

Pinellas County MPO Goods Movement Study



**PINELLAS COUNTY
METROPOLITAN PLANNING ORGANIZATION
GOODS MOVEMENT STUDY**

For the

**PINELLAS AREA
TRANSPORTATION STUDY**

Prepared by:

**PINELLAS COUNTY
METROPOLITAN PLANNING ORGANIZATION**

Preparation of the document was financed in part by the United States Department of Transportation under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

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GOODS MOVEMENT STUDY**

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DECEMBER 2008

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EXECUTIVE SUMMARY

PINELLAS COUNTY GOODS MOVEMENT STUDY

Introduction

The Pinellas County Metropolitan Planning Organization (MPO) Goods Movement Study, updates and refines the existing Pinellas County Goods Movement Study adopted by the MPO on December 11, 1996. The 1996 Goods Movement Study evaluated goods movement activities on the Pinellas roadway system, as well as regulatory policies and signage and also the elimination of obsolete truck routes, and the monitoring of truck traffic, roadway conditions, and land use along truck routes. Later in 2004, the MPO conducted an assessment of commercial vehicle enforcement in Pinellas County. The assessment concluded with a series of recommendations regarding consistency with definitions for commercial vehicles, weight restrictions, and development of criteria to designate truck routes.

This update to the Goods Movement Study recommends amendments to the Truck Route Plan as well as to the Pinellas County Code of Ordinances, Article III, Truck Routes; to promote consistency with municipal ordinances, and their respective truck route plan maps; and also presents policy issues for consideration. The study provides information on the operational performance of freight mobility corridors, recommends short-term low-cost improvements, and long-term alternative strategies to alleviate congestion and enhance the mobility of persons and goods. Importantly, the study complies with the Federal Highway Administration (FHWA) certification requirement that the Pinellas County MPO update its Goods Movement Study. It also provides the opportunity to engage the participation of stakeholders from the freight industry, law enforcement and the public to hear their concerns and provide input for consideration to the MPO's federally mandated role for addressing freight transportation planning.

This update to the Goods Movement Study supplements the regional perspective and other information available in the Florida Department of Transportation (FDOT) District Seven Freight Mobility - Tampa Bay Regional Goods Movement Study Phase I.

Project Background

Freight transportation has now emerged as a significant national policy issue on its own. The reliability and productivity of the nation's freight system are declining because of increasing demand and deteriorating capacity. These problems are now being addressed throughout the nation by the US Department of Transportation, Federal Highway Administration by emphasizing the freight sector's importance to economic development and industry competitiveness in a global economy.

The Pinellas County MPO Goods Movement Study identifies concerns and the source of problems in relation to restricted vehicle movement in Pinellas County, makes recommendations which may involve a change/improvement to current truck route designations on the Pinellas County Truck Route Plan, and provides a framework to develop long-term solutions. In addition, the study identifies local and regional freight activity centers and mobility corridors

used for local distribution and delivery activities, as well as restrictions on their hours of operation.

Most importantly, the Pinellas County MPO can use the Goods Movement Study to coordinate actions that promote the economic development of Pinellas County, such as:

- The designation and update of truck routes, local freight activity centers, and local freight corridors among local governments, to establish the freight infrastructure upon which to develop freight transportation planning activities;
- Coordinate the prioritization of improvements to multimodal and intermodal infrastructure, and influencing the decisions to amend the local governments' comprehensive plans (transportation and future land use elements) to support freight mobility by linking those improvements to land use decisions on redevelopment, transit-oriented development, community livability, and countywide economic development goals.

The Final Report for the Pinellas County Goods Movement Study is structured to address the various tasks of the scope of work for the Study in six technical memoranda. The last technical memorandum (number 6) was developed to address the technical recommendations of the Study, as well as recommendations from the Goods Movement Advisory Committee (GMAC) and from the MPO committee structure. Those recommendations can be utilized to amend the Pinellas County MPO Long Range Transportation Plan, to update the Pinellas County Truck Route Plan, and to update the Pinellas County Municipal Code, Article III, Truck Routes.

Description of Technical Memoranda

Technical Memorandum 1, Documentation of Existing Policy Context, identifies the existing policies, regulations, and laws governing restricted vehicles in Pinellas County. Among the documents reviewed are: The Pinellas County Code of Ordinances, along with several other municipal codes of ordinances, the State of Florida statutes and policies, in addition to local enforcement agencies common procedures. The review provides an overview of the current state of restricted vehicle routing.

In addition, this Technical Memorandum reports on the integration of land use policies and goods movement in Pinellas County and makes recommendations on transportation and land use policies that support freight mobility, economic development, and promotes Pinellas County's intermodal capabilities that are essential to goods movement while also supporting the land use development process.

Technical Memorandum 2, Stakeholder Group and Interviews, identifies and documents the establishment of a Goods Movement Advisory Committee (GMAC) composed of industry representative stakeholders. This Technical Memorandum documents each stakeholder's issues and concerns for restricted vehicles and designated truck routing. Emphasis is placed on identifying local freight activity centers and local freight corridors that supplement the regional activity centers and mobility corridors documented in FDOT's Tampa Bay Regional Goods Movement Study, Phase I.

Technical Memorandum 3, General Procedures for Freight Transportation Asset Improvement Measures, documents the inventory of existing signage used to govern freight transportation assets on County roads designated as truck routes. It also identifies general procedures to be used to implement a variety of transportation improvement measures within Pinellas County. These procedures include an overview of the regulatory agencies, conceptual steps for implementation, and typical duration for implementation.

Technical Memorandum 4, Determining Designation Criteria and Community Values, identifies criteria deemed to be useful in determining if a road can be identified as one which places limitations on restricted vehicle travel and documents the results of the Community Values Survey. It also includes a summary of public involvement activities. Identified criteria includes primary designation criteria such as safety, level of congestion, neighborhood impacts, environmental impacts, access to freight activity centers, and connectivity to other proposed and existing freight corridors, and associated designation criteria such as engineering features, the existence of transit activity, restricted vehicle traffic, etc. Each criterion category is given a generalized point (0 or 1) rating that helps establish the list of ordered criteria to be considered for future designation of a truck route.

Technical Memorandum 5, Update of the Existing Truck Routes Plan, utilizes the input from the GMAC, data collection, research, mapping activities, and the recommendations found in FDOT District 7 Tampa Bay Regional Goods Movement Study, Phase I to evaluate the Pinellas County Truck Route Plan for deficiencies and improvement options. This evaluation utilizes a combination of traffic engineering, transportation planning, and community values to determine recommendations for modification. Generalized cost estimates are given as unit costs for each type and category of improvement.

Technical Memorandum 6, Recommendations, is a summary of recommendations developed through all previous technical memoranda. Problem areas that included the needs associated with goods movement which incorporated the Pinellas County Freight Mobility Corridors, truck routes, intermodal facilities, and major Freight Activity Centers were identified. Where applicable, the recommendations include the generalized cost estimates for improvements developed under the previous technical memoranda.

Conclusion

The series of technical memoranda described above represent a process used to evaluate the existing truck route highway network from the standpoint of its existing conditions, which results in a set of recommendations that can be used when developing future projects for implementation. These recommended improvements represent potential and future changes to the Pinellas County Truck Route Plan. Further analysis may be necessary to refine the details and general cost estimates for each improvement and change.

TECHNICAL MEMORANDUM

NO. 1

**TECHNICAL MEMORANDUM NO. 1
DOCUMENTATION OF EXISTING POLICY CONTEXT**

INTRODUCTION

The economic health of Pinellas County depends on the seamless flow of people, freight services, and information. In many instances, conflicting corridors and facilities are used for a variety of transportation modes. The potential conflict of competing for capacity, mobility, and accessibility within a finite transportation network must be balanced so that the growing volume of commuter and freight movement within the Pinellas County and the region can be accommodated in a sustainable manner.

This technical memorandum identifies the existing policies, regulations, and laws governing restricted vehicles in Pinellas County. The Pinellas County Code of Ordinances, along with several other municipal codes of ordinances, is described below. Federal regulations, as well as State of Florida Statutes, in addition to local government ordinances, codes and common procedures, are reviewed in order to provide an overview of the current state of restricted vehicle routing.

Finally, the integration of land use policies and goods movement in Pinellas County is analyzed. The identification and recommendation of transportation and land use policies that support freight mobility, economic development and that promote Pinellas County's intermodal capabilities and capacity are essential to the goods movement while also supporting the land use development process.

REGULATORY CONTROLS

The first level of enforcement is the establishment of laws regulating restricted vehicles. These regulations can consist of federal, state, and local laws. The following provides a summary of the relevant laws regarding the definition of restricted vehicles and the weight thresholds used to manage the traffic of these vehicles on roadways.

Federal Regulations

Two primary federal laws address restricted vehicles and their weight limitations, load, and safety requirements. Title 23 – Highways, regulates the Interstate system. Specifically, Chapter I, Subchapter G, Part 658, addresses Truck Size and Weight, Route Designations – Length, Width, and Weight Limitations. Title 49 – Transportation regulates commercial motor vehicles, including length and width limitations. Title 49, Subtitle VI, Part B, Chapter 313, Section 31301, provides the following definition of a commercial motor vehicle and the weight thresholds used to restrict access:

“A commercial motor vehicle means a motor vehicle used in commerce to transport passengers or property that –

- (A) Has a gross vehicle weight rating or gross vehicle weight of at least 26,001 pounds, whichever is greater, or a lesser gross vehicle weight rating or gross vehicle weight

the Secretary of Transportation prescribes by regulation, but not less than a gross vehicle weight rating of 10,001 pounds;

- (B) Is designed to transport at least 16 passengers including the driver; or
- (C) Is used to transport material found by the Secretary to be hazardous under Section 5103 of this title, except that a vehicle shall not be included as a commercial motor vehicle under this sub-clause if:
 - (i) The vehicle does not satisfy the weight requirements of sub-clause (A) of this clause;
 - (ii) The vehicle is transporting material listed as hazardous under Section 306(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9656(a)) and is not otherwise regulated by the Secretary or is transporting a consumer commodity or limited quantity of hazardous material as defined in Section 171.8 of Title 49, Code of Federal Regulations; and
 - (iii) The Secretary does not deny the application of this exception to the vehicle (individually or as part of a class of motor vehicles) in the interest of safety.”

State of Florida Laws: Chapter 316 Florida Statutes

Chapter 316 of the Florida Statutes addresses traffic laws throughout the state and provides uniform traffic laws for jurisdictions in Florida. Reference to Title 49 in the Code of Federal Regulation pertaining to commercial motor vehicles; safety regulations; transporters and shippers of hazardous materials; and, enforcement is made directly throughout Section 316.302. Section 316.302 (1)(a) states that all owners and drivers of commercial motor vehicles that are operated on the highways of the State of Florida while engaged in Interstate commerce are subject to the rule regulations in 49 C.F.R. parts 382, 385, and 390-397.

The definition of a commercial vehicle, Section 316.003 is as follows:

COMMERCIAL MOTOR VEHICLE – Any self-propelled or towed vehicle used on the public highways in commerce to transport passengers or cargo, if such vehicle:

- (a) Has a gross vehicle weight rating of 10,000 pounds or more;
- (b) Is designed to transport more than 15 passengers, including the driver; or
- (c) Is used in the transportation of materials found to be hazardous for the purposes of the Hazardous Materials Transportation Act, as amended.

Review of Chapter 316, Florida Statutes, shows the law to be more specific and relevant to Pinellas County’s enforcement needs than the federal definition. In addition, this law is being used by many local jurisdictions for vehicles between 10,000 and 34,000 pounds; therefore, the State of Florida definition may be easier to interpret in the field by non-commercial vehicle enforcement personnel.

State of Florida Laws: FDOT Trucking Manual

The State of Florida laws designed to assist the transportation industry and keep trucking safe and economical are contained in Chapter 316 of the Florida Statutes and Title 49 of the Code of

Federal Regulations. They list weight, load, and safety requirements. The Florida Department of Transportation's Office of Motor Carrier Compliance enforces these laws. The Florida Department of Transportation has developed a Trucking Manual which explains what a trucker must do to comply with these laws and regulations. Information included in the guide outlines the State of Florida requirements for truckers regarding size and weight limits, overweight/oversize permits, safety rules/hazardous materials, fuel importation, and Florida and U.S. DOT numbers. In Florida, each truck needs to be legal and must comply with the following:

- Valid and current tag;
- Department of Highway Safety Motor Vehicles fuel decal if the vehicle combination is over 26,000 pounds of gross vehicle weight (GVW) or if the power unit has 3 or more axles, regardless of weight, and if operating Interstate;
- Correct size and weight;
- All parts and equipment in safe and working condition; and
- Display a valid Florida or U.S. DOT number.

Local Code of Ordinance

As stated earlier, the first step for a local jurisdiction is to ensure that the code language supports the state and federal laws. This is due to the state DOT being the primary commercial vehicle enforcement and training organization. Local code language should have, at a minimum, a similar definition and restrictions on commercial vehicles. Naturally, the individual truck routes, parking restrictions, and required permitting should be tailored to fit the local needs. Having the local municipalities mirror the County's Ordinance can provide even more uniformity. Consistency between jurisdictions provides a uniform enforcement environment that not only assists law enforcement personnel but the carriers as well. A review of the Pinellas County and other select local government ordinances is provided below.

PINELLAS COUNTY TRUCK ROUTE PLAN

Truck route means certain streets as designated on the Countywide Truck Route Plan, over and along which trucks in the restricted vehicle classification shall operate within the County during designated hours. These designations are attached to and made a part of the legislation from which Article III – Truck Routes of the Pinellas County Code is derived (and detailed later in this Task). This Plan emphasizes local regulations, establishes a system of routes on which to plan deliveries, reduces the impact of heavy truck traffic, and reduces the risk of hazardous materials incidents on roadways. The Plan is designed to serve as a routing guide for use by heavy truck vehicles primarily involving long distance travel. Major features of the Plan include:

- Unrestricted travel on all state numbered roadways;
- Provision of alternative County or municipal facilities to bypass congestion or poor roadway conditions or to improve access;
- Trucks with two or more rear axles and all combinations are considered restricted vehicles and must follow the truck route system;
- Linking all freight activity centers as generators of truck travel;

- Time of day restrictions on County and municipal routes through residential areas. Routes are typically open during daylight hours (6:00 a.m. – 6:00 pm); and
- Hazardous materials movement is restricted to the routes on the Countywide Truck Route Plan.

The Countywide Truck Route Plan and regulations have been adopted for application in unincorporated Pinellas County. In general, the cities of St. Petersburg, Clearwater, Dunedin, Largo, and Pinellas Park mirror the Pinellas County Code Article III, Truck Routes, with minor exceptions. Additional restrictions may exist on roadways not shown on the Plan.

PINELLAS COUNTY CODE OF ORDINANCES

Chapter 122 Traffic and Vehicles

Article III. Truck Routes

Section 122-61 to 122-66

The Pinellas County Code sets forth local regulations regarding truck usage on public roads. In 2004, the Pinellas County MPO retained the HNTB Corporation to provide an assessment study of Pinellas County Restricted Vehicle Enforcement. As a part of that process, the MPO and HNTB met with the Pinellas County Sheriffs Office (PSO) and other local law enforcement agencies in June 2005 to discuss problems that the PSO and other agencies were experiencing related to restricted vehicle enforcement. Enforcement agencies requested that definitions in the Pinellas County truck route regulations be simplified to facilitate ease of enforcement. As a result, revisions to Article III Truck Routes Section 122-61 to 122-66 of the Pinellas County Code of Ordinances, as drafted by the County Attorney’s Office, have been proposed that will amend the code.

During review by the MPO Technical Coordinating Committee, several key issues were proposed as revisions to the Article III - Truck Routes of the Pinellas County Code of Ordinances. Among them are the proposed modifications to Section 122-61, including: definitions, what constitutes commerce, gross vehicle weight, truck, and restricted vehicles. Trucks in the restricted vehicle classification will now be defined as exceeding the gross vehicle weight of 35,000 pounds and primarily used for the transportation of property for commercial purpose or the performance of services. Additionally, Sections 122-62 through 122-65 were proposed for amendment to conform to the observance, utilization, and hours of operation of truck routes. Finally, Section 122-66 was proposed for amendment to add a provision for the County’s Public Works Director to coordinate with municipalities in the installation and placement of truck route signs.

The following text was taken from the draft amendatory Ordinance, and includes the revisions recommended by the TCC to amend the Pinellas County Code of Ordinances, Article III. Truck Routes:

SECTION 1 is hereby amended to read as follows:

Sec. 122-61. Definitions:

The following words, terms, and phrases when used in this article shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Commerce means the exchange or buying and selling of goods, commodities, property, or services especially on a large scale and involving transportation from place to place.

Deviating truck means any truck in the restricted vehicle classification which travels over a street other than a designated truck route.

Gross Vehicle Weight (GVW) means the total vehicle weight including items or cargo that a vehicle can transport.

Hazardous material warning placard means the standard, diamond-shaped sign as required by 49 CFR 172, as part of the hazardous materials transportation act.

Truck means any self-propelled or towed vehicle designed, used or maintained primarily for the transportation of property on the public highways, for commercial purposes, or for the performance of services.

Restricted vehicles mean single-unit, single-rear, or multi-rear-axle trucks with GVW exceeding 35,000 pounds, and all tractor-trailer and semi trailer combinations.

Truck route means certain streets as designated in the Countywide Truck Route Plan, attached to and made a part of the legislation from which this article is derived, over and along which trucks in the restricted vehicle classification shall operate within the County during designated hours.

Officially established detour route means the path the FDOT, Pinellas County, or a Municipal jurisdiction designates a motorist to use to reach a destination while a state, county or municipal highway or highway bridge is closed to the public as a thoroughfare while under construction, while being repaired, or when closed for any other reason.

(Ord. No. 82-30, § 1, 9-28-82; Ord. No. 90-3, § 1, 1-30-90.)

Cross references: Definitions generally, § 1-2.

SECTION 2 is hereby amended to read as follows:

Sec. 122-62. Established; map; hazardous material warning placards.

(a) There is hereby established within the County a system of truck routes as shown on a map on file in the office of the County Clerk of the Circuit Court. The streets indicated as truck routes on the map and no others shall be used for truck traffic in the restricted vehicle classification.

(b) All vehicles, regardless of size, that display or are required to display hazardous material warning placards shall be required to travel on the prescribed routes of the Countywide Truck Route Plan, as amended.

(Ord. No. 90-3, § 2, 1-30-90)

SECTION 3 is hereby amended to read as follows:

Sec. 122-63. Observance of truck routes required; exceptions.

(a) All trucks in the restricted vehicle classification within the County shall be operated only over and along the truck routes established pursuant to this article.

(b) This article shall not prohibit:

(1) Operation on streets of destination, if authorized truck routes are used until reaching the intersection nearest the destination point and are proven upon request through possession of a valid and current delivery ticket or other dispatch order;

(2) Authorized emergency vehicles.

Detoured trucks on an officially established detour.

A detour can be created by the Florida Department of Transportation, Pinellas County, or other local government jurisdiction, if such trucks could lawfully be operated upon the street for which the detour is established during road construction, special events, or other temporary road problem or incident. When a road construction zone has been officially established by the Florida Department of Transportation by Pinellas County or by other local jurisdiction within its municipal boundaries, the Pinellas County Director of Public Works will work in coordination with municipal and state agencies to officially establish detours. As in any Maintenance of Traffic Operation (MOT), signage will be installed by the responsible jurisdiction.

(Ord. No. 82-30, § 3, 9-28-82)

SECTION 4 is hereby amended to read as follows:

Sec. 122-64. Manner of utilization.

(a) *Truck traffic of outside origin:*

(1) *To an inside destination point.* All restricted vehicles entering the County for a destination point in the County shall proceed only over an established truck route and shall deviate only at the intersection with the street upon which the traffic is permitted, nearest the destination point. Upon leaving the destination point, a deviating vehicle shall return to the truck route by the shortest permissible route.

(2) *To multiple inside destination points.* All restricted vehicles entering the County for multiple destination points shall proceed only over established truck routes and shall deviate only at the intersection with the street upon which truck traffic is permitted, nearest the first destination point. Upon leaving the first destination point, a restricted vehicle shall proceed to other destination points by the shortest direction and only over truck routes. Upon leaving the last destination point, a deviating vehicle shall return to the truck route by the shortest permissible route.

(b) *Truck traffic of inside origin:*

(1) ***To an outside destination point.*** All restricted vehicles on a trip originating in the County and traveling in the County for a destination point outside the County shall proceed to the nearest intersection of a designated truck route and travel from that point to the County limits only over designated truck routes.

(2) ***To inside destination points.*** All restricted vehicles on a trip originating in the County and traveling in the County for destination points in the County shall proceed only over designated truck routes.

(Ord. No. 82-30, § 4, 9-28-82)

SECTION 5 is hereby amended to read as follows:

Sec. 122-65. Hours of operation/time of day restrictions.

Trucks shall be able to travel upon truck routes at all hours of the day unless duly authorized signs are installed limiting the hours of use on a particular street or portion of street. Those streets which are designated as partially restricted truck routes shall be off limits to trucks in the restricted vehicle classification during the hours of 6:00 p.m. to 6:00 a.m. with the exception of authorized emergency vehicles. Any restricted vehicle attempting to utilize a partially restricted truck route during the restricted time period shall be regarded as a deviating vehicle.

(Ord. No. 82-30, § 5, 9-28-82)

SECTION 6 is hereby amended to read as follows:

Sec. 122-66. Installation of signs.

The Pinellas County Director of Public Works shall coordinate efforts for truck routes to be clearly posted and is hereby authorized to install appropriate signs along designated roadways within the unincorporated areas of the County to control truck operations, in accordance with the provisions of this article. The Director of Public Works shall also coordinate with the local municipal jurisdictions for their placement of signs as required under F.S. 316.006. Signs will conform to those shown in the Manual of Uniform Traffic Control Devices, and their use shall be as designated therein.

SECTION 7. Severability

If any section, paragraph, subdivision, clause, sentence, or provision of this Ordinance is adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, invalidate, or nullify the remainder of the Ordinance, but the affect thereof shall be confined to the section, paragraph, subdivision, clause, sentence or provision immediately involved in the controversy in which such judgment or degree shall be rendered.

SECTION 8. Inclusion in the Pinellas County Code

The provisions of this Ordinance shall be included and incorporated in the Pinellas County Code, as an addition or amendment thereto, and shall be appropriately numbered to conform to the uniform numbering system of the Pinellas County Code.

(Ord. No. 82-30, § 6, 9-28-82)

SECTION 9. Filing of Ordinance: Effective Date

Pursuant to Section 125.66, Florida Statutes, a certified copy of this Ordinance shall be filed with the Department of State by the Clerk of the Board of County Commissioners within ten (10) days after enactment by the Board of County Commissioners. This Ordinance shall become effective upon filing of the Ordinance with the Department of State.

SELECT MUNICIPAL GOVERNMENTS' CODE OF ORDINANCES

The following are provided as examples of cross section definitions that are in use in Pinellas County. This survey of ordinances focuses on the definition of commercial vehicle and at what level the jurisdiction starts to restrict use. As with the other aspects of commercial vehicle regulation, standards vary from place to place. In general, however, the cities of St. Petersburg, Clearwater, Largo, Pinellas Park and Dunedin mirror the Pinellas County Code Article III – Truck Routes with minor exceptions.

City of St. Petersburg, Florida Code of Ordinances

Chapter 26 Traffic and Motor Vehicles

General Rules of Vehicle Operation

Division 3. Truck Routes

Sec. 26-101 through Sec 26-108

The Unrestricted Vehicle definition mirrors that of Pinellas County. The Restricted (Heavy Vehicle) definition differs slightly. Maximum length is 40 feet and maximum GVW is 60,000 lbs. (including dump trucks and concrete mixers). Tractor trailer and semi-trailer combinations length and weight restrictions are the same as Pinellas County. Operation of trucks over and upon streets designated as truck routes by heavy dashed lines on the Truck Route Plan are prohibited from 6:00 p.m. through 6:00 a.m. Crosshatched shaded streets on the Truck Route Plan indicate streets of destination upon which time local delivery shall be prohibited between the hours of 6:00 p.m. and 8:00 a.m. Exceptions to the truck route requirements include operation on the street of destination, authorized emergency vehicles, public utilities, and detoured trucks. The City Manager designates all truck routes to be clearly posted with appropriate signage.

City of Clearwater, Florida Code of Ordinances

Chapter 30 Traffic and Motor Vehicles

Article III. Truck Routes

Section 30.121 through 30.126

The Restricted (Heavy Vehicle) definition mirrors that of Pinellas County. The Unrestricted (Light to Medium Truck) definition differs slightly. Maximum length is 21 feet and maximum GVW is 8,000 pounds and single-unit, single-rear-axle trucks with a maximum length of 35 feet but up to a maximum GVW of 44,000 pounds. Hours of operation allow for trucks to travel on unrestricted routes at all hours of the day unless authorized signs are installed limiting the hours of use on a particular street. Restricted hours, if designated, are 6:00 p.m. – 6:00 a.m. The City Manager is authorized to install appropriate signage to control truck authorization. This interpretation is different than that of St. Petersburg, where routes must be clearly posted.

Truck routes as shown on a map on file in the office of the City Clerk are established within the City. The streets indicated as truck routes on the map, as amended, and no others shall be used for truck traffic in the restricted classification. All trucks in the restricted vehicle classification within the City shall be operated only over and along the truck routes established pursuant to this article. The City does have a provision for detoured trucks that allows trucks to be lawfully operated on any officially established detour street.

As stated in Article I, In General - Section 30.005, the police department, under the direction of the City Manager, has full power and is charged with all duties in relation to the direction of vehicular traffic and enforcement of all laws governing vehicular traffic. The Traffic Engineering Department, under the direction of the City Manager, has full power with all duties in relation to planning, engineering, and management of vehicular and pedestrian traffic. Section 30.006 states that the police department and traffic engineer have the power and authority to divert traffic or to temporarily close any street to vehicular traffic or to vehicles of certain description for public safety purposes.

City of Largo, Florida Code of Ordinances

Chapter 12 Motor Vehicles and Traffic

Article V. Truck Routes

Section 12.71 through 12.76

The City of Largo definition for unrestricted vehicles is the same as the City of Clearwater. Restricted vehicle mirrors that of Pinellas County and Clearwater. Exception to the observance of truck routes includes operation on the streets of destination, authorized emergency vehicles, detoured trucks, and authorized public service. Hours of operation/time day of restriction are the same as Pinellas County. The City Manager shall cause truck routes to be clearly posted and is authorized to install appropriate signs along designated roadways to control truck operations. Signs are to conform to those shown in the Manual of Uniform Traffic Control Devices.

There is established within the City a system of truck routes as shown on a map on file in the office of the City Clerk. The streets indicated as truck routes on the map and no others shall be used for truck traffic in the restricted classification. All trucks in the restricted vehicle classification within the City shall be operated only over and along the truck routes established pursuant to this article. Detoured trucks can use an officially established detour, if such trucks could lawfully be operated upon the street for which the detour is established.

As stated in Article IV. Traffic Engineer Section 12-62 (26), the traffic engineer shall have the power to designate certain streets as truck routes to be used for the expeditious and convenient movement of farm tractors, trailers, semi-trailers, trucks, and other commercial vehicular traffic and to give notice thereof by means of appropriate signs placed along such streets.

The City of Largo definition for Heavy Truck is different when applying the definition pertaining to Outside Storage, as opposed to Truck Routes. Section 9-1 of the City Code defines any motor vehicle over 11,000 pounds GVW as a "heavy truck." The definition specifically defines "heavy truck" to include any motor vehicle designed for the carriage of goods or is equipped with a connecting device for hauling.

The current definition of "heavy truck" is focused on trucks designed to haul goods, not passengers

City of Dunedin, Florida Code of Ordinances

Chapter 74 Traffic and Vehicles

Article III. Truck Routes

Section 74.71 through 12.77

The Restricted (Heavy Vehicle) definition mirrors that of Pinellas County. The Unrestricted (light to medium truck) definition differs slightly. Maximum length is 21 feet and maximum GVW is 8,000 pounds and single-unit, single-rear-axle trucks with a maximum length of 35 feet but up to a maximum GVW of 44,000 pounds. Hours of operation allow for trucks to travel on unrestricted routes at all hours of the day unless authorized signs are installed limiting the hours of use on a particular street. Restricted hours, if designated, are 6:00 p.m. – 6:00 a.m. The City Manager is authorized to install appropriate signage to control truck authorization.

There is an established map within the City in which a system of truck routes are shown as attached to Ordinance No. 82-53 as Exhibit A, on file within the City. The streets indicated as truck routes on the map and no others shall be used for truck traffic. Detoured trucks on any officially established detour of such trucks could lawfully be operated upon the street for which the detour is established.

City of Pinellas Park, Florida Code of Ordinances

Chapter 9 Traffic Code of Ordinances

Truck Routes

Section 9-105 through 9-111

The City of Pinellas Park has established within the City a system of truck routes as a town on a map on file in the office of the City Clerk. The streets indicated as truck routes on the map and no others are used for restricted truck traffic, except for the purpose of local destination. All restricted trucks within the City shall be operated only over and along the truck route established by the Ordinance. Exceptions include authorized emergency vehicles and detoured trucks on streets officially designated as established detour routes, if such trucks could lawfully be operated upon the street for which the detour is established.

Trucks shall be able to travel upon truck routes at all hours of the day unless duly authorized signs are installed limiting the hours of use on a particular street or portion of street. Those streets designated as partially restricted truck routes shall be off limits to trucks in the restricted classification during the hours of 7:00 P.M. and 7:00 A.M. The City Manager shall cause truck routes to be clearly posted and is hereby authorized to install appropriate signs along designated roadways to control truck operations.

PINELLAS COUNTY MPO LONG RANGE TRANSPORTATION PLAN

GOALS, OBJECTIVES AND POLICIES

This task identifies and documents the existing goals, objectives, and policies in the MPO 2025 Long Range Transportation Plan that supports freight mobility and economic development and promotes Pinellas County’s intermodal capabilities and capacity as essential to the goods movement-oriented land use development process.

The review identifies three goals and several objectives and policies from the 2004 update of the Year 2025 Long Range Transportation Plan, which are supportive of freight mobility and intermodalism, namely:

1. GOAL: PROVIDE FOR A SAFE AND ENERGY EFFICIENT “MULTIMODAL” AND “INTERMODAL” TRANSPORTATION SYSTEM THAT SERVES THE TRANSPORTATION NEEDS OF PINELLAS COUNTY WHILE ENHANCING THE QUALITY OF LIFE FOR ITS CITIZENS.

Transportation System Management and Operations

1.6. Objective: Protect roadway capacity, optimize operating efficiency, enhance safety of transportation facilities, and reduce congestion through the application of Intelligent Transportation Systems (ITS), system management, and demand management strategies.

1.6.7. Policy: The MPO shall provide policy guidance, coordination, and implementation support to the city and county traffic departments and the Florida Department of Transportation, emergency service departments, and state and local police departments in their efforts to manage incidents using cooperatively developed incident response plans that are supported by ITS strategies capable of detecting incidents quickly.

1.6.10. Policy: The MPO shall work with and support the Florida Department of Transportation as it deploys commercial vehicle operations technologies, such as electronic clearance and roadside safety inspection.

Transportation Demand Management

1.7. Objective: Reduce traffic congestion and positively impact air quality by decreasing the use of the single occupant vehicle (SOV) at peak hours.

1.7.1. Policy: The MPO shall work with local governments, transportation demand management (TDM) agencies and FDOT to develop vehicle trip (VT) reduction and vehicle miles of travel (VMT) reduction goals.

1.7.5. Policy: The MPO shall work with transportation agencies and local governments to encourage non-work trips to be made at times other than peak to assist in the reduction of traffic congestion during those periods.

1.7.10. Policy: The MPO shall provide policy direction and implementation support to city and county traffic departments, Transportation Demand Management agencies, the Florida Department of Transportation, and state/local emergency and police departments to maintain the flow of people and goods during major reconstruction of highway facilities.

Transportation System Safety and Maintenance

1.10. Objective: Ensure the safe accommodation of motorized and non-motorized traffic while reducing the incidence of vehicular conflicts within the county's major transportation corridors.

1.10.6. Policy: The MPO shall work with the local governments, FDOT and law enforcement agencies to identify high crash locations in order to initiate the necessary improvements on the affected roadways and/or intersections.

1.10.13. Policy: The MPO shall continue to review roadway design plans, including resurfacing plans to ensure the needs of all modes, including pedestrian and bicycle, are addressed.

3. GOAL: CONTRIBUTE TO THE ECONOMIC VITALITY OF PINELLAS COUNTY THROUGH THE PROVISION OF A TRANSPORTATION SYSTEM THAT PROVIDES FOR THE EFFECTIVE MOVEMENT OF PEOPLE AND GOODS TO AND FROM MAJOR EMPLOYMENT CENTERS AND INTERMODAL FACILITIES.

Economic Development, Goods Movement and Intermodal Facilities

3.1. Objective: Facilitate the effective movement of goods in Pinellas County.

3.1.1. Policy: The MPO shall identify roadways suitable for truck movements in the Long Range Transportation Plan.

3.1.2. Policy: The MPO shall maintain a current map of designated truck routes that will be updated periodically as new roadways are constructed through the implementation of the Transportation Improvement Program.

3.1.3. Policy: In the staging of projects in the Long Range Transportation Plan and developing priorities for funding in the Transportation Improvement Program, the MPO shall give priority to improvements needed to improve

access to intermodal facilities, such as the St. Petersburg-Clearwater International Airport, including access roads to such facilities.

3.1.4. Policy: The MPO shall participate in the development and update of intermodal facilities (e.g., St. Petersburg-Clearwater International Airport and the Pinellas Suncoast Transit Authority bus terminals) master plans, and related planning activities.

3.1.8. Policy: The MPO shall consider Florida's Strategic Intermodal System Plan, as necessary, in establishing planning and funding priorities.

4. GOAL: ENSURE COORDINATION OF STATE, REGIONAL, AND LOCAL TRANSPORTATION PLANS.

Intergovernmental Coordination

4.1. Objective: The MPO Long Range Transportation Plan and Transportation Improvement Program shall be consistent with the 2020 Florida Transportation Plan, local government comprehensive plans, and the capital improvement programs of the Florida Department of Transportation and Pinellas Suncoast Transit Authority.

4.1.1. Policy: Annual Transportation Improvement Programs and subsequent amendments shall reflect the adopted capital improvement programs of the local governments, the St. Petersburg-Clearwater International Airport, the Pinellas Suncoast Transit Authority's Transit Development Plan, and the Florida Department of Transportation District 7 Work Program.

4.1.2. Policy: The Long Range Transportation Plan shall be consistent with the capital improvement programs and comprehensive plans of the local governments, the Pinellas Suncoast Transit Authority's Transit Development Plan, and the 2020 Florida Transportation Plan.

4.1.6. Policy: The Long Range Transportation Plan shall be consistent with regional transportation plans, including the Strategic Regional Policy Plan, the Regional Long Range Transportation Plan, and the Regional Congestion Management System.

4.1.9. Policy: The MPO shall support and participate in the development and enhancement of land use planning models and other analytical tools used to forecast and simulate transportation conditions under alternative land use scenarios.

4.1.10. Policy: The MPO shall support activities at the state level to facilitate better integration of transportation and land use planning.

- 4.1.11. Policy: The MPO shall work with airport and seaport authorities in the region, such as the Tampa Port Authority and the Tampa International Airport, to ensure coordinated planning and improvement of regional intermodal facilities.

Pinellas County MPO Long Range Transportation Plan Report

The 2004 Long Range Transportation Plan Report discusses Goods Movement in the context of regional access and economic development. Chapter 3 of the report documents economic and demographic development occurring through redevelopment in the County's largest centers of activity, including downtown St. Petersburg, downtown Clearwater, and the Mid-County area. The economic health and viability of these centers depends on the mobility provided by their access routes. Activity Centers are the primary economic engines in Pinellas County mainly because of their regional access.

Most of the goods transported to and within the County are delivered by trucks, which comprise approximately between 4% and 17 % of the traffic volume on truck routes during the Pinellas County Goods Movement study period. Most of the commercial goods arriving into the County are transferred at intermodal facilities located outside its borders. While the volume of goods moved within the County is rather low compared to other areas of the state, the MPO recognizes that the roadways and other facilities needed to accommodate the movement of goods are critical to the economic vitality of the County and the region. Therefore, the MPO maintains a Countywide Truck Route Plan that identifies roadways suitable for heavy truck movement (see Map 6-1 in Chapter 6).

The identification of multimodal transportation improvements and congestion management strategies through 2025 are based on current and projected level of service conditions, connectivity and mobility needs, intermodal travel and movement of goods, land use, and socioeconomic conditions. Management and operations planning also focuses on enhancements of the freeway system needed to facilitate motorist travel and freight movement such as the installation of freeway ITS equipment to monitor systems operations, provide traveler information and facilitate incident clearance.

Impact of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) to the Pinellas County Metropolitan Planning Organization Long Range Transportation Plan

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This Act authorizes the federal surface transportation programs for highways and transit for the five-year period 2005-2009.

SAFETEA-LU addresses the many challenges facing our transportation system today – challenges such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment – as well as laying the groundwork for addressing future challenges.

A SAFETEA-LU compliance review of the Pinellas County Metropolitan Planning Organization (MPO) 2025 Long Range Transportation Plan (LRTP) adopted in 2004 was completed in the summer of 2007. The compliance review identifies LRTP gaps in terms of the SAFETEA-LU requirements and methods for resolving those gaps within the mandated timeframe of July 1, 2007. In instances when a plan deficiency would require more time to address, such as coordination for a countywide or regional planning effort, the recommendations are oriented to the 2035 LRTP update to be completed in 2009.

Federal Requirements

SAFETEA-LU requires metropolitan transportation plans to “include both long-range and short-range strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods.” In order to comply with this mandate, the Pinellas County MPO Long Range Transportation Plan (LRTP) must accomplish the following provisions related to goods movement:

- Identify the projected transportation demand of persons and goods in the metropolitan planning area over the period of the plan;
- Identify adopted congestion management strategies including, as appropriate, traffic operations, ridesharing, pedestrian and bicycle facilities, alternative work schedules, freight movement options, high occupancy vehicle treatments, telecommuting, and public transportation improvements that demonstrate a systematic approach in addressing current and future transportation demand; and
- Assess capital investment and other measures necessary to preserve the existing transportation system and make the most efficient use of existing transportation facilities to relieve vehicular congestion and enhance the mobility of people and goods;

New SAFETEA-LU Planning Requirements

SAFETEA-LU includes a set of new transportation planning requirements in which all metropolitan transportation plans must be in full compliance by July 1, 2007. The new requirements of SAFETEA-LU are directed to the following areas:

Addressing SAFETEA-LU in the 2025 LRTP

The results of a SAFETEA-LU compliance review of the MPO 2025 LRTP are set forth in this section. The review references the data, analysis, and policy framework for the MPO 2025 LRTP as compared to the SAFETEA-LU planning requirements. These requirements have been organized under the following categories:

1. Special Needs Transportation
2. Transportation System Safety
3. Transportation System Security
4. Operational and Management Strategies
5. Environmental Mitigation and Agency Consultation
6. Consistency with Planned Growth and Development Plans

7. Participation Plan
8. Annual Listing of Obligated Projects
9. Transportation Finance
10. Multimodal Evaluation of LRTP Impacts

Out of those ten categories, the following require additions related to goods movement:

- **Transportation System Safety:** SAFETEA-LU calls for the safety of the transportation system to be a stand-alone planning factor.
 - SAFETEA-LU requires that safety strategies be identified that will improve the performance of the transportation system, maximizing the safety and mobility of people and goods and that safety be addressed as a stand-alone factor. The MPO is required to continue to develop strategies to incorporate safety in the transportation planning process and TIP development. The results of the MPO safety planning process should be consistent with and reflect the goals and objectives of the Strategic Highway Safety Plan (SHSP), as appropriate;
 - A new policy which supports the Florida Strategic Highway Safety Plan objective of ensuring the safe accommodation of motorized and non motorized traffic has been approved by the MPO (see proposed new Policy 1.10.15 in Technical Memorandum No. 6).
- **Transportation System Security:** SAFETEA-LU calls for the security of the transportation system to be a stand-alone planning factor, signaling an increase in importance from prior legislation in which security was coupled with safety.

The following plans, programs, and coordination mechanisms of the MPO and its community planning partners are supportive of the SAFETEA-LU security requirements:

Pinellas Countywide ATMS/ITS Master Plan

The countywide Intelligent Transportation System Architecture and Concept of Transportation Operations strengthens the application of operational and management strategies by increasing the compatibility of systems for inter-agency and intermodal operations and management. For emergency evacuation routes, dynamic message signs (Intelligent Transportation System) and Highway Advisory Radio messages are used to transmit information in emergencies.

Pinellas County 911 Dispatch / Primary Control Center (PCC) Management Team Memorandum of Understanding

The Memorandum of Understanding addresses shared video monitoring and system data for purposes of monitoring problem intersections and improving emergency response times. The arrangement promotes coordination and management of incidents on a regional scale, increases responders' knowledge of incidents, and provides information to facilitate rerouting around congestion/incidents for EMS/Fire and other emergency responses.

