

MARTIN SANITARY DIVERSION DRAIN
INTRA-COUNTY DRAINAGE BOARD
JANUARY 9, 2023
10:00 A.M.
AGENDA

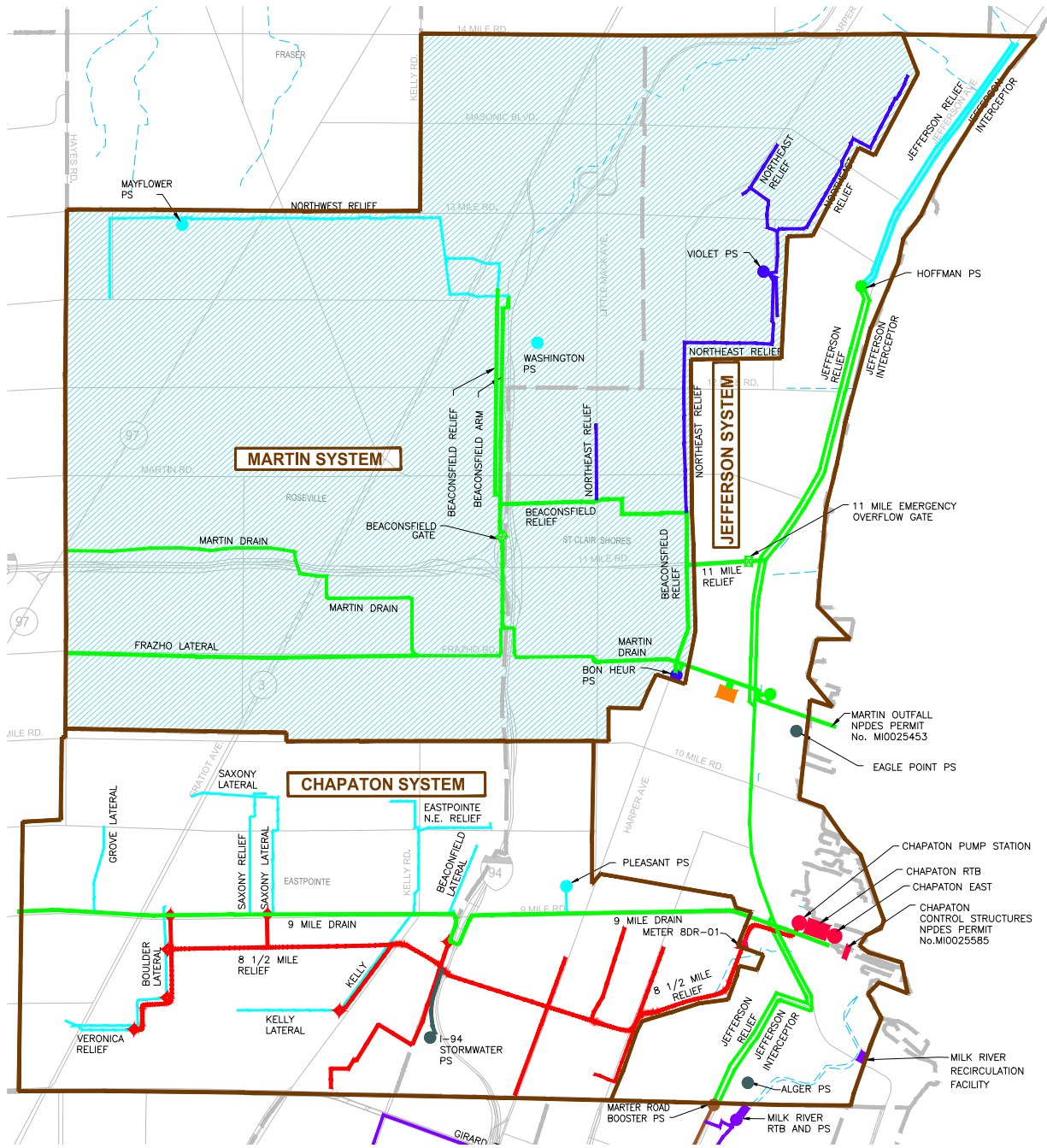
**NOTE: THIS MEETING WILL BE HELD IN PERSON WITH TELECONFERENCE
OPTION FOR PUBLIC**

