

Memorandum



Date: April 29, 2013

To: Jack Osterholt, Director
Department of Regulatory and Economic Resources (RER)

From: Juan A. Curiel *J. Curiel 4/29/2013*
Senior Professional Engineer
Public Works and Waste Management (PWWMD)

Subject: Florida City Canal Improvement Project
MCC 7360 Plan – CICC 7360-0/08
Contract Number: 20131234
Review and Assignment of CSBE Goals

BACKGROUND

The goal of this project (Florida City Canal Improvements) is to improve the hydrology within existing environmentally sensitive lands south of the Florida City Canal, located between S.W. 127th Avenue to S.W. 107th Avenue. The project will be funded by two entities, the Miami-Dade County Stormwater Utility Fund and the South Florida Water Management District (SFWMD). The funding provided by the SFWMD was approved by the Board of County Commissioners on April 4th, 2011 (Resolution No. R-232-11).

The Public Works and Waste Management Department will manage the contract and construction management phase of this project.

RECOMMENDATION

The cost estimate for this project is approximately one million seven hundred dollars (actual: \$1,623,700.00). We will be proposing to seek a Licensed General Contractor. There are aspects of this project that involve working within close proximity of environmentally lands; however, we have identified several tasks that may be eligible for consideration of CSBE Goals. Each of those tasks and their estimated costs are illustrated within the attachment.

Please be advised that although we are recommending several tasks for consideration of CSBE Goals, we must remain firm as to the qualifications and experience that the awarded contractor shall possess.

Please feel free to contact me if you have any questions or comments.

cc: Marina Blanco-Pape, P.E. (PWWMD)

Bassam Moubayed, CFM, (PWWMD)

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.: 20131234
 *Reference corresponding project number when submitting a work order

Contract/Project Title: Florida City Canal Improvement Project

Description/Scope of Work: See Attachment "A"

Estimated Cost: 1,700,000.00 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.
SW 344th St/Florida City Canal, between SW 127 Ave and just east of theoretical SW 107th Avenue

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

Comments: _____

PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE) See attachment

Sub-Trade	Est. Cost	% of Item to Base Bid	Availability
	\$	%	
	\$	%	
	\$	%	

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: _____

Contact Person: _____

Telephone No.: _____

FLORIDA CITY CANAL IMPROVEMENTS
(DURATION OF CONSTRUCTION IS 180 DAYS)

	LINE ITEM DESCRIPTION	Unit	Unit Price	Quantity	Total
1	MOBILIZATION/DEMOBILIZATION - Partial payment (50% of amount) of this line item shall be disbursed to the Contractor when mobilization activities to the site have commenced, and the remainder shall be paid upon completion and the County's acceptance of substantial completion of the overall project.	L.S.*	\$300,000.00	1	\$300,000.00
2	PERMANENT MANATEE GATES (MANATEE EXCLUSIONARY DEVICE) INCLUDES SUPPORT SYSTEM, ACCESS PLATFORM, ALUMINUM PANELS, SECURITY FENCE, REINFORCED CONCRETE SLAB, AND GRAVITY WALL	L.S.*	\$175,000.00	1	\$175,000.00
3	FLOATING SILT BARRIER	LF	\$20.00	1000	\$20,000.00
4	STAKED SILT FENCING	LF	\$20.00	1000	\$20,000.00
5	GEOTEXTILE FABRIC (FILTER FABRIC)	SY	\$15.00	1000	\$15,000.00
6	REMOVAL AND RE-INSTALLATION VEHICLE GUARDRAIL	LF	\$40.00	400	\$16,000.00
7	LIMEROCK BOULDERS	Ton	\$75.00	320	\$24,000.00
8	CORE BACKFILL MATERIAL	Ton	\$20.00	3000	\$60,000.00
9	BEDDING LAYER (BALLAST ROCK OR BEDDING STONE)	Ton	\$25.00	1400	\$35,000.00
10	SOIL EXCAVATION, LOADING, HAULING, AND DISPOSAL	Ton	\$70.00	1200	\$84,000.00
11	INSPECTION AND CLEANING OF EXISTING PIPES (CULVERTS). This item includes the inspection of culverts utilizing CCTV (Closed Circuit Television Imagery), removal and disposal of trash and other deleterious materials. All debris that is removed shall be considered soil excavation, thus, quantities for disposal shall be paid under that line item. This item is contingent upon field conditions and may increased decreased or eliminated by the Engineer	L.F.	\$30.00	500	\$15,000.00
12	CULVERT RETROFIT E-56; INCLUDES REINFORCED CONCRETE STRUCTURE, CORRUGATED ALUMINUM PIPING, FITTINGS, BANDS, CONNECTIONS, ALUMINUM TRASH RACK WITH LOCKING MECHANISM	L.S.*	\$50,000.00	1	\$50,000.00
13	CULVERT RETROFIT E-57; INCLUDES REINFORCED CONCRETE STRUCTURE, CORRUGATED ALUMINUM PIPING, FITTINGS, BANDS, CONNECTIONS, ALUMINUM TRASH RACK WITH LOCKING MECHANISM	L.S.*	\$50,000.00	1	\$50,000.00

