City of Jacksonville, Florida

Lenny Curry, Mayor

Department of Public Works
Engineering & Construction Management Division
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ONE CITY. ONE JACKSONVILLE.

TO: Gregory W. Pease, Chairman — March 26, 2019
Professional Services Evaluation Committee

THRU: John P. Pappas, P.E.
Director

03/28/19 10:17:35
Procurement Division

FROM: William J. Joyce, P.E.
Director of Operations

R. Duane Kent, P.E.
Public Works Project Manager

Steven D. Long, Jr., P.E., Chief
Right-of-Way and Stormwater Maintenance

SUBJECT: P-12-18 Professional Design Services for Old Middleburg Road South from Argyle Forest Blvd. to 103rd Street
PWCP351SD541-06504-PW0366-01

The Engineering Division has negotiated with the consultant selected for Professional Design Services for Old Middleburg Road South from Argyle Forest Blvd. to 103rd Street, resulting in the attached Scope of Services, Exhibit A and Contract Fee Schedule, Exhibit B. JSEB firms to be utilized to meet the 20% Participation Percentage Plan for this contract are detailed on a separate attachment.

Accordingly, this is to recommend that the City of Jacksonville enter into a contract with England, Thims & Miller, Inc., for Professional Design Services for Old Middleburg Road South from Argyle Forest Blvd. to 103rd Street, that includes the attached Scope of Services identified as Exhibit "A" and Fee Schedule identified as Exhibit "B", to provide a lump sum amount for Design Services in the amount of $1,476,251.12 and not to exceed limits for: Structural Services in the amount of $163,707.73, Geotechnical Services in the amount of $257,449.28, SUE Designation and Locates in the amount of $274,551.75, Wetland/Environmental Permitting in the amount of $33,200.00, Environmental in the amount of $40,097.76, Traffic Counts in the amount of $23,643.00, Traffic Study/Signalization Services in the amount of $97,254.20, Survey/Mapping Services in the amount of $611,607.91, Lighting in the amount of $123,037.38 and Miscellaneous in the amount of $25,199.87, with a maximum indebtedness to the City in the amount of $3,126,000.00 and with an expiration date of Project Completion. All other terms and conditions are as provided in the RFP and the City's standard contract language.

WJJ/lw

Attachment: Exhibits A & B
JSEB Participation

cc: Lori West, Contract Specialist

ab

EXHIBIT A

MARCH 12, 2019

SCOPE OF SERVICES

ENGINEERING

FOR

OLD MIDDLEBURG ROAD WIDENING

(Argyle Forest Boulevard to 103rd Street)

City of Jacksonville

DUVAL 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 City of Jacksonville (hereinafter referred to as the CITY) and England-Thims and Miller, Inc. (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

City Proposal Number : ***RFP P-12-18***

Federal Aid Project No.: ***N/A***

Description: Old Middleburg Road Widening from Argyle Forest Boulevard to 103rd Street (Approximately 4.0 miles)

Bridge No(s).: ***724291***

Rail Road Crossing No: ***NA***

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the CITY 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. These services will be conducted in one phase: Final Design

The Scope of Services establishes which items of work will be the responsibility of the CONSULTANT and/or the CITY.

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 CITY 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. 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 the duties and responsibilities assigned

under the terms of this agreement. The Consultant shall minimize to the maximum extent possible the City's need to apply its own resources to assignments authorized by the City.

The CITY 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 CONSULTANT shall be fully responsible for all work performed and work products developed under this Scope of Services. The CITY may provide job-specific information and/or functions as outlined in this contract, if favorable.

2 PROJECT DESCRIPTION

There are no known outstanding commitments for the development of this roadway improvement project. Information and prior studies on this corridor have been conducted. However, it has been determined by the CITY to be dated information and as such, will not be utilized for this new effort.

Project Limits are from Argyle Forest Boulevard to 103rd Street, approximately 4.0 miles. The existing two-lane rural roadway will be reconstructed as a 4-lane, undivided urban roadway. The typical section will include 8 ft. wide buffered bike lanes, a variable width planting strip and a 6 ft. wide sidewalk in each direction. This coincides with the CITY's "Avenue" street classification as shown on P-132 included in the RFP P-12-18. Right-of-way acquisition is anticipated along the corridor for the roadway typical section, drainage easements and pond sites. The typical section is anticipated to require 100 ft. of right-of-way width. The Posted Speed limit will be 35 mph.

This project will include: data collection, alignment analysis, traffic studies, bridge hydraulic reports, roadway, bridge and signalization plans as more fully outlined in the following pages of this scope, bid documents, submission of all required permits and proposed Right-of-way maps.

There is one existing bridge along the alignment (Bridge number *724291)* that will be replaced with this project.

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

Public Involvement: *Three public meetings are anticipated for the project.*
Joint Project Agreements: *JEA work will be included in the plans prepared for the roadway construction. A separate scope and fee will be prepared and approved by the JEA and funded separately.*

Specification Package Preparation: *Specifications and bidding documents will be prepared.*

Plan Type: *Plan/Profile sheets will be developed for the entire corridor.*

Typical Section: Typical Section 1 will include a 4-lane, undivided urban roadway with 8 ft. wide

buffered bike lanes, a variable width planting strip and a 6 ft. wide sidewalk in each direction. This coincides with the City's "Avenue" street classification as shown on P-132 included in the RFP P-12-18 .

Pavement Design: *One pavement design will be developed for the entire corridor.*
Pavement Type Selection Report(s): *[N/A] Pavement type will be asphalt*
Cross Slope: *[N/A] New Roadway*

Major Intersections/Interchanges: *The following intersections will require additional plan sheets*: Collins Road, Hipps Road, Marlee Rd., Sandler Road, and 103rd Street.

Roadway Alternative Analysis: *Early in the design, CONSULTANT will evaluate alternatives to the horizontal alignment to minimize right -of-way acquisition and/or increase the safety of the existing horizontal curves. Alternatives of realigning Old Middleburg Road to intersect 103rd Street at a more perpendicular angle will also be developed, evaluated, and presented to the CITY for direction.*
Level of TCP Plans: *It is anticipated that phased construction will be required to construct the roadway improvements under traffic.*

Temporary Lighting: *N/A.*
Temporary Signals: *N/A.*
Temporary Drainage: *N/A.*
Design Variations/Exceptions: *N/A.*

2.2 Drainage (Activities 6a and 6b)

System Type: *The project will have a closed drainage system. There are three primary drainage basins. The roadway will cross the 100 yr. floodplain in two locations. The pond siting report will identify at least two potential stormwater management facilities for each basin.*

2.3 Utilities Coordination (Activity 7)

The CONSULTANT shall be responsible for managing all utility coordination, including the following: Identifying all existing utilities and coordinating any new installations. Resolving utility conflicts. Scheduling and performing utility coordination meetings, keeping and distribution of minutes/action items of all utility meetings, and ensuring expedient follow-up on all unresolved issues. Distributing all plans, conflict matrixes and changes to affected utility owners and making sure this information is properly coordinated and documented.

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

St. Johns River Water Management District ERP, USACOE,FDOT Permit for work within 103rd Street Right-of-way,FDEP water and sewer permit for JEA work

2.5 Structures (Activities 9 – 18)

Bridge(s): Old Middleburg Road Bridge over Mile Branch, Structure number 724291. Bridge 724291 is a 30 ft. long, 40 ft. wide signal span concrete bridge originally constructed in 1965 and will be replaced with this roadway improvement project. Type of Bridge Structure Work:

- BDR – will be prepared early in the Design process.

- Short Span Concrete bridge plans Plans will be prepared.
- Retaining Walls: *N/A.*
- Noise Barrier Walls: *N/A.*
- Miscellaneous: *Foundations and mast arms design will be provided.*

2.6 Signing and Pavement Markings (Activities 19 & 20)

Signing and Pavement Marking Analyses and Design will be provided.

2.7 Signalization (Activities 21 & 22)

Intersections: Existing Signalized intersections are at Argyle Forest Boulevard, Crosshill Boulevard, Collins Road and 103rd Street. Proposed Signalization is anticipated at Hipps Road, Marlee Road and Sadler Road.

Traffic Data Collection: In order to complete the traffic study, the following traffic data will be collected.

- Crash Reports – At each intersection and along the corridor
- 24-Hour Approach Counts – At unsignalized intersections to be potentially signalized.
- 24-Hour Speed Counts – To determine the 85th percentile speed of Old Middleburg Road.
- 7 Day machine counts – To be used to develop time of day plans for interconnecting signals.
- Peak Hour Turning Movement Counts – At each major and minor intersection.
- Pedestrian and Bicycle Counts – At each major and minor intersection.
- Classification Counts – To determine the composition of traffic and develop pavement design.
- Delay Study – To be used for signal warrant study for analyzing unsignalized intersections.

Traffic Studies:

This scope outlines the Traffic Engineering Services that will be required for the Traffic Analysis.

A. Data Collection

The data to be collected, as described above, will be used on this project.

B. Planned Developments and Roadway Improvements

Planned developments, including the review of major and minor traffic impact studies in the vicinity of the study area, as well as proposed transportation improvements will be documented.

C. Crash Data

Crash data for accidents along Old Middleburg Road will be obtained and analyzed from Signal 4 Analytic for the last five years.

D. Future Growth Projection

Future growth along Old Middleburg Road will be based on the latest Northeast Regional Planning Model Activity Based (NERPM-AB) travel demand forecasting model (provided by the North Florida Transportation Planning Organization – NFTPO), which was prepared as part of the TPO's 2040 Long Range Transportation Plan update. The model will be run for existing conditions, 2040 No-Build (existing) conditions and 2040 Build (design year) conditions.

E. No-Build Traffic

The existing peak hour traffic as obtained from the traffic volumes will be adjusted using FDOT weekly factors to existing peak season peak hour traffic. The existing peak season peak hour traffic will be increased by the model annual growth rate to obtain the No-Build (existing conditions) traffic volumes.

F. Build (Design) Traffic

Design traffic will be calculated by applying the NERPM_AB model growth factors to the 2040 No-Build traffic.

G. Signal Warrant Analysis

A signal warrant analysis will be conducted at three unsignalized intersections along Old Middleburg Road; Hipps Road, Marlee Road and Sandler Road. As part of this analysis, a speed study will be conducted on Old Middleburg Road and a delay study will be conducted for the three unsignalized side street intersections.

H. Left and Right Turn Lane Warrant Analysis

Using the criteria contained in the City of Jacksonville's Land Development Procedures, the need for exclusive left or right turn lanes will be evaluated at all major and minor intersections (20 Locations) along the Old Middleburg corridor. For all warranted lanes, the appropriate storage length will be calculated.

I. Roadway Segment Analysis

A roadway segment analysis will be conducted to determine the appropriate laneage for Old Middleburg Road between Argyle Forest Boulevard and 103rd Street.

J. Intersection Analysis

Existing and Design year condition intersection analyses will be conducted for both the AM and PM peak hour at all major study area intersections (7 Locations). The movement/approach level of service (LOS) and corresponding delay will be provided for each condition at each intersection.

K. Recommended Intersection Improvements

For those intersections that do not meet the standard LOS criteria, intersection improvements will be recommended to ensure that the intersections work within the standard LOS. Improvements could consist of adding turn lanes and signalizing the intersection.

L. Report

A report will be prepared detailing the results of the analysis and submitted to COJ for review and approval.

2.8 Lighting (Activities 23 & 24)

Per City of Jacksonville standards roadway lighting will be provided. Lighting Plans and Voltage Drop calculation will be prepared.

