

*Pocket Guide to*  
**Florida Transportation  
Trends & Conditions**



**Florida  
Department of  
Transportation**

*2005 Edition*

## Introduction and Purpose

**T**he Mission of the Florida Department of Transportation is to provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities. The purpose of the Trends and Conditions process is to assist Florida's transportation policymakers and planning organizations by identifying, analyzing, and disseminating information about the key factors and emerging issues that affect Florida's ability to accomplish its transportation mission.

This *Pocket Guide to Florida Transportation Trends and Conditions* is organized into three areas: the growing demand for transportation facilities and services, the current system or supply of transportation, and the impacts of the transportation system on our society. The ability to understand this information so that changes in aggregate trends can be anticipated and explored opens new opportunities to benefit the state.

We hope you find this publication useful and helpful in understanding Florida's transportation system. More detailed trends and conditions information is available from our Web site at:

[www.dot.state.fl.us/planning/policy/trends](http://www.dot.state.fl.us/planning/policy/trends)



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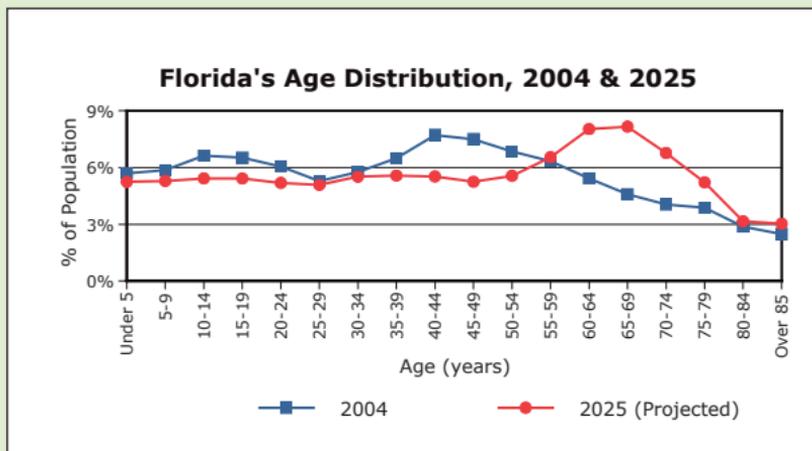
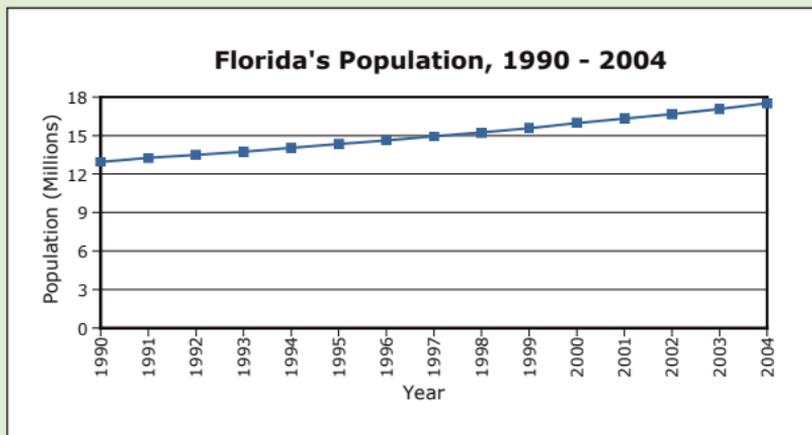
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Introduction and Purpose • Table of Contents

# Growing Travel Demand

## Population



# Growing Travel Demand

## Population

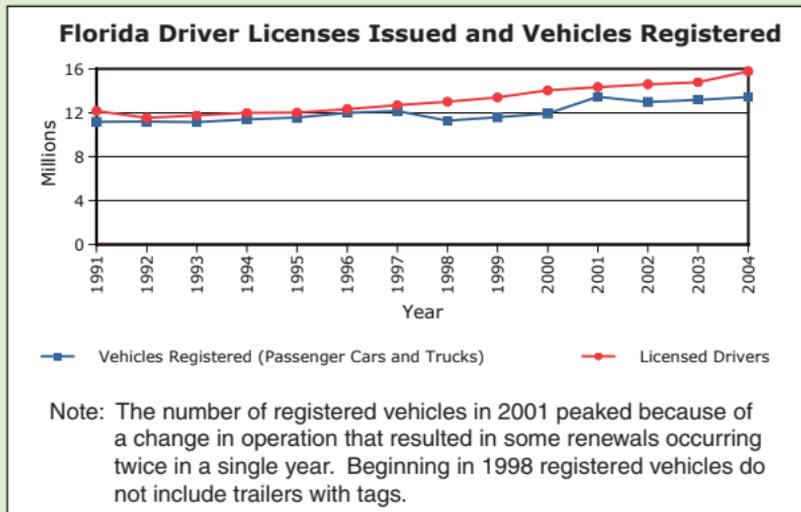
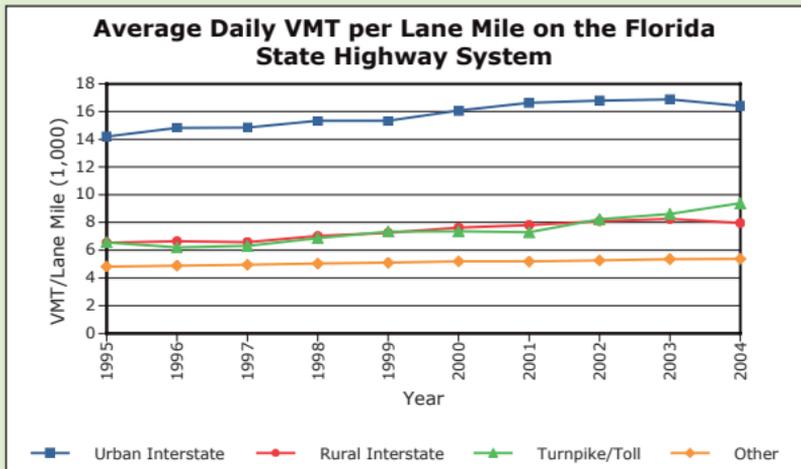
- From April 1, 2003 to April 1, 2004, Florida grew by an estimated 1,216 persons per day.
- By 2030, Florida is expected to be the third most populous state, with about 26 million residents.
- Between 2000 and 2004, Florida grew an average of 2.31% per year. The most recent pace of growth has increased over the prior decade.
- Only 5% of Florida's population growth through 2025 is expected to result from natural increases. Interstate migration is projected to account for 65%, with 30% from immigration.
- In 2030, 26% of the population is projected to be older than 65, compared to 9.8% in 1970 and 17.6% in 2000.
- From 2000 to 2004, the counties with the highest rate of growth, over 20%, were Flagler, St. Johns, Osceola, Walton, Sumter and Collier. Glades, Monroe, Holmes, Pinellas and Hardee had the slowest rates of growth.