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

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for January 9, 2023	
3. Approval of Minutes for December 12, 2022	3
4. Public Participation	
5. Project & Operations Update – Vince Astorino	5
6. Martin RTB Improvements Project Design Recommendation – Vince Astorino	8
Motion: To approve the Martin Retention Basin Improvements design proposal from Fishbeck for an amount not to exceed \$78,700.	
7. Consideration for approval of invoices (see attached)	12
8. Financial Report – Bruce Manning	13
9. Adjourn	

Hard copy is intended to be 8.5"x11" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

MARTIN SYSTEM MAP
Macomb County, MI
Southeast Macomb Sanitary District
Wastewater Master Plan



SYSTEM LEGEND

(AS OF DATE OF PUBLICATION)

- SYSTEM BOUNDARY

DISTRICT LEGEND

(AS OF DATE OF PUBLICATION)

- 8 1/2 MILE RELIEF DRAIN DRAINAGE DISTRICT
- SOUTHEAST MACOMB COUNTY WASTEWATER DISPOSAL SYSTEM
- MARTIN SANITARY DIVERSION DISTRICT
- SOUTHEAST MACOMB SANITARY DISTRICT
- NORTHEAST SEWAGE DISPOSAL SYSTEM
- MILK RIVER INTERCOUNTY DRAIN DRAINAGE DISTRICT
- LOCAL MUNICIPALITY
- OTHER

ASSET LEGEND

- PUMP STATION
- FLOW CONTROL STRUCTURE
- RETENTION TREATMENT BASIN
- GRAVITY INTERCEPTOR
- OVERFLOW POINT

PLOT INFO: Z:\2018\181053\CAD\PRECED\SEMSD_OVERALL.DWG LAYOUT: FIG 3-4_MARTIN SYS DATE: 1/25/2020 TIME: 7:48:56 AM USER: MESEDKI

An adjourned meeting of the Intra-County Drainage Board for the **MARTIN SANITARY DIVERSION DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham Clinton Township, Michigan on December 12, 2022, at 10:01 A.M.

PRESENT: Candice S. Miller, Chair
Bryan Santo, Member
Harold Haugh, Member

ALSO PRESENT: Vince Astorino, Operations & Flow Manager; Brian Baker, Chief Deputy; Stephen Downing, Construction and Maintenance Manager; Norb Franz, Communications Manager; Pam Sonnenberg, Administrative Assistant; Tom Stockel, Construction Supervisor; Veronica Klinefelt Board of Commissioners; Don VanSyckel, Board of Commissioners

PRESENT VIA TELECONFERENCE: Sarah Lucido, Newly Elected Board of Commissioner

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

Adopted: YEAS: 3
NAYS: 0

Minutes of the meeting of November 14, 2022 were presented. A motion was made by Mr. Santo, supported by Mr. Haugh 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. Astorino updated on projects and operations. He stated that there were no wet weather events in the past month and no active construction projects. He was planning on bringing the Martin RTB Improvement Design recommendation to the Board this month but they are still negotiating design costs. He is hoping to bring it to the Board next month. Martin In-System Storage has been delayed until the Fall of 2023 and we are combining it with the Bon Hur Pump Station project. We are waiting on Army Corps for the Green Infrastructure project. MCPWO staff has designed and started procuring equipment to install new sample pumps within the RTB. The new sample pumps will have 3 different locations within the facility and pumps will be set at two different elevations to better track sodium hypochlorite concentrations.

A motion was made by Mr. Haugh, supported by Mr. Santo to receive and file the project and operations updates as presented.

Adopted: YEAS: 3
NAYS: 0

The Chair presented the invoices totaling \$124,222.97 to the board for review and approval.

A motion was made by Mr. Santo, supported by Mr. Haugh to approve the invoices as presented.

Adopted: YEAS: 3
NAYS: 0

A motion to receive and file the financial report given by Mr. Baker was made by Mr. Haugh and supported by Mr. Santo.

Adopted: YEAS: 3
NAYS: 0

There being no further business, it was moved by Mr. Santo, supported by Mr. Haugh that the meeting of the Martin Sanitary Diversion Drain Board be adjourned.

Adopted: YEAS: 3
NAYS: 0

The meeting was adjourned at 10:04 a.m.