2.9 Landscape Architecture (Activities 25 & 26)

Planting Plans: The City's "Avenue" street typical section provides planting strips on both sides of the roadway. Planting Plans will be developed for these areas in addition to all proposed stormwater management facilities. Tree Mitigation and planting Plans will be developed.
Irrigation Plans: *Irrigation plans will be developed as necessary to support the proposed plantings.*
Hardscape Plans: *N/A.*
Outdoor Advertising: *N/A*

2.10 Survey (Activity 27)

Design Survey: *Argyle Forest Boulevard Intersection to 103rd Street along Old Middleburg Road including 25 ft. outside of the existing right-of-way on each side and 250 ft along all side streets. On 103rd Street, 500 ft. east of Old Middleburg Road to 1,500 ft. west of Old Middleburg Road. Also includes realignment of horizontal curves (if required), 103rd Street intersection realignment (if required) and all pond sites.*
Subsurface Utility Exploration: *Preliminary Phase will include utility location for Argyle Forest Boulevard Intersection to 103rd Street along Old Middleburg Road including 25 ft. outside of the existing right-of-way on each side and 250 ft along all side streets. On 103rd Street, 500 ft. east of Old Middleburg Road to 1,500 ft. west of Old Middleburg Road and will include soft digs for conflicts and mast arm foundations. Soft Dig budget is not a guaranteed maximum cost and additional soft digs may be requested, if necessary.*
Right of Way Survey: *Argyle Forest Boulevard Intersection to 103rd Street along Old Middleburg Road and all side streets. On 103rd Street, 500 ft. east of Old Middleburg Road to 1,500 ft. west of Old Middleburg Road. Also includes realignment of horizontal curves (if required), 103rd Street intersection realignment (if required) and all pond sites.*
Vegetation Survey: Protected Tree Survey - *Argyle Forest Boulevard Intersection to 103rd Street along Old Middleburg Road including 25 ft. outside of the existing right-of-way on each side and 250 ft along all side streets. On 103rd Street, 500 ft. east of Old Middleburg Road to 1,500 ft.*

west of Old Middleburg Road. Also includes realignment of horizontal curves (if required), 103rd Street intersection realignment (if required) and all pond sites.

2.11 Photogrammetry (Activity 28) *N/A*

2.12 Mapping (Activity 29)

Control Survey Map: *Argyle Forest Boulevard Intersection to 103rd Street along Old Middleburg Road including 25 ft. outside of the existing right-of-way on each side and 250 ft along all side streets. On 103rd Street, 500 ft. east of Old Middleburg Road to 1,500 ft. west of Old Middleburg Road*
Right of Way Map: *Argyle Forest Boulevard Intersection to 103rd Street along Old Middleburg Road including 25 ft. outside of the existing right-of-way on each side and 250 ft along all side streets. On 103rd Street, 500 ft. east of Old Middleburg Road to 1,500 ft. west of Old Middleburg Road. Existing Right of way maps will be prepared in the Preliminary Phase. Proposed Right of way maps will also be prepared in the Preliminary Engineering Phase.*
Legal Descriptions:
Maintenance Map: *N/A.*
Miscellaneous Items: *N/A.*

2.13 Terrestrial Mobile LiDAR (Activity 30) *N/A.*
2.14 Architecture (Activity 31) *N/A.*
2.15 Noise Barriers (Activity 32) N/A
2.16 Intelligent Transportation Systems (Activities 33 & 34) N/A.
2.17 Geotechnical (Activity 35)

Roadway and Bridge – Roadway borings, Bridge Borings, Pond Borings, Roadway Geotechnical Report.

Signalization –Mast Arm Boring, Geotechnical Report

2.18 3D Modeling (Activity 36) N/A

2.19 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed project activity/event schedule for CITY and CONSULTANT scheduled activities.
The schedule shall indicate all required submittals.

2.20 Submittals

Typical Section Package
Phase I Plans (30% Plans) with traffic study and realignment analysis
Phase II Plans (60% Plans) with SJRWMD Permit Application
Phase III Plans (90% Plans)
Phase IV Plans (100% Pland)
Final Bid Plans and Construction Documents.
2.22 Services to be Performed by the CITY. When appropriate and /or available, the CITY will

provide project data including:

- All information that may come to the CITY pertaining to future improvements.
- Available traffic and planning data.
- Any necessary title searches.
- All Right of Way acquisition services
- Engineering review services.
- All future information that may come to the CITY 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.
- Existing right of way maps.
- Phase reviews of plans and engineering documents.
- Regarding Environmental Permitting Services:
    - Approved Permit Document when available.
    - Approval of all contacts with environmental agencies.
    - Appropriate signatures on application forms.

3 PROJECT COMMON AND PROJECT GENERAL TASKS

Project Common Tasks

Project Common Tasks, as listed below, are work efforts that are applicable to many project activities, 4 (Roadway Analysis) through 35 (Geotechnical). These tasks are to be included in the project scope in each applicable activity when the described work is to be performed by the CONSULTANT.

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

Technical Special Provisions: The CONSULTANT shall provide Technical Special Provisions for all items of work not covered by the CITY's Standard Specifications.

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. The CONSULTANT shall prepare, and submit to the CITY'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: All subconsultant document submittals shall be submitted by the subconsultant directly to the CONSULTANT for their independent Quality Assurance/Quality Control review. It is the CONSULTANT'S responsibility to

independently and continually QC their plans and other deliverables. 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, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other products and services.

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 CITY drafts of all Public Involvement documents (i.e., newsletters, property owner letters, advertisements, etc.) associated with the following tasks for review and approval at least *ten (10)* business days prior to printing and / or distribution.

3.1.1 Community Awareness Plan. N/A

3.1.2 Notifications

Notifications for all Public Meetings will be made through the use of Variable Messages Boards placed along the project alignment prior to the public meeting. The variable messages boards will be supplied by the CONSULTANT. It is anticipated that three signs will be required, one each at Argyle Forest Boulevard, Collins Road, and 103rd Street.

3.1.3 Preparing Mailing Lists N/A
3.1.4 Median Modification Letters N/A
3.1.5 Driveway Modification Letters N/A
3.1.6 Newsletters N/A
3.1.7 Renderings

The CONSULTANT shall prepare renderings for use in public meetings.

3.1.8 PowerPoint Presentations

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

3.1.9 Public Meeting Preparations

The CONSULTANT shall prepare the following materials for use in public meetings: sign-in sheet, comment form.The CONSULTANT will investigate potential meeting sites to advise the CITY on their suitability. The CITY will pay all costs for meeting site rents and insurance. No CITY meetings will be held on public school system properties.

3.1.10 Public Meeting Attendance and Follow-up

The CONSULTANT shall attend public meeting(s), assist with meeting setup and take down. The CONSULTANT shall also prepare a summary of the public meeting that includes all copies of all materials shown or provided at the public meeting. The summary shall also include a listing of all written comments made during or after the meeting and responses to those written comments.
It is estimated for this project there will be *[3]* Public meetings during the design.

3.1.11 Other Agency Meetings

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

3.1.12 Web Site N/A

3.2 Joint Project Agreements N/A

3.3 Specifications Package Preparation

Specifications and Bidding Document will be prepared by the Consultant.

3.4 Contract Maintenance

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.

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

3.6 Prime Consultant Project Manager Meetings

Includes only the Prime Consultant Project Manager's time for travel and attendance at Activity Technical Meetings and other meetings listed in the meeting summary for Task 3.6 on tab 3 Project General Task of the staff hour forms. Staff hours for other personnel attending Activity Technical Meetings are included in the meeting task for that specific Activity.

3.7 Plans Update N/A. Specific services will be negotiated as necessary as a contract amendment.

3.8 Post Design Services

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

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 CITY on acceptable electronic media, as determined by the CITY.

3.10 Risk Assessment Workshop N/A

3.11 Railroad, Transit and/or Airport Coordination N/A

3.12 Landscape and Existing Vegetation Coordination N/A

3.13 Other Project General Tasks N/A

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 Typical Section Package.

4.2 Pavement Type Selection Report N/A.

4.3 Pavement Design Package

CONSULTANT shall provide an approved Pavement Design Package.

4.4 Cross-Slope Correction N/A.

4.5 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the project geometrics using the criteria 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, and scope of work.

4.6 Access Management N/A

4.7 Roundabout Evaluation N/A

4.8 Roundabout Final Design Analysis N/A

4.9 Cross Section Design Files

The CONSULTANT shall establish and develop cross section design files.

4.10 Traffic Control Analysis

The CONSULTANT shall design a safe and effective Traffic Control Plan to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement

markings, and detour quantity tabulations, roadway pavement, drainage structures, ditches, front slopes, back slopes, drop offs within clear zone, and traffic monitoring sites. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage must be maintained at all times.

4.11 Master TCP Design Files

The CONSULTANT shall develop master Traffic Control Plan (TCP) files showing each phase of the Traffic Control Plan.

4.12 Selective Clearing and Grubbing N/A
4.13 Tree Disposition Plans N/A. See Landscape Items.
4.14 Design Variations and Exceptions N/A

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 design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.
The design notes, data, and computations shall be recorded on size 8½"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8½"x11" size.

4.16 Quantities

The CONSULTANT shall develop accurate quantities and the supporting documentation, including construction days, when required.

4.17 Cost Estimate
4.18 Technical Special Provisions and Modified Special Provisions -N/A
4.19 Other Roadway Analyses
4.20 Field Reviews
4.21 Monitor Existing Structures N/A
4.22 Technical Meetings
4.23 Quality Assurance/Quality Control
4.24 Independent Peer Review -N/A
4.25 Supervision
4.26 Coordination

5 ROADWAY PLANS

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

5.1 Key Sheet
5.2 Summary of Pay Items Including Quantity Input - N/A

5.3 Typical Section Sheets
5.3.1 Typical Sections
5.3.2 Typical Section Details
5.4 General Notes/Pay Item Notes
5.5 Summary of Quantities Sheets -N/A
5.6 Project Layout
5.7 Plan/Profile Sheet
5.8 Profile Sheet- N/A
5.9 Plan Sheet- N/A
5.10 Special Profile
5.11 Back-of-Sidewalk Profile Sheet- N/A
5.12 Interchange Layout Sheet- N/A
5.13 Ramp Terminal Details (Plan View) - N/A
5.14 Intersection Layout Details
5.15 Special Details- N/A
5.16 Cross-Section Pattern Sheet(s) - N/A
5.17 Roadway Soil Survey Sheet(s)
5.18 Cross Sections
5.19 Temporary Traffic Control Plan Sheets
5.20 Temporary Traffic Control Cross Section Sheets
5.21 Temporary Traffic Control Detail Sheets- N/A
5.22 Utility Adjustment Sheets
5.23 Selective Clearing and Grubbing Sheet(s) - N/A
5.23.1 Selective Clearing and Grubbing - N/A
5.23.2 Selective Clearing and Grubbing Details- N/A
5.24 Tree Disposition Plan Sheet(s) - N/A
5.24.1 Tree Disposition Plan Sheet(s) - N/A
5.24.2 Tree Disposition Plan Tables and Schedules- N/A
5.25 Project Network Control Sheet(s) - N/A

5.26 Environmental Detail Sheets
Preparation of detail sheets for potential environmental issues such as, underground fuel tanks and monitoring wells, septic tanks within the proposed right of way. All piping and pumps in association with the above referenced issues shall also be located and identified by the survey. Coordination with Permits/Environmental staff and preparing Dredge & Fill Detail sheets where applicable.

5.26 Utility Verification Sheet(s) (SUE Data)

5.28 Quality Assurance/Quality Control

5.29 Supervision

6a DRAINAGE ANALYSIS

The CONSULTANT shall analyze and document Drainage Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, and procedures.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 City's Land Development Procedures Manual.The CONSULTANT shall coordinate fully with the appropriate permitting agencies and the CITY's staff. The work will include the engineering analyses for any or all of the following:

6a.1 Drainage Map Hydrology

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

6a.2 Base Clearance Calculations

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

6a.3 Pond Siting Analysis and Report

Evaluate pond sites using a preliminary hydrologic analysis. Document the results and coordination for all the project's pond site analyses.

6a.4 Design of Cross Drains

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

6a.5 Design of Ditches

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

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

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

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

6a.8 Design of Floodplain Compensation

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

6a.9 Design of Storm Drains

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

6a.10 Optional Culvert Material N/A
6a.11 French Drain Systems N/A
6a.11a Existing French Drain Systems N/A
6a.12 Drainage Wells N/A

6a.13 Drainage Design Documentation Report

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

6a.14 Bridge Hydraulic Report

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

6a.15 Temporary Drainage Analysis

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

6a.16 Cost Estimate

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

6a.17 Technical Special Provisions / Modified Special Provisions -N/A
6a.18 Hydroplaning Analysis-N/A

6a.19 Existing Permit Analysis

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

6a.20 Other Drainage Analysis-N/A

6a.21 Field Reviews

6a.22 Technical Meetings

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

6a.23 Environmental Look-Around Meetings N/A.
6a.24 Quality Assurance/Quality Control
6a.25 Independent Peer Review-N/A
6a.26 Supervision
6a.27 Coordination

6b DRAINAGE PLANS

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

6b.1 Drainage Map (Including Interchanges)
6b.2 Bridge Hydraulics Recommendation Sheets
6b.3 Summary of Drainage Structures
6b.4 Optional Pipe/Culvert Material – N/A
6b.5 Drainage Structure Sheet(s) (Per Structure)
6b.6 Miscellaneous Drainage Detail Sheets
6b.7 Lateral Ditch Plan/Profile-N/A
6b.8 Lateral Ditch Cross Sections-N/A
6b.9 Retention/Detention Pond Detail Sheet(s)
6b.10 Retention Pond Cross Sections
6b.11 Erosion Control Plan Sheet(s) -N/A
6b.12 SWPPP Sheet(s)
6b.13 Quality Assurance/Quality Control
6b.14 Supervision

7 UTILITIES

The CONSULTANT shall identify utility facilities.

