

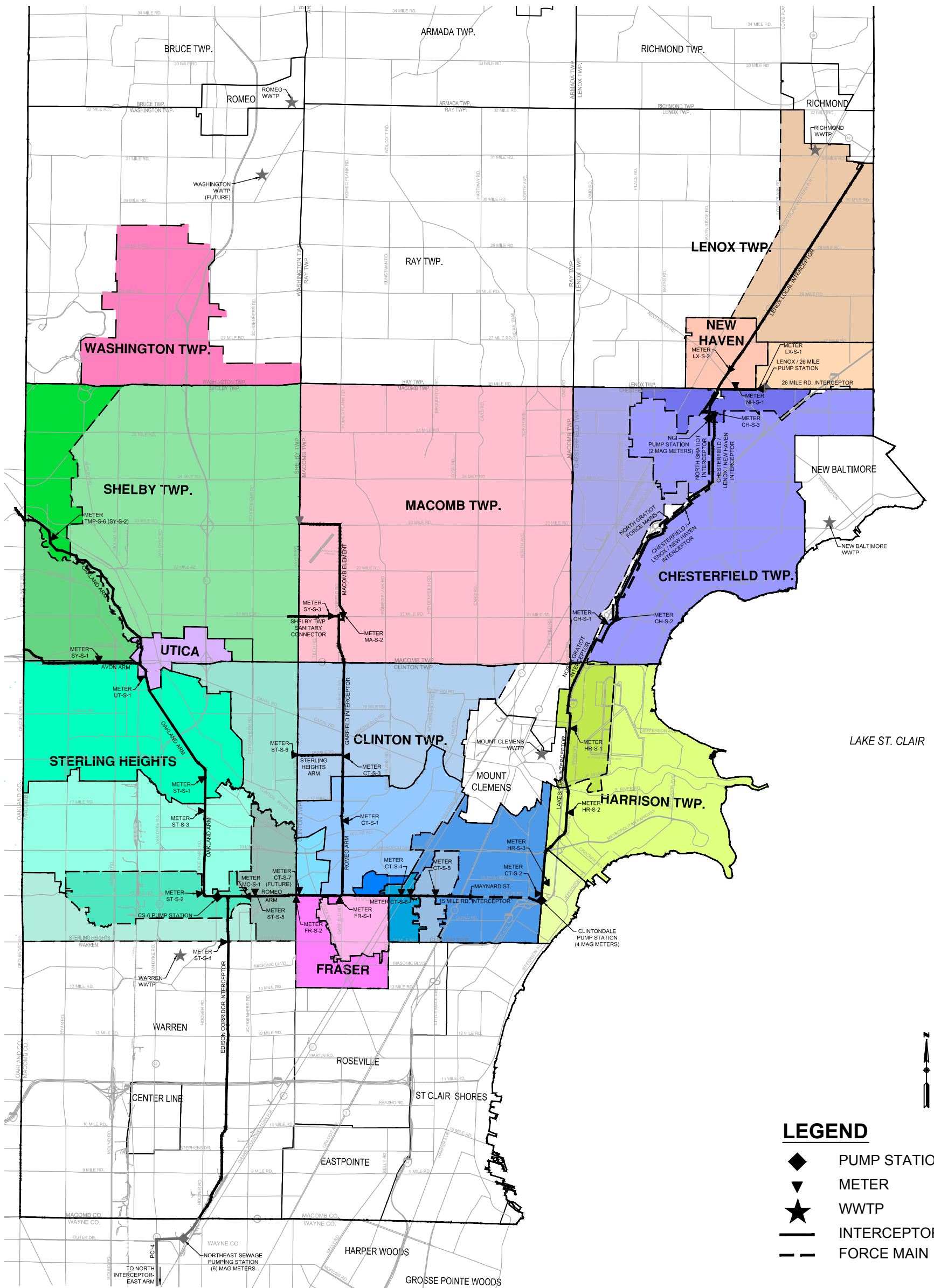
MACOMB INTERCEPTOR DRAIN
INTRA-COUNTY DRAINAGE BOARD
SEPTEMBER 12, 2022
10:30 A.M.
AGENDA

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

**Call in Number: 1-385-645-1319
Access Code: 310 230 337**

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for September 12, 2022	
3. Approval of Minutes for August 08, 2022	3
4. Public Participation	
5. Project Updates – Stephen Downing	7
6. Segment 5 Insurance Extension – Stephen Downing	22
Motion: To approve and authorize the Board Chair to execute the required documents to extend the Segment 5 Project Liability Insurance coverage for a 12-month period for the total premium of \$157,454.35.	
7. Phase 3 COVID Wastewater Monitoring - 100% State Grant Funded - Vince Astorino	25
Motion: To award the proposal for Phase 3 Covid Wastewater Monitoring to Aquasite for \$693,505 and authorization to execute the State grant agreement totaling \$728,180.	
8. Annual Critical Area Inspection Program – FK Engineering - Vince Astorino	84
Motion: To approve the proposal from FK Engineering for an amount not to exceed \$101,888 for annual inspection of the MIDD critical areas.	
9. Consideration for approval of invoices (see attached)	91
10. Financial Report – Bruce Manning	93
11. Adjourn	

MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT



LEGEND

- ◆ PUMP STATION
- ▼ METER
- ★ WWTP
- INTERCEPTOR
- - - FORCE MAIN



Candice S. Miller

MACOMB COUNTY PUBLIC WORKS COMMISSIONER



UPDATED: FEBRUARY 2017

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 8, 2022, at 11:10 A.M.

PRESENT: Candice S. Miller, Chair
Don VanSyckel, Member
Bryan Santo, Member

ALSO PRESENT: Vince Astorino, Operations & Flow Manager; Brian Baker, Chief Deputy; Steve Downing, Construction & Maintenance Manager; Norb Franz, Communications Manager; Denise Harwood, Financial Analyst; Bruce Manning, Finance Manager; Pam Sonnenberg, Administrative Assistant; Tom Stockel, Construction Supervisor

PRESENT VIA TELECONFERENCE: Mary Shepard, Environmental and Safety Services Supervisor City of Sterling Heights

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

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of July 11, 2022 were presented. A motion was made by Mr. VanSyckel, supported by Mr. Santo 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 some photos on the Segment 5 Rehabilitation project. As he showed pictures of the spray lining process, he mentioned that they had done a prior portion in 2017. Mr. Baker asked how the 2017 spray lining was holding up, and Mr. Downing said that they have inspected it and it is holding up well. He added that when they did the 2017 spray lining, the situation was ideal because it was full bypass. He also added that Oscar Renda is doing a great job. Mr. VanSyckel asked what the spray lining is made of and Mr. Downing said it is a geo polymer with small fibrous plastics in it. It's a cementitious product that mixes with water and has a bonding agent in it to help it bond to a surface. It needs about 3 hours of cure time before we can release flow.

Mr. VanSyckel asked if there were security cameras set up to monitor the electrical enclosure for the CS-12 Pump Station and Mr. Astorino replied that there are contractor cameras but we do not have cameras. He added that the contractor may have intrusion alarms and we could put cameras there to monitor.

Mr. Downing noted that as our spray lining crew moves downstream in the system, for safety reasons we will have to close Hayes north of 15 Mile road, between Moravian and 15 Mile because of where the manhole is located.

Mr. Downing added that there is not a lot to report on with the Phase II Grouting. We finished up all of the critically defined areas. Our crew went in to the 16 Mile and Garfield area where it was identified as critical on the basis of its location but found no infiltration or defects.

There was not a lot to report on regarding the Meter Facility Rehab. We are dealing with one leak at the manhole at SY-S-1. It's an area that is known for significant infiltration over the years. We have been working diligently to get this work done. The leak is still providing us issues. We are keeping the contract open just in case there are any additional expenses. We are in good shape and should be getting some money back.

Ric-Man continues to develop and submit the required submittals to the Engineer and Owner for review on the Segment 6 Rehabilitation project. The team is working with the insurance carrier on a Builder's Risk Claim to determine if a claim condition exists for the HOBAS pipe and installation of the remaining 240 feet of pipe. The cost estimates for the repair, additional work and engineering CCA were finalized and submitted to the insurance carrier. Hopefully we will have a resolution within the next month or so. The way the policy is written, the carrier has the ability to subrogate. The construction of the permanent CS-13 Shaft continued with the concrete placement of wall lift #1.

Ms. Miller said that we have already started work for these projects while we await our state grant award of \$72 million. The invoices that we have submitted so far are not for Chapaton, they are for Segment 5 and Segment 6. Mr. Baker said that we have done all of the paperwork for all of the specifications required, we are just waiting for the grant assignment to be signed and approved.

Lastly, Mr. Downing updated on the status of the Interceptor Inspection Program. Doetsch completed the manhole cover scanning and Fishbeck is reviewing the data. There are no other areas of concern. The Owner's Representatives, Engineering Consultant and Contractor, are coordinating completion of the remaining areas to be inspected, which included 8 Drop Shaft and Connecting Sewers.

Mr. Downing displayed a brief presentation update of the Romeo Arm Interceptor Segment 5 Lining and Segment 6 Rehabilitation Construction. The Segment 5 work that is completed to date is the CS-12 Temporary Earth Retention System and the Flume Romeo Arm Flow with Shaft. The work in progress is the CS-12 Finished Structure, CS-12 Drop Pipe Connections, CS-12 Pumping Components, Romeo Arm Spray Lining, and Romeo Arm Debris Removal. The work pending is the Romeo Arm Slip Lining and FR-S-2/CT-S-7 Lining. The Segment 6 Rehabilitation work completed to date includes the CS-13 Temporary Earth Retention System, Flume PCI-15C Flow with Shaft and PCI15C Debris Removal. The work in progress is the CS-13 Finished Structure and PCI-15C Slip Lining. The work pending is the Foul Air Duct, MH-1 Modification, FR-S-1 Spray Lining, Romeo Arm Debris Removal, Romeo Arm Slip Lining, and the CS-2 and CS-3 Spray Lining.

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

Adopted: YEAS: 3
NAYS: 0

Mr. Downing updated on the Drop Shaft Rehabilitation Change Order Request – Inland & AEW. This project was supposed to start in February of 2020 but was delayed due to the COVID-19 pandemic. The Contractor achieved substantial completion in June 2021 which was approximately 1 year after the original scheduled date. The Contractor was further delayed due to flooding at their Detroit office. We are happy to report that we are coming in under budget with Inland Waters contract in the amount of \$204,121.84. The bad news is that AEW ran over budget due to the extended construction

schedule and added scope during the design phase related to the Drop Bowls. The additional cost incurred is \$168,703.30.

A motion was made by Mr. VanSyckel, supported by Mr. Santo to approve Change Order #1 with a net decrease of \$204,121.84 to the Inland Waters Pollution Control Drop Shaft Rehabilitation construction contract.

Adopted: YEAS: 3
NAYS: 0

A motion was made by Mr. Santo, supported by Mr. VanSyckel to approve Change Order #1 with a net increase of \$168,703.30 to Anderson Eckstein & Westrick (AEW) Drop Shaft Rehabilitation engineering services contract.

Adopted: YEAS: 3
NAYS: 0

Mr. Astorino gave an update on the Garfield Interceptor Lining Pilot Project. Back in 2017 when Red Zone went through to inspect the pipe, there was some hydrogen sulfite damage, and at the time there was a recommendation to do some preventative maintenance. Then in 2022, when the grouting team worked their way into this area, they found the degradation had accelerated, rebar is exposed and therefore must be repaired quickly to prevent a catastrophic failure. We thought this gave us a unique opportunity to evaluate and test a different rehabilitation method. We wanted to find a solution that would minimize community impact. We also wanted the ability to maintain flows to the pipe and not have to do a complete bypass. We wanted it to be a structural rehabilitation and corrosion resistant.

Mr. Astorino presented four different rehabilitation methods that had been evaluated: Spray lining, CIPP Lining, Slip-Lining, and Spiral Wound PVC Liner Systems. Mr. Astorino said that the Spiral Wound PVC Liner Systems can be installed through a manhole, has minimal community impact, and has a long service life.

He reached out to 3 different manufacturers which have similar products. Sekisui, Contech, and Danby. Contech would not provide a price as they felt they could not be cost competitive. Danby would not provide a firm price for the project, they claimed they did not have enough information to bid the project which we disagree with. Sekisui provided full cost, and full design through an installer. We called the references and received all positive feedback. Sekisui met all design parameters for this project. There has been over 4 million feet of product installed in the US. It has a 50 year design life, and the pipe diameter will only be reduced down to 78" compared to 72" for Hobas. There is no hydraulic impact looking at 2045 Hydraulic Model scenarios and it takes about 3 month to install this product. Mr. Astorino then presented a video of the Spiral Wound PVC Liner System being installed in Minneapolis, MN. He added that we are the first in the State to use this product. He did a price comparison with HOBAS. The product itself is a bit more in cost, but the savings is in the Design Engineering.

A motion was made by Mr. Santo, supported by Mr. VanSyckel to approve the proposal from SAK Construction, LLC for an amount not to exceed \$2,394,385 for lining repairs to the Garfield Interceptor.

Adopted: YEAS: 3
NAYS: 0

Mr. Astorino then proposed a not to exceed amount for AEW to provide construction contract administration services for the Garfield Interceptor Lining Project.

A motion was made by Mr. VanSyckel, supported by Mr. Santo to approve the proposal from Anderson, Eckstein & Westrick for an amount not to exceed \$127,873.50 to provide construction contract administration services for the Garfield Interceptor lining project.

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$5,325,317.93 to the board for review and approval.

A motion was made by Mr. Santo, supported by Mr. VanSyckel 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. Santo.

Adopted: YEAS: 3
NAYS: 0

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

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 12:00 P.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 8, 2022 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: 08/08/22



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Stephen Downing, Construction & Maintenance Manager

Date: September 12, 2022

Subject: Construction Projects Status Updates for September 2022 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.
3. Continued spray-lining the 8-foot diameter interceptor (PCI-37).
4. Continued construction of the CS-12 permanent structure, which includes:
 - a. Rebar installation for the walls and gate columns
 - b. Concrete formwork removal/installation

- c. Concrete placement for permanent structure walls
- d. Application of the protective epoxy coating on the lower half of the permanent structure.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	10/21/2020	\$28,807,500.00
Current Contract Amount	8/31/2022	\$31,702,534.88
Total Spent to Date	8/31/2022	\$13,829,177.93
Remaining Budget	8/31/2022	\$17,873,356.95



Figure 1 – Geo-Polymer Spray Lining in PCI-37

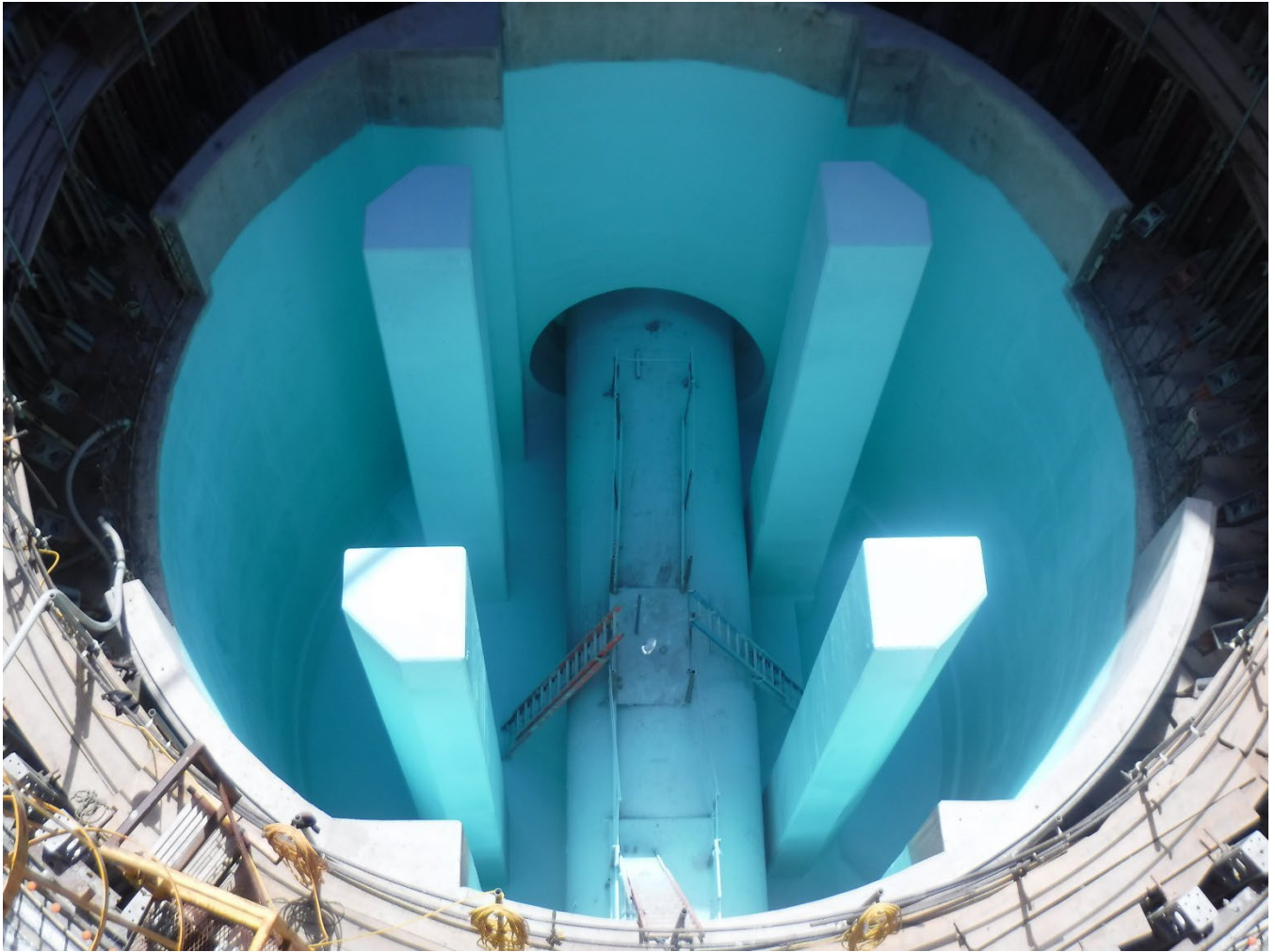


Figure 2 - CS-12 After Application of the Protective Epoxy Coating



Figure 3 – CS-12 Protective Epoxy Coating Application



Figure 4 – Dry-fitting the CS-12 Pumps Prior to Application of Protective Epoxy Coating

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. AEW, Doetsch and MCPWO personnel have evaluated where the crew will move to next which is dependent upon the flow control needs and coordination with other projects. This coordination will require grouting to occur on afternoons or nights based on where in the system whether they are working in the Garfield or Lakeshore Interceptors.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	6/24/2020	\$3,000,000.00
Change Order No. 1	3/14/2022	\$3,000,000.00
Current Contract Amount	3/14/2022	\$6,000,000.00
Total Spent to Date	8/31/2022	\$4,432,736.20
Remaining Budget	8/31/2022	\$1,567,263.80

Meter Facility Rehabilitation

Contractor: Weiss Construction

Engineering Consultant: HRC

Project Description:

The project includes the rehabilitation of three sewerage meter facilities; work includes removal and application of concrete surface repairs and protective coatings, televising, cleaning, and spray-lining the existing influent and effluent connecting sewers; rehabilitation existing adjacent sanitary manholes; improving access and safety features for maintenance personnel; and replacing existing electrical systems.

The sites, SY-S-1 and SY-S-2 are in Shelby Township and WA-S-1 is in Washington Township. The meter facilities are the point of transition of sewerage flow from the local systems into the MIDDD Interceptors. Each of the metering facilities provides the critical flow data required to allocate the billing apportionment for each of the MIDDD member communities.

