January 23, 2020

Tim Voelker, PE
City of Stuart
Public Works Assistant Director / City Engineer
121 SW Flagler Avenue
Stuart, Florida 34994

RE: NW Dixie Highway Sidewalk Extension
Proposal for Professional Engineering and Consulting Services

Dear Mr. Voelker:

Bowman Consulting Group Ltd (the Consultant) is pleased to submit this proposal to the City of Stuart (the Client) for professional engineering and consulting services for NW Dixie Highway Sidewalk Extension (the Project) for the City of Stuart.

DESCRIPTION OF SERVICES

It is our understanding that the Client is in need of professional engineering and consulting services for the above referenced Project to include engineering services for a sidewalk extension. It is also our understanding that the Project will be FDOT LAP funded and therefore will meet all FDOT LAP requirements to complete the Project. The Project will provide for pedestrian connectivity along the east side of NW Dixie Highway from the south east corner of Green River Parkway extension north approximately 1200 LF to NE Baker Road. The following general services are included herein:

The engineering services include survey and permitting work associated with the complete design and permitting of the sidewalk including, but not limited to: drainage modifications, driveway and culvert replacement, utility relocations, permitting and minimal post design services.

The Consultant shall prepare a complete set of construction plans in accordance with FDOT Plans Preparation Manual. The design shall follow the FDOT design criteria set forth in the Standard Specifications, Roadside Design Guide, and the Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Standard Streets (Florida Green Book). Additional criteria from the AASHTO a Policy on Geometric Design of Highways and Streets and the Institute of Traffic Engineers (ITE) Traffic Engineering Handbook may also be applicable. The construction plans shall include cross sections at a minimum of 200-foot intervals as well as plan and profile views.

The Consultant shall submit the applicable components of the LAP submittals to the City and be familiar with FDOT's electronic review process (ERC) for addressing FDOT review comments.

SCOPE OF SERVICES

Task 1 - Route Design Survey

The Consultant shall complete a topographic survey along the easterly and southerly right of way of Dixie Highway and the easterly right of way of SE Green River Parkway (approximately 1,500 feet) in Sections 28, 29, 32 and 33 Township 37 South, Range 41 East. The survey shall include the following:

A. Search for boundary monumentation along the survey route in an attempt to depict the apparent Easterly right of way line along NW Dixie Highway on the survey drawing. This will be the approximate right of way. A boundary survey is not a part of this scope of services.
B. Establish cross sections along the Project limits at 50-foot intervals. The cross sections shall commence at the centerline of pavement and terminate approximately 10 feet past the Easterly toe of the road grade. Elevations shall be collected at all significant changes in grade and at all topographic features along the cross-section lines.
C. Detail all driveways and inconsistent roadway features along Project limits.
D. Detail the entire intersection at NW Dixie Highway and SE Green River Parkway for the design of a cross walk.
E. Locate improvements within the Easterly right of way to include but not limited to; utilities, signs, drainage features, etc. (grates and manholes will not be pulled for inverts).
F. The survey work shall be supervised by a Professional Surveyor and Mapper, licensed in the State of Florida in accordance with Chapter 472, Florida Statutes and shall also meet or exceed the Standards of Practice for surveys as defined within Chapter 5J17-05 (F.A.C.)

Not Included:

- Boundary Survey
- Legal Descriptions

Task 2 - Subsurface Utility Engineering (SUE)

Utility Designating (ASCE 38-02 Quality Level B)

The Consultant will provide an ASCE 38-02 Quality Level B utility investigation, to determine the horizontal location of existing utilities within the Project area, as per marked plans provided by the Client. This includes electromagnetic designating of traceable subsurface utility facilities from surface accessible features, and Ground Penetrating Radar sweep for non-traceable facilities. Survey of utility designates to be provided by the Consultant.

The Consultant will mark designated facilities with American Public Works Association (APWA) compliant colors. Client to supply survey control and proposed mast arm location / signalization in order to accurately depict conflicts.

Deliverables will include a CAD file of the designated facilities, including copies of field notes or marked plans when appropriate.

