

**Agenda**  
**Milk River Intercounty Drain Drainage Board**  
**Macomb and Wayne Counties**  
**Thursday, July 16, 2020, at 10:00 a.m.**  
**Virtual Meeting**

**To Join the Zoom Meeting: <https://us02web.zoom.us/j/7499589010>**  
**Meeting ID: 749 958 9010**  
**Password: 12345678a\$**

**To Join by Telephone: (312)626-6799**  
**Meeting ID: 749 958 9010**  
**Password: 453490**

1. Call to Order  
Board Members  
Michael R. Gregg, Chair, Michigan Department of Agriculture & Rural Development  
Elmeka N. Steele, Esq., Wayne County Drain Commissioner, Wayne County  
Candice Miller, Macomb County Public Works Commissioner, Macomb County  
Bryan Babcock, P.E., Director of Public Works/Water, City of St. Clair Shores  
John Szymanski, Acting City Manager, City of Harper Woods
2. Approval of Agenda
3. Approval of the Minutes for:
  - a. June 16, 2020, Regular Drainage Board Meeting
4. Reports
  - a. Update on Financing Options K. Blanchett
  - a. Operations and Maintenance B. Avery/K. Walby/K. Seidel
  - b. Sandbagging Project B. Avery/K. Walby/K. Seidel
  - c. Priority 1B and Select Improvements Project G. Tupancy/R. Strassburg
    - Construction Update
  - d. Updated Financial Reports E. Steele/E. Barrera/M. Moore
5. New Business
  - a. Rosedale Street Bridge Correspondence B. Babcock
6. Unfinished Business
  - a. SEMSD FY21 O&M Charge K. Seidel/K. Walby
  - b. 2019 Metering Study Report K. Seidel/K. Walby
  - c. AT&T Cell Tower Lease J. Brennan
  - d. District PA 222 Claims J. Brennan
7. Approval of the SEMSD Operations and Maintenance Invoice
8. Public Comment
9. Next Drainage Board Meeting:  
Thursday, August 13, 2020 @ 10:00 a.m.  
Discussion on Contingency Plan for Future MRIDDD Board Meetings
10. Adjournment

**MILK RIVER INTERCOUNTY DRAIN DRAINAGE DISTRICT  
DRAINAGE BOARD MEETING MINUTES  
JUNE 16, 2020**

A meeting of the Milk River Intercounty Drain Drainage Board was held on Tuesday, June 16, 2020, via teleconference in compliance with the State of Michigan Executive Order No. 2020-02, dated March 13, 2020, and Executive Order No. 2020-75, dated May 6, 2020; electronic (telephonic or video conferencing) attendance will meet the quorum requirements, all votes will be taken by roll call, and public participation will be allowed at the designated portion of the agenda in accordance with the recommendations of Executive Order 2020-75.

**Members Present Via Teleconference**

Michael R. Gregg, Chair, Michigan Dept. of Agriculture & Rural Development, State of Michigan  
Elmeka N. Steele, Esq., Wayne County Drain Commissioner, Wayne County  
Bryan Babcock, P.E., Director of Public Works/Water, City of St. Clair Shores  
Brian Baker, Chief Deputy, Public Works Office, Macomb County  
William Snyder, Department of Public Works Superintendent, City of Harper Woods

**Others Present Via Teleconference**

Kyle Seidel, Anderson, Eckstein and Westrick  
Kip Walby, Southeast Macomb Sanitary District  
Brent Avery, Southeast Macomb Sanitary District  
Lori Hicks, Southeast Macomb Sanitary District  
Bruce Smith, City of Grosse Pointe Woods  
Cathy Behrens, City of Grosse Pointe Woods  
Frank Schulte, City of Grosse Pointe Woods  
Brett Smith, City of Grosse Pointe Shores  
John Brennan, Fahey, Schultz, Burzych & Rhodes  
Russ Strassburg, Tetra Tech  
Greg Tupancy, Tetra Tech  
Brady Harrington, State of Michigan  
Patrick Cullen, Wayne County  
Elizabeth Barrera, Wayne County  
Jim Grezlak, Wayne County  
Moyna Moore, Wayne County  
Kari Blanchett, PFM Financial Advisors  
Terry Donnelly, Dickinson Wright  
Zach Zechmeister, Spence Brothers

**1. Call to Order**

Mr. Gregg called the meeting to order at 1:38 p.m. Board Members will not communicate via text or other private methods of communication while this meeting is in session.

