



2060 FLORIDA TRANSPORTATION PLAN
MAINTENANCE & OPERATIONS
2013 PERFORMANCE REPORT

(This Page Intentionally Left Blank)



This report is part of the Performance-Based Planning and Programming Process used by the Florida Department of Transportation (FDOT). For a description of that process, updates to this report and other transportation performance reporting initiatives of FDOT, go to FDOTPerforms.org.

BY THE NUMBERS

The effective and efficient maintenance and operation of Florida's state roads and bridges is important to protecting infrastructure investment and to ensure the performance of our transportation network. Key performance highlights include:

- State Highway System pavements are in excellent condition, with 91.6 percent currently meeting Department standards
- Department maintained bridges are also in excellent condition, with 95.1 percent currently meeting Department standards
- The Department has met or exceeded its roadway maintenance standard target since 1994
- The number of miles managed by Intelligent Transportation System (ITS) technologies has dramatically increased from 170 miles in 2005 to 1,296 miles in 2013
- Over 14 million messages, calls, visits, and alerts were made to Florida's 511 program in fiscal year 2012-2013
- As of June 2013 there were 9,026 subscribers to the Department's twelve regional Twitter feeds—strengthening real time communication between FDOT and system users
- Road Ranger services are provided to over 350,000 stranded motorists each year
- The Department consistently meets its 90-minute target for clearing roadways after incidents (46 minutes on the State Highway System and 79 minutes for severe incidents handled by Rapid Incident Scene Clearance (RISC) activations)

OUR GOAL

MAINTAIN AND OPERATE FLORIDA'S TRANSPORTATION SYSTEM PROACTIVELY

Florida has invested billions of dollars in roads, rail networks, airports, transit facilities and services, seaports and other elements of the transportation system. Regular maintenance and improvements keep these assets operating efficiently, extend their useful life and can delay the substantial cost of reconstruction or replacement.

The Department will continue to make substantial investments to meet established standards for the state's routine maintenance, highway pavement, and bridges to keep them in acceptable condition. Roadways owned by local governments and other transportation facilities such as



bus systems, airports, seaports and railroads are maintained by their respective public and private owners and operators. The Department helps fund some of these facilities, but does not directly build, operate or maintain them.

Managing the transportation system also means ensuring that the existing system efficiently carries people and goods to meet the demand of population growth, an expanding economy, and ever-increasing travel. The Department will increase use of Intelligent Transportation Systems, demand management, access management, incident management and other techniques to maximize the operational efficiency and safety of the system.

The Department has primary jurisdiction over the State Highway System. Although this system consists of 12,086 (10 percent) of the 121,829 public road centerline miles in the state, it carries over half (54 percent) of the traffic. One of the Department's main responsibilities is keeping the State Highway System in acceptable physical condition. To achieve this, the Department resurfaces roads, repairs or replaces bridges and conducts routine maintenance activities such as mowing, litter removal, guardrail repair, and sign replacement.

Keeping the other facilities which are part of Florida's transportation system in acceptable physical condition is the responsibility of local governments, authorities and private sector companies which own and operate them. The Department will continue to compile available information on condition-related issues for these facilities and, where authorized, make safety-related inspections.

OUR OBJECTIVES

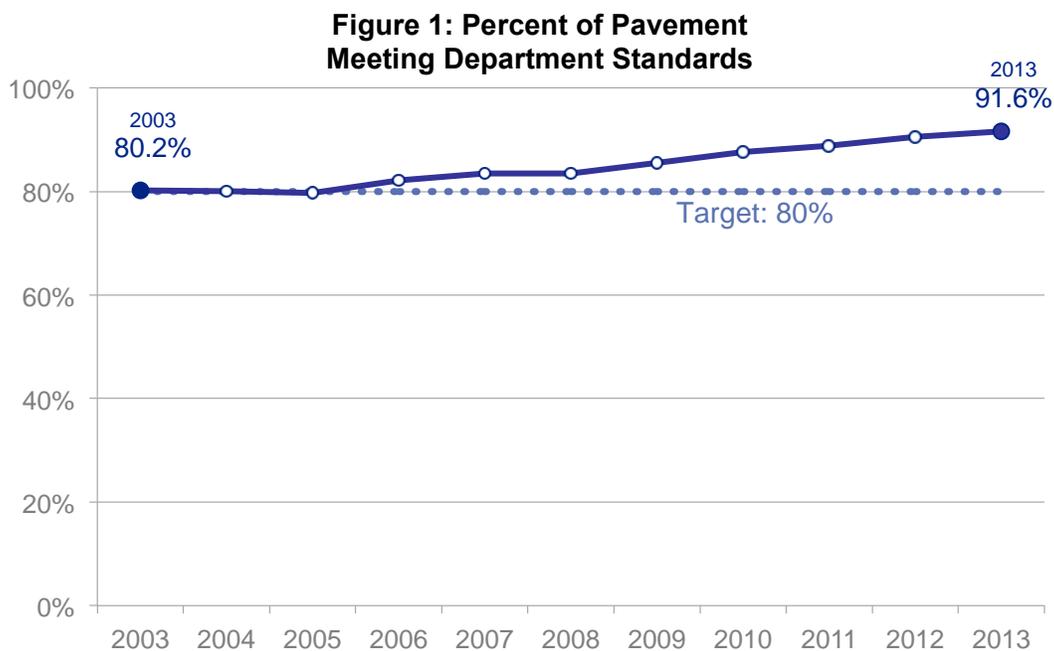
The Florida Department of Transportation sets objectives and strategies to implement the goals of the *2060 Florida Transportation Plan*. Each objective includes an array of strategies to enable the Department to meet its adopted objectives. The following objectives provide the policy framework for connecting the Department's budget and work program to the *2060 Florida Transportation Plan's* maintenance and operations goal.

