



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

20-07 Digester Complex Improvements:

SCOPE: The Digester #3 floating cover and the face brick on all four digester tanks is being replaced.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/W Gray - Donohue			
Engineer: Donohue and Associates						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
11/17/20	12/01/20	12/22/20	02/17/21	03/18/21	03/18/21	360 Substantial 390 Final
Submittals Reviewed: 6 complete /0 open						
Requests for Information (RFIs): 6 complete /0 open						
Owner Requests for Proposal/Change Order (RFPCO): 1 complete / 4 open						

Key Activities: Over this last month, Digester #3 siding was completed, and cleanout and washdown of Digester #4 has been completed. Installation of the insulating panels are scheduled to begin the week of 10/25/21 with the removal of brick face.

The submittal for the new cover was approved this last period with one coordination note remaining to be confirmed on the Ovivo mixing unit. (The length of seal tube needs extended 2'. We have verbal confirmation 2' is acceptable but are needing Ovivo to provide it in writing.)

All failed coatings have been addressed in the digesters to date. Digester #4 appears to have no defective areas.

Issues: Additional interior access hatches may need replacement (see change item 4 below). SDD has issued an RFPCO for an "each" price should it be required.

Changes:

1. WCD 01: Additional Pump Down of Digester Contents: Contract documents required SDD to bring digester liquid elevation down to 593.0. Digester 3 quit pumping down at 595.33 and Digester #2 at 595.8. Contractor was put on time and material for the additional pumping required. \$ 31,668.00
2. There are several locations inside digesters 2 and 3 that the coating has cracked/blistered. These sections will need to be repaired. This is outside the scope of the contract and any work on it will be an extra. \$ T&M
3. Digester cold joint repair. District issued T&M directive to remove damaged concrete, prepare the leaking concrete seam, and install Xypex patch along the cold joint in the concrete walls. \$ T&M
4. Excessive corrosion was discovered on the interior access hatch infrastructure. Contractor was directed to replace corroded material with SS plate and angle. Work was done on a T&M basis. \$ T&M

20-01 Lake Shore Drive PS Replacement:

SCOPE: The lift station is being reconfigured with submersible pumps.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/ J Edenburn - CDI			
Engineer: Clark Dietz Engineers, Inc						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
12/02/20	01/05/21	02/03/21	03/24/21	04/07/21	04/07/21	360 Substantial 390 Final
Submittals Reviewed: 38 received / 38 completed / 12 Rejected Requests for Information (RFIs): 1 submitted/1 completed Owner Requests for Proposal/Change Order (RFPCO): 1 Issued/1 Completed Change Orders: 1 completed						

Key Activities: Bypass plan has been approved and bypass operations are scheduled to begin on Nov 3rd. An acceptable schedule has been received which outlines the work to be done.

Issues: The schedule provided shows substantial completion being 05/16/22 which is 5 weeks beyond contractual substantial completion date. Staff is expecting a request for a time extension.

1. **Changes:** NONE PENDING

20-01 South Shores Sewer Rehab:

SCOPE: CIPP lining of approximately 17,700 LF of sewer, tie-in connections and approximately 700 vertical feet of cementitious manhole restoration.						
Contractor: SAK Construction			Engineer: Farnsworth Group, Inc			
Advertise	Pre-bid	Bid Open	Intent Award Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
12/15/20	02/02/21	03/02/21	03/17/21 05/26/21	06/21/21	06/15/21	270 Substantial 300 Final
Submittals Reviewed: 4 received / 0 outstanding Requests for Information (RFIs): none Owner Requests for Proposal/Change Order (RFPCO): none						

Key Activities: All lining West of Rt 51 is complete. Contractor has completed cleaning the 12" and 18" sections of the sewers (Franzy Drive area and Bay Shore area) and is continuing sewer cleaning operations in the 30" section along Lake Decatur.

Issue: Ameren cross-bored a section 18" sewer (60 feet North of MH 763b-09). Repair of the sewer is anticipated around Nov 4th or 5th. Work will be dependent on dry weather.

20-15 Hatch Replacement:

SCOPE: The Sanitary District has a working hatch replacement asset management plan. This project includes various hatch replacements needed to implement that plan.						
Contractor: Burdick Plumbing and Heating			Engineer: SDD			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
11/20/20	12/03/20	02/04/21	02/17/21	03/11/21	08/09/21	140 days
Submittals Reviewed: 9 submitted / 9 completed Requests for Information (RFIs): 1 submitted / 1 completed.						

Key Activities: All work is completed. Awaiting final pay request from contractor.