The Shelby Township meter facilities, originally constructed by DWSD, have reached the end of their useful life and are need of rehabilitation. The MCPWO previously rehabilitated several of the older metering facilities in the system, which were also constructed by DWSD.

The Washington Township meter facility is currently owned by Washington Township, which is a unique situation in the MIDDD system. Typically, the MIDDD assumes ownership of the billing meter facilities, which includes operation and maintenance activity. As such, the MCPWO negotiated a transfer agreement with Washington Township to transfer ownership of this asset to the MIDDD. The two entities agreed to equitable cost sharing terms within the agreement.

The project was designed by Hubbell, Roth and Clark and the construction contract was awarded to Weiss Construction. The total construction cost for the project is \$857,159.00. The work started in April 2021.

Significant project tasks that have occurred over the past month:

1. The Contractor is finalizing the closeout documents.
2. The final balancing change order will be presented to the Board on October 17, 2022.
3. There were two additional items identified for corrective action during the final punchlist walkthrough in September. The Contractor is moving forward with the correction of these items which will delay final closeout of the project until October 2022.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	12/3/2020	\$857,159.00
Current Contract Amount	3/30/2022	\$863,168.85
Total Spent to Date	3/30/2022	\$770,291.64
Remaining Budget	3/30/2022	\$92,877.21

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 March 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 & Owner for review.
2. The Project team is working with the insurance carrier on a Builder's Risk Claim to determine if a claim condition exists for the damaged HOBAS pipe and installation of the remaining 240 feet of pipe.
 - a. The cost estimates for the repair, additional work and Engineering CCA were finalized and submitted to the insurance carrier.
 - b. The insurance carrier assigned subrogation counsel to this claim, the information requested was provided for their reference.
3. The construction of the permanent CS-13 Shaft continued with the concrete placement of wall lift #2.
4. Performed utility locating along the FAD alignment and near existing Control Structure #3.
5. Installed the thimble for the new sluice gate.

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	8/31/2022	\$13,674,209.70
Total Spent to Date	8/31/2022	\$4,358,670.02
Remaining Budget	8/31/2022	\$9,315,539.68

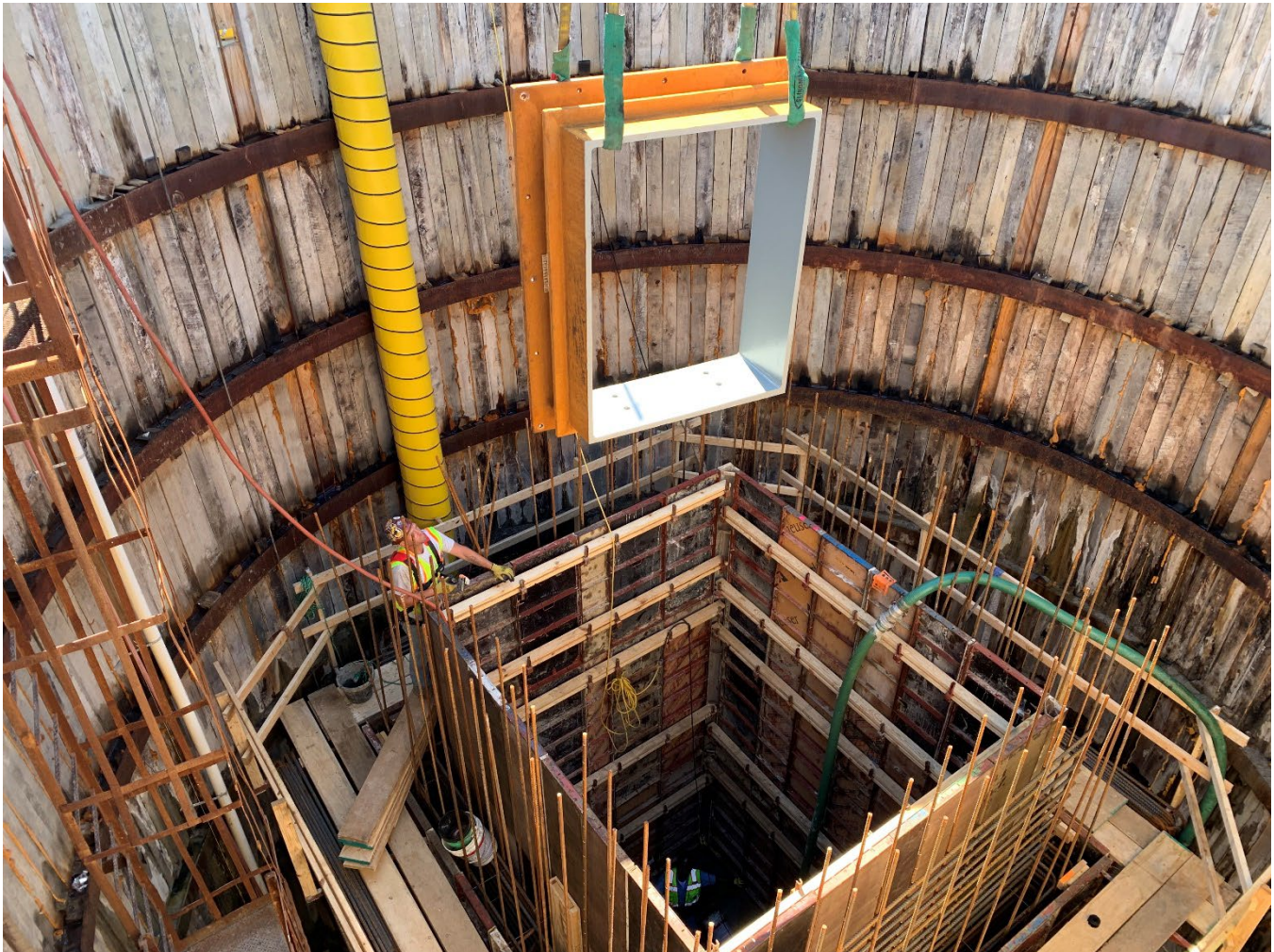


Figure 5 - Lowering Thimble into Position



Figure 6 - Installing Rebar around Thimble



Figure 7 - Verifying the Thimble is Level



Figure 8 - Concrete Placement for Structure Walls



Figure 9 - Installing Rebar for Structure Walls



Figure 10 - Rebar Installation for Structure Walls

Interceptor Inspection Program

Contractor: Doetsch Environmental Services, Inc.

Engineering Consultant: Fishbeck

Project Description:

The 2020 sewer inspection program was awarded to Doetsch Environmental Services in November 2020. The inspection program includes inspection of approximately 26 miles of sanitary sewer, 360 manholes and other aspects of the sanitary sewage infrastructure across multiple drainage districts, including the MIDDD.

The MIDDD portion of the inspection program includes 101,335 linear feet (19.25 miles) of pipe ranging in diameter from 24" to 132" and 145 manhole structures. Additionally, inspection of 8 junction chambers and 8 Drop Shaft/Connecting sewers will be performed.

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. The 2020 inspection program is the largest ever performed by the Macomb County Public Works Office. The project started in May 2021 and is expected to be completed in November of 2022.

Significant project tasks that have occurred over the past month:

1. The Consultant is reviewing the data and preparing inspection reports.
2. The Owner's Representatives, Engineering Consultant and Contractor are coordinating completion of the remaining areas to be inspected, which included:
 - a. 8 Drop Shaft and Connecting Sewers
 - b. Sections of the Lakeshore Interceptor
3. Review of the data has not revealed any additional areas of concern.

Construction Costs:

	Date (if applicable)	
Original Contract Amount	1/19/2021	\$280,034.00
Total Spent to Date	8/31/2022	\$184,971.35
Remaining Budget	8/31/2022	\$95,062.65

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



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

From: Stephen Downing, Construction & Maintenance Manager

Date: September 12, 2022

Subject: Segment 5 OCIP Liability Extension Premium

The Macomb Interceptor Drain Drainage District authorized the Board Chair to bind liability insurance coverage for the less than or equal to the estimates provided by Meadowbrook Insurance Agency (MIA) at the August 10, 2020 Drain Board meeting. The Board was provided an update of the actual liability premium costs at the following month's meeting on September 10, 2020. The original premium amounts are shown in the Table 1.

The original construction duration for the Segment 5 Rehabilitation was approximately 24-months which is the basis for the original 24-month policy term. As the Board is aware, the project duration has been extended for several reasons, which include:

- Additional work added to the project by the Owner/Engineer
- The Collapse of the CS-12 Shaft in December of 2020
- Delays due to limited pumping capacity at the NESPS in June and August of 2021
- Delays due to the Contractor efficiency and coordination with their sub-contractors

The Contractor was issued formal Notice to Proceed with an effective date of September 21, 2020 with a required substantial completion date of September 21, 2022 and final completion date of October 21, 2022. The contract has been extended a total of 169 days as a result of Change Orders #1-4 related to added work to the project, delays due to the NESPS pumping capacity issues and the CS-12 shaft collapse Builder's Risk claim settlement. The current contractually required substantial completion date is March 9, 2023 and final completion date is April 9, 2023.

The Contractor is currently tracking toward a substantial completion date of May 22, 2023 and a final completion of June 26, 2023. The Contractor is working to gain time back in their current schedule through greater efficiency in the execution of major project tasks such as spray-lining, sediment removal and CS-12 Pump Station construction. They have been able to reduce their schedule already by at least 2-months and it is anticipated that trend will continue to achieve the current contractually required completion dates.

As a result of the extended Project schedule an extension of the existing liability coverage within the OCIP Program is required. The OCIP Administrator, MIA, has recommended a 12-month extension of the current liability coverage. The recommendation is based on the Contractor's current construction schedule and the potential for additional work added to the Project by the Owner/Engineer.

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

MIA has negotiated an extension of the current Liability coverage for a total of \$157,454.35. A summary of these costs is shown in Table 1. It should also be noted that the total Project value has increased since the original liability coverage was bound.

Table 1 - Segment 5 Liability Extension Premium Summary

Segment 5 Liability Extension Premium Summary		
	Bound	Extension
Term	24 Months	Adding 12 Months
Construction Value	\$25,400,000	\$31,702,534
General Liability	\$ 124,222.45	\$ 30,523.48
5M Excess	\$ 84,145.05	\$ 20,450.80
5M x 5M	\$ 49,092.38	\$ 12,812.50
10M x 10M	\$ 70,216.88	\$ 34,561.98
15M x 20M	\$ 67,957.50	\$ 33,583.10
15M x 35M	\$ 51,500.00	\$ 25,522.50
Total	\$ 447,134.26	\$ 157,454.35

The action is that the Macomb Interceptor Drain Drainage District Board authorize the Board Chair to execute the required documents to extend the Liability Coverage for a 12-month period for the total premium of \$157,454.35.

Attachments: Meadowbrook Insurance Agency Memo

September 7, 2022

Macomb County Public Works
ATTN: Stephen Downing
21777 Dunham Road
Clinton Township, MI 48036

RE: Segment 5 Liability Insurance Extension

Dear Mr. Downing,

Please find summary below for the liability insurance extension on the owner-controlled insurance program (OCIP) for the Macomb Interceptor Drain Drainage District – Romeo Arm Lining Segment 5 Project. The summary below includes adding an additional 12 months of coverage to the current 24-month liability policy adjusting the policy expiration from 09/04/2022 to 09/04/2023, it also includes capturing the current project cost of \$31,702,534 from the original estimate at \$25,400,000. Total additional premium for this extension is \$157,454.35.

MCPW Segment 5 Liability Tower Extension Summary			
Carrier	Policy	Bound Policies	Extension
		24 Month Term \$25,400,000 Construction Value	Adding 12 Months \$31,702,534 Construction Value
Everest Indemnity Ins. Co.	General Liability	\$ 124,222.45	\$ 30,523.48
Everest Indemnity Ins. Co.	5M Excess	\$ 84,145.05	\$ 20,450.80
Navigators Specialty Ins. Co.	5M x 5M	\$ 49,092.38	\$ 12,812.50
Capitol Specialty Ins. Corp.	10M x 10M	\$ 70,216.88	\$ 34,561.98
Endurance American Specialty	15M x 20M	\$ 67,957.50	\$ 33,583.10
Liberty Mutual Ins. Co.	15M x 35M	\$ 51,500.00	\$ 25,522.50
	Total	\$ 447,134.26	\$ 157,454.35

Invoices are due upon receipt from our office and additional premium is made payable to Meadowbrook Insurance Agency.

Please let me know if you have any questions.

Thank you,



Patrick Kennedy
Account Executive
Meadowbrook Insurance Agency



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: August 19, 2022

Subject: State Grant for COVID Wastewater Monitoring – Aquasight Phase 3 Recommendation

The Macomb County Public Works Office (MCPWO) has been working with the Michigan Department of Health and Human Services (MDHHS) to monitor COVID within the wastewater systems throughout Macomb County. In May of 2021, MCPWO received a grant from MDHHS broken out in three phases that are 100% funded. The three phases are funded as follows:

	Dollar Amount	Time Range
Phase 1	\$578,683	6/1/21 to 9/30/21
Phase 2	\$1,366,943	10/1/21 to 9/30/22
Phase 3	\$728,180	10/1/22 to 7/31/23
Total Amount	\$2,673,806	

MCPWO is currently nearing the end of the Phase 2 grant and has been working with the Macomb County Health Department, Aquasight, Hesco, and Oakland University. This program has been successful to this point and with this program there are a total of 19 sites around Macomb County. These sites are currently being tested 2 times per week. For the Phase 3 portion of this grant, the sampling is being reduced to 1 time per week. The data to this point has typically been ahead of clinical testing by 7-10 days which can help our health department make informed decisions in advance.

This project is now moving into Phase 3 of the grant and MCPWO is recommending to continue this testing with Aquasight. Attached is the proposal for Aquasight in the amount of \$693,505. MCPWO has also built in \$34,675 to cover administrative expenses that will be incurred during the duration of the Phase 3 testing. This entire amount is 100% covered by the MDHHS grant. **This Phase 3 contract conforms to the MIDD contract structure and MCPWO is recommending that the board approve Aquasight in the amount of \$693,505 and approval to sign the Phase 3 contract with MDHHS in the total amount of \$728,180.**

Their proposal has been attached for reference.

Attachment: Aquasight Phase 3 Proposal

ORDER FORM AND SCOPE OF SERVICES

1. OWNER: **MACOMB INTERCEPTOR DRAIN
DRAINAGE DISTRICT
21777 Dunham Road
Clinton Township, MI 48036**

2. Program: **CEWS
COVID-19 Early Warning System
(Appendix A, B, D)**

3. Term: **October 1st, 2022, to July 31th 2023**

4. Fees: **\$693,505
(Appendix C)**

5. “CEWS” Program Details
 - Scope of Work (Appendix A)
 - Project Plan (Appendix B)
 - Project Costs (Appendix C)
 - Monitoring Sites (Appendix D)

6. Terms & Conditions:
 - Project will start Oct 1st, 2022, and end July 31th, 2023.
 - Fees will be invoiced as defined in the schedule in Appendix E and is payable within 30 days.
 - General terms and conditions are attached in Appendix F and is approved by MIDDD and applied on existing on-going contracts
 - Terms and Conditions as per existing MIDDD Contract number WWS-2019-007 will apply for this program
 - Sample preparation and lab testing will be performed by OU labs as per protocols defined by the lab

- WW based COVID-19 testing is a rapidly evolving science, and standards, testing and interpretation are being developed. MSU/OU experts assigned will make best efforts to ensure latest available best practice protocols will be utilized for the pilot program
- ACE platform will be used for flow data

**OWNER: MACOMB INTERCEPTOR
DRAIN DRAINAGE DISTRICT**

PROVIDER:

By: Candice S. Miller
Its: Public Works Commissioner

By: Mahesh Lunani
Its: CEO

A. Scope of Work

Project Management and Coordination: Overall project management and coordination for the sewage surveillance program at sites described in Appendix D and across six different agencies and local health departments. This includes development of schedule, creation of work plan, engineering & installation of composite samplers, sampling dates, sampling kit preparation, pre-paid shipment packages, chain of custody forms, on-ground logistics management, lab coordination, results review, issue management, LHD coordination and project meetings.

Sampling Infrastructure Design and Installation: Optimal site identification, site feasibility analysis, selection of the right sampler, purchase samplers, composite samplers, hardware installation, perform flow testing and troubleshooting, and determine optimal sampling aliquot and time window.

Weekly Sample Logistics and Delivery: Establish the schedule for on-site sample pick up and drop off, crew of two to three people preparing samplers, picking up samples and delivering samples to lab. For sites that are shipping the samples, pre-paid shipping labels as well as sample kits including cool packs will be provided to ensure sample is well preserved for testing and minimal lift on WWTP teams' operator's time.

Lab Testing, Variants Analysis and Raw ddPCR Data Quality Checks: Molecular quantification of SARS-CoV-2 virus is conducted using CDC qPCR detection method. The SARS CoV-2 target is amplified by ddPCR using CDC recommended primer and probe sets (N1 and N2). The percent recovery for each sample is analyzed by spiking the sample with Phi6 bacteriophage. Quality assurance and control measures (QA/QC) are performed for all samples. A minimum of 10,000 droplets are required that pass droplet formation QA/QC before a sample can be considered for further analysis. Positive and negative ddPCR controls are run concurrently with all samples for ddPCR analysis. For variant analysis, we will use a strategy developed by GT Molecular, LLC that allows us to assess the relative abundance of the UK, South Africa, and Brazilian variants.

Data Analytics, Reporting & Communication: meta data on sampling site, quality checks on lab data outputs, data conversion, calibration, and normalization. Create analytics and trending, variant analysis, heat maps, on-line dashboard updates, use of clinical case data, correlation and statistical analysis, rapid and instant communication with LHDs and reporting agencies, set up of automated notification system of results availability, follow up on actions.

Training and Access to Surveillance System: Train on how to access the reporting tool, review lab data, interpret the normalization information, read trends, analytics and heat map, when and what actions to take and closely coordinate with LHD and decision-making authorities.

LHD and/or Stakeholder Timely Decision-Making Integration: Frequent touchpoints will be established with decision making and LHD as and when required. Twice a week when the system goes live with new insights so decisions can be made on additional testing and/or isolation or enhanced social distancing activities. This communication along with access by LHD for the reporting system has been made available to severely cut down communication time.

