

# FDOT Statewide ITS Architecture and Standards



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## List of Acronyms

AASHTO	American Association of State Highway and Transportation Officials
AFD	Architecture Flow Diagram
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials
CVISN	Commercial Vehicle Information Systems and Networks
CVO	Commercial Vehicle Operations
EDP	Early Deployment Plan
EOC	Emergency Operations Center
EP	Equipment Package
FDOT	Florida Department of Transportation
FHP	Florida Highway Patrol
HRI	Highway-Rail Intersection
IEEE	Institute of Electrical and Electronic Engineers
ISP	Information Service Provider
ITE	Institute of Transportation Engineers
ITS	Intelligent Transportation Systems (or <i>Integrated</i> Transportation Systems)
MDE	The file name extension of a Microsoft Access Database
MPO	Metropolitan Planning Organization
MS	Microsoft
NEMA	National Electrical Manufacturers' Association
OTO	Office of Toll Operations
PIO	Public Information Office
PC	Personal Computer
PSpecs	Process Specifications
RPC	Regional Planning Commission
SAE	Society of Automotive Engineers
SDO	Standards Development Organization
TMC	Traffic Management Center
USR	User Service Requirement
USDOT	United States Department of Transportation

# 1 Introduction

From "Florida's Intelligent Transportation System Strategic Plan" Final Report (Aug 23, 1999) page 29:

*The Department should develop and maintain a statewide ITS architecture and supporting standards. This architecture should utilize the National ITS Architecture and adapt as needed to meet Florida's needs. The scope of a statewide architecture must recognize and accommodate existing regional ITS architectures in Jacksonville, Orlando, the Tampa Bay area, Miami and Ft. Lauderdale as well as corridor architectures such as for I-4, the Florida Turnpike and existing ITS infrastructure (legacy systems). The statewide ITS Architecture should focus on inter-urban and rural applications, but should also add value to urban areas. ITS development would be preceded by an analysis and mapping of the User Services needed to meet the adopted concept of operations.*

This report is the formal foundation for the objectives and process of this project: to develop a statewide ITS architecture and supporting standards.

## 1.1 Objective

The top-level objective of the project is to develop a statewide ITS architecture and identify applicable ITS standards. This objective supports the broader and related ITS objectives of achieving interoperability between ITS deployments and reducing the cost of ITS deployments. The objective of an ITS architecture is to document the current and future information sharing relationships between existing and planned ITS elements. These elements and their information sharing relationships must reflect the current and expected institutional stakeholder relationships in Florida. The objective of the standards is to guide the implementation of the external interfaces of identified architecture elements (e.g. specific centers, field equipment, vehicles and traveler equipment).

The Florida ITS Architecture identifies the existing and future ITS elements, and identifies the information exchange requirements between these elements, including options for open ITS standards to facilitate the exchange of information between the ITS elements. As such, the focus is on external interfaces to the elements (i.e. the interfaces between ITS elements, not within ITS elements). This focus on external interfaces acknowledges that usually the most difficult and time consuming barrier to deployment of interoperable ITS elements in a region or state is achieving the institutional agreement between stakeholders to exchange specific information between specific ITS elements. An objective of the Florida ITS Architecture is to specifically identify these information exchange requirements early in the process of deployment, so that the time consuming process of achieving institutional agreement(s) can proceed.

An objective of the Florida ITS Architecture is that each ITS element in Florida is mapped to one or more National ITS Architecture entities (e.g. subsystems or terminators). The National ITS

Architecture was thus used as a starting framework, but was augmented as necessary to allow

architecting solutions to physical and high-level functional requirements unique to Florida or Florida districts (and were thus not included in the National ITS Architecture).

Another objective of the regional and Statewide ITS architectures being developed through this program was to meet the Federal TEA-21 Section 5206(e) requirements on Architecture Conformity as interpreted in the USDOT's [\*Interim Guidance on Conformity with the National ITS Architecture and Standards\*](#):

*The regional ITS architecture should be defined at the subsystem and information (architecture) flow level, showing the type of information exchanges planned between specific agencies.*

As per the guidance, we first systematically identified the existing and future inventory of stakeholder elements at the subsystem level (as defined in the National ITS Architecture) based on existing regional and corridor deployments, existing ITS architectural documentation, and articulation of stakeholder needs in the workshops. Next, we identified generic services through National ITS Architecture Market Packages, and where stakeholders indicated a need, we customized those Market Packages for specific applications (existing or future) identified by the stakeholders. This customization identified information exchange at the architecture flow level as specified in the Interim Guidance. Finally, we rolled-up all information exchange requirements at the architecture flow level for each subsystem level entity in the region, and reviewed this with the stakeholders. The result was a consensus architecture for the FDOT districts and at the Statewide level.

While high level functional requirements are identified for each element mapped to a National ITS Architecture subsystem, an objective was to as much as possible avoid identifying specific technologies with Florida ITS Architecture elements. This was done to give the Florida ITS Architecture a "long shelf life," avoiding rapid technological obsolescence that would be unavoidable if specific technology choices were made now. We recommend that the architecture be followed, and that technology choices be made as close as possible to the actual time of deployment (e.g. during the PS&E - Planning, Specifications and Estimates phase of a project).

## **1.2 Process**

The process followed in developing the Florida Statewide ITS Architecture and Standards was as follows:

- **Analyze Prior Work for ITS Architecture Information.** We reviewed and incorporated all prior work as suggested in the Strategic Plan prior to validating the data collected from prior work and then collecting additional stakeholder input from a broad range of ITS stakeholders in each of the FDOT Districts. Before each of the eight regional workshops, the contractors collected available documentation on regional ITS architectures that may have already been developed as well as other information on existing or planned ITS deployments. This information was used to begin (and in the cases of FDOT Districts 5 and 7 substantially begin) the process of developing a regional ITS

architecture with the stakeholders of the region. In many cases, this regional ITS architecture that we developed goes beyond regional ITS architecture work already performed in level of detail with regard to identifying specific information exchange requirements between specific elements in the region.

- **Identification of Software Tools to Support ITS Architecture Analysis and Reporting.** Prior work and stakeholder requirements were collected and analyzed using the National ITS Architecture with *Turbo Architecture*, a personal computer based and inexpensive (\$190 per user) commercially available (from McTrans) tool designed to support ITS Architecture development. *Turbo Architecture* was augmented with proprietary software (*FloridaTurboExtensions*) based on codes developed by the contractor outside the scope of this contract for the purpose of additional analysis of the architecture requirements with the National ITS Architecture and current standards mapping results of the National ITS Architecture Team. This proprietary analysis tool has been delivered to FDOT for the sole use of FDOT in maintaining the Statewide ITS Architecture and Standards databases and html documentation, and its use is documented elsewhere in this report.
- **Develop User Friendly Documentation.** Full documentation of the ITS architecture and standards was done using *FloridaTurboExtensions* generating custom reports from the *Turbo Architecture* databases and including them in a hyperlinked web site and CDROM. The web site is currently posted at [www.jeng.com](http://www.jeng.com) (and is expected to be ported to the FDOT web site in the near future) and has been delivered to FDOT on a CDROM. A partial documentation of the statewide ITS architecture and the FDOT district architectures and standards is included in this final report. A full paper reporting of all deliverable documentation on the website would require several thousand additional pages. The website allows users to rapidly, easily and more economically and ecologically find the elements and interfaces of interest to specific parts of the ITS architecture, and if required supports printing of portions of interest to a user directly from any current web browser.
- **Conduct Stakeholder Workshops.** Having collected and assimilated information about each FDOT District into the *Turbo Architecture* database model, we then conducted an intensive three day workshop over a period of one-week with regional ITS stakeholders representing all aspects of ITS in each of the eight FDOT districts.

The stakeholders participated in three key phases of each workshop. First, the stakeholders validated and added to the inventory developed based on prior documentation. Next, Market Packages from the National ITS Architecture, easily and quickly grasped by stakeholders, were used as an easily accessible means to describe User Services, and were adapted to actual stakeholder inventory elements, user service needs

and desired concept of operations. The National ITS Architecture market packages were extended with new market packages to represent requirements and concepts of operations that are unique to Florida or were not anticipated by the National ITS Architecture. Finally, the stakeholders reviewed the external interfaces for each stakeholder element of the inventory. These external interfaces were derived from the earlier market package analysis.

- **Develop FDOT District Regional ITS Architectures.** Near the end of each of the eight FDOT district workshops, we completed a Draft FDOT district regional ITS architecture and it was reviewed and agreed to by the stakeholders as part of the workshop. The draft FDOT district architecture was then posted to the project website ([www.jeng.com](http://www.jeng.com)) for continued stakeholder review and electronic feedback.
- **Review of the Draft District ITS Architectures.** After all the workshops were concluded, stakeholders were notified that a review period had commenced, and feedback was solicited, collected, analyzed and incorporated into the FDOT district and draft statewide architecture. Based on the stakeholder input, each FDOT district architecture was updated and reposted to the web site. In addition, criteria for the statewide architecture was developed and used to develop a statewide ITS architecture. The criteria and statewide architecture were reviewed with the FDOT Project Panel, and feedback from the Panel incorporated.
- **Develop Florida Statewide ITS Architecture.** Criteria were developed to identify architectural elements and interfaces that should be included in the Florida Statewide ITS Architecture. After completing stakeholder workshops for each of the eight FDOT districts, the results were analyzed according to the developed criteria and then "rolled up" to define the Statewide Florida ITS Architecture.

The statewide ITS architecture was developed from requirements that were collected "bottom up", that is, first FDOT district ITS architectures were developed covering all ITS requirements (urban, interurban and rural) in each of the FDOT districts, and based on these requirements the statewide ITS architecture was developed with additional input from stakeholders involved in statewide ITS services. Requirements that were common across FDOT districts were allowed to "percolate" to the statewide level. Other requirements remained local to the FDOT district where they were identified.

- **Plan for Outreach and Maintenance Activities.** The project team has developed and presented a plan for the continuation of outreach activities to promote information, awareness, and support among ITS stakeholders in the state. Appropriate target audience groups, message themes, and presentation resource material have been identified and described in Chapter 7 of the Final Report.

A plan for continuing update and maintenance of the ITS architecture has also been discussed in Chapter 8. It is recommended that the ITS engineers in each of the FDOT

districts, let by the ITS Administrator at the FDOT Central Office be responsible to coordinate any updates of the architecture. The project team will provide a limited level of technical support in this effort during the second year of the contract.

## 2 Strategic Plan Review

The *Florida's Intelligent Transportation System Strategic Plan* Final Report dated 23 August 1999, serves as a road map for implementing ITS programs and technologies that will address the transportation needs in Florida. The Florida ITS Architecture will function as the foundation of the Florida ITS Strategic Plan. The architecture will integrate with existing and future District ITS Architecture developments and other regional ITS architectures to ensure statewide consistency.

This chapter of the final report reviews the Florida ITS Strategic Plan and identifies how its specific key recommendations have been interpreted and executed in the development of the Florida ITS Architecture and Standards. Also, included is a summary of what types of institutional agreements need to be made to implement the Florida ITS Architecture and Strategic Plan.

### 2.1 Relationships between the Florida ITS Strategic Plan and the Florida ITS Architecture and Standards

In the following table, specific elements of the Florida ITS Strategic Plan (related in some way to ITS Architecture and/or Standards) are compared to corresponding elements of the Florida ITS Architecture and Standards.

<b>Florida ITS Strategic Plan</b>	<b>Florida Statewide ITS Architecture and Standards</b>
... this ITS Strategic Plan directly relates to all of the Modal Plans ... (p. iii)	The Florida Statewide ITS Architecture specifically applies to all modes (including for example: transit, rail, bicycles, pedestrians). In particular, the Architecture has included many aspects of surface transportation that involve data communication and data processing that have traditionally not been included in ITS, (for example, the Controlled Burn Permitting Database) but which are important in Florida's ITS operations.

<b>Florida ITS Strategic Plan</b>	<b>Florida Statewide ITS Architecture and Standards</b>
<p>The development of Florida’s ITS Program will include the selection and prioritization of User Services. (p. 7)</p>	<p>While User Services are crucial for properly scoping and managing the development of a framework ITS architecture such as the National ITS Architecture, we have found that it is too abstract a concept to be very useful for most stakeholders in the limited amount of time available to engage them in an ITS architecture development activity. An alternative approach that serves the same and other purposes as well is through Market Packages. We have thus used the basic set of Market Packages from the National ITS Architecture as a starting point, and customized and added to them with stakeholder input. The resulting market package models include not only the abstract user service requirements of the stakeholders, but also a model of how information will be shared between specific elements to satisfy the user service requirements. This is a kind of "reality check" for the stakeholders, grounding the selection of user services into institutionally credible units.</p>
<p>The Department should also develop a statewide ITS architecture to assure compatibility between and among its districts and also as a framework for delivering those ITS User Services. (p. 7)</p>	<p>We have in fact developed the statewide and District ITS Architectures in parallel and explicitly tied them together only where stakeholders have indicated. In many cases, each District has elements that share information with a common element of the statewide ITS architecture. By developing in this way, the coordination, where desired, is assured.</p>

<b>Florida ITS Strategic Plan</b>	<b>Florida Statewide ITS Architecture and Standards</b>
<p>The relationship of this Statewide Architecture to the regional and corridor architectures is shown in Figure 1 (<i>reproduced here as Figure 1 on page 14</i>).</p>	<p>We have preserved the recommendations as follows: we have separate District ITS architectures and have combined Districts 4 and 6 as recommended. We have used prior District and corridor ITS architectures to instantiate the inventories and services of our District architectures (note that in all cases the documentation we reviewed did not go down to the same level of detail required in our architecture, e.g. identification of specific architecture flows between specific stakeholder elements). (Note that we have recently become aware of additional work on the I-4 corridor architecture to get down to the level of specificity in our corresponding District 5 and 7 ITS architectures.)</p>
<p>The Statewide Architecture, like the National ITS Architecture on which it would be based, does not require a certain methodology for implementing ITS. (p. 7)</p>	<p>Yes. All elements of the Statewide and District ITS architectures are technology neutral to the extent possible. In this way, specific technology choices and methodologies can be decided as close to deployment as possible. The focus of the ITS architectures is on ITS element external interfaces, to facilitate information exchange across institutional boundaries.</p>
<p>Each region and/or corridor would still develop and maintain their own architecture, but would coordinate with the Statewide Architecture development to identify data needs, functional requirements, standards and interfaces. (p. 7)</p>	<p>We have implemented linkages between the District ITS Architectures so that coordination with the statewide ITS architecture is both flexible and unambiguous. In developing the District ITS Architectures, we began with the existing ITS architectures to preserve and enhance the work already done.</p>
<p>There will likely be “project level architectures” for corridors or special applications that are implemented without an overarching regional architecture. These project architectures should acknowledge the statewide architecture and any future regional architecture within which the project will ultimately operate. (p. 7)</p>	<p>We have included project level architectures in the District and Statewide ITS architectures. For each ITS element, we explicitly identify all specific information to be exchanged with each other ITS element. By including the specific elements and their interfaces, we assure consistency as discussed in the strategic plan.</p>

Florida ITS Strategic Plan	Florida Statewide ITS Architecture and Standards
<p>Finally, there may be cases where an ITS type project does not need to be a formal part of any regional, corridor or statewide architecture. These cases would be governed by any applicable local standards and requirements. (P. 7).</p>	<p>We tried to include all ITS elements in the District and Statewide ITS architectures. We presented the interoperability opportunities, but only included information exchange flows where stakeholders ultimately wanted them. Standards identified for interfaces are only <i>recommended</i> at this time, where some level of interface conformity (local, District or Statewide) is desired.</p>
<p>Statewide Vision, Goals and Objectives For ITS (p. 9-11)</p>	<p>This is a vision of positive outcomes. Elegant consensus ITS Architecture is only one precursor of positive outcomes, but by itself does not generate such positive outcomes. After architecture, other requirements for positive outcomes are effective design including wise selection of technologies, effective deployment management, and effective operations management.</p>
<p><b>Provide a common framework for the planning, deployment and integration of systems through ITS architecture and standards consistency—develop regional applications of the National ITS Architecture, maximize the use of common architecture and standards; provide for a migration plan for older (legacy) systems to meet ITS standards and architecture consistency; establish a statewide ITS infrastructure through the use of statewide and national standards and architecture. (P. 12).</b></p>	<p>We have followed this guideline directly. <b>Whether the architecture and the recommended national standards are followed will be tested in the future deployment of new ITS elements and at the end-of-life replacement/upgrade of legacy ITS elements.</b> Commonality was emphasized through a set of common tools that emphasize the sharing of information and the architecting of information sharing infrastructure.</p>

<p>Integrate ITS planning and ITS-related operations planning with statewide, metropolitan, authority and local government planning processes; incorporate ITS plans with Long Range Transportation (LRTP) and with State Implementation Plans (SIP), Transportation Improvement Program (TIP), Congestion Management System (CMS) Transportation System Management (TSM), activities, etc. (P. 12).</p>	<p>The architecture we have developed can be used directly to support four of the seven elements of the integration strategy outlined in the recent NPRM on Planning (see Section 8.1).</p>
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<p>Provide ITS Funding for Architecturally consistent projects—funding priorities should favor those ITS projects which are consistent with state and national ITS architecture and standards. (P. 13).</p>	<p>This is a restatement of the TEA-21 consistency policy (TEA-21 Section 5206(e)) as interpreted by the current rules, the Interim Guidance on Architecture Consistency. Projects guided by the architecture developed here will meet the current rules (or the rules that may become law in the NPRM on Architecture and Standards Consistency).</p>
<p>Include education, training and outreach for policy makers, general public and technical staff. (P. 13)</p>	<p>A key part of the workshops held in each of the eight FDOT districts was to educate the participants about ITS architecture, standards, the benefits, and the role of stakeholders in developing a consensus ITS architecture.</p>
<p>When developing any ITS plan, policy makers and planners are encouraged to follow the ITS axiom of "think regionally and act locally". Local areas are more aware of their own problems and which solutions may be successful and publicly acceptable. Regional thinking is necessary to ensure that coordination is achieved across jurisdictional boundaries providing for maximum benefits to the citizens of Florida. (P. 15).</p>	<p>We followed this guidance in developing the Statewide ITS Architecture through bottoms up (locally driven) development methodology. Elements at the Statewide level always first appeared at the local level, and only when we had evidence of broad commonality of approach did we elevate an element to the statewide level. Local requirements for exchange of information were always customized by the stakeholders that actually represented the sources and sinks of the information flows (when possible, i.e. when they were participating in the stakeholder meetings).</p>

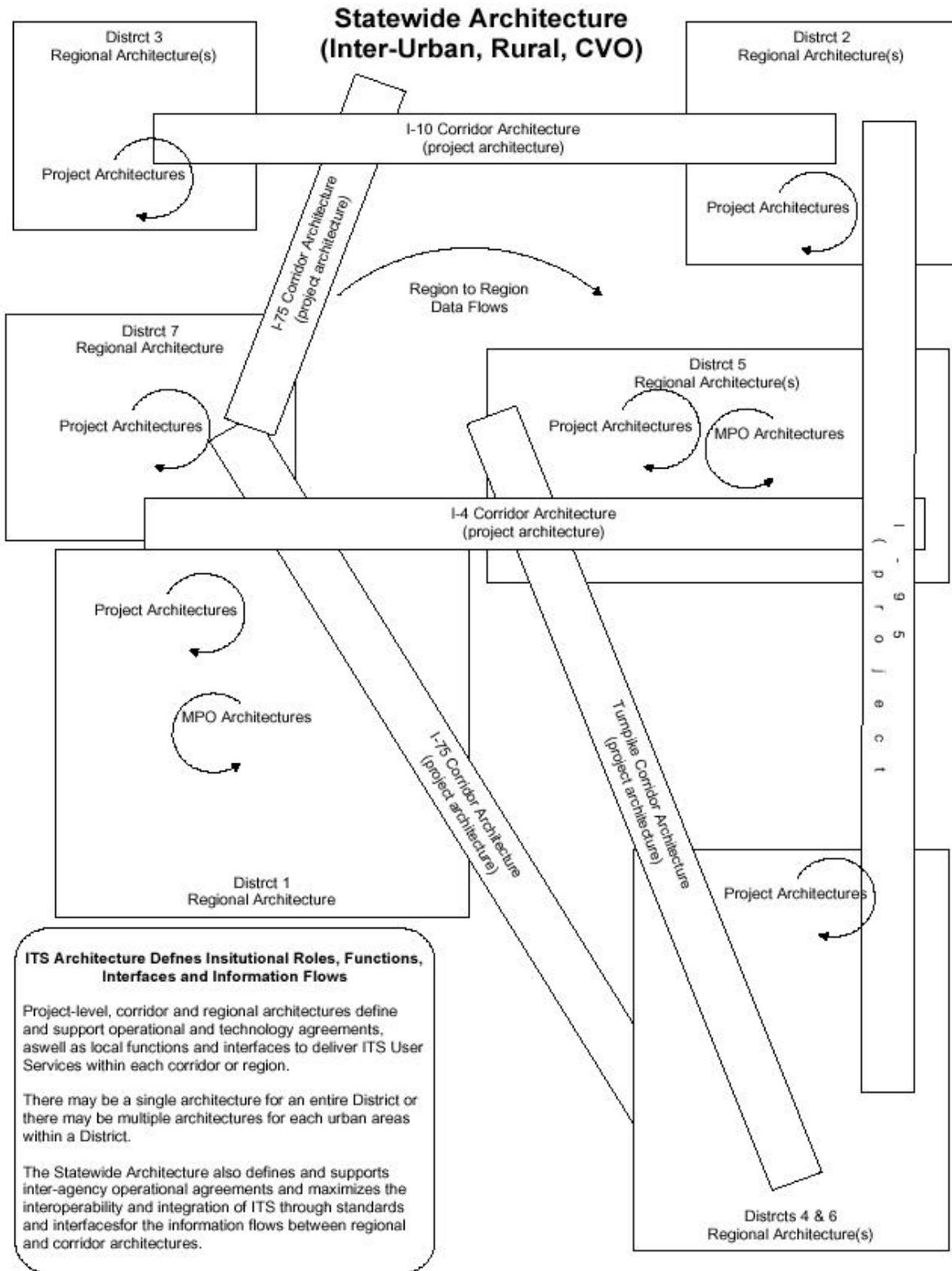
<p>Coordinate the development of a seamless electronic toll collection systems for all toll facilities in Florida. (P. 20).</p>	<p>Working with appropriate stakeholders, we have architected a Reciprocity Network between toll administration centers to allow travelers to use multiple electronic toll systems with a single billing entity. In addition, we have architected a single tag-beacon interface so that users can travel through multiple toll systems with a single tag.</p>
<p>The Department should develop and maintain a statewide ITS architecture and supporting standards. This architecture should utilize the National ITS Architecture and adapt as needed to meet Florida's needs. (P. 29).</p>	<p>This guidance was precisely followed.</p>

<p>The scope of a statewide architecture must recognize and accommodate existing regional ITS architectures in Jacksonville, Orlando, the Tampa Bay area, Miami and Ft. Lauderdale as well as corridor architectures such as for I-4, the Florida Turnpike and existing ITS infrastructure (legacy systems). (P. 29).</p>	<p>To the extent we could get documentation on existing architectures, they were recognized and accommodated by driving the initial definition of the District ITS architectures for this project. In some sense, these architectures were simply recoded into the common methodology used in this project across the entire state. During the workshops, the participating stakeholders added to the preexisting ITS architecture work by considering other services that were not considered, or bringing the documented architecture up-to-date.</p>
<p>The statewide ITS architecture should focus on inter-urban and rural applications, but should also add value to urban areas. (P. 29).</p>	<p>Another way of putting it is that the statewide ITS architecture should cover all ITS services. This is the approach taken.</p>
<p>ITS development would be preceded by an analysis and mapping of the User Services needed to meet the adopted concept of operations. (P. 29).</p>	<p>The Market Package analysis referenced earlier merges the User Service analysis and the Concept of Operation (which elements exchange information to effect a set of services).</p>
<p>Each District, in consultation with the appropriate local governments and MPOs, should develop an architecture or framework for short and long term comprehensive ITS deployment for each urban region. (P. 29).</p>	<p>Local government officials as well as their staffs were invited to participate in the ITS architecture development workshops.</p> <p>Projects that make up the Statewide and District regional ITS architectures are characterized as either existing or future. In this way, there is not distinction made between short and long term deployments. This deficiency is a part of the informed choice that was made by FDOT early in the program. Dropping this requirement originating in the Florida ITS Strategic Plan enabled FDOT to have an ITS architecture that used the off-the-shelf TurboArchitecture tool, rather than a completely proprietary Jaffe Engineering application as originally planned.</p>
<p>A concept of operations will allow for the desired uses of the infrastructure, thus lowering costs by avoiding unnecessary replication of subsystems for individual purposes. The regional architecture approach would be developed within the ITS National Architecture and used as an appropriate template for user services and market and equipment packages for the region. (P. 29).</p>	<p>Elements mapped to National ITS Architecture Subsystems have their component Equipment Packages identified, and we identify in which other ITS elements in a District that same Equipment Package is used. This allows for possible economies of scale in purchasing these Equipment Packages.</p>

<p>The District, in consultation with its MPOs will determine the definition of an urban region. Some Districts may determine that one District wide architecture is appropriate while others may define several urban area architectures within a District. Where more than one architecture is developed within a District, the District is responsible for coordinating and integrating the individual urban areas. (P. 29).</p>	<p>We followed this guidance directly.</p>
<p>The Department should develop and maintain statewide ITS specifications, and standards for project elements, based on national guidelines such as NTCIP and experience in Florida and other states. They need not be singular for each component, but serve as a baseline for system designers, contractors and suppliers. This will serve to level the costs of ITS elements around the state and reduce the overall costs as bidders begin to recognize the lower risk of known and understood requirements. The specifications should address minimum functional requirements and proven technologies, while remaining flexible to innovative technology. (P. 30).</p>	<p>The statewide ITS architecture identifies ITS message set, data element and communication profile standards when they exist. These are mapped to the architecture flows that are sourced and sunk by ITS elements in the Districts and Statewide.</p> <p>Considerable discussion at the workshops and with the Program Panel identified a consensus that ITS standards are at this time immature, and that is there is not sufficient experience with any one standard at this time to <i>require</i> that it be used in ITS projects in Florida. The consultants agree with this conclusion. The consensus decision was to <i>identify</i> applicable ITS standards and ITS standards choices, but not at this time to <i>require</i> any specific ITS standards, since none have the requisite level of maturity to be elevated to a <i>requirement</i>.</p>

<p>The Department should define a model and process for stakeholder involvement at three levels: <i>Statewide</i> for strategic planning and policy issues, <i>Regional</i> for integration and local issues and directions, and <i>Project</i> for specific projects such as the I-4 ITS Corridor Study or program elements such as CVO and take the initial steps of implementing the process. (P. 34). ... each district and each metropolitan area may develop and maintain a regional architecture and deployment plan that is developed with the appropriate stakeholders. These regional architectures should be compatible with the statewide architecture and, where appropriate, the National ITS Architecture. (P. 35).</p>	<p>Stakeholders were engaged in one-week stakeholder workshops, and they were successfully engaged in the District and Statewide ITS architecture development process.</p>
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<p>The Department should pro-actively support the development, coordination and deployment of public transportation ITS technology... Provide technical and financial support and guidance to public transportation systems for integrating these systems into regional ITS architectures; (P. 37).</p>	<p>The District and Statewide ITS Architectures treat public transportation as a full and equal member.</p>
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*Figure 1 Relationship Between Statewide ITS Architecture and Regional/Corridor Architectures (from Florida Statewide ITS Strategic Plan, p. 8).*

### **3 Florida Statewide ITS Architecture and Standards**

This chapter describes the process and summary results of the program. The full results can be found on the temporary project website: [www.jeng.com](http://www.jeng.com).

#### **3.1 Scope**

One of the most useful parts of an ITS architecture is the documentation of the current and future information sharing relationships between existing and planned ITS elements. These elements and their information sharing relationships must reflect the current and expected institutional stakeholder relationships in Florida. Note that a few relationships for Florida elements will be with elements outside the state (e.g. USDOT Southeast Regional Office in Atlanta for coordination of state-to-state emergency management). The objective of the standards is to guide the implementation of the external interfaces of identified architecture elements (e.g. specific centers, field equipment, vehicles and traveler equipment).

The Florida ITS Architecture identifies the existing and future ITS elements, and identifies the information exchange requirements between these elements, including options for open ITS standards to facilitate the exchange of information between the ITS elements. As such, the focus is on external interfaces to the elements (i.e. the interfaces between ITS elements, not within ITS elements). This focus on external interfaces acknowledges that usually the most difficult and time consuming barrier to deployment of interoperable ITS elements in a region or state is achieving the institutional agreement between stakeholders to exchange specific information between specific ITS elements. An objective of the Florida ITS Architecture is to specifically identify these information exchange requirements early in the process of deployment, so that the time consuming process of achieving institutional agreement(s) can proceed.

An objective of the Florida ITS Architecture is that each ITS element in Florida is mapped to one or more National ITS Architecture entities (e.g. subsystems or terminators). The National ITS Architecture was thus used as a starting framework, but was augmented as necessary to allow architecting solutions to physical and high-level functional requirements unique to Florida or Florida districts (and were thus not included in the National ITS Architecture).

#### **3.2 Statewide Architecture Development**

The major element of our approach to developing a Statewide ITS Architecture is a bottoms up development of stakeholder requirements. This is done by first developing regional (in the case of Florida, *FDOT Districts*) ITS architectures.

The FDOT District ITS Architectures were developed using a structured stakeholder workshop model in each District -- but the District ITS architectures were first initialized based on architecture work already done derived from: EDPs, District ITS Architectures, Corridor architectures and FDOT ITS Planning documents. The District ITS architecture models so

initialized were first validated by the stakeholders (important because some of the reference

material used was as much as 6 years old) and then added to (much of the reference material used did not cover all ITS services relevant to a region).

Finally, a set of consistent criteria was developed and applied to the district ITS architectures to remove from the districts and then create a Statewide Services ITS Architecture.

All results of this process were published on the Internet (at the temporary location [www.jeng.com](http://www.jeng.com)) and comments solicited, collected, and acted on. In addition, the Statewide Services ITS Architecture was reviewed, commented and each commented acted upon by an FDOT Program Panel for this project with representation from each FDOT district.

### **3.3 Project Schedule**

The key dates for the project schedule are as follows:

9 Feb 2000	Notice to Proceed
17 March 2000	First Stakeholder District Workshop Begins (Miami)
26 July 2000	Last/Eighth Stakeholder District Workshop Ends (Tallahassee)
4 January 2001	Draft Final Report delivered to Statewide ITS Architecture Review Panel
9 February 2001	Final Report Delivered; One year of maintenance begins
8 February 2002	One year of maintenance concludes.

### **3.4 Stakeholder Meetings**

Having collected and assimilated information from existing documentation about each FDOT District into the *Turbo Architecture* database model (see Section 3.4.3), we then conducted an intensive three day workshop over a period of one-week with regional ITS stakeholders representing all aspects of ITS in each of the eight FDOT districts.

The stakeholders participated in three key phases of each workshop. First, the stakeholders validated and added to the inventory developed based on prior documentation. Next, Market Packages from the National ITS Architecture, easily and quickly grasped by stakeholders, were used as an easily accessible means to describe User Services, and were adapted to actual stakeholder inventory elements, user service needs and desired concept of operations. The National ITS Architecture market packages were extended with new market packages to represent requirements and concepts of operations that are unique to Florida or were not anticipated by the National ITS Architecture. Finally, the stakeholders reviewed the external interfaces for each stakeholder element of the inventory. These external interfaces were derived from the earlier market package analysis.

#### **3.4.1 Secretary's Invitation**

An invitation from the Secretary was included with the invitation package sent to each potential stakeholder (see next page). In addition to this letter, the invitation package also included the following information:

- Location, date and time for the stakeholders meeting
- A three-page attachment with the background and purpose of the workshop, objectives and agenda, and a brief description of the activities scheduled for every day of the workshop.
- An Appeal to Attend letter.
- A one-page sample of some of the slides to be used during the workshop.
- An Introduction to Architecture for Intelligent Transportation Systems (ITS) prepared by U.S. DOT Intelligent Transportation Systems Joint Program Office.

The invitations were mailed to the stakeholders approximately one month prior to the date of the workshop.



## Florida Department of Transportation

JEB BUSH  
GOVERNOR

605 Suwannee Street  
Tallahassee, Florida 32399-0450

THOMAS F. BARRY, JR.  
SECRETARY

March 8, 2000

Dear ITS Stakeholder:

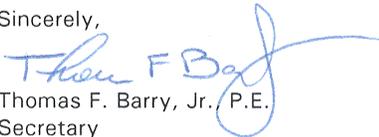
**Subject: Invitation to the Florida Statewide Intelligent Transportation Systems (ITS)  
Architecture and Standards Stakeholders Meeting**

The Florida Department of Transportation has initiated the development of a statewide ITS architecture and standards plan. This ITS system architecture will provide a unifying framework to ensure that technologies can work together smoothly and effectively. The Florida Statewide ITS Architecture will provide a blue print for the planning, design, development, integration, implementation, operation, and maintenance of Florida ITS projects.

The scheduled stakeholders meeting will be an opportunity for you to provide requirements to the ITS architecture analysts and will result in stakeholder buy-in. You will represent your organization's needs, and provide input needed to draft the regional ITS architecture at the stakeholder meeting in your area. National ITS Architecture leaders Dr. Robert S. Jaffe and Mr. Ronald C. Ice will conduct the stakeholder meetings over the next four months around the state in every district.

Attached is an information package including the location, date, time, background and purpose of the stakeholders meeting in your area.

Sincerely,



Thomas F. Barry, Jr., P.E.  
Secretary

TFB:lhs  
Attachments

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



### 3.4.2 Format, Objectives and Workshop Process

This section describes the specific activities and outcomes of the three-day workshop conducted in each of the eight FDOT districts.

The objective of the three-day workshops was to develop a Regional ITS Architecture, where the region was defined as the FDOT district. The intent was that the resultant ITS architecture would be used as input to the Statewide Architecture and Standards.

The overall methodology was that of a progressive exercise, that is, the results of the first day would be built upon on the second day, with the results of the first and second day being built on yet again in the final day of the workshop. The workshops were conducted with at least one day between successive stakeholder contact days so that the workshop organizers had time to analyze and organize the information collected on the preceding stakeholder contact day.

A key overall objective of the workshops was that the resultant District ITS Architecture outcomes of the workshops should be *consensus architectures*, that is, each of the participants *understood and agreed* to the ITS elements and specific information exchange between the ITS elements identified in the FDOT District ITS architecture that they participated in defining.

The overall agenda of the workshops was as follows:

<u>Day 1:</u>	
9:00	Introductions and Administration
9:30	Introductory Presentation and Discussion
10:30 - 12:00	Ex1 - Map Local Entities
1:00 - 2:15	Ex1 - continued
2:30 - 4:00	Ex2 - Prioritize Market Packages
<u>Day 2:</u>	
9:00 - 4:00	Ex3 - Customize Market Packages
<u>Day 3:</u>	
9:00 - 4:00	Ex4 - Critique Draft Regional ITS Architecture

While not explicitly identified above, morning, afternoon and lunch breaks were included. A briefing book of all presentation materials used was handed out to each participant at the beginning of the first day.

#### **Day 1**

After introductions and administrative announcements, an Introductory Presentation and Discussion was conducted to orient the stakeholders to the activities of the remainder of the workshop. No prior exposure to ITS Architecture was assumed. The following issues were raised and interactively discussed (using the basic principles of interactive adult oriented

education):

- What Is ITS? Definition
- Who Is an ITS Stakeholder?
- What Is and Isn't an ITS Architecture?
- Why Must We Have a Uniform ITS Architecture?
- How Can A Uniform ITS Architecture Benefit You?
- Florida Statewide ITS Architecture and Standards Project
  - Purpose
  - Process
  - Connection to National ITS Architecture Development Effort

Stakeholders then reviewed the parts of the National ITS Architecture relevant to the subsequent District ITS architecture development exercises through a presentation by the moderators and associated discussion.

With the assistance of the moderators, the stakeholders then identified local ITS elements, e.g. agencies and private elements, and mapped these elements to subsystems and/or terminators of the National ITS Architecture. Furthermore, the mapped entities were classified as to whether they were either:

- Existing – the entity already exists or
- Future – the entity will be deployed in the future.

In general, the stakeholders did not start from scratch, but rather before the workshop the moderators were able to begin building the list of local elements mapped to National ITS Architecture entities based on prior documentation that was reviewed. The list that the moderators came in with was validated and added to by the stakeholders present at the meeting.

Next, all Market Packages of the National ITS Architecture were systematically reviewed. Each Market Package was then classified to be either:

- Existing: some or all of this market package is already deployed in the FDOT District,
- Future: funds may be programmed for this market package at some time in the future or,
- Not Used: the service(s) represented by this market package are not sufficiently relevant to the foreseeable needs of the region to warrant any further consideration.

### **After Day 1 and Before Day 2**

Based on the inventory collected, a high level *Architecture Interconnect Diagram (AID, a.k.a. a Sausage Diagram)* of the region was prepared. This identifies the entire inventory of local stakeholder FDOT district elements, how they are mapped to National ITS Architecture entities, and whether the elements are *existing* or *future*.

Based on both the inventory and the market packages identified as existing or future, customized

market packages were prepared for the region. For each existing or future market package identified on Day 1, the diagrams were edited so that each National ITS Architecture subsystem or terminator also was shown associated with the local stakeholder element name. In some cases, multiple instances of the market package are shown, where the service has more than one instance in the region. In this way, each instance of the service, with its own group of identified stakeholders, can be customized individually on Day 2.

## **Day 2**

The market packages rated as *Existing* or *Future* were carefully reviewed and modified by the stakeholders as appropriate. The workshop moderators framed issues as they occurred. Each market package, after modification, represented a stakeholder consensus for how the specific service represented by the market package will be delivered, and in particular, what information would be exchanged by specific stakeholders, explicitly identified in the market package diagrams. The diagrams were each viewed and edited in real time during the workshop. As necessary, updates to the inventory were made.

## **After Day 2 and Before Day 3**

Using the customized market package diagrams, the TurboArchitecture database was edited, in particular:

- Updating the inventory
- Customizing the architecture interconnects (specifying which stakeholder elements are connected to which other elements)
- Customizing the architecture flows (specifying what information is sent from one specific stakeholder to another).

Having a full draft regional ITS architecture database in TurboArchitecture, we then used the *FloridaTurboExtensions* application provided by Jaffe Engineering to convert the TurboArchitecture database to an html hypertext report in the form of a website. The process for doing this is discussed in detail in Section 5 of this report. The key output of this activity is project oriented architecture flow diagrams (*AFDs* or *Physical Architecture Element Context Diagrams*) for each stakeholder ITS element in the district. Each diagram shows one ITS element and all the other elements it exchanges information with. In addition, the specific architecture flows between the elements are identified. This diagram is essentially a "rollup" of the information exchanged with the project element in all market packages that the element participates in. In addition, the diagrams are also augmented with diagrams that show just the project element with one other element from its project oriented architecture flow diagram. This is important for elements that have many other elements that it shares information with, because these diagrams are difficult to view (due to the density of detail) in a single image viewed using a limited resolution LCD projector.

For each architecture flow in each AFD, a report was generated indicating the ITS Standards that

might be specified for the information concepts contained in the Architecture Flow. These

standards are classified as to whether they are *Message Set Standards*, *Data Element Standards*, or *Communication Profile Standards*.

Other reports were prepared, and demonstrated at the Day 3 stakeholder meeting, but not necessarily critically reviewed.

Finally, the updated inventory was used to update the architecture interconnect diagram.

### Day 3

All project oriented architecture flow diagrams were reviewed by the stakeholders. Changes to the interconnects and architecture flows were discussed and those accepted by the stakeholders present, were immediately changed in the TurboArchitecture Database.

### After Day 3

The final FDOT district interconnect diagram, customized market packages, project oriented architecture flow diagrams (sorted both by stakeholder and by National ITS Architecture entity) and the TurboArchitecture database were regenerated and posted to the Florida Statewide ITS Architecture website temporarily hosted at [www.jeng.com](http://www.jeng.com). This was usually accomplished within 24 hours of completion of the workshop.

Stakeholders were asked to look at the website documentation, share the results with their stakeholder colleagues who may not have been able to participate in the workshop, and comment electronically (electronic submission of email comments is supported directly on the website). Appendix 2 identifies all comments received including those sent in during this phase.

### 3.4.3 Preparation for the Eight Stakeholder Meetings

Existing regional ITS architectures, Early Deployment Plans (EDPs) and other documents were analyzed prior to each regional ITS architecture workshop.

Documents reviewed for information about all FDOT districts included:

- Florida ITS Conceptual Plan (Operations Perspective), November 1994.
- Florida Intelligent Transportation System Strategic Plan, Final Report, August 23, 1999
- Governor's Hurricane Evacuation Task Force Team Report, February 1 2000.

Documents specific to FDOT districts are identified in Table 1 that follows:

*Table 1 Stakeholder Workshops and Documentation reviewed prior to the workshops.*

<b>FDOT District</b>	<b>Workshop Location</b>	<b>Workshop Date</b>	<b>Documentation Reviewed</b>
1	Naples	16, 19, 21 June 2000	<ul style="list-style-type: none"> <li>• I-4 ITS Draft Website, March 23, 2000 (on CDROM).</li> </ul>

<b>FDOT District</b>	<b>Workshop Location</b>	<b>Workshop Date</b>	<b>Documentation Reviewed</b>
2	Jacksonville	24, 26, 28 April 2000	<ul style="list-style-type: none"> <li>• Jacksonville Urban Area EDP</li> </ul>
3	Pensacola	14, 17, 19 July 2000	(None reviewed specific to this district.)
4	Miami	17, 20, 22 March 2000	<ul style="list-style-type: none"> <li>• SE Florida Intelligent Corridor, System Design Report, August 1994.</li> <li>• Broward County EDP</li> </ul>
5	Orlando	23, 26, 28 June 2000	<ul style="list-style-type: none"> <li>• I-4 ITS Draft Website, March 23, 2000 (on CDROM)</li> <li>• Orlando EDP</li> <li>• Orlando ITS Architecture</li> </ul>
6	Ft. Lauderdale	31 March 2000, 3, 5 April 2000	<ul style="list-style-type: none"> <li>• SE Florida Intelligent Corridor, System Design Report, August 1994.</li> </ul>
7	Tampa	8, 10 and 12 May 2000 (Note that the FDOT District 7 meetings were conducted with limited stakeholder participation, and the meetings on 10 and 12 May were conducted by telcon.)	<ul style="list-style-type: none"> <li>• District 7 Strategic Plan for Intelligent Transportation Systems (ITS), Final Report, May 1998.</li> <li>• I-4 ITS Draft Website, March 23, 2000 (on CDROM).</li> <li>• Tampa Bay Regional ITS Architecture (on CDROM)</li> </ul>
8 (Turnpike)	Tallahassee	21, 24, 26 July 2000	(None reviewed specific to this district.)

Documents were reviewed and information about existing or planned regional ITS architecture were extracted and included in the appropriate Turbo Architecture database prior to the corresponding stakeholder workshop. These documents were crucial in establishing an initial FDOT district inventory and identifying important services before beginning the district workshops. None of the documents reviewed above identified information exchange between specific ITS stakeholder elements as described in the USDOT's [\*Interim Guidance on Conformity with the National ITS Architecture and Standards\*](#).

#### 3.4.4 Stakeholders Input

Stakeholder input was collected primarily at the eight FDOT district ITS Architecture and Standards workshops. Additional input was solicited and collected through the website documentation. Feedback about the architecture and standards outside the workshops is documented in Section 3.4.6.

After all workshops were complete, the stakeholders were contacted again asking for their input/comments with regard to their district architecture. The text of the letter to stakeholders is reproduced in the "box" following.

August 16, 2000

Dear ITS Stakeholder:

Subject: ***Florida Regional ITS Architecture and Standards Project  
- Review and Comments Stage -***

The purpose of the eight ITS stakeholders meetings that were held around the state between March and July of this year was to define draft Regional ITS Architectures to be used as input to the draft Florida Statewide Architecture and Standards.

At this point, the draft Florida Regional ITS Architecture and Standards Project is in the review and comments stage. For those stakeholders who were not able to attend the workshops, this is an excellent opportunity to review your draft regional architecture and provide feedback on it. Obviously, those who attended the workshop are also welcome to send additional comments or suggestions that may be originated after a more detailed analysis of the Architecture.

The suggested procedure to send your comments to the ITS Analysts is as follows:

1. Visit the ITS Architecture web site at <http://www.jeng.com> (a hard copy would be too voluminous to mail to each stakeholder).
2. Click on the Link to the draft Florida Statewide ITS Architecture.
3. Click on the Regional Architecture that you wish to review.
4. Enter to any of the five options offered on this page and review its content.
5. Send your comments using the icons that are available for that purpose (your e-mail will be automatically directed to the ITS architecture team). Be sure to include, when necessary, the URL of the page you are referring to. For example, the URL that contains the architecture flows for Broward County Transit Vehicles is <http://www.jeng.com/florida/web/southeast%20florida/elements/87.htm> (tip: highlight the URL and do Copy/Paste to the e-mail).

The deadline date to receive your comments or suggestions is September 20, 2000. In the case that no response is received by this date, it will be assumed that the correspondent stakeholder fully agrees with the draft architecture and the team will proceed to finalize the architecture.

If you have any questions regarding this letter, please call José Alvarez or myself at the telephone number below.

Sincerely,

**KIMLEY-HORN AND ASSOCIATES, INC.**

K.K. Saxena, Project Manager  
 c.c. Liang Hsia  
 Rob Jaffe

### 3.4.5 Database of Invited and Participant Stakeholders

We have developed a database of ITS Stakeholders for each of the eight workshops. Each stakeholder in the database was invited to the corresponding workshop. The contents of that database, including which stakeholders participated in the corresponding workshops, is presented in Appendix 1. Those stakeholders who attended the workshops are denoted with an asterisk next to their last name.

The following table summarizes the total number of stakeholders invited to each of the District's workshops, and the total number of people who attended these workshops:

<b>FDOT District</b>	<b>Workshop Location</b>	<b>No. of Invitees</b>	<b>No. of Attendees</b>
1	Naples	283	24
2	Jacksonville	59	17
3	Pensacola	55	15
4	Miami	183	30
5	Orlando	98	15
6	Ft. Lauderdale	96	32
7	Tampa	69	7
8 (Turnpike)	Tallahassee	188	35
<b>Total</b>		<b>1031</b>	<b>175</b>

### 3.4.6 Specific Stakeholder Review Comments and Actions

After all workshops were concluded, all stakeholders (whether they participated in a workshop or not) were contacted and asked to comment on the results published to the FDOT Statewide ITS Architecture and Standards website. Comments were documented as to the stakeholder, their specific comment, and our disposition and rationale. The table of stakeholder comments with Disposition and Rationale is presented in tabular form in Appendix 2.

