

**Memorandum
Public Works Department**



To: City Manager
Subject: Emergency Repair
Date: June 15, 2017
Number: 2017-072

On May 2, 2017, one of the two 1962 era pumps at the sewage lift station located at 4700 30th Street stopped functioning. The motor was taken to Rock Island Electric Motor Repair in an attempt to be repaired. In the interim, a back up diesel powered pump was rented and set up on site to allow for redundancy. On Monday morning, June 12, 2017, the sole remaining pump in the lift station experienced a critical bearing failure and ceased functioning completely. The station is currently running off of the rented diesel pump and a second diesel pump that has been rented for redundancy. The pumps are unable to be repaired or rehabilitated due to the age and lack of replacement parts. A quote was received from Electric Pump of Des Moines, Iowa, for complete replacement of the pumps, motors, and controls with two new Flygt pump assemblies for inclusion in the 2018 budget; however, due to the critical failure of both pumps, this project must be done on an emergency basis to ensure the continued operation of this critical lift station. The quote includes providing and installing two new pumps, motors, controls, and all related appurtenances. These are the same brand of pumps that will be installed in the Blackhawk lift station when it is rehabilitated later this year.

Recommendation

The Public Works Department recommends City Council authorize the emergency purchase and installation of two Flygt sewage pumps and all associated appurtenances from Electric Pump of Des Moines, Iowa, in the amount of \$96,605.00.

Vendor: Electric Pump
Payment Amount: \$ 96,605.00
Account Chargeable:
Fund: 506 Wastewater Operation & Maintenance
Division: 618 Utility Services
Cost Center: 341 Mill St Plant
Object Code: 52804 Equipment S/C

Requisition Number: R006654

Submitted by: Lisa Perry, Wastewater Supervisor
Larry Cook, Interim Public Works Director

Approved by: Randall D. Tweet, Interim City Manager



4280 E 14th St
Des Moines, IA 50313
Office: 515-265-2222
Toll Free: 800-383-7867
Fax: 515-265-8079

201 4th Ave SW
New Prague, MN 56071
Office: 952-758-6600
Toll Free: 800-536-5394
Fax: 952-758-7778

TO: City of Rock Island, IL – 30th Street

ATTN: Lisa Perry (perry.lisa@rigov.org)

REF: Rock Island, IL – 30th Street

DATE: May 16, 2017

Retrofit Quote

Scope of work: Supply and install 2 Flygt pumps, accessories, piping, control panel and fittings.

Pumps & Accessories:

- Two (2) Flygt NT3171.185-454HT dry pit submersible pump. Pump to be furnished with the following:
- 34hp, 460V, 3phase, 60Hz motor
 - Hard Iron Impeller
 - Inlet Elbow
 - T-stand Kit
 - 50' Power Cable

Piping, Fittings, Hardware, Misc. & Labor:

- One (1) Lot of piping, fittings, hardware & labor to include the following:
- Check Valves - 8" x 4"
 - Gate Valves - 8"
 - 4" Elbows 22.5° DI
 - 8" Elbows 90° DI
 - Space Saver Flange 10"x8"
 - 8" Filler Flanges
 - Concrete
 - Bolt & Gasket kits

Controls & Accessories:

- One (1) Lot labor and materials to remove the existing control equipment and incorporate new primary and secondary control system as follows:
- One (1) Custom Duplex Pump Station Control Panel retrofit for installation in the existing station, 120 Volt powered. The proposed panel shall be factory fabricated, assembled, wired and tested and ready for installation and connection to incoming power; transducer, float switches, and variable frequency drives to operate two (2) Flygt Pumps.

Nema 12/3R painted steel wall mount enclosure with padlockable 3-pt latch
30mm Oiltight pilot lights & switches, door mounted

Fused phase monitor

Control power derived from incoming L1 & Neutral

Control power circuit breaker with operator toggle thru door

Elapsed time meters for each pump

Pump Called pilot lights for each pump

Hand-Off-Auto switch for each pump

VisiCon, 5.7" Color Touchscreen Duplex Pump Controller

Submersible Transducer

Square D Thermal Mag circuit breaker for each pump

Square D IEC contactors and overloads for each pump

MiniCas installed in enclosure door

Two float backup circuit – (Low Level/Pumps Off & High Level/Pumps On)

Pump Fail circuits with door mounted pilot lights

Dry contacts/signals for specified conditions –

- 4-20mA Wetwell level signal
- Pump 1 & 2 Run
- Pump 1 & 2 Seal Failure
- Pump 1 & 2 Overtemperature
- Pump 1 & 2 Failure
- Power Failure
- High Level – Transducer
- Low Level – Transducer
- High Level - Float
- Low Level – Float

Top mounted Red Lexan flashing alarm light

UL508A listed

One (1) Transducer/Float switch mounting bracket

Two (2) Float Switches

One (1) Submersible Pressure Transducer

Two (2) ABB ACQ 550 Variable Frequency Drives, 72A, NEMA 12 with Circuit Breaker suitable for wall mounting.

One (1) Lot factory field services to place above system into operation and provide system changeover.

Skilled programmer/technicians shall complete change over, troubleshooting, start up entire system into satisfactory operation and shall make necessary inspection of completed installation, make necessary final field adjustments and make program/wiring revisions as required to make it a fully function system.

The retrofit shall be conducted to provide full station operation during the changeover to the new system.

The price for Item A factory with freight allowed to jobsite and includes system installation, startup services, owner instruction training, and one (1) year warranty from date of startup.

One (1) Lot freight and startup services

Total Combined Selling Price: \$ 96,605.00 plus tax

Note the following:

- Anything not included in this proposal is excluded
- Well must be cleaned prior to Electric Pumps arrival
- Warranty on existing equipment not included
- HVAC items by others
- Ground grid and transformers are by city of Rock Island

If you have any questions or concerns with the contents of this proposal please feel free to contact us at (800) 383-7867.

Thanks you for your consideration,

John Leto (515) 707-6024
cc: Salina Godfrey (515) 265-2222