

"EXHIBIT C-3"
Work Authorization No. CTA 13-33
Under
Agreement between Broward County and Craven Thompson and Associates, Inc.
for
Project 104246 Septic Tank Elimination Program District 2 Area 2-G UAZ 235

1. This Work Authorization is issued pursuant to the Agreement between Broward County (hereinafter referred to as "County") and Craven Thompson and Associates, Inc. for Continuing Services for **Water Distribution, Wastewater Collection, and Storm Water Collection Systems** (hereinafter "the Agreement"), which was approved by the Board of County Commissioners on **December 3, 2013 (Item 18)**.

2. This Work Authorization permits Craven Thompson and Associates, Inc. (hereinafter referred to as "Consultant") to provide the services described in Exhibit "A" to this Work Authorization. These services are authorized pursuant to Article 3 of the Agreement.

3. Compensation and Method of Payment.

3.1 Payment for the services authorized by this Work Authorization shall be in accordance with Article 5 of the Agreement and the agreed method of compensation shall be as follows (check those boxes that apply):

3.1.1 Maximum Amount Not-To-Exceed Compensation. Compensation to Consultant for the performance of Basic Services identified in Exhibit A to this Work Authorization as payable on a "Maximum Amount Not-To-Exceed" basis, and as otherwise required under the terms of the Agreement, shall be based upon the Salary Costs as described in Section 5.2 of the Agreement up to a maximum amount not-to-exceed of \$5,000.00. Consultant shall perform all services designated as Maximum Amount Not-To-Exceed set forth herein for total compensation in the amount of or less than that stated above.

3.1.2 Lump Sum Compensation. Compensation to Consultant for the performance of all Basic Services identified in Exhibit A as payable on a "Lump Sum" basis, and as otherwise required by this Agreement, shall be not more than a total lump sum of \$218,041.00.

3.1.3 Reimbursable Expenses. County has established a maximum amount not-to-exceed of \$6,500.00 for potential reimbursable expenses which may be utilized pursuant to Section 5.3 of the Agreement. Unused amounts of those monies established for reimbursable expenses shall be retained by County.

3.2 Payments for this Work Authorization shall be charged against:

Budget No. 44250-44100-67301010-512110-104246

4. Consultant shall perform the services described in Exhibit A within _____ calendar days ("Time for Performance"), or The time periods specified in the Project Schedule included in Exhibit A ("Time for Performance"); said time periods shall commence from the date of the Notice to Proceed for such services.

4.1 If this box is checked, this paragraph shall be applicable. In the event Contractor fails to substantially complete the Project on or before the substantial completion date specified in its agreement with County, and the failure to substantially complete is caused in whole or in part by Consultant, then Consultant shall pay to County its proportional share of any claim or damages to Contractor arising out of the delay. By reference hereto, the provisions for the computation of delay costs/damages and any amounts included therein, whether direct or indirect, in the agreement between the Contractor and County are incorporated herein. This provision shall not affect the rights and obligations of either party as set forth in Section 10.8, Indemnification of County.

4.2 If this box is checked, liquidated damages shall be applicable. In the event Consultant fails to complete the services identified in Exhibit "A" to this Work Authorization on or before the Time for Performance set forth above, Consultant shall pay to County the sum of dollars identified below for each calendar day after the applicable Time for Performance, plus approved time extensions thereof, until completion of the service:

<u>Services</u>	<u>Amount</u>
	\$ TBD
	\$ TBD
	\$ TBD

These amounts are not penalties but are liquidated damages to County for Consultant's inability to proceed with, and complete, the service in a timely manner pursuant to the agreed upon Project Schedule. Liquidated damages are hereby fixed and agreed upon by the parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by County as a consequence of such delay, and both parties desiring to obviate any question or dispute concerning the amount of said damages and the cost and effect of the failure of Consultant to complete the services within the applicable Time for Performance. This provision shall not affect the rights and obligations of either party as set forth in Section 10.8, Indemnification of County.

5. CBE Goals.

5.1 In an effort to assist County in achieving its overall goal as set forth in the Agreement, Consultant agrees to meet the following CBE participation goals by utilizing the CBE firms for the work and dollar values described in paragraph 5.2 below: 48%.

5.2 In performing services for this Project, County and Consultant hereby incorporate Consultant's participating CBE firms, addresses, scope of work, and dollar value identified in the Letter of Intent (attached hereto and incorporated herein as Exhibit "B").

6. The terms and conditions of the Agreement are hereby incorporated into this Work Authorization. Nothing contained in this Work Authorization shall alter, modify, or change in any way the terms and conditions of the Agreement with the County.

[Remainder of This Page Is Intentionally Left Blank.]

IN WITNESS WHEREOF, the parties have made and executed this Work Authorization No. **CTA 13-33**: BROWARD COUNTY, by and through its BOARD OF COUNTY COMMISSIONERS, signing by and through its Mayor or Vice-Mayor, authorized to execute same by Board action on the ____ day of _____, 20__, and Craven Thompson and Associates, signing by and through its Vice President, duly authorized to execute same.

County

ATTEST:

BROWARD COUNTY, by and through
its Board of County Commissioners

Broward County Administrator, as
Ex-officio Clerk of the Broward County
Board of County Commissioners

By _____
Mayor

____ day of _____, 20__

Approved as to form by
Joni Armstrong Coffey
Broward County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-7641

Insurance requirements
Approved by Broward County
Risk Management Division

By Tim Lowry 6/6/17
Signature (Date)

By Angela F. Benjamin 6/7/17
Angela F. Benjamin (Date)
Assistant County Attorney

Tim Lowry Property Specialist
Print Name and Title above

Michael J. Kerr 6/8/17
Michael J. Kerr
Deputy County Attorney

Consultant

ATTEST:

Craven Thompson & Associates

Corporate Secretary

By Patrick J. Gibney
President or Vice President

Joseph Handley, Secretary

Patrick J. Gibney, P.E. Vice President

(SEAL)

8th day of May, 2017.

