

MACOMB INTERCEPTOR DRAIN
INTRA-COUNTY DRAINAGE BOARD
SEPTEMBER 11, 2023
11:15 A.M.
AGENDA

**NOTE: THIS MEETING WILL BE HELD IN PERSON WITH TELECONFERENCE
OPTION FOR PUBLIC**

**Call in Number: 1-224-990-0182
Access Code: 927 405 823**

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for September 11, 2023	
3. Approval of Minutes for August 14, 2023	3
4. Public Participation	
5. Project Updates – Stephen Downing/Vince Astorino	6
6. Drop Shaft Rehabilitation – Design and Administration – FKE – Vince Astorino	29
Motion: To award the design and construction contract administration proposal from FK Engineering for the 2024 MIDD Drop Shaft Rehabilitation project for a not to exceed amount of \$532,588.	
7. As Needed Engineering Services Change Order - METCO – Flow Control Assistance and Clintondale Pump #4 - Vince Astorino	35
Motion: To approve Change Order #1 for \$85,040 to the As Needed Engineering Services contract with METCO for flow control and pump #4 repair assistance.	
8. Odor & Corrosion Change Order #1 LDS – Miscellaneous & NGI Actuator - Steve Downing	41
Motion: To approve Change Order #1 for \$283,792.77 to the MIDD Odor & Corrosion Control contract with L. D'Agostini & Sons.	
9. Consideration for approval of invoices (see attached)	46
10. Financial Report – Bruce Manning	48
11. Adjourn	

An adjourned meeting of the Intra-County Drainage Board for the **MACOMB INTERCEPTOR DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Clinton Township, Michigan on August 14, 2023, at 10:48 A.M.

PRESENT: Candice S. Miller, Chair
Don VanSyckel, Member
Vince Viviano, Member

ALSO PRESENT: Daniel Acciavatti, Deputy Government Relations; Vince Astorino, Operations & Flow Manager; Brian Baker, Chief Deputy; Stephen Downing, Construction and Maintenance Manager; Norb Franz, Communications Manager; Jennifer Jozwiak, Drain Account Specialist; Bruce Manning, Finance Manager; Pamela Sonnenberg, Administrative Assistant; Tom Stockel, Construction Supervisor

PRESENT VIA TELECONFERENCE: Bonnie Rau, City of Sterling Heights DPW

The meeting was called to order by the Chair, Candice S. Miller. A motion was made by Mr. VanSyckel, supported by Mr. Viviano to approve the agenda as presented.

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of July 10, 2023, were presented. A motion was made by Mr. VanSyckel, supported by Mr. Viviano to approve the minutes as presented.

Adopted: YEAS: 3
NAYS: 0

The meeting was opened to public participation, then closed, there being no comments from the public.

Mr. Downing presented on Segment 5. Mr. Downing presented a photo of a piece of equipment used for sediment removal and stated that it had started 2 weeks ago. He said that the sediment is very sandy. Mr. Baker asked if the sand is indicative of the material from the sink hole in 2016, and Mr. Astorino said yes. He said the entire reach will be full of material from the sinkhole. Mr. Downing said that after the sand is decanted, it is unexplainably clean looking and white, almost beachy looking. They also completed spray lining the 8-foot diameter pipe near Hayes. He stated that we have not had odor complaints.

Mr. Downing then presented on Segment 6 Rehabilitation. Doetsch has been working on removing sediment from CS-2 and CS-3. Ric Man was having a hard time with their dewatering pumps, on top of bad weather days, and our hydraulic cylinder failed in our new CS-13. It had to be sent out for repair, however, were able to get a temporary cylinder installed. Unfortunately, there was some time lost this month. He presented photos showing the work being performed at CS-2. We now have Garfield Road closed, one lane in each direction. We are on track to have it complete and re-opened on the Friday before Labor Day.

Mr. Astorino said that the Garfield Interceptor Lining project is now complete. There is a drainage culvert that collapsed while we were out there working, the pipe was in terrible shape. We have been

working with Roads trying to figure out an agreement on getting it fixed. Other than that, this project is closed out.

Mr. Astorino updated on the 2023 Interceptor Inspection Program that was awarded to Taplin. They started in the 8 ½ and finished a couple months ahead of schedule. They are willing to work nights and weekends to keep our projects going. They are targeting to start in the MIDD at the end of this month. They have until the end of the year to finish their work and we are confident that they will have it done on time.

Mr. Downing stated that there is nothing to report on Phase II Grouting.

Mr. Downing said that there is a lot of progress being made this month on Odor and Corrosion Facilities. There is mechanical, plumbing, and electrical work ongoing at the NGI site, with new building doors being installed. The Clintondale site is idle. Excavation for the 21 Mile Road and Garfield site has started for the building foundation and they are driving sheet piles for the earth retention system. At the Fraser site, they have started installation of the upper earth retention system rib and tagging, the excavation is complete for the sub-structure, and installation of rebar and concrete placement for the foundations has been done.

A motion was made by Mr. VanSyckel, supported by Mr. Viviano to receive and file the project updates.

Adopted: YEAS: 3
NAYS: 0

Mr. Manning presented on the GLWA settlement with Highland Park. The City of Highland Park currently owes GLWA \$55 million in unpaid water and sewer bills dating back nearly 15 years. GLWA recently recovered \$1 million from the city as part of mediation to delay its final judgement for 3 months. GLWA member partners have been charged by GLWA a share of bad debt associated with Highland Park unpaid bills. On June 28th, GLWA approved applying the \$1 million recovered as a credit to member partners' water and sewer charges based on a pro rata shared methodology. GLWA plans to process future recovered amounts using the same methodology. OMID's portion is \$202,900 of the \$1 million recovered.

A motion was made by Mr. VanSyckel, supported by Mr. Viviano to approve passing on the GLWA credit to the MIDD communities in the amount of \$134,279 based on the attached allocation.

Adopted: YEAS: 3
NAYS: 0

Mr. Astorino updated on a 100% State Grant funded COVID Wastewater Monitoring project. He said the Health Department wants to add influenza testing to the monitoring, while staying within the cost of the grant. Mr. VanSyckel said he intends to ask what actions the Health Department has proactively done as a result of this study.

A motion was made by Mr. VanSyckel, supported by Mr. Viviano to award the proposal for Phase 4 COVID Wastewater Monitoring to Aquasite for \$729,873 and authorization to execute the State grant agreement totaling \$765,375.

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$13,499,439.71 to the board for review and approval.

A motion was made by Mr. VanSyckel, supported by Mr. Viviano to approve the invoices as presented.

Adopted: YEAS: 3
NAYS: 0

A motion to receive and file the financial report given by Mr. Manning was made by Mr. VanSyckel and supported by Mr. Viviano.

Adopted: YEAS: 3
NAYS: 0

There being no further business, it was moved by Mr. VanSyckel, supported by Mr. Viviano that the meeting of the Macomb Interceptor Drain Board be adjourned.

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 11:38 A.M.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on August 14, 2023, the original of which is on file in the Public Works Commissioner's Office. Public notice of the meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1975, including, in the case of a special or rescheduled meeting or a meeting secured for more than 36 hours, notice by posting at least 18 hours prior to the time set for the meeting.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

DATED: 8/14/23



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Stephen Downing, Construction & Maintenance Manager
Vincent Astorino, Operations Director

Date: September 11, 2023

Subject: Construction Projects Status Updates for September 2023 Board Meeting

The following provides a status update for construction work performed within the Macomb Interceptor Drain Drainage District for the previous month.