7.1 Utility Kickoff Meeting

7.2 Identify Existing Utility Agency Owner(s)

The Consultant shall identify all utilities within and adjacent to the project limits that may be impacted by the project.

7.3 Make Utility Contacts

First Contact: The CONSULTANT shall send letters and two sets of plans to each utility. Includes contact by phone for meeting coordination. Request type, size, location, easements, and cost for relocation if reimbursement is claimed. Request the voltage level for power lines in the project area. Include the meeting schedule (if applicable) and the design schedule. Include typical meeting agenda. If scheduling a meeting, give 4 weeks advance notice.
Second Contact: CONSULTANT shall transmit two complete sets of Phase II plans and the utility conflict information to each UAO having facilities located within the project limit.
Third Contact: Identify agreements and assemble packages. The CONSULTANT shall send agreements,

letters, the utility conflict information and two sets of plans to the UAO(s) including all component sets. Include the design schedule.
Not all projects will have all contacts as described above.

7.4 Exception Processing N/A

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, and discuss any future design issues that may impact utilities. This is also an opportunity for the UAO(s) to present proposed facilities. 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.

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

The CONSULTANT shall review utility marked plans and data individually as they are received for content. Ensure information from the UAO (utility type, material and size) is sent to the designer for inclusion in the plans.

7.8 Subordination of Easements Coordination N/A

7.9 Utility Design Meeting

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, maintenance of traffic (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and maintenance of traffic with each UAO. The intent of this meeting shall be to 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.

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

The CONSULTANT shall review utility marked up plans and work schedules as they are received for

content and coordinate review with the designer.

7.11 Utility Coordination/Follow-up

The CONSULTANT shall provide utility coordination and follow up. This includes follow-up, interpreting plans, and assisting the UAOs with completion of their work schedules and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all known conflicts. The CONSULTANT shall keep accurate minutes of all meetings and distribute a copy to all attendees. This task can be applied to all phases of the project.

7.12 Utility Constructability Review

The CONSULTANT shall review utility schedules against construction contract time, and phasing for compatibility. See Task 4.9 (Cross Section Design Files) for utility conflict identification and adjustments.

7.13 Additional Utility Services

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

7.14 Processing Utility Work by Highway Contractor (UWHC) N/A

7.15 Contract Plans to UAO(s) N/A

7.16 Certification/Close-Out

This includes hours for transmitting utility files to the CITY and preparation of the Utility Certification Letter. The CONSULTANT shall certify the following:
All utility negotiations (Full execution of each agreement, approved Utility Work Schedules, Technical Special Provisions or Modified Special Provisions written, etc.) have been completed with arrangements made for utility work to be undertaken and completed as required for proper coordination with the physical construction schedule.OR An on-site inspection was made and no utility work will be involved.OR.Plans were sent to the Utility Companies/Agencies and no utility work is required.

7.17 Other Utilities

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

8 ENVIRONMENTAL PERMITS, COMPLIANCE AND CLEARANCES

The CONSULTANT shall notify the CITY Project Manager in advance of all scheduled meetings with the regulatory agencies to allow a representative to attend. The CONSULTANT shall copy in the Project Manager on all permit related correspondence and meetings.

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 CONSULTANT shall also review for any existing easements or other restrictions that may exist both within or proposed project boundary. The CONSULTANT shall determine if any Sovereign Submerged Lands easements need to modified or acquired. Project research may include but should not be limited to review of available federal, state, and local permit files and databases, local government information including county and property appraiser data. This information will be shown on the plans as appropriate.

8.2 Field Work

8.2.1 Pond Site Alternatives:
The CONSULTANT shall review alternative pond sites.
8.2.2 Establish Wetland Jurisdictional Lines and Assessments:
The CONSULTANT shall collect all data and information necessary to determine the boundaries of wetlands and other surface waters defined by the rules or regulations of each agency processing.
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.
- Determine the jurisdictional boundaries and obtain a jurisdictional determination of wetlands and other surface waters as defined by rules or regulations of any permitting authority.
- Prepare aerial maps showing the jurisdictional boundaries of wetlands and surface waters. Aerial maps shall be reproducible, of a scale no greater than 1"=200' and be recent photography. The maps shall show the jurisdictional limits of each agency. Photo copies of aerials are not acceptable. All jurisdictional boundaries are to be tied to the project's baseline of survey. A wetland specific survey will be prepared by a registered surveyor and mapper.
- 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 impacted, size of wetland to be impacted, type of impact and identify any wetland 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:
The CONSULTANT shall conduct wildlife surveys as defined by rules or regulations of any permitting authority.

8.2.4 Archaeological Surveys:
The CONSULTANT shall conduct Archaeological field surveys.

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.

8.4 Complete and Submit All Required Permit Applications

The CONSULTANT shall prepare permit application packages as identified in the Project Description section. The CONSULTANT shall collect all of the data and information necessary to obtain the environmental permits required to construct the project. The CONSULTANT shall prepare each permit application for CITY approval in accordance with the rules and/or regulations of the environmental agency responsible for issuing a specific permit and/or authorization to perform work. The CONSULTANT will submit all permit applications. The CITY will be responsible for payment of all permit fees.

8.5 Prepare Dredge and Fill Sketches (as needed)

8.6 Prepare USCG Permit

8.7 Prepare Water Management District Right of Way Occupancy Permit

8.8 Prepare Coastal Construction Control Line (CCCL) Permit Application (as needed)
If a CCCL Permit is required, the CONSULTANT shall be responsible for the preparation of the legal advertisement required to acquire the final "Notice to Proceed" authorization for the Florida Department of Environmental Protection (FDEP). Legal advertisements shall be published one time in a newspaper that meets the notification requirements of the FDEP.

8.9 Prepare Tree Permit Information (as needed)

8.10 Mitigation Design

If wetland impacts cannot be avoided, the CONSULTANT shall prepare a mitigation plan to be included as a part of the Environmental Resource Permit and or Section 404 permit applications.
It is assumed that mitigation will be provided via mitigation bank credits. If creation/restoration plans are required fees for those services will be negotiated separately.
Prior to the development of alternatives, the CONSULTANT shall meet with the Project Manager to determine the CITY's policies in proposing mitigation. The CONSULTANT shall proceed in the development of a mitigation plan based upon the general guidelines provided by the CITY.
Below are mitigation options:

- Monetary participation in offsite regional mitigation plans
- Purchase of mitigation credits from a mitigation bank
- Creation/restoration on public lands
- Creation/restoration on right of way purchased by the CITY
- Creation/restoration on existing CITY right of way

In the event that physical creation or restoration is the only feasible alternative to offset wetland impacts, the CONSULTANT shall collect all of the data and information necessary to prepare alternative mitigation plans that may be acceptable to all permitting agencies and commenting agencies who are processing or reviewing a permit application.
Prior to selection of a final mitigation site, the CONSULTANT will provide the following services in the development of alternative mitigation plans:

- Preliminary jurisdictional determination for each proposed site
- Selection of alternative sites
- Coordination of alternative sites with /all environmental agencies
- Written narrative listing potential sites with justifications for both recommended and non-recommended sites.

8.11 Mitigation Coordination and Meetings

The CONSULTANT will be responsible for coordinating the proposed mitigation plan with the environmental agencies.

8.12 Other Environmental Permits

Environmental Clearances, Reevaluations and Technical Support

8.13 Technical Support for Environmental Clearances and Re-evaluations N/A
8.14 Preparation of Environmental Clearances and Reevaluations N/A
8.15 Contamination Impact Analysis

The CONSULTANT shall perform the necessary analysis to complete the Contamination Screening Evaluation.

8.16 Asbestos Survey N/A
8.17 Technical Meetings
8.18 Quality Assurance/Quality Control
8.19 Supervision
8.20 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS

The CONSULTANT shall analyze, design, and develop contract documents for all structures in accordance with applicable provisions as defined in Section 2.19, Provisions for Work. The CONSULTANT shall provide Design Documentation with each submittal consisting of structural design calculations and other supporting documentation developed during the development of the plans. The design calculations submitted shall adequately address the complete design of all structural elements.. The final design calculations shall be signed and sealed by a Florida-licensed professional engineer. A cover sheet indexing the contents of the calculations shall be included and the engineer shall sign and seal that sheet. All computer programs and parameters used in the design calculations shall include sufficient backup information to facilitate the review task.

9.1 Key Sheet and Index of Drawings
9.2 Project Layout
9.3 General Notes and Bid Item Notes
9.4 Miscellaneous Common Details
9.5 Incorporate Report of Core Borings
9.6 Standard Plans- Bridges
9.7 Existing Bridge Plans
9.8 Assemble Plan Summary Boxes and Quantities
9.9 Cost Estimate

9.10 Technical Special Provisions and Modified Special Provisions
9.11 Field Reviews
9.12 Technical Meetings
9.13 Quality Assurance/Quality Control
9.14 Independent Peer Review
9.15 Supervision
9.16 Coordination

10 STRUCTURES - BRIDGE DEVELOPMENT REPORT

The Consultant shall prepare a Bridge Development Report (BDR).

General Requirements

10.1 Bridge Geometry
10.2 Ship Impact Data Collection -N/A
10.3 Ship Impact Criteria-N/A
Superstructure Alternatives
10.4 Short-Span Concrete
10.5 Medium-Span Concrete-N/A
10.6 Long Span Concrete-N/A
10.7 Structural Steel-N/A
Foundation and Substructure Alternatives
10.8 Pier/Bent
10.9 Shallow Foundations / GRS Abutments
10.10 Deep Foundations
Movable Span-N/A
10.11 Data Collection and Design Criteria-N/A
10.12 Movable Span Geometrics and Clearances-N/A
10.13 Deck System Evaluation-N/A
10.14 Framing Plan Development-N/A
10.15 Main Girder Preliminary Design-N/A
10.16 Conceptual Span Balance/Counterweight-N/A
10.17 Support System Development-N/A
10.18 Drive Power Calculations-N/A
10.19 Drive System Development-N/A
10.20 Power and Control Development-N/A
10.21 Conceptual Pier Design-N/A
10.22 Foundation Analysis (FL PIER) -N/A
10.23 Tender Visibility Study-N/A
Other BDR Issues
10.24 Aesthetics-N/A
10.25 TCP/Staged Construction Requirements
10.26 Constructability Requirements

10.27 Load Rating for Damaged/Widened Structures-N/A
10.28 Quantity and Cost Estimates
10.29 Quantity and Cost Estimates - Movable Span-N/A
10.30 Wall Type Justification-N/A
Report Preparation
10.31 Exhibits
10.32 Exhibits - Movable Span-N/A
10.33 Report Preparation
10.34 Report Preparation - Movable Span-N/A
10.35 BDR Submittal Package

11 STRUCTURES - TEMPORARY BRIDGE-N/A

12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE

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

General Layout Design and Plans

12.1 Overall Bridge Final Geometry
12.2 Expansion/Contraction Analysis
12.3 General Plan and Elevation
12.4 Construction Staging
12.5 Approach Slab Plan and Details
12.6 Miscellaneous Details
End Bent Design and Plans
12.7 End Bent Geometry
12.8 End Bent Structural Design
12.9 End Bent Plan and Elevation
12.10 End Bent Details
Intermediate Bent Design and Plans
12.11 Bent Geometry
12.12 Bent Stability Analysis
12.13 Bent Structural Design
12.14 Bent Plan and Elevation
12.15 Bent Details
Miscellaneous Substructure Design and Plans
12.16 Foundation Layout
Superstructure Design and Plans
12.17 Finish Grade Elevation Calculation
12.18 Finish Grade Elevations

