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Review

EXHIBIT A



SCOPE OF SERVICES

FOR

Financial Project ID: 450835-3-32-01

FDOT District 6

***MIAMI-DADE***

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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 [*Consultant Name or leave blank until CONSULTANT is selected*] (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

Financial Project ID: 450835-3-32-01

Related Financial Project ID(s): [*Related FM Numbers*]

Federal Aid Project No.:

Roadway:

***Bird Rd: 87044000, MP 4.900 to 4.905***

***SW 8th St: 87120000, MP 10.803 to 10.808***

***W. Flagler St: 87053000, MP 1.767 to 1.772***

Project Description: LUDLAM TRAIL: NEW BRIDGE OVER BIRD ROAD, SW 8TH STREET & FLAGLER STREET

Bridge No(s).:

- ***TBD***

Railroad Crossing No.: N/A

Context Classification:

- ***Bird Road (SR-976): C4-Urban General***
- ***SW 8<sup>th</sup> Street (SR-90): C4-Urban General***
- ***W. Flagler Street (SR-968): C4-Urban General***

## 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 includes:
  - ***0328 - PEDESTRIAN/WILDLIFE OVERPASS***
- Major work groups include:
  - ***4.2.1 - Major Bridge Design - Concrete***
  - ***4.2.2 - Major Bridge Design - Steel (This group covers the canopy aluminum structure).***

- Minor work groups include:
  - *3.1 - Minor Highway Design*
  - *4.1.1 - Miscellaneous Structures*
  - *4.1.2 - Minor Bridge Design*
  - *7.1 - Signing, Pavement Marking and Channelization*
  - *7.2 - Lighting*
  - *8.2 - Design, Right of Way & Construction Surveying*
  - *8.4 - Right of Way Mapping*
  - *9.1 - Soil Exploration*
  - *9.4.1 - Standard Foundation Studies*
  - *14.0 - Architect*

Known alternative contracting methods include: *N/A*

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 system 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 FDOT Design 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 Environment (PD&E) study, the CONSULTANT shall use the approved concepts as a basis for the design unless otherwise directed by the DEPARTMENT.

### ***LUDLAM TRAIL: NEW BRIDGE OVER BIRD ROAD, SW 8TH STREET & FLAGLER STREET***

The project consists of the design of:

- 1) Three “Iconic” pedestrian shared-use bridges over the following State Roads:
  - a. SR 968/West Flagler Street
  - b. SR 90/US-41/SW 8<sup>th</sup> Street/Tamiami Trail
  - c. SR 976/SW 40<sup>th</sup> St./Bird Road
- 2) An iconic bridge canopy enclosure for the main span, as depicted in the concept plans of Attachment 1 – Design Criteria, Appendix A.
- 3) Approach ramps leading to the main span of each bridge. Approach ramps consist of Bridge and Retaining wall structures.;
- 4) New at-grade sidewalk connections between ramp touch-down locations and existing sidewalks.

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

Public Involvement:  
CAP Level: **4**

***The District Public Information Office (PIO) consultant is responsible for coordination of all public involvement activities during the design phase. The Designer may be expected to attend a Public Information Meeting.***

Other Agency Presentations/Meetings:

Agency	Number of Meetings
City of Miami	2
Miami-Dade County	2

Joint Project Agreements: *N/A*

Specifications Package Preparation:  
*Yes.*

Estimated Quantities Report Preparation:  
*Yes.*

Value Engineering: *N/A*

Risk Assessment Workshop: *N/A*

Plan Type:

***Roadway Plans, Drainage Plans, Bridge Plans, Civil Site Plans, Signing and Pavement Markings Plans, Lighting Plans, Temporary Traffic Control Plans, Architectural Plans, Miscellaneous Structural Plans, Retaining Wall Plans, Electrical Plans.***

Typical Section:

Number of Typical Sections: 3

***At-grade 6 ft sidewalk connection (1)***

***At-grade 10 ft sidewalk connection (1)***

***Shared-use path bridge (1)***

Pavement Designs:

Number of Pavement Designs: 1

***Shared-use path (1)***

Pavement Type Selection Report(s): *N/A*

Cross-Slope Correction: *N/A*

Access Management Classification:

- ***BIRD ROAD (SR-976) – Class 5***
- ***SW 8TH STREET (SR-90) – Class 7***
- ***FLAGLER STREET (SR-968) – Class 7***

Transit Route Features: *N/A*

Major Intersections and Interchanges: *N/A*

Roadway Alternative Analysis: *N/A*

Level of Temporary Traffic Control Plan (TTCP): *4*

Temporary Lighting: *N/A*

Temporary Signals: *N/A*

Temporary Drainage: *N/A*

Back of Sidewalk Profiles: ***Required for the sidewalk connection to the shared-use path***

Selective Clearing and Grubbing:

Number of acres of Selective Clearing and Grubbing and/or Plant Preservation Area: 6 acres.

See Activity 4.11

## **2.2 Drainage (Activities 6a and 6b)**

***The proposed drainage systems will consist of dry retention areas to meet water quality and pre-post discharge/offsite flooding criteria, as well as provide for flood protection of the Ludlam Trail facilities. In areas where there is not enough right-of-way to provide for the required dry retention volumes, the dry retention areas will be supplemented by French drains. Compensatory treatment is allowed, provided the areas are all within the same SFWMD drainage basin.***

## **2.3 Utilities Coordination (Activity 7)**

***Utility coordination will be performed by the DEPARTMENT. The CONSULTANT will provide support.***

The CONSULTANT is responsible for certifying that all necessary arrangements for utility work on this project have been made and will not conflict with the physical construction schedule.

The CONSULTANT shall ensure FDOT standards, policies, procedures, practices, and design criteria are followed concerning utility coordination.

Expected Utilities:

- ***Atlantic Broadband***
- ***AT&T Distribution***
- ***Comcast Cable***
- ***Crown Castle***
- ***Florida City Gas***
- ***Florida Power & Light – Dade***
- ***Miami-Dade County Department of Transportation and Public Works – Traffic Signals and Signs Division***
- ***MCI***

- *Miami-Dade Water & Sewer*

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

Expected Permits:

- *South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP)*
- *Florida Department of Environmental Protection (FDEP) National Pollutant Discharge Elimination System (NPDES) Permit or Notice of Intent*

*The proposed scope of work does not include impacts to wetlands. Therefore, compensatory wetlands mitigation is not anticipated. If it is determined to be required, any compensatory wetland mitigation will be provided by the DEPARTMENT, in accordance with Section 373.4137, Florida Statutes.*

*The Designer should coordinate with the Office of Environmental Management (OEM) and Environmental Permits Coordinators to determine if any other environmental permits will be required for this project. No significant environmental impacts are anticipated for this Project. The Designer is responsible for preparing the Permit Involvement Form (PIF). Contact Jacquelyn DeAngelo (Jacquelyn.DeAngelo@dot.state.fl.us) and Kylie Shivers (Kylie.Shivers@dot.state.fl.us).*

## 2.5 Structures (Activities 9 - 18)

Bridge:

<b>No.</b>	<b>Bridge Number</b>	<b>Length</b>	<b>Description</b>
<i>1</i>	<i>N/A</i>	<i>530'-0"</i>	<i>Bridge at W. Flagler St.</i>
<i>2</i>	<i>N/A</i>	<i>409'-6"</i>	<i>Bridge at SW 8<sup>th</sup> St.</i>
<i>3</i>	<i>N/A</i>	<i>478'-4"</i>	<i>Bridge at Bird Rd.</i>

Type of Bridge Structure Work

- BDR (Activity 10)
- Temporary Bridge (Activity 11): *N/A*
- Short Span Concrete (Activity 12): *N/A*
- Medium Span Concrete (Activity 13)
- Bridge Canopy Enclosure Design (See activity 31)
- Structural Steel (Activity 14): *N/A*

- Segmental Concrete (Activity 15): *N/A*
- Movable Span (Activity 16): *N/A*

Retaining Walls:

No.	Location	Temp Type	Temp Length	Perm Type	Perm Length
1	<i>W. Flagler St. – South Approach Ramp</i>	<i>N/A</i>	<i>N/A</i>	<i>TBD</i>	<i>640 ft</i>
2	<i>W. Flagler St. – North Approach Ramp</i>	<i>N/A</i>	<i>N/A</i>	<i>TBD</i>	<i>620 ft</i>
3	<i>SW 8<sup>th</sup> St. – South Approach Ramp</i>	<i>N/A</i>	<i>N/A</i>	<i>TBD</i>	<i>760 ft</i>
4	<i>SW 8<sup>th</sup> St. – North Approach Ramp</i>	<i>N/A</i>	<i>N/A</i>	<i>TBD</i>	<i>840 ft</i>
5	<i>Bird Rd. – South Approach Ramp</i>	<i>N/A</i>	<i>N/A</i>	<i>TBD</i>	<i>345 ft</i>
6	<i>Bird Rd. – North Approach Ramp</i>	<i>N/A</i>	<i>N/A</i>	<i>TBD</i>	<i>765 ft</i>

Miscellaneous Structures:

- *Structural Design of Canopy Enclosure (Activity 18.31). See concept plans in Attachment 1 – Design Criteria, Appendix A.*

**2.6 Signing and Pavement Markings (Activities 19 & 20)**

*Signing and Pavement Marking Plans are required. Signing and pavement markings shall meet current FDOT and MUTCD requirements. All pavement markings within the project limits of milling and resurfacing shall be replaced to meet current FDOT Standard Plans for Road Construction.*

**2.7 Signalization (Activities 21 & 22) - (N/A)**

**2.8 Lighting (Activities 23 & 24)**

*Refer to Attachment 1- Design Criteria, for additional Architectural Lighting, Bridge Lighting, and other decorative lighting.*

*New lighting shall be provided along new BIRD ROAD, SW 8TH STREET & FLAGLER STREET overpass bridges. Lighting poles and luminaires, if needed, shall be provided outside of the limits of the main span canopy. The type shall be coordinated with Miami*

*Dade Parks, Recreation and Open Spaces (MDPROS). All proposed lighting must be coordinated with the in-house FDOT District Traffic Design Engineer, and Miami Dade County.*

*Tunnel lighting analysis shall be evaluated for the proposed shared-use path bridges over these state roadways. 24-hour lighting should be evaluated to determine if needed.*

## **2.9 Landscape (Activities 25 & 26) - (N/A)**

## **2.10 Survey (Activity 27)**

Design Survey: *N/A*

*Design Survey to be provided by the DEPARTMENT. The Designer will create and sign/seal the Project Control sheets. Data will be extracted from the project survey.*

Subsurface Utility Exploration:

*The CONSULTANT shall perform Subsurface utility Exploration (SUEs) tests to verify any utility conflicts that may be within the project limits.*

## **2.11 Photogrammetry (Activity 28)**

## **2.12 Mapping (Activity 29)**

## **2.13 Terrestrial Mobile LiDAR (Activity 30)**

## **2.14 Architecture (Activity 31)**

Refer to Attachment 1 – Design Criteria for additional information regarding Architecture.

