

PUBLIC NOTICE  
AGENDA  
PROFESSIONAL SERVICES EVALUATION COMMITTEE MEETING  
Thursday, April 5, 2018, 10:00 a.m.  
Eighth Floor, Conference Room 851  
Ed Ball Building, 214 N. Hogan Street  
Jacksonville, FL 32202

Committee Members: Gregory Pease, Chairman  
Patrick Greive, Treasury  
Jeff Close, OGC

Subcommittee Members	ITEM #	TITLE & ACTION	MOTION	CONTR EXP	OUTCOME
Ed Randolph  Michael Thomas	P-16-17	Contract Amendment No. 1 <i>(Deferred 3/29/18)</i> Civil Engineering and Land Planning Services for Cecil Commerce Center/Alliance Florida Office of Economic Development	That Contract No. 6398-24 between the City of Jacksonville and England-Thims and Miller for civil engineering and land planning services for Cecil Commerce Center/Alliance Florida is amended to: (i) ratify the contract from March 20, 2018 to effective date of renewal and exercise the first of two one-year renewals extending the period of service to March 20, 2019, with one renewal option remaining; and (ii) incorporate the attached revised contract fee summary identified as Exhibit "C". The maximum indebtedness shall remain a not-to-exceed amount of \$250,000.00. All other terms and conditions shall remain the same except for such changes as the Office of General Counsel may deem appropriate to ensure compliance with the City's ordinances, Procurement policies and procedures and applicable federal and state laws.	03/20/18	
Tammy Emmons  Leah Hayes	P-07-15	Contract Amendment No. 4 Consultant Services for the Development/Administration & Grading of Promotional Examination Employee Services Department	That Contract No. 9482-01, originally executed May 22, 2015, between the City of Jacksonville and Ergometrics for consultant services for the development, administration & grading of promotional examinations, is amended to increase the maximum indebtedness by \$78,000.00 for the services to a not-to-exceed amount of \$292,000.00. All other terms and conditions shall remain the same except for such changes as the Office of General Counsel may deem appropriate to ensure compliance with the City's ordinances, Procurement policies and procedures and applicable federal and state laws.	03/31/19	
Jeff Foster  Will Williams	P-07-10	Contract Amendment No. 14 Trail Ridge Landfill Expansion Permitting and Design Department of Public Works	That Contract No. 6354-13 between the City of Jacksonville and CDM Smith, Inc., for Trail Ridge Landfill expansion permitting and design is amended to: (i) incorporate the attached Scopes of Work identified as Exhibit 'AA' & Exhibit 'AC'; (ii) incorporate the attached Contract Fee Summaries identified as Exhibit 'AB' in the amount of \$570,356.00 & Exhibit 'AD' in the amount of \$200,000.00; thereby (iii) increasing the maximum indebtedness by \$770,356.00 to a new not-to-exceed total maximum of \$9,699,647.00. All other terms and conditions shall remain the same except for such changes as the Office of General Counsel may deem appropriate to ensure compliance with the City's Ordinances, Procurement policies and procedures and applicable Federal and State laws.	<i>To project completion</i>	

MEETING ADJOURNED:

cc Council Auditor  
Subcommittee Members



ONE CITY. ONE JACKSONVILLE.

# City of Jacksonville, Florida

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*Lenny Curry, Mayor*

City Hall at St. James  
117 W. Duval St.  
Jacksonville, FL 32202  
(904) 630-CITY  
www.coj.net

## MEMORANDUM

Date: March 20, 2018

To: Gregory Pease, Chairman  
Professional Services Evaluation Committee (PSEC)

From: Ed Randolph, Director of Business Development  
Office of Economic Development(OED) 

Michael Thomas, Real Estate Manager  
Office of Economic Development (OED) 

Subject: **P-16-17 Civil Engineering and Land Planning Services for Cecil Commerce Center/Alliance Florida - Contract Amendment No. 1**

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Contract 6398-24 between the City and ETM is set to expire March 20, 2018. All work has been performed satisfactorily for the past year. Section 1.2 of the contract allows for two, one year renewal options. Therefore, we wish to extend the contract for the 1st of the two one-year renewals. A revised rate sheet is attached as "Exhibit C".

Accordingly, this is to recommend that Contract # 6398-24, originally executed May 8, 2017, between the City of Jacksonville and England-Thims and Miller, Inc., for Civil Engineering and Land Planning Services for Cecil Commerce Center, be amended to exercise the first of two one-year renewal options to extend the Period of Service from March 20, 2018 to March 20, 2019, and revise the hourly rates as depicted in Exhibit A. The maximum indebtedness remains unchanged. All other terms and conditions of the Contract shall be as provided in the Request for Proposals and the Department of Public Works Prototype Agreement for professional services, as applicable.

Thank you for your consideration of this request.

## Thomas, Michael

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**From:** Robert Kermitz <KermitzR@etminc.com>  
**Sent:** Monday, December 04, 2017 6:20 PM  
**To:** Thomas, Michael  
**Subject:** RE: Rate Sheet  
**Attachments:** New Contract - Civil Engineering and Land Planning Services for Cecil Commerce Center; Fully executed final contract #6398-23 NPDES Engineering and Permit Admin Svcs Annual Contract.pdf; Cecil Commerce Fee Proposal Sheet 12-5-2017.xlsx

**Categories:** Red Category

Mike,

As requested, I have attached an Excel Fee Summary worksheet showing our rates for the Cecil Contract Amendment which are consistent with our 2016 COJ NPDES Contract (also attached, see page 24 of 25 for Fee Sheet). I have also attached our email from April 7, 2017 discussing the need for these adjustments as well as a Contract Time correction.

Thank you for following up on these items. Please contact me if additional information is needed.

**Robert Kermitz**  
Vice President  
England-Thims & Miller, Inc.  
904.265.3112

**From:** Thomas, Michael [<mailto:MikeThom@coj.net>]  
**Sent:** Monday, December 04, 2017 12:30 PM  
**To:** Robert Kermitz <[KermitzR@etminc.com](mailto:KermitzR@etminc.com)>  
**Subject:** Rate Sheet

I am going to being the PSEC process to adjust ETM's rates as we have discussed. Do you happen to have handy your rate sheet used for Public Works projects?

Michael R. Thomas  
Real Estate Manager  
City of Jacksonville  
Office of Economic Development  
117 West Duval Street, Ste 275  
Jacksonville, FL 32202  
(904)630-3650

5. **Contract Documents.** This Contract consists of the following documents which are hereby incorporated as if fully set forth herein and which, in case of conflict, shall have priority in the order listed:

- This document, as modified by any subsequent signed amendments
- Any amendments to the RFP
- Specific Information Regarding the RFP (Section 1 of the RFP)
- Description of Services (Section 4 of the RFP)
- General Instructions to Respondents (Section 2 of the RFP)
- General Terms and Conditions of Agreement (Section 3 of the RFP)
- Any Purchase Order under the Contract
- The Response, provided that any terms in the Response that are prohibited under the RFP shall not be included in this Contract.

