

MEMORANDUM



TO: RANDY AULER, PARKS, RECREATION & FORESTRY
DIRECTOR

FROM: MATT WIKTOROWSKI, SUPERINTENDENT OF PARKS

SUBJECT: POWER PARK LIFT STATION UPGRADE

DATE: FEBRUARY 11, 2008

During the 2007 fall softball season it was noticed that the lift station at Power Park was decaying and needed to be upgraded to accommodate the needs of the facility. During initial inspection it was suggested that the pumps and control panels be placed on a replacement schedule for the upcoming fiscal years. In an effort to gain further detail a secondary inspection was performed that indicated that there may be a broken line just outside of the 'Wet Well' of the unit.

The indication of the leak prompted a thorough investigation by Spalding DeDecker Associates, Inc. (Attached). The plan provides four options for repair and three detailed replacement costs. In an effort to have the station functional by April 14 the division intends to isolate the broken line and repair. A long term fix will be investigated in cooperation with or Water and Sewer Department. If you have any questions please feel free to contact me at your earliest convenience.



MEMORANDUM

DATE: February 5, 2008
TO: Brian Coburn
ORGANIZATION: City of Novi
FROM: Taylor Reynolds
RE: Power Park Sanitary Pump Station
JOB NO.: NV08002

On January 31 there was a meeting at the Power Park facility to discuss options with regard to the failing submersible sanitary pump station. The attached GIS schematic shows the location of the existing station and the existing 500+ feet of discharge line to the public gravity sewer. The station is roughly 25-30 years old and while the wet well appears to be functional most of the electrical and mechanical equipment is in need of replacement. Additionally, there is a break in the discharge line near the well which discharges sewage to the surface. It is unclear at this point if this break is due to an existing blockage in the discharge line.

As discussed at the field meeting we have evaluated costs and timing to implement several options for replacement, repair or upgrade to the existing station which are detailed as follows:

Option 1. Remove existing Submersible Pump Station and replace with a Duplex Grinder Pump Station.

Discussion: The existing pump station and control panel would be removed and replaced with a Barnes 48"x144" Duplex Grinder Pump Station at its current location. The entire discharge line would be replaced with a new directionally drilled 2" HDPE line approximately 575' to the existing manhole in Hickory Grove Drive.

Cost: These improvements are estimated at \$40,000.00 and include materials and construction, design, bid management and construction engineering (contract admin., inspection and as-builts).

Timing: Barnes can deliver the pump station approximately 6-8 weeks after the order is placed. Assuming a fast track bid process will parallel the order from Barnes, we estimate that the grinder pump can be installed and fully functional 9-10 weeks after the order is placed. We estimate this station will have a useful life of 25-30 years with regular maintenance.

Option 2. Rehabilitation of Existing Submersible Pump Station.

Discussion: The existing submersible pump station will remain in place. Kennedy Industries will

Engineering Consultants

Infrastructure • Land Development • Surveying



SPALDING DEDECKER ASSOCIATES, INC.

905 South Boulevard East • Rochester Hills • Michigan 48307 • Tel 248 844 5400 • Fax 248 844 5404

provide replacement mechanical and electrical components to upgrade the station. With this option it is recommended that the entire discharge line be replaced with a new directionally drilled 3" HDPE line. It should be noted that the existing aging wet well will be utilized.

Cost: These improvements are estimated at \$56,500.00. Should the City wish to only repair the existing break in the discharge line total costs are reduced to \$46,500.00. Cost estimates include materials and construction, and construction inspection. No bidding or contract management is anticipated or included.

Timing: Kennedy will deliver the pump station components approximately 8 weeks after order is placed. We are assuming that competitive bidding will not be necessary for the installation services. Therefore, we are estimating that the pump station can be fully functional 11 weeks after the order is placed. We estimate this station will have a useful life of 30-35 years with regular maintenance. It should be noted however, that the existing wet well which will continue to be used will likely have to be replaced before useful life of other equipment has been reached.

Option 3. Continue use of existing Submersible Pump Station with no upgrades. Replace only 3" discharge line.

Discussion: The existing submersible pump station and control panel would remain in place. The entire discharge line would be replaced with a new directionally drilled 3" HDPE line.

Cost: These improvements are estimated at \$16,200.00. Should the City wish to only repair the existing break in the discharge line total costs are estimated at \$2,500.00. Cost estimates include materials and construction, and construction inspection. No bidding or contract management is anticipated or included.

Timing: We anticipate that the replacement discharge line can be installed within 4-6 weeks assuming that a formal bid process would not be necessary. For repair of the existing line only, 1 week should suffice.

Additional details of the three estimates and background information are attached.

If you have any questions, please give me a call.

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SPALDING DeDECKER ASSOCIATES, INC.

905 South Blvd. East
 Rochester Hills, MI 48307
 T (248) 844-5400 / F (248) 844-5404

JOB NO.: NV08002

DATE: February 5, 2008

PREPARED BY: T. Reynolds

CHECKED BY: D. Bluhm

COST ESTIMATE FOR:

CITY OF NOVI, MICHIGAN**POWER PARK****REMOVE PS & REPLACE W/ A DUPLEX GRINDER PUMP STATION**

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	Pump Station Complete (Barnes 48x144 Duplex) (City to Secure)	1	EA	\$6,000.00	\$6,000.00
2	Install Pump Station Complete	1	LS	\$8,000.00	\$8,000.00
3	Miscellaneous Connection Costs (Includes Gravity Connection to GP Tank, Electrical Connection to Control Panel, Shut Off Valve w/Curb Stop, Redundant Check Valve, FM Connection to Existing MH.)	1	LS	\$1,700.00	\$1,700.00
4	2" Discharge pipe - directional drill	575	LF	\$15.00	\$8,625.00
5	Electrical System Upgrade*	1	LS	\$1,500.00	\$1,500.00
6	Remove Existing PS (Mechanical & Electrical)	1	EA	\$1,500.00	\$1,500.00
7	Restoration	1	LS	\$500.00	\$500.00

CONSTRUCTION COST SUB-TOTAL*

\$27,825.00

CONTINGENCIES (15%)

\$4,173.75

CONSTRUCTION TOTAL

\$31,998.75

DESIGN & CONSTRUCTION ENGINEERING (25%)

\$7,999.69

PROJECT TOTAL

\$39,998.44

* note: Estimated electrical cost included however at the field meeting there was discussion with Parks/Rec lighting electrical contractor to upgrade electrical system to serve GP system.