Segment 5 Rehabilitation

Contractor: Oscar Renda

Engineering Consultant: FK Engineering

Project Description:

The Segment 5 reach of the Romeo Arm Interceptor is approximately 8,300 linear feet; it runs along 15 Mile Road starting at the ITC Corridor and extends east to approximately Hayes Road. The first 7,000 linear feet is 11-foot diameter non-reinforced concrete pipe, and the next 1,300 linear feet is 8-foot diameter steel reinforced concrete pipe. The rehabilitation consists of debris removal, cleaning, and inspection of the pipe's invert. Next, HOBAS pipe will be used to slip line 7,000 linear feet of the 11-foot diameter sewer and the 1,300 linear feet section of 8-foot diameter pipe will be coated with a corrosion resistant geo-polymer spray applied coating. To facilitate this work, a new control structure and access shaft is under construction in the ITC Corridor. The new control structure will provide the contractor access to the sewer to facilitate the work and will also serve as a dewatering pump station to draw down the upstream water level in the sewer.

Significant project tasks that have occurred over the past month:

1. Continued development, review, and approval of the required construction submittals.
2. Ground dewatering well maintenance and monitoring.
 - o ORC has implemented the decommissioning of the dewatering system. Due to infiltration detected at the downstream drop connections one of the pumps must

remain on until the infiltration is stopped. The infiltration previously observed at the upstream drop pipe has stopped.

3. CS-12 Pump Station and Control structure progress, which includes:
 - o MCPWO personnel continue the operation of the pump station and make adjustments to maximize the efficiency of the pump station for the Contractor to perform their work.
 - o The Contractor is required to perform the regular pump maintenance during construction.
4. Sediment and Debris Removal
 - o Continued debris/sediment removal with a skid-steer that has a modified bucket.
 - o The debris/sediment is a sandy material which is decanting very quickly – this allows the material to be hauled off site regularly.
 - o Approximately 1,109 tons of material has been removed
 - o Approximately 200
5. Manhole Rehab & Spray-Lining
 - o Continued preparation for the rehabilitation of manholes along 15 Mile, including removal of the ladder rungs and concrete patch repair.
6. HOBAS Pipe
 - o HOBAS pipe delivery continued this month – a total of 342 pipe sections have been delivered and staged in the ITC corridor (within the approved area).
7. Weather & Maintenance
 - o Work within the Interceptor was limited due to planned maintenance, wet-weather and unplanned maintenance.

Construction Costs:

	Date	
Original Contract Amount	10/21/2020	\$28,807,500.00
Current Contract Amount	9/1/2023	\$32,052,534.88
Total Spent to Date	9/1/2023	\$23,675,825.67
Remaining Budget	9/1/2023	\$8,376,709.21



Figure 1 – CS-12 Pump Station, Construction Yard & HOBAS Storage

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Figure 2 – HOBAS Temporary Staging in ITC Corridor



Figure 3 – Skid-Steer Returning to CS-12 during Debris Removal Operation



Figure 4 – Debris Coloration Immediately after removal from Interceptor



Figure 5 – Debris Coloration 24-36-hours after removal from Interceptor

Segment 6 Rehabilitation

Contractor: Ric-Man Construction

Engineering Consultant: FK Engineering

Project Description:

The Segment 6 Rehab project includes the rehabilitation of these main elements:

1. Cleaning and slip-lining (Hobas) of the 5-foot diameter 15 Mile Interceptor from MH-01 at Garfield Road and 15 Mile to MH-04 approximately 2200 feet east along 15 Mile.
2. Cleaning and slip-lining (Hobas) the 1400 linear feet 11-foot diameter Romeo Arm Interceptor sewer between CS-3 on 15 Mile Road and CS-2 on Garfield north of 15 Mile Road.
3. Rehabilitation of the Meter Facility FR-S-1 on Garfield south of 15 Mile Road.
4. Rehabilitation and spray-lining of the CS-2 and CS-3 control structure facilities. These concrete structures have been damaged by H2S damage over time and need repair.
5. Installation of an air-jumper to be incorporated into the existing Biofilter facility. This is being done to address the high level of odor issues that have resulted over the years from the intersection of 15 Mile and Garfield.
6. Installation of a new gate control structure on the 15 Mile Interceptor. This will allow for the rehabilitation of the MH-01 structure and provide future storage options within that interceptor.

The project started in September 2021 and is scheduled to be completed in September 2023.

Significant project tasks that have occurred over the past month:

1. The Contractor continues to develop and submit the required submittals to the Engineer.
2. Contractor completed the open-cut installation of the FAD line beneath Garfield Road.
3. The Contractor continued installation of the FAD via the open-cut method along the north side of 15 Mile in the greenbelt area. The FAD line installation will be completed in early September.
4. Continued the debris/sediment removal between CS-2 and CS-3.
 - o Progress was slow this month due to several issues including:
 - Maintenance (scheduled and unforeseen)
 - Weather days
 - Conflict with the traffic control for the Garfield FAD crossing
5. Concrete sidewalk replacement at CS-3/Bio-Filter

Construction Costs:

	Date (if applicable)	
Original Contract Amount	5/1/2021	\$13,541,545.00
Change Order No. 1	8/1/2021	\$132,664.70
Total Contract Amount	9/1/2023	\$13,674,209.70
Total Spent to Date	9/1/2023	\$9,463,352.51
Remaining Budget	9/1/2023	\$4,210,857.19



Figure 6 – FAD Connection at existing Bio-Filter line



Figure 7 – Excavation for FAD Installation



Figure 10 – Pavement Replacement at 15 Mile & Garfield after FAD Installation – Phase 1



Figure 11 – HOBAS Joint Repair



Figure 12 – Garfield Open-cut FAD Installation – Aerial View

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Garfield Interceptor Lining Project

Contractor: SAK Construction, LLC

Engineering Consultant: AEW

Project Description: MCPWO identified 755 feet of 7-foot diameter pipe within the Garfield Interceptor that has been aggressively attacked with Hydrogen Sulfide damage. This stretch of pipe was immediately labeled as an immediate repair and MCPWO underwent an analysis of options for repairs. The selected option was a Spiral Wound PVC liner which has been installed around the world but is the first time being installed within Michigan. This product has a guaranteed useful life of 50-years and is being treated as a pilot project within the MID system.

Significant project tasks that have occurred over the past month:

- Working on project closeout.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	8/25/2022	\$2,394,385.00
Change Order No. 1	3/14/23	\$510,160.00
Total Contract Amount	3/14/23	\$2,904,545.00
Total Spent to Date	6/26/23	\$2,713,976.88
Remaining Budget	6/26/23	\$190,568.12

2023 Interceptor Inspection Program

Contractor: Taplin

Engineering Consultant: NTH

Project Description:

The 2023 sewer inspection program was awarded to Taplin in March 2023. The inspection program includes inspection of approximately 24 miles of sanitary sewer ranging from 2-feet to 12-feet in diameter and 152 manholes across the MIDDD and 8.5 Mile Districts.

As part of the MIDDD inspection, sonar and laser scanning will be performed within the interceptors. This data will be used to not only correlate laser scan data to the 2017 inspection, but the sonar data will be used to develop design drawings to remove the sediment within the MIDDD interceptors.

The inspection interval for the entire system is based on a 3-year cycle, where non-reinforced concrete pipe is inspected every 3 years and reinforced concrete pipe is inspected every 6 years.

Significant project tasks that have occurred over the past month:

1. The MIDDD portion of the inspection was scheduled to begin near the end of August. Taplin did not submit their road permits in a timely manner so therefore this has been pushed to the start of September.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	4/10/23	\$591,319.40
Total Spent to Date		\$0.00
Remaining Budget		\$591,319.40

***This Table reflects the MIDDD costs only.**

Phase II Grouting

Contractor: Doetsch Environmental Services, Inc.