The work consists of design of three iconic pedestrian bridges that will serve as critical elements of a pedestrian-oriented shared-use corridor along the proposed Ludlam Trail. The design of the bridges shall balance safety, constructability, cost and aesthetics.

## **2.15 Noise Barriers (Activity 32) - (N/A)**

## **2.16 Intelligent Transportation Systems (Activities 33 & 34) - (N/A)**

## **2.17 Geotechnical (Activity 35) - (N/A)**

## **2.18 3D Modeling (Activity 36) - (N/A)**

## **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 project activity/event schedule for DEPARTMENT and CONSULTANT scheduled activities required to meet the current DEPARTMENT Production Date. The schedule shall be based upon the []. The current production date is [11/10/2025]. The schedule shall be accompanied by an anticipated payout and fiscal progress curve. For the purpose of scheduling, the CONSULTANT shall allow for a [4] week review time for each phase submittal and any other submittals as appropriate.

The schedule shall indicate all required submittals.

All fees and price proposals are to be based on the negotiated schedule of [24] months for final construction contract documents. However, the contract deadline is [48] months from the Notice to Proceed.

Periodically, throughout the life of the contract, the project schedule and payout and fiscal progress curves 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 schedule and schedule status report, along with progress and payout curves, shall be submitted with the monthly progress report.

The schedule shall be submitted in an FDOT system-compatible format.

## **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.

## **2.21 Provisions for Work**

The services performed by the CONSULTANT must comply with all applicable DEPARTMENT's manuals, procedure, policies, and guidelines. Specifically, the CONSULTANT must comply with DEPARTMENT's Project Development and Environmental (PD&E) Manual, FDOT Design Manual (FDM), Structures Manual, and Computer Aided Design and Drafting (CADD) Manual. The DEPARTMENT's manuals and guidelines incorporate, by requirement or reference, all applicable federal and state laws, regulations, and Executive Orders. The CONSULTANT will use the latest editions of the manuals, procedures, and guidelines to perform work for this project.

All work shall be prepared with English units (unless otherwise specified) in accordance with the latest editions of standards and requirements utilized by the DEPARTMENT.

## **2.22 Services to be Performed by the DEPARTMENT**

When appropriate or available, the DEPARTMENT will provide project data including:

- *Numbers for field books*
- *Preliminary Horizontal Network Control*
- *Access for the CONSULTANT to utilize the DEPARTMENT's Information Technology Resources*
- *All Department agreements with Utility Agency Owner (UAO)*
- *All certifications necessary for project letting.*
- *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.*
- *Available traffic and planning data*
- *All approved utility relocations*
- *Project utility certification to the DEPARTMENT's Central Office*
- *Any necessary title searches.*
- *Engineering standards review services.*
- *All available information in the possession of the DEPARTMENT pertaining to utility companies whose facilities may be affected by the proposed construction.*
- *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.*
- *Systems traffic for Projected Design Year, with K, D, and T factors*
- *Previously constructed Highway Beautification or Landscape Construction Plans*
- *Landscape Opportunity Plan(s)*
- *Existing right of way maps*
- *Existing pavement evaluation report for all RRR projects*
- *PD&E Documents*
- *Design Reports*
- *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*
- *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*

### **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 36 (3D Modeling). 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 is 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 II plans or completion of quantities, the DEPARTMENT's Long-Range Estimate (LRE) system will be used to produce a conceptual estimate, according to

District policy. Once the quantities have been developed (beginning at Phase II plans and no later than Phase III plans) the CONSULTANT shall be responsible for inputting the category information, pay items and quantities into AASHTOWare Project Preconstruction through the use of the DEPARTMENT's Designer Interface.

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 implement 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: 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 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, Independent Peer Review and a Constructability/Biddability Review for design Phase Plans document submittals may be required on this project. In case an independent peer review is needed, the time for this task shall be reflected in the design schedule.

The Independent Peer Review shall be completed by someone who has not worked on the plan component that is being reviewed. The Constructability/Biddability 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 FDOT CADD Manual. The Constructability/Biddability Review shall ensure the project can be constructed and paid for as designed. Constructability/Biddability 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/Biddability 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 3.7 below, represent work efforts that are applicable to the project as a whole and not to any one or more specific project activity. The work described in these tasks shall be performed by the CONSULTANT when included in the project scope.

### **3.1 Public Involvement**

Public involvement includes communicating to all interested persons, groups, and government organizations information regarding the development of the project. The CONSULTANT shall provide to the DEPARTMENT drafts of all Public Involvement documents (e.g., newsletters, property owner letters, advertisements, etc.) associated with the following tasks for review and approval at least [10] business days prior to printing and / or distribution.

#### **3.1.1 Community Awareness Plan**

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

### **3.1.2 Notifications - *By the DEPARTMENT***

### **3.1.3 Preparing Mailing Lists - *By the DEPARTMENT***

### **3.1.4 Median Modification Letters - (N/A)**

### **3.1.5 Driveway Modification Letters**

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

### **3.1.6 Newsletters - (N/A)**

### **3.1.7 Renderings and Fly-Throughs - (N/A)**

### **3.1.8 PowerPoint Presentations - *By the DEPARTMENT***

### **3.1.9 Public Meeting Preparations**

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

The CONSULTANT will investigate potential meeting sites to advise the DEPARTMENT on their suitability. The [DEPARTMENT] will pay all costs for meeting site rents and insurance. No DEPARTMENT meetings will be held on public school system properties.

### **3.1.10 Public Meeting Attendance and Follow-up**

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

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

It is estimated for this project there will be [1] Public meetings during the design.

### **3.1.11 Other Agency Meetings**

In addition to scheduled public meetings the CONSULTANT may be required to participate in meetings with local governing authorities and/or Metropolitan Planning Organization (MPO). The CONSULTANT's participation may include, but not be limited to, presentations during the meeting, note taking, and summarizing the meeting in a memo to the file. It is estimated for this project there will be [3] meetings (as indicated in Section 2.1 above) with local governing authorities and/or MPOs during the design.

### **3.1.12 Web Site - (N/A)**

## **3.2 Joint Project Agreements - (N/A)**

## **3.3 Specifications & Estimates**

### **3.3.1 Specifications Package Preparation**

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 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.

### **3.3.2 Estimated Quantities Report Preparation**

The CONSULTANT shall prepare an Estimated Quantities (EQ) Report in accordance with FDM 902. Includes loading category information, pay items, and quantities into Designer Interface for AASHTOWare Project Preconstruction (PrP), QA/QC efforts associated with AASHTOWare PrP and the EQ Report.

## **3.4 Contract Maintenance and Project Documentation**

Contract maintenance includes project management effort for complete setup and maintenance of files, electronic folders, and documents, developing technical monthly progress reports and schedule updates. Project documentation includes the compilation and delivery of final documents, reports or calculations that support the development of the contract plans; includes uploading files to Electronic Document Management System (EDMS) or Project Suite Enterprise Edition (PSEE).

### **3.5 Value Engineering (Multi-Discipline Team) Review - (N/A)**

### **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".

Specific services will be negotiated as necessary as a contract amendment.

### **3.8 Post-Design Services**

Post-Design Services may include, but not limited to, meetings, construction assistance, plans revisions, shop drawing review, survey services, as-built drawings, and load ratings. Specific services will be negotiated as necessary as a contract amendment.

Post-Design Services are not intended for instances of CONSULTANT errors 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 - (N/A)**

### **3.11 Railroad, Transit and/or Airport Coordination - (N/A)**

### **3.13 Other Project General Tasks**

#### **3.13.1 Sustainability**

*The consultant shall be responsible for complying with the requirements of Miami-Dade County Sustainability Building Program per County Ordinance 07-65. For this project, the primary mechanism for determining compliance with the County's Sustainability Buildings Program shall be the Envision rating system. Envision is a third-party rating system that focuses specifically on sustainable infrastructure and is managed by the Institute for Sustainable Infrastructure (ISI): <https://sustainableinfrastructure.org/>. This project is required to achieve, at a minimum, envision "Silver" certification and shall focus on implementing strategies within the Envision Framework: (1) quality of life, (2) leadership, (3) resource allocation (reduce water, energy use,) (4) natural world and (5) climate and resilience. Envision addresses human well-being, mobility,*

*community development, collaboration, planning, economy, materials, energy, water, sitting, conservation, ecology, emissions, and resilience. Refer to Attachment 1 – Design Criteria, for additional requirements.*

### **3.13.2 Sea Level Rise**

*Consultant shall be responsible for complying with the requirements of Miami-Dade County Ordinance 14-79 and Resolution No. R-451-14. A sea level rise analysis shall be performed. Report shall include methodology, assumptions, design criteria and parameters, recommendations, and conclusion.*

## **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 prepare a Typical Section Package.

### **4.2 Pavement Type Selection Report - (N/A)**

### **4.3 Pavement Design Package**

The CONSULTANT shall prepare a Pavement Design Package.