**FLORIDA CITY CANAL IMPROVEMENTS
(DURATION OF CONSTRUCTION IS 180 DAYS)**

14	CULVERT RETROFIT E-58; INCLUDES REINFORCED CONCRETE STRUCTURE, CORRUGATED ALUMINUM PIPING, FITTINGS, BANDS, CONNECTIONS, ALUMINUM TRASH RACK WITH LOCKING MECHANISM	L.S.*	\$50,000.00	1	\$50,000.00
15	CULVERT RETROFIT E-63; INCLUDES REINFORCED CONCRETE STRUCTURE, CORRUGATED ALUMINUM PIPING, FITTINGS, BANDS, CONNECTIONS, ALUMINUM TRASH RACK WITH LOCKING MECHANISM	L.S.*	\$50,000.00	1	\$50,000.00
16	CULVERT RETROFIT E-64; INCLUDES REINFORCED CONCRETE STRUCTURE, CORRUGATED ALUMINUM PIPING, FITTINGS, BANDS, CONNECTIONS, ALUMINUM TRASH RACK WITH LOCKING MECHANISM	L.S.*	\$50,000.00	1	\$50,000.00
17	WATER CONTROL STRUCTURE (FLORIDA CITY CANAL AT S.W. 107TH AND S.W. 344TH STREET); INCLUDING ALL PIPING, ALL WATER CONTROL GATES, REINFORCED CONCRETE WEIR, SAND-CEMENT RIP BAGS, ACCESS PLATFORM/RAILING, SECURITY FENCE, CANAL BANK RESTORATION, ALL APPURTANCES	L.S.*	\$175,000.00	1	\$175,000.00
18	PROGRESS/AS-BUILT SURVEY, To be performed and signed by a state licensed professional engineer. A certified "As-built" survey of the mechanical, concrete and earth works shall be conducted and formally submitted to the Department for final acceptance and payment. Lump sum to be paid at the completion of project and upon acceptance of final as-built survey	LS	\$60,000.00	1	\$60,000.00
	SUB-TOTAL				\$1,249,000.00
	OVERHEAD AND PROFIT (20%)				\$249,800.00
	CONTINGENCY (10%)				\$124,900.00
	TOTAL (INCLUDES OH&P AND CONTINGENCY)				\$1,623,700.00

L.S.* = Percentage based payment; see line item explanation within specifications

April 1st, 2013
Stormwater Utility Planning Division
Public Works and Waste Management (PWWMD)

Attachment A

Project Number: 20114321 (Pending to be entered in the CIIS System)

Project Title: Florida City Canal Improvement Project

Duration: 180 calendar days

Scope of Work:

The work included within this Contract consists of furnishing all supervision, labor, materials, equipment and tools necessary to perform the following:

