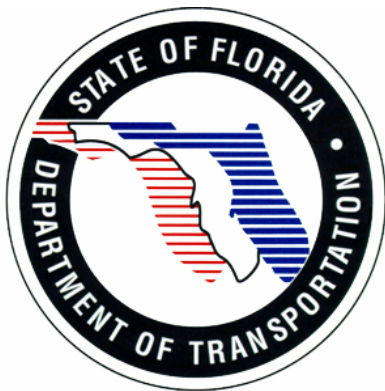


# Technical Memorandum

## Jacksonville and Southwest Florida Advanced Traveler Information System (ATIS) Project

### Southwest Florida ATIS Systems Engineering Management Plan

May 11, 2006  
Version 2



Prepared for:

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*Technical Memorandum  
Southwest Florida ATIS SEMP*

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## List of Acronyms

ATIS..... Advanced Traveler Information System  
CAD..... Computer-aided Dispatch  
FDOT..... Florida Department of Transportation  
ITN..... Invitation to Negotiate  
ITS..... Intelligent Transportation System  
IVR..... Interactive Voice Response  
PSEMP..... Project Systems Engineering Management Plan  
RITSA..... Regional Intelligent Transportation System Architecture  
SEMP..... Systems Engineering Management Plan  
SIC..... SunGuide<sup>SM</sup> ITS Checklist  
TEOO..... (FDOT) Traffic Engineering and Operations Office

## **1. Introduction**

This document lays out the various steps that will be taken to verify that the southwest Florida advanced traveler information system (ATIS) complies with the Florida Department of Transportation's (FDOT) systems engineering management procedures. Each of these items will be developed more fully, either as its own document or in conjunction with other materials.

## **2. Concept of Operations**

The first iteration of the concept of operations was contained in the *Southwest Florida 511 Concept Report*.<sup>1</sup> More details are contained in the *Southwest Florida 511 Concept of Operations*.<sup>2</sup> The latter document reflects the following topics, which are presented as summaries in this project systems engineering management plan (PSEMP):

### **2.1 History of the Southwest Florida ATIS Project**

The project began as a feasibility study in 2001 and resulted in the programming of \$3 million dollars in funding to achieve the goal of developing a working ATIS for the southwest Florida region, defined as Polk, Manatee, Sarasota, Charlotte, Lee, and Collier counties.

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<sup>1</sup> *Technical Memorandum – Jacksonville and Southwest Florida Advanced Traveler Information System Project – Southwest Florida 511 Concept Report, Version 2* (October 2005). FDOT Contract C-7772. Available online at [http://floridaitis.com/ATIS\\_Proj\\_Sup.htm](http://floridaitis.com/ATIS_Proj_Sup.htm).

<sup>2</sup> *Technical Memorandum – Jacksonville and Southwest Florida Advanced Traveler Information System Project – Final Southwest Florida 511 ATIS Concept of Operations, Version 3* (December 2005). FDOT Contract C-7772, Financial Project No. 414668-1-32-01. Available online at [http://floridaitis.com/ATIS\\_Proj\\_Sup.htm](http://floridaitis.com/ATIS_Proj_Sup.htm).

## 2.2 System Operations

From the management perspective, District 1 will be responsible for managing operations and automated data collection. Responsibility begins with data collection and ends when the data is entered into the data fusion system. The FDOT District 7 will be responsible for all aspects of the Tampa region except for the automated data collection on Interstates 4 and 75. The FDOT District 5 will be responsible for the statewide interactive voice response (IVR). Responsibility begins when data is received from the District 1 data fusion component. The FDOT Central Traffic Engineering and Operations Office (TEOO) will be responsible for oversight of the Intelligent Transportation Systems (ITS) Section’s implementation of the data fusion system and Web page. Responsibility begins when the operations contractor enters data and ends (for the telephone system) when the data is passed on to the statewide IVR system.

Table 2.1 shows how system operations will work.

**Table 2.1 – System Operations**

DATA TYPE	DATA SOURCE					
	LAW ENFORCEMENT CAD SYSTEMS	POLICE AND PUBLIC SAFETY SCANNER	CALLS TO AGENCIES / VENUES	EMAIL OR FAX FROM AGENCIES / VENUES	DATA COLLECTION INFRA-STRUCTURE	INTERNET
Unplanned Traffic Incidents (Crashes, etc.)	X	X	X		X	
Planned Incidents (Construction)			X	X		
Special Events (Sporting Events, Fairs, etc.)			X	X		X
Slowdowns and Delays			X		X	
Weather Information						X

