Ardaman & Associates, Inc.
Geotechnical, Environmental and Materials Consultants

AAI Proposal No. 18-4472
July 11, 2018
Revised July 27, 2018

Indian River County
1801 27th Street
Vero Beach, Florida 32960

EXHIBIT A

Attention: Ms. Kristin Leiendecker, EIT

Subject: Proposal for Subsurface Soil Exploration
Proposed 45th Street Roadway Improvements
43rd Avenue to 60th Avenue
Indian River County, Florida

Ms. Leiendecker:

As requested by Mr. Stephen E. Moler, P.E. with Masteller & Moler, Inc., we are pleased to submit our proposal to perform a subsurface soil exploration and pavement coring services for the above referenced project. The purpose of this work is to obtain general subsurface soil information for the use of project design engineers.

PROJECT UNDERSTANDING

It is our understanding that this segment of 45th Street will be designed for various roadway and drainage improvements. The number and approximate location of soil borings and pavement cores were presented to us on a Soil Boring & Pavement Core Location Exhibit dated June 5, 2018 which was provided to us by Mr. Moler.

FIELD EXPLORATION

As requested, we propose the following field program:

Borings and Type	Depth (feet)	Location Description
13 SPT	15	Locations representative of a given roadway segment and surface condition and conducted between the south edge of pavement and the adjacent drainage ditch.
4 SPT	35	Proposed mast arm foundations or strain poles for traffic signals at intersections of 43rd Avenue and 58th Avenue. Two borings per intersection at opposing corners where possible.

The borings will be performed with truck-mounted drilling equipment in general accordance with the procedures recommended in ASTM D-1586. Please note that many of these boring locations will require temporary lane closures of the eastbound lane of 45th Street and associated Maintenance-of-Traffic (MOT).

In addition, we will also perform seven (7) pavement cores at the requested locations within 45th Street. The thicknesses of the existing asphalt and pavement base material will be measured and recorded at each location. The pavement core locations will be positioned in areas of observed distress where possible. Coring of the roadway will require temporary lane closure of the eastbound lane of 45th Street and associated Maintenance-of-Traffic (MOT). The core holes will be backfilled with accumulated base material and patched with cold-patch asphalt upon completion.

Prior to the mobilization of our drilling equipment, we will notify Sunshine State One-Call of Florida, Inc. (SSOCOF) of our planned exploration to allow affected utility companies the opportunity to mark the location of buried utility lines in the proposed exploration areas. The locating process will require a lead time of 3 to 5 business days. We cannot take responsibility for damages to private underground lines or structures and/or underground services which do not subscribe to SSOCOF; their locations should be provided by the client prior to commencement of the field work.

LABORATORY TESTING

We preliminarily estimate that only routine laboratory visual classification of the recovered samples will be required for this project. However, gradation tests and organic content tests on select samples will be performed if deemed necessary. The number of laboratory tests will be determined upon completion of the soil borings and will depend on the nature of the encountered soils. All laboratory tests will be performed in accordance with applicable ASTM standards.

ENGINEERING REPORT

Upon completion of our field exploration and laboratory testing program, an engineering report will be issued presenting the findings of our explorations and tests, and our comments on geotechnical aspects of the project.

SCHEDULE

Weather conditions permitting, we will start the field exploration program within 10 to 15 business days after receiving your written authorization to proceed. We preliminarily estimate that our field work will have a duration of 5 to 8 business days. Our laboratory testing and report preparation will require an additional 5 to 10 business days to complete, however, verbal recommendations can be provided shortly after the completion of the field exploration program.

FEE ESTIMATE

Based on our knowledge of the project to-date, the estimated cost of our geotechnical services for this project is **$15,280.00 (including MOT)**. Should we encounter conditions on the site that warrant more investigative effort than anticipated, we will inform you immediately. Additional work or meetings in response to review of the report will incur an additional charge. The services are itemized below:

Field Reconnaissance
Senior Project Engineer: est. 4 hours @ $115.00/hour $460.00
Standard Penetration Test borings:
- 2 mobilizations @ $350.00/mobilization $700.00
- Standby between boreholes for MOT setup: est. 2 hours @ $250.00/hour $500.00
- 13 SPT borings to 15 feet (195 feet total) @ $14.50/foot $2,827.50
- 4 SPT borings to 35 feet (140 feet total) @ $14.50/foot $2,030.00

Coring Equipment: 1 day @ $150.00/day $150.00
Coring Crew: est. 12 hours @ $100.00/hour (two Sr. Field Technicians @ $50.00/hour) $1,200.00
Asphalt Patch (lump sum): $82.50

Laboratory Testing
Organic Testing: est. 4 tests @ $30.00/test $120.00
Percent Fines Content Tests: est. 10 tests @ 35.00/test $350.00

Engineering and Report Preparation
Senior Project Engineer: est. 4 hours @ $115.00/hour $460.00
Project Engineer: est. 20 hours @ $95.00/hour $1,900.00

Maintenance of Traffic (MOT)
We will subcontract the necessary MOT services for our field exploration. We have anticipated a total of three days for maintenance of traffic control.

MOT: Estimate 3 days @ $1,500.00/day (lump sum/day, Cost plus 15%)..... $4,500.00

Total Estimated Project Cost (including MOT): $15,280.00

TERMS AND CONDITIONS

This proposal is subject to the applicable terms in the enclosed General Conditions, and to the following: (1) *access to boring locations is to be readily available to our truck-mounted drilling equipment*, (2) the provided scope of work will be adequate, (3) if deemed necessary, Ardaman & Associates, Inc. will coordinate the location of underground utility lines through SSOCOF. We cannot take responsibility for damages to private underground lines or structures and/or underground services which do not subscribe to SSOCOF; their locations should be provided by the client prior to commencement of the field work.

CLOSURE

Please sign and return the enclosed Proposal/Project Acceptance and Agreement form as an indication of your acceptance of our proposal terms and authorization to proceed with the work. Please complete the form in its entirety to help us set up your file correctly and please provide us with the names and addresses of all parties who should receive copies of our reports for this project.

Please do not hesitate to contact our office should you have any questions concerning this proposal or whenever we may be of assistance to you.

ARDAMAN & ASSOCIATES, INC.

Dan Zrallack, P.E.
Branch Manager

Attachments: Proposal/Project Acceptance and Agreement Form
General Conditions