Utility Test Holes (ASCE 38-02 Quality Level A)

The Consultant will perform an ASCE 38-02 Quality Level A field investigation (utility test holes) at proposed mast arm potential conflicts as specified by the Client or Client's authorized representative. Maintenance of Traffic and survey included.

Deliverables will include test hole data sheets which include: Test Hole Inventory, digital pictures, XYZ survey data, type, size, material, direction, depth of utility, and Surveyors Report.

Task 3 - Environmental Assessment

Consultant will manage Hobe Sound Environmental Consultants, Inc. (HSE), a professional environmentalist firm to complete the following:

A. Wetland and Wildlife Assessment:

HSE will conduct a Wetland and Wildlife survey for the proposed corridor. Biologists will conduct a preliminary systematic survey for protected species in accordance with Florida Fish and Wildlife Conservation Commission (FFWCC) Guidelines. Biologists will record all observations of listed protected species and features that may indicate species presence. Physical features may include, but are not limited to, tree markings, burrows, tracks, nests, scat and cavity trees. HSE's biologists will delineate on-site wetlands at the above-referenced Project site. All wetlands will be delineated according to the State of Florida, FAC 62-340 and the U.S. Army Corps of Engineers (COE) Wetland Delineation Manual, Technical Report Y-87-1. Wetland boundaries will be flagged with pink surveyor's tape marked "Wetland Delineation" and consecutively numbered. HSE will locate the delineated wetland boundary using a hand held GPS system and overlay the boundary on a Martin County 2018 aerial photograph for the Client's review. Wetland survey is not part of this contract and will be provided by others.

Note: This proposal does not include any wetland verification with SFWMD, ACOE or Martin County. If wetlands are discovered on site during the WWA, HSE will provide the Client a separate proposal for additional services.

B. Vegetation Survey (FLUCCS)

HSE Biologists will conduct a systematic survey of vegetation using the Florida Land Use, Cover and Classification System (FLUCCS), A Technical Report. FLUCCS was developed by the State of Florida, Department of Administration, Division of State Planning, Bureau of Comprehensive Planning. Biologists will base the vegetative community descriptions on field survey observations, SCS soil maps and aerial photograph interpretation.

C. Soil Map/Survey

HSE Biologists will map all Project soils. Soils will be mapped according to the Soil Survey of Martin County Area, Florida, United States Department of Agriculture, Soil Conservation Service.

D. Wetland and Wildlife Assessment Report

HSE will prepare a Wetland and Wildlife Assessment report based on data compiled in tasks above. The report will discuss the environmental issues associated with the referenced Project site. The report may be used to address Federal and State environmental permitting issues. Digital copy (pdf) will be provided.

E. Preliminary Contamination Review

HSE will conduct a preliminary review of the corridor for contamination. HSE will review state and federal data basis.

F. Florida Scrub-Jay Survey (Five Day)

The Project is adjacent to an area known to have a family of Florida Scrub-Jays (Aphelocoma coerulescens). HSE P19-126 WWA Scrub-Jay Page 2 of 5 December 2019. The following work is associated with a Florida Scrub-Jay Survey. HSE biologists will conduct a Florida Scrub-Jay (Aphelocoma coerulescens) survey of the above-referenced site. Biologists will follow survey protocol as described in Ecology and Development-Related Habitat Requirements of the Florida Scrub-Jay, Non-game Wildlife Technical Report #8, Florida Game and Fresh Water Fish Commission (FGFWFC) [now known as Florida Fish and Wildlife Conservation Commission (FFWCC)]. Biologists will survey the Project site during the Spring (March - April) 2020 for five (5) days, playing Florida Scrub-Jay bird calls at various stations throughout the Project site. The survey will begin within one hour after sunrise and will terminate prior to midday, as referenced in the survey protocol for Technical Report #8. Biologists will mark any sightings of Scrub-Jays on a Martin County aerial photograph. *Florida Scrub-Jay surveys must be conducted during the Spring (March - April 2020), Mid-summer (July 2020) or Fall (September - October 2020).*

G. Scrub-Jay Survey Report

HSE will prepare a Confidential Florida Scrub-Jay report outlining the methodologies and findings of the scientific survey conducted at the Project site for the presence of Scrub Jays. A digital copy (pdf) of the report will be provided to the Consultant and the City of Stuart. Additional hard copies of the report will be prepared on a time and materials basis, if requested by the Client.

