



DIRECTOR OF ENGINEERING REPORT

May 22, 2024

District Engineering manages projects, consultants, contractors, and equipment suppliers. Consultant reports and Project Managers reports are included in this section along with details regarding the status of the associated study, design, or construction projects.

ACTIVE PROJECTS

21CMP04 Fermentation Reactor Pilot:

SCOPE: A pilot fermenter system has been installed to determine the best operating parameters for BNR and familiarize staff with operation of a fermenter.						
Contractor: Burdick			Original Contract Price: \$956,796.00			
Engineer: Black and Veatch						
R.E. Inspector: SDD						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
03/24/23	04/04/23	05/09/23	06/21/23	07/31/23	07/24/23	12/21/23 Subst 01/20/24 Final

Key Activities: Frac tank is functioning properly and first round of pilot testing has been completed this last period.

Staff issued a change order to the contractor to install an additional valve in underground piping to allow decant water from the South Sludge Lagoons to be pumped to a different location in the P2 channel. This modification will eliminate the need to isolate the frac tank from the shared discharge point when decant is required from the lagoon.

23MNTxx Damon Ave. Pump Station Upgrades

SCOPE: Project involves 1) removal of existing electrical utilities and installation of a dual service switchboard and ATS, a new 1200 AMP CT enclosure and removal and re-installation of two underground conduit duct banks and 2) replacement of the existing #2 pump and installation of a pre-procured Flygt 385 HP, 455A submersible pump. Bypass pumping during the installation process is required until the new pump is commissioned.						
Contractor:			Original Contract Price:			
Engineer: AEX			Sum of Change Orders: \$0			
R.E. Inspector: SDD			Total Value:			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
02/22/24	03/07/24	04/18/24				Sub – 365 days Final – 395 days

Key Activities: Bids for this project were received this last period on 04/18/24 as planned.

Two bids were received from 5 plan holders. A copy of the bid tabulation is attached. The pump replacement portion of this work was significantly higher than expected and staff recommends rejecting all bids. We will adjust the contract scope and rebid.



DIRECTOR OF ENGINEERING REPORT

May 22, 2024

23ENG45 Primary Clarifiers 4 and 6 Procurement

SCOPE: Pre-procure equipment to replace mechanisms in clarifiers #4 and #6.						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
03/12/24	none	05/01/24				

Key Activities: Bid proposals for the procurement of primary clarifiers #4 and #6 were received this last period. A copy of the bid tabulation is attached. *There is a recommended motion before the board under old business.*

NON-CONSTRUCTION ACTIVITY

DESIGN - 22ENG31 ADMINISTRATIVE OFFICE COMPLEX:

This last period staff has conducted 6 meetings with AEX. AEX continues coordination with BV on design details for the lab.

Soil borings were completed this last month analysis of the borings has been provided to AEX. The seismic analysis performed by SKS was completed this last month with an initial determination that the site is Site Class D.

Staff has received a second full set of contract review plans. SDD engaged with Liaison LLC out of Decatur this period for technology design services for the new board room, huddle rooms, and library.

Schedule:

Develop Contract Documents (ongoing)	
Advertise	May 24
Open Bids, Award and Execute	July 24
Construction Phase	52 weeks

22ENG02 Lost Bridge Force Main Renewal

SCOPE: Project involves the installation of approximately 2700 LF of horizontally directionally drilled fusible PVC and tie in to the Lost Bridge road pumping station (East side of Lake Decatur) and an existing force main on the West side of the lake.						
Contractor:			Original Contract Price:			
Engineer: Clark Dietz			Sum of Change Orders: \$0			
R.E. Inspector: SDD/CDI			Total Value:			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
04/05/24	04/15/24	05/01/24				Sub – xxx days Final – xxx days

Key Activities: Easements have been received from the Decatur Park District. *A recommendation of acceptance of these motions is before the board under the consent agenda.* Easements across CITY property have not been received.

Bids were received on May 1st as planned. *There is a recommended motion for trustee consideration under old business.*



STUDY – WRRF Groundwater Dewatering Plan Study

Scope: Martha Silks is the Lead Hydrologist for LRE Water, SDD has a long history with her as she has served on teams working with dewatering issues in the plant dating back to the early 2000’s. LRE Water, an engineer out of Lawrence Kansas and staff have agreed on a scope of work anticipating they would bring 3 alternative solutions to address groundwater dewatering issues in this area of the plant.

Preliminary results of the modeling were reviewed this last period. Staff is expecting this evaluation to be completed by the end of May 24.

Schedule:

Task 1 – Data Gathering	Complete
Task 2 - Development of Dewatering System options	Apr-24
Task 3 – Prepare 20-year life cycle costs for the options	May-24

Initial review of the dewatering options appears to favor the installation of 3 to 6 36” vertical wells to accomplish site groundwater dewatering. There is another review scheduled for 5/15/24. The modeled placement of those wells will inform the placement of new wells we are considering for the West Cluster project (below)

UPCOMING PROJECTS:

Replacement Dewatering Wells (West Cluster)

Drawdown/Recharge test was completed on one of the existing wells in proximity to the west cluster to confirm the current recharge rate of Well D-8. Over the first 10 minutes of recharging, the well displayed an average recharge rate of 5 gpm. These wells were originally designed to flow at 400 gpm.

DESIGN – Digester #1 Cover Replacement

Staff has completed negotiations with Donohue and Associates for the next digester cover replacement. *There is an Motion for a Professional Services Agreement for trustee consideration under old business.*

DESIGN – Final Clarifier Upgrades Project

<<No Update>> The project includes replacement of 3 isolation gates on the influent channels, painting 2 carbon steel clarifiers, performing maintenance work on the clarifier floors, and repairing 8 isolation gates in the nitrification aeration tanks.

