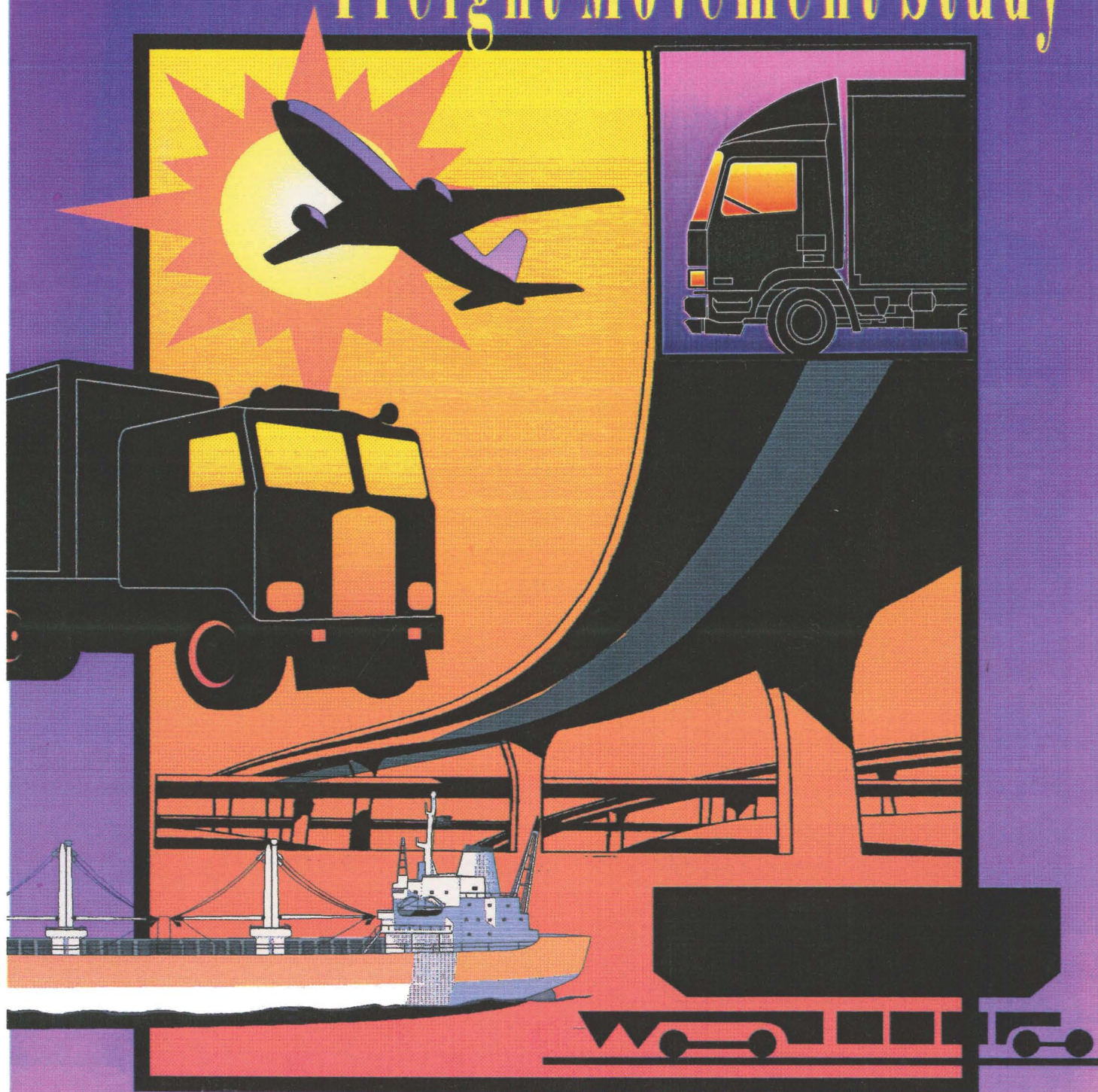


FINAL REPORT

Freight Movement Study



Prepared For:
Dade County Metropolitan Planning Organization

Prepared By:
The Corradino Group

DECEMBER, 1996

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FREIGHT MOVEMENT STUDY

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**DADE COUNTY
METROPOLITAN PLANNING ORGANIZATION**

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1. Introduction

Over the past 15 months, the Dade County Metropolitan Organization (MPO) has been involved in studying freight movement in Dade County. The Corradino Group (TCG), a transportation planning and engineering firm, has been the principal consultant on the study. The purpose of this study is to identify ways to improve freight movement on the surface transportation network. In addition, this study identifies recommendations for incorporating freight movement into Dade County's transportation planning process. The study has focused on eight work tasks, as follows:

- Task 1: Information Research
- Task 2: Developing an Inventory and Data on Existing Conditions
- Task 3: Analysis of Data
- Task 4: Considering/Researching Application of Freight Modes to Dade Travel Model
- Task 5: Assessing the Freight Movement Planning Process
- Task 6: Developing a Freight Movement Improvement Plan
- Task 7: Developing Other Recommendations
- Supplemental Task: Port of Miami Truck Survey

The work and products associated with this study are consistent with Federal, State, and Local transportation planning regulations and requirements, and have included significant input from both public and private sector entities involved in the freight movement business.

This report is the final report for the study and documents all work conducted in the study. A separately-bound Executive Summary has also been prepared.

1.1 Project Overview

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 requires the consideration of freight movements in both the statewide and metropolitan planning processes. ISTEA provides general direction but little guidance on specific solutions in the areas of freight and intermodal systems. The State, MPOs, and local freight carriers have the responsibility and the opportunity to determine local needs, shape the process, and develop solutions. The Freight Movement Study for Dade County provides the background for the identification of new strategies and

recommendations to satisfy freight movement needs, as well as to improve local modeling to develop better forecasts for future freight travel demands.

The Freight Movement Study has been developed with a steering committee that includes:

- Dade County Metropolitan Planning Organization;
- Florida Department of Transportation, District VI;
- Dade County Public Works Department;
- Port of Miami;
- Metro Dade Aviation Department; and
- Local Trucking and Freight Organizations.

1.2 Study Area

The study area for the project is Dade County, Florida. Major transportation corridors, highways and freight facilities used in conjunction with the freight movement transportation network, such as Miami

International Airport, the Port of Miami, major industrial parks and terminals, and others, are considered. While the study focus is primarily within the limits of the County, the study also evaluates the impact of freight movement into Dade County from outside the county, including the presence of numerous organizations based in Broward that have operations in Dade County.

Dade County is a major urbanized metropolitan area of 2,000,000 people. The Everglades on the west and south and the Atlantic Ocean on the east limit development. Major north-south transportation corridors serving Dade County are I-95, the Palmetto Expressway (SR 826) linked with I-75, and the Florida Turnpike. Major east-west corridors include SR 836, U.S. 41 (the Tamiami Trail) and numerous regionally significant major arterial linkages. U.S. 1 (Dixie Highway) provides major arterial extension from the end of I-95 through Coral Gables, South Miami and Kendall, south to Homestead.

2. Information Research

2.1 Review of Applicable Regulations Regarding Freight Movement

To obtain an understanding of the effect of regulations, information from federal, state, and local sources was obtained and reviewed. These include:

- Code of Federal Regulations (49, Parts 1000 to 1199, Revised as of October 1, 1993, Published by the Office of the Federal Register, National Archives and Records Administration);
- Federal Motor Carrier Safety Regulations (U.S. Department of Transportation, Federal Highway Administration, November, 1994);
- Florida Statutes (F.S.) 1993 (Uniform Commercial Code Chapter 677); and,
- Local Codes (Dade County Code 27-28, 24-25, 25.1, 26.1, 30-307).

The information in these materials will be used for reference throughout the Study.

The discussion in the following section reviews the overall environment of legislation affecting freight movement.

2.2 Analysis of the Effect of Statutes and Regulations on the Operational Aspects of Freight Movement

Trucking and freight movement in Florida and the United States is regulated through the Department of Transportation (DOT) Federal Highway Administration (FHWA). The Office of Motor Carriers (OMC) has responsibilities for aspects of motor carrier operations and safety. Agencies such as the National Highway Traffic Safety Administration are responsible for new vehicle safety standards and other components of highway safety.

The Department of Transportation faces restructuring under a plan released in February, 1995 by the Secretary of Transportation. The existing ten agencies of DOT are proposed to be consolidated into three major divisions. These are the Federal

Aviation Administration, the U.S. Coast Guard, and the Intermodal Transportation Administration (which would include highways, railroads, mass transit and trucking). This restructuring is promoted as a means of encouraging intermodalism and eliminating duplication of functions, and is anticipated to save \$6.4 billion in DOT expenditures over five years. The plan has yet to be approved by Congress. There is concern by some that the plan could result in use of highway funds to finance non-highway programs (such as subsidizing Amtrak service with highway money). This action also could have implications for funding of the proposed National Highway System.

The Interstate Commerce Commission (ICC) has traditionally (over 100 years) been responsible for motor carrier licensing and insurance monitoring programs, household goods carrier regulations, rules on uniform business practices and owner operator and leasing rules. The ICC regulated interstate surface transportation entry routes and geographical territories served, rates, and commodities transported. For-hire carriers desiring to haul regulated commodities had to apply for and receive operating authority from the ICC. The elimination of the ICC resulted in distribution of some of its various units, and/or functions, into other agencies.

Key responsibilities of the FHWA include enforcement of safety regulations, hazardous materials transport, and issues

such as drug and alcohol testing, annual vehicle inspection, and related activities. The FHWA is also charged with development of the National Highway System (NHS). The NHS is seen as key by many interests to ensuring continued maintenance and improvement of the nation's highway network which is vital to freight movement. Although the NHS would represent about only four percent of the nation's mileage, it would carry some 75 percent of the country's current commercial traffic. The critical issue associated with the NHS is whether the concept will be adopted, with resulting assurance of benefit to the national highway infrastructure, or whether funding will be cut. Recent work published by DRI/McGraw-Hill¹ indicates that the truck sector will continue to dominate the U.S. freight transportation market. It is estimated that between 1993 and 2003 trucking revenues will rise 21 percent to \$417 billion and will account for 77 percent of the \$544 billion domestic freight market. In addition, for-hire trucking revenues will climb by 30 percent during this period.

Federal law, Section 113 of the Surface Transportation Assistance Act of 1982 (STAA), governs the weight, length, and width of trucks using the Interstate system and other qualifying (designated) federal-aid highways. These regulations include:

¹ U.S. Freight Transportation Forecast to 2003, prepared for the ATA Foundation by DRI/McGraw Hill (as reported in Transport Topics, May 22, 1995).

- Axle weight - 20,000 pounds;
- Tandem axle weight - 34,000 pounds; and,
- Gross vehicle weight - 80,000 pounds.

Section 411 of the STAA provides the following truck length requirements:

- Semitrailers: states cannot impose a length limit of less than 48 feet on a semitrailer operating in a tractor-semitrailer combination;
- States shall not impose a length limit of less than 28 feet on any semitrailer or trailer operating in a tractor-semitractor-trailer combination;
- States must allow tractors with double trailers; and,
- States cannot set overall length limitations on tractor-semitrailer or tractor-semitrailer-trailer combinations.

In Florida, the legal size for a tractor-trailer combination is 102 inches wide and 13 feet 6 inches high. Semitrailers can be no more than 53' long (trailers from 48' to 53' require no more than 41' spacing from kingpin to center of rear axle group). Full trailers can be no more than 28 feet long and there is no stated specification for doubles (tractor-semitrailer-full trailer combination). The weight requirement for single axle vehicles is 22,000 pounds; 44,000 for tandem axle; and gross vehicle weight (GVW) of 80,000 pounds.

Florida further stipulates that weight on tires not exceed the maximum allowed by manufacturers. Longer combination vehicle operation (any combination of a truck tractor and 2 or more trailers or semitrailers at a GVW of more than 80,000 pounds) can be up to 106 feet, require a permit, and can only travel on the Florida Turnpike (as reported by the FHWA in the June 13, 1994 Federal Register).

The Florida Trucking Association has raised the issue of increasing the maximum allowable truck weights to 95,000 pounds (currently, only containers used in maritime commerce can exceed the requirement and they must be permitted). This issue has raised concerns among groups such as the American Automobile Association (AAA) about wear and tear on pavement and the risk to the roadway system because of potential shortages of funds for highway repair.

This discussion summarizes some of the pertinent operating aspects of applicable regulations and policies. With deregulation of intrastate commerce, the potential elimination of the Interstate Commerce Commission, potential safety requirements (antilock brakes, mandatory drug and alcohol testing), continued competition and coordination relative to intermodal transportation, the current shortage of drivers and driver concerns (drivers at the Port of Miami recently threatened to shut down the port to protest poor treatment), the regulatory and

operational environment for the freight industry is constantly changing. This review will be updated as the study proceeds to reflect legislative changes and additional information obtained during the study.

2.3 Statewide Intermodal Task Force

The Florida Department of Transportation, upon application to the U.S. Department of Transportation, the Florida Department of Transportation was selected to develop a Mode State Intermodal Planning Process. The grant, authorized under Title V of the Intermodal Surface Transportation and Efficiency Act of 1992, was awarded to the FDOT on September 22, 1992. The initial phase, the development of the intermodal planning concept was submitted to the USDOT on March 24, 1994.

A major work task of this planning element included the data collection and management system requirements for continuing development and implementation of an Intermodal Management System (IMS). For Miami and Metropolitan Dade County, this system will be part of an Integrated Management System developed by FDOT. The system will combine the Congestion Management System, Public Transportation System, and Intermodal Management System.

The objective of the management systems will be to provide information on the condition and performance of both existing and future transportation systems. A Decision Support System (DDS) is an integrated relational database connected to a GIS that will be the primary database and analysis tool used in meeting the management system requirements. It is expected that the DDS will include:

- Base roadway network;
- Roadway characteristics;
- Access control;
- Functional classification;
- Level of service;
- Parking areas;
- State highway system;
- Florida intrastate highway system;
- Bridge/overpass locations;
- Railroad grade crossing locations;
- Speed zones/speed limits;
- FDOT work program;
- Deficient pavement section locations;
- Location/attributes of public transportation facilities;
- Location/attributes of rail facilities;
- Location/attributes of intermodal facilities;
- Traffic comm data;
- Traffic signal data; and
- Accident data.

3. Existing Conditions

Information on freight movement and trucking activity in Dade County was obtained through sources such as Dun and Bradstreet Information Services, the Florida Trucking Association, the American Trucking Association, and from various national organizations and publications. Approximately 800 freight/trucking companies were identified as operating in Dade County. Many of these use major County intermodal centers such as Miami International Airport and the Port of Miami. This section presents a profile of freight activity in Dade County based on information gathered in the study, a meeting/workshop held with the project steering committee, interviews with public and private sector freight industry representatives, and a survey of trucking operators.

3.1 Characteristics of Freight Movement Operations on Roadway Network

This section provides a general description of the characteristics of freight movement operations over the roadway and intermodal infrastructure in Dade County. The most visible generators of freight

movement in Dade County are its multi-modal transfer centers. These centers serve as generators of freight movement on Dade County roadway infrastructure and as major economic resources in the County which are impacted by the efficiency of land-side access for freight. The locations of Dade County intermodal facilities are shown in Figure 3-1. Within Dade County, there are six airports, two sea ports, and three major rail yards. Also key to impacting freight movement in Dade County are Fort Lauderdale - Hollywood International Airport, and Port Everglades Seaport, both approximately seven miles north of Dade County.

3.1.1 Airports

3.1.1.1 Miami International Airport (MIA)

Miami International Airport is located on a 3,300-acre site about five miles northwest of downtown Miami. The residential neighborhoods of Miami Springs and Virginia Gardens are located directly to the north of the airport. Residential uses are buffered on the south and southeast sides of the airport by office, transportation, or recreational areas. Directly abutting the airport's west and east borders are light industrial areas which include a large mix of intermodal facilities, import/export, freight forwarding, warehousing, and other goods movement operations.

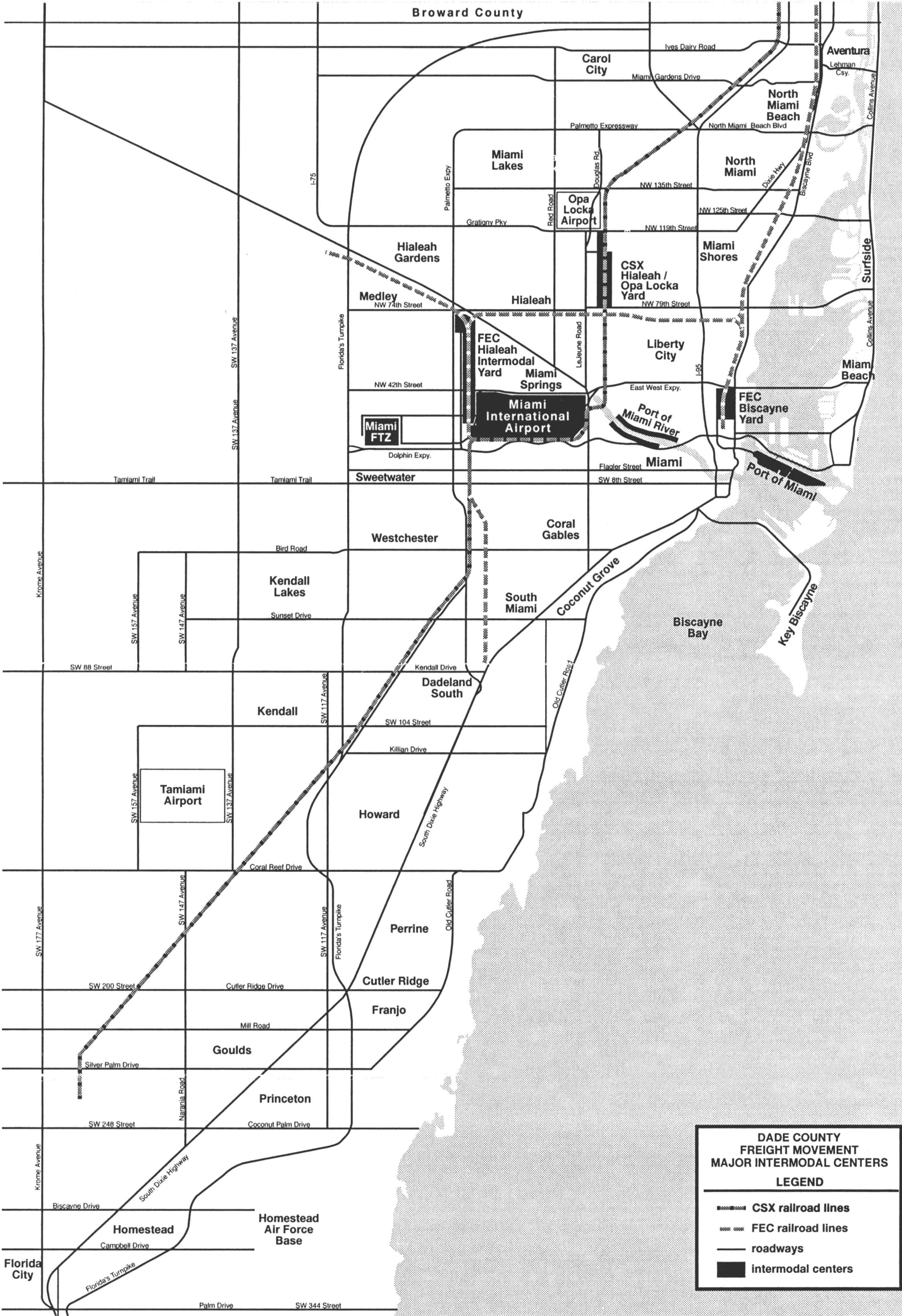


Figure 3-1

The Miami International Airport airfield includes three runways: 9L-27R, 10,500 feet; 9R-27L, 13,000 feet; and 12-30, 9,355 feet. Additional airfield facilities include 112 gates, and 3.8 million square feet of terminal space.

Ideal geographic location, a strong international trade community, and a vast route structure encompassing over 190 cities on four continents has contributed to MIA's status as a leading cargo airport (tonnage) in the United States. Miami International Airport handles 84 percent of South Florida's (Dade, Monroe, Broward, Collier, Palm Beach, Hendry, Martin, and Glades Counties) air cargo shipments, and 83 percent of all air cargo between the United States and South America. Fifty-six scheduled and charter all-cargo carriers operate from MIA.

Table 3-1 lists the top twenty import and export commodities at MIA. Cargo freight traffic through MIA is currently expanding at a rate of 15 percent for all commodities. The historic average annual growth rate for air cargo at MIA is 18 percent. Since 1992 domestic air freight has expanded at a greater rate than international freight growth, partly fueled by the recovery of markets following the simultaneous collapse of Eastern, and Pan Am Airlines in 1991. The displaced markets have been absorbed by the expansion of United and American Airlines. The continued expansion in air freight is assured by the airport's \$500 million Cargo Facilities and Road Access Development Program.

For the 1994 Calendar Year, 1,390,000 tons of air freight moved through MIA, up 14 percent from the 1993 level of 1,222,000 tons. Of this, 20 percent (273,000 tons) originated or was destined to domestic airports, while the remaining 80 percent (1,117,000 tons) was international freight. Sixty-eight percent of all air freight through MIA (940,000 tons) was carried by all-cargo freighter aircraft. Thirty-two percent (450,000 tons) was carried in the bellies of passenger aircraft. Domestic freight volumes increased at a rate of 11 percent, while international freight volumes increased at 25 percent.

Many of the roadway segments providing surface access to MIA currently exceed acceptable levels of congestion. These include the Dolphin and Palmetto Expressways, NW 12th Street, NW 25th Street, NW 21st Street, Poinciana Boulevard, North River Drive, Perimeter and LeJeune Roads, and NW 72nd, 57th, 37th, and 22nd Avenues. Although the airport is not the prime generator of vehicular traffic to the roadways, the congestion directly impacts the air freight capacity of the airport. In addition to programmed and unfunded improvements which impact landside access to MIA, an on-going planning and PD&E effort impacts the future landside access capacity of MIA. This effort includes projects such as the 112 Extension Concept Study, Dade County Metropolitan Planning Organization; the East-West Multimodal Transportation Corridor Study/Preliminary

Design & Engineering, Florida Department of Transportation; and the Miami Intermodal Center Preliminary Design and Engineering, Florida Department of Transportation.

3.1.1.2 Fort Lauderdale - Hollywood International Airport (FLL)

Fort Lauderdale - Hollywood International Airport handles eight percent of South Florida's (Dade, Monroe, Broward, Collier, Palm Beach, Hendry, Martin, and Glades Counties) air cargo. In 1994, FLL moved 147,364 tons of air cargo in both domestic and international markets. This activity primarily comprises domestic freight and express shipments, carried in the bellies of combination passenger aircraft. For international shipments, belly cargo is carried by charter carriers and freighters, as FLL does not currently have bilateral agreements for scheduled international flights. By the Year 2000, freight throughput at FLL is expected to increase by approximately 125 percent.

Freight traffic produced by FLL air freight activity will predominantly enter Dade County via Florida's Turnpike, or Interstate 95. Additional freight traffic may cross into Dade County via US-A1A, US-1, Dixie Highway, US-441, SR-817 (University Drive/NW 27th Avenue), or Krome Avenue.

3.1.1.3 Kendall-Tamiami Executive Airport (TMB)

Kendall-Tamiami Executive Airport, as the most active general aviation airport in the

South Florida Area, is a designated general aviation reliever airport for MIA, diverting general aviation operations and aircraft from Miami and allowing MIA to concentrate on its commercial passenger and cargo operations. The airport primarily provides capacity for general aviation local and itinerant operations, helicopter operations, and air rescue operations. Small pockets of industrial development exist to the east of the airport, and mixed commercial uses surround the airport to its north, east, and south sides. There is no significant cargo activity at TMB; therefore, it is not a significant multimodal facility for freight movement in Dade County.

3.1.1.4 Opa Locka Airport (OPF)

Opa Locka Airport, is a designated general aviation reliever airport for MIA, diverting general aviation operations and aircraft from Miami and allowing MIA to concentrate on its commercial passenger and cargo operations. The airport provides capacity for general aviation operations, with a greater proportion of propeller aircraft operations than TMB. Although a large industrial area, including the Seaboard Industrial Park is situated to the airport's southeast, there is little interaction between these industries and OPF as an air cargo facility. There is no significant cargo activity at OPF; therefore, it is not a significant multimodal facility for freight movement in Dade County.

Table 3-1
Miami International Airport
Cargo Volume

Export Volume	1994 Annual Tons	Growth Rate (1993-1994)	Projected 1995 Annual Tons	Projected 2000 Annual Tons
computers and peripherals	33,233	13%	37,542	47,378
clothing	15,588	-16%	13,094	9,395
agricultural & oil drilling machinery	14,753	22%	17,999	26,283
industrial machines	14,201	16%	16,473	21,853
office machines and supplies	13,818	19%	16,443	22,900
telecommunications equipment	13,138	20%	15,766	22,309
vehicle parts and accessories	13,088	-5%	12,434	11,277
commercial machinery	10,375	29%	13,384	21,734
home entertainment equipment	9,763	43%	13,961	27,585
hats/gloves/shoes/accessories	9,045	49%	13,477	28,797
underwear and socks	8,714	-1%	8,627	8,463
electrical machinery	8,244	16%	9,563	12,686
eggs and slaughter animals	7,745	-9%	7,048	5,889
household goods and consumer products	6,177	-2%	6,053	5,825
plastics and products	5,958	28%	7,626	12,202
paper products	5,786	-5%	5,497	4,985
metals and products	5,661	11%	6,284	7,665
medical equipment	5,175	9%	5,641	6,647
scientific instruments	4,327	2%	4,414	4,583
toys/games/sports equipment	4,297	13%	4,856	6,128
all other	392,740	17%	459,506	619,608

Import Volume	1994 Annual Tons	Growth Rate (1993-1994)	Projected 1995 Annual Tons	Projected 2000 Annual Tons
flowers/plants/trees	155,311	3%	159,970	169,232
fish and crustaceans	77,201	16%	89,553	118,798
clothing	42,518	5%	44,644	48,990
fruits/juices/jams	24,246	-1%	24,004	23,549
hats/gloves/shoes/accessories	23,020	-9%	20,948	17,505
vegetables/roots/tubers	17,682	-1%	17,505	17,173
underwear and socks	15,561	30%	20,229	33,337
vehicle parts and accessories	11,700	150%	29,250	167,419
household goods and consumer products	4,575	30%	5,948	9,801
commercial machinery and equipment	3,489	34%	4,675	8,162
hides/skins/leather goods	2,885	32%	3,808	6,461
returned/low value est.	2,800	14%	3,192	4,096
industrial machines	2,509	25%	3,136	4,797
telecommunications equipment	2,405	-23%	1,852	1,126
beauty preparations/oils	2,218	17%	2,595	3,499
tobacco and substitutes	1,858	35%	2,508	4,442
paper products and printed goods	1,681	15%	1,933	2,523
pets and show animals	1,437	1%	1,451	1,479
baggage, luggage	1,202	23%	1,478	2,193
medical equipment	1,146	25%	1,433	2,191
all other	392,740	17%	459,506	619,608

Summary: Import and Export	Year 1994 tonnage	Average annual growth	Year 1995 tonnage	Year 2000 tonnage
	1,390,000	15%	1,595,305	2,200,571

Source: DCAD Report, and Market Information Analysis, 1995

3.1.1.5 Homestead Air Reserve Base (HARB)

As a result of Hurricane Andrew, virtually all of the facilities at Homestead Air Force Base were destroyed. Presently, a control tower and one hangar are operational; it has been redesignated as Homestead Air Reserve Base. It is anticipated that HARB will be transferred from government operations to the Metro Dade Aviation Department, sometime in the Fall of 1995. The County will then operate it primarily as a general aviation facility with plans to rehabilitate at least one hangar. Within the next five years, if is anticipated that a small terminal and administration building will be constructed that will permit the use of this base by charter services. Some cargo carriers may use HARB based upon cost or proximity to special markets. There are no official freight facilities planned, although a developer has been contacted who would be able to construct facilities to meet the needs of any cargo carrier interested in using the facility. Facilities constructed during the first few years will be in the form of "incubators" which will be designed to demonstrate that the facility is functional and that it has advantages for certain types of freight. Among the disadvantages of HARB as a freight facility are the lack of a U.S. Customs office and the fact that many freight carrying aircraft contain cargo which must be transferred to other aircraft for further distribution. This is possible with a wide range of connections at MIA, but would be virtually impossible at Homestead.

Any future impact of HARB on freight movement in Dade County would likely occur after the year 2000.

3.1.1.6 Homestead General Aviation Airport (X51)

Homestead General Aviation Airport provides operational and storage relief for MIA. It provides capacity for local and itinerant propeller and helicopter operations. It is not a significant multimodal facility for freight movement in Dade County.

3.1.1.7 Other Aviation Facilities

Opa Locka West Airport is an active flight training site in Northwest Dade. There are no ground storage facilities, or cargo operations. Dade-Collier Airport is a low activity flight training airport located on a remote site west of Miami. There are no ground storage facilities, or cargo operations. The Watson Island Heliport is a public heliport site located on Watson Island near downtown Miami. It is not a significant multimodal facility for freight movement in Dade County.

3.1.2 Seaports

As shown in Figure 3-1, the primary intermodal freight generators in Dade County are the seaports: the Port of Miami deep water port, and the Port of Miami River riverport.

3.1.2.1 Port of Miami Seaport

The Port of Miami is one of the leading terminal complexes in the southern United States, and the ninth largest container port in the United States. Located just east of the Miami CBD, the port is situated on two islands, Dodge Island and Lummus Island, in northern Biscayne Bay. The Port encompasses a total land area of approximately 600 acres. While cruise operations are entirely located on Dodge Island, cargo operations occur on Lummus Island and the southeastern portion of Dodge Island.

The Port of Miami is a "clean port", meaning that it moves no bulk cargoes, such as petroleum, scrap metal, grain, phosphates, coal, or other potentially ecologically threatening commodities. Its clean port orientation is motivated by the situation of the port waters on the fragile marine ecology of the Biscayne Bay National Aquatic Preserve. Because of this, the port has positioned its cargo-handling capacity to the container market, by providing the cargo-handling and railroad facilities required for efficient intermodal container operations.

A 50,000-square-foot refrigerated warehouse facility, with enough space for 3,000 pallet loads of perishable foods has recently been completed. As South Florida is a major distribution center for perishable commodities, the Port attracts additional volumes of produce from Central and South America, adding to the product mix of

vegetables and citrus fruits from South Dade. Local produce generates a considerable amount of northbound truck traffic into the Port for export.

In addition to these facilities, the Port of Miami Master Development Plan identifies the following possible infrastructure improvements to expand freight capacity over the period from the present to 2007:

- Potential roadway tunnel from Dodge Island to I-395;
- Addition of 2,500 linear feet of berth and apron, increasing container berths from 3,360 to 5,860 feet;
- Addition of four container cranes;
- Extension of container operations area;
- Addition of 1,800 feet of marshaling track;
- Addition of a west container berth access road;
- Addition of a truck scale plaza; and
- Addition of two transit sheds, each approximately 40,000 square feet.

For the 1994 Calendar Year, the Port of Miami seaport moved 5,574,252 tons of cargo, having increased by 6 percent from the year before. The increase from 1992 to 1993 was 13 percent. Of these 5.5 million tons, 2,798,667 were imports and 2,775,575 were exports. The majority of the tonnage is high-value general cargo moving in intermodal containers, or roll-on/roll-off (RO-RO) trailers. Break bulk (non-container-

ized goods) cargoes are also moved at the port; however, because of the ports location within a marine sanctuary, bulk cargoes are prohibited. The Port's projected volume of goods movement for 1995 is 6.3-million tons of cargo. Table 3-2 lists existing and projected cargo volumes for the top 25 commodities moved through the Port.

Cargo freight traffic through the Port of Miami is currently expanding at a rate of 13 percent for all commodities. With an increasing trade among the ports of the Americas, the expansion of many Central and South American economies, the North American Free Trade Agreement (NAFTA), and the eventuality of market access to Cuba, the Port of Miami expects the current rate of cargo market expansion to continue. For the near term, cargo activity is limited by capacity more than by market conditions.

Landside access via roadways to the Port's service area is a key issue for the Port of Miami. Direct Port to Interstate access via a tunnel or bridge to I-395 is considered critical to increasing the Ports landside capacity. The Port's five-lane fixed-span bridge (opened in 1991), has significantly increased the landside throughput of the terminal by replacing an old two-lane draw bridge. However, freight traffic is still impeded as it must travel a 1/2-mile east/west connection through the congested Miami CBD to reach I-95, SR-826, and SR-112. Generally, freight trips, and intermodal

transfers between modes require that tractor-trailer combos either use Biscayne Boulevard to reach I-95 via I-395, or that these vehicles traverse the 5th Street 6th Street pair to reach entrance and exit ramps along I-95. The access problem is further compounded by the ramp design of I-95, which precludes access to SR-826 by the NW 8th Street entrance ramp. The CBD streets impose difficulties to the landside freight movement caused by automobile congestion, double parked delivery vehicles, incompatible adjacent uses and pedestrian ways, and roadway geometrics which are inhospitable to large volumes of truck traffic.

The Port of Miami has considered the planning and implementation of an exclusive truck corridor along the Florida East Coast (FEC) right-of-way to provide capacity for the transfer of containers between Lummus Island and the Buena Vista Rail Yard. The Buena Vista Yard, belonging to the FEC, is leased in part to the Port of Miami for use as storage facility for intermodal containers. Although an active rail line passes through the yard, it is used solely for temporary container storage. A "truck-way" from the Port to Buena Vista would utilize rail signalization and efficiently move truck convoys along the right-of-way. Before proceeding further, the environmental impacts, traffic impacts, and impacts to the implementation of other uses for the right-of-way, versus freight movement benefits and rail right-of-way preservation benefits.

Table 3-2
Port of Miami
Cargo Volume

Import/Export Volume	1994 Annual Tons	Growth Rate (1993-1994)	Projected 1995 Annual Tons	Projected 2000 Annual Tons
cargo, freight all kinds (FAK)	978,192	13%	1,105,357	1,394,967
fruits and vegetables	351,230	13%	396,890	500,877
textiles	268,866	13%	303,819	383,421
stone, clay, cement, tile	257,257	13%	290,700	366,866
iron, steel, fabricated metals	172,146	13%	194,525	245,492
lumber & wood, fabricated wood products	157,473	13%	177,944	224,567
spare parts	143,068	13%	161,667	204,024
other non-refrigerated products	90,644	13%	102,428	129,264
paper - non printed	89,756	13%	101,424	127,998
coffee and tea	87,273	13%	98,618	124,457
trucks and buses	86,214	13%	97,422	122,947
raw agricultural	86,147	13%	97,346	122,851
electrical equipment	82,138	13%	92,816	117,134
plastic and rubber goods	81,115	13%	91,660	115,675
alcoholic beverages	76,602	13%	86,560	109,240
automobiles	63,071	13%	71,270	89,943
audio/visual equipment	58,877	13%	66,531	83,963
construction equipment	56,588	13%	63,944	80,698
industrial equipment	51,468	13%	58,159	73,397
glass and pottery products	49,239	13%	55,640	70,218
seafood - refrigerated	48,747	13%	55,084	69,516
canned and preserved foods	48,436	13%	54,733	69,073
building materials	44,778	13%	50,599	63,856
household appliances	43,991	13%	49,710	62,734
meat, poultry, eggs - refrigerated	39,188	13%	44,282	55,885
all other	2,061,748	13%	2,329,775	2,940,190

Summary	1994 Annual Tons	Average Annual Growth	Year 1995 Tonnage	Year 2000 Tonnage
	5,574,252	13%	6,298,905	7,949,254

Source: DCAD CDMP EAR, June 1995

The Florida East Coast (FEC) Railroad is the sole provider of rail service to the Port of Miami, and this service is limited to cars and gondolas. The FEC connects with the Port via a spur that continues south from their main line through a warehouse district, across Biscayne Boulevard, and across a bridge to the Seaport. The railroad is restricted to crossing Biscayne Boulevard only at night from 7:00 p.m. to 7:00 a.m. The Port maintains 3.22 miles of track on the port, while the FEC operates all switches and power equipment.

All intermodal traffic is handled at the FEC's Hialeah Intermodal Facility, which is located 10 miles from the Seaport. More than 100,000 intermodal units per year, both marine containers and piggyback trailers, are trucked between the seaport and the intermodal yard. Access to the yard is becoming more difficult due to congestion over connecting roadways and heavy commercial development west of the Airport. According to Port reports, although there is only 10 miles between the yard and the seaport, travel time is between 40 minutes and 1 hour. To reflect the delay time, truckers have had to increase their drayage rates, some as much as 40 percent. Delays also occur at the FEC intermodal facility.

As the volume of intermodal freight handled through the Port continues to increase, the truck combos generated by Port freight operations will increase proportionally. Without an on-dock intermodal container transfer facility (ICTF)

many of these trips must cross County expressways and local streets. In lieu of an on-dock ICTF, a truckway on a dedicated right-of-way, can effectively create an off-site ICTF. This and other improvements to the landside infrastructure would need to be planned and programmed.

3.1.2.2 Port of Miami River

The Port of Miami River consists of approximately 28 independent shipping terminals and associated facilities located along 5.5 navigable miles of the Miami River, from the river's mouth at Biscayne Bay to the salinity dam at NW 36th Street and LeJeune Road.

From the CSX railroad bridge at the west end of the Port to approximately NW 27th Street, both sides of the river are predominantly utilized by container ports which load and unload ships up to approximately 200-feet in length. Some bulk materials, such as ferrous recyclables, are also loaded west of NW 27th Avenue. East of the NW 27th Avenue Bridge shipping terminals primarily handle break bulk commodities and roll-on/ roll-off cargos. Two of these terminals are located east of NW 22nd Avenue, while four others are located east of the NW 7th Avenue Bridge. Three of these are along South River Drive, and one is situated on North River Drive.

Other uses along the river include a large proportion of marine-related commercial and industrial uses, along with recreational

purpose marinas, and a public boat ramp at NW 30th Street and North River Drive. According to the Dade County Comprehensive Development Master Plan Evaluation and Appraisal Report, 15 percent of the land is vacant. Between NW 7th Avenue and NW 27th Avenue, a mix of low density and high density residential uses border the river, as well as two community parks. West of NW 27th Avenue, freight forwarding operations are mixed with terminals. Parking areas for rental car facilities serving Miami International Airport are located along the south bank.

Non-containerized goods are loaded and unloaded on vessels on the east side of the Port of Miami River. Specifically, wharfs are situated along North River Drive, from SW 1st to SW 3rd Street, and along South River Drive, from SW 2nd Street to the NW 5th Street Bridge. Maritime industries and other ship yards are situated along the river from NW 5th Street to the NW 27th Avenue Bridge. West of NW 27th Avenue, wharfage for vessels in the range of 100 to 300-feet LOA provides capacity to move a mix of containerized cargo, some bulk cargos, and other non-containerized goods.

The shipping terminals along Port of Miami River predominantly serve the small ports of the Caribbean Basin. All of the shipping terminals of the Port of Miami River account for about 1,800 departures per year, and an estimated 1,600,000 tons of cargo. About 80 percent of the tonnage is containerized, with the remaining 20 percent

bulk and break bulk. Average tonnage per ship ranges from 250 to 1,350 tons per voyage. More specific information is not available, as the terminals are proprietary, and operate in a competitive market. The Miami River Marine Group estimates that growth rates for all cargo reflect the expansion of port activity at the Port of Miami; therefore a similar growth rate is appropriate for forecasting future cargo volumes at the Port of Miami River.

West of NW 31st Avenue, the cargo terminals along the Miami River are accessible by roadway and a CSX Railroad line. East of NW 31st Street, the roadway network is the only direct landside access. The primary land side truck access to the Port of Miami River is via North and South River Drives, NW 27th Avenue, NW 37th Avenue, NW 42nd Avenue (LeJeune Road), and NW 20th Street. Currently, the linkages between these roadways and SR-836 are adequate.

3.1.3 Rail Freight Infrastructure

The Dade County freight rail system, (refer to Figure 3-1), is comprised of two line-haul railroad companies, with four primary switching and marshaling areas. All rail traffic into or out of the County must be carried by three active tracks: one CSX track along its alignment west of I-95, and two FEC tracks along its alignment west of Biscayne Boulevard. There are two primary rail lines which provide service into Dade County.

The Florida East Coast Railway Company is a Class I railroad that serves the east coast of Florida from Miami to Jacksonville. The carrier's 442 route miles are contained completely within the State of Florida. Major commodities handled by the FEC are nonmetallic minerals and various commodities moved in containers and piggyback trailers.

CSX Transportation Rail Road (CSX), a combination of the former Seaboard System and Chessie System, operates approximately 19,000 route miles and serves 20 states, the District of Columbia, and one Canadian Province. CSX operates 1,778 route miles in Florida, on both coasts, the central state, and the panhandle. Major Florida commodities for the CSX are nonmetallic minerals, chemicals and allied products, and coal.

3.1.3.1 CSX Yards

The CSX Opa Locka / Hialeah Rail Yards accommodate the throughput of a variety of goods and commodities. Running along a north/south alignment that centers along the NW 37th Avenue alignment, the rail yards extend from NW 79th Street, north to NW 119th Street and the Gratigny Parkway. South of the rail yards are situated industrial uses, many of which have active sidings available to load and unload directly from their properties. At its north end, north of NW 103rd Street and on the east side of the alignment, is the large Seaboard Industrial Park, with five sidings.

The rail yards, incorporating approximately 110 acres south of NW 103rd Street, include a marshaling yard with approximately 18 sidings, a turn-around, and two through movement tracks. These facilities are contained in the area from NW 79th Street to NW 103rd Street, and shares space with the Amtrak Terminal on the east side of the yard. North of NW 103rd Street, on the west side of the alignment, is a piggyback container intermodal facility, situated on approximately 50 acres between the track alignment and the United Parcel Service terminal in Hialeah.

The through-movement tracks continue south to the area east of Miami International Airport, where the line splits: one heading southeast along North River Drive to NW 28th Avenue and NW 24th Street; the other, continuing south of the airport to South Dade.

The rail terminal predominantly serves local industries and some air freight shippers in Hialeah, Miami, and unincorporated Dade County. The marshaling yard provides staging capacity for uses further south in Dade County. The primary arterial truck access to the CSX Yards are via NW 79th Street, NW 103rd Street, NW 32nd Avenue, and LeJeune Road.

3.1.3.2 FEC Hialeah Intermodal Facility

The FEC Hialeah Intermodal Facility, located west and northwest of Miami International Airport, extends north/south between NW 67th Avenue and NW 72nd

Avenue (Milam Dairy Road), from NW 12th Street to NW 74th Street. North of NW 36th Street, canals on the west and east sides buffer the yard from industrial uses to the west residential uses to the east. The facility includes a 120-acre marshaling yard, which extends from approximately NW 46th Street to NW 64th Street, and provides approximately 25 sidings and a turn-around. South of the marshaling yard, is an 125-acre auto-train handling and storage area. Rolling stock carrying automobiles from US plants and overseas sources, via the Jacksonville Port, are unloaded primarily for local distribution. The auto yard includes 10 sidings (7 south of 36th Street, 3 north of 36th Street) for roll-off unloading, and storage for approximately 8,700 automobiles. North of the marshaling yards, a 90-acre intermodal transfer yard extends from NW 54th Street, north to the Hialeah Expressway (NW 72nd Street). The intermodal yard provides 6 rail sidings for container handling, 4 single track wide movable overhead cranes, and two double-width moveable overhead cranes.

The through-movement tracks continue south, along the west side of Miami International Airport. At the southwest corner of the Airport, the right-of-way follows the SW 72nd Street alignment, then changing to running along a SW 62nd Street alignment to Dadeland. The right-of-way is no longer active south of the Snapper Creek Canal. North of the yard, through movements also follow the south bank of the Okeechobee Canal, west to Medley Commerce Industrial

Center, Pelmad Industrial Park, Leigh Lakes Industrial Center, and the North River Commerce Center, as well as other industrial centers in Medley, Hialeah Gardens, and unincorporated Dade.

The single arterial truck access to the FEC Intermodal Yards is via NW 74th Street. From its access point to NW 74th Street, freight traffic is 0.6 to 0.7 miles from the 74th Street ramps to the Palmetto Expressway (SR-826), 0.5 miles from the Hialeah Expressway, and 0.25 miles from Milam Dairy Road (NW 72nd Street). To the roll-on/roll-off yard, the only access point for truck transshipment is Ludlum Road (NW 67th St.), just west of the North Runway at MIA.

3.1.3.3 FEC Buena Vista Yard

The FEC Buena Vista Yard is located just west of Biscayne Boulevard, bounded by the rail right-of-way on the east, North Miami Avenue to the west, NE 36th Street to the north, and NE 29th Street to the south. The 58-acre yard, has one siding, and no handling equipment. It is primarily an intermodal container marshaling and storage area for Port transshipments, and transfers between the FEC Hialeah Intermodal Yard and the Port of Miami. Transfers are made via truck movements from between the Buena Vista Yard and the FEC Intermodal Facility. The Buena Vista Yard is not used as a Port off-site intermodal container transfer facility (ICTF). Although the Buena Vista Yard is not an active yard for intermodal container transfers, private

sidings along the NE 2nd Avenue side of the yard are still active. The largest of these industrial uses is Chiquita, located on NE 2nd Avenue at approximately NE 31st Street, which ships to northern markets via break bulk rail. The active rail line still serves numerous private sector industrial uses north and south of the Buena Vista Yard; however, the trend of its use as a freight line is in decline.

3.2 Land Use

The major generators of freight traffic in Dade County are industrial areas, major distribution points, and intermodal center. Figure 3-2 shows the major industrial generators of freight trips in Dade County:

- Airport / Doral
between NW 72nd Avenue and Florida's Turnpike, north of SR 836 to NW 74th Street;
- Central Dade
from the FEC alignment along Biscayne Boulevard, east along the north side of NW 20th Street to the Miami River, and the quadrangle circumscribed by NW 32nd Avenue, the Airport, NW 20th Street, and NW 36th Street;
- Hialeah
both sides of the Palmetto Expressway, from Okeechobee Road to NW 103rd Street, east of the Palmetto Expressway along the Gratigny Parkway, and on both

sides of the CSX alignment from NW 36th Street to Opa Locka Airport;

- Medley
west of Okeechobee Road, north of NW 74th Street, and east of the Florida Turnpike;
- Miami Lakes
north of the Gratigny Parkway, surrounding Opa Locka Airport on its north, west, and south sides;
- North Dade
sections along the west side of I-95, from NW 135th Street to the County Line, sections along Dixie Highway, from NE 125th Street to NE 163rd Street.

3.3 Freight Movement Roadway Network

The roadway network of Dade County as it relates to the movement of freight is presented in Figure 3-3.

- The super-regional network is comprised of roadways which facilitate freight movements originating and/or ending at locations outside of the County. The super-regional network in Dade County is comprised of US-1, I-95, Florida's Turnpike, I-75, Okeechobee Road, and the Tamiami Trail (SW 8th Street).

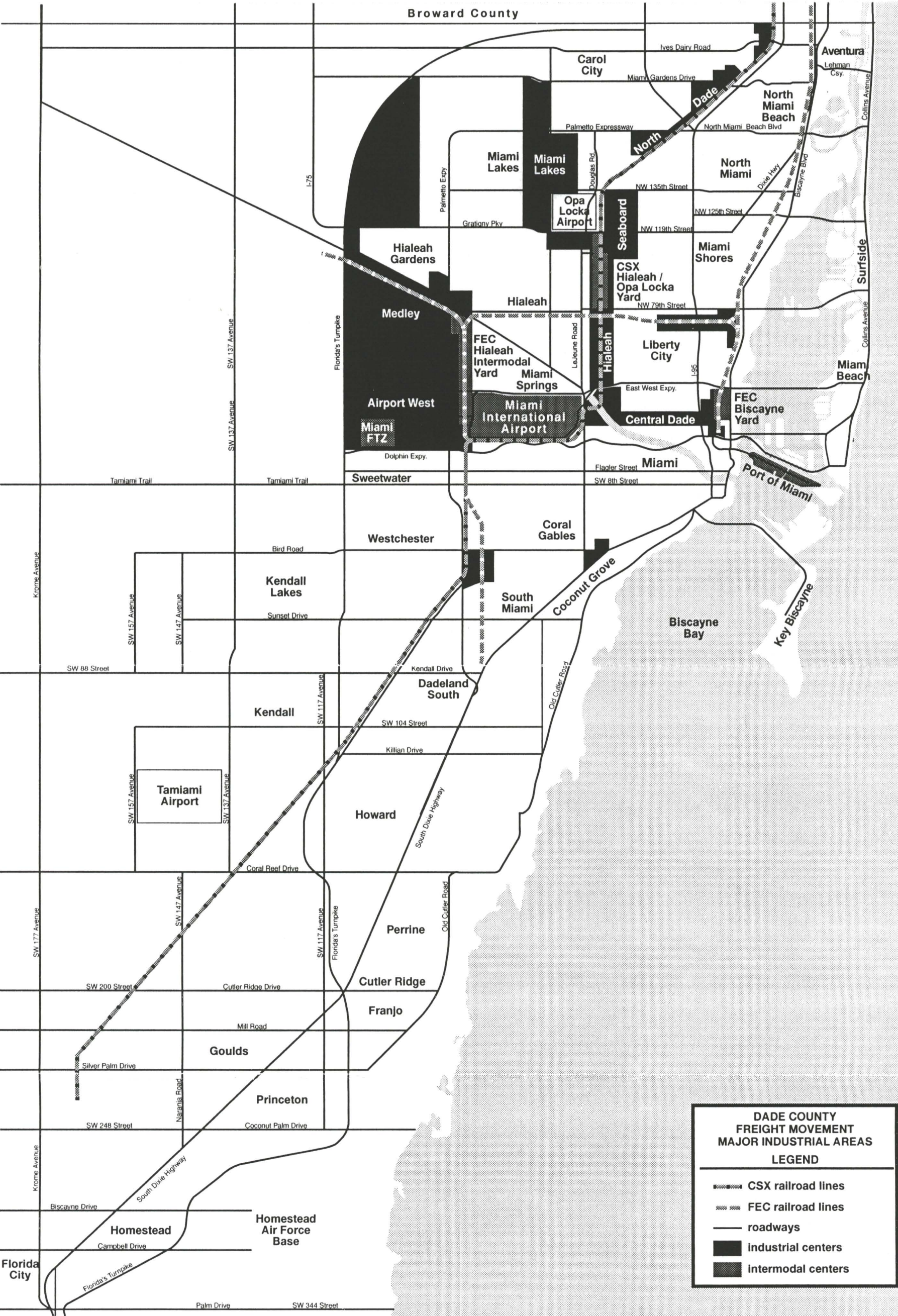


Figure 3-2

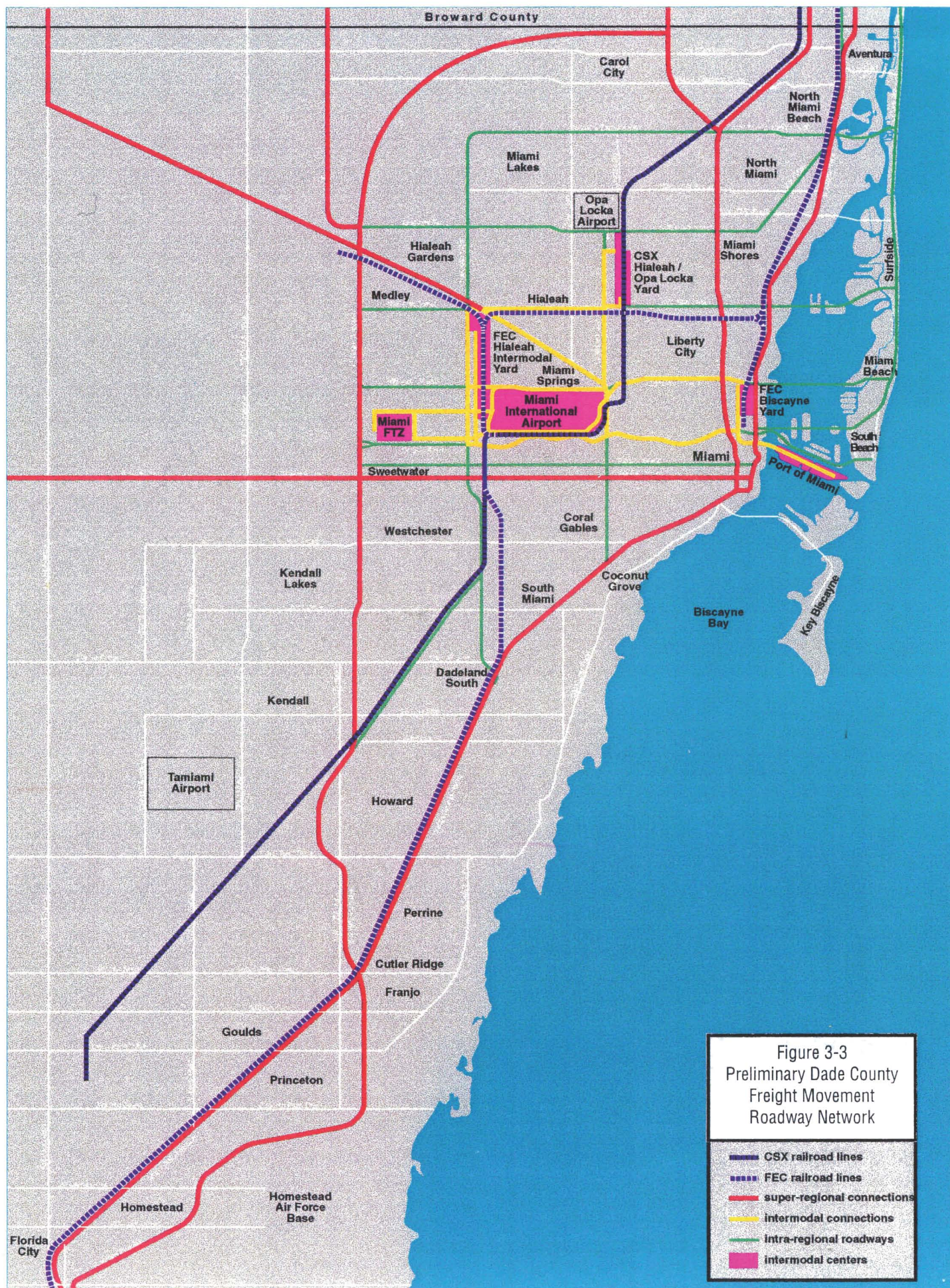


Figure 3-3
Preliminary Dade County
Freight Movement
Roadway Network

- CSX railroad lines
- - - FEC railroad lines
- super-regional connections
- intermodal connections
- intra-regional roadways
- intermodal centers

- The intraregional network facilitates distribution and collection as well as access between the super-regional network and local land uses which generate or attract freight trips. This network also facilitates all local delivery, and intracounty freight movements which are by a single mode. This network includes facilities of all functional classifications, including: local roads in commercial areas, collectors, major and minor arterials, and urban expressways (SR 836, SR 112, SR 826, I-396, I-195).

The intermodal connections network is comprised of the roadway facilities which are routes for intermodal freight traffic among the airports, seaports, railyards, free trade zone (FTZ), and centers for import/export freight forwarding operations. Although the network facilitates truck traffic which is essentially local movement, the needs of the Preliminary Dade County Freight Movement Roadway Network operations, and their significance to the County economy are distinct from other freight movement paths.

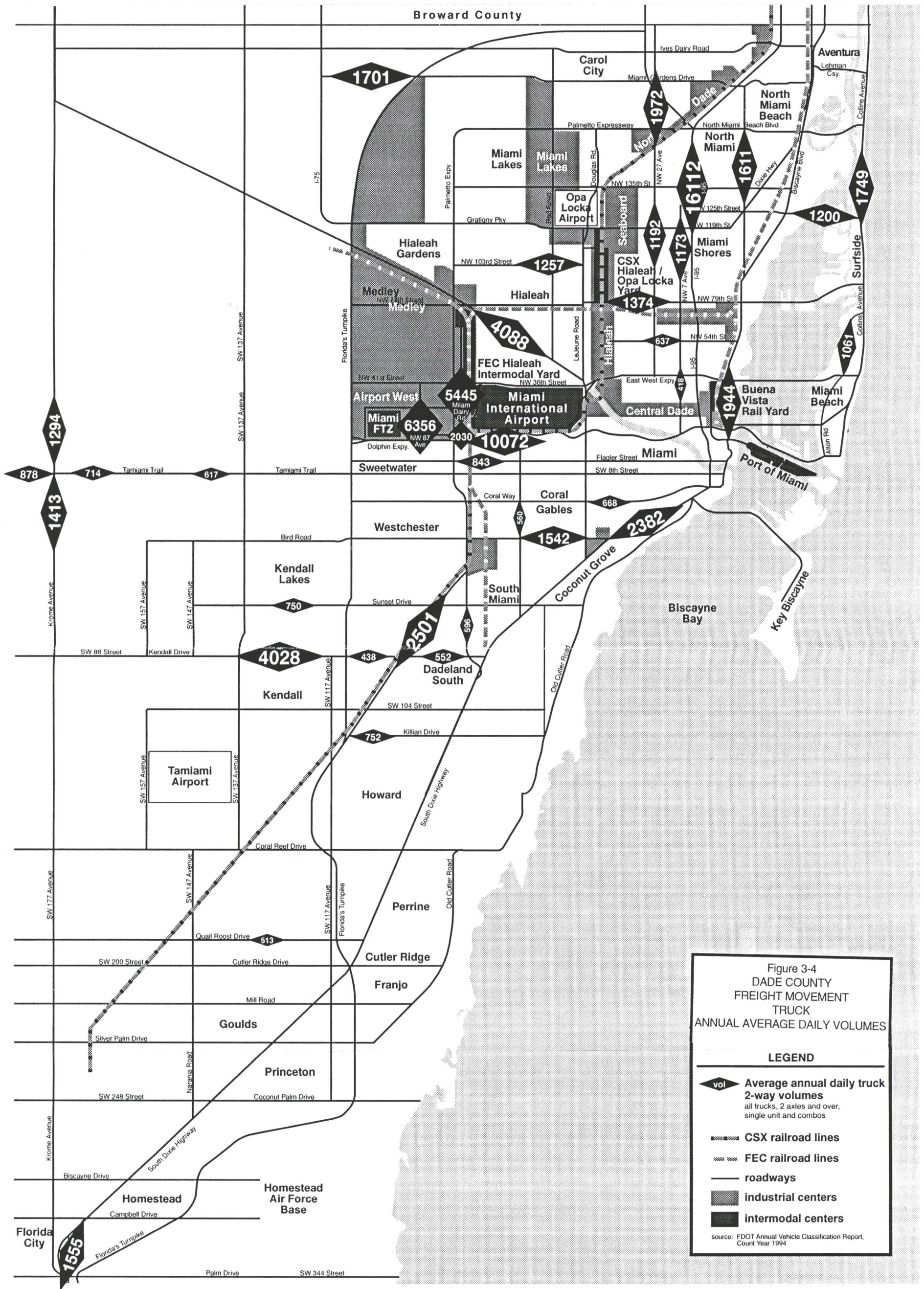
3.4 Dade County Freight Movement Traffic Volumes

Information was obtained from the Florida Department of Transportation

concerning traffic volumes by type of vehicle (classification counts) in Dade County (Appendix A). Figure 3-4 shows the locations of counts and the daily truck volumes experienced at these locations. According to the FDOT data, I-95 and S.R. 836 have the highest levels of trucking activity. There is also significant activity on Milam Dairy Road, Okeechobee Road, and Kendall Drive. About 2,000 trucks per day travel along Biscayne Boulevard near the downtown. Information on S.R. 826 was not available (although a count was made, it had very low volume). Additional information on truck activity will be collected to develop an accurate county-wide portrait of truck activity.

3.5 Survey of Truck Carriers

A survey was conducted of truck carriers and organizations in Dade County. A list of 834 freight movement-related organizations was developed based on information obtained from Dunn and Bradstreet (Appendix B) and the Florida Trucking Association. The survey was administered through a mailing to the entire list. Sixty-three completed responses were received and documented. Given that there were over 100 undeliverable surveys (firms no longer in business, no forwarding address, etc.), the response rate is approximately ten percent.



The following discussion presents the analysis of the results. That discussion is followed by tables presenting the results of the survey. The survey form that was used for the survey is presented in Appendix C. Figure 3-5 presents highlights of the survey.

Before proceeding with the discussion, it is important to assess the significance of the survey response. Although a total ten percent response was received from the survey (which is an acceptable level of

response from a mail survey), the sample size does not permit judgments to be made about subgroups (i.e., LTL, Truckload, etc.) because the sample size of the subgroups was not controlled. However, general conclusions can be made.

Information concerning the identities of respondents is confidential. Those that responded listed their "main business" as follows:

	Number	%
• Container/Truckloads	9	14
• Less-Than-Truckload	6	10
• Local Distribution	27	43
• Other/No Response	21	23
TOTAL	63	100

Respondents were asked to provide information in the following areas:

- Operational characteristics of the firm
 - number and type of facilities and types of products handled
 - primary site modal accessibility
- Primary shipment characteristics
 - destination/origin
 - tonnage
 - shipping mode
- Use of regional terminal facilities
- Characteristics of daily business
 - number and type of trucks
 - vehicle operators and authority
 - pickups, deliveries, and mileage
 - days and times of operation
 - special traffic problems
- Freight transportation issues

FIGURE 3-5

HIGHLIGHTS OF SURVEY RESPONSES

Warehouse is predominant facility type - container/truckload businesses utilize break/bulk or reconsolidation facilities heavily.

Most facilities have less than 50,000 sf but 10% of respondents have more than 100,000 sf available.

22% handle air freight daily.

Most common products include printed materials, apparel, furniture, food and refrigerated products and rubber or plastic.

Two of three "local distribution" businesses have primary site in Dade, but 60% of others are sited elsewhere.

80% ship most shipments into Dade. . . 11% of those ship most shipments to MLA. . . only two respondents serve primarily residential addresses.

17% of respondents' outbound shipments were by air and 35% of all Dade outbound tonnage leaves Florida.

14% of tonnage goes to local retail destinations. . . less than 1% to residences.

Container is primary inbound mode. . . rail exceeds air for inbound freight tonnage

44% of container or truckload shippers want better rail or intermodal facilities. . . 26% of all respondents will import/export in future.

Port of Miami is most commonly used major terminal facility.

One in seven trucks make 20+ stops each day. 80% need to be on roads in peak drive time. . . freight-only lanes are important to most.

Problems are no surprise: traffic, parking, and rush hour deliveries - delays at airport and seaport cited - problems expected to get worse.

Each of the questions and question categories was reviewed for each of the four "main business" types. The following discussion summarizes the response to each question in the survey. Tables 3-3 through 3-18 are presented after this discussion with the detailed results of the survey.

Q. What types of facilities do you operate?

Table 3-3 presents the type of facility operated by each main business category. Four different facility types were identified.

- Warehouse—typically used for storage of goods not immediately scheduled for delivery
- Distribution Site—a site where goods are delivered and stored temporarily for immediate dispersal to a variety of sites.
- Consolidation/Deconsolidation—a site where multiple shipments are combined (or separated) for shipment/distribution.
- Break bulk and/or reconsolidation—dealing with commodities such as coal, liquids, gas, etc.

Warehouse facilities are predominant. . .container/truckload businesses utilize break/bulk or reconsolidation facilities heavily.

Question 4a (Table 3-3) asks respondents to indicate what type of facility they operate. About 41% operate warehouse-type facilities which is the predominant type. Of the 27 respondents

listing local distribution as their main business, more than half operate warehouse and/or distribution facilities. The predominant distribution facility for container/truckload operations was a break bulk and/or reconsolidation facility which was reported by five of the nine respondents in this main business category.

Most facilities less than 50,000 sf but 10% have more than 100,000 sf available.

When asked about the size of the warehouse capacity available to them at all sites in Dade County (Question 4b, Table 3-4), 25 of the 48 respondents providing an answer listed facilities of 50,000 square feet or less. Four of the respondents indicated utilization of more than 100,000 square feet of warehouse space, and one indicated the availability of more than 300,000 square feet.

22% handle air freight daily.

Question 4c (Table 3-5) asks the respondents what types of shipments are handled by their firm during normal business activity. Not surprisingly, 58.7% of the 63 respondents indicated having LTL activity and 39.7% said that they handled truckload activity. Only two local distribution operators reported handling waste materials and just one handled mail. Air freight consolidations were reported as a daily activity by 22% of the respondents and this was about evenly distributed across all types of main business activity.

Most common products include printed materials, apparel,

furniture, food and refrigerated products and rubber or plastic.

Question 4d (Table 3-6) asks "If your firm has a warehousing or distribution facility, what kinds of products are handled here?" Respondents were asked to check all that applied. Apart from the generic responses of "freight-all kinds" and "miscellaneous manufactured products" which produced affirmative responses by 24% and 16% of the respondents, respectively, the most common category of products handled was "printed matter" which was reported by 15.9%. Also being reported by more than 12% of all respondents were "apparel-related products," "furniture or fixtures," "refrigerated products," "food or kindred products," and "rubber or plastic products." LTL businesses reported no specific products other than "freight-all kinds." Businesses specializing in container/truckloads reported heavy utilization by "furniture or fixtures," "printed matter," "refrigerated products," "food or kindred products," and "rubber or plastic products." Each of these categories was reported by more than 20% of the container/ truckload businesses. Among local distribution businesses, the categories of products being reported by more than 20% were "apparel-related products" and "printed matter."

Q *Primary product shipment destination*

Two of three "local distribution" businesses have primary site in Dade, but 60% of others are sited elsewhere.

Question 5a (Table 3-7) asked "is your primary distribution site located in Dade

County?" Only 55.6% of the respondents indicated that Dade County was their primary distribution site. LTL and local distribution businesses reported a primary Dade site in more than two-thirds of the cases each while the remainder had 60% of their primary sites outside of Dade County.

80% ship most shipments into Dade. . . 11% ship most shipments to MIA. . .only two respondents serve primarily residential addresses.

Question 5b asked "what percent of your business is shipped to each of the following regions?" and inquired in general category terms as can be seen in Table 3-8. Only 16 percent of the 63 respondents indicated that they ship more than half of their shipments out of the state of Florida and 20.6 percent indicated that they ship more than half of their shipments outside of Dade County. Just 3.2 percent send most of their shipments to a riverport or seaport and 11.1 percent ship the majority of their shipments to the airport. Less than five percent of all respondents indicated shipping more than 25 percent of their shipments to a railway terminal.

Shipments to local retail were reported as accounting for more than half of the activity by 7.9 percent of respondents and shipments to warehouse or wholesale facilities accounted for more than half the shipments by 4.8 percent of those responding. Only two respondents indicated that they ship more than half of their shipments to residential addresses. Of those shipping to sites within Dade County (50 of 63 respondents) 20 reported sending no shipments to the railroad and 14 reported having no shipments to residential addresses. The

remaining sites were served by at least 85 percent of all respondents.

Q Primary shipment characteristics

17% of respondents' outbound shipments were by air.

Question 6 (Table 3-9) asked respondents to indicate, for their most common shipping destinations, about how many tons were shipped annually and what was the usual shipping method? The total annual tons shipped by all respondents to all destinations was 57.4 million with 44.2 million of that total being carried by truckload carriers and 9.7 million being carried by air freight. Of the other three million tons, slightly over one million each was carried by container and LTL vehicles.

35% of all outbound leaves Florida.

Slightly over 20 million tons annually was shipped out of Florida, representing 35.2 percent of all shipments reported, including the largest report of 2 single shippers with 10 million tons annually being carried by truckload. Of those shipments reported leaving Florida, 10 million tons went by truckload, 9.7 million tons by air, and 300,000 tons by container. Less than 100,000 tons were shipped by railroad and LTL each. Shipments out of Dade but within Florida accounted for 10.9 million tons, with another single respondent reporting 10 million annual tons being carried by truckload to a Florida site out of Dade County. Only 4.7 percent of all shipments reported (2.7 million) were shipped to river or seaports in Dade and 2.1 million of that went by truckload carriers. Containers carried one-half million of the 2.7 million tons. The

airport was listed as the destination within Dade for 5.8 percent of all tons shipped to a Dade site (3.3 million) with slightly over 3 million being shipped by truckload and 300,000 by LTL carriers. Railroads were listed as the destination for just 504,475 tons of freight and all but 4,000 tons of that were shipped by "intermodal trailer" which is commonly considered to include containers and piggybacks.

14% of tonnage goes to local retail destinations. . .less than 1% to residences.

More than 8.3 million tons of freight listed local retail destinations and a single respondent shipping by truckload accounted for 8 million of those tons. Of the 5.7 million tons shipped to warehouses (9.9 percent of total tonnage), 5.0 million were shipped by truckload carriers and virtually all of this was reported by 1 respondent. Eight of the respondents indicated shipping to manufacturing sites and carrying 5.2 million tons (9.1 percent of total) to the sites annually. As with several other categories, a single respondent reported carrying 5 million tons of this total annually. Less than 1 percent of total shipments reported were bound for residences within Dade County.

Q Origin of inbound shipments

Container is primary inbound mode. . .rail exceeds air for inbound freight tonnage

Question 7 (Table 3-10) asked "where do most of the shipments to your business come from?" Twenty-four of the respondents indicated that most of their shipments came from sites within Florida while 29 indicated that they came

from other U.S. states. Interestingly, a sum total of responses (respondents indicated more than one location in some instances) showed that 24.1 percent receive most of their shipments by container with LTL (15.2 percent) and truckload (16.5 percent) accounting for the other large gross totals. The number of businesses indicating their primary source of incoming shipments to be rail was slightly higher than that for air.

44% of container or truckload shippers need better rail or intermodal facilities. . .26% of all respondents will import/export in future.

Question 8 (Table 3-11) asks about the availability of various transportation facilities at the respondents' primary site. The only facilities that were available to as many as half of the respondents were truck docks (52.4 percent), and warehousing (47.6 percent). Operators whose main business was listed as container/truckloads said in 44.4 percent of the cases that they needed better rail or intermodal facilities. Some 26% of all respondents said that they either were or would be in the future involved with international export/import.

Port of Miami is most commonly used terminal facility.

Question 9 (Table 3-12) explores whether the respondents make use of any of a series of local major terminal facilities. The most commonly used facility is the Port of Miami which was reported by 30.2 percent of all respondents, including more than half (55.6 percent) of those in the container/truckload business. Half of the respondents in the LTL

category indicated that they utilized MIA for some of their shipments and two-thirds of the LTL businesses said that they used one of the FEC terminals.

Q Transportation characteristics of businesses

20+% put more than 24 trucks on Dade roads each day.

Question 10 (Table 3-13) explored the transportation characteristics of the businesses by asking nine separate questions. Question 10a wanted to know on an "average day" how many highway vehicles did each firm place in service that would operate in Dade County. Slightly over 58 percent of respondents indicated that they had fewer than 10 such vehicles and 77 percent had 24 or fewer. Six of the respondents indicated that they put between 50 and 99 such vehicles on the road each day. One container/truckload business said that they put more than 200 loaded vehicles on the roads of Dade County each day.

The respondents said that they use their own drivers to operate vehicles in 60.3 percent of the cases with contract carriers performing 31.7 percent of the operation.

Only 1 autorack and 1 hopper in sample.

Question 10d (Table 3-14) asked what types of trucks were used by their firm, and, as might be expected, one-third of the respondents said that they use primarily tractors and semi-trailers. Straight trucks were the primary vehicle for 42.9 percent of respondents, including more than 60 percent of both local distribution businesses and

LTL businesses. Only one respondent reported using auto racks and one other reported using hoppers.

One in seven trucks make more than 20 stops each day.

In response to a question (Question 10f - Table 3-15) that asks "on an average day, how many pick-up and delivery stops are made by a typical vehicle in your fleet?" Almost 70 percent of the respondents said that there were 10 or fewer such stops with an additional 14 percent indicating that they made between 11 and 20, and an additional 14 percent indicating between 21 and 30 stops each day.

