

Date: June 2, 2014

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

From: James Ferreira, P.E. 
Engineer 2
Public Works and Waste Management
Department

Subject: Notice of Construction Project:
Project No. 20140081
Tamiami Canal Bridge Replacement,
FM #416658-1

RECOMMENDATION

Contracts and Specifications staff has evaluated the subject project and recommends 8.6% Disadvantaged Business Enterprise (DBE) participation. It is the policy of the State of Florida Department of Transportation's (FDOT) Local Agency Program (LAP) Agreement that DBEs, as defined in 49 Code of Federal Regulations (C.F.R.) Part 26, as amended, shall have the opportunity to participate in the performance of contracts financed in whole or in part with FDOT funds under this Agreement. The DBE requirements of applicable federal and state laws apply to this Agreement. The total estimated cost is \$27,579,167.51. The Public Works and Waste Management Department (PWWM) staff has checked the availability of DBE subcontractors and has attached the PWWM Project Measure Analysis and Recommendation findings along with other supporting documents for consideration. PWWM staff met with the Small Business Development (SBD) Division's Construction Manager to advise of PWWM's intent. This project is federally funded, therefore; the Community Workforce Program (CWP) is not applicable to this project.

BACKGROUND

The swing bridge that currently spans the Tamiami Canal in the vicinity of NW 30 Avenue and NW South River Drive is one of the oldest bridges in the Miami River System, and is eligible for listing in the National Register of Historic Places. Relocating the bridge to span the C-5 Canal west of NW 22 Avenue between the Miami Police Benevolent Association Park and Fern Isle Park will protect and preserve the historic bridge as a cultural resource. Informational signage will be posted to educate the public on the history of the bridge. A new concrete bascule bridge will be installed once the swing bridge has been relocated.

In addition to relocating and replacing the swing bridge, the existing 24-inch water main will be relocated. The existing water main will be removed within canal dredging limits and a new 24-inch high density polyethylene (HDPE) (30-inch outside diameter) water main will be installed under the Tamiami Canal using horizontal directional drilling (HDD).

Page 2
SBD Action
20140081

If any additional information is needed, please call me at (305) 375-3267, or Frank Aira at (305) 375-2930.

JPF/jpf

Attachments (2)

C: Vivian Forhat-Diaz, ISD
Laurie Johnson, ISD
Bassam Moubayed, PWWM
Frank Aira, P.E., CFM, PWWM
Alfredo Munoz, P.E., PWWM
Dianah Coakley, PWWM
Lisset Cabrera, PWWM
File

Miami-Dade County Public Works and Waste Management Department
Contract/Project Measure Analysis and Recommendation

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

From: James Ferreira, P.E.
Engineer 2
Public Works and Waste
Management Department

Date: Monday, June 2, 2014

Department: Public Works and Waste Management

Contract Type:

Single Trade – Bridge with auxillary work

Request for Price Quotation (RPQ) No.:

20140081

Re-submittal: Yes

No

Project Title:

Tamiami Canal Bridge Replacement, FM #416658-1

Standard Industrial Code (SIC):

16-Heavy Construction

Estimated Project Cost:

\$27,579,167.51

Funding Source:

GOB, Federal

Bonding Requirements: Bid Bond– 5% of base bid amount
Performance Bond- 100% of Contract Award Amount

Method of Award: Apparent Lowest, Responsive, Responsible Bidder: Line Item

Miami-Dade County Public Works and Waste Management Department
Contract/Project Measure Analysis and Recommendation

RPQ No.: 20140081

RPQ Title: Tamiami Canal Bridge Replacement, FM #416658-1

SCOPE OF WORK

- A. Work under this Contract includes furnishing of all supervision, labor, materials, tools, equipment and performing all operations required to construct the Work in accordance with the Contract Documents.
- B. The Work includes but is not limited to performing all operations necessary to replace the swing bridge that currently spans the Tamiami Canal in the vicinity of NW 30 Avenue and NW South River Drive and relocate the existing swing bridge to a location over the C-5 Canal, also known as the Comfort Canal, to provide pedestrian and bicycle access between two public parks located at 2201 NW 11 Street, in the City of Miami. The swing bridge is one of the oldest bridges in the Miami River System, and is eligible for listing in the National Register of Historic Places. Relocating the bridge to span the C-5 Canal west of NW 22 Avenue between the Miami Police Benevolent Association Park and Fern Isle Park will protect and preserve the historic bridge as a cultural resource. Informational signage will be posted to educate the public on the history of the bridge. In addition to relocating and replacing the swing bridge, the existing 24-inch water main will be relocated. The existing water main will be removed within canal dredging limits and a new 24-inch high density polyethylene (HDPE) (30-inch outside diameter) water main will be installed under the Tamiami Canal using horizontal directional drilling (HDD).
- C. The Contractor and all subcontractors, under this Contract, are prohibited from performing any work, other than specified in the Contract and/or directed by the Engineer, within the limits of the project site, without prior written notification to the Engineer. This includes any work for private or commercial entities.