B. Project Plan

Activity(ies)	Responsible Individual(s)	Timeline		Deliverable(s)
		Start By	End By	
Clinton Twp Sampling (7 Sites)				
1x/wk Sampling continues	Dave Burkel, Vince Aslorino	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
MCHD Sampling (3 Sites)				
1x/wk Sampling continues	Dave Burkel, Vince Aslorino	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
City of Warren WWTP Sampling				
2x/wk Sampling continues	Bryan Clor	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
City of Warren Senior Center Sampling (4 sites)				
1x/wk Sampling continues	Bryan Clor	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
Mount Clemens WWTP Sampling				
Distribution of Sample Materials	David Inman, Dave Szlag	10/1/22		
1x/wk Sampling continues	Leonard Bertrand, David Inman	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
Richmond WWTP Sampling				
Distribution of Sample Materials	David Inman, Dave Szlag	10/1/22		
1x/wk Sampling continues	Beth Eldridge, David Inman	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
Romeo WWTP Sampling				
Distribution of Sample Materials	David Inman, Dave Szlag	10/1/22		
1x/wk Sampling continues	Al Lapeer, David Inman	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS
New Baltimore WWTP Sampling				
Distribution of Sample Materials	David Inman, Dave Szlag	10/1/22		
1x/wk Sampling continues	Bill Bade, David Inman	10/1/22		
ddPCR analysis continues	Dave Szlag	10/1/22		
Data Uploaded into CEWS	Dave Szlag, Parma Bandyopadhyay	10/1/22		
As needed communication with MCHD	Mahesh Lunani, David Inman	10/1/22		
Caseload/Spread Report	Parma Bandyopadhyay		7/31/23	Data shared with MDHHS

C. Project Costs

Category	Oct -22 to Jul 2023
Project Management, Set Up New Sites, Planning and Day to Day Program Execution, LHD Integration, Site Meta Data	\$ 90,000
Site Review, Sampling Infrastructure Design & Installation, Flow Testing and Optimization	
Weekly Sampling Kits, Sample Pick Up and Drop Off Logistics, Shipment & Delivery via UPS, Chain of Custody, Schedule Management	\$ 154,155
Lab Testing Kits, Variant Analysis, ddPCR Data Quality Checks, System & Data Management	\$ 326,800
Sewage Surveillance Analytics & Reporting, Surveillance System, Notification and Communication, Clinical Case Data and Correlations	\$ 122,550
Total	\$ 693,505

D. Monitoring Sites

Site	Type of Facility	Latitude	Longitude	Street Address or Location	Sampling Frequency/ week (yr 1/yr2)	# of weeks/yr to be samples	Sample Type	Estimated Population Served	Anticipated collection start date	COVID-19 (CEWS)
Clinton Twp Sewer Shed #1	SS	42.5771919	-82.952047	38201 Garfield @ old DPW yard	1x	52	8hr Peak Composite	19662	8/1/22	Yes
Clinton Twp Sewer Shed #2	SS	42.5540366	-82.864661	35115 Union Lake Rd @ Clintondale Pump Station	1x	52	8hr Peak Composite	29555	8/1/22	Yes
Clinton Twp Sewer Shed #3	SS	42.5979398	-82.952743	20696 15 Mile Rd @ Little Mack	1x	52	8hr Peak Composite	56026	8/1/22	Yes
Clinton Twp Sewer Shed #4	SS	42.5540382	-82.934368	18275 15 Mile Rd @ Simon	1x	52	8hr Peak Composite	2715	8/1/22	Yes
Clinton Twp Sewer Shed #5	SS	42.5545934	-82.910564	19655 15 Mile Rd @ Beaconsfield	1x	52	8hr Peak Composite	9083	8/1/22	Yes
Clinton Twp Sewer Shed #6	SS	42.5544519	-82.920615	20696 15 Mile Rd @ Little Mack	1x	52	8hr Peak Composite	4934	8/1/22	Yes
Clinton Twp Sewer Shed #7	SS	42.553286	-82.969713	15 Mile @ Hayes	1x	52	8hr Peak Composite	1976	8/1/22	Yes
Macomb Correctional Facility	CF	42.7201688	-82.780188	32989 26 Mile Rd	1x	52	24hr Composite	1500	8/1/22	Yes
Macomb County Jail	CF	42.6169129	-82.890981	43565 Elizabeth Rd, Mt Clemens, MI 48043	1x	52	24hr Composite	1250	8/1/22	Yes
Martha T Berry Medical Care Facility	LTC	42.6153036	-82.892079	43533 Elizabeth St, Mt Clemens, MI 48043	1x	52	24hr Composite	250	8/1/22	Yes
Mt Clemens WWTP	WWTP	42.6016637	-82.866985	1750 Clara St, Mt Clemens, MI 48043	1x	52	24hr Composite	16300	8/1/22	Yes
New Baltimore WWTP	WWTP	42.6779639	-82.751196	35319 Crickewood Blvd, New Baltimore, MI 48047	1x	52	24hr Composite	12400	8/1/22	Yes
Richmond WWTP	WWTP	42.7953059	-82.757897	35653 31 Mile Rd, Richmond, MI 48062	1x	52	24hr Composite	5800	8/1/22	Yes
Romeo WWTP	WWTP	42.8031713	-82.986559	14787 32 Mile Rd, Bruce Township, MI 48065	1x	52	24hr Composite	3900	8/1/22	Yes
Stillwell Manor-Joseph Coach Manor Residential Deduc	Senior Living Deduc	42.488632	-83.011369	Camer Ave and Burg Ave	1x	52	24hr Composite	190	8/1/22	Yes
Stillwell Manor-Joseph Coach Manor	Senior Living Community	42.489995	-83.012793	26600 Burg Rd, Warren, MI 48089	1x	52	24hr Composite	400	8/1/22	Yes
Tivoli Manor	Senior Living Community	42.502845	-83.005686	28103 Imperial Dr, Warren, MI 48093	1x	52	24hr Composite	120	8/1/22	Yes
Ukrainian Village	Senior Living Community	42.4863623	-83.070482	26377 Ryan Rd, Warren, MI 48091	1x	52	24hr Composite	309	8/1/22	Yes
Warren WWRF	WWTP	42.5330963	-83.024306	32360 Warlop Ave, Warren, MI 48093	1x	52	24hr Composite	135000	8/1/22	Yes
Total Sites Selected										19

E. Invoicing Schedule

Invoice Date	Amount
11/1/22	\$ 79,175
12/1/22	\$ 65,140
1/1/23	\$ 79,175
2/1/23	\$ 65,140
3/1/23	\$ 65,140
4/1/23	\$ 79,175
5/1/23	\$ 65,140
6/1/23	\$ 65,140
7/1/23	\$ 65,140
8/1/23	\$ 65,140

F. Terms and Conditions

SOFTWARE SERVICE PROVIDER SERVICES AGREEMENT

This Software Service Provider Services Agreement (“Contract”) is made this ___ day of May, 2019 between the MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT (“OWNER”), and AQUASIGHT (“Provider”). In this Contract, Provider or the OWNER may also be referred to individually as a “Party” or jointly as the “Parties”.

In consideration of the mutual promises, obligations, representations, and assurances in this Contract, the Parties agree to the following:

§1. CONTRACT DOCUMENTS AND DEFINITIONS

The following words and expressions shall be defined as follows:

- 1.1. “Claims and Liabilities” means any alleged losses, claims, complaints, demands for relief or damages, lawsuits, causes of action, proceedings, administrative or governmental actions or proceedings, judgments, deficiencies, liabilities, fines, penalties, costs, and expenses of any kind or nature (including, but not limited to, reasonable attorney fees, litigation expenses, and court costs) which are imposed on, incurred by, or asserted against the OWNER, or for which the OWNER may become legally and/or contractually obligated to pay or defend against, whether direct, indirect, or consequential, whether based upon any alleged violation of the federal or state constitutions or any federal, state, or local statute, ordinance, rule, regulation, or state common law, whether any such claims are brought in law or equity, tort, contract, or otherwise, and/or whether commenced or threatened.

- 1.2. “Confidential Information” means all information that the OWNER is required or permitted by law to keep confidential and any information that may be subject to attorney-client, work product, or other privilege.

- 1.3. “Contract Administrator” means the individual designated by the OWNER to act as a liaison between the OWNER and the Provider. Any questions or problems the Provider may have concerning the work under this Contract should be directed to this individual.

- 1.4. “Contract Documents” means the following documents which are included and fully incorporated into this Contract:
 - 1.4.1. Exhibit I: Provider Insurance Requirements
 - 1.4.2. Exhibit II: Order Form and Scope of Services
 - 1.4.3. Exhibit III: Rate Schedule

- 1.5. “Data” means information, content, and other data that may be exchanged electronically between OWNER and Aquasight.
- 1.6. “Documentation” means the user manuals and/or technical publications as applicable, supplied in connection with Software relating to the installation, use, and administration of Software.
- 1.7. “OWNER Agent” means all OWNER board members, officials, employees (including employees shared with Macomb County), representatives, and/or any such persons’ successor(s). “OWNER Agent” shall include any person who is or was an “OWNER Agent” anytime during the term of this Contract.
- 1.8. “Provider Employee” means without limitation, any officers, directors, managers, employees, and representatives of Provider, and also includes any Provider subcontractors, consultants, independent contractors, or suppliers. “Provider Employee” shall include any person who is or was a Provider Employee at any time during the term of this Contract.
- 1.9. “E-Verify” is an internet-based system operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration (SSA) that allows participating employers to electronically verify the employment eligibility of their new hired employees. For more information and to register visit <https://e-verify.uscis.gov/enroll/>.
- 1.10. “Intellectual Property” means any developments, improvements, designs, innovation, and materials that may be the subject of a trademark/servicemark, copyright or patent, trade secrets, or Proprietary Information.
- 1.11. “Proprietary Information” means ideas, concepts, inventions, and processes related to the development and operation of computer software and systems such as source code, object code, security procedures, and passwords.
- 1.12. “Services” means on-boarding, implementation, initial deployment, maintenance, administration, subscription, technical, training, consulting, support and other professional services provided by Aquasight in connection with or otherwise associated with Software as described in the Order Form.

- 1.13. “Software” means the proprietary software and platform employed by Aquasight to deliver Services and its associated technology (if applicable), and any modified versions and copies of, and upgrades, updates and additions to Software, provided to OWNER by Aquasight, including Software and access thereto provided on a Software as a Service (SaaS) basis.
- 1.14. “Working Day” means any calendar day except Saturday, Sunday, and OWNER legal holidays.
- 1.15. “Written Notice” means a communication in writing delivered in person, by first class mail, or by overnight delivery by a reputable national delivery service to the Party’s address identified in Section 10.27 hereof.

§2. CONTRACT EFFECTIVE DATE, TERM, AND TERMINATION

- 2.1. The effective date of this Contract shall be stated on the first page of this Contract. Notwithstanding the above, under no circumstances shall this Contract be effective and binding and no payments to the Provider shall be due or owing for any Provider services until and unless:
- 2.1.1. This Contract is signed by an employee of Provider, legally authorized to bind the Provider.
- 2.1.2. Any and all Provider Certificates of Insurance and any other conditions precedent to the Contract have been submitted and accepted by the OWNER.
- 2.1.3. The OWNER Board has approved the retention of Provider.
- 2.2. The term of this Contract shall begin on the Effective Date for a period of three (3) years (the “Initial Term”). The Contract may be renewed for successive three (3) year terms (each a “Renewal Term”) upon the written agreement of both Parties, executed not less than sixty (60) days prior to the expiration of the Initial Term or Renewal Term, as applicable.
- 2.3. Right to Terminate.
- 2.3.1. Owner’s Right to Terminate for Any Reason.
- a. During the On-Boarding Phase. The OWNER may terminate and/or cancel this Contract at any time during the onboarding phase of this project, upon seven (7) days Written Notice to the Provider, for any reason, with or without cause, including a termination for the convenience of the OWNER, without incurring obligation or penalty of any kind. The OWNER’s sole obligation in the event of termination is for payment for actual services rendered by the Provider before the effective date of termination
- b. During the Subscription Phase. The OWNER may terminate and/or cancel this Contract at any time during the subscription phase of this project, upon thirty (30) days Written Notice to the Provider, for any reason, including a termination for the convenience of the OWNER. In the event of early termination pursuant to this

paragraph 2.3.1.b., OWNER's sole obligation to Provider will be to pay the remainder of the subscription fee, as specified in Exhibit II, for the current annual subscription term.

2.3.2. Parties' Right to Terminate for Breach. If either Party (the Non-Breaching Party) believes that the other Party (the "Breaching Party") materially breached one or more of its obligations under this Contract, then the Non-Breaching Party may deliver Written Notice of such material breach to the Breaching Party specifying the nature of the alleged breach in reasonable detail (a "Default Notice"). Thereafter, the Non-Breaching Party shall have the right to terminate this Agreement if the breach asserted in such Default Notice has not been cured within thirty (30) days after such Default Notice. If OWNER terminates this Contract pursuant to this paragraph 2.3.2, OWNER shall be entitled to a pro-rated refund of the unused portion of the subscription fee for the remainder of the current annual subscription term.

2.4. The OWNER shall not under any circumstances, in the event of termination or otherwise, be liable to the Provider for consequential damages of any kind, including but not limited to loss of income, lost profits, or any loss of business opportunities, revenues, or any other economic benefit.

2.5. Effect of Termination or Expiration. Promptly upon termination or expiration of this Agreement for any reason, OWNER shall cease using and accessing the Software. Termination of this Agreement shall be in addition to and not in limitation of any other rights and remedies to which either Party is or may become entitled. In the event of termination or expiration of this Agreement for any reason, Aquasight will provide all OWNER generated clean Data (i.e. raw Data that has been corrected and auto-filled by the Software), to OWNER pursuant to a separate Statement of Work to be mutually agreed to by the Parties, but such production shall be no later than 45 days after termination or expiration. Aquasight will retain a copy of OWNER raw Data for a period of one year after termination or expiration of this Agreement. After the expiration of the one-year period, Aquasight shall have the right to delete and destroy all OWNER raw Data with notice to OWNER.

§3. SCOPE OF PROVIDER'S SERVICES AND CHANGE ORDER PROCESS

3.1. The Provider shall perform all work identified and itemized in Exhibit II: "Order Form and Scope of Provider's Services" and this Contract.

3.2. Hosting and Software Services. Aquasight agrees to provide the hosting services described herein and as may be set forth in more detail in the applicable Order Form, including the right of OWNER to access, view, download, transmit, and use all data transmitted by OWNER or OWNER's systems and facilities to Aquasight ("OWNER Data"). Aquasight hereby grants OWNER a non-exclusive, non-transferable, worldwide right to use and access the Software solely for OWNER's own internal business purposes, subject to the terms and conditions of this Agreement. Only employees of OWNER properly authorized by OWNER for the performance of their job responsibility for OWNER ("Authorized Users") shall be entitled to access and use the Software. Only the number of Authorized Users indicated on the Order Form are permitted to access and use the Software. The Software may be hosted on hardware owned,

operated, and managed by Aquasight's third party service providers. Upon OWNER's request, Aquasight shall provide reasonable information to OWNER with respect to Aquasight's third party hosting services provider. Aquasight shall have the right to modify the Software in its sole discretion, provided that Aquasight shall not materially diminish the performance or functionality of the Software without OWNER's prior written consent.

3.3. Change Order Process.

3.3.1. Contract Change Orders, which must be in writing and executed by OWNER to be effective and binding, shall be used to reflect additions to, reductions in, or changes to the Order Form and Scope of Services (Exhibit II), Rate Schedule (Exhibit III), Contract price, or any other changes to the Contract.

3.3.2. Any change order request submitted by Provider shall indicate the reason for the addition, reduction, or change, the cost impact, the new proposed total Contract price, and any effect on the Software or Services provided under this Contract.

§4. OWNER PAYMENT OBLIGATIONS FOR PROVIDER'S SERVICES

4.1. Except as otherwise expressly provided for in this Contract, the OWNER's sole financial obligation to the Provider for any services under this Contract shall be as follows:

4.1.1. The Provider shall submit an invoice to the OWNER which shall itemize all amounts due and/or owing by the OWNER under this Contract, as the date of the invoice. The invoices shall be submitted in the form and according to the schedule approved by the OWNER. The OWNER shall have no obligation to make payment until a proper invoice is submitted and approved by the Contract Administrator or designated OWNER Agent. Once an invoice is approved, the OWNER will pay the invoice within forty-five (45) days. The OWNER reserves the right to make partial payments on any invoice in an amount the OWNER, in its discretion, deems to be commensurate with the actual progress of the services performed. Provider shall be compensated in accordance with the Rate Schedule attached as Exhibit III.

4.1.2. Under no circumstances shall the OWNER be obligated to pay the Provider for any services rendered which have not been invoiced, as required herein, within sixty (60) days of the date such services were actually rendered pursuant to this Contract.

4.2. Final payment for the work performed under this Contract shall not be made until all work is satisfactorily performed and accepted by the Contract Administrator or designated OWNER Agent.

4.3. Under no circumstances shall the OWNER be responsible for any cost, fee, fine, penalty, or damages incurred or suffered by Provider in connection with or resulting from the Provider's provisions of Services under this Contract.

4.4. The OWNER has the right to offset any amounts due and owing to the Provider should the OWNER incur any cost associated with this Contract that is the obligation of Provider under this Contract.

§5. PROVIDER'S ASSURANCES AND WARRANTIES

- 5.1. Provider Statements. The Provider certifies that all statements, assurances, records, and materials submitted to OWNER in connection with securing this Contract are truthful, complete, and accurate in all respects.
- 5.2. Service Warranty. The Provider warrants that all Services performed hereunder will be performed timely and in a manner that complies with all applicable laws, statutes, regulations, ordinances, and professional standards.
- 5.3. Warranty of Function. The Provider warrants that the Software documentation and representations regarding the Software's functionality provided by Aquasight to OWNER accurately describe the function and operational characteristics of the Software, and that the Software will operate according to the functional specifications, documentation, and representations provided to OWNER and in accordance with the Scope of Services. Further, the Software will be free from defects, viruses, and other malware. Provider will not be responsible for functionality failures resulting solely due to general Internet outages.
- 5.4. Ownership of Software. The Provider represents and warrants that it is the legal owner of all intellectual property rights of the Software, or has received all intellectual property licenses or rights necessary to provide the Software and Services without further consent from any third party. The Provider warrants that the Software does not infringe any patent or copyright of a third party.
- 5.5. Data Security. The Provider will maintain and enforce information and data privacy and security procedures with respect to its access, use, and storage of all OWNER Data that (a) are at least equal to industry standards, taking into consideration the sensitivity of the relevant OWNER Data, (b) comply with all applicable international, foreign, federal, state and local laws, statutes, rules, orders and regulations, and (c) provide all reasonably appropriate administrative, technical, and physical safeguards to protect against accidental or unlawful destruction, loss, alteration, or unauthorized disclosure, access or use of OWNER Data.
- 5.6. Business and Professional Licenses. The Provider will maintain at all times during the term of this Contract all applicable business and professional licenses necessary to provide the contracted services.
- 5.7. Equipment and Supplies. The Provider is responsible for providing equipment and supplies required to complete the specified Services under the Contract unless otherwise expressly set forth in the Contract.
- 5.8. Taxes. The Provider shall pay its own local, state, and federal taxes, including without limitation, social security taxes, and unemployment compensation taxes. The OWNER shall not be liable to or be required to reimburse the Provider for any federal, state, and local taxes or fees of any kind. OWNER will provide tax exempt documentation.
- 5.9. Provider's Incidental Expenses. Except as otherwise expressly provided in this Contract, the Provider shall be solely responsible and liable for all costs and expenses incident to the performance of all Services for the OWNER.
- 5.10. Provider Employees.
 - 5.10.1. The Provider shall employ and assign qualified Provider Employees as necessary and appropriate to provide the Services under this Contract. Provider shall ensure all Provider Employees have the necessary knowledge, skill,

and qualifications to perform the required Services and possess any necessary licenses, permits, certifications, and governmental authorizations as may be required by law.

