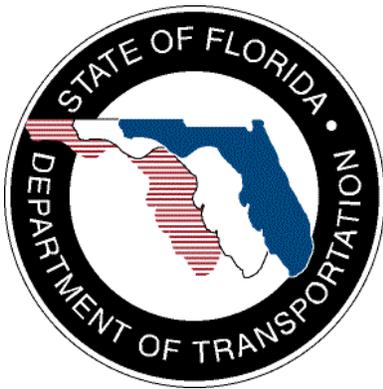# SunGuide®:

Subcontractor Management Plan

SunGuideSMD-SMP-1.0.0 (Working Final)

Prepared for:

Florida Department of Transportation
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List of Acronyms

CM ....Configuration Management
FDOT ....Florida Department of Transportation
ITS.............................Intelligent Transportation Systems
ITN............................Invitation to Negotiate
LOA ....Letter of Authorization
NTP...........................Notice to Proceed
SMD..........................Support, Maintenance and Development
SMP...........................Subcontractor Management Plan
SWA …………….....Standard Written Agreement
SwRI® ....Southwest Research Institute®

Revision History

Revision	Date	Changes
1.0 (Draft)	07/22/2010	Initial Release (Draft).
1.0.0 (Working Final)	08/12/2010	Updated IAW comments from FDOT.

1. Scope

1.1 Document Identification

This document serves as the Subcontractor Management Plan for the SunGuide® Support, Maintenance and Development contract. This plan describes how SwRI will manage subcontracts under the SunGuide Support, Maintenance and Development (SMD) Contract, including how the activities and hours will be reported to the Florida Department of Transportation (FDOT).

1.2 Project Overview

The FDOT SunGuide SMD 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 1–1[1] provides a graphical view of the SunGuide software architecture:
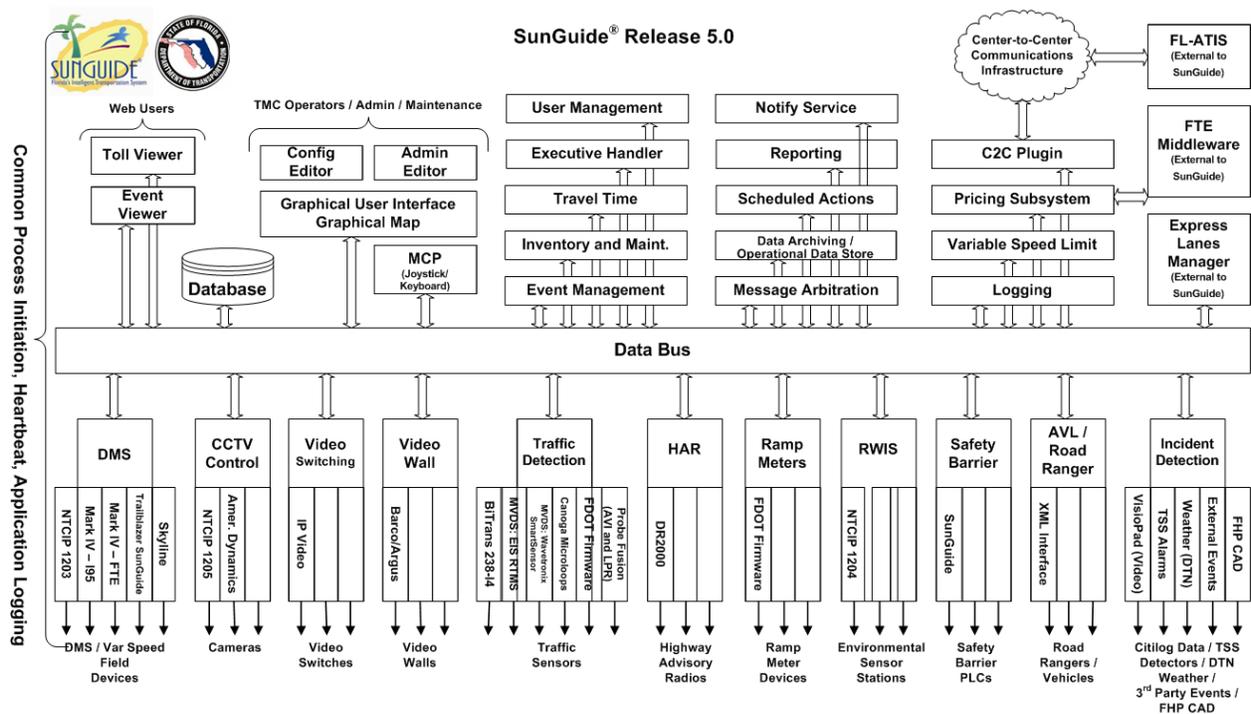

Figure 1–1 – High-Level Architectural Concept

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[1] Acronyms from this figure are not included in the list of acronyms for the document; as these acronym definitions are not pertinent to the content of this document.

1.3 Related Documents

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

- *FDOT Standard Written Agreement BDQ69, SunGuide Software Support, Maintenance and Development,* July 1, 2010.

