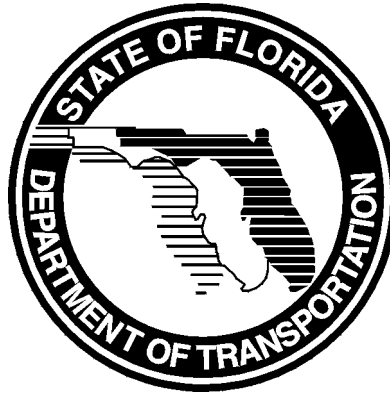


EXHIBIT A



SCOPE OF SERVICES
FOR
FINANCIAL PROJECT ID. 418439-1-32-07

DISTRICTWIDE
MISCELLANEOUS MINOR DESIGN PROJECTS
DISTRICT THREE

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SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES HIGHWAY AND BRIDGE/STRUCTURAL DESIGN

This Exhibit forms an integral part of the agreement between the State of Florida Department of Transportation (hereinafter referred to as the DEPARTMENT) and [REDACTED] (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

Financial Project ID: **418439-1-32-07**
Description: **MISCELLANEOUS MINOR DESIGN PROJECTS**
Location: **DISTRICTWIDE**

1 PURPOSE

The purpose of this Exhibit is to describe the **possible** scope of work and the **range of** responsibilities of the CONSULTANT and the DEPARTMENT in connection with the design and preparation of a complete set of construction contract plans and special provisions **for each specific project to be assigned to the CONSULTANT under this Agreement (hereinafter called “the assigned project”). Each such assignment shall be made with the issuance of a Task Work Order authorization with an accompanying scope of services; no work on a specific project shall begin until a Task Work Order for that project has been authorized in writing under this Agreement by the DEPARTMENT.**

- Major work groups include: 3.1, 4.1.2, & 8.2
- Minor work groups include: 7.1, 7.2, 7.3, 8.1, 8.3, 8.4, 9.1, 9.2, 9.3, 9.4.1, 9.4.2, & 9.5

The general objective is for the CONSULTANT to prepare a set of plans to be used by the contractor to build the **assigned** project, and by the DEPARTMENT to ensure the **assigned** project is built as designed and to specifications. Elements of work **may** include, **but not be limited to, roadways, structures, intersections, interchanges, surveys, drainage, signing and pavement markings, signalization, lighting, right-of-way maps, maintenance of traffic, environmental permits, utility coordination and relocation, cost estimates, design documentation, geotechnical investigation and testing, QA/QC and all necessary incidental items for a complete project.**

The Scope of Services **for each assigned project will establish** which items of work, as described in the Plans Preparation Manual and other pertinent manuals to accomplish the work are specifically included in this contract, and also which of the items of work **may** be the responsibility of the CONSULTANT or the DEPARTMENT **for an assigned project.**

All plans and design documents are to be prepared with Standard English values in accordance with all applicable DEPARTMENT manuals and guidelines.

The CONSULTANT shall be aware that as **an assigned** project is developed, certain

modifications and/or improvements to the original recommendation may be required. The CONSULTANT is to incorporate these refinements into the design and will consider this effort to be an anticipated and integral part of the work. This will not be a basis for any supplemental fee request(s).

The CONSULTANT shall demonstrate good project management practices while working on this project. These include communication with the DEPARTMENT and others as necessary, management of time and resources, and documentation. The CONSULTANT shall set up and maintain throughout the design of the project a contract file in accordance with DEPARTMENT procedures. It shall be the CONSULTANT's responsibility to utilize the very best engineering judgment, practices, and principles possible during the prosecution of the work commissioned under this contract.

The DEPARTMENT will provide contract administration, management services, and technical reviews of all work associated with the development and preparation of the contract plans. The DEPARTMENT will provide job-specific information and/or functions as outlined in this contract.

2 PROJECT DESCRIPTION

The CONSULTANT shall investigate the status of the projects and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies. If a Preliminary Engineering Report is available from a prior or current Project Development and Environmental (PD&E) study, the CONSULTANT shall use the approved concepts as a basis for the design unless otherwise directed by the DEPARTMENT.

2.1 Roadway

Each assigned project, (Task Work Order), will identify the roadway analyses and design elements applicable to be provided by the Consultant and/or the Department. Unless otherwise noted, roadway and design elements are to be in accordance with sections four (4) and five (5) of this document.

2.2 Drainage

Each assigned project, (Task Work Order), will identify the drainage analyses and design elements applicable to be provided by the Consultant and/or the Department. Unless otherwise noted, drainage design elements are to be in accordance with section six (6) of this document.

2.3 Utility Coordination

Each assigned project, (Task Work Order), will identify the utility coordination activities and responsibilities to be provided by the Consultant and/or the Department. Unless otherwise noted, utility elements are to be in accordance with section seven (7) of this document.

2.4 Permits

Each assigned project, (Task Work Order), will identify the environmental services and responsibilities, analyses and design elements applicable to be provided by the Consultant and /or the Department. Unless otherwise noted, environmental services and permitting elements are to be in accordance with section eight (8) of this document.

2.5 Structures

Each assigned project, (Task Work Order), will identify the Structural analyses and design elements applicable to be provided by the Consultant and /or the Department. Unless otherwise noted, structural analyses and design elements are to be in accordance with sections nine (9) through eighteen (18), as applicable, of this document.

2.6 Signing and Pavement Markings

Each assigned project, (Task Work Order), will identify the signing and pavement markings applicable to be provided by the Consultant and/or the Department. Unless otherwise noted, signing and pavement markings are to be in accordance with sections nineteen (19) and twenty (20) of this document.

2.7 Signals

Each assigned project, (Task Work Order), will identify the roadway analyses and design elements applicable to be provided by the Consultant and/or the Department. Unless otherwise noted, signalization design elements are to be in accordance with sections twenty-one (21) and twenty-two (22) of this document.

2.8 Lighting

Each assigned project, (Task Work Order), will identify if lighting services are applicable to be provided by the Consultant. Unless otherwise noted, lighting analyses and design elements are to be in accordance with sections twenty-three (23) and twenty-four (24) of this document.

2.9 Landscape Architecture (Not applicable to this project)

2.10 Survey

Each assigned project, (Task Work Order), will identify the survey services applicable to be provided by the Consultant and /or the Department. Unless otherwise noted, survey services are to be in accordance with section twenty-seven (27) of this document.

2.11 Photogrammetry

Each assigned project, (Task Work Order), will identify the photogrammetric services applicable to be provided by the Consultant and /or the Department.

Unless otherwise noted, survey services are to be in accordance with section twenty-eight (28) of this document.

2.12 Mapping

Each assigned project, (Task Work Order), will identify the mapping elements applicable to be provided by the Consultant and/or the Department. Unless otherwise noted, mapping services are to be in accordance with section twenty-nine (29) of this document.

2.13 Geotechnical

Each assigned project, (Task Work Order), will identify the geotechnical investigation, testing and analyses and design elements applicable to be provided by the Consultant and/or the Department. Unless otherwise noted, geotechnical elements are to be in accordance with section thirty (30) of this document.

2.14 Architecture (Not applicable to this project)

2.15 Noise Barriers (Not applicable to this project)

2.16 Intelligent Transportation Systems (Not applicable to this project)

2.17 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed project activity/event schedule *with actual dates and Department activity/event numbers* for DEPARTMENT and CONSULTANT scheduled activities required to meet the current DEPARTMENT Production Date. *The schedule shall be based upon the durations and schedule negotiated during the project staff hour negotiations process.* The schedule shall be accompanied by an anticipated payout and fiscal progress curve. For the purpose of scheduling, the CONSULTANT shall allow for a *three (3)* week review time for each phase review and other submittals as appropriate.

The schedule shall indicate, at a minimum, proposed dates for Phase I, II, III, and IV plans and all other appropriate milestones and required submittals.

Periodically, throughout the life of the project, the schedule and curves shall be reviewed and, with the approval of the DEPARTMENT, adjusted as necessary to incorporate changes in the work concept and progress to date.

The approved schedule and schedule status report, along with progress and payout curves, shall be submitted with the monthly progress report.

2.18 Submittals

The CONSULTANT shall provide copies of the required plans and documents as identified in the assigned Project (Task Work Order) Scope or made known by the

DEPARTMENT's Design Project Manager. The anticipated printing and submittal requirements for a project include the listed items below; however, this list of items may not be all inclusive on project needs. This tabulation will be used for estimating purposes. The DEPARTMENT's Design Project Manager will determine the specific number of copies and distribution list required for each project.

The DEPARTMENT's Electronic Review and Comment (ERC) system will be used for project reviews. Upon Notice to Proceed, the design project manager will coordinate with the CONSULTANT to provide the required access into the ERC system.

It is the CONSULTANT'S responsibility to independently and continually QC their plans and other deliverables. The CONSULTANT should regularly communicate with the DEPARTMENT Project Manager to discuss and resolve issues or solicit opinions from those within designated areas of expertise. It is also the responsibility of the CONSULTANT to adhere to all DEPARTMENT standards, policies, procedures, guidelines, etc. Constant communication between the DEPARTMENT and the CONSULTANT is vital in the overall success of any project.

The CONSULTANT will be required to provide written monthly progress reports for each assignment, documenting actions taken, actions to be taken, status of project schedule, and contacts with the DEPARTMENT (the DEPARTMENT employee contacted, the issue, and the resolution), and the status of the plans.

The CONSULTANT will be furnished a project "seed directory" CD to be used during the development of the project files. The District Survey Office will include all existing applicable survey data on this CD to be used where necessary. Upon completion of the design phase, this CD will become the Electronic Delivery CD and shall contain all pertinent project information as described in the FDOT CADD Manual.

Following the Notice-to Proceed Meeting, the CONSULTANT will begin the plans production process including making the necessary contacts with the DEPARTMENT and attending field reviews as required by the CONSULTANT Scope of Services.

Deliverables must be developed in the correct format as required by the FDOT CADD Manual and the CADD Criteria Handbook.

PRIOR TO PHASE I SUBMITTAL:

Quality Control Plan: The CONSULTANT shall submit their Quality Control Plan that will be used during the design of this project to the DEPARTMENT for reference. As a minimum, the QC plan shall include the details of all plan review processes to be utilized and sufficient file documentation to show that the QC plan has been followed.

Alignment Submittals: *Centerline/Baseline of Survey alignment submittals shall be submitted to the District Survey Office for approval and copies shall be*

submitted to the FDOT Project Manager, D3 R/W Mapping Office, and the Prime Consultant.

The Prime shall wait for approval from the District Surveying Office before utilizing the alignment for Design purposes.

Survey Submittals: *The Survey Subconsultant shall transmit their submittals to The District 3 Survey Office as well as the Prime Consultant. The Survey Subconsultant shall copy the DEPARTMENT's Project Manager on all submittal correspondence. These survey submittals are to be made prior to the phase I, II, III, and IV plans submittals.*

Misc. Design Documentation: *The CONSULTANT shall submit to the DEPARTMENT for review, and receive concurrence for, the Community Awareness Plan, the Typical Section Package, Design Variances and/or Exceptions (if applicable), etc., and other documents as required by the Plans Preparation Manual and the Scope of Services.*

Phase I:

*The CONSULTANT shall submit two (2) copies of the Phase Submittal CD/DVD and three (3) hard copies of the submittal components to the DEPARTMENT's Design Project Manager for distribution. The Phase Submittal CD/DVD will include all roadway plans in one (1) *.PDF file. In addition, *.PDF files of the project Design Documentation and any other submittal document will be included on the Phase Submittal CD/DVD. The CONSULTANT must have the QC marked-up plans available for the DEPARTMENT's review upon request.*

The CONSULTANT shall submit plans for utility coordination (electronically if possible and as indicated by the affected UAO or the Area Utility Coordinator).

*If pedestrian features exist within the project, the CONSULTANT shall submit two (2) CDs/DVDs containing an electronic *.PDF version of the ADA Survey Report. This report will use photographs and tables as necessary to present the existing conditions of each pedestrian feature (curb ramp, pedestrian signal detector, section of sidewalk, bus stop, etc.) and will make recommendations for correcting deficiencies.*

If bridge structures are included in the project: the CONSULTANT shall submit five (5) hard copies of the Bridge Hydraulics Report and five (5) copies of the Bridge Development Report.

Phase II:

The CONSULTANT shall submit two (2) copies of the Phase Submittal CD/DVD and three (3) hard copies of the submittal components to the DEPARTMENT's Design Project Manager for distribution. The Phase Submittal CD will include all plans set components (roadway, signing & pavement marking, signalization, etc.)

*combined into one (1) *.PDF file. In addition, *.PDF files of the project Design Documentation, and any other submittal document will be included on the Phase Submittal CD/DVD. The CONSULTANT must have the QC marked-up plans available for the DEPARTMENT's review upon request.*

The CONSULTANT shall review the DEPARTMENT's Long Range Estimate (L.R.E.) and provide a marked-up copy to the District Preliminary Estimates Office.

The CONSULTANT shall submit plans to each of the affected local government(s) designated contact for a two week review. Electronic submittals are preferred. See Section 3.1 of this document for details regarding Local Government Involvement.

The CONSULTANT shall submit plans for Utility Design Meeting (electronically if possible and as indicated by the affected UAO or the Area Utility Coordinator). Plans shall be submitted to the Area Utility Engineer and each utility on the project for the DEPARTMENT's Area Utility Engineer to coordinate. Reference section 7.9 of this Scope of Services for Utility Design Meeting requirements.

The CONSULTANT shall conduct a Post 60% Review Workshop with DEPARTMENT Area Operations personnel in conjunction with the Utility Design Meeting (see section 7.9). The workshop will take place at a location appropriate for the project that will allow for a same-day project site visit. The workshop will consist of a Project Briefing, Field Review, and Project Design Review Workshop.

The CONSULTANT shall submit a Constructability Phase Review Checklist as per the Construction Project Administration Manual (CPAM).

The CONSULTANT shall submit one (1) hard copy of a completed Design Plans Phase Review coversheet (PPM Vol. 1, exhibit 24-B) along with a hard copy set of the comments and responses from the previous phase submittal for concurrence by the District Project Management Engineer.

If applicable, the CONSULTANT shall submit a copy of the plans to the DEPARTMENT'S Project Manager for FHWA review.

If bridge structures are included in the project: the CONSULTANT shall submit five (5) copies of the approved Bridge Development Report and five (5) copies of the approved Bridge Hydraulics Report.

Phase III:

*The CONSULTANT shall submit two (2) copies of the Phase Submittal CD/DVD and three (3) hard copies of the submittal components to the DEPARTMENT's Design Project Manager for distribution. The Phase Submittal CD/DVD will include all plans set components (roadway, signing & pavement marking, signalization, etc.) combined into one (1) *.PDF file. In addition, *.PDF files of*

the project Computation Book, Design Documentation, CONSULTANT Cost Estimate, and any other submittal document will be included on the Phase Submittal CD/DVD. The CONSULTANT must have the QC marked-up plans available for the DEPARTMENT's review upon request.

The CONSULTANT shall submit plans for utility coordination (electronically if possible and as indicated by the affected UAO or the Area Utility Coordinator).

The CONSULTANT shall submit a Constructability Phase Review Checklist as per the Construction Project Administration Manual (CPAM). In addition, the CONSULTANT's construction contract time estimate shall be submitted to the DEPARTMENT's Design Project Manager (including utility schedules and a dependent time memo) for the DEPARTMENT's review of the project contract time. On a Lump Sum project where a comp book is not prepared, the CONSULTANT shall submit an estimate of pay items and quantities.

The CONSULTANT shall submit one (1) hard copy of a completed Design Plans Phase Review coversheet (PPM Vol. 1, exhibit 24-B) along with a hard copy set of the comments and responses from the previous phase submittal for concurrence by the District Project Management Engineer.

The CONSULTANT shall also submit any Technical Special Provisions and/or incentive/disincentive cost analysis as required by the Specification package (if applicable).

The CONSULTANT shall submit three (3) Geotechnical Reports (as applicable).

If applicable, the CONSULTANT shall submit a copy of the plans to the DEPARTMENT'S Project Manager for FHWA review.

Phase IV:

*If changes have been made to the plans after the Phase III review that will affect the pay-items or quantities in TRNS*PORT, the CONSULTANT must submit a Change Memo (PPM, Vol. 1, Ex. 20-I) to the District Preliminary Estimates Office to have TRNS*PORT unlocked.*

*The CONSULTANT shall submit two (2) copies of the Phase Submittal CD/DVD and three (3) hard copies of the submittal components to the DEPARTMENT's Design Project Manager for distribution. The Phase Submittal CD/DVD will include all plans set components (roadway, signing & pavement marking, signalization, etc.) combined into one (1) *.PDF file. In addition, *.PDF files of the project Computation Book, Design Documentation, CONSULTANT Cost Estimate, and any other submittal document will be included on the Phase Submittal CD/DVD. The CONSULTANT must have the QC marked-up plans available for the DEPARTMENT's review upon request.*

The CONSULTANT shall submit plans to each of the affected local government(s) designated contact for a two week review. Electronic submittals are preferred. See Section 3.1 of this document for details regarding Local Government Involvement.

*Two (2) Electronic Delivery CD/DVDs electronically signed and sealed with PEDDS (Note: all project data shall be included on the Electronic Delivery CD/DVD and its location noted in the project journal). The CONSULTANT shall submit the Electronic Data Submittal Checklist and Electronic Delivery Documents (Signatory Documents, Manifest Documents, etc.). The Electronic Data Submittal Checklist shall be signed by the Engineer of Record to certify that all electronic deliverables are complete, in the proper format, authenticated using PEDDS, and all plans and specifications are signed and sealed with the same program (as applicable per the Scope of Services). Also, the electronic computation book shall be developed into a single composite *.PDF file.*

The Prime Consultant shall have the final survey data on the Electronic Delivery CD/DVD at the 100% Phase delivery. The Survey Subconsultant shall be responsible for ensuring the deliverable matches the requirements stated in the District 3 Survey Guidelines. The Prime Consultant shall be responsible for ensuring that the survey folder of the Electronic Delivery CD/DVD is populated with the survey data for the project as well as being signed and sealed by the Surveyor thru PEDDS.

The CONSULTANT must have the QC marked-up plans available for the DEPARTMENT's review upon request.