6. **Notices.** All notices under this Agreement shall be in writing and shall be delivered by certified mail, return receipt requested, or by other delivery with receipt to the following:

As to the CITY:

City of Jacksonville  
Office of Economic Development, Suite 275  
117 W. Duval Street  
Jacksonville, Florida 32202

As to the CONTRACTOR:

England, Thims & Miller, Inc.  
14775 Old St. Augustine Road  
Jacksonville, Florida 32258  
Attn: Joe Tarver

7. **Contract Managers.** Each Party will designate a Contract Manager during the term of this Contract whose responsibility shall be to oversee the Party's performance of its duties and obligations pursuant to the terms of this Contract. As of the Effective Date, CITY'S Contract Manager is Michael Thomas, and the CONTRACTOR'S Contract Manager is Joe Tarver. Each Party shall provide prompt written notice to the other Party of any changes to the Party's Contract Manager or his or her contact information; provided, such changes shall not be deemed Contract amendments and may be provided via email.

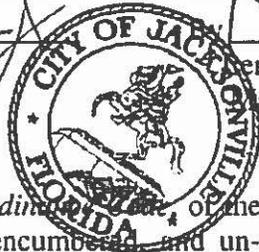
8. **Entire Agreement.** This Contract constitutes the entire agreement between the parties hereto for the Services to be performed and furnished by the CONTRACTOR. No statement, representation, writing, understanding, agreement, course of action or course of conduct, made by either party or any representative of either party, which is not expressed herein shall be binding. CONTRACTOR may not unilaterally modify the terms of this Contract by affixing additional terms to materials delivered to the CITY (e.g., "shrink wrap" terms accompanying or affixed to a deliverable) or by including such terms on a purchase order or

IN WITNESS WHEREOF, the parties have executed this Contract as of the day and year first above written.

ATTEST:

CITY OF JACKSONVILLE

By James R. McCain, Jr.  
James McCain, Jr.  
Corporation Secretary



Lenny Curry  
Lenny Curry  
Mayor

Sam E. Mousa  
Chief Administrative Officer  
For: Mayor Lenny Curry  
Under Authority of:  
Executive Order No. 2015-05

In accordance with the Ordinance of the City of Jacksonville, I do hereby certify that there is an unexpended, unencumbered, and un-impounded balance in the appropriation sufficient to cover the foregoing agreement; and that provision has been made for the payment of monies provided therein to be paid.

[Signature]

Director of Finance  
CITY Contract Number: 6398-24

Form Approved:

[Signature]  
Office of General Counsel

ATTEST:

ENGLAND, THIMS AND MILLER, INC.

By Robert J. Kerwitz  
Signature

Robert J. Kerwitz  
Type/Print Name

Vice President  
Title

By Joseph A. Tarver  
Signature

JOSEPH A. TARVER  
Type/Print Name

EXEC. V.P.  
Title

## **SCOPE OF SERVICES**

### **P-16-17**

- 1. Develop land plans, as needed, for development parcels shown in master plan. The land plans should include but should not be limited to the following: conceptual building size and layout (based on use), proposed retention pond locations, wetland boundaries, points of ingress and egress, and any known easements or other impediments to development.**
- 2. Plan traffic circulation and utility infrastructure to adequately serve development parcels and sub-parcels, as needed.**
- 3. Manage the CCC master stormwater system permits currently in place.**
- 4. Review and modify (if necessary) any traffic concurrency agreements for CCC.**
- 5. Provide topographical and boundary surveys as well as wetland delineations for development parcels, as needed.**
- 6. Provide construction contract management and construction inspection services (CEI) on all City Engineering projects at CCC.**
- 7. Attend all CCC related meetings as requested by OED staff.**
- 8. Coordinate and communicate, at the request of OED staff, with all City and State agencies that regulate development at CCC.**
- 9. Potentially assist in the following projects:**
  - Design/build of a 2 or 4 lane road that will access the megasite portion of Cecil Commerce Center North**
  - Ongoing sitewide drainage maintenance and improvement**
  - Installation of a drainage structure under New World Avenue west of its intersection with Cecil Commerce Parkway**
- 10. Any and all such other engineering and land planning services, which are deemed necessary by the OED staff, for Cecil Commerce Center.**





# City of Jacksonville, Florida

*Lenny Curry, Mayor*

Employee Services Department  
117 West Duval Street, Suite 100  
Jacksonville, Florida 32202

ONE CITY. ONE JACKSONVILLE.

**Date:** April 2, 2018

## MEMORANDUM

**TO:** Gregory W. Pease, Chief of Procurement Division

**FROM:** Tammy Emmons, Manager of Personnel Services  
Employee Services Department

**Subject:** P-07-15 Consultant Services for the Development/Administration, &  
Grading of Promotional Examinations - JFRD Contract #9482-01

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Employee Services request approval to increase the contract #9482-01 with Ergometrics, to provide development, administration and grading of Uniform Fire & Rescue promotional exams, under the same fees, terms and conditions of the current contract agreement by \$78,000. This is to ensure there is adequate funding to cover ongoing evaluations and assessments through the end of the contract period March 31, 2020. This will revise the maximum indebtedness from \$214,000 to a not-to-exceed amount of \$292,000.



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# City of Jacksonville, Florida

*Lenny Curry, Mayor*

Department of Public Works  
Solid Waste Division  
1031 Superior Street  
Jacksonville, FL 32254  
(904) 255-7500  
www.coj.net

April 2, 2018

04/02/18 15:36:24  
Procurement Division

**TO:** Greg Pease, Chief, Procurement Division

**THRU:** John Pappas, P.E., Director, Department of Public Works

**From:** Jeffrey S. Foster, P.G, SW Environmental Engineer Manager  
Will Williams, Chief, Solid Waste Division

**SUBJECT:** CDM Smith, Inc. Amendment #14  
Trail Ridge Landfill Expansion Permitting and Design  
Contract No. 6354-13, P-07-10

The Solid Waste Division is requesting approval of Amendment #14 for two separate scopes of work. The first scope of work involves the design and permitting of the first landfill gas collection system for the new disposal unit 6. Municipal solid waste disposal within unit 6 is at the horizontal footprint and vertical elevation of the basal terrace side-slope areas where an active gas system is required to be installed pursuant to US EPA Title V air permitting requirements. The Scope of Work for the permitting effort is contained in Exhibit AA to the contract in the amount of \$570,356.00 as detailed in the Contract Fee Summary Exhibit AB. The second scope of work is for small landfill projects that require engineering designed repairs or replacements to the existing active landfill disposal unit(s) or closure areas. Typical areas on the hill for disposal units 1-5 needing these types of services generally cover specialized pumping and monitoring equipment, leachate collection systems, gas collections systems, stormwater systems, seep repair in final closure cover areas or any other area on the current hill that requires engineering design and oversight that requires reporting to the Florida Department of Environmental Protection. The Scope of Work for these types of small engineering services is contained in Exhibit AC to the contract in the amount of \$200,000.00 on a time and materials basis as detailed in the Contract Fee Summary AD and Table 1.

Funding is available in PWSW44K SW0005 06 069505. The current contract amount for the base contract and Amendments 1 through 13 is \$8,929,291.00. Approval of Amendment #14 in the total amount of amount of \$770,356.00 will bring the maximum indebtedness to the City's not to exceed amount of \$9,699,647.00. Nothing contained herein shall be amended, modified or otherwise revised without prior PSEC and Mayor's approval. If there are any questions, please do not hesitate to contact me at this office (904) 381-8205. Please advise when this item will be placed on the agenda so a representative of DPW can attend.

JSF/jsf - Attachments

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**EXHIBIT AA**  
**AMENDMENT 14 TO TASK AUTHORIZATION 6354-13**  
**FOR**  
**TRAIL RIDGE LANDFILL CLASS I CELL EXPANSION PROJECT**  
**LANDFILL GAS COLLECTION SYSTEM DESIGN**

This Authorization, when executed, shall be incorporated in and become part of the Agreement for Professional Services between the City of Jacksonville (OWNER), and CDM Smith Inc. (CONSULTANT), dated February 9, 2011 hereafter referred to as the Agreement.