## 3.5 Criteria and Basis for Assembling Statewide Architecture

The Statewide ITS Architecture (sometimes called a Statewide Services ITS Architecture) is an overarching framework for deployment of ITS in Florida. The focus of the Statewide ITS

Architecture is the deployment of elements with inter-regional (or inter-district) and Statewide (regional/district to statewide) interfaces. For example, the services included in the Statewide

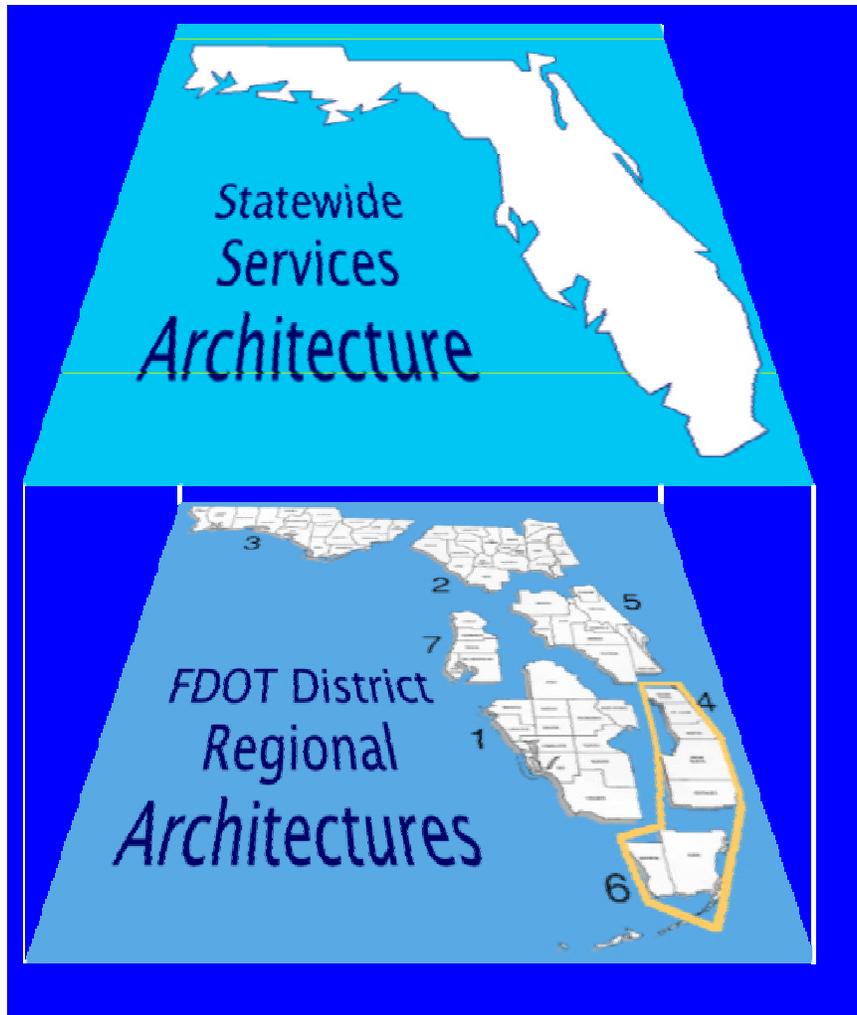
Services ITS Architecture include centralized services (e.g. much of records management for commercial vehicle safety inspection operations) or the central component of some services (e.g. data collection for federal HPMS (Highway Performance Monitoring System) reporting to the USDOT).

The regional ITS architectures (FDOT district or corridor ITS architectures) cover all locally defined interfaces (intra-region/district), and are important in their own right as guides to deployment of local projects (See Figure 2).

The following table lists the eight architectures developed. Note that the District 4 and District 6 architectures were combined due to their proximity and many interrelationships:

*Table 2 Architectures developed and the Supporting Workshops.*

<b>Architecture</b>	<b>Supporting Workshop(s)</b>
District 1	Naples
District 2	Jacksonville
District 3	Pensacola and Tallahassee
District 4 & 6	Miami and Fort Lauderdale
District 5	Orlando
District 7	Tampa
District 8 (Turnpike)	Miami, Fort Lauderdale, Orlando, and Tallahassee
Statewide Services	Primarily Tallahassee, but all other workshops as well.



*Figure 2 Overlay of Statewide Services and FDOT District Regional Architectures.*

The following section discusses Criteria used to decide what interfaces are regional (i.e. in one of the District ITS architectures) and which are "Statewide Services" interfaces. Statewide Services interfaces either are for example associated primarily with a statewide service, or have an interface with more than one Districts elements. At this time, District/regional ITS Architectures include the majority of the interfaces (see Figure 3).

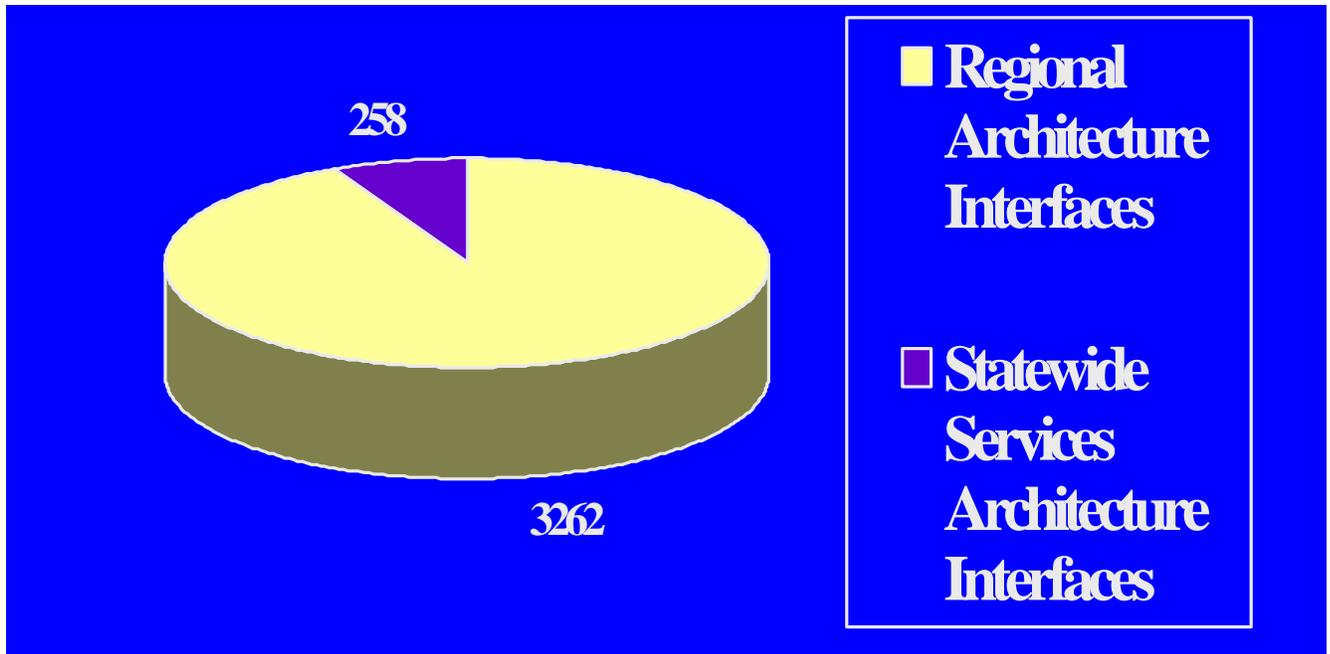


Figure 3 Only 7% of the Interfaces are included in the Draft Statewide Services Architecture.

### 3.5.1 Criteria

Criteria were established to determine the scope of the Florida Statewide Architectures.

The criteria developed were based on *Interoperability* requirements. These requirements build on the National ITS Architecture Interoperability analysis, and are similar to the criteria used in the recent USDOT *Critical Standards* analysis. This assessment of interoperability is used to establish the scope of the Statewide ITS Architecture.

Interoperability is defined for the purpose of this analysis as the ability of different systems to share and exchange information. Cost effective interoperability is a principal goal of ITS architecture and standards efforts.

We developed interoperability ratings, and apply them to each identified information exchange interface. The ratings used are:

- *National*: National services  
Interfaces to the end-user (e.g. toll tags, traveler cards, other traveler devices). Also includes interfaces to national or multi-state services (e.g. CVISN services for commercial vehicle safety and credentialing operations).
- *Statewide*: Statewide services  
Statewide data collection services, state traveler information initiatives or interfaces with statewide jurisdiction (e.g. State EOC, State Warning Point).

- *Regional:* Regional coordination  
Inter-agency interfaces within an FDOT district (e.g. traffic management to transit management coordination) or inter-agency interfaces spanning FDOT Districts (e.g. corridor TMC coordination or public safety mutual aid coordination).
- *Local:* Local interface implementation  
Interfaces managed by a single local agency/District (e.g. TMC to Field Equipment or Transit Management Center to Transit Vehicles).

Interfaces can be classified, based on the information that they carry and the services that they support, into one of the four categories identified above. *National* and *Statewide* interfaces will be allocated to the Statewide Services ITS Architecture, and interfaces classified as *Local* will be allocated to the regional/District ITS Architectures. Interfaces classified as *Regional* will be considered on a case-by-case basis. Considerations for interfaces classified as regional might be the nature of the ITS elements that source or sink the information. If these elements are primarily regional, then the interface might be classified as Regional/District as well. If the elements are not associated with a fixed region or are associated with a statewide agency, then the interface might better be classified as Statewide.

### 3.5.2 Methodology - Using the National ITS Architecture Framework

The Statewide Services Architecture is one of eight architectures developed for this project (see Table 2); it includes all interfaces with a scope that spans multiple FDOT Districts, in our assessment. We have focused on the Statewide Services Architecture interfaces that have the greatest implication for statewide interoperability. The other seven regional architectures include many other interfaces that are also architecturally important, but are regional or local in nature.

#### 3.5.2.1 How to Read the Table of Statewide ITS Services Architecture Interfaces

Here are the first two rows from the table (see Table 3):

Element	Interfacing Element	Rating
Agricultural Inspection Stations	Commercial Vehicles	National
Agricultural Inspection Stations	Florida Department of Agriculture	Statewide

There is one row in the table for every interface in the Statewide Services Architecture. For example, the first two rows in the table identify two distinct interfaces that we have identified for Agricultural Inspection Stations: One wireless interface to commercial vehicles and one wireline interface between the inspection station and the Department of Agriculture central office. Note that an interface may be bi-directional, or it may have information flowing in only one direction. This means that the row showing the interface between the “Agricultural Inspection Stations” and “Commercial Vehicles” could include information that flows from the inspection station to the vehicle and information that flows from the vehicle to the inspection station. All we can tell from the table is that this interface has been allocated to the Statewide Services Architecture. The precise definition of the interface is not shown. You would have to look at the architecture web

site to find out the details.

Each interface is assigned an interoperability rating of “National”, “Statewide”, “Regional”, or “Local” in the rightmost column of the table. In the excerpt above, the interface between the inspection station and the commercial vehicle is “National” because commercial vehicles from many different states could interface with the inspection station. The interface between the inspection station and the Department of Agriculture is “Statewide” because each inspection station across the entire state should have a consistent interface with the Department of Agriculture central office.

### 3.5.2.2 More on the Interoperability Ratings

We assigned an “Interoperability Rating” to every interface in the Statewide Services Architecture and to the District Regional Architectures, and used these ratings as a basis for our allocation of interfaces between Statewide Services and FDOT District Regional Architectures. The Statewide Services Architecture includes all National Interoperability and Statewide Interoperability interfaces. It also includes selected “Regional Interoperability” interfaces where the scope of the region clearly exceeds FDOT District boundaries.

These interoperability ratings are partially derived from Interoperability Ratings that are included in the National ITS Architecture; “National”, “Regional”, and “Local” interoperability are defined in the National ITS Architecture. (Actually, “Local” interoperability is called “Product” interoperability in the National ITS Architecture documentation.) We added a “Statewide” Interoperability rating to the standard ratings provided by the National Architecture. We used the following process to assign the interoperability ratings in the table:

- 1) Set the initial rating based on the interoperability rating assigned to the equivalent National ITS Architecture interface. In most cases, such a default rating was available. Where we have extended the National ITS Architecture, such a rating was not available and we had to assign our own based on the definitions used in the architecture where it was defined.
- 2) Tailor the rating based on the specific interface defined in the Florida Architecture. In particular, this step required that we look at every interface that had a default rating of “Regional” or “Local” and determine whether the interface was actually statewide or generally contained within an FDOT District. Interfaces that were clearly Statewide in scope were assigned a “Statewide” rating. In general, interfaces that were identified as “National” in the National ITS Architecture were not demoted to Statewide. In a few cases, other tailoring was also performed where the default assignments did not make sense.

Here is some additional background information on each of the interoperability ratings and the types of interfaces that are assigned this rating in the Statewide Services Architecture.

***National Interoperability*** – This includes all interfaces to end-users (travelers, drivers, commercial vehicles, archived data users) since each of these users would presumably like to be able to use the same equipment to support ITS services in Florida and in other states. In meetings

with stakeholders, we have discussed the assignment of the Archived Data User System interfaces as “National”. This assignment has been questioned since the scope of the data is clearly statewide for many of these transportation databases. This assignment matches the National ITS Architecture assignment for this type of interface and reflects the desire for researchers/planners/analysts in many states to be able to access Florida transportation data archives. Where you see an interface to a data archive that is “National”, this is likely to be an interface between an archive and an archive data user, or an interface between two archives. In both cases, the National ITS Architecture assigns a National interoperability rating which is preserved in our analysis.

Many of the CVO center-to-center interfaces are also assigned a National Interoperability rating since these interfaces are to multi-state or federal systems.

**Statewide** – Most of these interfaces have a default interoperability rating of “Regional” based on the National ITS Architecture definitions. Each of the interfaces that we promoted to “Statewide” interoperability is associated with a statewide system that supports ITS in many FDOT districts. In most cases, these are interfaces between a centralized system in Tallahassee and various satellite and/or user systems that are distributed around the state.

**Regional** – There were a few interfaces that were not really statewide, but they clearly required broad regional interoperability that exceeded FDOT district boundaries. Examples of these broad regional interoperability interfaces that were included in the Statewide Services architecture include the peer to peer interfaces that connect Traffic Management Centers (e.g., to support corridor management where a corridor spans several FDOT Districts) and public safety agencies (e.g., to support incident response and management for incidents and major disasters that can span FDOT districts. These regional interfaces are “Statewide” if you consider all possible incident, disaster, and corridor management scenarios and their connectivity requirements.

**Local** – There are no interfaces in the Statewide Services Architecture that are assigned a Local interoperability rating. Note that several interfaces in the table would appear to fit the definition of a local interface (generally an interface between a center and field equipment or center and vehicle fleet where both ends of the interface are owned and operated by the same agency.) Where these types of interfaces are included in the Statewide Services Architecture, the jurisdiction of the operating agency is statewide, so the interfaces are assigned Statewide interoperability, rather than Local Interoperability. This assignment reflects the fact that these statewide agencies should implement consistent interfaces in their operations across the state to optimize their efficiency and their ability to move assets from one part of the state to another.

### 3.5.3 Results

Interoperability ratings were assigned to each interface, and assignments guided interface allocation to statewide services and regional architectures. The following summarizes the

classification of the interfaces of the Statewide Services ITS Architecture:

91	Interfaces with National Interoperability
143	Interfaces with Statewide Interoperability
24	Interfaces with Regional Interoperability
0	Interfaces with Local Interoperability

The detailed results for the Statewide Services ITS Architecture appear in the following table (Table 3).

Table 3 Statewide Services ITS Architecture Interfaces

Element	Interfacing Element	Rating
Agricultural Inspection Stations	Commercial Vehicles	National
Agricultural Inspection Stations	Florida Department of Agriculture Database	Statewide
Agricultural Inspection Stations	Florida Department of Revenue Database	Statewide
Air Freight Terminals	FDOT Aviation Database	Statewide
Air Quality Database	Archived Data User Systems	National
Air Quality Database	Florida DEP Air Quality Management System	Statewide
Air Quality Sensors	Florida DEP Air Quality Management System	Statewide
Amtrak Passenger Train Terminal	FDOT Transit Database	National
Archived Data User Systems	Contracts Administration System (Virtis)	Statewide
Archived Data User Systems	Control Burn Permitting Database	Statewide
Archived Data User Systems	County and City Transp. Data Collection Systems	National
Archived Data User Systems	Demand-Response/Rural Transit Database	National
Archived Data User Systems	FDOT Aviation Database	National
Archived Data User Systems	FDOT Bridge Management Inventory System (Pontis)	National
Archived Data User Systems	FDOT District Transp. Data Collection Systems	National
Archived Data User Systems	FDOT Roadway Characteristics Inventory	National
Archived Data User Systems	FDOT Seaport Database	National
Archived Data User Systems	FDOT Traffic Characteristics Inventory	National
Archived Data User Systems	FDOT Transit Database	National
Archived Data User Systems	Manpower, Assets, and Resources System (MARS)	National
Archived Data User Systems	Rail Operations Database	National
Archived Data User Systems	RPC/MPO Transp. Data Collection System	National
Archived Data User Systems	State Highway System Crash Analysis Reporting System	National
Automated Collision Notification System	Commercial Vehicles	National
Automated Collision Notification System	County Fire Rescue Dispatch	National
Automated Collision Notification System	E911 Emergency Call Centers	National
Automated Collision Notification System	Local Fire Dispatch	National
CHEMTREC	County Fire Rescue Dispatch	National
CHEMTREC	Local Fire Dispatch	National

Element	Interfacing Element	Rating
Commercial Vehicle Fleet Dispatch Systems	CVIEW	National
Commercial Vehicle Fleet Dispatch Systems	FDOT Overdimension Permit System	Statewide
Commercial Vehicle Fleet Dispatch Systems	License, Registration, and Fuel Tax System	National
Commercial Vehicles	Scales and Inspection Facilities (Including ASPEN)	National
Contracts Administration System Data Suppliers	Contracts Administration System (Virtis)	Statewide
Control Burn Permitting Database	County and City Transportation Management Centers	Statewide
Control Burn Permitting Database	County Sheriff Dispatch	Statewide
Control Burn Permitting Database	Division of Forestry District Offices	Statewide
Control Burn Permitting Database	FDOT District Transportation Management Centers	Statewide
Control Burn Permitting Database	Florida Highway Patrol Dispatch	Statewide
Control Burn Permitting Database	Local Police Dispatch	Statewide
Control Burn Permitting Database	Turnpike Traffic Management Centers	Statewide
County and City Field Equipment	Driver	National
County and City Field Equipment	Pedestrian	National
County and City Field Equipment	Traveler Vehicle	National
County and City Overdimension Permit Systems	CVIEW	National
County and City Overdimension Permit Systems	International Fuel Tax Association (IFTA) System	National
County and City Overdimension Permit Systems	International Registration Plan (IRP) System	National
County and City Overdimension Permit Systems	Scales and Inspection Facilities (Including ASPEN)	Statewide
County and City Public Information System	Florida DEP Air Quality Management System	Statewide
County and City Public Information System	Newspapers, Radio, Television Stations	Regional
County and City Public Information System	Traveler PC/Info. Appliance	National
County and City Transp. Data Collection Systems	FDOT Traffic Characteristics Inventory	Statewide
County and City Transp. Data Collection Systems	State Highway System Crash Analysis Reporting System	Statewide
County and City Transportation Management Centers	Draw Bridge Operational Status System	Statewide
County and City Transportation Management Centers	Draw Bridge Operations Schedules	Statewide
County and City Transportation Management Centers	Equipment Management and Inventory System	Statewide
County and City Transportation Management Centers	FDOT Overdimension Permit System	Statewide
County and City Transportation Management Centers	Florida DEP Air Quality Management System	Statewide
County and City Transportation Management Centers	Other Traffic Management Centers	Statewide
County and City Transportation Management Centers	Rail Operations Centers	National
County and City Transportation Management Centers	Regional Evacuation Routes Database	Statewide

Element	Interfacing Element	Rating
County and City Transportation Management Centers	Sensitive Materials Carriers Information Provider	National
County and Local Toll Customer Service Centers	ETC Reciprocity Network	Statewide
County Court System	SunPass Customer Service Center	Statewide
County Emergency Operations Centers	Draw Bridge Operational Status System	Statewide
County Emergency Operations Centers	Equipment Management and Inventory System	Statewide
County Emergency Operations Centers	Florida Transit Systems	Regional
County Emergency Operations Centers	Newspapers, Radio, Television Stations	Regional
County Emergency Operations Centers	Other Public Safety Comm and Dispatch Centers	Regional
County Emergency Operations Centers	Traveler Info. Radio Network Stations	Statewide
County Emergency Operations Centers	Weather Information Providers	Regional
County Fire Rescue Dispatch	Draw Bridge Operational Status System	Statewide
County Fire Rescue Dispatch	Manpower, Assets, and Resources System (MARS)	National
County Fire Rescue Dispatch	Other Public Safety Comm and Dispatch Centers	Statewide
County Paratransit Systems	Demand-Response/Rural Transit Database	Statewide
County Sheriff Dispatch	Draw Bridge Operational Status System	Statewide
County Sheriff Dispatch	Florida Safety and Crash Data Collection System	National
County Sheriff Dispatch	Manpower, Assets, and Resources System (MARS)	National
County Sheriff Dispatch	Other Public Safety Comm and Dispatch Centers	Statewide
County Warning Points	Newspapers, Radio, Television Stations	Regional
County Warning Points	Other Public Safety Comm and Dispatch Centers	Statewide
County Warning Points	Traveler Info. Radio Network Stations	Statewide
County Warning Points	Weather Information Providers	Regional
CVIEW	FDOT Overdimension Permit System	National
CVIEW	License, Registration, and Fuel Tax System	National
CVIEW	SAFER	National
CVIEW	Scales and Inspection Facilities (Including ASPEN)	Statewide
CVO Parking Facilities	FDOT District Transportation Management Centers	Statewide
CVO Parking Facilities	Private Sector Traveler Info. Services	Statewide
CVO Parking Facilities	Turnpike Traffic Management Centers	Statewide
Department of Agriculture Inspection Vehicle	Florida Highway Patrol Dispatch	Statewide
District Forestry Dispatch Centers	FDOT Statewide Public Information System	Statewide
District Forestry Dispatch Centers	Manpower, Assets, and Resources System (MARS)	Statewide

Element	Interfacing Element	Rating
District Forestry Dispatch Centers	Other Public Safety Comm and Dispatch Centers	Statewide
District Public Information Office Systems	FDOT Statewide Public Information System	Statewide
Draw Bridge Operational Status System	Draw Bridge Operations Schedules	Statewide
Draw Bridge Operational Status System	Draw Bridges	Statewide
Draw Bridge Operational Status System	FDOT District Transportation Management Centers	Statewide
Draw Bridge Operational Status System	Florida Highway Patrol Dispatch	Statewide
Draw Bridge Operational Status System	Florida State Emergency Operations Center	Statewide
Draw Bridge Operational Status System	Local Fire Dispatch	Statewide
Draw Bridge Operational Status System	Local Police Dispatch	Statewide
Draw Bridge Operations Schedules	FDOT District Transportation Management Centers	Statewide
Driver	FDOT District Field Equipment	National
Driver	Parking Facilities	National
Driver	Sunpass Toll Collection Systems	National
Driver	Traveler Vehicle	National
Driver	Turnpike Field Equipment	National
E911 Emergency Call Centers	Mayday/Concierge Service Center	Statewide
E911 Emergency Call Centers	Other Public Safety Comm and Dispatch Centers	Statewide
Electronic Payment Card	Florida Transit Vehicles	National
EMS Dispatch	Manpower, Assets, and Resources System (MARS)	National
EMS Dispatch	Other Public Safety Comm and Dispatch Centers	Statewide
Equipment Management and Inventory System	FDOT Central Office Command Operations Center	National
Equipment Management and Inventory System	FDOT District Construction and Maintenance	Statewide
Equipment Management and Inventory System	FDOT District Emergency Operations Centers	National
Equipment Management and Inventory System	FDOT District Transportation Management Centers	National
Equipment Management and Inventory System	Roadway Maintenance Systems	Statewide
ETC Reciprocity Network	SunPass Customer Service Center	Statewide
FDLE Communications Center	Manpower, Assets, and Resources System (MARS)	National
FDLE Communications Center	Other Public Safety Comm and Dispatch Centers	Statewide
FDLE Vehicles	Florida Highway Patrol Dispatch	Statewide
FDOT Aviation Database	Florida Airports	National
FDOT Bridge Management Inventory Data Suppliers	FDOT Bridge Management Inventory System (Pontis)	National
FDOT Bridge Management Inventory System (Pontis)	FDOT Overdimension Permit System	Statewide

Element	Interfacing Element	Rating
FDOT Bridge Management Inventory System (Pontis)	FDOT Traffic Characteristics Inventory	National
FDOT Bridge Management Inventory System (Pontis)	State Highway System Crash Analysis Reporting System	National
FDOT Central Office Command Operations Center	Other Public Safety Comm and Dispatch Centers	Statewide
FDOT District Construction and Maintenance	FDOT Overdimension Permit System	Statewide
FDOT District Emergency Operations Centers	FDOT Statewide Public Information System	Statewide
FDOT District Emergency Operations Centers	Florida Transit Systems	Regional
FDOT District Emergency Operations Centers	Newspapers, Radio, Television Stations	Regional
FDOT District Emergency Operations Centers	Other Public Safety Comm and Dispatch Centers	Regional
FDOT District Emergency Operations Centers	Traveler Info. Radio Network Stations	Statewide
FDOT District Emergency Operations Centers	Weather Information Providers	Regional
FDOT District Field Equipment	Pedestrian	National
FDOT District Field Equipment	Traveler Vehicle	National
FDOT District Public Information Office	Newspapers, Radio, Television Stations	Regional
FDOT District Public Information Office	Traveler Info. Radio Network Stations	Statewide
FDOT District Public Information Office	Weather Information Providers	Regional
FDOT District Transp. Data Collection Systems	FDOT Traffic Characteristics Inventory	Statewide
FDOT District Transp. Data Collection Systems	State Highway System Crash Analysis Reporting System	Statewide
FDOT District Transportation Management Centers	FDOT Overdimension Permit System	Statewide
FDOT District Transportation Management Centers	FDOT Statewide Public Information System	Statewide
FDOT District Transportation Management Centers	FDOT Traffic Characteristics Inventory	Statewide
FDOT District Transportation Management Centers	Florida DEP Air Quality Management System	Statewide
FDOT District Transportation Management Centers	Florida DOT Traffic Information Web Page	Statewide
FDOT District Transportation Management Centers	Florida Highway Patrol Dispatch	Statewide
FDOT District Transportation Management Centers	Other Traffic Management Centers	Regional
FDOT District Transportation Management Centers	Regional Evacuation Routes Database	Statewide
FDOT District Transportation Management Centers	Sensitive Materials Carriers Information Provider	National
FDOT District Transportation Management Centers	Traveler Info. Radio Network Stations	Statewide
FDOT Overdimension Permit System	Financial Institutions	National
FDOT Overdimension Permit System	International Fuel Tax Association (IFTA) System	National
FDOT Overdimension Permit System	International Registration Plan (IRP) System	National
FDOT Overdimension Permit System	Scales and Inspection Facilities (Including ASPEN)	Statewide
FDOT Overdimension Permit System	Turnpike Traffic Management Centers	Statewide

Element	Interfacing Element	Rating
FDOT Roadway Characteristics Inventory	FDOT Roadway Characteristics Inventory Data Suppliers	Statewide
FDOT Roadway Characteristics Inventory	FDOT Traffic Characteristics Inventory	Statewide
FDOT Roadway Characteristics Inventory	Sensitive Materials Carriers Information Provider	National
FDOT Seaport Database	Florida Seaports	Statewide
FDOT Statewide Public Information System	Florida Fish and Wildlife Dispatch Center	Statewide
FDOT Statewide Public Information System	Florida Highway Patrol Dispatch	Statewide
FDOT Statewide Public Information System	Newspapers, Radio, Television Stations	Statewide
FDOT Statewide Public Information System	Traveler Info. Radio Network Stations	Statewide
FDOT Statewide Public Information System	Weather Information Providers	Statewide
FDOT Traffic Characteristics Inventory	Florida DOT Traffic Information Web Page	Statewide
FDOT Traffic Characteristics Inventory	Private Sector Traveler Info. Services	Statewide
FDOT Traffic Characteristics Inventory	RPC/MPO Transp. Data Collection System	National
FDOT Traffic Characteristics Inventory	Traffic Count Stations	Statewide
FDOT Transit Database	Florida Transit Systems	Statewide
FDOT Transit Database	Inter-City Bus Service	Statewide
FHWA Southeast Regional Office	Other Public Safety Comm and Dispatch Centers	Statewide
Financial Institutions	License, Registration, and Fuel Tax System	National
Financial Institutions	Parking Facilities	National
Financial Institutions	SunPass Customer Service Center	National
Florida DEP Air Quality Management System	Newspapers, Radio, Television Stations	Statewide
Florida DEP Air Quality Management System	Weather Information Providers	Statewide
Florida DOT Traffic Information Web Page	Florida Transit Systems	Statewide
Florida DOT Traffic Information Web Page	Rest Areas/Visitor Centers/Service Plazas	Statewide
Florida DOT Traffic Information Web Page	Road Ranger Service Patrol Dispatch	Statewide
Florida DOT Traffic Information Web Page	Traveler PC/Info. Appliance	National
Florida DOT Traffic Information Web Page	Traveler Vehicle	National
Florida DOT Traffic Information Web Page	Welcome Centers	Statewide
Florida Fish and Wildlife Commission Vehicles	Florida Fish and Wildlife Dispatch Center	Statewide
Florida Fish and Wildlife Dispatch Center	Manpower, Assets, and Resources System (MARS)	Statewide
Florida Fish and Wildlife Dispatch Center	Other Public Safety Comm and Dispatch Centers	Statewide
Florida Highway Patrol Dispatch	Florida Highway Patrol Vehicles	Statewide
Florida Highway Patrol Dispatch	Florida Safety and Crash Data Collection System	Statewide

Element	Interfacing Element	Rating
Florida Highway Patrol Dispatch	Manpower, Assets, and Resources System (MARS)	Statewide
Florida Highway Patrol Dispatch	Motor Carrier Compliance Enforcement Vehicles	Statewide
Florida Highway Patrol Dispatch	Motorist Aid Call Boxes	Statewide
Florida Highway Patrol Dispatch	Newspapers, Radio, Television Stations	Statewide
Florida Highway Patrol Dispatch	Other Public Safety Comm and Dispatch Centers	Statewide
Florida Highway Patrol Dispatch	Traveler Info. Radio Network Stations	Statewide
Florida Highway Patrol Dispatch	Weather Information Providers	Statewide
Florida Safety and Crash Data Collection System	Local Police Dispatch	Statewide
Florida Safety and Crash Data Collection System	State Highway System Crash Analysis Reporting System	Statewide
Florida State Emergency Operations Center	Florida Transit Systems	Statewide
Florida State Emergency Operations Center	Newspapers, Radio, Television Stations	Statewide
Florida State Emergency Operations Center	Other Public Safety Comm and Dispatch Centers	Statewide
Florida State Emergency Operations Center	Regional Evacuation Routes Database	Statewide
Florida State Emergency Operations Center	School District Transportation Dispatch	Statewide
Florida State Emergency Operations Center	Traveler Info. Radio Network Stations	Statewide
Florida State Emergency Operations Center	Turnpike Traffic Management Centers	Statewide
Florida State Emergency Operations Center	Weather Information Providers	Statewide
Florida State Warning Point	Newspapers, Radio, Television Stations	Statewide
Florida State Warning Point	Other Public Safety Comm and Dispatch Centers	Statewide
Florida State Warning Point	Sensitive Materials Carriers Dispatch	National
Florida State Warning Point	Traveler Info. Radio Network Stations	Statewide
Florida State Warning Point	Weather Information Providers	Statewide
HRI Crossings Database Info Suppliers	Rail-Highway Grade Crossings Database	Statewide
HRI Crossings Database Info Users	Rail-Highway Grade Crossings Database	Statewide
Infrastructure Assisted Hazardous Warning System	Traveler Vehicle	Statewide
International Fuel Tax Association (IFTA) System	License, Registration, and Fuel Tax System	National
International Registration Plan (IRP) System	License, Registration, and Fuel Tax System	National
License, Registration, and Fuel Tax System	Scales and Inspection Facilities (Including ASPEN)	Statewide
Local Agency Web Sites	Traveler PC/Info. Appliance	National
Local Fire Dispatch	Manpower, Assets, and Resources System (MARS)	Statewide
Local Fire Dispatch	Other Public Safety Comm and Dispatch Centers	Statewide
Local Police Dispatch	Manpower, Assets, and Resources System (MARS)	Statewide

Element	Interfacing Element	Rating
Local Police Dispatch	Other Public Safety Comm and Dispatch Centers	Statewide
Manpower, Assets, and Resources System (MARS)	Road Ranger Service Patrol Dispatch	Statewide
Mayday/Concierge Service Center	Other Public Safety Comm and Dispatch Centers	Statewide
Mayday/Concierge Service Center	Traveler Vehicle	National
Municipal Emergency Operations Centers	Other Public Safety Comm and Dispatch Centers	Statewide
Other Public Safety Comm and Dispatch Centers	Road Ranger Service Patrol Dispatch	Statewide
Parking Facilities	Traveler Vehicle	National
Private Sector Traveler Info. Services	Rest Areas/Visitor Centers/Service Plazas	National
Private Sector Traveler Info. Services	Service Plazas	National
Private Sector Traveler Info. Services	Traveler Info. Radio Network Stations	National
Private Sector Traveler Info. Services	Traveler PC/Info. Appliance	National
Private Sector Traveler Info. Services	Traveler Vehicle	National
Private Sector Traveler Info. Services	Turnpike Traffic Management Centers	National
Private Sector Traveler Info. Services	Welcome Centers	National
Rail Intermodal Terminals	Rail Operations Database	Statewide
Rail Operations Centers	Rail Operations Database	Statewide
Regional Evacuation Routes Database	Turnpike Traffic Management Centers	Statewide
RPC/MPO Transp. Data Collection System	State Highway System Crash Analysis Reporting System	Statewide
Sensitive Materials Carriers Dispatch	Sensitive Materials Carriers Information Provider	National
Skid Hazard Inventory	Skid Hazard Inventory Suppliers	Statewide
Skid Hazard Inventory	Skid Hazard Inventory Users	National
SunPass Customer Service Center	Sunpass Toll Collection Systems	Statewide
SunPass Customer Service Center	SunPass Web Site	Statewide
Sunpass Toll Collection Systems	Traveler Vehicle	National
SunPass Web Site	Traveler PC/Info. Appliance	National
Traveler Vehicle	Turnpike Field Equipment	National
Turnpike Traffic Management Centers	Weather Information Providers	Regional

### **3.6 Physical Architecture Inventory of Existing and Future Architecture Entities**

Our analysis approach and methodology is based on a strongly physical architecture-oriented use of the National ITS Architecture. This is a consequence of the expected use of the Regional ITS Architecture to identify and sequence projects, estimate their costs, and identify the information exchange dependencies they have with other projects. This approach should not be taken to understate the importance of the logical architecture. The logical architecture is crucial to understanding the physical architecture in sufficient detail to develop interface standards, and to understand the underlying processes that explain what a physical subsystem does. These details are important to standards developers and project designers at the PS&E (Plans, Specifications and Estimates) stage—but are less important to regional stakeholders and large investment decision-makers who are responsible for the regional ITS architecture requirements and decisions.

In addition, our approach to identifying stakeholder needs (also known as *requirements analysis*) is oriented to using *market packages* and their stakeholder-driven customization. There is direct traceability from a customized market package (an explicit selection of subsystems and their component equipment packages for a set of stakeholders with the architecture flows representing information transmission between them) to logical architecture process specifications and then to user service requirements (actual statements of user needs that do not specify a particular architectural implementation).

We prefer to use the predefined set of market packages from the National ITS Architecture, as a starting point for user needs analysis. We have found that the abstract concepts of user services, while invaluable for the system engineers that developed the National ITS Architecture, are generally too abstract for the majority of stakeholders in a limited time setting.

The inventory developed at each architecture workshop is used to prepare a customized Sausage Diagram for the region. An example of the type of diagram that was prepared is illustrated on the next page. This diagram was from FDOT, District 3. This diagram goes beyond the standard version of this diagram created by Turbo Architecture in that it includes terminators as well as subsystems, and identifies the specific local stakeholder entities that map to each subsystem and terminator.

# Florida Statewide ITS Architecture – FDOT District 3

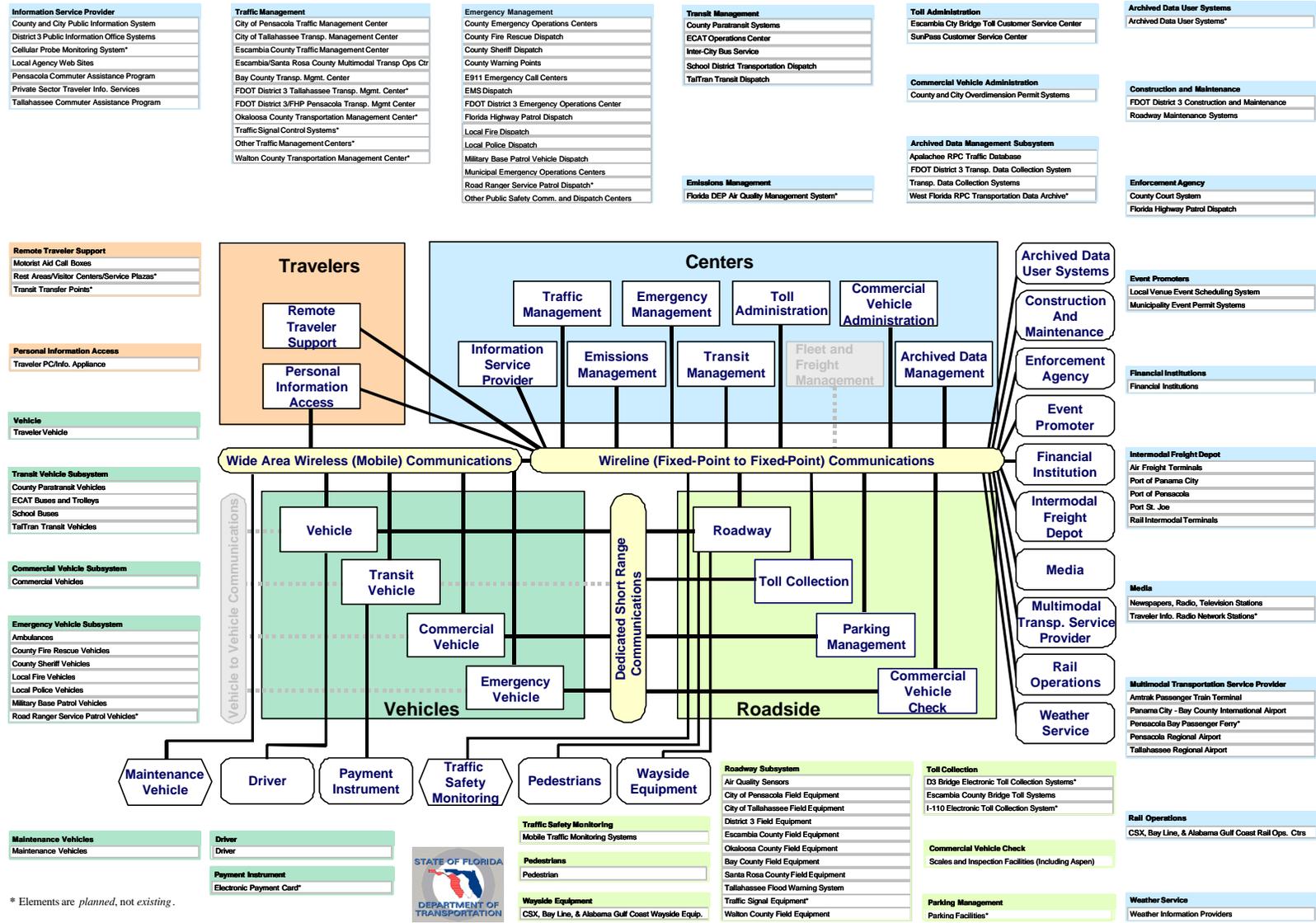


Figure 4 Regional ITS Architecture Sausage Diagram

The top level of the hypertext presentation is illustrated in Figure 5. Note that along the left side of the web page are hot links to the major portions of the site: the Sausage Diagram, the customized market packages, the physical entity inventory (sorted either by National ITS Architecture entity (easy to find for example all of the entities of a similar type) or by regional stakeholder (easy to find all the entities owned by one stakeholder)), and finally the TurboArchitecture Database download page.

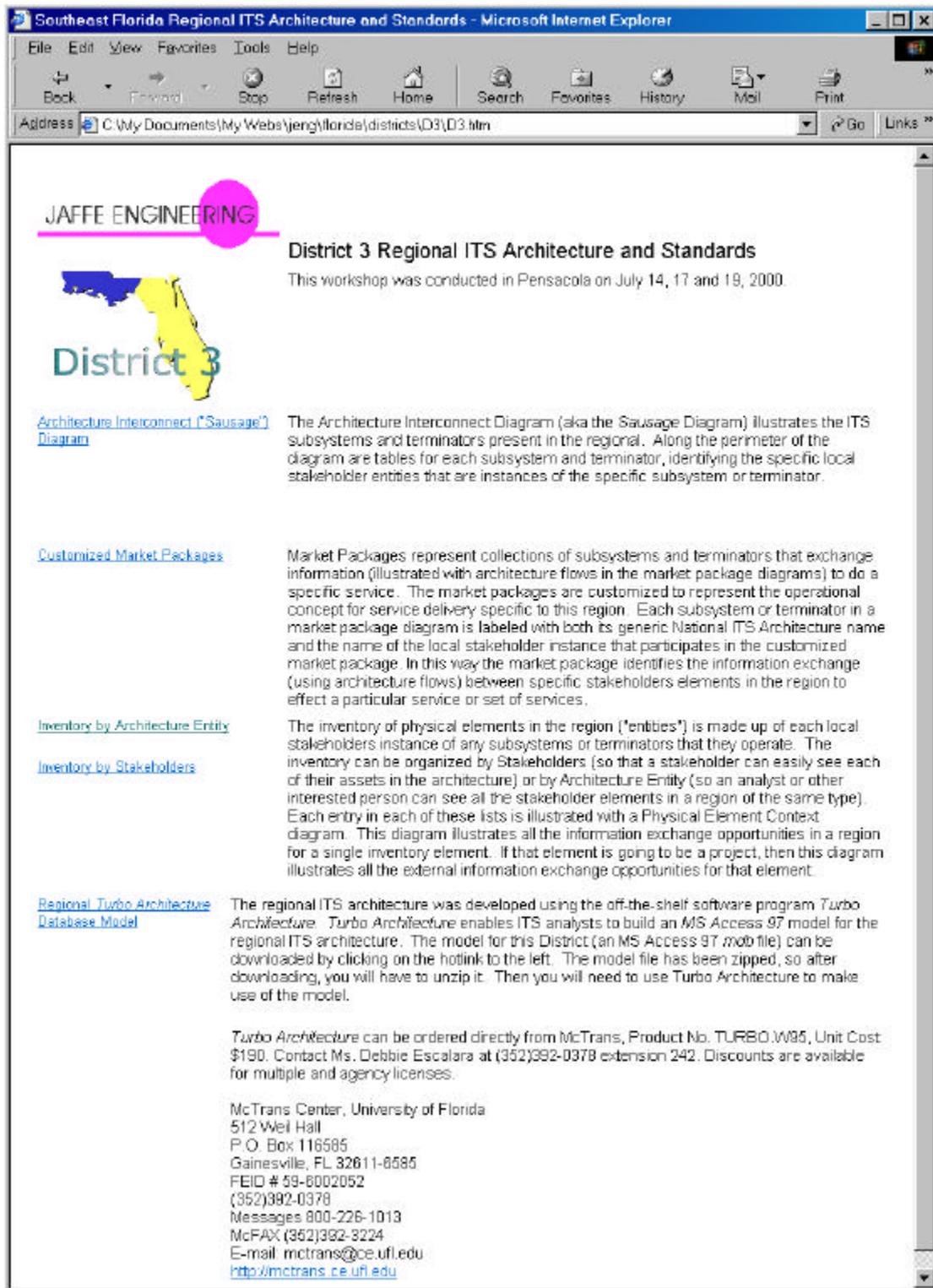


Figure 5 Top-level web site home page for a regional ITS architecture.

### 3.7 Market Packages

#### 3.7.1 Customized Market Packages as Concept of Operations

Market Packages, customized for the specific consensus requirements of each region, represent the information that will be exchanged between specific stakeholder elements to effect specific sets of user services. As such, they collectively represent the concept of operations for a district.

These market packages were selected by the regional stakeholders, and have been modified to correspond to the system inventory of the previous section. This modification requires that entities (subsystems or terminators) in these market packages not included in the previous inventory be removed, along with associated architecture flows. In addition, architecture flows deemed by the stakeholders as not relevant to the regional deployment were also removed. In a few cases subsystems or terminators were created to support physical elements that were not anticipated in the National ITS Architecture. Maintenance Vehicles are a typical example. Similarly, architecture flows were also created where necessary.

Each instance of a market package in this section (some market packages will be deployed more than once in the region) is classified as *Planned* or *Existing*. These classifications have the following meaning:

**Planned:**

The market package does not exist, but funds have been programmed for this service or there is reasonable stakeholder consensus for the project that can lead to funding in the future.

**Existing:**

The market package already exists, although the interfaces may be “legacy” that is they may not conform to the National ITS Architecture or related standards. It is a local decision that must be made to decide to upgrade these interfaces. This decision should be made based on the cost and benefits to be gained, based on many local factors (e.g. the impact on interoperability or future deployments that are dependent on these interfaces).

Market packages have been more finely classified in the following diagrams by identifying individual architecture flows with the above classification.

#### 3.7.2 Architecture Market Package Extensions

In some cases, it was not possible to find appropriate services in the National ITS Architecture to meet the needs of the districts. In these cases, the National ITS Architecture services were extended (locally defined subsystems, terminators or architecture flows) to meet specific local need or institutional requirement. These extensions are identified as such where they appear.

Market packages are presented on the web site with a menu of all market packages on the left

frame, and the actual market package of interest on the right. It is very easy for users to quickly find the market packages of interest, or to scan market packages, as they choose. An example of the market package web site presentation is illustrated in Figure 6.

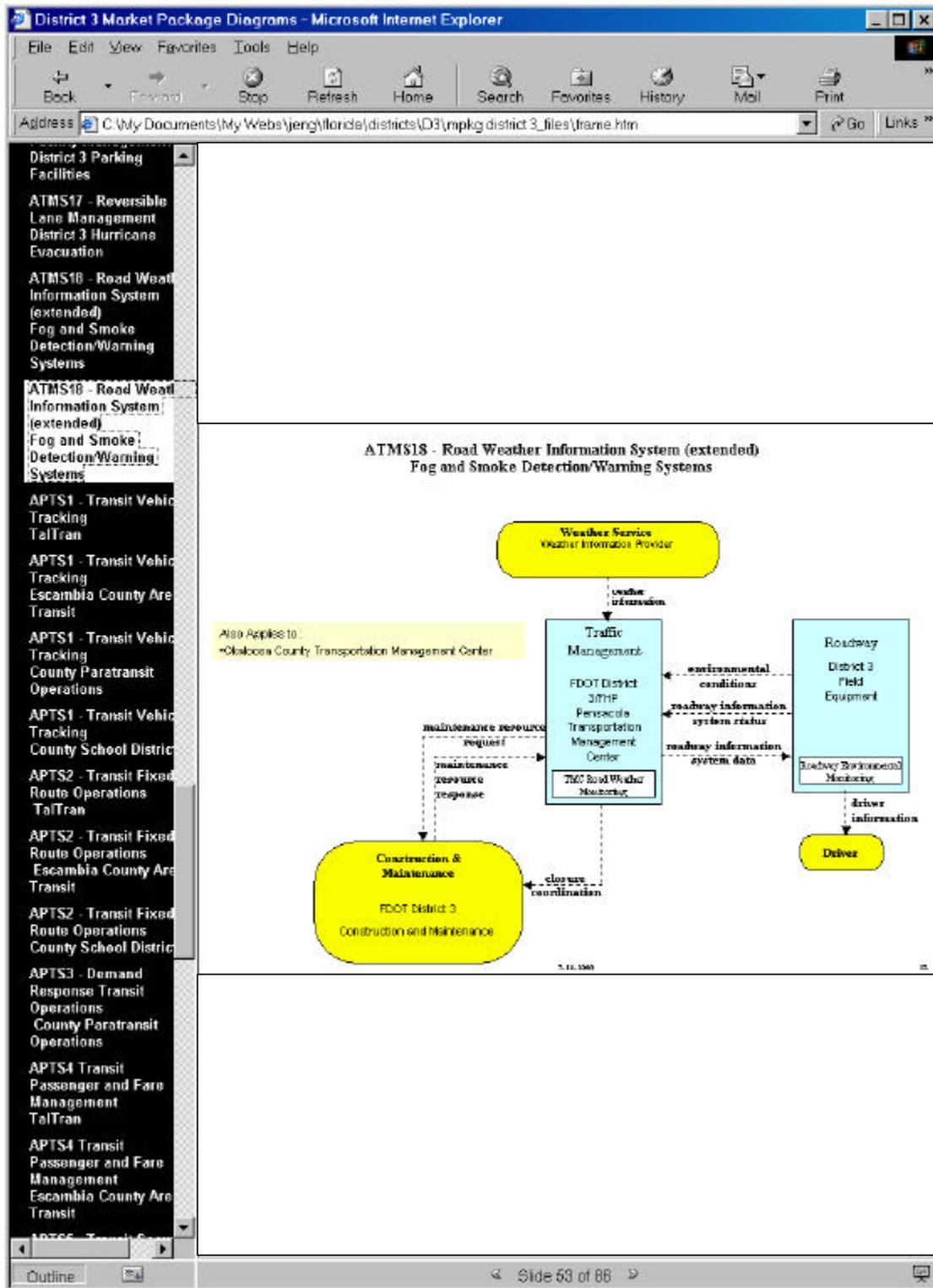


Figure 6 Web site presentation of market packages.

