EXHIBIT A

SCOPE OF SERVICES

FOR

MULTI-LANE RECONSTRUCTION

FINANCIAL PROJECT ID. (FPID) 441038-4-32-01
FEDERAL PROJECT NO. (PENDING)

State Road (SR) 8 (I-10)
from East of Yellow River Relief Bridges to SR 85 (South Ferdon Boulevard)

DISTRICT THREE
OKALOOSA COUNTY
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#### Technical Meetings

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- 19.16 Coordination

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- 21.1 – 21.19

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**Related Sections:**
- 22.1 – 22.18

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- 22.1 – 22.18

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**Related Sections:**
- 23.1 – 23.18

**Not Applicable:**
- 23.1 – 23.18

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**Related Sections:**
- 24.1 – 24.14

**Not Applicable:**
- 24.1 – 24.14

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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 or FDOT) and leave blank until CONSULTANT is selected (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

Financial Project ID: 441038-4-32-01
Federal Aid Project No.: PENDING
County Section No.: 57002000
Description: SR 8 (I-10) from E of Yellow River Relief Bridges to SR 85 (South Ferdon Blvd)
County: Okaloosa
Bridge No.: 570008, 570052
Overpass Bridge No.: 570009
Bridge Culvert No.: 570007
Rail Road Crossing No: N/A
Context Classification: Interstate

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the DEPARTMENT in connection with the design and preparation of a complete set of construction contract documents and incidental engineering services, as necessary, for improvements to the transportation facility described herein.

- Major work mix include: MULTILANE RECONSTRUCTION

- Major work groups include: 3.2, 4.1.2

- Minor work groups include: 3.1, 4.1.1, 5.4, 6.3.1, 7.1, 7.2, 8.1, 8.2, 8.3, 8.4, 9.1, 9.2, 9.4.1, 9.4.2

Alternative construction contracting methods have NOT been identified for this project at this time.

The general objective is for the CONSULTANT to prepare a set of contract documents including plans, specifications, supporting engineering analysis, calculations and other technical documents in accordance with FDOT policy, procedures and requirements. These Contract documents will be used by the contractor to build the project and test the project components. These Contract documents will be used by the DEPARTMENT or its Construction Engineering Inspection (CEI) representatives for inspection and final acceptance of the project. The CONSULTANT shall follow a systems engineering process to ensure that all required project components are included in the development of the
Contract documents and the project can be built as designed and to specifications.

The Scope of Services establishes which items of work in the Plans Preparation Manual and other pertinent manuals are specifically prescribed to accomplish the work included in this contract, and also indicate which items of work will be the responsibility of the CONSULTANT and/or the DEPARTMENT.

The CONSULTANT shall be aware that as a project is developed, certain modifications and/or improvements to the original concepts may be required. The CONSULTANT shall incorporate these refinements into the design and consider such refinements to be an anticipated and integral part of the work. This shall 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. CONSULTANTS are expected to know the laws and rules governing their professions and are expected to provide services in accordance with current regulations, codes and ordinances and recognized standards applicable to such professional services. The Consultant shall provide qualified technical and professional personnel to perform to Department standards and procedures, the duties and responsibilities assigned under the terms of this agreement. The Consultant shall minimize to the maximum extent possible the Department’s need to apply its own resources to assignments authorized by the Department.

The DEPARTMENT will provide contract administration, management services, and technical reviews of all work associated with the development and preparation of contract documents, including Construction documents. The Department’s technical reviews are for high-level conformance and are not meant to be comprehensive reviews. The CONSULTANT shall be fully responsible for all work performed and work products developed under this Scope of Services. The DEPARTMENT may provide job-specific information and/or functions as outlined in this contract, if favorable.

2 PROJECT DESCRIPTION

The CONSULTANT shall investigate the status of the project and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies and/or activities. 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.

*The CONSULTANT shall coordinate with the ongoing PD&E project, FPID 441038-1-22-01, and refer to the preferred typical sections for the design of this project. All*
commitments from the environmental documents shall be incorporated into the design.

Financial Project ID: 441038-4-32-01

This multi-lane project consists of constructing an additional 12’ travel lane on SR 8 (I-10) from east of the Yellow River relief bridges (CMP 9.718) to SR 85 (South Ferdon Boulevard) (CMP 14.151). Existing travel lanes, exit/entrance ramps, median crossovers, and the paved shoulders will be resurfaced. The typical section will consist of three 12’ travel lanes and 12’ shoulder (10’ paved) in each direction, plus paved inside shoulders. The median width varies throughout the project limits. Right-of-way limits vary throughout the project. Additional right-of-way may be required for ponds as determined by the PD&E Study, FPID 441038-1-22-01.

The CONSULTANT shall take a practical approach to all projects by identifying cost savings on any/all phases of a project (design, right-of-way acquisition, and construction). Guidance can be found in the DEPARTMENT’s Complete Streets Handbook and the FDOT Design Manual.

SR 8 has been designated as a “Hurricane Evacuation Route”.

SR 8 is a designated Strategic Intermodal System (SIS) highway/connector facility. The CONSULTANT shall be responsible for identifying and obtaining any Design Variations needed for deviating from SIS criteria.

The CONSULTANT shall identify and protect existing ITS infrastructure. Coordination with the DEPARTMENT’s Traffic Operations office will be required to determine any enhancements or impacts to the ITS system. The existing ITS infrastructure throughout the project limits shall be identified in the plans. Any impacts to the ITS system as a result of the widening shall be added as an OPTIONAL SERVICE to this project.

Three (3) bridges exist within the project limits (BR570009 – CR 4 (Antioch Road) over SR 8 and BR Nos. 570008 and 570052 – over SR 85 (South Ferdon Boulevard). No work is anticipated on BR570009. BR Nos. 570008 and 570052 shall be widened to accommodate the additional lane along SR 8. The existing typical section for these bridges includes two-12’ lanes with 6’ inside shoulder and a 10’ outside shoulder. The new bridge typical section will consist of three-12’ lanes with appropriate shoulders for the traffic volume.

One (1) concrete bridge culvert exists within the project limits (CB570007 – SR 8 over Juniper Creek) will be widened to accommodate the additional travel lane on SR 8. A load rating analysis will be required if the pavement design results in a change in the dead load on the structure. See Sections 2.5, 9, and 18.

Per the FDOT Traffic Operations Office and the Roadway Characteristics Inventory (RCI) Database, the posted (justified) speed limit on SR 8 is 70 mph throughout the project. Initial field observations of the posted speed limit agree with the RCI Database. Any contradictions to the posted (justified) speeds described above (found posted in the field or proposed by CONSULTANT) will require close coordination with the DEPARTMENT’s Design Project Manager and approval from the FDOT Traffic Operations Office on the project’s Typical Section Package.
All guardrail (including guardrail end anchorage assemblies and connections to bridge rail) shall be evaluated for conformance to FDOT Standards for type, height, and offset to the travel lanes and hazards. Existing guardrail shall be evaluated to determine if the length of advancement meets FDOT Standards. The guardrail should be extended if required. The District Safety Office recommends consideration of median barrier in the non-wooded sections of median throughout the project to mitigate the median crossover crashes. The CONSULTANT shall review the crash history and make recommendations for median barrier placement.

It is the DEPARTMENT’s desire to make every effort to avoid impacts to trees within the project limits. The CONSULTANT shall be cognizant of the limits of construction and any work activities that may pose a threat to existing trees or their root systems. Any tree impacts perceived to be unavoidable shall be closely reviewed with the DEPARTMENT’s Design Project Manager who will in turn review with other DEPARTMENT staff as appropriate. When there is the potential to impact trees, the CONSULTANT shall be prepared to provide and present alternate design scenarios with corresponding cost estimates and implications (drainage, utilities, etc.) when requested. On projects where numerous impacts are expected, the CONSULTANT shall produce a tree conflict matrix to describe tree types, sizes, and locations as well as the expected impacts and suggested remedies to alleviate.

The CONSULTANT shall be aware that the addition or removal of permanent crossovers will require approval and/or coordination with the DEPARTMENT, the Florida Highway Patrol (FHP), the Federal Highway Administration (FHWA), and Local Emergency Responders. See Section 4.6.

The existing wildlife fence will be upgraded to meet current standards. Reconstructing the wildlife fence will impact wetlands. Additional erosion control measures will be required at these locations. The CONTRACTOR should be provided with specific direction regarding construction methods in the vicinity of wetlands (what IS and what IS NOT allowed). In addition, the Surveyor of Record (SOR) and the CONSULTANT shall work together to effectively identify and designate the existing right-of-way monumentation to prevent the CONTRACTOR from destroying while reconstructing the wildlife fence.

COORDINATION REQUIREMENTS: This project should be coordinated with all adjacent County, State or private projects, including the following known projects:

1) FPID 441038-1-22-01 – FDOT Project – PD&E Study on SR 8 (I-10) from west of Log Lake Road to east of SR 85 (Ferdon Boulevard). This project is scheduled to begin in FDOT Fiscal Year 2019. The DEPARTMENT’s PD&E Project Manager is Mrs. Victoria White (850-330-1455).

2) FPID 441038-3-32-01 – FDOT Project – multi-laning of SR 8 from 2 miles west of Wilkerson Bluff Road to east of Yellow River relief Bridges. This project is scheduled for design in FDOT Fiscal Year 2020 and is currently not funded for construction.
The DEPARTMENT’s Design Project Manager is Ms. Sandra Lamb, Atkins (850-260-3216).

3) FPID 407918-5-32-01 – FDOT Project – resurfacing of SR 85 (South Ferdon Boulevard) from north of SR 123 (Roger J Clary Highway) to north of SR 8 (I-10). This project is currently in design and scheduled to be let for construction in FDOT Fiscal Year 2021. The DEPARTMENT’s Design Project Manager is Mr. Jordan Burnett, PE, Alday-Howell (850-526-2040).

4) FPID 441548-1-32-01 – FDOT Project – new interchange project for SR 8 (I-10) west of Crestview. This project is currently in design and scheduled to be let for construction in FDOT Fiscal Year 2021. The DEPARTMENT’s Design Project Manager is Mr. Dean Mitchell, PE, HNTB (850-415-9016).

5) FPID 443672-1-32-01 – FDOT Project – interchange improvements for SR 85 (South Ferdon Boulevard) from Southcrest Drive to Hospital Drive. This project is currently in design and scheduled to be let for construction in FDOT Fiscal Year 2021. The DEPARTMENT’s Design Project Manager is Mr. Jordan Burnett, PE, Alday-Howell (850-526-2040).

6) FPID 220171-2-22-01 – FDOT Project – PD&E Study on SR 85 (South Ferdon Boulevard) from SR 123 (Roger J Clary Highway) to north of SR 8 (I-10). This project is currently underway. The DEPARTMENT’s PD&E Project Manager is Mrs. Nikole Arrant, PE, HNTB (850-415-9017).

SPECIFIC EXCLUSIONS: This project has been discussed with District Three Management and no project specific exclusions have been identified at this time.

All necessary Geotechnical efforts will be provided by the CONSULTANT.

This project will be let to construction as a Conventional Bid Item project.

The CONSULTANT shall incorporate the following into the design of this facility:

2.1 Project General and Roadway (Activities 3, 4, and 5)

Public Involvement: This project will have a Community Awareness Plan (CAP) Level III, including a Public Information Meeting/Workshop. The CONSULTANT shall create project specific .shtm files immediately prior to each Public Information Meeting/Workshop and Public Hearing to be posted by the DEPARTMENT to the NWFLRoads.com web site. See Section 3.1.12 for specific requirements.

Other Agency Presentations/Meetings: Project updates will be provided to the Local Municipalities and any affected regional MPO/TPO organization for the project as described in Section 3.1.2.

Joint Project Agreements: There have been NO JPAs identified at this time.
Maintenance Agreement: (Not applicable to this project)

Project Agreement: (Not applicable to this project)

Offsite Detour Approval Form and Plan: (Not applicable to this project)

Lane Closure(s) During Design Phase Approval: If a lane closure is anticipated for any purpose during the design phase of a project (i.e., survey, geotechnical investigation, pavement coring, etc.) the CONSULTANT shall provide the DEPARTMENT’s Design Project Manager with all the necessary project/task related information in a memo form to pursue approval from the District Design Office. Needed information includes 1) the location of the lane closure, 2) the scope of work at the location, 3) the duration of closure, 4) when (date/time) that the work is requested to be performed, 5) Google Earth *.kmz file(s) of the location(s), and 6) Temporary Traffic Control Plans. The approval must be received before the specified work can commence.

Specification Package Preparation: To be negotiated and completed during the Plans Update phase. See the requirements described in Sections 3.3 & 3.7.

Value Engineering: It is anticipated that a Value Engineering study will be conducted during the PD&E phase for the project limits. If it is determined that an additional VE Study will be conducted during the design phase, these services will be added via Supplemental Amendment as requested by the DEPARTMENT.

Risk Assessment Workshop: (Not applicable to this project)

Plan Type: The CONSULTANT shall provide only the roadway and/or structures plans and miscellaneous details necessary to construct this project. The DEPARTMENT’s intent is to minimize the design and survey effort where possible. The CONSULTANT shall develop and sign and seal the plans electronically in accordance with Sections 3.9 & 37.5.

Typical Section: Refer to Section 2.0 for typical section information.

Resurfacing Limits: All existing travel lanes, exit/entrance ramps, median crossovers, and the paved shoulders will be resurfaced under this project.

Right-of-Way: Right-of-way may be required for ponds as determined by the PD&E Study FPID 441038-1-22-01. Existing R/W lines, including stations and offset distances at breaks, will be shown on all plan sheets. The existing R/W varies throughout the project between 400’ min. and 600’ +/- max.

Pavement Design: The CONSULTANT will provide the Pavement Design for this project. Two (2) pavement designs are anticipated for this project. One (1) for the new construction and one (1) for the milling and resurfacing.

Pavement Type Selection Report(s): (Not applicable to this project)

Cross Slope: There have been no cross-slope deficiencies identified in this project at this time.
Access Management Classification: This project has an Access Management Classification of 1.

Transit Route Features: (Not applicable to this project)

Major Intersections/Interchanges: SR 8 (I-10) is a Limited Access Highway. There is one interchange within the project limits located at CMP 13.845 (SR 85).

Roadway Alternative Analysis: (Not applicable to this project)

Level of TTCP Plans: The CONSULTANT shall provide a TTCP Level III.

Temporary Traffic Control Plans (TTCP) will be required for this project. The FDOT Standard Plans, 102 series, should be utilized for all work being performed on or adjacent to existing roadways. A reduction in the number of lanes will require that a lane closure analysis be performed by the CONSULTANT. See Section 4.10 for further guidance. SR 8 has been designated as a “Hurricane Evacuation Route”. All lanes must be open for traffic within 12 hours of a hurricane evacuation notice and shall remain open for the duration of the event as directed by the Project Administrator.

For projects with TTCP Levels of II or III, the CONSULTANT shall be prepared to provide materials for and participate in a Temporary Traffic Control Plans (TTCP) Workshop. The DEPARTMENT will submit the project’s Temporary Traffic Control Plans for an external peer review at Phase II. Following this review, the DEPARTMENT’s Design Project Manager will schedule the TTCP Workshop. The efforts associated with the TTCP review and TTCP Workshop are described in Section 4.10 and 4.22.

Temporary Lighting: (Not applicable to this project)

Temporary Signals: (Not applicable to this project)

Temporary Drainage: The CONSULTANT shall provide any necessary temporary drainage required.

Design Variations/Exceptions: The CONSULTANT should review all existing features within the project limits for a functional design that will meet FDOT design standards and make a determination whether a Design Variation or Exception is appropriate.

Conditions may be identified during design that may warrant design variations or exceptions. The CONSULTANT is to submit the requests for Variations and Exceptions to the DEPARTMENT as early as possible for approval in order to minimize potential schedule delays. The CONSULTANT is to be aware that omitting certain work items may require approval at the District Director level (see FDM 114.1.1). The CONSULTANT will coordinate with the DEPARTMENT’s Project Manager to obtain this approval.

Back of Sidewalk Profiles: (Not applicable to this project)
Selective Clearing and Grubbing: (Not applicable to this project)

2.2 Drainage (Activities 6a and 6b)

System Type: SR 8 has an open drainage system throughout the project limits.

The CONSULTANT shall evaluate treatment requirements and options to account for the additional impervious area created by the widening.

There are a number of crossdrains and box culverts on the project. Every location should be reviewed and evaluated for extensions and repairs.

The CONSULTANT should review all locations for a functional design that will meet FDOT clear zone criteria. A Design Exception will be required if any drainage structure creates a hazard in the clear zone and is to remain.

All existing drainage structures within the limits of construction shall be shown on the construction plans. The CONSULTANT shall inspect all drainage structures for function, scour, erosion, structural integrity, accumulation of sediments, and design as it pertains to pedestrian and vehicular safety. Prior to submitting staffhours, the CONSULTANT shall clearly communicate the drainage survey needs to the SURVEYOR and shall minimize the survey effort where possible. Drainage design treatments should be discussed with the DEPARTMENT’S Design Project Manager and the District Drainage Office before being added to the construction plans.

The CONSULTANT shall inspect the condition and performance of the existing edgdrain system and coordinate with the Resident Maintenance Engineer and District Drainage Office regarding proposed improvements (if any).

The Pond Siting Report will be included in the concurrent PD&E FPID 441038-1-22-01.

2.3 Utilities Coordination (Activity 7)

The DEPARTMENT will be responsible for utility coordination associated with this project.

The Surveyor of Record (SOR) shall communicate with the Engineer of Record (EOR) early/prior to staffhour negotiations to determine the specific survey needs required for locating utilities based on the anticipated limits of construction and the proposed scope of work.

The CONSULTANT will identify which utilities exist within the corridor during the survey phase by calling Sunshine 811. A copy of the Sunshine 811 “design” ticket listing all utility owners within the project limits shall be provided within 10 business days of the Notice to Proceed (NTP).

Once the draft design is apparent, the CONSULTANT shall determine if any additional survey is required regarding utility designations in order to provide an
adequate design and accurate quantities. The CONSULTANT will coordinate with the DEPARTMENT’s Design Project Manager and the District Survey Office to determine how much additional survey is required and what is the most economical method of obtaining the additional data.

The CONSULTANT will be responsible for showing areas that may be affected by construction. The CONSULTANT will evaluate utilities for potential impacts and prepare a Utility Conflict Matrix as directed by Section 7.7 of this document. An example Utility Conflict Matrix can be provided by the DEPARTMENT’s Design Project Manager if necessary. The matrix will be required with the Phase II submittal and will be updated and submitted with every phase thereafter.

For above-ground fixed utility (AFU) installations that are to remain and do not meet FDOT horizontal clearance and clear zone requirements WITHOUT viable options for relocation within the R/W, the CONSULTANT will be responsible for obtaining Design Exceptions.

For above-ground fixed utility (AFU) installations that are expected to be impacted and relocated due to construction activities, the final placement of the AFU must meet FDOT horizontal clearance and clear zone requirements. The Utility Agency Owner (UAO) will be responsible for pursuing and obtaining Design Exceptions for any alternate design (including shielding).

The CONSULTANT is to review the UAO marked up plans and the Utility Work Schedules as they are received and assure that they are compatible with the proposed design features in the plans. The CONSULTANT shall review the specific details of the markups and schedules with the Area Utility Manager as required to finalize the status of each potential conflict. The CONSULTANT shall also verify that the schedules conform to the construction phasing and TTCP sequences. **UTILITY SCHEDULE REPORT** - The CONSULTANT shall provide a written review of the critical path utility relocation activities and durations, considering possible concurrent construction activities, and a recommendation of Utility Dependent Time to be added to the overall Contract Time. This “written review” will be referred to as the **Utility Schedule Report** and will be required at the Phase III Submittal (and subsequent submittals) with the CONSULTANT’s Contract Time Estimate. The Utility Schedule Report will be revisited, updated, and resubmitted as necessary to the DEPARTMENT’s Area Utility Manager and Design Project Manager as the Utility Work Schedules are finalized.

### 2.4 Environmental Permits, Compliances, and Clearances (Activity 8)

The CONSULTANT shall coordinate with appropriate agencies for all necessary permits. Potential agencies requiring coordination include, but are not limited to: Northwest Florida Water Management District, Florida Department of Environmental Protection, and US Army Corps of Engineers.

The CONSULTANT shall be responsible for the identification, coordination and applications for all permits necessary to construct this project. All application and processing fees, including fees for any public notice required by the permit, shall be paid for by the CONSULTANT.
When designing stormwater treatment facilities, the CONSULTANT shall coordinate with the District Permit Coordinator and the District Drainage Engineer for the purpose of incorporating additional treatment for future unforeseen access management modifications that will contribute to the impervious area on the project.

The DEPARTMENT will provide compensatory wetland mitigation in accordance with Section 373.4137, Florida Statutes if required. The CONSULTANT shall coordinate with the District Permit Coordinator if wetland mitigation is anticipated.

