

**WORK AUTHORIZATION # CM2685-WA08  
 NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS  
 CONTINUING CONTRACT FOR PROFESSIONAL ENGINEERING SERVICES  
 SOLID WASTE LANDFILLS AND OTHER RELATED ANCILLARY FACILITIES  
 FOR NASSAU COUNTY, FLORIDA  
 RFQ/BID NO. NC19-001**

<b>Consultant:</b>	S2L, Incorporated
<b>Contract Number:</b>	CM2685
<b>Contact Name:</b>	Omar Smith, P.E., V.P.
<b>Contact Number:</b>	407-475-9163
<b>Email:</b>	osmith@s2li.com

CURRENT WORK AUTHORIZATION			
<b>Project Short Title: Preparation of Landfill Stabilization and Water Quality Technical Reports for the West Nassau Landfill</b>			
		CONTRACT OVERVIEW	
		<b>Total of Previous Authorizations</b>	\$347,166.52
<b>Date Submitted</b>	12/16/19	<b>Adjustments/Change Orders</b>	\$0
<b>Amount</b>	\$34,867.30	<b>This Work Authorization</b>	\$34,867.30
<b>Scheduled Completion</b>	240 days from NTP	<b>Current Contract Total</b>	\$382,033.82

This Work Authorization is to the CONTRACT between Nassau County and the Consultant known as the *Continuing Contract for Professional Engineering Services-Solid Waste Landfills and Other Related Ancillary Facilities for Nassau County, Florida*, dated July 26, 2019. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

S2Li will provide for the preparation submission of a Landfill Stabilization Report, Water Quality Technical Report and Updated Long-Term Care Plan for the West Nassau Landfill to the FDEP as required by the Landfill's permit conditions and Chapter 62-701.620(6), Florida Administrative Code. The services will be provided by S2Li and The Colinas Group (S2Li's hydrogeological subconsultant) collectively known as the S2Li Project Team Services for the Work Authorization are further described in Attachment "A", attached hereto and incorporated herein.

ARTICLE 2. Time Schedule

Work under the Scope of Services provided above will begin upon receipt of the signed Work Authorization. Assuming a receipt of a Notice to Proceed by February 1, 2020. The draft report for County review will be submitted by May 1, 2020 and the County is expected to provide comments to S2Li within two weeks after receipts of draft reports and FDEP submittals. After addressing and incorporating County staff comments, the draft document is to be submitted to FDEP by June 1, 2020. Assuming timely comments from FDEP, the final report is to be submitted to FDEP by July 1, 2020 or earlier. The total expected time period for this work authorization is eight months (240 days) which includes time for the County to receive and S2Li to review any final correspondents from FDEP in August 2020.

RCVD OMB  
 '20 JAN 10 PM2:52

CS19-152

ARTICLE 3. Budget

The cost estimate to conduct the work as described in the attached Scope of Service is \$34,867.30. A detailed breakdown for each task in conjunction with the estimated labor hours, contract labor rates, and expenses are included in the attached Exhibit 1 for the S2Li Project Team. Costs incurred will be invoiced on a time and material basis. The County will be notified when the overall project budget is nearing its limit.

ARTICLE 4. Other Provisions

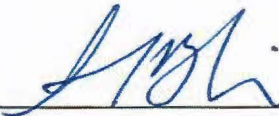
The Services covered by this Work Authorization will be performed in accordance with the provisions set forth in the CONTRACT referenced above and any of its attachments or schedules. Additional terms or contract provisions whether submitted purposely or inadvertently, shall have no force or effect. This Work Authorization will become a part of the referenced CONTRACT when executed by both parties.

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In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed Scope of Services are attached.

AGREED TO BY:

BY: 

Print Name: Samuel B. Levin

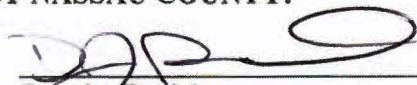
Title: President

Date: December 19, 2019

Account No.: <sup>2</sup>01367534-531000 \$26,867.30  
<sub>1</sub>01367534-531000 \$8,000.00

**RECOMMENDED AND APPROVED BY NASSAU COUNTY:**

Public Works:

  
Douglas Podiak

Contract Management:

  
Grayson Hagins

Office of Management & Budget:



Megan Diehl

County Manager:

  
Michael S. Mullin

Ex-Officio Clerk:

N/A  
John Crawford

County Attorney:

  
Michael S. Mullin

APPROVED by the County Manager, Designee for NASSAU COUNTY BOARD OF COUNTY COMMISSIONERS, the 10<sup>th</sup> day of January, ~~2019~~.

