March 10, 2023
Advertisement

EXHIBIT A

SCOPE OF SERVICES

FOR

RESURFACING, REHABILITATION, & RESTORATION

Financial Project ID(FPID): 450820-1-32-01

State Road 87 From State Road 30 (US 98) to S. of CR 399 (East Bay Blvd)

DISTRICT THREE

SANTA ROSA COUNTY

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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 (Project Specific Data)]* (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

Financial Project ID:	**450820-1-32-01**
Federal Aid Project No.:	
Roadway:	**58040000, 5804001, 58040100, 58040032**
Project Description:	**SR 87 from SR 30 (US 98) to CR 399 (East Bay Blvd)**
County:	**Santa Rosa**
Bridge No(s).:	**N/A**
Railroad Crossing No.:	**N/A**
Context Classification:	***C3C-Suburban Commercial Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.*** ***C3R-Suburban Residential Mostly residential uses within large blocks and a disconnected or sparse roadway network.***

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:
  - ***0012 - RESURFACING***
- Major work groups include:
  - ***3.1 - Minor Highway Design***
- Minor work groups include:
  - ***7.1 - Signing, Pavement Marking and Channelization***
  - ***7.2 - Lighting***
  - ***7.3 - Signalization***
  - ***8.1 - Control Survey***
  - ***8.2 - Design, Right of Way, Construction Survey***
  - ***8.3 – Photogrammetric Mapping***
  - ***9.1 - Soil Exploration***
  - ***9.2 - Geotechnical Classification Lab Testing***

Alternative construction contracting methods have <u>NOT</u> been identified for this project at this time.

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

The Scope of Services establishes which items of work in the 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.

Financial Project ID: 450820-1-32-01

This 3R project primarily consists of resurfacing SR 87 from SR 30 (US 98) to south of CR 399 (East Bay Boulevard). Existing travel lanes, auxiliary lanes, median crossovers, and paved shoulders will be resurfaced. The typical section consists of 4-12' travel lanes, 22' vegetated median, 2' curb and gutter on inside shoulder, and 4' paved outside shoulders with 2' curb and gutter and 6' sidewalks on both sides. The right-of-way varies throughout the project limits. No additional right-of-way will be required.

The CONSULTANT shall take a practical approach to all projects by identifying cost savings on any/all phases of a project (design, right-of-way acquisition, and construction).

SR 87 has been designated as a "Hurricane Evacuation Route".

SR 87 is a designated Strategic Intermodal System (SIS) highway/connector facility. The CONSULTANT shall be responsible for identifying and obtaining any Design Variations needed for deviating from SIS criteria.

Three (3) signalized intersections exist within the project limits. These fully actuated signals are located at the intersections with SR 30 (US 98)(CMP 0.000), Laredo St (CMP 0.615), and High School Blvd (CMP 1.508). The traffic detector loops on SR 87 that are impacted by the resurfacing operation will be replaced. The CONSULTANT shall review and coordinate with the DEPARTMENT (and the local maintaining agency as necessary) to determine whether video detection should be implemented at any of the signalized intersections. Other anticipated signal work throughout the project includes reconstructing pedestrian detectors and signal heads to meet Americans with Disabilities Act (ADA) access requirements.

A School Zone exists within the project limits. The CONSULTANT shall incorporate the most recent School Zone Criteria into the project. See Sections 2.6 & 2.7.

The CONSULTANT shall analyze and design pedestrian lighting at the signalized intersections throughout the project where pedestrian features exist or are proposed. The lighting component of this project may be prepared as a separate deliverable and executed as a JPA Roadway Illumination Services Agreement with the power provider. See Section 2.8.

The CONSULTANT shall coordinate with District Planning Office to determine if the traffic detector loops at existing Portable Traffic Monitoring Sites (PTMS) are to be reinstalled or if the sites are to be removed.

The CONSULTANT shall identify and protect existing ITS infrastructure. Coordination with the DEPARTMENT's Traffic Operations office and Santa Rosa County ITS office will be required to determine any enhancements or impacts to the ITS system.

Some ADA improvements to existing pedestrian features will be included in this project. These improvements will consist of repairing deficient sidewalk, replacing/retrofitting non-compliant curb ramps, meeting clear space requirements, and upgrading pedestrian signal features. The need to install, upgrade, or remove pedestrian handrail shall be considered throughout. The CONSULTANT shall assess every signalized intersection and provide a revised design, where necessary to provide pedestrian crossing on all legs. An ADA Survey Report will be required. See Section 4.15.

Per the FDOT Traffic Operations Office and the Roadway Characteristics Inventory (RCI) Database, the posted (justified) speed limit on SR 87 is 45 mph throughout the project limits. Initial field observations of the posted speed limit agree with the RCI Database. Any contradictions to the posted (justified) speeds described above (found posted in the field or proposed by CONSULTANT) will require close coordination with the DEPARTMENT's Design Project Manager and approval from the FDOT Traffic Operations Office on the project's Typical Section Package.

Any sideroad turnouts identified as having substandard radii or showing signs of off-tracking shall be reviewed by the CONSULTANT to determine if improvements are feasible. Recommendations for radius reconstruction should be discussed with the DEPARMENT's Design Project Manager.

It is the DEPARTMENT's desire to make every effort to avoid impacts to green planting space, trees, and other vegetation within and adjacent to the project limits. The CONSULTANT shall design the limits of construction and any work activities (including staging, storage of equipment, etc.) to minimize or eliminate a threat to green planting space, existing trees, or their root systems. Any green space or tree impacts perceived to be unavoidable shall be closely reviewed with the DEPARTMENT's Design Project Manager who will in turn review with other DEPARTMENT staff as appropriate. When there is the potential to impact trees, the CONSULTANT shall be prepared to provide and present alternate design scenarios with corresponding cost estimates and implications (drainage, utilities, etc.) when requested.

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

1) FPID 220426-5-32-01 - FDOT Project - SR 30 (US 98)(Gulf Breeze Pkwy) from E. of Ortega St. to Okaloosa County Line. This project is currently in design. The DEPARTMENT's Design Project Manager is Mr. Dean Mitchell, P.E. (850-415-9016).

2) FPID 220017-2-32-01 - FDOT Project - SR 30 (US 98) from Santa Rosa County Line to W. of Josie Rd. This project is currently in design. The DEPARTMENT's Design Project Manager is Mr. Dean Mitchell (850-415-9016).

3) FPID 220426-2-22-01 - FDOT Project - SR 30 (US 98)(Gulf Breeze Pkwy) from Portside Dr. to Okaloosa County Line. This project was a PD&E Corridor Study. The DEPARTMENT's Design Project Manager is Mrs. Sherry Alaghemand, P.E. (850-330-1510).

4) FPID 447900-1-58-01 - FDOT JPA Landscaping Project - SR 87 from Laredo Street to CR 399 (East Bay Blvd). The DEPARTMENT's Design Project Manager is Mrs. Pam Miner (850-845-0325).

The CONSULTANT shall be aware of the needs and recommendations made available by the Emerald Coast Regional Council and Northwest Florida Regional Transportation Planning Organization whilst preparing/proposing bicycle and pedestrian improvements, access management improvements, etc. The Implementation of improvements as identified in the plan will be coordinated through the DEPARTMENT's Design Project Manager.

Features installed on FDOT R/W OR COUNTY R/W by non-FDOT/COUNTY, private entities should be considered by the CONSULTANT as they relate to potential impacts. Within these project limits, landscaping, irrigation, signs, mailboxes, etc. are expected to be encountered and potentially impacted by construction activities. The construction plans must address the course of action for coordination. OR No specific features have been identified within these project limits at this time; however, the construction plans must address the course of action for coordination should features be identified.

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

Any necessary Geotechnical efforts will be provided by the CONSULTANT (though none have been identified at this time).

GENERAL:

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

The CONSULTANT shall take a practical approach to all projects by identifying cost savings on any/all phases of a project (design, right-of-way acquisition, and construction).

The CONSULTANT shall review and make recommendations to alleviate existing ADA and sight distance issues throughout the corridor. These recommendations will be reviewed by the DEPARTMENT's Design Project Manager who will in turn review with other DEPARTMENT staff as appropriate. An ADA Survey Report will be required. See Section 4.15.

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

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

Public Involvement: ***FPID 450820-1-32-01 will have a Community Awareness Plan (CAP) Level I with NO Public Information Meeting.***

See Section 3.1 for specific requirements.

Other Agency Presentations/Meetings: ***A pre-Phase I (30%) coordination meeting shall be held for representatives of Emerald Coast Regional Council and Northwest Florida Regional Transportation Planning Organization. Coordinate this meeting with the FDOT Urban Liaison.***

Joint Project Agreements: ***JPAs with power providers may be required where pedestrian lighting installations are proposed at signalized intersection. The DEPARTMENT will prepare and execute these agreements. The CONSULTANT will be expected to provide input and plan sheets as necessary for the JPAs.***

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

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

Estimated Quantities Report Preparation: ***The CONSULTANT shall develop accurate quantities and the supporting documentation, including construction days when required. Quantities shall be included in an Estimated Quantities Report per FDM 902. The CONSULTANT shall be responsible for inputting pay items and quantities into the DEPARTMENT's Project Preconstruction (PrP) System through the use of the DEPARTMENT's Designer Interface.***

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

Phase II - A Summary of Pay Items sheet shall be prepared with Phase II and subsequent plans submittals. The Phase II (60%) submittal shall have all pay items identified with or without quantities. If quantities have not been determined at this point, the CONSULTANT shall load a quantity of "1.0".Phases III & IV - At Phase III (90%) the CONSULTANT shall have all quantities loaded into PrP, with only minor change anticipated at subsequent submittals. Within PrP, the CONSULTANT shall run a Project Edit Report for the project at Phases III and IV just prior to submitting the plans to the DEPARTMENT for review. This program outputs invalid pay items that may be

erroneously loaded for a project. The above shall be provided for each component set of plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

Value Engineering: ***(Not applicable to this project)***

Risk Assessment Workshop: ***(Not applicable to this project)***

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

Typical Section: ***See Section 2.0 for the Typical Section details.***

Right-of-Way: ***Right-of-Way (R/W) varies throughout the project limits. R/W acquisition is not anticipated for this project. License Agreements may be appropriate and used for the purpose of harmonizing driveways and slopes where new sidewalk is to be constructed. The CONSULTANT will be required to assist in defining and presenting the requirements at each location as early in the design process as possible.***

Pavement Designs: ***The DEPARTMENT will provide the Pavement Design for these projects. The CONSULTANT may have to provide milling/paving details, if necessary, to prevent build-up of asphalt in the gutters.***

All excess milled asphalt not used by the Contractor in the resurfacing mix is to become the property of the Contractor.

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

Cross-Slope Correction: ***There have been no cross-slope deficiencies identified in this project at this time.***

As early as possible, the collected survey data along this project shall be analyzed by the CONSULTANT to determine if minimum and maximum cross-slope requirements are met throughout the project limits. Once the determination is made that cross-slope correction will be implemented, the CONSULTANT must determine if any additional survey is required to provide an adequate design and accurate quantities. The CONSULTANT will hold a coordination meeting with the DEPARTMENT's Design Project Manager, the District Design Office, the District Materials Office, and the District Survey Office to determine how much additional survey is required and what is the most economical method of obtaining the additional data. Prior to Phase I Plans, the CONSULTANT shall then schedule a cross-slope correction/overbuild review meeting review the cross sections with the District Construction Office, the District Design Office, and the District Bituminous Engineer to determine the method of correction (variable depth milling or overbuild) and the details/tables required. The CONSULTANT shall provide a cross-slope correction/overbuild memo with the Phase 1 submittal documenting the CONSULTANT'S approach to cross-slope/overbuild in the

project. A proposed design for cross slope correction must be included in the Phase II Plans".

Access Management Classification: ***SR 87 has an Access Management Classification of 3 throughout the project limits.***

The only Access Management improvements identified at this time consist of potential driveway closures or modifications to improve pedestrian or vehicular access and safety based on crash history. Abandoned driveway closures and modifications should be considered if the closure will improve pedestrian access and ADA compliancy. No specific locations have been identified to focus this effort; however, the CONSULTANT will be responsible for reviewing the available crash history and coordinating with the DEPARTMENT and local government contacts to identify any locations that may warrant further study or improvements. The CONSULTANT is to be aware that only a minimal amount of access management work (if any) will be considered for this 3R project.

All recommendations for access management improvements are to be closely coordinated with the DEPARTMENT's Design Project Manager. The CONSULTANT shall be aware that certain proposed deviations from access management and median opening spacing standards must be presented to the District Access Management Review Committee (AMRC)(see also Sections 3.1.4 and 4.6). At a minimum, non-typical access management, driveway, and median opening issues that cannot be resolved by standard review processes at the District Design Office level, as well as proposed full movement median openings not meeting the spacing standards in Rule Chapter 14-97, F.A.C by a threshold of 10% or more shall be taken to the AMRC for review.

Transit Route Features: ***(Not applicable to this project)***

Major Intersections and Interchanges: ***Signalized intersections exist within these projects as described in Section 2.0, and the traffic signal loops will have to be replaced where impacted by the milling and resurfacing operations.***

Level of Temporary Traffic Control Plan (TTCP): ***The CONSULTANT shall provide a TTCP Level 1.***

Temporary Traffic Control Plans (TTCP) will be required for this project. The FDOT Standard Plans, 102 series, should be utilized for all work being performed on or adjacent to existing roadways. A reduction in the number of lanes will require that a lane closure analysis be performed by the CONSULTANT. See Section 4.10 for further guidance.

SR 87 has been designated as a "Hurricane Evacuation Route". All lanes must be open for traffic within 12 hours of a hurricane evacuation notice and shall remain open for the duration of the event as directed by the Project Administrator.

Consideration must also be given to the movement and safety of pedestrian and bicycle traffic during construction.

