

EXECUTIVE SUMMARY

This report presents the results of the operational and organizational review of the Florida Department of Transportation (FDOT), commissioned by the Florida Transportation Commission (FTC) pursuant to Senate Bill 772, and conducted by KPMG Consulting LLC. The operational and organizational review of the FDOT is intended to present opportunities for improving the Department's operation and enhancing the quality of service provided by the Department, its management and employees.

This report comes at a time when Florida state government is planning a strategic transformation in operations and service delivery. Florida's businesses and citizens are demanding continuous change in the "ways of government" - better, faster and cheaper service. Under the leadership of Governor Bush, Florida government will be transformed through the implementation of an Enterprise Model for government. The Enterprise Model will ensure that the focus of government is placed on its only customer, the citizens of Florida. The Enterprise Model will also ensure that redundant business functions are eliminated while productivity and value are increased by leveraging like services across the Enterprise. The Enterprise transformation revolves around practical strategies to improve service delivery, increase public safety, and enhance Florida's economic development by leveraging new technology, consolidating services, outsourcing non-core business functions, and public-private partnerships – establishing, maintaining, and continually improving the state's technical and economic infrastructure.

FDOT can play a major role and emerge as a leader in this transformation. The state transportation system plays a vital role in sustaining and expanding the state and regional economies by helping businesses gain access to markets and customers – through constantly improving mobility and safety. Millions of individuals and thousands of businesses rely upon this system for effective and safe movement of people, goods, and services throughout the state. FDOT is responsible for a core component of Florida's economic infrastructure.

As one of the fastest growing states in the nation, Florida's future transportation needs are staggering. Responding to those needs is the driving force for transformation. An effective response requires new ways of thinking, effective planning and prioritizing, innovative application of technology, practical funding strategies, and creative implementation approaches that motivate and measure service providers. As the owner of Florida's transportation system, FDOT serves the public as one of the most visible leaders in the transformation process for meeting future needs. Secretary Barry has made excellent progress in his effort to establish an environment focused on excellence and change. The secretary, applying concepts used in the Malcolm Baldrige award selection criteria is focused not only on becoming a model DOT but as a model business.

OBJECTIVES

The report objectives are to:

- Provide an objective basis for improving the FDOT's operation
- Assess whether the FDOT's current organization structure, functions and processes are properly aligned to effectively meet changing economic and demographic development patterns
- Evaluate potential impacts of technology and new economy on transportation revenue streams
- Provide alternative models for the Turnpike District
- Assess opportunities for outsourcing selected business functions
- Evaluate the capital program development and management processes
- Recommend changes to improve operational efficiency and responsiveness to the public

SCOPE

The scope of this study included the following key areas, as directed by the FTC:

- Organizational structure and staffing in FDOT's Central Office and eight District Offices
- Possible outsourcing of selected business functions
- Impacts to transportation revenue streams
- Maintenance and operation of the Department's toll highway facilities
- Process of planning, designing and constructing transportation improvements

APPROACH

The project team spent four months reviewing and evaluating FDOT's operation and organizational structure, capital program development and project delivery processes, and assessing potential impact on the fuel tax revenues due to advancement in technology and growing "On-line" economy. To accomplish these objectives, the project team relied on a variety of internal and external sources of information to evaluate the issues covered in this report, including documentation provided by the FDOT, interviews with FDOT management team and key staff members, questionnaire, and information collected from other state transportation agencies.

BLUEPRINT FOR TRANSFORMATION

It's important to note that FDOT has been recognized nationally as a leader and innovator in many transportation areas through the years. As appropriate, the report attempts to note their relevant accomplishments and on-going efforts as they relate to the opportunities and issues discussed. Having said that, it is important to understand that this report focuses on issues,

opportunities, and recommendations as they relate to strategic objectives and meeting *future* transportation needs.

Recognizing the need for change. Historical success and leadership, such as the Department has seen, often mask the need for continuing change. The Department cannot rest on past laurels. Information indicates that FDOT consistently provides a high level of transportation service and quality – at a correspondingly high level of cost. The Department has done well, but with staggering future transportation needs, severely limited resources, rapidly changing business and technology environments, and transformation in government strategies, there is an opportunity and demand to do better. This is the time and opportunity to create a new culture and it's success characteristics – streamline, agile, responsive, adaptive, smart, and strategic.