Candice S. Miller, Chair
Macomb County Public Works Commissioner

STATE OF MICHIGAN
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on December 12, 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: 12/12/22



Candice S. Miller

Public Works Commissioner
Macomb County

To: Martin Sanitary Diversion Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: January 9, 2023

Subject: Construction Projects Status Updates for the January 2023 Board Meeting

The following provides a status update for construction work completed within the Martin Sanitary Diversion Drain District (MSDDD) for the previous month.

Wet Weather Operations

No wet weather events for this past month.

No active construction projects at the Martin RTB currently. The projects listed below are either in design or planning.

- Martin In-System Storage
 - In design and combining the project with the Bon Heur PS Rehab which is slated to be ready to bid in the fall of 2023.
- Martin RTB Improvements.
 - Study phase just completed. Design recommendation on today's agenda.
- USACE Green Infrastructure Grant
 - Have started the agreement process with USACE for this \$400,000 project with USACE covering \$300,000 of that. The \$100,000 match to be provided by MSDDD has already been budgeted.
- Chlorine Sample Pumps
 - This project will improve the operator's ability to better dose the incoming flows within the basin with sodium hypochlorite. The new sample pumps will have 3 different locations within the facility and pumps will be set at two different elevations to better track sodium hypochlorite concentrations. Project to get moving in the spring when we have the ability to trench in new conduits on top of the basin deck.



Martin District Overview

- Located at 22301 Bon Brae, St. Clair Shores, MI 48080
- Constructed in the late 1960's as a 8.6 Million Gallon Combined Sewer Overflow (CSO) Facility
- Flushing, Disinfection, Diversion Chamber, and Inlet/Outlet Structures added the late 1970's
- Sodium Hypochlorite Tanks in the Late 1990's
- Retention Basin Baffles Added in the Early 2000's
- Services Approximately 69,354 Residents in the Following Communities
 - Roseville
 - St. Clair Shores
- Annual Operation & Maintenance Budget of \$1,061,070



2022 LOOK BACK

During the 2022 calendar year, the Martin Retention Treatment Basin (RTB) had three (3) treated CSO discharge events. Each of these events were in compliance with the current EGLE permits and all sampling for e-coli, total suspended solids (TSS), Carbonaceous Biochemical Oxygen Demand (CBOD), ammonia, nitrogen, phosphorous, pH, dissolved oxygen (DO), and total residual chlorine (TRC) met or exceeded the EGLE standards.

The Martin District recently completed an updated wastewater master plan (WWMP). This WWMP has established a path forward for prioritizing asset replacements along with new projects to focus on reducing CSO's.

The Martin Flushing System project was completed in 2022 which consisted of installing two (2) sluice gates within the Martin RTB. This will allow MCPWO operators to divert stored sanitary flow to different areas within the RTB after a storage event for flushing purposes. This project has eliminated the need to bring in lake or city water to flush the basin and therefore will provide cost savings to residents for years to come. The project will reduce settled solids within the RTB and therefore will improve water quality if a treated CSO is to occur.

