

084-18 JEA Class III & IV Pony Pump Installation – Technical Specification

General

The Contractor shall install JEA supplied, diesel-driven, automatic standby pumps (pony pumps) at eight (8) sewage lift stations. The installation shall be performed in accordance with JEA standards and per the attached site-specific drawings*, including but not limited to:

- General site preparation
- Concrete foundation installation
- Pump placement/mounting to foundation
- Piping work - all suction and discharge piping, valves, fittings, and instrumentation
- Wet well and force main penetrations (core drill and hot tap as needed)
- All associated control devices, switches, floats, etc.
- Electrical and control cable and conduit (including terminations and equipment grounding)
- Stand-alone fuel storage tank installation (including foundation where required) as well as fuel supply piping, valves, fittings, and instrumentation
- Startup and performance testing support

Contractor shall provide all material and labor to complete this scope of work. Material includes all piping, fittings, valves, cable, conduit, concrete, rebar, instrumentation, etc. as per the attached drawings. Supplied labor shall be able to perform all work to complete this scope of work including but not limited to: pipefitting, welding, concrete installation/repair, electrical and control installation and terminations. Contractor shall also include in their bid all materials and services not specified to complete this scope of work including but not limited to: mobilization/demobilization, rentals, consumables, overhead, machine startup/testing, project management, book keeping/financial management, and any other direct or indirect cost associated with performing this scope of work.

Contractor will bid lump sum (fixed bid) pricing for each of the eight (8) locations. JEA reserves the right to award multiple contracts based on the price and schedule provided from each bidder. Therefore, the Contractor must price each site separately (see bid workbook); the price for each location shall include all costs to perform the scope of work at that location including all items mentioned above.

In general, at each location, the Contractor will be responsible for preparing the site, installing all concrete foundations, receiving and setting the pony pump (crane required; see Table 1 for pump information), fabricating and installing all suction and discharge piping to the pump (including wet well and force main penetrations), fabricating and installing all pipe supports, installing all valves and instrumentation, running all conduit, pulling all power and control cable, installing float switches in the wet well, setting a stand-alone fuel tank (3 locations only) and running fuel piping from the tank to the pump, starting up the equipment, supporting all pump testing, and demobilizing including removal of all extra material, trash, etc. leaving the station clean and safe.

*Attached drawings depict the layout, details, and notes for each specific site. Material lengths and take-outs are not to scale and it is the Contractor's responsibility to accurately measure and determine final quantities of materials needed (piping, cable, conduit, etc). Piping, cable, and conduit are to be field routed unless otherwise specified on the drawing and installed per the JEA standards and specifications outlined in this technical specification. Drawing layouts, details, and notes are all considered to be part of the technical specification.

Items supplied by JEA are limited to:

- Pony Pumps (8 total; 1/station) – Delivered by Pump Manufacturer
- Pony Pump Control Floats – Supplied by Pump Manufacturer
- Fuel tank for 3 locations (Abess, Huron, AC Skinner)
- Distributed I/O cabinet
- Site access (before award for bidding purposes and continuously for duration of work)
- Potable water hose connection

The Contractor shall provide all other items needed to perform this scope of work.

Station Outages & Confined Space

The pump station is to remain in service for the duration of the work. Short outages are permitted, but must be scheduled at least one week in advance. Station wet wells are considered permit required confined spaces. The Contractor is responsible for following JEA's confined space procedure or a JEA pre-approved confined space procedure. Contractor is responsible for any additional resources (including personnel, such as a hole-watch) to perform confined space work. This scope of work requires wet well penetrations, pipe/support installation inside the wet well, and float/control wiring inside the wet well. Contractor will be responsible for bypassing the station and/or providing temporary power as needed to perform this scope of work.