**PROJECT BACKGROUND**

CONSULTANT will assist the OWNER with the design, permitting, bidding and construction of a new Class 1 landfill facility (Phases 6-14) at the Trail Ridge Landfill (TRLF) site. The existing landfill has been developed via 5 stages of cell construction (Phases 1-5) over 20 years and is within 2-3 years of reaching capacity. CONSULTANT has completed the following work related to the TRLF Class I Cell Expansion Project.

Initial Authorization – Developed a Master Plan for the build out of the TRLF site. The Master Plan recommended three phases, Phases 6 through 8 (now numbered 6 through 14), for full site buildout and evaluated various options for the next cell construction, Phase 6 expansion. The initial authorization also initiated field data collection for design of the TRLF Expansion Project.

Amendment 1 – Developed permit application and supporting documentation for the TRLF Expansion Environmental Resource Permit (ERP).

Amendment 2 – Continued data collection and developed permitting plans and specifications for Phase 6A through 6E TRLF Expansion Florida Department of Environmental Protection (FDEP) Solid Waste Permit. Amendment 2 included conceptual stormwater modeling, development of methane gas management plan, geotechnical stability analysis, and ongoing hydro-geological modeling.

Amendment 3 – Authorized investigation of expansion of the on-site borrow pit for use in future landfill activities. This amendment was a partial authorization of the Amendment 3 activities at TRLF. The remaining activities were authorized under Amendment 4.

Amendment 4 – Authorized funding for the remaining work described and approved in Amendment 3, including continued design and permitting activities for Phases 6 through 14 with development of solid waste construction permit application and Phase 6 construction documents. This amendment also included bidding services.

Amendment 5 – this amendment is a continuation of the work begun under the previous four amendments to obtain the ERP and FDEP Solid Waste Construction Permits needed to construct Phases 6-14 of the Trail Ridge Landfill Expansion. This amendment included activities to apply for a major modification of the site's existing Prevention of Significant Deterioration (PSD) permit, renew the site's

solid waste operating permit, and design a new access road for operational traffic. CONSULTANT submitted and received the FDEP solid waste construction permit, operations permit, and 2014 financial assurances for the planned expansion area under this amendment.

Amendment 6 – this amendment authorized Engineering Services During Construction to support the TRLF Phase 6 Expansion Project. The amendment included conforming contract documents, holding a pre-construction meeting, conducting shop drawing review, issuing designer clarifications, addressing requests for additional information and providing resident project representation (RPR) for the project. These services were authorized through December 2015.

Amendment 7 – this amendment authorized design and permitting of a limerock construction access road from County Road 228 to Gilridge road. This road will provide access to the landfill and borrow areas for construction vehicles. This amendment also included intersection improvements to the perimeter road encircling Phases 1-5 of the existing landfill to facilitate re-routing of operations traffic to the new western access road. Re-routing of operations traffic is a key component of the construction sequence for the new Phase 6 cell.

Amendment 8 – this amendment authorized engineering services during construction for January 2016 through December 2016. Additionally, this scope includes activities to perform financial assurances reporting to the Florida Department of Environmental Protection (FDEP) associated with the site Solid Waste Permit, and perform various monitoring and maintenance tasks associated with onsite mitigation areas to maintain compliance with the site Environmental Resource Permit (ERP).

Amendment 9 - this amendment authorized engineering services during construction for January 2017 through June 2017. Additionally, this scope includes activities to perform various monitoring and maintenance tasks associated with onsite mitigation areas to maintain compliance with the site Environmental Resource Permit (ERP).

Amendment 10 – this amendment authorizes a seepage analysis study of the borrow pit south of Landfill Phases 1-5 to improve dewatering activities and address erosion concerns.

Amendment 11 - this amendment includes activities to perform investigation and recommendation for pretreatment of the landfill leachate prior to disposal at the Buckman WWTP, due to interference with the WWTP UV disinfection process.

Amendment 12 - this amendment extended geotechnical conformance testing from August 2017 through October 2017.

Amendment 13 – this amendment extended engineering services during construction through June 2018 due to an extension of the construction schedule by the Contractor.

### SCOPE OF WORK

This scope of work for Amendment 14 is a continuation of the work begun under the previous amendments to design and construct the Phase 6 Trail Ridge Landfill Expansion. This scope includes activities to permit and design the gas collection system for the Phase 6 cell which includes the gas collection wellfield, blower, flare, and gas conditioning system. The following is a description of the

services to be provided under this Amendment No. 14 to the Task Authorization. The non-sequential order of some tasks and subtasks listed below is a result of tasks either being authorized under previous amendments or the work is to be authorized as part of future amendments.

**TASK 1 - KICKOFF MEETING**

There is no change to Task 1. All work has been completed for this task.

**TASK 2 - DATA COLLECTION AND REVIEW**

There is no change to Task 2. All work has been completed for this task.

**TASK 3 - TRLF EXPANSION LANDFILL CELL ALTERNATIVES DEVELOPMENT**

There is no change to Task 3. All work has been completed for this task.

**TASK 4 - ANALYSIS OF PHASE 6 CELL ALTERNATIVE LOCATIONS**

There is no change to Task 4. All work has been completed for this task.

**TASK 5 - INITIATE FIELD SITE INVESTIGATION**

There is no change to Task 5. All work has been completed for this task.

**TASK 6 - STORMWATER MODELING**

There is no change to Task 6. All work has been completed for this task.

**TASK 7 - PROJECT MANAGEMENT**

Task 7 is amended as follows:

CONSULTANT will perform project management duties for the additional tasks and time period described in Amendment No. 14. CONSULTANT will set up a project status report format, meetings schedule, schedule updates and other activities required as part of the management of this project.

**TASK 8 - WETLAND LONG TERM HYDRATION EVALUATION**

There is no change to Task 8. All work has been completed for this task.

**TASK 9 - FLOOD ELEVATION DETERMINATION**

There is no change to Task 9.

**TASK 10 - ENVIRONMENTAL RESOURCE PERMITTING**

There is no change to Task 10. All work has been completed for this task.

**Subtask 10.9 - Forestry Management Plan Support**

There is no change to this task.

**Subtask 10.10 - NID Dam Breach Analysis**

There is no change to this task. All work has been completed.

### **Subtask 10.11 - ERP for Construction Access Road**

In Amendment 7, CONSULTANT was authorized to design and submit permit application for a construction access road (CAR) from County Road 228 to Gilridge Road. During design, it was determined that an existing conservation easement, established by ERP #16-307659-002-EI, must be modified to accommodate the wider roadway and accompanying stormwater infrastructure. CONSULTANT will coordinate with the Florida Department of Environmental Protection (FDEP) to review easement documents, calculate functional loss and the replacement of mitigation as a result of the conservation easement release as required by FDEP guidelines. CONSULTANT will also coordinate the release of the easements, and coordinate with the mitigation bank provider to obtain all necessary documentation to purchase the replacement credits. This task also includes a new legal description of the modified easement.

### **TASK 11 - DESIGN AND PERMITTING**

These tasks were initially authorized under Amendment 5; however, when the EPA delegated permitting authority to the FDEP, these tasks were placed on hold. Amendment 6 removed these tasks and associated funding. Amendment 14 reauthorizes the permitting tasks associated with the Phase 6 gas collection system.

