

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-931**

*Reference corresponding project number when submitting a work order

Contract/Project Title: **OCEAN OUTFALL LEGISLATION PROGRAM CONSTRUCTION PACKAGE ST-2A HEADWORKS 3, OXYGENATION TRAINS 9 & 10, AND SUBSTATION 57/58**

Description/Scope of Work: **See Attached**

Estimated Cost: **89725984** **Funding Source:** **General funds**

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, 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:The project is required for compliance with the State of Florida's Ocean Outfall Legislation.

PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE) See attachment

Sub-Trade	Est. Cost	% of Item to Base Bid	Availability
Construction	\$9555036	10.65%	N/A
G & S	\$1583203	1.76%	N/A
	\$	0%	

RECOMMENDATION

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

Basis for Recommendation:Project is for the proposed construction of a headworks, odor control and oxygenation facility at a wastewater plant, the construction of which includes numerous expensive and complex process equipment. However, there was limited availability of small business participation.

Date submitted to DBD:**10/25/2020**

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, Chief
Construction Contracts Division

Department: Miami-Dade Water and Sewer Department

Contract Title: OCEAN OUTFALL LEGISLATION PROGRAM CONSTRUCTION PACKAGE ST-2A
HEADWORKS 3, OXYGENATION TRAINS 9 & 10, AND SUBSTATION 57/58

Contract No.: S-931

Estimate Amount: \$89,725,984 [\$91,569,076 Construction + \$8,156,908 Contingency]

Funding Source: EW 667, Revenue Bonds Sold

Small Business Enterprise – Construction – 10.65%
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. It is part of the Miami-Dade County's compliance strategy for meeting the State of Florida's Ocean Outfall Legislation (OOL) schedule requirements.

In general, the project consists of furnishing all materials, labor, and equipment necessary for the construction of proposed headworks, two oxygenation trains and odor control facilities at the South District Wastewater Treatment Plant (SDWWTP), located at 8950 SW 232nd Street Miami, Florida. The project also includes the installation of large diameter pipelines including a connection to an existing 72-inch force main at SW 232 Street.

The scope of work includes, but is not limited to, construction of a new influent metering valve box, a new headworks building (Headworks 3) with an attached odor control building, construction of two new oxygenation trains (Oxygenation Trains 9 and 10), construction of a new electrical substation and electrical building, and the integration of these new structures with the rest of the plant. Specifically, the work includes the following:

1. Demolition - Site
 - a. Demolition of existing piping, pavement, conduits and duct banks as indicated in the Plans.
2. Construction –232nd Street Force Main Tie-in, Influent Metering Valve Box, Headworks 3, Odor Control Building, and Process Drain Lift Station
 - a. Construction of a connection to an existing plant 72-inch influent force main header located on SW 232nd Street.
 - b. Construction of a new influent valve box which will regulate the flow to a new headworks building.