Cast-In-Place Slab Bridges
12.19 Bridge Deck Design
12.20 Superstructure Plan
12.21 Superstructure Sections and Details
Prestressed Slab Unit Bridges
12.22 Prestressed Slab Unit Design
12.23 Prestressed Slab Unit Layout
12.24 Prestressed Slab Unit Details and Schedule
12.25 Deck Topping Reinforcing Layout
12.26 Superstructure Sections and Details
Reinforcing Bar Lists
12.27 Preparation of Reinforcing Bar List
Load Rating
12.28 Load Rating

13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE-N/A
14 STRUCTURES - STRUCTURAL STEEL BRIDGE -N/A
15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE -N/A
16 STRUCTURES - MOVABLE SPAN -N/A
17 STRUCTURES - RETAINING WALLS -N/A

18 STRUCTURES - MISCELLANEOUS

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

Concrete Box Culverts

18.1 Concrete Box Culverts
18.2 Concrete Box Culverts Extensions
18.3 Concrete Box Culvert Data Table Plan Sheets
18.4 Concrete Box Culvert Special Details Plan Sheets
Strain Poles

18.5 Steel Strain Poles-N/A
18.6 Concrete Strain Poles-N/A
18.7 Strain Pole Data Table Plan Sheets-N/A
18.8 Strain Pole Special Details Plan Sheets-N/A
Mast Arms

18.9 Mast Arms
18.10 Mast Arms Data Table Plan Sheets
18.11 Mast Arms Special Details Plan Sheets

Overhead/Cantilever Sign Structure-N/A

18.12 Cantilever Sign Structures-N/A
18.13 Overhead Span Sign Structures-N/A
18.14 Special (Long Span) Overhead Sign Structures-N/A
18.15 Monotube Overhead Sign Structure-N/A
18.16 Bridge Mounted Signs (Attached to Superstructure) -N/A
18.17 Overhead/Cantilever Sign Structures Data Table Plan Sheets-N/A
18.18 Overhead/Cantilever Sign Structures Special Details Plan Sheets-N/A
High Mast Lighting-N/A

18.19 Non-Standard High Mast Lighting Structures-N/A

18.20 High Mast Lighting Special Details Plan Sheets-N/A

Noise Barrier Walls (Ground Mount) -N/A

18.21 Horizontal Wall Geometry-N/A
18.22 Vertical Wall Geometry-N/A
18.23 Summary of Quantities – Aesthetic Requirements-N/A
18.24 Control Drawings-N/A
18.25 Design of Noise Barrier Walls Covered by Standards-N/A
18.26 Design of Noise Barrier Walls not Covered by Standards-N/A
18.27 Aesthetic Details-N/A
Special Structures-N/A
18.28 Fender System-N/A
18.29 Fender System Access -N/A
18.30 Special Structures-N/A
18.31 Other Structures-N/A
18.32 Condition Evaluation of Signal and Sign Structures, and High Mast Light Poles-N/A
18.33 Condition Evaluation of Signal and Sign Structures, and High Mast Light Poles (No As built or Design Plans Available) -N/A
18.34 Analytical Evaluation of Signal and Sign Structures, and High Mast Light Poles-N/A
18.35 Ancillary Structures Report-N/A

19 SIGNING AND PAVEMENT MARKING ANALYSIS

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

19.1 Traffic Data Analysis

The CONSULTANT shall review the approved preliminary engineering report, typical section package, traffic technical memorandum and proposed geometric design alignment to identify proposed sign

placements and roadway markings. Perform queue analysis.

19.2 No Passing Zone Study -N/A

19.3 Reference and Master Design File

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

19.4 Multi-Post Sign Support Calculations-N/A
19.5 Sign Panel Design Analysis-N/A
19.6 Sign Lighting/Electrical Calculations-N/A
19.7 Quantities
19.8 Cost Estimate
19.9 Technical Special Provisions and Modified Special Provisions
19.10 Other Signing and Pavement Marking Analysis
19.11 Field Reviews
19.12 Technical Meetings
19.13 Quality Assurance/Quality Control
19.14 Independent Peer Review -N/A
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.

20.1 Key Sheet
20.2 Summary of Pay Items Including Quantity Input-N/A
20.3 Tabulation of Quantities
20.4 General Notes/Pay Item Notes
20.5 Project Layout-N/A
20.6 Plan Sheet
20.7 Typical Details-N/A
20.8 Guide Sign Work Sheet(s) -N/A
20.9 Traffic Monitoring Site-N/A
20.10 Cross Sections-N/A
20.11 Special Service Point Details-N/A
20.12 Special Details-N/A
20.13 Interim Standards-N/A
20.14 Quality Assurance/Quality Control
20.15 Supervision

21 SIGNALIZATION ANALYSIS

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

21.1 Traffic Data Collection

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

21.2 Traffic Data Analysis

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

21.3 Signal Warrant Study

21.4 Systems Timings

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

21.5 Reference and Master Signalization Design File

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

21.6 Reference and Master Interconnect Communication Design File

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

21.7 Overhead Street Name Sign Design

The CONSULTANT shall design Signal Mounted Overhead Street Name signs.

21.8 Pole Elevation Analysis
21.9 Traffic Signal Operation Report
21.10 Quantities
21.11 Cost Estimate
21.12 Technical Special Provisions and Modified Special Provisions
21.13 Other Signalization Analysis

21.14 Field Reviews

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

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

- Controller Timing Data

21.15 Technical Meetings
21.16 Quality Assurance/Quality Control
21.17 Independent Peer Review-N/A
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 Summary of Pay Items Including Designer Interface Quantity Input-N/A
22.3 Tabulation of Quantities
22.4 General Notes/Pay Item Notes
22.5 Plan Sheet
22.6 Interconnect Plans
22.7 Traffic Monitoring Site-N/A
22.8 Guide Sign Worksheet
22.9 Special Details
22.10 Special Service Point Details
22.11 Mast Arm/Monotube Tabulation Sheet
22.12 Strain Pole Schedule-N/A
22.13 TCP Signal (Temporary)
22.14 Temporary Detection Sheet
22.15 Utility Conflict Sheet
22.16 Interim Standards-N/A
22.17 Quality Assurance/Quality Control
22.18 Supervision

23 LIGHTING ANALYSIS

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

23.1 Lighting Justification Report- N/A

23.2 Lighting Design Analysis Report

The CONSULTANT shall prepare a Preliminary Lighting Design Analysis Report. The report shall be submitted under a separate cover with the 60% plans submittal. The report shall provide analyses for each

signalized intersection lighting design and each typical section of the mainline, and arterial roads. Each lighting calculation shall be properly identified as to the area that it covers.
The Lighting Design Analysis Report shall include:
Voltage drop calculations
Load analysis calculations for each branch circuit

23.3 Aeronautical Evaluation

The CONSULTANT shall prepare an Aeronautical Evaluation/Airspace Analysis. It shall be submitted for approval by the CITY and by FAA. The report shall include an evaluation of the glide slope of all adjacent airport runways (including future runways) and the preparation of the required FAA forms and special lighting calculations based on NO PENETRATION of the approach or transitional surfaces and coordination with the Airport Manager.
The report shall include a profile drawing for each condition affected by the runway approach and transitional surfaces. This drawing(s) shall show the roadway profile grade line at the edge of the shoulder pavement with proper baseline stations, the FAR Part 77 - 50:1 (or 34:1) approach surface line and the 7:1 transitional surface line. The scale of this drawing shall be 1"=100' horizontal and 1"=10' vertical. The proposed location of each light pole shall be properly shown at the respective station to clearly indicate that no penetration to either the approach surface or to the transitional surface is anticipated.

23.4 Voltage Drop Calculations

The CONSULTANT shall submit voltage drop calculations showing the equation or equations used along with the number of luminaries per circuit, the length of each circuit, the size conductor or conductors used and their ohm resistance values. The voltage drop incurred on each circuit (total volts and percentage of drop) shall be calculated, and all work necessary to calculate the voltage drop values for each circuit should be presented. The Voltage Drop Calculations shall be submitted as part of the Lighting Design Analysis Report.

23.5 FDEP Coordination and Report-N/A

23.6 Reference and Master Design Files

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

23.7 Temporary Lighting-N/A

23.8 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.

23.9 Quantities

23.10 Cost Estimate

23.11 Technical Special Provisions and Modified Special Provisions

23.12 Other Lighting Analysis

23.13 Field Reviews

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

- Existing Lighting Equipment
- Load Center, Capabilities and Condition/Age
- Condition of Lighting Structure(s)
- Verification of horizontal clearances
- Verification of breakaway requirements

23.14 Technical Meetings
23.15 Quality Assurance/Quality Control
23.16 Independent Peer Review-N/A
23.17 Supervision
23.18 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 Summary of Pay Item Sheet Including Designer Interface Quantity Input -N/A
24.3 Tabulation of Quantities
24.4 General Notes/Pay Item Notes
24.5 Pole Data, Legend & Criteria
24.6 Service Point Details
24.7 Project Layout-N/A
24.8 Plan Sheet
24.9 Special Details
24.10 Temporary Lighting Data and Details-N/A
24.11 Traffic Control Plan Sheets-N/A(covered by Roadway TTCP)
24.12 Interim Standards
24.13 Quality Assurance/Quality Control
24.14 Supervision

25 LANDSCAPE ARCHITECTURE ANALYSIS

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

25.1 Data Collection

All research required to collect data necessary to complete the initial design analysis. Includes identifying local ordinances and collection of other project data.

25.2 Site Inventory and Analysis for Proposed Landscape

Includes identification of opportunities and constraints for the proposed landscape project based on existing site conditions. Identify available planting areas for nursery landscape material. Summary of analysis, if required, is included in conceptual design.

25.3 Planting Design

Includes delineation of all proposed planting types, scheme development and preliminary costs and reports. Includes identifying the species/type, size, location, spacing, and quality of all plants. It is anticipated that right of way restrictions will limit the amount of landscaping that can be provided. Landscape plan only includes trees along corridor.

25.4 Irrigation Design N/A – Not anticipated at this time.
25.5 Hardscape Design N/A
25.6 Plan Summary Boxes
25.7 Cost Estimates
25.8 Technical Special Provisions and Modified Special Provisions
25.9 Other Landscape Architecture
25.10 Outdoor Advertising N/A
25.11 Field Reviews
25.12 Technical Meetings / Public Meetings
25.13 Quality Assurance/Quality Control
25.14 Independent Peer Review
25.15 Supervision
25.16 Project Coordination
25.17 Interdisciplinary Coordination

26 LANDSCAPE ARCHITECTURE PLANS

The CONSULTANT shall prepare a set of Landscape Plans which includes the following.

26.1 Key Sheet
26.2 Tabulation of Quantities
26.3 General Notes
26.4 Tree and Vegetation Inventory, Protection and Relocation Plans
26.5 Planting Plans for Linear Roadway Projects
26.6 Planting Plans (Interchanges and Toll Plazas) -N/A
26.7 Planting Details and Notes
26.8 Irrigation Plans for Linear Roadway Project-N/A
26.9 Irrigation Plans for Interchange and Toll Plazas-N/A
26.10 Irrigation Details and Notes
26.11 Hardscape Plans-N/A
26.12 Hardscape Details and Notes-N/A
26.13 Landscape Maintenance Plan

The CONSULTANT shall include a written plan for care and maintenance of the plants and beds, hardscape, and irrigation system after the warranty period. The landscape maintenance plan will be

developed in performance based language and will be in coordination with the local government entity who assumes the maintenance obligation.

26.14 Cost Estimate

26.15 Quality Assurance/Quality Control

26.16 Supervision

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. 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.

27.1 Horizontal Project Control (HPC)

Establish or recover HPC, for the purpose of establishing horizontal control on the Florida State Plane Coordinate System; may include primary or secondary control points. Includes analysis and processing of all field collected data, and preparation of forms.

27.2 Vertical Project Control (VPC)

Establish or recover VPC, for the purpose of establishing vertical control; may include primary or secondary vertical control points. Includes analysis and processing of all field collected data, and preparation of forms.

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

Establish, recover or re-establish project alignment. Also includes analysis and processing of all field collected data, existing maps, and/or reports for identifying mainline, ramp, offset, or secondary alignments.

27.4 Aerial Targets N/A

27.5 Reference Points

Reference Horizontal Project Network Control (HPNC) points, project alignment, vertical control points, section, ¼ section, center of section corners and General Land Office (G.L.O.) corners as required.