- Ensure that 80 percent of pavement on the State Highway System meets Department standards
- Ensure that 90 percent of Department-maintained bridges meet standards while keeping all Department-maintained bridges open to the public safe
- Achieve 100 percent of the acceptable maintenance standard on the State Highway System
- Improve system efficiency by deploying transportation systems management and operations on state corridors



OBJECTIVE: Ensure that 80 percent of pavement on the State Highway System meets Department standards

The Department has a long-standing commitment to keeping the pavement on state highways in an acceptable condition. The State Highway System has remained at or above the target of 80 percent non-deficient throughout the last decade. Pavement on the State Highway System is in excellent condition, with 91.6 percent of the pavement currently meeting Department standards, exceeding the Department's target goal of 80 percent (**Figure 1**). This percentage is expected to remain above the 80 percent objective threshold.



The 8.4 percent of roadway miles not meeting the target goal means that 3,640 lane-miles of pavement currently need rehabilitation. While the Department has continued to find sufficient funds to meet the pavement condition objectives, the amount of funding needed for pavement rehabilitation is reevaluated annually.

Pavement on the State Highway System is in excellent condition, with 91.6 percent of the pavement currently meeting Department standards.

State roads needing resurfacing are identified through the Department's annual pavement condition survey. This survey evaluates pavement conditions using three factors: ride quality, crack severity and average depth of wheel-path ruts.



“Ride quality” is what the motorist experiences (i.e., smoothness of the ride). It directly affects motor vehicle operating costs. Crack severity, or “cracking,” refers to the structural deterioration of the pavement, which leads to loss of smoothness and deterioration of the road base by water seepage, if not corrected. Wheel-path ruts, or “rutting,” are depressions in the pavement caused by heavy use. These depressions can collect water, creating a safety hazard.

Truck traffic contributes to wear on roadways, because of the force exerted on the pavement and the way pavement reacts to it. A five-axle, 80,000 pound semi-trailer truck causes pavement distress equivalent to that caused by about 9,600 cars. The Department enforces legal weight limits because increases in weight have enormous impacts on pavement wear. Even the arrangement of truck axles or a factor as simple as proper tire pressure can have a significant impact on pavement wear.

It is important to keep roadway pavement in good shape. When roadway surfaces are not maintained, the roadway must be rebuilt—literally—from the ground up. It is more economical to systematically maintain roadways to extend their life-cycle as long as feasibly possible rather than rebuilding them.

Strategies for Pavement Condition

The Department will help ensure the objective related to pavement condition is achieved through these actions:

- Resurface at least 4 percent of the State Highway System annually
- Eliminate the illegal operation of commercial motor vehicles exceeding weight limits on Florida’s public roads and bridges
- Facilitate training and technical assistance, and maintain current data systems to assist local governments in conducting pavement condition surveys and ratings

OBJECTIVE: Ensure that 90 percent of Department-maintained bridges meet standards while keeping all Department-maintained bridges open to the public safe

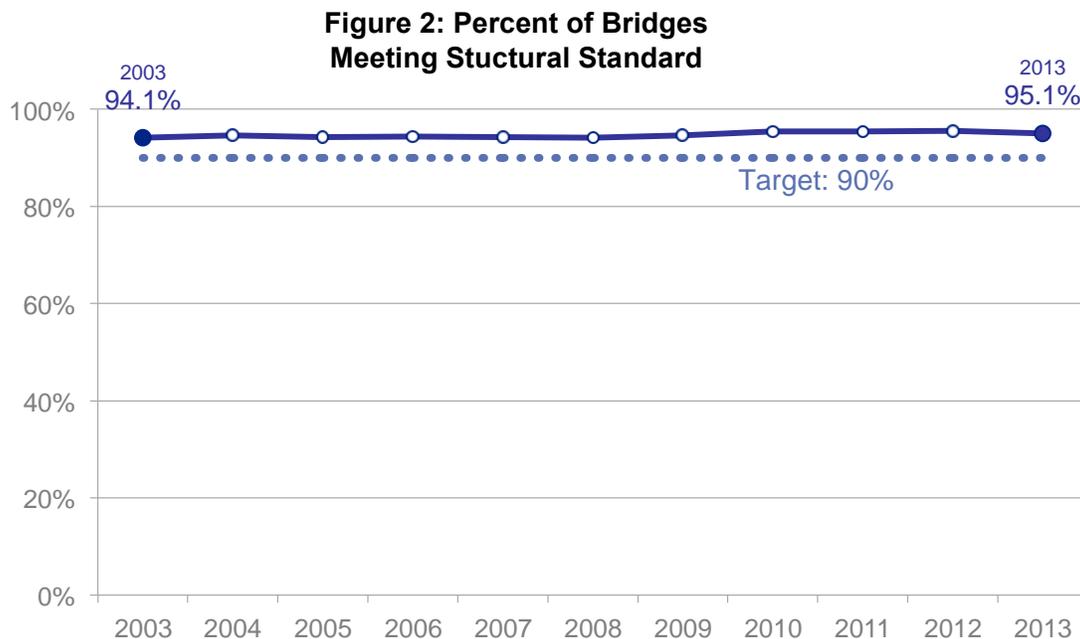
The Department has a long-standing commitment to keep the bridges on state highways in a good, safe condition. The Department’s primary measure is to have 90 percent of its bridges achieve a National Bridge Inventory (NBI) rating of 6 or higher. The NBI is a Federal Highway Administration requirement used to evaluate the condition of bridges, based on a scale of 0 to 9 with 0 meaning a failed

Ninety percent or more of the bridges on the State Highway System have met the Department’s standard since 1996.



condition and 9 meaning an excellent condition. An NBI rating of 6 or 7 means a bridge is in good condition. Ninety percent or more of the bridges on the State Highway System have met Department's standard since 1996.