Engineering Consultant: AEW

Project Description:

The Phase II Grouting project was awarded to Doetsch Environmental during summer 2020. The work includes chemical grouting of the sewer and manholes where infiltration is present. The work is planned in all reaches of the system not included in the Segment 5 or portion of the Romeo Arm rehabilitated during the 2016 Interceptor Collapse. The main areas of work include the Romeo Arm along Garfield Road between 15 Mile and Clinton River Roads, the Garfield Interceptor between Clinton River and 21 Mile Roads, and the Lakeshore Interceptor between the Clintondale Pump Station at 15 Mile and Union Lake and Joy Boulevard in Harrison Township. The chemical grouting is aimed to stop all active infiltration within the system in advance of future rehabilitation and maintenance projects.

Significant project tasks that have occurred over the past month:

1. The crew has not worked since late July 2022.
2. The critical area grouting is complete, grouting operations will resume in non-critical areas when daily flow control operations allow.

Construction Costs:

	Date	
Original Contract Amount	6/24/2020	\$3,000,000.00
Change Order No. 1	3/14/2022	\$3,000,000.00
Current Contract Amount	9/1/2023	\$6,000,000.00
Total Spent to Date	9/1/2023	\$4,432,736.20
Remaining Budget	9/1/2023	\$1,567,263.80

Odor & Corrosion Control Facilities

Contractor: L. D'Agostini & Sons

Engineering Consultant: Tetra Tech

Project Description:

The Macomb Interceptor Drain completed a system-wide odor and corrosion study to evaluate the need for additional odor and corrosion control facilities to mitigate corrosion induced degradation of the interceptor and nuisance odors emitting from the interceptor near homes, businesses and public spaces. This effort is concentrated on extending the useful life of the interceptor and reducing nuisance odors emitting from the interceptor.

The study identified the need to construct three new odor and corrosion control facilities. Additionally, it was determined that the existing open-bed woodchip media type Fraser Bio-Filter would be more efficient and effective if converted to an enclosed bio-filter with an engineered media. The locations of the new facilities were determined through analysis and computer modeling using data that was collected in the field during the study phase. The facilities are intended to complement one another to reduce hydrogen sulfide induced corrosion.

The facilities are summarized in the Table below:

Facility	Location	Filter Type	Media Type
Fraser	15 Mile & Garfield	Bio-Filter	Engineered
Macomb Township	21 Mile & Garfield	Bio-Filter	Engineered
Clintondale PS	Union Lake & Sorrentino	Carbon Filter	Carbon
NGI Pump Station	Gratiot & Concordia	Chemical Injection	Calcium Nitrate

The construction contract was awarded to L. D'Agostini & Sons in October of 2022 and the contractual Notice to Proceed was issued with an effective date of December 2, 2022. The number of days to achieve substantial completion is 630 days, resulting in a contractually required substantial completion date of August 23, 2024.

The construction work commenced in January of 2023 and is estimated to be completed by the summer of 2024. The estimated schedule for each site is summarized in the table below:

Facility	Location	Start Date	Finish Date
Fraser	15 Mile & Garfield	March – 2023	January – 2024
Macomb Township	21 Mile & Garfield	April – 2023	April – 2024
Clintondale Pump Station	Union Lake & Sorrentino	September – 2023	May – 2024
NGI Pump Station	Gratiot & Concordia	January – 2023	October – 2023

*The dates are based on the Construction schedule dated February 7, 2023

Significant project tasks that have occurred over the past month:

1. The Contractor is developing and submitting the required submittals to the Engineer & Owner for review.
2. NGI PS Site:
 - a. Mechanical, Plumbing and Electrical work is ongoing
 - b. Preparation for site paving
3. Clintondale PS Site:
 - a. Idle
4. 21 Mile & Garfield Site
 - a. Continued excavation for building foundation and driving sheet piles for the TERS
 - b. Encountered an artesian condition which filled the excavation with pressurized groundwater. Work was halted until additional geotechnical information is collected and a dewatering plan is developed and implemented.
 - c. NTH performed a soil boring and provided a report to provide to the Contractor.
5. Fraser Site
 - a. Continued Installation of rebar for foundations
 - b. Continued concrete placement for foundations

Construction Costs:

	Date	
Original Contract Amount	12/2/2022	\$11,799,678.78
Current Contract Amount	9/1/2023	\$11,799,678.78
Total Spent to Date	9/1/2023	\$3,649,022.83
Remaining Budget	9/1/2023	\$8,150,655.95



Figure 13 – Fraser Biofilter Foundation Rebar & Formwork



Figure 14 – Foundation Wall Rebar Installation at Fraser Site

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Figure 15 – 21 Mile & Garfield – Groundwater Infiltration



Figure 16 – Sampling Panel at NGI Discharge - 21 Mile & I-94



Figure 17 – Aerial View of Fraser Site



Figure 18 – Aerial View of Macomb Township Site – 21 & Garfield

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Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

From: Vincent Astorino, Operations Director

Date: September 11, 2023

Subject: 2024 MIDDD Drop Shaft Rehabilitation – Consultant Recommendation

Macomb County Public Works Office (MCPWO), on behalf of the Macomb Interceptor Drain Drainage District (MIDDD), has requested consultant proposals to administer the 2024 MIDDD Drop Shaft Rehab project. In 2015, Macomb County Public Works Office consulted Giffels Webster to conduct a condition assessment of the metering facility drop shaft and connecting sewers at twenty-one metering locations within the MIDDD as part of MDEQ SAW Grant No. 1130-01. The results of this study identified six critical priority locations as defined under the NASSCO assessment and ratings definitions. Repairs to those six critical locations were completed in 2020.

The Giffels Webster report also identified 10 additional sites as high priority repair locations. Three of the ten sites have been shifted into other projects and at this time have already been repaired. As part of the ongoing MCPWO inspection program, Fishbeck was hired to oversee the 2020 inspection program which included the seven remaining high priority site locations. The seven sites are listed below within the table. Three of the seven sites have now been further elevated into a critical priority status. The remaining four sites will require repairs and shall be evaluated by the selected firm to provide their recommendation of the level of repairs required.

2024 MIDDD Drop Shaft Rehab Project Site Information							
Site	Location	25-Year/24-Hour Peak Hourly Flow		Drop MH Depth. ⁽¹⁾ (ft.)	Energy Dissipation Unit Installation	MH's to be Epoxy Lined	Full Pipe Structural Rehab Required
		cfs	gpm				
CT-S-1	38201 Garfield Rd. Clinton Twp., MI	20.41	9,160	8.8	Yes	2	Review Required
CT-S-3	40940 Garfield Rd. Clinton Twp., MI	29.64	13,302	8.12	Yes	1	Review Required
HR-S-3	35115 Union Lake Rd. Harrison Twp., MI	8.36	3,752	23.2	Yes	1	Yes
ST-S-1	40440 Utica Rd. Sterling Heights, MI	22.54	10,116	10	Yes	1	Review Required
ST-S-2	11590 15 Mile Rd. Sterling Heights, MI	14.59	6,548	27.86	Yes	1	Yes
SY-S-1	45010 Oakhill Blvd. Shelby Twp., MI	3.26	1,463	3.8	No	1	Review Required
SY-S-2	3208 23 Mile Rd. Shelby Twp., MI	5.12	2,298	40.12	Yes	1	Yes

MCPWO put together a request for proposals (RFP) to design and provide construction administration support for the Drop Shaft project. This RFP was shortlisted to three qualified firms which included AEW, FKE, and NTH and was sent to them on July 28, 2023. The due date for their proposals was on August 30, 2023 and all three submitted a proposal. Since all three firms were deemed pre-qualified to perform the work, there was not a full technical review and the results will mainly be decided by cost. Those costs are as follows.

Firm	Cost
AEW	\$712,132.00
FKE	\$532,588.00
NTH	\$582,884.00

MCPWO reviewed the proposals and did follow-up with NTH and FKE on a technical clarification for both. Both firms responded by the next day and those responses did not have any impact on the proposed total cost.

There is currently \$2,400,000 budgeted for this project which will be more than sufficient to cover design and CCA. As the complete design is confirmed, MCPWO will adjust the construction budget to meet the construction estimates.