Temporary Lighting: ***(Not applicable to this project)***

Temporary Signals: ***(Not applicable to this project)***

Temporary Drainage: ***(Not applicable to this project)***

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

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

Back of Sidewalk Profiles: ***(Not applicable to this project)***

Selective Clearing and Grubbing: ***The CONSULTANT shall make every effort to preserve and protect existing landscaping within the project limits. Relocation of existing vegetation may be required in some cases. Coordination with the District Landscape Architect may be necessary. Effort for this task is covered in Section 4.12 and Section 5.23.***

3D Modeling ***: (Not applicable to this project)***

2.2 Drainage (Activities 6a and 6b)

Drainage System Type: ***SR 87 has a closed/urban drainage system throughout the project limits.***

The CONSULTANT shall anticipate that all storm sewer manholes located within areas of resurfacing will require adjustment and the plans and estimates shall be prepared accordingly.

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

All existing drainage structures within the limits of construction shall be shown on the construction plans. The CONSULTANT shall inspect all drainage structures for

function, scour, erosion, structural integrity, accumulation of sediments, and design as it pertains to pedestrian and vehicular safety. Prior to submitting staffhours, the CONSULTANT shall clearly communicate the drainage survey needs to the SURVEYOR and shall minimize the survey effort where possible. Drainage design treatments should be discussed with the DEPARTMENT's Design Project Manager and the District Drainage Office before being added to the construction plans.

2.3 Utilities Coordination (Activity 7)

The DEPARTMENT will be responsible for utility coordination associated with these projects.

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

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

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

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

Above-ground utility installations that have been struck three times within the latest 5-year period shall be assessed for relocation options. For installations with a crash history WITHOUT viable options for relocation within the R/W, the CONSULTANT will be responsible for obtaining Design Exceptions. Above-ground utility installations with a crash history WITH available R/W for relocation shall be relocated or the Utility Agency Owner (UAO) will be responsible for pursuing and obtaining a Design Exception.

The CONSULTANT is to review the UAO marked up plans and the Utility Work Schedules as they are received and assure that they are compatible with the proposed design features in the plans. The CONSULTANT shall review the specific details of the markups and schedules with the Area Utility Manager as required to finalize the status of each potential conflict. The CONSULTANT shall also verify that the schedules conform to the construction phasing and TTCP sequences.

2.4 Environmental Permits and Environmental Clearances (Activity 8)

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

The CONSULTANT shall be responsible for the identification, coordination, and applications for all permits necessary to construct this project. All application and processing fees, including fees for any public notice required by the permit, shall be paid for by the CONSULTANT.

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

2.5 Structures (Activities 9 - 18) (Not applicable to this project)

Retaining Walls: ***(Not applicable to this project)***

Noise Barrier Walls: ***(Not applicable to this project)***

Mast Arms: ***(Not applicable to this project)***

Miscellaneous: ***(Not applicable to this project)***

2.6 Signing and Pavement Markings (Activities 19 & 20)

The CONSULTANT shall be responsible for the design, details, and quantities associated with signing and pavement markings for this project. The CONSULTANT shall coordinate with the DEPARTMENT's Design Project Manager and the District Roadway Design Engineer to determine the most appropriate type of edge line for this application. FOR FLUSH SHOULDER COLLECTORS & ARTERIALS POSTED 50MPH OR GREATER (I-10 AUTOMATICALLY GETS RUMBLE STRIPS, NO .KMZ REQUIRED): If consideration of audible and vibratory pavement marking treatment is required by the FDOT Design Manual, provide the DEPARTMENT's Design Project Manager with an explanation of crash history, treatment recommendations, and a *.kmz graphically representing proposed audible and vibratory treatment to pursue approval from the District Design Office. The CONSULTANT shall evaluate the existing signage

to determine the need for additional signs, correcting redundant or conflicting signage, and the replacement of damaged signs.

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

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

The lane widths within the urban section of the project should be reviewed by the CONSULTANT and discussed with the DEPARTMENT's Design Project Manager to determine whether restriping to provide designated bicycle lanes or wider outside lanes should occur.

The school zone pavement markings and signage shall be closely reviewed by the CONSULTANT and redesigned/revised as necessary according to applicable standards. Recommended improvements shall be coordinated with the District Traffic Operations Engineer.

The CONSULTANT shall relocate the existing crosswalk at SR 87 and High School Blvd to the north side of the intersection at the request of District Traffic Operations.

2.7 Signalization (Activities 21 & 22)

Three (3) signalized intersections exist within the project limits at the following locations:

1) SR 30 (US 98)(CMP 0.000) - mast arms

2) Laredo Street (CMP 0.615) - mast arms

3) High School Blvd (CMP 1.508) – mast arms

The CONSULTANT shall review and coordinate with the DEPARTMENT (and the local maintaining agency as necessary) whether to install video detection at the signalized intersections where traffic detector loops are impacted by the milling operation.

Other anticipated signal work throughout the project includes reconstructing pedestrian detectors and signal heads to meet Americans with Disabilities Act (ADA) access requirements. Potentially, some of the signal heads will have LED indications and some will have incandescent heads. At this time, upgrades to LED indications are <u>NOT</u> included in this project.

The school zone crosswalks and signals shall be closely reviewed by the CONSULTANT and redesigned/revised as necessary according to applicable standards. Recommended improvements shall be coordinated with the District Traffic Operations Engineer.

The CONSULTANT shall coordinate the installation of new Traffic Control Assemblies with Preemption, CCTV and Uninterrupted Power Supply (UPS) at Laredo Street and High School Blvd, Signal Timing Adjustments for the northbound right turning movement are to run concurrently with the westbound movements at the request of District Traffic Operations.

Traffic Data Collection: ***(Not applicable to this project)***

Traffic Studies: ***(Not applicable to this project)***

Count Stations: ***(Not applicable to this project)***

Traffic Monitoring Sites: ***The Department shall be responsible for providing the location and quantities to the Consultant. There are currently three (3) Portable Traffic Monitoring Site within the project limits (CMP 0.005, CMP 0.215, and CMP 0.323) that will require removal during this milling and resurfacing project. Coordinate with the FDOT District 3 Planning Department for information regarding the removal.***

2.8 Lighting (Activities 23 & 24)

The CONSULTANT will be required to assess the existing lighting along the corridor and be cognizant of lighting being proposed in other projects (see Coordination Requirements above), then determine the need for additional lighting for this project. At a minimum, this project will be responsible for providing the required lighting at new pedestrian crossing locations.

The criteria used for the lighting analysis includes horizontal lighting illuminance standards for roadway and sidewalk lighting and enhanced horizontal and vertical lighting illuminance standards for signalized intersections as found in the FDOT Design Manual. Existing utility poles will be utilized to mount luminaires to the extent possible. A Lighting Design Analysis Report will be produced documenting all lighting design decisions and calculations.

The CONSULTANT is expected to coordinate closely with the DEPARTMENT's Area Utility Manager and the area power provider (TBD) in order to maximize the use of the UAO's poles and service. The DEPARTMENT's preference is for the UAO to install and maintain the necessary lights as specified by the CONSULTANT.

If a determination is made that the UAO is unable to provide the needed lighting services, a Supplemental Amendment will be processed with the CONSULTANT to finalize the lighting design and plans, including the service design/voltage drop calculations.

2.9 Landscape (Activities 25 & 26) (Not applicable to this project)

2.10 Survey (Activity 27)

Design Survey: ***The Primary and Secondary Horizontal and Vertical control will be provided by the DEPARTMENT. Other design survey requirements will be conducted by the CONSULTANT in accordance with Section 27.0 of this document.***

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

Production Survey Meeting - ***Following the Phase I submittal, the CONSULTANT, SURVEYOR, the District Surveyor, and the DEPARTMENT's Design Project Manager shall meet if it is determined that additional survey is required in order to provide an adequate design and accurate quantities. The CONSULTANT shall provide any necessary graphic depictions and/or descriptions of areas needing additional survey. Compensation for the additional survey work defined in this meeting will be made available through a Supplemental Amendment.***

Subsurface Utility Exploration: ***There have been no needs identified at this time. Should locations be identified prior to negotiations and contract execution, then the CONSULTANT shall submit staff hours and plan to provide these services.***

Right of Way Survey: ***(Not applicable to this project)***

Vegetation Survey: ***(Not applicable to this project)***

2.11 Photogrammetry (Activity 28)

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

2.12 Mapping (Activity 29) (To be provided by the DEPARTMENT)

As early as possible, the CONSULTANT shall provide map(s) or plan sheets accompanied by a *.kmz file reflecting the requirements for additional right-of-way and/or the need for License Agreements. The right-of-way requirements submittal shall identify, via highlighting in varying colors (not yellow), the existing right-of-way, required right-of-way, temporary construction easements (TCEs), perpetual easements, intended license agreements (LAs), and limits of construction. In addition, this submittal will indicate in some way whether the submittal is draft or final. The initial, draft requirements submittal and

subsequent draft requirements submittals can be submitted electronically to the DEPARTMENT's Design Project Manager. An updated *.kmz file is expected with each resubmittal. The requirements are not considered final until indicated by the DEPARTMENT. Once the requirements are approved, the CONSULTANT shall designate each sheet as "final" and transmit to the DEPARTMENT's Design Project Manager in *.pdf format (the file name shall include the FPID number). The effort for this task will be negotiated in Section 4.19.

2.13 Terrestrial Mobile LiDAR (Activity 30)

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

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

2.15 Noise Barriers (Activity 32) (Not applicable to this project)

2.16 Intelligent Transportation Systems (Activities 33 & 34)

The CONSULTANT shall identify and protect existing ITS infrastructure. Coordination with the DEPARTMENT's Traffic Operations office and Okaloosa County ITS office will be required to determine any enhancements or impacts to the ITS system. The CONSULTANT shall also coordinate with any other ongoing adjacent traffic or ITS projects that may influence the design.

2.17 Geotechnical (Activity 35)

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

The CONSULTANT shall be responsible for any/all necessary geotechnical activities associated with this project (though none have been identified at this time). The CONSULTANT shall coordinate with the DEPARTMENT's Design Project Manager and the DEPARTMENT's Geotechnical Project Manager regarding information needed.

2.18 3D Modeling (Activity 36) (Not applicable to this project)

2.19 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed Critical Path Method (CPM) project schedule. The DEPARTMENT and CONSULTANT scheduled activities are required to meet the current DEPARTMENT Production Date. The project schedule shall include the following: project FPID and project description, FDOT PSM standard activity codes and description for all activities, original duration, activity start date, activity finish date, activity percent complete, activity predecessor(s) and successor(s). The schedule shall be based upon the durations and schedule negotiated during the project staff hour negotiations process. For the purpose of scheduling, the CONSULTANT shall allow for a three (3) week review time for each phase review and other submittals as appropriate.

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

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

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

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

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

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

2.20 Submittals

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

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

Phase Submittal Delivery: **The delivery will include ONLY the submittal components (not the entire project directory and files). The delivery will be transmitted to the DEPARTMENT's Design Project Manager via ftp site, FTA, or other electronic file storage media and will include all construction plans components (roadway, signing & pavement marking, signalization, etc.) in *.pdf format, as well as the other submittal components described below for each submittal. The CONSULTANT shall coordinate with the DEPARTMENT's Design Project Manager to determine whether hard copy sets of plans or CDs/DVDs are required at any or all phase submittals.**

The CONSULTANT shall provide a *.kmz file of the project with each submittal. The *.kmz file needs to include the layers necessary to compare proposed construction features with the existing utilities as well as the limits of construction (LOC) and right-of-way (R/W).

Design Report: **The requirements for a Design Report (aka: Design Documentation Book/ Design Docs/ Doc Book/ 3R Report) and an ADA Survey Report are described in Section 4.15.**

PRIOR TO PHASE I SUBMITTAL:

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

Alignment Submittals: **Centerline/Baseline of Survey alignment submittals shall be submitted to the District Survey Office for approval and copies shall be submitted to the DEPARTMENT's Design Project Manager, D3 R/W Mapping Office, and the Prime CONSULTANT.**

The Prime CONSULTANT shall wait for approval from the District Survey Office before utilizing the alignment for design purposes.

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

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

Miscellaneous Design/ Production Document Submittals: **The CONSULTANT shall submit to the DEPARTMENT for review, and receive concurrence for, the Initial Project**

Schedule, the Community Awareness Plan, the Typical Section Package, Pavement Design, Design Variations and/or Exceptions (if applicable), and other documents as required by the FDOT Design Manual (FDM) and the Scope of Services.

PHASE I:

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

- ***one (1) electronic copy of the Plans,***
- ***one (1) electronic copy of the QC Marked-up Plans,***

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

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

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

PHASE II:

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

- ***one (1) electronic copy of the Plans,***
- ***one (1) electronic copy of the QC Marked-up Plans,***
- ***one (1) electronic copy of any Technical Special Provision (if applicable)***
- ***one (1) electronic copy of the Preliminary Lighting Design Analysis Report***

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

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

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

PHASE III:

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

- ***one (1) electronic copy of the Plans,***
- ***one (1) electronic copy of the QC Marked-up Plans,***
- ***one (1) electronic copy of any Technical Special Provision (if applicable)***
- ***one (1) electronic copy of the Estimated Quantities Report***
- ***one (1) electronic copy of the CONSULTANT's Construction Cost Estimate,***
- ***one (1) electronic copy of the CONSULTANT's Contract Time Estimate,***
- ***one (1) electronic copy of the Revised Lighting Design Analysis Report***
- ***one (1) electronic copy of the Geotechnical Report***

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

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

PHASE IV:

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

- ***one (1) electronic copy of the Plans,***
- ***one (1) electronic copy of the QC Marked-up Plans,***
- ***one (1) electronic copy of the Estimated Quantities Report***
- ***one (1) electronic copy of the CONSULTANT's Construction Cost Estimate,***
- ***one (1) electronic copy of the CONSULTANT's Contract Time Estimate,***
- ***one (1) electronic copy of the Lighting Design Analysis Report***
- ***one (1) electronic copy of the Geotechnical Report***

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

SUBMITTAL FOR "THE SHELF":

The CONSULTANT must submit a District 3 Change Memo to the District Preliminary Estimates Office to have Project Preconstruction (PrP) unlocked if changes are made following the PHASE IV submittal that affect the pay-items or quantities in PrP. A copy of the District 3 Change Memo can be obtained from the DEPARTMENT's Design Project Manager or the District Preliminary Estimates Office.
Upon addressing the PHASE IV review comments, the CONSULTANT shall submit to the DEPARTMENT's Design Project Manager the following in an electronic format via ftp site, FTA, or other electronic file storage media:

- ***PHASE IV Plans,***
- ***PHASE IV QC Marked-up Plans,***
- ***Project-DOCUMENTATION.zip folder,***
- ***Estimated Quantities Report,***
- ***Engineer's Construction Cost Estimate,***
- ***CONSULTANT's Contract Time Estimate,***
- ****.kmz file of the project,***
- ***Sunshine 811 "design" ticket,***
- ***Utility Conflict Matrix,***
- ***Geotechnical Reports,***
- ***ADA Survey Report,***
- ***Constructability Phase Review Checklist***

The CONSULTANT shall transmit the applicable electronic project files to the DEPARTMENT's Area Utility Manager.