20-19 Wyckles Facility Sludge Inlet Repairs:

SCOPE: Scope of work includes the removal of existing lagoon chutes that have collapsed and reinstalling chutes incorporating a shotcrete blanket to bridge the void left by removing the chute below the discharge.						
Contractor: Christy Foltz				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
01/22/21	03/04/21	04/15/21	04/22/21	05/03/21	05/13/21	90 days

Key Activities: All work is complete for this project. Staff is waiting for final change order paperwork to be submitted from the contractor before closing this project.

Changes:

1. Field Order was issued to contractor to relocate drain lines that were found to be installed at an elevation lower than the plans. The work was done on a T&M basis. \$ (TBD)
2. Field Order was issued to the contractor to add a bonding agent to existing concrete. The bonding agent was not required in the contract. The additional work was done on a T&M basis \$ (TBD)
3. A small section of Revetment Mat was noted deficient during an IEPA inspection to the Wyckles facility. In response to that deficiency, staff authorized the removal of the revetment mat at that location and reinstalled an equivalent, broom finish concrete mat in its place. The work was done on a T&M basis. \$ (TBD)

20-13 Grit Drying Bed Upgrades:

SCOPE: Scope of work includes the removal of existing concrete structure and installation of a 50'x60' grit drying structure with bin blocks and site drainage upgrades.						
Contractor: Christy Foltz				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
03/10/21	03/24/21	04/15/21	04/22/21	05/03/21	05/13/21	90 days
Submittals Reviewed: 5 submitted / 0 outstanding. Requests for Information (RFIs): 0 submitted Owner Requests for Proposal/Change Order (RFPCO): 0 requested						

Key Activities: All work is complete. Awaiting final paperwork from contractor to complete payment.

Changes:

1. Field Order was issued to contractor to bring in 3" stone to stabilize subgrade material before compacting CA6 base material under concrete bed. Work was performed on a T&M basis. \$ (TBD)



20-08 Roof Rehabilitation Project:

<p>SCOPE: Each year the SDD Asset Management Program plans for rehabilitation on roofing systems on the district facilities. Of the 16 roofs inspected, 10 require attention. The scope includes replacement of existing roofing system of Bldg. 871 (well house) at Wyckles Facility. The balance of the 9 roofs is for application of coatings on buildings 870 & 872 (Wyckles Facility), 860 (St. Louis Bridge Pump Station), 584 (Oakland Avenue C.S.O. Facility), 526 (7th Ward C.S.O.), 502 (McKinley Avenue C.S.O.), and 557, 559, 561 (Lincoln Park C.S.O.).</p>						
Contractor: TBD				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
03/30/21	04/13/21	05/11/21	06/16/21	08/04/21	08/04/21	120 days

Key Activities: All cleaning has been completed this last period. Oakland CSO work is complete. Roofing has begun on St Louis Bridge, 7th Ward CSO and McKinley CSO.

NON-CONSTRUCTION ACTIVITY

ADMINISTRATIVE OFFICE MASTER PLANNING:

Update: AEX has been requested to begin work on Phase 3 of this evaluation after concurrence to proceed was given at the Sept 2021 trustee meeting.

Phase 1 – Current State facility assessment looked at the condition and costs to maintain existing administrative infrastructure.

Phase 2 – Space Needs and Building Utilization was to assess the current space available, evaluate the utilization of that space and calculate the raw space required based on industry standards.

Phase 3 - (\$10,000) Phase 3 is to perform a pre-design level study ranging from modifications and upgrades to the existing facilities to the possibility of a new facility, based on the space needs that were identified in Phase 2. The study includes a high-level cost opinion that provides context for the findings from Phase 1 and 2. A review of the existing lab space as a standalone structure is also included in Phase 3.

PLANNING: PHOSPHORUS REMOVAL

Staff issued the request for qualifications (RFQ) for firms qualified and interested in performing Program Manager (PM) services to the Sanitary District of Decatur for Phosphorous Removal Planning, Design Criteria generation, Design Administration, Watershed management and general NPDES Permit compliance items related to milestones for meeting permit target dates.

The schedule published in the RFQ follows the following timeline:

PRE-SUBMITTAL CONFERENCE	06/08/21	Completed
RFQ'S DUE	07/16/21	Completed
REVIEW SUBMITTED RFQ'S	07/19 thru 07/30	Completed
SCHEDULE/ COMPLETE PROPOSAL INTERVIEWS	08/09 thru 08/20	Completed
MAKE SELECTION	08/24/21	Completed
AWARD CONTRACT	10/20/21 DELAYED	

Further comments were provided to B&V on the scope of work. Staff expects the next iteration of the scope of work from B&V to include the entire agreement language; after which we anticipate trustee and attorney review beginning.