2.5 Structures (Activities 9 – 18)

Three (3) bridges exist within the project limits (BR570009 – CR 4 (Antioch Road) over SR 8 and BR Nos. 570008 and 570052– over SR 85 (South Ferdon Boulevard). No work is anticipated on BR570009. BR Nos. 570008 and 570052 shall be widened to accommodate the additional lane along SR 8. The existing typical section for these bridges includes two-12’ lanes with 6’ inside shoulder and a 10’ outside shoulder. The new bridge typical section will consist of three-12’ lanes with appropriate shoulders for the traffic volume.

One (1) concrete bridge culvert exists within the project limits (CB570007 – SR 8 over Juniper Creek) will be widened to accommodate the additional travel lane on SR 8. A load rating analysis will be required if the pavement design results in a change in the dead load on the structure.

Retaining Walls: (Not applicable to this project)

Noise Barrier Walls: Noise barriers will be evaluated during the PD&E phase for the project limits. For the purposes of his contract, design analysis will be included as an OPTIONAL SERVICE and executed by the DEPARTMENT at such time if deemed necessary.

Mast Arms: (Not applicable to this project)

Miscellaneous: The CONSULTANT shall evaluate the structural design of all existing Box Culverts.

The CONSULTANT shall evaluate the structural design of all existing multi-post signs and overhead cantilever signs and supports based on current FDOT Design Standards and the FDOT Multi-Post Sign Program. Any multi-post or overhead sign replacement recommendations will be discussed with the DEPARTMENT’s Project Manager and the District Design Engineer prior to being implemented in the design plans.

2.6 Signing and Pavement Markings (Activities 19 & 20)

The CONSULTANT shall be responsible for the design, details, and quantities associated with signing and pavement markings for this project. Rumble strips shall be included as required for interstate projects. The CONSULTANT shall
evaluate the existing signage to determine the need for additional signs, correcting redundant or conflicting signage, and the replacement of damaged signs.

The CONSULTANT shall evaluate and design all signs to meet current Design Standards and the FDOT Multi-Post Sign Program.

Regarding pavement markings, the SOR shall communicate with the EOR early/prior to staffhour negotiations to determine the specific survey needs required for locating pavement markings based on the anticipated needs of the project and the proposed scope of work.

The necessary mile marker pavement messages shall be provided on the shoulder in advance of interchanges as described in the FDOT Design Manual (FDM).

2.7 Signalization (Activities 21 & 22) (Not applicable to this project)  
2.8 Lighting (Activities 23 & 24) (Not applicable to this project)  
2.9 Landscape Architecture (Activities 25 & 26) (Not applicable to this project)  
2.10 Survey (Activity 27)  

Design Survey: The Primary and Secondary Horizontal and Vertical control will be provided by the DEPARTMENT. Other design survey requirements will be conducted by the CONSULTANT in accordance with Section 27.0 of this document. Some survey will be provided under the PD&E Study (FPID 441038-12201). The CONSULTANT will be required to provide all additional survey needed for the design of the project.

Pre-Production Survey Meeting - The CONSULTANT and SURVEYOR shall communicate with the District Surveyor and DEPARTMENT's Design Project Manager prior to staff hour negotiations to determine the appropriate survey requirements for this project based on the anticipated limits of construction and the proposed scope of work. The CONSULTANT shall provide a basic graphic depiction and/or description of areas needed for topographical survey, DTM, cross sections, utilities, drainage structures, pavement markings, and wetland lines. Aerial imagery is recommended. The effort for the survey work defined in this meeting will be reflected in the staff hours and included in the Basic Services of work.

Production Survey Meeting - Following the Phase I submittal, the CONSULTANT, SURVEYOR, the District Surveyor, and the DEPARTMENT's Design Project Manager shall meet if it is determined that additional survey is required in order to provide an adequate design and accurate quantities. The CONSULTANT shall provide any necessary graphic depictions and/or descriptions of areas needing additional survey. Compensation for the additional survey work defined in this meeting will be made available through a Supplemental Agreement.
Subsurface Utility Exploration: The CONSULTANT will provide any subsurface utility excavations (SUE) that are required for the projects. May be required at proposed mast arm locations or where drainage structure construction or modification is expected to be in conflict with buried utilities.

Right-of-Way Survey: The CONSULTANT will be required to perform a R/W Survey for this project due to the need for additional R/W and to define existing maintained R/W, if additional right-of-way is required for ponds as determined by the PD&E Study FPID 441038-1-22-01.

Vegetation Survey: (Not applicable to this project)

2.11 Photogrammetry (Activity 28)

Photogrammetric services via the use of mobile LiDAR, low altitude LiDAR or low altitude Photogrammetry will be required as determined and directed by the District Surveyor. Consultant requirements are found in Activity 28 and Activity 30 of this document.

2.12 Mapping (Activity 29)

As early as possible, the CONSULTANT shall provide map(s) or plan sheets accompanied by a *.kmz file reflecting the requirements for additional right-of-way. The right-of-way requirements submittal shall identify, via highlighting in varying colors (not yellow), the existing right-of-way, required right-of-way, temporary construction easements (TCEs), perpetual easements, intended license agreements (LAs), and limits of construction. In addition, this submittal will indicate in some way whether the submittal is draft or final. The initial, draft requirements submittal and subsequent draft requirements submittals can be submitted electronically to the DEPARTMENT’s Design Project Manager. An updated *.kmz file is expected with each resubmittal. The requirements are not considered final until indicated by the DEPARTMENT. Once the requirements are approved, the CONSULTANT shall designate each sheet as “final” and transmit to the DEPARTMENT’s Design Project Manager in *.pdf format (the file name shall include the FPID number). The effort for this task will be negotiated in Section 29.7.

Control Survey Map: N/A

Right-of-Way Map: If required, the R/W Maps will be prepared by the CONSULTANT as determined and directed by the District Surveyor.

Legal Descriptions: To be prepared by the CONSULTANT.

Miscellaneous Items: Depending on the TIITF determination, a TIITF sketch may be required for the project. The CONSULTANT will be responsible for preparing the TIITF sketch if required.
2.13 Terrestrial Mobile LiDAR (Activity 30)

Services related to Terrestrial Mobile LiDAR via the use of conventional mobile LiDAR, low altitude LiDAR or low altitude Photogrammetry will be required as determined and directed by the District Surveyor. Consultant requirements are found in Activity 28 and Activity 30 of this document.

2.14 Architecture (Activity 31) (Not applicable to this project)

2.15 Noise Barriers (Activity 32)

Noise barriers will be evaluated during the PD&E phase for the project limits. For the purposes of this contract, design analysis will be included as an OPTIONAL SERVICE and executed by the DEPARTMENT at such time if deemed necessary.

2.16 Intelligent Transportation Systems (Activities 33 & 34)

The CONSULTANT shall identify and protect existing ITS infrastructure. Coordination with the DEPARTMENT’s Traffic Operations office and Okaloosa County ITS office will be required to determine any enhancements or impacts to the ITS system. Any impacts to the ITS system as a result of the widening shall be added as an OPTIONAL SERVICE to the project.

The Federal Highway Administration issued Rule 940 entitled Intelligent Transportation Systems (ITS) Architecture and Standards to ensure new projects conform to the National ITS Architecture and standards as well as with a regional ITS architecture developed to reflect the local needs, issues, problems, and objectives for implementation.

For all projects with ITS activities, the CONSULTANT shall follow the Rule 940 requirements and use a Systems Engineering approach for the determining the requirements for the project. The CONSULTANT shall develop all necessary documents to support the Rule 940 requirements like Concept of Operations (ConOPS), Systems Engineering Management Plan (SEMP), Requirements Traceability Verification Matrix (RTVM) and others as deemed necessary by the Department.

The ITS shall operate from the District III TMC located in Chipley, FL using the SunGuide™ (SunGuide) Software, or if SunGuide is not in use at the District III TMC, using the appropriate software package.

2.17 Geotechnical (Activity 35)

The Pavement Condition Survey (including coring, testing, and preparing the report) will be provided by the CONSULTANT as directed in Section 35.22 of this Scope of Services. The CONSULTANT will be responsible for the Pavement Design.

The CONSULTANT shall coordinate with the
DEPARTMENT’s Design Project Manager and the DEPARTMENT’s Geotechnical Project Manager regarding information needed.

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

2.18 3D Modeling (Activity 36)

2.19 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed Critical Path Method (CPM) project schedule. The DEPARTMENT and CONSULTANT scheduled activities are required to meet the current DEPARTMENT Production Date. The project schedule shall include the following: project FPID and project description, FDOT PSM standard activity codes and description for all activities, original duration, activity start date, activity finish date, activity percent complete, activity predecessor(s) and successor(s). The schedule shall be based upon the durations and schedule negotiated during the project staff hour negotiations process. 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.

All fees and price proposals are to be based on the negotiated schedule of XX months for final construction contract documents. However, the contract deadline is XX months from the Notice to Proceed.

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

The approved monthly updated project schedule and schedule status report shall be submitted with the monthly progress report to the DEPARTMENT’s Design Project Manager. The CONSULTANT will also be required to make monthly schedule updates for tasks assigned to the CONSULTANT in FDOT Project Suite Enterprise Edition (PSEE). Schedule updates are due the last Friday of each month.

Initial and revised schedules shall be submitted electronically in *.pdf, Word, or Excel format.

Additional information, the PSEE link, and schedule update training can be found at http://www.fdot.gov/designsupport/Districts/D3/default.shtm.
2.20 Submittals

The CONSULTANT shall furnish construction contract documents as required by the DEPARTMENT to adequately control, coordinate, and approve the work concepts. The CONSULTANT shall distribute submittals as directed by the DEPARTMENT. The DEPARTMENT will determine the specific number of copies required prior to each submittal.

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

Phase Submittal Delivery: The delivery will include ONLY the submittal components (not the entire project directory and files). The delivery will be transmitted to the DEPARTMENT’s Design Project Manager via ftp site, FTA, or other electronic file storage media and will include all construction plans components (roadway, signing & pavement marking, signalization, etc.) in *.pdf format, as well as the other submittal components described below for each submittal. The CONSULTANT shall coordinate with the DEPARTMENT’s Design Project Manager to determine whether hard copy sets of plans or CDs/DVDs are required at any or all phase submittals. The CONSULTANT shall provide a *.kmz file of the project with each submittal. The *.kmz file needs to include the layers necessary to compare proposed construction features with the existing utilities as well as the limits of construction (LOC) and right-of-way (R/W).

PRIOR TO PHASE I SUBMITTAL:

Quality Assurance/ Quality Control (QA/QC) Plan: The CONSULTANT shall submit their QA/QC Plan that will be used during the design of this project to the DEPARTMENT’s Design Project Manager for reference within 20 (twenty) calendar days of the written Notice to Proceed. As a minimum, the QA/QC Plan shall include the details of all plan review processes to be utilized and sufficient file documentation to show that the QA/QC plan has been followed. See Section 3.0 (Project Common Tasks).

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 DEPARTMENT’s Design Project Manager, D3 R/W Mapping Office, and the Prime CONSULTANT.

The Prime CONSULTANT shall wait for approval from the District Survey 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 Design Project Manager on all
submittal correspondence. These survey submittals are to be made prior to the phase I, II, III, and IV plans submittals.

**UAO Identification / Sunshine 811 “Design” Ticket:** A copy of the Sunshine 811 “design” ticket listing all utility owners within the project limits shall be transmitted to the Design Project Manager and the Area Utility Manager at the onset of the design survey effort. The ticket shall be included with all phase submittals. See Section 7.2 for additional information regarding this requirement.

**Revised Construction Cost Estimate:** Within 30 (thirty) calendar days of the written Notice to Proceed, the CONSULTANT shall submit a revised construction cost estimate using the DEPARTMENT’s Long Range Estimating System (L.R.E.). The revised estimate shall be based on all work items likely to be included in the project whether or not explicitly defined in this initial scope of work, including, but not limited to, work items being analyzed for possible inclusion in the scope after DEPARTMENT approval. This estimate is understood to be preliminary and will be used to better budget construction costs. The District Preliminary Estimates Office will provide the CONSULTANT with a version of the L.R.E. in the system for their use.

**Miscellaneous Design/ Production Document Submittals:** The CONSULTANT shall submit to the DEPARTMENT for review, and receive concurrence for, the Initial Project Schedule, the Community Awareness Plan, the Typical Section Package, Pavement Design, Design Variations and/or Exceptions (if applicable), and other documents as required by the FDOT Design Manual (FDM) and the Scope of Services.

**PHASE I:**

The CONSULTANT shall submit to the DEPARTMENT’s Design Project Manager for distribution:

- one (1) electronic copy of the Plans,
- one (1) electronic copy of the QC Marked-up Plans,
- one (1) electronic copy of the Preliminary Bridge Development Report (BDR)
- one (1) signed and sealed electronic copy of the Approved Bridge Hydraulic Report (BHR)

The submittal shall, at a minimum, include *.pdf files of the components listed above, as well as the Project-DOCUMENTATION.zip folder (see FDM 111.7), *.kmz file of the project, and Sunshine 811 “design” ticket.

Along with the Phase I plans submittal, the CONSULTANT shall submit the construction cost estimate using the DEPARTMENT’s Long Range Estimating System (L.R.E.). The District Preliminary Estimates Office will provide the CONSULTANT with a version of the L.R.E. in the system for their use.
The CONSULTANT shall resubmit electronic copies of the BDR as required to address the DEPARTMENT's PHASE I review comments and concerns. Approval of the BDR by the District Structures Engineer will be required prior to making the PHASE II submittal.

Following the PHASE I review and prior to the PHASE II submittal, the District Survey Office requests that the prime CONSULTANTS provide the Survey SubConsultants with the plans and allow time for a review to check the survey/construction layout, alignments, control information (including R/W control if applicable), curve data, layout information, etc.

If R/W is required, the CONSULTANT shall provide map(s) or plan sheets as early as possible reflecting the requirements for additional right-of-way. This effort is described in Section 29.7.

**PHASE II:**

The CONSULTANT shall submit to the DEPARTMENT's Design Project Manager for distribution:

- one (1) electronic copy of the Plans,
- one (1) electronic copy of the QC Marked-up Plans,
- one (1) electronic copy of any Technical Special Provision (if applicable)
- one (1) signed sealed electronic copy of the Approved Bridge Development Report (BDR)
- one (1) signed and sealed electronic copy of the Approved Bridge Hydraulic Report (BHR)

The submittal shall, at a minimum, include *.pdf files of the components listed above, as well as the Project-DOCUMENTATION.zip folder (see FDM 111.7), *.kmz file of the project, Sunshine 811 “design” ticket, Utility Conflict Matrix, and a scanned copy of the Constructability Phase Review Checklist (per the Construction Project Administration Manual (CPAM)).

Along with the Phase II plans submittal, the CONSULTANT shall submit the construction cost estimate using the DEPARTMENT’s Long Range Estimating System (L.R.E.). The District Preliminary Estimates Office will provide the CONSULTANT with a version of the L.R.E. in the system for their use.

The CONSULTANT shall submit plans to each of the affected local government(s) designated contact for a three-week review. See Section 3.1.2 of this document for details regarding Local Government Involvement.

If R/W acquisition is required, the CONSULTANT shall provide the DEPARTMENT's Design Project Manager with the Preliminary R/W Requirements for review and approval as early as possible. Phase III submittal should only occur upon receiving approval for the proposed R/W requirements.
See Section 29.7 for specifics regarding this deliverable. If the CONSULTANT is responsible for preparing the R/W Maps for the project, the preliminary maps are to also be submitted at this time for review. The timeline for proceeding phase submittals should not be affected by the reviews and revisions to the R/W Maps.

This project has a Temporary Traffic Control Plan Level III; therefore, the CONSULTANT shall be prepared to provide materials for and participate in a Temporary Traffic Control Plan (TTCP) Workshop. The DEPARTMENT will submit the project’s Temporary Traffic Control Plans for an external peer review at Phase II. Following this review, the DEPARTMENT’s Design Project Manager will schedule the TTCP Workshop. See Sections 4.10 and 4.22.

**PHASE III:**

The CONSULTANT shall submit to the DEPARTMENT’s Design Project Manager for distribution:

- one (1) electronic copy of the Plans,
- one (1) electronic copy of the QC Marked-up Plans,
- one (1) electronic copy of any Technical Special Provision (if applicable)
- one (1) electronic copy of the CONSULTANT’s Construction Cost Estimate,
- one (1) electronic copy of the CONSULTANT’s Contract Time Estimate,
- one (1) electronic copy of the CONSULTANT’s Utility Schedule Report (see Section 7.10),
- one (1) digitally sealed electronic copy of the Bridge Load Ratings (with output data) in accordance with the FDOT Load Rating Manual
- two (2) hard copies of the Geotechnical Report

The submittal shall, at a minimum, include *.pdf files of the components listed above, as well as the Project-DOCUMENTATION.zip folder (see FDM 111.7), *.kmz file of the project, Sunshine 811 “design” ticket, Utility Conflict Matrix, and a scanned copy of the Constructability Phase Review Checklist (per the Construction Project Administration Manual (CPAM)).

The CONSULTANT shall submit plans to each of the affected local government(s) designated contact for a three-week review. See Section 3.1.2 of this document for details regarding Local Government Involvement.

**PHASE IV:**

The CONSULTANT shall submit to the DEPARTMENT’s Design Project Manager for distribution:

- one (1) electronic copy of the Plans,
- one (1) electronic copy of the QC Marked-up Plans,
▪ one (1) electronic copy of the CONSULTANT’s Construction Cost Estimate,
▪ one (1) electronic copy of the CONSULTANT’s Contract Time Estimate,
▪ one (1) electronic copy of the CONSULTANT’s Utility Schedule Report (see Section 7.10),
▪ two (2) hard copies of the Geotechnical Report
▪ one (1) digitally sealed electronic copy of the Bridge Load Ratings (with output data) in accordance with the FDOT Load Rating Manual if any design changes have occurred that will affect the ratings since the previous submittal

The submittal shall, at a minimum, include *.pdf files of the components listed above, as well as the Project-DOCUMENTATION.zip folder (see FDM 111.7), *

▪.kmz file of the project, Sunshine 811 “design” ticket, Utility Conflict Matrix, BDR, BHR, and a scanned copy of the Constructability Phase Review Checklist (per the Construction Project Administration Manual (CPAM)).

SUBMITTAL FOR “THE SHELF”:

The CONSULTANT must submit a District 3 Change Memo to the District Preliminary Estimates Office to have Project Preconstruction (PrP) unlocked if changes are made following the PHASE IV submittal that affect the pay-items or quantities in PrP. A copy of the District 3 Change Memo can be obtained from the DEPARTMENT’s Design Project Manager or the District Preliminary Estimates Office.

Upon addressing the PHASE IV review comments, the CONSULTANT shall submit to the DEPARTMENT’s Design Project Manager the following in an electronic format via ftp site, FTA, or other electronic file storage media:

▪ PHASE IV Plans,
▪ PHASE IV QC Marked-up Plans,
▪ Project-DOCUMENTATION.zip folder,
▪ Engineer’s Construction Cost Estimate,
▪ CONSULTANT’s Contract Time Estimate,
▪ *.kmz file of the project,
▪ Sunshine 811 “design” ticket,
▪ Utility Conflict Matrix,
▪ Utility Schedule Report,
▪ Geotechnical Reports,
▪ BDR
▪ BHR
▪ Constructability Phase Review Checklist
The CONSULTANT shall transmit the applicable electronic project files to the DEPARTMENT’s Area Utility Manager.

**PHASE IV RE-SUBMITTAL:**

If the project spends one (1) year or more “on the shelf” and/or substantial changes have been made during Plans Update to the plans, pay items, or quantities after the Phase IV review, the CONSULTANT shall prepare a second Phase IV submittal. This submittal will include the requirements listed for Phase IV. This submittal will be made well in advance of the Final Submittal to the DEPARTMENT’s Plans Processing Group. This will allow time to address comments in advance of the Final Submittal.

The DEPARTMENT’s Design Project Manager will determine whether the Phase IV re-submittal will include a distribution to the local governments. See Section 3.1.2 of this document for details regarding Local Government Involvement.

The CONSULTANT must submit a District 3 Change Memo to the District Preliminary Estimates Office to have PrP unlocked if changes are made during Plans Update that affect the pay-items or quantities in PrP. A copy of the District 3 Change Memo can be obtained from the DEPARTMENT’s Design Project Manager or the District Preliminary Estimates Office.

The CONSULTANT must submit an electronic copy of the Plans Update Memo to describe in general terms the changes made to each sheet since the project was “shelved”. A copy of the Plans Update Memo can be obtained from the DEPARTMENT’s Design Project Manager.

Any design changes affecting utilities that occur after the PHASE IV or PHASE IV Resubmittal must be coordinated with the DEPARTMENT’s Design Project Manager and submitted to the DEPARTMENT’s Area Utility Manager so that Utility Work Schedules can be updated.

The effort for preparing a PHASE IV Re-Submittal will be negotiated as a part of the Plans Update Services. See Section 3.7 for more information regarding Plans Update.

**FINAL PLANS SUBMITTAL TO PLANS PROCESSING:**

This submittal will occur upon addressing PHASE IV (or PHASE IV RE-SUBMITTAL) comments or following the Plans Update phase and less than one (1) year spent “on the shelf”.

