

WORK ORDER NUMBER 5

IRC-2001

11th Drive & 37th Street Roadway and Intersection Improvements

This Work Order Number 5 is entered into as of this _____ day of _____, 2023 pursuant to that certain Continuing Contract Agreement for Continuing Geotechnical Engineering dated December 4, 2018, renewed and amended as of December 7, 2021, collectively referred to as the "Agreement", by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and **ANDERSEN ANDRE CONSULTING ENGINEERS, INC.** ("CONSULTANT").

The COUNTY has selected the CONSULTANT to perform the professional services set forth on Exhibit A (Proposal for Professional Services), attached to this Work Order No. 5 and made part hereof by this reference. The professional services will be performed by the CONSULTANT for the fees set forth in Exhibit A (Proposal for Professional Services, Items 1-4), attached to this Work Order and made a part hereof by this reference. Nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:
ANDERSEN ANDRE CONSULTING
ENGINEERS, INC.

BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY

By: _____

By: _____

Joseph H. Earman, Chairman

Title: _____

BCC Approved Date: _____

Attest: Jeffrey R. Smith, Clerk of Court and Comptroller

By: _____

Deputy Clerk

Approved: _____

Michael C. Zito, Interim County
Administrator

Approved as to form and legal sufficiency: _____

William K. DeBaal, Deputy County
Attorney

EXHIBIT A



ANDERSEN ANDRE CONSULTING ENGINEERS, INC.

Geotechnical Engineering
Construction Materials Testing
Environmental Consulting

AACE Proposal No. P23-2555

February 3, 2023

Indian River County Engineering Department
1801 27th Street, Building 'A'
Vero Beach, Florida 32960

Attention: Mr. Robert S. Skok
Infrastructure Project Manager

**Subject: PROPOSAL FOR CONSTRUCTION MATERIALS TESTING AND INSPECTION SERVICES
11TH DRIVE AND 37TH STREET ROADWAY AND INTERSECTION IMPROVEMENTS
IRC PROJECT NO. 2001
INDIAN RIVER COUNTY, FLORIDA**

Dear Mr. Skok:

Andersen Andre Consulting Engineers, Inc. (AACE) is pleased to present this proposal for construction materials testing services during improvements to portions of 11th Drive and 37th Street, as indicated above. The purpose of our services, as discussed further herein, will be to provide materials testing in general accordance with the project plans and technical specifications. Our services also include drilled shaft, signal pole anchor bolt and mast-arm connection bolt inspections as detailed herein.

BACKGROUND INFORMATION

We understand that the roadway and intersection improvement project includes the following scope elements:

- Paving and drainage improvements to approximately 900LF of 11th Drive, south of 37th Street;
- New roadway construction for the 11th Drive extension for approximately 700LF north of 37th Street;
- Drainage improvements within approximately 500LF of 37th Street;
- Miscellaneous milling and resurfacing of the intersection of 11th Drive and 37th Street;
- The construction of mast-arm traffic lighting mounted on four aluminum signal poles which will be supported by drilled shafts;
- Incidental sidewalk construction, bus pad construction and driveway restoration.

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SCOPE OF SERVICES

Based on our review of the Contract Plans (roadway) prepared by MBV Engineering, Inc. (dated October 2022) and the Contract Plans (signalization improvements) prepared by Kimley-Horn (dated April 2022) , we understand that required QC services will include the elements listed below:

- Density testing for all embankment, subgrade and base rock used for roadway construction;
- Density testing for all drainage improvements (including various conduits and utility deflections/conflicts);
- Density testing of sidewalk, driveway and bus pad subgrade;
- Concrete compressive strength testing for curbing, driveways, sidewalks, ADA ramps and drilled shafts;
- Perform limited asphalt inspection and testing services, both in the field and at the plant;
- Drilled shaft inspections and testing for the four mast-arm lighting assemblies and poles. Additionally, we will coordinate the inspection of signal pole anchor bolts and mast-arm connection bolts at each signal location (in general accordance with FDOT Standard Specification 649 (Galvanized Steel Poles, Mast Arms & Monotube Assemblies) and also FDOT's Standard Index 17745 (Mast Arm Assemblies). These services will be performed by our subconsultant, Johnson, Mirmiran and Thompson (JMT);
- Performing all necessary laboratory testing services to support the above-listed field testing services (e.g., Proctor, LBR, percent-fines, organic content, asphalt gradation/extraction, etc.).

