SunGuide®:

Software Development Plan

SunGuideSMD-SDP-13.0.0 (Final)

Prepared for:

Florida Department of Transportation
Traffic Engineering and Operations Office
605 Suwannee Street, M.S. 90
Tallahassee, Florida 32399-0450
(850) 410-5600

January 30, 2015

Document Control Panel			
File Name:	SunGuideSMD-SDP-13 0 0(Final).docx		
File Location:	SunGuide CM Repository		
	Name	**Initial**	**Date**
Created By:	Robert Heller	RWH	July 16, 2010
Reviewed By:	Tucker Brown	TJB	July 20, 2010
	Ken Irvin	KDI	July 20, 2010
	Tucker Brown	TJB	August 12, 2010
	Ken Irvin	KDI	August 12, 2010
	Roger Strain	RLS	September 14, 2010
	Ken Irvin	KDI	September 15, 2010
	Ken Irvin	KDI	November 10, 2010
	Ken Irvin	KDI	November 11, 2010
	Ken Irvin	KDI	July 18, 2011
	Josh Johnson	JSJ	January 6, 2012
	Robert Heller	RWH	January 23, 2012
	Josh Johnson	JSJ	January 24, 2012
	Tucker Brown	TKB	July 18, 2012
	Josh Johnson	JSJ	July 19, 2012
	Josh Johnson	JSJ	June 3, 2014
Modified By:	Robert Heller	RWH	August 12, 2010
	Tucker Brown	TJB	August 23, 2010
	Robert Heller	RWH	September 14, 2010
	Tucker Brown	TJB	November 3, 2010
	Tucker Brown	TJB	November 10, 2010
	Robert Heller	RWH	July 18, 2011
	Tucker Brown	TJB	January 4, 2012
	Tucker Brown	TJB	January 18, 2012
	Robert Heller	RWH	July 18, 2012
	Tucker Brown	TJB	May 28, 2014
	Tucker Brown	TJB	January 27, 2015
Completed By:			

Table of Contents

Page

Table of Contents

1. SCOPE 1
1.1 Document Identification 1
1.2 Project Overview 1
1.3 Related Documents 2
1.4 Contacts 3
2. PROJECT BASELINE ITEMS 4
2.1 LOA001 Baseline 4
2.1.1 LOA001 Baseline Items 4
2.1.2 LOA001 Baseline Documents 5
2.2 LOA002 Baseline 6
2.3 LOA003 Baseline 7
2.3.1 LOA003 Baseline Items 7
2.3.2 LOA003 Baseline Documents 7
2.4 LOA004 Baseline 8
2.4.1 LOA004 Baseline Items 8
2.4.2 LOA004 Baseline Documents 8
2.5 LOA005 Baseline 8
2.5.1 LOA005 Baseline Items 8
2.5.2 LOA005 Baseline Documents 9
2.6 LOA006 Baseline 9
2.6.1 LOA006 Baseline Items 9
2.6.2 LOA006 Baseline Documents 9
2.7 LOA007 Baseline 10
2.7.1 LOA007 Baseline Items 10
2.7.2 LOA007 Baseline Documents 11
2.8 LOA008 Baseline 12
2.8.1 LOA008 Baseline Items 12
2.8.2 LOA008 Baseline Documents 12
2.9 LOA009 Baseline 12
2.9.1 LOA009 Baseline Items 12
2.9.2 LOA009 Baseline Documents 12
2.10 LOA010 Baseline 13
2.10.1 LOA010 Baseline Items 13
2.10.2 LOA010 Baseline Documents 13
2.11 LOA011 Baseline 13
2.11.1 LOA011 Baseline Items 13
2.11.2 LOA011 Baseline Documents 14
2.12 LOA012 Baseline 14

2.12.1 LOA012 Baseline Items 14
2.12.2 LOA012 Baseline Documents 14
2.13 LOA013 Baseline 15
2.13.1 LOA013 Baseline Items 15
2.13.2 LOA013 Baseline Documents 15
2.14 LOA014 Baseline 15
2.14.1 LOA014 Baseline Items 15
2.14.2 LOA014 Baseline Documents 16
3. PROJECT MANAGEMENT 17
3.1 Work Breakdown Structure (WBS) 17
3.1.1 LOA001 WBS 17
3.1.2 LOA002 WBS 17
3.1.3 LOA003 WBS 17
3.1.4 LOA004 WBS 18
3.1.5 LOA005 WBS 18
3.1.6 LOA006 WBS 19
3.1.7 LOA007 WBS 19
3.1.8 LOA008 WBS 20
3.1.9 LOA009 WBS 20
3.1.10 LOA010 WBS 21
3.1.11 LOA011 WBS 22
3.1.12 LOA012 WBS 22
3.1.13 LOA013 WBS 23
3.1.14 LOA014 WBS 24
3.2 Project Schedule 24
3.2.1 LOA001 Schedule 24
3.2.2 LOA002 Release 5.0 Installation Schedule 24
3.2.3 LOA003 INRIX Data Enhancement, Orlando-Orange County Expressway Authority (OOCEA), and Pensacola SunGuide Deployments 24
3.2.4 LOA004 Road Ranger Smart Phone Application, DMS Multithreading, EM Location Publish, Transcore Driver Update, DMS Miles Ahead 24
3.2.5 LOA005 IntelliDrive Application Development 24
3.2.6 LOA006 Schedule 25
3.2.7 LOA007 SQL Server Support, DMS NTCIP Version 2 Support, AVI Algorithm Enhancement, and Travel Time Scheduling Development 25
3.2.8 LOA008 Schedule 25
3.2.9 LOA009 SunGuide/Lonestar Unification, Nokia, ONVIF, Installer Enhancements, Activu 25
3.2.10 LOA010 Schedule 25
3.2.11 LOA011 RWIS NTCIPv2 and v3, RWIS Alerting, Beacon Management 25
3.2.12 LOA012 Connected Vehicle Demonstrations at TERL 25
3.2.13 LOA013 Schedule 25
3.2.14 LOA014 RWIS NTCIPv2 and v3, RWIS Alerting, Beacon Management 25
3.3 Project Plan Revisions 25

4. ENGINEERING PLAN..... 26
4.1 Environment and Resources..... 26
4.1.1 Project Resources..... 26
4.1.2 Developer Resources..... 26
4.2 LOA001 Support and Maintenance..... 26
4.2.1 San Antonio Staff Activities..... 26
4.2.2 Florida Based Staff Activities..... 29
4.3 General Software Development Lifecycle (SDLC)..... 29
4.3.1 Concept of Operations..... 29
4.3.2 Requirements Analysis..... 29
4.3.3 Design..... 29
4.3.4 Development and Unit Testing..... 30
4.3.5 Integration Testing..... 30
4.3.6 Acceptance Testing..... 30
4.3.7 IVV & Deployment..... 31
4.4 LOA003 INRIX Development..... 31
4.4.1 Minor Development SDLC..... 31
4.4.2 INRIX Development Review Plan..... 32
4.5 LOA004 Road Ranger Smart Phone Application Development..... 33
4.5.1 Minor Development SDLC..... 33
4.5.2 LOA004 Development Review Plan..... 34
4.6 LOA005 IntelliDrive Development..... 36
4.6.1 Moderate Development SDLC..... 36
4.6.2 LOA005 Development Review Plan..... 37
4.7 LOA006 Support and Maintenance..... 39
4.7.1 On-Call Support Staff..... 40
4.7.2 Software Issue Support (Footprints Support)..... 40
4.7.3 Operational and Configuration Support..... 40
4.8 LOA007 SQL Server Support, AVI Algorithm Enhancement, DMS NTCIP Version 2 Support, Travel Time Scheduling..... 41
4.8.1 Moderate Development SDLC..... 41
4.8.2 LOA007 Development Review Plan..... 42
4.9 LOA008 Support and Maintenance..... 46
4.9.1 On-Call Support Staff..... 46
4.9.2 Software Issue Support (Footprints Support)..... 46
4.9.3 Operational and Configuration Support..... 46
4.10 LOA009 SunGuide/Lonestar Unification, Nokia, ONVIF, Installer Enhancements..... 47
4.10.1 Minor Development SDLC..... 47
4.10.2 LOA009 Development Review Plan..... 48
4.11 LOA010 Support and Maintenance..... 49
4.11.1 On-Call Support Staff..... 49
4.11.2 Software Issue Support (Footprints Support)..... 50
4.11.3 Operational and Configuration Support..... 50
4.12 LOA011 RWIS NTCIPv2 and v3, RWIS Alerting, Beacon Management..... 50

4.12.1 Minor Development SDLC 50
4.12.2 LOA011 Development Review Plan 51
4.13 LOA012 CV Demonstrations at TERL 53
4.13.1 Minor Development SDLC 53
4.13.2 LOA012 Development Review Plan 54
4.14 LOA013 Support and Maintenance 56
4.14.1 On-Call Support Staff 56
4.14.2 Software Issue Support (Footprints Support) 56
4.14.3 Operational and Configuration Support 56
4.15 LOA014 Release 6.2 (Various Enhancements) 56
4.15.1 Minor Development SDLC 56
4.15.2 LOA014 Development Review Plan 57
5. NOTES 60

List of Attachments

ATTACHMENT A	LOA001 Schedule
ATTACHMENT B	LOA002 Schedule Release 5.0 Deployment
ATTACHMENT C	LOA003 Schedule Release 5.0 Deployment for OOCEA and Pensacola
ATTACHMENT D	LOA003 Schedule INRIX Development
ATTACHMENT E	LOA004 Schedule ROAD RANGER SMART PHONE APPLICATION Development
ATTACHMENT F	LOA004 Schedule ENHANCEMENTS Development
ATTACHMENT G	LOA005 Schedule INTELLIDRIVE Development
ATTACHMENT H	LOA007 Schedule SQL SERVER SUPPORT Development
ATTACHMENT I	LOA009 Schedule UNIFICATION Development
ATTACHMENT J	LOA0011 Schedule RWIS ALERTING Development
ATTACHMENT K	LOA0012 Schedule CONNECTED VEHICLE TERL DEMO Development
ATTACHMENT L	LOA0014 Schedule RELEASE 6.2 ENHANCEMENTS

List of Tables

Page

Table 2-1 – Project Baseline Items 4
Table 2-2 – Project Baseline Documents 5
Table 2-3 – LOA003 Baseline Items 7
Table 2-4 – LOA003 Baseline Documents 7
Table 2-5 – LOA004 Baseline Items 8
Table 2-6 – LOA004 Baseline Documents 8
Table 2-7– LOA005 Baseline Items 9
Table 2-8 – LOA005 Baseline Documents 9
Table 2-9 – LOA006 Baseline Documents 10
Table 2-10 – Project Baseline Items 10
Table 2-11 – Project Baseline Documents 11
Table 2-12 – Project Baseline Documents 12
Table 2-13 – Project Baseline Items 12
Table 2-14 – Project Baseline Documents 12
Table 2-15 – Project Baseline Documents 13
Table 2-16 – Project Baseline Items 13
Table 2-17 – Project Baseline Documents 14
Table 2-18 – Project Baseline Items 14
Table 2-19 – Project Baseline Documents 14
Table 2-20 – Project Baseline Documents 15
Table 2-21 – Project Baseline Items 15
Table 2-22 – Project Baseline Documents 16
Table 4-1 – Telephone Response Times 27
Table 4-2 – Non-Telephone Response Times 28
Table 4-3 – LOA003‘Minor’ Development Waterfall SDLC Activities and Deliverables 31
Table 4-4 – LOA003 Work Product Review Plans 32
Table 4-5 – LOA004 ‘Minor’ Development Waterfall SDLC Activities and Deliverables 34
Table 4-6 – LOA004 Work Product Review Plans 35
Table 4-7 – LOA005 ‘Moderate” Development Waterfall SDLC Activities and Deliverables ... 36
Table 4-8 – LOA005 Work Product Review Plans 37
Table 4-9 – LOA007 “Moderate” Development Waterfall SDLC Activities and Deliverables... 41
Table 4-10 – LOA007 Work Product Review Plans 42
Table 4-11 – LOA009 ‘Minor” Development Waterfall SDLC Activities and Deliverables 47
Table 4-12 – LOA009 Work Product Review Plans 48
Table 4-13 – LOA011 ‘Minor” Development Waterfall SDLC Activities and Deliverables 50
Table 4-14 – LOA011 Work Product Review Plans 51

Table 4-15 – LOA012 ‘Minor” Development Waterfall SDLC Activities and Deliverables 53
Table 4-16 – LOA012 Work Product Review Plans 54
Table 4-17 – LOA014 ‘Minor” Development Waterfall SDLC Activities and Deliverables 56
Table 4-18 – LOA014 Work Product Review Plans 57

List of Figures

Page

Figure 1 – High-Level Architectural Concept 2

List of Acronyms

AVLRR.....Automatic Vehicle Location Road Ranger
C2C.....Center to Center
CAP.....Corrective Action Plan
CCTV.....Closed Circuit Television
CM .....Configuration Management
CMP .....Configuration Management Plan
CONOPS.....Concept of Operations
COO .....Concept of Operations
DB.....Databus
DBDD .....Database Design Document
DCP.....Data Collection Process
DMS.....Dynamic Message Sign
DOT .....Department of Transportation
EM.....Event Management
FAT.....Factory Acceptance Test
FDOT .....Florida Department of Transportation
FL-ATIS.....Florida-Advanced Traveler Information System
HAR .....Highway Advisory Radio
I595PPP.....I-595 Private Public Partnership
ICD.....Interface Control Document
IDE.....Integrated Development Environment
IDS .....Incident Detection System
IMS .....Inventory Management System
IN .....Installation Notes
IP.....Internet Protocol
ITS.....Intelligent Transportation Systems
LOA .....Letter of Authorization
MAS.....Message Arbitration System
MDX .....Miami Dade Expressway Authority
MSDN.....Microsoft Developer Network
NTCIP.....National Transportation Communication for ITS Protocol
NTP.....Notice to Proceed
PM.....Project Manager
PPP.....Public Private Partnership
PS .....Pricing Subsystem
PSP.....Project Staffing Plan
PTZ .....Pan Tilt Zoom
QA.....Quality Assurance
QAP.....Quality Assurance Plan
ReqPro.....Requisite Pro
RMP .....Risk Management Plan
RR .....Road Rangers
RS.....Reporting Subsystem
RWIS.....Roadway Weather Information Station

SB.....Safety Barrier
SDD.....Software Design Document
SDLC .....Software Development Lifecycle
SDP .....Software Development Plan
SICP .....Software Integration Case Procedures
SIP.....Software Integration Plan
SMP.....Subcontractor Management Plan
SPM.....Software Project Manager
SQL .....Structured Query Language
SRS .....Software Requirements Specification
SSP.....Software Security Plan
SUM.....Software User Manual
SWA……..…Standard Written Agreement
SwRI .....Southwest Research Institute®
TERL.....Test Engineering Research Laboratory
TMC.....Traffic Management Center
TP.....Training Plan
TSS.....Traffic Sensor Subsystem
TvT.....Travel Time
TX .....Texas
TxDOT.....Texas Department of Transportation
VDD.....Version Description Document
VS .....Video Switching
VSL.....Variable Speed Limit
VW.....Video Wall
WBS.....Work Breakdown Structure
XML.....eXtensible Markup Language

Revision History

Revision	Date	Changes
LOA 1	July 21, 2010	Initial Release (DRAFT).
1.0.0 (Working Final)	August 13, 2010	Revised in response to FDOT comments.
3.0.0	September 15, 2010	Added LOA002 WBS & Schedule Added LOA003 WBS, Schedule, SDLC, Review Plan
4.0.0	November 3, 2010	Added LOA004 WBS, Schedule
5.0.0 (Draft)	November 10, 2010	Added LOA005 WBS, Schedule
6.0.0 (Draft)	July 18, 2011	Added LOA006 WBS and updated support description.
7.0.0 (Draft)	January 6, 2012	Added LOA007 WBS, Schedule
7.0.0	January 24, 2012	Revised in response to FDOT comments.
8.0.0	July 18, 2012	Add LOA008
12.0.0 (Draft)	May 28, 2014	Added LOA009, LOA010, LOA011, LOA012
13.0.0 (Draft)	January 27, 2015	Added LOA13 and LOA14

1. SCOPE

1.1 Document Identification

This document serves as the Software Development Plan (SDP) for the SunGuide® Support, Maintenance and Development contract. This document describes the baseline items, the project management approach and the authorized activities. Other supporting project information is documented in the following deliverables:

- Project Staffing Plan (PSP)
- Configuration Management Plan (CMP)
- Quality Assurance Plan (QAP)
- Risk Management Plan (RMP)
- Subcontractor Management Plan (SMP)
- Software Security Plan (SSP)

The initial version addresses the support activities of LOA001, but also addresses development of SunGuide enhancements in a general manner. As additional Letters of Authorization (LOAs) are issued and the work scope expands, sections will be added to address those activities. It is expected that this document will be revised as Southwest Research Institute® (SwRI®) receives additional LOAs; it is not possible to address those future LOAs without knowing the specific content of them.