## 3.8 Architecture Flow Diagrams

### 3.8.1 Project-Oriented Architecture Flow Context Diagrams

These diagrams provide a comprehensive, graphical presentation of the regional ITS architecture for the FDOT districts and statewide services. This presentation consists of a series of “project-oriented” architecture flow diagrams; one diagram is included for each ITS element that has been identified. The reader who is interested in how a particular system fits with the rest of the district ITS architecture will find a comprehensive diagram that shows all architecture flows that go into or come out of the system of interest. Taken together, the diagrams identify every ITS element and every architecture flow that has been selected for the FDOT districts and statewide ITS architecture.

The diagrams for one entity are often too dense to be useful using a web browser. Thus we always allow a stakeholder entity under consideration to be viewed one interconnect at a time (that is, view all the architecture flows between each pair of entities). Collectively, the diagram clearly identifies the institutional agreements to share data that must be put in place before design (the PS&E) and construction can begin. The relationships in this diagram are derived from all the modified market packages where the ITS element under consideration appears. Note that the legend identifies architecture flows as either existing or planned. This information was derived from the stakeholder customized market package analysis and was validated by the stakeholders during their review of the project oriented Architecture Flow diagrams on Day 3 of the workshop.

When the user selects the inventory by stakeholder, they can quickly see the architecture entities that each stakeholder "owns" as in Figure 7. On the left side of the screen, they can easily comment (and this will show up on other screens as well) by clicking on the "send your comments" icon. This will send their comments to the developers, along with information as to exactly which page they are reviewing at the time.

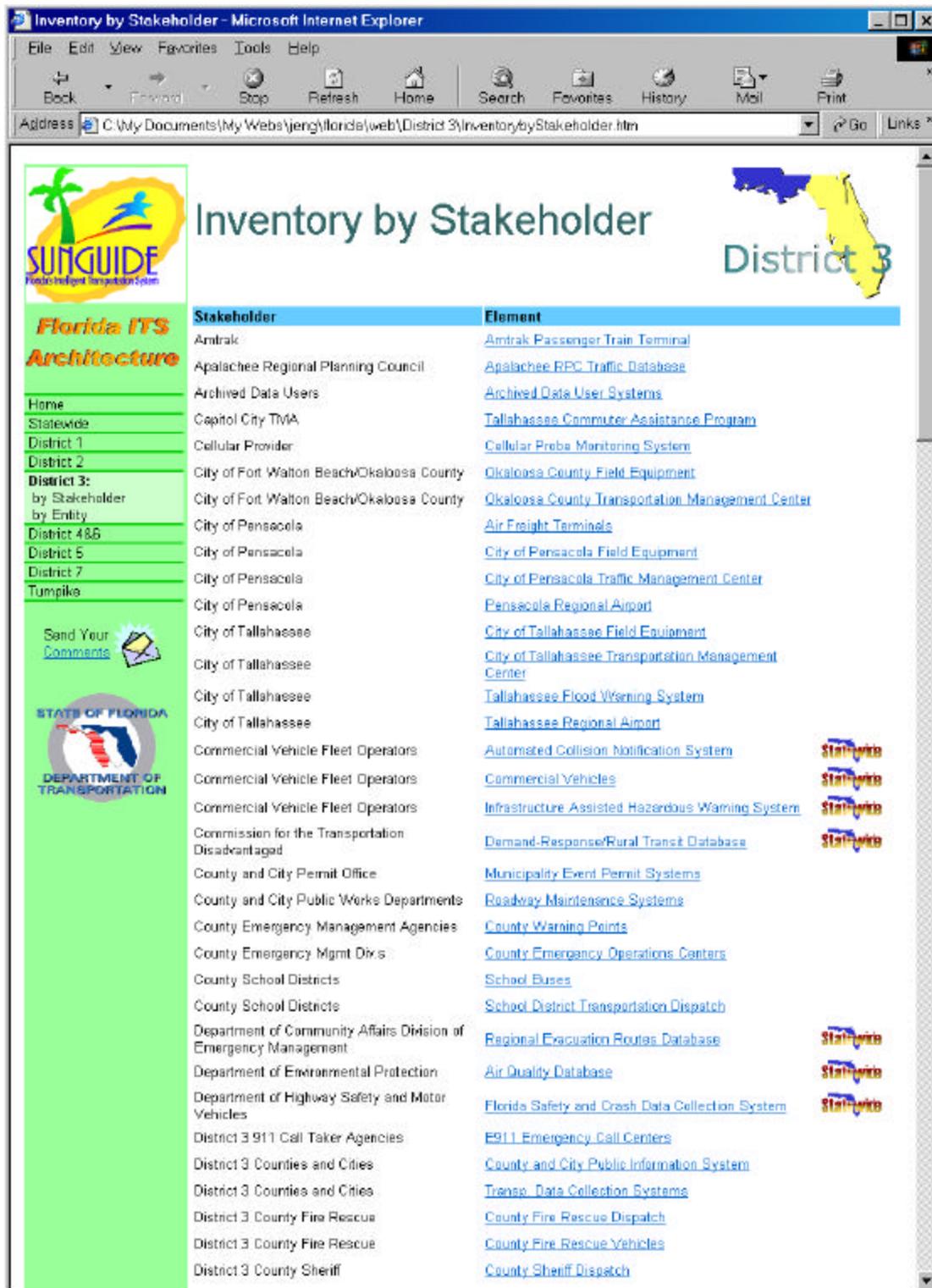
Selecting one of the elements on the page will bring the user to the physical architecture page for that element. For example, selecting "City of Tallahassee Transportation Management Center" brings the user to the page illustrated in Figure 8. This page gives the elements status, a brief description of the entity, who the stakeholder is, and a brief listing of the National ITS Architecture elements that the entity was mapped to. In this example, the City of Tallahassee TMC was mapped to the *Traffic Management* subsystem, the *Archived Data User Systems* terminator, and the *Other TM* terminator. Additional detail, as required by the proposed federal regulations, can be found by clicking the Details icon, which leads in this case to a web page illustrated in Figure 9. Here, a listing of equipment packages for the stakeholder element is identified, along with their definitions from the National ITS Architecture. These equipment packages are a consequence of the specific market packages that the element was assigned to. Each Equipment Package is mapped to process specifications from the National ITS Architecture, and these can be seen by selecting the Details icon. For example, selecting the Details icon next to Collect Traffic Surveillance from Figure 9 leads to the web page illustrated in Figure 10. This now illustrates for that equipment package its description, which other physical elements in the regional ITS architecture also use the same equipment package, a listing of the

Logical Architecture Process Specifications (PSpecs) that are allocated to the equipment package, and a list of User Service Requirements that are fully or partially satisfied by this equipment

package.

Returning to the Physical Architecture page for a single element (e.g. Figure 8), below the Functional Details is the list of other physical entities that the element interfaces to. A user could select the full context diagram, but this is often too dense with interfaces to be useful. More useful is to examine each interconnect individually, and this is done by selecting one of the other entities in the list. For example, selecting County Emergency Operations Centers with bring the user to the page illustrated in Figure 11, the detailed interface definition page. This shows first a diagram of all the stakeholder selected architecture flows for the interface (this diagram is created by Turbo Architecture) and then a list of definitions of each of the illustrated architecture flows.

With each architecture flow is a hotlink to a standards page, illustrated in Figure 12. This standards page shows the type, Standard Development Organization, Title and Document ID of the applicable standards for that architecture flow. Note that in general, each architecture flow has up to three standards that are relevant: a Message Set Standard, a Data Element standard and a communications protocol standard. Especially in the area of communication protocols, there are various technology choices that a region can make, and in this report, all the realistic options are presented. The final choice is usually made closer to or at the PS&E stage for a particular physical entity.



**Inventory by Stakeholder**

Stakeholder	Element
Amtrak	<a href="#">Amtrak Passenger Train Terminal</a>
Apalachee Regional Planning Council	<a href="#">Apalachee RPC Traffic Database</a>
Archived Data Users	<a href="#">Archived Data User Systems</a>
Capitol City TMA	<a href="#">Tallahassee Commuter Assistance Program</a>
Cellular Provider	<a href="#">Cellular Probe Monitoring System</a>
City of Fort Walton Beach/Okaloosa County	<a href="#">Okaloosa County Field Equipment</a>
City of Fort Walton Beach/Okaloosa County	<a href="#">Okaloosa County Transportation Management Center</a>
City of Pensacola	<a href="#">Air Freight Terminals</a>
City of Pensacola	<a href="#">City of Pensacola Field Equipment</a>
City of Pensacola	<a href="#">City of Pensacola Traffic Management Center</a>
City of Pensacola	<a href="#">Pensacola Regional Airport</a>
City of Tallahassee	<a href="#">City of Tallahassee Field Equipment</a>
City of Tallahassee	<a href="#">City of Tallahassee Transportation Management Center</a>
City of Tallahassee	<a href="#">Tallahassee Flood Warning System</a>
City of Tallahassee	<a href="#">Tallahassee Regional Airport</a>
Commercial Vehicle Fleet Operators	<a href="#">Automated Collision Notification System</a> 
Commercial Vehicle Fleet Operators	<a href="#">Commercial Vehicles</a> 
Commercial Vehicle Fleet Operators	<a href="#">Infrastructure Assisted Hazardous Warning System</a> 
Commission for the Transportation Disadvantaged	<a href="#">Demand-Response/Rural Transit Database</a> 
County and City Permit Office	<a href="#">Municipality Event Permit Systems</a>
County and City Public Works Departments	<a href="#">Roadway Maintenance Systems</a>
County Emergency Management Agencies	<a href="#">County Warning Points</a>
County Emergency Mgmt Divs	<a href="#">County Emergency Operations Centers</a>
County School Districts	<a href="#">School Buses</a>
County School Districts	<a href="#">School District Transportation Dispatch</a>
Department of Community Affairs Division of Emergency Management	<a href="#">Regional Evacuation Routes Database</a> 
Department of Environmental Protection	<a href="#">Air Quality Database</a> 
Department of Highway Safety and Motor Vehicles	<a href="#">Florida Safety and Crash Data Collection System</a> 
District 3 911 Call Taker Agencies	<a href="#">911 Emergency Call Centers</a>
District 3 Counties and Cities	<a href="#">County and City Public Information System</a>
District 3 Counties and Cities	<a href="#">Transp. Data Collection Systems</a>
District 3 County Fire Rescue	<a href="#">County Fire Rescue Dispatch</a>
District 3 County Fire Rescue	<a href="#">County Fire Rescue Vehicles</a>
District 3 County Sheriff	<a href="#">County Sheriff Dispatch</a>

Figure 7 Web site presentation of Inventory by Stakeholder.

**City of Tallahassee Transportation Management Center**

**SUNGUIDE**  
Florida's Intelligent Transportation System

**Florida ITS Architecture**

Home  
Statewide  
District 1  
District 2  
**District 3:**  
by Stakeholder  
by Entity  
District 4&6  
District 5  
District 7  
Tumpike

Send Your Comments

STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

**City of Tallahassee Transportation Management Center**

**District 3**

Status: Existing

Description: This staffed operations center controls traffic signals and other associated traffic management devices for the city of Tallahassee.

Stakeholder: City of Tallahassee

Functionality: Traffic Management  
Archived Data User Systems  
Other TM

**Details**

Interfaces to:

**Context Diagram**

- Apalachee RPO Traffic Database
- Cellular Probe Monitoring System
- City of Tallahassee Field Equipment
- Control Room Permitting Database
- County and City Public Information System
- County Emergency Operations Centers
- County Fire Rescue Dispatch
- County Sheriff Dispatch
- CSX, Bay Line, and Alabama Gulf Coast Rail Operations Centers
- Draw Bridge Operational Status System
- Draw Bridge Operations Schedules
- Equipment Management and Inventory System
- EQOT Overdimension Permit System
- Florida Highway Patrol Dispatch
- Local Agency Web Sites
- Local Fire Dispatch
- Local Police Dispatch
- Local Venue Event Scheduling System
- Municipal Emergency Operations Centers
- Municipality Event Permit Systems
- Newspapers, Radio, Television Stations
- Other Traffic Management Centers
- Parking Facilities
- Private Sector Traveler Info. Services
- Regional Operations Center Database

Figure 8 Physical entity web site page.



Figure 9 Physical Entity Functional Details information web site page.

Collect Traffic Surveillance Equipment Package - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print

Address C:\My Documents\My Webs\jeng\florida\web\District 3\trace\eqp6.htm



# Collect Traffic Surveillance Equipment Package



**Florida ITS Architecture**

Home

Statewide

District 1

District 2

**District 3:**

by Stakeholder

by Entity

District 4&6

District 5

District 7

Tumpike

[Send Your Comments](#)




**Description:** This Equipment package collects, stores, and provides electronic access to the traffic surveillance data.

**Included in:**

- [Bay County Transportation Management Center](#)
- [City of Pensacola Traffic Management Center](#)
- [City of Tallahassee Transportation Management Center](#)
- [Escambia County Traffic Management Center](#)
- [Escambia/Santa Rosa County Multimodal Transportation Operations Center](#)
- [FDOT District 3 Tallahassee Transportation Management Center](#)
- [FDOT District 3/FHP Pensacola Transportation Management Center](#)
- [Okaloosa County Transportation Management Center](#)
- [Traffic Signal Control Systems](#)
- [Walton County Transportation Management Center](#)

**Processes:**

- 1.1.2.1 Process Traffic Data for Storage
- 1.1.2.2 Process Traffic Data
- 1.1.2.3 Update Data Source Static Data
- 1.1.4.1 Retrieve Traffic Data
- 1.1.4.2 Provide Traffic Operations Personnel Traffic Data Interface
- 1.1.4.4 Update Traffic Display Map Data

**User Service Requirements (fully or partially addressed):**

1.0	TRAVEL AND TRAFFIC MANAGEMENT
1.10	Highway-Rail Intersection
1.10.0	Highway-Rail Intersection. ITS shall include a Highway-Rail Intersection (HRI) function to control highway and rail traffic in at-grade HRIs. Two sub-services are supported: Standard Speed Rail Subservice which is applicable to light rail transit, commuter rail and heavy rail trains with operational speeds up to 79 miles per hour (MPH), and High Speed Rail Subservice which is applicable to all passenger and freight trains with operational speeds from 80 to 126 MPH.
1.6	TRAFFIC CONTROL
1.6.0	ITS shall provide a Traffic Control capability. Traffic Control provides the capability to efficiently manage the movement of traffic on streets and highways. Four functions are provided which are (1) Traffic Flow Optimization, (2) Traffic Surveillance, (3) Control Function, and (4) Provide Information. This will also include control of network signal systems with eventual integration of freeway control.
1.6.1	Traffic Control shall include a Flow Optimize function to provide the capability to optimize traffic flow.
1.6.1.7	Implementation of the Control Function shall include strategies that account for at least the following:
1.6.1.7(a)	Human factors.
1.6.2	Traffic Control shall include a Traffic Surveillance function.
1.6.2.2	Traffic Surveillance shall include a Data Collect function to provide the capability to collect data that are needed for determining traffic flow and prediction.
1.6.2.2.1	Data Collect shall provide the capability to quickly feedback traffic data to the control processes.
1.6.2.3	Traffic Surveillance shall include an area wide surveillance capability to include several

Figure 10 Physical Entity Equipment Package Details web page

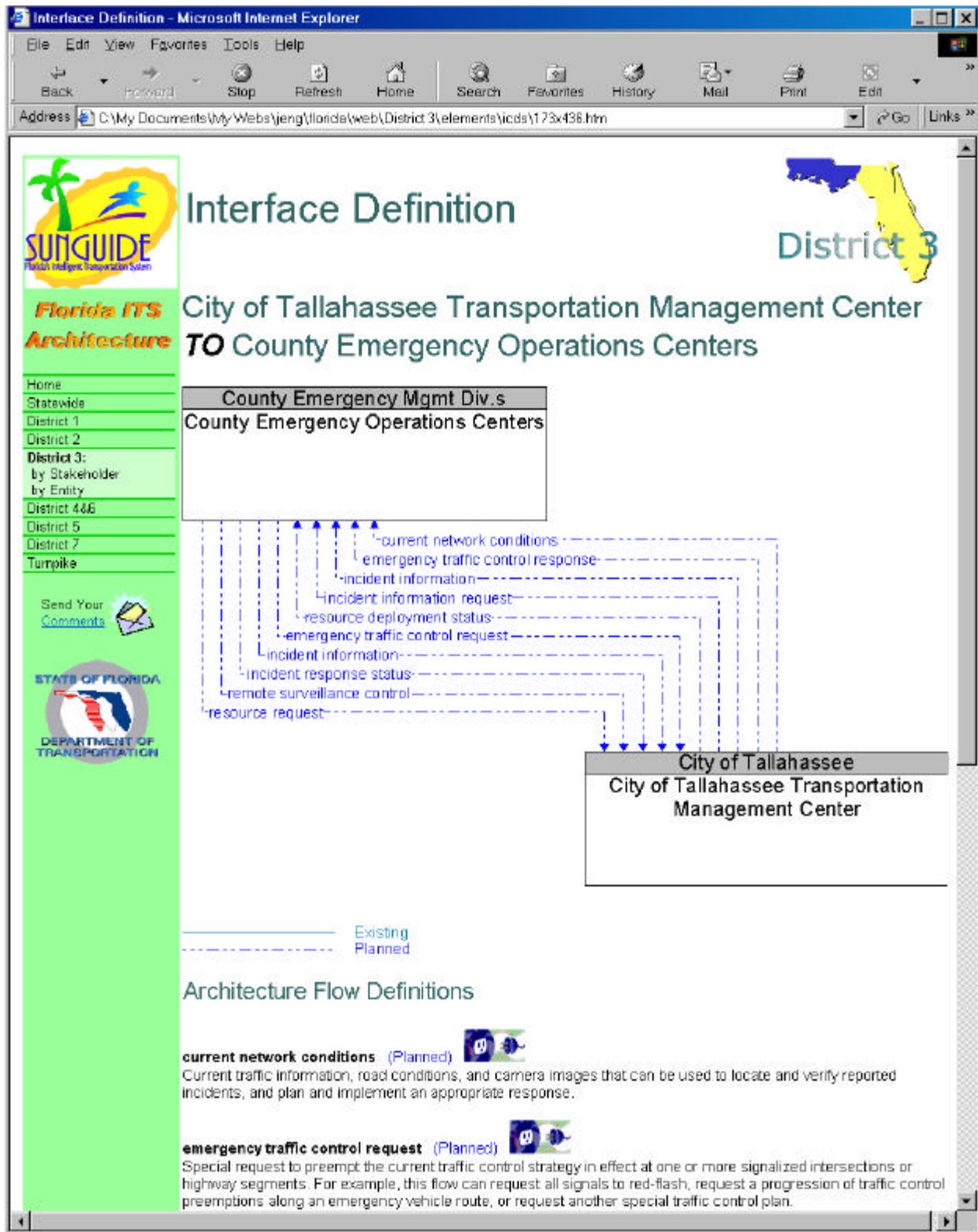


Figure 11 Detailed architecture flow interface specification for a Physical element with one of the other physical elements it shares information with.

**SUNGUIDE**  
Florida's Intelligent Transportation System

**Florida ITS Architecture**

Standards Support For current network conditions District 3

Type	SDO	Title	Document ID
Message Sets	ITE	Message Set for External TMC Communication (MS/ETMCC)	TM 2.01
Data Elements	ITE	Standard for Functional Level Traffic Management Data Dictionary (TMDD)	TM 1.03
Communications	AASHTO	NTCIP - Applications Profile for Common Object Request Broker Architecture (CORBA)	2305
	AASHTO	NTCIP - Applications Profile for Data Exchange ASN.1 (DATEX)	2304
	AASHTO	NTCIP - Application Profile for File Transfer Protocol (FTP)	2303
	AASHTO	NTCIP - Internet (TCP/IP and UDP/IP) Transport Profile	2202
	AASHTO	NTCIP - Subnetwork Profile for Ethernet	2104
	AASHTO	NTCIP - Base Standard: Octet Encoding Rules (OER)	1102

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STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

Figure 12 Standards Candidates for a specific Architecture Flow.

### 3.8.2 Interface Standards Analysis

The development of a regional ITS architecture is one important step in a process towards cost-effective integration of the region's transportation systems. To achieve integration, the ITS Architecture must be supported by standards that specify exactly how systems should communicate and share information. Fortunately, a large body of standards that are relevant to ITS either exist or will be completed within the next year. For example, the ITS Standards Catalog, developed by the Jet Propulsions Lab, identifies over 300 standards that are relevant to ITS systems. In addition, a major ITS Standards Acceleration program, sponsored by US DOT (Jaffe Engineering staff are actively leading some of these activities – see our qualifications section), is currently tracking approximately 80 standards that focus specifically on the interoperability needs of ITS systems. There are seven Standards Development Organizations (SDOs) that are involved in the

development of these ITS standards: IEEE; AASHTO; NEMA; SAE; ITE; ASTM; and ANSI. Each of the ITS standards activities is mapped to architecture flows in the National ITS Architecture. Based on this mapping, and the mapping between the National ITS Architecture and the regional ITS Architecture developed as part of this effort, we will present the ITS standards that are relevant.

### 3.8.3 Standard Activities

In general, every architecture interface can have three or more associated standards. This is because three general types of standards are being developed for ITS:

- Communications standards – Standards that identify the communications profiles that are used to support the transfer of information ITS systems. Oftentimes, these standards identify broader industry communications standards and specify their application for ITS.
- Data Dictionary Standards – Standards that specify the data elements that are transferred between ITS systems. These standards define the meaning, format, and structure of all primitive data elements that have application in ITS.
- Message Set Standards – Standards that define the messages that are transferred between ITS systems. These messages are composed of data elements defined in data dictionary standards and are transferred using communications profiles specified in Communications standards.

There are several excellent resources on the World Wide Web for those who want to learn more about ITS standards. The [ITS America Standards Home Page](#) provides access to standards information relating to all aspects of ITS. It also contains links to the organizations involved and, where possible, provides rapid access to published standards documents. The [U.S. DOT Joint Program Office Standards](#) site provides status on the standards acceleration program.

In addition to these general sites, each Standards Development Organization also maintains a presence on the web. In many cases, the web sites and e-mail reflector sites together allow full monitoring and participation of standards committee activities with minimal travel and minimal time spent attending meetings. Since web addresses can change over time, only the top level addresses for the ITS America and US DOT sites are provided below. Each site links to the individual SDO sites where you can get information that is more detailed.

- ITS America Web Site (Standards Page) – [www.itsa.org/standards](http://www.itsa.org/standards)
- US DOT Standards Acceleration Program Page: - [www.its.dot.gov/standards](http://www.its.dot.gov/standards)

The ITS standards development effort is progressing rapidly; new standards are identified frequently and the mapping between the National ITS Architecture and standards is subject to change. For these reasons, the mapping information provided should be augmented with information from other resources.

## 4 Database Design

The Florida Statewide ITS Architecture is actually defined in a collection of interrelated Microsoft Access Databases. These databases define the inventory, the market package choices, and the interface definitions for all seven district architectures and the statewide services architecture. The databases also define the linkages between these architecture definitions and the underlying ITS standards activities, equipment packages, user service requirements, and process specifications defined in the National ITS Architecture. The databases are used to maintain the architecture definitions and generate the detailed hypertext architecture information that is used in the architecture web site and CD-ROM.

The database design is backwards-compatible with Turbo Architecture, allowing use of this commercially available tool for continuing update and maintenance of the Statewide Architecture.

### 4.1 District and Statewide Services Architecture Databases

A set of relational databases were used to capture, analyze, and document the Florida Statewide Architecture. These databases build on established National ITS Architecture and Turbo Architecture database designs. Per our agreement with FDOT, Microsoft Access 2000 is used for the new databases that we developed for Florida DOT.

#### 4.1.1 Statewide Architecture Database Requirements

Before we sketched our first database design, we developed a set of requirements based on the contract, associated project documentation, and preliminary conversations with FDOT. The following table lists the key requirements that we identified for the statewide architecture databases through this analysis. It also identifies the subset of these requirements that are supported by Version 1.0 of the Turbo Architecture software product. We delineate between requirements that can be supported by Turbo Architecture and extended requirements because it is beneficial to use a commercially-available software tool like Turbo Architecture where practical to satisfy these requirements.

Table 4-1. Summary of Statewide Architecture Database Requirements

Requirement	Turbo	Extended	Comment
<b>Review Strategic Plan.</b>			
• Identify User Services (short, mid, long)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Add User Service to Architecture Mapping
• Identify required Institutional Agreements	<input type="checkbox"/>	<input type="checkbox"/>	Institutional agreement analysis not in database
• Inventory (stakeholder, system, status,	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>Collect Stakeholder Input (Workshops)</b>			
• Identify Key Stakeholders (public/private)			
- Save general agency/company info	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
- Save contact info/workshop attendance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Extended stakeholder attributes will be stored.
• Identify Inventory			
- Save stakeholder, system, status, entity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
- Save extended info – photos, links	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If desired, add extended attributes (photos, hyperlinks)
• Identify Market Packages			
- Select Market Packages for the Region	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Requirement	Turbo	Extended	Comment
- Support Market Package Tailoring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Produce intermediate "tailored MP" diagrams
• Identify Regional Interconnects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
• Identify Regional Architecture Flows	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
• Identify ITS Projects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
• Identify Other Development Issues	<input type="checkbox"/>	<input checked="" type="checkbox"/>	General SOS requirement could be implemented
• Produce Regional Architecture per	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Combination of Turbo and Extended Reports
<b>Develop Florida Statewide Architecture</b>			
• Develop Physical Architecture. Define:			
- Subsystems/Terminators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
- Market Packages	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
- Architecture Flows	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
- Equipment Packages	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Turbo doesn't identify EPs. Extended feature.
• Generate Architecture Flow Diagrams	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
• Provide Traceability to USRs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Identify User Services and USRs in extended report
• Identify Logical Arch PSpecs, Flows,	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Identify relevant LA elements in an extended report
• Identify Current/Future ITS Projects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	May require 3-tier (State, Region, Projects) architecture
• Compare Regional and State	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Best results with extensions to support 3-tier arch
• Document Rolled-Up Statewide Arch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Extended tables could support roll-up/generalization
<b>Identify Florida Statewide Standards</b>			
• Link Architecture to Standards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Will use latest data available...possibly later than Turbo
• Cross Reference to TEA-21 Critical List	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Attribute not available in Turbo.
• Generate Standards Reports	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Extended reports will be used in lieu of Turbo Reports
• Generate HTML Linking Arch to	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No HTML Generation Available in Turbo
<b>Develop CD ROM and Update Web Site</b>			
• Connect USRs to Needs in the Strategic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Extended tables populated in Task 1
• Hand Build Architecture Home Page(s)	<input type="checkbox"/>	<input type="checkbox"/>	Custom pages contain intro, links to detailed content
• Generate detailed architecture content	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Generated from the Database
<b>Maintenance and Support</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	All above requirements may apply to maintenance

#### 4.1.2 Database Design Constraints

The database design also takes the following factors into account:

- Microsoft Access will be used. Microsoft Access 2000 will be used for any new databases. Existing Access 97 databases may also be integrated into the design using "linked tables" where necessary.
- The design must support all the requirements identified in the previous section
- The design should directly use National ITS Architecture databases for relevant source data. This will simplify future maintenance of the Florida Statewide Architecture as the National ITS Architecture is enhanced.
- The design should be backwards-compatible with the Turbo Architecture database design so that Turbo Architecture can be used as an aid in development and maintenance of the statewide architecture.

#### 4.1.3 High Level Database Design

The Florida Statewide ITS Architecture is actually defined in several different databases. The databases and their relationships are presented in Figure 4-1.

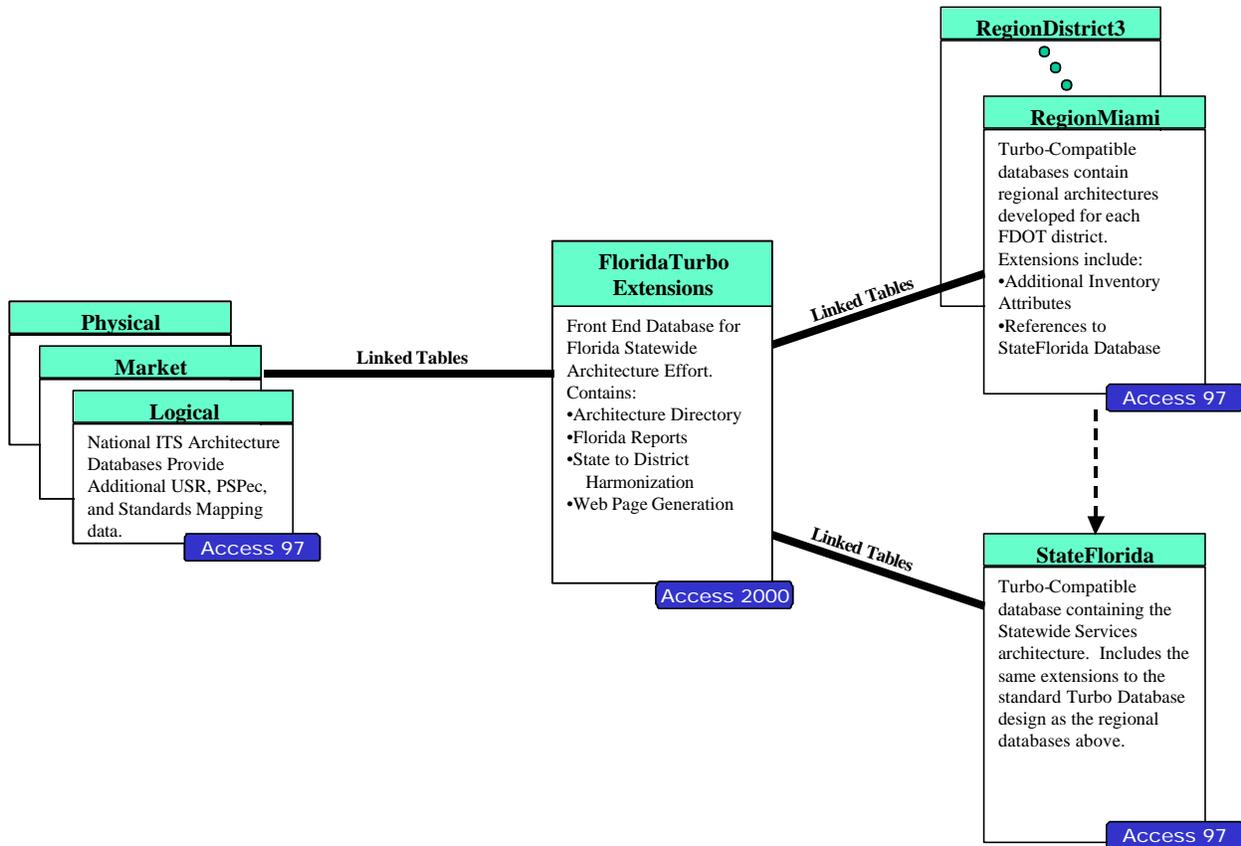


Figure 4-1. High-level Statewide Database Design

The design of each of these databases is briefly described in the following paragraphs.

### ***FloridaTurboExtensions***

This is a “client” database application that provides the primary user interface to each of the other databases. It includes the queries, reports, forms, macros, and modules that provide all database system functions that augment Turbo Architecture. These functions include HTML generation, statewide services architecture to district architecture harmonization, extended reports, and data tables and queries that support the “roll up” from the district architectures to the overarching statewide services architecture for Florida. Section 5 provides a detailed user guide for this database.

### ***District and Statewide Services Architecture Databases***

In the course of the statewide architecture program, separate regional architectures were developed for each FDOT district, including the Turnpike District. In addition, a separate Statewide Services architecture was defined that provided an overarching architecture that included statewide services and key interfaces that integrated and unified the transportation architecture for the state. Each of these architectures (seven district architectures and a statewide

services architecture) is defined in separate Microsoft Access 97 databases. Microsoft Access 97 format is used for these databases for compatibility with Turbo Architecture. Table 4-2 identifies each of these architecture databases and the workshops that were related to each.

*Table 4-2. District and Statewide Services Architecture Databases*

Architecture	Database	Supporting Workshops
District 1	RegionNaples.mdb	Naples
District 2	RegionJacksonville.mdb	Jacksonville
District 3	RegionDistrict3.mdb	Pensacola and Tallahassee
District 4 & 6	RegionMiami.mdb	Miami and Fort Lauderdale
District 5	RegionOrlando.mdb	Orlando
District 7	RegionTampa.mdb	Tampa
District 8 (Turnpike)	Turnpike.mdb	Miami, Fort Lauderdale, Orlando, and Tallahassee
Statewide Services	StateFlorida.mdb	Tallahassee

The design of each of these databases is identical. Each database is compatible with Turbo Architecture and includes everything that a standard Turbo Architecture database contains. In addition, each database includes several extended fields that were added to support requirements specific to this contract. The Turbo Architecture database design itself is public domain, and largely self-documented within each Turbo Architecture database. The database design is made available in Microsoft Access through the design and definition properties for each table and field in the database. The Turbo database design extensions created for the Florida Statewide Architecture are documented in a like manner; every extended field is defined, and all extended fields are clearly distinguished by the words “Extended Attribute” at the beginning of the field definition. The “Relationships” tool within Microsoft Access provides a nice overview of the database design. A screen capture from this tool in Figure 4-2 shows the Turbo Architecture design and the extensions created for the Florida Statewide Architecture program.

Table 4-3 highlights the fields in each District Architecture database that were added for this contract. The remaining table and field definitions (the vast majority of the database definition) exactly matches the Turbo Architecture standard Version 1.0 database design.

*Table 4-3. Turbo Architecture Database Design Extensions*

Table	Field Name	Description
tblElements	ElementLink	Extended Attribute – For more information hyperlink
tblElements	ElementContact	Extended Attribute – Pointer to a contact for the element
tblElements	ElementParent	Extended Attribute – Pointer to general element. Allows element hierarchies.
TblElements	StatewideServices	Extended Attribute – Is this part of the statewide services?
TblMarketPackageElements	StatewideServices	Extended Attribute – Is this part of the

<b>Table</b>	<b>Field Name</b>	<b>Description</b>
		statewide services?
TblRegionalArchitecture	StatewideServices	Extended Attribute – Is this part of the statewide services?

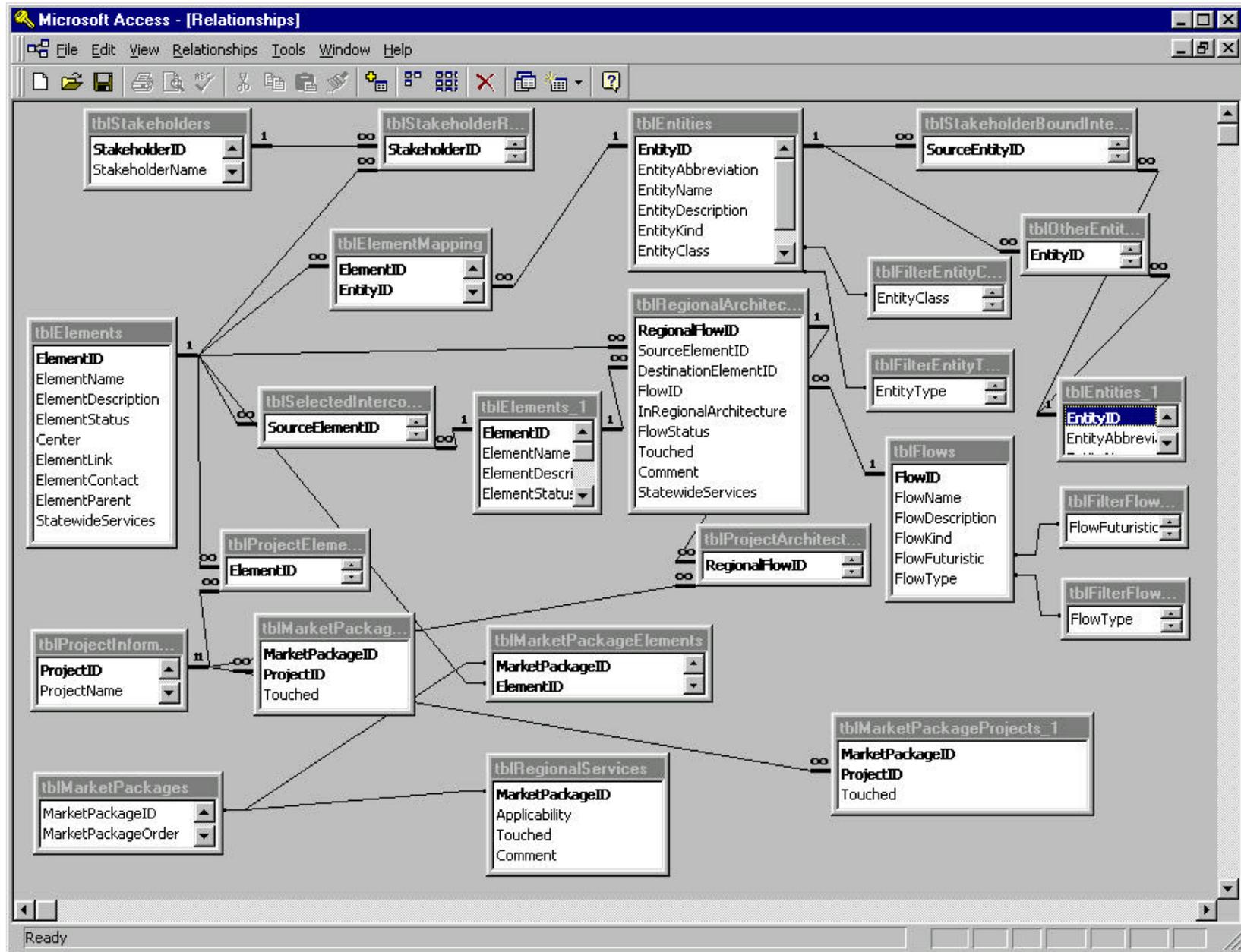


Figure 4-2. District and Statewide Services Architecture Database Design

### ***National ITS Architecture Databases***

The “Physical”, “Market”, and “Logical” databases are each National ITS Architecture databases that are developed and maintained by the National ITS Architecture team. The information in these databases is used to support some of the extended functionality reports that were required by the Statewide Architecture contract. The databases are used in the native Access 97 format provided by the National Architecture Team. This strategy should allow FDOT to access updated National ITS Architecture functional definitions in the future simply by linking the latest version of the National ITS Architecture databases.

## **4.2 Process for Linking Regional and Statewide Databases**

### **4.2.1 Requirements**

The *Florida Statewide ITS Architecture* is composed of regional ITS architectures, scoped approximately geographically according to FDOT Districts, and one overarching Statewide Services ITS architecture that covers the entire state.

The FDOT District regional ITS architectures each cover one FDOT district for Districts One through Seven, except Districts 4 and 6 which are combined due to the heavy interoperability between the Miami and Ft Lauderdale Districts (the Southeast Florida "metropolis"). In addition, there is a regional ITS architecture for the Turnpike District (FDOT District 8), which covers much of the state, cutting through several other geographic FDOT Districts.

There is also a *Statewide Services ITS architecture* that includes services that are common across all or most of the state (e.g. HPMS reporting, Crash Data reporting, commercial vehicle safety inspection and credentialing).

The regional ITS architectures work in part independently and in part interoperating with the Statewide Services ITS architecture. For example, a *Local Police Dispatch* element<sup>1</sup> (mapped as an *Emergency Management* subsystem in the *National ITS Architecture*) exists in each District regional ITS architecture, and always sends crash data to a common archive (the *Florida Safety and Crash Data Collection System*) in the Statewide Services ITS architecture. The regional ITS architectures define the exchange of information between elements within an FDOT district, customized to local stakeholder requirements. Often, the elements in the FDOT District regional ITS Architectures also exchange information with elements defined in the statewide services ITS architecture. The regional element to statewide services elements interconnects are the same for each similar element in the regional ITS architectures.

From a system engineering perspective, there are two key requirements for documenting these common interfaces between regional ITS architecture elements and statewide services elements:

#### **1. Deployment Requirement:** It is important that these common interfaces between the local

---

<sup>1</sup>An *element* is a specific piece of stakeholder equipment that has interfaces to other elements. Elements are mapped to National ITS Architecture *entities* (subsystems and/or terminators). This mapping broadly identifies the functional capabilities and external interfaces of the element (i.e. the element inherits the characteristics of the entity or entities it is mapped to). An element *interface* (on *interconnect*) connects two elements. One element is the *source* of information (represented by *architecture flows* over the interconnect), and the other is the *sink* of information for that interface.

entities and the central entities be similar or even better, identical. This simplifies the aggregation and sharing of data in a central location, and back to the regions. While it is not essential to interoperability, it significantly simplifies the implementation (and will reduce the cost) of automated information exchange between local and central entities.

2. **Documentation Requirement:** From a system management perspective, it is important that these identical interfaces be documented in only one place. If the documentation is in multiple locations (such as in each regional ITS architecture), then when there is any change to the interface, that change must be propagated into two or more regional ITS architectures, increasing the likelihood of errors (ambiguity) and increasing the cost of maintenance of the ITS architecture. Finally, any failure to propagate changes or to propagate the changes incorrectly will result in ambiguity in the architecture definition of these interfaces. Ambiguity in the ITS architecture might result in costly changes if the errors are discovered late in a deployment process.

From a user perspective, we gained the following additional requirement from a consensus of stakeholders (at the Tallahassee stakeholder meeting and shortly thereafter in a flurry of email discussion):

3. **Simplified Documentation Requirement:** It is important to hide the linkages between the regional ITS architectures and the Statewide Services ITS Architecture in the hypertext documentation. When a regional ITS architecture user is reviewing or using a regional ITS architecture, the relevant interconnects and entities of the Statewide Services ITS architecture must appear "pulled into" the regional ITS architecture model, so that the linkage of regional to statewide models appears seamless.

#### 4.2.2 Original Approach

Our original approach (prior to and at the Tallahassee workshop cited above) satisfied the first two requirements above, but not the third architecture simplified documentation requirement. The original documentation approach involved using a *parent* hotlink from the physical context diagram of a regional ITS architecture element to the generalized element of the statewide services regional ITS architecture (see Figure 1). Note that the generalized element might have a different name than the local element, e.g. *Turnpike Traffic Management Center (Pompano)* in a regional ITS architecture might be mapped to the more general *FDOT Traffic Management Centers* in the statewide ITS architecture. This approach makes use of the object-oriented analysis concept of inheritance. The intent was that the interfaces of the generalized parent element were inherited by the specific element in the regional ITS architecture. The benefit of this approach is that the interfaces of the generalized element then were documented in only one place (in the statewide services regional ITS architecture) and were used identically in all regions that took advantage of the parent hotlink to the generalized element.

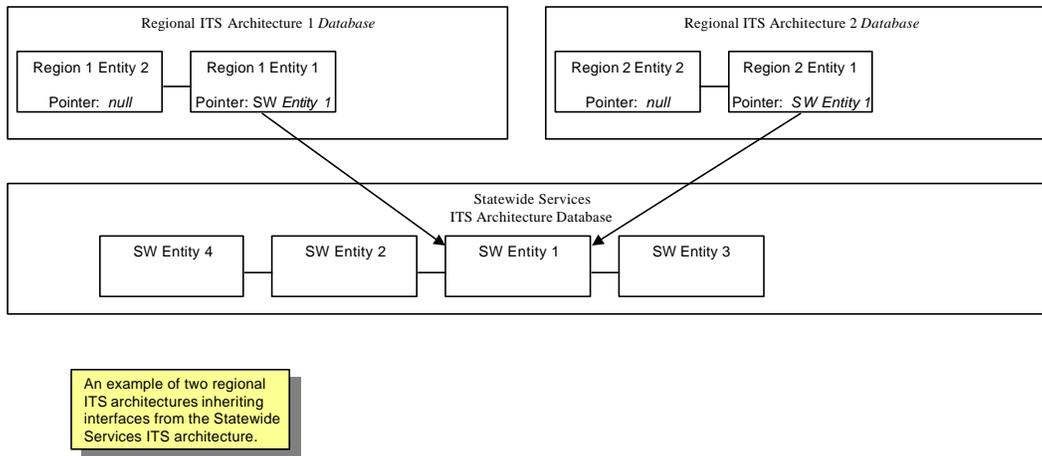


Figure 13 Original Approach to Allocation of Entities between regional and statewide ITS architectures

For example, the Turnpike regional ITS architecture has two distinct but similar traffic management centers:

- Turnpike Traffic Management Center (Pompano), and
- Turnpike Traffic Management Center (Turkey Lake).

In addition, the *Turnpike Traffic Management Center (Pompano)* element also is present in the District 4 and 6 regional ITS architecture, and the *Turnpike Traffic Management Center (Turkey Lake)* is present in the District 5 regional ITS architecture.

Each specific instance of the Turnpike TMC subsystem was hotlinked to the generalized *FDOT Traffic Management Centers* subsystem in the statewide services regional ITS architecture, guaranteeing that their common interfaces were documented in only one place, and that those interfaces were identical. Interfaces to these two TMCs that were unique to the region where they were located was documented in the individual regional ITS architectures.

#### 4.2.3 Updated and Current Approach

Satisfying the third user requirement above has taken considerable effort to design, implement and test, which we have undertaken (out of the project scope and without cost to the customer).

Our updated approach is as follows:

1. We continue to maintain 7 separate databases for each separate FDOT region (including the Turnpike) as well as one statewide services ITS architecture database. These are each MS Access 97 databases, and can be downloaded by a user from the website documentation of each regional and the statewide ITS architecture. See section 4.1 for more information on these databases.
2. Before we "build" the hypertext documentation for any of the regional (including Turnpike) ITS architectures, we "expand" the regional ITS architecture to include part of the statewide services ITS architecture. This is based on the linkages that are set up for elements of the regional ITS architecture that need to inherit interfaces from the statewide services

architecture. Each element in a regional ITS architecture has a pointer to one element of the Statewide Services ITS Architecture. This pointer can be "null", indicating that the element will inherit no Statewide Services interfaces, i.e. it has interconnects only to local entities in the same regional ITS architecture. If an element points to an element of the statewide services architecture, then the element will inherit the interconnects of that element of the statewide services architecture. In addition to inheriting the interconnects, the regional ITS architecture will also inherit the elements from the Statewide Services ITS Architecture that are sources and/or sinks for the inherited interconnects (see Figure 14).