- *ITN-DOT-09/10-9017-LG, SunGuide Software Support, Maintenance and Development,* February 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.
- SunGuide Project website: http://sunguide.datasys.swri.edu.

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
- Arun Krishnamurthy, FDOT SunGuide Project Manager, arun.krishnamurthy@dot.state.fl.us, 850-410-5615
- Khue Ngo, PBS&J Project Manager, khue.ngo@dot.state.fl.us, 850-410-5579
- David Chang, PBS&J Project Advisor, David.Chang@dot.state.fl.us, 850-410-5622
- Robert Heller, SwRI Project Manager, rheller@swri.org, 210-522-3824
- Tucker Brown, SwRI Software Project Manager, tbrown@swri.com, 210-522-3035

2. SwRI Teaming Arrangements

SwRI identified Cambridge Systematics, Lucent Group and Vanus Incorporated as team members in the SwRI response to ITN-DOT-09/10-9017-LG. Although SwRI concluded that adequate development staff are available for this effort, areas were identified where other companies could strengthen the response, such as "traditional" traffic engineering skills. The major areas of skills provided by the team members included:

- Performance Measures
- Traffic Engineering
- On-site support staff

SwRI identified companies known to have expertise in those areas and which were regarded as having very strong reputations in the ITS industry. Each of these team members provides capabilities or resources that are not readily available to SwRI "in-house". The teaming arrangements can be summarized as follows.

- If the FDOT requests SwRI to perform *performance measures* tasks, then with concurrence of the FDOT, SwRI will subcontract that work to Cambridge Systematics.
- If the FDOT requests SwRI to provide *on-site support staff* outside of the Orlando area, then with concurrence of the FDOT, SwRI will subcontract that work to Lucent Group.
- If the FDOT requests SwRI to perform *traffic engineering* tasks, then with concurrence of the FDOT, SwRI will subcontract that work to VANUS Group.

As prime contractor, SwRI will be responsible for all aspects of subcontractor management including performance and schedule. With respect to how the work will be distributed, if FDOT requests a cost estimate for development efforts requiring more knowledge in performance measures of traffic engineering than the SwRI staff possesses, hours will be included in the cost estimate (which will be reviewed and approved by FDOT) for staff with those specialties from our team members. For on-site support, if FDOT decides to continue to request this service, we will utilize the services of our team to augment the SwRI staff already based in Florida.

2.1 Cambridge Systematics

If the FDOT requests SwRI to perform performance measures tasks, then with concurrence of the FDOT, SwRI will subcontract that work to Cambridge Systematics. Within the SwRI proposal, Cambridge Systematics proposed the following labor categories identified in Table 2–1[2].

Table 2–1 – Cambridge Systematics labor Category Qualifications

Labor Category	Qualifications
Cambridge Analyst I	Bachelor's level degree, expertise in the following areas: traffic engineering, transportation planning, performance measurement, data management, traffic operations analysis, and ITS planning and architecture studies.

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[2] Labor categories can be found in the FDOT Standard Written Agreement BDQ69, Exhibit C

Labor Category	Qualifications
Cambridge Analyst II	Bachelor's level degree, advanced expertise in the following areas: traffic engineering, transportation planning, performance measurement, data management, traffic operations analysis, and ITS planning and architecture studies.

2.2 Lucent Group

If the FDOT requests SwRI to provide on-site support staff outside of the Orlando area, then with concurrence of the FDOT, SwRI will subcontract that work to Lucent Group. Within the SwRI proposal, Lucent Group proposed the following labor categories identified in Table 2–2[3].

Table 2–2 – Lucent Group Labor Category Qualifications

Labor Category	Qualifications
LGI Admin Assistant	High School diploma. Experience with data entry, technical writing, and/or clerical support to technical projects.
LGI On-site support staff I	Bachelor's level degree in Computer Science, Engineering or other related discipline, or some college/technical training together with computer industry experience. Assists with advanced technical activities associated with project performance, under the supervision of a programmer, analyst, designer or ITS Specialist.
LGI On-site support staff II	Bachelor's level degree in Computer Science, Engineering or other related discipline, or some college/technical training together with computer industry experience. Entry level position in computer programming, network administration, or system support.
LGI On-site support staff III	Bachelor's level degree in Computer Science, Engineering or other related discipline. Advanced level position in computer programming, network administration, or system support. Provides technical direction to less experienced programmers.
LGI Technician I	High School diploma. Assists with technical activities associated with project performance, under the supervision of a programmer, analyst, designer or ITS Specialist.
LGI Technician II	Bachelor's level degree in Computer Science, Engineering or other related discipline. Experienced in computer programming, network administration, system support or systems training development and delivery.
LGI Technician III	Bachelor's level degree in Computer Science, Engineering or other related discipline. Advanced level position in computer programming, network administration, or system support. Provides technical direction to less experienced technicians.
LGI Technician IV	Bachelor's level degree in Computer Science, Engineering, or other related discipline. Demonstrated capability in computer programming, network administration, or system support. Provides oversight and technical direction to less experienced technicians.