Based upon our understanding of the project plans and our prior experience with projects similar to this one, we estimate the cost of the services will be approximately \$43,851.00. The actual cost of AACE's testing services will be a function of work actually performed in accordance with the attached unit fee schedule (in accordance with the continuing service contract between Indian River County and AACE, Contract #20211207). Contractor efficiency, methodology and changes in testing frequencies may affect the testing cost. We will notify you in advance if it appears that the cost estimate will be exceeded.

To authorize us to proceed with this project, please execute and return to us a copy of the attached Project Agreement form or a Purchase Order number. If you have any questions or if we can provide any additional information, please feel free to contact us at your convenience.

Best Regards,

ANDERSEN ANDRE CONSULTING ENGINEERS, INC.



David P. Andre, P.E.
Principal Engineer



Peter G. Andersen, P.E.
Principal Engineer

▶ **ITEM #1: Field and Lab Testing of Roadway Construction**

- In-Place Density Testing of Roadway Embankment, Stabilized Subgrade and Base Course;
 - 85 tests @ \$25.00/test (minimum 4 tests per hour, per trip) \$2,125.00
- In-Place Density Testing of Excavation Backfill for Removal of Old Storm Drainage;
 - 50 tests @ \$25.00/test (minimum 4 tests per hour, per trip) \$1,250.00
- In-Place Density Testing of Storm Drainage Trench & Excavation Backfill;
 - 250 tests @ \$25.00/test (minimum 4 tests per hour, per trip) \$6,250.00
- In-Place Density Testing of Misc. Deflections & Conflicts;
 - 25 tests @ \$25.00/test (minimum 4 tests per hour, per trip) \$625.00
- In-Place Density Testing of Sidewalk, Driveway, Bus Pad Subgrade;
 - 40 tests @ \$25.00/test (minimum 4 tests per hour, per trip) \$1,000.00
- Moisture/Density Relationship (Proctor) Testing: 6 tests @ \$91.00/test \$546.00
- LBR Testing (Stabilized Subgrade, Base Rock); 5 tests @ \$315.00/test \$1,575.00
- Compressive Strength Testing of Concrete (Sidewalk, Curb, Bus Pad, Driveways, etc.)
 - 12 sets of concrete cylinders @ \$95.00/set. \$1,140.00
- Engineering Technician (man-hours for sample collection, limited standby, etc.)
 - 100 hours @ \$63.00/hour \$6,300.00

Item #1 Subtotal: \$20,811.00

▶ **ITEM #2: QC Services During Paving Operations**

- Asphalt Plant Inspection - Senior Transportation/Roadway Technician;
 - 2 Days x 10 hours/day @ \$85.00/hr. x 1.5 (nighttime testing rate) \$2,550.00
 - Asphalt Content and Extraction/Gradation Testing; 2 samples x \$210.00/sample \$420.00
- Roadway Coring (2 Coring Events)
 - Engineering Technician (for Roadway Coring - 2 techs. required for all coring);
 - 2 events @ 8 hours/event x @ \$63.00/hour x 2 technicians \$2,016.00
 - Coring Mobilization; 2 events x \$100.00/mob \$200.00
 - Core Machine Usage; 2 days x \$150.00/day \$300.00
 - Generator Usage; 2 days x \$50.00/day. \$100.00
 - Specific Gravity Testing (Unit Weight) of Cores; 8 cores x \$37.00/core. \$296.00
- Snr. Project Engineer (Pre-Pave Mtg., Test Review, etc.); 10 hours x \$128.00/hour \$1,280.00

Item #2 Subtotal: \$7,162.00

▶ **ITEM #3: Signalization Drilled Shaft and Anchor/Connection Bolt Inspections**