#### **Subtask 11.16 - Prevention of Significant Deterioration (PSD) Air Permitting – Major Modification**

The TRLF is currently classified as a major PSD source of air pollution. The TRLF's current PSD Preconstruction Air Permit (No. 0310358-012-AC/PSD-FL-374C) covers emission units associated with the existing 176-acre landfill:

- MSW Landfill collection system (two 2,500 scfm blowers)
- 5,000-scfm open flare
- 1,600-scfm open flare
- Fugitive dust emissions from unpaved roads and landfill work areas
- 10 Caterpillar Model No. G3520C landfill-gas-fired engine generators

The additional emissions for the Phase 6 cell will be included in a major modification for the existing PSD. For this application, only fugitive GHG emissions and fugitive dust emissions from Phase 6 will be considered. Because the OWNER would like flexibility to use the landfill gas as a combustion source at the landfill, or for offsite use as a fuel in the OWNER's fleet vehicles, emissions of combustion-related pollutants will be estimated based on the most conservative use of the gas. The existing on-site 5,000-cfm and 1,600-cfm flares would remain unchanged, and would provide back-up control for the proposed Expansion. If the OWNER decides to include on-site emissions sources (e.g., additional engine generators) at a later date, a separate modification will be required.

The tasks below detail the development of the PSD major modification application.

#### **Subtask 11.16.1 - Meetings and Communication**

CONSULTANT will coordinate with FDEP during the application development and approval process. CONSULTANT will work to expedite the approval process and keep FDEP apprised of the status and content of the first-of-its-kind Best Available Control Technology (BACT) analysis and incorporate appropriate regulatory feedback. CONSULTANT will prepare for and attend up to four pre-application teleconference calls with FDEP representatives to review application contents, discuss requests for information, or to negotiate permit conditions. CONSULTANT will also prepare for and attend up to four progress meetings/teleconference calls with the OWNER.

**Subtask 11.16.2 - PSD Permit Application Forms**

The PSD major modification application will be prepared using the Electronic Submission of Application (ELSA) electronic system versions of the FDEP's air permit application forms. CONSULTANT will complete the FDEP Air Application Long Form (FAC 62-210.900(1)) for the landfill expansion.

**Subtask 11.16.3 - PSD Permit Application Supporting Documentation**

CONSULTANT will prepare required permit application attachments. The list of analyses required by the federal PSD regulations (40 CFR 52.21) for the PSD permit Modification is shown below, modified as directed by the EPA Region 4 and FDEP at the pre-permitting meeting for the fugitive GHG and dust analyses. This scope is also based on EPA, March 2011, PSD and Title V Permitting Guidance for Greenhouse Gases, Report No. EPA-457.B-11-001. The supporting documentation shall include the following:

- 1.0 Project Overview and Summary of Best Available Control Technology (BACT). This documentation will include site location, description of the landfill expansion, and Air Quality and BACT summaries.
- 2.0 Regulatory Review. This section will include a description of the FDEP's authority to administer the PSD program, Title V and PSD Applicability, and a description of applicable regulations including PSD/Title V Tailoring Rule (75 FR 31514, June 3, 2010), NSPS for Municipal Solid Waste Landfills (40 CFR 60 Subpart WWW), and the draft revisions to this Rule (71 FR 53272, Sept. 8, 2006), and National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Municipal Solid Waste Landfills (40 CFR 63 Subpart AAAA).
- 3.0 Air Pollutant Emissions. This section will document estimates of dust and methane emissions for the Phase 6 Expansion area.
  - 3.1 Fugitive Dust Emissions will be modeled for operational activities at Phase 6 build-out, such as placement of MSW at working face, daily cover, interim and final cover, and vehicle travel on paved and unpaved on-site roads. Equations in EPA's Compilation Air Pollutant Emission Factors, Report No. AP-42, will be used.
  - 3.2 Uncontrolled Methane Emissions from Phase 6 Expansion modeled using EPA's LANDGEM model and forecasted MSW placement rates to build-out
  - 3.3 Controlled Methane Emissions will be calculated based on estimated collection efficiency (currently assumed to be 75 percent) for a base-case NSPS-compliant collection system at full build-out. For the most conservative estimates, collected landfill gas (LFG) would be used on site

for energy generation or leachate treatment. Uncollected LFG and methane would be counted as fugitive emissions from the proposed Expansion.

**4.0 Best Available Control Technology (BACT) Review.** This section will include BACT analyses for methane collection efficiency for the Phase 6 expansion. It is assumed that a formal BACT analysis is not required for fugitive dust control. The BACT analysis will be conducted following the procedure in EPA, 1990, Draft New Source Review Manual:

- Identify all available control technologies – based on guidance from EPA Region 4, and from Appendix G in the PSD and Title V Permitting Guidance, the collection technologies to be considered would include well spacing and installation of collection system earlier than required by NSPS.
- Eliminate technically infeasible options
- Rank remaining collection technologies by collection effectiveness.
- Evaluate economic feasibility (\$ per ton of methane collected) including development of preliminary designs and layouts for the candidate collection systems to support cost estimates and estimated collection efficiencies. This task will include soliciting vendor quotes for collection system components; estimating installation, capital, and operating costs associated with each candidate system, calculating the net present value of the annualized costs, and developing a basis for estimating the in-place collection efficiency of each candidate system.
- Consider the relative energy usage and environmental impact (such as hydrogen sulfide and odor issues) of each candidate collection option.
- Recommend BACT based on the results of the assessment.

**5.0 Air Quality Analysis.** Dispersion modeling is not required for GHGs because no National Ambient Air Quality Standards (NAAQS) have been established for them (EPA, Region 4, pre-permitting teleconference, August 16, 2013; and EPA, March 2011). However, dispersion modeling could be required for fugitive dust if the fugitive dust emission rate calculations show the potential for controlled emissions to exceed the PSD Significant Increase threshold. This scope includes an assumption that screening-level dispersion modeling for fugitive dust would be required. Results would be compared with the NAAQS and PSD Class II Increments for particulate matter less than 10 microns in diameter (PM<sub>10</sub>).

**6.0 Additional Impact Analysis.** EPA Region 4 stated that PSD Additional Impact Analyses for Visibility Impacts, Growth Analysis, Class I and Pristine Area Air Quality Analysis, and Soils and Vegetation Impact Analysis would not be required for GHGs. (EPA, Region 4, pre-permitting teleconference, August 16, 2013; and EPA, March 2011). CONSULTANT assumes that these analyses also would not be required for fugitive dust, but will confirm with FDEP after completing the fugitive dust emission rate calculations.

The draft permit application package will be prepared and submitted to the OWNER for review and comment. CONSULTANT will respond to OWNER comments, revise the draft permit application package, and submit the final PSD major modification application to FDEP for review and permit issuance.

**Subtask 11.16.4 - Post Permit Submittal Activities**

After submittal of the final Major Modification PSD Permit Application to FDEP, CONSULTANT will provide the following services:

- Written responses to up to one Request for Additional Information from FDEP
- Review of pre-draft and draft permit conditions, and submittal of written comments to FDEP
- Attendance at a PSD public hearing, if one is held (costs for arranging and conducting the public hearing would require an amendment to this scope of work)

Costs associated with this subtask have been assumed to be \$20,000 which will not be exceeded without prior authorization from the OWNER.

**Subtask 11.17 - Construction Sequencing Plan**

There is no change to this subtask.

**Subtask 11.18 - Design of Southern Construction Access Road**

There is no change to this subtask.