The CONSULTANT shall submit plans for utility coordination (electronically if possible and as indicated by the affected UAO or the Area Utility Coordinator).

The CONSULTANT shall also submit a complete Specifications Package including any Technical Special Provisions and/or incentive/disincentive cost analysis as required by the Specification package (if applicable).

The CONSULTANT shall submit a Constructability Phase Review Checklist as per the Construction Project Administration Manual (CPAM).

The CONSULTANT shall submit one (1) hard copy of a completed Design Plans Phase Review coversheet (PPM Vol. 1, exhibit 24-B) along with a hard copy set of the comments and responses from the previous phase submittal for concurrence by the District Project Management Engineer.

The CONSULTANT shall submit three (3) Final Geotechnical Reports (as applicable).

If applicable, the CONSULTANT shall submit a copy of the plans to the DEPARTMENT'S Project Manager for FHWA review.

If bridge structures are included in the project: the CONSULTANT shall submit two (2) signed and sealed load ratings and one copy.

Final Phase:

*If changes have been made to the plans after the Phase IV review that will affect the pay-items or quantities in TRNS*PORT, the CONSULTANT must submit a Change Memo (PPM, Vol. 1, Ex. 20-I) to the District Preliminary Estimates Office to have TRNS*PORT unlocked.*

If changes have been made to the plans, pay items, or quantities after the Phase IV review that will affect the contract time, the CONSULTANT shall resubmit plans, computation book, and the utility schedules/utility dependent time memo (if changes have occurred or they have not been submitted).

The CONSULTANT shall submit plans to each of the affected local government(s) designated contact for a two week review. Electronic submittals are preferred. This submittal to the local governments should be made well in advance of the Final Submittal to the DEPARTMENT's Plans Processing group. This will allow time to address comments from the Locals in advance of the submittal to the DEPARTMENT. See Section 3.1 of this document for details regarding Local Government Involvement.

After any necessary plan and /or specification package revisions, the CONSULTANT shall submit the following:

*Two (2) Electronic Delivery CD/DVDs electronically signed and sealed with PEDDS (Note: all project data shall be included on the Electronic Delivery CD/DVD and its location noted in the project journal). The CONSULTANT shall submit the Electronic Data Submittal Checklist. The Electronic Data Submittal Checklist shall be signed by the Engineer of Record to certify that all electronic deliverables are complete, in the proper format, authenticated using PEDDS, and all plans and specifications are signed and sealed with the same program (as applicable per the Scope of Services). Also, the electronic computation book shall be developed into a single composite *.PDF file.*

The Prime Consultant shall have the final survey data on the Electronic Delivery CD/DVD at the Final Phase delivery. The Survey Subconsultant shall be responsible for ensuring the deliverable matches the requirements stated in the District 3 Survey Guidelines. The Prime Consultant shall be responsible for ensuring that the survey folder of the Electronic Delivery CD/DVD is populated with the survey data for the project as well as being signed and sealed by the Surveyor thru PEDDS.

The CONSULTANT shall submit one (1) hard copy of a completed Design Plans Phase Review coversheet (PPM Vol. 1, exhibit 24-B) along with a hard copy set of the comments and responses from the previous phase submittal for concurrence by the District Project Management Engineer.

Original survey field books

All other applicable deliverables required by the Survey CONSULTANT Checklist.

2.19 Provisions for Work

All maps, plans and designs are to be prepared with English values in accordance with all applicable current DEPARTMENT manuals, memorandums, guidelines including but not limited to:.

General

- o 29 CFR, Part 1910.1101 – Asbestos Standard for Industry, U.S. Occupational Safety and Health Administration (OSHA)
- o 29 CFR, Part 1926, 1101 – Asbestos Standard for Construction, OSHA
- o 40 CFR, Part 61, Subpart M - National Emission Standard for Hazardous Air Pollutants (NESHAP), Environmental Protection Agency (EPA)
- o 40 CFR, Part 763, Subpart E – Asbestos-Containing Materials in Schools, EPA
- o 40 CFR, Part 763, Subpart G – Asbestos Worker Protection, EPA
- o Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- o Any special instructions from the DEPARTMENT
- o Bicycle Facilities Planning and Design Manual,
- o CADD Manual
- o CADD Production Criteria Handbook
- o Ch. 469, F.S. – Asbestos Abatement, Florida Department of Business and Professional Regulation (DBPR)
- o Ch. 62257, F.A.C. – Asbestos Program, Florida Department of Environmental Protection (DEP)
- o Code of Federal Regulations
- o Design Traffic Procedure
- o Equivalent Single Axle Load Guidelines
- o Florida Administrative Codes
- o Florida Department of Business & Professional Regulations Rules
- o Florida Department of Environmental Protection Rules
- o Florida Department of Transportation Basis of Estimates Manual
- o Florida Department of Transportation Design Standards for Design, Construction, Maintenance, and Utility Operations on the State Highway System
- o Florida Department of Transportation Handbook for Preparation of Specifications Package
- o Florida Department of Transportation Materials Manual
- o Florida Department of Transportation Plans Preparation Manual
- o Florida Department of Transportation Project Development and Environmental Manual
- o Florida Department of Transportation Standard Specifications for Road and Bridge Construction

- o Florida Statutes
- o Florida's Level of Service Standards and Guidelines Manual for Planning
- o K-Factor Estimation Process
- o Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways
- o Model Guide Specifications – Asbestos Abatement and Management in Buildings, National Institute for Building Sciences (NIBS)

- o Policy for Geometric Design of Highways and Streets
- o Project Traffic Forecasting Guidelines
- o Quality Assurance Guidelines
- o Rule 61G17-6, F.A.C., Minimum Technical Standards for Professional Surveyors and Mappers
- o Safety Standards
- o Utility Accommodations Guidelines
- o ***Flexible Pavement Design Manual***
- o ***Pavement Type Selection Manuals***
- o ***Life Cycle Cost Analysis***
- o ***Rigid Concrete Pavement Manual***
- o ***FHWA Roadside Design Guide***
- o ***Florida Intersection Design Guide***

Permits

- o Chapter 373, F.S.
- o Bridge Permit Application Guide, COMDT PUB P16591.3B
- o Building Permit
- o [425-000-005](#) Asbestos Management Program
- o [625-020-020](#) Asbestos on Bridges

Drainage

- o Cross Drain
- o Drainage Handbooks
- o Drainage Manual
- o Erosion and Sediment Control
- o Hydrology
- o Optional Pipe Materials
- o Storm Drain
- o Stormwater Management Facility
- o Temporary Drainage Handbook

Survey and Mapping

- o ***District 3 Surveying Guidelines***
- o ***Maintenance of Traffic Training: Topic No. 625-010-010***
- o ***Survey Safety Handbook***

- o ***Minimum Technical Standards for Surveying and Mapping Rule 61G17-6***
- o Chapter 177, F.S.
- o Chapter 472, F.S.
- o ***All other applicable Department procedures, handbooks, and manuals***
- o All applicable Florida Statutes and Administrative Codes
- o Applicable Rules, Guidelines Codes and authorities of other Municipal, County, State and Federal Agencies.
- o FDOT Aerial Surveying Standards for Transportation Projects Topic 550-020-002
- o FDOT Right of Way Mapping Handbook
- o FDOT Surveying Procedure Topic 550-030-101
- o Florida Department of Transportation Right of Way Procedures Manual
- o Florida Department of Transportation Surveying Handbook
- o Right of Way Mapping Procedure 550-030-015

Traffic Operation Manuals

- o AASHTO - An Information Guide for Highway Lighting
- o AASHTO - Guide for Development of Bicycle Facilities
- o American Disabilities Act
- o Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD)
- o Federal Highway Administration Standard Highway Signs Manual
- o FHWA - Roundabouts: An Informational Guide
- o Florida Department of Transportation - Florida Roundabout Guide
- o Florida Department of Transportation Manual on Uniform Traffic Studies (MUTS)
- o Florida Department of Transportation Median Handbook
- o Florida Department of Transportation Traffic Engineering Manual
- o Minimum Specifications for Traffic Control Signal Devices
- o National Electric Safety Code
- o National Electrical Code

Structures

- o AASHTO LRFD Bridge Design Specifications and Interims
- o AASHTO LRFD Movable Highway Bridge Design Specifications and Interims
- o AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, and Interims.
- o AASHTO/-AWS-D1. 5M/D1.5: An American National Standard Bridge Welding Code
- o AASHTO Guide Specifications for Structural Design of Sound Barriers
- o AASHTO Manual for Condition Evaluation and Load and Resistance Factor Rating (LRFR) of Highway Bridges
- o Florida Department of Transportation Structures Manual

- o Florida Department of Transportation Structures Design Office Temporary Design Bulletins (available on Florida Department of Transportation Structures web site only)
- o Florida Department of Transportation Preferred Details (available on Florida Department of Transportation Structures web site only)
- o Florida Department of Transportation Bridge Load Rating Permitting and Posting Manual.

Geotechnical

- o FHWA Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Specifications
- o Manual of Florida Sampling and Testing Methods
- o Soils and Foundation Handbook

Landscape Architecture

- o Florida Highway Landscape Guide

Architectural

Building Codes – Latest Adopted Edition

- o Florida Building Code Building
- o Florida Building Code Fuel Gas
- o Florida Building Code Mechanical
- o Florida Building Code Plumbing
- o Florida Building Code Existing Building
- o Accessibility for Persons with Disabilities
- o Florida Accessibility Code for Building Construction
- o Florida Administrative Code Chapter 60D, Division of Building Construction
- o Florida Statutes Chapter 553, Building Construction Standards
- o ANSI A117.1 2003 Accessible and Usable Building and Facilities
 - Titles II and III, Americans With Disabilities Act (ADA), Public Law 101-336; and the ADA Accessibility Guidelines (ADAAG)
- o Fire Codes and Rules - Latest Adopted Edition
 - NFPA 70 National Electrical Code
 - NFPA 101 Life Safety Code
 - NFPA 10 Standard for Portable Fire Extinguishers
 - NFPA 11 Standard for Low-Expansion Foam Systems
 - NFPA 11A Standard for High- and Medium-Expansion Foam Systems
 - NFPA 12 Standard for Carbon Dioxide Extinguishing Systems
 - NFPA 13 Installation of Sprinkler Systems
 - NFPA 30 Flammable and Combustible Liquids Code

- NFPA 54 National Gas Fuel Code
- NFPA 58 LP-Gas Code
- o Florida Fire Prevention Code as adopted by the State Fire Marshal
Consult with the Florida State Fire Marshal's office for other frequently used codes.
- o Energy Conservation
 - Section 255.251, F.S., Florida Energy Conservation Act of 1974
 - Section 255.255, F.S., Life-Cycle Costs
- o Elevators
 - Chapter 61C-5, Florida Elevator Code
 - Chapter 7C-5, Florida Elevator Code
 - ASME A-71.1, Safety Code for Elevators and Escalators
 - Flood Plain Management Criteria
 - Section 255.25, F.S., Approval Required Prior to Construction or Lease of Buildings
 - Rules of the Federal Emergency Management Agency (FEMA)
- o Extinguishing Systems
 - NFPA 10 Fire Extinguishers
 - NFPA 13 Sprinkler
 - NFPA 14 Standpipe and Hose System
 - NFPA 17 Dry Chemical
 - NFPA 20 Centrifugal Fire Pump
 - NFPA 24 Private Fire Service Mains
 - NFPA 200 Standard on Clean Agent Fire Extinguishing Systems
- o Detection and Fire Alarm Systems
 - NFPA 70 Electrical Code
 - NFPA 72 Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems
 - NFPA 72E Automatic Fire Detectors
 - NFPA 72G Installation, Maintenance, and Use of Notification Appliances
 - NFPA 72H Testing Procedures for Remote Station and Proprietary Systems
 - NFPA 74 Household Fire Warning Equipment
 - NFPA 75 Protection of Electronic Computer Equipment
- o Mechanical Systems
 - NFPA 90A Air Conditioning and Ventilating Systems
 - NFPA 92A Smoke Control Systems

- NFPA 96 Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment
- NFPA 204M Smoke and Heating Venting
- o Miscellaneous Systems
 - NFPA 45 Laboratories Using Chemicals
 - NFPA 80 Fire Doors and Windows
 - NFPA 88A Parking Structures
 - NFPA 105 Smoke and Draft-control Door Assemblies
 - NFPA 110 Emergency and Standby Power Systems
 - NFPA 220 Types of Building Construction
 - NFPA 241 Safeguard Construction, Alteration, and Operations
 - Florida Administrative Code 4A-47 Uniform Fire Safety For Elevators
 - Florida Administrative Code 4A-51 Boiler Safety
- o Other
 - Chapter 64E-6 FAC Standards for On Site Sewage Disposal Systems (Septic Tanks)
 - Florida Administrative Code, Chapter 17-6.070 Wastewater Facilities (Treatment Plants)
 - Florida Administrative Code Chapter 17-761 Underground Storage Tank Rules
 - Chapter 10D-6 FAC On Site Sewage Disposal Systems (Septic Tanks)
 - Chapter 17-6.070 FAC Wastewater Facilities (Treatment Plants)
 - Chapter 17-761 FAC Underground Storage Tank Rules

These documents are revised periodically by the responsible agencies and adopted by authorities having jurisdiction on building projects. The design consultant and the project manager are advised to obtain applicable versions of these documents from the responsible agency prior to use.

- o American Concrete Institute
- o American Institute of Architects - Architect's Handbook of Professional Practice
- o American Society for Testing and Materials - ASTM Standards
- o Brick Institute of America
- o DMS - Standards for Design of State Facilities
- o Florida Building Code
- o Florida Concrete Products Association
- o Florida Department of Transportation - ADA/Accessibility Procedure
- o Florida Department of Transportation - Asbestos Management Program Procedure
- o Florida Department of Transportation - Building Code Compliance Procedure
- o Florida Department of Transportation – Design Build Procurement and Administration

- o Florida Department of Transportation - Standard Specifications for Road and Bridge Construction
- o Florida Department of Transportation - Structures Manual
- o Florida Department of Transportation - Design Standards
- o National Concrete Masonry Association
- o National Electrical Code (current edition)
- o National Fire Protection Association - Life Safety Code (current edition)
- o Portland Cement Association - Concrete Masonry Handbook

Intelligent Transportation Systems

Florida Department of Transportation Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways
<http://www.dot.state.fl.us/rddesign/FloridaGreenbook/2007/2007FloridaGreenbook.pdf>

Supplemental Florida's Turnpike standards for the design and construction of the Florida's Turnpike mainline improvements from Griffin Road to Peters Road:

Florida's Turnpike Plans Preparation and Practices Handbook
http://www.dot.state.fl.us/turnpikepio/design_website/tppph.htm

Florida's Turnpike Traffic Pacing Design Guide Drawings

Florida's Turnpike Lane Closure Policy

Florida's Turnpike Drainage Manual Supplement
http://www.dot.state.fl.us/turnpikepio/Design_Website/Drainage/Drainage%20Manual%20Supplement%202007.pdf

Florida's Turnpike Rigid Pavement Design Guide for SunPass Only / Express Lanes
http://www.dot.state.fl.us/turnpikepio/Design_Website/Roadway%20Pavement%20Design%20-%20Concrete.htm

Traffic Monitoring:

FHWA Traffic Detector Handbook

FDOT General Interest Roadway Data Procedure

FHWA Traffic Monitoring Guide

FDOT's Traffic/Polling Equipment Procedures

AISC Manual of Steel Construction, referred to as "AISC Specifications"

American National Standards Institute (ANSI) RP-8-00 Recommended Practice for Roadway Lighting

AASHTO AWS D1.1/ANSI Structural Welding Code – Steel

AASHTO D1.5/AWS D1.5 Bridge Welding Code

Chapter 62-302 Florida Administrative Code - Surface Water Quality Standards

Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) and Guideline Handbook

Florida Fish and Wildlife Conservation Commission - Standard Manatee Construction Conditions 2005

2.20 Services to be Performed by the DEPARTMENT *(unless otherwise indicated within each assigned task work order scope of services)*

- When appropriate the DEPARTMENT will provide project data currently on file.
- Regarding Surveying Services:
 - ***Provide a number sequence for each survey field book required for the project.***
 - ***Provide the Primary and Secondary Horizontal and Vertical control for the project.***
 - ***Approve all surveyed roadway centerline alignments prior to being used by the Prime Design Consultant.***
 - ***Provide phase reviews of the survey data and phase reviews of the survey elements within the plans.***
- Regarding Environmental Permitting Services:
 - Approve all contacts with environmental agencies.
 - Provide general philosophies and guidelines of the DEPARTMENT to be used in the fulfillment of this contract. Objectives, constraints, budgetary limitations, and time constraints will be completely defined by the Project Manager.
 - Provide the appropriate signatures on application forms.
- Provide letters of authorization designating the CONSULTANT as an agent of the DEPARTMENT in accordance with F.S. 327.274.
- Provide phase reviews of plans and engineering documents.
- Provide access for the CONSULTANT to utilize the DEPARTMENT's Information Technology Resources.
- Furnish all Department agreements with Utility Agency Owner (UAO).
- Furnish all certifications necessary for project letting.
- Building Construction Permit Coordination (Turnpike)
- Provide all information that may come to the DEPARTMENT pertaining to future improvements.

- *Provide Pavement Coring Information.*
- *Provide Pavement Design(s)*
- *Provide necessary Geotechnical Support*
- *Provide Utility Coordination*

3 PROJECT COMMON and PROJECT GENERAL TASKS

Project Common Tasks

Project Common Tasks, as listed below, are work efforts that are applicable to many project activities, 4.0 Roadway Analysis through 32.0 Noise Impact Design Assessment. These tasks are to be included in the project scope in each applicable activity when the described work is to be performed by the CONSULTANT.