- c. Construction of a new headworks building and grit chamber (Headworks 3).
 - d. Construction of a new lift station which will receive flow from the process drains from the new headworks.
 - e. Construction of interconnecting piping between existing and new facilities.
 - f. Furnishing and installation of pumps, screens, collectors, conveyors, gates, valves, and other process mechanical equipment.
 - g. Furnishing and installation of fire alarm systems, electrical systems, SCADA system, MCCs, conduits, duct banks, control panels and lighting systems.
 - h. Furnishing and installation of new sensors, including flowmeters, wastewater samplers and other instruments.
 - i. Furnishing and installation of new fire suppression systems, HVAC systems, water source heat pumps (WHPs) cooling water pumps (CWPs), cooling towers (CTs), fans, air ducts and air purification systems.
 - j. Furnishing and installation, doors, windows, skylights, and rollup doors.
 - k. Furnishing and installation of all plumbing.
 - l. Furnishing and installation of all appurtenances for electrical and control room.
3. Construction – Substation 57/58
- a. Construction of Substation 57/58 to power all new process areas that are part of the Work.
 - b. Furnishing and installation of new fire alarm system, electrical systems, SCADA system, transformers, switchgears, MCCs, conduits, duct banks, control panels and lighting systems.
 - c. Furnishing and installation of new HVAC systems, water source heat pumps (WHPs), cooling water pumps (CWPs), cooling towers (CTs), fans, air ducts and air purification system.
 - d. Furnishing and installation, doors, windows and rollup doors.
 - e. Furnishing and installation of all plumbing.
 - f. Furnishing and installation of all appurtenances for control room.
4. Construction – Ox. Trains 9 and 10 and Sampling Building
- a. Construction of two (2) new Oxygenation Trains and Sampling Building.
 - b. Construction of interconnecting piping between existing and new facilities.
 - c. Furnishing and installation of new mechanical aerators, blowers, pumps, gates, valves, and other process mechanical equipment.
 - d. Furnishing and installation of new exterior lighting systems.
 - e. Furnishing and installation of new sensors, including flowmeters, gas samplers, wastewater analyzers, and gas detection.
5. Construction – O2 Trains 9-12 Electrical Building
- a. Construction of one (1) new electrical building for oxygenation trains 9 and 10.
 - b. Furnishing and installation of new fire alarm system, electrical systems, SCADA system, conduits, MCCs, VFDs, control panels, fire alarm, and lighting systems.
 - c. Furnishing and installation of new HVAC systems, water source heat pumps (WHPs) cooling water pumps (CWPs), cooling towers (CTs), fans, air ducts and air purification system.
 - d. Furnishing and installation, doors, windows and rollup doors.
 - e. Furnishing and installation of all plumbing.
 - f. Furnishing and installation of all appurtenances for control room.
6. Construction – Site and Yard Piping
- a. Site grading and construction of new yard piping and electrical conduits to connect new structures to the SDWWTP existing electrical, water, sewer, process water, fire alarm and SCADA systems.
 - b. Construction of new pavement and sidewalks around new structures.
 - c. Improvements to the SDWWTP potable water, fire water and plant water distribution networks, including replacement of existing yard piping.
 - d. Contractor shall expose all tie-in locations prior to preparation of Shop Drawings.

- e. Contractor is responsible for groundwater dewatering as well as any dewatering and disposal of dewatered fluids from the pipe itself for all tie-ins.
- f. Isolation valves are available for all tie-ins; however, the Contractor shall assume that all tie-ins will require additional temporary isolation provided by the Contractor should the isolation valves not completely shut.

It is Miami-Dade Water and Sewer Department's intent to obtain a completely functional and satisfactory installation under this project, and any items of labor, equipment or materials which may be reasonably assumed as necessary to accomplish this and shall be supplied whether or not they are specifically shown on the plans or stated in the specifications. The Contractor shall provide all sheeting, shoring, bracing and all other labor, material or equipment required to preclude damage to, or loss of functionality of, any existing facility or system.

QUALIFICATIONS OF BIDDERS:

1. With the bid, the successful Bidder shall submit proof that the firm has at least the minimum successful contract experience as required below for this Contract. Such proof shall consist of a list of projects, completed prior to the bid date, with the names and telephone numbers of the Department's or representatives that the Department can contact to confirm the listed experience.
2. The Bidder shall have successfully completed a minimum of three (3) projects demonstrating experience with large wastewater treatment upgrade projects having a total construction value (for each project) of greater than \$75 million.
3. The Bidder's proposed project manager shall have successfully completed a minimum of three (3) projects demonstrating experience with large wastewater treatment upgrade projects having a total construction value (for each project) of greater than \$75 million.
4. The Bidder or the Bidder's Large Diameter Piping Subcontractor shall have successfully completed a minimum of three (3) projects demonstrating experience constructing piping projects that include 72" or larger prestressed concrete cylinder pipe with runs greater than 300 feet and which include connections to existing 72" or larger prestressed concrete cylinder pipe.
5. The Bidder or the Bidder's Large Diameter Piping Subcontractor Project Manager shall have successfully completed a minimum of three (3) projects demonstrating experience constructing piping projects that include 72" or larger prestressed concrete cylinder pipe with runs greater than 300 feet and which include connections to existing 72" or larger prestressed concrete cylinder pipe.
6. The Bidder or Bidder'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.
7. The Bidder or Bidder's Electrical Subcontractor Lead Electrician shall have successfully completed a minimum of three (3) projects demonstrating experience with medium or high voltage power supply systems, including transformers and switchgear.

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.