EXHIBIT B
LETTERS OF INTENT

[Applicable when work authorization has assigned CBE goals]

Consultant represents that the CBE participants referenced in the attached Letters of Intent have agreed by written subcontract to perform the percentage of work amounts set forth and that the following information regarding participating subconsultants is true and correct to the best of his/her knowledge.

EXHIBIT "A"
SCOPE OF SERVICES
CONTINUING ENGINEERING SERVICES
BCWWS RLI R1025211R1
Work Authorization CTA 13-33
March 6, 2017

BCWWS Project No. 104246 Septic Tank Elimination Program District 2 Area 2-G UAZ 235

SCOPE OF WORK

CONSULTANT shall provide professional engineering services to **COUNTY** for design and regulatory permitting services for the Project STEP Area 2-G as described below and further described in the task summaries that follow.

- Design approximately three thousand (3,000') feet of eight (8") gravity sewer main, eleven (11) maintenance access structures, one (1) retail lift station and seventeen hundred and fifty (1,750') feet of six (6") force main in NW 16th Lane, NW 17th Lane, Park Central Boulevard South and Copans Road in Pompano Beach. Roadway restoration, Test Hole locations, geotechnical investigation are also included in the scope.
- Provide detailed cost estimate based on a quantity take off of the final design drawings.

TASK 1 – DESIGN SERVICES

The design of the new gravity sewer, force main and lift station in Area 2-G in Pompano Beach shall consist of the following:

Task 1.1 – Preliminary Design

Task 1.1.1 – Site Investigation

CONSULTANT shall:

- Obtain existing utility information, including water, drainage, gas, telephone and underground electric.
- Coordinate with utility companies to minimize utility relocations due to conflicts with proposed work.
- Meet with all applicable utility, permitting agencies and the City of Pompano Beach.
- Review all available reports and record drawings of existing utilities.

Task 1.1.2 – Surveys

Design Survey – Prepare Design Survey gravity sewer route on NW 16th Lane, NW 17th Lane, Park Central Boulevard South and Copans Road to provide a base sheet for design and permitting to include the following:

- Prepare right-of-way calculations adjacent to and covering the project area and prepare base map for Project Site.
- Obtain topography and locations of all visible fixed improvements within the project area.
- As-built existing utilities, rims, inverts, pipe sizes and material, etc.

- Locate underground piping as designated 811.
- Attempt to obtain Finish Floor Elevations and Septic Tank locations, if available.

Task 1.2 – Detailed Design

CONSULTANT shall prepare construction contract documents including bidding documents, general and supplementary conditions, technical specifications and drawings that show the character and extent of the project.

At each design milestone as identified in Tasks 1.2.1, and 1.2.2, **CONSULTANT** shall provide **COUNTY** with four (4) copies of construction contract documents for that milestone. For Task 1.2.3, **CONSULTANT** shall provide **COUNTY** with three (3) copies of construction contract documents. **CONSULTANT** shall meet with **COUNTY** to receive and discuss **COUNTY** review comments. **CONSULTANT** shall incorporate into the construction contract documents the review comments of **COUNTY** as required.

Task 1.2.1 – 50% Design

The 50% design milestone submittal shall consist of preliminary drawings for the pipeline and lift station. **CONSULTANT** shall provide a current construction cost estimate at that point. The estimate shall be to the Budget level, as defined by the American Association of Cost Engineers (AACE) with a probable accuracy of –15% to +30%. Twenty calendar days of review time for **COUNTY** has been provided for in **CONSULTANT**'s time of performance.

Task 1.2.2 – 90% Design

The 90% design milestone submittal shall consist of the entire contract document set including **COUNTY**'s front-end documents, technical specifications and construction drawings for all the work proposed. **CONSULTANT** shall provide a construction cost estimate to the Definitive level, as defined by the AACE with a probable accuracy of –5% to +15%. Thirty calendar days of review time for the **COUNTY** have been provided for in **CONSULTANT**'s time of performance.

Task 1.2.3 – Final Check Documents (Purchasing Review Submittal)

CONSULTANT shall provide **COUNTY** with construction contract documents that incorporate final comments from **COUNTY** on the 90% design documents and information required from the **COUNTY** to complete the front end documents within twenty calendar days of receipt of the information from the **COUNTY**.

TASK 2 – PRE-BID PERMITTING

At the 90% stage of design, **CONSULTANT** shall submit the 90% design documents to the permitting agencies listed below for review or permit issuance as noted.

CONSULTANT shall prepare applications and such documents and design data as may be required so that Contract Administrator may apply for approvals of all such governmental authorities as have jurisdiction over the Project regarding Engineering Design permits. Identification of the governmental authorities is the responsibility of the **CONSULTANT**. **CONSULTANT** shall assist in obtaining such approvals by participating in meetings, submissions, resubmissions and negotiations with such authorities. **CONSULTANT** shall respond to approval agency comments to the Contract Administrator within ten working days of receipt of comments unless a different time is agreed to by

the Contract Administrator.

- ***Broward County Environmental Protection Department (BCEPD) – Application to Construct a Wastewater Collection / Transmission System***

CONSULTANT shall complete two (2) construction permit application form for the gravity sewer system, lift station and force main system in NW 16th Lane, NW 17th Lane, Park Central Boulevard South and Copans Road along with all supporting documentation to BCEPD.