Task 4 - Cultural Resource Assessment Survey (CRAS)

Consultant will manage Florida Archeological Services, Inc. (FAS) a Registered Professional Archeologist firm to complete the following:

Section 106 of the National Historic Preservation Act of 1966 (as amended); Public Law 89-665. As indicated in the 2018 study via its March 26, 2018 LAP Environmental Review Request Memorandum for the NW Dixie Highway Guardrail and Sidewalk project, a formal Cultural Resource Assessment Survey was completed during the prior project in order to assure the project's compliance with current FDOT and DHR historic preservation mandates and guidelines. The current East side Project will follow the same guidelines and procedures in order to assure historic preservation compliance and consistency.

In completing a preliminary review of pertinent cultural resources potential for this Project, FAS has conducted a brief review of the cultural resources in near proximity to the NW Dixie Highway based upon information contained in the Florida Master Site Files (FMSF) at the Division of Historical Resources (DHR) in Tallahassee, Florida. As indicated above, only one (1) significant (NR-eligible) historic resource occurs in the Project vicinity. The site, the FEC Railroad is located in vicinity of the east side of the Project area.

This proposal and the cultural resources assessment survey will do just that and include an architectural and historical assessment of the archeological and/or historic potential that may be present within the Project's ROW. This work will be documented via text, photographs and the completion of a report as standard cultural resources documentation. Following submittal to your office and review by the FDOT PLEMO office or Planning & Environmental Management Office, the subsequent CRAS report will be submitted to SHPO by FDOT for review and concurrence.

In order to prepare our proposal, Florida Archeological Services, Inc. (FAS) has completed a review of the latest revisions of the FDOT Project Development & Environmental (PD&E) Manual, Part 1, Chapter 2 dated January 14, 2019. As such, all work associated with the NW Dixie Highway East investigation will be completed within the Martin County ROW. Moreover, this work will likely be completed in concert with a Type 1 Categorical Exclusion under [23CFR771.11 (c)] #28, as referenced in Part 1, Chapter 2 of the current FDOT PD&E Manual.

During the completion of the NW Dixie Highway investigation, all fieldwork operations and reporting requirements will be consistent with current FDOT policies and procedures. Moreover, this work will also be consistent with current DHR and FDOT cultural and environmental manuals maintained for such work. These include the SHPO's / DHR's *Cultural Resource Management Standards & Operations Manual, Module 3, Guidelines for Use by Historic Preservation Professionals*, as well as the FDOT's current *PD&E Manual*, and the FDOT's *Cultural Resource Management Handbook (1995/2004).* Further, the Project's final report is intended to comply with Section 1A-46 *Florida Administrative Code.*

It should be noted that the Project's Principal Investigator, Bob Johnson, meets the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48CFR44716-42) and has extensive experience in such investigations with over 30-years in the profession. He is a Registered Professional Archaeologist or RPA. The project's Architectural Historian, Paul L. Weaver, has over 30-years' experience in documenting, describing, evaluating and interpreting historic properties across Florida and other areas of the Southeast. He received his M.A. in Latin American History and Historic Preservation in 1986 from the University of Florida. He is well-qualified to conduct the architectural assessment element of the NW Dixie Highway Project. Like Johnson, he meets pertinent federal guidelines for architectural historian.