2020.

**Attachment "A"**  
**Scope of Services**

**Preparation**  
**of**

**Landfill Stabilization and Water Quality Technical Reports**  
**for the**

**West Nassau Landfill**

**S2Li, Inc.'s Contract and Work Authorization Number: CM2685-WA08**  
**S2Li Project Number: 19-868**

This Work Authorization will provide for the preparation and submission of a Landfill Stabilization Report, Water Quality Technical Report, and Updated Long-Term Care Plan for the West Nassau Landfill ("Landfill") to the Florida Department of Environmental Protection ("FDEP" or "Department") as required by the Landfill's permit conditions and Chapter 62-701.620(6), Florida Administrative Code ("F.A.C."). The services will be provided by S2L, Incorporated ("S2Li") and The Colinas Group ("TCG") (S2Li's hydrogeological subconsultant) collectively known as the "S2Li Project Team".

**BACKGROUND**

On March 25, 2013, Nassau County ("County") received closure certification from the FDEP for its closed Landfill. At that point, the 11-acre unlined area of the Landfill (previously closed) entered into a 20-year long-term care ("LTC") period and the 42-acre lined area of the landfill entered into a 30-year LTC period. The water quality monitoring plan, which monitors both lined and unlined areas, is considered a "site" monitoring plan with a duration for 30 years. Since the start of the LTC period, the County has been:

- conducting water quality testing and reporting;
- collecting, storing, and hauling leachate off-site for disposal;
- operating and maintaining an active landfill gas collection and control system ("LFGCCS");
- reporting operational and testing results on the LFGCCS to federal and state agencies;
- conducting and reporting landfill gas measurements on the perimeter of the landfill property;
- conducting groundwater elevation measurement on both sides of the landfill slurry wall system;
- maintaining a stormwater management system;
- mowing the surface of the landfill property;
- maintaining a vegetative cover and performing soil and erosion control measures;
- maintaining access control; and
- continuing other miscellaneous operational and maintenance items required for a closed facility.

On July 24, 2015, FDEP issued the County a Solid Waste LTC Permit (Permit No. 0002870-017-SF) that sets the conditions for LTC at the Landfill. This 10-year LTC permit for the Landfill is scheduled to expire on July 24, 2025. In accordance with specific condition requirements of this LTC permit, by July 1, 2020, the County is required to submit to FDEP a Landfill Stabilization Report, Water Quality Technical Report, and Updated Long-Term Care Plan.

Under the scope of services for this Work Authorization, S2Li Project Team will perform the following:

### SCOPE OF SERVICES

#### Task 1 – Preparation of a Water Quality Technical Report

A Water Quality Technical Report will be prepared to present and evaluate semi-annual groundwater and surface water monitoring data collected at the Landfill since the submission of the 2015 Water Quality Technical Report. A concise Executive Summary of findings, conclusions, and recommendations for permit modifications derived from the water quality monitoring evaluation will be presented in the Technical Report. The Technical Report will address each of the evaluation criteria presented in Rule 62-701.510(8)(b) F.A.C. and in the Water Quality Monitoring Plan (WQMP) and will include:

- a. Tabular displays of any data which shows that a monitoring parameter has been detected, and graphical displays of any leachate key indicator parameters detected, including hydrographs for all monitor wells;
- b. Trend analyses of any monitoring parameters consistently detected;
- c. Comparisons among shallow, middle and deep zone wells;
- d. Comparisons between background water quality and the water quality in the detection and compliance wells;
- e. Correlations between related parameters such as total dissolved solids and specific conductance;
- f. Discussion of erratic and/or poorly correlated data;
- g. An interpretation of the groundwater contour maps, including an evaluation of groundwater flow rates, and;
- h. An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based upon site conditions.

The Technical Report will present recommendations for modification of the current Landfill Monitoring Plan Implementation Schedule (MPIS) to include consideration of retirement of specific monitoring wells and deletion of specific monitoring parameters. The Technical Report will also address the results and recommendations of the study on the water quality impacts on the drinking water standards based on turning off the “Recovery Wells System” at the Landfill. This study was prepared under a separate Work Authorization.

