

## Technical Memorandum



# Florida Statewide Intelligent Transportation System Architecture Update Project

## Quality Assurance/Quality Control Documentation

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## List of Acronyms and Abbreviations

CFR.....	Code of Federal Regulations
FDOT .....	Florida Department of Transportation
FHWA.....	Federal Highway Administration
FTE .....	Florida's Turnpike Enterprise
ITS.....	Intelligent Transportation Systems

# 1 Introduction

## 1.1 Purpose

The purpose of this document is to identify all documentation, databases, and web sites developed or updated for the Florida Statewide Intelligent Transportation Systems (ITS) Architecture update program. This document will summarize the process used to update the architecture, along with the contents of the documents, databases, and web sites, and identify where each document may be found.

## 1.2 ITS Architecture Update Process

The update of the Florida Statewide ITS Architecture program, conducted during 2014 and 2015, generated four types of outputs:

- Florida Statewide ITS Architecture web pages
- Turbo Architecture Database
- Customized Service Package Diagrams
- ITS Architecture Documents

As part of the architecture updates, ConSysTec led stakeholder discussions regarding the transportation services being provided, or being planned for, in each of the Florida Department of Transportation (FDOT) Districts as well as Florida's Turnpike Enterprise (FTE) and for statewide services. This was a consensus review of the architectures based upon review of ITS Architecture web sites, relying on a Turbo Architecture database and a set of customized service package diagrams. Each District, the FTE, and the stakeholders responsible for the ITS statewide services followed the same process.

First, stakeholders were interviewed. The results of the interviews were documented and validated by the stakeholders, and the Turbo Architecture database and customized Service Package diagrams were updated. Next, these documents were reviewed at an ITS architecture workshop, held in each respective region, including for the FTE and Statewide Services architectures. Using the additional inputs from the ITS Architecture workshops, a draft web site was generated for each regional ITS architecture based on the information contained in the updated Turbo Architecture database and updated customized Service Package diagrams.

Stakeholders in each region were provided with the address of their draft ITS architecture web site and invited to provide comments on their portions of the ITS architecture. In addition, stakeholders were provided with a short guide to find their respective portions of the draft architecture. Comments received during this review

period were collected and stored in a comments log, along with a resolution to each comment from the ITS architecture update team. Finally, these comments were incorporated into a final ITS architecture web site.

In addition, the project team created an ITS architecture document for each regional ITS architecture. These documents serve three purposes:

- Define the portions of the regional ITS architecture in accordance with the Federal Highway Administration's (FHWA) Final Rule 23 Code of Federal Regulations (CFR) 940;
- Explain what the portions of the regional ITS architecture represent for stakeholders; and
- Explain how the regional ITS architecture can be used for support of planning and project development activities.

In addition, each ITS architecture document contains an appendix mapping the regional ITS architecture to Rule 23 CFR 511, a federal requirement on providing real-time traffic and travel conditions on highways. Rule 511 requires that "all states and regions evaluate their regional ITS architecture to determine whether the regional ITS architecture explicitly address real-time highway and transit information needs and the methods needed to meet such needs." To meet this requirement, each document specifically maps out the portions of the regional ITS architecture that support the Data Exchange Format Specifications provided by the FHWA in order to meet this requirement.

At the end of the Florida Statewide ITS Architecture update process, the ITS Architecture web sites were again compared and updated a final time to ensure consistency with the adjacent and overlapping (statewide services) regional ITS architectures. In addition, a ConSysTec staff member who had not previously worked on this project conducted a formal review (based on the "ITS Architecture Assessments" conducted by the United States Department of Transportation National ITS Architecture Team) of each regional ITS architecture to ensure consistency with Rule 940 as well as to ensure architecture quality. Each respective ITS architecture web site was updated a final time using the results of these architecture checklists and collected comments as inputs.

## 2 Identifying Controlled Documents

Criteria for documenting the quality assurance process consist of establishing what the controlled documents are, where they are kept, and how the integrity of the document is maintained. This section details the controlled documents for the Florida Statewide ITS Architecture Update.