- ***State of Florida Department of Environmental Protection Department (FDEP) – Application to Construct a Wastewater Collection / Transmission System***

CONSULTANT shall complete one (1) FDEP application form for the gravity sewer system, lift station and force main system in NW 16th Lane, NW 17th Lane, Park Central Boulevard South and Copans Road along with all supporting documents to BCEPD.

- ***Broward County Highway Construction & Engineering Division (Right of Way Permit)***

CONSULTANT shall complete necessary applications for the Plan Approval of Improvements in Copans Road Rights of Way along with all supporting documents to BCHCED.

- ***Broward County Traffic Engineering Division (Pavement Markings and Signage Permit)***

CONSULTANT shall complete one (1) construction permit application form for the pavement, markings and signage on NW 16th Lane, NW 17th Lane, Park Central Boulevard South and Copans Road along with all supporting documentation to BCTED.

- ***Engineering/Building Permit***

CONSULTANT shall complete one (1) City of Pompano Beach Engineering Permit Application form for the gravity sewer system, lift station and force main system in NW 16th Lane, NW 17th Lane, Park Central Boulevard South and Copans Road with all supporting documents to the City.

TASK 3 – BIDDING AND AWARD

Upon completion of construction contract documents and permitting reviews by agencies, **CONSULTANT** shall make final revisions to the documents based on review comments within twenty calendar days of receipt of the last of these comments.

CONSULTANT shall reproduce construction contract documents to provide copies requested by potential bidders and six (6) sets to the **COUNTY**. **CONSULTANT** shall submit a list to **COUNTY** of construction contractors **CONSULTANT** deems capable of construction project.

CONSULTANT shall reproduce and distribute bid documents to construction contractors requesting documents. **CONSULTANT** can charge a reasonable fee to potential bidders and others that request bid documents.

CONSULTANT shall schedule and conduct a pre-bid conference to be held prior to the advertised bid date. **CONSULTANT**'s attendance time is included in this Task.

CONSULTANT shall provide timely responses to the inquiries of potential bidders through written addenda. These queries shall be transmitted to the **COUNTY** by **CONSULTANT**. **CONSULTANT** shall prepare and distribute up to two addenda as required, or requested by **COUNTY**.

CONSULTANT shall evaluate the bids for completeness, full responsiveness and price, including alternative prices and unit prices, and shall make a formal recommendation to **COUNTY** in regard to the award of contract. Nontechnical bid requirements shall be evaluated by **COUNTY**.

CONSULTANT shall provide eight sets of construction contract documents for execution by **COUNTY** and construction contractor within five calendar days of request by **COUNTY**.

TASK 4 – OPTIONAL ADDITIONAL SERVICES

CONSULTANT shall provide additional services, as identified by the Contract Administrator, which are related to but beyond the level of effort of the scope of work outlined above. Services provided under this Task shall be billed on an hourly basis up to the specified amount as authorized by the Contract Administrator, subject to the limits set in the agreement. Services performed under this Task must be initiated by a separate written Notice to Proceed issued by the Contract Administrator.

ASSUMPTIONS

The proposed Scope of Services is based on the following understandings of the project:

1. All permit and certification fees will be paid for by BCWWS.
2. Design Meeting attendance is based upon the following:
 - One (1) meeting with other government agencies as directed by the Contract Administrator.
 - Two (2) Design Review Meetings with **COUNTY**.

TIME of PERFORMANCE

275 days from Notice to Proceed - Task 1 and Task 2

Task 3 and Task 4 – Time dependent on procurement process.

3/6/2017

CTA Estimated Fee Summary
BCWWS Project No. 104246
Septic Tank Elimination District Area 2G
 WA 13-33

TASK Description, See Exhibit "A")	CTA												HILLERS	NOVA	TIERRA	SPECIAL SUB	Total Hrs.	Fee
	\$88.43 Admn Assistant	\$74.37 Sr. Tech	\$74.37 Resident Represent.	\$92.96 Sr Res. Represent.	\$119.52 Registered Land Surv.	\$119.52 3-Person Survey Crew	\$132.80 Project Engineer	\$100.93 Sr. Eng	\$127.49 QA Person	\$159.36 Project Manager	\$172.64 Vice President							
1.1.1 Investigation																		
LS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hours																		
Sub-Total Fee	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,060	\$0	\$2,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1.1.2 Survey																		
LS	0	40	0	0	48	88	0	0	0	0	0	0	0	0	0	0	0	0
Hours																		
Sub-Total Fee	\$0	\$2,975	\$0	\$0	\$5,737	\$11,687	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
1.2 Civil Design																		
LS	0	160	0	0	0	0	160	120	22	40	8							
Hours																		
Sub-Total Fee	\$0	\$11,899	\$0	\$0	\$0	\$0	\$16,149	\$15,299	\$3,506	\$6,374	\$1,381	\$14,142	\$79,215	\$6,271	\$0	\$0	\$0	\$154,236
2 Pre-Bid Permitting																		
LS	0	16	0	0	0	0	60	40	0	16	0							
Hours																		
Sub-Total Fee	\$0	\$1,190	\$0	\$0	\$0	\$0	\$6,056	\$5,100	\$0	\$2,550	\$0	\$0	\$6,014	\$0	\$0	\$0	\$0	\$20,909
3 Bidding and Award																		
LS	16	0	0	0	0	0	0	40	8	8	4							
Hours																		
Sub-Total Fee	\$935	\$0	\$0	\$0	\$0	\$0	\$0	\$5,100	\$1,275	\$1,275	\$691	\$1,510	\$2,065	\$0	\$0	\$0	\$0	\$12,850

CTA Sub Total \$108,824
 Hillers Sub Total \$15,652
 Nova Sub Total \$87,294
 Tierra Sub Total \$6,271
 SUB TOTAL \$218,041

48%

CBE Participation

\$6,000
 \$600

REIMBURSABLES
 Test Hole Sub Total (16)
 Prints, Fed Ex, etc.