PHASE IV RE-SUBMITTAL:

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

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

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

The CONSULTANT must submit an electronic copy of the Plans Update Memo to describe in general terms the changes made to each sheet since the project was

"shelved". A copy of the Plans Update Memo can be obtained from the DEPARTMENT's Design Project Manager.

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

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

FINAL PLANS SUBMITTAL TO PLANS PROCESSING:

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

If changes are made to the plans after the PHASE IV review that affect the pay-items or quantities in PrP, the CONSULTANT must submit a District 3 Change Memo to the District Preliminary Estimates Office to have PrP unlocked. A copy of the District 3 Change Memo can be obtained from the DEPARTMENT's Design Project Manager or the District Preliminary Estimates Office.

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

Final Project Submittal to ERC:

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

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

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

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

Final Project Submittal:

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

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

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

2.21 Provisions for Work

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

General:

- *Title 29, Part 1910, Standard 1910.1001, Code of Federal Regulations (29 C.F.R. 1910.1001) - Asbestos Standard for Industry, U.S. Occupational Safety and Health Administration (OSHA)*
- *29 C.F.R. 1926.1101 - Asbestos Standard for Construction, OSHA*
- *40 C.F.R. 61, Subpart M - National Emission Standard for Hazardous Air Pollutants (NESHAP), Environmental Protection Agency (EPA)*
- *40 C.F.R. 763, Subpart E - Asbestos-Containing Materials in Schools, EPA*

- *40 C.F.R. 763, Subpart G - Asbestos Worker Protection, EPA*
- *Americans with Disabilities Act (ADA) Standards for Accessible Design*
- *AASHTO - A Policy on Design Standards Interstate System*
- *AASHTO - Roadside Design Guide*
- *AASHTO - Roadway Lighting Design Guide*
- *AASHTO - A Policy for Geometric Design of Highways and Streets*
- *AASHTO - Highway Safety Manual*
- *Rule Chapter 5J-17, Florida Administrative Code (F.A.C.), Standards of Practice for Professional Surveyors and Mappers*
- *Chapter 469, Florida Statutes (F.S.) - Asbestos Abatement*
- *Rule Chapter 62-257, F.A.C., Asbestos Program*
- *Rule Chapter 62-302, F.A.C., Surface Water Quality Standards*
- *Code of Federal Regulations (C.F.R.)*
- *Florida Administrative Codes (F.A.C.)*
- *Chapters 20, 120, 215, 455, Florida Statutes (F.S.) - Florida Department of Business & Professional Regulations Rules*
- *Florida Department of Environmental Protection Rules*
- *FDOT Basis of Estimates Manual*
- *FDOT Computer Aided Design and Drafting (CADD) Manual*
- *FDOT Standard Plans*
- *FDOT Flexible Pavement Design Manual*
- *FDOT - Florida Roundabout Guide*
- *FDOT Handbook for Preparation of Specifications Package*
- *FDOT Standard Plans Instructions*
- *FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways ("Florida Greenbook")*
- *FDOT Materials Manual*
- *FDOT Pavement Type Selection Manual*
- *FDOT Design Manual*
- *FDOT Procedures and Policies*
- *FDOT Procurement Procedure 001-375-030, Compensation for Consultant Travel Time on Professional Services Agreements*
- *FDOT Project Development and Environment Manual*
- *FDOT Project Traffic Forecasting Handbook*
- *FDOT Public Involvement Handbook*
- *FDOT Rigid Pavement Design Manual*
- *FDOT Standard Specifications for Road and Bridge Construction*
- *FDOT Utility Accommodation Manual*
- *Manual on Speed Zoning for Highways, Roads, and Streets in Florida*
- *Federal Highway Administration (FHWA) - Manual on Uniform Traffic Control Devices (MUTCD)*
- *FHWA - National Cooperative Highway Research Program (NCHRP) Report 672, Roundabouts: An Informational Guide*

- *FHWA Roadway Construction Noise Model (RCNM) and Guideline Handbook*
- *Florida Fish and Wildlife Conservation Commission - Standard Manatee Construction Conditions 2005*
- *Florida Statutes (F.S.)*
- *Florida's Level of Service Standards and Guidelines Manual for Planning*
- *Model Guide Specifications - Asbestos Abatement and Management in Buildings, National Institute for Building Sciences (NIBS)*
- *Quality Assurance Guidelines*
- *Safety Standards*
- *Any special instructions from the DEPARTMENT*

- Roadway:

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

- Permits:

  - *Chapter 373, F.S. - Water Resources*
  - *US Fish and Wildlife Service Endangered Species Programs*
  - *Florida Fish and Wildlife Conservation Commission Protected Wildlife Permits*
  - *Bridge Permit Application Guide, COMDTPUB P16591.3C*
  - *Building Permit*

- Drainage:

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

- Survey and Mapping:

  - *All applicable Florida Statutes and Administrative Codes*
  - *Applicable Rules, Guidelines Codes, and authorities of other Municipal, County, State and Federal Agencies.*
  - *FDOT Aerial Surveying Standards for Transportation Projects Topic 550-020-002*
  - *FDOT Right of Way Mapping Handbook*
  - *FDOT Surveying Procedure Topic 550-030-101*
  - *Florida Department of Transportation Right of Way Procedures Manual*
  - *Florida Department of Transportation Surveying Handbook*
  - *Right of Way Mapping Procedure 550-030-015*

- Traffic Engineering and Operations and ITS:

  - *AASHTO - An Information Guide for Highway Lighting*
  - *AASHTO - Guide for Development of Bicycle Facilities*
  - *FHWA Standard Highway Signs Manual*
  - *FDOT Manual on Uniform Traffic Studies (MUTS)*
  - *FDOT Median Handbook*
  - *FDOT Traffic Engineering Manual*
  - *National Electric Safety Code*
  - *National Electrical Code*

- Florida's Turnpike Enterprise:

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

- Traffic Monitoring:

  - *American Institute of Steel Construction (AISC) Manual of Steel Construction, referred to as "AISC Specifications"*
  - *American National Standards Institute (ANSI) RP-8-00 Recommended Practice for Roadway Lighting*

- *AASHTO AWS D1.1/ANSI Structural Welding Code - Steel*
- *AASHTO D1.5/AWS D1.5 Bridge Welding Code*
- *FHWA Traffic Detector Handbook*
- *FDOT General Interest Roadway Data Procedure*
- *FHWA Traffic Monitoring Guide*
- *FDOT's Traffic/Polling Equipment Procedures*

- Structures:

  - *AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications and Interims*
  - *AASHTO LRFD Movable Highway Bridge Design Specifications and Interims*
  - *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, and Interims*
  - *AASHTO/-AWS-D1. 5M/D1.5: An American National Standard Bridge Welding Code*
  - *AASHTO Guide Specifications for Structural Design of Sound Barriers*
  - *AASHTO Manual for Condition Evaluation and Load and Resistance Factor Rating (LRFR) of Highway Bridges*
  - *FDOT Bridge Load Rating Manual*
  - *FDOT Structures Manual*
  - *FDOT Structures Design Bulletins (available on FDOT Structures web site only)*
  - *Geotechnical*
  - *FHWA Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Specifications*
  - *Manual of Florida Sampling and Testing Methods*
  - *Soils and Foundation Handbook*

- Landscape Architecture:

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

- *Geotechnical:*

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

2.22 Services to be Performed by the DEPARTMENT

Project Data:

When appropriate the DEPARTMENT will provide project data currently on file, including, when available:

- *Available traffic and planning data.*
- *Systems traffic for Projected Design Year, with K, D, and T factors.*
- *Existing right of way maps.*
- *Existing cross slope data for all RRR projects.*
- *Existing pavement evaluation report for all RRR projects.*
- *PD&E Documents*
- *Design Reports*
- *Straight Line Diagram (SLD)*
- *Existing as-built construction plans*
- *Long Range Estimates (LRE)*

*Regarding Utilities**:***

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

*Regarding Surveying Services**:***

- *Provide a number sequence for each survey field book required for the project.*
- *Provide the Primary and Secondary Horizontal and Vertical control for the project.*
- *Approve all surveyed roadway centerline alignments prior to being used by the Prime Design Consultant*
- *Provide phase reviews of the survey data and phase reviews of the survey elements within the plans.*

*Regarding Environmental Permitting Services**:***

- *Approved Permit Document when available*
- *Approval of all contacts with environmental agencies.*
- *General philosophies and guidelines of the DEPARTMENT to be used in the fulfillment of this contract. Objectives, constraints, budgetary limitations, and time constraints will be completely defined by the Project Manager.*
- *Appropriate signatures on application forms.*

*Regarding Pavement Design and Geotechnical Services**:***

- *Provide Pavement Survey Information (coring, testing, and report preparation)*
- *Provide Pavement Design(s)*

*Miscellaneous Services**:***

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

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.

Prior to Phase I - Within 30 (thirty) calendar days of the written Notice to Proceed, the CONSULTANT shall submit a revised construction cost estimate using the DEPARTMENT's Long Range Estimating System (L.R.E.). The revised estimate shall be based on all work items likely to be included in the project whether or not explicitly

defined in this initial scope of work, including, but not limited to, work items being analyzed for possible inclusion in the scope after DEPARTMENT approval. This estimate is understood to be preliminary and will be used to better budget construction costs. The District Preliminary Estimates Office will provide the CONSULTANT with a version of the L.R.E. in the system for their use.

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

Phase II - A Project Summary of Pay Items sheet shall be prepared with Phase II and subsequent plans submittals. The Phase II (60%) submittal shall have all pay items identified with or without quantities. If quantities have not been determined at this point, the CONSULTANT shall load a quantity of "1.0". For the Phase II (60%) submittal, the CONSULTANT shall submit the cost estimate using the DEPARTMENT's Long Range Estimating (L.R.E.) system. This estimate will be reviewed by the District Preliminary Estimates Office within the L.R.E. System. The Phase II (60%) L.R.E. shall be complete and ready for review at the time of the plans submittal.

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

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

A Technical Special Provision shall not modify the Standard Specifications and

implemented modifications in any way.

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

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

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

A Modified Special Provision shall not modify the first nine sections of the Standard Specifications and implemented modifications in any way. All modifications to other sections must be justified to the appropriate District and Central Specifications Offices to be included in the project's specifications package.

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

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

Quality Assurance/Quality Control: 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, a subconsultant may perform Independent Peer Reviews.

Prior to staffhour negotiations, the CONSULTANT shall coordinate with the DEPARTMENT's Design Project Manager to determine whether Independent Peer Reviews and/or Constructability/Bidability Reviews through this design contract will be required on this project. These separate reviews shall be completed by someone who has not worked on the plan component that is being reviewed. These could include but are not limited to a separate office under the Prime's umbrella, a subconsultant that is qualified in the work group being reviewed, or a CEI. It does not include persons who have knowledge of the day to day design efforts. The Constructability/Bidability Review shall be performed by a person with experience working on Department construction projects (CEI,

Contractor, etc.).

The Independent Peer Review for design Phase Plans submittals shall ensure the plans meet the FDM, Standard Plans and FDOT CADD Manual. The Constructability/Bidability Review shall ensure the project can be constructed and paid for as designed. Constructability/Bidability Reviews should be conducted prior to the Phase III and Phase IV submittals, using the Phase Review Checklist (Guidance Document 1-1-A) from the Construction Project Administration Manual (CPAM) as a minimum guideline. The CONSULTANT shall submit this checklist, as well as the "marked-up" set of plans during this review, and review comments and comment responses from any previous Constructability/Bidability reviews. These items will be reviewed by District Design and District Construction.
Supervision: The CONSULTANT shall supervise all technical design activities.

Coordination: The CONSULTANT shall coordinate with all disciplines of the project to produce a final set of construction documents.

Project General Tasks:

Project General Tasks, described in Sections 3.1 through 3.7 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 15 business days prior to printing and / or distribution.

This project has been determined to be a Community Awareness Plan (CAP) Level 1 project. For CAP Level 1 projects, a brief plan must be developed for documentation purposes (see Section 3.1.1). Public Information Meetings/Workshops are not required for CAP Level 1 projects.

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

3.1.1 Community Awareness Plan

All projects require the development of a Community Awareness Plan (CAP) utilizing the District Three Community Awareness Plan Template. A copy of the Template can be

obtained from the DEPARTMENT's Design Project Manager.

Prepare a Community Awareness Plan (CAP) for review and approval by the DEPARTMENT within 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

In addition to public involvement data collection, the CONSULTANT shall assist the DEPARTMENT or prepare notifications, flyers, and/or letters to elected officials and other public officials, private property owners, and tenants at intervals during plans production as identified by the DEPARTMENT. All letters and notices shall be reviewed by the ***DEPARTMENT*** to ensure that they are addressed to the correct and current public officials.