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Sources: Florida Department of Transportation. Bureau of Economic and Business Research, University of Florida. U.S. Census Bureau.

# Growing Travel Demand

## Travel Levels



# Growing Travel Demand

## Travel Levels

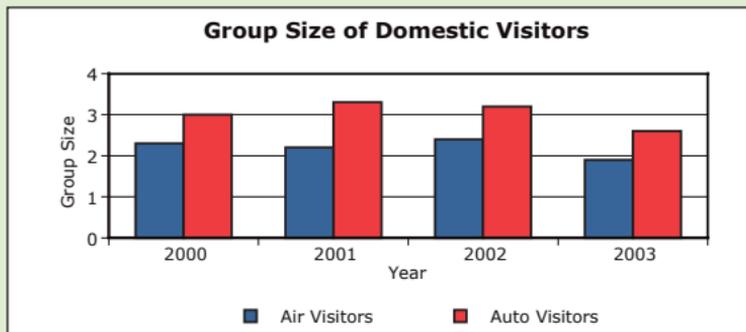
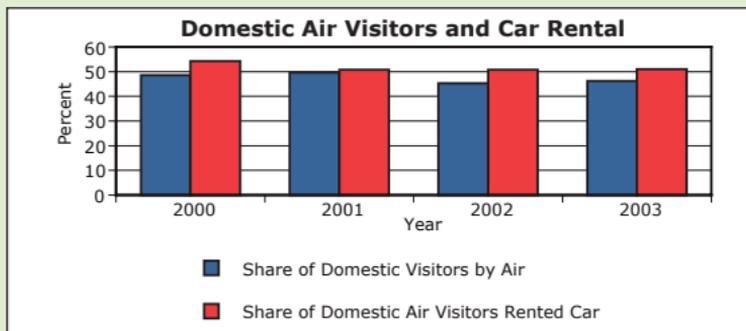
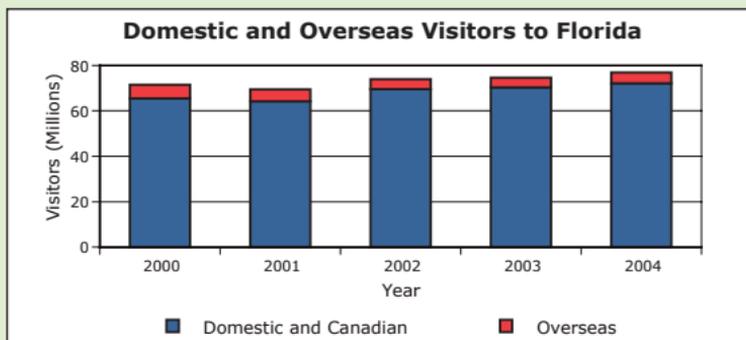
- Vehicle Miles of Travel (VMT) per lane mile is an indicator of the intensiveness of use of the roadway infrastructure.
- Due to strong growth in population, economy and visitors, Florida total VMT growth has outpaced national trends.
- In 2004, total VMT growth in Florida was 5.7%. About 40% of the growth is attributable to population growth and the remainder is a result of increased travel by residents, visitors and businesses.
- Vehicle registration and total licensure levels have continued to grow, partially as a result of increasing population.
- While an aging population and lower per capita travel growth rates suggest moderating growth in overall travel demand, continuing population and economic growth in Florida will, nonetheless, result in increasing demands on the transportation system.

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Sources: FDOT Transportation Statistics Office, State Highway System Mileage Reports. Florida Department of Highway Safety and Motor Vehicles.

# Growing Travel Demand

## Tourism & Travel



# Growing Travel Demand

## Tourism & Travel

- Domestic visitors to Florida outnumber international visitors by 11 to 1.
- Both overseas and domestic visitor rates are significantly influenced by economic conditions.
- There are approximately 4.5 visitors to the state each year for every resident in the state. Visitor growth rates have outpaced population growth rates.
- The share of travel to Florida by air was affected by the security concerns in the 2001-2003 period, declining from about 53% in 2000 to 49% in 2003.
- Almost half of domestic air travelers rent an auto when arriving in Florida.
- The group size of persons traveling to Florida is larger for auto travel and has been increasing for both air and auto travel.
- There were almost 15 million cruise passengers in fiscal year 2004, with over 4 million passengers each at Port Canaveral and Port Everglades.

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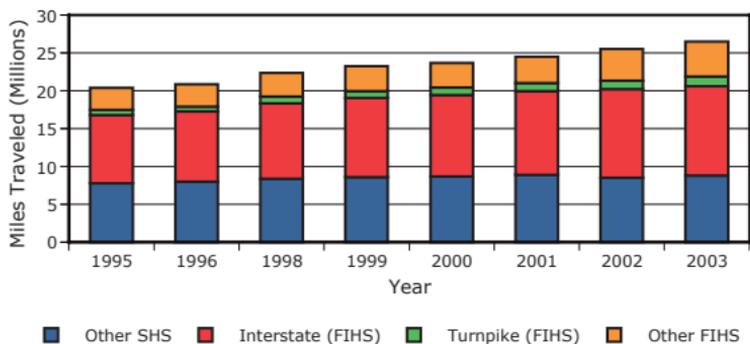
Source: Annual Florida Visitor Study Series.

Note: Domestic and overseas visitor estimates for 2004 are from Visit Florida quarterly reports. Cruise passenger data reported by respective port authority.

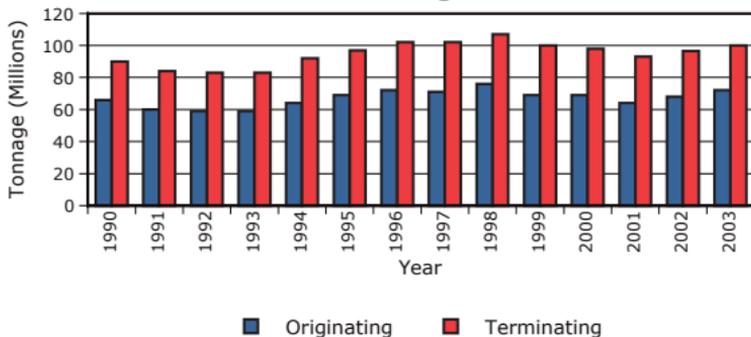
# Growing Travel Demand

## Freight & Commerce

### Truck Miles Traveled on Florida State Highway System



### Florida Rail Freight Traffic



# Growing Travel Demand

## Freight & Commerce

- Truck travel growth on the Florida Intrastate Highway System (FIHS) has outpaced overall vehicle travel growth rates in the last few years.
- Growth in truck travel has occurred predominantly in the non-urban component of the Florida Intrastate Highway System (FIHS).
- Rail freight tonnage has fluctuated modestly during the past 15 years. As a result, the roadway system had to accommodate the growth in freight traffic.