### **4.4 Cross-Slope Correction - (N/A)**

### **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 the project Utility Coordinator in the format requested by the DEPARTMENT.

Note: When the project includes a 3D Model deliverable, it also includes Activity 36 3D Modeling.

### **4.6 Access Management - (N/A)**

### **4.7 Roundabout Final Design Analysis - (N/A)**

### **4.8 Cross Section Design Files**

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

Note: If the Cross Sections are prepared using a 3D model, use Task 36.5 instead of Task 4.9 for the Cross Section Design Files.

#### **4.9 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, transit stops, and traffic monitoring sites. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage must always be maintained. 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 Traffic Control Plan shall be prepared by a certified designer who has completed the 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.

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

#### **4.10 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.

#### **4.11 Selective Clearing and Grubbing**

Note: Utilize Activities 25 and 26 for Standalone Landscape Projects.

##### **a) Selective Clearing and Grubbing of Existing Vegetation Field Assessment**

The CONSULTANT shall review information from the DEPARTMENT and conduct a project field assessment(s) of existing vegetation. At least one field assessment visit is to be attended by the District Landscape Architect.

The Result of the Field Assessment(s) will determine the course of action for Selective Clearing and Grubbing and the extent of the Vegetation Survey under Task 2.10.

**b) Selective Clearing and Grubbing Site Inventory Analysis of Existing Vegetation and Cross-Discipline Coordination (OPTIONAL SERVICES)**

The CONSULTANT shall coordinate with the District Utility Office, drainage engineers, and traffic engineers to ensure that preservation of existing vegetation is coordinated between all disciplines. Coordinate with the District Landscape Architect.

Based on the field assessment, the CONSULTANT may be required do a site inventory analysis of existing vegetation, opportunities for preservation and protection of existing vegetation, relocation options, and selective removal of nuisance and/or non-nuisance vegetation. Coordinate with surveyor to have trees and vegetation tagged and surveyed, per tasks 27.28 or 27.29.

**c) Selective Clearing and Grubbing- Existing Vegetation Maintenance Report**

The CONSULTANT shall include in the plan instructions for the care and maintenance of the plant preservation areas, and selective clearing and grubbing areas throughout the construction period. The CONSULTANT will coordinate with the District Landscape Architect to ensure that the intent of the plant preservation areas is in alignment with future highway landscape plans. The CONSULTANT should be knowledgeable in arboricultural practices to the extent that they are able to deliver detailed and informed Selective Clearing and Grubbing Plans.

**4.12 Tree Disposition Plans**

The consultant will prepare a Tree Disposition Plan outlining the requirements for the relocation and protection of trees located within the project boundaries. Will utilize the information collected from the Vegetation Survey and information collected under task 4.12 for Selective Clearing and Grubbing.

**4.13 Design Variations and Exceptions**

The CONSULTANT shall prepare the documentation necessary to gain DEPARTMENT approval of all appropriate Design Variation Memorandums, Formal Design Variations and/or Design Exceptions.

A Project Design Variation Memorandum (FDM Form 122-B) shall be prepared to document all non-controlling design elements for a project that do not meet Department criteria. Those elements requiring a more detailed analysis, as per FDM Section 122.2, shall be submitted as Formal Design Variations or Design Exceptions.

**4.14 Design Report - (N/A)**

**4.15 Roadway Quantities for EQ Report**

The CONSULTANT shall determine roadway pay items and quantities and the supporting documentation.

#### **4.16 TTCP Quantities for EQ Report**

The CONSULTANT shall determine temporary traffic control pay items and quantities and the supporting documentation.

#### **4.17 Cost Estimate**

#### **4.18 Technical Special Provisions and Modified Special Provisions**

#### **4.19 Other Roadway Analyses - (N/A)**

#### **4.20 Field Reviews**

#### **4.21 Monitor Existing Structures**

The CONSULTANT shall perform field observations to visually identify existing structures within the project limits which may require settlement, vibration, or groundwater monitoring by the contractor during construction in accordance with FDM Chapter 117. The CONSULTANT shall identify the necessary pay items to be included in the bid documents to monitor existing structures.

Optional Services (may be negotiated later if needed): The CONSULTANT shall coordinate with and assist the geotechnical engineer and/or structural engineer to develop mitigation strategies (when applicable).

#### **4.22 Technical Meetings**

#### **4.23 Quality Assurance/Quality Control**

#### **4.24 Independent Peer Review - (N/A)**

#### **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.

#### **5.1 Key Sheet**

#### **5.2 Typical Section Sheets**

##### **5.2.1 Typical Sections**

##### **5.2.2 Typical Section Details**

#### **5.3 General Notes/Pay Item Notes**

#### **5.4 Project Layout**

**5.5 Plan/Profile Sheet - (N/A)**

**5.6 Profile Sheet**

**5.7 Plan Sheet**

**5.8 Special Profile - (N/A)**

**5.9 Back-of-Sidewalk Profile Sheet**

**5.10 Interchange Layout Sheet - (N/A)**

**5.11 Ramp Terminal Details (Plan View)**

**5.12 Intersection Layout Details - (N/A)**

**5.13 Special Details**

**5.14 Cross-Section Pattern Sheets - (N/A)**

**5.15 Roadway Soil Survey Sheets**

**5.16 Cross Sections**

**5.17 Temporary Traffic Control Plan Sheets**

**5.18 Temporary Traffic Control Cross Section Sheets - (N/A)**

**5.19 Temporary Traffic Control Detail Sheets**

**5.20 Utility Adjustment Sheets**

**5.21 Selective Clearing and Grubbing Sheets - (N/A)**

**5.21.1 Selective Clearing and Grubbing**

**5.21.2 Selective Clearing and Grubbing Details**

**5.22 Tree Disposition Plan Sheets**

**5.22.1 Tree Disposition Plan Sheets**

Tree Disposition Plan Sheets will be signed and sealed drawings showing the location and vertical/horizontal landscape design of the vegetation to be relocated. The Tree Disposition Plans will be produced at the scale of the roadway drawings or at a scale that best depicts the information. Interchange and details will be shown at no larger than a 1" =50" scale.

**5.22.2 Tree Disposition Plan Tables and Schedules**

**5.23 Project Control Sheets**

**5.24 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 Environmental Permit Coordinators/Environmental staff and preparing Dredge & Fill Detail sheets where applicable.

#### **5.25 Utility Verification Sheets (SUE Data)**

#### **5.26 Quality Assurance/Quality Control**

#### **5.27 Supervision**

### **6a DRAINAGE ANALYSIS**

*The CONSULTANT will adhere to the Florida stormwater management program per the Water Resources Implementation Rule (Chapter 62-40.431 FAC) and implement best management practices to avoid, where possible, and otherwise minimize adverse impacts to surface waters and water quality within the project limits.*

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

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

The CONSULTANT shall 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.

#### **6a.2 Base Clearance Calculations - (N/A)**

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 a Base Clearance Report.

### **6a.3 Pond Siting Analysis and Report - (N/A)**

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

### **6a.4 Design of Cross Drains - (N/A)**

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

### **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 drainpipes, 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**

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

### **6a.9 Design of Storm Drains**

Delineate contributing drainage areas, determine runoff, inlet locations, and spread. Calculate hydraulic losses (friction, utility conflict and, if necessary, minor losses). Determine design tailwater and, if necessary, outlet scour protection.

### **6a.10 Optional Culvert Material**

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

### **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.11.1 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 - (N/A)**

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

### **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.

### **6a.14 Bridge Hydraulic Report - (N/A)**

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 (N/A)**

### **6a.16 Drainage Quantities for EQ Report**

The CONSULTANT shall determine drainage pay items and quantities and the supporting documentation.

### **6a.17 Cost Estimate**

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

### **6a.18 Technical Special Provisions / Modified Special Provisions**

### **6a.19 Hydroplaning Analysis - (N/A)**

Perform a hydroplaning analysis to assist in the determination of the appropriate roadway geometry for all necessary locations (both typical sections and critical cross sections) as

needed. See the FDOT Hydroplaning Guidance and FDOT Design Manual (FDM) Chapters 210 and 211 for more information.

#### **6a.20 Existing Permit Analysis**

Data gathering including desktop analysis of local, state and federal Drainage permits.

#### **6a.21 Other Drainage Analysis**

Includes all efforts for a drainage task not covered by an existing defined task.

#### **6a.22 Noise Barrier Evaluation - (N/A)**

Evaluate the capacity of drainage openings in noise barriers and locate them to ensure flows are accommodated.

#### **6a.23 Erosion Control Plan**

Includes analysis and design of the Erosion Control Plan. Includes creating the design file.

#### **6a.24 Field Reviews**

#### **6a.25 Technical Meetings**

Meetings with Department staff, regulatory agencies, local governments such as meetings with District Drainage Engineer, the Water Management District, FDEP, etc.

#### **6a.26 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.27 Quality Assurance/Quality Control**

#### **6a.28 Independent Peer Review**

#### **6a.29 Supervision**

#### **6a.30 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 - (N/A)**

#### **6b.3 Drainage Structures**

#### **6b.4 Lateral Ditch Plan/Profile & Cross Sections**

#### **6b.5 Retention/Detention/Floodplain Compensation Pond Details & Cross Sections**

#### **6b.6 Erosion Control Plan**

#### **6b.7 SWPPP**

#### **6b.8 Quality Assurance/Quality Control**

#### **6b.9 Supervision**

### **7 UTILITIES**

*Utility coordination will be performed by the DEPARTMENT. The CONSULTANT shall assist the DEPARTMENT during the utility process as described from 7.1 to 7.17 below.*

The DEPARTMENT shall identify utility facilities and secure agreements, utility work schedules, and plans from the Utility Agency Owners (UAO) ensuring all conflicts that exist between utility facilities and the DEPARTMENT's construction project are addressed. The DEPARTMENT shall certify all utility negotiations have been completed and that arrangements have been made for utility work to be undertaken.