Currently, over 95 percent of all Department-maintained bridges meet standards, exceeding the Department's target goal of 90 percent (**Figure 2**), which means Florida bridges do not show evidence of structural deterioration and are not limited by weight restrictions. The Department takes a proactive approach towards bridge maintenance, which has proven cost-effective, as preventative maintenance and repairs are performed prior to the bridge deteriorating to a level that would require a much higher cost to repair. This proactive approach ensures Department-maintained bridges meet or exceed their life expectancy, which results in a lower frequency of replacements due to bridge condition. All bridges maintained by the Department that are open to the public are safe.



The Department maintains 6,700 bridges and inspected 2,581 other bridges owned by other state and local government jurisdictions in FY 2012/2013. Each bridge's current condition is compared with the condition from its previous inspection. If the structural capacity has been affected, the bridge is reevaluated through load rating tests to determine its current structural capacity. Each bridge is inspected at least once every two years to assess its condition and to identify which bridges need routine or periodic maintenance, rehabilitation, or replacement. Special inspections are conducted after major weather events, such as floods and hurricanes.



Routine maintenance and repairs help extend bridge life. However, at a certain point it becomes more cost-effective to replace a bridge than to repair it. Since the Department's bridge inspection program began in 1970, there has been a steady improvement in bridge conditions on the State Highway System due to an aggressive maintenance and construction program. The Department also administers federal programs which help fund repairs and replacements of locally maintained bridges.

Bridges are designed to tolerate a certain amount of structural deterioration and still support legal weight loads. If a bridge is unable to support all legal loads, weight limits are posted or the bridge is closed to traffic until the deficiency can be corrected. Because bridges are actually flexible, vehicles moving across a bridge cause some vertical movement in the bridge structure. Over time, this structural flexing causes deterioration. Another reason bridges wear out is stress caused by saltwater, rain, freezing temperatures and wind. Impacts from colliding motor vehicles, barges and ships also exact their toll.

Most bridge damage, though, comes simply from usage. As with roadways, heavy trucks contribute to wear-and-tear on bridges. So, like pavements, bridges must be designed to take into account how many trucks will pass over them during their design lives.

Strategies for Bridge Condition

The Department will help ensure the bridge condition objective is achieved through these actions:

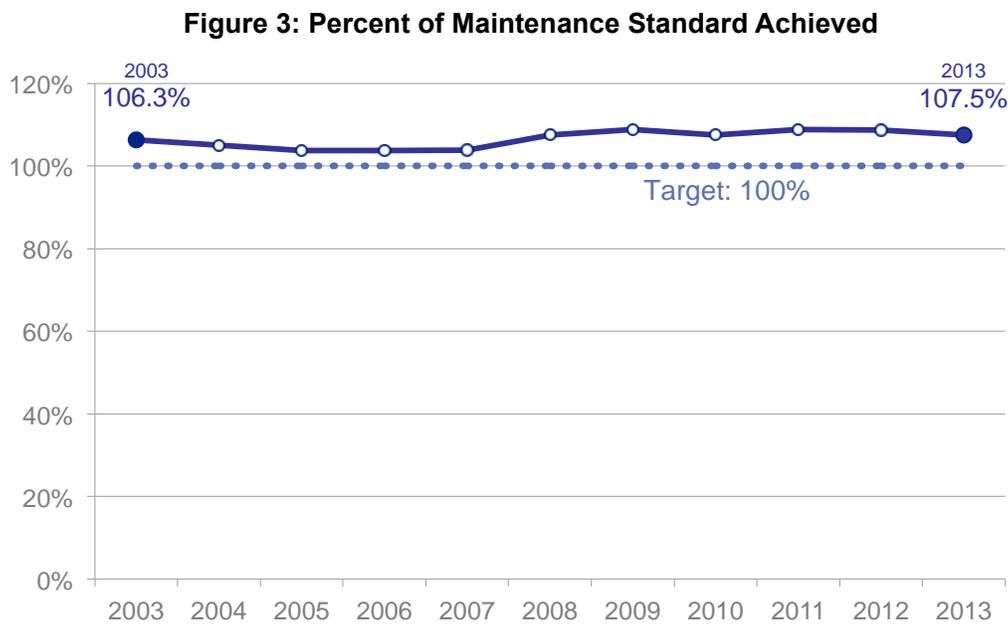
- Enter all Department-maintained bridge projects that need repair into the Work Program within 12 months of deficiency identification
- Replace or repair all structurally deficient Department-maintained bridges and those bridges posted for weight restriction within six years of the deficiency identification
- Replace all other Department-maintained bridges designated for replacement within nine years of the deficiency identification
- Reduce the illegal operation of commercial motor vehicles exceeding weight limits on Florida's public roads and bridges
- Continue to monitor bridges scheduled to be replaced and make interim repairs, as necessary, to safeguard the traveling public



OBJECTIVE: Achieve 100 percent of the acceptable maintenance standard on the State Highway System

As an integral part of preserving state highways, the Department has reconfirmed its long-standing commitment to “achieve 100 percent of the acceptable maintenance standard on the State Highway System.” The Department’s primary measure is to achieve a Maintenance Rating Program of at least 80 on the State Highway System. The Maintenance Rating Program is based on an evaluation of the State Highway System, which grades five maintenance elements (listed further below) and arrives at a composite score based on a scale of 1 to 100. The Department has met or exceeded its roadway maintenance target goal of 100 percent since 1994. **Figure 3** highlights this accomplishment with data from the past 10 years.