MCPWO is confident that FKE can perform the scope of services as provided for the project.

MCPWO staff is recommending the following action:

That the MIDDD Board award the contract to FKE in the total not-to-exceed amount of \$532,588 to design and provide CCA for the 2024 MIDDD Drop Shaft Rehab Project.

Attachments: FKE Proposal Dated 8/29/23

30425 Stephenson Hwy
Madison Heights, MI 48071

Macomb County Public Works Office
21777 Dunham Rd.
Clinton Township, Michigan 48036

August 29, 2023

Attention: Mr. Steve Wagner, Engineer II

RE: 2024 MIDDD Drop Shaft Rehabilitation Project
Proposal for Professional Engineering Services

Dear Mr. Wagner,

FK Engineering Associates (FKE) is pleased to present this proposal for Professional Engineering Services for the 2024 MIDDD Drop Shaft Rehabilitation Project Request for Proposal (RFP) as prepared by the Macomb County Public Works Office (MCPWO), Chaired by Commissioner Candice S. Miller. We offer the following information in concert with the attached comprehensive services matrix detailing staff classifications and associated hourly efforts to complete this project.

Project Understanding

Per the RFP, MCPWO identified three main Tasks for the inspection, plan preparation, bidding assistance, and construction contract administration for the 2024 MIDDD Drop Shaft Rehabilitation Project:

- Task 1 – Basis of Design
- Task 2 – Contract Documents & Bidding
- Task 3 – Construction Contract Administration

In 2015, MCPWO consulted Giffels Webster to conduct a condition assessment of the metering facility drop shaft and connecting sewers at 21 metering locations within the MIDDD. The results of this study identified six critical priority locations as defined under the NASSCO assessment and ratings definitions. Repairs to those six critical locations were completed in 2020. The report also identified 10 additional sites as high priority repair locations. Three of these 10 sites have already been rehabilitated. As part of the ongoing MCPWO inspection program, Fishbeck was hired to oversee the 2020 inspection program which included the seven remaining high priority site locations. Four of these seven sites are now considered critical priority. The current MIDDD RFP targets rehabilitation design services at all seven of the critical locations, or a portion thereof depending on conditions.

FKE Experience

Since 2012, FKE has worked extensively in Southeast Michigan performing interceptor inspection & rehabilitation design that represents the services under this RFP. In particular, we have had the pleasure to work directly with MCPWO on some of the most complex and challenging rehabilitation projects in the region including the 2016 RAI Emergency Rehabilitation Project and the Segments 5 & 6 Interceptor Rehabilitation Projects. We bring a hands-on, collaborative approach to underground rehabilitation inspection



& design, including having senior and experienced staff participating in all aspects of the process from inspection, through design and subsequent construction. We also have successful experience on other MCPWO drop shaft rehabilitation projects.

FKE Design Team Staffing

We will perform the services for this project with our professional staff that are already familiar with the MIDD Drop Shafts. These individuals are familiar to MCPWO staff and have a proven expertise and passion for the services to be performed. Specifically, Zachary Carr, P.E. will be the Project Manager, Nick Kacynski, P.E. will be the Inspection Lead, and Nick Bassett, P.E. will be the Design Lead. We have supplemented our Team with Applied Science Inc. for the potential hydraulic engineering and bypass system aspects of the project, and Greentech Engineering, Inc. for the topographic survey services.



Proposed Approach

To accomplish the main Tasks of the RFP according to the design completion schedule, we are prepared to start this project as soon as authorized. Our familiarity with the MIDD Drop Shafts will help expedite our historical review. We intend to perform physical inspections of the seven locations as this provides for the best interpretation of existing conditions and helps avoid costly mischaracterizations of defects and construction obstacles. ***Deliverables will be seven separate Inspection Technical Memorandums: one for each site.***

Following inspection activities and discussions with MCPWO, we will begin rehabilitation design drawing package preparation, targeting 30%, 60%, 90%, and IFB submittal deadlines. ***For the purposes of this proposal, we have assumed that 5 of the 7 drops shafts will require design.*** At the start of the design efforts, we will meet with MCPWO to identify potential special Division 0 specifications. Key aspects of the 60% submittal will be a comprehensive list of Design Drawings and Specifications, including the general framework developed for each drawing. We will facilitate a workshop with MCPWO for each of the five submissions to confirm compliance with project goals and deliverable expectations. We will obtain required permits, including coordination with EGLE. ***Deliverables will include 30%, 60%, 90%, and IFB Design Packages, each for MCPO review and comment.***

Estimated Professional Fees

Our total cost estimate for this project is separated under the following two categories:

- Task 1 – Basis of Design: \$ 45,000
- Task 2 – Contract Documents & Bidding: \$ 156,000
- Task 3 – Construction Contract Administration: \$ 331,588

Our total estimated **Cost-Plus Engineering fees are \$532,588**. Please refer to the cost matrix attached for a general breakdown of hours and staffing.

We appreciate your consideration of our proposal, and we look forward to continuing to provide underground rehabilitation design services to the Macomb County Public Works Office. If you have any questions, please call.

