



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(28), F.A.C.
Form Title: Closure Cost Estimating Form
For Solid Waste Facilities
Effective Date: January 6, 2010
Incorporated in Rule 62-701.630(3), F.A.C.

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Trail Ridge Class I Landfill WACS ID: 33628
Permit Application or Consent Order No.: _____ Expiration Date: _____
Facility Address: 5110 U.S. Highway 301, Baldwin, Florida 32234
Permittee or Owner/Operator: Trail Ridge Landfill, Inc.
Mailing Address: Same as Facility Address

Latitude: 30 ° ' " Longitude: _____ ° ' "
Coordinate Method: _____ Datum: NGVD 1929
Collected by: Robert M. Angas Associates Company/Affiliation Subconsultant

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste received	If closed: Official date of closing
Phase 1-5	144	5/18/1992	20 years +/-	5 years +/-		
Phase 6	30.5	NA	5 years +/-	NA		

Total disposal unit acreage included in this estimate: Closure: 43.4 Long-Term Care: 174.5

Facility type: Class I Class III C&D Debris Disposal
(Check all that apply) Other: _____

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check type)

- Letter of Credit* Insurance Certificate Escrow Account
- Performance Bond* Financial Test Form 29 (FA Deferral)
- Guarantee Bond* Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Government Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13051 N. Telecom Pky.
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 N. Congress Ave., Ste. 200
West Palm Beach, FL 33401
561-681-6600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code, (F.A.C.) sets forth the method of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum costs of closure in current dollars. Select one of the methods of cost estimate adjustment below.

(a) Inflation Factor Adjustment

(b) Recalculated or New Cost Estimates

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its survey of Current Business. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year. The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850) 245-8706.

This adjustment is based on the Department approved closing cost estimate dated: _____

Latest Department Approved Closing Cost Estimate:		Current Year Inflation Factor, e.g. 1.02			Inflation Adjusted Closing Cost Estimate:
_____	×	_____	=		_____

This adjustment is based on the Department approved long-term care cost estimate dated: _____

Latest Department Approved Annual Long-Term Care Cost Estimate:		Current Year Inflation Factor, e.g. 1.02			Inflation Adjusted Annual Long-Term Care Cost Estimate:
_____	×	_____	=		_____
		Number of Years of Long Term Care Remaining:		×	_____
		Inflation Adjusted Long-Term Care Cost Estimate:		=	_____

Signature by: **Owner/Operator** **Engineer** (check what applies)

Signature

Address

Name & Title

City, State, Zip Code

Date

E-Mail Address

Telephone Number

Description	Unit	Number of Units	Cost / Unit	Total Cost
7. Passive Gas Control:				
Wells	EA	_____	_____	_____
Pipe and Fittings	LF	_____	_____	_____
Monitoring Probes	EA	_____	_____	_____
NSPS/Title V requirements	LS	1	_____	_____
Subtotal Passive Gas Control:				_____
8. Active Gas Extraction Control:				
Traps	EA	9	22500	202500
Sumps	EA	_____	_____	_____
Flare Assembly	EA	_____	_____	_____
Flame Arrestor 6"-10" Pipes, Fittings	EA LF	28000	\$40.00	1120000
Mist Eliminator 12"-18" Pipes, Fittings	EA LF	12000	\$50.00	600000
Flow Meter Well Drilling	EA LF	9000	\$200.00	1800000
Blowers 6"-10" Control Valve	EA	13	\$3,600.00	46800
Collection System 12"-18" Control Valve	LF	19	\$7,440.00	141360
Other (explain) Wellhead Assembly	LS	62	\$950.00	58900
Subtotal Active Gas Extraction Control:				3969560
9. Security System:				
Fencing	LF	_____	_____	_____
Gate(s)	EA	_____	_____	_____
Sign(s)	EA	_____	_____	_____
Subtotal Security System:				_____
10. Engineering:				
Closure Plan Report	LS	1	51389.90	51389.9
Certified Engineering Drawings	LS	1	_____	_____
NSPS/Title V Air Permit	LS	1	_____	_____
Final Survey	LS	1	44051.78	44051.78
Certification of Closure	LS	1	14687.77	14687.77
Other (explain) _____	LS	1	183539	183539
Construction Drawings	_____	_____	_____	_____
Subtotal Engineering:				293668.45

Description	Hours	Cost / Hour	Hours	Cost / Hour	Total Cost
11. Professional Services					
	<u>Contract Management</u>		<u>Quality Assurance</u>		
P.E. Supervisor	144	\$150.00	58	\$150.00	30300
On-Site Engineer	_____	_____	5131	\$80.00	410480
Office Engineer	58	\$128.00	231	\$115.00	33989
On-Site Technician	144	\$60.00	1384	\$60.00	91680
Other (explain) _____	_____	_____	_____	_____	_____

Description	Unit	Number of Units	Cost / Unit	Total Cost
Quality Assurance Testing	LS	1	221700	221700
Subtotal Professional Services:				788149

Subtotal of 1-11 Above: 15233892.45

12. Contingency 15 % of Subtotal of 1-11 Above 2285083.8675
Subtotal Contingency: 2285083.8675

Estimated Closing Cost Subtotal: 17518976.3175

Description	Total Cost
13. Site Specific Costs	
Mobilization	<u>438324</u>
Waste Tire Facility 1,600 Tons @ \$100/Ton	<u>160000</u>
Materials Recovery Facility	
Special Wastes Erosion Control (1% of Construction Cost)	<u>63700</u>
Leachate Management System Modification	<u>175330</u>
Other (explain) Bonds (1.2% of Construction Cost)	<u>210395</u>
	<u>Subtotal Site Specific Costs: 1047749</u>

TOTAL ESTIMATED CLOSING COSTS (\$): 18566725.3175

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) 5 Years 20 Years 30 Years Other, ___ Years

Notes: 1. Cost estimates must be certified by a professional engineer.

2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.

3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

Description	Sampling Frequency (Events / Year)	Number of Wells	(Cost / Well) / Event	Annual Cost
1. Groundwater Monitoring [62-701.510(6), and (8)(a)]				
Monthly	12	_____	_____	_____
Quarterly Permit Renewal	4	1.65	\$660.00	\$4,356.00
Semi-Annually	2	21	\$1,500.00	\$63,000.00
Annually Cost of Biennial Tech Report	1	1	\$2,080.00	\$2,080.00
Subtotal Groundwater Monitoring:				\$69,436.00
2. Surface Water Monitoring [62-701.510(4), and (8)(b)]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	7	\$425.00	\$5,950.00
Annually	1	_____	_____	_____
Subtotal Surface Water Monitoring:				\$5,950.00
3. Gas Monitoring [62-701.400(10)]				
Monthly	12	_____	_____	_____
Quarterly	4	30	\$60.00	\$7,200.00
Semi-Annually	2	1	\$830.00	\$1,660.00
Annually	1	_____	_____	_____
Subtotal Gas Monitoring:				\$8,860.00
4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]				
Monthly	12	_____	_____	_____
Quarterly	4	_____	_____	_____
Semi-Annually	2	_____	_____	_____
Annually	1	_____	_____	_____
Other (explain) _____	1	1	\$3,720.00	\$3,720.00
Subtotal Leachate Monitoring:				\$3,720.00