#### **7.1 Utility Kickoff Meeting**

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

#### **7.2 Identify Existing Utility Agency Owner(s)**

*To be performed by the DEPARTMENT.*

#### **7.3 Make Utility Contacts**

*To be performed by the Department. The CONSULTANT shall provide the DEPARTMENT with Initial Utility Contact plans for distribution to UAOs.*

#### **7.4 Exception Processing**

The DEPARTMENT shall be responsible for transmitting/coordinating the appropriate design reports including, but not limited to, the Resurfacing, Restoration and Rehabilitation (RRR) report, Preliminary Engineering Report, Project Scope and/or the Concept Report (if applicable) to each UAO to identify any condition that may require a Utility Exception. The DEPARTMENT shall identify and communicate to the UAO any facilities in conflict with their location or project schedule. The CONSULTANT shall assist with the processing of design exceptions involving Utilities with the UAO and the DEPARTMENT. Assist with processing per the UAM.

## **7.5 Preliminary Utility Meeting**

The DEPARTMENT shall schedule (time and place), notify participants, and conduct a preliminary utility meeting with all UAO(s) having facilities located within the project limits for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable property rights from the FDOT Legal Office, 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 facilities. The DEPARTMENT 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 DEPARTMENT is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting.

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

The CONSULTANT shall assist the DEPARTMENT in reviewing utility marked plans and data individually as they are received for content. Ensure information from the UAO (utility type, material, and size) is included in the plans. The DEPARTMENT will process and forward all supporting documentation for utility reimbursement.

## **7.8 Subordination of Easements Coordination**

The CONSULTANT shall assist the DEPARTMENT, as requested, in transmitting to and securing from the UAO, the executed subordination agreements prepared by the appropriate DEPARTMENT office. The CONSULTANT shall coordinate with the DUO the programming of the necessary work program funds to compensate the UAO.

## **7.9 Utility Design Meeting**

The DEPARTMENT 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 plans (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 DEPARTMENT 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 4.9 (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 shall review utility marked up plans and work schedules as they are received for content and coordinate review with the designer. 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. 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.

### **7.11 Utility Coordination/Follow-up**

The DEPARTMENT shall provide utility coordination and follow-up. This includes follow-up, interpreting plans, and assisting the UAOs with completion of their work schedules 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. The DEPARTMENT shall keep accurate minutes of all meetings and distribute a copy to all attendees. This task can be applied to all phases of the project.

### **7.12 Utility Constructability Review**

The CONSULTANT shall assist the DEPARTMENT in reviewing 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**

The CONSULTANT shall 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.

If required by the DEPARTMENT, the CONSULTANT shall 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)**

This includes coordination of utility design effort between the DEPARTMENT and the UAO(s). The DEPARTMENT shall conduct additional coordination meetings, prepare and process the agreements, review tabulation of quantities, perform UWHC constructability and biddability review, review pay items, cost estimates and Technical Special Provisions (TSP) or Modified Special Provision (MSP) prepared by the UAO. This does not include utility the utility design effort. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified. Effort for the EOR is not included in this task, see Roadway Analysis Task Group 4.

#### **7.15 Contract Plans to UAO(s)**

Task to be performed by the DEPARTMENT. If requested by the DEPARTMENT, the CONSULTANT shall transmit the contract plans as processed for letting to the UAO(s). Transmittals to UAO(s) may be by certified mail, return receipt requested.

#### **7.16 Certification/Close-Out**

Task to be performed by the DEPARTMENT. The CONSULTANT shall assist the DEPARTMENT in transmitting utility files and preparation of the Utility Certification Letter. The DEPARTMENT shall certify the following:

All utility negotiations (Full execution of each agreement, approved Utility Work Schedules, Technical Special Provisions or Modified Special Provisions written, etc.) have been completed with arrangements made for utility work to be undertaken and completed as required for proper coordination with the physical construction schedule.

OR

An on-site inspection was performed, and no utility work will be involved.

OR

Plans were sent to the Utility Companies/Agencies and no utility work is required.

#### **7.17 Other Utilities**

If requested by the DEPARTMENT, the CONSULTANT shall provide other utility services. This includes all efforts for a utility task not covered by an existing defined task. Required work will be defined in the scope and negotiated on a case-by-case basis.

### **8 ENVIRONMENTAL PERMITS and NEPA**

***Procurement of Environmental Permits and Environmental Clearances will be performed by the DEPARTMENT. The CONSULTANT shall provide support for all Environmental Permits and Environmental Clearances tasks.***

The CONSULTANT shall notify the DEPARTMENT Project Manager, Environmental Permit Coordinator, and other appropriate DEPARTMENT personnel in advance of all scheduled meetings with the regulatory agencies to allow a DEPARTMENT representative to attend. The CONSULTANT shall copy 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 DEPARTMENT shall perform preliminary project research and shall be responsible for regulatory agency coordination to ensure that design efforts are properly directed toward permit requirements.

The CONSULTANT shall research any existing easements or other restrictions that may exist both within and adjacent to the proposed project boundary. Project research may include but should not be limited to review of available: District Right of Way files and databases; federal, state, and local permit files and databases; and local government information including county and property appraiser data. Any applicable information will be shown on the plans and provided to the DEPARTMENT as appropriate.

### **8.2 Field Work**

#### **8.2.1 Pond Site Alternatives - (N/A)**

#### **8.2.2 Establish Wetland Jurisdictional Lines and Assessments - (N/A)**

#### **8.2.3 Species Surveys:**

The DEPARTMENT shall conduct wildlife surveys as defined by rules or regulations of any permitting agency, or commenting agency that is processing a DEPARTMENT permit.

### **8.3 Agency Verification of Wetland Data - (N/A)**

### **8.4 Complete and Submit All Required Permit Applications**

To be performed by the DEPARTMENT. The DEPARTMENT's Environmental Permit Consultant shall collect 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 8.15 (Other Permits). The DEPARTMENT's Environmental Permit 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.

The CONSULTANT shall provide all supporting information required for the submittal of the permit application packages. The DEPARTMENT's Environmental Permit Consultant shall collect all the data and information necessary to obtain the environmental permits required to construct the project. The DEPARTMENT's Environmental Permit Consultant shall prepare each permit application for DEPARTMENT approval in accordance with the rules and/or regulations of the environmental agency responsible for issuing a specific permit and/or authorization to perform work.

The DEPARTMENT's Environmental Permit Consultant will submit all permit applications, as directed by the DEPARTMENT, and be responsible for payment of all permits and public noticing fees.

**8.4.1 Complete and Submit all Required Environmental Permit Applications:**

The DEPARTMENT shall prepare, complete, and submit the required environmental permit (ERP NPDES Stormwater permit) application package to the appropriate regulatory agencies. This includes, but is not limited to, applications submitted to WMDs and/or DEP. The application packages may include but are not limited to attachments (e.g., 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 DEPARTMENT 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.

**8.4.2 Complete and Submit all Required Species Permit Applications - (N/A)**

**8.5 Coordinate and Review Dredge and Fill Sketches - (N/A)**

**8.6 Complete and Submit Documentation for Coordination and/or USCG Bridge Permit Application-- (N/A)**

**8.6.1 Prepare and submit required documents for USCG Coordination - (N/A)**

**8.6.2 Complete and submit USCG Bridge Permit Application - (N/A)**

**8.7 Prepare Water Management District or Local Water Control District Right of Way Occupancy Permit Application - (N/A)**

**8.8 Prepare Coastal Construction Control Line (CCCL) Permit Application - (N/A)**

**8.9 Prepare USACE Section 408 Application to Alter a Civil Works Project - (N/A)**

**8.10 Compensatory Mitigation Plan - (N/A)**

**8.11 Mitigation Coordination and Meetings - (N/A)**

**8.12 Regulatory Agency Support**

The CONSULTANT shall provide regulatory agency support which may include but is not limited to preparing: a Statement of Findings or Memorandum for the Record; Public Notice; Findings of Fact; and Biological Opinion.

**8.13 Technical Support to the DEPARTMENT for Environmental Certifications and Re-evaluations (use when CONSULTANT provides technical support only)**

The CONSULTANT shall provide engineering and environmental support for the DEPARTMENT to obtain environmental certifications for all changes to the project after

the PD&E study has been approved. These changes include but are not limited to pond or mitigation sites identified, land use or environmental changes, and design changes.

#### **8.13.1 NEPA Re-evaluation**

During the development of the final design plans, the CONSULTANT shall be responsible for coordinating with the District Project Manager and the Planning and Environmental Management Office (PLEMO) to provide necessary engineering and environmental information required in the preparation of the re-evaluation by the DEPARTMENT. The preparation of environmental re-evaluations includes those as listed in Part 1, Chapter 13 of the DEPARTMENT's PD&E Manual: Right of Way, Design Change, and Construction Advertisement.

Re-evaluations will be completed in accordance with Part 1, Chapter 13 of the PD&E Manual. The CONSULTANT shall provide information to the DEPARTMENT to update the Project Commitment Record for incorporation into the re-evaluation(s) and provide documentation confirming all PD&E commitments to be met.

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

#### **8.13.2 Archaeological and Historical Resources**

The CONSULTANT shall provide necessary technical information to the District's Project Manager to analyze the impacts to all cultural and historical resources due to changes in the project in accordance with Part 2, Chapter 8 of the PD&E Manual.