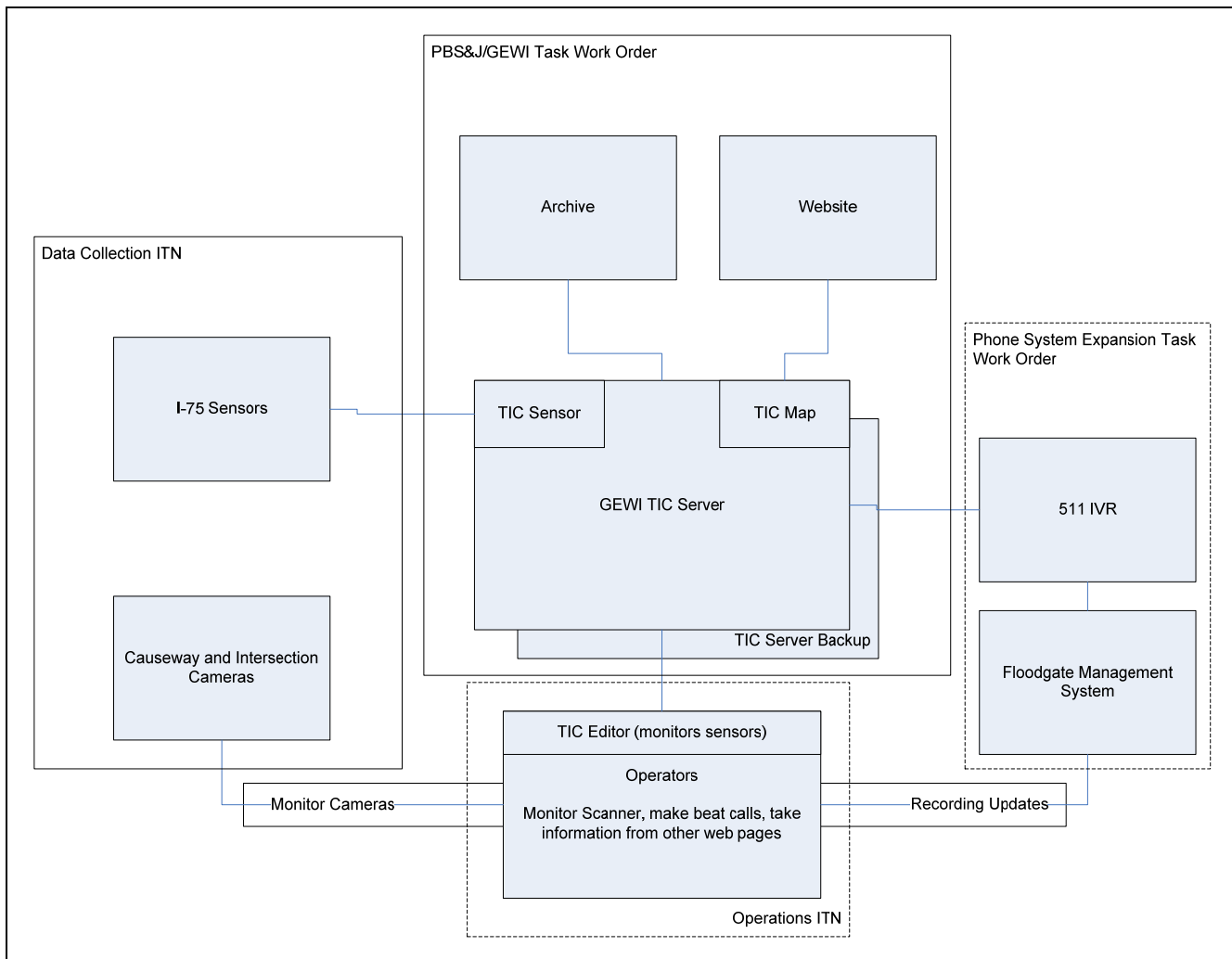
User experiences will depend on the users’ specific locations. A caller in either Polk, Manatee, or Sarasota County (i.e., the northern counties) will reach the Tampa 511 system. A caller from anywhere else in the state, except for the Miami and Orlando areas, will reach the statewide system, where they will have the ability to obtain more information on roads in Charlotte, Lee, and Collier counties (i.e., the southern counties) than would otherwise be available on the statewide 511 system. Callers in the Orlando or Miami areas will reach the specific system for their area, and will have the ability to return to the main statewide system and reach either the Tampa system or detailed information for the southern counties.

The project will also have a Web page for the southern counties that will link to and from the statewide 511 Web page. Information from the northern counties will be available on the Tampa 511 Web page.