1.2 Project Overview

The Florida Department of Transportation (FDOT) SunGuide Support, Maintenance and Development Contract, contract number BDQ69, addresses the necessity of supporting, maintaining and performing enhancement development efforts to the SunGuide software. The SunGuide software was developed by the FDOT in a contract from October 2003 through June 2010. The SunGuide software is a set of Intelligent Transportation System (ITS) software that allows the control of roadway devices as well as information exchange across a variety of transportation agencies and is deployed throughout the state of Florida. The SunGuide software is based on ITS software available from the state of Texas, with significant customization and development of new software modules to meet the needs of the FDOT. Figure 1 provides a graphical view of the SunGuide software architecture:

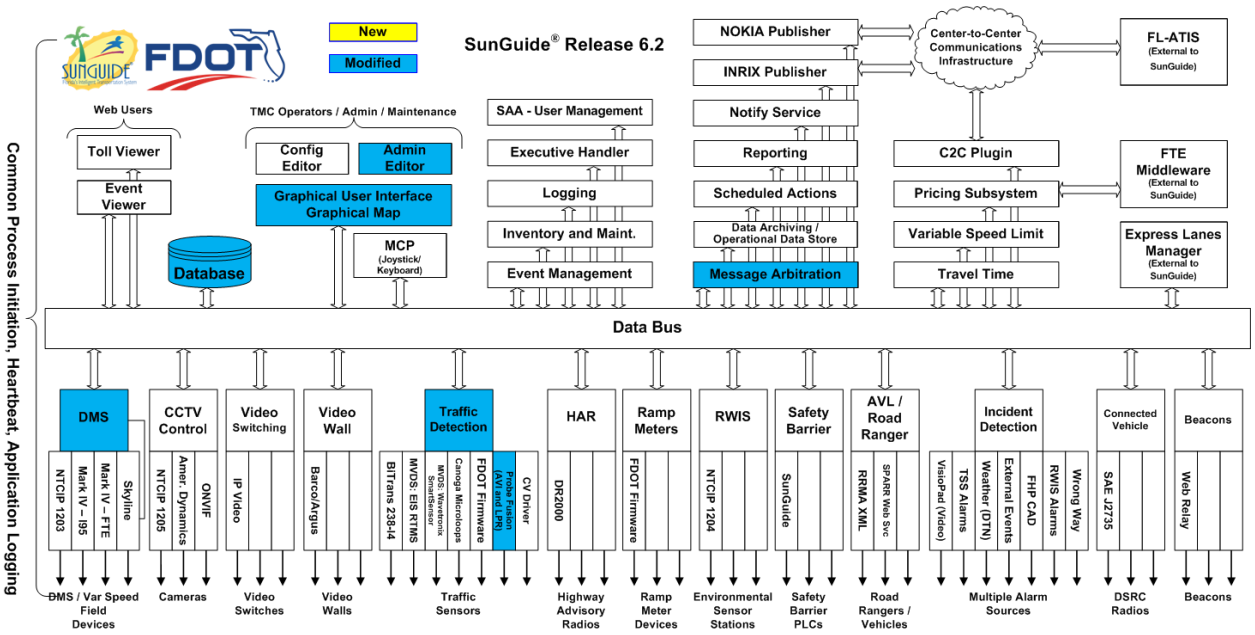


Figure 1 – High-Level Architectural Concept

1.3 Related Documents

Additional information regarding the SunGuide project can be found in the following documents and electronic publications:

- FDOT Scope of Services: *BDQ69, Standard Written Agreement for SunGuide Software Support, Maintenance, and Development, Exhibit A: Scope of Services.* July 1, 2010.
- Notice to Proceed: Letter to SwRI for BDQ69, July 1, 2010
- Letter of Authorization 001: Letter to SwRI for BDQ69, July 1, 2010.
- Letter of Authorization 002: Letter to SwRI for BDQ69, August 3, 2010.
- Letter of Authorization 003: Letter to SwRI for BDQ69, August 19, 2010.
- Letter of Authorization 004: Letter to SwRI for BDQ69, October 20, 2010.
- Letter of Authorization 005: Letter to SwRI for BDQ69, November 9, 2010.
- Letter of Authorization 006: Letter to SwRI for BDQ69, June 28, 2011
- Letter of Authorization 007: Letter to SwRI for BDQ69, December 22, 2011
- Letter of Authorization 008: Letter to SwRI for BDQ69, June 29, 2012
- Letter of Authorization 009: Letter to SwRI for BDQ69, May 30, 2013
- Letter of Authorization 010: Letter to SwRI for BDQ69, June 25, 2013
- Letter of Authorization 011: Letter to SwRI for BDQ69, January 3, 2014
- Letter of Authorization 012: Letter to SwRI for BDQ69, May 28, 2014
- Letter of Authorization 013, Letter to SwRI for BDQ69, July 1, 2014
- Letter of Authorization 014, Letter to SwRI for BDQ69, January 22, 2015
- Quality Assurance Plan: BDQ69, August 19, 2010
- SunGuide Project website: http://sunguidesoftware.com

1.4 Contacts

The following are contact persons for the SunGuide software project:

- Elizabeth Birriel, ITS Section, Traffic Engineering and Operations Office, elizabeth.birriel@dot.state.fl.us, 850-410-5606
- Derek Vollmer, FDOT SunGuide Project Manager, derek.vollmer@dot.state.fl.us, 850-410-5615
- Clay Packard, Atkins Project Manager, clay.packard@dot.state.fl.us, 850-410-5623
- David Chang, Atkins Project Advisor, David.Chang@dot.state.fl.us, 850-410-5622
- Robert Heller, SwRI Project Advisor, rheller@swri.org, 210-522-3824
- Tucker Brown, SwRI Project Manager, tbrown@swri.com, 210-522-3035
- Roger Strain, SwRI Software Project Manager, rstrain@swri.org, 210-522-6295

2. PROJECT BASELINE ITEMS

The following sections contain tables listing the baseline items and baseline documents for each category of baseline material. The tables also indicate, where appropriate, which items will be delivered to the customer, which items will be peer reviewed, which items will be placed under configuration management, and the estimated size of the baseline item.

2.1 LOA001 Baseline

2.1.1 LOA001 Baseline Items

Table 2-1 lists the baseline items that may be developed or updated during the project. Each LOA for development enhancement will identify specific baseline items that will be updated and new baseline items that will be created. All baseline items are deliverable to the FDOT.

Table 2-1 – Project Baseline Items

Baseline Item[1]	Current Version[2]
Admin Editor	5.0.3
Automated Vehicle Location/Road Ranger Driver	5.0.3
Automated Vehicle Location /Road Ranger Subsystem	5.0.3
Center-to-Center	5.0.3
Center-to-Center Collector	5.0.3
Center-to-Center Command Receiver	5.0.3
Center-to-Center Extractor	5.0.3
Center-to-Center Provider	5.0.3
Center-to-Center Publisher	5.0.3
Center-to-Center Subscriber	5.0.3
Closed Circuit Television Subsystem	5.0.3
Closed Circuit Television American Dynamics Driver	5.0.3
Closed Circuit Television NTCIP Driver	5.0.3
Config Editor	5.0.3
Data Archive Subsystem	5.0.3
Databus	5.0.3
Dynamic Message Sign Subsystem	5.0.3
Dynamic Message Sign Mark IV Driver (D4)	5.0.3
Dynamic Message Sign Mark IV Driver (FTE)	5.0.3
Dynamic Message Sign NTCIP Driver	5.0.3
Dynamic Message Sign Skyline Driver	5.0.3
Dynamic Message Sign Trailblazer Driver	5.0.3
Event Management Subsystem	5.0.3
Event Viewer	5.0.3
Executive Handler	5.0.3

[1] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

[2] Source code files are "versioned" with each new release.

Baseline Item[1]	Current Version[2]
Graphical User Interface	5.0.3
Highway Advisory Radio	5.0.3
Highway Advisory Radio DR 2000 Driver	5.0.3
Incident Detection Subsystem	5.0.3
Incident Detection External Events Driver	5.0.3
Incident Detection FHP CAD Driver	5.0.3
Incident Detection TSS Alarms Driver	5.0.3
Incident Detection VisioPad Driver	5.0.3
Incident Detection Weather Driver	5.0.3
Inventory and Management Subsystem	5.0.3
Message Arbitration Subsystem	5.0.3
Notify Service	5.0.3
Pricing Subsystem	5.0.3
Ramp Metering Subsystem	5.0.3
Ramp Metering FDOT Firmware Driver	5.0.3
Ramp Metering Firmware	5.0.3
Reporting Subsystem	5.0.3
Roadway Weather Information Station Subsystem	5.0.3
Roadway Weather Information Station NTCIP Driver	5.0.3
Safety Barrier Subsystem	5.0.3
Safety Barrier SunGuide Driver	5.0.3
Scheduled Actions Subsystem	5.0.3
Status Logger	5.0.3
Toll Viewer	5.0.3
Traffic Detection Subsystem	5.0.3
Traffic Detection Probe Fusion Driver (AVI & LPR)	5.0.3
Traffic Detection FDOT Firmware Driver	5.0.3
Traffic Detection RTMS Driver (Canoga, Wavetronix, EIS)	5.0.3
Traffic Detection BiTrans 238-I4 Driver	5.0.3
Travel Time Subsystem	5.0.3
Variable Speed Limit Subsystem	5.0.3
Video Switching Subsystem	5.0.3
Video Switching IP Driver	5.0.3
Video Wall Subsystem	5.0.3
Video Wall Barco-Argus Driver	5.0.3

2.1.2 LOA001 Baseline Documents

Table 2-2 lists the baseline documents that will be generated or updated during the project. All baseline documents are deliverable to the FDOT.

Table 2-2 – Project Baseline Documents

Document	Document Identifier	New / Update
Concept of Operations	SunGuide SMD-COO-x.y.z	New
Configuration Management Plan	SunGuide SMD-CMP-x.y.z	New
Database Design Document	SunGuide-DBDD- x.y.z	Update

Document	Document Identifier	New / Update
Installation Notes	SunGuide-IN-5.0.3	Update
Interface Control Document		
AVL RR	SunGuide-AVLRR-ICD-3.0.1	Update
Center to Center	SunGuide-C2C-ICD-4.0.11	Update
CCTV	SunGuide-CCTV-ICD- 3.0.1	Update
Databus	SunGuide-DB-CIM-1.0.01	Update
Databus	SunGuide-DB-PT-ICD-1.0.01	Update
DMS	SunGuide-DMS-ICD-3.0.1	Update
General	SunGuide-General-ICD-3.0.1	Update
Event Management	SunGuide-EM-ICD-3.0.1	Update
Highway Advisory Radio	SunGuide-HAR-ICD-1.0.01	Update
Incident Detection	SunGuide-IDS-ICD-4.2.0	Update
Inventory Management	SunGuide-IMS-ICD-1.0.01	Update
Message Arbitration	SunGuide-MAS-ICD- 3.0.1	Update
Pricing	SunGuide-PS-ICD-4.3.0	Update
Reporting	SunGuide-RS-ICD-3.0.1	Update
Safety Barrier	SunGuide-SB-ICD-1.0.01	Update
Traffic Sensor	SunGuide-TSS-ICD-4.1.0	Update
Travel Time	SunGuide-TvT-ICD-4.1.0	Update
Video Switching	SunGuide-VS-ICD-3.0.1	Update
Video Wall	SunGuide-VW-ICD-1.0.2	Update
Variable Speed Limit	SunGuide-VSL-ICD-3.0.1	Update
Output from Requisite Pro	SunGuide-ReqPro-x.y.x.zip	Update
Project Staffing Plan	SunGuide SMD-PSP-x.y.z	New
Quality Assurance Plan	SunGuide SMD-QAP-x.y.z	New
Risk Management Plan	SunGuide SMD-RMP-x.y.z	New
Software Design Document	SunGuide-SDD-5.0.0	Update
Software Development Plan	SunGuide SMD-SDP-x.y.z	New
Software Integration Case Procedure	SunGuide-SICP-5.0.0	Update
Software Integration Procedure	SunGuide-SIP-5.0.0	Update
Software Requirements Specification	SunGuide-SRS-5.0.0	Update
Software Security Plan	SunGuide SMD-SSP-x.y.z	New
Software User's Manual	SunGuide-SUM-5.0.1	Update
Subcontract Management Plan	SunGuide SMD-SMP-x.y.z	New
Training Plan and Training Materials	SunGuide-TP-	New
Version Description Document	SunGuide-VDD-5.0.3	Update

2.2 LOA002 Baseline

SwRI will not create new or modify existing baseline items or documents in response to LOA002.

2.3 LOA003 Baseline

2.3.1 LOA003 Baseline Items

Table 2-3 lists the baseline items that may be developed or updated in response to LOA002. All baseline items are deliverable to the FDOT.

Table 2-3 – LOA003 Baseline Items

Baseline Item[3]	Updated Version
Admin Editor	5.0.4
Center-to-Center	5.0.4
Center-to-Center Extractor	5.0.4
Center-to-Center Provider	5.0.4
Center-to-Center Publisher	5.0.4
Center-to-Center Subscriber	5.0.4
Data Archive Subsystem	5.0.4
Databus	5.0.4
Graphical User Interface	5.0.4
INRIX Center-to-Center Publisher	5.0.4 (New)
Travel Time Subsystem	5.0.4

2.3.2 LOA003 Baseline Documents

Table 2-4 lists the baseline documents that will be generated or updated in response to LOA003. All baseline documents are deliverable to the FDOT.

Table 2-4 – LOA003 Baseline Documents

Document	Document Identifier	New / Update
Installation Notes	SunGuide-IN-5.0.3	Update
Interface Control Document		
Center to Center	SunGuide-C2C-ICD-4.0.11	Update
Traffic Sensor	SunGuide-TSS-ICD-4.1.0	Update
Travel Time	SunGuide-TvT-ICD-4.1.0	Update
Output from Requisite Pro	SunGuide-ReqPro-x.y.x.zip	Update
Project Staffing Plan	SunGuideSMD-PSP-1.0.0	Update
Software Design Document	SunGuide-SDD-5.0.0	Update
Software Development Plan	SunGuideSMD-SDP-1.0.0	Update
Software Requirements Specification	SunGuide-SRS-5.0.0	Update
Software User's Manual	SunGuide-SUM-5.0.1	Update
Training Plan and Training Materials	SunGuide-TP-x.y.z	New
Version Description Document	SunGuide-VDD-5.0.3	Update

[3] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

2.4 LOA004 Baseline

2.4.1 LOA004 Baseline Items

Table 2-5 lists the baseline items that may be developed or updated in response to LOA004. All baseline items are deliverable to the FDOT.

Table 2-5 – LOA004 Baseline Items

Baseline Item[4]	Updated Version
Admin Editor	5.0.5
AVLRR Server Application for SPARR Application	5.0.5 (New)
AVL Android Application	5.0.5 (New)
Center-to-Center	5.0.5
DMS Subsystem	5.0.5
Event Management Subsystem	5.0.5
Probe Fusion Driver	5.0.5

2.4.2 LOA004 Baseline Documents

Table 2-6 lists the baseline documents that will be generated or updated in response to LOA004. All baseline documents are deliverable to the FDOT.

Table 2-6 – LOA004 Baseline Documents

Document	Document Identifier	New / Update
Installation Notes	SunGuide-IN-5.0.4	Update
Interface Control Document		
SPARR	SunGuide-C2C-ICD-5.0.4	New
Output from Requisite Pro	SunGuide-ReqPro-x.y.x.zip	Update
Project Staffing Plan	SunGuideSMD-PSP-4.0.0	Update
Software Design Document	SunGuide-SDD-5.0.0	Update
Software Development Plan	SunGuideSMD-SDP-4.0.0	Update
Software Requirements Specification	SunGuide-SRS-5.0.0	Update
Version Description Document	SunGuide-VDD-5.0.4	Update

2.5 LOA005 Baseline

2.5.1 LOA005 Baseline Items

Table 2-7 lists the baseline items that may be developed or updated in response to LOA005. All baseline items are deliverable to the FDOT.

[4] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

Table 2-7– LOA005 Baseline Items

Baseline Item[5]	Updated Version
Admin Editor	5.1
Center-to-Center Publisher	5.1
Event Management Subsystem	5.1
IntelliDrive Driver	5.1 (New)
IntelliDrive Subsystem	5.1 (New)
Operator Map	5.1

2.5.2 LOA005 Baseline Documents

Table 2-8 lists the baseline documents that will be generated or updated in response to LOA005. All baseline documents are deliverable to the FDOT.

Table 2-8 – LOA005 Baseline Documents

Document	Document Identifier	New / Update
Installation Notes	SunGuide-IN-5.1	Update
Interface Control Document		
C2C	SunGuide-C2C-ICD-5.1	Update
IntelliDrive	SunGuide-ID-ICD-5.1	New
Output from Requisite Pro	SunGuide-ReqPro-x.y.x.zip	Update
Project Staffing Plan	SunGuideSMD-PSP-5.0.0	Update
Software Design Document	SunGuide-SDD-5.1	Update
Software Development Plan	SunGuideSMD-SDP-5.1	Update
Software Integration Case Procedures	SunGuide-SICP-5.1	New
Software Integration Plan	SunGuide-SIP-5.1	New
Software Requirements Specification	SunGuide-SRS-5.1	Update
Software User Manual	SunGuide-SUM-5.1	Update
Version Description Document	SunGuide-VDD-5.1	Update

2.6 LOA006 Baseline

2.6.1 LOA006 Baseline Items

LOA006 baseline items are those currently in use by the project and result from activities of other LOAs.

2.6.2 LOA006 Baseline Documents

Table 2-9 lists the baseline documents that will be generated or updated in response to LOA006. All baseline documents are deliverable to the FDOT.

[5] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

Table 2-9 – LOA006 Baseline Documents

Document	Document Identifier	New / Update
Project Staffing Plan	SunGuideSMD-PSP-6.0.0	Update
Software Development Plan	SunGuideSMD-SDP-6.0.0	Update

2.7 LOA007 Baseline

2.7.1 LOA007 Baseline Items

Table 2-10 lists the baseline items that may be developed or updated during the project. Each LOA for development enhancement will identify specific baseline items that will be updated and new baseline items that will be created. All baseline items are deliverable to the FDOT.

Table 2-10 – Project Baseline Items

Baseline Item[6]	Current Version
Admin Editor	5.1
Automated Vehicle Location /Road Ranger Subsystem	5.1
Center-to-Center	5.1
Center-to-Center Publisher	5.1
Center-to-Center Subscriber	5.1
Closed Circuit Television Subsystem	5.1
Connected Vehicle Subsystem	5.1
Data Archive Subsystem	5.1
Dynamic Message Sign Subsystem	5.1
Event Management Subsystem	5.1
Graphical User Interface	5.1
Highway Advisory Radio	5.1
Incident Detection Subsystem	5.1
Inventory and Management Subsystem	5.1
Message Arbitration Subsystem	5.1
Notify Service	5.1
Pricing Subsystem	5.1
Ramp Metering Subsystem	5.1
Reporting Subsystem	5.1
Roadway Weather Information Station Subsystem	5.1
Safety Barrier Subsystem	5.1
Scheduled Actions Subsystem	5.1
Status Logger	5.1
Toll Viewer	5.1
Traffic Detection Subsystem	5.1
Traffic Detection Probe Fusion Driver (AVI & LPR)	5.1
Travel Time Subsystem	5.1

[6] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

Baseline Item[6]	Current Version
Variable Speed Limit Subsystem	5.1
Video Switching Subsystem	5.1
Video Wall Subsystem	5.1

2.7.2 LOA007 Baseline Documents

Table 2-11 lists the baseline documents that will be generated or updated during the project. All baseline documents are deliverable to the FDOT.

Table 2-11 – Project Baseline Documents

Document	Document Identifier	New / Update
ERWIN Database Model	SunGuide-DbModel-6.0	New
Installation Notes	SunGuide-IN-6.0	Update
Interface Control Document		
AVL RR	SunGuide-AVLRR-ICD-6.0	Update
Center to Center	SunGuide-C2C-ICD-6.0	Update
CCTV	SunGuide-CCTV-ICD-6.0	Update
Connected Vehicle	SunGuide-CVS-ICD-6.0	Update
Databus	SunGuide-DB-CIM-6.0	Update
DMS	SunGuide-DMS-ICD-6.0	Update
Event Management	SunGuide-EM-ICD-6.0	Update
Highway Advisory Radio	SunGuide-HAR-ICD-6.0	Update
Incident Detection	SunGuide-IDS-ICD-6.0	Update
Inventory Management	SunGuide-IMS-ICD-6.0	Update
Message Arbitration	SunGuide-MAS-ICD-6.0	Update
Pricing	SunGuide-PS-ICD-6.0	Update
Reporting	SunGuide-RS-ICD-6.0	Update
Safety Barrier	SunGuide-SB-ICD-6.0	Update
Traffic Sensor	SunGuide-TSS-ICD-6.0	Update
Travel Time	SunGuide-TvT-ICD-6.0	Update
Video Switching	SunGuide-VS-ICD-6.0	Update
Video Wall	SunGuide-VW-ICD-6.0	Update
Variable Speed Limit	SunGuide-VSL-ICD-6.0	Update
Output from Requisite Pro	SunGuide-ReqPro-6.0.zip	Update
Project Staffing Plan	SunGuideSMD-PSP-7.0.0	Update
Risk Management Plan	SunGuideSMD-RMP-7.0.0	Update
Software Development Plan	SunGuideSMD-SDP-7.0.0	Update
Software Integration Case Procedure	SunGuide-SICP-6.0.0	New
Software Integration Procedure	SunGuide-SIP-6.0.0	New
Software Requirements Specification	SunGuide-SRS-6.0.0	Update
Software User's Manual	SunGuide-SUM-6.0.0	Update
Version Description Document	SunGuide-VDD-6.0.0	Update

2.8 LOA008 Baseline

2.8.1 LOA008 Baseline Items

LOA008 baseline items are those currently in use by the project and result from activities of other LOAs.