#### **8.13.3 Wetland Impact Analysis - (N/A)**

#### **8.13.4 Essential Fish Habitat Impact Analysis - (N/A)**

#### **8.13.5 Protected Species and Habitat Impact Analysis**

The CONSULTANT shall provide necessary technical information to the District's Project Manager to analyze the impacts to all protected species and habitat in accordance with Part 2, Chapter 16 of the PD&E Manual due to changes in the project. The DEPARTMENT shall perform the necessary analysis to complete agency consultation in accordance with Section 7 or Section 10 of the Endangered Species Act.

*The CONSULTANT will incorporate the USFWS's most current protection guidelines for the eastern indigo snake, currently entitled "Standard Protection Protocols for the Eastern Indigo Snake", into the final project design and will require that the construction contractor to abide to the guidelines during construction to satisfy the PD&E study commitment.*

#### **8.14 Preparation of Environmental Clearances and Re-evaluations (use when CONSULTANT prepares all documents associated with a re-evaluation) - (N/A)**

### **8.15 Other Environmental Permits**

*The CONSULTANT shall evaluate the project for any other federal, state, or local permits which may be applicable to the proposed scope of work. In the event additional environmental permits are required and are not identified in the present scope of work, the CONSULTANT shall provide a summary of such permits to the DEPARTMENT.*

### **8.16 Contamination Impact Analysis**

The CONSULTANT shall prepare Contamination Screening Evaluation for the project limits as described in Part 2, Chapter 20, of the PD&E Manual.

The DEPARTMENT will provide Level II assessment services if necessary. If contamination is identified within the limits of construction, the CONSULTANT shall coordinate with the District Contamination Impact Coordinator to properly address identified contamination areas in the plans and develop specifications as appropriate.

### **8.17 Asbestos Survey - (N/A)**

*In the event an Asbestos Survey is required, the CONSULTANT shall notify the DEPARTMENT immediately and provide a summary of work required to the DEPARTMENT.*

### **8.18 Technical Meetings**

### **8.19 Quality Assurance/Quality Control**

### **8.20 Supervision**

### **8.21 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 2.19, 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. 20, Provisions for Work. Contract documents shall display economic 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 8 ½"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.

**9.1 Key Sheet and Index of Drawings**

**9.2 Project Layout**

**9.3 General Notes and Bid Item Notes**

**9.4 Miscellaneous Common Details**

**9.5 Incorporate Report of Core Borings**

**9.6 Standard Plans - Bridges**

**9.7 Existing Bridge Plans - (N/A)**

**9.8 Structures Quantities for EQ Report**

**9.9 Cost Estimate**

**9.10 Technical Special Provisions and Modified Special Provisions**

**9.11 Field Reviews**

**9.12 Technical Meetings**

**9.13 Quality Assurance/Quality Control**

**9.14 Independent Peer Review – (N/A)**

**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 - (N/A)**

**10.3 Ship Impact Criteria - (N/A)**

**10.4 Short-Span Concrete - (N/A)**

**10.5 Medium-Span Concrete**

**10.6 Long Span Concrete - (N/A)**

**10.7 Structural Steel - (N/A)**

Foundation and Substructure Alternatives

**10.8 Pier/Bent**

**10.9 Shallow Foundations / GRS Abutments**

**10.10 Deep Foundations**

Movable Span

**10.11 Data Collection and Design Criteria - (N/A)**

**10.12 Movable Span Geometrics and Clearances - (N/A)**

**10.13 Deck System Evaluation - (N/A)**

**10.14 Framing Plan Development - (N/A)**

**10.15 Main Girder Preliminary Design - (N/A)**

**10.16 Conceptual Span Balance/Counterweight - (N/A)**

**10.17 Support System Development - (N/A)**

**10.18 Drive Power Calculations - (N/A)**

**10.19 Drive System Development - (N/A)**

**10.20 Power and Control Development - (N/A)**

**10.21 Conceptual Pier Design - (N/A)**

**10.22 Foundation Analysis (FL PIER) - (N/A)**

**10.23 Tender Visibility Study - (N/A)**

Other BDR Issues

**10.24 Aesthetics**

**10.25 TTCP/Staged Construction Requirements**

**10.26 Constructability Requirements**

**10.27 Load Rating for Damaged/Widened Structures - (N/A)**

**10.28 Quantity and Cost Estimates**

**10.29 Quantity and Cost Estimates - Movable Span - (N/A)**

**10.30 Wall Type Justification**

Report Preparation

**10.31 Exhibits**

**10.32 Exhibits - Movable Span - (N/A)**

**10.33 Report Preparation**

**10.34 Report Preparation - Movable Span - (N/A)**

**10.35 BDR Submittal Package**

Preliminary Plans

When ONLY Phase I plans are final deliverable, use Task Nos. as shown for applicable bridge types for project Activities 12 thru 16. Staff hours to be negotiated and scaled appropriately.

**11 STRUCTURES - TEMPORARY BRIDGE (N/A)**

*N/A*

**12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE**

*N/A*

**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 - (N/A)**

**13.13 Bent Stability Analysis - (N/A)**

**13.14 Bent Structural Design - (N/A)**

**13.15 Bent Plan and Elevation - (N/A)**

**13.16 Bent Details - (N/A)**

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 - (N/A)**

**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

**13.32 Section Properties - (N/A)**

**13.33 Material Properties - (N/A)**

- 13.34 Construction Sequence - (N/A)**
- 13.35 Tendon Layouts - (N/A)**
- 13.36 Live Load Analysis - (N/A)**
- 13.37 Temperature Gradient - (N/A)**
- 13.38 Time Dependent Analysis - (N/A)**
- 13.39 Stress Summary - (N/A)**
- 13.40 Ultimate Moments - (N/A)**
- 13.41 Ultimate Shear - (N/A)**
- 13.42 Construction Loading - (N/A)**
- 13.43 Framing Plan - (N/A)**
- 13.44 Girder Elevation, including Grouting Plan and Vent Locations - (N/A)**
- 13.45 Girder Details - (N/A)**
- 13.46 Erection Sequence - (N/A)**
- 13.47 Splice Details - (N/A)**
- 13.48 Girder Deflections and Camber - (N/A)**
- 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 Ratings - (N/A)**

**14 STRUCTURES - STRUCTURAL STEEL BRIDGE - (N/A)**

**15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE - (N/A)**

**16 STRUCTURES - MOVABLE SPAN - (N/A)**

**17 STRUCTURES - RETAINING WALLS**

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

General Requirements

**17.1 Key Sheet**

**17.2 Horizontal Wall Geometry**

Permanent Proprietary Walls

**17.3 Vertical Wall Geometry**

**17.4 Semi-Standard Drawings**

**17.5 Wall Plan and Elevations (Control Drawings)**

**17.6 Details**

Temporary Proprietary Walls

**17.7 Vertical Wall Geometry - (N/A)**

**17.8 Semi-Standard Drawings - (N/A)**

**17.9 Wall Plan and Elevations (Control Drawings) - (N/A)**

**17.10 Details - (N/A)**

Cast-In-Place Retaining Walls

**17.11 Design**

**17.12 Vertical Wall Geometry**

**17.13 General Notes**

**17.14 Wall Plan and Elevations (Control Drawings)**

**17.15 Sections and Details**

**17.16 Reinforcing Bar List**

Other Retaining Walls and Bulkheads

**17.17 Design - (N/A)**

**17.18 Vertical Wall Geometry - (N/A)**

**17.19 General Notes, Tables and Miscellaneous Details - (N/A)**

**17.20 Wall Plan and Elevations - (N/A)**

**17.21 Details - (N/A)**

## **18 STRUCTURES – MISCELLANEOUS - (N/A)**

## **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 - (N/A)**

### **19.3 Signing and Pavement Marking 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**

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

The CONSULTANT shall prepare a photometric analysis to be submitted as part of the Lighting Design Analysis Report. An analysis shall be provided for each new and/or modified sign panel which requires lighting.

The Consultant shall submit voltage drop calculations and load analysis for each new and/or modified sign panel which requires lighting.

### **19.7 S&PM Quantities for EQ Report**

The CONSULTANT shall determine signing and pavement marking pay items and quantities and the supporting documentation.

### **19.8 Cost Estimate**

### **19.9 Technical Special Provisions and Modified Special Provisions**

### **19.10 Other Signing and Pavement Marking Analysis**

### **19.11 Field Reviews**

### **19.12 Technical Meetings**

### **19.13 Quality Assurance/Quality Control**

### **19.14 Independent Peer Review**

### **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 all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums that include the following.

### **20.1 Key Sheet & Signature Sheet**

### **20.2 General Notes/Pay Item Notes**

### **20.3 Project Layout**

### **20.4 Plan Sheet**

### **20.5 Special Details**

### **20.6 Service Point Details**

### **20.7 Guide Sign Data**

### **20.8 Cross Sections (Sign Installations)**

### **20.9 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.

#### **20.10 Supervision**

#### **21 SIGNALIZATION ANALYSIS - (N/A)**

#### **22 SIGNALIZATION PLANS - (N/A)**

#### **23 LIGHTING ANALYSIS**

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

##### **23.1 Lighting Justification Report - (N/A)**

##### **23.2 Lighting Design Analysis Report (LDAR)**

The CONSULTANT shall prepare a Preliminary Lighting Design Analysis Report in accordance with the requirements of the FDOT Design Manual. The report shall be submitted under a separate cover with the Phase II plans submittal. After approval of the preliminary report, the CONSULTANT shall submit a revised report for each submittal. Final report to be signed and sealed by EOR.

##### **23.3 Voltage Drop Calculations**

The CONSULTANT shall submit voltage drop calculations showing the equation or equations used along with the number of luminaries per circuit, the length of each circuit, the size conductor or conductors used and their ohm resistance values. The voltage drop incurred on each circuit (total volts and percentage of drop) shall be calculated, and all work necessary to calculate the voltage drop values for each circuit should be presented in such a manner as to be duplicated by the District.

The Voltage Drop Calculations shall be submitted as part of the Lighting Design Analysis Report.