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. Leachate Collection/Treatment Systems Maintenance				
<u>Maintenance</u>				
Collection Pipes	LF	_____	_____	_____
Sumps, Traps	EA	_____	_____	_____
Lift Stations	EA	14	\$4,000.00	\$56,000.00
Cleaning	LS	1	_____	_____
Tanks	EA	_____	_____	_____

Description	Unit	Number of Units / Year	Cost / Unit	Annual Cost
5. (continued)				
<u>Impoundments</u>				
Liner Repair	SY	_____	_____	_____
Sludge Removal	CY	_____	_____	_____
<u>Aeration Systems</u>				
Floating Aerators	EA	_____	_____	_____
Spray Aerators	EA	_____	_____	_____
<u>Disposal</u>				
Off-site (Includes transportation and disposal)	1000 gallon	<u>3,064</u>	<u>\$75.00</u>	<u>\$229,800.00</u>
Subtotal Leachate Collection / Treatment Systems Maintenance:				<u>\$273,800.00</u>
6. Groundwater Monitoring Well Maintenance				
Monitoring Wells	LF	_____	_____	_____
Replacement	EA	<u>0.07</u>	<u>\$5,500.00</u>	<u>\$385.00</u>
Abandonment	EA	_____	_____	_____
Subtotal Groundwater Monitoring Well Maintenance:				<u>\$385.00</u>
7. Gas System Maintenance				
Piping, Vents	LF	_____	_____	_____
Blowers	EA	_____	_____	_____
Flaring Units	EA	_____	_____	_____
Meters, Valves	EA	_____	_____	_____
Compressors	EA	_____	_____	_____
Flame Arrestors	EA	_____	_____	_____
Operation	LS	<u>1</u>	<u>\$32,000.00</u>	<u>\$32,000.00</u>
Subtotal Gas System Maintenance:				<u>\$32,000.00</u>
8. Landscape Maintenance				
Mowing	AC	<u>174.5</u>	<u>\$360.00</u>	<u>\$62,820.00</u>
Fertilizer	AC	<u>174.5</u>	<u>\$320.00</u>	<u>\$55,840.00</u>
Subtotal Landscape Maintenance:				<u>\$118,660.00</u>
9. Erosion Control and Cover Maintenance				
Sodding	SY	<u>4.000</u>	<u>\$2.80</u>	<u>\$11,200.00</u>
Regrading	AC	<u>0.87</u>	<u>\$9,800.00</u>	<u>\$8,526.00</u>
Liner Repair	SY	<u>2.000</u>	<u>\$6.10</u>	<u>\$12,200.00</u>
Clay	CY	<u>1.000</u>	<u>\$29.50</u>	<u>\$29,500.00</u>
Subtotal Erosion Control and Cover Maintenance:				<u>\$61,426.00</u>
10. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	<u>1</u>	<u>\$16,320.00</u>	<u>\$16,320.00</u>
Subtotal Storm Water Management System Maintenance:				<u>\$16,320.00</u>
11. Security System Maintenance				
Fences	LS	<u>1</u>	<u>\$5,000.00</u>	<u>\$5,000.00</u>
Gate(s)	EA	_____	_____	_____
Sign(s)	EA	_____	_____	_____
Subtotal Security System Maintenance:				<u>\$5,000.00</u>

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of this solid waste management facility have been examined by me and found to conform to engineering principles applicable to such facilities. In my professional judgment, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.

Lisa M Sterling
Signature

4651 Salisbury Rd, Suite 420
Mailing Address

Lisa M Sterling, Principal Engineer
Name and Title (please type)

Jacksonville FL 32256
City, State, Zip Code

09/27/2009
Date

SterlingLm@cdmsmith.com
E-Mail address (if available)

#64795
Florida Registration Number
(please affix seal)

904-527-6726
Telephone Number



VII. SIGNATURE BY OWNER/OPERATOR

Signature of Applicant

Mailing Address

Name and Title (please type)

City, State, Zip Code

E-Mail address (if available)

Telephone Number

Trail Ridge Landfill Phases 1 – 5 and Phase 6 Closure and Long-term Care Cost Estimate

1.0 General Information

The City is the owner of the TRLF, a Class I Landfill that is located at 5110 US Highway 301, Duval County, Florida. This facility currently operates under FDEP Solid Waste Operations Permit No. 0013493-017-SO (issued May 11, 2012). The facility has two distinct areas, the older Phases 1 through 5 that were constructed in 1990 and are still in operation today, and the newer Phases 6 through 14 that were permitted in 2014. Phases 1-5 consist of approximately 144 acres of lined landfill and access road, stormwater conveyances, buffer, scale house and maintenance shed. Of the 144 acres of lined landfill, 100.6 acres have been closed and certified. Of the newly permitted Phases 6-14, only Phase 6 is currently constructed and in operation. Phase 6 includes 30.5 acres of lined landfill. The entire facility is enclosed by chain-link and barbed-wire fence with a single point of entry from US Highway 301 on the east side of the site.

The proposed closure area of the site is 73.9 acres and the entire area of the landfill considered for long-term care is about 174.5 acres. The closure cost estimate is based on the drawings submitted with The Phase 6 through 14 solid waste permit application (CDM Smith 2014). These drawings include proposed details such as typical final cover, typical stormwater let down pipe, and typical side slope cross sections. The Florida Department of Environmental Protection (FDEP) Permit Number for the expansion and aforementioned drawings is DEP File No. 0013493-025-SO-01 and 0013493-036-SC-01.

The expected life of Phases 1 through 6 at Trail Ridge Landfill is approximately 3.5 years.

2.0 Estimated Closing Cost

The total closure area is 73.9 acres. This includes 43.4 acres left to close in the existing Phases 1-5 and 30.5 acres for the new Phase 6 cell. It is assumed that all work will be completed by a third party. The unit costs used in this financial assurances estimate were obtained using March 2018 costs from Thalle Construction Co, Inc to represent the fair market values of material, equipment and labor currently. A copy of this unit cost letter is included in **Attachment 1**.

2.1 Proposed Monitoring Wells

No monitoring wells are proposed for closure.

2.2 Slope and Fill (Bedding Layer between Waste and Barrier Layer)

The March 2018 unit cost estimate for placement and spreading was \$12.00 per cubic yard (cy). (Line 2A.a3, Attachment 1). The bedding layer has a thickness of 12 inches and consists of common fill material. The volume of fill for Phases 6 and Phases 1-5, is an estimated 119,000 cy for the entire 73.9 acres of closure.

The total cost for slope and fill is estimated to be \$1,428,000.

2.3 Cover Material (Barrier Layer)

The Phases 6 final cover detail, Details B and C on Sheet CD-8 of the solid waste permit application (CDM Smith 2014), shows that the final closure barrier layer on the side slopes shall be a 1-foot minimum compacted clay (at $K = 6.67 \times 10^{-5}$ cm/sec). The area of clay is estimated to be 45.97 (27.5 acres Phases 1-5 + 18.5 acres Phase 6).