2.8.2 LOA008 Baseline Documents

Table 2-12 lists the baseline documents that will be generated or updated in response to LOA008. All baseline documents are deliverable to the FDOT.

Table 2-12 – Project Baseline Documents

Document	Document Identifier	New / Update
Project Staffing Plan	SunGuideSMD-PSP-8.0.0	Update
Software Development Plan	SunGuideSMD-SDP-8.0.0	Update

2.9 LOA009 Baseline

2.9.1 LOA009 Baseline Items

Table 2-13 lists the baseline items that may be developed or updated during the project. Each LOA for development enhancement will identify specific baseline items that will be updated and new baseline items that will be created. All baseline items are deliverable to the FDOT.

Table 2-13 – Project Baseline Items

Baseline Item[7]	Current Version
Activu Driver	6.0
Databus	6.0
Executive Handler	6.0
FDOT Toolset (Installer, Configuration)	New
Nokia Publisher	New
ONVIF CCTV Driver	New
Status Logger	6.0
System Administration Application	New
Video Wall Subsystem	6.0

2.9.2 LOA009 Baseline Documents

Table 2-14 lists the baseline documents that will be generated or updated in response to LOA009. All baseline documents are deliverable to the FDOT.

Table 2-14 – Project Baseline Documents

Document	Document Identifier	New / Update
Interface Control Document		

[7] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

Document	Document Identifier	New / Update
Software Administration Application	SunGuide-SAA-ICD-9.0.0	New
Project Staffing Plan	SunGuideSMD-PSP-9.0.0	Update
Software Development Plan	SunGuideSMD-SDP-9.0.0	Update

2.10 LOA010 Baseline

2.10.1 LOA010 Baseline Items

LOA010 baseline items are those currently in use by the project and result from activities of other LOAs.

2.10.2 LOA010 Baseline Documents

Table 2-15 lists the baseline documents that will be generated or updated in response to LOA010. All baseline documents are deliverable to the FDOT.

Table 2-15 – Project Baseline Documents

Document	Document Identifier	New / Update
Project Staffing Plan	SunGuideSMD-PSP-10.0.0	Update
Software Development Plan	SunGuideSMD-SDP-10.0.0	Update

2.11 LOA011 Baseline

2.11.1 LOA011 Baseline Items

Table 2-16 lists the baseline items that may be developed or updated during the project. Each LOA for development enhancement will identify specific baseline items that will be updated and new baseline items that will be created. All baseline items are deliverable to the FDOT.

Table 2-16 – Project Baseline Items

Baseline Item[8]	Current Version
Beacon Management Subsystem	New
Event Management	6.0
IDS RWIS Alert Driver	New
IDS Subsystem	6.0
Operator Map	6.0
RWIS NTCIP Driver	6.0
RWIS NTCIP Simulator	New
RWIS Subsystem	6.0
WebRelay Driver for Beacons	New

[8] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

2.11.2 LOA011 Baseline Documents

Table 2-17 lists the baseline documents that will be generated or updated in response to LOA011. All baseline documents are deliverable to the FDOT.

Table 2-17 – Project Baseline Documents

Document	Document Identifier	New / Update
Interface Control Document		
Beacon Management Subsystem	SunGuide-BMS-ICD-11.0.0	New
Event Management	SunGuide-EM-ICD-11.0.0	Update
IDS Subsystem	SunGuide-IDS-ICD-11.0.0	Update
RWIS Subsystem	SunGuide-RWIS-ICD-11.0.0	Update
Project Staffing Plan	SunGuideSMD-PSP-11.0.0	Update
Software Development Plan	SunGuideSMD-SDP-11.0.0	Update

2.12 LOA012 Baseline

2.12.1 LOA012 Baseline Items

Table 2-10 lists the baseline items that may be developed or updated during the project. Each LOA for development enhancement will identify specific baseline items that will be updated and new baseline items that will be created. All baseline items are deliverable to the FDOT.

Table 2-18 – Project Baseline Items

Baseline Item[9]	Current Version
CVS Subsystem	6.0
Emergency Braking Application	New
Emergency Vehicle Alert Application	New
J2735 Driver	6.0
Mayday Message Relay Application	New
Operator Map	6.0
Over Height Detection and Alert Application	New
Wrong Way Driving using Basic Safety Messages Application	New

2.12.2 LOA012 Baseline Documents

Table 2-9 lists the baseline documents that will be generated or updated in response to LOA012. All baseline documents are deliverable to the FDOT.

Table 2-19 – Project Baseline Documents

Document	Document Identifier	New / Update
Interface Control Document		
Connected Vehicle Subsystem	SunGuide-CVS-ICD-12.0.0	Update

[9] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

Document	Document Identifier	New / Update
Project Staffing Plan	SunGuideSMD-PSP-12.0.0	Update
Project Staffing Plan	SunGuideSMD-PSP-12.0.0	Update
Software Development Plan	SunGuideSMD-SDP-12.0.0	Update

2.13 LOA013 Baseline

2.13.1 LOA013 Baseline Items

LOA013 baseline items are those currently in use by the project and result from activities of other LOAs.

2.13.2 LOA013 Baseline Documents

The table belowTable 2-15 lists the baseline documents that will be generated or updated in response to LOA013. All baseline documents are deliverable to the FDOT.

Table 2-20 – Project Baseline Documents

Document	Document Identifier	New / Update
Project Staffing Plan	SunGuideSMD-PSP-13.0.0	Update
Software Development Plan	SunGuideSMD-SDP-13.0.0	Update
Output from Requisite Pro	SunGuide-ReqPro.zip	Update
Software Design Document	SunGuide-SDD-6.2.0	Update
Software Requirements Specification	SunGuide-SRS-6.2.0	Update
Version Description Document	SunGuide-VDD-6.2.0	Update
Software User Manual	SunGuide-SUM-6.2.0	Update

2.14 LOA014 Baseline

2.14.1 LOA014 Baseline Items

The table below lists the baseline items that may be developed or updated during the project. Each LOA for development enhancement will identify specific baseline items that will be updated and new baseline items that will be created. All baseline items are deliverable to the FDOT.

Table 2-21 – Project Baseline Items

Baseline Item[10]	Current Version
Admin Editor	6.1
Event Management	6.1
Incident Detection Subsystem	6.1
IDS TSS Alert Driver	6.1

[10] This is a summary list of the "SunGuide Processes." Including a complete list of the source code files in this table would be prohibitive in length (approximately 20,000 files).

Baseline Item[10]	Current Version
Message Arbitration Subsystem	6.1
Operator Map	6.1
Probe Fusion Driver	6.1
Traffic Sensor Subsystem	6.1

2.14.2 LOA014 Baseline Documents

The table below lists the baseline documents that will be generated or updated in response to LOA014. All baseline documents are deliverable to the FDOT.

Table 2-22 – Project Baseline Documents

Document	Document Identifier	New / Update
Interface Control Document		
EM Subsystem	SunGuide-EM-ICD-13.0.0	Update
DMS Subsystem	SunGuide-DMS-ICD-13.0.0	Update
TSS Subsystem	SunGuide-TSS-ICD-13.0.0	Update

3. PROJECT MANAGEMENT

3.1 Work Breakdown Structure (WBS)

Each LOA may result in modifications to the Project WBS. Individual paragraphs will address each LOA.

3.1.1 LOA001 WBS

LOA001 authorizes SwRI to provide support through Fiscal Year 2011 (July 1, 2010 to June 30, 2011 inclusive). The FDOT Program Manager verbally authorized SwRI to perform SunGuide Release 5.0 Installations under this LOA as well. The WBS for this support follows.

- FY 2011 Support
  - Central Office
  - Test Engineering Research Laboratory (TERL)
  - D1
  - D2
  - D3
  - D4
  - D5
  - D6
  - D7
  - FTE
  - MDX
  - FL-ATIS
  - I595PPP
  - Lee County
  - City of Tallahassee

3.1.2 LOA002 WBS

LOA002 authorizes SwRI to perform on-site installations of SunGuide Release 5.0. The WBS for these deployments is as follows

- Release 5.0 Installations
  - D2 - SG R5.0 INSTALL
  - D5 - SG R5.0 INSTALL
  - D6 - SG R5.0 INSTALL
  - D7 - SG R5.0 INSTALL
  - FTE - SG R5.0 INSTALL
  - MDX - SG R5.0 INSTALL
  - Lee County - SG R5.0 INSTALL

3.1.3 LOA003 WBS

LOA003 authorizes SwRI to perform on-site installations of SunGuide Release 5.0. The WBS for these deployments is as follows

- Pensacola – SG R5.0 INSTALL
- Orlando-Orange County Expressway Authority (OOCEA) – SG R5.0 INSTALL

LOA003 also authorizes SwRI to a new subsystem for inclusion of INRIX data into SunGuide.

- Update Process Documents
- Concept, Requirements, Design Review
- SunGuide Updates (GUI)
- Inrix Interface Service (C2C Publisher)
- Inrix TMC Path Library
- Inrix GIS Library
- Integration Testing
- SunGuide Documentation Updates

3.1.4 LOA004 WBS

LOA004 authorizes SwRI for 5 different development tasks

1) Road Ranger Smart Phone Application
    a. Update Process Documents
    b. Smartphone GUI Prototyping
    c. Driver/Device ICD
    d. SPARR Driver
    e. Smart Phone Application
    f. Integration Testing
2) DMS Multithreading
    a. DMS Subsystem Update
    b. Integration Testing
3) EM Location Publish
    a. EM Subsystem Update
    b. C2C Subsystem Update
    c. Admin Editor Update
    d. Integration Testing
4) Transcore Driver
    a. TSS Driver Update
    b. Integration Testing
5) DMS Miles Ahead Enhancement
    a. EM Subsystem Update
    b. Admin Editor Update
    c. Integration Testing

3.1.5 LOA005 WBS

LOA005 authorizes SwRI to develop a new subsystem, a new driver, and GUI modifications in preparation for inclusion of IntelliDrive data into SunGuide.

- Update Process Documents
- Concept, Requirements, Design Review
- Support BSM Data
- Support Probe Vehicle Data
- Support Traveler Advisory Messages
- Integration Testing

- SunGuide Documentation Updates
- FAT
- IVV
- Deployments

3.1.6 LOA006 WBS

LOA006 authorizes SwRI to provide support through Fiscal Year 2012 (July 1, 2011 to June 30, 2012 inclusive). The WBS for this support follows.

- FY 2012 Support
    - Central Office
    - Test Engineering Research Laboratory (TERL)
    - D1
    - D2
    - D3
    - D4
    - D5
    - D6
    - D7
    - FTE
    - MDX
    - FL-ATIS
    - I595PPP
    - Lee County
    - City of Tallahassee
    - OOCEA

3.1.7 LOA007 WBS

LOA007 authorizes SwRI for four different development tasks

1. SQL Server Support
    a. Update Process Documents
    b. Modify all queries to support Oracle and SQL commands
    c. Remove stored procedures from the database and put logic in EM
    d. Change foreign key so database objects can be renamed
    e. Change GUI to recognize name changes
    f. Integration testing
2. DMS NTCIP Version 2
    a. NTCIP Driver will support version 2 and graphics
    b. GUI will support DMS Graphics Library and sending messages with graphics
    c. Integration testing
3. AVI Algorithm Enhancement
    a. Add configuration parameters to Probe Links
    b. Add filtering to the speed algorithm
    c. Integration testing
4. Travel Times Scheduling
    a. Add the ability to schedule the display of travel times on DMS signs
    b. Integration testing

3.1.8 LOA008 WBS

LOA008 authorizes SwRI to provide support through Fiscal Year 2013 (July 1, 2012 to June 30, 2013 inclusive). The WBS for this support follows.

- Project Management
- Planning Documents
- FY 2013 Support
    - TERL - SA Support
    - D1 - SA Support
    - D2 - SA Support
    - D3 - SA Support
    - D4 - SA Support
    - D5 - SA Support
    - D6 - SA Support
    - D7 - SA Support
    - FTE - SA Support
    - MDX - SA Support
    - FL-ATIS - SA Support
    - I595PPP - SA Support
    - Lee County - SA Support
    - City of Tallahassee - SA Support
    - OOCEA - SA Support
- Release 5.1.1 Installations
    - TERL 5.1.1 Install - SA
    - D1 5.1.1 Install - SA
    - D2 5.1.1 Install - SA
    - D3 5.1.1 Install - SA
    - D4 5.1.1 Install - SA
    - D5 5.1.1 Install - SA
    - D6 5.1.1 Install - SA
    - D7 5.1.1 Install - SA
    - FTE 5.1.1 Install - SA
    - FL-ATIS 5.1.1 Install - SA
    - I595PPP 5.1.1 Install - SA
    - LEE CO 5.1.1 Install - SA
    - TLH 5.1.1 Install - SA
    - OOCEA 5.1.1 Install - SA
- Release 5.1.1
- RITIS
- Desktop Video Wall

3.1.9 LOA009 WBS

LOA009 authorizes SwRI for five different development tasks

1. Phase 0 of SunGuide / Lonestar Unification
    a. Unify Executive Handler
    b. Unify Status Logger

c. Unify Databus
d. Incorporate the Software Administration Application for user permissions
e. Build a GUI Framework for FDOT/TxDOT unification
f. Unify ITS Generic

2. Nokia Compatibility
    a. Interface with the Nokia data feed
    b. Provide C2C links based on Nokia data
    c. Integration testing
3. ONVIF Compatibility
    a. Add support for the ONVIF protocol
    b. Integration testing
4. Installer Enhancement
    a. Configuration validation
    b. Necessary components installed before SunGuide
    c. Save configuration of installation
    d. Remote server installations
    e. Integration testing
5. Activu and Support for Multiple Walls
    a. Add support for multiple walls from the same VWS Driver
    b. Integration Testing

3.1.10 LOA010 WBS

LOA010 authorizes SwRI to provide support through Fiscal Year 2014 (July 1, 2013 to June 30, 2014 inclusive). The WBS for this support follows.

- Project Management
- Planning Documents
- FY 2014 Support
    - TERL - SA Support
    - D1 - SA Support
    - D2 - SA Support
    - D3 - SA Support
    - D4 - SA Support
    - D5 - SA Support
    - D6 - SA Support
    - D7 - SA Support
    - FTE - SA Support
    - MDX - SA Support
    - FL-ATIS - SA Support
    - I595PPP - SA Support
    - Lee County - SA Support
    - City of Tallahassee - SA Support
    - OOCEA - SA Support
- Release 6.0 Installations
    - TERL 6.0 Install - SA
    - D1 6.0 Install - SA
    - D2 6.0 Install - SA

- D3 6.0 Install - SA
- D4 6.0 Install - SA
- D5 6.0 Install - SA
- D6 6.0 Install - SA
- D7 6.0 Install - SA
- FTE 6.0 Install - SA
- FL-ATIS 6.0 Install - SA
- I595PPP 6.0 Install - SA
- LEE CO 6.0 Install - SA
- TLH 6.0 Install - SA
- OOCEA 6.0 Install - SA

3.1.11 LOA011 WBS

LOA011 authorizes SwRI for six different development tasks

1. RWIS Subsystem and Driver Enhancements
    a. NTCIP v2 and v3 Support
    b. RWIS Simulator for Testing
    c. RWIS Alert configurations
    d. Integration testing
2. IDS Subsystem and Driver Enhancements
    a. RWIS Alerting through a new driver
    b. Store alert and responses in database
    c. Automated response plans
    d. Integration testing
3. Event Management Enhancements
    a. Automated response plan handling
    b. Beacons in response plans
4. GUI Enhancements
    a. RWIS and Beacon configuration
    b. RWIS Status Dialog
    c. Beacon Status Dialog
5. Beacon Subsystem and Driver Development
    a. Beacon Configuration
    b. Interface with Web Relay Driver
6. Documentation

3.1.12 LOA012 WBS

LOA012 authorizes SwRI for six different development tasks

1. Wrong Way Driver using Basic Safety Messages
    a. SunGuide Alerts
    b. RSE and OBE Applications
    c. Integration Testing
2. Over Height Detection and Alert
    a. SunGuide Alerts
    b. RSE and OBE Applications
    c. Integration Testing

3. Emergency Braking
    a. RSE and OBE Applications
    b. Integration Testing
4. Emergency Vehicle Alert
    a. RSE and OBE Applications
    b. Integration Testing
5. Mayday Message Relay
    a. SunGuide Alerts
    b. RSE and OBE Applications
    c. Integration Testing
6. Site Survey and Demo Planning (TERL)
7. Integration testing at SwRI and at the TERL
8. Demonstration Setup, Dry Runs, and Final Demonstrations

3.1.13 LOA013 WBS

LOA013 authorizes SwRI to provide support through Fiscal Year 2015 (July 1, 2014 to June 13, 2015 inclusive). The WBS for this support follows.

- Project Management
- Planning Documents
- FY 2014 Support
    - TERL - SA Support
    - D1 - SA Support
    - D2 - SA Support
    - D3 - SA Support
    - D4 - SA Support
    - D5 - SA Support
    - D6 - SA Support
    - D7 - SA Support
    - FTE - SA Support
    - MDX - SA Support
    - FL-ATIS - SA Support
    - I595PPP - SA Support
    - Lee County - SA Support
    - City of Tallahassee - SA Support
    - OOCEA - SA Support
- Release 6.1 Installations
    - TERL 6.1 Install - SA
    - D1 6.1 Install - SA
    - D2 6.1 Install - SA
    - D3 6.1 Install - SA
    - D4 6.1 Install - SA
    - D5 6.1 Install - SA
    - D6 6.1 Install - SA
    - D7 6.1 Install - SA
    - FTE 6.1 Install - SA
    - FL-ATIS 6.1 Install - SA

- I595PPP 6.1 Install - SA
- LEE CO 6.1 Install - SA
- TLH 6.1 Install - SA
- OOCEA 6.1 Install - SA

3.1.14 LOA014 WBS

LOA014 authorizes SwRI for five different development tasks

1. Response Plan Templates
2. DMS Force Caps
3. DMS Force Blank on Failure
4. Dismiss Redundant TSS Alerts
5. Arterial Probe Algorithm
    a. Release 6.0
    b. Port to 6.1
    c. Port to 6.2
    d. TSS Configuration in Operator Map
6. Documentation and design Reviews
7. Factory Acceptance testing of the Release

3.2 Project Schedule

Each LOA may result in modifications to the Project Schedule. Individual paragraphs will address each LOA.