**2. Approval of Agenda**

Mr. Baker moved to approve the agenda with the addition of items 5.b. 2020-2021 Sewer Rates and 5.c. Discussion of District PA 222 Claims, and move item 6.a. Financing Options after item 3. Approval of the Minutes. The motion was supported by Ms. Steele. Motion adopted.

**3. Approval of the Minutes for:**

**a. May 28, 2020, Milk River Intercounty Drain Drainage District Special Board Meeting**

Mr. Snyder moved to approve the May 28, 2020, Milk River Intercounty Drain Drainage District Special Board Meeting minutes as presented. The motion was supported by Mr. Babcock. Motion adopted.

**6. Unfinished Business**

**a. Financing Options**

Ms. Steele commented that Karen Nichols of EGLE informed her that EGLE is still considering the segmented SRF loan but no decision has been made yet. However, if the loan is approved, the closing would be for the first quarter of 2021. She thanked Ms. Barrera, Ms. Moore, and Mr. Grezlak for updating the financial reports. She introduced Kari Blanchett, PFM Financial Advisors, to review the financing options.

Ms. Blanchett commented that the first quarter for the State's fiscal year is in December. The SRF loan would be the lowest cost of funds; if the State approves the segmented SRF loan, use those funds as well as any community prepayments. If the segmented SRF loan does not work, then the Board could pursue a public bond sale. She recommended waiting for an answer from the State on the segmented SRF loan.

Mr. Donnelly asked if the SRF loan is approved, could interim borrowing be done before the SRF loan comes through.

Mr. Blanchette replied yes, that would make sense and people would have confidence in the note being paid back.

Mr. Donnelly commented he would prepare interim borrowing options for the next board meeting.

Mr. Smith commented that Grosse Pointe Woods could pay their portion of the loan, with approval from City Council, to help with the deficit. It would be approximately \$2,000,000 and would lower the amount needed to borrow.

Mr. Baker commented that if GPW paid in advance, that would give Mr. Donnelly and Ms. Blanchette time to work on other funding.

Mr. Smith commented that it will be on the agenda for the July 13, 2020, GPW City Council Meeting.

Mr. Babcock thanked GPW for their potential prepayment and suggested sending the apportionment to all the communities and SCS may also be able to prepay.

Mr. Gregg commented that MDOT could also prepay; it would be prudent to request prepayment from all the communities. He requested Mr. Donnelly to draft correspondence to all communities requesting a prepayment of their apportionment for the MRIDDD Chair to execute.

Mr. Baker moved to authorize the Chair to send correspondence to all communities requesting them to pre-fund their apportionment, the reason for the pre-funding, and the anticipated amount due. The motion was supported by Mr. Babcock. Motion adopted.

#### **4. Reports**

##### **a. Operations and Maintenance (O&M)**

The Operations and Maintenance (O&M) update was presented by Brent Avery. Mr. Avery commented that there were two discharges in May with full compliance. Electrical testing is beginning on Storm Water Pump #3 tomorrow and, if successful, the electrical switchover will move forward for Storm Water Pumps 2, 6, and 7. Pump #4 is out and in transport to the testing facility. The Control Room has had some nonstructural construction done to make it a 20 x 20 room with all the work being done by the SEMSD staff. The engineering for Basin 1 and Basin 2 structural openings needs to be completed. Basin 1 is empty, flushed, and cleaned. Basin 2 is empty.

Mr. Zechmeister commented that Spence Brothers are working through cost details with Tetra Tech. Tetra Tech will need to review the costs but Mr. Zechmeister does not believe it will be a problem.

Mr. Avery asked for the payment status on the past due O&M Invoices from February, March, and April 2020.

Ms. Barrera replied the O&M invoices for February, March, and April as well as the Fixed Sewer invoices from April and May were paid on June 10, 2020. She asked SEMSD to let her know when the check arrives.

Mr. Babcock moved to receive and file the Operations and Maintenance Report. The motion was supported by Mr. Baker. Motion adopted.

##### **b. Sandbagging Project**

Mr. Seidel commented that the sandbagging operation will be done by Tuesday, June 23, 2020. The next week will be used for punch list items and the backflow preventers will be installed. LSI has stopped the production of sandbags with 280 pallets stockpiled. Mr. Seidel displayed some pictures of the sandbagging operation on the Rosedale Bridge and Liberty from the past two weeks.