Future Actions for the MPO 2035 Long Range Transportation Plan Update

During the development of the 2035 Long Range Transportation Plan (LRTP), a stand-alone security element must be prepared for the LRTP that emphasizes strategies and policies in support of homeland security. The following represents recommended components of the security element that would impact goods movement and freight planning:

- Federal requirements for security planning for the transportation system;
- MPO's role in local and regional security planning activities;
- Protection of and recovery planning for critical transportation infrastructure including airports, railroads, intermodal terminals and transit facilities;
- Policy development covering planning and coordination, communications, and programming security projects prioritization and green transportation initiatives to support homeland security; and
- Add/incorporate freight security planning in coordination with FDOT and FHWA.

Multimodal Evaluation of Long Range Transportation Plan Impacts

SAFETEA-LU requires that the LRTP update process include a mechanism for ensuring that the MPO, State, and public transportation operators' agree that the data utilized in preparing other existing modal plans providing input to the LRTP are valid.

Transportation facilities (including major roadways, transit, multimodal, and intermodal facilities, and intermodal connectors) that function as an integrated system shall be identified, giving emphasis to facilities that serve important national, state, and regional transportation functions.

2007 Update to the 2025 Long Range Transportation Plan

Recommended changes to the 2025 LRTP relative to the multimodal evaluation of LRTP impacts include the following:

Chapter 3: Plan Context

- Update listing of designated Strategic Intermodal Systems facilities in subsection 3.4.
- Describe the ongoing Pinellas Goods Movement Study and coordination with freight interests (Sec 3.7).

Future Actions for 2035 Long Range Transportation Plan

A map of the Strategic Intermodal Systems facilities and a plan for continued coordination with freight interests within the planning process will be prepared during the plan update.

The Pinellas County Goods Movement study identifies areas of conflict for freight movement and defines near and long-term strategies to improve freight mobility within Pinellas County, while minimizing effects to community assets. The improvement

strategies and policy recommendations resulting from the study will be integrated into the update of the Long Range Transportation Plan to be adopted in 2009.

PINELLAS COUNTY COMPREHENSIVE PLAN

The Pinellas County Comprehensive Plan identifies the linkage of land use and freight mobility, intermodal/multimodal capabilities, and infrastructure capacity as essential to promote economic development. As Pinellas County continues to grow, mature and change, it will be necessary to ensure that the basic relationship between land uses, the quality of life and the provision of adequate public services and facilities, that promote the movements of persons and goods, are maintained and enhanced in coordination with the efforts of municipal and state governments.

The Future Land Use and Quality Communities Element and Transportation Element of the Pinellas County Comprehensive Plan are reviewed, as a component of this task, to determine which goals, policies, and objectives are in place to support goods movement. Additionally, this process helps to determine if additional goals, policies, and objectives should be added to these elements in relation to goods movement in Pinellas County.

Transportation Element Goals, Objectives, and Policies

1. GOAL: PROVIDE FOR A SAFE, CONVENIENT, AND ENERGY EFFICIENT MULTIMODAL TRANSPORTATION SYSTEM THAT SERVES TO INCREASE MOBILITY, REDUCE THE INCIDENCE OF SINGLE-OCCUPANT VEHICLES, PROTECT ROADWAY CAPACITY, REDUCE THE CONTRIBUTION TO AIR POLLUTION FROM MOTORIZED VEHICLES AND IMPROVE THE QUALITY OF LIFE FOR THE CITIZENS OF PINELLAS COUNTY.

Land Use Coordination and Highway Beautification

- 1.3. Objective: The Transportation Element shall coordinate with the goals, objectives, and policies of the Future Land Use and Quality Communities Element in guiding population distribution, economic growth, and the overall pattern of urban development.

- 1.3.3. Policy: Pinellas County shall rely on the Future Land Use Map as a basis for projecting population densities and housing and employment patterns for the process of forecasting traffic demand through the Tampa Bay Regional Transportation Planning Model (TBRPM).

Safety, Efficiency, and Goods Movement

- 1.8. Objective: Pinellas County's transportation system should provide for safety and efficiency in the movement of people and goods.

- 1.8.13. Policy: Pinellas County shall amend the truck route section of the Land Development Code in 2008 to reflect recommendations resulting from the MPO Goods Movement Study.

State, Regional, and Local Coordination

1.9. Objective: Pinellas County shall coordinate its transportation planning with transportation planning at the local, regional, and state level.

1.9.15. Policy: Pinellas County shall pursue opportunities for funding for transportation projects through the following:

Partnerships with private interests as well as local, state and federal agencies to leverage County transportation funding for projects to the fullest extent possible;

Seek State and Federal grant monies and Federal earmarks as appropriate; and

Support legislative activities to increase the return from Federal fuel taxes to the State.

2. GOAL: STIMULATE ECONOMIC DEVELOPMENT IN PINELLAS COUNTY THROUGH THE GROWTH AND EXPANSION OF THE ST. PETERSBURG-CLEARWATER INTERNATIONAL AIRPORT IN A MANNER THAT MINIMIZES IMPACTS ON THE SURROUNDING AREA AND THE ENVIRONMENT AND THAT IS COORDINATED WITH FEDERAL, STATE, REGIONAL AND LOCAL AGENCY, PLANS AND REGULATIONS.

2.2. Objective: Expand the landside and airside capacity of the St. Petersburg-Clearwater International Airport to meet future demand consistent with the Airport Master Plan.

2.2.2. Policy: Pinellas County shall expand access and terminal roads, automobile parking lots, aircraft parking capacity and air cargo facilities, office and warehouse and/or light industrial space in accordance with the CIP schedule.

2.2.5. Policy: Pinellas County shall coordinate with FDOT in obtaining the necessary funding for construction of access road improvements.

2.3. Objective: Ensure Airport operations are consistent with and protected by the Pinellas County Land Development Code and Future Land Use and Quality Communities Element regarding surrounding land uses and the environment.

2.3.3. Policy: The Future Land Use and Quality Communities Element shall restrict the land uses in the Airport overlay zoning area to industrial, aviation, preservation, public/semi-public and commercial uses as recommended in the Master Plan.

Future Land Use and Quality Communities Element Goals, Objectives, and Policies

1. GOAL: THE PATTERN OF LAND USE IN PINELLAS COUNTY SHALL PROVIDE A VARIETY OF URBAN ENVIRONMENTS TO MEET THE NEEDS OF A DIVERSE POPULATION AND THE LOCAL ECONOMY, CONSERVE AND LIMIT DEMANDS ON NATURAL AND ECONOMIC RESOURCES TO ENSURE SUSTAINABLE BUILT AND NATURAL ENVIRONMENTS, BE IN THE OVERALL PUBLIC INTEREST, AND EFFECTIVELY SERVE THE COMMUNITY AND ENVIRONMENTAL NEEDS OF THE POPULATION.

1.10. Objective: The scenic/non-commercial corridor policies adopted in the Comprehensive Plan shall continue to be enforced to preserve the scenic/non-commercial designations approved by resolution by the Board of County Commissioners for specific transportation corridors, and to protect their traffic carrying capacity.

1.10.1. Policy: Land uses along designated scenic/noncommercial corridors shall be managed to protect the traffic carrying capacity and the scenic nature of these roadways.

1.11. Objective: Pinellas County shall implement its land use policies in a manner that clearly defines the future land use categories and the regulations pertaining to them that manage growth in Pinellas County.

1.11.3. Policy: Pinellas County shall continue to use the Countywide Sign Ordinance as the basis for County regulations pertaining to signs to meet the safety, environmental, and aesthetic needs of the County.

1.12 Objective: Pinellas County shall promote the location of community or neighborhood commercial development within centers in order to achieve optimal land use relationships, avoid commercial intrusion and impacts into established neighborhoods, achieve compatibility with traffic movement objectives, minimize air pollution, and serve the immediate retail shopping needs of limited or defined geographic areas.

1.12.1. Policy: Pinellas County shall restrict the proliferation of strip commercial development in areas where it has not yet become established as the predominant commercial land use pattern

1.12.2. Policy: Pinellas County shall permit commercial development in a manner that will maintain the economic vitality of recognized and established commercial areas.

1.13. Objective: The Future Land Use Map and land use policies shall define the location, type, and intensity of industrial activities (including manufacturing, services, warehousing, and trade) that may be operated in order to

diversify the County's economy and provide a broad range of employment opportunities to the County's residents.

1.13.2. Policy: Pinellas County will evaluate recommendations in the Industrial Lands Study, upon its completion in 2008, and develop recommended amendments to the Pinellas County Comprehensive Plan and land development regulations based on the Study's results. The proposed amendments will be submitted to the Board of County Commissioners no later than June 2009, and will include recommendations on retaining sufficient acreage with appropriate future land use designations to accommodate the anticipated employment growth, by type, within the County.

4. GOAL: PINELLAS COUNTY SHALL WORK TOWARD A LAND USE PATTERN THAT CAN BE SUPPORTED BY THE AVAILABLE COMMUNITY AND PUBLIC FACILITIES THAT WOULD BE REQUIRED TO SERVE THAT DEVELOPMENT.

4.2. Objective: The Concurrency Management System, applicable policies within the Pinellas County Comprehensive Plan, and the standards and the locational and use characteristics as set out in the Future Land Use Category Descriptions and Rules of the Future Land Use and Quality Communities Element comprise the County's program in which development shall be coordinated with the availability of public and private utilities.

4.2.3. Policy: Pinellas County shall discourage approval of Zoning and/or Future Land Use Map (FLUM) amendments that would increase the number of trips generated on corridors designated as long term concurrency management, congestion containment and constrained corridors in the Concurrency Test Statement.

4.2.4. Policy: Pinellas County shall discourage approval of Future Land Use Map (FLUM) amendments that would increase the number of trips generated on corridors operating at peak hour level of service E and F in 2005 and 2015 as identified in the Transportation Element.

COMPREHENSIVE PLAN OBSERVATIONS FOR CONSIDERATION

Transportation Element – Safety, Efficiency and Goods Movement

- Pinellas County strives to ensure that people and goods can be moved through its transportation system safely and efficiently;
- Freight carrying trucks move the largest number of goods through Pinellas County. The heaviest truck traffic in Pinellas County occurs on facilities that serve the County's most industrialized areas;
- The low volume of activity on the CSX railroad indicates a small percentage of goods moved through this mode. Rail usage is measured in million gross ton miles (MGTM), which incorporates the weight of freight and the rolling stock. Lines carrying less than 5 MGTM like the one operated by CSX in Pinellas County are classified by the railroad industry as "light density" lines which are candidates for abandonment;
- Due to the high cost of gasoline and the need to reduce congestion on roadways, the expansion of rail to facilitate goods movement is being considered and explored in other parts of the state. CSX is proposing a new terminal in Central Florida which would be a main distribution point for consumer goods to reach Tampa Bay and Pinellas County by truck. This facility, if developed, is likely to attract "big box" industries who are rail users in close proximity to the terminal. There are other such smaller distribution sites, such as Tampa's intermodal yard off 62nd Street and not far from the Port of Tampa, which services Pinellas County.
- Currently, there is one request to lay extra rail sidings in Pinellas County for a small lumber company. Such sidings let trains heading in opposite directions pull aside for each other, giving a single track system the benefits of a double track. The lack of requests to extend existing CSX railroad track in Pinellas County is due to a lack of potential (industrial) for use, if developed.
- The CSX Company maintains approximately 32.9 miles of branch line track, in Pinellas County, as well as several side tracks. The highest volumes shipped on the rail line (in descending order according to major commodity groupings) are pulp, paper, chemicals and allied products, lumber and wood products and petroleum and coal products. Most of the side tracks are within the industrial parks. Since the industrial areas are also on designated truck routes, these facilities are well served in terms of transportation access;
- Pinellas County strives to ensure that people and goods can be moved through its transportation system safely and efficiently;
- Freight transportation plays a key role in the economic well-being of any community
- Movement of freight to and from Pinellas County occurs primarily through heavy trucks and the St. Petersburg-Clearwater International Airport;
- Heavy trucks represent between 4% and approximately 17% of the traffic on the County's truck routes (based on MPO traffic classification counts);
- Current zoning and land uses in Pinellas County do not encourage expansion of cargo rail services. Consequently, the County's efforts to facilitate the efficient movement of goods revolve around the implementation of the MPO's Countywide Truck Route Plan, and the provision of airport accommodations for freight carriers; and

- Intermodal facilities, excluding the St. Petersburg-Clearwater International Airport, play a limited role in the movement of goods in Pinellas County. Most of the commercial goods arriving into the County are transferred at intermodal facilities located outside its borders.

Ports and Aviation

- **Aviation**

The St. Petersburg-Clearwater International Airport (PIE) is a small hub, long haul, Primary Commercial Service Airport. The airport provides services to commercial/charter, military, general aviation operations, and cargo operations. It also seeks to attract both aviation and non-aviation business and industry to utilize the land, services, and facilities located at the airport. The airport owns and maintains 532.8 acres of properties around the airport's perimeter that are used for non-aviation purposes. That property includes the Airport Business/Industrial Park, approximately 300 acres in size, and the AIRCO Golf Course (130 acres), among others. The airport itself and the properties described above are designated as Foreign Trade Zone # 193. A feasibility study of land development opportunities at the AIRCO Golf Course is being completed in 2008 to assess the financial feasibility of redeveloping the property.

The airport continues to serve as an economic engine for Pinellas County, pumping more than \$783 million into the local economy as reported in the 2004 update of the Airport Master Plan.

During 2007 the airport was home to three commercial carriers and two cargo carriers. In 2008 one of the three commercial carriers (USA 3000) is ceasing services. United Parcel Service (UPS) and DHL (formerly Airborne Express) are the two cargo carriers that provided services at the airport during 2007. DHL terminated cargo services in March 2008.

Total number of passengers passing through the airport in 2007 was 747,369. During the first four months of 2008, the airport has handled 343,487 passengers. Total number of aircraft operations at the airport during 2007 was 187,174. During the first three months of 2008, the airport has handled 42,451 aircraft operations. The peak year for passenger service at the airport since 1992 was the year 2004 with 1.33 million.

The airport handled 29,842 tons of cargo shipments in 2007, which had been steadily increasing since 1987 when UPS started operations at the airport with an annual cargo shipment of 2,699 Tons. Airborne Express started cargo services at the airport in 1999. During the first four months of 2008, the airport has handled 8,590 Tons of cargo.

Peak access times, for cargo ground operations occur very early in the morning 5:30 – 7:00 a.m. and very late evening, 9:00 – 10:30 p.m. Cargo pickup and delivery that takes place at the airport typically does not interfere with peak rush hour traffic.

Current access constraints to the St. Petersburg-Clearwater International Airport are largely ingress/egress access. There is only one ingress/egress access point at Roosevelt Boulevard and 46th Street North, which services everyone using the airport, in addition to the U.S. Coast Guard and several area businesses. If feasible, the redevelopment of the

AIRCO property to a higher density/intensity of mixed uses would require improved access to the property. Current plans in the MPO Long Range Transportation Plan will impact access to the industrial park. Those improvements are to construct the Roosevelt Boulevard Connector, realignment, and grade separation at the Roosevelt Boulevard/49th Street intersection.

The St. Petersburg-Clearwater International Airport requested an exception to the rule that the Emerging SIS airport must be located at least 50 miles from the nearest SIS airport, by showing documentation that they meet the Emerging SIS minimum size threshold (based on a three-year average) and provide low-fare, non-stop service, from smaller markets not directly served by nearby Tampa International Airport. Based on these data, the St. Petersburg-Clearwater International Airport was designated as an Emerging Strategic Intermodal System airport. Planned Drop and Planned Add connectors were also designated, reflecting plans for development of a new urban highway in Pinellas County. The Planned Drop connector is from U.S. 19 to Roosevelt Boulevard to airport entrance and the Planned Add connector is from 118th Avenue to Roosevelt Boulevard. Bypass to airport entrance.

- **Seaports**

None of the “facility ports”, as defined by Rule 9J-5, F.A.C., in Pinellas County fall within the jurisdiction of the Board of County Commissioners, and therefore, are not examined in the Transportation Element.

Future Land Use and Quality Communities Element

- The coordination of transportation and land use planning in Pinellas County occurs primarily through the review of proposed Future Land Use Map (FLUM) amendments and community redevelopment plans. Pinellas County supports higher density and mixed-use development in urban centers through the Local Planning Agency’s involvement in reviewing community redevelopment plans. The review considers whether the plans are consistent with Chapter 163, Part 3, F.S., as well as the Pinellas County Comprehensive Plan and the MPO Long Range Transportation Plan;
- In 2007, vacant developable land accounted for approximately 5.5% of the entire County and 5.9% of the unincorporated area;
- With only between 5% and 6% of the unincorporated area and the entire county currently vacant and suitable for development, it becomes readily apparent why infill development and redevelopment have become the predominant building activity within Pinellas County and the unincorporated area; and
- Unincorporated Pinellas County, in 2007, had approximately 3,579 acres of developable vacant land. It is anticipated that 75% of the remaining developable vacant land will be developed for residential uses, while 20% of the developable vacant land will be developed for either commercial, office, or industrial uses. A substantial portion of the County’s remaining industrial vacant land (approximately 13% of the vacant land in the

unincorporated area of the County) is now located in the Gateway/Mid-Pinellas Area where I-275, Ulmerton Road, Gandy Boulevard, U.S. Highway 19, and 49th Street converge.

For purposes of this overview, the general Gateway area was sectioned into three areas: west of 9th Street North; east of 9th Street North; and north of Ulmerton Road:

- 1) This area is west of 9th Street North. The general boundaries include Ulmerton Road to the north, Gandy Boulevard to the south, the area west of I-275 to the west, and 9th Street North to the east. This area is largely within the City of St. Petersburg but includes a section within the City of Pinellas Park north of Gandy Boulevard and west of I-275 and a small section within unincorporated Pinellas County near C.R. 296. Vacant acreage designated as Vacant Industrial Land totals 269.24; vacant acreage designated for Office/Commercial Land is 89.68; County Owned Property designated is 5.77 acres; Vacant Institutional Land is 5.25 acres; and Vacant Residential Land is 15.97 acres. The majority of Vacant Industrial Land and Vacant Office/Commercial Land in Gateway is in this general area;
- 2) This area is east of 9th Street North. The general boundaries are Howard Frankland Bridge to the north, Gandy Boulevard to the south, 9th Street North to the west, and Tampa Bay to the east. Vacant acreage designated as vacant industrial land is 8.717; vacant acreage designated as municipal owned property is 1.303; and vacant acreage designated as vacant office/commercial land is 3.481; and
- 3) This area is north of Ulmerton Road. The boundaries are north of Ulmerton Road, east of Roosevelt Boulevard, and west of I-275. There is slightly over ½ acre of vacant office/commercial land. This area is mid-Pinellas County and, thus, has the direct tie-in to the St. Petersburg-Clearwater International Airport, along with major transportation network improvements taking place. Future goals and policies related to Goods Movement in the Future Land Use Element may be developed in consideration of the Gateway and mid-Pinellas location.

In May 2008, The Pinellas Planning Council in cooperation with the Pinellas County Department of Economic Development completed the Pinellas Industrial Lands Study. This study builds upon previous efforts to identify the need for proactive redevelopment planning to encourage economic development by attracting and retaining target industries. It also assesses future land needs for industry, evaluates the existing regulatory framework in which the target industries operate, and identifies regulatory amendments that will protect critical locations and discourage the conversion of viable industrial to other uses.

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DISTRICT SEVEN FREIGHT MOBILITY

Phase I and II - Tampa Bay Regional Goods Movement Study

The FDOT Freight Mobility – Tampa Bay Regional Goods Movement Phases I and II Study recommends the inclusion of several recommendations into the Pinellas County and regional transportation planning process:

- A Goods Movement Management System (GMMS) – A GMMS is a freight planning process that systematically provides information on the freight transportation stakeholders to assist decision-makers in selecting and funding strategies/actions that facilitate the safe and efficient movement of freight. County/MPO level GMMSs are fundamental to effectively plan for and address freight mobility issues that will get integrated as projects into the Long Range Transportation Plan and prioritized in the Transportation Improvement Program for implementation;
- As part of the Phase II Tampa Bay Regional Goods Movement Study FDOT District Seven staff is planning to recommend to the MPOs, that only one Goods Movement Advisory Committee (GMAC) for the Tampa Bay Region be established because the industry stakeholders would prefer that alternative to avoid unnecessary local meetings, given that many of the industry representatives operate regionally. The Consultant that is to conduct the Phase II of the study has been selected, and is expected to start the project in fiscal year 2008/09;
- As a component of the Pinellas Goods Movement Study, a GMAC was established and provided review and comment during the duration of the study. While the need for a GMAC is identical to what is recommended in the FDOT's study, the Pinellas Committee included freight trucking representatives and several government and/or law enforcement members. The makeup of the Pinellas Committee is reflective of the type of Goods Movement Study for the Pinellas MPO;
- Identification of Regional Freight Activity Center (RFAC) – These are major generators of truck trip activity, including long-haul shipments to areas outside of the region. The RFACs are major contributors to the region's base employment and a key component of a regional economic development plan. The industry located within RFACs typically has significant ties to areas outside the region. The Phase I-Tampa Bay Regional Goods Movement Study identifies six RFACs in Pinellas County and includes: the Dome Industrial Center, South Central CSXT Corridor, Gateway Triangle, St. Petersburg-Clearwater International Airport, West Pinellas Industrial Area, and Tampa Road Industrial Area; and
- Identification of Regional Freight Mobility Corridors – Regional freight mobility corridors are identified in the Freight Mobility-Tampa Bay Regional Goods Movement Study, Phase I Report. They are roadways essential to the efficient movement of goods to, from, and within the region. The corridors include:
 - (a) Statewide Strategic Trade Corridors, which connect the Tampa Bay Region to other Florida markets and the rest of the nation, and

- (b) Other regional roadways that connect freight activity centers to each other and to the Statewide Strategic Trade Corridors.

Regional freight mobility corridors are designated throughout the region to provide a transportation network for the efficient movement of goods while minimizing potential impacts of truck traffic on community assets such as neighborhoods and ecosystems. The purpose of designating these corridors is to influence the regional economic development through the implementation of policies and actions that improve and preserve freight mobility in the corridors.

It is on these corridors that it is most essential to maintain adequate capacity and efficient operations in order to promote the prosperity of RFACs and the overall well-being of the region. In Pinellas County, the regional freight mobility corridors identified in the Study are:

- The Interstate System, represented by I-275, I-175, and I-375;
- US Highway 19 from SR 586 to Gandy Boulevard;
- Gandy Boulevard;
- SR 586 from US Highway 19 to SR 584;
- SR 584 from SR 586 to SR 580;
- SR 580 from SR 584 to the Hillsborough County line;
- Roosevelt Boulevard and planned connector from US Highway 19 to the proposed 118th Avenue North Expressway;
- Roosevelt Boulevard East Flyover from Ulmerton Road to Gandy Boulevard;
- Ulmerton Road from 113th Street to I-275;
- The proposed 118th Avenue North Expressway from US Highway 19 to I-275;
- CR 296 (Bryan Dairy Road) from Starkey Road to US Highway 19; and
- Starkey Road from Ulmerton Road to CR 296.

US Department of Transportation

The United States Department of Transportation has developed policy regarding freight transportation planning in metropolitan areas (Framework for a National Freight Policy). The policy supports economic growth and environmental quality through strategies that can be part of the Congestion Management Process, as well as freight-specific capacity improvements such as truck-only lanes to reduce freight transportation bottlenecks.

PINELLAS COUNTY MPO – GOODS MOVEMENT STUDY

This updated study incorporates local/county concepts derived from the Pinellas County MPO Goods Movement Study and promotes the identification of the following transportation planning concepts in local governments' comprehensive plans and in the Pinellas County MPO Long Range Transportation Plan;

- Identification of Local Freight Activity Centers (LFAC) – These are local generators of truck trip activity, including shipments to areas of the Tampa Bay region. The LFACs are major contributors to the County's base employment and a key component of a County economic development plan. The industry located within LFACs typically has significant ties to areas in the region. The LFACs in Pinellas County are identified as a part of the Goods Movement Study; and
- Identification of Local Freight Mobility Corridors – Local freight mobility corridors are roadways essential to the efficient movement of goods to, from, and within Pinellas County. The corridors include:
 - Strategic Local Trade Corridors, which connect Pinellas County to Strategic Statewide Trade Corridors and the other Tampa Bay local markets; and
 - Other local roadways that connect LFACs to each other and to the Local Strategic Trade Corridors.

Local freight mobility corridors can be designated throughout the County to provide a transportation network for the efficient and safe movement of goods while minimizing potential impact of truck traffic on community assets such as neighborhoods and ecosystems. As in the case of the regional corridors, the purpose of designating the local freight mobility corridors is to influence Pinellas County economic development through the implementation of policies and actions that improve and preserve connectivity with the regional infrastructure and efficient freight mobility in the freight corridors.

GENERAL REGULATORY RECOMMENDATIONS

After careful review of the comments from the GMAC, and to be consistent with the Florida Department of Transportation District Seven Freight Mobility, the following general regulatory recommendations were added.

- Truck Route Plans, ordinances and municipal codes have been adopted by the Pinellas County Board of County Commissioners, the Pinellas County MPO, and the Cities of St. Petersburg, Clearwater, Dunedin, Largo, and Pinellas Park. It is recommended that municipal governments and Pinellas County coordinate their efforts to revise their ordinances and municipal codes to increase their uniformity, and to facilitate enforcement of restricted vehicle operation on designated truck routes;

- Factors to be considered in evaluating any potential changes to existing truck routes should include land use and environmental sensitivity, engineering considerations, safety, and security considerations, alternative route availability and need;
- A major goal of a truck route designation should include preserving existing residential neighborhoods, while encouraging an appreciation of the important role trucks play in the County's economy; and
- Enforcement will still continue to play a significant role in goods movement within Pinellas County. Development of a strategy to help local law enforcement officials share information, concerns, and successes should be considered.

TECHNICAL MEMORANDUM

NO. 2

TECHNICAL MEMORANDUM NO. 2 STAKEHOLDER GROUP AND INTERVIEWS

INTRODUCTION

The Florida Department of Transportation District Seven Freight Mobility, Phase I, Tampa Bay Regional Goods Movement Study recommends the establishment of a Goods Movement Management System (GMMS) for each county within FDOT District Seven.

A key component of a GMMS is the establishment of a Goods Movement Advisory Committee (GMAC). For purposes of the Pinellas County MPO Goods Movement Study, a representative group of 15 stakeholders was invited to participate as advisory to MPO staff and the Consultant to ensure that the industry. In addition, Law enforcement agencies and government representatives provide comments on issues and concerns. The membership goal for the GMAC was to include up to 75% of freight industry representatives and the remaining 25% includes representation from the state, county, and local agencies that operate and maintain the transportation system in Pinellas County, as well as local enforcement and State regulatory agencies. Membership of the Goods Movement Advisory Committee is included in Appendix A-1 of this Technical Memorandum.

Upon formation of the GMAC, the consultant prepared a survey and conducted one-on-one meetings with the members. The purpose of these meetings was to gain a comprehensive understanding of the desired objectives of each stakeholder. Interviews were also conducted to gather detailed information regarding the stakeholders concerns about restricted vehicles and designated truck routing. A copy of the survey instrument is included in Appendix A-3.

Emphasis was placed on the identification of local freight activity centers and local freight corridors to supplement the regional freight activity centers and mobility corridors identified in the Tampa Bay Regional Goods Movement Study-Phase I. Generally associated with Local Freight Activity Centers was the identification of local freight mobility corridors. The criteria considered to identify those corridors are documented in Appendix A-2. The objective of those criteria was to provide delivery and distribution access to regional and local freight activity centers, or connection to a regional freight mobility corridor, while also considering the magnitude of truck traffic volume. The documentation includes the reference of regional or local freight activity centers served by the designated corridor. Map 2-1 identifying the location of activity centers and mobility corridors is also included in Appendix A-2.

The freight transportation stakeholders in the private and public sectors understand that, because of the freight industry focus on national and global operations, freight transportation planning, project development, prioritization, and funding of freight projects is complicated by the fact that states, local governments, and the MPOs are limited by Statute to the area over which they have jurisdiction. An additional constraint to effective participation of freight industry stakeholders in the public sector transportation planning process is the different focus on its timeliness, needs, and the expectations of the private sector, where “innovate-today-or-be-out-of-business-tomorrow” is the norm. Documentation of stakeholders/carriers’ concerns is included in Appendix A-4.

The identification of truck routes that have operational, safety, or congested conditions through an analysis of historical traffic count classification data of heavy trucks, heavy truck crash data, and level of service information is documented in Appendix A-5.

SUMMARY OF GOODS MOVEMENT ADVISORY COMMITTEE (GMAC) AND CARRIER ISSUES/CONCERNS

A substantial amount of time and effort was devoted to obtaining input from the Goods Movement Advisory Committee members and freight carriers who traverse the Pinellas County truck routes highway network. The intent of the GMAC process was to survey and interview 15 regular members, 11 from the freight industry and 4 from the government side. Approximately 45 GMAC members and/or carriers were contacted, numerous times in many cases, in an effort to obtain survey input from the freight movement community. Response and compliance was approximately 25%.

Industry participation and input was somewhat difficult to extract but those who participated in the survey process were highly involved. Carrier survey input (all industry) proved even more difficult to obtain; however, a total of 21 surveys were completed and submitted through 11 representatives. A summary of the issues highlighted in the carrier survey is included in Appendix A-4. Additionally, the associated windshield survey observations made at select Freight Activity Centers supplemented this process. Valuable information was obtained as part of the meeting, survey, interview, and windshield survey process. The following are highlights of the GMAC member and carrier concerns as submitted and discussed.

Restricted Vehicle Signage pertaining to “Truck Route” or “No Truck” travel

- Placement of signs is an issue. A truck driver may not recognize a route restricted to trucks until they are already traveling on it due to site distance issues such as a tree blocking one’s view;
- Restricted vehicle drivers understanding the signs and their meaning;
- There are inconsistencies related to truck route signage within the County;
- Although several respondents appreciated that the City of St. Petersburg signs all of its truck routes and, thus, increases signage visibility, the majority felt it was unnecessary to sign unrestricted truck routes;
- The desire is for consistency countywide in the way the unrestricted and restricted truck routes are signed;
- One suggestion was to change the wording from “No Trucks” to “No Thru Trucks” to eliminate driver confusion; and
- Suggestion to consider the use of signage to restrict truck travel to right lanes where appropriate, which is done in St. Petersburg to some degree.

Problem locations on or near the Pinellas Truck Route network as it relates to signage

- Belleair Road off of U.S. 19 and 102nd Avenue North off Seminole Boulevard – site distance issues for restricted vehicle drivers coming off of the truck route onto a restricted roadway;
- West Bay Drive (S.R. 686) between Clearwater-Largo Road and Indian Rocks Road – identified as lacking “No Truck” regulatory signage; and
- Indian Rocks Road between Walsingham Road and West Bay Drive identified as lacking “No Truck” regulatory signage.

Restricted Truck Route travel specific times of the day and/or night

- The current posted time for restriction on restricted truck routes is 6:00 p.m. – 6:00 am;
- There is a strong sentiment from GMAC freight industry members to allow truck travel as early as 4:00 a.m. and, possibly, as late as 8:00 p.m. Earlier hours are more critical to the industry;
- Law enforcement would not be affected by a change in restriction times;
- Expanding the hours of travel on these roads for trucks may reduce overall peak hour congestion on some roads and have a positive safety effect; and
- Community values and neighborhood sensitivity issues would have to be factored into a decision to change current established hours. Public participation and input is a necessary component of this process.

Truck Route Plan and/or Freight Activity Center “problem” areas identified

- Keystone Road – two-lane undivided road experiences severe congestion and safety issues. This is an unrestricted truck route;
- U.S. 19 – Pinellas Park area south to 54th Avenue South. Request for dedicated through right-turn lane to allow for better access to side streets;
- 4th Street North. – Deliveries made in the center through lane from 22nd Avenue North to downtown area. Need for operations review and appropriate “pull-over” opportunities;
- City of Pinellas Park – Consider removing 62nd Avenue North between 49th Street North and 66th Street North from the Truck Route Plan;
- West Pinellas Industrial Area issues include:
 - The danger of making a left-hand turn onto Ulmerton Road at unsignalized Lake Avenue SE. At the request of FDOT, the Pinellas County MPO held a public hearing on December 12, 2007 and approved the installation of the signal in conjunction with the widening project for Ulmerton Road being conducted by FDOT;
 - Making a U-turn on Ulmerton Road to avoid the left turn at Lake Avenue SE but encountering heavy traffic volume and CSX rail nearby;
 - 20th Street SE needing CSX signalization installation and activation before the County road can be improved and opened to provide access to Lake Avenue SE and Starkey Road;
 - Freight haulers driving on restricted and signed residential Donegan Road and 8th Avenue SE to access their business;

- Ingress/Egress issues for businesses that use or front Starkey Road in the Industrial Area; and
- The Pinellas County Public Works Transportation Department is actively addressing the problems this area is experiencing.

Major roadways not on the truck route network that are experiencing problems, may be evaluated for truck route potential

- 102nd Avenue North – from Starkey Road to 113th Street North;
- Alderman Road between U.S. 19 and Alternate U.S. 19;
- Keene Road (C.R. 1) from Gulf-to-Bay Boulevard to Alderman Road;
- West Bay Drive from Missouri Avenue to Clearwater-Largo Road;
- Clearwater-Largo Road/Ft. Harrison Avenue from West Bay Drive to Myrtle Avenue; and
- 63rd Street North between 142nd Avenue North and 146th Avenue North – identified as having poor pavement condition.

Law Enforcement issues including vehicle weight enforcement and truck route restriction issues

- Law enforcement concentrates more on enforcement of vehicle operational safety than on enforcement of route restrictions;
- Law enforcement tries to work with the freight industry allowing them to do their job effectively;
- Law enforcement may need education on the enforcement of restricted vehicle restrictions and protocols;
- The current County Ordinance does not allow the Pinellas Sheriff's Office to enforce restrictions pertaining to weight;
- Weight enforcement is performed by FDOT Motor Carrier Compliance (MCC);
- The Pinellas Sheriff's Office must contact FDOT MCC to address vehicle weight enforcement issues;
- The GMAC has the perception that Law enforcement cannot move trucks involved in crashes and rely on freight companies, which typically have their own wrecker, to move their truck when involved in a crash. MPO staff investigated this issue for clarification as follows: Law Enforcement officers can legally cause vehicles and cargo to be removed. They do not have to wait for the owners wreckers; and
- A traffic incident management plan is needed and should address a plan for the quick removal of trucks involved in crashes. This issue was also clarified based on existing incident management coordination. There is an existing working group called the Pinellas Traffic Management Team (TIM) which includes representatives of FDOT, Pinellas County, local law enforcement and traffic operations, fire, Road Rangers, towing companies, and other first responders. The TIM have been operating for about seven years in Florida to plan and implement countywide scene clearance strategies. There is also a Statewide project underway called the Rapid Incident Scene Clearance (RISC). Information used for clarification was provided by Mr. Terry Hensley, ITS Operations Manger, FDOT District Seven.

Miscellaneous

- Use technology advances to meet future freight mobility needs;
- Address issue of consistency of local ordinances;
- Address the policy issue of detours related to construction areas on the truck route network. This issue is being addressed in the draft ordinance amendatory language to amend the Pinellas County Code of Ordinances, Chapter 122, Traffic and Vehicles, Article III, Truck Routes, Section 122-61 to 122-66;
- Class A licensed drivers will no longer be allowed to take Defensive Driver classes to avoid accumulating points when cited;
- There is a perception in the GMAC that there is not a consistent policy to establish “lay-over” spaces for restricted vehicles to deliver goods along truck routes. This issue can be addressed through access management policies at the State, County and local levels; and
- General concern over roadway condition and deterioration.

SUMMARY OF GMAC AND CARRIER SURVEY INTERVIEWS

Pinellas County Sheriffs Office – Deputy Nick Lazaris

The Pinellas Sheriff’s Office (PSO) believes the restricted vehicle signage could be better placed on some roadways. For example, the signs are posted in a manner that a restricted vehicle driver would not know they are on a restricted roadway until they are already on that restricted road such as Belleair Road (at U.S. 19) and 102nd Avenue North (at Seminole Boulevard).

In general, Deputy Lazaris believes the signage in place in Pinellas County is adequate, that it just needs adjusting. He is not a proponent for signing all truck routes as the City of St. Petersburg does. Enforcement of the truck route restrictions is a 24-hour a day job for the PSO; therefore, any time change to route restriction would not effect the PSO enforcement operation. Deputy Lazaris notes that some roadways do need improvement from heavy use of trucks but did not identify specific examples.

The PSO expressed concern with the current County Ordinance that does not have provisions to enforce restrictions pertaining to weight. Weight enforcement is only performed by FDOT Motor Carrier Compliance (MCC). The PSO does work with FDOT MCC to restrict overweight vehicles, but not on a daily basis. The PSO currently has no resources to deal with overweight vehicles. They must contact FDOT MCC when an issue arises. MPO staff further discussed this issue with the supervisor of the PSO Traffic Enforcement Unit, Sergeant Kenneth Page. Under current conditions, by Statute, only the State’s Motor Carrier Compliance Unit can issue citations to overweight vehicles. In order for the PSO to enforce weight restrictions, the Pinellas County Code would have to be amended to deal with weight restrictions, and additional funding allocated for staffing, capital, operation, and maintenance costs in support of those activities.

Pinellas County Public Works Transportation – Tom Washburn, P.E., Safety and Special Projects

Mr. Washburn stated he has no preference how the entire County is signed concerning restricted vehicles, whether signing unrestricted routes or not; however, he does believe there should be

uniformity throughout the entire County. Tom stated, the complaints Public Works receives related to truck route restrictions are almost always from citizens and not the trucking industry.

Concerning lessening the restrictions on times, Mr. Washburn thought allowing truck travel earlier on restricted routes could ease morning and evening peak period congestion. Additionally, another idea would be to restrict trucks from peak period travel on restricted roadway, or at least restrict truck travel on certain problem roads during peak periods. Tom's biggest related concern is with two-lane undivided roads where traffic is heavy (Keystone Road is an example) and traffic has difficulty passing safely.

The problem location in the West Pinellas Industrial Area for safety in turning movements at the Ulmerton Road/Lake Avenue SE intersection is being addressed with the MPO approval for the installation of the traffic signal.

Mr. Washburn felt that truck routing restrictions are not affecting the Pinellas County economy, as the business community adjusts accordingly. Mr. Washburn supports the Sheriff's Office input on amendments to the Ordinance to have provisions for vehicle weight restrictions.

Waste Management of Pinellas – Bonnie Martinez, Health and Safety Manager for Central Florida

Ms. Martinez stated that Waste Management drivers understand and make use of the restricted vehicle signage in place. They feel the signage is adequate for their needs. Overall, the restricted route times of 6:00 am – 6:00 pm allowing travel meet the needs of this business. There are some exceptions during the Christmas season. Bonnie stated that drivers attempt to avoid using 102nd Avenue North between Seminole Boulevard and Starkey Road. They experience a loss of time and fuel. There were no other areas of concern or issues.

Great Bay Distributors – Mike Coleman, Fleet Manager

Great Bay Distributors had a total of six survey responses completed. Mr. Coleman was interviewed and discussed input from all of the surveys. Great Bay Distributors travel in Pinellas and Pasco County only. Respondents expressed some concern about the existing truck route network meeting business roadway needs. Specifically, non-truck route roads of concern included 102nd Avenue North west of Starkey Road, Alderman Road between Alternate U.S. 19 and U.S. 19, and C.R. 1 between Main Street (S.R. 580) and Drew Street.

Drivers expressed concern that restricted vehicle signage could be more visible, although drivers understand the signage. The City of St. Petersburg was given praise for signing its truck routes, thus, providing visibility. Drivers strongly recommended that an earlier start time be allowed on restricted truck routes anywhere from 3:00 a.m. to 5:00 am, as the stores and businesses they service request early delivery to not interfere with shopping customers. Vehicle weight restrictions are not a factor as weight loads decrease as the driver's day continues.

Areas and issues of concern related to truck route travel include:

- West Pinellas Industrial Area – Great Bay Distributors is located here. Ingress/egress is difficult from Starkey Road. It is difficult to leave their property at 8:00 a.m. on weekday mornings. Staff feels, once Starkey Road is widened as planned, ingress/egress to the Great Bay property will be even more difficult. Staff is aware of the fact that Pinellas County Public Works is attempting to address the problems on 20th Avenue SE, Lake Avenue SE, Ulmerton Road, and the CSX. CSX must install rail signals along 20th Avenue SE prior to the County making any additional improvements. Opening 20th Avenue SE from Starkey Road to Lake Avenue SE would be very helpful;
- 102nd Avenue North from Starkey Road to 113th Avenue North. Consider its viability as a truck route;
- Alderman Road between U.S. 19 and Alternate U.S. 19. Consider its viability as a truck route;
- C.R. 1 between Main Street (S.R. 580) and Drew Street. Consider its viability as a truck route;
- U.S. 19 – Consider the addition of right-turn lanes from the Pinellas Park area south to 54th Avenue South to allow better access to side streets; and
- 4th Street North – Deliveries are currently made in the middle through lane from 22nd Avenue North south to downtown. Improvements are needed to prevent this from taking place.

Publix – Mike Lester, Supervisor for Dispatch

Mr. Lester indicated his drivers expressed concern in the past about making deliveries off the truck route networks and over time restrictions on restricted truck routes. Through the GMAC process, those concerns have been answered. The six drivers Mr. Lester spoke to felt that signage for restricted vehicle travel is adequate. They felt that signing all truck routes, as the City of St. Petersburg does, is unnecessary. Mr. Lester did suggest changing the wording on No Truck signs for restriction to No Thru Trucks, since exceptions are made for deliveries to destinations on these roads. He felt this would be less confusing to new restricted vehicle drivers or non-English speaking drivers.

