

Pocket Guide to

Florida Transportation Trends & Conditions



Office of
Policy Planning

Summer 2004

Introduction and Purpose



The 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 Mission 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.us/planning/policy/trends

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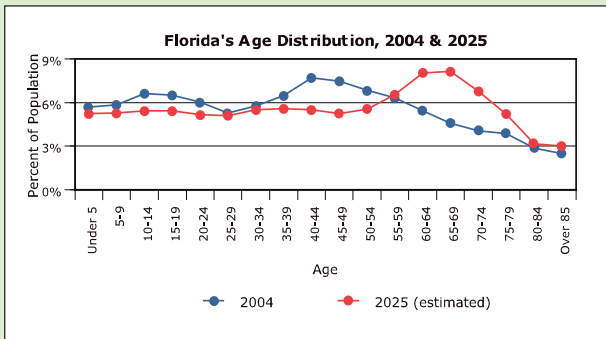
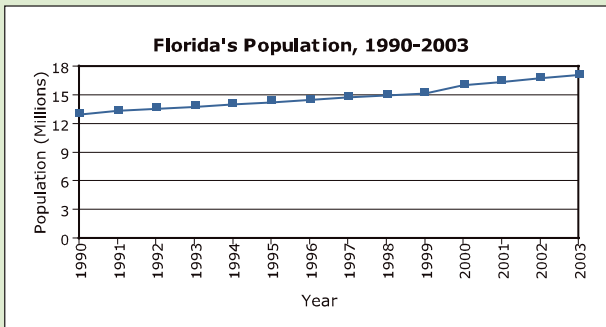
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Growing Travel Demand

Population



Growing Travel Demand

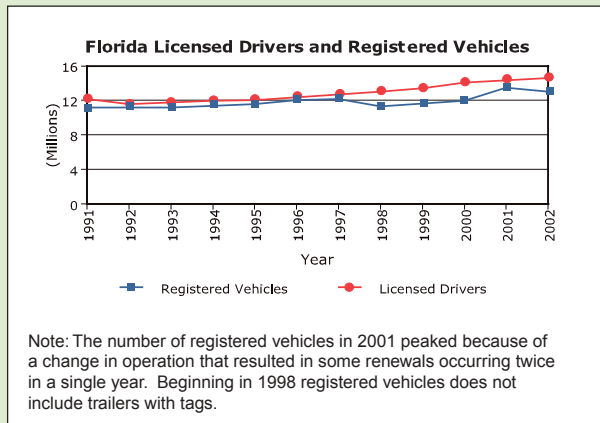
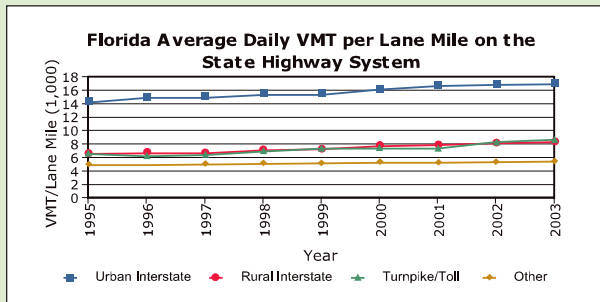
Population

- By 2025, Florida is expected to be the third most populous state, with over 20 million residents.
- Between 1990 and 2003, Florida grew an average of 2.1% per year, slower than the preceding 30 years, when growth averaged 2.9%. The growth rate is expected to continue declining, averaging 1.5% through 2025.
- 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 2025, 26% of the population is projected to be older than 65, compared to 9.8% in 1970 and 12.4% in 2000.
- From 1990 to 2000, the counties with the highest rate of growth, over 4.8%, included Flagler, Sumter, Collier, Wakulla, and Osceola. Monroe, Pinellas, Putnam, Gadsden, and Escambia had the slowest rates of growth, below 1.1%.