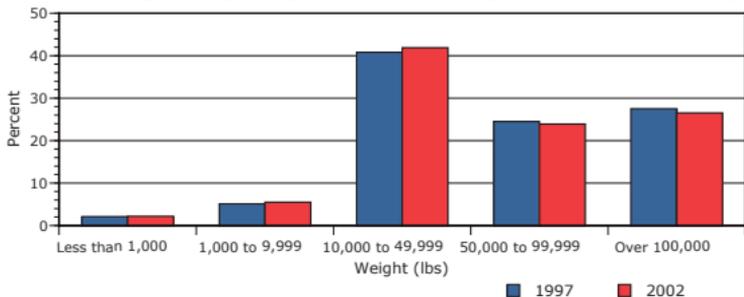
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Sources: FDOT Transportation Statistics Office, 2003 Florida Highway Source Book. FDOT Rail Office, 2004 Rail Freight Component of Florida Rail System Plan. Florida Ports Council.

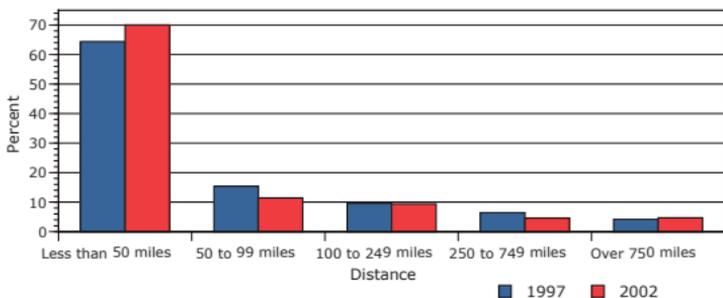
# Growing Travel Demand

## Freight & Commerce

**Florida Originating Freight Shipment Weight by Percent Tonnage**



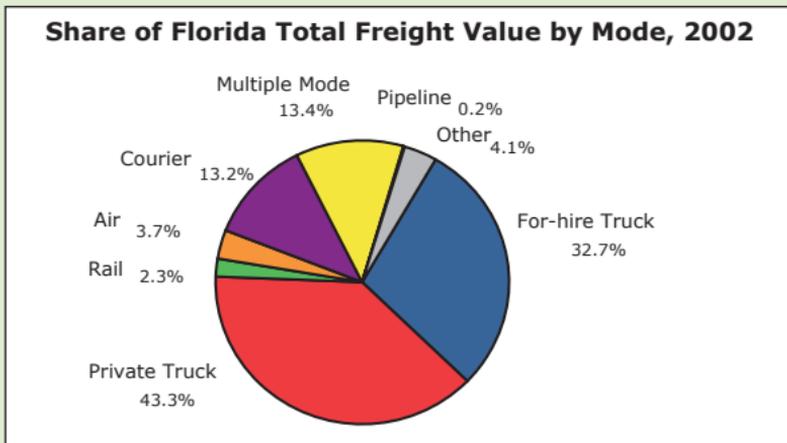
**Florida Originating Freight Shipment Distance by Percent Tonnage**



# Growing Travel Demand

## Freight & Commerce

- Florida's freight tonnage leader is construction materials such as gravel and crushed stone, which predominately rely on truck transportation.
- The diversity of freight modes in Florida reflect both the diversity of products produced and consumed in Florida and the availability of alternative modes for freight shipment.
- Electronic and other electrical equipment and components account for the largest percentage of Florida freight value. The primary transportation mode is truck.
- Higher value, time-sensitive, smaller lot size, or more perishable products rely predominately on truck transportation.



Source: US Census Bureau, 1997 and 2002 Commodity Flow Surveys.

# The Transportation System

## Strategic Intermodal System

The Strategic Intermodal System (SIS) is made up of transportation facilities and services of statewide and interregional significance. Designation of the SIS is intended to enhance Florida's economic competitiveness by focusing resources on priority elements of the transportation system. Emerging SIS facilities currently do not meet adopted SIS criteria but are experiencing growing levels of activity and provide connectivity to fast-growing economic regions and rural areas.



# The Transportation System

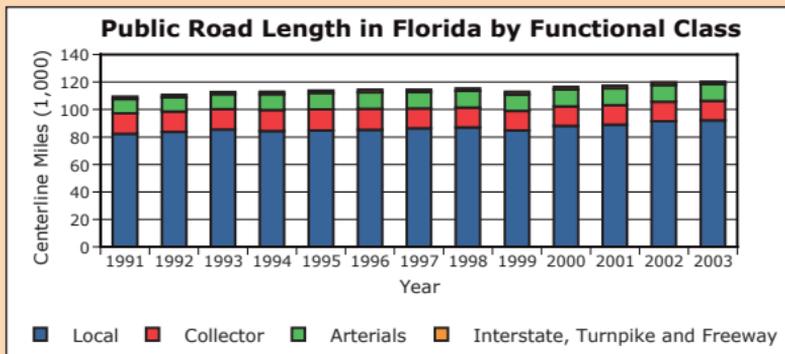
## Strategic Intermodal System

Facility Type	SIS	Emerging SIS
<b>Commercial service airports</b>	7	9
• Percent of all Florida enplanements	93%	6%
• Percent of all Florida air cargo tonnage	98%	1%
<b>Spaceports</b>	1	0
• Percent of all launch activity	100%	0%
<b>Deepwater seaports</b>	7	3
• Percent of all waterborne freight tonnage	98%	2%
• Percent of all home-port cruise passengers	>99%	<1%
<b>Rail freight terminals</b>	5	2
• Percent of all intermodal rail freight tonnage	85%	15%
<b>Interregional passenger terminals</b>	25	7
• Percent of all interregional passengers	70%	6%
<b>Rail corridors</b>	1,700 mi	400 mi
• Percent of all interregional rail passengers	100%	0%
• Percent of all freight rail tonnage	>90%	<10%
<b>Waterways</b>	1,100 mi	300 mi
• Percent of all waterborne freight on coastal and international shipping routes	100%	0%
• Percent of all waterborne freight on inland interregional waterways	0%	100%
<b>Highways</b>	3,500 mi	760 mi
• Percent of all traffic on SHS	51%	2%
• Percent of all truck traffic on SHS	64%	3%
<b>Intermodal connectors</b>	76	27

Source: FDOT Office of Policy Planning, 2004. FDOT Transportation Statistics Office.

