

COMMISSION FILE NO: 20-136-9 **DATE INTRODUCED:** September 14, 2020

INTRODUCED BY: Executive Director (Signature on File in the Office of the Commission)

REFERRED BY COMMISSION CHAIRPERSON TO: Operations Committee

RELATING TO: Award of Contract S06038C12, Operational Storage Pump and Sludge Feed Pump Replacements at South Shore Water Reclamation Facility

SUMMARY:

The Commission is requested to award and to direct the Executive Director to execute on behalf of the District Contract S06038C12, Operational Storage Pump and Sludge Feed Pump Replacements at South Shore Water Reclamation Facility (SSWRF), to Lee Plumbing Mechanical Contractors, Inc., (Lee Mechanical) in the amount of \$314,547. Lee Mechanical was the lowest responsible, responsive bidder among four bids received.

As wastewater passes through the primary clarifiers at SSWRF and Jones Island Water Reclamation Facility (JIWRF), solids settle by gravity to the bottom of the clarifiers and are collected and removed as primary sludge. The primary sludge is sent to the active anaerobic digesters, where bacteria breaks down the organic matter, reducing the amount of solids to be handled and creating biogas, which can be used as fuel for power generation.

To maximize available volume in the digesters, the digested sludge is thickened in the Sludge Dewatering Building at SSWRF. This is accomplished by pumping digested sludge (DSD) from the anaerobic digesters to three gravity belt thickeners (GBT's) using six centrifugal sludge feed pumps.

After thickening, the operational storage pumps pump DSD to:

- Storage digesters for temporary storage (at SSWRF),
- Active digesters when using recuperative thickening (at SSWRF),
- Plate and frame presses for sludge cake production (at SSWRF), or
- Equalization and blend tanks for Milorganite® production (at JIWRF).

ATTACHMENTS: **BACKGROUND** ☐ **KEY ISSUES** ☐ **RESOLUTION** ☒

FISCAL NOTE ☒ **S/W/MBE** ☒ **OTHER** ☐ _____

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COMMITTEE ACTION: _____ **DATE:** _____

COMMISSION ACTION: _____ **DATE:** _____

SUMMARY (Cont'd)

Award of Contract S06038C12, Operational Storage Pump and Sludge Feed Pump Replacements at South Shore Water Reclamation Facility

The six sludge feed pumps and three operational storage pumps were installed between 1986 and 1988 and need to be replaced. Due to the abrasive nature of DSD, rotating parts within the pumps show signs of severe wear, metallic parts are corroded beyond repair, and the pump seals leak sludge onto the floor. Replacement of these pumps will ensure a reliable means of dewatering the digested sludge from the anaerobic digesters and sustaining the biosolids handling process at both water reclamation facilities.

Under this contract, the Contractor will perform the following work.

Sludge Feed Pumps

- Remove the existing pumps and pump motors from the baseplates.
- Blast clean and paint the existing baseplates.
- Install new pumps and pump motors.
- Couple align and balance the six new pumps and new motors.
- Startup and testing.

Operational Storage Pumps

- Remove the existing pumps, gear reducers, and pump motors from the baseplates.
- Blast clean and paint the existing baseplates.
- Overhaul the existing gear reducers.
- Install new pumps, pump motors and newly overhauled gear reducers.
- Couple, align, and balance the three new pumps, new motors, and overhauled gear reducers.
- Startup and testing.

The contract duration is 240 days.

RESOLUTION

Award of Contract S06038C12, Operational Storage Pump and Sludge Feed Pump Replacements at South Shore Water Reclamation Facility

RESOLVED, by the Milwaukee Metropolitan Sewerage Commission, that Contract S06038C12, Operational Storage Pump and Sludge Feed Pump Replacements at South Shore Water Reclamation Facility, is awarded to Lee Plumbing Mechanical Contractors, Inc., in the amount of \$314,547, and that the Executive Director is directed to execute a contract on behalf of the District.