Sources: U.S. Census Bureau, Estimate and Projections 2003.,

Growing Travel Demand

Travel Levels



Growing Travel Demand

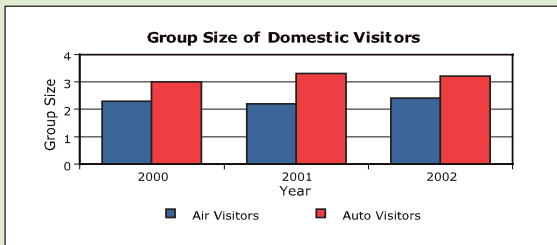
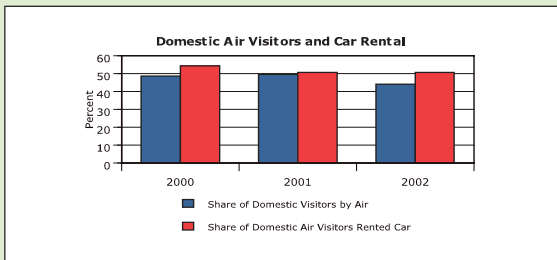
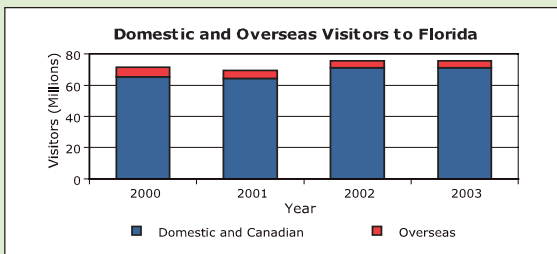
Travel Levels

- Vehicle Miles of Travel (VMT) per lane mile is an indicator of the intensiveness of use of the roadway infrastructure.
- Due to strong population growth, Florida VMT growth has outpaced national trends.
- Vehicle registration and total licensure levels have continued to grow, partially as a result of increasing population.
- While an aging population and lower 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.

Sources: Transportation Statistics Office, State Highway System Mileage Reports. Florida Department of Highway Safety and Motor Vehicles, Traffic Crash Facts 2002.

Growing Travel Demand

Tourism & Travel



Growing Travel Demand

Tourism & Travel

- Domestic visitors to Florida outnumber international visitors by 12 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 September 11th attacks, declining from about 53% in 2000 to approximately 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 14 million cruise passengers in the fiscal year ending June 2003, with over 3.4 million passengers each at Port Canaveral, Port Everglades and Miami.

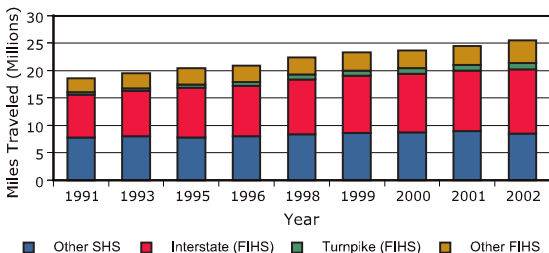
Source: Annual Florida Visitor Study Series.

Note: Domestic and overseas visitor estimates for 2003 are from Visit Florida quarterly reports.

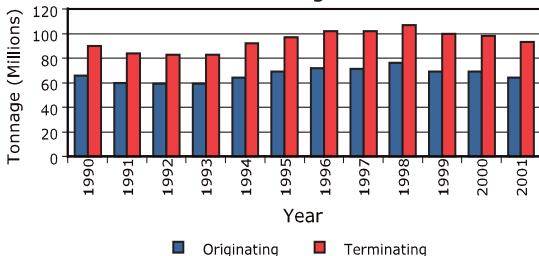
Growing Travel Demand

Freight & Commerce

Truck Miles Traveled on Florida State Highway System



Florida Rail Freight Traffic



Growing Travel Demand

Freight & Commerce

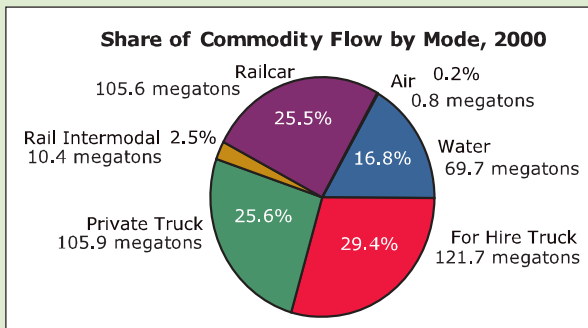
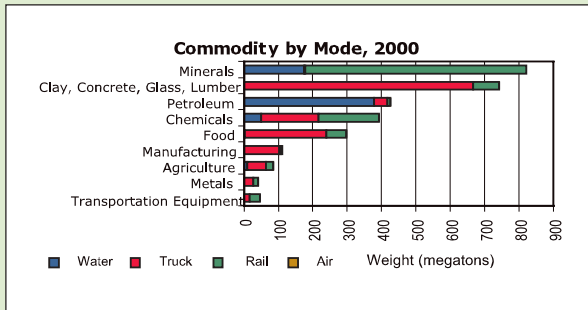
- Truck travel growth on the Florida Intrastate Highway System (FIHS) has outpaced overall vehicle travel growth rates in the last few years.
- Urban Interstate truck miles traveled have stabilized in recent years, probably because of urban congestion levels and more opportunities for bypassing urban areas.
- Rail freight tonnage has fluctuated modestly during the 1990's. As a result, the roadway system had to accommodate the growth in freight traffic.