# The Transportation System

## Roadway System



# The Transportation System

## Roadway System

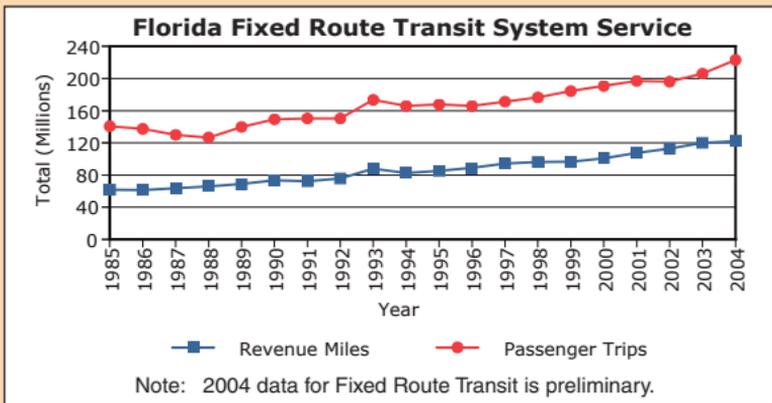
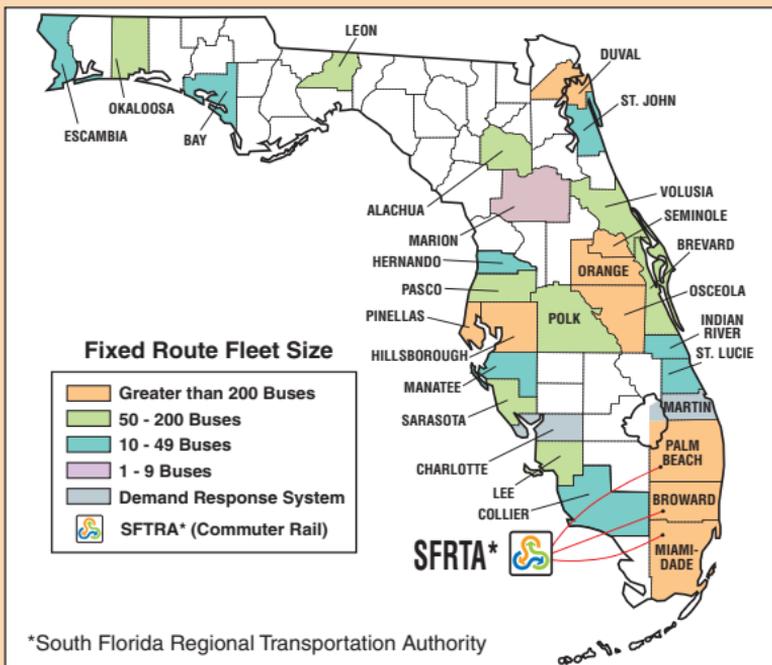
- Florida's roadway system has been growing steadily, but not nearly as fast as population or travel demand.
- The Florida State Highway System is approximately 10% of the entire Florida roadway network, but in 2004, it carried about 54% of all daily traffic.
- Urban and rural roads functionally classified as "local" comprised three fourths of the roadway centerline miles in 2002.
- Since 2000, total public road length in Florida has increased by 3,084 centerline miles.
- The pace of new roadway additions has been steady, governed by funding availability and the lead-time for securing right-of-way, engineering, and construction.
- Several factors impact the amount of new roadway system that can be afforded with existing resources:
  - rapidly growing right-of-way costs
  - growing costs of maintaining traffic during construction
  - recent cost increases for concrete, steel, and asphalt
  - costs of impact mitigation

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Source: FHWA Highway Statistics Series. FDOT Systems Planning Office, Florida Intrastate Highway System, <http://www.dot.state.fl.us/planning/systems/fihs>

# The Transportation System

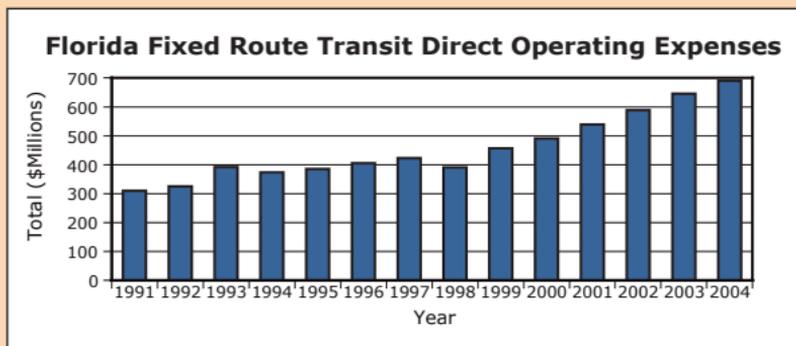
## Transit Systems



# The Transportation System

## Transit Systems

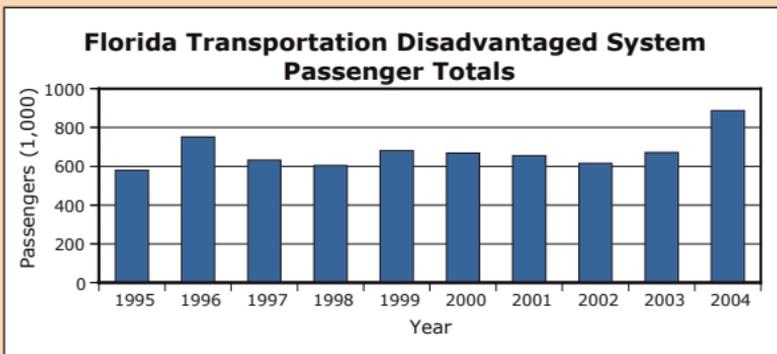
- Florida's transit properties reported over 227 million passenger boardings on fixed route systems in 2004.
- The vast majority of Florida's population resides in areas of the state served by fixed route transit services.
- Transit ridership, service levels, and operating costs have grown steadily over the past 15 years.
- In recent years the growth of transit use has outpaced the growth of vehicle miles of travel, indicating that transit is playing an increasingly important role in meeting travelers' needs.



Sources: Federal Transit Administration National Transit Database.  
Florida Transit Information System (FTIS) Version 2004.  
FDOT Transit Office.

# The Transportation System

## Transportation Disadvantaged Services



- Florida's Transportation Disadvantaged (TD) Program coordinated and provided over 56 million trips during 2004, an increase of 7% from 2003.
- Over 35 million of the TD Program trips were provided by fixed route transit services.
- Of the trips provided by the Transportation Disadvantaged Program, 37% were for medical purposes, 9% for employment purposes, 20% for education/training, 14% for nutrition, and 20% for other services.
- Florida's elderly residents account for 44% of TD trips, while children and other adults account for 18% and 38%, respectively.
- The number of unmet TD trip requests in 2004 declined 4% to slightly over 680,000.

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Source: Florida Commission for the Transportation Disadvantaged, 2004 Annual Performance Report.