- A. Televising and cleaning five (5) existing pipes that carry flow to and from the Florida City Canal to Environmentally Endangered Lands (EEL Lands) owned by Miami-Dade County, located south of the Florida City Canal. Any debris shall be hauled and disposed in a legal manner at an approved licensed landfill.
- B. Installation of five (5) corrugated metal pipe extension pieces that will extend from the existing aforementioned pipes to areas within the County's road right-of-way adjacent to the property line of five (5) Environmentally Endangered Lands (EEL Lands) owned by Miami-Dade County, located south of the Florida City Canal. Each proposed pipe extension shall be built within a reinforced concrete structure that will encase the proposed pipe extensions. This task shall also include but not be limited to, the removal/reinstallation of the existing guardrail, clearing, grubbing and disposal of existing vegetative material, excavation and disposal of spoil material, preparation of sub-surface conditions with approved compacted limerock material, placement and pining of sand/cement rip rap bags, placement of an approved geotextile material, placement of an approved bedding layer, placement of approved boulders, grading, and lastly, the restoration of the adjacent areas as shown on the approved plans and permits.
- C. Installation of a water control structure within the Florida City Canal at the intersection of S.W. 344th Street and theoretical S.W. 107th Ave. The proposed structure shall measure approximately forty feet long (along its east to west alignment) and approximately ninety (90) feet wide (north to south). The structure will also extend from below the existing top of bank to the bottom of the existing canal. The structure will consist of layers of approved core backfill material and five (5) - forty two (42) inch diameter corrugated metal pipes. The pipes will be fitted with Waterman F-10 Cast Iron Drainage Gates and Waterman Cast Iron C-20 Canal Gates on various sides of the proposed structure. This task shall also include, but not be limited to, the removal/reinstallation of the existing guardrail,

clearing, grubbing and disposal of existing vegetative material, excavation and disposal of spoil material, placement of approved geotextile material, placement and pining of sand/cement rip rap bags that will line both external faces of the proposed structure and eastern and western canal banks, placement of six a (6) inch high reinforced concrete weir (notch) along both the northern and southern faces of the proposed structure (the concrete notch will also serve as a reinforced concrete headwall for the proposed C-20 Canal Gates that will be placed along the eastern face of the structure), installation of an approved operating platform that will allow for the safe operation and maintenance of the proposed gates on the eastern face of the structure (platform, rails, and support columns shall be manufactured of material specified in the plans and specifications), grading, and lastly, the restoration of the existing canal banks (including the installation of a reinforced concrete slabs that will allow for a uniform finish to all proposed canal bank restoration), and adjacent areas as shown on the approved plans and permits.

- D. Placement of a manatee exclusionary device (manatee gate) that will be constructed/installed seventy-five (75) feet to the east of the location of the eastern most face of the proposed water control structure to be placed inside the Florida City Canal at the intersection of theoretical S.W. 107th Avenue and S.W. 344th Street. The proposed exclusionary device shall consist of modified steel I-Beams that will be embedded into the bottom of the existing canal to a depth that is in accordance to the plans and shall serve as mounting rails for aluminum panels that will span along the canal, isolating the canal in all directions. The proposed steel I-Beams shall serve as the main support mechanism for the each section of the manatee gate. Each section of the proposed manatee gate shall have the ability to be removed and/or operated individually. The device shall also consist of steel beams, plates, channels, and a grated platform that will support the load of the person(s) and any equipment necessary to operate the proposed manatee exclusionary device. To ensure a safe operation, the device will also consist of an aluminum railing system, reinforced concrete gravity and slabs, placement and grading of a limerock material to ensure a uniform transition from the existing top of bank to the proposed operator platform as shown on the approved plans and permits.
- E. The placement of approximately seven (7) staff gauges that will be placed at locations as specified on the approved plans and permits.
- F. The placement, maintenance (during the duration of the contract), and removal of any temporary wildlife exclusionary devices, erosion control barriers (temporary wildlife exclusionary device, silt fences, turbidity booms, etc), and any other best management practices stated within the approved environmental permits. This includes adherence to the conditions related to wildlife protection as indicated within the approved permits and specifications.