Sources: 2003 Florida Highway Source Book. 2002 Florida Rail System Plan.

Growing Travel Demand

Freight & Commerce



Growing Travel Demand

Freight & Commerce

- Florida's freight tonnage leader is minerals, which predominately rely on water and rail transportation.
- Construction materials are the second largest tonnage freight commodity and rely predominately on truck transportation.
- The diversity of freight modes in Florida reflects both the diversity of products produced and consumed in Florida and the availability of alternative modes for freight shipment.
- Higher value, more time-sensitive, smaller lot size, or more perishable products rely predominately on truck transportation.



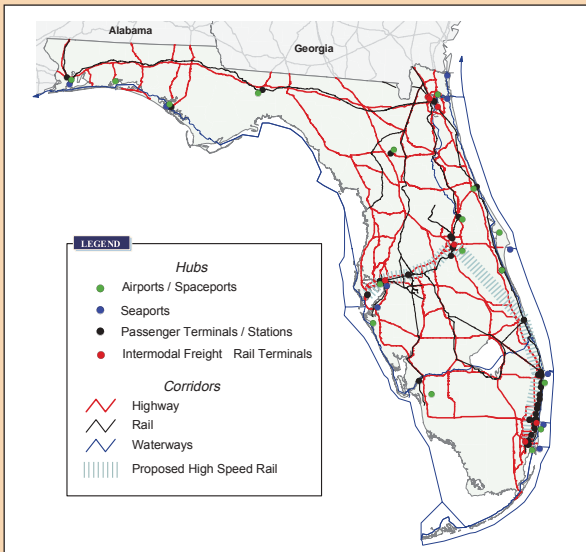
*Port of Tampa
Adjacent to Downtown
Tampa*

Source: Reebie TRANSEARCH Data, 2000. This dataset consists of commodity flows (by tons) into, out of and within Florida. The TRANSEARCH database is a sample and does not contain all freight transportation flows.

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
Commercial service airports	7	9
Spaceports	1	0
Deepwater seaports	7	3
Rail freight terminals	5	2
Passenger terminals	25	7
Rail corridors (miles)	1,600	340
High-speed rail	Initial phases	None
Waterways (miles)	900	310
Highways (miles)	3,500	700
Intermodal connectors	78	27

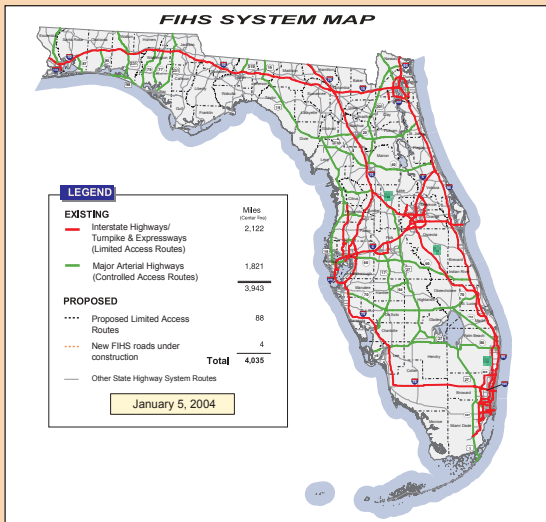
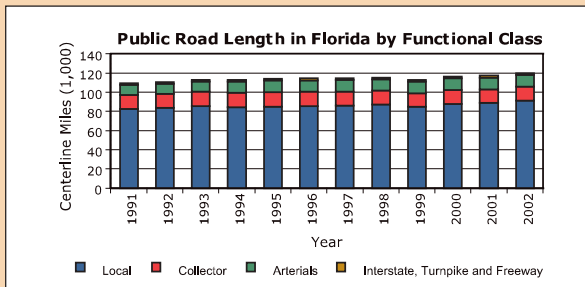
Facilities designated as part of the SIS and Emerging SIS account for:

- 99% of Florida's commercial enplanements
- 98% of Florida's air cargo tonnage
- all commercial and military space launch activity
- 99% of freight rail traffic by weight
- virtually all rail freight using intermodal terminals
- 82% of passengers served by Florida's interregional passenger terminals
- 68% of all truck traffic that uses the State Highway system