The final closure barrier for the landfill top shall be 40 mil textured HDPE along with geonet and 1 foot of protective sand. The area of geomembrane, sand, and geonet is estimated to be 27.9 (15.9 acres Phases 1-5 + 12 acres Phases 6).

Total estimated quantities are outlined below:

- Clay: 46.0 acres x 1 ft = 2,000,000 ft³ (74,000 cy)
- Geomembrane: 27.9 acres (135,000 sy)
- Geocomposite: 27.9 acres (135,000 sy)
- Sand: 27.9 acres x 1 ft = 1,217,000 ft³ (45,000 cy)

The March 2018 unit rate cost for clay is \$29.50 per cy. The cost for the 74,000 cy of clay is estimated to be \$2,183,000.

The March 2018 unit rate cost for 40 mil HDPE Liner was \$3.69 per sy (Line 2A.f2, Attachment 1). The cost for the 135,000 sy of geomembrane is estimated to be \$498,150.

The March 2018 unit rate cost for geonet was \$4.95 per sy (Line 2A.f3, Attachment 1). The cost for the 135,000 sy of geonet is estimated to be \$668,250.

The March 2018 unit rate cost for sand was \$26.00 (Line 2A.f5, Attachment 1). The cost for the 45,000 cy of sand is estimated to be \$1,170,000.

The total estimated cost of cover material is \$4,519,400.

2.4 Top Soil Cover

The March 2018 unit cost estimate for placement and spreading was \$12.00 per cubic yard (cy.) (Line 2A.f6, Attachment 1). The Phases 6 final cover detail, Details B and C on Sheet CD-8 (CDM Smith 2014), shows the 24-inch top soil layer for the sideslopes and 12-inch top soil layer for the top slope. The material for the protective soil layer is assumed to be obtained from off-site sources. The estimated cost includes the cost of offsite material, delivery and spreading. The volume of fill was estimated to be 148,000 cy for 46 acres of side slope areas and 45,000 cy of material for top 27.9 acres of slope area, for an estimated 193,000 cy for the entire 73.9 acres of closure.

Total estimated cost for top soil cover is \$2,316,000.

2.5 Vegetative Layer

The March 2018 unit cost estimate for sodding was \$1.98 per square yard (sy). (line 2A.f7, Attachment 1). The upper vegetative layer shall be sodded along the top and side slopes. The area to be sodded is 73.9 acres (358,000 sy).

Total cost for vegetative layer is estimated to be \$708,840.

2.6 Stormwater Control System

The stormwater control system will divert rainfall off the closed landfill area to the existing perimeter swale system. The stormwater control system includes swales, terrace underdrains, and letdown structures.

The March 2018 unit cost estimate for HDPE piping used for letdown structures was \$100.00 per linear foot (lf) (Line 2A.b3, Attachment 1). The stormwater letdown piping begins as 24-inch corrugated HDPE pipe and reduces to 18-inch corrugated HDPE pipe draining from the top of the proposed build-out up to the terrace (details on Sheet CD-7). There are a total of 4 letdown structures within the Phases 6 expansion area. Each letdown structure associated with Phase 6 is estimated to be 650 ft in length. Combined with the 1,200 lf of letdown structures in Phases 1-5, the total estimated length of stormwater letdown drains is 4,000 ft.

Total cost for letdown structure piping is estimated to be \$400,000.

The March 2018 unit cost estimate for terrace drains was \$14,275 each (ea) (Lines 2A.b2-b10, Attachment 1). Typical terrace drains are shown on Detail E on Sheet CD-7. There is a total of 4 letdown structures within the Phase 6 expansion area. Each letdown structure crosses 4 terraces (at elevations 260 ft, 220 ft, 180 ft, and 140 ft) as shown on sheet C-31 for a total of 16 letdown structures in Phases 6. Combined with the 25 terrace drains in Phases 1-5, the total number of terrace drains is estimated to be 41.

Total cost for terrace drains is estimated to be \$585,275.

The March 2018 unit cost estimate for underdrains on intermediate terraces \$25.00 per lf (line 2A.b8, Attachment 1). Typical underdrains are shown on Detail C on Sheet CD-7. The drain consists of 6-inch perforated HDPE pipe wrapped in a filter sock. The perimeter of each terrace was calculated to estimate the length of underdrain along intermediate terraces. Combined with the 6,400 lf of underdrain in Phases 1-5, the total length of underdrain is estimated to be 9,000 lf.

Total cost for terrace drains is estimated to be \$225,000.

The total cost of stormwater control system for the entire closure area is estimated to be \$1,210,000.

2.7 Passive Gas Control – Not Used

2.8 Active Gas Extraction Control

The LFG system consisting of horizontal and vertical gas wells is shown on Sheet C-34 and details are shown on Sheet CD-12.

Condensate from the LFG collection system will be collected in local condensate sumps throughout the landfill and conveyed via pneumatic pump to the existing leachate collection system. The estimated cost for each condensate collection sump is \$22,500 (Lines 2A.g1-g3, Attachment 1). Including the 5 condensate sumps remaining in Phases 1-5 and the 3 sumps anticipated for Phase 6, the total number of condensate sumps for full build-out is estimated to be 8. A 10% safety factor will be applied to get a conservative amount of 9 condensate sumps. The cost for 9 condensate sumps is \$202,500.

The Trail Ridge Landfill currently uses one flare and one back-up flare in cases where LFG is not utilized by Trail Ridge Energy, LLC. The Phase 6 gas production fits within the existing capacity of the TRLF flare system.

Horizontal wells will be installed at 40 ft and 90 ft of waste. Six-inch horizontal well collection laterals will be installed as shown on sheet CD-12. Piping cost is estimated to be \$40.00 per ft for pipes 6 to 10 inches in diameter (Line 2A.e3, Attachment 1) inclusive of fittings. The total length for Phase 6 is estimated to be 25,400 ft based on linear feet of first row collectors, second row collectors, and lateral connections. Including the 2,600 lf in Phase 1-5, the cost for 28,000 lf of 6- to 10-inch piping is estimated to be \$1,120,000.

Vertical and horizontal wells will be manifolded to deliver LFG to onsite treatment as shown on Sheet C-34. Piping cost is estimated to be \$50.00 per ft for pipes 12 to 18 inches in diameter (Line 2A.e1, Attachment 1) inclusive of fittings. Including the 2,600 lf in Phase 1-5, the total length is estimated to be 12,000 ft based on linear feet of manifold piping. The cost for 12- to 18-inch piping is estimated to be \$600,000.

The estimated cost, per the quote in Attachment 1, is \$200 per lf of vertical well drilling (Line 2A.e6, Attachment 1). Including the 3,640 lf of vertical wells remaining for Phases 1-5 and the 5,040 lf anticipated for Phase 6, the total vertical well drilling for the site is 9,000 lf. The cost for 36 vertical LFG wells at 140 ft depth is \$1,800,000.