If changes are made to the plans after the PHASE IV review that affect the pay-items or quantities in PrP, the CONSULTANT must submit a District 3 Change Memo to the District Preliminary Estimates Office to have PrP unlocked. A copy of the District 3 Change Memo can be obtained from the DEPARTMENT’s Design Project Manager or the District Preliminary Estimates Office.
The CONSULTANT must submit an electronic copy of the Plans Update Memo to describe in general terms the changes made to each sheet since the project was “shelved”. A copy of the Plans Update Memo can be obtained from the DEPARTMENT’s Design Project Manager.

Final Project Submittal to ERC: The CONSULTANT shall submit the following to the DEPARTMENT’s Design Project Manager via ftp site, FTA, or other electronic file storage media to post to ERC for the District’s Plans Processing Group’s review:

- electronic *.pdf copy of each component of the final plans. The plans must be electronically sealed using the Digital Delivery method for the second and subsequent submittals. Not the first.
- a complete Specifications Package including any Technical Special Provisions and/or incentive/disincentive cost analyses and backup documentation (when necessary)
- Project-DOCUMENTATION.zip folder,
- the Project-CADD.zip folder with all project design files
- the Compliance Certification Checklist Report. This report shall be signed by the Engineer of Record to certify that all electronic deliverables are complete, in the proper format, and all plans and specifications are signed and sealed with the same program.

Any design changes since the previous submittal affecting utilities must be coordinated with the DEPARTMENT’s Design Project Manager and submitted to the DEPARTMENT’s Area Utility Manager so that Utility Work Schedules can be updated.

The CONSULTANT will expeditiously address the comments received in ERC and be prepared to resubmit the final plans package once the review period in ERC is complete. A minimum of two (2) complete reviews using the ERC system will occur at this juncture, followed by subsequent Final Project CD/DVD submittals as necessary.

Final Project Submittal: The CONSULTANT shall submit the following to the DEPARTMENT’s Design Project Manager via ftp site, FTA, or other electronic file storage media for the District’s Plans Processing Group’s review once the ERC reviews are complete:

- final plans electronically sealed using the Digital Delivery method
- a complete Specifications Package including any Technical Special Provisions and/or incentive/disincentive cost analyses and backup documentation (when necessary)
- Project-DOCUMENTATION.zip folder,
- the Project-CADD.zip folder with all project design files
• the Compliance Certification Checklist Report. This report shall be signed by the Engineer of Record to certify that all electronic deliverables are complete, in the proper format, and all plans and specifications are signed and sealed with the same program.
• all project data and its location noted in the project journal.

Upon addressing all comments received during the Final Plans Processing review, the CONSULTANT shall transmit electronic project files to the DEPARTMENT’s Area Utility Manager as described in the requirements above.

Once all electronic project files have been finalized, the DEPARTMENT’s Design Project Manager shall upload the Project-DOCUMENTATION.zip folder to Electronic Document Management System (EDMS) or Project Suite Enterprise Edition (PSEE). See FDM 111.7 for guidance on the organization and delivery of Project Documentation.

Original survey field books will be submitted to the District Survey Office as well as all other applicable deliverables required by the District’s Survey CONSULTANT Checklist.

2.21 Provisions for Work

All work shall be prepared with English units in accordance with the latest editions of standards and requirements utilized by the DEPARTMENT which include, but are not limited to, publications such as:

- General
  - 29 C.F.R. 1926.1101 – Asbestos Standard for Construction, OSHA
  - 40 C.F.R. 61, Subpart M - National Emission Standard for Hazardous Air Pollutants (NESHAP), Environmental Protection Agency (EPA)
  - 40 C.F.R. 763, Subpart E – Asbestos-Containing Materials in Schools, EPA
  - 40 C.F.R. 763, Subpart G – Asbestos Worker Protection, EPA
  - Americans with Disabilities Act (ADA) Standards for Accessible Design
  - AASHTO – A Policy on Design Standards Interstate System
  - AASHTO – Roadside Design Guide
  - AASHTO – Roadway Lighting Design Guide
  - AASHTO – A Policy for Geometric Design of Highways and Streets
  - AASHTO – Highway Safety Manual
  - Rule Chapter 5J-17, Florida Administrative Code (F.A.C.), Standards of Practice for Professional Surveyors and Mappers
  - Chapter 469, Florida Statutes (F.S.) – Asbestos Abatement
  - Rule Chapter 62-257, F.A.C., Asbestos Program
o Rule Chapter 62-302, F.A.C., Surface Water Quality Standards
o Code of Federal Regulations (C.F.R.)
o Florida Administrative Codes (F.A.C.)
o Chapters 20, 120, 215, 455, Florida Statutes (F.S.) – Florida Department of Business & Professional Regulations Rules
o Florida Department of Environmental Protection Rules
o FDOT Basis of Estimates Manual
o FDOT Computer Aided Design and Drafting (CADD) Manual
o FDOT Standard Plans
o FDOT Flexible Pavement Design Manual
o FDOT - Florida Roundabout Guide
o FDOT Handbook for Preparation of Specifications Package
o FDOT Instructions for Design Standards
o FDOT Instructions for Structures Related Design Standards
o FDOT Materials Manual
o FDOT Pavement Type Selection Manual
o FDOT Design Manual
o FDOT Procedures and Policies
o FDOT Procurement Procedure 001-375-030, Compensation for Consultant Travel Time on Professional Services Agreements
o FDOT Project Development and Environmental Manual
o FDOT Project Traffic Forecasting Handbook
o FDOT Public Involvement Handbook
o FDOT Rigid Pavement Design Manual
o FDOT Standard Specifications for Road and Bridge Construction
o FDOT Utility Accommodation Manual
o Manual on Speed Zoning for Highways, Roads, and Streets in Florida
o Federal Highway Administration (FHWA) - Manual on Uniform Traffic Control Devices (MUTCD)
o FHWA – National Cooperative Highway Research Program (NCHRP) Report 672, Roundabouts: An Informational Guide
o FHWA Roadway Construction Noise Model (RCNM) and Guideline Handbook
o Florida Fish and Wildlife Conservation Commission - Standard Manatee Construction Conditions 2005
o Florida Statutes (F.S.)
o Florida’s Level of Service Standards and Guidelines Manual for Planning
o Model Guide Specifications – Asbestos Abatement and Management in Buildings, National Institute for Building Sciences (NIBS)
o Quality Assurance Guidelines
o Safety Standards
- Any special instructions from the DEPARTMENT

- **Roadway**
  - FDOT – Florida Intersection Design Guide
  - FDOT - Project Traffic Forecasting Handbook
  - FDOT - Quality/Level of Service Handbook
  - Florida’s Level of Service Standards and Highway Capacity Analysis for the SHS
  - Transportation Research Board (TRB) - Highway Capacity Manual

- **Permits**
  - Chapter 373, F.S. – Water Resources
  - US Fish and Wildlife Service Endangered Species Programs
  - Florida Fish and Wildlife Conservation Commission Protected Wildlife Permits
  - Bridge Permit Application Guide, COMDTPUB P16591.3C
  - Building Permit
  - *US Army Corps of Engineers, 33 CFR 325.1 (d)*

- **Drainage**
  - FDOT Bridge Hydraulics Handbook
  - FDOT Culvert Handbook
  - FDOT Drainage Manual
  - FDOT Erosion and Sediment Control Manual
  - FDOT Exfiltration Handbook
  - FDOT Hydrology Handbook
  - FDOT Open Channel Handbook
  - FDOT Optional Pipe Materials Handbook
  - FDOT Storm Drain Handbook
  - FDOT Stormwater Management Facility Handbook
  - FDOT Temporary Drainage Handbook
  - FDOT Drainage Connection Permit Handbook
  - FDOT Bridge Scour Manual

- **Survey and Mapping**
  - *District 3 Surveying Guidelines*
  - *Survey Safety Handbook*
  - *Minimum Technical Standards for Surveying and Mapping Rule 5J-17*
  - All applicable Florida Statutes and Administrative Codes
  - Applicable Rules, Guidelines Codes and authorities of other Municipal, County, State and Federal Agencies.
  - FDOT Aerial Surveying Standards for Transportation Projects Topic 550-020-002
  - FDOT Right of Way Mapping Handbook
- FDOT Surveying Procedure Topic 550-030-101
- Florida Department of Transportation Right of Way Procedures Manual
- Florida Department of Transportation Surveying Handbook
- Right of Way Mapping Procedure 550-030-015
- All other applicable Department procedures, handbooks, and manuals

- Traffic Engineering and Operations and ITS
  - AASHTO - An Information Guide for Highway Lighting
  - AASHTO - Guide for Development of Bicycle Facilities
  - FHWA Standard Highway Signs Manual
  - FDOT Manual on Uniform Traffic Studies (MUTS)
  - FDOT Median Handbook
  - Minimum Specifications for Traffic Control Signal Devices
  - National Electric Safety Code
  - National Electrical Code

- Florida’s Turnpike Enterprise
  - Florida’s Turnpike Plans Preparation and Practices Handbook (TPPPH)
  - Florida’s Turnpike Lane Closure Policy
  - Florida’s Turnpike Drainage Manual Supplement
  - Rigid Pavement Design Guide for Toll Locations with Electronic Toll Collection
  - Flexible Pavement Design Guide for Toll Locations with Electronic Toll Collection
  - Florida’s Turnpike General Tolling Requirements (GTR)
  - Additional Florida’s Turnpike Enterprise standards, guides, and policies for design and construction can be found on the FTE Design Website: http://design.floridasturnpike.com

- Traffic Monitoring
  - American Institute of Steel Construction (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
  - FHWA Traffic Detector Handbook
  - FDOT General Interest Roadway Data Procedure
  - FHWA Traffic Monitoring Guide
  - FDOT’s Traffic/Polling Equipment Procedures

- Structures
  - AASHTO Load and Resistance Factor Design (LRFD) Bridge Design
Specifications and Interims

- AASHTO LRFD Movable Highway Bridge Design Specifications and Interims
- AASHTO/-AWS-D1. 5M/D1.5: An American National Standard Bridge Welding Code
- AASHTO Guide Specifications for Structural Design of Sound Barriers
- AASHTO Manual for Condition Evaluation and Load and Resistance Factor Rating (LRFR) of Highway Bridges
- FDOT Bridge Load Rating Manual
- FDOT Structures Manual
- FDOT Structures Design Bulletins (available on FDOT Structures web site only)

▪ Geotechnical

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

▪ Landscape Architecture

- Florida Department of Agriculture and Consumer Services Grades and Standards for Nursery Plants

▪ Architectural

- Building Codes
- Florida Building Code:
  - Building
  - Fuel Gas
  - Mechanical
  - Plumbing
  - Existing Building
- Florida Accessibility Code for Building Construction
- Rule Chapter 60D, F.A.C., Division of Building Construction
- Chapter 553, F.S. – Building Construction Standards
- 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)

▪ Architectural – Fire Codes and Rules

- National Fire Protection Association (NFPA) - Life Safety Code
- NFPA 70 - National Electrical Code
o NFPA 101 - Life Safety Code
o NFPA 10 - Standard for Portable Fire Extinguishers
o NFPA 11 - Standard for Low-Expansion Foam Systems
o NFPA 11A - Standard for High- and Medium-Expansion Foam Systems
o NFPA 12 - Standard for Carbon Dioxide Extinguishing Systems
o NFPA 13 - Installation of Sprinkler Systems
o NFPA 30 - Flammable and Combustible Liquids Code
o NFPA 54 - National Gas Fuel Code
o 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.

- Architectural – Extinguishing Systems
  o NFPA 10 - Fire Extinguishers
  o NFPA 13 - Sprinkler
  o NFPA 14 - Standpipe and Hose System
  o NFPA 17 - Dry Chemical
  o NFPA 20 - Centrifugal Fire Pump
  o NFPA 24 - Private Fire Service Mains
  o NFPA 200 - Standard on Clean Agent Fire Extinguishing Systems

- Architectural – Detection and Fire Alarm Systems
  o NFPA 70 - Electrical Code
  o NFPA 72 - Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems
  o NFPA 72E - Automatic Fire Detectors
  o NFPA 72G - Installation, Maintenance, and Use of Notification Appliances
  o NFPA 72H - Testing Procedures for Remote Station and Proprietary Systems
  o NFPA 74 - Household Fire Warning Equipment
  o NFPA 75 - Protection of Electronic Computer Equipment

- Architectural – Mechanical Systems
  o NFPA 90A - Air Conditioning and Ventilating Systems
  o NFPA 92A - Smoke Control Systems
  o NFPA 96 - Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment
  o NFPA 204M - Smoke and Heating Venting

- Architectural – Miscellaneous Systems
  o NFPA 45 - Laboratories Using Chemicals
  o NFPA 80 - Fire Doors and Windows
  o NFPA 88A - Parking Structures
  o NFPA 105 - Smoke and Draft-control Door Assemblies
o NFPA 110 - Emergency and Standby Power Systems
o NFPA 220 - Types of Building Construction
o NFPA 241 - Safeguard Construction, Alteration, and Operations
o Rule Chapter 69A-47, F.A.C., Uniform Fire Safety For Elevators
o Rule Chapter 69A-51, F.A.C., Boiler Safety

■ Architectural – Energy Conservation
o Rule Chapter 60D-4, F.A.C., Rules For Construction and Leasing of State Buildings To Insure Energy Conservation
o Section 255.255, F.S., Life-Cycle Costs

■ Architectural – Elevators
o Rule Chapter 61C-5, F.A.C., Florida Elevator Safety Code
o ASME A-17.1, Safety Code for Elevators and Escalators
o Architectural – Floodplain Management Criteria
o Section 255.25, F.S., Approval Required Prior to Construction or Lease of Buildings
o Rules of the Federal Emergency Management Agency (FEMA)

■ Architectural – Other
o Rule Chapter 64E-6, F.A.C., Standards for On Site Sewage Disposal Systems (Septic Tanks)
o Rule Chapter 62-600, F.A.C., Domestic Wastewater Facilities
o Rule Chapter 62-761, F.A.C., Underground Storage Tank Systems
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 Concrete Products Association
o FDOT – ADA/Accessibility Procedure
o FDOT – Building Code Compliance Procedure
o FDOT – Design Build Procurement and Administration
o LEED (Leadership in Energy and Environmental Design) Green Building Rating System
o National Concrete Masonry Association
o National Electrical Code
o Portland Cement Association - Concrete Masonry Handbook
o United State Green Building Council (USGBC)

2.22 Services to be Performed by the DEPARTMENT

Project Data:

When appropriate the DEPARTMENT will provide project data currently on file,
including, when available:
▪ Available traffic and planning data.
▪ Systems traffic for Projected Design Year, with K, D, and T factors.
▪ Existing right of way maps.
▪ Existing cross slope data for all RRR projects.
▪ Existing pavement evaluation report for all RRR projects.
▪ PD&E Documents
▪ Design Reports
▪ Straight Line Diagram (SLD)
▪ Existing as-built construction plans
▪ Long Range Estimates (LRE)

Regarding Utilities:
▪ All Department agreements with Utility Agency Owner (UAO).
▪ All approved utility relocations.
▪ All available information in the possession of the DEPARTMENT pertaining to utility companies whose facilities may be affected by the proposed construction.
▪ Project utility certification to the DEPARTMENT’s Central Office.
▪ Provide Utility Coordination

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:
▪ Approved Permit Document when available
▪ Approval of all contacts with environmental agencies.
▪ 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.
▪ Appropriate signatures on application forms.

Regarding Pavement Design and Geotechnical Services:
▪ Provide necessary Geotechnical Support

Miscellaneous Services:
▪ All certifications necessary for project letting.
▪ Access for the CONSULTANT to utilize the DEPARTMENT’s Information Technology Resources.
- Building Construction Permit Coordination (Turnpike)
- All information that may come to the DEPARTMENT pertaining to future improvements.
- All future information that may come to the DEPARTMENT during the term of the CONSULTANT’s Agreement, which in the opinion of the DEPARTMENT is necessary for the prosecution of the work.
- Letters of authorization designating the CONSULTANT as an agent of the DEPARTMENT in accordance with F.S. 337.274.
- Phase reviews of plans and engineering documents.
- Any necessary title searches.
- Engineering standards review services.
- All future information that may come to the DEPARTMENT pertaining to subdivision plans so that the CONSULTANT may take advantage of additional areas that can be utilized as part of the existing right of way.
- Previously constructed Highway Beautification or Landscape Construction Plans
- Letters of authorization designating the CONSULTANT as an agent of the DEPARTMENT in accordance with F.S. 337.274.
- Phase reviews of plans and engineering documents.
- Any necessary title searches.
- Engineering standards review services.
- All future information that may come to the DEPARTMENT pertaining to subdivision plans so that the CONSULTANT may take advantage of additional areas that can be utilized as part of the existing right of way.
- Previously constructed Highway Beautification or Landscape Construction Plans
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- Phase reviews of plans and engineering documents.
- Any necessary title searches.
- Engineering standards review services.
- All future information that may come to the DEPARTMENT pertaining to subdivision plans so that the CONSULTANT may take advantage of additional areas that can be utilized as part of the existing right of way.

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 (Roadway Analysis) through 35 (Geotechnical). 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. Prior to 60% plans and completion of quantities, the DEPARTMENT’s Long Range Estimate (L.R.E.) system will be used to produce a conceptual estimate, according to District policy. 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 AASHTOWare Project Preconstruction through the use of the DEPARTMENT’s Designer Interface for generating the summary of quantities and the FDOT’s in-house estimates. A Summary of Pay Items sheet shall be prepared with all required Phase II, III, and IV Plans submittals.

Prior to Phase I - Within 30 (thirty) calendar days of the written Notice to Proceed, the CONSULTANT shall submit a revised construction cost estimate using the DEPARTMENT’s Long Range Estimating System (L.R.E.). The revised estimate shall be based on all work items likely to be included in the project whether or not explicitly
defined in this initial scope of work, including, but not limited to, work items being analyzed for possible inclusion in the scope after DEPARTMENT approval. This estimate is understood to be preliminary and will be used to better budget construction costs. The District Preliminary Estimates Office will provide the CONSULTANT with a version of the L.R.E. in the system for their use.

Phase I - The project shall be established in PrP by Phase I (30%). The District Preliminary Estimates Office will create the project(s) in the system upon receiving a copy of the Notice to Proceed for the design contract. The District Preliminary Estimates Office will also create a version in the L.R.E. System for the CONSULTANT’s use at Phase I. The CONSULTANT can request access to the assigned L.R.E. through the DEPARTMENT’s Design Project Manager. For the Phase I (30%) submittal, the CONSULTANT shall submit the cost estimate using the DEPARTMENT’s Long Range Estimating (L.R.E.) system. This estimate will be reviewed by the District Preliminary Estimates Office within the L.R.E. System. The Phase I (30%) L.R.E. shall be complete and ready for review at the time of the plans submittal.

Phase II - A Project Summary of Pay Items sheet shall be prepared with Phase II and subsequent plans submittals. The 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 submit the cost estimate using the DEPARTMENT’s Long Range Estimating (L.R.E.) system. This estimate will be reviewed by the District Preliminary Estimates Office within the L.R.E. System. The Phase II (60%) L.R.E. shall be complete and ready for review at the time of the plans submittal.

Phases III & IV – At Phase III (90%) the CONSULTANT shall have all quantities loaded into PrP, with only minor changes anticipated at subsequent submittals. Within PrP, 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. The “Project Edit Report” lists all pay items loaded in the project (by category) and identifies obsolete pay items in PrP. The complete submittal package, including the CONSULTANT’s construction cost estimate, will be provided to the District Preliminary Estimates Office at phases III (90%) and IV (100%). If the project includes a Special Detour, the CONSULTANT shall prepare and submit a Special Detour Quantity Worksheet for submittals beginning at Phase III (90%). The Special Detour Worksheet should be submitted at every subsequent phase submittal and updated if necessary. The above shall be provided for each component set of plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

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 Standard Specifications and implemented modifications in any way.
The Technical Special Provisions 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 Packages. 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 digitally signed and sealed in accordance with applicable Florida Statutes.

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

**Modified Special Provisions:** The CONSULTANT shall provide Modified Special Provisions as required by the project. Modified Special Provisions are defined in the Specifications Handbook.

A Modified 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 and Central Specifications Offices to be included in the project's specifications package.

**Field Reviews:** The CONSULTANT shall make as many trips to the project site as required to obtain necessary data for all elements of the project.

**Technical Meetings:** The CONSULTANT shall attend all technical meetings necessary to execute the Scope of Services of this contract. This includes meetings with DEPARTMENT and/or Agency staff, between disciplines and subconsultants, such as access management meetings, pavement design meetings, local governments, railroads, airports, progress review meetings (phase review), and miscellaneous meetings. The CONSULTANT shall prepare, and submit to the DEPARTMENT's Project Manager for review, the meeting minutes for all meetings attended by them. The meeting minutes are due within five (5) working days of attending the meeting.