Source: FDOT Office of Policy Planning, 2004

The Transportation System

Roadway System



The Transportation System

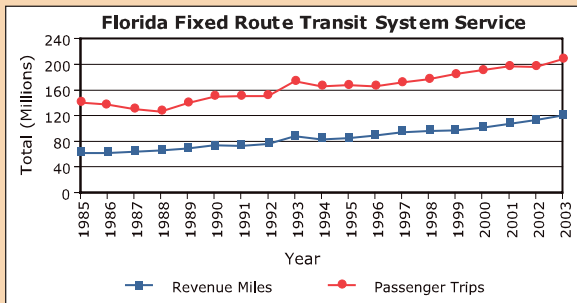
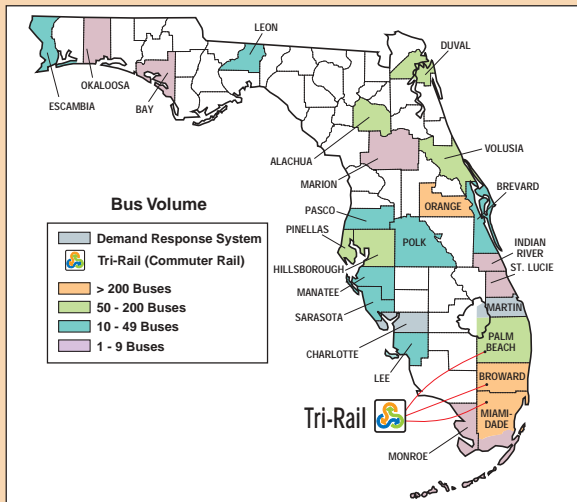
Roadway System

- Florida's roadway system has been growing steadily, but not nearly as fast as population or travel demand.
- There were 5,563 new lane miles of roadway added in 2002, and 2,483 new centerline miles.
- The FIHS is only 3% of the entire Florida roadway network, but carries about 29% of all traffic and 64% of all truck traffic that uses the State Highway System.
- Urban and rural roads functionally classified as "local" comprised 76% of the roadway centerline miles in 2002.
- 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

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

The Transportation System

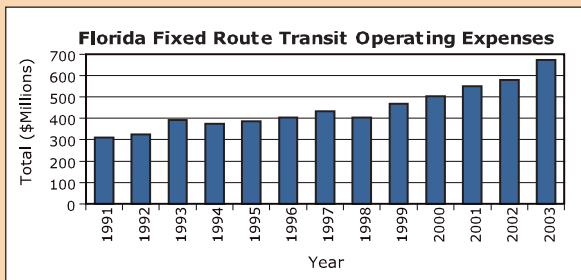
Transit Systems



The Transportation System

Transit Systems

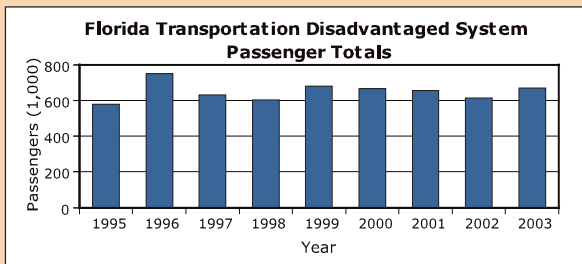
- Florida's transit properties reported over 207 million passenger boardings in 2003.
- The vast majority of Florida's population resides in areas of the state served by fixed route transit services. Transit services have been expanded or added in growing areas.
- Transit ridership, service levels, and 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: Florida Transit Information System (FTIS) Version 2003. FDOT's Florida Transit Handbook 2003.

The Transportation System

Transportation Disadvantaged Services



- Florida's Transportation Disadvantaged (TD) Program coordinated and provided over 53 million trips during 2003, an increase of 10% from 2002.
- Over 33 million of the TD Program trips were provided by fixed route transit services.
- Of the trips provided by the Transportation Disadvantaged Program, 38% were for medical purposes, 9% for employment purposes, 20% for education/training, 15% for nutrition, and 18% for other services.
- Florida's elderly residents account for 45% of TD trips, while children and other adults account for 18% and 37%, respectively.
- The number of unmet TD trip requests in 2003 declined 33% from more than 1 million to slightly over 700,000.

Source: Florida Commission for the Transportation Disadvantaged, 2003 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.
- In Florida, every public transit agency that operates buses 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 ridership.
- South Florida has the largest share of paved bicycle paths by length.