- Drilled Shaft Inspection and Testing;
 - Senior Transportation/Roadway Technician (drilled shaft (4) inspections, includes Pre-Con mtg.);
 - 50 hours @ \$85.00/hour. \$4,250.00
- Drilled Shaft Concrete Testing; 4 sets of concrete specimens @ \$95.00/set. \$380.00
- Senior Field Technician (CTQP/FDOT Concrete Field Technician, if needed during pours);
 - 24 hours @ \$63.00/hour \$1,512.00
- Senior Project Engineer; 4 hours @ \$128.00/hour \$512.00
- Anchor/Connection Bolt Inspections:

Since the contractor's proposed assembly methodology is currently unknown, we have assumed that separate technician-visits will be required for each of the four anchor assemblies, and also for each mast-arm connection (for a total of 8 technician-visits). Further, we have assumed that a bucket truck will be available for our use. Finally, we have budgeted limited standby time during this effort in the event that MOT requires adjusting, the bucket truck is delayed, etc. However, we have assumed that all inspections will occur during normal working hours/days (M-F, 7am-5pm).

 - Senior Field Technician (Bolted Connections): 6 visits x 6 hours/visit @ \$83.00/hour \$2,988.00
 - Senior Project Engineer: 4 hours @ \$128.00/hour \$512.00
 - Professional/Administrative Man-hours (Engineering Consultations, Reporting, etc.):
 - Senior Project Engineer; 3 hours @ \$128.00/hr. \$384.00
 - Technical Secretary; 5 hours @ \$50.00/hr. \$250.00

Item #3 Subtotal: \$10,788.00

▶ **ITEM #4: Professional/Administrative Services Estimate:**

• Snr. Project Engineer:	
- Limited Meeting Attendance - 10 hours x \$128.00/hour	\$1,280.00
- Project Coordination, review of testing results; 20 hours x \$128.00/hour.	\$2,560.00
• Technical Secretary; 25 hours x \$50.00/hour	\$1,250.00
Item #5 Subtotal:	\$5,090.00

PROJECT TOTAL: \$43,851.00

TERMS AND CONDITIONS

- (1) Unit rates apply to standard working days, Monday through Friday, 7:00 a.m to 6:00 p.m. Testing and hourly rates will be increased by 50% for weekend, holiday or after-hours services (i.e., services performed before 7:00 am or after 7:00 pm). Our man-hour rates as presented herein are based on day-time testing only. No allowances for nighttime work are reflected in our fee.
- (2) The contractor (or County personnel) should contact Andersen Andre Consulting Engineers, Inc. at (772) 807-9191 a minimum of 24 hours prior to any testing and 48 hours prior to weekend and evening work.
- (3) If our testing estimate for a specific work element is insufficient for that particular activity, resources from another work element can be used without prior authorization from the client as long as our total cost estimate is not exceeded. We will notify you in advance if it appears that the cost estimate presented in the attached unit fee schedule will be exceeded.
- (4) AACE has not been provided with the selected Contractor's proposed schedule (i.e.; paving days, FDR days, etc.). Therefore, man-hours and associated testing quantities are based on our experience with similar projects. It is possible that our testing budget may require revision based on contractor efficiency, methodology and scheduling.
- (5) Soil sample and concrete cylinder pickup for laboratory testing (e.g., Proctor, LBR testing, compressive strength, etc.) will be billed at \$63.00/hour if not scheduled with other work.
- (6) Our services do not include reviewing, monitoring or reporting any aspect of the required Maintenance of Traffic (M.O.T.) that may be required for this project.
- (7) AACE's field technicians and engineers do not direct or witness the performance of any work. Neither the presence of an AACE representative on-site nor the observation and testing performed by our firm implies AACE's responsibility for defects discovered in the construction work.
- (8) AACE will not be responsible for job or site safety for this project; job site safety will be the sole responsibility of the contractor.
- (9) AACE will not have stop-work authority. Should our representatives encounter materials or workmanship that, either based on direct testing or on our experience with similar projects, does not appear to meet the engineering plans and specifications, we will notify Indian River County immediately. Results will not be relayed to the Contractor without prior consent of the County.
- (10) We understand that no FDOT Earthwork/Density Log Book will be required for this project.