Cost Estimates: The CONSULTANT shall be responsible for producing a construction cost estimate and reviewing and updating the cost estimate when scope changes occur and/or at milestones of the project. ***At the 60% plans submittal and prior to completion of quantities, the DEPARTMENT's current Long Range Estimate (L.R.E.) will be marked-up by the CONSULTANT and provided to the District Preliminary Estimates Office.*** Once the quantities have been developed (beginning at 60% plans and no later than 90% plans) the CONSULTANT shall be responsible for inputting the pay items and quantities into TRNS*PORT PES (Proposal Estimating System) through the use of the DEPARTMENT's Designer Interface. A Summary of Pay Items sheet shall be prepared with all required Phase II, III, and IV Plans submittals. ***Within TRNS*PORT, the CONSULTANT shall run a Project Edit Report for the project at Phases III and IV just prior to submitting the plans to the DEPARTMENT for review. This program outputs invalid pay items that may be erroneously loaded for a project.***

Technical Special Provisions: The CONSULTANT shall provide Technical Special Provisions for all items of work not covered by the Standard Specifications for Road and Bridge Construction and the workbook of implemented modifications.

A Technical Special Provision shall not modify the first nine sections of the Standard Specifications and implemented modifications in any way. All modifications to other sections must be justified to the appropriate District Specifications Office to be included in the project's specifications package, typically as special provisions and not as Technical Special Provisions.

The Technical Special Provisions shall be technical in nature and shall provide a description of work, materials, equipment and specific requirements, method of measurement and basis of payment. Proposed Technical Special Provisions will be submitted to the District Specifications Office for initial review at the time of the Phase III plans review submission to the DEPARTMENT's Project Manager. This timing will allow for adequate processing time prior to final submittal. The Technical Special Provisions will be reviewed for suitability in accordance with the Handbook for Preparation of Specification Package. The District Specifications Office will forward the Technical Special Provisions to the District Legal Office for their review and comment. All comments will be returned to the

CONSULTANT for correction and resolution. Final Technical Special Provisions shall be electronically signed and sealed in accordance with applicable Florida Statutes.

The CONSULTANT shall contact the District Specifications Office for details of the current format to be used before starting preparations of Technical Special Provisions.

Field Reviews: Includes all trips required to obtain necessary data for all elements of the project.

Technical Meetings: Includes meetings with DEPARTMENT and/or Agency staff, between disciplines and subconsultants, such as access management meetings, pavement design meetings, local governments, railroad companies, progress review meetings (phase review), and miscellaneous meetings.

Quality Assurance/Quality Control: It is the intention of the DEPARTMENT that design CONSULTANTS are held responsible for their work, including plans review. Detailed checking of CONSULTANT plans or assisting in designing portions of the project for the CONSULTANT is not the intent of having external design consultants. The purpose of CONSULTANT plan reviews is to ensure that CONSULTANT plans follow the plan preparation procedures outlined in the Plans Preparation Manual, that state and federal design criteria are followed with the DEPARTMENT concept, and that the CONSULTANT submittals are complete.

The CONSULTANT shall be responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications and other services furnished by the CONSULTANT under this contract.

The CONSULTANT shall provide a Quality Control Plan that describes the procedures to be utilized to verify, independently check, and review all maps, design drawings, specifications, and other documentation prepared as a part of the contract. The CONSULTANT shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. ***The Quality Control Plan shall be one specifically designed for the assigned project.*** The CONSULTANT shall submit a Quality Control Plan for approval within 20 (twenty) calendar days of the written Notice to Proceed ***for each assignment.*** A marked up set of prints from a Quality Control Review indicating the reviewers for each component (structures, roadway, drainage, signals, geotechnical, signing and marking, lighting, surveys, etc.) and a written resolution of comments on a point-by-point basis will be required, ***if requested by the DEPARTMENT,*** with each phase submittal. The responsible Professional Engineer, Landscape Architect, or Professional Surveyor that performed the Quality Control review will sign a statement certifying that the review was conducted.

The CONSULTANT shall, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other services.

Independent Peer Review: When directed by the DEPARTMENT, a subconsultant ***may*** perform Independent Peer Reviews.

Supervision: Includes all efforts required to supervise all technical design activities.

Coordination: Includes all efforts to coordinate with all disciplines of the project to produce a final set of construction documents.

Project General Tasks

Project General Tasks, described in Sections 3.1 through 3.7 below, represent work efforts that are applicable to the project as a whole and not to any one or more specific project activity. The work described in these tasks shall be performed by the CONSULTANT when included in the project scope.

3.1 Public Involvement

Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the project. The CONSULTANT shall provide to the DEPARTMENT drafts of all Public Involvement documents (i.e., newsletters, property owner letters, advertisements, etc.) associated with the following tasks for review and approval at least five (5) business days prior to printing and / or distribution.

All projects require the development of a CAP plan.

For CAP level 1 projects, a brief plan must be developed for documentation purposes. Public Information Meetings are not required for CAP Level 1 projects. Most assigned projects will either be considered CAP Level 1 or CAP level 2 projects.

For assigned CAP Level 2 projects WITHOUT a Public Workshop or Meeting, the projects are defined as follows:

Project has general public acceptance, little impact on access and moderate degree of traffic disruption. Examples are urban resurfacing, bridge repairs and other construction activities that require lane closures.

CAP Level 2 requirements include:

- Public Information Workshop between the 60% - 90% plans stage. An additional Workshop may be required six (6) months prior to letting, however, staffhours for this effort will be negotiated at the appropriate time.*
- Contact all residences, tenants, and owners within 300 feet of the centerline of the project through mass mailings or hand delivered flyers. Mail-outs should provide a complete description of construction limits and activities. Mail-outs should provide name(s) of contact persons and should be mailed 10 days prior to the project meeting date.*

Specific requirements for these activities are described below.

Development of Community Awareness Plan (CAP)

The CONSULTANT shall prepare a Community Awareness Plan in accordance with Department Guidelines. The objective of the plan is to notify local governments, affected property owners, tenants, and the public of the DEPARTMENT'S proposed construction and the anticipated impact of that construction. In addition to the benefits of advance notification, the process should allow the DEPARTMENT to resolve controversial issues during the design phase. Three areas of specific concern are: (1) Influences on access to businesses and residences, (2) Drainage, (3) Maintenance of Traffic during construction.

Public Information Workshop

The CONSULTANT shall provide all support necessary for the DEPARTMENT to hold a Public Information Workshop.

The purpose of this workshop is to present to the public the results of the detailed design for the project and receive comments on the proposed design.

The CONSULTANT shall prepare and/or provide:

- Script or agenda for the presentation.*
- Prepare graphics and displays as directed by the DEPARTMENT's Design Project Manager.*
- Workshop equipment set-up and teardown.*
- Legal and/or display advertisements. The CONSULTANT will pay the cost of publishing.*
- Draft letters for notification of elected and appointed officials.*
- Two Press/News releases, for notification purposes. One ten (10) days prior to the workshop and one the day before the workshop.*

Any press release or advertisement will indicate that the workshop is a DEPARTMENT activity and will be coordinated by the CONSULTANT.

Both the CONSULTANT'S and DEPARTMENT'S responsibilities are specified for the workshop as follows:

- The workshop will be advertised and conducted by the CONSULTANT as an information workshop. The CONSULTANT will prepare all necessary displays, maps, handouts, etc., as explained below. The CONSULTANT will actively participate in all portions of the presentation.*
- A copy of the public announcement including the project number, date, meeting place, and items to be addressed shall be submitted to the DEPARTMENT'S Design Project Manager and the District Public*

Information Director and incorporated into the project Community Awareness Plan (CAP).

- *All graphics, media releases, and general (mass) public announcements for property owners and business operators, will be prepared by the CONSULTANT and reviewed by the DEPARTMENT'S Public Information Director and the DEPARTMENT'S Design Project Manager.*
- *Notification will be made to elected and appointed officials by personal letter. This letter shall be prepared by the CONSULTANT for the District Secretary's signature. This notification shall be mailed by the CONSULTANT no less than 15 days before the workshop. Letters shall be on DEPARTMENT letterhead.*
- *Property Owner Letters/Business Operators Notification. An announcement, prepared by the CONSULTANT, will be written and sent no less than 10 days before the workshop to all property owners/business operators whose property or business lies in whole or in part within 300 feet of the centerline of the project. The CONSULTANT shall utilize Direct Mail Services, Tax Collector Office and/or any other source to identify and obtain the address of property owners and business operators along the project. This letter shall be prepared by the CONSULTANT on DEPARTMENT letterhead for the District Consultant Project Management Engineer's signature. The CONSULTANT will pay for the postage.*
- *News releases will be prepared by the CONSULTANT and shall be published during the week of the Public Information Workshop. Two (2) newspaper display advertisements no less than (4"X6" inch) with graphic will be published in the local section, the first shall be two weeks in advance of the workshop, and the second will be the day before the workshop date. This shall be developed by the CONSULTANT and approved by the DEPARTMENT. The CONSULTANT shall pay for the ad.*
- *The workshop format will be informal allowing the public to come and go. The workshop is anticipated to be approximately one hour in length. Proper signage using display boards no smaller than 2'X2' will be displayed near and on the site directing participants to the meeting place.*
- *The CONSULTANT shall prepare displays or wall graphics for use during the meeting. These include typical sections, roadway plan layouts, charts, graphs, and visual imaging as needed. A summary handout package is required in addition to other visual aids. All displays, handouts, and graphics will be reviewed by the DEPARTMENT prior to the workshop.*

Displays or wall graphics shall include but not limited to the following:

- 1-(36"X24") foam board (or a display similar in nature) displaying a typical section. The drawing shall be in color with computer images of automobiles, bicycles, and pedestrians occupying the designated travel areas.
- 1-(36"X24") foam board (or a display similar in nature) displaying a computer enhance photograph utilizing an existing conditions photo to reflect proposed conditions. For intersection projects, 2 computer-enhanced photographs for intersection projects are required.
- Project plan view shall be on (36"X24") foam boards/rollouts (or a display similar in nature). For projects of substantial length, projects can be rolled out on tables or placed on the wall. The photo or roll-outs shall be 1"=50', 1"=100" (or a legible scale) raster drawings, to scale aerial photos, or colored CADD drawings with the following information:
 - * existing right-of-way lines
 - * proposed right-of-way lines
 - * proposed pavement markings (pavement should be black or gray with the correct color of pavement markings (white or yellow)
 - * existing structures adjacent to the roadway (homes, businesses, etc.)
 - * proposed driveway and median openings
 - * proposed ponds designated as wet or dry
 - * designation of proposed signalized intersections.

All displays may depict the CONSULTANT logo but shall depict the DEPARTMENT'S logo at an equivalent or larger dimension.

Briefing of the Design staff by the CONSULTANT (who will be on hand during the workshop) will be done twice. The first time is to be at least seven days prior to the workshop and the second time will be just before the meeting to make sure the staff is up to date on the project and understands the project well enough to discuss it with the public and to answer questions.

Workshop equipment setup and tear down will be handled by the CONSULTANT staff members.

Conducting the workshop will take knowledgeable CONSULTANT staff and will require enough staff members to handle the crowd anticipated for the meeting. Although the meeting is scheduled for a one (1) hour period, the CONSULTANT staff will be available for some time before and/or after those set hours in order to maintain public contact, etc.

The CONSULTANT shall also provide office support personnel to ensure attendees register (CONSULTANT must provide a sign-in sheet with space available for the person's name, address, and telephone number).

If issues are identified at the workshop, their significance will be determined by the CONSULTANT and the DEPARTMENT; i.e., are the issues valid enough for

further consideration or do they have elements which may require further consideration.

The CONSULTANT shall provide self-addressed comment forms to allow attendees to provide written comments within 10 days after the Public Information Workshop. The Engineer of Record (EOR) shall be listed as the contact for all comments.

Addressing the issues and responding to them is also an integral part of the workshop process. This is to be accomplished by the CONSULTANT. The CONSULTANT shall prepare responses to the issues on DEPARTMENT letterhead to be signed by the District Consultant Project Management Engineer. The CONSULTANT shall pay for the postage. The DEPARTMENT shall review and approve all response letters prior to mailing. Elected Public Officials require a 48 hour response time.

The CONSULTANT shall coordinate all activities listed and actions to be taken with the Department's Public Information Director and the DEPARTMENT's Design Project Manager.

Public Involvement Data Collection

The CONSULTANT will collect the following data:

Mailing list preparation - This process involves the identification of any affected, possibly affected, and interested parties early in the study process. Media in the project area will be identified and placed on the mailing list to be used for news releases, advertisements or any concerns. The mailing list will be submitted to the DEPARTMENT and Public Information Director for review and approval. Information from this list will also be used in the CAP plan. In addition to property owners, business owners and tenants, individuals who are to receive a Notice of the meeting and a map shall as applicable include, (but not be limited to):

- Chief of Police
- District Secretary and Directors
- Chamber of Commerce
- Seaport Authority
- Airport Authority
- County/City Manager

Elected and appointed officials (city, state, federal, county) and community leaders in the area will be identified and placed on the mailing list of officials and interested parties. The letter should be developed to include the local road names as well as the state road number. The limits and type of work should be clearly defined. Review the letters and notices to ensure accuracy, names are spelled correctly, and letters are sent to the person holding the public official positions. The letters to be signed by the District Secretary must also include the meeting format, schedule of the project, funding, length of construction, etc.. The list of Public Officials to receive signed letters from the District Secretary will include:

- *Legislative Delegation,*
- *House of Representatives,*
- *Congress,*
- *Senate,*
- *Florida House & Florida Senate*

County Officials

- *County Manager*
- *County Public Information Director*
- *County Commissioners*
- *County Public Works Director*
- *County Engineer*
- *County Emergency Management Director*
- *Sheriff's Department*
- *Sheriff's Department Public Information / Public Affairs*
- *County Airport Director*
- *County Seaport Director*
- *County Public Transit System*

County Schools

- *Superintendent*
- *Transportation Director*
- *Public Information Director*

City Contacts

- *City Commission*
- *Mayor*
- *City Manager*
- *Engineer / Public Work Director*
- *City Police Chief*

Fire & Rescue Departments

Chamber of Commerce

- *City, Regional, etc.*
- *Merchants Association*
- *Convention & Visitors Bureau*

Tourist Development Regional Planning Council

Local American's with Disabilities Act (ADA)/ Pedestrian Advocacy Groups

Water Management Districts

Florida Highway Patrol

**especially if Troop Headquarters is located in municipality*

- **Major & Commanders**

Local Hospitals

US Postmaster

The CONSULTANT shall be responsible for determining the appropriate meeting site. Elementary, Middle and High Schools, and Colleges are not considered appropriate sites when searching for meeting locations. In accordance with Section 4 of Executive Order 07-126, any hotel or conference center used for hosting an FDOT Public Information Meeting must be designated under the FDEP's Green Lodging Program. Prospective sites for the workshop shall be convenient to residents along the corridor and shall be inspected for suitability. Consideration shall be given to capacity, lighting, and other physical characteristics that may influence the selection of the site. The site shall meet ADA standards.

Room size will be based on the number of mailouts. The proposed meeting site shall be presented to the DEPARTMENT for approval prior to the CONSULTANT negotiating use of the site.

Local Government Involvement

The CONSULTANT shall submit Phase II, IV, and Final Plans to the office(s) designated by the local government(s) for a two week review. The submittal of the Final Plans should take place in advance of the submittal to the District for Plans Processing to allow time to address comments received from the Local Governments.

The CONSULTANT shall prepare a letter for the District Secretary's signature for each City and/or County Commissioner when the plans are ready to be submitted to their designated contact's office at Phases II, IV, and Final. Examples of this correspondence can be made available upon request by the DEPARTMENT's Design Project Manager.

When commissioners and/or council members are notified that Phase Submittals have been sent to their designated contact's office, the notice shall include the following:

- ***FPID Number,***
- ***Local Description,***
- ***Type of Work***
- ***Construction Cost Estimate***
- ***Construction Letting Date***
- ***Estimated Duration of Construction***
- ***A two week deadline for providing comments***

Each comment or request provided by the local government shall be evaluated by the CONSULTANT and discussed with the DEPARTMENT'S Design Project Manager. Responses will be prepared by the CONSULTANT for the District Secretary's signature. All comments or requests shall be responded to in writing within forty-eight (48) hours of receipt of comments.

3.1.1 Community Awareness Plan

Prepare a Community Awareness Plan (CAP) for review and approval by the DEPARTMENT within 30 calendar days after receiving Notice to Proceed. This item will be reviewed and updated periodically through the life of the project.

3.1.2 Notifications

In addition to public involvement data collection, the CONSULTANT shall assist the DEPARTMENT in preparing notifications to elected officials and other public officials that the project is beginning.

3.1.3 Preparing Mailing Lists

At the beginning of the project, The CONSULTANT shall identify all impacted property owners and tenants (within a minimum of 300 feet of the project corridor) Prepare a mailing list of all such entities. The CONSULTANT shall update the mailing list as needed during the life of the project.

3.1.4 Median Modification Letters

The CONSULTANT shall prepare a median modification letter template to be sent to property owners along the corridor. In addition, the CONSULTANT shall prepare a sketch of each proposed median modification for inclusion in the letter. The letters will be sent by the DEPARTMENT.

3.1.5 Driveway Modification Letters

The CONSULTANT shall prepare a driveway modification letter template to be sent to property owners along the corridor. In addition, the CONSULTANT shall prepare a sketch of each proposed driveway modification for inclusion in the letter. The letters will be sent by the DEPARTMENT.

3.1.6 Newsletters

The CONSULTANT shall prepare newsletters for distribution to elected officials, public officials, property owners along the corridor and other interested parties. The letters will be sent by the DEPARTMENT.

3.1.7 Renderings and Fly-Throughs

The CONSULTANT shall prepare renderings and fly-throughs for use in public meetings.

3.1.8 PowerPoint Presentations

The CONSULTANT shall prepare PowerPoint presentations for use in public meetings.

3.1.9 Public Meeting Preparations

The CONSULTANT shall prepare the necessary materials for use in public meetings.

3.1.10 Public Meeting Attendance and Follow-up

The CONSULTANT shall attend public meeting(s), assist with meeting setup and take down. The CONSULTANT shall also prepare a summary of the public meeting that includes all copies of all materials shown or provided at the public meeting. The summary shall also include a listing of all written comments made during or after the meeting and responses to those written comments.

The CONSULTANT will investigate potential meeting sites to advise the DEPARTMENT on their suitability. The **CONSULTANT** will pay all costs for meeting site rents and insurance.

The CONSULTANT will attend the meetings with an appropriate number of personnel to assist the DEPARTMENT'S Project Manager.