CONTRACTOR CERTIFICATION AND EXPERIENCE REQUIREMENTS

Certificate of Competency Requirement:

- A. Include with the bid submittal package, copies of certifications and documentation that demonstrate that at the time of Bid and pursuant to the requirements of Section 10-3 of the Code of Miami-Dade County, Florida and these Solicitation Documents, the Bidder holds a valid, current, and active:
 - a. Certificate of Competency from the County's Construction Trades Qualifying Board as a General Engineering Contractor or as a Specialty Engineering Contractor, commensurate to the requirements of the Scope of Work, in one or more engineering crafts to include structural engineering contractor. The specialty contractor shall subcontract with a qualified contractor any work which is incidental to the specialty but is specified in the aforementioned Code as being the work of other than that of the Engineering Specialty for which certified; or

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- b. Pursuant to Section 255.20, F.S. and in lieu of the above, the County may consider a bid from a Bidder that is a Contractor in good standing that has been prequalified and considered eligible by the Florida Department of Transportation (FDOT) under Section 337.14, F.S. and Chapter 14-22, Florida Administrative Code, to perform the work described in the Contract Documents. Contractors seeking consideration under this Paragraph shall submit along with the bid submittal package for review and consideration, current copy (ies) of their FDOT Certificate(s) of Qualification, Certification of Work Underway, and Status of Contract(s) On Hand. Acceptable FDOT prequalification(s) necessary to perform the Work specified in the Contract Documents include the Major Bridge - Bascule Spans Work Class.

Experience Requirement:

- A. The Bidder, through full time personnel employed by the Bidder, must demonstrate a minimum of five years of continual experience as the prime contractor in projects with scopes comparable to the Project Scope of Work. Demonstrate the experience requirement by including along with the bid submittal package:
 - a. A detailed description of projects, similar to the Project Scope of Work, in which the Bidder is currently engaged or has completed within the past ten years.
 - i. List and describe those projects performed for government clients, similar size private entities, and any work performed for the County.
 - ii. Identify for each project a) the client, b) description of work, c) total dollar value of the contract, d) contract duration, e) customer contact person and phone number for reference, f) statement or notation of whether Bidder is/was the prime contractor or subcontractor, and g) the results of the project.
 - b. An FDOT prequalified contractor may demonstrate the Experience Requirement herein by meeting the Certificate of Competency Requirement of subarticle 2 above.

Additional Certification Requirements:

- A. Provide copy of personnel's latest training records and current certification issued by the Steel Structures Painting Council Quality Program (SSPC QP) as SSPC QP1 (Field Application to Complex Industrial and Marine Structures) and SSPC QP2 (Field Removal of Hazardous Coatings), as required by the Scope of Work.

INSURANCE TO BE CARRIED BY CONTRACTOR

Contractor shall indemnify and hold harmless the County and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorneys' fees and costs of defense, which the County or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance of this Agreement by the Contractor or its employees, agents, servants, partners principals or subcontractors. Contractor shall pay all claims and losses in connection therewith and shall investigate and defend all claims, suits or actions of any kind or nature in the name of the County, where applicable, including appellate proceedings, and shall pay all costs, judgments, and attorney's fees which may issue thereon. Contractor expressly understands and agrees that any insurance protection required by this Agreement or otherwise provided by Contractor shall in no way limit

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the responsibility to indemnify, keep and save harmless and defend the County or its officers, employees, agents and instrumentalities as herein provided.

The Contractor shall furnish to Public Works and Waste Management Department, Construction Division, 111 NW 1st Street, 14th Floor, Miami, Florida 33128, Certificate(s) of Insurance which indicate that insurance coverage has been obtained which meets the requirements as outlined below:

- a. Worker's Compensation Insurance as required by Chapter 440, Florida Statutes, including, if applicable, coverage under the U.S. Longshoremen and Harbor Workers' Act and Jones Act coverage.
- b. Commercial General Liability / Marine Liability Insurance on a comprehensive basis in an amount not less than \$1,000,000 combined single limit per occurrence for bodily injury and property damage. **Miami-Dade County must be shown as an additional insured with respect to this coverage.**
- c. Automobile Liability Insurance covering all owned, non-owned and hired vehicles used in connection with the work, in an amount not less than \$500,000 combined single limit per occurrence for bodily injury and property damage.
- d. Hull and Protection and Indemnity Insurance, in an amount not less than \$1,000,000 covering combined single limit per occurrence for bodily injury and property damage. **Miami-Dade County must be shown as an additional insured with respect to this coverage.**
- e. Professional Liability Insurance in the name of the Contractor or the licensed design professional employed by the Contractor in an amount of not less than \$1,000,000 per claim.