The only problem area noted was on West Bay Drive (S.R. 686) from Clearwater-Largo Road to Indian Rocks Road. West Bay Drive is not a truck route, nor is Indian Rocks Road. Mr. Lester indicated, and he is correct, that there are no truck restriction signs on these roads. Mr. Lester was to provide additional areas of concern where it is difficult to exit Publix stores onto truck routes but the consultant did not receive those concerns after an additional request.

Florida Department of Transportation District 7 – Daniel Lamb, Modal Systems Planning Administrator

Mr. Lamb believes that, for planning, publishing and distribution purposes, signing of all truck routes may be of some benefit as it relates to the Truck Route Plan Map. He felt that, generally, the 6:00 AM. – 6:00 PM delivery timeframe on restricted routes was fine. However, as the economic needs have expanded statewide, it may be useful to study expanding these time frames from 5:00 AM. – 8:00 PM. Mr. Lamb referenced the “hot spots” survey from the FDOT Regional Goods Movement Study for study of areas and issues of concerns as it relates to the Pinellas County Truck Route network.

Mr. Lamb also felt that the economic needs of Pinellas County were being addressed by the freight community, as long as the County continues to recognize the specific access and mobility needs of trucks and is willing to balance these against the concerns and needs of the neighborhoods potentially impacted. Mr. Lamb felt the current weight restrictions and local ordinances were working well; however, he suggested the County needs to be concerned with changing technology and meeting future needs. He also recommended that consistency among local ordinances be studied to determine if problems were being created.

Zone Defense: Division of Power-Linx, Inc – James Markus, Vice-President & General Manager

Zone Defense manufactures and distributes accident avoidance camera systems to commercial truck fleets. Mr. Markus distributed surveys to drivers who are customers and use Pinellas County, Tampa Bay, Florida, and the Southeastern United States roads. Mr. Markus stated that response regarding the Pinellas County Truck Route Plan meeting business needs was generally positive. Complaints were received about construction areas, however. General comment was made that detour routes were confusing.

Mr. Markus felt that truck routes should be signed, as done in St. Petersburg. This benefits those who are not regularly driving truck routes in Pinellas County. The issue of poor pavement conditions on 63rd Street between 142nd Avenue North and 146th Avenue North was brought up. Additionally, the name changes of continuous streets throughout Pinellas County were mentioned. Generally, Mr. Markus felt the Truck Route network works well for those drivers who know the rules.

Federal Express – Cheri Wedding

Ms. Wedding felt the Clearwater area could do a better job of delineating Truck Route and No Truck travel signage. She felt drivers understood the signs when posted. Ms. Wedding stated that consistency in advanced notice signing would provide restricted vehicle drivers notice of roads that may be difficult to navigate. She felt the current timing on restricted truck routes; 6:00 PM – 6:00 AM was fine. For purposes of delivery, she cited the Clearwater Beach roundabout as a potential concern for navigating a truck. In her local driving experience, she felt that U.S. 19, S.R. 580, and S.R. 92 (Gandy Boulevard) were well signed for the general public to understand, and offered an acceptable travel experience for restricted vehicle operators.

Twiss Transport Inc. (West Pinellas Industrial Area) – Len Wernicke, Fleet Manager

Twiss Transport is an interstate transportation business. They are apportioned to travel 48 states. In most cases, Mr. Wernicke believed truck route signage was understood by drivers, especially in the case of a restricted road. He did not necessarily feel additional signage on truck routes was warranted. Mr. Wernicke felt adjustments to travel time on restricted truck routes should be done on a one-on-one basis and not a blanket change. He felt it was difficult to answer questions related to truck routing restrictions affecting economic impact and vehicle weight restrictions on trucks. The industry and the neighborhoods both have legitimate concerns.

Mr. Wernicke's main area of concern centered on the West Pinellas Industrial Area where Twiss Transport is located. He stated the only safe way to exit their location is on Donegan Road/8th Avenue SE to Seminole Boulevard, then Seminole Boulevard to Ulmerton Road or East Bay Drive. Donegan Road and 8th Avenue SE restrict truck travel and are signed. There are single-family residences on both streets. He states it is dangerous to exit their facility via Lake Avenue to Ulmerton Road, especially when making a left turn. Ideally, 20th Avenue SE would be open from Starkey Road to Lake Avenue SE. A final item of interest raised is that Class A licensed drivers will no longer be allowed to take Defensive Driver classes to avoid accumulating points when cited.

Caladesi Construction (West Pinellas Industrial Area) – Wayne Wyatt, Site Coordinator

Caladesi Construction is in the construction industry. They travel the Tampa Bay region only. Overall, the Pinellas County Truck Route Plan meets their business needs; however, Mr. Wyatt feels there are inconsistencies related to truck route and no truck signage throughout the County and its municipalities. He feels drivers of restricted vehicles understand and make use of the existing signage. Mr. Wyatt stated only the restricted truck routes need be signed, for Caladesi drivers; however, other for-hire transport businesses may benefit from the entire network being signed. The workday for Caladesi is from 6:00 AM. – 3:30 PM which falls within the allowed time period of operation for restricted truck routes.

The issue item brought forth was the travel around the West Pinellas Industrial Area. They travel Donegan Road and 8th Avenue SE knowing these streets are local. This is done for safety reasons. Largo Police Department and the PSO understand the dilemma. Restricted vehicle drivers use these roads for access to and from their business. Mr. Wyatt expressed again the difficulty and associated dangers of making a left turn onto Ulmerton Road from Lake Avenue SE. As indicated before the issue is being resolved through the MPO approval to install the traffic signal.

Pinellas Suncoast Transit Authority – James Byers, Planner

Mr. Byers is a former law enforcement officer and has been involved with the Pinellas County Community Traffic Safety Team for many years. He offers a unique perspective. He feels there is a general lack of consideration for the trucking industry needs and activity they generate in Pinellas County. He feels drivers from outside the area do not understand the signage as posted in Pinellas County related to restricted vehicles. He states there is too much sign clutter in

general. From his past profession, he knows law enforcement officers will not cite truck drivers for traveling on a restricted roadway unless it is a major complaint.

Parking spaces in general are an issue. There are not enough “lay-over” spaces. It is tough for the drivers to make all their stops. Lay-over spaces should be incorporated in roadway design. Again, the big consideration is for visiting drivers. He feels this problem is only going to get worse as Pinellas County grows. Mr. Byers voiced concern about trucks that break down. Currently, a wrecking company must be called to move a truck. The trucking company has its own wrecker unless they are from out of town. There is no ordinance that allows a law officer to have a truck removed. A traffic incident management plan is needed and should include a plan for quick removal of trucks involved in crashes. This issue is being addressed through the Traffic Incident Management Committee spearheaded by FDOT District 7.

Mr. Byers feels signage in the entire County needs to be consistent and clear and has no preference over signing truck routes or not. He feels that restricted truck route timeframes should be expanded as needed.

A study was done regarding alternate routing for access and egress to the PSTA Scherer Drive facility in an effort to take PSTA vehicles off 34th Street North northbound in the Gateway Freight Activity Center. Ultimately, it was determined to be too costly not to use this route.

IDENTIFICATION OF PROBLEM TRUCK ROUTES

Operational and Capacity – Areas of Significant Congestion

- Tarpon Avenue/Keystone Road – Alternate U.S. 19 to East Lake Road;
- U.S. 19 – Tarpon Avenue to Gulf-to-Bay Boulevard;
- East Lake Road – Keystone Road to Tampa Road;
- Alternate U.S. 19 – Tarpon Avenue to Drew Street;
- McMullen-Booth Road – Tampa Road to Gulf-to-Bay Boulevard;
- Gulf-to-Bay Boulevard – Fort Harrison Avenue to Courtney Campbell Causeway;
- Ulmerton Road – Howard Frankland Bridge to Starkey Road;
- Starkey Road – Belleair Road to Park Boulevard; and
- Bryan Dairy Road – 66th Street North to Starkey Road.

As identified by Consultant, the roadways and segments listed above are not ranked nor in order of concern. Note that evaluation and analysis were made by segment (between restricted or unrestricted truck routes). The list above was derived from 2004 Level of Service and Volume to Capacity Ratio data. Segments funded for improvement within the upcoming five year cycle were not evaluated since the proposed improvements intend to address congestion.

Crashes involving Heavy Vehicles

- U.S. 19 near Drew Street;
- 66th Street North near Bryan Dairy Road;

- Ulmerton Road at 66th Street North;
- U.S. 19 at Tampa Road;
- U.S. 19 at Curlew Road;
- Gulf-to-Bay Boulevard at Belcher Road;
- Duhme Road at Park Boulevard;
- Seminole Boulevard (Alternate U.S. 19) at Park Boulevard; and
- Park Boulevard between 66th Street North and U.S. 19.

The segments and intersections are not ranked nor in order of concern. These intersection/segments of concern are based on analysis of the 2002-2004 crash information obtained from the Pinellas County MPO Crash Database. Refer to maps 5-8, 5-9, and 5-10 in Technical Memorandum No. 5, Update of the Existing Truck Routes Plan, for incident location and crash data and see Map 5-1 (Hot Spots Map), and Maps 5-3, 5-5 & 5-7 (Level of Service). These segments or intersections of study may change should it be determined they are scheduled for improvement within the upcoming five year funding cycle.

APPENDICES
FOR
TECHNICAL MEMORANDUM
NO. 2

**A-1 GOODS MOVEMENT ADVISORY COMMITTEE
MEMBERSHIP**

**A-2 FREIGHT ACTIVITY CENTERS AND MOBILITY
CORRIDORS**

A-3 STAKEHOLDERS SURVEY QUESTIONNAIRE

**A-4 CARRIER SURVEY OF LOCAL TRANSPORTA-
TION CONCERNS**

A-5 IDENTIFICATION OF PROBLEM ROUTES

APPENDIX A-1

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APPENDIX A-2

FREIGHT ACTIVITY CENTERS AND MOBILITY CORRIDORS

REGIONAL FREIGHT ACTIVITY CENTERS

Dome Industrial Center

This activity center is located along the CSXT railroad corridor south of 1st Avenue South, east of 28th Street South and north of I-275. The area is made up of 122 businesses with over 1,000 employees located on approximately 122 acres of industrial land. Primary employers located within the activity center include Cox Lumber; Littrel Building Materials; Film Technologies Inc.; Elreha Printed Circuits Corporation; Bama Seafoods; Euro-Bake; and the St. Petersburg Clay Company.

The site visit took place on Thursday, November 9, 2006.

Terminal Drive is heavily used for loading areas. Cement mixers are using 5th Avenue South to 24th Street South to the entrance of CEMEX. The CEMEX cement plant is located on 24th Street South.

The road is brick and in poor condition. There are numerous streets that are brick and in poor shape. There is not a lot of traffic on these streets in the industrial area so trucks are not having much of a problem getting in and out.

A truck unloading at a silo at Eurobake on 20th Street South blocking the northbound lane was noted.

The main truck routes include 1st Avenue South, 16th Street South, and 20th Street South.

An employee from Jagged Edge, located on 18th Street South, told HNTB staff that he has heard of no major problems from the truck drivers getting in and out of their company.

Alleyways are also used by some trucks in order to get to delivery areas.

Film Technologies Inc., on Terminal Drive, is a heavy truck delivery business.

Polar Glo Paint Company, Gulfside Supply Inc. (727 322 6112).

Tab Glass & Window (727 323 7040).

Gateway Triangle

This activity center is located south of the St. Petersburg-Clearwater International Airport. It is generally bounded by Ulmerton Road on the north, U.S. 19 on the west, Gandy Boulevard on the south, and 9th Street North on the east. For the most part, the area is contained within the municipal boundaries of Pinellas Park and St. Petersburg; however, there are numerous parcels that are not within the incorporated area. The Gateway Triangle includes diverse manufacturing, warehousing, distribution, and office uses. The Gateway Chamber of Commerce estimates there are 33,000 jobs in the Gateway Triangle, of which 22% are industrial related.

The Gateway Triangle site visit took place on November 8, 2006.

Gateway:

Boundaries – 9th Street North to the east, Gandy Blvd to the south, Ulmerton Road to the north, and U.S. 19 to the west.

Vehicle truck types observed entering Gateway are vendors, freight delivery, FedEx, buses, and recycling/garbage.

The Pinellas County Resource Recovery Facility is located in the Gateway area, (28th Street North and 118th Avenue North), which also attracts heavy traffic from the general public discarding solid waste.

Gateway hosts businesses such as FedEx, Cintas (uniforms), and the Pinellas County Resource Recovery Plant. Staff observed quite a few businesses that were closed, including the giant MCI building/complex. The old Echelon site offers 125,000 square feet of vacant office space. There are numerous vacant lots along 28th Street North, although it appears some are about to be developed.

There are numerous ways in and out of the Gateway Center. There were no problems noted getting in or out as there are multiple lanes and lane widths seemed to be wider than normal.

Very heavy truck traffic was observed on 126th Avenue North at 34th Street North. The Recycling Center Services of Florida (3060 126th Avenue North) and Sony Glasbrenner (3565/3571 126th Avenue North) account for a great deal of this traffic. Sony Glasbrenner is a road paving operation and grease depository.

There is high volume truck traffic in general along 118th Avenue North from 28th Street North to 49th Street North. This street offers numerous auto salvage yards, Keys cement, and many other industrial businesses.

PSTA's new administrative and operations headquarters are located on Scherer Drive between 28th Street North and 34th Street North. Although the transfer center along 34th Street North is busy, there did not seem to be obvious problems for maneuvering buses.

The internal roads in Gateway are wide and appear to be designed for significant truck traffic.

Carillon

Boundaries – Roosevelt Boulevard to the west and Ulmerton Road to the north.

Carillon is a 2,675,000 Sq. Ft. office park. The only truck traffic is from deliveries and vendors such as FedEx, UPS, Coca Cola, water companies, Staples Office Supplies. Entry into the park is on Roosevelt Boulevard and the intersection is signalized.

No heavy truck traffic, such as tractor-trailers, was observed.

Pinellas Business Park

It is bounded by Roosevelt Boulevard on the west.

Pinellas Business Park is strictly an office park. Truck traffic consists of deliveries and vendors such as UPS, FedEx, Coca Cola, water businesses, and Staples Office Supplies. Entry is on Roosevelt Boulevard and there is no traffic signal.

No heavy truck traffic, such as tractor-trailers, was observed.

Tampa Road Industrial Area

This activity center area is generally bounded by S.R. 580 to the south, Commerce Drive to the west, Forest Lakes Boulevard to the north, and Racetrack Road to the east and is considered a Regional Freight Activity Center in the FDOT Freight Mobility Tampa Bay Regional Goods Movement Study-Phase I.

The site visit took place on November 9, 2006.

A general observation is that this FAC is prosperous and compact, and truck traffic flows well internally. Industry in general is of the “clean” variety. There is some vacant land. All buildings/complexes appear to be filled.

There is heavy activity at the Roberts Road/Burbank Road intersection, which is north of Douglas Road. Due to heavy automobile parking on these streets near the intersection, it appears that trucks have some difficulty maneuvering. A large business at this intersection is Structall Building Systems located at 350 Burbank Road.

Other large businesses observed include:

Rinker Building Products – Douglas Road. Parking lots are on both sides of the facility. Both are long and narrow. There are a considerable number of vehicles in both parking lots. There is a tight-turn radius in the delivery entrance. The business includes sand pick up for cement mix trucks.

Mi Con Packaging Inc. and Mi Windows and Doors – Commerce Boulevard. This is a very large site but no problems were noticed.

Tru Green Chem Lawn – Dunbar Avenue at Douglas Road. No problems noticed.

The intersection of S.R. 580 and Commerce Boulevard has a flashing red traffic signal but is not a fully-activated signal. Traffic is very heavy and left turns are especially difficult.

South Central CSXT Corridor

This activity center includes northern and southern sections connected by a CSXT railroad corridor. The northern portion of the area includes the Joe’s Creek Industrial Park and is generally bounded by 46th Avenue North on the north, the CSXT rail corridor on the west, 31st Street North on the east, and 42nd Avenue North on the south. The southern portion is bounded by 30th Avenue on the north and 9th Avenue North on the south and includes several blocks on both sides of the rail corridor, including an area that follows the 22nd Avenue North spur to the St. Petersburg Times plant on 34th Street North.

The site visit took place on November 8, 2006.

Businesses located in the South Central CSXT Corridor include Pepsi, CarQuest, Kanes Furniture, Dairy Mix, JFK Supply, GSI Building Products, and Clear-Cote.

44th Street North is the main artery for trucks coming from U.S. Highway 19 and 28th Street North.

All trucks are backing in on 44th Street North to get into their businesses.

Box trucks, semis, Pepsi delivery trucks and fork lifts use 44th Street North.

Streets are too narrow for most trucks and they have to back up into delivery bays. Traffic is not very heavy so it does not cause a major problem for semis and other trucks.

Some trucks are using 31st Street North to get to 38th Avenue North.

46th Avenue North off U.S. Highway 19 is also heavy with truck traffic. Trucks are entering and exiting on U.S. Highway 19 or 38th Avenue North.

Railroad tracks do not appear to play any role in deliveries on the west side of U.S. Highway 19. Delivery trucks use Morris Street and exit back onto 38th Avenue North.

St. Petersburg-Clearwater International Airport

This activity center is located north of Ulmerton Road and east of 58th Street North and includes the St. Petersburg-Clearwater International Airport, which occupies approximately 2,000 acres, and the Rubin ICOT Center (a Development of Regional Impact).

The site visit was conducted on November 8, 2006.

St. Petersburg–Clearwater International Airport entrance:

Vehicle types include dump, garbage, vendors, freight, gas, and UPS freight.

- Spoke with Gene Hastings (UPS), 727-539-6944 about types and volumes.
- A.M. – 11 tractor-trailers and 12 box type trucks
- P.M. – 13 tractor-trailers and 28 box type trucks

All UPS vehicles use Roosevelt Boulevard.

One trouble spot noted. After turning into the airport, truck traffic makes an immediate left onto Fairchild Drive. All traffic except UPS continues on Fairchild Drive to its destination. UPS vehicles turn right off Fairchild Drive into a security area. The security shack is located too close to Fairchild Drive, which causes a back-up onto Fairchild Drive. Fairchild Drive is not wide enough to accommodate two vehicles. This is an internal airport site issue, thus the information was forwarded to the Airport Engineer for evaluation. Airport staff reported back that UPS trucks were arriving early and parking along Fairchild Drive. The Airport Engineer will explore other areas where the UPS trucks can park prior to entering the Airport.

There were no real turning movements noted. The Roosevelt Boulevard airport entrance is signalized with turn arrows. Timing may need to be checked and increased during peak hours.

49th Street North:

Boundaries – Ulmerton Road to the south and Roosevelt Boulevard to the north.

Vehicle types noted included car carriers, gas, postal trucks, vendors, and FDOT trucks.

Vehicles are going to the auto auction, rental car companies, post office, jail, Sheriff's Department maintenance yard, and the FDOT maintenance yard.

Vehicles are entering from the south at Ulmerton Road and the north at Roosevelt Boulevard. Vehicles are then accessing 49th Street North, 140th Street North, 142nd Street North, 144th Street North, 46th Street North, and Automobile Boulevard.

Roosevelt Boulevard, 49th Street North, and Ulmerton Road are signalized intersections. No problems noted here; however, side streets are not signalized creating some difficulty in left turns. Some areas on side streets are narrow making backing and turning for truck traffic somewhat difficult.

RUBIN ICOT CENTER DRI:

Boundaries – North of Ulmerton Road and the Cross Bayou Canal to the east

Vehicle types noted – vendors and car carriers.

This is mainly an office, retail and light industrial park that also includes the EpiCenter, a St. Petersburg College joint-use facility between St. Petersburg College and Pinellas County where professionals from business, government and academia come together to provide information and services. Most truck traffic is delivery type.

There are two ways into the ICOT Center: 58th Street North and ICOT Boulevard. 58th Street North is signalized. ICOT Boulevard is not signalized and making a left turn onto Ulmerton Road is virtually impossible.

West Pinellas Industrial Area

This activity center is located south of 142nd Avenue North and north of 110th Avenue North. The CSXT railroad tracks and Starkey Road form the western border and 83rd Street North and the CSXT railroad tracks form the eastern border.

The site visit took place on Wednesday, November 8, 2006.

Cement trucks are using 20th Avenue SE both off Starkey Road and Lake Avenue SE. 20th Avenue SE is closed off Lake Avenue SE and is only used by cement trucks.

Great Bay Distributors has entrances off Ulmerton Road, Starkey Road, and 20th Avenue SE and is used for beer delivery trucks.

Apart from CEMEX- and Great Bay, there does not appear to be much truck traffic in the area.

In the Starkey Center area, Enterprise Road is heavily used by semis coming off Starkey Road. On 126th Avenue North, there is a lot of dump truck activity for fill dirt business.

Twiss Transport Inc. (1501 Lake Avenue SE) appears to have a small turn area onto Lake Avenue SE.

There are several boat builder businesses on Lake Avenue SE. The Dade Paper Company is located on Lake Avenue SE as well.

Somerset Drive has no trucks sign posted; however, Amerigas is located on Somerset Drive and its gas trucks are using that road.

Southeast Paper Recycling Company is located in the Starkey Center area.

The Starkey Center is not a heavy traffic area even with a subdivision located just to the west of its location. Trucks do not appear to have too much trouble getting in and out of locations.

LOCAL FREIGHT ACTIVITY CENTERS

Clearwater Airport

This area was identified in the FDOT Freight Mobility Goods Movement Study as a potential Regional Freight Activity Center. Its boundaries include Palmetto Street to the south, Belcher Road to the East, Carol Drive to the North, and North Arcturas Avenue to the west. A major north/south street through the area is North Hercules Avenue.

This area was observed on Tuesday, November 7, 2006.

Vehicle types observed included utility (Progress Energy, Clearwater Public Works), auto parts, a/c heating and cooling, vendors, garbage/recycling, city bus (PSTA), food distribution.

Trucks are entering side streets using Belcher Road. Belcher Road is four lanes with turn lanes, allowing plenty of room for turning; however, a problem does exist when trucks are trying to turn left onto Belcher Road from side streets. No side streets are signalized. Numerous trucks were observed waiting 1 – 2 minutes to turn.

Also, most of the side streets are narrow, making it difficult for the tractor-trailers to get in and out of businesses.

There was a medium degree of truck traffic using the side streets off North Hercules Avenue, accessing the businesses on both the east and west side of the street. Range Road and the adjacent streets have a considerable amount of storage facilities.

The Weaver Business Park and Weaver Industrial Park take up a good deal of this overall area at the southern end.

Northwest Tarpon Springs Industrial Area

This area was identified in the FDOT Freight Mobility Goods Movement Study as a potential Regional Freight Activity Center. The boundaries include S.R. 595 (Pinellas Avenue) to the east, Anclote Road to the west and south, and Anclote Boulevard to the North.

The site visit was performed on Tuesday, November 7, 2006.

Vehicle truck types observed included dump, rock, cement, vendors, and freight.

Truck traffic is using three entry/exit points:

- S.R. 595 (southbound) turning onto Anclote Boulevard (westbound)
- Anclote Boulevard (westbound) turning onto Industrial Boulevard
- Anclote Boulevard (eastbound) turning left on S.R. 595 (northbound).

The following types of businesses were noted: Florida Rock, furniture, windows, boats, concrete, Sun Rock Inc., a recycling plant, Suncoast Paving and Asphalt Plant, MAR marina, food distribution, and Port Tarpon Marina.

Some difficulty was noted for trucks turning left onto Anclote Road off of S.R. 595 as there is no signal. The reverse also applies turning left off Anclote Road onto S.R. 595. The same situation applies a little further to the north turning onto Anclote Blvd off S.R. 595.

Once trucks were inside the park, they seemed to have no problem getting in and out. Streets were plenty wide and businesses had plenty of room for backing in.

62nd Avenue North Industrial Area

The site visit took place on Wednesday November 8, 2006.

This is a local freight activity center. The area is bounded by 70th Avenue North to the north, 49th Street North to the west, CSXT rail/58th Avenue North to the south, and 43rd/41st Street North to the east.

Trucks are using any road available to get to these sites. 62nd Avenue North appears to be the most congested street for trucks. Storage places and warehouses are being used as businesses. Most streets are dead ends and some have no trespassing signs posted at businesses.

The truck activity is mostly small delivery trucks such as UPS or FedEx types.

Businesses include Mill Rite and Hydro Spa.

This entire area looks rundown, in decline. Staff noticed chopped up cars being painted.

North Bryan Dairy Industrial Area

This is a local freight activity area. It is bounded generally by Belcher Road to the west, 118th Avenue North to the north, 102nd Avenue to the south, and 66th Street North to the east.

The site visit took place on November 9, 2006.

Freeman Pitman Road and 75th Street North have heavy traffic with trucks coming off Bryan Dairy Road and Belcher Road.

Larger trucks are mainly using Freeman Pitman Road, with 75th Street North being used mostly by smaller box trucks.

Semi trucks are also using Endeavor Way to get access to Cross Bayou Drive.

Roads are narrow and the trucks seem to be driving a little too fast for the narrow streets. Cross Bayou Drive is heavily used by semis for delivery and pick up at Envirotech. This company

houses a large area of receiving and loading docks off Cross Bayou Drive. Cross Bayou Drive is being cut off whenever these trucks come in and have to back up into bays.

Apart from Envirotech, most businesses are set back off the roads far enough to allow easy access in and out for most semi truck deliveries.

Catalina Yachts is located at the end of Freeman Pittman Road. Other businesses nearby include International Cybernetics, Southern Tool & Machine Company, and Hit Promotional Products.

On the north side of Bryan Dairy Road is the Walter Pownall Service Center, which includes use by Pinellas County School System bus maintenance and storage. 114th Avenue North is heavily used by buses and maintenance vehicles.

72nd Street North and 69th Street North are also used by trucks coming off Bryan Dairy Road.

Baxter Healthcare has truck entrances off 114th Avenue North using 117th Avenue North for access back on to Belcher Road.

Westfield Countryside Mall

This local freight activity area has a main enclosed shopping mall and numerous strip shopping plazas in the area. Outside the mall boundary, a new strip mall with Kohl's Department Store has been constructed on the north side of SR 580. In general, the shopping activity area is bounded by Enterprise Road to the west and south, S.R. 580 to the north, and Village Drive/Countryside Boulevard to the east.

The site visit took place on Tuesday November 7, 2006.

There is a PSTA bus stop on Countryside Boulevard. Buses pick up passengers at the first stop, turning into the mall parking lot by the JC Penney and rolling back out to the next exit to the west.

At the Countryside Boulevard/Macy's entrance/exit, semi-trailer trucks take up the entire length of the turn lane when exiting, causing traffic backup if other cars are trying to enter or exit. This exit is a problem area and is also the busiest due to the existing traffic signal.

Delivery trucks use all entrances of the mall. They deliver to numbered delivery bays.

A Clearwater Police officer informed staff that trucks are not supposed to be using Countryside Boulevard to deliver but are doing so. Countryside is a designated non-truck route. S.R. 580 is the designated truck route.

At the Countryside Center Shopping Plaza, trucks are using the frontage road off U.S. Highway 19, Village Drive, or the signalized entrance at Countryside Boulevard/ Shopping Plaza.

Deliveries by vendors such as FedEx and UPS are made to the front of the stores and larger trucks are using delivery bays at the back of the shopping center.

At the Courtyard at Countryside shopping plaza, semi-trailer trucks are delivering to Kohl's in back of the store. Semi-trailer trucks were observed turning into the shopping center off S.R. 580. There is still construction at the shopping center and some construction trucks are using the entrance off Summerdale Drive.

Tyrone Square Mall and Industrial Area

This retail area is a local freight activity center and includes an enclosed shopping mall and numerous strip plazas and free standing stores, along with an industrial area. The retail area is generally bounded by Tyrone Boulevard to the north, 70th Street North/Pinellas Trail to the west, 22nd Avenue North to the south, and Tyrone Boulevard to the east. The Tyrone Industrial District and Water Treatment Plant are west of the Pinellas Trail, west to 77th Way. This southern border is also 22nd Avenue North and the northern boundary is Tyrone Boulevard.

The site visit took place on November 8, 2006.

Bus stops located on 22nd Avenue North, at various times back up into the right lane due to too many buses in the spot at one time. 22nd Avenue North seems overrun at times with PSTA. The street is not wide enough to handle the traffic.

Some PSTA buses go through the mall parking lot off 22nd Avenue North and exit the other side at 68th Street North.

Deliveries other than those made to anchor stores (i.e., Sears, JC Penney) are made to the back door of the stores.

Semi-trailer trucks use Tyrone Boulevard at 68th Street North because it is a signalized intersection.

Heavy truck traffic was observed on Tyrone Boulevard.

Observation example: When two buses pullout onto Tyrone Boulevard from the mall and the first bus stops at the first bus stop with the other bus stopping right behind it, a shut down in the right lane on Tyrone Boulevard occurs and cars stack up 20 deep before the buses start to move again.

Trucks are using Alternate U.S. 19 to enter other shopping centers, such as Tyrone Corners, Crosswinds Center, and the Home Depot.

Some larger semi-trailer trucks are having trouble getting through some of these parking lots. Deliveries are made to the back of the stores in these locations.

At the Tyrone Industrial Park, trucks use both Anvil Street North and 72nd Street North. Anvil Street has the most traffic, but most trucks use 72nd Street North to exit back onto 22nd Avenue North due to the traffic signal in place.

Telstar Graphics, Molex, Raytheon, and Life-Like Products are businesses in the Tyrone Industrial Park.

PINELLAS COUNTY LOCAL FREIGHT MOBILITY CORRIDORS

Criteria for a Local Freight Mobility Corridor designation:

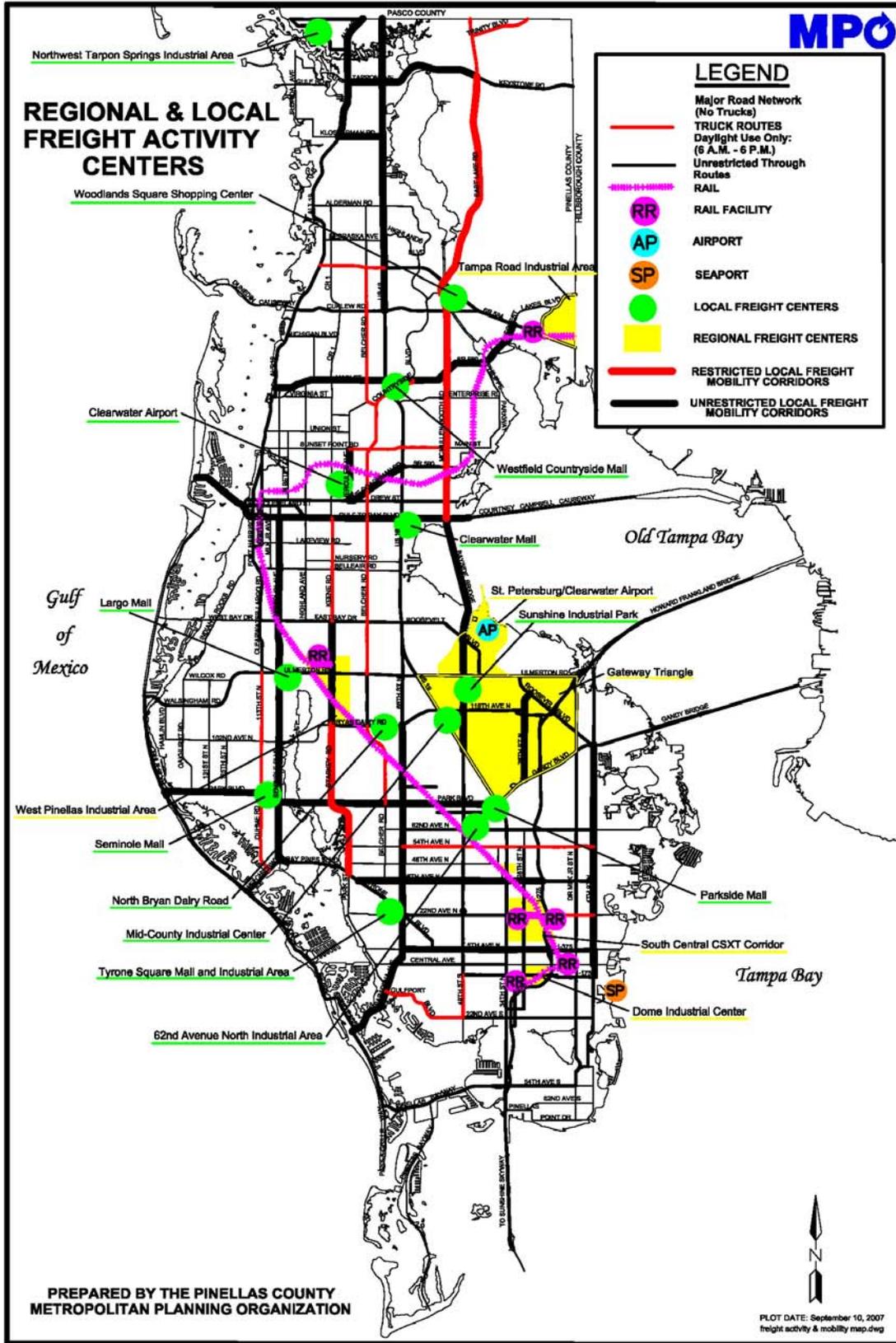
- Serves local functions of delivery and distribution;
- Is a designated truck route;
- Carries significant truck volume;
- Provides essential connection to a regional freight mobility corridor; and
- Provides essential connection to a regional/local freight activity center.

Pinellas County Truck Routes designated as Local Freight Mobility Corridors:

- U.S. 19 from Pasco County line to Curlew Road – (Northwest Tarpon Springs Industrial Area and Countryside Mall);
- Alternate U.S. 19 from Pasco County line to Klosterman Road – (Northwest Tarpon Springs Industrial Area);
- Tarpon Avenue/Keystone Road from Alternate U.S. 19 to East Lake Road – (Northwest Tarpon Springs Industrial Area and Tampa Road Industrial Area);
- Klosterman Road from Alternate U.S. 19 to U.S. 19 – (Northwest Tarpon Springs Industrial Area and Tampa Road Industrial Area);
- Main Street (S.R. 580) from Alternate U.S. 19 to S.R. 584 – (Tampa Road Industrial Area and Countryside Mall);
- McMullen-Booth Road/East Lake Road from S.R. 60 to Keystone Road – (Countryside Mall, Woodlands Square Shopping Center, and Tampa Road Industrial Area);
- S.R. 60/Gulf-to-Bay Boulevard from East Shore Drive (Roundabout) to Courtney Campbell Causeway – (Clearwater Airport, Tampa Road Industrial Area, Countryside Mall, and Clearwater Mall);
- Hercules Avenue from Drew Street to Sunset Point Road – (Clearwater Airport);
- NE Coachman Road from Drew Street to U.S. 19 – (Clearwater Airport);
- Missouri Avenue/Seminole Boulevard from Gulf-to-Bay Boulevard to Bay Pines Boulevard – (Clearwater Airport, West Pinellas Industrial Area, St. Petersburg-Clearwater International Airport, Gateway Triangle, Largo Mall, Seminole Mall, and Tyrone Mall);
- Starkey Road from East Bay Drive to Tyrone Boulevard – (West Pinellas Industrial Area, Largo Mall, and Tyrone Mall);
- Bayside Bridge/49th Street North from Gulf-to-Bay Boulevard to U.S. 19 – (St. Petersburg-Clearwater International Airport, Gateway Triangle, South Central CSXT Corridor, 62nd Avenue North Industrial Area, Sunshine Industrial Park, and Mid-County Industrial Center);
- 66th Street North/Pasadena Avenue from Bryan Dairy Road to Gulf Boulevard (Tyrone Mall, North Bryan Dairy Road area);

- 28th Street North between Roosevelt Boulevard and Gandy Boulevard – (St. Petersburg-Clearwater International Airport, Gateway Triangle);
- Park Boulevard between Gulf Boulevard and U.S. 19 – (Parkside Mall and 62nd Avenue North Industrial Area);
- 38th Avenue North from Tyrone Boulevard to I-275 – (South Central CSXT Corridor, Dome Industrial Center, and Tyrone Mall);
- 4th Street North between Central Avenue and Gandy Boulevard - (South Central CSXT Corridor, Dome Industrial Center); and
- 5th Avenue North between 66th Street North and I-275 – (South Central CSXT Corridor, Dome Industrial Center and Tyrone Mall).

Map 2-1



APPENDIX A-3

STAKEHOLDERS SURVEY QUESTIONNAIRE

1. What type of industry does your business represent?
 - a. Government
 - b. Retail
 - c. Parcel Delivery
 - d. Food
 - e. Construction/Industrial
 - f. Other – Please describe

2. Does your company restricted vehicles travel exclusively in Pinellas County, the Tampa Bay Region, Statewide, or beyond?
 - a. Pinellas County only
 - b. Tampa Bay Region only
 - c. Florida only
 - d. Southeastern United States and beyond

3. Do the Pinellas County Truck Route Plan and the roadways on which your business is directed to travel meet your businesses needs? If not, please explain.

4. A. Does the signage in Pinellas County clearly delineate Truck Route and No Truck travel?

B. Do the drivers understand and make use of the signage?

5. The City of St. Petersburg has Truck Route signs in place on Unrestricted Truck Routes; the remainder of Pinellas County does not. Do you have a preference for signing or non-signing of Unrestricted Truck Routes?

6. The current timing for Restricted Truck Route travel is generally 6 A.M. to 6 P.M. Is this time frame satisfactory for traveling on restricted truck routes, or do you feel restriction times should be re-evaluated? Please explain.

7. Are there any particular problem location concerns for signage as it relates to the Pinellas County Truck Route Plan that you are aware of? Please identify specific areas and locations of concern. Use separate pages if necessary.

8. Are there any particular problem locations, concerning travel, as it relates to the Pinellas County Truck Route Plan roadways? Please identify specific areas and locations of concern. Use separate pages as necessary.
(Location example would be: ‘XYZ Road’ between ‘this Cross Street’ and ‘that Cross Street.’ Examples of problems to be noted are: poor pavement conditions, insufficient

turn lanes, crashes, loading zones, congestion, safety, intersection geometrics, turning radii, etc.)

9. Do you feel truck routing restrictions in Pinellas County adversely affect the economic impact that the freight industry has on the County? If so, please explain.

10. A. Do you have vehicle weight restriction or enforcement concerns?

B. Do you think the current State, County and Local Agency Truck Ordinances work?

11. Please feel free to write any additional comments or information. Thank you.

APPENDIX A-4

CARRIER SURVEY OF LOCAL TRANSPORTATION CONCERNS

Physical Barriers

- Congestion/blocked roadways reducing access to Freight Activity Centers on regional and local freight corridors;
- Insufficient landside capacity at Intermodal facility causing roadway congestion;
- Turn lanes – not long enough, not large enough; and
- Poor pavement conditions.

Operational Barriers

- Traffic signals – short turn cycles, truck acceleration time should be considered on high truck volume roadways;
- Too few loading zones in urban activity centers/downtowns. Need off-street loading zones, as well as larger on-street loading zones
- Truck size and weight restrictions; and
- Operating hours.

Institutional Barriers

- Lack of understanding between public and private sectors;
- Selection and funding of transportation projects;
- Public sector not understanding needs of timing of private sector to accomplish freight initiatives (i.e., lost profit);
- Need for planning staff dedicated to freight and economic concerns related to freight; and
- No truck or freight traffic planning models actively being used. Projection for truck traffic needs difficult.

Financial Barriers

- Sources of funding needed. Benefit of goods movement not typically considered when deciding on transportation project improvements; and
- Typically have to rely on air quality and safety programs for funding.

Political/Public Opinion Barriers

- Residents do not want trucks driving on their local street. Trucks are relegated to approved Truck Routes;
- Truck route improvements should benefit the movement of trucks; and
- Concern over safety, among other issues, is a reason to oppose freight-related projects.

