



HOLTZ CONSULTING ENGINEERS, INC

March 15, 2019

Mr. Leighton Walker
Utilities Engineer
City of Riviera Beach Utility District
600 West Blue Heron Boulevard
Riviera Beach, FL 33404

Subject: **Riviera Beach Utility District
Avenue C Repump Station Improvements**

Dear Mr. Walker,

We are pleased to offer the following proposal for the Avenue C Repump Station Improvements Project for the City of Riviera Beach Utility Special District (District). The project includes civil, mechanical, and electrical upgrades to the District's potable water repump station located at Avenue C including replacement of the pumping system and controls. This proposal includes surveying, engineering, and construction services for the design, permitting, and construction of various improvements at the repump station. The Scope of Services will consist of the following tasks:

Task 1 – Surveying Services

Under this task, HCE will provide surveying services to perform a survey of the existing pump station site including the pump station property limits, ground storage tank, above-grade facilities and surface features, and exterior and interior of the pump station building. The survey shall be used to depict the existing conditions and as base drawings and to depict the proposed improvements. The survey will include the following:

- 1.1 Obtaining horizontal and vertical control for using information published by the Palm Beach County Survey Department utilizing State Plane Coordinates for horizontal control and the North American Vertical Datum of 1988 (NAVD 88) for vertical control.
- 1.2 Location of visible fixed improvements within the project area site, depicting the horizontal location and vertical location of surface features and facilities such as above-grade piping, valves, valve vaults, control panels, fences, power poles, buildings, etc.
- 1.3 Providing and reference site benchmarks. Elevations to be referenced to an existing established City or County Benchmark.
- 1.4 Platted boundary lines, easements, and rights-of-way will be shown on the survey, but this proposal does not include performing any title searches.



Task 1 - Deliverables

1. Electronic copies of surveys

Task 2 – Engineering Design

- 2.1 HCE will provide engineering services consisting of preparation of construction plans and specifications for the following improvements at the District’s repump station:

Avenue C

- A. Replacement of the suction and discharge piping, check valves, and gate valves inside the pump room
 - B. Replacement of the two 60-HP booster pumps with two new 75-HP maximum booster pumps
 - C. Removal of existing and installation of new electrical equipment for the new booster pumps including switch gear and VFDs
 - D. Removal of the underground propane fuel tank
 - E. Installation of new standby generator and automatic transfer switch (ATS)
 - F. Replacement of the pump station control panel and RTU
 - G. Miscellaneous building improvements (painting, doors/windows, security)
 - H. Addition of an isolation valve to the existing ground storage tank (GST) outlet line to the pumps
 - I. Installation of a new GST level transmitter to the new PLC
 - J. Replacing the overflow screens on the GST
 - K. Safety improvements to the GST (T-rails for ladder, hand rails, etc.)
- 2.2 Work will include the preparation of drawings and specifications for the proposed improvements, attendance at meetings, site visits, coordination with subconsultants, and preparation of construction cost estimates.
 - 2.3 HCE will prepare an Engineer’s Opinion of Probable Construction Cost at the 60% and final design stages. These cost estimates will be provided with the 60% and final submittal packages.
 - 2.4 HCE will provide one (1) full size (24” x 36”) set and two (2) half size (11” x 17”) sets of plans for review and comment by the City at the 60% complete stage. The submittal will also include a complete draft of the technical specifications with the 60% complete submittal. HCE will also provide CAD files and PDF files of the final drawings and specifications.



Task 2 Deliverables:

1. 60% complete drawings and specifications and cost estimate.
2. Final drawings and specifications and cost estimate.

Task 3 – Permitting Services

- 3.1 HCE shall prepare permit applications for construction of the project and submit to the following agencies:
 - Palm Beach County Health Department (PBCHD) Permit for Water System Improvements
 - City of Riviera Beach Development Services Department
- 3.2 HCE will coordinate with the permitting agencies during the review process on a regular basis in an effort to keep the project on schedule and respond to their review comments. HCE will respond to Requests for Additional Information (RAI) during the permitting process. It is anticipated that no more than two (2) RAI's will be issued by the permitting agencies.
- 3.3 Permit fees will be paid for by the District.