All insurance policies required above shall be issued by companies authorized to do business under the laws of the State of Florida, with the following qualifications:

- a) The company must be rated no less than "B" as to management, and no less than "Class V" as to financial strength, by A.M. Best Company, Oldwick, New Jersey, or its equivalent, subject to the approval of the County Risk Management Division.

or

- b) The company must hold a valid Florida Certificate of Authority as shown in the latest "List of All Insurance Companies Authorized or Approved to Do Business in Florida" issued by the Department of Financial Services and are members of the Florida Guaranty Fund.

and

Any Protection and Indemnity Mutual which is a member of the International Group of Protection and Indemnity insurers (Applies to Protection and Indemnity as required in E above).

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Certificates will indicate no modification or change in insurance shall be made without thirty (30) days in advance notice to the certificate holder.

PWWM Areas for possible measures:

N/A

PWWM Areas recommended for CSBE participation:

N/A

Contract Measure Recommendation:

- No Measure
- Set-Aside:
 - Level I
 - Level II
 - Level III
- Trade Set-Aside(s)
- Aggregate Set-Aside
- CSBE Subcontractor Goal
- CWP
- DBE Subcontractor Goal: 8.6%**

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Miami-Dade County Public Works and Waste Management Department
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Reason for Recommendation:

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CSBE Prime History of similar Contracts/Projects for previous three years:

None

Scope of Work History Summary – Subcontracting Opportunities:

N/A

Areas used to meet subcontractor goal (Awarded Contractor):

N/A

Similar Projects previously submitted for Project Review and Analysis Process:

None

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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.: 20140081

*Reference corresponding project number when submitting a work order

Contract/Project Title: Tamiami Canal Bridge Replacement, FM #416658-1

Description/Scope of Work: See Attached

Estimated Cost: 27579167 **Funding Source:** Federal 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.

Please see attached

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
Supervisor	1	730
Foremen	1	730
Operator	2	730

Comments: Please note the estimated number of days to complete the job may not be equal to actual amount of days indicated above.

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: Opportunity for DBE participation and Funding source

Date submitted to DBD: 6-2-14

Contact Person: James Ferreira or Frank Aira

Telephone No.: 305-375-3267

DEPARTMENT INPUT
CONSTRUCTION CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

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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
Laborers	6	730
Clearing and Grubbing	3	730
Earthwork	3	730

Comments: Please note the estimated number of days to complete the job may not be equal to actual amount of days indicated above.

PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE) See attachment

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

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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
Drainage and Structures	4	730
Concrete	3	730
Sound Barriers, Guardrail and Fence	8	730

Comments: Please note the estimated number of days to complete the job may not be equal to actual amount of days indicated above.

PROJECT ANALYSIS FOR GOAL RECOMMENDATION (CSBE) See attachment

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

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Please see attached

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
Pavement Markings and signs	6	730
Lighting	4	730

Comments: Please note the estimated number of days to complete the job may not be equal to actual amount of days indicated above.

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

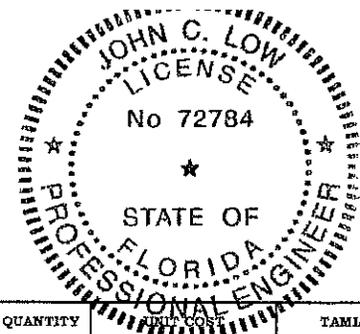
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Contact Person: James Ferreira or Frank Aira

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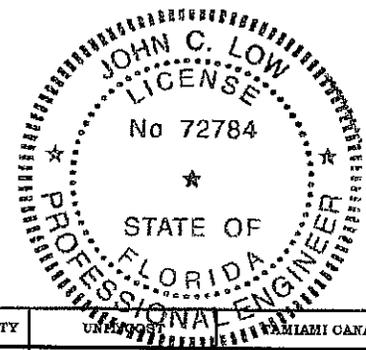
FINAL SUBMITTAL
ESTIMATE OF PROBABLE COST
TAMIAMI CANAL BRIDGE



ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TAMIAMI CANAL
GENERAL					
101-1	MOBILIZATION	LS	1.00	\$1,652,178	\$1,652,178.00
104-11	FLOATING TURBIDITY BARRIER	LF	430	\$15.70	\$6,751.00
110-1-1	CLEARING AND GRUBBING	LS	1.00	\$2,986.24	\$2,986.24
110-3	REMOVAL OF EXISTING STRUCTURE	LS	1.00	\$832,922	\$832,922.34
120-5	CHANNEL EXCAVATION	CY	4,408	31.00	135,635.93
STRUCTURES					
400-0-11	CONCRETE NS, GRAVITY WALL	CY	22.9	\$484.47	\$11,087.87
400-0-13	CONCRETE CLASS NS, STEPS	CY	13.2	\$1,549.72	\$20,481.41
400-2-10	CONCRETE CLASS II , APPROACH SLABS	CY	116.6	\$600.00	\$69,952.60
400-4-4	CONCRETE CLASS IV , SUPERSTRUCTURE	CY	167.2	\$2,000.00	\$334,407.23
400-4-5	CONCRETE CLASS IV , SUBSTRUCTURE	CY	758.0	\$770.00	\$583,650.00
400-4-6	CONCRETE CLASS IV , COUNTERWEIGHT	CY	260.0	\$1,200.00	\$312,000.00
400-4-8	CONCRETE CLASS IV, BULKHEAD	CY	52.8	\$502.75	\$26,526.27
400-4-25	CONCRETE CLASS IV , MASS-SUBSTRUCTURE	CY	1,517.0	\$770.00	\$1,168,090.00
400-9	BRIDGE DECK GROOVING AND PLANING- DECK THICKNESS 8.5" OR GREATER	SY	940.8	\$6.00	\$5,644.53
400-95-1	COFFERDAM, BASCULE PIER	EA	1.00	\$1,100,000.00	\$1,100,000.00
400-147	COMPOSITE NEOPRENE PADS	CF	3.8	\$1,000.00	\$3,796.30
415-1-4	REINFORCING STEEL, SUPERSTRUCTURE	LB	28,700	\$1.15	\$33,005.00
415-1-5	REINFORCING STEEL, SUBSTRUCTURE	LB	357,004	\$1.15	\$410,554.30
415-1-8	REINFORCING STEEL, BULKHEAD	LB	2,857	\$1.15	\$3,285.60
415-1-9	REINFORCING STEEL, APPROACH SLABS	LB	11,145	\$1.15	\$12,817.30
450-2-36	PREST BEAMS: FLORIDA-1 BEAM 36"	LF	184.00	225.00	41,400.00
455-18	PROTECTION OF EXISTING STRUCTURES	LS	1	\$75,000.00	\$75,000.00
455-34-5	PRESTRESSED CONCRETE PILING, 24" SQ	LF	2,087	\$100.00	\$208,671.00
455-133-3	SHEET PILING STEEL ,FURNISH & INSTALL, PERMANENT	SF	11,390	\$30.20	\$343,978.00
455-143-5	TEST PILES- PRESTRESSED CONCRETE , 24" SQ.	LF	190	\$300.00	\$57,000.00
458-1-11	BRIDGE DECK EXPANSION JOINT, NEW CONST., F&I, POURED JOINT W/ BACKER ROD	LF	108	\$130.00	\$13,985.83
460-2-5	STRUCTURAL STEEL (BASCULE LEAVES)	LB/LS	902,577	\$3.75	\$3,384,663.75
460-6-1	LADDERS & PLATFORMS	LS	1	\$843,565.00	\$843,565.00
460-70-1	ALUMINUM BULLET RAILINGS, SINGLE RAIL	LF	148	\$80.00	\$80.00
460-71-2	METAL TRAFFIC RAILING, (STEEL POST AND RAIL) NON- STANDARD	LF	222	\$75.00	\$75.00
465-1	MOVABLE BRIDGE - MECHANICAL EQUIPMENT	LS	1	\$5,170,000.00	\$5,170,000.00
465-3-14	MOVABLE BRIDGE COUNTERWEIGHT, F&I, BUMPER BLOCK	EA	2	\$2,000.00	\$2,000.00
465-3-17	MOVABLE BRIDGE COUNTERWEIGHT, F&I, BALANCE BLOCKS	EA	1,025	\$160.00	\$160.00
465-3-19	MOVABLE BRIDGE COUNTERWEIGHT, F&I, STEEL BALLAST	TN	664	\$1,000.00	\$1,000.00
465-3-50	MOVABLE BRIDGE COUNTERWEIGHT, ADJUST	EA	1	\$15,000.00	\$15,000.00
465-20	MOVABLE BRIDGE - PREVENTIVE MAINTENANCE & ROUTINE REPAIR	LS	1	\$70,000.00	\$70,000.00
465-21	MOVABLE BRIDGE OPERATOR	DA	550	\$500.00	\$275,000.00
465-71-3	MOVABLE BRIDGE FUNCTIONAL CHECKOUT, PHASE C	LS	1	\$40,000.00	\$40,000.00
504-1-5	ROADWAY FLOOR, STEEL, 5.5" ARMORED (10" EXODERMIC DECK)	SF	5,746	\$80.00	\$459,656.80
507-70	2 1/2" ALUMINUM SIDEWALK FLOOR	SF	2,326	\$35.00	\$81,401.25
508-1-1	MOVABLE BRIDGE ELECTRICAL EQUIPMENT	LS	1	\$1,700,000.00	\$1,700,000.00