Mr. Walby commented that SEMSD has not received any complaints and the project is working out very well.

Mr. Seidel commented that there is a possibility the lake may be at its highest level now, which is good news. He reviewed the following expenses through June 15, 2020, and commented there is a fund balance of \$116,163.93:

Submitted Pay Estimate	Date	Vendor	Invoice No.	Amount	Budget Remaining	Notes
02	5/1/20	Grosso Trucking & Supply Co.	63168	\$ 1,729.79	\$ 505,183.65	Sand purchase
02	5/4/20	Grosso Trucking & Supply Co.	63369	\$ 1,662.82	\$ 503,520.83	Sand purchase
00	5/8/20	AEW, Inc.	0126308	\$ 27,365.30	\$ 476,155.53	Engineering Services
02	5/12/20	LSI	184209	\$ 39,199.75	\$ 436,955.78	5/4/20 to 5/9/20 Prod. & install
02	5/7/20	Grosso Trucking & Supply Co.	63524	\$ 1,669.31	\$ 435,286.47	Sand purchase
02	5/11/20	Grosso Trucking & Supply Co.	62267	\$ 1,693.54	\$ 433,592.93	Sand purchase
02	5/13/20	Grosso Trucking & Supply Co.	63783	\$ 2,526.19	\$ 431,066.74	Sand purchase
02	5/14/20	Grosso Trucking & Supply Co.	61399	\$ 1,741.05	\$ 429,325.69	Sand purchase
02	5/18/20	LSI	184340	\$ 49,125.00	\$ 380,200.69	5/11/20 to 5/16/20 Prod. & install
03	5/19/20	Grosso Trucking & Supply Co.	63074	\$ 2,585.91	\$ 377,614.78	Sand purchase
03	5/26/20	LSI	184515	\$ 46,881.62	\$ 330,733.16	5/18/20 to 5/22/20 Prod. & install
03	5/22/20	Grosso Trucking & Supply Co.	81103	\$ 954.19	\$ 329,778.97	Sand purchase
03	5/22/20	Grosso Trucking & Supply Co.	63840	\$ 860.70	\$ 328,918.27	Sand purchase
03	5/22/20	Grosso Trucking & Supply Co.	81104	\$ 1,717.01	\$ 327,201.26	Sand purchase
03	6/1/20	LSI	184739	\$ 516.65	\$ 326,684.61	Irrigation Relocation for Levee
03	6/1/20	LSI	184738	\$ 44,165.00	\$ 282,519.61	5/26/20 to 5/30/20 Prod. & install
04	6/1/20	Grosso Trucking & Supply Co.	64382	\$ 1,717.20	\$ 280,802.41	Sand purchase
04	6/2/20	Grosso Trucking & Supply Co.	64543	\$ 1,716.25	\$ 279,086.16	Sand purchase
04	6/2/20	Grosso Trucking & Supply Co.	64542	\$ 1,706.71	\$ 277,379.45	Sand purchase
04	6/4/20	LSI	185488	\$ 7,460.39	\$ 269,919.06	Visqueen, Plywood, PVC materials
00	6/3/20	AEW, Inc.	0126512	\$ 74,452.63	\$ 195,466.43	Eng. Services, Sandbag Pass Thru
04	6/8/20	LSI	185505	\$ 43,277.50	\$ 152,188.93	6/1/20 to 6/6/20 Prod. & install
04	6/15/20	LSI	185610	\$ 36,025.00	\$ 116,163.93	6/8/20 to 6/12/20 Prod. & install

Ms. Barrera commented that pay estimate number 2 will be paid on June 24, 2020 and pay estimate number 3 will be paid on July 8, 2020.

Mr. Gregg commented that Mr. Seidel has done an excellent job with the whole sandbagging operation. He asked if the lake level is up to the weir extension.

Mr. Walby replied no; the lake is just below the top of the permanent weir.

Mr. Babcock moved to receive and file the Sandbagging Operation Report. The motion was supported by Mr. Baker. Motion adopted.