The Department has met or exceeded its roadway maintenance standard since 1994.



Field conditions are evaluated using the Maintenance Rating Program. Each part of the highway is rated and the overall maintenance condition is calculated. Conditions are compared to Department standards and a composite state score is calculated. The maintenance condition rating system looks at five parts of the highway environment:

- Roadway - potholes, pavement joints, paved shoulders and pavement distress
- Traffic services - signs, lighting, guardrails, striping, attenuators, handrail and pavement markers



- Roadside - unpaved shoulders, slopes, sidewalks, and fences
- Drainage - storm drains, ditches, roadway sweeping, inlets, and pavement edgedrain outlets
- Vegetation/aesthetics – landscaping, mowing, litter removal, turf condition, and tree trimming

It is important to maintain roads at an optimal level, both for driver safety and comfort, as well as to allow the responsible agency or local government to plan a stable program of roadway repair or resurfacing. The Department is responsible for scheduling and performing routine maintenance on the State Highway System to help preserve its condition.

Through routine maintenance, highway rest stops are kept clean and attractive, wildflowers are planted along roadsides, roadway striping is reflective for safe nighttime travel, guardrails are repaired, signs are kept clean and visible and potholes are filled. Department staff and contractors also mow grass, remove litter, perform bridge inspections, make bridge repairs, clean out ditches and storm drains and do many other jobs needed to make highway travel easier and safer.

Strategies for Roadway Maintenance

The Department will help ensure the objective related to roadway maintenance is achieved through these actions:

- Continue to identify and implement practices which reduce the time and cost of preserving the State Highway System
- Emphasize use of state-of-the-art technologies and innovative contracting methods to increase the efficiency of system maintenance
- Continue to monitor and adjust maintenance standards to preserve our investment and provide safe roadways for Florida motorists, including special population groups

OBJECTIVE: Improve system efficiency by deploying transportation systems management and operations on state corridors

Transportation professionals across the nation are responding to the challenge of getting more capacity out of the existing transportation system and improving performance. The Department recognizes additional roadway and facility improvements alone will not solve our traffic problems. The solution will be a diverse set of approaches requiring funding commitments, as well as a variety of changes in the way our transportation system is operated. Travel choices, Intelligent Transportation Systems (ITS), access management, and land use issues must be



considered, all in an effort to increase safety and to extend the useful life of our existing roadways.

Transportation Systems Management and Operations (TSM&O) are being used to improve the operation of the existing system in an effort to maximize system efficiency. The purpose of TSM&O is to manage and operate existing roadways, systems and infrastructure as efficiently and effectively as possible.

The Department routinely constructs turn lanes, adjusts median access points, improves traffic signalization and signal systems, and makes other improvements to the operation of state highways and affected local government roads. Many of these activities occur as part of rehabilitating state roads through the Resurfacing program. These kinds of improvements are known as transportation system management strategies.

Transportation demand management strategies to reduce auto travel can also help with managing the system, both by reducing the number and length of trips and by increasing vehicle occupancy. The Department works with local governments and other partners to promote the use of transportation demand management techniques such as bicycle and pedestrian programs, commuter matching and ridesharing, carpooling, park-and-ride lots, transit, commuter rail, telecommuting, alternative work hours, trip reduction ordinances, congestion pricing and other ways to reduce peak-hour demand on roadways.

The development of master plans and action plans for the Strategic Intermodal System (SIS) includes support for all modes of transport, including the provision of managed lanes by incorporating special purpose lanes with exclusive connections to park-and-ride lots and transit services. Managed lanes are facilities that are within an existing highway/corridor where operational strategies are proactively implemented and managed in response to changing conditions with a combination of tools, which may include accessibility, vehicle eligibility, or pricing. The implementation of these plans is progressing consistent with the availability of funds.

Access Management

Comprehensive access management is an effective strategy to address traffic congestion, crashes and reduction of roadway capacity. Access management addresses the location and design of restrictive medians, public street entrances and driveway connections to roadways. Access management considers all main users of the roadway system; not only cars, but the interactions between vehicle traffic, pedestrians, cyclists, as well as transit users. Because it involves both land use and transportation, access management also requires cooperation with



local government agencies responsible for transportation and land development decisions. Access management techniques can be extremely beneficial by optimizing vehicle circulation, flow, and safety.

The goal of the Department's program is to limit and separate traffic conflict points. By reducing conflicts safety can be enhanced while improving traffic operations. Florida's access management standards and procedures—developed using national standards and research undertaken or sponsored by the Department—help provide safe and efficient travel.

Virtually all of the Department's new multi-lane highway projects are designed with restrictive medians, which greatly enhance safety. A recent study conducted by Florida International University showed that adding medians to roadways reduced fatal and injury crashes by more than 30 percent¹

Because access management can be controversial, the Department makes a significant effort to engage the public in planning these projects. Each district has a team that works with the public on access management issues.