**Subtask 11.19 - Gilridge Road Intersection Improvements**

There is no change to this subtask.

**Subtask 11.20 - Financial Assurances 2015**

There is no change to this subtask.

**Subtask 11.21 - Financial Assurances 2016**

There is no change to this subtask.

**Subtask 11.22 - Financial Assurances 2018**

CONSULTANT will develop a letter report calculating estimated closure and long-term care costs for Trail Ridge Landfill Phases 1-6. The letter report will describe the methodology used to calculate closure and long-term care costs for both the existing Phases 1-5 and Phase 6 Expansion Area. Construction unit prices will be updated and verified based on TRLF's most recent closure. FDEP Form 62-701.900(28) will be completed and submitted with the letter report to FDEP. Remaining life of cell estimates will be provided by Waste Management Inc. or their representative. Electronic copies of all submittals will be provided to the OWNER and Waste Management.

**Subtask 11.23 - Financial Assurances 2019**

CONSULTANT will update the 2018 Financial Assurances letter report to reflect ongoing closure activities and recalculate closure and long-term care costs. Unit prices developed for the 2015 report will be used with an escalation factor to estimate closure and long-term care costs for 2019. Remaining life of cell

estimates will be provided by Waste Management Inc. or their representative. FDEP Form 62-701.900(28) will be completed and submitted with the letter report to FDEP. Electronic copies of all submittals will be provided to the OWNER and Waste Management.

#### **Subtask 11.24 - Phase 6 Gas Collection System Design**

##### ***Subtask 11.24.1 - Modeling and Analysis***

LandGEM gas production modeling and KYPipe system conveyance modeling will be conducted. The modeling will be used to determine LFG pipe sizing in areas where no preexisting sizing of connecting pipes would dictate pipe sizing.

LFG condensate management capacity analysis and recommendations for condensate handling will be done to determine the most efficient method(s) of conveying condensate generated in the LFG piping to existing collection/disposal points.

##### ***Subtask 11.24.2 - LFG System Design***

The LFG system will be designed to generally accepted design parameters and within the design guidelines set in the New Source Performance Standards. The system design may include horizontal collectors, vertical LFG wells, header and lateral piping, wellheads, valves and other appurtenances which would provide for a complete and operable LFG collection and conveyance system. The conceptual LFG design included with the Trail Ridge Landfill Solid Waste Construction and Operations permit Application (2014) will be used as the starting point for this task. Changes in industry practice since the preliminary design will be incorporated by CDM Smith and reviewed with both the Owner, Landfill Operator, and LFG system operator for concurrence.

The proposed LFG system will be designed to operate in conjunction with the existing LFG system. The proposed LFG system will be designed with the operational flexibility to direct LFG to the existing user, TRLF Energy LLC, and/or the existing flare, or a new user and/or flare to be determined at a later date.

To provide the desired operational flexibility, the design shall include a blower station with a tie-in to existing LFG piping, a gas conditioning system, and an open flare should one be required (if the existing flare cannot be used). The gas conditioning system includes gas filtration and gas dehydration appropriate for use in a genset or flare, but does not include treating LFG to natural gas pipeline standards.

Pneumatic condensate pumps will be provided at the gas conditioning system and the condensate knockout pot at the flare. The existing compressor system will be used to operate these pumps. Design of a new compression system is not included in this scope of work. The condensate will be routed to the existing leachate/condensate tank farm. No additional condensate storage is included in this scope of work.

Provisions will be provided for a temporary generator connection for the gas conditioning system and flare. Design of a permanent generator system is not included in this scope of work.

CONSULTANT will review draft LFG design documents with the OWNER at the 30 percent, 60 percent, and 90 percent design phases. The expectations for each design deliverable are outlined below.



M-2	LFG Gas Conditioning System
MD-1	Mechanical Details I
MD-2	Mechanical Details II
Electrical	
E-1	Electrical Legend I
E-2	Electrical Legend II
E-3	Electrical Site Plan
E-4	One Line Diagrams
Instrumentation	
I-1	Legend and System Architecture
I-2	Landfill gas Blower
I-3	Landfill Gas Flare
I-4	Installation Details

CONSULTANT will prepare detailed specifications to be included with the contract documents. These drawings and specifications will form the technical documents for public bidding of the project. COJ standard specifications describing general, non-technical requirements and OWNER's bidding requirements will be used in order to compile a complete set of contract documents.

***Subtask 11.24.4 - Opinion of Probable Construction Cost***

CONSULTANT will prepare OPCCs at the 60 percent and 100 percent completion stages using generally accepted costs for this area of the country for this type of work. These estimates will be submitted to the City for review and planning purposes

***Subtask 11.24.5 - Coordination with Waste Management Inc.***

Waste Management Inc. (WMI) provided an overview of best management practices to identify and mitigate elevated temperature events in landfills to CONSULTANT and OWNER on February 8, 2018. CONSULTANT will coordinate with the OWNER and WMI to incorporate applicable WMI design features to mitigate elevated temperature events. Possible design features may include interconnected horizontal collection wells and tiered horizontal and vertical collections wells. CONSULTANT will also coordinate with TRLF WMI operations to determine a fill sequence that will facilitate installation of the designed gas collection system and reduce installation costs.

***Subtask 11.24.6 - Preliminary Evaluation of Renewable Natural Gas (RNG) as a Revenue Stream***

CONSULTANT will use projected gas production for Phase 6-14 to evaluate potential use of LFG as a revenue stream for the OWNER. If treated to pipeline quality, the RNG offers the opportunity to generate revenue from sale of Renewable Identification Numbers (RINs) via compliance with EPA's Renewable Fuel Standards for a D3 advanced biofuel credit.

CONSULTANT will use the gas generation estimates developed in Task 11 as well as existing information on LFG quality to establish the baseline for gas generation for Phase 6-14. CONSULTANT will contact the local gas utility, TECO Peoples Gas, to identify the location, capacity, and quality standards for the nearest natural gas pipeline to TRLF. This information will be used with a bioenergy model developed by CONSULTANT to model treatment requirements and financial scenarios to evaluate the feasibility of

using LFG to supply the local natural gas pipeline and generation of RIN credits. The bioenergy model will have capability of modeling future flow conditions for future phases to estimate financial feasibility.

The deliverable for this task will be a technical memorandum summarizing the preliminary evaluation of using LFG as a new revenue stream for the OWNER based on gas production estimates, gas quality requirements, treatment capital and operational costs, and value of RIN credits in existing market.

**TASK 12 - SOLID WASTE LANDFILL CONSTRUCTION PERMITTING**

There is no change to Task 12. All work has been completed for this task.

**TASK 13 - QUALITY ASSURANCE AND QUALITY CONTROL**

There is no change to Task 13. All work has been completed for this task.

**TASK 14 - ECONOMIC EVALUATION**

There is no change to Task 14. All work has been completed for this task.

**TASK 15 - PUBLIC INFORMATION PROGRAM ASSISTANCE**

There is no change to Task 15. All work has been completed for this task.

**TASK 16 - BIDDING SERVICES**

Task 16 is amended to add the following tasks.

**Subtask 16.4 - Phase 6 Gas System Bidding Support and Addenda**

CONSULTANT will assist with the advertisement of the bid, address questions on bid documents forwarded by the OWNER, attend a pre-bid conference, and issue up to two addenda, as necessary. The OWNER will advertise for bids, supply drawings and specifications to contractors, and coordinate addenda distribution. The OWNER will be responsible for the cost of copying the plans and specification that are made available to prospective bidders.