### ***2.1.1 Controlled Documents/Files***

Previous versions of the Florida Statewide ITS Architecture were based on a single Turbo Architecture database. Based on comments from the FHWA, it was determined that for this update of the Florida Statewide ITS Architecture, each respective regional ITS architecture should have a distinct Turbo Architecture database, including regional projects.

In addition to a Turbo Architecture database, each architecture is also described by a set of customized service package diagrams created in Microsoft Visio. The set of customized service package diagrams for each regional ITS architecture is consistent with each region's respective Turbo Architecture database based on proprietary software developed by ConSysTec.

Each regional ITS architecture is also presented in an ITS architecture web site, hosted at [www.consyntec.com](http://www.consyntec.com). Each web site was developed based on the underlying information found in each region's Turbo Architecture database and customized set of service package diagrams. The ITS architecture web pages represent a holistic view of each regional ITS architecture and are designed to present a user-friendly view of the information contained in each regional ITS architecture.

Finally, each regional ITS architecture is represented by a regional ITS architecture document. These documents are not meant to contain the totality of the information of each regional ITS architecture, but rather explain the portions of the ITS architecture on the respective web site, how the regional ITS architecture is to be used, and how each regional ITS architecture meets the requirements of Rule 940.

Therefore, the controlled documents/files are:

- Eight Turbo Architecture databases, one for each regional ITS architecture;
- Eight Microsoft Visio files detailing customized service package diagrams, one for each regional ITS architecture;
- Eight ITS architecture sets of hyperlinked web pages, one set for each regional ITS architecture; and
- Eight regional ITS architecture documents, one for each regional ITS architecture.

### ***2.1.2 Document Integrity***

The controlled documents were edited and updated by a single ConSysTec staff member through the entirety of the Florida Statewide Regional ITS Architecture update process. All changes to the ITS architecture documents and files were made by the same staff member.

### *2.1.3 Location of the Controlled Documents*

ConSysTec stores the controlled documents in a central repository on their ftp server. The files may be accessed for each respective ITS architecture through the following ftp links:

- District 1: [www.consystemec.com/florida/district1.zip](http://www.consystemec.com/florida/district1.zip)
- District 2: [www.consystemec.com/florida/district2.zip](http://www.consystemec.com/florida/district2.zip)
- District 3: [www.consystemec.com/florida/district3.zip](http://www.consystemec.com/florida/district3.zip)
- District 4 and 6: [www.consystemec.com/florida/district46.zip](http://www.consystemec.com/florida/district46.zip)
- District 5: [www.consystemec.com/florida/district5.zip](http://www.consystemec.com/florida/district5.zip)
- District 7: [www.consystemec.com/florida/district7.zip](http://www.consystemec.com/florida/district7.zip)
- FTE: [www.consystemec.com/florida/FTE.zip](http://www.consystemec.com/florida/FTE.zip)
- Statewide: [www.consystemec.com/florida/statewide.zip](http://www.consystemec.com/florida/statewide.zip)

Each archived file (.zip) contains a set of the controlled documents for each respective regional ITS architecture. This includes each regional Turbo Architecture database, each set of customized service package diagrams, each regional ITS architecture document, and a copy of each regional ITS architecture top level web page. Although these files are contained in an archive format, they are quite large and may take some time to download.

In addition to the above ftp archives, each regional ITS architecture web site is accessible from the ConSysTec homepage, at [www.consystemec.com](http://www.consystemec.com) by following the link to the "Florida Statewide Update."

Each regional ITS architecture web site contains a "project documents" web page, accessible through the "resources" tab on the menu along the top of each web page. Each Project Documents web page contains a copy of the Turbo Architecture database and regional ITS architecture document for each respective regional ITS architecture. This page also contains a copy of the presentation made at each respective regional ITS architecture workshop as well as the comments log describing each comment submitted (and comment resolution) for each regional ITS architecture during the stakeholder review period.