Intelligent Transportation Systems

Today, we see that transportation performance increasingly reflects the marriage of infrastructure and information. In order to better accommodate our growth in population, tourism and commerce, the Department is committed to develop and deploy sophisticated, fully-integrated, statewide Intelligent Transportation Systems (ITS) in a cost-efficient manner. These systems represent the application of real-time information systems and advanced technologies such as transportation management tools to improve the movement of people, goods and services. Intelligent Transportation Systems use advanced technologies to remedy mobility and safety problems, which may delay or possibly eliminate having to build new roads or expanding existing roads. As ITS evolves throughout Florida, the development and reporting of operational performance measures is a priority for the Department to demonstrate and document the benefits of ITS. When the ITS Program began addressing performance in 2004, none of the districts had an automated data collection system. Performance measures were initially limited to measures of basic production and usage. The initial statewide measures were the number of 511 calls, Road Rangers assists and centerline miles of limited access highways managed by ITS.

¹ Before and After Safety Study of Roadways Where New Medians Have Been Added – November 2012 Priyanka Alluri, Albert Gan, Kirolos Haleem, Stephanie Miranda, Erik Echezabal Andres Diaz, and Shanghong Ding

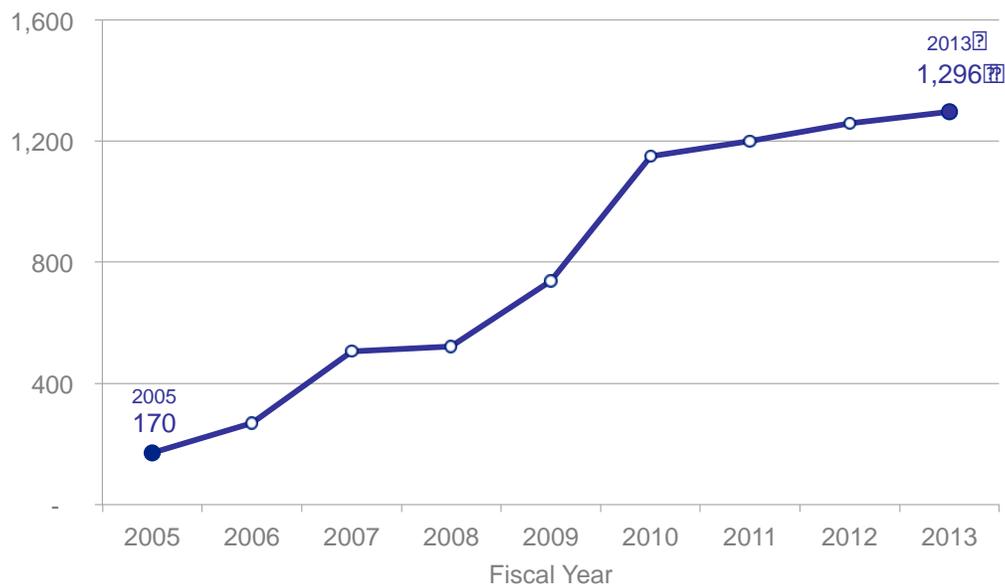


As ITS deployment and integration proliferate, measures of performance and resulting benefits can be more accurately documented and reported. A number of ITS performance measures have been identified: miles managed by ITS; 511 calls, messages, visits and alerts; Road Ranger service stops; incident duration (roadway clearance times); and customer satisfaction.

Miles Managed by ITS

By June 2012, 1,258 miles were managed through ITS (**Figure 4**). This represents 60 percent ITS coverage of Florida's strategic highway system. Extensive ITS deployment has taken place during the previous fiscal year throughout the State.

Figure 4: FDOT-Managed ITS Miles



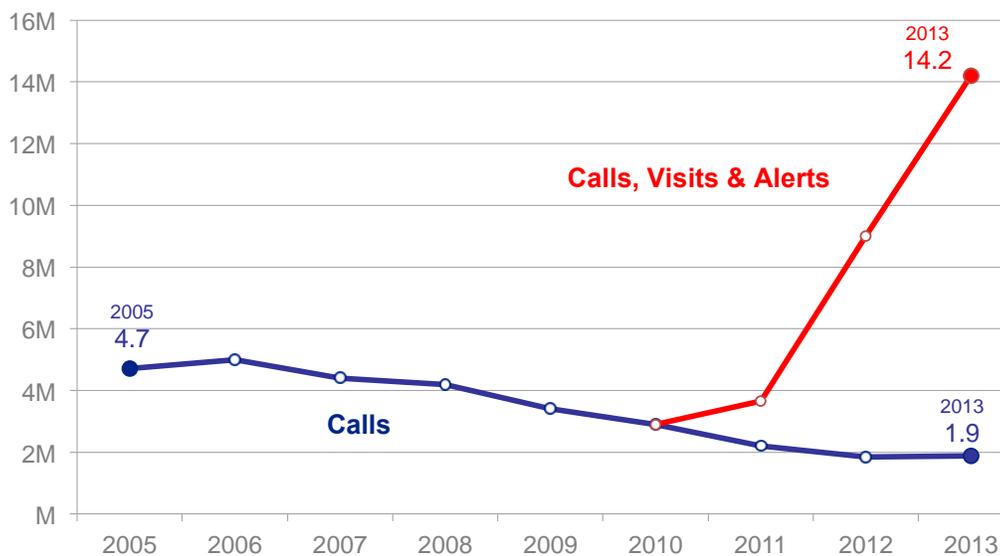
FL511

Florida's 511 program, dubbed FL511, provides accurate real-time information to travelers on traffic and road conditions, alternate route information (during incidents), construction information, weather-related problems and public transportation information/options. FL511 provides multiple platforms to allow motorists to receive traffic updates through methods that best suit their lifestyles, whether it is through a phone call, an email, a text, a web site, Twitter, or a smart phone application. With a wide variety of outlets for travelers to receive 511 traffic updates, the phone system continues to expand as a key platform for distributing traveler information.