It is estimated for this project there will be one (1) public meeting during the design. An additional public meeting may be required during the Plans Update phase of the project depending on the changes made and the duration "on the shelf"; however, staffhours and fees for this effort will be negotiated at that time.

3.1.11 MPO Meetings

In addition to scheduled public meetings the CONSULTANT may be required to participate in meetings with the local governing authorities and Metropolitan Planning Organization (MPO). The CONSULTANT's participation will be limited to participation during the meeting, note taking, and summarizing the meeting in a memo to the file.

3.1.12 Web Site

When requested by the DEPARTMENT, the CONSULTANT shall create and/or maintain a web site for the project.

3.2 Joint Project Agreements

The CONSULTANT services **may** include all coordination, meetings, etc., required to include Joint Project Agreement (JPA) plans (prepared by others) in contract plans package including all necessary revisions/modifications to contract documents to ensure plans compatibility. ***Should this become a requirement, a supplemental agreement will be negotiated for these services.***

3.3 Specifications Package Preparation

The CONSULTANT shall prepare and provide a complete specifications package, including applicable Technical Special Provisions, for all items and areas of work. ***The CONSULTANT must have completed the Specifications Package Preparation Training for Consultants before using the Specs on the Web application. The District Specifications Office can be contacted for more information.***

All current special provisions and supplemental specifications can be found on the DEPARTMENT'S Internet web site at the State Specifications Office Web Page (<http://www.dot.state.fl.us/specificationsoffice/>) under the Standard Specifications for Road and Bridge Construction and Implemented Modifications. The DEPARTMENT will post permits/utility schedules obtained by the DEPARTMENT to their Specifications Web site for informational purposes. The actual work effort will entail utilization of the ***Specs on the Web*** electronic files, including updates of new files that may be issued from time to time as mandatory ***revisions***, and assembling the package in accordance with the DEPARTMENT's Specification Package Preparation Training. The DEPARTMENT may also require inclusion of special provisions necessary to convey particular DEPARTMENT needs. ***The DEPARTMENT has a database of previously approved Technical Special Provisions that may be used as a basis of formulation of any proposed Technical Special Provisions.***

The Standard Specifications, for Road and Bridge Construction and, Special Provisions or Supplemental Specifications from the applicable workbook of implemented modifications may not be modified unless absolutely necessary to control project-specific requirements. ***Two (2) copies of any modified Special Provisions are to be submitted. One (1) copy will show the redline strikethrough format and One (1) signed and sealed copy will be clean with accepted changes.*** Provide justification of the project specific need, and coordinate with the District Specifications Office, justification of the project specific need, and coordinate with the District Specifications Office, who will obtain District Legal input, and approval by the State Specifications Engineer, prior to inclusion in the final project specifications package.

Contact the District Specifications Office for formatting requirements and the availability of a Technical Special Provision for the anticipated work on the project. Each modification must be justified to the DEPARTMENT's Specifications Office to be included in the project's Specifications Package as Technical Special Provisions. Technical Special Provisions shall be submitted in conformity with FDOT Handbook for Preparation of Specifications Packages and FDOT Procedure No. 630-010-005-a. If any portion of the project is Federally funded, all Technical Special Provisions must also conform to Chapter 23, Part 635 of the Code of Federal Regulations for this project. At the Phase III plans submittal, the CONSULTANT shall submit a draft of the proposed Technical Special Provisions to the District's Specifications Office. Submittal shall be coordinated through the District's Project Manager.

One of the most important considerations for justifying the use of an Incentive Disincentive (I/D) provision is whether payment for early completion of the project or portion of the project is cost beneficial to the traveling public. The incentive/disincentive monetary amount set for a selected project shall be supported by an estimated cost of damages expected to be mitigated by early completion of the overall project or critical phase of work. The amount of such I/D payment or such additional damages shall be established in the contract based on an analysis of the cost savings to the traveling public or revenue projections for a revenue-producing project. The Consultant will be required to conduct the I/D cost analysis and shall submit the analysis results and backup documentation to the District Construction Office at Phase III along with any TSP's (as noted above) to be reviewed at that time. The analysis may be conducted by using an approved process and software such as "QUEWZ" or "MicroBenCost" to calculate the daily I/D amount. The Consultant shall coordinate with the Department's Project manager and the District Specifications Office regarding the use of these software packages and if an equivalent process may be used for the cost analysis. The Consultant shall conduct the cost analysis on projects that are identified to use Incentive/Disincentive, Time plus Money (A+B), and/or Lane Rental Alternative Contracting methods for letting.

For Both Class 1 (State) and Class 7 (District) Contracts the following is required:

As required in Chapter 20 of the Plans Preparation Manual, within the electronic final plans package submittal (Project CD), submit a complete Specifications Package and the Workbook generated via Specs on the Web that was used to compile the Specifications Package.

This submittal shall include:

One Electronically Signed and Sealed Spec Package and the documents generated from using the current version of the Professionals' Electronic Data Delivery System (PEDDS) software. One copy of the quality control review conducted for the submittal a copy of the signed and sealed plans and a copy of the incentive/disincentive cost amounts and backup documentation. The submittal shall occur nine (9) weeks prior to the "Contract Package to Tallahassee" date for Class 1 projects, or the "Transmit Package to Letting" date for Class 7 projects.

The District Specifications Office will review the Specifications Package and provide input for the Consultant's consideration. The Consultant shall respond in writing to the comments within 10 days and provide a corrected Specifications package, any corrected plan sheets and a copy of the quality review conducted for the changes.

Any Plan Revision, Mandatory Specification Revision or any other change occurring after the "Transmit Package for Letting" Date that requires a Supplemental Specifications Package, will be the responsibility of the CONSULTANT.

For projects to be let together or "goes with projects", the CONSULTANT for the lead project will be responsible for compiling the Specifications Package and any

required Supplemental Specifications Packages. Technical Special Provisions will be the responsibility of the CONSULTANT for that project which requires the TSP.

It is the intent of the DEPARTMENT that the Specifications Package and any Supplements be prepared by & signed and sealed by the Engineer of Record preparing the project plans, except as noted above for projects being let together. In this case, the Engineer of Record for the lead project will be required to sign and seal the Specification Package and any required Supplements.

3.4 Contract Maintenance

Contract maintenance includes project management effort for complete setup and maintenance of files, developing monthly progress reports, schedule updates, work effort to develop and execute subconsultant agreements, etc.

3.5 Value Engineering (Multi-Discipline Team) Review

The Consultant shall develop the design and contract documents using sound value engineering practices to the fullest extent possible, in order to support appropriate design decisions in producing the contract plans for the most efficient and economical design.

The design for this project **may** be subjected to a Value Engineering (VE) review. The VE review will be conducted by a multi-disciplined independent team of Department and Consultant personnel for the purpose of the improving the value of the project.

Value Engineering is an event-related activity and should occur at a time when it will provide the greatest opportunity for value improvement, as determined by the Department Project Manager and Value Engineering Coordinator. This opportune time during the design phase of a project will generally fall between completion of Phase I design plans and completion of Phase II design plans, but may occur at anytime during the development of a project.

Activities required by the Consultant in support of the VE team are:

Providing Materials and Information: The Consultant shall allow ample time for the appropriate knowledgeable members of their staff to present current design documentation and data to the VE team, as deemed necessary for an effective project review.

The Consultant Project Manager and other key members of the design team shall meet with the VE team to explain the development of design features and how and why they were selected. The information will be provided in the form of a personal verbal presentation and the submittal of a package containing current plans and other documentation. This presentation will take place at the location of the VE study and may be followed up with additional meetings, written communications and phone enquiries.

Information and data that should be available to the VE Team include, but is not limited to the following:

- One copy of all environmental documents
- One copy of the Preliminary Engineering Report
- Three copies of all plan drawings
- One copy of the Drainage Alternatives Report
- One copy of Bridge Development Reports
- One copy of other miscellaneous reports
- Project Cost Estimate

The Project Cost Estimate shall include a tabulation of estimated construction costs for the proposed design. This list shall, at a minimum, contain a breakdown of costs for each major element of the design.

The Consultant shall provide, in the form of a matrix, all criteria and weighted impacts used in arriving at decisions for the selection of specific design features. These criteria must include Safety, Operation, Maintenance and Public Acceptance.

All reports provided by the Consultant will be returned after the VE review has been completed. However copies of plans and drawings may be kept by the VE team.

3.6 Prime Consultant Project Manager Meetings

Includes only the Prime Project Manager's time for travel and attendance at Activity Technical Meetings and other meetings listed in the meeting summary for Task 3.6 on tab 3.0 Project General Task of the staff hour forms. Staff hours for other personnel attending Activity Technical Meetings are included in the meeting task for that specific Activity.

3.7 Plans Update Services

The effort needed for Plans Update services will vary from project to project depending on size and complexity of the project, ***as well as the duration of time spent "on the shelf"***.

The CONSULTANT shall perform engineering analyses and/or make revisions to original plans and documents, as requested by the DEPARTMENT, to reflect additions, deletions and/or modifications prior to and subsequent to letting.

Staffhours and fees for Plans Update Services will be negotiated following Basic Services and at the time that the plans come "off the shelf", if and when said services are required. Plans Update Services will be established in a separate task work order.

Note: All services will be agreed upon by the Department's Design Project Manager.

3.8 Post Design Services

Staffhours and fees for Post Design Services will be submitted and negotiated post-letting and in advance of the Pre-Construction Conference.

Identifying the effort needed for post design services will vary significantly from project to project depending on size and complexity of the project. The approach described herein assists the Department in determining an initial estimate of the work effort needed for the Engineer of Record (EOR) to support the Department in the construction of a project.

Post Design Services include Construction Assistance and Review of Shop Drawings as noted below. In addition, these services are included for the CONSULTANT to attend and provide information at the preconstruction meeting. Subsequent construction field meetings are to be attended as required. The frequency of meetings shall be based on the complexity of the project and as directed by the Design Project Manager.

With regards to post design services the EOR will be required to respond to any request from the Contractor within 24 hours. This does not mean that the issue will be resolved; it simply means that the EOR has received the request, states an immediate course of action, and begins the communication process.

The activities associated with Post Design Services can be characterized as the following:

Meetings: The EOR is expected to attend all pre-construction meetings as well as those regularly scheduled meetings throughout the construction phase when deemed necessary by the Construction Project Manager.

Construction Assistance: This includes responses to Requests for Information (RFI), interpretation of construction plans and documents, and engineering solutions to changed conditions encountered in the field. Site visits shall be made by the EOR consultant when agreed upon with the Department's Construction Project Manager. The CONSULTANT shall provide to the DEPARTMENT qualified representation during the construction phase to address issues concerning the intent and interpretation of the construction contract plans and documents prepared in the work. From time to time during construction the CONSULTANT may be requested by the DEPARTMENT or its designated representative to review contractor proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications

Plan Revisions: This includes effort required to provide revised plan sheets reflecting any changes made during the Right-of-Way Acquisition or Construction phases of a project. During Right-of-Way or Construction phases, the Consultant may be requested by the Department to review proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications.

Shop Drawing Review: This includes review of shop drawings and erection plans for all components supplied by the contractor and required by the bid documents. For all independently supported sign structures of which the contractor is responsible, the consultant will review and check all the foundation, sign structure design, and shop drawings submitted by the contractor. Shop drawing reviews shall be performed by the CONSULTANT in accordance with the Standard Specifications for Road and Bridge Construction.

Load Ratings: Projects involving bridges typically have the load rating done during the design phase work. If the as-built bridge complies with the bid documents, the EOR should be willing to certify the load rating performed during design is adequate for the as-built condition of the bridge. However, if the as-built bridge was built in a modified or altered condition from the bid documents an updated load rating may be required. Therefore, during construction the EOR may be asked to perform an updated load rating based on the as-built condition of the bridge. As an aid in the negotiations the Structures Design Office has established guidelines for the development of staff-hours for load rating various bridge types.

Post design services may also include:

- ***Reestablishment of the original survey control just prior to construction (Refer to Section 5-7.1 of the Standard Specifications for Road and Bridge Construction).***
- ***Flagging R/W for acquisition***
- ***Monumentation of the R/W after construction is complete for projects with right-of-way acquisition***
- ***Comprehensive utility coordination and conflict resolution during construction.***

Note: All services will be agreed upon by the Department's Construction Project Manager and approved by the Department's Design Project Manager.

Post Design services are not intended for instances of CONSULTANT errors and/or omissions. The fee(s) for these services shall be established if and when said services are required ***in a separate task work order.***

3.9 Electronic Delivery

The CONSULTANT shall deliver final contract plans in electronic format using the DEPARTMENT's Electronic Delivery software. The final contract plans shall be electronically signed and sealed files delivered to the DEPARTMENT on acceptable electronic media, as determined by the DEPARTMENT.

4 ROADWAY ANALYSIS

The CONSULTANT shall analyze and document Roadway Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

4.1 Typical Section Package

The CONSULTANT shall provide an approved signed and sealed Typical Section Package to be submitted to the DEPARTMENT for review and concurrence prior to the Phase I plans submittal date. This package shall include the following:

Transmittal Letter, Location Map(s), Typical Section(s) (including bridge sections), Project Control Sheet(s)

4.2 Pavement Design Package

Pavement Evaluation (including coring, testing, and preparing the report) will be provided as directed in Section 30.20 of this Scope of Services.

For some assigned projects, the DEPARTMENT will be responsible for the Pavement Design.

For other assigned projects, the CONSULTANT may be required to provide an approved Pavement Design Package in accordance with applicable FDOT pavement design manuals along with the Phase I (30%) plans submittal. ***The Pavement Design shall comply with the most recent version of the FDOT Pavement Design Manual. The CONSULTANT may contact the District Materials Office to obtain a copy of the Department's Pavement Design Package Requirements.***

The CONSULTANT shall provide the District Materials Office the opportunity to review the Pavement Design. The Pavement Design shall be submitted for concurrence, prior to plan implementation.

The CONSULTANT shall consider the number of lifts and constructability when designing the pavement mix. The CONSULTANT shall consider these issues, as construction plans are prepared. The CONSULTANT shall provide an approved Pavement Design Package for DEPARTMENT concurrence prior to the Phase II Plans submittal date.

4.3 Access Management

The CONSULTANT shall incorporate access management standards for each project in coordination with DEPARTMENT staff. The degree of application shall be performed by the CONSULTANT in agreement with the DEPARTMENT'S project manager after taking into consideration the effort of work as well as whether the project is located on an FIHS (or SIS) corridor. Access management standards shall be implemented on all projects located on the FIHS (or SIS) corridor. Along non-FIHS corridors (or SIS), access management standards shall be applied on all multi-lane reconstruction projects or projects affecting the roadway classification.

However, the degree of implementation shall be carefully considered for RRR projects. For those types of projects, access management standards should be more location/site specific. Access Management considerations should be developed after review of historic crash data for specific locations along the roadway. When access management criteria is applied, the CONSULTANT shall review adopted access management standards and the existing access conditions (interchange spacing, signalized intersection spacing, median opening spacing, and connection spacing). Median openings proposed to be closed, relocated, or substantially altered shall be shown on plan sheets and submitted with supporting documentation **at the Department's first review (Phase I or Phase II) of the plans** submittal.

The DEPARTMENT shall provide access management classification information and information derived from PD&E studies and public hearings to be used by the CONSULTANT.

Unused/nonfunctional driveways may need to be replaced with curb and gutter when future use of the driveway is not feasible. The Designer will be responsible for notifying property owners in writing prior to altering or removing driveways. The Designer shall coordinate this activity with the Department's Project Manager prior to notifying the property owners. The Designer's notification will be via a prepared letter, on FDOT letterhead, requesting permission to alter or remove any driveways as appropriate. The FDOT Project Manager or District Consultant Project Management Engineer will sign the letter(s). Driveway widths should be evaluated to determine if improvements are warranted to provide better refuge for pedestrians on the sidewalk or to improve safety at intersections. The design should comply with Rule 14-96, Connection Permit Applications, and Rule 14-97, Access Management.

4.4 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the geometrics using the design standards that are most appropriate with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, ***Florida's Safe Mobility for Life Program requirements***, access management, PD&E documents and scope of work.

4.5 Cross Section Design Files

The CONSULTANT shall establish and develop cross section design files in accordance with the CADD manual.

4.6 Traffic Control Analysis

The CONSULTANT shall design a safe and effective Traffic Control Plan to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations, ***roadway pavement, drainage structures, ditches, front slopes, back***

slopes, drop offs within the clear zone, and traffic monitoring sites. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage must be maintained at all times. The design shall include construction phasing of roadways to accommodate the construction *or relocation* of utilities when the contract includes Joint Project Agreements (JPAs).

The CONSULTANT shall investigate the need for temporary traffic signals, temporary lighting, alternate detour roads, and the use of materials such as sheet piling in the analysis. The Traffic Control Plan shall be prepared by a certified designer who has completed training as required by the DEPARTMENT. Prior to proceeding with the Traffic Control Plan, the CONSULTANT shall meet with the appropriate DEPARTMENT personnel. The purpose of this meeting is to provide information to the CONSULTANT that will better coordinate the Preliminary and Final Traffic Control Plan efforts.

Prior to negotiating staffhours for this task, the CONSULTANT must work with the DEPARTMENT Design Project Manager to determine if the Area Operations Engineer will provide lane closure restrictions for this project. At the discretion of the Area Operations Engineer, the CONSULTANT shall conduct the lane closure analysis to determine work conditions when no lane closures will be allowed. The Traffic Control Plan shall be prepared by a certified designer who has completed the DEPARTMENT'S training course, and in accordance with the DEPARTMENT'S Design Standards and the Roadway Plans Preparation Manual.

The CONSULTANT shall consider the local impact of any lane closures or alternate routes. When the need to close a road is identified during this analysis, the CONSULTANT shall notify the DEPARTMENT's Project Manager as soon as possible. Proposed road closings must be reviewed and approved by the DEPARTMENT. Diligence shall be used to minimize negative impacts by appropriate specifications, recommendations or plans development. Local impacts to consider will be local events, holidays, peak seasons, detour route deterioration and other eventualities. CONSULTANT shall be responsible to obtain local authorities permission for use of detour routes not on state highways.

4.7 Master TCP Design Files

Not required for TCP Level 1 projects.