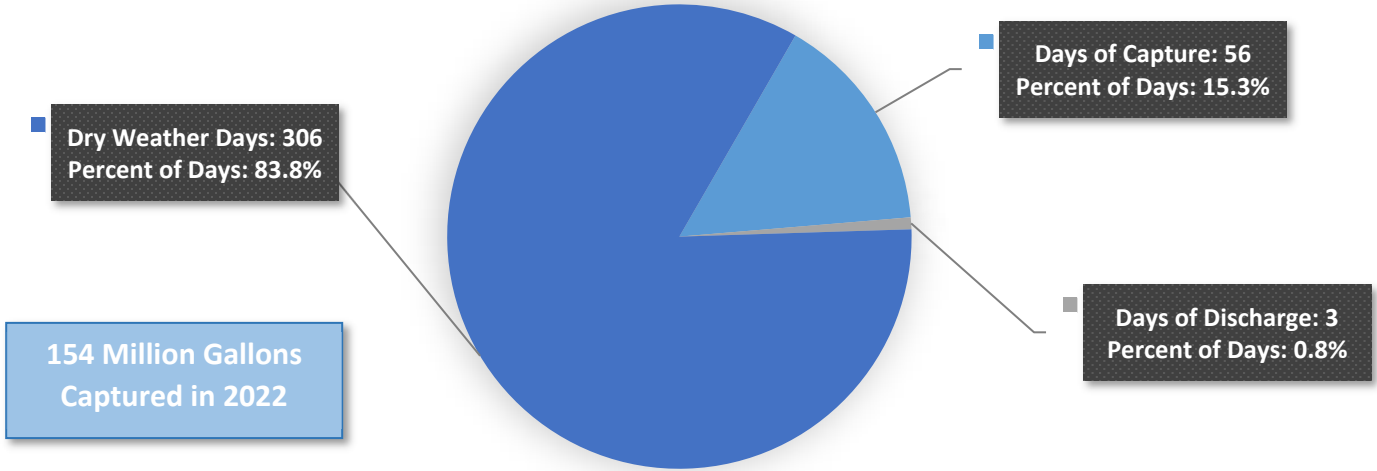
MOVING FORWARD

The Martin District is scheduled to have several improvement studies and projects procured during the 2023 calendar year. The following projects are intended to increase the level of service within the district and to improve upon existing operation and maintenance efforts.

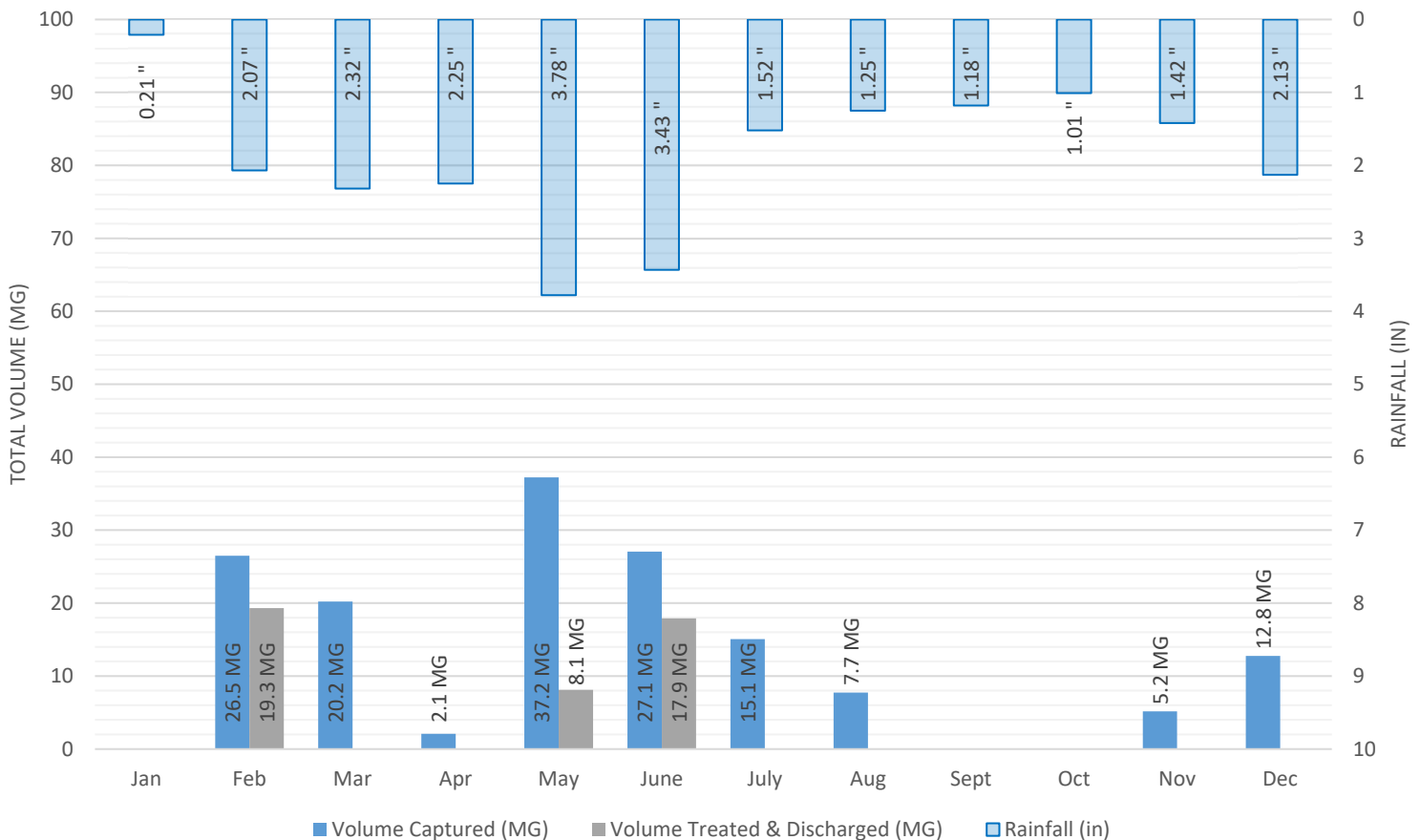
- **In-System Storage:** The Martin In-System Storage project is projected to begin in the fall of 2023 and will reduce CSO's within the district. This project consists of installing a fixed-height weir wall with operable sluice gates within the Martin Drain to assist with capturing 4.2 million gallons (MG) per event. This reduction represents a 20% reduction in annual overflow volumes.
- **Martin RTB Improvements:** This project is currently in design and will target various life-cycle improvements at the Martin RTB. This includes items such as sluice gate replacement, abandoned flushing system demolition, equipment hoist and hatch replacement, and HVAC improvements.
- **Green Infrastructure Project:** In collaboration with the United States Army Corps of Engineers and the Martin District, grant funding has been secured to establish a green infrastructure project at the Martin RTB. This project will reduce stormwater from entering the combined sewer system.