##### **23.4 FDEP Coordination and Report - (N/A)**

##### **23.5 Reference and Master Design Files - (N/A)**

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

##### **23.6 Temporary Highway Lighting - (N/A)**

### **23.7 Design Documentation**

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

- Phase submittal checklist.
- Structural calculations for special conventional pole concrete foundations.
- Correspondence with the power company concerning new electrical service.

### **23.8 Lighting Quantities for EQ Report**

The CONSULTANT shall determine lighting pay items and quantities and the supporting documentation.

### **23.9 Cost Estimate**

### **23.10 Technical Special Provisions and Modified Special Provisions**

### **23.11 Other Lighting Analysis - (N/A)**

### **23.12 Field Reviews**

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

- Existing Lighting Equipment
- Load Center, Capabilities and Condition/Age
- Condition of Lighting Structure(s)
- Verification of horizontal clearances
- Verification of breakaway requirements
- Verification of existing lighting circuits to be used as part of this design.

### **23.13 Technical Meetings**

### **23.14 Quality Assurance/Quality Control**

### **23.15 Independent Peer Review - (N/A)**

### **23.16 Supervision**

### **23.17 Coordination**

## **24 LIGHTING PLANS**

The CONSULTANT shall prepare a set of Lighting Plans in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

### **24.1 Key Sheet & Signature Sheet**

### **24.2 General Notes/Pay Item Notes**

### **24.3 Pole Data, Legend & Criteria**

### **24.4 Project Layout**

### **24.5 Plan Sheets**

### **24.6 Special Details**

### **24.7 Service Point Details**

### **24.8 Temporary Highway Lighting Plan Sheets**

### **24.9 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.

### **24.10 Supervision**

## **25 LANDSCAPE ANALYSIS - (N/A)**

## **26 LANDSCAPE PLANS - (N/A)**

## **27 SURVEY**

*To be provided by the DEPARTMENT. The CONSULTANT will provide SUE verification.*

## **28 PHOTOGRAMMETRY - (N/A)**

## **30 TERRESTRIAL MOBILE LiDAR - (N/A)**

## **31 ARCHITECTURE DEVELOPMENT**

### **PHASE I - 30% SCHEMATIC DESIGN DOCUMENTS SUBMITTAL**

After receipt of written authorization to proceed from the DEPARTMENT and based on the approvals and any authorized adjustments to the Project Scope, Project Schedule or Budget, the Design Professional shall prepare, submit, and present for approval by the DEPARTMENT, Phase I (30%) documents, comprised of, but not limited, to the following:

Documents

- Architectural and Civil site plan(s) showing, in addition to site survey requirements, drainage, and such physical features that may adversely affect or enhance the safety, health, welfare, visual environment, or comfort of the occupants.
- A statement on the site plan signed and dated by the Design Professional or his designated subconsultant, including identifying the number of existing trees, the number and size of required trees, and the number of proposed trees to be planted, and other relevant features.
- Soil testing results including a copy of the Geotechnical Engineer's report on the site, and proposed method of treatment when unusual soil conditions or special foundation problems are indicated.
- Review of anticipated GBRS points and certification level; adjust attempted points as needed to meet target certification level. Provide updated GBRS credit scorecard or checklist.

Drawing(s) to include as a minimum, the following deliverables:

- Site plan drawn at an architectural scale that will allow the entire facility to be shown on one sheet, without break-lines, and which indicates project phasing as applicable to the Scope.
- Floor plans drawn at 3/32 inch or larger scale showing the entire bridge and other program requirements.
- Floor plans drawn at 3/32 inch or larger scale showing each ramped path to the bridge and other relevant features.
- Reflected ceiling plans drawn at 3/32 inch or larger scale for the entire bridge showing major lighting equipment and ceiling panel layouts.
- Roof and miscellaneous plans to be drawn at 3/32 inch or larger scale showing dimensioned features penetrations; and other relevant features.
- All exterior building elevations to illustrate and indicate the scale, finish, size and fenestration of the facility.
- Sufficient building and wall sections to show dimensions, proposed construction material, and relationship of finished floor to finished grades.
- Preliminary Structural Drawings to include plans and sections indicating systems, connections, and foundations.
- Electrical Drawings include plans with electrical outlets, lighting layouts, power connections for misc. items, and empty conduits embedded in the concrete slab for future use - coordinate location with owner. for outdoors and major interior spaces. Show location of electrical rooms, transformers, emergency generator.
- Equipment Schedules to indicate major equipment that will be provided by the Contractor and those that will be provided by the DEPARTMENT or others.

Life Safety plans to show exit capacity and other relevant features.

Outline Specifications (Edited Table of Contents)

- Organized to conform to the formats for outline specifications as established by the Construction Specifications Institute's current edition of Master Format on the date of execution of the Contract.
- Provide only those sections relevant to the project scope.
- Complete for Divisions 2 through 48 for finishes, material, and systems including structural, electrical, and specialty items.

- They Shall incorporate all GBRS requirements dictated by the credits being pursued for the project.

#### Other Requirements

- Provide a Life Cycle Cost Analysis (LCCA) for review and approval. LCCA shall be by a commercially available life cycle cost analysis program and as required by the State of Florida and the DEPARTMENT.
- Design to meet or exceed Florida Energy Efficiency Code for Building Construction (FEEC). Submit preliminary (input and output) FEEC forms.
- The Design Professional shall advise the DEPARTMENT of any adjustments to the budget and shall submit a fully detailed Phase I estimate of probable construction cost, projected to the expected time of bid and containing sufficient detail to provide information necessary to evaluate compliance with the Construction Budget set for this project. Format estimate and provide detail matching the organization and content of the project's Outline Specifications complete for Divisions 2 through 48.
- Provide an updated Project Development Schedule reflecting development and anticipated schedules for all subsequent project activities.
- Preliminary selection of materials and finishes in digital format to establish design intent. Provide two schemes for selection and approval by the DEPARTMENT. Provide documentation demonstrating compliance with GBRS requirements.

Staff from each of the Design Professional's major technical disciplines, and subconsultants shall attend coordination, review and presentation meetings with the Owner to explain the design concept and technical resolution of their respective building or site systems.

If requested, the Design Professional shall submit five (5) sets of all documents required under this phase without additional charge, for approval by the Owner. The Design Professional shall not proceed with the next phase until the completion of all required presentations and reports are provided digitally and the Consultant receives written Authorization to Proceed with the next phase.

#### **PHASE II - 60% DESIGN DOCUMENTS SUBMITAL:**

After written Authorization to Proceed from DEPARTMENT and based on the approved Phase I documents, and any adjustments in the scope or quality of the project or in the Fixed Limit of Construction Cost authorized by DEPARTMENT, the Design Professional shall prepare for approval by DEPARTMENT, Phase II (60% Construction) Documents setting forth in detail the requirements for the construction of the Project. The Design Professional is responsible for the full compliance of the design with all applicable codes. Phase II documents comprised of, but not limited to, the following:

#### Documents

- Updated Florida Energy Efficiency Code for Building Construction (FEEC) (input and output) compliance forms, documenting energy efficiency ratio rating of HVAC equipment, electrical systems, to be submitted to the DEPARTMENT for review and approval.
- Calculations: Provide preliminary calculations for structural and electrical systems.

- Review of anticipated GBRS points and certification level; adjust attempted points as needed to meet target certification level. Provide updated GBRS credit scorecard or checklist.

## Drawings

Site Plan(s) and detailing which, in addition to the Phase I requirements, indicate the following:

- Spot elevations, based on the civil grading plan, for the perimeter of the new construction, sidewalk, or any other areas pertinent to the drainage of rainwater.
- Location of storm water service for new construction drainage.
- Final location for manholes, handholds, and pull boxes.
- Layout of underground distribution systems (normal power emergency power, control and spares).
- Locations of all site improvements, equipment, and other features.

A plan to delineate staging areas, site barriers, and other area designations to control the public from construction activities and traffic.

Floor plans to include the following:

- All dimensions and any cross references explaining the extent of work, wall types, or other component, assembly, or direction regarding the Construction.
- Show structural tie columns and coordinate with the floor plan.
- Cross referenced interior elevations.

Building elevations developed further than at Phase II and including delineation of building joints (including dimensionally located control joints), material locations, elevation height, and other building features.

Building and wall sections to establish vertical controls and construction types. Include clear graphics, and notes on construction assemblies and systems to be used, dimensions, heights. Provide associated detailing to delineate solutions for difficult connections.

Reflected ceiling plans to indicate heights, light fixture types and mounting heights. Delineate and detail any joint conditions between different materials. Coordinate with architectural, electrical, and structural disciplines.

## Roof Plans

- Indicate all elements shown from above. Show elevations at the high and low points-
- Provide dimensions to locate all penetrations and cross-reference details.

Large scale building details as appropriate to this level of document development and as required to establish vertical controls for the Project. Include clear graphics and notes on construction assemblies and systems to be used, and dimensions and heights. Provide associated detailing to delineate solutions for difficult connections.

Interior elevations of the bridge including cross references of sections, dimensions and heights, notes indicating type of equipment (and whether equipment is in or out of contract), wall materials, finishes, and accessories.

Details of the following:

- Interior and exterior expansion control connections.
- Any other specialized items necessary to clearly express the intent of the project design.

Material finishes coordinated with the floor plans, developed to 60% completion.

Structural foundation and framing plans, with associated diagrams, schedules, notes, detailing, and section drawings completed sufficiently to communicate the design intent and coordination with other disciplines.