Sincerely,
FK Engineering Associates

Nicholas J. Bassett, P.E.
Senior Project Engineer

Zachary F. Carr, P.E.
Vice President

Fritz J. Klingler, P.E.
President

Attachments

2024 MIDD Dropshafts Rehabilitation

ENGINEERING SERVICES	Estimated Staff Hours By Classification																	Total Hours	Revised Total Estimated Fees	Commentary		
	FKE Services										ASI Services											
	Principal	Project Principal	Senior Project Engineer	Project Engineer	Assistant Project Engineer	Senior Staff Engineer / CADD	Staff Engineer	Senior Technician	Field Technician	Document Control Specialist	Expenses	Principal Engineer	Senior Project Manager	Project Manager	Staff Engineer	CADD Manager	Expenses					
Engineering Sub-Task (Segment 5 and 6 costs)	\$ 199	\$ 159	\$ 134	\$ 119	\$ 109	\$ 99	\$ 86	\$ 72	\$ 57	\$ 57		\$ 175	\$ 161	\$ 127	\$ 96	\$ 103						
TASK 1: Basis of Design																						
1A	Historical Review																					
	Historical Documents review	1	1	4	8	8		16				1	1		4			44	\$ 4,850.00	Review of available drawings, videos, photos, etc. Review of previous inspections that were provided by MCPWO		
																		44	\$ 4,850.00			
1B	Inspection																					
	Inspection Prep and Coordination with MCPWO		1	1	1	4	1	4										450	13	\$ 1,886.80	Devise inspection plan, gather equipment	
	Drop Shaft Inspections	1	2	2	2	16	16	16				0.5	0.5		4			500	60	\$ 6,856.60	Two days to inspect all seven sites	
	Immediate Discussions with MCPWO	1	1	1		1						1	1						2	8	\$ 1,067.80	Update MCPWO daily on inspection observations and a final summary meeting.
																				81	\$ 9,811.20	
1C	Post-Inspection Memorandum																					
	Video Review		1	2	4		8	24					1		4					44	\$ 4,331.25	All electronic recordings to be provided via external hard drive to MCPWO
	HR-S-3 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
	ST-S-2 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
	SY-S-2 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
	CT-S-1 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
	CT-S-3 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
	ST-S-1 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
	SY-S-1 Recommendation Memo	1	2	2	6		4	6				1	2	2	4					32	\$ 3,716.75	Inspection & Rehabilitation Technical Memorandum
																				268	\$ 30,348.50	
	Task 1 Sub-Total	10	20	24	57	29	53	102	0	0	16	9.5	17.5	14	41	0	393	\$ 45,000.00				
TASK 2: Contract Documents & Bidding																						
2A	Topographic Survey																					
	Site Surveys				4			8											25000	12	\$ 28,664.00	Survey by Green Tech Engineering. Assumes 5 sites and full day per site
																				12	\$ 28,664.00	
2B	Bid Package																					
	30% Bid Set (Drawings and Specifications)	1	8	20	20	30	100	30			40	500	1	8	16	16	40			330	\$ 34,719.55	ASI to develop bypass plan
	30% Meeting with MCPWO	2	2	2			2				2	200	2		2					14	\$ 2,150.20	Workshop - in person. Specs and plans printed for review
	60% Bid Set (Drawings and Specifications)	1	8	20	20	20	80	20			30	500	1	8	8	8	40			264	\$ 28,346.35	All Plan Sheets plotted, General Specifications complete, Technical Specifications started.
	60% Meeting with MCPWO	2	2	2			2				2	200	2		2					14	\$ 2,150.20	Workshop - in person. Specs and plans printed for review
	90% Bid Set (Drawings and Specifications)	1	6	12	12	16	50	16			20	500	1	4	4	4	20			166	\$ 17,908.55	pseudo 100% Drawings & Specifications
	90% Meeting with MCPWO	4	4	4			4				4	200	4		4					28	\$ 4,080.40	Workshop - in person. Specs and plans printed for review
	100% Bid Set (Drawings and Specifications)	1	6	12	12	16	30	16			8	500	1	2	2	2	16			124	\$ 14,005.55	IFB Set
	100% Meeting with MCPWO	3	3	3			3				3	200	3		3					21	\$ 3,115.30	Final Workshop - in person. Specs and plans printed for review
																				961	\$ 106,476.10	
2C	Permit Assistance																					
	Permit Application	1	2	2	8			8					4	4	2					39	\$ 4,558.90	NPDES, Hydraulics Engineer coordination
	Permit Meetings		2	2	2	2		2					2		2					14	\$ 1,848.20	NPDES
																				53	\$ 6,407.10	
2D	Bidding																					
	Prebid Meeting	2	3	3	3			8					2	2	2					29	\$ 3,522.30	Coordination with MCPWO and slideshow presentation for meeting
	Addendums and Bidder Questions	1	2	2	6	6		2					1	2	2					26	\$ 3,227.55	As needed
	Bid Review	2	3	4	4	8		8					2	3						36	\$ 4,435.65	Generate a Bid Comparison Memorandum with our recommendation to MCPWO
	Pre-Award Meeting	2	2	2	2	4		8					2	2						28	\$ 3,279.60	Coordination with MCPWO and contractor questionnaire for meeting
																				119	\$ 14,465.10	
	Task 2 Sub-Total	23	53	90	93	102	271	126	0	0	129	28	35	49	30	116	1145	\$ 156,000.00				

2024 MIDD Dropshafts Rehabilitation

ENGINEERING SERVICES	Estimated Staff Hours By Classification																	Total Hours	Revised Total Estimated Fees	Commentary
	FKE Services										ASI Services									
	Principal	Project Principal	Senior Project Engineer	Project Engineer	Assistant Project Engineer	Senior Staff Engineer / CADD	Staff Engineer	Senior Technician	Field Technician	Document Control Specialist	Expenses	Principal Engineer	Senior Project Manager	Project Manager	Staff Engineer	CADD Manager	Expenses			
Engineering Sub-Task (Segment 5 and 6 costs)	\$ 199	\$ 159	\$ 134	\$ 119	\$ 109	\$ 99	\$ 86	\$ 72	\$ 57	\$ 57	\$ 175	\$ 161	\$ 127	\$ 96	\$ 103					
TASK 3: Construction Contract Administration																				
3A	Meetings																			
	Kickoff Meeting	2	3		2		2			2	2	2						17	\$ 2,302.60	Meeting with Contractor and MCPWO to go over roles
	Progress Meetings	6	12		24					24		8	16					90	\$ 11,500.80	Twice a month for 12 months, 24 total
	Site Kickoff Meetings		5		5		5				5	5						25	\$ 3,584.00	Assume 4 construction task meetings for large task items
																		132	\$ 17,387.40	
3B	Document Control																			
	Submittal Reviews	4	8		8		24	16			4	16		16				96	\$ 11,824.60	Assumes 40 submittals
	RFI Reviews	1	4		4		3	4			4	4						24	\$ 3,363.20	Assumes 10 RFIs
	Pay Applications	1	4		4							4						5	\$ 835.00	Assumes 12 Pay Apps
	Document Control		4		4					100		4		8				120	\$ 8,294.60	
																		245	\$ 24,317.40	
3C	Inspection																			
	Resident Engineer			600														600	\$ 81,060.00	3 hrs per work day (includes site visits, submittal, RFI, Pay App review)
	Inspector						1440							160		2500		1600	\$ 183,575.50	Assumes 200 days of full time inspection and DFR (approx. 8 hr days) for FKE (Includes truck and CSE equipment). Also assumes 20 days of ASI inspection for bypass.
	DFR Revisions						30			8								38	\$ 3,426.00	
	Site Visits	6	24								8	24		4				66	\$ 10,940.40	
																		2238	\$ 279,001.90	
3D	Contract Closeout																			
	As-builts	1	2				24	4		2	1	2		1	9			46	\$ 4,947.00	Update Plans based on construction
	Punchlist Meeting	1	1		1					1	1	1						7	\$ 995.80	
	Final Inspection	1	8					8						8				25	\$ 3,160.10	Inspection of sites after repair with Contractor and MCPWO
	Closeout Meeting	2	2		1					2	2	1						12	\$ 1,777.95	
																		90	\$ 10,880.85	
	Task 3 Sub-Total	25	77	600	48	2	1523	39	0	0	139	35	76	1	197	9	2705	\$ 331,588.00		
	Grand Total	58	150	714	198	133	1847	267	0	0	284	72.5	128.5	64	268	125	4243	\$ 532,588.00		



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

From: Vincent Astorino, Operations Director

Date: September 11, 2023

Subject: Change Order #1 Approval Request for As-Needed Engineering Services – METCO

On December 31, 2022, The Macomb Interceptor Drain Drainage District (MIDDD) entered into an updated As-Needed Engineering Services agreement with Metco. This agreement was for \$100,000 and was budgeted within the overall MIDDD engineering budget.

As of the time that this recommendation has been written, MCPWO has utilized Metco for \$21,307.57 for Clintondale Pump Station HVAC Improvements Design/CCA and \$59,712.88 for flow control support within the Oakland Macomb Interceptor Drain Drainage District (OMIDDD). As a reminder and unlike the MIDDD operations, flow control is hired out by OMIDDD to Metco and therefore any work within the MIDDD that requires flow control support in the OMID will require us to pay Metco for their time.

It is anticipated that the current contract allocation to Metco will be nearly depleted by the time of this board meeting. Now that the CS-12 pump station (PS) has come online, the use of OMID flow control structures will be significantly reduced. Within the CS-12 PS there is a flap gate installed on the downstream side which will protect workers from sewage coming back upstream. There will still be some work intermittently that will require flow control support from OMIDDD. Therefore, we still propose to allocate another \$50,000 within the Metco contract for as-needed support with flow control.

Not only do funds need to be added to continue flow control support but there have also been some recent complications at Clintondale Pump Station with Pump #4. In the past few weeks, Pump #4 starting to have serious vibration issues which would cause the pump to trip out. MCPWO brought in a vibration specialist to perform an analysis on the pump. It was found that the pump was experiencing vibration at approximately 2.87 inches/sec near halfway down the shaft. Due to the location of the vibration, it is believed that the bearing at that location has failed. In order to replace the bearing, the entire pump, motor, and piping will need to be pulled. MCPWO has spare parts on site but due to the size of the project has reached out to the original design engineer, Metco, to provide a proposal to provide support and CCA services for this work. You will find their proposal for this task attached in the amount of \$35,040. MCPWO has reviewed this proposal and does not have any issues with what has been proposed.