**Subtask 16.5 - Phase 6 Gas System Evaluation of Bidders**

CONSULTANT will attend the bid opening, evaluate bids based on references, pricing, and scope of services, and recommend a bidder to the OWNER for award of construction contract.

**Subtask 16.6 - Phase 6 Gas System Conformed Documents**

After issuance of a Notice of Award by the OWNER, CONSULTANT shall assist the OWNER in preparing the construction contract, request and review the bid package provided by the Contractor, and advise the OWNER on finalizing the contract.

CONSULTANT will conform the drawings and specifications, incorporating addenda issued during the bidding process. The conformed drawings and specifications will become part of the contract documents and will be used throughout the construction of the project as the basis for determining conformance with project design. Five hard copies, signed and sealed by the engineer(s) of record will be provided to the OWNER, one electronic copy will be provided to the OWNER, and two AutoCAD format files will be provided to the OWNER and the CONTRACTOR who is awarded the project.

**TASK 17 - GENERAL ENGINEERING SERVICES DURING CONSTRUCTION**

There is no change to Task 17.

**TASK 18 - SPECIAL SERVICES**

There is no change to Task 18.

**Subtask 18.2- Leachate Treatability Study**

There is no change to Task 18.2

**TASK 19 - RESIDENT PROJECT REPRESENTATIVE SERVICES DURING CONSTRUCTION**

There is no change to Task 19.

**TASK 20 - NEW CELL GEOSYNTHETIC INSTALLATION QA/QC CONSTRUCTION SERVICES**

There is no change to Task 20.

**TASK 21 - BORROW PIT EVALUATION AND EXPANSION**

There is no change to these subtasks.

**TASK 22 - MEETINGS, PROJECT MANAGEMENT AND QUALITY CONTROL**

Activities performed under this task consist of those general functions required to maintain the project on schedule, within budget, and that the quality of the work products defined within this scope is consistent with CONSULTANT's standards and OWNER's expectations. Specific activities included are identified below:

**Subtask 22.1- Project Kick-Off and Progress Meetings**

CONSULTANT will prepare a separate project kickoff for the design and permitting of the Phase 6 gas collection system. Progress and regulatory meetings will be conducted as previously outlined in the tasks above.

**Subtask 22.2- Project Quality Control (QC) Technical Review**

CONSULTANT will conduct three quality reviews at the 10-percent, 30-percent, and 60-percent milestones. The quality review will consist of an independent review by experienced and technically qualified personnel. Subjects addressed include will include the adequacy and appropriateness of technical data; pertinent application of existing and new technology; and whether a sound, practical, and cost-effective approach has been made.

**Subtask 22.3- Project Status Reports**

CONSULTANT's project manager will prepare and submit monthly written status reports for an anticipated project life of seven months to accompany monthly invoices.

**ASSUMPTIONS**

The following assumptions are included in this Amendment No. 9:

1. OWNER shall be responsible for all permit or review fees associated with project.

2. OWNER shall bear all costs incident to compliance with the requirements of the OWNER's Responsibilities.
3. The gas conditioning system includes gas filtration and gas dehydration appropriate for use in a genset or flare, but does not include treating LFG to natural gas pipeline standards.
4. Pneumatic pumps provided in this design will utilize the existing onsite air compressor. Design of a new air compressor system is not included in this scope of work.
5. Permanent generator capacity is not included in this scope. Provisions for connection of temporary generators will be provided for the blowers, gas conditioning system, and flare system.
6. OWNER to provide data required to complete emissions calculations for permitting, including historic waste generation rates and LFG sampling data. LFG sampling is not included in this scope of work.
7. OWNER to provide information on existing gas collection equipment, SCADA requirements, and landfill operator requirements. This information shall be provided during the project kickoff meeting. Redesign associated with communication of additional requirements following the 30-percent design milestone will be conducted through a separate scope of work.

#### DELIVERABLES

The following deliverables will be provided:

Task	Description of Deliverable	Quantity/Format
Task 11.16.5	Draft PSD major modification application	- 1 Electronic copy, PDF
	Final PSD major modification application	- 1 Electronic copy, PDF - 1 hard copy, signed and sealed by the engineer of record
Task 11.16.6	One Request for Additional Information Response	- 1 Electronic copy, PDF
Task 11.23	2018 Financial Assurances Transmittal Letter and FDEP Form 62-701.900(28)	- 1 Electronic copy, PDF - 1 hard copy, signed and sealed by the engineer of record
Task 11.22	2019 Financial Assurances Transmittal Letter and FDEP Form 62-701.900(28)	- 1 Electronic copy, PDF - 1 hard copy, signed and sealed by the engineer of record
Task 11.24.2	30% Design Technical memorandum with basic design criteria, code regulations, and standard requirements	- 1 Electronic copy, PDF

	60% Design Plans, preliminary specification table of contents, and preliminary design layout.	- 5 hard copies - 1 Electronic copy, PDF
	90% Design Plans and specifications	- 5 hard copies - 1 Electronic copy, PDF
Task 11.24.3	Contract Documents Plans and specifications	- 5 hard copies - 1 Electronic copy, PDF
Task 11.24.4	60% OPCC Cost Estimate	- Electronic, PDF
	100% OPCC Cost Estimate	- Electronic, PDF
Task 11.24.6	RNG Evaluation Technical Memorandum	- Electronic, PDF
Task 16.6	Conformed Documents Plans and Specifications	- 5 hard copies, signed and sealed by the engineer(s) of record - 1 Electronic copy, PDF - 2 AutoCAD format files

#### TIME OF COMPLETION/SCHEDULE

CONSULTANT will begin work within two weeks of receiving Notice to Proceed (NTP) from the OWNER. Title V permit application will be submitted within 120 days of the kickoff meeting. The 10% design milestone will be submitted within 60 days of the kickoff meeting. The contract documents will be submitted within 270 days of the kickoff meeting.

#### COMPENSATION AND PAYMENT

CONSULTANT will complete the services in the Tasks listed above in this Amendment No. 14 for a lump sum fee of **\$570,356** as shown in Exhibit AB. CONSULTANT will invoice monthly as a percentage of the lump sum based on the percentage of work completed during the billing period. Lump sum compensation shall be for all labor, sub-consultants, and other direct costs associated with the performance of the work. The new total amended value for this Task Authorization is **\$9,499,647**.