**Quality Assurance/Quality Control (QA/QC):** It is the intention of the DEPARTMENT that design CONSULTANTS, including their subconsultant(s), are held responsible for their work, including plans review. The purpose of CONSULTANT plan reviews is to ensure that CONSULTANT plans follow the plan preparation procedures outlined in the Plans Preparation Manual/FDOT Design Manual, that state and federal design criteria are followed with the DEPARTMENT concept, and that the CONSULTANT submittals are complete. All subconsultant document submittals shall be submitted by the subconsultant directly to the CONSULTANT for their independent Quality Assurance/Quality Control review and subsequent submittal to the DEPARTMENT.
It is the CONSULTANT’S responsibility to independently and continually QC their plans and other deliverables. The CONSULTANT should regularly communicate with the DEPARTMENT’s Design Project Manager to discuss and resolve issues or solicit opinions from those within designated areas of expertise.

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 and their subconsultant(s) 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 this project. The CONSULTANT shall submit a Quality Control Plan for approval within twenty (20) business days of the written Notice to Proceed and it shall be signed by the CONSULTANT’s Project Manager and the CONSULTANT QC Manager. The Quality Control Plan shall include the names of the CONSULTANT’s staff that will perform the quality control reviews. The Quality Control reviewer shall be a Florida Licensed Professional Engineer fully prequalified under F.A.C. 14-75 in the work type being reviewed. 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, landscape, 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 & Mapper that performed the Quality Control review will sign a statement certifying that the review was conducted and found to meet required specifications.

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

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

Prior to staffhour negotiations, the CONSULTANT shall coordinate with the DEPARTMENT’s Design Project Manager to determine whether Independent Peer Reviews and/or Constructability/Bidability Reviews through this design contract will be required on this project. These separate reviews shall be completed by someone who has not worked on the plan component that is being reviewed. These could include but are not limited to a separate office under the Prime’s umbrella, a subconsultant that is qualified in the work group being reviewed, or a CEI. It does not include persons who have knowledge of the day to day design efforts. The Constructability/Bidability Review shall be performed by a person with experience working on Department construction projects (CEI, Contractor, etc.).
The Independent Peer Review for design Phase Plans submittals shall ensure the plans meet the FDM, *Standard Plans* and CADD Manual. The Constructability/Bidability Review shall ensure the project can be constructed and paid for as designed. Constructability/Bidability Reviews should be conducted prior to the Phase III and Phase IV submittals, using the Phase Review Checklist (Guidance Document 1-1-A) from the Construction Project Administration Manual (CPAM) as a minimum guideline. The CONSULTANT shall submit this checklist, as well as the “marked-up” set of plans during this review, and review comments and comment responses from any previous Constructability/Bidability reviews. These items will be reviewed by District Design and District Construction.

**Supervision:** The CONSULTANT shall supervise all technical design activities.

**Coordination:** The CONSULTANT shall 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 3.13 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

*This project has been determined to be a Community Awareness Plan (CAP) Level 3 project with a minimum of one (1) Public Meeting/Workshop, a determination will be made during design as to whether a second meeting would be needed, the addition of noise walls would require a second meeting. This type of project has a widespread impact to the traveling public and will typically include substantial impacts to access and a noticeable degree of traffic disruption. Examples are major roadway widening and reconstruction, major bridge replacements, permanent access management changes, and other construction activities that require long term road closures. Projects that propose modification to currently available turning movements by dividing a state highway, erecting median barriers, or having the effect of closing or modifying an existing access to an abutting property owner will necessitate a Public Hearing vs. Public Meeting/Workshop only when a Public Hearing was NOT conducted during a PD&E phase. Access management changes will also necessitate a Public Hearing if the proposed changes differ from the changes shown during a previous PD&E Public Hearing.*

*Prior to negotiations, the CONSULTANT shall coordinate with the DEPARTMENT's Design Project Manager and Public Information Director to discuss the specific public involvement activities anticipated for this project.*
3.1.1 Community Awareness Plan

All projects require the development of a Community Awareness Plan (CAP) utilizing the District Three Community Awareness Plan Template. A copy of the Template can be obtained from the DEPARTMENT's Design Project Manager.

Prepare a Community Awareness Plan (CAP) for review and approval by the DEPARTMENT within 20 business days after receiving Notice to Proceed. 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. The CAP shall address timeframes for each review and shall include tentative dates for each public involvement requirement for the project. The CAP will also document all public involvement activities conducted throughout the project’s duration. In addition to the benefits of advance notification, the process should allow the DEPARTMENT to resolve controversial issues during the design phase. Four areas of specific concern are: (1) Influences on access to businesses and residences, (2) Drainage, (3) Temporary Traffic Control Plans during construction, and (4) right-of-way acquisition.

3.1.2 Notifications

**PHASE SUBMITTAL NOTIFICATIONS:**

The CONSULTANT shall prepare an email notification and a distribution list for plans at Phase II, Phase III, and any subsequent Phase IV re-submittal to the office(s) designated by the local government(s) and applicable regional authorities for a three-week review. The email notifications and plans will be distributed by the DEPARTMENT. The need to re-submit Phase IV Plans will depend on the duration of time spent “on the shelf” and the amount of changes that have occurred since the last submittal to the Local Governments at Phase III. See Section 2.20 regarding Phase IV re-submittals. The Phase IV re-submittal to the Local Governments should take place well in advance of the Final Submittal to the District for Plans Processing to allow time to address comments received from the Local Governments.

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 Consultant Project Management Engineer’s signature. All comments or requests shall be responded to in writing within thirty (30) calendar days of receipt of comments.

**PROJECT NOTIFICATIONS PUBLIC MEETING/WORKSHOP:**

Project Notifications shall be prepared by the CONSULTANT for all parties affected by the subject project.

Email Notifications and Mass Mail-outs shall provide:

- FPID Number
• State Road Number and Local Road Name
• Project Limits
• A Project Map
• Type of Work
• Construction Letting Timeframe (ie, Spring 20XX, Winter 20XX)
• DEPARTMENT contact persons
• Meeting/Workshop Date, Time, Location, and Format (if applicable)
• Meeting/Workshop Location Map (if applicable)

Email Notification to Public Officials:

• Notifications shall be prepared as an email by the CONSULTANT for all pertinent public officials as described in Section 3.1.3. The email notification to the public officials shall be emailed by the DEPARTMENT no less than 15 calendar days before a public meeting/workshop/hearing or following the Phase II distribution for CAP II projects without a public meeting/workshop/hearing.

• In addition to the email notification, a flier or tri-fold will be required as an attachment to relay all of the pertinent information described above.

• The CONSULTANT shall submit the draft email notification along with the attachment(s) and distribution list at the designated time in the project schedule. The distribution list shall be an MS Excel file and shall include the name, title, and email address of each intended recipient.

Mail-out to Property Owners:

• A notification/invitation letter and/or a project information flier/ tri-fold will be prepared and sent to all property owners, tenants, and business operators as defined in Section 3.1.3. This notification shall be mailed by the CONSULTANT no less than 10 calendar days before the meeting/workshop/hearing or following the Phase II distribution for CAP II projects without a public meeting/workshop/hearing.

• Property owners and tenants can be contacted through mass mailings and/or hand delivered flyers. Letters shall be prepared for the District Consultant Project Management Engineer’s signature and shall be on DEPARTMENT letterhead.

All notification/invitation letters intended for physical mail-out shall be on DEPARTMENT letterhead. The CONSULTANT shall pay postage for the mail-out to property owners and will be responsible for the physical mail-out effort (printing, envelope stuffing, stamping, etc.).

The CONSULTANT must review all notices, letters, and attachments for accuracy and spelling and ensure that notices are sent to the person currently holding the public official positions. The CONSULTANT must attempt to affirm the validity of all email addresses submitted for each notification.
Examples of any of this correspondence can be made available upon request to the DEPARTMENT’s Design Project Manager.

3.1.3 Preparing Mailing Lists

PHASE SUBMITTAL NOTIFICATIONS:

The distribution list for the phase submittal notifications described in Section 3.1.2 will be submitted to the DEPARTMENT’s Design Project Manager at Phase II, Phase III, and any subsequent Phase IV re-submittal. The distribution list shall be an MS Excel file and shall include the name, title, and email address of each intended recipient.

Mail-out to Public Officials:

• Public Officials who are to receive notification of projects shall include, (but not be limited to):

  County
  ▪ County Manager
  ▪ County Public Information Director
  ▪ County Commissioners
  ▪ County Public Works Director
  ▪ County Engineer

  City
  ▪ City Commission
  ▪ Mayor
  ▪ City Manager
  ▪ Engineer / Public Work Director

  Regional
  ▪ Regional Planning Council/ MPO/ TPO/ TPA
  ▪ College Campus Facilities Department

PRELIMINARY FIELD INVESTIGATION NOTIFICATIONS:

The preliminary field investigation notifications shall be mailed by the CONSULTANT in accordance with the guidance and timeframes provided in Section 3.1.2.

The CONSULTANT shall prepare a mailing list to include all properties where R/W impacts are likely to occur. The CONSULTANT shall utilize Direct Mail Services, Tax Collector Office and/or any other source to identify and obtain the addresses of property owners and business operators along the project. The CONSULTANT is expected to implement delivery receipts and/or certified mail options to ensure that property owners/tenants are notified.
PUBLIC MEETING/WORKSHOP INVITATIONS:

Public Meeting/Workshop Invitations shall be prepared by the CONSULTANT in accordance with the guidance and timeframes described in Section 3.1.2.

The mailing list shall be prepared by the CONSULTANT to include all affected parties. Media in the project area will also be identified and placed on the mailing list to be used for news releases, advertisements or any concerns. The mailing list will be submitted along with the notifications/invitations to the DEPARTMENT’s Design Project Manager for review and approval.

Email Notifications/Invitations to Public Officials:

- Public Officials who are to receive notification of projects and public meetings/workshops/hearings shall include, (but not be limited to):

  Federal/State
  - Legislative Delegation/Congress (Federal & State)
  - Water Management Districts
  - Florida Highway Patrol (Major & Commander)

  County
  - 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

  City
  - City Commission
  - Mayor
  - City Manager
  - Engineer / Public Work Director

  Regional
  - Regional Planning Council/ MPO/ TPO/ TPA
  - Local Hospitals
  - Seaport Authority
  - Airport Authority
  - Local Colleges/Universities
Mail-out to Property Owners:

- A notification/invitation will be written and sent to all property owners, tenants, and business operators whose property, home, or business lies in whole or in part within a minimum of 300 feet of the centerline of the project. In addition, the CONSULTANT must include any businesses or neighborhoods located down side roads that may be impacted by 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.

3.1.4 Median Modification Letters (Not applicable to this project)

3.1.5 Driveway Modification Letters (Not applicable to this project)

3.1.6 Newsletters (Not applicable to this project)

3.1.7 Renderings and Fly-Throughs (Not applicable to this project)

3.1.8 PowerPoint Presentations (Not applicable to this project)

3.1.9 Public Meeting Preparations

Following the Phase II plans submittal, and typically in advance of the Phase III submittal, the CONSULTANT shall assist the DEPARTMENT in scheduling the FDOT Public Information Meeting/Workshop or Hearing. Tuesday and Thursday evenings are preferred. The CONSULTANT shall be aware of and avoid other scheduled FDOT Public Meetings or Hearings. The CONSULTANT shall assist the DEPARTMENT in determining when local government meetings are scheduled (MPO/TPO, County Commission, and/or City Council Meetings) and shall avoid scheduling the FDOT meeting to conflict with the local government meetings.

The CONSULTANT will investigate potential meeting sites to advise the DEPARTMENT on their suitability. The CONSULTANT will pay all costs for meeting site rentals and insurance. No DEPARTMENT meetings will be held on public school system properties. In addition, churches and religious facilities are to be considered if no other secular or municipal buildings are available. In accordance with Section 4 of Executive Order 07-126, any hotel or conference center used for hosting an FDOT Public Information Meeting/Workshop must be designated under the FDEP’s Green Lodging Program. Prospective sites for the meeting 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 and the CONSULTANT shall provide signs to indicate the location of the available handicapped accesses.

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.
In preparation for the FDOT Public Information Meeting/Workshop, the CONSULTANT shall provide:

- Project Information/Fact Sheets
- Script or Agenda for any planned presentation (if applicable)
- All necessary graphics and displays (see requirements below)
- Meeting equipment set-up and teardown
- Legal and/or display advertisements

The CONSULTANT shall prepare all materials, displays, and/or wall graphics for use during the meeting. These include but are not limited to the following:

- Self-addressed comment forms to allow attendees to provide written comments within 10 days after the FDOT Public Information Meeting/Workshop. The DEPARTMENT’s Design Project Manager shall be listed as the contact for all comments.
- Sign-in sheets
- At least two (2) foam boards (36"X24") (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.
- At least two foam boards (36"X24") (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 showing the existing conditions and proposed improvements will be required. “Before and After” depictions of select work elements are encouraged for 3R projects as well to help demonstrate proposed changes to the public.
- Two (2) copies of the project in plan view. The project plan view shall be on (36"X24") foam boards or 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.

Displays and other materials prepared for Public Meeting(s) shall NOT depict the CONSULTANT’s logo. Displays and materials shall only depict the DEPARTMENT’s logo/seal.
Mail-out Materials: The CONSULTANT shall be aware that along with the mail-outs described in Section 3.1.3, all the above deliverables intended for mail-out must be submitted to the DEPARTMENT’s Design Project Manager well in advance of the mail-out and meeting/workshop to allow time for review, approval, and signatures if necessary.

Display Materials: The CONSULTANT shall be aware that all the above deliverables and materials proposed to be displayed at the Public Meeting/Workshop or Public Hearing must be presented to DEPARTMENT staff at a pre-meeting workshop for review and approval in advance of the Public Meeting/Workshop or Public Hearing.

3.1.10 Public Meeting Attendance and Follow-up

The purpose of the FDOT Public Information Meeting/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 provide all support necessary for the DEPARTMENT to hold a Public Information Meeting/Workshop. The CONSULTANT is expected to actively participate in all portions of the meeting. Conducting the meeting will take knowledgeable CONSULTANT staff and will require enough staff members to handle the crowd anticipated for the meeting.

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).

Briefing of the DEPARTMENT Design staff by the CONSULTANT (who will be on hand during the meeting) will be done twice. The first time is to be at least seven days prior to the meeting 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. The CONSULTANT shall assist the DEPARTMENT’s Design Project Manager with ensuring that the appropriate DEPARTMENT staff are invited and included in the pre-Public Information Meeting/Workshop briefings. This will include (at a minimum) representatives from the Public Information Office and the Design Office. In addition, the DEPARTMENT’s Transportation Planning Area’s Urban Liaisons shall be notified of any briefings and public meetings. If the project includes a right-of-way acquisition phase, the Right-of-way Acquisition Administrator shall also be notified of the briefing.

FDOT Public Information Meetings/Workshops are held between the 60% - 90% plans stage. Depending on the amount of time spent “on-the-shelf”, an additional meeting may be required six (6) months prior to letting, however, staffhours for this effort will be negotiated at the appropriate time.

The meeting format will be informal allowing the public to come and go. The meeting will be scheduled for one (1) hour in length. 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.

Proper signage using display boards no smaller than 2’X2’ will be displayed near and on the site directing participants to the meeting place. In addition, the site must meet ADA standards and the CONSULTANT shall provide signs to indicate the location of the available handicapped accesses. A “Title VI” board will be required at the meeting site. The CONSULTANT shall coordinate with the DEPARTMENT to attain “Title VI” board requirements.

If issues are identified by participants at the meeting, 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.

Addressing the issues and responding to them is also an integral part of the meeting 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 and will require signature by the District Secretary.

3.1.11 Other Agency Meetings

In addition to scheduled public meetings the CONSULTANT may be required to participate in meetings with the local governing authorities and/or Metropolitan Planning Organization (MPO). It is estimated for this project there will be at least one (1) meetings with local governing authorities and/or MPOs during the design. DEPARTMENT staff will conduct all meetings and presentations made for Local Governments and MPOs/TPOs. The CONSULTANT shall prepare the needed presentation materials as directed by the DEPARTMENT’s Design Project Manager. The CONSULTANT shall be responsible for participating in the meetings, as well as note taking and the preparation of meeting summaries/minutes.

3.1.12 Web Site

The CONSULTANT shall create project specific .shtm files for each Public Information Meeting/Workshop and Public Hearing to be posted by the DEPARTMENT to the NWFLRoads.com web site. Templates and instructions can be obtained through the DEPARTMENT's Design Project Manager.

These web files shall be submitted in draft form to the DEPARTMENT’s Design Project Manager at the time of the pre-meeting workshop with DEPARTMENT staff that is referenced in Section 3.1.9. Once all materials to be displayed at the Public Meeting/Workshop or Public Hearing have been approved by the DEPARTMENT, the web files shall be updated if necessary and resubmitted at least seven days prior to the Public Meeting/Workshop or Public Hearing.

3.2 Joint Project Agreements (Not applicable to this project)
3.3 Specifications Package Preparation (To be Prepared during Plans Update)

The CONSULTANT shall prepare and provide a specifications package in accordance with the DEPARTMENT’S Procedure Topic No. 630-010-005 Specifications Package Preparation and the Specifications Handbook. The CONSULTANT shall provide the DEPARTMENT names of at least two team members who have successfully completed the Specifications Package Preparation Training and will be responsible for preparing the Specifications Package for the project. The Specifications Package shall be prepared using the DEPARTMENT's Specs on the Web application. The CONSULTANT shall be able to document that the procedure defined in the Handbook for the Preparation of Specifications Packages is followed, which includes the quality assurance/quality control procedures. The specifications package shall address all items and areas of work and include any Mandatory Specifications, Modified Special Provisions, and Technical Special Provisions. The District Specifications Office can be contacted for more information.

The specifications package must be submitted for review to the District Specifications Office at least 30 days prior to the contract package to Tallahassee or District due date, or sooner if required by the District Specifications Office. This submittal does not require signing and sealing and shall be coordinated through the District’s Project Manager. The CONSULTANT shall coordinate with the DEPARTMENT on the submittal requirements, but at a minimum shall consist of (1) the complete specifications package, (2) a copy of the marked-up workbook used to prepare the package, and (3) a copy of the final project plans.

Final submittal of the specifications package must occur at least 10 working days prior to the contract package to Tallahassee due date. This submittal shall be digitally signed, dated, and sealed in accordance with applicable Florida Statutes.

All current special provisions and supplemental specifications can be found on the DEPARTMENT’S Internet web site at the State Program Management Office Web Page (http://www.dot.state.fl.us/programmanagement/specs.shtm) 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 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. Provide justification of the project specific need, and coordinate with the District Specifications Office.

Developmental Specifications are developed around a new process, procedure, or material approved for limited use by the State Program Management Office. These
specifications are signed and sealed by the professional engineer responsible for authorizing use and monitoring performance in the field. Developmental Specifications are requested from the District Specifications Office on a project by project basis.

Contact the District Specifications Office for formatting requirements and the availability of a Technical Special Provision for the anticipated work on the project. 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. 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-f. 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.

Prepare a complete Specifications Package as described in Section 115.3 of the FDOT Design Manual. Submit the Specifications Package and the Workbook generated via Specs on the Web that was used to compile the Specifications Package within the electronic final plans package. Submittal requirements are further detailed in Chapter 131 of the FDOT Design Manual and Section 2.20 of this Scope of Services.

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 “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 and Electronic Document Management System (EDMS)

Contract maintenance includes project management effort for complete setup and maintenance of files, electronic folders and documents and developing technical monthly progress reports and schedule updates.

The CONSULTANT will be required to provide written monthly progress reports (preferably electronic via email) 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 also be required to make monthly schedule updates for tasks assigned to the CONSULTANT in FDOT Project Suite Enterprise Edition (PSEE). Schedule updates are due the last Friday of each month.

3.5 Value Engineering (Multi-Discipline Team) Review (To be included as a Supplemental Amendment if required)

3.6 Prime Consultant Project Manager Meetings

Includes only the Prime Consultant 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 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

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”.

Staffhours negotiated for this task during the initial staffhour and fee submittal will include efforts necessary to kick-off Plans Update Services due to an accelerated schedule. It is recommended that the CONSULTANT coordinate with the DEPARTMENT’s Contract Manager to differentiate the staffhours for the Plans Update effort in the Automated Fee Proposal (AFP) from the Basic Services effort. Staffhours for the remainder of the anticipated Plans Update Services will be negotiated following Basic Services and at the time that the plans come “off 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. The CONSULTANT shall be aware that minor modifications and/or updates to the original plans are to be expected. These minor refinements shall not be a basis for any payment under the Plans Update supplemental agreement.

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. All Phase 32 funds (Basic Services and Plans Update Services) shall be expended or released prior to initiating Post Design Services (Phase 62).

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 Pre-Construction Conference. 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 DEPARTMENT’s Design Project Manager.

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 DEPARTMENT’s 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.

The CONSULTANT shall submit a “Post Design Services Status Report” in *.xlsx format with every invoice during this phase. A blank example of this report can be provided by the DEPARTMENT’s Design Project Manager.

Post Design Services are not intended for instances of CONSULTANT errors and/or omissions.