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

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of creating a DTM with sufficient density. Shoot all break lines, high and low points. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.7 Planimetric (2D)

Locate all above ground features and improvements. Deliver in appropriate electronic format. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.8 Roadway Cross Sections/Profiles

Perform cross sections or profiles. May include analysis and processing of all field-collected data for comparison with DTM.

27.9 Side Street Surveys

Refer to tasks of this document as applicable.

27.10 Underground Utilities

Designation includes 2-dimensional collection of existing utilities. Selected 3-dimensional verification will be provided in the Final Design Phase. Location includes non-destructive excavation to determine size, type and location of existing utility, as necessary for final 3-dimensional verification. Survey includes collection of data on points as needed for designates and locates. Includes analysis and processing of all field collected data, and delivery of all appropriate electronic files.

27.11 Outfall Survey

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of a DTM. Survey with sufficient density of shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.12 Drainage Survey

Locate underground data (XYZ, pipe size, type, condition and flow line) that relates to above ground data. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.13 Bridge Survey (Minor/Major)

Locate required above ground features and improvements for the limits of the bridge. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.14 Channel Survey N/A

27.15 Pond Site Survey

Refer to tasks of this document as applicable.

27.16 Mitigation Survey

Refer to tasks of this document as applicable.

27.17 Jurisdiction Line Survey

Perform field location (2-dimensional) of jurisdiction limits as defined by respective authorities, also includes field edits, analysis and processing of all field collected data, preparation of reports.

27.18 Geotechnical Support

Perform 3-dimensional (X,Y,Z) field location, or stakeout, of boring sites established by geotechnical engineer. Includes field edits, analysis and processing of all field collected data and/or reports.

27.19 Sectional/Grant Survey

Perform field location/placement of section corners, 1/4 section corners, and fractional corners where

pertinent. Includes analysis and processing of all field-collected data and/or reports.

27.20 Subdivision Location

Survey all existing recorded subdivision/condominium boundaries, tracts, units, phases, blocks, street R/W lines, common areas. Includes analysis and processing of all field collected data and/or reports. If unrecorded subdivision is on file in the public records of the subject county, tie existing monumentation of the beginning and end of unrecorded subdivision.

27.21 Maintained R/W N/A

27.22 Boundary Survey N/A

27.23 Water Boundary Survey N/A

27.24 Right of Way Staking, Parcel / Right of Way Line N/A

27.25 Right of Way Monumentation N/A

27.26 Line Cutting

Perform all efforts required to clear vegetation from the line of sight.

27.27 Work Zone Safety

Provide work zone as required by DEPARTMENT standards.

27.28 Miscellaneous Surveys N/A

27.29 Supplemental Surveys

27.30 Document Research

Perform research of documentation to support field and office efforts involving surveying and mapping.

27.31 Field Review

Perform verification of the field conditions as related to the collected survey data.

27.32 Technical Meetings

Attend meetings as required and negotiated.

27.33 Quality Assurance/Quality Control (QA/QC)

27.34 Supervision

27.35 Coordination

28 PHOTOGRAMMETRY -N/A

29 MAPPING

The CONSULTANT will be responsible for the preparation of control survey maps, right of way maps, maintenance maps, sketches, other miscellaneous survey maps, and legal descriptions as required for this project in accordance with Florida Statutes. All maps, surveys and legal descriptions will be prepared under the direction of a Florida Professional Surveyor and Mapper (PSM) and will be designed to provide a high degree of uniformity and maximum readability. The CONSULTANT will submit maps, legal descriptions, quality assurance check prints, checklists, electronic media files and any other documents as required for this project.

For Basis of Estimate, It is assumed that 25 parcels will be impacted.

Master CADD File

29.1 Alignment
29.2 Section and 1/4 Section Lines
29.3 Subdivisions / Property Lines
29.4 Existing Right of Way
29.5 Topography
29.6 Parent Tract Properties and Existing Easements
29.7 Proposed Right of Way Requirements

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

29.8 Limits of Construction

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

29.9 Jurisdictional/Agency Lines

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

Sheet Files

29.10 Control Survey Cover Sheet
29.11 Control Survey Key Sheet
29.12 Control Survey Detail Sheet
29.13 Right of Way Map Cover Sheet
29.14 Right of Way Map Key Sheet
29.15 Right of Way Map Detail Sheet
29.16 Maintenance Map Cover Sheet
29.17 Maintenance Map Key Sheet
29.18 Maintenance Map Detail Sheet
29.19 Reference Point Sheet

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

29.20 Project Network Control Sheet

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

29.21 Table of Ownerships Sheet

Miscellaneous Surveys and Sketches

29.22 Parcel Sketches
29.23 TIITF Sketches

29.24 Other Specific Purpose Survey(s)
29.25 Boundary Survey(s) Map
29.26 Right of Way Monumentation Map
29.27 Title Search Map – To be provided by the City
29.28 Title Search Report– To be provided by the City
29.29 Legal Descriptions
29.30 Final Map/Plans Comparison

The PSM will perform a comparison of the final right of way maps with the available construction plans to review the correctness of the type of parcel to be acquired and the stations/offsets to the required right of way. The PSM will coordinate with the EOR to resolve any conflicts or discrepancies and provide documentation of the review.

29.31 Field Reviews
29.32 Technical Meetings
29.33 Quality Assurance/Quality Control
29.34 Supervision
29.35 Coordination
29.36 Supplemental Mapping

30 TERRESTRIAL MOBILE LiDAR -N/A

31 ARCHITECTURE DEVELOPMENT -N/A

32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE - N/A

33 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS -N/A

34 INTELLIGENT TRANSPORTATION SYSTEMS PLANS -N/A

35 GEOTECHNICAL

The CONSULTANT shall, for each project, be responsible for a complete geotechnical investigation.

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

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 Final plans.
Obtain pavement cores.
The roadway exploration will be performed and results provided to the Engineer of Record to assist in setting roadway grades and locating potential problem areas.
All laboratory testing and classification will be performed in accordance with applicable, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

35.2 Develop Detailed Boring Location Plan

Develop a detailed boring location plan.

35.3 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

35.4 Muck Probing

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

35.5 Coordinate and Develop MOT Plans for Field Investigation

Coordinate and develop Maintenance of Traffic (MOT) plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Standard Plans Index 102 series.

35.6 Drilling Access Permits

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

35.7 Property Clearances

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

35.8 Groundwater Monitoring

Monitor groundwater, using piezometers.

35.9 LBR / Resilient Modulus Sampling

Collect appropriate samples for Limerock Bearing Ratio (LBR) testing.

35.10 Coordination of Field Work

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

35.11 Soil and Rock Classification - Roadway

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

35.12 Design LBR

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

35.13 Laboratory Data

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

35.14 Seasonal High Water Table

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

35.15 Parameters for Water Retention Areas

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

35.16 Delineate Limits of Unsuitable Material

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

35.17 Electronic Files for Cross-Sections

Create electronic files of boring data for cross-sections.

35.18 Embankment Settlement and Stability

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

35.19 Monitor Existing Structures -N/A

35.20 Stormwater Volume Recovery and/or Background Seepage Analysis

Perform stormwater volume recovery analysis.

35.21 Geotechnical Recommendations

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

35.22 Pavement Condition Survey and Pavement Evaluation Report -N/A

35.23 Preliminary Roadway Report

Submit a preliminary roadway report before the 30% plans submittal. The purpose of the preliminary roadway report will be to assist in setting road grades and locating potential problems.

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Plans Indices 120-001 and 120-002.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis.
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.

35.24 Final Report

The Final Roadway Report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Plans Indices 120-001 and 120-002.
- The results of all tasks discussed in all previous sections regarding data interpretation and analysis.
- An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.

35.25 Auger Boring Drafting

35.26 SPT Boring Drafting

Structures

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities.. CONSULTANT shall perform specialized field-testing as required by needs of project.
All laboratory testing and classification will be performed in accordance with applicable ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.
The staff hour tasks for high embankment fills and structural foundations for bridges, box culverts, walls, high-mast lighting, overhead signs, mast arm signals, strain poles, buildings, and other structures include the following:

35.27 Develop Detailed Boring Location Plan

Develop a detailed boring location plan.

35.28 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

35.29 Coordinate and Develop MOT Plans for Field Investigation

Coordinate and develop MOT plan. All work zone traffic control will be performed in accordance with the DEPARTMENT's Roadway and Traffic Standard Plans Index 102 series.

35.30 Drilling Access Permits

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

35.31 Property Clearances

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

35.32 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

35.33 Coordination of Field Work

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

35.34 Soil and Rock Classification - Structures

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

35.35 Tabulation of Laboratory Data

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

35.36 Estimate Design Groundwater Level for Structures

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

35.37 Selection of Foundation Alternatives (BDR)

Evaluation and selection of foundation alternative, including the following:

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

35.38 Detailed Analysis of Selected Foundation Alternate(s)

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

- GRS-IBS (including the parameters identified in the Instructions for Developmental Design Standard D6025 to be provided by the Geotechnical Engineer)
- Spread footings (including soil bearing capacity, minimum footing width, and minimum embedment depth).
- For pile and drilled shaft foundations, provide graphs of ultimate axial soil resistance versus tip elevations. Calculate scour resistance and/or downdrag (negative skin friction), if applicable.
- CONSULTANT shall assist the Engineer of Record in preparing the Pile Data Table (including test pile lengths, scour resistance, downdrag, minimum tip elevation, etc.)
- Provide the design soil profile(s), which include the soil model/type of each layer and all soil-engineering properties required for the Engineer of Record to run the FBPier computer program. Review lateral analysis of selected foundation for geotechnical compatibility.
- Estimated maximum driving resistance anticipated for pile foundations.
- Provide settlement analysis.

35.39 Bridge Construction and Testing Recommendations

Provide construction and testing recommendations including potential constructability problems.

35.40 Lateral Load Analysis (Optional) NA

35.41 Walls

Provide the design soil profile(s), which include the soil model/type of each layer and all soil engineering

properties required by the Engineer of Record for conventional wall analyses and recommendations.
Review wall design for geotechnical compatibility and constructability.
Evaluate the external stability of conventional retaining walls and retained earth wall systems. For retained earth wall systems, calculate and provide minimum soil reinforcement lengths versus wall heights, and soil parameters assumed in analysis. Estimate differential and total (long term and short term) settlements.
Provide wall construction recommendations.

35.42 Sheet Pile Wall Analysis (Optional) NA

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

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

35.44 Box Culvert Analysis

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

35.45 Preliminary Report - BDR

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

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, S.C.S., U.S.G.S., geologic and potentiometric data.
- 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.
- 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.

35.46 Final Report - Bridge and Associated Walls

The final structures report shall include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Summary of structure background data, S.C.S., U.S.G.S., geologic and potentiometric data.

- 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/
- 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.

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.
- 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.
- 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 CITY 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 include the following:

- All original plan sheets (11" x 17")
- One set of all plan and specification documents, in electronic format,
- 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 CITY'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. Soil symbols must be consistent with those presented in the latest Florida Department of Transportation Soils and Foundations Handbook.

35.49 Other Geotechnical

35.50 Technical Special Provisions and Modified Special Provisions

35.51 Field Reviews

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

35.52 Technical Meetings

35.53 Quality Assurance/Quality Control

35.54 Supervision

35.55 Coordination

36 3D MODELING -N/A

37 PROJECT REQUIREMENTS

37.1 Liaison Office

The CITY and the CONSULTANT will designate 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 CITY 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 CITY.

37.3 Progress Reporting

The CONSULTANT shall meet with the CITY as required and shall provide a written monthly progress report with approved schedule status. Invoices shall be submitted after the CITY approves the monthly progress report. 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 CITY 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.