The 2023/2024 MIDDD budget allocated \$200,000 for As-Needed Engineering Services. At this time, MCPWO is requesting to add \$85,040 to the METCO As-Needed Engineering contract which will provide funding through the next fiscal year.

OFFICE LOCATION: 21777 Dunham Road, Clinton Township, Michigan 48036 • Phone: 586-469-5325 • Fax: 586-469-5933

MAILING ADDRESS: P. O. Box 806, Mt. Clemens, Michigan 48046-0806

ENGINEERING • Phone: 586-469-5910 • Fax: 586-469-7693 ♦ **SOIL EROSION** • Phone: 586-469-5327 • Fax 586-307-8264

A draft copy of this change order has been attached for reference. On behalf of the MCPWO Engineering staff please approve this request to allocate \$85,040 as Change Order No. 1 to the METCO as-needed contract.

Attachments: Change Order No. 1
Task 1C – Metco CPS Pump 4 Proposal

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Date of Contract: 12/31/22

Effective Date of CO: 9/11/23

Owner: Macomb Interceptor Drain

Owner's Contract No.: WWS-2023-001

Drainage District

Engineer Contract No.:

Engineer: Metco Services

Contract Name: MIDD D As-Needed

The Contract is modified as follows upon execution of this Change Order:

Add \$85,040 to the existing contract to provide as-needed engineering services at the direction of MCPWO Engineering staff.

The original Contract Sum was: \$ 100,000.00

The net change from previously approved Change Orders No. to No: \$ 0

The Contract Sum prior to this Change Order: \$ 100,000.00

The Contract Sum prior to this Change Order will be increased by: \$ 85,040.00

The new Contract Sum, including this Change Order, will be: \$ 185,040.00

The Contract Time will be unchanged by: 0 (days)

The date of Substantial Completion as of the date of this Change Order, therefore, is: N/A

ACCEPTED:

ACCEPTED:

By: _____
Owner (Authorized Signature)

By: _____
Engineer (Authorized Signature)

Title _____

Title _____

Date _____

Date _____

ENGINEER TASK ORDER NO.: 1C – CPS Pump #4 Repairs

Owner: Macomb Interceptor Drain Drainage District Owner’s Project No.: WWS-2023-001
Engineer: METCO Services, Inc. Engineer’s Project No.:
Contract Name: MIDDD As-Needed Engineering Services Contract Date: 12/31/2022

Effective Date of Task Order: 09/11/2023

In accordance with Paragraph 4.1.4 of the Engineering Services and Construction Contract Administration Agreement (“Agreement”) dated 12/31/2022, Engineer is hereby directed to promptly perform the Scope of Work described in this Task Order as follows:

General Description:

Project consists of design/CCA support of the Clintondale Pump Station Pump #4 repairs.

Engineer Scope of Work:

See attached.

Task Details:

Task Order Name: CPS Pump #4 Repairs
Task Order Project No.: WWS-2022-013
Work Order No.: WO22053
Not-to-Exceed Cost: \$35,040
Date of Completion: N/A
Related Change Order: N/A
Related Task Orders: N/A

Attachments:

METCO Proposal dated 8/30/23

Accepted by Engineer

Authorized by Owner

By (<i>signature</i>): _____	_____
Name & Title: _____	_____
Date: _____	_____

Execution of this Task Order by Owner and Engineer shall be subject to the terms and conditions of the Agreement which is incorporated by reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

August 30, 2023

Office of Macomb County Public Works Commissioner
 21777 Dunham Road
 Clinton Township, MI 48036

Attn: Vincent Astorino
 Operations and Flow Manager

RE: WWS-2022-RFP-001 – As-Needed Engineering Services
 Proposal for Technical Assistance for the Rehabilitation of Pump #4 at Clintondale Pump Station

Dear Mr. Astorino

Pursuant to your request, METCO Services, Inc. (METCO) is pleased to provide this proposal to Macomb County Public Works Office (MCPWO) for technical assistance in the rehabilitation of Pump #4 at the Clintondale Pump Station. Per our discussions, Pump #4 is experiencing high vibrations, which have been validated by a Vibration Analysis performed by HECO. METCO will provide technical assistance in facilitating the inspection, rehabilitation, installation, and startup and testing of Pump #4 as summarized below:

Scope of proposed services include the following:

- Review of background information and report
- Coordination and technical discussion with t Fairbanks Morse Pump local representative
- Analysis of findings and recommendation for rehabilitation
- Review and make recommendations for the rehabilitation proposal from the pump manufacturer.
- Develop RFP for services of the installation contractor.
- Review proposal for completeness and recommendation to MCPWO.
- Meetings with MCPWO, Clintondale staff, manufacturer’s rep., and rehabilitation contractor as required.
- Review of submittals and respond to RFIs.
- Technical Assistance with:
 - Review of testing and inspection reports.
 - Review of proposals and pay applications.
 - Start-up procedures and assistance.
 - Testing procedures and observation of on-site testing.
 - Review of pump and motor spare parts inventory and recommendations.
- Periodic on-site observation as required during installation and testing.

Our estimated hours and fee to provide above services:

Task	Hours
Review of Background Information and Report	8
Coordination and technical discussion w/ Pump Manuf. Rep	12
Analysis of findings and recommendation	8
Develop RFP	12
Review of Proposal and Pay Apps	8
Meetings:	12

Review Submittals & RFIs	36
Reviewing of further testing and reports	8
Startup procedures and assistance	16
Testing Procedure and observation of on-site testing	16
Review and Recommendation for Pump and Motor Spare Parts Inventory	8
Periodic On-Site Observations	88
Total	232

For the services noted above we propose a cost not to exceed (T&M) fee of \$35,040.00.

We appreciate this opportunity and look forward to your approval. In the meantime, should you have any questions or need further clarification, please contact Dan Martel of our office. at (313) 995-5653.

Respectfully,

METCO SERVICES, INC.



Daniel J. Martel, AIA
Senior Project Manager
RV/rs

Accepted By

Signature

Vincent Astorino, Operations and Flow Manager
Printed Name, Title

Date



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain District Board Members

From: Stephen Downing, Construction & Maintenance Manager

Date: September 11, 2023

Subject: Odor & Corrosion Change Order No. 1 – NGI Actuator Upgrades & Misc. Items

The Board approved the award of the Odor and Corrosion project to L. D’Agostini & Sons (LDS) in October of 2022. Since that time the Contractor has progressed on schedule as updated in the report provided each month at the Board meeting. Since the start of construction there have been a few items that have come up that require a change order to the construction contract, these items are summarized in the table below.

Description	Add/ Deduct	Amount +(-)
Traffic Control	Add	\$5,799.19
Unforeseen Conditions (Clintondale PS)	Add	\$8,223.83
New Hydrant (NGI)	Add	\$8,707.17
NGI Actuated Valves	Add	\$240,113.24
NGI Grading	Add	\$20,949.34
TOTAL THIS CHANGE ORDER	Add	\$283,792.77

The item of most significance included in this change order is the NGI Actuated valves. This item was added to the contract at the direction of MCPWO personnel, first the design to Tetra Tech (approved by the Board previously) and then subsequently a work change directive issued to LDS. This work is not associated directly with the Odor and Corrosion project, but it was an ideal time to facilitate this work while we have an Engineer and Contractor working at this site. The existing actuators for the twin NGI force mains are manual, requiring operations personnel to manually operate when necessary. The current normal operation of the NGI requires only one of the force mains to be active, however, during large rain events such as a 25-year 24-hour event both force mains are required. In this scenario operations personnel would have to manually open the actuator during the event. This upgraded to the actuators will allow the operations staff to remotely open and close the valves as required. This work was included in the current budget for \$200,000, which has come in slightly over budget. The LDS proposal has been vetted by MCPWO and Tetra Tech personnel.