The CONSULTANT shall develop master Traffic Control Plan (TCP) files (for Level II and Level III only) showing each phase of the Traffic Control Plan.

4.8 Design Variations and Exceptions

If available, the DEPARTMENT shall furnish the Variation/Exception Report. The CONSULTANT shall prepare the documentation necessary to gain DEPARTMENT approval of all appropriate Design Variations and/or Design Exceptions. ***This information shall be submitted to the Project Manager upon completion.***

4.9 Design Report

The CONSULTANT shall prepare all applicable report(s) as listed in the Project Description section of this scope.

The CONSULTANT shall submit to the DEPARTMENT design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8½"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8½"x11" size. The data shall be in a hardback folder for submittal to the DEPARTMENT.

4.10 Computation Book and Quantities

The CONSULTANT shall prepare the Computation Book and various summary of quantities sheets. This includes all efforts required to develop the Computation Book and the supporting documentation, including ***proposed*** construction days ***and total contract time***.

Comp books are not required on Lump Sum Projects. If the project is identified to be a Lump Sum project, a summary of pay items and quantities shall be submitted with the construction contract time estimate for the DEPARTMENT's review and approval at the Phase III, IV and Final plans submittal.

4.11 Cost Estimate

The CONSULTANT shall be responsible for inputting pay items and quantities into the DEPARTMENT'S Transport System. The project shall be established in this system by Phase I (30%). Phase II (60%) submittal shall have all pay items identified with or without quantities. (If quantities have not been determined at this point, the CONSULTANT shall load a quantity of "1.0".) For the Phase II (60%) submittal, the CONSULTANT shall review the DEPARTMENT's Long Range Estimate (L.R.E.) and provide a marked-up copy to the District Preliminary Estimates Office. At Phase III (90%) the CONSULTANT shall have all quantities loaded, with only minor change anticipated at subsequent submittals. The complete submittal package will be provided to the District Preliminary Estimates Office at phases III (90%) and IV (100%). The above shall be provided for each component set of plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

For Lump Sum projects, the CONSULTANT shall provide sufficient data to the District Preliminary Estimates Office to be used in the cost estimation process. Refer to PPM 1 Section 22.4.

4.12 Technical Special Provisions

4.13 Other Roadway Analysis (Not applicable to this project)

4.14 Field Reviews

4.15 Technical Meetings

4.16 Quality Assurance/Quality Control

4.17 Independent Peer Review

4.18 Supervision

4.19 Coordination

5 ROADWAY PLANS

The CONSULTANT shall prepare Roadway, Drainage, Traffic Control, Utility Adjustment Sheets, plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

On some projects, traffic monitoring sites may have to be included. The CONSULTANT shall be responsible for locating all quantities for the installation and/or removal of a traffic monitoring site(s) and showing the location of the site(s) on the Key Sheet and plan sheets (as applicable). The DEPARTMENT shall be responsible for providing the location to the CONSULTANT.

Contamination – All underground fuel tanks and monitoring wells within the proposed right-of-way are to be located and shown/tabulated in the plans. All piping and pumps in association with the tanks shall also be located and identified by the survey. The CONSULTANT shall relay to the DEPARTMENT any findings of contaminated soil, monitoring wells, or any features (particularly springs or sinks) relating to contamination or hazardous material.

5.1 Key Sheet

5.2 Summary of Pay Items Including Quantity Input

5.3 Drainage Map

5.4 Interchange Drainage Map

5.5 Typical Section Sheets

5.6 General Notes/Pay Item Notes

5.7 Summary of Quantities

5.8 Box Culvert Data Sheet

5.9 Bridge Hydraulics Recommendation Sheets

5.10 Summary of Drainage Structures

5.11 Optional Pipe/Culvert Material

- 5.12 Project Layout**
- 5.13 Plan/Profile Sheet**
- 5.14 Profile Sheet**
- 5.15 Plan Sheet**
- 5.16 Special Profile**
- 5.17 Back of Sidewalk Profile Sheet**
- 5.18 Interchange Layout Sheet**
- 5.19 Ramp Terminal Details (Plan View)**
- 5.20 Intersection Layout Details**
- 5.21 Miscellaneous Detail Sheets**
- 5.22 Drainage Structure Sheet (Per Structure)**
- 5.23 Miscellaneous Drainage Detail Sheets**
- 5.24 Lateral Ditch Plan/Profile**
- 5.25 Lateral Ditch Cross Sections**
- 5.26 Retention/Detention Ponds Detail Sheet**
- 5.27 Retention Pond Cross Sections**
- 5.28 Cross-Section Pattern Sheet**
- 5.29 Roadway Soil Survey Sheet**
- 5.30 Cross Sections**
- 5.31 Traffic Control Plan Sheets**
- 5.32 Traffic Control Cross Section Sheets**
- 5.33 Traffic Control Detail Sheets**
- 5.34 Utility Adjustment Sheets**
- 5.35 Selective Clearing and Grubbing**
- 5.36 Erosion Control Plan**

5.37 SWPPP

5.38 Project Control Network Sheet

5.39 Environmental Detail Sheets

Preparation of detail sheets for potential environmental issues such as, underground fuel tanks and monitoring wells, septic tanks within the proposed right-of-way. All piping and pumps in association with the above referenced issues shall also be located and identified by the survey. The CONSULTANT shall relay to the DEPARTMENT any findings of contaminated soil, monitoring wells, or any features (particularly springs or sinks) relating to contamination or hazardous material.

5.40 Utility Verification Sheet (SUE Data)

5.41 Quality Assurance/Quality Control

5.42 Supervision

6 DRAINAGE ANALYSIS

The CONSULTANT shall analyze and document Drainage Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

The CONSULTANT shall be responsible for designing a drainage and stormwater management system. All design work shall comply with the requirements of the appropriate regulatory agencies and the DEPARTMENT's Drainage Manual.

The CONSULTANT shall field inspect the project for the structural condition of all side drains, cross drains, and drainage under the roadway area and make recommendations concerning repairs, extensions, replacement/upgrade, or removal of such facilities. Drainage structures shall be assessed and designed to meet clear zone requirements within existing right of way or a Design Variation or Exception must be obtained. Culverts that warrant replacement shall be itemized and detailed as appropriate in the construction plans. The CONSULTANT shall contact and document discussions with the DEPARTMENT's local Maintenance Office regarding historical drainage problems in the project area.

The CONSULTANT shall develop a drainage map based upon available information and field reviews. The available information should consist of old Florida Department of Transportation Plans, USGS Quadrangles, USGS Studies, NFWMD Studies, FEMA Studies, Local Government Agency Studies or Contours, etc. The drainage map should be included in the Hydraulic Design Study. The Hydrology should be by regional or local regression equations, or by the rational method. An assumed velocity should not be used. The CONSULTANT shall document the Drainage Design in the Drainage Design Study (23CFR650A). The Design Study should show that the design requirements of the

DEPARTMENT and FHWA have been met.

The CONSULTANT has the responsibility for determining the need, appropriate locations, and sizes for water management facilities, and drainage outfalls.

In the areas of poor drainage, significant addition of impervious surface, or inadequacy of sufficient downstream conveyance, the CONSULTANT shall address the requirements of Ch. 14-86 F.A.C. Alternate detention facilities shall be conceptually designed, costed and presented to the DEPARTMENT for consideration. Detention facilities to be considered include open basins, underground pipes or vaults, and french drains. The DEPARTMENT will decide on the Alternate to be used.

Flood data requirements will be determined in accordance with DEPARTMENT procedures. Flood data will be required in plans under the following conditions 1) necessary for all structures that are being modified, 2) necessary for all structures that have a history of flooding or other hydraulic problems even if the structure is not to be modified, 3) necessary for structures that may not be modified but share a drainage basin with another structure being modified and are being impacted by such modification.

The CONSULTANT will consider alternate culvert materials in accordance with the DEPARTMENT's Drainage Manual.

Prior to Phase II (60%) plans submittal, the CONSULTANT shall meet with the District Drainage Engineer. The purpose of this meeting is to provide information to the CONSULTANT that will better coordinate the Preliminary and Final Drainage Design efforts.

The CONSULTANT shall provide the DEPARTMENT's District Drainage Engineer a signed and sealed Drainage Design Study. The study shall include a narrative description of existing and proposed drainage structures, conditions, and facilities, and a listing of environmental regulatory permits required. All hydrologic and hydraulic drainage computations for the design presented in the plans shall be included along with supporting design information such as drainage maps, geotechnical data (such as soil borings and permeability tests), and correspondence that directly affected design decisions.

The CONSULTANT ***must*** coordinate fully with the appropriate permitting agencies and the DEPARTMENT's staff. All activities and submittals should be coordinated through the DEPARTMENT's Project Manager. The work will include the engineering analyses for any or all of the following:

6.1 Determine Base Clearance Water Elevation

Analyze, determine, and document high water elevations which will be used to set roadway profile grade. Determine surface water elevations at cross drains, floodplains, outfalls and adjacent stormwater ponds. Determine groundwater elevations at intervals between the above-mentioned surface waters.

6.2 Pond Siting Analysis and Report

Evaluate pond sites using a preliminary hydrologic analysis. Document the results and coordination for all of the project's pond site analyses. The Drainage Manual provides specific documentation requirements.

6.3 Design of Cross Drains

Analyze the hydraulic design of cross drains. Check existing cross drains to determine if they are structurally sound and can be extended. Document the design as required. Determine and provide flood data as required.

6.4 Design of Roadway Ditches

Design roadway conveyance ditches. This includes determining ditch cross sections, grades, selecting suitable channel lining, designing the side drain pipes, and documentation.

6.5 Design of Outfalls

Analyze and document the design of ditch or piped outfalls. (Pond outlet structure included in task 6.6)

6.6 Design of Stormwater Management Facility (Offsite Pond)

Design stormwater management facilities to meet requirements for stormwater quality treatment and attenuation. Develop proposed pond layout (shape, contours, slopes, etc.), perform routing calculations, and design the outlet control structure.

6.7 Design of Stormwater Management Facility (Roadside Ditch as Linear Pond or Infield Pond)

Design stormwater management facilities to meet requirements for stormwater quality treatment and attenuation. Develop proposed pond layout (shape, contours, slopes, etc.), perform routing calculations, and design the outlet control structure.

6.8 Design of Flood Plain Compensation Area

Determine flood plain encroachments, coordinate with regulatory agencies, and develop proposed compensation area layout (shape, contours, slopes, etc.). Document the design following the requirements of the regulatory agency.

6.9 Design of Storm Drains

Develop a “working drainage map”; determine runoff, inlet locations, and spread. Calculate hydraulic losses (friction, utility conflict and, if necessary, minor losses). Determine Design Tailwater and, if necessary, outlet scour protection.

6.10 Optional Culvert Material

Determine acceptable options for pipe materials.

6.11 French Drain Design

Design French Drain Systems to provide stormwater treatment and attenuation. Identify location for percolation tests and review these, determine the size and length of French Drains, design the control structure/weir, and model the system of inlets, conveyances, French Drains, and other outfalls using a routing program such as ICPR.

6.12 Drainage Wells

Design the discharge into deep wells to comply with regulatory requirements. Identify the location of the well, design the control structure/weir, and model the system using a routing program such as ICPR.

6.13 Drainage Design Documentation Report

Compile drainage design documentation into report format. Include documentation for all the drainage design tasks and associated meetings and decisions, except the Pond Siting Analysis Report and Bridge Hydraulics Report.

6.14 Bridge Hydraulic Report

A Coastal Engineering Analysis will be required for these bridges as specified in Section 4.8.2 of the Drainage Manual.

Calculate hydrology, hydraulics, scour, and deck drainage. Prepare report and the information for the Bridge Hydraulics Recommendation Sheet.

6.15 Temporary Drainage Analysis

Evaluate and address drainage to adequately drain the road and maintain existing offsite drainage during all construction phases. Provide documentation.

6.16 Cost Estimate

6.17 Technical Special Provisions

6.18 Other Drainage Analysis (Not applicable to this project)

6.19 Field Reviews

6.20 Technical Meetings

6.21 Quality Assurance/Quality Control

6.22 Independent Peer Review

6.23 Supervision

6.24 Coordination

7 UTILITIES

All Utility Coordination activities will be performed by the DEPARTMENT. The CONSULTANT will coordinate with FDOT Area Utility Manager regarding information needed.

7.1 Kickoff Meeting

Prior to any contact with the UAO(s), the CONSULTANT shall meet with the District Utility Office (DUO) to receive guidance, as may be required, to assure that all necessary coordination will be accomplished in accordance with DEPARTMENT procedures. CONSULTANT shall bring a copy of the design project work schedule reflecting utility activities.

7.2 Identify Existing UAO(s)

The CONSULTANT will identify all utilities in the corridor during the survey phase by calling Sunshine State One-Call of Florida (SSOCOF) and shall coordinate with each company to verify that all existing utilities are designated in the field prior to completing the topographic survey. As-built documentation shall be requested from each UAO for verification of complete designation, and a review will be made to ensure that field designated data is included on the Phase I plans. Proper identification of design coordination contact information shall be made during this activity.

The DEPARTMENT will assist in identifying all utilities in the corridor.

7.3 Make Utility Contacts

The DEPARTMENT's Area Utility Manager will make contact and distribute plans to the applicable UAO's. The CONSULTANT will be responsible for providing the appropriate quantity of plans sets or CDs/DVDs to the Area Utility Manager. A memo requesting that the UAO's verify/mark all existing facilities will be sent along with the plans.

7.4 Exception Coordination

The DEPARTMENT will coordinate all necessary Utility Exceptions. The CONSULTANT will not be responsible for obtaining utility exceptions but will need to transmit the appropriate design reports including, but not limited to, the Resurfacing, Restoration and Rehabilitation (RRR) report, Project Scope and/or the Concept Report (if applicable) to each UAO in order to identify any condition that may require a Utility Exception.

7.5 Preliminary Utility Meeting

The CONSULTANT shall schedule (time and place), notify participants, and conduct a preliminary utility meeting with all affected UAO(s) for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, and discuss any future design issues that may impact utilities. This is also an opportunity for the UAO(s) to present proposed facility **relocations with the CONSULTANT and other UAOs**. The CONSULTANT shall keep accurate minutes and distribute a copy to all attendees.

7.6 Individual/Field Meetings

The CONSULTANT will attend utility meetings as required for proper coordination of proposed design features. Field reviews shall be coordinated with the DEPARTMENT'S Area Utility Manager.

7.7 Collect and Review Plans and Data from UAO(s)

The CONSULTANT will be responsible for reviewing and implementing identified utility locations into the plans as well as producing a Potential Utility Conflict Matrix. The Matrix will include location (station, offset, depth) of existing facilities in relation to proposed construction features, and will be submitted with Phase II plans.

7.8 Subordination of Easements Coordination

The CONSULTANT, if requested by the DEPARTMENT, shall transmit to and secure from the UAO the executed subordination agreements prepared by the appropriate DEPARTMENT office. The CONSULTANT shall **obtain information as required from the UAO(s) for** the programming of the necessary work program funds to compensate the UAO **for reimbursable expenses**.

7.9 Utility Design Meeting

At a minimum of 3 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans **to the Area Utility Manager for** each **of the** UAOs having facilities located within the project limits, and one set to the DEPARTMENT Offices as required by the District. **The DEPARTMENT's Area Utility Manager shall schedule (time and place), notify participants, and conduct a Utility Design Meeting with all affected UAO(s)**. The CONSULTANT shall be prepared to discuss drainage, traffic signalization, maintenance of traffic (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and maintenance of traffic with each UAO. The intent of this

meeting shall be to identify and resolve conflicts between utilities and proposed construction prior to completion of the plans, including utility adjustment details. Also recommend resolution between known utility conflicts with proposed construction plans as practical. The **AREA UTILITY MANAGER** shall keep accurate minutes of all meetings and distribute a copy to all attendees.

7.10 Review Utility Markups and Work Schedules and Processing of Schedules and Agreements

Review utility marked up plans individually as they are received for content and coordinate review with the **proposed design features. Review specific details of** markups and schedules **with the Area Utility Manager as required to finalize the status of each potential conflict.**

7.11 Utility Coordination/Follow-up

Utility Coordination and Follow-up activities will be performed by the DEPARTMENT and the CONSULTANT if requested by the DEPARTMENT.

This includes follow-up, interpreting plans, and assisting **with coordination of** the completion of the UAO(s) work schedule and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all known conflicts. This task can be applied to all phases of the project.

7.12 Utility Constructability Review

Utility Constructability Review activities will be performed by the DEPARTMENT.

7.13 Additional Utility Services

All Additional Utility Services will be performed by the DEPARTMENT.

7.14 Processing Utility Work by Highway Contractor (UWHC)

Processing of any Utility Work by the Highway Contractor will be performed by the DEPARTMENT.

As directed by the DEPARTMENT, the CONSULTANT shall assist with the determination of the DEPARTMENT's cost participation, **attend** additional coordination meetings, prepare, negotiate, and process **UWHC** agreements, review tabulation of quantities **prepared by the UAO(s)**, prepare Summary of Pay Items (TRNS*PORT) **for UWHC items**, perform UWHC constructability and bidability reviews, **and review and incorporate** Technical Special Provisions (TSPs). This does not include utility design effort. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified.

7.15 Contract Plans to UAO(s)

The CONSULTANT will be responsible for providing the appropriate quantity of plan sets to the Area Utility Manager for submittal to the UAO(s) at each Phase Submittal.

This includes transmittal of the ***Final*** contract plans as processed for letting. Transmittals to UAO(s) are by certified mail, return receipt requested.

7.16 Certification/Close-Out

Utility Certification will be performed after all Utility Work Schedules have been executed and the coordination of construction related issues has been completed by the DEPARTMENT.

Utility Coordination Close-Out will include archiving all project documents and files in an orderly fashion consistent with the DEPARTMENT's EDMS archiving process.

7.17 Other Utilities

8 ENVIRONMENTAL PERMITS

The CONSULTANT shall notify the DEPARTMENT Project Manager, Environmental Permit Coordinator and other appropriate personnel in advance of all scheduled meetings with the regulatory agencies to allow a DEPARTMENT representative to attend. The CONSULTANT shall copy in the Project Manager and the Environmental Permit Coordinator on all permit related correspondence and meetings.