APPENDIX A-5

IDENTIFICATION OF PROBLEM ROUTES

Sites Reviewed for Potential Operational Improvements

(Numbers do not indicate priority ranking)

1. U.S. 19 – Tarpon Avenue to Klosterman Road
2. U.S. 19 – Klosterman Road to Tampa Road
3. U.S. 19 – Tampa Road to Curlew Road
4. U.S. 19 – Curlew Rd to S.R. 580
5. East Lake Road – Keystone Road to Brooker Creek
6. Alternate U.S. 19 – Klosterman Road to Tampa Road
7. Alternate U.S. 19 – Curlew Road to Myrtle Street
8. McMullen-Booth Road – S.R. 580 to Sunset Point Road
9. McMullen-Booth Road – Sunset Point Road to Gulf-to-Bay Boulevard
10. Gulf-to-Bay Boulevard – Causeway Boulevard to U.S. 19
11. Gulf-to-Bay Boulevard – Belcher Road to Keene Road

Sites Reviewed for Potential Safety Improvements

1. Ulmerton Road at 66th Street
2. Ulmerton Road at 34th Street
3. U.S. 19 at Tampa Road
4. U.S. 19 at Curlew Road
5. Gulf-to-Bay Boulevard at Belcher Road
6. Alternate U.S. 19 at Park Boulevard
7. Park Boulevard – 66th Street to 49th Street
8. Park Boulevard – 49th Street to U.S. 19
9. 66th Street at Bryan Dairy Road

Three locations that were originally planned to be reviewed in further detail were removed from the list because capacity projects were already planned for these locations. These locations were initially noted because they had a Level of Service F and a volume to capacity ratio greater than 0.9. These sites and their related improvements are listed below:

- Tarpon Avenue/Keystone Road – Complete roadway segment: Alternate U.S. 19 to East Lake Road.
 - Improvement: U.S. 19 to East Lake Road: 2-lane undivided to 4-lane divided
- Ulmerton Road – Complete roadway segment: Howard Frankland Bridge to Starkey Road.
 - Improvement: East of 119th Street to El Centro Ranchero: 6-lane divided; and
 - Improvement: West of 38th Street to west of I-275: 6-lane divided
- Starkey Road – Complete roadway segment: Belleair Road to Park Boulevard
 - Improvement: Bay Drive to Park Boulevard: 6-lane divided

TECHNICAL MEMORANDUM

NO. 3

**TECHNICAL MEMORANDUM NO. 3
GENERAL PROCEDURES FOR FREIGHT TRANSPORTATION ASSET
IMPROVEMENT MEASURES**

INTRODUCTION

This section provides an overview of procedure and implementation steps taken by local governments to implement freight transportation asset improvement measures. It is intended to complement the overall Existing Freight Transportation Asset inventory, located in Appendix B-1 of Technical Memorandum No. 3. All local government agencies in Pinellas County were requested to provide information. Those who responded include Pinellas County, City of St. Petersburg, City of Clearwater, City of Pinellas Park, and City of Safety Harbor. The agencies represented cover the majority of roadways impacted by goods movement in Pinellas County.

PINELLAS COUNTY PUBLIC WORKS

At the time the Truck Route Ordinance was established, it was decided that truck route signing along each truck route corridor would not be posted. What is typically posted are truck prohibition signs (R5-2). In many instances, the County has posted truck prohibition signs (R5-2) with placards that state the time periods that trucks are not allowed. Those times are generally from 6:00 p.m. – 6:00 a.m. These signs on non-truck routes are typically posted when a complaint is received. An example of a complaint would be that trucks are using a non-truck route as a cut-through.

Conceptual Steps:

- The complaint is received by the Traffic Engineering Division;
- Investigation is initiated and the investigation usually takes less than two weeks;
- If a decision is made to post a truck prohibition sign (R5-2), a work order is developed and submitted to the Sign Shop; and
- The signing is installed within two weeks once the request is received by the Sign Shop.

Please Note: Due to the fact that truck routes are regulated by the Pinellas County Code of Ordinances on the article III, these signs are exempted from the process of developing an Official Traffic Regulation and needing Commission approval (as is required with the installation of any other regulatory sign). This reduces the time requirement by a 4-6 week period.

CITY OF ST. PETERSBURG

It is important to note that the City of St. Petersburg signs Pinellas County roadways, which are Unrestricted Truck Routes on the Pinellas County Truck Route Plan, if they are in the City of St. Petersburg City limits. Signage is typically a regulatory R14-1, which simply says “Truck Route.” The sign is often accompanied by directional arrows (M5-1, M5-2, and M6 Series). The truck prohibition (R5-2) sign is also used in the City of St. Petersburg where appropriate. The majority of this signage has been installed in the past two years. Although the City does not

have an official inventory database, the R14-1 Truck Route signage is installed essentially at the approaches to each traffic signalized intersection along designated truck routes.

Conceptual Steps:

- Regulation must be approved by the Traffic Operations Department;
- Appropriate signage is then determined, based on MUTCD standards;
- Required signs are then installed to correspond to the approved traffic regulation; and
- Sign installs are scheduled as part of routine work schedule but generally are posted within two weeks.

CITY OF CLEARWATER

The City of Clearwater has a very similar process to that of Pinellas County when it comes to designating Unrestricted and Restricted Truck Routes on the Pinellas County Truck Route Plan in the City. This is due to the fact that Pinellas County originally used the City of Clearwater Truck Route Plan to develop the Countywide Truck Ordinance. The City does not place truck route signs on unrestricted through routes but does place truck prohibition signs (R5-2) on roadways where trucks are not allowed. Additionally, the County roadways that allow restricted truck access in the City are designated by R5-2 with the appropriate times (generally 6:00 p.m. – 6:00 am) trucks are not allowed.

Conceptual Steps:

- Traffic Division receives a complaint about a truck using an undesignated roadway;
- Incident is reviewed within two weeks;
- If determined that signage is needed to indicate “No Trucks,” a work order is written by a Traffic Engineering Assistant;
- Work order must be signed off by Traffic Operations Manager or other delegated individual;
- Work order is forwarded to sign shop;
- Signs are installed within two weeks but often sooner; and
- A copy of the work order is placed on file.

Note: Many complaints received from the public are related to pickup trucks or 1 axle, 1 ton trucks such as U-Hauls. These trucks are not considered trucks for truck route purposes. In these cases, the Traffic Division responds to the person who complained to explain that these smaller trucks are not in violation of the Truck Route Plan routing system.

CITY OF PINELLAS PARK

The City of Pinellas Park process is essentially identical to that of Pinellas County. Truck prohibition signs (R5-2) are typically posted. In many instances, the City has posted truck prohibition signs (R5-2) with placards that state the time periods that trucks are not allowed. Those times are generally from 6:00 p.m. – 6:00 a.m. These signs are typically posted when a

complaint is received. An example of a complaint would be that trucks are using a non-truck route as a cut-through.

Conceptual Steps:

- The complaint is received by the Traffic Division;
- Investigation is initiated, with the investigation usually taking less than two weeks;
- If a decision is made to post a truck prohibition sign (R5-2), a work order is developed and submitted to the Sign Shop; and
- The signing is installed within two weeks once the request is received by the Sign Shop.

CITY OF SAFETY HARBOR

The City of Safety Harbor has an informal work order process for goods movement transportation asset requests. Requests are typically generated by the public and/or City Commissioners in response to truck traffic on local streets in the evening. Most often, these concerns are brought to the staff's attention during City Commission meetings.

Conceptual Steps:

- A written request is received by the Planning or Public Works Department;
- This request is analyzed and reviewed to determine if the sign is necessary and can be legally installed in accordance with Federal, State, and local installation policies;
- If a sign is necessary and legal to install, then a sign is manufactured by the City's Public Works Department;
- The Public Works Department then installs the sign; and
- The entire process from receipt of written request to installation is generally less than 30 days.

When a concern exists on a Pinellas County roadway within the Safety Harbor Planning Area (can be unincorporated), written request is made to Pinellas County Public Works by the appropriate City representative.

PURPOSE OF EXISTING DESIGNATION, ASSETS AND SIGNAGE

Selective Exclusion Signs – Selective Exclusion signs give notice to road users that State or local statutes or ordinances exclude designated types of traffic from using particular roadways or facilities. If used, Selective Exclusion signs shall clearly indicate the type of traffic that is excluded. Typical exclusion messages include:

- **No Trucks (R5-2)**
- 
- R5-2*

- Commercial Vehicles Excluded (R5-4)
- Hazardous Cargo Prohibited (R14-3)

The word message NO TRUCKS may be used as an alternate to the No Trucks (R5-2) symbol sign. Often, the time of day restrictions are displayed on routes to use during daylight hours only such as 6:00 a.m. to 6:00 p.m.

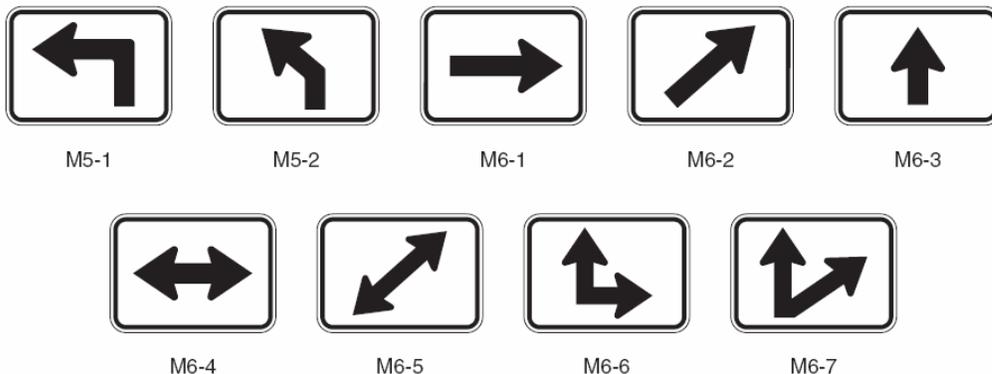
Truck Route Sign (R14-1) – The Truck Route (R14-1) sign should be used to mark a route that has been designated to allow truck traffic. On a numbered highway, the auxiliary TRUCK marker sign may be used. Often, directional arrows are displayed on routes and route approaches.



R14-1

Advance Turn Arrow Auxiliary Signs (M5-1, M5-2) – If used, the Advance Turn Arrow auxiliary sign shall be mounted directly below the route sign in Advance Route Turn assemblies and displays a right or left arrow, the shaft of which is bent at a 90-degree angle (M5-1) or at a 45-degree angle (M5-2).

Directional Arrow Auxiliary Signs (M6 Series) – If used, the Direction Arrow auxiliary sign shall be mounted below the route sign in directional assemblies, and displays a single or double-headed arrow pointing in the general direction that the route follows.



Slow Moving Traffic Lane Signs (R4-5) – The Slow Moving Traffic Lane signs are used to direct vehicles into an extra lane that has been provided for slow-moving vehicles. If an extra lane has been provided for slow-moving traffic, a **TRUCKS USE RIGHT LANE (R4-5)** sign, or other appropriate sign should be installed at the beginning of the lane. A **TRUCK LANE (R4-6)** sign, with the appropriate distance shown, should be installed in advance of the lane. If an extra lane has been provided for slow-moving traffic, a Lane Ends sign should be installed in advance of the point where the extra lane ends. Appropriate pavement markings should be installed at both the beginning and the end of the extra lane.



R4-5



R4-6

Weigh Station Signs – An All Trucks/Commercial Vehicles Next Right (R13-1) sign should be used to direct appropriate traffic into a weigh station. The R13-1 sign should be supplemented by the D8 series of guide signs. The reverse color combination, a white legend and border on a black background, may be used for the R13-1 sign.



R13-1

Other Regulatory Signs – Regulatory word message signs other than those classified and specified in the Manual and “Standard Highway Signs” book may be developed to aid the enforcement of other laws or regulations. Except for symbols on regulatory signs, minor modifications in the design may be permitted provided that the essential appearance characteristics are met.

Source: Manual on Uniform Traffic Control Devices, Millennium Edition December 2000
US Department of Transportation and Federal Highway Administration

APPENDIX
FOR
TECHNICAL MEMORANDUM
NO. 3

APPENDIX B-1

Freight Transportation Asset Inventory

FREIGHT TRANSPORTATION ASSET INVENTORY

East Lake Road from Tampa Road to Pasco County Line			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6 pm-6am)	NB	north of Tampa Rd	
2 signs - R5-2 (No 6pm-6am)	NB	north of Keystone Rd	One sign in median
Trucks Entering Highway	NB	south of county line	Advisory
Trucks Entering Highway	SB	south of county line	Advisory
2 signs - R5-2 (No 6pm-6am)	SB	south of county line	One sign in median
2 signs - R5-2 (No 6pm-6am)	SB	south of Keystone Rd	One sign in median

McMullen-Booth Road/Bayside Bridge from Roosevelt Boulevard to Tampa Road			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	NB	north of Curlew Rd	
R5-2 (No 6pm-6am)	NB	north of S.R. 580	
R5-2 (No 6pm-6am)	NB	north of Enterprise Rd	
2 signs R5-2 (No 6pm-6am)	NB	north of Sunset Point Rd	One sign in median
R5-2 (No 6pm-6am)	NB	north of S.R. 590	
2 signs R5-2 (No 6pm-6am)	NB	north of Drew St	One sign in median
R5-2 (No 6pm-6am)	SB	south of Tampa Rd	First sign on On-Ramp
R5-2 (No 6pm-6am)	SB	south of Tampa Rd	300 feet south of first sign, on On-Ramp to Countryside Blvd
2 signs R5-2 (No 6pm-6am)	SB	south of Curlew Rd	One sign in median
2 signs R5-2 (No 6pm-6am)	SB	south of S.R. 580	One sign in median
2 signs R5-2 (No 6pm-6am)	SB	south of Enterprise Rd	One sign in median
R5-2 (No 6pm-6am)	SB	south of Sunset Point Rd	
R5-2 (No 6pm-6am)	SB	south of S.R. 590	

49 th Street from 22 nd Avenue South to Roosevelt Boulevard			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 38 th Ave N	
R14-1	SB	south of 31 st Ave N	
R14-1	SB	north of 22 nd Ave N	
R14-1	SB	south of 6 th Ave N	
R14-1	SB	south of 1 st Ave N	
R14-1	SB	south of 1 st Ave S	
R14-1	SB	south of 4 th Ave S	
R14-1	SB	south of 6 th Ave S	
R14-1	NB	north of 16 th Ave S	
R14-1	NB	north of 12 th Ave S	
R14-1	NB	south of Fairfield Ave S	
R14-1	NB	north of 6 th Ave S	
R14-1	NB	north of 1 st Ave S	
R14-1	NB	south of Central Ave	
R14-1	NB	north of 1 st Ave N	
R14-1	NB	south of 5 th Ave N	
R14-1	NB	south of 9 th Ave N	
R14-1	NB	south of 22 nd Ave N	
R14-1	NB	north of 29 th Ave N	
R14-1	NB	south of 38 th Ave N	

Trinity Boulevard from East Lake Road to Pasco County Line			
Sign	Direction	Nearest Intersection	Description
2 signs R5-2 (No 6pm-6am)	EB	Trinity Blvd	One sign south of Trinity Blvd, one sign north of Trinity Blvd
R5-2 (No 6pm-6am)	WB	County Line	At County line

Keystone Road from U.S. 19 to Hillsborough County Line			
Sign	Direction	Nearest Intersection	Description
Note: No signs, route is Unrestricted. Tarpon Ave (S.R. 582) west of U.S. 19 is signed with R14-1 Truck Route signs			

Anclote Road from Pasco County Line to Alternate U.S. 19			
Sign	Direction	Nearest Intersection	Description
Note: No signs, route is Unrestricted. Freight Activity Center.			

Anclote Boulevard from Pasco County Line to Alternate U.S. 19			
Sign	Direction	Nearest Intersection	Description
Note: No signs, route is Unrestricted.			

Klosterman Road from Alternate U.S. 19 to U.S. 19			
Sign	Direction	Nearest Intersection	Description
Note: No signs, route is Unrestricted.			

Countryside Boulevard from Belcher Road/Oak Neck Drive to S.R. 580			
Sign	Direction	Nearest Intersection	Description
R5-2(No 6pm-6am)	SB	south of S.R. 580	
Note: Recommend 2 signs, R5-2 (No 6pm-6am) NB near Belcher Rd and near U.S. 19			

Tampa Road from Alternate U.S. 19 to Curlew Road			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6 pm-6am)	EB	east of Alt 19	
R5-2 (No 6 pm-6am)	EB	east of Belcher Rd	
ITS Solar Speed Limit Sign	EB	east of Lake St George Rd	In median. Device has speed limit and tells motorist speed.
R5-2 (No 6 pm-6am)	WB	west of U.S. 19	
R5-2 (No 6 pm-6am)	WB	west of Belcher Rd	
Note: Recommend R5-2 (No 6pm-6am) be installed EB east of U.S. 19. Restricted Truck Route (6am-6pm) from Alt U.S. 19 to U.S. 19.			

Forest Lakes Boulevard from St Pete Drive to Tampa Road			
Sign	Direction	Nearest Intersection	Description
Note: No signs, Unrestricted route.			

Commerce Boulevard/Forest Lakes Boulevard from Tampa Road to Hillsborough County Line			
Sign	Direction	Nearest Intersection	Description
All Through Trucks Rt Turn Only	NB on Commerce	south of Forest Lakes Blvd	
Truck Route Ahead	WB on FLB	west of Brooker Creek Rd	
Through Trucks Prohibited	WB on FLB	west of Brooker Creek Rd	Pertaining to Brooker Creek Blvd.
Truck Route Ahead	WB on FLB	west of Brooker Creek Rd	
Must Exit Next Left	WB on FLB	approaching Commerce Blvd	All Through Trucks Must Exit Next Left (similar to R13-1)
R5-2	WB on FLB	approaching Commerce Blvd	
Note: Freight Activity Center			

Belcher Road from Sunset Point Road to Tampa Road			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	SB	south of Tampa Rd	
R5-2 (No 6pm-6am)	SB	south of S.R. 580	
R5-2 (No 6pm-6am)	SB	south of Greenbriar Rd	
2 signs R5-2 (No 6pm-6am)	SB	south of Willow Trail	One sign in median
R5-2 (No 6pm-6am)	SB	south of Old Coachman Rd	
R5-2 (No 6pm-6am)	NB	north of Sunset Point Rd	
R5-2 (No 6pm-6am)	NB	north of Greenbriar Rd	
R5-2 (No 6pm-6am)	NB	north of S.R. 580	
R5-2 (No 6pm-6am)	NB	north of Curlew Rd	Sign in median
Note: Need R5-2 (No 6pm-6am) SB south of Curlew Road. Unrestricted Route from Bryan Dairy Road to Ulmerton Road.			

Myrtle Avenue from Lakeview Road to Alternate U.S. 19/Edgewater Drive			
Sign	Direction	Nearest Intersection	Description
Note: No signage/assets			

Lakeview Road from Alternate U.S. 19/Ft Harrison Avenue to Myrtle Avenue			
Sign	Direction	Nearest Intersection	Description
Note: No signage/assets			

Hercules Avenue from Drew Street to Sunset Point Road			
Unrestricted Route			
Sign	Direction	Nearest Intersection	Description
Trucks Entering Highway-1000 ft	NB	south of Gentry St	Advisory
Trucks Entering Highway-400 ft	NB	south of RR tracks	Advisory

Sunset Point Road from Hercules Avenue to McMullen-Booth Road			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	WB	west of McMullen-Booth Rd	
R5-2 (No 6pm-6am)	WB	west of U.S. 19	
R5-2 (No 6pm-6am)	EB	east of Hercules Ave	
R5-2 (No 6pm-6am)	EB	east of Belcher Rd	
Note: Need R5-2(No 6pm-6am) WB west of U.S. 19			
Note: Need R5-2(No 6pm-6am) EB east of U.S. 19			

Drew Street from Coachman Road to Bayshore Boulevard			
Sign	Direction	Nearest Intersection	Description
R5-2	WB	west of McMullen-Booth Rd	No time restriction
Note: Recommend removal of this sign. Drew St segment is Unrestricted Through Route			

Alternate U.S. 19/Ridge Road/113 th Street N/Duhme Road from Gulf-to-Bay Blvd to Tyrone Blvd			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	SB	south of S.R. 688	
R5-2 (No 6pm-6am)	SB	south of Walsingham Rd	
R5-2 (No 6pm-6am)	SB	south of 102 nd Ave	
R5-2 (No 6pm-6am)	SB	south of Park Blvd	
R5-2 (No 6pm-6am)	SB	south of 54 th Ave N	
R5-2 (No 6pm-6am)	NB	north of Tyrone Blvd	
R5-2 (No 6pm-6am)	NB	north of 54 th Ave N	
R5-2 (No 6pm-6am)	NB	north of Park Blvd	
R5-2 (No 6pm-6am)	NB	north of 102 nd Ave	
R5-2 (No 6pm-6am)	NB	north of 110 th Ave	
R5-2 (No 6pm-6am)	NB	north of Walsingham Rd	

Alternate U.S. 19/Ridge Rd.	(Continues)		
Note: Recommend R5-2 (No 6pm-6am) SB south of 110 th Ave - Pending transfer.			

Keene Road/Starkey Road from Gulf-to-Bay Boulevard to Ulmerton Road			
Unrestricted Route from Ulmerton Rd to West Bay Dr			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	NB	north of S.R. 686	
R5-2 (No 6pm-6am)	NB	north of Belleair Rd	
R5-2 (No 6pm-6am)	NB	north of Druid Rd	
R5-2 (No 6pm-6am)	SB	south of Gulf-to-Bay Blvd	
Note: Recommend R5-2 (No 6pm-6am) SB south of Druid Rd			
Note: Recommend R5-2 (No 6pm-6am) SB south of Belleair Rd			

Starkey Road/Park Street from Ulmerton Road to Tyrone Boulevard			
Unrestricted Route from Ulmerton Rd to Bryan Dairy Rd			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	NB	north of 54 th Ave N	
R5-2 (No 6pm-6am)	NB	north of Park Blvd	
R5-2 (No 6pm-6am)	SB	south of Bryan Dairy Rd	
R5-2 (No 6pm-6am)	SB	south of Park Blvd	
R5-2 (No 6pm-6am)	SB	south of 54 th Ave N	

C.R. 296 north from I-275 to Starkey Road			
Sign	Direction	Nearest Intersection	Description
Note: No signs, Unrestricted. Two R5-2 west of Starkey Road (one in median).			

Park Boulevard from 66th Street to Gulf Boulevard			
Sign	Direction	Nearest Intersection	Description
Note: No signs, Unrestricted.			

9th Street North from Ulmerton Road to 54th Avenue South			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 102 nd Ave N	
R14-1	SB	south of 102 nd Ave N	
R14-1	SB	south of Executive Cir Dr	
R14-1	SB	north of 94 th Ave N	
R14-1	SB	north of 83 rd Ave N	
R14-1	SB	north of 77 th Ave N	
R14-1	SB	north of 70 th Ave N	
R14-1	SB	north of 62 nd Ave N	

9th Street North (Continues)			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 54 th Ave N	(6pm-6a.m. Restricted)
R14-1	SB	north of 38 th Ave N	
R14-1	SB	north of 35 th Ave N	
R14-1	SB	north of 30 th Ave N	
R14-1	SB	north of 22 nd Ave N	
R14-1	SB	north of 9 th Ave N	
R14-1	SB	north of 7 th Ave N	
R14-1	SB	north of 5 th Ave N	
R14-1	SB	north of 11 th Ave S	
R14-1	SB	north of 22 nd Ave S	
R14-1	SB	north of 26 th Ave S	
R14-1	SB	north of 45 th Ave S	
R14-1	SB	north of CC Way	
R14-1	SB	north of 54 th Ave S	
R14-1	NB	south of CC Way	
R14-1	NB	south of 45 th Ave S	
R14-1	NB	south of 26 th Ave S	
R14-1	NB	south of 22 nd Ave S	
R14-1	NB	south of 18 th Ave S	
R14-1	NB	south of 11 th Ave S	
R5-2	NB	north of 4 th Ave S	Location on 8th Ave S
R14-1	NB	south of 7 th Ave N	
R14-1	NB	south of 22 nd Ave N	
R14-1	NB	south of 30 th Ave N	
R14-1	NB	south of 34 th Ave N	
R14-1	NB	south of 38 th Ave N	
R14-1	NB	south of 54 th Ave N	(6pm-6a.m. Restricted)
R14-1	NB	south of 62 nd Ave N	
R14-1	NB	south of 70 th Ave N	
R14-1	NB	south of 77 th Ave N	
R14-1	NB	south of 83 rd Ave N	
R14-1	NB	south of 94 th Ave N	
R14-1	NB	north of 94 th Ave N	
R14-1	NB	south of Executive Cir Dr	
R14-1	NB	north of Executive Cir Dr	
R14-1	NB	south of 102 nd Ave N	
R14-1	NB	south of Roosevelt Blvd	
Note: 9th St. N is a one way street SB through Downtown St. Petersburg			

28th Street North from Roosevelt Boulevard to Gandy Boulevard			
Sign	Direction	Nearest Intersection	Description
Note: No signs, Unrestricted.			

62 nd Avenue North from 4 th Street North to 66 th Street North			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	east of 16 th St. N	
R14-1	EB	east of 9 th St N	
R14-1	EB	east of 4 th St N	
R5-2	EB	west of 4 th St N	
R14-1	WB	west of 9 th St N	
R14-1	WB	west of 16 th St N	
Note: Recommend R14-1 WB west of 4th St N			
Note: 2 lane undivided from 66th St to 34th St N - not in City of St. Petersburg			
Note: 4 lane undivided from 34th St N to 4th St N			

54 th Avenue North from 4 th Street to 66 th Street North			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	WB	west of 4 th St N	
R5-2 (No 6pm-6am)	WB	west of 9 th St N	
R5-2 (No 6pm-6am)	WB	west of 16 th St N	
R5-2 (No 6pm-6am)	WB	west of 34 th St. N	
R5-2 (No 6pm-6am)	WB	west of 49 th St N	
R5-2 (No 6pm-6am)	WB	west of 58 th St N	
R5-2 (No 6pm-6am)	WB	west of 62 nd St N	
R5-2 (No 6pm-6am)	WB	west of 66 th St N	
R5-2 (No 6pm-6am)	EB	east of 66 th St N	
R5-2 (No 6pm-6am)	EB	east of 62 nd St N	
R5-2 (No 6pm-6am)	EB	east of 58 th ST N	
R5-2 (No 6pm-6am)	EB	east of 49 th St N	
R5-2 (No 6pm-6am)	EB	east of 34 th St N	
R5-2 (No 6pm-6am)	EB	east of 16 th St N	
R5-2 (No 6pm-6am)	EB	east of 9 th St N	
Note: Recommend R5-2 (No 6p.m. - 6am) both east and westbound at 28th Ave N.			

38 th Avenue North from 4 th Street North to 66 th Street North			
Unrestricted Truck Route			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	east of 66 th St N	
R14-1	EB	east of 62 nd St N	
R14-1	EB	east of 58 th St N	
R14-1	EB	east of 49 th St N	
R14-1	EB	east of 43 rd St N	
R14-1	EB	east of 37 th St N	
R14-1	EB	east of 28 th St N	
R14-1	EB	east of 16 th St N	
R14-1	EB	east of Haines Rd	
R14-1	EB	east of 9 th St N	
R14-1	EB	east of 4 th St N	Arrow directing truck route traffic to 4th St N
R14-1	WB	west of 9 th St N	
R14-1	WB	west of 16 th St N	
R14-1	WB	west of 28 th St N	
R14-1	WB	west of 37 th St N	
R14-1	WB	west of 43 rd St N	
R14-1	WB	west of 49 th St N	
R14-1	WB	west of 58 th St N	
R14-1	WB	west of 62 nd St N	
Note: Recommend R14-1 signs (2) EB And WB approaching U.S. 19			
Note: Recommend R14-1 WB approaching 4th St N.			
Note: Recommend R14-1 WB approaching Haines Rd			

Belcher Road from Park Boulevard to Sunset Point Road			
Unrestricted Truck Route from Bryan Dairy Rd to Ulmerton Rd			
Sign	Direction	Nearest Intersection	Description
R5-2 (No 6pm-6am)	SB	south of Sunset Pt Rd	
R5-2 (No 6pm-6am)	SB	south of NE Coachman Rd	
R5-2 (No 6pm-6am)	SB	south of Gulf-to-Bay Blvd	
R5-2 (No 6pm-6am)	SB	south of Belleair Rd	
R5-2 (No 6pm-6am)	SB	south of East Bay Dr	
R5-2 (No 6pm-6am)	SB	south of Bryan Dairy Rd	
R5-2 (No 6pm-6am)	SB	south of Park Blvd	
R5-2 (No 6pm-6am)	NB	north of Park Blvd	
R5-2 (No 6pm-6am)	NB	north of Ulmerton Rd	
R5-2	NB	north of East Bay Dr	Time restriction detail is missing
R5-2 (No 6pm-6am)	NB	north of Belleair Rd	
R5-2 (No 6pm-6am)	NB	north of Gulf-to-Bay Blvd	
R5-2 (No 6pm-6am)	NB	north of NE Coachman Rd	

22 nd Avenue North from 4 th Street North to 66 th Street North			
Unrestricted Truck Route from I-275 to 66th St. N			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	east of Tyrone/66 th St N	
R14-1	EB	west of 58 th St N	
R14-1	EB	west of 49 th St N	
R14-1	EB	west of 43 rd St N	
R14-1	EB	west of 34 th St N	
R14-1	EB	west of 28 th St N	
R5-2 (No 6pm-6am)	EB	west of I-275	
R14-1	EB	west of 16 th St N	Recommend Removal
R5-2 (No 6pm-6am)	EB	east of 16 th St N	
R14-1	EB	east of 9 th St N (MLK Blvd)	
R5-2 (No 6pm-6am)	EB	west of 9 th St N (MLK Blvd)	
R4-5	EB	west of 9 th St N (MLK Blvd)	Trucks Use Outside Lane
R14-1	EB	east of 4 th St N	
R5-2	EB	west of 4 th St N	
R4-5	WB	west of 4 th St N	Truck Use Right Lane
R14-1	WB	east of 9 th St N (MLK Blvd)	
R5-2 (No 6pm-6am)	WB	west of 9 th St N (MLK Blvd)	
R14-1	WB	east of 16 th St N	
R5-2 (No 6pm-6am)	WB	west of 16 th St N	
R14-1	EB	east of 28 th St N	
R14-1	EB	east of 34 th St N	
R14-1	EB	east of 43 rd St N	
R14-1	EB	east of 49 th St N	
R14-1	EB	east of 58 th St N	
R14-1	EB	east of Tyrone/66 th St N	
Note: Recommend R5-2 (No 6pm-6am) WB east of 4th St N			

Central Avenue from Pasadena Avenue to 34 th Street North			
Unrestricted Truck Route			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	At 66 th St N	Directing onto N/S route
R14-1	EB	west of 64 th St S	
R14-1	EB	west of 58 th St S	
R14-1	EB	west of 49 th St S	
R14-1	EB	west of 43 rd St S	
R14-1	EB	west of 40 th St S	
R14-1	EB	west of 37 th St S	
R14-1	EB	west of 34 th St S	
R14-1	EB	east of 34 th St S	Directing onto N/S route
R14-1	WB	east of 37 th St N	
R14-1	WB	east of 40 th St N	
R14-1	WB	east of 43 rd St N	
R14-1	WB	east of 49 th St N	
R14-1	WB	east of 58 th St N	
R14-1	WB	east of 64 th St N	
R14-1	WB	west of 64 th St N	
R14-1	WB	west of 66 th St N	
Note: Recommend R14-1 WB east of 34th St N with appropriate arrows			

22nd Avenue South/Gulfport Boulevard from 4th Street South to Pasadena Avenue			
Unrestricted Truck Route from 4th St S to 49th St S			
Sign	Direction	Nearest Intersection	Description
All Trucks	EB	west of 45 th St S	Arrow denotation for truck route ahead (regulatory)
R14-1	EB	west of 43 rd St S	
R14-1	EB	west of 37 th St S	
R14-1	EB	west of 34 th St S	
R14-1	EB	west of 31 st St S	
R14-1	EB	west of 22 nd St S	
R14-1	EB	west of 16 th St S	
R14-1	EB	west of 4 th St S	
R14-1	WB	east of 49 th St S	
R14-1	WB	east of 9 th St S (MLK Blvd)	
R14-1	WB	east of 16 th St S	
R14-1	WB	east of 22 nd St S	
R14-1	WB	east of 37 th St S	
R14-1	WB	east of 43 rd St S	

54th Avenue South from 9th Street South to 34th Street South (U.S. 19)			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	west of 31 st St S	
R14-1	EB	west 22 nd St S	
R14-1	EB	west 16 th St S	
R14-1	EB	west of 9 th St S (MLK Blvd)	
R5-2	EB	east of 9 th St S (MLK Blvd)	
R5-2	4th St NB	north of 45 th Ave S	54th Ave S EB dead-ends into 4th St S/N NB ends at 39th St S
R14-1	WB	east of 16 th St S	
R14-1	WB	east of 22 nd St S	
R14-1	WB	east of 31 st St S	
Note: 54th Ave S from 9th St to 4th St S is not a truck route.			

5 th Avenue South/4 th Avenue South from 49 th Street South to 4 th Street South			
Unrestricted Truck Route			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	east of 43 rd St S	
R14-1	EB	west of 31 st St S	
R14-1	EB	west of 28 th St S	
R14-1	EB	west of 22 nd St S	
R14-1	EB	west of 16 th St S	EB is One Way at 16th St S
R14-1	EB	west of 9 th St S (MLK Blvd)	
R14-1	EB	east of 6 th St S	
R14-1	WB	west of 4 th St S	4th Ave S WB is One Way to 16th St S
R14-1	WB	west of 6 th St S	4th Ave S WB is One Way to 16th St S
R14-1	WB	west of 7 th St S	4th Ave S WB is One Way to 16th St S
R14-1	WB	west of 9 th St S (MLK Blvd)	4th Ave S WB is One Way to 16th St S
(#2) R14-1	WB	west of 16 th St S	Signs on right and left side of one way street
R14-1	WB	east of 20 th St S	
R14-1	WB	east of 22 nd St S	
R14-1	WB	west of 22 nd St S	
R14-1	WB	east of 28 th St S	
R14-1	WB	east of 31 st St S	
R14-1	WB	east of 34 th St S	
R5-2	WB	west of 49 th St S	

70 th Avenue North from U.S. 19 to 58 th Street North			
Unrestricted Truck Route			
Sign	Direction	Nearest Intersection	Description
R14-1	WB	west of U.S. 19	No directional arrow
R14-1	EB	east of U.S. 19	No directional arrow
(#2) R5-2	WB	west of RR tracks	
R5-2	WB	west of 58 th St N	Truck Rt dead-ends west of RR tracks by Kanes Furniture

82 nd Avenue North from 66 th Street North to 62 nd Street North			
Unrestricted Truck Route			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	west of 66 th St N	Sign says: Truck Rt to 62nd St N
R14-1	WB	east of 60 th St N	Sign says: Truck Rt to 66th St N
Note: Truck Route established for Southern Culvert business located on 82nd Ave			

28th Street North/south from 54th Avenue North to 15th Avenue South			
Unrestricted Truck Route			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 38 th Ave N	2 lane undivided roadway begins at 54 Ave. N.
R14-1	SB	north of 30 th Ave N	
R14-1	SB	north of 22 nd Ave N	
R14-1	SB	north of 13 th Ave N	
R14-1	SB	north of 9 th Ave N	4 lane divided begins south of 9th Ave. N.
R14-1	SB	north of 5 th Ave N	
R14-1	SB	north of 1 st Ave N	
R14-1	SB	north of Central Ave.	
R14-1	SB	north of 1 st Ave. S.	
R14-1	SB	north of 5 th Ave S	2 lane undivided begins at 11 Ave S.
Truck Route w/arrow	SB	north of 15 th Ave. S.	Arrow directing traffic to 15 Ave. S.
R14-1	15 Ave S WB	east of 28 th St. S.	15 Ave S dead ends at 34th St. S.
R14-1	NB	south of 5 th Ave S	
R14-1	NB	south of 1 st Ave S	
R14-1	NB	south of Central Ave	
R14-1	NB	south of 1 st Ave N	
R14-1	NB	south of 5 th Ave N	
R14-1	NB	south of 9 th Ave N	
R14-1	NB	south of 13 th Ave N	
R14-1	NB	south of 22 nd Ave N	
R14-1	NB	south of 30 th Ave N	
R14-1	NB	south of 38 th Ave N	
Note: Recommend R14-1 on 15 Ave S southbound to direct traffic onto 31st St S			

45th Avenue South from 6th Street South to 9th Street South			
Sign	Direction	Nearest Intersection	Description
R14-1	WB	east of 9 th St S	Arrow to 9th St S
R14-1	EB	west of 6 th St S	Arrow to 6th St S

5th Avenue North from Tyrone Boulevard to 66th Street North			
Sign	Direction	Nearest Intersection	Description
R14-1	EB	west of Tyrone Blvd	Arrow directs straight and to Tyrone Blvd
R14-1	WB	west of 66 th St N	Arrow directs to 66th St

31st Street South from 5th Avenue South to 26th Avenue South			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 18 th Ave S	
R14-1	SB	north of 22 nd Ave S	

31st Street South from 5th Avenue South to 26th Avenue South (Continues)			
R14-1	SB	north of 26 th Ave S	Arrow directs to 26 Ave S
R14-1	NB	south of 22 nd Ave S	
R14-1	NB	south of 18 th Ave S	
R14-1	NB	south of 5 th Ave S	Arrow directs to 5th Ave S

26th Avenue South from 34th Street South to 31st Street South			
Sign	Direction	Nearest Intersection	Description
R14-1	WB	east of 34 th St S	Arrow directs n/s onto 34th St S
R14-1	EB	west of 31 st St	

18th Avenue South from 34th Street South to 28th Street South			
Sign	Direction	Nearest Intersection	Description
R5-2	WB	west of 31 st St	No trucks allowed
R5-2	EB	east of 34 th St	No trucks allowed

4th Street South from 6th Avenue South to 28th Street South			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 6 th Ave S	2 signs - one on each side of one way SB street
R14-1	SB	north of 9 th Ave S	Street is two way south of 6th Ave S
All Trucks w/direction arrows	SB	north of Preston Ave S	Trucks can go straight or east (north of 17th Ave S)
R14-1	SB	north of 22 nd Ave S	Arrow directing straight or west onto 22nd Ave S
R14-1	NB	south of 22 nd Ave S	Arrow directing straight or west onto 22nd Ave S
R14-1	NB	south of 9 th Ave S	Arrow directs ahead
R14-1	NB	south of 6 th Ave S	Arrow directs onto 6th Ave S

6th Street South from 28th Avenue South to 45th Avenue South			
Sign	Direction	Nearest Intersection	Description
R14-1	SB	north of 39 th Ave S	
R14-1	SB	north of 45 th Ave S	Arrow directs onto 45th Ave S
R14-1	NB	south of 39 th Ave S	

3rd Street South from Central Avenue to 5th Avenue South			
Sign	Direction	Nearest Intersection	Description
R14-1	NB	6 th Ave S	Sign is on 6th Ave S just east of 3rd St S
R14-1	NB	north of 5 th Ave S	
4 signs - R14-1	NB	south of 4 th Ave S	4 signs total - 2 on each side of street NB

TECHNICAL MEMORANDUM

NO. 4

TECHNICAL MEMORANDUM NO. 4
DETERMINING DESIGNATION CRITERIA AND COMMUNITY VALUES

INTRODUCTION

This Technical Memorandum identifies criteria deemed to be useful in determining if a road can be identified as one which places limitations on restricted vehicle travel and which documents the results of the Community Values Survey and a summary of public involvement activities.

PRIMARY DESIGNATION CRITERIA

The determination for designation is based on the criteria identified below. Items are not listed in order of importance.

- **Safety** – Safety concerns include a high number of vehicular crashes, truck crashes, and/or pedestrian and bicycle crashes.
Is the intersection on the Pinellas County MPO Crash Data Center 2005 Top 100 Crash Intersection List? (Yes-1, No-0)
- **Level of Congestion** – Congestion is defined by the number of vehicles using the corridor, the delay that is experienced by the vehicles, and the resulting level of service.
Does the corridor currently operate at a level of service E or F or a vehicle-capacity ratio greater than 0.9? (Yes-1, No-0)
- **Neighborhood Impacts** – Impact on residential, institutional (i.e., schools, libraries, churches), and recreation uses such as parks and activity centers. Adjacent land uses and surrounding neighborhoods are the biggest determining factors in Pinellas County.
Are there residential sensitive land uses along or in close proximity that generate activity along the roadway? (Yes-1, No-0)
- **Environmental Impacts** – Noise, pollution, spills, and garbage are examples.
Are environmental impacts of truck traffic a concern to the surrounding communities in the vicinity of the roadway? (Yes-1, No-0)
- **Existing Facility** – Unrestricted truck route, restricted truck route, or non-truck route roadway designation.
Is the roadway designated as a truck route? (Yes-0, No-1)
- **Evacuation Route** – Hurricane or other emergency routes are examples. Evacuation routes should be open to all forms of travel during emergencies.
Is the roadway part of an existing evacuation route? (Yes-0, No-1)
- **Access to Freight Activity Center** – Freight activity centers can include the following:
 - Major industrial areas including manufacturing, warehousing, and distribution centers;

- Intermodal trans-shipment locations including airports, seaports and associated landside activities, and rail intermodal facilities;
- Incubators for future industrial growth; and
- Major enclosed and stand alone retail shopping malls.

Does the roadway provide direct access to freight activity centers? (Yes-0, No-1)

- **Regional or Local Connection** – Connections to Regional Freight Mobility Corridors or Local Freight Mobility Corridors. Regional Freight Mobility Corridors are roadways essential to the efficient movement of goods to, from, and within the region. They include the following:
 - Statewide Trade Corridors, which connect the Tampa Bay Region to other markets and Trade Corridors;
 - Other regional roadways that connect FACs to each other and to the Statewide Strategic Trade Corridors;
 - Provide access and/or connectivity to Freight Activity Centers;
 - Provide connectivity between Freight Activity Centers and Statewide Strategic Trade Corridors;
 - Carry significant truck volume; and
 - Are compatible with existing and planned land uses in the corridor.

Local Freight Mobility Corridors are roadways essential to the efficient movement of goods to, from, and within the local area. The Local Freight Mobility Corridors have the following characteristics:

- Serve more local functions of delivery and distribution;
- Carry significant truck volumes or are designated truck routes by local governments; and
- Provide essential connections for regional Freight Activity Centers.