Florida Bikes on Transit Ridership Statistics

Agency	Bike Boardings	Bike Share
BCT, Fort Lauderdale	1,200 per day (2002)	1.10%
PSTA, St. Petersburg	10,000 per month (2002)	1.25%
HARTline, Tampa	9,618 (April 2004)	1.29%
SCAT, Sarasota	175 per day	2.70%
MCAT, Bradenton	1,166 (April 1998)	1.80%

Source: BikeMap.com (accessed 3/24/04)

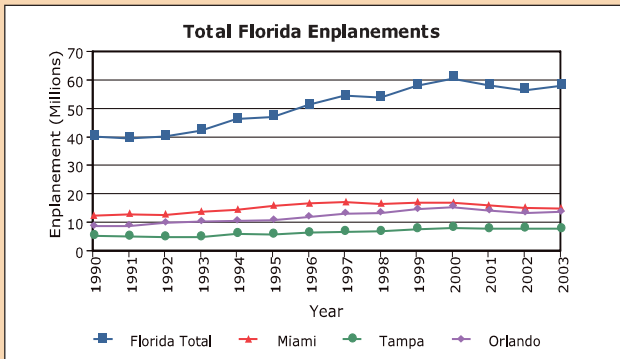
Outdoor Recreation Facilities in Florida

Major Supplier	Bike Trails (paved)	Bike Trails (unpaved)
Federal	70.0 mi	297.3 mi
State	209.6 mi	718.3 mi
County	182.6 mi	341.9 mi
Municipal	402.5 mi	112.5 mi
Non-Government	108.2 mi	61.2 mi
Total	972.9 mi	1,531.2 mi

Source: Florida Department of Environmental Protection, The Office of Park Planning. Statewide Comprehensive Outdoor Recreation Plan 2000.

The Transportation System

Airports



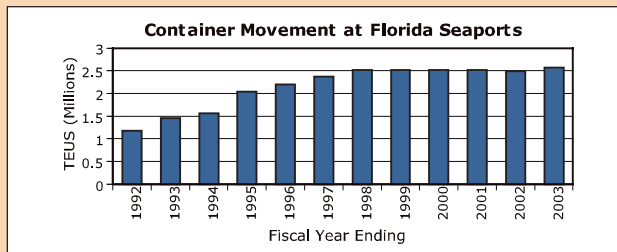
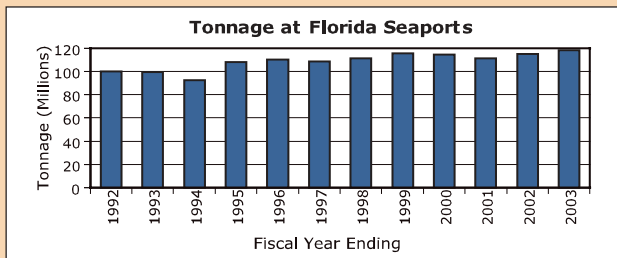
- Population and tourism growth in Florida are among the factors that underlie the dramatic air travel growth.
- Dramatic changes in the air travel industry and security concerns have created more uncertainty regarding air travel growth; however, the core demand for travel, particularly recreational travel, does not appear to be permanently dampened.
- Florida's abundance of commercial airports with substantial capacity expansion plans can meet growing needs as expansion becomes financially viable.

Source: FDOT Aviation Office, 2003.

The Transportation System

Seaports

- Florida offers 14 seaports, 9 of which are deep sea freight ports providing freight access to various global destinations.
- Port freight activity has remained stable in terms of tonnage.
- Eight of Florida's seaports also serve the growing passenger cruise business in Florida.

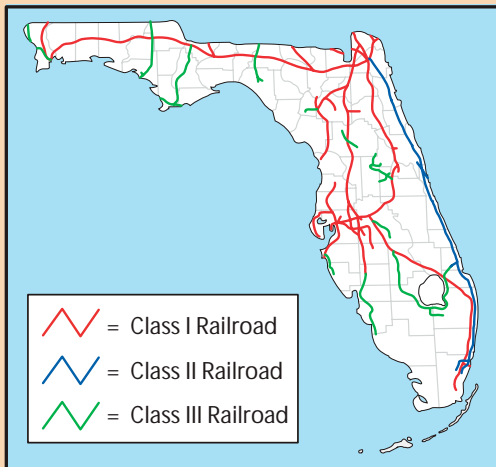


Source: FDOT Seaport Office, 2003.