Schedule

Contractor will provide a general work schedule with their bid. This schedule will be evaluated to determine if the Contractor can complete all work by the project deadline of **8/18/2018**. If a single contractor is unable to complete this scope of work by the deadline, a second contract may be awarded and the work scope divided at the discretion of JEA. The schedule provided with the bid can be high-level but shall include the following activities per station to complete the entire work scope:

- Mobilization/Demobilization
- Concrete Start/Finish
- Piping Start/Finish
- Electrical/Controls Start/Finish
- Duration of all confined space work (wet well penetration/float installation) and force main tap/tie-in
- Installation of Pony Pump & Fuel Tank (where required)
- Substantial Completion – Available for run/testing
- Final Completion

A detailed schedule will be required after contract award.

Table 1 denotes the estimated pump delivery dates for each site. The pump manufacturer will deliver the pumps to the station or a mutually agreed upon location.

Table 1 – Station and Pony Pump Information

Pump Station Name/Number	Pump Station Address	Pony Pump Model (JEA Provided)	Pump Weight (lbs)	Stand-Alone Fuel Tank Needed (JEA Provided)	Estimated Delivery Date[†]
Hodges LS001089	1705 Hodges Bv	CD150M	3,950	No	6/8/18
Barnes LS000230	4437 Barnes Rd	CD225M	4,950	No	6/20/18
Tropic Egret LS002308	13383 Tropic Egret Dr	CD225M	4,950	No	6/20/18
Fury LS000924	8560 Fury Dr	CD300M	14,200	No	6/25/18
Huffman LS001114	2798 Huffman Blvd	CD400M	22,500	No	6/27/18
Abess LS000060	12733 Abess Blvd	CD500M	27,900	Yes	7/9/18
Huron LS000013	2809 W 5th Street	CD500M	27,900	Yes	7/9/18
AC Skinner LS000018	7200 A C Skinner Pkwy	CD500M	27,900	Yes	7/9/18

[†]These delivery dates are to be used for high-level planning purposes only. Dates are not guaranteed. Schedule will be updated and provided to the successful Contractor(s) as information is received from the pump manufacturer.

Workmanship and Quality

The Contractor shall perform all work safely and in compliance with all national, state, local, and JEA standards, ordinances, and regulations. Contractor is responsible for obtaining all licenses, permits, etc. to perform this scope of work in Duval County, Florida.

Workmanship shall be in accordance with all national standards including but not limited to: ACI – Concrete, ASME/AWS – Welding, AWWA- Pipefitting, IEEE/NEC-Electrical, NFPA, General Contractor laws and standards, etc.

JEA reserves the right to perform QA/QC spot checks at any time. The JEA project manager will communicate any issues with the Contractor's QA/QC or project manager for quick resolution.

Pre-Bid and Site Visits

JEA will conduct a mandatory Pre-Bid meeting to discuss the commercial and technical terms of this contract. The date and time for this meeting is listed above in the commercial section of this solicitation.

JEA will also make the stations available for Contractor inspection prior to the bid due date. The dates and times for these station visits will be communicated during the mandatory pre-bid meeting. These station visits are not mandatory, but are highly encouraged to fully understand the specific station layouts, details, and to obtain any

measurements or other needed information. Additional visits needed by any contractor will be scheduled based on the availability of the JEA project manager and made available to all potential bidders.

Control and Power Cable and Conduit

Contractor will run, mount, and/or bury conduit and install control and power cables according to the attached drawings and the schedule in Table 2 below. The drawings specify which conduits are to be buried or can be installed above grade. All conduit is to be located to minimize operational impact and ensure safety at all times. Conduit shall be located beneath or adjacent to pipe runs, foundation edges, etc. to minimize tripping hazards and operational interference. The drawings include point-to-point connection locations, however, the Contractor is responsible for routing the conduit/cable appropriately and accounting for the complete cost in their bid price. Note: all 12AWG and smaller are to be tin-plated and to have ferrules installed. All wires are to be labeled on both ends to clearly identify the cable and the labels are to comply with the JEA 433 Water Wastewater Standards.