Does the roadway provide a connection to a regional or local freight mobility corridor? (Yes-0, No-1)

- **Impact on Historic Sites** – Historic sites can include archeological locations such as Indian mounds or architectural sites such as preserved buildings.

Is there a historical site along the roadway that would be impacted by truck traffic? (Yes-1, No-0)

- **Delivery of Products or Freight**
Are products or freight delivered to businesses along this roadway or adjoining roadways? (Yes-0, No-1)

ASSOCIATED DESIGNATION CRITERIA

Additional examples of potential community values or criteria to consider for restricted vehicle roadway travel may include:

- **Engineering Features** – Includes geometric (i.e., turning radii) and roadway condition assessment.

Are there engineering features that will not allow for efficient truck travel? (Yes-1, No-0)

- **Transit Activity** – Transit includes any upcoming bus rapid transit considerations, enhanced bus services, and related amenities. Compatibility with rail services, related to commuter services, could be a regional concern in the future.

Is there a PSTA service along the roadway or will bus rapid transit be in place no later than 2008? (Yes-1, No-0)

- **Restricted Vehicle Traffic Volumes** – The number of restricted vehicles traveling along the roadway is a consideration.

Is the restricted vehicle percentage greater than 2% along the roadway? (Yes-0, No-1)

- **Functional Classification** – Examples include collectors, major and minor arterials, local roadways, etc.

Is this roadway designated as a local street? (Yes-1, No-0)

- **Public and Industry Input** – Several opportunities will be given for general public and industry input at public meetings and Goods Movement Advisory Committee meetings.

What type of input has been given on restricted vehicle traffic along this roadway? (Support Truck Route-0, Oppose Truck Route-1)

- **Engineering Judgment** – The engineering review should assess whether existing infrastructure allow for this roadway segment to be a functioning and qualified truck route.

Will this roadway segment function as a part of the restricted or unrestricted truck route network? (Yes- 0, No-1)

- **Other environmental features** – Including causes of crashes occurring at specific locations.
- **A combination of planning, sound traffic engineering judgment, community values, and economic concerns** – Must also be considered.

To correlate the point evaluation system to the associated spreadsheet, in general, the lower the final score for a segment, the more likely a candidate it is to be considered a part of the truck route network. Conversely, the higher a segment score, the less likely that segment is a candidate for the truck route network.

The spreadsheet and corresponding answer/point process is intended to be a tool used to simplify the evaluation process. This format in which the questions are asked concerning to truck travel, therefore, works better than a straight forward point assignment system as No-0, Yes-1.

The original intent of determining designation criteria and community values was to designate criteria to be used when considering a road that will limit restricted vehicle travel. Meetings and individual interviews with the Goods Movement Advisory Committee (GMAC), as part of the Goods Movement Study process, have determined there appears to be a need to increase the time allowed on existing restricted truck routes, especially in the early morning. Other examples of using the designation criteria may be for consideration of the addition of future truck routes to the network, as well as the restriction of trucks on the network.

COMMUNITY INPUT CARD RESPONSE RESULTS

Technical Coordinating Committee (TCC)

- Are Truck Route signs adequate in the way of placement and understanding? Three answered yes and one no.
- Would changing the allowable hours of operation (generally 6:00 AM – 6:00 PM) on restricted roadways to allow for increased truck travel to meet business needs be acceptable? Two answered yes and two no.

Additional TCC comments:

- Truck drivers understand route signing; however, the general public does not even notice these signs unless there is a problem.
- Property damage should be a criterion concern when considering what is most important when considering the restriction of truck travel on roadways.
- One suggested requiring trucks to use the right travel lane only on designated truck routes and non-truck routes that might help traffic flow.
- Concern over roadway deterioration and whether or not a truck route is designed to accommodate larger trucks.
- The study may want to determine if restricting large trucks on the inside lane of a multi-lane roadway is safe and would improve the roadway level of service.

Citizen Advisory Committee (CAC) comments:

- Are Truck Route signs adequate in the way of placement and understanding? Two answered yes and two no.
- Would changing the hours (generally 6:00 p.m. – 6:00 a.m.) on restricted roadways to allow for increased truck travel to meet business needs be acceptable? Four answered yes and none no.
- What criteria (i.e., noise, residential, safety, congestion) are most important when considering the restriction of truck travel on roadways?
 - Safety – 2 ranked this highest priority
 - Needs of business – one ranked this highest priority
 - Noise – 1 ranked this second priority, one ranked it third priority
 - Congestion – 1 ranked this second priority
 - Residential – 1 ranked this fourth priority
- Additional CAC comments:
 - Pinellas County is totally dependent on the trucking industry for its primary needs including food. We should provide the trucking industry the highest possible use of Pinellas County roadway network;
 - Trucks should deliver at “non-peak car traffic times”; possibly night delivery, depending on the type of goods;
 - Need discussion, including CAC, to eliminate restrictions on truck routes and allow trucks greater access during non-daylight hours. This will reduce the number of trucks and truck deliveries during the peak daylight traffic hours.
 - Consider having trucks use right lanes for travel; and
 - Consider restricting truck traffic during peak traffic volume hours.

General Public Comments

- None received

SUMMARY OF PUBLIC INVOLVEMENT ACTIVITIES

- The Public Meeting on March 8, 2007 was held at Largo Public Library from 4:30 p.m. – 6:30 p.m.
- This meeting was advertised twice in the *St. Petersburg Times* newspaper prior to the meeting date.
- The purpose of the public open house was to solicit input from the general public in an attempt to get a greater understanding on community values as it relates to goods movement in Pinellas County.
- A Community Input Card was developed, to receive input from the public. One side of the card discusses the purpose of the Goods Movement Study and raises issues of

unrestricted and restricted truck routes, signage, truck route criteria, and restriction hours. The other side was designated for comments and optional information to include name, address, telephone/email, and affiliation. The public is to comment on their restricted vehicle concerns related to:

- Truck signage;
 - Criteria for truck route designations such as safety and neighborhood compatibility;
 - Decrease hours of restriction. Current restriction is from 6:00 PM. – 6:00 AM; and
 - Roadways or roadway segments of concern.
- Visuals on display included:
 - Truck Route Plan Map;
 - Pinellas County Regional Freight Activity Center Map;
 - Level of Service (with Truck Route Percentage) GIS Map and
 - Crash (with Truck Route Percentage) GIS Map.
 - A brief (30 minute) PowerPoint presentation was made at 5:30 p.m., which provided an overview of the Pinellas County Goods Movement Study and Truck Route Plan update. The presentation stressed why the freight industry, GMAC, and public input is critical and what the study hoped to achieve in the way of determining opportunities for improvement for goods movement in Pinellas County and adjoining counties. Questions to MPO and HNTB staff followed the presentation.
 - After the presentation and questions were addressed, the attendee was asked to finish completion of the comment card, which he did not. The attendee was then free to review the visuals and ask other questions individually to MPO and HNTB staffs.
 - Unfortunately, only one resident attended the public meeting. That person's insight was particularly important because he was the project manager for the recent Hillsborough County Truck Route Plan update. Although he did not fill out a comment card, a summary of his general feelings based on his experience follows:
 - Safety and crash concerns are difficult to measure when evaluating whether a roadway should be a part of the truck route network.
 - Neighborhood impact is almost impossible to avoid, especially in the way of school concerns. Generally, truck traffic does not have a negative effect on school-related issues.
 - Hillsborough and Pinellas Counties are much different in relation to the truck route network. Hillsborough County does not restrict truck travel to a particular time of the day on its network, for example. One way is not necessarily better than the other way. It should be based on the characteristics and needs of the county.
 - Transit activity and truck travel can take place on the same network roadways.

TECHNICAL MEMORANDUM

NO. 5

TECHNICAL MEMORANDUM NO. 5 UPDATE OF THE EXISTING TRUCK ROUTES PLAN

INTRODUCTION

Technical Memorandum No. 5 makes use of the input from the Goods Movement Advisory Committee (GMAC), research, data collection and mapping activities, traffic count information, and the existing FDOT District Seven Tampa Bay Regional Goods Movement Study-Phase I. The existing Pinellas County Truck Route Plan was evaluated for deficiencies and areas were identified that require improvement or further study. Those areas identified were evaluated using a combination of traffic engineering, transportation planning, and community values to determine recommendation for modification. Generalized cost estimates for each proposed action in this Technical Memorandum No. 5 are detailed in Technical Memorandum No. 6. The selected site analysis of the Pinellas County Truck Route network is discussed later in this memorandum (No. 5) and attempts to follow the recommendations made in the Tampa Bay Regional Goods Movement Study-Phase I Report.

TRUCK FREIGHT ASSESSMENT: TAMPA BAY REGIONAL GOODS MOVEMENT STUDY PHASE I

Truck freight transportation needs as they pertain to Pinellas County include the following:

- Good access to and from the major roadway network;
- Reduced congestion;
- Elimination of bottlenecks; and
- Efficient connection to other freight modes and facilities.

Truck freight represents over half of the total freight tonnage moved in the Tampa Bay Region. In Pinellas County, the freight transport of commodities by truck is the primary mode of moving goods and providing services. The freight that is transported by trucks is varied in terms of value and time-sensitivity to delivery. The types of vehicles vary from semi-trailers to specially designed trucks that accommodate refrigerated products, construction materials, small package delivery, and a wide range of other products. The flexibility of trucks allows goods to be delivered to businesses, offices, and residences throughout Pinellas County and the Tampa Bay Region. The regional roadway network for trucks connects the seaport, airport, rail terminal, and distribution centers to each other. Ultimately, freight trucks support all transport modes to deliver goods to the consumer.

Most truck trips generated in Pinellas County or in any urban area in the region are part of a series of interrelated movements. Final delivery of a product to the consumer often includes more than one trip to a warehouse, distribution site, manufacturing facility, or other intermodal (air, port, or rail) center.

Overall, freight forecasts indicate a 50% increase in Florida truck volumes by the year 2025. This means that commuters and trucks will be vying for limited road capacity now and well into

the future. The ability to balance needs of commuters and trucks will be a challenge for transportation decision-makers. Anticipated road improvements, such as safety and grade separations on U.S. 19, will greatly enhance the mobility of truck freight in Pinellas County.

RECOMMENDED FREIGHT FRIENDLY DESIGN CRITERIA (TAMPA BAY REGIONAL GOODS MOVEMENT STUDY-PHASE I)

- The shortest and most direct routes from major activity centers to the national and strategic highway network;
- Grade separations at major intersections and rail crossings to promote continuous movement of traffic and reduce delay;
- Channelization/separation of through traffic from local traffic through heavily congested corridors;
- Longer acceleration and deceleration lanes to accommodate large trucks;
- Longer and/or multiple holding/turning lanes at intersections;
- Wider turning radii to accommodate long tractor trailers;
- Synchronization of traffic signals to minimize delay; and
- Improved signage clearly directing freight traffic to the major activity centers such as ports, airports, rail intermodal facilities, and industrial parks.

OPERATIONAL RECOMMENDATIONS (TAMPA BAY REGIONAL GOODS MOVEMENT STUDY-PHASE I)

- Evaluate the operational, access, capacity conditions, and needs on each of the identified regional freight mobility corridors, develop recommendations for improvements to address these needs, and establish an ongoing process for monitoring conditions and needs within these corridors;
- Use the five-step freight project planning and programming process presented in the Regional Goods Movement Study:

**Table 5-1
Freight Project Planning Process**

Step 1	Project Identification
Step 2	Project Classification and Evaluation
Step 3	Project Prioritization
Step 4	Project Programming & Implementation
Step 5	Project Monitoring

*Source: Freight Mobility, Tampa Bay Regional Goods Movement Study-Phase I
FDOT District 7*

- Develop weighting standards that recognize the economic importance of goods movement to the regional and local transportation systems;
- Improve the safety of all vehicles by improving conditions for truck operations;

- Reduce congestion and pollution by improving conditions for truck operations;
- Incorporate truck friendly design criteria into projects on designated freight corridors to improve operations of large trucks and safety for all vehicles; and
- Develop and maintain a list of relatively low-cost “Fast Track” projects for the regional freight mobility corridors and connectors that can be completed in a short timeframe to show commitment to the needs of the goods movement industry.

GOODS MOVEMENT ADVISORY COMMITTEE AND FREIGHT CARRIER CONCERNS

Every effort was made to gain input from industry and non-industry GMAC members, local and national freight carriers in the community, the Pinellas MPO Technical Coordinating Committee (TCC), Citizen Advisory Committee (CAC), and the general public by way of an advertised public meeting. The input received was summarized as part of Technical Memorandum No. 2, and includes a summary of the GMAC and Carrier Issues and Concerns.

The preliminary information and findings in Technical Memorandum No. 5 were presented to the GMAC at their May 1, 2007 meeting. A list of 21 segments, Table 5-2, and/or intersections of concern, Table 5-3, on the Pinellas County Truck Route network was developed, in coordination with MPO staff, based on operations/capacity and safety. The safety and operational hot spots and segments are displayed in Map 5-1. The GMAC was in agreement with the truck route segments and/or intersections selected for detailed study.

**Table 5-2
Sites Reviewed for Potential Operational Improvements**

Roadway	Segment
U.S. 19	Tarpon Avenue to Klosterman Road
U.S. 19	Klosterman Road to Tampa Road
U.S. 19	Tampa Road to Curlew Road
U.S. 19	Curlew Road to S.R. 580 (Main Street)
Alternate U.S. 19	Klosterman Road to Tampa Road
Alternate U.S. 19	Curlew Road to Myrtle Avenue
East Lake Road	Keystone Road to Brooker Creek
McMullen-Booth Road	S.R. 580 to Sunset Point Road
McMullen-Booth Road	Sunset Point Road to Gulf-to-Bay Boulevard
Gulf-to-Bay Boulevard (S.R. 60)	Damascus Road to U.S. 19
Gulf-to-Bay Boulevard (S.R. 60)	Belcher Road to Keene Road

**Table 5-3
Sites Reviewed for Potential Safety Improvements**

Location
Ulmerton Road (S.R. 688) at 66 th Street North (S.R. 693)
Ulmerton Road (S.R. 688) at 34 th Street North
U.S. 19 at Tampa Road
U.S. 19 at Curlew Road (S.R. 586)
Gulf-to-Bay Boulevard (S.R. 60) at Belcher Road
Alternate U.S. 19 (S.R. 595) at Park Boulevard (S.R. 694)
66 th Street North (S.R. 693) at Bryan Dairy Road
Park Boulevard (S.R. 694) – 66 th Street N. (S.R. 693) to 49 th Street North
Park Boulevard (S.R. 694) – 49 th Street North to U.S. 19

The list from these tables was then given a preliminary order utilizing generalized weighting categories and weights as discussed in Technical Memorandum No. 4 and reflected in the preliminary sorting in Table 5-4 within the Truck Route Plan Analysis and Evaluation of this technical memorandum.

Roads or segments and/or intersections of concern funded for improvement within the next five years were not analyzed in detail but are still discussed in this technical memorandum. This is done to keep those identified segments on the “radar screen” should the future improvements fail to address goods movement/truck route issues.

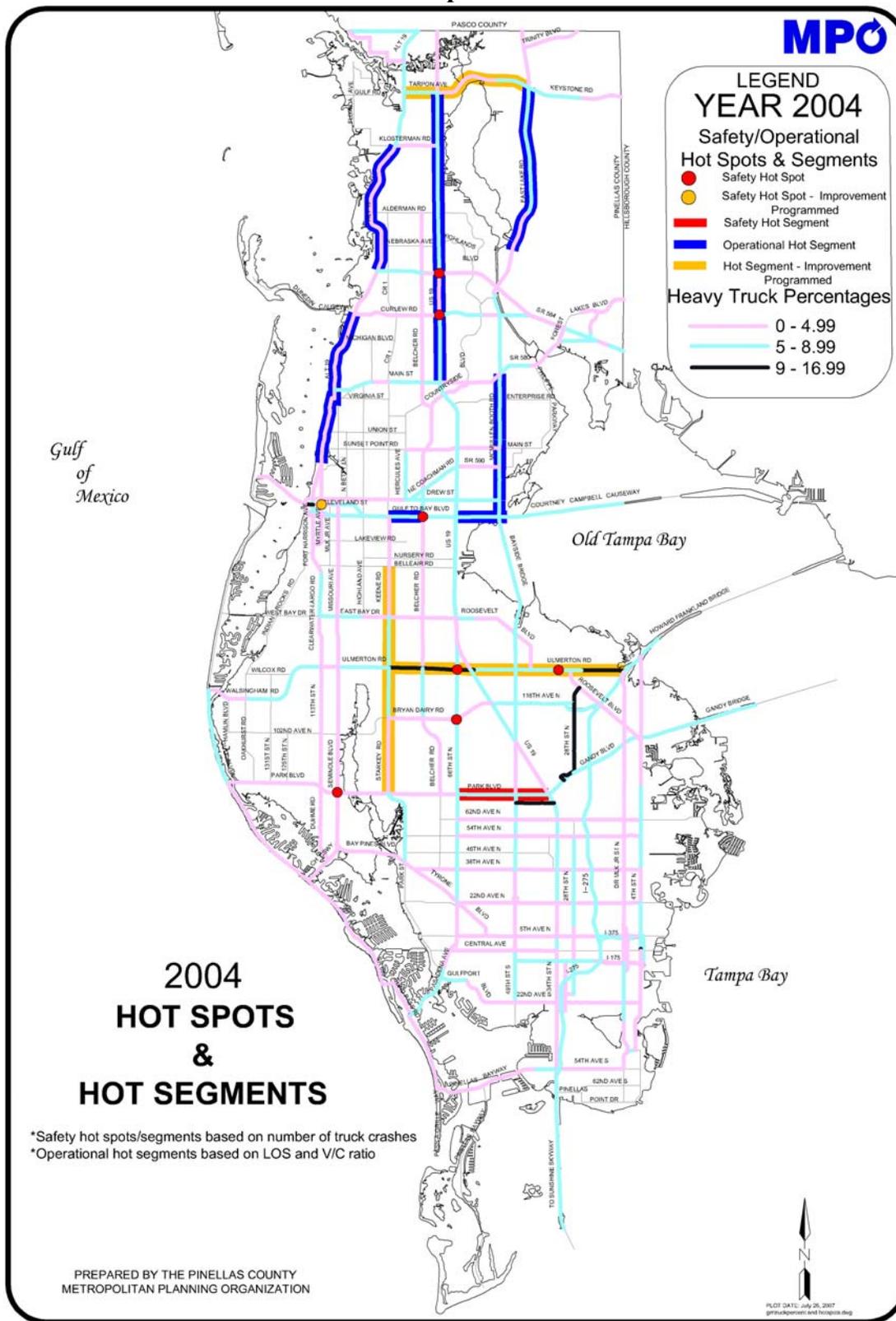
HAZARDOUS MATERIALS

The movement of goods throughout the Pinellas County truck route network includes the transport of products and byproducts classified as hazardous materials. Research of resources pertaining to transporting hazardous materials indicates that existing regulations are focused on licensing and safety. Federal and state regulations state that vehicles transporting hazardous materials must pass random and periodic safety inspections. In addition, drivers must maintain all necessary and required documentation for the specific materials in transport and that the respective placard identifying the classification of materials must be displayed on the vehicle.

Both federal and state regulations do not focus on establishing restrictions for use of specific roadways or restricting the time periods that hazardous materials can be transported. Enforcement issues and problems were the identified concerns with these types of restrictions.

No recommended change to Pinellas County policy regarding transporting of hazardous materials is suggested. Adherence to federal and state regulations is recommended to maintain consistency with these agencies.

Map 5-1



PINELLAS COUNTY TRUCK ROUTE PLAN ANALYSIS AND EVALUATION

The existing truck route network was reviewed and evaluated based on level of service, volume to capacity ratio, and heavy vehicle collisions. Level of service and volume to capacity data for the year 2004, provided by the Pinellas County MPO, were used to evaluate the operational characteristics of the roadways. Through this evaluation process, locations that had a Level of Service F and a volume to capacity ratio greater than 0.9 were identified, see Maps 5-2 through 5-7. Collision data for the years 2002, 2003, and 2004, also provided by the Pinellas County MPO, was used for the safety analysis, see Maps 5-8 through 5-10. Locations on the truck route network that have had the greatest number of crashes involving heavy vehicles over a three-year time span were noted. These locations were then checked against the Long Range Transportation Plan and the FDOT Five Year Work Program, for planned improvements. The locations that already had improvements planned were removed from the review list and are detailed below.

The final sites that were reviewed for deficiencies are listed below in two categories. Crash histories for the locations with safety concerns were reviewed. The locations were then observed in the field to identify any operational or capacity concerns and to identify any safety problems. Based on analysis of the data and the field observations, recommendations were developed. Cost estimates will be developed and the improvements will be ranked based on generalized categories as outlined in Technical Memorandum No. 4. Cost estimate information pertaining to these projects is detailed in Technical Memorandum No. 6.

LOCATIONS WITH PLANNED IMPROVEMENTS

Three locations that were originally planned to be reviewed in further detail were removed from the list because capacity projects were already planned for these locations. These locations were initially noted because they had a Level of Service F and a volume to capacity ratio greater than 0.9. These sites and their related improvements are listed in Appendix A-5 of Technical Memorandum No. 2.

OPERATIONAL AND CAPACITY REVIEW

U.S. 19 – Tarpon Avenue to Klosterman Road

Existing Conditions

U.S. 19 is an eight-lane divided principal arterial with a raised median between Tarpon Avenue and Klosterman Road. This segment of U.S. 19 is part of the Strategic Intermodal System, an unrestricted truck route, and is being proposed as a local freight mobility corridor that provides connectivity to local and regional freight activity centers and to the designated U.S. 19 regional freight mobility corridor between S.R. 586 and Gandy Boulevard. Tarpon Avenue and Klosterman Road are also unrestricted truck routes. The two endpoints of the U.S. 19 segment are signalized intersections. The length of this segment is approximately 1.6 miles. Land uses along this area of U.S. 19 consist primarily of commercial developments and recreational/open space. The posted speed limit on U.S. 19 within the study limits is 50 mph.

Analysis

U.S. 19 between Tarpon Avenue and Klosterman Road operates at a Level of Service F during the p.m. peak hour with a volume to capacity (V/C) ratio of 1.14. The truck percentage of this segment is 6.13. These values are reflected in the V/C Ratio Map and the Level of Service/Daily Heavy Truck Percentage Map. The Level of Service F value means that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network. Also, the V/C ratio shows the roadway segment is operating over capacity. The turn lane lengths along the segment were evaluated based on the current design standards and all of the turn lanes were found to be in compliance. The signalized intersections were found to be the cause of the highest delay in the area. Therefore, to reduce the delay and congestion heavy vehicles are experiencing, improvements must be made to the signalized intersections. Starting in September 2006, an adaptive signal control system was installed that provides preferential treatment to U.S. 19 traffic over that of cross streets. The adaptive signal control phase of this project includes the segments of U.S. 19 from the Pasco County line to Republic Drive. Coordination of the signals and grade separation are two alternatives that will reduce delay and congestion on this roadway.

Recommendations

Short Term

- Adaptive control of the signal network.

Long Term

- Grade separation of the major signalized intersections.

U.S. 19 – Klosterman Road to Tampa Road

Existing Conditions

U.S. 19 is an eight-lane divided principal arterial with a raised median between Klosterman Road and Tampa Road. This segment of U.S. 19 is part of the Strategic Intermodal System and an unrestricted truck route. Klosterman Road is also an unrestricted truck route. Tampa Road is an unrestricted truck route to the east and a restricted truck route to the west. The two endpoints of the US 19 segment are signalized intersections. The length of this segment is approximately 3.8 miles. Land uses along this area of U.S. 19 consist primarily of commercial developments and some multi-family communities. The majority of the cross streets and side streets intersecting U.S. 19 within the study limits provide access to single-family and multi-family residential communities. The posted speed limit on U.S. 19 within the study limits is 55 mph. As indicated for the previous segment, U.S. 19 is being proposed as a local freight mobility corridor between Keystone Road and S.R. 586.

Analysis

U.S. 19 between Klosterman Road and Tampa Road operates at a Level of Service F during the p.m. peak hour. The V/C ratio is 1.46 from Klosterman Road to Alderman Road and 1.48 from Alderman Road to Tampa Road. The truck percentage of this segment is 5.1 from Klosterman Road to Alderman Road and 5.27 from Alderman Road to Tampa Road. These values are

reflected in the V/C Ratio Map and the Level of Service/Daily Heavy Truck Percentage Map. A V/C ratio greater than one means the roadway segment is over capacity. This level of service value shows heavy vehicles are experiencing high delay and congestion during the peak period, while traveling along this segment of the truck route network. The highest delay was found to be occurring at the signalized intersections. Improvements must be made to the signalized intersections to reduce the delay and congestion heavy vehicles are experiencing. As indicated for the previous U.S. 19 segment, starting in September 2006, an adaptive signal control system was installed and is currently in operation. The turn lane lengths along the segment were evaluated based on the current design standards. The northbound left-turn lane at Coral Landings Boulevard was found to have inadequate deceleration distance for the posted speed limit. Lengthening the turn lanes to have adequate deceleration distance allows vehicles to pull into the turn lanes and out of the traffic flow before decelerating. This improves both safety and operation of the corridor. Improved signal coordination and grade separation are two alternatives that will reduce delay and congestion on this roadway.

Recommendations

Short Term

- Lengthen the northbound left-turn lane to the required standard of 350 feet at Coral Landings Boulevard; and
- Adaptive control of the signal network.

Long Term

- Grade separation of the major signalized intersections.

U.S. 19 – Tampa Road to Curlew Road

Existing Conditions

U.S. 19 is an eight-lane divided principal arterial with a raised median between Tampa Road and Curlew Road. This segment of U.S. 19 is part of the Strategic Intermodal System and an unrestricted truck route. Tampa Road is an unrestricted truck route to the east and a restricted truck route to the west. Curlew Road is also an unrestricted truck route. The two endpoints of the US 19 segment are signalized intersections. The continuous right-turn lane within this corridor does not allow through movements at either of these signals. The length of this segment is approximately 1.25 miles. Land uses along this area of U.S. 19 consist primarily of commercial developments. The majority of the cross streets and side streets intersecting U.S. 19 within the study limits provide access to single-family residential communities. The posted speed limit on U.S. 19 within the study limits is 55 mph. As indicated for the previous segment, U.S. 19 is being proposed as a local freight mobility corridor between Keystone Road and S.R. 586.

Analysis

As shown in the V/C Ratio Map 5-6 and the Level of Service/Daily Heavy Truck Percentage Map 5-7, U.S. 19 between Tampa Road and Curlew Road operates at a Level of Service F during the p.m. peak hour with a V/C ratio of 1.47, and the truck percentage of this segment is 4.43. These values show that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network and the segment is over capacity. The signalized intersections were found to be the cause of the highest delay in the area. Improvements targeted at these areas will yield the highest benefit. As indicated for the previous U.S. 19 segment, starting in September 2006, an adaptive signal control system was installed and is currently in operation. All of the turn lanes were found to be in compliance with the current design standards. Grade separating the major intersections and adaptive control of the signal network are two alternatives that will reduce delay and congestion for this segment.

Recommendations

Short Term

- Adaptive control of the signal network.

Long Term

- Grade separation of the major signalized intersections.

U.S. 19 – Curlew Road to S.R. 580 (Main Street)

Existing Conditions

U.S. 19 is an eight-lane divided principal arterial with a raised median between Curlew Road and S.R. 580. This segment of U.S. 19 is part of the Strategic Intermodal System and an unrestricted truck route. Curlew Road and S.R. 580 are also unrestricted truck routes. The intersection of U.S. 19 and Curlew Road is a signalized intersection. The intersection of U.S. 19 and S.R. 580 is grade separated. The length of this segment is approximately 2.0 miles. Land uses along this area of U.S. 19 consist primarily of commercial developments. The majority of the cross streets and side streets intersecting U.S. 19 within the study limits provide access mainly to single-family residential communities and some mobile home and multi-family communities. The posted speed limit on U.S. 19 within the study limits is 55 mph. This road segment is a part of FDOT's designated U.S. 19 regional freight mobility corridor between S.R. 586 and Gandy Boulevard.

Analysis

U.S. 19 between Curlew Road and S.R. 580 operates during the p.m. peak hour at a Level of Service F with a V/C ratio of 1.34. The truck percentage of this segment is 5.13. These values are reflected in the V/C Ratio Map 5-6 and the Level of Service/Daily Heavy Truck Percentage Map 5-7. The Level of Service F value means that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network. Also, the V/C ratio shows the roadway segment is over capacity. The signalized intersections are the cause of the highest delay in the area. To reduce the delay and congestion heavy vehicles are

experiencing, improvements must be made to the signalized intersections. As indicated in the previous U.S. 19 segment, starting in September 2006, an adaptive signal control system was installed and is currently in operation between the Pasco County Line and Republic Drive. Coordination of the signals and grade separation will reduce delay and congestion occurring at the signals. The turn lane lengths along the segment were evaluated based on the current design standards. Three left-turn lanes were found to have inadequate deceleration distance for the posted speed limit. Lengthening the turn lanes to have adequate deceleration distance allows vehicles to pull into the turn lanes and out of the traffic flow before decelerating. This improvement targets operational issues and improves safety for the section.

Recommendations

Short Term

- Lengthen the northbound left-turn lane to the required standard of 350 feet at Estancia Boulevard;
- Lengthen the southbound left-turn lane to the required standard of 350 feet at Estancia Boulevard;
- Lengthen the northbound left-turn lane to the required standard of 350 feet at Republic Drive/Hammock Pine Boulevard; and
- Adaptive control of the signal network.

Long Term

- Grade separation of the major signalized intersections.

Alternate U.S. 19 (S.R. 595) – Klosterman Road to Tampa Road

Existing Conditions

Alternate U.S. 19 is a two-lane minor arterial with a center two-way left-turn lane between Klosterman Road and Tampa Road. Alternate U.S. 19 is an unrestricted truck route. Klosterman Road is also an unrestricted truck route. Tampa Road is a restricted truck route in the vicinity of Alternate U.S. 19. The two endpoints of the segment are signalized intersections. The length of this segment is approximately 4.2 miles. Land uses along this area of Alternate U.S. 19 consist primarily of small commercial developments, some residential, and public areas. The majority of the cross streets and side streets intersecting Alternate U.S. 19 within the study limits provide access to single-family residential communities and some conservation areas. The posted speed limit on Alternate U.S. 19 within the study limits ranges from 40 to 45 mph.

Analysis

The V/C Ratio Map 5-6 shows that the V/C ratio is 1.46 from Klosterman Road to Alderman Road and 1.66 from Alderman Road to Tampa Road, which means that the roadway segment is operating over capacity. The Level of Service/Daily Heavy Truck Percentage Map 5-7 shows that Alternate U.S. 19 between Klosterman Road and Tampa Road operates at a Level of Service F during the p.m. peak hour. This level of service reflects that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network. The truck percentage of this segment is 4.47 from Klosterman Road to Bee Pond Road and 3.96 from

Bee Pond Road to Tampa Road. All of the turn lanes along this segment were found to have adequate deceleration distance in compliance with current standards. Widening the roadway from two lanes to four lanes would increase the capacity and level of service. This alternative, however, is not preferred due to constraints. The addition of auxiliary lanes, wherever possible, removes turning vehicles from the through lanes, also improving capacity and safety.

Recommendations

Short Term

- Install northbound right-turn lane into Pinellas County Highway Department. The required deceleration distance for a 45 mph roadway is 185 feet.

Long Term

- Install auxiliary lanes along segment.

Alternate U.S. 19 (S.R. 595) – Curlew Road to Myrtle Avenue

Existing Conditions

Alternate U.S. 19 is a two-lane undivided minor arterial with a painted median between Curlew Road and Myrtle Avenue. Alternate U.S. 19 is an unrestricted truck route. Curlew Road and Myrtle Avenue are also unrestricted truck routes. The intersection of Alternate U.S. 19 and Curlew Road is signalized. Land uses along this 4.8 mile segment of Alternate U.S. 19 consist primarily of residential developments and some small commercial developments. The majority of the cross streets and side streets intersecting Alternate U.S. 19 within the study limits provide access to single-family residential communities. The posted speed limit on Alternate U.S. 19 within the study limits ranges from 25 to 40 mph.

Analysis

Alternate U.S. 19 between Curlew Road and Myrtle Avenue operates at a Level of Service F during the p.m. peak hour. Maps 5-7, and 5-6 show that the V/C ratio is 1.47 from Curlew Road to S.R. 580 and 0.94 from S.R. 580 to Myrtle Avenue. The truck percentage of this segment is 3.63 from Curlew Road to S.R. 580 and 2.42 from S.R. 580 to Myrtle Avenue. The Level of Service F value means this segment of the truck route network has high delay and congestion. Some sections within the study segment have lane widths that are narrow and difficult for trucks to maneuver. Widening the roadway would improve the level of service; however, due to the land use and low speed limits on this road, that modification may not be desirable. The section of Alternate U.S. 19 south of S.R. 580 is mainly residential. The addition of auxiliary lanes would improve the capacity and safety of the segment by removing turning vehicles from the through lanes.

Recommendations

Short Term

- None.

Long Term

- Install auxiliary lanes along segment.

East Lake Road – Keystone Road to Brooker Creek

Existing Conditions

East Lake Road is a four-lane divided arterial with a raised median between Keystone Road and Brooker Creek. This segment is a County-maintained roadway is policy constrained. It provides parallel relief to the north-south corridor traffic, especially for U.S. 19, that runs parallel to the west and is accessible by way of Keystone Road. East Lake Road is designated as a scenic-non commercial corridor, and also as a restricted truck route. Keystone Road is an unrestricted truck route, as well as a hurricane evacuation route. The intersection of East Lake Road and Keystone Road is signalized. The length of this segment is approximately 5.0 miles. Land uses along this area of East Lake Road consist primarily of residential developments and recreational/open space. The majority of the cross streets and side streets intersecting East Lake Road within the study limits provide access to single-family and some multi-family residential communities. The posted speed limit on East Lake Road within the study limits is 50 mph.

This road segment is a part of the proposed East Lake Road/McMullen-Booth Road/49th Street North local freight mobility corridor (Map 2-1). It provides connectivity to local and regional freight activity centers and regional freight mobility corridors.

Analysis

East Lake Road between Keystone Road and Brooker Creek operates during the p.m. peak hour at a Level of Service F (Map 5-7). The V/C ratio is 1.17 from Keystone Road to Lansbrook Parkway, 1.38 from Lansbrook Parkway to Tarpon Woods Boulevard, and 1.23 from South Tarpon Woods Boulevard to Brooker Creek (Map 5-6). The truck percentage along this segment ranges from 5.08 to 5.03 from Keystone Road to Tarpon Lake Boulevard and 4.13 from Tarpon Lake Boulevard to Brooker Creek. These values are reflected in the V/C Ratio Map and the Level of Service/Daily Heavy Truck Percentage Map. The Level of Service F value means that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network. Also, the V/C ratio shows the roadway segment is over capacity. The turn lane lengths along the segment were evaluated based on the current design standards and all of the turn lanes were found to be in compliance. Widening the roadway from four lanes to six lanes would increase the capacity and level of service.

Adaptive control of the signals can reduce the delay experienced at the signalized intersections, therefore, reducing overall delay along the segment. Current status of implementation of Intelligent Transportation Systems (ITS) in the East Lake Road/McMullen-Booth Road/49th

Street North corridor as of September 2007 is that the installation of fiber optics has been completed and 6 Closed Circuit Television (CCTV) cameras have been installed. Those cameras were activated in October 2007. The field equipment installation is to be completed by the end of 2008. The equipment to be installed includes 12 additional CCTV cameras, 32 intersections running adaptive control, and 5 Dynamic Message Signs (DMS).

Recommendations

Short Term

- Adaptive control of the signal network.

Long Term

- Widen the roadway from four lanes to six lanes.

McMullen-Booth Road – S.R. 580 to Sunset Point Road

Existing Conditions

McMullen-Booth Road is a six-lane divided arterial with a raised median between S.R. 580 and Sunset Point Road. This segment is a County-maintained roadway that provides parallel relief to the north-south corridor traffic, especially for U.S. 19, that runs parallel to the west and is accessible by numerous cross streets. The two endpoints of the segment are signalized intersections. McMullen-Booth Road is designated as a scenic-non commercial corridor, and also as a restricted truck route. S.R. 580 is an unrestricted truck route, while Sunset Point Road is a restricted truck route. Land uses along this 2.2 mile segment of McMullen-Booth Road consist primarily of residential developments with commercial developments concentrated at the major intersections. The majority of the cross streets and side streets intersecting McMullen-Booth Road within the study limits provide access to single-family and multi-family residential communities. The posted speed limit on McMullen-Booth Road within the study limits is 45 mph.

As indicated in the previous segment, this road segment is a part of the proposed East Lake Road/McMullen-Booth Road/49th Street North local freight mobility corridor (Map 2-1).

Analysis

As shown in the V/C Ratio (Map 5-6) and the Level of Service/Daily Heavy Truck Percentage (Map 5-7), McMullen-Booth Road between S.R. 580 and Sunset Point Road operates at a Level of Service F during the p.m. peak hour, with a V/C ratio of 1.16 and a truck percentage of 5.11. These values show that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network and the segment is over capacity. The signalized intersections are the cause of the highest delay along the segment. There is a high volume of northbound right turning traffic at Enterprise Road. The addition of a northbound right-turn lane at this intersection would improve operations by removing this turning traffic from the through lane. The turn lane lengths along the segment were evaluated based on the current design standards. The southbound left-turn lane at Harbor Oaks Circle was found to have inadequate deceleration distance for the posted speed limit. Also, advanced street name signs

placed in advance of the major intersections along this segment would prepare drivers for the intersection ahead and would allow them to complete lane changes well in advance of the intersection, therefore, improving operations at the intersections. As of September 2007, Pinellas County has received safety funds from FDOT to install advanced street name signs on East Lake Road/ McMullen-Booth Road between the Pasco County line and Drew Street. The project is currently under design.

Adaptive control of the signals will reduce the delay experienced at the signalized intersections, therefore, reducing overall delay along the segment. As indicated in the previous segment, the implementation of Intelligent Transportation Systems (ITS) in the East Lake Road/McMullen-Booth Road/49th Street North corridor will be completed and operational by the end of 2008. The equipment to be installed includes 12 additional CCTV cameras, 32 intersections running adaptive control, and 5 DMS signs.

Recommendations

Short Term

- Lengthen the southbound left-turn lane to the required standard of 185 feet at Harbor Oaks Circle;
- Install northbound right-turn lane at Enterprise Road;
- Install northbound right-turn lane and receiving lane at Sunset Point Road/Main Street;
- Increase the radius of the eastbound right turn at Sunset Point Road;
- Install advanced street name signs in advance of major intersections; and
- Adaptive control of the signal network.

Long Term

- None.

McMullen-Booth Road – Sunset Point Road to Gulf-To-Bay Boulevard

Existing Conditions

McMullen-Booth Road is a six-lane divided arterial with a raised median between Sunset Point Road and Gulf-to-Bay Boulevard (S.R. 60). This segment provides parallel relief to traffic demand on U.S. 19, a facility in the Strategic Intermodal System. The intersection of McMullen-Booth Road and Sunset Point Road is signalized and the intersection of McMullen-Booth Road and Gulf-to-Bay Boulevard (S.R. 60) is grade separated. McMullen-Booth Road is designated as a scenic-non commercial corridor, and also as a restricted truck route. Sunset Point Road is also a restricted truck route. Gulf-to-Bay Boulevard/SR 60 is an unrestricted truck route. Land uses along this 2.0 mile segment of McMullen-Booth Road consist primarily of residential developments, institutional, and recreational/open space. Commercial development occurs only at major intersections. The majority of the cross streets and side streets intersecting McMullen-Booth Road within the study limits provide access to single-family and multi-family residential communities. The posted speed limit on McMullen-Booth Road within the study limits is 45 mph.

As indicated in the previous segment, this road segment is a part of the proposed East Lake Road/McMullen-Booth Road/49th Street North local freight mobility corridor.

Analysis

McMullen-Booth Road between Sunset Point Road and Gulf-to-Bay Boulevard (S.R. 60) operates at a Level of Service F during the p.m. peak hour. The V/C ratio is 1.12 and the truck percentage of this segment ranges from 5.32 to 5.53. These values are reflected in the V/C Ratio (Map 5-6) and the Level of Service/Daily Heavy Truck Percentage (Map 5-7). The Level of Service F value means that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network. Also, the V/C ratio shows the roadway segment is operating over capacity. The turn lane lengths along the segment were evaluated based on the current design standards. Two left-turn lanes were found to have inadequate deceleration distance for the posted speed limit. There is a high volume of southbound right turning traffic at Drew Street. The addition of a southbound right-turn lane at this intersection would improve operations by removing this turning traffic from the through lane. Also, advanced street name signs placed in advance of the major intersections along this segment will prepare drivers for the intersection ahead and will allow them to complete lane changes well in advance of the intersection, therefore, improving operations at the intersections.

As indicated in the previous segment, Pinellas County has received safety funds from FDOT to install advanced street name signs between the Pasco County line and Drew Street. The project is currently under design.

As indicated in the previous segment, the implementation of Intelligent Transportation Systems (ITS) in the East Lake Road/McMullen-Booth Road/49th Street North corridor will be completed and operational by the end of 2008. The equipment to be installed includes 12 additional CCTV cameras, 32 intersections running adaptive control, and 5 DMS signs.