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

The Transportation System

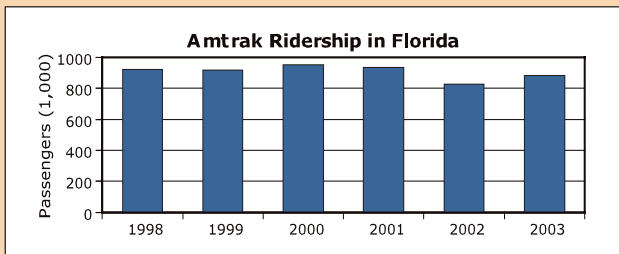
Rail System



- The rail system in Florida serves both passenger and freight transportation needs.
- The Florida rail system consists of approximately 2,900 miles of routes. Thirteen line-haul railroads and four terminal companies own the routes. CSX, with over 56% of the track mileage, is the largest carrier.
- In 2001, a total of 158 million tons of freight originated or terminated in Florida.
- Non-metallic minerals are the dominant product by weight followed by chemicals and coal.

The Transportation System

Rail System

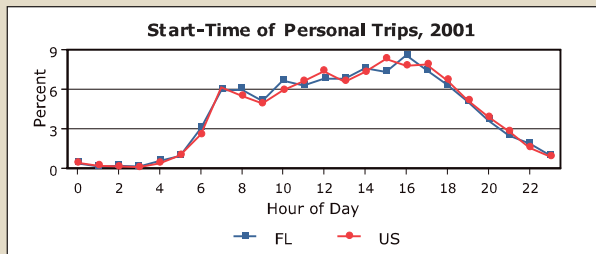
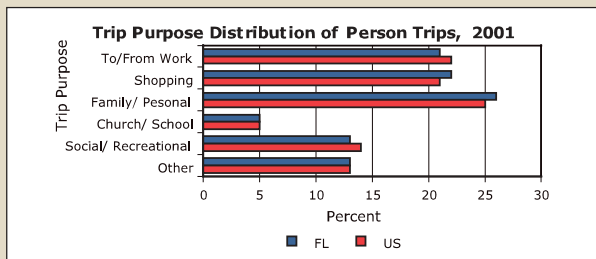
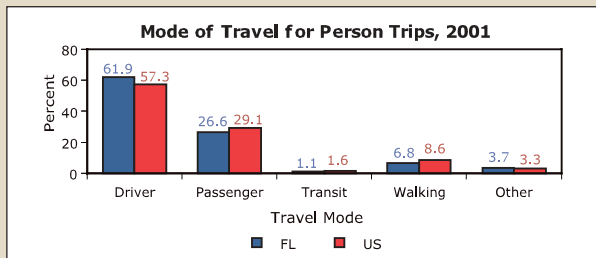


- While the vast majority of the rail system is privately owned and operated, the Florida Department of Transportation has investments in rail infrastructure and services including Amtrak and Tri-Rail.
- Amtrak operates over 1,098 route miles but does not own the track.
- Amtrak carried 883,366 passengers in Florida in fiscal year 2003, up from 626,115 passengers in 1980, but down from the peak year of 1993 when ridership reached over 1.2 million.
- There were no additions or deletions to rail mileage in Florida in 2003.

Source: 2002 Florida Rail System Plan.

Transportation Impacts

Travel Behavior of Floridians



Transportation Impacts

Travel Behavior of Floridians

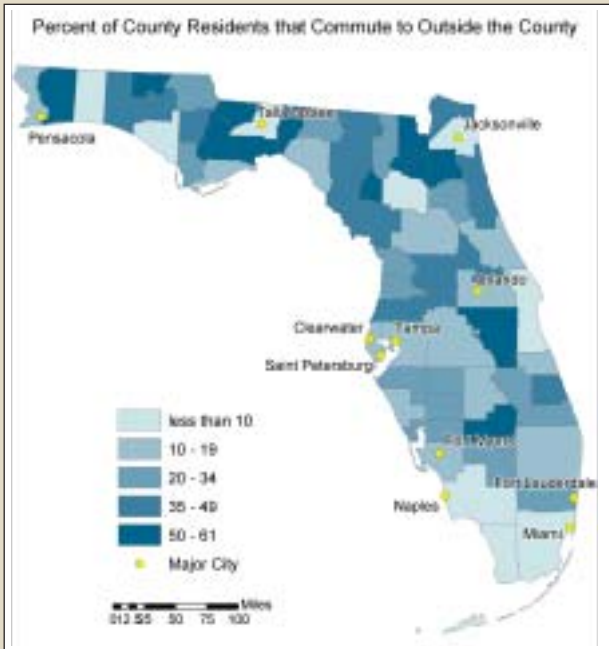
- Floridians make the majority of their trips as auto drivers. Travel as passengers is the second most common means of travel.
- In Florida, transit carries about 1% of trips, about half as much as the average for the rest of the country. Lower densities and service levels in urbanized areas make transit less competitive in Florida than in many other states.
- Similarly, 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.