**c. Priority 1B and Select Improvements Project – Construction Update**

The Drainage District Board received the Engineering Services and Construction Contract Status Report and the Summary of SRF Loan Costs Reports as of June 12, 2020. Mr. Tupancy commented that the engineering contract is approximately 78.88% completed and invoiced through April 30, 2020. The construction contract is approximately 89.95% completed and invoiced through April 30, 2020, however, change order number 3 needs to be added. He commented that the control room reconstruction done by SEMSD is separate and not part of the improvement project. He also commented that the structural engineering for the basin openings and the covers are not part of the Priority 1B Project and would need additional funding. Storm Pump #4 is out and on its way to the shop. Storm Pump #3 is on the new electrical control system with some issues; it would start 7 out of 10 times. Eaton will be out to reset the controllers to clear up this issue. The onsite asphalt was replaced with concrete, which Spence Brother elected to do at no cost to the MRIDDD; however, some of the slabs will need to be replaced due to cracking. The intake pipe repairs should begin again this week. Mr. Tupancy thanked Mr. Smith for his help and the City of Grosse Pointe Woods for allowing the intake pipework to continue through the summer/holiday

season. The new chemical feed valves were mislabeled and are now correct but Mr. Tupancy will confirm that next week. He is trying to get caught up with mediation payments.

Mr. Zechmeister commented that the disinfection is starting tomorrow. Storm Pump settings are being worked on now and Pumps 2, 6, and 7 should proceed more streamlined. He is looking at demobilization in August and September with the site cleaned up.

Mr. Babcock moved to receive and file the Construction Reports. The motion was supported by Ms. Steele. Motion adopted.

**d. Financial Reports**

Ms. Moore reviewed the Projected Construction Cash Balance as of September 30, 2020. With the unforeseen conditions allowance of \$7,487,173, the cash balance will be short \$4,659,580. Ms. Moore commented that after Mr. Tupancy's review, she will update the unforeseen conditions allowance to approximately \$6,800,000 on both the Cash Balance Report and the Statement of Operations.

Mr. Baker asked when will additional funds be needed.

Ms. Moore replied the fund will run out of money within the next two months. She will work with Mr. Tupancy to project out all anticipated costs through the project end and get a report back to the Board. She reviewed the Statement of Operations for the fund through May 31, 2020. The report shows a Fund balance for the O&M of \$1,510,083, Reserve of \$339,946, Construction (\$1,879,297), and the Total Fund Balance of (\$29,268). She will revise the amount for the Contract Conditions Expenses after she speaks with Mr. Tupancy.

Mr. Baker asked if the O&M fund is overspending by \$836,510 and does the \$773,465 in Pending 4<sup>th</sup> Quarter Assessments include the supplemental (catch-up) assessments.

Mr. Grezlak replied that the \$836,510 is the remaining amount that will be spent for the rest of the year.

Ms. Steele replied that the \$773,465 does not include supplemental assessments; it is shown separately.

Mr. Baker asked when will we know what the unknown pump costs will be.

Mr. Tupancy replied that there is a projection included but he will not know the actual costs until the pump and motor are at the shop and broke down; approximately 4 weeks after the breakdown of the pump. The final pump/motor rebuild is approximately two years out but the projection for the future pump/motor costs has been included in the additional costs to complete the project report.

Mr. Babcock asked if the cost was included in the Additional Construction Cost Summary. He wants to confirm the future pump/motor costs are included in the new loan amount.

Mr. Tupancy replied that it is not included on the June 12, 2020, Construction Cost Summary. However, it was included in the Cost of Outstanding Items Known to Date Report on May 7, 2020.

Mr. Gregg thanked Ms. Moore for her detailed review of the reports.

Ms. Moore looks forward to working with the MRIDDD Board.

Mr. Snyder moved to receive and file the Financial Reports. The motion was supported by Mr. Babcock. Motion adopted.

## **5. New Business**

### **a. SEMSD O&M Charge**

Mr. Seidel commented that the SEMSD Board approved the SEMSD Fiscal Year 2021 Budget. As a result, the new monthly O&M amount will be \$60,361.11 effective July 1, 2020; the current O&M monthly amount is \$51,586.46. He reviewed the data used for calculation with 1/3 of the SEMSD Milk River Budget charged to the MRIDDD. He noted that the Marter Road Booster Station, Hoffman Pump Station, Martin Drain Pump Station, and Kerby Road Pump Station are not included in the O&M charge.