## Electrical

Provide drawings for the following systems:

- Electrical Drawings include plans with lighting layouts and electrical outlets for all major spaces. Show locations of electrical panels and transformers. Also show locations of other relevant features.
- Lighting including, circuiting and luminaire identification and switching. Also provide illuminance computer printout for interior of the bridge.
- Convenience outlets and circuiting, special outlets and circuiting, and power systems and equipment. Provide riser diagrams for all electrical systems. Provide light fixture schedule.
- The panel schedule may be in preliminary form, but circuitry must be included.
- Applicable installation details.
- General legend and list of abbreviations.
- Voltage drops computations for all main feeders.
- Short circuit analysis
- Indicate surge protector for main switchboard and electrical panels.
- Empty conduit embedded in bridge deck for future MDPROS use. Coordinate with Owner)

## Specifications

- Provide preliminary Project Manual including front-end documents. Completion of filling in items in Bidding documents and other "Division 0" documents is not required.
- Provide a preliminary Division 1 based upon the standard documents provided by the Owner and edited by the Design Professional after consultation with the Owner to establish project specific requirements.
- Include progress set of all other Sections in Divisions 2 through 48 with each section developed to demonstrate to the Owner an understanding of the project and an appropriate level of developmental progress comparable to that of the drawings.
- Specification sections shall be organized to follow the Construction Specification Institute's (CSI) current edition of Master Format with each section developed to include CSIs standard three-part section and page formats with full paragraph numbering. They shall incorporate all GBRs requirements dictated by the credits being pursued for the project.

An updated Project Development Schedule, formatted as a preliminary construction schedule reflecting continued Project development and illustrating anticipated schedules for all subsequent project activities including permitting and submittal coordination with all agencies

having jurisdiction on the Project, project phasing, site, mobilization, temporary facilities, general construction sequencing, anticipated substantial completion dates, DEPARTMENT occupancy, and all other significant Project events.

Color boards illustrating color selections, finishes, textures, and aesthetic qualities for all finish materials for final review and approval by the DEPARTMENT, and to establish a final palette of material selections for development of subsequent specifications, schedules and other requirements for incorporation into the Contract Documents. This may be submitted digitally if approved by the DEPARTMENT. Provide documentation demonstrating compliance with GBRS requirements.

A letter from the Design Professional and each of the major technical disciplines and any necessary subconsultants or explaining how each previous comment concerning the project has been addressed or corrected.

Staff from each of the Design Professional's major technical disciplines, and subconsultants shall attend coordination, review and presentation meetings with the Owner to explain the design concept and technical resolution of their respective building or site systems.

If requested, the Design Professional shall submit five (5) sets of all documents required under this phase without additional charge, for approval by the Owner. The Design Professional shall not proceed with the next phase until the completion of all required presentations and reports are provided digitally and the Consultant receives a written Authorization to Proceed with the next phase.

### **PHASE III - 100% CONSTRUCTION DOCUMENTS SUBMITTAL**

After written Authorization to Proceed from DEPARTMENT and based on the approved Phase II documents and any adjustments in the scope or quality of the project or in the Fixed Limit of Construction Cost authorized by DEPARTMENT, the Design Professional shall prepare for approval by DEPARTMENT, Phase III (100% Construction) Documents setting forth in detail the requirements for the construction of the Project. The Design Professional is responsible for the full compliance of the design with all applicable codes. Phase III documents are to be comprised of, but not limited to, the following:

General Requirements - Digital submittals are acceptable upon the approval of the DEPARTMENT.

- Updated Florida Energy Efficiency Code for Building Construction (FEEC) (input and output) compliance forms. Submit five (5) copies signed and sealed by a State of Florida registered design professional.
- Signed and Sealed/Statements of Compliance: Only complete documents, properly signed and sealed by the Project Consultant and respective subconsultants, will be accepted for review; in addition, these documents shall contain a statement of compliance by the architect or engineer of record as follows: "To the best of my knowledge and belief these drawings, and the project manual are complete, and comply with the Department of Transportation Requirements".
- Submit engineering calculations for mechanical, electrical, and structural systems in a separately bound manual.

- Review of anticipated GBRS points and certification level; adjust attempted points as needed to meet target certification level. Provide updated GBRS credit scorecard or checklist.

## Drawings

The drawings shall include all previous phase review requirements, and the Phase III 100% document requirements specified above, along with the following:

- Site plans including, but not limited to, area location map, legal description of property, demolition, excavation, utilities, finish grading, electrical, civil/structural, and architectural site plans:
- Drawings include at a minimum, the following:
  - Key sheets including a table of contents and statement of compliance by the design professional. Each discipline shall have a list of abbreviations, schedule of material indications, and schedule of notations and symbols at the beginning of their section of the plans.
  - Architectural drawings including floor plans, door, finish schedules, roof plans, elevations, sections, and details.
  - Civil/Structural drawings including paving, drainage; foundation plans; floor plans; roof plans; structural plans; sections; details; beam and column schedules.
  - Electrical drawings including floor plans; sections; details; riser diagrams, and fixture and panel schedules.
  - The drawings should indicate that the approved electrical systems, from the previous phases FEEC/LCCA analysis, have been incorporated into the documents.

## Specifications

- Provide a complete Project Manual including front-end documents. Completion of fill in items in Bidding documents and other "Division 0" documents is not required.
- Provide a complete Division 1 based upon the standard documents provided by the Owner and edited by the Design Professional after consultation with the Owner to establish project specific requirements.
- Provide a complete set of all other Sections in Divisions 2 through 48 with each section developed to demonstrate to the Owner an understanding of the project and an appropriate level of developmental progress comparable to that of the drawings.
- Specification sections shall be organized to follow the Construction Specification Institute's (CSI) current edition of Master Format with each section developed to include CSI's standards 3-part section and page formats with full paragraph numbering. They shall incorporate all GBRS requirements dictated by the credits being pursued for the project.

Staff from each of the Design Professional's major technical disciplines, and subconsultants shall attend coordination, review and presentation meetings with the Owner to explain the design concept and technical resolution of their respective building or site systems.

If requested, the Design Professional shall submit five (5) sets of all documents required under this phase without additional charge, for approval by the Owner. The Design Professional shall not proceed with the next phase until the completion of all required presentations and reports

are provided digitally and the Consultant receives a written Authorization to Proceed with the next phase.

#### **PHASE IV FINAL BID DOCUMENTS SUBMITTAL:**

After written Authorization to Proceed from DEPARTMENT and based on the approved Phase III documents and any adjustments in the scope or quality of the project or in the Fixed Limit of Construction Cost authorized by DEPARTMENT, the Design Professional shall prepare for approval by DEPARTMENT, Phase IV (Release for Construction, or RFC) Documents setting forth in detail the requirements for the construction of the Project: The Design Professional is responsible for the full compliance of the design with all applicable codes. Phase IV documents are to be comprised of, but not limited to, the following:

General Requirements - Digital submittals are acceptable upon approval of the DEPARTMENT.

- This submittal is the official record set and shall be the bid documents.
- Signed and Sealed/Statements of Compliance: Only complete documents, properly signed and sealed by the Project Consultant and respective subconsultants, will be accepted for review; in addition, these documents shall contain a statement of compliance by the architect or engineer of record as follows: "To the best of my knowledge and belief these drawings, and the project manual are complete, and comply with the DEPARTMENT of Transportation Requirements".
- Submit engineering calculations for electrical and structural systems in a separately bound manual.
- Update anticipated GBRS points and certification level; adjust attempted points as needed to meet target certification level. Provide updated GBRS credit scorecard or checklist.

#### Drawings

The drawings shall include all previous phase review requirements, and the Phase IV final document requirements specified above, along with the following:

- Site plans including, but not limited to, area location map, legal description of property, demolition, excavation, utilities, finish grading, electrical, civil/structural, and architectural site plans:
- Drawings include at a minimum, the following:
  - Key sheets including a table of contents and statement of compliance by the design professional. Each discipline shall have a list of abbreviations, schedule of material indications, and schedule of notations and symbols at the beginning of their section of the plans.
  - Architectural drawings including floor plans, door, finish schedules, roof plans, elevations, sections, and details.
  - Structural drawings including foundation plans; floor plans; roof plans; structural plans; sections; details; beam and column schedules.
  - Electrical drawings including floor plans; sections; details; riser diagrams, and fixture and panel schedules.
  - The drawings should indicate that the approved electrical systems, from the previous phases FEEC/LCCA analysis, have been incorporated into the documents.

## Specifications

- Provide a final Project Manual including front-end documents. Completion of filling in items in Bidding documents and other "Division 0" documents is not required.
- Provide a final Division 1 based upon the standard documents provided by the Owner and edited by the Design Professional after consultation with the Owner to establish project specific requirements.
- Provide a final set of all other Sections in Divisions 2 through 48 with each section developed to demonstrate to the Owner an understanding of the project and an appropriate level of developmental progress comparable to that of the drawings.
- Specification sections shall be organized to follow the Construction Specification Institute's (CSI) current edition of Master Format with each section developed to include CSI's standards 3-part section and page formats with full paragraph numbering. They shall incorporate all GBRS requirements dictated by the credits being pursued for the project.

Upon completion of the Final Bid Documents, the Design Professional shall submit to the Owner five (5) copies of the Drawings, Specifications, reports, programs, a final updated Project Development Schedule, a final up dated Statement of Probable Construction Cost and such other documents as reasonably required by Owner.

All documents for this phase shall be provided in both hard copy and in electronic media. The DEPARTMENT will approve Phase IV documents for submission to the DEPARTMENT for review and approval.