In response to a question (Question 10g - Table 3-16) which asks how many miles a typical vehicle in each fleet travels daily and annually, of the 34 respondents who provided information on their annual mileage, 12 indicated that they drive fewer than 24,000 miles for a typical vehicle, 10 indicated between 24,000 and 48,000 miles and 12 said they drive more than 48,000 miles annually. When viewed on the basis of daily miles traveled, 72.7 percent of respondents indicated traveling 100 or fewer miles each day for a typical vehicle, although the vast majority of those (34.1 percent of the total respondents) estimated their vehicles travel 100 miles per day.

80% need to be on roads in peak drive time. . .freight only lanes are important to most.

When asked if it was important for their vehicles to be on the street during peak drive time (Question 10h - Table 3-17) (6:00-9:00 a.m. or 3:00-6:00 p.m.), more than 80 percent of each

of the categories container/truckload, LTL and local distribution, said that it was important. When asked about the importance of having a freight only vehicle lane on the regional major highways (Question 10i), more than two-thirds of these same three categories indicated that it would be important to them. When asked if there were certain intersections, streets or areas in this region which produce significant problems for drivers in their fleet (Question 10j), more than half of the respondents from the container/truckload category (55.6 percent) indicated that there were such problems, while 36.5 percent of all respondents gave this indication.

Q Time of day importance

Question 11 asked for certain time of day shipping information. Question 11a asked if "receiving or making deliveries by a certain time of day" was important to the operation. More than two-thirds of each of the specific categories of container/truckloads, LTL and local distribution indicated that it was important that they be on the street at certain times of the day. Of the 63 respondents, only 60.3 percent gave this indication suggesting that as many as 40 percent of all truck vehicles do not have to be on the streets at any particular time of day and can select less highly traveled times. This is contrary to the response in the immediately preceding question where 80% indicated a need to be on streets during peak drive time.

Q Problems

Problems no surprise: traffic, parking, and rush hour deliveries - delays at airport and seaport cited - problems expected to get worse.

Question 12 (Table 3-18) provides a series of 21 specific potential freight transportation problems and asks which of these impacted the operations of the respondents. The most common problems experienced by respondents were traffic congestion, no parking opportunities, and rush hour delivery issues. The only other category receiving at least a significant response was the issue of paperwork delays at ports and airports.

In each of the top three problem categories listed above, many of all the respondents indicated that they expected these problems to get worse in the future. The other problem area which was expected to deteriorate in the future was the lack of access to ports and airports by trucks.

Table 3-3
Freight Movement Survey Response

Question 4a. TYPES OF FACILITIES OPERATED*

# of Respondents	Main Business	Warehouse	Distribution	Consolidation	Break Bulk	Total
9	Container/Truckloads	3	3	3	5	14
6	Less-Than-Truckload	2	1	2	0	5
27	Local Distribution	14	15	8	8	45
21	Other	7	3	3	2	15
63	Total	24	21	14	15	74
	No Answer	2	1	2	0	5
	Total	26	22	16	15	79
	% of 63 Respondents	41.3%	34.9%	25.4%	23.8%	

*Number of responses exceeds number of respondents because each respondent was allowed to select more than one response to this question.

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-4
Freight Movement Survey Response

Question 4b. WAREHOUSE CAPACITY IN DADE COUNTY (ALL SITES)

No. of Resp.	Main Business	SQUARE FEET											Total	No Response
		None	<10,000	10,000 to 24,999	25,000 to 50,000	50,000 to 74,999	75,000 to 99,999	100,000 to 199,999	200,000 to 299,999	300,000 to 499,999	600,000 to 749,999	Over 750,000		
9	Container/Truckloads	4	1	0	0	1	2	1	0	0	0	0	9	0
6	Less-than-Truckload	3	0	2	1	0	0	0	0	0	0	0	6	0
27	Local Dist.	8	7	2	2	3	0	2	0	1	0	0	25	2
21	Other	2	3	3	0	0	0	0	0	0	0	0	8	13
63	Total	17	11	7	3	4	2	3	0	1	0	0	48	15
% of 48 Respondents to this Question		35.4%	22.9%	14.6%	6.3%	8.3%	4.2%	6.3%	0.0%	2.1%	0.0%	0.0%	100.0%	31.3%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-5
Freight Movement Survey

Question 4c. TYPES OF SHIPMENTS HANDLED

# of Respondents	Main Business (MB)	LTL	Parcel	Bulk	Air	Waste	Truckload	Mail	Container	Hazardous	Other
9	Container/Truckloads	5	2	3	2		7		7	3	1
6	Less-Than-Truckload	6	1		1		3			1	
27	Local Distribution	20	11	4	7	2	11	1	2	4	5
21	Other	5	3		2		1		2	1	7
63	Sub-Total	37	17	7	12	2	22	1	11	9	13
	% of 63 Respondents	58.7%	28.6%	11.1%	22.2%	3.2%	39.7%	1.6%	20.6%	14.3%	20.6%

RESPONSES AS PERCENT OF MAIN BUSINESS CATEGORY RESPONDENTS

# of Respondents	Main Business (MB)	LTL	Parcel	Bulk	Air	Waste	Truckload	Mail	Container	Hazardous	Other
9	Container/Truckloads	55.6%	22.2%	33.3%	22.2%	0.0%	77.8%	0.0%	77.8%	33.3%	11.1%
6	Less-Than-Truckload	100.0%	16.7%	0.0%	16.7%	0.0%	50.0%	0.0%	0.0%	16.7%	0.0%
27	Local Distribution	74.1%	40.7%	14.8%	25.7%	7.4%	40.7%	13.7%	7.4%	14.8%	18.5%
21	Other	28.6%	19.0%	0.0%	19.0%	0.0%	19.0%		19.0%	4.8%	33.3%
63											

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

**Table 3-6
Freight Movement Survey**

4d. IF A SHIPPING FACILITY, WHAT KINDS OF PRODUCTS ARE HANDLED THERE?

# Of Respondents	Main Business	Farm	Fish	Coal	Ord-nance	To-bacco	Appar-el	Fur-niture	Print	Petro-leum	Leather	Shoes	Metal	Machin-ery	Beer	Soft Drinks	Refriger-ated Products	Trans-portion	Misc. Mfrgr
9	Container/Truckloads	0	0	0	0	0	1	2	2	0	0	1	1	1	0	1	2	2	3
6	Less-Than-Truckload	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	Local Distribution	2	1	2	1	3	6	3	6	3	3	4	2	1	1	1	4	1	4
21	Other	1	2	0	0	0	1	2	1	0	1	1	0	0	0	1	1	0	1
63	Total	3	3	2	1	3	9	8	10	3	4	6	3	3	1	4		3	10
	% of 63 Respondents	4.8%	4.8%	3.2%	1.6%	4.8%	14.3%	12.7%	15.9%	4.8%	6.3%	9.5%	4.8%	4.8%	1.6%	6.3%	11.1%	4.8%	15.9%

RESPONSES AS PERCENT OF MAIN BUSINESS CATEGORY RESPONDENTS

# Of Respondents	Main Business	Farm	Fish	Coal	Ord-nance	To-bacco	Appar-el	Fur-niture	Print	Petro-leum	Leather	Shoes	Metal	Machin-ery	Beer	Soft Drinks	Refriger-ated Products	Trans-portion	Misc. Mfrgr
9	Container/Truckloads	0.0%	0.0%	0.0%	0.0%	0.0%	11.1%	22.2%	22.2%	0.0%	0.0%	11.1%	11.1%	11.1%	0.0%	11.1%	22.2%	22.2%	33.3%
6	Less-Than-Truckload	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
27	Local Distribution	7.4%	3.7%	7.4%	3.7%	11.1%	22.2%	11.1%	22.2%	11.1%	11.1%	14.8%	7.4%	3.7%	3.7%	3.7%	14.8%	3.7%	14.8%
21	Other	4.8%	9.5%	0.0%	0.0%	0.0%	9.5%	14.3%	9.5%	0.0%	4.8%	4.8%	0.0%	4.8%	0.0%	9.5%	4.8%	0.0%	14.3%
63	% of 63 Respondents	4.8%	4.8%	3.2%	1.6%	4.8%	14.3%	12.7%	15.9%	4.8%	6.3%	9.5%	4.8%	4.8%	1.6%	6.3%	11.1%	4.8%	15.9%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-6
Freight Movement Survey
(continued)

4d. IF A SHIPPING FACILITY, WHAT KINDS OF PRODUCTS ARE HANDLED THERE?

# of Respondents	Main Business (MB)	Freight	Forest	Ores	Non-metallic	Food	Textile	Lumber	Pulp	Chemicals	Rubber	Tile	Clay	Fabricated Metal	Electrical	Instruments	Waste	Other	Totals	Avg. Products
9	Container/Truckloads	2	0	0	0	3	1	1	0	1	2	0	0	1	1	0	1	1	30	33.3
6	Less-Than-Truckload	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0.33
27	Local Distribution	8	0	0	0	4	3	3	2	3	5	2	2	2	4	1	1	3	91	3.37
21	Other	1	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	1	18	1.38
63	Total % of 63 Respondents	15	0	0	0	9	4	5	3	5	7	2	2	4	7	2	2	5	155	2.46
		23.8	0.0	0.0	0.0	14.3	6.3	7.9	4.8	7.9	11.1	3.2	3.2	6.3	11.1	3.2	3.2	7.9		

RESPONSES AS PERCENT OF MAIN BUSINESS CATEGORY RESPONDENTS

# of Respondents	Main Business (MB)	Freight	Forest	Ores	Non-metallic	Food	Textile	Lumber	Pulp	Chemicals	Rubber	Tile	Clay	Fabricated Metal	Electrical	Instruments	Waste	Other
9	Container/Truckloads	22.2%	0.0%	0.0%	0.0%	33.3%	11.1%	11.1%	0.0%	11.1%	22.2%	0.0%	0.0%	11.1%	11.1%	0.0%	11.1%	11.1%
6	Less-Than-Truckload	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
27	Local Distribution	29.6%	0.0%	0.0%	0.0%	14.8%	11.1%	11.1%	7.4%	11.1%	18.5%	7.4%	7.4%	7.4%	14.8%	3.7%	3.7%	11.1%
21	Other	14.3%	0.0%	0.0%	0.0%	9.5%	0.0%	4.8%	4.8%	4.8%	0.0%	0.0%	0.0%	4.8%	9.5%	4.8%	0.0%	4.8%
63	% of 63 Respondents	23.8%	0.0%	0.0%	0.0%	14.3%	6.3%	7.9%	4.8%	7.9%	11.1%	3.2%	3.2%	6.3%	11.1%	3.2%	0.0%	7.9%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-7
Freight Movement Survey

QUESTION 5A. PRIMARY DISTRIBUTION SITE IN DADE?			
	Yes	No	% Yes
Container/Truckloads	4	5	44.4%
Less-Than-Truckload	4	2	66.7%
Local Distribution	19	8	70.4%
Other	8	13	38.1%
Total	35	28	55.6%

Table 3-8
Freight Movement Survey

Question 5b PERCENT OF BUSINESS SHIPPED TO:							
OUT OF FLORIDA:							
	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response	1	1				1	3
Container/Truckloads		3	1	1	1		6
Less-Than-Truckload	1		3			1	5
Local Distribution	9	6	2	1	4		22
Other	5				1		6
Total	16	10	6	2	6	2	42
% Out of Florida	38.1%	23.8%	14.3%	4.8%	14.3%	4.8%	
% of 63 Respondents	25.4%	15.9%	9.5%	3.2%	9.5%	3.2%	
OUT OF DADE, IN FLORIDA:							
	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response	1	1					2
Container/Truckloads		2	2	1			5
Less-Than-Truckload	1				2		3
Local Distribution		8	7	4	3		22
Other	1	2		1			6
Total	3	13	9	6	5	2	38
% Out of Dade in Florida	7.1%	31.0%	21.4%	14.3%	11.9%	4.8%	
% of 63 Respondents	4.8%	20.6%	14.3%	9.5%	7.9%	3.2%	
IN DADE TO:							
River Port or Sea Port	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response				1			1
Container/Truckloads		1	2		1		4
Less-Than-Truckload		2					2
Local Distribution	6	7	2				15
Other	4	2					6
Total	10	12	4	1	1	0	28
% of Riverport/Seaport	23.8%	28.6%	9.5%	2.4%	2.4%	0.0%	
% of 63 Respondents	15.9%	19.0%	6.3%	1.6%	1.6%	0.0%	

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Table 3-8
Freight Movement Survey
(Continued)

Question 5b PERCENT OF BUSINESS SHIPPED TO:							
IN DADE TO:							
Airport	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response				1		0	1
Container/Truckloads	1	4	0			0	5
Less-Than-Truckload		2	0	1	1	0	4
Local Distribution	6	9	0	2	1	0	18
Other	4	1	0	1		0	6
Total	11	16	0	5	2	0	34
% of Airport	26.2%	38.1%	0.0%	11.9%	4.8%	0.0%	
% of 63 Respondents	17.5%	25.4%	0.0%	7.9%	3.2%	0.0%	

Railway	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response	1			0		0	1
Container/Truckloads	1	3	1	0	1	0	6
Less-Than-Truckload	3			0		0	3
Local Distribution	10	4		0		0	14
Other	5		1	0		0	6
Total	20	7	2	0	1	0	30
% of Retail	47.6%	16.7%	4.8%	0.0%	2.4%	0.0%	
% of 63 Respondents	31.7%	11.1%	3.2%	0.0%	1.6%	0.0%	

Local Retail	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response	1			0			1
Container/Truckloads		4	1	0			5
Less-Than-Truckload	1	1	1	0	1		4
Local Distribution	3	7	4	0	3	1	18
Other	3		2	0			5
Total	8	12	8	0	4	1	33
% of Local Retail	19.0%	28.6%	19.0%	0.0%	9.5%	2.4%	
% of 63 Respondents	12.7%	19.0%	12.7%	0.0%	6.3%	1.6%	

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Table 3-8
Freight Movement Survey
(Continued)

Question 5b PERCENT OF BUSINESS SHIPPED TO:

Warehouse, Wholesale	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response	1					0	1
Container/Truckloads		5				0	5
Less-Than-Truckload		2	1		1	0	4
Local Distribution	4	6	5	1	1	0	17
Other	4					0	4
Total	9	13	6	1	2	0	31
% of Whse., Wholesale	21.4%	31.0%	14.3%	2.4%	4.8%	0.0%	
% of 63 Respondents	14.3%	20.6%	9.5%	1.6%	3.2%	0.0%	

Residential	0%	<25%	25-49%	50-74%	75-99%	100%	Total
No Response	1			1	0		2
Container/Truckloads	3	1	1		0		5
Less-Than-Truckload	1	3			0		4
Local Distribution	5	10	1		0		16
Other	4		1		0	1	6
Total	14	14	3	1	0	1	33
% of Residential	33.3%	33.3%	7.1%	2.4%	0.0%	2.4%	
% of 63 Respondents	22.2%	22.2%	4.8%	1.6%	0.0%	1.6%	

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-9
Freight Movement Survey

Question 6. SHIPMENTS TO VARIOUS DESTINATIONS

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Out of Florida	TOTAL	14	1,441,442	10,000,000	20,180,182	35.2%	
	LTL	3	22.700	40.300	68,100		5.7%
	Parcel carrier	0	0	0	0		0.0%
	Truckload	3	3,340.720	10,000.000	10,022.160		22.7%
	Intermodal Trailer	0	0	0	0		0.0%
	Container	5	62.984	300.000	314.922		25.5%
	Railroad	1	75.000	75.000	75,000		100.0%
	Air	2	4,850,000	9,600.000	9,700,000		100.0%
	Other		0	0	0		0.0%

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Out of Dade	TOTAL	15	727,126	10,000,000	10,906,686	19.0%	
	LTL	6	23.299	60.000	139,796		11.8%
	Parcel carrier	1	20.000	20.000	20,000		64.4%
	Truckload	3	3,511.667	10,000.000	10,535.000		23.8%
	Intermodal Trailer	0	0	0	0		0.0%
	Container	4	3.023	8.190	12,090		1.0%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	1	200.000	200.000	200,000		48.1%

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
In Dade To: River or Sea Port	TOTAL	11	247,055	2,000,000	2,717,610	4.7%	
	LTL	4	19.675	75.000	78,700		6.6%
	Parcel carrier	0	0	0	0		0.0%
	Truckload	3	701.567	2,000.000	2,104,700		4.8%
	Intermodal Trailer	1	30,000	30,000	30,000		5.6%
	Container	3	168.070	500.000	504,210		40.8%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	0	0	0	0		0.0%

Table 3-9
Freight Movement Survey
(Continued)

Question 6. SHIPMENTS TO VARIOUS DESTINATIONS

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Airport	TOTAL	11	301,934	3,000,000	3,321,271	5.8%	
	LTL	5	60,404	300,000	302,020		25.4%
	Parcel carrier	2	2,525	5,000	5,050		16.3%
	Truckload	3	1,003,667	3,000,000	3,011,001		6.8%
	Intermodal Trailer	0	0	0	0		0.0%
	Container	0	0	0	0		0.0%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	1	3,200	3,200	3,200		0.8%

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Railway	TOTAL	4	126,119	500,000	504,475	0.9%	
	LTL	0	0	0	0		0.0%
	Parcel carrier	0	0	0	0		0.0%
	Truckload	0	0	0	0		0.0%
	Intermodal Trailer	3	166,825	500,000	500,475		93.1%
	Container	1	4,000	4,000	4,000		0.3%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	0	0	0	0		0.0%

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Local retail	TOTAL	14	595,622	8,000,000	8,338,711	14.5%	
	LTL	5	23,208	45,500	116,040		9.8%
	Parcel carrier	1	5,000	5,000	5,000		16.1%
	Truckload	5	1,603,454	8,000,000	8,017,270		18.1%
	Intermodal Trailer	0	0	0	0		0.0%
	Container	1	1	1	1		0.0%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	2	100,200	200,000	200,400		48.2%

Table 3-9
Freight Movement Survey
(Continued)

Question 6. SHIPMENTS TO VARIOUS DESTINATIONS

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Warehouse	TOTAL	12	474,474	5,000,000	5,693,690	9.9%	
	LTL	6	59,883	280,000	359,300		30.2%
	Parcel carrier	0	0	0	0		0.0%
	Truckload	2	2,514,625	5,000,000	5,029,250		11.4%
	Intermodal Trailer	1	3,000	3,000	3,000		0.6%
	Container	1	300,000	300,000	300,000		24.3%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	2	1,070	1,640	2,140		0.5%

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Manufacturer	TOTAL	8	652,671	5,000,000	5,221,370	9.1%	
	LTL	3	35,700	54,600	107,100		9.0%
	Parcel carrier	0	0	0	0		0.0%
	Truckload	2	2,500,135	5,000,000	5,000,270		11.3%
	Intermodal Trailer	1	4,000	4,000	4,000		0.7%
	Container	1	100,000	100,000	100,000		8.1%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	1	10,000	10,000	10,000		2.4%

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
Residence	TOTAL	9	57,800	500,000	520,201	0.9%	
	LTL	3	5,833	12,500	17,500		1.5%
	Parcel carrier	1	1,000	1,000	1,000		3.2%
	Truckload	4	125,425	500,000	501,700		1.1%
	Intermodal Trailer	0	0	0	0		0.0%
	Container	1	1	1	1		0.0%
	Railroad	0	0	0	0		0.0%
	Air	0	0	0	0		0.0%
	Other	0	0	0	0		0.0%

Table 3-9
Freight Movement Survey
(Continued)

Question 6. SHIPMENTS TO VARIOUS DESTINATIONS

Destination	Method	# of Responses	Average	Annual Tons Largest	Total	% Of All Shipments	Category Shipments
All Destinations	TOTAL	98	585,759	10,000,000	57,404,396		
	LTL	35	33,959	300,000	1,188,556	2.1%	
	Parcel carrier	5	6,210	20,000	31,050	0.1%	
	Truckload	25	1,768.854	10,000,000	44,221,351	77.0%	
	Intermodal Trailer	6	89,579	500,000	537,475	0.9%	
	Container	17	72,660	500,000	1,235,224	2.2%	
	Railroad	1	75,000	75,000	75,000	0.1%	
	Air	2	4,850,000	9,600,000	9,700,000	16.9%	
	Other	7	59,391	200,000	415,740	0.7%	

Table 3-10
Freight Movement Survey

Question 7. WHERE DO MOST OF YOUR SHIPMENTS COME FROM?

Origin	Method	# of Responses	% of Category
Florida	Air	0	0.0%
	Barge/Ship	0	0.0%
	Container	5	20.8%
	Intermodal trailer	1	4.2%
	LTL	4	16.7%
	Other	5	20.8%
	Parcel Carrier	1	4.2%
	Rail	0	0.0%
	Truckload	8	33.3%
		24	

Origin	Method	# of Responses	% of Category
Other US State	Air	1	3.4%
	Barge/Ship	2	6.9%
	Container	5	17.2%
	Intermodal trailer	3	10.3%
	LTL	5	17.2%
	Other	3	10.3%
	Parcel Carrier	1	3.4%
	Rail	4	13.8%
	Truckload	5	17.2%
		29	

Origin	Method	# of Responses	% of Category
Mexico	Air	0	0.0%
	Barge/Ship	0	0.0%
	Container	1	50.0%
	Intermodal trailer	0	0.0%
	LTL	0	0.0%
	Other	0	0.0%
	Parcel Carrier	1	50.0%
	Rail	0	0.0%
	Truckload	0	0.0%
		2	

Table 3-10
Freight Movement Survey
(Continued)

Question 7. WHERE DO MOST OF YOUR SHIPMENTS COME FROM?

Origin	Method	# of Responses	% of Category
Canada	Air	1	25.0%
	Barge/Ship	1	25.0%
	Container	0	0.0%
	Intermodal trailer	0	0.0%
	LTL	0	0.0%
	Other	1	25.0%
	Parcel Carrier	0	0.0%
	Rail	1	25.0%
	Truckload	0	0.0%
		4	

Origin	Method	# of Responses	% of Category
South America	Air	1	14.3%
	Barge/Ship	1	14.3%
	Container	3	42.9%
	Intermodal trailer	0	0.0%
	LTL	1	14.3%
	Other	0	0.0%
	Parcel Carrier	1	14.3%
	Rail	0	0.0%
	Truckload	0	0.0%
		7	

Origin	Method	# of Responses	% of Category
Central America	Air	0	0.0%
	Barge/Ship	1	25.0%
	Container	2	50.0%
	Intermodal trailer	0	0.0%
	LTL	1	25.0%
	Other	0	0.0%
	Parcel Carrier	0	0.0%
	Rail	0	0.0%
	Truckload	0	0.0%
		4	

Table 3-10
Freight Movement Survey
(Continued)

Question 7. WHERE DO MOST OF YOUR SHIPMENTS COME FROM?

Origin	Method	# of Responses	% of Category
Caribbean	Air	0	0.0%
	Barge/Ship	1	25.0%
	Container	2	50.0%
	Intermodal trailer	0	0.0%
	LTL	0	0.0%
	Other	0	0.0%
	Parcel Carrier	1	25.0%
	Rail	0	0.0%
	Truckload	0	0.0%
		4	

Origin	Method	# of Responses	% of Category
Other	Air	1	20.0%
	Barge/Ship	0	0.0%
	Container	1	20.0%
	Intermodal trailer	0	0.0%
	LTL	1	20.0%
	Other	1	20.0%
	Parcel Carrier	1	20.0%
	Rail	0	0.0%
	Truckload	0	0.0%
		5	

Origin	Method	# of Responses	% of Category
All Origins	Air	4	5.1%
	Barge/Ship	6	7.6%
	Container	19	24.1%
	Intermodal trailer	4	5.1%
	LTL	12	15.2%
	Other	10	12.7%
	Parcel Carrier	6	7.6%
	Rail	5	6.3%
	Truckload	13	16.5%
		79	

Table 3-11
Freight Movement Survey

Question 8. TRANSPORTATION ACCESSIBILITY AT SITE

% with Access to Rail	Main Business (MB)			Yes as % of	
		Yes	No	MB Category	63 Respondents
9	Container/Truckloads	5	3	55.6%	
6	Less-Than-Truckload	0	6	0.0%	
27	Local Distribution	4	22	14.8%	
21	Other	2	9	9.5%	
63	Total	11	40		17.5%

% with Access to Truck Dock	Main Business (MB)			Yes as % of	
		Yes	No	MB Category	63 Respondents
9	Container/Truckloads	7	1	77.8%	
6	Less-Than-Truckload	5	1	83.3%	
27	Local Distribution	16	10	59.3%	
21	Other	5	5	23.8%	
63	Total	33	17		52.4%

% with Access to Ship Dock	Main Business (MB)			Yes as % of	
		Yes	No	MB Category	63 Respondents
9	Container/Truckloads	1	7	11.1%	
6	Less-Than-Truckload	0	6	0.0%	
27	Local Distribution	0	26	0.0%	
21	Other	0	10	0.0%	
63	Total	1	49		1.6%

% with Access to Pipeline	Main Business (MB)			Yes as % of	
		Yes	No	MB Category	63 Respondents
9	Container/Truckloads	0	8	0.0%	
6	Less-Than-Truckload	0	6	0.0%	
27	Local Distribution	1	25	3.7%	
21	Other	0	10	0.0%	
63	Total	1	49		1.6%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-11
Freight Movement Survey
(Continued)

Question 8. TRANSPORTATION ACCESSIBILITY AT SITE

% With Warehousing at Site	Main Business (MB)	Yes	No	Yes as % of MB Category	63 Respondents
9	Container/Truckloads	7	1	77.8%	
6	Less-Than-Truckload	1	4	16.7%	
27	Local Distribution	15	11	55.6%	
21	Other	7	3	33.3%	
63	Total	30	19		47.6%

% Who Need better Rail or IM	Main Business (MB)	Yes	No	Don't Know	Yes as % of MB Category	63 Respondents
9	Container/Truckloads	4	4	0	44.4%	44.4%
6	Less-Than-Truckload	1	3	2	16.7%	16.7%
27	Local Distribution	1	18	5	3.7%	3.7%
21	Other	1	8	1	4.8%	4.8%
63	Total	7	32	8		11.1%

% Who Said Future Involved with International Export/Import	Main Business (MB)	Yes	No	Already Involved	Don't Know	Yes & Already Involved as % of MB Category	63 Respondents
9	Container/Truckloads	3	1	3	1	66.7%	
6	Less-Than-Truckload	1	0	2	3	50.0%	
27	Local Distribution	5	8	9	4	51.9%	
21	Other	0	3	3	0	14.3%	
63	Total	9	12	17	8		41.3%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-12
Freight Movement Survey

Question 9. DO YOU SHIP THROUGH ANY OF THESE FACILITIES?

Facility	Method	Yes	No	Yes as a % of Category
Port of Miami	Container/Truckloads	5	4	55.6%
	Less-Than-Truckload	2	4	33.3%
	Local Distribution	8	19	29.6%
	Other	4	17	19.0%
	Total	19	44	30.2%

Facility	Method	Yes	No	Yes as a % of Category
Port Everglades	Container/Truckloads	4	5	44.4%
	Less-Than-Truckload	2	4	33.3%
	Local Distribution	4	23	14.8%
	Other	3	18	14.3%
	Total	13	50	20.6%

Facility	Method	Yes	No	Yes as a % of Category
MIA	Container/Truckloads	1	8	11.1%
	Less-Than-Truckload	3	3	50.0%
	Local Distribution	9	18	33.3%
	Other	3	18	14.3%
	Total	16	47	25.4%

Facility	Method	Yes	No	Yes as a % of Category
Ft. Lauderdale	Container/Truckloads	0	9	0.0%
	Less-Than-Truckload	2	4	33.3%
	Local Distribution	2	25	7.4%
	Other	0	21	0.0%
	Total	4	59	6.3%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-12
Freight Movement Survey
(Continued)

Question 9. DO YOU SHIP THROUGH ANY OF THESE FACILITIES?

Facility	Method	Yes	No	Yes as a % of Category
FEC	Container/Truckloads	6	3	66.7
	Less-Than-Truckload	4	2	66.7
	Local Distribution	3	24	11.1
	Other	2	19	9.5
	Total	15	48	23.8

Facility	Method	Yes	No	Yes as a % of Category
CSX	Container/Truckloads	3	6	33.3%
	Less-Than-Truckload	1	5	16.7%
	Local Distribution	2	25	7.4%
	Other	0	21	0.0%
	Total	6	57	9.5%

Facility	Method	Yes	No	Yes as a % of Category
Buena Vista Yards	Container/Truckloads	0	9	0.0%
	Less-Than-Truckload	0	6	0.0%
	Local Distribution	1	26	3.7%
	Other	0	21	0.0%
	Total	1	62	1.6%

Facility	Method	Yes	No	Yes as a % of Category
Miami River	Container/Truckloads	3	6	33.3%
	Less-Than-Truckload	1	5	16.7%
	Local Distribution	3	24	11.1%
	Other	2	19	9.5%
	Total	9	54	14.3%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-13
Freight Movement Survey

Question 10a. AVERAGE LOADED HIGHWAY VEHICLES IN SERVICE PER DAY:

	Less than 10	10 to 24	25 - 49	50 - 99	100 - 199	200 +
Containers/Truckloads	2	3	1	2	0	1
Less-Than-Truckload	2	0	2	2	0	0
Local Distribution	14	8	3	1	0	0
Other	9	1	1	1	0	0
Total	37	12	7	6	0	1
% of 63 respondents	58.7%	19.0%	11.1%	9.5%	0.0%	1.6%

Question 10b. WHO OPERATES THE VEHICLES?

	Our Own Drivers	Common Carrier	Contract Carrier	Private Fleet	Renter
Container/Truckloads	6	1	5	1	
Less-Than-Truckload	6				
Local Distribution	16	6	11	1	1
Other	10	3	4		
Total	38	10	20	2	1
% of 63 respondents	60.3%	15.9%	31.7%	3.2%	1.6%

Question 10c. WHO GRANTS OPERATING AUTHORITY?

	ICC	Florida	Both	Neither
Container/Truckloads	6	5	2	0
Less-Than-Truckload	3	2	1	0
Local Distribution	7	13	4	3
Other	4	7	1	1
Total	20	27	8	4
% of 63 respondents	31.7%	42.9%	12.7%	6.3%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-14
Freight Movement Survey

Question 10d. TYPES OF TRUCKS USED

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Delivery Vans	Container/Truckloads	2	22.2%
6		Less-Than-Truckload	1	16.7%
27		Local Distribution	6	22.2%
21		Other	3	14.3%
63		Total	12	19.0%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Vans	Container/Truckloads	2	22.2%
6		Less-Than-Truckload	2	33.3%
27		Local Distribution	9	33.3%
21		Other	2	19.5%
63		Total	15	23.8%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Autoracks	Container/Truckloads	0	0.0%
6		Less-Than-Truckload	0	0.0%
27		Local Distribution	0	0.0%
21		Other	1	4.8%
63		Total	1	1.6%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Straight Trucks	Container/Truckloads	2	22.2%
6		Less-Than-Truckload	4	66.7%
27		Local Distribution	17	63.0%
21		Other	4	19.0%
63		Total	27	42.9%

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-14
Freight Movement Survey
(Continued)

Question 10d. TYPES OF TRUCKS USED

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Flatbeds	Container/Truckloads	3	33.3%
6		Less-Than-Truckload	0	0.0%
27		Local Distribution	4	14.8%
21		Other	2	9.5%
63		Total	9	14.3%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Hoppers	Container/Truckloads	0	0.0%
6		Less-Than-Truckload	0	0.0%
27		Local Distribution	0	0.0%
21		Other	0	4.8%
63		Total	1	1.6%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Containers	Container/Truckloads	4	44.4%
6		Less-Than-Truckload	0	0.0%
27		Local Distribution	3	11.1%
21		Other	0	0.0%
63		Total	7	11.1%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Tractors and Semi-trailers	Container/Truckloads	7	77.8%
6		Less-Than-Truckload	3	50.0%
27		Local Distribution	8	29.6%
21		Other	3	14.3%
63		Total	21	33.3%

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-14
Freight Movement Survey
(Continued)

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Refrigerated Trucks	Container/Truckloads	3	33.3%
6		Less-Than-Truckload	1	16.7%
27		Local Distribution	4	14.8%
21		Other	3	14.3%
63		Total	11	17.5%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Tanks	Container/Truckloads	1	11.1%
6		Less-Than-Truckload	0	0.0%
27		Local Distribution	2	7.4%
21		Other	1	4.8%
63		Total	4	6.3%

# of Survey Respondents	Vehicle Type	Main Business (MB)\	Yes	% of Category
9	Other	Container/Truckloads	1	11.1%
6		Less-Than-Truckload	0	0.0%
27		Local Distribution	2	7.4%
21		Other	3	14.3%
63		Total	6	9.5%

Number of responses exceeds number of respondents since each respondent could select more than one response to this question.

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-15
Freight Movement Survey

Question 10f. AVERAGE DAILY STOPS (PICKUP AND DELIVERY)
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# Of Stops	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
0			3	11	14	22.2%
1			1	2	3	4.8%
2	1		1	1	3	4.8%
3	2		1		3	4.8%
4		1			1	1.6%
5	2		1	1	4	6.3%
6	2				2	3.2%
8	1		3	1	5	7.9%
10		1	7	1	9	14.3%
10 or fewer	8	2	17	17	44	69.8%

# Of Stops	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
12		1	2		3	4.8%
15		1	1	2	4	6.3%
20				2	2	3.2%
11 to 20	0	2	3	4	9	14.3%

# Of Stops	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
22			1		1	1.6%
23		1			1	1.6%
25			4		4	6.3%
30		1	2		3	4.8%
21 to 30	0	2	7	0	9	14.3%

# Of Stops	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
250	1				1	1.6%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-16
Freight Movement Survey

Question 10g. AVERAGE MILES DAILY/VEHICLE

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
18		1			1	2.3%
20			1		1	2.3%
25	1				1	2.3%
30				1	1	2.3%
40				1	1	2.3%
50			3	1	4	9.1%
60	1	1	1	1	4	9.1%
68		1			1	2.3%
70			1		1	2.3%
75			2		2	4.5%
100	4	3	5	3	15	34.1%
100 or fewer	6	6	13	7	32	72.7%

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
120			1		1	2.3%
150	1		1		2	4.5%
180			1		1	2.3%
200	1		3		4	9.1%
101 to 200	2	0	6	0	8	18.2%

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
250			1	1		4.5%
300			1			2.3%
500			1			2.3%
more than 200	0	0	3	1	4	9.1%

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
Total Responses	8	6	22	8	44	

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-16
Freight Movement Survey
(Continued)

Question 10g. AVERAGE MILES ANNUALLY/VEHICLE

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
5000	1	1			1	2.9%
10000			1	1	2	5.9%
11000				1	1	2.9%
13000					1	2.9%
15000			1	1	2	5.9%
16000	1	1			1	2.9%
18000			1		1	2.9%
20000		1			2	5.9%
23400			1		1	2.9%
fewer than 24000	1	3	4	4	12	35.3%

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
25000	1	3	1		5	14.7%
26000	1		1	1	2	5.9%
30000		1	1	1	1	2.9%
31200			1		1	2.9%
36000				1	1	2.9%
fewer than 48000	2	1	4	3	10	29.4%

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
50000	1		1		2	5.9%
52000			3		3	8.8%
55000	1				1	2.9%
60000			2	1	3	8.8%
60480			1	1	1	2.9%
73000	1				1	2.9%
75000			1		1	2.9%
more than 48000	3	0	8	1	12	35.3%

# Of Miles	Container/ Truckloads	LTL	Local Distribution	Other	Total	% of 63 Respondents
Total Responses	6	4	16	8	34	

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-17
Freight Movement Survey

Question 10h. IMPORTANT TO BE ON STREET DURING PEAK PERIODS

# of Survey Respondents	Main Business (MB)	Yes	% of MB
9	Container/Truckloads	8	88.9%
6	Less-Than-Truckload	5	83.3%
27	Local Distribution	23	85.2%
21	Other	9	42.9%
63	Total	45	
% of 63 Respondents		71.4%	

Question 10i. IMPORTANT TO HAVE FREIGHT ONLY LANE

# of Survey Respondents	Main Business (MB)	Yes	% of MB
9	Container/Truckloads	7	77.8%
6	Less-Than-Truckload	4	66.7%
27	Local Distribution	18	66.7%
21	Other	4	19.0%
63	Total	33	
% of 63 Respondents		52.4%	

Question 10j. ARE CERTAIN INTERSECTIONS, STREET PROBLEMS

# of Survey Respondents	Main Business (MB)	Yes	% of MB
9	Container/Truckloads	5	55.6%
6	Less-Than-Truckload	2	33.3%
27	Local Distribution	12	44.4%
21	Other	4	19.0%
63	Total	23	
% of 63 Respondents		36.5%	

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

Table 3-18
Freight Movement Mailback Survey
Assess Problems Affecting Operation

Question 12. WHICH OF THESE PROBLEMS IMPACT YOUR OPERATION?

	Is there a problem?		How important in future?			% Yes	% Yes and More
	Yes	No	More	Same	Less		
1. Turning radius	10	29	5	34		25.6%	7.9%
2. Merge lanes	16	23	11	28		41.0%	17.5%
3. Highway speed limits not being enforced	6	33	5	33	1	15.4%	7.9%
4. Traffic congestion	39	6	29	16		86.7%	46.0%
5. Turning at traffic lights	20	22	15	27		47.6%	23.8%
6. No parking	34	10	23	21		77.3%	36.5%
7. Rush hour deliveries	32	12	26	17	1	72.7%	41.3%
8. Insufficient lane widths	6	32	4	34	1	15.8%	6.3%
9. Insufficient bridge/tunnel clearances	4	35	5	33	1	10.3%	7.9%
10. Inadequate all-weather roadways	10	28	8	29	1	26.3%	12.7%
11. Lack of freight only lanes	15	33	13	24	1	31.3%	20.6%
12. Lack of trailer drop-off/pick-up facilities	9	30	6	33		23.1%	9.5%
13. Lack of freight access zones	16	25	11	16		39.0%	17.5%
14. Diminishing delivery window (union)	4	32	3	33		11.1%	4.8%
15. Diminishing delivery window (congestion)	16	23	14	25		41.0%	22.2%
16. Curfew restrictions on truck movement	2	36	2	35	1	5.3%	3.2%
17. Just-In-Time delivery	20	21	16	24	1	48.8%	25.4%
18. Lack of receiving areas in shopping centers	16	25	10	30	1	39.0%	15.9%
19. Lack of access to ports/airports	14	28	22	30		33.3%	34.9%
20. Lack of rail access to ports/airports	2	35	2	34	1	5.4%	3.2%
21. Paperwork delays at ports/airports	21	20				51.2%	0.0%
22. Other	2					100.0%	0.0%

Source: Freight Movement Study Survey (Dade County MPO and The Corradino Group).

3.6 Interaction with Freight Community

A function of this study has been to establish a rapport with the freight community and to develop an information base that can be used in future planning efforts. Freight coalitions have been established in a number of cities (Baltimore, Detroit, Houston, Minneapolis, St. Louis, Kansas City, and Portland) through a joint initiative of the American Trucking Association, the National Industrial Transportation League, and the Intermodal Association of North America. This Dade County Freight Movement Study has established a Steering Committee which will meet several times and serve as a link for the MPO for future planning efforts.

A number of data sources have been referenced and used for the initial phase of the study such as Dun and Bradstreet Information Services, the American Trucking Association, the Florida Trucking Association and the Florida Department of Transportation. Magazines and reports compiled as reference materials include:

- *Transport Topics* (identified as the National magazine for the trucking industry); *Transport Topics* is a weekly publication.
- Regional Freight Mobility Conference Proceedings, September, 1994.

- Report on a Survey from the American Trucking Association (ATA) on Freight Issues (January, 1995).
- Intermodal Freight Transportation, ENO Foundation for Transportation, 1989.
- Intermodal Coordination Study: A survey and consultant recommendations on containerized transportation in Northern New Jersey, (prepared by the Foundation of the NJ Alliance for Action, August, 1994).
- The Economic Importance of the National Highway System (prepared by Apogee Research, Inc. for the Trucking Research Institute, February, 1984.)
- 2015 Regional Transportation Plan for Southeast Michigan (Background Paper No. 3—Inventory of Freight, Intermodal, and Non-Motorized Transportation Facilities in Southern Michigan, October, 1993.

Finally, interviews have been conducted with public and private sector representatives of the goods movement industry in Dade County.

The following section presents information developed during the study based on the results of the first steering committee meeting/workshop and interviews with individuals involved in freight movement in Dade County. The discussion of both is presented in summary form to preserve the confidentiality of respondents.

3.6.1 Steering Committee Workshop

A steering committee workshop was held with representatives of public and private sector entities involved in freight movement at the beginning of the study. Fifteen steering committee members, along with MPO and consultant staff, participated in the meeting. The public sector was represented at the meeting by the Dade County Planning Department, the Dade County Seaport Department, Dade County Aviation, Dade County Public Works, and the Dade County Metropolitan Planning Organization. The private sector was represented by small package distributors, less-than-truckload and truckload companies, a freight transportation consultant, truck leasing, and Miami Lakes Technical Institute, which is a driver training school. The purpose of the meeting, which was conducted as an interactive workshop, was to identify key issues, characteristics, and concerns regarding freight movement in Dade County.

Key issues identified in the workshop were:

PROCESS RELATED

- The role of the Metropolitan Planning Organization (MPO) in the planning process has expanded to include freight interest in transportation planning as a result of the Intermodal Transportation Surface Efficiency Act (ISTEA).
- There are local efforts, including this "Freight Movement Study," to involve

freight in long-range transportation and planning efforts.

- It was suggested that freight movement primarily occurs at four levels.
 - The most local is the distribution of small packages and some freight throughout the community, such as the service provided by UPS, Federal Express, and other local delivery organizations. At this level, the trucks use the same transportation system as all other vehicles and travel to virtually all parts of the community.
 - The second level is less-than-truckload (LTL) distribution in which various size loads are distributed to multiple destinations and pick-ups are made at multiple points throughout the community. To provide this service, trucks begin and end each day at a common terminal. This form of transportation uses major thoroughfares and travels on/along relatively predictable routes.
 - The third level is the line-haul truck freight movement in which freight is typically moved in or out of Dade County and to or from various multi-modal transloading facilities. These freight movements use the interstates and major state roads primarily and have consistent routes

from origin to destination. The final level of freight movement that will be that of the intermodal transfer facilities at the seaport, the airport, and railway transfer points.

FACILITY RELATED

- The tunnel from the Seaport to I-95 was identified as a significant need but that no funds for construction had been identified.
- The Port of Miami and Port Everglades compete with each other in some areas, but are complementary on others. As an example, bulk products such as oil and grain are handled at Port Everglades but not at the Port of Miami.
- It was stated that it appears that small towns in Dade County are not spending funds on roadway improvement in the same fashion and to the same extent as the county and large communities. It was noted in subsequent discussion that these issues may be related to the responsibility for those roadways, i.e., whether they are state or county responsibility rather than local.
- The intermodal connection between the Port of Miami and rail carriers is critical. The Florida East Cost Railroad (FEC) was trying to get closer to the port and that presently the transfer of cargo to and from trains was occurring at Buena Vista just north of downtown Miami. Norfolk-Southern Railroad will, beginning in

March 1995, offer a through Bill of Lading to South Florida permitting better service and less expense for freight moving south. Railroads are becoming more aggressive in competition with trucks.

- In response to a question asking if there were impediments to railcar double-stacks at the present time, it was stated there were none now at the Port of Miami, but that SR 395 and SR 195 have height restrictions which can be solved. There is a curve within the port that is a problem, especially for double-stacks which are on fifty-foot articulated platforms. For this reason, Buena Vista is still the preferred site for making up full double-stacked trains. It was stated that a truck traffic corridor from the port through the city to Buena Vista was a critical issue. The Port of Miami and the railroad are reviewing an option to pave the FEC track right-of-way from the Seaport to Buena Vista and to leave the train signals in place and then run truck convoys along this pavement using the signals to stop traffic as the truck convoys moved through.
- In response to a question about traffic on I-95, it was stated that a truck-only lane could be beneficial. The I-95 HOV lane has been useful for automobiles and perhaps that lane could be used for trucks during their primary delivery hours.

- It was stated that the design of some new roads does not consider trucks. (Part of the reason for this is design standards are often pressed to make the highway system more pedestrian-friendly and as a result create problems for trucks and other large vehicles.)

In addition, prevalent neighborhood (minimum of forty acres) design standards in Dade County call for narrower, but more, lanes and slower speeds. They require a mix of uses that sometimes produces situations that are less than friendly for trucks and large vehicles. It was suggested that larger vehicles be used to reach major distribution points and small vehicle used to travel neighborhood streets. This introduces a costly freight transfer problem.

OPERATIONS RELATED

- Fifty to sixty percent of congestion in Dade County is incident-related rather than systemic. Options for facilitating incident management by the freight industry will be key in future freight movement planning. Roadway wear produced by trucks, and operations and maintenance issues of routes for trucks should be considered. Major infrastructure projects should be designed with an understanding of the needs of the freight industry.

- There are differences between the single-destination trucks and the less-than-truckload shippers (LTL). LTL trucks often make 20 to 25 stops within the county to deliver products plus making additional pick-ups before they return to their terminal. These vehicles move widely throughout the community and they encounter many streets where trailer movement is very difficult.
- Parcel shippers identified problems getting in and out of shopping centers. Shopping centers are designed so that the customers can park their cars in large parking lots, but they don't make arrangements for delivery trucks which need to park near the door for very brief stops.
- Concerning planning for routine and non-routine deliveries given the state of congestion in Dade County, it was suggested that this study might locate corridors for trucks and improved roads to truck standards that can provide access into major portions of the community.
- Truck movements are primarily in the daylight and heaviest in the morning. However, shippers are looking at more night-time delivery to avoid traffic issues. This sometimes involves drivers having keys to locked facilities and to burglar alarm systems. A problem associated with night-time deliveries is finding drivers to work these hours. This trend is

particularly significant in the wholesale grocery area. A problem is that if a driver picks up a truck full of produce from the wholesaler and tries to delivery it to a series of grocers, a delay at any one of the grocers can cause the driver's schedule to slip at the subsequent deliveries and some of the contracts have penalty clauses instituted by the shipper which can be costly.

- Another trend is that the use of pups (small trailers capable of being pulled singly or in pairs) is becoming more prevalent. There is a tendency now to pull two pups to a site, leave one to be emptied or loaded and then take the second to another site. Subsequently, the truck cycles back to pick up the first pup and then continues to the second site to pick up the second pup. It is possible to take two pups to a neighborhood and drop one. Then deliveries from one with a shorter length truck and when it is empty go back and pick up the second and make deliveries from that.

3.6.2 Interview with Representatives of Freight Movement Industry

Interviews have been conducted with representatives of individuals involved in freight movement issues in Dade County. These serve as a way to develop information as well as discuss alternative concepts for recommendations concerning freight movement. Interviews were conducted with

representatives of the Port of Miami, Ryder Dedicated Logistics, Metro-Dade Aviation Department, and Roadway Express.

Port of Miami

The Port of Miami is located on an island near the Miami CBD (refer to Figure 3-1). There are three separate types of "freight" movement which produces, and is affected by, congestion within the boundaries of the Port of Miami as well as surrounding streets providing access and leading into the island facility. The first of these is created by tour buses run by the cruise ship lines. These lines will have as many as seven ships at a time at the Port of Miami from Thursday through Monday each week. These ships typically make port at about 7:00 a.m. at which time they disembark about 1,000 to 1,500 passengers each onto buses primarily headed for Miami International Airport. As these buses cross the bridge from the Port of Miami (Dodge Island), they either turn north on Biscayne Boulevard or use Northeast Sixth Street to proceed north on one of the other narrow downtown streets to reach the intersection with westbound I-395, which they take to the airport entrance. These same buses then wait at the airport and pick up passengers for the return trip so that the ship can leave port by 5:00 p.m. The problems that occur with moving these buses, as well as with freight movement, occur on the surface streets which are used to move from Port Boulevard (the road serving the port which crosses the bridge and intersects with Biscayne Boulevard) to provide access to the interstate system.

The second issue concerns inbound and outbound truck movements. Container trucks comprise the majority of these vehicles and have serious difficulty in negotiating some of the intersections in the downtown area as they work their way between the interstate and the Port or, in some cases, north on Biscayne Boulevard to the Buena Vista Railroad Yard just south of I-195 and NW 36th Street. There are as many as forty different carriers moving trucks and container trucks to and from ships and storage areas/warehouses at the Port of Miami.

The busiest time for freight at the port is during the winter months when fresh fruits and vegetables are the major products shipped. This period also coincides with the heaviest demand for package cruise trips and is additionally the season of the year when people who winter in south Florida tend to add their trips to the local roadway system.

With regard to cruise ship passengers, there has been some discussion of extending the fixed-guideway public transit system to bring people from the airport to Miami Beach and the Seaport. Saturday is the business day for cruise ship activity, with 10,000 passengers requiring 250 or more buses departing from the Seaport before noon and arriving back at the Seaport in the late afternoon for a 5:00 p.m. departure. All of these 250+ buses must use surface streets to reach I-395. Fortunately, Saturday and Sunday are the lightest days for truck traffic, although the loading and unloading of ships does go on those days.

With regard to the truck traffic, it is estimated that about 30 percent of the Seaport's cargo moves from the Seaport to rail primarily through the Buena Vista Rail Yard located just over a mile north of the Port of Miami, adjacent to Biscayne Boulevard and NW 36th Street. Another 15 percent is placed on line-haul trucks leaving the area or arriving from outside the area. About twenty percent of the cargo does not impact the roadway network as it arrives at the Port of Miami and is placed directly on other ships at the port without leaving the port area in the transition. The remaining 35 percent is destined for local distribution when it crosses the bridge. This local distribution could be anywhere in the area but the primary warehouse district is located between Miami International Airport and the Florida Turnpike.

The following improvements were identified as those that could be made to the local transportation system to aid the movement of freight in and out of the Port of Miami:

- A better tie to the interstate,
- Developing Buena Vista Rail Yard into a more efficient operation and providing a better connection between the port and the yard; and
- Developing fixed-guideway transit service to move passenger traffic between the airport and the Port.

With regard to tying the truck traffic into the interstate, there has been much discussion about the option of constructing a tunnel from the Port of Miami north under Government Cut (the Channel used for ships to get to the ocean from the Port of Miami) to intercept I-395. The project currently is in the unfunded portion of the Transportation Improvement Program.

With regard to improving and accessing the Buena Vista Rail Yard, there has been discussion of the possibility of paving over the current rail line which runs from the port to Buena Vista or possibly constructing a truck-only roadway on the railroad right-of-way or adjacent property. The railroad signals would be left in place, and periodic "truck convoys" would be operated to and from the railyard at relatively high speeds with no stops. The railroad signals would protect them from local traffic.

The option of extending more rail into the Port would be of some, but not major, interest. There are turning radius problems within the Port and rail storage problems that would require most trains being broken down into three or four sections, and delivered one section at a time to the Port over the existing rail line.

Ryder Dedicated Logistics

Ryder Dedicated Logistics (Ryder) provides a full range of transportation services under contract to many companies; this could include providing a driver wearing the uniform of the company and driving a

truck painted with the company's logo. To all intents and purposes, the truck appears to be operated by the company whose name is on the side, but the vehicles are owned and operated by Ryder and the drivers receive their paycheck from Ryder. A particular example of this is the fleet of trucks that deliver the *Miami Herald* newspapers each day. These trucks are based at the site of the press and roll out in the middle of the night each night looking like *Miami Herald* trucks. However, all trucks, operations, drivers, and logistical support are provided by Ryder.

Ryder also provides the auto carriers that move new cars from the FEC freight yard northwest of the Miami International Airport to car dealers throughout the area. They currently have 4,500 such vehicles nationwide.

Ryder representatives interviewed for the study expressed concern that many intersections in Miami were not geometrically designed for trucks. Consequently, there are many locations where trucks face operational constraints that cause them, and adjacent traffic, delays. This situation is particularly critical in the heavy warehouse distribution section which lies between the Dolphin Expressway (SR 836) and SR 112 (and its extension along 36th Street and 41st Street to the Florida Turnpike).

Ryder provides service to the many plant and tree nurseries of South Dade and makes deliveries from them to the area east of the

Mississippi. In addition, it is significantly cheaper to fly flowers from South America to MIA and then truck them to Atlanta than to fly them directly to Atlanta. In fact, flowers are flown into MIA and trucked as far as Seattle.

Concerning in-bound freight, South Florida must truck in most of the goods consumed in the region. There is a heavy demand for trucks which are heading into south Florida, and they rarely come in empty. There is very little manufacturing in south Dade County or south Florida, and this contributes to the heavy demand for in-bound freight. South Florida is unique in that there is no flow-through truck traffic. All trucks coming into south Florida that are line-haul trucks must turn around and go back out of south Florida, ideally with another load of freight.

A significant problem identified by Ryder was the freight traffic density between the Port of Miami and Miami International Airport, a distance of 3 1/2 miles that is served by SR 836 and SR 112.

Some congestion is relieved by providing off-hours deliveries. A case in point is Ryder's relationship with L'Eggs Panty Hose. Ryder picks up stock in Mississippi and delivers it to mini-warehouses throughout the southeast as far south as Miami. Drivers of L'Eggs trucks have keys to the warehouses and are able to open them, remove rejects and other stock that must go back to the factory, install new stock in the mini-warehouse, lock it, and leave. That stock is

then accessed by local individuals who service the various grocery stores, drug stores, and other outlets in their area each day.

The question of a designated truck lane came up in seeking some improvement which might aid in relieving congestion in Dade County. The point was made that cars and trucks should not be asked to use the same roadway lanes since they are basically incompatible in their driving styles.

The question was asked: what improvement would be most helpful to Ryder's truck traffic? It was suggested that some improvement that would extend SR 112, which currently terminates at LeJeune Road (NW 42nd Avenue) east of the airport in the heavily-congested and traffic-plagued area known as the Iron Triangle, westward to the Florida Turnpike. (This extension, according to MIA staff, has been studied and is presently considered unfeasible because of the high cost of construction and right-of-way acquisition.) The Long-Range Transportation Plan Update, currently underway, recommends improvements to the corridor to enhance vehicle throughput by implementing urban interchanges, transportation system management in an integrated "smart street" concept.

Metro Dade Aviation Department

There is not a significant amount of freight movement traffic between Miami International Airport (MIA) and the downtown area or the Port of Miami. Most of it goes

west to the concentrated warehouse and distribution center (which is still growing/expanding) located between the airport and the Florida Turnpike.

The southwest quadrant of the airport property has cargo transfer buildings which are primarily used by freight haulers to unload and load airplanes and unload and load trucks. There is consolidation/separation of cargo at this site, and trucks are loaded/unloaded to move out west to other warehouses and distribution sites. It is estimated that 1.4 million tons of cargo a year is processed through MIA. The Aviation Department is currently adding more transfer buildings and replacing some older buildings that are being demolished in this area. Primary access to the cargo terminal area is via 16th and 25th Streets from the west, and from Milam Dairy Road (NW 72nd Avenue) and the Palmetto Expressway (SR 826) from the north or south.

About 75 percent of freight entering the airport comes in on cargo freighters, aircraft specifically used for freight. However, the largest single freight carrier is American Airlines, which operates no cargo freighters but carries freight in the "belly" (storage compartments located below the passenger deck) of its many passenger planes. Most of the airport's cargo freighters are hauling freight back and forth between south Florida and Europe, Caribbean destinations, or Latin America.

The airport may eventually expand by purchasing land out to Milam Dairy Road, which would force the relocation of the FEC railroad tracks westward. Expansion to the north is not feasible. Miami Springs residents use the area along 36th Street, the northern boundary of the airport property, as their main commercial strip. There is some planning for a close-in east-west runway at the north edge of the airport property.

The Aviation Department owns land for an airport in far west Dade County in the Everglades and a jet port was planned at one time at that site. At the present time, there is one runway which is used for training. The Aviation Department keeps a trailer there to maintain lights and maintain the runway. Environmentalists have successfully stopped any efforts to build a new airport in the Everglades.

Homestead Air Reserve Base could offer relief to freight concerns, but it would need considerable infrastructure development. It is 25 miles south of the central part of Dade County, about a one-hour drive by truck on the Florida Turnpike. It could eventually become a site for cargo that is inbound or outbound from south Florida which does not require transfer to other planes. There is no existing rail service to Homestead although tracks do enter the property.

Most of the cargo handled at MIA is high-value and time-sensitive. In-bound cargo is more than 60 percent perishable, consisting primarily of flowers, fruits and vegetables,

and sea food. A large hauler of this product is Armellini, which imports flowers by air and then trucks them to destinations throughout the entire United States from their South Florida base.

The geometry of the roads west of the airport serving the warehouse and distribution center is very poor for trucks; these roads were designed for cars. Major redesign of most of the roads and intersections would be required for this to be a really effective freight transportation area. In related activities, FDOT is studying the possibility of grade separations on 25th Street, extending it west and having grade separations at 72nd Avenue and at the Palmetto. In addition, NW 36th Street may eventually have a grade separation at 72nd Avenue.

As previously noted in discussions with Ryder, trying to extend SR 112 (which is the airport expressway) west of its present terminus at LeJeune Road has been found to be cost prohibitive.

One option identified during the interview with the Aviation Department would be for trucks to be permitted on the special use HOV (carpool) lanes on the interstates and expressways.

Roadway Express

The biggest problem facing Roadway Express is slow moving traffic, especially on the Palmetto Expressway (congestion on this major regional facility often causes traffic to

slow to a crawl) especially from 7:00 until 9:00 in the morning and from 4:00 to 6:30 p.m. in the evening. As a result of backups on the Palmetto, the Florida Turnpike and Okeechobee Road also get backed up. These are the primary access roads trucks use to move north and south, in and out of Dade County and east and west into Dade County and into downtown Miami, the Port of Miami, and MIA. This is especially serious because Roadway's major commitment to their clients is to be on time.

Wednesday and Thursday are the lightest days for truck movement, with Monday, Tuesday, and Friday being the busiest. On Mondays, Roadway has about 68 tractors out in Dade County, delivering about 90 trailer loads of goods. On the lighter days, Wednesday and Thursday, Roadway operates as few as 48 tractors.

Roadway provides delivery services in and around Dade County, to Monroe County, and as far north as Sheridan Road in Broward County.

Roadway experiences relatively little difficulty getting in and out of Dade County, apart from local access, because their location is near the Florida Turnpike. The regional distribution center for Roadway Express is located at Valdosta, Georgia; and is the origin and destination of its line-haul trucks.

Roadway does have some interaction with the Florida East Coast Railroad (FEC)

at their yard just west of the airport. They will typically get 18 units (trailers) in a typical week off the train, and 20 to 22 units on a busy week.

One function of Roadway Express is to "break out" units and to work during the evening so they can be loaded onto 28-foot trailers for distribution the next day. A typical 28-foot trailer will have 22 - 30 bills (separate customers) that must be delivered throughout a route within Dade County.

Because Roadway is a 24-hours a day, seven days a week operation, the firm is able to serve the Port of Miami and MIA during off-hours to some extent, thereby alleviating some of the traffic problems other truckers experience. Roadway also works on Saturday and Sunday when it is less difficult to travel around the county. Roadway's most serious local distribution problem is the configuration of downtown Miami streets which so seriously constrains use of trailers that Roadway must limit deliveries to those carried on straight trucks. South Dade is especially crowded, such as in the area of Kendall Drive, Miller Drive, and Southwest 8th Street.

Roadway serves the Seaport only occasionally and prefers that customers using containers transport their own containers to and from Roadway facility where Roadway then will load, break out, reload, and distribute containers for them.

With regard to after-hours deliveries, Roadway has a number of customers who prefer pick-ups at night, especially grocery warehouses. The Roadway representative said that these warehouses usually schedule all of their truck deliveries at 4:00 a.m. and then have a line of trucks waiting to be unloaded behind the grocery store at that hour.

Although more economical, the only time Roadway uses the railroad for piggybacks (trailers carried on railroad flatcar) is when there are not enough drivers available to drive the trucks. This is the result of a union agreement in which "overflow" (more trailers to pull than drivers available) can only be sent on piggyback.

Roadway plans to soon start loading containers to be sent to the Port of Miami and then shipped to Puerto Rico. Presently, they send this cargo north to Valdosta, Georgia where it is distributed to trucks going to Jacksonville, Florida and then put on ships bound for Puerto Rico. There now is enough activity to load their own trucks and deliver them to the Seaport.

The MPO and Department of Transportation need to be sensitive to building roads with the proper geometry to handle trucks in industrial and distribution areas. Four thousand dollars per year are assessed to a typical unit in road taxes and this should be sufficient to warrant consideration of trucks in planning and design.

4. Analysis of Data

This section presents analysis based on the results of data collection efforts conducted as part of the Freight Movement Study. The purpose of this analysis is to identify truck travel patterns and issues associated with freight movement and truck traffic resulting from information developed during the study. Conclusions and recommendations relative to travel modeling in Dade County are proposed. Consideration of short-term improvements to the roadway network to improve freight movement and relieve traffic congestion completes the discussion.

4.1 Existing Traffic Conditions

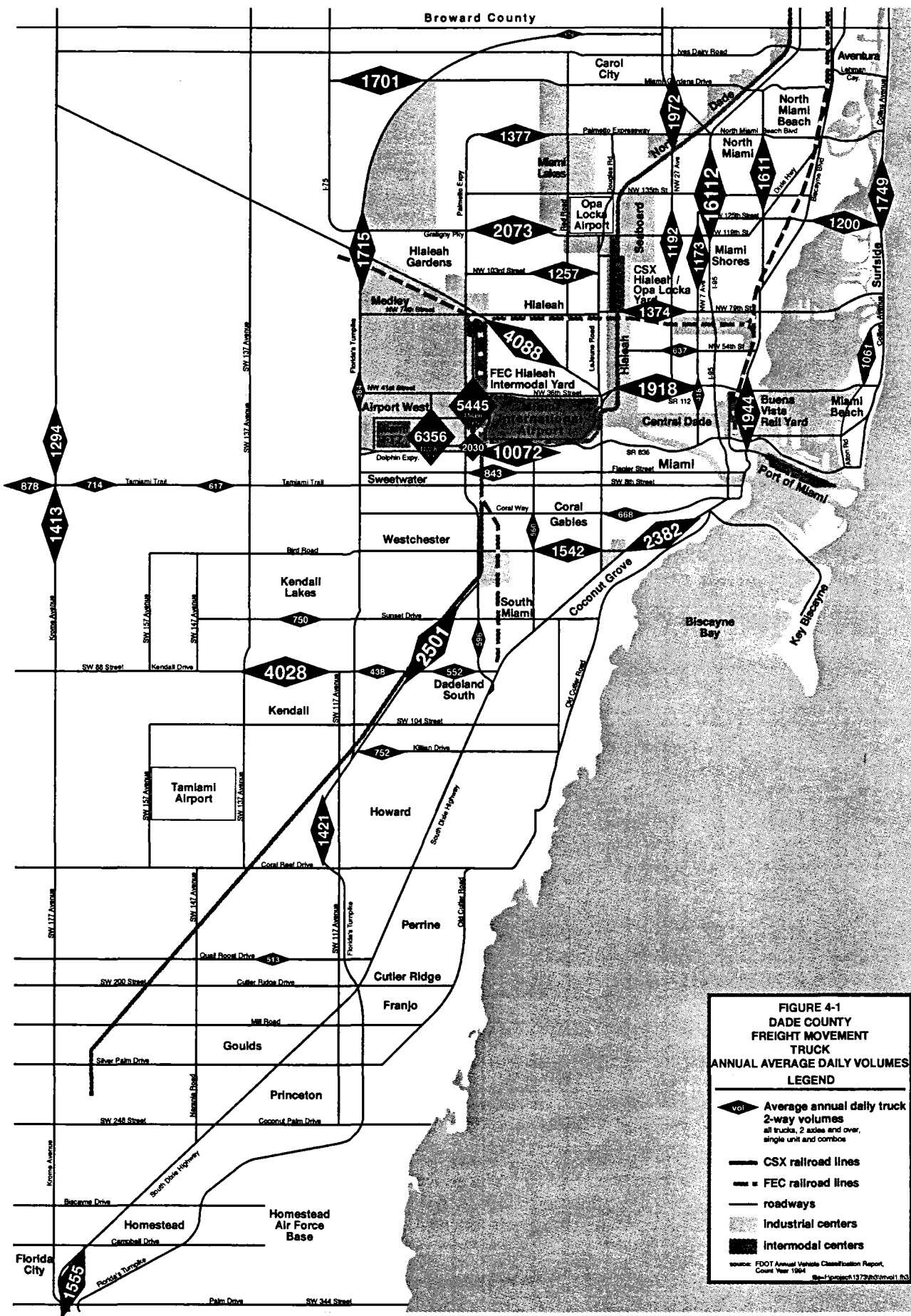
Truck volume estimates on Dade County roadways were identified in Task 1 through the use of Florida Department of Transportation vehicle classification roadway counts. Based on these counts, approximate daily truck volumes were developed (Figure 4-1); these truck volumes are based on counts made at specific points on the roadway network. Projecting these counts across the roadway network provides a picture of the major truck movements in Dade County (Figure 4-2).

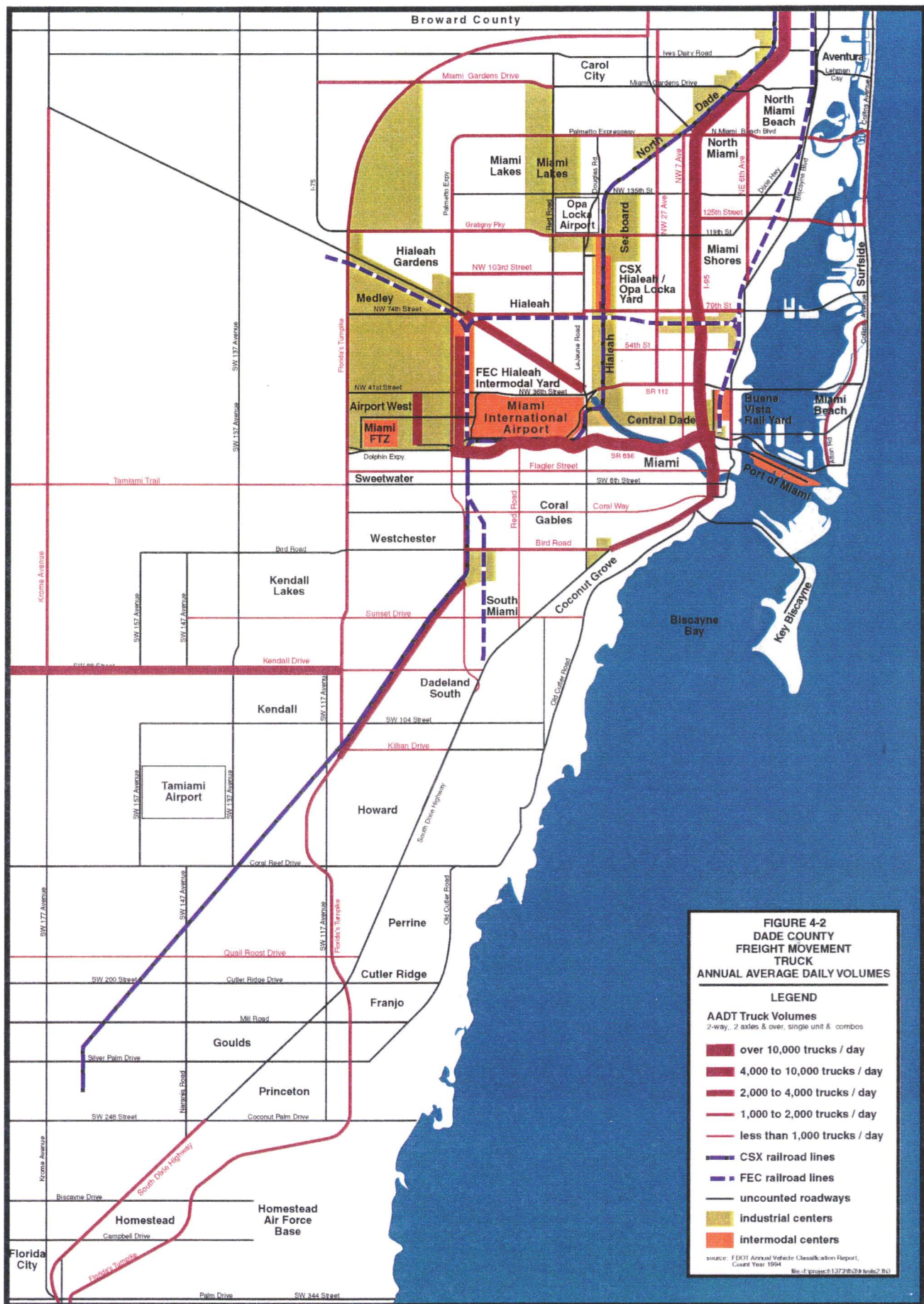
Figure 4-3 shows the level of service on Dade roadways as reported by the Florida Department of Transportation (December 1994). As can be seen, many of the roads with the heaviest truck movements (SR 836, I-95, Okeechobee Road) are operating at Level of Service D or worse.¹ Figure 4-4, which was developed as part of the "Proposed 1995 Evaluation and Appraisal Report for the Traffic Circulation Element,"² indicates that by 2005 traffic conditions in many parts of the County will deteriorate "...despite additional major highway and transit improvements." Corridors projected to operate at Level of Service D or worse include U.S. 1, I-95, NW 36th Street, SR 836, Flagler Street, SW 24 Street, SW 40 Street, SW 88 Street, SW 107 Avenue, SW 87 Avenue, NW 183 Street, Red Road, LeJeune Road, and NW/SW 27 Avenue.

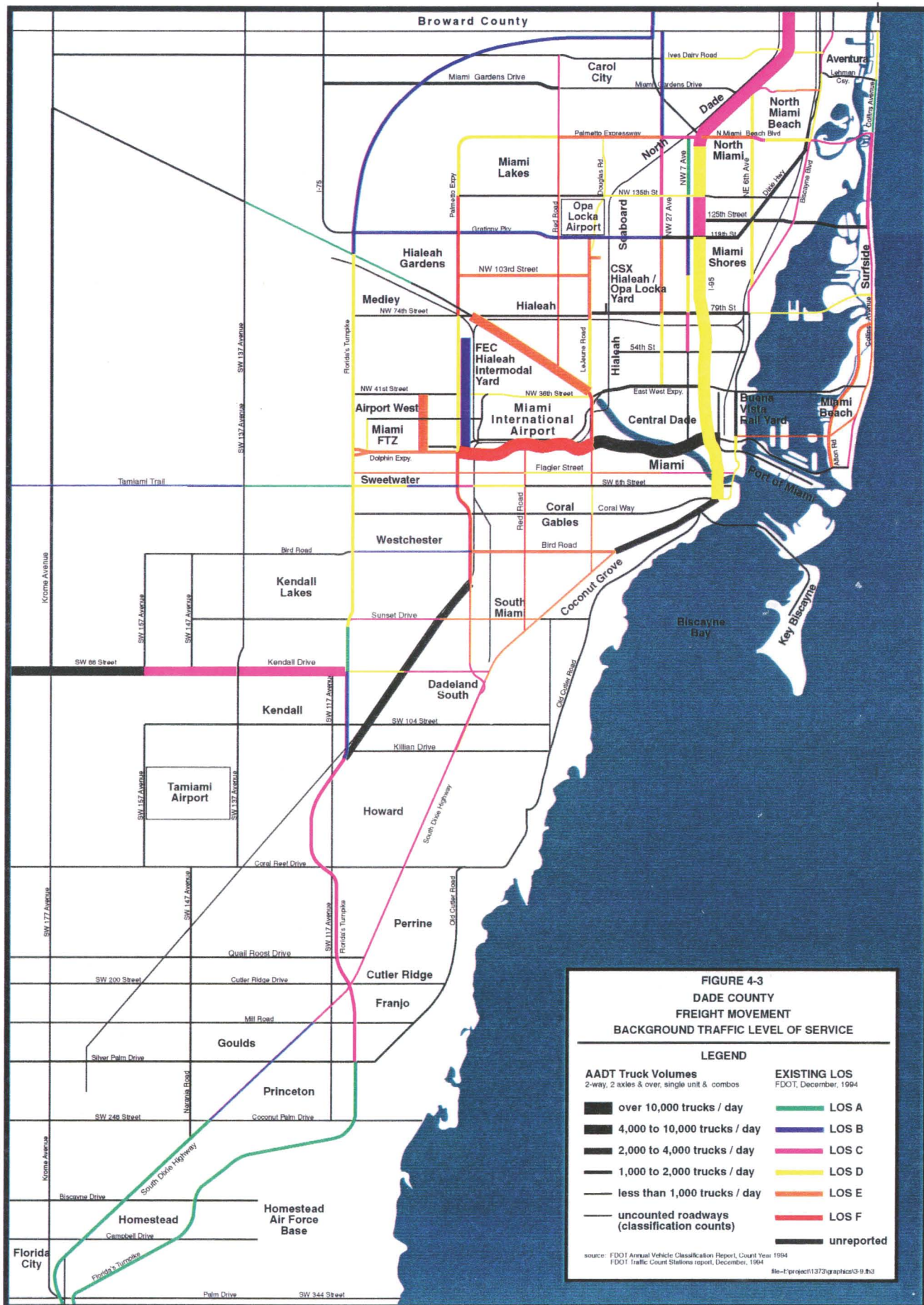
Roadways with the heaviest truck movements that will be operating at LOS F will include I-95, SR 836, and U.S. 1.