8.1 Preliminary Project Research

The CONSULTANT shall perform preliminary project research and shall be responsible for early identification of and coordination with the appropriate regulatory agencies to assure that design efforts are properly directed toward permit requirements.

8.2 Complete Permit Involvement Form

The CONSULTANT shall document permit involvement in coordination with the District Permit Coordinator and DEPARTMENT Project Manager. This is to be done upon completion of preliminary project research.

8.3 Establish Wetland Jurisdictional Lines

The CONSULTANT shall collect all data and information necessary to determine the boundaries of wetlands and surface waters defined by the rules or regulations of each agency processing or reviewing a permit application necessary to construct a DEPARTMENT project.

It is the intent of the Florida DEPARTMENT of Transportation (FDOT) to “preserve the quality of our environment.” In keeping with this portion of our Mission, the FDOT, District 3, has developed guidelines to assist the FDOT and our Consultant

Designers in meeting environmental agency permit requirements. In general, MECHANICAL clearing and grubbing (construction activities) or VEHICULAR intrusion in jurisdictional wetlands requires a Dredge and Fill permit from the State and Federal permitting agencies for permanent or temporary impacts to wetlands.

It is the FDOT's intent to document impacts within the Limits of Construction (LOC) plus a "buffer zone" of 5 feet outside each LOC line. If the right of way line is within 5 feet of the LOC, then the impact is to the right of way line. The CONSULTANT is responsible for identifying if the footprint for construction of the project, as well as wetland impacts, can fit within the right of way.

The CONSULTANT is to stake or flag the State and Federal jurisdictional lines. A registered surveyor will be required to survey these jurisdictional lines. The consultant must remove all stakes or flags after the environmental permits are approved.

The contractor is to be provided, in the plans, survey points to delineate or flag the wetlands that are NOT TO BE IMPACTED. It is the contractor's responsibility to flag or stake these areas prior to construction beginning and maintain them throughout construction. The CONSULTANT will identify this responsibility of the contractor clearly in the plans.

The plans shall clearly show the jurisdictional lines(s). The jurisdictional areas that are impacted shall be clearly designated and noted "Construction activities allowed." Jurisdictional areas that are not to be impacted and are to remain undisturbed throughout construction should be clearly designated and noted "Construction activities not allowed."

The CONSULTANT shall include a section in the roadway component set of plans to reflect the items above. This section shall also include a Tabulation Sheet or Block defining the undisturbed wetlands by x, y coordinates or station and offsets. The disturbed wetlands shall also be tabulated in square feet (or acres) indicating the area impacted. This section shall include any general or project specific environmental notes.

On projects where no wetland impacts are anticipated, the plans will clearly show the "Safe Upland Line"**. Areas outside this line shall be labeled or noted "Construction Activities Not Allowed". **According to the US Army Corps of Engineers, a Safe Upland is any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, and/or hydrologic characteristics associated with wetlands. The Consultant/Designer shall locate this line in a manner that allows the Contractor to reproduce this line in the field – station and offset, or state plan coordinates.

8.4 Agency Verification of Wetland Data

The jurisdictional lines will be verified during the permit submittal and review by the State or Federal agency. A formal jurisdictional determination will not be obtained prior to permit submittal except for new roadway alignments, or if a questionable determination is anticipated. The CONSULTANT will be responsible for

jurisdictional determinations during permit reviews and will respond to Requests for Additional Information by the reviewing agency.

8.5 Complete and Submit All Required Permit Applications

The CONSULTANT will have a Pre-Application meeting with the State permitting agency for all projects involving Stormwater Ponds. The FDOT PM, District Drainage Engineer, and District Permit Coordinator will be invited to the Stormwater Pre-Application meeting, and will be forwarded all correspondence and meeting minutes. For projects within the jurisdiction of Leon County, or the City of Tallahassee, the District Permit Coordinator and the District Drainage Engineer will be coordinated with before any permit application is submitted; and before any meetings with said agencies. The DEPARTMENT wants to be fully involved and to give proper direction to the CONSULTANT regarding permitting in Leon County and the City of Tallahassee.

The Engineer of Record (EOR) shall prepare a narrative, in layman terms, for the inclusion in the permit application package. It shall include work being performed in this project, impacts to the environment and methods of construction specifically related to the environmentally sensitive areas. This brief description will aid the regulatory agency reviewer in understanding the scope of the project.

For projects that do not have a wetland assessment (Unified Mitigation Assessment Method, or UMAM), and the permit requires this information to be issued, the CONSULTANT will prepare a UMAM to be submitted with the permit application.

8.6 Prepare Dredge and Fill Sketches per Agency Criteria

8.7 Prepare USCG Permit Sketches

8.8 Prepare Water Management District Right-of-Way Occupancy Sketches

The DEPARTMENT will prepare all Water Management District Right-of-Way Occupancy Sketches unless otherwise directed.

8.9 Prepare Coastal Construction Control Line (CCCL) Permit Application

8.10 Prepare Tree Permit Information

The CONSULTANT shall have ample knowledge of the governing Agency's ordinance on tree preservation within the project limits that is delegated to grant tree permits. Each agency has a distinct ordinance on tree preservation.

The CONSULTANT shall meet due dates for each activity within the DEPARTMENT'S Production Work Schedule.

The CONSULTANT's Professional Surveyor and Mapper shall provide the CONSULTANT's Landscape Architect with a Preliminary Specific Purpose Survey defined in Section 27.28 of this document.

The CONSULTANT shall perform the following work activities:

Preliminary Information, Field Evaluation & Tree Index Chart: *The CONSULTANT's Landscape Architect shall perform a field evaluation to determine the trees that may be potentially impacted by construction activities or pose a wind hazard. The CONSULTANT shall prepare a summary of the field evaluation findings and of the meeting minutes to include in the project file.*

The CONSULTANT shall identify all governing Agency(s) that encompass the project limits and review their individual tree ordinances. This information shall be transferred to the Tree Index Chart template in an orderly manner, by Agency(s).

The CONSULTANT shall perform background research by gathering of all necessary data with regards to the plan files and survey reference materials.

Tree Index Chart: Tree Identification & Condition Status: *The CONSULTANT's Landscape Architect shall review the applicable information on the Preliminary Specific Purpose Survey prepared by the CONSULTANT'S Professional Surveyor & Mapper as required to complete the Tree Index Chart. The CONSULTANT shall verify and confirm this information in the field: botanical name, common name, if native, size, location and condition. This information shall be transferred to the Tree Index Chart by the CONSULTANT. The CONSULTANT shall review the governing agency's ordinance on tree preservation to identify the "Permit Exempt" trees and note this information in the Conditions/Notes column. The CONSULTANT shall determine in the field whether a tree shall remain or shall be removed from the project. The "Comments/Notes" column on the Tree Index Chart shall describe the determining reason for this status and shall be coordinated with the DEPARTMENT and the governing Agency(s). The DEPARTMENT and the governing Agency(s) will determine whether the tree designated to be removed will be relocated. Once this determination has been completed in the Tree Index Chart, it shall be returned to the CONSULTANT'S Professional Surveyor and Mapper for the completion of the production plans defined in Section 27.28 of this document.*

Tree Permit Plans: *The CONSULTANT shall prepare the Tree Permit Plans to include the following: Key Sheet, Plan View Sheet(s) and the Tree Index Chart Sheet(s). The CONSULTANT shall transfer the surveyed tree and palm information within the project limits onto the Plan View Sheet(s) utilizing one symbol for trees and another one for palms. The relocation column in the Tree Index Chart shall be completed by the CONSULTANT after the DEPARTMENT and/or the Agency(s) have agreed on the relocation activities.*

Tree Permit Application Package: The CONSULTANT shall complete the Tree Permit Application form using the applicable Agency(s) format. Most Agencies require that the application form be completed with the name of the agent authorized to represent the DEPARTMENT and the agent's signature notarized by a Public Notary. A certified legal description of the site and/or an affidavit of ownership may be required by the applicable Agency(s). The affidavit may be obtained from the DEPARTMENT'S Right-of-Way Department and/or from the DEPARTMENT'S District Permits Coordinator. The CONSULTANT must sign and have their representative's signature notarized on the Tree Permit Application Form.

- A complete Tree Permit Application Package consists of:
- Application Form
- Letter of Application describing the final number and type of affected trees and palms, the canopy impacts and the total proposed canopy to offset the impacts
- Affidavit of Ownership (if required)
- Tree Permit Plans hand signed and sealed by a Florida Registered Landscape Architect (may not be required depending on the local agency requirements).
- Conceptual Landscape Plans hand signed and sealed by a Florida Registered Landscape Architect (may not be required depending on the local agency requirements).

Prior to submission to the Agency, the draft version of the Tree Permit Application Package may be reviewed for completeness with the DEPARTMENT'S District Permits Coordinator. The CONSULTANT shall provide a copy of the final Tree Permit Application Package including the proposed Landscape Plans to the DEPARTMENT District Permits Coordinator (or designee) in the District Environmental Management Office (DEMO).

Mitigation, Negotiation and Relocation: When the governing agency(s) ordinance on tree preservation describes the compensation loss in canopy square feet, caliper inch, or DBH (diameter at breast high inch), the CONSULTANT shall calculate the project mitigation. New trees proposed in the final landscape plans may be used as compensation for tree impacts when calculating the mitigation fees. The Agency may request the CONSULTANT to attend a field meeting to confirm or negotiate the final mitigation requirement. The DEPARTMENT District Permits Coordinator shall review and approve all mitigation and permit fees. All fee negotiations will be conducted by the DEPARTMENT. If the Agency(s) requests the relocation of any tree(s), it is their responsibility to provide the DEPARTMENT with a tree relocation cost estimate. This cost estimate must be approved by the DEPARTMENT District Permits Coordinator. The CONSULTANT shall be responsible for follow-up coordination to ensure the

mitigation negotiation and relocation occurs within the DEPARTMENT'S production work schedule and guidelines.

Permit Payment: *The CONSULTANT shall submit the draft version of Tree Permit and request for payment processing to the DEPARTMENT District Permits Coordinator. The DEPARTMENT will process the permit fee payment and send the payment directly to the Agency. The CONSULTANT shall monitor the process until completion and shall be responsible for any coordination or follow-up.*

Permit Clear: *The CONSULTANT shall submit the final Tree Permit to the DEPARTMENT District Permits Coordinator immediately after receiving the permit from the applicable Agency.*

Tree Permit Extension: The CONSULTANT shall apply for a Tree Permit extension six months prior to the expiration of the permit (if it is required).

8.11 Mitigation Coordination and Meetings

The CONSULTANT shall coordinate with DEPARTMENT personnel prior to approaching any environmental permitting or reviewing agencies. Once a mitigation plan has been reviewed and approved by the DEPARTMENT, the CONSULTANT will be responsible *for providing the necessary project information to the Water Management District (WMD)* for coordinating the proposed mitigation plan with the environmental agencies.

8.12 Mitigation Design (To Be Provided by Others)

The FDOT mitigation design will be in accordance with CH 373.4137 FS. The NFWFMD will be responsible for developing a mitigation plan for the wetland impacts associated with this project.

8.13 Environmental Clearances, Reevaluations and Technical Support

The CONSULTANT shall provide engineering support for the District to obtain clearances for all changes to the project after the PD&E was completed. These changes include but are not limited to pond and/or mitigation sites identified, land use or environmental changes, and significant design changes. The **DEPARTMENT** shall prepare clearances for *the project site as required*.

NEPA or SEIR Reevaluation: During the development of the final design plans, the CONSULTANT shall be responsible for coordinating with the District Project Manager to provide necessary engineering information required in the preparation of the reevaluation by the DEPARTMENT. The preparation of all environmental reevaluations on major projects include the following types of reevaluations as listed in Chapter 11, Part I of the DEPARTMENT's Project Development & Environment Manual: Preliminary Engineering, Right of Way, Design Change, and Construction Advertisement Reevaluations.

It is the responsibility of the CONSULTANT to provide the District Project Manager with engineering information on major design changes including changes in typical section, roadway alignment, pond site selection, right of way requirements, bridge to box culvert, drainage, and traffic volumes that may affect noise models.

Archaeological and Historical Features: The CONSULTANT shall provide technical information to the District's Project Manager necessary to analyze the impacts to all cultural and historic resources due to changes in the project.

Wetland Impact Analysis: The CONSULTANT shall provide technical information to the District's Project Manager necessary to analyze the impacts to wetlands due to changes in the project.

Wildlife and Habitat Impact Analysis: The CONSULTANT shall provide technical information to the District's Project Manager necessary to analyze the impacts to all wildlife and habitat due to changes in the project.

Contamination Impact Analysis: The CONSULTANT shall provide technical information to the District's Project Manager necessary to perform a Contamination Screening Evaluation for the pond and/or mitigation sites and complete the Contamination Screening Evaluation Report.

8.14 Environmental Clearances and Reevaluations (*Refer to Section 8.13*)

8.15 Other Environmental Permits (Not applicable for this project)

8.16 Technical Meetings

At the Pre-construction Conference, the EOR must be prepared to discuss the Erosion Control Plan, including environmentally sensitive areas, and known risk, proposed avoidance measures, and the special requirements listed in the permit for this project. ***Payment for attending the Pre-construction Conference will be made through Post Design Services, to be negotiated post-Letting.***

8.17 Quality Assurance/Quality Control

8.18 Supervision

8.19 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS

The CONSULTANT shall analyze and design all structures in accordance with applicable provisions as defined in Section 2.17, Provisions for Work. Individual tasks identified in Sections 9 through 18 are defined in the Staff Hour Estimation Handbook and within the provision defined in Section 2.17, Provisions for Work. Contract documents shall display economical solutions for the given conditions.

The CONSULTANT shall provide Design Documentation to the DEPARTMENT with each

submittal consisting of structural design calculations and other supporting documentation developed during the development of the plans. The design calculations submitted shall adequately address the complete design of all structural elements. These calculations shall be neatly and logically presented on 8½"x11" paper (where possible) and all sheets shall be numbered. The final design calculations shall be signed and sealed by a Florida-registered professional engineer. A cover sheet indexing the contents of the calculations shall be included and the engineer shall sign and seal that sheet. All computer programs and parameters used in the design calculations shall include sufficient backup information to facilitate the review task.

- 9.1 Index of Drawings**
- 9.2 Project Layout**
- 9.3 General Notes and Bid Item Notes**
- 9.4 Miscellaneous Common Details**
- 9.5 Incorporate Report of Core Borings**
- 9.6 Existing Bridge Plans**
- 9.7 Assembly of Computation Book and Quantities**
- 9.8 Cost Estimate**
- 9.9 Technical Special Provisions**
- 9.10 Field Reviews**
- 9.11 Technical Meetings**
- 9.12 Quality Assurance/Quality Control**
- 9.13 Independent Peer Review**
- 9.14 Supervision**
- 9.15 Coordination**

- 10 STRUCTURES - BRIDGE DEVELOPMENT REPORT** and tasks 10.1 – 10.48 are not applicable for this project.
- 11 STRUCTURES - TEMPORARY BRIDGE** and tasks 11.1 – 11.8 are not applicable for this project.
- 12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE** and tasks 12.1 – 12.28 are not applicable for this project.
- 13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE** and tasks 13.1 – 13. 52 are not applicable for this project.
- 14 STRUCTURES - STRUCTURAL STEEL BRIDGE** and tasks 14.1 – 14. 60 are not applicable for this project.
- 15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE** and tasks 15.1 – 15.77 are not applicable for this project.
- 16 STRUCTURES - MOVABLE SPAN** and tasks 16.1 – 16.102 are not applicable for this project.
- 17 STRUCTURES - RETAINING WALL**

The CONSULTANT shall prepare plans for Retaining Wall(s) as specified in Section 2.5.

General Requirements

17.1 Key Sheets

17.2 Horizontal Wall Geometry

Permanent Proprietary Walls

17.3 Vertical Wall Geometry

17.4 Semi-Standard Drawings

17.5 Wall Plan and Elevations (Control Drawings)

17.6 Details

Temporary Proprietary Walls

17.7 Vertical Wall Geometry

17.8 Semi-Standard Drawings

17.9 Wall Plan and Elevations (Control Drawings)

17.10 Details

Cast-In-Place Retaining Walls

17.11 Design

17.12 Vertical Wall Geometry

17.13 General Notes

17.14 Wall Plan and Elevations (Control Drawings)

17.15 Sections and Details

17.16 Reinforcing Bar List

Other Retaining Walls and Bulkheads

17.17 Design

17.18 Vertical Wall Geometry

17.19 General Notes, Tables and Miscellaneous Details

17.20 Wall Plan and Elevations

17.21 Details

18 STRUCTURES - MISCELLANEOUS

The CONSULTANT shall prepare plans for Miscellaneous Structure(s) as specified in Section 2.5.

Concrete Box Culverts

18.1 Concrete Box Culverts

18.2 Concrete Box Culverts Extensions

Strain Poles

18.3 Steel Strain Poles

18.4 Concrete Strain Poles

Mast Arms

18.5 Mast Arms

Overhead/Cantilever Sign Structure

18.6 Cantilever Sign Structures

18.7 Overhead Span Sign Structures

18.8 Special (Long Span) Overhead Sign Structures

18.9 Monotube Overhead Sign Structure

18.10 Bridge Mounted Signs (Attached to Superstructure)

High Mast Lighting and task 18.11 are not applicable for this project.

Sound Barrier Walls (Ground Mount) and tasks 18.12 – 18.18 are not applicable for this project.

Special Structures and tasks 18.19 – 18.22 are not applicable for this project.

19 SIGNING AND PAVEMENT MARKING ANALYSIS

The CONSULTANT shall analyze and document Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

19.1 Traffic Data Analysis

The CONSULTANT shall review the approved preliminary engineering report, typical section package, traffic technical memorandum and proposed geometric design alignment to identify proposed sign placements and roadway markings. Perform queue analysis.

19.2 No Passing Zone Study

19.3 Reference and Master Design File

The CONSULTANT shall prepare the Signing & Marking Design file to include all necessary design elements and all associated reference files.

19.4 Multi-Post Sign Support Calculations

The CONSULTANT shall determine the appropriate column size from the DEPARTMENT's Multi-Post Sign Program(s).

19.5 Sign Panel Design Analysis

Establish sign layout, letter size and series for non-standard signs.