Source: 2001 National Household Travel Survey. All persons over 5 years of age, and trips are less than 100 miles.

Transportation Impacts

Travel Behavior of Floridians



Top 3 Count-to-County Work Flows

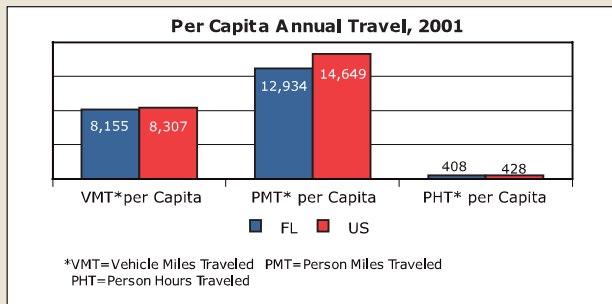
Rank	Residence County	Work County	Number of Workers
1	Broward	Miami-Dade	115,044
2	Seminole	Orange	80,875
3	Miami-Dade	Broward	60,096

Source: 2000 Census Transportation Planning Package

Transportation Impacts

Travel Behavior of Floridians

- Commuting from outlying counties to major urban areas for work is increasingly common.
- 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: 2001 National Household Travel Survey data. All persons over 5 years of age, trips less than 100 miles.

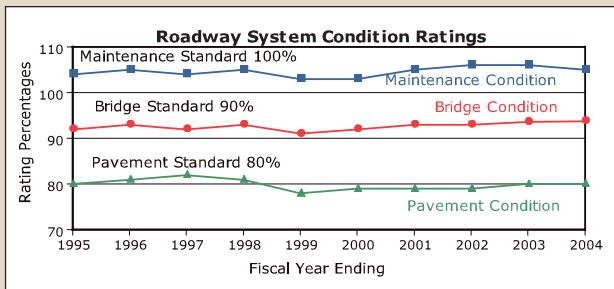
Transportation Impacts

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** indicates whether the system is properly sized to meet demands.

These measures are applied to all modes though the dominance and public oversight of the State Highway System result in more information being reported for highways.



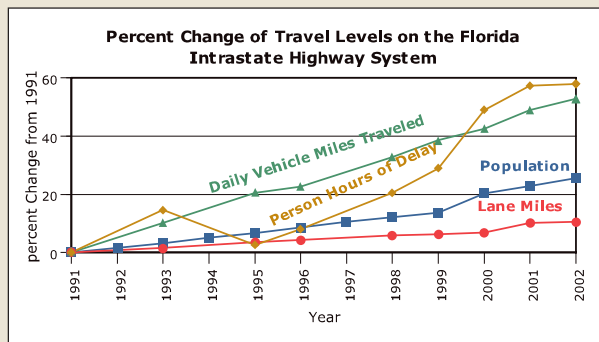
- The State is committed to keeping the State Highway System in acceptable condition. This includes meeting standards for maintenance, bridges and pavement condition.

Transportation Impacts

System Performance

System Accessibility

	SHS Lane Miles per 100 Square Miles	Rural Miles per 100 Square Miles	Commercial Airports per Million Residents
FL	75.3	5.5	1.1
U.S.	51.5	4.1	1.9
CA	32.3	4.5	0.8



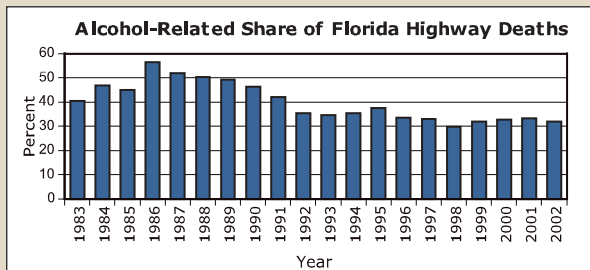
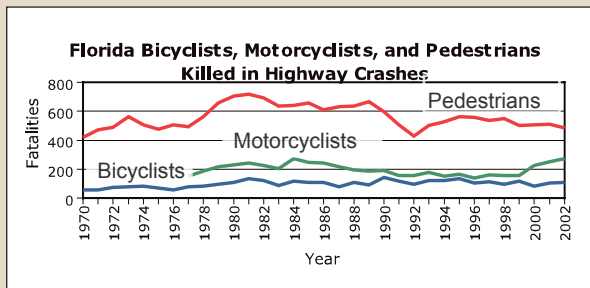
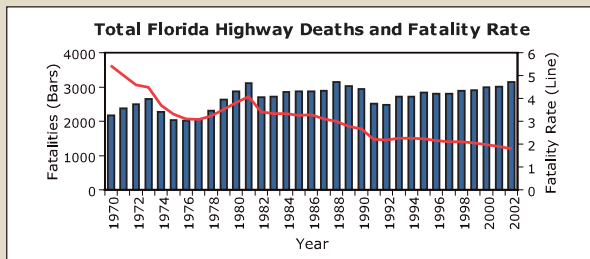
Capacity expansion of the FIHS is not keeping up with the increases in travel demand.