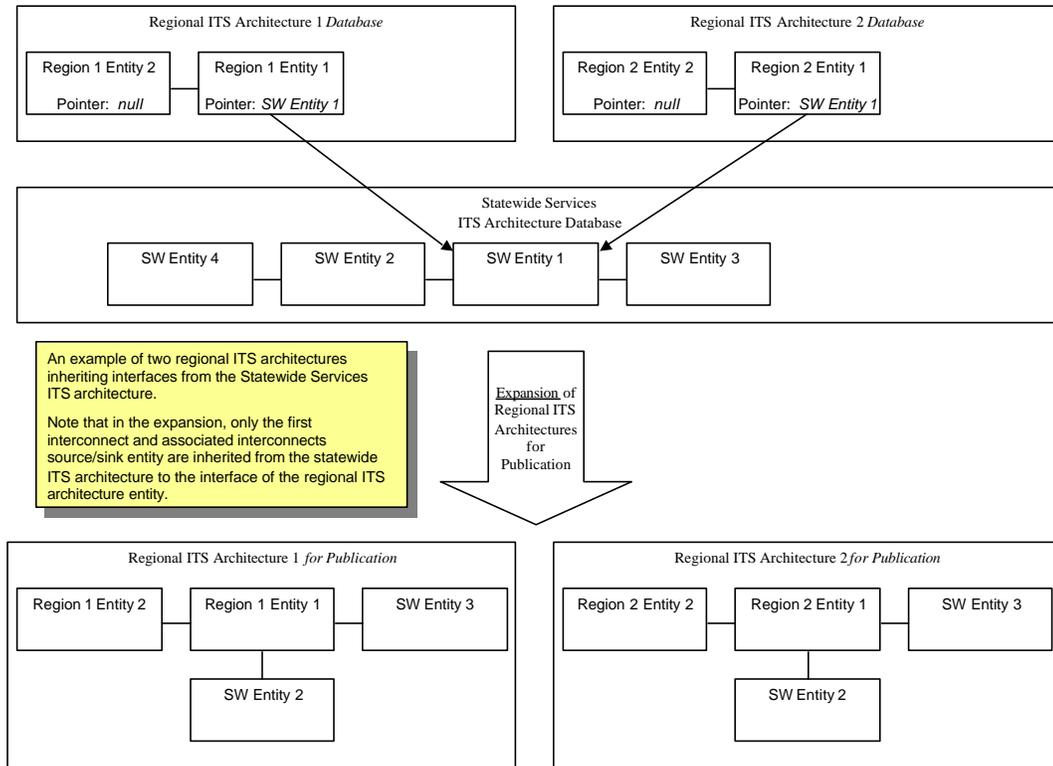


Figure 14 Expansion of regional elements for publication<sup>2</sup>, inheriting statewide interfaces and associated elements

- Care must be taken to avoid unintended redundancy of interfaces that might be specified in both the regional and the statewide architecture (see Figure 15). In this case, an interface is specified in both the regional and statewide ITS architectures and the expanded architecture has the union of all the architecture flows in both interface specifications. One solution is illustrated in Figure 16. Here the interface specification in the statewide ITS architecture has been removed. This allows the interface specification to be only in the regional ITS architecture, and each regional ITS architecture can have its own unique interface

specification with the statewide elements. An unintended consequence may be that Regional ITS

<sup>2</sup> Publication is the process by which the databases are converted to html for presentation.

Architecture 2 now does not have an interface to Statewide Element 2. Alternatively, the interface between the regional ITS architecture elements can be removed as illustrated in Figure 17. Here the regional ITS architecture interface has been removed, with no consequence to other regional ITS architectures, and with the interface specification between these elements defined by the statewide ITS architecture.

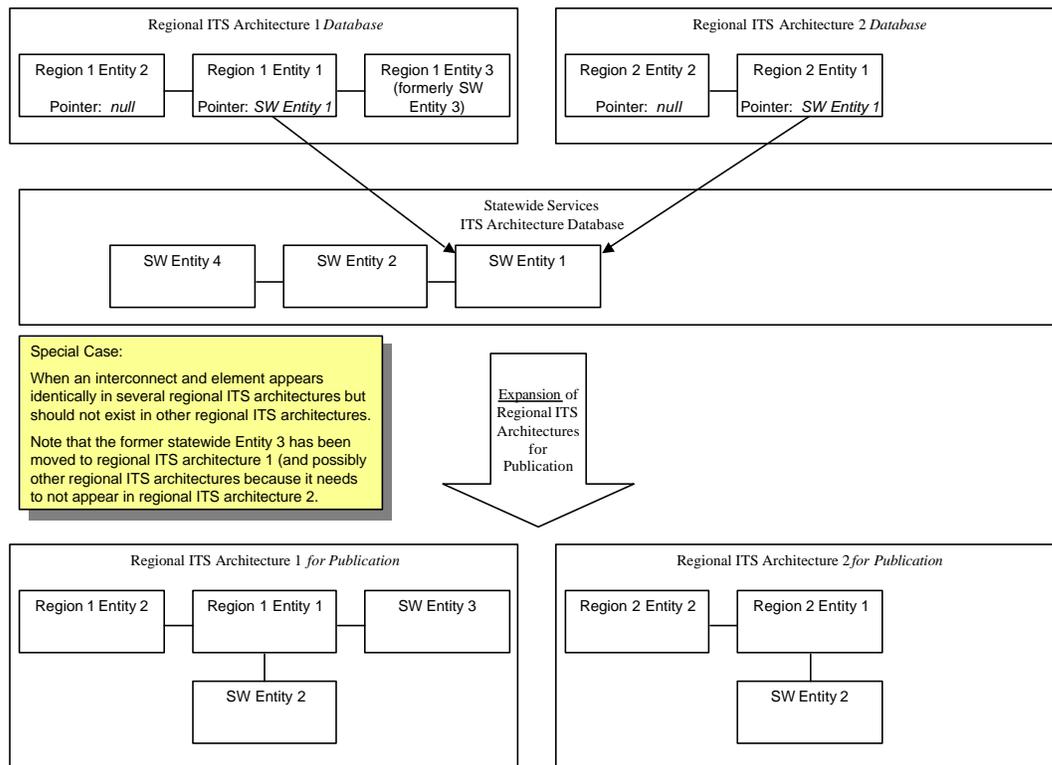


Figure 15 Example consequence of interface redundancy

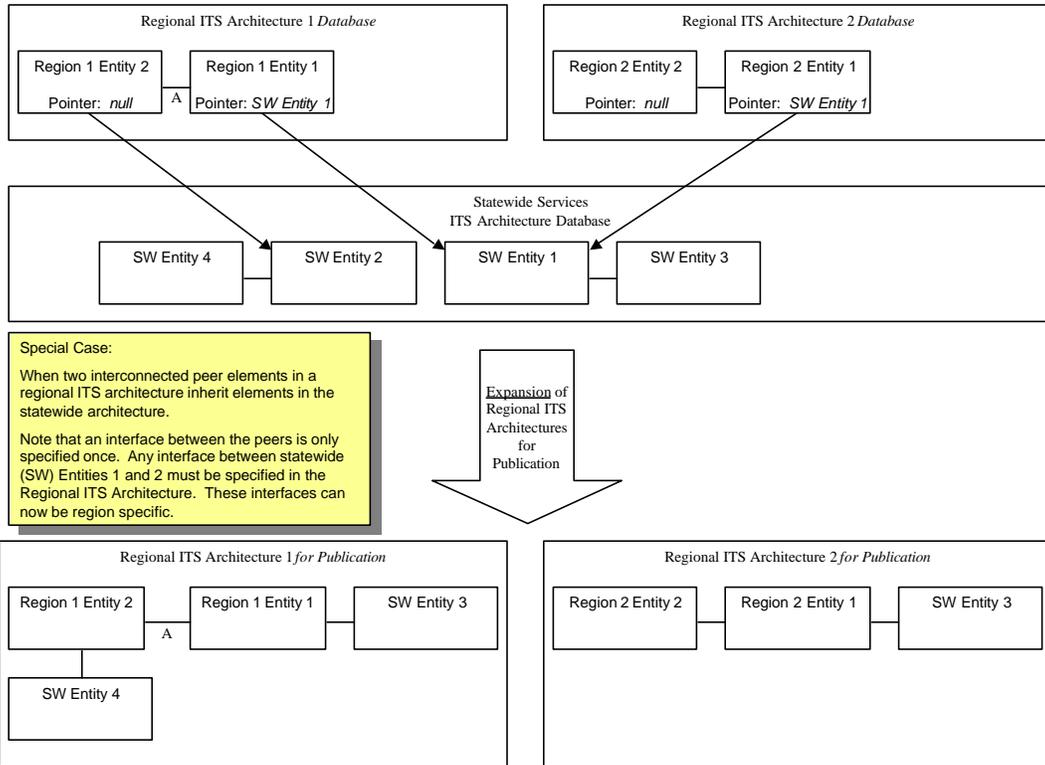


Figure 16 Avoiding redundant interface specifications by placing the specification in the regional ITS architecture

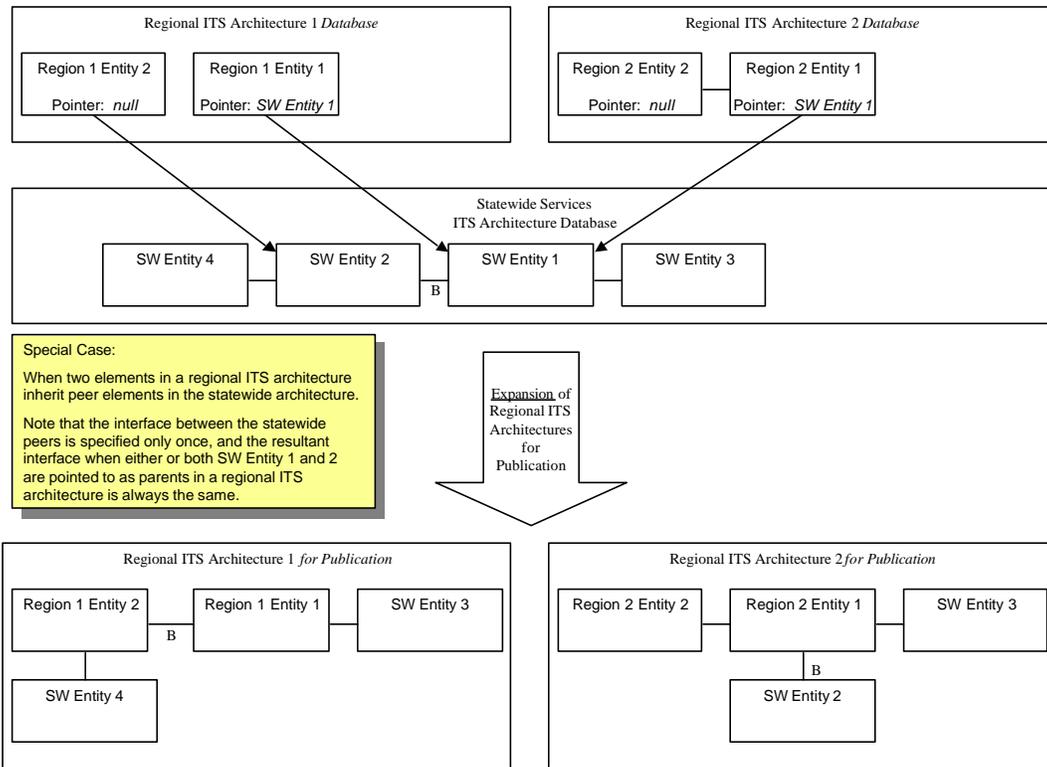


Figure 17 Avoiding redundant interface specifications by placing the specification in the statewide ITS architecture

- Care must be taken here to not inherit interconnects and associated source or sink elements that are not intended. Figure 18 illustrates where Region 2 Element 1 is not supposed to have an interconnect with Statewide Element 3, so this element was removed from the statewide ITS architecture and placed in each regional ITS architecture where it's interface was required. This is not ideal from a system management point of view, but is the best compromise with the *currently available toolset*<sup>3</sup>.

<sup>3</sup> The currently available toolset is based on *Turbo Architecture*. An objective of the program is that the customer or any consultant should be able to maintain the FDOT ITS Architecture and Standards using off-the-shelf tools and a minimum of custom developed software at a reasonable cost. Custom system management software would raise the cost of maintenance dramatically. One solution (but requiring considerable additional effort to develop and maintain) would be to develop a more sophisticated linkage where a regional entity, once linked to a statewide entity, then can be selectively linked to the statewide entities architecture flows in each inherited interconnect. This would require both more analysis than budgeted and additional stakeholder education and outreach. The benefit for this level of thoroughness in a regional ITS architecture is not clear. Usually, this level of thoroughness is considered at the PS&E (Planning, Specifications and Estimates) stage of each individual project. We believe that it is necessary and sufficient for regulatory (TEA-21 Conformity) and planning objectives to identify the likely interfaces between district (regional) and statewide entities.

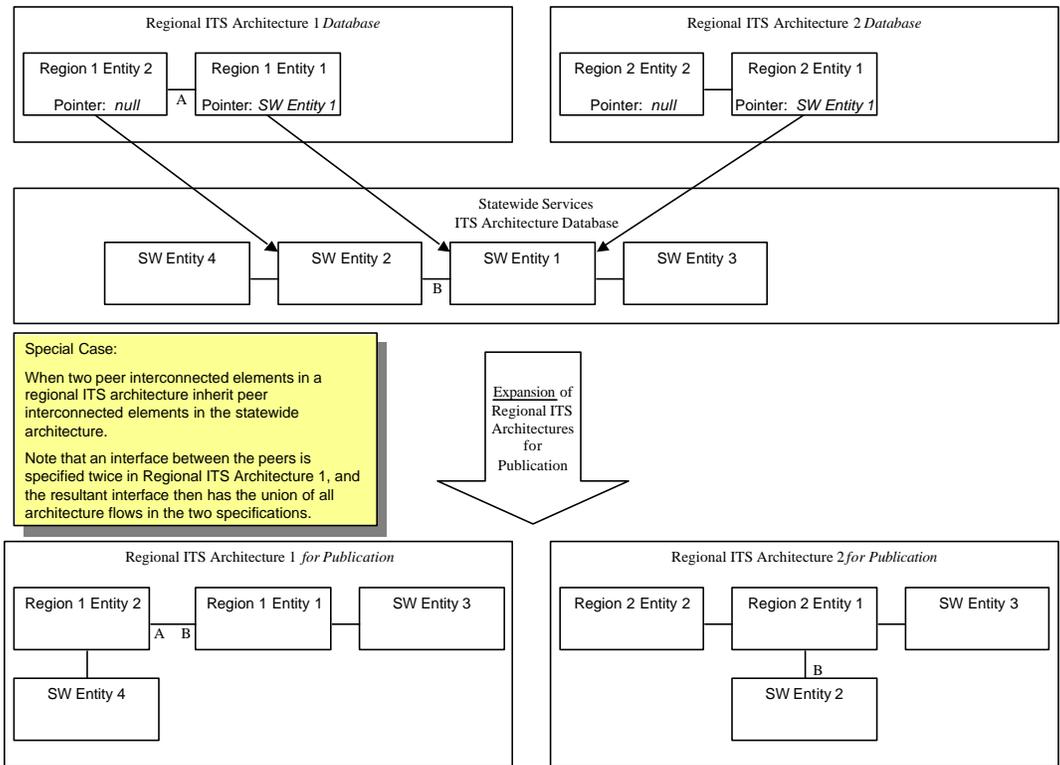


Figure 18 Removing a statewide services element and placing it in a regional ITS architecture

## 5 Guide to the Florida Architecture Software

### 5.1 TurboArchitecture

The US DOT has developed and is now distributing Turbo Architecture, a new off-the-shelf software package specifically designed to develop regional ITS architectures based on the National ITS Architecture. Turbo Architecture was used extensively in the development of the Florida Statewide ITS Architecture, and the final product is compatible with Turbo Architecture. In order to use the new Turbo Architecture database model supporting this deliverable, users must purchase a licensed copy of Turbo Architecture.

Turbo Architecture, along with detailed user documentation for its use, can be ordered directly from *McTrans*, Product No. TURBO.W95, Unit Cost: \$190. Contact Ms. Debbie Escalara at (352) 392-0378 extension 242. Discounts are available for multiple and agency licenses.

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512 Weil Hall  
P.O. Box 116585  
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FEID # 59-6002052  
(352) 392-0378  
Messages 800-226-1013  
McFAX (352) 392-3224  
E-mail: [mctrans@ce.ufl.edu](mailto:mctrans@ce.ufl.edu)  
<http://mctrans.ce.ufl.edu>

### 5.2 Turbo Extensions and Web Site Generation

The “FloridaTurboExtensions” Microsoft Access Database application provides architecture development and publication features that are not otherwise available, through Turbo Architecture or any other commercially available product. A full-featured executable version of this application was delivered as part of this contract. This section guides the prospective user through installation and use of this application.

#### 5.2.1 Installation

The entire FloridaTurboExtensions application is stored in a Microsoft Access 2000 “MDE” file. This makes application “installation” very easy, since the user really only has to copy the “FloridaTurboExtensions.mde” file onto a properly configured PC to install the application. The basic installation steps are as follows:

1. If not already installed, install Microsoft Access 2000 on your PC. The FloridaTurboExtensions application cannot be run without Microsoft Access 2000. Since both Microsoft Access 97 and Microsoft Access 2000 databases are used for the Florida Statewide Architecture, you may want to install both Microsoft Access 97 and Access 2000 on your system if you plan to work extensively with many of the databases. A knowledge

base article is available on the Microsoft Web Site ([www.microsoft.com](http://www.microsoft.com)) that describes how

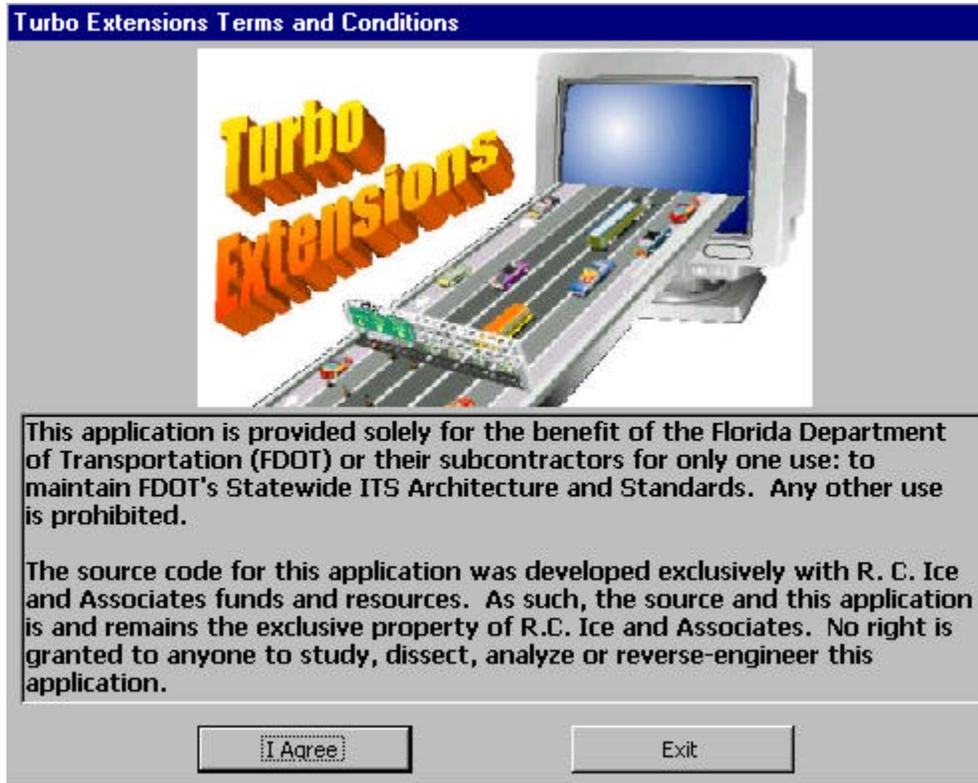
to properly install both Access 97 and Access 2000 on the same PC.

2. Create a new directory for the Florida Statewide Architecture databases, and then copy the MDE file and all supporting databases to this directory. While other configurations are possible, the application will work best if all files are stored in the same directory. Table 5-1 provides a complete list of all files that should be installed. The first nine database files are contract deliverables; the last four (shaded) rows identify National ITS Architecture databases that are available from the architecture web site ([www.iteris.com/itsarch](http://www.iteris.com/itsarch)) or the National ITS Architecture CD-ROM.

*Table 5-1: Installation Files*

FloridaTurboExtensions.mde
RegionNaples.mdb
RegionJacksonville.mdb
RegionDistrict3.mdb
RegionMiami.mdb
RegionOrlando.mdb
RegionTampa.mdb
Turnpike.mdb
StateFlorida.mdb
Physical.mdb
Market.mdb
Logical.mdb
Trace.mdb

3. Run Microsoft Access 2000 and open the “FloridaTurboExtensions.mde” file that you installed in the previous step. The first time the application runs in a new environment, it automatically checks all external database references (“linked tables”) and updates these references so they are consistent with the file structure on your PC. This may take a minute and result in several dialog boxes, notifying you that tables are being relinked. Simply answer OK to each of these questions, if they are posed.
4. The application will now present the terms and conditions of use. Read these terms and conditions and select “I Agree” if you agree with, and can abide by, the terms and conditions. Please notify Ron Ice (714-777-1297) or Rob Jaffe (914-248-8466) if you have a question about these terms or are aware of use of this tool that is inconsistent with these terms and conditions.



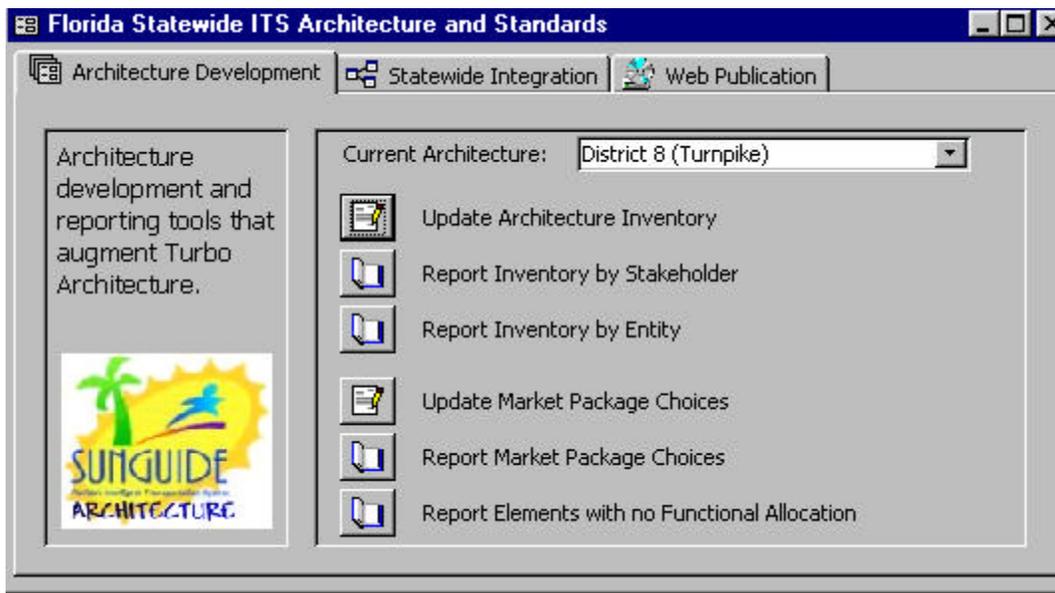
### 5.2.2 Using the Application

Once it is installed, you run the application by opening the FloridaTurboExtensions.mde file using Microsoft Access 2000. Each time you open the file, you will be presented with the preceding Terms and Conditions dialog. If you agree with the terms and conditions, a tabbed form is displayed that provides access to all the features of the application.

In general, the user will progress from left to right across the three tabs as the architectures are developed, cross-references between the architectures are established and elaborated, and each architecture definition is published on the Internet. Each of the tabs (“Architecture Development”, “Statewide Integration”, and “Web Publication”) is discussed in the following sections.

Note that this application, like all Microsoft Access applications, saves any changes that you make immediately to the regional architecture database file. Keep this in mind, and make it a habit to save backup copies of your files in case you inadvertently make a change that is difficult to reverse.

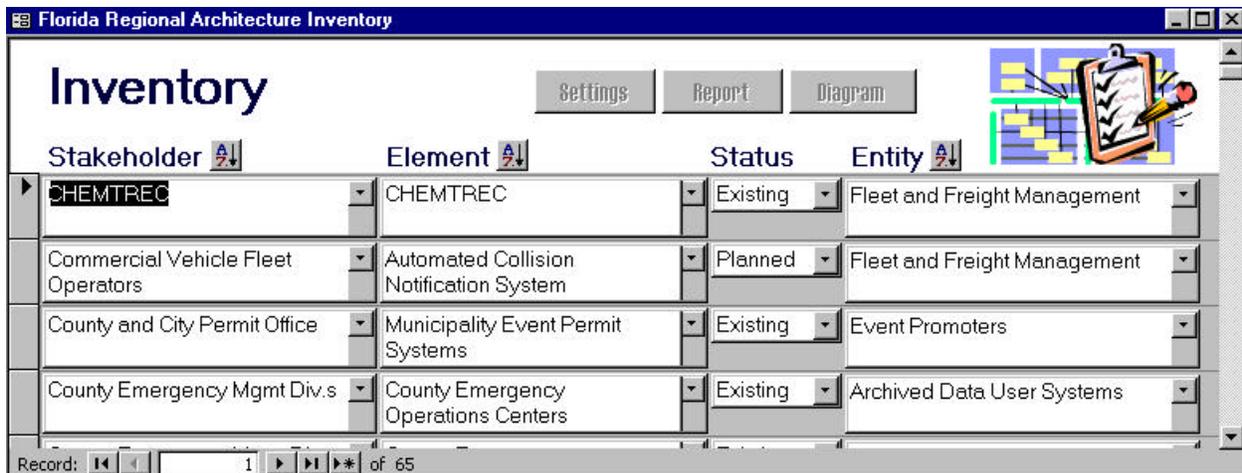
### 5.2.2.1 Architecture Development Tab



This tab provides enhanced architecture development tools that extend the basic tools available in Turbo Architecture. Enhanced data entry forms were used during the workshops to develop the inventory and identify the market packages for each regional architecture. Several custom reports were used to generate sections of this final report and identify flaws in the evolving regional architectures. The same data entry forms and reports that we used are available on the architecture development tab. The pull-down menu and the six commands available on this tab are described below.

 The FloridaTurboExtensions application works with one regional architecture (either a district architecture or the statewide services architecture) at a time. The current architecture is displayed on every tab in a “Current Architecture” pull-down menu; for example, the District 8 (Turnpike) architecture is open in the preceding screen snapshot. To change the current architecture, pull down the menu (by selecting the inverted triangle to the right of the current architecture) and select a new current architecture.

 [Update Architecture Inventory](#) Click here to display the tabular inventory form that was used to develop the inventory for each district and statewide services architecture during the workshops. This form provides essentially the same functionality as the “Inventory Tab” in Turbo Architecture.



This form may be used to update the stakeholder, element name, element status, and associated National ITS Architecture entity (subsystem or terminator) for each element in the inventory. To add a new element in the inventory, page down to the last row in the form and add the new information there. The “A to Z” command buttons above each of the major columns allow the inventory to be sorted by stakeholder, by element, and by entity. Each entry on the form is actually a pull-down menu that encourages reuse of names that have already been defined. If the user types in a new name in either the Stakeholder or Element columns, then the software asks the user before adding the new name to the inventory. This is a working tool that still has a few minor issues that can be worked around. Here are a few of the known issues:

- When you begin to enter text into this form, the software will try to auto complete your entry to match one of the valid names. If you want to enter a different name, just keep typing. I always terminate a new entry with a carriage return so that the software knows that I’ve completed my entry.
- This form does not perform stringent checks on the names you type, so you can inadvertently enter names that are not allowed in Turbo Architecture. Do not include single or double quotes in any of the names that you enter to prevent problems once you move over to Turbo Architecture.
- When an element is mapped to more than one entity, the stakeholder name and element name is repeated more than once on this form. Though it can be done by creating duplicate entries on this form, I find it easier to use Turbo Architecture to create a mapping between a single element and many architecture entities.

Double click on a Stakeholder or Element to display any associated attributes. Each of the displayed attributes is editable, allowing entry of detailed definitions, hyperlinks, and parent information for each name. This detailed information is published in the architecture HTML.



This command provides a complete inventory report, sorted by stakeholder. This report is more space efficient than the standard report generated by Turbo Architecture.



#### Report Inventory by Entity

This command provides a complete inventory report, this time sorted by National ITS Architecture entity. This report is more space efficient than the standard report generated by Turbo Architecture.



#### Update Market Package Choices

This command displays a form that allows the user to select market packages and associate inventory elements with each. This form provides similar functionality to the Market Packages tab in Turbo Architecture, but provides a more focused list of elements to choose from. The form only displays elements that may include equipment packages associated with the current market package – we restrict the element list because we are using these selections to drive the functional definitions for each inventory element.



#### Report Market Package Choices

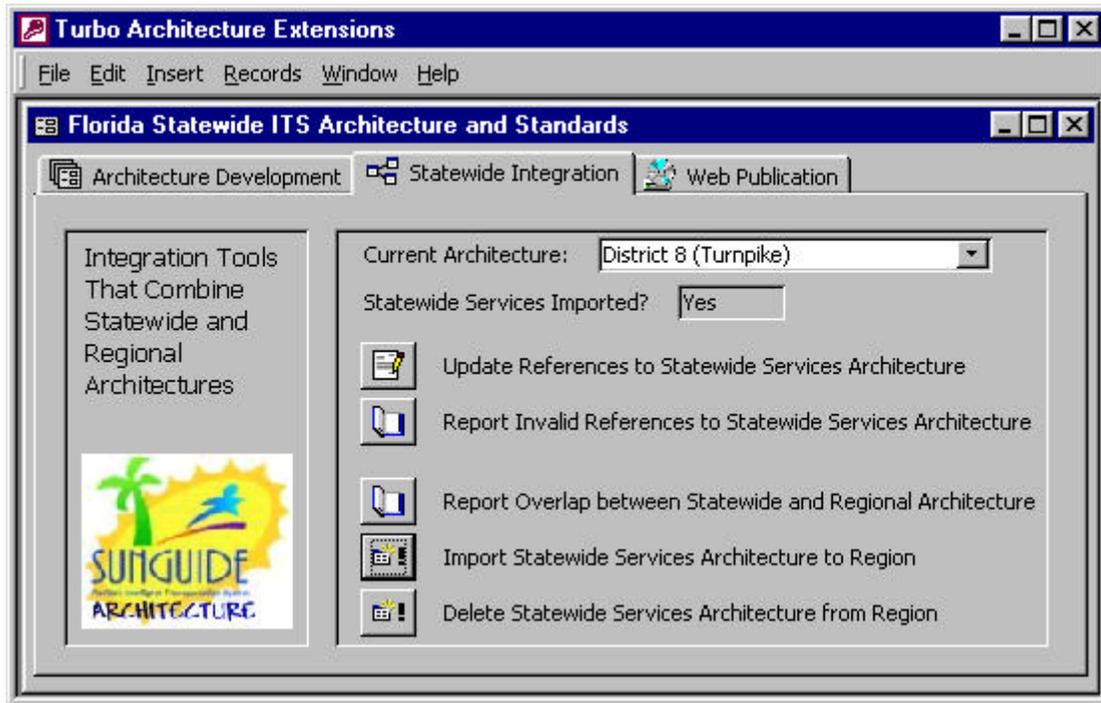
This command generates a concise tabular report of the market package choices for the regional architecture. This table is used in the Final Report.



#### Report Elements with no Functional Allocation

This command identifies elements that have been mapped to one or more National ITS Architecture subsystems that have not yet been allocated any equipment packages based on Market Package associations. This report was used to verify that the functional definitions developed for the Florida Statewide Architectures were as complete as possible. Consider adding market package associations for any elements that are identified by this report so that functional specifications based on the National ITS Architecture can be generated.

### 5.2.2.2 Statewide Services Tab



Each district architecture references the statewide services architecture. These references are used to connect regional inventory elements (e.g., “Turnpike Transportation Management Center (Pompano)”) with more general representations of the same element in the statewide services architecture (e.g., “FDOT Transportation Management Center”). These references are used to generate integrated HTML for each district architecture that includes both the district architecture and the portions of the statewide services architecture that may be relevant to the district. Section 4.2 provides more detailed background information on the connections between district and statewide services architectures. The Statewide Integration tab manages these connections. Each portion of this tab is described in the following.

**Current Architecture:**  This is the same pull-down menu that was described on the Architecture Development tab. It allows one of the regional architectures to be selected. Note that the commands on the Statewide Integration tab can only be used if one of the District architectures is selected. The application will automatically disable all commands on this tab when the statewide services architecture is selected.

**Statewide Services Imported?**  This non-editable status field shows whether the Statewide Services architecture is already included in the current district architecture. We generate an integrated web presentation of the district and statewide services architectures by importing the relevant portions of the Statewide Services Architecture into each district architecture and then generating HTML from the integrated databases. The standard Turbo Architecture “Import” function is used to bring the Statewide Services architecture definition into each District Architecture.



Update References to Statewide Services Architecture

This command displays all the references that the current District Architecture makes to the Statewide Services Architecture.

Turbo Architecture Extensions					
File	Edit	Insert	Records	Window	Help
FDOT Turnpike EOC			FDOT District Emergency Operations Centers		
FHP Troop K Emergency Dispatch Center			Florida Highway Patrol Dispatch		
Florida DOT Traffic Information Web Page					
Florida Highway Patrol Vehicles					
Florida Safety and Crash Data Collection System					
Florida State Emergency Operations Center					
Florida Transit Systems					
Local Fire Dispatch			Local Fire Dispatch		
Local Police Dispatch			Local Police Dispatch		
Local Venue Event Scheduling System					

The first column displays the elements in the current district architecture and the second column displays the referenced statewide services architecture element (if any). The references may be edited by typing and/or selecting a valid Statewide Services Architecture element name in the second column. As with all forms in this application, all changes are made to the underlying database immediately.



Report Invalid References to Statewide Services Architecture

As the statewide services architecture evolves, references to the Statewide Services Architecture in the District Architectures may be invalidated. This report identifies any invalid references. Invalid references should be fixed using the preceding “Update References to the Statewide Services Architecture” command.



Report Overlap between Statewide and Regional Architecture

This report identifies all overlaps between the current District Architecture and the Statewide Services Architecture definitions. It is possible to define the same interface in both a District Architecture and a Statewide Services Architecture. This happens when an interface is defined between two elements in the District Architecture and the same interface is defined between the two elements in the Statewide Services Architecture that the two District Architecture elements reference. The results of this report are warnings, not errors, since overlapping definitions were reviewed and selectively retained in the final Florida Statewide Architecture. Where overlaps remain, the interface defined in the District Architecture will always override the interface defined in the Statewide Services Architecture.

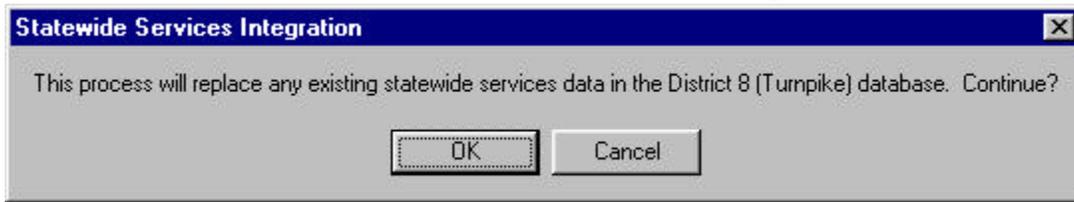


Import Statewide Services Architecture to Region

This command imports the relevant portions of the Statewide Services Architecture into the current District Architecture. This import function requires one or two minutes and requires both this FloridaTurboExtensions application and Turbo Architecture. The import process begins immediately after the command button is selected. The basic steps of the process and required user interactions are as follows:

1. If Statewide Services Architecture information already exists in the District Architecture

database, the user is notified that this information will be replaced

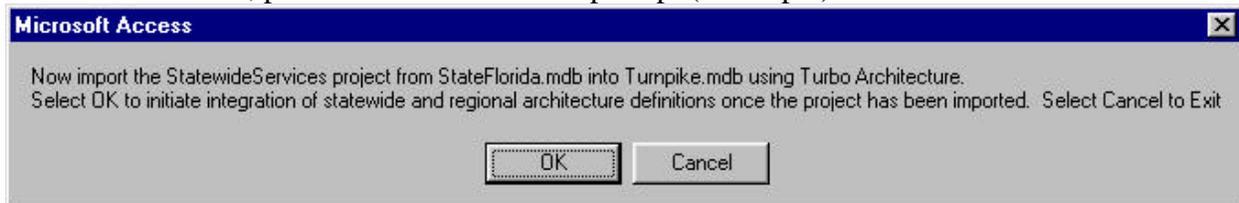


2. The application first creates a project architecture in the Statewide Services Architecture file that includes the portion of the Statewide Services Architecture that is relevant to the current district architecture. If a project architecture already exists in the Statewide Services Architecture database (StateFlorida.mdb), then the user is warned that this project architecture will be replaced.



Select “Yes” to build a new project architecture for import (this is the typical choice), “No” to continue, but import the project architecture that already exists, and “Cancel” to abort the Statewide Services Architecture import process.

3. When the project architecture in the Statewide Services Architecture database is ready, the user is prompted to use Turbo to import the project architecture into the District Architecture database. Don’t select “OK” until you have actually imported the project architecture, per the instructions in the prompt (see step 4).



4. Start Turbo Architecture and open the identified District Architecture (the actual name of the database is included in the FloridaTurboExtensions prompt – Turnpike.mdb in our example). Next, select “Import” from the “Architecture” menu. This initiates an import dialog in Turbo Architecture. Select the source database (always StateFlorida) and the project architecture (always StatewideServices), and then accept all import suggestions that the Turbo Architecture software makes. (The Turbo software will ask you before importing elements, stakeholders, user defined entities, user defined flows, and architecture flows. Always import the suggested items.) Save the District Architecture database and exit Turbo Architecture.
5. Reenter the FloridaTurboExtensions application and select “OK”.
6. The application will complete the integration of Statewide Services and District

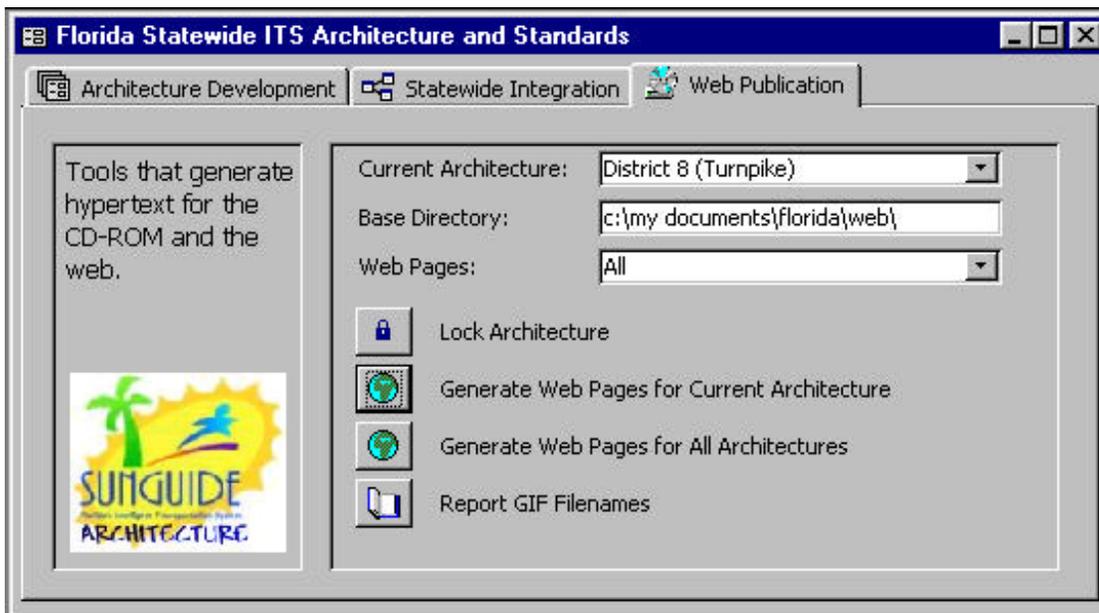
Architecture definitions and prompt the user when this is completed. You have successfully integrated the Statewide Service information and may now publish the web

site for this District Architecture.



This command removes the Statewide Services elements and interface definitions from the current District Architecture, essentially restoring the architecture to the state it was in prior to the Statewide Services architecture import. The word “essentially” is used because there are some secondary definitions (e.g., statewide services stakeholder definitions) that are not removed by this command.

### 5.2.2.3 Web Publication Tab



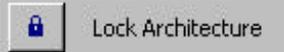
One of the distinguishing features of the Florida Statewide Architecture is the detailed architecture web site that provides comprehensive, hyperlinked access to the architecture definitions. This tab provides access to tools that generate these web pages and a report that guides the user in use of Turbo Architecture to regenerate the architecture graphics that are also included in the web site. The proper operation of this tab is described in the following paragraphs.

**Base Directory:**  This text field establishes the base directory on the local hard disk where the web pages will be generated. The identified directory must contain the following subdirectories:

- District 1
- District 2
- District 3
- District 5
- District 7
- images
- Southeast Florida
- Statewide
- Turnpike

The “images” directory must be loaded with all the static image files and cascading style sheet that are used by the web site. The existing “images” directory can be used as a source for these files. All other subdirectories are automatically populated with all required HTML files by the commands on this tab.

**Web Pages:**  This pull-down menu controls how many different web pages are generated when the web generation commands are invoked. This pull-down currently only allows a choice between “All” and “Standards” pages. When “All” is selected, the web generator will produce all possible web pages including inventory, context diagram, functionality, and standards pages. When “Standards” is selected, only standards pages are generated.

 This command “locks” all architecture flow choices in the current architecture so that subsequent Turbo Architecture Builds will never select additional architecture flows that are already on the Customize Tab. This mechanism is not needed if the Turbo Architecture Customize Tab is the only tool that is used to edit the regional architecture. Since we have used other custom tools to expedite regional architecture development, this function is required and was run on every architecture prior to delivery. This function may not be required

again, unless custom tools/queries are used to expedite further architecture customization.



#### Generate Web Pages for Current Architecture

This command causes the web generator to generate web pages for the current architecture (e.g., pages would be generated for the District 8 (Turnpike) architecture based on the screen snapshots provided in this report). This process requires 5-30 minutes depending on the size of the architecture. It is recommended that you clear all subdirectories prior to generating web pages to remove the possibility that old widowed pages will remain in the subdirectory after web site generation.



#### Generate Web Pages for All Architectures

This command causes the web generator to produce web pages for all eight architectures (seven regional district architectures and one statewide services architecture). Complete web page generation for all eight architectures requires over one hour. It is recommended that you clear all subdirectories prior to generating web pages to remove the possibility that old widowed pages will remain in the subdirectory after web site generation.



#### Report GIF Filenames

This command identifies the subdirectories and filenames where GIF files must be updated on the web site if the interfaces to a particular element are changed.

Turbo Architecture is used to generate the detailed architecture graphics that are used for the web site. Two basic types of graphics are generated:

- 1) A context diagram is generated for every element in the inventory. A context diagram shows every interface for a particular element. A context diagram is generated in Turbo Architecture by selecting a single element in the Element Selection form and selecting the “Show All” checkbox on the Diagrams form.
- 2) An Interface Control Diagram (ICD) is generated for every interface (pair of interconnected elements) in the architecture. The ICD shows every architecture flow that goes between a specific pair of elements. An ICD is generated in Turbo Architecture by selecting a pair of elements in the Element Selection form and deselecting the “Show All” checkbox.

The diagrams generated by Turbo Architecture can be saved as enhanced metafiles (emf). These files must then be converted to GIF files before they can be published to the web site. Many commercially available tools will support the required EMF to GIF file conversion. The GIF filenames must be very specific since they are referenced in the HTML produced by the web generator. The report generated by this command specifies the subdirectories and filenames that must be used for each GIF file. See the following example.

County Sheriff Dispatch GIF Files		
Context Diagram: %tumpike\images\510.gif		
ICD Diagrams: Store following Diagrams at %tumpike\elements\icds\images\		
Element	Interfacing Element	ICD Diagram
County Sheriff Dispatch	Turnpike Traffic Management Center (Pompano)	428x510.gif
County Sheriff Dispatch	Turnpike Traffic Management Center (Turkey Lake)	357x510.gif

### 5.3 Top Level Website Design

As per requirements by FDOT, all high level website design and development was done using *MS FrontPage 2000*.

The home page of the Florida website is illustrated in Figure 19.

The structure of the files at the top level that make up the Florida Statewide ITS Architecture and Standards is illustrated using MS Frontpage in Figure 20. Note that the homepage itself is *Default.htm* in the *jeng\florida* directory, and note that this is the directory on the computer that has the source model for the website. The actual home page on the Internet will be *root\florida\default.htm*, where *root* is replaced with the root directory location. On the temporary web site *root = [www.jeng.com](http://www.jeng.com)*.

The website is structured as a hierarchy of subwebs. This was done to speed the publication of the website from the development environment PC to the web server when only a portion of the website was changed or added. Figure 20 shows that at the top level there are several subwebs:

- **FDOTDB**  
This is the directory where the eight Turbo Databases that comprise the seven FDOT district ITS architectures and the Statewide architecture reside.
- **Web**  
This is the subweb, with it's own set of subwebs, that has for each District and the Statewide architectures the set of reports based on the Turbo Architecture model for that District or the Statewide ITS Architecture.
- **D1, D2, D3, D4D6, D5, D7, D8Turnpike and Statewide**  
These subdirectories, in the folder *districts*, each represent the homepages for each of the FDOT district and statewide ITS architectures and other associated files for the seven District and Statewide architectures.

The *web* subweb structure is simply illustrated in Figure 21. Each FDOT District ITS Architecture and the Statewide ITS Architecture each have their own subweb. The structure of these subwebs for each component architecture is the same. The images directory has logos and other graphics and icons that are used in this subweb and throughout the subwebs of this subweb. For illustration, the subweb for District 1 is illustrated in Figure 22.