3.9 Digital Delivery

The CONSULTANT shall deliver final contract plans and documents in digital format. The final contract plans and documents shall be digitally signed and sealed files delivered to the DEPARTMENT on acceptable electronic media, as determined by the DEPARTMENT.

3.10 Risk Assessment Workshop (Not applicable to this project)

3.11 Railroad, Transit and/or Airport Coordination (Not applicable to this project)

3.12 Landscape and Existing Vegetation Coordination (Not applicable to this project)

3.13 Other Project General Tasks (Not applicable to this project)
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 Type Selection Report (Not applicable to this project)

4.3 Pavement Design Package (To Be Provided By The CONSULTANT)

The Pavement Condition Survey (including coring, testing, and preparing the report) will be provided by the CONSULTANT as directed in Section 35.22 of this Scope of Services.

The CONSULTANT shall 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.

4.4 Cross-Slope Correction (Not applicable to this project)

4.5 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the geometrics using the Standard Plans 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, existing vegetation to be preserved, pedestrian and bicycle concerns, ADA requirements, Safe Mobility for Life Program, access management, PD&E documents and scope of work. The CONSULTANT shall also develop utility conflict information to be provided to
project Utility Coordinator in the format requested by the DEPARTMENT.

4.6 Access Management  (Not applicable to this project)

4.7 Roundabout Evaluation  (Not applicable to this project)

4.8 Roundabout Final Design Analysis  (Not applicable to this project)

4.9 Cross Section Design Files

The CONSULTANT shall establish and develop cross section design files in accordance with the CADD manual, see Section 36.5. The CONSULTANT shall also produce *.gen files to be included with the Project-CADD.zip file required in Section 2.20 for Plans Processing.

4.10 Temporary Traffic Control Plan (TTCP) Analysis

The CONSULTANT shall design a safe and effective TTCP 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 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 highway lighting, detours, diversions, lane shifts, and the use of materials such as sheet piling in the analysis. The Temporary Traffic Control Plan shall be prepared by a certified designer who has completed training as required by the DEPARTMENT. Before proceeding with the TTCP, 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 TTCP efforts.

For projects with TTCP Levels of II or III, the CONSULTANT shall be prepared to provide materials for and participate in a Temporary Traffic Control Plans (TTCP) Workshop. The DEPARTMENT will submit the project’s Temporary Traffic Control Plans for an external peer review at Phase II. Following this review, the DEPARTMENT’s Design Project Manager will schedule the TTCP Workshop.

Materials to be provided by the CONSULTANT to facilitate the TTCP Workshop shall include, but not be limited to the following (in no particular order):

- Plan view aerial roll plot of each traffic control phase involving a lane shift with side streets and businesses labeled
- Traffic control typical sections
• The most recent set of construction plans

The effort associated with attending this workshop shall be included in Section 4.22.

The CONSULTANT shall conduct a Lane Closure Analysis to determine work conditions when no lane closures will be allowed.

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. The CONSULTANT shall be responsible for obtaining local authorities permission for use of detour routes not on state highways.

4.11 Master TTCP Design Files

The CONSULTANT shall develop master TTCP files showing each phase of the TTCP. This includes all work necessary for designing lane configurations, diversions, lane shifts, signing and pavement markings, temporary traffic control devices, and temporary pedestrian ways.

4.12 Selective Clearing and Grubbing (Not applicable to this project)

4.13 Tree Disposition Plans (Not applicable to this project)

4.14 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 before the first submittal.

4.15 Design Report

The CONSULTANT shall prepare all applicable report(s) as listed in the Project Description section of this scope. Reports are to be delivered as a signed and sealed pdf file.

4.16 Quantities

The CONSULTANT shall develop accurate quantities and the supporting documentation, including proposed construction days and total contract time.

4.17 Cost Estimate

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.
Prior to Phase I - Within 30 (thirty) calendar days of the written Notice to Proceed, the CONSULTANT shall submit a revised construction cost estimate using the DEPARTMENT’s Long Range Estimating System (L.R.E.). The revised estimate shall be based on all work items likely to be included in the project whether or not explicitly defined in this initial scope of work, including, but not limited to, work items being analyzed for possible inclusion in the scope after DEPARTMENT approval. This estimate is understood to be preliminary and will be used to better budget construction costs. The District Preliminary Estimates Office will provide the CONSULTANT with a version of the L.R.E. in the system for their use.

Phase I - For the Phase I (30%) submittal, the CONSULTANT shall submit the cost estimate using the DEPARTMENT’s Long Range Estimating (L.R.E.) system.

Phase II - For the Phase II (60%) submittal, the CONSULTANT shall submit the cost estimate using the DEPARTMENT’s Long Range Estimating (L.R.E.) System.

Phases III & IV - The complete submittal package, including the CONSULTANT’s construction cost estimate, 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.). If the project includes a Special Detour, the CONSULTANT shall prepare and submit a Special Detour Quantity Worksheet for submittal at phase III (90%).

4.18 Technical Special Provisions and Modified Special Provisions (Not applicable to this project)

4.19 Other Roadway Analyses

Tree Inventory Assessment: On projects where numerous impacts are expected, the CONSULTANT shall produce a tree conflict matrix to describe tree types, sizes, and locations as well as the expected impacts and suggested remedies to alleviate.

4.20 Field Reviews

4.21 Monitor Existing Structures (Not applicable to this project)

4.22 Technical Meetings

This task includes effort for (but is not limited to) the following meetings:

Production Survey Meeting: This task includes the effort for the CONSULTANT to attend the Production Survey Meeting as described in Section 2.10.

Line and Grade Meeting: Specific Requirements: This task includes efforts associated with the Line and Grade Meeting. The CONSULTANT will coordinate the scheduling, format and materials necessary with the DEPARTMENT’s Design Project Manager.
Post 60% Review Workshop: *These workshops are typically held with DEPARTMENT Area Operations personnel in conjunction with the Utility Design Meeting* (see section 7.9). *The workshops take place at a location appropriate for the project that will allow for a same-day project site visit.* *The workshops may consist of a Project Briefing, Project Design Review Workshop, and a Field Review; however, the format and need for the meeting will depend on the project’s complexity and the CONSULTANT’s familiarity with the District’s policies and procedures.* *The workshop will be co-chaired by the CONSULTANT and the DEPARTMENT’s Design Project Manager.* *The DEPARTMENT’s Area Utility Manager will chair and take minutes of the utility coordination segment of the workshop.*

**TTCP Workshop:** *In addition, the CONSULTANT shall attend an TTCP Workshop to present the Temporary Traffic Control Plans to the DEPARTMENT.* *This workshop will be scheduled by the DEPARTMENT’s Design Project Manager to occur at some point following the Phase II plans review.* *The effort to prepare necessary workshop materials shall be included in Section 4.10.*

4.23 Quality Assurance/Quality Control

4.24 Independent Peer Review (Not applicable to this project)

4.25 Supervision

4.26 Coordination

5 ROADWAY PLANS

The CONSULTANT shall prepare Roadway, TTCP, 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 loading 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
The CONSULTANT shall be responsible for inputting pay items and quantities into the DEPARTMENT’s Project Preconstruction (PrP) System through the use of the DEPARTMENT’s Designer Interface.

Phase I - The project shall be established in PrP by Phase I (30%). The District Preliminary Estimates Office will create the project(s) in the system upon receiving a copy of the Notice to Proceed for the design contract.

Phase II - A Summary of Pay Items sheet shall be prepared with Phase II and subsequent plans submittals. The 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”.

Phases III & IV – At Phase III (90%) the CONSULTANT shall have all quantities loaded into PrP, with only minor change anticipated at subsequent submittals. Within PrP, 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. The above shall be provided for each component set of plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

5.3 Typical Section Sheets

5.3.1 Typical Sections

5.3.2 Typical Section Details

5.4 General Notes/Pay Item Notes

5.5 Summary of Quantities Sheets

5.6 Project Layout

5.7 Plan/Profile Sheet (Not applicable to this project)

5.8 Profile Sheet

5.9 Plan Sheet

5.10 Special Profile

5.11 Back-of-Sidewalk Profile Sheet (Not applicable to this project)

5.12 Interchange Layout Sheet (Not applicable to this project)

5.13 Ramp Terminal Details (Plan View) (Not applicable to this project)

5.14 Intersection Layout Details (Not applicable to this project)
5.15 Special Details
5.16 Cross-Section Pattern Sheet(s)
5.17 Roadway Soil Survey Sheet(s)
5.18 Cross Sections
5.19 Temporary Traffic Control Plan Sheets
5.20 Temporary Traffic Control Cross Section Sheets
5.21 Temporary Traffic Control Detail Sheets
5.22 Utility Adjustment Sheets
5.23 Selective Clearing and Grubbing Sheet(s) (Not applicable to this project)
5.24 Tree Disposition Plan Sheet(s) (Not applicable to this project)
5.25 Project Network Control Sheet(s)
5.26 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.

Coordination with Permits/Environmental staff and preparing Dredge & Fill Detail sheets where applicable.

5.27 Utility Verification Sheet(s) (SUE Data) (Not applicable to this project)
5.28 Quality Assurance/Quality Control
5.29 Supervision

6a 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 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:

6a.1 Drainage Map Hydrology

Create a (pre and/or post condition) working drainage basin map to be used in defining the system hydrology. This map shall incorporate drainage basin boundaries, existing survey and/or LiDAR and field observations, as necessary, to define the system. Basin delineations shall also include any existing collection systems in a logical manner to aid in the development of the hydraulic model. Include coordination hours needed to convey drainage hydrologic features onto produced drainage maps.

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, NFWFMD 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.

6a.2 Base Clearance Calculations

Analyze, determine, and document high water elevations per basin which will be used to set roadway profile grade and roadway materials. Determine surface water elevations at cross drains, floodplains, outfalls and adjacent stormwater ponds. Determine groundwater elevations at intervals between the above-mentioned surface waters. Document findings in the Drainage Design Documentation Report, see 6a.13.

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.

6a.3 Pond Siting Analysis and Report (Not applicable to this project)

6a.4 Design of Cross Drains

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 (or the local maintaining agency for off-system projects) regarding historical drainage problems in the project areas.

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

6a.5 Design of Ditches

Design roadway conveyance and outfall ditches. This task includes capacity calculations, longitudinal grade adjustments, flow changes, additional adjustments for ditch convergences, selection of suitable channel lining, design of side drain pipes, and documentation. (Design of linear stormwater management facilities in separate task.)

6a.6 Design of Stormwater Management Facility (Offsite or Infield Pond)

Design stormwater management facilities to meet requirements for stormwater quality treatment, attenuation and aesthetics. Develop proposed pond layout (contributing drainage basin, shape, contours, slopes, volumes, tie-ins, aesthetics, etc.), perform routing, pollutant/nutrient loading calculations, recovery calculations, design the outlet control structure and buoyancy calculations for pond liners when necessary.

6a.7 Design of Stormwater Management Facility (Roadside Treatment Swales and Linear Ponds)

Design stormwater management facilities to meet requirements for stormwater quality treatment, attenuation and aesthetics. Develop proposed pond layout (contributing drainage basin, shape, contours, slopes, volumes, tie-ins, aesthetics, etc.), perform routing, pollutant/nutrient loading calculations, recovery calculations and design the outlet control structure.

6a.8 Design of Floodplain Compensation (Not applicable to this project)

6a.9 Design of Storm Drains (Not applicable to this project)

6a.10 Optional Culvert Material

Determine acceptable options for pipe materials using the Culvert Service Life Estimator.

The CONSULTANT will consider alternate culvert materials in accordance with the DEPARTMENT's Drainage Manual.
6a.11 French Drain Systems

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.

6a.11a Existing French Drain Systems

Include this task if French Drains are proposed and the existing systems must be analyzed for a pre- versus post comparison of the peak stages and/or discharges.

6a.12 Drainage Wells (Not applicable to this project)

6a.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 for stand-alone reports, such as the Pond Siting Analysis Report and Bridge Hydraulics Report.

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.

6a.14 Bridge Hydraulic Report

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

6a.15 Temporary Drainage Analysis

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

6a.16 Cost Estimate

Prepare cost estimates for the drainage components, except bridges and earthwork for stormwater management and flood compensation sites.


6a.18 Hydroplaning Analysis (Not applicable for this project)

6a.19 Existing Permit Analysis (Not applicable for this project)

6a.20 Other Drainage Analysis
6a.21 Field Reviews

6a.22 Technical Meetings

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.

6a.23 Environmental Look-Around Meetings

Convene a meeting with Department staff, regulatory agencies, local governments and other stakeholders to explore watershed wide stormwater needs and alternative permitting approaches.

6a.24 Quality Assurance/Quality Control

6a.25 Independent Peer Review (Not applicable to this project)

6a.26 Supervision

6a.27 Coordination

6b DRAINAGE PLANS

The CONSULTANT shall prepare Drainage 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.

6b.1 Drainage Map (Including Interchanges)

6b.2 Bridge Hydraulics Recommendation Sheets

6b.3 Summary of Drainage Structures

6b.4 Optional Pipe/Culvert Material

6b.5 Drainage Structure Sheet(s) (Per Structure)

6b.6 Miscellaneous Drainage Detail Sheets

6b.7 Lateral Ditch Plan/Profile

6b.8 Lateral Ditch Cross Sections

6b.9 Retention/Detention Pond Detail Sheet(s)

6b.10 Retention Pond Cross Sections

6b.11 Erosion Control Plan Sheet(s)
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 Utility Kickoff Meeting

Before any contact with the UAO(s), the CONSULTANT shall meet or teleconference with the DEPARTMENT’s Area Utility Manager 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 Utility Agency Owner(s)

The CONSULTANT will identify all utilities in the corridor during the survey phase by calling Sunshine 811. 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. A copy of the Sunshine 811 “design” ticket listing all utility owners within the project limits shall be provided within 10 business days of the Notice to Proceed (NTP) as part of all subsequent phase submittals.

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

7.3 Make Utility Contacts (To Be Conducted by the DEPARTMENT)

The DEPARTMENT’s Area Utility Manager will make contact and distribute plans to the applicable UAO’s. A memo requesting that the UAO’s verify/mark all existing facilities will be sent along with the plans.

7.4 Exception Processing

For above-ground utility installations that are to remain within the horizontal clearance area WITHOUT viable options for relocation within the R/W, the CONSULTANT will be responsible for obtaining Design Exceptions. For above-ground utility installations that are to remain within the horizontal clearance area WITH available R/W and options for relocation, the UAO will be responsible for obtaining Design Exceptions. The DEPARTMENT will coordinate all necessary Utility Exceptions.
7.5 Preliminary Utility Meeting

The DEPARTMENT 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 shall meet with each UAO as necessary, separately or together, throughout the project design duration to provide guidance in the interpretation of plans, review changes to the plans and schedules, standard or selective clearing and grubbing work, and assist in the development of the UAO(s) plans and work schedules. The CONSULTANT is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting. 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 the Phase II submittal. Subsequent phase submittals will require that the Utility Conflict Matrix be updated and submitted reflecting any design changes or new information. Marked plans provided from UAOs may need to be acquired through the Department’s Project Suite Enterprise Edition (PSEE) system.*

7.8 Subordination of Easements Coordination (To Be Conducted by the DEPARTMENT)

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

*The DEPARTMENT’s Area Utility Manager shall coordinate with the DEPARTMENT’s Design Project Manager and schedule (time and place), notify participants, and conduct a Utility Design Meeting with all affected UAO(s). This meeting may be held in conjunction with the Post 60% Workshop described in Section 4.22. The CONSULTANT shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAO(s). The*
CONSULTANT shall be prepared to discuss impacts to existing trees/vegetation and proposed landscape, drainage, traffic signalization, temporary traffic control plan (TTCP) (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable property rights from FDOT Legal Office, discuss with each UAO the utility work by highway contractor option, 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 TTCP with each UAO. The intent of this meeting shall be to assist the UAOs in identifying and resolving conflicts between utilities and proposed construction before completion of the plans, including utility adjustment details. Also to work with the UAOs to recommend potential resolution between known utility conflicts with proposed construction plans as may be deemed practical by the UAO. The CONSULTANT shall keep accurate minutes of all meetings and distribute a copy to all attendees within 3 days. See Task 4.5 (Horizontal/Vertical Master Design File) and Task 4.8 (Cross Section Design Files) for utility conflict location identification and adjustments.

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

The CONSULTANT is to review the UAO marked up plans and the Utility Work Schedules as they are received and assure that they are compatible with the proposed design features in the plans. The CONSULTANT shall review the specific details of the markups and schedules with the Area Utility Manager as required to finalize the status of each potential conflict. Send color markups and schedules to the appropriate DEPARTMENT office(s) such as survey, geotechnical, drainage, structures, lighting, roadway, signals, utilities, landscape architecture, municipalities, maintaining agency, and District Traffic Operations for review and comment if required by the District. The CONSULTANT shall also verify that the schedules conform to the construction phasing and TTCP sequences. Coordinate with the District for execution. Distribute Executed Final Documents. Prepare Work Order for UAO(s). The CONSULTANT shall coordinate with the DUO the programming of necessary Work Program funds.

UTILITY SCHEDULE REPORT - The CONSULTANT shall provide a written review of the critical path utility relocation activities and durations, considering possible concurrent construction activities, and a recommendation of Utility Dependent Time to be added to the overall Contract Time. This “written review” will be referred to as the Utility Schedule Report and will be required at the Phase III Submittal (and subsequent submittals) with the CONSULTANT’s Contract Time Estimate. The Utility Schedule Report will be revisited, updated, and resubmitted as necessary to the DEPARTMENT’s Area Utility Manager and Design Project Manager as the Utility Work Schedules are finalized.

Any design changes affecting utilities that occur after the Phase IV Resubmittal must be submitted to the DEPARTMENT’s Area Utility Manager so that Utility Work Schedules can be updated.
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 (To Be Conducted by the DEPARTMENT)

Utility Constructability Review activities will be performed by the DEPARTMENT. The CONSULTANT shall review utility schedules against construction contract time, and phasing for compatibility. Coordinate with and obtain written concurrence from the construction office. See Task 4.5 (Horizontal/Vertical Master Design File) and Task 4.9 (Cross Section Design Files) for utility conflict identification and adjustments.

7.13 Additional Utility Services (To be Included via Supplemental Agreement)

*The CONSULTANT will provide any subsurface utility excavations (SUE) that are required for the projects. This effort will be negotiated in Section 27.10.*

*The CONSULTANT may be required to provide additional utility services. Additional services will be determined when the services are required and requested. 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.*

7.14 Processing Utility Work by Highway Contractor (UWHC) (To Be Conducted by the DEPARTMENT)

*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 and process UWHC agreements, review tabulation of quantities prepared by the UAO(s), perform UWHC constructability and bidability reviews, review pay items and cost estimates, and review and incorporate Technical Special Provisions (TSPs) or Modified Special Provisions (MSP) prepared by the UAO. 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. Effort for the EOR is not included in this task, see Roadway Analysis Task Group 4.
7.15 Contract Plans to UAO(s)

The CONSULTANT will be responsible for providing the necessary electronic files to the DEPARTMENT’s Design Project Manager for submittal to the Area Utility Manager at each Phase Submittal.

7.16 Certification/Close-Out (To Be Conducted by the DEPARTMENT)

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, COMPLIANCE, AND ENVIRONMENTAL CLEARANCES

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. The Consultant shall use current regulatory guidelines and policies for all permits required as identified in Section 2.4.

8.1 Preliminary Project Research

The CONSULTANT shall perform preliminary project research and shall be responsible for regulatory agency coordination to assure that design efforts are properly directed toward permit requirements. The research shall include but should not be limited to a review of the project’s PD&E documents including the Environmental Document, Natural Resources Evaluation, and Cultural Resources Assessment Survey.

8.2 Field Work

8.2.1 Pond Site Alternatives: The CONSULTANT shall review alternative pond sites as directed by the DEPARTMENT and information shall be included in the Pond Siting Report.

8.2.2 Establish Wetland Jurisdictional Lines and Assessments:

The CONSULTANT shall be responsible for, but not limited to, the following activities:

- Determine landward extent of wetlands and other surface waters as defined in
Rule Chapter 62-340, F.A.C., as ratified in Section 373.4211, F.S.

- Collect all data and information necessary to determine the jurisdictional boundaries of wetlands and other surface waters as defined by the rules or regulations of each permitting agency processing a DEPARTMENT permit application for the project.
- Set seasonal high water levels
- Obtain a jurisdictional determination as defined by the rules or regulations of each permitting agency processing a DEPARTMENT permit application for the project.
- Prepare aerial maps showing the jurisdictional boundaries of wetlands and other surface waters. Aerial maps shall be reproducible, of a scale of 1”=400’ or more detailed and be recent photography. The maps shall show the jurisdictional boundaries of each agency. Photo copies of aerals are not acceptable. When necessary, a wetland specific survey will be prepared by a registered surveyor and mapper. All surveyed jurisdictional boundaries are to be tied to the project’s baseline of survey.
- Prepare a written assessment of the current condition and functional value of the wetlands and other surface waters. Prepare data in tabular form which includes the ID number for each wetland (and other surface water, if necessary) impacted, size of wetland to be impacted, type of impact, and identify any wetland (by ID number and size) within the project limits that will not be impacted by the project.
- Prepare appropriate agency forms to obtain required permits. Forms may include but are not limited to the United States Army Corps of Engineers (USACE) “Wetland Determination Data Form – Atlantic and Gulf Coastal Plain Region”; the USACE “Approved Jurisdictional Determination Form”; Uniform Mitigation Assessment Method forms and/or project specific data forms.

