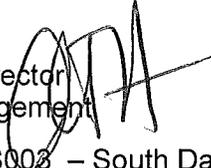


# Memorandum



**Date:** December 1, 2016

**To:** Tara Smith, Director  
Internal Services Department

**From:** Alina T. Hudak, Deputy Mayor/Director  
Department of Solid Waste Management 

**Subject:** Goal Measure for Project No. 14S003 – South Dade Landfill Cell 5 Construction

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## **RECOMMENDATION:**

This is a request for the Internal Services Department to review the attached Community Small Business Enterprise (CSBE) contract measure in order to allow the Miami-Dade Department of Solid Waste Management (DSWM) to proceed with advertisement for the South Dade Landfill Cell 5 Construction.

This project was set to be advertised in 2014 and the Recommendation to Advertise was approved. Thereafter, staff did a capacity analysis that revealed that due to higher level performance, the tonnage being processed at our waste-to-energy plant had increased, which gave the DSWM additional years of capacity at the currently active South Dade Landfill Cell 4. As a result, DSWM deemed that it was in the best interest of the Department to delay the major construction portion of the project; we did not want to construct a new cell that would not be utilized. Instead, the project was divided into three phases. The first phase entailed de-mucking of the area and construction of the sub-base. Phase 2 consisted of the construction of the base. Both Phase 1 and Phase 2 have been completed. We are now ready to proceed with Phase 3 (the final Phase), which is the major construction.

We are recommending a subcontractor goal of 3.10%, which includes 10% for contingency, based on availability of CSBE Subcontractors as per Ordinance 97-52. Please note that all of the work in Phase 1 and Phase 2 were performed by small business contractors. The DSWM Contract Measures Analysis Worksheet findings and the other supporting documents are attached. The estimated cost of the project is \$16,142,089, including a 10% contingency of \$1,467,463.

The scope of the work for this project consists of the construction of the final Phase of Cell 5 at the South Dade Landfill (SDLF), a Class 1 landfill in Miami-Dade County, Florida. The cell will occupy a total of 50 acres, of which approximately 45 acres will be for waste disposal and the remainder for the storm water management system.

## **BACKGROUND/EXPERIENCE:**

The South Dade Landfill (SDLF) is a 320-acre Class 1 municipal solid waste (MSW) facility owned and operated by the DSWM. The current footprint of the SDLF consists of four cells designated as Cells 1 through 4. Cells 1 and 2 have approximately 60 acres of combined footprint area and are closed; the 50-acre Cell 3 is also closed; and the 50-acre Cell 4 is currently active and receiving Class 1 waste.

Goal Measure for Project No. 14S003  
South Dade Landfill Cell 5 Construction  
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Thank you for your assistance with this matter. If you have any questions, please contact Olga Espinosa-Anderson, Division Director, at (305) 514-6730.

Attachments

c: Laurie Johnson, Manager, ISD  
Paul Mauriello, Deputy Director, DSWM  
Aneisha Daniel, Administration Assistant Director, DSWM  
Asok Ganguli, Technical Services Assistant Director, DSWM  
Olga Espinosa-Anderson, Procurement and Contracts Management Div. Director, DSWM  
Luis Moreno, Construction Manager 3, DSWM

## DSWM CONTRACT MEASURE ANALYSIS WORKSHEET

**Date:** December 1, 2016

**To:** Tara Smith, Director  
Internal Services Department

**From:** Alina T. Hudak, Deputy Mayor/Director

**Department:** Department of Solid Waste Management

**Project/contract Title:** South Dade Landfill Cell 5 Construction

**Contract No.** 14S003

**Estimated Project Cost:** \$16,142,089

**Funding Source:** Waste Disposal Operating Fund (Pay As You Go Capital)  
Building Better Communities GOB Program

### Description of Project:

This project consists of the construction of Cell 5 at the South Dade Landfill (SDLF), a Class I landfill in Miami-Dade County, Florida. This cell will occupy approximately 50 acres, of which 45 acres are for waste disposal. Cell 5 will be constructed as 5 sub-cells – two approximate 6-acre sub-cells and three approximate 11-acre sub-cells. The construction of Cell 5 will include the installation of a landfill double liner system, consisting of a 2-ft thick liner protective layer; leachate collection system (LCS) geocomposite drainage layer, which consists of a geonet with nonwoven geotextiles heat-bonded on both sides; a primary liner consisting of 60-mil thick textured high-density polyethylene (HDPE) geomembrane liner; leachate detection system (LDS) geocomposite drainage layer, which consists of a geonet with nonwoven geotextiles heat-bonded on both sides; a composite secondary liner, which consists of 60-mil thick textured HDPE geomembrane placed on top of a geosynthetic clay liner (GCL) with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec; and a 6-inch (minimum) thick prepared subgrade layer.