Table 2 – Conduit and Cable Schedule

Conduit Schedule

Conduit #	From	To	Size	Material	Notes
1	Check Valve	Pony Pump	1 in	PVC	Check Stat
2	Distributed I/O	Pony Pump	1 in	PVC	I/O
3	RTU	Pony Pump	1 in	PVC	Sec Pwr/I/O
4	Demarcation	Pony Pump	1 in	PVC	Float Stat
5	Distributed I/O	RTU	1 in	PVC	Comm/Pwr
6	MCC	Pony Pump	2 in	PVC	Power
7	Wet Well	Demarcation	1 in	PVC	Floats

Cable Schedule

Conduit #	Conductor Size / Part Number	Quantity	Notes
1	18 AWG	2	Discrete
1	Belden 9463	1	Analog
2	18 AWG	24	Discrete
2	Belden 9463	2	Analog
3	12 AWG	2	12VDC Secondary Power
3	18 AWG	6	Discrete
4	18 AWG	4	Floats
5	Siemens FC CAT5 6XV1840-2AH10	1	Communication
5	12 AWG	2	24VDC Power
6	12 AWG	2	Charger
6	To be sized per Contractor	2	Heater
7	Provided by Pump Manuf.	2	Floats

Note: Contractor is responsible for lengths/quantities of all conduit and cable installed. Drawings are for information only and may not reflect the exact path of conduit/cable installation. Contractor to determine safe and accessible method for installation using the guidelines herein and in the attached drawings. Site visits may be required and will be allowed for the Contractor to estimate routing and quantities. JEA reserves the right to review and approve the Contractor's routing plan prior to material order.

Table 2 reflects the quantities of conduit and cable per site, not the total project amount.

Contractor will make all terminations for the conductors they install. Use the above schedule and attached drawings for specific details; a general explanation is outlined below.

Pump control floats shall be installed in the wet well according to the JEA standards. The floats will be wired to the existing demarcation box. The Contractor shall install conduit and cable between the pony pump controller and the pump discharge check valve (for control) as well as between the pony pump controller and the pipe nipple (for future pressure indication). The contractor will provide a transmitter that meets JEA standards as part of this installation.

The pony pump manufacture will be providing pumps with approximately twelve (12) control connection points. The Contractor shall install conduit and cable from these connections to the Distributed I/O cabinet (Distributed I/O cabinet and module will be provided by JEA). The distributed I/O cabinet shall have one conduit with Profinet and AWG cables installed to connect to the existing RTU. A separate conduit with cable shall be installed between the RTU and pony pump for secondary power.

The pony pump heater and battery charger will have power supplied from the existing MCC. Contractor shall install conduit and cable for two (2) 120V feeds from the MCC to the pony pump.

Safety

All Contractor personnel who perform work on JEA property must be JEA safety certified and adhere to JEA Safety and Training regulations. The Contractor shall adhere to current JEA Safety and Training regulations as referenced in the contract documents.

The Contractor shall take all precautions to protect the safety of its employees and others. Work safety requirements shall comply with JEA Company Safe Work Practices Manual available on-line at:

https://www.jea.com/About/Procurement/Become_a_Vendor/Contractor_Safety/Qualification_Requirements/

The Contractor shall familiarize every member of the crew with all fire and safety regulations recommended by OSHA, and other industry or local governmental groups.

The Contractor shall be responsible for ensuring that all personnel have received the appropriate safety training. Supervisors may also be required to have additional training.

The Contractor shall provide, and personnel must wear, proper Personal Protective Equipment (PPE) as required by OSHA and JEA. PPE minimums include safety footwear, plastic hard hat (no metal), and safety glasses. Hearing protection is required while operating machinery or equipment (including saws) or other loud equipment. Footwear must have steel toe caps.

The Contractor shall exercise extreme care when working around energized lines or equipment to prevent accidents and interrupting service. If any such incident should result, the JEA Contract Administrator shall be immediately notified of the location of such incident.

The Contractor shall be responsible for all damages to JEA property and personal injury caused by non-compliance with Safety and training requirements.

Contractor Personnel

All services rendered shall be by uniformed employees (company identified shirts and hard hats) of the Contractor. Shirts with offensive logos or messages, ripped jeans, shorts, tennis shoes, and sleeveless shirts are not acceptable.

Parking is the responsibility of the Contractor. Parking on JEA property may be approved at the sole discretion of the JEA Project Manager.