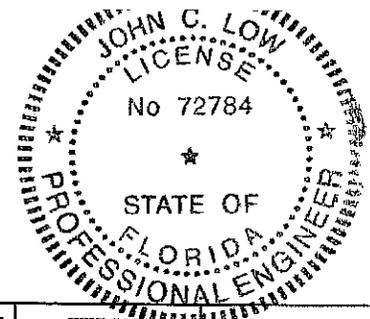
Rev 5/01/14

FINAL SUBMITTAL
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TAMIAMI CANAL BRIDGE

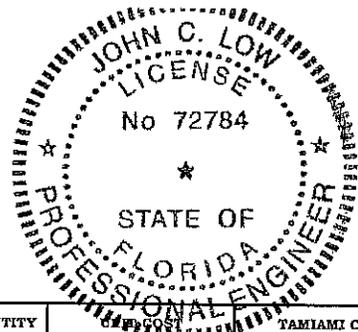


ITEM NO.	ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL
512-1	MOVABLE BRIDGE - CONTROL HOUSE, NEW	LS	1	\$1,000,000.00	\$1,000,000.00
512-71-1	MOVABLE BRIDGE - PLUMBING SYSTEM	EA	1	\$38,813.00	\$38,813.00
515-2-311	PEDESTRIAN/BICYCLE RAILING, ALUMINUM ONLY, 42" TYPE 1)	LF	844	\$75.00	\$63,300.00
521-5-1	CONCRETE TRAFFIC RAILING BARRIER, BRIDGE 32" F-SHAPE	LF	148	\$75.00	\$11,100.00
530-3-3	RIPRAP-RUBBLE, BANK AND SHORE (LARGE BOULDERS)	TN	1,916.7	\$103.11	\$197,628.48
530-74	BEDDING STONE	TN	229.2	\$75.00	\$17,189.46
530-76-4	CABION MAT, 12" THICK	SY	463	\$135.00	\$62,475.88
548-12	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	SF	3,578	\$43.00	\$158,154.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	LF	96	\$25.00	\$2,396.47
ROADWAY LIGHTING					
630-2-11	CONDUIT, F&I, OPEN TRENCH	LF	4010	\$9.95	\$39,899.50
630-2-12	CONDUIT, F&I, DIRECTIONAL BORE	LF	95	\$13.25	\$1,258.75
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24" COVER SIZE	EA	20	\$395.35	\$7,907.00
715-1-12	LIGHTING CONDUCTORS, F&I, NO. 8 TO NO 6	LF	8400	\$1.09	\$9,156.00
715-4-111	LIGHT POLE COMPLETE, F&I, WIND SPEED 150, POLE - 40'	EA	13	\$4,500.00	\$58,500.00
715-4-600	LIGHT POLE COMPLETE, REMOVE	EA	3	\$1,292.44	\$3,877.32
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA	2	\$30,260.00	\$60,520.00
715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA	13	\$559.14	\$7,268.82
ROADWAY					
102-1	MAINTENANCE OF TRAFFIC	LS	1	\$70,774.97	\$70,774.97
102-3	COMMERCIAL MATERIAL FOR DRIVEWAY MAINTENANCE	CY	105.0	\$10.87	\$1,141.35
102-71-14	BARRIER WALL TEMPORARY F&I TYPE K	LF	200	\$20.96	\$4,192.00
102-99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	40	\$12.63	\$505.20
104-18	INLET PROTECTION SYSTEM	EA	16	\$85.90	\$1,374.40
110-1-1	CLEARING AND GRUBBING	LS	1	\$40,000.00	\$40,000.00
110-4	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	100	\$57.68	\$5,768.00
120-1	REGULAR EXCAVATION	CY	1100.0	\$11.37	\$12,507.00
102-4	SUBSOIL EXCAVATION	CY	3597.0	\$6.04	\$21,725.88
120-6	EMBANKMENT	CY	7026.5	\$14.48	\$101,743.72
145-71	REINFORCEMENT GRID FOR SOIL STABILIZATION	SY	2083	\$2.60	\$5,415.80
160-4	STABILIZATION TYPE B	SY	6419	\$3.11	\$19,963.09
285-706	BASE OPTIONAL (BASE GROUP 6)	SY	6267	\$12.27	\$76,896.09
286-1	TURNOUT CONSTRUCTION	SY	440	\$40.00	\$17,600.00
327-70-1	MILLING EXISTING ASPHALT (1")	SY	3796	\$3.36	\$12,754.56
334-1-13	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC C)	TN	664.3	\$105.01	\$69,758.14
337-7-32	ASPH CONC FRICTION COURSE (INC RUBBER) (FC-9.5) (1")	TN	532.2	\$105.07	\$55,918.25
400-0-11	CONCRETE CLASS NS, GRAVITY WALL	CY	25.0	\$484.47	\$12,111.75
425-1-311	INLETS, CURB, TYPE P-1, <10'	EA	1	\$4,022.92	\$4,022.92
425-1-351	INLET (CURB) (TYPE P-5) (<10')	EA	3	\$3,446.65	\$10,339.95
425-1-352	INLET (CURB) (TYPE P-5) (>10')	EA	3	\$3,945.89	\$11,837.67