- Lane miles are increasing at 0.9% annually.
- Population is increasing at 2.1% annually.
- VMT is increasing at 3.9% annually.
- Delay on FIHS is increasing at 4.2% annually.

Source: FDOT 2003 Short-Range Component and Transportation Statistics Office

Transportation Impacts

Transportation Safety



Transportation Impacts

Transportation Safety

- Safety trends are influenced by a host of factors including population growth and demographic characteristics, and vehicle and roadway design characteristics, driver behavior, enforcement and training.
- In 2002, the Department of Highway Safety and Motor Vehicles (DHSMV) reported that traffic crashes decreased 2.2% to 250,470 crashes, an average of 686 crashes per day.
- Counter to national trends, Florida's total number of transportation deaths has increased through the 1990's.
- There has been a decline in the death rate in Florida during the 1990's, but this decline in rates has been more modest than national trends.
- Of Florida's 3,143 transportation deaths in 2002, approximately 28% of them were of bicyclists, pedestrians and motorcyclists.
- More than 30% 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.

Source: Florida Traffic Crash Facts, annual issue. Florida DHSMV

Transportation Impacts

Transportation and the Environment

- In federal FY 2003, more than \$7.5 million was spent on assessments, surveys, protection, conservation, and mitigation projects for Florida's threatened and endangered wildlife and plant species.



- FDOT provides for the conservation of natural roadside growth and scenery and for the implementation and maintenance of roadside beautification programs. No less than 1.5% of the amount contracted for construction projects is allocated to beautification programs.



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.
- 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.

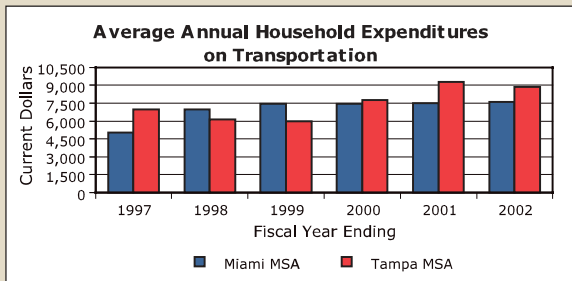


- Recent review by the U.S. Environmental Protection Agency has resulted in all of Florida's urban areas being designated as air quality attainment areas.
- Since 1999, 416 cultural resource assessment surveys have been completed on transportation projects, and more than 1,300 historic preservation issues reviewed.

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. As exemplified by the Miami and Tampa data, average household spending tops \$7,500 annually for transportation.
- While the growing transportation system enables a strong competitive economy, 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 Industry					
Florida Industry	Reliance on Mode				
	Airports	Seaports	Rail	Highway	Intercity Transit
Agriculture/ Forestry					
Mining					
Distribution					
High-Tech					
Universities					
Health Care					
Tourism					
Military					
Importance: Less → → More					

- Florida collects nearly \$3 billion annually in fees and taxes on transportation fuel related items. This is in addition to local and federal revenues derived from gas, other transportation taxes and fees, and investments by developers.

Source: Transportation expenditure data from various annual issues of Consumer Expenditure Survey, Selected Southern Metropolitan Statistical Areas, Bureau of Labor Statistics, US Department of Labor, 2001-2002. Florida Department of Revenue, 2003 Annual 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.

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

- **Florida Transportation Indicators**
<http://www.indicators.cutr.usf.edu/>
- **2020 Florida Transportation Plan**
<http://www.dot.state.fl.us/planning/2020ftp/>
- **Florida Facts by Visit Florida**
<http://www.flausamedia.com/Subcategories/Florida%20Facts/ffmain.htm>
- **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
- **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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