EXHIBIT AB				
CONTRACT FEE SUMMARY FORMAT FOR ENGINEERING DIVISION				
CITY OF JACKSONVILLE, FLORIDA				
CLASS I LANDFILL PERMITTING AND DESIGN - AMENDMENT 14A				
1/12/2018				
<b>PART I - GENERAL</b>				
<b>1. Project</b>			<b>Proposal Number</b>	
CLASS I LANDFILL PERMITTING AND DESIGN AMENDMENT #14 Phase 6 Gas Collection System Design and Permitting			RFP #P-07-10	
<b>3. Name of Consultant</b>			<b>Date of Proposal</b>	
CDM Smith Inc.			1/12/2018	
<b>PART II - LABOR RELATED COSTS</b>				
<b>5. Direct Labor</b>	Hourly Rate	Estimated Hours		TOTAL
Officer/Technical Expert	74.32	551	\$ 40,950.32	
Principal / Associate / Project Manager	63.06	587	\$ 37,016.22	
Senior Professional	50.11	785	\$ 39,336.35	
Project Engineer II / GIS Specialist III	41.10	1,088	\$ 44,716.80	
Project Engineer I / GIS Specialist II	34.34	456	\$ 15,659.04	
Sr. GIS Specialist/Designer	40.54	212	\$ 8,594.48	
GIS Specialist I / Drafter/Technician	29.28	173	\$ 5,065.44	
Clerical	20.83	230	\$ 4,790.90	
Field Staff Support Services	28.15	-	\$ -	
<b>TOTAL DIRECT LABOR</b>	<b>48.05</b>	<b>4,082</b>		<b>\$ 196,130</b>
<b>6. Overhead (Combined Fringe Benefit &amp; Administrative)</b>				
Overhead Rate	150.0%	x Total Direct Labor		\$ 294,194
<b>7. SUBTOTAL: Labor + Overhead (Items 5 &amp; 6)</b>				<b>\$ 490,324</b>
<b>8. PROFIT: Labor Related Costs (Item 7)</b>			x 10%	<b>\$ 49,032</b>
<b>PART III - OTHER COSTS</b>				
<b>9. Miscellaneous Direct Costs</b>				
Transportation, Per Diem and Equipment				
Presentation Boards				
Reproduction				
<b>MISCELLANEOUS DIRECT COSTS SUB-TOTAL</b>				<b>\$ 10,000</b>
<b>10. SUBCONTRACTS (Lump Sum)</b>				
Wetland Assessment				\$ 21,000
<b>SUB-CONTRACT SUB-TOTAL</b>				<b>\$ -</b>
<b>TOTAL LUMP SUM AMOUNT (Items 5, 6, 8, 9 and 10)</b>				<b>\$ 570,356</b>
<b>11. REIMBURSABLE COSTS (Limiting Amount)</b>				
<b>SUB-TOTAL REIMBURSABLES</b>				<b>\$ -</b>
<b>PART IV - SUMMARY</b>				
<b>TOTAL AMOUNT OF AM 14A CONTRACT (Lump Sum Plus Reimbursables)</b>				<b>\$ 570,356</b>
<b>12. PRIOR CONTRACT AMOUNT (Through Amendment 13)</b>				<b>\$ 8,929,291</b>
<b>AMENDED AMOUNT OF CONTRACT</b>				<b>\$ 9,499,647</b>

**EXHIBIT AC**  
**AMENDMENT 14 TO TASK AUTHORIZATION 6354-13**  
**FOR**  
**TRAIL RIDGE LANDFILL CLASS I CELL EXPANSION PROJECT**  
**CLOSURE QUALITY ASSURANCE AND TESTING SUPPORT**

This Authorization, when executed, shall be incorporated in and become part of the Agreement for Professional Services between the City of Jacksonville (OWNER), and CDM Smith Inc. (CONSULTANT), dated February 9, 2011 hereafter referred to as the Agreement.

**PROJECT BACKGROUND**

CONSULTANT will assist the OWNER with the design, permitting, bidding and construction of a new Class 1 landfill facility (Phases 6-14) at the Trail Ridge Landfill (TRLF) site. The existing landfill has been developed via 5 stages of cell construction (Phases 1-5) over 20 years and is within 2-3 years of reaching capacity. CONSULTANT has completed the following work related to the TRLF Class I Cell Expansion Project.

Initial Authorization – Developed a Master Plan for the build out of the TRLF site. The Master Plan recommended three phases, Phases 6 through 8 (now numbered 6 through 14), for full site buildout and evaluated various options for the next cell construction, Phase 6 expansion. The initial authorization also initiated field data collection for design of the TRLF Expansion Project.

Amendment 1 – Developed permit application and supporting documentation for the TRLF Expansion Environmental Resource Permit (ERP).

Amendment 2 – Continued data collection and developed permitting plans and specifications for Phase 6A through 6E TRLF Expansion Florida Department of Environmental Protection (FDEP) Solid Waste Permit. Amendment 2 included conceptual stormwater modeling, development of methane gas management plan, geotechnical stability analysis, and ongoing hydro-geological modeling.

Amendment 3 – Authorized investigation of expansion of the on-site borrow pit for use in future landfill activities. This amendment was a partial authorization of the Amendment 3 activities at TRLF. The remaining activities were authorized under Amendment 4.

Amendment 4 – Authorized funding for the remaining work described and approved in Amendment 3, including continued design and permitting activities for Phases 6 through 14 with development of solid waste construction permit application and Phase 6 construction documents. This amendment also included bidding services.

Amendment 5 – this amendment is a continuation of the work begun under the previous four amendments to obtain the ERP and FDEP Solid Waste Construction Permits needed to construct Phases 6-14 of the Trail Ridge Landfill Expansion. This amendment included activities to apply for a major modification of the site's existing Prevention of Significant Deterioration (PSD) permit, renew the site's

solid waste operating permit, and design a new access road for operational traffic. CONSULTANT submitted and received the FDEP solid waste construction permit, operations permit, and 2014 financial assurances for the planned expansion area under this amendment.

Amendment 6 – this amendment authorized Engineering Services During Construction to support the TRLF Phase 6 Expansion Project. The amendment included conforming contract documents, holding a pre-construction meeting, conducting shop drawing review, issuing designer clarifications, addressing requests for additional information and providing resident project representation (RPR) for the project. These services were authorized through December 2015.

Amendment 7 – this amendment authorized design and permitting of a limerock construction access road from County Road 228 to Gilridge road. This road will provide access to the landfill and borrow areas for construction vehicles. This amendment also included intersection improvements to the perimeter road encircling Phases 1-5 of the existing landfill to facilitate re-routing of operations traffic to the new western access road. Re-routing of operations traffic is a key component of the construction sequence for the new Phase 6 cell.

Amendment 8 – this amendment authorized engineering services during construction for January 2016 through December 2016. Additionally, this scope includes activities to perform financial assurances reporting to the Florida Department of Environmental Protection (FDEP) associated with the site Solid Waste Permit, and perform various monitoring and maintenance tasks associated with onsite mitigation areas to maintain compliance with the site Environmental Resource Permit (ERP).

Amendment 9 - this amendment authorized engineering services during construction for January 2017 through June 2017. Additionally, this scope includes activities to perform various monitoring and maintenance tasks associated with onsite mitigation areas to maintain compliance with the site Environmental Resource Permit (ERP).

Amendment 10 – this amendment authorizes a seepage analysis study of the borrow pit south of Landfill Phases 1-5 to improve dewatering activities and address erosion concerns.

Amendment 11 - this amendment includes activities to perform investigation and recommendation for pretreatment of the landfill leachate prior to disposal at the Buckman WWTP, due to interference with the WWTP UV disinfection process.

Amendment 12 - this amendment extended geotechnical conformance testing from August 2017 through October 2017.

Amendment 13 – this amendment extended engineering services during construction through June 2018 due to an extension of the construction schedule by the Contractor.

#### SCOPE OF WORK

This scope of work for Amendment 14 is a continuation of the work begun under the previous amendments to support the active Trail Ridge Landfill. This scope includes activities to provide quality assurance and quality control testing services of field construction activities associated with sideslope and top closure of Phases 1-5. The following is a description of the services to be provided under this

Amendment No. 14 to the Task Authorization. The non-sequential order of some tasks and subtasks listed below is a result of tasks either being authorized under previous amendments or the work is to be authorized as part of future amendments.

**TASK 1 - KICKOFF MEETING**

There is no change to Task 1. All work has been completed for this task.

**TASK 2 - DATA COLLECTION AND REVIEW**

There is no change to Task 2. All work has been completed for this task.