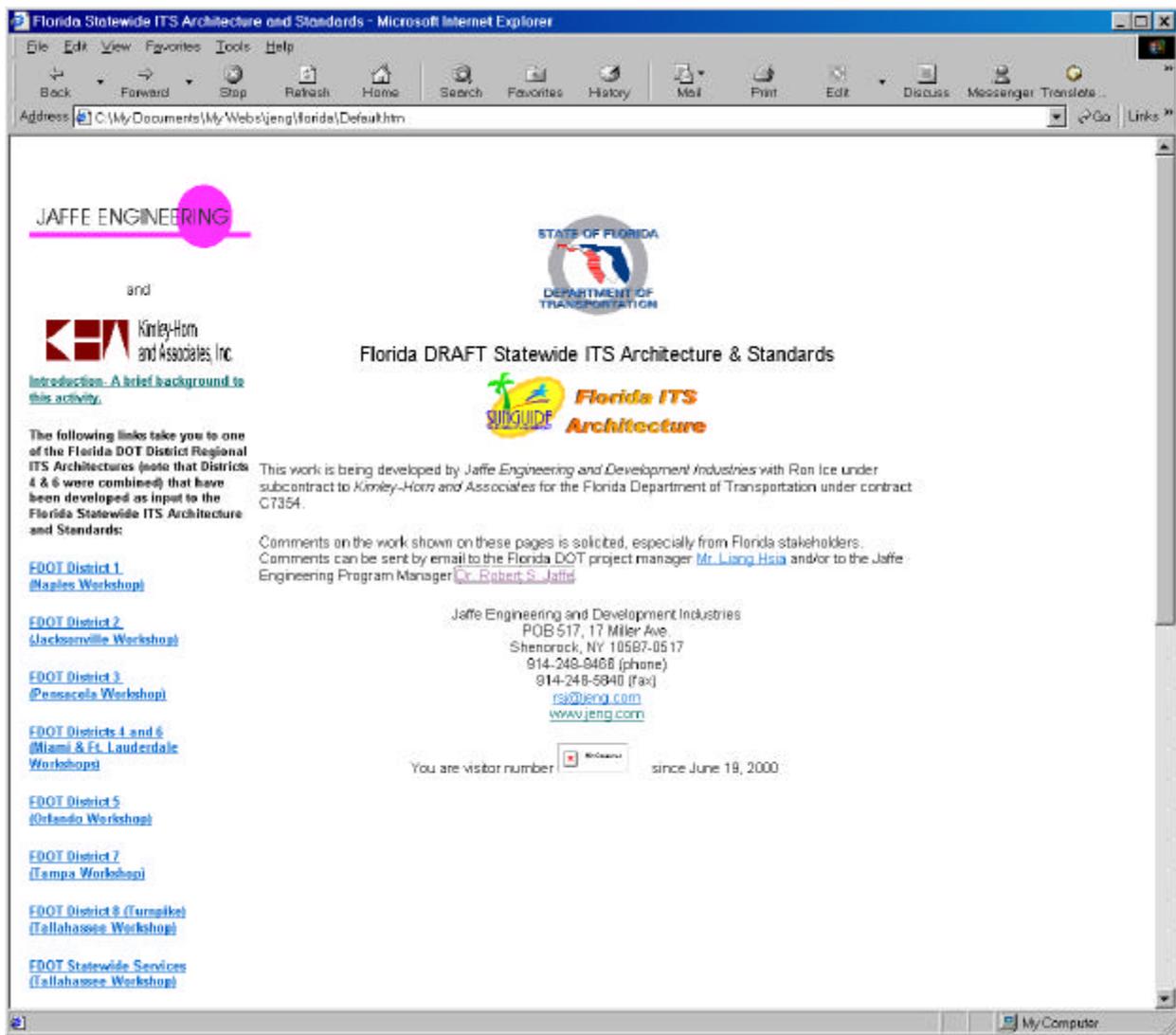
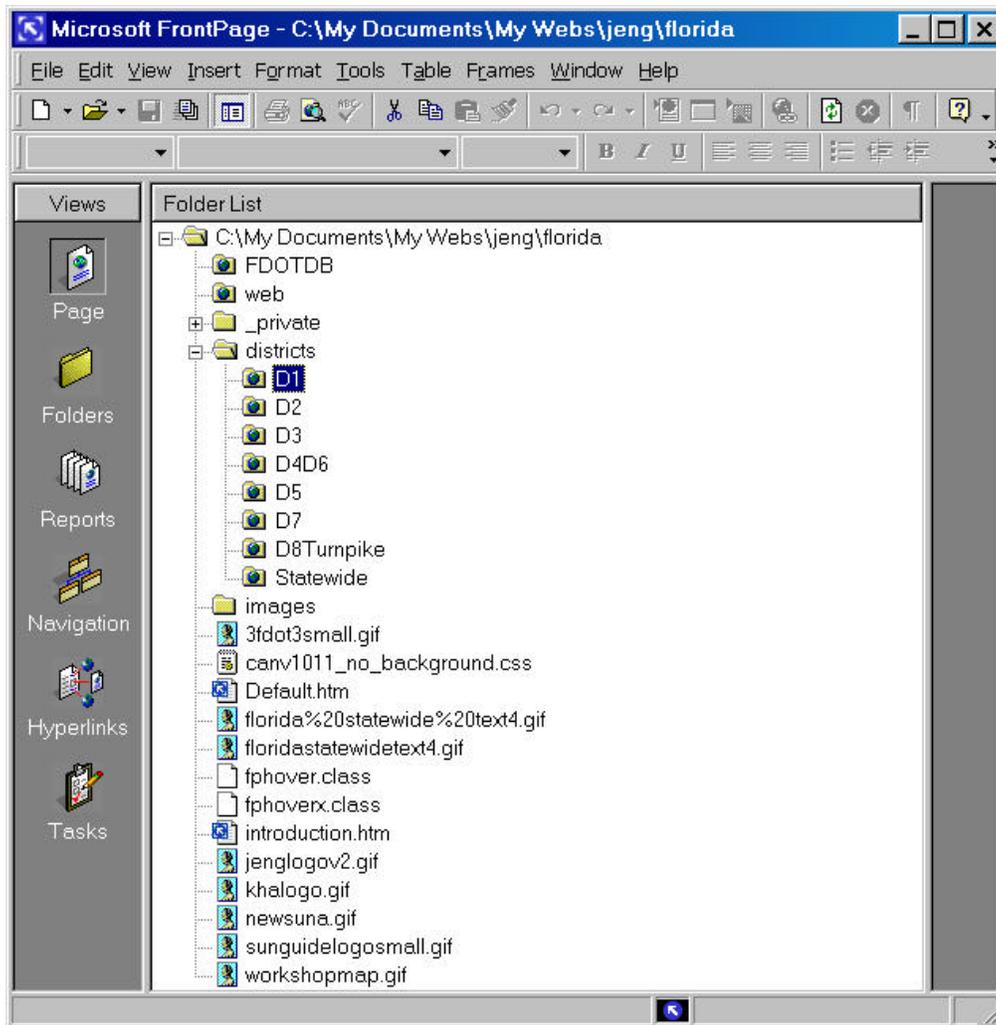


Figure 19 Home Page for the Florida ITS and Standards Site



*Figure 20 Top Level File Structure for the Florida Statewide ITS Architecture and Standards Web Site*

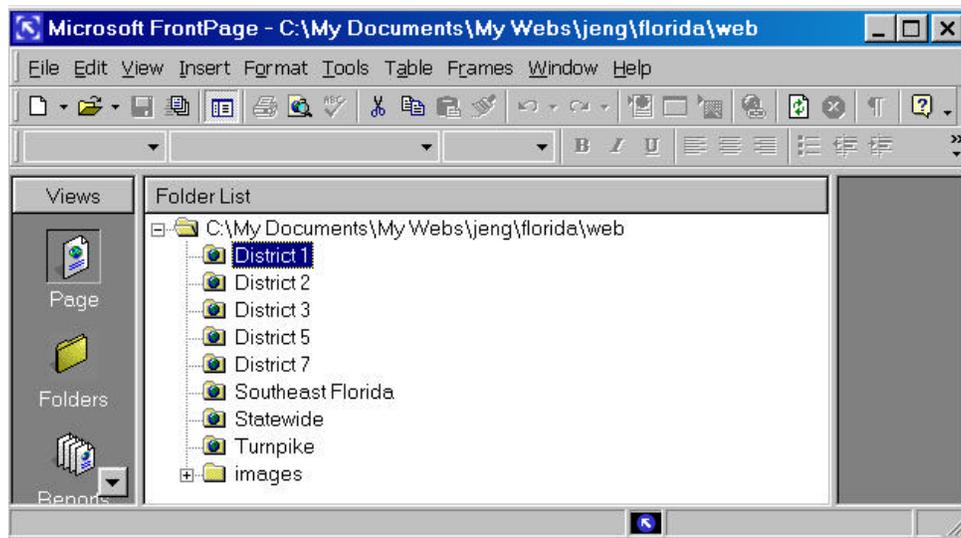


Figure 21 File and Subweb structure of the root\florida\web subweb

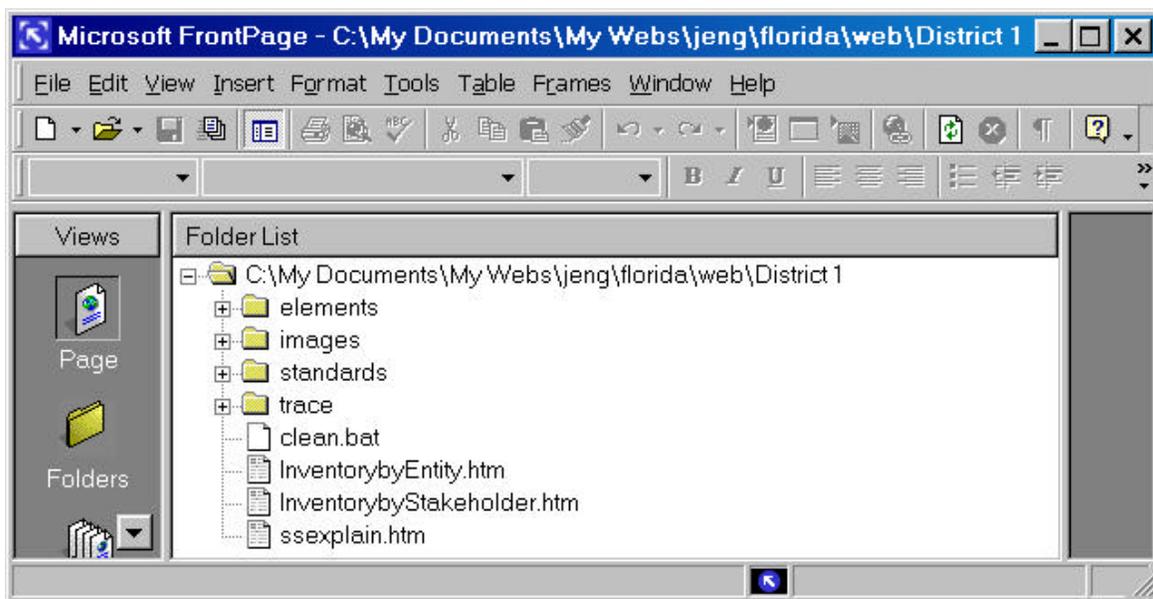


Figure 22 File and subweb structure for root\florida\web\District 1.

The web\District 1 structures includes for this architecture (see Figure 23):

- Index of elements sorted by stakeholder (*InventorybyStakeholder.htm*)
- Index of elements sorted by architecture entity that the elements are mapped to (*InventorybyEntity.htm*)
- For each element:
  - *elements* directory:
    - Element status, Description, stakeholder(s) responsible for it.
    - *Context Diagram*: an architecture flow diagram (AFDs) showing the full AFD for each element. This diagram illustrates the context

of the element with each other element that it shares information with.

- Equipment Package decomposition, if the element is mapped to at least one National ITS Architecture subsystem.
- *elements\icds* directory:
  - Shows an AFD (from the all element pairs that share information
  - Includes definitions for each architecture flow appearing in each AFD
- *elements\icds\images* directory
  - each gif file for the pages in the *elements\icds* directory.
- *standards* directory
  - For each architecture flow, a page that identifies the potential ITS message set, data element and communications standards that should be considered for deployment.
- *images* directory
  - The actual gif files for each AFD Context diagram
- *trace* directory
  - for each equipment package identified in the *elements* directory, identifies the
    - description of the equipment package
    - identifies which other elements in the architecture use that equipment package
    - identifies the Pspecs from the National ITS Architecture that are allocated to the equipment package
    - identifies which National ITS Architecture User Service Requirements are fully or partially addressed by the equipment package

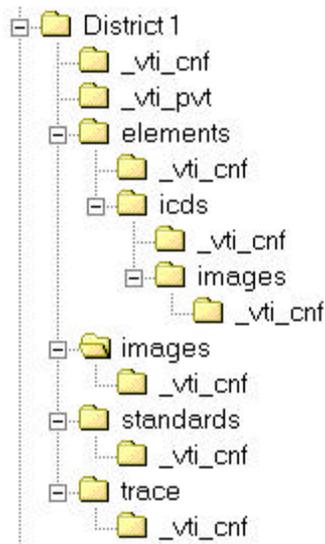


Figure 23 Detailed directory structure for root\florida\web\District 1 (Note that directories starting with an underbar are artifacts of MS Frontpage 2000).

As we discussed earlier, each of the FDOT Districts and the Statewide ITS Architecture have a homepage in a subweb in the *root\florida\districts* directory. The file structure for the subweb for FDOT District 1 is illustrated in Figure 24. The actual homepage for FDOT District 1 is *D1.htm*, the sausage diagram is sausage *D1 Naples.htm* and the set of market packages is *mpkg D1 Naples.htm*. The subdirectories corresponding to these two files contain files that are referenced by the aforementioned files. The source for the sausage diagram and market package diagrams is *MS PowerPoint 2000*, and the htm files and subdirectories are automatically created by those applications using the "save as" feature, specifying a type of "html".

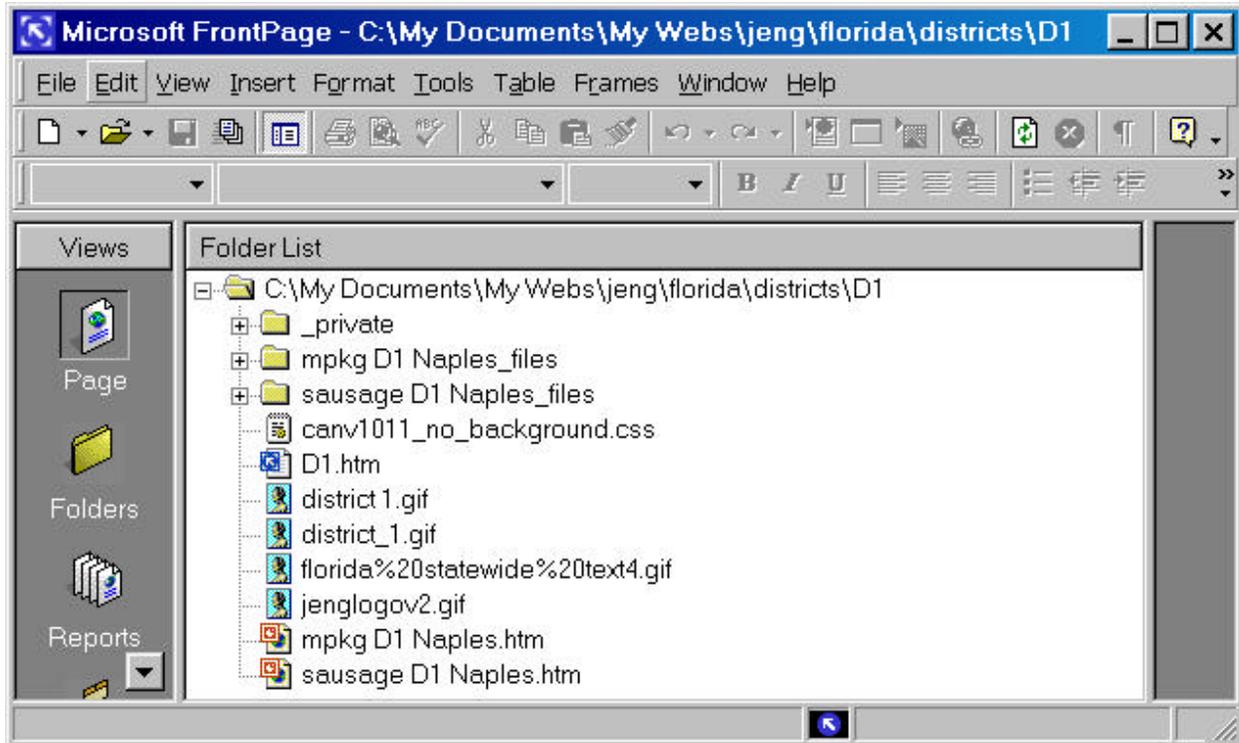


Figure 24 File structure for the FDOT District 1 ITS architecture (sub)web site root\florida\districts\D1.

#### 5.4 Website Publication

Publication of the website and CDROM is straightforward using MS FrontPage 2000. Each subweb is published individually, to save time and to reduce the likelihood of failure due to any number of technical intermittent problems over the Internet that can occur, any of which will cause *MS FrontPage 2000* to fail after hours of upload.

Overall summary statistics for the website (as of 2 January 2001) are as follows:

- 62,088 files
- 206 folders
- 328.4 MB

The specifics of publication are as follows:

- Open FrontPage and select *file*, then *openweb...*, then navigate to the subweb that you wish to publish (presumably the subweb where you have made some changes) and select *open*.
- Select *file*, then *Publish Web...* In the box for *Specify the location to publish your web to:* type the full path to the location. For example, for the subweb illustrated in Figure 24, type <http://www.jeng.com/florida/districts/D1> if publishing to the Jaffe Engineering temporary web site. If publishing to another site, such as the FDOT web site, you will need to know the exact location designated for the root. (i.e. replace [www.jeng.com/florida](http://www.jeng.com/florida)

with the appropriate root for the FDOT web site).

- To speed publication, select the *Publish changed pages only* radio button.
- Finally, select the *Publish* button, and the process should complete automatically. The time required will depend on the speed of the connection between the client PC running *MS FrontPage 2000*, and the *NT* server hosting the site, and the speed of the *NT* server.

## 5.5 How to use the web site and CD ROM

Using the website and the CDROM are identical, simply because the CDROM is a static image of the website. Of course, references to websites outside of the root\florida website will be dead unless the PC running the CDROM is connected to the Internet.

### 5.5.1 Roadmap for Stakeholders to find specific information about their elements

Stakeholders can find specific information relevant to their activities by following these general instructions:

- Open your web browser to the Florida ITS Architecture and Standards web page. This is currently located at <http://www.jeng.com/florida/Default.htm>
- Select the appropriate district or Statewide Services architecture from the list on the left side column on the page. This will bring up the appropriate District or Statewide website.
- Select one of the following areas to explore
  - **Architecture Interconnect ("Sausage") Diagram**  
The Architecture Interconnect Diagram (aka the Sausage Diagram) illustrates the ITS subsystems and terminators present in the regional. Along the perimeter of the diagram are tables for each subsystem and terminator, identifying the specific local stakeholder entities that are instances of the specific subsystem or terminator.
  - **Customized Market Packages**  
Market Packages represent collections of subsystems and terminators that exchange information (illustrated with architecture flows in the market package diagrams) to do a specific service. The market packages are customized to represent the operational concept for service delivery specific to this region. Each subsystem or terminator in a market package diagram is labeled with both its generic National ITS Architecture name and the name of the local stakeholder instance that participates in the customized market package. In this way the market package identifies the information exchange (using architecture flows) between specific stakeholders elements in the region to affect a particular service or set of services.
  - **Inventory by Architecture Entity or Inventory by Stakeholders**  
The inventory of physical elements in the region ("entities") is made up of each local stakeholders instance of any subsystems or terminators that they operate. The inventory can be organized by Stakeholders (so that a stakeholder can easily

see each of their assets in the architecture) or by Architecture Entity (so an analyst or other interested person can see all the stakeholder elements in a region of the same type). Each entry in each of these lists is illustrated with a Physical Element Context diagram. This diagram illustrates all the information exchange

opportunities in a region for a single inventory element. If that element is going to be a project, then this diagram illustrates all the external information exchange opportunities for that element.

- **Regional Turbo Architecture Database Model**

The regional ITS architecture was developed using the off-the-shelf software program Turbo Architecture. Turbo Architecture enables ITS analysts to build an MS Access 97 model for the regional ITS architecture. The model for this District (an MS Access 97 mdb file) can be downloaded by clicking on the hotlink to the left. The model file has been zipped, so after downloading, you will have to unzip it. Then you will need to use Turbo Architecture to make use of the model.

A particularly useful approach for a stakeholder is to select *Inventory by Stakeholder* as described above. The stakeholder should then be able to search the alphabetically organized list of stakeholders and find themselves (or their organization). It should then be easy to see the corresponding physical elements that are allocated to the stakeholder. Each of these physical elements is a hot link, and can be clicked to get to the physical element page that will allow the user to easily see all the other elements that their element is connected to, and with which architecture flows.

## 5.5.2 How to review the ITS architecture and how to provide comments

The analysis of architecture flows into and out of a stakeholder's elements is of particular importance, as it defines at a high level the information exchange requirements with other stakeholders that a stakeholder's element is involved. Stakeholders should appreciate the benefits of the information exchange. Alternatively, stakeholders may believe that additional information exchange relationships may be required to achieve some benefit. In either of these cases, the ITS architecture may require revision. A starting point for making this revision is to comment on the ITS architecture. This can be done by sending email to Mr. Liang Hsia, [liang.hsia@dot.state.fl.us](mailto:liang.hsia@dot.state.fl.us). An alternative comment path is to click on the part of a web page that says *Send Your Comments* with the icon of an envelope (see for example Figure 25).

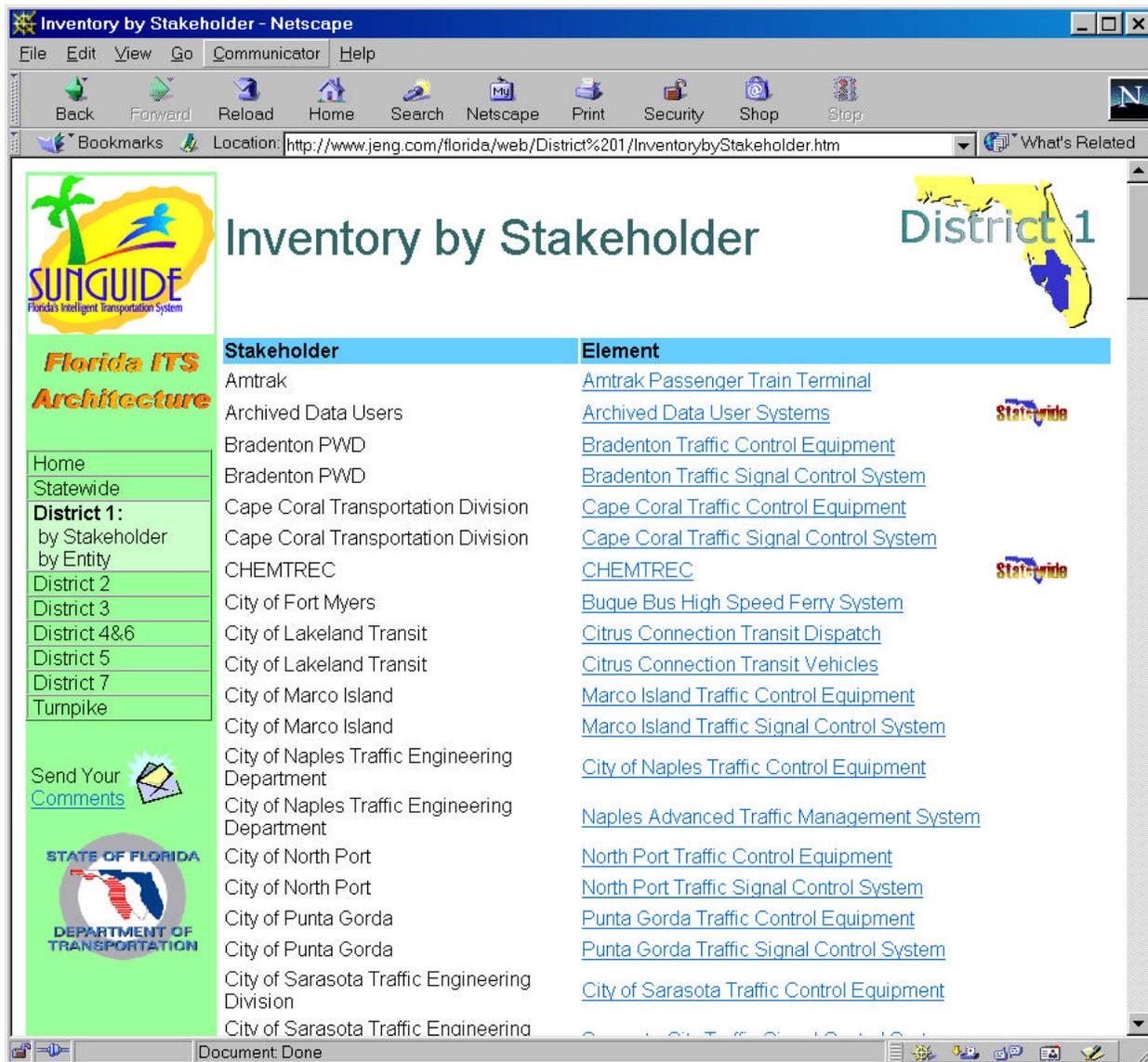


Figure 25 A web page with a "send your comments" icon.

## **6 Quality Control and Quality Assurance Review**

### **6.1 Quality Assurance Plan (Draft):**

Prior to its final release, the Project Draft Final Report underwent an extensive, independent quality review by a competent reviewer who had not been a part of the project production team. In order to benefit from similar national initiatives to develop a regional ITS architecture, the project team had identified senior ITS experts in the KHA Phoenix office to perform this important function.

The QA Plan emphasized a review of both the content and the presentation of the Draft Final Report. The report outline, section titles, and section contents were reviewed against the project objective in order to ascertain that the contents are broadly responsive to the stated objective "...to provide a framework for the development and integration of Florida ITS projects, and for long range ITS planning." (Scope of Services, Page A-1).

The report outline of section and subsection headings was developed collaboratively by the project team and reviewed by the project review panel. The QA Review determined if the section/subsection contents are complete, comprehensive and accurate in describing project activities and products. At each step, the reviewers were guided by the broad project objective stated in Section 1 of the Scope.

In the area of presentation, the QA reviewers perused the document for consistency and readability of style, clear organization of material, conciseness, accuracy, references, grammar and punctuation.

In accordance with Kimley-Horn's emphasis on continuous quality improvement, the reviewers were also asked to comment on whether based on their experience from other projects, there are ways to improve the overall quality of the report.

A summary of the QA reviewer's comments is presented below.

### **6.2 QC Review Comments and Actions Taken**

At the conclusion of the quality assurance review, the reviewers provided both a verbal briefing and a written summary of comments to the production team. Following is a summary of the QC comments and the corresponding actions taken by the production team.

**QC Comments on Draft Final Report**

Upon a review of project scope, other material gathered during the course of the project, we are assured that the Draft Final Report is responsive to all requirements of the project.

<u>Comment</u>	<u>Action</u>
<ul style="list-style-type: none"> <li>Document is well organized, has good grammar and punctuation. A few editorial and typo comments are being provided with a marked copy of the document.</li> </ul>	None required.
<ul style="list-style-type: none"> <li>Some of the report is written in present tense (Page 3, second paragraph), while other sections are written in past tense (Page 3, third paragraph). These inconsistencies should be revised.</li> </ul>	Verb tense differences resolved, unless required by context
<ul style="list-style-type: none"> <li>Figure titles should be larger font</li> </ul>	Done
<ul style="list-style-type: none"> <li>The list of stakeholders (48 pages) would more appropriately be placed in an Appendix.</li> </ul>	Done
<ul style="list-style-type: none"> <li>There are several unfamiliar acronyms. These should be eliminated. All acronyms should be presented in a glossary at the beginning of the document. It is also suggested that most acronyms be eliminated because you will have many stakeholders not familiar with the terms.</li> </ul>	Done
<ul style="list-style-type: none"> <li>Several paragraphs need to be completed. (i.e. 3.3;)</li> </ul>	Done
<ul style="list-style-type: none"> <li>Figures 14, 15, 16, and 17 (pages 68-71) are difficult to understand.</li> </ul>	Necessitated by nature of information being presented
<ul style="list-style-type: none"> <li>Text in some diagrams is too small to read. This is also true of “sausage diagram” on the web site. (i.e. Figure 4, Page 44)</li> </ul>	Readers should view diagram on web site
<ul style="list-style-type: none"> <li>Table in Section 2.1 needs to be revised to use the same font throughout.</li> </ul>	Done
<ul style="list-style-type: none"> <li>Table in Section 2.1 (20<sup>th</sup> item, page 13) refers to each District having a framework for short and long term deployment. It seems the report only addresses the long term final buildout.</li> </ul>	In most cases, the ITS framework for short-term deployment is already in the implementation pipeline and is therefore regarded as existing.
<ul style="list-style-type: none"> <li>Make it clear in Section 3.1 that an ITS Architecture is more than just a “documentation of current and future information sharing relationships.”</li> </ul>	Done
<ul style="list-style-type: none"> <li>It would be useful for the report to indicate how much feedback was received via the web site posting of the detailed documents.</li> </ul>	Done
<ul style="list-style-type: none"> <li>In Section 3.4.6, several notes were made in the markup where more</li> </ul>	Done

complete “disposition and rationale” comments seem to be needed.



## **7 Outreach Plan**

### **7.1 INTRODUCTION:**

Under Tasks 1 through 4 of this project, a draft ITS architecture for the state of Florida has been developed. The architecture development process was based on detailed and comprehensive input provided by regional ITS stakeholders. These stakeholders represented the various transportation-related or transportation-impacted agencies involved in providing or coordinating transportation services. Inputs provided by these groups included information regarding the functions, limitations, expansion plans and operation of various existing automated systems that in some way or another impact surface mobility in the area. Additionally, these representatives also commented upon the usefulness of exchanging different types of operational information among systems operated by the different agencies. The draft regional architectures developed through this process were then made available to all participants through a project web site for the purpose of eliciting further comments, especially from those stakeholders who may have been unable to attend one the eight stakeholder workshops.

### **7.2 OBJECTIVE:**

A systemic approach to overcoming institutional barriers is one of the defining hallmarks of the ITS paradigm. ITS users and practitioners across the nation unanimously agree that the formulation of collaborative relationships among institutions is a critical prerequisite to the successful implementation of any integrated regional architecture. The underlying objective of the public involvement campaign referred to in Task 5 of the project scope goes beyond stakeholder input to enable the development of the draft architecture. Activities under Task 5 are aimed at not only disseminating the already developed draft statewide and regional ITS architectures, but also underscore both the need and benefits of a uniform ITS architecture to policy makers, general public, and technical staff.

In an ideal world, the draft architecture development process would have been based on input received from a wide cross section of the ITS stakeholder community. Due to schedule constraints, however, the attendance at the stakeholder workshops was not at the level that was hoped for.

The Project Team proposed that a far greater benefit would accrue to the Department if the activities under Task 5 were directed towards enlarging the buy-in reach of the need, concept, and benefit of a statewide architecture primarily among stakeholders. The ITS stakeholders (transportation policy makers and their technical staff, private service providers, research institutions and academia) must be viewed in two distinct lights. On the one hand, these are the people who are the most knowledgeable in the details of the existing systems, namely, their functional content, their potential, limitations, and operational role. The emphasis on soliciting

their input in the initial round of development workshops indeed was in recognition of this

information-provider role.

By virtue of their knowledge and standing in the regional transportation community, these ITS stakeholders also serve in the role of opinion-makers in the community. For this reason, their buy-in into the concept and justification for the draft architecture is of paramount importance. Finally, it is hoped that the process of training and outreach would itself create ITS champions and advocates who will become the rallying point for the continuation of the implementation process beyond the schedule of this project.

The outreach plan presented here can be followed by an outreach team constituted by the Department and may consist of Department personnel or outside staff.

### **7.3 TARGET AUDIENCE:**

The public outreach plan discussed in this section is aimed primarily at the following specific groups of ITS stakeholders.

- Public Sector Decision Makers and Technical Staff (FDOT, FHWA)
- County/City Elected Officials
- County/City/MPO Department Heads and Technical Staff
- Emergency Services Providers (Fire, Police, Emergency Operations Centers)
- Private Sector Service Providers

Other groups of ITS stakeholders may also be recognized from time to time. The outreach plan should be suitable to communicate the message to all such groups.

### **7.4 MESSAGE THEMES SOUGHT TO BE COMMUNICATED:**

An effective explanation of the structure and benefits of an ITS architecture requires a minimum awareness level of the concept of ITS itself. Following is a natural sequence of a comprehensive curriculum for an ITS Architecture Outreach workshop. Certain message themes from the following may be more heavily emphasized depending upon the needs of the particular target audience. Conversely, depending on time availability and audience preparedness, certain message points may only be discussed in summary or may have to be eliminated.

- Benefits of ITS
- General Description of Completed or Ongoing ITS Initiatives in Florida
- Regional and Statewide ITS Architecture:
  - Need
  - Benefits
  - Process of Development
  - What Statewide ITS Architecture Looks Like Now
  
  - How You Can Access It

Flexible, How You Can Modify It  
How To Use It

- ITS Standards:  
Interconnectivity and Integrated Operation  
Specific Standards Available, Applicable, or Required

### **7.5 OUTREACH FORUMS RECOMMENDED:**

In order to maximize attendance at such workshops, it is strongly recommended that the outreach team make the maximum use of existing forums, conferences, and meeting where one or more of the target audience groups convene. Some examples of such forums are as follows:

FSITE Meetings (for example, the meeting scheduled in Tallahassee for Nov.1, 2000)  
ITS America Meetings (Annual Meeting scheduled in Miami Beach, June 4-7, 2001)  
District Traffic Operations Engineers' Meetings  
MPO Meetings in various regions and counties

### **7.6 OUTREACH MATERIALS RECOMMENDED:**

The outreach team is expected to use both resource materials developed as part of this project and other relevant resource material already available from other sources.

The resource material developed as part of this project and available to the outreach team are as follows\*:

Initial 4-page Mailer/Announcer  
Hand-Out Set of Hard Paper Copy of Slides  
PowerPoint Slides  
CD-ROM  
Web Site

*(\* One original to be provided under the project, multiple copies to be reproduced by the Department)*

### **RESOURCE MATERIAL AVAILABLE FROM OTHER SOURCES\*:**

Florida's ITS Planning Guidelines. *Integration of ITS into the Transportation Planning Process.* June 2000

Saving Lives, Time and Money – Using Intelligent Transportation Systems, Opportunities and Actions for Deployment (ITS America, Feb 2000)

Saving Lives, Time and Money – Using Intelligent Transportation Systems, Opportunities

for Deployment (ITS America, 2000)

Florida ITS Conceptual Plan (Operations Perspective) (77 pages plus appendix, FDOT, November 1994)

What Is ITS? (1 page, 2-sided flyer, ITS America)

The National Architecture for ITS: A Framework for Integrated Transportation into the 21<sup>st</sup>. Century (ITS America)

IVHS Architecture Video Primer (26:30 min, ITS America, 1994)

Florida Statewide Strategic Plan, 1999.

***(\*One sample copy to be delivered. Additional copies to be obtained directly by the outreach team from the source organization as required).***

## **8 Recommendations for Florida Statewide ITS Architecture Maintenance**

This section first describes how the architecture documentation might be used to augment and support the parallel MPO driven planning processes based on expected new USDOT rules on Architecture and Standards conformity. It then describes a process to collect changes to the Statewide ITS Architecture based on updated District requirements and new projects, and how these changes might be vetted with stakeholders to maintain the consensus objective of the Florida Statewide ITS Architecture.

### **8.1 Expected USDOT Regulations on ITS Architecture and Standards Conformity (TEA-21 5206(e))**

As of January 8, 2001, the USDOT's [\*Interim Guidance on Conformity with the National ITS Architecture and Standards\*](#) published in the fall of 1998, has been replaced with the final rule on ITS Architecture and Standards (Federal Highway Administration, 23 CFR Parts 655 and 940, FHWA Docket No. FHWA-99-5899). During the summer of 2000, an NPRM (Notice of Proposed Rulemaking) on Architecture and Standards Conformity was published by USDOT. The publication of the final rule was too late to be analyzed for this document (*editorial note: the final rule was published on January 8, 2001*).

In developing the Florida Statewide ITS Architecture and Standards, we adapted our analysis and reports to conform to changes between the Interim Guidance and the NPRM where necessary.

The one area that was directly impacted by the NPRM was the requirement for a "high level functional requirements" analysis. In support of this requirement, each stakeholder element that mapped to one or more National ITS Architecture subsystem has been analyzed to identify the component Equipment Packages and the component Process Specifications for that stakeholder element. The NPRM was not crisp on what was meant by "high level functional requirements," but we believe that this is a fully adequate approach.

#### **The Integration Strategy**

The one exception to this discussion is the reference in the Architecture and Standards NPRM to an "Integration Strategy" document. (*Editorial Note: the Integration Strategy was dropped from the final rule.*) This document did not have any detail in the Architecture and Standards NPRM to help the reader to understand exactly what was in that document, but was described in some detail in the accompanying *Planning NPRM*. Furthermore, the "Planning NPRM", received considerable negative criticism during the NPRM comment period and is not expected to become law anytime soon according to discussions with USDOT officials, except possibly in a substantially reduced form. Regarding this concern, the USDOT JPO has initiated some discussions and outlines internally for an Integration Strategy Guidance document, to assist authors of such a document -- on the chance that the Integration Strategy document appears in the final Architecture and Standards (or slimmed down Planning) rule(s).

It is likely that any required Integration Strategy documents will be developed under the auspices of MPOs. The purpose of an Integration Strategy is to support the planning community in identifying regional transportation priorities and achieving stakeholder consensus. Thus, it is closely related to the process and objectives of developing regional (or in the case of Florida, FDOT District) ITS architectures. The Integration Strategy is also closely related to analyses already performed as part of the long-range transportation planning process.

The **Planning NPRM** identified the following elements of an Integration Strategy. Items identified with an asterisk (\*) are closely associated with work already performed under this Statewide ITS Architecture and Standards project.

- **\* Stakeholder Identification.** This section identifies or lists the stakeholders in a region. Narrative descriptions of the organizations and their responsibilities should be provided for each stakeholder as well as establishing points of contact.
- **\* Existing / Future System Inventory.** Each system, existing and future, should be identified and described, both functionally and in terms of the resources that are available or planned to be deployed. Their responsible stakeholder should be identified for each system. This section could take the form of a table or narrative.
- **\* Services / Project Inventory.** A list of services or ITS projects should be developed. For each item, a description should be included that illustrates the purpose of the item, the stakeholders involved, the systems or resources required to carry it out, and its relationship to other services or projects.
- **\* System Interconnections / Electronic Information Sharing.** This section will lay the groundwork for the integration strategy and provide a vital link to the regional architecture development. It identifies interfaces between systems within the region that will electronically exchange information.
- **Integration Phasing.** Integration phasing takes the approach of the previous section and breaks it down into project level phasing *over time* that will ultimately result in the vision for ITS within the region. The approach in the previous section should dictate the sequencing of projects and system deployment according to the regional project ranking process which might consider factors such as project deliverability, funding requirements, and the degree to which projects address priority needs.
- **Interagency Agreements.** With an integration phasing and overall approach documented, it is important to get agreements between the stakeholders that the integration phasing will be supported and that interfaces of joint work be coordinated. This section may be summarized the agreements and an attachment will contain the actual signed agreements.
- **Resource Commitments / Available Funding Sources.** Ultimately the Interagency Agreements should also include resource commitments and identify funding sources to facilitate the integration approach and phasing. These are transportation planning requirements and the Integration Strategy is a planning document.

We recommend that FDOT closely track the emerging rules as well as USDOT guidance

documents relating to the new rules and consider adding one or more *Integration Strategy* documents to each of the District ITS Architectures based on actual requirements in the new

rule(s).

## **8.2 Collecting and Analyzing Stakeholder Comments and Changes in Requirements**

While the Statewide ITS Architecture is generally technology neutral, and this immunizes the product from rapid technological obsolescence, there is still the strong likelihood that the statewide ITS architecture, and the FDOT district architectures that make it up, will need to adapt as the requirements of the FDOT Districts slowly evolves.

We propose that FDOT conducts periodic stakeholder meetings, coordinates with corridor, regional, district and project architecture developments, and provides an annual update of the Florida Statewide ITS Architecture and Standards based on the information collected through these activities. The periodicity of stakeholder meetings depends mostly on the rate of changes in requirements in a region. A rapidly developing district will require more frequent stakeholder meetings than more stable districts. Prior to stakeholder meetings, specific issues should be analyzed and the architectural alternatives framed for stakeholder consideration. In this way, these periodic stakeholder "update" meetings can be kept relatively short (compared to the weeklong workshops required to develop the FDOT district ITS architectures in the first place).

We propose that stakeholder input and feedback be collected and analyzed through the web-based Statewide ITS Architecture documentation as well as through stakeholder meetings. At stakeholder meetings, we suggest that stakeholder suggestions be presented and impact of those suggestions be framed so that the stakeholders can come to a consensus decision about updates to the architecture. Based on this input, deliverables should be updated periodically. Annual updates might be required for the Statewide ITS Architecture and some of the rapidly evolving districts, and less frequently for the more slowly evolving FDOT districts.

Included in these updates should be conversion of custom FDOT Architecture entities to new National ITS Architecture entities as these are released by the National ITS Architecture team in new versions of the National ITS Architecture. (Note that the current version 3 of the National ITS Architecture will be replaced with a version 4 around Fall 2001.) We also recommend that FDOT take advantage of the most current, at the time of update, mappings of Architecture Flows to open ITS standards that are periodically updated by the National ITS Architecture team and published on the National ITS Architecture Team documentation website (currently at [www.iteris.com/itsarch](http://www.iteris.com/itsarch)).

## **8.3 Identifying changes based on ITS Project Deployments and Plans**

Many institutional issues affecting and responsive to the working relationships between FDOT, the FDOT districts and other local agencies can effect the actual process used to incorporate changes based on ITS Project Deployments and Plans. Consideration, for example, may need to

take into account the source (federal, state or local) of deployment funds, which could affect the way and/or timing for making updates to the Statewide ITS Architecture and Standards and its District ITS architecture components. Consequently, we recommend that FDOT devote one or

possibly two full day workshops to bring together the effected stakeholders (about the same as the Program Panel for this project) to consider and develop a process for this activity.

#### **8.4 Consensus Review Changes and Comments**

As discussed previously in Section 8.2, changes to FDOT District ITS Architectures and the Statewide ITS Architecture should be documented and framed for stakeholder review and concurrence -- prior to updating the specific ITS architecture documents.

#### **8.5 Periodic Update of the Website, CDROM and report**

We recommend that the following process be followed to update the Statewide ITS Architecture website, CDROM and final report.

We recommend that FDOT (or their consultant) use the same technology and methodology to update and maintain the deliverables that was used to create the deliverables.

Annual updates of the underlying architecture databases should be made using TurboArchitecture. At the same time, the CDROM and website can be updated using FloridaTurboExtensions provided by Jaffe Engineering (to convert the Turbo database to html hypertext reporting system). This same system is currently used to generate the FDOT Statewide Architecture web site. The process for doing this is discussed in detail in Section 5 of this report.

#### **8.6 Adoption of District ITS Architectures and Standards by MPOs (Metropolitan Planning Organizations)**

A key next step is that the District (regional) ITS architectures and associated standards need to be *officially* brought up to the MPOs for either adoption or for their use as a starting point in developing their own individual MPO area architectures.

#### **8.7 Update and Coordination Procedure**

In as much as it is a framework for the design and deployment of ITS infrastructure, the ITS architecture must remain flexible enough to easily accommodate changes in operational needs, organizational structures, regulations and policies. As such underlying changes occur, the architecture flows and market packages can be easily made to reflect the changed conditions. In the project panel meetings, and appropriate need to effect such changes in a coordinated and cohesive manner was expressed. As an initial coordination measure, it was felt that each of the FDOT districts' ITS engineers, led by the ITS Administrator at the FDOT Central Office be

made responsible for any changes or updates to the statewide architecture. In this effort, a limited level of technical support will be available from the project team during the second year of the current contract.

# 1 Appendix: Stakeholder Workshop Database

Note: Those stakeholders who attended the workshops are denoted with an asterisk (\*) next to their last name.