Aligning to the transformation. The whole of Florida's government is restructuring and transforming. The Governor has issued a challenge to reduce staff and cost by 25 percent over five years. The Department is proactively preparing a plan that meets or exceeds that challenge – reducing staff by 2,837 positions over the next five years. But that plan must be closely aligned with the strategic goals and objectives, to include consideration of the recommendations in this report. Continuing with their proactive nature the new organization must be carefully and thoughtfully designed, planned, and executed based on business need and operational strategy.

Establishing the goal. To establish a simple framework for creating the recommendations in this report and responding to the demands for doing more with less, two operational goals were considered:

- Increase operational efficiency and effectiveness in meeting the transportation needs with accountability through performance measures
- Continually close the gap between transportation needs and available resources while providing the transportation infrastructure necessary to support Florida's citizens and economic development

Problem Indicators. The information and analysis identified several indicators of problems that led to the recommendations in the full report. Those key indicators were:

- Estimated transportation needs significantly exceed estimated resources (Florida Intrastate Highway System [FIHS] \$29B shortfall over 20 years)
- Critical and complex areas for project planning and management are less effective than they could be in areas of estimating, risk assessment and management, and contract management and may contribute to project cost and time overruns
- Staffing levels and related costs remain above a comparative peer and national average despite FDOT's leadership role in outsourcing and partnership strategies
- The Department continues to perform non-core functions (the reorganization/reduction plan is beginning to address some of these functions)

- Planning and application of Intelligent Transportation Systems (ITS) has been decentralized, resulting in districts/metropolitan regions implementing diverse and incompatible systems, insufficient to realize full potential benefits – ITS, and application of technology in general, must be integral to strategic planning
- Regional planning, collaboration, and coordination with and through the Metropolitan Planning Organizations (MPOs) is complex, inconsistent, and parochial, adding effort, time, and cost to planning and projects
- The Department acknowledges employee retention problems in critical skill areas – an issue that must be specifically addressed in the reorganization and reduction plan.

Prescriptive Opportunities. With these problems and the Department’s history for innovation come opportunities for continued improvement. The Department should review and modify its strategic plan in the context of the 35 recommendations in this report. Some of these recommendations are easier than others to address and implement in the short-term. In focusing on nearer-term opportunities, the following specific areas should be addressed:

- Focus on core business functions – outsource or transfer non-core business functions
 - Expand outsourcing where private sector functions and capability exist
 - Outsource all Office of Toll Operations (OTO) functions
 - Expand the use of Asset Management-based contracts for highway maintenance to reduce service, administrative, and management costs
 - Consolidate professional services contracts to enhance regional coverage and reduce administrative and management costs
 - Leverage private sector or other governmental agencies to eliminate non-core functions like graphics, video, etc.
 - Transfer functions to other agencies
 - Transfer the Motor Carrier Compliance Office (MCCO) staff and responsibility to an organization that performs similar core functions
 - Migrate the Turnpike “district” to a Turnpike Authority to reduce size and increase revenue, etc.
 - Complete the integration and alignment with the State Technology Office (STO) to maximize the benefit of infrastructure technology in the future
- Organization and Staffing
 - In reducing staff and cost to meet or exceed the State’s goal of 25 percent reductions, the Department must align organizational structure and staffing requirements to meet core business functions, outsourcing and partnership strategies, and manage service providers
 - Improve the project planning and management approach, process, and training to reduce cost and time overruns

- Establish a program for training and retention of skilled resources that leverages the realities of career path and development, compensation, and estimated attrition to the private sector
- Technology
 - Develop a full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS
 - Complete efforts to establish a Department ITS strategic function and expand it to include industry participation in an advisory council to define vision, standards, approach, and partnership
 - Increase the emphasis on ITS and technology, in general, by aligning responsibility for technology at a strategic level in the organization
- Define legislative changes and additional funding assistance strategies to encourage MPOs to collaborate on regional projects

RESULTS IN BRIEF

Capacity and Need. Florida Intrastate Highway System (FIHS) capacity improvements have not kept pace with Florida's growth. Travel demand and congestion on the FIHS are increasing more than two-times faster than the Department can fund and construct lane miles to expand system capacity. Since 1990, travel and congestion increased approximately 30 percent, while the FIHS capacity expanded approximately 13 percent. An analysis updated in 2000 estimated FIHS needs of \$47 billion by 2020. During this same period, revenues available for the FIHS were estimated at \$18 billion, leaving an estimated shortfall of \$29 billion by 2020. This need and resource gap underscores the demand for transformation and innovative thinking.