SUB TOTAL - REIMBURSABLES

TASK 4 ADDITIONAL SERVICES (Not to Exceed)
 Potential HydroGeologic Engineer/Geologists
TOTAL

\$6,500
 \$5,000
 \$229,641



March 8, 2017

EMAIL

Mr. Patrick J. Gibney, P.E.
Craven Thompson & Associates (CTA)
3563 NW 53rd Street
Fort Lauderdale, FL 33309

*Re: BCWWS Septic Tank Elimination Program- District 2 Area 2-G- UAZ 235
Proposal for Professional Engineering Services*

Dear Mr. Gibney:

As requested, herewith for your review and approval please find the scope of work and fee proposal associated with the design and solicitation support in connection with the above referenced project.

This proposal was prepared based on your request for proposal received via e-mail on February 7th, 2017.

SCOPE OF WORK

CONSULTANT shall provide professional engineering services to **COUNTY** for design and permitting assistance services for the construction contract as described below and further described in the task summaries that follow.

Prepare Contract Documents for the Project to extend the sanitary sewer system and provide service to approximately 24 existing water customers. The work includes construction of approximately 3000 LF of 8" PVC gravity sewer, ten (10) maintenance access structures (MAS), twenty four (24) service laterals with cleanouts, and restoration of the roadway.

The project also includes the following work not included in Nova's scope (i.e., to be done by others): 1) one (1) Lift Station and generator and 2) 1750 LF ductile iron force main, connection to existing force main.

The Project is located on NW 17th Lane and NW 16th Lane, north of Copans Road, within Utility Analysis Zone (UAZ235). See Attachment B for Project Description and Proposed Layout provided by COUNTY.

TASK 1 – DESIGN SERVICES

Design services in connection with the project shall consist of the following:

Task 1.1 – Preliminary Design

Task 1.1.1 – Site Investigation

Site Investigation services are excluded from this scope of work, as they will be performed by others.

Nova Consulting

*Mr. Patrick Gibney, P.E.
March 8, 2017
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Task 1.1.2 – Surveys

Land Surveying services are excluded from this scope of work, as they will be performed by others.

Task 1.1.3 – Geotechnical Investigations

Geotechnical Investigations are excluded from this scope of work, as they will be performed by others.

Task 1.2 – Detailed Design

CONSULTANT shall prepare construction contract documents including bidding documents, general and supplementary conditions, technical specifications and drawings that show the character and extent of the project.

At each design milestone as identified in Tasks 1.2.1, and 1.2.2, **CONSULTANT** shall provide **COUNTY** with four (4) copies of construction contract documents for that milestone. For Task 1.2.3, **CONSULTANT** shall provide **COUNTY** with three (3) copies of construction contract documents. **CONSULTANT** shall meet with **COUNTY** to receive and discuss **COUNTY** review comments. **CONSULTANT** shall incorporate into the construction contract documents the review comments of **COUNTY** as required. **CONSULTANT**'s meeting attendance time is included in

Task 1.2.1 – 50% Design

The 50% design milestone submittal shall consist of preliminary drawings for the pipeline, including profiles. Draft technical specifications of critical items (pipe and control structures) shall also be included in the submittal. **CONSULTANT** shall provide a current construction cost estimate at that point. The estimate shall be to the Budget level, as defined by the American Association of Cost Engineers (AACE) with a probable accuracy of -15% to +30%. Ten calendar days of review time for **COUNTY** has been provided for in **CONSULTANT**'s time of performance.

Task 1.2.2 – 90% Design

The 90% design milestone submittal shall consist of the entire contract document set including **COUNTY**'s front-end documents, technical specifications and construction drawings, including Maintenance of Traffic Plans for all the work proposed. **CONSULTANT** shall provide a construction cost estimate to the Definitive level, as defined by the AACE with a probable accuracy of -5% to +15%. Ten calendar days of review time for the **COUNTY** have been provided for in **CONSULTANT**'s time of performance.

Task 1.2.3 – Final Check Documents (Purchasing Review Submittal)

CONSULTANT shall provide **COUNTY** with construction contract documents that incorporate final comments from **COUNTY** on the 90% design documents and information required from the **COUNTY** to complete the front end documents within fifteen calendar days of receipt of the information from the **COUNTY**.

Nova Consulting

Mr. Patrick Gibney, P.E.
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TASK 2 – PRE-BID PERMITTING

At the 90% stage of design, **CONSULTANT** shall submit the 90% design documents to the permitting agencies listed below for review or permit issuance as noted.

- **ROW- Broward County/City Permit**
 - **CONSULTANT** shall complete one (1) Right of Way Permit Application for submittal to Broward County or corresponding City having jurisdiction, as appropriate, with all supporting documents including pipeline.
- **Florida Department of Environmental Protection (FDEP)/ Broward County Environmental Protection and Growth Management Division (BCEPGMD).**
 - **CONSULTANT** shall complete one (1) FDEP/BCEPGMD application form for Sewer Extension Permits for the proposed sewer installation with all supporting documents.

TASK 3 –BIDDING AND AWARD

Upon completion of construction contract documents and permitting reviews by agencies, NOVA shall provide timely responses to the inquiries of potential bidders through written addenda. These queries shall be transmitted to the COUNTY by NOVA. NOVA shall prepare responses to up to three (3) RFIs as required.

TASK 4 – MEETINGS

Meetings are excluded from this scope of work and fee.

TASK 5 –CONSTRUCTION OBSERVATIONS

Construction Observation Services are excluded from this scope of work and fee.