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[3] Labor categories can be found in the FDOT Standard Written Agreement BDQ69, Exhibit C

Labor Category	Qualifications
LGI ITS Specialist I	Bachelor's degree plus three years of IT/ITS Management/operations experience. In lieu of a Bachelor's degree, an additional three (3) years (for a total of six [6] years) experience in ITS operations and planning.
LGI ITS Specialist II	Bachelor's degree plus three years of IT/ITS Management/operations experience. In lieu of a Bachelor's degree, an additional three (3) years (for a total of six [6] years). Demonstrated advanced capability in task management, systems engineering, planning, network communications, studies and analysis, systems design, implementation, integration and test.

2.3 VANUS Inc. (Gannett Fleming VANUS Group)

If the FDOT requests SwRI to perform *traffic engineering*, then with concurrence of the FDOT, SwRI will subcontract that work to VANUS Group. Within the SwRI proposal, VANUS Inc. proposed the following labor categories identified in Table 2–3[4].

Table 2–3 – Vanus Inc. Labor Category Qualifications

Labor Category	Qualifications
Vanus Traffic Engineer Tech	Associates level degree, knowledge in traffic engineering, ITS systems and traffic signals.
Vanus Senior Traffic Engineer	Bachelor's level degree, advanced knowledge in traffic engineering, ITS systems and traffic signals.

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[4] Labor categories can be found in the FDOT Standard Written Agreement BDQ69, Exhibit C

3. Subcontract Process

SwRI issues subcontracts using the following summarized process:

1. FDOT provides a letter for authorization to SwRI which contains work which the SwRI Project Manager decides to subcontract. This decision is made with due consideration of SwRI capabilities or it is subject to the teaming agreements previously described with Cambridge Systematics, Lucent Group or VANUS, Inc.
2. SwRI PM provides SwRI Purchasing (subcontracts specialist) with a Statement of Work and subcontractor point of contact; included is justification for using a specified subcontractor rather than entering a competitive procurement process.
3. SwRI purchasing subcontract specialist provides draft SOW to subcontractor and requests a cost estimate.
4. Subcontractor provides a cost estimate (proposal) to SwRI subcontract specialist.
5. SwRI subcontract specialist forwards the cost estimate to SwRI PM and requests approval.
6. DRAFT subcontract is developed with DRAFT SOW and subcontractor proposal and provided to subcontractor.
7. SwRI receives comments and resolves issues with subcontractor; finalizes contract; all parties agree to subcontract.
8. Subcontract issued

4. Invoices and Reporting

The following paragraphs describe specific aspects of invoicing and reporting as required by BDQ69 SWA Exhibit A, 'Scope of Services.'

4.1 Subcontract Invoice Requirements

SwRI will require subcontractors to submit invoices as follows:

- Subcontractor shall not exceed allocations for Labor or Other Direct Costs without written modification to this Subcontract.
- Invoices for costs incurred will be submitted on a periodic basis (there is no invoice due date within the subcontract to Lucent. Lucent is aware of the SwRI reporting requirements and has indicated they will supply information in a timely manner).
- Invoices shall reference the subcontract number, indicate the number of hours included in the invoice and shall be accompanied by an itemized statement of cost and documentation substantiating incurred labor expenses (e.g. timecards) and other direct costs (e.g. receipts).
- If the invoice does not comply with these requirements, the designated billing office will return it within 7 days after receipt and provide the reasons why it is not a proper invoice. Government Property (i.e. equipment or other type of contractor - acquired property) must be itemized separately on each invoice.
- Copies of all invoices shall be forwarded to Buyer at P.O. Box 28510, San Antonio, Texas 78228, Attn: Accounts Payable.

4.2 Subcontract Invoicing and Labor Reporting to FDOT

SwRI will invoice FDOT for subcontractor hours and report subcontract hours as described in the following paragraphs.

4.2.1 Activity Reporting

In each periodic status report, SwRI will include a description of activities performed by its subcontractor personnel during that same reporting period. The activity summary will provide association with Footprints issues or district (TMC) support requests.

4.2.2 Invoicing

SwRI will invoice the FDOT for subcontractor costs in the reporting period following receipt of invoices from subcontractors. SwRI will provide to FDOT the following information as backup to the invoices:

- Copies of the invoices received by SwRI from its subcontractors
- Copies of the invoice supporting materials received by SwRI from its subcontractors (labor backup, travel receipts, etc.)

As an example, subcontractor hours and costs for a period ending on August 27, 2010 would be invoiced to SwRI during the following four week period, i.e. before September 24, 2010 and would appear in the invoice and labor detail associated with the period ending September 24, 2010.

4.2.3 Reporting of Hours to FDOT

SwRI will report subcontract hours to the FDOT as follows:

- SwRI will report subcontractor hours by individual subcontractor staff member on the labor detail spreadsheet provided by SwRI with progress status reports and invoices.
- Subcontractor staff members will be indicated by labor category and total hours for each labor category will be included on the labor detail, in accordance with labor rates in BDQ69 Exhibit C.