Final plan drawings have been received.

Plans and Specifications development will commence again once the Dewatering Well drilling work is advertised.

INTERGOVERNMENTAL ACTIVITIES

1. Staff has continued participating in meetings as needed with the CITY and ADM for the “NE quadrant work group” looking at water and wastewater needs in this corridor. The force main routing for the City’s new Brush College pump station has been selected and design is underway the CITY is still working to attain the easements of the force main. Clark Dietz Engineers are working with the City on that design.
2. Work on the Faries Parkway interceptor replacement work is ongoing.

If there are questions, please contact me at 422-6931 ext 216, or by email at DonM@sddcleanwater.org.



PROJECT MANAGER REPORT

May 22nd, 2024

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ACTIVE PROJECTS

22ENG45 Primary Clarifier #5 Replacement Project: Plocher has completed all construction and final punch list items have been addressed.

23MNT22 Sidewalk and Stairs Replacement Project: Christy-Foltz has completed the finish coat of the concrete and installation of the new handrails.

22ENG44 East Headworks Grit Classifier Replacement: All newly installed equipment is fully operational and the final punch list items have been completed.

23MNT21 Sodium Bisulfite Tuck Pointing

SCOPE: Sodium Bi-sulfite Building tuck pointing project includes tuck pointing and replacing bricks as necessary, replace lintel over the north wall louver, and replacement of caulking and performing concrete repair as necessary.						
Contractor:			Original Contract Price:			
Engineer: SDD			Sum of Change Orders: \$0			
R.E. Inspector: SDD			Total Value:			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
02/20/24	03/12/24	04/04/24	04/18/2024	05/13/2024	05/13/2024	90 days-Substantial 120 days - Final

Key Activities: A pre-construction meeting with Berglund Construction was conducted on 5/13/24. Crews are currently mobilizing and will begin work by the end of May pending weather conditions.

24ENG17 Sewer Televising and Rating

SCOPE: Request for Proposals submitted to televise and rate conditions for the Northeast Interceptor, Pershing Rd. Bypass, Route 51 Bypass, Old Main Interceptor, New Main Interceptor, and Eastside Interceptor.						
Contractor:			Original Contract Price:			
Engineer: SDD			Sum of Change Orders: \$0			
R.E. Inspector: SDD			Total Value:			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
02/29/2024	03/14/2024	03/28/2024				

Key Activities: A recommendation is before the Board to accept the TeleScan Inc proposal as submitted.

23ENG22 McKinley Interceptor Repair



SCOPE: Removal of approximately 115 ft of failing 48-inch centrifugally cast fiberglass pipe and replacement with PVC pipe. After the repair is made, the entire manhole to manhole gravity sewer segment is to be CIPP lined. Restoration will require slope stabilization with geofabric and rip rap.

Contractor: SAK	Original Contract Price: \$841,365.00
Engineer: SDD	Sum of Change Orders: \$0
R.E. Inspector: SDD	Total Value: \$841,365.00

Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
10/26/23	11/02/23	11/22/23	12/21/23	12/28/23	1/23/24	180 days-Substantial 210 days - Final

Key Activities: Pipe excavation, repair, and CIPP lining is completed. Bypass pumping operations were conducted without interruption and disassembly is in progress. Site remediation will be completed as soon as dry conditions are present. Pay applications are not yet received.

Example of original HOBAS pipe with ovality	Example of longitudinal crack
	
PVC – HOBAS Coupling	C900 PVC Pipe Installation
	

Liner Installation process	Example of CIPP Liner Thickness
	

Sanitary District of Decatur
BIDS FOR 2-130' Circular PRIMARY CLARIFIERS (4 and 6) PROCUREMENT

Project: **PC #4 and #6 Procurement**
 Bid Date: **5/1/2024**
 Bid Time: **4:00pm**

				ESTIMATE Based on PC #5 (Walker Process in 2021)		KUSTERS		ENVIRODYNE		WESTECH	
Item #	Pay Item	QTY	UOM	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
BASE BID FOR 316 Stainless Steel Clarifiers											
1	PC #4 - 130' Circular primary clarifer, drive, and appurtenances	1	EA	\$ 605,273	\$ 605,273	\$ 690,620	\$ 690,620	\$ 743,113	\$ 743,113	\$ 900,762	\$ 900,762
2	PC #6 - 130' Circular primary clarifer, drive, and appurtenances	1	EA	\$ 605,273	\$ 605,273	\$ 606,122	\$ 606,122	\$ 743,113	\$ 743,113	\$ 900,762	\$ 900,762
TOTAL FOR STAINLESS STEEL CLARIFIERS				\$ 1,210,545		\$ 1,296,742		\$ 1,486,226		\$ 1,801,524	
ALTERNATE BID FOR Carbon Steel Clarifiers											
1A	PC #4 - 130' Circular primary clarifer, drive, and appurtenances	1	EA	\$ 383,009	\$ 383,009	\$ 482,894	\$ 482,894	\$ 461,100	\$ 461,100	\$ 519,819	\$ 519,819
2A	PC #6 - 130' Circular primary clarifer, drive, and appurtenances	1	EA	\$ 383,009	\$ 383,009	\$ 449,543	\$ 449,543	\$ 461,100	\$ 461,100	\$ 519,819	\$ 519,819
TOTAL FOR PRIMED CARBON STEEL CLARIFIERS				\$ 766,017		\$ 932,437		\$ 922,200		\$ 1,039,638	
TOTAL BID AS READ:			Base			\$ 1,296,742.00		\$ 1,486,226.00		\$ 1,801,524.00	
			Alternate			\$ 932,437.00		\$ 922,200.00		\$ 1,039,638.00	

Note: Clarifiers being replaced have been installed since 1986, a total of 38 years.