

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.: S-914

*Reference corresponding project number when submitting a work order

Contract/Project Title: CD 1.11 GENERAL ELECTRICAL DESIGN – SUBSTATIONS 9, 10, 11, AND 12

Description/Scope of Work: See Attached

Estimated Cost: 7073306 Funding Source: Other (specify)

Location of Project (street address or beginning and ending points) i.e. 12345 NE 23rd Ct or Starts at 135 St. ends at 145 St.
South District Waste Water Treatment Plant Substations 9 and 10 and Substations 11 and 12, located in unincorporated Miami Dade County at 8950 SW 232nd St, Miami, FL 33190.

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
N/A		
N/A		
N/A		

Comments: Specialized Electrical work involving sophisticated 15KV feeder cables, 2000 KVA liquid-filled transformers and associated units and controls. The project is required under the USEPA Consent Decree and must be in service by March 26, 2021.

PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE) See attachment ☒

Sub-Trade	Est. Cost	% of Item to Base Bid	Availability
Construction	\$941,805	13.31%	
G & S	\$241,835	3.42%	
	\$	0%	

RECOMMENDATION

Set-Aside: Level 1 ☐ Level 2 ☐ Level 3 ☐ Trade Set-Aside ☐ Sub-Contractor Goal ☒ Workforce Goal ☐ No Measure ☐

Basis for Recommendation: This is the rehabilitation and upgrading of four(4) electrical substations within the South District Waste Water Treatment Plant. The bulk of this project involves high voltage electrical circuits, transformers and controls.

Date submitted to DBD: 8/28/2018

Contact Person: Isaac Smith

Telephone No.: (786)552-8989

DEPARTMENTAL INPUT
CONTRACT MEASURE ANALYSIS AND RECOMMENDATION

To: Gary T. Hartfield, Division Director
Internal Services Department
Small Business Development Division

From: Isaac Smith, Manager
Construction Contracts Section

Department: Miami-Dade Water and Sewer Department

Contract Title: CD 1.11 GENERAL ELECTRICAL DESIGN – SUBSTATIONS 9, 10, 11, AND 12

Contract No.: S-914

Estimate Amount: \$7,073,306.90 [\$6,430,279.00 Construction + \$643,027.90 Contingency]

Funding Source: EW 660, Revenue Bonds Sold

Small Business Enterprise – Construction – 13.31% Analysis for Recommendation (Attached)

Department Head or Authorized Agent

DESCRIPTION OF PROJECT:

This project is one in a series of projects that are being processed under Section 2-8.2.12 of the Code, entitled Miami-Dade Water and Sewer Department Consent Decree and Capital Improvement Programs Accelerate Ordinance. In general, the project consists of furnishing all materials unless otherwise specified to be furnished by the Department, all labor, and equipment necessary for electrical improvements at the South District Wastewater Treatment Plant's Electrical Substation Nos. 9, 10, 11 and 12, located in unincorporated Miami Dade County at 8950 SW 232nd St, Miami, FL 33190.

The scope of work includes, but is not limited to, furnishing all materials, labor, and equipment necessary for the electrical improvements for Substations 9, 10, 11 and 12. The project generally includes, but is not limited to, demolition and replacement of existing electrical transformer and switchgear equipment and panels, electrical busduct, conduits, and cabling; associated instrumentation and controls; and modifications to the existing substation buildings, including: replacement of existing built-up roofing, new interior and exterior lighting, power and lighting panels, new doors, louvers, equipment pads, exhaust fans, and air conditioning and filtration equipment; and new sidewalks, fencing, and site grading. Major portions of the work includes:

1. Installation of two (2) new, customized 2000 KVA liquid-filled transformers
2. Installation of new arc-resistant 480V switchgears, including a remote racking mechanism to remove switchgear breakers.
3. Installation of new electrical power and lighting panels, transformers, conduit, cabling, and lighting.
4. Installation of new 15KV feeder cables to the existing Motor Control Centers for Substations 9 and 10.
5. Installation of new 480V feeder cables in the existing conduits for Clarifiers 5 through 8 in Substation 10.