3.2.1 LOA001 Schedule

The draft schedule showing teleconferences and deliverables for LOA001 is in Attachment A.

3.2.2 LOA002 Release 5.0 Installation Schedule

A draft schedule showing installations for SunGuide Release 5.0 is in Attachment B.

3.2.3 LOA003 INRIX Data Enhancement, Orlando-Orange County Expressway Authority (OOCEA), and Pensacola SunGuide Deployments

A draft schedule showing installations for OOCEA and Pensacola for SunGuide Release 5.0 can be seen in Attachment C. A draft schedule for development of the INRIX Data Enhancement can be seen in Attachment D.

3.2.4 LOA004 Road Ranger Smart Phone Application, DMS Multithreading, EM Location Publish, Transcore Driver Update, DMS Miles Ahead

A draft schedule showing the development of the Road Ranger Smart Phone Application can be seen in Attachment E. A draft schedule for the other developments of this LOA can be seen in Attachment F. The schedule shown in Attachment F reflects the calendar time needed to complete the task and does not necessarily represent the actual start date.

3.2.5 LOA005 IntelliDrive Application Development

A draft schedule showing the development schedule for IntelliDrive can be seen in Attachment G.

3.2.6 LOA006 Schedule

No schedule for LOA006 is included. LOA006 has no regularly scheduled activities, though monthly support meetings are commonly held.

3.2.7 LOA007 SQL Server Support, DMS NTCIP Version 2 Support, AVI Algorithm Enhancement, and Travel Time Scheduling Development

A draft schedule showing the development schedule for this effort can be seen in Attachment H.

3.2.8 LOA008 Schedule

No schedule for LOA008 is included. LOA008 has no regularly scheduled activities, though monthly support meetings are commonly held.

3.2.9 LOA009 SunGuide/Lonestar Unification, Nokia, ONVIF, Installer Enhancements, Activu

A draft schedule showing the development schedule for this effort can be seen in Attachment I.

3.2.10 LOA010 Schedule

No schedule for LOA010 is included. LOA010 has no regularly scheduled activities, though monthly support meetings are commonly held.

3.2.11 LOA011 RWIS NTCIPv2 and v3, RWIS Alerting, Beacon Management

A draft schedule showing the development schedule for this effort can be seen in Attachment J.

3.2.12 LOA012 Connected Vehicle Demonstrations at TERL

A draft schedule showing the development schedule for this effort can be seen in Attachment K.

3.2.13 LOA013 Schedule

No schedule for LOA013 is included. LOA013 has no regularly scheduled activities.

3.2.14 LOA014 RWIS NTCIPv2 and v3, RWIS Alerting, Beacon Management

A draft schedule showing the development schedule for this effort can be seen in Attachment L.

3.3 Project Plan Revisions

Each new LOA may require modifications to this SDP. Those LOAs may modify existing LOAs (authorize additional expenditure for existing tasks, authorize new tasks, etc.). As each new LOA is received, SwRI will modify this SDP to reflect the new LOA.

4. ENGINEERING PLAN

The following sections contain the engineering procedures that will be used on the project. These include the following: development environment and resources, the development lifecycle, analysis and design methods, coding standards, and testing methods.

4.1 Environment and Resources

The following sections describe the hardware and software resources that will be used during the project.

4.1.1 Project Resources

SwRI provides an extensive development environment for the SunGuide project including a "server farm" (30+ servers), Oracle tools, Microsoft Visual Studio, AccuRev, Footprints and other development tools, ITS devices including physical and simulated cameras, signs, detectors, weather stations, codecs, and video switches. Recently, SwRI has introduced a virtual server into the development laboratory capable of emulating over 100 virtual servers or workstations with varying operating systems and software.

Additionally, SwRI provides a project web-site for dissemination of project deliverables and an FTP site for exchange of information with FDOT that will not pass the FDOT email system.

4.1.2 Developer Resources

All developers have SwRI-provided Microsoft Developer Network (MSDN) or Visual Studio licenses providing access to Microsoft toolsets for use in development. Each developer has at least one dedicated computer, used for development and unit testing. All computers have dual monitors, development tools including Integrated Development Environments (IDEs), source control software, database tools (SQL Developer or Toad), schema creation tools (XMLSpy), and other productivity tools. SwRI uses different IDEs depending upon the type of code; some examples are Visual Studio 2010, IntelliJ, Eclipse, and Dreamweaver. SwRI uses AccuRev (stream-based source control tool) which allows us to easily manage multiple release versions in development and maintenance at one time.

4.2 LOA001 Support and Maintenance

SwRI is providing support and maintenance under LOA001. SwRI provides support and maintenance by providing staff in San Antonio, TX and on-site staff in locations specified by the FDOT. The following paragraphs describe the activities of staff in San Antonio and Florida.

4.2.1 San Antonio Staff Activities

The SwRI staff members in San Antonio perform three general types of project support activities at the request of FDOT.

1. Project Management (PM) staff (see staffing plan for the list of PM staff) members manage the LOA001 effort, personally oversee support tasks deemed "critical", prepare various administrative reports (periodic status reports, periodic support performance reports, inputs for Configuration Management Board [CMB] meetings, etc.), respond to information requests from FDOT, and participate in various teleconferences.

2. On-Call Support staff members respond to telephone requests for service in the event of Critical Failures, Failures and External System Failures.
3. General Support staff members respond to user requests in the form of Footprints Issues with issue types Deployment / Configuration, Defects and Enhancements.

The following paragraphs describe in more detail the latter two types of activities.

4.2.1.1 On-Call Support Staff

In the event that a SunGuide installation suffers from a Critical Failure, Failure or External Interface failure, the issue is to be reported via telephone call to the SunGuide support telephone line. The support line is answered 24 hours per day, 7 days per week (24 x 7). Issue category, required initial response times, initial response type, escalation times and on-site responses are noted in Table 4-1.

Table 4-1 – Telephone Response Times

Category	Required Initial Response Time	Initial Response	Escalation Time	On-site Response
Critical Failure	One hour	Return the phone call	2 hours	4 Hours from FDOT PM Approval
Failure	One hour	Return the phone call	8 hours	1 Business Day from FDOT PM Approval
External Failure	One hour	Return the phone call	12 Hours of contact with external POC	1 Business Day from FDOT PM Approval

SwRI telephone support follows the following process; these actions are logged into the Footprints reporting tool for record keeping purposes.

1. The line rings on the desk of a SunGuide On-Call Support Staff member at SwRI.
2. Upon the first ring the call is logged via text messages and email messages to internal phone lists for record keeping and monitoring purposes.
3. If the call is answered, then the support staff member begins work to resolve the reported issue.
4. If the call is not answered, then the support line is answered by a 24 x 7 answering service.
5. If the answering service answers the call, the operator records the following key information and begins a process of calling a list of on-call SwRI staff members.
    a. Name of user reporting issue
    b. Call back number
    c. TMC
    d. Failure priority
    e. Name of components failing
6. Once a staff member is reached, the staff member calls the support line to record that a response is in progress. This action will trigger and email and text message to internal phone lists for timestamp tracking purposes. The support staff then returns the call to the user reporting the issue.
7. The staff member begins work to resolve the reported issue.

8. If the system is not returned to functionality within an escalation interval, the issue is escalated to either the PM or Software Project Manager (SPM). The PM/SPM mobilizes other resources to work on the problem if the initial responder cannot resolve the issue.
9. The support member will log the issue into the Footprints using the timestamp generated through the call log as the basis for initial call time and initial response time.

4.2.1.2 Non-Telephone Issue Support Staff

SwRI has a number of other developers available to process issues reported through the Footprints reporting tool. Issue category, required initial response times, initial response type, escalation times and on-site responses are noted in Table 4-2.

Table 4-2 – Non-Telephone Response Times

Category	Required Initial Response Time	Initial Response	Escalation Time	On-site Response
Defect	1 business day	Email to submitter	1 business day	No
Deployment / Configuration	1 business day	Email to submitter	1 business day	1 Business Day from FDOT PM Approval
Enhancement	3 business day	Email to submitter	2 business weeks	No

SwRI non-telephone support follows the following process; these actions are logged into the Footprints reporting tool for record keeping purposes.

1. The Footprints tool is checked daily for new issues.
2. New issues are assigned to a SwRI staff member for resolution.
3. The Footprints tool automatically sends notifications to the user who reported the problem when any changes are made to the Footprints issue.
4. Footprints issues are addressed in order of their priority[11], within the time and funds available on the contract.
5. Once an issue has been "resolved" it is updated with a status of "Awaiting Release" and marked with the version of SunGuide that will include this change.
6. Once a resolved issue has been released, status is changed to "Waiting for District Confirmation".
7. Once a released issue has been confirmed by the user who reported the issue initially, the Footprint issue is closed.
8. If FDOT finds an issue of sufficient priority (SwRI and FDOT PM conferring), the issue may be released using a Hotfix to the reporting user's Traffic Management Center (TMC) or Patch to all SunGuide deployments.

[11] Footprints issue priority has multiple meanings and is based first on the actual priority of the issue in Footprints, and then by criticality to operations, number of districts affected, and may be ranked higher or lower depending on discussions between the FDOT Program Manager and the SwRI PM.

4.2.2 Florida Based Staff Activities

Florida based SwRI[12] support staff provide support to TMCs and their operational staff. In this manner, a higher level of service can be provided using on-site staff. These staff will augment the San Antonio based staff by being assigned Footprints issues for preliminary investigation in TMCs located close to their home base. In the event that San Antonio staff cannot readily diagnose problems remotely, these staff members may be called upon to do additional testing within the TMC where they can more closely monitor test results. They may be called upon to help resolve either issues reported via telephone (Critical, Failures, External) or Footprints (Defects, Deployment / Configuration, Enhancements).

4.3 General Software Development Lifecycle (SDLC)

BDQ69 Exhibit A 'Scope of Services' identifies a waterfall SDLC which is consistent with the development utilized on the previous SunGuide software contract BD826. The Waterfall SDLC has been applied in an iterative manner for all SunGuide development including Release 1.0, 1.1, 2.0, 2.1, 2.2, 3.0, 3.1, 4.0, 4.1, 4.2, 4.3 and 5.0. The Scope of Services describes a full waterfall lifecycle with provisions for tailoring depending on enhancement size, complexity, time constraints, etc. Activities that comprise the Waterfall SDLC are described in the following paragraphs. Specific SDLC modifications will be described in sections of this SDP for each LOA requiring development.

4.3.1 Concept of Operations

Depending on the magnitude of the enhancement to be implemented, a Concept of Operations may be required. SwRI will utilize the FDOT's Concept of Operations (ConOps) baseline document as the starting point.

4.3.2 Requirements Analysis

Whether or not a ConOps is required, a set of system requirements will be developed for the enhancement. The FDOT will develop the system requirements and provide them to SwRI. SwRI will develop software requirements based on the system requirements and provide traceability of the software requirements to the system requirements. After the initial software requirements have been developed, they will be provided to the FDOT for review. SwRI may schedule a meeting to review the software requirements and the FDOT's comments. SwRI will maintain requirements, both System Requirements and derived Software Requirements, in the tool Requisite Pro as required by the contract. SwRI will utilize Requisite Pro to generate a Software Requirements Specification (SRS) for transmittal to the FDOT with the Requisite Pro database files.

4.3.3 Design

SwRI will identify a design method to be used in high level and detailed design for an enhancement in updates to this SDP. A preliminary design review will be conducted with the FDOT to ensure that the design meets the requirements (both system and derived software

[12] May be either SwRI employees or employees of a SwRI subcontractor (e.g. Lucent Group) supplying support staff in Florida; for purposes of this document they should be viewed as the same.

requirements) and the understanding that the FDOT has for the enhancement. Depending on the size and criticality of the enhancement, the FDOT will require, at a minimum, an informal design review where the FDOT will review materials provided by SwRI or a formal critical design review. At the conclusion of the design, SwRI will update the Software Design Document (SDD), Database Design Document (DBDD) and Interface Control Documents (ICDs).

4.3.4 Development and Unit Testing

SwRI will perform development and unit testing of the enhancement in accordance with its software development procedures. SwRI will utilize the coding standards that are part of the QAP. SwRI will conduct internal peer reviews throughout the development effort. SwRI will utilize automated testing tools distributed as part of Visual Studio in cases SwRI deem appropriate[13].

4.3.5 Integration Testing

SwRI will perform integration testing of the enhancement and identify those specific methods in the enhancement proposal. SwRI will perform regression testing as part of the integration testing.

SwRI will develop the Software Integration Plan (SIP). The SIP will group requirements into logical subsets for development of test cases. The test cases within a group share common test setups and are a method of introducing test efficiency.

From the SIP, SwRI will develop Software Integration Case Procedures (SICP) which will include detailed test setups and test steps to verify the software meets System Requirements and Software Requirements. The SICP will contain traceability form System Requirements, Software Requirements to individual test steps.

SwRI will construct an “installer” for the software and a working Version Description Document (VDD) for this release. SwRI will utilize the installer and VDD to install the software for final integration testing and preparation for Factory Acceptance Testing (FAT). All installers will be run and tested at SwRI prior to delivery to the FDOT.

SwRI will update the Software User’s Manual (SUM) and have those updates available prior to FAT.

4.3.6 Acceptance Testing

SwRI will conduct FAT in its facilities (or other facilities mutually agreed upon with the FDOT). The test team, consisting of a SwRI operator, SwRI reader and a FDOT monitor, will execute each test step in the SICP and determine if that test passes or fails the tested requirement. The SwRI reader and FDOT monitor will sign and indicate time and date the test was completed as well as pass or failure status.

If, during the testing, anomalous behavior of the software is observed, SwRI will have paper forms available upon which the anomalous behavior may be noted. Observers may use these same forms to note and describe other facets of the software behavior that they would like considered for change or enhancement.

[13] The cost to develop automated testing can be significant; informally SwRI will evaluate the cost versus the return in the evaluation.

SwRI will provide a record of the FAT results, consisting of a copy of the annotated SICP and collection of other forms, to the FDOT following conclusion of the FAT.

SwRI and FDOT will participate in a "Hot Washup" post FAT meeting during which the FAT results, anomalous behavior (if any) and change or enhancement requests will be discussed. At the conclusion of the "Hot Washup," SwRI will provide a SICP Corrective Action Plan (CAP) listing defects identified during FAT and the SwRI proposed solutions. When agreement is reached between the FDOT and SwRI, SwRI will implement the CAP. If enhancements are requested, then SwRI will provide cost and schedule estimate for FDOT approval and authorization (through an LOA). SwRI and FDOT may decide to retest the software through execution of another FAT.

4.3.7 IVV & Deployment

Following satisfactory completion of FAT, the FDOT may choose to conduct IVV testing in an independent facility. If IVV testing identifies issues the FDOT may task SwRI to make modifications to the software. Following satisfactory completion of the IVV testing, SwRI will provide the FDOT with updated Release media (installer materials) and documentation (IN and VDD).

4.4 LOA003 INRIX Development

The following sections describe the process for the INRIX development.

4.4.1 Minor Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Minor Development described in the CMP. The activities and deliverables of that process are shown in Table 4-3.

Table 4-3 – LOA003'Minor' Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	
SRS Delivery	
Requirement Database Delivery	
Design	
Preliminary Design Review	
Detail Design Review	
SDD Delivery	
ICD Delivery	Y
DBDD Delivery	

Activity	Minor
Development Unit Test	
FDOT in process code review	
Integration Testing	
SIP	
SICP	
FDOT Dry Run	
VDD	Y
IN	Y
Acceptance Testing	
PCA	
SUM	
FAT	
IVV	

4.4.2 INRIX Development Review Plan

Table 4-4 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-4 – LOA003 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SDP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
VDD	☒	☐	☐	☒	Required by Process & Contract	Document Control Panel, Email Comments

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
IN	☒	☐	☐	☒	Required by Process & Contract	Document Control Panel, Email Comments
ICD	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments
INRIX Publisher	☐	☒	☐	☐	Recommendation from development staff	Minutes
TSS	☐	☒	☐	☐	Recommendation from development staff	Minutes
TVT	☐	☒	☐	☐	Recommendation from development staff	Minutes
GUI	☐	☒	☐	☐	Recommendation from development staff	Minutes

4.5 LOA004 Road Ranger Smart Phone Application Development

The following sections describe the process for the Road Ranger Smart Phone Application development as well as the additional development described in LOA004.

4.5.1 Minor Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Minor Development described in the CMP. The activities and deliverables of that process are shown in Table 4-5.

Table 4-5 – LOA004 'Minor' Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	
SRS Delivery	
Requirement Database Delivery	
Design	
Preliminary Design Review	
Detail Design Review	
SDD Delivery	
ICD Delivery	Y
DBDD Delivery	
Development Unit Test	
FDOT in process code review	
Integration Testing	
SIP	
SICP	
FDOT Dry Run	
VDD	Y
IN	Y
Acceptance Testing	
PCA	
SUM	
FAT	
IVV	

4.5.2 LOA004 Development Review Plan

Table 4-6 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-6 – LOA004 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SDP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
VDD	☒	☐	☐	☒	Required by Process & Contract	Document Control Panel, Email Comments
IN	☒	☐	☐	☒	Required by Process & Contract	Document Control Panel, Email Comments
ICD	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments
AVL Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
Smart Phone Application	☐	☒	☐	☐	Recommendation from development staff	Minutes
EM	☐	☒	☐	☐	Recommendation from development staff	Minutes

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
C2C	☐	☒	☐	☐	Recommendation from development staff	Minutes
Admin Editor	☐	☒	☐	☐	Recommendation from development staff	Minutes
DMS	☐	☒	☐	☐	Recommendation from development staff	Minutes
Probe Fusion Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes

4.6 LOA005 IntelliDrive Development

The following sections describe the process for the IntelliDrive development.

4.6.1 Moderate Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Moderate Development described in the CMP. The activities and deliverables of that process are shown in Table 4-7.