#### Task 2 – Landfill Stabilization Study and Report

Subtask 2.1 – Draft Document Preparation. The S2Li Project Team will prepare a draft report to assess landfill stability in accordance with Chapter 62-701.620 (6), F.A.C. The following criteria will be addressed and assessed in the report as to meeting stability requirements and will include the evaluation results, conclusions, and recommendations:

- Water quality conditions as required by Chapter 62-701.510(8)(b);
- Landfill gas generation, emission, and migration;
- Landfill surface subsidence activity;
- Condition of vegetative cover related to soil and erosion control and barrier layer effectiveness;
- Storm water management system function;
- Leachate collection and removal system effectiveness; and
- Leachate quantity.

The report document will be provided in digital form and is expected to be organized at follows:

- Signed and Sealed Cover Page
- Transmittal Letter
- Introduction
- Background
- Site History
- Existing Conditions with Respect to Stabilization Criteria
  - a. Water Quality Technical Report
  - b. Subsidence
  - c. Barrier Layer Effectiveness
  - d. Stormwater Management
  - e. Gas Production and Management
  - f. Leachate Collection and Removal System Effectiveness
  - g. Leachate Quantity
- Summary of Existing Conditions Meeting Landfill Stability Criteria
- Conclusions
- Recommendations
- Exhibit 1 – Water Quality Technical Report
- Exhibit 2 – Long-Term Care Plan
- Exhibit 3 – A “clean” version and a “tracked changes” version of the Long-Term Care Plan; and
- Exhibit 4 – Report for the Leachate Collection System Cleaning and Storage Tank Inspection.

Subtask 2.2 – County Review. The S2Li Project Team will prepare and submit to the County a draft report for review and comment. S2Li will meet via conference call with the County as needed to discuss any staff comments. The S2Li Project Team will incorporate final comments received from the County associated with S2Li’s scope of services and will prepare an updated draft report for submittal to FDEP.

Subtask 2.3 – Meetings. The S2Li Project Team will prepare for and attend up to two project meetings, one with the County to discuss relevant project issues and if required, one meeting with FDEP Northeast District Office in Jacksonville.

*Deliverables: Draft Report for County Review*

### **Task 3 – FDEP Submittal, Requests for Additional Information (RAI), and Permit Review**

Subtask 3.1 – FDEP Draft Report Submittal. After incorporating any County comments, the updated draft Stabilization Report will be submitted to FDEP by June 1, 2020, for their review and comment. This will allow time for the Department to provide comments to the report’s conclusions and recommendations sections before the actual report due.

Subtask 3.2 – FDEP Final Report Submittal. After incorporating any additional County and/or FDEP comments, the S2Li Project Team will submit a final draft report for County review, and upon approval by the County, the report will be submitted to FDEP by of July 1, 2020.

Subtask 3.3 – FDEP’s RAI. Should any questions or minor requested changes be received from FDEP whether it is a part of the review of the draft or review of final report submittals, the S2Li Project Team, with the assistance of the County, will modify the report, and/or prepare responses, as appropriate, within the required time period. The County understands that the level of effort for RAI response cannot be determined beforehand and that the budget for Subtask 3.3 is based on an estimate of the level of effort that will be required. The maximum level of

effort to be expended for this task is limited to the fee estimate for this task. If additional investigations, analyses, testing, design, research, or permit modification application are required to provide satisfactory responses to FDEP, beyond the fee estimate of this Subtask 3.3, S2Li Project Team will perform the additional work effort only after receipt of written approval from the County. The S2Li Project Team will review any responses, permit updates, or any other related correspondence from FDEP and provide any comments to the County.

Subtask 3.4 – LTC Permit Review. It is anticipated that FDEP will propose modifications to the existing LTC permit based upon the submitted information as described above. The S2Li Project Team will review the draft or final LTC permit modifications proposed by FDEP. Any new requirements will be discussed with the County. Any issues with the draft or final permit modifications will be addressed with FDEP.

*Deliverables: Draft Stabilization Report for FDEP, questions for FDEP, final report submitted to FDEP, formal and informal RAI responses and review of correspondents and permit modification(s) from FDEP.*

### SCHEDULE

- Written Notice-to-Proceed received from the County by February 1, 2020;
- A draft report document is to be submitted to County staff for review by May 1, 2020. The County is expected to provide comments to S2Li within two weeks after receiving the draft reports and FDEP submittals;
- After addressing and incorporating County staff comments, the draft document is to be submitted to FDEP by June 1, 2020;
- Assuming timely comments from FDEP, the final report is to be submitted to FDEP by July 1, 2020, or earlier; and
- Total expected time period for this work authorization is eight months (240 days) which includes time for the County to receive and S2Li to review any final correspondents from FDEP in August 2020.