# The Transportation System

## Pedestrian and Bicycle Services

- The Florida Pedestrian and Bicycle Program develops initiatives and programs to improve the environment for safe, comfortable, and convenient walking and bicycling trips.
- Four cities in Florida (Boca Raton, Gainesville, Miami Beach, and Orlando) have been recognized as “Bicycle Friendly Communities” by the League of American Bicyclists.
- Florida’s State Greenways and Trails comprise nearly 400 miles of paved and over 250 miles of designated unpaved recreational bicycle trails. Adding and improving bicycle lanes on Florida’s roadways have been prominent commitments, though a statewide total is not available.
- In Florida, every public transit agency that operates bus routes provides bikes-on-bus service. The ability of bicyclists to use transit extends the potential range of travel for this group and increases the service coverage area for transit riders.

Florida Monthly Bikes on Bus Boardings

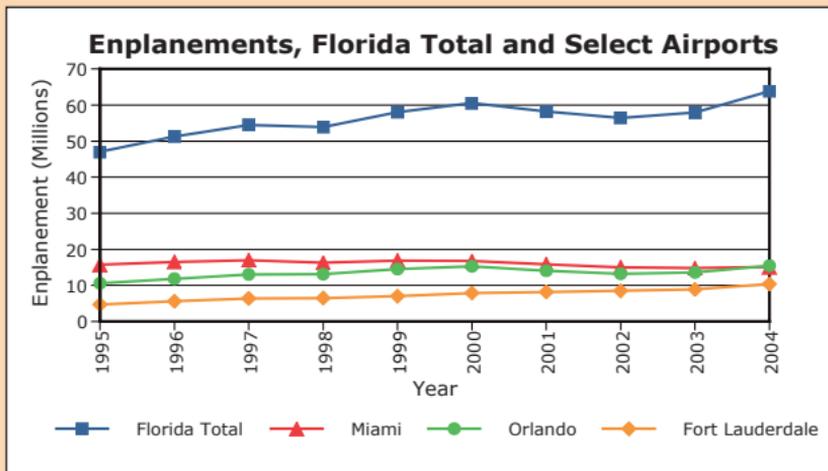
Agency	2001	2002	2003	2004
BCT, Fort Lauderdale	NA	NA	NA	30,000
PSTA, St. Petersburg	9,290	11,150	12,700	13,850
HARTline, Tampa	4,600	4,800	5,700	7,300
Space Coast, Brevard	NA	NA	NA	4,000
TalTran, Tallahassee	1,309	1,053	964	900

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Source: National Center for Transit Research, Analysis of Bikes on Bus Programs, 2005. FDOT Safety Office.

# The Transportation System

## Airports



- Population and tourism growth in Florida are among the factors that underlie the air travel growth.
- Dramatic changes in the air travel industry, security concerns, and fuel prices have created more uncertainty regarding air travel growth; however, the core demand for travel, particularly recreational travel, appears to remain strong.
- Florida's commercial airports have substantial capacity expansion plans for implementation as demand increases and expansion becomes financially viable.

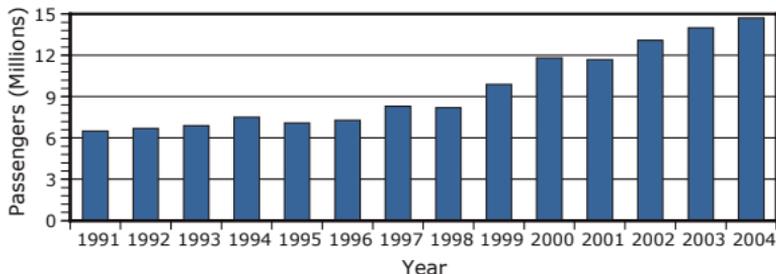
Source: Florida Department of Environmental Protection. FDOT Aviation Office, 2004.

# The Transportation System

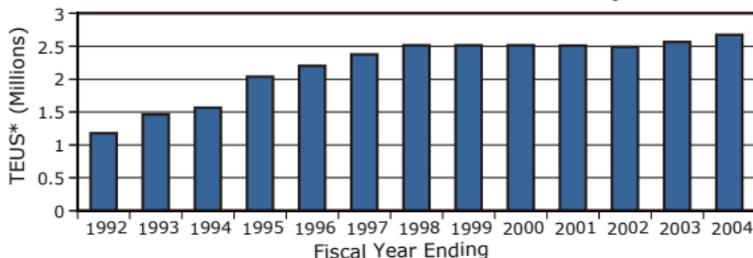
## Seaports

- Florida offers 14 deepwater seaports, which provide freight access to various global trade opportunities.
- Container movements have been growing at Florida ports; in terms of tonnage, freight activity has been relatively stable.
- Florida remains a leader in the U.S. cruise industry, with seven of the seaports involved in the multi-day cruise industry.

### Florida Cruise Passenger Totals



### Container Movement at Florida Seaports



\* Twenty-foot equivalent unit (TEU) is a unit of measure that is equivalent to a twenty foot shipping container.

Source: FDOT Seaport Office, 2004. Florida Ports Council.

# The Transportation System

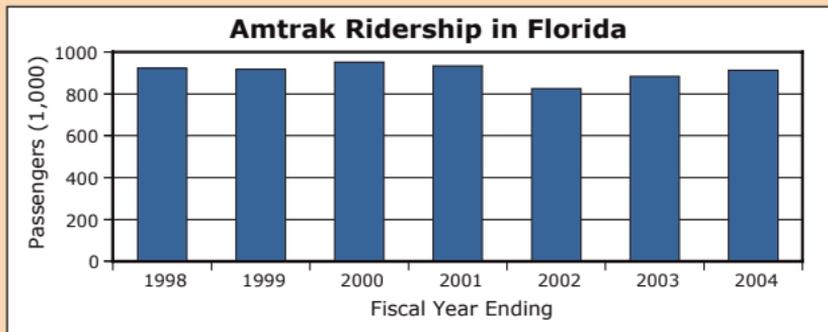
## Rail System



- The rail system in Florida serves both passenger and freight transportation needs.
- The Florida rail system consists of just over 2,700 miles of routes owned by twelve companies. CSX, which owns almost 60% of the track mileage, is the largest operator.
- In 2003, Florida's freight railroads moved more than 117 million tons of freight, up from 113 million in 2002. This includes totals of inbound, outbound, through, and local freight tonnage. Florida is unique among states in that local tonnage constitutes nearly half of the total.
- Non-metallic minerals, primarily phosphates, are the dominant rail product by weight followed by chemicals and food products.