The other items included in this change order have arisen for various reasons during construction. The traffic control item associated with traffic signal adjustments at 21 Mile and Garfield was assigned to LDS by MCPWO personnel in coordination with the spiral-wound lining project. LDS encountered an unforeseen condition while excavating at the Clintondale PS site. An underground vault extended beyond where it was shown on the contract documents which required some additional effort. The new hydrant at NGI was an add to the project, originally intended to re-purpose the existing water source for pigging operations, but

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Chesterfield Township required a hydrant to meet their specifications. Lastly, an adjustment was made to the site grading plan to better manage wet-weather run-off on the site.

The Macomb County Public Works Office staff and Tetra Tech performed a review of each item included in this change order and it represents a fair price for the work to be performed.

The action is that the Board approve Change Order No.1 to L. D'Agostini & Sons for the Lump Sum amount of \$283,792.77.

Attachments: Tetra Tech Change Order Summary
LDS Change Order No. 1

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CHANGE ORDER SUMMARY

OWNER: Macomb County, Michigan

Project: MIDDD Odor & Corrosion Control

CHANGE ORDER NO.: 1

Description	Add/ Deduct	Amount +(-)
Traffic Control	Add	\$5,799.19
Unforeseen Conditions (Clintondale PS)	Add	\$8,223.83
New Hydrant (NGI)	Add	\$8,707.17
NGI Actuated Valves	Add	\$240,113.24
NGI Grading	Add	\$20,949.34
TOTAL THIS CHANGE ORDER	Add	\$283,792.77

Due to proposed changes to contract and work. Please see supporting documentation attached hereto.

Current Contract Amount	\$11,799,678.78
Amount this Change Order Add	\$283,792.77
New Contract Amount	\$12,083,471.50

CHANGE ORDER NO.: 001

Owner:	Macomb County, MI	Owner's Project No.:	WWS-2022-01
Engineer:	Tetra Tech Inc.	Engineer's Project No.:	200-16347-21001
Contractor:	L. D'Agostini and Sons	Contractor's Project No.:	
Project:	Odor Control and Improvement Project		
Contract Name:	Macomb Interceptor Drainage District Odor & Corrosion Improvements Project		
Date Issued:		Effective Date of Change Order:	Upon Approval

The Contract is modified as follows upon execution of this Change Order:

Description:

Additional cost due to changes in Traffic Control Devices at 21 Mile and Garfield, Site 500. This was requested by Owner to coordinate a sewer lining project with this project.

Additional cost due to Unforeseen Conditions at Clintondale, Site 300. A previously unknown vault was discovered that necessitated the work be adjusted.

Additional Cost due to local agency request for new fire hydrant and valve at NGI, Site 100. A hydrant existed during survey. Prior to construction, this hydrant was removed. The change order compensates Contractor for the new hydrant.

Additional Cost due to Owner request for controlled Valves at NGI, Site 100. Owner desired these valves to be automated. While unrelated to the odor control project, there are efficiencies in having the Odor Control contractor (already on site) complete this work.

Additional Cost to revise paving at NGI, Site 100. During construction, it was necessary to adjust pavement slopes to better drain the pump station site.

Attachments:

Summary of Changes (Table)

Unforeseen Conditions documents from Contractor

Work Change Directive and quotation for traffic control

Quotation for fire hydrant and valve

Proposal Request and quotation for controlled valves

Quotation for paving at NGI

Change in Contract Price		Change in Contract Times	
		[State Contract Times as either a specific date or a number of days]	
Original Contract Price:	Original Contract Times:	Substantial Completion:	<u>08/23/2024</u>
\$ <u>11,799,678.78</u>	Ready for final payment:	Ready for final payment:	<u>09/22/2024</u>
Change from previously approved Change NONE	Change from previously approved Change Orders NONE	Substantial Completion:	<u>0 days</u>
\$ <u>0.00</u>	Ready for final payment:	Ready for final payment:	<u>0 days</u>
Contract Price prior to this Change Order:	Contract Times prior to this Change Order:	Substantial Completion:	<u>08/23/2024</u>
\$ <u>11,799,678.78</u>	Ready for final payment:	Ready for final payment:	<u>09/22/2024</u>

Increase this Change Order:	Increase this Change Order:
\$ <u> \$283,792.77</u>	Substantial Completion: <u> 0 Days</u>
	Ready for final payment: <u> 0 Days</u>
Contract Price incorporating this Change Order:	Contract Times with all approved Change Orders:
\$ <u> \$12,083,471.50</u>	Substantial Completion: <u> 08/23/2024</u>
	Ready for final payment: <u> 09/22/2024</u>

*See Notes Next Page

Recommended by Engineer (if required)	Authorized by Owner
By: _____	_____
Title: _____	_____
Date: _____	_____
Authorized by Owner	Approved by Funding Agency (if applicable)
By: _____	_____
Title: _____	_____
Date: _____	_____

MACOMB INTERCEPTOR DRAINAGE DISTRICT
08/08/2023 - 09/05/2023

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>	
Macomb Interceptor Drain	Chapter 20 Chesterfield – 7.4416% Clinton – 20.9117% Fraser – 4.2007% Harrison – 6.2625% Lenox – 1.1700% Macomb – 14.1489% New Haven – 0.8391% Shelby – 9.7883% Sterling Heights – 30.8805% Utica – 1.6392% Washington – 2.7176%							
		Astorino	City of Mt. Clemens	\$ 15,156.31	Invoice #28006488 - 08.11.23	Monthly Sewage - June 2023		
		Astorino	Department of Roads	\$ 1,385.85	Invoice #302497 - 07.14.23	Fleet Fuel - June 2023		
		Downing	Dropbox	\$ 4,115.64	Invoice #29541527 - 08.23.23	Dropbox User License - 10.01.23 - 08.22.24		
		Astorino	Fishbeck	\$ 2,317.00	Invoice #426228 - 08.09.23	WWMP through 08.04.23	\$ 190,417.67	
		Astorino	Fishbeck	\$ 2,645.00	Invoice #426310 - 08.10.23	Engineering Services As Needed through 08.04.23	\$ 58,161.50	
		Downing	FK Engineering Associates	\$ 77,720.85	Invoice #20-058-038 - 08.07.23	Segment 6 CCA - 07.09.23 - 08.05.23	\$ 20,922.05	
		Downing	FK Engineering Associates	\$ 99,941.18	Invoice #20-152-032 - 08.07.23	Segment 5 CCA - 07.09.23 - 08.05.23	\$ (590,130.11)	
		Baker	Kienbaum Hardy Viviano Pelton	\$ 585.00	Invoice #49964 - 08.01.23	General Matters July 2023		
		Downing	L D'Agostini & Sons, Inc.	\$ 678,065.03	Invoice #WWS-2022-001 App #6 - 08.31.23	Odor & Corrosion Improvements through 8.17.23	\$ 8,150,655.95	
		Astorino	Motor City Electric Technologies	\$ 1,282.50	Invoice #95244 - 08.03.23	SCADA Automation		
		Downing	Oscar Renda Contracting	\$ 3,119,070.15	Invoice #WO23003 Est #36 - 09.05.23	Romeo Arm Segment 5 Lining through 08.31.23	\$ 8,376,709.21	
		Downing	Ric-Man Construction	\$ 301,580.10	Invoice #WO23003 EST24 - 08.30.23	Segment 6 Services - 07.21.23 - 08.20.23	\$ 4,210,857.19	
		Downing	Tetra Tech, Inc.	\$ 19,914.43	Invoice #52114711 - 08.20.23	Odor & Corrosion CCA through 7.28.23	\$ 712,994.39	
		Astorino	Verizon	\$ 2,035.10	Invoice #9940363222 - 07.23.23	Monthly Cellular - 06.24.23 - 07.23.23 (Eq. Fund)		
		Astorino	Verizon	\$ 776.85	Invoice #9940363222 - 07.23.23	Monthly Cellular - 06.24.23 - 07.23.23		
		<u>CPS</u>		Astorino	Bell Fork Lift, Inc.	\$ 3,281.00	Invoice #S0047888 - 08.16.23	Phase Charger
	Astorino		Clinton Township Treasurer	\$ 2,648.57	Invoice #23-471 - 08.01.23	Monthly Water - July 2023		
	Astorino		Colville Electric Co.	\$ 1,591.79	Invoice #23453 - 08.21.23	Electrical Disconnect for Repair Work		
	Astorino		Colville Electric Co.	\$ 862.68	Invoice #23466 - 08.21.23	Sluice Gate Actuator Power Disconnect for Repair		
	Astorino		De-Cal Inc.	\$ 7,435.00	Invoice #WO9231455 - 08.10.23	Rebuild Blower for HV2		
	Astorino		DTE Energy	\$ 15,712.57	Invoice #23-479 - 08.03.23	Monthly Electric - 07.05.23 - 08.01.23		
<u>CS-12</u>		Astorino	DTE Energy	\$ 656.19	Invoice #23-478 - 08.03.23	Monthly Electric - 07.04.23-08.02.23		
<u>METERS</u>		Astorino	ADS Environmental Services	\$ 9,860.00	Invoice #35414-0922A - 10.22.22	Meter Maintenance - 09.01.22 - 09.30.22	\$ 255,925.00	
		Astorino	ADS Environmental Services	\$ 10,200.00	Invoice #35414-1022A - 11.19.23	Meter Maintenance - 10.01.22 - 10.31.22	\$ 245,725.00	
		Astorino	ADS Environmental Services	\$ 9,520.00	Invoice #35414-1122A - 12.24.22	Meter Maintenance - 11.01.22 - 11.30.22	\$ 236,205.00	
		Astorino	ADS Environmental Services	\$ 9,180.00	Invoice #35414-1222A - 01.21.23	Meter Maintenance - 12.01.22 - 12.31.22	\$ 227,025.00	
		Astorino	ADS Environmental Services	\$ 9,860.00	Invoice #35414-0123A - 02.18.23	Meter Maintenance - 01.01.23 - 01.31.23	\$ 217,165.00	
		Astorino	ADS Environmental Services	\$ 5,780.00	Invoice #35414-0223A - 03.25.23	Meter Maintenance - 02.01.23 - 02.28.23	\$ 211,385.00	
		Astorino	Amazon	\$ 823.77	Invoice #1VG7-9D6Q-IHNW - 08.08.23	Supplies - Battery Backups		