Other pertinent federal historic preservation mandates that will be utilized for this work include the stipulation that all newly recorded sites (including the NW Dixie Highway) will be evaluated in accordance with 36CFR60.4 (*National Register Criteria*), and Cultural Resource Management (CRM) recommendations will be generated in accordance with 36CFR800, *Procedures for the Protection and Enhancement of Historic and Cultural Properties*, a standard procedure for implementing and formulating CRM recommendations

Task 5 - Preliminary Phase Submittal

A. FDOT Scope of Work form:
    1. Fill out the form as applicable
    2. Coordinate and assist City in obtaining information

Task 6 – Initial Phase Submittal

The Consultant shall provide the City with the initial phase documents of the proposed sidewalk. The Consultant will do the following:

A. Complete the following checklist items:
    1. 30% Initial Plans
    2. 30% Signalization Plans
    3. 30% Engineer's Estimate

Task 7 - Constructability Phase Submittal

The Consultant shall provide the City with the Constructability Phase plan submittal documents of the proposed sidewalks in accordance with the FDOT PPM and Florida Green Book. The Plans shall be prepared on 11" x 17" size format and comply with the City criteria, PPM, and FDOT Design Standards. The Plan submittal requirements shall be in accordance with the City of Stuart and FDOT.

A. Complete the following checklist items:

1. Final Plans (100%)
    a. Key Sheet (Complete but subject to change)
    b. General Notes/Summary of Pay Items (Complete but subject to change)
    c. Drainage Maps @ 200 scale (Complete but subject to change)
    d. Typical Sections (Complete but subject to change)
    e. Project Layout Sheets @ 200 scale (Complete but subject to change)
    f. Signalization plans for pedestrian signals and proposed mast arm at the intersection of NW Dixie Highway and SE Green River Parkway.
    g. Plan and Profile Sheets @ 40 Scale (Complete but subject to change)
    h. Cross Sections @ 100' intervals (Complete but subject to change)
    i. Detail Sheets (Complete but subject to change)
    j. Stormwater Pollution Prevention Plan (Complete but subject to change)
2. Engineer's Estimate (100%)
3. Engineer's backup (Provide backup quantities – Comp Book)
4. Documentation of Utility Coordination
5. Address all comments from FDOT ERC review
6. Martin County to provide required right of way and Contract Documents listed in the checklist

Task 8 – Production Phase Submittal

The Consultant shall provide the City with the Production Phase plan submittal documents of the proposed sidewalks in accordance with the FDOT PPM and Florida Green Book. The Plans shall be prepared on 11" x 17" size format and comply with the City criteria, PPM, and FDOT Design Standards. The Plan submittal requirements shall be in accordance with the City of Stuart and FDOT.

A. Complete the following checklist items:

1. Final Plans (100%) Key Sheet (Final)
    a. General Notes/Summary of Pay Items (Final)
    b. Drainage Maps @ 200 scale (Final)
    c. Typical Sections (Final)
    d. Project Layout Sheets @ 200 scale (Final)
    e. Signalization plans for pedestrian signals and proposed mast arm at the intersection of NW Dixie Highway and SE Green River Parkway
    f. Plan and Profile Sheets @ 40 Scale (Final)
    g. Cross Sections @ 100' intervals (Final)
    h. Detail Sheets (Final)
    i. Stormwater Pollution Prevention Plan (Final)
    j. Signing & Pavement Markings Plans (Final)
    k. Traffic Control Plans

2. Engineer's Estimate (100%)
3. Applicable permits
4. Signed/Sealed LAP "Big 4" Specifications
5. Environmental checklist and memo documentation
6. Martin County to provide required right of way and contract documents listed in checklist

Task 9 - Traffic Signal Design Plans (30%, 90% & Final)

30% Traffic Signal Design: The Consultant will utilize survey and existing traffic signal plan to develop base mapping for the proposed traffic signal design improvements.

It is our understanding that the proposed intersection improvements have been coordinated and approved by FDOT and local officials. The proposed improvements are:

A. Install pedestrian signal facilities to support the proposed crosswalk on SE Green River Parkway.
B. Install pedestrian traffic facilities to support the proposed crosswalk on NW Dixie Highway.
C. Install Mast Arm to control right turning movements at the NW Dixie Highway Approach.
D. Revise existing traffic signal system to incorporate the operations for the proposed pedestrian signals.

