

City of Minneapolis
Request for Committee Action

To: Transportation & Public Works
Date: 9/27/2016
Referral: Ways & Means
From: Public Works Department
Prepared by: Pamela Fernandez *Pam Fernandez*
Presented by: None
File type: Action
Subcategory: Bid

Subject:

Approval of Official Publication No. 8326 Bids for Fridley Softening Plant Recarbonation Improvements.

Description:

Acceptance of the low bid of Rice Lake Construction Group (OP 8326) in the amount of \$4,018,200.00 to furnish and deliver all labor, materials and incidentals necessary for the Fridley Softening Plant Recarbonation Improvements for the Minneapolis Public Works – Water Treatment and Distribution Division, as follows:

Lump Sum: \$4,018,200.00

Terms are net-30 days F.O.B.: Destination

Further recommend proper Officers be authorized and directed to execute a contract for this project, all in accordance with our specifications.

This has been approved by the Civil Rights Department.

Previous Actions:

None

Ward/Address:

Not Applicable

Background/Analysis:

Tabulation of four (4) bids received on Official Publication No. 8326 Bids for Fridley Softening Plant Recarbonation Improvements.

Lime softening is the initial treatment process after raw water is drawn from the Mississippi River. Treatment by lime softening is designed to partially remove mineral content from the water. In addition, approximately half of the natural organic matter from vegetation like fallen leaves, is removed by this process. Removing the organic matter helps reduce odors and minimizes the potential for disinfection byproducts.

Lime softening raises the pH of the water which necessitates recarbonation. Recarbonation adds carbon dioxide (CO₂) to the water, bringing it closer to neutral pH for the next stages in the treatment process. The existing CO₂ feed system and storage tanks were installed between 1947 and 1951. The existing feed system uses CO₂ inefficiently and does not provide stable pH control compared to modern systems.

The storage tanks provide only eight days of storage for average demand. Regulations and guidelines suggest 30-days of storage for critical chemicals to provide better reliability.

Replacement of the existing CO₂ feed equipment and storage tanks at Fridley Softening Plant was identified as a priority project. The project is in the 5-year capital program. Major improvements include: installation of two new 120-ton CO₂ storage tanks and three new 1,200 pounds per hour CO₂ pressurized solution feed systems, installation of serpentine baffles and orifice walls in the existing recarbonation basins, and removal of existing storage and feed systems. The project is designed to achieve stable pH control, improve water quality and improve system reliability.

City policy concerning Leadership in Energy and Environmental Design (LEED) does not apply to this project. There will not be any new building area constructed as part of the project. The project involves renovating existing process systems and constructing concrete baffle walls and stainless steel orifice walls.

Financial Review:

No additional appropriation required, amount included in current budget.

Attachments:

1. Tabulation Sheet