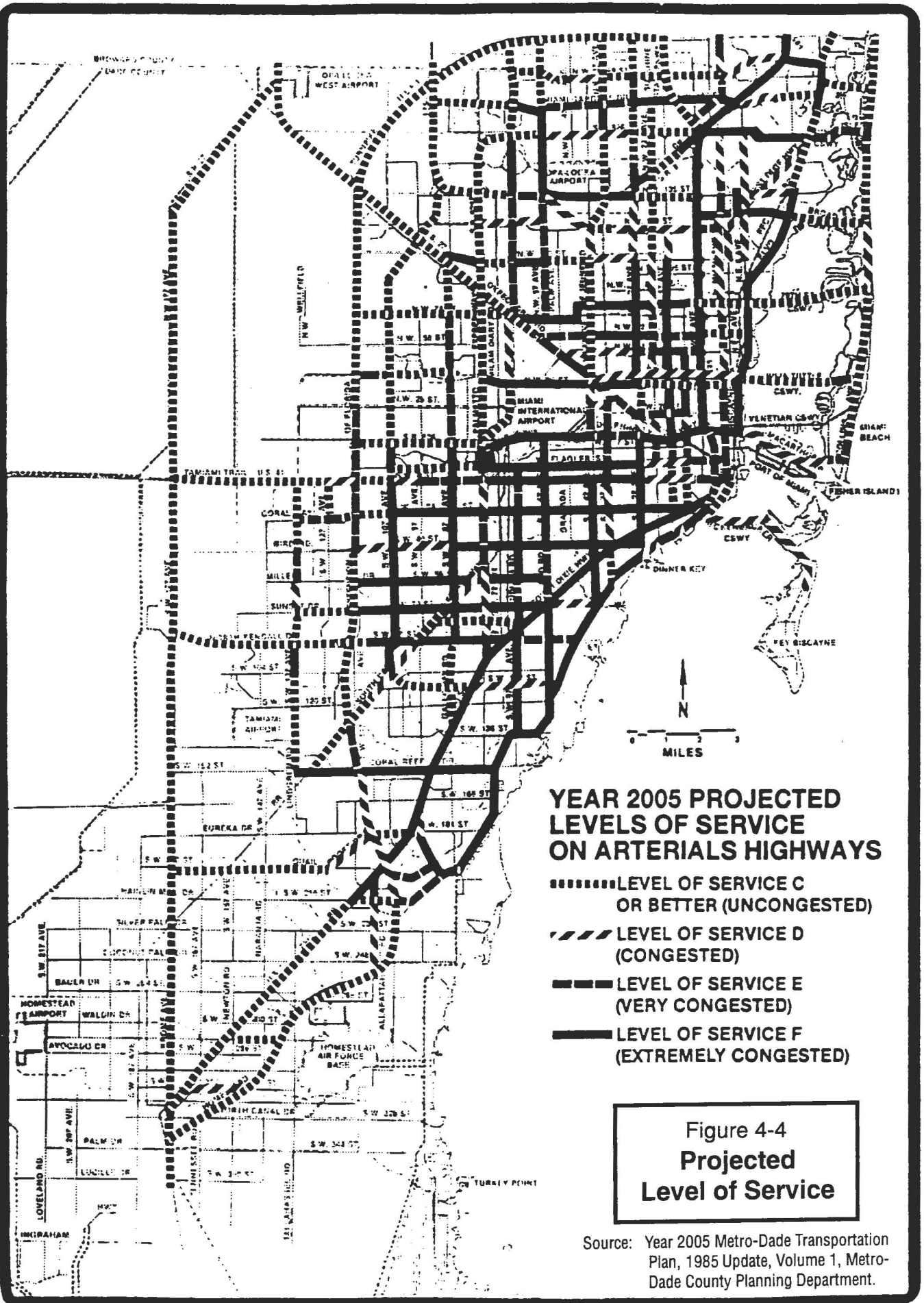
¹Level of Service (LOS) on roadways refers to the flow of traffic, with LOS A indicating free-flow traffic and LOS F indicating no or minimal traffic movement.

² "Proposed 1995 Evaluation and Appraisal Report for the Traffic Circulation Element, II, Metropolitan Dade County, Florida Comprehensive Development Master Plan," prepared by the Dade County Planning Department, June 1995.









Okeechobee Road will be operating at Level of Service E.

4.2 Dade County Mail-Back Freight Movement Survey

The first effort to develop information about trucking characteristics in Dade County was a survey of motorized freight industry as identified through Dun and Bradstreet and the Florida Trucking Association. Approximately seven hundred organizations received surveys. Of these, about 10 percent returned completed surveys. A summary of the response to the survey was presented in Technical Memorandum #1 to this study and is presented in Chapter 3 of this Final Report. Several factors are significant.

The Port of Miami is the most commonly used major terminal facility. In addition, 44 percent of those respondents classifying themselves as container or truckload shippers want better rail or intermodal facilities. The airport was also identified as an important terminal. Twenty-two percent of the respondents handled air freight on a daily basis.

According to the response from the survey, most companies surveyed (80%) stated their shipments are within Dade County, indicating that local truck trips are the greatest percentage of all truck trips.

The distribution of responses is shown in Figure 4-5. The area with the greatest response density is West Dade, particularly in the triangle bounded by Okeechobee Road/Miami International Airport area. While a significant number of responses also came from North Dade, there were fewer in South Dade. Based on the distribution of responses, the heaviest loads of truck traffic accessing the roadway network would be on SR 836, SR 826, and Okeechobee Road.

The survey identified that 80 percent of respondents need to be on roads during peak hours. This is supported by input from the advisory committee established for the study, which indicated that although some companies are moving towards night-time deliveries, for many types of shipments the best time to operate is during the day.

Many trucking organizations (75%) responded to a direct question that a freight-only lane would be important. Interestingly, the FDOT has recently suggested that the I-95 HOV facility and the access to Golden Glades adjacent right lane be restricted to exclude use by trucks. This would continue a precedent established in Broward and Palm Beach Counties. Although it is unclear what effect this would have on truck traffic on I-95, it may spur movement of trucks to other facilities.

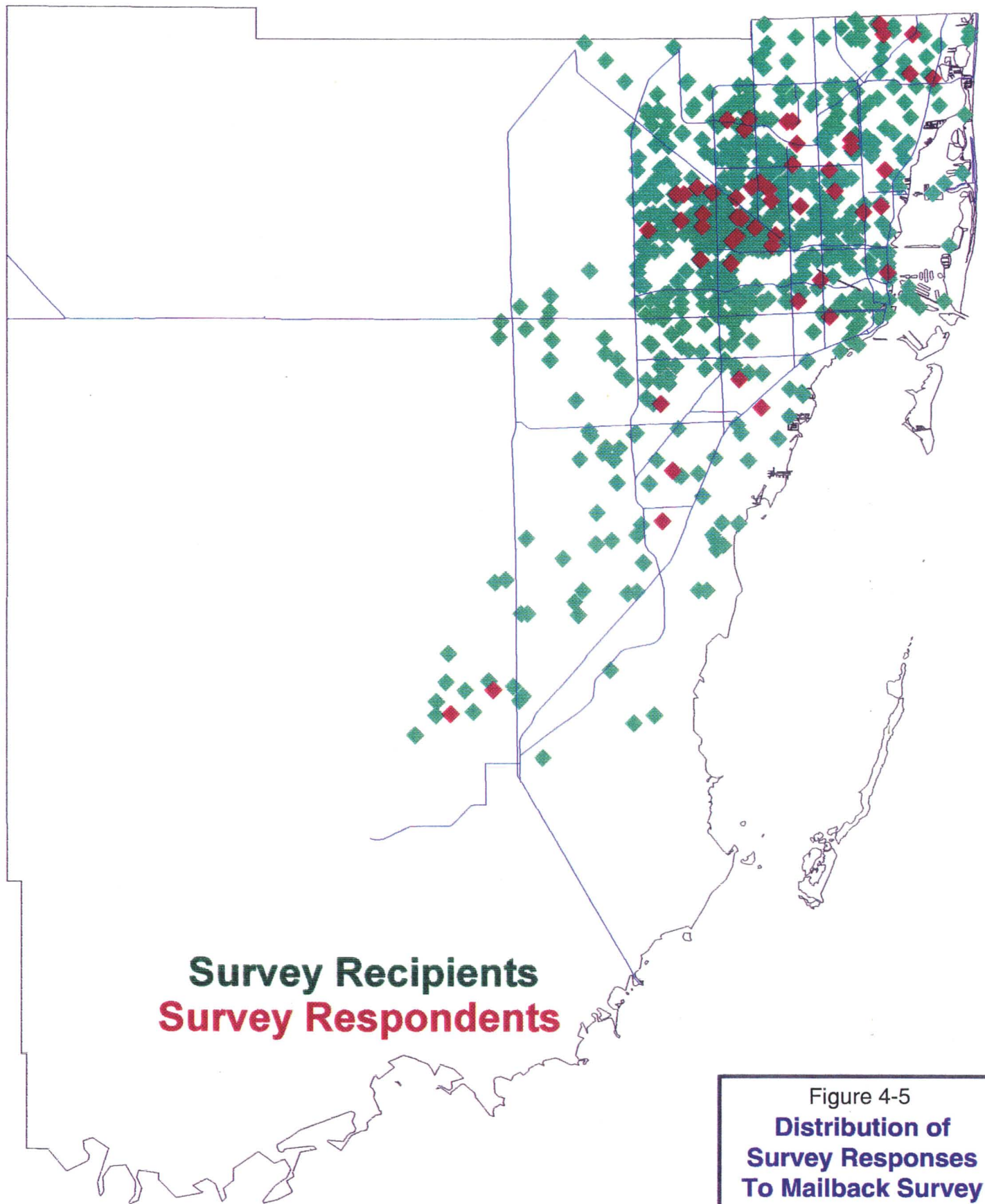


Figure 4-5
**Distribution of
Survey Responses
To Mailback Survey**

4.3 Origin-Destination Truck Survey

The consultant team conducted personal driver interview, origin-destination surveys at three intermodal trucking locations in Dade County. These were the Port of Miami, the Miami Free Trade Zone, and the FEC Hialeah Intermodal Yard (Figure 4-6). The interviewers were bi-lingual and the survey forms were prepared in English and Spanish. Because each location involved an area where trucks arrive from a destination, and then go to a destination, each completed survey represented two truck trips. It should be noted that the consultant conducted a supplemental survey for the Port of Miami to identify downtown-oriented travel patterns. This survey is documented later in the report.

The trip origins and destinations were coded to the 1990 Metro-Dade County traffic analysis zone (TAZ) map. There are 1,164 zones in the 1990 TAZ system. (The Port of Miami is in TAZ 2, the Miami Free Trade Zone is in TAZ 482, and the FEC Intermodal Yard is in TAZ 451.)

Surveys were conducted from 8 a.m. to 12 noon on a typical weekday at each location. Traffic counts (tubes) were set in place to record all vehicles 3 axles and greater for a 24-hour period. Four hundred and eight surveys were obtained (Table 4-1) from 791 trucks (a 48% sample).

The surveys (Appendix A presents the survey form used) captured the information at the location of the interview (Free Trade Zone, Port, or FEC), the time of the interview, the location of the trip origin prior to coming to the interview location, and the trip destination anticipated after leaving the interview location. The greatest number of completed surveys was obtained from the Port of Miami, where surveys were conducted at two of the three stevedore³ operations on the site POMTOC and Universal. The fewest number of surveys were obtained at the Miami Free Trade Zone, which also had the fewest number of trucks.

Three hundred and eighty surveys of the 408 received were satisfactorily coded for use in developing origin distinction data. Each survey that was used included information on origin, survey location, and destination TAZ's. In addition to the Dade County TAZ's, special zones were established for Port Everglades, Broward County, Palm Beach County, Florida's West Coast, Central Florida, North Florida, and Out-of-state origins or destinations. Each record was then broken down into two origin-destination trips. These were then accumulated and sorted to obtain a file that contained the origin traffic analysis zone, the destination TAZ, and the number of trips

³ Responsible for loading and unloading ships. In the container industry, stevedore firms manage the flow of containers into and out of a port by truck.

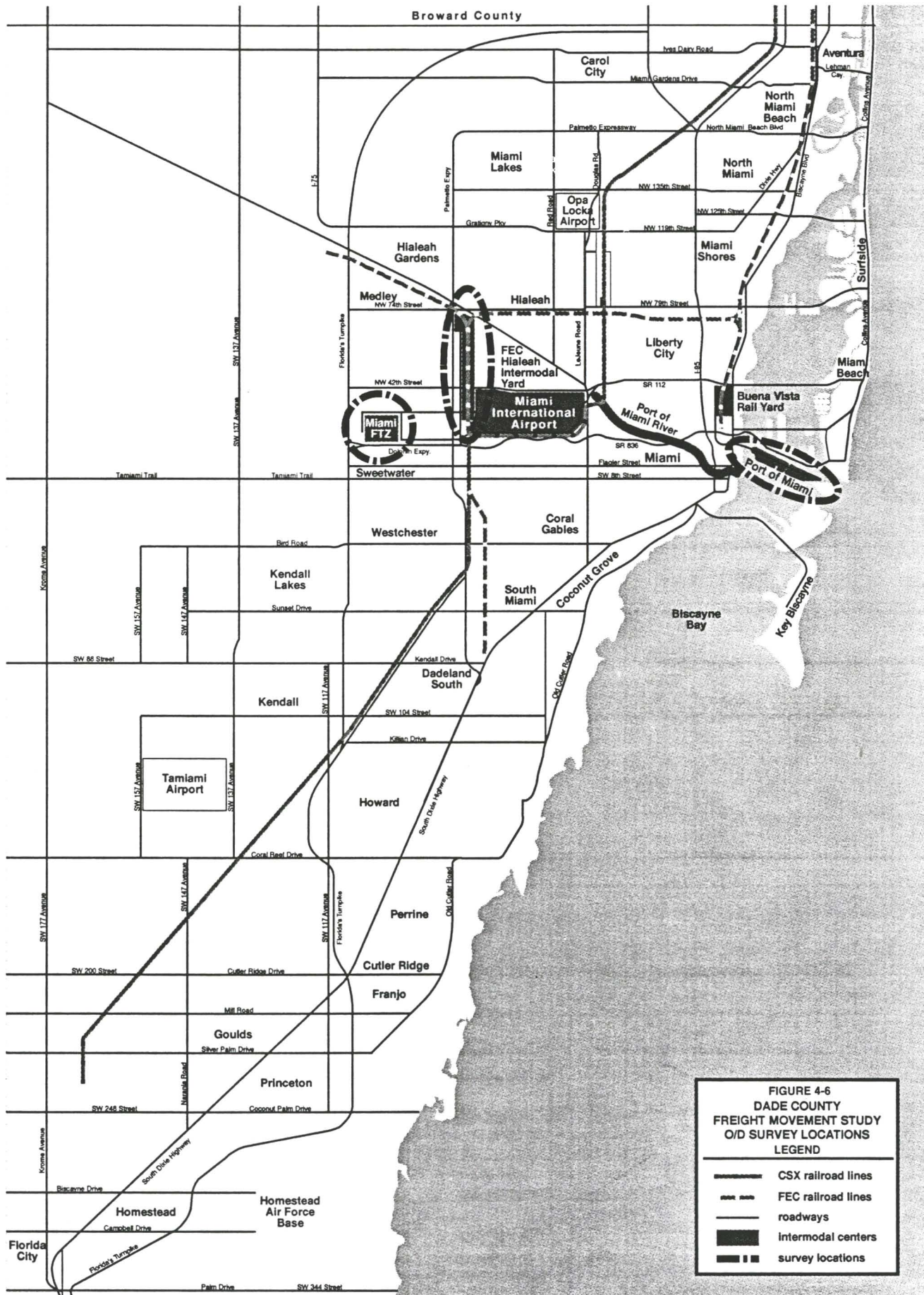


Table 4-1
Dade County MPO Freight Movement Study
On-Site O/D Survey

	FEC	PORT	TRADE	TOTAL
Responses	106	213	61	380
% Surveyed ¹	48%	42%	100%	
Truck Trips ²	445	849	122	750
Total Trucks ³	223	507	61	1,600
Daily Truck Trips ⁴	1,562	2,138	246	2,999
Daily % Surveyed ⁵	13.57%	19.92%	49.59%	

¹Based on actual number of trucks entering facility (each response provided an inbound and outbound trip record).

²During survey period (total 2-way trips recorded during survey period).

³Number of trucks entering facility during survey period.

⁴24-hour 2-way tube count; does not include all trucks entering Port of Miami.

⁵Percent of 2-way Daily Trips surveyed assuming each response is two trip records.

between the two. This file was input to TRANPLAN (a transportation modeling program), which produced a trip matrix. Each survey record was weighted to represent the daily sampling rate at each of the three survey sites. The matrix was then assigned to the Dade County highway network (the highway network is one part of the Dade County Travel Model) and a band width plot was produced. The total number of modeled trips was 733 (obtained by multiplying 380 useable survey records by 2, to account for the dual trip of each interviewee, and subtracting 27 one-way trips that were not useable because of bobtailing, which occurs when a trucker drops off a shipment and then leaves the

facility without a load or a defined destination). Trips are assigned on the highway network by the TRANPLAN computer software. Each of the 733 trips is assigned to its appropriate origin and destination TAZ. The computer program determines the minimum path between the two zones and assigns the trip to the path.

The TRANPLAN simulation of the truck trips, shown in Figure 4-7, indicates concentrations of movement along SR 836, SR 112, Okeechobee Road, I-95, and throughout the CBD. This data substantiates the responses of truck drivers whenever asked what roads they typically traveled (discussed next). Clearly the heaviest

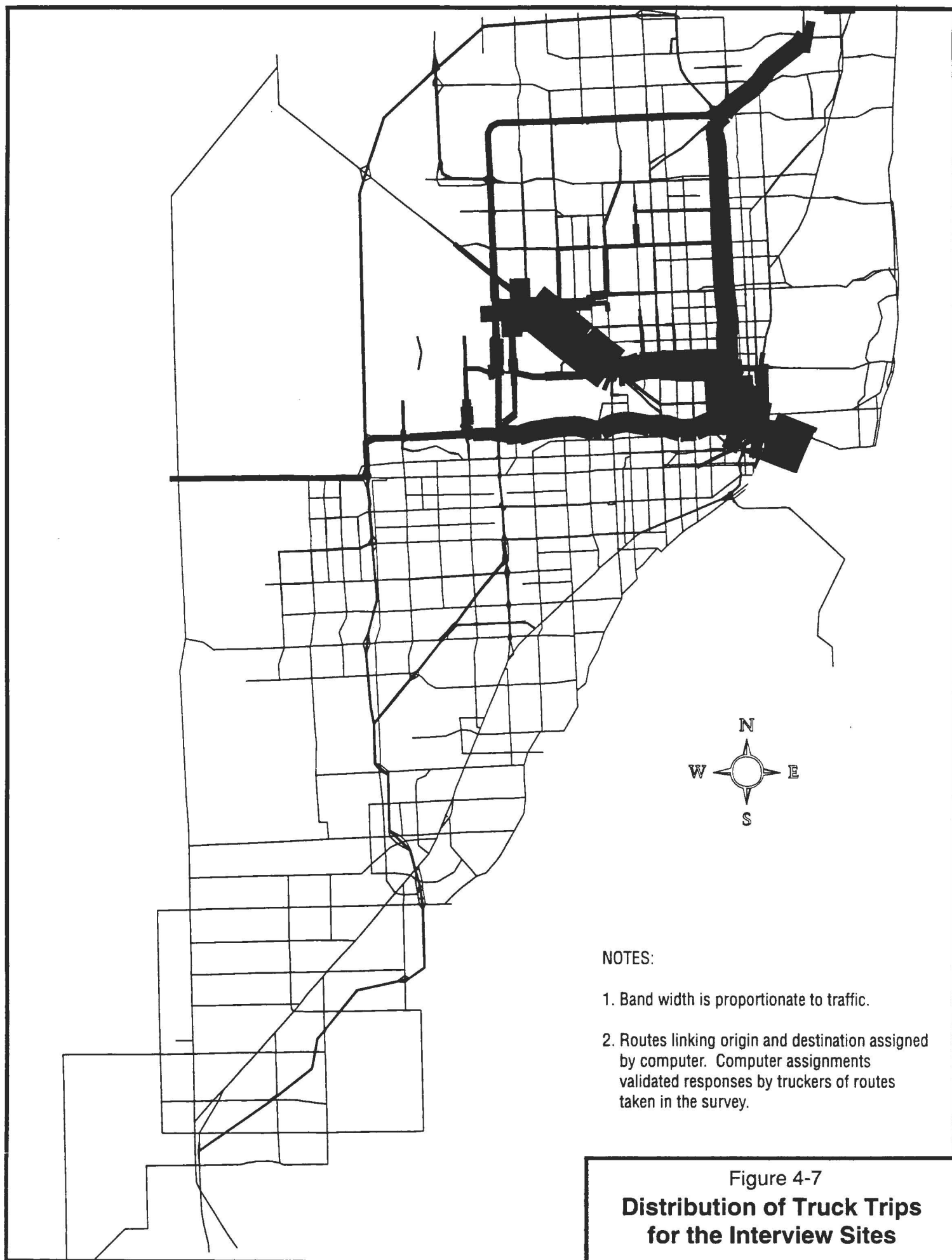


Figure 4-7
**Distribution of Truck Trips
for the Interview Sites**

movements are to west and northwest Dade County and north along I-95. However, while the trip routes appear to be heavily concentrated along specific routes, examination of trip ends at the TAZ level indicates a wide dispersion of trip ends. Of 733 trip records identified in the survey, there were 317 different origin-destination pairs (Appendix B).

Analysis of the most frequently cited origins and destinations was performed as depicted in Figure 4-8. Appendix C presents the origin and destination data by TAZ as defined by the interviews at each survey location (to avoid bias, this analysis does not reference the total number of trips at the survey location -- as each of the three locations is an origin and destination of the respective trip ends of every survey record). Based on the survey at these three locations, the FEC Intermodal Yard is the most prominent origin and destination with the Port of Miami having the next greatest number of trip ends. Interestingly, Broward County and Port Everglades combined represent nearly 10 percent of the total trip origins and destinations while the airport

accounts for less than three percent. This is an indication of the lack of interaction between the Port of Miami and the airport. Other locations with substantial total origins and destinations are Medley (south of Okeechobee Road), the area west of the Palmetto just south of 36th Street, and the area just west of the intermodal yard.

The surveyors asked drivers about the most frequently traveled roads for both the inbound and outbound trip (respondents could identify more than one facility). Table 4-2 presents the response. Not surprisingly, the greatest number of drivers cited I-95, with SR 112, SR 836, and SR 826 being the next most frequently cited. Although as noted earlier, there is a basic concurrence between the TRANPLAN simulation and driver responses, comparing the drivers' responses to the TRANPLAN simulation, it is interesting to note that the computer appears to assign more trips to Okeechobee Road than would appear to be using it based on the trucker response, and conversely fewer trips are assigned to SR 836 than would appear to be using it based on trucker response.

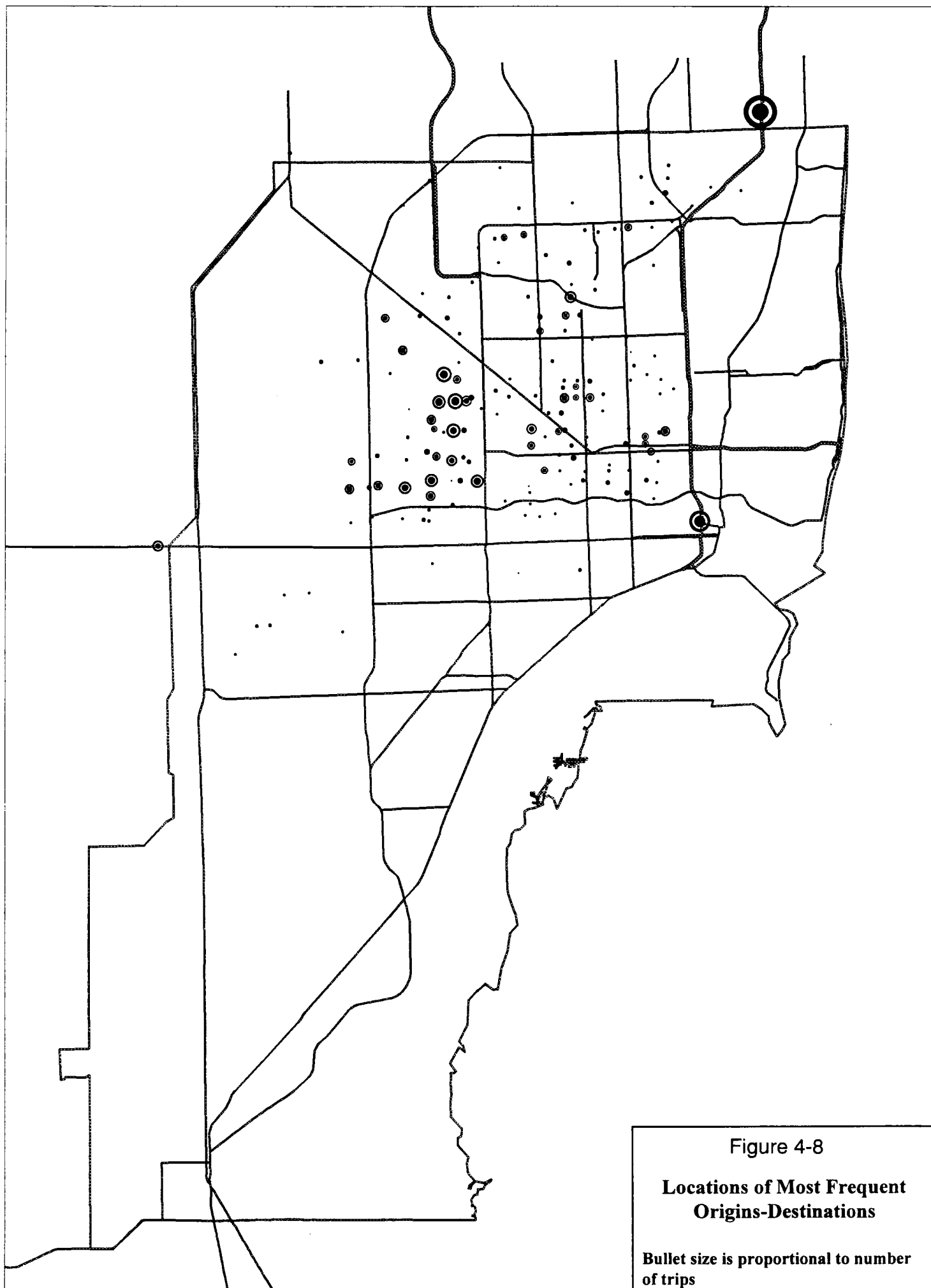


Table 4-2
On-Site O/D Survey Responses
Roads Reported Traveled by Drivers Interviewed
At All Survey Sites
(Percentage of Total Responses)

ROAD	ORIGIN	DEST.	TOTAL ¹
I-95	29%	32%	61%
SR 112	17	20	37
SR 836	19	18	37
SR 826	17	19	36
NW 25 St.	13	14	28
NW 74 St.	12	8	20
Okeechobee Road	8	9	17
NW 72 Ave.	9	6	16
NW 36 St.	7	3	10
NW 107 Ave.	3	4	7
I-75	2	3	5
NE 2 Ave.	3	1	4
LeJeune Rd.	2	2	4
NW 87 Ave.	2	1	3
NW 27 Ave.	2	2	3
US 1	1	2	3
NW 21 St.	1	1	3
NW 32 Ave.	2	1	3
I-395 (MacArthur Cty)	1	1	3
I-595 (Broward Cty)	0	2	2
NW 82 Ave.	1	1	2
NW 57 Ave.	1	2	2
NW 12 Ave.	1	1	2
NW South River Drive	1	1	2
Florida Turnpike	2	0	2
NW 58 St.	1	1	2
NW 79 St.	1	1	2
NW 74th St.	1%	1%	2%
Biscayne Blvd.	1	1	2
NW 79th Ave.	1	1	2
NW 62 St.	1	0	2
N. Miami Ave.	1	1	1

¹Respondents could cite more than one roadway so total is greater than 100%. A response of 0 indicates the roadway had percentage response less than 0.5 percent of total.

Table 4-2
On-Site O/D Survey Responses
Roads Reported Traveled by Drivers Interviewed
At All Survey Sites
(Percentage of Total Responses)
(Continued)

ROAD	ORIGIN	DEST.	TOTAL ¹
NW 84 Ave.	0	1	1
NW 71 St.	1	1	1
NW 2 Ave.	1	0	1
NW 42 Ave.	1	1	1
U.S. 27	0	1	1
NW 46 St.	1	1	1
NW 74 Ave.	0	1	1
NW 97 Ave.	1	1	1
NW 119 St.	1	0	1
NW 17 Ave.	1	1	1
NW 39th Ave.	0	1	1
NW 20 St.	0	1	1
SR 441	0	1	1
SR 595	1	0	1
NW 30 St.	0	1	1
Perimeter Rd.	1	0	1
NW 135 St.	0	1	1
NE 2 St.	0	0	1
NW North River Dr.	1	0	1
E. 49 St.	1	0	1
NW 4 Ave.	0	1	1
NW 5 St.	0	1	1
NW 6 St.	0%	0%	1%
NW 36 Ave.	0	0	1
NW 49 St.	0	1	1
NW 37 Ave.	1	0	1
NW 12 St.	0	1	1
I-195	0	1	1
NW 183 St.	0	0	1
NW 103 St.	0	0	1
NW 103 Ave.	1	0	1

¹Respondents could cite more than one roadway so total is greater than 100%. A response of 0 indicates the roadway had percentage response less than 0.5 percent of total.

4.4 25th Street Traffic Study

The Florida Department of Transportation recently conducted a traffic study of the NW 25th Street Corridor between NW 87th Avenue and NW 67th Avenue, a total length of 3.2 kilometers.⁴ The purpose of the study was to evaluate existing and projected traffic conditions in the corridor and to define the existing demand of truck traffic for a direct connection between SR 826 and the Miami International Airport Westside Cargo Area. The study involved a traffic operational analysis as well as origin and destination surveys of truck traffic.

The Westside Cargo Area (WCA) is the most significant truck traffic generator in the NW 25th Street Corridor, which is primarily dedicated to industrial use. Over 20 percent of traffic in the corridor is truck traffic.

The origin and destination survey indicated that approximately 56 percent of the trucks leaving the WCA were going directly to or west of SR 826 and approximately 71 percent of the traffic going to WCA on NW 25th Street was coming from SR 826 or west of SR 826. A 1995 truck

⁴ "Final Traffic Report, Engineering Concept Study, NW 25th Street, prepared for the Florida Department of Transportation District Six, prepared by Marlin Engineering, September 1995.

volume count performed as part of the study indicated that 1,757 trucks daily entering and exiting the WCA.

The report concluded that a direct connection between the WCA and SR 826 is a viable option for future analysis.

The results of this study indicate that the Airport West area is and will continue to be a significant generator of truck traffic, with truck activity increasing to over 3,000 trips per day. Combined with the information produced during the origin-destination surveys at the FEC, Port, and Free Trade Zone, it was ascertained that SR 826 plays an equally significant role in truck traffic and overall trip distribution as I-95, SR 836, and SR 112.

4.5 Freight Movement Profile

As part of the overall goal of the MPO Freight Movement Study, work has focused upon developing new data and reviewing existing data concerning truck activity in Dade County. In addition to the traditional trucking companies, there are many other organizations putting trucks on the road. These include retailers such as Winn Dixie, Walgreens, and Publix; other companies involved in distribution such as UPS, Pepsi, and Dominos; and public utilities such as

Florida Power and Light, the United States Post Office, and Bell South.

Truck trip activity in Dade County is focused east-west along the general SR 112/SR 836 corridors; north on I-95; and for both directions on SR 826. Okeechobee Road is a major corridor. Although the base trip activity appears focused on these key corridors, there are hundreds of individual trip ends as cited in the survey. Of the 700+ trips recorded during the survey at the Port, the Free Trade Zone, and the FEC Intermodal Yards, there were over 300 traffic analysis zone pairings, despite the fact that the survey had only three central focus points.

There is significant movement from Dade County to Broward County and Port Everglades (more so than was indicated during discussions with the trucking industry and the Port of Miami).

On-site data collection efforts have been very successful in both the work conducted for this study and the airport study. Because of the number of central terminal locations in Dade County and the apparent cooperation experienced to date from the truckers, on-site surveys may be the most effective way in the near-term to collect data needed for county-wide modeling and transportation planning activities.

5. Application of Freight Modes To The Dade County Travel Model

5.1 Review Current Efforts to Forecast Freight Movement

Most of the freight planning techniques developed in the past have been structured for national or regional analysis. A literature review shows growing interest in freight travel modeling at the state level with the advent of ISTEA regulations. Freight movement modeling in urbanized areas is not very common. MPO's are responding to ISTEA mandates by establishing partnerships with the freight industry and establishing a clearer understanding of how freight moves in regional, national, and international markets. Because ISTEA requires intermodal planning to incorporate the impact of freight shipping in the MPO project selection process, MPO's will increasingly be faced with the challenge of accurately portraying goods movement patterns. Literature pertaining to freight movement modeling that was reviewed for this study is summarized in the following sections.

5.1.1 Application of Statewide Freight Demand Forecasting Techniques [NCHRP-260]

The technique generally used for estimating freight demand is divided into four phases: (i) freight generators, (ii) freight distribution, (iii) mode division, and (iv) traffic assignment. The main inputs are present and future economic activities (base and forecast year vehicle or commodity flows) and present and future mode service, cost, and price characteristics for rail, truck, and inland waterway transport.

- **Freight Traffic Generation** involves estimating the amount and location of originating and terminating freight moving externally to the establishment. It can include the full universe of freight movements or, more typically, is restricted to a subset of movements delineated by: (1) geography (i.e., an area from within which the freight must originate and terminate); (2) economic sector or industry inclusion, typically by Standard Industrial Classification (SIC) codes; (3) size of establishment (e.g.,

minimum number of employees); (4) commodity types, typically by Standard Transportation Commodity Codes (STCC); (5) distance of shipment (i.e., intercity rather than local); and (6) transport modes or services used. This reduces both the number of establishments and the movements contained within the universe being examined, and thus makes the application more manageable.

- **Freight Traffic Distribution** involves estimating vehicle interchanges or commodity flows between the origins and destinations identified under freight traffic generation. A large portion of the movements of freight usually originate or terminate outside of the study area.
- **Modal Division** is the process of “splitting” commodity movements among competing modes. For modal division to take place, the following prerequisites are necessary:
 1. The physical capability for intermodal competition must exist (i.e., presence of, or convenient access to, a rail line or inland waterway system segment either directly or in combination with truck transport.
 2. Carriers either already providing or capable and willing to provide shippers with a choice of services

differentiated by price and service quality.

3. Commodity types, shipment sizes, and a length of haul conducive to transport by competing modes or services.

Much of past research in freight demand forecasting has been devoted to modeling the mode choice decision-making process. Most models use comparative transport cost, price (i.e., rates), or logistics cost (total cost to the shipper) as the primary means for dividing traffic among competing modes.

- **Traffic Assignment** converts commodity flows into vehicle flows and then allocates the resulting vehicle interchanges to the transportation system. Either manual or computerized techniques (or a combination thereof) can be used in assigning traffic to modal subsystems, the selection of which depends on the complexity of the application and the number of alternatives being analyzed. Usually, the route choices involved with rail, inland waterway, and even intercity highway movements will be obvious. Thus, any advantages of using computerized assignment techniques lie not so much in finding the least distance or cost route through a network, but rather in the systematic accounting of vehicle

volumes by segment and the calculation of distance or traffic related costs. Computerized highway assignment techniques commonly used in urban transportation studies can be applied with little modification. Such techniques are particularly valuable in assigning motor carrier traffic to the statewide highway system. Manual or simplified computerized techniques often suffice in assigning rail and inland waterway traffic.

5.1.2 Freight Data Requirements for Statewide Transportation Systems Planning (a) Research Report [NCHRP-177] and (b) User's Manual [NCHRP-178]

These two reports summarize the data requirements for this freight movement study at the state level. The User's Manual, NCHRP Report 178, presents guidance for identifying data requirements, obtaining primary and secondary data, and data management. The appendix of this User's Manual has an extensive catalog of existing freight data sources. NCHRP Report 177 presents an assessment of freight data requirements, data availability, and likely data needs in relation to current problems and issues. Strategies to develop data collection methods are also outlined. Besides data needs, this report also presents a useful state-of-the-art summary of techniques for demand estimation, mode

choice modeling, network analysis, economic evaluation, and input estimation.

5.1.3 Estimating Truck Travel Patterns in Urban Areas, Transportation Research Record 1430, (Pages 1-9)

This paper presents a method for estimating multi-class truck trip matrices from partial and fragmentary observations. Data sets of widely varying character are combined in an efficient and effective manner in developing the estimated flows. The method is linked to a geographic information system environment for data management and display of the results. A case study focusing on the Bronx in New York City is presented. Trip matrices are estimated for three truck classes: vans, and medium and heavy trucks.

5.1.4 Transport Flows in the State of Indiana - Commodity Database Development and Traffic Assignment, Phase 1, Transportation Research Center, Indiana University

This report presents freight database development and modeling for the State of Indiana. Transport networks for the highway, railway and waterway sectors were defined for the study using a combination of original and existing digital networks. Modes were defined for each county of Indiana and for other areas around the United States.

Traffic production and attraction data for grains and coal, estimates for manufactured goods, and the average shipment lengths were used in a fully constrained gravity model to generate flows between Indiana's counties, as well as between those counties and the remainder of the United States. A modal split model based on commodity and shipment length was used to separate the traffic into highway, rail, and waterway modes. An all-or-nothing traffic assignment algorithm was used to assign traffic to the networks. TRANSCAD, a GIS system developed primarily for transportation applications, was used in this study for network evaluation, updating, and assignment of traffic. Multivariate regression analysis and an entropy-based gravity model algorithm were used for trip generation and distribution.

5.1.5 Truck Trip Generation Characteristics of Nonresidential Land Uses, ITE Journal, July, 1994, [Pages 43-47]

This paper presents truck trip rates for several land use categories of various sizes as well as levels of activity. The equations are developed for weekday trip ends for (1) two- and three-axle trucks, (2) four-, five- and six-plus-axle trucks, and (3) all trucks, using floor area of buildings and total area in acres as independent variable.

5.2 Potential of Available Travel Models and Dade County Travel Model to Incorporate Traffic and Freight Movement

Travel demand forecasting in the Miami area is performed for the developed portions of metropolitan Dade County, extending from the Atlantic Ocean westward to the edge of the Everglades. The adjacent urbanized areas of Broward County to the north are not included within the Miami modeling area and the interaction with Broward County is maintained through the external stations. The overall modeling includes both the mainland area and Miami Beach and other adjacent keys and barrier island communities using approximately 1,200 zones. Travel demand forecasting for the Miami area follows FSUTMS conventions and uses a fairly conventional purpose split as follows: home-based-work trips, home-based-shopping trips, home-based social-recreational trips, home-based-other trips, non-home based trips, truck/taxi trips, internal/external, and through trips. The model reflects the best features of the FSUTMS multi-path, multi-period (MMP)) model and is fully operational on RS/6000 computer platforms. The model has the capability to forecast traffic on local bus,

express bus, tri-rail and metromover. This multi-modal model also considers Jitney services. It basically utilizes two networks - highway and transit. It also includes the capability to perform traffic assignments on facilities restricted to utilization by high occupancy vehicles (HOVs).

Several features could be added to the current Miami model to allow for better analysis of truck and freight movement. This section provides a list of features that have some promise, given the structure of the model, the capabilities of TRANPLAN and the likely availability of data. Further evaluation of these methods will be conducted in later phases of the project.

1. The current truck/taxi purpose could be replaced with several purposes. A possible scheme would be purposes for taxi, intercity truck, local heavy truck, and light truck. Additionally, special freight trip generators would have to be identified. These generators would probably include Miami International Airport, the Seaport, and major rail and truck terminals. Trip generation rates and independent variables (data) would have to be gathered to support this scheme. Availability of data to operate and validate a freight model will be key to choosing the approach to modeling.

2. Each of the revised truck and freight purposes would need a trip distribution model. Gravity model friction factors would be developed to replicate the average trip length for these purposes. This would require some local information on freight trip characteristics.
3. Trip assignment would be calibrated to match freight movements as indicated by percent trucks on major roadways. Validation at screenline and link levels should be considered.
4. TRANPLAN high occupancy vehicle (HOV) assignment methods might be a way to deal with truck traffic and the designation of truck routes. Currently, TRANPLAN has four HOV modes and one non-HOV mode. These modes could be used to restrict certain classes of truck from certain links in the network, thereby simulating truck routes.

In order for an urban area to incorporate truck/freight planning into its transportation program, accurate and reliable truck travel data is needed for analysis. In Dade County, the data needed for truck model development does not currently exist. Obtaining the data, and maintaining a reliable data base, would be costly. This section provides discussion relative to: (1) the advisability of including forecasts of

truck traffic in the model; (2) a description of the structure that would be feasible for incorporation of truck traffic into the Dade model; (3) the database required to support the model; and (4) how such a database might be acquired.

5.3 Need For a Truck Element in the Dade Travel Model

The Metropolitan Planning Organization currently uses a FSUTMS¹ travel model, based on TRANPLAN, which is operated on an IBM RS/6000 computer. Currently, truck assignments are a function of a “truck/taxi” trip purpose, which is based on surveys conducted in the 1970’s. The model uses Internal/External (IE) and External/External (EE) trip tables that recognize only vehicle trips.

There are several reasons why the County should consider including a uniquely designated truck element in the urban area travel model.

Trucks are a significant contributor to congestion in Dade County. As discussed in the previous section and presented in Figure 4-4, in 2010 much of the County will be

experiencing Level of Service (LOS) D or worse levels of congestion (LOS is a reference for congestion ranging from A, free-flow traffic, to F, extremely congested). Trucks represent a significant number of trips on the roadway network (nearly 10% of current traffic). As an example, on I-95, with an Annual Average Daily Traffic (AADT) volume of 184,500, trucks represent 16,112 trips, or nearly 10 percent. Trucks also have significant impact on pavement deterioration, noise, accidents, and air pollution.

Including truck traffic in the Dade model will allow a more accurate projection of roadway needs (e.g., trucks have different highway geometric needs than automobiles, and roadways with a higher percentage of trucks require more frequent maintenance and reconstruction, etc.), will allow consideration of design enhancements at key access and egress points at major terminals and operations points, and will allow for improvements to the transportation system that may alleviate impacts from the trucks.

The Intermodal Surface Transportation Efficiency Act has mandated that States develop management systems for transportation functions. These include the Congestion Management System, the Public Transportation Management System, the

¹Florida Standard Urban Transportation Model Structure (FSUTMS is a set of standardized procedures used for travel demand modeling.

Intermodal Management System, the Bridge Management System, the Pavement Management System, and the Safety Management System. In Dade County, the Congestion Management System, the Public Transportation Management System, and the Intermodal Management System are being cooperatively integrated by FDOT and the MPO into a unified system known as the Integrated Management System. ISTEA requires that emphasis be placed on improving intermodal connectivity. Incorporating truck movements into the planning process will provide a basis for overall improvement to intermodal connectivity, and developing a model that incorporates truck travel will allow the exploration of surface transportation problems associated with and particular to trucking.

The following discussion focuses upon a review of truck travel surveys and modeling activity, a discussion of the type of model structure that may be appropriate for including truck traffic into Dade's travel model, the data needed to support the model, and the means and resources to obtain the data.

5.4 Review of Current Literature on Truck Travel Surveys and Modeling Efforts

Work associated with assessing the feasibility of including freight in the Dade model and developing recommendations for incorporation of freight into the model included review of literature associated with freight movement modeling and data collection efforts. These include the following reports:

- Truck Travel Surveys: A Review of the Literature and State-of-the-Art
Author: Samuel W. Lau, Planning Section, Metropolitan Transportation Commission, Oakland, California, January 1995
- Trucking in Greater Vancouver: Demand Forecast and Policy Implications, TRANSPORT 2021 Technical Report 7, August 1993.
- Florida's Intermodal Planning Process
Author: Florida Department of Transportation, with the assistance of Wilbur Smith Associates, Kimley-Horn and Associates and Leftwich Consulting Engineers, March 1994

- Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area
Author: Earl R. Ruiter, Cambridge Systematics, Inc./Prepared for the Arizona Department of Transportation in cooperation with the U.S. Department of Transportation Federal Highway Administration, February 1992
- Review of the current CATS Travel Demand Estimation Practices, January 31, 1994, Prepared for the CATS by Parsons Brinckerhoff Quade & Douglas, Inc. and Chicago Area Transportation Study (CATS) Research News, 30th Anniversary Issue, Volume 26, Number 1, February 1987.

The purpose of this review is to profile past experiences, as well as current practices on truck travel demand forecasting for metropolitan planning organizations. The review provides a basis for the analysis relative to application of a freight element in the Dade County model.

5.4.1 MTC Truck Travel Surveys - A Review of the Literature and State-of-the Art

Overview of Report

The following discussion is based upon the "Truck Travel Surveys" report prepared by the Metropolitan Transportation Commission (MTC) in Oakland. This report

presents a thorough compilation of past literature and current practices on truck surveys and truck travel demand forecasting. The report identifies that "...few urban areas in the country have had extensive experience in conducting truck surveys and truck travel demand forecasting." As is true in Dade County, most MPO's or regional transportation planning agencies generate their truck trip estimates based on origin-destination studies conducted in the 1960's and 70's. The report cites Chicago, Ontario, Vancouver, Phoenix, Alameda County, California, New York-New Jersey, El Paso, and Houston-Galveston as having conducted significant efforts to collect truck travel data or develop new techniques for forecasting truck traffic. Chicago, Phoenix, El Paso, and Vancouver have used their truck survey data to develop regional truck travel demand models.

The recent truck travel surveys cited above all collected origin-destination information, and with the exception of two surveys, requested land use at the destination. Trucks were classified in the surveys by weight, number of axles, or by truck type. Surveys were done by roadside interview (3) or trip diaries (5). Only one survey collected data on truck driver characteristics and, interestingly, only one survey collected route choice information for the surveyed trip. The most common survey method for conducting truck travel surveys was the combined telephone-mailout-

mailback method. This method was deemed more cost effective and yielded a reasonably high response rate. Most of the surveys ranged in cost from \$90,000 (in Phoenix, where the combined telephone-mailout/mailback method was used and resulted in 720 surveys) to \$312,000 in New York-New Jersey, where roadside interviews were conducted (resulting in 14,671 completed surveys). The City of El Paso conducted telephone interviews and obtained 188 surveys for \$65,000.

The primary uses of the truck data were for regional truck travel model development and corridor/route analysis. Ontario was cited as having used truck data for time series comparisons, evaluation of road design and geometric, pavement management planning, truck-related accident analysis, dangerous goods movement regulation and enforcement, understanding truck driver characteristics, and for planning truck driver education programs. Data have also been used to generate truck activity maps, estimation of truck vehicle miles traveled (VMT) and emissions, and intermodal analysis of truck movement.

Some of the common findings of the MTC review were as follows:

- The share of different truck sizes used varied from urban area to urban area.

- Light trucks had a higher average trip frequency than heavy trucks
- Heavy trucks made longer trips and traveled more miles on an average day than light trucks
- Trip time increases with vehicle weight
- Most “first” truck trips occurred early in the morning (between 6:00 a.m. and 9:00 a.m.)
- Most truck trips occurred during the midday (9:00 a.m. and 3:00 p.m.)
- Truck travel during peak hours varied considerably by community and ranged from less than 9 percent to as high as 17 percent of the total volume during peak periods
- Truck traffic typically occurs on weekdays and decreases significantly on weekends
- Although only one survey cited in the MTC review analyzed route choice for return trips, it found that 73 percent of drivers said they would use the same route for the reverse trip
- Over one-third of all commercial vehicles stops were made on-street, as opposed to a terminal or receiving dock, according

to the one survey in the MTC review that collected stop information

- Light trucks make more residential trips than any other category, while retail attracted both light and medium truck trips. Heavy trucks dominated in terminal/warehouse land uses.

The MTC report made several recommendations for conducting a regional truck survey and developing a truck travel forecasting model:

- For internal-to-internal (II) and internal-to-external (IE) trips, the sample should be drawn from the Department of Motor Vehicles registration file or regional truck registration files. A combined telephone mailout-mailback survey type was recommended.
- For external-to-internal and external-to-external trips, it was recommended that roadside intercept surveys be conducted at various roadway facilities and links in the network. Weigh in motion stations and toll plazas were recommended as appropriate locations. Vehicle classification counts should be conducted at the same time as the surveys.
- For obtaining trip diaries, a combination of fleet-employer samples and truck unit samples would be desirable. Small

operators should be over-sampled as previous efforts indicate that large fleet operators tend to respond better than small operators.

- Time of day, day of week, and seasonal variations in truck travel should be targets for examination.
- Origins and destinations of trips that begin and end within the study area should be geocoded to the TAZ level.

Applicability to Dade County

Validation of a truck modeling element in the Dade travel model would require extensive data about truck travel that is not currently available. Key information is origin and destination of trips. Traditionally, this information is collected by surveys, such as roadside interviews or mailback surveys: For trucks, roadside interviews could be practical at locations such as terminal yards (similar to the survey conducted by the consultant as part of this study at the Port of Miami, FEC Hialeah Intermodal Yard, Miami Free Trade Zone). A recent project by the Florida Department of Transportation involved interviewing trucks on 25th Street as they left Miami International Airport. Interviewers approached the trucks as they waited in traffic and conducted the surveys during the wait.

As discussed in Chapter 2, there have been two efforts conducted in this study to collect information on trucks. The first was a mailback survey. A list of approximately 800 companies involved in trucking in Dade County was obtained from Dun and Bradstreet. The mailback response to the survey was slightly less than ten percent. To increase the response, telephone calls were made to those firms that did not respond to the survey. Following that initiative, responses had been obtained from about 12 percent of the trucking organizations based in Dade County as identified through Dun and Bradstreet and the Florida Trucking Association. A second survey effort involved conducting personal interviews at three major intermodal locations in Dade County. These were the Port of Miami, the Miami Free Trade Zone, and the FEC Hialeah Intermodal Yard. This effort resulted in a 48 percent surveillance rate of traffic at these three locations combined.

Origin-destination data for every trip are included in a trucker's waybill. If a truck has several trips scheduled, the information on the trips is included. At transfer terminals such as the Port of Miami, the FEC Intermodal Yard, and the Free Trade Zone, truckers must log their waybills. At the FEC, there are plans to have this process computerized in the next year. The waybills for truckers passing through the Port of Miami are maintained by the union. Through these sources, it may be possible to

eventually obtain verifiable origin-destination data without conducting surveys. Because of the heavy use of the port and FEC for truck activity, acquiring origin-destination information from secondary sources (i.e., waybills, computer records, etc.) may be very practical.

5.4.2 Greater Vancouver Regional District (GVRD) Truck Model

Overview of Report

The Greater Vancouver (Canada) Regional District (GVRD) truck model was based on the 1988 truck survey data. The model was developed to estimate 24-hour light and heavy truck travel demand for current and future years. Light trucks are classified as having a gross vehicle weight (GVW) of 4,500 - 20,000 kilograms¹. Trucks over 20,000 kg are classified as heavy trucks. Each weight class has different trip generation and distribution characteristics as described below. 1988 truck survey origin-destination data were used to calibrate the 1989 GVRD Truck Model. The model was subsequently validated to 1991 conditions using truck screenline data. The model is composed of three main components:

1. **A traffic zone system:** comprising 445 traffic zones. The size of the zones varies according to population and employment densities. There are 11

¹ One pound = 2.2 kilograms.

external zones (at six border crossings, airport and ferry terminals) at entry points to the region to account for traffic entering and leaving the region.

2. A regional light and heavy truck

network: The network is composed of freeway, arterial and collector facilities. Each roadway link contains information on the number of lanes, posted speed limits, capacity, and turning restrictions.

3. A truck demand modeling procedure:

This is a procedure that estimates the number of 24-hour light and heavy truck trips.

The truck demand modeling procedure is a three-step procedure that includes: 1) trip generation, 2) trip distribution, and 3) trip assignment. The trip generation stage estimates the number of truck trips produced and attracted by each traffic zone based on population, wholesale, manufacturing, and non-wholesale employment for that zone. The trip generation equations for light and heavy trucks are:

$$\text{Light}_i = 0.327Wh_i + 0.0213nwh_i + 0.0103Pop_i$$

where,

$$\text{Light}_i = \text{24-hour light truck trips produced by zone } i$$

Wh_i = wholesale employment in zone i

NWh_i = non-wholesale employment in zone i

Pop_i = population in zone i

and,

$$\text{Heavy}_i = 0.164Wh_i + 0.0665Man_i$$

where,

Heavy_i = 24-hour heavy truck trip produced by zone i

Wh_i = wholesale employment in zone i

Man = manufacturing employment in zone i

The trip distribution stage is applied using the Fratar modeling technique. Truck trips between origins and destinations are allocated based on the observed heavy and light truck trip distribution patterns. This stage produces a set of 24-hour trip tables for light and heavy trucks. External truck trips are subsequently added to these trip tables.

The final step involves trip assignment - allocating light and heavy truck trips to the computerized network. The network assignment is based on the link travel times derived from the 1991 automobile assignment. This means autos are assigned first and trucks are assigned to travel paths based on congested travel times. The three-

step modeling process, together with the traffic zone system and computerized network system, produces estimates of 24-hour light and heavy truck link volumes. These 24-hour link volumes can be factored down to represent travel demands for different time periods during the day.

Applicability to Dade County

The GVRD Truck Model results produced the following findings for the base model year 1991:

- Light truck trips outnumbered heavy truck trips by two to one in the Vancouver region.
- The number of daily truck trips in the GVRD exceeded 100,000 trips, and about 15 percent of all truck traffic in the region had an origin or destination outside the region.
- Truck traffic accounted for 3 percent of total daily vehicular traffic, with almost 85 percent of the truck traffic operating within Greater Vancouver.
- External truck traffic accounted for 15 percent of the total goods movement in the region by volume.

The GVRD model considers only two truck classes (light and heavy), while the Phoenix and CATS model have three and

four truck classes respectively in their final selection. The GVRD model considers separate truck network and its assignment. These concepts of truck network and/or a separate assignment could be adapted to Dade County. The key results from the Vancouver study should be carefully compared to the Dade County due to geographic variation. Like the CATS and Phoenix truck travel models, the GVRD model also builds on its own truck survey. The trip distribution phase of each of these studies is heavily dependent on the O/D information from truck travel survey. For the Dade County truck model, a similar survey collecting the origins and destinations of truck trips geocoded to TAZ's should be considered. Trip generation equations of the GVRD model are very simple and could be easily transferred to the Dade County model after proper translation of employment categories.

5.4.3 Florida's Intermodal Planning Process

Overview

Florida's Intermodal Planning Process is one element of Florida's Transportation Planning Process. The major steps in the Intermodal Planning Process are:

- Criteria for programs and projects;
- Data management system;
- Demand forecasting process;

- Needs identification process;
- Funding;
- Advanced technologies and innovative Techniques;
- Strategy and action identification;
- Prioritization; and,
- Implementation plan,

The process is being developed as a tool to guide the Florida Department of Transportation (FDOT) and local governments in performing intermodal transportation planning. The strategy developed as part of the process is intended to serve as the foundation for Metropolitan Planning Organizations (MPOs) and local governments to use in developing and updating their own intermodal plans.

In Florida, "intermodal" refers to the movement of both goods and people, thus including both intermodal (linkages, interactions and movements between modes of transportation) and multimodal (collectively addressing all modes of transportation). *The report identifies that a key limitation to intermodal planning is the lack of data, particularly relative to private sector transportation movements and origin-destination of freight (and passengers) in the intermodal environment.*

The Intermodal Planning Process calls for establishment of an Intermodal Data System (IDS), that will eventually include a

data base containing existing physical characteristics and related information to be used in the intermodal planning process for all categories of intermodal systems in Florida. In review of the various modes (air, sea, freight, transit, etc.) a significant gap was identified in the availability of highway freight movement data. The 1993 Commodity Flow Survey by the Bureau of Census presented data on 24 million shipments, but because it was aggregated at the multiple Bureau of Economic Analysis areas, its applicability at the state and local level is limited.

The report identifies a Central Office Steering Committee to guide the collection of data for the IDS. District offices will be the clearinghouses for collected data. They could work closely with MPOs in their region to gather the necessary data. The primary output of the IDS will be the Intermodal Facility Evaluation Report (IFER), which is intended to be produced annually and provide an inventory of data collected and the evaluation of each intermodal facility studied.

The implementation of demand forecasting modeling for the Statewide Intermodal Planning Process will include auto, truck, and public transit highway passenger trip modes. Air passenger and freight movement, as well as high speed rail and Amtrak passenger trips will be simulated. Water passenger trips would be

considered in the form of special generators. Freight movements would be replicated through spreadsheet analyses and then assigned onto the intermodal network, where applicable. Bicycle and pedestrian movements would not be modeled.

The Statewide Highway Forecast Model and local urban area models are recommended to serve as the base for the Statewide Intermodal Planning Process' intermodal demand forecasting model. The Statewide model provides a statewide highway network for evaluating Florida intercity auto, truck and bus highway travel.

Truck trip movements are not currently modeled as a unique standard element of statewide or urban area highway modeling in Florida. The "Florida's Intermodal Planning Process" report proposes that truck movements become an integral part of the overall intermodal modeling process, with the initial truck highway assignment modeling limited to truck travel. A modeling procedure similar to the San Francisco Bay Area Truck Travel model is recommended in the report. In the San Francisco model, the truck travel model has four procedures: trip generation; trip distribution; peak hour factoring; and trip assignment. Truck, rail, port, and pipeline freight movement for selected commodities are based on spreadsheet calculations and not included in the highway network assignment because of the extensive data base required. Freight

movement trip production and travel patterns, as well as commodities categories, are based on field observed conditions. Should Florida follow the recommendation, these particular points would need to be included in the proposed truck model.

Information needed to quantify truck travel movements would be obtained by surveying selected station points throughout Florida, statewide, local or both. Survey data are recommended to include: axle size, commodity type, trip type, origin/destination, route, and trip frequency.

The report identifies that current state-of-the-art modeling in Florida uses FSUTMS for transportation demand modeling. FSUTMS models do not currently address many intermodal factors. Changes to the existing modeling structure are proposed to be examined. Some possible modifications are proposed. In the near term, adjustments to incorporate freight are not proposed. As possible "ultimate" model modifications, it is proposed that all passenger and freight movements be modeled.

Applicability to Dade County

The Statewide Intermodal Planning Process identifies modeling of freight movement as an "ultimate" goal. This is due to the recognition in the report that data to support such modeling is not currently readily available. Through the Intermodal

Data System, proposed in the report, a structure for assembling a statewide data base on all modes, including freight, is defined. The MPOs have the opportunity to participate in this data base development. As Dade County considers development of a freight mode for its model, the data elements required should complement those anticipated to be collected for the state process. In particular, it is recommended that Dade County and other MPO's work with the state to develop coordinated data requirements and collection procedures in order to share the cost among all government bodies of developing and using truck database information.

5.4.4 Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area (1992)

Overview of Report

The Arizona Transportation Research Center, the Arizona Department of Transportation commissioned development of a travel survey of commercial vehicles operating in the Phoenix area. Survey data were used for development of commercial vehicle trip generation, distribution, and traffic assignment models. The models were designed to be incorporated into a UTPS-based travel model system.

The Phoenix commercial vehicle survey provided detailed information on 3,402 trips

made by 606 commercial vehicles registered in Maricopa (Phoenix) County. Each trip had both its origin and destination within the transportation study area. The purpose of the survey was to develop new models for internal commercial trips only. The sampling frame for the survey was a computerized file of 157,000 commercial vehicles registered in the County obtained from the Department of Motor Vehicles and a listing of 2,300 vehicles owned by the U.S. Postal service and garaged in the County.

The survey method was a combined telephone/mailback technique. This approach was adopted after obtaining low response rates in an initial pretest which relied entirely on a mailout/mailback method. The questionnaire, which was mailed to contacts (vehicle owners) who agreed to participate, was a one-day trip diary. The report identifies that the confidence level of the survey was 95 percent. Approximately 30 percent of those who were mailed questionnaires after telephone contact responded to the survey (a total of 1726 surveys were mailed, resulting in 525 responses).

In order to expand the successfully coded vehicle and trip records to represent total commercial vehicle travel by vehicles registered in Maricopa County, expansion factors were developed for each data record. The variables affecting these expansion factors are:

- The percentage of vehicles in use for commercial purposes within the Phoenix metropolitan area on a typical weekday;
- Vehicle weight-class:
 - 0 - 8,000 pounds
 - 8,000 - 28,000 pounds
 - 28,000 - 64,000 pounds and
 - over 64,000 pounds of gross vehicle weight;
- Zip code of vehicle owner.

Overall, the survey represented a 0.5 percent sample of all commercial vehicles based in Maricopa County. In addition to vehicle factors, additional truck-specific factors were used to account for each truck's unreported trips beyond the ten maximum trips which the survey asked to be reported.

Travel Characteristics of Commercial Vehicles

As shown in Table 5-1, the average vehicle surveyed reported making 7.7 trips per day. The averages by weight class are:

Table 5-1
Travel Characteristics of Commercial Vehicles

Vehicle Weight (lbs.)	Average Trips (Per Day)	Average Miles-Per-Day	Average Miles-Per-Trip
0 - 8,000	7.2	79.0	11.0
8 - 28,000	12.1	56.2	4.7
28 - 64,000	8.0	74.0	9.2
64,000+	4.7	156.8	33.4
Total	7.7	78.5	10.2

Vehicles in the heaviest category make a few long trips and in so doing generate many more vehicle miles per day than are generated by the lighter vehicles.

The time-of-day pattern for commercial vehicles is much different than that for private autos. Rather than AM and PM peaks, truck travel typically increases steadily to a

single peak hour, and then begins decreasing steadily. The peak hour by vehicle type ranges from the hour ending at 9:00 a.m. to the hour ending at 2:00 p.m., and the percentage of total daily travel occurring in the peak ranges from 11 to 15 percent.

Comparing the peaking characteristics of commercial vehicles with other private

vehicles, the AM peak period is found to be as important for commercial vehicles as for private vehicles. During the p.m. peak periods, when traffic volume is greatest in total, commercial vehicle's percentage of daily traffic is only ten percent of that for private vehicles.

In the survey form, truck drivers were asked to select eleven land use categories. These eleven categories were subsequently aggregated into eight categories to match

the land use data used in the travel forecasting process for the Phoenix metropolitan area. Table 5-2 shows the distribution of land uses for the Phoenix truck survey. Three land uses - residential, retail and manufacturing/warehousing - account, overall, for approximately equal shares of all trip ends. Together, these three land uses account for nearly two-thirds of all reported trips. Distributions of truck trip travel times, and the corresponding averages, are shown in Table 5-3.

Vehicle Weight (lbs.)	Average Trip Distance (miles)	Speed (miles/hour)	Percentage of Vehicle Trips Stopping On-Street
0 - 8,000	14.1	35.4	36.8
8 - 28,000	8.5	27.2	50.2
28 - 64,000	13.3	26.5	10.9
64,000+	27.1	28.2	17.5
Total	13.3	28.4	38.3

These distributions are based on the times between successive vehicle stops and they include time spent during stopping. Overall, the average trip time is 28.1 minutes. Generally, average trip times increase with increasing vehicle weight. A

similar distribution of trip distances based on starting and ending odometer readings for individual trips shows the following averages of trip distance and speed by vehicle weight categories.

Table 5-2
Land Uses at Trip Ends
for the Phoenix Truck Survey

Land Use at Stop	Vehicle Weight (lbs.)				Total (%)
	0 - 8,000 (%)	8 - 28,000 (%)	28 - 64,000 (%)	64,000+ (%)	
Residential	19.5*	35.8	18.6	26.7	22.9
Retail	20.0	18.5	22.9	7.4	19.5
Manufacturing, Warehousing	22.2	15.8	23.6	16.6	20.8
Transportation, Utilities, Communications	2.0	1.6	3.7	9.6	2.2
Medical, Government	4.0	0.4	4.0	6.4	3.4
Office, Services	11.2	3.2	1.8	1.2	9.0
Garaging locations	9.3	18.4	13.1	19.0	11.5
Other	11.8	6.3	12.3	13.1	10.7

* Percentage of all commercial vehicle trips.

Source: Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area, Cambridge Systematics and the Arizona Department of Transportation, February 1992.

Table 5-3
Distribution of Trip Durations
for Phoenix Truck Survey

Time Range (minutes)	Vehicle Weight (lbs.)				Total (%)
	0 - 8,000 (%)	8 - 28,000 (%)	28 - 64,000 (%)	64,000+ (%)	
0 - 5	18.5*	37.7	13.3	1.8	20.4
5 - 10	17.2	16.6	17.2	2.8	16.1
10 - 15	17.3	10.5	20.5	5.8	15.3
15 - 20	8.6	10.6	8.5	5.7	8.5
20 - 25	6.1	3.2	4.4	6.5	5.3
25 - 30	9.6	7.9	8.5	13.6	9.0
30 - 45	8.8	3.6	8.5	15.5	7.8
45 - 60	3.6	4.1	5.5	9.2	3.7
60 - 75	4.8	0.2	2.6	9.2	3.9
75 - 90	2.1	0.2	2.0	5.3	1.7
90 - 105	0.1	0.5	0.7	4.3	0.3
105 - 120	0.8	0.2	1.4	5.8	0.8
120+	2.6	4.7	6.8	14.5	7.2
Average (min.)	23.9	18.8	30.1	57.6	28.1

Note: These trip durations include time for loading, unloading, etc., at each stop.

* Percentage of all commercial vehicle trips.

Source: Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area, Cambridge Systematics and the Arizona Department of Transportation, February 1992.

While this table also shows that over one-third of commercial vehicle stops are made on-street, there is considerable variation of this statistic for the separate vehicle categories.

Truck Travel Model

- Trip Generation

For the trip generation model, two alternative forms, linear regression models and land-use based models, were evaluated. The land-use based models appeared to be

superior because of their lower linear coefficients of variation.

Since the survey included information on land uses at trip ends and the Maricopa Association of Governments (MAG) zonal data included the number of residents and employment by land use category, it was possible to analyze trip generation rates by land use categories. The five land use categories available in the MAG zonal data and the corresponding categories used in the truck survey have the following correspondence:

MAG Zonal Employment-Category	Truck Survey Land Use Category
Retail	Retail
Industrial	Manufacturing, warehousing
Public	Medical, government
Office	Office, services
Other	Transportation, utilities, communication, other

The equation for each of the above five land use category trip rates has the following form:

Truck trip rate for land use category i =

study area trips to land use category i
study area employment at land use category i

An additional land use category - residential land - was also included in the survey. Trip rates for trips to and from this land use category was defined as:

total study area trips to residential land
total study area households

The equation for the trip generation models for each vehicle weight category is:

$$TRIPS_{wi} = t^*TOTHH_i + u^*RETEMP_i + v^*INDEMP_i + w^*PUBEMP_i + x^*OFFEMP_i + y^*OTHEMP_i + z^*RESHH_i$$

where

$TRIPS_{wi}$ = total average weekday commercial vehicle trips for vehicle weight category w originated from and destined for zone or district i ;

$TOTHH_i$ = total households in zone or district i ;
 $RETEMP_i$ = total retail employees in zone or district i ;
 $INDEMP_i$ = total industrial employees in zone or district i ;
 $PUBEMP_i$ = total public employees in zone or district i ;
 $OFFEMP_i$ = total office employees in zone or district i ;
 $OTHEMP_i$ = total other employees in zone or district i ;
 $RESHH_i$ = total resident (non group quarters, non temporary, and non seasonal) households in zone or district i .

Information on land uses to and from the garaging locations was not requested in the travel survey. To overcome this data limitation, the equations estimated for trips to

and from garaging locations were added to equations based on the trip rates. The final land-use based models for the five vehicle weight categories are shown in Table 5-4.

- Trip Distribution

Six zonal trip tables (four for each vehicle weight class, one which combines the two heaviest groups, and one which includes all weighted survey trips) were analyzed using a table of zone-to-zone off-peak highway skimmed travel times for Phoenix's existing highway system.

The total one percent of weekday Daily Trips and the average trip length for these trip tables are:

Vehicle Weight (lbs.)	Total Weekday Daily Trips (miles)	Percent of Weekday Daily Trips	Average Trip Time (minutes)
0 - 8,000	702,377	74.5	16.4
8,000 - 28,000	187,855	20.0	11.9
28,000 - 64,000	31,944	3.4	16.2
64,000+	19,430	2.1	23.1
28,000+	51,377	5.5	18.8
All Trucks	941,613	100.0	15.6

The average travel time by vehicle weight category are much smaller than those obtained from drivers' reported stopping times per trip, reflecting the absence of stopped time from the averaging process and reflecting differences between times based on minimum paths in a highway

network and times reported by truck drivers. The average trip times for the two heaviest vehicle categories are quite different, but a final decision to combine these into a single heavy vehicle category (28,000+) was not made until initial gravity model calibration results were obtained.

For consistency with the MAG's other trip purpose distribution models, a gravity model was used to simulate trip distribution. An iterative application of the TRANPLAN gravity model calibration program was used to calibrate the model, supplemented by a spreadsheet to help make manual friction factor adjustments. The model calibration process involved re-estimating each friction factor using a correction term equal to the desired fraction of trips in a travel time range

divided by the previously estimated fraction in this range. The travel time ranges were selected to ensure that the resulting friction factors would always decrease as travel times increase. Comparisons of the predicted and observed trip time (Table 5-5) distribution from the final calibration runs for all three vehicle weight categories did not show any variations. The average trip lengths were also matched closely.

Table 5-4
Final Trip Generation Model
for Phoenix Truck Traffic

Independent Variable	Vehicle Weight (lbs.)				
	0 - 8,000	8 - 28,000	28 - 64,000	64,000+	28,000+
Total households	0.15433*	0.06859	0.00671	0.00590	0.01260
Retail employment	0.59091	0.13253	0.03075	0.00609	0.03685
Industrial employment	0.64087	0.09972	0.03210	0.01781	0.04991
Public employment	0.29491	0.00596	0.01349	0.01049	0.02398
Office employment	0.30925	0.02119	0.00225	0.00095	0.00320
Other employment	0.76348	0.10567	0.04026	0.03500	0.07527
Residential households	0.04004	--	0.00288	--	0.00288
Group quarter households	--	7.52348	--	--	--
Total area (acres *100)	--	--	--	0.00365	0.00365
Vehicles	--	--	--	0.00062	0.00062

* Commercial vehicle one-way trips per one unit of the independent variable.

Source: Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area, Cambridge Systematics and the Arizona Department of Transportation, February 1992.