19.6 Sign Lighting/Electrical Calculations

Includes the verification of photometrics on lighted, load center and voltage drop calculations.

19.7 Quantities

19.8 Computation Book

19.9 Cost Estimates

19.10 Technical Special Provisions

19.11 Other Signing and Pavement Marking Analysis (Not applicable for this project)

19.12 Field Reviews

19.13 Technical Meetings

19.14 Quality Assurance/Quality Control

19.15 Independent Peer Review

19.16 Supervision

19.17 Coordination

20 SIGNING AND PAVEMENT MARKING PLANS

The CONSULTANT shall prepare a set of Signing and Pavement Marking Plans in accordance with the Plans Preparation Manual that includes the following. ***The plans shall include only those sheets, of the following list of sheets, necessary to convey the intent and scope of the project for the purpose of construction.***

20.1 Key Sheet

20.2 Summary of Pay Items Including CES Input

20.3 Tabulation of Quantities

- 20.4 General Notes/Pay Item Notes**
- 20.5 Project Layout**
- 20.6 Plan Sheet**
- 20.7 Typical Details**
- 20.8 Guide Sign Work Sheet(s)**
- 20.9 Traffic Monitoring Site**
- 20.10 Cross Sections**
- 20.11 Special Service Point Details**
- 20.12 Special Details**
- 20.13 Interim Standards**
- 20.14 Quality Assurance/Quality Control**
- 20.15 Supervision**

21 SIGNALIZATION ANALYSIS

The CONSULTANT shall analyze and document Signalization Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

21.1 Traffic Data Collection

The CONSULTANT shall perform all effort required for traffic data collection, including crash reports, 24 hr. machine counts, 8 hr. turning movement counts, 7 day machine counts, and speed & delay studies.

21.2 Traffic Data Analysis

The CONSULTANT shall determine signal operation plan, intersection geometry, local signal timings, pre-emption phasing & timings, forecasting traffic, and intersection analysis run.

21.3 Signal Warrant Study

21.4 Systems Timings

The CONSULTANT shall determine proper coordination timing plans including splits, force offs, offsets, and preparation of Time Space Diagram.

21.5 Reference and Master Signalization Design File

The CONSULTANT shall prepare the Signalization Design file to include all necessary design elements and all associated reference files.

21.6 Reference and Master Interconnect Communication Design File

The CONSULTANT shall prepare the Interconnect Communication Design file to include all necessary design elements and all associated reference files.

21.7 Overhead Street Name Sign Design

The CONSULTANT shall design Signal Mounted Overhead Street Name signs.

21.8 Pole Elevation Analysis

21.9 Traffic Signal Operation Report (Not applicable for this project)

21.10 Quantities

21.11 Cost Estimate

21.12 Technical Special Provisions

21.13 Other Signalization Analysis (Not applicable for this project)

21.14 Field Reviews

The CONSULTANT shall collect information from the maintaining agencies and conduct a field review. The review should include, but is not limited to, the following:

- Existing Signal and Pedestrian Phasing
- Controller Make, Model, Capabilities and Condition/Age
- Condition of Signal Structure(s)
- Type of Detection as Compared With Current District Standards
- Interconnect Media
- Controller Timing Data

21.15 Technical Meetings

21.16 Quality Assurance/Quality Control

21.17 Independent Peer Review

21.18 Supervision

21.19 Coordination

22 SIGNALIZATION PLANS

The CONSULTANT shall prepare a set of Signalization Plans in accordance with the Plans Preparation Manual, which includes the following.

- 22.1 Key Sheet**
- 22.2 Summary of Pay Items Including CES Input**
- 22.3 Tabulation of Quantities**
- 22.4 General Notes/Pay Item Notes**
- 22.5 Plan Sheet**
- 22.6 Interconnect Plans**
- 22.7 Traffic Monitoring Site**
- 22.8 Guide Sign Worksheet**
- 22.9 Special Details**
- 22.10 Special Service Point Details**
- 22.11 Mast Arm/Monotube Tabulation Sheet**
- 22.12 Strain Pole Schedule**
- 22.13 TCP Signal (Temporary)**
- 22.14 Temporary Detection Sheet**
- 22.15 Utility Conflict Sheet**
- 22.16 Interim Standards**
- 22.17 Quality Assurance/Quality Control**
- 22.18 Supervision**

23 LIGHTING ANALYSIS

The CONSULTANT shall analyze and document Lighting Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

- 23.1 Lighting Justification Report**

The CONSULTANT shall prepare a Lighting Justification Report. The report shall be submitted under a separate cover with the Phase I plans submittal, titled Lighting Design Analysis Report

23.2 Lighting Design Analysis Report

The CONSULTANT shall prepare a Preliminary Lighting Design Analysis Report. The report shall be submitted under a separate cover prior to the Phase II plans submittal. The report shall provide analyses for each typical section of the mainline, typical section for the ramps (one and/or two lanes), interchanges, underdeck lighting, and arterial roads. Each lighting calculation shall be properly identified as to the area that it covers.

The report shall include the Lighting Design Criteria that will be used and shall include the evaluation of at least three lighting design alternatives and a recommendation on the alternative to use. Each alternative shall be properly described; the alternatives shall consider different pole heights, lamp wattage, and arm lengths. Each alternative shall be provided with a cost estimate that includes initial cost in addition to operations and maintenance cost for one year.

After approval of the preliminary report, the CONSULTANT shall submit a revised report including a detailed lighting design analysis for each submittal.

23.3 Aeronautical Evaluation

The CONSULTANT shall prepare an Aeronautical Evaluation/Airspace Analysis Report for those projects within *a specified distance* of an airport. It shall be submitted for approval by the DEPARTMENT and by FAA prior to Phase II plans submittal.

The report shall include an evaluation of the glide slope of all adjacent airport runways (including future runways) and the preparation of the required FAA forms and special lighting calculations based on NO PENETRATION of the approach or transitional surfaces and coordination with the Airport Manager.

The report shall include a profile drawing for each condition affected by the runway approach and transitional surfaces. This drawing(s) shall show the roadway profile grade line at the edge of the shoulder pavement with proper baseline stations, the FAR Part 77 - 50:1 (or 34:1) approach surface line and the 7:1 transitional surface line. The scale of this drawing shall be 1"=100' horizontal and 1"=10' vertical. The proposed location of each light pole shall be properly shown at the respective station to clearly indicate that no penetration to either the approach surface or to the transitional surface is anticipated.

23.4 Voltage Drop Calculations

The CONSULTANT shall submit voltage drop calculations showing the equation or equations used along with the number of luminaries per circuit, the length of each circuit, the size conductor or conductors used and their ohm resistance values. The voltage drop incurred on each circuit (total volts and percentage of drop) shall be

calculated, and all work necessary to calculate the voltage drop values for each circuit should be presented in such a manner as to be duplicated by the District.

Load analysis calculations shall be submitted for each branch circuit breaker and main breaker.

23.5 FDEP Coordination and Report

23.6 Reference and Master Design Files

The CONSULTANT shall prepare the Lighting Design file to include all necessary design elements and all associated reference files.

23.7 Temporary Lighting

The CONSULTANT shall provide temporary lighting for all affected phases of construction to light all detour roadways in areas where required. The temporary lighting shall be included with the Traffic Control Plans with proper notes, quantities and details.

23.8 Design Documentation

The CONSULTANT shall submit a Roadway Lighting Design Documentation Book with each lighting plans submittal under a separate cover and not part of the roadway documentation book. At a minimum, the design documentation book shall include:

Lighting Calculations.

- Back up sheet for each bid item quantity total on each lighting plan sheet (Phase III and Phase IV submittals).
- Phase submittal checklist.
- Three-way quantity check list (Phase III and IV submittals).
- Structural calculations for special conventional pole concrete foundations.
- Structural calculations for the high mast pole foundations.
- Letter to the power company requesting service.
- Power company confirmation letter on the requested services (Phase III and Phase IV submittals).
- Voltage drop calculations (Phase III and Phase IV submittals).

Load analysis calculations (Phase III and Phase IV submittals).

23.9 Quantities

23.10 Cost Estimate

23.11 Technical Special Provisions

23.12 Other Lighting Analysis (Not applicable for this project)

23.13 Field Reviews

The CONSULTANT shall collect information from the maintaining agencies and conduct a field review. The review should include but is not limited to the following:

Existing Lighting Equipment
Load Center, Capabilities and Condition/Age
Condition of Lighting Structure(s)

23.14 Technical Meetings

23.15 Quality Assurance/Quality Control

23.16 Independent Peer Review

23.17 Supervision

23.18 Coordination

24 LIGHTING PLANS

The CONSULTANT shall prepare a set of Lighting Plans in accordance with the Plans Preparation Manual, which includes the following:

24.1 Key Sheet

24.2 Summary of Pay Item Sheet Including CES Input

24.3 Tabulation of Quantities

24.4 General Notes/Pay Item Notes

24.5 Pole Data and Legend & Criteria

24.6 Service Point Details

24.7 Project Layout

24.8 Plan Sheet

24.9 Special Details

24.10 Temporary Lighting Data and Details

24.11 Traffic Control Plan Sheets

24.12 Interim Standards

24.13 Quality Assurance/Quality Control

24.14 Supervision

25 LANDSCAPE ARCHITECTURE ANALYSIS and tasks 25.1 – 25.16 are not applicable for this project.

26 LANDSCAPE ARCHITECTURE PLANS and tasks 26.1 – 26.16 are not applicable for this project.

27 SURVEY

The CONSULTANT shall perform survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

The survey CONSULTANT shall perform all survey services necessary to prepare the plans for the subject project. Survey work shall be accomplished in accordance with the Department's Surveying procedure and special instructions below.

27.1 Horizontal Project Network Control (HPNC)*(To Be Provided by the Department)*

27.2 Vertical Project Network Control (VPNC)*(To Be Provided by the Department)*

27.3 Alignment and/or Existing Right of Way Lines

Refer to the D3 Survey Guidelines for requirements.

27.4 Aerial Targets

Refer to the D3 Survey Guidelines for requirements.

27.5 Reference Points

Refer to the D3 Survey Guidelines for requirements.

27.6 Topography/DTM (3D)

Refer to the D3 Survey Guidelines for requirements.

27.7 Planimetric (2D)

Refer to the D3 Survey Guidelines for requirements.

27.8 Roadway Cross Sections/Profiles

Refer to the D3 Survey Guidelines for requirements.

27.9 Side Street Surveys

Refer to the D3 Survey Guidelines for requirements.

27.10 Underground Utilities

Refer to the D3 Survey Guidelines for requirements.

27.11 Outfall Survey

Refer to the D3 Survey Guidelines for requirements.

27.12 Drainage Survey

Refer to the D3 Survey Guidelines for requirements.

27.13 Bridge Survey

Refer to the D3 Survey Guidelines for requirements.

27.14 Channel Survey

Refer to the D3 Survey Guidelines for requirements.

27.15 Pond Site Survey

Refer to the D3 Survey Guidelines for requirements.

27.16 Mitigation Survey

Refer to tasks of this document as applicable as well as the D3 Survey Guidelines for requirements.

27.17 Jurisdiction Line Survey

Refer to the D3 Survey Guidelines for requirements.

27.18 Geotechnical Support

Refer to the D3 Survey Guidelines for requirements.

27.19 Sectional/Grant Survey

Refer to the D3 Survey Guidelines for requirements.

27.20 Subdivision Location

Refer to the D3 Survey Guidelines for requirements.

27.21 Maintained R/W

Refer to the D3 Survey Guidelines for requirements.

27.22 Boundary Survey

Refer to the D3 Survey Guidelines for requirements.

27.23 Water Boundary Survey

Refer to the D3 Survey Guidelines for requirements.

27.24 Right of Way Staking

Refer to the D3 Survey Guidelines for requirements.

27.25 Right of Way Monumentation

Refer to the D3 Survey Guidelines for requirements.

27.26 Line Cutting

Refer to the D3 Survey Guidelines for requirements.

27.27 Work Zone Safety

Refer to the D3 Survey Guidelines for requirements.

27.28 Miscellaneous Surveys

Refer to the D3 Survey Guidelines for requirements.

The CONSULTANT shall survey the location of trees located within the Florida Department of Transportation right-of-way. The CONSULTANT shall refer to the governing Agency's ordinance on tree preservation for the definition of a tree. All surveyed trees shall be tagged with plastic ties and metallic labels including their number for later identification. The plastic ties must be two to three inches loose to allow growing of the tree's trunk or branch until the start of construction.

Once all trees have been surveyed, the CONSULTANT shall set up and fill in the following columns on the Tree Index Chart CAD sheet file provided by the DEPARTMENT:

Tree Tag Number (Column labeled as "TAG")

Generic Description (examples: oak, palm, and pine) (Column labeled as "COMMON NAME")

Diameter at Breast Height (DBH) in inches (3 inches or greater) (Column labeled as "DBH (in.)"). In the case of specimens which have multiple trunks, the DBH shall be calculated as a sum of the individual diameters at breast height.

Tree Canopy Area in square feet (Column labeled as "CANOPY AREA (sq ft.)")

Survey Baseline Station (Column labeled as “STATION”)

Offset from the Survey Baseline (Column labeled as “OFFSET”)

Unusual circumstances (example: multiple trunk trees or palms, unusual position or locations, tree dead or down, etc.) (Column labeled “COMMENTS/NOTES”)

The CONSULTANT shall prepare a signed and sealed Specific Purpose Survey to include in the contract plans. The survey shall include a cover sheet, detail sheets (following the roadway design set-up), and a Tree Index Chart. The CONSULTANT’s Professional Surveyor and Mapper shall receive back from the CONSULTANT’S Landscape Architect the completed Tree Index Chart from the tree permit activities defined in Section 8.11 of this document to incorporate in the production plans.

27.29 Supplemental Surveys

Supplemental survey days and hours are to be approved in advance by the District Design Surveyor. Refer to tasks of this document, as applicable, to perform surveys not described herein.

27.30 Document Research

Refer to the D3 Survey Guidelines for requirements.

27.31 Field Review

Refer to the D3 Survey Guidelines for requirements.

27.32 Technical Meetings

Attend meetings as required and negotiated by the District Survey Department.

27.33 Quality Control/Quality Assurance

Refer to the D3 Survey Guidelines for requirements.

27.34 Supervision

Perform all activities required to supervise and coordinate project. These activities must be performed by the project supervisor, a Florida Professional Surveyor.

27.35 Coordination

Includes all effort required to coordinate survey activities with other disciplines. These activities must be performed by the project supervisor, a Florida Professional Surveyor.

28 PHOTOGRAMMETRY

The CONSULTANT shall perform photogrammetric tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

In addition to the maps and photographic products, the CONSULTANT shall submit all computations to document the mapping. This will include documentation of all decisions reached from meetings, telephone conversations, and site visits.

28.1 Flight Preparation (Not applicable for this project)

28.2 Control Point Coordination (Not applicable for this project)

28.3 Mobilization (Not applicable for this project)

28.4 Flight Operations (Not applicable for this project)

28.5 Film Processing (Not applicable for this project)

28.6 Photo Products (Not applicable for this project)

28.7 Scanning (Not applicable for this project)

28.8 Lidar (Not applicable for this project)

28.9 Aerial Triangulation (Not applicable for this project)

28.10 Surfaces (Not applicable for this project)

28.11 Ortho Generation (Not applicable for this project)

28.12 Rectified Digital Imagery (Georeferenced)

Create the rectified digital image.

28.13 Mosaicking

Create the mosaic.

28.14 Sheet Clipping

Create plot files for sheets from the database.

28.15 Topographics

Prepare topographic maps including surface and planimetrics. (Photogrammetrist will not propose hours for Surfaces and Topographics.)

28.16 Planimetrics (2D)

Prepare 2D planimetric map.

28.17 Drainage Basin

Includes preparing drainage basin maps in clipped "sheet" format.

28.18 CADD Edit

Perform final edit of graphics for delivery of required Microstation .dgn, CADD, and Geopak files.

28.19 Data Merging

Merge photogrammetric files, field survey files, and data from other sources.

28.20 Miscellaneous

Other tasks not specifically addressed in this document.

28.21 Field Review

Perform on site review of maps.

28.22 Technical Meetings

Attend meetings as required.

28.23 Quality Control/Quality Assurance

Establish and implement a QC/QA plan.

28.24 Supervision

Supervise all photogrammetric activities. This task must be performed by the project supervisor, a Florida P.S.M.

28.25 Coordination

Coordinate with all elements of the project to produce a final photogrammetric product.

29 MAPPING

The CONSULTANT will be responsible for the preparation of control survey maps, right of way maps, maintenance maps, sketches, other miscellaneous survey maps, and legal descriptions as required for this project in accordance with all applicable DEPARTMENT Manuals, Procedures, Handbooks, and Florida Statutes. All maps, surveys and legal

descriptions will be prepared under the direction of a Florida Professional Surveyor and Mapper (PSM) to DEPARTMENT size and format requirements utilizing DEPARTMENT approved software, and will be designed to provide a high degree of uniformity and maximum readability. The CONSULTANT will submit maps, legal descriptions, quality assurance check prints, checklists, electronic media files and any other documents as required for this project to the DEPARTMENT for review at stages of completion as negotiated.

Master CADD File

29.1 Alignment

29.2 Section and 1/4 Section Lines

29.3 Subdivisions / Property Lines

29.4 Existing Right of Way

29.5 Topography

29.6 Parent Tract Properties and Existing Easements

29.7 Proposed Right of Way Requirements

The ENGINEER OF RECORD (EOR) will provide the proposed requirements. The PSM is responsible for calculating the final geometry. Notification of Final Right of Way Requirements along with the purpose and duration of all easements will be specified in writing.

29.8 Limits of Construction

The limits of construction DGN file as provided by the EOR will be imported or referenced to the master CADD file. Additional labeling will be added as required. The PSM is required to advise the EOR of any noted discrepancies between the limits of construction line and the existing/proposed right of way lines, and for making adjustments as needed when a resolution is determined.

29.9 Jurisdictional/Agency Lines

These lines may include, but are not limited to, jurisdictional, wetland, water boundaries, and city/county limit lines.