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

Each comment or request provided by the local government shall be evaluated by the CONSULTANT and discussed with the DEPARTMENT's Design Project Manager. Responses will be prepared by the CONSULTANT for the District Consultant Project Management Engineer's signature. All comments or requests shall be responded to in writing within thirty (30) calendar days of receipt of comments.

The CONSULTANT must review all notices, letters, and attachments for accuracy and spelling and ensure that notices are sent to the person currently holding the public official positions. The CONSULTANT must attempt to affirm the validity of all email addresses submitted for each notification.

Examples of any of this correspondence can be made available upon request to the

DEPARTMENT's Design Project Manager.

3.1.3 Preparing Mailing Lists

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

PHASE SUBMITTAL NOTIFICATIONS:

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

Mail-out to Public Officials:

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

County

- ***County Manager***
- ***County Public Information Director***
- ***County Commissioners***
- ***County Public Works Director***
- ***County Engineer***

City

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

Regional

- ***Regional Planning Council/ MPO/ TPO/ TPA***
- ***College Campus Facilities Department***

Regional Authorities (Governor Appointed)

- **Northwest Florida Transportation Corridor Authority (NFTCA)(if applicable – for projects along or intersecting US 98 or alternate US 98 routes)**
- **Santa Rosa Bay Bridge Authority (if applicable – for Santa Rosa County projects along or affecting SR 281, SR 30, or SR 8 (I-10) within close proximity to SR 281 and the Garcon Point Bridge)**

3.1.4 Median Modification Letters (Not applicable to this project)

3.1.5 Driveway Modification Letters (Not applicable to this project)

3.1.6 Newsletters (Not applicable to this project)

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

3.1.8 PowerPoint Presentations (Not applicable to this project)

3.1.9 Public Meeting Preparations (Not applicable to this project)

3.1.10 Public Meeting Attendance and Follow-up

The CONSULTANT will coordinate and attend any Public Meetings identified in the Coordination Requirements, Section 2.0 for any potential Scope of Services modifications for this project.

3.1.11 Other Agency Meetings (Not applicable to this project)

3.1.12 Web Site (Not applicable to this project)

3.2 Joint Project Agreements

JPAs with power providers may be required where pedestrian lighting installations are proposed at signalized intersection. The DEPARTMENT will prepare and execute these agreements. The CONSULTANT will be expected to provide input and plan sheets as necessary for the JPAs.

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.

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

The Standard Specifications, for Road and Bridge Construction and, Special Provisions or Supplemental Specifications from the applicable workbook of implemented modifications may not be modified unless absolutely necessary to control project-specific requirements. Provide justification of the project specific need and coordinate with the District Specifications Office.

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

Contact the District Specifications Office for formatting requirements and the availability of a Technical Special Provision for the anticipated work on the project. The DEPARTMENT has a database of previously approved Technical Special Provisions that may be used as a basis of formulation of any proposed Technical Special Provisions. Each modification must be justified to the DEPARTMENT's Specifications Office to be included in the project's Specifications Package as Technical Special Provisions. Technical Special Provisions shall be submitted in conformity with FDOT Handbook for Preparation of Specifications Packages and FDOT Procedure No. 630-010-005-f. If any portion of the project is federally funded, all Technical Special Provisions must also conform to Chapter 23, Part 635 of the Code of Federal Regulations for this project.

Prepare a complete Specifications Package as described in Section 115.3 of the FDOT

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

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

For "goes-with" projects, the CONSULTANT for the lead project will be responsible for compiling the Specifications Package and any required Supplemental Specifications Packages. Technical Special Provisions will be the responsibility of the CONSULTANT for that project which requires the TSP.

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

3.3.2 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.

Quantities shall be included in an Estimated Quantities Report per FDM 902.

The CONSULTANT shall be responsible for inputting pay items and quantities into the DEPARTMENT's Project Preconstruction (PrP) System through the use of the DEPARTMENT's Designer Interface.

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

Phase II - A Summary of Pay Items sheet shall be prepared with Phase II and subsequent plans submittals. The Phase II (60%) submittal shall have all pay items identified with or without quantities. If quantities have not been determined at this point, the CONSULTANT shall load a quantity of "1.0".Phases III & IV - At Phase III (90%) the CONSULTANT shall have all quantities loaded into PrP, with only minor change anticipated at subsequent submittals. Within PrP, the CONSULTANT shall run a Project Edit Report for the project at Phases III and IV just prior to submitting the plans to the DEPARTMENT for review. This program outputs invalid pay items that may be erroneously loaded for a project. The above shall be provided for each component set of

plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

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).

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

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

3.5 Value Engineering (Multi-Discipline Team) Review (Not applicable to this project)

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 (Optional Services)

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

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

Staffhours negotiated for this task during the initial staffhour and fee submittal will include efforts necessary to kick-off Plans Update Services due to an accelerated schedule. It is recommended that the CONSULTANT coordinate with the DEPARTMENT's Contract Manager to differentiate the staffhours for the Plans Update effort in the Automated Fee Proposal (AFP) from the Basic Services effort. Staffhours for the remainder of the anticipated Plans Update Services will be negotiated following Basic Services and at the time that the plans come "off the shelf".

The CONSULTANT shall perform engineering analyses and/or make revisions to original plans and documents, as requested by the DEPARTMENT, to reflect additions,

deletions and/or modifications prior to and subsequent to letting. The CONSULTANT shall be aware that minor modifications and/or updates to the original plans are to be expected. These minor refinements shall not be a basis for any payment under the Plans Update supplemental 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.

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

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

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

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

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

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

<u>Construction Assistance</u>: This includes responses to Requests for Information (RFI), interpretation of construction plans and documents, and engineering solutions to changed conditions encountered in the field. Site visits shall be made by the EOR consultant when agreed upon with the DEPARTMENT's Construction Project Manager. The CONSULTANT shall provide to the DEPARTMENT qualified representation during the construction phase to address issues concerning the intent and interpretation of the construction contract plans and documents prepared in the work. From time to time during construction the CONSULTANT may be requested by

the DEPARTMENT or its designated representative to review CONTRACTOR proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications

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

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

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

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

3.9 Digital Delivery

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

3.10 Risk Assessment Workshop (Not applicable to this project)

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

3.11.1 Aeronautical Evaluation (Not applicable to this project)

3.12 Landscape and Existing Vegetation Coordination

Coordinate to ensure preservation and protection of existing vegetation. Relocation of existing vegetation may be necessary in some cases. Space for proposed landscape should be preserved and conflicts with drainage, utilities, ITS, and signage should be minimized. Coordination with the District Landscape Architect may be necessary as defined in 4.12. Additionally, coordination with the Florida Scenic Highways program should be included

to ensure any requirements of the FSH program are met.

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

4 ROADWAY ANALYSIS

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

4.1 Typical Section Package

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

This package shall include the following:

Transmittal Letter, Location Map(s), Typical Section(s),and Project Control Sheet(s)

4.2 Pavement Type Selection Report (Not applicable to this project)

4.3 Pavement Design Package (To be provided by the DEPARTMENT)

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

The DEPARTMENT will be responsible for the Pavement Design.

4.4 Cross-Slope Correction

Includes the effort necessary to review the existing cross-slopes and the need for overbuild with the District Construction Office, the District Design Office, and the District Bituminous Engineer and to prepare needed overbuild details, notes, and tables.

As early as possible, the collected survey data along this project shall be analyzed by the CONSULTANT to determine if minimum and maximum cross-slope requirements are met throughout the project limits. Once the determination is made that cross-slope correction will be implemented, the CONSULTANT must determine if any additional survey is required to provide an adequate design and accurate quantities. The CONSULTANT will hold a coordination meeting with the DEPARTMENT's Design Project Manager, the District Design Office, the District Materials Office, and the District Survey Office to determine how much additional survey is required and what is the most economical method of obtaining the additional data. Prior to Phase I Plans, the CONSULTANT shall then schedule a cross-slope correction/overbuild review meeting review the cross sections with the District Construction Office, the District Design Office, and the District Bituminous Engineer to determine the method of correction (variable depth milling or overbuild) and the details/tables required. The CONSULTANT shall provide a cross-slope correction/overbuild memo with the Phase 1 submittal documenting the CONSULTANT'S approach to cross-slope/overbuild in the project. A proposed design for cross slope correction must be included in the Phase II Plans.

4.5 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the geometrics using the Standard Plans that are most appropriate with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, aesthetics, existing vegetation to be preserved, pedestrian and bicycle concerns, ADA requirements, Safe Mobility For Life Program, access management, PD&E documents, and scope of work. The CONSULTANT shall also develop utility conflict information to be provided to project Utility Coordinator in the format requested by the DEPARTMENT.

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

4.6 Access Management (Not applicable to this project)

4.7 Roundabout Evaluation (Not applicable to this project)

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

4.9 Cross Section Design Files (Amount to be determined during Negotiations)

The CONSULTANT shall establish and develop cross section design files in accordance with the CADD manual and plot existing utilities for utility conflict identification and adjustment. The CONSULTANT shall also produce .gen files to be included with the Project-CADD.zip file required in Section 2.20 for Plans Processing.

If Cross Sections are prepared using 3D Modeling, see Task 36.5.

4.10 Temporary Traffic Control Plan (TTCP) Analysis

The CONSULTANT shall design a safe and effective TTCP to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations, roadway pavement, drainage structures, ditches, front slopes, back slopes, drop offs within clear zone, 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 be maintained at all times. The design shall include construction phasing of roadways to accommodate the construction or relocation of utilities when the contract includes Joint Project Agreements (JPAs).

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

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

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

4.11 Master TTCP Design Files (Not applicable to this project)

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

4.13 Tree Disposition Plans (Not applicable to this project)

4.14 Design Variations and Exceptions

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.

4.15 Design Report

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

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

The design notes, data, and computations shall be fully titled, numbered, dated, indexed, and signed by the designer and the checker.

The CONSULTANT shall be responsible for preparing a Design Report for each phase submittal as referenced in the FDOT Design Manual (114.3.1.5 for 3R Projects). The Design Report is synonymous with the following: Design Documentation Book, Design Docs, Doc Book, and 3R/RRR Report.

The Design Report shall include (if applicable), but not be limited to the following (in no particular order):

- ***Assessment of Existing Conditions***
- ***Design notes, data, and calculations compiled in an executive summary format to document and describe the design conclusions reached during the development of the contract plans. Examples of design conclusions warranting an executive summary include, but are not limited to: alignments and profile decisions, median opening spacing, maintenance of traffic (MOT) phasing, temporary***

construction easements, etc.

- ***Straight Line Diagram***
- ***Scope of Services***
- ***Community Awareness Plan***
- ***Project Schedule***
- ***Traffic Forecasting Report***
- ***Pavement Design***
- ***Typical Section Package***
- ***Design Variations/Exceptions***
- ***Constructability Phase Review Checklist (as required by the CPAM)***
- ***Load Ratings***
- ***Supporting Crash Data***
- ***Comments & Responses***
- ***Engineer's Cost Estimate/ LRE (see Section 3.0, Project Common Tasks***
- ***and Section 4.17, Cost Estimates)***
- ***Sunshine 811 Design Ticket***
- ***Utility Conflict Matrix***
- ***Lane Closure Analysis***
- ***Contract Time Estimate***
- ***Correspondence***

The components of the Design Report will vary for each phase submittal based on the production schedule and project milestones. Draft/unsigned/unapproved components (i.e., Design Variations/ Exceptions, Contract Time, Load Ratings, etc.) shall be included for informational purposes and clearly designated as DRAFT.

ADA Survey Report: This task shall include the effort to prepare the ADA Survey Report. This report will provide photographic and tabular documentation of the existing pedestrian features (sidewalk, curb ramps, bus stops, pedestrian signal/detectors, etc.). In addition, the CONSULTANT shall review all legs of all sideroad intersections (signalized and unsignalized) to determine if pedestrian signals and/or crosswalks are needed. The report shall identify the deficiencies and make recommendations for improvement. The CONSULTANT will be responsible for contacting the District Bike/Ped Coordinator, ADA Coordinator, Area Maintenance Office, and the District Traffic Operations Office to determine if any project specific pedestrian access or safety related complaints have been received. The ADA Survey Report will be required with the PHASE I submittal.

4.16 Quantities for EQ Report

The CONSULTANT shall develop accurate quantities and the supporting documentation, including construction days when required. Quantities shall be included in an Estimated

Quantities Report per FDM 902.

The CONSULTANT shall be responsible for inputting pay items and quantities into the DEPARTMENT's Project Preconstruction (PrP) System through the use of the DEPARTMENT's Designer Interface.

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

Phase II - A Summary of Pay Items sheet shall be prepared with Phase II and subsequent plans submittals. The Phase II (60%) submittal shall have all pay items identified with or without quantities. If quantities have not been determined at this point, the CONSULTANT shall load a quantity of "1.0".

Phases III & IV - At Phase III (90%) the CONSULTANT shall have all quantities loaded into PrP, with only minor change anticipated at subsequent submittals. Within PrP, the CONSULTANT shall run a Project Edit Report for the project at Phases III and IV just prior to submitting the plans to the DEPARTMENT for review. This program outputs invalid pay items that may be erroneously loaded for a project. The above shall be provided for each component set of plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

4.17 Cost Estimate

The CONSULTANT shall be responsible for producing a construction cost estimate and reviewing and updating the cost estimate when scope changes occur and/or at milestones of the project.

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

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

Phases III & IV - The complete submittal package, including the CONSULTANT's construction cost estimate, will be provided to the District Preliminary Estimates Office at phases III (90%) and IV (100%). The above shall be provided for each component set of plans (i.e., Roadway, Bridge, Signing and Marking, etc.).