The LCS will also include a LCS corridor consisting of 6-inch nominal diameter perforated HDPE pipe embedded in pipe bedding material. Below the geocomposite drainage layer of the LDS will be a collection corridor comprised of two or more layers of geocomposite or bi-planar geonet, which lie directly on top of the 60-mil thick textured HDPE geomembrane of the secondary liner.

This project will include the installation of a collection sump area at each sub-cell. Each sump will be equipped with three pumps. In addition, the project will include grading activities and the completion of the Cell 5 stormwater management system that was partially built during Phase 1 and Phase 2 constructions.

The prime contractor should have at least five (5) years of experience in layered liner and drainage systems, including Geotextile, HDPE, Geonet and protective layer installation. Subcontractors must have at least five (5) years of experience in earth work, electrical, and mechanical. In addition, the installer of the liner and HDPE pipes must have a certification in heat fusion and seams that demonstrates training and qualification to perform these tasks.

Set Aside      Bid Preference                  Subcontractor Goal    Project Goal      No Measure

Selection Factor

**DEPARTMENT INPUT**  
**CONSTRUCTION CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION**

Check applicable Ordinance(s):  90-143 Responsible Wage and Benefits  03-237 (formerly 03-1) Community Workforce Program

**PROJECT INFORMATION** See attachment

**Contract/Project/\*Work Order No.:** 14S003  
 Reference corresponding project number when submitting a work order

**Contract/Project Title:** South Dade Landfill Cell 5 Construction

**Description/Scope of Work:** To establish a contract for the construction of South Dade Landfill Cell 5 to include: Installation of a double liner system consisting of a 60-mil textured HDPE geomembrane clay liner (GCL) with a maximum hydraulic conductivity of 1x10<sup>-7</sup> cm/sec, associated leachate collection, detection and pumping systems, including the completion of the storm water management system, and the construction of a disposal area.

**Estimated Cost:** \$ 16,142,089

**Funding Source:** Waste Disposal Operating Funds & Building Better Communities (GOB Program)

**Location of Project** (street address or beginning and ending points) i.e. 12345 NE 23<sup>rd</sup> Ct or Starts at 135 St. ends at 145 St.  
23707 SW 97<sup>th</sup> Avenue, Miami, Florida 33032

**PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CWP)** See attachment

Engineer/Department or Agency's estimated required workforce for Project  Work Order :

Trade/Skills Required	Est. # of workforce required per trade	Est. # of total days to complete job
Electrical	3	90
Landscaper	9	90
Operators	6	360
Laborers	5	360
Liner Installer	15	180

**Comments:** The liner installer trade has various skill levels but all must have experience, these include a manager, lab technician, welders, etc. These are normally established crews that are kept together and rotate from job to job. Job specifications require years of experience and some certificates.

**PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE)** See attachment

Sub-Trade	Est. Cost	% of Item to total bid	Availability
Electrical	\$250,000	1.55%	Yes
Landscaping	\$250,000	1.55%	Yes
Total	\$500,000	3.10%	

**RECOMMENDATION**

**Set-Aside:** Level 1  Level 2  Level 3  Trade Set-Aside  Sub-Contractor Goal  Workforce Goal  No Measure   
**Basis for Recommendation:** \_\_\_\_\_

**Date submitted to DBD:** 11/28/16

**Contact Person:** Olga Espinosa-Anderson

**Telephone No.:** (305) 514-6730

**PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
SOUTH DADE LANDFILL CELL 5 CONSTRUCTION**

**PROJECT #: 14S003**

**COST ESTIMATE BY TRADE**

TRADE/SUB-TRADE	EST. COST	% OF ITEM TO TOTAL BID (including contingency)	CSBE GOAL FOR THE TRADE (%)	RECOMMENDED CSBE PARTICIPATION (%)	RECOMMENDED CSBE PARTICIPATION (\$)	CASE AVAILABILITY
Layered Liner and drainage System including Geotextile, HDPE, Net and protective layer (Prime Contractor)*	\$14,174,626.00	87.81%	0%	0.00%	\$0.00	No
CSBE Electrical Work	\$250,000.00	1.55%	100.00%	1.55%	\$250,000.00	Yes
CSBE Concrete Work	\$250,000.00	1.55%	100.00%	1.55%	\$250,000.00	Yes
Contingency	\$1,467,463.00	9.09%		3.10%		
Total with contingency	\$16,142,089.00	100.00%				

\*Note: These are specialized works that require at least 5 years of experience in the specified field.