FINAL SUBMITTAL
ESTIMATE OF PROBABLE COST
TAMIAMI CANAL BRIDGE



ITEM NO.	ITEM	UNIT	QUANTITY	UNIT COST	TAMIAMI CANAL
425-1-461	INLETS, DT BOT, TYPE F, <10'	EA	4	\$5,440.58	\$21,762.32
425-2-43	MANHOLE (P-7) (PARTIAL)	EA	4	\$2,478.80	\$9,915.20
425-2-61	MANHOLE, P-8, <10'	EA	1	\$3,393.81	\$3,393.81
425-2-62	MANHOLE, P-8, >10'	EA	3	\$5,358.53	\$16,075.59
425-2-91	MANHOLES, J-8, <10'	EA	1	\$6,270.00	\$6,270.00
425-2-92	MANHOLES, J-8, >10'	EA	1	\$8,250.00	\$8,250.00
425-5	ADJUST MANHOLE	EA	4	\$338.98	\$1,355.92
425-5-1	ADJUST MANHOLA (UTILITIES) (MIAMI-DADE WATER & SEWER ONLY)	EA	3	\$418.07	\$1,254.21
425-6	ADJUST EXISTING VALVE BOXES (MIAMI - DADE COUNTY ONLY)	EA	9	\$269.07	\$2,421.63
430-94-1	DESILTING PIPE, 0-24"	LP	383	\$4.27	\$1,635.41
430-175-118	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 18"S/CD	LF	364	\$58.50	\$21,294.00
430-175-124	PIPE CULVERT, OPTIONAL MATERIAL, ROUND, 24"S/CD	LF	216	\$63.49	\$13,713.84
430-175-224	PIPE CULVERT, OPTIONAL MATERIAL, OTHER-ELIP/ARCH, 24"S/CD	LF	19	\$187.00	\$3,553.00
443-70-4	FRENCH DRAIN, 24"	LF	647	\$126.90	\$82,104.30
515-1-2	PIPE HANDRAIL - GUIDERAIL, ALUMINUM	LF	242	\$50.70	\$12,269.40
520-1-10	CURE AND GUTTER CONC (TYPE F)	LF	1602	\$20.82	\$33,353.64
520-2-1	CONCRETE CURE (TYPE A)	LF	110	\$17.03	\$1,873.30
521-72-5	SHOULDER CONCRETE BARRIER WALL, RIGID-CURE & GUTTER	LF	442	\$181.71	\$80,315.82
522-1	SIDEWALK CONCRETE (4")	SY	1273	\$40.54	\$51,607.42
522-2	SIDEWALK CONCRETE (6")	SY	190	\$46.13	\$8,764.70
536-73	GUARDRAIL REMOVAL	LF	432	\$1.77	\$764.64
570-1-2	PERFORMANCE TURF, SOD	SY	662	\$2.83	\$1,873.46
700-20-11	SIGN, SINGLE POST (LESS THAN 12 SF)	AS	18	\$295.57	\$5,320.26
700-20-12	SIGN, SINGLE POST (12 -20 SF)	AS	4	\$872.89	\$3,491.56
700-20-40	SIGN EXISTING, SINGLE POST (RELOCATE)	EA	8	\$129.34	\$1,034.72
700-20-60	SIGN EXISTING, SINGLE POST (REMOVE)	EA	6	\$19.34	\$116.04
706-3	RETRO-REFLECTIVE PAVEMENT MARKER (YELLOW/YELLOW)	EA	462	\$3.53	\$1,631.32
710-11-111	PAINTED PAVEMENT MARKING SOLID (WHITE) (6")	NM	0.848	\$931.24	\$789.69
710-11-112	PAINTED PAVEMENT MARKING SOLID (WHITE) (8")	LF	576	\$0.29	\$167.04
710-11-113	PAINTED PAVEMENT MARKING SOLID (WHITE) (12")	LF	531	\$0.56	\$297.36
710-11-114	PAINTED PAVEMENT MARKING SOLID (WHITE) (18")	LF	187	\$0.81	\$151.47
710-11-115	PAINTED PAVEMENT MARKING SOLID (WHITE) (24")	LF	122	\$0.98	\$119.56
710-11-131	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 6", 3-9 SKIP	GM	0.347	\$330.54	\$114.70
710-11-151	PAINTED PAVEMENT MARKING, STANDARD, WHITE, DOTTED / GUIDELINE / 6-10 GAP EXTENSION,	LF	48	\$0.32	\$15.36
710-11-160	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, MESSAGE	EA	5	\$38.21	\$191.05
710-11-170	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ARROWS	EA	19	\$24.18	\$458.47
710-11-211	PAINTED TRAFFIC STRIPE SOLID (YELLOW) (6")	NM	1.047	\$929.86	\$973.56
710-11-214	PAINTED TRAFFIC STRIPE SOLID (YELLOW) (18")	LF	623	\$0.75	\$467.25
710-11-251	PAINTED PAVEMENT MARKING SKIP (6-10) (YELLOW) (6")	LF	54	\$0.31	\$16.74