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Funding Source: EW 667, Revenue Bonds Sold

Small Business Enterprise – Goods & Services – 1.76% Analysis for Recommendation (Attached)
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CONSIDERATIONS FOR ANALYSIS:

1. The project involves the construction of a proposed headworks facility and associated odor control facility at an operating wastewater treatment plant.
2. The project also involves the construction of two oxygenation trains, which includes 24 mixers, blowers and exhaust fans.
3. In addition, the project also includes the installation of large diameter concrete mains and a connection to an existing 72-inch force main.
4. Items 1 and 2 above includes the installation of very large, expensive and specialized equipment. Item 3 requires the use of very large construction equipment for the installation of large diameter concrete pipelines.
5. The project site shall be within an existing and operating wastewater treatment 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 a wide range of 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: Mechanical Process Equipment Oxygenation Systems Electrical Switchgear Instrumentation & Controls Piping & Fittings Electrical & Mechanical Sitework & Sodding Architectural	X X X X X	X X X X	X X X X
2.	SERVICES Structural Electrical Instrumentation Testing & Compaction Paving Civil Site work Systems Integration Paving Utility Piping Finishing Painting Plumbing Fencing	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 Participation - Contract No. S-931

Recommendation SBE-Cons: 10.65% SBE-G&S: 1.76%

ID	OPCC Item	OPCC Amount	% of Construction	SBE Construction - Availability (\$)	SBE Construction - Availability (%)	Description of SBE Construction Work	SBE G&S - Availability (\$)	SBE G&S - Availability (%)	Description of SBE G&S Work
1	General Site	\$ 23,151,540	28.38%	\$ 6,422,786	27.7%	Site Preparation work, including temporary roads, demolition, hauling of materials, equipment rental, pavement, piping work	\$ 593,206.0	2.6%	Site Preparation including temporary and permanent fencing, signing and marking, landscaping (sodding), dewatering, potholling, fill material
2	Influent Flow Meter and Valve Box	\$ 6,139,412	7.53%	\$ 401,136	6.5%	Demolition, site preparation, metal installation	\$ 86,203.0	1.4%	Dewatering services and PVC fittings
3	Headworks Building 3	\$ 24,927,176	30.56%	\$ 1,459,700	5.9%	Demolition, site preparation, metal installation, windows and tempered glass installation, painting and coatings, piping related work	\$ 413,199.0	1.7%	Dewatering services and PVC fittings, materials such as plywood, insulation, doors, and frames
4	Odor Control Building 4	\$ 1,401,823	1.72%	\$ 38,849	2.8%	Metal installations, painting and coatings	\$ 8,964.0	0.6%	Materials such as plywood, insulation, doors, and frames
5	Oxygenation Tank 9	\$ 6,900,804	8.46%	\$ 240,483	3.5%	Site Preparation, metal installations, and piping related work	\$ 27,178.0	0.4%	Materials such as PVC waterstop and pipe fittings
6	Oxygenation Tank 10	\$ 7,000,060	8.58%	\$ 296,790	4.2%	Site Preparation, metal installations, and piping related work	\$ 37,234.0	0.5%	Materials such as PVC waterstop and pipe fittings
7	Oxygen Train Sampling Bldg.	\$ 233,902	0.29%	\$ 43,038	18.4%	Metal installations, painting and coatings, windows installation, piping related work	\$ 26,219.0	11.2%	Materials such as plywood, insulation, doors, and frames, lab equipment
8	Substation 57/58	\$ 8,930,164	10.95%	\$ 444,149	5.0%	Demolition, site preparation, concrete work, metal work, paintings and coatings, piping related work	\$ 359,744.0	4.0%	Materials such as plywood, insulation, lavatory accessories, doors, frames, fittings, fill
9	Oxygen Train 9-12 Electrical Bldg.	\$ 2,884,195	3.54%	\$ 208,105	7.2%	Metal installations, paintings and coatings, window installation, piping related work	\$ 31,256.0	1.1%	Materials such as plywood, insulation, doors, frames, pipe fittings
	Subtotal	\$ 81,569,076		\$ 9,555,036			\$ 1,583,203		
	Contingency Allowance	\$ 8,156,908							
	SBE Project Total	\$ 89,725,984		10.65%		SBE-Construction	1.76%		SBE-Good & Services