4.18 Technical Special Provisions and Modified Special Provisions (Not applicable

to this project)

4.19 Other Roadway Analyses (Not applicable to this project)

4.20 Field Reviews

4.21 Monitor Existing Structures (Not applicable to this project)

4.22 Technical Meetings

This task includes, but is not limited to, effort for the Post 60% Review Workshop (if required). These workshops are typically held with DEPARTMENT Area Operations personnel in conjunction with the Utility Design Meeting (see section 7.9). The workshops take place at a location appropriate for the project that will allow for a same-day project site visit. The workshops may consist of a Project Briefing, Project Design Review Workshop, and a Field Review; however, the format and need for the meeting will depend on the project's complexity and the CONSULTANT's familiarity with the District's policies and procedures. The workshop will be co-chaired by the CONSULTANT and the DEPARTMENT's Design Project Manager. The DEPARTMENT's Area Utility Manager will chair and take minutes of the utility coordination segment of the workshop.

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

This task includes the effort for the CONSULTANT to attend a pre-Phase I (30%) coordination meeting for both projects with representatives of the Emerald Coast Regional Council (ECRC) as described in Section 2.1.

4.23 Quality Assurance/Quality Control

4.24 Independent Peer Review (Not applicable to this project)

4.25 Supervision

4.26 Coordination

5 ROADWAY PLANS

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

On some projects, traffic monitoring sites may have to be included. The CONSULTANT

shall be responsible for loading all quantities for the installation and/or removal of a traffic monitoring site(s) and showing the location of the site(s) on the Key Sheet and plan sheets (as applicable). The DEPARTMENT shall be responsible for providing the location to the CONSULTANT.

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

5.1 Key Sheet

5.2 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 (Not applicable to this project)

5.6 Profile Sheet (Not applicable to this project)

5.7 Plan Sheet

5.8 Special Profile (Not applicable to this project)

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

5.10 Interchange Layout Sheet (Not applicable to this project)

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

5.12 Intersection Layout Details (Not applicable to this project)

5.13 Special Details

5.14 Cross-Section Pattern Sheets (Not applicable to this project)

5.15 Roadway Soil Survey Sheets

5.16 Cross Sections (TBD during Negotiations)

5.17 Temporary Traffic Control Plan Sheets

5.18 Temporary Traffic Control Cross Section Sheets (Not applicable to this project)

5.19 Temporary Traffic Control Detail Sheets

5.20 Utility Adjustment Sheets

5.21 Selective Clearing and Grubbing Sheets (Not applicable to this project)

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

5.21.2 Selective Clearing and Grubbing Details (Not applicable to this project)

5.22 Tree Disposition Plan Sheets (Not applicable to this project)

5.22.1 Tree Disposition Plan Sheets (Not applicable to this project)

5.22.2 Tree Disposition Plan Tables and Schedules (Not applicable to this project)

5.23 Project Control Sheets

The Engineer of Record will create the Project Control sheet from data extracted from the project survey and sign and seal the Project Control sheet.

5.24 Environmental Detail Sheets (Not applicable to this project)

5.25 Utility Verification Sheets (SUE Data)

5.26 Quality Assurance/Quality Control

5.27 Supervision

6a DRAINAGE ANALYSIS

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

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

The CONSULTANT 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:

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

The CONSULTANT shall contact and document discussions with the DEPARTMENT's local Maintenance Office (or the local maintaining agency for off-system projects) regarding historical drainage problems in the project areas.

The CONSULTANT will consider alternate culvert materials in accordance with the DEPARTMENT's Drainage Manual. Prior to Phase II (60%) plans submittal, the CONSULTANT shall meet with the District Drainage Engineer. The purpose of this meeting is to provide information to the CONSULTANT that will better coordinate the Preliminary and Final Drainage Design efforts.

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

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 (Not applicable to this project)

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

6a.4 Design of Cross Drains (Not applicable to this project)

6a.5 Design of Ditches (Not applicable to this project)

6a.6 Design of Stormwater Management Facility (Offsite or Infield Pond) (Not applicable to this project)

6a.7 Design of Stormwater Management Facility (Roadside Treatment Swales and Linear Ponds) (Not applicable to this project)

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

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 (Not applicable to this project)

6a.11.1 Existing French Drain Systems (Not applicable to this project)

6a.12 Drainage Wells (N/A)

6a.13 Drainage Design Documentation Report

The CONSULTANT shall 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 (Not applicable to this project)

6a.15 Temporary Drainage Analysis (Not applicable to this project)

6a.16 Quantities for EQ Report

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

The CONSULTANT shall develop accurate quantities and the supporting documentation, including construction days when required. Quantities shall be included in an Estimated Quantities Report per Section 3.3.2.

6a.17 Cost Estimate

Prepare cost estimates for the drainage components, except bridges and earthwork for

stormwater management and flood compensation sites. Hours for this effort have been allocated with the Roadway activities.

6a.18 Technical Special Provisions / Modified Special Provisions (Not applicable to this project)

6a.19 Hydroplaning Analysis (Not applicable to this project)

6a.20 Existing Permit Analysis (Not applicable to this project)

6a.21 Other Drainage Analysis

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

6a.22 Noise Barrier Evaluation (Not applicable to this project)

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 (Not applicable to this project)

6a.27 Quality Assurance/Quality Control

6a.28 Independent Peer Review (Not applicable to this project)

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 (Not applicable to this project)

6b.3 Drainage Structures

6b.4 Lateral Ditch Plan/Profile & Cross Sections (Not applicable to this project)

6b.5 Retention/Detention/Floodplain Compensation Pond Details & Cross Sections (Not applicable to this project)

6b.6 Erosion Control Plan

6b.7 SRCC

6b.8 Quality Assurance/Quality Control

6b.9 Supervision

7 UTILITIES

The CONSULTANT 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 CONSULTANT shall certify all utility negotiations have been completed and that arrangements have been made for utility work to be undertaken.

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

7.1 Utility Kickoff Meeting

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

7.2 Identify Existing Utility Agency Owner(s)

The CONSULTANT will identify all utilities in the corridor during the survey phase by calling Sunshine 811. As-built documentation shall be requested from each UAO for verification of complete designation, and a review will be made to ensure that field designated data is included on the Phase I plans. Proper identification of design

coordination contact information shall be made during this activity. A copy of the Sunshine 811 "design" ticket listing all utility owners within the project limits shall be provided within 10 business days of the Notice to Proceed (NTP) as part of all subsequent phase submittals.

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

7.3 Make Utility Contacts

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

7.4 Exception Processing

For above-ground utility installations that are to remain within the horizontal clearance area WITHOUT viable options for relocation within the R/W, the CONSULTANT shall refer to Section 3.14.5 of the UAM regarding practical considerations and Section 6 of the UAM for Design Alternative processing.

For above-ground utility installations that are to remain within the horizontal clearance area WITH available R/W and options for relocation, the UAO will be responsible for submitting a Design Alternative approval request as described in Section 6 of the UAM. The DEPARTMENT will coordinate all necessary Design Alternatives.

7.5 Preliminary Utility Meeting

The CONSULTANT 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. ***This is also an opportunity for the UAO(s) to present proposed facility relocations with the CONSULTANT and other UAOs. The CONSULTANT shall keep accurate minutes and distribute a copy to all attendees.***

7.6 Individual/Field Meetings

The CONSULTANT shall meet with each UAO as necessary, separately, or together, throughout the project design duration to provide guidance in the interpretation of plans, review changes to the plans and schedules, standard or selective clearing and grubbing work, and assist in the development of the UAO(s) plans and work schedules.

The CONSULTANT is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting. Field reviews shall be

coordinated with the DEPARTMENT's Area Utility Manager.

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

The CONSULTANT will be responsible for reviewing and implementing identified utility locations into the plans as well as producing a Potential Utility Conflict Matrix. The Matrix will include location (station, offset, depth) of existing facilities in relation to proposed construction features, and will be submitted with the Phase II submittal. Subsequent phase submittals will require that the Utility Conflict Matrix be updated and submitted reflecting any design changes or new information. Marked plans provided from UAOs may need to be acquired through the Department's Project Suite Enterprise Edition (PSEE) system.

7.8 Subordination of Easements Coordination

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

7.9 Utility Design Meeting

The DEPARTMENT's Area Utility Manager shall coordinate with the DEPARTMENT's Design Project Manager and schedule (time and place), notify participants, and conduct a Utility Design Meeting with all affected UAO(s). This meeting may be held in conjunction with the Post 60% Workshop described in Section 4.22.

The CONSULTANT shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAO(s). The CONSULTANT shall be prepared to discuss impacts to existing trees/vegetation and proposed landscape, drainage, traffic signalization, temporary traffic control plan(TTCP) (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable property rights from FDOT Legal Office, discuss with each UAO the utility work by highway contractor option, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and TTCP with each UAO. The intent of this meeting shall be to assist the UAOs in identifying and resolving conflicts between utilities and proposed construction before completion of the plans, including utility adjustment details. Also, to work with the UAOs to recommend potential resolution between known utility conflicts with proposed construction plans as may be deemed practical by the UAO. The CONSULTANT shall keep accurate minutes of all meetings and distribute a copy to all attendees within 3 days. See Task 4.5 (Horizontal/Vertical

Master Design File) and Task 4.8 (Cross Section Design Files) for utility conflict location identification and adjustments.

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

The CONSULTANT is to review the UAO marked up plans and the Utility Work Schedules as they are received and assure that they are compatible with the proposed design features in the plans.

The CONSULTANT shall review the specific details of the markups and schedules with the Area Utility Manager as required to finalize the status of each potential conflict. Send color markups and schedules to the appropriate DEPARTMENT office(s) such as survey, geotechnical, drainage, structures, lighting, roadway, signals, utilities, landscape architecture, municipalities, maintaining agency, and District Traffic Operations for review and comment if required by the District.

The CONSULTANT shall also verify that the schedules conform to the construction phasing and TTCP sequences. Coordinate with the District for execution. Distribute Executed Final Documents. Prepare Work Order for UAO(s). The CONSULTANT shall coordinate with the DUO the programming of necessary Work Program funds.

Any design changes affecting utilities that occur after the Phase IV Resubmittal must be submitted to the DEPARTMENT's Area Utility Manager so that Utility Work Schedules can be updated.

7.11 Utility Coordination/Follow-up

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

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

7.12 Utility Constructability Review (To be conducted by the DEPARTMENT)

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

adjustments.

7.13 Additional Utility Services

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

The CONSULTANT may be required to provide additional utility services. Additional services will be determined when the services are required and requested. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental amendment when the need is identified.

7.14 Processing Utility Work by Highway Contractor (UWHC) (To be conducted by the DEPARTMENT)

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

As directed by the DEPARTMENT, the CONSULTANT shall assist with the determination of the DEPARTMENT's cost participation, attend additional coordination meetings, prepare and process UWHC agreements, review tabulation of quantities prepared by the UAO(s), perform UWHC constructability and bidability reviews, review pay items and cost estimates, and review and incorporate Technical Special Provisions (TSPs) or Modified Special Provisions (MSP)

prepared by the UAO. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental amendment when the need is identified. Effort for the EOR is not included in this task, see Roadway Analysis Task Group 4.

7.15 Contract Plans to UAO(s)

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

7.16 Certification/Close-Out (To be conducted by the DEPARTMENT)

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

Utility Coordination Close-Out will include archiving all project documents and files in

an orderly fashion consistent with the DEPARTMENT's EDMS archiving process.

7.17 Other Utilities (Not applicable to this project)

8 ENVIRONMENTAL PERMITS and ENVIRONMENTAL CLEARANCES

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 in the Project Manager and the Environmental Permit Coordinator on all permit related correspondence and meetings. The Consultant shall use current regulatory guidelines and policies for all permits required as identified in Section 2.4.

8.1 Preliminary Project Research

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

The CONSULTANT shall research any existing easements or other restrictions that may exist both within or 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. The CONSULTANT shall determine if any Sovereign Submerged Lands easements need to be modified or acquired. Any applicable information will be shown on the plans as appropriate.

8.2 Field Work

8.2.1 Pond Site Alternatives: (Not applicable to this project)

8.2.2 Establish Wetland Jurisdictional Lines and Assessments:

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

- Determine landward extent of wetlands and other surface waters as defined in Rule Chapter 62-340, F.A.C., as ratified in Section 373.4211, F.S. United States Army Corps of Engineers (USACE) Wetland Delineation Manual (Technical Report Y-87-1); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (ERD/EL TR-10-20).
- Collect all data and information necessary to determine the jurisdictional boundaries of wetlands and other surface waters as defined by the rules or regulations of each permitting agency processing a DEPARTMENT permit

application for the project.

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

8.2.3 Species Surveys: (Not applicable to this project)

8.3 Agency Verification of Wetland Data

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

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

8.4 Complete and Submit All Required Permit Applications

The 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 8.12 (Other Permits). The CONSULTANT shall prepare each permit application in accordance with the rules and/or regulations of the regulatory agency responsible for issuing a specific permit and/or authorization to perform work. The permit application packages must be approved by the DEPARTMENT prior to submittal to regulatory agencies.

The CONSULTANT will submit all permit applications, as directed by the

DEPARTMENT, and be responsible for payment of all permit and public noticing fees.

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

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

8.4.1 Complete and Submit all Required Wetland Permit Applications:

The CONSULTANT shall prepare, complete, and submit required wetland permit (i.e., ERP, Section 404) application packages to the appropriate regulatory agencies. This includes, but is not limited to, applications submitted to WMDs and/or DEP, and USACE. The application package may include but is not limited to attachments (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 CONSULTANT shall prepare and respond to agency Requests for Additional Information (RAIs), including necessary revisions to the application package. All responses and completed application packages must be approved by the District Permit Coordinator prior to submittal to the regulatory agencies. Geotechnical permitting should also be prepared, submitted, and obtained.

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

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

8.4.2 Complete and Submit all Required Species Permit Applications: (Not applicable to this project)

8.5 Coordinate and Review Dredge and Fill Sketches

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

Dredge and Fill sketches.