### 2.3 System Architecture

Figure 2.1, first provided in the *Southwest Florida 511 Concept Report* referenced in *Section 2* herein, depicts the system architecture.

**Figure 2.1 – Southwest Florida 511 System Architecture**



## 2.4 Cost Estimates

Table 2.2, first submitted as part of the *Southwest Florida 511 Concept Report*, provides the initial cost estimates for the project. The estimates have been refined since initial development.

**Table 2.2 – Initial Cost Estimates**

PROJECT ELEMENT	RESPONSIBLE PARTY	FUNDING MECHANISM	COST
Southwest Florida 511 Operations and Marketing	FDOT District 1	Contract from Invitation to Negotiate (ITN)	\$1,075,000
Modifications to the Statewide 511 System (LogicTree)	FDOT District 5 and Central Office	Fund transfer to District 5	\$365,000
PBS&J Task Work Order (Data Fusion Engine / Web Page Development)	PBS&J	Task Work Order	\$335,000
Modifications to the Tampa 511 System (Traffic.com)	FDOT District 7	Fund transfer to FDOT District 7	\$225,000
Automated Data Collection	FDOT District 1	Contract from ITN	\$1,000,000

## 3. Requirements Development

Development of the requirements includes several subprocesses. First, based on the concept of operations, a set of high-level user requirements are developed. The first iteration of these requirements are defined in the *Southwest Florida 511 Concept Report* for this project. These requirements will be refined in conjunction with modifications to the concept of operations discussed above.

Once the high-level user requirements are complete, a requirements analysis will be performed to derive system requirements. Finally, a requirements allocation process will be performed on the system requirements. At each stage in this process, the requirements are maintained in a database for reference and access.

## **4. Program Management Plan**

The program management plan for the southwest Florida ATIS will include the risk management plan, master schedule, and master budget. The program management plan will describe the overall project structure, deliverables, and monitoring methods that will ensure successful completion of the project. It will guide the overall schedule and budget, as well as the project's technical aspects. The risk management plan that will be developed with the program management plan is intended to identify and manage the various risks associated with this project.

## **5. Interface Control Documentation**

The interface control documentation will specify the interface requirements to be met by the participating systems. It describes the concept of operations for the interface; defines the message structure and protocols that govern data interchange; and identifies the communication paths along which the data is expected to flow. The interfaces include:

- An interface between the automated data collection system and the southwest Florida data fusion system
- An interface between the automated data collection system and the Tampa 511 data fusion system
- An interface between the southwest Florida data fusion system and the statewide IVR system
- An interface between the southwest Florida data fusion system and the southwest Florida ATIS Web page

## **6. Acceptance Test Plan, Procedures, and Reports**

These documents relate to the acceptance testing of various components of the southwest Florida ATIS deployment. At a minimum, the following components will be tested:

- Automated data collection system
- Data fusion system
- Southwest Florida ATIS Web page
- Modifications to the statewide IVR system
- Modifications to the Tampa IVR system
- Interfaces described in *Section 5*

The acceptance test plan will provide more detail on which system components will be tested and the method of testing. The procedures will describe in detail how the tests will be conducted, with the intent of ensuring that all system requirements identified are tested. Finally, the reports will summarize the test results.

## 7. Other ITS Requirements

### 7.1 SunGuide<sup>SM</sup> ITS Checklist

The SunGuide<sup>SM</sup> ITS Checklist (SIC) will be completed as required by *Florida's Statewide Systems Engineering Management Plan (SEMP)* to ensure that the project SEMP and its related documents are complete.<sup>3, 4, 5</sup>

### 7.2 Identification of Project Elements for the Regional Architecture

This requirement will identify where elements of this project fit within the regional ITS architecture (RITSA).<sup>6</sup>

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<sup>3</sup> SunGuide is a service mark of the Florida Department of Transportation. More information regarding the FDOT SunGuide project is available online at <http://sunguide.datasys.swri.edu/>.

<sup>4</sup> The SIC was developed as part of the FDOT SEMP Project. The form is referenced as *Appendix A* in *Florida's Statewide SEMP* and a copy of the form is available online at <http://floridaitis.com/SEMP/Index.htm>.

<sup>5</sup> *Deliverable 1-10: Technical Memorandum – Florida's Statewide Systems Engineering Management Plan, Version 2* (March 2005). FDOT Contract C-7772. Available online at <http://floridaitis.com/SEMP/Index.htm>.

<sup>6</sup> The RITSAs were updated as part of the 2005 Florida Statewide and Regional ITS Architectures Update. More information regarding this update is available online at <http://www.consystem.com/> under the Florida Statewide Update link.