8.2.3 Species Surveys: (Not applicable to this project)

8.3 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 shall be responsible for verification of wetland data identified in Section 8.2 and coordinating regulatory agency field reviews, including finalization of wetland assessments and jurisdictional determinations with applicable agencies.

8.4 Complete and Submit All Required Permit Applications

The CONSULTANT shall collect all of the data and information necessary to prepare the permit applications and obtain the environmental permits required to construct the project as identified in the Project Description and as described in 8.4.1, 8.4.2, and 8.12 (Other Permits). The CONSULTANT shall prepare each
permit application in accordance with the rules and/or regulations of the regulatory agency responsible for issuing a specific permit and/or authorization to perform work. The permit application packages must be approved by the DEPARTMENT prior to submittal to regulatory agencies.

A Pre-Application meeting with the permitting agencies can be anticipated for projects that require an Individual ERP from the State of Florida or an Individual Permit from the Army Corps of Engineers. As a project develops, other project specific conditions may be identified that will warrant a Pre-Application meeting to clarify the permitting requirements. The DEPARTMENT’s Design Project Manager, District Drainage Engineer, and District Permit Coordinator will be invited to the Pre-Application meeting (when required) and will be forwarded all correspondence and meeting minutes.

The CONSULTANT will submit all permit applications, as directed by the DEPARTMENT, and be responsible for payment of all permit fees. The CONSULTANT will file any public notices required by the permits, in a publication selected by the DEPARTMENT, and will be responsible for payment of all fees associated with the filing the public notice.

The CONSULTANT shall be responsible for responding to Requests for Additional Information by the reviewing agency.

8.4.1 Complete and Submit all Required Wetland Permit Applications:

The CONSULTANT shall prepare, complete, and submit required wetland permit (i.e. ERP, Section 404) application packages to the appropriate regulatory agencies. This includes, but is not limited to, applications submitted to WMDs and/or DEP, and USACE. The application package may include but is not limited to attachments (i.e. project location map, aerials, affidavit of ownership, pictures, additional technical analysis, etc.), a cover letter with project description as well as completion of applicable agency forms. 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. The CONSULTANT shall prepare and respond to agency Requests for Additional Information (RAIs), including necessary revisions to the application package. All responses and completed application packages must be approved by the District Permit Coordinator prior to submittal to the regulatory agencies. Geotechnical permitting should also be prepared, submitted, and obtained.

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.

8.4.2 Complete and Submit all Species Permit Applications: (Not applicable to this project)
8.5 Coordinate and Review Dredge and Fill Sketches

The CONSULTANT shall review Dredge and Fill Detail sheets to ensure information on the sketch(es) meet the requirements of the regulatory agencies and are appropriate for environmental permit application submittal and acquisition. The CONSULTANT will also provide environmental data/information as needed to support the preparation of the Dredge and Fill sketches.

8.6 Prepare USCG Permit Sketches

If it is determined that a USCG permit is required, the CONSULTANT shall prepare the USCG permit sketches in accordance with the most recent USCG Bridge Permit Application Guide.

8.7 Prepare Water Management District or Local Water Control District Right of Way Occupancy Permit Application (Not applicable to this project)

8.8 Prepare Coastal Construction Control Line (CCCL) Permit Application (Not applicable to this project)

8.9 Prepare Tree Permit Information (Not applicable to this project)

8.10 Compensatory Mitigation Design (To Be Provided by Others or via Supplemental Amendment)

The FDOT mitigation design will be in accordance with CH 373.4137 FS. The DEPARTMENT will direct the CONSULTANT regarding whether the NWFWMD will prepare the mitigation plan, or if the DEPARTMENT will purchase mitigation credits from an appropriate mitigation bank. If a mitigation plan is not provided by the NWFWMD or if the DEPARTMENT is unable to purchase mitigation credits from a mitigation bank, the CONSULTANT may be asked to prepare a mitigation plan, at which point a Supplemental Agreement will be processed.

8.11 Mitigation Coordination and Meetings

The CONSULTANT shall coordinate with DEPARTMENT personnel prior to approaching any environmental permitting or reviewing agencies. The CONSULTANT will provide mitigation information needed to update the FDOT Environmental Impact Inventory.

If it is determined at the Pre-Application meeting that wetland mitigation is required, the CONSULTANT shall submit the UMAM (completed in Section 8.4.1) including the Mitigation Determination Formulas and mitigation options for the project area to the Department.

8.12 Other Environmental Permits (Not applicable to this project)
ENVIRONMENTAL CLEARANCES, RE-EVALUATIONS, AND TECHNICAL SUPPORT

8.13 Technical Support to the DEPARTMENT for Environmental Clearances and Re-evaluations

The CONSULTANT shall provide engineering and environmental support for the DEPARTMENT to obtain environmental clearances for all changes to the project after the PD&E study was approved. 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.

8.13.1 NEPA or SEIR Re-evaluation: (To be provided by the DEPARTMENT)

8.13.2 Archaeological and Historical Features: (Not applicable to this project)

8.13.3 Wetland Impact Analysis: (Not applicable to this project)

8.13.4 Essential Fish Habitat Impact Analysis: (Not applicable to this project)

8.13.5 Protected Species and Habitat Impact Analysis: (Not applicable to this project)

8.14 Preparation of Environmental Clearances and Reevaluations (TO BE PROVIDED BY THE DEPARTMENT)

8.14.1 NEPA or SEIR Reevaluation: (Not applicable to this project)

8.14.2 Archaeological and Historical Features: (Not applicable to this project)

8.14.3 Wetland Impact Analysis: (Not applicable to this project)

8.14.4 Essential Fish Habitat Impact Analysis: (Not applicable to this project)

8.14.5 Protected Species and Habitat Impact Analysis: (Not applicable to this project)

8.15 Contamination Impact Analysis (Not applicable to this project)

8.16 Asbestos Survey (Not applicable to this project)

8.17 Technical Meetings

8.18 Quality Assurance/Quality Control

8.19 Supervision

8.20 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS

The CONSULTANT shall analyze, design, and develop contract documents for all
structures in accordance with applicable provisions as defined in Section 2.21, 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 2.21, 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 digital media or, at the DEPARTMENT’s request, on 8½”x11” paper and all sheets shall be numbered. The final design calculations shall be signed and sealed by a Florida-licensed 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.

Three (3) bridges exist within the project limits (BR570009 – CR 4 (Antioch Road) over SR 8 and BR Nos. 570008 and 570052 – over SR 85 (South Ferdon Boulevard). No work is anticipated on BR570009. BR Nos. 570008 and 570052 shall be widened to accommodate the additional lane along SR 8. The existing typical section for these bridges includes two-12’ lanes with 6’ inside shoulder and a 10’ outside shoulder. The new bridge typical section will consist of three-12’ lanes with appropriate shoulders for the traffic volume.

One (1) concrete bridge culvert exists within the project limits (CB570007 – SR 8 over Juniper Creek) will be widened to accommodate the additional travel lane on SR 8. A load rating analysis will be required if the pavement design results in a change in the dead load on the structure.

9.1 Key Sheet and Index of Drawings
9.2 Project Layout (Not applicable to this project)
9.3 General Notes and Bid Item Notes
9.4 Miscellaneous Common Details
9.5 Incorporate Report of Core Borings
9.6 Design Standards – Bridges
9.7 Existing Bridge Plans
9.8 Assemble Plan Summary Boxes and Quantities
9.9 Cost Estimate
9.11 Field Reviews
9.12 Technical Meetings
9.13 Quality Assurance/Quality Control
9.14 Independent Peer Review (Not applicable to this project)
9.15 Supervision
9.16 Coordination

10 STRUCTURES - BRIDGE DEVELOPMENT REPORT

The Consultant shall prepare a Bridge Development Report (BDR). The BDR shall be submitted as part of the Phase I Roadway Submittal, General Requirements.

General Requirements

10.1 Bridge Geometry
10.2 Ship Impact Data Collection (Not applicable to this project)
10.3 Ship Impact Criteria (Not applicable to this project)

Superstructure Alternatives

10.4 Short-Span Concrete
10.5 Medium-Span Concrete
10.6 Long Span Concrete
10.7 Structural Steel

Foundation and Substructure Alternatives

10.8 Pier/Bent
10.9 Shallow Foundations / GRS Abutments

For single span bridge designs, this task includes the efforts necessary to evaluate the suitability of Geosynthetic Reinforced Soil (GRS) Walls and Abutments.

10.10 Deep Foundations
Movable Span

10.11 Data Collection and Design Criteria
10.12 Movable Span Geometrics and Clearances
10.13 Deck System Evaluation
10.14 Framing Plan Development
10.15 Main Girder Preliminary Design
10.16 Conceptual Span Balance/Counterweight
10.17 Support System Development
10.18 Drive Power Calculations
10.19 Drive System Development
10.20 Power and Control Development
10.21 Conceptual Pier Design
10.22 Foundation Analysis (FL PIER)
10.23 Tender Visibility Study

Other BDR Issues

10.24 Aesthetics
10.25 TTCP/Staged Construction Requirements
10.26 Constructability Requirements
10.27 Load Rating for Damaged/Widened Structures
10.28 Quantity and Cost Estimates
10.29 Quantity and Cost Estimates - Movable Span
10.30 Wall Type Justification

Report Preparation

10.31 Exhibits
10.32 Exhibits - Movable Span
10.33 Report Preparation
10.34 Report Preparation - Movable Span
10.35 BDR Submittal Package

11 STRUCTURES - TEMPORARY BRIDGE and tasks 11.1 – 11.8 are not applicable to this project.

12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE and tasks 12.1 – 12.28 are not applicable to this project.

13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE

The CONSULTANT shall prepare plans for Medium Span Concrete Bridge(s) at the location(s) specified in Section 2.5.

General Layout Design and Plans
13.1 Overall Bridge Final Geometry
13.2 Expansion/Contraction Analysis
13.3 General Plan and Elevation
13.4 Construction Staging
13.5 Approach Slab Plan and Details
13.6 Miscellaneous Details

End Bent Design and Plans
13.7 End Bent Geometry
13.8 Wingwall Design and Geometry
13.9 End Bent Structural Design
13.10 End Bent Plan and Elevation
13.11 End Bent Details

Intermediate Bent Design and Plans
13.12 Bent Geometry
13.13  Bent Stability Analysis
13.14  Bent Structural Design
13.15  Bent Plan and Elevation
13.16  Bent Details

Pier Design and Plans
13.17  Pier Geometry
13.18  Pier Stability Analysis
13.19  Pier Structural Design
13.20  Pier Plan and Elevation
13.21  Pier Details

Miscellaneous Substructure Design and Plans
13.22  Foundation Layout

Superstructure Deck Design and Plans
13.23  Finish Grade Elevation (FGE) Calculation
13.24  Finish Grade Elevations
13.25  Bridge Deck Design
13.26  Bridge Deck Reinforcing and Concrete Quantities
13.27  Diaphragm Design
13.28  Superstructure Plan
13.29  Superstructure Section
13.30  Miscellaneous Superstructure Details

Reinforcing Bar Lists
13.31  Preparation of Reinforcing Bar List

**Continuous Concrete Girder Design** and tasks 13.32 – 13.48 are not applicable to this project.
Simple Span Concrete Design

13.49  Prestressed Beam

13.50  Prestressed Beam Schedules

13.51  Framing Plan

Beam Stability

13.52  Beam/Girder Stability

Bearing

13.53  Bearing Pad and Bearing Plate Design

13.54  Bearing Pad and Bearing Plate Details

Load Rating

13.55  Load Rating

14  STRUCTURES - STRUCTURAL STEEL BRIDGE and tasks 14.1 – 14.62 are not applicable to this project.

15  STRUCTURES - SEGMENTAL CONCRETE BRIDGE and tasks 15.1 – 15.77 are not applicable to this project.

16  STRUCTURES - MOVABLE SPAN and tasks 16.1 – 16.102 are not applicable to this project.

17  STRUCTURES - RETAINING WALL and tasks 17.1 – 17.21 are not applicable to this project.

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
18.3 Concrete Box Culvert Data Table Plan Sheets

18.4 Concrete Box Culvert Special Details Plan Sheets

Strain Poles and tasks 18.5 – 18.8 are not applicable to this project.

Mast Arms and tasks 18.9 – 18.11 are not applicable to this project.

Overhead/Cantilever Sign Structure and tasks 18.12 – 18.18 are not applicable to this project.

High Mast Lighting and tasks 18.19 – 18.20 are not applicable to this project.

Noise Barrier Walls (Ground Mount)

Noise barriers will be evaluated during the PD&E phase for the project limits. For the purposes of his contract, design analysis will be included as an OPTIONAL SERVICE and executed by the DEPARTMENT at such time if deemed necessary.

Special Structures and tasks 18.28 – 18.31 are not applicable to 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 (Not applicable to this project)

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 (Not applicable to this project)

19.7 Quantities

19.8 Cost Estimate


19.10 Other Signing and Pavement Marking Analysis

*Rumble Strips are required on the Interstate for Audible/vibratory edge treatments.*

19.11 Field Reviews

19.12 Technical Meetings

19.13 Quality Assurance/Quality Control

19.14 Independent Peer Review (Not applicable to this project)

19.15 Supervision

19.16 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 construction.*

20.1 Key Sheet

20.2 Summary of Pay Items Including Designer Interface Quantity 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 (Not applicable to this project)
20.10 Cross Sections (Not applicable to this project)

20.11 Special Service Point Details (Not applicable to this project)

20.12 Special Details

20.13 Interim Standards

20.14 Quality Assurance/Quality Control

The CONSULTANT shall be responsible for the professional quality, technical accuracy and coordination of traffic design 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 design drawings, specifications and other services 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 may be one utilized by the CONSULTANT as part of their normal operation or it may be one specifically designed for this project.

20.15 Supervision

21 SIGNALIZATION ANALYSIS and tasks 21.1 – 21.19 are not applicable to this project.

22 SIGNALIZATION PLANS and tasks 22.1 – 22.18 are not applicable to this project.

23 LIGHTING ANALYSIS and tasks 23.1 – 23.18 are not applicable to this project.

24 LIGHTING PLANS and tasks 24.1 – 24.14 are not applicable to this project.

25 LANDSCAPE ARCHITECTURE ANALYSIS and tasks 25.1 – 25.17 are not applicable to this project.

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

27 SURVEY

Some Survey for this project will be provided during the PD&E process. The CONSULTANT shall provide any additional survey required to accomplish the design of the project and shall perform said survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.
The CONSULTANT shall submit all survey notes and computations to document the surveys. All field survey work shall be recorded in approved media and submitted to the DEPARTMENT. Field books submitted to the DEPARTMENT must be of an approved type. The field books shall be certified by the surveyor in responsible charge of work being performed before the final product is submitted.

The survey notes shall include documentation of decisions reached from meetings, telephone conversations or site visits. All like work (such as bench lines, reference points, etc.) shall be recorded contiguously. The DEPARTMENT may not accept field survey radial locations of section corners, platted subdivision lot and block corners, alignment control points, alignment control reference points and certified section corner references. The DEPARTMENT may instead require that these points be surveyed by true line, traverse or parallel offset.

27.1 Horizontal Project Control (HPC) *(To Be Provided by the DEPARTMENT)*

*Includes effort necessary to recover control established by others.*

27.2 Vertical Project Control (VPC) *(To Be Provided by the DEPARTMENT)*

*Includes effort necessary to recover control established by others.*

27.3 Alignment and/or Existing Right of Way (R/W) Lines

*Refer to the FDOT Survey Handbook for requirements.*

27.4 Aerial Targets

*Refer to the FDOT Survey Handbook for requirements.*

27.5 Reference Points

*Refer to the FDOT Survey Handbook for requirements.*

27.6 Topography/Digital Terrain Model (DTM) (3D)

*Refer to the FDOT Survey Handbook for requirements.*

27.7 Planimetric (2D)

*Refer to the FDOT Survey Handbook for requirements.*

27.8 Roadway Cross Sections/Profiles

*Refer to the FDOT Survey Handbook for requirements.*

27.9 Side Street Surveys (Not applicable to this project)
27.10 Underground Utilities

Refer to the FDOT Survey Handbook for requirements.

27.11 Outfall Survey

Refer to the FDOT Survey Handbook for requirements.

27.12 Drainage Survey

Refer to the FDOT Survey Handbook for requirements.

27.13 Bridge Survey (Minor/Major)

Refer to the FDOT Survey Handbook for requirements.

27.14 Channel Survey

Refer to the FDOT Survey Handbook for requirements.

27.15 Pond Site Survey (Not applicable to this project)

27.16 Mitigation Survey

Refer to tasks of this document as applicable as well as the FDOT Survey Handbook for requirements.

27.17 Jurisdiction Line Survey

Refer to the FDOT Survey Handbook for requirements.

27.18 Geotechnical Support

Refer to the FDOT Survey Handbook for requirements.

27.19 Sectional/Grant Survey

Refer to the FDOT Survey Handbook for requirements.

27.20 Subdivision Location (Not applicable to this project)

27.21 Maintained R/W (Not applicable to this project)

27.22 Boundary Survey (Not applicable to this project)

27.23 Water Boundary Survey

Refer to the FDOT Survey Handbook for requirements.

27.24 Right of Way Staking, Parcel / Right of Way Line (Not applicable to this project)
27.25 Right of Way Monumentation (Not applicable to this project)

27.26 Line Cutting

Refer to the FDOT Survey Handbook for requirements.

27.27 Work Zone Safety

Provide work zone as required by DEPARTMENT standards. Refer to the FDOT Survey Handbook for requirements.

27.28 Miscellaneous Surveys (Not applicable to this project)

27.29 Supplemental Surveys (Not applicable to this project)

27.30 Document Research (To Be Provided by the CONSULTANT)

27.31 Field Review

Perform verification of the field conditions as related to the collected survey data. Refer to the FDOT Survey Handbook for requirements.

27.32 Technical Meetings

Attend meetings as required and negotiated by the Surveying and Mapping Department.

27.33 Quality Assurance/Quality Control (QA/QC)

Establish and implement a QA/QC plan. Also includes subconsultant review, response to comments and any resolution meetings if required, preparation of submittals for review, etc. Refer to the FDOT Survey Handbook 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 P.S.M. or their delegate as approved by the District Surveying Office.

27.35 Coordination

Coordinate survey activities with other disciplines. These activities must be performed by the project supervisor, a Florida P.S.M. or their delegate as approved by the District Surveying Office.

28 PHOTOGRAFMETRY

The CONSULTANT shall perform photogrammetric tasks in accordance with all applicable statues, 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**

Review record data, create target diagrams, and plan the mission.

28.2 **Control Point Coordination**

Determine photo identifiable control points, and mark contact prints.

28.3 **Mobilization**

Perform pre- and post flight aircraft inspection; prepare the aircraft and camera for the mission.

28.4 **Flight Operations**

Operate the aircraft, aerial camera, and other instruments to obtain aerial photography.

28.5 **Film Processing**

Process, check, and annotate the aerial film.

28.6 **Photo Products**

Prepare contact prints, contact diapositives, and photo enlargements.

28.7 **Scanning**

Scan photographic images.

28.8 **LiDAR**

Includes data acquisition, post processing of LiDAR data to XYZ coordinates for "bare earth" classification.

28.9 **Aerial Triangulation**

Measure and adjust control within aerial images.

28.10 **Surfaces**

Includes collection of break lines and spot elevations.
28.11 **Ortho Generation**
Includes creation of final images.

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 Assurance/Quality Control

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, District specific requirements, 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

As early as possible, the CONSULTANT shall provide map(s) or plan sheets accompanied by a *.kmz file reflecting the requirements for additional right-of-way. The right-of-way requirements submittal shall identify, via highlighting in varying colors (not yellow), the existing right-of-way, required right-of-way,
temporary construction easements (TCEs), perpetual easements, intended license agreements (LAs), and limits of construction. In addition, this submittal will indicate in some way whether the submittal is draft or final. The requirements submittals are to be submitted electronically to the DEPARTMENT’s Design Project Manager. An updated *.kmz file is expected with each resubmittal. The requirements are not considered final until indicated by the DEPARTMENT. Once the requirements are approved, the CONSULTANT shall designate each sheet as “final” and transmit to the DEPARTMENT’s Design Project Manager in *.pdf format (the file name shall include the FPID number).

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 (Not applicable to this project)

29.11 Control Survey Key Sheet (Not applicable to this project)

29.12 Control Survey Detail Sheet (Not applicable to this project)

29.13 Right of Way Map Cover Sheet (Not applicable to this project)

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.