Recommendations

Short Term

- Lengthen the northbound left turn lane at Abbey Crescent Lane;
- Lengthen the northbound left turn lane at Kapok Cove Drive;
- Install southbound right turn lane at Drew Street;
- Install advanced street name signs in advance of major intersections; and
- Adaptive control of the signal network.

Long Term

- None.

Gulf-To-Bay Boulevard (S.R. 60) – Damascus Road to U.S. 19

Existing Conditions

Gulf-to-Bay Boulevard (S.R. 60) between Damascus Road and U.S. 19 is a six-lane divided principal arterial that includes roadway segments with a center two-way left-turn lanes but mostly operate with raised medians near intersections to protect east bound and west bound left

turns, as well as to provide access to driveways and allow for pedestrian safety. The intersection of Gulf-to-Bay Boulevard (S.R. 60) and Damascus Road is signalized. The intersection of Gulf-to-Bay Boulevard (S.R. 60) and U.S. 19 is grade separated. The length of this segment is approximately 1.9 miles. Access to the Strategic Intermodal System is available at the intersection of U.S. 19. Gulf-to-Bay Boulevard and U.S. 19 are unrestricted truck routes, while Damascus Road only provides access to the Clearwater Christian College. Land uses along this area of Gulf-to-Bay Boulevard (S.R. 60) consist primarily of commercial developments. Land uses along this area of Gulf-to-Bay Boulevard (S.R. 60) include the Clearwater Christian College, restaurants, hotels, the Clearwater Mall, the Park Place Development of Regional Impact, and strip commercial development. The cross streets and side streets intersecting Gulf-to-Bay Boulevard (S.R. 60) within the study limits provide access to several residential communities. The posted speed limit on Gulf-to-Bay Boulevard (S.R. 60) within the study limits is 45 mph.

This roadway segment is being proposed as a local freight mobility corridor that provides connectivity to local and regional freight activity centers and to the designated U.S. 19 regional freight mobility corridor and Strategic Intermodal System facility.

As of May 2006, an adaptive signal control system has been fully operational on S.R. 60 between Hillcrest Avenue and Damascus Road.

Analysis

Gulf-to-Bay Boulevard (S.R. 60) between Damascus Road and U.S. 19 operates during the p.m. peak hour at a Level of Service F and the truck percentage of this segment is 7.3, as shown in the Level of Service/Daily Heavy Truck Percentage (Map 5-7). The Level of Service F value means that heavy vehicles are experiencing high delay and congestion while traveling along this segment of the truck route network. The V/C ratio is 1.54, shown in the V/C Ratio (Map 5-6). The V/C ratio shows the roadway segment is over capacity. The turn lane lengths along the segment were evaluated based on the current design standards from the safety and operational perspectives. Three left-turn lanes were found to have inadequate deceleration distance for the posted speed limit. It's important to maintain adequate deceleration distance in auxiliary lanes on the truck route network, especially for heavy vehicles which have more difficulty stopping quickly. The left-turn lanes at Hampton Road and Sky Harbor Drive listed below may be lengthened to current standards without impacting other accesses to accommodate the required deceleration distance for the speed limit on the roadway. However, the eastbound left-turn lane at the Clearwater Mall entrance, although substandard, cannot be lengthened without impacting the intersection of U.S. 19 to the west. Therefore, the lengthening of this left-turn lane is not recommended. Also, there is no eastbound right-turn lane at the west entrance to the Clearwater Mall. The addition of a right-turn lane at this location would improve operations by removing turning traffic from the through lane. The pavement quality is poor along this segment of Gulf-to-Bay Boulevard (S.R. 60). It is cracked and rutting was observed throughout the study area.

Recommendations

Short Term

- Lengthen the westbound left-turn lane at Hampton Road;
- Lengthen the eastbound left-turn lane at Sky Harbor Drive;
- Install an eastbound right-turn lane at the Clearwater Mall west entrance; and
- Resurface Gulf-to-Bay Boulevard (S.R. 60).

Long Term

- None.

Gulf-To-Bay Boulevard (S.R. 60) – Belcher Road to Keene Road

Existing Conditions

Gulf-to-Bay Boulevard (S.R. 60) is a six-lane divided principal arterial with a raised median between Belcher Road and Keene Road. The two endpoints of the segment are both signalized intersections. The length of this segment is approximately 1.0 mile. Access to the Strategic Intermodal System is available onto U.S. 19 to the east. Gulf-to-Bay Boulevard is an unrestricted truck route. As indicated in the previous segment, this road is being proposed as a local freight mobility corridor that provides connectivity to local and regional freight activity centers and to the designated U.S. 19 regional freight mobility corridor and Strategic Intermodal System facility. Belcher Road and Keene Road are restricted truck routes. Land uses along this area of Gulf-to-Bay Boulevard (S.R. 60) consist primarily of commercial developments immediately adjacent to the roadway. The majority of the cross streets and side streets intersecting Gulf-to-Bay Boulevard (S.R. 60) within the study limits provide access to single-family residential communities. The posted speed limit on Gulf-to-Bay Boulevard (S.R. 60) within the study limits is 40 mph.

Analysis

Gulf-to-Bay Boulevard (S.R. 60) between Belcher Road and Keene Road is shown in the Level of Service/Daily Heavy Truck Percentage (Map 5-5) to operate at a Level of Service F during the p.m. peak hour with a truck percentage of 5.76. The V/C ratio of this segment is 1.13, displayed in the V/C Ratio (Map 5-6). The turn-lane lengths along the segment were evaluated based on the current design standards. Ten left-turn lanes were found to have inadequate deceleration lengths for the posted speed limit. These lanes were located at Main Avenue, Mercury Avenue, Nimbus Avenue, Gun Avenue, Bamboo Lane, Cirus Avenue, Meteor Avenue, and Arcturas Avenue. There are several locations where there is a break in the left-turn lane and turning vehicles are allowed to cross through the left-turn lane. This can result in operational and safety problems at these locations. It is recommended that FDOT conduct an access management analysis along this roadway to determine which lanes to extend, median openings to close, and median openings to leave open. There is no westbound right-turn lane at the intersection with Hercules Avenue. Also, there are no eastbound right-turn lanes at Keene Road and Belcher Road. The addition of right-turn lanes at these locations would improve operations by removing turning traffic from the through lane. The pavement quality is poor along this segment of Gulf-to-Bay Boulevard (S.R. 60). It is cracked and rutting was observed throughout the study area.

As indicated for the previous S.R. 60 segment, an adaptive signal control system has been fully operational on S.R. 60, between Hillcrest Avenue and Damascus Road since May 2006.

Recommendations

Short Term

- Complete an access management evaluation along the entire segment;
- Install a westbound right-turn lane at Hercules Avenue;
- Install eastbound right-turn lanes at Keene Road and Belcher Road, might require additional right-of-way, resulting in becoming a long-term recommendation; and
- Resurface Gulf-to-Bay Boulevard (S.R. 60).

Long Term

- None.

Safety Review

The collision analyses described in this section of the evaluation were performed using the crash information available in the Pinellas County MPO Crash Data Center database. The crash data was put into Geographic Information System (GIS) format to visually select the crashes from the GIS truck crash maps 5-8, 5-9 and 5-10. A 500-foot radius around the intersection was used to capture the crashes that occurred at or near the signalized intersection. By selecting these crashes visually from the GIS crash map, crashes were picked up that occurred up to 500 ft. away from the intersection itself.

Ulmerton Road (S.R. 688) at 66th Street North (S.R. 693) Intersection

Existing Conditions

The intersection of Ulmerton Road with 66th Street North is a four-way plus-type signalized intersection. Land uses around the intersection consist of commercial developments. Ulmerton Road is a two-way, four-lane divided roadway that runs east-west in the vicinity of the intersection. The eastbound and westbound approaches each provide one exclusive left-turn lane, one exclusive right-turn lane, and two through lanes. 66th Street North is a two-way, six-lane divided roadway south of the intersection and a two-way, four-lane divided roadway north of the intersection. 66th Street North runs north-south in the vicinity of the intersection. The northbound approach consists of two exclusive left-turn lanes, one exclusive right-turn lane, and two through lanes. The southbound approach consists of one exclusive left-turn lane, one exclusive right-turn lane, and two through lanes. The posted speed limit on Ulmerton Road is 45 mph; the posted speed limit on 66th Street North is 45 mph within the vicinity of the intersection. The Strategic Intermodal System may be accessed to the north or east by way of U.S. 19. Ulmerton Road and 66th Street North are both unrestricted truck routes.

Collision Analysis

According to the collision data, there have been 20 collisions involving heavy vehicles reported in the vicinity of the intersection during the years 2002 to 2004. During the reporting period, 13

of the crashes were rear-ends, 5 were sideswipes, and 1 was an angle collision. Eight of the collisions involved northbound vehicles. Since 40% of the collisions involved northbound vehicles, modifications are recommended for the northbound approach. Six of the collisions resulted in injury and none resulted in fatalities. To take into account the volume of heavy vehicles versus the number of heavy vehicle collisions, the heavy vehicle AADT for the intersection was calculated. The heavy vehicle AADT was estimated to be 6,715 vehicles. Using this value and the number of heavy vehicle collisions, the heavy vehicle crash rate for the intersection was calculated to be 2.72 crashes per million entering heavy vehicles during the study period.

Recommendations

Short Term

- Install supplemental signal head on northbound approach for greater signal head visibility for northbound motorists; and
- Relocate the existing overhead FDOT sign structure south, set further back from the intersection to allow for advance notification to motorists.

Long Term

- None.

Ulmerton Road (S.R. 688) at 34th Street North Intersection

Existing Conditions

The intersection of Ulmerton Road with 34th Street North is a four-way plus-type signalized intersection. Land uses around the intersection consist of commercial developments. Ulmerton Road is a two-way, six-lane divided roadway that runs east-west in the vicinity of the intersection. The eastbound approach provides one exclusive left-turn lane, one exclusive right-turn lane, and three through lanes. The westbound approach provides one exclusive left-turn lane, one exclusive right-turn lane, and four through lanes. 34th Street North is a two-way, two-lane undivided roadway that runs north-south in the vicinity of the intersection. The northbound and southbound approaches each consist of one exclusive left-turn lane and one shared left/through/right-turn lane. The posted speed limit on Ulmerton Road is 50 mph; the posted speed limit on 34th Street N is 40 mph within the vicinity of the intersection. The Strategic Intermodal System may be accessed from this intersection to the west by way of U.S. 19 or to the east at I-275. Ulmerton Road is an unrestricted truck route, while 34th Street North is not on the truck route network.

Collision Analysis

According to the collision data, there have been 18 collisions involving heavy vehicles reported in the vicinity of the intersection during the years 2002 to 2004. During the reporting period, 11 of the crashes were rear-ends, 3 were angle collisions, and 1 was a sideswipe collision. All of the crashes involved an eastbound or westbound vehicle. Since the majority of the collisions were rear-ends, measures to improve the signal head visibility for motorists can help to reduce these crashes. Eight of the collisions resulted in injury and none resulted in fatalities. The heavy

vehicle AADT for the intersection was calculated to account for the volume of heavy vehicles versus the number of heavy vehicle collisions occurring at the intersection. The heavy vehicle AADT was estimated to be 7,487 vehicles. Using this value and the number of heavy vehicle collisions, the heavy vehicle crash rate for the intersection was calculated to be 2.20 crashes per million entering heavy vehicles during the study period.

Recommendations

Short Term

- Upgrade the signal heads to LED signal indications and add backplates for greater signal head visibility for motorists; and
- Install supplemental signal head on eastbound approach for greater signal head visibility for eastbound motorists.

Long Term

- None.

U.S. 19 at Tampa Road Intersection

Existing Conditions

The intersection of U.S. 19 with Tampa Road is a four-way plus-type signalized intersection located within the Strategic Intermodal System. Land uses around the intersection consist of commercial developments. U.S. 19 is a two-way, eight-lane divided roadway that runs north-south in the vicinity of the intersection. The northbound and southbound approaches each provide two exclusive left-turn lanes, one exclusive right-turn lane, and three through lanes. Tampa Road is a two-way, six-lane divided roadway east of the intersection and a two-way, four-lane divided roadway west of the intersection. Tampa Road runs east-west in the vicinity of the intersection. The eastbound approach consists of two exclusive left-turn lanes, one through lane, and one shared through/right-turn lane. The westbound approach provides two exclusive left-turn lanes, one exclusive right-turn lane, and two through lanes. The posted speed limit on U.S. 19 is 55 mph and the posted speed limit on Tampa Road is 45 mph within the vicinity of the intersection. U.S. 19 is an unrestricted truck route within the vicinity of the intersection. Tampa Road is an unrestricted truck route east of the intersection and a restricted truck route west of the intersection.

Collision Analysis

According to the collision data, there have been 33 collisions involving heavy vehicles reported in the vicinity of the intersection during the years 2002 to 2004. During the reporting period, 15 of the crashes were rear-ends, 8 were sideswipe collisions, and 4 were left-turn collisions. Thirteen of the collisions resulted in injury and none resulted in fatalities. This intersection currently has many of the possible improvements to reduce collisions. Grade separation would improve the operation of the intersection, as well as reducing the number of conflict points to improve safety. There is a higher number of heavy vehicle collisions that have occurred at this intersection, but there is also a large number of heavy vehicles traveling through this area. To account for this, the heavy vehicle AADT for the intersection was calculated. Using the AADT

values and truck percentage numbers, the heavy vehicle AADT was estimated to be 4,888 vehicles. Using this value and the number of heavy vehicle collisions, the heavy vehicle crash rate for the intersection was calculated to be 6.17 crashes per million entering heavy vehicles during the study period.

Recommendations

Short Term

- None.

Long Term

- Grade separate the intersection.

U.S. 19 at Curlew Road (S.R. 586) Intersection

Existing Conditions

The intersection of U.S. 19 with Curlew Road is a four-way plus-type signalized intersection located within the Strategic Intermodal System. Land uses around the intersection consist of commercial developments. U.S. 19 is a two-way, eight-lane divided roadway that runs north-south in the vicinity of the intersection. The northbound and southbound approaches each provide two exclusive left-turn lanes, one exclusive right-turn lane, and three through lanes. Curlew Road is a two-way, six-lane divided roadway east of the intersection and a two-way, four-lane divided roadway west of the intersection. Curlew Road runs east-west in the vicinity of the intersection. The eastbound approach consists of two exclusive left-turn lanes, three through lanes, and one exclusive right-turn lane. The westbound approach provides two exclusive left-turn lanes, one exclusive right-turn lane, and two through lanes. The posted speed limit on U.S. 19 is 55 mph and the posted speed limit on Curlew Road is 45 mph within the vicinity of the intersection. U.S. 19 and Curlew Road are both unrestricted truck routes.

Collision Analysis

According to the collision data, there have been 26 collisions involving heavy vehicles reported in the vicinity of the intersection during the years 2002 to 2004. During the reporting period, 12 of the crashes were rear-ends, 5 were sideswipe collisions, and 3 were left-turn collisions. Seven of the collisions resulted in injury and none resulted in fatalities. The improvements that may reduce collisions at this location are currently in the planning and preliminary engineering stages. Grade separation will completely eliminate the need for the through movements to stop at the intersection; therefore, reducing the number of rear-end collisions. To take into account the volume of heavy vehicles versus the number of heavy vehicle collisions, the heavy vehicle AADT for the intersection was calculated. The heavy vehicle AADT was estimated to be 5,008 vehicles. Using this value with 26 heavy vehicle collisions, the heavy vehicle crash rate for the intersection was calculated to be 4.74 crashes per million entering heavy vehicles during the study period.

Recommendations

Short Term

- None.

Long Term

- Grade separate the intersection.

Gulf-To-Bay Boulevard (S.R. 60) at Belcher Road Intersection

Existing Conditions

The intersection of Gulf-to-Bay Boulevard (S.R. 60) with Belcher Road is a four-way plus-type signalized intersection. Land uses around the intersection consist of commercial developments and a mobile home park development. Gulf-to-Bay Boulevard (S.R. 60) is a two-way, six-lane divided roadway that runs east-west in the vicinity of the intersection. The eastbound and westbound approaches each provide one exclusive left-turn lane and three through lanes. Belcher Road is a two-way, four-lane undivided roadway that runs north-south in the vicinity of the intersection. The northbound and southbound approaches each consist of one exclusive left-turn lane and two through lanes. The posted speed limit on Gulf-to-Bay Boulevard (S.R. 60) is 40 mph and the posted speed limit on Belcher Road is 35 mph within the vicinity of the intersection. The Strategic Intermodal System may be accessed from this intersection to the east by way of U.S. 19. Gulf-to-Bay Boulevard is an unrestricted truck route and Belcher Road is a restricted truck route.

Collision Analysis

According to the collision data, there have been 26 collisions involving heavy vehicles reported in the vicinity of the intersection during the years 2002 to 2004. During the reporting period, 13 of the crashes were rear-ends, 6 were sideswipe collisions, and 6 were left-turn collisions. Three of the collisions resulted in injury and none resulted in fatalities. Since the majority of the heavy vehicle collisions were rear-ends and sideswipes, greater visibility of the signal indications and advance warning of the intersection can reduce these crashes. The installation of eastbound and westbound right-turn lanes would improve the operations of this intersection; however, there is no right-of-way available for this improvement. Since the incidence of heavy vehicle collisions will increase with the volume of heavy vehicles, the heavy vehicle crash rate for the intersection was calculated. The heavy vehicle AADT was estimated to be 4,798 vehicles. Using this value and 26 heavy vehicle collisions, the heavy vehicle crash rate for the intersection was estimated to be 4.95 crashes per million entering heavy vehicles during the three-year study period.

Recommendations

Short Term

- Upgrade the signal heads to LED signal indications and add backplates for greater signal head visibility for motorists;
- Install supplemental signal heads at the intersection for greater signal head visibility for motorists; and

- Install advance street name signs in advance of the intersection.

Long Term

- None.

Alternate U.S. 19 (S.R. 595) at Park Boulevard (S.R. 694) Intersection

Existing Conditions

The intersection of Alternate U.S. 19 (Seminole Boulevard) with Park Boulevard is a four-way plus-type signalized intersection. Land uses around the intersection consist of commercial developments on all four quadrants. Alternate U.S. 19 is a two-way, six-lane divided roadway that runs north-south in the vicinity of the intersection. The northbound and southbound approaches each provide two exclusive left-turn lanes, one exclusive right-turn lane, and three through lanes. Park Boulevard is a two-way, six-lane divided roadway east of the intersection and a two-way, four-lane divided roadway west of the intersection. Park Boulevard runs east-west in the vicinity of the intersection. The eastbound approach consists of two exclusive left-turn lanes, three through lanes, and one exclusive right- turn lane. The westbound approach provides two exclusive left- turn lanes, one exclusive right-turn lane, and two through lanes. The posted speed limit on Alternate U.S. 19 is 45 mph and the posted speed limit on Park Boulevard is 35 mph within the vicinity of the intersection. The Strategic Intermodal System may be accessed to the east by way of U.S. 19 or I-275. Alternate U.S. 19 and Park Boulevard are both unrestricted truck routes.

Collision Analysis

There have been 23 collisions involving heavy vehicles reported in the vicinity of the intersection during the years 2002 to 2004 according to the collision data. During the reporting period, 12 of the crashes were rear-ends, 4 were left-turn collisions, 2 were right-turn collisions, and 2 were backing crashes. Two of the collisions resulted in injury and none resulted in fatalities. Since the majority of the collisions were rear-ends, modifications to improve signal head visibility are recommended. Advance street name signs may also reduce the number of crashes on the approaches by giving earlier notice to motorists of the upcoming intersection. This allows vehicles to complete lane changes or slow down prior to reaching the intersection. The heavy vehicle crash rate for the intersection was calculated. Using the intersection AADT and truck percentages, the heavy vehicle AADT was estimated to be 3,441 vehicles. Using this value and the number of heavy vehicle collisions, the heavy vehicle crash rate for the intersection was calculated to be 6.10 crashes per million entering heavy vehicles during the three-year study period.

Recommendations

Short Term

- Upgrade the signal heads to LED signal indications and add backplates for greater signal head visibility for motorists;
- Install supplemental signal heads on the westbound approach for greater signal head visibility for westbound motorists;

- Install an overhead ‘Right Lane Must Turn Right’ sign on the westbound approach; and
- Install advance street name signs in advance of the intersection.

Long Term

- None.

66th Street North (S.R. 693) at Bryan Dairy Road Intersection

Existing Conditions

The intersection of 66th Street North with Bryan Dairy Road is a grade-separated signalized intersection. Land uses around the intersection consist of vacant land and residential developments. 66th Street North is a two-way, six-lane divided roadway that runs north-south in the vicinity of the intersection. The northbound and southbound approaches each provide two exclusive left-turn lanes, one exclusive right-turn lane, and three through lanes. Bryan Dairy Road is a two-way, six-lane divided roadway east of 66th Street North, while tapering down to a four-lane divided facility on the west side of the overpass. The at-grade eastbound approach provides two exclusive left-turn lanes, one shared right-turn/through lane, and one through lane. The at-grade westbound approach provides three exclusive left-turn lanes (the inside left-turn being used for U turns), one shared right-turn/through lane, and one exclusive through lane. The posted speed limit on 66th Street North is 45 mph and the posted speed limit on Bryan Dairy Road is 45 mph within the vicinity of the intersection. 66th Street North and Bryan Dairy are both unrestricted truck routes.

Collision Analysis

According to the collision data, there have been 10 collisions involving heavy vehicles reported in the vicinity of the intersection during this the years 2002 to 2004. During the reporting period, 3 of the crashes were rear-ends, 3 were sideswipes, and 2 were angle collisions. Eight of the crashes involved either a northbound or southbound vehicle. Three of the collisions resulted in injury and none resulted in a fatality. Since the majority of the heavy vehicle collisions were rear-ends and sideswipes, advance warning of the intersection can reduce these crashes. The heavy vehicle crash rate for the intersection was calculated to take into account the volume of heavy vehicles versus the number of heavy vehicle collisions. The heavy vehicle AADT was estimated to be 4,268 vehicles, using the AADT and truck percentages for the intersection. The heavy vehicle crash rate for the intersection was calculated using the heavy vehicle AADT and the 10 heavy vehicle collisions and was found to be 2.14 crashes per million entering heavy vehicles during the study period.

Recommendations

Short Term

- Install advance street name signs on 66th Street North in advance of the intersection.

Long Term

- None.

Park Boulevard (S.R. 694) – 66th Street North (S.R. 693) to 49th Street North Intersection

Existing Conditions

Park Boulevard is a two-way, six-lane divided arterial with a raised median between 66th Street North and 49th Street North. The two endpoints of the segment are both signalized intersections. The length of this segment is approximately 1.8 miles. Land uses along this area of Park Boulevard consist primarily of commercial developments. The majority of the cross streets and side streets intersecting Park Boulevard within the study limits provide access to single-family residential communities. The posted speed limit on Park Boulevard within the study limits ranges from 40 to 45 mph. Park Boulevard, 66th Street North, and 49th Street North are unrestricted truck routes.

This road segment is a part of the proposed local freight mobility corridor that provides connectivity to local and regional freight activity centers.

Collision Analysis

There were 45 collisions involving heavy vehicles reported along Park Boulevard between 66th Street North and 49th Street North from January 2002 and December 2004. During the 36-month study period, 18 of the crashes (40%) were rear-end collisions, 12 (27%) were sideswipe crashes, 3 (7%) were left-turn crashes, 3 (7%) were angle collisions, and 3 (7%) were right-turn collisions. Also, 7 of the total crashes (16%) resulted in injuries and none resulted in fatalities.

To take into account the volume of heavy vehicles versus the number of heavy vehicle collisions, the heavy vehicle AADT for the segment was calculated. The heavy vehicle AADT was estimated to be 2,766 vehicles. Using this value and the number of heavy vehicle collisions, the heavy vehicle crash rate for the segment was calculated to be 8.25 crashes per million entering heavy vehicles per mile during the study period.

Further analysis showed that 19 (42%) of the crashes and 13 (43%) of the rear-end and sideswipe crashes occurred at or near intersections, and 25 (56%) of the crashes and 17 (57%) of the rear end and sideswipe collisions did not occur near an intersection. The signalized intersection with the highest number of heavy vehicle collisions was Park Boulevard at 66th Street North with 7 crashes during the study period.

An analysis of the left-turn lane lengths using the posted speed limit of the roadway and other features was performed. The results found that almost every left-turn lane within this study segment has inadequate deceleration length. The turn lane lengths are adequate for the signalized intersections at the endpoints of the segment; however, there are a total of 29 left-turn lanes that do not meet design criteria within this segment. Additionally, the lane widths within this segment are narrow and are approximately 10-feet wide. This can make it difficult for large vehicles to maneuver and may account for some of the sideswipe collisions occurring in this area.

Recommendations

Short Term

- Lengthen the left-turn lanes to meet current standards;
- Close the median opening just west of 49th Street North; and
- Complete an access management evaluation on corridor.

Long Term

- None.

Park Boulevard (S.R. 694) – 49th Street North to U.S. 19 Intersection

Existing Conditions

Park Boulevard is a two-way, six-lane divided arterial with a raised median between 49th Street North and U.S. 19. This section of Park Boulevard provides access to the Strategic Intermodal System through U.S. 19 north of Park Boulevard and Gandy Boulevard east of U.S. 19. The intersection of Park Boulevard and 49th Street North is signalized and the intersection of Park Boulevard and U.S. 19 is grade separated. The length of this segment is approximately 1.0 mile. Land uses along this area of Park Boulevard consist primarily of commercial developments. The majority of the cross streets and side streets intersecting Park Boulevard within the study limits provide access to single-family residential communities. The posted speed limit on Park Boulevard within the study limits is 40 mph. Park Boulevard, 49th Street North, and U.S. 19 are unrestricted truck routes.

This road segment is a part of the proposed local freight mobility corridor that provides connectivity to local and regional freight activity centers.

Collision Analysis

There were 36 collisions involving heavy vehicles reported along Park Boulevard between 49th Street North and U.S. 19 from January 2002 and December 2004. During the 36-month study period, 15 of the crashes (42%) were rear-end collisions, 11 (31%) were sideswipe crashes, 2 (6%) were left-turn crashes, and 5 (14%) were right-turn collisions. Also, 8 of the total crashes (22%) resulted in injuries and none resulted in fatalities. The heavy vehicle AADT for the segment was calculated to take into account the volume of heavy vehicles versus the number of heavy vehicle collisions. The heavy vehicle AADT was estimated to be 3,674 vehicles. Using this value and the number of heavy vehicle collisions, the heavy vehicle crash rate for the segment was calculated to be 8.95 crashes per million entering heavy vehicles per mile during the study period.

Further analysis showed that 20 (56%) of the crashes and 15 (58%) of the rear end and sideswipe crashes occurred at or near intersections, and 16 (44%) of the crashes and 11 (42%) of the rear end and sideswipe collisions did not occur near an intersection. Access management improvements would greatly reduce the number of conflict points along the corridor, thus, reducing the number of rear-ends, sideswipes, left-turn, and angle collisions.

An analysis of the left-turn lane lengths using the posted speed limit of the roadway and other features was performed. The results found the turn lane lengths are adequate for the signalized intersections at the endpoints of the segment; however, three left-turn lanes within this study segment have inadequate deceleration length. These are located at 44th Street, 46th Street, and 47th Street. An access management analysis should be completed along this corridor to determine which lanes to extend, median openings to close, and median openings to leave open. Additionally, the lane widths within this segment are narrow and are approximately 10-feet wide. The narrow lane widths can make it more difficult for heavy vehicles to complete their movements on this segment.

Recommendations

Short Term

- Lengthen the left-turn lanes to meet the required deceleration length of 155 feet for a 40 mph roadway plus the required queue length; and
- Complete an access management evaluation on corridor.

Long Term

- None.

ANALYSIS SUMMARY

The current truck route network within Pinellas County has several operational and safety deficient areas. Many of these have been identified and analyzed as part of this study. As previously discussed, the sites and locations identified in Table 5-2 and Table 5-3 were evaluated with the generalized categories and weights that resulted in a preliminary order of importance found in Table 5-4 below. The generalized categories included safety, level of congestion, access to freight centers, transit activity, corridor designation, and neighborhood impacts. The scoring reflects a preliminary efficiency of use as a road segment on the truck route system. The higher the score, the less efficient that road segment appears to function based on this evaluation process.

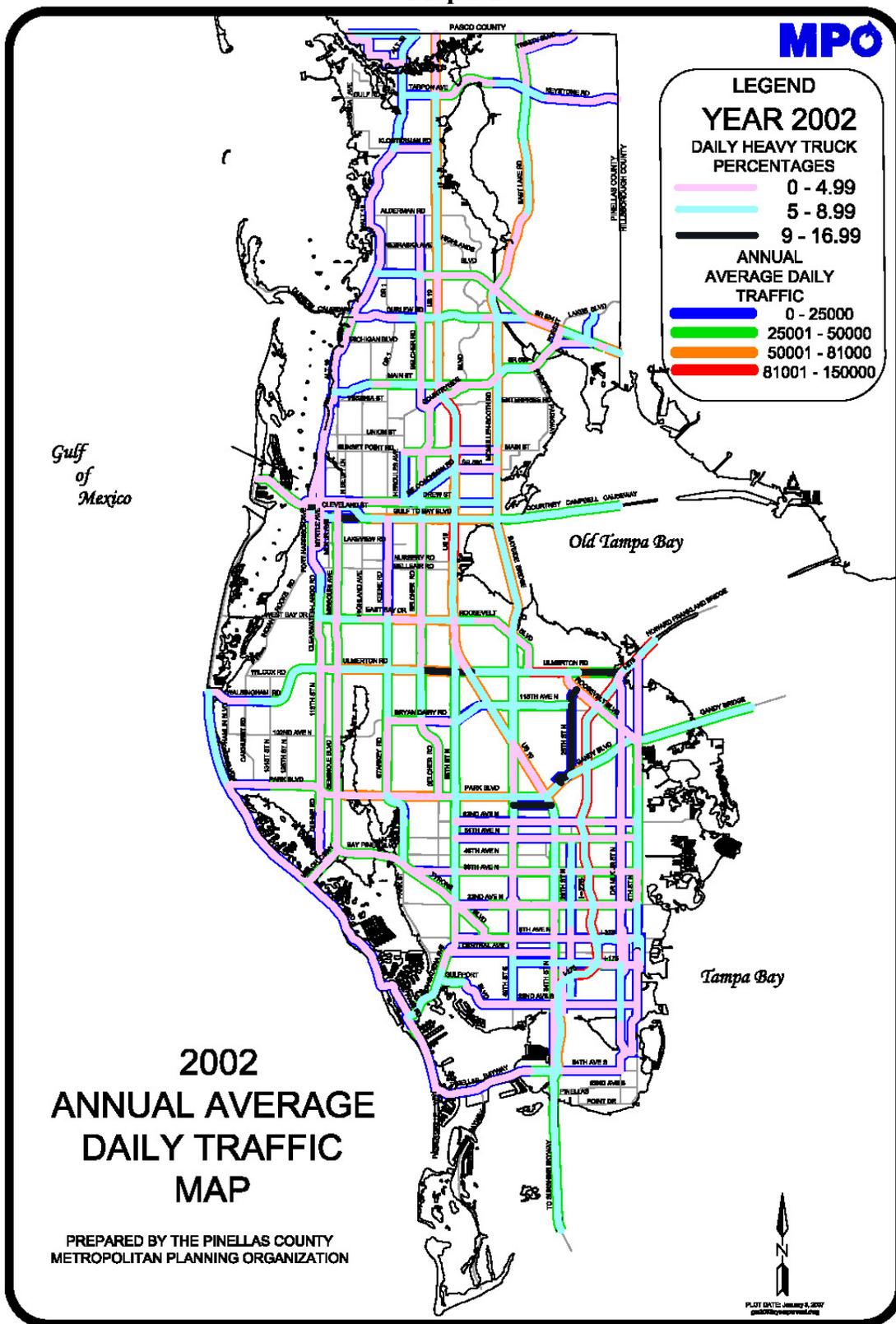
**Table 5-4
Preliminary Order of Potential Operational and Safety Sites**

Roadway	Segment / Location	Score
Gulf-to-Bay Blvd (S.R. 60)	Damascus Road to US 19	5
Gulf-to-Bay Blvd (S.R. 60)	Belcher Road to Keene Road	5
Gulf-to-Bay Blvd (S.R. 60)	Belcher Road	5
U.S. 19	Klosterman Road to Tampa Road	4
U.S. 19	Tampa Road to Curlew Road	4
U.S. 19	Curlew Road to S.R. 580 (Main Street)	4
Alternate U.S. 19	Klosterman Road to Tampa Road	4
Alternate U.S. 19	Curlew Road to Myrtle Avenue	4
East Lake Road	Keystone Road to Brooker Creek	4
McMullen-Booth Road	S.R. 580 to Sunset Point Road	4
McMullen-Booth Road	Sunset Point Road to Gulf-to-Bay Blvd	4
Ulmerton Road (S.R. 688)	66 th Street North (S.R. 693)	4
Ulmerton Road (S.R. 688)	34 th Street North	4
U.S. 19	Tampa Road	4
U.S. 19	Curlew Road (S.R. 586)	4
Alternate U.S. 19 (S.R. 595)	Park Boulevard (S.R. 694)	4
U.S. 19	Tarpon Avenue to Klosterman Road	3
66 th Street N. (S.R. 693)	Bryan Dairy Road	3
Park Boulevard (S.R. 694)	66 th Street N (S.R. 693) to 49 th Street N	3
Park Boulevard (S.R. 694)	49 th Street North to U.S. 19	3

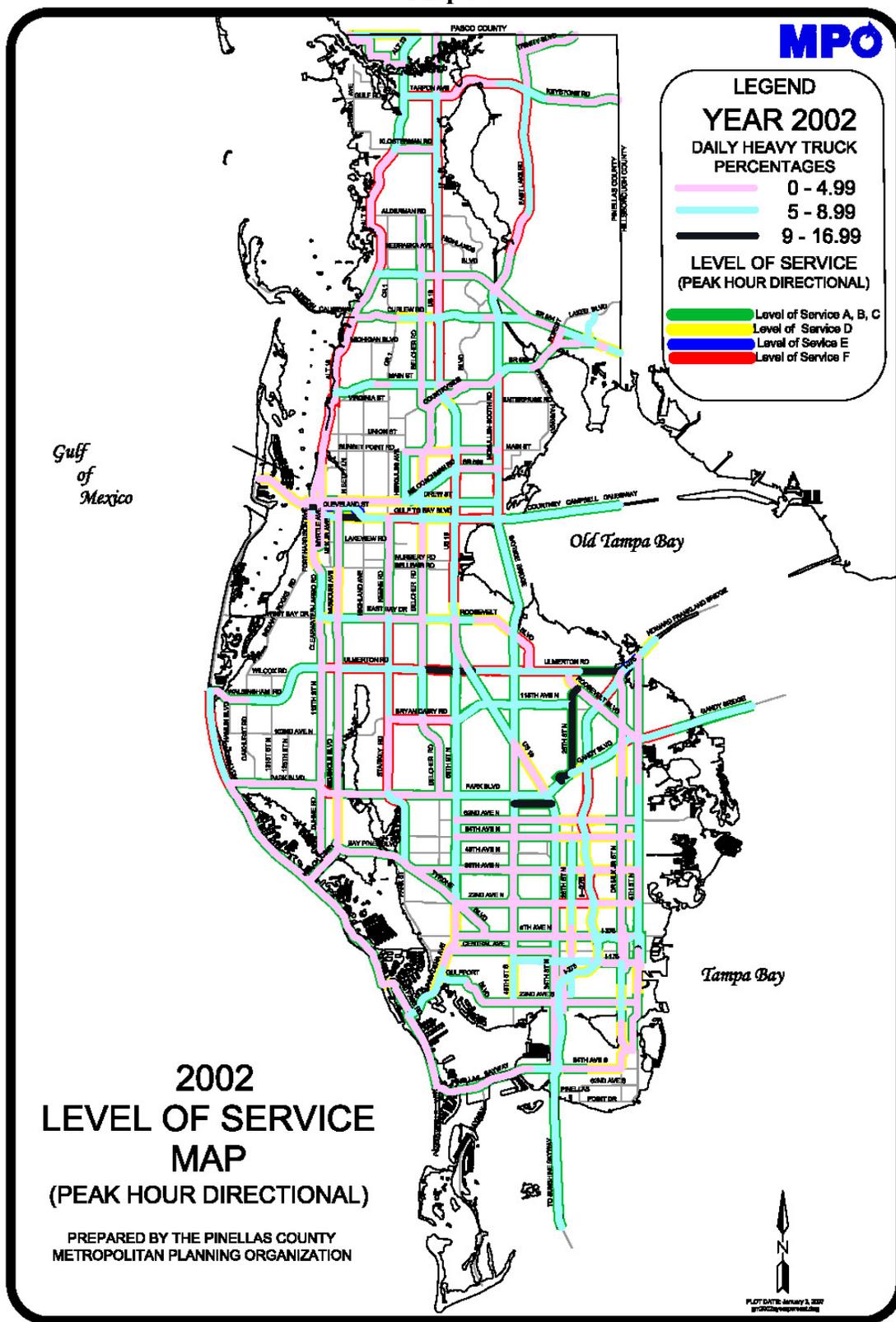
There are currently 128 segments of the truck route network that are considered to operate at a Level of Service F. See Maps 5-2 through 5-7 that follow.

Additionally, there were 3,566 heavy vehicle collisions that occurred within the truck route network during the years 2002 to 2004. This includes 1,124 heavy vehicle crashes in 2002, 1,216 in 2003, and 1,226 in 2004. See maps 5-8, 5-9, and 5-10 below. This does not include the many incidents that have occurred on truck routes that did not involve a heavy vehicle. As more traffic is placed on the network, the number of heavy vehicle collisions is increasing. The recommendations outlined in this study such as roadway widening, grade separation, signal upgrades, and access management modifications target the capacity and operational issues, as well as the safety concerns on many of the major roadways of the truck route network.