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JOB NO.: NV08002

DATE: February 5, 2008
 PREPARED BY: T. Reynolds
 CHECKED BY: D. Bluhm

COST ESTIMATE FOR:**CITY OF NOVI, MICHIGAN****POWER PARK****REHABILITATION OF EXISTING SUBMERSIBLE PUMP STATION**

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	Equipment Provided by Kennedy (See attached proposal from Kennedy)	1	LS	\$24,862.00	\$24,862.00
2	Installation & Site Work	1	LS	\$6,000.00	\$6,000.00
3	Miscellaneous Connection Costs (Electrical Connection to Control Panel, Shut Off Valve w/Curb Stop, Redundant Check Valve, FM Connection to Existing MH.)	1	LS	\$1,700.00	\$1,700.00
4	3" Discharge pipe - directional drill	575	LF	\$17.00	\$9,775.00
5	Restoration	1	LS	\$300.00	\$300.00
CONSTRUCTION COST SUB-TOTAL					\$42,637.00
CONTINGENCIES (15%)					\$6,395.55
CONSTRUCTION TOTAL					\$49,032.55
CONSTRUCTION ENGINEERING (15%)					\$7,354.88
PROJECT TOTAL					\$56,387.43

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JOB NO.: NV08002

DATE: February 5, 2008
 PREPARED BY: T. Reynolds
 CHECKED BY: D. Bluhm

COST ESTIMATE FOR:

**CITY OF NOVI, MICHIGAN
 POWER PARK
 REPLACE DISCHARGE LINE**

NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	Miscellaneous Connection Costs Control Panel, Shut Off Valve w/Curb Stop, Redundant Check	1	LS	\$1,500.00	\$1,500.00
2	3" Discharge pipe - directional drill	575	LF	\$17.00	\$9,775.00
3	Miscellaneous Earth Work and Restoration	1	LS	\$1,000.00	\$1,000.00
CONSTRUCTION COST SUB-TOTAL					\$12,275.00
CONTINGENCIES (15%)					\$1,841.25
CONSTRUCTION TOTAL					\$14,116.25
CONSTRUCTION ENGINEERING (15%)					\$2,117.44
PROJECT TOTAL					\$16,233.69



Kennedy Industries Inc.
PUMPS • VALVES

P.O. Box 809 • 4975 Technical Drive
Milford • Michigan 48381-0809
Phone: (248) 684-1200 • Fax: (248) 684-6011

Proposal No MH-2476

Date February 2, 2008

Page 1 of 2 Pages

Accepted By: _____
Company: _____

Date: _____

By: _____

Mr. Scott Roselle
City of Novi
26300 Delwal
Novi, MI 48375

Reference: Novi Parks & Recreation
Grinder Pump Station Replacement

Dear Scott:

We are pleased to propose the following equipment for your consideration:

- One (1) **METROPOLITAN INDUSTRIES** prefabricated, insulated stainless steel/aluminum valve chamber/control panel enclosure with epoxy coated baseplate. Enclosure is 5'-6" L x 4'-0" W x 5'-5" H and includes 2" stainless steel piping, Uni Flanges for riser pipes, Link-Seals, plug valves, check valves, station heater, cord reel light, and LB fittings.
- Two (2) **FLYGT** explosion proof submersible sewage grinder pumps, Model MP-3068, 2" discharge, 2.7 HP, three phase, 230 volts with 30' of motor and sensor cable.
- One (1) Intrinsically safe duplex control panel in Nema 1 enclosure. Panel includes variable frequency drives to convert incoming single phase, 230 volt power to three phase, 230 volts to feed pumps, circuit breakers, H-O-A switches, run lights, seal leak and hi temp lights, elapsed time meters, alternator, 115 volt duplex GFI outlet, and high water alarm light and horn - remote mounted.
- Four (4) Non Mercury type float switches with 30' cable and support bracket.
- Two (2) Guide rail bases with 2" discharge elbows.
- Four (4) Lengths stainless steel guide rails.
- Two (2) Lengths stainless steel lifting chain (17').
- One (1) Aluminum hatch over pumps - with "Safe-Hatch" - 24" x 36".
- One (1) Start up assistance.

NET PRICE INCLUDING FREIGHT, BUT NO TAXES:

\$ 24,862.00

We do not include:

- anchor bolts
- concrete, site work or installation
- conduit or wiring outside valve house
- junction boxes or seal off fittings
- piping below Metropolitan house
- padlocks or keys

KENNEDY INDUSTRIES, INC.

MH-2476

FEBRUARY 2, 2008

PAGE 2 OF 2

This proposal is subject to Kennedy Industries, Inc. standard terms and conditions of sale (rev'd 2/2001), which are incorporated by reference or attached. Terms of payment are net 30 days from date of invoice with 1-1/2% per month additional charge on unpaid balance.

We appreciate this opportunity to quote and look forward to being of future service.

Sincerely,
KENNEDY INDUSTRIES, INC.



Mark J. Hemeyer

MJH/ds