In June 2009, Florida's statewide 511 services integrated all of the Florida regional 511 services into one statewide system creating the new Statewide Florida 511 Traveler Information System. The fully integrated, bilingual resource offers statewide roadway coverage, including the addition of more than 50 new travel partners and personalized services. System integration allows users to request customized calls or texts to inform them of incidents in areas of interest. A new option for travelers is the Florida 511 application for iPhone, iPad and iPod users, which launched in June 2011. The technology pushes traffic information out to users based on the user's predefined settings. The 511 app uses the mobile device's GPS system to provide users with information based on their location. Approximately 1.88 million 511 calls were made during the 12-month period from July 2012 through June 2013. Although tracking phone calls to Florida 511 is no longer the sole indicator of system usage as more travelers use automated and mobile applications to customize their experience. Over 14 million calls, web/app visits, and e-mail/text/phone message alerts were made in fiscal year 2012-2013 keeping travelers on Florida's highways informed (**Figure 5**).

Figure 5: FL511 Calls, Visits & Alerts (millions)



Below is additional information on the FL511 program:

- The 511 system covers all of Florida's interstates, toll roads and other major metropolitan roadways
- Florida's statewide 511 phone system has received more than 9.1 million calls since launch in June 2009 and averages 189,000 calls a month
- The 511 system provides a free Florida 511 app available for Android and Apple devices



- The Florida 511 mobile apps have been downloaded approximately 57,000 times
- The Florida 511 system provides traveler information 45,000 times per day
- Travel information also is available at FL511.com, which features hundreds of traffic cameras statewide
- 511 users can customize the information they receive through My Florida 511 personalized services
- The FL511.com website has received more than 3 million web visitors since its launch and averages approximately 58,000 visitors each month
- Users can access 511 updates on Twitter by following one of Florida's 12 FL511 regional and roadway Twitter feeds
- As of June 2013 there were 9,026 subscribers to the Department's twelve regional Twitter feeds
- Callers can transfer from 511 to Florida's major airports, seaports and transit agencies
- The most commonly requested reports are for:
 - I-95
 - I-4
 - Florida's Turnpike
 - I-75

ITS Customer Satisfaction

Florida conducts a statewide ITS customer satisfaction survey every two years, with the most recent survey (conducted in July and August 2012) reported in October 2012. Significant findings of the latest survey are:

- The days of radio and television traffic reports dominating traveler market share will eventually come to a close. This was evidenced in previous years by the generational divides in radio and television traffic information consumption. Young drivers were less dependent on traditional sources of traffic information and are more inclined to turn to the internet for traffic information. Use of traditional sources is generally down across all subgroups, and in-car navigation systems have already emerged as the second most popular alternative source of traffic information.
- Use of traditional sources is generally down across all subgroups. By far the most popular alternative source is electronic message signs, which are used by three-quarters (75 percent) of drivers. The next most popular sources for traffic information are in-car navigation systems (34 percent) and websites on a home or work computer (23 percent).



- Drivers who use 511 are passionate in their praise of it, are increasingly trusting of it, and are likely to act on the information it provides.
- There is increased interest in receiving traffic information via text message. With an increasing number of 511 users who have customized the service to meet their specific needs, drivers are less likely to call 511 and are more likely to want traffic notifications sent to them directly.
- The Road Ranger Program and the electronic sign message signs continue to receive overwhelmingly positive ratings by customers—these services are highly valued and trusted by the driving public.
- When asked what additional types of traffic information FDOT should provide, most drivers say they would find information on alternate routes useful.

Incident Duration and Emergency Management

Vehicle crashes on highways typically affect far more travelers and businesses than those directly involved in the crash. It is critical that crash victims be attended to as soon as possible to reduce the possibility of death or serious injury. It is not unusual for major highways to be partially or fully closed while vehicles and debris are removed, which creates or compounds traffic congestion and causes delay for users in the vicinity of the crash. Occasionally, hazardous materials—some of which can be life-threatening—and other commodities are spilled as a result of these crashes or as a result of crashes on other transportation modes such as the railroad network. Quickly responding to and clearing an incident allows the highway to return to normal capacity and traffic flow sooner.

In order to improve incident management, Florida developed a statewide Traffic Incident Management Program, which is comprised of four major components:

- Road Ranger Service
- Open Roads Policy
- Rapid Incident Scene Clearance (RISC) Program
- Traffic Incident Management (TIM) Teams

Road Ranger Service

The Road Rangers Program is a free motorist assistance service provided by the Florida Department of Transportation and its partners that consist of roving vehicles which patrol congested areas and high incident locations along urban freeways. The program began in December 1999 and was initially used for the management of vehicle incidents in construction



zones. The program has since been expanded to respond to all types of incidents and has become an effective tool in the Department's incident management program.

The primary focus of the Road Ranger program is to assist in the clearance of traffic crashes, in addition to continuously roving the roadways looking for stranded motorists, roadway debris, traffic crashes or other incidents. The Road Rangers assist in these situations to help motorists to keep traffic moving. Road Rangers provide direct service to motorists by quickly clearing travel lanes of minor incidents and providing assistance to motorists. Services can include: providing a limited amount of fuel, assisting with tire changes and other types of minor emergency repairs.