- 5.10.2.** The Provider shall solely control, direct, and supervise all Provider Employees with respect to all Provider obligations under this Contract. The Provider will be solely responsible for and fully liable for the work, conduct, and supervision of any Provider Employee.
- 5.10.3.** If requested by the OWNER, all Provider Employees shall wear and display appropriate OWNER-provided identification at all times while working on OWNER premises. The Provider shall promptly return all OWNER-provided identification.
- 5.10.4.** All Provider Employees assigned to work under this Contract may, at the OWNER's discretion, be subject to a security check and clearance by the OWNER.
- 5.11.** E-Verify. Provider shall register with, participate in, and utilize the E-Verify Program (or any successor program implemented by the federal Department of Homeland Security and Social Security Administration) when hiring their employees. Unless otherwise exempted, Provider agrees to certify they have registered with, will participate in, and continue to utilize, once registered, the E-Verify Program (or any successor program implemented by the federal government or its departments or agencies) to verify the work authorization status of all newly hired employees employed by the Provider. Breach of this term or conditions is considered a material breach of this Contract.
- 5.12.** Provider Employee-Related Expenses. All Provider Employees shall be employed at the Provider's sole expense (including employment-related taxes and insurance) and the Provider warrants that all Provider Employees shall fully comply with and adhere to all of the terms of this Contract. The Provider shall be solely and completely liable for any and all applicable Provider Employee's federal, state, or local payment withholdings or contributions and/or any and all Provider Employee related pension or welfare benefits plan contribution under federal or state law. The Provider shall indemnify, defend, and hold the OWNER and OWNER Agents harmless for and against any and all Claims brought against the OWNER or OWNER Agents by any Provider Employee.
- 5.13.** Full Knowledge of Service Expectations and Attendant Circumstances. The Provider warrants that before submitting its bid, it had a full opportunity to review all OWNER requirements and expectations under this Contract. The Provider understands and confirms that it will be able to timely perform all obligations under the Contract as specified herein.
- 5.14.** Independent Contractor. The Provider's relationship to the OWNER is that of an independent contractor. All Provider Employees assigned to provide Services under this Contract by the Provider shall, in all cases, be deemed employees, agents, or subcontractors of the Provider and not employees, agents, or sub-contractors of the OWNER.
- 5.15.** Disclaimer. Except as expressly provided in this Contract, the software and the services are provided to OWNER in their then-existing condition, as is, where is and with all faults. Except for the foregoing warranties, Provider expressly disclaims all other warranties, express or implied, including merchantability, satisfactory quality, or fitness for a particular purpose.

§6. **OWNER RESPONSIBILITIES**

- 6.1. Compliance with Laws. OWNER is responsible for all activity occurring under any applicable user accounts while users are in performance of their job responsibilities, and OWNER shall abide by all applicable local, state, federal and foreign laws, treaties and regulations in connection with OWNER's use of the Services and Software, including those related to data privacy, international communications, and the transmission of technical or personal data.
- 6.2. OWNER Data.
- 6.2.1. OWNER represents that it has the right and authority to provide all OWNER Data to be hosted by Aquasight hereunder, and to the best of OWNER's knowledge all such OWNER Data will be free from viruses, spyware, and other similar harmful and destructive code.
- 6.2.2. OWNER is solely responsible for the quality of the Data transmitted to Aquasight or otherwise processed by the Software. OWNER acknowledges that the quality of the results and analytics provided by the Software is a function of the quality of OWNER's Data, and that inaccurate or erroneous Data can lead to inaccurate or erroneous results. Aquasight cannot and does not guarantee the quality of any Data provided by OWNER. Aquasight retains all historical and real-time collected and analyzed data for the life of the Subscription Term.
- 6.3. OWNER Equipment and Connectivity. OWNER is solely responsible for the equipment used by OWNER in connection with the Software, including without limitation the calibration of all sensors and equipment data being collected. Aquasight will not be liable or responsible for any delays, inaccuracies, or unavailable Data resulting from a disruption or interruption of connectivity and Data communication to the Aquasight system and Software due to a connectivity problem that is the fault of OWNER's equipment.
- 6.4. Use of the Software and Results. OWNER acknowledges and agrees (a) it will verify and validate with its engineering staff any changes that OWNER proposes to make to its systems or facilities based on intelligence from the Aquasight system and Software, and (b) the Aquasight system and Software does not control OWNER's systems or facilities, but rather assists OWNER with the efficiencies associated with the operation of OWNER's system and facilities.
- 6.5. Design Information and Configuration. OWNER acknowledges and agrees that the Aquasight system and Software are configured based on the preliminary design information provided by OWNER. In the event of any changes or modifications to the design information relating to OWNER's systems or facilities, OWNER will promptly notify Aquasight of such changes or modifications. Aquasight will adapt the configuration of the Aquasight system and Software to the new design conditions pursuant to a separate Statement of Work to be mutually agreed to in writing by the Parties.
- 6.6. License to Use OWNER Data. OWNER grants Aquasight (i) a non-exclusive, non-transferable (except as permitted herein), royalty-free, license to use, reproduce, modify and transmit Data provided by OWNER during the term of this Contract for the purpose of performing the Services only, and (ii) a non-exclusive, non-transferable (except as permitted herein), royalty-free, license to use, reproduce, display, modify, create derivative works of, and disclose and

distribute any usage Data derived by Aquasight from the provision of Services to OWNER (“Usage Data”) during the term of this Contract for the purpose of performing the Services only, provided that the Usage Data is disclosed in an aggregate form.

§7. SOFTWARE AND DATA OWNERSHIP

- 7.1. Aquasight IP. All right, title, and interest in and to the Software and all portions thereof, including the look and feel of the Software, visualizations displayed by the Software, and all other intellectual property rights therein, including all applicable rights to: (i) copyrights, including all rights incident to copyright ownership, such as all rights of publication, registration and rights to create derivative works; (ii) patents; (iii) trademarks; and (iv) trade secrets (including all know-how, ideas, logic, formulas and confidential information embodied in or reflected in Software) are and shall remain with Aquasight and its suppliers.
- 7.2. OWNER IP. All right, title, and interest in and to Data provided by OWNER, related analyzed/generated clean Data, and all related information provided to and accessed by Aquasight, including all intellectual property rights therein and all rights incident thereto, are and shall remain with OWNER.

§8. PROVIDER PROVIDED INDEMNIFICATION AND INSURANCE

- 8.1. Indemnification. To the maximum extent permitted by law, Provider agrees to protect, defend, indemnify and hold the OWNER and the OWNER Agents free and harmless from and against any and all Claims and Liabilities of any kind arising from any action or omission by Provider or any Provider Employee related to or arising out of the performance of Provider’s Services under this Agreement. This indemnification provision shall be construed in all respects to comply with MCL 691.991 and shall not be construed to: (a) indemnify the OWNER or the OWNER Agents for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the OWNER or OWNER Agents or (b) require Provider to assume any liability or indemnity obligation for any amount greater than the degree of fault of the Provider and Provider Employees.
- 8.2. Provider Provided Insurance. At all times during this Contract, including renewals or extensions, Provider shall obtain and maintain insurance according to the specifications indicated in Exhibit I: Provider Insurance Requirements.

§9. Limitation of Liability

- 9.1. Neither party shall be liable to the other party for any lost profits resulting from any claim or cause of action based on breach of warranty, breach of contract, negligence (including strict liability), or any other legal theory.

§10. ADDITIONAL TERMS AND CONDITIONS

- 10.1. Immunity. In undertaking the obligations of this Contract, OWNER is engaging in a governmental function. The activities undertaken herein are not proprietary and specifically are not for pecuniary profit. Nothing in this Contract is intended to, or shall be construed as, in any way diminishing the immunity OWNER enjoys under applicable law.

10.2. Notification and Access to OWNER Facilities.

10.1.1. To the extent the Provider requires access to OWNER facilities for performances of its Services, the Provider must provide notice to the OWNER and obtain prior permission from the OWNER to obtain such access.

10.1.2. If applicable to the Services rendered hereunder, the OWNER shall have full access to the work site and full access to any off-site preparation and fabrication facilities.

10.3. Use of OWNER's Premises. To the extent applicable to the Services rendered hereunder, Provider shall confine its equipment, apparatus, materials and products, and operations of Provider Employees to the limits indicated by law, ordinances, permits, or directions of the OWNER and shall not unnecessarily encumber the work site or OWNER premises with its materials, products, or equipment.

10.4. Damage to OWNER Property and Premises. The Provider shall be responsible for any damage to the OWNER premises or property and the work site, if applicable, that is caused by the Provider or Provider Employees. Should damage occur as a result of the Provider's actions or the actions of the Provider Employees, the Provider is responsible for the repair and/or replacement of the damage. If the Provider fails to repair or replace the damage, the OWNER shall repair and/or replace the damaged area and charge the Provider or deduct the amount from the Provider's payment, at the OWNER's option.

10.5. Cleaning. To the extent applicable to the Services rendered hereunder, the Provider shall at all times keep the OWNER's property and premises free of rubbish related to Provider's Services hereunder.

10.6. OWNER Right to Complete Work. In addition to all remedies the OWNER has at law or in equity, in the event the Provider shall fail, neglect, or refuse to perform any or all of his duties under this Contract, the OWNER, after giving the Provider seven (7) calendar days' notice in writing, may perform or employ another entity to perform such duties under the Contract and charge the Provider or deduct the amount from the Provider's payment due under this Contract, at the OWNER's option.

10.7. Cumulative Remedies. The OWNER's exercise of any remedy shall not preclude the exercise of any other remedies, all of which shall be cumulative. The OWNER shall have the right, in its sole discretion, to determine which remedies are to be exercised and in which order.

10.8. Survival of Terms and Conditions. All terms and conditions which by their nature extend beyond termination of this Contract shall survive and continue in full force beyond the termination and/or cancellation of this Contract, including without limitations Provider's assurances and warranties in Section 5 and insurance and indemnification obligations in Section 8.

10.9. OWNER Right to Suspend Services. Upon written notice, the OWNER may suspend performance of this Contract if Provider has failed to comply with federal, state, or local laws, or any requirements contained in this Contract. The right to suspend services is in addition to the OWNER's right to terminate and/or cancel this Contract. The OWNER shall incur no penalty, expense, or liability to Provider if the OWNER suspends services under this Section.

- 10.10. No Third-Party Beneficiaries.** Except as expressly set forth herein, this Contract does not and is not intended to create any obligation, duty, promise, contractual right, or benefit in favor of any other person or entity.
- 10.11. Compliance with Laws.** Provider shall comply with all federal, state, and local laws, statutes, ordinances, regulations, insurance policy requirements, and requirements applicable to its activities under this Contract.
- 10.12. Permits and Licenses.** Provider shall be responsible for obtaining and maintaining throughout the term of this Contract all licenses, permits, certificates, and governmental authorizations necessary to perform all of its obligations under this Contract and to conduct business under this Contract. Upon request by the OWNER, Provider shall furnish copies of any permit, license, certificate, or governmental authorizations necessary to provide services under this Contract. The Provider shall deliver all certificates of inspection to the OWNER, if applicable.
- 10.13. Discrimination.** Provider shall not discriminate against any employee or applicant for employment because of sex, race, religion, color, national origin, or disability in violation of State or Federal law.
- 10.13.1.** Provider shall promptly notify the OWNER of any complaint or charge filed and/or determination by any Court or administrative agency of illegal discrimination by Provider.
- 10.13.2.** The OWNER, in its discretion, may consider any illegal discrimination described above as a breach of this Contract and may terminate or cancel this Contract immediately.
- 10.14. Reservation of Rights.** This Contract does not, and is not intended to, impair, divest, delegate, or contravene any constitutional, statutory, and/or other legal right, privilege, power, obligation, duty, or immunity of the OWNER.
- 10.15 Assignment.** OWNER shall not assign this Contract or any rights or obligations hereunder, without the express written consent of Aquasight, which consent shall not be unreasonably withheld. Any assignment or transfer in violation of the foregoing will be null and void. Aquasight shall not assign this Contract to any affiliate or any entity in connection with the sale, combination, or transfer of all or substantially all of the assets or capital stock or from any other corporate form of reorganization by or of Aquasight without the express written consent of the OWNER, which consent shall not be unreasonably withheld. Subject to all the terms and conditions hereof, the Contract inures to the benefit of and is binding upon the Parties hereto and their successors and assigns.
- 10.16. Force Majeure.** Notwithstanding any other term or provision of this Contract, neither Party shall be liable to the other for any failure of performance hereunder if such failure is due to acts of God, natural disasters, fire, explosion, vandalism, national emergencies, insurrections, riots, wars, strikes, lockouts, or work stoppages. Reasonable Written Notice shall be given to the affected Party of any such event and the other Party's reliance on this provision. If such event persists for sixty (60) days or more, either Party may terminate this Contract without penalty upon Written Notice to the other Party.
- 10.17. Conflict of Interest.** To avoid any real or perceived conflict of interest, Provider shall identify any Provider Employee or relative of Provider's Employees who are presently employed by the OWNER or Macomb County.
- 10.18. Grant Compliance.** If any part of this Contract is supported or paid for with any state or federal funds granted to the OWNER, the Provider shall comply with all applicable grant requirements.

- 10.19. Project Managers.** Each Party shall designate an employee or agent to act as a Project Manager. The Project Manager shall serve as a contact point for all matters related to the services to be performed under this Contract. The Provider's Project Manager shall coordinate with the OWNER's Project Manager. The Provider shall provide the name and qualifications of its Project Manager and an alternate.
- 10.20. Contract Administrator.** The OWNER may appoint a Contract Administrator to be responsible for such activities as monitoring deliverables and funding, addressing the quality of services provided by the Provider, reviewing invoices, and submitting requests to the OWNER board or authorized representative for any contract modification in accordance with this Contract.
- 10.21. Access and Records.** Provider will maintain accurate books and records in connection with the services provided under this Contract for thirty-six (36) months after the end of this Contract and provide the OWNER with reasonable access to such books and records.
- 10.22. Audit.** At the OWNER's request, Provider shall allow an auditor identified by the OWNER to perform finance compliance audits with the authority to access all pertinent records and interview any Provider Employee throughout the term of this Contract and for a period of three (3) years after final payment.
- 10.23. Delegation/Subcontract/Assignment.**
- 10.23.1.** The Provider shall not assign, delegate, or subcontract any part of this Contract without the prior written consent of the OWNER. With respect to permitted assignments, delegations, and subcontracts:
- a.** The rights and obligations under this Contract shall not be diminished in any manner by assignment, delegation, or subcontract.
 - b.** Any assignment, delegation, or subcontract by Provider must include a requirement that the assignee, delegee, or subcontractor will comply with this Contract.
 - c.** The Provider shall remain primarily liable for all work performed by any subcontractor. The Provider shall remain liable to the OWNER for any obligations under the Contract not completely performed or incorrectly performed by any Provider, delegee, or subcontractor.
 - d.** If any part of the Provider's services depends upon the work of any other Provider or subcontractor, the Provider shall inspect and promptly report to the OWNER any defects in such work that shall render it unsuitable.
- 10.24. Non-Exclusive Contract.** This Contract is a non-exclusive agreement and the OWNER may freely engage other persons to perform the same or similar work that the Provider performs. Except as provided in this Contract, this Contract shall not be construed to guarantee the Provider or any Provider Employee any certain quantity of hours or services to be rendered to the OWNER.
- 10.25. No Waiver.** No term or condition of this Contract may be waived in the absence of a written waiver. Absent a written waiver, no act, failure, or delay by a Party to pursue or enforce any right or remedy under this Contract shall constitute

a waiver of those rights. Any waiver shall be limited to the specific instance for which it is given, and no waiver by either Party shall subsequently affect its right to require strict performance of this Contract.

- 10.26. Severability.** If a court of competent jurisdiction finds a term, condition, or provision of this Contract to be illegal or invalid, then the term, condition, or provision shall be deemed severed from this Contract. All other terms, conditions, and provisions of this Contract shall remain in full force and effect.
- 10.27. Written Notices.** Written Notices given under this Contract shall be sent as follows:
- 10.27.1.** If notice is sent to the Provider, it shall be addressed to: AQUASIGHT LLC, 1650 Big Beaver Road, Suite 101, Troy, MI 48084, ATT: CEO.
- 10.27.2.** If notice is sent to the OWNER, it shall be addressed to: 21777 Dunham Road, Clinton Township, Michigan 48036, ATT: Chief Deputy Public Works Commissioner, with a required copy to: Joseph E. Viviano, Esq., Kienbaum Hardy Viviano Pelton & Forrest, P.L.C., 48 S. Main St., Ste. 2, Mt. Clemens, Michigan 48043.
- 10.27.3.** Either Party may change the address or individual to which notice is sent by notifying the other party in writing of the change.
- 10.28. Contract Modifications or Amendments.** Any modifications, amendments, rescissions, waivers, or releases to this Contract must be in writing and agreed to by an authorized representative of both Parties.
- 10.29. Precedence of Documents.** In the event of a conflict between the terms and conditions in any of the documents comprising this Contract, the terms and conditions in this Contract document shall prevail and take precedence over any allegedly conflicting provisions in all other Exhibits and documents.
- 10.30. Governing Law.** This Contract is made and entered into in the County of Macomb, State of Michigan, and shall be governed, interpreted, and enforced by the laws of the State of Michigan. Provider acknowledges and stipulates that it conducts business in Macomb County for purposes of MCL 600.1621 or any successor statute.
- 10.31. Provider Use of Confidential Information.** The Provider and/or Provider Employees shall not reproduce, provide, or disclose Confidential Information to any third party, or to any Provider Employee not having a legitimate need to know any such information and data, and shall not use the Confidential Information for any purpose other than performing its services under this Contract. Notwithstanding the foregoing, Provider may disclose the Confidential Information if required by law, statute, or other legal process, provided that Provider (i) gives OWNER prompt written notice of an impending disclosure prior to make the disclosure, (ii) provides reasonable assistance to OWNER in opposing or limiting the disclosure, and (iii) makes only such disclosure as is compelled or required.
- 10.32. Entire Contract.** This Contract represents the entire Contract and understanding between the Parties. This Contract supersedes all other prior or contemporaneous oral or written understandings, communications, agreements, or contracts between the Parties related to the subject matter hereof. The language of this Contract shall be construed as a whole according to its fair meaning, and not construed strictly for or against any Party.

EXHIBIT I

1. At all times during this Contract, including renewals or extensions, Provider shall obtain and maintain insurance according to the following specifications:
 - a. Commercial General Liability – with the following minimum requirements:
 - \$1,000,000 for each occurrence of bodily injury and personal injury with an annual aggregate of not less than \$2,000,000.
 - Occurrence Form Policy
 - Broad Form Property Damage
 - Premises/Operations
 - Independent Providers
 - Products and Completed Operations
 - (Blanket) Broad Form Contractual
 - Additional Insured – The Macomb Interceptor Drain Drainage District (“OWNER”) and Macomb Interceptor Drain Drainage District board members, officials, employees (including employees shared with Macomb County), and representatives (“OWNER Agents”)**
 - b. Workers’ Compensation – as required by law and Employer’s Liability Insurance with minimum limits of \$500,000 each accident, \$500,000 bodily injury by disease policy limit, \$500,000 bodily injury by disease each employee;
 - c. Automobile Liability and Property Damage - \$1,000,000 each occurrence, including coverage for all owned, hired, and non-owned vehicles including No Fault coverage as required by law;
 - d. Professional Liability/Errors & Omissions Insurance (as applicable) – with minimum limits of \$1,000,000 per claim and \$2,000,000 aggregate.
2. General Certificates of Insurance:
 - a. All Certificates of Insurance shall be sent as provided in Section 10.27.
 - b. The insurance carrier(s) must have an A.M. Best rating of no less than an A-, VII.

- c. The OWNER and OWNER Agents shall be named additional insured on all policies (excluding Worker's Compensation and Professional Liability/Errors & Omissions Insurance) and the underwriters will have no right of recovery or subrogation against the OWNER or OWNER Agents.
- d. The insurance company(s) issuing the policy or policies will have no recourse against the OWNER for payment of any premiums or for assessments under any form of policy.
- e. The Provider will assume any and all deductible in the above-described insurance policies.
- f. All Certificates are to provide thirty (30) days written notice of material change, cancellation, or non-renewal. Certificates of Insurance or insurance binders must be provided no less than ten (10) working days before commencement of work. Insurance carriers are subject to the approval of the OWNER.