8.6 Prepare USCG Permit Application (Not applicable to this project)

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

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

8.9 Prepare USACE Section 408 Application to Alter a Civil Works Project (Not applicable to this project)

8.10 Compensatory Mitigation Plan (Not applicable to this project)

8.11 Mitigation Coordination and Meetings (Not applicable to this project)

8.12 Other Environmental Permits (Not applicable to this project)

8.13 Technical Support to the DEPARTMENT for Environmental Clearances and Re-evaluations (use when CONSULTANT provides technical support only) (Not applicable to this project)

8.14 Preparation of Environmental Clearances and Re-evaluations (use when CONSULTANT prepares all documents associated with a re-evaluation) (Not applicable to this project)

8.15 Contamination Impact Analysis (Not applicable to this project)

8.16 Asbestos Survey (Not applicable to this project)

8.17 Technical Meetings

8.18 Quality Assurance/Quality Control

8.19 Supervision

8.20 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS (Not applicable to this project)

10 STRUCTURES - BRIDGE DEVELOPMENT REPORT (Not applicable to this project)

11 STRUCTURES - TEMPORARY BRIDGE (Not applicable to this project)

12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE (Not applicable to this project)

13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE (Not applicable to this project)

14 STRUCTURES - STRUCTURAL STEEL BRIDGE (Not applicable to this project)

15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE (Not applicable to this project)

16 STRUCTURES - MOVABLE SPAN (Not applicable to this project)

17 STRUCTURES - RETAINING WALLS (Not applicable to this project)

18 STRUCTURES - MISCELLANEOUS (Not applicable to this project)

19 SIGNING AND PAVEMENT MARKING ANALYSIS

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

19.1 Traffic Data Analysis

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

The CONSULTANT shall evaluate the existing signage to determine the need for additional signs, correcting redundant or conflicting signage, and the replacement of damaged signs. It is NOT the DEPARTMENT's intent to replace signs based solely on age or installation date. Existing signage problems/issues that are discovered during the design phase should be communicated to the maintaining agency to be addressed as appropriate.

The CONSULTANT shall prepare a detailed summary of additional or modified traffic regulations affected by this project. The summary shall include affected regulatory signs (No U, No Left, No Parking etc.), signals (including school zones, pedestrian devices, intersection control beacons, post-mounted warning devices) or pavement markings. This information is to be forwarded to the District Traffic Operations Engineer for use in fulfilling Florida Statute 335.10(1). The CONSULTANT may refer to Traffic Engineering Topic Number 750-010-011: Traffic Regulation Approval Process, and the Roadway Characteristic Inventory (RCI) database for additional information.

19.2 No Passing Zone Study (Not applicable to this project)

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

19.5 Sign Panel Design Analysis

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

19.6 Sign Lighting/Electrical Calculations (Not applicable to this project)

19.7 Quantities for EQ Report

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

19.8 Cost Estimate

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

19.10 Other Signing and Pavement Marking Analysis (Not applicable to this project)

19.11 Field Reviews

19.12 Technical Meetings (Not applicable to this project)

19.13 Quality Assurance/Quality Control

19.14 Independent Peer Review (Not applicable to this project)

19.15 Supervision

19.16 Coordination

20 SIGNING AND PAVEMENT MARKING PLANS

The CONSULTANT shall prepare a set of Signing and Pavement Marking Plans in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums that includes the following. ***The plans shall include only those sheets, of the following list of sheets, necessary to convey the intent and scope of the project for construction.***

20.1 Key Sheet

20.2 General Notes/Pay Item Notes

20.3 Project Layout (Not applicable to this project)

20.4 Plan Sheet

20.5 Typical Details (Not applicable to this project)

20.6 Guide Sign Work Sheets

20.7 Traffic Monitoring Site (Not applicable to this project)

20.8 Cross Sections (Not applicable to this project)

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

20.10 Special Details (Not applicable to this project)

20.11 Interim Standards (Not applicable to this project)

20.12 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.

20.13 Supervision

21 SIGNALIZATION ANALYSIS

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

21.1 Traffic Data Collection

The CONSULTANT shall perform all effort required ***as applicable*** for traffic data collection ***for the purposes of providing signal design related services as described in this scope of services. This effort may*** include collecting crash reports, 24 hr. machine counts, 8 hr. turning movement counts, 7 day machine counts, and speed & delay studies.

21.2 Traffic Data Analysis

As applicable for the purposes of providing signal design related services as described in this scope of services, the CONSULTANT shall determine signal operation plan, intersection geometry, local signal timings, pre-emption phasing & timings, forecasting traffic, and intersection analysis run.

21.3 Signal Warrant Study (Not applicable to this project)

21.4 Systems Timings

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

21.5 Reference and Master Signalization Design File

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

21.6 Reference and Master Interconnect Communication Design File (Not applicable to this project)

21.7 Overhead Street Name Sign Design (Not applicable to this project)

21.8 Pole Elevation Analysis (Not applicable to this project)

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

21.10 Quantities for EQ Report

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

21.11 Cost Estimate (Not applicable to this project)

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

21.13 Other Signalization Analysis (Not applicable to this project)

21.14 Field Reviews

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

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

21.15 Technical Meetings

21.16 Quality Assurance/Quality Control

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.

21.17 Independent Peer Review (Not applicable to this project)

21.18 Supervision

21.19 Coordination

22 SIGNALIZATION PLANS

The CONSULTANT shall prepare a set of Signalization Plans in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums, which includes the following:

22.1 Key Sheet

22.2 General Notes/Pay Item Notes

22.3 Plan Sheet

22.4 Interconnect Plans (Not applicable to this project)

22.5 Traffic Monitoring Site

22.6 Guide Sign Worksheet (Not applicable to this project)

22.7 Special Details

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

22.9 Mast Arm/Monotube Tabulation Sheet (Not applicable to this project)

22.10 Strain Pole Schedule (Not applicable to this project)

22.11 TTCP Signal (Temporary) (Not applicable to this project)

22.12 Temporary Detection Sheet (Not applicable to this project)

22.13 Utility Conflict Sheet (Not applicable to this project)

22.14 Interim Standards

22.15 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.

22.16 Supervision

23 LIGHTING ANALYSIS

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

23.1 Lighting Justification Report (Not applicable to this project)

23.2 Lighting Design Analysis Report (LDAR)

The report shall be submitted under a separate cover with the Phase II plans submittal. The report shall provide analyses for each signalized intersection lighting design and each typical section of the mainline, typical section for the ramps (one and/or two lanes), interchanges, underdeck lighting, and arterial roads. Each lighting calculation shall be properly identified as to the area that it covers. The report shall include the Lighting Design Criteria that will be used. For projects with corridor lighting, the report shall include the evaluation of at least three lighting design alternatives. The report shall provide a recommendation on the alternative to use. Each alternative shall be properly described; the alternatives shall consider different pole heights, lamp wattage, and arm lengths. Each alternative shall be provided with a cost estimate that includes initial cost in addition to operations and maintenance cost for one year.

After approval of the preliminary report, the CONSULTANT shall submit a revised report for each submittal.

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 (Not applicable to this project)

23.5 Reference and Master Design Files

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

23.6 Temporary Highway Lighting (Not applicable to this project)

23.7 Design Documentation

The CONSULTANT shall submit a Design Documentation with each plans 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 Quantities for EQ Report

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

23.9 Cost Estimate

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

23.11 Other Lighting Analysis

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

23.13 Technical Meetings

23.14 Quality Assurance/Quality Control

23.15 Independent Peer Review (Not applicable to this project)

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

24.2 General Notes/Pay Item Notes

24.3 Pole Data, Legend & Criteria

24.4 Service Point Details

24.5 Project Layout (Not applicable to this project)

24.6 Plan Sheet

24.7 Special Details (Not applicable to this project)

24.8 Temporary Highway Lighting Detail Sheets (Not applicable to this project)

24.9 Temporary Highway Lighting Plan Sheets (Not applicable to this project)

24.10 Interim Standards (Not applicable to this project)

24.11 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.

24.12 Supervision

25 LANDSCAPE ANALYSIS

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

26 LANDSCAPE PLANS (Not applicable to this project)

27 SURVEY

The CONSULTANT shall perform survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda. The CONSULTANT shall submit all survey notes and computations to document the

surveys. All field survey work shall be recorded in approved media and submitted to the DEPARTMENT. Field books submitted to the DEPARTMENT must be of an approved type. The field books shall be certified by the surveyor in responsible charge of work being performed before the final product is submitted.

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

27.1 Horizontal Project Control (HPC) (To be provided by the DEPARTMENT)

Includes efforts necessary to recover control established by others.

27.2 Vertical Project Control (VPC) (To be provided by the DEPARTMENT)

Includes efforts necessary to recover control established by others.

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

Refer to the FDOT Survey Handbook for requirements.

27.4 Aerial Targets

Refer to the FDOT Survey Handbook for requirements.

27.5 Reference Points

Refer to the FDOT Survey Handbook for requirements.

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

Refer to the FDOT Survey Handbook for requirements.

27.7 Planimetric (2D) (Not applicable to this project)

27.8 Roadway Cross Sections/Profiles

27.9 Side Street Surveys (Not applicable to this project)

27.10 Underground Utilities

Refer to the FDOT Survey Handbook for requirements.

27.11 Outfall Survey (Not applicable to this project)

27.12 Drainage Survey

Refer to the FDOT Survey Handbook for requirements.

27.13 Bridge Survey (Minor/Major) (Not applicable to this project)

27.14 Channel Survey (Not applicable to this project)

27.15 Pond Site Survey (Not applicable to this project)

27.16 Mitigation Survey (Not applicable to this project)

27.17 Jurisdiction Line Survey

Refer to the FDOT Survey Handbook for requirements.

27.18 Geotechnical Support (Not applicable to this project)

27.19 Sectional/Grant Survey (Not applicable to this project)

27.20 Subdivision Location (Not applicable to this project)

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

27.22 Boundary Survey (Not applicable to this project)

27.23 Water Boundary Survey (Not applicable to this project)

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

27.25 Right of Way Monumentation (Not applicable to this project)

27.26 Line Cutting (Not applicable to this project)

27.27 Work Zone Safety

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

27.28 Vegetation Survey

27.29 Tree Survey

27.30 Miscellaneous Surveys

Refer to tasks of this document, as applicable, to perform surveys not described herein. The percent for Supplemental will be determined at negotiations. This item can only be used if authorized in writing by the District Surveyor (DS), District Location Surveyor (DLS) or their representative. *Refer to the FDOT Survey Handbook for requirements.*

Anticipated survey requirements may include:

- **Generic Description (examples: oak, palm, and pine)**
- **Diameter at Breast Height (DBH) in inches**
- **Survey Baseline Station**
- **Offset from the Survey Baseline**
- **Unusual circumstances (examples: multiple trunk trees or palms, unusual position, or location, etc.)**

The Surveyor of Record (SOR) shall communicate with the Engineer of Record (EOR) early/prior to staffhour negotiations to determine the specific survey needs.

27.31 Supplemental Surveys (Not applicable to this project)

27.32 Document Research (Not applicable to this project)

27.33 Field Review

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

27.34 Technical Meetings

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

27.35 Quality Assurance/Quality Control (QA/QC)

Establish and implement a QA/QC plan. Also includes subconsultant review, response to comments and any resolution meetings if required, preparation of submittals for review, etc. *Refer to the FDOT Survey Handbook for requirements.*

27.36 Supervision

Perform all activities required to supervise and coordinate project. These activities must be performed by the project supervisor, a Florida P.S.M. or their delegate as approved by the District Surveying Office.

27.37 Coordination

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

28 PHOTOGRAMMETRY

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

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

28.1 Flight Preparation

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

28.2 Control Point Coordination

Determine photo identifiable control points, and mark contact prints.

28.3 Mobilization

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

28.4 Flight Operations

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

28.5 Photo Products

Prepare contact prints, contact diapositives, and photo enlargements.

28.6 LiDAR

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

28.7 Aerial Triangulation

Measure and adjust control within aerial images.

28.8 Surfaces

Includes collection of break lines and spot elevations.

28.9 Ortho Generation

Includes creation of final images.

28.10 Rectified Digital Imagery (Georeferenced)

Create the rectified digital image.

28.11 Mosaicking

Create the mosaic.

28.12 Sheet Clipping

Create plot files for sheets from the database.

28.13 Topographics (3D)

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

28.14 Planimetrics (2D)

Prepare 2D planimetric map.

28.15 Drainage Basin

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

28.16 CADD Edit

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

28.17 Data Merging

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

28.18 Miscellaneous

Other tasks not specifically addressed in this document.

28.19 Field Review

Perform on site review of maps.

28.20 Technical Meetings

Attend meetings as required.

28.21 Quality Assurance/Quality Control

Establish and implement a QA/QC plan.

28.22 Supervision

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

28.23 Coordination

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

29 MAPPING (To be provided by the DEPARTMENT)

30 TERRESTRIAL MOBILE LiDAR

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

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

30.1 Terrestrial Mobile LiDAR Mission Planning

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

30.2 Project Control Point Coordination

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

30.3 Terrestrial Mobile LiDAR Mobilization

Prepare the LiDAR sensor and vehicle for project data collection and get specialized

personnel and equipment on site.

30.4 Terrestrial Mobile LiDAR Mission

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

30.5 Terrestrial Mobile LiDAR Processing

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

30.6 Terrestrial Mobile Photography Processing

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

30.7 Transformation / Adjustment

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

30.8 Classification / Editing

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

30.9 Specific Surface Reporting

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

30.10 Topographic (3D) Mapping

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

30.11 Topographic (2D) Planimetric Mapping

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

30.12 CADD Edits

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

30.13 Data Merging

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

30.14 Miscellaneous

Other tasks not specifically addressed in this document.

30.15 Field Reviews

Perform on site review of maps.

30.16 Technical Meetings

Attend meetings as required.

30.17 Quality Assurance/Quality Control

Establish and implement a QA/QC plan.

30.18 Supervision

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

30.19 Coordination

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

31 ARCHITECTURE DEVELOPMENT (Not applicable to this project)

32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE (Not applicable to this project)

33 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS

The CONSULTANT shall review the approved preliminary engineering report, typical section package, traffic technical memorandum and proposed geometric design alignment to identify impacts to existing ITS components (if applicable).