Any worker employed by the Contractor, who exhibits inadequate experience and knowledge or is incapable in his/her field, shall be removed from the work site at the discretion of the JEA Project Manager.

General Site Conditions

The Contractor shall prevent access by the public to materials, tools, and equipment during the course of this project.

All doors, lids, and gates shall be locked and secured at all times when unattended.

It is the policy of JEA to provide healthy, tobacco-free facilities for all employees and visitors. This policy prohibits the smoking of any tobacco product and the use of oral tobacco products, as well as e-cigarettes and it applies to employees, contractors, and visitors. Company employees shall not use tobacco products while on JEA property or in the course of performing work on behalf of JEA.

Disposal of Waste Generated due to Contractor Work

The Contractor must dispose of all waste generated as a result of this Contract at an officially permitted location.

Any fees and/or charges associated with this disposal should be included in the Contractor's Bid Price. JEA shall not pay additional charges/fees for waste disposal.

The Contractor shall conform to environmental regulations of public agencies, including local jurisdiction.

The Contractor shall be accountable for timely clean-up and remediation associated with any containment spills, accidental or otherwise, including, but not limited to, chemicals, diesel fuel, gasoline, lubricants, cleaning fluids, or toxic chemicals.

Permits

The Contractor shall obtain all permits required by local agencies and pay all fees which may be required for the performance of the work including removal/disposal of hazardous materials. The Contractor shall provide copies of all local, state and Federal permits required for the work described in this contract to the JEA Contract Administrator.

Special Weather Event

In anticipation of a weather event where damage to JEA facilities could occur, the Contractor shall take steps to ensure that JEA shall be a priority for securing all equipment to minimize damage to equipment or existing facilities.

JEA Standards, Specifications, and Technical Clarifications

All work and contractor supplied materials shall comply with JEA Water and Wastewater Standards as listed on JEA.com

The following items shall be included in the solicitation in addition to, or in clarification of, the JEA Water and Wastewater Standards.

1. When an existing plug or other valve on the pump out assembly is closed to allow connection of the discharge piping without the need for bypass pumping, the valve must be re-opened after piping completion to allow the pony pump to operate.
2. The electrical conduits shall be buried, in order to prevent potential tripping hazards. However, where digging would be difficult as approved by the JEA Project Manager, or when not in direct walking area, conduits can run above ground. Conduits that are placed on top of concrete shall be fastened to the concrete. Above ground conduits shall be run under pump suction or discharge piping if possible.

3. Expansion joints are required at the pump flange tie-ins. These will be supplied and installed by the Contractor.
4. A distributed I/O panel shall be installed adjacent to the pony pump. JEA will provide the panel to the Contractor prior. The Contractor shall include the cost to mount the panel and wire the panel per the schematic that will be included at the time the panel is delivered. The panel cost shall not be included in the Contractor's bid price. A 24VDC connection shall be provided, through the designated conduit, from the JEA SCADA Panel (also labeled RTU on the drawings) to the distributed I/O panel per the attached cable schedule and drawings.
5. All drain ports from the pump shall be piped through a single pipe into the wet well. The pipe shall be no less than 1" Schedule 40 PVC. Where installed in non-concrete areas, the pipe shall be buried and cored into the side of the wet well. Where an existing concrete slab prevents burying the drain pipe, the pipe shall be laid on, and secured to, the concrete slab utilizing stainless steel hardware. The route of the pipe shall be under and following the suction piping to avoid creating a tripping hazard and shall enter the top slab of the wet well. When a core is required for the suction pipe, core a large enough hole to accommodate the drain as well. Where a suction pipe already exists, core a new hole into the top slab as close as possible to the existing suction pipe and repair the hole as indicated on the design drawings.
6. Start and stop float switches shall be in accordance with JEA Water and Wastewater Standards Section 433, Submersible Wastewater Pump Stations. These switches will be provided by the pump manufacturer.
7. Fuel tank installations are required to have an isolation block valve installed on the fuel piping. This is in addition to the anti-siphon valve. The installation order shall be tank – block valve – anti-siphon valve. See drawings for details, Contractor to provide and install all piping and valves in the fuel system.