Table 4-7 – LOA005 'Moderate" Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	Y
SRS Delivery	Y
Requirement Database Delivery	Y

Activity	Minor
Design	
Preliminary Design Review	Y
Detail Design Review	
SDD Delivery	Y
ICD Delivery	Y
DBDD Delivery	
Development Unit Test	
FDOT in process code review	
Integration Testing	
SIP	Y
SICP	Y
FDOT Dry Run	
VDD	Y
IN	Y
Acceptance Testing	
PCA	Y
SUM	Y
FAT	Y
IVV	Y

4.6.2 LOA005 Development Review Plan

Table 4-8 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-8 – LOA005 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
SDP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
VDD	☒	☐	☐	☒	Required by Process & Contract	Document Control Panel, Email Comments
IN	☒	☐	☐	☒	Required by Process & Contract	Email Comments
ICD	☒	☐	☒	☒	Required by Process & Contract	Email Comments
SRS	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SIP	☒	☐	☒	☒	Required by Process & Contract	Email Comments
SICP	☒	☐	☒	☒	Required by Process & Contract	Email Comments
SUM	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SDD	☒	☐	☒	☒	Required by Process & Contract	Email Comments

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments
IntelliDrive Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
IntelliDrive Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
GUI	☐	☒	☐	☐	Recommendation from development staff	Minutes
C2C	☐	☒	☐	☐	Recommendation from development staff	Minutes
EM	☐	☒	☐	☐	Recommendation from development staff	Minutes
DMS	☐	☒	☐	☐	Recommendation from development staff	Minutes

4.7 LOA006 Support and Maintenance

SwRI is providing support and maintenance under LOA006. During the performance of LOA001, the process of providing support to the FDOT has changed. This section reflects those changes. SwRI provides support and maintenance by providing staff in San Antonio, TX and on-site staff in locations specified by the FDOT. The following paragraphs describe the activities of staff in San Antonio and Florida. SwRI performs the following activities under LOA006.

- Project Management (PM): The SwRI PM staff (see staffing plan for the list of PM staff) members manage the LOA006 effort, personally oversee support tasks deemed "critical", prepare various administrative reports (periodic status reports, periodic support performance reports, inputs for Configuration Management Board [CMB] meetings, etc.), respond to information requests from FDOT, and participate in various teleconferences.
- On-Call Support: The SwRI on-call support staff members respond to telephone requests for service in the event of Critical Failures, Failures and External System Failures.
- Software Issue Support: The SwRI non-telephone support staff members respond to user requests in the form of Footprints Issues with issue types of "Deployment / Configuration", "Defects" and "Enhancements".
- Operational and Configuration Support: SwRI staff provide on-site support either through staff members located in Florida or by sending San Antonio staff to Florida.

The following paragraphs describe in more detail the latter three types of activities.

4.7.1 On-Call Support Staff

The method and process of providing On-Call Support Staff is described in Section 4.2.1.1.

- On-Call support staff are backed up by several other support staff members including Tucker Brown, Jose Perez and Mary Thornton if the on-call support staff are not available.
- The schedule for the on-call support staff is managed by Brent Becker.

4.7.2 Software Issue Support (Footprints Support)

Staff located in both Florida and San Antonio provide software issue support. These support staff members process software issues reported through the Footprints reporting tool. Contractually required response times for are noted in Table 4-2 and the process utilized is described in Section 4.2.1.2.

During the performance of LOA001, the process for handling Footprints issues changed in several ways.

- Tucker Brown, the SPM, coordinates all non-Telephone Issue support.
- The software issue support staff has been expanded to include both San Antonio and Florida based staff.
- When a new issue is entered into Footprints, one of the software issue support staff respond to the issue if it is received during working hours. Issues received during non-working hours are processed the next morning by the team.
- SwRI provides a "Weekly Support Plan" which provides a weekly update on support activities for the subject week. Specifically the support plan lists software issues (by Footprints Number) that were addressed during the previous week and those issues that will be addressed during the current week.
- Software issue support staff implement FDOT approved enhancements under LOA006.

4.7.3 Operational and Configuration Support

SwRI staff provide operation and configuration support to TMCs and their operational staff. Often on-site staff are utilized for this because a higher level of service can be provided. SwRI staff provide operational and configuration activities include (but are not limited to):

- Installations of new software versions on new or existing equipment or installations of existing software versions on new equipment.
- Planning of software upgrades on existing systems including generation of detailed upgrade plans for those districts that require them.
- Support for configuration of new devices, subsystems or system options.
- Support to operations and administrative staff through local presence.
- Addressing specific training needs through use of local staff or staff placed temporarily on-site.

These activities are often provided by SwRI or subcontractor staff located in Florida, but may be augmented by San Antonio staff either through remote access (e.g. VPN) or by traveling to the location where the support is needed.

4.8 LOA007 SQL Server Support, AVI Algorithm Enhancement, DMS NTCIP Version 2 Support, Travel Time Scheduling

The following sections describe the process for LOA7 development.

4.8.1 Moderate Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Moderate Development described in the CMP. The activities and deliverables of that process are shown in Table 4-9.

Table 4-9 – LOA007 "Moderate" Development Waterfall SDLC Activities and Deliverables

Activity	Tasks to be Performed
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	Y
SRS Delivery	Y
Requirement Database Delivery	Y
Design	
Preliminary Design Review	Y
Detail Design Review	
SDD Delivery	Y
ICD Delivery	Y
DBDD Delivery	
Development Unit Test	
FDOT in process code review	

Activity	Tasks to be Performed
Integration Testing	
SIP	Y
SICP	Y
FDOT Dry Run	
VDD	Y
IN	Y
Acceptance Testing	
PCA	Y
SUM	Y
FAT	Y
IVV	Y

4.8.2 LOA007 Development Review Plan

Table 4-10 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-10 – LOA007 Work Product Review Plans

Baseline Item or Portion of Baseline Item[14]	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SDP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
VDD	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments

[14] All items are delivered in both Microsoft Word and PDF format unless otherwise specified

Baseline Item or Portion of Baseline Item[14]	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
IN	☒	☐	☒	☒	Required by Process & Contract	Email Comments
ICD	☒	☐	☒	☒	Required by Process & Contract	Email Comments
SRS	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SIP	☒	☐	☒	☒	Required by Process & Contract	Email Comments
SICP	☒	☐	☒	☒	Required by Process & Contract	Email Comments
SUM	☒	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
SDD (HTML)	☒	☐	☒	☒	Required by Process & Contract	Email Comments
Requirements (RequsitePro Output)	☐	☐	☒	☒	Requirements	Email Comments
Design	☐	☐	☒	☒	CONOPS, Design Review Meeting	Minutes, Email Comments
AVL (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
C2C (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
CCTV (Code)	☒	☐	☐	☐	Recommendation from development staff	Email

Baseline Item or Portion of Baseline Item[14]	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
CVS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
DMS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
RWIS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
EM (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
SB (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
RMS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
Pricing (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
GUI (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
RS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email

Baseline Item or Portion of Baseline Item[14]	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
HAR (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
TVT (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
MAS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
VSL (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
IMS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
DA (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
IDS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
TSS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
VS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email

Baseline Item or Portion of Baseline Item[14]	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
Admin (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
SAS (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
Toll Viewer (Code)	☒	☐	☐	☐	Recommendation from development staff	Email
VW (Code)	☒	☐	☐	☐	Recommendation from development staff	Email

4.9 LOA008 Support and Maintenance

SwRI is providing support and maintenance under LOA008. The following paragraphs describe the activities in more detail.

4.9.1 On-Call Support Staff

The method and process of providing On-Call Support Staff is described in Section 4.2.1.1.

- On-Call support staff are backed up by several other support staff members including Tucker Brown and Jose Perez if the on-call support staff are not available.
- The schedule for the on-call support staff is managed by Brent Becker.

4.9.2 Software Issue Support (Footprints Support)

Staff provide software issue support. These support staff members process software issues reported through the Footprints reporting tool. Contractually required response times for are noted in Table 4-2 and the process utilized is described in Section 4.2.1.2.

4.9.3 Operational and Configuration Support

SwRI staff provide operation and configuration support to TMCs and their operational staff. Often on-site staff are utilized for this because a higher level of service can be provided. SwRI staff provide operational and configuration activities include (but are not limited to):

- Installations of new software versions on new or existing equipment or installations of existing software versions on new equipment.
- Planning of software upgrades on existing systems including generation of detailed upgrade plans for those districts that require them.
- Support for configuration of new devices, subsystems or system options.
- Support to operations and administrative staff through local presence.
- Addressing specific training needs through use of local staff or staff placed temporarily on-site.

4.10 LOA009 SunGuide/Lonestar Unification, Nokia, ONVIF, Installer Enhancements

The following sections describe the process for the LOA009 development.

4.10.1 Minor Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Minor Development described in the CMP. The activities and deliverables of that process are shown in Table 4-11.

Table 4-11 – LOA009 'Minor" Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	Y
SRS Delivery	
Requirement Database Delivery	
Design	
Preliminary Design Review	Y
Detail Design Review	
SDD Delivery	
ICD Delivery	
DBDD Delivery	
Development Unit Test	
FDOT in process code review	
Integration Testing	
SIP	
SICP	

Activity	Minor
FDOT Dry Run	
VDD	
IN	
Acceptance Testing	
PCA	
SUM	
FAT	
IVV	

4.10.2 LOA009 Development Review Plan

Table 4-12 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-12 – LOA009 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
ICD	☒	☐	☒	☒	Required by Process & Contract	Email Comments
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments
Activu Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
Databus	☐	☒	☐	☐	Recommendation from development staff	Minutes
Executive Handler	☐	☒	☐	☐	Recommendation from development staff	Minutes
FDOT Toolset	☐	☒	☐	☐	Recommendation from development staff	Minutes
Nokia	☐	☒	☐	☐	Recommendation from development staff	Minutes
ONVIF CCTV Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
Status Logger	☐	☒	☐	☐	Recommendation from development staff	Minutes
Software Administration Application	☐	☒	☐	☐	Recommendation from development staff	Minutes
Video Wall Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes

4.11 LOA010 Support and Maintenance

SwRI is providing support and maintenance under LOA010. The following paragraphs describe the activities in more detail.

4.11.1 On-Call Support Staff

The method and process of providing On-Call Support Staff is described in Section 4.2.1.1.

- On-Call support staff are backed up by several other support staff members including Tucker Brown, Jose Perez, and AJ Skillern if the on-call support staff are not available.
- The schedule for the on-call support staff is managed by Brent Becker.

4.11.2 Software Issue Support (Footprints Support)

Staff provide software issue support. These support staff members process software issues reported through the Footprints reporting tool. Contractually required response times for are noted in Table 4-2 and the process utilized is described in Section 4.2.1.2.

4.11.3 Operational and Configuration Support

SwRI staff provide operation and configuration support to TMCs and their operational staff. Often on-site staff are utilized for this because a higher level of service can be provided. SwRI staff provide operational and configuration activities include (but are not limited to):

- Installations of new software versions on new or existing equipment or installations of existing software versions on new equipment.
- Planning of software upgrades on existing systems including generation of detailed upgrade plans for those districts that require them.
- Support for configuration of new devices, subsystems or system options.
- Support to operations and administrative staff through local presence.
- Addressing specific training needs through use of local staff or staff placed temporarily on-site.

4.12 LOA011 RWIS NTCIPv2 and v3, RWIS Alerting, Beacon Management

The following sections describe the process for the LOA011 development.

4.12.1 Minor Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Minor Development described in the CMP. The activities and deliverables of that process are shown in Table 4-13.

Table 4-13 – LOA011 'Minor" Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	Y
SRS Delivery	
Requirement Database Delivery	
Design	

Activity	Minor
Preliminary Design Review	Y
Detail Design Review	
SDD Delivery	
ICD Delivery	
DBDD Delivery	
Development Unit Test	
FDOT in process code review	
Integration Testing	
SIP	
SICP	
FDOT Dry Run	
VDD	
IN	
Acceptance Testing	
PCA	
SUM	
FAT	
IVV	

4.12.2 LOA011 Development Review Plan

Table 4-14 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-14 – LOA011 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
ICD	☒	☐	☒	☒	Required by Process & Contract	Email Comments
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments
Beacon Management Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
Event Management	☐	☒	☐	☐	Recommendation from development staff	Minutes
IDS RWIS Alert Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
IDS Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
Operator Map	☐	☒	☐	☐	Recommendation from development staff	Minutes
RWIS NTCIP Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
RWIS NTCIP Simulator	☐	☒	☐	☐	Recommendation from development staff	Minutes

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
RWIS Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
WebRelay Driver for Beacons	☐	☒	☐	☐	Recommendation from development staff	Minutes

4.13 LOA012 CV Demonstrations at TERL

The following sections describe the process for the LOA012 development.

4.13.1 Minor Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Minor Development described in the CMP. The activities and deliverables of that process are shown in Table 4-15.

Table 4-15 – LOA012 'Minor" Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y
Requirements Review	Y
SRS Delivery	
Requirement Database Delivery	
Design	
Preliminary Design Review	Y
Detail Design Review	
SDD Delivery	
ICD Delivery	
DBDD Delivery	

Activity	Minor
Development Unit Test	
FDOT in process code review	
Integration Testing	
SIP	
SICP	
FDOT Dry Run	
VDD	
IN	
Acceptance Testing	
PCA	
SUM	
FAT	
IVV	

4.13.2 LOA012 Development Review Plan

Table 4-16 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-16 – LOA012 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments
ICD	☒	☐	☒	☒	Required by Process & Contract	Email Comments
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
Beacon Management Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
Event Management	☐	☒	☐	☐	Recommendation from development staff	Minutes
IDS RWIS Alert Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
IDS Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
Operator Map	☐	☒	☐	☐	Recommendation from development staff	Minutes
RWIS NTCIP Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
RWIS NTCIP Simulator	☐	☒	☐	☐	Recommendation from development staff	Minutes
RWIS Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
WebRelay Driver for Beacons	☐	☒	☐	☐	Recommendation from development staff	Minutes

4.14 LOA013 Support and Maintenance

SwRI is providing support and maintenance under LOA013. The following paragraphs describe the activities in more detail.

4.14.1 On-Call Support Staff

The method and process of providing On-Call Support Staff is described in Section 4.2.1.1.

- On-Call support staff are backed up by several other support staff members including AJ Skillern and Tucker Brown if the on-call support staff are not available.
- The schedule for the on-call support staff is managed by Brent Becker.

4.14.2 Software Issue Support (Footprints Support)

Staff provide software issue support. These support staff members process software issues reported through the Footprints reporting tool. Contractually required response times for are noted in Table 4-2 and the process utilized is described in Section 4.2.1.2.

4.14.3 Operational and Configuration Support

SwRI staff provide operation and configuration support to TMCs and their operational staff. Often on-site staff are utilized for this because a higher level of service can be provided. SwRI staff provide operational and configuration activities include (but are not limited to):

- Installations of new software versions on new or existing equipment or installations of existing software versions on new equipment.
- Planning of software upgrades on existing systems including generation of detailed upgrade plans for those districts that require them.
- Support for configuration of new devices, subsystems or system options.
- Support to operations and administrative staff through local presence.
- Addressing specific training needs through use of local staff or staff placed temporarily on-site.

4.15 LOA014 Release 6.2 (Various Enhancements)

The following sections describe the process for the LOA014 development.

4.15.1 Minor Development SDLC

SwRI will utilize the general SDLC described in the Scope of Services as modified by the Minor Development described in the CMP. The activities and deliverables of that process are shown in the table below.

Table 4-17 – LOA014 'Minor" Development Waterfall SDLC Activities and Deliverables

Activity	Minor
Requirements Elicitation	
ConOps	Y
FDOT System Requirement	Y
Software Requirements	Y

Requirements Review	Y
SRS Delivery	Y
Requirement Database Delivery	Y
Design	
Activity	**Minor**
Preliminary Design Review	Y
Detail Design Review	
SDD Delivery	Y
ICD Delivery	Y
DBDD Delivery	Y
Integration Testing	
SIP	Y
SICP	Y
FDOT Dry Run	Y
VDD	Y
IN	Y
Acceptance Testing	
PCA	Y
SUM	Y
FAT	Y
IVV	Y

4.15.2 LOA014 Development Review Plan

The table belowTable 4-14 identifies peer review method, rationale, and method of reporting and tracking the results of the reviews of created or updated baseline items (see QAP for definitions of review types).

Table 4-18 – LOA014 Work Product Review Plans

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
PSP	☐	☐	☒	☒	Required by Process & Contract	Document Control Panel, Email Comments

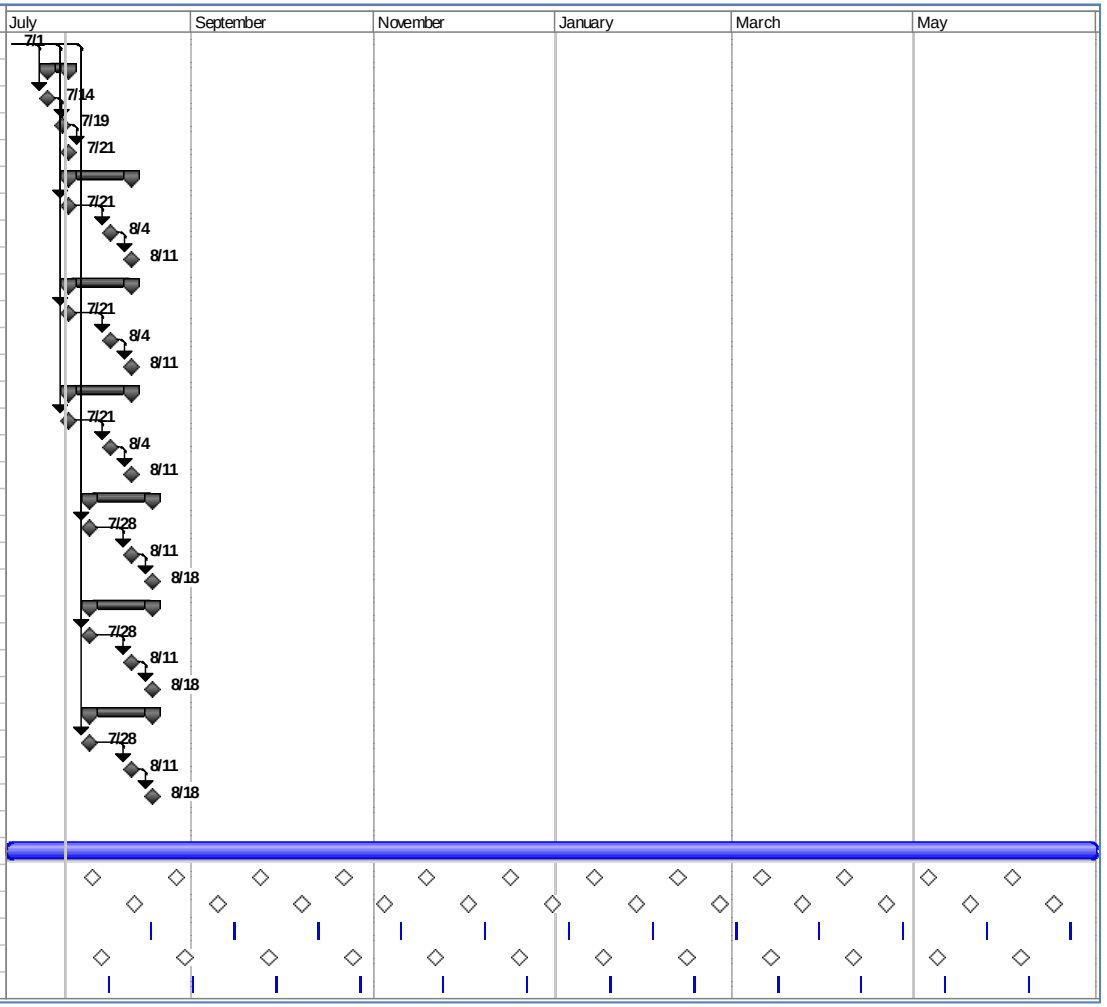
Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
ICD	☒	☐	☒	☒	Required by Process & Contract	Email Comments
CONOPS, Requirements, Design	☐	☐	☒	☒	CONOPS, Requirements Design Review Meeting	Minutes, Email Comments
Admin Editor	☐	☒	☐	☐	Recommendation from development staff	Minutes
Event Management	☐	☒	☐	☐	Recommendation from development staff	Minutes
Incident Detection Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
IDS TSS Alert Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes
Message Arbitration Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes
Operator Map	☐	☒	☐	☐	Recommendation from development staff	Minutes
Probe Fusion Driver	☐	☒	☐	☐	Recommendation from development staff	Minutes