Task 3 Deliverables:

1. Copies of all permits obtained.

Task 4 – Construction Services

- 4.1 Under this task, HCE will perform the following construction services at the repump station at Avenue C:
 - 4.1.1 Coordinate and assist with the installation of a temporary bypass pumping system including coordination with the pump rental company (Xylem), electrical engineering, necessary demolition for the installation, equipment materials. Rental pumps and fuel for the rental pumps are provided by the District.
 - 4.1.2 Furnish and install two (2) new booster pumps (75 HP, 1780 RPM, 1,500 GPM @ 150' TDH) and reinforced concrete pump bases
 - 4.1.3 Furnish and install new suction and discharge piping including:
 - (2) 8" gate valves, (2) 8" swing check valves, (3) 10" gate valves
 - (4) 10" DIP spool pieces, (4) 8" DIP spool pieces
 - (4) 10" x 8" reducers, (4) 10" elbows, (2) 8" elbows



- (6) 10" st. pipe supports
 - All necessary accessory kits and appurtenances and coating of new piping
- 4.1.4 Furnish and install new electrical switchgear, booster pump VFDs, pump station control panel and RTU
- 4.1.5 Furnish and install new 250-KW, base-mounted generator with aluminum enclosure and concrete generator pad and automatic transfer switch.
- 4.1.6 Demolition of existing facilities necessary for installation of improvements generally including: Booster Pump No. 1 and base frame, concrete pipe and valve supports, existing valves, pipe, and fittings for both booster pumps, existing exhaust piping, existing switchgear and panels, existing 4'x4' louver, sawcut and removal of pump room floor for new concrete pump bases
- 4.1.7 Demolition of existing buried propane tank and tank piping and backfilling with clean fill
- 4.1.8 Furnish and install miscellaneous building improvements
- 4.1.9 Furnish and install Crom Safety Package for existing GST, new overflow screens, new ultrasonic level indicator
- 4.1.10 Furnish and install chlorine/chloramine residual analyzers and tie to the new RTU
- 4.1.11 Restoration of existing facilities impacted by the construction activities
- 4.2 HCE shall provide all necessary items provided under the General Conditions including sanitary services, dumpsters, construction schedules, mobilization/demobilization, submittals, testing, startup, and commissioning. It is assumed that the GST at each station can be temporarily taken offline. No programming is included in this proposal.
- 4.3 HCE shall prepare record drawings of all improvements, Operation and Maintenance Manuals, and closeout documents.



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SCHEDULE

The above tasks will be completed according to following schedule:

Task 1 - Surveying Services	30 days from NTP
Task 2 - Engineering Design	
60% Design Submittal	90 days from receipt of survey (120 days from NTP)
Final Design Submittal	30 days from receipt of City comments on the 60% Submittal
Task 3 – Permitting	Applications submitted with the final plans
Task 4 – Construction Services	
Avenue C Improvements	225 days from NTP

COMPENSATION

Compensation will be in accordance with the attached takeoff worksheet (Attachment A) for a guaranteed maximum price of \$1,296,310.13. Monthly progress payments will be authorized based on percent complete as determined by HCE and approved by the District.

Sincerely,

HOLTZ CONSULTING ENGINEERS, INC.

A handwritten signature in blue ink, appearing to read 'S. Fowler', is positioned above the typed name.

Stephen Fowler, P.E.
Associate Engineer

City of Riviera Bch Utlty Dist
180140 RB Ave. C Repump Modifications

Assembly#	Part#	Description	Unit	Quantity	Ext. Price
Job: 180140 RB Ave. C Repump Modifications					
Bid Item: 1 General Requirements					
2		General Conditions	LOT		
		Submittal Labor	HR	40.00	4,032.86
		O&M	HR	40.00	4,032.86
		Progress Meeting	HR	40.00	6,232.61
		Scheduling Labor	HR	60.00	6,049.30
		Construction PM	HR	250.00	38,953.80
		Construction Superintendent	HR	300.00	28,184.22
		Purchasing & Subcontracts	HR	80.00	10,264.40
		Building Permits Application & Coordination	HR	20.00	1,904.94
		Construction Assistance	HR	80.00	7,149.17
				Bid Item Totals:	106,804.16
Bid Item: 2 Existing Conditions					
		MOB/DEMOB	LOT	1.00	6,007.06
1		Temporary Facilities	LOT		
		Trailer Pick up/Delivery	EA	2.00	984.40
		Container Rental	EA	6.00	1,476.60
		Sanitary	MONTH	6.00	885.96
		Job Site Office Supplies	LOT	1.00	615.25
		Waste Hauling	LOT	4.00	2,953.20
		Startup Crew	CR-D	2.00	2,945.43
		Punch Out Crew	CR-D	2.00	2,945.43
		Site Restoration	LOT	1.00	7,383.00
				Bid Item Totals:	26,196.33