## 1.1 District 1 Workshop

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
William	Abreu	Police Officer	Charlotte County Sheriff Office	7474 Utilities Road	Punta Gorda	Florida	33980-
Stephen	Adams	Engineer	City of Punta Gorda	326 West Marion Avenue	Punta Gorda	Florida	33950-4492
Gary	Albritton, Sr.	Mayor	City of Bowling Green	P.O. Box 608	Bowling Green	Florida	33834-
Ronny	Allen	Mayor	City of Arcadia	P.O. Box 351	Arcadia	Florida	33821-
Jim	Allen		Winter Haven Police Department	P.O. Box 2277	Winter Haven	Florida	33883-
Paul	Allen	Asst. Park Manager	Little Manatee River State Recreation	215 Lightfoot Road	Wimauma	Florida	33598-
Jose	Alvarez*		Kimley - Horn				
Peter	Anderson	Park Manager	Highlands Hammock State Park	5931 Hammock Road	Sebring	Florida	33872-
Lester	Baird	Administrator	Hendry County Administration	P.O. Box 1760	LaBelle	Florida	33975-
John	Baker		Florida Highway Patrol	721 Brevard	Arcadia	Florida	34266-
John	Baker		Florida Highway Patrol	1174 U.S. 27th North	Lake Placid	Florida	33852-
William	Barnett	Mayor	City of Naples	735 Eighth Street, South	Naples	Florida	34012-
Dale	Bathon	Manager	Collier County Traffic Operations	3301 East Tamiami Trail	Naples	Florida	34112-
Dale	Bathon*	Traffic Ops Manager	Collier County Transportation			Florida	
William	Beattie		Wauchula Police Department	303 W. Main Street	Wauchula	Florida	33873-
John	Beckler		Lee County Sheriff Department	14750 Six Mile Cypress Parkway	Fort Myers	Florida	33912-
Lisa	Beever	Director	Charlotte-Punta Gorda MPO	28000 A-6 Airport Road	Punta Gorda	Florida	33982-
Fritz	Behring	Manager	City of Fort Meade	P.O. Box 856	Fort Meade	Florida	33841-
Tom	Beman	Asst. Park Manager	Myakka River State Park	13207 State Road 72	Sarasota	Florida	34241-
Randal	Bengston		Hendry County Fire - EMS	P.O. Box 1760	LaBelle	Florida	33975-
Clif	Betts	Chairman	Okeechobee County Board of Commissioners	304 NW Second St., Room 106	Okeechobee	Florida	34972-
Frank	Birdwell	Mayor	City of Moore Haven	P.O. Box 399	Moore Haven	Florida	33471-
Chris	Birosak*	Sr. Transportation Systems Program Mang.	F.D.O.T.				
Martin	Black	Director	Town of Longboat Key Community and Development Ser	600 General Harris Street	Longboat Key	Florida	34428-
Martin	Black	Director	Town of Longboat Key Community Services	501 Bay Isles Road	Longboat Key	Florida	34228-
Dennis	Blanchard	Mayor	City of Eagle Lake	P.O. Box 129	Eagle Lake	Florida	33839-
Ronnie	Boch		Glades County EMS	P.O. Box 365	Moore Haven	Florida	33471-
Glen	Bond*	Supervisor, Traffic Signal	Charlotte County Public Works			Florida	
Michael	Boyle	Director	LaBelle Public Works	P.O. Box 458	LaBelle	Florida	33935-
Michael	Boyle	Superintendent	City of LaBelle Public Works	P.O. Box 458	LaBelle	Florida	33935-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Marsha	Bradley	Sheriff	Charlotte County Sherrif Office	7474 Utilities Road	Punta Gorda	Florida	33980-
Robert	Bradshaw	Administrator	City of Okeechobee	55 SE Third Avenue	Okeechobee	Florida	34972-
Mel	Brant		Clewiston Police Department	205 W. Ventura Avenue	Clewiston	Florida	33940-
Charles	Brown	Asst. Park Manager	Myakka River State Park	13207 State Road 72	Sarasota	Florida	34241-
Andrew	Bryan	Mayor	City of Hillcrest Heights	P.O. Box 129	Babson Park	Florida	33827-0129
J. Neil	Byrd		Frostproof Police Department	P.O. Box 308	Frostproof	Florida	33843-
Dean	Calamaras	Mayor	City of Venice	401 West Venice Ave.	Venice	Florida	34285-
Molly	Cardamone	Mayor	City of Sarasota	P.O. Box 1058	Sarasota	Florida	34230-1058
Herb	Caudle		FGCU Police Department	19501 Ben Hill Griffin Parkway	Fort Myers	Florida	33965-6565
Anita	Cereceda	Mayor	Town of Fort Myers Beach	P.O. Box 3077	Fort Myers Beach	Florida	33932-
Richard	Chappelle		City of Fort Myers Fire Department	2404 Dr. Martin Luther King Jr., Blvd.	Fort Myers	Florida	33901-
Phil	Charnock	Director	City of Anna Maria Public Works	P.O. Box 608	Anna Maria	Florida	34216-
James	Chisholm	Administrator	DeSoto County Administration	P.O. Drawer 2076	Arcadia	Florida	33821-
Larry	Clark	Mayor	City of Lake Alfred	155 E. Pomelo Street	Lake Alfred	Florida	33850-
Ed	Clator		Sebring Police Department	307 N. Ridgewood Drive	Sebring	Florida	33870-
Lauaren	Cogburn		Hardee County Sheriff Office	900 E. Summit Street	Wauchula	Florida	33873-9606
Gail	Cole	Mayor	City of Bradenton Beach	107 Gulf Drive North	Bradenton Beach	Florida	34217-
Pat	Collins	City Engineer	City of Venice Public Works	401 West Venice Avenue	Venice	Florida	34285-
Bruce	Collins		Arcadia Police Department	17 N. Polk Ave.	Arcadia	Florida	34266-
Jery	Connerly	Administrator	City of Wauchula	P.O. Box 818	Wauchula	Florida	33873-
Timothy	Constantine	Chairman	Collier County MPO	3301 E. Tamiami Trail	Naples	Florida	34112-
Stephen	Cook	Executive Director	Sarasota County Public Works	1301 Cattlemen Road	Sarasota	Florida	34232-
Carl	Cool	County Administrator	Highlands County Administration	411 S. Eucalyptis Street/P.O. Box 1926	Sebring	Florida	33871-
Donald	Coppola	Chairman	Charlotte-Punta Gorda MPO	18500 Murdock Circle	Port Charlotte	Florida	33948-
Larry	Costanza		Florida Highway Patrol	P.O. Box 90247	Lakeland	Florida	33804-
Ronnie	Cotton	Interim Director	City of Haines City Public Works	P.O. Box 1507	Haines City	Florida	33844-
Sharon	Craichy	Mayor	City of LaBelle	P.O. Box 580/481 SR 80 West	LaBelle	Florida	33935-
Arlan	Cummings	City Engineer	City of Bradenton Public Works	1411 Ninth Street West	Bradenton	Florida	34205-
John	Cummings	Director	City of Bradenton Public Works	Caller Service 25015	Bradenton	Florida	34206-
Lois	Daindridge	Mayor	City of Zolfo Springs	P.O. Box 162	Zolfo Springs	Florida	33890-
Dennis	Daughters	City Engineer	City of Sarasota	P.O. Box 1058	Sarasota	Florida	34230-
Dennis	Daughters	Director of Engineering	City of Sarasota	P.O. Box 1058	Sarasota	Florida	34230-1058
John	Davis*	Engineer	Lee County	P.O. Box 398	Fort Myers	Florida	33902-
Robert	Deak		Glades County Sheriff Office	P.O. Box 39	Moore Haven	Florida	33471-
Thomas	Deardorff	TPO Coordinator	City of Bartow	P.O. Box 9005, Drawer TS05	Bartow	Florida	33831-9005
Robert	DeChefke	Engineer	City of Arcadia	P.O. Box 351	Arcadia	Florida	33821-
Gary	Deffenbaugh	Mayor	City of Anna Maria	P.O. Box 608	Anna Maria	Florida	34216-
Ty	Dejesus*		Emergency Management E.O.C.	404 W. Orange Street	Wauchula	Florida	33873-
Charles	Dickerson	Park Manager	Lake Manatee State Recreation Area	20007 E. State Road 64	Bradenton	Florida	34202-
Christopher A.	Dilley, P.E.*	Stormwater Manager	City of North Ports Public Works/Emergency				
Pauline	Dione	Mayor	Town of Lake Placid	51 Park Drive	Lake Placid	Florida	33852-
Russ	Disinger	Public Safety Director	Okeechobee Fire Rescue	301 NW 2nd Street	Okeechobee	Florida	34972-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Keith	Drake*	Principal Planner	Sarasota / Manatee MPO			Florida	
Joe	Duennes	Superintendent	City of Homes Beach Public Works	5801 Marina Drive	Holmes Beach	Florida	34217-
David	Duke	Aeromedical Specialist	Aeromedical Transport Program	301 S. Clinch Lake Blvd.	Frostproof	Florida	33843-2218
Bill	Dunkleberger		Lake Wales Police Department	133 E. Tillman	Lake Wales	Florida	33853-
Craig	Durham		Cape Coral Police Department	815 Nicholas Parkway	Cape Coral	Florida	33990-
Robert	Dyer	Manager	Myakka River State Park	13207 State Road 72	Sarasota	Florida	34241-
Bruce	Efurd		Lake Alfred Police Department	120 E. Pomelo Street	Lake Alfred	Florida	33850-
David	Elbertson	City Manager	City of Bowling Green	P.O. Box 608	Bowling Green	Florida	33834-
Chuck	Elders	Director	City of Okeechobee Public Workd	55 S.E. 3rd Ave.	Okeechobee	Florida	34974-
Robert	Elliott	Mayor	City of Fort Meade	P.O. Box 856	Fort Meade	Florida	33841-
Buck (Raymond)	Farrenkopf		Okeechobee Police Department	55 SE 3rd Avenue	Okeechobee	Florida	34974-
Robert	Fernandez	Administrator	Collier County Administration	3301 East Tamiami Trail	Naples	Florida	33962-
Robert	Fielder		Hendry County Sheriff Office	712 E. El Paso Avenue	Clewiston	Florida	33440-
Joseph	Fink*	Chairperson	North Port City Commission	5650 North Port Blvd.	North Port	Florida	34287-
June	Fisher	Acting Director	DeSoto County Public Works	221 East Hickory Street	Arcadia	Florida	33821-
Buddy	Fletcher	Mayor	City of Lakeland	228 South Massachusetts Ave.	Lakeland	Florida	33801-5086
Juan	Florensa	Director	North Port Public Works	5650 North Port Blvd.	North Port	Florida	34287-
David	Flowers	Chairman	Hilghlands County Board of Commissioners	P.O. Box 1926	Sebring	Florida	33871-
Lamar	Forbes		Sebring Police Department	307 N. Ridgewood Drive	Sebring	Florida	33870-
George	Fox	Director	City of Sebring Public Works	368 S. Commerce Ave.	Sebring	Florida	33870-
Mark	Frazier		Hardee County Roads Department	74 Hanchey Road	Wauchula	Florida	33873-
Matthew	Free		Punta Gorda Fire Department	1410 Tamiami Trail	Punta Gorda	Florida	33950-
Edward	Freeman		Lake Hamilton Police Department	P.O. Box 126	Lake Hamilton	Florida	33851-
Richard	Fulwider		Cedar Hammock Fire Department	5200 26th Street West	Bradenton	Florida	34207-
Catherine	Furr	Director	DeSoto Emergency Management	115 E. oak	Arcadia	Florida	34266-
Thomas "Felton"	Garner	Chairman	DeSoto Board of County Commissioners	201 East Oak St., Suite 201	Arcadia	Florida	34266-
Joe	Garrison	Mayor	City of Dundee	P.O. Box 1000	Dundee	Florida	33838-
John	Gaskins*	Signal Supcrvisor	Manatee Court Transportation				
Richard	Gatti	Engineer	City of Naples	735 Eighth Street South	Naples	Florida	33940-
Ramon	Gavarrette	County Engineer	Highlands County Administration	4344 George Blvd.	Sebring	Florida	33872-
Ron	Getman		Florida Highway Patrol	5023 SR 70 East	Bradenton	Florida	34203-
Robert	Giesler	Chairman	Glades Board of County Commissioners	P.O. Box 10	Moore Haven	Florida	33471-
Bob	Giesler	Acting Administrator	Glades County	P.O. Box 1018	Moore Haven	Florida	33471-
Scott	Girouard	Mayor	City of Winter Haven	P.O. Box 2277	Winter Haven	Florida	33883-2277
H.C.	Godwin		Highlands County Sheriff Office	P.O. Box 71	Sebring	Florida	33870-
Henry	Graham	Mayor	City of Wauchula	P.O. Box 818	Wauchula	Florida	33873-
Bobby	Green	Manager	City of Auburndale	P.O. Box 186	Auburndale	Florida	33823-
Tom	Greenwood	Superintendent	Glades County Roads Department	P.O. Box 395	Moore Haven	Florida	33471-
Gary	Grosser		Lee County Port Authority Police Department	16000 S.E. Chamberlin Parkway	Fort Myers	Florida	33913-8899
Michael	Guy	Executive Director	Sarasota/Manatee MPO	7632 301 Blvd.	Sarasota	Florida	34243-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Sammy	Hamilton	Mayor	City of Everglades City	P.O. Box 110	Everglades City	Florida	33929-
Mike	Hancock		Longboat Key Police Department	501 Bay Isle Road	Longboat Key	Florida	34228-
Linda	Hansen		Glades County EMS	P.O. Box 365	Moore Haven	Florida	33471-
Larry	Harbuck	Director	Town of Lake Alfred Public Works	120 E. Pomelo Street	Lake Placid	Florida	33852-
Susan	Harrelle		Hendry County Sheriff Office	P.O. Box 456	LaBelle	Florida	33935-
Claude	Harris		Hardee County Sheriff Office	900 E. Summit Street	Wauchula	Florida	33873-
Glen	Hart		Polk Emergency Management	P.O. Box 1458	Bartow	Florida	33831-
Denise	Hawkins		Charlotte County EMS	22429 Edgewater Drive	Punta Gorda	Florida	33980-
I.W.	Healthcote		Fort Meade Police Department	15 NW 1st Street	Fort Meade	Florida	33841-3350
Larry	Heath	Director	City of Venice Public Works	401 West Venice Ave.	Venice	Florida	34285-
Gary	Heil		Sarasota-Bradenton Police Department	6000 Airport Circle	Sarasota	Florida	34243-
Robert	Henry	Park Manager	Collier Seminole State Park	20200 Tamiami Trail East	Naples	Florida	34114-
George	Hensley	Mayor	City of Sebring	368 South Commerce Avenue	Sebring	Florida	33870-
John	Herlihy		Sarasota County Sheriff Office	P.O. Box 4115	Sarasota	Florida	34230-
Mike	Herr	Transportation Director	City of Bartow	P.O. Box 9005, Drawer TS01	Bartow	Florida	33831-9005
Rob	Hinesley		Sarasota Police Department	2050 Ringling Blvd.	Sarasota	Florida	34237-
Robert	Hoffman	Administrator	City of Sebring	368 South Commerce Avenue	Sebring	Florida	33870-
Ted	Hoffman*		Sarasota County Public Works Business Center	100 Cattlemen Road	Sarasota	Florida	34232-
Roger	Hood	Manager	City of Frostproof	P.O. Box 308	Frostproof	Florida	33843-
Mac	Horton	Chairman	Charlotte County Board of Commissioners	18500 Murdock Circle	Port Charlotte	Florida	33948-
Ken	Howard		Glades County Department of Emergency Management	P.O. Box 68	Moore Haven	Florida	33471-
David P.	Hunt*	Sr. Transportation Planner	S.W. Fl. Restonall Plann. Council Lee MPD				
Bryan	Hunter	Engineer	Hardee County	412 West Orange Ave.	Wauchula	Florida	33873-
John	Hunter		Mulberry Police Department	P.O. Box 707	Mulberry	Florida	33860-
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Ed	Ilschner	Administrator	City of Naples Public Works	3301 East Tamiami Trail	Naples	Florida	33962-
Natale	Ippolito		San Carlos Park Fire/Rescue District	8013 Sanibel Blvd.	Fort Myers	Florida	33912-
Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Charlie	Johnson		Cape Coral Fire Department	P.O. Box 150027	Cape Coral	Florida	33915-0027
Ed	Johnson		Florida Highway Patrol	11281 Cleveland Avenue	Fort Myers	Florida	33907-
Robert	Johnson	Director	City of Eagle Lake	P.O. Box 129	Eagle Lake	Florida	33839-
Bob	Jones	Director	Glades County Emergency Medical Services	P.O. Box 365	Moore Haven	Florida	33471-
Jeff	Jones		Cape Coral Police Department	P.O. Box 150027	Cape Coral	Florida	33915-0027
Randy	Jones		Lakeland Police Department	219 N. Massachusetts Ave.	Lakeland	Florida	33801-
Gavin	Jones*	MPO Coordinator	Collier County Development Services	2800 N. Horseshoe Drive	Naples	Florida	34104-
Randy	Jordan		Fort Myers Beach Fire District	3043 Estero Blvd.	Fort Myers	Florida	33931-
David	Kainrad		Lee County EMS	P.O. Box 398	Fort Myers	Florida	33902-0398

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Edward	Kant	Director	Collier County Transportation Services	3301 East Tamiami Trail	Naples	Florida	33962-
Jim	Keene	County Manager	Polk County Board of Commissioners	P.O. Box 9005, Drawer CA01	Bartow	Florida	33831-9005
Vernon	Keene		DeSoto County Sheriff Office	208 E. Cypress Street	Arcadia	Florida	34266-
Rick	Keeney	Director	Punta Gorda Public Works	900 West Henry Street	Punta Gorda	Florida	33950-
Scott	Kercher		Lakeland Police Department	219 N. Massachusetts Ave.	Lakeland	Florida	33801-
James	Kirk	Mayor	City of Okeechobee	Okeechobee City Hall, 55 SE Third Ave.	Okeechobee	Florida	34972-
Steve	Kiss	Director	City of Cape Coral Public Works	P.O. Box 150027	Cape Coral	Florida	33915-
Tom	Knight		Florida Highway Patrol	4010 South Tamiami Trail	Venice	Florida	34293-
Thomas	Kochheiser		Hendry County Emergency Management	P.O. Box 358	LaBelle	Florida	33975-0358
Michael	Kraus		Fort Myers Fire Department	2404 Dr. Martin Luther King Jr. Blvd	Fort Myers	Florida	33901-
Ronnie	Lee		Hendry County Sheriff Office	P.O. Box 579	LaBelle	Florida	33975-0579
Kennedy	Legler, Jr.	Mayor	Town of Longboat Key	501 Bay Isles Road	Longboat Key	Florida	34228-
Jeff	Lewis		Bradenton Police Department	100 10th Street West	Bradenton	Florida	34205-
James	Ley	County Administrator	City of Sarasota	P.O. Box 8	Sarasota	Florida	34230-
Steve	Litschauer		Manatee County Sheriff Office	515 11th Street West	Bradenton	Florida	34205-
Deryl	Loar		Florida Highway Patrol	P.O. Box 836 / 2929 N. 25th Street	Fort Pierce	Florida	34949-
Jack	Logan	City Clerk	Zolfo Springs City Hall	P.O. Box 162	Zolfo Springs	Florida	33890-
George	Long	County Administrator	Okeechobee County	304 NW Second Street	Okeechobee	Florida	34972-
Leo	Longworth	Mayor	City of Bartow	P.O. Box 1069	Bartow	Florida	33831-1069
Chuck	Lovell*	Dist. T/O Eng	Florida Dept. of Transportation			Florida	
Thomas	Macklin	Mayor	City of Avon Park	110 East Main Street	Avon Park	Florida	33825-
J.P.	Marchand	Director of Transportation	Sarasota County Transportation Department	1301 Cattlemen Road	Sarasota	Florida	34232-
Randy	Martin	Mayor	City of Lake Hamilton	P.O. Box 126	Lake Hamilton	Florida	33851-
Tom	Masterson	Engineer	Okeechobee County	499 N.W. 6th Street	Okeechobee	Florida	34972-
George	Mathis	Director	City of Clewiston Public Works	115 W. Ventura Ave.	Clewiston	Florida	33440-
Larry	Mau	Director	Manatee County Transportation Dept.	P.O. Box 1000	Bradenton	Florida	34206-1000
Dale	May	Director	City of Lake Wales Public Works	P.O. Box 1320	Lake Wales	Florida	33859-
Joe	McClash	Chairman	Sarasota/Manatee MPO	7632 301 Blvd.	Sarasota	Florida	34243-
Ray	McClellan	Superintendent	City of Wauchula Public Works	P.O. Box 818	Wauchula	Florida	33873-
Craig	McConnell	Director	Charlotte County Public Works	7000 Florida Street	Punta Gorda	Florida	33950-
Harry K.	Meadeahall*	Assistant Director	Manatee County Transportation Dept.				
Ralph	Meller	Director	Polk County Traffic Engineering Division	3000 Sheffield Road	Winter Haven	Florida	33880-
Anthony	Messina		Arcadia Fire Department	121 W. Hickory Street	Arcadia	Florida	34266-
Stephen	Mislyan		Town of Longboat Key Police Department	501 Bay Isles Road	Longboat Key	Florida	34228-
James	Moody	Mayor	City of Auburndale	P.O. Box 186	Auburndale	Florida	33823-
Bill	Moore	Director	Town of Dundee Public Works	P.O. Box 1000	Dundee	Florida	33838-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
G.J.	Moran		City of Bradenton Beach Planning and Zoning	107 Gulf Drive North	Bradenton Beach	Florida	34217-
Charles	Moran	Manager	City of Davenport	P.O. Box 125	Davenport	Florida	33837-
John	Morgan	Director	South Florida Water Management	P.O. Box 2033	Okeechobee	Florida	34972-
William	Moss	City Manager	City of Marco Island	950 N. Collier Blvd., Suite 308	Marco Island	Florida	34145-
Mike	Murray		Sanibel Police Department	800 Dunlop Road	Sanibel	Florida	33957-
Jeff	Nelson		Sarasota Police Department	2050 Ringling Blvd	Sarasota	Florida	34237-
Jeff	Newell	City Manager	City of Clewiston	115 West Ventura Avenue	Clewiston	Florida	33440-
Reginald	Norman	Park Manager	Cayo Costo Island State Park	880 Belcher Road	Boca Grande	Florida	33921-
Gordon	Norris	Chairman	Hardee Board of County Commissioners	412 Orange Street, Rm A203	Wauchula	Florida	33873-
Gary	Oden	County Manager	Hardee County	412 West Orange Street, Rm. A203	Wauchula	Florida	33873-
Harry	Ogletree	Mayor	City of Moore Haven	P.O. Box 399	Moore Haven	Florida	33471-
Lowell	O'Grady		City of Cape Coral	P.O. Box 150027	Cape Coral	Florida	33915-
Thomas	O'Kane, Jr.	Engineer	Charlotte County	7000 Florida Street	Puna Gorda	Florida	33950-
Ernie	Padgett	County Administrator	Manatee County Administration	P.O. Box 1000	Bradenton	Florida	34206-
Corrine	Palmer		Hendry County Sheriff Office	P.O. Box 579	LaBelle	Florida	33975-0579
Thomas	Palmese		Lee County Port Authority Police	16000 S.E. Chamberlin Parkway	Fort Myers	Florida	33913-8899
Bruce	Parker	Chairperson	Polk County Board of Commissioners	P.O. Box 9005, Drawer BC01	Bartow	Florida	33831-9005
William "Bo"	Pelham	Chairperson	Hendry County Board of Commissioners	P.O. Box 1760	LaBelle	Florida	33975-
Larry	Pelton	Coordinator	Hardee County Emergency 911	404 W. Orange Street	Wauchula	Florida	33873-
William	Pickard	Director	City of Bartow Public Works	P.O. Box 1069	Bartow	Florida	33831-
B.	Pickett		Fort Myers Police Department	2210 Peck Street	Fort Myers	Florida	33901-
Raymond	Pilon	Chairman	Sarasota Board of County Commissioners	1660 Ringling Blvd.	Sarasota	Florida	34230-
James	Pittman	Mayor	City of Clewiston	243 West Delmonte	Clewiston	Florida	33440-
Brett	Pollock		Anna Maria Fire District - West Side	6001 Marina Drive	Holmes Beach	Florida	34217-
Wayne	Poston	Mayor	City of Bradenton	Caller Service 25015	Bradenton	Florida	34206-
Dwayne	Pratt		LaBelle Volunteer Fire Department	P.O. Box 1214	LaBelle	Florida	33975-1214
J.R.	Prestridge	Superintendent	Hardee County Road and Bridge	412 West Orange Street, Rm A203	Wauchula	Florida	33873-
Bonnie	Pruitt		Wauchula Police Department	303 W. Main Street	Wauchula	Florida	33873-
William	Quick		Fort Myers Police Department	2210 Peck Street	Fort Myers	Florida	33901-
Ken	Reese		Manatee County Sheriff Office	515 11th Street West	Bradenton	Florida	34205-
Malcolm	Rhodes		Florida Highway Patrol	11281 Cleveland Avenue	Fort Myers	Florida	33907-
James	Rider		Glades County Sheriff Office	P.O. Box 39	Moore Haven	Florida	33471-
Bill	Rippy		Florida Highway Patrol	11281 Cleveland Avenue	Fort Myers	Florida	33907-
W.L.	Roberson		Florida Highway Patrol	712 N. Brevard Ave.	Arcadia	Florida	33821-
Mark	Roberts*	Transportation System Program Mang.	F.D.O.T.- District One				
Roger	Robinson		Fort Myers Public Works Department	P.O. Drawer 2217	Fort Myers	Florida	33902-2217
John	Roper	Mayor	City of Frostproof	P.O. Box 308	Frostproof	Florida	33843-0308
Paul	Rose		Lee County Sheriff Office	14750 Six Mile Cypress Parkway	Fort Myers	Florida	33912-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Jane	Ross		City of Bradenton Fire and Rescue	1010 9th Avenue West	Bradenton	Florida	34205-
Peter	Rust	Mayor	City of Davenport	P.O. Box 125	Davenport	Florida	33836-
Steve	Sadler		Sarasota-Bradenton Police Department	6000 Airport Circle	Sarasota	Florida	34243-
Frank	Satchel	Mayor	City of Mulberry	P.O. Box 707	Mulberry	Florida	33860-0707
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Joe	Schaefer*	Asst. State Traffic Operations Eng.	F.D.O.T. -Central Office				
Martin	Segura		Hendry County Sheriff Office	712 E. El Paso Avenue	Clewiston	Florida	33440-
Earl	Sehi	Mayor	City of Highland Park	1337 N. Highland Park Dr.	Lake Wales	Florida	33853-
Robert	Shedd	Mayor	City of Punta Gorda	326 W. Marion Ave.	Punta Gorda	Florida	33950-
Susan	Sibbald		Hendry County Sheriff Office	P.O. Box 579	LaBelle	Florida	33975-
Bobby	Sizemore	Director	City of Avon Park Public Works	110 East Main Street	Avon Park	Florida	33825-
Tom	Slider	Engineer	Hendry County	P.O. Box 1607	LaBelle	Florida	33935-
Dale	Smith	Director	City of Winter Haven	P.O. Box 2277	Winter Haven	Florida	33883-
Mack	Smith*	Traffic Tec.	City of Maples				
Deborah	Snyder*	Asst. Dist. T/O Eng	Florida Dept. of Transportation			Florida	
Mark	Souder		Bradenton Fire Department	1010 9th Avenue West	Bradenton	Florida	34205-
Stan	Stephens	Chairman	Manatee Board of County Commissioners	P.O. Box 1000	Bradenton	Florida	34206-
Dale	Stepherson		Holmes Beach Police Department	5901 Marina Drive	Holmes Beach	Florida	34217-
Scott	Stapp	Engineer	DeSoto County	201 East Oak Street Suite 204	Arcadia	Florida	34266-4451
Edward	Strube	Administrator	City of Arcadia	P.O. Box 351	Arcadia	Florida	33821-
Michael	Suarez		Sarasota County Fire Department	2070 Waldemere Street	Sarasota	Florida	34239-
Kathryn	Sullen		Fort Myers Police Department	1803 Golf View Avenue	Fort Myers	Florida	33901-
Maureen	Swenson*	Principal Planner	Charlotte Co. - Punta Gorda MPO			Florida	
Carl	Taylor	Director	Palmetto Public Works Dept.	P.O. Box 1209	Palmetto	Florida	34220-1209
Carl	Taylor	Director	City of Palmetto Public Works	600 17th Street West	Palmetto	Florida	34221-
Mary	Tillary	Mayor	Town of Polk City	P.O. Box 1139	Polk City	Florida	33868-1139
Charles	Tillman		Zolfo Springs Police Department	P.O. Box 162	Zolfo Springs	Florida	33890-
Clifford	Tonjes	Mayor	City of Lake Wales	P.O. Box 1320	Lake Wales	Florida	33859-
Joseph	Trainor		City of Avon Park Fire Department	110 E. Main Street	Avon Park	Florida	33825-
Norm	Trebilcock	Director	City of Marco Islands Public Works	950 North Collier Blvd., Suite 308	Marco Island	Florida	34145-
Michael	Treubert		Venice Police Department	1350 Ridgewood Avenue	Venice	Florida	34292-
Arlene	Tuck	Town Clerk	Town of Lake Placid	Town Hall - 51 Park Drive	Lake Placid	Florida	33852-
Mike	Tyrrell		Longboat Key Fire and Rescue	5490 Gulf of Mexico Drive	Longboat Key	Florida	34228-
David	Uria	Traffic Operations Engineer	City of Lakeland	834 East Rose Street	Lakeland	Florida	33801-
Eunice	Usher*	Traffic Engineer	City of Fort Myers		Fort Myers	Florida	
Anthony	Velong		Avon Park Police Department	304 W. Pleasant Street	Avon Park	Florida	33825-
Alvin	Walters		Highlands County Sheriff Office	P.O. Box 71	Sebring	Florida	33871-
James	Ward	Director	National Park Service	2900 Horseshoe Drive, South	Naples	Florida	34104-
Buddy	Watts	Director	Bradenton Breach Public Works	107 Gulf Drive North	Bradenton Beach	Florida	34217-
Rick	Weigand		Highland County Emergency Medical Services	P.O. Box 1926	Sebring	Florida	33871-
Pat	Whitesel	Mayor	City of Palmetto	P.O. Box 1209	Palmetto	Florida	34220-1209

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Carol	Whitmore	Mayor	City of Holmes Beach	5801 Marina Drive	Holmes Beach	Florida	34217-
Carmen	Whitney	City Clerk	City of Moore Haven	P.O. Box 399	Moore Haven	Florida	33471-
Scott	Wilkerson		San Carlos Park Fire Department	8013 Sanibel Blvd.	Fort Myers	Florida	33912-
Joanna	Wilkinson	Mayor	City of Haines City	P.O. Box 1507	Haines City	Florida	33845-1507
Jack	Willis		Felda Volunteer Fire Department	P.O. Box 337	Felda	Florida	33930-0337
Billy	Wingate		Wauchula Fire Rescue	149 K.D. Revell Road	Wauchula	Florida	33873-
Jan	Winters	Administrator	Charlotte County Administration	18500 Murdock Circle	Port Charlotte	Florida	33948-
Floyd	Woods	Manager	City of Mulberry	P.O. Box 707	Mulberry	Florida	33860-
Greg	Young	Commissioner	Sarasota-Manatee Airport Authority	6000 Airport Circle	Sarasota	Florida	34243-

## 1.2 District 2

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Richard	Ball*		City of Jacksonville - Traffic Engineering	515 Julia St.	Jacksonville	Florida	32202-
Gene	Blackwood	Director	Duval County Transportation Department	129 King Street	Jacksonville	Fl	32204-
Scott	Blocker*	Contract Coord.	Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	Florida	32204-
Randy	Brown	Captain	Florida Dept. of Transportation	P.O. box 2777	Jacksonville	Fl	32202-
Denise	Bunnewith	Chief	City of Jacksonville MPO	128 E. Forsyth	Jacksonville	Fl	32202-
Eleanor	Cain		Florida Dept. of Transportation	1901 S.Marion	Lake City	Fl	32056-
Randy	Crosby		Traffic Control Devices	1339 Eastport Rd.	Jacksonville	Fl	32218-
Jack	D'Amato	Director	Nassau County Public Works	2290 State Rd	Fernina	Fl	32034-
Steven	Delrich	Sheriff	Alachua County Sheriff Office	2621 SE Hawth	Gainesville	Fl	32641-
Joey	Dobson	Sheriff	Baker County Sheriff Office	56 N.2nd St.	Macclenny	Fl	32063-
Bill	Dow	Director	Lake City Public Works	300Gumswamp	Lake City	Fl	32055-
Dave	Fachko*	Captain	Florida Dept. of Transportation - Motor Carrier	P.O. Box 6669	Jacksonville	Fl	32236-
Kevin	Feldt*		St. John's County Public Works	P.O. Drawer 349	St. Augustine	Florida	32085-
Jack	Gabriel	Manager	Jacksonville Transportation Authority	100North Myrtle	Jacksonville	Fl	32202-
John	Galen	Director	Neptune Beach Public Works	2010 Forest Ave	Neptune Beach	Fl	32266-
Bob	Gamble	Director	Green Cove Springs Public Works	900 W.Gum St	Gr Cove Spring	Fl	32043-
Michael	Greene	Chief	Nassau County Fire and Rescue	11N. 14th St	Fernandina	Fl	32034-
Michael	Griffin	Director	St. Johns County	2250 Irene St.	Jacksonville	Fl	32204-
James	Hannigan*		Florida Dept. of Transportation	2250 Irene St	Jacksonville	Fl	32236-
John	Hartley	Lieutenant		501 E.Bay St.	Jacksonville	Fl	32202-
Huey	Hawkins		Florida Dept. of Transportation	1901 S. Marion	Lake City	Fl	32056-
Jim	Higginbotham	Director	Fernandina Beach Public Works	1180 S. 5st	Fern Beach	Fl	32034-
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Rob	Jaffe*		Jaffe Engineering and Development	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
			Industries				
Tom	John*	System Analyst	Kimley-Horn and Associates	14750 NW 77 CT, Suite 100	Miami Lakes	FI	33016
Brain	Kanely*	Chief	City of Gainesville Fire Rescue - Transportation S	913 SE 5st	Gainesville	FI	32601-
David	Kaufman*	Director	Jacksonville Port Authority	2831 Tally Ave	Jacksonville	FI	32206-
Robert	Kosoy	Director	City of Atlantic Beach Public Works	1200Sandpiper	Atlantic Beach	FI	32233-
Fred	Kyle	Traffic Engineer	City of Jacksonville	1007 Superior St	Jacksonville	FI	32254-
Scott	Lancaster	Sheriff	Clay County Sheriff Office	901 N.Orange A	Green Cove Sp	FI	32043-
Eric	Lindstrom	Senior Pro Man	Jacksonville Development Authority	128 E Forthyth	Jacksonville	FI	32202-
Alexander	Lorenzo		Florida Dept. of Transportation	2250 Irene Street	Jacksonville	FI	32204-
Mock	Lorin	Lieutenant	Jacksonville Fire and Rescue	2700 Fire.Mem	Jacksonville	FI	32246-
David	Lynch		Florida Dept. of Transportation	2250 Irene St	Jacksonville	FI	32236-
Jim	MacLaughlin		Florida Dept. of Transportation	1901 S.Marion	Lake City	FI	32055-
Dan	Maxey		Parsons Transportation	4417 Beach Blvd	Jacksonville	FI	32207-
Robert	Merton	Director	Putnam County Public Works	223Putman C.Blvd	East Palata	FI	32131-
Joe	Moore	Chief	Jacksonville Fire and Rescue	2700 Mem. Dr.	Jacksonville	FI	32246-
Kamal	Munawar*		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-
Michelle	Neiman*		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-
Robert	Patterson	Chief Emer.	City of Jacksonville Emergency Management	515 Julia St.	Jacksonville	FI	32202-
Neil	Perry	Sheriff	St. Johns County Sheriff Office	4015 Lewis Speed.	St. Augustine	FI	32095-
Harrell	Reid	Sheriff	Hamilton County Sheriff Office	207 1st NE114	Jasper	FI	32052-
Chris	Richter		Federal Highway Administration	227 N.Bronou	Tallahassee	FI	32301-
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Aage	Schroder		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-
James	Scott Jr.		Florida Dept. of Transportation	2250 Irene St	Jacksonville	FI	32236-
	Seiebler	Chief	Jacksonville Sheriff Office	501 East Bay	Jacksonville	FI	32202-
Donna	Shannaham*		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-
Roger	Sharp	Director of Eng.	Jacksonville Transportation Authority	100 North Myrtle Ave	Jacksonville	FI	32204-
Andy	Sikes		Jacksonville Fire Rescue	515 Julia St	Jacksonville	FI	32202-
Joe	Stephenson	Director	St. Johns County	P.O.Drawer 349	St Augustine	FI	32085-
Douglas	Taylor	Sheriff	Putnam County Sheriff Office	1800 Hwy 19	Palatka	FI	32177-
Ernie	Taylor	Asst. Director	Alachua County Public Works	P.O. Box 1188	Gainesville	FI	32602-
Bill	Taylor*		Nassau County			Florida	
William	Tredik	Director	St. Johns County	P.O. Drawer 349	St. Augustine	FI	32085-
Randy	Warden*		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-
Phil	Worth		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-
Walter	Zebrowski*		Florida Dept. of Transportation - Traffic Ops	2250 Irene St	Jacksonville	FI	32204-

### 1.3 District 3

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Mike	Akridge	State ITS Manager	State Highway Engineer Office	MS 57 605 Suwannee St.	Tallahassee	Florida	32399-0450
Mike	Akridge	ITS Manager	State Highway Engineer Office	605 Suwannee St. MS 57	Tallahassee	Florida	32399-0450
Jose	Alvarez		Kimley - Horn				
John	Athony*	Traffic Ops.	FDOT / District 3				
Maxie	Barrow	Chief	Crestview Police Department	203 W. Woodruff Ave.	Crestview	Florida	32536-
Tom	Bedal	City Enigneer	City of Pensacola- Streets and Trafic Division	2757 N. Palafox	Pensacola	Florida	32501-
John	Blackburn	Chief	Shalimar Police Department	2 Cherokee Road	Shalimar	Florida	32579-
Jerry	Brown	Sheriff	Santa Rose County Sheriff	5755 E. Milton Road	Milton	Florida	32583-
Gary	Brown	Sheriff	Jay City Sheriff Office	3695 Highway 4	Jay	Florida	32565-
Ray	Burgess	Chief	DeFuniak Springs Police Department	355 U.S. Highway 90	DeFuniak Springs	Florida	32433-
Bill	Christie	Director	United States Navy - Public Works- Engineering Dept	310 John Tower Road	Pensacola	Florida	32508-
George	Collins	Director	Okaloosa Emergency Management	1250 North Eglin Parkway	Shalimar	Florida	32579-
General	Cox	Director	Crestview Public Works Department	715 N. Ferdon Blvd.	Crestview	Florida	32536-
Byron	Cruttendent	Chief	Niceville Police Department	212 Partin Dr. N.	Niceville	Florida	32578-
Jim	Dixon	Chief	Pensacola Fire Department	239 North Spring Street	Pensacola	Florida	32501-
Lomax	Donaldson	Chief	Valparaiso Police Department	465 Valparaiso Parkway	Valparaiso	Florida	32580-
Craig	Gavin	District Three Traffic Operations	Florida Dept. of Transoprtation	U.S. 90 West	Chipley	Florida	32428-9990
Bob	Halfhill	Director	Escambia County Public Works	601 Highway 297a	Cantonment	Florida	32533-
Steven	Hogue	Chief	Fort Walton Beach Pplice Department	5 Hollywood Blvd.	Fort Walton Beach	Florida	32548-
Ron	Horm*	Office Manager	Motor Carrier Comp. Office	6708 Plantation Rd.	Pensacola	Florida	32504-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Cliff	Johnson*	District Three Traffic Operations	Florida Dept. of Transportation	U.S. 90 West	Chipley	Florida	32428-9990
Janice	Kilgore	Director	Escambia County Adminisator Emergency Management	2920 North L St.	Pensacola	Florida	32501-
Lorin	Kruger*	Systems Planning Office	Florida Dept. of Transportation	MS 19 605 Suwannee St.	Tallahassee	Florida	32399-0450
Dave	Ling	Director	Santa Rosa County Emergency Management	4499 Pine Forest Road	Milton	Florida	32583-
Jim	Lowman	Sheriff	Escambia Countys Sheriff's Office	1700 W. Lenord St.	Pensacola	Florida	32501-
William	Markopoulos	Chief	Milton Police Department	609 Alabama St.	Milton	Florida	32570-
Quinn	McMillian	Sheriff	Walton County Sheriff Department	21527 U.S. Highway 331 N.	Paxton	Florida	32538-
John	Morgan	Chief	Gulf Breeze Police Department	311 Fairpoint Dr.	Gulf Breeze	Florida	32561-
Charlie	Morris	Sheriff	Okaloosa County Sheriff Department	1250 Eglin Parkway	Shalimar	Florida	32579-
Charlie	Morris		Okaloosa County Emergency Management	1250 Eglin Parkway	Shalimar	Florida	32579-
Thomas	Pagels	Director	Walton County Emergency Management	75 South Davis Lance	DeFuniak Springs	Florida	32435-
Joe	Poole*	District Three Traffic Operations Engineer	Florida Dept. of Transportation	U.S. 90 West	Chipley	Florida	32428-9990
Jery	Potts	Chief	Pensacloa City Police Department	711 N. Hayne St.	Pensacola	Florida	32501-
Bruce	Price	Director	Niceville Plant Public Works	208 Partin Dr. North	Niceville	Florida	32578-
Frank	Rowell	Director	Santa Rose County Public Works	6075 Old Bagdad Hwy.	Milton	Florida	32583-
Rick	Sanders	Fire Mashall	Crestview Fire Department	211 Villacrest Dr.	Crestview	Florida	32536-
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Tim	Shockley	Director	Destin Public Works	4200 Two Trees Road	Destin	Florida	32541-
Wanda	Stafford	Director	Holmes County Emergency Management	107 East Virginia Ave.	Bonifay	Florida	32425-
Marvin	Stukey	District Three Traffic Operations	Florida Dept. of Transportation	U.S. 90 West	Chipley	Florida	32428-9990
John	Thompson*	Traffic Dept.	City of Penasacola				
Noel	Tiller*	District Three Traffic Operations Office	Florida Dept. of Transportation	U.S. 90 West	Chipley	Florida	32428-9990
Joseph	Traylor	Chief	Crestview Fire Dept.	221 Villacrest Dr.	Crestview	Florida	32536-
Guy	Tunnell	Sheriff	Bay County Sheriff's Office	3421 N. Highway 77	Panama	Florida	32405-
Mark	Van Hala	Director	Fort Walton Beach Public Works	107 Miracle Strip Parkway SW	Fort Walton Beach	Florida	32548-
Kacey	Wagg*	Transportation Planner	WFRPC / Pensacola Mpo				
Ken	Westbrook		Escambia County Area Transit	1515 West Fairfield Drive	Pensacola	Florida	32501-
Keith	Westphal*	Captain	Motor Carrier Comp. Office	6708 Plantation Rd.	Pensacola	Florida	32504-
Denny	Wood	District Three Traffic Operations	Florida Dept. of Transportation	U.S. 90 West	Chipley	Florida	32428-9990
Nedra	Woodyan*	Manager	ECAT				
Peter J.	Yauch*	Dir. Of Traffic Eng.	TEL Engineers&Planners				

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Mike	Ziegler*	Director	Fort Walton Beach	P.O.box 486	Pensacola	Florida	32593-

## 1.4 Districts 4

First name	Last Name	Title	Company	Address	City	State	Zip
Stephen J.	Allison	Chief	Tequesta Police Dept	357 Tequesta Drive	Tequesta	FL	33469
Samuel	Amerson	Director	Public Works/Engineering	2401 SE Monterey Road	Stuart	FL	34996
Robert	Anton	Lieutenant	Port Everglades Public Safety (BSO)	1901 Eller Drive	Fort Lauderdale	FL	33316
J.D.	Armstrong	Chief	North Palm Beach Fire Dept	501 U.S. Highway 1	North Palm Beach	FL	33408
George	Atkinson	Chief	Miramar Police Dept	8915 Miramar Parkway	Miramar	FL	33025
Pete	Bergal	Chief	Palm Beach Gardens Fire Dept	10500 N.Military Trail	Palm Beach Gardens	FL	33410
William	Bingham	Chief	Boynton Beach Fire Dept	100 E. Boynton Beach Boulevard	Boynton Beach	FL	33425
Tery	Blackman	Captain	Florida Highway Patrol	P.O. Box 16007	West Palm	FL	33416
Paul	Blockson	Chief	LakeWorth Fire Dept	1020 Lucerne Avenue	Lake Worth	FL	33460
Jerry	Blough	Chief	Margate Police Dept	5790 Margate Boulevard	Margate	FL	33063
David	Boyett	Chief	Sunrise Police Dept	10440 W. Oakland Park Blvd	Sunrise	FL	33351
Ric L.	Bradshaw	Chief	West Palm Beach Police Dept	600 Banyan Blvd	West Palm Beach	FL	33401
Mike	Braswell	Chief	Fort Lauderdale Police Dept	1300 West Broward Blvd	Fort Lauderdale	FL	33312
Herman W.	Brice	Chief	Palm Beach County Fire - Rescue	50 S. Military Trail Suite 101	West Palm Beach	FL	33415
Jeff	Brown	Chief	Port Everglades Auth. Fire Res.	1850 Eller Drive	Fort Lauderdale	FL	33316
Mike	Bruscell	Chief	Royal Palm Bch. Police Dept	11498 Okeechobee Blvd	Royal Palm Beach	FL	33411
Ken	Buckner*		Greenacres Public Safety	2995 Jog Road	Greenacres	FL	33467
Jim	Budzinski	Chief	Tamarac Fire Department	7501 N.W. 88 Avenue	Tamarac	FL	33321
Randall C.	Burrough	Chief	Hollywood Fire Rescue	3401 Hollywood Boulevard	Hollywood	FL	33021
Gary	Burroughs	Chief	Pahokee Fire Dept	171 North Lake Avenue	Pahokee	FL	33476
Robert	Bushman*	Chief	Martin County Fire Dept	6000 SW Tower Drive	Stuart	FL	34997
Martha	Campbell	Director	Sebastian Public Works/Engineering	1225 Main Street	Sebastian	FL	32958
Ron	Capobianco*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud.	FL	33309
James	Carman	Chief	West Palm Beach Fire Dept	600 N. Dixie Highway	West Palm Beach	FL	33401
Jon	Case	Chief	Lauderdale Volunteer Fire Dept	4501 Ocean Drive	Lauderdale-By-The-Sea	FL	33308
Carl	Castillo	Director	Stuart County Public School	2845 SE Dixie Hwy	Stuart	FL	34997
Robert	Chalman	Chief	Lantana Police Dept	500 Greynolds Circle	Lantana	FL	33462
Red	Childs*	Traffic Ops. Eng.	Broward County Traffic Center	2300 W. Commercial Blvd.	Fort Lauderdale	FL	33309

First name	Last Name	Title	Company	Address	City	State	Zip
Roger M.	Crane	Chief	South Palm Beach Public Safety	3577 S. Ocean Boulevard	South Palm Beach	FI	33462
Roger	Crane	Chief	South Palm Bch Police Dept	3577 South Ocean Blvd	South Palm Beach	FI	33480
Dennis	Creamer	Chief	Lauderdale Lakes Police Dept	4300 N.W. 36 Street	Lauderdale Lakes	FI	33319
Warren	Crittenden*		LBFH, Inc.	2222 Colonial Road, #201	Fort Pierce	Florida	34950
Frank	Croft	Chief	Palm Beach Police Dept	345 South County Road	Palm Beach	FI	33480
Robert	Crowder	Sheiff	Martin County Sheiff Dept	800 SE Monterey Road	Stuart	FI	34994
Jim	Davis	Director	Public Works Engineering	1840 25th Street	Indian River	FI	32960
Donald	DiPetrillo*		Fort Lauderdale Fire Rescue	101 NE 3 Avenue	Fort Lauderdale	FI	33301
Don	Donaldson	Director	Public Works/Engineering	2401 SE Monterey Road	Stuart	FI	34996
Michael	Donati	Chief	Davie Fire Rescue	6901 Orange Drive	Davie	FI	33314
Ralph	Dunn	Chief	Hillsborough Beach Police Dept	1210 SR A1A	Hillsborough Beach	FI	33062
John	Eddinger*		Boca Raton Fire Rescue	2333 West Glades Road	Boca Raton	Florida	33431
Ken	Elmore	Chief	Palm Beach Fire Dept.	300 N. County Road	Palm Beach	FI.	33480
Lawrence	Faragher	Chief	Hallandale Police Dept	100 S.W. 4 Street	Hallandale	FI	33009
Charles	Faranda	Chief	Lauderhill Fire Rescue	1900 N.W. 56 Avenue	Lauderhill	FI	33313
Larry	Fauci	Chief	Palm Beach Shores Fire Dept	247 Edwards Lane	Palm Beach Shores	FI	33404
Bruce	Filk	Chief	Boca Raton Fire Rescue	2333 West Glades Road	Boca Raton	FI	33431
Gary	Firch	Director	Fort Pierce Public Work/Engineering		Fort Pierce	FI	
James	Fitzgerald	Chief	Palm Beach Gardens Police Dept	10500 N. Military Trail	PB Gardens	FI	33410
William	Flaherty	Director	Palm Beach County Public Work/Eng.	1201 NE 5th Ave	Pompano Beach	FI	33060
Geatano	Francese*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud	FI	33309
Donald	Freedland	Director	Deerfield Beach Public Work/Eng	210 Goolsby Blvd	Deerfield Beach	FI	33442
Rick	Frey	Chief	Dania Police Dept	100 West Dania Beach Blvd	Dania	FI	33304
William	Fyfe, Jr.	Chief	Coral Springs Fire Dept.	2801 Coral Spring Drive	Coral Springs	FI	33065
James	Gabbard	Chief	Vero Beach Police Dept	1055 20th Street	Vero Beach	FI	32960
Marshall	Gaga	Chief	Boynton Beach Police Dept	100 E. Boynton Beach Blvd	Boynton Beach	FI	33435
Kathleen	Geyer	Dir. Of Transportion	Indian River County	1425 18th Street	Indian River	FI	32960
Timothy	Gillette	Chief	Pembroke Park Police Dept	4900 W. Hallandale Beach Blvd	Pembroke Park	FI	33023
Michael	Goldstein	Captain	Tamarac Police Dept	7515 N.W. 88 Avenue	Tamarac	FI	33321
Peter	Gregory	Chief	Sea Ranch Lakes Police Dept	#1 Gate House Road	Fort Lauderdale	FI	33308
Paul	Hailey Jr.	Chief	St. Lucie Fire Dept.	2400 Rhode Island	Fort Piece	FI	34950
Jim	Henson	Chief	Oakland Park Fire Rescue	301 N.E. 38 Street	Oakland Park	FI	33334
Edward	Hillery	Director	Ocean Ridge/Public Safety	6450 N. Ocean Boulevard	Ocean Ridge	FI	33435
Edward	Hillery	Chief	Ocean Ridge Police Dept	6450 N. Ocean Blvd	Ocean Ridge	FI	33435
Keith	Holman	Director	Martin County Emergency Management		Martin County	FI	
Marilda	Hoover	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud.	FI	33309
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517