MARTIN RTB 2022 DAILY STATISTICS



MARTIN RTB 2022 VOLUME STATISTICS





Candice S. Miller

Public Works Commissioner
Macomb County

To: Martin Sanitary Diversion Drainage District (MSDDD) Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: December 20, 2022

Subject: Martin RTB Improvements Project Design Phase Recommendation

Macomb County Public Works Office (MCPWO), on behalf of the Martin Sanitary Diversion Drainage District (MSDDD), has budgeted to start a miscellaneous improvements project at the Martin Retention Treatment Basin (RTB). There have been multiple projects identified within the MSDDD capital improvement plan (CIP) that will be worked into this project. Some of the CIP projects that have been identified are as follows:

- Replacement of the Martin RTB dewatering gate which is original to the facility.
- Rehabilitation of the dry weather and drain underground vaults.
- Demolition of the old flushing system which includes pipe and pump removal along with properly abandoning the old underground flushing chambers.
- Installation of new underground electrical conduits to abandon old failing conduits.
- Chemical grouting of infiltration within the basement of the Martin building.
- Martin RTB blower and ductwork replacement.
- Equipment hatch cover replacement.
- Equipment crane and trolley replacement/rehab.

Due to the current construction market, it was critical that we work through a study phase of all the projects to fine tune priorities and cost estimates to ensure that we can stay within the approved budget. The study performed by Fishbeck found that with contingencies the total estimated cost for the projects listed above is \$1.6 million. For this project we currently have \$1.3 million budgeted. Due to this we are planning to have the design ready for all the projects listed above and then when it is bid out will list several items as alternate bid tasks. This will allow us flexibility to stay within the budget. Fishbeck has provided a design proposal in the NTE amount of \$78,700. The schedule for this design is to have the project ready to bid by the middle of June 2023.

MCPWO staff is recommending to award the design contract to Fishbeck in the total NTE amount of \$78,700 to perform the design work associated with the Martin RTB Improvements project.

Attachment: Fishbeck Design Proposal – Dated December 20, 2022

December 20, 2022

Vincent Astorino
Operations and Flow Manager
Macomb County Public Works Commissioner
21777 Dunham Road
Clinton Township, Michigan 48036-1005

**Proposal for Professional Engineering Services
2023 Martin Retention Treatment Basin Improvements – Design Engineering Services**

Dear Vincent:

Fishbeck is pleased to submit this proposal for professional engineering services for the 2023 Martin RTB improvements. This proposal is based on our knowledge of the Martin RTB facility and associated sewer system, and our preliminary design report for the 2023 improvements project. This letter presents our proposed work plan in a task-based outline, our estimated fees, and a conceptual schedule. Included in the work is development of final design drawings and technical specifications, as well as bidding assistance, if necessary.