EXHIBIT B
CONTRACT FEE SUMMARY FORMAT FOR ENGINEERING DIVISION
CITY OF JACKSONVILLE, FLORIDA

PART I - GENERAL

1. Project Old Middleburg Road Widening (Argyle Forest Blvd to 103rd St)	**2. Proposal No. / Contract No.** P-12-18 /
3. Name of Consultant England-Thims & Miller, Inc.	**4. Date of Proposal** March 19, 2019

PART II - LABOR RELATED COSTS

5. Direct Labor (Limiting Amount)	Hourly Rate	Estimated Hours	Estimated Cost	TOTAL
Principle Engineer	$ 96.16	225	$ 21,636.00	
Project Manager	$ 57.02	1,904	$ 108,566.08	
Senior Engineer	$ 57.07	1,340	76,473.80	
Design Engineer	$ 38.00	2,366	$ 89,908.00	
Engineer Intern	$ 31.85	2,013	$ 64,114.05	
Senior Designer	$ 37.50	2,540	95,250.00	
Designer	$ 27.54	642	$ 17,680.68	
Drafter/Cad Tech	$ 16.00	248	$ 3,968.00	
TOTAL DIRECT LABOR	$ 42.35	11,278		$ 477,596.61
6. Overhead (Combined Fringe Benefit & Administrative) Overhead Rate	181 % x Total Direct Labor			$ 864,449.86
7. SUBTOTAL: Labor + Overhead (Items 5 & 6)				**$ 1,342,046.47**
8. PROFIT: Labor Related Costs (Item 7)	x	10%		$ 134,204.65
TOTAL LUMP SUM FEES				**$ 1,476,251.12**

PART III - OTHER COSTS

9. Miscellaneous Direct Costs (Lump Sum) Printing, Transportation, Deliveries, etc.	$ 0.00	
MISCELLANEOUS DIRECT COSTS SUB-TOTAL		$ -
10. SUBCONTRACTS (Reimbursable/Not to Exceed)		
CSI (Structural)	$ 163,707.73	
CSI Geo (Geotech)	$ 257,449.28	
ECHO (SUE Designation and Locates)	$ 274,551.75	
LG2 (Wetlands Delineation and Environmental Permitting)	$ 33,200.00	
NDN (Phase 1 Envionmental Site Assessments)	$ 40,097.76	
PMA (Traffic Counts)	$ 23,643.00	
P&Y (Traffic Study and Signalization)	$ 97,254.20	
RMA (Survey and Mapping)	$ 611,607.91	
TLC (Lighting)	$ 123,037.38	
SUB-CONTRACT SUB-TOTAL (Reimb/NTE)		$ 1,624,549.01
11. REIMBURSABLE COSTS (Limiting Amount) ETM Expenses (Printing, Transportation, Deliveries, VMB, etc)	$ 25,199.87	
SUB-TOTAL REIMBURSABLES		$ 25,199.87
TOTAL REIMBURSABLES		**$ 1,649,748.88**

PART IV - SUMMARY

TOTAL AMOUNT OF CONTRACT (Lump Sum Plus Reimbursables) (Items 5, 6, 8, 9, 10, and 11)	**$ 3,126,000.00**
12. TOTAL PRIOR CONTRACT AMOUNT	**$ -**
TOTAL CONTRACT AMOUNT	**$ 3,126,000.00**

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	Old Middleburg Road	Consultant Name:	Civil Services, Inc.
County:	enter name of county	Consultant No.:	enter consultants proj. number
FPN:	999999-1-52-01	Date:	3/12/2019
FAP No.:	54321	Estimator:	insert name

Staff Classification	Total Staff Hours From "SH Summary Firm"	Project Manager	Chief Engineer	Sr. Engineer	Engineer	Designer	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$100.00	$72.12	$72.12	$32.00	$26.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	154	0	8	31	59	57	0	0	0	0	0	0	0	155	$6,183	$39.89
10. Structures - Bridge Development Report	352	0	18	70	134	130	0	0	0	0	0	0	0	352	$14,015	$39.81
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	182	0	9	36	69	67	0	0	0	0	0	0	0	181	$7,195	$39.75
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	688	0	35	137	262	254	0	0	0	0	0	0	0	688		
Total Staff Cost		$0.00	$2,524.20	$9,880.44	$8,384.00	$6,604.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$27,392.64**	**$39.81**

Check = $27,392.64

SALARY RELATED COSTS:					$27,392.64
OVERHEAD:		199.13%			$54,546.96
OPERATING MARGIN:		10%			$8,193.96
FCCM (Facilities Capital Cost Money):		0.000%			$0.00
EXPENSES:		1.63%			$446.50
SUBTOTAL ESTIMATED FEE:					**$90,580.06**
Survey (Field)	0	4-person crew days @	$ -	/ day	$0.00
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$90,580.06**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$90,580.06**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	Old Middleburg Road	Consultant Name:	Civil Services, Inc.
County:	enter name of county	Consultant No.:	enter consultants proj. number
FPN:	999999-1-52-01	Date:	3/12/2019
FAP No.:	54321	Estimator:	insert name

Staff Classification	Total Staff Hours From "SH Summary Firm"	Project Manager	Chief Engineer	Sr. Engineer	Engineer	Designer	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$100.00	$72.12	$72.12	$32.00	$26.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	127	0	6	25	48	47	0	0	0	0	0	0	0	126	$4,994	$39.63
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	254	0	13	51	97	94	0	0	0	0	0	0	0	255	$10,164	$39.86
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	172	0	9	36	64	64	0	0	0	0	0	0	0	173	$6,957	$40.22
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	553	0	28	112	209	205	0	0	0	0	0	0	0	554		
Total Staff Cost		$0.00	$2,019.36	$8,077.44	$6,688.00	$5,330.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$22,114.80**	**$39.92**

Check = $22,114.80

SALARY RELATED COSTS:					$22,114.80
OVERHEAD:		199.13%			$44,037.20
OPERATING MARGIN:		10%			$6,615.20
FCCM (Facilities Capital Cost Money):		0.000%			$0.00
EXPENSES:		1.63%			$360.47
SUBTOTAL ESTIMATED FEE:					**$73,127.67**
Survey (Field)	0	4-person crew days @	$ -	/ day	$0.00
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$73,127.67**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$73,127.67**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

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Geotechnical Cost Estimate
Old Middleburg Road
from South of Argyle Forest Blvd. to 103st St.
P-12-18
Duval County, Florida

2394 St. Johns Bluff Road, Ste 200
Jacksonville, Florida 32246
tel (904) 641-1993
fax (904) 645-0057

Geotechnical Item	Unit	Number of Units	Cost / Unit	Estimated Cost
Field Investigation				
Crew & Equipment Mobilization / Demobilization:				
Mobilization - Truck Rig	ea.	2	$550.00 /ea.	$1,100.00
Mobilization - ATV Rig	ea.	6	$550.00 /ea.	$3,300.00
Mobilization - Track Rig	ea.	1	$7,500.00 /ea.	$7,500.00
Roadway Widening (Truck/ATV):				
186 Auger Borings @ 5' ea.	lin. ft.	930	$10.50 /lin. ft.	$9,765.00
41 Auger Borings @ 20' ea.	lin. ft.	820	$10.50 /lin. ft.	$8,610.00
41 Pavement Cores with Base Depth Check	ea.	41.0	$125.00 /ea.	$5,125.00
LBR Sample Pickup	ea.	12	$90.00 /ea.	$1,080.00
Clearing / Difficult Access	hr.	34	$225.00 /hr.	$7,650.00
Standby Time	hr.	18	$225.00 /hr.	$4,050.00
MOT	day	18	$1,150.00 /day	$20,700.00
High Fill Embankments (ATV Rig):				
4 Standard Penetration Test (SPT) @) 20' ea.:	lin. ft.	80	$13.50 /lin. ft.	$1,080.00
6 SPT @) 15' ea.:	lin. ft.	90	$13.50 /lin. ft.	$1,215.00
6 SPT @) 10' ea.:	lin. ft.	60	$13.50 /lin. ft.	$810.00
3" Casing to Stabilize Borehole	lin. ft.	80	$9.00 /lin. ft.	$720.00
Clearing / Difficult Access	hr.	13	$225.00 /hr.	$2,925.00
Standby Time	hr.	4	$225.00 /hr.	$900.00
Ponds (Total of 8 acres of ponds, 3 SPT Borings per acre @ 20' ea.) - ATV Rig)				
24 Standard Penetration Test (SPT) @) 20' ea.:	lin. ft.	480	$13.50 /lin. ft.	$6,480.00
Extra Split Spoon Sample 0-50' SPT	ea.	72	$34.00 /ea.	$2,448.00
3" Casing to Stabilize Borehole	lin. ft.	120	$9.00 /lin. ft.	$1,080.00
Clearing / Difficult Access	hr.	12	$225.00 /hr.	$2,700.00
Standby Time	hr.	8	$225.00 /hr.	$1,800.00
Bridges (4 SPT on Land - Track Rig):				
4 SPT @) 100' ea.:				
0-50' SPT	lin. ft.	200	$24.00 /lin. ft.	$4,800.00
50'-100' SPT	lin. ft.	200	$26.50 /lin. ft.	$5,300.00
Extra Split Spoon Sample				
0-50'	ea.	32	$38.00 /ea.	$1,216.00
50'-100'	ea.	40	$44.00 /ea.	$1,760.00
4" Casing to Stabilize Borehole	lin. ft.	200	$17.00 /lin. ft.	$3,400.00
Undisturbed Sample-Thin wall Shelby tube	ea.	4	$210.00 /ea.	$840.00
Grout Boreholes				
0-50'	lin. ft.	200	$7.00 /lin. ft.	$1,400.00
50'-100'	lin. ft.	200	$8.00 /lin. ft.	$1,600.00
Clearing / Difficult Access	hr.	2	$295.00 /hr.	$590.00
Standby Time	hr.	8	$295.00 /hr.	$2,360.00

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Geotechnical Cost Estimate
Old Middleburg Road
from South of Argyle Forest Blvd. to 103st St.
P-12-18
Duval County, Florida

2394 St. Johns Bluff Road, Ste 200
Jacksonville, Florida 32246
tel (904) 641-1993
fax (904) 645-0057

Geotechnical Item	Unit	Number of Units	Cost / Unit	Estimated Cost
Bridges (1 SPT through Existing Bridge- Truck Rig):				
1 SPT @) 100' ea.:				
0-50' SPT	lin. ft.	50	$13.50 /lin. ft.	$675.00
50'-100' SPT	lin. ft.	50	$15.50 /lin. ft.	$775.00
Extra Split Spoon Sample				
0-50'	ea.	8	$34.00 /ea.	$272.00
50'-100'	ea.	10	$39.00 /ea.	$390.00
3" Casing to Stabilize Borehole	lin. ft.	50	$9.00 /lin. ft.	$450.00
Grout Boreholes				
0-50'	lin. ft.	50	$6.00 /lin. ft.	$300.00
50'-100'	lin. ft.	50	$7.00 /lin. ft.	$350.00
Soil Probing 2-Person Crew	day	1	$1,200.00 /day	$1,200.00
Concrete Coring	ea.	1	$145.00 /ea.	$145.00
Patching	ea.	1	$45.00 /ea.	$45.00
Standby Time	hr.	1	$225.00 /hr.	$225.00
MOT	day	2	$1,150.00 /day	$2,300.00
	Subtotal:			**$121,431.00**
Laboratory Testing				
Moisture Content of Soils	ea.	88	$21.00 /ea.	$1,848.00
Organic Content in Soils	ea.	88	$37.00 /ea.	$3,256.00
Material Finer Than No. 200 Sieve	ea.	88	$35.00 /ea.	$3,080.00
Grain Size Analysis	ea.	30	$67.00 /ea.	$2,010.00
Plastic limit of soil	ea.	44	$49.00 /ea.	$2,156.00
Liquid limit of soil	ea.	44	$50.00 /ea.	$2,200.00
Corrosion Series Test - (Environmental Corrosion)	ea.	30	$225.00 /ea.	$6,750.00
Consolidation	ea.	4	$500.00 /ea.	$2,000.00
LBR	ea.	12	$335.00 /ea.	$4,020.00
	Subtotal:			**$27,320.00**
Geotechnical Investigation Total (Field Investigation & Laboratory Testing):				**$148,751.00**
Engineering/Support Services				
Project Manager	hr.	33	$67.23 /hr.	$2,218.59
Project Engineer	hr.	125	$43.35 /hr.	$5,418.75
Staff Engineer	hr.	164	$43.32 /hr.	$7,104.48
CADD/Computer Technician	hr.	164	$32.51 /hr.	$5,331.64
Geotechnical Technician	hr.	125	$25.50 /hr.	$3,187.50
Secretary/Clerical	hr.	46	$15.00 /hr.	$690.00
	TOTAL DIRECT LABOR:			$23,950.96
	OVERHEAD:		175%	$41,914.18
	SUBTOTAL: Labor + Overhead			$65,865.14
	PROFIT: Labor Related Costs:		10%	$6,586.51
Engineering/Support Services (Labor + Overhead + Profit):				**$72,451.65**