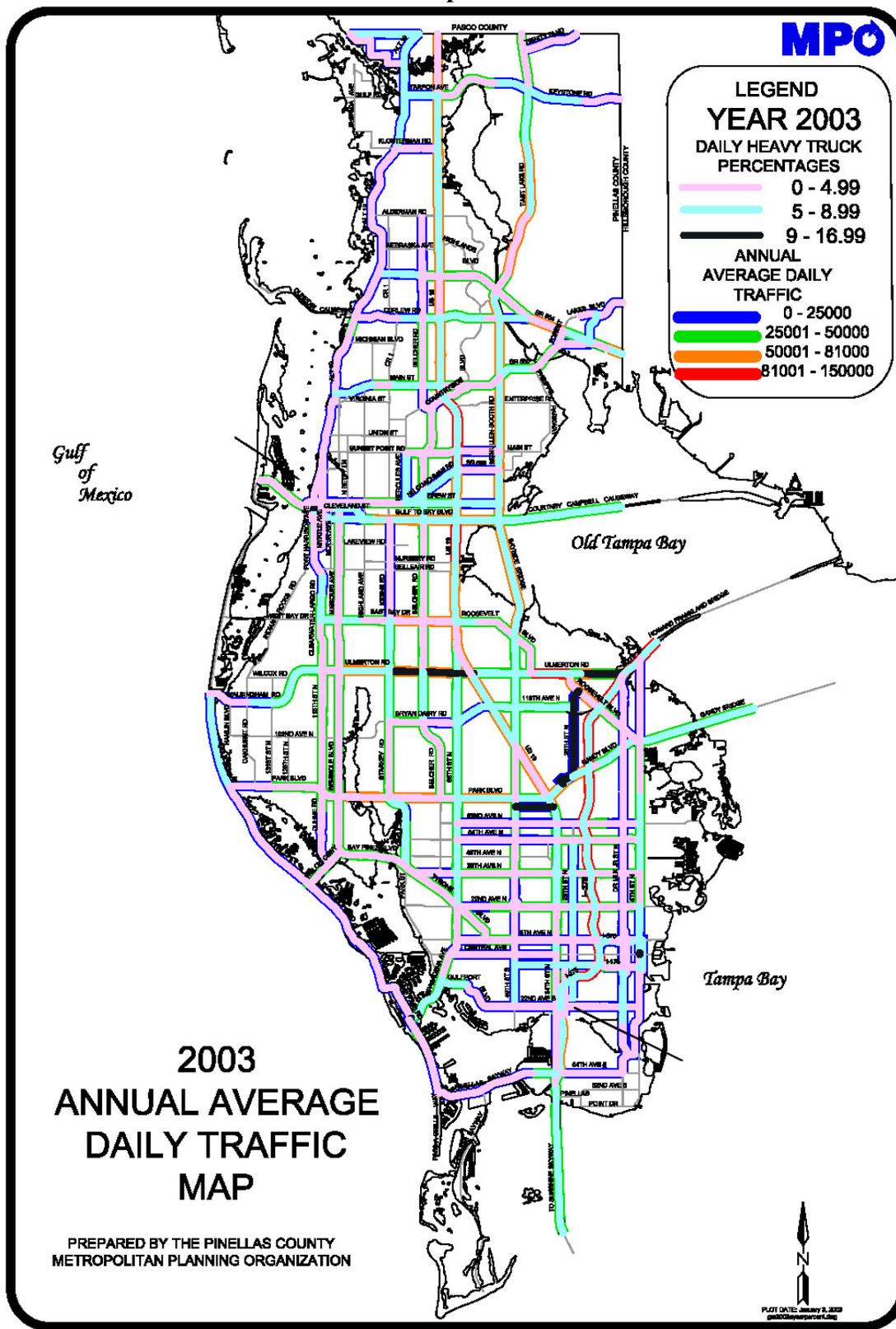
Map 5-2



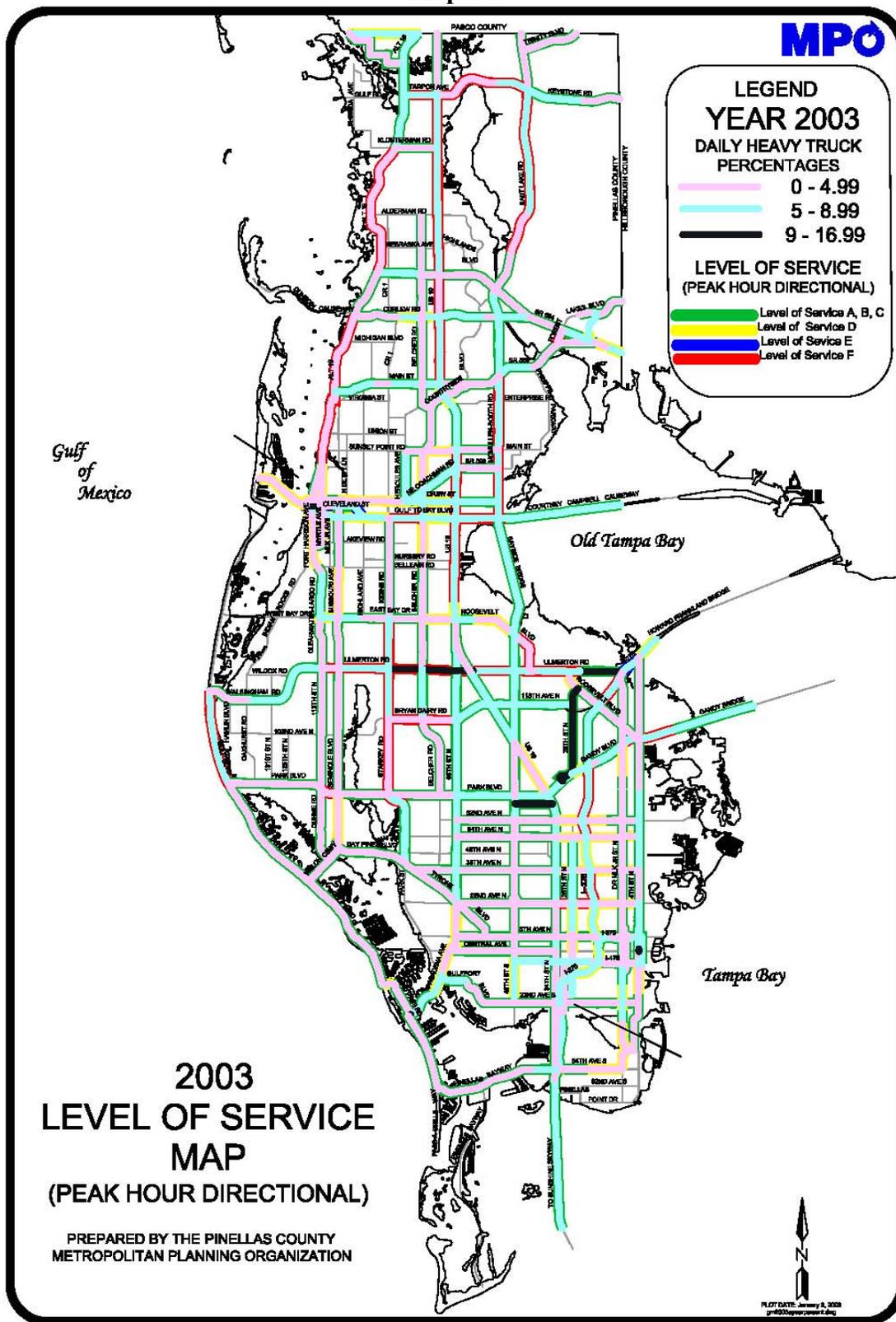
Map 5-3



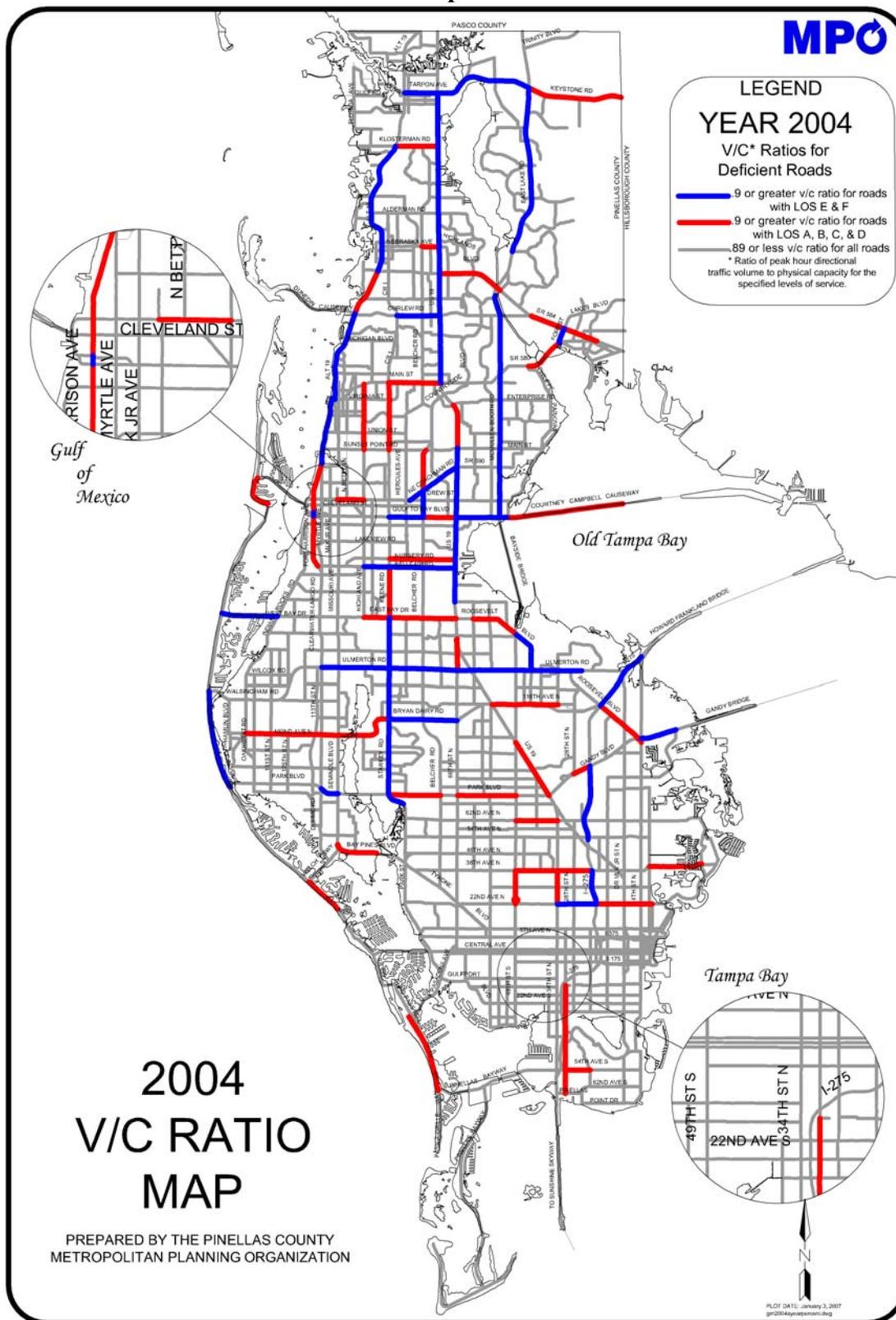
Map 5-4



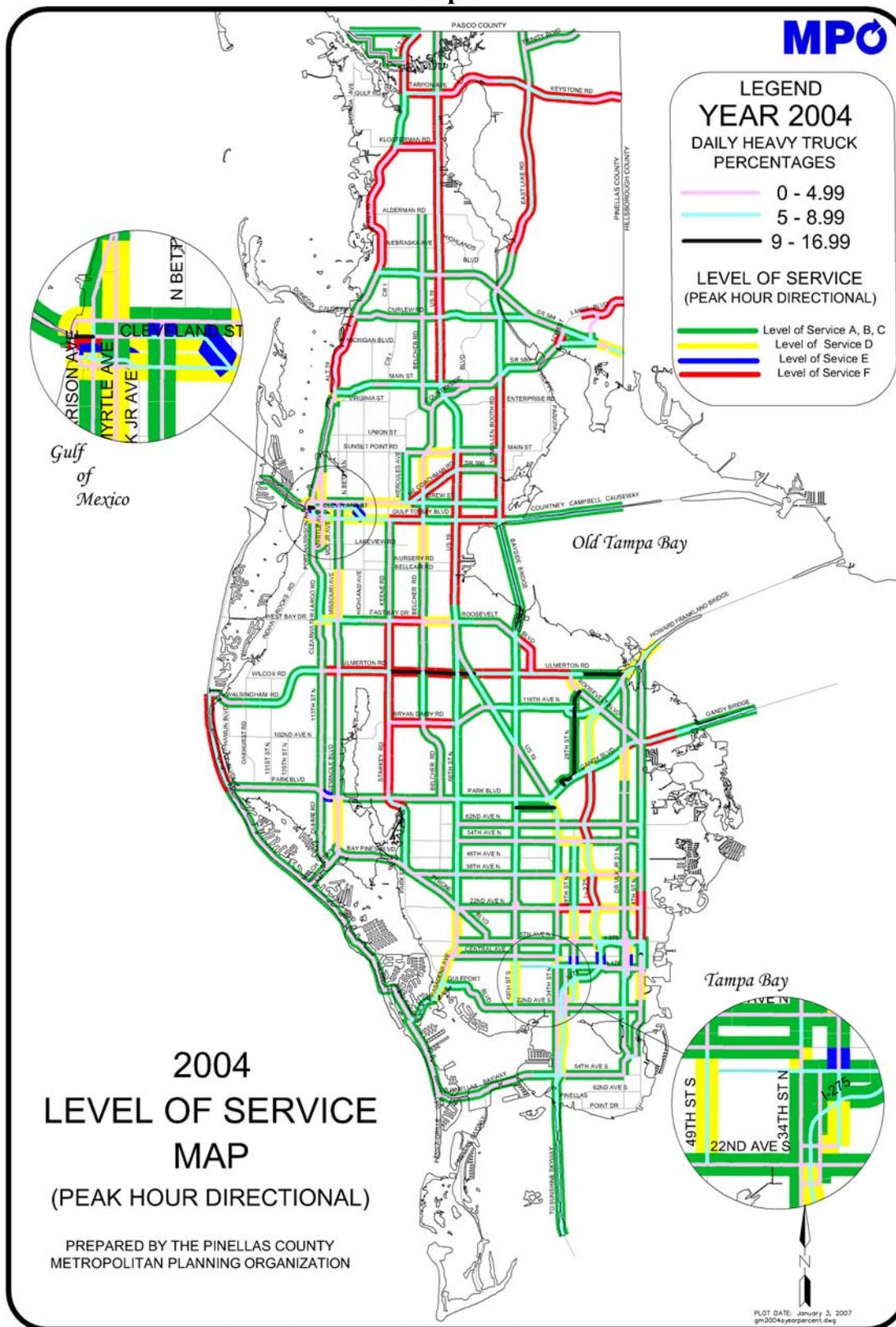
Map 5-5



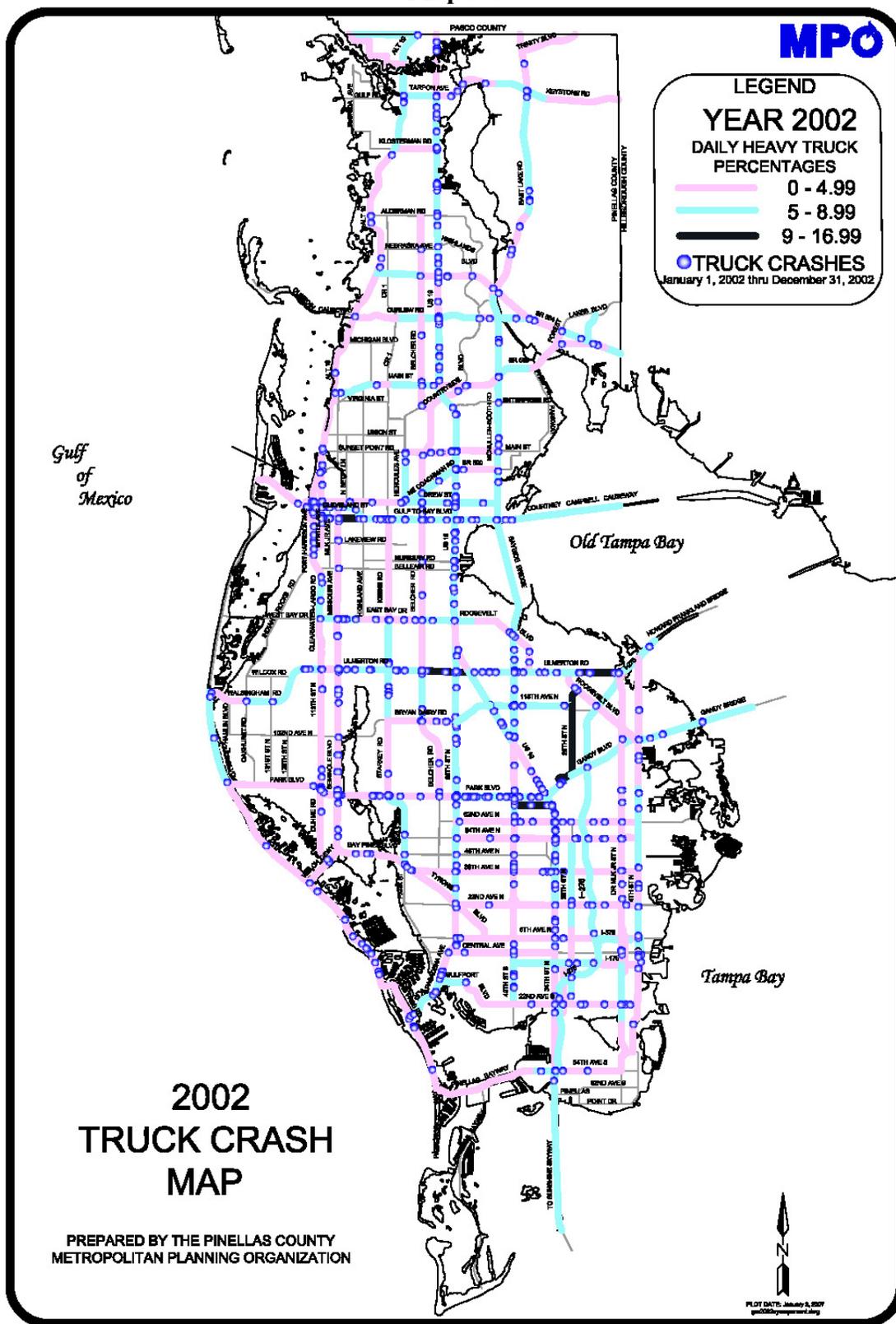
Map 5-6



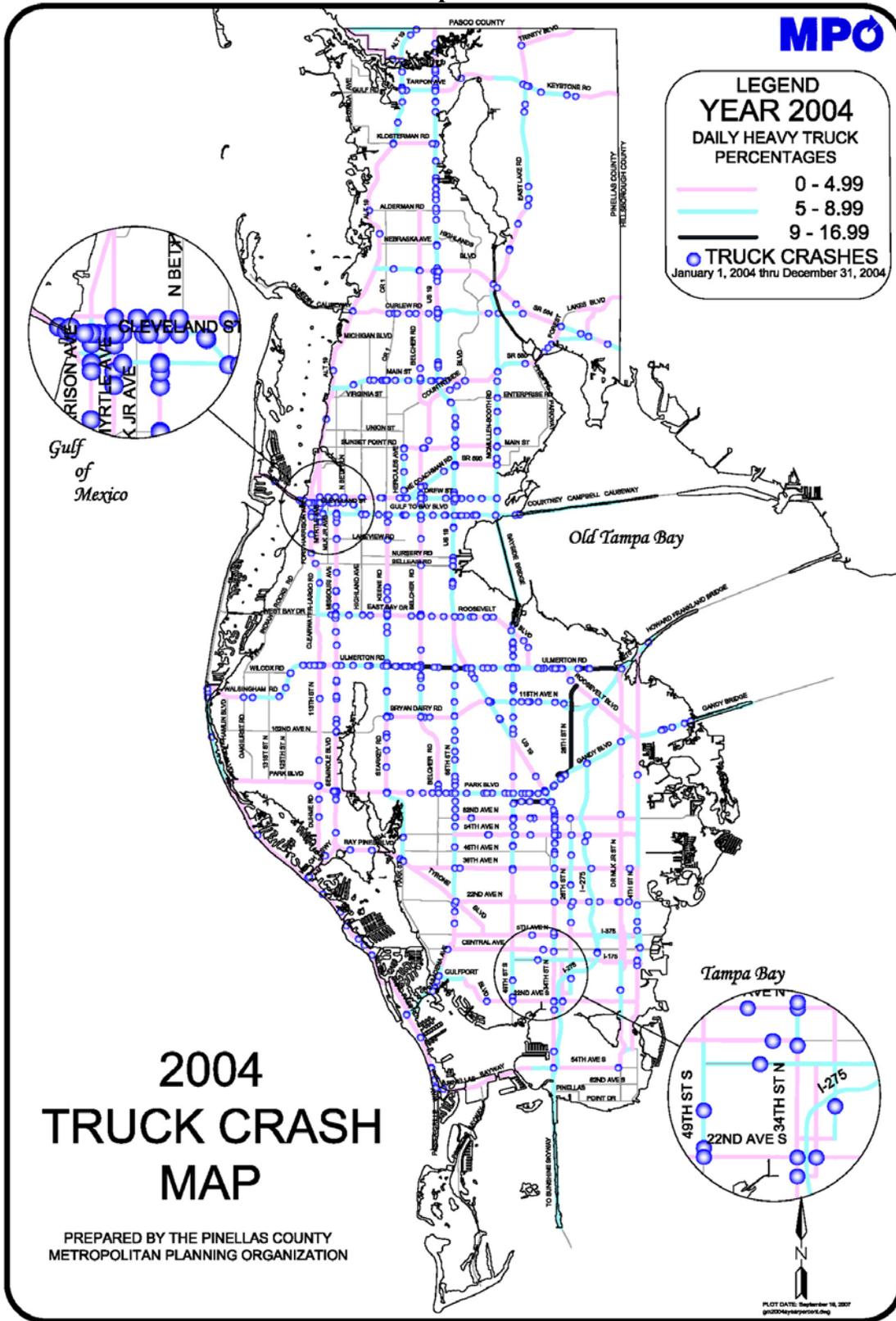
Map 5-7



Map 5-8



Map 5-10



TECHNICAL MEMORANDUM

NO. 6

TECHNICAL MEMORANDUM NO. 6 RECOMMENDATIONS

INTRODUCTION

The Pinellas County Goods Movement Study focuses on a number of areas of consideration important to the movement of goods in Pinellas County. These areas have been crucial to the development of recommendations for consideration as it applies to the Pinellas County Truck Route Plan. Areas of consideration in many cases build upon each other. Therefore, all are important to the overall study and eventual recommendations. Major areas of consideration or tools used in the Pinellas County Goods Movement Study include:

- State and local commercial vehicle regulation and enforcement;
- County and municipal governments' land use and transportation policy;
- Available data including average annual daily trips, level of service, volume to capacity ratio, and crash data from the period of 2002-2004, and crash statistics from the year 2005;
- Freight carrier information and concerns;
- Regional and local freight mobility centers and corridors;
- Goods Movement Advisory Committee (GMAC), input and concerns from industry and governmental stakeholders;
- Inventory of the existing freight transportation assets (signage) on truck routes;
- Designation criteria and community values that were developed for consideration of a roadway for truck routing designation or restriction;
- Public input and community values survey information;
- Measures of effectiveness and their use in evaluation of low cost operational improvements and long term strategies/improvements;
- Historical traffic classification count data;
- Hazardous material transport considerations;
- Considerations for roadways on the truck route network related to the level of service, annual average daily traffic, volume-to-capacity ratio, crash statistics, site visits, engineering judgment; and
- Review of the previous actions of the MPO.

EXISTING POLICY AND REGULATORY CONTROLS

Pinellas County Code of Ordinances Recommendations:

- Adopt changes proposed by the Pinellas MPO Committees and staff to the Pinellas County Code of Ordinances, Chapter 122 Traffic and Vehicles Article III. Truck Routes, Section 122-61 to 122-66. These proposed changes include the results of the Commercial Vehicle Assessment developed by the MPO and HNTB in 2004 and 2005. Details on the proposed revisions are included in the Technical Memorandum No. 1 for the Pinellas County Goods Movement Study;

- Develop an overall policy or language related to the Truck Route Article III to work in coordination with the local governments to refine their truck route ordinances to be compatible to the Pinellas County Truck Route Ordinance. If possible, work to develop the same enforcement regulations the County will use as they pertain to vehicle weight and enforcement. During consultation with the Pinellas County Sheriff's Office (PSO) Traffic Enforcement Unit, it was established that in order for the PSO to enforce weight restrictions, the Pinellas County Code not only would have to be amended to deal with weight restrictions, but funding would have to be available for staffing, capital, operation, and maintenance costs in support of those activities. Current economic conditions preclude this alternative scenario; and
- Develop a policy or language that addresses the matter of detours on truck routes based on a coordinated effort with the jurisdictions that have authority over detours involving a truck route.

Municipal Governments' Code of Ordinances (St. Petersburg, Clearwater, Largo, Dunedin, and Pinellas Park) Observations:

- St. Petersburg – The City designates all truck routes to be clearly posted with appropriate signage. The City of St. Petersburg differs from the rest of Pinellas County in that it signs all truck routes, restricted or un-restricted. No recommendation for change is recommended because the City has a considerable number of truck routes in proximity to each other and it may be more confusing if the streets were not signed. It is felt the driver benefits from the visibility of the posted signs in St. Petersburg;
- Clearwater – The Police Department and traffic engineer have the power to divert traffic or temporarily close any street to vehicular traffic or to vehicles of certain description for public safety purpose. This should be considered when addressing the issue of detours on truck routes;
- The City of Clearwater exempts public utility and contractor heavy trucks from the restricted vehicle classification in the Truck Route Plan when engaged in repair, maintenance, and construction of street improvements within its jurisdiction; and
- MPO staff and the TCC have proposed amending the Pinellas County Code to address issues regarding truck routes. Recommended revisions include adding definitions for commerce and gross vehicle weight and to modify the definitions of truck and restricted vehicle; confirm the observance, utilization, and hours of operation of truck routes to the proposed definitions; add a provision for coordination with FDOT and municipalities when establishing official detour routes; and to add provisions for the installation of signs.

Municipal Governments' Code of Ordinances Recommendations:

- It is recommended that the City of Pinellas Park consider revising its Municipal Code of Ordinances Truck Routes Section 9-108 (Ordinance 1247 – 3.24.83, and Ordinance 2599 – 06.24.99) in relation to restricted vehicle hours of operation on truck routes to mirror the municipal codes of the other local government codes in Pinellas; and

- It is recommended that the Cities of St. Petersburg, Clearwater, Largo, Dunedin and Pinellas Park review their code of ordinances as they pertain to Truck Routes and amend them to be consistent with the Pinellas County Code of Ordinance Truck Route language.

PINELLAS COUNTY METROPOLITAN PLANNING ORGANIZATION LONG RANGE TRANSPORTATION PLAN

Impact of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU):

On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the federal surface transportation programs for highways and transit for the 5-year period 2005-2009.

Addressing SAFETEA-LU in the 2025 LRTP:

The results of a SAFETEA-LU compliance review of the MPO 2025 LRTP are set forth in this section. The review references the data, analysis, and policy framework for the MPO 2025 LRTP as compared to the SAFETEA-LU planning requirements. These requirements have been organized under the following categories:

1. Special Needs Transportation;
2. Transportation System Safety;
3. Transportation System Security;
4. Operational and Management Strategies;
5. Environmental Mitigation and Agency Consultation;
6. Consistency with Planned Growth and Development Plans;
7. Participation Plan;
8. Annual Listing of Obligated Projects;
9. Transportation Finance; and
10. Multimodal Evaluation of LRTP Impacts.

Out of those ten categories, the following require additions related to goods movement:

- **Transportation System Safety:** SAFETEA-LU calls for the safety of the transportation system to be a stand-alone planning factor.

SAFETEA-LU requires that safety strategies be identified that will improve the performance of the transportation system, maximizing the safety and mobility of people and goods, and that safety be addressed as a stand-alone factor. The MPO is required to continue to develop strategies to incorporate safety in the transportation planning process and the Transportation Improvement Program development. The results of the MPO safety planning process should be consistent with and reflect the goals and objectives of the Strategic Highway Safety Plan (SHSP), as appropriate.

A new policy which supports the Florida Strategic Highway Safety Plan objective to ensure the safe accommodation of motorized and non motorized traffic has been approved by the MPO (see proposed new Policy 1.10.15 below):

1.10.15. Policy: The MPO shall assist the FDOT and its safety partners in their goal as stated in the statewide Florida Strategic Highway Safety Plan to improve the safety of Florida's surface transportation system by achieving a 5% annual reduction in the rate of fatalities and serious injuries beginning in 2007.

- **Transportation System Security:** SAFETEA-LU calls for the security of the transportation system to be a stand-alone planning factor, signaling an increase in importance from prior legislation in which security was coupled with safety.

Future Actions for the MPO 2035 LRTP Update

During the development of the 2035 LRTP Plan Update, a stand-alone security element must be prepared for the LRTP that emphasizes strategies and policies in support of homeland security. As mandated by SAFETEA-LU, it is recommended that consideration be given to the following components of the security element that impact goods movement and freight planning:

- Federal requirements for security planning for the transportation system;
 - MPO's role in local and regional security planning activities;
 - Protection of and recovery planning for critical transportation infrastructure including airports, railroads, intermodal terminals and transit facilities;
 - Policy development covering planning and coordination, communications and programming security projects prioritization, and green transportation initiatives to support homeland security; and
 - Add/incorporate freight security planning in coordination with FDOT and the Federal Highway Administration.
- **Multimodal Evaluation of LRTP Impacts:**

SAFETEA-LU requires that the LRTP update process includes a mechanism for ensuring that the MPO, State, and public transportation operators agree that the data utilized in preparing other existing modal plans providing input to the LRTP are valid.

It is recommended that transportation facilities (including major roadways, transit, multimodal and intermodal facilities, and intermodal connectors) that function as an integrated system shall be identified, giving emphasis to facilities that serve important national, state, and regional transportation functions.

- **Future Actions for 2035 LRTP:**

It is recommended that a map of the Strategic Intermodal System facilities and a plan for continued coordination with freight interests within the planning process at the regional and state level be prepared during the plan update of 2009.

PINELLAS COUNTY COMPREHENSIVE PLAN TRANSPORTATION ELEMENT

Safety, Efficiency, and Goods Movement:

- It is recommended to expand Objective 1.8 to include security and goods movement considerations, and develop a policy for safety, security, efficiency, and goods movement, which combines the reliability of trucks with the low cost of rail, when possible; and
- It is recommended to incorporate local and county concepts derived from the Pinellas County MPO Goods Movement Study including Local Freight Activity Centers and Local Freight Mobility Corridors.

Ports and Aviation (operational recommendation related to the element):

- It is recommended that Pinellas County coordinate with the Florida Department of Transportation to improve ingress/egress at and near the St. Petersburg-Clearwater International Airport in order to better expand cargo trade potential. This may take place in the form of improvements at the intersection of Roosevelt Boulevard and 46th Street North, at Ulmerton Road, and as being proposed by the 2008 Feasibility Study of Land Development Opportunities at the AIRCO Golf Course adjacent to the St. Petersburg-Clearwater International Airport (PIE). It is recommended that the improvements to the St. Petersburg-Clearwater International Airport take into consideration the Pinellas County Comprehensive Plan, Transportation Element Goal 2, and the policies under Objectives 2.2 and 2.3.

PINELLAS COUNTY COMPREHENSIVE PLAN FUTURE LAND USE AND QUALITY COMMUNITIES ELEMENT

- It is recommended that the objectives and policies of Goal One in the Comprehensive Plan Future Land Use and Quality Communities Element be considered when amending the MPO Truck Route Plan Map; and
- It is recommended that the objectives and policies of Goal Four in the Comprehensive Plan Future Land Use and Quality Communities Element be considered when amending the MPO Truck Route Plan Map.

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) FREIGHT MOBILITY – PHASE I AND II TAMPA BAY REGIONAL GOODS MOVEMENT STUDY

Once the report for Phase I of the Tampa Bay Regional Goods Movement Study is finalized by FDOT, MPOs in the region will consider the following freight planning recommendation from the draft report to be included in their documents:

- Establish a Goods Movement Management System (GMMS) and develop a freight planning process in order to select and fund strategies/actions that facilitate the safe and efficient movement of freight;
- Follow the FDOT recommendation that only one Goods Movement Advisory Committee for the Tampa Bay Region be installed because the industry stakeholders would prefer

that alternative to avoid unnecessary local meetings, given that many of the members operate regionally. (Phase II Tampa Bay Regional Goods Movement Study); and

- Develop strategies that assist local law enforcement officials share information and concerns through the GMAC or the Pinellas County Community Traffic Safety Team (CTST).

GOODS MOVEMENT ADVISORY COMMITTEE (GMAC)

Signing, Truck Route Restrictions, Freight Activity Centers, Traffic Incident Management, and Parking Recommendations:

- A consistent countywide protocol, as it relates to signing the truck route network, is ultimately recommended. The majority of the GMAC and participating carriers felt that signing unrestricted truck routes is not necessary and would increase visual clutter;
- Further evaluate truck route sign placement on the network, on restricted routes, to provide optimum visibility. Belleair Road off U.S. 19 and 102nd Avenue off Seminole Boulevard provide examples of needed placement evaluation and potential placement change;
- Although not unanimous, several members of the GMAC supported the added flexibility of extending the current hours of permitted truck travel on Restricted Truck Routes to the period from 4:00 a.m. – 8:00 p.m. Should this take place, traffic congestion at peak hours would be relieved. All local governments would have to reflect this change in their truck route ordinances and codes;
- It is recommended that 20th Avenue SE in the West Pinellas Industrial Area be made a paved public road in coordination with the CSX Railroad, including the installation of rail signals by CSX and opening 20th Avenue SE from Starkey Road to Lake Avenue SE as it relates to freight movement. As indicated in the Technical Memorandum No. 2, the Pinellas County MPO approved the installation of the signal in conjunction with the widening project for Ulmerton Road on December 12, 2007;
- Development of a countywide traffic incident management plan which addresses the quick removal of restricted vehicles involved in crashes on the truck route network. The plan should complement and coordinate with FDOT's traffic incident management plans in place for District Seven, and the statewide Rapid Incident Scene Clearance (RISC) project. As indicated in the Technical Memorandum No. 2, there is an existing working group, the Pinellas Traffic Incident Management Team (TIM) which implements countywide scene clearance strategies; and
- The County and local government agencies should address the need for "lay-over" spaces for restricted vehicles through their site planning processes. This type of policy should be incorporated in the Pinellas County and local agency comprehensive plans.

FREIGHT TRANSPORTATION ASSET INVENTORY

Inventory Recommendations:

Technical Memorandum No. 3, of the Pinellas County Goods Movement Study includes a comprehensive inventory of freight transportation assets (signage) for County maintained roads on the Pinellas County Truck Route Plan. Please refer to the recommendations in the inventory

in Technical Memorandum No. 3 (Appendix B-1) for further asset detail and description. Additionally, deficiencies are noted at the bottom of each segment block in the inventory spreadsheet.

- Countryside Boulevard from Belcher Road/Oak Neck Drive to S.R. 580 – Recommend two signs, R5-2 (No 6:00 p.m. – 6:00 a.m.) northbound near Belcher Road and near U.S. 19;
- Tampa Road from Alternate U.S. 19 to Curlew Rd – Recommend R5-2 (No 6:00 p.m. – 6:00 a.m.) westbound west of U.S. 19;
- Belcher Road from Park Boulevard to Tampa Road – Recommend R5-2 (No 6:00 p.m. – 6:00 a.m.) southbound south of Curlew Road;
- Sunset Point Road from Hercules Avenue to McMullen-Booth Road – Recommend two signs, R5-2 (No 6:00 p.m. – 6:00 a.m.) westbound west of U.S. 19 and eastbound east of U.S. 19;
- Drew Street from Coachman Road to Bayshore Boulevard – Recommend removal of R5-2 signs westbound west of McMullen-Booth Road (Drew Street is an unrestricted truck route in this area);
- Keene Road/Starkey Road from Gulf-to-Bay Boulevard to Ulmerton Road – Recommend two signs, R5-2 (No 6:00 p.m. – 6:00 a.m.) southbound south of Druid Road and southbound south of Belleair Road;
- 62nd Avenue North from 4th Street North to 66th Street North – Recommend R14-1 (Truck Route) sign westbound west of 4th Street North;
- 54th Avenue North from 4th Street North to 66th Street North – Recommend two signs, R5-2 (No 6:00 p.m. – 6:00 a.m.) both eastbound and westbound at 28th Avenue North;
- 38th Avenue North from 4th Street North to 66th Street North – Recommend R14-1 (Truck Route) signs two eastbound and westbound approaching U.S. 19, also recommend R14-1 sign westbound approaching 4th Street North, and another R14-1 sign westbound approaching Haines Road;
- 22nd Avenue North from 4th Street North to 66th Street North – Recommend removal of R14-1 (Truck Route) sign eastbound west of 16th Street North, recommend installation of R5-2 sign (No 6:00 p.m. – 6:00 a.m.) westbound east of 4th Street North;
- Central Avenue from 66th Street North to 34th Street North – Recommend R14-1 (Truck Route) sign westbound east of 34th Street North to include appropriate directional arrow;
- 28th Street from 54th Avenue North to I-275 – Recommend two R14-1 (Truck Route) signs approaching 15th Avenue South and 31st Street South, recommended sign approaching 31st Street South is to direct traffic onto 31st Street South; and
- 78th Avenue North from railroad tracks to 66th Street North – The existing Truck Route Plan map indicates this is an unrestricted truck route, which is incorrect, and the map needs to be corrected to indicate that 82nd Avenue North from 66th Street North to the railroad tracks is an unrestricted truck route.

COMMUNITY VALUES AND DESIGNATION CRITERIA

Comments and Observations:

- Truck travel in the right lane only was suggested through discussion during the January 2007 Citizens Advisory Committee meeting. Although the City of St. Petersburg does recommend this travel manner with signage on several of its signed truck routes, this is not recommended as a blanket application to the Pinellas County Truck Route. On roadways where there is not a separate right-turn lane present, this would create conflicts between the trucks and right-turning vehicles. Also, trucks in the right lane conflict with bicyclists on the roadway. Enforcement of this restriction would prove difficult because trucks have to be able to travel in other lanes to complete left turns. There could also be conflicts at intersections where trucks commonly turn left due to the trucks attempting to maneuver into the left-lane prior to the intersection;
- The concern for truck traffic on the roadways being a source of exacerbated congestion was discussed during the January 2007 Citizens Advisory Committee meeting. Cited examples included 118th Avenue North between U.S. 19 and I-275 where trucks were observed in all turn lanes;
- The inclusion of short spurs from existing truck routes to provide connectivity to other routes or to provide direct access to freight generators was proposed by a citizen representative for evaluation by the Consultant at the Citizens Advisory Committee meeting of January 25, 2007 as follows:
 - Connecting Alternate U.S. 19 and U.S. 19 through Live Oak Street;
 - Connecting Alternate U.S. 19 and U.S. 19 through approximate location of Martin Luther King Drive (Tarpon Springs);
 - Connecting McMullen-Booth Road to the City of Safety Harbor through an east-west spur north of Main Street;
 - Extending the unrestricted truck route designation of the Bayside Bridge north of Gulf-to-Bay Boulevard to serve commercial land uses at S.R. 590 and to connect with a proposed spur to Safety Harbor;
 - Connecting Belcher Road and 66th Street between Bryan Dairy Road and Park Boulevard through industrial land uses;
 - Connecting commercial land uses along Park Street between Tyrone Boulevard and 54th Avenue North, with a re-designated unrestricted route spur instead of the current “Daylight Use Only” designation;
 - Extending the current designation of 22nd Avenue North west of 66th Street with a unrestricted truck route spur to properly serve the Tyrone Square Mall area; and
 - Connecting U.S. 19 and I-275 to serve commercial land uses along 54th Avenue North by means of an unrestricted truck route segment with the currently designated “Daylight Use Only” truck route, to replace 62nd Avenue North between U.S. 19 and I-275.

The proposed spurs were subsequently presented to the Technical Coordinating Committee for discussion at their meeting of September 26, 2007.

JURISDICTIONAL TRANSFER OF ROADWAYS

Several roadways were identified to have been transferred from one jurisdiction to another. Though the jurisdictional change should not alter the proposed recommendations, it required the review of designation criteria for the roadways transferred from the State of Florida to municipal maintenance and jurisdiction. The following table identifies those roadways, the affected segment, and jurisdictional changes.

**Roadway Segment Transfers
From the State of Florida to Municipal Governments**

ROAD	FROM	TO	OBSERVATIONS
Cleveland Street/Gulf-to-Bay Boulevard	Pierce Blvd.	Highland Ave.	Jurisdictional Change to Clearwater
Drew Street	Ft. Harrison Ave.	Myrtle Ave.	Jurisdictional Change to Clearwater
Ft. Harrison Avenue	Belleair Rd	Myrtle Ave.	Jurisdictional Change to Clearwater
Clearwater-Largo Road	West Bay Dr.	Belleair Rd.	Jurisdictional Change to Largo
West Bay Drive	Seminole Blvd.	Clearwater-Largo Rd.	Jurisdictional Change to Largo

- The Consultant's evaluation of Clearwater-Largo Road between West Bay Drive and Belleair Road received scores that indicate they function efficiently on the truck route and should remain. However, the City of Largo has been emphasizing pedestrian safety and has reduced the posted speed limit to 30 mph through the Clearwater-Largo Road Redevelopment District Plan adopted in August of 2006, and recommended deletion of the road segment from the Truck Route Plan with the concurrence of the TCC at their October 24, 2007 meeting;
- Fort Harrison Avenue between Belleair Road and Myrtle Avenue was recommended by the Consultant for deletion from the truck route network due to its narrow lanes, three lane sections where the middle lane is used for left turns, school crossing, and the heavy emphasis on the pedestrian network now in place. The City of Clearwater representative to the TCC agreed to recommend deletion of the road segment from the Truck Route Plan with the concurrence of the TCC (October 24, 2007);
- West Bay Drive between Clearwater Largo Road and Seminole Boulevard was recommended by the Consultant to remain on the truck route network. The City of Largo representative to the TCC agreed with the recommendation with the concurrence of the TCC (October 24, 2007);
- Cleveland Street/Gulf-to-Bay Boulevard between Pierce Boulevard and Highland Avenue was recommended by the Consultant for removal due to travel lane deficiencies and the streetscape of Cleveland St. between Myrtle Street and the Bluff, which restricts trucks travel within the area. The City of Clearwater representative to the TCC agreed to

recommend deletion of the road segment from the Truck Route Plan with the concurrence of the TCC (October 24, 2007); and

- Drew Street between Ft. Harrison Avenue and Myrtle Avenue was recommended by the Consultant to remain on the truck route network to provide connectivity to Myrtle Avenue. This will allow trucks to avoid the immediate downtown Clearwater vicinity that contains many tight turning radii and narrow traffic lanes. The City of Clearwater representative to the TCC agreed to recommend that road segment to remain in the Truck Route Plan with the concurrence of the TCC (October 24, 2007).

SUMMARY OF IDENTIFICATION OF CANDIDATE ROADWAYS

Information on designation criteria by location was used to develop the recommendations below.