Review and prioritize need. FDOT management should revise its planning process to more accurately match expected available funding to the planned expansion of the program and project plan. While it is prudent to entertain more projects than can be funded, since some projects may be delayed and thus others can be accelerated, the current practice of forecasting a shortfall in excess of planned expenditure doesn't yield any favorable result, and in fact may reflect poorly on FDOT with regard to a perception that the "job is too big and can't get done."

Planning and Management. The annual construction element of Florida's Transportation Work Program contains over \$2.0 billion in highway and public transportation improvements that must be planned, designed and constructed to meet defined schedules and budgets. While FDOT is successful in meeting its annual plan production and contract letting goals, there are opportunities to improve the efficiency of program and project management processes, systems and skills.

Projects vary widely in complexity – a simple culvert replacement project might cost only \$50,000 and take less than two years to design and construct, while a new multi-lane highway or major river crossing might cost over \$50 million and take 8-10 years to implement. Management processes and skills must support this range of complexity. Managing a multi-year program with thousands of complex projects in various stages of development requires sophisticated project management tools and capabilities. More effective management and control of major project components will provide an opportunity to reduce cost and time overruns.

Funding Strategies. The funding strategies available to FDOT, other than the major expansion of tolled facilities, do not generate sufficient revenue - to counter the downside risk in future fuel tax revenues. Nor do those strategies significantly contribute to closing the funding shortfall gap for the continued development of the FIHS through year 2020. To be effective, funding strategies should be derived from the following critical elements:

- **Transportation need.** The estimated \$29B funding gap over the next 20 years – created by the \$47B identified need offset by \$18B in anticipated resources – cannot be fully met by a feasible and practical combination of existing and alternative revenue strategies.
- **Revenue impact strategies.** The report reviews the potential impact on the future fuel tax revenues due to technology and behavioral changes and presents several broader strategies for addressing the long-term transportation funding needs. The 20-year impact of potential lost fuel tax revenue is \$3B. The recommended strategies for increasing revenue, combined in total, are not adequate to offset the projected \$29B shortfall. (See Section 3)
- **Project planning and development.** Opportunities to improve the Department's program and project management processes, systems, and skills could significantly reduce project cost. The cost reductions could be realized through efficiencies in planning and estimating, scheduling, design, and management. Improved management processes would reduce controllable cost that contribute to cost and time overruns, supplemental agreement days, and claims. KPMG estimates that over 44 percent of the factors that contribute to cost and time overruns are within the project engineer's control and could be managed. For example, the cost overruns on completed projects for the last five years have averaged 12 percent. Each one percent reduction in annual cost overruns, that can be achieved through improved project planning and management, will save \$160M over 20 years. (See Section 4 and Section 6)
- **Organizational and operational efficiency.** Potential cost savings and efficiency through organizational and operational restructuring, including expansion of outsourcing and public/private partnerships. The Department, in response to initiatives to reduce cost and staff by 25 percent over the next five years, has prepared a restructuring proposal that reduces staff by approximately 28 percent (2,837 FTEs). As the details of the restructuring plan emerge, they should be reviewed in the context of the Department's core functions. To be successful, the restructuring and staffing plan must be based on a "resource model" that

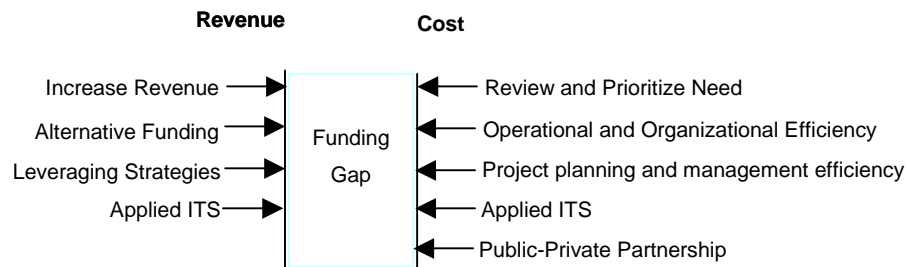
establishes the baseline in-house staffing levels and skills required for FDOT's core functions. The resource model should also address a career and succession planning strategy to ensure that the Department acquires and maintains these prescribed staffing levels and skills. (See Section 7)