6. Installation of new LED lighting for the interior and exterior of each substation building.
7. Installation of a new fire alarm system for each substation building that will connect to the existing Simplex plant-wide fire alarm system.
8. Installation of a new fire extinguisher for each substation building.
9. Demolition of the existing 1000 KVA transformers in each substation building.
10. Demolition of the existing 480V switchgear in each substation building.
11. Installation of new concrete equipment pads for transformers and switchgears.
12. Replacement of existing built up roof with a new SBS bituminous membrane roofing for each substation building.
13. Installation of new transformer louvers and associated concrete sidewalk and curb.
14. Installation of replacement and new doors.
15. Repairs to the existing structure from demolition and from installation of new appurtenances.
16. Painting interior and exterior of each substation building.

LICENSES: The types of licenses required are: General Engineering, General Building Contractor and/or other categories as applicable by Chapter 489 of the Florida Statutes or Chapter 10 of Miami-Dade County Code.

COMMUNITY WORKFORCE PROGRAM

CWP PARTICIPATION: CWP is Applicable to this Project.

QUALIFICATIONS OF BIDDERS:

Bidders shall submit proof that his/her firm has at least the minimum successful contract experience as requested below:

- a. The Contractor or Contractor's Electrical Subcontractor shall have successfully completed a minimum of three (3) projects demonstrating experience with medium or high voltage power supply systems, including transformers and switchgear.

DEPARTMENTAL INPUT
CONTRACT MEASURE ANALYSIS AND RECOMMENDATION

To: Gary T. Hartfield, Division Director
Internal Services Department
Small Business Development Division

From: Isaac Smith, Manager
Construction Contracts Section

Department: Miami-Dade Water and Sewer Department

Contract Title: CD 1.11 GENERAL ELECTRICAL DESIGN – SUBSTATIONS 9, 10, 11, AND 12

Contract No.: S-914

Estimate Amount: \$7,073,306.90 [\$6,430,279.00 Construction + \$643,027.90 Contingency]

Funding Source: EW 660, Revenue Bonds Sold

Small Business Enterprise – Goods & Services – 3.42%

Analysis for Recommendation (Attached)

Department Head or Authorized Agent

DESCRIPTION OF PROJECT:

This project is one in a series of projects that are being processed under Section 2-8.2.12 of the Code, entitled Miami-Dade Water and Sewer Department Consent Decree and Capital Improvement Programs Accelerate Ordinance. In general, the project consists of furnishing all materials unless otherwise specified to be furnished by the Department, all labor, and equipment necessary for electrical improvements at the South District Wastewater Treatment Plant's Electrical Substation Nos. 9, 10, 11 and 12, located in unincorporated Miami Dade County at 8950 SW 232nd St, Miami, FL 33190.

CONSIDERATIONS FOR ANALYSIS:

1. The project predominantly involves improvements to several Electrical Substations at the site of an operating wastewater treatment plant.
2. This substation of the plant includes very large, expensive and specialized high voltage electrical equipment.
3. The major portions of the work involves the removal of interior contents of the substation and replacement of new electrical equipment.
4. The project also includes construction of new roof, doors, louvers and other structural building improvements.
5. The work shall be executed while the wastewater plant is in operation. The contractor's activities shall not adversely affect the operations or impact the treatment capacity of the plant.

6. The Department has evaluated the project for possible opportunities for participation in the area of SBE – Goods and Services. Based on the scope and nature of the work, we have concluded that there are multiple opportunities for participation on this project. The recommended areas of participation for SBE Goods & Services providers includes the possible areas:

Analysis for Small Business Enterprise – Goods and Services Recommendation				
Item	Goods & Services	Prime Contractor	Sub-Contractor	SBE Availability
1.	GOODS: Liquid-filled Transformers Racking Mechanism Electrical Switchgear Motor Control Centers Instrumentation & Controls Doors, Louvers, etc Interior lighting Exterior LED Lighting Conduits and Cables Paint	X X X X X	X X X X X X	X X X X X X
2.	SERVICES Electrical Instrumentation Civil Site work Bituminous Roofing Systems Integration Hauling Painting Fire Alarm System Power Coordination Study	X X X X X X X X X	X X X X X X X X X	X X X X X X X X X