Grant Agreement Between
Michigan Department of Health and Human Services
hereinafter referred to as the "Department"
and
MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT
21777 Dunham Road
Clinton Township MI 48036 1005
Federal I.D.#: 27-2745944, Unique Entity Identifier: ZJDYV9CL9DF4
hereinafter referred to as the "Grantee"
for
SEWER Network Project - 2023
Part 1

1. Period of Agreement:

This Agreement will commence on the date of the Grantee's signature or October 1, 2022, whichever is later, and continue through September 30, 2023. No activity will be performed and no costs to the state will be incurred prior to October 1, 2022 or the effective date of the Agreement, whichever is later. Throughout the Agreement, the date of the Grantee's signature or October 1, 2022, whichever is later, will be referred to as the start date. This Agreement is in full force and effect for the period specified.

2. Program Budget and Agreement Amount:

A. Agreement Amount

The total amount of this Agreement is \$728,180.00. Under the terms of this Agreement, the Department will provide funding not to exceed \$728,180.00. The source of funding provided by the Department can be obtained in the Schedule of Financial Assistance, available on-demand in the EGrAMS electronic grants management system (<http://egramms-mi.com/mdhhs>).

The Agreement is designated as a:

- Subrecipient relationship (federal funding); or
- Recipient (non-federal funding).

The Agreement is designated as:

- Research and development project; or
- Not a research and development project.

B. Equipment Purchases and Title

Any Grantee equipment purchases supported in whole or in part through this Agreement must be listed in the supporting Equipment Inventory Schedule which should be attached to the Final Financial Status Report. Equipment means tangible, non-expendable, personal property having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit. Title to items having a unit acquisition cost of less than \$5,000 will vest with the Grantee upon acquisition. The Department reserves the right to retain or transfer the title to all items of equipment having a unit acquisition cost of \$5,000 or more, to the extent that the Department's proportionate interest in such equipment supports such retention or transfer of title.

C. Deviation Allowance

A deviation allowance modifying an established budget category by \$10,000 or 15%, whichever is greater, is permissible without prior written approval of the Department. Any modification or deviations in excess of this provision, including any adjustment to the total amount of this Agreement, must be made in writing and executed by all parties through an amendment to this Agreement before the modifications can be implemented. This deviation allowance does not authorize new categories, subcontracts, equipment items or positions not shown in the attached Program Budget Summary and supporting detail schedules.

3. Purpose:

The focus of the program is to conduct wastewater monitoring for surveillance of SARS-CoV-2 virus shed into the Michigan public sewer systems.

4. Statement of Work:

The Grantee agrees to undertake, perform and complete the activities described in Attachment A, which is part of this Agreement.

5. Financial Requirements:

The financial requirements must be followed as described in Part 2 and Attachment B, which are part of this Agreement.

6. Performance/Progress Report Requirements:

The progress reporting methods must be followed as described in Part 2 and Attachment C, which are part of this Agreement.

7. General Provisions:

The Grantee agrees to comply with the General Provisions as described in Part 2, which is part of this Agreement.

8. Administration of the Agreement:

The person acting for the Department in administering this Agreement (hereinafter referred to as the Contract Manager) is:

Mary Grace Stobierski Contract Manager (517) 284-4928
stobierskim@michigan.gov

Name	Title	Telephone No.	Email Address
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9. Grantee's Financial Contact for the Agreement:

The financial contact acting on behalf of the Grantee for this Agreement is:

Bruce Manning Financial Officer

Name	Title
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bruce.manning@macombgov.org (586) 307-8279

E-Mail Address	Telephone No.
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10. Special Conditions:

- A. This Agreement is valid upon approval and execution by the Department which may be contingent upon approval by the State Administrative Board and signature by the Grantee.
- B. This Agreement is conditionally approved subject to and contingent upon the availability of funds.
- C. Based on the availability of funding, the Department may specify the amount of funding the Grantee may expend during a specific time period within the Agreement Period.
- D. The Department will not assume any responsibility or liability for costs incurred by the Grantee prior to the start date of this Agreement.
- E. The Grantee is required by 2004 PA 533 to receive payments by electronic funds transfer.

11. Special Certification:

The individual or officer signing this Agreement certifies by their signature that they are authorized to sign this Agreement on behalf of the responsible governing board, official or Grantee.

12. Signature Section:

**FOR the GRANTEE
MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT**

Vincent Astorino Project Director

Name	Title	Date
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For the Michigan Department of Health and Human Services

Christine H. Sanches 07/21/2022

Christine H. Sanches, Director	Date
Bureau of Grants and Purchasing	

Part 2
General Provisions

I. Responsibilities - Grantee

The Grantee, in accordance with the general purposes and objectives of this Agreement, must:

A. Publication Rights

1. Copyright materials only when the Grantee exclusively develops books, films or other such copyrightable materials through activities supported by this Agreement. The copyrighted materials cannot include recipient information or personal identification data. Grantee provides the Department a royalty-free, non-exclusive and irrevocable license to reproduce, publish and use such materials copyrighted by the Grantee and authorizes others to reproduce and use such materials.
2. Obtain prior written authorization from the Department's Office of Communications for any materials copyrighted by the Grantee or modifications bearing acknowledgment of the Department's name prior to reproduction and use of such materials. The state of Michigan may modify the material copyrighted by the Grantee and may combine it with other copyrightable intellectual property to form a derivative work. The state of Michigan will own and hold all copyright and other intellectual property rights in any such derivative work, excluding any rights or interest granted in this Agreement to the Grantee. If the Grantee ceases to conduct business for any reason or ceases to support the copyrightable materials developed under this Agreement, the state of Michigan has the right to convert its licenses into transferable licenses to the extent consistent with any applicable obligations the Grantee has.
3. Obtain written authorization, at least 14 days in advance, from the Department's Office of Communications and give recognition to the Department in any and all publications, papers and presentations arising from the Agreement activities.
4. Notify the Department's Bureau of Grants and Purchasing 30 days before applying to register a copyright with the U.S. Copyright Office. The Grantee must submit an annual report for all copyrighted materials developed by the Grantee through activities supported by this Agreement and must submit a final invention statement and certification within 60 days of the end of the Agreement period.
5. Not make any media releases related to this Agreement, without prior written authorization from the Department's Office of Communications.

B. Fees

1. Guarantee that any claims made to the Department under this Agreement will not be financed by any sources other than the Department under the terms of this Agreement. If funding is received through any other source, the Grantee agrees to budget the additional source of funds and reflect the source of funding on the Financial Status Report.
2. Make reasonable efforts to collect 1st and 3rd party fees, where applicable, and report those collections on the Financial Status Report. Any under recoveries of otherwise available fees resulting from failure to bill for eligible activities will be excluded from reimbursable expenditures.

C. Grant Program Operation

Provide the necessary administrative, professional and technical staff for operation of the grant program. The Grantee must obtain and maintain all necessary licenses, permits or other authorizations necessary for the performance of this Agreement.

Use an accounting system that can identify and account for the funds received from each separate grant, regardless of funding source, and assure that grant funds are not commingled.

D. Reporting

Utilize all report forms and reporting formats required by the Department at the start date of this Agreement and provide the Department with timely review and commentary on any new report forms and reporting formats proposed for issuance thereafter.

E. Record Maintenance/Retention

Maintain adequate program and fiscal records and files, including source documentation, to support program activities and all expenditures made under the terms of this Agreement, as required. The Grantee must assure that all terms of the Agreement will be appropriately adhered to and that records and detailed documentation for the grant project or grant program identified in this Agreement will be maintained for a period of not less than four years from the date of termination, the date of submission of the final expenditure report or until litigation and audit findings have been resolved. This section applies to the Grantee, any parent, affiliate, or subsidiary organization of the Grantee and any subcontractor that performs activities in connection with this Agreement.

F. Authorized Access

1. Permit within 10 calendar days of providing notification and at reasonable times, access by authorized representatives of the Department, Federal Grantor Agency, Inspector Generals, Comptroller General of the United States and State Auditor General, or any of their

duly authorized representatives, to records, papers, files, documentation and personnel related to this Agreement, to the extent authorized by applicable state or federal law, rule or regulation.

2. Acknowledge the rights of access in this section are not limited to the required retention period. The rights of access will last as long as the records are retained.
3. Cooperate and provide reasonable assistance to authorized representatives of the Department and others when those individuals have access to the Grantee's grant records.

G. Audits

This section only applies to Grantees designated as subrecipients by the Department (see Part 1, Section II. A.).

1. Required Audit or Audit Exemption Notice

Submit to the Department either a Single Audit, Financial Related Audit or Audit Exemption Notice as described below. A Financial Related Audit is applicable to for-profit Grantees that are designated as subrecipients. If submitting a Single Audit or Financial Related Audit, Grantees must also submit a corrective action plan prepared in accordance with 2 CFR 200.511(c) for any audit findings that impact the Department funded programs, and management letter (if issued) with a corrective action plan.

a. Single Audit

Grantees that are a state, local government or non-profit organization that expend \$750,000 or more in federal awards during the Grantee's fiscal year must submit a Single Audit to the Department, regardless of the amount of funding received from the Department. The Single Audit must comply with the requirements of 2 CFR 200 Subpart F. The Single Audit reporting package must include all components described in 2 CFR 200.512 (c).

b. Financial Related Audit

Grantees that are for-profit organizations that expend \$750,000 or more in federal awards during the Grantee's fiscal year must submit either a financial related audit prepared in accordance with Government Auditing Standards relating to all federal awards, or an audit that meets the requirements contained in 2 CFR 200 Subpart F, if required by the federal awarding agency.

c. Audit Exemption Notice

Grantees exempt from the Single Audit and Financial Related Audit requirements (a. and b. above) must submit an Audit Exemption Notice that certifies these exemptions. The

template Audit Exemption Notice and further instructions are available at State of Michigan - MDHHS by selecting Inside MDHHS – MDHHS Audit - Audit Reporting.

2. Financial Statement Audit

Grantees exempt from the Single Audit and Financial Related Audit requirements (that are required to submit an Audit Exemption Notice as described above) must submit to the Department a Financial Statement Audit prepared in accordance with generally accepted auditing standards if the audit includes disclosures that may negatively impact the Department funded programs including but not limited to fraud, going concern uncertainties, financial statement misstatements and violations of the Agreement requirements. If submitting a Financial Statement Audit, Grantees must also submit a corrective action plan for any audit findings that impact the Department funded programs.

3. Due Date and Where to Send

The required audit and any other required submissions (i.e., corrective action plan, and management letter with a corrective action plan), and/or Audit Exemption Notice must be submitted to the Department within nine months of the end of the Grantee's fiscal year by e-mail to MDHHS-AuditReports@michigan.gov. Single Audit reports must be submitted simultaneously to the Department and Federal Audit Clearinghouse, in accordance with 2 CFR 200.512(a). The required submissions must be assembled in PDF files and compatible with Adobe Acrobat (read only). The subject line must state the agency name and fiscal year end. The Department reserves the right to request a hard copy of the audit materials if for any reason the electronic submission process is not successful.

4. Penalty

a. Delinquent Single Audit or Financial Related Audit

If the Grantee does not submit the required Single Audit or Financial Related Audit, including any management letter and applicable corrective action plan(s) within nine months after the end of the Grantee's fiscal year, the Department may withhold from any payment from the Department to the Grantee an amount equal to five percent of the audit year's grant funding (not to exceed \$200,000) until the required filing is received by the Department. The Department may retain the amount withheld if the Grantee is more than 120 days delinquent in meeting the filing requirements. The Department may terminate any current grant agreements if the Grantee is more than 180 days delinquent in meeting the filing requirements.

b. Delinquent Audit Exemption Notice

Failure to submit the Audit Exemption Notice, when required, may result in withholding from any payment from Department to the Grantee an amount equal to one percent of the audit year's grant funding until the Audit Exemption Notice is received.

5. Other Audits

The Department or federal agencies may also conduct or arrange for agreed upon procedures or additional audits to meet their needs.

H. Subrecipient/Contractor Monitoring

1. When passing federal funds through to a subrecipient (if the Agreement does not prohibit the passing of federal funds through to a subrecipient), the Grantee must:

a. Ensure that every subaward is clearly identified to the subrecipient as a subaward and includes the information required by 2 CFR 200.332.

b. Ensure the subrecipient complies with all the requirements of this Agreement.

c. Evaluate each subrecipient's risk for noncompliance as required by 2 CFR 200.332(b).

d. Monitor the activities of the subrecipient as necessary to ensure that the subaward is used for authorized purposes, in compliance with federal statutes, regulations and the terms and conditions of the subawards; that subaward performance goals are achieved; and that all monitoring requirements of 2 CFR 200.332(d) are met including reviewing financial and programmatic reports, following up on corrective actions and issuing management decisions for audit findings.

e. Verify that every subrecipient is audited as required by 2 CFR 200 Subpart F.

2. Develop a subrecipient monitoring plan that addresses the above requirements and provides reasonable assurance that the subrecipient administers federal awards in compliance with laws, regulations and the provisions of this Agreement, and that performance goals are achieved. The subrecipient monitoring plan should include a risk-based assessment to determine the level of oversight and monitoring activities, such as reviewing financial and performance reports, performing site visits and maintaining regular contact with subrecipients.

3. Establish requirements to ensure compliance for for-profit subrecipients as required by 2 CFR 200.501(h), as applicable.

4. Ensure that transactions with subrecipients/contractors comply with laws, regulations and provisions of contracts or grant agreements.

I. Notification of Modifications

Provide timely notification to the Department, in writing, of any action by its governing board or any other funding source that would require or result in significant modification in the provision of activities, funding or compliance with operational procedures.

J. Software Compliance

Ensure software compliance and compatibility with the Department's data systems for activities provided under this Agreement, including but not limited to stored data, databases and interfaces for the production of work products and reports. All required data under this Agreement must be provided in an accurate and timely manner without interruption, failure or errors due to the inaccuracy of the Grantee's business operations for processing data. All information systems, electronic or hard copy, that contain state or federal data must be protected from unauthorized access.

K. Human Subjects

Comply with Federal Policy for the Protection of Human Subjects, 45 CFR 46. The Grantee agrees that prior to the initiation of the research, the Grantee will submit Institutional Review Board (IRB) application material for all research involving human subjects, which is conducted in programs sponsored by the Department or in programs which receive funding from or through the state of Michigan, to the Department's IRB for review and approval, or the IRB application and approval materials for acceptance of the review of another IRB. All such research must be approved by a federally assured IRB, but the Department's IRB can only accept the review and approval of another institution's IRB under a formally approved interdepartmental agreement. The manner of the review will be agreed upon between the Department's IRB Chairperson and the Grantee's authorized official.

L. Mandatory Disclosures

1. Disclose to the Department in writing within 14 days of receiving notice of any litigation, investigation, arbitration or other proceeding (collectively, "Proceeding") involving Grantee, a subcontractor or an officer or director of Grantee or subcontractor that arises during the term of this Agreement including:
 - a. All violations of federal and state criminal law involving fraud, bribery, or gratuity violations potentially affecting the Agreement.
 - b. A criminal Proceeding;
 - c. A parole or probation Proceeding;
 - d. A Proceeding under the Sarbanes-Oxley Act;
 - e. A civil Proceeding involving:
 1. A claim that might reasonably be expected to

adversely affect Grantee's viability or financial stability;
or

2. A governmental or public entity's claim or written allegation of fraud; or
3. Any complaint filed in a legal or administrative proceeding alleging the Grantee or its subcontractors discriminated against its employees, subcontractors, vendors, or suppliers during the term of this Agreement; or

f. A Proceeding involving any license that Grantee is required to possess in order to perform under this Agreement.

2. Notify the Department, at least 90 calendar days before the effective date, of a change in Grantee's ownership or executive management.

M. Statement of Work Progress Reports

Submit quarterly Statement of Work progress reports to the Department via the <http://egram-mi.com/mdhhs> website by the 15th day of the month following the end of the quarter and a final report no later than 15 days following the end of this Agreement.

N. Conflict of Interest and Code of Conduct Standards

1. Be subject to the provisions of 1968 PA 317, as amended, 1973 PA 196, as amended, and 2 CFR 200.318 (c)(1) and (2).
2. Uphold high ethical standards and be prohibited from the following:
 - a. Holding or acquiring an interest that would conflict with this Agreement;
 - b. Doing anything that creates an appearance of impropriety with respect to the award or performance of this Agreement;
 - c. Attempting to influence or appearing to influence any state employee by the direct or indirect offer of anything of value; or
 - d. Paying or agreeing to pay any person, other than employees and consultants working for Grantee, any consideration contingent upon the award of this Agreement.
3. Immediately notify the Department of any violation or potential violation of these standards. This Section applies to Grantee, any parent, affiliate, or subsidiary organization of Grantee, and any subcontractor that performs activities in connection with this Agreement.

O. Travel Costs

1. Be reimbursed for travel costs (including mileage, meals, and lodging) budgeted and incurred related to activities provided under this Agreement.
 - a. If the Grantee has a documented policy related to travel

reimbursement for employees and if the Grantee follows that documented policy, the Department will reimburse the Grantee for travel costs at the Grantee's documented reimbursement rate for employees. Otherwise, the state of Michigan travel reimbursement rate applies.

- b. State of Michigan travel rates may be found at the following website: http://www.michigan.gov/dtmb/0,5552,7-358-82548_13132---,00.html.
- c. International travel must be pre-approved by the Department and itemized in the budget.

P. Federal Funding Accountability and Transparency Act (FFATA)

- 1. Complete and upload the FFATA Executive Compensation report to the EGrAMS agency profile if:
 - a. The Grantee's federal revenue was 80% or more of the Grantee's annual gross revenue; AND
 - b. Grantee's gross revenue from federal awards was \$25,000,000 or more; AND
 - c. The public does not have access to the information about executive officers' compensation through periodic reports filed under Section 13(a) or 15(d) of the Securities Exchange Act of 1934 or Section 6104 of the Internal Revenue Code of 1986.
- 2. The FFATA Executive Compensation report template can be found in EGrAMS documents.

Q. Insurance Requirements

- 1. Maintain at least a minimum of the insurances or governmental self-insurances listed below and be responsible for all deductibles. All required insurance or self-insurance must:
 - a. Protect the state of Michigan from claims that may arise out of, are alleged to arise out of, or result from Grantee's or a subcontractor's performance;
 - b. Be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the state; and
 - c. Be provided by a company with an A.M. Best rating of "A-" or better and a financial size of VII or better.
- 2. Insurance Types
 - a. Commercial General Liability Insurance or Governmental Self-Insurance: Except for Governmental Self-Insurance, policies must be endorsed to add "the state of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 20 10 12 19 and CG

20 37 12 19.

If the Grantee will interact with children, schools, or the cognitively impaired, the Grantee must maintain appropriate insurance coverage related to sexual abuse and molestation liability.

- b. Workers' Compensation Insurance or Governmental Self-Insurance: Coverage according to applicable laws governing work activities. Policies must include waiver of subrogation, except where waiver is prohibited by law.
 - c. Employers Liability Insurance or Governmental Self-Insurance.
 - d. Privacy and Security Liability (Cyber Liability) Insurance: cover information security and privacy liability, privacy notification costs, regulatory defense and penalties, and website media content liability.
3. Require that subcontractors maintain the required insurances contained in this Section.
 4. This Section is not intended to and is not to be construed in any manner as waiving, restricting or limiting the liability of the Grantee from any obligations under this Agreement.
 5. Each Party must promptly notify the other Party of any knowledge regarding an occurrence which the notifying Party reasonably believes may result in a claim against either Party. The Parties must cooperate with each other regarding such claim.

R. Fiscal Questionnaire

1. Complete and upload the yearly fiscal questionnaire to the EGrAMS agency profile within three months of the start of the Agreement.
2. The fiscal questionnaire template can be found in EGrAMS documents.