The CONSULTANT shall review all related District ITS plans and documentation for the project corridor to ensure all cited ITS elements are included in this project.

The CONSULTANT shall research any required legacy system or system components that may be impacted by new work, such as: existing communications; existing types, numbers, locations, models, manufacturers, and age of ITS devices; as-built plans; existing operating software; existing center-to-field devices; and C2C communications and capabilities.

34 INTELLIGENT TRANSPORTATION SYSTEMS PLANS (Not applicable to this project)

35 GEOTECHNICAL

The CONSULTANT shall, for each project, be responsible for a complete geotechnical investigation. All work performed by the CONSULTANT shall be in accordance with DEPARTMENT standards, or as otherwise directed by the District Geotechnical Engineer. The District Geotechnical Engineer will make interpretations and changes regarding geotechnical standards, policies and procedures and provide guidance to the CONSULTANT.

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

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

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

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

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

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

35.1 Document Collection and Review

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

Roadway

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

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

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

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

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

35.2 Develop Detailed Boring Location Plan

35.3 Stake Borings/Utility Clearance

35.4 Muck Probing (Not applicable to this project)

35.5 Coordinate and Develop TTCP for Field Investigation

35.6 Drilling Access Permits (Not applicable to this project)

35.7 Property Clearances (Not applicable to this project)

35.8 Groundwater Monitoring (Not applicable to this project)

35.9 LBR / Resilient Modulus Sampling (Not applicable to this project)

35.10 Coordination of Field Work

35.11 Soil and Rock Classification - Roadway

35.12 Design LBR (Not applicable to this project)

35.13 Laboratory Data

35.14 Seasonal High Water Table

35.15 Parameters for Water Retention Areas (Not applicable to this project)

35.16 Delineate Limits of Unsuitable Material (Not applicable to this project)

35.17 Electronic Files for Cross-Sections

35.18 Embankment Settlement and Stability (Not applicable to this project)

35.19 Monitor Existing Structures (Not applicable to this project)

35.20 Stormwater Volume Recovery and/or Background Seepage Analysis (Not applicable to this project)

35.21 Geotechnical Recommendations

35.22 Pavement Condition Survey and Pavement Evaluation Report

35.23 Preliminary Roadway Report (Not applicable to this project)

35.24 Final Report

35.25 Auger Boring Drafting

35.26 SPT Boring Drafting (Not applicable to this project)

Structures

35.27 Develop Detailed Boring Location Plan

35.28 Stake Borings/Utility Clearance

35.29 Coordinate and Develop TTCP for Field Investigation

35.30 Drilling Access Permits (Not applicable to this project)

35.31 Property Clearances

35.32 Collection of Corrosion Samples (Not applicable to this project)

35.33 Coordination of Field Work

35.34 Soil and Rock Classification - Structures

35.35 Tabulation of Laboratory Data

35.36 Estimate Design Groundwater Level for Structures

35.37 Selection of Foundation Alternatives (BDR) (Not applicable to this project)

35.38 Detailed Analysis of Selected Foundation Alternate(s) (Not applicable to this project)

35.39 Bridge Construction and Testing Recommendations (Not applicable to this project)

35.40 Lateral Load Analysis (Optional) (Not applicable to this project)

35.41 Walls (N/A)

35.42 Sheet Pile Wall Analysis (Optional) (Not applicable to this project)

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

35.44 Box Culvert Analysis (Not applicable to this project)

35.45 Preliminary Report - BDR (Not applicable to this project)

35.46 Final Report - Bridge and Associated Walls (Not applicable to this project)

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

The final reports shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, S.C.S., U.S.G.S., geologic and potentiometric data.
- *Electronic input files for plotting the boring data on the plan and cross section sheets.*
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis).
- Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
- Any special provisions required for construction that are not addressed in the DEPARTMENT's Standard specification.

An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information. Final reports will incorporate comments from the DEPARTMENT and contain any additional field or laboratory test results, recommended foundation alternatives along with design parameters and special provisions for the contract plans. These reports will be submitted to the District Geotechnical Engineer for review prior to project completion. After review by the District Geotechnical Engineer, the reports will be submitted to the District Geotechnical Engineer in final form and will include the following:

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

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

The final reports, special provisions, as well as record prints, will be signed and sealed by

a Professional Engineer licensed in the State of Florida.

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

35.48 SPT Boring Drafting

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

35.49 Other Geotechnical (Not applicable to this project)

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

35.51 Field Reviews

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

35.52 Technical Meetings (Not applicable to this project)

35.53 Quality Assurance/Quality Control

35.54 Supervision

35.55 Coordination

36 3D MODELING (Not applicable to this project)

37 PROJECT REQUIREMENTS

37.1 Liaison Office

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

37.2 Key Personnel

The CONSULTANT's work shall be performed and directed by the key personnel

identified in the proposal presentations by the CONSULTANT. Any changes in the indicated personnel shall be subject to review and approval by DEPARTMENT.

37.3 Progress Reporting

The CONSULTANT shall meet with the DEPARTMENT as required and shall provide a written monthly progress report with approved schedule, schedule status, and payout curve or by using the earned value method that describe the work performed on each task. The report will include assessing project risk through monthly documentation of identifying and updating the risk category and approach for monitoring those tasks. Invoices shall be submitted after the DEPARTMENT approves the monthly progress report and the payout curve or with earned value analysis. The Project Manager will make judgment on whether work of sufficient quality and quantity has been accomplished by comparing the reported percent complete against actual work accomplished.

37.4 Correspondence

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

37.5 Professional Endorsement

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

37.6 Computer Animation

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 any and all adjacent and integral consultants so as to effect complete and homogenous plans and specifications for the project(s) described herein.

37.8 Optional Services

At the DEPARTMENT's option, the CONSULTANT may be requested to provide optional services. The fee for these services shall be negotiated in accordance with the terms detailed in Exhibit B, Method of Compensation, for a fair, competitive and reasonable cost, considering the scope and complexity of the project(s). Additional

services may be authorized by Letter of Authorization or supplemental amendment in accordance with paragraph 2.00 of the Standard Consultant Agreement. The additional services may include Construction Assistance, Review of Shop Drawings, Final Bridge Load Rating, update (Category II) bridge plans electronically (CADD) for the Final "As-Built" conditions, based on documents provided by the DEPARTMENT (CADD Services Only) or other Services as required.

38 INVOICING LIMITS

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

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

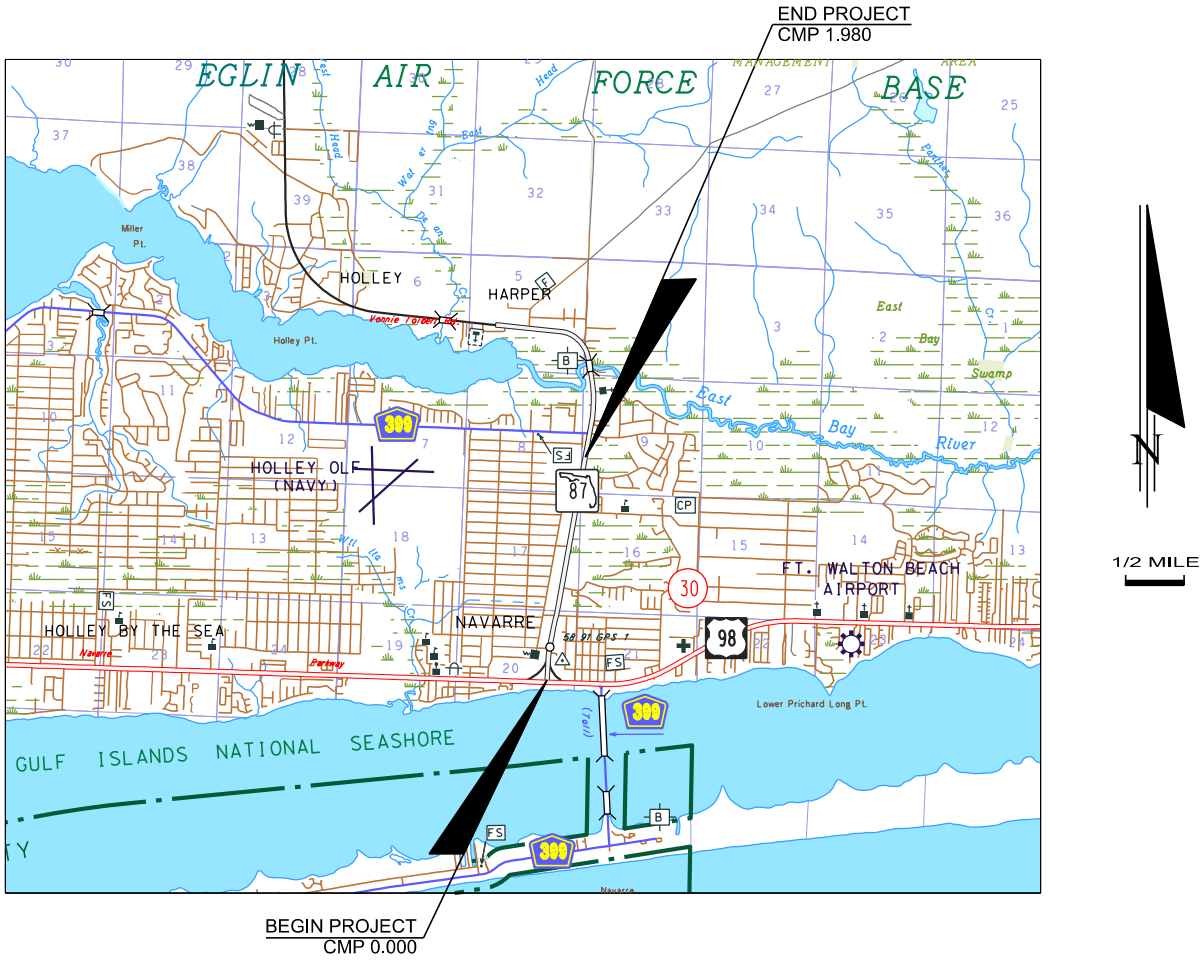
39 PROJECT COST ACCOUNTING (Not applicable to this project)

Santa Rosa County

Resurfacing, Rehabilitation, & Restoration (RRR) Project

State Road 87
From US 98 to County Road 399 (East Bay Blvd.)

FPID: 450820-1
Section No.: 58040000, 58040001, 58040032, 58040100



PROJECT LOCATION MAP

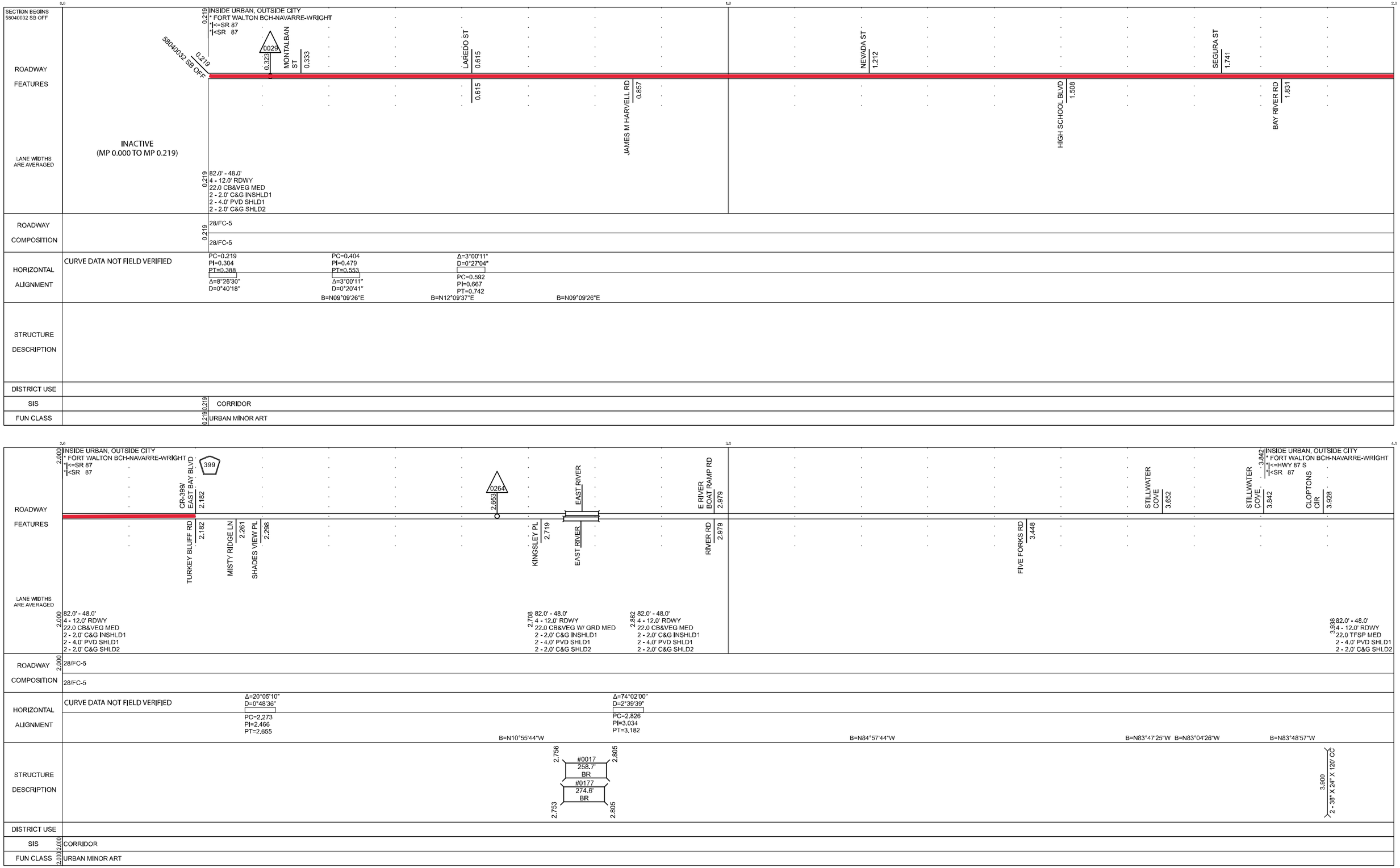
	5 YR INV	SLD REV
DATE	10/07/2020	10/15/2020
BY	SSMC	SSMC