Additional Submittals upon request

JEA may request and Bidder shall provide within 48 hours the following additional documents for JEA's review. JEA's review and approval of the submitted schedule or certifications shall be at JEA's sole discretion.

- Detailed Schedule – resource loaded.
- Welder Certifications.

**084-18 APPENDIX B MINIMUM QUALIFICATION FORM
INSTALLATION OF 8 CLASS III & IV
DIESEL STANDBY PUMPS FOR JEA WASTE WATER LIFT STATIONS**

The minimum qualifications shall be submitted in the format attached. The report shall be presented in the order described below. In order to be considered a qualified supplier by JEA you must meet all the criteria listed and be able to provide all the services listed in this specification.

The supplier must complete **one (1) original and three (3) duplicate (copy) and one (1) CD or thumb drive** of the following information and any other information or attachments.

BIDDER INFORMATION

COMPANY NAME:_____

BUSINESS ADDRESS:_____

CITY, STATE, ZIP CODE:_____

TELEPHONE:_____

FAX:_____

E-MAIL:_____

- The Bidder shall be a currently Licensed General Contractor or underground Utility Contractor in the State of Florida on or before Bid Due Date – enter license number on Bid Form.
- The Bidder shall have successfully completed two (2) similar projects in the past five (5) years. A similar project is defined as a diesel driven pumping system installation project greater than \$250,000.00 in value which includes piping and electrical installation at a water treatment, water reclamation facility, or lift station.

079-18 APPENDIX B BID FORM

PURCHASE AND INSTALLATION OF EMERGENCY PUMP ENGINE SYSTEM FOR JEA LIFT STATIONS

Submit an **original, three (3) copies and one (1) CD or thumb drive** along with other required forms in a sealed envelope to: JEA Procurement Dept., 21 W. Church St., Bid Office, Customer Center, 1st Floor, Room 002, Jacksonville, FL 32202-3139.

Company Name: _____

Company's Address _____

License Number _____

Phone Number: _____ FAX No: _____ Email Address: _____

BID SECURITY REQUIREMENTS

- ☐ None required
☒ Certified Check or Bond Five Percent (5%)

TERM OF CONTRACT

- ☐ One Time Purchase
☐ Annual Requirements
☒ Other, Specify- Project Completion

SAMPLE REQUIREMENTS

- ☒ None required
☐ Samples required prior to Response Opening
☐ Samples may be required subsequent to Bid Opening

SECTION 255.05, FLORIDA STATUTES CONTRACT BOND

- ☐ None required
☒ Bond required 100% of Bid Award

QUANTITIES

- ☒ Quantities indicated are exacting
☐ Quantities indicated reflect the approximate quantities to be purchased Throughout the Contract period and are subject to fluctuation in accordance with actual requirements.

INSURANCE REQUIREMENTS

Insurance required

PAYMENT DISCOUNTS

- ☐ 1% 20, net 30
☐ 2% 10, net 30
☐ Other _____
☐ None Offered

Item No.	ENTER YOUR BID FOR THE FOLLOWING DESCRIBED ARTICLES OR SERVICES	TOTAL BID PRICE
1	Total Bid Price From the Bid Workbook	\$ _____

☐ I have read and understood the Sunshine Law/Public Records clauses contained within this solicitation. I understand that in the absence of a redacted copy my proposal will be disclosed to the public "as-is".

BIDDER CERTIFICATION

By submitting this Bid, the Bidder certifies that it has read and reviewed all of the documents pertaining to this Solicitation, that the person signing below is an authorized representative of the Bidding Company, that the Company is legally authorized to do business in the State of Florida, and that the Company maintains in active status an appropriate contractor's license for the work (if applicable). The Bidder also certifies that it complies with all sections (including but not limited to Conflict Of Interest and Ethics) of this Solicitation.

We have received addenda

_____ through _____

_____ Handwritten Signature of Authorized Officer of Company or Agent _____ Date

_____ Printed Name and Title