### SCOPE OF SERVICES - COUNTY ASSUMPTIONS

It has been assumed that the County will perform, provide or make available the following:

- Any permit application fees if not completely waived;
- Previous water quality results from information provided by the County's outside laboratory and technical reports from other consultants;
- Any requested changes to the existing permit's specific conditions and the LTC Plan,
- Annual quantity of leachate hauled off-site from FY2015 through FY2019, and
- Review and provide comments to any correspondences from FDEP.

Some of the information may have already been received, so the S2Li Project Team will work with County staff to ensure that S2Li has received all of the information.

### COST ESTIMATE

The cost estimate to conduct the Work as described in the above-listed Scope of Services is **\$34,867.30**. A detailed breakdown for each task in conjunction with the estimated labor hours, contract labor rates, and expenses are included in the attached Exhibit 1 for the S2Li Project Team. Costs incurred will be invoiced on a time and material basis. The County will be notified when the overall project budget is nearing its limit.

December 20, 2019  
 Total Project Costs  
 S2Li Fee Estimate

**EXHIBIT 1**  
**Preparation of**  
**Landfill Stabilization and Water Quality Technical Reports**  
 West Nassau Landfill  
 Nassau County, Florida

S2Li No. 19-868  
 County No. CM2685-WA08

LABOR		LABOR CATEGORY AND RATE								TOTAL HOURS	SUBTOTAL LABOR
		Project Dir./ Principal	Regional Manager/ QC Officer	Principal Engineer	Senior Engineer	Project Engineer	Associate Engineer/CADD	Field Technician	Office Manager		
TASK	DESCRIPTION	\$250.00	\$232.25	\$190.26	\$137.09	\$97.92	\$74.21	\$52.38	\$76.24		
1	Preparation of a Water Quality Technical Report	2	8	0	0	0	0	0	4	14	\$2,662.96
2	Landfill Stabilization Study and Report	4	34	0	0	40	24	0	8	0	\$15,204.26
3	FDEP Submittal, Requests for Additional Information (RAI), and Permit Review	2	8	0	0	0	0	0	2	12	\$2,510.48
SUBTOTALS:		8	50	0	0	40	24	0	14	26	\$20,377.70

EXPENSES		Field Vehicle (\$100/day)	Lab Testing (est.)	Equipment Rental (est.)	Parts (est.)	The Colinas Group (Attachment)					SUBTOTAL EXPENSES
TASK	DESCRIPTION										
1	Preparation of a Water Quality Technical Report	\$ -	\$ -	\$ -		\$ 12,044.80					\$ 12,044.80
2	Landfill Stabilization Study and Report	\$ -	\$ -	\$ -	\$ -	\$ 2,444.80					\$ 2,444.80
3	FDEP Submittal, Requests for Additional Information (RAI), and Permit Review	\$ -	\$ -	\$ -		\$ 0.00					\$ -
SUBTOTALS:		\$ -	\$ -	\$ -	\$ -	\$ 14,489.60	\$ -	\$ -	\$ -	\$ -	\$ 14,489.60

COST SUMMARY				
TASK	DESCRIPTION	S2Li LABOR	SUBTOTAL EXPENSES including Subconsultants	TASK TOTAL
1	Preparation of a Water Quality Technical Report	\$ 2,662.96	\$ 12,044.80	\$ 14,707.76
2	Landfill Stabilization Study and Report	\$ 15,204.26	\$ 2,444.80	\$ 17,649.06
3	FDEP Submittal, Requests for Additional Information (RAI), and Permit Review	\$ 2,510.48	\$ -	\$ 2,510.48
<b>TOTALS</b>		<b>\$ 20,377.70</b>	<b>\$ 14,489.60</b>	<b>\$ 34,867.30</b>

West Nassau Landfill 11 Acre Unlined (23%) = \$ 8,000.00  
 West Nassau Landfill 42 Acre Unlined (77%) = \$ 26,867.30  
 Total = \$ 34,867.30

WNLFF NPC 01362534-531000 - \$ 26,867.30  
 WNLFF OPC 01361534-531000 - \$ 8,000.00



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**THE COLINAS GROUP, INC.**  
HYDROGEOLOGISTS & ENGINEERS

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December 12, 2019

Mr. Omar E. Smith, P.E.  
S2L, Inc.  
531 Versailles Drive, Suite 202  
Maitland, FL 32751

Re: Proposal for Professional Services  
Preparation of 5-Year Water Quality Monitoring Technical Report  
West Nassau Closed Class I Landfill  
Nassau County, Florida  
TCG Proposal No. P-595

Dear Mr. Smith:

The Colinas Group, Inc. (TCG) is pleased to present this proposal to provide hydrogeological consulting services to S2L, inc. (S2Li) in support of preparation of a Landfill Stabilization Report for the Nassau County West Nassau Closed Class I Landfill. This proposal is based on our review of the existing landfill permit requirements, the rules contained in Chapter 62-701, Florida Administrative Code (F.A.C.).