Project Understanding

Fishbeck provided a draft preliminary design report and preliminary opinion of probable construction cost for the 2023 Martin RTB improvements. The report covered various potential areas of improvement. Based on your review of the draft report and preliminary costs, we understand MCPWO intends to proceed with a bid package for the following project components:

1. Basin Dewatering Gate Replacement
2. Maintenance Access Hatch Replacement
3. Monorail Steel Repairs
4. Trolley Crane Hoist Replacement
5. Basin Ventilation Blower Replacement
6. Dry Weather Gate Chamber Repairs
7. Flushing System Demolition

Scope of Services

Fishbeck has developed the following scope of services for completing the design phase.

Task 1 – Project Management and Coordination

- A. Progress Meetings – Fishbeck will hold a virtual kickoff meeting with MCPWO staff to confirm schedules, design scope, and deliverables. Three design coordination meetings will be held with MCPWO staff to review design progress and receive comments.
- B. Project Management – Project management includes coordination of Fishbeck staff; management of Fishbeck scope, schedule, and budget; preparation of invoices; additional communication with MCPWO staff; and project closeout.

Task 2 – Design

- A. Drawings and Specifications:
 1. Final design drawings and specifications will be fully developed to indicate the scope and extent of the work to be performed by the contractor.
 2. Drawings and specifications will be submitted electronically at the 60%, 90%, and 100% completion milestones for MCPWO’s review and input. Design review meetings will be held following MCPWO’s review of each design submittal.
 3. An opinion of probable cost will be prepared following the 90% milestone.
 4. Fishbeck will use MCPWO standard contract front end specifications and prepare additional project-specific Division 00 and/or Division 01 sections as appropriate, to include in the 90% and 100% milestone submittals.
- B. Permit Applications – Following the 90% design review meeting, signed and sealed electronic design drawings and technical specifications, written descriptions, and design data will be provided for MCPWO’s use in filing applications for permits from, or approvals of, governmental authorities having jurisdiction to review or approve the final design. Fishbeck will assist MCPWO in consultation with appropriate authorities. Fees for applications or reviews will be the responsibility of MCPWO. It should be noted that EGLE is required to provide a review within 150 days from the final design submission to their office. Their workload will affect the actual time required for the review to be finalized.
- C. Bidding Documentation Preparation – Upon MCPWO and EGLE approval of the final design and permits, Fishbeck will prepare the final drawings and project manual, and provide to MCPWO to issue for bid.

Task 3 – Bidding Assistance

- A. Bid Advertising – Fishbeck will coordinate with MCPWO for the bid advertisement.
- B. Pre-Bid Meeting – Fishbeck will coordinate and conduct a pre-bid meeting at the Martin RTB facility.
- C. Response to Written Inquiries – Fishbeck will respond to bidder questions during the bidding period, and prepare addenda for changes to the bid documents, as required.
- D. Bid Review and Evaluation – Fishbeck will attend the bid opening, prepare a bid tabulation, and identify responsive, responsible contractor bids for MCPWO’s award.

Assumptions

This proposal for design services is based on the following assumptions:

- MCPWO will include the maintenance access hatch in the bid package.
- MCPWO will include the flushing piping, chambers, and pump system demolition as an alternate bid item.
- No pre-procurement package is included in this scope of services.
- No topographical survey, geotechnical investigation, environmental study, or hydraulic modeling of the system are included in this scope of services.
- Fishbeck will utilize the available record drawings for site structures and yard piping. Drawings will include notes calling for the contractor to field-verify existing conditions.
- An EGLE Part 41 Construction Permit application is the only permitting requirement for the engineering design phase and construction.
- Unusually long lead times from equipment suppliers may impact the desired construction schedule.
- No construction phase administration, engineering, or oversight is included in this scope of services.

We will strive to communicate in a timely manner if we discover that the project scope changes, and will work with MCPWO to amend our approach and efforts accordingly.

Project Schedule

We are available to begin the work immediately after receiving written authorization. The project design (Task 2) is expected to take approximately five months. This will allow MCPWO to submit an approvable set of construction documents to EGLE by mid-June 2023.