Control valves will be installed throughout the LFG system to separate gas collection zones and isolate specific collection areas. The estimated costs for 6- to 10-inch control valves and 12- to 18-inch control valves are \$3,600 and \$7,440 per valve respectively (Line 2A.e11, Attachment 1). No additional 6- to 10-inch valves are estimated for Phases 6. Including the 13 valves estimated for Phases 1-5, a total of 19, 12- to 18-inch control valves is projected for full landfill build-out. The cost for 13, 6- to 10 inch control valves is \$46,800. The cost for 19, 12- to 18-inch control valves is \$141,360.

Each vertical well will be equipped with a well head assembly as shown on Sheet CD-12. The estimated cost for each well head assembly is \$950 (Line 2A.e8, Attachment 1). Based on the 36 vertical wells previously estimated, the total number of well heads anticipated is 62 for Phases 1-5 and Phase 6. The cost for well head assemblies will be \$58,900.

The total cost of the active gas system is estimated to be \$3,969,560.

2.9 Security System

The entire TRLF is enclosed by a chain link fence with gated entrances to the Facility. No additional fencing or gates are estimated.

2.10 Engineering

The engineering cost associated with closure of each acre of the TRLF is estimated to be \$3,974/acre based on the lump sum estimates for Phases 1-6.

This is estimated as:

- Closure Plan Report at a Lump Sum cost of \$51,390.
- Final Survey at a Lump Sum cost of \$44,052.

- Certification of Closure at a Lump Sum cost of \$14,688.
- Construction Drawings at a Lump Sum cost of \$183,539.
- Total lump sum closure cost for 73.9 acres is \$293,669.

2.11 Professional Services

The administrative costs are estimated as \$788,149. This breakdown includes costs from recent closures services for Phase 3 and Phase 4 of TRLF for QA/QC by an on-site engineer and QA/QC Testing. A breakdown of all the hours and rates is provided on the Financial Assurance Cost Estimate Form.

2.12 Contingency

The total for items 1 through 11 above is estimated to be \$15,233,892.45. A contingency of 15% is assumed and is \$2,285,083.87, raising the Closing Cost Sub-Total to \$17,518,976.32.

2.13 Site-Specific Costs

Site-specific costs associated with TRLF are below. Unit costs for the waste tire facility and special waste are based on costs provided by Waste Management Inc Operations.

- Mobilization is estimated to be \$438,324 lump sum.
- Waste Tire Facility (1600 tons @ \$100/ton) is estimated to be \$160,000.
- Cost of handling special waste is estimated to be \$63,700.00.
- Erosion control is estimated to be 1% of construction cost, or \$175,330.
- Bonds are estimated to be 1.2% of construction cost, or \$210,395.

The total for the site-specific costs is estimated to be \$1,047,749.

The total Closing Cost for the 73.9 acres at TRLF is estimated to be \$18,566,725.

3.0 Annual Cost for Long-Term Care

This portion of the form is to calculate the annual long-term care for the entire 174.5 acres of Phases 1 through 6 at TRLF for the long-term care period of 30 years. The actual number of monitoring wells and/or sampling points and the sampling frequencies are consistent with the currently available approved water quality and gas monitoring plans for the site. The sampling and analysis procedures used by the laboratory, including sampling equipment, decontamination, field measurements, and sample shipment, shall be performed in accordance with Chapter 62-160, FAC. The laboratory is registered with the Florida Department of Health and utilizes the procedures and methods approved by the Florida Department of Health.

3.1 Groundwater Monitoring

Phase 6 will install additional groundwater detection wells and groundwater background wells. With the expansion, other groundwater monitoring wells established for Phases 1 through 5 will be

abandoned. Consequently, the total number of groundwater monitoring wells will be 6 background wells, 6 detection wells, and 21 compliance wells (2 temporary side gradient detection wells will be installed during operation and construction but will not be present for long-term care).

Semi-annual sampling will be conducted 2 times per year for the 21 shallow background, detection, and compliance wells. Five intermediate background and detection wells will be sampled semi-annually for a reduced set of field parameters. A semi-annual monitoring report will be developed for each sampling event. An August 2015 total unit price for semi-annual monitoring of each well (includes sampling, lab analysis and reporting) was provided by Waste Management and is estimated as \$1,500 per sampling event; therefore, the total annual cost for semi-annual sampling, monitoring and reporting for 21 wells is \$63,000.

During the active life of the facility, a technical report will be prepared every 2-½ years that summarizes and interprets groundwater quality and water level information collected during the past 2-½ years. This report cost is estimated to be \$5,200 every 2.5 years. The annual cost of the biennial report will be \$2,080.

The groundwater monitoring well permits will be renewed every 5 years (0.2 annual recurrence). Since the available FDEP form does not allow editing of the groundwater monitoring frequency, the permitting task was amortized and is represented as 1.65 renewals per quarter for a total of 33 wells over a 5-year period (1.65 wells/quarter x 4 quarters/year x 5 years). Based on previous financial assurance pricing, the cost of each permit renewal is \$660, resulting in an annual permit renewal cost of \$4,356.

Total annual cost for groundwater monitoring is \$69,436.

3.2 Surface Water Monitoring

There are 2 surface water monitoring locations for Phases 1-5 and 5 surface water monitoring stations proposed for Phases 6-14, including 1 background, 3 stormwater pond outlet, and 1 downgradient location. Based on the cost of semi-annual monitoring with \$425.00 per sampling event, the total cost of 7 surface water monitoring stations is \$5,950 per year.

3.3 Gas Monitoring

Trail Ridge Landfill's gas monitoring cost per year is as follows.

- Quarterly gas monitoring: \$60.00/well
- Semi-annual gas monitoring reporting: \$830.00

Estimated lump sum cost of gas monitoring for 30 monitoring wells is \$8,860.00 per year.

3.4 Leachate Monitoring

Leachate monitoring cost is estimated per historical WMI operations as per year is \$3,720.00.

3.5 Leachate Collection/Treatment System Maintenance

A lump sum amount of \$38,300 is estimated for cleaning and video inspection of the leachate collection underdrains. This cost includes cleaning and video inspection for the primary leachate collection system. For a total of 10 leachate collection pipes (2 underdrains per phase), a unit cost of

\$4,000 is calculated. This unit cost was applied to Phases 6 leachate collection pipes. A total of 11 underdrains (Ph 1-5: 10 pipes, Ph 6: 1 pipe) would result in \$44,000 in annual maintenance costs.

3.6 Leachate Disposal

The disposal costs for leachate at the Jacksonville Electric Authority regional WWTP on average is \$75.00/kgal according to WMI historical figures. The total estimated leachate for Phase 1-5 and Phase 6 annually that will be disposed annually is 3,064 Kgal. Estimated total treatment cost of leachate is \$229,800 per year.

3.7 Groundwater Monitoring Well Maintenance

The maintenance of the groundwater monitoring wells is estimated as based on repair or replacement of 10 percent of all wells. With 21 total wells on-site for Phases 1-5 and Phase 6, the total anticipated replacement through the life of these phases will be 2 wells. On an annual basis and a long-term care period of 30 years, the annual frequency of well maintenance is 0.07. The total estimated cost of groundwater monitoring is \$385.

3.8 Gas System Maintenance

The maintenance of the groundwater landfill gas system is estimated to be \$32,000 per year for all maintenance based on historical WMI Operations.