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Assembly#	Part#	Description	Unit	Quantity	Ext. Price
Bid Item:	3	Concrete			
		Core	LOT	1.00	1,476.60
		Pump Pad			
		Form & Materials	LOT	2.00	2,461.00
		Cast In Place Concrete	YD	2.00	1,722.70
		Concrete Pump	LOT	2.00	1,722.70
		Testing Services	LOT	2.00	1,650.00
		Form & Pour Concrete	CR-D	8.00	14,349.36
		High Strength Grout	LOT	1.00	3,691.50
		Installation	CR-D	2.00	3,587.34
		Generator Pad			
		Form & Materials	LOT	1.00	3,076.25
		Cast In Place Concrete	YD	10.00	2,214.90
		Concrete Pump	LOT	1.00	861.35
		Density and Concrete Testing	LOT	1.00	1,476.60
		Installation	CR-D	8.00	12,501.24
		Concrete Supports	LOT	1.00	3,076.25
				Bid Item Totals:	53,867.79
Bid Item:	5	Metals			
		SS Unistrut	LOT	5.00	738.30
		SS Unistrut Hardware	LOT	1.00	1,538.13
		SS Unistrut Pipe Clamp	LOT	1.00	615.25
		Misc Metals & Fasteners	LOT	1.00	1,538.13
		Installation	CR-D	2.00	2,945.43
				Bid Item Totals:	7,375.24
Bid Item:	9	Finishes			
		Signs & Labels	LOT	1.00	1,230.50
		Installation	CR-D	1.00	1,472.71

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Assembly#	Part#	Description	Unit	Quantity	Ext. Price
		Building Coating (Interior)	LOT	1.00	7,383.00
		Pump & Piping Coating	LOT	1.00	12,305.00
				Bid Item Totals:	22,391.21
Bid Item:	11	Equipment			
		Booster Pump	EA	2.00	77,431.72
		Installation	CR-D	2.00	3,587.34
		Genset & Enclosure	LOT	1.00	178,422.50
		Installation	CR-D	5.00	8,968.35
		Instrumentation Allowance	LOT	1.00	12,305.00
		Installation	CR-D	3.00	5,381.01
				Bid Item Totals:	286,095.92
Bid Item:	17	I&C			
		Ultrasonic Level	LOT	1.00	4,922.00
		Stanchion, Sunshade & Surge	LOT	1.00	2,461.00
		Control Panel and SCADA Modification	LOT	1.00	86,135.00
				Bid Item Totals:	93,518.00
Bid Item:	26	Electrical			
		Electrical Sub	LOT	1.00	215,622.00
		Trenching, Backfilling, and Compaction	CR-D	2.00	2,945.43
		Construction PM Electrical	HR	80.00	8,798.98
				Bid Item Totals:	227,366.41
Bid Item:	40	Process Interconnections			
		Temporary Bypass Piping (Work Previously Completed)	LOT	1.00	8,500.00
		Temporary Bypass Pumping			
		Pump Rental	Month	1.00	13,535.50
		Pump & Piping Installation	CR-D	2.00	4,248.34
		Pump & Piping Removal	CR-D	2.00	4,248.34

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Assembly#	Part#	Description	Unit	Quantity	Ext. Price
		Crane	LOT	2.00	2,953.20
		Pump Replacement			
		Remove Existing Pump & Grout	CR-D	2.00	3,125.31
		Concrete Cutting	LOT	1.00	1,320.00
		Remove Concrete and Prep Area	CR-D	4.00	6,250.62
		DI Pipe & Fittings	LOT	1.00	9,228.75
		Gate Valves	LOT	1.00	9,228.75
		Check Valves	LOT	1.00	9,830.22
		Flange Kits & Misc Materials	LOT	1.00	3,076.25
		Installation	CR-D	6.00	10,762.02
		Isolation Valve for Tank Outlet	LOT	1.00	6,700.00
		Tank Mixer	LOT	1.00	33,657.63
		Installation	CR-D	2.00	3,587.34
		Ammonia Analyzer	EA	1.00	30,885.86
		Chlorine Analyzer	EA	1.00	6,152.50
		Surge	LOT	1.00	1,230.50
		SCH 80 PVC Pipe, Fittings & Valves	LOT	1.00	7,383.00
		Tapping Saddle & Valve	EA	1.00	1,230.50
		Installation	CR-D	10.00	17,936.70
		Crom Tank Improvements			
		Replace Overflow Screens	EA	1.00	3,691.50
		Install Safety Package	EA	1.00	9,228.75
				Bid Item Totals:	207,991.58
Bid Item:	41	Material Processing & Handling			
		Traversing Fork Lift	Month	1.00	5,967.93
		Compactor 5000-7000LB	WEEK	2.00	1,107.45
		Safety	HR	20.00	2,566.10
		Safety Equipment	LOT	1.00	2,461.00

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Assembly#	Part#	Description	Unit	Quantity	Ext. Price
		Crane	Hr	40.00	8,859.60
		Equipment Fuel	GAL	100.00	690.00
		Misc Tools & Equipment	LOT	1.00	3,076.25
		Equipment Pickup and Delivery	LOT	2.00	1,107.45
				Bid Item Totals:	25,835.78
Bid Item:	100	Engineering			
		Engineering		1.00	200,095.50
				Bid Item Totals:	200,095.50
Bid Item:	102	Bonds & Insurance			
		Bonds & Certifications	LOT	1.00	25,627.13
		Builders Risk Insurance	LOT	1.00	3,015.90
		Additional Insurance	LOT	1.00	10,129.18
				Bid Item Totals:	38,772.21
				Grand Totals:	1,296,310.13