

MEMO

Date: May 27, 2021
To: Trevor Walter

From: Mark Hallan
Cc: Aric Welch

Project Name: Water Treatment Plant

Project No.: 2021-10311

Subject: Interconnect Building Modifications

Brainerd/Baxter

7804 Industrial Park Road PO Box 2720 Baxter MN 56425-2720

> 218.829.5117 Baxter@Widseth.com Widseth.com

We have completed our review of the chlorine feed booster pump. The pump needs to develop around 255 feet of total dynamic head or 110 psi to allow a chlorine feed rate of 50 pounds per day at a flow rate of 2,200 gpm. The 110 psi figure is based on the suction line being 40 psi and the discharge line at 90 psi which is a 50 psi difference. The chlorine injection needs a 50 psi differential to work properly at the target flow and chlorine feed rate.

To achieve the required pressure differential, it is necessary to upsize the existing chlorine feed booster pump. Below are the quotes to provide/install a new pump and to make the necessary electrical modifications for the larger HP pump motor.

WW. Goetsch \$3,032

- CR 3-9 1.5 HP 3 Phase Pump
- 1 1/4" Flange Set
- Freight
- Install

Holden Electric \$4,950

- 208 volt VFD
- Conduit and wire

The total estimate cost for a new chlorine feed booster pump capable of meeting the target feed rate of 50 pounds per day at flow rate of 2,200 gpm is \$7,982.

City staff had the chlorine feed booster pump suction and discharge lines replaced with larger PVC lines by Tim Thompson Plumbing and Heating. The total cost of the piping replacement project was \$3,860. Additional engineering and coordination for the chlorine feed booster pump upgrades was \$1,008. The total of all costs for the chloring feed booster pump system upgrade is estimated at \$12,850.

Aric Welch

From: Steve Green <SGreen@wwgoetsch.com>

Sent: Friday, May 27, 2022 8:25 AM

To: Aric Welch

Subject: RE: Baxter Chlorination Station

1- CR 3-9 1.5 HP 3Phase. \$ 2244.00 Net each 1- 1¼" flange set. \$103.00 Net each p

1- Prepaid freight Total......\$2532.00 Install.......\$500.00

\$3032.00

Thank you!

Dominus vobiscum!



Steven P. Green Sales Engineer 952-374-6471 direct office 612-325-7550 mobile



7669 College Road PO Box 2688 Baxter, MN 56425 Phone: 218-829-4759 Email: RPraught@holdenelectric.com

Bid Proposal

5/18/2022	
TO: Aric Welch	
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JOB: <u>Baxter Transfer station chlorine pump</u> Bid Date: 5/18/2022	
WORK DESCRIPTION: VFD for chlorine pump Additional Info:	
Supply and install new 208 volt VFD for new chlorine pump. Supply and install conduit and wire for control.	
We will supply and install all materials, labor and equipment as per drawings, specifications, addenda and as noted above inclusive for the total amount of: \$4,950.00.	
Respectfully,	Accepted by:
Randy Grant	
Randy Praught, PM / Estimator Holden Electric Co., Inc.	Print Name:

Aric Welch