S. Criminal Background Check

1. Conduct or cause to be conducted a search that reveals information similar or substantially similar to information found on an Internet Criminal History Access Tool (ICHAT) check and a national and state sex offender registry check for each new employee, employee, subcontractor, subcontractor employee, or volunteer who under this Agreement works directly with clients or has access to client information.
 - a. ICHAT: <http://apps.michigan.gov/ichat>
 - b. Michigan Public Sex Offender Registry: <http://www.mipsor.state.mi.us>
 - c. National Sex Offender Registry: <http://www.nsopw.gov>

2. Conduct or cause to be conducted a Central Registry (CR) check for each new employee, employee, subcontractor, subcontractor employee, or volunteer who under this Agreement works directly with children.
 - a. Central Registry: https://www.michigan.gov/mdhhs/0,5885,7-339-73971_7119_50648_48330-180331--,00.html
3. Require each new employee, employee, subcontractor, subcontractor employee, or volunteer who, under this Agreement, works directly with clients or who has access to client information to notify the Grantee in writing of criminal convictions (felony or misdemeanor), pending felony charges, or placement on the Central Registry as a perpetrator, at hire or within 10 days of the event after hiring.
4. Determine whether to prohibit any employee, subcontractor, subcontractor employee, or volunteer from performing work directly with clients or accessing client information related to clients under this Agreement, based on the results of a positive ICHAT response or reported criminal felony conviction or perpetrator identification.
5. Determine whether to prohibit any employee, subcontractor, subcontractor employee or volunteer from performing work directly with children under this Agreement, based on the results of a positive CR response or reported perpetrator identification.
6. Require any employee, subcontractor, subcontractor employee or volunteer who may have access to any databases of information maintained by the federal government that contain confidential or personal information, including but not limited to federal tax information, to have a fingerprint background check performed by the Michigan State Police.

II. Responsibilities - Department

The Department in accordance with the general purposes and objectives of this Agreement will:

A. Reimbursement

Provide reimbursement in accordance with the terms and conditions of this Agreement based upon appropriate reports, records and documentation maintained by the Grantee.

B. Report Forms

Provide any report forms and reporting formats required by the Department at the start date of this Agreement and provide to the Grantee any new report forms and reporting formats proposed for issuance thereafter at least 30 days prior to their required usage in order to afford the Grantee an opportunity to review.

III. Assurances

The following assurances are hereby given to the Department:

A. Compliance with Applicable Laws

The Grantee will comply with applicable federal and state laws, guidelines, rules and regulations in carrying out the terms of this Agreement. The Grantee will also comply with all applicable general administrative requirements, such as 2 CFR 200, covering cost principles, grant/agreement principles and audits, in carrying out the terms of this Agreement. The Grantee will comply with all applicable requirements in the original grant awarded to the Department if the Grantee is a subgrantee. The Department may determine that the Grantee has not complied with applicable federal or state laws, guidelines, rules and regulations in carrying out the terms of this Agreement and may then terminate this Agreement under Part 2, Section V.

B. Anti-Lobbying Act

The Grantee will comply with the Anti-Lobbying Act (31 U.S.C. 1352) as revised by the Lobbying Disclosure Act of 1995 (2 U.S.C. 1601 et seq.), Federal Acquisition Regulations 52.203.11 and 52.203.12, and Section 503 of the Departments of Labor, Health & Human Services, and Education, and Related Agencies section of the current fiscal year Omnibus Consolidated Appropriations Act. Further, the Grantee must require that the language of this assurance be included in the award documents of all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans and cooperative agreements) and that all subrecipients must certify and disclose accordingly.

C. Non-Discrimination

1. The Grantee must comply with the Department's non-discrimination statement: The Michigan Department of Health and Human Services will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, height, weight, marital status, gender identification or expression, sexual orientation, partisan considerations, or a disability or genetic information that is unrelated to the person's ability to perform the duties of a particular job or position. The Grantee further agrees that every subcontract entered into for the performance of any contract or purchase order resulting therefrom, will contain a provision requiring non-discrimination in employment, activity delivery and access, as herein specified, binding upon each subcontractor. This covenant is required pursuant to the Elliot-Larsen Civil Rights Act (1976 PA 453, as amended; MCL 37.2101 et seq.) and the Persons with Disabilities Civil Rights Act (1976 PA 220, as amended; MCL 37.1101 et seq.), and any breach thereof may be regarded as a material breach of this Agreement.
2. The Grantee will comply with all federal and state statutes relating to nondiscrimination. These include but are not limited to:
 - a. Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which

- prohibits discrimination based on race, color or national origin;
 - b. Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 1681-1683, 1685-1686), which prohibits discrimination based on sex;
 - c. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), which prohibits discrimination based on disabilities;
 - d. The Age Discrimination Act of 1975, as amended (42 U.S.C. 6101-6107), which prohibits discrimination based on age;
 - e. The Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination based on drug abuse;
 - f. The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970 (P.L. 91-616) as amended, relating to nondiscrimination based on alcohol abuse or alcoholism;
 - g. Sections 523 and 527 of the Public Health Service Act of 1944 (42 U.S.C. 290 dd-2), as amended, relating to confidentiality of alcohol and drug abuse patient records;
 - h. Any other nondiscrimination provisions in the specific statute(s) under which application for federal assistance is being made; and,
 - i. The requirements of any other nondiscrimination statute(s) which may apply to the application.
3. Additionally, assurance is given to the Department that proactive efforts will be made to identify and encourage the participation of minority-owned and women-owned businesses, and businesses owned by persons with disabilities in contract solicitations. The Grantee must include language in all contracts awarded under this Agreement which (1) prohibits discrimination against minority-owned and women-owned businesses and businesses owned by persons with disabilities in subcontracting; and (2) makes discrimination a material breach of contract.

D. Debarment and Suspension

The Grantee will comply with federal regulation 2 CFR 180 and certifies to the best of its knowledge and belief that it, its employees and its subcontractors:

- 1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or contractor;
- 2. Have not within a five-year period preceding this Agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining,

attempting to obtain, or performing a public (federal, state, or local) or private transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;

3. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state or local) with commission of any of the offenses enumerated in section 2;
4. Have not within a five-year period preceding this Agreement had one or more public transactions (federal, state or local) terminated for cause or default; and
5. Have not committed an act of so serious or compelling a nature that it affects the Grantee's present responsibilities.

E. Federal Requirement: Pro-Children Act

1. The Grantee will comply with the Pro-Children Act of 1994 (P.L. 103-227; 20 U.S.C. 6081, et seq.), which requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted by and used routinely or regularly for the provision of health, day care, early childhood development activities, education or library activities to children under the age of 18, if the activities are funded by federal programs either directly or through state or local governments, by federal grant, contract, loan or loan guarantee. The law also applies to children's activities that are provided in indoor facilities that are constructed, operated, or maintained with such federal funds. The law does not apply to children's activities provided in private residences; portions of facilities used for inpatient drug or alcohol treatment; activity providers whose sole source of applicable federal funds is Medicare or Medicaid; or facilities where Women, Infants, and Children (WIC) coupons are redeemed. Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty of up to \$1,000 for each violation and/or the imposition of an administrative compliance order on the responsible entity. The Grantee also assures that this language will be included in any subawards which contain provisions for children's activities.
2. The Grantee also assures, in addition to compliance with P.L. 103-227, any activity funded in whole or in part through this Agreement will be delivered in a smoke-free facility or environment. Smoking must not be permitted anywhere in the facility, or those parts of the facility under the control of the Grantee. If activities are delivered in facilities or areas that are not under the control of the Grantee (e.g., a mall, restaurant or private work site), the activities must be smoke-free.

F. Hatch Act and Intergovernmental Personnel Act

The Grantee will comply with the Hatch Act (5 U.S.C. 1501-1508, 5 U.S.C. 7321-7326), and the Intergovernmental Personnel Act of 1970 (P.L. 91-648) as amended by Title VI of the Civil Service Reform Act of 1978 (P.L. 95-454). Federal funds cannot be used for partisan political purposes of any kind by any person or organization involved in the administration of federally assisted programs.

G. Employee Whistleblower Protections

The Grantee will comply with 41 U.S.C. 4712 and must insert this clause in all subcontracts.

H. Clean Air Act and Federal Water Pollution Control Act

The Grantee will comply with the Clean Air Act (42 U.S.C. 7401-7671(q)) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1388), as amended. This Agreement and anyone working on this Agreement will be subject to the Clean Air Act and Federal Water Pollution Control Act and must comply with all applicable standards, orders or regulations issued pursuant to these Acts. Violations must be reported to the Department.

I. Victims of Trafficking and Violence Protection Act

The Grantee will comply with the Victims of Trafficking and Violence Protection Act of 2000 (P.L. 106-386), as amended.

This Agreement and anyone working on this Agreement will be subject to P.L. 106-386 and must comply with all applicable standards, orders or regulations issued pursuant to this Act. Violations must be reported to the Department.

J. Procurement of Recovered Materials

The Grantee will comply with section 6002 of the Solid Waste Disposal Act of 1965 (P.L. 89-272), as amended.

This Agreement and anyone working on this Agreement will be subject to section 6002 of P.L. 89-272, as amended, and must comply with all applicable standards, orders or regulations issued pursuant to this Act. Violations must be reported to the Department.

K. Subcontracts

For any subcontracted activity or product, the Grantee will ensure:

1. That a written subcontract is executed by all affected parties prior to the initiation of any new subcontract activity or delivery of any subcontracted product. Exceptions to this policy may be granted by the Department if the Grantee asks the Department in writing within 30 days of execution of the Agreement.
2. That any executed subcontract to this Agreement must require the subcontractor to comply with all applicable terms and conditions of this Agreement. In the event of a conflict between this Agreement and the provisions of the subcontract, the provisions of this Agreement will

prevail.

A conflict between this Agreement and a subcontract, however, will not be deemed to exist where the subcontract:

- a. Contains additional non-conflicting provisions not set forth in this Agreement;
 - b. Restates provisions of this Agreement to afford the Grantee the same or substantially the same rights and privileges as the Department; or
 - c. Requires the subcontractor to perform duties and/or activities in less time than that afforded the Grantee in this Agreement.
3. That the subcontract does not affect the Grantee's accountability to the Department for the subcontracted activity.
 4. That any billing or request for reimbursement for subcontract costs is supported by a valid subcontract and adequate source documentation on costs and activities.
 5. That the Grantee will submit a copy of the executed subcontract if requested by the Department.

L. Procurement

1. Grantee will ensure that all purchase transactions, whether negotiated or advertised, are conducted openly and competitively in accordance with the principles and requirements of 2 CFR 200.
2. Funding from this Agreement must not be used for the purchase of foreign goods or services.
3. Preference must be given to goods and services manufactured or provided by Michigan businesses, if they are competitively priced and of comparable quality.
4. Preference must be given to goods and services that are manufactured or provided by Michigan businesses owned and operated by veterans, if they are competitively priced and of comparable quality.
5. Records must be sufficient to document the significant history of all purchases and must be maintained for a minimum of four years after the end of the Agreement period.

M. Health Insurance Portability and Accountability Act

To the extent that the Health Insurance Portability and Accountability Act (HIPAA) is applicable to the Grantee under this Agreement, the Grantee assures that it is in compliance with requirements of HIPAA including the following:

1. The Grantee must not share any protected health information provided by the Department that is covered by HIPAA except as permitted or required by applicable law, or to a subcontractor as appropriate under

this Agreement.

2. The Grantee will ensure that any subcontractor will have the same obligations as the Grantee not to share any protected health data and information from the Department that falls under HIPAA requirements in the terms and conditions of the subcontract.
3. The Grantee must only use the protected health data and information for the purposes of this Agreement.
4. The Grantee must have written policies and procedures addressing the use of protected health data and information that falls under the HIPAA requirements. The policies and procedures must meet all applicable federal and state requirements including the HIPAA regulations. These policies and procedures must include restricting access to the protected health data and information by the Grantee's employees.
5. The Grantee must have a policy and procedure to immediately report to the Department any suspected or confirmed unauthorized use or disclosure of protected health information that falls under the HIPAA requirements of which the Grantee becomes aware. The Grantee will work with the Department to mitigate the breach and will provide assurances to the Department of corrective actions to prevent further unauthorized uses or disclosures. The Department may demand specific corrective actions and assurances and the Grantee must provide the same to the Department.
6. Failure to comply with any of these contractual requirements may result in the termination of this Agreement in accordance with Part 2, Section V.
7. In accordance with HIPAA requirements, the Grantee is liable for any claim, loss or damage relating to unauthorized use or disclosure of protected health data and information, including without limitation the Department's costs in responding to a breach, received by the Grantee from the Department or any other source.
8. The Grantee will enter into a business associate agreement should the Department determine such an agreement is required under HIPAA.

N. Website Incorporation

The Department is not bound by any content on Grantee's website or other internet communication platforms or technologies, unless expressly incorporated directly into this Agreement. The Department is not bound by any end user license agreement or terms of use unless specifically incorporated in this Agreement or any other agreement signed by the Department. The Grantee must not refer to the Department on the Grantee's website or other internet communication platforms or technologies without the prior written approval of the Department.

O. Survival

The provisions of this Agreement that impose continuing obligations will survive the expiration or termination of this Agreement.

P. Non-Disclosure of Confidential Information

1. The Grantee agrees that it will use confidential information solely for the purpose of this Agreement. The Grantee agrees to hold all confidential information in strict confidence and not to copy, reproduce, sell, transfer or otherwise dispose of, give or disclose such confidential information to third parties other than employees, agents, or subcontractors of a party who have a need to know in connection with this Agreement or to use such confidential information for any purpose whatsoever other than the performance of this Agreement. The Grantee must take all reasonable precautions to safeguard the confidential information. These precautions must be at least as great as the precautions the Grantee takes to protect its own confidential or proprietary information.

2. Meaning of Confidential Information

For the purpose of this Agreement the term “confidential information” means all information and documentation that:

- a. Has been marked “confidential” or with words of similar meaning, at the time of disclosure by such party;
- b. If disclosed orally or not marked “confidential” or with words of similar meaning, was subsequently summarized in writing by the disclosing party and marked “confidential” or with words of similar meaning;
- c. Should reasonably be recognized as confidential information of the disclosing party;
- d. Is unpublished or not available to the general public; or
- e. Is designated by law as confidential.

3. The term “confidential information” does not include any information or documentation that was:

- a. Subject to disclosure under the Michigan Freedom of Information Act (FOIA);
- b. Already in the possession of the receiving party without an obligation of confidentiality;
- c. Developed independently by the receiving party, as demonstrated by the receiving party, without violating the disclosing party’s proprietary rights;
- d. Obtained from a source other than the disclosing party without an obligation of confidentiality; or
- e. Publicly available when received or thereafter became publicly available (other than through an unauthorized disclosure by,

through or on behalf of, the receiving party).

4. The Grantee must notify the Department within one business day after discovering any unauthorized use or disclosure of confidential information. The Grantee will cooperate with the Department in every way possible to regain possession of the confidential information and prevent further unauthorized use or disclosure.

Q. Cap on Salaries

None of the funds awarded to the Grantee through this Agreement will be used to pay, either through a grant or other external mechanism, the salary of an individual at a rate in excess of Executive Level II. The current rates of pay for the Executive Schedule are located on the United States Office of Personnel Management web site, <http://www.opm.gov>, by navigating to Policy — Pay & Leave — Salaries & Wages. The salary rate limitation does not restrict the salary that a Grantee may pay an individual under its employment; rather, it merely limits the portion of that salary that may be paid with funds from this Agreement.

IV. Financial Requirements

A. Operating Advance

An operating advance may be requested by the Grantee to assist with program operations. The request should be addressed to the Contract Manager identified in Part 1, Section VIII. The operating advance will be administered as follows:

1. The operating advance amount requested must be reasonable in relation to factors including but not limited to program requirements, the period of the Agreement, and the financial obligation. The advance must not exceed 16.67 percent of operating expenses. Operating advances will be monitored and adjusted by the Department relative to the Agreement amount.
2. The operating advance must be recorded as an account payable liability to the Department in the Grantee's financial records. The operating advance payable liability must remain in the Grantee's financial records until fully recovered by the Department.
3. The reimbursement for actual expenditures by the Department should be used by the Grantee to replenish the operating advance used for program operations.
4. The operating advance must be returned to the Department within 30 days of the end date of this Agreement unless the Grantee has a recurring agreement with the Department. Subsequent Department agreements may not be executed if an outstanding operational advance has not been repaid.

The Department may obtain the Michigan Department of Treasury's

assistance in collecting outstanding operating advances. The Department will comply with the Michigan Department of Treasury's Due Process procedures prior to forwarding claims to Treasury. Specific Due Process procedures include the following:

- a. An offer from the Department of a hearing to dispute the debt, identifying the time, place and date of such hearing.
 - b. A hearing by an impartial official.
 - c. An opportunity for the Grantee to examine the Department's associated records.
 - d. An opportunity for the Grantee to present evidence in person or in writing.
 - e. A hearing official with full authority to correct errors and decide not to forward debt to Treasury.
 - f. Grantee representation by an attorney and presentation of witnesses if necessary.
5. If the Grantee has a recurring agreement with the Department, the Department requires an annual confirmation of the outstanding operating advance. At the end of either the Agreement period or Department's fiscal year, whichever is first, the Grantee must respond to the Department's request for confirmation of the operating advance. Failure to respond to the confirmation request may result in the Department recovering all or part of an outstanding operating advance.

B. Reimbursement Method

The Grantee will be paid for allowable expenditures incurred by the Grantee, submitted for reimbursement on the Financial Status Reports (FSRs) and approved by the Department. Reimbursement from the Department is based on the understanding that Department funds will be paid up to the total Department allocation as agreed to in the approved budget. Department funds are the first source after the application of fees and earmarked sources unless a specific local match condition exists.

C. Financial Status Report Submission

The Grantee must electronically prepare and submit FSRs to the Department via the EGrAMS website <http://egram-mi.com/mdhhs>.

FSRs must be submitted on a monthly basis, no later than 30 days after the close of each calendar month. The monthly FSRs must reflect total actual program expenditures, up to the total agreement amount. Failure to meet financial reporting responsibilities as identified in this Agreement may result in withholding future payments.

The Grantee representative who submits the FSR is certifying to the best of their knowledge and belief that the report is true, complete and accurate and the expenditures, disbursements and cash receipts are for the purposes and

objectives set forth in the terms and conditions of this Agreement. The individual submitting the FSR should be aware that any false, fictitious or fraudulent information, or the omission of any material facts, may subject them to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise.

The instructions for completing the FSR form are available on the EGrAMS website <http://egram-mi.com/mdhhs>. Send FSR questions to FSRMDHHS@michigan.gov.

D. Reimbursement Mechanism

All Grantees must register using the on-line vendor self-service site to receive all state of Michigan payments as Electronic Funds Transfers (EFT)/Direct Deposits, as mandated by MCL 18.1283a. Vendor registration information is available through the Department of Technology, Management and Budget's web site: <https://www.michigan.gov/sigmavss>.

E. Final Obligations and Financial Status Reporting Requirements

1. Obligation Report

The Obligation Report, based on annual guidelines, must be submitted by the due date established by and using the format provided by the Department's Expenditures Operations Division. The Grantee must provide an estimate of unbilled expenditures for the entire Agreement period. The information on the report will be used to record the Department's year-end accounts payable and receivable for this Agreement.

2. Department-wide Payment Suspension

A temporary payment suspension is in effect on agreements during the Department's year-end closing period. The Department will notify the Grantee of the date by which FSRs should be submitted to ensure payment prior to the payment suspension period.