ANALYSIS FOR SBE CONSTRUCTION AND G & S

Contract No. S-914

Item	Bid Item Description	Cost	% of Total	SBE Constr. Availability	SBE Construction (%)	Description of SBE Construction work	SBE G&S - Availability	SBE G&S - Availability (\$)	SBE G&S - % of Total	Description of SBE G&S work
1	Mobilization & Demobilization	\$ 269,036	3.80%	\$ 0.00	0.00%		0.00%	\$ 0.00	0.00%	
2	For the demolition at Substations 9 & 10 and 11 & 12	\$ 117,072	1.66%	\$ 93,657.60	1.32%	Demolition including masonry, equipment pads, existing louvers, hauling debris off site, removing AC units	0.00%	\$ 0.00	0.00%	
3	For all Site Civil demolition and disposal at Substations 9 & 10 and 11 & 12	\$ 132,284	1.87%	\$ 105,827.20	1.50%	Site Civil demolition and disposal of equipment pads and SOG	0.00%	\$ 0.00	0.00%	
4	For all site Civil Work at Substation 9 & 10 and 11 & 12	\$ 23,965	0.34%	\$ 19,172.00	0.27%	Civil site work including gravel roadway, chainlink fence, and sidewalk	0.00%	\$ 0.00	0.00%	
5	For all structural and architectural work within Substation 9 & 10 and 11 & 12 buildings	\$ 240,766	3.40%	\$ 144,459.60	2.04%	Equipment pads, louver curbs, insulating lightweight concrete, openings	20.00%	\$ 48,153.20	0.68%	Mounting pads, louvers misc metal work
6	For all work associated with replacement of the existing built up roof at Substation 9 & 10 and 11 & 12 buildings	\$ 142,334	2.01%	\$ 99,633.80	1.41%	Demolition of existing builtup roof, hauling debris off site	10.00%	\$ 14,233.40	0.20%	Hauling and dumping
7	For furnishing and installing all building mechanical Work at Substation 9 & 10 and 11 & 12.	\$ 233,020	3.29%	\$ 139,812.00	1.98%	HVAC Installation	20.00%	\$ 46,604.00	0.66%	Fans, ducting, A/C unit
8	For furnishing and installing electrical transformers and switchgear at Substation 9 and 10	\$ 1,600,372	22.63%	\$ 0.00	0.00%		0.00%	\$ 0.00	0.00%	
9	For furnishing and installing electrical transformers and switchgear at Substation 11 and 12	\$ 1,467,317	20.74%	\$ 0.00	0.00%		0.00%	\$ 0.00	0.00%	
10	For furnishing and installing all low voltage electrical Work at Substation 9 and 10	\$ 1,080,839	15.28%	\$ 270,209.75	3.82%	Low voltage electrical work	10.00%	\$ 108,083.90	1.53%	Lighting panels, interior and exterior lighting, misc. panels, conduits, cables
11	For furnishing and installing all low voltage electrical Work at Substation 11 and 12	\$ 104,975	1.48%	\$ 26,243.75	0.37%	Low voltage electrical work	10.00%	\$ 10,497.50	0.15%	Lighting panels, interior and exterior lighting, misc. panels, conduits, cables
12	For all Instrumentation and Control Work at Substation 9 and 10, including coordination with the Owner and the Owner's Integrator,	\$ 520,765	7.36%	\$ 0.00	0.00%		0.00%	\$ 0.00	0.00%	
13	For all Instrumentation and Control Work at Substation 11 and 12, including coordination with the Owner and the Owner's Integrator,	\$ 413,633	5.85%	\$ 0.00	0.00%		0.00%	\$ 0.00	0.00%	
14	For painting of the interior and exterior of Substation 9 and 10 and Substation 11 and 12 buildings	\$ 71,316	1.01%	\$ 42,789.60	0.60%		20.00%	\$ 14,263.20	0.20%	Painting of interior and exterior of Substations 9 and 10, and 11 and 12
15	Final clean up	\$ 12,585	0.18%	\$ 0.00	0.00%		0.00%	\$ 0.00	0.00%	
	Subtotal	\$6,430,279.00	90.91%	\$ 941,805.30	13.31%			\$241,835.20	3.42%	
	Contingency Account (10%)	\$643,027.90	9.09%							
	SBE TOTAL BID	\$7,073,306.90	100.00%							