3.9 Landscape Maintenance

The cost of mowing is estimated to be \$360.00 per acre per year. The cost is estimated to be \$63,000/year.

The cost of fertilizing is estimated to be \$320.00 per acre per year. The cost is estimated to be \$56,000/year.

The total cost for landscaping is estimated to be \$118,660/year.

3.10 Erosion Control & Cover Maintenance

It is estimated that approximately 0.5% of the landfill surface area out of the 174.5 acres requires re-sodding per year. This is approximately 0.9 acres (4,000 sy) of sod per year. At a cost of \$2.80/sy (Attachment 1) sod replacement is estimated to cost \$11,200 per year.

It is estimated that approximately 0.5% of the landfill surface area out of the 174.5 acres requires re-grading per year. This is approximately 0.9 acres of re-grading per year. At a cost of \$9,800/acre (Attachment 1) re-grading is estimated to cost \$8,526 per year.

It is estimated that approximately 0.25% of the landfill surface area out of the 174.5 acres requires liner repair per year. This is approximately 0.4 acres (2,000 sy) per year. At a cost of \$6.10/sy (Attachment 1) liner repair is estimated to cost \$12,200 per year.

It is estimated that approximately 0.25% of the landfill surface area out of the 174.5 acres requires clay replacement every year. This is approximately 0.4 acres. At a depth of 1 foot this results in 1,000 cy of clay for replacement. At a cost of \$29.50/cy (Attachment 1) clay replacement is estimated to cost \$29,500 per year.

Total cost for erosion control and cover maintenance is estimated to be \$61,426 per year.

3.11 Stormwater Management System Maintenance

The cost estimate for Stormwater Management System maintenance is estimated on a Lump Sum basis as \$16,320/year. This is based on clearing 2,480 linear feet of ditch at a cost of \$4.00/lf (Attachment 1) and a lump sum cost of \$6,400 for conveyance maintenance.

3.12 Security System Maintenance

The cost estimate for security maintenance is estimated on a Lump Sum basis as \$5,000/year for typical costs associated with on-site fencing.

3.13 Utilities

Utility costs are estimated on a Lump Sum basis as \$50,000/year.

3.14 Leachate Collection/Treatment System Operation

One on-site technician is estimated to be needed 210 hours per year for leachate collection and treatment systems operations and one PE Supervisor is estimated to be needed for 24 hours per year. The labor rate is estimated to be \$100 per hour and \$160 per hour for the technician and supervisor respectively. Staff for leachate collection and treatment systems operations is estimated as \$24,600/year.

3.15 Administrative

The administrative costs are estimated as \$28,920/year. A breakdown of the hours and rates is provided on the Financial Assurance Cost Estimate Form.

3.16 Contingency

Total of items 1 through 14 above is \$699,075. A contingency of 10% is assumed and estimated to be \$69,908.00/year.

3.17 Site Specific Cost

There are no estimated site-specific costs for this facility.

Total annual long-term care is estimated as \$768,983 per year.

Over the 30-year long-term care period, the total long-term care cost is estimated to be \$23,069,489.00.

Attachment 1

SECTION 00300
BID FORM
TO

Indian River County

Solid Waste Disposal District

**Indian River County Landfill Segment 3 Cell 2 Expansion, Segment 2 Partial Closure, And
Landfill Gas System Expansion**

IRC Bid Number 2018025

The undersigned declares that the only persons or parties interested in this Bid as principals are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that all the Contract Documents as prepared by CDM Smith, 1701 Highway A-1-A, Suite 301, Vero Beach Florida, 32963 and dated January 2018 have been carefully examined; that the undersigned is fully informed in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. These prices shall cover all expenses incurred in performing the Work required under the Contract Documents, of which this Bid Form is a part.

CONTRACTOR shall complete all work as specified or indicated in the Contract Documents. The work is generally described as follows, which shall include, but is not necessarily limited to the following:

Construction of the Segment 3 Cell 2 Landfill Expansion, Segment 2 Landfill Partial Closure, and Landfill Gas System Expansion Project at the Indian River Solid Waste Disposal District Landfill at 1325 74th Ave. SW, Vero Beach, FL 32968.

The work of this Contract comprises the construction the above described improvements. The scope of this Contract shall include work associated with mobilization/demobilization, new construction, removal of the existing facility, improvements to the site and installation of CONTRACTOR furnished equipment as indicated in the Technical Specifications. All work shall be completed in accordance with the Contract Documents and be in accordance with the Florida Building Codes.

The construction of the Segment 3 Cell 2 Landfill Expansion, Segment 2 Landfill Partial Closure, and Landfill Gas System Expansion Project described above shall also consist of, but not limited to: mobilization/demobilization; site work (clearing/grubbing, filling/grading, landscaping, sodding); paving, grading, and drainage; yard piping (water, forcemain, gravity sewer, storm water grading); a pump station; a landfill liner system, landfill gas collection system, a leachate collection system, a leachate detection system, a landfill closure liner system; and emergency generator.

THIS BID IS SUBMITTED TO: Indian River County Purchasing Division
1800 27th Street
Vero Beach, FL 32960

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in the Contract Documents and in accordance with the other terms and conditions of the Contract Documents.

Bid Form
00300 - 1

2. Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders. This Bid will remain subject to acceptance for ninety (90) days after the day of Bid opening. Bidder will sign and submit the Agreement with the bond and other documents required by the Bidding Requirements within fifteen (15) calendar days after the date of OWNER's Notice of Award.

3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

(a) Bidder has examined copies of all the Bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number	
<u>02-08-2018</u>	<u>#1</u>	<u>SKR</u>
<u>02-14-2018</u>	<u>#2</u>	<u>SKR</u>
<u>02-22-2018</u>	<u>#3</u>	<u>SKR</u>
<u>02-23-2018</u>	<u>#4</u>	<u>SKR</u>
_____	_____	_____

(b) Bidder has familiarized itself with the nature and extent of the Contract Documents, the work, site, locality, and all local conditions and laws and regulations that in any manner may affect cost, progress, performance or finishing of the work.

(c) Bidder has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in Paragraph 4.02 of the General Conditions as amended by Paragraph SC-4.02 of the Supplementary Conditions.

(d) Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in (c) above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the work as Bidder considers necessary for the performance or furnishing of the work at the contract price, within the contract time and in accordance with the other terms and conditions of the contract documents, including specifically the provisions of Paragraph 4.02 of the General Conditions; and no additional examination, investigations, explorations, test, reports, studies or similar information or data or will be required by Bidder for such purposes.

(e) Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing underground facilities at or contiguous to the site and assumes responsibility for the accurate location of said underground facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said underground facilities are or will be required by Bidder in order to perform and furnish the work at the contract price, within the contract time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.04 of the General Conditions.