DESIGN: Fermentation Reactor – Black and Veatch

Design Kickoff Meeting	03/10/21	Complete
Preliminary Engineering Assessment	05/10/21	Complete
30% Design Submittal/Review	06/21/21	Complete
90% Design Submittal/Review	08/19/21 10/29/21	
Final Design Submittal	08/27/21 12/10/21	

Original design of the fermentation reactor was to remove the existing covers based on feedback from the designers that the fermenter should not have much additional odor over that of the waste activated sludge tanks (they are open air tanks). SDD staff requested B&V provide a list of organizations with fermenters to interview them on their experiences with odors. During the investigation process it was discovered that some did have covers, some did not. Those that did tended to have primary sludge addition in the fermentate, which is how SDD will operate the reactor. Therefore, a change was made to the design to include odor control covers. The adjusted schedule is included above.

DESIGN: (21-06) Decant Upgrades Wyckles Facility – East Lagoon

This project is to improve the decanting operation in the East Lagoon. With the East Lagoon emptied, this is the time to perform this modification.

This project was advertised on 8/24/21 and bids opened on 9/21/21 as planned. There was one bid received. The price included in that bid (\$267,450) exceeded the anticipated cost of the work by (\$100k). No recommendation is being made to perform the work as bid, and staff is working on alternative methods for achieving dewatering the east lagoon.

STUDY: (21-21) Aeration Basin Diffuser Performance Study

Staff engaged Redmon Engineering (Racine Wisconsin) to characterize the oxygen transfer performance in the existing aeration basins. The analysis measures the amount of air delivered to the basins at various locations and compares that to the amount of air that leaves the basin at those same locations. The method is known as the “Off-gas method” and is used to measure Oxygen Transfer Efficiency (OTE). The study was a preliminary look to determine if further investigation into the diffuser performance is necessary. Note that EPDM diffusers, like the ones installed in Decatur typically begin dropping off performance at 3 years and the ones we currently were installed in 2014/15.

UPDATE: Study was completed this last period. The draft report has been submitted for review. Discussion in the report summarizes the report by reading “Based on the offgas data, the aeration system in the Decatur WWTP appears to be functioning in an efficient manner.”

STUDY: (21-22) Regionalization Study – CMT Engineers

In March 2021 SDD entered into an agreement with Crawford Murphy and Tilly Consulting Engineers (CMT) for investigating regionalization opportunities to the West of the SDD Main Treatment facility; ranging from approximately I-72 to Route 121. The report has been completed and summarizes costs that communities to the West of SDDs main WWTP can expect to pay when faced with new permits that would impose nutrient removal requirements compared to the cost to connect to the SDD system for treatment at the SDD treatment plant.

Oct 27, 2021

UPCOMING PROJECTS:

Effluent Pump #03 Replacement: Staff is beginning to prepare project plans to replace the third effluent pump. This is the last of 3 pumps that we are converting to VFDs which replaces 3 of the 5 original Flygt pumps in the station. Trustees approved the purchase of this pump on Aug 18, 2021. A purchase order has been issued for its procurement. Lead time of the pump is 24 months, and we expect to advertise an installation bid specification in the month of December.

Replacement of Sludge Transfer Pump: <<No Update>> Staff is preparing plans for the procurement and installation of a replacement transfer pump. This pump moves sludge from the main treatment plant to the Wyckles Facility.

Sodium Bisulfite Tank Replacement: <<No Update>> Development of project plans to replace the two sodium bisulfite tanks is ongoing.

STUDY: East Headworks Grit Flow Modeling – Clemson Engineering Hydraulics

<<No Update>> This effort is to model the flow of grit through the east primary headworks. Dr David Werth of Clemson Engineering is the hydraulic modeling expert that worked with SDD through the effluent pump station flow issues. The district experiences imbalanced grit loading through this structure and with the West Headworks upgrades is desiring to address the imbalanced grit load. This modeling effort is expected to be around \$30,000.

INTERGOVERNMENTAL ACTIVITIES

Staff is working through an intergovernmental agreement with the CITY to address the costs of relocation for the Faries Park Interceptor. In the agreement, CITY will contract the work and invoice the SDD for a portion of the materials and installation cost.