## Architectural Plans

### **31.1 Architectural Program Review/Verification**

### **31.2 Key Sheet and Index of Sheets**

### **31.3 General Notes, Abbreviations, Symbols, and Legend**

### **31.4 Life Safety Plans**

### **31.5 Site Plans**

### **31.6 Floor Plans (small scale)**

### **31.7 Floor Plans (large scale)**

### **31.8 Exterior Elevations**

### **31.9 Roof Plans**

### **31.10 Roof Details - (N/A)**

### **31.11 Interior Elevations**

### **31.12 Rest Room Plans (Enlarged) - (N/A)**

- 31.13 Rest Room Elevations - (N/A)**
- 31.14 Building Sections**
- 31.15 Stair Section, Enlarged Stair Plan and Details - (N/A)**
- 31.16 Reflective Ceiling Plans**
- 31.17 Room Finish Schedule or Finish Plan**
- 31.18 Door and Window Finish Schedule - (N/A)**
- 31.19 Door Jamb Details and Window Details - (N/A)**
- 31.20 Exterior Wall Sections**
- 31.21 Interior Wall Sections - (N/A)**
- 31.22 Overhead Door Details - (N/A)**
- 31.23 Curtain Wall Details - (N/A)**
- 31.24 Fascia, Soffit and Parapet Details - (N/A)**
- 31.25 Signage Details**
- 31.26 Miscellaneous Details**
- 31.27 Repetitive Sheets**
- 31.28 Design Narrative Reports**
- 31.29 Permitting**
- 31.30 Other Pertinent Project Documentation**
- 31.31 Cost Estimate**
- 31.32 Technical Special Provisions and Modified Special Provisions Packages**
- 31.33 Field Reviews**
- 31.34 Technical Meetings**
  - 31.34.1 FDOT**
  - 31.34.2 Local Governments (cities)**
  - 31.34.3 Local Governments (counties)**
  - 31.34.4 Other Meetings**
  - 31.34.5 Progress Meetings**
  - 31.34.6 Phase Review Meetings**

- 31.35 Quality Assurance/Quality Control**
- 31.36 Meeting with Independent Peer Review**
- 31.37 Supervision**
  - Structural Plans
- 31.38 General Notes, Abbreviations, Symbols, and Legend**
- 31.39 Foundation Plans (Small Scale)**
- 31.40 Foundation Plans (Large Scale)**
- 31.41 Slab Plans (Small Scale)**
- 31.42 Slab Plans (Large Scale)**
- 31.43 Slab Placement Plans**
- 31.44 Slab Placement Details**
- 31.45 Foundation Sections**
- 31.46 Foundation Details**
- 31.47 Slab Sections**
- 31.48 Slab Details**
- 31.49 Roof Framing Plans (Small Scale) - (N/A)**
- 31.50 Roof Framing Plans (Large Scale) - (N/A)**
- 31.51 Roof Loading Plans and Details - (N/A)**
- 31.52 Roof Sections - (N/A)**
- 31.53 Roof Details - (N/A)**
- 31.54 Bearing Wall Sections - (N/A)**
- 31.55 Bearing Wall Details - (N/A)**
- 31.56 Column Sections**
- 31.57 Column Details**
- 31.58 Miscellaneous Sections**
- 31.59 Repetitive Sheets**
- 31.60 Other Pertinent Project Documentation**
- 31.61 Cost Estimate**

**31.62 Technical Special Provisions and Modified Special Provisions Packages**

**31.63 Field Reviews**

**31.64 Technical Meetings**

**31.64.1 FDOT**

**31.64.2 Local Governments (cities)**

**31.64.3 Local Governments (counties)**

**31.64.4 Other Meetings**

**31.64.5 Progress Meetings**

**31.64.6 Phase Review Meetings**

**31.65 Quality Assurance/Quality Control**

**31.66 Independent Peer Review**

**31.67 Supervision**

Mechanical Plans

**31.68 General Notes, Abbreviations, Symbols, Legend, and Code Issues - (N/A)**

**31.69 Plans (Small Scale) - (N/A)**

**31.70 Plans (Large Scale) - (N/A)**

**31.71 Details - (N/A)**

**31.72 Sections - (N/A)**

**31.73 Piping Schematics - (N/A)**

**31.74 Control Plans - (N/A)**

**31.75 Schedules - (N/A)**

**31.76 HVAC Calculations - (N/A)**

**31.77 Life Cycle Cost Analysis - (N/A)**

**31.78 Repetitive Sheets - (N/A)**

**31.79 Other Pertinent Project Documentation - (N/A)**

**31.80 Cost Estimate - (N/A)**

**31.81 Technical Special Provisions and Modified Special Provisions Packages - (N/A)**

**31.82 Field Reviews - (N/A)**

**31.83 Technical Meetings - (N/A)**

**31.83.1 FDOT - (N/A)**

**31.83.2 Local Governments (cities) - (N/A)**

**31.83.3 Local Governments (counties) - (N/A)**

**31.83.4 Other Meetings - (N/A)**

**31.83.5 Progress Meetings - (N/A)**

**31.83.6 Phase Review Meetings - (N/A)**

**31.84 Quality Assurance/Quality Control - (N/A)**

**31.85 Independent Peer Review - (N/A)**

**31.86 Supervision - (N/A)**

Plumbing Plans

**31.87 General Notes, Abbreviations, Symbols, Legend, and Code Issues - (N/A)**

**31.88 Plans (Small Scale) - (N/A)**

**31.89 Plans (Large Scale) - (N/A)**

**31.90 Isometrics (Large Scale) - (N/A)**

**31.91 Riser Diagrams - (N/A)**

**31.92 Details - (N/A)**

**31.93 Repetitive Sheets - (N/A)**

**31.94 Other Pertinent Project Documentation - (N/A)**

**31.95 Cost Estimate - (N/A)**

**31.96 Technical Special Provisions and Modified Special Provisions Packages - (N/A)**

**31.97 Field Reviews - (N/A)**

**31.98 Technical Meetings - (N/A)**

**31.98.1 FDOT - (N/A)**

**31.98.2 Local Governments (cities) - (N/A)**

**31.98.3 Local Governments (counties) - (N/A)**

**31.98.4 Other Meetings - (N/A)**

**31.98.5 Progress Meetings - (N/A)**

**31.98.6 Phase Review Meetings - (N/A)**

**31.99 Quality Assurance/Quality Control - (N/A)**

**31.100 Independent Peer Review - (N/A)**

**31.101 Supervision - (N/A)**

Fire Protection Plan

**31.102 General Notes, Abbreviations, Symbols, Legend, and Code Issues - (N/A)**

**31.103 Fire Protection Plan - (N/A)**

**31.104 Riser Diagram, Details, and Partial Plans - (N/A)**

**31.105 Hydraulic Calculation - (N/A)**

**31.106 Repetitive Sheets - (N/A)**

**31.107 Other Pertinent Project Documentation - (N/A)**

**31.108 Cost Estimate - (N/A)**

**31.109 Technical Special Provisions and Modified Special Provisions Packages - (N/A)**

**31.110 Field Reviews - (N/A)**

**31.111 Technical Meetings - (N/A)**

**31.111.1 FDOT - (N/A)**

**31.111.2 Local Governments (cities) - (N/A)**

**31.111.3 Local Governments (counties) - (N/A)**

**31.111.4 Other Meetings - (N/A)**

**31.111.5 Progress Meetings - (N/A)**

**31.111.6 Phase Review Meetings - (N/A)**

**31.112 Quality Assurance/Quality Control - (N/A)**

**31.113 Independent Peer Review - (N/A)**

**31.114 Supervision - (N/A)**

Electrical Plans

**31.115 General Notes, Abbreviations, Symbols, Legend, and Code Issues**

**31.116 Electrical Site Plan**

**31.117 Lighting Plans**

- 31.118 Lighting Fixtures Schedules**
- 31.119 Lighting Fixtures Details**
- 31.120 Lightning Protection Plans**
- 31.121 Lightning Protection Details**
- 31.122 Power Plans**
- 31.123 Power Distribution Riser Diagrams**
- 31.124 Panel Board Schedules**
- 31.125 Data Plans**
- 31.126 Data Details**
- 31.127 Communication Plans - (N/A)**
- 31.128 Communication Details - (N/A)**
- 31.129 Security Alarm System Plans - (N/A)**
- 31.130 Miscellaneous Details**
- 31.131 Repetitive Sheets**
- 31.132 Energy Analysis - (N/A)**
- 31.133 Other Pertinent Project Documentation**
- 31.134 Cost Estimate**
- 31.135 Technical Special Provisions and Modified Special Provisions Packages**
- 31.136 Field Reviews**
- 31.137 Technical Meetings**
  - 31.137.1 FDOT**
  - 31.137.2 Local Governments (cities)**
  - 31.137.3 Local Governments (counties)**
  - 31.137.4 Other Meetings**
  - 31.137.5 Progress Meetings**
  - 31.137.6 Phase Review Meetings**
- 31.138 Quality Assurance/Quality Control**
- 31.139 Independent Peer Review**

### **31.140 Supervision**

### **31.141 GBRS Certification**

#### **31.141.1 GBRS Coordination Meetings**

#### **31.141.2 GBRS Commissioning**

#### **31.141.3 GBRS Green Credit**

### **31.142 Coordination**

### **31.143 Building Information Modeling (BIM)**

## **32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE - (N/A)**

## **33 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS - (N/A)**

## **34 INTELLIGENT TRANSPORTATION SYSTEMS PLANS - (N/A)**

## **35 GEOTECHNICAL - *By the DEPARTMENT***

## **36 3D MODELING- (N/A)**

## **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 representatives 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 remains 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 the DEPARTMENT.

### **37.3 Progress Reporting**

The CONSULTANT shall meet with the DEPARTMENT as required and shall provide a written monthly progress report with an approved schedule, schedule status, and payout curve or by using the earned value method that describes 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 and the payout curve or with earned value analysis. The Project Manager will make a judgment on whether work of sufficient quality and quantity has been accomplished by comparing the reported percentage 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 FDOT CADD Manual. The CONSULTANT shall submit final documents and files as described therein.

#### **37.7 Coordination with Other Consultants**

The CONSULTANT is to coordinate his work with all adjacent and integral consultants 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.

### **38 INVOICING LIMITS**

Payment for the work accomplished shall be in accordance with the Method of Compensation in this contract. Invoices shall be submitted to the DEPARTMENT, 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 occurred and the results are acceptable to the DEPARTMENT.