- Calibration and Traffic Assignment

MAG, does not have a process to make separate truck assignments independent of passenger vehicle assignments. Survey data in these study areas have been used mainly for truck modeling. However, both studies applied equivalent vehicle factors to the truck trip table before combining it with the automobile trip table. A two-step adjustment was made to the calibration process for the truck assignment in the

Maricopa County travel model. Those are:

- The commercial vehicle trips were expanded by weight class to account for the average number of axles per vehicle in each weight class.
- The total commercial vehicle trips were expanded by VMT to match those estimated with the reported VMT for the Phoenix region.

Table 5-5
Observed and Predicted Trip Time for the
Final Calibrated Phoenix Truck Distribution Models

Trip Time (minutes)	Vehicle Weight (lbs)					
	0 - 8,000		8 - 28,000		28,000+	
	Observed (%)	Predicted (%)	Observed (%)	Predicted (%)	Observed (%)	Predicted (%)
0 - 5	21.2*	21.0	42.3	41.3	23.8	21.8
6 - 10	20.4	20.8	20.2	19.4	12.8	13.4
11 - 15	19.2	19.1	10.3	10.8	11.6	12.2
16 - 20	12.4	12.6	9.4	9.7	11.6	12.6
21 - 25	6.5	7.6	5.1	5.	11.	11.8
26 - 30	8.2	6.6	1.9	3.8	8.0	10.0
31 - 40	6.1	6.3	7.9	5.7	13.2	10.4
41 - 50	2.3	2.9	1.8	2.6	4.7	4.7
51 - 60	1.5	1.8	0.6	0.9	2.2	2.4
61 - 70	2.2	0.9	0.6	0.3	0.7	0.7
71 - 80	--	0.3	--	--	0.1	0.1
81 - 90	--	0.1	--	--	--	--
91 - 100	--	--	--	--	--	--
101 - 110	--	--	--	--	--	--
Average Trip Time (mins)	16.4	16.1	11.9	12.2	18.8	18.9

* Percentage of total vehicle trips by weight category.

Source: Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area, Cambridge Systematics and the Arizona Department of Transportation, February 1992.

The second adjustment process accounts for any underreporting of vehicle registration in Maricopa County. The combined registration/under-reporting factor is 1.623. The axles per vehicle trip factors are derived from the commercial vehicle survey. Table 5-6 shows the axles distribution by number of axles and weight classes.

When the averages of Table 5-6 are divided by two, factors are obtained which can be used to increase the number of medium and heavy vehicle trips to account for those made by vehicles with more than two axles. Overall, this adds 3.3 percent more vehicle trips and vehicle miles of travel to that provided by the unadjusted vehicle trip model.

Table 5-6
Axles per Vehicle Trip for Phoenix Travel Study

Number of Axles	Vehicle Weight (lbs)			All Vehicles (%)
	0 - 8,000 (%)	8 - 28,000 (%)	28,000+ (%)	
2	100*	96.3	24.1	95.6
3	--	1.9	57.5	3.2
4	--	1.6	2.4	0.4
5	--	0.2	14.0	0.7
6	--	--	2.0	0.1
Averages	2.000	2.056	3.124	2.066

* Percentage of all commercial vehicle trips by weight class.

Source: Development of an Urban Truck Travel Model for the Phoenix Metropolitan Area, Cambridge Systematics and the Arizona Department of Transportation, February 1992.

Applicability to Dade County

The Phoenix commercial vehicle survey experience produced a list of requirements and suggestions for model transferability to other urban areas. These requirements and suggestions include:

- A file from the state vehicle registration agency of all commercial vehicles registered to owners in the study area;

- The ability to geocode street addresses to traffic analysis zones (TAZs);
- Current zonal data on households and employment by type; on vehicles; and on land area.
- A matrix of zone-to-zone off-peak uncongested highway travel times in the year of the truck travel survey;
- An existing model system to which truck travel models can be added or replaced; and,
- Estimates of regional VMT by commercial vehicle type and by private automobiles.

Because travel patterns vary from one urban area to another, the best approach for developing a truck travel model in another community would be to repeat the travel survey and model development tasks. Although the models developed for Phoenix appear to have performed acceptably for forecasting truck travel, the study does cite inherent trade-offs between the cost of conducting a truck survey and the precision of a truck forecasting model. The Phoenix models could be adapted to Dade County by adjusting the models to match local information. Changes in the trip generation model coefficients would be required to match local measures of vehicle registrations, or vehicle miles of travel (not

likely to be available without a travel survey). In addition, gravity model friction factors for truck travel would have to be revised to match local data on trip lengths.

The report notes that the ultimate extension of the models developed in Phoenix would involve their generalization to create a "national model." This would assume the Quick Response System (Sossiau, A.B., et al, Quick-Response Urban Travel Estimation Techniques and Transferable Parameters, Users Guide, NCHRP Report 187, Washington, D.C., 1978) as a base and would involve combining the existing models with information on national travel characteristics. This would provide urban areas with versions of the models developed in this project with acceptable levels of accuracy for sketch planning purposes.

As Dade County considers incorporating a truck element in its modeling process, data collection on truck activity over and above what is done in this study will be required. The Phoenix experience mirrored the first survey attempt on this study with a poor response to an unsolicited mailout-mailback survey. Future survey efforts should consider a telephone/mailout-mailback technique as an appropriate and cost-effective way to generate truck travel information suitable for incorporation in a model.

5.4.5 Truck Modeling Efforts of Chicago Area Transportation Study (CATS)

Overviews of CATS Studies

In the 1970s, the Chicago Area Transportation Study (CATS) began developing separate trip forecasting models for passenger vehicles and commercial vehicles. It was one of the first of such efforts in the country. Recognition of a change in travel patterns led CATS to conduct a commercial vehicle survey in 1986 to provide updated truck travel data. The CATS practice was not to do separate forecasts and trip assignments for commercial and passenger vehicles but to "translate" commercial vehicle trips into passenger equivalents (VEQs) before assigning vehicle trips to the highway network. Converting trucks to VEQs provides a correct view of the impact of trucks on the traffic stream, but eliminates the ability to specifically estimate the number or percentage of trucks on any given roadway link. This practice was initiated with the recognition that trucks are slower, wider, and longer than cars and that they affect traffic flow and the performance of all vehicles on the network. Trip generation rates and trip lengths for the truck trip generation and distribution models were developed from the CATS 1986 commercial vehicle survey. The survey yielded information allowing the calculation of the average number of truck

trips by type for different land uses. The origin-destination and trip length information from the survey were used to recalibrate the truck trip distribution model.

In the CATS study, four categories of trucks are forecast:

1. "B" trucks, the lightest weight class of commercial vehicles that weigh less than 8,000 pounds gross weight.²
2. Light trucks, which weigh between 8,000 and 28,000 pounds gross weight.
3. Medium trucks, weighing between 28,000 and 64,000 pounds gross weight.
4. Heavy trucks of more than 64,000 pounds gross weight.

The VEQ graphs established from the 1986 survey are as follows:

VEQ class	VEQ factor	Maximum Gross Wt. (Lbs)
B truck	1	8,000
light	1	28,000
medium	2	64,000
heavy	3	80,000

² "B" truck group includes pick-ups and vans in its weight group that are being operated commercially on private (passenger) vehicle registrations for such activities as messenger services, point-of-sale advertising, home furnishings consulting, etc.

The two most important measures of travel behavior are trip frequency and trip length. Trip frequency is the number of trips

made in a 24-hour period. Trip length is the average roadway distance of a trip. These statistics for the 1986 CATS' truck survey are:

Vehicle Class	Daily Trip Frequency	Average Trip Length (Miles)
B Truck	6.9	11.1
light	7.9	9.6
medium	9.3	10.5
heavy	5.9	24.9

The 1986 CATS Commercial Vehicle Survey resulted in the following conclusions for the truck travel survey and travel characteristics:

- B trucks made more residential trips than any other truck category.
- Almost three-quarters of all International Registration Plan³ vehicles were from outside the six-county study area.
- With the exception of heavy trucks, trip frequency increased with vehicle weight.
- Heavy trucks made much longer trips, compared to light trucks.
- Weighing the average trip frequency and trip length by the number of working vehicles in each class, the study found that almost two-thirds of all commercial

vehicle miles of travel were made by B trucks. When weighting the average trip frequency and trip length by the number of working vehicles in each class and by the appropriate vehicle equivalency (VEQ) factors, the results showed that almost half of all commercial equivalent miles of travel were made by B trucks.

- "B" truck trip ends dominated all land uses except for the landfill and in-transit (i.e., leaving the region) categories.
- A strong relationship existed between heavy trucks and terminal/warehouse land uses.
- Retail land uses attracted many more B class, light, and medium truck trips than trips from the heavy class.

A more complete set of trip characteristics can be obtained by examining the relative distribution within

³ Vehicles with registrations that allow them to operate in multiple states.

each vehicle class. To provide a profile of trips generated and destined to different land uses, survey respondents were asked to provide land use data. The eleven land use categories cited and coded from the survey are:

- Residential;
- Retail;
- Manufacturing;
- Terminal/warehouse;
- Public/government;
- Office/service;
- Construction;
- In-transit (i.e. E-E leaving the region);
- Landfill;
- Agricultural; and,
- Other/mining.

A correspondence was made between the land use categories and the data in the socioeconomic file. Using the correspondence and the number of trips in each category, the number of trips going to each zone within the region was calculated. Such an iteration is conducted for each land use category and for each vehicle type.

- Heavy trucks were found to dominate the in-transit category. Of all heavy trucks, almost nine percent were found to be in-transit. Of all commercial vehicle trips in the in-transit category, 44.8 percent were made by heavy trucks.

- A need exists for the development of a coding scheme on restricted links for trucks in the modeling network. Since commercial vehicles are converted to passenger vehicle equivalents, it was difficult to identify which trips were truck trips and exclude from being assigned to serve routes where, in practice, they were forbidden by law.

Applicability to Dade County

Over the last two decades, CATS has developed and refined the truck travel forecasting effort. Many studies since have cited CATS's pioneering efforts in truck travel forecasting. Since the 1986 CATS survey, separate reports have been written based on the data and findings of the commercial vehicle survey. Vehicle classes of CATS study would be a candidate for Dade County Truck Model. The travel characteristics of the selected vehicle classes are very dissimilar to be considered in trip generation and trip distribution as aggregated. Chicago's position as a central shipping point with strong intermodal connections indicates correlation to the Dade freight situation.

5.5 Potential Dade County Truck Model

5.5.1 Introduction

This section defines a framework for a Dade County Truck Model which could be implemented with proper data and resources (defined later in this section). There are four types of freight traffic within most urban areas. These are (1) long-haul traffic; (2) short-haul extra-regional traffic; (3) local distribution traffic; and, (4) through traffic. Each is different in character, involves different actors, and employs different modes. The proposed structure does not attempt to provide freight mode-choice surveys and/or modeling efforts (competition among rail, truck, air, and ship, for example). The model structure answers only the truck traffic question and proposes to model other freight modes through special generators.

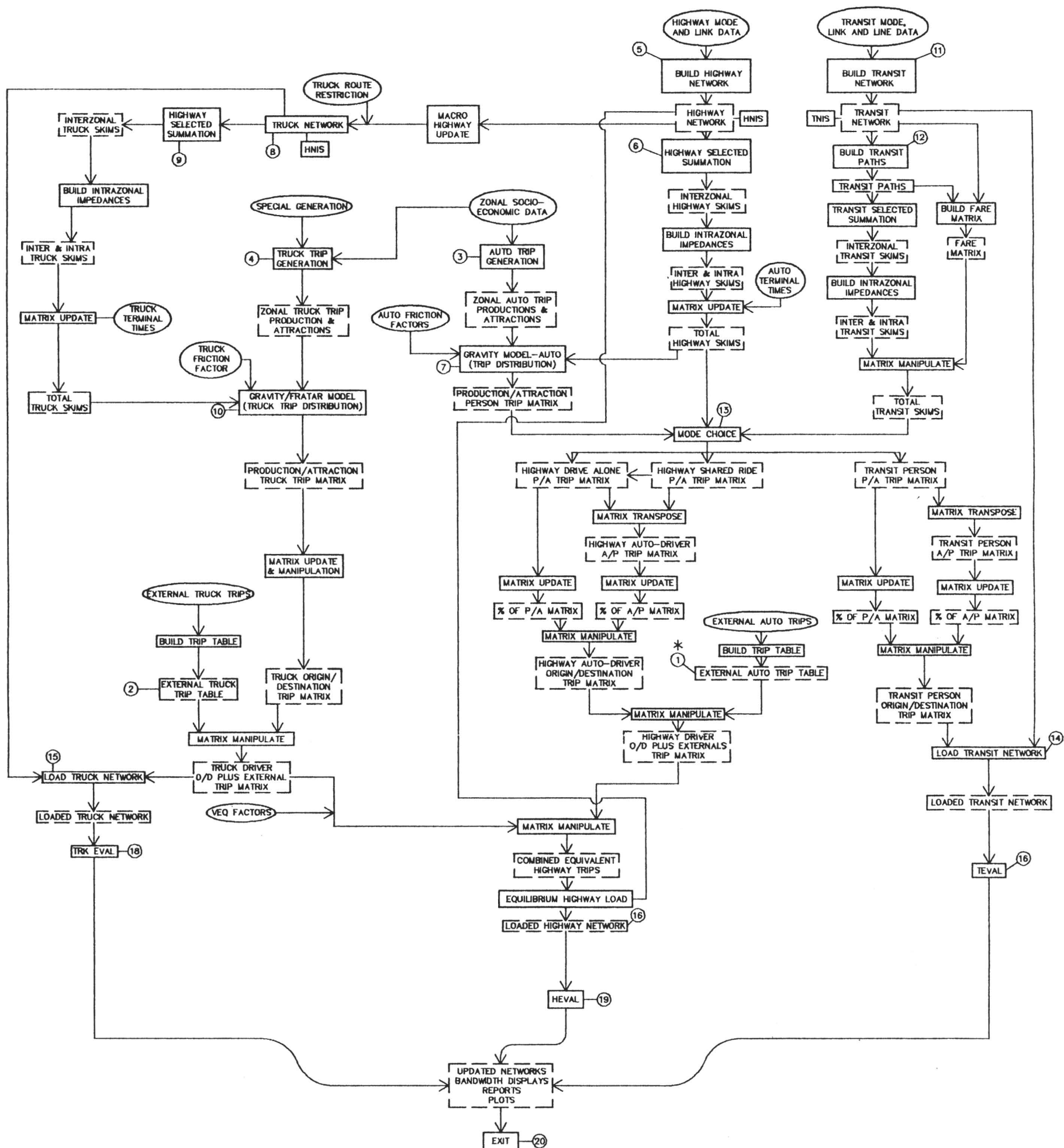
Truck traffic has different travel characteristics than passenger vehicles. Their impact on the urban roadways requires a separate modeling approach and technique to estimate future trips. Travel demand forecasting for Dade County follows FSUTMS conventions and uses a fairly conventional trip purpose split as follows: home-based-work trips, home-based-shopping trips, home-based-social-recreational trips, home-based-other trips, non-home-based trips, truck/taxi trips,

internal/external and through trips. The model has approximately 1,200 zones and is fully operational on RS/6000 computer platforms. It uses two networks - highway and transit - and performs modal splits between these models with a sophisticated nested logit mode choice model. Currently, the Dade County travel model uses the following thirteen-step menu to complete a model run.

- | | |
|--------------------------|-----------|
| 1. External | → EXT |
| 2. Generation | → GEN |
| 3. Highway Network | → HNET |
| 4. Highway Paths | → HPATH |
| 5. Distribution | → DISTRIB |
| 6. Transit Network | → TNET |
| 7. Transit Path | → TPATH |
| 8. Mode Split | → MODE |
| 9. Transit Assignment | → TASSIGN |
| 10. Highway Assignment | → HASSIGN |
| 11. Transit Evaluation | → TEVAL |
| 12. Highway Evaluation | → HEVAL |
| 13. Air Quality Analysis | → EMIS |
| 14. Exit to System | |

5.5.2 Model Framework

The proposed truck model structure is based on several assumptions regarding truck traffic. This includes: (a) truck types (for example, light and heavy); (b) freight carried by trucks only; (c) separate truck assignment (use of all-or-nothing assignment); and, (d) combined auto and truck assignment using the FSUTMS equilibrium assignment. The "assignment" of traffic in the model refers to the allocation, or assignment, of specific trips on the



LEGEND

TRANPLAN/FSUTMS
PROCESSTRANPLAN/FSUTMS
I/O FILE

USER INPUT
ASCII DATA

* NUMBERING SYSTEM CORRESPONDS TO
MODULE DESCRIPTIONS LISTED ON PAGE 43

roadway network. To obtain a picture of how trucks would function on an uncongested network, an all-or-nothing assignment (which assumes the trip follows the shortest path possible) is used. A second profile is presented using total traffic. Under total traffic, an equilibrium assignment is used which assigns trips based on congestion.

Using the all-or-nothing assignment element as a starting point assumes trips on the free-flow path is available.

An example of the modules recommended for incorporating truck traffic into the Dade County Model is:

<u>Module Description</u>	<u>Suggested Program/Name</u>	<u>Status</u>
1. External - Auto	→ EXTAUTO	Modified
2. External - Truck	→ EXTTRK	New
3. Generation - Auto	→ GENAUTO	Modified
4. Generation - Truck	→ GENTRUCK	New
5. Highway (Auto) Network	→ HNET	Unmodified
6. Highway (Auto) Paths	→ HPATH	Unmodified
7. Distribution - Auto ⁴	→ DISTRIB	Unmodified
8. Truck Network	→ TRKNET	New
9. Truck Paths	→ TRKPATH	New
10. Distribution - Truck	→ DISTTRK	New
11. Transit Network	→ TNET	Unmodified
12. Transit Paths	→ TPATH	Unmodified
13. Mode Split	→ MODE	Unmodified
14. Transit Assignment	→ TASSIGN	Unmodified
15. Truck Assignment	→ TRKASIN	New
16. Highway (Auto and Truck) Assignment	→ HASSIGN	Unmodified ⁵
17. Transit Evaluation	→ TEVAL	Unmodified
18. Truck Evaluation	→ TRKEVAL	New
19. Highway (Auto and Truck) Evaluation	→ HEVAL	Unmodified
20. Exit to System		

The status of these modules are categorized as “modified,” “unmodified,” and “new” based on action necessary to change the script and/or program. Figure 5-1 presents the suggested Dade County Travel Model with a truck element. It should be

noted that the Dade County transit and highway models are much more sophisticated than this representation, housing nested logit mode choice models, multi-path, multi-period transit assignment, and HOV and TOLL modeling capabilities.

⁴ In this pre-distribution stage, all person trips (both auto and transit) are distributed.

⁵ Module 16 is classified as unmodified because factoring is being accomplished under module 16.

For simplicity, details of those features are not shown in Figure 5-1. However, the nineteen modules necessary for the truck modeling activity are depicted in the diagram to show the interconnection among the modules. A description of the modules for which status identified as "new" and "modified" follows:

Module 1 and 2 (EXT AUTO, EXT TRK):

Through-trip tables for auto and truck need to be built based on an external station survey. South Florida is unique in that there is minimal flow of through truck traffic (of note, the Dade County model does not have an element to model external-external automobile traffic). Virtually all trucks coming into South Florida that are line-haul trucks must turn around and go back out of South Florida.

External-internal truck traffic would have to be separated from total external-internal traffic. Existing external station survey data should be examined to see if the auto and truck external-internal trip table could be assembled separately. This should be possible as FDOT usually records vehicle type information. A simple distribution of trucks and auto at each external station could be a starting point for separate auto and truck external trips. Truck trips should have separate distribution patterns among the internal zones than the auto trips.

Module 3 (GENAUTO)

The truck-taxi trip generation model for auto trips should be modified. The current truck/taxi purpose could be replaced with several purposes. The current FSUTMS truck-taxi (TT) equation is:

$$TT = 0.3 (\text{dwelling units}) + 0.45 (\text{total employment}).$$

A possible scheme for replacing the truck/taxi trip would be new purposes for taxis and for light, medium, and heavy trucks. From trip end data obtained from travel surveys, a new equation for taxi trips should be developed. The State of Florida Model Task Force Committee is currently involved in testing alternative model structure for trip generation. Researchers are using travel data from several recent surveys. Those survey data should be analyzed for a possible trip generation model for the taxi trips. If this scheme does not work out for the immediate application of the proposed model structure, borrowing a taxi-trip model from another urban area should be considered. Any necessary change in the trip generation program is expected to be minimal unless the model selected for the taxi trips uses an independent variable either nonexistent in the current Zdata files or not easily available at the zonal level.

Module 4 (GENTRK)

A new truck travel survey providing information on trip end land-use variables and origin-destinations should be considered for developing a useful truck model. Survey analysis should determine the number of truck trip purposes as well as the land use

variable and origin-destination movements for the trip generation equation. However, alternatives for Dade County are proposed in the absence of such a survey. The categories of trucks used by the three MPOs reviewed in the previous section in their truck models are:

MPO	Truck Category	Weight (maximum gross weight unless specified)
Chicago (CATS) (1986)	B Truck	8,000 lbs.
	Light	28,000 lbs.
	Medium	64,000 lbs.
	Heavy	84,000 lbs.
Phoenix (MAG) (1991)	Type 1	8,000 lbs.
	Type 2	28,000 lbs.
	Type 3	More than 28,000 lbs.
Vancouver (GVRD) (1991)	Light	4,500 - 20,000 kilograms
	Heavy	More than 20,000 kilograms

The Chicago Area Transportation Study (CATS) made a correlation between the surveyed land use categories (Residential, Retail, Manufacturing, Warehouse/Terminal, Government/Public, Service/Office, Construction, In-Transit, Landfills, Agricultural, Other) and a socioeconomic data file. Then an iterative procedure was used to determine the number of trips going to each zone for each land use category and vehicle type. Phoenix used a truck travel survey similar to the CATS travel survey. MAG has developed a trip generation model based on their travel survey for each of their vehicle type. The independent variables used in the Phoenix model are: total households, public employment, office employment, other employment, resident households, group-

quarters households, total acres and vehicles. In the Vancouver model, trip generation equations for light and heavy trucks were developed based on a travel survey. The predictor variables used in the models are: population, wholesale, manufacturing, and non-wholesale employment.

Transferability of the MAG and GVRD trip generation model is assessed (Table 5-7) by comparing their predictor variables against zonal data of the Dade County travel model. Table 5-8 presents the 1990 Dade County employment in 2-digit SIC codes from two sources. The figures in this table were used as weights to derive a preliminary truck trip generation model for Dade County

by transferring MAG's model coefficients (refer to Table 5-4).

Dade County employment categories were expressed in terms of the MAG's predictor variables. The derived Dade County Truck Trip Generation Models are shown in Table 5-9. The preliminary estimate of the coefficients can be used as a starting point. A validation effort may need to modify these coefficients for transferring the MAG model to Dade County. For example, differences in the commercial vehicle registration in two areas need to be compared to correct for regional biases. It is preferable to have models using their own travel survey. Models in Table 5-9 are proposed to avoid major collection/assembly of zonal data. Data on group-quarters households and total TAZ area need to be assembled at the zonal level. 1990 Census contains information on group-quarter households. Total TAZ area could be easily obtained from a GIS-mapping of zonal data.

The model in Table 5-9 uses the same truck classes used in MAG models. Once again, determination of trip classes will be best made through a travel survey identifying classes of vehicles that have dissimilar trip rates and average trip length. Such a survey may indicate the need for four truck classes (splitting the 28,000+ truck classes into two categories, one being 28,000 to 64,000 pounds and the other 64,000+).

Another alternative transferred model (for only two truck classes) is proposed in Table 5-10. These models are directly taken from the GVRD model based on assumptions of employment correspondence. Although the models in Table 5-10 are much simpler, the assumptions behind transferability favor models of Table 5-9 over those in Table 5-10. However, both of these proposed models could be tested for Dade County.

The proposed model structure provides only for modeling truck traffic. The influence of other freight modes as well as the zones which will not be captured by the usual trip generation rates needs to be modeled through special generation techniques similar to those employed in auto trips.

Module 8 and 9 (TRKNET and TRKPATH)

The GVRD truck model uses a separate truck network for its light and heavy trucks. Neither CATS nor MAG truck models use a separate truck network. In order to produce separate estimates of truck traffic, a separate truck network should be built. Generally, MPO's have a truck route plan designating where truck movements are permitted. In most cases, the truck network should share the regional road network with passenger vehicles. In general, the truck network should be comprised of freeway, arterial and collector facilities. Minimal representation is given to local and residential roadways. Trucks (especially heavy trucks) may be

Table 5-7
Correspondence between PHOENIX/GVRD
Truck Generation Predictor Variables
and Dade County Zonal Data

MAG Predictor Variables	GVRD Predictor Variables	SIC Codes ¹	Dade County Zonal Data ²	
			Apply Directly	Do Not Apply Directly
Total households			Tot. Occu. Dwelling Units	
Resident Households			Tot. Perm. Occu. Dwelling Units	
Group Quarter HHs			Available	
Total Acres (*100)			Available	Available
Vehicles			Vehicles available in SF and MF Dwelling Units	
Retail Employment		50 - 51 52 - 59	Commercial Employment	
Industrial Employment		1 - 39	Industrial Employment	
Public Employment		91 - 99		Part of Service Employment
Office Employment		60 - 67 70 - 89		Part of Service Employment
Other Employment		40 - 49		Part of Service Employment
	Population		Available	See footnote 1
	Wholesale Emp.	50 - 51		Part of Commercial Employment
	Non-wholesale Emp.	1 - 49 52 - 99		Total minus Wholesale Employment
	Manufacturing	20 - 39		Part of Industrial Employment

¹Assigned SIC codes need to be verified from PHOENIX/GVRD officials.

²SIC for FSUTMS place of work employment:

<u>Category</u>	<u>SIC-Code</u>
Commercial	50 - 59
Industrial	1 - 39
Service	40 - 49, 60 - 99

Source: The Corradino Group

Table 5-8
1990 Dade County Place of Employment

Industry	SIC Code	CTPP Part B (A)	FDLES T6.23 (B)	Total Employment (A + B)/2	Percent	Dade Co. Employment Class
Agriculture, forestry, and fisheries	01 - 09	16,081	12,544	14,313	1.5786%	Industrial
Mining	10 - 14	678	858	768	0.0847%	Industrial
Construction	15 - 17	58,656	37,748	48,202	5.3164%	Industrial
Manufacturing	20 - 39	104,398	87,733	96,066	10.5954%	Industrial
Transportation, communication & other public utilities	40 - 49	97,809	78,799	88,304	9.7394%	Service
Wholesale trade	50 - 51	60,825	69,582	65,204	7.1916%	Commercial
Finance, insurance & real estate	52 - 59	160,135	164,265	162,200	17.8897%	Commercial
Services	60 - 67	77,299	69,469	73,384	8.0938%	Service
Public Administration	70 - 89	318,449	296,489	307,469	33.9120%	Service
Nonclassifiable (others)	91 - 98	39,492	55,013	47,253	5.2117%	Service
	99	6,575	438	3,507	0.3867%	--
Total		940,397	872,938	906,668	100.0000%	

(A)CTPP (Statewide), PART B

(B)1992 Florida Statistical Abstract, Table 6.23

Source: The Corradino Group

Table 5-9
Dade County Truck Trip Generator Model
Derived from Phoenix Truck Model

Independent Variable	Vehicle Weight (lbs.)		
	0 - 8,000	8 - 28,000	28,000+
Total Occupied DU	0.15433 ⁽¹⁾	0.06859	0.01260
Total Permanently Occupied DU	0.04004	--	0.00288
Group Quarter Households	--	7.52348	--
Total Area (acres *100)	--	--	0.00365
Vehicles	--	--	0.00062
Industrial Employment	0.64087	0.09972	0.04991
Commercial Employment	0.59091	0.13253	0.03685
Service Employment	0.38500	0.03405	0.01747

⁽¹⁾Preliminary estimate of trucks one-way trips per unit of the independent variable.

Source: The Corradino Group

Table 5-10
Dade County Truck Trip Generator Model
Derived from GVRD Model

Independent Variable	Vehicle Category	
	Light ($\leq 20,000$ kg)	Heavy ($> 20,000$ kg)
Population	0.0103	
Commercial	0.327	0.164
Non-Commercial	0.0213	
Industrial		0.0103

Assumption on Employment - Correspondence:

GVRD	→	Dade
Wholesale	→	Commercial
Non-wholesale	→	Non-wholesale
Manufacturing	→	Industrial

restricted from certain roads on the county/MPO's truck route plan. For instance, weight limitations, truck maneuvering requirements, and local noise ordinances may forbid trucks to use certain roads and routes for through travel, or prohibit them from operating at certain times.

A highway network should be the starting point to build a truck network. TRANPLAN's "Macro Highway Network Update Procedure" may be employed to build the truck network from the highway networks. Each roadway link should contain speed and capacity or the information to obtain it. Analogous to the highway network, a speed capacity table for the truck network could be developed based on network attributes (for example, facility type, area type and number of lanes).

These attributes usually will come from the highway network. Additional data which affect the speed and capacities for the trucks should be considered. Alternatively, the posted speed limit for each route could be taken as a measure of truck speed and could be entered directly into the truck network. Two other major data items that need to be entered in the truck network are truck counts and the screenline information. Screenlines for the highway network could be used for the truck network. In the future, the location and number of screenlines could be adjusted based on validation requirements and/or major truck movements. For truck traffic counts, information from the FDOT's truck classification program could be utilized to develop the default truck percentages possibly by facility type and/or sectors. These percentages could be used to derive

the truck traffic counts from the counts on the highway network. It is suggested that the derived default truck count at each screenline locations be replaced by the actual truck count if and when they become available. In addition, any other known truck count should replace the default truck count on the network.

TRANPLAN's "Highway Selected Summation" procedure could be employed to build truck paths. Any turning restrictions would be modeled through the turning prohibitor file (namely TRKTCARD.YYA). It may be necessary to have separate networks and paths for light/medium and heavy trucks to account for their differing speed and capacity characteristics as well as for differing limitations on the use of certain facilities. To keep the model simple, an initial truck model should consider only a common network. However, differing limitations on turning restrictions could be implemented through separate TRKTCARD.YYA files. An example of turning restrictions is a prohibition of trucks from using HOV lanes (such as is being proposed in Dade County). Terminal times for the truck trips are usually much different from the auto trips. These numbers typically weight class-based, should be derived from survey results. Intrazonal impedances for the truck trips could follow the same procedure used for auto trips. The resultant skims would then be used to distribute the truck trips among the zones.

Module 10 (DISTTRK)

In this report three MPOs (MAG, CATS, GVRD) reported using their own truck survey to develop the truck trip generation and distribution models. In the GVRD truck model, both heavy and light truck trips are allocated between origins and destination based on observed distribution patterns and then by applying the Fratar modeling technique. In the MAG truck model, TRANPLAN's "Gravity Model" technique is primarily used to calibrate the distribution parameter based on the travel survey distribution patterns. CATS used its 1986 truck survey to develop the truck trip table. It is suggested that the Dade County MPO undertake a travel survey similar to CATS/MAG/GVRD truck study to develop information for the truck trip distribution model. Because current modeling capacity does not allow for modeling of chained trips, the survey information would focus on single trips. At a minimum, information on the truck trip length distribution by the truck type selected in the truck trip generation module would be necessary for the truck trip distribution model. TRANPLAN's GRAVITY/FRATAR model could be used to distribute the truck trips between origin and destination zones. In the absence of an origin-destination survey, the friction factor from the MAG model could be borrowed for the initial model runs and the truck trip length distribution, then model trip length will be validated against the survey trip length data, gathered from a small scale travel survey.

Module 15 (TRK ASIN)

Among the three MPOs (MAG, CATS, or GVRD) whose studies for truck trip models are referred to in this report, only GVRD used truck trip assignment. Automobile assignments linking travel time was used in the GVRD truck trip assignment. CATS and MAG recognize the slow moving characteristics and capacity limitation of truck trips through using passenger car equivalents (VEQ's) before combining truck trips to the automobile trips. For Dade County's proposed model, both techniques are suggested. A truck assignment will be carried out by an all-or-nothing assignment technique on the truck network. At the same time, truck trips should be factored through VEQ's to combine with auto driver trips for the combined highway assignment. In this process of combined assignment, the truck path would not be preserved in the equilibrium assignment. An alternative to this approach is to preload the truck trips from the all-or-nothing truck assignment with appropriate VEQ's applied to the truck trips. The equilibrium assignment for auto trips would then be performed on the preloaded truck assignment. In this process, the truck paths will be preserved.

Module 18 (TRKEVAL)

An evaluation routine similar to the highway evaluation routine (HEVAL) should be developed to assess the truck model. At the initial stage of truck model validation, truck screenlines should be assessed to modify distribution as well as generation parameters

of truck trips. The overall truck-VMT from the model could be also checked against any independently estimated truck-VMT data.

Another alternative approach for simultaneous auto and truck assignment is to use TRANPLAN's high occupancy vehicle (HOV) assignment method. In this approach, three modes of traffic should be defined as follows:

- Truck only trips (mode 1);
- All single occupant vehicles (mode 2); and
- Carpool trips (mode 3).

An assignment group (an attribute of links file) for links where trucks are allowed should be identified and coded. Truck trips should be factored by VEQ's before assignment. After assignment, the assigned truck loadings should be divided by VEQ's to get the actual estimate of truck traffic. The role of VEQ's in the assignment is to consider delay for trucks more appropriately in the equilibrium assignment algorithm.

5.5.3 Data Requirements to Support Potential Dade County Truck Model

Inclusion of an original truck element in the Dade County travel model will require specific data, some of which exist and some of which have to be revised or generated. These are:

- Speed and capacity information for each link in the highway network (on hand);
- Truck classification counts and screenline information (revised);
- Truck trip length distribution by truck type (new); and,
- Origins and destination of truck trips (new).

Speed and capacity information, along with classification counts, will be required. FDOT has some counts available, but it is anticipated that enhanced counts could be required. The number of counts will be determined by locations and availability of existing counts, and the degree to which truck information is available for screenlines (used to evaluate model performance).

Information on truck trip length distribution and origin-destination by type will need to be collected. As noted previously, the consultant has conducted two survey efforts of truck movement as a part of this study. The mailback survey distributed by the consultant resulted in about a ten percent response, which is considered

acceptable for most surveys. But because of the significant differences in the types of organizations involved in trucking, very small percentages from every subgroup were actually received. Planning efforts in other communities had better experience with combination mailback-telephone surveys or traditional origin-destination personal interview surveys. The consultant also conducted personal interview surveys at three locations in Dade County. These surveys were very successful.

Information on truck trips can also be developed through review of trip logs, accessing computer inventories, etc., if allowed by the private sector. Because Dade County has a large number of fixed locations where many truck trips can be intercepted, there are a number of survey options to be explored for acquiring origin-destination data. In addition to the intermodal yards, interviews similar to those conducted by the consultant could be performed periodically at truck locations throughout the County.

6. Establish A Freight Movement Planning Process

This chapter proposes a Freight Movement Planning Process for Dade County. The process must be consistent with the 23 statewide planning factors and the 15 metropolitan planning factors. It must also be consistent with and complement the six management systems as established under the Intermodal Surface Transportation Efficiency Act (ISTEA) and the proposed Florida Intermodal Management System.

In Dade County, the Congestion Management System, the Public Transportation Management System, and the Intermodal Management System are being integrated into a unified system known as the Integrated Management System (IMS). The freight movement planning process would work within the framework of the IMS. Freight and Truck Movement Planning Committee, made up of private sector representatives of freight companies and organizations, would be established with rotating membership to meet consistent with MPO policy for similar committees. This committee would provide input into the local transportation planning process, especially the annual TIP approval and amendment

process, and the Long-Range Transportation Plan project priority and selection processes, relative to the needs of the freight industry, particularly relative to traffic and roadway concerns, and guidance in the project prioritization process.

This chapter is presented in three sections. First, the statewide planning factors (stipulated under ISTEA) are addressed. The fifteen metropolitan planning factors are addressed in the second section. (The legislation including the planning factors is included in Appendix B.) The third section summarizes the Freight Movement Planning process proposed for Dade County.

6.1 Integration of Different Freight Modes

This study focuses upon freight movement which utilizes the surface transportation system of Dade County, i.e., the highway network, roads and streets. For a vehicle to be considered as part of the

freight movement system, it must be used primarily for the movement of freight from a loading, or origination point, to an unloading, or destination point. The primary classification of freight movement is recommended to be:

1. Intermodal Freight Movement -

movements in which the point of origin of the freight is a transportation mode (air, water, rail, road) different than the transportation mode for the subsequent movement of the freight. These are the freight movements that are truly intermodal. They are of special importance in this study because the freight facilities for three of the four modes (air, water, and rail) are extremely limited in number and fixed in location. These characteristics directly signify that all freight utilizing these modes, whether moving into or out of the area, must utilize the same small subset of highway facilities if they are making any movements other than transfer between cargo carriers within the same mode, such as movement from an inbound ship to an outbound ship without leaving the port.

The primary movements within intermodal freight movement consist of movements to and from Dade County warehouse/distribution facilities, manufacturing sites, and intermodal transfer facilities.

2. Delivery/Distribution Movements - The distribution and delivery movements of freight within Dade County are almost always conducted by trucks using the highways, roads and streets of Dade County. These movements can further be divided into four subtypes:

- Delivery to manufacturing/industrial users. These movements can be estimated generally using the land use maps of Dade County which identify industrial/manufacturing land uses. Shipments to and from these sites may be intermodal (shipping freight to and from air, water, or rail facilities); or movements to other destinations by roadway within, or outside of, Dade County, Florida.
- Delivery to commercial sites. These shipments typically begin at a warehouse or distribution facility, although they may be directly from a manufacturing site or an intermodal transfer facility. The largest number of these trips are to major shopping malls, downtown Miami, and similar retail centers where the truck traffic necessarily competes with private vehicle movements.

- Materials delivery to construction sites. These movements, which include large numbers of trucks from the quarries in West Dade, involve movements which are constantly changing as development projects shift.
- Residential delivery. This typically involves small package delivery to residential addresses throughout Dade County and does not permit modeling other than as an estimated and small percentage of the vehicles using the roads classified as minor collector or less.

6.2 Meeting Statewide and Metropolitan Transportation Planning Process Factors

6.2.1 The Fifteen MPO Factors

ISTEA lists fifteen factors that must be considered as part of the planning process for all Metropolitan areas. These factors shall be explicitly considered, analyzed as appropriate, and reflected in the planning process products. This section describes the way in which these fifteen factors are addressed within this freight movement study. The fifteen MPO factors and the way in which

they have been considered or addressed by the present study are identified here:

1. Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;

Truck volumes have a great impact on highway pavement life. In most pavement design procedures, the composition of pavement (thickness, materials, depth of subbase) is determined by the number of applications of a standard axle load during the pavement's design life. More applications shorten the life of the pavement. Auto volumes usually are not part of the calculation. Thus freight movement, trucks, have a great impact here.

The preservation of existing transportation facilities can only be done effectively if good information is available concerning the impact of current and projected use upon the facility. In the case of pavement, bridges, and congestion, if preservation projects are to be scheduled and budgeted in a manner that will ensure the continued usefulness of the facility for its design purpose then the deteriorating effects of routine use must be accurately estimated. This requires a valid and reliable methodology for estimating the number and size of

trucks and the materials being carried for each facility to be managed.

Maintenance priorities must be cognizant of the impact of freight movement on each facility and its resultant effect on the life expectancy of the facility. Design standards for construction should consider roadway materials and depth as well as curves, intersections, clearances, grades, and other factors which can limit a facility's utility for trucking use or eliminate it entirely as a freight movement option. Maintenance construction scheduling should be planned in coordination with truckers and shippers to mitigate the impact of a temporary loss of capacity.

The balance between allowable truck and trailer lengths and gross weights which might reduce the volume or significantly impeded the flow of traffic, and the impact of larger trucks on the roadway surface must be carefully maintained. This information should be developed in conjunction with freight movers and highway design engineers.

Currently it is cost effective to make periodic traffic counts to determine the number and size of trucks using key roadway links. While there is automatic equipment that can count trucks, few agencies have it. Thus, most truck counts come from manual classification

counts. The work in this study identified clearly the general lack of suitable truck traffic data on the roadway network.

Through DOT's IMS data collection efforts, emphasis should be placed on establishing regular automatic counts capacity access the roadway network.

2. Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;

Any measures which reduce delay on the region's roadways will reduce energy consumption. Virtually every improvement considered in this study would, if adopted, have this effect. Improvements in signalization, scheduling rail movements away from peak hours, and improving access to intermodal facilities would all reduce delay both for freight and for all other vehicular traffic.

3. The need to relieve congestion and prevent congestion from occurring where it does not yet occur;

Relieving congestion within Dade County is a traffic problem of proportions that include issues of freight movement. In general, congestion poses two questions to the freight movement community: (1) can freight movement vehicles be

persuaded (or permitted) to use alternate routes rather than more congested major arterials?; and, (2) can truckers be influenced to use the more congested routes at times other than peak drive times? Freight movement is driven by the economic considerations of minimizing costs and maximizing mobility. This is in contrast to passenger vehicle movement which is often driven by factors such as work schedules, convenience, comfort, familiarity, and habit, in addition to the minimization of travel time and distance. Understanding the driving forces behind freight movement scheduling, it is apparent that it is in the best interest of freight movers to operate their vehicles, insofar as possible, on less congested roadways and at times other than peak drive times. The timing of deliveries is often a function of the requirements of the customer to have just-in-time delivery or delivery during limited hours of operation, thus constraining some delivery alternatives.

While the delivery of fresh baked goods to grocery stores as they open each morning has been cited as an example of this need to be on the roads in peak drive time, it is not the only example; many retail and non-retail businesses make demands upon freight movers that require travel during the hours when most passenger vehicles are also on the

road. Innovative steps have been taken in recent years in the freight movement industry to permit deliveries at hours when traffic is at its lowest. These include providing drivers with keys to customers' facilities and to burglar alarms so that they may make nighttime deliveries to customers whose facilities are not attended during those hours. Insofar as possible, truckers encourage this and benefit from such efficiencies. However, nighttime driving has a relatively high risk of accident and only a minority of businesses are willing or able to permit unattended access to their facility by delivery drivers during off hours.

Analogous attempts at relieving congestion by altering schedules have focused on reducing the use of the highway network by passenger vehicles, as opposed to freight-moving vehicles, during peak drive time. Staggering the beginning hours of work, utilizing flex-time for some workers, and permitting increasing amounts of work to be done at home using modern telecommunications techniques rather than at the work site. All serve to either eliminate or shift peak period traffic away from the most congested conditions. While each of these has had some effect, none of them have proven to be major relievers of traffic congestion. Nevertheless, this topic of scheduling the use of highways

proactively will continue to receive attention by MPOs and by freight movement advisory councils. The issue of identifying alternate, less congested routes for freight movement is even more problematic. There is no generally available truck route plan or system in Dade County. Some areas, such as Pinellas County, have established truck plans and routes. For the most part, freight movement is conducted by, and through, vehicles which require wider roadways and turn radii than are found on typical residential streets throughout the community, as well as for the preponderance of right turn movements at even major intersections. They also benefit greatly from free flow with minimal traffic control devices. Study research indicates that some of the larger trucking firms look aggressively for better routing for their vehicles along major corridors through Dade County, but the constraint to operate on roadways with design characteristics that permit safe and efficient truck movement limits the options. It is possible that the MPO will be able to identify one or more routes, parallel to currently congested routes, which through some modest upgrade(s) could be made more suitable to and useful for truck movement. This topic should continue to be explored.

Looking to the future, it is important that projections of commercial/industrial/residential growth be refined and that the land uses wherein such growth will occur be reviewed carefully for freight movement access. There are too many cases in Dade County of roads which must be accessed by trucks (mini-warehouse developments are an example) and which have geometrics which make such access both difficult and potentially hazardous. When reviewing the anticipated growth for the next 20 years and beyond, roadways could be designed, and turns could be built with sufficient geometric characteristics, to permit easier flow of freight transported by both straight trucks and tractor trailers.

In the course of looking at future growth, it is recognized that some new intensive warehouse and distribution area may be needed in southern Dade County and that its development could and should be controlled rather than occurring haphazardly. Because such areas ideally require particular kinds of roadways for the truck traffic servicing them, these facilities should be located in close proximity to one another, to utilize the same roads for access and egress to the major highway network, and sized to allow for future growth of the activity areas and the probable increase in trucking to serve the areas.

4. The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short- and long-term land use and development plans;

Among the land use and development issues which address freight movement concerns are:

- The utilization of land use controls to consolidate warehouse and distribution facilities in a fashion that will permit the construction or re-construction of roadways to serve the movements between these facilities and the highway network which is utilized by freight movers. This will reduce the number of roadways which will require a higher design standard to accommodate the length and weight of increased volumes of trucks and semi-trailers.
- Land use controls which accommodate large trucks and trailers in and to the commercial areas of new development and provide for loading and unloading of these vehicles in a manner which minimizes competition with passenger vehicle movements.

- Policies regarding access to multimodal facilities which separate automobile traffic and passenger bus traffic from truck movements to the extent possible.
- Infill policies which seek opportunities to elevate the design and construction of older areas and their roads to accommodate current freight movement appropriate to the land use being developed.

5. Programming of expenditures for transportation enhancement activities;

Programming of expenditures for transportation enhancement activities must focus on the best possible identification of present and future problem sites. These will include not only major collector (and above) corridors but will also include many local streets and intersections which truckers report as difficult or hazardous and other intersections which might provide a more direct route for trucks but which are largely unused because they are impractical and hazardous to navigate given present design and conflicting traffic. Among the solutions which should be explored are improved turn geometry, limited parking to permit use of a wider piece of the roadway in making turns, traffic signals, and

prohibitions against trucks on certain congested roads where suitable and not inefficient alternative routes exist or can be arranged.

A particular problem exists in local access and egress to the Port of Miami because inbound and outbound trucks and tractor trailers are forced to utilize city streets for some 8 to 12 blocks between the interstate system and at the port. A tunnel, known as the Port of Miami tunnel, is identified in the County 2015 Transportation Plan, is an example of a solution to a problem that would be highly effective, but which has been slow to realization because of its cost and funding constraints.

6. The effect of all transportation projects to be undertaken within the metropolitan planning area, without regard to the source of funding;

All transportation projects proposed for the metropolitan area, regardless of funding source, should be reviewed by a freight movement advisory at an early stage for advice and comment regarding their singular and combined impacts upon the flow of freight in the area. Among the topics to be reviewed by this growth would be connectivity with existing freight movement routes and the impact on the cost of freight movement.

These reviews should also consider alternate routes that are proposed to be used during any necessary construction delays and the timing of such construction as it affects major freight movement throughout Dade County.

7. International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;

Issues regarding access to ports, airports, railroads, and related intermodal transportation facilities should be viewed on both a macro and a micro level in Dade County. At the micro level, those local roads and streets providing connectivity between the highway network of major collectors and above with the intermodal transfer facilities, in particular the Port of Miami, should be reviewed during the transportation planning process to identify the most cost-effective routes that can be taken by freight moving on the highways. These routes will then be explored to see what limitations exist that prevent them from being used by trucks, semi-trailers, passenger buses, and other freight-bearing vehicles and, where necessary and possible, recommendations will be

made for altering such things as roadway width, turn geometrics, parking restrictions that might degrade turn geometrics, and truck prohibitions in cases where that may be necessary.

On the macro level, a review will be made of the routes that provide most of the freight movement between intermodal transfer facilities on an east-west corridor beginning at the Port of Miami extending through Miami International Airport to the warehouse distribution facilities located west of the airport and on to the Free Trade Zone. Recommendations will be made concerning improvements that must be made to improve the quality of freight movement along this east-west corridor. At the same time, a review of north-south freight movement, primarily on the interstate highway system and the HEFT and the major arterials and limited-access roads of the highway network, will be reviewed for potential improvements in capacity and free flow speeds.

Finally, growth projected to take place in Dade County, primarily in the southern half of Dade County, will be reviewed to see what impact it will have upon connectivity of the major intermodal transfer facilities.

8. Connectivity of roads within metropolitan areas with roads outside those areas;

The focus on connectivity will be on the movements north-south to and from Broward County and east-west to and from the central and northwestern portions of South Florida. The very limited number of roadways moving east-west into Dade County are complete portions of the statewide highway network and have no connectivity problems. Likewise, major north-south arterials utilized for freight movement are already part of the highway network and have seamless connectivity between Broward and Dade County in all cases.

9. Transportation needs identified through the use of the six management systems;

In this early stage of utilization of the ISTEA-mandated management systems, initial attention is being paid to ensure that the management systems most significantly impacting freight movement (pavement, bridge, and congestion) each accurately reflect the role of the highway network in moving freight. The pavement and bridge management systems, for example, will not be able to project life-cycle costs nor to schedule maintenance, preservation,

improvement, and enhancement (P/I/E) projects unless they include accurate data concerning the number and type of trucks using those facilities. Once this verification has been obtained, the output from these systems should be reviewed to enable FDOT and the MPO to provide pro-active planning for potential delays and re-routings that will be necessitated by the projected maintenance and preservation, improvement, and enhancement projects.

With regard to the congestion management system, it is imperative that the MPO continually monitor the output, conclusions, and results of the projects of that management system in terms of their impact upon roads and streets which are adjacent to, parallel to, and otherwise serve the highway network being reviewed by the CMS.

10. Preservation of existing rights-of-way for construction of future transportation projects, including future transportation corridors;

Given the heavily built-up nature of most of Dade County, there are very limited opportunities for expansion of existing rights-of-way in the portion of the network serving most freight movement traffic. In the areas that are most congested, the opportunities for

additional right-of-way are severely limited by factors which can be expected to compete effectively against transportation needs. Nevertheless, all currently held rights-of-way should be reviewed for continuity and for adequacy in terms of the 20-year projections of the travel demand model; the review should include the identification of future commercial and industrial sites and the access between those sites and the highway network as well as the impact of adding freight movement from those sites to the highway network. A review of the impact of changes in the status of the former Homestead AFB suggest that there will be little impact from this site upon freight movement for the next 5 to 10 years and future updates of this plan and the LRTP, must continue to look at the developments of that facility as they impact freight movement.

11. Enhancement of the efficient movement of freight;

Absent a prohibitively expensive large-scale origin-destination study, the available traffic counts and truck-vehicle percentages provide sufficient but generalized estimates of freight movement flow in major corridors and on major highway network links to permit the identification and assessment of possible enhancement measures. In fact, freight movement is actually

undergoing restrictions on some segments of the roadway network. As an example, Dade County is considering restricting truck access to the HOV lane on I-95. The most effective enhancements identified thus far have been in the area of movements between intermodal facilities and the highway network over local streets and roads. These include the widening of some roads, altering the geometrics of some curves and intersections, and prohibiting parking within a specified distance of corners where large trucks must make difficult turns. The list of restrictions which might be mitigated by enhancement projects include weight restrictions, vertical and lateral clearance restrictions, turn radius limitations, noise pollution, hazardous cargo restrictions, and traffic conflicts. Most of these restrictions would apply to buses as well as to trucks.

For example, on the narrow corridor between the Port of Miami and the Buena Vista Intermodal Yard, a potential enhancement might be the modification of the existing, lightly used, rail right-of-way to accommodate semi-trailers. At the present time, this movement between the part of Miami and Buena Vista Rail Yard is very difficult and slow, sometimes taking as many as 45 minutes to move less than 5 miles. The existing railroad right-of-way includes signalization and

gates at intersections. Trucks could move in convoy fashion, 10 to 20 trucks at a time, through this corridor at a relatively high rate of speed and cause no more disruption to local traffic than a train movement would cause. This particular enhancement warrants additional study.

12. The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement;

It is important to ensure that all life-cycle costs and cost-benefit analyses accurately incorporate and reflect the impact of trucks on the life-cycle costs of maintaining, preserving, and eventually replacing freight movement facilities as well as the economic benefits produced by more efficient freight movement.

13. The overall social, economic, energy, and environmental effects of transportation decisions, including consideration of the effects and impacts of the plan on the human, natural, and man-made environment;

There would be some social, economic, energy, and environmental (air quality and noise impacts) effects to any improvement in the flow of trucks throughout Dade County. Each of the recommendations made in the course of

this study is designed to improve the flow of freight movement throughout Dade County and consequently would have positive effects upon the economy by lowering the cost of freight movement: energy costs would be lower from less time spent at slow speeds in idle; likewise environmental "costs", especially impacts upon air quality, would be reduced. This proposal would also move toward removing undesirable chronic truck traffic from residential neighborhoods, and retail commercial areas, except where absolutely required.

14. Expansion, enhancement, and increased use of transit services.

The recommendations from this study would not have a significant impact on general transit use. However, of significance will be the development of the multimodal transportation center at Miami International Airport. While the focus of the multimodal center will be passenger traffic, there will be capacity for trucks, small goods distribution, etc. In addition, as the Metrorail network expands in the County, opportunities can be explored for adding goods delivery capability to the system. It is understood that such activity may be totally infeasible today with, despite congestion, relatively cost effective capability to distribute goods by truck or van. However, as congestion worsens,

innovative ways to use the existing transportation system, including Metrorail and Tri-Rail, should be explored.

15. Capital investments that would result in increased security in transit systems.

Apart from the vehicle travel demand reductions that would result from increased transit ridership, transit has little or no relevance to this study

6.2.2 The Twenty-three Statewide Factors

ISTEA requires that, at the statewide level, each state shall, at a minimum, explicitly consider, analyze as appropriate and reflect in the planning process products the following factors. Most of them have been considered as part of the fifteen MPO planning factors listed above.

1. The transportation needs identified through the management systems;

See # 9 above.

2. Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives

See # 2 above.

3. Strategies for incorporating bicycle transportation facilities and pedestrian walkways in appropriate projects;

Beyond the potential for reduction of pedestrian/cyclist conflicts on local streets and roads with trucks, and the intended reduction in accident rates, this factor has little or no relevance to the present study.

4. International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations;

See # 7 above.

5. The transportation needs of non-metropolitan areas through a process that includes consultation with local elected officials;

Metro Dade covers the entire county but there are many small jurisdictions which still have considerable autonomy and control of maintenance and improvement of traffic movements within their boundaries. These jurisdictions need to be involved, preferably at a separate committee or council level, which can then be represented at the MPO.

6. Any metropolitan plan developed pursuant to the Federal Transit Act;

Apart from the demand reductions that would result from increased transit ridership transit has little or no relevance to this study.

7. Connectivity between metropolitan areas within the state and with metropolitan planning areas in other states;

See # 7 above.

8. Recreational travel and tourism;

Increases in travel or tourism add to the congestion of the community's roadway network. The planned expansion of any attractions for such travel should be brought to the attention of freight movers at the earliest possible date for their advice concerning economic impacts on freight movers and their customers as well as to give them time to plan alternate routes where necessary.

9. Any State plan developed pursuant to the Federal Water Pollution Control Act;

Little or no relevance.

10. Transportation system management and investment strategies designed to make the most efficient use of existing transportation facilities;

See # 1 above.

11. The overall social, economic, energy, and environmental effects of transportation decisions, including consideration of the effects and impacts of the plan on the human, natural, and man-made environment;

See # 13 above.

12. Methods to reduce traffic congestion and prevent congestion from occurring where it does not yet occur;

See # 3 above.

13. Methods to expand and enhance appropriate transit services and to increase the use of such services;

Apart from the demand reductions that would result from increased transit ridership transit has little or no relevance to this study.

14. The effect of transportation policy decisions on land use and land development and the consistency of transportation plans and programs

with the provisions of all applicable short- and long-term land use and development plans;

See # 4 above.

15. Strategies for identifying and implementing transportation enhancement activities;

See # 11.

16. The use of innovative mechanisms for financing projects, including various capture pricing, tolls, and congestion pricing;

FDOT is already using reduced tolls on the HEFT as a way to increase its use by trucks, and hopefully attract them from more congested roadways, such as I-95. Congestion pricing and other innovative mechanisms could also have an effect on freight movement. As an example, congestion pricing might shift some truck movements to off-peak travel.

17. Preservation of existing rights-of-way for construction of future transportation projects, including future transportation corridors;

see # 1 above.

18. Long-range needs of the State transportation system for movement of persons and goods;

This is directly applicable, but it is not yet available on a statewide basis. Locally, needs of the State road system have been addressed in this study.

19. Methods to enhance the efficient movement of commercial motor vehicles;

See # 11.

20. The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement;

See # 12 above.

21. The coordination of transportation plans and programs developed for metropolitan planning areas with statewide transportation plans and programs, and the reconciliation of such plans and programs as necessary to ensure connectivity within transportation systems;

Statewide plan not yet available.

22. Investment strategies to improve adjoining State and local roads that

support rural economic growth and tourism development;

The agricultural economy of South Florida places some demand on the highway network and the roadways where that demand conflict with other automobile and truck traffic should be identified and monitored for potential improvements.

23. The concerns of Indian tribal governments;

No relevance.

6.3 Freight Planning Process

The overall objective of ISTEA is the improved performance of the national transportation system, largely by improving statewide and metropolitan transportation systems through preservation, operations, and capacity enhancements. This is accomplished through the utilization of six prescribed management systems which provide information concerning both the condition and performance of both the existing and future transportation system in terms of the six specific areas they address. Three of the systems (bridge, pavement and public transportation) tend to focus on the management of system assets. The other

three focus more on the performance aspects of the system. All six, however, must produce strategies for ensuring that the performance of the current and the future systems is optimized, in terms of each individual system, the overall transportation system and the performance measures established for the metropolitan area.

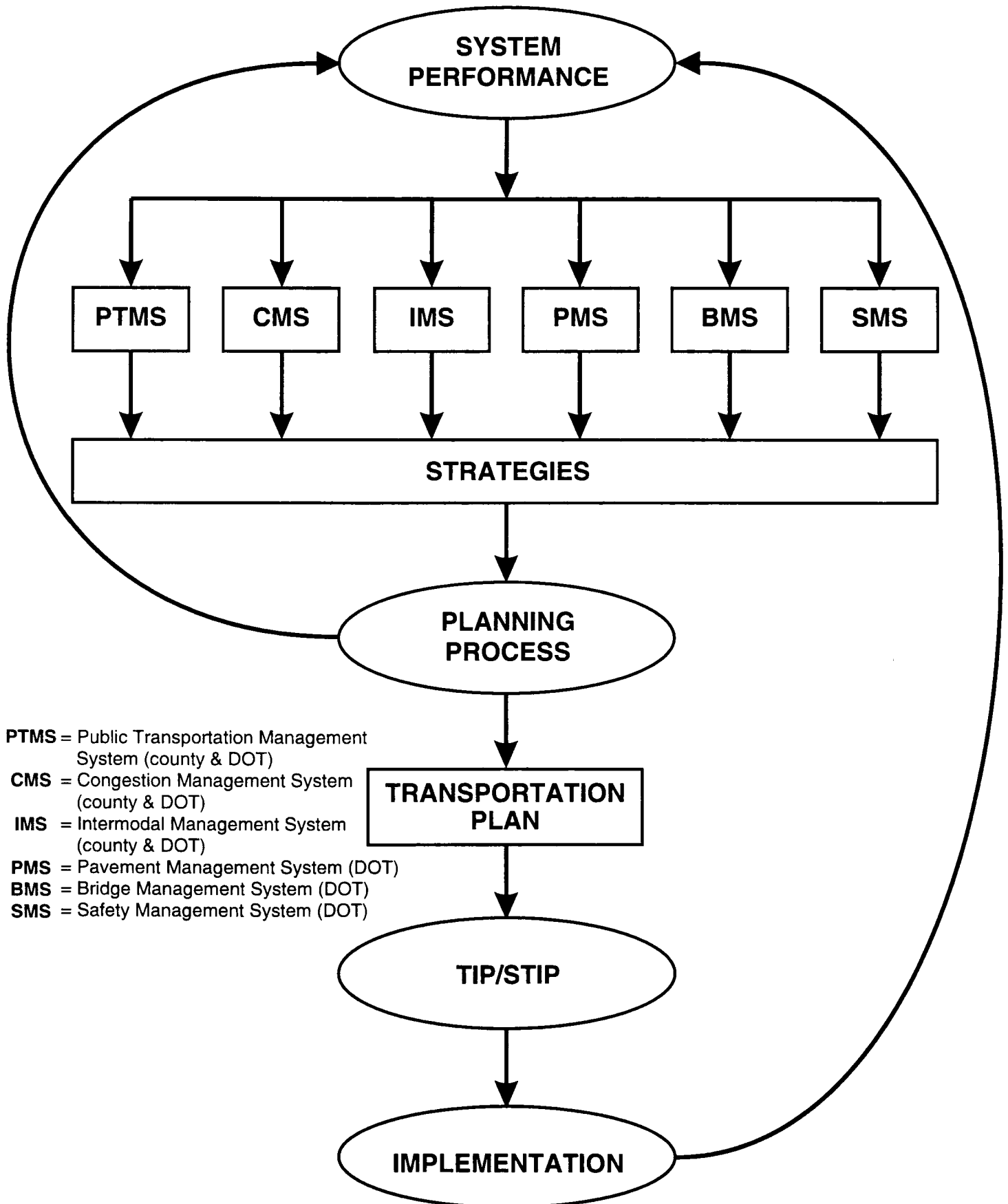
The ISTEA planning process provides a mechanism for linking the existing human, natural and built environment with future development patterns. In meeting the demands of the current and future system users, the process must address not only the results of the management systems but the other factors specified by ISTEA. The planning process as envisioned in ISTEA is a dynamic activity which effectively integrates current operational and preservation considerations with longer term mobility, environmental, and development concerns. While the planning process must address the production of plan, it also must provide an ongoing context for metropolitan and statewide decision-making that supports integration of the multiple dimensions of the transportation decision process. Figure 6-1 illustrates the role of the planning process with respect to feeding into the Long-Range Transportation Plan and the Transportation Improvement Program and State Transportation Improvement Program while

at the same time providing input regarding system performance measures which are then utilized by the six management systems to develop strategies which then feed back into the planning process. Within the metropolitan planning areas, the Congestion Management System (CMS), the Public Transportation Management System (PTMS), and the Intermodal Management System (IMS) shall, to the extent appropriate, be part of the metropolitan planning process.

Within this context proactive public involvement processes shall provide a two-way communication channel between interested public and the agencies and organizations responsible for the maintenance and improvement of the transportation system. It is important to note that a significant amount of the traffic on metropolitan highways, roads, and streets is commercial traffic and that its role in the vitality of the economy - which provides jobs for many of those persons carried by passenger vehicles on the same highways, roads, and streets - is critical. Consequently, it is deemed important that the MPO act affirmatively to obtain the involvement and participation of those organizations operating the freight movement vehicles on all transportation modes throughout the MPO.

Figure 6-1

ISTEA MPO Planning Process



It is the goal of this study and the particular topic of this section to describe the manner in which the ideas, concerns, and needs of the freight movement sector can be incorporated into the MPO planning process. Just as the planning process both receives information from management systems and feeds back advice to the measurement of system performance which is the foundation of the management systems, so also the input of freight should be felt both at the level of identifying appropriate system performance measures, highway and bridge design standards, and intermodal facility operational standards) as well as in the development of strategies to ensure the preservation, maintenance and improvement of the entire transportation system.

This level of involvement requires the institutionalization of a role for the freight movement community within the planning process of the MPO. The planning process of the MPO must be a combination of professional input, public input including special interest groups, and the input of those private organizations which operate public transit systems and public freight movement systems. In view of the fact that the freight movement system is largely a privately owned and operated system it is important that the MPO solicit and permit participation by persons and organizations who validly represent significant shares of the freight movement community. Towards this end the MPO should work with the

American Trucking Association, local Chambers of Commerce, and other organizations, to identify the best possible representation for freight movement interests within the MPO planning process.

The freight planning process at an MPO level today must adapt to a severe limitation of good data that is needed to monitor and manage MPO level responses. Several steps should be taken to provide the best available information regarding the present and future needs and impact of freight movement.

First, to the greatest extent possible, depending upon budgets and technology, all traffic counts should identify truck movements, the MPO should work with FDOT and others developing traffic counts to strongly encourage the inclusion of this mode. Absent such counts on a more universal basis, the best estimates of the percentage of highway traffic that consist of straight trucks and tractor-trailers should be maintained and updated through visual inspection and other currently employed methods.

Second, the establishment and maintenance of groups such as the American Trucking Association's (ATA) "Freight Stakeholders National Network" at the local level provides an opportunity to ensure that all applicable metropolitan Dade transportation planning activities have input

from regional truckers and intermodal facility operators. The Freight Stakeholders include railroads, port authorities, manufacturers, air freight carriers, and terminal operators, among others. These networks have been established in a number of cities already; the MPO should initiate work with ATA to see that a Dade County group is established. The ATA reports that these groups intend to remain independent of any governmental organizations but they are willing to provide representation on MPO advisory groups. Such an arrangement should be institutionalized. The large number of private trucking operations (not reported as licensed for-hire carriers) makes it impossible to maintain a complete record of the volume of such activity or an inventory of materials carried in any other realistic manner.

Third, the intermodal transfer of freight which arrives or departs by air, water, or rail can be estimated more accurately than that for highway-only freight movements since these modes provide some regular reporting to state and federal offices concerning all or part of their activity. These sources should be encouraged to provide additional data that would make it possible to identify origins and destinations of their freight in some geocodable manner.

Fourth, an effort should be made to obtain O-D data when freight movers are interviewed and to include freight movement when O-D studies are made of other modes.

Fifth, a microanalysis of freight movement in, and around, intermodal transfer facilities should become part of a regular, periodic assessment of the transportation network. In most cases, the microanalysis will cover streets and roads where trucks and passenger vehicles contend for the same limited roadway space. Important gains often are possible in this area with less capital expenditure.

The Dade County Freight Movement Planning Process should be complementary to the management systems and Florida's Intermodal Planning Process. Figure 6-2 identifies conceptually how the process works. As can be seen in Figure 6-2, the planning process links to the Intermodal Data System. While the state system will not capture all the data needed in Florida's process, interaction with the state process is recommended so that data collected are complementary and original data collection needs are minimized, and local data can also help feed statewide information needs.

The major steps in the Dade County Freight Movement Planning Process are recommended to be the following:

- Establish freight and truck committees (structures within the overall MPO master organization as shown in Figure 6-3);
- Establish goals and objectives;

Figure 6-2

Dade County Freight Movement Planning Process

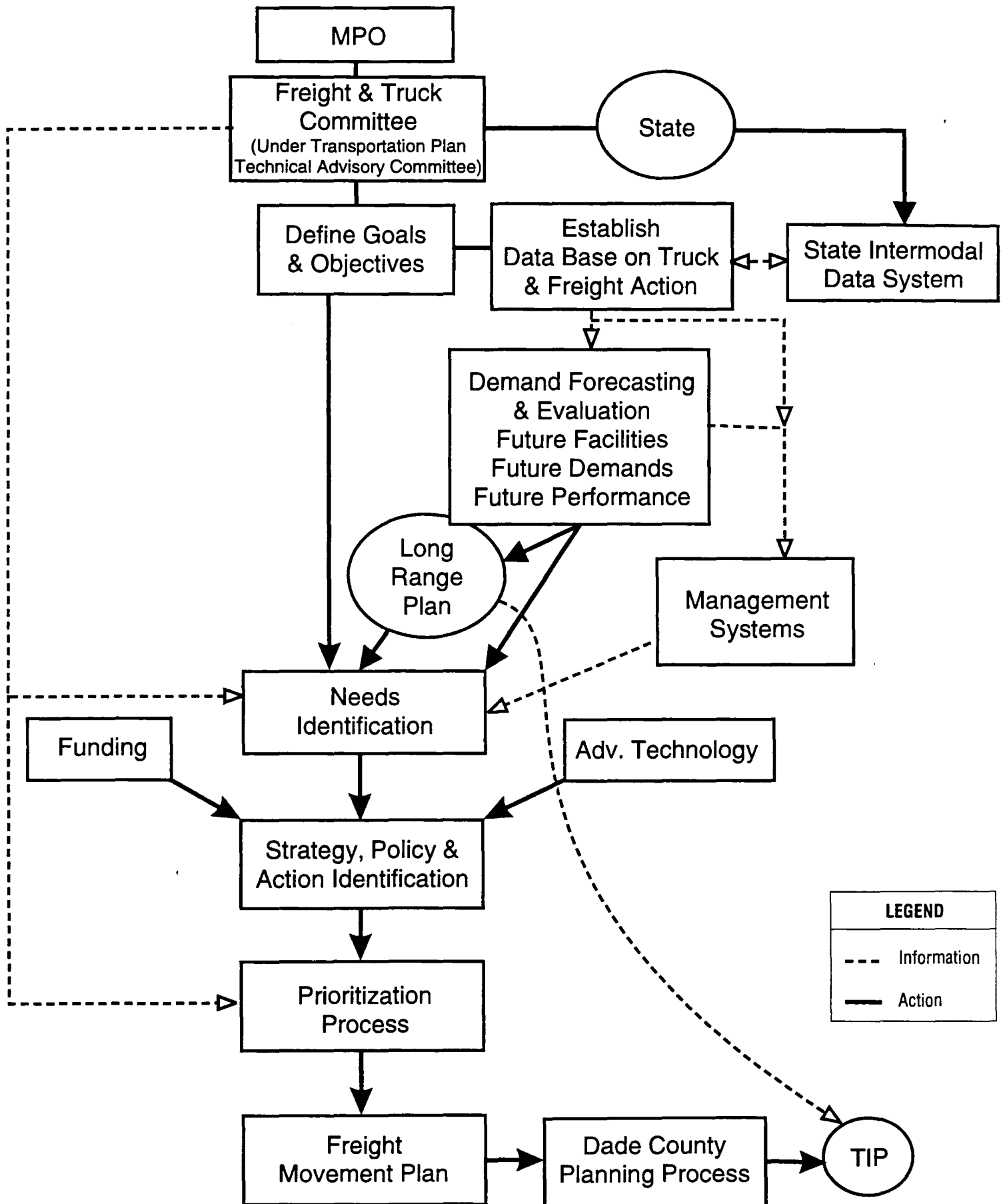
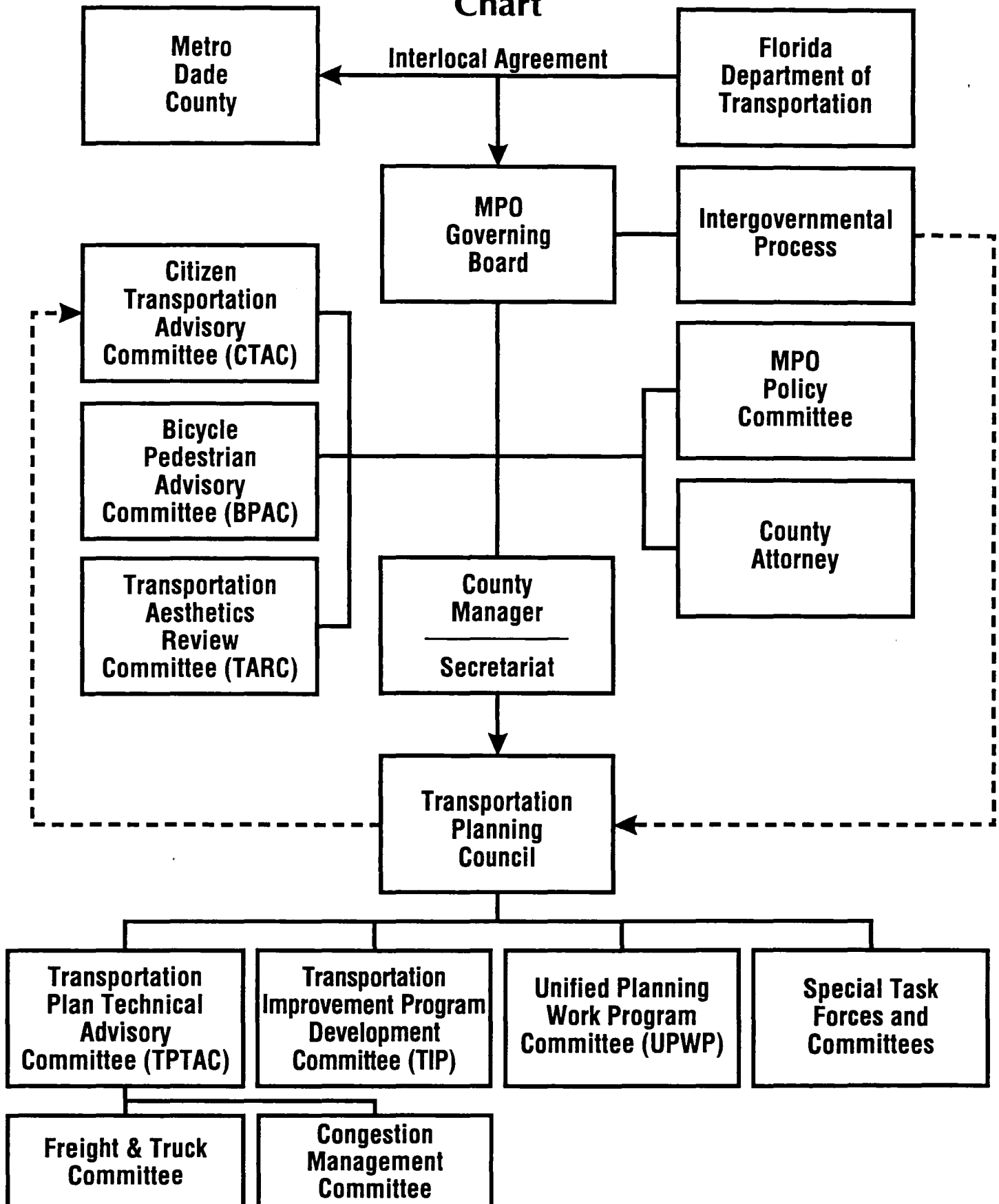


Figure 6-3

Metropolitan Planning Organization Master Organization Chart



- Establish data base on truck and freight activity;
- Coordinate data base with local and state data management systems;
- Include truck and freight movements in Dade County travel model;
- Include freight considerations in TIP needs identification process;
- Establish funding set-asides for freight elements;

- Define advanced technologies and innovative techniques;
- Present candidate projects to Freight Advisory Task Force;
- Identify strategies and actions; and,
- Develop an implementation plan (projects included in TIP).