Truck Route and Non Truck Route Network Recommendations

- Alderman Road between Alternate U.S. 19 and U.S. 19 is not a candidate for the truck route network due to school crossings, hilly conditions, residential nature, and Klosterman Road (an unrestricted truck route) being in proximity;
- 102nd Avenue between 113th Street to Seminole Boulevard – No change recommended. The section is residential and has narrow lanes and trees in the median;
- 102nd Avenue/C.R. 296 between Seminole Boulevard and Starkey Road appears to function well as a potential truck route because of the existing roadway features, such as number of lanes and sidewalks; however, it is not recommended as an addition to the network due to the adjacent residential land uses and the proximity to schools and parks on this segment;
- C.R. 1 between Gulf-to-Bay Boulevard and S.R. 580 appears to operate efficiently as a truck route; however, there are a number of school crossings in place and it is not recommended to be added to the truck route network due to previous action by the MPO on December 13, 2000;
- Keene Road between Main Street/S.R. 580 and Tampa Road appears to operate efficiently as a truck route; however, there are a number of school crossings in place and there are residential concerns in this area; and, therefore, it is not recommended to be added to the truck route network due to actions by the MPO on December 13, 2000;
- Keene Road between Tampa Road to Alderman Road is not recommended as a candidate for the truck route network since the land use along the roadway is residential, the lanes are narrow with a two-lane divided cross section, and the Palm Harbor historic downtown is within this segment;
- Sunset Point Road between U.S. 19 to Hercules Avenue is recommended to remain a restricted truck route; and
- 62nd Avenue North between 49th Street North and 66th Street North had been recommended to be removed from the truck route network due to the existing engineering features of this segment, including narrow lanes, no shoulders, and open drainage; and the truck routing would be shifted to 54th Avenue North via 66th Street North and/or 49th Street North. At their meeting of October 25, 2007, the Technical Coordinating Committee recommended to keep the current designation in the adopted Truck Route Plan. 54th Avenue North between 49th Street North and 66th Street North is a part of the truck route network and had been recommended for a designation change from restricted to unrestricted. The engineering features in place, wider lanes, shoulders and/or sidewalks, are more suitable for a truck route than 62nd Avenue North, eight blocks to the north; a more detailed analysis would be required prior to implementing to ensure neighborhood compatibility. The MPO took action in April 1997 on a TCC recommendation of “Daytime Use Only” truck route designation for 54th Avenue North between I-275 and 66th Street North. The MPO also took action to not allow trucks on 54th Avenue North between 66th Street North and Park Street. At their meeting of October 25, 2007, the Technical Coordinating Committee recommended to keep the current designation in the adopted Truck Route Plan.

IDENTIFICATION OF AREAS OF HIGH CONFLICT

Intersections and roadway segments on the truck route network that are locations of high conflict were identified. The most optimal way to identify areas of conflict is to review crash history. This was completed through the use of heavy vehicle collision data for the years 2002 through 2004 supplied by the Pinellas MPO. This data was placed into GIS format and selected graphically from the GIS crash map. Crashes occurring within a 500-foot radius around the intersection were captured to include any problems that may be occurring that are influenced by backups or operations at the signalized intersection. The ten locations with the highest number of crashes involving heavy vehicles were designated as hot spots. One of them, the intersection of Cleveland Avenue and Myrtle Avenue has been deleted from the list because the streetscape and traffic calming improvements completed by the City of Clearwater in 2007 have eliminated westbound heavy truck thru-traffic along Cleveland Street, and thus the high conflict characteristics of that location identified in 2004. Those areas of high conflict are identified and listed in Table 6-1 below and reflected on Map 5-1 Year 2004 Hot Spots and Hot Segments.

**Table 6-1
Areas of High Conflict**

Location
Ulmerton Road (S.R. 688) at 66 th Street North (S.R. 693)
Ulmerton Road (S.R. 688) at 34 th Street North
U.S. 19 at Tampa Road
U.S. 19 at Curlew Road (S.R. 586)
Gulf-to-Bay Boulevard (S.R. 60) at Belcher Road
Alternate U.S. 19 (S.R. 595) at Park Boulevard (S.R. 694)
66 th Street North (S.R. 693) at Bryan Dairy Road
Park Boulevard (S.R. 694) – 66 th Street N. (S.R. 693) to 49 th Street N.
Park Boulevard (S.R. 694) – 49 th Street North to U.S. 19

IDENTIFICATION OF AREAS FOR OPERATIONAL IMPROVEMENT

Intersections and roadway segments on the truck route network that are locations of operational concerns are identified below. The recommended way to identify areas with operational problems is to review level of service (LOS) and volume to capacity (V/C) data. This was completed through the use of LOS and V/C data for the year 2004 provided by the Pinellas County MPO. The procedure allows the location of the areas of highest delay and congestion for heavy vehicles on the truck route network. The road segments with a Level of Service F and a V/C greater than 0.9 are included as operationally-deficient road segments. Those segments are identified and listed in Table 6-2 below.

**Table 6-2
Areas for Operational Improvements**

Roadway	Segment
U.S. 19	Tarpon Avenue to Klosterman Road
U.S. 19	Klosterman Road to Tampa Road
U.S. 19	Tampa Road to Curlew Road
U.S. 19	Curlew Road to S.R. 580 (Main Street)
Alternate U.S. 19	Klosterman Road to Tampa Road
Alternate U.S. 19	Curlew Road to Myrtle Avenue
East Lake Road	Keystone Road to Brooker Creek
McMullen-Booth Road	S.R. 580 to Sunset Point Road
McMullen-Booth Road	Sunset Point Road to Gulf-to-Bay Boulevard
Gulf-to-Bay Boulevard (S.R. 60)	Damascus Road to U.S. 19
Gulf-to-Bay Boulevard (S.R. 60)	Belcher Road to Keene Road

As discussed in Technical Memorandum No. 5, the current truck route network within Pinellas County has several operational and safety deficient areas. Many of these have been identified and analyzed as part of this study. As previously discussed the sites and locations identified in Table 6-1 and Table 6-2 were evaluated with the generalized categories and weights that resulted in a preliminary order of importance found in Table 6-3 below.

**Table 6-3
Preliminary Order of Potential Operational and Safety Sites**

Roadway	Segment / Location	Score
Gulf-to-Bay Blvd (S.R. 60)	Damascus Road to US 19	5
Gulf-to-Bay Blvd (S.R. 60)	Belcher Road to Keene Road	5
Gulf-to-Bay Blvd (S.R. 60)	Belcher Road	5
U.S. 19	Klosterman Road to Tampa Road	4
U.S. 19	Tampa Road to Curlew Road	4
U.S. 19	Curlew Rd to S.R. 580 (Main St	4
Alternate U.S. 19	Klosterman Road to Tampa Road	4
Alternate U.S. 19	Curlew Road to Myrtle Avenue	4
East Lake Road	Keystone Road to Brooker Creek	4
McMullen-Booth Road	S.R. 580 to Sunset Point Road	4
McMullen-Booth Road	Sunset Point Rd to Gulf-to-Bay Blvd	4
Ulmerton Road (S.R. 688)	66 th Street North (S.R. 693)	4
Ulmerton Road (S.R. 688)	34 th Street North	4
U.S. 19	Tampa Road	4
U.S. 19	Curlew Road (S.R. 586)	4
Alternate U.S. 19 (S.R. 595)	Park Boulevard (S.R. 694)	4
U.S. 19	Tarpon Avenue to Klosterman Road	3
66 th Street North (S.R. 693)	Bryan Dairy Road	3
Park Boulevard (S.R. 694)	66 th Street North (S.R. 693) to 49 th St N.	3
Park Boulevard (S.R. 694)	49 th Street North to U.S. 19	3

Scoring for roadway segments that were transferred from the State to local jurisdiction is reflected in Table 6-4.

Table 6-4
Scoring of Roadway Segment Transfers
From the State of Florida to Municipal Governments

Road	From	To	Observations	Score
Cleveland Street/ Gulf-to-Bay Blvd	Pierce Blvd.	Highland Avenue	Jurisdictional Change to Clearwater and bridge realignment	5
Drew Street	Ft. Harrison Ave.	Myrtle Avenue.	Jurisdictional Change to Clearwater	7
Ft. Harrison Ave	Belleair Road	Myrtle Avenue	Jurisdictional Change to Clearwater	8
Clearwater-Largo Road	West Bay Dr.	Belleair Road	Jurisdictional Change to Largo	3
West Bay Drive	Seminole Blvd.	Clearwater-Largo Rd.	Jurisdictional Change to Largo	3

The generalized categories that were evaluated include safety, level of congestion, access to freight activity centers, transit activity, corridor designation, and, neighborhood impacts (see Technical Memorandum No. 4 for full list of categories). The scoring reflects a preliminary efficiency of use as a road segment on the truck route system. The higher the score, the less efficient that road segment appears to function based on this evaluation process.

As reflected on the Roadway Segment Transfers, Clearwater-Largo Road (West Bay Drive to Belleair Road) and West Bay Drive (Seminole Boulevard to Clearwater-Largo Road) received scores that indicate they function efficiently on the truck route and should remain. Ft. Harrison Avenue received a high score due in part to the location of parks and schools at points on this segment. The Technical Coordinating Committee recommended removal of Clearwater-Largo Road (West Bay Drive to Belleair Road) and Ft. Harrison Avenue (Belleair Road to Myrtle Avenue) from the truck route network at their meeting of October 25, 2007. The Technical Coordinating Committee also recommended retaining West Bay Drive (Seminole Boulevard to Clearwater-Largo Road) on the truck route network on October 25, 2007.

Drew Street between Ft. Harrison Avenue and Myrtle Avenue is recommended to remain on the truck route network though the score is relatively high. Drew Street provides connectivity to Myrtle Avenue that allows trucks to avoid the immediate downtown Clearwater vicinity that contains many tight turning radii and narrow traffic lanes. Similarly, Cleveland Street/Gulf-to-Bay Boulevard is recommended for removal from the network due to travel lane deficiencies and the streetscape between Myrtle Street and the Bluff that restricts many trucks within the area. The Technical Coordinating Committee also recommended retaining Drew Street (Ft. Harrison Avenue to Myrtle Avenue) and removal of Cleveland Street/Gulf-to-Bay Boulevard (Pierce Boulevard to Highland Avenue) as changes to the truck route network at their meeting of October 25, 2007.

SHORT TERM IMPROVEMENTS

Improvements or modifications to improve safety and operation of the truck route network that are relatively low in cost that may be implemented within a reasonably short period of time were identified for the locations listed above. These improvements are discussed in more detail below.

Adding/Lengthening Auxiliary Lanes

The installation of new turn lanes is recommended at several locations within the truck route network. Lengthening existing auxiliary lanes is also recommended at many locations. These modifications aid in improving the operation of the truck route network by removing turning vehicles from the through travel lanes. Providing proper queue lengths and deceleration lengths, eliminates the need for vehicles to lower their speed while remaining in the through lane and the consequential delay to the entire road segment. According to the Florida Department of Transportation long range planning estimates for 2007, the typical cost to lengthen a left- turn lane is estimated to be \$257,622 and a right- turn lane \$464,534. This is based on an urban arterial roadway and an average 300-foot length. The typical cost to install a new left-turn lane is \$515,244 and a right-turn lane \$929,068 for an average 600-foot lane on an urban arterial roadway. This is recommended at the locations listed below. More detailed data would be necessary to determine the heavy truck activity for each auxiliary lane.

- Lengthen the northbound left-turn lane at U.S. 19 and Coral Landings Boulevard;
- Lengthen the northbound left-turn lane at U.S. 19 and Estancia Boulevard;
- Lengthen the southbound left-turn lane at U.S. 19 and Estancia Boulevard;
- Lengthen the northbound left-turn lane at U.S. 19 and Republic Drive/Hammock Pine Boulevard;
- Install northbound right-turn lane on Alternate U.S. 19 into the Pinellas County Highway Department;
- Lengthen the southbound left-turn lane at McMullen-Booth Road and Harbor Oaks Circle;
- Install a northbound right-turn lane at McMullen-Booth Road and Enterprise Road;
- Install a northbound right-turn lane and receiving lane at McMullen-Booth Road and Sunset Point Road;
- Lengthen the northbound left-turn lane at McMullen-Booth Road and Abbey Crescent Lane;
- Lengthen the northbound left-turn lane at McMullen-Booth Road and Kapok Cove Drive;
- Install southbound right-turn lane at McMullen-Booth Road and Drew Street;
- Lengthen the westbound left-turn lane at S.R. 60 and Hampton Road;
- Lengthen the eastbound left-turn lane at S.R. 60 and Sky Harbor Drive;
- Install eastbound right-turn lane at S.R. 60 and Clearwater Mall west entrance, which may require additional right-of-way;
- Install a westbound right-turn lane at S.R. 60 and Hercules Avenue;
- Install an eastbound right-turn lane at S.R. 60 and Keene Road, which may require additional right-of-way;
- Install an eastbound right-turn lane at S.R. 60 and Belcher Road, which may require additional right-of-way;

- It is recommended that FDOT conduct an access management analysis along Gulf-to-Bay Boulevard (SR 60), especially between Belcher Road and Keene Road to determine which lanes to extend, median openings to close, and median openings to leave open;
- Lengthen the left-turn lanes on Park Boulevard (S.R. 694) from 66th Street North (S.R. 693) to 49th Street North; and
- Lengthen the left-turn lanes on Park Boulevard (S.R. 694) at 44th Street, 46th Street, and 47th Street.

Upgrading Signal Visibility

Installing supplemental signal heads, upgrading incandescent signal heads to LED, and the installation of backplates are modifications that result in improved visibility of the traffic signal indications. Supplemental signal heads are additional signals that are added to the overhead support or pole mounted on a corner of the intersection. Because these roadways are truck routes, there is a relatively high presence of heavy vehicles that may block the visibility of the signal heads for other motorists. LED signal heads are more intense and less susceptible to glare than regular incandescent bulbs, thus, improving visibility. Backplates placed on the signal head assemblies aid in blocking out ambient light and glare around the signal heads. This is especially helpful during the morning and afternoon hours when the sun is in a low position. These visibility issues can result in crashes at or near the intersection, particularly the occurrence of rear-end collisions. The installation of a LED signal head is estimated to cost approximately \$825. The installation of backplates to a signal head is estimated to cost approximately \$99. This is recommended at the following locations:

- Ulmerton Road (S.R. 688) at 66th Street North (S.R. 693);
- Ulmerton Road (S.R. 688) at 34th Street North;
- Gulf-to-Bay Boulevard (S.R. 60) at Belcher Road;
- Alternate U.S. 19 (S.R. 595) at Park Boulevard (S.R. 694); and
- Cleveland Street at Myrtle Avenue (S.R. 595).

Installation of Supplemental Signing

The addition of supplemental signing at or upstream to an intersection provides motorists advance notice of a roadway condition, thus, allowing drivers additional time and space to make a decision and complete their movement. Notifying motorists of an upcoming intersection or a lane drop gives additional time for lane changes and decreases in speed in preparation for the intersection. This can reduce the occurrence of sideswipe collisions and rear-end collisions at and upstream of an intersection. It may also improve delay and operation of an intersection that is attributed to last minute lane changes and driver decisions. The installation of an overhead sign to a signal support is estimated to cost approximately \$208. The installation of a single post ground mounted sign is estimated at \$307 and a multipost sign at \$2,954. This is recommended at the following locations:

- Install advanced street name signs in advance of major intersections on McMullen-Booth Road from S.R. 580 to Sunset Point Road. This project is currently under design;
- Install advanced street name signs in advance of major intersections on McMullen-Booth Road from Sunset Point Road to Gulf-to-Bay Boulevard. This project is currently under design;

- Relocate the existing overhead FDOT sign structure south, set further back from the intersection to allow for advance notification to motorists at Ulmerton Road and 66th Street North;
- Install advance street name signs in advance of the intersection at Gulf-to-Bay Boulevard (S.R. 60) and Belcher Road;
- Install an overhead ‘Right Lane Must Turn Right’ sign on the westbound approach at Alternate U.S. 19 (S.R. 595) and Park Boulevard;
- Install advance street name signs in advance of the intersection at Alternate U.S. 19 (S.R. 595) and Park Boulevard; and
- Install advance street name signs in advance of the intersection at 66th Street North (S.R. 693) and Bryan Dairy Road.

Adaptive control of the Signal Network in Advanced Traffic Management Systems (ATMS)

Coordination of the signal system is an excellent way to improve traffic flow on the truck route network. There have been several advanced systems developed that are able to modify signal timing and operation as demand varies. Adaptive signal control systems improve coordination between intersections and road networks. Additionally, they respond in real time to traffic demand and delays. The implementation of adaptive signal control on the truck route network can improve the delay, congestion, and level of service for heavy vehicles traveling through Pinellas County. It has already been installed on Gulf-to-Bay Boulevard and U.S. 19 and is programmed for construction for Ulmerton Road and East Lake Road/McMullen-Booth Road as part of Phase One of the Pinellas County Long-Range ATMS/ITS Master Plan. Phases One through Three in this Master Plan detail ATMS/ITS to be implemented on almost every truck route in the County to improve the road system. The installation of an adaptive signal control system is estimated to cost approximately \$350,000 per mile for arterials with signals. Adaptive signal control is recommended at the following locations:

- East Lake Road – Keystone Road to Brooker Creek;
- McMullen-Booth Road – S.R. 580 to Sunset Point Road; and
- McMullen-Booth Road – Sunset Point Road to S.R. 60.

STATUS OF PINELLAS COUNTY ATMS/ITS PROJECTS (JUNE, 2006)

Arterial Management System Projects

PROJECT	COST	EQUIPMENT
S.R. 60 (Phase 1, Stage 1) – Hillcrest Ave. to Damascus Drive US 19 - Seville Blvd. to Haines-Bayshore Rd.	\$5.5 million	Total 21 adaptive control signals, 7 CCTV cameras, 3 DMS, fiber optic Bayshore to Clearwater TOC, system software, and computer hardware
U.S. 19 (Phase 1, Stage 1) Beckett Way to Republic US 19/34th St. – St. Petersburg	\$6.5 million	10 adaptive control signals, 13 CCTV cameras, 4 CCTV on 34th St. , 3 DMS, and hardware – TOC modifications

Arterial Management System Projects (Continues)

PROJECT	COST	EQUIPMENT
McMullen Booth ATMS Project Early Fiber Project (Phase 1, Stage 2)	\$800 (thousand)	Fiber installed in conduit, PC TOC to Drew St. and McMullen-Booth Road from SR 60 to Curlew Rd.; Curlew Rd. from McMullen-Booth Rd. to US Hwy. 19. East Lake Road from Curlew Road to Keystone Road. Wireless connection from Keystone Rd. to Trinity Boulevard. 6 CCTV cameras
C.R. 611 (Phase 1, Stage 2) Keystone to SR 60	\$6.2 million	27 adaptive control signals, 14 CCTV cameras, 5 DMS
US 19 (Phase 1, Stage 2) Haynes Bayshore to 54th Avenue N.	\$6.7 million	Install new fiber, 15 adaptive control signals, 12 CCTV cameras, 4 DMS, 8 system detector stations
US 19 (Stage 3) SR 60 to SR 580	\$1.65 million	Complete the last portion of US 19 ATMS In Pinellas
SR 60 (phase 1, Stage 2) Memorial Causeway to Highland Ave. Drew St. and Cleveland St.	\$6.3 million (unfunded)	To Be Determined
Pinellas County ATMS	\$0.93 million	\$250,000 for Maintenance and Operations of ATMS projects and \$750,000 for converting existing mainframe to PC-based system
SR 688/Ulmerton Rd. Oakhurst to 119th Ave.	\$0.2 million	Communications conduit and poles only, no ATMS devices.
US 19/34th St	\$3.4 million (unfunded)	Based on Pinellas County Feasibility Study
49th St.	\$2.0 million (unfunded)	Based on Pinellas County Feasibility Study
66th St US 19 to Corey Causeway	\$7.5 million (unfunded)	Based on ITS Priority Corridor Map
Next Priority ATMS Corridors Project Limits to be determined	\$20.0million (unfunded)	Based on Pinellas County Feasibility Study Note: \$4.2 million federally funded through Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU)
ITS Primary Control Center / Centralized Communication Center	\$12.8 million	Emergency Services Dispatch, back-up Emergency Operations Center, ITS Control Primary Center – Funded for 2008-2010

Access Management Evaluation and Improvements

An access management evaluation analyzes the location, design, and operation of driveways, median openings, and cross streets. Access management reduces and separates traffic conflict points along a road segment. This is done by combining access points such as driveways and closing or directionalizing median openings. This also reduces the interference of turning traffic with the through traffic. Access management improves safety and increases traffic capacity where it is implemented. It reduces accidents such as rear-end collisions, sideswipe collisions, angle and left-turn collisions. The cost will vary depending on the specific modifications needed. An access management study and evaluation is estimated to cost approximately \$20,000 per mile. Closing a median opening is estimated to cost approximately \$215,000. Evaluations are recommended at the following locations:

- Complete an access management evaluation on S.R. 60 from Belcher Road to Keene Road;
- Complete access management evaluation on Park Boulevard (S.R. 694) from 66th Street North (S.R. 693) to 49th Street North; and
- Complete access management evaluation on Park Boulevard (S.R. 694) from 49th Street North to U.S. 19.

Roadway Resurfacing

Resurfacing a roadway with poor pavement condition can improve the safety and operation of the roadway. Rutting of the road surface can lead to water ponding on the travel surface, which can cause hydroplaning and crashes. Additionally, when a road is resurfaced, the skid number is improved, which reduces the stopping distance for vehicles. This is especially beneficial to heavy vehicles. Resurfacing can help to reduce the number of rear-end collisions on the roadway. Milling and resurfacing is estimated to cost approximately \$3,048,104 per mile for a four-lane urban arterial and \$4,317,073 per mile for a six-lane urban arterial roadway. This is recommended at the following locations:

- Gulf-to-Bay Boulevard (S.R. 60) – Damascus Road to U.S. 19; and
- Gulf-to-Bay Boulevard (S.R. 60) – Belcher Road to Keene Road.

Other candidates for roadway resurfacing include Gandy Boulevard, Roosevelt Boulevard, and 28th Street North. Gandy Boulevard is scheduled in the FDOT Five-Year Work Program to be resurfaced.

LONG TERM IMPROVEMENTS

Improvements or modifications to improve safety and operation of the truck route network that are higher in cost that may be implemented over a longer period of time were identified for the locations listed above in Table 6-1 and 6-2. These improvements are discussed in more detail below.

Roadway Widening

The construction of additional travel lanes can greatly improve the level of service of a roadway. The additional capacity improves delay, congestion, and allows the roadway to accommodate

added traffic volume. By handling this extra volume, this can result in the improved operation of parallel roadways in a corridor as well. Also, additional lanes on a road segment lessen the time for it to clear at an intersection, improving the operation of the signalized intersections along the improved segment. The August 2007 cost to add lanes to widen an urban arterial roadway is estimated to be \$13,965,570 from two to four lanes, \$15,280,183, from four to six lanes, \$20,397,418 from four to eight lanes, and \$18,178,546 from six to eight lanes. The cost estimates were obtained from the Florida Department of Transportation Long Range Estimates for an urban arterial roadway. This information does not include the cost traffic signals, lighting, bridges, or the fiber communications backbone. This is recommended at the following locations:

- East Lake Road – Keystone Road to Brooker Creek.

Grade Separation of Intersections

Grade separation of an intersection has both safety and operational benefits. By grade separating the roadways, the number of conflict points at the intersection is reduced. The fewer conflict points at an intersection, the lesser the potential for a collision. Also, the mainline through traffic no longer is required to stop for the signal; therefore, the delay is reduced to zero for this movement, greatly increasing the level of service and capacity for that road segment and for the cross street. Added benefits of the free flow mainline movement is the reduction of rear-end collisions in those directions, which comprised the majority of the truck collisions at the intersections. Location of grade-separated intersections and their associated costs were obtained from the FDOT District 7 2030 Unfunded Needs Plan for the Strategic Intermodal System (SIS) – Florida Intrastate Highway System (FIHS). The recommendations are for the following locations:

- U.S. 19 – Tarpon Avenue to Klosterman Road
 - At Tarpon Avenue (\$86,700,000); and
 - At Klosterman Road (\$106,550,000).
- U.S. 19 – Klosterman Road to Tampa Road
 - At Alderman Road (\$121,350,000); and
 - At Nebraska Avenue (\$120,500,000).
- U.S. 19 – Tampa Road to Curlew Road
 - At Curlew Road (\$119,850,000)
- U.S. 19 – Curlew Road to S.R. 580 (Main Street)
 - Specific costs to-be-determined based on location (generalized cost: \$120,000,000 each)

Intelligent Transportation System (ITS)

An Intelligent Transportation System (ITS) is the application of technologies that support the operation and management of transportation facilities. In combination, those technologies increase operational capacity, improve efficiency, and also safety. They can include Advanced Traffic Management Systems (ATMS) for arterials and freeways, Advanced Traveler Information Systems such as video monitoring and dynamic message (DMS) signs, and Advanced Public Transit Systems. The adaptive signal control in ATMS can be implemented separately as previously discussed or as part of this system. The ITS considered a long-term improvement due to the time and costs associated with the installation and implementation of the

cameras, DMS signs, fiber network, and operations. ITS can improve the operations of the truck route network by providing information to truck drivers on officially detoured routes, and closed or delayed routes. Also, monitoring the road network facilitates the process of responding to and clearing crashes from the roadway. With the implementation of incident management, the delay caused by incidents can be greatly reduced. The cost of a system varies depending on the number of locations and equipment necessary. The installation of an ITS can range from approximately \$500,000 to \$1,500,000 per mile, depending on the number of devices needed. This is recommended at the following locations:

- East Lake Road – Keystone Road to Brooker Creek;
- McMullen-Booth Road – S.R. 580 to Sunset Point Road; and
- McMullen-Booth Road – Sunset Point Road to S.R. 60.

The current status for implementation of Intelligent Transportation Systems (ITS) in the East Lake Road/McMullen-Booth Road/49th Street North corridor as of September 2007 is: The installation of fiber optics has been completed as of October 2007. The field equipment has been ordered and the contractor estimates that the completion of installation will occur by the end of 2008. The equipment to install includes 12 additional CCTV cameras, 32 intersections running adaptive control, and 5 DMS signs.

RECOMMENDATIONS FOR OPERATIONAL AND AREAS OF HIGH CONFLICT

As titled, Technical Memorandum No.6 contains the recommendations of the Goods Movement Study that result from the analyses contained within the previous technical memoranda. These recommended improvements are to mitigate the generally-described needs based upon the operational and/or safety analysis utilized to evaluate each location. As discussed in previous technical memoranda, each identified need will require more detailed and specific analyses that will enable the Pinellas County MPO to further filter this list and develop a more detailed prioritized listing of candidate projects.

Table 6-5, *Operational Improvement Recommendations* and Table 6-6, *Recommendations for Areas of High Conflict*, summarize the previous discussions and sections of this memorandum.

Proposed Truck Route Spurs at the Citizens Advisory Committee meeting of January 25, 2007

At the CAC meeting of January 25, 2007 a citizen representative made a recommendation that the Consultant evaluate six (6) truck route spurs to improve access to the truck route network. The Proposed Truck Route Spurs were evaluated with the following recommendations:

- Park Street North (Tyrone Boulevard to 54th Avenue North) – remove time restrictions.
 - Recommend approval of change as the segment is within an industrial area.
- 54th Avenue North (U.S. 19 to I-275) – remove time restrictions.
 - Recommend approval, segment has direct ramp access to I-275 that is not available at 62nd Avenue North.
- 22nd Avenue North (66th Street North to Tyrone Mall) – add new segment to truck route network.

- Recommend not adding this new segment since it does not add connectivity to another route and trucks would have access into this commercial area via Tyrone Boulevard.
- Live Oak Street (Alternate U.S. 19 to U.S. 19) – add as a new segment.
- Martin Luther King, Jr. Drive (Alternate U.S. 19 to U.S. 19) – add as a new segment.
 - Recommend adding both as a pair to increase the accessibility of trucks into the Tarpon Springs area, provide better connectivity between Alternate U.S. 19 and U.S. 19, and to redistribute trucks off Tarpon Avenue, which is deficient for most trucks.
- McMullen-Booth Road (S.R. 60 to north of Sunset Point Road then a new spur east) – remove time restrictions and add new spur.
 - Recommend not approving a time restriction change since it would provide an unrestricted connection between S.R. 60 to Drew Street to Coachman Road through a predominately residential area; and
 - Recommend not approving the new spur east of McMullen-Booth Road since it provides no route connection and deliveries would be permitted under current policies.

At their public hearing of March 12, 2008, the Pinellas County MPO amended its Truck Route Plan Map as requested by the City of St. Petersburg, for consistency with the City's Truck Route Plan Map. The MPO also acted on recommendations made as a result of jurisdictional transfers from the State to municipalities, and on a proposed spur agreed to by the City of Tarpon Springs, as an unrestricted truck route within its jurisdiction.

The amendments approved by the MPO after their public hearing of March 12, 2008 are:

- 1) To remove the following truck routes from the Pinellas County MPO Truck Route Plan due to transfer from the State to the cities of Largo and Clearwater jurisdiction in accordance with Section 335.0415, Florida Statutes:
 - a. Cleveland Street/Gulf-to-Bay Boulevard from Pierce Boulevard to Highland Ave;
 - b. Fort Harrison Avenue from Belleair Road to Myrtle Avenue; and
 - c. Clearwater-Largo Road from West Bay Drive to Belleair Road.
- 2) To add a spur within the City of Tarpon Springs jurisdiction to the Pinellas County MPO Truck Route Plan as an unrestricted truck route:
 - a. Live Oak Street from Alternate US Highway 19 to US Highway 19.
- 3) To add truck routes to the Pinellas County MPO Truck Routes Plan Map for consistency with the City of St. Petersburg Truck Route Plan Map, as unrestricted truck routes.
 - a. 16th Street, from 54th Avenue North to 22nd Avenue South;
 - b. 20th Street, from 5th Avenue North to 5th Avenue South;
 - c. 58th Street, from 62nd Avenue North to 1st Avenue South;
 - d. 1st Avenue North, from 16th Street to 34th Street;
 - e. 1st Avenue South, from 16th Street to 34th Street;
 - f. 5th Avenue North, from 3rd St. to 66th St. (MPO Truck Route map already shows the portion west of downtown St. Petersburg);
 - g. 4th Avenue North, from 3rd Street to 16th Street;
 - h. 4th Avenue South, from 3rd Street to 16th Street (where it connects with 5th Avenue

- South);
- i. 5th Avenue South, from 3rd St. to 49th St. (MPO Truck Route map already shows the portion west of downtown St. Petersburg); and
 - j. 83rd Avenue North, from 4th Street to 9th Street (Martin Luther King Jr. Street).

The MPO amendment of March 12, 2008 did not include the inclusion of 5th Avenue North from 3rd St. to 66th St. (MPO Truck Route map already shows the portion west of downtown St. Petersburg), as requested by the City, due to an oversight. A correction will be made during a future plan amendment. Although also requested by the City of St. Petersburg, it was verified that 5th Avenue South from 3rd Street to 49th Street is already depicted as a truck route in the MPO Truck Route Map.

The amended Truck Route Plan Map is shown below as Map 6-1.

FUTURE ACTIONS

Goods Movement Study and the recommendations contained within are the beginning of the process to identify candidate improvements that could be developed into potential future projects for inclusion in the County's Capital Improvement Program, and/or FDOT's Work Program.

Formal actions by the municipalities, Pinellas County, or the MPO may result in policies and decisions that remove or add items to the Consultant's recommendations, but this is considered the next phase of the evaluation process along with the development of project specific costing of improvements. The project development and prioritization of projects to improve freight mobility is a dynamic process that is anticipated to change as the economic development needs of the County change, based on the growth and redevelopment policies of local governments in Pinellas County. The dynamics of that process will also be affected by the overall economic market conditions in the region, and FDOT's response through improvements of regional freight mobility corridors.

The MPO Technical Coordinating Committee has reviewed a Draft Ordinance with revised amendatory language for Section 122-61, Definitions, Section 122-63, Observance of truck routes required; exceptions, Section 122-64, Manner of utilization; Section 122-65, Hours of operation/time of day restrictions; and Section 122-66, Installation of signs, of the Pinellas County Code of Ordinances, Article III, Truck Routes.

- It is recommended that Pinellas County proceed to amend the County Code of Ordinances, Article III, Truck Routes.

Table 6-5

Operational Improvement Recommendations

Roadway	Segment	Short-Term Recommendation	Short-Term Cost Estimate	Long-Term Recommendation	Long-Term Cost Estimate
U.S. 19	Tarpon Avenue to Klosterman Road	None	\$0	Grade separation of major signalized intersections -- @ Tarpon Avenue @ Klosterman Road	\$86,700,000 * \$106,550,000 *
U.S. 19	Klosterman Road to Tampa Road	Lengthen northbound left-turn lane at Coral Landings Blvd to minimum 350 feet	\$257,622	Grade separation of major signalized intersections -- @ Alderman Road (CR 816) @ Nebraska Avenue (CR 776)	\$121,350,000 * \$120,500,000 *
		None	\$0		
U.S. 19	Tampa Road to Curlew Road	None	\$0	Grade separation of major signalized intersections -- @ Curlew Road	\$119,850,000 *
U.S. 19	Curlew Road to S.R. 580 (Main Street)	Lengthen northbound left-turn lane at Estancia Boulevard to minimum 350 feet	\$515,244	Grade separation of major signalized intersections	\$120,000,000 **
		Lengthen southbound left-turn lane at Estancia Boulevard to minimum 350feet	\$257,622		
		Lengthen northbound left-turn lane at Republic Drive/Hammock Pine Boulevard to minimum 350 feet	\$257,622		
		None	\$0		
Alternate U.S. 19	Klosterman Road to Tampa Road	Install northbound right-turn lane into Pinellas County Highway Department, minimum 185-foot deceleration length for 45 mph	\$929,068	Install auxiliary lanes along segment	\$257,622
Alternate U.S. 19	Curlew Road to Myrtle Avenue	None	\$0	Install auxiliary lanes along segment	\$257,622
East Lake Road	Keystone Road to Brooker Creek	Adaptive control of the signal network	\$7,500,000	Widen the roadway from 4-lanes to 6-lanes	\$24,155,423
McMullen-Booth Road	S.R. 580 to Sunset Point Road	Lengthen southbound left-turn lane at Harbor Oaks Circle to minimum 185 feet	\$257,622	None	\$0
		Install northbound right-turn lane at Enterprise Road	\$929,068		
		Install northbound right-turn lane at Sunset Point Road	\$929,068		
		Increase the turning radius of eastbound right-turn at Sunset Point Rd	\$115,000		
		Installation of adaptive control of the signal network	\$3,300,000		
		Install advanced street name signs in advance of major intersections	\$2,954		
McMullen-Booth Road	Sunset Point Road to Gulf-to-Bay Boulevard	Lengthen northbound left-turn lane at Abbey Crescent Lane	\$257,622	None	\$0
		Lengthen northbound left-turn lane at Kapok Cove Drive	\$257,622		
		Install southbound right-turn lane at Drew Street	\$929,068		
		Install advanced street name signs in advance of major intersections	\$2,954		
		Installation of adaptive control of the signal network	\$3,000,000		
Gulf-to-Bay Boulevard (S.R. 60)	Damascus Road to U.S. 19	Lengthen westbound left-turn lane at Hampton Road	\$257,622	None	\$0
		Lengthen eastbound left-turn lane at Sky Harbor Drive	\$257,622		
		Install eastbound right-turn lane at Clearwater Mall west entrance	\$929,068		
		Resurface Gulf-to Bay Blvd (S.R. 60)	\$7,919,417		
Gulf-to-Bay Boulevard (S.R. 60)	Belcher Road to Keene Road	Complete an access management evaluation	\$20,000	None	\$0
		Install westbound right-turn lane at Hercules Avenue	\$929,068		
		Install eastbound right-turn lanes at Keene Road and Belcher Road	\$1,858,136		
		Resurface Gulf-to Bay Blvd (S.R. 60)	\$4,168,114		

Notes: * = cost estimates from FDOT District 7 2030 Unfunded Needs Plan dated April 20, 2005

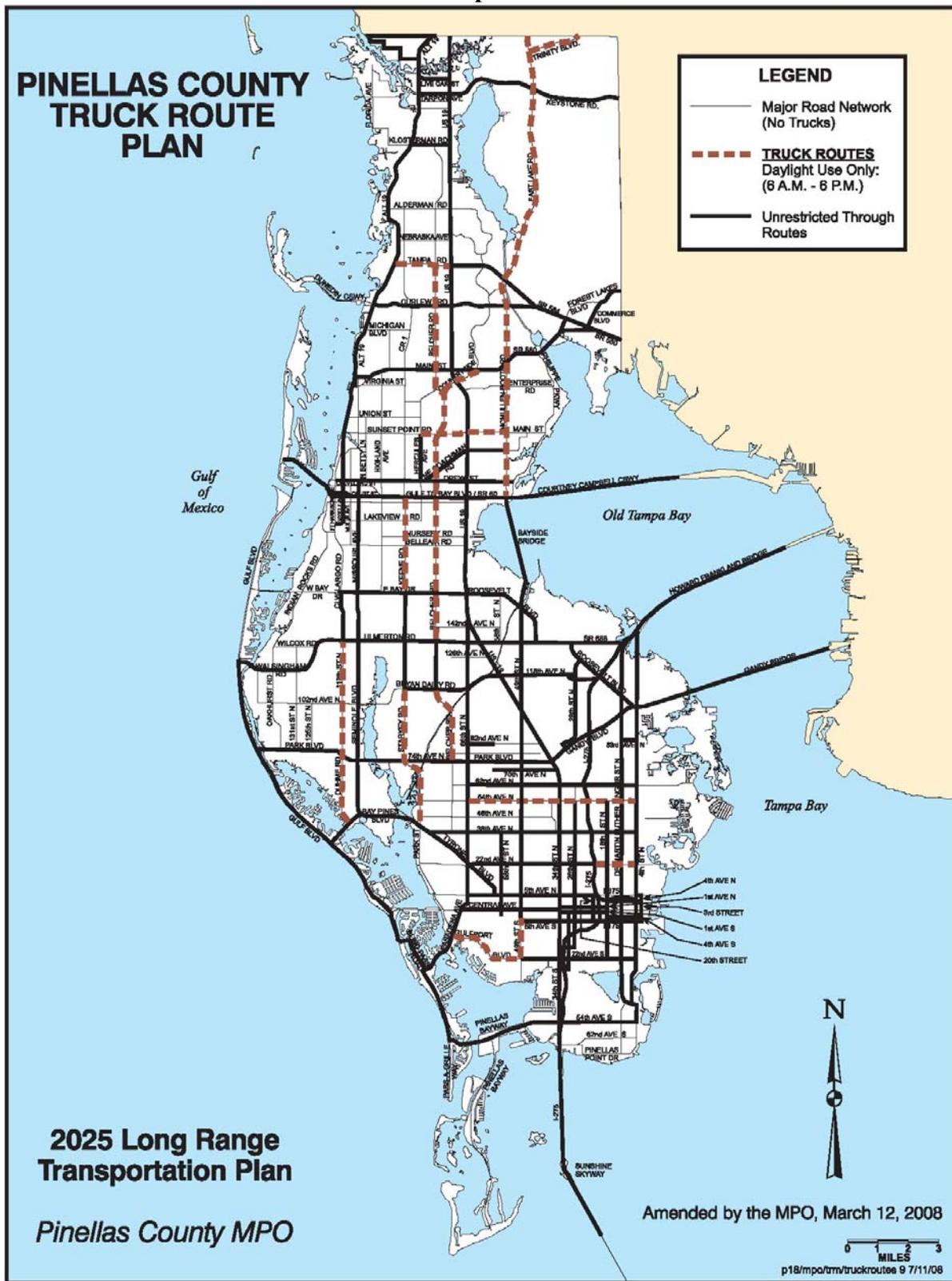
** = cost estimate from average of interchange costs

Table 6-6
Recommendations for Areas of High Conflict

Roadway	Location	Short-Term Recommendation	Short-Term Cost Estimate	Long-Term Recommendation	Long-Term Cost Estimate
Ulmerton Road (S.R. 688)	at 66 th Street N (S.R. 693)	Install supplemental signal head on NB approach for greater visibility	\$924	None	\$0
		Relocate the existing FDOT overhead sign structure south & further back to allow for advance notification	\$208		
Ulmerton Road (S.R. 688)	at 34 th Street N	Upgrade signal heads to LED and add backplates for greater signal head visibility	\$924	None	\$0
		Install supplemental signal head on EB approach for greater visibility	\$924		
U.S. 19	at Tampa Road	None	\$0	Grade separate the intersection	\$120,000,000 **
U.S. 19	at Curlew Road (S.R. 586)	None	\$0	Grade separate the intersection	\$119,850,000 *
Gulf-to-Bay Boulevard (S.R. 60)	at Belcher Road	Upgrade signal heads to LED and add backplates for greater signal head visibility	\$924	None	\$0
		Install supplemental signal head at the intersection for greater visibility	\$924		
		Install advance street name signs in advance of intersection	\$2,954		
Alternate U.S. 19	at Park Boulevard (S.R. 694)	Install supplemental signal head on WB approach for greater visibility	\$924	None	\$0
		Upgrade signal heads to LED and add backplates for greater signal head visibility	\$924		
		Install an overhead 'Right Lane Must Turn Right' sign on the WB approach	\$208		
		Install advance street name signs in advance of intersection	\$2,954		
Cleveland Street	at Myrtle Avenue (S.R. 595)	Upgrade signal heads to LED and add backplates for greater signal head visibility	\$924	None	\$0
		Install improved signing for WB lane drop	\$307		
		Reevaluate signing location after streetscape project is complete	TBD		
66th Street North (S.R. 693)	at Bryan Dairy Road	Install advance street name signs on 66th Street N in advance of intersection	\$307	None	\$0
Park Boulevard (S.R. 694)	66 th Street N (S.R. 693) to 49 th Street North	Lengthen left-turn lanes to meet current standards	\$257,622	None	\$0
		Close the median opening just west of 49th Street N	\$215,000		
		Complete an access management evaluation on corridor	\$36,000		
Park Boulevard (S.R. 694)	49 th Street North to U.S. 19	Lengthen the left-turn lane to the required deceleration length of 155-ft for 40 MPH plus required queue length	\$257,622	None	\$0
		Complete an access management evaluation on corridor	\$20,000		

Notes: * = cost estimates from FDOT District 7 2030 Unfunded Needs Plan dated April 20, 2005
 ** = cost estimate from average of interchange costs

Map 6-1



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