Baseline Item or Portion of Baseline Item	Buddy Check	Walk-through	Management Review	Customer Review	Rationale	Reporting and Tracking Method for Review Results
Traffic Sensor Subsystem	☐	☒	☐	☐	Recommendation from development staff	Minutes

5. NOTES

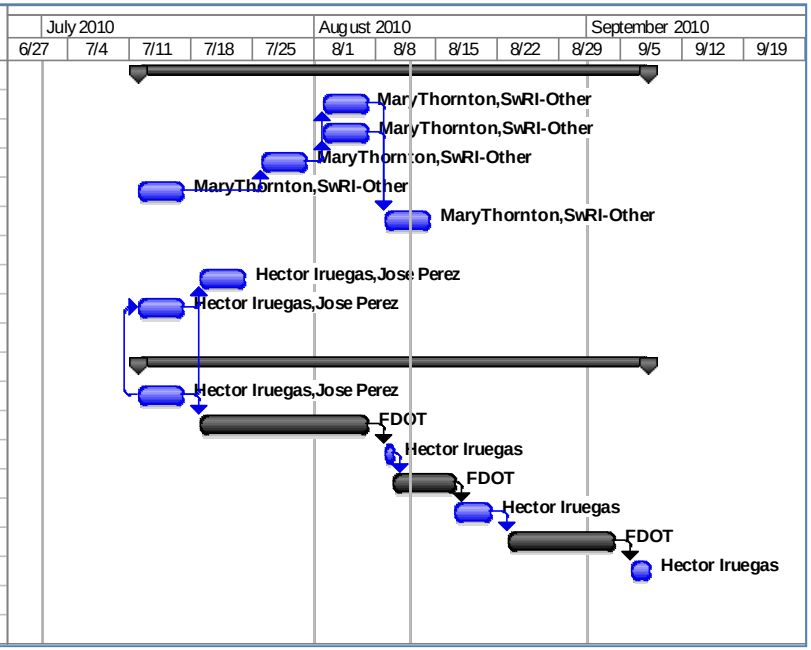
ATTACHMENT A
LOA001 SCHEDULE

ID	Task Name	Duration	Start
1	**Notice to Proceed**	0 days	Thu 7/1/10
2	**Project Staffing Plan**	**5 days**	**Wed 7/14/10**
3	Initial Delivery	0 days	Wed 7/14/10
4	FDOT Comments	0 days	Mon 7/19/10
5	Final Delivery	0 days	Wed 7/21/10
6	**Software Development Plan**	**15 days**	**Wed 7/21/10**
7	Initial Delivery	0 days	Wed 7/21/10
8	FDOT Comments	0 days	Wed 8/4/10
9	Final Delivery	0 days	Wed 8/11/10
10	**Configuration Management Plan**	**15 days**	**Wed 7/21/10**
11	Initial Delivery	0 days	Wed 7/21/10
12	FDOT Comments	0 days	Wed 8/4/10
13	Final Delivery	0 days	Wed 8/11/10
14	**Subcontractor Management Plan**	**15 days**	**Wed 7/21/10**
15	Initial Delivery	0 days	Wed 7/21/10
16	FDOT Comments	0 days	Wed 8/4/10
17	Final Delivery	0 days	Wed 8/11/10
18	**Risk Management Plan**	**15 days**	**Wed 7/28/10**
19	Initial Delivery	0 days	Wed 7/28/10
20	FDOT Comments	0 days	Wed 8/11/10
21	Final Delivery	0 days	Wed 8/18/10
22	**Quality Assurance Plan**	**15 days**	**Wed 7/28/10**
23	Initial Delivery	0 days	Wed 7/28/10
24	FDOT Comments	0 days	Wed 8/11/10
25	Final Delivery	0 days	Wed 8/18/10
26	**Software Security Plan**	**15 days**	**Wed 7/28/10**
27	Initial Delivery	0 days	Wed 7/28/10
28	FDOT Comments	0 days	Wed 8/11/10
29	Final Delivery	0 days	Wed 8/18/10
30			
31	**Support Letter of Authorization 00**	52.2 wks	Thu 7/1/10
32	**SwRI Periods End Dates**	**240 days**	**Fri 7/2/10**
46	**Periodic Status Reports Due**	**220 days**	**Fri 8/13/10**
59	**Periodic Status Teleconferences**	**20.25 days**	**Wed 8/18/10**
72	**Support Teleconference Agenda & Attendee**	**220 days**	**Mon 8/2/10**
85	**Support Teleconferences**	**20.25 days**	**Wed 8/4/10**



ATTACHMENT B
LOA002 SCHEDULE
RELEASE 5.0 DEPLOYMENT

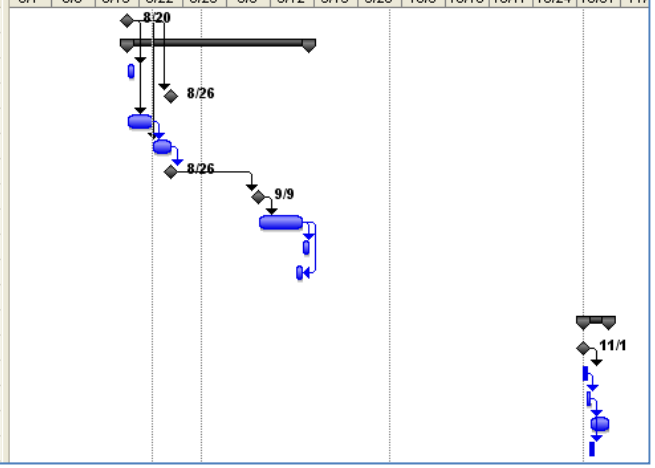
ID	Task Name	Duration	Start	Finish	Predecessors
1	**Release 5.0 Installations**	**42 days**	**Mon 7/12/10**	**Tue 9/7/10**	
2	Ft Myers - SWIFT	1 wk	Mon 8/2/10	Fri 8/6/10	4
3	Ft Myers - Lee County	1 wk	Mon 8/2/10	Fri 8/6/10	4
4	Tampa - D7	1 wk	Mon 7/26/10	Fri 7/30/10	5FS+5 days
5	Orlando - D5	1 wk	Mon 7/12/10	Fri 7/16/10	
6	Orlando - FTE Turkey Lake	1 wk	Mon 8/9/10	Fri 8/13/10	2,3
7					
8	Jacksonville - D2	1 wk	Mon 7/19/10	Fri 7/23/10	9,12
9	Miami - MDX	1 wk	Mon 7/12/10	Fri 7/16/10	12SS
10					
11	**D6 Schedule**	**42 days**	**Mon 7/12/10**	**Tue 9/7/10**	
12	Install SG 5.0 on NAP	1 wk	Mon 7/12/10	Fri 7/16/10	
13	Ops and D6 SW Testing	3 wks	Mon 7/19/10	Fri 8/6/10	12
14	SwRI Rollback NAP to SG 4.2.2	1 day	Mon 8/9/10	Mon 8/9/10	13
15	Ops Testing of 4.2.2 on NAP	1 wk	Tue 8/10/10	Mon 8/16/10	14
16	Install SG 5.0 on Production	4 days	Tue 8/17/10	Fri 8/20/10	15
17	Production Burn-In	10 days	Mon 8/23/10	Fri 9/3/10	16
18	SwRI Re-Install on NAP	2 days	Mon 9/6/10	Tue 9/7/10	17
19					
20					



ATTACHMENT C
LOA003 SCHEDULE
RELEASE 5.0 DEPLOYMENT
FOR OOCEA AND PENSACOLA

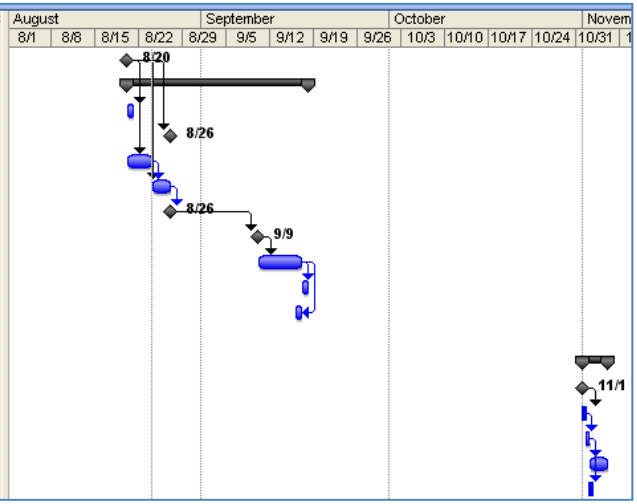
Pensacola Deployment

Task Name	Duration	Start	Finish	Predecessors
LOA	0 days	Fri 8/20/10	Fri 8/20/10	
Pensacola Deployment Plan	**21 days?**	**Fri 8/20/10**	**Fri 9/17/10**	
Data Request	1 day?	Fri 8/20/10	Fri 8/20/10	1
Receipt of Data	0 days	Thu 8/26/10	Thu 8/26/10	1FS+5 days
Skeletal Plan	2 days	Fri 8/20/10	Mon 8/23/10	1
Finalize Draft	3 days	Tue 8/24/10	Thu 8/26/10	1,5
Deliver Plan	0 days	Thu 8/26/10	Thu 8/26/10	6
FDOT Comments	0 days	Thu 9/9/10	Thu 9/9/10	7FS+10 days
Revise Plan	5 days	Fri 9/10/10	Thu 9/16/10	8
Deliver Plan	1 day?	Fri 9/17/10	Fri 9/17/10	9
Revise Schedule and Cost	1 day?	Thu 9/16/10	Thu 9/16/10	9FF
Deployment	**4 days**	**Mon 11/1/10**	**Thu 11/4/10**	
Deployment Start Date	0 days	Mon 11/1/10	Mon 11/1/10	
Install Clustering	0.5 days	Mon 11/1/10	Mon 11/1/10	14
Install SunGuide	0.5 days	Mon 11/1/10	Mon 11/1/10	15
Configure Devices	3 days	Tue 11/2/10	Thu 11/4/10	16
Admin Training	0.5 days	Tue 11/2/10	Tue 11/2/10	16



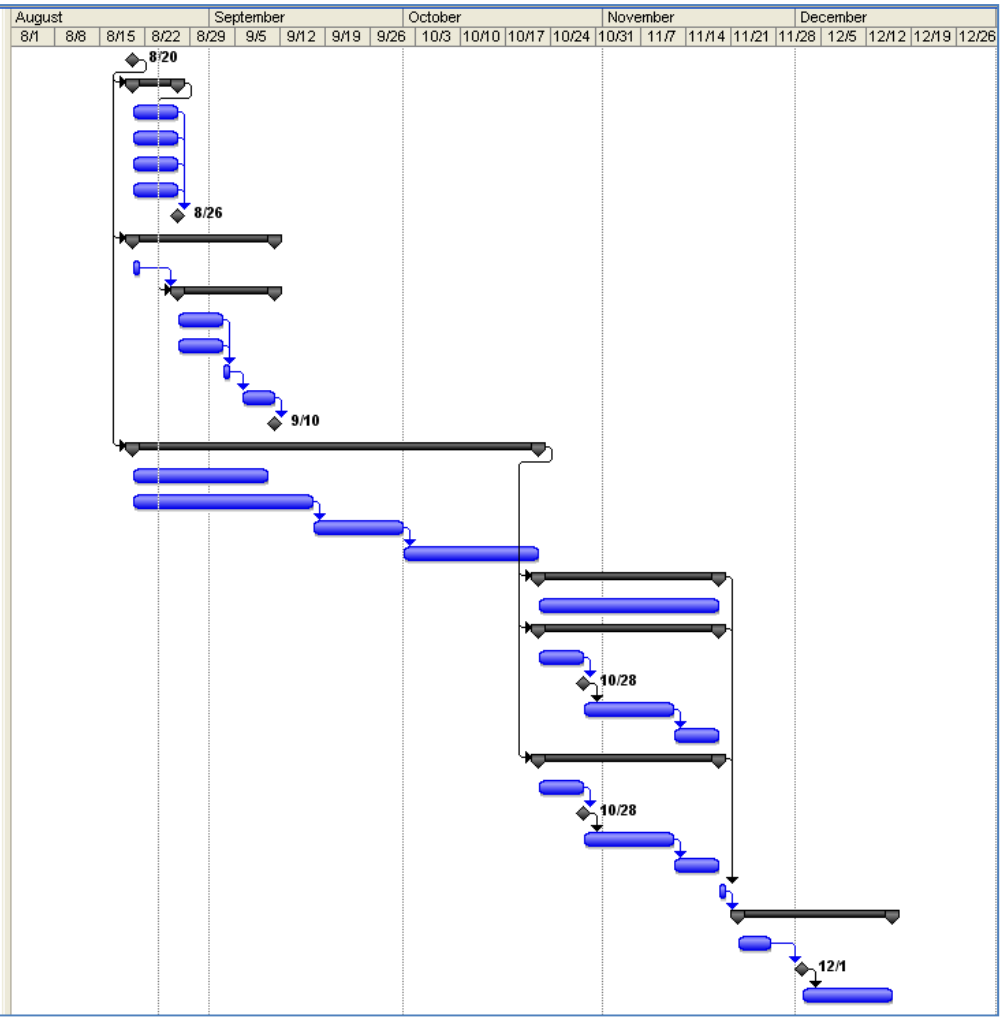
OOCEA Deployment

Task Name	Duration	Start	Finish	Predecessors
LOA	0 days	Fri 8/20/10	Fri 8/20/10	
OOCEA Deployment Plan	**21 days?**	**Fri 8/20/10**	**Fri 9/17/10**	
Data Request	1 day?	Fri 8/20/10	Fri 8/20/10	1
Receipt of Data	0 days	Thu 8/26/10	Thu 8/26/10	1FS+5 days
Skeletal Plan	2 days	Fri 8/20/10	Mon 8/23/10	1
Finalize Draft	3 days	Tue 8/24/10	Thu 8/26/10	1,5
Deliver Plan	0 days	Thu 8/26/10	Thu 8/26/10	6
FDOT Comments	0 days	Thu 9/9/10	Thu 9/9/10	7FS+10 days
Revise Plan	5 days	Fri 9/10/10	Thu 9/16/10	8
Deliver Plan	1 day?	Fri 9/17/10	Fri 9/17/10	9
Revise Schedule and Cost	1 day?	Thu 9/16/10	Thu 9/16/10	9FF
Deployment	**4 days**	**Mon 11/1/10**	**Thu 11/4/10**	
Deployment Start Date	0 days	Mon 11/1/10	Mon 11/1/10	
Install Clustering	0.5 days	Mon 11/1/10	Mon 11/1/10	14
Install SunGuide	0.5 days	Mon 11/1/10	Mon 11/1/10	15
Configure Devices	3 days	Tue 11/2/10	Thu 11/4/10	16
Admin Training	0.5 days	Tue 11/2/10	Tue 11/2/10	16



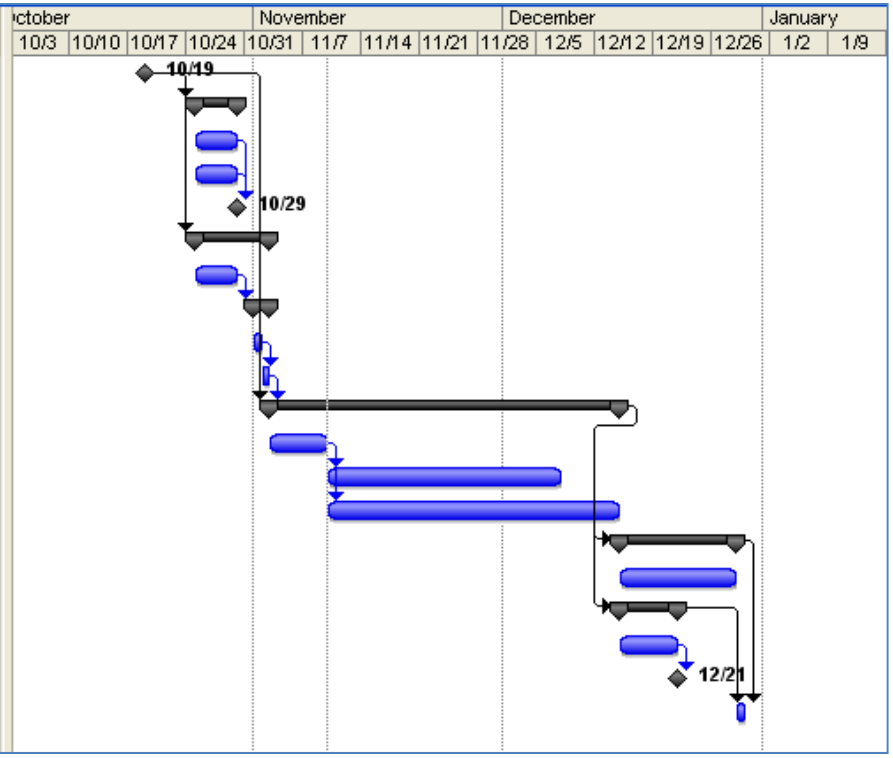
ATTACHMENT D
LOA003 SCHEDULE
INRIX DEVELOPMENT