This process is based on Florida's Intermodal Planning Process and will allow for interaction and cooperation at key levels (i.e., data collection, demand forecasting, funding).

7. Port of Miami Truck Survey

7.1 Introduction

7.1.1 Overview

Over the past fifteen months, the Dade County Metropolitan Planning Organization (MPO) has been conducting a study to identify ways to improve consideration of freight movement in the transportation planning process. The Corradino Group (TCG), a transportation planning and engineering firm, has been retained by the County to perform the study. Specifically, the study has focused on ways to improve freight movement on the surface transportation network through improvements to the roadway system and incorporating freight movement into Dade County's transportation planning process. The MPO involved both public and private sector representatives of the freight industry in the study. The process led to the identification of the need for additional information about truck movements in the downtown, particularly as they relate to the Port of Miami. This report presents the results of a survey of truck traffic conducted at the Port of Miami. The purpose of the survey was to identify typical truck routes through downtown Miami so that specific intersections and routes can be prioritized for improvement.

7.1.2 Summary of Results

The survey resulted in 2,007 responses. The survey was conducted on Monday through Friday during the week of September 23. During the survey period, 9,098 trucks entered the port. Therefore, the survey resulted in a response rate of 22 percent.

The survey found the most frequently taken routes to the Port of Miami were from I-395 to NE 2nd Avenue to NE 5th Street to the port (55.2 percent) and from I-395 to Biscayne Boulevard to the port (18.5 percent). The ramps off of I-395 onto NE 2nd Avenue and Biscayne and the intersection where NE 2nd Avenue meets NE 5th Street are extremely important to truck traffic going to the port.

The survey found the most frequently taken routes away from the Port of Miami were from the port onto NE 6th Street to NE 1st Avenue to I-395 (53 percent) and from the Port to Biscayne to I-395 (26.4 percent). The ramps onto I-395 from NE 1st Avenue and Biscayne and the intersection where NW 6th Street meets NE 1st Avenue are extremely important for truck traffic leaving the port.

This information substantiates analysis conducted by The Port of Miami (through its engineers) that indicates the following intersections as areas requiring design improvements or traffic modifications to reduce the negative impact of truck traffic in the area:

- Intersection of NE 2nd Avenue and NE 5th street
- Intersection of NE 1st Avenue and NE 6th Street
- Eastbound ramp at I-395 and NE 2nd Avenue
- Westbound ramp at NE 1st Avenue at I-395

7.2 Survey Methodology

The Port of Miami truck survey was administered during the week of September 23 through September 28. Surveys were distributed to truckers by the security personnel at the truck entry gates on the port. The gatekeepers handed the surveys (which were printed in English on one side and Spanish on the other) to drivers as they passed through the gate (each truck stops entering the port to pick up a security ticket and also stops exiting the port to drop the ticket). Truckers were instructed to fill out the surveys for each trip made during the survey week. Truckers were advised through memoranda prior to the truck survey that surveys would be distributed through the security gates for the week of September 23. Drivers were told that every

response would be important and that they should fill out a survey for each trip. Signs were placed throughout the Port instructing drivers how to fill out the surveys. Survey personnel were on site to assist truckers with questions and to encourage drivers to fill out the survey. Detailed information on the survey results is presented in the next section.

While the survey was being conducted, traffic counts were conducted at the following major roadway facilities in downtown Miami:

- NE 1 Avenue north of 8th Avenue
- NE 2 Avenue north of 8th Avenue
- Biscayne Boulevard north of 8th Avenue
- NE 2 Avenue north of 17th Avenue

Additionally, information on the number of trucks entering the port was obtained from counts of security tickets and substantiated by a traffic count of vehicles entering the Port of Miami via the Port Bridge.

7.3 Analysis of Truck Survey

The results of the Port of Miami Truck Survey are presented in this section, along with analysis of the results. This section provides documentation of the traffic counts collected during the survey, detailed information on the survey results, and preferred route paths as indicated by drivers. Figure 7-1 provides a sample of the survey used.

Port Trucking Survey



(Para Español voltear folleto)

1. Terminal you are doing business with now?

- ☐ a. Pomtoc
- ☐ b. Universal
- ☐ c. Seaboard

2. Time you arrived?

_____ ☐ AM ☐ PM

3. Where did you come from today?

- ☐ a. Miami Airport
- ☐ b. FEC Railyard
- ☐ c. Buena Vista Railyard
- ☐ d. Port Everglades
- ☐ e. Local (Dade County)
- ☐ f. Outside Dade County
- ☐ g. Outside Florida

→
Please draw
your route
into the port
on map

4. Type of rig you are driving now?

- ☐ a. Flatbed/Low Boy
- ☐ b. Straight Truck
- ☐ c. 20' Container
- ☐ d. 40' Container or Trailer
- ☐ e. 45' Container or Trailer
- ☐ f. Bobtail

5. Where will you go when you leave?

- ☐ a. Miami Airport
- ☐ b. FEC Railyard
- ☐ c. Buena Vista Railyard
- ☐ d. Port Everglades
- ☐ e. Local
- ☐ f. Outside Dade County
- ☐ g. Outside Florida

→
Please draw
your route
leaving the
port on map

6. Type of rig leaving in?

- ☐ a. Flatbed/Low Boy
- ☐ b. Straight Truck
- ☐ c. 20' Container
- ☐ d. 40' Container or Trailer
- ☐ e. 45' Container or Trailer
- ☐ f. Bobtail

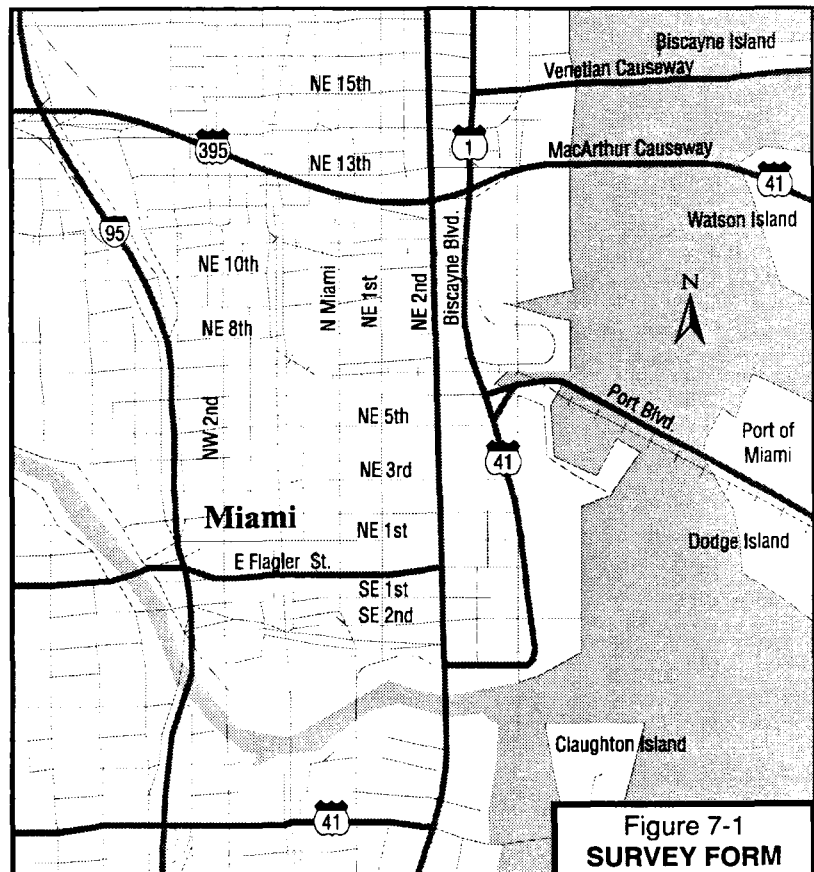
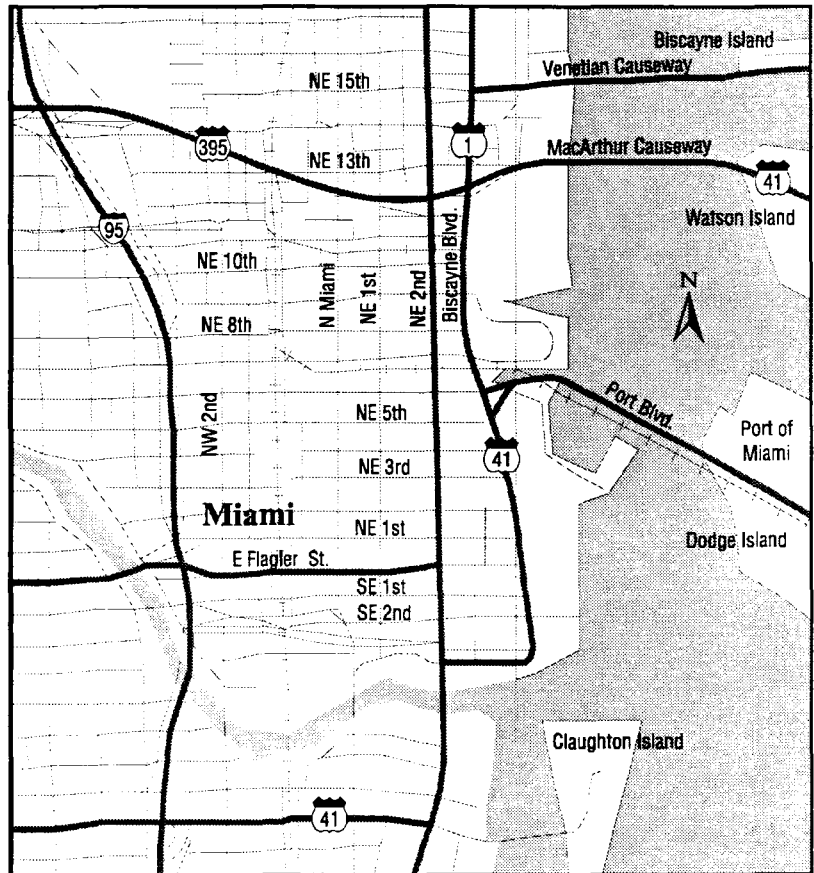


Figure 7-1
SURVEY FORM

7.3.1 Traffic Counts

Twenty-four hour traffic counts were conducted during the week of the survey at the following locations:

- NE 1st Avenue north of 8th Avenue
- NE 2nd Avenue north of 8th Avenue
- Biscayne Boulevard north of 8th Avenue
- NE 2nd Avenue north of 17th Avenue

Full presentation of the counts by location and by day are presented in Appendix A. "Trucks" as identified in the following discussion include 2-axle, 6-tired vehicles, 3-axle, 4-axle, 5-axle, 6-axle, and 7-axle vehicles. These include many trucks, i.e., local delivery, not typical of those entering Port.

The location of Biscayne Boulevard north of NE 8th Street had the most truck traffic and the most overall traffic the week that counts were conducted. Biscayne had 31,860 trucks travel on it during the week. (At an average of 6,000 trucks per day, this number is substantially different from the number of trips on Biscayne Boulevard reported by FDOT classification counts reviewed for earlier work in this study. This is likely a result of different location and/or counting methodology, but substantiates the need for more uniform truck classification data.) Northbound trucks accounted for 21,523 trips, while southbound trucks accounted for 10,337 trips. Total traffic for this location registered 214,250 for the week. The lowest truck count for any of the

days was 6,027 on Monday, with 3,866 trucks going northbound and 2,161 going southbound. The highest count was 7,055 trucks, with 4,677 going northbound and 2,378 going southbound on Friday. When all vehicle trips are tabulated Monday had the lowest count with a total of 40,692 while Friday had the highest count with a total of 47,294.

The NE 1st Avenue north of 8th Avenue location had the second highest truck and total traffic counts. There were 8,457 trucks over the week and 60,041 total vehicles over the week. The NE 2nd Avenue north of 8th Avenue location had the third highest truck counts but the lowest total vehicle counts. That location had 7,581 trucks and 50,859 total vehicles. The NE 2nd Avenue north of 17th Avenue location had the third highest overall traffic and the lowest truck traffic. There were 5,331 trucks over the week and 58,483 total vehicles.

The average weekday counts for trucks at each of the locations were 4,305 northbound and 2,067 southbound for Biscayne Boulevard north of 8th Avenue, 1,691 northbound for NE 1st Avenue north of 8th Avenue, 1,516 southbound for NE 2nd Avenue north of 8th Avenue, and 816 southbound and 249 northbound for NE 2nd Avenue north of 17th Avenue.

Figure 7-2 presents average weekday counts for trucks at each of the locations measured. Table 7-1 presents daily information on the counts.

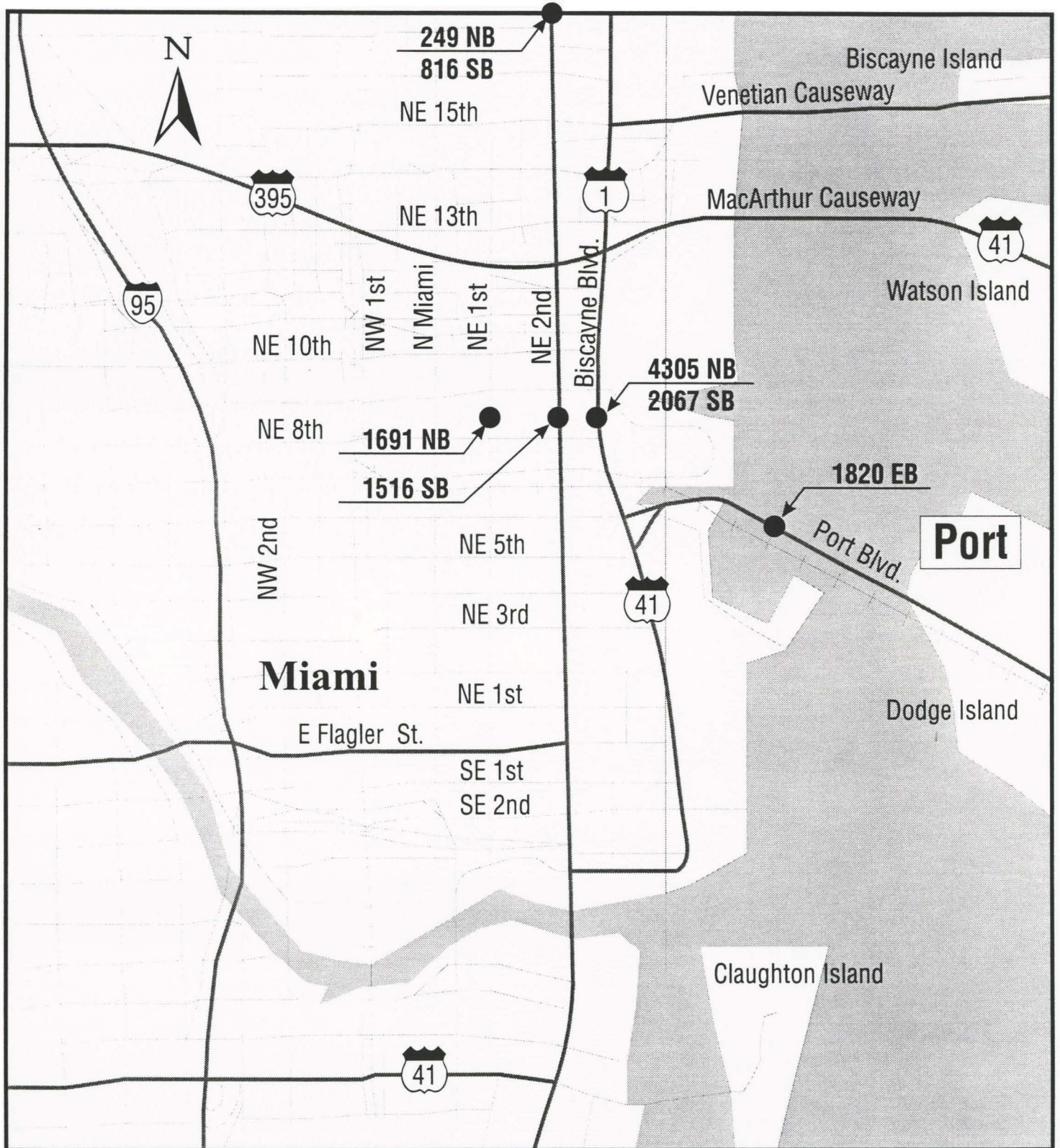


Figure 7-2
**TRAFFIC COUNT LOCATIONS
 AND AVERAGE DAILY TRUCKS**

Table 7-1
Traffic Counts on Downtown Streets during Port of Miami Survey¹

NE 2nd Avenue - N of 17 St.

Day	CAR/PICKUP		TRUCK*		BUSES		OTHER		TOTAL		NB & SB
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	TOTAL
Monday-9/23/96	4,852	5,205	301	840	69	88	65	35	5,287	6,168	11,455
Tuesday-9/24/96	5,107	5,366	238	822	69	86	54	49	5,468	6,323	11,791
Wednesday-9/25/96	4,799	5,188	218	762	82	91	52	53	5,151	6,094	11,245
Thursday-9/26/96	5,132	5,361	215	824	82	86	44	40	5,473	6,311	11,784
Friday-9/27/96	5,465	5,351	276	835	80	86	69	46	5,890	6,318	12,208
TOTAL	25,355	26,471	1,248	4,083	382	435	284	223	27,269	31,214	58,483
AVERAGE	5,071	5,294	249	816	76	87	57	45	5454	6,243	11,696

Biscayne Blvd. & NE 8 St.

Day	CAR/PICKUP		TRUCK*		BUSES		OTHER		TOTAL		NB & SB
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	TOTAL
Monday-9/23/96	19,981	12,866	3,866	2,161	412	200	429	777	24,688	16,004	40,692
Tuesday-9/24/96	20,460	12,836	4,322	1,928	317	224	510	766	25,609	15,754	41,363
Wednesday-9/25/96	20,471	13,479	4,183	1,896	332	165	484	666	25,470	16,206	41,676
Thursday-9/26/96	21,142	13,809	4,475	1,974	364	176	476	809	26,457	16,768	43,225
Friday-9/27/96	23,832	14,002	4,677	2,378	453	213	450	1,289	29,412	17,882	47,294
TOTAL	105,886	66,992	21,523	10,337	1,878	978	2,349	4,307	131,636	82,614	214,250
AVERAGE	21,177	13,398	4,305	2,067	376	196	470	861	26,327	16,523	42,850

NE 1st Avenue N of 8 St.

Day	CAR/PICKUP	TRUCK*	BUSES	OTHER	TOTAL
	NB	NB	NB	NB	NB
Monday-9/23/96	9,654	1,559	258	140	11,611
Tuesday-9/24/96	10,041	1,779	225	172	12,217
Wednesday-9/25/96	9,582	1,502	217	126	11,427
Thursday-9/26/96	9,901	1,779	245	181	12,106
Friday-9/27/96	10,443	1,838	272	127	12,680
TOTAL	49,621	8,457	1,217	746	60,041
AVERAGE	9,924	1,691	243	149	12,008

NE 2nd Avenue - N of 8 St.

Day	CAR/PICKUP	TRUCK*	BUSES	OTHER	TOTAL
	SB	SB	SB	SB	SB
Monday-9/23/96	7,414	1,333	261	134	9,142
Tuesday-9/24/96	8,924	1,477	211	100	10,712
Wednesday-9/25/96	7,907	1,377	215	98	9,597
Thursday-9/26/96	8,957	1,699	236	142	11,034
Friday-9/27/96	8,276	1,695	284	119	10,374
TOTAL	41,478	7,581	1,207	593	50,859
AVERAGE	8,296	1,516	241	119	10,172

* "Truck" includes many vehicles not typical of those that enter port: for commercial activity (i.e., service/UPS-type trucks).

¹Refer to next page for vehicle classification. An expanded version of this table with more detailed information is provided in the appendix.

Vehicle Classification References

1. Cars, pickups, 2-axle vans
2. Buses
3. Other (cycles and non-classifiable vehicles)
4. Trucks:
 - 2-axle, 6-tired
 - 3-axle, 4-axle, 5-axle, 6-axle, 7-axle

Information on the number of trucks entering the Port of Miami via the Port of Miami bridge was collected by the Port. All trucks entering the Port of Miami must pick up a security ticket upon entering the Port. During the five days of the survey, 9,098 trucks entered the Port, an average of 1,820 per day. A one-day traffic count of all traffic entering the Port indicated that 1,947 trucks entered the Port (out of a total daily inbound traffic count of 9,003).

7.3.2 Survey Results

The survey resulted in 2,007 responses. The response rate was 22 percent. There were six primary questions asked on the survey. These included questions about which terminals were used, where drivers trips began, when drivers arrived at the port, where drivers are heading, and what types of rigs drivers were entering and leaving with. In addition, drivers were asked to draw their routes to and from the port.

The Pomtoc Terminal was the most commonly used terminal by the survey respondents (over 40%). Twenty-eight percent of the drivers used the Seaboard Terminal. The fewest number of respondents (23%) used the Universal Terminal.

The arrival time with the highest response rate was 9:00 A.M. to 11:59 A.M. Almost 29 percent of the drivers said that is when they arrived. About 20 percent of drivers said they

arrived before 9:00 A.M. and over 14 percent said they arrived after noon.

The Dade County area was the origin that was most frequently answered by the survey respondents. Close to 65 percent said they came from Dade County. Only a little over seven percent said they came from outside of Dade County. Other respondents indicated more specific origins such as the FEC Railyard, 7.2 percent, Port Everglades, 5.7 percent, Buena Vista Railyard, 5.5 percent, and the Miami Airport, 3.3 percent. A very small percentage, 1.8 percent, said they came from outside of Florida.

Most drivers said they arrived at the port in a 40' container or trailer, 43.7 percent. The next two most common trucks, that were indicated by the drivers, were 20' containers, 23.7 percent, and bobtails¹, 13.3 percent. Other trucks that drivers indicated they arrived at the port in included 45' container or trailer, 7.8 percent, flatbed/low boy, 2.4 percent, and straight truck, 2.4 percent.

The most common destination that drivers indicated was inside the Dade County area. Over 68 percent said this is where they were going. Only 8.6 percent said they were going outside the Dade County area. Within the Dade County area Port Everglades, 5.5 percent, and the FEC Railyard, four percent, were the two most common responses.

¹ A "bobtail" is a tractor without a trailer.

Another 3.4 percent said the Miami Airport was their destination and 2.6 percent said the Buena Vista Railyard was their destination. Only two percent said they would be leaving the state of Florida.

Most drivers said they left the port in a 40' container or trailer, 43.1 percent. The next two most common trucks, that were indicated by the drivers, were 20' containers, 23.2 percent, and bobtails, 14.1 percent. Other trucks that drivers indicated they left the port in included 45' container or trailer, 6.5 percent, flatbed/low boy, 2.5 percent, and straight truck, 2 percent.

Table 7-2 presents detailed information on each question asked in the survey.

7.3.3 Preferred Route Paths

Each survey included maps portraying the central business district area. Truckers were asked to draw their routes entering and leaving the port for the surveyed trip. The most typical routes noted by the drivers were identified and responses assigned to those routes. Figures 7-3a and 7-3b present for each route the amount of trip activity relative to other routes. Table 7-3 shows the number trips taken on each route and the percent of trips marked on each survey. Table 7-4 shows the number and percentage of trips, on each route, when surveys that were not filled out completely were left out of the totals. (About 60 percent of drivers who responded to the survey drew their inbound and outbound routes on the maps that were provided.)

There are two predominant routes with high amounts of truck traffic to the port. These are from I-395 onto NE 2nd Ave down to NE 5th Street into the port, and from I-395 onto Biscayne Boulevard and into the port. Referring to Table 7-4 (which assigns percentages of routes taken not inclusive of non-responsive surveys), the first route accounted for over 55 percent of the trips marked on the surveys. This was a total of 669 trips on this route. The second route accounted for 18.5 percent of the trips. This amounted to 224 trips. These high totals show that areas such as the intersection of NE 2nd Ave and NE 5th Street and the intersection where Biscayne turns onto Port Boulevard should be studied to make sure that trucks can navigate them with minimal problems.

When trucks leave the port there were also two routes that were shown to have high truck volumes. The one with the highest volume was from the Port onto NE 6th Street then north onto NE 1st Ave and then west onto I-395. There were 635 surveys that said they used this route. This made up 53 percent of the truckers who answered this question. Another 26.4 percent, or 317 drivers, said they left the port by turning north onto Biscayne Boulevard and then west onto I-395. (It should be noted that it was difficult to determine from the maps what exits drivers were using to leave Biscayne Boulevard and enter I-395.)

Table 7-2
Survey Results

1. Terminal you are doing business with now?

	#	Percent
Pomtoc	815	40.6
Universal	480	23.9
Seaboard	556	27.7
No Answer	156	7.8
Total	2007	100.0

2. Time you arrived?

	#	Percent
6:00-8:59 am	399	19.9
9:00-11:59 am	581	28.9
12:00-2:59 pm	290	14.4
3:00-5:59 pm	128	6.4
6:00-9:00 pm	8	.4
Other	23	1.1
No answer	578	28.8
Total	2007	100.0

3. Where did you come from today?

	#	Percent
Miami Airport	67	3.3
FEC Railyard	144	7.2
Buena Vista Railyard	110	5.5
Port Everglades	115	5.7
Local (Dade Co.)	1300	64.8
Outside Dade Co.	152	7.6
Outside Florida	36	1.8
No answer	83	4.1
Total	2007	100.0

4. Type of rig you are driving now?

	#	Percent
Flatbed/Low Boy	49	2.4
Straight Truck	49	2.4
20' Container	476	23.7
40' Container or Trailer	877	43.7
45' Container or Trailer	156	7.8
Bobtail	267	13.3
No answer	133	6.6
Total	2007	100.0

5. Where will you go when you leave?

	#	Percent
Miami Airport	68	3.4
FEC Railyard	81	4.0
Buena Vista Railyard	52	2.6
Port Everglades	110	5.5
Local (Dade Co.)	1371	68.3
Outside Dade Co.	173	8.6
Outside Florida	41	2.0
No answer	111	5.5
Total	2007	100.0

6. Type of rig leaving in?

	#	Percent
Flatbed/Low Boy	50	2.5
Straight Truck	41	2.0
20' Container	466	23.2
40' Container or Trailer	866	43.1
45' Container or Trailer	131	6.5
Bobtail	283	14.1
No answer	170	8.5
Total	2007	100.0

Table 7-3
Routes Taken by Trucks

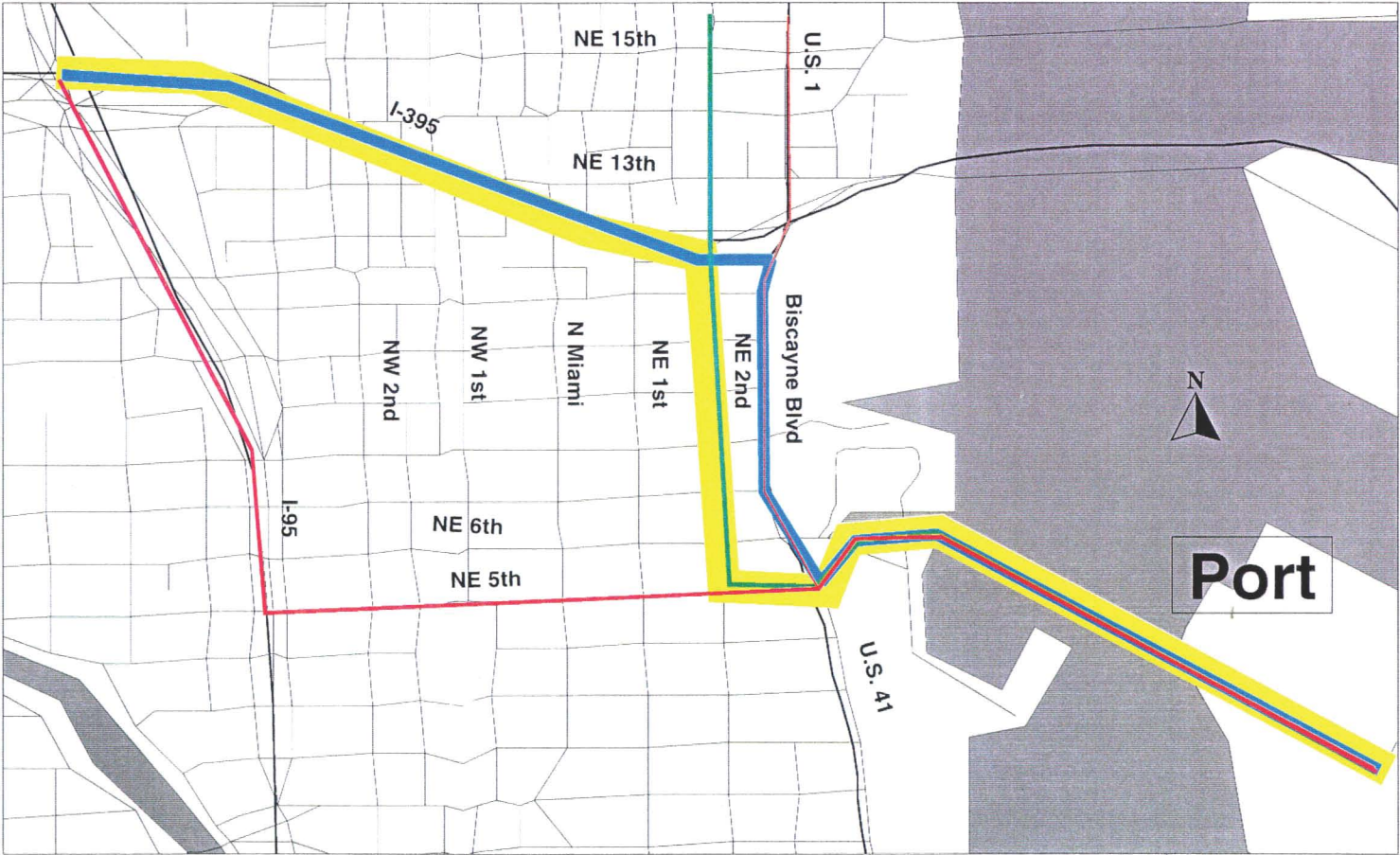
Route to Port

Route	#	Percent
From I-95 onto NE 5th to Port	76	3.8
From I-395 onto Biscayne to Port	224	11.2
From I-395 onto NE 2nd to Port	669	33.3
From Buena Vista Yards onto NE 2nd to Port	106	5.3
From Buena Vista Yards onto Biscayne to Port	24	1.2
From I-395 indeterminate route to Port	65	3.2
From I-95 indeterminate route to Port	46	2.3
No Answer	776	38.7
None of the Above	20	1.0
TOTAL	2007	100.0

Route from Port

Route	#	Percent
From Port onto NE 6th to I-95	73	3.6
From Port onto Biscayne to I-395 at 11th Street	317	15.8
From Port onto NE 1st to I-395	635	31.6
From Port onto NE 1st North past I-395	16	0.8
From Port onto Biscayne North past I-395	37	1.9
From Port indeterminate route to I-395	84	4.2
From Port indeterminate route to I-95	38	1.9
No Answer	789	39.3
None of the Above	18	0.9
TOTAL	2007	100.0

Figure 7-3a: Routes To the Port of Miami



Inbound to port via I-395 to NE 2nd to NE 5th to Port

Inbound to port via I-395 to Biscayne to Port

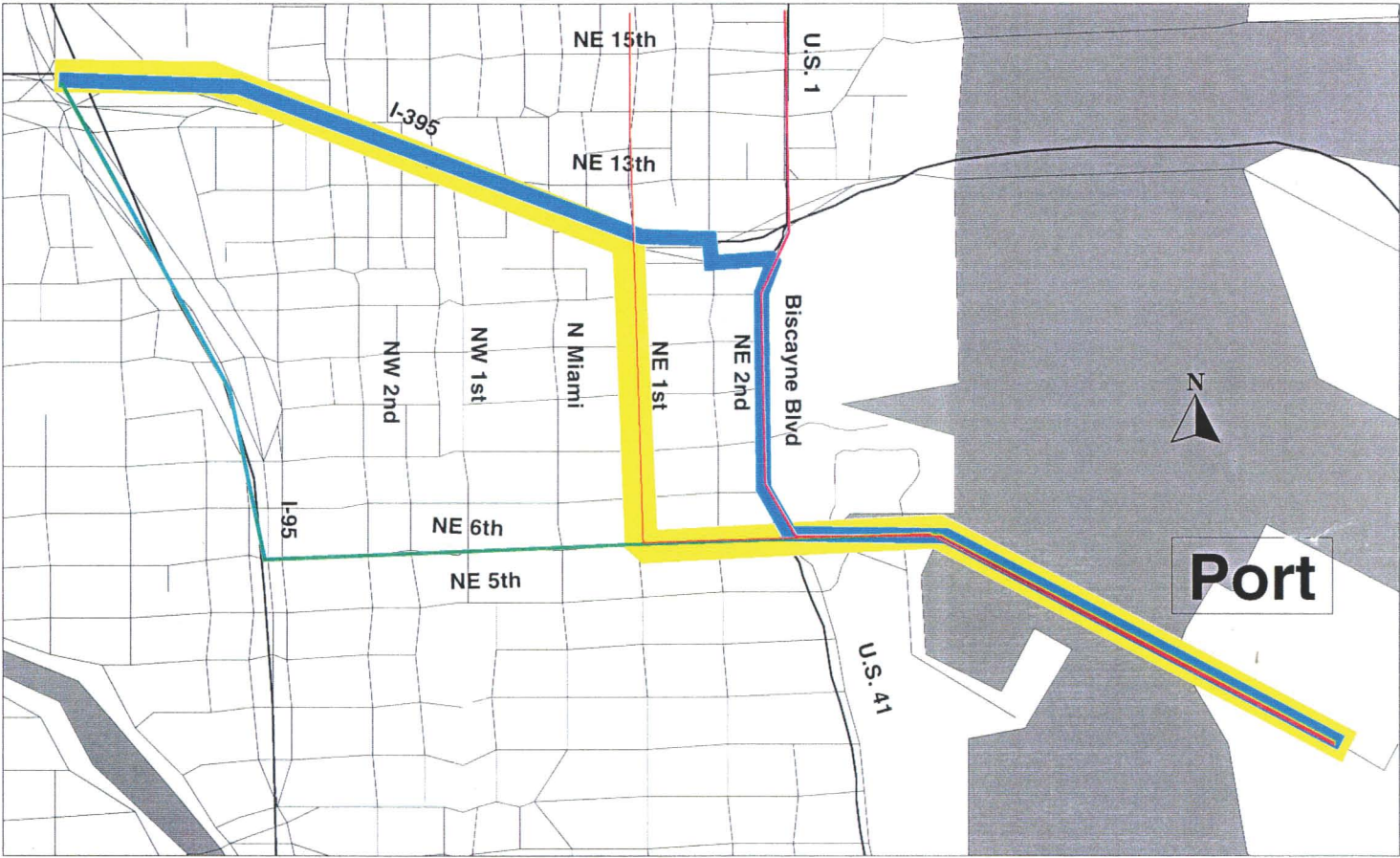
Inbound to port via NE 2nd, north of I-395, to NE 5th to Port






Inbound to port via I-95 to NE 5th to Port

Inbound to port via Biscayne, north of I-395, to Port

Line width proportionate to number of trips

Figure 7-3b: Routes From the Port of Miami



-  Outbound from port on NE 6th to NE 1st to I-395
-  Outbound from port onto Biscayne to I-395
-  Outbound from port on NE 6th to I-95
-  Outbound from port onto Biscayne north past I-395
-  Outbound from port on NE 6th to NE 1st north past I-395

Line width proportionate to number of trips

Table 7-4
Routes Taken by Trucks (with “no response” surveys left out)

Route to Port

Route	#	Percent
From I-95 onto NE 5th to Port	76	6.3
From I-395 onto Biscayne to Port	224	18.5
From I-395 onto NE 2nd to Port	669	55.2
From Buena Vista Yards onto NE 2 nd to Port	106	8.8
From Buena Vista Yards onto Biscayne to Port	24	2.0
From I-395 indeterminate route to Port	65	5.4
From I-95 indeterminate route to Port	46	3.8
TOTAL	1211	100.0

Route from Port

Route	#	Percent
From Port onto NE 6th to I-95	73	6.1
From Port onto Biscayne to I-395 at 11th Street	317	26.4
From Port onto NE 1st to I-395	635	53.0
From Port onto NE 1st North past I-395	16	1.3
From Port onto Biscayne North past I-395	37	3.0
From Port indeterminate route to I-395	84	7.0
From Port indeterminate route to I-95	38	3.2
TOTAL	1200	100.0

7.3.4 Origins and Destinations

Table 7-5 presents where truckers reported they came from and when they arrived at the port, and presents where

truckers reported they are going and when they left the port. This information is given by day of the week.

Table 7-5
Origins and Destinations by Time and by Day

Monday (Place of Origin by Time Arriving at Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	18	4	0	2	12	84	9	4	152
6 am - 8:59 am	4	3	3	6	7	64	4	6	97
9 am - 11:59 am	5	8	20	8	10	118	13	4	186
noon - 2:59 pm	4	4	11	1	10	50	9	0	89
3 pm - 5:59 pm	0	1	7	2	4	25	6	1	46
6 pm - 9 pm	1	0	1	0	0	5	3	1	6
Other	1	0	2	1	1	7	1	0	13
TOTAL	33	20	63	20	44	351	43	15	589

Monday (Destination by Time Leaving Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	21	2	8	5	12	92	10	2	152
6 am - 8:59 am	5	3	4	0	9	61	11	4	97
9 am - 11:59 am	7	9	9	2	10	120	23	6	186
noon - 2:59 pm	4	4	3	3	5	64	6	0	89
3 pm - 5:59 pm	1	2	2	0	2	32	4	3	46
6 pm - 9 pm	1	0	0	0	0	3	0	2	6
Other	0	0	0	1	1	11	0	0	13
TOTAL	39	20	26	11	39	383	54	17	589

Tuesday (Place of Origin by Time Arriving at Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	12	7	12	10	9	70	11	2	133
6 am - 8:59 am	3	0	4	10	6	80	6	2	111
9 am - 11:59 am	5	5	11	9	10	98	10	3	151
noon - 2:59 pm	1	1	6	3	7	48	11	0	77
3 pm - 5:59 pm	0	0	0	0	1	11	0	0	12
6 pm - 9 pm	0	0	0	0	0	1	1	0	2
Other	0	0	1	0	1	4	1	0	7
TOTAL	21	13	34	32	34	312	40	7	493

Table 7-5 (continued)
Origins and Destinations by Time and by Day

Tuesday (Destination by Time Leaving Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	16	8	5	3	4	82	13	2	133
6 am - 8:59 am	4	4	3	2	11	72	13	2	111
9 am - 11:59 am	5	6	7	1	11	100	15	6	151
noon - 2:59 pm	3	0	3	7	3	55	4	2	77
3 pm - 5:59 pm	0	0	0	1	0	11	0	0	12
6 pm - 9 pm	0	0	0	0	0	1	1	0	2
Other	0	0	1	1	0	5	0	0	7
TOTAL	28	18	19	15	29	326	46	12	493

Wednesday (Place of Origin by Time Arriving at Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	5	5	9	7	8	93	11	1	139
6 am - 8:59 am	0	5	5	14	1	70	8	2	105
9 am - 11:59 am	1	5	3	7	5	70	14	4	109
noon - 2:59 pm	3	4	2	3	2	48	8	0	70
3 pm - 5:59 pm	2	1	0	3	2	40	4	0	52
6 pm - 9 pm	0	0	0	0	0	0	00	0	0
Other	0	0	0	0	0	0	0	0	0
TOTAL	11	20	19	34	18	321	45	7	475

Wednesday (Destination by Time Leaving Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	11	5	7	4	5	94	13	0	139
6 am - 8:59 am	0	4	7	1	7	75	10	1	105
9 am - 11:59 am	2	4	1	4	7	71	16	4	109
noon - 2:59 pm	2	2	1	7	3	49	6	0	70
3 pm - 5:59 pm	2	3	0	3	1	38	5	0	52
6 pm - 9 pm	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
TOTAL	17	18	16	19	23	327	50	5	475

Table 7-5 (continued)
Origins and Destinations by Time and by Day

Thursday (Place of Origin by Time Arriving at Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	2	0	5	4	3	46	4	0	64
6 am - 8:59 am	4	3	1	4	1	29	2	0	44
9 am - 11:59 am	2	5	6	3	4	36	2	2	60
noon - 2:59 pm	0	0	1	1	0	23	3	1	29
3 pm - 5:59 pm	0	0	0	0	0	7	0	0	7
6 pm - 9 pm	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
TOTAL	8	8	13	12	8	141	11	3	204

Thursday (Destination by Time Leaving Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	5	3	1	3	5	44	3	0	64
6 am - 8:59 am	4	2	2	0	1	32	3	0	44
9 am - 11:59 am	3	3	6	0	3	40	2	3	60
noon - 2:59 pm	1	0	1	1	0	24	1	1	29
3 pm - 5:59 pm	0	0	1	0	0	5	1	0	7
6 pm - 9 pm	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
TOTAL	13	8	11	4	9	145	10	4	204

Friday (Place of Origin by Time Arriving at Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	9	2	9	3	5	59	3	0	90
6 am - 8:59 am	0	0	0	6	0	33	2	1	42
9 am - 11:59 am	0	1	4	2	2	58	5	3	75
noon - 2:59 pm	1	1	2	1	3	14	3	0	25
3 pm - 5:59 pm	0	1	0	0	1	9	0	0	11
6 pm - 9 pm	0	0	0	0	0	0	0	0	0
Other	0	1	0	0	0	2	0	0	3
TOTAL	10	6	15	12	11	175	13	4	246

Table 7-5 (continued)
Origins and Destinations by Time and by Day

Friday (Destination by Time Leaving Port)

	No Answer	Miami Airport	FEC Railyard	Buena Vista Railyards	Port Everglades	Local Dade County	Outside Dade County	Outside Florida	TOTAL
No answer	9	1	6	0	5	65	4	0	90
6 am - 8:59 am	0	0	0	2	1	36	2	1	42
9 am - 11:59 am	1	1	2	1	2	60	6	2	75
noon - 2:59 pm	4	1	1	0	1	17	1	0	25
3 pm - 5:59 pm	0	1	0	0	0	10	0	0	11
6 pm - 9 pm	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	1	2	0	0	3
TOTAL	14	4	9	3	10	190	13	3	246

7.3.5 Conclusions

Several factors are evident from the survey results. As noted, the predominant travel patterns to and from the Port of Miami through the downtown are associated with travel on I-395 and NE 2nd Street (inbound) and NE 1st Street (outbound). Second, trip origins and destinations are scattered throughout Dade County with no single predominant origin and destination. Finally, review of the traffic count data indicates a large number of trucks (including some vehicles that are not typical of those entering the Port such as two-axle vehicles with six tires) on Biscayne Boulevard. The total number of daily trucks on Biscayne (over 30,000 two-way) indicates that this high

volume facility needs special consideration in addition to those primary facilities being used for access and egress from the Port of Miami.

A study of truck movement conducted for the Port of Miami identified several key locations for truck route improvements. These are:

- Intersection of NE 2nd Avenue and NE 5th Street
- Intersection of NE 1st Avenue and NE 6th Street
- Eastbound ramp at I-395 and NE 2nd Avenue
- Westbound ramp and NE 1st Avenue and I-395.

Specific improvements that have been recommended in the Port of Miami report include:

Location	Problem	Improvement
Eastbound I-395 and NE 2nd Avenue	Right-turn conflicts with pier cap and curb/gutter.	Redesign intersection to provide adequate turning radius or clearance. Also, redesign signalization.
NE 6th Street and NE 1st Avenue	No capacity for right turns; house on corner has been hit by turning trucks and trucks must block traffic in inside lane to make turn.	Intersection needs to be redesigned.
NE 5th and NE 2nd	Very tight left turns from 2nd to 5th.	Redesign intersection, signalization improvement.

These improvements are appropriate given the information developed in the freight survey. Additional improvements are being identified and will be included in the final freight movement report.

In addition, the information developed in the survey supports the concept of a Biscayne truckway along the Florida East Coast rail alignment from the port extending

north to the Biscayne yard as well as that of the Port tunnel.

Because even under the most optimistic scenario, the tunnel will take years to complete, the truckway would be a viable way to improve access/egress to the Port and address existing concerns with truck operations from the Port to downtown.

8. Freight Movement Improvement Plan

Historically, transportation planning has focused on passenger travel by automobile and other modes. Given that truck travel represents nearly 10 percent of all vehicular traffic and that issues associated with truck travel are factors in areas such as accidents, pavement life, and congestion as well as economic areas such as the cost of goods, it is now more appropriate than ever before to incorporate freight specifically in local transportation planning activities. The MPO is therefore currently taking steps to include freight movement and truck travel in its planning process.

Through this study of freight movement in Dade County, a preliminary investigation has been made of freight movement patterns in the county. A "Freight Movement Planning Process" was defined in Technical Memorandum No. 2; it presents a systematic guideline for accommodating freight movement concerns into the Dade County planning process. Within the structure of the Freight Movement Planning Process are specific recommendations for transportation planning, involvement of the freight community (both in public and private sectors) in the planning process, and short-term infrastructure improvement considerations to improve freight mobility.

The recommended Dade County Freight Movement Improvement Plan encompasses two elements:

- Continued and coordinated planning with incorporation of both private and public freight sector representation.
- Systematic implementation of short-term and long-term operational improvements to facilitate truck movements on major truck corridors, at major intermodal terminal points, and at "hot spots" as identified through the planning process.

Implementation of the recommended Freight Movement Improvement Plan's recommended planning process will ensure direct representatives and participation of this vital economic sector in Dade County transportation planning.

The following discussion highlights key recommendations and improvement options identified through the Freight Movement Study. First, a summary of freight planning in other communities and an assessment of conclusions derived from this study is presented.

8.1 Freight Planning and Surveys in Other Communities

A review was made of other MPO's to determine their approach to freight movement planning. The following highlights reflect results of this survey:

- Hillsborough County (Tampa), Florida - Recently completed a truck route plan that identified roadways suitable for trucks. The routes most suited for trucks were posted and information provided to trucking industries in the area. Their model was adjusted to include truck traffic for future planning efforts.
- New Orleans - Began studying goods movement when ISTEA was implemented. They are currently relying on national statistics for forecasts of truck traffic in the metropolitan area. They are currently doing field observations to identify operational problems on known links between the National Highway System and the major industrial parks, freight terminals, and airports in their area. They are nearing completion of the Tchoupitoulas Port Access Roadway to the Port of New Orleans which will be an exclusive truck access (a five-mile road from the Pontchartrain Expressway to the port).
- Baltimore - A Regional Freight Movement Task Force was established that discussed freight movement issues, barriers, and constraints. The key role of the Task Force is to build consensus and develop priorities for trucking and rail freight movement with an emphasis on getting these priorities into the Long Range Plan and the Transportation Improvement Program.
- Los Angeles - The Southern California Association of Governments currently spends about \$750,000 annually on goods movement planning. Major projects include ground access studies to major airports and the possibility of creation of a freight airport, studies of railroad grade crossings, and involvement in the National Freight Partnership. They believe they do not have a good measure of what truck traffic exists and are looking for help from the State.

The approach taken by the Dade County Metropolitan Planning Organization to begin incorporating freight movement planning into its overall planning process appears to be consistent with activities occurring at other MPO's. Each MPO contacted appears to be following approaches dictated by the Intermodal Transportation Surface Efficiency Act and local considerations.

ISTEA has served as a stimulus for these and other communities to initiate freight planning. Communities such as Chicago, Phoenix, El Paso, Vancouver, and New York/New Jersey have conducted surveys to determine travel characteristics.

8.2 Summary of Findings

The MPO freight movement study has resulted in the following major findings:

- There is no consistent approach to freight movement planning; rather, local governments appear to be tailoring their planning to local conditions. There are a number of important study efforts occurring throughout the United States relative to freight movement that can be drawn upon and coordinated to improve freight movement planning in Dade County.
- Freight movement issues and planning are becoming increasingly important in Dade County's Transportation Planning Process. The County's Draft Mobility Management Process/Congestion Management System (MMP/CMS) includes factors in its corridor evaluation process that are key to freight movement.
- There is no consolidated database of truck movements in Dade County; the District VI of the Florida Department of

Transportation (DOT) maintains classification counts at specific locations in Dade County.

- There currently is no mechanism in Dade County to estimate truck travel patterns; specifically, there is no mechanism in the County travel model to forecast truck travel uses and patterns for long-range planning.
- On-site data collection efforts were much more successful than "outreach" (i.e., telephone, mailback survey) efforts in acquiring information on truck travel.
- Most of the truck travel in the County occurs north of SR 836. The Port of Miami, Miami International Airport, and FEC Intermodal Yard in Hialeah are major freight intermodal hubs.
- Travel patterns are generally concentrated in the northern to northwestern part of the County, there are numerous individual trip ends.
- There is significant movement from Dade County to Broward County and Port Everglades.
- Countywide the heaviest traveled roads are: I-95, SR 112, SR 836, SR 826, NW 25th Street, NW 74th Street, and Okeechobee Road. In the downtown, I-395 is the most common access route.

- The current situation where trucks and buses must access the Port of Miami via downtown streets is a major concern. Other concerns include access from the airport west cargo area to SR 826 and western Dade County beyond SR 826, the worsening level of service on roadways throughout Dade County, and the effect of trucks on pavement and bridges.
- While the private sector has generalized concerns relative to congestion, and dissatisfaction with specific locations with geometric deficiencies, etc. there were no major concerns regarding identification of problems and strategic transportation concerns by the private sector in meetings held as part of the study. Most input came from the public sector representatives of the airport and seaport in particular.

8.3 Planning Recommendations

8.3.1 Recommendation 1: Establish Dade County Freight and Truck Committee

The County should establish a Freight and Truck Committee (FTC) to participate within the overall transportation planning process and provide input to the Transportation Improvement Program (TIP),

which is the primary mechanism for actual transportation improvement project implementation. The committee would function within the overall planning process as a technical committee at a parallel level with the Congestion Management Committee, as a part of, and reporting to, the Transportation Plan Technical Advisory Committee (TPTAC). As such, the FTC would have a participatory role in the development, selection, and prioritization of projects placed in the Long Range Transportation Plan.

Cost: It is estimated by The Corradino Group that the cost to Dade County would be solely the time of individuals working for Dade County departments who would sit on the Committee. This should include a representative of the Metropolitan Planning Organization, Dade County Public Works, the Port of Miami, and Miami International Airport; it could also include representatives of other County entities who may be significant to surface freight movement planning activities, such as FDOT District 6 Planning and Intermodal Offices, Dade County Department of Planning, Development and Regulation, Dade County Public Safety and the Florida Highway Patrol, and representatives of municipalities with large commercial, freight, or industrial sectors.

Benefit: The benefit would be in that future planning and implementation efforts would be steered by public and private sector input of those most directly involved

and most knowledgeable of freight movement. As a standard, it is recommended that at least one private sector representative be on the committee for every public sector person.

8.3.2 Recommendation 2: Modify Dade County Travel Model to Include A Truck Element

Travel demand forecasting for Dade County follows FSUTMS¹ conventions. The model should be modified to include truck traffic as defined in this report. It should be noted that the proposed truck model structure provides only for modeling truck traffic which can be estimated using zonal data. The influence of other modes such as air, rail, and ports, as well as the zones of significant truck origins and/or destinations not captured by the usual trip generation rates, need to be modeled through special generation techniques similar to those employed in auto trips.

Cost: It is estimated by The Corradino Group that the cost of modifying the Dade Travel model to include truck traffic would be approximately \$75,000.

¹ Florida Standard Urban Transportation Model Structure (FSUTMS). FSUTMS is the Florida Department of Transportation's model structure for travel forecasting.

Benefit: The inclusion of trucks in the Dade County model will allow for a quantifiable data assessment to be used when assessing priorities for truck travel. The benefits of implementing a truck model would include better estimates of travel and congestion on arterial roadways as well as on freeways, because trucks have a greater impact on congestion than do cars. Thus, without a truck model, congestion on roadways with high truck percentages may be understated. A truck model would correct this.

Additionally, better estimates of truck volumes would improve pavement design procedures for new roadways, and reconstruction of existing roadways. Because the primary input to most pavement design methods is the percentage or volume of large trucks over the planned life of the pavement, it is sensible to forecast such traffic estimates to anticipate enhanced pavement design and construction, and subsequent maintenance advantages of proactively developing heavy truck traffic-ready roadways. Thus, better estimates of truck volume would result in more efficient use of both initial highway construction and subsequent maintenance dollars by helping to minimize over-design of low truck volume roads, and most especially, the under-design of high truck volume roads.

8.3.3 Recommendation 3: Conduct Origin-Destination/Travel Survey Suitable for Dade County Travel Model

The County should build upon the database for truck movement established in this study to provide a comprehensive origin-destination profile for truck travel to be used in model development. Surveys to accomplish this activity would ideally be based on driver interviews and data obtained from waybill records at intermodal centers. Specific information to be required will be truck trip length distribution and origin-destination by type. Based on experience from review of survey activities in other communities and that gained during this MPO Freight Movement Study, the best approach for conducting the survey will be through driver interviews or collection of secondary information (waybills, etc.).

Cost: Based on the range of origin-destination surveys identified for areas similar to Dade County, the cost for this survey would be approximately/is estimated at \$190,000.

Benefit: The benefit of this expanded data collection effort to Dade County will be realized in the ability to incorporate truck traffic into the travel forecasting effort, thus ensuring that project prioritization through transportation planning efforts include the

fullest level of recognition of truck movements.

In addition, the County will also/additionally be able to identify “hot spots” of truck activity that may be suitable for short-term, implementable transportation improvements by addressing needs via FDOT work programs, Public Works departments, action, or for larger projects, inclusion in the TIP.

8.3.4 Recommendation No. 4: Conduct Industry/Location Specific Surveys

The level of survey activity needed to develop a statistically valid and more comprehensive profile of the majority of freight movements in Dade County was beyond the scope of the current study. As noted in Technical Memoranda Nos. 1 and 2, two surveys were conducted to obtain an understanding of the characteristics of shippers in various industries and a broad but only sketch-level profile of freight movement. In addition to the origin-destination survey conducted as part of the effort to establish a valid transportation modeling base in Dade County that includes freight, it is recommended that the County conduct a series of narrow survey efforts targeted at specific segments of freight movement. One such survey was conducted as a supplement task to the study and was documented in Chapter 7 (the Port of Miami Truck Survey).

The following are identified as key areas for additional surveys:

- **Airport West area:** A origin-destination survey was conducted as part of the recent "NW 25 Street Engineering Concept Study conducted by the Florida Department of Transportation). A strong interaction between the airport and the northwest Miami area was noted. However, no information on trucker activity outside of the relationship of truck movements to and from SR 826 was noted. Surveys to understand truck movement will be key to ensuring roadway projects in West Dade include proper elements of freight design.
- **Private Sector Truck Operations Survey:** Although this MPO Freight Movement Study incorporated private sector representation in both the surveys conducted, the large number of private sector companies (over 800) providing truck-related transportation in Dade County, as well as the different types of companies (i.e., truckload, less-than-truckload, service delivery) warrant examination. It is recommended that private companies be targeted for survey and analysis based on their size. Rather than attempting to collect original data, it is recommended that secondary data provided by the companies be utilized for analysis, for example, waybills and dispatcher records.

Cost: The surveys for each of the above efforts, as well as others identified through the planning, would likely be done over a period of time. Surveys at bigger facilities such as the Port of Miami and Airport West area should be in the range of \$20,000 to each. A program to develop statistically valid private operations data beyond the level of origin-destination data will be more complex and could cost in the \$190,000 range, similar to the origin destination survey identified above.

Benefit: In discussions concerning the Freight Movement Study with representatives of major intermodal facilities, it was clear there are large gaps of information, and analysis that is needed to improve freight movement concerns in these areas. Such information gathering analyses were beyond the scope of this study. It is believed that each of the individual areas identified above warrant individual attention and emphasis. Such studies are needed for improved specification of meaningful, short term solutions to freight issues in these areas.

8.3.5 Recommendation No. 5: Improve Monitoring of Truck Traffic on the Roadways

Through both this MPO Freight Movement Study and through recent work associated with development of the Southeast Florida Regional Planning Model, it has been observed that an increased

capacity for identification of truck travel volumes would be very desirable for planning purposes, as well as for identifying operational improvement opportunities and recognizing potential high maintenance areas. The MPO, the County Public Works Department, and the local FDOT office should cooperatively examine both local and state programs for development of classification counts for truck traffic to determine opportunities for better monitoring of truck traffic.

Cost: The cost of increased monitoring of truck traffic will be associated with improvements to counting stations and staff time for processing.

Benefit: The availability of improved truck traffic monitoring will provide a supportive data base for truck travel model development, as well as for identifying operational improvement opportunities and recognizing potential high maintenance areas.

8.4 Dade Transportation Improvements for Trucking and Freight Movement

This section identifies transportation improvements that are being considered or

are recommended for consideration for implementation. Through work in this study, the consultant identified three key areas of emphasis for freight movement consideration. Extend to and include the roadway linkages between the three locations. These were the Port of Miami, the Miami International Airport, and the west/northwest commercial area., and improvement considerations

The identification of improvement alternatives for freight movement in the county was based on review of information developed in this Freight Movement Study, discussions with representatives of major intermodal facilities, and review of Dade County planning documents such as the Transportation Improvement Program (TIP).

This section identifies specific projects that correlate to key areas of freight movement and concern developed during the study thus are recommended for implementation of further development. However, it should be noted that specific project development and prioritization occurs through Dade County and MPO planning processes.

8.4.1 Improvement No. 1: Port of Miami Tunnel

This MPO Freight Movement Study recognizes the port tunnel project as a viable and necessary project. No other alternative

surfaced through the study process that would replace the overall function of the port tunnel more cost effectively. In addition, work associated with the supplemental Port of Miami Truck Survey reinforced the major impact of I-395 as an access/egress road to downtown and the Port and the resulting reduction of truck traffic in downtown that would be experienced through implementation of a Port tunnel. Since the initiation of this study in 1995, preliminary engineering for the Port of Miami tunnel project has been included in the listing of "Federally Funded Projects of the Fiscal Year 1996-2000 Transportation Improvement Program" of the Transportation Improvement Program, Fiscal Years 1996 - 2000.² In addition, an FDOT sponsored PD&E study on the project has been completed.³ The Port has identified access improvement for trucks as a major priority. Currently, trucks must pass through downtown during trips to and from the Port. Congestion in the downtown and conflicts with traffic and development such as Bayside have been major concerns. The port tunnel will link truck traffic from the port with I-395. As noted earlier, the Port of Miami Truck Survey conducted as a

² Transportation Improvement Program, Fiscal Years 1996-2000, Metropolitan Planning Organization for the Miami urbanized Area, Adopted May 4, 1995

³ Port of Miami Tunnel & Access Improvements PD&E Study, prepared by Post, Buckley, Schuh & Jernigan, prepared for Florida Department of Transportation, District 6, October 1994.

supplement to this study identified I-395 as the major access/egress route for downtown truck movements. The tunnel will eliminate conflicts in downtown Miami and ease congestion in that area. Combined with a Biscayne Busway, the tunnel could also be used as part of a strategy to accommodate increased container activity at the port. It is recommended that this project be funded through construction.

Cost: The total cost identified for the Port of Miami tunnel as estimated in the FDOT PD&E report is \$351,500,000. The schedule for completion is sixty months.

Benefit: The port tunnel will afford relief to downtown congestion and should result in reduced travel times and associated cost savings to trucking companies operating in and out of the port. Information produced during this Freight Movement Study indicated significant truck movement to the north, northwest and west. The tunnel will complement and greatly facilitate those movements. The "truckway" has been cited as a potential link to the Buena Vista yards, which would make that facility more suitable for accommodating intermodal container traffic consistent with Port plans to expand its container business to maintain its competitive stance, both with respect to other Florida ports, as well as other east coast and gulf ports such as New Orleans.

8.4.2 Improvement No. 2: NW 25th Street Improvements

The Miami International Airport Westside Cargo Area (WCA) is a major distribution center for airport-related truck traffic. The Florida Department of Transportation recently engaged a consultant to prepare an engineering concept report⁴ to address existing conditions and present comparative analyses of improvement concepts for the NW 25th Street corridor between NW 87th Avenue and NW 67th Avenue.

The corridor, which is heavily used by vehicles traveling between SR-826/Palmetto Expressway and the main cargo and maintenance facilities of Miami International Airport, also was identified in this Freight Movement Study as a major corridor even though the surveys of this study did not expressly include airport traffic. This decision was made that because of the ongoing FDOT work, FDOT study surveys would be relied upon as an additional preliminary information base for the study. Surveys conducted as part of the work concluded that over 50 percent of the 1,330 trucks leaving the WCA were going west of

SR-826 or directly to the interchange, and 81 percent of the 1,250 trucks entering the WCA were coming from west of SR 826 or directly from the interchange.

The study provided documentation and evaluation of concept alternatives to improve the operation of NW 25th Street together with providing adequate truck access between SR 826 and the WCA. These included constructing a viaduct above the NW 25th Street Canal; widening of NW 25th Street; locating a viaduct above the NW 25th Street median; and locating a viaduct above the FEC railroad tracks.

Cost: The improvements had cost estimates ranging from \$12,450,000 (widening of NW 25th Street) to \$43,770,000 (viaduct over the NW 25th Street tracks).

Benefit: The WCA is currently undergoing expansion to meet double-digit growth for air freight demand at Miami. Increased capacity will in turn place significantly greater demands on traffic in the corridor. Because of the link between the WCA and West Dade, as demonstrated through the origin-destination survey conducted in the FDOT study, improvements to this corridor will serve to meet future industry growth and truck movement activity.

⁴ Engineering Concept Study, NW 25th Street from NW 87th Avenue to NW 67th Avenue, "Engineering Concept Report," prepared by Marlin Engineers for the Florida Department of Transportation, November 1995.

8.4.3 Improvement No. 3: Downtown Miami Street Improvements

A preliminary evaluation of truck traffic movement between the Port of Miami and the downtown roadway system was conducted by the firm of Beiswenger, Hoch and Associates⁵ with the principal objective of improving existing operational routes. The report identifies that the main points of conflict associated with trucks are related to turning movements in the downtown where existing conditions and design are not suitable for the number of trucks serving the Port of Miami. Key intersections identified for improvement were:

- NE 2nd Avenue and NE 5th Street
- NE 1st Avenue and NE 6th Street
- Eastbound ramp at I-395 and NE 2nd Avenue

The intersection of NE 5th Street and NE 2nd Avenue has very tight left turns from 2nd Avenue to 5th Street. Trucks essentially are forced to use all lanes when making the left turn movement. The solutions proposed for this location are redesign of the intersection with consideration given to the option to design a left turn in between the columns of the Metrorail utilizing right-of-way acquired from an existing parking lot, and signalization improvements. At NE 1st Avenue and NE 6th Street, conditions

associated with geometric design of the roadway (turning radius) and the location of a house immediately on a corner where many trucks make turns posed a concern. The proposed solution is intersection redesign. The study of the eastbound ramp at I-395 and NE 2nd Avenue revealed that trucks frequently hit the pier cap while making a right turn movement; drive over the curb and gutter when trying to avoid hitting the cap while turning; and avoid the intersection. The solution proposed for this location was to redesign the intersection to provide adequate turning radius and proper clearances for structures and to redesign the signalization.

The Port of Miami truck survey supported implementation of these improvements. Specifically, the on-street improvements should be immediate priority. It is also recommended that conversion of the Biscayne Truck (see next section) be strongly considered as an interim, and perhaps complementary measure, to the Port of Miami tunnel.

Cost: No costs were identified in the report for the on-street improvements. However, in addition to design, engineering and construction costs, right-of-way costs and issues may be significant.

⁵ Port of Miami - City Street Improvements, prepared by Beiswenger, Hoch and Associates, Inc., July 1995.

Benefit: Improvements on key truck routes through downtown that would improve truck passages through the downtown. These improvements were identified on the main truck routes through the downtown.

8.4.4 Improvement No. 4: Biscayne Truckway

The consideration of a truckway on existing Florida East Coast (FEC) rail line from downtown to the Buena Vista yards at approximately Biscayne Boulevard and 36th Street has been identified as a key improvement that would allow the port and the railroad to optimize handling of container traffic from the Port of Miami. Currently, there is little activity on the tracks with only a few trains daily using the tracks to access the port. Most rail intermodal container traffic occurs at the FEC Hialeah Intermodal yard, which requires a seven mile trip for trucks hauling containers from the port to the yard for transfer to train. Increasing operations at the Buena Vista yard would be a significant opportunity for reduction of truck traffic on roadways and for increasing port container traffic. The FEC and the port have examined the possibility of such a truckway.

The rail line for most of the corridor north of the Miami Arena is a 100 foot wide right-of-way, which would be sufficient for the truckway. However, there would have to be a coordinated signalized crossing programs, as with the trains, which would necessitate

the operation of convoys. One option considered has been construction of an elevated truckway. While this would be more expensive than the at-grade truckway, it would eliminate the need for signalization.

Another opportunity for the link to the Buena Vista yard will be the development of the Port tunnel. Current design configurations have the tunnel linking with I-395. A ramp from I-395 to the Biscayne Truckway would remove the need for traffic on the Biscayne Truckway to pass through downtown. On the other hand, the Biscayne Truckway may be an opportunity for linking truck traffic to I-395 in the short-term prior to completion of the port tunnel.

Cost: No costs have been identified for the truckway. The issue of use of the right-of-way will be a key concern (and considered feasible based on preliminary discussions).

Benefit: The benefit of the truckway would be two-fold. One, it would create opportunities for greater concentration of intermodal activity at the Buena Vista yards and would remove some traffic from the roadway system, as trucks formerly traveling to the FEC Hialeah Yard would be traveling to Buena Vista and would not be using the roadway system. Second, it could represent a short-term opportunity for moving trucks through and out of Miami with some level of separation from the roadway network.

8.4.5 Improvement No. 5: Okeechobee Road Truck Corridor Improvements

When the results of the origin-destination survey conducted as part of the Freight Movement Study were plotted in a TRANPLAN simulation, Okeechobee Road appeared to have a higher concentration of truck trips than were referenced by drivers as a road cited by drivers as a road traveled on during the trip. It ranked 7th in terms of reports from drivers but, with the exception of the downtown area, has the greatest distribution of truck trips as simulated by the model (note, the model assigns routes linking origin and destination and may not reflect the route actually taken for a trip). This indicates that while Okeechobee Road should be the most efficient route for truck trips, it is not being used. There may be potential for greater utilization of Okeechobee Road by trucks.

Cost: Detailed analysis of the Okeechobee Road corridor was not conducted.

Benefit: Okeechobee Road passes through heavy concentrations of commercial and industrial activity. There are gravel companies in the area of the HEFT that have significant movements of heavy, multitude truck activity. Southeast of the Palmetto, the corridor is highly constrained with minimal

opportunity for expansion. There are many trucking companies and distributors located in this area. Improvements to the corridor could provide enhanced movement for these users and relieve some truck traffic from other major congested facilities.

8.4.6 Other Considerations

The County and FDOT District VI are establishing a program to monitor and control traffic with an ITS (Intelligent Transportation System) system that will provide information about traffic flow over the entire region. This and other ITS opportunities for freight should be monitored as they evolve. These may have particular importance relative to minimizing congestion resulting from accidents involving heavy trucks, which have been cited as being responsible for disproportionate traffic slowdown as a result of incident. In December 1994, Dade County established an ITS coordinating committee to plan for a comprehensive integrated ITS program for the Miami urbanized area and give support for the development and future application of ITS technologies in Dade County. This committee is the appropriate source for information concerning future ITS developments that may be beneficial to freight movement in the County; this should also be consulted by the freight route regarding incorporating trucking interests when considering ITS applications.

Hillsborough County has established a county truck route plan. There is no current adopted truck route plan in Dade County. The purpose of the Hillsborough plan was developed in response to complaints by citizens that trucks were using county roads that were not suitable for large vehicles. The implementation of projects that remove truck

traffic on local roads (such as the Port Tunnel) and the growth of areas with major commercial and industrial concentrations such as northwest Dade are seen as being two important catalysts for proactively incorporating planning for trucks in facility design considerations.