ASSUMPTIONS

The proposed Scope of Services is based on the following understandings of the project:

1. Site Investigation is not included and will be performed by others (CTA) as per negotiations in March 7, 2017 email between CTA and Nova. CTA will provide NOVA with the utility as-builts, 811 call information, GIS and other documents associated with the Site Investigation.
2. Surveys are not included and will be performed by others (CTA).
3. Geotechnical Investigations are not included and will be performed by others (CTA).

Nova Consulting

Mr. Patrick Gibney, P.E.
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4. Detailed Design includes the design of the gravity sewer, maintenance access structures, laterals and roadway restoration. Nova will utilize the previous STEP project (District 3A, Area 3A-S, UAZ313) design as the template for this project including page layouts, scaling, notes, Standard Details, title block, CAD Standards, etc. Significant deviations from this template shall be provided by CTA. As per negotiations in March 1, 2017 email between CTA and NOVA, NOVA's gravity sewer design will be a part of CTA's drawing package (which will include all disciplines, i.e. pump station, electrical, force main and gravity sewer), and hence the "Shared" General sheets of the drawing package (which include Cover Page Sheet; Legend and Abbreviation Sheet; General Notes Sheet) will not be NOVA's responsibility.
5. Pre-Bid Permitting include Permits listed above. Pre-Bid Permitting associated with the Design of the Lift Station/force main and dewatering will be performed by others (CTA). Other Permits, that are not listed above, are not included. Additional permits may need additional funds.
6. Bidding and Award Services is limited to three (3) RFI responses.
7. Meetings are not included.
8. Construction Observations are not included.
9. A single construction bid package shall be prepared as part of this scope.
10. Downstream Lift Station, to be designed by others, has sufficient capacity. In case pump station evaluation and/or upgrades are required and/or recommended, these services are not included in this scope of work or fee, and additional funds will be required.
11. All permit and certification fees will be paid by BCWWS directly, or reimbursed in case it is paid by the CONSULTANT.
12. No utility easements and/or property ownership investigations are included in this scope of work. It is assumed that the Owner has sufficient rights for utility installation.
13. Land survey activities will be performed by others, which will include at a minimum:
 - Right-of-way calculations covering the project area and prepare base map for Project Site.
 - Obtain topography and locations of all visible fixed improvements within the project area.
 - Locate underground piping and utilities.
14. No dewatering plan and/or dewatering calculations are included in this scope or fee proposal. Dewatering is considered an option for the construction contractor based on its means and methods.

TIME of PERFORMANCE

180 Days from Notice to Proceed

COMPENSATION

Compensation for services rendered under this proposal will be a Lump Sum Fee of **\$87,294.00** payable on a "percent complete" basis and invoiced monthly.

The above fee is based on an estimated level of effort associated with the tasks included in this scope of work. The cost estimate included in **Attachment A** provides a cost breakdown of the fee for this project. May the work required exceed the estimated budget, additional funds will be

Nova Consulting

Mr. Patrick Gibney, P.E.
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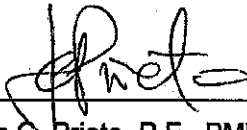
required.

As you well know, **NOVA CONSULTING, INC.** is ready and eager to start working on this important project upon your approval and notice to proceed. If you have any questions or comments, please do not hesitate to call me.

Thanks again for the opportunity to work on this important project.

Submitted by:

NOVA CONSULTING



Juan C. Prieto, P.E., PMP
Senior Principal Engineer

Attachments: Attachment A: Estimated fee proposal
Attachment B: Project Description and Proposed Layout provided by COUNTY.

3/8/2017

Attachment A: Estimated Fee Summary
Septic Tank Elimination Program - District 2 Area 2-G - UAZ 235 Improvement Project
Nova Consulting, Inc.

Fringe Benefit 32.01%
Overhead 128.98%
Profit 10.00%

Overall Multiplier 2.87089

Raw Hourly Rate \$ 28.22 \$ 25.00 \$ 23.08 \$ 24.52 \$ 22.50 \$ 22.84 \$ 42.00 \$ 52.00 \$ 42.07 \$ 61.00 \$ 74.52 \$ 96.00

Hourly Rates	\$81.02	\$71.77	\$66.26	\$70.39	\$64.60	\$65.57	\$120.58	\$149.29	\$120.78	\$175.12	\$175.12	\$175.12	Principal	Total Hrs	Fee
TASK Description, See Exhibit "A")	Resident Rep	Admin Assist	Sr Drafter	Sr Design	Field Eng	Project Eng	Sr Project Eng	Sr Project Field Eng	Sr Eng	QA-QC	PM				
1.2 Detailed Design															
Hours	0	0	421	366	0	0	0	0	142	0	48	0	0	977	\$79,215.00
Sub-Total Fee	\$0	\$0	\$27,895	\$25,763	\$0	\$0	\$0	\$0	\$17,151	\$0	\$8,406	\$0	\$0		
2 Pre-bid Permitting															
Hours	0	0	0	44	0	0	0	0	14	0	7	0	0	65	\$6,014.00
Sub-Total Fee	\$0	\$0	\$0	\$3,097	\$0	\$0	\$0	\$0	\$1,691	\$0	\$1,226	\$0	\$0		
3 Bidding and Award (By Others)															
Hours	0	0	0	9	0	0	0	0	7.5	0	3	0	0	19.5	\$2,065.00
Sub-Total Fee	\$0	\$0	\$0	\$634	\$0	\$0	\$0	\$0	\$906	\$0	\$525	\$0	\$0		