29.21 Table of Ownerships Sheet

Miscellaneous Surveys and Sketches

29.22 Parcel Sketches

29.23 TITF Sketches

29.24 Other Specific Purpose Survey(s)

29.25 Boundary Survey(s) Map

29.26 Right of Way Monumentation Map (To Be Provided During Post Design)

29.27 Title Search Map

29.28 Title Search Report (To Be Provided by the CONSULTANT)

29.29 Legal Descriptions (To Be Provided by the CONSULTANT)

29.30 Final Map/Plans Comparison

The PSM will perform a comparison of the final right of way or maintenance maps (whether prepared by the CONSULTANT or the DEPARTMENT) 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 and the DEPARTMENT 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 Surveyor prior to any work being done under this task.

30 TERRESTRIAL MOBILE LiDAR

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

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

30.1 Terrestrial Mobile LiDAR Mission Planning

Research and prepare materials necessary for the successful execution of the Mobile LiDAR Mission. This includes but is not limited to route and safety planning, GPS/data acquisition scheduling, weather reports, and site terrain research.

30.2 Project Control Point Coordination

All efforts necessary to coordinate the proper placement of project ground control i.e. base stations, transformation control points, and validation points, supporting the Mobile LiDAR survey.

30.3 Terrestrial Mobile LiDAR Mobilization

Prepare the LiDAR sensor and vehicle for project data collection, and get specialized personnel and equipment on site.

30.4 Terrestrial Mobile LiDAR Mission

Perform site calibrations of LiDAR sensor and collect laser survey data, including any simultaneous base station GPS occupations and operation of any necessary safety equipment.

30.5 Terrestrial Mobile LiDAR Processing

Download and post process collected measurement data from Mobile LiDAR vehicle sensors, and any base stations occupied during mission. Analyze Mobile LiDAR measurement points and scan route overlaps. Separate any large point cloud data sets into manageable file sizes with corresponding indexes.

30.6 Terrestrial Mobile Photography Processing

Process, reference, and name digital photographic imagery files collected during Mobile LiDAR mission.

30.7 Transformation / Adjustment

Adjust LiDAR point cloud data to Project Control points. Create point cloud data
file(s) in approved digital format. Prepare required reports of precision and accuracy achieved. If this task is performed by separate firm, or is the final product to be delivered, include effort for Survey Report.

30.8 Classification / Editing

Identify and attribute (classify) point cloud data into requested groups. Classify or remove erroneous points.

30.9 Specific Surface Reporting

Prepare reports, data and/or graphics of specific surface details such as, but not limited to pavement rutting, bridge structure clearance to roadway surface.

30.10 Topographic (3D) Mapping

Produce three dimensional (3D) topographic survey map(s) from collected Mobile LiDAR data. This includes final preparation of Construction Information Management (CIM) deliverable, if applicable.

30.11 Topographic (2D) Planimetric Mapping

Produce two dimensional (2D) planimetric map(s) from collected Mobile LiDAR data.

30.12 CADD Edits

Perform final edit of graphics for delivery of required CADD files. This includes final presentation of CIM deliverable, if applicable.

30.13 Data Merging

Merge Mobile LiDAR survey and mapping files, with other field survey files, and data from other sources.

30.14 Miscellaneous

Other tasks not specifically addressed in this document.

30.15 Field Reviews

Perform on site review of maps.

30.16 Technical Meetings

Attend meetings as required.

30.17 Quality Assurance/ Quality Control

Establish and implement a QA/QC plan.

30.18 Supervision

Supervise all Terrestrial Mobile LiDAR activities. This task must be performed by the project supervisor, a Florida P.S.M.
30.19 Coordination

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

31 ARCHITECTURE DEVELOPMENT and tasks 31.1 – 31.143 are not applicable to this project.

32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE

Noise barriers will be evaluated during the PD&E phase for the project limits. For the purposes of his contract, design analysis will be included as an OPTIONAL SERVICE and executed by the DEPARTMENT at such time if deemed necessary.

33 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS and tasks 33.1 – 33.21 to be included as discussed and approved by the DEPARTMENT as an Optional Service.

34 INTELLIGENT TRANSPORTATION SYSTEMS PLANS and tasks 34.1 – 34.21 to be included as discussed and approved by the DEPARTMENT as an Optional Service.

35 GEOTECHNICAL

The CONSULTANT shall, for each project, be responsible for a complete geotechnical investigation. 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 an 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. Upon approval of the investigation plan by the DEPARTMENT, the CONSULTANT shall submit an updated schedule prior to initiating the investigation plan. 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.

35.1 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

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

Obtain pavement cores as directed in writing by the District Geotechnical Engineer.

If required by the District Geotechnical Engineer, a preliminary roadway exploration shall be performed before the Phase I plans submittal and shall include a preliminary economic analysis, a plan for geotechnical investigation, and all field reconnaissance results. 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 note, but not be limited to, the following as applicable unless directed otherwise in writing by the District Geotechnical Engineer.

- Location survey stakes
- Bench marks
- Geological formation
- Surface soils (i.e., potential muck pockets)
- Surface water table
- General site conditions
- Debris and/or sanitary dump locations
- Rock type
- Conditions for detours
- Foundation type, condition and location
- Nearby structure type, condition and location
- Evidence of scour
- Site conditions relevant to boring plan including utilities, site access, private property access, equipment necessary, etc.
- Flow through soils, dunes, exposure, flood elevations on FIRM maps
- Possible obstructions to construction

CONSULTANT shall perform specialized field-testing as required by project needs and as directed in writing by the District Geotechnical Engineer.

All laboratory testing and classification will be performed in accordance with applicable DEPARTMENT standards, ASTM Standards or AASHTO Standards, and the Florida Department of Transportation Soils and Foundations Handbook unless otherwise specified in the Contract Documents.

35.2 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.

35.3 Stake Borings/Utility Clearance

Auger borings with water table readings, Standard Penetration Test (SPT) borings with water table readings, and Cone Penetrometer Test (CPT) soundings with water table readings shall be performed as applicable. Submit copies of field boring logs with driller’s notes via fax or email to the DEPARTMENT’s Geotechnical Project Manager.

Stake borings and cores and obtain utility clearance.

35.4 Muck Probing

Probe standing water and surficial muck in a detailed pattern sufficient for determining removal limits to be shown in the Plans.

35.5 Coordinate and Develop Temporary Traffic Control Plans for Field Investigation

Coordinate and develop Temporary Traffic Control Plan (TTCP). All work zone traffic control will be performed in accordance with the DEPARTMENT’s Standard Plans Index 102 series.

35.6 Drilling Access Permits (Not applicable to this project)

35.7 Property Clearances (Not applicable to this project)

35.8 Groundwater Monitoring

Monitor groundwater, using piezometers.
35.9 LBR / Resilient Modulus Sampling

The Consultant will coordinate with the District Geotechnical Office regarding the need for LBR sampling and testing. When so directed, the Consultant will collect appropriate samples.

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.

35.10 Coordination of Field Work

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

35.11 Soil and Rock Classification - Roadway

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

35.12 Design LBR

Determine design LBR values from the 90% and mean methods when LBR testing is required by the DEPARTMENT.

35.13 Laboratory Data

The laboratory testing for roadway shall consist of, but not be limited to, the following tests by designated procedures or directives available from the Geotechnical Project Manager:

- Sieve analysis conducted according to AASHTO T88 and additional applicable methods: AASHTO M-92, AASHTO M 145, AASHTO M 146, AASHTO M 147, FM 1-T87
- Atterberg limits conducted according to AASHTO T89 and AASHTO T90 and additional applicable methods: FM 1-T 87, AASHTO M 146
- LBR tests conducted according to FM 5-515 and additional applicable methods: Modification of AASHTO T-180 Method D, AASHTO M-92
- Corrosion testing for alternate culvert materials including pH (FM 5-550), resistivity (FM 5-551), chloride content (FM 5-552) and sulfate content (FM 5-553), and/or according to FDOT directives
- Consolidation tests according to AASHTO T216 with an unload/reload cycle near the preconsolidation pressure
- Triaxial compression tests according to AASHTO T297
- Moisture content according to AASHTO T265
- Conduct hydrometer analysis according to AASHTO T88
- Organic content according to FM 1-T 267 and additional applicable methods: AASHTO T194, AASHTO M-231, AASHTO T87
- Specific Gravity according to AASHTO T100 and additional applicable methods: AASHTO T88, ASTM D-854, AASHTO 132
- Torvane sensitivity and/or pocket pentrometer tests as directed by the Project Manager/Engineer
- Quantitative determination of asphalt content from asphalt paving mixtures by the ignition method according to FM 5-563.
- Mechanical analysis of extracted aggregate according to FM 1-T 30 and additional applicable methods: AASHTO M-231, AASHTO T27

(FM – Florida Methods available from the Tallahassee Maps and Publications Department.)

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.

35.14 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.

35.15 Parameters for Water Retention Areas

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

35.16 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.

35.17 Electronic Files for Cross-Sections

Create electronic files of boring data for cross-sections.

35.18 Embankment Settlement and Stability

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

35.19 Monitor Existing Structures

Provide Roadway EOR guidance on the radius to review existing structures for monitoring.

Optional services (may be negotiated at a later date if needed): Identify existing structures in need of settlement, vibration and/or groundwater monitoring by the contractor during construction and coordinate with the EOR and structural engineer (when applicable) to develop mitigation strategies. When there is risk of damage to the structure or facility, provide recommendations in the geotechnical report addressing project specific needs and coordinate those locations with the EOR. See *FDOT Design Manual 307* and Chapter 9 of the Soils and Foundations Handbook.
35.20 Stormwater Volume Recovery and/or Background Seepage Analysis

*Perform stormwater volume recovery analysis as directed by the DEPARTMENT.*

35.21 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.*

35.22 Pavement Condition Survey and Pavement Evaluation Report

*Pavement Evaluation Report: Pavement coring, testing, and a pavement condition evaluation shall 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.

35.23 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, *including water tables plotted to elevation*) and construction recommendations relative to Standard Plans Index 120-001 and 120-002.
- The results of all tasks discussed in all previous sections regarding 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, *seasonal high and/or low water tables*, and other pertinent calculations.
- Electronic input files for plotting the boring data on the roadway and pond plan and cross section sheets.
- The CONSULTANT will respond in writing to any changes and/or comments from the DEPARTMENT and submit any responses and revised reports.

35.24 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, including water tables plotted to elevation) and construction recommendations relative to Standard Plans Index 120-001 and 120-002.
- The results of all tasks discussed in all previous sections regarding 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, seasonal high and/or low water tables, and other pertinent calculations.
- Electronic input files for plotting the boring data on the plan and cross section sheets.

Final reports will incorporate comments from the DEPARTMENT and contain any additional field or laboratory test results, 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 licensed 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.
35.25 Auger 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.

35.26 SPT Boring Drafting

Draft SPT borings as directed by the DEPARTMENT.

Structures

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

CONSULTANT shall perform specialized field-testing as required by needs of project and as directed in writing by the District Geotechnical Engineer.

All laboratory testing and classification will be performed in accordance with applicable DEPARTMENT standards, ASTM Standards or AASHTO Standards, and the Florida Department of Transportation Soils and Foundations Handbook unless otherwise specified in the Contract Documents.

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:

35.27 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.

35.28 Stake Borings/Utility Clearance

Auger borings with water table readings, Standard Penetration Test (SPT) borings with water table readings, SPT borings for bridge decks, and Cone Penetrometer Test (CPT) soundings with water table readings shall be performed as applicable. Submit copies of field boring logs with driller’s notes via fax or email to the Project Manager.

Stake borings and cores and obtain utility clearance.

35.29 Coordinate and Develop TTCP for Field Investigation

Coordinate and develop TTCP plan. All work zone traffic control will be performed in accordance with the DEPARTMENT’s Standard Plans Index 102
35.30 Drilling Access Permits (Not applicable to this project)

35.31 Property Clearances (Not applicable to this project)

35.32 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

35.33 Coordination of Field Work

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

35.34 Soil and Rock Classification - Structures

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

35.35 Tabulation of Laboratory Data

The laboratory testing for roadway shall consist of, but not be limited to, the following tests by designated procedures or directives available from the Geotechnical Project Manager:

- Sieve analysis conducted according to AASHTO T88 and additional applicable methods: AASHTO M-92, AASHTO M 145, AASHTO M 146, AASHTO M 147, FM 1-T87
- Atterberg limits conducted according to AASHTO T89 and AASHTO T90 and additional applicable methods: FM 1-T87, AASHTO M 146
- Corrosion testing for environmental classification for substructure and superstructure including pH (FM 5-550), resistivity (FM 5-551), chloride content (FM 5-552) and sulfate content (FM 5-553), and/or according to FDOT directives
- Consolidation tests according to AASHTO T216 with an unload/reload cycle near the preconsolidation pressure
- Triaxial compression tests according to AASHTO T297
- Moisture content according to AASHTO T265
- Conduct hydrometer analysis according to AASHTO T88
- Organic content according to FM 1-T 267 and additional applicable methods: AASHTO T194, AASHTO M-231, AASHTO T87
- Specific Gravity according to AASHTO T100 and additional applicable methods: AASHTO T88, ASTM D-854, AASHTO 132
- Torvane sensitivity and/or pocket pentrometer tests as directed by the Project Manager/Engineer
- Sieve analysis (3) for D50 of streambed material according to AASHTO T88
- Splitting tensile strength of intact rock core specimens according to ASTM D 3967-86, in accordance with ASTM E 122
- Unconfined compressive strength of intact rock core specimens according to ASTM D 2938-79, in accordance with ASTM E 122

(FM – Florida Methods available from the Tallahassee Maps and Publications Department.)

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

35.36 Estimate Design Groundwater Level for Structures

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

35.37 Selection of Foundation Alternatives (BDR)

Evaluation and selection of foundation alternative, including the following:

- GRS-IBS
- Spread footings (CBEAR)
- Prestressed concrete piling - various sizes (SPT-97)
- Steel H- piles (COYLE or SPILE)
- Steel pipe piles (SPT-97)
- Drilled shafts (FHWA Drilled Shaft Manual – Reese/O’Neill or UF Research Report D647F as appropriate)
- Other feasible foundation types
- Evaluate proprietary earth walls and other walls for external stability
- Foundation analyses shall be performed using approved DEPARTMENT methods. Assist in selection of the most economical, feasible foundation alternative.

35.38 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:

- GRS-IBS (including the parameters identified in the Instructions for Developmental Design Standard D6025 to be provided by the Geotechnical Engineer)
- Spread footings (including soil bearing capacity, minimum footing width, and minimum embedment depth).
- For pile and drilled shaft foundations, provide graphs of design and 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.

- **Estimated hammer requirements and/or** maximum driving resistance anticipated for pile foundations.
- Provide settlement analysis.

### 35.39 Bridge Construction and Testing Recommendations

*Provide construction and testing recommendations including potential constructability problems.*

### 35.40 Lateral Load Analysis (Optional)

*Calculate lateral soil resistance and allowable lateral load and present plots for allowable lateral load for all feasible foundation alternatives where required by the DEPARTMENT. Recommend soil parameters required for lateral load analysis.*

### 35.41 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.

### 35.42 Sheet Pile Wall Analysis (Optional)

*Analyze sheet pile walls as directed by the DEPARTMENT.*

### 35.43 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.*

### 35.44 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.

35.45 Preliminary Report - BDR

*The preliminary structures report shall contain the following discussions as appropriate for the assigned project:*

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- The results of all tasks discussed in all previous sections regarding 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.
- *Electronic input files for plotting the boring data on plan and cross section sheets.*

35.46 Final Report - Bridge and Associated Walls

*The final structures report shall include the following:*

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- The results of all tasks discussed in all previous sections regarding 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.
- *Electronic input files for plotting the boring data on the plan and cross section sheets.*
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.
- The results of all tasks discussed in all previous sections regarding 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.
- Electronic input files for plotting the boring data on the plan and cross section sheets.

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 licensed 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.
35.48 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.

35.49 Other Geotechnical

35.50 Technical Special Provisions and Modified Special Provisions

35.51 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.

35.52 Technical Meetings

35.53 Quality Assurance/Quality Control

35.54 Supervision

35.55 Coordination

36 3D MODELING

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

The CONSULTANT shall deliver all master design files, 3D surface design models, and all supporting digital files for the development of plans as required in the DEPARTMENT’s CADD Manual.

The CONSULTANT shall prepare a 3D model using the latest FDOT software in accordance with the FDOT CADD Manual. Includes all efforts required for developing files for 3D deliverables supporting automated machine guidance for design models. This includes importing survey data and creation of existing 3D surface features and models, and developing proposed corridor models with necessary detail of features to depict the proposed project in 3D to comply with the DEPARTMENT CADD Manual.

The CONSULTANT shall add detail to the corridor and design model for 3D design. Includes many elements that contribute to this including but not limited to slope transitions, typical section transitions, changes in pavement depth, berms, swales/ditches, and other feature transitions. Extra corridor structure leads to extra assemblies, extra targeting, etc. Dynamic relationships must be maintained. Frequency must be increased to achieve a useable model.
The CONSULTANT shall create an accurate roadway design model which includes modeling the intersections.

The CONSULTANT shall provide sufficient detail in the 3D model to account for driveways, Guardrail Terminal Locations, etc. and other graded areas where surface triangles are delivered as break lines.

36.1 **Phase I 3D Design Model (30% Plans)**

The CONSULTANT shall prepare, submit and present for approval by the DEPARTMENT, 30% complete 3D interactive model, comprised of, but not limited to: Existing features (pavement, shoulders, sidewalk, curb/gutter, utilities-if required per scope, drainage - if required per scope) and proposed corridor(s).

36.2 **Phase II 3D Design Model (60% Plans)**

The CONSULTANT shall prepare, submit and present for approval by the DEPARTMENT, 60% complete 3D model, comprised of, but not limited to: Modification of 30% model to update the model to comply with changes based on 30% review comments and to include the addition of ponds, floodplain compensation sites, retaining walls, barrier walls, guardrail terminals, cross overs, gore areas, side street connections, roundabouts, and driveways.

[List optional services to be included, i.e. Curb Ramps, Closed Drainage Network, Bridge Modeling, Bridge Abutment, Overhead sign post/structures with foundation, Toll gantry and overhead DMS structures with foundation, proposed utilities (pressure pipe/gravity), etc.].

36.3 **Phase III 3D Design Model (90% Plans)**

The CONSULTANT shall prepare, submit and present for approval by the DEPARTMENT, 90% complete 3D model, comprised of, but not limited to: Modification of 60% model to update the model to comply with changes based on 60% review comments and to further refine areas of transition between templates, detailed grading areas, bridge approaches and end bents, median noses, shoulder transition areas, retaining walls, barrier walls and guardrail.

36.4 **Final 3D Model Design (100% Plans)**

The CONSULTANT shall prepare for approval by DEPARTMENT, 100% complete 3D model, comprised of, but not limited to: Modification of 90% model to update the model to comply with changes based on 90% review comments and to accurately generate, export and otherwise prepare the final 3D deliverable files as described in the DEPARTMENT’s CADD Manual.

36.5 **Cross Section Design Files**

The CONSULTANT shall establish and develop cross section design files in accordance with the DEPARTMENT’s CADD manual and Plans Preparation Manual. Includes all work required to establish and utilize intelligent/automated
methods for creating cross sections including determining the locations for which all cross sections will be shown, existing and proposed features, cross section refinement, placement of utilities and drainage, soil boxes, R/W lines, earthwork calculations, and other required labeling.

36.6 Template and Assembly Development (Optional)

The CONSULTANT shall prepare for approval by DEPARTMENT, specialty templates or assemblies needed to develop the features required to deliver the 3D model.

36.7 Quality Assurance/Quality Control

36.8 Supervision

36.9 Coordination

37 PROJECT REQUIREMENTS

37.1 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.

37.2 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.

37.3 Progress Reporting

The CONSULTANT shall meet with the DEPARTMENT as required and shall provide a written monthly progress report with approved schedule and schedule status, or by using the earned value method that describe the work performed on each task. The report will include assessing project risk through monthly documentation of identifying and updating the risk category and approach for monitoring those tasks. Invoices shall be submitted after the DEPARTMENT approves the monthly progress report or with earned value analysis. 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.

37.4 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.

37.5 Professional Endorsement

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

37.6 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 shall 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.

37.7 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.

37.8 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.

The CONSULTANT is requested to provide optional services for Load Rating Analyses. Any impacts to the ITS system as a result of the widening shall be added as an optional service, as well. Should noise barriers be deemed necessary during the PD&E phase, design analysis will also be included as an optional service. 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).

38 INVOICING LIMITS

Payment for the work accomplished shall be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the DEPARTMENT through the
DEPARTMENT’s 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 ensure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the DEPARTMENT.

The CONSULTANT shall provide a list of key events and the associated total percentage of work considered to be complete at each event. This list shall 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.