The Consultant will visit the site and conduct a visual review of existing lane designations, anticipated curb ramp locations, striping, lighting, adjacent land uses, nearby driveway locations, traffic patterns and driver behavior, overhead utilities or other obstructions, evidence of underground utilities (valve boxes, manhole covers, telephone pedestals, etc.), landscaping, topography, recent road improvements, public and private sign locations, and sign condition. The Consultant will collect digital photographs to document existing conditions at each corner and potential crosswalk locations for the intersection. The Consultant will attempt to verify the existence and location (where possible) of the items in the base mapping prepared under this task. The Consultant will spot check the base mapping and actual conditions in the field for discrepancies and will consult with the Client or the Client's Engineer, if necessary, to resolve and correct discrepancies in the electronic base mapping file.

Upon receipt and review of the survey and preliminary roadway design files and after conducting a site review, the Consultant will prepare 30% design drawings for submittal.

This submittal will be prepared at 1" = 30' scale using AutoCAD software. The Consultant will indicate the following items in this submittal: General notes, mast arm, pedestrian signal poles, signal and pedestrian head placement, junction boxes, conduits, push buttons and detector location and phase assignment.

The total number of plan sheets in this submittal is anticipated to be as follows:

A. One (1) title/general notes sheet
B. One (1) signal plan sheet
C. One (1) signing and pavement marking plan
D. One (1) sidewalk plan
E. Mast Arm Tabulation
F. Existing Guide Sign Sheet
G. Existing Utility Location
H. Existing Project Survey Control

The Consultant will schedule a meeting with FDOT's District and County representatives to discuss the proposed 30% design before submittal for review.

90% Traffic Signal Design: The Consultant will receive and incorporate 30% review comments from the reviewing agency (FDOT) to create a 90% plan set for their review and comment. This submittal will be prepared at 1" = 30' scale using AutoCAD software. The Consultant will indicate the following items in this submittal:

- General notes
- Demolition notes
- Existing traffic signal poles
- Existing and proposed mast arms
- Pedestal poles
- Sign placement
- Horizontal control information for signal/pedestal poles
- Wireless communication elements
- Controller cabinet
- Signal phasing diagram
- Proposed easement locations
- Existing signal phasing diagram
- Existing lane designation arrows
- Existing color sequence chart
- Clearance chart
- Existing and proposed junction boxes
- Conduit and wiring callouts
- Electrical service requirements
- Existing detector location and phase assignment
- Proposed curb ramp locations
- Existing and proposed intersection stop bars
- Proposed crosswalk striping
- Approach striping

It is assumed that a Traffic Management Plan (TMP) with supporting notes will not be required by the FDOT and that all TMP requirements will be satisfied using General Notes.

The following are assumed for this Task:

A. The Consultant will rely on the same base survey / final roadway design file used for the 30% plan. Changes to the base survey / final roadway design file will be incorporated into this submittal as Additional Services and will be conducted only as authorized by the Client.

The Consultant will prepare 90% design drawings for submittal. The total number of plan sheets in this submittal is anticipated to be as follows:

A. One (1) Title/General Notes sheet
B. One (1) Signal Plan sheet
C. One (1) Signing and Pavement Marking plan
D. One (1) Sidewalk plan
E. Mast Arm Tabulation
F. Existing Guide Sign Sheet
G. Existing Utility Location
H. Existing Project Survey Control
I. Two (2) Detail Sheets

Final Traffic Signal Design:

The Consultant will receive and incorporate 90% review comments from the reviewing agency (FDOT) to create a Final plan set for their review and approval. The Consultant will prepare hard copies of all plan sheets for this submittal.

Martin County will be responsible for the Clearance Interval Timing Calculations and the Traffic Signal Timings and Timing Plans.

TIME OF PERFORMANCE

Contract period shall start January 2020, and terminate January 2022. In the event all work required in the proposal specifications has not been completed by the specified date, the Engineer agrees to provide work as authorized by the Contract Supervisor until all work specified in the proposal specifications has been rendered.

