

Memorandum

MIAMI-DADE
COUNTY

Date: April 20, 2012
To: Jack Osterholt - Interim Director
Sustainability, Planning and Economic Enhancement

From: John W. Renfrow, P.E., Director
Miami-Dade Water and Sewer Department



Subject: Recommendation for Non-Exclusive Professional Services for a Design Criteria Professional for the Replacement/Rehabilitation of a 72-inch Sanitary Sewage Force Main along Northwest/Northeast 159th Street between Northwest 17th Avenue and Northeast 10th Avenue Project Number E12-WASD- 02

This is to advise you that Miami-Dade Water and Sewer Department (WASD) is proposing to employ an engineering firm to prepare a Design Criteria Package for the Replacement/Rehabilitation of a 72-inch Sanitary Sewage Force Main along Northwest/Northeast 159th Street between Northwest 17th Avenue and Northeast 10th Avenue.

The proposed professional service agreement will be for a three (3) year period and the maximum compensation is five hundred thousand (\$500,000), plus contingency in accordance with Ordinance 00-65.

The firms providing these services must be certified in the following categories and the respective percentages of the disciplines are indicated as follows:

Technical Category No.	Description	Percentage	CBE Percentage/ Amount	Amount
6.01Prime	Water Distribution and Sanitary Sewage Collection and Transmission Systems	65%	0	\$325,000
10.05	Contamination Assessment and Monitoring	5%	0	\$25,000
11.00	General Structural Engineering	5%	5% \$25,000	\$25,000
15.01	Survey and Mapping	10%	5% \$25,000	\$50,000
16.00	General Civil Engineering	10%	5% \$25,000	\$50,000
17.00Prime	Major Water and Sanitary Sewage Pumping Facilities	5%	0	\$25,000
	Total	100%	15% \$75,000	\$500,000

Minimum Requirements: The Prime consultant selected must have **all** of the experience listed below:

- Design and post design services of a minimum of three (3) pipeline projects, including pressurized pipeline design, within the last five (5) years.
- Design and post design services of at least one (1) project with a 48-inch diameter pressurized main within the last five (5) years.
- Prior experience in trenchless design and rehabilitation of large diameter pipes within the last five (5) years.

WASD is recommending a 15% CBE participation goal. Attached is WASD's Departmental Input Worksheet for your review and approval.

Should you have any questions, please contact Patty David, A/E Professional Services Manager at (786) 552-8040.

Attachments

DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

Contract/Project Title: Design Criteria Professional for the Replacement/Rehabilitation of a 72-inch Sanitary Sewage Force Main along Northwest/Northeast 159th Street between Northwest 17th Avenue and Northeast 10th Avenue

Contract/Project No. E12-WASD-02

DESCRIPTION: Design Criteria Professional for the Replacement/Rehabilitation of a 72-inch Sanitary Sewage Force Main along Northwest/Northeast 159th Street between Northwest 17th Avenue and Northeast 10th Avenue

DEPARTMENT: Miami-Dade Water and Sewer Department **CONTACT:** Patty David **PHONE:** (786) 552-8040

ESTIMATED COST: \$500,000 **FUNDING SOURCE:** _____

ANALYSIS

Commodity/Service No. _____ SIC: _____

Trade/Commodity/Service Opportunities

Contract/Project History of Previous Purchases for Previous Three (3) Years
 Check Here if this is a New Contract/Purchase with no Previous History

Existing 2nd Year _____ 1st Year _____

Contractor	_____	_____	_____
Ethnicity/Race	_____	_____	_____
Gender	_____	_____	_____
Contract Value	_____	_____	_____

COMMENTS: _____

RECOMMENDATIONS

CBE GOAL **BID PREFERENCE** **NO MEASURE**
15 % _____ _____

Analysis for Goal Recommendation

<u>Sub-Trade</u>	<u>Est. Cost</u>	<u>% of Item to Base Bid</u>	<u>Availability</u>
_____	\$ _____	_____	_____
_____	\$ _____	_____	_____
_____	\$ _____	_____	_____
Total:	\$ _____	_____	_____

Basis for Recommendation: WASD proposes that the goal can be achieved with the CBE firm assisting with – 5% General Structural Engineering; 5% Surveying and Mapping; and 5% General Civil Engineering


 By Department
 John W. Renfrow, P.E., Director

 Date: SPEE

MIAMI-DADE COUNTY, FLORIDA
NOTICE TO PROFESSIONAL CONSULTANTS

MIAMI-DADE WATER AND SEWER DEPARTMENT
**DESIGN CRITERIA PROFESSIONAL FOR THE REPLACEMENT/REHABILITATION
OF 72-INCH SANITARY SEWAGE FORCE MAIN ALONG
NORTHWEST/NORTHEAST 159TH STREET BETWEEN NORTHWEST 17TH AVENUE
AND NORTHEAST 10TH AVENUE
PROJECT NO. E12-WASD-02**

The Mayor of Miami-Dade County, pursuant to Section 287.055, Florida Statutes, Sections 2-8.1 and 2.10.4 of the Miami-Dade County Code and Administrative Order 3-39, announces that the Miami-Dade Water and Sewer Department (WASD) will require a design criteria professional to prepare a design criteria package for the rehabilitation/replacement of a 72-inch sanitary sewer force main. This project requires highly specialized engineering expertise and other technical services including but not limited to, development of design criteria package, compliance review of contract documents, post design services during construction, and project coordination services on an as-needed basis for the duration of the project. The selected consultant will be responsible for completing a Pipeline Rehabilitation/Replacement Report, recommend a pipeline rehabilitation method(s), prepare the Design-Build Criteria Package for the selected alternative, assist the County during the Design/Build Contractor selection process, and provide compliance reviews and support services during the design and construction phases of the replacement/rehabilitation of the 72-inch force main along Northwest/Northeast 159th Street between Northwest 17th Avenue and Northeast 10th Avenue.