Appendix A

DADE COUNTY CLASSIFICATION COUNTS

Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 87 - DADE

Site Co Sec Sub MilePost Description
0003 87110000 25.660 SR90/US41/TAMIAMI TRL, 200'W OF SR997/KROMEAV, DACH

Func. Class: 02 - Rural Principal Arterial -- Other

Survey Type: Portable	Duration: 2 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		3	0.09	24T&B = 72.19%	DH1 = 36.10%
Class 02 CARS		699	25.88	24T = 70.32%	DH3 = 27.31%
Class 03 PICK-UPS AND VANS		49	1.83	24B = 54.63%	DH2 = 8.78%
Class 04 BUSES		51	1.87	24M = 17.57%	
Class 05 2-AXLE, SINGLE UNIT TRUCKS		424	15.69		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		7	0.26		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		2	0.07		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR		1427	52.85		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		7	0.26		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		2	0.07		
Class 11 5-AXLE MULTI-TRLR		22	0.82		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		7	0.26		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		2700	100.00		

Site Co Sec Sub MilePost Description
0004 87150000 22.260 SR 997/KROME AVE, 200' S OF SR 90/US-41, DACH CO

Func. Class: 02 - Rural Principal Arterial -- Other

Survey Type: Portable	Duration: 2 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		170	2.62	24T&B = 21.95%	DH1 = 10.98%
Class 02 CARS		4362	67.12	24T = 21.73%	DH3 = 10.61%
Class 03 PICK-UPS AND VANS		540	8.31	24B = 21.23%	DH2 = 0.36%
Class 04 BUSES		15	0.22	24M = 0.72%	
Class 05 2-AXLE, SINGLE UNIT TRUCKS		33	0.50		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		196	4.55		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		386	5.93		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR		433	6.64		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		58	0.90		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		31	0.48		
Class 11 5-AXLE MULTI-TRLR		18	0.28		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		150	2.43		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		6500	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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County: 87 - DADE

Site Co Sec Sub MilePost Description
0035 87062000 2.993 SR 959/RED RD/SW 57 AVE. 200' S CORAL WAY/SW 24 ST

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 3 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	39	0.21
Class 02 CARS	15514	90.73
Class 03 PICK-UPS AND VANS	969	5.66
Class 04 BUSES	19	0.11
Class 05 2-AXLE, SINGLE UNIT TRUCKS	78	0.46
Class 06 3-AXLE, SINGLE UNIT TRUCKS	192	2.29
Class 07 4-AXLE, SINGLE UNIT TRUCKS	12	0.07
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	43	0.25
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	15	0.09
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	6	0.03
Class 11 5-AXLE MULTI-TRLR	1	0.01
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	13	0.08
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	17100	100.00

Summary Daily Statistics
Daily Design Hour
24T&B = 3.38% DHT = 1.69%
24T = 3.27%
24B = 2.82% DHD = 1.41%
24M = 0.57% DHD = 0.28%

Site Co Sec Sub MilePost Description
0060 87001000 4.006 SR 94/KENDALL DR. 200 FT E SW 137 AVE

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	742	1.14
Class 02 CARS	56530	85.97
Class 03 PICK-UPS AND VANS	3583	5.51
Class 04 BUSES	116	0.18
Class 05 2-AXLE, SINGLE UNIT TRUCKS	454	0.70
Class 06 3-AXLE, SINGLE UNIT TRUCKS	1709	2.17
Class 07 4-AXLE, SINGLE UNIT TRUCKS	265	0.41
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	171	0.26
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	132	0.20
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	90	0.14
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	207	0.32
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	65000	100.00

Summary Daily Statistics
Daily Design Hour
24T&B = 6.30% DHT = 3.19%
24T = 6.20%
24B = 5.50% DHD = 2.75%
24M = 0.88% DHD = 0.40%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

Florida Department of Transportation
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County: 87 - DADE

Site Co Sec Sub MilePost Description
0066 87001000 9.140 SR 94/KENDALL DR, 200 FT W SR 973/SW 87 AVE

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		341	0.84	24T&B = 1.79%	DH1 = 0.90%
Class 02 CARS		39301	91.40	24T = 1.28%	
Class 03 PICK-UPS AND VANS		2567	5.97	24H = 0.68%	DH3 = 0.34%
Class 04 BUSES		220	0.51	24M = 1.11%	DH2 = 0.56%
Class 05 2-AXLE, SINGLE UNIT TRUCKS		257	0.60		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		106	0.25		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		3	0.01		
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR		94	0.22		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		69	0.16		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		12	0.03		
Class 11 5-AXLE MULTI-TRLR		2	0.00		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		9	0.02		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		43600	100.00		

Site Co Sec Sub MilePost Description
0112 87028000 4.625 SR 932/WW 103 ST, 200' W R 8 AV, MIAMI, DADE CO

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		288	0.69	24T&B = 3.66%	DH1 = 1.83%
Class 02 CARS		35859	86.41	24T = 3.13%	
Class 03 PICK-UPS AND VANS		3832	9.23	24H = 1.93%	DH3 = 0.97%
Class 04 BUSES		223	0.54	24M = 1.73%	DH2 = 0.87%
Class 05 2-AXLE, SINGLE UNIT TRUCKS		496	1.19		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		195	0.47		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		6	0.01		
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR		326	0.79		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		234	0.56		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		9	0.02		
Class 11 5-AXLE MULTI-TRLR		7	0.02		
Class 12 6-AXLE MULTI-TRLR		1	0.00		
Class 13 ANY 7 OR MORE AXLE		23	0.06		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		41500	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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County: 87 - DADE

Site Co Sec Sub MilePost Description
0132 87066000 5.486 SR 922/NE-NW 125 ST, 200'W HARDING AV, DADE COUNTY

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	431	2.24
Class 02 CARS	14316	74.56
Class 03 PICK-UPS AND VANS	3174	16.53
Class 04 BUSES	79	0.41
Class 05 2-AXLE, SINGLE UNIT TRUCKS	264	1.37
Class 06 3-AXLE, SINGLE UNIT TRUCKS	613	3.19
Class 07 4-AXLE, SINGLE UNIT TRUCKS	100	0.52
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	166	0.87
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	21	0.11
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	10	0.05
Class 11 5-AXLE MULTI-TRLR	4	0.02
Class 12 6-AXLE MULTI-TRLR	1	0.01
Class 13 ANY 7 OR MORE AXLE	21	0.11
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	19200	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 6.66%	DH1 = 3.33%
24T = 6.25%	
24H = 4.88%	DH3 = 2.44%
24M = 1.70%	DH2 = 0.89%

Site Co Sec Sub MilePost Description
0135 87240000 8.245 SR 9/NW 27 AVE, 200' S NW 95 ST, DADE COUNTY

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable Duration: 2 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	195	0.61
Class 02 CARS	27188	84.95
Class 03 PICK-UPS AND VANS	3003	9.38
Class 04 BUSES	421	1.31
Class 05 2-AXLE, SINGLE UNIT TRUCKS	471	1.47
Class 06 3-AXLE, SINGLE UNIT TRUCKS	171	0.53
Class 07 4-AXLE, SINGLE UNIT TRUCKS	10	0.03
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	280	0.88
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	226	0.71
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	16	0.05
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	1	0.00
Class 13 ANY 7 OR MORE AXLE	17	0.05
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	32000	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 5.04%	DH1 = 2.52%
24T = 3.73%	
24H = 2.26%	DH3 = 1.13%
24M = 2.79%	DH2 = 1.39%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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County: 87 - DADE

Site Co Sec Sub MilePost Description
0137 87260000 17.646 SR 826/PALMETTO EXPWY, 1600 FEET W OF NW 67TH AVE

Func. Class: 12 - Urban Principal Arterial -- Other Freewa

Survey Type: Telemetered	Duration: 309 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		43	0.04	24T&B = 0.11%	DM7 = 0.05%
Class 02 CARS		96362	99.66	24T = 0.10%	DM3 = 0.04%
Class 03 PICK-UPS AND VANS		121	0.12	24H = 0.02%	DM2 = 0.01%
Class 04 BUSES		12	0.01		
Class 05 2-AXLE, SINGLE UNIT TRUCKS		12	0.01		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		33	0.03		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		2	0.00		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR		18	0.02		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		16	0.02		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		0	0.00		
Class 11 5-AXLE MULTI-TRLR		0	0.00		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		14	0.01		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		62	0.06		
		97193	100.00		

Site Co Sec Sub MilePost Description
0146 87026000 4.317 SR968/MIAMI GARDENWAY, 200'E NW 14 AV/W FL TPK, DADE

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		60	0.21	24T&B = 6.70%	DM7 = 3.35%
Class 02 CARS		24979	87.65	24T = 5.97%	DM3 = 2.71%
Class 03 PICK-UPS AND VANS		1551	5.44	24H = 1.29%	DM2 = 0.65%
Class 04 BUSES		210	0.74		
Class 05 2-AXLE, SINGLE UNIT TRUCKS		150	0.56		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		1212	4.25		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		77	0.27		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR		36	0.12		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		43	0.15		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		48	0.16		
Class 11 5-AXLE MULTI-TRLR		0	0.00		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		91	0.32		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		28500	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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County: 87 - DADE

Site Co Sec Sub MilePost Description
0168 87034000 5.147 SR 915/NE 6 AVE, 200 FEET S NE 170 ST

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Volume	Average Daily %
Class 01 MOTORCYCLES	208	0.68
Class 02 CARS	26972	88.43
Class 03 PICK-UPS AND VANS	1467	4.81
Class 04 BUSES	242	0.79
Class 05 2-AXLE, SINGLE UNIT TRUCKS	232	0.76
Class 06 3-AXLE, SINGLE UNIT TRUCKS	878	2.85
Class 07 4-AXLE, SINGLE UNIT TRUCKS	16	0.05
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	244	0.80
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	126	0.41
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	36	0.12
Class 11 5-AXLE MULTI-TRLR	3	0.01
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	22	0.00
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	30500	100.00

Summary Daily Statistics

Daily	Design Hour
24T&B = 6.28%	DH1 = 3.04%
24T = 5.28%	
24M = 4.52%	DH3 = 2.26%
24M = 1.55%	DH2 = 0.78%

Site Co Sec Sub MilePost Description
0168 87001800 8.640 SR-94/KNEEDALL DR, 150' W OF SW 91ST AVE, DADE CO

Func. Class: 16 - Urban Other Principal Arterial

Survey Type: Telemetered Duration: 265 Days

	Annual Volume	Average Daily %
Class 01 MOTORCYCLES	58	0.13
Class 02 CARS	41888	91.61
Class 03 PICK-UPS AND VANS	2628	5.73
Class 04 BUSES	88	0.19
Class 05 2-AXLE, SINGLE UNIT TRUCKS	89	0.19
Class 06 3-AXLE, SINGLE UNIT TRUCKS	120	0.26
Class 07 4-AXLE, SINGLE UNIT TRUCKS	3	0.01
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	175	0.39
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	46	0.10
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	2	0.00
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	2	0.00
Class 14 NOT USED	0	0.00
Class 15 OTHER	632	1.38
	45717	100.00

Summary Daily Statistics

Daily	Design Hour
24T&B = 1.15%	DH1 = 0.58%
24T = 0.96%	
24M = 0.76%	DH3 = 0.38%
24M = 0.39%	DH2 = 0.19%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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County: 87 - DADE

Site Co Sec Sub MilePost Description
0193 87021000 1.710 SR-878, 0.15 MI. WEST OF SR-826, DADE CO.

Func. Class: 16 - Urban Minor Arterial

Survey Type: Telemetered Duration: 354 Days

	Volume	Annual Average Daily %
Class 01 MOTORCYCLES	244	0.58
Class 02 CARS	39043	92.10
Class 03 PICK-UPS AND VANS	1700	4.01
Class 04 BUSES	94	0.22
Class 05 2-AXLE, SINGLE UNIT TRUCKS	154	0.39
Class 06 3-AXLE, SINGLE UNIT TRUCKS	204	0.48
Class 07 4-AXLE, SINGLE UNIT TRUCKS	3	0.01
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	106	0.49
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	17	0.04
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	1	0.00
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	1	0.00
Class 14 NOT USED	0	0.00
Class 15 OTHER	715	1.69
	42392	100.00

Summary Daily Statistics
Daily Design Hour
247AB = 1.63% DM7 = 0.01%
247 = 1.41%
248 = 1.02% DM3 = 0.51%
24M = 0.61% DM2 = 0.30%

Site Co Sec Sub MilePost Description
0258 87034000 4.300 SR 915, 175' S OF SR 157TH ST. MIAMI

Func. Class: 16 - Urban Minor Arterial

Survey Type: Telemetered Duration: 88 Days

	Volume	Annual Average Daily %
Class 01 MOTORCYCLES	26	0.09
Class 02 CARS	23847	85.47
Class 03 PICK-UPS AND VANS	1995	6.87
Class 04 BUSES	79	0.29
Class 05 2-AXLE, SINGLE UNIT TRUCKS	127	0.46
Class 06 3-AXLE, SINGLE UNIT TRUCKS	35	0.13
Class 07 4-AXLE, SINGLE UNIT TRUCKS	1	0.00
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	21	0.08
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	27	0.10
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	0	0.00
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	0	0.03
Class 14 NOT USED	0	0.00
Class 15 OTHER	1516	5.49
	27603	100.00

Summary Daily Statistics
Daily Design Hour
247AB = 1.80% DM7 = 0.54%
247 = 0.79%
248 = 0.32% DM3 = 0.17%
24M = 0.75% DM2 = 0.37%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Site	Co	Sec	Sub	MilePost	Description
0266		87120000		3.840	US-41/SW 8TH STREET, E. OF SW 139TH AVE., MIAMI

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Telemetered Duration: 63 Days

Class	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	75	0.53
Class 02 CARS	9924	70.39
Class 03 PICK-UPS AND VANS	1412	10.01
Class 04 BUSES	10	0.07
Class 05 2-AXLE, SINGLE UNIT TRUCKS	106	0.75
Class 06 3-AXLE, SINGLE UNIT TRUCKS	164	1.16
Class 07 4-AXLE, SINGLE UNIT TRUCKS	25	0.18
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	72	0.51
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	191	1.35
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	13	0.09
Class 11 5-AXLE MULTI-TRLR	7	0.05
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	39	0.28
Class 14 NOT USED	0	0.00
Class 15 OTHER	2051	14.63
	14099	100.00

Summary Daily Statistics	
Daily	Design Hour
24TAS = 4.45%	DET = 2.22%
24T = 4.38%	
24H = 3.63%	DH1 = 1.01%
24M = 0.02%	DH2 = 0.41%

Site	Co	Sec	Sub	MilePost	Description
0346		87020000		12.028	SR 5/US-1, 100 FEET N ALLAPATTAH RD/SW 112 AVE

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable Duration: 1 Days

Class	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	135	0.27
Class 02 CARS	40021	79.25
Class 03 PICK-UPS AND VANS	7914	15.47
Class 04 BUSES	406	0.80
Class 05 2-AXLE, SINGLE UNIT TRUCKS	1003	1.99
Class 06 3-AXLE, SINGLE UNIT TRUCKS	236	0.47
Class 07 4-AXLE, SINGLE UNIT TRUCKS	6	0.01
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	307	0.77
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	351	0.70
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	16	0.03
Class 11 5-AXLE MULTI-TRLR	13	0.03
Class 12 6-AXLE MULTI-TRLR	2	0.00
Class 13 ANY 7 OR MORE AXLE	10	0.02
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	50500	100.00

Summary Daily Statistics	
Daily	Design Hour
24TAS = 4.01%	DET = 1.01%
24T = 4.01%	
24H = 2.02%	DH1 = 1.01%
24M = 2.79%	DH2 = 1.40%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 04-13

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County: 87 - DADK

Site Co Sec Sub MilePost Description
0377 87120000 0.038 SR 99/SW 8 ST, 200' E OF KROME AV/SR 997, DADK CO

Func. Class: 02 - Rural Principal Arterial -- Other

Survey Type: Portable Duration: 2 Days

	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	26	0.40
Class 02 CARS	5010	77.08
Class 03 PICK-UPS AND VANS	814	12.53
Class 04 BUSES	34	0.53
Class 05 2-AXLE, SINGLE UNIT TRUCKS	147	2.27
Class 06 3-AXLE, SINGLE UNIT TRUCKS	117	1.80
Class 07 4-AXLE, SINGLE UNIT TRUCKS	18	0.28
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	59	0.91
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	257	3.96
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	12	0.18
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	4	0.06
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	6500	100.00

Summary Daily Statistics

Daily	Design Hour
2474B = 9.99%	DHT = 5.00%
24T = 9.46%	
24M = 7.20%	DM3 = 3.60%
24M = 2.79%	DM2 = 1.40%

Site Co Sec Sub MilePost Description
0436 87140000 9.982 SR 7/US 661/SW/NW 7 AVE, 200 FEET N NW 147 ST

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	52	0.19
Class 02 CARS	22979	83.56
Class 03 PICK-UPS AND VANS	2926	10.64
Class 04 BUSES	369	1.34
Class 05 2-AXLE, SINGLE UNIT TRUCKS	351	1.28
Class 06 3-AXLE, SINGLE UNIT TRUCKS	450	1.64
Class 07 4-AXLE, SINGLE UNIT TRUCKS	52	0.19
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	235	0.85
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	40	0.15
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	19	0.07
Class 11 5-AXLE MULTI-TRLR	1	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	25	0.09
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	27500	100.00

Summary Daily Statistics

Daily	Design Hour
2474B = 5.61%	DHT = 2.81%
24T = 4.27%	
24M = 2.99%	DM3 = 1.50%
24M = 2.62%	DM2 = 1.31%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 87 - BADE

Site Co Sec Sub MilePost Description
0528 87098000 10.374 SR 25/US 27/OKKECHONES RD, 200 FEET SE SR 826

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily	%
Volume		
Class 01 MOTORCYCLES	122	0.21
Class 02 CARS	46644	81.12
Class 03 PICK-UPS AND VANS	6381	11.10
Class 04 BUSES	265	0.46
Class 05 2-AXLE, SINGLE UNIT TRUCKS	987	1.72
Class 06 3-AXLE, SINGLE UNIT TRUCKS	887	1.54
Class 07 4-AXLE, SINGLE UNIT TRUCKS	344	0.60
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	738	1.28
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	717	1.25
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	60	0.10
Class 11 5-AXLE MULTI-TRLR	15	0.03
Class 12 6-AXLE MULTI-TRLR	4	0.01
Class 13 ANY 7 OR MORE AXLE	336	0.58
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	57508	100.00

Summary Daily Statistics

Daily	Design Hour
24T&B = 7.57%	DHT = 3.78%
24T = 7.11%	
24H = 5.39%	DH3 = 2.70%
24M = 2.18%	DH2 = 1.09%

Site Co Sec Sub MilePost Description
8537 87088900 35.027 SR 934/NW 79 ST, 500 FT E SR 953/LEJUNE RD

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily	%
Volume		
Class 01 MOTORCYCLES	74	0.26
Class 02 CARS	23156	81.25
Class 03 PICK-UPS AND VANS	3672	12.89
Class 04 BUSES	221	0.78
Class 05 2-AXLE, SINGLE UNIT TRUCKS	606	2.13
Class 06 3-AXLE, SINGLE UNIT TRUCKS	451	1.58
Class 07 4-AXLE, SINGLE UNIT TRUCKS	6	0.02
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	120	0.42
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	127	0.45
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	13	0.04
Class 11 5-AXLE MULTI-TRLR	1	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	50	0.18
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	28508	100.00

Summary Daily Statistics

Daily	Design Hour
24T&B = 5.61%	DHT = 2.80%
24T = 4.82%	
24H = 2.70%	DH3 = 1.35%
24M = 2.91%	DH2 = 1.45%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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ID: 305+377+5487

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 87 - Dade

Site Co Sec Sub MilePost Description
0540 87060000 12.261 SR A1A/COLLINS AVE, 200' S END BRIDGE/WCL BAL HARB

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable		Duration: 1 Days		Annual Average Daily		Summary Daily Statistics	
				Volume	%	Daily	Design Hour
Class 01	MOTORCYCLES			46	0.13	24T&B = 5.88%	DHT = 2.94%
Class 02	CARS			31635	90.56	24T = 4.80%	DH3 = 2.10%
Class 03	PICK-UPS AND VANS			1222	3.44	24H = 4.20%	DH2 = 0.84%
Class 04	BUSES			378	1.08		
Class 05	2-AXLE, SINGLE UNIT TRUCKS			207	0.59		
Class 06	3-AXLE, SINGLE UNIT TRUCKS			1177	3.36		
Class 07	4-AXLE, SINGLE UNIT TRUCKS			46	0.13		
Class 08	2-AXL TRCTR W/ 1 OR 2-AXL TRLR			96	0.27		
Class 09	3-AXLE TRACTOR W/ 2-AXLE TRLR			46	0.13		
Class 10	3-AXLE TRACTOR W/ 3-AXLE TRLR			36	0.10		
Class 11	5-AXLE MULTI-TRLR			2	0.01		
Class 12	6-AXLE MULTI-TRLR			0	0.00		
Class 13	ANY 7 OR MORE AXLE			69	0.20		
Class 14	NOT USED			0	0.00		
Class 15	OTHER			0	0.00		
				35000	100.00		

Site Co Sec Sub MilePost Description
0543 87020000 0.363 SR 5/US1, 2500' S OF PALM DR (FLA CITY), DADE COUNTY

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable		Duration: 1 Days		Annual Average Daily		Summary Daily Statistics	
				Volume	%	Daily	Design Hour
Class 01	MOTORCYCLES			329	1.71	24T&B = 8.23%	DHT = 4.11%
Class 02	CARS			14619	76.14	24T = 8.89%	
Class 03	PICK-UPS AND VANS			2673	13.92	24H = 6.36%	DH3 = 3.16%
Class 04	BUSES			25	0.13	24M = 1.87%	DH2 = 0.93%
Class 05	2-AXLE, SINGLE UNIT TRUCKS			193	1.74		
Class 06	3-AXLE, SINGLE UNIT TRUCKS			650	3.38		
Class 07	4-AXLE, SINGLE UNIT TRUCKS			179	0.93		
Class 08	2-AXL TRCTR W/ 1 OR 2-AXL TRLR			156	0.81		
Class 09	3-AXLE TRACTOR W/ 2-AXLE TRLR			138	0.72		
Class 10	3-AXLE TRACTOR W/ 3-AXLE TRLR			23	0.12		
Class 11	5-AXLE MULTI-TRLR			1	0.00		
Class 12	6-AXLE MULTI-TRLR			0	0.00		
Class 13	ANY 7 OR MORE AXLE			75	0.39		
Class 14	NOT USED			0	0.00		
Class 15	OTHER			0	0.00		
				19200	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 87 - DADS

Site Co Sec Sub MilePost Description
1038 87054000 1.494 SR 972/CORAL WAY, 200' W OF SW 27 AV/SA 9, DADS CO

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		104	0.19	24T&B = 1.51%	DHT = 0.76%
Class 02 CARS		50018	53.49	24T = 1.25%	
Class 03 PICK-UPS AND VANS		2568	4.80	24H = 0.78%	DH3 = 0.39%
Class 04 BUSES		142	0.27	24M = 0.71%	DH2 = 0.37%
Class 05 2-AXLE, SINGLE UNIT TRUCKS		259	0.47		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		234	0.44		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		11	0.02		
Class 08 2-AXL TRACTR W/ 1 OR 3-AXL TRLR		79	0.15		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		25	0.05		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		10	0.02		
Class 11 5-AXLE MULTI-TRLR		0	0.00		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		59	0.11		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		53500	100.00		

Site Co Sec Sub MilePost Description
1049 87044000 6.276 SR 976/BIAD RD, 200' E OF SW 57 AVE, DADS COUNTY

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		424	0.78	24T&B = 3.84%	DHT = 1.92%
Class 02 CARS		47350	87.69	24T = 2.86%	
Class 03 PICK-UPS AND VANS		4150	7.69	24H = 1.44%	DH3 = 0.72%
Class 04 BUSES		534	0.99	24M = 2.40%	DH2 = 1.20%
Class 05 2-AXLE, SINGLE UNIT TRUCKS		762	1.41		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		183	0.34		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		11	0.02		
Class 08 2-AXL TRACTR W/ 1 OR 3-AXL TRLR		434	0.80		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		94	0.17		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		10	0.02		
Class 11 5-AXLE MULTI-TRLR		1	0.00		
Class 12 6-AXLE MULTI-TRLR		0	0.00		
Class 13 ANY 7 OR MORE AXLE		47	0.09		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		54000	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 87 - Dade

Site Co Sec Sub MilePost Description
1070 87055000 1.989 SR 986/SUNSET DR, 200' N OF SW 107 AV. DADE COUNTY

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	252	0.56
Class 02 CARS	40988	51.08
Class 03 PICK-UPS AND VANS	2071	6.38
Class 04 BUSES	140	0.31
Class 05 2-AXLE, SINGLE UNIT TRUCKS	346	0.77
Class 06 3-AXLE, SINGLE UNIT TRUCKS	250	0.56
Class 07 4-AXLE, SINGLE UNIT TRUCKS	7	0.02
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	81	0.18
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	40	0.09
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	7	0.02
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	19	0.04
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	45000	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 1.98%	DHT = 0.99%
24T = 1.67%	
24M = 0.90%	EH1 = 0.85%
24N = 1.08%	EH2 = 0.54%

Site Co Sec Sub MilePost Description
1074 87047000 7.826 SR 973/GALLOWAY RD, 200' N SW 12 ST, DADE COUNTY

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	1025	3.31
Class 02 CARS	19695	63.53
Class 03 PICK-UPS AND VANS	3734	12.05
Class 04 BUSES	189	0.61
Class 05 2-AXLE, SINGLE UNIT TRUCKS	3020	9.74
Class 06 3-AXLE, SINGLE UNIT TRUCKS	1675	5.40
Class 07 4-AXLE, SINGLE UNIT TRUCKS	341	1.10
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	899	2.90
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	120	0.41
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	115	0.37
Class 11 5-AXLE MULTI-TRLR	4	0.01
Class 12 6-AXLE MULTI-TRLR	1	0.00
Class 13 ANY 7 OR MORE AXLE	173	0.56
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	31000	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 21.12%	DHT = 10.56%
24T = 20.51%	
24M = 10.77%	EH1 = 5.38%
24N = 10.35%	EH2 = 5.18%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 87 - DADN

Site Co Sec Sub MilePost Description
1089 87066000 0.019 SR 990/KILLIAN DR, 100' E SW 107 AVE, DADN COUNTY

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	144	0.44
Class 02 CARS	28760	88.49
Class 03 PICK-UPS AND VANS	2680	8.25
Class 04 BUSES	163	0.50
Class 05 2-AXLE, SINGLE UNIT TRUCKS	329	1.01
Class 06 3-AXLE, SINGLE UNIT TRUCKS	137	0.42
Class 07 4-AXLE, SINGLE UNIT TRUCKS	8	0.03
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	196	0.60
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	62	0.19
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	7	0.02
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	13	0.04
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	32300	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 2.82%	DET = 1.41%
24T = 2.33%	
24H = 1.30%	DE3 = 0.65%
24M = 1.52%	DE2 = 0.76%

Site Co Sec Sub MilePost Description
1091 87072000 4.243 SR 985/SW 107 AVE, 200' W BIRD RD/SW 40 ST/SR 976

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	152	0.52
Class 02 CARS	25915	89.36
Class 03 PICK-UPS AND VANS	2292	7.90
Class 04 BUSES	56	0.19
Class 05 2-AXLE, SINGLE UNIT TRUCKS	261	0.90
Class 06 3-AXLE, SINGLE UNIT TRUCKS	93	0.32
Class 07 4-AXLE, SINGLE UNIT TRUCKS	11	0.04
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	131	0.45
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	43	0.15
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	9	0.03
Class 11 5-AXLE MULTI-TRLR	1	0.00
Class 12 6-AXLE MULTI-TRLR	1	0.00
Class 13 ANY 7 OR MORE AXLE	36	0.12
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	29000	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 2.21%	DET = 1.11%
24T = 2.02%	
24H = 1.12%	DE3 = 0.56%
24M = 1.08%	DE2 = 0.55%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
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County: 87 - DADE

Site Co Sec Sub MilePost Description
1116 87091000 5.058 SR 994/QUAIL HOOBT DR, 200' W OF SW 127 AVE, DADE

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

Class	Annual Average Daily		Summary Daily Statistics	
	Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES	6	0.10	24T4B = 8.88%	DH1 = 4.44%
Class 02 CARS	3875	64.58	24T = 8.55%	
Class 03 PICK-UPS AND VANS	1586	26.43	24H = 5.57%	DH3 = 2.78%
Class 04 BUSES	20	0.34	24M = 3.31%	DH2 = 1.66%
Class 05 2-AXLE, SINGLE UNIT TRUCKS	179	2.98		
Class 06 3-AXLE, SINGLE UNIT TRUCKS	155	2.58		
Class 07 4-AXLE, SINGLE UNIT TRUCKS	29	0.49		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	111	1.84		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	20	0.34		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	3	0.05		
Class 11 5-AXLE MULTI-TRLR	8	0.13		
Class 12 6-AXLE MULTI-TRLR	3	0.05		
Class 13 ANY 7 OR MORE AXLE	5	0.09		
Class 14 NOT USED	0	0.00		
Class 15 OTHER	0	0.00		
	6000	100.00		

Site Co Sec Sub MilePost Description
1139 87053080 1.493 SR 968/FLAGLER ST, 200 FEET E SW/NW 72 AVE

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

Class	Annual Average Daily		Summary Daily Statistics	
	Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES	106	0.20	24T4B = 2.36%	DH1 = 1.18%
Class 02 CARS	50020	92.63	24T = 1.56%	
Class 03 PICK-UPS AND VANS	2680	4.82	24H = 0.95%	DH3 = 0.47%
Class 04 BUSES	430	0.80	24M = 1.41%	DH2 = 0.71%
Class 05 2-AXLE, SINGLE UNIT TRUCKS	332	0.61		
Class 06 3-AXLE, SINGLE UNIT TRUCKS	153	0.28		
Class 07 4-AXLE, SINGLE UNIT TRUCKS	10	0.02		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR	203	0.38		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	85	0.16		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	6	0.01		
Class 11 5-AXLE MULTI-TRLR	1	0.00		
Class 12 6-AXLE MULTI-TRLR	0	0.00		
Class 13 ANY 7 OR MORE AXLE	53	0.10		
Class 14 NOT USED	0	0.00		
Class 15 OTHER	0	0.00		
	54080	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 07 - DADR

Site Co Sec Sub MilePost Description
1203 07027000 2.755 SR 969/MILAM DAIRY RD, 200 FEET S NW 31 ST

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 2 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	133	0.58
Class 02 CARS	19283	78.71
Class 03 PICK-UPS AND VANS	2811	11.47
Class 04 BUSES	242	0.99
Class 05 2-AXLE, SINGLE UNIT TRUCKS	877	3.58
Class 06 3-AXLE, SINGLE UNIT TRUCKS	271	1.11
Class 07 4-AXLE, SINGLE UNIT TRUCKS	24	0.10
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	472	1.93
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	305	1.25
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	25	0.10
Class 11 5-AXLE MULTI-TRLR	2	0.01
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	54	0.22
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	24500	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 9.28%	DHT = 4.66%
24T = 8.29%	
24H = 4.71%	DM3 = 2.36%
24M = 4.56%	DM2 = 2.20%

Site Co Sec Sub MilePost Description
1205 07027000 3.375 SR 969/MILAM DAIRY RD, 200 FEET S NW 41 ST

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	235	0.60
Class 02 CARS	29982	76.88
Class 03 PICK-UPS AND VANS	3278	8.41
Class 04 BUSES	60	0.15
Class 05 2-AXLE, SINGLE UNIT TRUCKS	318	0.82
Class 06 3-AXLE, SINGLE UNIT TRUCKS	3033	7.78
Class 07 4-AXLE, SINGLE UNIT TRUCKS	1148	2.94
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	62	0.16
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	98	0.25
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	144	0.37
Class 11 5-AXLE MULTI-TRLR	1	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	640	1.64
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	39000	100.00

Summary Daily Statistics

Daily	Design Hour
24TAB = 14.11%	DHT = 7.06%
24T = 13.96%	
24H = 13.16%	DM3 = 6.57%
24M = 8.97%	DM2 = 0.49%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

Florida Department of Transportation
Annual Vehicle Classification Report
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County: 87 - DADE

Site Co Sec Sub MilePost Description
2134 87270000 12.190 SR 9A/I-95, 200 FEET S NW 151 ST

Func. Class: 11 - Urban Principal Arterial -- Interstate

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		90	0.05	24T6B = 9.07%	D8T = 4.53%
Class 02 CARS		156758	84.96	24T = 8.73%	
Class 03 PICK-UPS AND VANS		10918	5.92	24H = 7.28%	DH3 = 3.68%
Class 04 BUSES		620	0.34	24M = 1.79%	DH2 = 0.90%
Class 05 2-AXLE, SINGLE UNIT TRUCKS		2686	1.46		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		7390	4.01		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		2133	1.16		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR		1213	0.66		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		1624	0.88		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		221	0.12		
Class 11 5-AXLE MULTI-TRLR		56	0.03		
Class 12 6-AXLE MULTI-TRLR		7	0.00		
Class 13 ANY 7 OR MORE AXLE		782	0.42		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		-----	-----		
		184500	100.00		

Site Co Sec Sub MilePost Description
2193 87280000 6.095 SR 836/DOLPHIN EXPWY, 1500 FEET W AND RD/NW 57 AVE

Func. Class: 12 - Urban Principal Arterial -- Other Freewa

Survey Type: Portable	Duration: 1 Days	Annual Average Daily		Summary Daily Statistics	
		Volume	%	Daily	Design Hour
Class 01 MOTORCYCLES		503	0.28	24T6B = 5.85%	D8T = 2.92%
Class 02 CARS		158622	88.12	24T = 5.68%	
Class 03 PICK-UPS AND VANS		10351	5.75	24H = 4.61%	DH3 = 2.30%
Class 04 BUSES		452	0.25	24M = 1.24%	DH2 = 0.63%
Class 05 2-AXLE, SINGLE UNIT TRUCKS		1775	0.99		
Class 06 3-AXLE, SINGLE UNIT TRUCKS		4332	2.41		
Class 07 4-AXLE, SINGLE UNIT TRUCKS		921	0.51		
Class 08 2-AXL TRCTR W/ 1 OR 2-AXL TRLR		1616	0.90		
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR		481	0.27		
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR		310	0.18		
Class 11 5-AXLE MULTI-TRLR		94	0.05		
Class 12 6-AXLE MULTI-TRLR		16	0.01		
Class 13 ANY 7 OR MORE AXLE		519	0.29		
Class 14 NOT USED		0	0.00		
Class 15 OTHER		0	0.00		
		-----	-----		
		180000	100.00		

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 07 - DADE

Site Co Sec Sub MilePost Description
5348 87250000 3.956 SR 944/NW 54 ST, 200 FEET W NW 12 AVE

Func. Class: 16 - Urban Minor Arterial

Survey Type: Portable Duration: 1 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	367	1.76
Class 02 CARS	18152	82.55
Class 03 PICK-UPS AND VANS	2527	11.49
Class 04 BUSES	287	1.30
Class 05 2-AXLE, SINGLE UNIT TRUCKS	264	1.20
Class 06 3-AXLE, SINGLE UNIT TRUCKS	200	0.91
Class 07 4-AXLE, SINGLE UNIT TRUCKS	10	0.05
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	72	0.33
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	57	0.26
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	7	0.03
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	27	0.12
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	22000	100.00

Summary Daily Statistics

Daily	Design Hour
24T4B = 4.20%	DH1 = 2.10%
24T = 2.90%	
24H = 1.70%	DH3 = 0.85%
24M = 2.50%	DH2 = 1.25%

Site Co Sec Sub MilePost Description
9038 87140000 3.587 SR 7/US 441/NW 7 AV, S OF NW 46 ST @ R111, DADE CO

Func. Class: 16 - Urban Other Principal Arterial

Survey Type: Portable Duration: 8 Days

	Annual Average Daily Volume	%
Class 01 MOTORCYCLES	100	0.56
Class 02 CARS	16863	86.92
Class 03 PICK-UPS AND VANS	1803	9.29
Class 04 BUSES	209	1.08
Class 05 2-AXLE, SINGLE UNIT TRUCKS	204	1.05
Class 06 3-AXLE, SINGLE UNIT TRUCKS	114	0.59
Class 07 4-AXLE, SINGLE UNIT TRUCKS	0	0.00
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	42	0.22
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	47	0.24
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	5	0.02
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	6	0.03
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	-----	-----
	19400	100.00

Summary Daily Statistics

Daily	Design Hour
24T4B = 3.23%	DH1 = 1.61%
24T = 2.15%	
24H = 1.10%	DH3 = 0.55%
24M = 2.13%	DH2 = 1.06%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Florida Department of Transportation
Annual Vehicle Classification Report
Count Year 1994

County: 07 - DADE

Site Co Sec Sub MilePost Description
9800 07030000 3.970 SR 5/US-1, S. OF GRANADA BOULEVARD AT ATR 178

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Portable Duration: 0 Days

	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	208	0.28
Class 02 CARS	64343	86.37
Class 03 PICK-UPS AND VANS	7345	9.86
Class 04 BUSES	222	0.30
Class 05 2-AXLE, SINGLE UNIT TRUCKS	744	1.00
Class 06 3-AXLE, SINGLE UNIT TRUCKS	305	0.41
Class 07 4-AXLE, SINGLE UNIT TRUCKS	471	0.64
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	429	0.58
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	135	0.18
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	41	0.05
Class 11 5-AXLE MULTI-TRLR	4	0.00
Class 12 6-AXLE MULTI-TRLR	2	0.00
Class 13 ANY 7 OR MORE AXLE	249	0.33
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	74500	100.00

Summary Daily Statistics

Daily	Design Hour
24TdB = 3.49%	DH1 = 1.75%
24T = 3.20%	
24B = 2.20%	DH3 = 1.10%
24M = 1.30%	DH2 = 0.65%

Site Co Sec Sub MilePost Description
9930 07030000 20.970 US1, 0.1MI W OF ME 146TH ST, N MIAMI, WID630

Func. Class: 14 - Urban Other Principal Arterial

Survey Type: Telemetered Duration: 23 Days

	Annual Average Daily	
	Volume	%
Class 01 MOTORCYCLES	0	0.00
Class 02 CARS	0	0.00
Class 03 PICK-UPS AND VANS	0	0.00
Class 04 BUSES	0	0.00
Class 05 2-AXLE, SINGLE UNIT TRUCKS	0	0.00
Class 06 3-AXLE, SINGLE UNIT TRUCKS	0	0.00
Class 07 4-AXLE, SINGLE UNIT TRUCKS	0	0.00
Class 08 2-AXL TRACTR W/ 1 OR 2-AXL TRLR	0	0.00
Class 09 3-AXLE TRACTOR W/ 2-AXLE TRLR	0	0.00
Class 10 3-AXLE TRACTOR W/ 3-AXLE TRLR	0	0.00
Class 11 5-AXLE MULTI-TRLR	0	0.00
Class 12 6-AXLE MULTI-TRLR	0	0.00
Class 13 ANY 7 OR MORE AXLE	0	0.00
Class 14 NOT USED	0	0.00
Class 15 OTHER	0	0.00
	0	0.00

Summary Daily Statistics

Daily	Design Hour
24TdB = 0.00%	DH1 = 0.00%
24T = 0.00%	
24B = 0.00%	DH3 = 0.00%
24M = 0.00%	DH2 = 0.00%

Classes: Passenger Vehicles 01-03, Truck & Buses 04-13, Trucks 05-13, Medium Trucks 04-05, Heavy Trucks 06-13

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Appendix B

LISTING of TRUCKING OPERATIONS IN DADE AND BROWARD COUNTIES

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT	
A & A Distribution Corp		4100 N 29th Ter	Hollywood	FL	330201022	3059200323	Alexander	Krugs
A & R Transfer Inc	Aaron Moving Storage	P O Box 16213	Ft Lauderdale	FL	333186213	3057918111	Richard	Wandeman
A A C		10609 NW 8th St	Hollywood	FL	330263948	3054335902	Alfred	Chang
A A Santini of NY Mvg & Stor		3551 NW 15th St	Ft Lauderdale	FL	333114268	3055836700	John	Porcaro
A Aachen Corp	Right Move Van Lines	3111 SW 14th CT	Pompano Beach	FL	330694812	3059779677	Aldo	Disorbo
A Aba Above Best Moving & Stor		2601 NW 17th Ln	Pompano Beach	FL	330641526	3057830203	Mark E	Santora
A Anthonys Driveaway Truckaway		4371 NW 19th Ave	Pompano Beach	FL	330648705	3059707384	Jim	Civille
A Archer Self Storage Entps		3685 NW 15th St	Ft Lauderdale	FL	333114134	3057831359	Ray	Guist
A J Anderson Trucking Inc		5241 SW 4th St	Ft Lauderdale	FL	333173611	3055879214	A J	Anderson
A J F Enterprises Inc		5506 Grant St	Hollywood	FL	330215751	3059896139	Adalberto	Ferrari
A One A All Amercn Mvg Tmspt		1217 Seabreeze	Ft Lauderdale	FL	333162427	3057666067		
A 1 A Moving and Storage Co		7051 SW 21st Pl	Ft Lauderdale	FL	333177116	3054735200	John A	Griffin
A 1st Choice Moving & Storage	Cousins	2101 SW 31st Ave	Hallandale	FL	330093045	3059646333	Clement	Pollo
A-Pronto Delivery Service		1011 SE 7th Ave	Pompano Beach	FL	330609415	3057833113	Gerald	Decampo
A-1 Fargo Van & Storage Inc	Fargo Mayflower Moving & Stor	1210 SW 12th Ave	Pompano Beach	FL	330694617	3057812711	Barbara	Toreno
A-1 Hauling		3440 NW 39th St	Ft Lauderdale	FL	333094922	3057317247		
A-1-A Atlantic Moving & Stor	A Aachen	2549 W Broward	Ft Lauderdale	FL	333121307	3055811711	Alexander	Mc Kenzie
Austin Enterprises Inc		610 SW 34th St	Ft Lauderdale	FL	333153600	3053597749		
Aba Above Best Move & Stge		2601 NW 17th Ln	Pompano Beach	FL	330641526	3052708774	Mark	Santora
Acrosstown Movers & Stge Svc		1315 Ne 14th Ave	Ft Lauderdale	FL	333041834	3057613233		Parker
Action Trucking Inc		2634 SE 14th St	Pompano Beach	FL	330627224	3057848400	Lyne	Masse
Admired Movers Inc		1901-03 Mears Pky	Pompano Beach	FL	33063	3059793838	Dennis	Cyrlacks
Adv Mail Comm Inc		PO Box 26053	Ft Lauderdale	FL	333206053	3054849826		
Afc Trucking Inc		P O Box 22862	Ft Lauderdale	FL	333352862	3054638816	David	Raudebaugh
All Auto Transport Inc		2781 SW 56th Ave	Hollywood	FL	330234166	3059637003	Paul	Hoffer
All Cargo Express Inc		7800 N University	Ft Lauderdale	FL	333212106	3057210010	Alan	Cohen
All Day Delivery Inc		6661 Branch St	Hollywood	FL	330245702	3059629127	Kevin	Condon
All Florida Mgnr & Dlvry Svc	All Florida Delivery Services	6822 NW 20th Ave	Ft Lauderdale	FL	333091513	3059733278	Allen	Solomon
All Moving Services Inc		800 NW 65th St	Ft Lauderdale	FL	333092006	3059380110	Jack	Brown
All Points Boat Transport Inc		1221 SE 13th Ave	Deerfield Bch	FL	334417139	3057717895	James	Powell
All Service Refuse Company		825 NW 31st Ave	Ft Lauderdale	FL	333116699	3055831830	Harold	Carter
All Star Moving & Storage Inc		1080 S Dixie Hwy	Pompano Beach	FL	330607824	3053468889	Dominick	Nuzzi
All States Transport Service		950 N Federal Hwy	Pompano Beach	FL	330624325	3057837557	Lynn	Fragus
All Truck Inc		1330 NW 22nd St	Pompano Beach	FL	330691426	3059772500	Donald	Bymes
Allpoints National Mvg & Stor		120 SW 5th CT	Pompano Beach	FL	330607910	3057814744	Adalberto	Ferrari
Aloha Freightways Inc		7933 NW 21st St	Ft Lauderdale	FL	333223917	3055257211		

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Ambassador Moving & Storage		P O Box 590	Hollywood	FL	33022	3059231100	Wayne A Gregory
American Hhld Mvg Stor of Fla		3233 SW 2nd Ave	Ft Lauderdale	FL	333153335	3055239657	Michael Dowsett
American Trucking Inc		3633 Cocoplum Cir	Pompano Beach	FL	330635933	3059755125	
American Way Acquiring Corp	Mayflower Moving and Storage	1919 NW 19th St	Ft Lauderdale	FL	333113538	3057617872	Patrick S Carr
American World Van Lines Inc		4646 NW 8th Way	Ft Lauderdale	FL	333093979	3055667427	John E Webb
An Ideal Moving & Stor Co Inc		4100 N Powerline	Pompano Beach	FL	330733083	3059686590	John L Hyett
Anywhere In Florida Movers		3812 NW 59th St	Pompano Beach	FL	330734109	3054812919	
Max E Asman Trucking		7030 Hood St	Hollywood	FL	330243713	3059895268	Max E Asman
Austin Tupler Trucking Inc		6570 SW 47th CT	Ft Lauderdale	FL	333144335	3055830801	Austin W Tupler
Auto Marine Transport Inc	A-1 EXPORT TRADERS	3300 SW 11th Ave	Ft Lauderdale	FL	333152902	3057670856	James T Nolan
AA Plus	AA Moving Storage	6571 Hayes St	Hollywood	FL	330245847	3059610115	Patrick Mela
AAA Cooper Transportation		1441 SW 32nd Ave	Pompano Beach	FL	330694831	3059780455	George Christian
AAA Gold Coast Moving & Stor		6825 NW 16th Ter	Ft Lauderdale	FL	333091517	3059747700	Ralph Montera
ABC Discount Auto Transport		2800 Hammondville	Pompano Beach	FL	330691138	3059774445	T Indyk
B M T Trucking Inc	B M T Movers	6860 SW 3rd St	Pompano Beach	FL	330681547	3059710024	Marilyn Altamura
Bagel Club Inc	Bagel To You	7201 W Oakland	Ft Lauderdale	FL	333131050	3055726421	Mark Rubin
Bardacorp Limited Inc	Cavaller International Air Frt	P O Box 350587	Ft Lauderdale	FL	333350587	3055845407	Barbara Clapp
Barleau Express Incorporated	Barleau Daley Moving & Stor	5101 Powerline Rd	Ft Lauderdale	FL	333093158	4072433749	Dave Mariano
Bayside Express Inc		10240 SW 56th St	Ft Lauderdale	FL	333286503	3054675702	
Bekins Moving & Stor Co of NM	Bekins Moving and Storage Fla	5535 NW 35th Ave	Ft Lauderdale	FL	333096309	3054841313	Ron Hancock
Beltmann North American Co Inc		1651 SW 5th CT	Pompano Beach	FL	330693536	3057812122	Rich Ferguson
Bennies Hauling		940 NW 33rd Way	Ft Lauderdale	FL	333116537	3055875769	Bennie Jenkins
Bertran Trucking		13440 SW 20th St	Hollywood	FL	330273404	3054320786	Jose Bertran
Best Auto Delivery Inc		1560 Ne 42nd St	Pompano Beach	FL	330646027	3057823905	Earl Carr
Bills Excavating & Hauling	Klines Backhoe Service	2421 SW 28th Ave	Ft Lauderdale	FL	333124554	3055812988	William E Kline
Bobby Deedrick MBL Home Tmspt		5630 SW 36th CT	Hollywood	FL	330236108	3055847306	Bobby Deedrick
Bodan Inc		730 NW 44th Ave	Pompano Beach	FL	330661553	3059744033	
Bohrens Moving & Storage Inc		2525 Davie Rd Ste	Ft Lauderdale	FL	333177424	3056811773	John Scheirer
Bohrens Moving & Storage Inc	Bohrens of Florida	2525 Davie Rd I595	Ft Lauderdale	FL	333177424	3054247200	John Scheier
Ronald Bond		3680 SW 59th Ter	Ft Lauderdale	FL	333142618	3055872341	Ronald Bond
Boston Auto Transport		1919 NW 19th St	Ft Lauderdale	FL	333113538	3058320660	
Brits Moving Inc		4801 Ne 12th Ave	Ft Lauderdale	FL	333344803	3057765034	Gary Richer
Broward Blue Ribbon Moving		P O Box 4671	Hollywood	FL	330834671	3059875120	William J Cull
Broward Dade Sanitation Corp		1614 N 28th CT	Hollywood	FL	330202942	3059257925	Flora D Aria
Broward Grading & Hauling		1814 N University	Ft Lauderdale	FL	333224106	3057494777	
Browning-Treyz Mvg & Stor Co		100-130 SW 5TH	POMPANO BEACH	FL	33060	3059422028	David A Treyz

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Bruce Auto Inc		2222 SCOTT ST	HOLLYWOOD	FL	330202311	3059237684	
Bucknor Hauling Inc		4851 NW 103rd Ave	Ft Lauderdale	FL	333517969	3057487308	Alexander B Bucknor
Budge It Moving & Storage Inc		117 Ne 3rd St	Ft Lauderdale	FL	333011046	3054847202	Lou Halson
William Burkett Inc		871 SE 7th Ave	Pompano Beach	FL	330609503	3059419138	William Burkett
BLT Hauling Inc		3951 NW 96th Ave	Hollywood	FL	330248179	3054338390	Anthony Tripl
C & A Trucking & Mtls Corp		2281 NW 15th CT	Pompano Beach	FL	330691518	3059728676	Carlos Alonso
C & H Produce		P O Box 2375	Pompano Beach	FL	330612375	3059421473	Harry Walls
C D Haulers Inc		559 Ne 42nd St	Ft Lauderdale	FL	333343111	3055640747	Jack Dunham
C JS Freightway Inc		6511 SW 3rd St	Hollywood	FL	330231216	3059679388	Cynthia M Campbell
C&G Grading & Trucking Inc		5769 NW 69th Way	Pompano Beach	FL	330671351	3057538282	
Cal Brothers Trucking		725 NW 35th St	Ft Lauderdale	FL	333095002	3057319340	
Cannonball Transport		2700 NW 24th Ave	Ft Lauderdale	FL	333112130	3057394863	Wendell Bowl
Caribbean Cement Carriers Ltd		1350 E Newport	Deerfield Bch	FL	334427712	3054291500	Donald L Smith
Caribbean Transportation Inc		P O Box 01544	Ft Lauderdale	FL	33101	3055250022	Edwardo Pichardo
Caribbean Ways Express		3083 NW 28th St	Ft Lauderdale	FL	333112029	3057319857	
Carls Inc		1427 Wiley St	Hollywood	FL	330206520	3059227449	James Carls
Carolina Freight Carriers Corp		5861 Pembroke Rd	Hollywood	FL	330232339	3059837151	Ken Lorimier
Castaneda Company		1500 NW 67th Ter	Hollywood	FL	330245763	3059810531	Robert Bayles
Chapman Transport Inc		P O Box 6276	Ft Lauderdale	FL	333106276	3054920087	Garland H Chapman
Chark Transportation Inc		8231 NW 17th CT	Hollywood	FL	330243501	3054379122	Mark Hantin
Matilda Cincotta Inc		1155 Hillsboro Mile	Pompano Beach	FL	330621742	3054268773	Matilda Cincotta
Clavon Sales and Transport		1173 NW 44th Ave	Ft Lauderdale	FL	333136619	3057925852	David Clavon
Coast To Coast Van Lines	Coast To Coast Moving & Stor	271 NW 1st St	Deerfield Bch	FL	334413390	3054287444	Judy Schulman
Coastal Carting Ltd Inc		P O Box 7377	Hollywood	FL	33081	3059633391	Frank D Agostino
Coastline Backhoe Service Inc		535 Ne 5th Ave	Ft Lauderdale	FL	333011107	3055221705	Robert Tolly
Cohen Moving and Storage Inc	A Aachen Cohen Moving & Stor	2516 SW 30th Ave	Hallandale	FL	330093020	3054545250	Raymond Vidal
Commercial Carrier Corporation		P O Box 13039	Ft Lauderdale	FL	333160100	3055230252	C E Brittain
Commercial Innovations Inc		P O Box 165141	Ft Lauderdale	FL	333165141	3057619696	James Linner
Comer Trucking Corp		6330 Lincoln St	Hollywood	FL	330247726	3059200690	
Consumers Delivery Inc		1425 SW 1st CT	Pompano Beach	FL	33069	3057853248	Jim Clarke
Continental Marine Tmspt Inc		664 Ne 44th St	Ft Lauderdale	FL	333343149	3055615700	Roger Laramore
Raymond Conway	Raymond Conway Paving & Trckg	2401 Ne 4th Ave	Pompano Beach	FL	330645401	3059412321	Raymond Conway
Coral Springs Moving & Storage		12090 NW 40th St	Pompano Beach	FL	330657602	3057527366	Joel Simon
Coras Charters Ltd		1401 S Ocean Blvd	Pompano Beach	FL	330627312	3059420542	Richard D Rizzo
Crawford Paving		5191 SW 22nd St	Hollywood	FL	330233223	3059669833	Daniel W Crawford
Cross Country Auto Tmspt Inc		2467 Pembroke Rd	Hollywood	FL	330205863	3059237703	David Kushner

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Crossroads Auto Transport Inc		9988 Twin Lakes Dr	Pompano Beach	FL	330715341	3057553410	Barbara T Bergeron
Crowley American Transport	Crowley American Transport	P O Box 359004	Ft Lauderdale	FL	333359004	3057607900	Joe Shea
Crystal Van & Storage Inc	Crystal Moving	1710 SW 100th Ave	Hollywood	FL	330251824	3054310009	Vito Silecchia
Cunningham Trucking Inc		2272 NW 26th Ave	Ft Lauderdale	FL	333113326	3054847601	
H K Cupp & Sons Inc		P O Box C	Stevensville	MI	491270420	3057820404	Austin M Cupp
D & D Trucking & Grading Inc		10140 NW 39th CT	Coral Springs	FL	330651531	3057551666	Jay Dewerth
D B Trucking Inc		P O Box 13007	Ft Lauderdale	FL	333160100	3055836550	Paul De Natale
D P Deblols Transport		12631 SW 6th CT	Ft Lauderdale	FL	333253425	3054521143	David Deblols
Deep South Enterprises		1614 NW 90TH	HOLLYWOOD	FL	330244653	3054360832	
Dely Trucking Co Inc		8551 NW 3rd St	Hollywood	FL	330246657	3054313286	Delene Chang
William Densil Trucking		10611 NW 26th Pl	Ft Lauderdale	FL	333221060	3057491348	
Dicks Trucking and Leasing		3611 NW 124th Ave	Coral Springs	FL	330652407	3057533986	Richard Cardegnio
Direct Messenger Service		1341 Sunset St	Ft Lauderdale	FL	33313	3057928088	
Direct Transfer Service Inc		1855 Griffin Rd	Dania	FL	330042239	3059231139	Louis Zavaletta
DI Moving & Storage		1111 SW 21st Ave	Ft Lauderdale	FL	333123139	3053216683	Desmond Campbell
Dobek Trucking Inc		2551 NW 15th CT	Pompano Beach	FL	330691520	3059780800	Gerald Dobek
Doe Enterprises Inc		2251 W Havana Dr	Hollywood	FL	330233540	3059835646	
Doris Drake Enterprises Inc		7110 SW 5TH ST	HOLLYWOOD	FL	330231005	3059874769	
Drc Hauling Inc		2466 NW 49th Ter	Pompano Beach	FL	330633853	3057536760	Dennis Cyriacks
Drivers Express		5450 HANCOCK	FT LAUDERDALE	FL	333302508	3059472773	Ursula Coschnick
DC Miller & Sons Inc		4761 NW 17th CT	Ft Lauderdale	FL	333134105	3054858484	Dorsey Miller
E&k Varco Trucking		3206 NW 87th Ave	Pompano Beach	FL	330654414	3053419422	
Eastcoast Furniture Tmnp		942 NW 44th St	Ft Lauderdale	FL	333094635	3059380901	John C Crowell
Eastern Sea Systems Inc		P O Box 30235	Ft Lauderdale	FL	333030235	3057613275	John J O Neill
Emery Air Freight Corporation		640 SW 34th St	Ft Lauderdale	FL	333153628	3053590047	Bill Chancey
Ericaroy Food Corp	Cal Werner Trucking	10428 SW 49th Pl	Ft Lauderdale	FL	333284053	3054348141	Cal Werner
Elate Inc		1888 NW 21st St	Pompano Beach	FL	330691334	3059600466	
Kermit Evans Trucking		2920 NW 26th St	Ft Lauderdale	FL	333112014	3054865855	
Exodus Transport		2702 Thomas St	Hollywood	FL	330201826	3059260101	Alberto Lueddeckens
Express Freightways Inc		P O Box 21647	Ft Lauderdale	FL	333351647	3055275113	John Mercalde
Family Moving & Storage Inc		3551 NW 15th St	Ft Lauderdale	FL	333114268	3057315400	John Porcaro
Fast-Lane Trucking Inc		5208 SW 91st Ave	Ft Lauderdale	FL	333285027	3054760782	Michael Fulks
Father & Son Moving & Storage		3551 NW 15th St	Ft Lauderdale	FL	333114147	3057693200	John Porcaro
Lee Fatt Trucking		2800 Cypress Ave	Hollywood	FL	330252436	3054351917	Lee Fatt
Federal Express Corporation		4800 SW 51st St	Ft Lauderdale	FL	333145511	3054844811	
First American Transfer System	Miami Gold Coast Transfers Co	3406 SW 26th Ter	Ft Lauderdale	FL	333125015	3057917001	Ellisabet M Huguet

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Flatlander Transport Inc		P O Box 10391	Pompano Beach	FL	330616391	3057840182	Alice Cadman
Fleet Transport Company Inc		P O Box 21127	Ft Lauderdale	FL	333351127	3055231474	Gary Brinker
Florida Dairy Farmers Assn		P O Box 9666	Ft Lauderdale	FL	333109666	3055833344	Tommy T Rucks
Florida East Coast Railway Co		3131 S Andrews	Ft Lauderdale	FL	333164125	3055257948	
Florida Fast Freight Inc		6245 Powerline Rd	Ft Lauderdale	FL	333092047	3054919466	Larry Tuttle
Florida Sanitation Ltd Inc		2390 SW 66th Ter	Ft Lauderdale	FL	333177135	3054344325	
Fort Lauderdale Transl Rigging		4701 SW 36th St	Ft Lauderdale	FL	333142232	3055843026	Theodore E Dorosy
Four-S Hauling Inc		6961 NW 82nd CT	Ft Lauderdale	FL	333215074	3057207009	Rodney M Stickney
Fredoris Enterprises Inc	Korman Cars	2831 Ravenswood	Ft Lauderdale	FL	333124919	3057929200	Fred A Korman
Fulks Trucking		4913 SW 90th Ave	Ft Lauderdale	FL	333283620	3054341872	Gerald L Fulks
G H R Enterprises Inc		9 SE 10th CT	Deerfield Bch	FL	334416609	3054290787	George Ricciardelli
Dan Galasso Waste Service		P O Box 4985	Hollywood	FL	330834985	3056812949	Dan Galasso
Juan Galliano		6660 McClellan St	Hollywood	FL	330241949	3059838347	Juan Galliano
Garcia Delivery Service		2461 NW 57th Ter	Pompano Beach	FL	330631917	3059794320	Bonifacio Garcia
Gator Freightways Inc		1000 NW 209th Ave	Hollywood	FL	330292100	3056853511	Phil Kaufman
Gator State Moving Inc		2910 NW 28th St	Ft Lauderdale	FL	333112028	3054845858	R K Jordan
Gems Trucking Inc		8566 NW 19th Dr	Pompano Beach	FL	330716151	3057524346	Stephanie Milford
Global Van Lines Inc	Advance Relocation & Storage	1521 W Copans Rd	Pompano Beach	FL	330641513	3059749696	Sue Craft
Gold Coast Auto Transport Inc		P O Box 21158	Ft Lauderdale	FL	333351158	3057422112	John Monaco
Gold Coast Express Inc	Gold Coast Delivery	P O Box 24551	Ft Lauderdale	FL	333074551	3055660566	Jay Belina
Gold Coast Land Dev Svcs		9625 NW 25th CT	Coral Springs	FL	330654986	3057559137	Richard S Lynch
Gold Coast Sanitation Inc		P O Box 4576	Hollywood	FL	330834576	3059620600	Anthony Rapisardi
Govea Trucking Inc	G T I	P O Box 7448	HOLLYWOOD	FL	33081	3059629798	Peter D Hernandez
Grace Courier Service Inc		3355 SW 11th Ave	Ft Lauderdale	FL	333152901	3057643600	Jeff Woods
Graebel/Miami Movers Inc		701 NW 33rd St Lot	Pompano Beach	FL	330642054	3057847732	Mike Lombardo
Vernon Grantham		4449 SW 27th Ter	Ft Lauderdale	FL	333125601	3059632108	Vernon Grantham
Greenstein Trucking Co		280 NW 12th Ave	Pompano Beach	FL	330692902	3059463520	Harry Greenstein
Greyhound Bus Lines		2190 Ne 4th St	Pompano Beach	FL	330624809	3059421119	
Grocery Express		3031 N Ocean Blvd	Ft Lauderdale	FL	333087334	3055610527	
Gulfstream Metal Plating Inc		2701 NW 55TH CT	FT LAUDERDALE	FL	333092542	3057350086	Jim Phillips
H T S Inc	Harte-Hanks Trans. Serv.	1701 W Hillsboro	Deerfield Bch	FL	334421501	3054293771	David R Chamberlain
Half Pint Delivery Inc	Half Pint Moving	1218 SW 2nd Ave	Pompano Beach	FL	330608726	3057850313	Frank Montagnino
Harbor Relocation Services		1919 NW 19th St	Ft Lauderdale	FL	333113538	3054639080	
Heck Trucking Inc		7101 SW 16th St	Hollywood	FL	330232029	3059647173	Bill Heck
Hedgehog Express		1621 N Dixie Hwy	Pompano Beach	FL	330605247	3059425330	
John Hedl Trucking		31 SW 15th St	Dania	FL	330044242	3059290810	John Hedl

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Hercules Delivery Service Inc		1829 NW 29th St	Ft Lauderdale	FL	333112123	3057797774	Rodney R Rodriguez
Hercules Moving		1975 E Sunrise Blvd	Ft Lauderdale	FL	333041433	3057791145	
Higgs Inc		2231 NW 93rd Ave	Hollywood	FL	330243139	3054313361	John Higginbotham
Wm R Hubbell Steel Corporation		750 W McNab Rd	Ft Lauderdale	FL	333092150	3059707000	Dave Atan
Van Hunt Lines Inc		1121 SW 24th Ter	Deerfield Bch	FL	334426033	3056986712	Daniel Hunt
Hurricane Dist & Whse Co		P O Box 10464	Pompano Beach	FL	330616464	3059600665	George Kirkpatrick
HDG Express Inc		P O Box 759566	Ft Lauderdale	FL	33075	3057792250	Harry Davila
Interior Design Delivery Inc		3402 SW 26th Ter	Ft Lauderdale	FL	333125071	3057977933	Joseph McClain
International Freightways		4400 NW 19th Ave	Pompano Beach	FL	330648703	3059755561	Richard Baker
International Warehouse Svcs		P O Box 21031	Ft Lauderdale	FL	333351031	3057637551	Fred Rogacki
Intra-Coastal Delivery Svc Inc		1919 NW 19th St	Ft Lauderdale	FL	333113538	3055254936	James E Cardwell
Intracoastal Trucking Systems		3025 NW 60th St	Ft Lauderdale	FL	333092254	3059778222	
Iron Eagle Transport Inc		6300 SW 186th	Ft Lauderdale	FL	333321464	3056806967	Harry Marchand
IMS Couriers		4543 NW 9th Ave	Ft Lauderdale	FL	333093836	3057717545	Terry Millard
J & B Movers & Storage Inc	J & B Movers	2055 Blount Rd	Pompano Beach	FL	330695110	3059731880	Jerry Ehrlich
J & J Trucking		1631 NW 25th Ave	Ft Lauderdale	FL	333114521	3057352230	James E Parrish
J E M Trucking		3131 N 73 Terrance	Hollywood	FL	330242430	3059812257	John E Mortimer
J F Trucking Corp		1355 SW 121st Ave	Hollywood	FL	330253768	3054351337	Jaime Fuehtes
Dee Jackie Trucking Inc		445 SW 22nd Ter	Ft Lauderdale	FL	333121446	3057919069	Dee Jackie
Sidney Jackson	Jackson Produce Hauling	8410 N Sherman Cir	Hollywood	FL	330252181	5162340795	Sidney Jackson
Tony Jackson Trucking		807 NW 2nd Ave	Ft Lauderdale	FL	333117484	3057642310	Tony Jackson
Jansko/All American Inc		4101 Ravenswood	Ft Lauderdale	FL	333125373	3057975044	Henry Gayer
Jarrett & Sons Trucking		5739 Pembroke Rd	Hollywood	FL	330232337	3059669735	
Jayenbee Inc		P O Box 21102	Ft Lauderdale	FL	333351102	3055225702	James E Brown
Jaymark Express Inc		7071 W	Ft Lauderdale	FL	333192143	3057201730	Jay Fleming
Sean Jennings Inc		396 NW 107th Ave	Hollywood	FL	330264068	3054327213	Sean Jennings
Jl Insurance Agency		740 NW 7th Ave	Ft Lauderdale	FL	333117309	3055225554	Pierre Alexander
Ann Joan Trucking Inc		2717 Ne 10th St	Pompano Beach	FL	330624217	3059432284	Joan A Cantoni
Johnnys Moving & Storage Inc		5710 Dewey St	Hollywood	FL	330231918	3059838520	John W Wickham
JB Freight Line		6450 SW 9th Pl	Pompano Beach	FL	330682625	3059721123	John Huff
JC Giola Trucking		100 NW 52nd CT	Ft Lauderdale	FL	333093233	3057725846	J C Giola
K & J Bulldozing		16801 SW 48th St	Ft Lauderdale	FL	333311385	3054343765	James L Hewett
K & J Trucking		712 NW 27th Ave	Ft Lauderdale	FL	333116839	3055830830	Karl Kotulak
K & S Moving Systems Inc	United Van Lines	1919 NW 19th St	Ft Lauderdale	FL	333113529	3057607177	Paul Schilling
K C Delivery Plus Inc		P O Box 811887	Boca Raton	FL	334811887	3059782164	Paul D Copen
Clarence E Kannal Trucking		P O Box 21456	Ft Lauderdale	FL	333351456	4072720912	Clarence E Kannal

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Katz & Katz Transfer Inc	K & K Transfer	4737 SW 51st St	Ft Lauderdale	FL	33314	3055832584	Nathan Katz
Kaveney Trucking		5871 NW 15th St	Ft Lauderdale	FL	333134763	3057350011	Patrick Kaveney
Kelly Trucking		4900 Godfrey Rd	Pompano Beach	FL	330674147	3053446553	
Kenan Transport Company		2270 SW 36th St	Ft Lauderdale	FL	333125029	3055830997	Bob Whitaker
Simon Kehdrick		2710 NW 25th Ave	Ft Lauderdale	FL	333112920	3054844695	Simon Kendrick
Keys Haulage Inc		5140 SW 148th Ave	Ft Lauderdale	FL	333302415	3054348268	Kettfer E Yap
King David Moving & Storage Co		3101 SW 25th St	Hallandale	FL	330093071	3059669966	Uri Kadosh
L & R Dirtworks Inc		4747 Hollywood	Hollywood	FL	330216503	3059870688	Rita A Migatz-
L B Trucking & Excavating		4851 NW 103rd Ave	Ft Lauderdale	FL	333517969	3055727799	Alexander Bucknor
L P U Trucking Inc		4989 SW 94th Ter	Ft Lauderdale	FL	333283428	3054748630	Raul P Urtecho
La Centra Trucking Inc	South Florida Aggregate	1951 NW 44th St	Pompano Beach	FL	330648707	3059734331	Charles La Centra
Landmar Inc		4100 N 29th Ter	Hollywood	FL	330201022	3059209557	Roland Boyon
Lauderdale Cargo of Broward		P O Box 350423	Ft Lauderdale	FL	333350423	3057676486	Mark De Marinis
Lauderdale Moving & Storage		540 SW 27th Ave	Ft Lauderdale	FL	333122144	3055839333	John Collum
Ldi Enterprises		1848 NW 22nd St	Pompano Beach	FL	330691318	3059795340	Lawrence Pado
Van Leavy Lines		1577 SW 1st Way	Pompano Beach	FL	330644933	3054270816	
Van Leavy Lines Inc		1577 SW 1st Way	Pompano Beach	FL	330644933	3053511121	
Levys Moving & Storage Inc		1640 NW 34th Ter	Ft Lauderdale	FL	333114258	3053216003	Avner Ben-ARI
Lieberman & Reznitsky Trucking		3800 Hillcrest Dr	Hollywood	FL	330217937	3059871762	Mildred Makuta
G Lindsay Hauling Inc		225 E Las Olas Blvd	Ft Lauderdale	FL	333012208	3055873192	Gilford Lindsay
Lippolis Trucking	Liss Enterprises	1951 NW 44th St	Pompano Beach	FL	330648707	3059790150	
Liss Transportation Inc		P O Box 790	Deerfield Bch	FL	334430790	3054212800	Ronald Liss
Logan Delivery Service Inc		P O Box 8252	Ft Lauderdale	FL	333108252	3057729746	Barbara Logan
Lorraine Horse Transportation		901 S Federal Hwy	Hallandale	FL	330097124	3054570414	
Luigis Trucking & Heavy Eqp	Lumsden Trucking	1641 N Powerline	Pompano Beach	FL	330691622	3059781411	Luigi Cesario
George A Lumsden Inc		5502 NW 22nd Ave	Ft Lauderdale	FL	333092715	3057352811	David L Lumsden
M & D Transfer Inc		P O Box 350554	Ft Lauderdale	FL	333350554	3058492772	Fernando Scull
M & E Movers & Storage Inc		1650 W Oakland	Ft Lauderdale	FL	333111514	3054851870	Maurice Marston
M & M Trk	Atlantic Mvg Stor Myflower Agt	1111 SW 87TH	HOLLYWOOD	FL	330253359	3059877539	
Alex Mackenzie		2549 W Broward	Ft Lauderdale	FL	333121307	3055810044	Alex Mackenzie
Macks Groves Inc	High Tech Trucking	4405 N Ocean Dr	Ft Lauderdale	FL	333083651	3057760910	Darla Cheshier
Maddock Enterprises Inc		741 Ne 60th St	Ft Lauderdale	FL	333343557	3057767323	Robert Maddock
Magnum Petroleum Recovery Inc		1280 Ne 48th St	Pompano Beach	FL	330644909	3057852320	Albert Dimaria
Marine Trucking		3450 Ne 19th Ave	Ft Lauderdale	FL	333061027	3055254347	
Marino Truck & Transport		201 SE 2nd Ave	Pompano Beach	FL	330607111	3057839361	
Marino Trucking Inc		P O Box 350156	Ft Lauderdale	FL	333350156	3054626999	Daniel Marino

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Mark Jacksons Mobile Home Svc		9040 SW 54th Pl	Ft Lauderdale	FL	333285852	3056806912	
Mark Line Distributors Inc		P O Box 9841	Ft Lauderdale	FL	333109841	3054854120	Warren G Smiley
Martys Auto Delivery Service		3600 S State Road	Hollywood	FL	330235200	3059814166	Ronald Renno
Martys Auto Service		314 SE 10th St	Dania	FL	330045256	3059230460	Martin Renno
Mavino Trucking		P O Box 350156	Ft Lauderdale	FL	333350156	3054621644	Dan Mavino
Maximum Express Delivery		108 NW 20th Ave	Ft Lauderdale	FL	333118722	3057604090	
Mc Cutchen Cnstr & Trckg Co	Mc Cutchen Contractors	620 NW 28th Ave	Ft Lauderdale	FL	333117664	3055842660	Louis N Mc Cutchen
Mc Kenzie Tank Lines Inc		3333 SW 3rd Ave	Ft Lauderdale	FL	333153303	3055240299	Art Landry
Meadowbrook Horse Trnsp		1291 S Powerline	Pompano Beach	FL	330694329	3059421282	Ralph Tufano
Merchants Home Delivery Svc		1572 N Andrews	Pompano Beach	FL	330691735	3059799061	Larry Phillips
Merchants Home Delivery Svc		1919 NW 19th St	Ft Lauderdale	FL	333113529	3055613846	Michael M Div
Metcalf & Eddy Technologies		400 Sawgrass	Ft Lauderdale	FL	333256235	3058468611	Tandy Calibo
Metro Transport Inc		P O Box 22536	Ft Lauderdale	FL	333352536	3055624618	Donald Smith
Miami National Express Inc		2608 N Ocean Blvd	Pompano Beach	FL	330622943	3057841561	Francis Maguire
Michigan Auto Transport Inc		3411 SW 49th Way	Ft Lauderdale	FL	333142112	3055842300	Mike Gildon
Mill Transportation Co		750 W McNab Rd	Pompano Beach	FL	330608639	3059705100	Hc Stang
Mitsui Osk Lines (america)		P O Box 13047	Ft Lauderdale	FL	333160100	3057632727	Katie Brown
Mr Messenger Courier Service		501 SE 26th St	Ft Lauderdale	FL	333163945	3055232708	
Mr Shipper USA Inc	Mr Shipper	5313 N Nob Hill Rd	Ft Lauderdale	FL	333514711	3057489548	Alan Palange
Van Murry & Storage		1111 SW 30th Ave	Deerfield Bch	FL	334428154	3057642515	
Terry Scott Nation		1227 Ne 11th Ave	Ft Lauderdale	FL	333042156	3057636732	Terry S Nation
National Parcel Service Ctrs		5313 N State Road	Tamarac	FL	333192919	3054848700	Sari Levy
Old Dominion Freight Line Inc		3811 PEMBROKE	HOLLYWOOD	FL	330218129	3059665050	Roxanne Wooton
Morris Ollenyean Trucking		521 Ne 39th St	Pompano Beach	FL	330644312	3058483367	
Omni Central Services Inc		P O Box 50045	Pompano Beach	FL	330740045	3059790826	T C Love
On Time Transport Inc		650 SW 34th St	Ft Lauderdale	FL	333153628	3053592802	Willie Collier
Donald L Oppenheim	Tak-A-Way	P O Box 290833	Ft Lauderdale	FL	333290833	3054345306	Donald L Oppenheim
Palm Express Inc		2800 Ne 14th St	Pompano Beach	FL	330623636	3058890019	M T Ellis
Personalized Delivery Svc Inc		3040 NW 27th St 16	Ft Lauderdale	FL	333112001	3057916900	Jerry S Sherman
Petroleum Recovery Inc 1		4111 SW 47th Ave	Ft Lauderdale	FL	333144038	3057923330	Art Furberg
Pick-Up Artists Inc		6731 Coolidge St	Hollywood	FL	330243918	3059641099	Jeffery E Gardner
Pittsville Services Inc		P O Box 21783	Ft Lauderdale	FL	333351783	3055247104	William Korvach
Van Plycon Lines Inc		1406 W McNab Rd	Ft Lauderdale	FL	333091122	3059782000	David Pilaconis
Pope Moving & Storage Service	Astro Moving & Storage	2801 S Park Rd	Hallandale	FL	330093818	3059879656	Joseph Verderber
John Porcaro Inc		3551 NW 15th St	Ft Lauderdale	FL	333114268	3057914533	John Porcaro
Priority Courier Services Inc		1909 Harrison St	Hollywood	FL	330205067	3059250502	Herbert Backer