All seven Districts and the Turnpike Enterprise provide Road Rangers services covering almost 2,000 miles of state roads. Other than in 2008 when the legislature instituted a 50 percent reduction in Road Ranger funding, which it re-instated the following year, Road Rangers have consistently assisted over 350,000 motorists annually. In fiscal year 2012-13 Road Rangers services were provided to 382,570 motorists (**Figure 6**). Several of the Districts currently provide Road Ranger service on a "24/7" basis. Statewide there are 127 Road Ranger vehicles, of which 90 are equipped with automatic vehicle location (AVL). During peak hours there are up to 109 vehicles on patrol throughout the state.

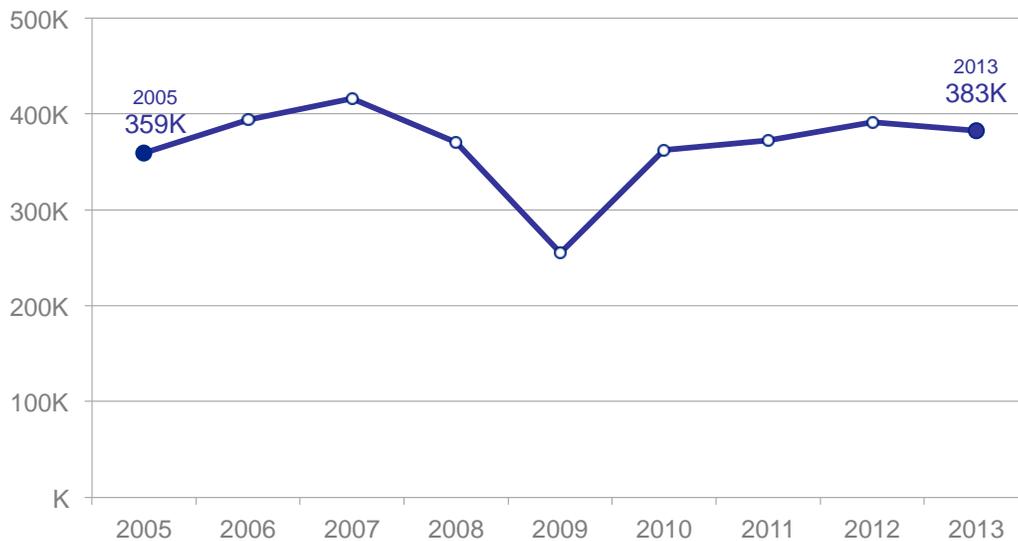
Benefits of the Road Ranger program have been:

- Reduction of accidents
- Reduction of incident duration by assisting the Florida Highway Patrol
- Assistance to disabled or stranded motorists
- Removal of road debris
- Reduction of congestion produced air pollutants
- Increased safety at incident scenes

The Department is committed to expanding the service and coverage of the Road Rangers. The United States Department of Transportation estimates service patrols (such as Road Rangers) can reduce travel delays by up to 45 percent.



Figure 6: Number of Road Ranger Service Stops

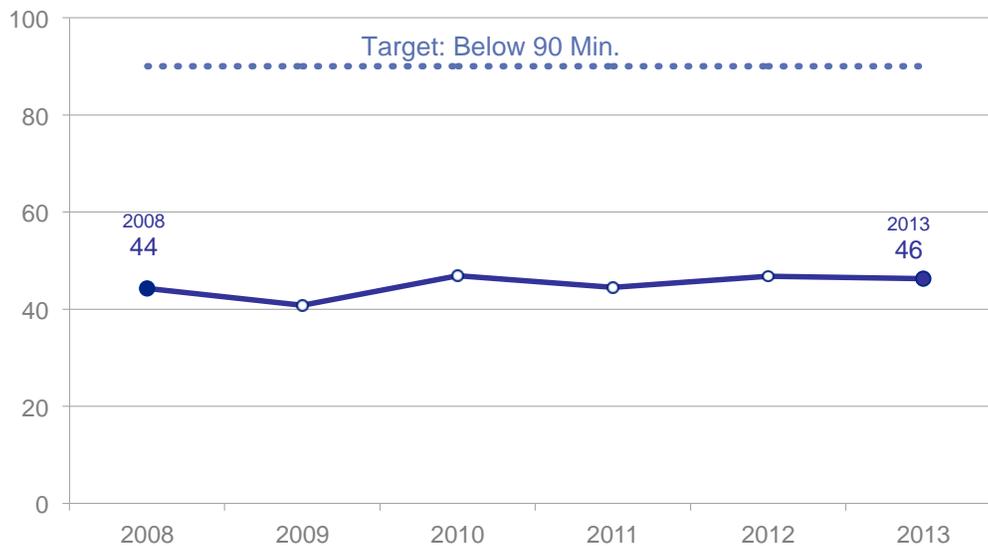


Open Roads Policy

In an effort to provide the traveling public a cost-effective and high quality transportation infrastructure, the Department and the Florida Highway Patrol have implemented the “Open Roads Policy.” The goal of the “Open Roads Policy” is to clear damaged vehicles, spilled cargo and debris as soon as it is safe to do so. It is understood damage to vehicles or cargo may occur as a result of clearing the roadway on an emergency basis. While a reasonable attempt to avoid damage is taken, the highest priority is restoring traffic to normal conditions. A combined goal of all agencies is for all incidents to be cleared from the roadway within 90 minutes of the arrival of the first responding officer with the understanding that this goal may not be obtainable with more complex scenarios, which may require additional time for complete clearance. Roadway clearance times can vary, ranging from a low of 29 minutes to a high of 64 minutes, but the average clearance time is 46 minutes, which is well below the 90-minute target goal of the Open Roads Policy (**Figure 7**).