The 72-inch force main Interceptor Number-9 is approximately 5 miles long and conveys wastewater along Northwest/Northeast 159th Street to the North District Wastewater Treatment Plant. The material for this segment of the 72-inch force main is Prestressed Concrete Cylinder Pipe or Embedded Cylinder Pipe which was installed in the late 1970's.

On June 18th, 2010, a portion of the 72-inch Prestressed Concrete Cylinder Pipe force main experienced a catastrophic failure just west of Northwest 17th Avenue. The corresponding failed pipe, along with an adjacent pipe segment, were removed and replaced at that time.

A forensic analysis of the failed and adjacent pipes prepared by Lewis Engineering and Consulting, Inc. suggested the primary mode of failure to be loss of structural integrity resulting from corrosion-induced hydrogen embrittlement of the Class IV prestressing steel wires. It was further suggested that the pipe section may have had pre-existing wire break damage and that a pressure transient, or surge event, could have increased the pressure inside the 72-inch force main, causing the failure. Due to concerns over the condition of the pipeline, and the risk associated with an additional failure, WASD contracted Pure Technologies in November, 2010 to conduct an internal inspection and a condition assessment of the 72-inch force main's prestressed wires.

Pipeline inspection, engineering analysis, and condition assessment of the 72-inch force main were conducted between January and February 2011.

Based on the results of these inspections, approximately 1.5 miles of the force main between Northwest 32 Avenue and Northwest 17 Avenue were rehabilitated by slip lining the existing 72-inch force main with high density polyethylene pipe.

At this time, WASD needs to replace/rehabilitate the 3.5 miles of 72-inch force main between Northwest 17th Avenue and Northeast 10th Avenue. In order to do so, WASD requests that the results of the pipeline condition assessment performed by Pure Technologies be reviewed and used as the basis of design (no additional condition assessment will be performed as part of this Work Order) for the rehabilitation/replacement of this portion of the force main; recommendations for the rehabilitation/replacement of force main be submitted; and a design build criteria package contract document for the renewal rehabilitation/replacement of the force main be prepared, procured and awarded.

The selected consultant will develop contract documents to a level sufficient for the procurement and award of a design-build contract for the rehabilitation/replacement of the 72-inch force main. WASD anticipates the following services to be provided: evaluating the rehabilitating/replacement alternatives for the 72-inch force main; identifying permits required and maintenance of traffic issues during the construction; surveying; coordinating with other utilities, governmental agencies and/or municipalities, and other professional consultants; preparation of design reports, contract documents, design drawings, specifications; cost estimates and project schedules; provide assistance as needed during contract procurement and construction phases of the project.

The **Prime** consultant selected must have **all** of the experience listed below:

- Design and post design services of a minimum of three (3) pipeline projects, including pressurized pipeline design, within the last five (5) years.
- Design and post design services of at least one (1) project with a 48-inch diameter pressurized main within the last five (5) years.
- Prior experience in trenchless design and rehabilitation of large diameter pipes within the last five (5) years.

Pursuant to Florida Statutes Chapter 287.055 Section 8(b) a design criteria professional who has been selected to prepare the design criteria package is not eligible to render services under a design-build contract executed pursuant to the design criteria package. WASD intends to retain one qualified firm under a non-exclusive Professional Services Agreement. The term of the contract is for a three (3) year period. Maximum compensation is five hundred thousand dollars (\$500,000), plus contingency in accordance with Ordinance 00-65. No minimum amount of work or compensation will be assured to the retained consultant. The County reserves the right to re-use the work products of the retained consultant and to retain other consultants to provide the same or similar services at its sole discretion. The consultant coordinator for this project is _____ who may be contacted via e-mail at _____ or fax at _____ with copy to the Clerk of the Board.

TECHNICAL CERTIFICATION REQUIREMENTS

Prime

- 6.01 Water Distribution and Sanitary Sewage
Collection and Transmission Systems
- 17.00 Engineering Construction Management

Prime and/or Sub consultants

- 10.05 Contamination Assessment and Monitoring
- 11.00 General Structural Engineering
- 15.01 Surveying and Mapping
- 16.00 General Civil Engineering

CBE Goal – 15%

BREAKDOWN LIST

		<u>%</u>	<u>CBE %</u>
6.01	Water Distribution and Sanitary Sewage Collection and Transmission Systems	65%	
10.05	Contamination Assessment and Monitoring	5%	
11.00	General Structural Engineering	5%	5%
15.01	Surveying and Mapping	10%	5%
16.00	General Civil Engineering	10%	5%
17.00	Engineering Construction Management	5%	
TOTAL		100%	15%