(f) Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

**Indian River County
Solid Waste Disposal District
Segment 3 Cell 2 Expansion, Segment 2 Partial Closure, And Landfill Gas System Expansion
Schedule of Bid Items**

Item (Note 1)	Unit	Estimated Quantity (Notes 7, 8)	Unit Price	Total
BID ITEMS:				
1. SEGMENT 3 CELL 2 EXPANSION				
1A. Site Work				
a. Site Preparation, Clearing, Grubbing (Notes 4, 6)	L.S.	1	\$ 50,000.00	\$ 50,000.00
b. Site Grading	L.S.	1	\$ 60,000.00	\$ 60,000.00
c. Imported Common Fill - Subgrade (Note 5)	C.Y.	44,000	\$ 12.00	\$ 528,000.00
d. Interim Cell Stormwater Diversion Berm (Note 5)	L.F.	335	\$ 125.00	\$ 41,875.00
e. 24-inch by 36-inch Elliptical RCP Culvert	L.F.	200	\$ 140.00	\$ 28,000.00
f. Fabric Formed Concrete Riprap	S.F.	150	\$ 10.00	\$ 1,500.00
g. Coquina Shell Access Road and Shoulder	S.F.	4,050	\$ 2.00	\$ 8,100.00
1B. Liner System (Note 9)				
a. 6-inch Processed Sand Layer (Note 5)	C.Y.	11,500	\$ 26.00	\$ 299,000.00
b. Geosynthetic Clay Liner	S.F.	494,000	\$ 0.57	\$ 281,580.00
c. Secondary 60-mil Textured HDPE Geomembrane	S.F.	494,000	\$ 0.50	\$ 247,000.00
d. LDS Geonet	S.F.	389,000	\$ 0.41	\$ 159,490.00
e. LDS Geocomposite Double Sided	S.F.	105,000	\$ 0.71	\$ 74,550.00
f. Primary 60-mil Textured HDPE Geomembrane	S.F.	494,000	\$ 0.50	\$ 247,000.00
g. LCS Geocomposite Double Sided	S.F.	494,000	\$ 0.67	\$ 330,980.00
h. 24-inch Protective Sand Cover (Note 5)	C.Y.	49,000	\$ 45.00	\$ 2,205,000.00
i. Tie-in to Existing Cell (inclusive of all layers)	L.S.	1	\$ 25,000.00	\$ 25,000.00
j. Metal Information Signs	Ea.	10	\$ 500.00	\$ 5,000.00
k. Electrical Leak Location Survey	L.S.	1	\$ 31,000.00	\$ 31,000.00
l. Cleaning and Video Inspection of the Leachate Collection and Leachate Detection Systems	L.S.	1	\$ 5,100.00	\$ 5,100.00
m. Site Restoration Including Sod	L.S.	1	\$ 45,000.00	\$ 45,000.00
n. Miscellaneous	L.S.	1	\$ -	\$ -
1C. Leachate Detection System (LDS) Pump Station				
a. LDS Pump Station Pump Package including all components for a complete system (wetwell, hatch and safety grate, turbine meter with totalizer, 1.5-inch Schedule 80 PVC pipe and fittings, and control panel)	Ea.	1	\$150,000.00	\$ 150,000.00
b. 18-Foot x 13-Foot x 10-Inch Thick Concrete Slab	S.F.	234	\$ 25.00	\$ 5,850.00
c. Miscellaneous	L.S.	1	\$ 7,000.00	\$ 7,000.00
1D. Leachate Piping System (Note 10)				
a. Leak Detection System including SDR 15.5 HDPE Pipe, Fittings, Geotextile wrap, River Rock, Bootless Pipe Penetration, Cleanouts	L.S.	1	\$150,000.00	\$ 150,000.00

Item (Note 1)	Unit	Estimated Quantity (Notes 7, 8)	Unit Price	Total
b. Leachate Collection System including SDR 15.5 HDPE Pipe and Fittings, Geotextile wrap, River Rock, Bootless Pipe Penetration, Cleanout, Plug Valves	L.S.	1	\$20,000.00	\$ 20,000.00
c. 5-Foot Diameter LCS Manhole	Ea.	2	\$20,000.00	\$ 40,000.00
d. Horizontal Directional Drill 10-Inch Solid SDR 15.5 HDPE Gravity Pipe	L.F.	100	\$ 100.00	\$ 10,000.00
e. Miscellaneous	L.S.	1	\$ -	\$ -
1E. Electrical and Instrumentation and Control				
a. Measurement and Control Instrumentation				
a.1. Programming Points	Ea.	29	\$ 1,500.00	\$ 43,500.00
a.2. Instruments	Ea.	16	\$15,000.00	\$ 240,000.00
a.3. Tower and Antenna	Ea.	1	\$25,000.00	\$ 25,000.00
b. Electrical Demolition Including Removal and Disposal	L.S.	1	\$ 600.00	\$ 600.00
c. Grounding	L.F.	520	\$ 11.00	\$ 5,720.00
d. Service & Distribution				
d.1. Panelboard PP-1	Ea.	1	\$15,000.00	\$ 15,000.00
d.2. Main Circuit Breaker	Ea.	1	\$ 2,000.00	\$ 2,000.00
d.3. ATS	Ea.	1	\$11,000.00	\$ 11,000.00
d.4. TPA-COMP-A	Ea.	1	\$ 8,000.00	\$ 8,000.00
d.5. TPA-LCS-A	Ea.	1	\$10,000.00	\$ 10,000.00
d.6. Panelboard LP-LDS	Ea.	1	\$ 4,000.00	\$ 4,000.00
d.7. Mounting Racks	Ea.	3	\$10,000.00	\$ 30,000.00
d.8. 20KW Diesel Genset	Ea.	1	\$50,000.00	\$ 50,000.00
e. Site Power				
e.1. Power Handhole with Grounding 3-Foot x 3-Foot x 3-Foot	Ea.	3	\$ 2,700.00	\$ 8,100.00
e.2. Control Handhole with Rack 2=Foot x 2-Foot x 2-Foot	Ea.	2	\$ 1,800.00	\$ 3,600.00
e.3. Concrete Encased Duct bank	L.S.	1	\$63,000.00	\$ 63,000.00
e.4. Associated directional drilling, trenching, excavation, backfill, and compaction as required for a complete underground system	L.S.	1	\$ 9,500.00	\$ 9,500.00
f. Site Lighting pole	Ea.	3	\$ 3,175.00	\$ 9,525.00
g. Branch Circuits and Feeders - All Conduit and Wire Per Schedules on E-3 and E-4 with all necessary fittings, pullboxes, supports, and appurtenances as required for a complete and operable system including material, installation, termination, and testing	L.S.	1	\$42,000.00	\$ 42,000.00
h. Short Circuit Coordination Study & Arc Flash Labels	L.S.	1	\$30,000.00	\$ 30,000.00
i. FPL Fee	L.S.	1	\$ 5,000.00	\$ 5,000.00
j. Miscellaneous Items	L.S.	1	\$ -	\$ -
1F. Survey (Note 3)	L.S.	1	\$89,000.00	\$ 89,000.00
TOTAL BID ITEM 1				\$ 5,760,570.00
2. SEGMENT 2 PARTIAL CLOSURE AND LANDFILL GAS SYSTEM EXPANSION				
2A. Partial Closure Construction				
a. Site Work				