MACOMB INTERCEPTOR DRAINAGE DISTRICT
08/08/2023 - 09/05/2023

<u>Funding Source</u>	<u>Apportionment</u>	<u>Manager</u>	<u>Vendor</u>	<u>Amount</u>	<u>Invoice Detail</u>	<u>Project Summary</u>	<u>Project Balance</u>
NGI		Astorino	DTE Energy	\$ 1,309.67	Invoice #23-474 - 08.02.23	Monthly Electric - 06.30.23-08.01.23	
		Astorino	ETNA Supply	\$ 1,945.00	Invoice #s104570457.001 - 06.1.23	Wedge for Gate Valve	
OMID		Manning	Oakland County	\$ 3,341,691.33	Invoice #CI023623 - 08.01.23	Fall Debt	
SCADA		Astorino	Verizon	\$ 1,038.30	Invoice #9940363222 - 07.23.23	Monthly Cellular - 06.24.23 - 07.23.23	
Total				\$ 7,759,986.86			

Budget to Actual
MIDDD
As of Aug 31, 2023 = 17%

DESCRIPTION	2024 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
GLWA-OMID	49,276,790		8,213,517	41,063,273	16.7%
OMID O&M	4,379,020		729,837	3,649,183	16.7%
Settlement	100,000			100,000	0.0%
Reimbursements	150,000		59,542	90,458	39.7%
PY Revenue-Fund Balance	20,907,890			20,907,890	0.0%
Reimb-Local Communities	17,717,200		2,952,867	14,764,333	16.7%
State Grant-ARPA Seg 5 & 6	-		2,825,966	-	0.0%
COVID Grant	345,630		213,286	132,344	0.0%
Interest	400,000			400,000	0.0%
Total Revenue Accounts	93,276,530	-	14,995,015	81,107,481	16.1%
EXPENSE ACCOUNTS					
GLWA-OMID	49,276,790		8,213,517	41,063,273	16.7%
OMID O&M	4,379,020		729,837	3,649,183	16.7%
Public Works Wastewater Disposal Division	1,984,020		5,774	1,978,246	0.3%
Office Operations/Insurance	406,450		2,700	403,750	0.7%
SCADA	117,260		6,028	111,232	5.1%
Engineering					
Replenish reserve from CPS refunding	618,680			618,680	0.0%
As Needed Engineering	200,000		5,880	194,120	2.9%
Annual Meter Dye Testing	50,000			50,000	0.0%
Data Review-Aquasight	100,000			100,000	0.0%
Odor and Corrosion Construction/CCA	811,040		600,708	210,332	74.1%
Covid Testing 2023-Grant Funded	340,630			340,630	0.0%
General Construction/Engineering Contingency-All projects	2,650,000			2,650,000	0.0%
SY-S-1, SY-S-2, & WA-S-1 Meter Const Admin/Rehab	75,000			75,000	0.0%
Level Sensors/Pressure/H2S-Meters	261,200			261,200	0.0%
2023 Drop Shaft Rehab Design, Construction, & CCA	2,400,000			2,400,000	0.0%
Odor and Control-Construction	8,333,780			8,333,780	0.0%
Segment 6 Construction Administration (ARPA)			77,720	(77,720)	
Segment 6 Construction/CCA (ARPA)			240,792	(240,792)	
Segment 5 Construction Admin (ARPA)			150,530	(150,530)	
Segment 5 Construction (ARPA)			4,037,494	(4,037,494)	
COVID Grant			213,286		
Legal Services	75,000		1,510	73,490	2.0%
Clintondale PS O&M	786,890		159,544	627,346	20.3%
NGI O&M	88,500		6,761	81,739	7.6%
Meters O&M	189,400		57,123	132,277	30.2%
Control Structures and Pump Station O&M	178,930		700	178,230	0.4%
Biofilter O&M	19,800		406	19,394	2.1%
Contribution Life Cycle Reserve	184,300			184,300	0.0%
Interceptor O&M	18,614,210		480	18,613,730	0.0%
Stormwater Pump Stations	50,000		8,333	41,667	16.7%
Sewage Disposal Charges - Mt. Clemens	410,000		15,156	394,844	3.7%
Debt Service - Revenue Bonds	675,630		112,605	563,025	16.7%
Total Expense Accounts	93,276,530	-	14,646,884	78,842,932	15.7%

	O&M Balance 6/30/2023	O&M	Total 8/31/2023
Cash - Operating	59,727,429	348,130	60,075,559
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		14,995,015	14,995,015
Expenditures		14,646,884	14,646,884
			0
Equity*	59,727,429		60,075,559

Detail of 2023 Equity*

Reserve at 6/30/2023	20,862,516	PLC Equipment Replacement	100,000
Life Cycle Reserve	1,237,460	Improvement to Hydraulic Cylinder	120,333
General Construction/Engineering Contingency-All projects	450,000	Grouting	3,926,770
SY-S-1, SY-S-2, & WA-S-1 Meter Const Admin/Rehab	75,000	Interceptor Inspections	1,714,481
Level Sensors/Pressure/H2S-Meters	256,230	Intercept Clean/Sediment Removal	3,550,000
Drop Shaft Rehab Design	2,400,000	Segment 5	14,064,063
Odor and Corrosion Construction/CCA	7,803,213	Segment 6	3,003,560
CPS Electrical Room AC	63,803	Drain Valve For Force Main	100,000