Figure 7: State Average Roadway Clearance Times (minutes)

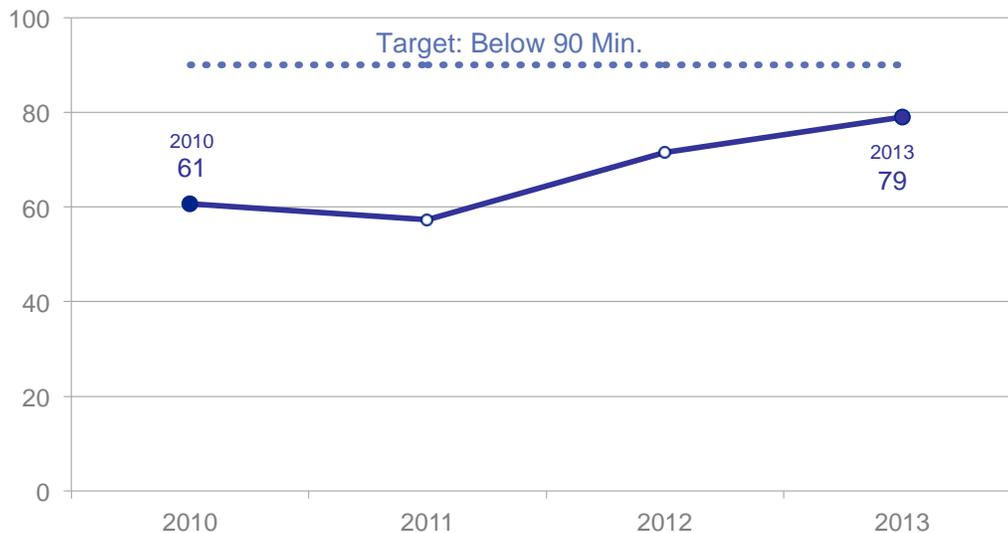


Rapid Incident Scene Clearance (RISC) Program

The Rapid Incident Scene Clearance (RISC) Program is a highly innovative, incentive-based program to meet the goal of safely clearing major highway incidents and truck crashes. This program pays bonuses of \$2,500 to wrecker operators with specialized heavy equipment for successful removal of all wreckage and roadway re-opening within 90 minutes of being given a notice-to-proceed. Incident Response Teams have been formed in all 7 districts and the Turnpike Enterprise to respond rapidly to these incidents. The teams include local emergency response services, the Florida Highway Patrol and local law enforcement officers, state and local traffic engineers, state and local maintenance personnel, and the staff and resources of other partners which may be needed. These teams work together to reduce the severity of injuries resulting from crashes and to restore transportation facilities to normal operating conditions as soon as possible. The Department is an active participant, providing traffic engineering, and maintenance personnel and resources to work with other team members. Communication between team members is a critical component. Roadway clearance times for crashes on major highways can also vary, but the average clearance time is 79 minutes, ranging from a low of 5 minutes to a high of 418 minutes (**Figure 8**), which has increased over the past few years. Although the overall average falls within the 90-minute target goal, the Department reviews all events that do not meet the 90-minute goal to ensure that responders are aware of the RISC activation criteria.



Figure 8: Statewide Average RISC Clearance Time (minutes)



The Department now requires specialized equipment and trained operators to quickly remove heavy trucks hauling larger loads after an incident. Consistent with the “Open Roads Policy,” several Districts have adopted an innovative clearance strategy by implementing the Rapid Incident Scene Clearance Program in order to significantly reduce the time to clear major accidents and incidents. This program utilizes vendors who can provide specialized heavy-duty wreckers and equipment to rapidly clear the roadway on limited access facilities.

Florida also has a State Emergency Response Team composed of staff from key state agencies to ensure the state is prepared to respond to emergencies, recover from them and mitigate their impacts. The State Emergency Operations Center (SEOC) provides direction and coordination of emergency response and recovery efforts before, during and after times of impending or serious emergencies or disasters. When the magnitude of an emergency or disaster exhausts local response capabilities, the SEOC may be activated to respond.

Traffic Incident Management (TIM) Teams

Traffic Incident Management (TIM) Teams bring together all of the agencies involved in clearing an accident, including Florida Highway Patrol (FHP), local law enforcement, fire departments, emergency medical personnel, towing companies, and spill response firms, along with FDOT TMC operators, Road Rangers, and maintenance crews. TIM Teams strive to reduce the time needed to reopen travel lanes and get traffic moving again by reviewing past response actions, exploring ways to improve incident management, and coordinating upcoming planned events or



planning for unplanned events, such as hurricanes, wildfires, and floods. TIM Teams are currently active in most of FDOT's Districts and Florida's Turnpike Enterprise.

Strategies for Transportation Systems Management and Operations

The Department will help ensure the objective related to transportation systems management and operations is achieved through these actions:

- Develop TSM&O policy and procedures
- Establish TSM&O outreach and education program
- Update Department policies and procedures to incorporate TSM&O strategies in all functional areas in PD&E, Construction, Maintenance, and Production
- Continue and refine the Department's Access Management Program based on continued research and practice
- Incorporate Intelligent Transportation Systems (ITS) technologies such as traffic control systems and aggressive incident management techniques to keep traffic moving on the Strategic Intermodal System
- Increase the use of ITS technology as a tool to improve transportation safety and security
- Expand the use of the electronic toll collection system known as SunPass®
- Develop an ITS plan consistent with the Department's Ten-Year Cost Feasible Plan
- Support commuter assistance programs for sharing rides to work
- Use information from post-crash inspections of fatal crashes involving commercial vehicles to target resources in high crash locations and to identify problem carriers
- Coordinate with partners in revising regional evacuation plans