First name	Last Name	Title	Company	Address	City	State	Zip
Ken	Jenne	Sheiff	Broward County Public Safety	2601 W. Broward	Fort Lauderdale	FI	33312
Tom	John*	System Analyst	Kimley-Horn and Associates	14750 NW 77 CT, Suite 100	Miami Lakes	FI	33016
Earl	Johnson	Chief	N. Palm Beach Police Dept	560 U.S. 1	North Palm Beach	FI	33408
Danny	Jones	Director	South Bay Public Safety	335 S.W. 2nd Avenue	South Bay	FI	33493
Bob	Keating	Director	Indian River County MPO	1840 25 Street	Vero Beach	FI	32960
Tim	Keefe	Chief	Pembroke Park Fire Dept	3150 S.W. 52 Avenue	Pembroke Park	FI	33023
Jim	Kelly	Chief	Palm Beach Cnty School Board	3330 Forest Hill Blvd	West Palm Beach	FI	33406
Stephen	Kenneth	Chief	Wilton Manors Police Dept	524 N.E. 21 Court	Wilton Manors	FI	33305
John	King	Chief	Indian Rivera Fire Dept	1500 Old Dixie Hwy	Vero Beach	FI	32960
Greg	Kisela	Director	Fort Lauderdale Public Work/Eng.	100 N. Andrews Ave.	Fort Lauderdale	FI	33301
Robert	Knowles	Sheiff	St. Lucie County Sheiff Dept	4700 W. Midway Rd.	St. Lucie	FI	34981
William	Kohnke	Chief	Pompano Beach Police Dept	100 S.W. 3 Street	Pompano Beach	FI	33060
Al	Lamberti	Captain	Deerfield Beach Police Dept	300 N.E. 2 Street	Deerfield Beach	FI	33441
Ken	Land	Chief	Dania Beach Fire Rescue	116 West Dania Beach Boulevard	Dania	FI	33004
Mel	Lange*	Sheiff	Broward County Sheiff Dept	2601 W.Broward Blvd	Fort Lauderdale	FI	33312
John	Lavisky	Chief	Lighthouse Point Fire Dept	3740 N.E. 22 Avenue	Lighthouse Point	FI	33064
Joseph	Lello	Chief	Cooper City Fire Rescue	10550 Stirling Road	Cooper City	FI	33026
Jeffrey	Lindskoog	Chief	Lake Park Police Dept	700 Sixth Street	Lake Park	FI	33403
Steven W.	List	Pub. Safe Dir.	Parkland Public Safety Dept	6500 Parkside Drive	Parkland	FI	33067
Michael	Loffredo	Chief	Jupiter Island Police Dept	P.O. Box 7 Hobe South	Jupiter	FI	33475
Herminio	Lorenzo	Chief	Broward County Fire Dept	2601 W. Broward Boulevard	Fort Lauderdale	FI	33312
Gary	Lother	Chief	Deerfield Beach Fire Rescue	928 E. Hillsboro Boulevard	Deerfield Beach	FI	33441
Jack	Mackie	Chief	Davie Police Dept	1230 Nabhill Road	Davie	FI	33324
Robert	Mangold	Chief	Atlantis Police Dept	260 Orange Tree Drive	Atlantis	FI	33462
Paul	Mannino	Chief	Lighthouse Point Police Dept	3760 N.E. 22 Avenue	Lighthouse Point	FI	33064
Glenn	Margoles*		Broward County Emergency Management	201 NW 84th Ave.	Plantation	FI	33324
Jose	Mashan*		Coral Springs Police Dept	2801 Coral Springs Drive	Coral Springs	FI	33065
Mark	Mathes	Coordinator	Martin County MPO	2401 SE Monterey Road	Stuart	FI	34996
Perry	Maull	Director	Palm Beach County Transit	3201 Electronics Way	West Palm Beach	FI	33407
Larry	Mccarty	Chief	Sewalls Police Dept	1 Sewell Point	Sewalls	FI	34996
Alberto	Melis	Chief	Lauderhill Police Dept	1980 N.W. 56 Avenue	Lauderhill	FI	33313
Mike	Miller	Chief	Belle Glade Police Dept	40 W. Canal Street South	Belle Glade	FI	33430
Richard	Mitinger*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud	FI	33309
Bruce J.	Moeller	Chief	Sunrise Fire Rescue	10440 West Oakland Park Boulevard	Sunrise	FI	33351
Chris	Mora*		Indian River County MPO	1840 25 Street	Vero Beach	Florida	32960
Edward	Morley	Chief	Stuart Police Dept		Stuart	FI	
Mike	Morrow*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud	FI	33309
Michael	Murphy	Chief	Miramar Fire Rescue	14801 S.W. 27 Street	Miramar	FI	33027
Robert	Neumann	Chief	West Palm Beach Police Dept	3228 Gun Club Road	West Palm Beach	FI	33406
Rudy	Neumann	Chief	North Lauderdale Fire Dept	7700 Hamptons Boulevard	North Lauderdale	FI	33068
Carlos	Nunez*		Boca Raton Police Dept	100 N.W. Boca Raton Blvd	Boca Raton	Florida	33432

First name	Last Name	Title	Company	Address	City	State	Zip
William	O'Brien III	Director	Palm Beach Emer. Management	20 S Millary Trail	WPB	FI	33415
Richard	Overman	Chief	Delray Beach Police Dept	300 W. Atlantic Ave.	Delray Beach	FI	33444
Edward	Overman	Chief	Oakland Park Police Dept	301 NE 38 Street	Oakland Park	FI	33334
Jonathan	Overton*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Lauderdale	FI	33309
Randall	Parker	Chief	Jupiter Inlet colony Police Dept	1 Colony Road	Jupiter	FI	33469
Murali	Pasumarthi*	Traffic Ops. Eng.	Broward County Traffic Center	2300 W. Commercial Blvd.	Fort Lauderdale	FI	33309
Edward	Patten	Chief	Lauderdale-By-The-Sea Police Dept	4501 Ocean Drive	Lauderdale-by-the-Sea	FI	33308
Troy	Perry	Chief	Rivera Beach Fire Dept	600 W. Blue Heron Blvd	Rivera Beach	FI	33404
Jay	Pickens	Chief	Palm Springs Police Dept	400 Davis Road	Palm Springs	FI	33461
Louis	Piper	Director	St. Lucie County Public School		St Lucie County	FI	
Mark	Plass	Traffic Ops. Eng.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd.	Fort Lauderdale	FI	33309
Frank	Porclla	Chief	Margate Fire Rescue	600 Rock Island Road	Margate	FI	33063
Jerry	Poreba	Chief	Rivera Bch Police Dept	600 West Blue Heron Blvd	Rivera Beach	FI	33404
Pierre	Pretorius*	Engineer	Kimley-Horn and Associates, Inc.	7600 N. 15th Street	Phoenix	Arizona	85020
Robert	Pudney	Chief	Plantation Volunteer Fire Dept	550 N.W. 65 Avenue	Plantation	FI	33317
George	Raggio	Director	Coconut Creek Public Safety.	4800 West Copans Road	Coconut Creek	FI	33063
Martin	Rahansky	Chief	Pembroke Pines Police Dept	9500 Pines Boulevard	Pembroke Pines	FI	33025
Ken	Reardon	Director	Palm Beach Public Work/Eng.	1000 45 Street	West Palm Beach	FI	33407
Ron	Reffett*		Oakland Park Police Dept	301 NE 38 Street	Oakland Park	Florida	33334
Robert	Rehr	Chief	Delray Beach Fire Dept	501 W. Atlantic Avenue	Delray Beach	FI	33444
Bob	Riley	Dir of Trans.	Palm Beach County Public Schools	3376 Summit Blvd	WPB	FI	33406
Felix	Rodriquez*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud.	FI	33309
W.R.	Rossmann	Captain	Florida Highway Patrol	14190 West SR 84	Davie	FI	33325
Bob	Roth	Director	Broward County Transit	3201 W Copans Road	Pompano Beach	FI	33069
Richard	Rothe	Chief	Wilton Manors Vol. Fire Dept	524 N.E. 21 Court	Wilton Manors	FI	33305
Al	Sadowski	Chief	West Palm Beach Police Dept	505 S. Flagler Dr./ #500	West Palm Beach	FI	33401
Carmen	Salvatore III	Chief	Pahokee Police Dept	171 1/2 North Lake Avenue	Pahokee	FI	33476
Gene	Savage	Chief	Fort Pierce Police Dept	920 S. US1	Ft. Piece	FI	34954
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Archie	Sayas*	Traffic Ops. Eng.	Broward County Traffic Center	2300 W. Commercial Blvd.	Fort Lauderdale	FI	33309
Bernard	Schatner	Director	Jupiter County Public Works/Engineering		Jupiter	FI	
Robert	Schultz	Chief	Gulfstream Police Dept	246 Sea Road	Gulfsteam	FI	33444
Andrew J.	Scott	Chief	Boca Raton Police Dept	100 N.W. Boca Raton Blvd	Boca Raton	FI	33432
C.E.	Sharrett	Chief	Plantation Police Dept	451 N>W> 70 Terrace	Plantation	FI	33317
Richard	Sievers	Chief	Lauderale Lakes Fire Rescue	3461 N.W. 43 Avenue	Lauderdale Lakes	FI	33319
John	Skinner	Chief	Port St. Lucie Police Dept	121 SW Stein Blvd	Port St Lucie	FI	34954
Wes	Smith	Chief	Lake Clarke Shores Police Dept	1701 Barbados Road	Lake Clarke Shores	FI	33406
William M.	Smith	Chief	Manalapan / Public Safety	600 S. Ocean Boulevard	Manalapan	FI	33462
William	Smith	Chief	Lake Worth Police Dept	120 North G Street	Lake Worth	FI	33460

First name	Last Name	Title	Company	Address	City	State	Zip
Jack	Southard	Director	St. Lucie Emer. Management	101 N. Rock Rd	Ft. Pierce	FL	34945
Vito	Splendorio	Chief	Pembroke Pines Fire Rescue	9500 Pines Boulevard	Pembroke	FL	33025
Rice	Stephen	Chief	Belle Glades Fire Dept.	525 S.W.2nd street,	Belle Glades	FL	33430
Dan	Sullivan	Chief	Hallandale Fire Rescue	121 S.W. 3 Street	Hallandale	FL	33009
Clifford	Suthard	Director	Vero Beach County Public Works/Engineering	P.O. box 1389	Vero Beach	FL	32961
Larry	Thacker	Director	Port St. Lucie Public Work/Engineering		Port St. Lucie	FL	
Delphine	Thorton*	Traffic Ops. Eng.	Broward County Traffic Center	2300 W. Commercial Blvd.	Fort Lauderdale	FL	33309
Valerie	Tofexis*	ITS Pers.	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd	Ft. Laud	FL	33309
John	Treanor	Chief	Greenacres Police Dept	2995 Jog Road	Greenacres	FL	33467
John	Treanor	Director & Chief	Greenacres Public Safety	2995 Jog Road	Greenacres	FL	33467
Gregory	Turek	Director	Hollywood Public Work/Eng.	P.O. Box 229045	Hollywood	FL	33022
Mitch	Tyre	Chief	Juno Beach Police Dept	340 Ocean Drive	Juno Beach	FL	33408
James	Uhde	Chief	North Lauderdale Police Dept	701 S.W. 71 Avenue	North Lauderdale	FL	33068
Karl	Umberger	Director	Palm Springs Fire Dept	400 Davis Road	Palm Springs	FL	33461
David	Utlej	Dist. Manager	Broward County Division Of Forestry	3315 S.W. College Avenue	Davie	FL	33314
Carlos	Valle	Captain	Pratt/Whitney Aircraft Fire Dept	P.O. Box 109600	West Palm Beach	FL	33410
Arlin	Vance*	Director	Broward County Public Schools - Transportation	3895 NW 10th Ave.	Fort Lauderdale	FL	33309
Joseph	Vondembowski	Chief	Mangonia Police Dept	1755 East Tiffany Drive S.	Mangonia Park	FL	33407
Kenneth	Vorce	Engineer	Kimley-Horn and Associates	14750 NW 77th Court, Suite 100	Miami Lakes	Florida	33016
Clay	Walker	Chief	Manalapan Police Dept	600 South Ocean Blvd	Manalapan	FL	33462
Charles	Walker	Director	Palm Beach County Public Work/Eng.		Palm Beach County	FL	
Michael	Washam	Director	FDLE	1400 Centre Park Blvd Suite 800	West Palm Beach	FL	33401
Don	Washington*		Pompano Beach Fire Dept	120 S.W. 3 Street	Pompano Beach	FL	33060
James	Weinand	Chief	Tequesta Fire Dept	357 Tequesta Drive	Tequesta	FL	33469
Michael	Wells	Chief	Lake Park Fire Dept	535 Park Avenue	Lake Park	FL	33403
Edward	Werder	Chief	Cooper City Police Dept	11610 Stonebridge Parkway	Cooper City	FL	33026
Richard	Westgate	Chief	Jupiter Police Dept	210 Military Trail	Jupiter	FL	33458
Gary C.	Wheeler	Sheriff	Vero Beach Sheriff Dept	4055 41 Ave.	Vero Beach	FL	32960
Pete	White	Chief of Police	Sebastian Police Dept		Sebastian	FL	
Randy	Whitfield	Director	Palm Beach County MPO	160 Australian, Suite 201	West Palm Beach	FL	33406
Roger	Wille	Chief	Palm Beach Shores Police Dept	247 Edwards Lane	PB Shores	FL	33404
Bruce	Wilson	Director	Broward County MPO	115 S. Andrews Ave.	Fort Lauderdale	FL	33301
Richard	Witt	Chief	Hollywood Police Dept	3250 Hollywood Boulevard	Hollywood	FL	33021
Douglas	Wright	Director	Indian River County	1840 25th Street	Vero Beach	FL	32960
Ayub	Zaid*		Broward County MPO	115 S. Andrews Ave.	Fort Lauderdale	Florida	33301

## 1.5 District 5

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Don	Adams	Fire Chief	Osceola County Fire Department	320 N. Beaumont Ave.	Kissimmee	Florida	34741-
Osman	Aloyo	CEM, Director	Orange County Emergency Management	6590 Amory Court	Winter Park	Florida	32792-
William	Anderson	Police Chief	Deland Police Department	219 W. Howry Ave.	Deland	Florida	32720-
Mario	Baldoni	Director	Brevard County Emergency Management	1040 Florida Ave.	Rockledge	Florida	32955-
Kevin	Beary	Sheriff	Orange County Sheriff Department	2400 W. 33rd Street	Orlando	Florida	32801-
James	Beekman	Director	Osceola County Public Schools	2540 Old Dixie Highway	Kissimmee	Florida	34744-
John	Blackwood	Director	Seminole County Emergency Management	150 Bush Blvd.	Sanford	Florida	32773-
Robert	Boggs	Traffic Engineer	Daytona Beach Public Works - Engineering	P.O. Box 2451	Daytona Beach	Florida	32115-
Mounir	Bouyounes	Traffic Engineer	Marion County Public Works-Transportation Engineer	412 SE 25th Ave.	Ocala	Florida	34471-2687
Luann	Brooks	Executive Director	I-Ride Trolley	7081 Grand National Dr. Suite 103	Orlando	Florida	32819-
Harry	Campbell	Traffic Engineer	Orlando Public Works - Engineering	400 S. Orange Ave., 8th Floor	Orlando	Florida	32801-
Ben	Carroll	Police Chief	Tavares Police Department	201 E. Main St.	Tavares	Florida	32778-
Walt	Chamberlain	Fire Chief	Melbourne Fire Department	865 Eaugallie Blvd.	Melbourne	Florida	32935-
Keith	Chandler	Police Chief	Melbourne Police Department	650 N. Apollo Blvd.	Melbourne	Florida	32935-
John	Chapman	Fire Chief	Kissimmee Fire Department	200 W. Dakin Ave.	Kissimmee	Florida	34741-
Charles	Chapman	Fire Chief	Longwood Fire Department	235 W. Church Ave.	Longwood	Florida	32750-
John	Cheney	Traffic Engineer	Volusia County/Deland Public Works - Engineering	123 W. Indiana Ave.	Deland	Florida	32720-
Dave	Chesbro	Director	Daytona/Orlando Transportation Shuttle	1034 N. Nova Road	Daytona Beach	Florida	32117-
Don	Clark	Police Chief	Wildwood Police Department	100 E. Huey Street	Wildwood	Florida	34785-
Jim	Cooper	Fire Chief	Flagler County Fire Department	1200 E. Moody Blvd. #8	Bunnell	Florida	32110-
Don	Crawford	Director	Volusia County Public Schools	P.O. Box 2118	Deland	Florida	32721-
C.W. "Charlie"	Croft	Sheriff	Osceola County Sheriff Department	400 Simpson Road	Kissimmee	Florida	34744-
Morrey	Dean	Police Chief	Ocala Police Department	214 SE Ft. King Street	Ocala	Florida	34470-
Ed	Dean	Sheriff	Marion County Sheriff Department	P.O. Box 1987	Ocala	Florida	34478-
Jerry	Demings	Police Chief	Orlando Police Department	100 S. Hughey Ave.	Orlando	Florida	32801-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Denis	Dietz*	Director	Lake County Public Works - Engineering	28127 County Rd., #561	Tavares	Florida	32788-
Randy	Dollar	Fire Chief	Winter Garden Fire Department	131 E. Palmetto Street	Winter Garden	Florida	34787-
Ed	Dougherty	Traffic Engineer	Flagler County Public Works-Engineering	1200 E. Moody Blvd., #7	Bunnell	Florida	32110-
Anganie	Durbal*	Transit Analyst				Florida	
Bobbie	Englehardt	Director	Marion County Public Schools	P.O. Box 670	Ocala	Florida	34478-
Donald	Eslinger	Sheriff	Seminole County Sheriff Department	100 Bush Blvd.	Sanford	Florida	32773-
William	Farmer	Fire Chief	Brevard County Fire Department	1040 Florida Ave.	Rockledge	Florida	32955-
William	Farmer, Jr.	Sheriff	Sumter County Sheriff Department	P.O.Box 188	Bushnell	Florida	33513-
Greg	Floyd		Department of Transportation	133 S. Semoran Blvd.	Orlando	Florida	32807-
Hannah	Foster	Director	Sumter County Public Schools	2680 W. County Road 476	Bushnell	Florida	33513-
George	Gaston	Fire Chief	Altamonte Springs Fire Department	225 Newburyport Ave.	Altamonte Springs	Florida	32701-
Eric	Gentry	Director	Flagler County Emergency Management	1200 E. Moody Blvd., #8	Bunnell	Florida	32110-
Richard	Gordon*	Asst. County Engineer	Flagler County			Florida	
George	Graves	Fire Chief	Deland Fire Department	201 W. Howry Ave.	Deland	Florida	32720-
Eddie	Guida	Director	Flagler County Public Schools	P.O. Box 755	Bunnell	Florida	32110-
David	Hegel*	Traffic Systems Analyst	City of Sarasota		sarasota	Florida	
Tom	Hickson	Fire Chief	Sanford Fire Department	1303 S. French Ave.	Sanford	Florida	32771-
Milton	Hill	Director	Sumter County Emergency Management	362 Shopping Center Dr.	Wildwood	Florida	34785-
Val	Hubbard	AICP, Director	Orlando Metropolitan Planning	City Hall, 400 South Orange Ave.	Orlando	Florida	32801-
Mike	Iacona	Fire Chief	Orange County Fire Department	5690 Amory Court	Winter Park	Florida	32792-
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
H. Charles	Idell, Jr.	Police Chief	Leesburg Police Department	115 E. Magnolia St.	Leesburg	Florida	34748-
Tommy	Jackson	Police Chief	Longwood Police Department	235 W. Church Ave.	Longwood	Florida	32750-
Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Doug	Jamison*	Project Manager	Lynx			Florida	
Jean	Johnson	Director	Seminole County Public Schools	820 E 434	Winter Springs	Florida	32708-
Charles	Jones	Director	Brevard County Public Schools	2091 W. King St.	Cocoa	Florida	32926-
George	Knupp, Jr.	Sheriff	Lake County Sheriff Department	360 W. Ruby St.	Tavares	Florida	32778-
Lorin	Krueger*		Florida Dept. of Transportation-System Planning			Florida	
Don	Lepic	Traffic Engineer	Osceola County Public Works - Engineering	17 S. Vernon Ave.	Kissimmee	Florida	34741-
Jim	Liesenfelt	Director	Brevard County Transit Department	401 S. Barr Ave	Cocoa	Florida	32922-
William	Liquori	Police Chief	Altamonte Springs Police Department	225 Newburyport Ave.	Altamonte Springs	Florida	32701-
Wayne	Little	Traffic Engineer	Ocala Public Works - Transportation Engineering	1307 NW 4th Ave.	Ocala	Florida	34475-
Eddie	Lovett	Public Safety Manager	Bushnell Public Safety Department	201 N. Beville Street	Bushnell	Florida	33513-
Phil	Lucas	Director	Lake County Public Schools	529 W. Lanthe St.	Tavares	Florida	32778-
Mike	Mannix	Director	Greater Orlando Aviation Authority	1 Airport Blvd.	Orlando	Florida	32827-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Jim	Maoney	Fire Chief	Lake County/Tavares Fire Department	P.O. Box 7800	Tavares	Florida	32778-
Robert	McCarthy	Sheriff	Flagler County Sheriff Department	P.O. Drawer 1880	Bunnell	Florida	32110-
Stuart	McElhane	Fire Chief	Marion County Fire Department	3230 SE Maricamp Road	Ocala	Florida	34471-
Rye	Merriam	Director	Orange County Public Schools	6721 Hanging Moss Road	Orlando	Florida	32807-
Matt	Meyers	Director	Osceola County Emergency Management	320 N. Beaumont Ave.	Kissimmee	Florida	34741-
Keith	Mobley*	Traffic Officer	Kissimmee Police Department		Kissimmee	Florida	
David	Muniz*	Sr. Coordinator	Seminole County			Florida	
Dale	Parrett	Engineer	Sumter County Public Works - Engineering	319 E. Anderson Ave.	Bushnell	Florida	33513-
Michael	Plummer	Police Chief	Flagler Beach Police Department	P.O. Box 36	Flagler Beach	Florida	32136-
John	Porter	Traffic Engineer	Melbourne Public Works - Engineering	650 N. Apollo Blvd.	Melbourne	Florida	32935-
John	Porter*	Director, Traffic Opers.	City of Melbourne		Melbourne	Florida	
Jim	Poston	Fire Chief	Ocala Fire Department	410 NE 3rd St.	Ocala	Florida	34470-
Gary	Quill	Director	Ocala Regional Airport	P.O. Box 1270	Ocala	Florida	34478-
Marshall	Robertson	Engineer	Winter Garden Public Works - Engineering	265 Lakeview Road	Winter Garden	Florida	34787-
H.B.	Robinson	Police Chief	Bunnell Police Department	P.O. Box 756	Bunnell	Florida	32110-
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Terry	Schenk	Fire Chief	Seminole County Fire Department	200 W. County Home Road	Sanford	Florida	32773-
Bill	Schneeman	Director	Lynx Transit	445 W. Amelia Street, Suite 800	Orlando	Florida	32801-
Brian	Scoggins	Director	Orlando Public Works - Parking	53 West Central Ave.	Orlando	Florida	32801-
John	Shamblin*	Sr. Manager, Tech. Svc.	Orange County District Schools - Transp. Services			Florida	
Tim	Shea	Director	Kissimmee Airport	301 N. Dyer Blvd.	Kissimmee	Florida	34741-
Paul	Skinner	Fire Chief	Daytona Beach Fire Department	301 S. Beach St.	Daytona Beach	Florida	32114-
Ken	Small	Police Chief	Daytona Beach Police Department	990 Orange Ave.	Daytona Beach	Florida	32114-
Tad	Stome	Director	Lake County Emergency Management	P.O. Box 7800	Tavares	Florida	32778-
Marcel	Tart*	Captain	FDOT - MCCO			Florida	
Jim	Tauber	Fire Chief	Volusia County Fire Department	123 W. Indiana Ave. 4th Floor	Deland	Florida	32720-4619
Dick	Thompson	Traffic Engineer	Brevard County Public Works - Engineering	2725 Judge Fran Jamieson Way, Buidling A	Viera	Florida	32940-
Trey	Tillander*	ITS Prog. Manager	Florida Dept. of Transportation - System Planning			Florida	
Brian	Tooley	Police Chief	Sanford Police Department	815 S. French Ave.	Sanford	Florida	32771-
Robert	Vogel	Sheriff	Volusia County Sheriff Department	123 W. Indiana Ave.	Deland	Florida	32720-
Mark	Weimer	Police Chief	Kissimmee Police Department	8 N. Stewart Ave.	Kissimmee	Florida	34741-
Philip	Williams	Sheriff	Brevard County Sheriff Department	700 Park Ave.	Titusville	Florida	32780-
Steve	Wilmarth	Traffic Engineer	Orange County Public Works - Engineering	4200 S. John Young Parkway, Building 1	Orlando	Florida	32839-
Frank	Worley	Director	Marion County Emergency Management	P.O. Box 1987	Ocala	Florida	34478-
Jimkie	Yawn	Police Chief	Winter Garden Police Department	251 W. Plant Street	Winter Garden	Florida	34787-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Bob	Zaitooni	Traffic Engineer	Seminole County/Sanford Public Works - Engineering	140 Bush Loop	Sanford	Florida	32773-

## 1.6 Districts 6

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Ruby	Adams*		Miami-Dade Expressway Authority	3790 NW 21st Street	Miami	Florida	33142
Alex	Alamo*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Michael	Alvarez	Asst. Director	Miami Beach Public Works Department	1700 Convention Center Dr.	Miami Beach	Florida	33139
Danny	Alvarez	Director	Miami-Dade Transit Authority	111 NW 1st Street	Miami	Florida	33128
Carlos	Alvarez	Chief	Miami -Dade Police Department	9105 Northwest 25th Street	Miami Miami	Florida	33172
Paul	Barcinas	Fire Chief	Ocean Reef Fire Department	110 Anchor Drive	Key Largo	Florida	33037
Richard	Barreto	Chief	Miami Beach Police Department	1100 Washington Avenue	Miami Beach	Florida	33139
William	Berger	Chief	North Miami Beach Police Department	16901 Northeast 19 Avenue	North Miami Beach	Florida	33162
Larry	Boemler	Chief	Surfside Police Department	9293 Harding Avenue	Surfside	Florida	33154
Rolando	Bolanos	Chief	Hialeah Police Department	5555 E. 8th Avenue	Hialeah	Florida	33013
Jim	Brierton*	Chief	Florida Highway Patrol - Troop K		Miami	Florida	
Rob	Burley	Fire Chief	Tavernier Fire Department	P.O. Box 301	Tavernier	Florida	33070
Herman	Cardeno	Chief	Golden Beach Police Department	1 Golden Beach Drive	Golden Beach	Florida	33160
Dan	Cassel	Fire Chief	Big Coppitt Fire Department	1427 Boca Chica Road	Key West	Florida	33040
Jason	Chang*	Engineer	Florida Department of Transportation	1000 NW 111th Ave.	Miami	Florida	33172
Alan	Cole	Acting Chief	North Bay Village Police Department	7903 East Drive	North Bay Village	Florida	33141
Mark	Collins	Director	North Miami Public Works Department	776 NE 125th Street	North Miami	Florida	33161
Richard	Cook	Fire Chief	Coral Gables Fire Department	2815 S. Salzedo St.	Miami	Florida	33134
Phil	Dalton	Fire Chief	Big Pine Fire Department	P.O. Box 192	Big Pine Key	Florida	33043
Jacqueline	Del Valle*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Alberto	Delgado	Director	Coral Gables Public Works Department	285 Aragon Avenue	Coral Gables	Florida	33134
Gary	Dellapa	Executive Director	Miami-Dade Aviation Department	P.O. Box 592075	Miami	Florida	33159
Gordon	Dillion	Chief	Key West Police Department	525 Angela St.	Key West	Florida	33040
Eugene	Duffy	Chief	Miami Springs Police Department	201 Westward Drive	Miami Springs	Florida	33166

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Marc	Elias	Chief	Florida City Police Department	404 West Palm Drive	Florida City	Florida	33034
Elio	Espino*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Judy I.	Evans	Executive Director	Miami Beach Transportation Management Association	301 41st Street	Miami Beach	Florida	33140
Michael	Flaherty	Chief	Village of Key Biscayne Police Department	85 West Enid Drive	Key Biscayne	Florida	33149
Wayne	Fletcher	Fire Chief	Layton Fire Department	P.O. Box 624	Layton	Florida	33001
Guy	Francese*	IS Personnel	Florida Dept. of Transportation, Dist. 4	3400 W. Commercial Blvd.	Ft.Lauderdale	Florida	33309
Carlos	Francis*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Roger	Free	Chief	Virginia Gardens Police Department	6498 Northwest 38 Terrace	Virginia Gardens	Florida	33165
Lary	Freeman	Chief	Bal Harbour Police Department	655 96th Street	Bal Harbour	Florida	33154
Sergio	Garcia	Fire Chief	Key Largo Fire Department	P.O. Box 782	Key Largo	Florida	33037
Richard	Garcia*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
John	Gilbert	Fire Chief	Village of Key Biscayne	85 W. Enid Drive	Key Biscayne	Florida	33149
Carlos	Gimenez	Fire Chief	City of Miami Fire Department	444 SW 2nd Ave.	Miami	Florida	33130
Javier	Gonzalez*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Ronald	Gotlin	Chief	Biscayne Park Police Department	640 Northeast 114 Street	Biscayne Park	Florida	33161
Victor	Hernandez*	IT representative	Miami-Dade Transit Authority	111 NW 1st Street	Miami	Florida	33128
Evelyn	Hicks	Chief	Opa Locka Police Department	2495 Ali Baba Avenue	Opa locka	Florida	33054
John	Hohensee	Chief	Village of Pinecrest Police Department	11555 So. Dixie Highway	Miami	Florida	33156
Thomas	Hood	Chief	North Miami Police Department	700 Northeast 124 Street	North Miami	Florida	33161
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
John	Jackson	Acting Director	Miami Public Works Department	444 SW 2nd Ave., 8th Flr.	Miami	Florida	33130
Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Tom	John*	System Analyst	Kimley-Horn and Associates	14750 NW 77 CT, Suite 100	Miami Lakes	FL	33016
Floyd	Jordan	Fire Chief	Miami Beach Fire Department	2300 Pine Tree Drive	Miami Beach	Florida	33140
Keith	Joy	Chief	Hialeah Gardens Police Department	10001 Northwest 87th Ave.	Hialeah Gardens	florida	33016
Patrick	Kelly	Chief	Medley Police Department	7331 Northwest 74th Street	Medley	Florida	33166
Ali	Khalilahmadi*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Arvind	Kumbhojkar*		Florida Dept. of Transportation, Dist. 6	1000 NW 111th Ave.	Miami	Florida	33172
Charles	Lanza	Fire Chief	Miami-Dade Emergency Management	5600 SW 87th Ave.	Miami	Florida	33173
Eloy	Lee		Miami-Dade Traffic Control Center	7100 NW 36th St.	Miami	Florida	33166
Eloy	Lee*		Miami-Dade Public Works - Traffic Signal	7100 NW 36th St.	Miami	Florida	33166
Roger	Letourneau*	Fire Chief	Hialeah Fire Department	83 E. 5th Street	Hialeah	Florida	33010
Armando	Lopez*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Khalil	Maarouf*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Fred	Maas	Chief	Sunny Isles Beach Police Department	17070 Collins Avenue, # 255	Sunny Isles Beach	Florida	33160
Roger	Marrero*		Florida Dept. of Transportation, Dist. 6	1000 NW 111th Ave.	Miami	Florida	33172

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Dick	Masten	Chief	Miami Shores Police Department	9990 Northeast 2nd Avenue	Miami Shores	Florida	33138
Leonard	Matarese	Chief	Indian Creek Public Safety Department	9080 Bay Drive	Indian Creek Village	Florida	33154
Y	McCormtell*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Omar	Meitin*	Traffic Engineer	Florida Department of Transportation	1000 NW 111th Ave.	Miami	Florida	33172
Jesus	Menocal	Chief	Sweetwater Police Department	500 Southwest 109 Ave.	Sweetwater	Florida	33174
William	O'Brien*	Chief	Miami Police Department	400 Northwest 2nd Avenue	Miami	Florida	33128
Patrick	O'Kiel	Chief	West Miami Police Department	901 Southwest 62 Avenue	West Miami	Florida	33144
Servando	Parapar	Executive Director	Miami-Dade Expressway Authority	3790 NW 21st Street	Miami	Florida	33142
R.D.	Paulison	Fire Chief & Director	Metro-Dade Fire & Rescue	6000 SW 87th Ave.	Miami	Florida	33173
Rosie	Perez*	IT representative	Miami-Dade Transit Authority	111 NW 1st Street	Miami	Florida	33128
Dent	Pierce	Director	Monroe County Public Works	5100 College Road	Key West	Florida	33040
Maria	Porrata*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Mike	Puto	Fire Chief	Marathon Fire Department	8900 Overseas Highway	Marathon	Florida	33050
Bob	Register*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Thomas	Ribel	Chief	Miami-Dade Police Department	2960 Aventura Boulevard	Aventura	Florida	33180
Brian	Rich*	Traffic Engineer	Florida Department of Transportation	1000 NW 111th Ave.	Miami	Florida	33172
Artistides	Rivera	Director	Miami-Dade County Public Works Dept.	111 NW 1st Street, #1610	Miami	Florida	33128
Carlos	Roa	Transportation Systems Specialists	Miami-Dade Metropolitan Planning Organization	111 NW 1st Street	Miami	Florida	33128
Alexander	Rolle	Chief	Homestead Police Department	4 South Krome Avenue	Homestead	Florida	33030
John	Rolli	Fire Chief	Sugarloaf Fire Department	P.O. Box 40	Sugarloaf	Florida	33044
John	Ross	Chief	Bay Harbor Islands Police Department	9665 Bay Harbor Terrace	Bay Harbor Islands	Florida	33154
Rory	Santana		Florida Dept. of Transportation, Dist. 6	1000 NW 111th Ave.	Miami	Florida	33172
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Lew	Sayre*		Florida Dept. of Transportation	1000 NW 111th Ave	Miami	Florida	33172
Patrick	Shortal*		Florida Dept. of Transportation, Dist. 6	1000 NW 111th Ave.	Miami	Florida	33172
James	Skinner	Chief	Coral Gables Police Department	2801 Salzedo Street	Coral Gables	Florida	33134
Bruce	Stoll	Fire Chief	Conch Key Fire Department	10 S. Conch Avenue	Conch Key	Florida	33050
Armando	Vidal	Director	Hialeah Public Works Department	3700 W. 4th Avenue	Hialeah	Florida	33012
William	Wagner, III	Fire Chief	Islamorada Fire Department	P.O. Box 706	Islamorada	Florida	33036
Richard	Walterman*		City of Miami Police Department	400 Northwest 2nd Ave	Miami	Florida	33128
Billy	Wardlow	Fire Chief	Key West Fire Rescue	1600 N. Roosevelt	Key West	Florida	33040
Cokes	Watson, Jr.	Chief	South Miami Police Department	6130 Sunset Drive	South Miami	Florida	33143
Kathi	Wilbur	District Director	Miami Dade Public Schools	1450 NE 2nd Ave., Rm 525	Miami	Florida	33132
Marvin	Wiley	Chief	El Portal Police Department	500 Northeast 87th Street	El Portal	Florida	33138
Ross	Willman	Fire Chief	Monroe County Fire Rescue Administration	490 63rd Street Ocean	Marathon	Florida	33050
Anthony	Zecca	Chief	Miccosukee Police Department	Box 440021 Tamiami Station	Miami	Florida	33144

## 1.7 District 7

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Micheal	Akridge*	Engineering	Fl. Dept of Transportation	605 Suwannee Street	Tallahassee	FL	32999-
Ron	Anderson	Emer. Oper.	Fl. Dept of Transportation	11201 N. Mckinley Drive	Tampa	FL	33612-6403
Paul	Andrews	Sgt.	Pinellas Park Police Dept	7700 59th Street	Pinellas Park	FL	33781-
Erik	Anthens	Sgt.	Pusco County Sheriff's Office	8700 Citizens Drive	New Port Richey	FL	34654-
Ned	Baier	Manager	Hillsborough Co. Plan & Grow	601 E. Kennedy Blvd 20th Floor	Tampa	FL	33602-
Walt	Barbour	Capt.	Hillsborough County Sheiff	7202 Gunn Hwy	Tampa	FL	33625-
Bijan	Behzad	Design/Traffic	Fl. Dept of Transportation	11201 N. McKinley Dr. MS7-800	Tampa	FL	33612-
Paul	Bertels	Man. Traffic Oper	City of Clearwater	P.O. Box 4748	Clearwater	FL	33758-
David	Bilodeau	Manager	Pinellas Emer. Management	400 S. Ft. Harrison Ave.	Clearwater	FL	33756-
Chris	Birosak*	Dist. ITS Mang.	Fl Dept of Transportation	801 North Broadway	Bortow	FL	33830-
Randy	Bly	AAA		1515 N. Westshore Blvd	Tampa	FL	33607-
Debbie	Bolduc		Pasc County Growth Man	7530 Little Road #320	New Port Richey	FL	34654-
Dwaine	Booth	Admin.	Pinellas County Fire Admin.	12490 Ulmerton Road	Largo	FL	33774-
Randy	Bratton	Lt.	St.Peterburg Police Dept	1300 First Avenue	St.Petersburge	FL	33705-
Bob	Bray	Director	Pinellas Park Plan. Dept	P.O. Box 1100	Pinellas Park	FL	33780-
Buddy	Brogdon	Sgt	Tampa Police DUI Unit	411 N. Franklin Street	Tampa	FL	33602-
Chris	Carr	Director	Citus County Engineering	3600 W. Sovereign Path Suite 241	Lecanto	FL	34461-
Wade	Carroll	MPO	Pinellas County MPO	315 Court Street	Clearwater	FL	33756-
Diana	Carsey	Director	Hart	201 E. Kennedy Blvd #1600	Tampa	FL	33602-
David	Costo		Hernando County Emer. Ser.	20 N. Main Street room 362	Brooksville	FL	34601-
Chester	Chandler	ITS Director	FDOT Turnpike District	1211 Govenor Square Blvd Suite 100	Tallahassee	FL	32301-
Terry	Chapman		Brooksville Police Dept	87 Veteran Avenue	Brooksville	FL	34601-
Richard	Cook		Transhernando	1122 Ponce DeLeon Blvd	Brooksville	FL	34601-
Lawny	Corlew	Sgt.	Hernando County Sheiff office	P.O. Box 10070	Brooksville	FL	34603-
Keith	Crawford	Engineer	Fl Dept of Transportation	11201 N. McKinley Drive	Tampa	FL	33612-
Terry	Dioquino	Sgt.	Pinellas County Sheiff Office	10750 Ulmerion Road	Largo	FL	33778-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Dennis	Dix		Hernando County MPO	20 N. Main Street Rm 262	Brooksville	FL	34601-
Steve	Durshinner	Lt.	Emergency Services	411 Land O'Lake Blvd #208	Land O'Lake	FL	34639-
Bill	Geiger	Development Dir	City of Brooksville	201 N. Howell Ave	Brooksville	FL	34601-
Larry	Gispert	Manager	Hillsborough Co. Emer.	2711 E. Hanna Ave	Tampa	FL	33610-
Bob	Gordon	Engineer	Hillsborough Co. Engineer	601 E. Kennedy Blvd	Tampa	FL	33602-
Brain	Gunnoe		Tampa Fire & Rescue	808 Zack Street	Tampa	FL	33602-
Mike	Guzman	Cpt.	Florida Highway Patrol	11305 N. McKinley Drive	Tampa	FL	33612-
Russ	Handler		Metro Network	Suite A3 Tampa Airport Marriott	Tampa	FL	33607-
Debbie	Hermington	City Traffic Eng	City of Tampa	306 E. Jackson Street	Tampa	FL	33602-
Clifford	Hitchman	Training Chief	Hillsborough Fire Rescue	2709 E. Hanna Ave	Tampa	FL	33610-
Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Tom	John*	System Analyst	Kimley-Horn and Associates	14750 NW 77 CT, Suite 100	Miami Lakes	FL	33016
Dick	Kane	Public inf. Adm	Florida Dept of Trans.	605 Suwannee Street	Tallahassee	FL	32399-
Jerry	Karp*	Project Manage	Fl. Dept of Trans Dist VII	11201 N. McKinley Drive	Tampa	FL	33612-
Gary	Maidoff	Director	Citus Co. Dept of Development	3600 W. Soverign Path Suite 109	Lecanto	FL	34461-
David	McCarter	Capt	Florida Highway Patrol	7651 US 19 North	Pincellas	FL	33781-
Michael	McCarthy	Traffic Services	Hillsborough Co. Public Works	P.O. Box 1110	Tampa	FL	33601-
Mike	McClenny		Commerial Carrier Corp	P.O. Box 2046	Brooksville	FL	34605-
Tom	Miller	Sgt.	Clearwater Police Dept	645 Pierce Street	Clearwater	FL	33756-
George	Mosher	Cpt	Hillsborough County Sheiff	14102 20th Street North	Tampa	FL	33613-
Doug	Mullis	Engineer	County Traffic Engineer	22211 US Hwy 19 North	Clearwater	FL	33675-
Ben	Muns	Chief Engineer	Tampa Hills. Expwy Authority	412 E. Madison Street #800	Tampa	FL	33602-
Sarah	Noyle	.	Bay Area Comm. Services	5100 W. Kennedy Blvd #265	Tampa	FL	33609-
Gerald	O'Dell		Hernando County DPW	20 N. Main Street Rm 263	Brooksville	FL	34601-
Mike	O'Keefe		City of Plant City	P.O.Box C	Plant City	FL	33864-
Phyllis	Pacyna	Director	Director of Planning & Traffic	201 N. Franklin Street Suite 1724	Tampa	FL	33602-
Denny	Pedrick	Capt.	Florida Highway Patrol	11305 N. McKinley Drive	Tampa	FL	33612-
Emory	Pierce		Brooksville Dept of Public Work	600 S. Brooksville Ave.	Brooksville	FL	34601-
Mike	Pietrzyk		CUTR/USF	4202 E. Fowler Ave. CUT 100	Tampa	FL	33620-
Hickman	Rahman	Director	Division Dir. Traffic & Fleet	P.O. Box 1348	Dunedin	FL	34296-
Angelo	Rao	City Traffic Engr	City of St. Petersburg	1744 9th Ave. North	St.Petersburg	FL	33713-
Robert	Reck	Operation	Pasco County Traffic Oper.	7530 Little Road. Public Working Bldg. #124	New Port Richey	FL	34654-
James	Richburg	Lt.	Florida Highway Patrol	16026 SR 52	Land O'Lakes	FL	34639-
Reginald	Sanford	Envir. Spec.	Hillsborough County-EPC	1410 N. 21th Street	Tampa	FL	33605-
KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
R.B.	Simmons	Chief	Tampa Fire Dept	116S. 34th Street	Tampa	FL	33605-
Roger	Sweeney	Exec. Director	Pinellas County Transit Auth	14840 49th Street North	Clearwater	FL	33762-
Doug	Uden		Pasco County MPO	7530 Little Road #320	New Port Richey	FL	34654-
John	Vanacore	Senior Engineer	Hillsborough County Traffic	601 E. Kennedy Blvd	Tampa	FL	33602-
Bill	Ward	Lt	St.Peterburge Fire & Rescu	400 Martin Luther King Jr. Street	St.Peterburg	FL	33701-
Bill	Wilshire*	Engineer	District ITS Engineer	11201 N. McKinley Drive	Tampa	FL	33612-

First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Joe	Zunbito	Sr.Plan. Man	Hillsborough County MPO	601 E. Kennedy Boulevard, 18th Floor	Tampa	Fl	33602-

## 1.8 Tallahassee Workshop

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
			Board of City Commissioners	Panama City	P. O. Box 1880-	Panama City	Florida	32402-1880
			Board of County Commissioners	Leon County	301 S. Monroe Street	Tallahassee	Florida	32301-
			City Council Members	Mexico Beach	P. O. Box 13425	Mexico Beach	Florida	32410-
			City Council Members	City of Port St. Joe	P. O. Box 278	Port St. Joe	Florida	32457-
			Board of County Commissioners	Blountstown	425 E. Central Avenue, Room 130	Blountstown	Florida	32424-
			City Commissionions	City of Marianna	P. O. Box 936	Marianna	Florida	32447-
			City Commission	City of Tallahassee	300 S. Adams Street	Tallahassee	Florida	32302-1731
Mr.	Mike	Akridge*	State ITS Manager	State of Florida-State Hihgway Engineer Office	605 Suwannee St.MS 57	Tallahassee	Florida	32399-0450
Mr.	John	Alaghemand*	Traffic Engineer	Bay County BCC			Florida	
Mr.	Parwez	Alam	County Administrator	Leon County	301S. Monroe St.	Tallahassee	Florida	32301-
Mr.	Bill	Albaugh	Highway Operations Director	Florida Dept. of Tranaportations	605 Suwannee St. MS 31	Tallahassee	Florida	32399-0450
Mr.	Gary	Ament	Planner II	Bay County Planning Dept.	634 Mulberry Avenue	Panama City	Florida	32401-
Mr.	Thomas F.	Barry,Jr	Secretary of Transportation	Florida Dept. of Transportation	605 Suwannee St. MS 57	Tallahassee	Florida	32399-0450
Ms.	Tara	Bartee		State of Florida-Transit Office	605 Suwannee St. MS 26	Tallahassee	Florida	32399-0450
Mr.	Jack	Barwick	Fire Chief	City of Marianna	4225 Clinton St.	Marianna	Florida	32448-
Mr.	Parrish	Barwick	County Administrator	Wakulla County	P. O. Box 1263	Crawfordville	Florida	32326-1263
Ms.	April	Blackburn*	Business Systems Support	State of Florida	605 Suwannee St. MS 78	Tallahassee	Florida	32399-0450
Mr.	Joe	Blanchard	Director	Wakulla Co. Sheriff's Office	15 Oak Street	Crawfordville	Florida	32327-
Ms.	Vicki	Bradford*	Manager, BSSO	Florida Dept. of Transportation	605 Suwannee St.	Tallahassee	Florida	32399-0450
Major	David	Browing	Motor Carrier Compliance Office	State of Florida	1815 Thomas Road	Tallahassee	Florida	32303-
Mr.	Robbie	Brown	Fire Chief	Jackson County	2864 Madison Street	Marianna	Florida	32448-
Mr.	Marlon	Brown	Assistant City Manager	City of Tallahassee	300 S. Adams Street	Tallahassee	Florida	32302-