FINAL SUBMITTAL
ESTIMATE OF PROBABLE COST
TAMIAMI CANAL BRIDGE

ITEM NO.	ITEM	UNIT	QUANTITY	ESTIMATED COST	TAMIAMI CANAL
	ARCHAEOLOGICAL MONITORING	LS	1	\$50,000.00	\$50,000.00
	(CAR) SPECIALIST - CONTAMINATION ASSESSMENT/ REMEDIATION SPECIALIST	LS	1	\$50,000.00	\$50,000.00

General Total \$2,631,473.51
 Structures Total \$18,429,012.32
 Roadway Lighting Total \$188,387.39
 Roadway Total \$1,055,528.51
Tamiami Canal Br Grand Total \$22,304,401.73

COMFORT CANAL BRIDGE

GENERAL					
101-1	MOBILIZATION	LS	1.00	\$73,505	\$73,505
110-1-1	CLEARING AND GRUBBING	LS	1.00	\$4,817	\$4,817
STRUCTURES					
104-11	FLOATING TURBIDITY BARRIER	LF	180	\$15.70	\$2,826.00
400-4-5	CONCRETE CLASS IV (SUBSTRUCTURE)	CY	52	\$1,200.00	\$62,400.00
415-1-5	REINFORCING STEEL (SUBSTRUCTURE)	LB	2,921.00	\$1.15	\$3,359.15
455-2	TREATED TIMBER, PILING	LF	2,533.00	\$200.00	\$506,600.00
455-34-5	PRESTRESSED CONCRETE PILING, 24" SQ	LF	453	\$100.00	\$45,300.00
455-143-5	TEST PILES (PRESTRESSED CONCRETE) (24"SQ.)	LF	100	\$250.00	\$25,000.00
470-1	TREATED TIMBER, STRUCTURAL	MB	33.1	\$5,480.81	\$181,249.29
515-2-419	PEDESTRIAN/ BICYCLE RAILING, SPECIAL MATERIAL, 42" CUSTOM PANEL	LF	812	\$105.00	\$85,260.00
700-2-11	MULTI POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	2	\$1,000.00	\$2,000.00