Sheet Files

29.10 Control Survey Cover Sheet

29.11 Control Survey Key Sheet

29.12 Control Survey Detail Sheet

29.13 Right of Way Map Cover Sheet

29.14 Right of Way Map Key Sheet

29.15 Right of Way Map Detail Sheet

29.16 Maintenance Map Cover Sheet

29.17 Maintenance Map Key Sheet

29.18 Maintenance Map Detail Sheet

29.19 Reference Point Sheet

This sheet(s) will be included with the Control Survey Map, Right of Way Map and Maintenance Map.

29.20 Project Network Control Sheet

This sheet depicts the baseline, the benchmarks, the primary and secondary control points and their reference points including the type of material used for each point, their XYZ coordinates, scale factors and convergence angles. This sheet(s) may be included with the Control Survey Map, Right of Way Map and Maintenance Map.

29.21 Table of Ownerships Sheet

Miscellaneous Surveys and Sketches

29.22 Parcel Sketches

29.23 TIITF Sketches

29.24 Other Specific Purpose Survey(s) (Not applicable for this project)

29.25 Boundary Survey(s) Map

29.26 Right of Way Monumentation Map

29.27 Title Search Map

29.28 Title Search Report

29.29 Legal Descriptions

29.30 Final Map/Plans Comparison

The PSM will perform a comparison of the final right of way maps with the available construction plans to review the correctness of the type of parcel to be acquired and the stations/offsets to the required right of way. The PSM will coordinate with the

EOR to resolve any conflicts or discrepancies and provide documentation of the review.

29.31 Field Reviews

29.32 Technical Meetings

29.33 Quality Assurance/Quality Control

29.34 Supervision

29.35 Coordination

29.36 Supplemental Mapping

This task is to cover efforts resulting from major design and/or development changes after 60% map development that affect the right of way requirements/parent tract property lines and may include any number of tasks. Request and approval to utilize the Supplemental Mapping hours will be in writing ***and approved by the District Right of Way Surveyor prior to any work being done under this task.***

30 GEOTECHNICAL

The CONSULTANT *may* be responsible for a complete geotechnical investigation, ***depending on the assigned project/task. The scope of work for each assignment will designate geotechnical responsibilities (CONSULTANT'S and/or DEPARTMENT'S).*** All work performed by the CONSULTANT shall be in accordance with DEPARTMENT standards, or as otherwise directed by the District Geotechnical Engineer. The District Geotechnical Engineer will make interpretations and changes regarding geotechnical standards, policies and procedures and provide guidance to the CONSULTANT.

Before beginning each phase of investigation and after the Notice to Proceed is given, the CONSULTANT shall submit investigation plan for approval and meet with the DEPARTMENT's Geotechnical Engineer or representative to review the project scope and DEPARTMENT requirements. The investigation plan shall include, but not be limited to, the proposed boring locations and depths, and all existing geotechnical information from available sources to generally describe the surface and subsurface conditions of the project site. Additional meetings may be required to plan any additional field efforts, review plans, resolve plans/report comments, resolve responses to comments, and/or any other meetings necessary to facilitate the project.

The CONSULTANT shall notify the DEPARTMENT in adequate time to schedule a representative to attend all related meetings and field activities.

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of final plans. Rock cores shall be retained as directed in writing by the District Geotechnical Engineer.

CONSULTANT shall perform specialized field-testing as required by project needs.

All testing and classification will be performed in accordance with applicable DEPARTMENT standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

All Standard Penetration Testing will be performed using an automatic hammer.

30.1 Document Collection and Review

CONSULTANT will review printed literature including topographic maps, county agricultural maps, aerial photography (including historic photos), ground water resources, geology bulletins, potentiometric maps, pile driving records, historic construction records and other geotechnical related resources. Prior to field reconnaissance, CONSULTANT shall review U.S.G.S., S.C.S. and potentiometric maps, and identify areas with problematic soil and groundwater conditions.

Roadway

If required by the District Geotechnical Engineer, a preliminary roadway exploration shall be performed before the Phase I plans submittal. The preliminary roadway exploration will be performed and results provided to the Engineer of Record to assist in setting roadway grades and locating potential problem areas. The preliminary roadway exploration shall be performed as directed in writing by the District Geotechnical Engineer.

30.2 Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with DEPARTMENT Geotechnical Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to the DEPARTMENT for approval prior to commencing with the boring program.

30.3 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

30.4 Coordinate and Develop MOT Plans for Field Investigation

Coordinate and develop Maintenance of Traffic (MOT) plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Design Standards Index 600 series.

30.5 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

30.6 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the DEPARTMENT's Project Manager.

30.7 Groundwater Monitoring

Monitor groundwater, using piezometers.

30.8 LBR / Resilient Modulus Sampling

The Consultant will collect appropriate samples for Limerock Bearing Ratio (LBR) testing.

The Consultant will collect appropriate samples for Resilient Modulus (M_R) Testing. Coordinate with District Geotechnical Office regarding delivery of samples to State Materials Office, Gainesville.

30.9 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

30.10 Soil and Rock Classification - Roadway

Refine soil profiles recorded in the field, based on results of laboratory testing.

30.11 Design LBR

Determine design LBR values from the 90% and mean methods.

30.12 Laboratory Data

Tabulate laboratory test results for inclusion in the geotechnical report, the report of tests sheet (Roadway Soil Survey Sheet), and for any necessary calculations and analyses.

30.13 Seasonal High Water Table

Review the encountered ground water levels and estimate seasonal high ground water levels. Estimate seasonal low ground water levels, if requested.

30.14 Parameters for Water Retention Areas

Calculate parameters for water retention areas, exfiltration trenches, and/or swales.

30.15 Delineate Limits of Unsuitable Material

Delineate limits of unsuitable material(s) in both horizontal and vertical directions. Assist the Engineer of Record with detailing these limits on the cross-sections. If requested, prepare a plan view of the limits of unsuitable material.

30.16 Electronic Files for Cross-Sections

Create electronic files of boring data for cross-sections.

30.17 Embankment Settlement and Stability

Estimate the total magnitude and time rate of embankment settlements. Calculate the factor of safety against slope stability failure.

30.18 Stormwater Volume Recovery and/or Background Seepage Analysis

Perform stormwater volume recovery analysis as directed by the DEPARTMENT.

30.19 Geotechnical Recommendations

Provide geotechnical recommendations regarding the proposed roadway construction project including the following: description of the site/alignment, design recommendations and discussion of any special considerations (i.e. removal of unsuitable material, consolidation of weak soils, estimated settlement time/amount, groundwater control, high groundwater conditions relative to pavement base, etc.) Evaluate and recommend types of geosynthetics and properties for various applications, as required.

30.20 Pavement Condition Survey and Pavement Evaluation Report

The Pavement Evaluation (including coring, testing, and preparing the report) will be performed by the DEPARTMENT for some projects.

For some assigned projects, the Pavement Evaluation Report: Pavement coring, testing, and a pavement condition evaluation may be performed by the CONSULTANT. The evaluation and report submittal shall be in accordance with Section 3.2 of the Materials Manual: Flexible Pavement Coring and Evaluation. ***The CONSULTANT will be responsible for recommendations regarding milling and recycling.***

The condition of the pavement at each core location shall be observed and recorded on the Pavement Evaluation Coring and Condition Data Sheet (Form #675-030-09), and input into the Pavement Coring Reporting (PCR) system.

The CONSULTANT shall provide the District Materials Office the opportunity to review the Pavement Coring. A Coring plan shall be submitted to the District Bituminous Engineer, for concurrence, prior to commencing with any coring. The Pavement Design shall be submitted for concurrence, prior to the first phase submittal.

When the project includes adding paved shoulders, the shoulder subgrade shall be evaluated to assist the pavement designer in determining the need for subgrade stabilization or alternate pavement designs. Classification and LBR testing of subgrade soils may be necessary. Refer to the Flexible Pavement Design Manual,

Chapter 8. Coordinate the extent of sampling and testing needed with the Pavement Designer and the District Geotechnical Project Manager.

30.21 Preliminary Roadway Report

If a preliminary roadway investigation is performed, submit a preliminary roadway report before the Phase I plans submittal. The purpose of the preliminary roadway report will be to assist in setting road grades and locating potential problems.

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505.
- Results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
- The CONSULTANT will respond in writing to any changes and/or comments from the DEPARTMENT and submit any responses and revised reports.
-

30.22 Final Report

The Final Roadway Report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505.
- Results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
- The CONSULTANT will respond in writing to any changes and/or comments from the DEPARTMENT and submit any responses and revised reports.

30.23 Auger Boring Drafting

Draft auger borings as directed by the DEPARTMENT.

30.24 SPT Boring Drafting

Draft SPT borings as directed by the DEPARTMENT.

Structures

The staff hour tasks for high embankment fills and structural foundations for bridges, box culverts, walls, high-mast lighting, overhead signs, mast arm signals, strain poles, buildings, and other structures include the following:

30.25 Develop Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with DEPARTMENT Geotechnical Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to the DEPARTMENT for approval prior to commencing with the boring program.

30.26 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

30.27 Coordinate and Develop MOT Plans for Field Investigation

Coordinate and develop MOT plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Design Standards Index 600 series.

30.28 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

30.29 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the DEPARTMENT's Project Manager.

30.30 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

30.31 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

30.32 Soil and Rock Classification - Structures

Soil profiles recorded in the field should be refined based on the results of laboratory testing.

30.33 Tabulation of Laboratory Data

Laboratory test results should be tabulated for inclusion in the geotechnical report and for the necessary calculations and analyses.

30.34 Estimate Design Groundwater Level for Structures

Review encountered groundwater levels, estimate seasonal high groundwater levels, and evaluate groundwater levels for structure design.

30.35 Selection of Foundation Alternatives (BDR)

Evaluation and selection of foundation alternative, including the following:

- Spread footings
- Prestressed concrete piling - various sizes
- Steel H- piles
- Steel pipe piles
- Drilled shafts

Foundation analyses shall be performed using approved DEPARTMENT methods. Assist in selection of the most economical, feasible foundation alternative.

30.36 Detailed Analysis of Selected Foundation Alternate(s)

Detailed analysis and basis for the selected foundation alternative. Foundation analyses shall be performed using approved DEPARTMENT methods and shall include:

- For pile and drilled shaft foundations, provide graphs of ultimate axial soil resistance versus tip elevations. Calculate scour resistance and/or downdrag (negative skin friction), if applicable.
- CONSULTANT shall assist the Engineer of Record in preparing the Pile Data Table (including test pile lengths, scour resistance, downdrag, minimum tip elevation, etc.)
- Provide the design soil profile(s), which include the soil model/type of each layer and all soil-engineering properties required for the Engineer of Record to run the FBPIER computer program. Review lateral analysis of selected foundation for geotechnical compatibility.
- Shallow foundation bearing capacity (including soil bearing capacity, minimum footing width, and minimum embedment depth).
- Estimated maximum driving resistance anticipated for pile foundations.
- Provide settlement analysis.

30.37 Bridge Construction and Testing Recommendations (Not applicable for this project)

30.38 Lateral Load Analysis (Optional)

Perform lateral load analyses as directed by the DEPARTMENT.

30.39 Walls

Provide the design soil profile(s), which include the soil model/type of each layer and all soil engineering properties required by the Engineer of Record for conventional wall analyses and recommendations. Review wall design for geotechnical compatibility and constructability.

Evaluate the external stability of conventional retaining walls and retained earth wall systems. For retained earth wall systems, calculate and provide minimum soil reinforcement lengths versus wall heights, and soil parameters assumed in analysis. Estimate differential and total (long term and short term) settlements.

Provide wall construction recommendations.

30.40 Sheet Pile Wall Analysis (Optional)

Analyze sheet pile walls as directed by the DEPARTMENT.

30.41 Design Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations

Provide the design soil profile(s) that include the soil model/type of each layer and all soil properties required by the Engineer of Record for foundation design. Review design for geotechnical compatibility and constructability.

30.42 Box Culvert Analysis

- Provide the design soil profile(s) that include the soil model/type of each layer and all soil properties required by the Engineer of Record for foundation design. Review design for geotechnical compatibility and constructability.
- Provide lateral earth pressure coefficients.
- Provide box culvert construction and design recommendations.
- Estimate differential and total (long term and short term) settlements.
- Evaluate wingwall stability.

30.43 Preliminary Report - BDR (Not applicable for this project)

30.44 Final Report - Bridge and Associated Walls (Not applicable for this project)

30.45 Final Reports - Signs, Signals, Box Culvert, Walls, and High Mast Lights

The final reports shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, SCS, USGS, geologic and potentiometric data.
- The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.

- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.
- An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

Final reports will incorporate comments from the DEPARTMENT and contain any additional field or laboratory test results, recommended foundation alternatives along with design parameters and special provisions for the contract plans. These reports will be submitted to the District Geotechnical Engineer for review prior to project completion. After review by the District Geotechnical Engineer, the reports will be submitted to the District Geotechnical Engineer in final form and will include the following:

- All original plan sheets (11" x 17")
- One set of all plan and specification documents, in electronic format, according to DEPARTMENT requirements
- Two sets of record prints
- Six sets of any special provisions
- All reference and support documentation used in preparation of contract plans package

Additional final reports (up to four), aside from stated above, may be needed and requested for the DEPARTMENT's Project Manager and other disciplines.

The final reports, special provisions, as well as record prints, will be signed and sealed by a Professional Engineer registered in the State of Florida.

Draft the detailed boring/sounding standard sheet, including environmental classification, results of laboratory testing, and specialized construction requirements, for inclusion in final plans.

30.46 SPT Boring Drafting

Prepare a complete set of drawings to include all SPT borings, auger borings and other pertinent soils information in the plans. Include these drawings in the Final Geotechnical Report. Draft borings, location map, S.C.S. map and U.S.D.A. map as directed by the DEPARTMENT. Soil symbols must be consistent with those presented in the latest Florida Department of Transportation Soils and Foundations Handbook.

30.47 Other Geotechnical (Not applicable for this project)

30.48 Technical Special Provisions

30.49 Field Reviews

Identify and note surface soil and rock conditions, surface water conditions and locations, and preliminary utility conflicts. Observe and note nearby structures and foundation types.

30.50 Technical Meetings

30.51 Quality Assurance/Quality Control

30.52 Supervision

30.53 Coordination

30.54 Optional Preliminary Contamination Assessment

When required, all work shall be performed in accordance with current Florida Department of Environmental Regulation (DER) and Federal OSHA and EPA standards. The following work shall be included, but not limited to:

- A minimum of four borings will be required per site.
- Soil gas analysis will be required by use of a flame ionization detector; e.g. Organic Vapor Analyzer (OVA).
- Installation of monitoring wells may be required.
- Water sampling and laboratory analysis may be required. The State of Florida Department of Health shall certify the laboratory performing the analysis.
- Four copies of the draft PCA report will be required for review and comment by the DEPARTMENT. After comments have been addressed, six signed and sealed copies of the final PCA report shall be submitted to the DEPARTMENT. Copies of all documents will be additionally transmitted to the DEPARTMENT in electronic format in accordance with the DEPARTMENT's current standards.

31 ARCHITECTURE DEVELOPMENT and tasks 31.1 – 31.139 are not applicable for this project.

32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE and tasks 32.1 – 31.11 are not applicable for this project.

33 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS and tasks 33.1 – 33.21 are not applicable for this project.

34 INTELLIGENT TRANSPORTATION SYSTEM PLANS and tasks 34.1 – 34.20 are not applicable for this project.

35 PROJECT REQUIREMENTS

35.1 Liaison Office

The DEPARTMENT and the CONSULTANT will designate a Liaison Office and a Project Manager who shall be the representative of their respective organizations for the Project. While it is expected the CONSULTANT shall seek and receive advice from various state, regional, and local agencies, the final direction on all matters of this project remain with the DEPARTMENT Project Manager.

35.2 Key Personnel

The CONSULTANT's work shall be performed and directed by the key personnel identified in the proposal presentations by the CONSULTANT. Any changes in the indicated personnel shall be subject to review and approval by DEPARTMENT.

35.3 Progress Reporting

The CONSULTANT shall meet with the DEPARTMENT as required and shall provide a written progress and schedule status reports that describe the work performed on each task. Progress and schedule status reports shall be delivered to the DEPARTMENT concurrently with the monthly invoice. The Project Manager will make judgment on whether work of sufficient quality and quantity has been accomplished by comparing the reported percent complete against actual work accomplished.

35.4 Correspondence

Copies of all written correspondence between the CONSULTANT and any party pertaining specifically to this contract shall be provided to the DEPARTMENT for their records within one (1) week of the receipt or mailing of said correspondence.

35.5 Professional Endorsement

The CONSULTANT shall have a Registered Professional Engineer in the State of Florida sign and seal all reports, documents, and plans as required by DEPARTMENT standards.

35.6 Computer Automation

The project will be developed utilizing Computer Aided Drafting and Design (CADD) systems. The DEPARTMENT makes available software to help assure quality and conformance with policy and procedures regarding CADD. It is the responsibility of the CONSULTANT to meet the requirements in the DEPARTMENT's CADD Manual. The CONSULTANT will submit final documents and files as described therein. ***The Engineer of Record must certify that the electronic plans and documents for the project meet the requirements of the DEPARTMENT's CADD Manual.***

35.7 Coordination with Other Consultants

The CONSULTANT is to coordinate his work with any and all adjacent and integral consultants so as to effect complete and homogenous plans and specifications for the project(s) described herein.

35.8 Optional Services

At the DEPARTMENT's option, the CONSULTANT may be requested to provide optional services. The fee for these services shall be negotiated in accordance with the terms detailed in Exhibit B, Method of Compensation, for a fair, competitive and reasonable cost, considering the scope and complexity of the project(s). Additional services may be authorized by Letter of Authorization or supplemental amendment in accordance with paragraph 2.00 of the Standard Consultant Agreement. The additional services may include Construction Assistance, Review of Shop Drawings, Final Bridge Load Rating, update (Category II) bridge plans electronically (CADD) for the Final "As-Built" conditions, based on documents provided by the DEPARTMENT (CADD Services Only) or other Services as required.

36 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted ***through the Departments Consultant Invoice Transmittal System (CITS) or*** in a format prescribed by the DEPARTMENT. The DEPARTMENT Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the DEPARTMENT.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those events have actually occurred and the results are acceptable to the DEPARTMENT.