GRAND TOTAL ESTIMATED FEE: **$221,202.65**

* See Project Activity 35, for detailed man hours

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Geotechnical Cost Estimate
Old Middleburg Road
from South of Argyle Forest Blvd. to 103st St.
P-12-18
Duval County, Florida
PHASE II

2394 St. Johns Bluff Road, Ste 200
Jacksonville, Florida 32246
tel (904) 641-1993
fax (904) 645-0057

Geotechnical Item	Unit	Number of Units	Cost / Unit	Estimated Cost
Field Investigation				
Crew & Equipment Mobilization / Demobilization:				
Mobilization - Truck Rig	ea.	1	$550.00 /ea.	$550.00
Mobilization - ATV Rig	ea.	1	$550.00 /ea.	$550.00
Mast Arms Structures at 4 Intersections (Truck/ATV)				
16 Standard Penetration Test (SPT) @) 25' ea.:	lin. ft.	400	$13.50 /lin. ft.	$5,400.00
3" Casing to Stabilize Borehole	lin. ft.	160	$9.00 /lin. ft.	$1,440.00
Grout Borehole	lin. ft.	400	$6.00 /lin. ft.	$2,400.00
Clearing / Difficult Access	hr.	8	$225.00 /hr.	$1,800.00
Standby Time	hr.	4	$225.00 /hr.	$900.00
MOT	day	4	$1,150.00 /day	$4,600.00
	Subtotal:			**$17,640.00**
Laboratory Testing				
Moisture Content of Soils	ea.	16	$21.00 /ea.	$336.00
Organic Content in Soils	ea.	16	$37.00 /ea.	$592.00
Material Finer Than No. 200 Sieve	ea.	16	$35.00 /ea.	$560.00
Grain Size Analysis	ea.	0	$67.00 /ea.	$0.00
Plastic limit of soil	ea.	8	$49.00 /ea.	$392.00
Liquid limit of soil	ea.	8	$50.00 /ea.	$400.00
Corrosion Series Test - (Environmental Corrosion)	ea.	16	$225.00 /ea.	$3,600.00
	Subtotal:			**$5,880.00**
Geotechnical Investigation Total (Field Investigation & Laboratory Testing):				**$23,520.00**
Engineering/Support Services				
Project Manager	hr.	6	$67.23 /hr.	$403.38
Project Engineer	hr.	22	$43.35 /hr.	$953.70
Staff Engineer	hr.	29	$43.32 /hr.	$1,256.28
CADD/Computer Technician	hr.	29	$32.51 /hr.	$942.79
Geotechnical Technician	hr.	22	$25.50 /hr.	$561.00
Secretary/Clerical	hr.	6	$15.00 /hr.	$90.00
	TOTAL DIRECT LABOR:			$4,207.15
	OVERHEAD:		175%	$7,362.51
	SUBTOTAL: Labor + Overhead			$11,569.66
	PROFIT: Labor Related Costs:		10%	$1,156.97
Engineering/Support Services (Labor + Overhead + Profit):				**$12,726.63**

GRAND TOTAL ESTIMATED FEE: **$36,246.63**

* See Project Activity 35, for detailed man hours

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	Old Middleburg Road	Consultant Name:	ECHO UES, INC.
County:	enter name of county	Consultant No.:	enter consultants proj. number
FPN:	999999-1-52-01	Date:	3/14/2019
FAP No.:	54321	Estimator:	Carlo Pilia, ECHO UES, Inc.

Staff Classification	Total Staff Hours From "SH Summary Firm"	SUE/SUR Project	SUR Sr Surveyor	SUR Surveyor	CADD/Computer Tech	SUR Clerical	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$57.69	$57.69	$37.02	$26.20	$29.36	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	296	30	44	59	148	15	0	0	0	0	0	0	0	296	$10,772	$36.39
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	296	30	44	59	148	15	0	0	0	0	0	0	0	296		
Total Staff Cost		$1,730.70	$2,538.36	$2,184.18	$3,877.60	$440.70	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$10,771.54**	**$36.39**

Check = $10,771.54

SALARY RELATED COSTS:					$10,771.54
OVERHEAD:		174%			$18,742.48
OPERATING MARGIN:		10%			$2,951.40
FCCM (Facilities Capital Cost Money):		0.00%			$0.00
EXPENSES:		0.00%			$0.00
SUBTOTAL ESTIMATED FEE:					**$32,465.42**
SUE Designating (Field)	47	2-person crew	$ 1,622.74	10hr / day	$76,001.78
SUE Locating (Field)	2	3-person crew	$ 2,114.62	10hr / day	$4,757.90
Utility Survey (Field)	24	3-person crew	$ 1,947.54	10hr / day	$47,170.66
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$160,395.76**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$160,395.76**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Old Middleburg Road
County: enter name of county
FPN: 999999-1-52-01
FAP No.: 54321

Consultant Name: ECHO UES, INC.
Consultant No.: enter consultants proj. number
Date: 3/14/2019
Estimator: Carlo Pilia, ECHO UES, Inc.

Staff Classification	Total Staff Hours From "SH Summary Firm"	SUE Project	SUR Sr Surveyor	SUR Surveyor	CADD/Computer Tech	SUR Clerical	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$57.69	$57.69	$37.02	$26.20	$29.38	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	244	24	37	49	122	12	0	0	0	0	0	0	0	244	$8,882	$36.40
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	244	24	37	49	122	12	0	0	0	0	0	0	0	244		
Total Staff Cost		$1,384.56	$2,134.53	$1,813.98	$3,196.40	$352.56	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$8,882.03**	**$36.40**

Check = $8,882.03

SALARY RELATED COSTS:					$8,882.03
OVERHEAD:		174%			$15,454.73
OPERATING MARGIN:		10%			$2,433.68
FCCM (Facilities Capital Cost Money):		0.00%			$0.00
EXPENSES:		0.00%			$0.00
SUBTOTAL ESTIMATED FEE:					**$26,770.44**
SUE Designating (Field)	0	2-person crew	$ 1,622.74	10hr /day	$0.00
SUE Locating (Field)	38	2-person crew	$ 1,622.74	10hr /day	$60,852.75
Utility Survey (Field)	14	3-person crew	$ 1,947.54	10hr /day	$26,532.80
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$114,155.99**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$114,155.99**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

Client: ETM/DOT
Contact: Leesa Gerald/Brian Spahr
Project Name/Description: Old Middleburg Road Widening - LG2ES PROPOSAL # 2018-306
Estimator: Leesa Gerald
Date: 2/7/2019

Brief Scope Summary:

					Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8		
					Wetland Del	Permitting	umam	T&E Species Eval. & Report	N/A	Tech Meetings	NEPA - N/A		Subtotals	
Labor	**Unburdened Labor Rates**	**OH, Fringe, and GA**	**Loaded Labor Rates**	**Units**										
Principal	$67.31	$ 1.75	117.79	$/hr	1	8	5	4		16				
Senior Project Manager/Consul	$46.15	$ 1.75	80.77	$/hr		45	24	12		40				
Senior Scientist/PM	$39.37	$ 1.75	68.90	$/hr	32	80	40	40						
Mid Level Scientist	$0.00	$ 1.75	0.00	$/hr										
GIS Manager	$31.25	$ 1.75	54.69	$/hr	16	48	40	40						
Accounting Mgr	$30.77	$ 1.75	53.85	$/hr										
Junior Scientist	$23.77	$ 1.75	41.60	$/hr		80	40	120						
Historian/Archaeologist	$0.00	$ 1.75	0.00	$/hr										
GIS Technician	$21.63	$ 1.75	37.86	$/hr										
Arch/Env Technician	$0.00	$ 1.75	0.00	$/hr										
Admin/Reports Specialist	$22.00	$ 1.75	38.50	$/hr	2.5	8	8							
				Total Hours	51.5	269	157	216	0	56	0	0	750	
				Subtotal Labor	$3,293.76	$9,342.58	$5,395.83	$6,500.28	$0.00	$2,923.08	$0.00	$0.00	$0.00	$27,455.53 ck
TOTAL LABOR W/Profit	100%			110%	$3,623.13	$10,276.84	$5,935.41	$7,150.30	$0.00	$3,215.38	$0.00	$0.00	**$30,201.08**	$30,201.08 ck
Other Direct Costs	**Rates**			**Units**										
Lodging**	$120.00			$/day									$0.00	
Meals ** (full day)	$50.00			$/day									$0.00	
Meals ** (travel day)	$38.00			$/day									$0.00	
Vehicle Rental	$80.00			$/day									$0.00	
Mileage	$0.575			$/mile	325.00	200.00							$301.88	
Field supplies	$25.00			$/day									$0.00	
GPS Unit	$65.00			$/day	5.00			12.00					$1,105.00	
Geopump	$25.00			$/day									$0.00	
MiniRae PID	$75.00			$/day									$0.00	
Hand Auger Kit	$35.00			$/day									$0.00	
Well Screen - 1" x 10' Sch 40 P	$35.00			each									$0.00	
Other Equipment	$100.00			$/day									$0.00	
Shipping/postage	$25.00			$/each		10.20	3.50	1.00					$367.50	
Office Expenses*	$80.00			5%		4.00	3.00	3.50					$840.00	
FNAI reports	$250.00			each									$0.00	
				Subtotal ODCs	$511.88	$690.00	$327.50	$1,085.00	$0.00	$0.00	$0.00	$0.00	$2,614.38	$2,614.38 ck
Mark-up ODCs (G&A & Profit)	105%			110%	**$591.22**	**$796.95**	**$378.26**	**$1,253.18**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$3,019.60**	$3,019.60 ck
				Task Totals:	$4,214.35	$11,073.79	$6,313.68	$8,403.48	$0.00	$3,215.38	$0.00	$0.00	**$33,220.68**	$33,220.68 ck
					Task 1	**Task 2**	**Task 3**	**Task 4**	**Task 5**	**Task 6**	**Task 7**	**Task 8**	**TOTAL**	
				Final Prices	**$4,400**	**$10,800**	**$6,400**	**$8,400**	**$0**	**$3,200**	**$0**	**$0**	**$33,200**	**PRICE QUOTED**

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	Old Middleburg Road	Consultant Name:	The NDN Companies
County:	enter name of county	Consultant No.:	enter consultants proj. number
FPN:	999999-1-52-01	Date:	3/14/2019
FAP No.:	54321	Estimator:	insert name

Staff Classification	Total Staff Hours From "SH Summary Firm"	Sr. Geologist	Env. Specialist	Staff Classification 3	Staff Classification 4	Staff Classification 5	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$48.08	$24.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	460	184	276	0	0	0	0	0	0	0	0	0	0	460	$15,482	$33.66
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	460	184	276	0	0	0	0	0	0	0	0	0	0	460		
Total Staff Cost		$8,846.72	$6,635.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$15,481.76**	**$33.66**

Check = $15,481.76

SALARY RELATED COSTS:					$15,481.76
OVERHEAD:		149%			$23,067.82
OPERATING MARGIN:		10%			$1,548.18
FCCM (Facilities Capital Cost Money):		0.00%			$0.00
EXPENSES:		0.00%			$0.00
SUBTOTAL ESTIMATED FEE:					**$40,097.76**
Survey (Field)	0	4-person crew	$ -	/ day	$0.00
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$40,097.76**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$40,097.76**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

PEGGY MALONE & ASSOCIATES
TRAFFIC DATA COLLECTION

DBE Certified in: FL, GA, and VA

PRICE QUOTE

Quote # : Q18-525
Date: December 5, 2018
Expiration Date: June 5, 2019
Client: Peters and Yaffee, Inc.
Contact: Wayne Petrone
E-mail: wpetrone@petersandyaffee.com
State: FL

Client Phone # (904) 234-2702
Job Description:
Old Middleburg Rd Widening
Jacksonville, FL
COJ

Type of count	Unit Price	# Units	Total
4 Hour Turning Movement Count, 1 Person	$305.00	30	$9,150.00
(Weekday times to be determined, Saturday & Sunday 10AM-2PM)			
9 Hour Turning Movement Count 1 Person	$692.00	1	$692.00
(6:30AM-9:30AM, 11AM-2PM & 3:30PM-6:30PM, Vehicles, Trucks, Peds & Bikes)			
9 Hour Turning Movement Count 2 Person	$956.00	3	$2,868.00
(6:30AM-9:30AM, 11AM-2PM & 3:30PM-6:30PM, Vehicles, Trucks, Peds & Bikes)			
10 Hour Turning Movement Count 1 Person	$692.00	3	$2,076.00
(Times to be determined from approach counts)			
24 Hour Volume Hose Count Approach - 1 Direction	$151.00	14	$2,114.00
24 Hour Speed Hose Count (By Lane)	$177.00	8	$1,416.00
7 Day Class Hose Count (By Lane)	$458.00	6	$2,748.00
7 Day Volume Hose Count 2 Directions	$527.00	2	$1,054.00
2 Hour Delay Study Per Approach	$305.00	5	$1,525.00
GRAND TOTAL			**$23,643.00**

Janette Simpson

Janette Simpson, Vice President

12/5/2018

Date

Important Notice: Pricing valid for quantities shown until expiration date.