Task Name	Duration	Start	Finish	redecessor:
Letter of Authorization	0 days	Fri 8/20/10	Fri 8/20/10	
Update Process Documents	**5 days**	**Fri 8/20/10**	**Thu 8/26/10**	**1**
Update SDP	5 days	Fri 8/20/10	Thu 8/26/10	
Update Staffing Plan	5 days	Fri 8/20/10	Thu 8/26/10	
Update QA Plan	5 days	Fri 8/20/10	Thu 8/26/10	
Update Risk Management Plan	5 days	Fri 8/20/10	Thu 8/26/10	
Deliver Updated Process Documents	0 days	Thu 8/26/10	Thu 8/26/10	3,4,5,6
Concept, Requirements, Design Revie	**16 days?**	**Fri 8/20/10**	**Fri 9/10/10**	**1**
Write COO, SRS, SDD (35% Design Do	1 day?	Fri 8/20/10	Fri 8/20/10	
Review	**11 days**	**Fri 8/27/10**	**Fri 9/10/10**	**9,2**
Agenda	5 days	Fri 8/27/10	Thu 9/2/10	
Presentation Materials	5 days	Fri 8/27/10	Thu 9/2/10	
Conduct Review	1 day	Fri 9/3/10	Fri 9/3/10	11,12
Respond to Comments	5 days	Mon 9/6/10	Fri 9/10/10	13
Revision	0 days	Fri 9/10/10	Fri 9/10/10	14
Develop & Unit Test	**45 days**	**Fri 8/20/10**	**Thu 10/21/10**	**1**
SunGuide Updates (GUI)	3 wks	Fri 8/20/10	Thu 9/9/10	
Inrix Interface Service (Inrix C2C Publish	4 wks	Fri 8/20/10	Thu 9/16/10	
Inrix TMC Path Library	2 wks	Fri 9/17/10	Thu 9/30/10	18
Inrix GIS Library	3 wks	Fri 10/1/10	Thu 10/21/10	19
Integration Testing	**20 days**	**Fri 10/22/10**	**Thu 11/18/10**	**16**
Integration Testing	4 wks	Fri 10/22/10	Thu 11/18/10	
VDD	**20 days**	**Fri 10/22/10**	**Thu 11/18/10**	**16**
Develop VDD	5 days	Fri 10/22/10	Thu 10/28/10	
Deliver VDD	0 days	Thu 10/28/10	Thu 10/28/10	24
FDOT VDD Review	10 days	Fri 10/29/10	Thu 11/11/10	25
VDD Revision	5 days	Fri 11/12/10	Thu 11/18/10	26
SUM	**20 days**	**Fri 10/22/10**	**Thu 11/18/10**	**16**
Update SUM	5 days	Fri 10/22/10	Thu 10/28/10	
Deliver SUM	0 days	Thu 10/28/10	Thu 10/28/10	29
FDOT SUM Review	10 days	Fri 10/29/10	Thu 11/11/10	30
SUM Revision	5 days	Fri 11/12/10	Thu 11/18/10	31
Deliver CD to FDOT	1 day	Fri 11/19/10	Fri 11/19/10	21,23,28
FDOT IVV Testing	**18 days**	**Mon 11/22/10**	**Wed 12/15/10**	**33**
FDOT IVV Test	5 days	Mon 11/22/10	Fri 11/26/10	
FDOT IVV Test Results	0 days	Wed 12/1/10	Wed 12/1/10	35FS+3 days
Corrective Actions	10 days	Thu 12/2/10	Wed 12/15/10	36



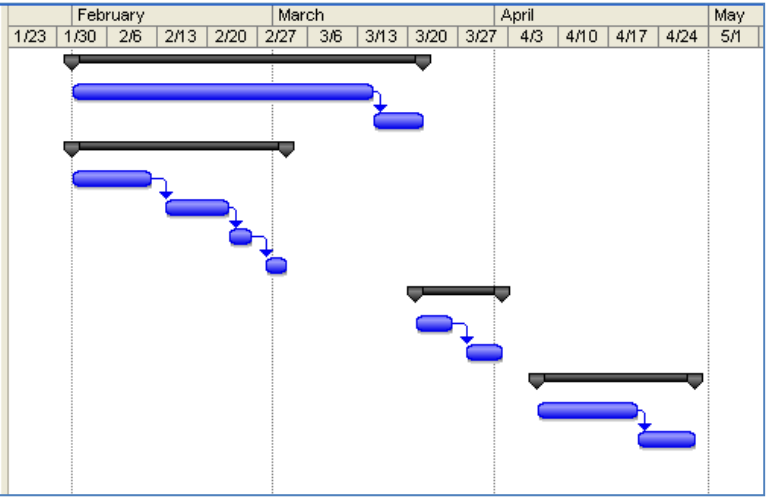
ATTACHMENT E
LOA004 SCHEDULE ROAD RANGER
SMART PHONE APPLICATION DEVELOPMENT

	Task Name	Duration
1	Letter of Authorization	0 days
2	**Update Process Documents**	**5 days**
3	Update SDP	5 days
4	Update Staffing Plan	5 days
5	Deliver Updated Process Documents	0 days
6	**Concept, Requirements, Design Revie**	**7 days**
7	Smartphone GUI Prototyping	5 days
8	**Review**	**2 days**
9	Conduct Review	1 day
10	Respond to Comments	1 day
11	**Develop & Unit Test**	**30 days**
12	Driver - Device ICD	1 wk
13	SPARR Server Application	4 wks
14	SPARR Smartphone Application	5 wks
15	**Integration Testing**	**10 days**
16	Integration Testing	2 wks
17	**VDD**	**5 days**
18	Develop VDD	5 days
19	Deliver VDD	0 days
20	Deliver CD to FDOT	1 day

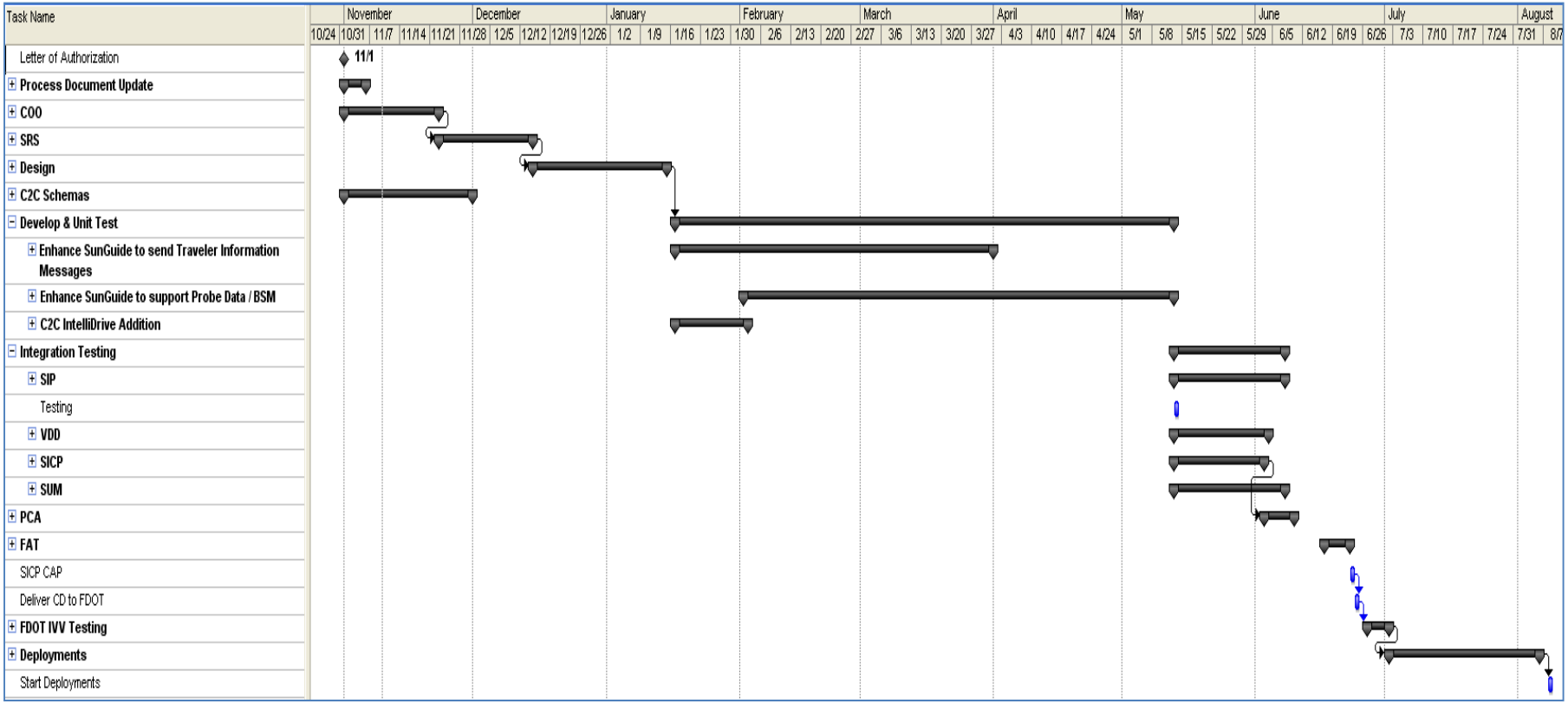


ATTACHMENT F
LOA004 SCHEDULE ENHANCEMENTS DEVELOPMENT

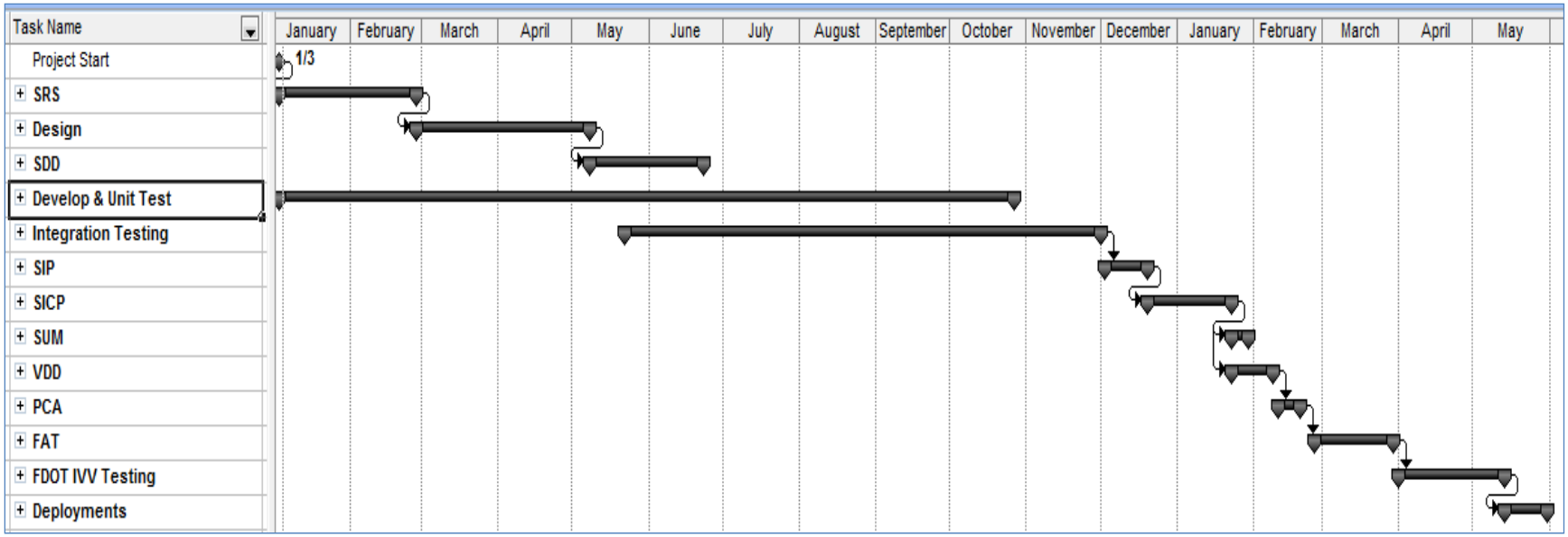
	Task Name	Duration	Start	Finish	redecessor:
1	**DMS Multthreading**	**35 days**	**Tue 2/1/11**	**Mon 3/21/11**	
2	Multithread	30 days	Tue 2/1/11	Mon 3/14/11	
3	UI/DB Mods	5 days	Tue 3/15/11	Mon 3/21/11	2
4	**EM Do Not Publish Location**	**22 days**	**Tue 2/1/11**	**Wed 3/2/11**	
5	EM Modifications	9 days	Tue 2/1/11	Fri 2/11/11	
6	C2C Modifications	7 days	Mon 2/14/11	Tue 2/22/11	5
7	Admin Editor Modification	3 days	Wed 2/23/11	Fri 2/25/11	6
8	Doumentation	3 days	Mon 2/28/11	Wed 3/2/11	7
9	**Miles Ahead DMS**	**10 days**	**Mon 3/21/11**	**Fri 4/1/11**	
10	EM Modifications	5 days	Mon 3/21/11	Fri 3/25/11	
11	Admin Editor Modifications	5 days	Mon 3/28/11	Fri 4/1/11	10
12	**Transcore Driver Enhancement**	**16 days?**	**Thu 4/7/11**	**Thu 4/28/11**	
13	Driver Update	10 days?	Thu 4/7/11	Wed 4/20/11	
14	Admin Update	6 days?	Thu 4/21/11	Thu 4/28/11	13



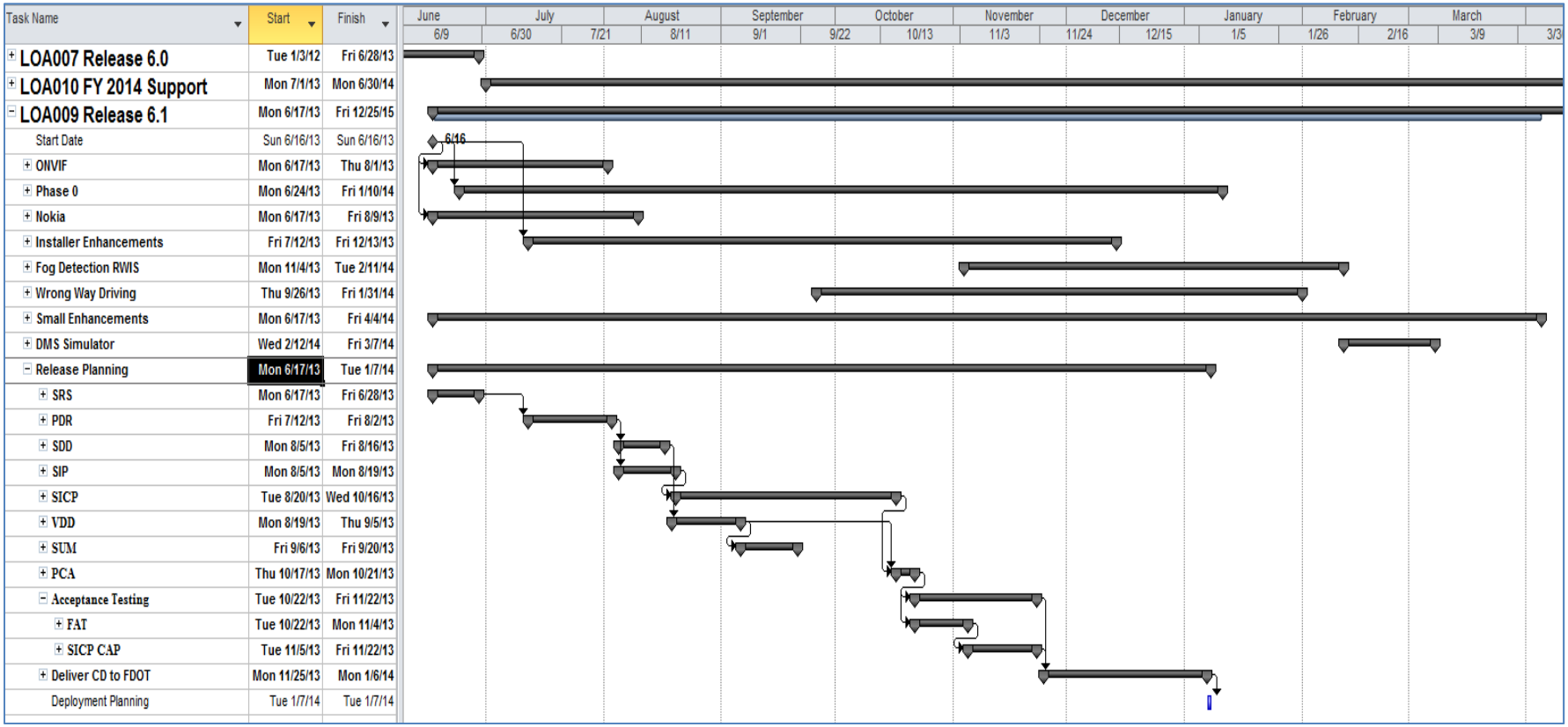
ATTACHMENT G
LOA005 INTELLIDRIVE SCHEDULE


Task Name
November
December
January
February
March
April
May
June
July
August
10/24 10/31 11/7 11/14 11/21 11/28 12/5 12/12 12/19 12/26 1/2 1/9 1/16 1/23 1/30 2/6 2/13 2/20 2/27 3/6 3/13 3/20 3/27 4/3 4/10 4/17 4/24 5/1 5/8 5/15 5/22 5/29 6/5 6/12 6/19 6/26 7/3 7/10 7/17 7/24 7/31 8/7
Letter of Authorization
Process Document Update
COO
SRS
Design
C2C Schemas
Develop & Unit Test
Enhance SunGuide to send Traveler Information Messages
Enhance SunGuide to support Probe Data / BSM
C2C IntelliDrive Addition
Integration Testing
SIP
Testing
VDD
SICP
SUM
PCA
FAT
SICP CAP
Deliver CD to FDOT
FDOT IVV Testing
Deployments
Start Deployments
11/1

ATTACHMENT H
LOA007 SQL SERVER SUPPORT SCHEDULE

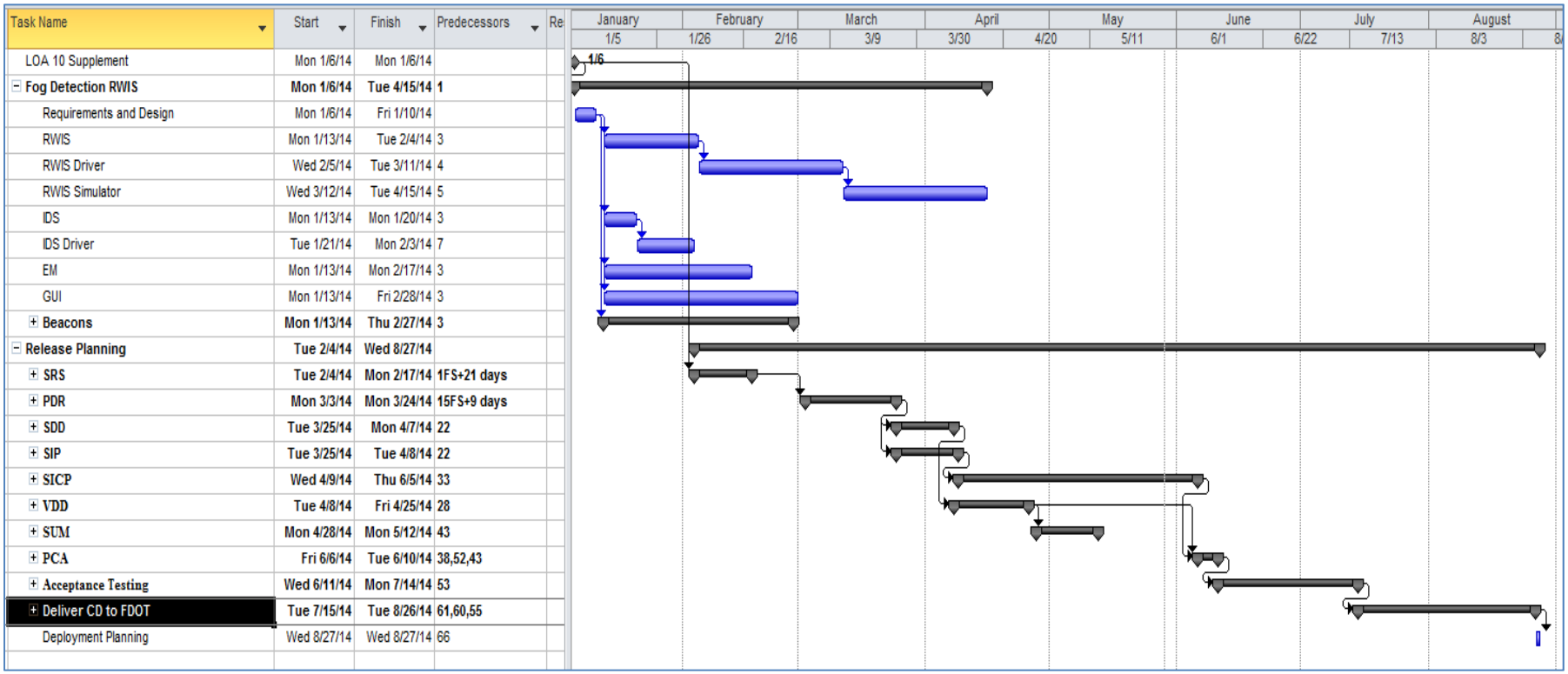

Task Name
January
February
March
April
May
June
July
August
September
October
November
December
January
February
March
April
May
Project Start
1/3
SRS
Design
SDD
Develop & Unit Test
Integration Testing
SIP
SICP
SUM
VDD
PCA
FAT
FDOT IVV Testing
Deployments