**SCOPE OF SERVICES**

At the request of S2Li we have developed our proposed scope of services into specific Work Tasks, presented below as follows:

**TASK 1**      **TCG will prepare a water quality monitoring Technical Report for the closed landfill meeting the reporting requirements specified in FDEP Rule 62-701.510(8)(b), F.A.C.** The Technical Report will present and evaluate semi-annual groundwater and surface water monitoring data collected at the landfill over the 5-year period of record extending from January 2015 through December 2019. The Technical Report will address each of the Items 1 through 8 presented in Rule 62-701.510(8)(b).

A concise Executive Summary of findings, conclusions and recommendations for permit modifications derived from the water quality monitoring evaluation will be presented in the Technical Report.

TCG will respond to review comments of the Technical Report and make appropriate changes and revisions, if any, to the Technical Report. The final work product will be delivered to S2Li for incorporation with the Landfill Stabilization Report being prepared by S2Li. Descriptions of, and justifications for, proposed monitoring plan modifications will be incorporated and presented as separate sections in the water quality monitoring Technical Report.

**TASK 2** TCG will prepare for and attend two project meetings as part of the Landfill Stabilization Report and FDEP submission process: One meeting with S2Li/Nassau County to discuss relevant project issues, and; one meeting with the FDEP Northeast District Office in Jacksonville.

#### **ESTIMATED PROFESSIONAL FEES**

TCG proposes to complete the above Cope of Services on a not-to-exceed fee basis in accordance with the hourly fee schedule identified in Attachment A to this proposal. We will not exceed this fee estimate unless the Scope of Services is increased and approved by S2Li prior to execution of additional services. Estimated professional labor hours and fees to the complete the work identified in this proposal are presented in Attachment A.

#### **SCHEDULE OF PROJECT COMPLETION**

TCG will complete Work Task 1 and deliver a draft document (completed water quality monitoring Technical Report) to S2Li on or before May 1, 2020. Time of completion for Work Task 1 will be determined by, and conform to, S2Li's schedule. Work Task 2 will be completed on demand by S2Li/Nassau County and the FDEP.

We trust our proposal is suitable for your budgeting and contracting needs. If you have any questions or require additional information regarding the Scope of Services for this project, please contact the undersigned at your convenience. We look forward to being of helpful assistance to S2Li in successful completion of this assignment for Nassau County and to the successful conclusion of the permitting process to the benefit of your client.

Very truly yours,  
**THE COLINAS GROUP, INC.**



Richard L. Potts, Jr., P.G.  
Principal Consultant  
FL P.G. Reg. No.1113

TCG PROPOSAL NO. P-595

ATTACHMENT A

HYDROGEOLOGICAL SERVICES FOR  
5-YEAR WATER QUALITY MONITORING REPORT 2015-2019  
WEST NASSAU CLOSED CLASS I LANDFILL  
NASSAU COUNTY, FLORIDA

ESTIMATED MAN-HOURS BY LABOR CATEGORY

LABOR CATEGORY	TASK 1	TASK 2
Principal Consultant	16	16
Sr. Hydrogeologist	40	---
Staff Hydrogeologist	48	---
Draftsperson/CAD Op.	---	---
Clerk/Word Processor	8	---

ESTIMATED PROFESSIONAL LABOR FEE

Principal Consultant	32 Hours @ \$152.80/Hour.....	\$ 4,889.60
Sr. Hydrogeologist	40 Hours @ \$123.50/Hour.....	4,940.00
Staff Hydrogeologist	48 Hours @ \$ 90.50/Hour.....	4,344.00
Draftsperson/CAD	0 Hours @ \$ 60.00/Hour.....	0.00
Clerk/Word Proc.	8 Hours @ \$ 39.50/Hour.....	<u>316.00</u>

**TOTAL ESTIMATED LABOR FEE** **\$ 14,489.60**