- G. The Contractor shall remove and dispose of any debris, silt, litter, lumber, and vegetation clippings, etc., from the designated areas in a legal manner to the satisfaction of the Engineer. No debris will be allowed to be stockpiled within the site's vicinity without the approval of the Engineer.
- H. The Contractor shall abide by all conditions set forth on all the approved permits that pertain to this project.
- I. The Contractor shall be responsible for obtaining all permits as well as obtaining an approved Maintenance of Traffic Plan from the Miami-Dade Public Works and Waste Management Department. The Department has already obtained "dry-run" approvals from the Miami-Dade Public Works and Waste Management Department and the Miami-Dade County Department of Regulatory and Economic Resources (former Miami-Dade County Department of Building and Neighborhood Compliance) as well as Class III and IV Permits (from the former DERM Department). In addition, the Department has also secured environmental permits from the South Florida Water Management District (SFWMD) and the United States Department of Army Permit (ACOE).
- J. Prior to commencing any construction activity and after the pre-construction meeting, the Contractor shall submit a complete construction methodology (sequence of activity), emergency contact list, name(s) of superintendent(s) and a master construction schedule to the Engineer for review and approval.
- K. Prior to commencing any construction activity and after the pre-construction meeting, the Contractor shall submit a complete construction methodology (including shop drawings) for the installation of a temporary manatee protection barrier (coated galvanized chain link fence or approved equal). The plan shall adhere to all of the conditions indicated in all permits included herewith. The plan shall include details such as gauge to be used, diameter and length of all posts, thickness of material, proposed embedment depth of all posts, installation, removal, and disposal procedures, etc. to the Engineer for review and approval.
- L. Prior to commencing any construction activity, the contractor shall submit for review and approval of the Engineer, a plan demonstrating how flow in the canal shall be maintained, including a contingency plan that shall be executed in the event that a significant rain event, tropical storm, or hurricane affects the area. The plan shall include and not be limited to, removal of temporary wildlife barriers, removal of silt barriers (fences), etc.

Estimated Cost: \$1,700,000.00(rounded off, actual is \$1,623,700.00)

Funding Source: Stormwater Utility Fund and contribution from the South Florida Water Management District (SFWMD; \$350K); contribution approved by the BCC on 4/4/2011 (Resolution #: R-232-11)

Location of Project: SW 344th Street/Florida City Canal; between approx SW 127th Ave to east of theoretical SW 107th Avenue

Department's Recommendation:

We recommend that the following portion/line items of the approved scope of work be analyzed for allocation of CSME Goals:

- ***Removal and Re-installation of Vehicle Guardrail (See line item description)***

A. Trade/Skills Required: Earthwork

B. Est. Cost: \$16,000.00

C. % of Item to Base Bid: Approx. 1%

- ***Limerock Boulders (See line item description)***

A. Trade/Skills Required: Hauling/Placing

B. Est. Cost: \$24,000.00

C. % of Item to Base Bid: Approx. 1.5%

- ***Core Backfill Material (See line item description)***

A. Trade/Skills Required: Hauling/Placing

B. Est. Cost: \$60,000.00

C. % of Item to Base Bid: Approx. 3.5%

- ***Bedding Layer (Ballast Rock or Bedding Stone; See line item description)***

A. Trade/Skills Required: Hauling/Placing

B. Est. Cost: \$35,000.00

C. % of Item to Base Bid: Approx. 2.1%

- ***Five (5) Culvert Retrofits (See each line item description)***

A. Trade/Skills Required: Plumbing, Drainage Construction

B. Est. Cost: \$50,000.00/per retrofit x 5 retrofits = \$250,000.00

C. % of Item to Base Bid: Approx. 15%

It is our belief that this project ~~falls~~ ^{doesn't fall} within the region mandated by the Community Workforce Program. However, if it does, we will prepare and submit the appropriate documentation. ^{total 4/8/13}

Additional Requirements (As stated within the Project Specifications):

In addition to the above requirements, each Contractor, within their bid package(s) shall submit sufficient documentation demonstrating proof of experience with drainage, drainage related and/or water control projects in environmentally sensitive areas as well as pertinent documentation regarding CSBE Goals (See Section 25, "Community Small Business Enterprise Subcontractor Goals"). Sufficient proof of experience shall be defined as a minimum of five (5) years of experience in a minimum of three (3) drainage projects, including, but not limited to the following tasks: canal bank restoration, installation of pipeline/flow conveyance structures in waterways or public right of way, etc. Sufficient documentation, or proof of experience shall accompany the bid package and shall be provided in the form of signed letters (signed by an officer of the firm and on company letterhead). All pertinent information, including but not limited to project name(s), references, contact numbers, etc shall be provided to the County for review of each of the projects submitted.