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT	
Quick Delivery Inc		P O Box 100846	Ft Lauderdale	FL	333100846	3057717292	Lon	Hoehne
Quicksilver Courier Inc		78 NW 37th St	Ft Lauderdale	FL	333095244	3055248562	Donald	Barr
R & S Trucking & Rentals		140 NW 80th Ave	Pompano Beach	FL	330634734	3059716687		
R C Transfer		314 NW 13th St	Ft Lauderdale	FL	333116077	3057644317	Robert	Cummings
R H Delivery Service		1283 S State Road	Ft Lauderdale	FL	333175805	3055873677		
R J Trucking		231 SW 8th St	Deerfield Bch	FL	334415211	3054271187	Ellare	Strawbridge
Regal Express Transport Corp		P O Box 100527	Ft Lauderdale	FL	333100527	3055613607	Brian	Gordon
Report Pickup Service		6456 SW 28th St	Hollywood	FL	330233821	3059875148		
Retranca Equipment & Trckg Inc		1280 SW 26th Ave	Ft Lauderdale	FL	333123097	3055816613	Angel	Trujillo
Rite-Star Inc		8731 SW 14th St	Hollywood	FL	330253344	3054325372	Benson	Somuah
Roadway Connection		2651 S University	Ft Lauderdale	FL	333281410	3055632436		
Roadway Express Inc		1601 NW 18th St	Pompano Beach	FL	330691642	3059750002	Jim	Blanton
Roadway Industries Inc	Meineke Discount Muffler	1100 W Oakland	Ft Lauderdale	FL	333111612	3055630200	Charles J	Bonfiglio
Roadway Package System Inc		790 International	Ft Lauderdale	FL	333256219	3058460524	Wade	Frier
Rocoda Envrmtl Systems Inc		1840 NW 21st St	Pompano Beach	FL	330691306	3059748280	Frank	Sidotti
Roll-Away Systems Inc		1911 SW 100th Ter	Hollywood	FL	330251833	3054378060	Theresa	Piccinonna
Rountree Transport & Rigging		3580 SW 46th Ave	Ft Lauderdale	FL	333142219	3055871333	Michael	Rountree
Ruland Trash Removal		2300 NW 16th St	Pompano Beach	FL	330691549	3054265500		
RCM Trucking Inc		1407 Sussex Dr	Pompano Beach	FL	330685345	3058963898	Robert	Munzing
S & G Trucking Inc		1200 S Powerline	Deerfield Bch	FL	334428123	3054286144	Sid	Shaw
Raymond Schuck		1507 Ne 21st St	Ft Lauderdale	FL	333052303	3055680477	Raymond	Schuck
Sea Express Transportation		P O Box 350364	Ft Lauderdale	FL	333350364	3054630205	John	Rosenkranz
Seaboard Warehouse Terminals		195 Ravenswood Dr	Dania	FL	33004	3056211968		
Seabulk Chemical Carriers Inc		P O Box 13038	Ft Lauderdale	FL	333160100	3055271712	Hans	Hvide
Sears Roebuck and Co	Sears Logistic Services	1201 Ne 38th St	Ft Lauderdale	FL	333344557	3055374002	Rick	Rocco
Secure Storage Inc		4800 NW 15th Ave	Ft Lauderdale	FL	333093781	3057728500	Salvatore	Dibattista
Secure Storage Inc		488 NW 15th Ave	Ft Lauderdale	FL	333118838	3057619500	Salvatore	Dibattista
Shalom Moving & Storage Inc		2311 SW 31st St	Ft Lauderdale	FL	333124915	3055832711	Gal	Aloni
Shamrock Express (not Inc)		3308 SW 3rd Ave	Ft Lauderdale	FL	333153304	3054677209	Walter	Quigley
Shoreline Mail Services Inc		5200 N Federal Hwy	Ft Lauderdale	FL	333083249	3057719099	Jeff	Hammerly
Shoreline Marine Transpor Inc		5212 SW 87th Ave	Ft Lauderdale	FL	333284330	3054343962	Charles	Brown
Southeast Atl Snitation Systems		4000 SW 47th Ave	Ft Lauderdale	FL	333144024	3057911214	Onofrio	Lozito
Southeast Florida Trucking		4211 NW 38th Ter	Ft Lauderdale	FL	333094105	3057350206	Henry	O'Brien
Southeast-Atlantic Sanitation		4100 SW 47th Ave	Ft Lauderdale	FL	333144007	3055250439	Joseph	Lozito
Southport Transfer Inc		4555 NW 103rd Ave	Ft Lauderdale	FL	333517953	3055724191		
Space Plus Ltd Partnership I	Space Plus Self-Storage	4950 N Dixie Hwy	Ft Lauderdale	FL	333343947	3054914600	Marvin	Chaney

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Special Delivery		8406 SW 26th St	Ft Lauderdale	FL	333245708	3054759966	
Spectrum Health Services Inc		4100 N Powerline	Pompano Beach	FL	330733083	3059717811	Brian Hukill
Stanford & Sons Trucking		4710 NW 11th Pl	Ft Lauderdale	FL	333136514	3057914277	Stanford Amritt
Stella & Wright Inc	M & M Warehouse	4749 SW 51st St	Ft Lauderdale	FL	333145525	3053219135	Peter Stella
Stonom Delivery Systems Inc		3520 W Broward	Ft Lauderdale	FL	333121047	3055838881	Kennith Stonom
Streicher Enterprises Inc		2720 NW 55th CT	Ft Lauderdale	FL	333092543	3057393880	Stanley H Streicher
Van Suddath Lines Inc		1150 SW 32nd Way	Deerfield Bch	FL	334428110	3054265050	Julie Cobbs
Sunny Acres Ranch Trucking		8170 SW 7th St	Pompano Beach	FL	330682022	3057224333	
Swad Auto Transporters Inc		2901 S Federal Hwy	Ft Lauderdale	FL	333164023	3057645700	Annette Swad
T & M Container		1801 SW 1st Ave	Ft Lauderdale	FL	333152108	3055246608	
Teds Moving Inc		2100 SW 58th Way	Hollywood	FL	330233043	3059613722	Ted Freeman
Gerald Todd Trucking Inc		2311 SW 66th Ter	Ft Lauderdale	FL	333177134	3054747614	Gerald Todd
Todd Trucking Inc		2311 SW 66th Ter	Ft Lauderdale	FL	333177134	3056396710	Gerald Todd
Trans-Express Inc		4970 SW 52nd St	Ft Lauderdale	FL	333145531	3055817605	Carlos Pena
Tranet Enterprises Inc		1999 N University	Pompano Beach	FL	330718918	3057538452	Luis Anticona
Transport Logistics Inc		4820 NW 3rd Ave	Pompano Beach	FL	330642422	3055704090	James W Warrelmann
Transport South		1100 SE 24TH ST	FT LAUDERDALE	FL	33316	3054636203	William Prevost
Tri County Paper Delivery Inc		708 Ne 15th St	Ft Lauderdale	FL	333041128	3057637735	
Tri State Trucking Office		6136 Dewey St	Hollywood	FL	330231821	3059893646	
Trinity Transport Inc		P O Box 350524	Ft Lauderdale	FL	333350524	3054625022	Russell Weaver
Tropical Moving & Storage		4100 N Powerline	Pompano Beach	FL	330733083	3059723344	
Tropical Trucking Inc		P O Box 350603	Ft Lauderdale	FL	333350603	3059786600	Michael Spavin
Truck Express Inc		13292 SW 6th CT	Ft Lauderdale	FL	333253210	3056202163	Robert Berman
Bill Turner Inc		7910 Hampton Blvd	Pompano Beach	FL	330685790	8005032545	William G Turner
Typetronics		P O Box 8873	Ft Lauderdale	FL	333108873	3055831340	F G Schmdt
Valet Self Storage Company Inc	Valet Moving and Storage Ctrs	2201 N Andrews	Pompano Beach	FL	330691425	3053444242	Jack Rossborough
Van-Tastic Movers Inc	Van-Tastic Moving and Storage	2200 NW 32nd St	Pompano Beach	FL	330691044	3053609903	Diane Wolf
Vineland Construction Co	National Distributions Center	108 NW 20th Ave	Ft Lauderdale	FL	333118722	3057638533	Terry McCormick
Vs Trucking Corp		2301 W Flamingo	Hollywood	FL	330233526	3059661986	
W A Relocation Services of FL		3901 Commerce	Hollywood	FL	330253936	3054389980	Billy Parris
Wagon Wheel Trucking		6520 NW 9th St	Pompano Beach	FL	330633504	3059774807	
Williams		1909 Harrison St	Hollywood	FL	330205067	3058443369	H Williams
Wilson Irish Trucking		2850 SW 1st St	Ft Lauderdale	FL	333121283	3057643951	
X S Hauling Inc		1530 Ne 43rd CT	Pompano Beach	FL	330645929	3057830938	Lisa Darling
Y C S Trucking Inc		3013 NW 60th St	Ft Lauderdale	FL	333092254	3059739486	Ken Yowell
Zap Courier Services Inc		4444 NW 71st Ave	Ft Lauderdale	FL	333194049	3054637996	Owen Edwards

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
441 Motors Inc	Driveway Service	2520 E Hallandale	Hallandale	FL	330094817	3054562277	Barry Halpern
A & A Moving & Delivery		1799 Ne 4th Ave	Miami	FL	331321101	3057512900	
A & H Delivery Service Inc		8635 NW 8th St	Miami	FL	331265943	3055540326	Hector Del Prado
A & J Transport Systems Corp		2088 SW 138th CT	Miami	FL	331757538	3052290568	Yamile M De-Oca
A & K Enterprises Inc		8750 SW 99th St	Miami	FL	331762945	3058633966	Alexander Krugs
A & Willy Transfer Inc		1049 E 23rd St	Hialeah	FL	330134321	3056853831	Juana Gonzalez
A A A American Moving Service	American Mayflower	P O Box 370982	Miami	FL	331370982	3055734800	Earle Lerette
A Amigo Van Lines Inc		9117 NW 105th Cir	Miami	FL	331781306		Rene Morales
A C A International Corp		4995 NW 79th Ave	Miami	FL	331665442	3054711157	Angela C Andreaci
A M Transfer and Crane Service		239 NW 26th St	Miami	FL	331274115	3056356611	John Smith
A Moving		7629 Ne 3rd CT	Miami	FL	331384917	3057512900	
A 1 A Trucking Inc		650 W 53rd St	Hialeah	FL	330122524	3058255633	Alejandro R Rizo
A& J Express Inc		10001 NW 28th Ter	Miami	FL	331721333	3054774347	Jorge Canela
A&C Delivery Service		10560 SW 25th St	Miami	FL	331652537	3055532811	Mirte Lynn
A-1 Carting Corp		P O Box 527563	Miami	FL	331527563	3054771300	Chester Wittkin
A-1 City Movers Inc		434 E 12th St	Hialeah	FL	330103650	3056962651	Justo Lopez
A-1 Express International Inc		1650 NW 70th Ave	Miami	FL	331261312	3054776722	Herman Lara
A-1 Fargo Van & Storage Inc	Sentry Moving & Storage	2131 NW 72nd Ave	Miami	FL	331221823	3055937020	Dick Griesemer
A-1 Fargo Van & Storage Inc	Fargo Mayflower Moving & Stor	7700 SW 100th St	Miami	FL	331568105	3055959501	Virgil Hale
A-1 International Courier Svc		P O Box 527850	Miami	FL	331527850	3055941184	Tomislav Miletic
Abf Freight System Inc		2365 Ali Baba Ave	Opa Locka	FL	330543133	3057692237	Steve Wilson
Abraham & Raul Moving & Divry		8181 NW South	Miami	FL	331667435	3058838454	Abraham Figueroa
Ernesto Acosta		3970 SW 144th Ave	Miami	FL	331757813	3055598504	Ernesto Acosta
Addison Truck Transport Inc		1246 Ne 110th Ter	Miami	FL	331617625	3058950429	Harville F Addison
Adel Road Truck Corporation		421 E 15th St	Hialeah	FL	330103246	3058883779	Aquillino D Rodriguez
Adolfo Brothers Moving & Stor		2320 NE 174TH	MIAMI	FL	331604861	3059494191	
Adriapema Auto Transport Corp		P O Box 650865	Miami	FL	332650865	3056353356	Rafael Delauz
Adriapema Auto Transport Corp		10531 SW 23rd Ter	Miami	FL	331657932	3058716227	
Advance Trucking Inc		P O Box 3462	Miami	FL	33034		Todd Whitley
Aerotruck Inc		2059 NW 79th Ave	Miami	FL	331221614	3055941907	Will Hill
Air Sea Express Inc		1955 NW 72nd Ave	Miami	FL	331261320	3055925176	Emilo Ruiz
Alco Trucking Services Inc		610 NW 183rd St	Miami	FL	331694472	3057393904	Lenford Nelson
Aldo Moving		1330 SW 86TH CT	MIAMI	FL	331444039	3052678465	
Aldo Moving		1330 SW 86TH CT	MIAMI	FL	331444039	3052671992	
Alespe Trk Corp		13827 SW 102ND	MIAMI	FL	331867303	3053833476	
All American Air Freight Inc		8110 W 30th CT	Hialeah	FL	330163820	3058267467	

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All System Travel & Cargo Svcs		13321 W DIXIE	MIAMI	FL	331614134	3058919116	
Allied Systems Ltd		P O Box 522202	Miami	FL	331522202	3058715947	Paul Walters
Allied Trucking of Florida		8849 NW 107th St	Hialeah	FL	330164506	3058220909	Eduardo Cusco
Allstop Courier Svc & Dlvry		P O Box 432424	Miami	FL	332432424	3056659766	Nelson L Suarez
Aloha Freightways Inc		P O Box 524295	Miami	FL	331524295	3055990436	Terry Gega
Alpha Transfers Inc		2804 NW 112th Ave	Miami	FL	331721809	3054772369	Alberto Sanchez
Alterman Corporation		P O Box 425	Opa Locka	FL	33054	3056883571	Sidney Alterman
Alterman Transport Lines Inc		7540 Byron Ave	Miami	FL	331412323	4078450220	Mike Bohan
Alterman Transport Lines Inc		P O Box 425	Opa Locka	FL	33054	3056883571	Sidney Alterman
Jorge F Alvarez Trucking Inc		P O Box 522633	Miami	FL	331522633	3055922369	Jorge F Alvarez
AlOha Freightways		1774 NW 82nd Ave	Miami	FL	331261016	3058544116	
Amador Delivery		7824 SW 88th CT	Miami	FL	331733510	3055983929	Emenello Amador
Amerl Carting Inc		3500 NW 51st St	Miami	FL	331423237	3056333360	
American Eagle Tmnp Corp		11000 NW 121st	Miami	FL	331781009	3058233902	
American Eagle Tmnp Corp	Aquila Block Hauling	8335 NW 64th St	Miami	FL	331662642	3055912155	Frank J Nesseler
American Transport Lines		2801 NW 74th Ave	Miami	FL	331221423	3058368900	
Americas Custom Brokers Inc		7923 NW 21st St	Miami	FL	331221616	3055919600	Jorge Sam
Amt Express Inc		921 NW 143rd St	Miami	FL	331683019	3057582844	Archie Dorton
Ander Trucking Inc		4781 NW 72nd Ave	Miami	FL	331665616	3054777121	Ander Dielingen
Anello Inc		357 W 57TH ST	HIALEAH	FL	330122743	3058215677	
Anu Transfer Inc	Econocaribe Trucking	2401 NW 69th St	Miami	FL	331476883	3058356893	Harvey Sykes
Anu-Way Contractors & Recycl		10440 SW 186th	Miami	FL	331576723	3052568858	Kenneth R Melvin
Anywhere Transport Inc		10421 NW 28th St	Miami	FL	331722169	3057170911	John Amato
Ao Trucking		3022 NW 62nd St	Miami	FL	331477634	3058344866	
Apolo Transport Corp		5427 NW 72nd Ave	Miami	FL	331664223	3054709588	Jamie Munera
Armellini Express Lines		2811 NW 74th Ave	Miami	FL	331221423	3055925933	
Arrow Transfer Services Inc		5209 NW 74th Ave	Miami	FL	331664842	3055978347	Alberto Vivanco
Asco Trucking Inc	Watson Brothers	P O Box 1116	Hialeah	FL	33011	3056332502	Roland Watson
Ataboy Tank & Fuel Cleaning SE		11814 SW 92nd Ter	Miami	FL	331862151	3055985070	Richard Gorski
Atlantic Fish Seafood		972 E 30th St	Hialeah	FL	330133427	3056914887	Clemente C Paretiro
Atlantic Good Services Inc		3272 NW 30th St	Miami	FL	331426312	3056349991	Guillermo J Sanchez
Atlantic Trucking Company	Container Service Division	10887 NW 17th St	Miami	FL	331722045	3055945866	Joeseph Dezome
Atlantis Moving & Shipping		8710 NW 100TH ST	MIAMI	FL	331781454	3058880337	Yigal Aviani
Attwoods NJ Holdings Inc		2601 S Bayshore Dr	Miami	FL	331335417	3058564455	Edwin D Johnson
Auction Transport Systems Inc		521 Ne 189th St	Miami	FL	331793909	3056540882	Roger Perillo
Auto Driveaway Co		19135 Biscayne	Miami	FL	331802310	3059318330	Anthony W Basso

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Auto Flight		12230 SW 187th	Miami	FL	331773112	3052511154	Dwight Kumanchik
Automated Building Component		7525 NW 37th Ave	Miami	FL	331475817	3055449183	
Axo Industries Inc		7935 NW 67th St	Miami	FL	331662632	3054715849	Enrique Garcia
Ayalas Movers		7050 SW 21st St	Miami	FL	331551621	3052646683	
Azpettia Trucking Corp		550 NW 137th Ave	Miami	FL	331821927	3052218696	Romelio Azpettia
Azpettia Trucking Inc		12660 SW 190th St	Miami	FL	331773832	3052537467	
AAA Advance Septic & Drain Svc	AAA Advanced Septic & Drain	P O Box 161941	Miami	FL	331161941	3058889600	Loretta Rosenfeldt
AAA Cooper Transportation		10410 NW South	Miami	FL	331781318	3058878811	Bill Chapman
AAA Metro Moving & Storage		1732 NW 21st Ter	Miami	FL	331427438	3053247099	
AB Delivery		633 NE 167TH ST	MIAMI	FL	331622441	3056520212	
ASAP Courier		609 S Federal Hwy	Miami	FL	33146	3059477477	
ASP Transport Corp Inc		3522 Ne 171st St	Miami	FL	331603038	3059475447	Arthur St Peter
B & A Agencies Incorporated		12444 SW 27th St	Miami	FL	331752107	3052204728	Alexis Matos
B & W Hauling		3500 NW 119th St	Miami	FL	331672928	3056888664	John Bowe
B C E Trucking Inc		1701 NW 84th Ave	Miami	FL	331261033	3055924170	Brian Eagleston
B-52 Express Lines Inc		P O Box 520519	Miami	FL	331520519	3055943660	Tito G Alamo
R Bacuranao Transfer Inc		10015 SW 2nd Ter	Miami	FL	331741836	3055595070	Ricardo Rodriquez
Bayside Express Inc		10240 SW 56th St	Miami	FL	331657066	3052799066	Orestes Castro
Bee Moving and Storage Inc	Courtesy Van Lines	1892 Ne 151st St	Miami	FL	331626010		John Belviso
The Bekins Company		650 NW 105th St	Miami	FL	331501165	3057582504	Terry Mastaler
Bel Air Express	Gold Coast Express	9060 NW 13th Ter	Miami	FL	331722907	3055910033	Andrew Dye
Bellevue Vico	Vic Transfer and General Svcs	1232 N Crum Ave	Homestead	FL	33030	3052483911	Vico Bellevue
Santiago P Bello		5380 SW 92nd Ave	Miami	FL	331656533	3052747934	Santiago P Bello
Benitez & Sons Inc		12555 Biscayne	Miami	FL	331812522	3056345744	George Benitez
Benton Express Inc		6775 NW 25th St	Miami	FL	331221801	3058716716	Nelson Fitzhugh
Best Trucking Inc		P O Box 661019	Miami	FL	332661019	3056346611	Juan Quintana
Best Westchester Movers Inc		1747 NW 21st Ter	Miami	FL	331427437	3055527072	George Perez
Bestway Delivery Service		P O Box 681095	Miami	FL	331681095	3056218975	Joe Rachubinski
Bestway Distribution Services		8201 NW 56th St	Miami	FL	331664028	3055917650	Norton F Hight
F Bethea Transport		3220 NW 170th St	Opa Locka	FL	330564257	3056250751	F Bethea
Big T Transport Inc		2320 N Miami Ave	Miami	FL	331274432	3055760116	
Billings Freight Systems Inc		9999 NW 89th Ave	Miami	FL	331781459	3058845110	
Blackshear Hauling Co		1065 NW 114th St	Miami	FL	331686115	3057514590	Charles Blackshear
Blackwell Trucking Inc		14500 SW 96th Ave	Miami	FL	331767862	3052511820	John Blackwell
Botanical Transport Corp Amer		17455 SW 157th	Miami	FL	331871716	3052357683	Warren W Lovell
Antonio Bouza Co		9105 SW 21st Ter	Miami	FL	331658251	3055525278	Antonio Bonza

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J J Brady & Sons Inc	Brady Farms	1125 Burlington St	Opa Locka	FL	330543618	3056889658	John Brady
Brago Transportation Inc		20390 SW 155th	Miami	FL	331873801	3052535333	Frank Brago
Brautigam Inc		8906 SW 11th St	Miami	FL	331743246	3052616122	Jerry Brautigam
Bravo Trucking		5480 W 21st CT	Hialeah	FL	330167046	3058286691	Eliazar Martinez
Brickell Express Cour Systems		330 SW 27th Ave	Miami	FL	331352968	3058548459	Joe Gonzalez
Brinke Transportation Corp		8801 Biscayne Blvd	Miami	FL	331383365	3057545644	
Browns Towing & Truck Rental		406 N Chrome St	Homestead	FL	33030	3052453038	Forest Brown
Budge It Moving & Storage		2052 Ne 163rd St	Miami	FL	331624902	3059459660	Halm Shalem
Burgess Transport Inc		P O Box 541707	Opa Locka	FL	330541707	3056888777	William Burgess
C & A Trucking Inc		P O Box 2941	Hialeah	FL	330120941	3058231465	Luis Casas
C & O Roof Tile and Bldg Sup		2100 W 76th St Ste	Hialeah	FL	330165503	3058288277	Orlando Otero
C G Trucking		6711 NW 73rd CT	Miami	FL	331663039	3055922041	
C H A D Trucking Inc		19936 NW 51st CT	Opa Locka	FL	330554646	3056230548	Hiram Diaz
C J Freight Inc		5483 NW 72nd Ave	Miami	FL	331664223	3058838400	Greta Mena
C R Transport Corp		P O Box 4534	Hialeah	FL	330140534	3055565092	Miguel A Segura
C Z Enterprises Group Inc		7282 NW 66th St	Miami	FL	331663008	3055990021	Martha E Zambrano
Cabrera Sales		5577 W 27th Ave	Hialeah	FL	330164095	3055573946	Hugo Cabrera
Cabrera Trucking Inc		1250 NW 36th St	Miami	FL	331425554	3056355332	
Cannon Express Inc		P O Box 52 3682	Miami	FL	33152	3055928685	Margarita Garcia
Captain Jerrys Trucking Inc		1440 Ne 149th St	Miami	FL	331612637	3059442220	Jerome Story
Cargo Express International		8249 NW 70th St	Miami	FL	331662743	3055935132	Carlos Vinuela
Cargo Services Express Inc		7743 NW 187th Ter	Hialeah	FL	330155248	3058298616	Omaida Delgado
Cargus Express Moving		6560 W 2ND CT	HIALEAH	FL	330126739	3058233098	
Caribbean Transportation Inc		P O Box 0154444	Miami	FL	33132	3053746420	Jorge J Medina
Caribbean Trucking		P O Box 15444	Miami	FL	331015444	3055250022	
Caribe Container Express Inc		3250 NW 65th St	Miami	FL	331477562	3056962661	Oscar Acharandio
Carlos Trucking Inc		860 NW 19th CT	Miami	FL	331253533	3055519994	Juan C Victorero
Carluz Delivery Services Inc	Miami Fast Delivery	P O Box 661355	Miami	FL	332661355	3058273278	Carlos Salazarte
Carolina Freight Carriers Corp		6402 NW 74th Ave	Miami	FL	331663635	3055921101	Richard Reaves
Carpel Transport Inc		9165 NW 101st St	Miami	FL	331781349	3058844275	Jim McCann
Cartage Services Inc	Mail Boxes Etc	2577 NW 74th Ave	Miami	FL	331221417	3054708565	Robert N Geiser
Carvi Experess Corp		P O Box 522458	Miami	FL	331522458	3055990788	Carlos Vidal
Catalina Cold Transfer Inc		P O Box 111180	Hialeah	FL	330111180	3055581589	Jose R Rodriguez
Censur Express Inc		14629 SW 104th St	Miami	FL	331862905	3053829907	Samuel Gomez
Central Ex Art Related Svcs		P O Box 651617	Miami	FL	332651617	3057544339	Farzad Malek
Central Holding Systems		5720 NW 35th Ave	Miami	FL	331422708	3056346928	Delmar B Conner

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT	
Centro Sur Envios Corp		1014 71st St	Miami	FL	331412963	3058615660	Jabar	Rojas
Challenger Xpress		8316 NW 14th St	Miami	FL	331261504	3055938394		
Chamsy Transfer Inc	Chamsy	P O Box 523730	Miami	FL	331523730	3055930665	Leonard	Roberts
Chance Enterprises Inc	Low Cost Alrco	19100 NW 50th CT	Opa Locka	FL	330552037	3056251189	William	Chance
Chuck S Mobile Home Corp		11564 SW 93rd St	Miami	FL	331761008	3052741526	Charles	Cunningham
Cillo Bros Inc	Atlantic Sanitation Systems	P O Box 639	Hallandale	FL	330080639	3055919456	Gabriel	Cillo
Circuit City Stores Inc	Circuit Cy 208 HM Divry Svc	5590 NW 163rd St	Hialeah	FL	330146132	3058256947	John	Earwood
R E Clark Inc		1170 NW 149th Ter	Miami	FL	331682025	3056888143	Robert E	Clark
Lester Coggins Trucking Inc		7979 NW 29th St	Miami	FL	331221000	3055943923	Dean	Stilwell
Colcargo Freight Forwarders		5287 NW 161st St	Hialeah	FL	330146221	3058230894	Angela	Castaneda
Columbia Transport Corp		8420 NW 30th Pl	Miami	FL	331474020	3058365794	Celedonio	Andollo
Comet Courier Corp		7902 NW 66th St	Miami	FL	331662726	3055912262	Steven	Seltzer
Commercial Carrier Corporation		850 SW 177th Ave	Miami	FL	33144	3052268522	Juan	Cros
Commercial Carrier Corporation	Comcar	P O Box 440606	Miami	FL	331440606	3052268445	Tony	Williamson
Commercial Carriers Inc		P O Box 522755	Miami	FL	331522755	3058716380	Terrell	Luke
Complete Courier Systems Inc		74 Ne 17th St	Miami	FL	331321229	3055921544	James	Mierzejewski
Consolidated Freightways Inc		3355 NW 41st St	Miami	FL	331424305	3056342600	Dell	Ray
Container Services Intl Inc		5190 NW 167th St	Hialeah	FL	330146328	3058208632	Martin	Schmitt
Contentional Freightways Inc		3560 NW 34th St	Miami	FL	331425749	3056345114	Nora	Cruz
Contract Design Services Inc		19620 Ne 18th CT	Miami	FL	331793150	3059333771	Bruce	Rubin
Cooper Trucking	Cooper Farnes	P O Box 4179	Hialeah	FL	330140179	3058222987	Don	Cooper
Cory Joseph Divry Svc of Fla		3101 NW 71st St	Miami	FL	331475937	3056962679	Joseph	Cory
Cory Joseph Divry Svc of Fla		7101 NW 32nd Ave	Miami	FL	331476671	3056962679	Hank	Baer
Country Express Inc		170 W 50th St	Hialeah	FL	330123720	3058229472	Thomas	Thompson
Countywide of Miami Inc		P O Box 680099	Miami	FL	331680099	3056856281	Ronne	Lalacona
Courier Dispatch Group Inc		6375 NW 84th Ave	Miami	FL	331662606	3055920474	Mark	Rykowski
Crisal Trucking Corp		7320 Ne 1st Place	Miami	FL	331385302	3057592278	Jose	Paredes
Criss Cross Couriers Inc		1401 SW 107th Ave	Miami	FL	331742522	3055969099	Michael	Erica
Cross Country Express		8361 NW 66th St	Miami	FL	331662626	3055911147		
Aaron Crump Trucker		1000 NW 108th Ter	Miami	FL	331686045	3058950179		
Cubanica Moving Service		300 SW 12th Ave	Miami	FL	331302038	3053251522		
Cultum Courier		20 Westward Dr	Miami	FL	331665258	3058848408	Ron	Cultum
Custom Boat Transporters Inc		100 Ne 15th St Ste	Homestead	FL	330304578	3052454524	Victor	Bonura
Custom Boat Transporters Inc		3115 SW 103RD PL	MIAMI	FL	331652847	3052267871		
Customs & Trade Services Inc		P O Box 527328	Miami	FL	331527328	3054777088	Norman E	Gelber
Juan A Cutino		2353 NW 3rd St	Miami	FL	331255211	3055418549	Juan A	Cutino

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CJM Transport Inc		3421 SW 122nd CT	Miami	FL	331753071	3052231135	Candido J Marquez
D & A Transportation		17230 NW 14th Ave	Miami	FL	331695105	3056252271	Anthony Peek
D & D Flowers Corporation		2824 NW 72nd Ave	Miami	FL	331221310	3055927511	
Dade Moving & Delivery Svc Inc		7471 NW 63rd St	Miami	FL	331663603	3054702483	Chino Font
Dade Sky Trading Corp		P O Box 526751	Miami	FL	331526751	3054776205	Clive L D Adesky
Daniel Moving & Storage Inc		3480 NW 125th St	Miami	FL	331672412	3055279990	Nelson Miles
Dannys Fast Service Inc		7471 NW 8th St	Miami	FL	331262912	3052615719	Dannell Higuera
Daughters Interline Inc		7280 NW 77th St	Miami	FL	331662204	3058852805	James D Shannon
David Delivery Inc		2430 W 73rd Pl	Hialeah	FL	330166511	3058224155	David Valdez
David Transport Inc		3562 NW 79th St	Miami	FL	331474529	3058365444	Angel D Aguiar
Davton Transfers Inc		P O Box 523781	Miami	FL	331523781	3055917303	David Lopez
Dbp Courier Msngr Svc Inc		1221 Brickell Ave	Miami	FL	331313200	3053585977	
Delivery Systems Service	A A Associates	5454 W 10th Ave	Hialeah	FL	330122441	3058567806	
Dennis Fish Express		500 Ne 185th St	Miami	FL	331794541	3056534771	
Dependable Auto Shippers Inc	AB Auto Transporters	162 Sunny Isles	Miami	FL	331604207	3059454104	A London
Depina Ltd		7967 NW 21st St	Miami	FL	331221616	3059947750	Peter Bekkers
Dhl Airways Inc	Dhl Worldwide Express	2176 NW 82nd Ave	Miami	FL	331221507	3054710490	Robert A Milne
W C Dillard Trucking		2290 NW 93rd St	Miami	FL	331473030	3056966762	
Distrito Trucking Inc		P O Box 506	Goulds	FL	33170	3052488122	Joseph Distrito
Dixie Transport Inc		P O Box 370525	Miami	FL	331370525	3057578900	Steve Blatt
Willie Dixon	Willies Transfer	2110 NW 58th St	Miami	FL	331427817	3056340467	Willie Dixon
Dlt Express Couriers		2511 Tigertail Ave	Miami	FL	331334710	3052851691	
Dogwood Enterprises Inc		1255 Ne 110th St	Miami	FL	331617641	3058932236	Al Uber
Dolphin Moving		1330 SW 86TH CT	MIAMI	FL	331444039	3052678465	
Dolthan Trojan Trucking		P O Box 581068	Miami	FL	33168	3056961166	
Dorado Enterprises Inc		1260 NW 72nd Ave	Miami	FL	331261919	3055924967	Luis Capo
Double T Express Inc		5725 W 28TH AVE	HIALEAH	FL	330161923	3058279457	
Dougs Tractor Service Inc		P O Box 660181	Miami	FL	332660181	3055925488	Douglas Devine
Draper Hauling		1386 NW 54th St	Miami	FL	331423859	3057519889	
DCH Group Inc		11117 W	HIALEAH	FL	330164200	3055580310	
E & L Delivery Service Inc		745 SW 98th Place	Miami	FL	331741992	3055526575	
E & M Trucking Inc		8255 NW 93rd St	Miami	FL	331662027	3058845411	Elsa H Ramirez
E C Transfer Corp		P O Box 523006	Miami	FL	331523006	3055930288	
E C Trucking		1068 W 38th St	Hialeah	FL	330124194	3058225583	Elio Cruz
Eagle Messenger Co		9905 NW 88th Ave	Miami	FL	331781450	3058830044	Craig Martin
Eagle Service Corp		7233 NW 79th Ter	Miami	FL	331662209	3058877454	Ramon E Catalan

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Eagle Transfer Inc	Eagle Companies	P O Box 521180	Miami	FL	331521180	3055919346	Raul Pedraza
East Florida Hauling Inc		7227 NW 29th Ave	Miami	FL	331475915	3056910091	Robert Acuna
Edy Ariel Moving		7105 W 13TH AVE	HIALEAH	FL	330144571	3058233802	
El Dorado Furniture Corp		4200 NW 167th St	Opa Locka	FL	330546112		Manuel Capo
Elder Moving & Storage Co Inc	Mayflower Moving and Storage	9262 NW 101st St	Miami	FL	331781351	3058853322	Ed Smith
Electronic Express Inc		9731 NW 91st CT	Miami	FL	331781428	3058877516	Hardy Adams
Elite Courier Svcs		3236 NW 41st St	Miami	FL	331424304	3056350881	
Elys Produce Inc		10361 SW 12th St	Miami	FL	331742711	3055594226	Ellecer Machado
Environmental Mgt Cnsrvation Oil	EMC Waste Oil	P O Box 520882	Miami	FL	331520882	3054777497	Marla P Leon
Environmental Contractors Inc	E C I	2648 W 78th St	Hialeah	FL	330162745	3055566942	Kelly Moran
Escorpion Transfer Corp		9600 NW 25th St	Miami	FL	331721416	3057168677	Jesus Perez
Esquire Express Inc		600 Brickell Ave Ste	Miami	FL	331312539	3055309580	Steve Howard
Estes Solar Trucking		22750 SW 147th	Goulds	FL	331706106	4072583470	Solan Estes
Everglades Pipeline Company LP		P O Box 13013	Ft Lauderdale	FL	333160100	3055266671	Larry Skelly
Exclusive Carrier Systems Inc		P O Box 521092	Miami	FL	331521092	3054775005	Ruben Valdes
Executive Express Inc		2000 S Dixie Hwy	Miami	FL	331332456	3058540565	Carlos Ruga
Expedited Trucking Inc		P O Box 660836	Miami	FL	332660836	3057176858	Alfredo Silva
Explorer Freightways Inc		4448 NW 74th Ave	Miami	FL	331666443	3056614519	Alexander J Voigt
Exporthr Bonded Corporation		P O Box 523996	Miami	FL	331523996	3055913943	Jorge H Rivero
Express Hauling Inc		541 SW 122nd Ave	Miami	FL	331841517	3055548838	Beatriz Rodriguez
ELA Manzo Inc		591 SE 7th Ave	Hialeah	FL	330105461	3058842993	Ana Manzo
F & C Trucking Inc		6250 W 21st CT	Hialeah	FL	330162655	3058239889	Jose M Fonte
F & F Star Transport Inc		2801 SW 79th CT	Miami	FL	331552565	3059652371	Jose L Franco
Fabios Machinery Movers		3310 SW 106th Ave	Miami	FL	331653604	3055534489	
Fabios Trucking & Hauling		2121 NW 24th Ave	Miami	FL	331427239	3056340001	Fabio Barredo
Faircloth Sanitation Inc		112 N Homestead	Homestead	FL	330307426	3052472262	Reba Faircloth
Falcon Transport Systems Inc		12040 NW 8TH	MIAMI	FL	331686311	3056855475	
Fast Transfer		8330 NW 56th St	Miami	FL	331664020	3055931415	Eugenio Gonzalez
Felix Moving Service		944 SW 68th Ave	Miami	FL	331444745	3052640656	
Felix Transfer Inc		P O Box 521053	Miami	FL	331521053	3055918084	Felix Vinuela
Fernan-Di Enterprise Corp		P O Box 145224	Miami	FL	331145224	3054412340	Azuzena Fernandez
Fernandez Transport Inc		P O Box 524036	Miami	FL	331524036	3054714433	Adrian Fernandez
Fij Inc		10135 NW 88th Ave	Miami	FL	331781344	3058837800	Alan Brumel
Figueroa Trucking Corp		525 SW 68th Ave	Miami	FL	331443649	3052620543	John Figueroa
Fireball Inc		P O Box 526622	Miami	FL	331526622	3055959079	
Fisher & Benson Inc		13501 SW 84th Ave	Miami	FL	331566625	3052388063	Ann Fisher

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Flash Delivery Service		8504 NW 8th St	Miami	FL	331263709	3052611368	Maria C Lopez
Florida Carrier Inc		12060 NW South	Miami	FL	331781111	3058227231	Alejandro A Acosta
Florida Cartage and Warehouse	Florida Express Freightways	6750 NW 79th Ave	Miami	FL	331662779	3055993900	Jose Jimenez
Florida Container Transport		125 Ne 9th St	Miami	FL	331321716	3053734765	Jorge Rovirosa
Florida Delivery Service Inc		6804 NW 84th Ave	Miami	FL	331662617	3055992166	
Florida Express Cargo Inc		P O Box 527963	Miami	FL	331527963	3054702217	Ivo Rojas
Florida Express Freightways		6750 NW 79th Ave	Miami	FL	331662779	3055993900	Earl McCardle
Florida Intrastate Mvg & Stor	Moving & Storage	8501 NW 56th St	Miami	FL	331663328	3055922044	Joel Dubin
Florida Lime & Avocado Growers		P O Box 4176	Princeton	FL	33030	4072583326	Emil Leto
Florida Tank Lines and Leasing		12060 NW SOUTH	MIAMI	FL	331781111	3058227235	Alejandro A Acosta
Florida Transfer Service Corp		P O Box 523703	Miami	FL	331523703	3058887402	Jose Jimenez
Florida Trucking Co		P O Box 1450	Homestead	FL	33090	3052475012	Jerry C Shears
Food Dist Systems of Fla		500 Ne 185th St	Miami	FL	331794541	3056530674	Jim P Craven
Fresh Produce Transport Inc		P O Box 4036	Hialeah	FL	330140036	3056876323	Eloy A Perez
Ft Laudie Tmsfr & Rigging		4701 NW 36th St	Miami	FL	331666106	3056617753	
Miranda Fv Incorporated	Express Transport	6320 NW 37th Ave	Miami	FL	331477524	3056965808	Frank Miranda
G & M Hauling Inc		21485 SW 256th St	Homestead	FL	330311535	3052468262	Glen Bozelle
G J C Trucking Inc		1162 SW 129th Ave	Miami	FL	331842135	3055516348	
G O Cartage Inc		1001 N America	Miami	FL	331322013	3053778387	John Matusek
Jim K Gaines		7422 Big Cypress	Hialeah	FL	330142557	3056529990	Jim K Gaines
Eli Gallardo	Big E Trucking Inc	9270 NW River Dr	Miami	FL	33166	3058889383	Eli Gallardo
Gama Suppliers Inc		14372 SW 142nd	Miami	FL	331866769	3052520832	Gustabo Martinez
Garcia J Trucking		474 E 31st St APT 2	Hialeah	FL	330133363	3058225244	
Miguel A Garcia Trucking Co		15975 SW 304th St	Homestead	FL	330333429	3052453043	Miguel A Garcia
Garcia Trucking Inc		6555 NW 36th St	Miami	FL	331666903	3058713668	
Gasa Freight System		1448 NW 42nd Ave	Miami	FL	331261413	3055991929	
Gateway Freight System		P O Box 25259	Miami	FL	331025259	3058713522	
Gateway Freight Systems		6085 NW 82ND	MIAMI	FL	331663420	3054700003	Joseph Ferrara
Gemini Transportation Inc		4757 NW 72nd Ave	Miami	FL	331665616	3055918115	Eddie Weitz
General Express Inc		1126 W Flagler St	Miami	FL	331301034	3055416340	
General Hauling Services Inc		P O Box 420854	Miami	FL	332420854	3053258666	Martin Goldberg
General Moving Inc	General Moving & Delivery Svcs	1068 W 38th St	Hialeah	FL	330124194	3058268656	Humberto Forte
General Packing & Crating Inc		5708 Ne 4th Ave	Miami	FL	331372528	3057582042	Robert Goltzman
German Plano Craft Inc		14021 NW 20th CT	Opa Locka	FL	330544119	3056889431	Rudi Hauschild
German Plano Craft Inc		14021 NW 20th CT	Opa Locka	FL	330544119	3056889431	Rudi Hauschild
Giant Express Inc		7801 Coral Way	Miami	FL	331556538	3052645144	

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Gifts Ahoy Inc		2250 S Dixie Hwy	Miami	FL	331332360	3058588040	Barbara Slingbaum
Globe Moving and Storage Inc		20865 Ne 16th Ave	Miami	FL	331792122	3056541254	Jake Nagar
Gold Coast Freightways		P O Box 54 0882	Miami	FL	33054	3056875660	Gary C Maxwell
Golden Apple Investments Inc		14384 SW 142nd	Miami	FL	331866769	8133510854	
Golden Line Express Inc		9600 NW 13th St	Miami	FL	331722814	3054775555	Raul Delvalle
Gomez Local Moving		736 NW 1st St	Miami	FL	331281404	3053731758	
Gomez Moving Co	La Valjera	112 NW 8th Ave	Miami	FL	331281410	3055455825	Jose Prieto
Gonzalez & Sons Equipment Inc		836 W 37th St	Hialeah	FL	330125168	3058221827	Gonzalez Juan
Gonzalez Movers Inc		710 NW 76th Ave	Miami	FL	331262917	3052624969	Rene Gonzales
Grandi Intertrade Corp		8265 NW 66th St	Miami	FL	331662721	3054702288	
Greater Miami Delivery		9010 SW 137th Ave	Miami	FL	331861413	3053888177	
Green Wings Couriers & Divry		4493 SW 75th Ave	Miami	FL	331554430	3052669228	
Greenstein Trucking Co		280 NW 12th Ave	Miami	FL	331281011	3053712197	
Greggs Mobile Home Service		17390 SW 301st St	Homestead	FL	330303304	3052480005	
Grg Service Way Corp		1785 Opa Locka	Opa Locka	FL	330544221	3056858124	
Grg Service Way Corp		1785 Opa Locka	Opa Locka	FL	330544221	3056829010	
Guevara & Vega Trucking		3700 SW 82nd Ave	Miami	FL	331553430	3055536791	Flavio Guevara
Nelson Gutierrez		11498 SW 56th St	Miami	FL	331656809	3058210651	Nelson Gutierrez
Hamersmith Inc		3200 NW 125th St	Miami	FL	331672408	3056857451	Joyce Hamersmith
S Harper Delivery Service		60 NW 37th St	Miami	FL	331273109	3055760550	
Hawk Courier		6921 NW 46th St	Miami	FL	331665603	3054716993	
Hd Garden Maintenance		P O Box 540634	Opa Locka	FL	330540634	3057904217	Hencle Dorsey
Heavy Hauling & Leasing Inc		12060 NW South	Miami	FL	331781111	3058227231	Rafael Elortegui
Hecny Transportation USA Inc		1904 NW 82nd Ave	Miami	FL	331261012	3055945882	Avelino Garcia
Hercules Express Inc		6665 NW 40th St	Miami	FL	331666951	3058716938	Fernando Rodriguez
Daniel Hernandez		4264 W 7th Ln	Hialeah	FL	330123827	3058197822	Daniel Hernandez
High Power Entertainment Inc		5050 NW 7th St	Miami	FL	331263419		Luz S Cruz
High Power Entertainment Inc		6001 NW 74th Ave	Miami	FL	331663743	3054487922	Luz S Cruz
Hillar Delivery		8025 NW 90TH ST	MIAMI	FL	331662113	3058837999	
Hilson & Fergusson Inc		16125	HIALEAH	FL	330146581	3058236195	
Hilton Trucking		18928 NW 46th Ave	Opa Locka	FL	330552651	3056205148	Clyde Hilton
Hlxsons Auto Transport		17101 SW 200th St	Miami	FL	331872710	3052383755	Theodore Hlxson
R P Hoak & Associates		8931 SW 182nd Ter	Miami	FL	331575947	3052533246	Robert P Hoak
Homestead Transfer & Stor Co		9314 NW 102nd St	Miami	FL	331781334	3052475012	Lois E Shears
Humpty Dumpty Truck Service		12501 SW 82nd	Miami	FL	331565911	3052324424	Robert Bratz
HN Citrus		6364 SW 33rd St	Miami	FL	331554911	3056678639	Hector Nunez

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
I B Express Transfer Inc		4680 W 13th Ln	Hialeah	FL	330123238		Israel G Bayate
Instant Couriers		3162 W 73rd Pl	Hialeah	FL	330165263	3053628099	
Instant Deliveries		10412 NW 7th Ave	Miami	FL	331501004	3057517779	
Inter Amer Del Service	Universal Express	7700 N Kendall Dr	Miami	FL	331567578	3052713519	Michael Cuveas
Inter Pac Services Inc		PO Box 520423	Miami	FL	331520423	3055919392	William Garcia
Inter-American Moving Services		3601 NW 55th St FL	Miami	FL	331422725	3056333727	Terence A Rignault
Intermodal Trnsp of Flordia		15 Ne 17th Ter	Miami	FL	331321113	3053714041	Ron Sabilia
International Crg Animals Inc		3100 NW 72nd Ave	Miami	FL	331221335	3055938938	Annette Lopez
International Trckg & Rigging		6175 NW 153rd St	Hialeah	FL	330142435	3058211799	Richard L Kipp
J & P Transportation Inc		6550 NW 74th Ave	Miami	FL	331663637	3054710779	Mike Crull
J & P Transportation Inc		6550 NW 74th Ave	Miami	FL	331663637	3054710779	Mike Cruell
J A B Transport Inc		60 E 3rd St APT	Hialeah	FL	330104900	3058883830	Alberto Batista
J B Hauling Inc		3500 NW 119th St	Miami	FL	331672928	3056888664	John Bowe
J C H Trucking Inc		7270 NW 66th St	Miami	FL	331663008	3055910433	Jarlo Chltiza
J I L Trucking Inc		1405 N Krome Ave	Homestead	FL	330304208	3052488681	Violet Cables
Jaf Transport Inc		11761 SW 24th Ter	Miami	FL	331752459	3052275794	Norma Fernandez
Jam Transportation Inc		9410 NW 109th St	Miami	FL	331781223	3055589918	Jesus A Martinez
Jays Delivery Service		P O Box 68 114	Miami	FL	33168	3056873613	
Jessal Trans Corp		9850 SW 111th Ter	Miami	FL	331762873	3052427370	
Jet Trading Inc		500 Ne 185th St	Miami	FL	331794541	3058530442	Richard Weinsler
Jlr Trucking Co		7101 SW 130th St	Miami	FL	331566919	3052522079	
Joe Multl Service		4141 N Miami Ave	Miami	FL	331272848	3055767788	Joseph Saintil
Joes Moving & Storage Inc		1100 E 13th St	Hialeah	FL	330103759	3058883963	Jose Baluja
Joes Trucking		731 E 13th St	Hialeah	FL	330103663	3058878399	
Jol Enterprises Inc		272 W 42nd St	Hialeah	FL	330123913	3053623137	Enrique J Lamelas
Jones L Trck Svc Land Clearing		P O Box 510174	Miami	FL	331510174	3056911704	Leonzie Jones
Joseph Cory Delivery Service		7101 W 32ND AVE	HIALEAH	FL	33016	3056960077	
Jr Transportation		2775 W 79th St	Hialeah	FL	330162768	3058253169	
Juner Truck Inc	Juner Hauling	9455 NW 109th St	Miami	FL	331781227	3058241277	Juan Alvarez
K & K Excavating Inc		22935 SW 122nd Pl	Miami	FL	331704411	3052581479	Kent Mertens
K&R Transportation		3059 Washington St	Miami	FL	331333827	8003322430	Rubin Salbago
Kambri Express Inc		3177 NW NORTH	MIAMI	FL	331426342	3056333603	
Kambri Express Inc		P O Box 111960	Hialeah	FL	330111960	3058848299	Henry Rivero
Kauffs of Miami Inc	Kauffs Towing	2435 Ali Baba Ave	Opa Locka	FL	330543135	3056857593	Michael W Marion
Keystone Freight Corp		8740 NW 102nd St	Miami	FL	331781336	3055949079	
King Courier Messenger Service		4471 NW 36th St	Miami	FL	331667258	3058884415	Ralph Gutierrez

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
King Fats Trucking		5441 NW 181st Ter	Opa Locka	FL	330553146	3056251354	
King Hauling Waste Services		9555 W	Hialeah	FL	330162112	3055576166	Greg Reyes
Knight-Ridder Inc	Miami Herald The Division	1 Herald Plz	Miami	FL	331321609	3053763800	James K Batten
L A Hauling Inc		7565 SW 152nd	Miami	FL	331932385	3053320666	
L A S Cargo Inc	L A S Cargo Tmstp Co	1941 NW 97th Ave	Miami	FL	331722305	3054774429	Freddy Mogollon
L Caceres Inc		3916 NW 4TH TER	MIAMI	FL	331265632	3056426995	
L J Development & Engineering		4100 Ne 2nd Ave	Miami	FL	331373525	3055769961	Roy Johnston
L M Moving		12440 SW 188th St	Miami	FL	331773142	3052519527	Luis Menendez
L T L Express Inc		8248 NW 68th St	Miami	FL	331662759	3055948567	Adalberto Perez
La Rosa Del Monte Express Inc		7675 NW 66th St	Miami	FL	331662805	3055992590	Angel Torres
Lam Transportation Corp		1002 SW 138TH PL	MIAMI	FL	331843011	3055526636	
Land Trucking Co Inc		3675 NW 71st St	Miami	FL	331476525	3058369114	Ramon Campos
Larmond Trucking Co		7035 NW 28th Ave	Miami	FL	331476761	3058364845	
Laser Trucking Inc		11350 NW South	Miami	FL	331781126	3058262264	
Lasha Enterprises	Lasha Cargo	3401 H NW 72nd	Miami	FL	33122	3055978848	Manfred J Koberg
Latin American Forwarding Co	Lafco	P O Box 528050	Miami	FL	331528050	3055926878	Jorge A Soberon
Latinvan Inc		P O Box 520623	Miami	FL	331520623	3055926580	Manuel E Rojas
Lb Trucking & Excavating		17101 Ne 6th Ave	Miami	FL	331622005	3056543500	
Lees Trailer Service Inc		P O Box 381	Miami	FL	33156	3052743353	Patricia Handley
George Lima Moving Inc		7911 SW 14th Ter	Miami	FL	331445264	3052613030	Silbrito Guerra
Liz Cargo Service		4466 NW 74th Ave	Miami	FL	331666443	3055921967	George Gonzalez
Lmn Trucking Inc		770 NW 184th Dr	Miami	FL	331694266	3056536149	
Jose L Lopez Inc		6310 NW 113th Ter	Hialeah	FL	330122332	3055561932	Jose L Lopez
Lovett Trucking Inc		13919 NW 22nd Pl	Opa Locka	FL	330544005	3056888009	William Taylor
Lovett Trucking Inc		13919 NW 22nd Pl	Opa Locka	FL	330544005	3056888009	Willie Taylor
John Walter Lowe		208 Ne 10th St	Hornestead	FL	330304731	3052471423	John W Lowe
Ltd Air Cargo Inc	Ltd Express	7379 NW 31st St	Miami	FL	331221240	3057160132	Ed Cardona
Luciano Enterprises		P O Box 693573	Miami	FL	332690573	3056530300	Nicholas Luciano
M C I Express Inc		9300 NW 100th St	Miami	FL	331781419	3058875953	Betty Myers
M C O Construction Inc		6600 NW 27th Ave	Miami	FL	331477220	3056934344	Elizabeth A McNeill
M Cuenca P Delivery		5770 W 21st CT	Hialeah	FL	330162629	3055577130	Manual Cuenca
M&G Transport Corp		7070 NW 84th Ave	Miami	FL	331662621	3055914224	Janbrill Fernandez
Madelu Enterprises Inc		7898 W 15th Ave	Hialeah	FL	330143371	3058252081	Luis Diaz
S Malatesta & Sons	Malatesta Movers	2498 W 8th CT	Hialeah	FL	330102028	3058213811	Andrew Malatesta
Managua & Leon Express		1421 SW 8TH ST	MIAMI	FL	331353843	3058584251	
Manny & Son Trucking Inc		P O Box 681406	Miami	FL	331681406	3056853362	Manuel E Ponce

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Mannys Trnsfr Pick Up & Dlvry		61 E 42nd St	Hialeah	FL	330132241	3055582896	Manuel Domingo
Marios Transfer		1430 NW 28th St	Miami	FL	331426653	3056381879	Mario Faurest
Marlin Auto Transport Inc		5525 NW 74th Ave	Miami	FL	331664211	3058882950	Walter Crane
Marlin Transport		10250 NW South	Miami	FL	331781322	3058852314	Donald Sprague
Martainer Inc		5601 NW 72nd Ave	Miami	FL	331664207	3058842211	Jose Hermida
Martin Express Inc		4995 NW 79th Ave	Miami	FL	331665442	3055949248	
Martin Lionel Trucking		19231 NW 51st Ave	Opa Locka	FL	330552044	3056217157	
Martinez Harvesting Inc	Martinez Trucking	22251 SW 187th	Goulds	FL	331703506	3052487120	Margarito Martinez
Segundo Martinez		775 W 34th St	Hialeah	FL	330125122	3055567842	Segundo Martinez
Mary Express		610 E 18th St	Hialeah	FL	330134124	3055921802	
Masson Trucking Inc		4420 3 4th Ave	Hialeah	FL	33013	3053624408	Rossanna Siccradi
Maylin Rolando Haulers		734 W 37th St	Hialeah	FL	330125144	3055581827	
Mc Dowell-Jackson Inc		1110 Ne 163rd St	Miami	FL	331624514	3059447788	Butler Mc Dowell
Mc Phersons & Sons		19714 NW 32nd CT	Opa Locka	FL	330562310	3058215018	Joe Mc Pherson
McD Mobile Home Transporting		19725 SW 187th	Miami	FL	331872417	3052476444	
Medley Carrier Corp		P O Box 526406	Miami	FL	331526406	3054780062	Jose F Cancio
Mendez Moving & Delivery Corp		1730 NW 21st Ter	Miami	FL	331427438	3053240030	Jose Mendez
C J Menendez Co Inc		3303 SW 107th CT	Miami	FL	331653610	3055514106	Carlos J Menendez
Mermal Enterprises Inc		4625 E 11th Ave	Hialeah	FL	330132115	3056817308	
Lucas Mesa Trucking		651 W 35th St	Hialeah	FL	330125128	3058219429	Lucas Mesa
Metro Disposal Inc		P O Box 522168	Miami	FL	331522168	3055922338	Arthur D Onofrio
Metro Star Services Inc		8028 NW 68th St	Miami	FL	331662781	3055949826	Armando La Fuente
Miami Crating Co Inc		P O Box 1404	Miami	FL	33011	3055924898	Eugenio Navarro
Miami Messenger Service Inc		555 W 49th St Ste	Hialeah	FL	330123645	3058216000	James L Schlavo
Miami Service Express Inc		7555 NW 63rd St	Miami	FL	331663605	3055993020	Gilberto Hernandez
Miami Sunshine Movers Inc		300 SW 12th Ave	Miami	FL	331302038	3056426688	Carlos Flores
Miami Transfer Company Inc		P O Box 680579	Miami	FL	331680579	3056882222	Michael Utvich
Miami/Atlanta-Truck/alr Inc		7441 NW 78th St	Miami	FL	331667528	3058871633	Normandg Boisvert
Micrologistics Inc		P O Box 570272	Miami	FL	332570272	3052388163	Stephen P Gingras
Midnight Express Trnsp Svcs		7543 NW 52nd St	Miami	FL	331665531	3055990150	Janet Martinez
Jose Milanes		4210 SW 102nd	Miami	FL	331655059	3055528515	Jose Milanes
Millares Truck Hauling Service		160 Ne 60th St	Miami	FL	331372019	3057544588	
Modernized Trucking Inc		643 Ne 125th St	Miami	FL	331615503	3058920557	Charles George
Monarch Delivery Service Inc		7835 NW 148th St	Hialeah	FL	330161554	3055587980	Richard T Matthews
Monzo Ela Inc		591 SW 7th Ave	Miami	FL	331302620	3058842993	Ela Monzo
Morales Moving & Storage Co		9117 NW 105th Clr	Miami	FL	331781306	3058851339	Rene Morales

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Olga Morales		29911 SW 152nd	Homestead	FL	330333665	3052481559	Olga Morales
Morales Trucking Co		3571 SW 117th Ave	Miami	FL	331751736	3052253112	
More Freight Inc		3724 NW 72nd St	Miami	FL	331475820	3056962777	Harold Tragash
Clyde Morris Trucking		1280 NW 171st St	Miami	FL	331695213	3056240855	Clyde Morris
Moving & Storage Systems Inc	La Mar Transfer	8195 W 20th Ave	Hialeah	FL	330143231	3055574884	Ray Shashaty
Mr Cartage Inc		7227 NW 29th Ave	Miami	FL	331475915	3058367882	
Mr TS Enterprises		1884 NW 64th St	Miami	FL	331477434	3056812626	William R Taylor
Mulkey Trucking		1830 NW 51st St	Miami	FL	331423723	3056350301	
Munoz Trucking		266 E 47th St	Hialeah	FL	330131844	3058230362	Felix Munoz
MAC Transport		16321 SW 114th CT	Miami	FL	331572747	3052387493	Michael A Corbin
MASL Enterprises Inc		3661 Percival Ave	Miami	FL	331334909	3054470542	Mark A Thomas
MIM Latin American Link		6630 Indian Creek	Miami	FL	331415835	3058647414	Marlana Aguirre
N & V Enterprises Inc		7528 NW 8th St	Miami	FL	331262915	3052611021	Norman Barrette
Nab Trucking		2137 Opa Locka	Opa Locka	FL	330544229	3056817212	
Nelson Delivery		P O Box 1011	Hialeah	FL	330111011	3058872858	Adela Diaz
New England Motor Freight		10105 NW 88th Ave	Miami	FL	331781344	3058841552	
Nica Delivery		1701 W Flagler St	Miami	FL	331352019	3056424901	
Nolan Specialized Heavy Hlg		2540 NW 74th St	Miami	FL	331476216	3056963696	
North Star Transportation Inc		7225 NW 25th St	Miami	FL	331221709	3055927008	Stephen J Armellini
O & J Deliveries Service		P O Box 4886	Hialeah	FL	330140886	3052230103	
O and J Delivery Corp		7379 NW 31st St	Miami	FL	331221240	3058216500	Osvaldo Perez
O K Storage & Transfer Co Inc		4200 NW 73rd Ave	Miami	FL	331666722	3055938244	A W Barnett
O M S Deliveries		1445 W FLAGLER	MIAMI	FL	331352208	3056436644	
R E Odom Trucking Inc		3900 NW 79th Ave	Miami	FL	331666548	3054704633	Mike Melamud
Ogden Trucking Co		27340 S Federal	Homestead	FL	330328211	3052474131	A G Ogden
Olmar Sand & Gravel Inc		6200 NW 72nd Ave	Miami	FL	331663624	3054777428	Alfredo Oliva
Oliva Trucking		3118 NW 22nd CT	Miami	FL	331428527	3056337223	
Olympic Transfer Corp		3574 NW 46th St	Miami	FL	331423950	3056346054	Felix R Otero
On Time Transport Inc		420 Ne 24th St	Miami	FL	331374709	3055765374	
Opportunity Trucking Inc		P O Box 523118	Miami	FL	331523118	3055924088	Adam Benjamin
Optimum Computers Corp		8181 NW 36th St	Miami	FL	331666628	3055990722	
Orbit Express Corp		6121 SW 17th St	Miami	FL	331552126	3052614645	Alejandro S Cruz
Omar Transfer Inc		512 SW 103rd Ave	Miami	FL	331741779	3052263806	
Ost Trucking Co Inc		3399 NW 72ND	MIAMI	FL	331221349	3055943449	
Over The Hill Trucking Inc	Trucking	3586 NW 41st St	Miami	FL	331424365	3056344458	James J Walker
Overland Carriers Inc		12145 NW 99th Ave	Hialeah	FL	330162937	3058269200	Rene Arencibia

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT	
Overnite Transportation Co		5370 NW 74th Ave	Miami	FL	331664827	3054774361		
OK Express Inc		9326 NW 13TH ST	MIAMI	FL	331722808	3057173111		
OK Transport		8760 NW 122nd St	Hialeah	FL	330161746	3058220373		
P G A Delivery Service Inc		6885 NW 25th St	Miami	FL	331221803	3058717224	George	Tziganuk
P H Transport Inc		1565c NW 88th Ave	Miami	FL	331722603	3054710009	Ivane	Ponton
P H Waste Collection Service		3222 NW 28th St	Miami	FL	331426306	3056331571	Pedro	Hernandez
Pan American Delivery Service		10421 NW 28th St	Miami	FL	331722169		Fernando	Ruano
Pan American Delivery Service		7550 NW 82nd St	Miami	FL	331667413	3058843620	Fernando	Ruano
Panther Enterprises of So Fl		250 E 45TH ST	HIALEAH	FL	330131828	3055567792	Rosy	Machado
Papl Express Inc		P O Box 523056	Miami	FL	331523056	3055946979	Omar	Rodriguez
Paragon Trucking Co		45 SW 31st Ave	Miami	FL	331351214	3056439919	Rossano	Valdes
Pauls Moving Service		5894 SW 41st St	Miami	FL	331555308	3056611302		
Less Pay Moving Express Inc		11115 NW 61st Ave	Hialeah	FL	330126569	3058258551	Oscar	Rodriguez
Peguero Lazaro	Miami Delivery	275 E 15th St	Hialeah	FL	330103553	3053873003	Lazaro	Peguero
Penser Transportation Inc		11701 NW 100th Rd	Miami	FL	331781023	3058834735	Carlos	Martin
Perez Moving		8941 Grand Canal	Miami	FL	331742358	3055529032		
Perez Orestes		11345 SW 43rd Ln	Miami	FL	331654629	3055536912	Orestes	Perez
M & J Perrotta Waste Services		P O Box 219	Miami	FL	33160	3059456748	Mark	Zautner
Peten Trucking Corp		7300 NE 1ST	MIAMI	FL	331385302	3057591101		
Phone Chefs Inc		9075 SW 87th Ave	Miami	FL	331762308	3052748444	Gus	Tobon
Pinolero Deliveries		135 SW 107th Ave	Miami	FL	331741417	3052202017		
Pinolero Deliveries		4750 NW 7th St	Miami	FL	331262253	3054483053		
Pinolero Deliveries		10748 SW 72nd St	Miami	FL	331732702	3052731959		
Pinolero Delivery		1199 W Flagler St	Miami	FL	331301033	3053268035		
Pinolero Delivery		115 SW 107th Ave	Miami	FL	331741417	3052202017		
Pinto Transfer & Packing Corp	Pinto Packing	1501 NW 97th Ave	Miami	FL	331722815	3055929657	Jorge	Perez
Poma Sca Incorporated		7269 NW 12th St	Miami	FL	331261908	3055949680	Lisa	Cluzio
Ports International Inc		P O Box 522471	Miami	FL	331522471	3058883774	Tony E	Ronconi
Precept Business Products	Precept Computer Products	5330 NW 161st St	Hialeah	FL	330146224	3056206400	Ron	Rudges
Precision Delivery Systems		3455 NW 54th St	Miami	FL	331423309	3056338587		
Robert Preston	B P Moving	9550 Dominican Dr	Miami	FL	331891636	3052533163	Robert	Preston
Pro-Express Inc		6608 NW 82nd Ave	Miami	FL	331662744	3054771293	Luis	Posada
Python Transport Inc		7555 NW 63rd St	Miami	FL	331663605	3054718121	Margarita	Alexander
Quick Delivery		4180 NW 10th Ave	Miami	FL	331272761	3059483606		
Quick Pick Trucking of S Fla		P O Box 526141	Miami	FL	331526141	3055936986	Raul A	Sandoval
Quick Trux Systems Inc		11151 NW 36th Ave	Miami	FL	331673304	3057691400	Mike	Sherman

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Rametta Corp	A Angelos Trash Hauling	20401 Ne 14th Ave	Miami	FL	331795115	3056513595	Arthur G Walters
Ramon Mudanzas Inc	Ramon Moving	3267 SW 68th Ave	Miami	FL	331553858	3056653303	Marlo Ramon
Rancano Trucking Inc		1065 E 21st St	Hialeah	FL	330134319	3058859794	Baldomero Rancano
Raul Gonzalez Enterprises Corp		8457 NW 70th St	Miami	FL	331662668	3055932728	Raul Gonzalez
Rays Moving & Storage Inc		1034 E 28th St	Hialeah	FL	330133722	3058364960	Armando Font
Reinaldo Tamayo Inc		6980 NW 53rd Ter	Miami	FL	331664802	3058879615	Reinaldo Tamayo
Remington Trucking Corp		948 W 45th Pl	Hialeah	FL	330123540	3058216303	Jorge A Perez
Remis Moving		3151 SW 19th Ter	Miami	FL	331451937	3054435623	Rubin Morales
Resource Reclamation Services		6955 NW 77th Ave	Miami	FL	331662844	3058831927	Thomas A Mestre
Retailers Express		P O Box 524257	Miami	FL	331524257	3058713380	
Retranca Equipment		1280 NW 26th St	Miami	FL	331427640	3059449515	
Rgm Trucking Inc		10311 SW 43rd St	Miami	FL	331654908	3052261138	Reynaldo Gonzalez
Rite-Way Transport Systems		2227 NW 79th Ave	Miami	FL	331221618	3054775691	Marcelo Cabrera
Manuel Rivas Jr	Mannys Express	3955 NW 4th St	Miami	FL	331265623	3056490332	Manuel Rivas
Riveron Trucking Inc		640 W 53rd St	Hialeah	FL	330122524	3058232824	Serafin Riveron
Road Runner Inc		P O Box 520568	Miami	FL	331520568	3058889811	Monte Rielly
Road Runner Trucking Inc		P O Box 520301	Miami	FL	331520301	3055945611	Alfredo Martinez
Roadway Express Inc		11301 NW 134th St	Miami	FL	331783108	3055569222	Archie Jenkins
Roadway Package System Inc		7480 NW 48th St	Miami	FL	331665502	8007623725	Jack Saalwachter
C H Robinson Inc	Robinson Trnsp Svcs Div	10100 NW 116th	Miami	FL	331781154	3058830138	Doub Tannehill
Pedro Luis Rodriguez	P L R Trucking	2601 SW 92nd CT	Miami	FL	331658140	3055544899	Pedro L Rodriguez
Roger Harper Trucking		8215 Lake Dr	Miami	FL	331667773	3054717216	
Angel Rojo Trucking		1859 SW 16th St	Miami	FL	331451428	3058566766	Angel Rojo
Roko Enterprises Inc	Inter-City Van & Storage	7399 NW 36th Ave	Miami	FL	331475809	3056915340	Burton Kovler
Ron P Dammar		8700 SW 183rd Ter	Miami	FL	331575958	3052541489	Ronald P Dammar
Ropa Enterprises Inc		4715 NW 36th Ave	Miami	FL	331423907	3056342778	Ronald Richards
Ros Trucking Co		623 SW 1st Ave	Homestead	FL	330307216	3052482533	Mark Lero
Royal Crown Carting Inc		P O Box 960 0157	Miami	FL	33186	3052473003	Steven Weston
Rs Express Inc		8507 NW 66th St	Miami	FL	331662636	3054773036	Ricardo Valdes
Ru Service Inc		1325 NW 93rd CT	Miami	FL	331722857	3057159733	Scarlett Martia
Ruiz & Sons Trucking Assn		351 W 38th St	Hialeah	FL	330124327	3055561144	Israel Ruiz
Ryder Dedicated Capacity Inc		3600 NW 82nd Ave	Miami	FL	331666623	3055933726	Anthony Burns
Ryder Dedicated Logistics Inc		3600 NW 82nd Ave	Miami	FL	331666623	3055933726	M A Burns
Ryder Move Management Inc		P O Box 0202816	Miami	FL	33102	3055933726	M A Burns
Ryder System Inc	Sunbelt Systems	9107 NW 105th	Miami	FL	331781221	3058884601	Richard Petrelli
Ryder System Inc		3600 NW 82nd Ave	Miami	FL	331666623	3055933726	M A Burns