ATTACHMENT I
LOA009 UNIFICATION SCHEDULE



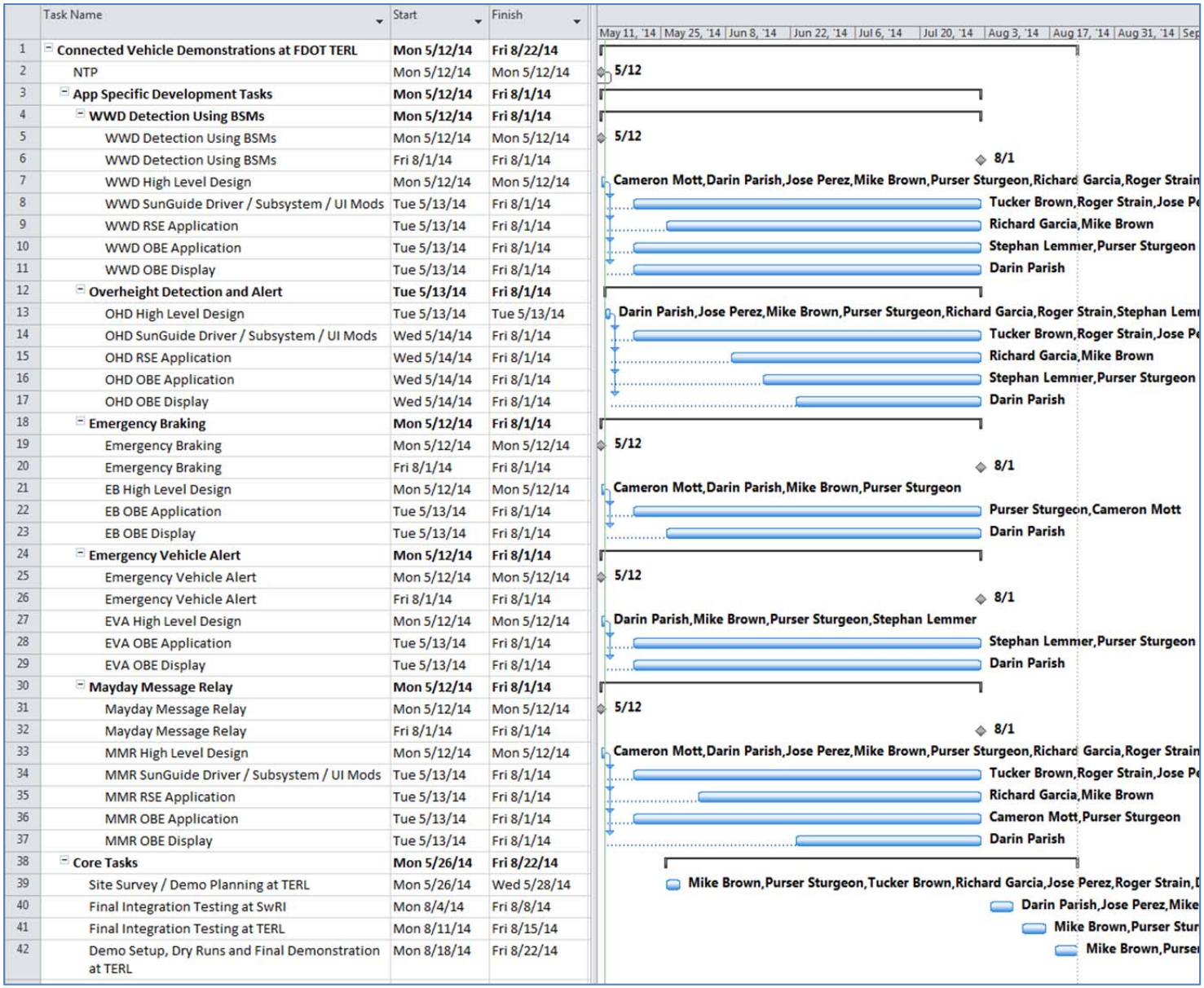
Task Name	Start	Finish
LOA007 Release 6.0	Tue 1/3/12	Fri 6/28/13
LOA010 FY 2014 Support	Mon 7/1/13	Mon 6/30/14
LOA009 Release 6.1	Mon 6/17/13	Fri 12/25/15
Start Date	Sun 6/16/13	Sun 6/16/13
ONVIF	Mon 6/17/13	Thu 8/1/13
Phase 0	Mon 6/24/13	Fri 1/10/14
Nokia	Mon 6/17/13	Fri 8/9/13
Installer Enhancements	Fri 7/12/13	Fri 12/13/13
Fog Detection RWIS	Mon 11/4/13	Tue 2/11/14
Wrong Way Driving	Thu 9/26/13	Fri 1/31/14
Small Enhancements	Mon 6/17/13	Fri 4/4/14
DMS Simulator	Wed 2/12/14	Fri 3/7/14
Release Planning	Mon 6/17/13	Tue 1/7/14
SRS	Mon 6/17/13	Fri 6/28/13
PDR	Fri 7/12/13	Fri 8/2/13
SDD	Mon 8/5/13	Fri 8/16/13
SIP	Mon 8/5/13	Mon 8/19/13
SICP	Tue 8/20/13	Wed 10/16/13
VDD	Mon 8/19/13	Thu 9/5/13
SUM	Fri 9/6/13	Fri 9/20/13
PCA	Thu 10/17/13	Mon 10/21/13
Acceptance Testing	Tue 10/22/13	Fri 11/22/13
FAT	Tue 10/22/13	Mon 11/4/13
SICP CAP	Tue 11/5/13	Fri 11/22/13
Deliver CD to FDOT	Mon 11/25/13	Mon 1/6/14
Deployment Planning	Tue 1/7/14	Tue 1/7/14

ATTACHMENT J
LOA011 RWIS ALERTING SCHEDULE

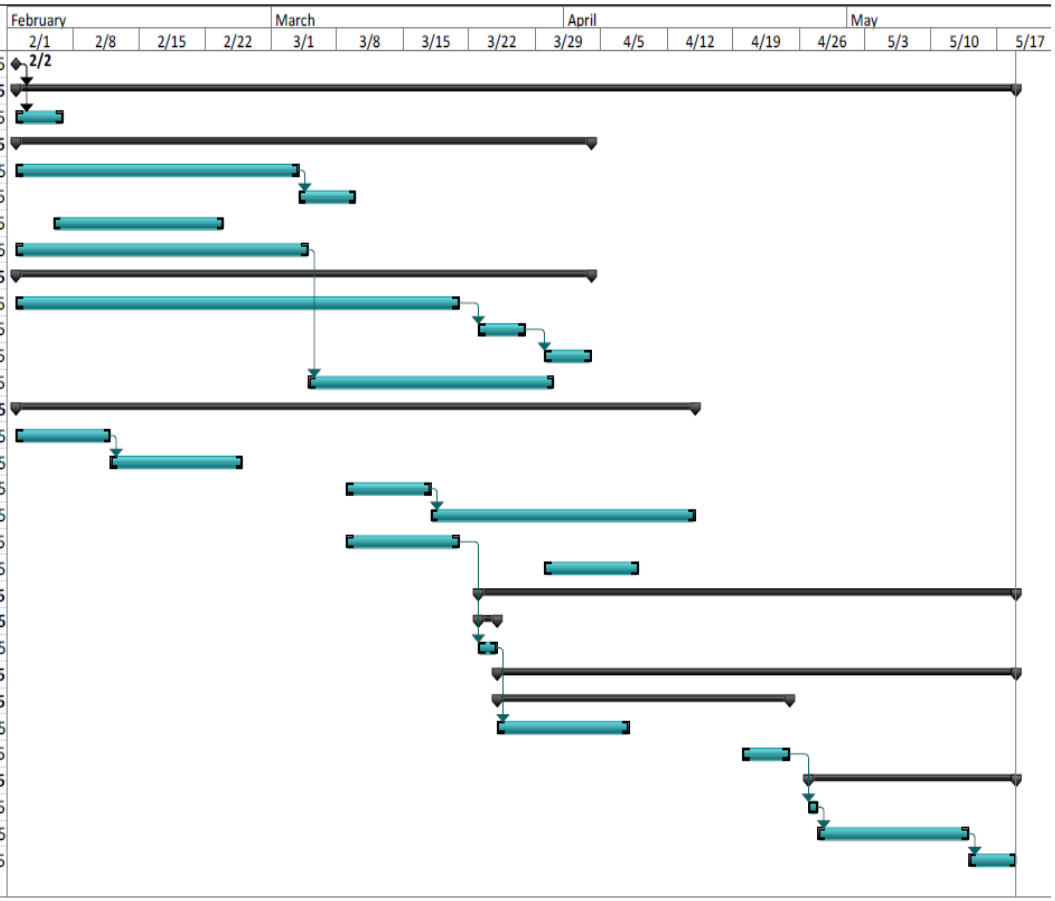


Task Name	Start	Finish	Predecessors	Re
LOA 10 Supplement	Mon 1/6/14	Mon 1/6/14		
Fog Detection RWIS	**Mon 1/6/14**	**Tue 4/15/14**	**1**	
Requirements and Design	Mon 1/6/14	Fri 1/10/14		
RWIS	Mon 1/13/14	Tue 2/4/14	3	
RWIS Driver	Wed 2/5/14	Tue 3/11/14	4	
RWIS Simulator	Wed 3/12/14	Tue 4/15/14	5	
IDS	Mon 1/13/14	Mon 1/20/14	3	
IDS Driver	Tue 1/21/14	Mon 2/3/14	7	
EM	Mon 1/13/14	Mon 2/17/14	3	
GUI	Mon 1/13/14	Fri 2/28/14	3	
Beacons	**Mon 1/13/14**	**Thu 2/27/14**	**3**	
Release Planning	**Tue 2/4/14**	**Wed 8/27/14**		
SRS	**Tue 2/4/14**	**Mon 2/17/14**	**1FS+21 days**	
PDR	**Mon 3/3/14**	**Mon 3/24/14**	**15FS+9 days**	
SDD	**Tue 3/25/14**	**Mon 4/7/14**	**22**	
SIP	**Tue 3/25/14**	**Tue 4/8/14**	**22**	
SICP	**Wed 4/9/14**	**Thu 6/5/14**	**33**	
VDD	**Tue 4/8/14**	**Fri 4/25/14**	**28**	
SUM	**Mon 4/28/14**	**Mon 5/12/14**	**43**	
PCA	**Fri 6/6/14**	**Tue 6/10/14**	**38,52,43**	
Acceptance Testing	**Wed 6/11/14**	**Mon 7/14/14**	**53**	
Deliver CD to FDOT	**Tue 7/15/14**	**Tue 8/26/14**	**61,60,55**	
Deployment Planning	Wed 8/27/14	Wed 8/27/14	66	

ATTACHMENT K
LOA012 CONNECTED VEHICLE TERL DEMO SCHEDULE



	Task Name	Start	Finish
1	**Connected Vehicle Demonstrations at FDOT TERL**	**Mon 5/12/14**	**Fri 8/22/14**
2	NTP	Mon 5/12/14	Mon 5/12/14
3	**App Specific Development Tasks**	**Mon 5/12/14**	**Fri 8/1/14**
4	**WWD Detection Using BSMs**	**Mon 5/12/14**	**Fri 8/1/14**
5	WWD Detection Using BSMs	Mon 5/12/14	Mon 5/12/14
6	WWD Detection Using BSMs	Fri 8/1/14	Fri 8/1/14
7	WWD High Level Design	Mon 5/12/14	Mon 5/12/14
8	WWD SunGuide Driver / Subsystem / UI Mods	Tue 5/13/14	Fri 8/1/14
9	WWD RSE Application	Tue 5/13/14	Fri 8/1/14
10	WWD OBE Application	Tue 5/13/14	Fri 8/1/14
11	WWD OBE Display	Tue 5/13/14	Fri 8/1/14
12	**Overheight Detection and Alert**	**Tue 5/13/14**	**Fri 8/1/14**
13	OHD High Level Design	Tue 5/13/14	Tue 5/13/14
14	OHD SunGuide Driver / Subsystem / UI Mods	Wed 5/14/14	Fri 8/1/14
15	OHD RSE Application	Wed 5/14/14	Fri 8/1/14
16	OHD OBE Application	Wed 5/14/14	Fri 8/1/14
17	OHD OBE Display	Wed 5/14/14	Fri 8/1/14
18	**Emergency Braking**	**Mon 5/12/14**	**Fri 8/1/14**
19	Emergency Braking	Mon 5/12/14	Mon 5/12/14
20	Emergency Braking	Fri 8/1/14	Fri 8/1/14
21	EB High Level Design	Mon 5/12/14	Mon 5/12/14
22	EB OBE Application	Tue 5/13/14	Fri 8/1/14
23	EB OBE Display	Tue 5/13/14	Fri 8/1/14
24	**Emergency Vehicle Alert**	**Mon 5/12/14**	**Fri 8/1/14**
25	Emergency Vehicle Alert	Mon 5/12/14	Mon 5/12/14
26	Emergency Vehicle Alert	Fri 8/1/14	Fri 8/1/14
27	EVA High Level Design	Mon 5/12/14	Mon 5/12/14
28	EVA OBE Application	Tue 5/13/14	Fri 8/1/14
29	EVA OBE Display	Tue 5/13/14	Fri 8/1/14
30	**Mayday Message Relay**	**Mon 5/12/14**	**Fri 8/1/14**
31	Mayday Message Relay	Mon 5/12/14	Mon 5/12/14
32	Mayday Message Relay	Fri 8/1/14	Fri 8/1/14
33	MMR High Level Design	Mon 5/12/14	Mon 5/12/14
34	MMR SunGuide Driver / Subsystem / UI Mods	Tue 5/13/14	Fri 8/1/14
35	MMR RSE Application	Tue 5/13/14	Fri 8/1/14
36	MMR OBE Application	Tue 5/13/14	Fri 8/1/14
37	MMR OBE Display	Tue 5/13/14	Fri 8/1/14
38	**Core Tasks**	**Mon 5/26/14**	**Fri 8/22/14**
39	Site Survey / Demo Planning at TERL	Mon 5/26/14	Wed 5/28/14
40	Final Integration Testing at SwRI	Mon 8/4/14	Fri 8/8/14
41	Final Integration Testing at TERL	Mon 8/11/14	Fri 8/15/14
42	Demo Setup, Dry Runs and Final Demonstration at TERL	Mon 8/18/14	Fri 8/22/14

ATTACHMENT L
LOA014 RELEASE 6.2 ENHANCEMENTS

ID	Task Name	Duration	Start	Finish
1	LOA 14 Start Date	0 days	Mon 2/2/15	Mon 2/2/15
2	**Release 6.2**	**76 days**	**Mon 2/2/15**	**Mon 5/18/15**
3	Requirements	5 days	Mon 2/2/15	Fri 2/6/15
4	**Enhancements**	**45 days**	**Mon 2/2/15**	**Fri 4/3/15**
5	Response Plan Templates	22 days	Mon 2/2/15	Tue 3/3/15
6	DMS Force Caps	4 days	Wed 3/4/15	Mon 3/9/15
7	DMS Force Blank	12 days	Fri 2/6/15	Mon 2/23/15
8	Dismiss Redundant TSS Alerts	23 days	Mon 2/2/15	Wed 3/4/15
9	**Arterial Probe Algorithm**	**45 days**	**Mon 2/2/15**	**Fri 4/3/15**
10	Release 6.0	35 days	Mon 2/2/15	Fri 3/20/15
11	Release 6.1	5 days	Mon 3/23/15	Fri 3/27/15
12	Release 6.2	5 days	Mon 3/30/15	Fri 4/3/15
13	Optional TSS Link Configuration in Map	18 days	Thu 3/5/15	Mon 3/30/15
14	**Project Management**	**52 days**	**Mon 2/2/15**	**Tue 4/14/15**
15	SRS	8 days	Mon 2/2/15	Wed 2/11/15
16	SDD	10 days	Thu 2/12/15	Wed 2/25/15
17	SIP	7 days	Mon 3/9/15	Tue 3/17/15
18	SICP	20 days	Wed 3/18/15	Tue 4/14/15
19	VDD	10 days	Mon 3/9/15	Fri 3/20/15
20	SUM	8 days	Mon 3/30/15	Wed 4/8/15
21	**Release Planning**	**41 days**	**Mon 3/23/15**	**Mon 5/18/15**
22	PCA	**2 days**	**Mon 3/23/15**	**Tue 3/24/15**
23	Setup and Walk-through	2 days	Mon 3/23/15	Tue 3/24/15
24	Acceptance Testing	**39 days**	**Wed 3/25/15**	**Mon 5/18/15**
25	FAT	**23 days**	**Wed 3/25/15**	**Fri 4/24/15**
26	FAT Setup	10 days	Wed 3/25/15	Tue 4/7/15
27	Conduct FAT	5 days	Mon 4/20/15	Fri 4/24/15
28	SICP CAP	**16 days**	**Mon 4/27/15**	**Mon 5/18/15**
29	Produce Defect List & Remedy	1 day	Mon 4/27/15	Mon 4/27/15
30	Corrective Actions	12 days	Tue 4/28/15	Wed 5/13/15
31	Produce Installer, Update VDD, Update IN	3 days	Thu 5/14/15	Mon 5/18/15