Comfort Canal Br Grand Total \$992,315.83

Grand Total \$23,296,717.56

EXHIBIT A

PRELIMINARY BUDGETARY ESTIMATE					
FURNISH AND INSTALL 24-INCH HDD WATER MAIN (30-inch OD) IN					
NW S. River Dr. Crossing Tamiami Canal, City of Miami					
PCTS No. 12675					
Item	Description	Qty	Units	\$/Units	Total
1	Furnish 24" D.I. Pipe and Fittings (including restraintment, where required)	200	L.F.	\$120.00	\$24,000.00
2	Install 24" D.I. Pipe and Fittings (including restraintment, where required).	200	L.F.	\$60.00	\$12,000.00
3	Furnish 8" D.I. Pipe, Valves and Fittings (including restraintment, where required)	120	L.F.	\$40.00	\$4,800.00
4	Install 8" D.I. Pipe, Valves and Fittings (including restraintment, where required).	120	L.F.	\$50.00	\$6,000.00
5	Furnish 6" D.I. Pipe, Valves and Fittings (including restraintment, where required)	70	L.F.	\$45.00	\$3,150.00
6	Install 6" D.I. Pipe, Valves and Fittings (including restraintment, where required).	70	L.F.	\$55.00	\$3,850.00
7	Furnish and Install 24" HDD Pipe (DR-9, 30-inch OD) along Tamiami Bridge (including restraintment, where required)	800	L.F.	\$900.00	\$720,000.00
8	Make Connection to Existing 24" WM at Each Side of Tamiami Bridge	2	EA.	\$12,000.00	\$24,000.00
9	Furnish 24-inch M.J. resilient seat gate valve, complete with valve box, lid and riser pipe	2	Each	\$8,000.00	\$16,000.00
10	For installing 24-inch M.J. resilient seat gate valve, complete with valve box, lid and riser pipe	2	Each	\$4,000.00	\$8,000.00
11	Construct Air Release Valve Assemblies (A.R.V.'s), for water mains	2	EA.	\$1,600.00	\$3,200.00
12	Furnish Fire Hydrant Assembly, 6" D.I. Pipe, and Fittings (including restraintment, where required).	2	EA.	\$1,200.00	\$2,400.00
13	Install Fire Hydrant Assembly, 6" D.I. Pipe, and Fittings (including restraintment, where required), and guard posts where required.	2	EA.	\$2,000.00	\$4,000.00
14	For sheeting and shoring ordered left in place by the Engineer.	100	Sq. Ft. (Cont. Item)	\$7.00	\$700.00
15	Construction of limerock base for Type "M" permanent paving repairs.	217	Sq. Yd.	\$17.00	\$3,683.39
16	Construction of asphaltic concrete surface course for type "M" permanent paving repairs (2"	217	Sq. Yd.	\$13.00	\$2,816.67
17	For milling existing asphalt pavement to an average depth of 1-inch, (full lane = 12 ft (+/-))	520	Sq. Yds. (Contingency Item)	\$5.00	\$2,600.00
18	For constructing Type "V" pavement repairs (nominal 1-inch thick machine-laid asphaltic concrete surface overlay), (full lane = 12 ft (+/-))	520	Sq. Yds. (Contingency Item)	\$12.50	\$6,500.00

PRELIMINARY BUDGETARY ESTIMATE					
FURNISH AND INSTALL 24-INCH HDD WATER MAIN (30-inch OD) IN					
NW S. River Dr. Crossing Tamiami Canal, City of Miami					
PCTS No. 12675					
Item	Description	Qty	Units	\$/Units	Total
19	For trench overcut in 1 foot depth increments	100	L.F.	\$7.00	\$700.00
20			SUBTOTAL 1 =		\$848,400.00
21	Mobilization, Staging and Demobilization. (10% of Subtotal 1)	1	Aggregate Sum (Contingency Item)	\$84,840.00	\$84,840.00
22	Furnish and Install Traffic Control for the project, complete. (0% of Subtotal 1, Included in MDPWWD Bridge Work)	1	Aggr. Sum (Contingency Item)	\$0.00	\$0.00
23	For the cost of providing 1 off-duty police officers (1 x \$42/hr x 8 hrs x 30 days)	1	Aggr. Sum (Contingency Item)	\$10,080.00	\$10,080.00
24			SUBTOTAL 2 =		\$943,320.00
25	For cost of required permits, fees, inspections impact fees, if authorized by engineer. The sum of 3 % of Subtotal 2	1		\$28,299.60	\$28,299.60
26	Contingency allowance for unforeseen conditions, minor construction changes & quantity adjustments (10% of Subtotal 2)	1		\$94,332.00	\$94,332.00
27			CONSTRUCTION GRAND TOTAL =		\$1,065,951.60

Notes: 1.) Cost of restoration of sodded areas, and cost for traffic loop assemblies are included in pipe installation & connection prices.
 2.) Estimate assumes installation by Construction Contractor.