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Ryder Truck Rental Inc	Ryder Commercial Lsg & Svcs	P O Box 20816	Miami	FL	331020816	3055933726	M A Burns
Ryder Truck Rental Inc	Ryder Dedicated Logistics	3600 NW 54th St	Miami	FL	331423213	3056342877	Michael Russo
RA Van Services Inc		P O Box 523051	Miami	FL	331523051	3054774503	Gustavo R Arango
RE Odom Trucking Inc	Odom Trucking Inc	P O Box 1495	Homestead	FL	33090	3052483351	Michael Melanmud
RM Transport Rfrgn Inc		9605 NW 79th Ave	Hialeah	FL	330162526	3058208300	Mike G Dudra
RP Refrigerated Inc		11831 SW 179th	Miami	FL	331772316	3052543029	Rafael Polo
S & B Trk		1501 NW 174th St	Miami	FL	331695126	3056238278	
S & S Trucking & Warehousing		6966 NW 12th St	Miami	FL	331261336	3055929982	Michael Arzillo
S Wersing Co	Wersing Trucking	1411 Ne 155th Ter	Miami	FL	331625623	3056521175	Steven Wersing
S&A International Inc		7901 NW 67th St	Miami	FL	331662632	3055939338	Fernando Serrano
Safeway Interstate Tmnp		1301 NW 89th CT	Miami	FL	331723006	3054774422	Yvo Duverger
Sammy & Willow Moving Co		3092 NW 63rd St	Miami	FL	331477640	3056964531	Samuel Gethers
Sanchez & Son Inc		13295 SW 34th St	Miami	FL	331756906	3055521394	Virgilio Sanchez
Bruce Schwebel Trucking		5313 Collins Ave	Miami	FL	331402525	3058659552	Bruce Schwebel
Scratch Transportation Inc		16505 NW 49th Ave	Hialeah	FL	330146320	3056282395	Virginia B Dent
Sea Shore Trading Inc		1745 Ne 157th Ter	Miami	FL	331625634	3054378835	Errol Roper
Sea-Land Service Inc		8325 NW 53rd St	Miami	FL	331664665	3054776820	Tom Krajewski
Seaboard Warehouse Terminals		3455 NW 54th St	Miami	FL	331423395	3056338587	Andrew Blank
Seaside Transport Inc		3523 NW 116th St	Miami	FL	331672923	3056851920	Jose F Vega
Seminole Services Inc	Bellair Express Service	P O Box 522764	Miami	FL	331522764	3055917153	Elliot Revell
Servi Fast Inc		2724 SW 137th Ave	Miami	FL	331756324	3052216108	Sandra Alvarez
Services Unlimited		646 Ne 81st St	Miami	FL	331384615	3057567150	Donald Hinson
Sixto Moving		1747 NW 21st St	Miami	FL	331427433	3053258985	Yolando Ferrer
Skorplos Trading Corp		5627 NW 74th Ave	Miami	FL	331664213	3058883600	Victor Arcelus
Slick Transit Inc		9013 SW 138th St	Miami	FL	331767158	3052553160	
Smalley Transportation Co Inc		11405 NW 36th Ave	Miami	FL	331672906	3056851047	John D Aloia
Smith Cartage Inc		P O Box 681280	Miami	FL	331681280	3054632630	Frank Futernick
Smith Terminal Warehouse Co	Smith Terminal Dist Systems	P O Box 681280	Miami	FL	331681280	3056850325	Morris Futernick
Smith Trucking		9701 SW 147th St	Miami	FL	331767832	3052387098	Fred Spiegelman
Sorrel Enterprises Inc	Sorrel Development	8835 NW 95TH ST	MIAMI	FL	331781447	3058824860	Igor Velikopoljski
South Atlantic Trucking Co		1414 NW 107th Ave	Miami	FL	331722739	3054771322	William O Donnel
South Florida Delivery		2501 NW 72nd Ave	Miami	FL	331221303	3055936996	
Florida South Trucking & Eqp		P O Box 970664	Miami	FL	331970664	3058282843	Oscar Mareno
South Florida Van Lines Inc		2605 W 6th Ave	Hialeah	FL	330101310	3058844269	Francisco Gamayo
South Freight Service		6550 NW 74th Ave	Miami	FL	331663637	3055977033	
South FL Tmsprt & Equip Corp		4431 SW 64th CT	Miami	FL	331555931	3059376252	

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South Miami Moving & Storage	Coconut Grove Transl & Stor Co	12598 SW 128th St	Miami	FL	331865405	3052510600	Richard Freer
Southeastern Freight Lines		5875 NW 72nd Ave	Miami	FL	331663733	3058890501	Tom Ellis
Southern Cartage Inc		P O Box 521033	Miami	FL	331521033	3058830061	Nivardo Mora
Southern Express Freightways		930 Hialeah Dr Ste	Hialeah	FL	330105534	3058846667	Enrique Pimienta
Southern Ocean Transport Inc		4950 NW 72nd Ave	Miami	FL	331665621	3055918880	Angel M Dones
Southern Trucking Co Inc		P O Box 3217	Hialeah	FL	330130217	3058851486	Arthur Olsen
C F S Southport Inc		9270 NW 100th St	Miami	FL	331781423	3058876399	John Tominelli
Spartan Express Inc		6800 NW 72nd St	Miami	FL	331662942	3058820125	
Specialized Transport & Sales		P O Box 830788	Miami	FL	332830788	3055961128	Vidal Lazo
Speed Racer Express Dist		2248 W 77TH ST	HIALEAH	FL	330161866	3055566433	
Speedy Courier Dispatch	S T S	1295 Ne 118th St	Miami	FL	331616836	3057515688	Pamela Torres
Speedy Enterprises Transport		25431 SW 127th	Miami	FL	33132	3052581624	Berto Lorenzo
Speedy Express Delivery Svc		8121 NW 60th St	Miami	FL	331663414	3055928560	
Speedy Express Inc		6541 NW 87th Ave	Miami	FL	331781624	3055928560	Frank Colazo
H L Stansell Inc		7810 NW 52nd St	Miami	FL	331664744	3055929121	Ron Wornick
Statewide Carrier Inc		12060 NW SOUTH	MIAMI	FL	331781111	3058227235	Alejandro A Acosta
Stella Giros Al Minuto Inc		5918 W 20th Ave	Hialeah	FL	330162604	3058210229	
Stephanie Transport		1800 W 49th St Ste	Hialeah	FL	330122945	3058238977	Diane Borges
Suarez Local Moving & Storage		3601 NW 55th St	Miami	FL	331422725	3056351404	Jorge Suarez
Raul Suarez Trucker		5885 W 16th Ln	Hialeah	FL	330126887	3058255041	
Van Suddath Lines Inc	Withers/Suddath Untd Van Lines	6900 NW 74th Ave	Miami	FL	331662825	3058858161	William Strouse
Suddenly Express Corp		1475 NW 97th Ave	Miami	FL	331722819	3057173252	Lazro Hernandez
Sun Florida Trucking Corp Inc		2922 NW 22nd Ave	Miami	FL	331425940	3056343600	Angel Fagundo
Suncoast Baggage Service Inc		P O Box 15608	Ft Lauderdale	FL	333185608	3058718555	Allan G Polsky
Sunrise Transport Co		9500 NW 77th Ave	Hialeah	FL	330162522	3053628373	Wilfredo Perez
Sunshine Trucking Inc		1102 SW 35th Ave	Miami	FL	331354324	3054481768	Jose Casas
Sunshine Trucking Inc		1100 SW 35th Ave	Miami	FL	331354324	3054452850	Jose Casas
Sunstate Courier Inc		1515 NW 167TH ST	MIAMI	FL	331695100	3059447070	
Super Transport		7755 W 4th Ave	Hialeah	FL	330144211	3058220066	Mike Boach
Super Transport		7755 W 4th Ave	Hialeah	FL	330144211	8009290099	Mike Boach
Super Xpress Deliveries Inc		P O Box 522482	Miami	FL	331522482	3058842240	Alicia Suarez
Supreme Courier Service Corp		7416 NW 8th St	Miami	FL	331262913	3052648614	Fernando Suarez
SOS Transportation Inc		P O Box 693149	Miami	FL	332690149	3057701593	Ray Caraballo
Tapanes & Son Trucking Srv		11555 NW 88th CT	Hialeah	FL	330161967	3053629879	
Tatco Industries Inc		10135 NW 88th Ave	Miami	FL	331781344	3058838500	Humberto Perez
Tati-Transfer Inc		P O Box 522086	Miami	FL	331522086	3058715449	Roberto Lores

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Tatos Trucking Inc		P O Box 15995	Miami	FL	331015995	3056359014	Jose Rodriguez
Temples Heavy Hauling Inc		P O Box 470400	Miami	FL	332470400	3056963698	Ozzie Temple
Three Seas Corp		P O Box 524328	Miami	FL	331524328	3056883238	Tom Van Antwerp
Tiffany Transportation Co Inc		P O Box 591965	Miami	FL	331591965	3055923307	Joseph Aversa
Todays Courier Inc		5951 NW 151st St	Hialeah	FL	330142423	3055584200	Alvero Serrano
Todo A Cuba Express		6105 SW 8th St	Miami	FL	331445004	3052678177	Andres Curbelo
Tom Waters Company Inc		12206 SW 129th CT	Miami	FL	331866443	3052535137	Thomas C Waters
Tom Werts Trucking		7040 SW 46th St	Miami	FL	331554614	3052337949	
Tommy Auto Transport		1621 SW 139th CT	Miami	FL	331757059	3055535752	Jose Flores
Toms Moving & Storage Inc		2501 SW 117th CT	Miami	FL	331752444	3054465874	Tomas G Prieto
Torbert Trucking Inc		1720 N Anhinga Ln	Homestead	FL	330351059	3052470900	Thomas Torbert
Trans American Freight Inc		P O Box 311	Miami	FL	33166	3058712944	Joseph Garcia
Transcor of Miami Inc		3380 NW 114th St	Miami	FL	331673331	3056853200	Joseph Leonetti
Transus Inc	Georgia Highway Express	6425 E 8th Ave	Hialeah	FL	330131166	3056858291	Ray Newby
Trash Hauling Service		19731 SW 119th	Miami	FL	331774327	3052513842	Alonso Pendergrass
Trash Hauling Service Inc		18012 Homestead	Miami	FL	331575551	3052535635	Alonva Pendergrass
Travelers Meet & Greet		5900 SW 93rd CT	Miami	FL	331731581	3052712838	Marcia Semel
Triangle A Trucking Inc		P O Box 441277	Miami	FL	331441277	3058780032	Alvaro Fernandez
Trinity Transport Inc		1801 SW 1st Ave	Miami	FL	33129	3059400192	
Triple A Freightways		7907 NW 53rd St	Miami	FL	331664603	3055938453	
Triple J Carriers Inc		6250 W 21st CT	Hialeah	FL	330162655	3058239889	Jose M Gonzalez
Tropical Auto Transport Inc		13342 SW 26th Ter	Miami	FL	331757173	3052266902	Julio Prieto
Tropical Cartage Corporation		P O Box 523538	Miami	FL	331523538	3058859277	Ramon Hernandez
Tropical Hauling Corp		12060 NW South	Miami	FL	331781111	3058227231	Alex Acosta
Truck Air		1800 NW 82nd Ave	Miami	FL	331261014	3055992030	
Truck Brokerage By National		12060 NW South	Miami	FL	331781111	3058227232	Alejandro Acosta
Turni International Movers		9605 NW 13th St	Miami	FL	331722813	3054772300	Gustavo Huaroto
Two Brothers Delivry & Mvg Svc		7460 NW 82nd St	Miami	FL	331667411	3058630058	Antonio Lopez
Two Brothers Enterprises Inc		5937 W 18th CT	Hialeah	FL	330127598	3053624811	Juan Lezano
Tynlor Trucking		18921 NW 7th Ave	Miami	FL	331693921	3056524268	
Union Express Services Inc		159 Ne 54th St	Miami	FL	331372473	3057582211	Joseph Cesar
Union Trucking & Warehousing		7480 NW 52nd St	Miami	FL	331665530	3055823488	Cora Calleja
Unique Delivery Service		20621 SW 121st CT	Miami	FL	331775370	3052562788	
United Auto Transport Inc		2540 NW 29th Ave	Miami	FL	331426438	3056379984	Carlos Marencio
United Services Corporation		7510 NW 70th St	Miami	FL	331662816	3058846068	Wilfredo O Latorre
Universal Road Master Inc		16505 NW 49th Ave	Hialeah	FL	330146320	3056260925	Rick Guido

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Universal Trucking Inc		4448 NW 74th Ave	Miami	FL	331666443	3055918499	George Gaston
Urban Trucking & Warehouse		11700 NW 101st Rd	Miami	FL	331781019	3058838661	Albert Schwartz
UNI-Express International		1790 NW 82nd Ave	Miami	FL	331261016	3055938513	Alvear Jorge
US 1 Van Lines Florida Inc		19597 Ne 10th Ave	Miami	FL	33179	3056532121	Hanoch Vilnai
USA Carriers		11801 NW 100th Rd	Miami	FL	331781040	3058821234	Martin Metia
V & A Transportation Inc		11922 SW 192nd	Miami	FL	331774397	3052388387	Victor Arvelo
V & V Trucking Inc		1900 W 68th St	Hialeah	FL	330144401	3055561874	Lazaro M Valdez
V&g Trucking Inc		860 NW 19th CT	Miami	FL	331253533	3056420679	
Luis Valdes Trucking		7861 NW 171st St	Hialeah	FL	330153841	3058229752	Luis Valdes
Valencia Humberto Delivery Svc		11801 SW 205th St	Miami	FL	331775445	3052383379	Humberto Valencia
Varela Transport Inc		8390 NW 53rd St	Miami	FL	331667900	3052330912	Angel Varela
Joel Velazquez Dump Trucks		5415 NW 173rd Dr	Opa Locka	FL	330553503	3056248809	Joel Valazquez
Velez Carriers Corp		5897 NW 198th Ter	Hialeah	FL	330154904	3056201693	Alvaro Velez
Ventura Enterprises Inc		9751 Wayne Ave	Miami	FL	331575547	3059443456	Carlos Fontan
Viano Enterprises Corp		1061 W 59th Pl	Hialeah	FL	330122307	3055580485	Beni E Viano
W & B Trucking Co Inc		9800 NW 106th St	Miami	FL	331781220	3058852463	Walter F Brewer
W W Trucking Company		P O Box 242020	Miami	FL	331242020	3055913318	George Fiallo
Amy Walsh	Foliage Works	17505 SW 91st Ave	Miami	FL	331575809	3052482187	Amy Walsh
Tom Waters Co Inc	Waters Chris & Tom Sand Co	14090 SW 142nd	Miami	FL	331866740	3052535098	Tom Waters
Watkins Motor Lines Inc	General Commodities	8610 NW 93rd St	Miami	FL	331662020	3058854721	Wendell Spence
Westbury Transport Inc		7331 NW 12th St	Miami	FL	331261910	3055924795	Lou Gandia
Westgate Homes Inc	Manufacturers Mobile HM Tmspt	11385 NW 7th St	Miami	FL	331723500	3052273956	Lynn Turney
Wheeler's Move & Stge Mayflower		1800 NW 1st Ave	Miami	FL	331361704	3054622888	Jan Phillips
Wheels Truck Corp		1165 SW 82nd CT	Miami	FL	331444349	3052620320	Oscar Izquierdo
Wild West Trk Inc		9935 SW 4TH ST	MIAMI	FL	331741854	3052231723	
Williams Robert Moving & Stor		615 NW 129th St	Miami	FL	331682737	3056813549	Coleman Perez
Wilsey Bennett Inc		2051 NW 79th Ave	Miami	FL	331221614	3055999909	Ted Kowalski
O M Wilson Moving & Storage	A-1 Ace Moving & Storage Fla	4499 E 10th CT	Hialeah	FL	330132522	3056882511	Steve Wilson
Withers Tmsfr Strg	Withers Worldwide Forwarders	10890 NW 29th St	Miami	FL	331722149	3054770030	Wayne E Withers
Withers Tmsfr Strg		11441 SW 208th Dr	Miami	FL	331892234	3052354131	William McDowell
Wood Delivery Service Inc		18980 NW 5th Ave	Miami	FL	331693971	3056510819	
World Cnsldtors Frwarders Whse		P O Box 523041	Miami	FL	331523041	3055830244	Rafael Puga
World Courier Inc	Industrial Courier	7270 NW 12th St	Miami	FL	331261928	3055921544	Michael Holden
Wygo Trucking Inc		9270 NW South Rd	Miami	FL	33166	3058630051	Villo Gallardo
Year 2000 USA Enterprises Inc		P O Box 640179	Miami	FL	331640179	3059484700	Oscar Deleon
Yellow Freight System Inc		P O Box 172310	Hialeah	FL	330172310	3056252700	Ben Hurst

COMPANY	TRADE NAME	ADDRESS	CITY	ST	ZIP	TELEPHONE	CONTACT
Your Way Courier Inc		8250 SW 32nd St	Miami	FL	331552437	3055544098	Avellna Bulnes

Appendix C

FREIGHT MOVEMENT STUDY

Freight and Goods Movement Survey for Dade County, Florida

Sponsored by:

Dade County Metropolitan Planning Organization

Conducted by:

The Corradino Group

The Dade County Metropolitan Planning Organization is conducting a study of goods movement in Dade County. The purpose of the study is to allow us to incorporate freight-related traffic in our transportation planning process. Your input is very valuable. Please take a few minutes to fill out the survey. Your response to this survey will be confidential. If you have any questions, call Larry Strange at 1/800-880-8243 or Frank Baron at 305/375-4507. When you have completed the survey, mail it back in the enclosed envelope, postage prepaid.

Thank You!

1. ***The following is the information we have on file about you and your company.
Please correct any errors.***

<i>Company name:</i>	Dade County Metropolitan Planning Organization		
<i>Site address:</i>	111 N.W. First Street		
<i>Your name:</i>	Frank Baron		
<i>Your title:</i>			
<i>Your phone number:</i>	(305) 375-4507		
<i>May we call you if we have more questions?</i>		<input type="checkbox"/> Yes	<input type="checkbox"/> No

This identifying information is for use in tabulating and accumulating responses by category. In the report which will be produced, this information will not be revealed in a manner that will permit the identification of your firm with the data which you provide.

2. **First, we would like to know something about your company:**

How many sites are operated in Dade County? _____

Please identify the following for each site:

Site	Address	No. of Trucks based at Site	Hours of Operation
Sample			
Site B	101 Building, Miami 37405	42	6 a.m. - 6 p.m.

3. **What is the main business done by your firm?**

☐ Local Distribution

☐ Less-Than-Truckload

☐ Container/Truckloads

☐ Other

4. **Basic operational characteristics of your firm.**

a. What types of facilities do you operate? Please check ALL that apply.

- ☐ Warehouse(s) ☐ Distribution Site(s) ☐ Local consolidation/deconsolidation site(s)
☐ Break bulk and/or reconsolidation

b. About how many square feet of warehousing space does your firm have available in Dade County?

- | | | | |
|---|---|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Less than 10,000 | <input type="checkbox"/> 10,000 to 24,999 | <input type="checkbox"/> 25,000 to 49,999 |
| <input type="checkbox"/> 50,000 to 74,999 | <input type="checkbox"/> 75,000 to 99,999 | <input type="checkbox"/> 100,000 to 199,999 | <input type="checkbox"/> 200,000 to 299,999 |
| <input type="checkbox"/> 300,000 to 499,999 | <input type="checkbox"/> 600,000 to 749,999 | <input type="checkbox"/> 750,000 and over | |

c. What types of shipments are handled by your firm during normal business activity?
Please check ALL that apply.

Description	Description
<input type="checkbox"/> Less-than-truckload (LTL)	<input type="checkbox"/> Truckload (TL)
<input type="checkbox"/> Parcels	<input type="checkbox"/> Mail
<input type="checkbox"/> Bulk commodity shipments in rail cars	<input type="checkbox"/> Shipping containers
<input type="checkbox"/> Air freight consolidations	<input type="checkbox"/> Hazardous materials
<input type="checkbox"/> Waste materials	
<input type="checkbox"/> Other (specify) _____	

d. If your firm has a warehousing or distribution facility, what kinds of products are handled here?
Please check ALL that apply.

Description	Description
<input type="checkbox"/> Farm Products	<input type="checkbox"/> Forest Products
<input type="checkbox"/> Fresh Fish/Marine Products	<input type="checkbox"/> Metallic Ores
<input type="checkbox"/> Coal, Petroleum, Gas	<input type="checkbox"/> Nonmetallic Minerals
<input type="checkbox"/> Ordnance or Accessories	<input type="checkbox"/> Food or Kindred Products
<input type="checkbox"/> Tobacco Products	<input type="checkbox"/> Textile Mill Products
<input type="checkbox"/> Apparel/Related Products	<input type="checkbox"/> Lumber or Wood Products
<input type="checkbox"/> Furniture or Fixtures	<input type="checkbox"/> Pulp, Paper, Allied Products
<input type="checkbox"/> Printed Matter	<input type="checkbox"/> Chemicals or Allied Products
<input type="checkbox"/> Petroleum or Coal Products	<input type="checkbox"/> Rubber or Plastic Products
<input type="checkbox"/> Leather or Leather Products	<input type="checkbox"/> Tile
<input type="checkbox"/> Shoes	<input type="checkbox"/> Clay, Concrete, Glass or Stone
<input type="checkbox"/> Primary Metal Products	<input type="checkbox"/> Fabricated Metal Products
<input type="checkbox"/> Non-Electrical Machinery	<input type="checkbox"/> Electrical Equipment
<input type="checkbox"/> Beer/Alcohol	<input type="checkbox"/> Instruments, Photo/Optical Equipment
<input type="checkbox"/> Soft Drinks/Juices/Nonalcoholic Beverages	<input type="checkbox"/> Waste or Scrap Materials
<input type="checkbox"/> Refrigerated Products	
<input type="checkbox"/> Transportation Equipment	
<input type="checkbox"/> Miscellaneous Manufactured Products	
<input type="checkbox"/> Freight -- All Kinds	
<input type="checkbox"/> Other (specify) _____	

5. Primary Product Shipment Destination

a. Is your primary distribution site located in Dade County?

☐ Yes

☐ No

If not, where is your primary distribution site located?

b. What percent of your business is shipped to each of the following regions?

Region	None	Less than 25%	25-49%	50-49%	75-99%	100%
Out of Florida	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Out of Dade County, in Florida	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Dade to River or Seaport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Dade to Airport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Dade to Railway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Dade to Local Retail Business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Dade to Warehouses, Wholesaler, Manufacturer, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Dade to Residential Addresses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Primary Shipment Characteristics

For each of the common destinations to which you ship your product(s) or to which your trucks travel, please provide the annual tons shipped and the typical shipment method in the following sections. For example, fill out one section for shipment that typically go out of Florida and another for shipments that goes to the Seaport. If you have multiple shipment methods, please indicate all that apply.

a. Answer the following for your most common shipping destinations.		b. Annual Tons shipped (estimate)	c. What is the usual shipment method?
1.	<input type="checkbox"/> Out of Florida		<input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____
2.	<input type="checkbox"/> Out of Dade County		<input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____
3.	<input type="checkbox"/> In Dade to River or Seaport		<input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____
4.	<input type="checkbox"/> In Dade to Airport		<input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____
5.	<input type="checkbox"/> In Dade to Railway		<input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____

6. **Primary Shipment Characteristics (Continued)**

a. Answer the following for your most common shipping destinations.	b. Annual Tons shipped (estimate)	c. What is the usual shipment method?
6. <input type="checkbox"/> In Dade to Local Retail Business		<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____ </div> <div> <input type="checkbox"/> Air <input type="checkbox"/> Barge/Ship <input type="checkbox"/> Pipeline </div> </div>
7. <input type="checkbox"/> In Dade to Warehouse		<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____ </div> <div> <input type="checkbox"/> Air <input type="checkbox"/> Barge/Ship <input type="checkbox"/> Pipeline </div> </div>
8. <input type="checkbox"/> In Dade to Manufacturer, Other		<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____ </div> <div> <input type="checkbox"/> Air <input type="checkbox"/> Barge/Ship <input type="checkbox"/> Pipeline </div> </div>
9. <input type="checkbox"/> In Dade to Residential Addresses		<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than-truckload <input type="checkbox"/> Truckload <input type="checkbox"/> _____ </div> <div> <input type="checkbox"/> Air <input type="checkbox"/> Barge/Ship <input type="checkbox"/> Pipeline </div> </div>

7. **Where do most of the shipments to your business come from?**

Where does most of it originate? (Please tell us the specific state, province or country)	Annual Tons received (estimate)	How is this input usually shipped to your site?
<input type="checkbox"/> Florida _____ <input type="checkbox"/> Other US State _____ <input type="checkbox"/> Mexico _____ <input type="checkbox"/> Canada _____ <input type="checkbox"/> South America _____ <input type="checkbox"/> Central America _____ <input type="checkbox"/> Caribbean _____ <input type="checkbox"/> Other Country _____		<input type="checkbox"/> Container <input type="checkbox"/> Intermodal Trailer <input type="checkbox"/> Rail <input type="checkbox"/> Parcel Carrier <input type="checkbox"/> Less-than truckload <input type="checkbox"/> Truckload <input type="checkbox"/> Air <input type="checkbox"/> Barge/Ship <input type="checkbox"/> Pipeline <input type="checkbox"/> _____

8. **Please tell us about transportation accessibility at your primary site(s).**

a. Do you have access to a rail siding at your primary site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
b. Do you have access to truck loading/unloading docks at your primary site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
c. Do you have access to ship/barge docks at your primary site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
d. Do you have pipeline access at this site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
e. Is warehousing usually done at this site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
f. Would better rail or other intermodal service possibly benefit this site?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		<input type="checkbox"/> Don't Know
g. In the future, do you expect your firm to be involved with international import or export?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Already Involved	<input type="checkbox"/> Don't Know

9. **We are interested in your business' use of the region's major terminal facilities:**

From this site, do you ship through any of the major terminal facilities listed below? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If you do NOT use these facilities, please skip to the next page.						
Terminal Facility	Annual Units Truckload/Container		Annual Units Less-Than-Truckload		Other* (Please describe below)	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Port of Miami						
Port Everglades						
Miami International Airport						
Ft. Lauderdale Int. Airport						
Florida East Coast Railroad						
C.S.X. Railroad						
Buena Vista Railroad Yard						
Miami River Sites						

*Please describe other: _____

10. **Transportation characteristics of your business.**

a. On an average day how many loaded highway vehicles does your firm place in service that will operate in Dade County?

☐ Less than 10 ☐ 10 to 24 ☐ 25 to 49
☐ 50 to 99 ☐ 100 to 199 ☐ 200+

b. Who operates the vehicles? Check all that apply.

☐ Our own drivers ☐ Common Carrier ☐ Contract Carrier ☐ Private Fleet ☐ Renter

c. Who grants operating authority for the vehicles?

☐ ICC ☐ State of Florida ☐ Both ☐ Neither

d. What types of trucks are used by your firm? Check all that apply.

☐ Delivery vans ☐ Straight trucks ☐ Tractors and semi-trailers
☐ Vans ☐ Flatbeds ☐ Reefers
☐ Autoracks ☐ Hoppers ☐ Tanks
☐ Other (specify) ☐ Container

f. On an average day, how many pick-up and delivery stops are made by a typical vehicle in your fleet? _____

g. On average, how many miles does a typical vehicle in your fleet travel?

Daily _____ Annually _____

h. Is it important to your operation that vehicles in your fleet be on the street during commute periods (6-9 a.m. or 3-6 p.m.)?

☐ Yes ☐ No ☐ Don't Know

i. Would a "freight only vehicle" lane on selected major roadways be helpful to your operation?

☐ Yes ☐ No ☐ Don't Know

If so, where? (specify) _____

j. Are certain intersections, streets, or areas in this region significant problems for drivers in your fleet?

☐ Yes ☐ No ☐ Don't Know

If so, where? (specify) _____

11. Time of day shipping information:

a. Is receiving or making deliveries by a certain time of day important to your operation?

☐ Yes ☐ No If you answered NO, skip to Question #12

b. During what hours do you need to receive most of your deliveries?

From _____ : _____ ☐ a.m. or ☐ p.m. To _____ : _____ ☐ a.m. or ☐ p.m.

c. During what hours do you need to make most of your deliveries?

From _____ : _____ ☐ a.m. or ☐ p.m. To _____ : _____ ☐ a.m. or ☐ p.m.

12. Please indicate which of these freight transportation problems impact your operation:

a. Freight transportation problems		b. Is this a problem for your firm?	c. How important will this problem be in the future?
1	Turning radius	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
2	Merge lanes	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
3	Highway speed limits not being enforced	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
4	Traffic congestion	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
5	Turning at traffic lights	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
6	No parking	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
7	Rush hour deliveries	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
8	Insufficient lane widths - over-width loads	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
9	Insufficient bridge/tunnel clearances- over-height loads	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
10	Inadequate all-weather roadways	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
11	Lack of freight only vehicle lanes on roadways	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
12	Lack of trailer drop-off/pick-up facilities for trucks	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
13	Lack of freight access zones	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
14	Diminishing off-peak travel or delivery window (union related)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
15	Diminishing off-peak travel or delivery window (congestion related)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
16	Curfew restrictions on movement of large and heavy loads	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
17	Just-in-time delivery needs	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
18	Lack of central receiving areas in shopping areas	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
19	Lack of truck access to ports/airports	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
20	Lack of rail access to ports/airports	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
21	Paperwork processing delays at ports/airports	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less
22	Other (specify)		<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less

13. Please describe any problems that we have not covered.

14. Do you have any other ideas or solutions we should consider or investigate further? Please tell us:

Appendix D

SURVEY FORM: ON-SITE TRUCK ORIGIN-DESTINATION SURVEY

ORIGIN-DESTINATION SURVEY

Form No. _____

TODAY'S DATE: 9/15/95

1. Interview Location: Free Trade Zone

2. Approximate Time of Interview:

☐ 8:00 - 9:00 AM ☐ 9:00 - 10:00 AM ☐ 10:00 - 11:00 AM ☐ 11:00 - 12:00 PM

3. Where were you before you arrived here:

☐ Free Trade Zone ☐ Port of Miami ☐ Miami Airport ☐ FEC Railyard ☐ Other (Zone) _____

4. Could you tell me the nearest intersection or zip code of your origin (where you started from):

TAZ []

Street A: _____

Street B: _____

Zip Code: _____

5. Which major roads did you drive on to get here (check all applicable roads):

<input type="checkbox"/> I-95 Northbound	<input type="checkbox"/> SR 112 Eastbound	<input type="checkbox"/> Turnpike Northbound
<input type="checkbox"/> I-95 Southbound	<input type="checkbox"/> SR 112 Westbound	<input type="checkbox"/> Turnpike Southbound
<input type="checkbox"/> Palmetto X-Way Northbound	<input type="checkbox"/> SR 836 Eastbound	<input type="checkbox"/> US 1 Northbound
<input type="checkbox"/> Palmetto X-Way Southbound	<input type="checkbox"/> SR 836 Westbound	<input type="checkbox"/> US 1 Southbound
<input type="checkbox"/> Okeechobee Road Northbound	<input type="checkbox"/> Tamiami Tr. Eastbound	
<input type="checkbox"/> Okeechobee Road Southbound	<input type="checkbox"/> Tamiami Tr. Westbound	

Other frequently traveled truck routes to get here:

6. What is your next destination (after leaving here):

☐ Free Trade Zone ☐ Port of Miami ☐ Miami Airport ☐ FEC Railyard ☐ Other (Zone) _____

7. Could you tell me the nearest intersection or zip code where your destination is:

TAZ []

Street A: _____

Street B: _____

Zip Code: _____

8. Which major roads will you drive on to get to your next stop (check all applicable roads):

<input type="checkbox"/> I-95 Northbound	<input type="checkbox"/> SR 112 Eastbound	<input type="checkbox"/> Turnpike Northbound
<input type="checkbox"/> I-95 Southbound	<input type="checkbox"/> SR 112 Westbound	<input type="checkbox"/> Turnpike Southbound
<input type="checkbox"/> Palmetto X-Way Northbound	<input type="checkbox"/> SR 836 Eastbound	<input type="checkbox"/> US 1 Northbound
<input type="checkbox"/> Palmetto X-Way Southbound	<input type="checkbox"/> SR 836 Westbound	<input type="checkbox"/> US 1 Southbound
<input type="checkbox"/> Okeechobee Road Northbound	<input type="checkbox"/> Tamiami Tr. Eastbound	
<input type="checkbox"/> Okeechobee Road Southbound	<input type="checkbox"/> Tamiami Tr. Westbound	

Other frequently traveled truck routes to get to your destination:



Appendix E

ORIGIN-DESTINATION TRAFFIC ANALYSIS ZONE PAIRING ON-SITE TRUCK ORIGIN-DESTINATION SURVEY

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
2	2	5
2	81	5
2	111	5
2	147	5
2	167	5
2	179	5
2	183	10
2	185	5
2	190	15
2	191	5
2	192	5
2	193	20
2	194	5
2	212	5
2	213	5
2	232	5
2	259	10
2	268	5
2	269	15
2	270	5
2	318	10
2	336	5
2	377	5
2	379	5
2	383	5
2	391	10
2	400	5
2	414	10
2	420	10
2	421	5
2	422	5
2	423	20
2	424	10
2	426	10
2	427	5
2	433	10
2	444	5
2	446	5
2	447	5
2	451	157
2	452	10
2	453	35
2	454	25
2	455	10
2	457	25
2	479	20
2	481	5
2	482	13
2	488	30

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
2	489	5
2	491	20
2	492	5
2	493	15
2	494	5
2	497	5
2	512	10
2	513	5
2	518	25
2	527	5
2	555	5
2	559	5
2	563	5
2	568	5
2	572	5
2	585	5
2	589	5
2	598	5
2	601	5
2	1183	236
2	1197	10
2	1198	30
79	2	5
102	2	5
102	451	15
104	451	7
105	451	7
111	2	5
118	2	5
167	2	5
177	451	7
183	451	15
183	482	4
185	2	5
187	451	7
190	2	20
190	451	7
190	482	2
191	482	2
193	2	35
193	451	37
194	2	15
194	451	15
194	482	2
195	2	5
210	2	5
212	2	5
247	451	15
253	451	7

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
253	482	2
258	2	10
259	2	15
263	451	7
266	451	15
269	2	5
269	451	15
269	482	2
270	2	30
270	451	15
271	451	7
273	451	7
287	2	5
296	482	2
307	451	7
312	482	2
318	2	15
318	451	7
320	2	5
321	2	5
384	2	5
391	2	30
391	451	7
392	2	10
395	2	5
400	2	15
400	451	7
412	2	5
413	451	7
414	2	15
414	451	7
417	2	5
420	2	5
420	451	7
421	451	15
421	482	2
422	2	5
423	2	5
423	451	22
424	2	5
425	2	10
425	451	7
426	2	15
428	451	7
431	451	7
433	2	5
433	451	7
434	2	5
434	451	15

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
438	451	7
446	2	5
450	2	5
450	451	7
451	2	278
451	72	7
451	109	7
451	142	7
451	160	7
451	183	7
451	187	7
451	193	15
451	202	7
451	207	7
451	211	7
451	212	15
451	236	7
451	247	15
451	253	7
451	256	7
451	270	15
451	271	7
451	282	7
451	283	7
451	284	15
451	288	7
451	294	7
451	315	7
451	317	7
451	402	7
451	414	7
451	423	22
451	433	7
451	434	15
451	450	7
451	451	88
451	452	7
451	453	7
451	454	37
451	455	37
451	458	15
451	481	15
451	482	23
451	484	7
451	488	7
451	490	7
451	491	7
451	492	37
451	512	22

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
451	514	7
451	518	15
451	534	15
451	536	7
451	555	7
451	575	7
451	1183	7
453	2	15
453	451	29
453	482	6
454	2	30
454	451	22
455	2	10
455	451	22
455	482	4
456	2	5
457	2	10
457	451	7
457	482	2
458	451	7
459	2	5
461	482	2
478	482	2
479	2	15
479	451	7
480	2	10
480	482	10
481	2	5
481	451	7
482	2	23
482	156	2
482	183	2
482	193	2
482	293	2
482	296	2
482	451	29
482	453	2
482	457	2
482	459	2
482	464	2
482	478	2
482	479	4
482	480	12
482	482	10
482	488	8
482	489	2
482	490	2
482	492	6
482	496	2

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
482	510	2
482	518	12
482	533	2
482	535	2
482	568	2
482	732	2
482	1183	6
483	451	15
487	2	5
488	2	25
488	451	7
488	482	2
490	451	7
490	482	2
491	2	10
492	2	20
492	451	15
492	482	6
493	2	25
493	451	7
493	482	2
494	482	2
497	2	5
509	2	10
510	451	15
511	482	2
512	2	10
512	451	22
512	482	6
513	2	5
513	482	2
514	2	5
518	2	25
518	482	4
519	2	5
528	2	5
529	2	5
532	2	5
534	451	15
535	2	5
535	482	2
536	2	5
536	451	7
537	2	5
538	2	5
543	2	5
563	2	5
564	2	5
567	451	15

**ORIGIN AND DESTINATION
OF TRUCK TRIPS**

ORIGIN TAZ	DESTINATION TAZ	NO. OF TRIPS
568	2	15
568	482	2
576	2	5
576	451	7
585	2	10
590	482	2
598	2	25
598	451	7
606	2	5
607	2	5
607	451	7
617	2	5
691	451	7
769	2	5
801	2	5
811	2	5
820	2	5
828	451	7
829	451	7
833	2	5
1183	2	151
1183	451	15
1183	482	20
1198	2	30

TRIP END SUMMARY

TAZ	ORIGIN	DESTINATION	TOTAL
2	1041	1247	2288
451	932	905	1837
482	146	146	292

Appendix F

TRAFFIC ANALYSIS ZONE DATA RESPONSE ON-SITE TRUCK ORIGIN-DESTINATION SURVEY

APPENDIX *K*

DADE COUNTY MPO
FREIGHT MOVEMENT STUDY
TRAFFIC ANALYSIS ZONE DATA RESPONSES
SORTED BY MOST FREQUENT TAZ

ORIGIN TAZ	SURVEY LOCATION			TOT	%	DESTINATION TAZ	SURVEY LOCATION			TOT	%	TAZ	PERCENT TOTAL	
	FEC	PORT	TRADE				FEC	PORT	TRADE				O & D	O & D
451	10	23	4	37	9.7	2	22	1	9	32	8.4	451	62	8.2
2001	2	11	5	18	4.7	451	2	23	0	25	6.6	2	42	5.5
2000	0	14	0	14	3.7	2000	0	14	3	17	4.5	2000	31	4.1
193	5	7	0	12	3.2	518	2	5	6	13	3.4	2001	30	3.9
453	4	3	3	10	2.6	2007	5	0	8	13	3.4	193	22	2.9
2	5	1	4	10	2.6	2001	1	11	0	12	3.2	492	21	2.8
492	2	4	3	9	2.4	492	5	4	3	12	3.2	518	20	2.6
454	3	6	0	9	2.4	454	5	6	0	11	2.9	454	20	2.6
270	2	6	0	8	2.1	488	1	5	4	10	2.6	488	17	2.2
482	4	1	3	8	2.1	193	2	7	1	10	2.6	270	16	2.1
512	3	2	3	8	2.1	480	0	2	6	8	2.1	480	15	2.0
391	1	6	0	7	1.8	270	2	6	0	8	2.1	453	15	2.0
455	3	2	2	7	1.8	455	5	2	0	7	1.8	455	14	1.8
480	0	2	5	7	1.8	2002	0	6	0	6	1.6	391	13	1.7
493	1	5	1	7	1.8	391	0	6	0	6	1.6	512	13	1.7
518	0	5	2	7	1.8	453	1	3	1	5	1.3	2007	13	1.7
488	1	5	1	7	1.8	479	0	3	2	5	1.3	482	13	1.7
190	1	4	1	6	1.6	493	0	5	0	5	1.3	493	12	1.6
2002	0	6	0	6	1.6	512	3	2	0	5	1.3	2002	12	1.6
194	2	3	1	6	1.6	482	2	1	2	5	1.3	598	11	1.4
598	1	5	0	6	1.6	598	0	5	0	5	1.3	190	10	1.3
2003	0	2	3	5	1.3	423	3	1	0	4	1.1	479	9	1.2
414	1	3	0	4	1.1	568	0	3	1	4	1.1	194	9	1.2
423	3	1	0	4	1.1	414	1	3	0	4	1.1	423	8	1.1
318	1	3	0	4	1.1	190	0	4	0	4	1.1	568	8	1.1
400	1	3	0	4	1.1	400	0	3	0	3	0.8	414	8	1.1
269	2	1	1	4	1.1	318	0	3	0	3	0.8	318	7	0.9
457	1	2	1	4	1.1	259	0	3	0	3	0.8	400	7	0.9
183	2	0	2	4	1.1	481	2	1	0	3	0.8	457	7	0.9
568	0	3	1	4	1.1	457	0	2	1	3	0.8	2003	7	0.9
479	1	3	0	4	1.1	491	1	2	0	3	0.8	259	6	0.8
425	1	2	0	3	0.8	426	0	3	0	3	0.8	426	6	0.8
259	0	3	0	3	0.8	434	2	1	0	3	0.8	434	6	0.8
421	2	0	1	3	0.8	212	2	1	0	3	0.8	183	6	0.8
434	2	1	0	3	0.8	194	0	3	0	3	0.8	491	5	0.7
426	0	3	0	3	0.8	585	0	2	0	2	0.5	481	5	0.7
102	2	1	0	3	0.8	490	1	0	1	2	0.5	269	5	0.7
585	0	2	0	2	0.5	433	1	1	0	2	0.5	425	5	0.7
576	1	1	0	2	0.5	514	1	1	0	2	0.5	585	4	0.5
567	2	0	0	2	0.5	284	2	0	0	2	0.5	433	4	0.5
607	1	1	0	2	0.5	425	0	2	0	2	0.5	534	4	0.5
490	1	0	1	2	0.5	534	2	0	0	2	0.5	535	4	0.5
433	1	1	0	2	0.5	509	0	2	0	2	0.5	536	4	0.5
491	0	2	0	2	0.5	535	0	1	1	2	0.5	450	4	0.5
534	2	0	0	2	0.5	392	0	2	0	2	0.5	392	4	0.5
535	0	1	1	2	0.5	536	1	1	0	2	0.5	258	4	0.5
420	1	1	0	2	0.5	258	0	2	0	2	0.5	509	4	0.5
513	0	1	1	2	0.5	2004	0	2	0	2	0.5	247	4	0.5
510	2	0	0	2	0.5	183	1	0	1	2	0.5	2004	4	0.5
509	0	2	0	2	0.5	458	2	0	0	2	0.5	102	4	0.5
536	1	1	0	2	0.5	2003	0	2	0	2	0.5	212	4	0.5
392	0	2	0	2	0.5	459	0	1	1	2	0.5	490	4	0.5
2005	0	1	1	2	0.5	247	2	0	0	2	0.5	420	3	0.4
253	1	0	1	2	0.5	450	1	1	0	2	0.5	576	3	0.4
266	2	0	0	2	0.5	497	0	1	0	1	0.3	607	3	0.4
247	2	0	0	2	0.5	456	0	1	0	1	0.3	514	3	0.4
2004	0	2	0	2	0.5	513	0	1	0	1	0.3	513	3	0.4
258	0	2	0	2	0.5	111	0	1	0	1	0.3	510	3	0.4
481	1	1	0	2	0.5	510	0	0	1	1	0.3	421	3	0.4
483	2	0	0	2	0.5	496	0	0	1	1	0.3	458	3	0.4
450	1	1	0	2	0.5	478	0	0	1	1	0.3	459	3	0.4
511	0	0	1	1	0.3	487	0	1	0	1	0.3	2005	3	0.4
177	1	0	0	1	0.3	167	0	1	0	1	0.3	253	3	0.4
514	0	1	0	1	0.3	484	1	0	0	1	0.3	456	2	0.3
111	0	1	0	1	0.3	160	1	0	0	1	0.3	284	2	0.3
118	0	1	0	1	0.3	142	1	0	0	1	0.3	185	2	0.3
478	0	0	1	1	0.3	118	0	1	0	1	0.3	532	2	0.3
487	0	1	0	1	0.3	464	0	0	1	1	0.3	478	2	0.3
167	0	1	0	1	0.3	156	0	0	1	1	0.3	833	2	0.3
461	0	0	1	1	0.3	489	0	0	1	1	0.3	537	2	0.3
497	0	1	0	1	0.3	109	1	0	0	1	0.3	446	2	0.3
458	1	0	0	1	0.3	732	0	0	1	1	0.3	538	2	0.3
494	0	0	1	1	0.3	769	0	1	0	1	0.3	187	2	0.3
459	0	1	0	1	0.3	801	0	1	0	1	0.3	287	2	0.3
519	0	1	0	1	0.3	808	0	1	0	1	0.3	820	2	0.3
801	0	1	0	1	0.3	807	0	1	0	1	0.3	79	2	0.3
811	0	1	0	1	0.3	817	0	1	0	1	0.3	111	2	0.3
789	0	1	0	1	0.3	811	0	1	0	1	0.3	487	2	0.3
617	0	1	0	1	0.3	79	0	1	0	1	0.3	497	2	0.3
691	1	0	0	1	0.3	2005	0	1	0	1	0.3	118	2	0.3
820	0	1	0	1	0.3	72	1	0	0	1	0.3	266	2	0.3
79	0	1	0	1	0.3	820	0	1	0	1	0.3	271	2	0.3
2006	0	0	1	1	0.3	833	0	1	0	1	0.3	167	2	0.3
833	0	1	0	1	0.3	102	0	1	0	1	0.3	529	2	0.3
828	1	0	0	1	0.3	532	0	1	0	1	0.3	519	2	0.3
829	1	0	0	1	0.3	533	0	0	1	1	0.3	483	2	0.3
806	0	1	0	1	0.3	537	0	1	0	1	0.3	528	2	0.3
537	0	1	0	1	0.3	519	0	1	0	1	0.3	543	2	0.3
538	0	1	0	1	0.3	528	0	1	0	1	0.3	412	2	0.3
532	0	1	0	1	0.3	529	0	1	0	1	0.3	210	2	0.3
528	0	1	0	1	0.3	538	0	1	0	1	0.3	417	2	0.3
529	0	1	0	1	0.3	564	0	1	0	1	0.3	801	2	0.3
543	0	1	0	1	0.3	575	1	0	0	1	0.3	789	2	0.3
590	0	0	1	1	0.3	576	0	1	0	1	0.3	395	2	0.3

DADE COUNTY MPO
FREIGHT MOVEMENT STUDY
TRAFFIC ANALYSIS ZONE DATA RESPONSES
SORTED BY MOST FREQUENT TAZ

ORIGIN TAZ	SURVEY LOCATION			TOT	%	DESTINATION TAZ	SURVEY LOCATION			TOT	%	TOTAL		%
	FEC	PORT	TRADE				FEC	PORT	TRADE			TAZ O & D	O & D	
104	1	0	0.0	1	0.26316	543	0	1	0.0	1	0.26316	321	2	0.3
105	1	0	0.0	1	0.26316	555	1	0	0.0	1	0.26316	617	2	0.3
563	0	1	0.0	1	0.26316	563	0	1	0.0	1	0.26316	606	2	0.3
564	0	1	0.0	1	0.26316	402	1	0	0.0	1	0.26316	320	2	0.3
412	0	1	0.0	1	0.26316	412	0	1	0.0	1	0.26316	384	2	0.3
413	1	0	0.0	1	0.26316	210	0	1	0.0	1	0.26316	422	2	0.3
395	0	1	0.0	1	0.26316	395	0	1	0.0	1	0.26316	567	2	0.3
212	0	1	0.0	1	0.26316	283	1	0	0.0	1	0.26316	195	2	0.3
417	0	1	0.0	1	0.26316	420	0	1	0.0	1	0.26316	296	2	0.3
424	0	1	0.0	1	0.26316	422	0	1	0.0	1	0.26316	811	2	0.3
195	0	1	0.0	1	0.26316	417	0	1	0.0	1	0.26316	563	2	0.3
210	0	1	0.0	1	0.26316	207	1	0	0.0	1	0.26316	564	2	0.3
422	0	1	0.0	1	0.26316	282	1	0	0.0	1	0.26316	424	2	0.3
384	0	1	0.0	1	0.26316	211	1	0	0.0	1	0.26316	533	1	0.1
273	1	0	0.0	1	0.26316	315	1	0	0.0	1	0.26316	2006	1	0.1
287	0	1	0.0	1	0.26316	317	1	0	0.0	1	0.26316	105	1	0.1
263	1	0	0.0	1	0.26316	293	0	0	1.0	1	0.26316	511	1	0.1
271	1	0	0.0	1	0.26316	296	0	0	1.0	1	0.26316	555	1	0.1
296	0	0	1.0	1	0.26316	294	1	0	0.0	1	0.26316	104	1	0.1
320	0	1	0.0	1	0.26316	287	0	1	0.0	1	0.26316	72	1	0.1
321	0	1	0.0	1	0.26316	384	0	1	0.0	1	0.26316	691	1	0.1
307	1	0	0.0	1	0.26316	288	1	0	0.0	1	0.26316	575	1	0.1
312	0	0	1.0	1	0.26316	320	0	1	0.0	1	0.26316	732	1	0.1
428	1	0	0.0	1	0.26316	321	0	1	0.0	1	0.26316	109	1	0.1
185	0	1	0.0	1	0.26316	253	1	0	0.0	1	0.26316	829	1	0.1
438	1	0	0.0	1	0.26316	256	1	0	0.0	1	0.26316	590	1	0.1
187	1	0	0.0	1	0.26316	446	0	1	0.0	1	0.26316	828	1	0.1
191	0	0	1.0	1	0.26316	452	1	0	0.0	1	0.26316	211	1	0.1
446	0	1	0.0	1	0.26316	185	0	1	0.0	1	0.26316	402	1	0.1
431	1	0	0.0	1	0.26316	187	1	0	0.0	1	0.26316	317	1	0.1
456	0	1	0.0	1	0.26316	236	1	0	0.0	1	0.26316	312	1	0.1
732	0	0	0.0	0	0	269	0	1	0.0	1	0.26316	315	1	0.1
2007	0	0	0.0	0	0	202	1	0	0.0	1	0.26316	428	1	0.1
452	0	0	0.0	0	0	424	0	1	0.0	1	0.26316	431	1	0.1
464	0	0	0.0	0	0	271	1	0	0.0	1	0.26316	202	1	0.1
294	0	0	0.0	0	0	195	0	1	0.0	1	0.26316	413	1	0.1
589	0	0	0.0	0	0	2006	0	0	0.0	0	0	207	1	0.1
232	0	0	0.0	0	0	213	0	0	0.0	0	0	273	1	0.1
160	0	0	0.0	0	0	273	0	0	0.0	0	0	282	1	0.1
601	0	0	0.0	0	0	589	0	0	0.0	0	0	293	1	0.1
315	0	0	0.0	0	0	590	0	0	0.0	0	0	236	1	0.1
317	0	0	0.0	0	0	104	0	0	0.0	0	0	256	1	0.1
81	0	0	0.0	0	0	268	0	0	0.0	0	0	294	1	0.1
179	0	0	0.0	0	0	266	0	0	0.0	0	0	307	1	0.1
268	0	0	0.0	0	0	828	0	0	0.0	0	0	293	1	0.1
72	0	0	0.0	0	0	829	0	0	0.0	0	0	283	1	0.1
236	0	0	0.0	0	0	81	0	0	0.0	0	0	288	1	0.1
282	0	0	0.0	0	0	232	0	0	0.0	0	0	156	1	0.1
293	0	0	0.0	0	0	601	0	0	0.0	0	0	484	1	0.1
256	0	0	0.0	0	0	691	0	0	0.0	0	0	452	1	0.1
288	0	0	0.0	0	0	263	0	0	0.0	0	0	489	1	0.1
283	0	0	0.0	0	0	572	0	0	0.0	0	0	464	1	0.1
284	0	0	0.0	0	0	431	0	0	0.0	0	0	177	1	0.1
211	0	0	0.0	0	0	438	0	0	0.0	0	0	160	1	0.1
527	0	0	0.0	0	0	483	0	0	0.0	0	0	461	1	0.1
489	0	0	0.0	0	0	147	0	0	0.0	0	0	438	1	0.1
533	0	0	0.0	0	0	427	0	0	0.0	0	0	142	1	0.1
444	0	0	0.0	0	0	428	0	0	0.0	0	0	496	1	0.1
147	0	0	0.0	0	0	444	0	0	0.0	0	0	494	1	0.1
109	0	0	0.0	0	0	192	0	0	0.0	0	0	191	1	0.1
202	0	0	0.0	0	0	461	0	0	0.0	0	0	232	0	0.0
427	0	0	0.0	0	0	191	0	0	0.0	0	0	213	0	0.0
496	0	0	0.0	0	0	177	0	0	0.0	0	0	147	0	0.0
192	0	0	0.0	0	0	179	0	0	0.0	0	0	268	0	0.0
207	0	0	0.0	0	0	447	0	0	0.0	0	0	81	0	0.0
142	0	0	0.0	0	0	494	0	0	0.0	0	0	527	0	0.0
336	0	0	0.0	0	0	312	0	0	0.0	0	0	572	0	0.0
377	0	0	0.0	0	0	559	0	0	0.0	0	0	444	0	0.0
379	0	0	0.0	0	0	336	0	0	0.0	0	0	447	0	0.0
575	0	0	0.0	0	0	105	0	0	0.0	0	0	559	0	0.0
572	0	0	0.0	0	0	567	0	0	0.0	0	0	192	0	0.0
447	0	0	0.0	0	0	307	0	0	0.0	0	0	427	0	0.0
559	0	0	0.0	0	0	377	0	0	0.0	0	0	589	0	0.0
213	0	0	0.0	0	0	413	0	0	0.0	0	0	377	0	0.0
484	0	0	0.0	0	0	511	0	0	0.0	0	0	336	0	0.0
402	0	0	0.0	0	0	421	0	0	0.0	0	0	179	0	0.0
555	0	0	0.0	0	0	379	0	0	0.0	0	0	383	0	0.0
383	0	0	0.0	0	0	383	0	0	0.0	0	0	601	0	0.0
156	0	0	0.0	0	0	527	0	0	0.0	0	0	379	0	0.0

2000 PORT EVERGLADES
2001 BROWARD COUNTY
2002 FLA WEST COAST
2003 OUT OF STATE
2004 CENTRAL FLORIDA
2005 PALM BEACH COUNTY
2006 NORTH FLORIDA
2007 BOBTAILING

* This table presents the TAZ origins of trucks coming to each of the three survey locations and the TAZ destination of trucks leaving each of the three locations.

Appendix G

**ISTEA MANDATE 23 STATE FACTORS
AND 15 METROPOLITAN TRANSPORTATION
PROCESS FACTORS FOR CONSIDERATION IN
TRANSPORTATION PLAN DEVELOPMENT**

§ 450.208 Statewide transportation planning process: General requirements.

(a) The statewide transportation planning process shall include, as a minimum:

- (1) Data collection and analysis;
- (2) Consideration of factors contained in § 450.208;
- (3) Coordination of activities as noted in § 450.210;
- (4) Development of a statewide transportation plan that considers a range of transportation options designed to meet the transportation needs (both passenger and freight) of the state including all modes and their connections; and
- (5) Development of a statewide transportation improvement program (STIP).

(b) The statewide transportation planning process shall be carried out in coordination with the metropolitan planning process required by subpart C of this part.

§ 450.209 Statewide transportation planning process: Factors.

(a) Each State shall, as a minimum, explicitly consider, analyze as appropriate and reflect in planning process products the following factors in conducting its continuing statewide transportation planning process:

- (1) The transportation needs (strategies and other results) identified through the management systems required by 23 U.S.C. 303;
- (2) Any Federal, State, or local energy use goals, objectives, programs, or requirements;
- (3) Strategies for incorporating bicycle transportation facilities and pedestrian walkways in appropriate projects throughout the State;
- (4) International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation and scenic areas, monuments and historic sites, and military installations;
- (5) The transportation needs of nonmetropolitan areas (areas outside of MPO planning boundaries) through a process that includes consultation with local elected officials with jurisdiction over transportation;
- (6) Any metropolitan area plan developed pursuant to 23 U.S.C. 134 and section 8 of the Federal Transit Act, 49 U.S.C. app. 1607;
- (7) Connectivity between metropolitan planning areas within the State and with metropolitan planning areas in other States;
- (8) Recreational travel and tourism;
- (9) Any State plan developed pursuant to the Federal Water Pollution

Control Act, 33 U.S.C. 1251 et seq. (and in addition to plans pursuant to the Coastal Zone Management Act);

(10) Transportation system management and investment strategies designed to make the most efficient use of existing transportation facilities (including consideration of all transportation modes);

(11) The overall social, economic, energy, and environmental effects of transportation decisions (including housing and community development effects and effects on the human, natural and manmade environments);

(12) Methods to reduce traffic congestion and to prevent traffic congestion from developing in areas where it does not yet occur, including methods which reduce motor vehicle travel, particularly single-occupant motor vehicle travel;

(13) Methods to expand and enhance appropriate transit services and to increase the use of such services (including commuter rail);

(14) The effect of transportation decisions on land use and land development, including the need for consistency between transportation decisionmaking and the provisions of all applicable short-range and long-range land use and development plans (analyses should include projections of economic, demographic, environmental protection, growth management and land use activities consistent with development goals and transportation demand projections);

(15) Strategies for identifying and implementing transportation enhancements where appropriate throughout the State;

(16) The use of innovative mechanisms for financing projects, including value capture pricing, tolls, and congestion pricing;

(17) Preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way which may be needed for future transportation corridors, identification of those corridors for which action is most needed to prevent destruction or loss (including strategies for preventing loss of rights-of-way);

(18) Long-range needs of the State transportation system for movement of persons and goods;

(19) Methods to enhance the efficient movement of commercial motor vehicles;

(20) The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavements;

(21) The coordination of transportation plans and programs developed for metropolitan planning

areas of the State under 23 U.S.C. 134 and section 8 of the Federal Transit Act with the statewide transportation plans and programs developed under this subpart, and the reconciliation of such plans and programs as necessary to ensure connectivity within transportation systems;

(22) Investment strategies to improve adjoining State and local roads that support rural economic growth and tourism development, Federal agency (renewable resources management, and multipurpose land management practices, including recreation development; and

(23) The concerns of Indian tribal governments having jurisdiction over lands within the boundaries of the State.

(b) The degree of consideration and analysis of the factors should be based on the scale and complexity of many issues, including transportation problems, land use, employment, economic development, environmental and housing and community development objectives, the extent of overlap between factors and other circumstances statewide or in subareas within the State.

§ 450.210 Coordination.

(a) In addition to the coordination required under § 450.208(a)(21), in carrying out the requirements of this subpart, each State, in cooperation with participating organizations (such as MPOs, Indian tribal governments, environmental, resource and permit agencies, public transit operators) shall, to the extent appropriate, provide for a fully coordinated process including coordination of the following:

(1) Data collection, data analysis and evaluation of alternatives for a transit, highway, bikeway, scenic byway, recreational trail, or pedestrian program with any such activities for the other programs;

(2) Plans, such as the statewide transportation plan required under § 450.214, with programs and priorities for transportation projects, such as the STIP;

(3) Data analysis used in development of plans and programs, (for example, information resulting from traffic data analysis, data and plans regarding employment and housing availability, data and plans regarding land use control and community development) with land use projections, with data analysis on issues that are part of public involvement relating to project implementation, and with data analysis done as part of the establishment and maintenance of management systems developed in response to 23 U.S.C. 303;

should be all
trans. factors

Weigh in on
our side needs

(6) The effects of all transportation projects to be undertaken within the metropolitan planning area, without regard to the source of funding (the analysis shall consider the effectiveness, cost effectiveness, and financing of alternative investments in meeting transportation demand and supporting the overall efficiency and effectiveness of transportation system performance and related impacts on community/central city goals regarding social and economic development, housing, and employment);

(7) International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations (supporting technical efforts should provide an analysis of goods and services movement problem areas, as determined in cooperation with appropriate private sector involvement, including, but not limited to, addressing interconnected transportation access and service needs of intermodal facilities);

(8) Connectivity of roads within metropolitan planning areas with roads outside of those areas;

(9) Transportation needs identified through the use of the management systems required under 23 U.S.C. 303 (strategies identified under each management system will be analyzed during the development of the transportation plan, including its financial component, for possible inclusion in the metropolitan plan and TIP);

(10) Preservation of right-of-way for construction of future transportation projects, including future transportation corridors;

(11) Enhancement of the efficient movement of freight;

(12) The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement (operating and maintenance costs must be considered in analyzing transportation alternatives);

(13) The overall social, economic, energy, and environmental effects of transportation decisions (including consideration of the effects and impacts of the plan on the human, natural and man-made environment such as housing, employment and community development, consultation with appropriate resource and permit agencies to ensure early and continued coordination with environmental resource protection and management plans, and appropriate emphasis on transportation-related air quality problems in support of the requirements of 23 U.S.C. 109(h), and section 14 of

the Federal Transit Act (49 U.S.C. 1610), section 4(f) of the DOT Act (49 U.S.C. 303) and section 174(b) of the Clean Air Act (42 U.S.C. 7504(b))];

(14) Expansion, enhancement, and increased use of transit services; and

(15) Capital investments that would result in increased security in transit systems.

(b) In addition, the metropolitan transportation planning process shall:

(i) Include a proactive public involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs and meets the requirements and criteria specified as follows:

(i) Require a minimum public comment period of 45 days before the public involvement process is initially adopted or revised;

(ii) Provide timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs and projects (including but not limited to central city and other local jurisdiction concerns);

(iii) Provide reasonable public access to technical and policy information used in the development of plans and TIPs and open public meetings where matters related to the Federal-aid highway and transit programs are being considered;

(iv) Require adequate public notice of public involvement activities and time for public review and comment at key decision points, including, but not limited to, approval of plans and TIPs (in nonattainment areas, classified as serious and above, the comment period shall be at least 30 days for the plan, TIP and major amendment(s));

(v) Demonstrate explicit consideration and response to public input received during the planning and program development processes;

(vi) Seek out and consider the needs of those traditionally underserved by existing transportation systems, including but not limited to low-income and minority households;

(vii) When significant written and oral comments are received on the draft transportation plan or TIP (including the financial plan) as a result of the public involvement process or the interagency consultation process required under the U.S. EPA's conformity regulations, a summary, analysis, and report on the disposition

of comments shall be made part of the final plan and TIP;

(viii) If the final transportation plan or TIP differs significantly from the one which was made available for public comment by the MPO and raises new material issues which interested parties could not reasonably have foreseen from the public involvement efforts, an additional opportunity for public comment on the revised plan or TIP shall be made available;

(ix) Public involvement processes shall be periodically reviewed by the MPO in terms of their effectiveness in ensuring that the process provides full and open access to all;

(x) These procedures will be reviewed by the FHWA and the FTA during certification reviews for TMAs, and as otherwise necessary for all MPOs, to assure that full and open access is provided to MPO decisionmaking processes;

(xi) Metropolitan public involvement processes shall be coordinated with statewide public involvement processes wherever possible to enhance public consideration of the issues, plans, and programs and reduce redundancies and costs;

(12) Be consistent with Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794, which ensure that no person shall, on the grounds of race, color, sex, national origin, or physical handicap, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program receiving Federal assistance from the United States Department of Transportation;

(3) Identify actions necessary to comply with the Americans With Disabilities Act of 1990 (Pub. L. 101-236, 104 Stat. 327, as amended) and U.S. DOT regulations "Transportation for Individuals With Disabilities" (49 CFR parts 27, 37, and 38);

(4) Provide for the involvement of traffic, ride-sharing, parking, transportation safety and enforcement agencies; commuter rail operators; airport and port authorities; toll authorities; appropriate private transportation providers; and where appropriate city officials; and

(5) Provide for the involvement of local, State, and Federal environmental resource and permit agencies as appropriate.

(c) In attainment areas not designated as TMAs simplified procedures for the development of plans and programs, if considered appropriate, shall be proposed by the MPO in cooperation with the State and transit operator, and

developing the transportation control measures.

(d) In nonattainment or maintenance areas for transportation related pollutants, the MPO shall not approve any transportation plan or program which does not conform with the SIP, as determined in accordance with the U.S. EPA conformity regulation (40 CFR Part 51).

(e) If more than one MPO has authority in a metropolitan planning area (including multi-State metropolitan planning areas) or in an area which is designated as nonattainment or maintenance for transportation related pollutants, the MPOs and the Governor(s) shall cooperatively establish the boundaries of the metropolitan planning area (including the twenty year planning horizon and relationship to the nonattainment or maintenance areas) and the respective jurisdictional responsibilities of each MPO. The MPOs shall consult with each other and the State(s) to assure the preparation of integrated plans and transportation improvement programs for the entire metropolitan planning area. An individual MPO plan and program may be developed separately. However, each plan and program must be consistent with the plans and programs of other MPOs in the metropolitan planning area. For the overall metropolitan planning area, the individual MPO planning process shall reflect coordinated data collection, analysis and development. In those areas where this provision is applicable, coordination efforts shall be initiated and the process and outcomes documented in subsequent transmittals of the UPWP and various planning products (the plan, TIP, etc.) to the State, the FHWA, and the FTA.

(f) The Secretary must designate as transportation management areas all UZAs over 200,000 population as determined by the most recent decennial census. The Secretary designated TMAs by publishing a notice in the Federal Register. Copies of this notice may be obtained from the FHWA Metropolitan Planning Division or Office of Planning FTA. The TMAs so designated and those designated subsequently by the FHWA and the FTA (including those designated upon request of the MPO and the Governor) must comply with the special requirements applicable to such areas regarding congestion management systems, project selection, and certification. The TMA designation applies to the entire metropolitan planning area boundary. If a metropolitan planning area encompasses a TMA and other UZA(s),

the designation applies to the entire metropolitan planning area regardless of the population of constituent UZAs.

(g) As required by 23 CFR part 500, the required management systems shall be developed cooperatively by the State, the MPOs and transit operators for each metropolitan planning area. In TMAs, the congestion management system will be developed as part of the metropolitan transportation planning process.

(h) The State shall cooperatively participate in the development of metropolitan transportation plans. The relationship of the statewide transportation plan and the metropolitan plan is specified in subpart B of this part.

(i) Where a metropolitan planning area includes Federal public lands and/or Indian tribal lands, the affected Federal agencies and Indian tribal governments shall be involved appropriately in the development of transportation plans and programs.

§ 450.314 Metropolitan transportation planning process: Unified planning work programs.

(a) In TMAs, the MPO(s) in cooperation with the State and operators of publicly owned transit shall develop unified planning work programs (UPWPs) that meet the requirements of 23 CFR part 420, subpart A, and:

(1) Discuss the planning priorities facing the metropolitan planning area and describe all metropolitan transportation and transportation-related air quality planning activities (including the corridor and subarea studies discussed in § 450.318) anticipated within the area during the next one or two year period, regardless of funding sources or agencies conducting activities, in sufficient detail to indicate who will perform the work, the schedule for completing it and the products that will be produced;

(2) Document planning activities to be performed with funds provided under Title 23, U.S.C., and the Federal Transit Act.

(b) Arrangements may be made with the FHWA and the FTA to combine the UPWP requirements with the work program for other Federal sources of planning funds.

(c) The metropolitan transportation planning process may include the development of a prospectus that establishes a multiyear framework within which the UPWP is accomplished. The prospectus may be used to satisfy the requirements of § 450.310 and paragraph (a)(1) of this section.

(d) In areas not designated as TMAs, the MPO in cooperation with the State

and transit operators, with the approval of the FHWA and the FTA, may prepare a simplified statement of work, in lieu of a UPWP, that describes who will perform the work and the work that will be accomplished using Federal funds. If a simplified statement of work is used, it may be submitted as part of the Statewide planning work program, in accordance with 23 CFR part 420.

§ 450.316 Metropolitan transportation planning process: Elements.

(a) Section 134(f) of title 23, U.S.C., and Federal Transit Act section 8(f) (49 U.S.C. app. 1807(f)) list 15 factors that must be considered as part of the planning process for all metropolitan areas. The following factors shall be explicitly considered, analyzed as appropriate, and reflected in the planning process products:

(1) Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently;

(2) Consistency of transportation planning with applicable Federal, State, and local energy conservation programs, goals, and objectives;

(3) The need to relieve congestion and prevent congestion from occurring where it does not yet occur including:

(i) The consideration of congestion management strategies or actions which improve the mobility of people and goods in all phases of the planning process; and

(ii) In TMAs, a congestion management system that provides for effective management of new and existing transportation facilities through the use of travel demand reduction and operation management strategies (e.g., various elements of IVHS) shall be developed in accordance with § 450.320;

(4) The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provisions of all applicable short- and long-term land use and development plans (the analysis should include projections of metropolitan planning area economic, demographic, environmental protection, growth management, and land use activities consistent with metropolitan and local/central city development goals (community, economic, housing, etc.), and projections of potential transportation demands based on the interrelated level of activity in these areas);

(5) Programming of expenditures for transportation enhancement activities as required under 23 U.S.C. 223;

Appendix H

COUNTS FOR FIVE DAYS OF SURVEY

PORT of MIAMI FREIGHT MOVEMENT Study
(COUNTS FOR FIVE DAYS OF SURVEY - TOTAL COUNTS MONDAY 9/23 THROUGH Friday 9/27)

		Cycle		Cars		2A-41		Buses		2A-SU		3A-SU		4A-SU		4A-ST		5A-ST		6A-ST		5A-NT		6A-NT		7A-NT		Other		Total		Two-way	Weekly	
		NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	Total	Average	
1	NE 2 Ave. N of 17 St.																																	
	Monday - 9/23/96	36	17	4255	4502	597	703	69	88	45	573	56	46	154	124	19	31	15	56	2	1	0	0	0	0	10	9	29	18	5287	6168	11455	11697	
	Tuesday - 9/24/96	31	33	4489	4684	618	682	69	86	39	524	49	49	110	136	16	44	11	64	4	0	0	0	0	9	5	23	16	5468	6323	11791			
	Wednesday - 9/25/96	33	31	4235	4534	564	654	82	91	47	449	46	67	98	134	6	37	9	66	3	2	0	0	0	9	7	19	22	5151	6094	11245			
	Thursday - 9/26/96	33	25	4507	4751	625	610	82	86	55	498	40	65	87	130	15	37	12	85	1	1	0	0	0	5	8	11	15	5473	6311	11784			
	Friday - 9/27/96	55	26	4865	4664	600	687	80	86	63	539	60	45	112	133	18	38	14	71	2	1	0	0	0	7	8	14	20	5890	6318	12208			
2	Biscayne Blvd. & NE 8 St.																																	
	Monday - 9/23/96	105	278	18532	12244	1449	622	412	200	229	167	209	224	2883	1477	159	112	304	37	9	40	3	5	0	1	70	98	324	499	24688	16004	40692	42850	
	Tuesday - 9/24/96	134	224	19105	12387	1355	449	317	224	207	149	237	179	3272	1274	166	111	351	41	12	67	0	0	1	0	76	107	376	542	25609	15754	41363		
	Wednesday - 9/25/96	129	222	18962	12625	1509	854	332	165	224	123	197	168	3117	1284	161	92	385	143	18	10	2	1	1	0	78	75	355	444	25470	16206	41676		
	Thursday - 9/26/96	137	328	19763	13002	1379	807	364	176	254	165	200	190	3275	1261	186	78	449	156	20	16	2	1	0	0	89	107	339	481	26457	16768	43225		
	Friday - 9/27/96	118	396	22242	13053	1590	949	453	213	315	178	327	220	3337	1589	186	111	404	147	22	25	4	2	0	0	82	106	332	893	29412	17882	47294		
3	NE 1 Ave. N. of 8 St.																																	
	Monday - 9/23/96	81		8560		1094		258		152		150		459		62		678		12		0		0		46		59		11611				
	Tuesday - 9/24/96	88		9008		1033		225		194		189		541		51		731		18		1		0		54		84		12217				
	Wednesday - 9/25/96	75		8567		1015		217		128		154		389		44		753		4		0		0		30		51		11427				
	Thursday - 9/26/96	93		8888		1013		245		169		192		491		59		824		7		0		0		37		88		12106				
	Friday - 9/27/96	77		9351		1092		272		198		290		481		74		756		5		0		0		34		50		12680				
4	NE 2 Ave. N of 8 St.																																	
	Monday - 9/23/96		103		6388		1028		261		134		162		222		48		732		6		0		0		29		31		9144			
	Tuesday - 9/24/96		70		7830		1094		211		138		202		260		39		809		4		0		0		25		30		10712			
	Wednesday - 9/25/96		82		6911		996		215		121		196		208		44		788		5		0		0		15		16		9597			
	Thursday - 9/26/96		97		7906		1051		236		152		246		326		45		900		2		0		0		28		45		11034			
	Friday - 9/27/96		90		7270		1006		284		188		169		261		53		992		10		1		0		21		29		10374			

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Notes:

Cycle = Motorcycle

Cars = Automobile

2A-41 = Pick-ups

Buses = Buses

2A-SU = 2-axle, 6-tired trucks

3A-SU = Trucks

4A-SU = Trucks

4A-ST = Trucks

5A-ST = Trucks

6A-ST = Trucks

7A-ST = Trucks

Other = Unclassified vehicles