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Mr.	Jack	Brown*	State Traffic Operations Engineer	Florida Dept. of Transp.	605 Suwannee St. MS 36	Tallahassee	Florida	32399-0450
Ms.	Marshan H.	Butler	Routes & Operations Supervisor	Leon Co. School Board	3395 W. Tharpe St.	Tallahassee	Florida	32303-
Mr.	Larry	Carter	Director	TalTran	555 Appleyard Drive	Tallahassee	Florida	32304-
Mr.	Hulan	Carter	Chairman	Washington County Commission	1336 South Boulevard	Chipley	Florida	32428-
Mr.	Jeff	Caster		Environmental Management Office	605 Suwannee St. MS 37	Tallahassee	Florida	32399-0450
Mr.	Ralph	Central	Administrator	DCA, Florida Coastal Management Program	2555 Shumard Oak Blvd.	Tallahassee	Florida	32399-2100
Mr.	Bob	Chamberlain	Assistant Director	TalTran	555 Appleyard Drive	Tallahassee	Florida	32304-
Mr.	Bill	Chambers*	Turnpike District	Florida Dept. of Transp.	1211 Governors Square Blvd Suite100	Tallahassee	Florida	32301-
Mr.	Chester	Chandler	Turnpike Districk	Florida Dept. of Transp. Turnpike	1211 Governors Square Blvd Suite100	Tallahassee	Florida	32301-
Mr.	David	Clark	Business System Support	State of Florida	605 Suwannee St. MS78	Tallahassee	Florida	32399-0450
Mr.	Jerry	Clemons	Mayor	Panama City	P. O. Box 1880	Panama City	Florida	32402-1880
Mr.	R.L.	Cloud*	Chief Duty Officer FHP Communications	Fedrerel Highway Patrol	Neil Kirkman Bldg.	Tallahassee	Florida	32399-0500
Mr.	Ed	Coven	Manager	Transit Office	605 Suwannee St. MS 26	Tallahassee	Florida	32399-0450
Sgt.	Ray	Crew	Special Events Planning	Tallahassee Police Dept.	234 E. 7th Avenue	Tallahassee	Florida	32303-
Mr.	Warren	Crum	Chair, Board of County Commissioners	Wakulla County	P. O. Box 1263	Crawfordville	Florida	32326-1263
Mr.	John	Davis, P.E., L.S.	Assistant Director	Tallahassee Public Works Department	300 S. Adams Street	Tallahassee	Florida	32302-1731
Mr.	Steve	Decker*		State of Florida	605 Suwannee St. MS 53	Tallahassee	Florida	32399-0450
Mr.	Hashadrai	Desai*	Transportation Statistics Office	Florida Dept. Of Transp.	605 Suwannee St. MS 27	Tallahassee	Florida	32399-0450
Mr.	Paul	Donofro	Mayor	City of Marianna	P. O. Box 936	Marianna	Florida	32447-
Ms.	Sally	Dowlen	Transportation Systems Coordinator	Leon County Public Works Dept.	2280 Miccosukee Road	Tallahassee	Florida	32308-
Chief	Carey	Drayton	Chief of Police	Florida State University Police Dept.	830 W. Jefferson Street	Tallahassee	Florida	32306-4215
Chief	John	Earst	Chief of Police	Florida A & M University	2400 Wahnish Way	Tallahassee	Florida	32307-
Sgt.	Mark	Edenfield	Special Events Operations Manager	Florida State University Police Dept.	830 W. Jefferson Street	Tallahassee	Florida	32306-4215
Mr.	Kurt	Eichin*	Office of Policy Plannning	Florida Dept. of Transp	605 Suwannee St. MS 28	Tallahassee	Florida	32399-0450
Ms.	Carol	Ellerbe	Director	Jefferson Co. Emergency Management	P. O. Box 45	Monticello	Florida	32345-0045
Mr.	Rudy	Etheredge	Director	Panama City Port Authority	P. O. Box 15095	Panama City	Florida	32406-
Ms.	Jennifer	Farmer	Florida Turnpike Traffic Operations	Florida Dept. of Transp.	PO Box 9828	Ft Lauderdale	Florida	33310-9828

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Ms.	Anita	Favors	City Manager	City of Tallahassee	300 S. Adams Street	Tallahassee	Florida	32302-
Mr.	John	Ford	Chief	Fire Department	410 Williams Avenue	Port St. Joe	Florida	32456-
Mr.	Graham W.	Fountain	Manager, Motor Carrier Compliance	State of Florida	605 Suwannee St. MS 99	Tallahassee	Florida	32399-0450
Ms.	Susan	Freiden	Manager	Town of Havana	P. O. Box 1068	Havana	Florida	32333-
Mr.	Craig	Fugate*	Chief	DCA, Bureau of Preparedness & Response	2555 Shumard Oak Blvd.	Tallahassee	Florida	32399-2100
Mr.	Garry	Gaddis	Mayor	Mexico Beach	P. O. Box 13425	Mexico Beach	Florida	32410-
Mr.	Craig	Gavin	District Three Planning Office	Florida Dept. of Transp.	U.S. 90 West	Chipley	Florida	32428-9990
Mr.	Howard	Glassman	MPOAC Advisory Council	Florida Dept. of Transp.	605 Suwannee St. MS 28	Tallahassee	Florida	32399-0450
Mr.	Gene	Glotzbach	Deputy State Traffic Operations Engineer	Florida Dept. of Transp.	605 Suwannee St. MS 36	Tallahassee	Florida	32399-0450
Mr.	John	Goin	ACM-CS	Bay County	225 Mackenzie Avenue	Panama City	Florida	32401-
Mr.	Bob	Gottschalk		Florida Dept. of Transp.	605 Suwannee St. MS 36	Tallahassee	Florida	32399-0450
Mr.	Edgar	Grant	Director, Public Works	City of Tallahassee	300 S. Adams Street	Tallahassee	Florida	32302-
Mr.	John	Grantland	Public Works	Mexico Beach	P. O. Box 13425	Mexico Beach	Florida	32410-
Mr.	Paul	Grimes*	Senior Network Analyst	Florida Dept. of Transportation	605 Suwannee St.	Tallahassee	Florida	32399-0450
Mr.	Roger	Hagan	Director	Washington Co. Emergency Management	1331 South Blvd.	Chipley	Florida	32428-
Colonel	Charles C.	Hall	Director	Florida Highway Patrol	Neil Kirkman Building, Room A437-MS 40, 2900 Apalachee Parkway	Tallahassee	Florida	32399-0500
Mr.	Joe	Hall	Commander	Panama City Police Dept.	1209 E. 15th Street	Panama City	Florida	32405-
Mr.	Guy B.	Hall	Public Safety	Mexico Beach	P. O. Box 13425	Mexico Beach	Florida	32410-
Mr.	John	Hamilton	Transportation Director	Jackson County Schools	2789 Penn Avenue	Marianna	Florida	32448-
Mr.	Kenneth	Hammons	City Manager	Panama City	P. O. Box 1880	Panama City	Florida	32402-1880
Mr.	Sammy	Hanna	Director	Liberty Co. Emergency Management	P. O. Box 877	Bristol	Florida	32321-0877
Mr.	James	Hannigan*	District Two Traffic Operations Office	Florida Dept. of Transp.	2250 Irene St. Jacksonville Urban Office	Jacksonville	Florida	32204-
Mr.	Marion	Hart, Jr	State Public Transportation Administrator	Florida Dept. of Transportation	605 Suwannee St. MS 57	Tallahassee	Florida	32399-0450
Mr.	David F.	Harvey	Sheriff	Wakulla County	15 Oak Street	Crawfordville	Florida	32327-
Mr.	Frank	Healy	City Administrator	Mexico Beach	P. O. Box 13425	Mexico Beach	Florida	32410-
Mr.	Fred	Heery, P.E.*	Acting City Traffic Engineer	City of Tallahassee	300 S. Adams Street, 1st Floor	Tallahassee	Florida	32302-
Mr.	Mike	Hemmen*	Project Manager	TEI Engineers & Planners		Tallahassee	Florida	
Mr.	Peter	Herbert	County Administrator	Washington County	1338 South Blvd.	Chipley	Florida	32428-
Mr.	Nelson	Hill	Chief Information Officer	Office Of Information Systems	605 Suwannee St. MS 47	Tallahassee	Florida	32399-0450
Mr.	Lap	Hoang	Deputy State Traffic Operations Engineer	Florida Dept. of Transp.	605 Suwannee St. MS 36	Tallahassee	Florida	32399-0450
Ms.	Sharon	Holmes	State Maintenance Engineer	Florida Dept. of Transportation	605 Suwannee MS52	Tallahassee	Florida	32399-0450

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Mr.	Liang	Hsia	Deputy State Traffic Operations Engineer	Florida Dept. of Transp.	605 Suwannee St. MS 36	Tallahassee	Florida	32399-0450
	Ron	Ice*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Mr.	Leroy	Irwin	Manager	Enviromental management office	605 Suwannee	Tallahassee	Florida	32399-0450
Mr.	Vandolis	Jackson	Safety, Training and Recruitment	Leon Co. School Board	3395 W. Tharpe St.	Tallahassee	Florida	32303-
Mr.	Rob	Jaffe*		Jaffe Engineering and Development Industries	POB 517, 17 Miller Ave	Shenorock	NY	10587-0517
Mr.	Terry	Jernigan	Planning & Zoning Dept.	Bay County	634 Mulberry Avenue	Panama City	Florida	32401-
Mr.	Wendell	Johnson	City Administrator	City of Chipley	1442 Jackson Avenue	Chipley	Florida	32428-
Mr.	Cliff	Johnson*	District Three Traffic Operations Office	Florida Dept. of Transp.	U.S.90 West	Chipley	Florida	32428-9990
Mr.	Dick	Kane		Public Information Administrator	605 Suwannee MS 54	Tallahassee	Florida	32399-0450
Major	David	Kelly		Florida Highway Patrol	2100 Mahan Drive	Tallahassee	Florida	32308-
Mr.	Jack	Kostrzewa	Acting Supervisor, Transportation Planning	Tallahassee-Leon Co. Planning Dept.	300 S. Adams Street	Tallahassee	Florida	32302-
Ms.	Lorin	Kruger	Systems Planning Office	Florida Dept. of Transp.	605 Suwannee St. MS 19	Tallahassee	Florida	32399-0450
Mr.	Bob	Krzeminski	Systems Planning Office	Florida Dept.of Transp.	605 Suwannee St. MS 19	Tallahassee	Florida	32399-0450
Mr.	Jay	Leffert	Chief	Police Department	410 Williams Avenue	Port St. Joe	Florida	32456-
Mr.	Charlie	Lewis	Assistant Director	Panama City Port Authority	P. O. Box 15095	Panama City	Florida	32406-
Ms.	Ysela	Llort	State Transportation Planner	Florida Dept. Of Transportation	605 Suwannee St. MS 57	Tallahassee	Florida	32399-0450
Mr.	Scott	Maddox	Mayor	City of Tallahassee	300 S. Adams Street	Tallahassee	Florida	32302-1731
Mr.	John O.	Mader	Director	Jackson Co. Emergency Management	4447 Marlon Street	Marianna	Florida	32448-
Mr.	Robert J.	Majka	Director	Bay County Dept. Of Public Safety	634 Mulberry Avenue	Panama City	Florida	32401-
Mr.	Fred	Malfa	FHP Communications .	Federal Highway Patrol	Neil Kirkman Bldg.	Tallahassee	Florida	32399-0500
Mr.	Steve	Malone	Planner	Panama City Planning Dept.	P. O. Box 1880	Panama City	Florida	32402-1880
Mr.	Jonathan	Mantey	County Manager	Bay County	P. O. Box 1818	Panama City	Florida	32402-
Mr.	Doug	Martin*	Toll Office	State of Florida	605 Suwannee St. MS 45	Tallahassee	Florida	32399-0450
Mr.	Barry	Mason*	Weigh Station Manager	Florida Dept. of Transportation			Florida	
Mr.	Phil	McCrary	City Manager	City of Marianna	P. O. Box 936	Marianna	Florida	32447-
Mr.	John P.	McDaniel	Sheriff	Jackson County	P. O. Box 919	Marianna	Florida	32447-
Mr.	Terry	McDaniel	Superintendent	Public Works	P. O. Box 278	Port St. Joe	Florida	32457-
Mr.	Tommy	McDonald	Mayor	City of Chipley	1442 Jackson Avenue	Chipley	Florida	32428-
Mr.	Howard	McKinnon	County Manager	Gadsden County	P. O. Box 1799	Quincy	Florida	32353-
Mr.	Walter	McNeil	Chief	Tallahassee Police Department	234 E. 7th Avenue	Tallahassee	Florida	32303-
Mr.	Warren	Merrell	Manager	System Planning Office	605 Suwannee St. MS 10	Tallahassee	Florida	32399-0450
Mr.	Randy	Merritt	Director	Wakulla Co. Public Works	340 Trice Lane	Crawfordville	Florida	32327-
Ms.	Karyn	Miles*	Modeling Coordinator	Florida Dept. of Transportation			Florida	
Mr.	George Edward	Mills	Director	Wakulla Co. Planning & Zoning Dept.	P. O. Drawer 1210	Crawfordville	Florida	32326-1210
Mr.	Dan	Miner	Public Works Director	City of Chipley	1442 Jackson Avenue	Chipley	Florida	32428-

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
Lt.	Ron	Moat	Emergency Management	Florida State University Police Dept.	830 W. Jefferson Street	Tallahassee	Florida	32306-4215
Mr.	Ken	Morefield	Assistant Secretary of Transportation	Florida Dept. of Transportation	605 Suwannee St. MS 57	Tallahassee	Florida	32399-0450
Mr.	Austin	Mott	Director	Visit Florida	661 E. Jefferson Street	Tallahassee	Florida	32301-
Mr.	Malcolm	Murphy	Transportation Coordinator	Bay County School Board	P. O. Drawer 54820	Panama City	Florida	32402-
Mr.	Gummada	Murthy*	Florida's Turnpike	Florida Dept. of Transp.	PO Box 9828	Ft Lauderdale	Florida	33310-9828
Mr.	Joseph	Myers	Director	DCA, Division of Emergency Management	2555 Shumard Oak Blvd.	Tallahassee	Florida	32399-2100
	Charles	Newlin	Division Commander	Tallahassee Police Dept.	234 E. 7th Avenue	Tallahassee	Florida	32303-
	Marc	Nolen	Chairman	Bay County Board of County Commissioners	P. O. Box 1818	Panama City	Florida	32401-
Mr.	Don A.	O'Bryan	Director	Calhoun Co. Emergency Management	425 E. Central Ave., Room G-40	Blountstown	Florida	32424-
mr.	Alan	Otley	Traffic Engineers	State of Florida	300 S. Adams St.	Tallahassee	Florida	32301-
Mr.	Alan	Otley, P.E.	Signal Timing Engineer	City of Tallahassee	300 S. Adams Street, 1st Floor	Tallahassee	Florida	32302-
Mr.	B. L.	Palmer	Chief of Police	City of Marianna	2890 Green St.	Marianna	Florida	32448-
Mr.	Anil	Panicker	Planner	Tallahassee-Leon Co. Planning Dept.	300 S. Adams Street	Tallahassee	Florida	32302-
Mr.	Tony	Park, P.E.	Director of Engineering Services	Leon County Public Works Dept.	2280 Miccosukee Road	Tallahassee	Florida	32308-
Mr.	Kevan	Parker	Fire Chief	City of Chipley	1442 Jackson Avenue	Chipley	Florida	32428-
Mr.	Frank	Pate	Mayor	City of Port St. Joe	P. O. Box 278	Port St. Joe	Florida	32457-
Mr.	Fred	Peel	Sheriff	Washington County	1293 Jackson Avenue	Chipley	Florida	32428-
Ms.	Pauline	Pendarvis	City Clerk	City of Port St. Joe	P. O. Box 278	Port St. Joe	Florida	32457-
Mr.	Rick	Pettis	Community Development Director	Jackson County	4487 Lafayette St.	Marianna	Florida	32448-
Mr.	Harold	Pickron	Director	Calhoun Co. Road Dept.	Route 1, Box 94	Blountstown	Florida	32424-
Mr.	Milton	Pitman	Chairman, Board of County Commissioners	Jackson County	2864 Madison St.	Marianna	Florida	32448-
Mr.	David	Pitts	Transportation Director	Calhoun County Schools	425 E. Central Avenue, Room G-20	Blountstown	Florida	32424-
Mr.	Arthur J.	Pla, Sr.	Director	Leon Co. School Board	3395 W. Tharpe St.	Tallahassee	Florida	32303-
Mr.	Robert	Pleas	Police Chief	City of Chipley	1442 Jackson Avenue	Chipley	Florida	32428-
Mr.	Joe	Poole*	District Three Traffic Operations Engineer	Florida Dept. of Transp.	U.S.90 West	Chipley	Florida	32428-9990
Mr.	Thomas	Quillan	Fire Chief	Tallahassee Fire Department	327 N. Adams Street	Tallahassee	Florida	32301-
Mr.	James L.	Quinn	Bureau Chief	DCA, Bureau of State Planning	2555 Shumard Oak Blvd.	Tallahassee	Florida	32399-2100
Mr.	Louis	Reis*		Environmental Management Office	605 Suwannee St. MS 73	Tallahassee	Florida	32399-0450
Mr.	Ed	Rice*	State Safety Enigneer	State of Florida	605 Suwannee St. MS 53	Tallahassee	Florida	32399-0450
Mr.	Don	Rich	Transportation Director	Gulf Co. School Board	150 Middle School Road	Port St. Joe	Florida	32456-
Mr.	Joe	Richey	City Planning Dept.	City of Marianna	P. O. Box 936	Marianna	Florida	32447-
Mr.	George	Rogers	Director	Washington County Public	2215 Mud Hill Road	Chipley	Florida	32428-

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
				Works				
Ms.	Coleen	Roland*	Planner for Transportation	Tallahassee-Leon Co. Planning Dept.	300 S. Adams Street	Tallahassee	Florida	32302-
Sgt.		Rollins	Special Events Operations Manager	Florida A & M University	2400 Wahnish Way	Tallahassee	Florida	32307-
Mr.	Larry	Ross	Public Works Dept.	City of Marianna	P. O. Box 936	Marianna	Florida	32447-
Mr.	Dick	Rossell	Deputy State Traffic Operations Engineer	Florida Dept. of Transp.	605 Suwannee St. MS 36	Tallahassee	Florida	32399-0450
Mr.	KK	Saxena*		Kimley-Horn and Associates, Inc	14750 NW 77 Ct, Suite 100	Miami Lakes	Florida	33016
Mr.	Joe	Schaefer*	Asst. Traffic Ops Engineer	Florida Dept. of Transportation	605 Suwannee St.	Tallahassee	Florida	32399-0450
Mr.	Willie	Scott	Vehicle Management Manager	Leon Co. School Board	3395 W. Tharpe St.	Tallahassee	Florida	32303-
Mr.	Steven M.	Seibert	Director	Florida Dept. of Community Affairs	2555 Shumard Oak Blvd.	Tallahassee	Florida	32399-2100
Mr.	Freddie	Simmons	State Highway Engineer	Florida Dept. of Transportation	605 Suwannee St. MS 57	Tallahassee	Florida	32399-0450
Mr.	Donald	Skinner	Computer Services Office	State of Florida	605 Suwannee St. MS 14	Tallahassee	Florida	32399-0450
Mr.	Richard R.	Smith	Director	Leon County Emergency Management	535 Appleyard Drive	Tallahassee	Florida	32304-3801
Mr.	Ed	Spooner	Director	Gadsden Co. Emergency Management	P. O. Box 1709	Quincy	Florida	32351-1709
Mr.	Mike	Sprayberry*	Bridge Info System Eng.	Florida Dept. of Transportation	605 Suwannee St.	Tallahassee	Florida	32399-0450
Ms.	Debora	Stemle	Toll Office	State of Florida	605 Suwannee St. MS 45	Tallahassee	Florida	32399-0450
Sgt.	Beverly	Stevens	Emergency Management	Florida A & M University	2400 Wahnish Way	Tallahassee	Florida	32307-
Mr.	Calvin	Stevenson	School Bus Coordinator	Washington County School Board	206 N. 3rd Street	Chipley	Florida	32428-
Mr.	Marvin	Stukey	District Three Planning Office	Florida Dept.of Transp.	U.S.90 West	Chipley	Florida	32428-9990
Mr.	Tony	Szwast*	Communications Engineer	STO		Tallahassee	Florida	
Captain	Marcel	Tart	Motor Carrier Compliance Offive	State of Florida	719 South Woodland Blvd MS 1-995	Deland	Florida	32720-6800
Mr.	Wendall	Taylor	County Administrator	Jackson County	2864 Madison Street	Marianna	Florida	32448-
Mr.	Noel	Tiller*	District Three Traffic Operations Office	Florida Dept. of Transp.	U.S.90 West	Chipley	Florida	32428-9990
Mr.	Chung	Tran	ITS/Traffic Engineer	Federal Highway Administration-Florida Division	227 North Bronough Dt. Suite 2015	Tallahassee	Florida	32301-
Mr.	Guy	Tunnell	Sheriff	Bay County Sheriff's Department	3421 N. Hwy 77	Panama City	Florida	32405-
Mr.	Tim	Turner	Director	Franklin Co. Emergency Management	33 Commerce Street	Apalachicola	Florida	32320-
Mr.	Ike	Ubaka*	Transit Office	State of Florida	605 Suwannee St. MS 26	Tallahassee	Florida	32399-0450
Ms.	Anita P.	Vandervalk	Manager	Transportation Statistics Office	605 Suwannee St. MS 27	Tallahassee	Florida	32399-0450
Mr.	Joe	Villadsen	Director	Panama City Public Works	P. O. Box 1880	Panama City	Florida	32402-1880
Mr.	Sterling	Watson	Chairman, Board of	Gadsden County	P. O. Box 1799	Quincy	Florida	32353-

Prefix	First Name	Last Name	Title	Organization Name	Address	City	State	Postal Code
			County Commissioners					
	Al	Watson*	Major	Leon County Sheriff's Dept.	P. O. Box 727	Tallahassee	Florida	32301-
Mr.	J. Gary	Wells	Assistant Fire Chief	Bay County	600 E. Bus. Hwy 98	Panama City	Florida	32401-
Mr.	R. Larry	Wells	Director	Gulf County Emergency Management	1000 Cecil G. Costin, Sr. Blvd.	Port St. Joe	Florida	32456-
Mr.	J. Gary	Wells	Assistant Fire Chief	Panama City Fire Department	600 E. Bus. 98	Panama City	Florida	32401-
Mr.	Jay	Wiggins	Director of Dept. Maintenance	Wakulla Co. School Board	87 Andrew Hargrett Sr. Road	Crawfordville	Florida	32327-
Mr.	Michael	Willett	Director	Leon County Public Works	2280 Miccosukee Road	Tallahassee	Florida	32308-
Mr.	Bo	Winstead*	Turnpike District	Florida Dept. of Transp.	1211 Governors Square Blvd Suite100	Tallahassee	Florida	32301-
Mr.	Fred	Wise	Manager	Rail Office	605 Suwannee St. MS 25	Tallahassee	Florida	32399-0450
Mr.	Denny	Wood	District Three Planning Office	Florida Dept. of Transp.	U.S. 90 West	Chipley	Florida	32428-9990
Mr.	William	Woodham	Sheriff	Gadsden County	Hwy 267 S.	Quincy	Florida	32353-
Mr.	Craig	Wooten*	Mechanic	Leon County Schools		Tallahassee	Florida	
Major	Jerry C.	Wright		Florida Highway Patrol	6050 W. Highway 98	Panama City	Florida	32406-5729
Mr	Greg	Xanders	State Construction Engineer	Florida Dept. of Transportation	605 Suwannee St. MS 31	Tallahassee	Florida	32399-0450

## 2 Appendix: Table of Stakeholder Comments

Stakeholder	Comment	Disposition and Rationale
Liang Y Hsia, 05/24/00 09:23 AM	Document the stakeholder meeting process, progress.	Will document the three-day workshop process in the final report (Section 3.4).
	Memorandum of understanding among stakeholders.	Included in Task 1.1,3 Draft Architecture Survey Instrument, Database Design and Report Deliverable. Final Report will include a section (Section 8.1) on <i>identifying institutional agreements necessary (based on architecture and standards)</i> .
	Stakeholder invitation and attendance record.	See Final Report (Section 3.4.1 and 3.4.5).
	Panel Meeting record.	Notes prepared separately by KHA.
	User guide of the website or CD-ROM.	See Final Report Section 5.5.
	Introduction of Statewide ITS Architecture	See Final Report, several sections.
Liang Y Hsia 2 Jun 2000 09:40:30	The draft document should have the following information:	
	1. Florida Statewide ITS Architecture Web Page/CDROM Stakeholder's (User's) Guide (1.1 Table of contents) 1.2 Introduction of ITS, ITS Architecture 1.3 How to apply Florida ITS Architecture & Standards 1.4 Sample road map for stakeholders to find his institution, architecture flow, and associated standards 1.5 How to review general and specific architecture and how to provide comments.	See Final Report Table of Contents. Each item at left is covered  EXCEPT  "1.2 Introduction of ITS, ITS Architecture."  This was not included because it is redundant with an excellent introduction to ITS Architecture that is included on the National ITS Architecture CDROM and website (e.g. go to <a href="http://www.iteris.com/itsarch/">http://www.iteris.com/itsarch/</a> and then select the link <a href="#">key architecture concepts</a> ).
	2. Chronicle of the projects which includes the preparation, the stakeholders meetings, the list of invited stakeholders and the list of attended stakeholders with their job title, detailed street address, phone, and e-mail address. Sample letter of invitation, meeting agenda, and targeted letter contents. Public involvement plan, Panel meeting agenda and minutes.	See Table of Contents. Each item covered in Final Report.
	3. Cross reference with other corridor/ regional architectures.	See Final Report, Table 1.

Stakeholder	Comment	Disposition and Rationale
Denis Dietz <a href="mailto:dendiet@aol.com">dendiet@aol.com</a> 4 Jul 2000	For Lake County (District 5), Excursion Train. Company: Mount Dora Railway. Sixteen at grade crossings between Mount Dora and Tavares. Current Schedule: Saturday and Sunday only name of train "Cannonball"	No action. Information on the Mount Dora Railway is available at web site: <a href="http://www.doradoodlebug.com/index.shtml">http://www.doradoodlebug.com/index.shtml</a> . This short line is part of the Florida Central Railroad system of short lines <a href="http://www.fcrr.com/index.html">http://www.fcrr.com/index.html</a> . It is not clear if they have or plan any electronic connection between their wayside equipment and local traffic management field equipment, or if they maintain a rail operations center with any real-time train control functions. Until this is established, no ITS deployments are expected and thus no action is required.
	Also 911 call taker for Lake County is central County agency that then sends the call to appropriate agency.	No action. The inventory element: "E911 Emergency Call Centers" mapped to Emergency Management Subsystem and defined as "Represents the various county and local call taker systems that handle 911 calls in FDOT District 5..." seems to cover this element.
Liang Hsia 13 Jul 2000 09:52:01	Provide sample and road map on web page so the stakeholders can review and comment on the draft architecture by themselves.	Okay. We will copy Section 5.5 of the Final Report to an introductory page on the web site.
Pei-Sung Lin, Ph.D., P.E., Traffic Engineer, Traffic Operations, Sarasota County Public Works July 17, 2000	<p><b>1. <a href="#">/elements/ctx236.htm</a> &amp; <a href="#">elements/236.htm</a></b></p> Cargo information (kinds of cargo that trucks or trains transport) is essential for traffic accident response if a carrier is involved in the accident. With cargo information, an emergency response team can clean or extinguish the spill quickly and effectively when the accident happens. There is a national network that we may access to obtain the cargo information. Sarasota County recommends links between the above-mentioned national network and County Emergency Communication Center, County Emergency Operations Center, and District 1 Emergency Operations Center.	No action. References: District 1 Description page and Context Diagram - County Fire Rescue Dispatch. In the statewide architecture we have included an information path where the Commercial Vehicle notifies its own carrier center (automated collision notification) which then notifies County or Local Fire dispatch, including the bill of lading, msds info, location etc. This is illustrated in the statewide services architecture on Market Package slide "CVO10 - HAZMAT Management Automatic Collision Notification System + HAZMAT Response". From the second page you referenced, go to "Statewide Services" (because it is the same for each region) and then select "Automated Collision Notification System". The architecture flow "HAZMAT INFORMATION" has the content you are looking for.

Stakeholder	Comment	Disposition and Rationale
	<p><b>2. <u><a href="#">/elements/ctx292.htm</a></u> &amp; <u><a href="#">elements/292.htm</a></u></b>            (Sarasota Traffic Signal Control System) In the future, we need the information from the Traveler Information Radio Network Station to adjust traffic signal timing plan from our Traffic Control Room or provide our information to travelers. We were unable to locate this link.</p>	<p>No action.            TiRN is a private radio station network that receives info (telephone, data network and video) from FDOT District PIOs, the FDOT state PIO, and the FHP. They then produce and broadcast the information over a network of private radio stations. Their information is specifically targeted for travelers on limited access highways. It is not clear how you will use the information to adjust traffic signal timing plans for a surface street system -- except to be notified when there are incidents on the highway system. In that case, you can simply have the operators listen to the local broadcast. It is not clear that TiRN has any plans or budget to create any digital feeds (except for a web site -- currently all advertising: <a href="http://www.tirn.com/">http://www.tirn.com/</a>). As TiRN people did not participate in any of our workshops, the best source of information on TIRN that we have found is at ITS Online: <a href="http://www.itsonline.com/tirn.html">http://www.itsonline.com/tirn.html</a> and an update article <a href="http://www.nawgits.com/tirnon.html">http://www.nawgits.com/tirnon.html</a>.            The Sarasota County Traffic Signal Control System already gets a feed from the District 1 Public Information Office System (in the regional ITS architecture), and that is really the same source of information as TiRN gets.</p>
	<p><b>3. <u><a href="#">/elements/ctx292.htm</a></u> &amp; <u><a href="#">elements/292.htm</a></u></b>            (Sarasota Traffic Signal Control System)            Because I-75 is a major north-south corridor in Charlotte, Sarasota, and Manatee Counties, any accidents on I-75 will easily affect the traffic on surface road of counties. Proper traffic controls and signal timing adjustment are essential for diverted traffic from I-75 due to accidents. Therefore, in Sarasota County Traffic Signal Control System, Sarasota County recommends a direct interface between Sarasota County Traffic Control System and I-75 Traffic Management Center (Charlotte, Sarasota, and Manatee Counties).</p>	<p>No Action.            There already is a (future) bi-directional exchange of architecture flows "traffic information coordination" and "traffic control coordination" between both the <i>Sarasota County Traffic Signal Control System</i> and the <i>I-75 Traffic Management Center (Charlotte, Sarasota and Manatee Counties)</i>. This is through the "<i>Other SW Florida Traffic Management Centers</i>" network interface terminator.            For an explanation of how this works, see the definition of <i>Other SW Florida Traffic Management Centers</i>. ... \Florida\web\District 1\elements\191.htm</p>

Stakeholder	Comment	Disposition and Rationale
	<p><b>4. <a href="#">/elements/ctx203.htm</a></b>            (Florida Safety and Accident Data Collection System) Links between District 1 County Sheriff and Fire and District 1 Counties, Cities, and MPOs are recommended. This is because under the current system, counties or cities collect traffic accident information directly from police reports provided by the county sheriff office, and provide the accident reports or speed study report to them after analysis.</p>	<p>Okay.            The county Sheriff's and County Fire/Rescue entities use a common County Emergency Communications entity for dispatch and reporting functions. Thus, the County Emergency Communications entity does the crash reporting. This sends archive data (including crash data) to both the County/City/MPO Transportation Data Collection Systems and to the Florida Safety and Accident Data Collection system (in Tallahassee).            What we need to add is the information flow from the Transp. Data Collection Systems back to the County Emergency Communications Centers that allows them to access the archived and analyzed data (this requires that the County Emergency Communications Centers also be mapped as an Archive Data User in the National ITS Architecture). DONE.</p>

Stakeholder	Comment	Disposition and Rationale
<p>Mike Zeigler 20 Jul 2000 14:34:52</p>	<p>When there is a train derailment or crash of a tank truck, or similar incident, the first responders are generally the fire departments. The senior of the first responder will become the field commander. He/She will report to the 911 dispatch (Emergency Control Center or 911 Center) what the incident involves, any roads/railroad crossings/areas that are affected. Each rail/road crossing has a numbered gate/signal and the field commander will report any equipment that has been damaged or is malfunctioning. If there is to be an evacuation or if the incident becomes so big that the field commander and ECC cannot handle it; or, if the ECC becomes so overwhelmed with other 911 calls that it cannot handle all functions, the EOC will be activated. The field commander than calls in requests for "backup"; be it equipment to control pollution, to move wrecks, to evacuate people, to block roads, etc.</p> <p>The placards on train cars, tank trucks, etc. that are used to identify chemical contents are transmitted to a chemical control company (ChemCo) to obtain handling, control and treatment information.</p> <p>Incidentally, I learned something new when I asked the questions about this discussion. Trains now have something like an AVL. The entire train is connected by a single cable. The flashing beacon on the last car is the transmitter. When the cable is broken or separated at a connector, a signal is sent to the control station to indicate something is wrong. How can this process be improved by the ITS architecture? Does it fall within the scope of the regional architecture?</p>	<p>No specific actions from this discussion. The reference to <i>ChemCo</i> is probably intended to be <i>Chemtrec</i> (see <a href="http://www.chemtrec.org/">http://www.chemtrec.org/</a>).</p> <p>In the last paragraph, the question as to how the technology used by train companies can be used is difficult to answer. We could speculate, but this is a consensus, user driven regional ITS architecture. ... But, if the wayside equipment or the train control center knows that the train has a problem, this of course should be (and probably is) used to manage train traffic -- but could also be used to notify traffic management centers having Highway Rail Intersections (HRIs) on the affected railroad that something is amiss.</p>
<p>Liang Hsia 7/24/00</p>	<p>Sent a number of jpg pictures from the Tallahassee meeting. Suggested (verbally) that these need to be included in the web site.</p>	<p>Okay. Will incorporate into the page introducing the pages for the District 8 (Turnpike) and Statewide Services Regional ITS Architecture and Standards. DONE.</p>

Stakeholder	Comment	Disposition and Rationale
<p>Liang Y Hsia 08/07/2000 01:31 PM</p>	<p>Pl. do not take out of the district architecture the portions common to each district and put it in separately as a part of statewide architecture. This is likely to create confusion when the local and uninitiated district people see only the district architecture. Local agencies are particularly likely to miss those parts because they may not find it necessary to crosscheck w/ statewide architecture.</p>	<p>Okay. DONE.</p> <p>It is essential that the statewide elements of the FDOT ITS Architecture have only one database instance. To allow otherwise, almost assures that there will be ambiguity in those elements across districts. At the same time, we acknowledge the requirement that stakeholders be able to easily use the architecture website documentation.</p> <p>In order to have it both ways, we are now maintaining separate databases for the central elements and for each regional ITS architecture. At the beginning of building a web site for a regional ITS architecture for a district, the district and central databases will be "merged" and the merged database will be the basis for the automated build of the website. (See Final Report Sections 4.2 and 5.2.2.3.)</p> <p>Now, when any change is made to the central services web database and website, all regional ITS architectures must be rebuilt as discussed above. While this may increase technician time to do the maintenance, including website compilation machine time, website upload and testing, the benefit is that the final website product is easy to use and much more likely to be consistent.</p>
<p>Liang Hsia 16 Aug 2000 11:32:49</p>	<p>In order to distinguish statewide architecture from Central and Turnpike District. I suggest that we identify the Tallassee Stakeholders as District 9 or Central. The Statewide Architecture will have the following components: District One, District Two, District Three, District Four, District Five, District Six, District Seven, District Eight (Turnpike), District Nine (Central).</p>	<p>Okay. DONE.</p> <p>Please note that Districts 2 and 4 will remain combined.</p> <p>We have agreed to call the statewide architecture the "Statewide Services ITS Architecture" rather than D9.</p>
<p>Cliff Johnson 08/16/2000 12:23 PM</p>	<p>Please remember that the Tallahassee stakeholders actually fit into two categories: District Three Regional area of Pensacola/Tallahassee, and Central (or "District 9" as you are proposing).</p>	<p>Okay. (See above.)</p> <p>The local (District 3) elements are in their own regional ITS architecture.</p>
<p>Noel M Tiller 08/16/2000 03:25 PM</p>	<p>I Discussed this with Joe Poole (D-3 DTOE) and we would prefer that District 3 stay as one entity for several reasons that are obvious.</p>	<p>Okay. (See above.)</p>

Stakeholder	Comment	Disposition and Rationale
Jack A Brown 08/16/2000 03:28 PM	I agree with Noel on D3 retained as a whole in the Statewide Architecture. Some how need to blend the "central/Tallahassee HQ of state agencies into each District stakeholders database. These could be labeled as STATEWIDE issues.	Okay. (See above.)
Jack A Brown 08/17/2000 09:40 AM	I agree and Liang has sent instructions to the consultant. We should have the District/regional architectures and then integrate the statewide ITS stakeholders issues into the District/regional.	Okay. (See above.)
Joe Poole 08/17/2000 08:34 AM	Jack, just wanted to add my two cents to Noel's comments. Tallahassee is within the boundaries and a part of District 3 and should be included in the District 3 ITS Architecture. All databases in the Architecture relative to the 3rd District shall be separate from the ones for the Central Office & Turnpike. Any assistance you can provide to make this happen is appreciated.	Okay. (See above.)
Not sure of author, forwarded by Liang Y Hsia 08/23/2000 2:01 PM	<ol style="list-style-type: none"> <li>1. Should be more ITS related links.</li> <li>2. Most of the diagrams have small text and not legible.</li> </ol>	<ol style="list-style-type: none"> <li>1. No action. We need some discussion/guidance here.</li> <li>2. No immediate action. This is difficult to resolve. Standard browsers (today) require bitmap images that are not scalable. We looked at allowing a download of a zipped emf (scalable) version of each diagram -- but we are just out of funds for more development for now. All interfaces can be viewed one interface at a time, and these diagrams are quite legible. To really solve this (for larger diagrams) will require considerable new work (and would almost certainly substantially grow the size of the already quite large website), and will only be undertaken with permission of the customer.</li> </ol>

Stakeholder	Comment	Disposition and Rationale
<p>Mike Zeigler 7 Sep 2000 16:05:53</p>	<p>re: ...?D3/mpkg%20district%203_files/frame.htm ; page 50 of the slide show - Parking Facility Management: the airport parking lots at Pensacola, Okaloosa County, and Panama City-Bay County - are they monitored through each respective city or county or are they monitored and managed by the airport authority? In the cases of Pensacola and Okaloosa County, the airports are a department of the local government. In the case of Panama City-Bay County International Airport, the airport is operated by an independent authority.</p>	<p>No action. Looking at the definition for Parking Facilities, "<i>Represents major parking facilities in beaches, downtown areas, resort areas, airports, and other major travel destinations and transportation hubs in District 3...</i>" So yes, airports are covered, and to the extent that any of the listed traffic management facilities are interested, the monitoring information should be available. The architecture is neutral to who actually manages the parking facilities.</p>
	<p>re: Inventory by Entity: I do not see Okaloosa County Regional Airport listed. This is the commercial passenger airport in Okaloosa County, which shares a runway with Eglin AFB. I did not remember to look for it in all the market packages. Is this facility included in the regional architecture?</p>	<p>No action. All airport parking facilities are generalized into "Parking Facilities". If the airport needs to be included as a Multimodal Transportation Service Provider, then we need to be advised of the ITS interfaces that are important to the entity, in order to include it. For example, see how the <i>Tallahassee Regional Airport</i> and the <i>Pensacola Regional Airport</i> were included. Perhaps identifying which similar interfaces are required for the <i>Okaloosa County Regional Airport</i> would allow us to take a stab at this new element.</p>
<p>Bill Chambers (Turnpike District) 14 Sep 2000 10:45:11</p>	<p>The Regional ITS Architecture for the Turnpike District has been combined with the ITS architecture for the Florida Department of Transportation (FDOT) Central Office. Since the Central Office and the Turnpike District are two separate entities within the FDOT and are physically and functionally different, we recommend that the Turnpike District have its own separate architecture.</p>	<p>Okay. DONE.</p>
	<p>ATMS01 (Pompano and Turkey Lake) – In the ATMS01 Market Package Diagrams, the information flow between the Information Service Provider (ISP) shows a one-way flow of traffic information (i.e., a request for traffic information is sent to the Traffic Management Center [TMC] and traffic information is sent to the ISP). However, the TMC can also request traffic information that an ISP (e.g., SmartRoutes in South Florida) possesses, providing a two-way flow of traffic data.</p>	<p>Done. We will include <i>road network use</i> from the ISP to these two TMCs in the market package. This is already in the architecture (see AFDs between <i>Private Sector Traveler Info. Services</i> and <i>FDOT District Transportation Management Centers</i> or <i>Turnpike Traffic Management Center (Pompano)</i> or <i>Turnpike Traffic Management Center (Turkey Lake)</i>).</p>

	<p>ATMS02 (Pompano and Turkey Lake) – It is understood that the Turnpike intends to implement the functionality in the SunNav software to utilize transponders as traffic probes. However, such information that is taken at toll plazas will have to flow from the roadway equipment to the Office of Toll Operations (OTO), then to the TMC. Even if additional readers are placed in the field, then the market package diagram may function as shown (depending on the implementation), but would likely have to be integrated somehow into the OTO’s system.</p>	<p>No immediate action. Needs further discussion for closure.          Could put Office of Toll Operations (OTO) between Turnpike Field Equipment and Turnpike Traffic Management Center (Pompano) / (Turkey Lake), <u>but</u> this was discussed during the Tallahassee stakeholder meeting, and it was decided that the topology illustrated in the market package diagrams was accurate.</p>
	<p>ATMS02 (Wide Area Probe Surveillance) – The previous comment (comment #3) also applies here. In addition, an ISP (i.e., SmartRoutes) may also provide wide area traffic system information on incidents, travel time, link speed, etc.</p>	<p>No immediate action (see previous) re OTO. No action on ISP providing wide area traffic information. (See earlier comment.)</p>
	<p>ATMS04 (Pompano) – The Pompano TMC will have information exchange with the FDOT District 4 and FDOT District 6 TMCs.</p>	<p>No action.          This is already accomplished through the <i>Other Traffic Management Centers</i> terminator (shown in Market Package diagram ATMS07 - <i>Regional Traffic Control Turnpike</i>).</p>
	<p>6). ATMS06 (Pompano and Turkey Lake) – Does the “Media” terminator also include ISPs (e.g., SmartRoutes, AIRTIS/paging services)? If not, these need to be taken into account. Also, the Turnpike has awarded an RFP for Dynamic Message Signs (DMS) along the entire Turnpike, so the Turnpike expects to have DMS sometime next year. Since the HAR and DMS have been identified, should those be in one Roadway/Field Equipment box for existing field equipment, and another Roadway/Field Equipment box be for “other” field elements?</p>	<p>No action.          Media is defined as "The local newspaper, radio stations, and cable and broadcast TV stations that carry traveler information as a service to their clients" (see description under "media" in the inventory). ISPs are separately defined. How should they be taken into account?          DMS is included in Turnpike Field Equipment as "driver information systems" ("<i>Represents the roadside equipment (traffic controllers, detectors, traffic control devices, and driver information systems) operated by FDOT Turnpike District that monitor and controls traffic. This includes three existing HAR installations.</i>").          Architecturally, the interface for HAR and DMS between TMC and Roadway subsystems is identical.</p>
	<p>ATMS07 – With the two TMCs being “twins” and having operational redundancy, would there be some sort of data flow between the two TMCs for coordination? For example, a hurricane could be coming and the Pompano TMC evacuated.</p>	<p>No action.          As per the diagram, they exchange <i>traffic information coordination</i> and <i>traffic control coordination</i>.</p>

	ATMS08 (EM-TM Relationships) – Same comment as #6 above.	No action. All interfaces <u>are</u> the same?
	ATMS08 (Terminator Interfaces, Weather Service) – The Turnpike recommends that the Turnpike’s Emergency Operations Center (EOC) be included in receipt of weather service information and have communications between the EOC and TMC.	Done. Will include weather information flow from Weather Information Providers to FDOT Turnpike EOC. Connection between FDOT Turnpike EOC and Turnpike Traffic Management Center (Pompano)/(Turkey Lake) already exists.
	ATMS08 (Terminator Interfaces, Construction and Maintenance) – The Turnpike recommends that the Turnpike Public Information Office (PIO) be included.	Done. We will add a custom architecture flow for these elements from Construction and Maintenance to ISP called "PIO work zone status", with definition: "Information about an incident that is about to be created by the proposed start of road maintenance activity which will affect the flow of traffic on one or more lanes of a road or highway. Information contained is location, number of lanes closed, and duration of closure."
	ATMS10 (Turnpike SunPass System) – Does OTO factor in anywhere? Does the TMC factor into Toll Administration (e.g., the lifting of tolls)?	No action. Consensus was to leave OTO out of the ITS architecture. "Lifting of tolls" was never discussed by the stakeholders at the workshops. (And I am not sure what it means).
	ATMS10 (Toll Coordination/Reciprocity) – Does the TMC feed information into the Toll Administration? Where is OTO?	No action. Reciprocity does not seem to require the OTO's or TMCs participation (according to the stakeholders at the workshops). To make a change would require more information as to roles and specific information to be exchanged.
	ATMS16 – Do the Service Plazas and the Tandem Trailer Lots along the Turnpike get placed under “Parking Management”? The Service Plazas will be providing this type of information to the TMC.	Okay. DONE. Update Market Packages to reflect architecture at Service Plazas.
	ATMS17 (Catastrophic Event Evacuation) – The Governor is the entity responsible for authorizing a decision to waive tolls and/or reverse lanes, not the state EOC. The EOC’s role is to make the recommendation to waive tolls/reverse lanes.	Okay. DONE. Fix comment box to reflect real authority.
	Extended Market Package (Draw Bridge Management) – The Turnpike does not have any drawbridges on its system. Please delete this from the Turnpike’s architecture.	Okay. Done.

	All CVO slides except CVO10 – The Turnpike has no CVO components. Please remove these from the Turnpike’s architecture.	Okay. Done.
	CVO10 (Automatic Collision Notification System) - Where are the TMCs in this system? They should receive data from this system.	No action. TMCs get the information directly from Emergency Management subsystems (see ATMS08).
	ATIS1 (FDOT Statewide Public Information System and Turnpike Public Information Office) – same comment as #6 above.	See response above.
	All AD Slides – Most of these slides aren’t connected to the Turnpike’s system.	Okay. DONE.
Notes from Tallahassee Day 3 meeting.	Suggest that we break out Turnpike from the Statewide Services. Consensus (from Turnpike reps) that we should break out District 8 from Statewide Services. Their preference: <ul style="list-style-type: none"> <li>• Show integration with Turnpike in districts 4, 5, 6 (districts 1 and 7 in the future).</li> <li>• Create a separate entry point for Turnpike that focuses on its services.</li> </ul>	Okay. DONE.
	Concern about software deliverable. Will they be able to maintain the web site? Ans. Yes, we will deliver an executable.	Okay. Will be delivered on Jan 4, 2001.
	Central Maintenance is concerned with control of their databases and have been directed to remove these databases from the ITS Architecture. They are using the Enterprise Information Sharing System as their mechanism for access to. Ans. You will not lose control by keeping the databases in the architecture, but inclusion in the architecture is required to receive Highway Trust Funds.	No action.
	“Incident Database” that includes all conditions information surrounding an incident. Collect weather conditions, environmental conditions, and any other information that may be a contributing factor. Comment: In order to actually integrate this, we need to standardize what information is collected (e.g., RPCs/MPOs (TMCs?) will collect daily weather conditions for use in crash analysis.	No action.

	<p>Issue with “Surveillance” terminology in architecture flow names. Can we have a renaming table, add a comment to the architecture flow, or use a glossary to define/substitute terms. Contact Jim Johnson to review the construction data.</p>	<p>No action. We discussed that it is a contract requirement to use the National ITS Architecture as a framework for the Florida ITS Architecture, and it is required to comply with the Interim Guidance on (TEA-21) Architecture Conformity. A renaming table could be done but is assumed out-of-scope at this time.</p>
	<p>FHWA Southeast Regional Office in Atlanta will coordinate state to state. USDOT Southeast Region Regional Office (FAA coordination, FEMA coordination, FRA coordination).</p>	<p>Done. Add new Emergency Management Element, connect to <i>Other Public Safety Comm and Dispatch Centers</i> using <i>incident report</i> and <i>incident response coordination</i>.</p>
	<p>Real-time meteorological conditions. Collect roadside observations and provide this information. Sensor communications could be piggybacked on the call box system and/or the new statewide microwave.</p>	<p>Needs more discussion. Could add road weather arch flow from call boxes to FHP including environmental conditions, but is FHP the user of the data, or who/where? Could also continue arch flow from FHP/Emergency Management to Traffic Management and ISPs, but what did you really have in mind? Does this kind of a change require some consensus (because if it goes past the FHP it will cross at least one institutional boundary).</p>