- **Intelligent Transportation Systems (ITS).** Nationwide, direct benefits from transportation system efficiency gains applying ITS are expected to reach \$252B over 20 years. The report highlights strategies for effectively applying ITS for efficiency, revenue, and improved service. To date, there has been no enterprise level focus on ITS as a transportation solution element. The Department is establishing and staffing a function to include ITS in strategic planning. To be successful, the Department must reach out and include the technology solution providers in the strategic planning process and integrate ITS planning into the MPO process. With respect to overall potential benefits, from both public and private sector investment in ITS, initial analysis suggests that Florida could realize up to \$12B in benefits over the next 20 years. A summary of the ITS opportunities and challenges include:
 - ITS Opportunities
 - Maximize Asset Utilization along parallel routes to reduce congestion and accidents
 - Ramp Metering and Traffic Signal Synchronization to control traffic flow
 - Information sharing to provide real-time information to travelers in planning and in route
 - Incident Management using wireless and satellite communication for emergency and safety assistance
 - ITS Challenges
 - Establishing architecture deployment standards for ITS solutions
 - Selecting common or interoperable ITS software platforms
 - Establishing methods for inter-jurisdictional cooperation
 - Establishing an aggressive funding strategy for ITS implementation, operations, and maintenance

The project team recommends that FDOT establish a firm time-line for preparing the full-scale ITS deployment plan (e.g., within 6 to 9 months). The proposed ITS deployment plan should clearly outline FDOT's strategies for the deployment, operations and maintenance of ITS applications on a statewide basis, describe meaningful and tangible benefits of deploying ITS applications, and it should identify opportunities for establishing a public-private partnership for deployment, operations and maintenance of ITS applications in Florida. A reasonable strategy could begin realizing benefits within 18 to 24 months of completing the initial deployment plan.

Closing the gap. Taken individually, none of the elements summarized briefly above, and discussed throughout the report, have a cost or revenue impact significant enough to offset the estimated \$29B funding shortfall of the FIHS in the 20-year plan. To properly address this gap, these elements should be addressed in combination as part of a Department transformation process. Cost, revenue, planning, and management strategies will contribute significantly to closing the funding gap and creating a program and project plan that aligns need with projected resources(Exhibit E-1).

Exhibit E-1: Closing the Funding Gap



Peer Group Comparison. To establish a foundation to evaluate FDOT’s operations, a comparative analysis was completed as a part of this study (Appendix A). Relevant information was collected from neighboring states, and from states comparable to Florida in terms of transportation infrastructure, capital outlay and other characteristics. For each category of information collected, both the peer states average and the U.S. average are calculated and presented. The results of the comparative analysis indicate symptoms of possible operational and program/project management inefficiencies that should be investigated. For example, FDOT outsources nearly twice as much maintenance compared to their peer group, but the FDOT maintenance staff per lane mile is nearly double their peer average. Identifying the cause and effect of the analysis indicators would provide additional opportunities and strategies for operational and service delivery improvements.

Recruitment and Retention. The organizational and operational strategies should align staffing and organization with business functions and specifically address staffing, training, and retention requirements for providing effective, critical, core competencies. At a minimum, the core competencies must address both engineering and project planning and management disciplines. The recommendations include the concept of a “Transportation Academy” for developing and maintaining these core competencies through a planned curriculum that aligns consistency, productivity, and efficiency in execution with the Department’s business and programmatic needs. The strategy should consider a private sector staffing model that classifies position requirements based on business need and competitively compensates skills to encourage retention and maximize productivity and effectiveness. In addition, the staffing model should be realistic – recognizing that state pay is not professionally competitive, and staff will leave for private sector opportunities. The plan can also leverage a strategy with the private

sector for executives on loan, DOT internships, and public/private partnership to swap resources.

Turnpike Organizational Models. The FDOT has retained Infrastructure Management Group, Inc. (IMG) to develop three strategic options involving the management and operation of the Turnpike District and assess the relative implications of each strategic option on the Turnpike District, FDOT and the State of Florida. The three options in the IMG study are the current district structure, privatization of the turnpike through lease or sale, and the creation of an “enhanced” district. The FTC, as part of this study, has requested KPMG to develop and assess the benefits of creating a separate Authority for the Florida Turnpike – a fourth option. The assessment includes a comparative analysis of the three IMG options with the Authority option. Presently, the IMG report to FDOT has not been completed and released. However, this draft report contains our qualitative analysis of the Authority approach. The Authority model presents a feasible public-private partnership that could manage Turnpike operations with a staff of 30-35 people.