39  PROJECT COST ACCOUNTING (Not Applicable for this Project/ Contract)
Okaloosa County
Resurfacing, Rehabilitation, Restoration (RRR) Project

SR 8 (I-10)
From East of Yellow River Relief Bridges to SR 85 (Ferdon Boulevard)

FPID: 441038-4
Section No.: 57020000

PROJECT LOCATION MAP
**FDOT Long Range Estimating System - Production**

**R3: Project Details by Sequence Report**

**Project:** 441038-4-52-01  
**Letting Date:** 01/2099

**Description:** SR 8 (I-10) FROM EAST OF YELLOW RIVER TO SR 85 FERDON BLVD

**District:** 03  
**County:** 57 OKALOOSA  
**Market Area:** 01  
**Units:** English

**Contract Class:** 1  
**Lump Sum Project:** N  
**Design/Build:** N  
**Project Length:** 9.780 MI

**Project Manager:** JORDAN BURNETT

**Version 3 Project Grand Total**  
**Description:** SR 8 (I-10) FROM EAST OF YELLOW RIVER TO SR 85 FERDON BLVD 4/22/2019 Updated JK  
**$45,841,030.72**

**Sequence:** 1 WDR - Widen/Resurface, Divided, Rural  
**Net Length:** 9.780 MI  
**51,638 LF**

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**EARTHWORK COMPONENT**

**User Input Data**

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<td>Top of Structural Course For End Section</td>
<td>102.00</td>
</tr>
<tr>
<td>Horizontal Elevation For Begin Section</td>
<td>100.00</td>
</tr>
<tr>
<td>Horizontal Elevation For End Section</td>
<td>100.00</td>
</tr>
<tr>
<td>Existing Front Slope L/R</td>
<td>6 to 1 / 6 to 1</td>
</tr>
<tr>
<td>Existing Median Slope L/R</td>
<td>6 to 1 / 6 to 1</td>
</tr>
<tr>
<td>Existing Median Shoulder Cross Slope L/R</td>
<td>5.00 % / 5.00 %</td>
</tr>
<tr>
<td>Existing Outside Shoulder Cross Slope L/R</td>
<td>6.00 % / 6.00 %</td>
</tr>
<tr>
<td>Front Slope L/R</td>
<td>6 to 1 / 6 to 1</td>
</tr>
<tr>
<td>Median Slope L/R</td>
<td>6 to 1 / 6 to 1</td>
</tr>
<tr>
<td>Median Shoulder Cross Slope L/R</td>
<td>5.00 % / 5.00 %</td>
</tr>
<tr>
<td>Outside Shoulder Cross Slope L/R</td>
<td>6.00 % / 6.00 %</td>
</tr>
<tr>
<td>Roadway Cross Slope L/R</td>
<td>2.00 % / 2.00 %</td>
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**Pay Items**

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Price</th>
<th>Extended Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-1-1</td>
<td>CLEARING &amp; GRUBBING</td>
<td>99.58 AC</td>
<td>$25,000.00</td>
<td>$2,489,500.00</td>
<td></td>
</tr>
<tr>
<td>120-2-2</td>
<td>BORROW EXCAVATION, TRUCK MEASURE</td>
<td>93,522.88 CY</td>
<td>$25.85</td>
<td>$2,417,566.45</td>
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**X-Items**

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<th>Extended Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>120-2-2</td>
<td>BORROW EXCAVATION, TRUCK MEASURE</td>
<td>35,000.00 CY</td>
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<td>$904,750.00</td>
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**Earthwork Component Total**  
**$5,811,816.45**
ROADWAY COMPONENT

User Input Data

Description | Value
--- | ---
Number of Lanes | 6
Existing Roadway Pavement Width L/R | 24.00 / 24.00
Structural Spread Rate | 220
Friction Course Spread Rate | 80
Widened Outside Pavement Width L/R | 0.00 / 0.00
Widened Inside Pavement Width L/R | 12.00 / 12.00
Widened Structural Spread Rate | 330
Widened Friction Course Spread Rate | 80

Pay Items

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<tr>
<th>Pay item</th>
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<th>Extended Amount</th>
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<td>160-4</td>
<td>TYPE B STABILIZATION</td>
<td>367,206.40 SY</td>
<td>$8.00</td>
<td>$2,937,651.20</td>
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<tr>
<td>285-709</td>
<td>OPTIONAL BASE,BASE GROUP 09</td>
<td>141,489.22 SY</td>
<td>$38.76</td>
<td>$5,484,122.17</td>
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<tr>
<td>327-70-5</td>
<td>MILLING EXIST ASPH PAVT, 2&quot; AVG DEPTH</td>
<td>275,404.80 SY</td>
<td>$4.75</td>
<td>$1,308,172.80</td>
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<tr>
<td>334-1-13</td>
<td>SUPERPAVE ASPHALTIC CONC, TRAFFIC C</td>
<td>30,294.53 TN</td>
<td>$150.00</td>
<td>$4,544,179.50</td>
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<tr>
<td>334-1-13</td>
<td>SUPERPAVE ASPHALTIC CONC, TRAFFIC C</td>
<td>22,720.90 TN</td>
<td>$150.00</td>
<td>$3,408,135.00</td>
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<tr>
<td>337-7-25</td>
<td>ASPH CONC FC,INC BIT.FC-5,P G76-22</td>
<td>11,016.19 TN</td>
<td>$165.00</td>
<td>$1,817,671.35</td>
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<tr>
<td>337-7-25</td>
<td>ASPH CONC FC,INC BIT.FC-5,P G76-22</td>
<td>5,508.10 TN</td>
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<td>$908,836.50</td>
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Pavement Marking Subcomponent

| Description | Value
--- | ---
Include Thermo/Tape/Other | N
Pavement Type | Asphalt
Solid Stripe No. of Paint Applications | 2
Solid Stripe No. of Stripes | 4
Skip Stripe No. of Paint Applications | 2
Skip Stripe No. of Stripes | 4

Pay Items

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<th>Unit Price</th>
<th>Extended Amount</th>
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<tr>
<td>706-3</td>
<td>RETRO-REFLECTIVE/RAISED PAVEMENT MARKERS</td>
<td>6,602.00 EA</td>
<td>$6.09</td>
<td>$40,206.18</td>
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<tr>
<td>710-11-131</td>
<td>PAINTED PAVT MARK,STD,WHITE,SKIP, 6&quot;</td>
<td>78.24 GM</td>
<td>$572.20</td>
<td>$44,768.93</td>
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<td>710-11-201</td>
<td>PAINTED PAVT MARK,STD,YELLOW,SOLID,6&quot;</td>
<td>78.24 GM</td>
<td>$1,011.47</td>
<td>$79,137.41</td>
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Roadway Component Total | $20,572,881.04

SHOULDER COMPONENT

User Input Data

Description | Value
--- | ---
Existing Total Outside Shoulder Width L/R | 10.00 / 10.00
New Total Outside Shoulder Width L/R | 12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R | 2.67 / 2.67
Existing Paved Outside Shoulder Width L/R 5.00 / 5.00
New Paved Outside Shoulder Width L/R 8.00 / 8.00
Structural Spread Rate 110
Friction Course Spread Rate 80
Total Width (T) / 8" Overlap (O) T
Rumble Strips $\ell\frac{1}{2}$No. of Sides 1

### Pay Items

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<tr>
<th>Pay item</th>
<th>Description</th>
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<tbody>
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<td>285-704</td>
<td>OPTIONAL BASE,BASE GROUP 04</td>
<td>95,588.42 SY</td>
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<td>$1,338,237.88</td>
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<tr>
<td>327-70-1</td>
<td>MILLING EXIST ASPH PAVT, 1&quot; AVG DEPTH</td>
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<td>$3.75</td>
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<tr>
<td>334-1-13</td>
<td>SUPERPAVE ASPHALTIAN CONC, TRAFFIC C</td>
<td>5,049.09 TN</td>
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<tr>
<td>337-7-25</td>
<td>ASPH CONC FC,INC BIT,FC-5.PG76-22</td>
<td>3,672.06 TN</td>
<td>$165.00</td>
<td>$605,889.90</td>
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<tr>
<td>546-72-1</td>
<td>GROUND-IN RUMBLE STRIPS, 16&quot;</td>
<td>9.78 GM</td>
<td>$1,806.81</td>
<td>$17,670.60</td>
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<tr>
<td>570-1-1</td>
<td>PERFORMANCE TURF</td>
<td>30,638.78 SY</td>
<td>$1.81</td>
<td>$55,456.19</td>
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### Erosion Control

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<tbody>
<tr>
<td>104-10-3</td>
<td>SEDIMENT BARRIER</td>
<td>118,768.32 LF</td>
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<td>$435,879.73</td>
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<tr>
<td>104-11</td>
<td>FLOATING TURBIDITY BARRIER</td>
<td>978.00 LF</td>
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<td>$14,670.00</td>
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<tr>
<td>104-12</td>
<td>STAKED TURBIDITY BARRIER- NYL REINF PVC</td>
<td>978.00 LF</td>
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<td>$7,696.86</td>
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<tr>
<td>104-15</td>
<td>SOIL TRACKING PREVENTION DEVICE</td>
<td>10.00 EA</td>
<td>$3,477.53</td>
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<td>107-1</td>
<td>LITTER REMOVAL</td>
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<td>107-2</td>
<td>MOWING</td>
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Shoulder Component Total $3,493,674.71

### MEDIAN COMPONENT

User Input Data

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<tr>
<td>Performance Turf Width</td>
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<tr>
<td>New Total Median Shoulder Width L/R</td>
<td>8.00 / 8.00</td>
</tr>
<tr>
<td>New Paved Median Shoulder Width L/R</td>
<td>0.00 / 0.00</td>
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<tr>
<td>Existing Total Median Shoulder Width L/R</td>
<td>8.00 / 8.00</td>
</tr>
<tr>
<td>Existing Paved Median Shoulder Width L/R</td>
<td>0.00 / 0.00</td>
</tr>
<tr>
<td>Structural Spread Rate</td>
<td>110</td>
</tr>
<tr>
<td>Friction Course Spread Rate</td>
<td>80</td>
</tr>
<tr>
<td>Total Width (T) / 8&quot; Overlap (O)</td>
<td>T</td>
</tr>
<tr>
<td>Rumble Strips $\ell\frac{1}{2}$No. of Sides</td>
<td>0</td>
</tr>
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</table>

<table>
<thead>
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<th>Quantity</th>
<th>Unit</th>
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<th>Extended Amount</th>
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<tbody>
<tr>
<td>570-1-1</td>
<td>PERFORMANCE TURF</td>
<td>30,638.78 SY</td>
<td>$1.81</td>
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Median Component Total $55,456.19
## DRAINAGE COMPONENT

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<th>Extended Amount</th>
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<tbody>
<tr>
<td>400-2-2</td>
<td>CONC CLASS II, ENDWALLS</td>
<td>176.04</td>
<td>CY</td>
<td>$1,353.00</td>
<td>$238,182.12</td>
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<tr>
<td>430-174-124</td>
<td>PIPE CULV, OPT MATL, ROUND, 24&quot; SD</td>
<td>7,824.00</td>
<td>LF</td>
<td>$110.33</td>
<td>$863,221.92</td>
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<tr>
<td>430-175-136</td>
<td>PIPE CULV, OPT MATL, ROUND, 36&quot; S/CD</td>
<td>784.00</td>
<td>LF</td>
<td>$152.29</td>
<td>$119,395.36</td>
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<tr>
<td>430-984-129</td>
<td>MITERED END SECT, OPTIONAL RD, 24&quot; SD</td>
<td>392.00</td>
<td>EA</td>
<td>$1,716.86</td>
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<tr>
<td>570-1-1</td>
<td>PERFORMANCE TURF</td>
<td>6,885.12</td>
<td>SY</td>
<td>$1.81</td>
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Drainage Component Total  
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## SIGNING COMPONENT

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<th>Extended Amount</th>
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<tbody>
<tr>
<td>700-1-11</td>
<td>SINGLE POST SIGN, F&amp;I GM, &lt;12 SF</td>
<td>20.00</td>
<td>AS</td>
<td>$450.00</td>
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<tr>
<td>700-1-12</td>
<td>SINGLE POST SIGN, F&amp;I GM, 12-20 SF</td>
<td>235.00</td>
<td>AS</td>
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<td>700-1-50</td>
<td>SINGLE POST SIGN, RELOCATE</td>
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<td>700-1-60</td>
<td>SINGLE POST SIGN, REMOVE</td>
<td>235.00</td>
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<td>700-2-14</td>
<td>MULTI- POST SIGN, F&amp;I GM, 31-50 SF</td>
<td>20.00</td>
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<td>$4,539.18</td>
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<td>MULTI- POST SIGN, REMOVE</td>
<td>20.00</td>
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Signing Component Total  
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Sequence 1 Total  
$32,249,457.03
FDOT Long Range Estimating System - Production
R3: Project Details by Sequence Report

Project: 441038-4-52-01 Letting Date: 01/2099

Description: SR 8 (I-10) FROM EAST OF YELLOW RIVER TO SR 85 FERDON BLVD

District: 03 County: 57 OKALOOSA Market Area: 01 Units: English
Contract Class: 1 Lump Sum Project: N Design/Build: N Project Length: 9.780 MI
Project Manager: JORDAN BURNETT

Version 3 Project Grand Total $45,841,030.72
Description: SR 8 (I-10) FROM EAST OF YELLOW RIVER TO SR 85 FERDON BLVD 4/22/2019 Updated JK

<table>
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<tr>
<td>102-1 Maintenance of Traffic</td>
<td>10.00 %</td>
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<tr>
<td>101-1 Mobilization</td>
<td>12.00 %</td>
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<table>
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<tr>
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<tr>
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<td>Design/Build</td>
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<td>999-25</td>
<td>INITIAL CONTINGENCY AMOUNT (DO NOT BID)</td>
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</table>

Project Non-Bid Subtotal $150,000.00

Version 3 Project Grand Total $45,841,030.72
CRASH REPORTING SYSTEM

NOTICE: THE INFORMATION CONTAINED IN THIS DOCUMENT (REPORT, SCHEDULE, LIST, OR DATA) HAS BEEN COMPILED FROM INFORMATION COLLECTED FOR THE PURPOSE OF IDENTIFYING, EVALUATING, OR PLANNING SAFETY ENHANCEMENTS. THIS PRODUCT IDENTIFIES INFORMATION USED FOR THE PURPOSE OF DEVELOPING HIGHWAY SAFETY CONSTRUCTION IMPROVEMENT PROJECTS WHICH MAY BE IMPLEMENTED UTILIZING FEDERAL-AID HIGHWAY FUNDS. ANY DOCUMENT DISPLAYING THIS NOTICE SHALL BE USED ONLY FOR THOSE PURPOSES DEEMED APPROPRIATE BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. SEE TITLE 23, UNITED STATES CODE, SECTION 409.

I/O NAME: ............... CARI122
PROGRAM ID: ............. CARPJ122
REPORT NUMBER: ......... 01
MESSAGE CLASS: ........... A
PRINTER DEST: ............ LOCAL
# COPIES: ............... 01
ACCOUNT #: .............. 5565945
SUBMIT W/HOLD? .......... N
USERID: ................... KNAKNGH
DETIAL SORT ORDER: ....... 1 - SORT BY ROADWAY, MILE POINT
PRINT SEGMENTS? ........ N
PRINT INTERSECTIONS? .... N
SUMMARY FORMAT: ........ 2 - TOP LINE ALL BREAKS
MAX # OF BREAKS: ...... 06
AVERAGE DAILY TRAFFIC:...
# OF LEGS: .............
1 - SORT BY ROADWAY, MILE POINT

FROM: 01/01/2012 TO 12/31/2016

COMMENT: 13.863 1155 8 017500 13 12 04 13 U-INT 0 27 77 01 03 02 10 01 M M E 16 01 01 12 59
                    1 0 00
1 - SORT BY ROADWAY, MILE POINT

<p>| ROADWYID | MILEPOINT | ADT | Y | M | D | H | CRCC | A | H | M | L | W | R | DL | R | A | V | V | V | VM | VA | V | V | VN | VN | N | V |
| 762600230 | 57002000 | 13.882 | 1514 | 8 | 019400 | 12 | 11 | 27 | 17 | U-INT | 0 | 14 | 04 | 01 | 01 | 11 | 03 | L | S | 16 | 01 | 01 | 10 | 50 | S | 19 | 01 | 01 | 01 | 64 | 2 | 0 | 00 |
| 832075540 | 57002000 | 13.882 | 1514 | 8 | 017500 | 13 | 02 | 11 | 06 | U-INT | 0 | 09 | 77 | 01 | 03 | 02 | 10 | 01 | M | M | E | 01 | 01 | 12 | 38 | 1 | 0 | 01 |
| 828785250 | 57002000 | 13.920 | 1514 | 8 | 019400 | 12 | 03 | 03 | 15 | U-INT | 0 | 27 | 77 | 01 | 03 | 02 | 01 | 01 | R | S | E | 01 | 01 | 01 | 23 | 1 | 0 | 00 |
| 861620270 | 57002000 | 13.920 | 1155 | 8 | 019400 | 15 | 11 | 06 | 21 | U-INT | 0 | 14 | 03 | 04 | 01 | 01 | 01 | R | 1 | E | 01 | 01 | 10 | 06 | 36 | E | 01 | 01 | 01 | 01 | 27 | 2 | 0 | 01 |
| 762626880 | 57002000 | 14.100 | 0588 | 8 | 017500 | 13 | 12 | 16 | 08 | U-INT | 0 | 14 | 01 | 88 | 01 | 01 | 01 | 08 | R | X | W | 01 | 01 | 01 | 02 | 28 | W | 15 | 01 | 13 | 01 | 31 | 2 | 0 | 00 |</p>
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<th>YEAR</th>
<th>CRASHES</th>
<th>FATALITIES</th>
<th>INJURIES</th>
<th>CRASHES</th>
<th>INJURIES</th>
<th>DAMAGE ONLY</th>
<th>TOTALS</th>
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<td>13</td>
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**FATAL CRASH STATISTICS**

**INJURY CRASH STAT**

**PROPERTY DAMAGE ONLY**

**TOTALS**

**INFLUENCE CRASHES OCCURRING ON INTERSECTING RDWYS AT INT. INFL AREA**
### CUMULATIVE TOTALS FOR ALL LOCATIONS SUBMITTED - OVERLAPPING OR INTERSECTING LOCATIONS MAY RESULT IN CRASHES COUNTED MORE THAN ONCE

<table>
<thead>
<tr>
<th>YEAR</th>
<th>CRASHES</th>
<th>FATALITIES</th>
<th>INJURIES</th>
<th>CRASHES</th>
<th>INJURIES</th>
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<tbody>
<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>6</td>
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**NOTICE:** THE INFORMATION CONTAINED IN THIS DOCUMENT (REPORT, SCHEDULE, LIST, OR DATA) HAS BEEN COMPILED FROM INFORMATION COLLECTED FOR THE PURPOSE OF IDENTIFYING, EVALUATING, OR PLANNING SAFETY ENHANCEMENTS. THIS PRODUCT IDENTIFIES INFORMATION USED FOR THE PURPOSE OF DEVELOPING HIGHWAY SAFETY CONSTRUCTION IMPROVEMENT PROJECTS WHICH MAY BE IMPLEMENTED UTILIZING FEDERAL-AID HIGHWAY FUNDS. ANY DOCUMENT DISPLAYING THIS NOTICE SHALL BE USED ONLY FOR THOSE PURPOSES DEEMED APPROPRIATE BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. SEE TITLE 23, UNITED STATES CODE, SECTION 409.
Description of Survey Parcel A - Okaloosa County, Florida  
11-20-2007
Commence at the Northwest corner of the Southeast Quarter of Section 29, Township 3 North, Range 23 West said corner being a 4” iron rod and cap LB 6783; thence run S 87° 47' 31" E along the North line of said Southeast quarter a distance of 376.19 feet to the East Right of way of State Road 85 a 109° 31’ W; thence run S 16° 17' 31" W along said East Right of way line a distance of 206.90 feet and the Point of Beginning; thence continue South 6° 17' 31" W a distance of 7.77 feet; thence, leaving said Right of Way line, run S 87° 44' 13" E for a distance of 5.40 feet; thence run N 22° 46' 10" W a distance of 8.31 feet to the Point of Beginning.
Parcel A containing 20.42 square feet more or less.

Description of Survey Parcel B - Okaloosa County, Florida  
11-20-2007
Commence at the Northwest corner of the Southeast Quarter of Section 29, Township 3 North, Range 23 West said corner being a 4” iron rod and cap LB 6783; thence run S 87° 47' 31" E along the North line of said Southeast Quarter a distance of 376.19 feet to the East Right of way of State Road 85 a 109° 31’ W; thence run S 16° 17' 31" W along said East Right of way a distance of 206.90 feet; thence continue along said East Right of Way S 16° 17' 31" W a distance of 7.77 feet to the Point of Beginning; thence continue S 16° 17' 31" W a distance of 101.54 feet; thence leaving said Right of Way, run S 88° 26' 38" E a distance of 38.30 feet; thence run N 21° 52' 10" E a distance of 11.72 feet; thence run N 87° 42' 52" W a distance of 9.54 feet; thence run N 87° 42' 50" W a distance of 14.07 feet; thence run N 87° 44' 13" W a distance of 5.40 feet to the Point of Beginning.
Parcel B containing 2561.33 square feet – 0.06 acres more or less.