Item (Note 1)	Unit	Estimated Quantity (Notes 7, 8)	Unit Price	Total
a.1. Site Clearing and Preparation (Note 4)	L.S.	1	\$ 50,000.00	\$ 50,000.00
a.2. Site Grading (Note 4)	L.S.	1	\$250,000.00	\$ 250,000.00
a.3. Common Fill (Note 5)	C.Y.	30,000	\$ 12.00	\$ 360,000.00
b. Drainage & Containment (Note 10)				
b.1 Remove existing 15-inch and 18-inch downcomers and replace w/ 24-inch Corrugated HDPE Pipe	L.F.	2,500	\$ 20.00	\$ 50,000.00
b.2. 24-inch RCP	L.F.	80	\$ 100.00	\$ 8,000.00
b.3. 24-inch Corrugated HDPE drainage pipe	L.F.	2,000	\$ 100.00	\$ 200,000.00
b.4. 18-inch Corrugated HDPE drainage pipe	L.F.	1,000	\$ 80.00	\$ 80,000.00
b.5. 15-inch Corrugated HDPE drainage pipe	L.F.	520	\$ 75.00	\$ 39,000.00
b.6. 8-inch Solid HDPE drainage pipe	L.F.	400	\$ 50.00	\$ 20,000.00
b.7 8-inch Perforated HDPE pipe	L.F.	3,000	\$ 50.00	\$ 150,000.00
b.8. 4-inch Perforated HDPE Underdrain	L.F.	3,000	\$ 25.00	\$ 75,000.00
b.9. Fabric Formed Concrete Riprap	S.F.	11,500	\$ 10.00	\$ 115,000.00
b.10. Flash Board Risers	Ea.	42	\$ 2,000.00	\$ 84,000.00
c. New Asphalt Access Road	S.Y.	3,800	\$ 80.00	\$ 304,000.00
d. Resurface Existing Asphalt Access Road	S.Y.	2,950	\$ 10.00	\$ 29,500.00
e. LFG Collection Piping and Installation				
e.1. 12-inch SDR 17 HDPE Solid Pipe and Fittings	L.F.	1,600	\$ 50.00	\$ 80,000.00
e.2. 10-inch SDR 17 HDPE Solid Pipe and Fittings	L.F.	1,350	\$ 45.00	\$ 60,750.00
e.3. 8-inch SDR 17 HDPE Solid Pipe and Fittings	L.F.	800	\$ 40.00	\$ 32,000.00
e.4. 6-inch SDR 17 HDPE Solid Pipe and Fittings	L.F.	4,000	\$ 30.00	\$ 120,000.00
e.5 4-inch SDR 17 HDPE Solid Pipe and Fittings	L.F.	500	\$ 26.00	\$ 13,000.00
e.6. Vertical Extraction Well	V.F.	2,900	\$ 200.00	\$ 580,000.00
e.7. Horizontal Extraction Well	Ea.	4	\$ 14,800.00	\$ 59,200.00
e.8. Well Head	Ea.	39	\$ 950.00	\$ 37,050.00
e.9. Miscellaneous Valves & Fittings	L.S.	1	\$ 50,000.00	\$ 50,000.00
e.10. Access Riser	Ea.	38	\$ 1,000.00	\$ 38,000.00
e.11. Zone Valve	Ea.	18	\$ 3,600.00	\$ 64,800.00
e.12. Summit Vent	Ea.	4	\$ 12,000.00	\$ 48,000.00
f. Liner System (Note 9)				
f.1. 6-inch Cap Foundation Layer (Note 5)	C.Y.	23,200	\$ 26.00	\$ 603,200.00
f.2. 40-mil Linear Low-Density Polyethylene Geomembrane	S.F.	1,017,000	\$ 0.40	\$ 406,800.00
f.3. Geocomposite Drainage Layer	S.F.	1,017,000	\$ 0.55	\$ 559,350.00
f.4. Geocomposite Gas Venting Layer	S.F.	1,017,000	\$ 0.40	\$ 406,800.00
f.5. 18-inch Protective Soil Layer (Note 5)	C.Y.	69,500	\$ 26.00	\$ 1,807,000.00
f.6. 6-inch Top Soil Cover (Note 5)	C.Y.	23,200	\$ 12.00	\$ 278,400.00
f.7. Bahia Sod	S.F.	1,017,000	\$ 0.22	\$ 223,740.00
f.8. Metal Information Signs	Ea.	4	\$ 500.00	\$ 2,000.00
g. Compressed Air and Forcemain Piping, Fittings, Valves, and Ancillary Components				

Item (Note 1)	Unit	Estimated Quantity (Notes 7, 8)	Unit Price	Total
g.1. 2-inch DR 11 HDPE Compressed Air & Forcemain Pipe (same trench)	L.F.	15,200	\$ 4.00	\$ 60,800.00
g.2. 2-inch Compressed Air & Forcemain Valves	Ea.	26	\$ 950.00	\$ 24,700.00
g.3 Well Dewatering Pump Assembly	Ea.	6	\$ 8,250.00	\$ 49,500.00
h. Turn-Key Air Compressor System Including All Equipment and Electrical Components and Connections and Prefabricated Metal Panel Enclosure (17 feet x 13 feet) with all appurtenances	L.S.	1	\$ 200,000.00	\$ 200,000.00
i. Concrete Gravity Wall for Existing Pump Station	L.F.	70	\$ 350.00	\$ 24,500.00
j. Site Restoration	L.S.	1	\$ 10,000.00	\$ 10,000.00
k. Miscellaneous	L.S.	1	\$ -	\$ -
2B. Survey (Note 3)	L.S.	1	\$ 89,000.00	\$ 89,000.00
TOTAL BID ITEM 2				\$7,743,090.00
3. PUBLIC CONSTRUCTION BOND AND INSURANCE (TOTAL)	L.S.	1	\$ 114,800.00	\$ 114,800.00
4. MOBILIZATION AND DEMOBILIZATION (TOTAL) (Note 2)	L.S.	1	\$ 543,000.00	\$ 543,000.00
5. WATER MAIN EXTENSION AND HYDRANT				
5A. Water Main Extension and Hydrant (Note 10)				
a. 8-inch C900 PVC Water Main	L.F.	1,750	\$ 50.00	\$ 87,500.00
b. Directional Drill 8-inch C900 PVC Water Main	L.F.	100	\$ 75.00	\$ 7,500.00
c. 8-inch Tapping Saddle & Gate Valve	Ea.	1	\$ 6,000.00	\$ 6,000.00
d. Hydrant and Ancillary Components	Ea.	1	\$ 10,000.00	\$ 10,000.00
e. 2-inch Sch 80 Pipe, Hose Bibb, Meter and Backflow preventer to LCS Pump Station	Ea.	1	\$ 10,000.00	\$ 10,000.00
f. Flushing, Disinfection, and Testing	L.S.	1	\$ 5,000.00	\$ 5,000.00
g. Miscellaneous (valves and fittings)	L.S.	1	\$ 10,000.00	\$ 10,000.00
5B. Survey (Note 3)	L.S.	1	\$ 3,500.00	\$ 3,500.00
TOTAL BID ITEM 5				\$ 139,500.00
6. LEACHATE COLLECTION SYSTEM (LCS) PUMP STATION AND				
6A. Leachate Collection System Pump Station				
a. Duplex LCS Pump Station Pump Package including all components for a complete system (precast wetwell, hatch and safety grate, turbine meter with totalizer, control panel, valves, ARV, pressure gauge, HDPE pipe and fittings, ductile iron pipe and fittings, pipe supports, miscellaneous appurtenances, and dewatering)	L.S.	1	\$ 150,000.00	\$ 150,000.00
b. 10-inch Concrete Slab and Driveway	S.F.	1,400	\$ 15.00	\$ 21,000.00
c. 5-Foot Diameter Pump Out Manhole	Ea.	1	\$ 20,000.00	\$ 20,000.00
6B. Leachate Forcemains (Note 10)				
a. 2-Inch Dual Contained (in 4-Inch) HDPE Forcemain	L.F.	292	\$ 45.00	\$ 13,140.00
b. 2-Inch Plug Valve	Ea.	2	\$ 2,000.00	\$ 4,000.00