**MIAMI-DADE COUNTY PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
ENGINEER'S OPINION OF PROBABLE COST  
SOUTH-DADE LANDFILL CELL 5 CONSTRUCTION**

Item Number	Description of Work	Unit	Quantity	Unit Price	Cost
<b>SITE PREPARATION/SITE GRADING</b>					
1	Remove vegetation	acre	50	\$ 500.00	\$ 25,000
3	Base Grading and Berm Cut/Fill	CY	33,000	\$ 5.00	\$ 165,000
4	Import and Place New Fill for Base Grading/Berm	CY	70,000	\$ 24.00	\$ 1,680,000
5	Berm/Swale Topsoil and Sodding	SY	33,000	\$ 6.50	\$ 214,500
	<b>Sub-Total Site Preparation</b>				<b>\$ 2,084,500</b>
<b>LINER SYSTEM</b>					
6	6" Prepared Subbase - Fine Grading (exist. Material)	CY	38,000	\$ 5.00	\$ 190,000
7	Secondary Geosynthetic Clay Liner	SF	1,950,000	\$ 0.60	\$ 1,170,000
8	Secondary 60-mil HDPE Textured Geomembrane	SF	1,950,000	\$ 0.73	\$ 1,423,500
9	Secondary Geocomposite Drainage Layer	SF	1,950,000	\$ 0.85	\$ 1,657,500
10	Primary 60-mil HDPE Textured Geomembrane	SF	1,950,000	\$ 0.73	\$ 1,423,500
11	Primary Geocomposite Drainage Layer	SF	1,950,000	\$ 0.85	\$ 1,657,500
12	2' Liner Protective Layer	CY	145,000	\$ 24.00	\$ 3,480,000
13	Cell 4 Tie-In Extrusion Welding	LF	2,350	\$ 6.00	\$ 14,100
14	Anchor Trench	LF	4,100	\$ 7.00	\$ 28,700
	<b>Sub-Total Liner System</b>				<b>\$ 11,044,800</b>
<b>LEACHATE COLLECTION SYSTEM</b>					
15	16 oz./sy Nonwoven Geotextile	SY	6,500	\$ 3.00	\$ 19,500
16	No. 57 Coarse Aggregate	CY	500	\$ 150.00	\$ 75,000
17	6" Dia. SDR-21 perforated HDPE pipe	LF	4,000	\$ 25.00	\$ 100,000
18	18" Dia. Perforated End Cap	each	10	\$ 150.00	\$ 1,500
19	18" Dia. Perforated SDR-17 HDPE Riser Pipe	LF	100	\$ 40.00	\$ 4,000
20	18" Dia. SDR-17 Solid HDPE Riser Pipe	LF	900	\$ 40.00	\$ 36,000
21	6" Dia. SDR-21 solid HDPE pipe	LF	900	\$ 20.00	\$ 18,000
	<b>Sub-Total Leachate Collection Sytem</b>				<b>\$ 254,000</b>
<b>LEACHATE TRANSMISSION SYSTEM</b>					
22	2" and 4" transmission pipe	LF	450	\$ 100.00	\$ 45,000
23	Leachate Transmission Access Manhole	each	2	\$ 15,000.00	\$ 30,000
24	Leachate Transmission System Valve Box	each	5	\$ 1,500.00	\$ 7,500
25	Leachate Pump (Package System)	LS	1	\$ 214,600.00	\$ 214,600
26	Electrical Generators	LS	0	\$ 75,000.00	\$ -
	<b>Sub-Total Drainage</b>				<b>\$ 297,100</b>
	Energy Dissipators	each	2	\$ 15,000.00	\$ 30,000
<b>MISCELLANEOUS</b>					
27	Bonds/Insurance	%	1.5%	\$ 205,206	\$ 205,206
28	Mobilization/Demobilization	%	2.0%	\$ 273,608	\$ 273,608
29	Survey/As-Builts	LS	1	\$ 75,000	\$ 75,000
30	Laboratory Testing/QA/QC	%	3.0%	\$ 410,412	\$ 410,412
	<b>TOTAL</b>				<b>\$ 14,674,626</b>
31	Contingency @ 10%	LS	1	\$ 1,467,463	\$ 1,467,463

<b>GRAND TOTAL</b>	<b>\$ 16,142,089</b>
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