3. Final FSRs

Final FSRs are due 30 days following the end of the Agreement period. The final FSR must be clearly marked "Final." Final FSRs not received by the due date may result in the loss of funding requested on the Obligation Report and may result in a potential reduction in a subsequent year's Agreement amount.

F. Unobligated Funds

Any unobligated balance of funds held by the Grantee at the end of the Agreement period will be returned to the Department within 30 days of the end of the Agreement or treated in accordance with instructions provided by the Department.

G. Indirect Costs

The Grantee may use an approved federal or state indirect rate in their budget calculations and financial status reporting. If the Grantee does not have an existing approved federal or state indirect rate, they may use a 10% de minimis rate in accordance with 2 CFR 200 to recover their indirect costs. Governmental Grantees with an existing cost allocation plan may budget accordingly in lieu of an indirect cost rate. Non-governmental Grantees may use a cost allocation plan only if the plan was in place prior to December 26, 2014.

V. Agreement Termination

This Agreement may be terminated without further liability or penalty to the Department for any of the following reasons:

- A. By either party by giving 30 days written notice to the other party stating the reasons for termination and the effective date.
- B. By either party with 30 days written notice upon the failure of either party to carry out the terms and conditions of this Agreement, provided the alleged defaulting party is given notice of the alleged breach and fails to cure the default within the 30-day period.
- C. Immediately if the Grantee or an official of the Grantee or an owner is convicted of any activity referenced in Part 2 Section III. D. of this Agreement during the term of this Agreement or any extension thereof.

VI. Stop Work Order

The Department may suspend any or all activities under this Agreement at any time. The Department will provide the Grantee with a written stop work order detailing the suspension. Grantee must comply with the stop work order upon receipt. The Department will not pay for activities, Grantee's incurred expenses or financial losses, or any additional compensation during a stop work period.

VII. Final Reporting Upon Termination

Should this Agreement be terminated by either party, within 30 days after the termination, the Grantee must provide the Department with all financial, performance and other reports required as a condition of this Agreement. The Department will make payments to the Grantee for allowable reimbursable costs not covered by previous payments or other state or federal programs. The Grantee must immediately refund to the Department any funds not authorized for use and any payments or funds advanced to the Grantee in excess of allowable reimbursable expenditures.

VIII. Severability

If any part of this Agreement is held invalid or unenforceable by any court of competent jurisdiction, that part will be deemed deleted from this Agreement and the severed part will be replaced by agreed upon language that achieves the same or similar objectives. The remaining parts of the Agreement will continue in full force and effect.

IX. Waiver

Failure by the Department to enforce any provision of this Agreement will not constitute a waiver of the Department's right to enforce any other provision of this Agreement.

X. Amendments

Any changes to this Agreement will be valid only if made in writing and executed by all parties through an amendment to this Agreement. Any change proposed by the Grantee which would affect the Department funding of any project must be submitted in writing to the Department immediately upon determining the need for such change. The Department has sole discretion to approve or deny the amendment request. The Grantee must, upon request of the Department and receipt of a proposed amendment, amend this Agreement.

XI. Liability

The Grantee assumes all liability to third parties, loss, or damage because of claims, demands, costs, or judgments arising out of activities, such as but not limited to direct activity delivery, to be carried out by the Grantee in the performance of this Agreement, under the following conditions:

- A. The liability, loss, or damage is caused by, or arises out of, the actions of or failure to act on the part of the Grantee, any of its subcontractors, or anyone directly or indirectly employed by the Grantee.
- B. Nothing herein will be construed as a waiver of any governmental immunity that has been provided to the Grantee or its employees by statute or court decisions.

The Department is not liable for consequential, incidental, indirect or special damages, regardless of the nature of the action.

XII. State of Michigan Agreement

This Agreement is governed, construed, and enforced in accordance with Michigan law, excluding choice-of-law principles, and all claims relating to or arising out of this Agreement are governed by Michigan law, excluding choice-of-law principles. Any dispute arising from this Agreement must be resolved in the Michigan Court of Claims. Complaints against the State must be initiated in Ingham County, Michigan. Grantee waives any objections, such as lack of personal jurisdiction or forum non conveniens. Grantee must appoint an agent in Michigan to receive service of process.

A Attachment A - Statement of Work

- Objective :** Clinton Twp Sewershed Sampling
- Activity :** Scheduled Sampling
- Responsible Staff :** Dave Burkel, Vince Astorino
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, etc.) over the entire project duration.
-
- Activity :** ddPCR Analysis
- Responsible Staff :** Dave Szlag, Emily Hunawill
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** 95% or more of received samples analyzed and reported over the entire project duration
-
- Activity :** Autonomous Reporting
- Responsible Staff :** Parna Bandyopadhyay
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.
-
- Activity :** As Needed Communication with MCHD
- Responsible Staff :** Mahesh Lunani, David Inman
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.
-
- Objective :** MCHD Sites (Martha T Berry LTC and Macomb County Jail)
- Activity :** Scheduled Sampling
- Responsible Staff :** Dave Burkel, Vince Astorino
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, etc.) over the entire project duration.
-
- Activity :** ddPCR Analysis
- Responsible Staff :** Dave Szlag, Emily Hunawill
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** 95% or more of received samples analyzed and reported
-
- Activity :** Autonomous Reporting
- Responsible Staff :** Parna Bandyopadhyay
- Date Range :** 10/01/2022 - 09/30/2023
- Expected Outcome :**
- Measurement :** Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.
-
- Activity :** As Needed Communication with MCHD
- Responsible Staff :** Mahesh Lunani, David Inman
- Date Range :** 10/01/2022 - 09/30/2023

Expected Outcome :	
Measurement :	Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.
Objective :	Mt Clemens WWTP Sampling
Activity :	Scheduled Sampling
Responsible Staff :	Leonard Bertrand, David Inman
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, etc.) over the entire project duration.
Activity :	Test Kit Materials Supplied and Shipping Logistics
Responsible Staff :	David Inman
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	Materials resupplied 3-4 times during the project, with reused materials where possible to reduce total landfill waste.
Activity :	ddPCR Analysis
Responsible Staff :	Dave Szlag, Emily Hunawill
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	95% or more of received samples analyzed and reported
Activity :	Autonomous Reporting
Responsible Staff :	Parna Bandyopadhyay
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.
Activity :	As Needed Communication with MCHD
Responsible Staff :	Mahesh Lunani, David Inman
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.
Objective :	New Baltimore WWTP Sampling
Activity :	Scheduled Sampling
Responsible Staff :	Bill Bade, David Inman
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, etc.) over the entire project duration.
Activity :	Test Kit Materials Supplied and Shipping Logistics
Responsible Staff :	David Inman
Date Range :	10/01/2022 - 09/30/2023
Expected Outcome :	
Measurement :	Materials resupplied 3-4 times during the project, with reused materials where possible to reduce total landfill waste.
Activity :	ddPCR Analysis
Responsible Staff :	Dave Szlag, Emily Hunawill

Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : 95% or more of received samples analyzed and reported

Activity : Autonomous Reporting
Responsible Staff : Parna Bandyopadhyay
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.

Activity : As Needed Communication with MCHD
Responsible Staff : Mahesh Lunani, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.

Objective : Richmond WWTP Sampling
Activity : Sampling Resumes
Responsible Staff : Brent Ames, Beth Eldridge, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, shipping, etc.)

Activity : Test Kit Materials Supplied and Shipping Logistics
Responsible Staff : David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Materials resupplied 3-4 times during the project, with reused materials where possible to reduce total landfill waste.

Activity : ddPCR Analysis
Responsible Staff : Dave Szlag, Emily Hunawill
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : 95% or more of received samples analyzed and reported

Activity : Autonomous Reporting
Responsible Staff : Parna Bandyopadhyay
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.

Activity : As Needed Communication with MCHD
Responsible Staff : Mahesh Lunani, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.

Objective : Romeo WWTP Sampling
Activity : Scheduled Sampling

Responsible Staff : Al LaPeer, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, shipping, etc.)

Activity : Test Kit Materials Supplied and Shipping Logistics
Responsible Staff : David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Materials resupplied 3-4 times during the project, with reused materials where possible to reduce total landfill waste.

Activity : ddPCR Analysis
Responsible Staff : Dave Szlag, Emily Hunawill
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : 95% or more of received samples analyzed and reported

Activity : Autonomous Reporting
Responsible Staff : Parna Bandyopadhyay
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.

Activity : As Needed Communication with MCHD
Responsible Staff : Mahesh Lunani, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.

Objective : Warren WWTP Sampling
Activity : Scheduled Sampling
Responsible Staff : David Scheel, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, shipping, etc.)

Activity : ddPCR Analysis
Responsible Staff : Dave Szlag, Emily Hunawill
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : 95% or more of received samples analyzed and reported

Activity : Autonomous Reporting
Responsible Staff : Parna Bandyopadhyay
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.

Activity : As Needed Communication with MCHD

Responsible Staff : Mahesh Lunani, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.

Objective : Warren Senior/LTC Sampling
Activity : Scheduled Sampling
Responsible Staff : David Scheel, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Greater than 85% of planned samples successfully collected (weather, power failure, hardware failure, shipping, etc.)

Activity : ddPCR Analysis
Responsible Staff : Dave Szlag, Emily Hunawill
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : 95% or more of received samples analyzed and reported

Activity : Autonomous Reporting
Responsible Staff : Parna Bandyopadhyay
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Automated reporting of results into the CEWS platform as data entered by lab staff. Technical support as needed.

Activity : As Needed Communication with MCHD
Responsible Staff : Mahesh Lunani, David Inman
Date Range : 10/01/2022 - 09/30/2023
Expected Outcome :
Measurement : Alerts shared with the health department on an as needed basis when spikes and other flare ups occur.

B1 Attachment B1 - Program Budget Summary

PROGRAM SEWER Network Project - 2023			DATE PREPARED 7/21/2022	
CONTRACTOR NAME MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT			BUDGET PERIOD From : 10/1/2022 To : 9/30/2023	
MAILING ADDRESS (Number and Street) 21777 Dunham Road			BUDGET AGREEMENT <input checked="" type="checkbox"/> Original <input type="checkbox"/> Amendment	
			AMENDMENT # 0	
CITY Clinton Township	STATE MI	ZIP CODE 48036-1005	FEDERAL ID NUMBER 27-2745944	

	Category	Total	Amount
DIRECT EXPENSES			
Program Expenses			
1	Salary & Wages	23,579.00	23,579.00
2	Fringe Benefits	11,096.00	11,096.00
3	Employee Travel and Training	0.00	0.00
4	Supplies & Materials	0.00	0.00
5	Subawards – Subrecipient Services	0.00	0.00
6	Contractual - Professional Services	693,505.00	693,505.00
7	Communications	0.00	0.00
8	Grantee Rent Costs	0.00	0.00
9	Space Costs	0.00	0.00
10	Capital Expenditures - Equipment & Other	0.00	0.00
11	Client Assistance - Rent	0.00	0.00
12	Client Assistance - All Other	0.00	0.00
13	Other Expense	0.00	0.00
Total Program Expenses		728,180.00	728,180.00
TOTAL DIRECT EXPENSES		728,180.00	728,180.00
INDIRECT EXPENSES			
Indirect Costs			
1	Indirect Costs	0.00	0.00
2	Cost Allocation Plan	0.00	0.00
Total Indirect Costs		0.00	0.00
TOTAL INDIRECT EXPENSES		0.00	0.00
TOTAL EXPENDITURES		728,180.00	728,180.00

SOURCE OF FUNDS

	Category	Total	Amount	Cash	Inkind
1	Source of Funds				
	MDHHS State Agreement	728,180.00	728,180.00	0.00	0.00
	Fees and Collections - 1st and 2nd Party	0.00	0.00	0.00	0.00
	Fees and Collections - 3rd Party	0.00	0.00	0.00	0.00
	Local	0.00	0.00	0.00	0.00
	Non-MDHHS State Agreements	0.00	0.00	0.00	0.00
	Federal	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00
	In-Kind	0.00	0.00	0.00	0.00
	Federal Cost Based Reimbursement	0.00	0.00	0.00	0.00
	Total Source of Funds	728,180.00	728,180.00	0.00	0.00
	Totals	728,180.00	728,180.00	0.00	0.00

B2 Attachment B2 - Program Budget - Cost Detail Schedule

	Line Item	Qty	Rate	Units	UOM	Total
DIRECT EXPENSES						
Program Expenses						
1	Salary & Wages					
	Program/Project Manager	1.0000	23579.000	0.000	FTE	23,579.00
2	Fringe Benefits					
	All Composite Rate	0.0000	32.000	34675.000		11,096.00
3	Employee Travel and Training					
4	Supplies & Materials					
5	Subawards – Subrecipient Services					
6	Contractual - Professional Services					
	Subcontracting Agency- Aquasight, Hesco, Oakland University Contact Details : Aquasight 1650 W Big Beaver Rd Suite 101, Troy,MI,48084, Phone : 2482196538	0.0000	0.000	0.000		693,505.00
7	Communications					
8	Grantee Rent Costs					
9	Space Costs					
10	Capital Expenditures - Equipment & Other					
11	Client Assistance - Rent					
12	Client Assistance - All Other					
13	Other Expense					
Total Program Expenses						728,180.00
TOTAL DIRECT EXPENSES						728,180.00
INDIRECT EXPENSES						
Indirect Costs						
1	Indirect Costs					
2	Cost Allocation Plan					
Total Indirect Costs						0.00

	Line Item	Qty	Rate	Units	UOM	Total
TOTAL INDIRECT EXPENSES						0.00
TOTAL EXPENDITURES						728,180.00

- B3** **Attachment B3 - Equipment Inventory Schedule**
[Attachment B3 - Equipment Inventory Schedule](#)

- C** **Attachment C - Performance Report Requirements**
[Attachment C - Performance/Progress Report Requirements](#)



Candice S. Miller

Public Works Commissioner
Macomb County

To: Macomb Interceptor Drain Drainage District Board Members

From: Vincent Astorino, Operations & Flow Manager

Date: September 12, 2022

Subject: Critical Area Inspection Program – Consultant Recommendation

Macomb County Public Works Office (MCPWO), on behalf of the Macomb Interceptor Drain Drainage District (MIDDD), has been coordinating various inspection and grouting projects within the District in an effort to minimize the risk of another interceptor collapse. One such effort is the on-going MIDDD Grouting Program which consists of injecting an acrylamide chemical grout into the concrete interceptor walls to fill cracks and stop leaks. The locations chosen for this program consisted of areas of observed infiltration (increased probability of failure) and areas beneath critical features & infrastructure (increased consequence of failure). Thus far, the program has been effective with the areas of observed infiltration being successfully sealed.

In addition to grouting, MCPWO staff have also initiated a comprehensive inspection program on three and six-year intervals depending on the pipe material. Currently the next phase of this program is in design and is known as the 2023 Interceptor Inspection Program. This program will consist of sonar and laser scanning of the MIDDD interceptors. These scheduled inspections are in accordance with the Administrative Consent Order (ACO-004875) entered by the MIDDD with the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Approximately 15 miles of MIDDD pipe will be scanned, televised, and PACP-scored as part of this project.

MCPWO staff have been working closely with FK Engineering, Inc. (FKE) to analyze the system-wide planning approach for the rehabilitation of the MIDDD interceptors. Within these comprehensive reports, recommendations have been made to continue inspections of the critical areas identified for the grouting program on an annual basis. A table of the areas to be inspected is included below and a map is included as an attachment.

Table 1 – Critical Area Lengths by Interceptor

Interceptor	Length
Romeo Arm (PCI-12A)	2,550'
Garfield (PCI-24 & PCI-45)	2,930'
Lakeshore (PCI-13 & PCI-14)	5,495'
Total:	10,975'

These areas are where the largest MIDDD interceptors cross under critical infrastructure including the Clinton River, Red Run, and major thoroughfares. While any interruption of sewer service to the member

communities is unacceptable, these locations represent the greatest risk of significant environmental impact, financial impact, and disruption to the communities.

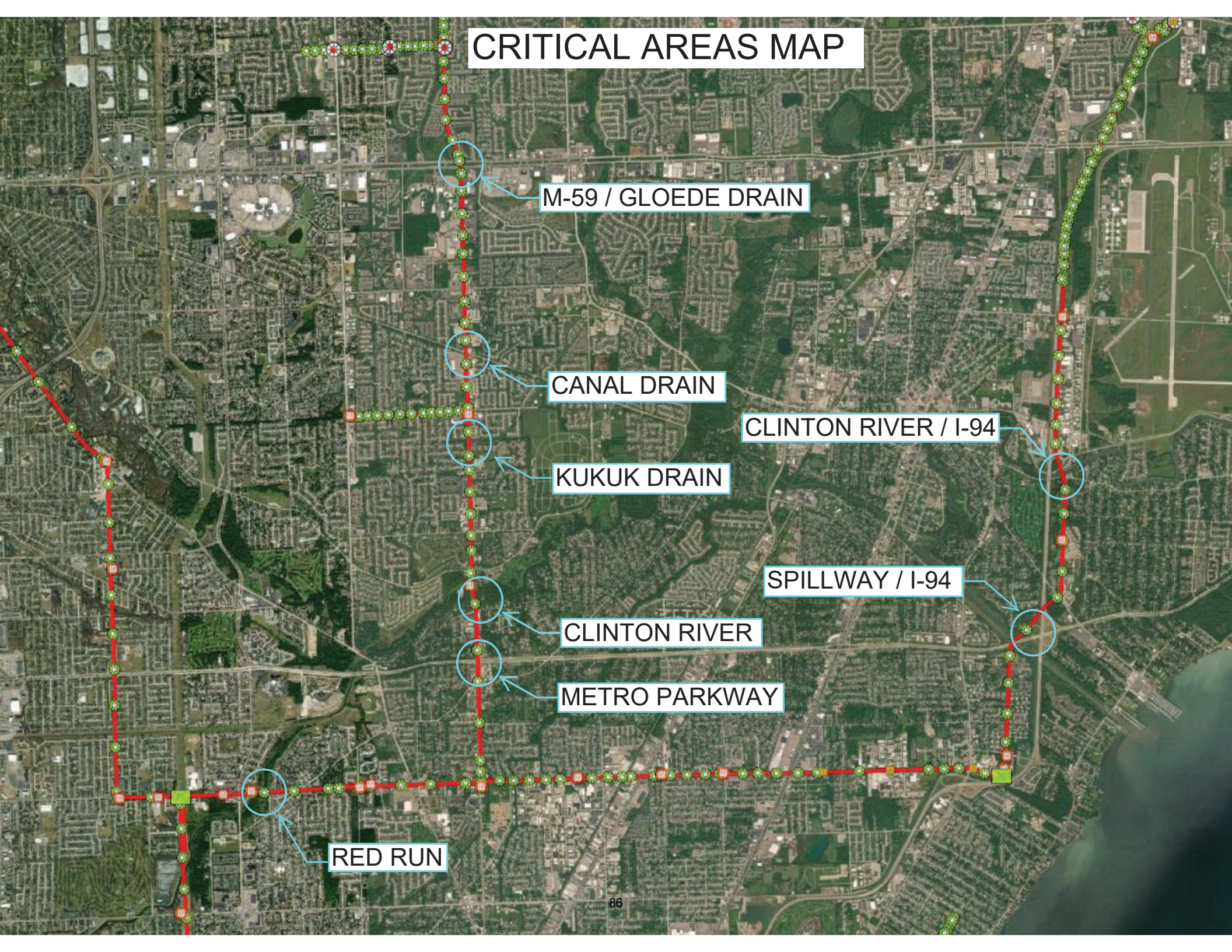
In an effort to continue this proactive approach, MCPWO staff has requested and obtained a cost proposal from FKE to perform several manned-entry inspections and subsequent inspection reports of the recently grouted critical areas. While several firms may be qualified to perform these inspections, MCPWO staff identified FKE as the best suitor because of their on-going involvement with the Segment 5 and Segment 6 projects. Nearly all of the inspection work will have to be coordinated with these two large projects. The primary coordination effort is with flow control since, when the contractors are working in the pipe, flow is stored upstream making it inaccessible for entry. As such, FKE has accounted for working off-hours / off-days in order to accomplish these inspections.