COMPENSATION

This is a Time Not to Exceed and Lump Sum Budget Contract. The total amount to be paid by the City to the Consultant is based on actual time spent on this project with an estimated amount of **$86,095.00** All Estimated Fee Amounts are Not to Exceed amounts.

FEE SCHEDULE

TASK	FEE TYPE	FEE
Task 1 – Route Design Survey	TNE	$ 7,900.00
Task 2 – Subsurface Utility Engineering (SUE)	TNE	$ 3,560.00
Task 3 – Environmental Assessment	LS	$ 6,175.00
Task 4 – Cultural Resource Assessment Survey (CRAS)	LS	$ 5,950.00
Task 5 – Preliminary Phase Submittal	TNE	$ 2,100.00
Task 6 – Initial Phase Submittal	TNE	$ 18,840.00
Task 7 – Constructability Phase Submittal	TNE	$ 17,340.00
Task 8 – Production Phase Submittal	TNE	$ 13,480.00
Task 9 - Traffic Signal Design Plans (30%, 90% & Final)	TNE	$ 10,000.00
Task 98099 – Reimbursable / Permit Fees	TNE	$ 750.00
	Total	**$** 86,095.00

LS: Lump Sum T&E: Time & Materials TNE: Time & Materials - Not-To-Exceed

CITY RESPONSIBILITIES

The City will provide specific data for the Project. Such data shall include as a minimum available record drawing. Prepare the bid documents and manage construction activities.

WARRANTY

The Consultant warrants that the plans and specifications produced as a result of this contract are complete, correct and suitable for the purpose intended.

AMERICANS WITH DISABILITIES

The Consultant shall ensure compliance with all applicable governmental accessibility standards, including without limitation those applicable under sections 35.151 CFR.

PLAN AND SPECIFICATIONS REPRODUCTION

The Consultant will provide three (3) sets of signed and sealed construction sets. The cost of these sets is to be included in the design cost paid under the professional as compensation for services required under this Project authorization. If additional sets of construction documents are required by the city, the professional shall furnish such sets at cost. Payment for such additional sets shall be promptly made by the City, upon properly supported invoices, submitted by professional.

PLAN AND DOCUMENT OWNERSHIP

The original plans and specifications will become the property of the City upon completion of the Project. Computer Aided Design Drawings (CADD) is to be used in the preparation of the construction plans; a copy of all electronic data and drawing files arc to be submitted on CD media. These will utilize AutoCAD version 14.0 or 2000 software. If other software is used, it is to be translated to the aforementioned software. The supplied disks are to include all points and working files.

IN WITNESS WHEREOF, the parties have made and executed this Agreement, the day and year first above written.

PROFESSIONAL: Bowman Consulting Group Ltd

By:_____ Date January 23, 2020

Jerry Compton Principal

ATTEST

APPROVED AS TO COMPLIANCE WITH PURCHASING & CONTRACTS POLICIES AND PROCEDURES

By:_____ Date

Holly Vath, Financial Services Assistant Director Procurement and Contracting Services Manager

TECHNICAL PROVISIONS OF CONTRACT AND BUDGETARY REQUIREMENTS APPROVED

By:_____ Date

David Peters, Public Works Director

APPROVED AS TO FORM AND LEGALITY FOR THE USE AND BENEFIT OF STUART CITY ONLY

By:_____ Date

Michael J. Mortell, City Attorney

CITY OF STUART

By:_____ Date

David Dyess, City Manager

Hourly Rate Schedule "B"
January 2017

CLASSIFICATION	HOURLY RATES
Senior Principal	$260.00/HR
Principal	$200.00/HR
Senior Project Manager	$185.00/HR
Project Manager	$160.00/HR
Analyst I	$100.00/HR
Analyst II	$125.00/HR
Design Technician I	$120.00/HR
Construction Inspector	$ 95.00/HR
Sr. CADD Technician	$100.00/HR
CADD Technician	$ 60.00/HR
Office Manager	$ 75.00/HR
Clerical	$ 60.00/HR