# The Transportation System

## Rail System



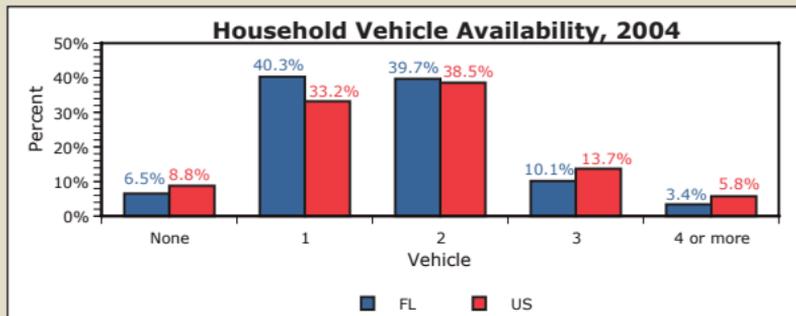
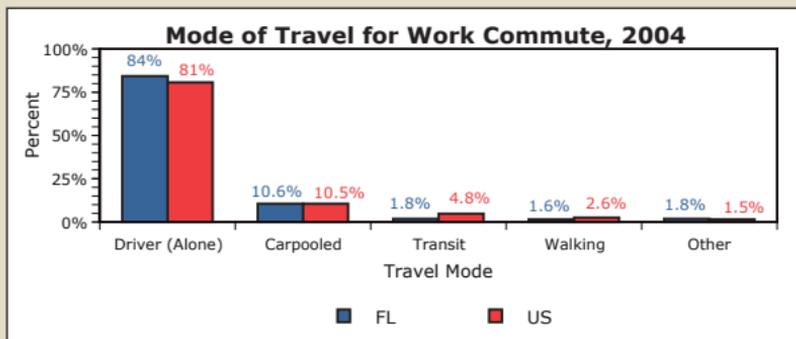
- While the vast majority of the rail system is privately owned and operated, the Florida Department of Transportation has investments in rail infrastructure and services including Amtrak and South Florida Regional Transportation Authority.
- Amtrak does not own any track in Florida.
- Amtrak operates just under 22,000 route miles nationally and 912 in Florida.
- Amtrak carried 913,553 passengers in Florida in fiscal year 2004, up from 626,115 passengers in 1980, but down from the peak year of 1993 when ridership reached over 1.2 million.

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Source: FDOT Rail Office, 2004 Rail System Plan. Amtrak.

# Transportation Impacts

## Travel Behavior of Floridians



All persons are over 5 years of age, and trips are less than 100 miles.

# Transportation Impacts

## Travel Behavior of Floridians

- Nearly 90% of all person trips made by Floridians are by automobile - as drivers or passengers, slightly higher than the national average.
- In Florida, transit carries about 1% of trips, about half as much as the average for the rest of the country. Lower densities and service levels in urbanized areas make transit less competitive in Florida than in many other states.
- Walking is a less common means of travel in Florida.
- Family/personal business and shopping are the two most frequent reasons for traveling.
- The travel start-time pattern of Floridians is similar to that of the rest of the country.
- The evening peak period is the busiest, with noon and then the morning rush periods the next most frequent times of travel.
- Florida has slightly higher midday and evening peaks than the rest of the country, reflective of tourism and the travel patterns of retired persons.

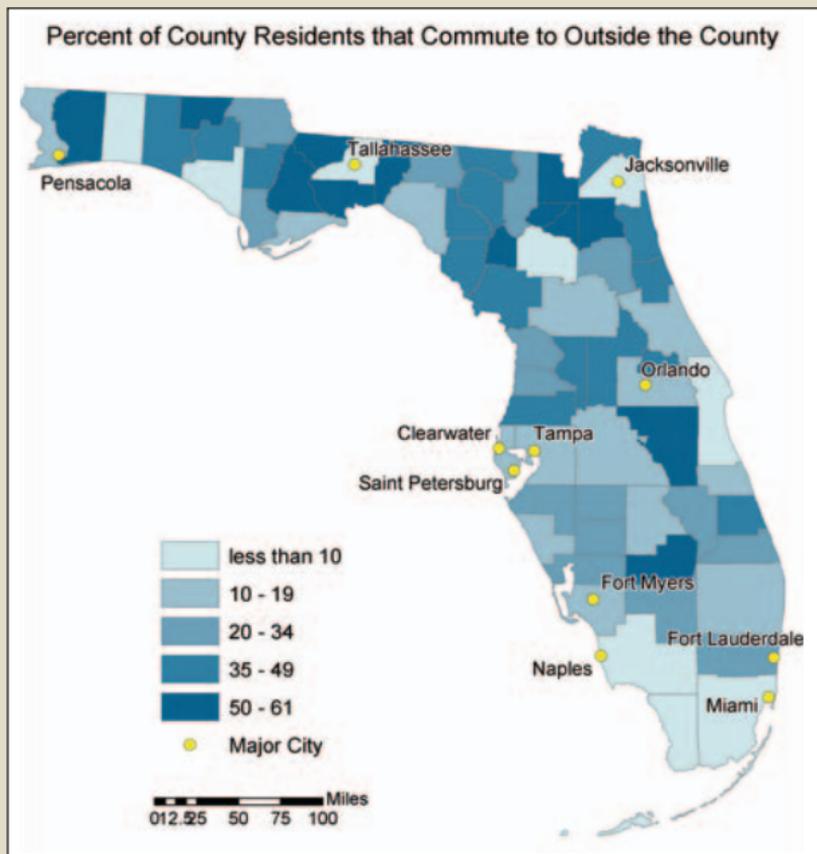


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Source: US Census Bureau, 2004 American Community Survey. U.S. DOT Federal Highway Administration, 2001 National Household Travel Survey.

# Transportation Impacts

## Travel Behavior of Floridians



### Top 3 County-to-County Work Flows

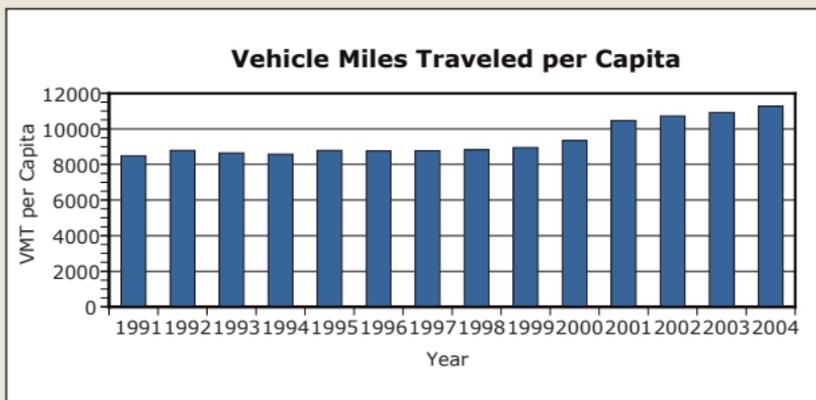
Rank	Residence County	Work County	Number of Workers
1	Broward	Miami-Dade	115,044
2	Seminole	Orange	80,875
3	Miami-Dade	Broward	60,096

Source: U.S. Census Bureau, 2000 Census Transportation Planning Package.