MCPWO staff is recommending that the MIDDD board award the contract to FK Engineering, Inc. in the total not-to-exceed amount of \$101,888.00 to perform the work outlined in the RFP and their proposal letter. Upon approval, MCPWO will initiate a new task and execute a change order to the existing as-needed engineering contract.

MCPWO staff is confident that FKE will be able to perform the work for the proposed fee. MCPWO staff will provide assistance to this effort to facilitate better in-pipe conditions and to keep costs down.

Attachments: FKE Proposal Letter Dated 07-26-22
Critical Areas Map

CRITICAL AREAS MAP



M-59 / GLOEDE DRAIN

CANAL DRAIN

KUKUK DRAIN

CLINTON RIVER

METRO PARKWAY

RED RUN

CLINTON RIVER / I-94

SPILLWAY / I-94



30425 Stephenson Hwy
Madison Heights, MI 48071

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

July 26, 2022

Attention: Mr. Steve Wagner, Engineer II

RE: 2023 MCPWO Critical Area Inspection Program
Proposal for Professional Engineering Services

Dear Mr. Wagner,

FK Engineering Associates (FKE) is pleased to present this proposal for Professional Engineering Services for the 2023 MCPWO Critical Area Inspection Program 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 to convey our project understanding, anticipated services, and associated unit rate fees as requested in the RFP.

Project Understanding

Per the RFP, MCPWO has identified specific manhole-to-manhole sewer reaches within the Macomb Interceptor Drain Drainage District (MIDDD) system. These reaches have been identified as infrastructure for which near-term inspection is warranted due to location and/or condition. The target inspection reaches are as follows:

- Romeo Arm (PCI-12A) – 2,550 feet total
 - Red Run: RA-MH-002 to ST-S-5 Tap. 9'-2" diameter, 575 feet
 - Metropolitan Parkway: RA-MH-14 to RA-MH-013. 11' diameter, 1,400 feet
 - Clinton River: RA-MH-016 to CT-S-1 Tap. 11' diameter, 575 feet
- Garfield Interceptor (PCI-24 & PCI-45) – 2,900 feet total
 - Kukuk Drain: GI-MH-007 to GI-MH-006. 9' diameter, 1,050 feet
 - Canal Drain: GI-MH-011 to GI-MH-010. 7' diameter, 1,030 feet
 - M-59/Gloede Drain: GI-MH-020 to GI-MH-019. 7' diameter, 850 feet
- Lakeshore Interceptor (PCI-13 & PCI-14) – 5,495 feet total
 - Metro Parkway/Spillway/I-94: LSI-MH-007 to LSI-MH-005. 11' diameter, 3,400 feet
 - Clinton River/I-94: LSI-MH-012 to LSI-MH-011. 11' diameter, 2,095 feet

FKE Experience

Since 2012, FKE has worked extensively in Southeast Michigan performing interceptor and sewer inspection services that conform to the services as described in this RFP. We have a hands-on, collaborative approach to interceptor inspections, including extensive experience with the MCPWO interceptor systems. Our approach is possible as a result of our experience in the coordination and execution of inspections and our timely assessment of observed conditions and associated criticality of

defects. As our experience demonstrates, we are proactive in our inspection approach, providing observation assessments immediately following inspections when conditions warrant, which is key in preventing/eliminating costly surprises at later dates.

Proposed Approach

FKE will meet the requirements of this project as stipulated in the RFP, including performing inspection and providing individual post-inspection technical memorandums. ***We plan to provide three separate Technical Memorandums, one for each interceptor inspected, separated by specific reach as divided in the RFP.*** Based on our experience, key aspects of our services are discussed as follows:

- *Active Communication and Coordination:* Throughout the various sub-task work items, we will actively engage with MCPWO staff and incorporate comments, concerns, and preferences into fieldwork and project deliverables. Our goal is to keep MCPWO informed in a proactive manner to allow for informed Owner decisions to be made in a timely/effective manner. We understand that the numerous on-going projects within the regional wastewater system will require an inspection schedule that may include weekends and/or atypical working hours.
- *Interceptor Inspection:* FKE will perform interceptor inspection of identified manhole reaches using 360°, high-definition cameras with a minimum of one PACP-trained Engineer to provide inspection and real-time commentary of observed conditions.

Our inspection team will be generally comprised of a team of 7: three topside crew for access and support at the up and downstream entrance points, one downstream manhole tender (entrant), and 3 inspector entrants (minimum two with PACP training). This approach allows for safe confined space entry and efficient inspection of existing conditions. Any critical damage or abnormalities noted during inspection shall be brought to the Owner's attention immediately following inspection.

- *Post-inspection memorandum (Romeo Arm, Garfield Interceptor, and Lakeshore Interceptor):* The videos captured in the above tasks will be further reviewed in-office to develop a post-inspection technical memorandum. These memorandums will include a summary of conditions as well as a comparison to conditions documented during the previous inspection (where applicable). PACP-based scoring will be included in these memorandums. Captured footage will be provided to MCPWO on a separate flash drive as an exhibit to the memorandum.

We have assumed that flow control aspects and related hydraulic analysis will be performed by others as needed and is not included in our services as discussed herein. We have also assumed that confined space entry emergency response/rescue services will be provided and/or coordinated by MCPWO as has been done on recent interceptor inspections performed by FKE.


Estimated Professional Fees


Our total cost estimate for this project is based on a **Cost-Plus** professional fee basis of **\$101,888**. Please refer to the cost matrix attachment for a general breakdown of hours and staffing developed as part of this proposal.

These fees are reduced from our standard rate schedule, reflecting a discount for continued service to MCPWO. We will be applying a 0% markup on any subconsultant invoices and project related expenses.

We appreciate your consideration of our proposal, and we look forward to continuing to provide interceptor inspection 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
PACP Cert. No. U-413-17564


Zachary F. Carr, P.E.
Vice President

Attachments

MCPWO Critical Area Inspection Program

ENGINEERING SERVICES		Estimated Staff Hours By Classification										Total Hours	Revised Total Estimated Fees	Commentary	
		Principal	Project Principal	Senior Project Engineer	Project Engineer	Assistant Project Engineer	Senior Staff Engineer / CADD	Staff Engineer	Senior Technician	Field Technician	Administrative Assistant				Expenses
Engineering Sub-Task		\$ 205	\$ 170	\$ 157	\$ 135	\$ 125	\$ 120	\$ 105	\$ 76	\$ 66	\$ 66				
TASK 1: Inspection															
1A	Coordination														
	SESR		1	1		1	8						11	\$ 1,412.00	Field Crew: (2) upstream MH (tender and topside)
													11	\$ 1,412.00	(2) downstream MH (tender and topside) (3) entrants for inspection
1B	Inspection														
	PCI-12A - Red Run (575 ft)		3	3		10	20	20					56	\$ 6,731.00	Anytime & no traffic control, 1/3 day inspection
	PCI-12A - Metro Parkway (1400 ft)		4	4		10	20	40				250	78	\$ 9,408.00	2-6 am & minor TC, 1/2 day inspection
	PCI-12A - Clinton River (575 ft)		3	3		10	20	20				250	56	\$ 6,981.00	2-6 am & minor TC, 1/3 day inspection
	PCI-24 - Kukuk Drain (1050 ft)		4	4		10	20	20			1000		58	\$ 8,058.00	midnight & TC, 1/2 day inspection
	PCI-45 - Canal Drain (1030 ft)		4	4		10	20	20			1500		58	\$ 8,558.00	9-10 pm & TC, 1/2 day inspection
	PCI-45 - M-59 / Gloede Drain (850 ft)		4	4		10	20	20			1500		58	\$ 8,558.00	anytime & TC, 1/2 day inspection
	PCI-13 - Metro Parkway / Spillway / I-94 (3400 ft)		8	8		20	40	40			250		116	\$ 14,366.00	2-6 am & minor TC, 2 days inspection
	PCI-14 - Clinton River (2095 ft)		6	6		12	30	30			250		84	\$ 10,462.00	2-6 am & minor TC, 1 day inspection
													564	\$ 73,122.00	8 days of fieldwork plus prep @ 10hrs/staff
1C	Post-Inspection Memorandum														
	Video Review		2	4	8		30						44	\$ 5,648.00	
	Memo	4	8	8	8	16	30	30			4	291	399	\$ 13,821.00	Three Memos - one for each interceptor
													443	\$ 19,469.00	
	Sub-Total	4	47	49	16	109	258	240	0	0	4		1018	\$ 94,003.00	
Expenses															
			#	Days									Rate		
	Truck usage		3	8									95	\$ 2,280.00	
	Confined Space Entry		1	8									650	\$ 5,200.00	
	Mileage		600										0.675	\$ 405.00	
	Sub-Total													\$ 7,885.00	
	Total Hours and Expenses													\$ 101,888.00	

<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 – 7.4212% Clinton – 21.2122% Fraser – 4.1667% Harrison – 6.3461% Lenox – 1.1179% Macomb – 14.0617% New Haven – 0.8255% Shelby – 9.7911% Sterling Heights – 30.6812% Utica – 1.6170% Washington – 2.7596%	Baker	Aloia & Associates	\$ 656.75	Invoice #26441 - 07.01.22	Sale of 45345 Garfield Road - May 2022	
		Downing	Anderson, Eckstein & Westrick	\$ 6,848.50	Invoice #139144 - 08.17.22	MID Grouting Program - 07.04.22 - 07.31.22	\$ 201,853.15
		Astorino	Applied Science, Inc.	\$ 26,180.50	Invoice #8203 - 07.30.22	Dye Dilution Testing 10.26.21 thru 07.30.21	\$ 67,111.00
		Astorino	Aquasight	\$ 69,640.00	Invoice #000719 - 08.05.22	Covid-19 Monitoring - Grant	\$ 153,314.00
		Astorino	ASU Group	\$ 1,500.00	Invoice #MD00158099 - 7.29.21	Annual Administration Fee - Liability Insurance	
		Astorino	City of Mt. Clemens	\$ 21,735.68	Invoice #28004915 - 07.29.22	Monthly Utilities - June 2022	
		Astorino	Department of Roads	\$ 1,783.85	Invoice #302178 - 06.08.22	Fleet Fuel - May 2022	
		Astorino	Department of Roads	\$ 2,060.04	Invoice #302201 - 07.08.22	Fleet Fuel - June 2022	
		Astorino	Department of Roads	\$ 1,895.81	Invoice #302226 - 08.10.22	Fleet Fuel - July 2022	
		Downing	Doetsch	\$ 197,301.00	Invoice #72097 - 07.27.22	Phase 2 Grouting	\$ 1,567,263.80
		Downing	Doetsch	\$ 122,267.50	Invoice #WO20004 App#4 - 08.24.22	2020 Inspection Program	\$ 95,062.65
		Downing	DTE Energy	\$ 14,602.00	Invoice #22-311 - 08.25.22	Segment 5 Permanent Power Feed	
		Astorino	DTN, LLC	\$ 823.50	Invoice #6161041 - 07.22.22	Storm Sentry Weather Service	
		Astorino	Fishbeck	\$ 1,817.00	Invoice #414013 - 08.11.22	GLWA Assistance 07.12.22 - 08.05.22	
		Astorino	Fishbeck	\$ 22,322.00	Invoice #414061 - 08.05.22	Wastewater Master Plan 07.09.22 - 08.05.22	\$ 290,275.49
		Downing	FK Engineering Associates	\$ 75,814.27	Invoice #22-058-026 - 08.09.22	Segment 6 Rehabilitation CCA 07.10.22 - 08.06.22	\$ 945,170.27
		Downing	FK Engineering Associates	\$ 84,400.78	Invoice #20-152-020 - 08.09.22	Segment 5 Romeo Arm Lining CCA - July 2022	\$ 1,831,809.50
		Downing	Meadowbrook Insurance	\$ 107,000.00	Invoice #5405 - 08.11.22	OCIP Policy - Odor & Corrosion/Seg 5/6	
		Astorino	METCO Consulting Services	\$ 7,432.82	Invoice #1717-37 - 09.01.22	Flow Control Services 08.01.22 - 08.28.22	\$ 72,118.49
		Astorino	METCO Consulting Services	\$ 10,375.56	Invoice #1717-36 - 08.01.22	Flow Control Services 06.27.22 - 07.31.22	\$ 79,551.31
		Astorino	NTH Consultants, Ltd	\$ 703.50	Invoice #630254 - 08.08.22	Interceptor Inspection Program	\$ 80,845.50
		Astorino	NTH Consultants, Ltd	\$ 736.00	Invoice #630468 - 08.31.22	2023 Interceptor Inspection Program - Design	\$ 80,109.50
		Downing	Oscar Renda Contracting	\$ 306,630.00	Invoice #WO19024 Est #24 - 09.02.22	Romeo Arm Segment 5 Lining	\$ 17,873,356.95
		Downing	Ric-Man Construction	\$ 574,998.64	Invoice #WO21026 Est #12 - 09.01.22	Segment 6 Services 08.01.22 - 08.31.22	\$ 9,315,539.68
		Astorino	TBM Property Management LLC	\$ 750.00	Invoice #666 - 04.01.22	Storage Rental - January 2022 - March 2022	
		Astorino	TBM Property Management LLC	\$ 750.00	Invoice #686 - 06.01.22	Storage Rental - April 2022 - June 2022	
		Downing	Tetra Tech, Inc.	\$ 4,222.50	Invoice #51931913 - 08.05.22	Odor & Corrosion Design 07.02.22 - 07.19.22	\$ 35,249.22
		Astorino	ULINE	\$ 630.54	Invoice #153056169 - 08.24.22	Tyvek Coveralls	
		Astorino	Verizon	\$ 1,318.69	Invoice #9909541461 - 06.23.22	Monthly Cellular - 05.24.22 - 06.23.22 (Eq. Fund)	
		Astorino	Verizon	\$ 1,506.51	Invoice #9909541461 - 06.23.22	Monthly Cellular - 05.24.22 - 06.23.22	

<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>
<u>Biofilter</u>		Astorino	City of Fraser	\$ 830.91	Invoice #22-285 - 07.15.22	Monthly Utilities 06.16.22 - 07.15.22	
<u>CPS</u>		Astorino	Clinton Township Treasurer	\$ 2,621.03	Invoice #22-281 - 08.02.22	Monthly Water - 06.28.22 - 07.26.22	
		Astorino	De-Cal, Inc	\$ 19,770.00	Invoice #122008-1 - 07.25.22	24" Valve Replacement - Plug Valve - Pump 2	
		Astorino	DTE Energy	\$ 14,568.42	Invoice #22-292 - 08.01.22	Monthly Electric 07.05.22 - 08.01.22	
<u>METERS</u>		Astorino	Amazon	\$ 882.06	Invoice #22-304 - 05.11.22	Solar Batteries - Meters	
		Astorino	Colville Electric, Co., LLC	\$ 609.39	Invoice #22366 - 08.05.22	Pump Electrical Work	
<u>NGI</u>		Astorino	Kennedy Industries	\$ 628.00	Invoice #632347 - 08.03.22	Troubleshoot Stator Temp	
		Astorino	Kennedy Industries	\$ 2,715.00	Invoice #632345 - 08.02.22	Pump Inspection	
<u>OMID</u>		Downing	Oakland County Treasurer	\$ 4,364,430.08	Invoice #C1005050 - 08.01.22	Sewer Disposal - July 2022	
Total				\$ 6,075,758.83			

**Budget to Actual
MIDDD
As of Aug 31, 2022 = 17%**

DESCRIPTION	2023 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
GLWA-OMID	48,014,249		8,003,184	40,011,065	16.7%
OMID O&M	4,358,913		726,486	3,632,428	16.7%
Settlement	100,000			100,000	0.0%
Reimbursements	225,000		915	224,085	0.4%
PY Revenue-Fund Balance	16,738,220			16,738,220	0.0%
Reimb-Local Communities	17,159,080			17,159,080	0.0%
COVID Grant	-		258,810		
Interest	50,000		29,475	20,525	59.0%
<i>Total Revenue Accounts</i>	86,645,462	-	9,018,869	77,885,403	10.4%
EXPENSE ACCOUNTS					
GLWA-OMID	48,014,249		8,003,184	40,011,065	16.7%
OMID O&M	4,358,913		726,486	3,632,428	16.7%
Public Works Wastewater Disposal Division	1,889,760			1,889,760	0.0%
Office Operations/Insurance	343,100		15,258	327,842	4.4%
SCADA	461,990		5,053	456,937	1.1%
<u>Engineering</u>					
Replenish reserve from CPS refunding	618,680			618,680	0.0%
Drop shaft rehab Design	1,600,000		177,965	1,422,035	11.1%
METCO As Needed	75,000		18,595	56,405	24.8%
Data Review-Aquasight	58,000			58,000	0.0%
Annual Meter Dye Testing	50,000		26,181	23,819	52.4%
As Needed Engineering	250,000		22,322	227,678	8.9%
Odor and Corrosion Construction/CCA	3,280,000		4,223	3,275,777	0.1%
GLWA Assistance	30,000		1,817	28,183	6.1%
General Construction/Engineering Contingency-All Projects	450,000			450,000	0.0%
As Needed Applied Science	25,000			25,000	0.0%
As Needed Metco	60,000			60,000	0.0%
Level Sensors/Pressure/H2S-Meters	214,200			214,200	0.0%
Odor and Control-Construction	7,010,000			7,010,000	0.0%
Segment 6 Construction Administration	685,530		166,941	518,589	24.4%
Segment 6 Construction/CCA from reserve	-		307,029	(307,029)	100.0%
SY-S-1, SY-S-2, & WA-S-1 Meter Const Admin/Rehab	927,790		1,620	926,170	0.2%
Segment 5 Construction Admin	972,500		84,401	888,099	8.7%
COVID Grant	-		258,810	(258,810)	100.0%
Segment 5 Construction	611,240		356,565	254,675	58.3%
Legal Services	75,000		4,277	70,723	5.7%
Clintondale PS O&M	870,000		55,582	814,418	6.4%
NGI O&M	307,500		5,669	301,831	1.8%
Meters O&M	228,400		9,246	219,154	4.0%
Control Structures and Pump Station O&M	281,370		46,895	234,475	16.7%
Biofilter O&M	25,500		1,157	24,343	4.5%
Contribution Life Cycle Reserve	184,300			184,300	0.0%
Interceptor O&M	9,898,300		40,709	9,857,591	0.4%
Stormwater Pump Stations	131,000			131,000	0.0%
Sewage Disposal Charges - Mt. Clemens	200,000		44,953	155,047	22.5%
Debt Service - Revenue Bonds	2,458,140		409,690	2,048,450	16.7%
<i>Total Expense Accounts</i>	86,645,462	-	10,794,627	75,850,835	12.5%

	O&M Balance 6/30/2022	O&M	Total 8/31/2022
Cash - Operating	34,922,137	(1,775,758)	33,146,379
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		9,018,869	9,018,869
Expenditures		10,794,627	10,794,627
			0
Equity*	34,922,137		33,146,379

Detail of 2022 Equity*

Reserve at 6/30/2022	10,665,604
Construction/ Engineering Reserve	23,088,928
Life Cycle Reserve	1,167,605