14286 Beach Blvd. Ste 19-345; Jacksonville FL 32250; Phone: 904-992-8072; Fax: 904-223-0021

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	Old Middleburg Road	Consultant Name:	PETERS AND YAFFEE, INC.
County:	enter name of county	Consultant No.:	enter consultants proj. number
FPN:	999999-1-52-01	Date:	2/11/2019
FAP No.:	54321	Estimator:	insert name

Staff Classification	Total Staff Hours From "SH Summary Firm"	Principal	PM / Chief Engineer	Senior Engineer	Sr. Project Engineer	Project Engineer	Engineering Intern	Designer	Clerical	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$86.78	$69.89	$67.70	$48.13	$35.30	$34.18	$28.82	$24.48	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	534	5	21	43	96	192	107	59	11	0	0	0	0	534	$21,838	$40.89
22. Signalization Plans	90	0	0	9	18	27	18	18	0	0	0	0	0	90	$3,563	$39.59
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	624	5	21	52	114	219	125	77	11	0	0	0	0	624		
Total Staff Cost		$433.90	$1,467.69	$3,520.40	$5,486.82	$7,730.70	$4,272.50	$2,219.14	$269.28	$0.00	$0.00	$0.00	$0.00		**$25,400.43**	**$40.71**

Check = $25,400.43

SALARY RELATED COSTS:					$25,400.43
OVERHEAD:		167.129%			$42,451.48
OPERATING MARGIN:		10%			$6,785.19
FCCM (Facilities Capital Cost Money):		0.00%			$0.00
EXPENSES:		0.00%			$0.00
SUBTOTAL ESTIMATED FEE:					**$74,637.10**
Survey (Field)	0	4-person crew	$ -	/ day	$0.00
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$74,637.10**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$74,637.10**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	Old Middleburg Road	Consultant Name:	PETERS AND YAFFEE, INC.
County:	enter name of county	Consultant No.:	enter consultants proj. number
FPN:	999999-1-52-01	Date:	2/11/2019
FAP No.:	54321	Estimator:	insert name

Staff Classification	Total Staff Hours From "SH Summary Firm"	Principal	PM / Chief Engineer	Senior Engineer	Sr. Project Engineer	Project Engineer	Engineering Intern	Designer	Clerical	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$86.78	$69.89	$67.70	$48.13	$35.30	$34.18	$28.82	$24.48	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	127	1	5	10	23	46	25	14	3	0	0	0	0	127	$5,175	$40.75
22. Signalization Plans	64	0	0	6	13	19	13	13	0	0	0	0	0	64	$2,522	$39.40
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	191	1	5	16	36	65	38	27	3	0	0	0	0	191		
Total Staff Cost		$86.78	$349.45	$1,083.20	$1,732.68	$2,294.50	$1,298.84	$778.14	$73.44	$0.00	$0.00	$0.00	$0.00		**$7,697.03**	**$40.30**

Check = $7,697.03

SALARY RELATED COSTS:					$7,697.03
OVERHEAD:		167.129%			$12,863.97
OPERATING MARGIN:		10%			$2,056.10
FCCM (Facilities Capital Cost Money):		0.00%			$0.00
EXPENSES:		0.00%			$0.00
SUBTOTAL ESTIMATED FEE:			167.12		**$22,617.10**
Survey (Field)	0	4-person crew	$ -	/ day	$0.00
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$22,617.10**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$22,617.10**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Old Middleburg Road
County: Duval
FPN: 999999-1-52-01
FAP No.: N/A

Consultant Name: ETM Surveying & Mapping, Inc.
Consultant No.: N/A
Date: 2/6/2019
Estimator: Scott A. Graham, PSM

Staff Classification	Total Staff Hours From "SH Summary Firm"	Survey Project Manager	Professional Surveyor & Mapper	Non-Registered Technician	CADD Operator	Clerical	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$84.61	$58.44	$38.10	$27.84	$24.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0		0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	123	2	31	37	52	1	0	0	0	0	0	0	0	123	$4,823	$39.21
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	541	11	157	162	206	5	0	0	0	0	0	0	0	541	$21,916	$40.51
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	664	13	188	199	258	6	0	0	0	0	0	0	0	664		
Total Staff Cost		$843.83	$10,986.72	$7,581.90	$7,182.72	$144.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$26,739.17**	**$40.27**

Check = $26,739.17

SALARY RELATED COSTS:					$26,739.17
OVERHEAD:		171.46%			$45,846.98
Profit		10%			$7,258.62
EXPENSES:		5.76%			$1,540.18
SUBTOTAL ESTIMATED FEE:					**$81,384.95**
Survey (Field)	23	3-person crew c	$ 1,304.08	/ day	$29,993.84
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$111,378.79**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$111,378.79**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: Old Middleburg Road
County: Duval
FPN: 999999-1-52-01
FAP No.: N/A

Consultant Name: ETM Surveying & Mapping, Inc.
Consultant No.: N/A
Date: 2/6/2019
Estimator: Scott A. Graham, PSM

Staff Classification	Total Staff Hours From "SH Summary Firm"	Survey Project Manager	Professional Surveyor & Mapper	Non-Registered Technician	CADD Operator	Clerical	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$54.91	$56.44	$39.10	$27.84	$24.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	772	15	193	232	324	8	0	0	0	0	0	0	0	772	$30,304	$39.25
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	1,512	30	438	454	575	15	0	0	0	0	0	0	0	1,512	$61,209	$40.48
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	2,284	45	631	686	899	23	0	0	0	0	0	0	0	2,284		
Total Staff Cost		$2,920.95	$36,875.64	$26,136.60	$25,028.16	$552.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$91,513.35**	**$40.07**

Check = $91,513.35

SALARY RELATED COSTS:					$91,513.35
OVERHEAD:		171.46%			$156,908.79
Profit		10%			$24,842.21
EXPENSES:		5.76%			$5,271.17
SUBTOTAL ESTIMATED FEE:					**$278,535.52**
Survey (Field)	170	3-person crew c	$ 1,304.08	/ day	$221,693.60
Geotechnical Field and Lab Testing					$0.00
SUBTOTAL ESTIMATED FEE:					**$500,229.12**
Optional Services					$0.00
GRAND TOTAL ESTIMATED FEE:					**$500,229.12**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: OLD MIDDLEBURG ROAD WIDENING - 60 to 100% DESIGN PHASE
County: Duval
FPN: TBD
FAP No.: 100% Local Funding

Consultant Name: TLC Engineering For Architecture, Inc.
Consultant No.: 817099
Date: 3/14/2019
Estimator: Ryan Fryman

Staff Classification	Total Staff Hours From "SH Summary Firm"	Project Manager	Senior Electrical	Graduate Engineer,	Staff Classification 4	Staff Classification 5	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$0.00	$61.54	$28.08	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	379	0	227	152	0	0	0	0	0	0	0	0	0	379	$18,238	$48.12
24. Lighting Plans	130	0	26	104	0	0	0	0	0	0	0	0	0	130	$4,520	$34.77
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	509	0	253	256	0	0	0	0	0	0	0	0	0	509		
Total Staff Cost		$0.00	$15,569.62	$7,188.48	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$22,758.10**	**$44.71**

Check = $22,758.10

SALARY RELATED COSTS:				$22,758.10
OVERHEAD:		184%		$41,813.46
PROFIT		10%		$6,457.16
FCCM (Facilities Capital Cost Money):		0.00%		$0.00
EXPENSES:		0.00%		$0.00
SUBTOTAL ESTIMATED FEE:				**$71,028.72**
Survey (Field)	0	4-man crew da	$ - / day	$0.00
Geotechnical Field and Lab Testing				$0.00
SUBTOTAL ESTIMATED FEE:				**$71,028.72**
Optional Services				$0.00
GRAND TOTAL ESTIMATED FEE:				**$71,028.72**

Notes:
1. This sheet to be used by Subconsultant to calculate its fee.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	OLD MIDDLEBURG ROAD WIDENING	Consultant Name:	TLC Engineering For Architecture, Inc.
County:	Duval	Consultant No.:	817099
FPN:	TBD	Date:	3/14/2019
FAP No.:	100% Local Funding	Estimator:	Ryan Fryman

Staff Classification	Total Staff Hours From "SH Summary Firm"	Project Manager	Senior Electrical	Graduate Engineer,	Staff Classification 4	Staff Classification 5	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$0.00	$61.54	$28.03	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	277	0	166	111	0	0	0	0	0	0	0	0	0	277	$13,333	$48.13
24. Lighting Plans	96	0	19	77	0	0	0	0	0	0	0	0	0	96	$3,331	$34.70
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	373	0	185	188	0	0	0	0	0	0	0	0	0	373		
Total Staff Cost		$0.00	$11,384.90	$5,279.04	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$16,663.94**	**$44.68**

Check = $16,663.94

SALARY RELATED COSTS:				$16,663.94
OVERHEAD:		184%		$30,616.66
PROFIT		10%		$4,728.06
FCCM (Facilities Capital Cost Money):		0.00%		$0.00
EXPENSES:		0.00%		$0.00
SUBTOTAL ESTIMATED FEE:				**$52,008.66**
Survey (Field)	0	4-man crew da	$ - / day	$0.00
Geotechnical Field and Lab Testing				$0.00
SUBTOTAL ESTIMATED FEE:				**$52,008.66**
Optional Services				$0.00
GRAND TOTAL ESTIMATED FEE:				**$52,008.66**

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.

EBO FORM 1
SCHEDULE OF SUBCONTRACTOR/SUBCONSULTANT PARTICIPATION

Name of Proposer: **England-Thims & Miller, Inc.**

Project Title: **Old Middleburg Road Widening (Argyle Forest Blvd to 103rd Street)**

Proposal Number: **P-12-18** Total Base Proposal Amount (if applicable): $ 3,126,000

***Please list all JSEBs first**

Full Company Name	JSEB Category (African-American, Women, Asian, Native American, Non-MBE or Hispanic)	Type of Work to be Performed	Total Contract Value or Percentage
Civil Services, Inc.	African-American	Structural Engineering	$ 163,707.73
CSIGeo, Inc.	African-American	Geotech. Engineering	$ 257,449.28
LG2 Environmental Services	Woman	Environ. Services	$ 33,200.00
NDN, Inc.	Native American	Contamination Assmt.	$ 40,097.76
Peggy Malone & Associates	Women	Traffic Data Collection	$ 23,643.00
Peters & Yaffee, Inc.	African-American	Traffic Engineering	$ 97,254.20
ECHO UES, Inc.	Non-JSEB MBE	Utility Location	$ 274,551.75
Robert M Angas Associates, Inc.	Non-MBE	Survey and Mapping	$ 611,607.91
TLC Arch. for Engineering	Non-MBE	Lighting	$ 123,037.38

Attach additional list of subcontractors/sub-consultants as needed

CONSULTANT/SUBCONTRACTOR/SUPPLIER TOTAL VALUES	
African-American Participation Total	$ 518,411.21
Hispanic-American Participation Total	$ 0.00
Native-American Participation Total	$ 40,097.76
Asian-American Participation Total	$ 0.00
Woman Participation Total	$ 56,843.00
Non-MBE Participation Total	$ 2,510,648.03

The undersigned will enter into a formal Agreement with the JSEB Suppliers/Consultants/Subcontractors identified herein for work listed in this schedule conditioned upon execution of a contract with the City of Jacksonville. Under penalties of perjury I declare that I have read the foregoing conditions and instructions and the facts are true to the best of my knowledge and beliefs.

Signature of Proposer: Title: Exec. Vice President Date: 3/19/2019

Print Name: Robert Mizell, PE