# Transportation Impacts

## Travel Behavior of Floridians

- Commuting from outlying counties to major urban areas for work is increasingly common in Florida.
- Floridians travel slightly fewer miles and make slightly fewer trips annually than residents in the rest of the country.
- Floridians spend 408 hours per year or 67 minutes per day in travel versus the national average of 428 hours per year.



Source: US Census Bureau, Population Estimates. U.S. DOT Federal Highway Administration, 2001 National Household Travel Survey.

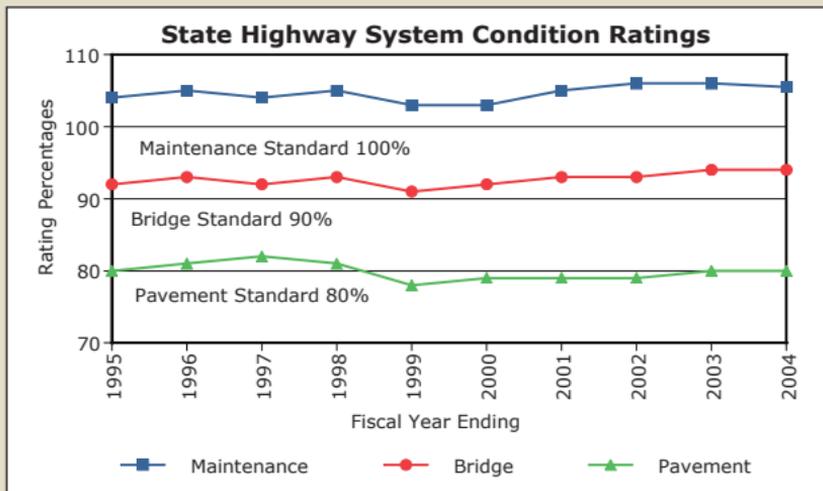
# Transportation Impacts

## System Performance

System performance measures characterize the performance of the transportation system. Three measures are used to report performance.

- **Condition** describes the physical condition and maintenance requirements of system infrastructure.
- **Accessibility** is a measure of the ease with which people can connect to the multimodal transportation system.
- **Level of Service** is a measure of the quality of service provided by the transportation system to a typical traveler.

These measures are applied to all modes. However, the extent of public ownership and usage of the State Highway System results in more information being reported for highways.



The state is committed to keeping the State Highway System in acceptable condition. This includes meeting standards for maintenance, bridges and pavement condition.

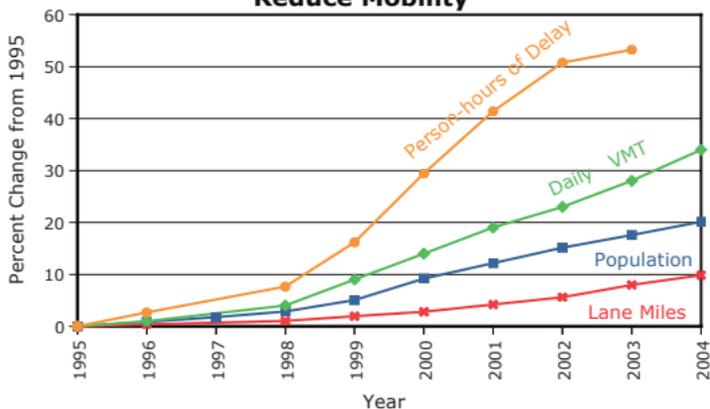
# Transportation Impacts

## System Performance

### System Accessibility

	Highway Lane Miles per 100 Square Miles	Rail Miles per 100 Square Miles	Commercial Airports per Million Residents
FL	75.9	5.5	1.1
U.S.	51.5	4.0	1.9
CA	30.1	3.5	0.8

**Trends in Mobility and Demand on the FIHS:  
Continued Growth Will Increase System Demands and  
Reduce Mobility**



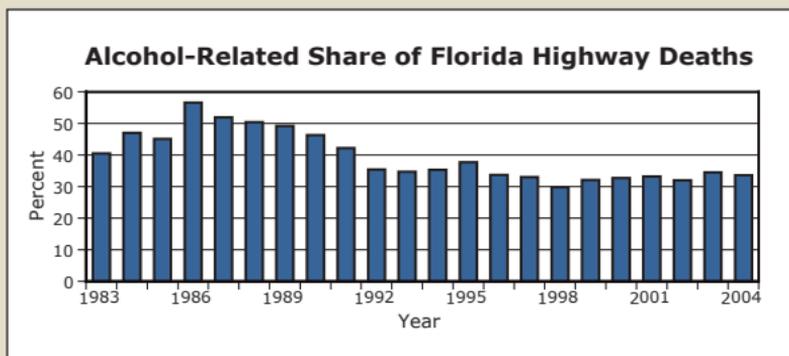
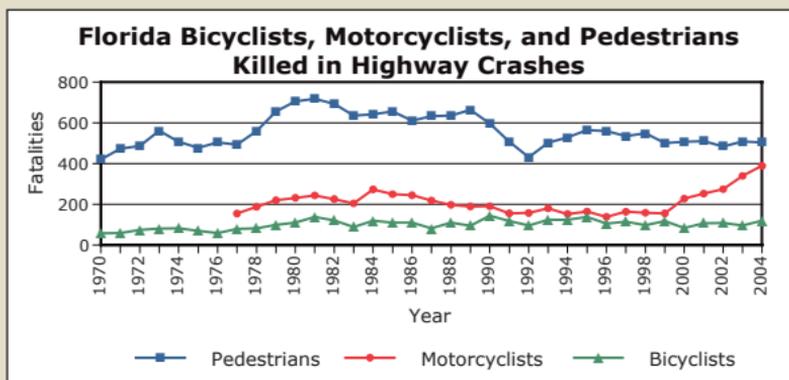
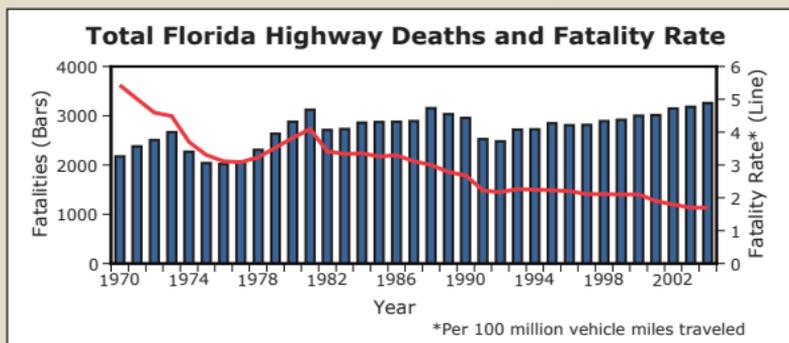
Capacity expansion of the FIHS is not keeping up with the increases in travel demand based on 1995-2004 data.