Professional Services Fees

The preliminary opinion of probable construction cost was approximately \$1,600,000. Fishbeck proposes to complete the design services on a time and expense basis for a not-to-exceed fee of Seventy-Eight Thousand Seven Hundred Dollars (\$78,700).

Authorization

This work will be performed under the terms and conditions of our existing as-needed contract.

We thank you in advance and look forward to working with you. If you have any questions or require additional information, please contact me at 248.324.1228.

Sincerely,



Maria E. Sedki, PE

Vice President/Senior Civil Engineer

By email



Erin H. Szczegielniak, PE

Senior Water & Wastewater Engineer

MARTIN SANITARY DIVERSION
12/06/22 - 01/09/23

<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>
Martin Sanitary Diversion Drain	Chapter 20 Roseville - 78.09% St. Clair Shores - 21.91%	Astorino	Access Interactive LLC	\$ 662.25	Invoice #INV000110783 - 11.15.22	SCADA Maintenance	\$ 74,915.62
		Astorino	Fishbeck	\$ 886.00	Invoice #418671 - 12.28.22	As-Needed Services - RTB Improvements	
		Astorino	Grainger	\$ 16,525.00	Invoice #9511510878 - 11.11.22	(6) Swan Unit Sampling Pumps	
		Astorino	TREMCO/Weatherproofing Tech	\$ 1,236.00	Invoice #96883469 - 11.21.22	Roof Warranty	
		Total			\$ 19,309.25		

YTD Budget

Fund: Martin Sanitary Diversion

As of Fiscal Period: Oct 1, 2022-Dec 31, 2022(25%)

DESCRIPTION	2023 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
REVENUE ACCOUNTS					
Investment Inc-Interest	5,000		178	4,822	3.6%
Reimb-Local Communities	1,061,070		530,535	530,535	50.0%
Use of Reserves/Funds Previously Collected	778,000				
Use of SCADA Reserves	12,950				
PY Revenue-Fund Balance	581,290			581,290	0.0%
Total Revenue Accounts	2,438,310	-	530,713	1,116,647	21.8%
EXPENSE ACCOUNTS					
Application/Permit Fee	6,000		6,000	-	100.0%
Dues, Training, Conf, Subs.	3,310		33	3,277	1.0%
Engineering					
-Basin Equipment Hatch Replacement	30,000			30,000	0.0%
-Gates/Vault/RTB Ductwork Project	1,108,000		11,428	1,096,572	1.0%
-As Needed Engineering	29,090		1,369	27,721	4.7%
-In-System Storage Design & CCA	481,280			481,280	0.0%
-Misc Sewer Repairs	20,000				
-Basin Equipment Hatch Replacement Design	9,950				
New Equipment	1,000			1,000	0.0%
Operating Supplies	61,950		17,873	44,077	28.9%
Other Professional Svcs	9,800		1,259	8,541	12.8%
Personnel Services	220,100			220,100	0.0%
Repair & Maintenance	371,800		18,319	353,481	4.9%
Contribution to SCADA Reserve	5,810			5,810	0.0%
Scada System	34,620			34,620	0.0%
Utilities	45,600		1,592	44,008	3.5%
Total Expense Accounts	2,438,310	-	57,873	2,350,487	2.4%

	O&M Balance 9/30/2022	O&M	Total 12/31/2022
Cash - Operating	1,294,502	472,840	1,767,342
A/R ISS SEMSD	600,000		600,000
Assets			0
Liabilities			0
Revenues		530,713	530,713
Expenditures		57,873	57,873
Equity	1,894,502		2,367,342

Detail of 2022 Equity

Design Basin Equipment Hatch	9,950	SolarWinds-Net Mgt Software	1,940
Misc Sewer Repairs	20,000	Obsolete Wireless Backhaul Links	3,230
ISS SEMSD Contribution	600,000	Fiber Optic improvements	3,220
In System Storage-Design and CCA	730,290	Firewall Hard Design/Config	2,580
Flushing System Upgrades-Design, Const, CCA	51,151	Parking Lot Resurface	30,000
CCTV of Dewatering Line and Influent and Effluent Boxes	25,000	Capital Reserves	386,400
SCADA Reserves	19,900	As Needed Engineering	10,841