Sub Total: \$87,294.00
expenses (copies, etc) \$0
Total \$87,294.00

Assumptions
Task 1.1 Site Investigation is not included and will be performed by others (CTA) as per negotiations in 3/7/17 email between CTA and Nova. CTA will provide Nova with the as-builts, 811 call info, GIS, and other documents associated with the Site Investigation.
Task 1.2 Surveys are not included and will be performed by others (CTA).
Task 1.3 Obstacles in the site are not included and will be performed by others (CTA).
Task 1.2 Detailed Design includes the design of the gravity sewer, manholes, access structures, laterals and roadway restoration. Nova will utilize the previous STEP project (District 3A, Area 3A-S, UAZ213) design as the template for this project including page layouts, sealing, notes, Standard Details, file block, CAD Standards, etc. Significant deviations from this template shall be provided by CTA.
Task 2 Pre-Bid Permitting include Permits listed above. Pre-Bid Permitting associated with the Design of the Lift Station/force main and dewatering will be performed by others (CTA). Other Permits, that are not listed above, are not included. Additional permits may need additional funds.
Task 3 Bidding and Award Services is limited to three (3) RFI responses.
Task 4 Meetings are not included.
Task 5 Construction Observations are not included.
The following items are not included in Nova's scope and will be performed by others (CTA): Design of the new Lift Station/force main, confirmation of the available capacity/impact to surrounding sewer system, dewatering plan/design (plan, notes, etc.), investigation of the suitability of the existing pipe at the drainage canal crossing, easement request/documents/coordination, communication with WWS customers, coordination with surrounding projects, and assistance with customer transition from septic tank to gravity sewer, and maintaining access to businesses during construction.
The following items are included in Nova's scope: Sewer Design will be a part of CTA's drawing package (which will include all disciplines, i.e., pump station, electrical, force main, and gravity sewer), and hence the "Shared" General Sheets of the drawing package (which include Cover Page Sheet, Legend and Abbreviation Sheet, General Notes Sheet) will not be Nova's responsibility.

H E E

HILLERS ELECTRICAL ENGINEERING, INC.

March 1, 2017

Mr. Patrick J. Gibney, P.E.
Craven Thompson & Associates
3563 53rd Street
Fort Lauderdale,, Florida 33309

Subject: Electrical Engineering Services Fee Proposal for the BCWWS (County)
(1) New Lift Station located at District 2 Area 2-G.

Dear Patrick:

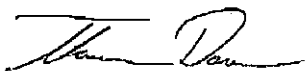
Hillers Electrical Engineering, Inc. (HEE) is pleased to provide Craven Thompson & Associates, Inc. (CTA) an electrical engineering services fee proposal for the County (1) New Lift Station District 2 Area 2-G Project. Design proposal is based on utilizing current County BCWWS Lift Station Standards.

The following items are included in our scope:

- Includes design coordination meetings visits with BCWWS, FPL Co. and CTA.
- Design (1) new FPL electrical service points for (1) new Lift Station.
- Design power /control panel, power & control systems, XL SCADA/RTU connections, conduit & conductors, grounding systems per BCWWS Standards.
- Design Stand-by power generator system connection for Lift Stations.
- County shall provide specific SCADA / RTU equipment / systems design information for Lift Stations. HEE shall incorporate County provided equipment / systems information into Contract Documents specific for each Lift Station.
- Does not include any type design for new main County Wide XL SCADA / RTU Systems.
- BCWWS shall provide base drawings on disks to HEE on AutoCAD 2013.
- HEE shall provide (1) electronic set of plans & specifications & probable cost estimates for 50%, 90%, 100% reviews, permits, bid, construction phases.
- BCWWS shall provide all printing of Contract Documents.
- Includes Bid & Award Services.
- Does not include Construction services.

Our lump-sum fee for Lift Station Design, Permit, Bid & Award is: \$ 15,652.

Sincerely,



Thomas Doran, Vice-President

HILLERS ELECTRICAL ENGINEERING, INC.

DESCRIPTION :	Broward County WWS Project (1) New Lift Station located in District 2 Area 2-G Electrical Design & Bid & Award Services.
PROPOSAL REQ.No :	
WORK ORDER No.:	
DATE:	3/1/2017

TASK	Chief Engineer	Prof. Engineer	Project Engineer	CADD Technician	Field Engineer	Admin. Clerical	Total Hours	Budget (\$)
1- PLANNING ANALYSIS & RECOMMENDATIONS								
1.1- Conceptual design & Design Coordination	1	2	2			2	7	\$686
1.2- Data Collection & Design Report	1	4	4			2	11	\$1,078
1.3- Review with Contract Administrator							0	\$0
Subtotal	2	6	6	0	0	4	18	\$1,764
2- CONSTRUCTION/BID DOCUMENTS								
2.1- Preparation and coordination, 50% C.D.	1	18	28	16		1	64	\$5,819
2.2- Preparation and coordination, 90% C.D.	1	8	14	8		1	32	\$2,914
2.3- Preparation of final C.D. (100%)	1	2	4	2		1.5	10.5	\$976
2.4- Technical Specifications	1	8				8	17	\$1,568
2.5- Cost estimates		2	3			1.5	6.5	\$578
2.6- Assistance with permitting		2	2			2	6	\$525
2.7- Assistance with preparation of bidding documents							0	\$0
2.8- Bidding, addenda and revisions	1	4	4	4		4	17	\$1,510
Subtotal	5	44	55	30	0	19	153	\$13,889
3- CONSTRUCTION SERVICES								
3.1- Shop drawing review							0	\$0
3.2- RFI and problem solving							0	\$0
3.3- (2) Periodic site visits during construction (EA) LS							0	\$0
3.4- Pay requisition processing							0	\$0
3.5- Final inspection & Testing Inspection							0	\$0
3.6- As-Builts Documents per Contractor Markups							0	\$0
Subtotal	0	0	0	0	0	0	0	\$0
TOTAL HOURS	7	50	61	30	0	23	171	
BILLING RATES	\$161.39	\$109.52	\$86.46	\$74.93	\$112.40	\$66.29		
TOTAL DESIGN	\$1,130	\$5,476	\$5,274	\$2,248	\$0	\$1,525		\$15,652

DIRECT EXPENSES	
Printing	
Courier	
Telecommunications	
Others	
TOTAL EXP.	\$0

SUBCONSULTANTS	
TOTAL SUB.	\$0

GRAND TOTAL	\$15,652
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NOTES :

Estimated Construction Cost =	\$180,000.00
Design & Const. Fee Percentage =	8.70%
Geotechnical Investigation and Pile Inspection Fee Percentage =	0.00%



February 13, 2017

Craven Thompson & Associates
3563 NW 53rd Street
Ft. Lauderdale, FL 33309

Attn: Mr. Patrick Gibney, P.E.