Integrating Transportation into Florida’s Enterprise Vision. Transportation is a major factor in the growth of our state – the transportation planning process must be integrated with growth management, operational transformation, and technology planning for the Florida Enterprise. The Department should embrace and actively seek to partner with other state agencies in joint piloting and implementing programs and technologies for improving performance and service delivery. Florida Enterprise areas that are combining thought leadership and economies of scale include:

- **Growth Management** – Multi-agency strategic planning for Florida economic development with a focus on future needs, performance measurements (outcomes), operational and organizational effectiveness and efficiency, physical infrastructure, and technical infrastructure.
- **Transformation Initiatives** – FDOT can leverage multi-agency initiatives for e-procurement, on-line bidding, human resources administration, financial management, project planning and management to accelerate the Department’s operational and organizational improvements.
- **State Technology Office (STO)** – FDOT must embrace the transition of information technology into the STO. Achieving STO goals will improve the wide area communications capability, establish an infrastructure to support Intelligent Transportation Systems (ITS) integration, and reduce the cost of accessing and disseminating information.

SUMMARY OF PROPOSED RECOMMENDATIONS

The report presents recommendations, in each of the key areas, that are estimated to have high, positive impacts on cost, revenue, efficiency, and service delivery. Those recommendations are summarized in the table below.

Exhibit E-2: Recommendation Table

FDOT Assessment and Operational Review Recommendations
<p>Chapter 3 – Revenue Impact Strategies</p> <ol style="list-style-type: none"> 1) Strategies for augmenting STTF revenues <ul style="list-style-type: none"> Expansion of Turnpike Value Pricing – High Occupancy/Toll (HOT) Lanes Value Pricing – Express Lanes Shadow Tolls Naming Rights Joint Development– Resource Leveraging Asset Management – Infrastructure Preservation 2) Establish a threshold for supporting funding needs for the non-highway modes through the STTF 3) The Planning process should take into consideration expected available funding for the planned expansion of the FIHS
<p>Chapter 4 - Project Development and Delivery</p> <ol style="list-style-type: none"> 1) Re-engineer FDOT's program and project management processes, systems and organizational structure 2) Consider legislative changes and additional funding assistance to encourage MPO's to collaborate on regional projects 3) Streamline the process for certifying projects as Type 2 Categorical Exclusions 4) Accelerate the process for awarding professional service contracts 5) Automate and centralize contract advertising and letting functions for all construction contracts 6) Simplify design and plan preparation requirements for 100 percent state-funded projects 7) Improve FDOT's utility location and relocation capabilities

FDOT Assessment and Operational Review Recommendations**Chapter 6 - Alternative Service Delivery Strategies**

- 1) Expand the use of alternative/innovative contracting methods for construction contracts
- 2) Expand the use of Asset Management-based contracts for highway maintenance
- 3) Consider grouping of professional services contracts to establish enhanced regional coverage
- 4) Change the Florida Statutes for Right of Way acquisition to reduce cost and time
- 5) Transfer the Office of Toll Operation function to the Turnpike District and Outsource the Toll Collection to private vendor(s) using the Revenue-Sharing Concept
- 6) Outsource and/or transfer selected support services and other non-core functions
- 7) Promote the use of alternative QA/QC concepts for construction and maintenance projects
- 8) Automate Human Resources functions

Chapter 7 - Organizational Structure

- 1) Realign and train FDOT staff to support a life-cycle approach to project delivery
- 2) Transfer the Office of Motor Carrier Compliance from FDOT to an organization that performs similar core functions – or – investigate alternatives to improve the MCCO operation within the Department
- 3) Establish baseline in-house staffing levels and skills requirements for FDOT's core functional areas (a Resource Model)
- 4) Establish a career and succession planning strategy for managers and leaders at FDOT
- 5) Revise measures used to assess FDOT's management and operational performance
- 6) Consolidate staff in offices that perform the Department's various QA/QC functions
- 7) Consolidate area engineer positions
- 8) Consider "corridor management" approach as an alternative to FDOT's current District organization
- 9) Discontinue inspection of private airports, rail tracks and railroad equipment

FDOT Assessment and Operational Review Recommendations**Chapter 8 – Other Strategic Issues**

- 1) Develop a full-scale ITS deployment plan that leverages effective technology to improve mobility and safety on the FIHS
- 2) Establish an ITS advisory council to guide deployment of ITS in Florida
- 3) Complete the transition of the FDOT information technology function to the State Technology Office

We present this report in the hope that the recommendations for improvement outlined here will help the FDOT in its efforts to meet the challenges it currently faces and those that lie ahead.