**TASK 3 - TRLF EXPANSION LANDFILL CELL ALTERNATIVES DEVELOPMENT**

There is no change to Task 3. All work has been completed for this task.

**TASK 4 - ANALYSIS OF PHASE 6 CELL ALTERNATIVE LOCATIONS**

There is no change to Task 4. All work has been completed for this task.

**TASK 5 - INITIATE FIELD SITE INVESTIGATION**

There is no change to Task 5. All work has been completed for this task.

**TASK 6 - STORMWATER MODELING**

There is no change to Task 6. All work has been completed for this task.

**TASK 7 - PROJECT MANAGEMENT**

There is no change to Task 7.

**TASK 8 - WETLAND LONG TERM HYDRATION EVALUATION**

There is no change to Task 8. All work has been completed for this task.

**TASK 9 - FLOOD ELEVATION DETERMINATION**

There is no change to Task 9.

**TASK 10 - ENVIRONMENTAL RESOURCE PERMITTING**

There is no change to Task 10.

**TASK 11 - DESIGN AND PERMITTING**

There is no change to Task 11. Post Permit Submittal Activities

**TASK 12 - SOLID WASTE LANDFILL CONSTRUCTION PERMITTING**

There is no change to Task 12. All work has been completed for this task.

**TASK 13 - QUALITY ASSURANCE AND QUALITY CONTROL**

There is no change to Task 13. All work has been completed for this task.

**TASK 14 - ECONOMIC EVALUATION**

There is no change to Task 14. All work has been completed for this task.

**TASK 15 - PUBLIC INFORMATION PROGRAM ASSISTANCE**

There is no change to Task 15. All work has been completed for this task.

**TASK 16 - BIDDING SERVICES**

There is no change to Task 16. All work has been completed for this task.

**TASK 17 - GENERAL ENGINEERING SERVICES DURING CONSTRUCTION**

Task 17 is amended to add the following tasks.

**Subtask 17.18 - Oversight of Closure Repair Activities**

The following tasks will be performed on a time and materials basis.

**Subtask 17.18.1 Clarifications, Interpretations, and Field Orders of Closure Activities**

CONSULTANT shall issue necessary clarifications and interpretations on technical matters. Such clarifications and interpretations will be consistent with the intent of and reasonably inferable from the Contract Documents. CONSULTANT may issue Field Orders authorizing minor variations from the requirements of the Contract Documents.

**Subtask 17.18.2 Review of Independent Testing Lab Results for Closure Activities**

CONSULTANT will contract with a geotechnical and materials testing laboratory to conduct independent testing of CONTRACTOR's work. CONTRACTOR shall contact the testing laboratory to conduct the testing as needed throughout construction progress. CONSULTANT is responsible for all testing costs, including analysis and shipping (if needed). Estimated testing unit costs are outlined in Table 1. CONSULTANT to review test results for conformance with Contract Documents. CONSULTANT will review field test reports for conformance with project contract documents. Should CONTRACTOR fail to pass the independent test and retesting is required, the CONSULTANT is eligible for additional compensation to review retest results.

**Subtask 17.18.3 Site Visits and Observation of Construction Progress for Closure Activities**

CONSULTANT will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed work of the Contractor and to determine in general if such work is proceeding in accordance with the Contract Documents. During such visits and on the basis of on-site observations, CONSULTANT shall keep OWNER informed of the progress of the work and shall endeavor to determine in general if such work is proceeding in accordance with the Contract Documents. Additionally, during such visits and on the basis of such observations, CONSULTANT shall disapprove or reject Contractor's work while it is in progress if CONSULTANT believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. CONSULTANT shall document the site visits with an e-mail to the CONSULTANT's and OWNER's Project Managers summarizing the observations, discussions and/or decisions.

**TASK 18 - SPECIAL SERVICES**

There is no change to Task 18.

**TASK 19 - RESIDENT PROJECT REPRESENTATIVE SERVICES DURING CONSTRUCTION**

There is no change to Task 19.

**TASK 20 - NEW CELL GEOSYNTHETIC INSTALLATION QA/QC CONSTRUCTION SERVICES**

There is no change to Task 20.

**TASK 21 - BORROW PIT EVALUATION AND EXPANSION**

There is no change to these subtasks.

**TASK 22 - MEETINGS, PROJECT MANAGEMENT AND QUALITY CONTROL**

There is no change to Task 22.

**ASSUMPTIONS**

The following assumptions are included in this Amendment:

1. OWNER shall bear all costs incident to compliance with the requirements of the OWNER's Responsibilities.

**TIME OF COMPLETION/SCHEDULE**

CONSULTANT will begin work within two weeks of receiving Notice to Proceed (NTP) from the OWNER and will continue through December 31, 2019.

**COMPENSATION AND PAYMENT**

CONSULTANT will complete the services in the Tasks listed above in this Amendment No. 14 for a not to exceed cost of \$200,000 as shown in Exhibit AB. CONSULTANT will invoice monthly based on actual charges. The new total amended value for this Task Authorization is **\$9,699,647**.

Table 1

Material	Test Description	Test Number	Unit cost
<b>Backfill or Common Fill</b>	Sieve Analysis	ASTM D422	\$ 60.00
	Organic Content	ASTM D2974	\$ 50.00
	pH	ASTM E70	\$ 16.50
	Modified Proctor	ASTM D1557	\$ 75.00
	Soil Classification	ASTM D2488	\$ 15.00
	Limerock Bearing Ratio	FM5-515	\$ 215.00
<b>Sand</b>	Hydraulic Conductivity	ASTM D-2434	\$ 230.00
	Carbonate Content	ASTM D4373	\$ 76.50
	Particle Shape	ASTM D2488	\$ 15.00
<b>Clay</b>	Moisture Content	ASTM D2216	\$ 15.00
	Triaxial Shear	ASTM D4767	\$ 545.00
	Direct Shear	ASTM D3080	\$ 710.00
	Standard Proctor	ASTM D698	\$ 75.00
	Atterberg Limits	ASTM D4318	\$ 85.00
	Percent Fines	ASTM D1140	\$ 35.00
	Organic Content	ASTM D2974	\$ 50.00
	Carbonate Content	ASTM D4373	\$ 76.50
	Lab Permeability	ASTM D5084	\$ 230.00
	Soil Classification	ASTM D2488	\$ 15.00
<b>Concrete</b>	Compressive Strength	ASTM C31	\$ 75.00
	Alt. cost per cylinder		\$ 12.00
	Slump/ Air / WC ratio tests	ASTM C143	\$ -
	Field vehicles and nuclear density gauges		\$ 650.00
	Field vehicle and nuclear density gauges		\$ 650.00
	Computer, printer, general office needs		\$ 180.00

Geotechnical Testing Labor Rates	Rate
PE Principal (Internal QA review)	\$ 149.40
Senior Project Engineer PE (Review, Sign & Seal)	\$ 138.20
Staff EI (Review, Field Demuck Observation)	\$ 83.89
Project Administrator(EFR, RPR, CQA Manager) (On-Site)	\$ 87.00
Project Administrator (On-Site OT)	\$ 130.50
Senior Technician (On-Site)	\$ 68.36
Senior Technician (On-Site, OT)	\$ 68.36
Technician (FT On-Site, 8 Months Only)	\$ 52.82
Technician (FT On-Site, 8 Months Only)	\$ 52.82
CAD (Support)	\$ 62.15
Admin (Support)	\$ 69.01