BMP	EMP	INV	SLD REV
000.000	019.769	01/19/2022 Ceteris	01/19/2022 Ceteris
000.980	001.075	12/07/2020 METRIC	12/07/2020 METRIC

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
12		SR 87	SANTA ROSA	03	58040000	1 OF 5



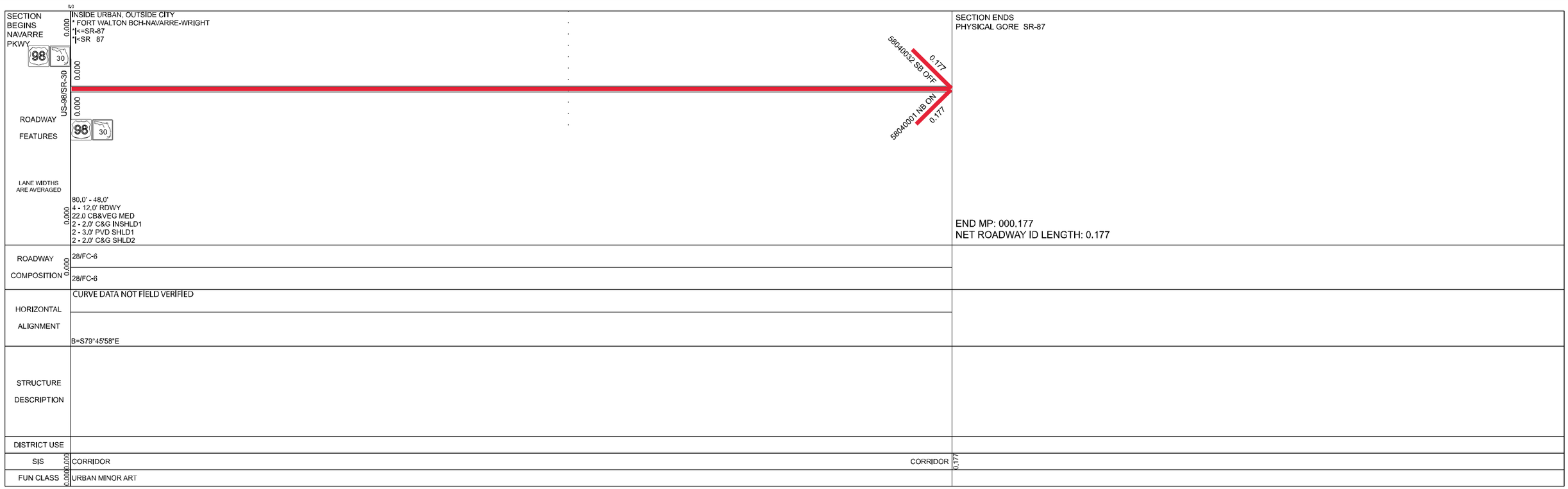
Version: 1.4.2.27 01/19/2022

	5 YR INV	SLD REV	BMP	EMP	INV	SLD REV
DATE	05/21/2020	05/26/2020				
BY	HSA	HSA DB				

FLORIDA DEPARTMENT OF TRANSPORTATION

STRAIGHT LINE DIAGRAM OF ROAD INVENTORY

SECTION STATUS	INT. or US ROUTE NO.	STATE ROAD NO.	COUNTY	DISTRICT	ROADWAY ID	SHEET NO:
02		SR 87	SANTA ROSA	03	58040100	1 OF 1



Version: 1.4.2.27 05/26/2020

Date: 7/8/2022 10:51:58 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 450820-1-52-01 **Letting Date:** 01/2099

Description: SR 87 FROM US 98 TO CR 399 EAST BAY BLVD

District: 03 **County:** 58 SANTA ROSA **Market Area:** 01 **Units:** English
Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.520 MI

Project Manager: CLAY HUNTER

Version 1-P Project Grand Total **$4,689,323.08**
Description: SR 87 FROM US 98 TO CR 399 EAST BAY BLVD

Sequence: 1 RSD - Resurfacing, Divided **Net Length:** 0.219 MI 1,156 LF

Description: Section 58040000 (CMP: 0.000-0.219); Urban: 2-12'(LT), 1-12'(RT), 2-4' B.L.

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	28.00 / 16.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-15	MILLING EXIST ASPH PAVT,2 3/4" AVG DEPTH	5,653.12	SY	$4.55	$25,721.70
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	466.38	TN	$185.00	$86,280.30
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	466.38	TN	$195.00	$90,944.10

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	250.00	SY	$150.00	$37,500.00
	Comment: Misc				
710-90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	1.00	LS	$20,000.00	$20,000.00
711-14-125	THERMOPLASTIC, PREFORM, WHITE, SOLID,24"	820.00	LF	$19.45	$15,949.00
	Comment: 24" preformed striping for crosswalks at signalized intersections				

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
695-7-600	TRAFFIC MONITORING SITE, REMOVE EXISTING CABINET	3.00	EA	$590.93	$1,772.79
	Comment: Covers removal of PTMS within project limits				

Turnouts/Crossovers Subcomponent

Description	Value

Asphalt Adjustment	104.00
Milling Code	Y
Friction Course Code	Y

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-15	MILLING EXIST ASPH PAVT,2 3/4" AVG DEPTH	5,879.24	SY	$4.55	$26,750.54
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	485.04	TN	$185.00	$89,732.40
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	485.04	TN	$195.00	$94,582.80

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	59.00	EA	$15.00	$885.00
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.88	GM	$1,250.00	$1,100.00
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.22	GM	$850.00	$187.00
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.88	GM	$5,250.00	$4,620.00
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	0.22	GM	$2,450.00	$539.00
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.88	GM	$5,300.00	$4,664.00
	Roadway Component Total				$501,228.63

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	2.00 / 2.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-11	FLOATING TURBIDITY BARRIER	21.90	LF	$55.00	$1,204.50
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	21.90	LF	$40.00	$876.00
104-18	INLET PROTECTION SYSTEM	50.00	EA	$276.07	$13,803.50

Shoulder Component Total	$15,884.00

Sequence 1 Total	$517,112.63

Sequence: 2 RSD - Resurfacing, Divided **Net Length:** 1.761 MI 9,298 LF

Description: Section 58040000 (CMP: 0.219-1.980); Urban: 4-12'Lanes, 2-4' Bike Lanes, 2-2' C&G

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	28.00 / 28.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-15	MILLING EXIST ASPH PAVT,2 3/4" AVG DEPTH	57,854.72	SY	$4.55	$263,238.98
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	4,773.01	TN	$185.00	$883,006.85
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	4,773.01	TN	$195.00	$930,736.95

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-1-3	RAISED PAVMT MARK, TYPE B	713.00	EA	$15.00	$10,695.00
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	7.04	GM	$1,250.00	$8,800.00
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.52	GM	$850.00	$2,992.00
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	7.04	GM	$5,250.00	$36,960.00
711-16-131	THERMOPLASTIC, STD-OTH, WHITE, SKIP, 6"	3.52	GM	$2,450.00	$8,624.00
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	7.04	GM	$5,300.00	$37,312.00

Roadway Component Total	$2,182,365.78

Sequence 2 Total	$2,182,365.78

Sequence: 3 RSD - Resurfacing, Divided **Net Length:** 1.511 MI

7,978 LF

Description: Section 58040000 Aux Lanes; 12' Turn Lanes

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	12.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-15	MILLING EXIST ASPH PAVT,2 3/4" AVG DEPTH	10,637.44	SY	$4.55	$48,400.35
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	877.59	TN	$185.00	$162,354.15
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	877.59	TN	$195.00	$171,130.05

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	3.02	GM	$1,250.00	$3,775.00
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	3.02	GM	$5,250.00	$15,855.00
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	3.02	GM	$5,300.00	$16,006.00
	Roadway Component Total				$417,520.55

Sequence 3 Total $417,520.55

Sequence: 4 RSD - Resurfacing, Divided **Net Length:** 0.479 MI 2,529 LF

Description: Section: 58040001 & 58040032 NB & SB Ramps; Urban: 15' Lane, 4' Shldr, 2' Shldr

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	15.00 / 0.00
Structural Spread Rate	165
Friction Course Spread Rate	165

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-15	MILLING EXIST ASPH PAVT,2 3/4" AVG DEPTH	4,215.20	SY	$4.55	$19,179.16
334-1-53	SUPERPAVE ASPH CONC, TRAF C, PG76-22	347.75	TN	$185.00	$64,333.75
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	347.75	TN	$195.00	$67,811.25

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.96	GM	$1,250.00	$1,200.00
711-16-101	THERMOPLASTIC, STD-OTH, WHITE, SOLID, 6"	0.96	GM	$5,250.00	$5,040.00
711-16-201	THERMOPLASTIC, STD-OTH,YELLOW, SOLID, 6"	0.96	GM	$5,300.00	$5,088.00
	Roadway Component Total				$162,652.16

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	7.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	2.67 / 0.00
Paved Outside Shoulder Width L/R	4.00 / 0.00
Structural Spread Rate	0
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-6	MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH	1,124.05	SY	$4.25	$4,777.21
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	92.73	TN	$265.00	$24,573.45
570-1-2	PERFORMANCE TURF, SOD	750.31	SY	$4.25	$3,188.82
	Shoulder Component Total				$32,539.48

MEDIAN COMPONENT

User Input Data

Description	Value

Total Median Width	5.00
Performance Turf Width	2.67
Total Median Shoulder Width L/R	5.00 / 0.00
Paved Median Shoulder Width L/R	2.00 / 0.00
Structural Spread Rate	0
Friction Course Spread Rate	165
Total Width (T) / 8" Overlap (O)	T
Rumble Strips ï¿½No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
327-70-6	MILLING EXIST ASPH PAVT,1 1/2" AVG DEPTH	562.03	SY	$4.25	$2,388.63
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	46.37	TN	$265.00	$12,288.05
570-1-2	PERFORMANCE TURF, SOD	750.31	SY	$4.25	$3,188.82
	Median Component Total				$17,865.50

Sequence 4 Total $213,057.14

Sequence: 5 MIS - Miscellaneous Construction **Net Length:** 0.019 MI 100 LF

Description: 3-Signalized Intersections (US 98, Laredo St., and High School Blvd)

Special Conditions: SR 87 @ Laredo St - 1 Loop at Southbound Left Turn Lane (SR 87).

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	Miscellaneous
Multiplier	1
Description	

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	244.00	LF	$10.00	$2,440.00
	Comment: Per Loop Assemblies				
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	196.00	LF	$30.00	$5,880.00
	Comment: Per Loop Assemblies				
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36"	4.00	EA	$1,650.00	$6,600.00
	Comment: Per Loop Assemblies				
660-2-101	LOOP ASSEMBLY- F&I, TYPE A	2.00	AS	$1,200.00	$2,400.00
	Comment: Per Loop Assemblies				
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	8.00	AS	$950.00	$7,600.00
	Comment: Per Loop Assemblies				
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	4.00	AS	$1,450.00	$5,800.00
	Comment: Per Loop Assemblies				
	Signalizations Component Total				$30,720.00

Sequence 5 Total $30,720.00

Sequence: 7 MIS - Miscellaneous Construction **Net Length:** 0.019 MI 100 LF

Description: Traffic Ops Study Improvement Recommendations

ROADWAY COMPONENT

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-4-10	REMOVAL OF EXIST CONC	25.00	SY	$85.00	$2,125.00
	Comment: Exist Sidewalk to remove, for 2 Curb Ramps @ High School Blvd.				
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	25.00	SY	$300.00	$7,500.00
	Comment: 2 Curb Ramps @ High School Blvd.				
527-2	DETECTABLE WARNINGS	20.00	SF	$32.00	$640.00
	Comment: 2 Curb Ramps @ High School Blvd				
570-1-2	PERFORMANCE TURF, SOD	12.00	SY	$4.25	$51.00
	Comment: sod at back for 2 Curb Ramps @ High School Blvd.				
	Roadway Component Total				$10,316.00

Sequence 7 Total $10,316.00

Sequence: 8 MIS - Miscellaneous Construction **Net Length:** 0.100 MI 528 LF

Description: Traffic Ops Signal Recommendations

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	Miscellaneous
Multiplier	1
Description	Signalization Improvement Recommendations from Traffic Ops

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
670-5-112	TRAF CNTL ASSEM, F&I, NEMA, 2 PREEMPT	2.00	AS	$37,000.00	$74,000.00
682-1-113	ITS CCTV CAMERA, F&I, DOME ENCL-PRESS	2.00	EA	$9,000.00	$18,000.00
684-6-12	WIRELESS COMMUNICATION DEVICE, F&I, ETHE	2.00	EA	$5,750.00	$11,500.00
685-1-14	UPS, F&I, ONLINE DOUBLE CONVERSION W CAB	1.00	EA	$11,000.00	$11,000.00
	Signalizations Component Total				$114,500.00

Sequence 8 Total $114,500.00

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 450820-1-52-01 **Letting Date:** 01/2099

Description: SR 87 FROM US 98 TO CR 399 EAST BAY BLVD

District: 03 **County:** 58 SANTA ROSA **Market Area:** 01 **Units:** English
Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.520 MI

Project Manager: CLAY HUNTER

Version 1-P Project Grand Total **$4,689,323.08**
Description: SR 87 FROM US 98 TO CR 399 EAST BAY BLVD

Project Sequences Subtotal			**$3,485,592.10**
102-1	Maintenance of Traffic	10.00 %	$348,559.21
101-1	Mobilization	10.00 %	$383,415.13
Project Sequences Total			**$4,217,566.44**
Project Unknowns		10.00 %	$421,756.64
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$50,000.00	$50,000.00
Project Non-Bid Subtotal					**$50,000.00**
Version 1-P Project Grand Total					**$4,689,323.08**