Re: Geotechnical Engineering Services
BCWWS – Gravity Sewer, Force Main, and Lift Station
UAZ 235 Improvement Project
Broward County, Florida
TSF Proposal No. 1702-088

Dear Pat:

TIERRA SOUTH FLORIDA, Inc. (TSF) is pleased to submit this proposal for providing a subsurface exploration for the proposed lift station, gravity sewer, and force main in Broward County, Florida. This proposal includes an outline of our proposed scope of work, an estimate of the total job cost, and our anticipated schedule for completion of the work.

SCOPE OF SERVICE

As requested, our scope of work will consist of drilling one (1) Standard Penetration Test (SPT) boring to a depth of 35 feet below existing grade for the lift station, six (6) SPT borings to a depth 15 feet below existing grade. Some adjustments in the boring depths may be necessary depending upon the subsurface conditions encountered.

Within the borings, penetration resistance testing will be performed in general accordance with the requirements of ASTM designation D 1586. Borings will be approximately located in the field by our drilling personnel by measuring distances with a tape from known reference points. Elevations at boring locations can be interpreted from a topographic plan if furnished by others. Prior to drilling at the project site, TSF will notify the local utility companies and request that underground utilities be marked. Our experience, however, is that the utility companies will not mark privately owned utilities. Our proposal assumes that private utility lines will be located in the field by others prior to mobilization of the drill rig. TSF will recommend a utility line locating service upon request.

Upon completion of the field exploration, a geotechnical engineer will evaluate the results of all drilling. A report will be issued that contains the exploration data and recommendation for foundation design.

ESTIMATED COST

It is proposed that the fee for the performance of the services outlined above will be on a unit price basis in accordance with the attached fee schedule. Our estimate covers the work needed to present our findings. Not included are reviews of foundation drawings, preparation of construction specifications, special conferences and any other work requested after submittal of our report. This proposal assumes that access to the proposed boring locations can be accomplished with a truck mounted drill rig.

Boring, sampling, and testing requirements are a function of the subsurface conditions encountered. Therefore, the estimated cost previously indicated is approximate, and compensation for the exploration will be based on the actual work and tests performed. We will endeavor to keep the exploration cost at a minimum consistent with good engineering practice.

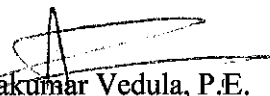
SCHEDULE AND AUTHORIZATION

TSF will proceed with the work after receipt of a signed copy of this proposal. With our present drilling schedule, we can commence work within several days of project approval (weather permitting) and fieldwork is expected to take about 2 days to complete. The report can be submitted two weeks after completion of the field exploration. We at TSF appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you should have any questions concerning our proposal, please contact our office.

Respectfully submitted,

TIERRA SOUTH FLORIDA, INC.


Raj Krishnasamy, P.E.
President


Ramakumar Vedula, P.E.
Principal Engineer

Attachment: Fee Schedule

AUTHORIZED BY:	INVOICE TO:
Firm:	Firm:
Name:	Name:
Title:	Address:
Date:	Phone #:
	Fax #:

TIERRA SOUTH FLORIDA, INC.
ATTACHMENT - 1
FEE SCHEDULE FOR GEOTECHNICAL SERVICES

	Unit	# of Units	Unit Price		Total
I. FIELD INVESTIGATION					
Mobilization of Men and Equipment					
Truck-Mounted Equipment	Trip	1	\$	350.00	\$ 350.00
Standard Penetration Test Borings (By Truck-Mounted Equipment)					
0 - 50 ft depth	L.F.	125	\$	12.00	\$ 1,500.00
50 - 100 ft depth	L.F.	0	\$	14.00	\$ 0.00
Grout-Seal Boreholes (By Truck-Mounted Equipment)					
0 - 50 ft depth	L.F.	125	\$	5.50	\$ 687.50
50 - 100 ft depth	L.F.	0	\$	6.50	\$ 0.00
Casing Allowance (By Truck-Mounted Equipment)					
0 - 50 ft depth	L.F.	50	\$	7.00	\$ 350.00
50 - 100 ft depth	L.F.	0	\$	9.00	\$ 0.00
II. LABORATORY TESTING					
Visual Examination by Project Engineer	Hour	3	\$	117.08	\$ 351.24
Natural Moisture Content Tests	Test	2	\$	20.00	\$ 40.00
Grain-Size Analysis - Full Gradation	Test	2	\$	75.00	\$ 150.00
Grain-Size Analysis - Single Sieve	Test	0	\$	45.00	\$ 0.00
Organic Content Tests	Test	2	\$	50.00	\$ 100.00
Atterberg Limit Tests	Test	0	\$	80.00	\$ 0.00
Environmental Tests (pH, sulfates, chlorides, resistivity)	Set	0	\$	185.00	\$ 0.00
LBR Test	Test	0	\$	275.00	\$ 0.00
III. FIELD ENGINEERING AND TECHNICAL SERVICES					
Site Recon./Utility Coordination					
Senior Technician	Hour	8	\$	86.26	\$ 690.08
IIIA. ENGINEERING AND TECHNICAL SERVICES					
Project Manager	Hour	1	\$	132.49	\$ 132.49
Senior Engineer	Hour	4	\$	138.05	\$ 552.20
Project Engineer	Hour	8	\$	117.08	\$ 936.64
Senior Drafter	Hour	5	\$	86.26	\$ 431.30
TOTAL FEE FOR GEOTECHNICAL SERVICES				\$	6,271.45



OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT

**LETTER OF INTENT BETWEEN BIDDER/OFFEROR
AND COUNTY BUSINESS ENTERPRISE (CBE) SUBCONTRACTOR/SUPPLIER**
(Form to be completed and signed for each CBE firm)

Solicitation Number: BCWWS RLI R1025211R1	Project Title: Continuing Engineering Services / Project 104246
---	---

Bidder/Offeror Name: Craven Thompson & Associates
Address: 3563 NW 53rd Street **City:** Fort Lauderdale **State:** FL **Zip:** 33309
Authorized Representative: Patrick J. Gibney, P.E., Vice President **Phone:** 954-739-6400

CBE Subcontractor/Supplier Name: Hillers Electrical Engineering, Inc.
Address: 23257 State Road 7 Suite 100 **City:** Boca Raton **State:** FL **Zip:** 33428
Authorized Representative: Tom Doran, Vice President **Phone:** 561-451-9165

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform subcontracting work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm			
Description	NAICS*	CBE Contract Amount†	CBE Percentage of Total Project Value
Electrical Engineering Services	541330	\$15,652.00	6.8%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Subcontractor/Supplier Authorized Representative
 _____ V.P. 3/13/17
 (Signature) (Title) (Date)

Bidder/Offeror Authorized Representative
 _____ V.P. 3/13/17
 (Signature) (Title) (Date)

* Visit <http://www.census.gov/eos/www/naics/> to search. Match type of work with NAICS code as closely as possible.
 † To be provided only when the solicitation requires that bidder/offer include a dollar amount in its bid-offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.



OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT

**LETTER OF INTENT BETWEEN BIDDER/OFFEROR
AND COUNTY BUSINESS ENTERPRISE (CBE) SUBCONTRACTOR/SUPPLIER**
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Solicitation Number: BCWWS RLI R1025211R1	Project Title: Continuing Engineering Services / Project 104246
---	---

Bidder/Offeror Name: Craven Thompson & Associates
Address: 3563 NW 53rd Street **City:** Fort Lauderdale **State:** FL **Zip:** 33309
Authorized Representative: Patrick J. Gibney, P.E., Vice President **Phone:** 954-739-6400

CBE Subcontractor/Supplier Name: Nova Consulting, Inc.
Address: 10486 NW 31st Terrace **City:** Miami **State:** FL **Zip:** 33172
Authorized Representative: Steven Eagle, P.E., Vice President **Phone:** 305-436-9200

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform subcontracting work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm			
Description	NAICS*	CBE Contract Amount†	CBE Percentage of Total Project Value
Civil Engineering Service Project 104246	541330	\$87,294.00	38%
TOTAL			38%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Subcontractor/Supplier Authorized Representative
[Signature] V.P. 3/9/17
 (Signature) (Title) (Date)

Bidder/Offeror Authorized Representative
[Signature] V.P. 3/8/17
 (Signature) (Title) (Date)

* Visit <http://www.census.gov/eos/www/naics/> to search. Match type of work with NAICS code as closely as possible.
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OFFICE OF ECONOMIC AND SMALL BUSINESS DEVELOPMENT

**LETTER OF INTENT BETWEEN BIDDER/OFFEROR
AND COUNTY BUSINESS ENTERPRISE (CBE) SUBCONTRACTOR/SUPPLIER
(Form to be completed and signed for each CBE firm)**

Solicitation Number: BCWWS RLI R1025211R1	Project Title: Continuing Engineering Services / Project 104246
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Bidder/Offeror Name: Craven Thompson & Associates
Address: 3563 NW 53rd Street **City:** Fort Lauderdale **State:** FL **Zip:** 33309
Authorized Representative: Patrick J. Gibney, P.E., Vice President **Phone:** 954-739-6400

CBE Subcontractor/Supplier Name: Tierra South Florida
Address: 2765 Vista Parkway, Suite 10 **City:** West Palm Beach **State:** FL **Zip:** 33411
Authorized Representative: Raj Krishnasamy, P.E., Principal Engineer **Phone:** 561-687-8539

- A. This is a letter of intent between the bidder/offeror on this project and a CBE firm for the CBE to perform subcontracting work on this project.
- B. By signing below, the bidder/offeror is committing to utilize the above-named CBE to perform the work described below.
- C. By signing below, the above-named CBE is committing to perform the work described below.
- D. By signing below, the bidder/offeror and CBE affirm that if the CBE subcontracts any of the work described below, it may only subcontract that work to another CBE.

Work to be performed by CBE Firm			
Description	NAICS*	CBE Contract Amount†	CBE Percentage of Total Project Value
Geotechnical Engineering Service Project 104246	541330	\$6,271.00	2.7%

AFFIRMATION: I hereby affirm that the information above is true and correct.

CBE Subcontractor/Supplier Authorized Representative

 (Signature) **President** (Title) **3/9/17** (Date)

Bidder/Offeror Authorized Representative

 (Signature) **V.P.** (Title) **3/8/17** (Date)

* Visit <http://www.census.gov/eos/www/naics/> to search. Match type of work with NAICS code as closely as possible.
 † To be provided only when the solicitation requires that bidder/offer include a dollar amount in its bid-offer.

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.