- Lane miles are increasing at 1.3% annually.
- Population is increasing at 2.3% annually.
- VMT is increasing at 5.4% annually.

Source: US Census Bureau. FDOT Office of Policy Planning, 2004 Short-Range Component. FDOT Transportation Statistics Office.

# Transportation Impacts

## Transportation Safety



# Transportation Impacts

## Transportation Safety

- Safety trends are influenced by a host of factors including population growth, demographic characteristics, vehicle and roadway design, and driver behavior, enforcement and training.
- In 2004, the Department of Highway Safety and Motor Vehicles (DHSMV) reported that traffic crashes increased 3.9% to 252,902 crashes, an average of 691 crashes per day.
- Counter to national trends, Florida's total number of transportation deaths has increased through the 1990's and to date.
- There has been a decline in the death rate in Florida since the 1990's, but this decline in rates has been more modest than national trends.
- Of Florida's 3,257 transportation deaths in 2004, approximately 31% of them were of bicyclists, pedestrians and motorcyclists.
- More than 33% of traffic deaths in Florida are alcohol-related.
- Florida, like other southeastern states, has a higher-than-average death rate for transportation accidents, thus motivating initiatives to understand and improve safety for Florida travelers.

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Source: Florida DHSMV, Florida Traffic Crash Facts.

# Transportation Impacts

## Transportation and the Environment



- During 2003-2004, FDOT implemented the Efficient Transportation Decision Making process, which provides early agency reviews of proposed transportation projects for potential impacts to the natural and human environment.
- More than \$10 million was spent on assessments, surveys, protection, conservation, and mitigation projects for Florida's threatened and endangered wildlife and plant species during the 2003 and 2004 federal fiscal years. Another \$20-25 million was spent on wetland mitigation.
- FDOT provides for the conservation of natural roadside growth and scenery and for the implementation and maintenance of roadside beautification programs. At least 1.5% of the amount contracted for construction projects is allocated to beautification programs.



# Transportation Impacts

## Transportation and the Environment

- As a grass-roots effort to heighten awareness of our state's historical and intrinsic resources (cultural, historical, archeological, recreational, natural and scenic), the Florida Scenic Highway Program provides subsequent benefits to the community, such as resource preservation, enhancement and protection.



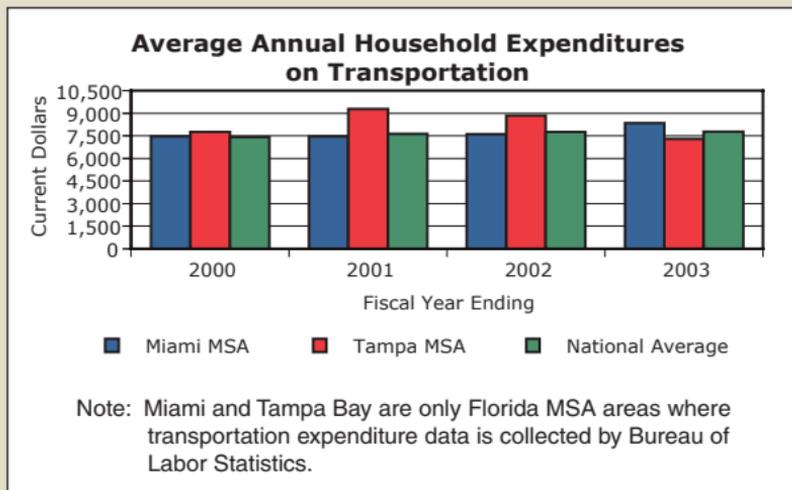
- In the last five years, more than 400 cultural resource assessment surveys have been completed on transportation projects, and more than 1,300 historic preservation issues reviewed.
- A recent review by the U.S. Environmental Protection Agency has resulted in all of Florida's urban areas being designated as air quality attainment areas.

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Source: FDOT Environmental Management Office.

# Transportation Impacts

## Transportation and the Economy



- Household spending on all forms of transportation constitutes the second largest spending category of households, exceeded only by housing costs. It accounts for approximately 20% of annual household expenditures in the Tampa and Miami Metropolitan Statistical Areas (MSA).
- Sustaining the performance of the transportation system enables a strong competitive economy and spending on transportation infrastructure is itself a significant contributor to the economy.
- Transportation is critical to Florida's businesses. Florida's diverse economy is dependent on a variety of modes.

# Transportation Impacts

## Transportation and the Economy

Importance of Transportation to Florida's Key Industries Interregional, Interstate, and International						
Florida Industry	Reliance on Mode					
	Airport	Spaceport	Seaport	Rail	Highway	Intercity Bus
Agriculture/ Forestry						
Mining						
Distribution						
High-Tech						
Universities						
Health Care						
Tourism						
Military						
Importance:	Less				More	

- It is estimated that over a 25-year period, every \$1.00 invested through FDOT's Work Program generates \$5.50 in benefits for Florida's residents and businesses.

Source: US Department of Labor Bureau of Labor Statistics, Consumer Expenditure Surveys, Selected Southern Metropolitan Statistical Areas, 2001-2002. SIS Steering Committee Final Report: Recommendations for Designating Florida's SIS. FDOT Macroeconomic Analysis Report.

## Other Resources

### Additional Resources

This **Pocket Guide** as well as other **Transportation Trends and Conditions** products are available at:

[www.dot.state.fl.us/planning/trends](http://www.dot.state.fl.us/planning/trends).

Other Internet resources that provide useful information related to Florida's transportation trends and conditions include:

- **2025 Florida Transportation Plan**  
<http://www.dot.state.fl.us/planning/ftp>
- **Florida Transportation Indicators**  
<http://www.indicators.cutr.usf.edu>
- **Florida Edition: Journey to work**  
<http://www.j2w.usf.edu>
- **FDOT Transportation Glossary**  
<http://www.dot.state.fl.us/planning/glossary>
- **FDOT Transportation Statistics Office**  
<http://www.dot.state.fl.us/planning/statistics>
- **Florida Aviation Database**  
<http://www.florida-aviation-database.com>
- **Florida Traffic Crash Facts**  
[http://www.hsmv.state.fl.us/reports/crash\\_facts.html](http://www.hsmv.state.fl.us/reports/crash_facts.html)
- **Florida Strategic Intermodal System**  
<http://www.dot.state.fl.us/planning/sis>
- **Florida Intrastate Highway System**  
<http://www.dot.state.fl.us/planning/systems/fihs>

## Other Resources

*For further information, please contact:*

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