Quarterly Meeting with the CITY occurred on 10/11/21. Staff reviewed items of interest from the SDD NPDES permit. A key item of discussion was the CITY's plan to bid out the Ellendale and Division I&I reduction project during the winter of 2021/22. This has been a targeted I&I reduction area since

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

October 1, 2021

Sanitary District of Decatur
501 Dipper Lane
Decatur, IL 62522

Attn: Don Miller, Director of Engineering

Re: 20-06 South Shores Rehab
Project Status Report

Dear Don:

We are pleased to provide the following project status summary for the current project that Farnsworth Group is currently working on for the District. Our most recent monthly invoice for work on this current project is attached for your consideration.

1. 20-06 South Shores Sewer Rehab (L17-5456):

A. Construction Progress:

- Cured-in-place lining installation is proceeding along the first segment of the interceptor sewer main 763 between S. Main St. (Bus 51) west to the St. Louis Bridge Pump Station (Manholes 1 – 22). As of 9/26/21, approximately 2,490 lineal feet of liner has been installed, with the only section remaining between Manholes 8 – 11 to complete for this first segment.
- Cured-in-place lining installation is planned to begin next on the 12" sewer main branch (763A) the week of 10/4.
- Bypass piping is being installed for the second segment of the interceptor main 763 from S. Main St. (Bus 51) to the east end of S. Shores Dr.
- Cleaning and televising work has been completed along the 18" Sand Creek branch sewer main (763B), except for one segment between Manholes 8 & 9 due to an Ameren boring discovered through the sewer main piping.

B. Construction administration and on-site observation are ongoing with review of shop drawings and Contractor Pay Applications.

- RFI's: No formal RFI's received to date, with informal clarifications related to MH 763A-03.05 and review of sewer service lateral connections/status for lateral lining
- Change Orders: None received to date
- Shop Drawings: 5 submittals received; 5 submittals reviewed and returned to date
- Contractor Pay Applications: Pay Applications #2 & #3 have been reviewed and recommended by Farnsworth and submitted to the District for review and approval.

Sanitary District of Decatur

October 1, 2021

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- Additional Construction Observation provided this month: 22 Hours
- C. As of this Project Invoice #11 (Invoice No. 228029), we have billed \$122,090.99 to date on the project scope which is 59% of the total estimated fee of \$207,800. The additional construction observation services billed to date of \$3,151.59 have been provided separately from the Base scope on an as needed basis.

If you have any questions or need any additional information regarding the status of this project, please feel free to contact me any time. Thanks.

Sincerely,

FARNSWORTH GROUP, INC.

Kevin N. Hannel, PE
Engineering Manager



Memorandum

Date: October 4, 2021
To: Donald B. Miller, P.E., Director of Engineering
From: Will Gray, P.E., Donohue & Associates
Re: Project Status Report
2020-07 Digester Improvements Project
Donohue Project No. 13782

2020-07 Digester Improvements Project

- Weekly job progress meetings are being held monthly on the last Thursday of the month.
- Christy-Foltz has identified coating failures inside both digester #2 and #3, with the failures in #2 being more prevalent than those inside #3. C-F to remove the failed coatings back to a solid edge as a T&M change order (RFPCO #002). C-F has removed the failed coatings from within Digester #2, Digester #3 is pending.
- Christy-Foltz has completed removal of Digester #3 lid. They left the center scaffolding assembled in the tank to assist with installation of the new lid.
- SDD has turned over Digester #4 to C-F to be cleaned. Digester #2 is back in operation. Once D#4 is clean, C-F can begin brick removal work.
- Christy-Foltz has removed all the brick on Digester #2 and #3. Ridgelok panels for Digester #2 and #3 have been installed.
- The exterior concrete wall repairs are complete on Digester #2 and #3. This work to be paid for as a T&M Change Order (RFPCO #003).
- As of the date of this report, WesTech has STILL not submitted the digester lid shop drawing. Submittal is eminent.
- The manway to Digester #3 was replaced as a T&M change order. Pricing for replacement of manway to Digester #1 and #4 has been requested from C-F in RFPCO #004.
- C-F will be soon moving the staircase that was temporarily moved to the north side of the digester complex back to its original position on the west side of the complex.
- Change Order #1 will be issued once pricing for RFPCO #002 and #003 is submitted.
- RFPCO#001 – Brick Recycling was rejected by the District.
- RFPCO #002 – Coating Repair is proceeding as a T&M change order.
- RFPCO #003 – Digester Wall Repair is proceeding as a T&M change order.



- RFPCO #004 – Digester Manway Replacement Unit Pricing
- RFI #006 – Digester #3 Manway Repair T&M
- Stewart Spreading Additional Pumping

Updated: 10-04-2021	Open	Closed	Total
Submittals	0	6	6
RFI	0	6	6
Change Order Request	4	1	5
Change Orders	0	0	0