Item (Note 1)	Unit	Estimated Quantity (Notes 7, 8)	Unit Price	Total
c. 4-Inch Solid SDR 11 HDPE Forcemain	L.F.	1,700	\$ 30.00	\$ 51,000.00
d. Directional Drill 4-Inch Solid DR 11 HDPE Forcemain	L.F.	100	\$ 100.00	\$ 10,000.00
e. 4-Inch Plug Valve	Ea.	2	\$ 1,500.00	\$ 3,000.00
6C. Survey (Note 3)	L.S.	1	\$ 3,500.00	\$ 3,500.00
TOTAL BID ITEM 6				\$ 275,640.00
7. CONTINGENCY ALLOWANCE (10%)	L.S.	1	\$1,619,600.00	\$ 1,619,600.00
GRAND TOTAL BID			\$	16,196,200.00

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(g) Bidder has given ENGINEER written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to Bidder.

(h) This bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

4. Bidder will complete and include with the bid the Schedule of Bid Items attached to this proposal. The quantities shown on the Schedule of Bid Items are approximate quantities to be used for the purpose of comparing bids. The actual quantities may vary. It is further understood that the actual amount of the Agreement, and payments there under, will be based upon the actual quantities placed into the work.

5. Bidder agrees that the work will be completed in accordance with the following timeframe. The CONTRACTOR shall be Substantially Complete with the work of Milestone 1 (Bid Item Nos. 2 and 4) within One Hundred Eighty (180) calendar days from the date of Notice of Proceed, Milestone 2 (Bid Item Nos. 1, 4, 5, and 6) within Three hundred sixty (360) calendar days from the date of Notice to Proceed, in accordance with Paragraph 2.03 of the General Conditions as amended by Supplementary Conditions, and be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions as amended by Supplementary Conditions within three hundred and ninety (390) calendar days after the issuance of the Notice to Proceed.

6. The following documents are attached to and made a part of this Bid:

- (a) Certificates of Insurance (included in Section 00800 Supplementary Conditions).
- (b) Certificate of Compliance with the Florida Trench Safety Act (Section 00480).
- (c) Schedule of Subcontractors (Section 00431).
- (d) Schedule of Suppliers (Section 00450).
- (e) Disclosure of Relationships (Section 00452).
- (f) Confirmation of a Drug-Free Workplace (Section 00454).
- (g) Non-Collusive Affidavit (Section 00455).
- (h) General Information Required for Bidders (Section 00456).
- (i) Schedule of Alternate Suppliers (Section 00460).

7. The terms used in this Bid, which are defined in the General Conditions of the Construction Contract included as part of the Contract Documents, have the meanings assigned to them in the General Conditions. CONTRACTOR acknowledges the insurance requirements of Section 00700 as amended by Section 00800 and any other addendums and agrees to provide said insurance upon award of contract.

SCHEDULE OF BID ITEMS

Notes:


1. All items shall include the cost for materials, installation, labor, testing, startup and training to complete the work as required in the applicable Construction Drawings and Technical Specifications.
2. Mobilization/Demobilization (Item 4) shall include any partial demobilization required for all components of construction specified herein and in the Construction Drawings and Technical Specifications.
3. The survey activities (All Bid Items) shall include surveying of existing conditions prior to construction; surveying for all pipe alignment; as-built surveys of all piping, structures, subgrade, processed sand layer, protective sand layer, leachate collection system, cap foundation layer, protective soil layer, stormwater collection pipe, and all items identified in Section 01050; a final survey and any surveying needed throughout the duration of the project.
4. The Site Preparation activities (Items 2 and 3) shall include demolition, clearing, grubbing, stripping, and/or surface grading for areas in accordance with Section 02100 and shall involve all material, equipment and labor required.
5. Earthwork quantities are in-place compacted quantities. Earthwork pay items include all cost to haul, place, compact, and grade all fill materials.
6. All demolition activities shall be in accordance with Technical Specification Section 02050. All pipe relocations shall include excavation and backfill.
7. Quantities presented herein are estimated quantities and shall be verified by Contractor. If quantities are found to be significantly different, Contractor shall notify Engineer.
8. Quantities not provided shall be estimated and verified by Contractor. Payment shall be made on surveyed and calculated quantities in accordance with the Technical Specifications.
9. All geosynthetic quantities provided are installation quantities for bid estimate purposes. Material supply quantities shall be based on installer take-off estimate, approved by Owner. Supply quantities shall include waste, slope, anchor trench, overlap, and any other adjustment factors necessary to supply all material to complete the work. Install pay quantities will be based on actual square footage verified by 3rd party survey.
10. All items for pipe installation shall include bedding, backfill, compaction, and testing.

All bid items shall include costs for furnishing to the OWNER all materials, equipment, and supplies and for all costs incurred in completing the work including installation of all materials, equipment, and supplies furnished, complete in place and ready for continued service, all other labor, taxes, insurance, miscellaneous costs, overhead, and profit.

NOTE: Contingencies Definitions - Contingencies shall be bid in an amount equal to 10% of the sum of the bid. The amount bid for contingencies shall only be paid for in the event change orders are needed and approved by Indian River County for unforeseen work in conformance with this contract. The amounts to be paid for by Owner under contingencies shall not exceed the value of the approved change orders.

I have attached the required 5 percent Bid Security to this Bid.

BIDDER INFORMATION:

SUBMITTED ON: 03 - 01 - 2018 (DATE)
SUBMITTED BY: Thalle Construction Co., Inc. (NAME OF BIDDER)
900 NC Highway 86 North (STREET ADDRESS)
Hillsborough, NC 27278 (CITY, STATE, ZIP)
919-245-4190 (PHONE #)
919-241-1659 (FAX #)
skohler@thalle.com (E-MAIL)
13-1734206 (FEDERAL ID #)
CGC1520319 (FLORIDA LICENSE #)
SIGNED BY: Stephen E. Kohler (PRINTED NAME)
 President/COO (TITLE)
(SIGNATURE)

Note: If the Bidder is a corporation, indicate State of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses, if different from business address.

END OF SECTION