Mr. Baker commented that it looks like a 17% increase. He asked why the large increase in OPEB; it was at \$0 last year and now it is at \$40,000. He believes this was discussed a couple of years ago when the Milk River hired SEMSD.

Mr. Walby replied that SEMSD is at 76% funding.

Mr. Seidel will need to consult with Brett McDonald to find out why there are two OPEB amounts. The original discussion a couple of years ago was should the MRIDDD share in the OPEB cost for past service years. It was determined and verified that Wayne County had been passing through OPEB costs to the MRIDDD. SEMSD paid off the OPEB costs to Wayne County when they purchased the assets. As part of the agreement, SEMSD paid \$3.4 million in OPEB and legacy costs. SEMSD still has OPEB costs that are being passed through under the DB OPEB Contribution, which is unchanged from last year's budget and the new DC OPEB expense. Mr. Seidel will get back to the Board with an answer as to why the DC OPEB Expense was added.

Mr. Baker asked Mr. Seidel to update the report and show the actual numbers from last year and this year as well as projected expenses. He also asked for the true-up from last year.

Mr. Seidel replied he will bring the 2019 True-Up and actual numbers for FY 20 through June 30, 2020.

Ms. Moore commented that Wayne County will adjust their annual budget for the remainder of the year to reflect the new SEMSD budget.

Mr. Baker moved to receive and file the correspondence for the Milk River RTB Monthly Service Fee for FY 21 subject to further discuss at the July 16, 2020, MRIDDD Board Meeting. The motion was supported by Mr. Babcock. Motion adopted.

**b. 2020-2021 Sewer Rates**

Mr. Seidel reviewed the 2020/2021 Sewer Rates for the MRIDDD explaining the fixed monthly fee includes the base flow fee, excess flow fee, and bond debt for Priority 1A Project, and Kerby Road Pump Stations (SFR Project No 5416-01). The new monthly fixed sewer fee amount is \$192,878.20 effective July 1, 2020, through June 30, 2021. He reviewed the supporting data used to determine the fixed monthly sewer rates.

Ms. Barrera commented that GLWA deferred the rate increase until October 2020 for Area 3. She asked if that was included in the new rate calculation.

Mr. Seidel replied that the GLWA deferred cost was calculated in the new rate, but we are not looking to defer the SEMSD rates until October. For the First Quarter, SEMSD used the same rates and then calculated the anticipated rate increase beginning with the Second Quarter.

Mr. Baker asked what percentage is the increase for Milk River.

Mr. Walby replied the Milk River increase was 9.2%.

Mr. Baker asked what percentage was the rate increase including the three-month GLWA rate pause.

Mr. Seidel replied it was 1.3%.

Mr. Baker asked why the Milk River District is so high with a 9.2% rate increase.

Mr. Seidel replied it has to do with the shifting of flow and the Milk River District went up .5% more in sharing the approximate total of \$30,000,000. It is based on a five-year average apportionment assessed every year and there was a time when the Milk River apportionment rates did not change for several years during the transition from Wayne County to SEMSD. The rates were held artificially lower than they should have been with the District having a substantial increase from 5.9% to 7.3% last year. The District's total share of the SEMSD costs is based on 7.88%.

Mr. Baker asked if it is based on water consumption or actual sewage flow.

Mr. Seidel replied that it is based on metered sewer flow going into the Milk River, which has increased from past years. The flow for both Grosse Pointe Woods and Harper Woods has decreased.

Mr. Babcock moved to receive and file the 2020-2021 Sewer Rates. The motion was supported by Mr. Snyder. Motion adopted.



**c. Discussion of District PA 222 Claims**

Mr. Brennan commented that the claims are still under investigation with some input from the Engineers. He asked if the claim for \$20,400 has been submitted to Spence Brothers and their insurance carrier. This claim was submitted on May 26, 2020, and alleges movement of foundation walls, cracking of foundation walls, water in the basement and backyard due to the work at the pump station. The claim is allegedly due to the pump station work and should be tendered to both Spence Brothers and their insurance carrier as MRIDDD is named as an additional insured on their policy. Mr. Brennan offered to draft a letter to Spence Brothers and their insurance carrier for the Chair to execute to tender this claim to them.

Mr. Strassburg replied he would need to check with Mr. Ard to see if the claims were submitted to Spence Brothers and their insurance carrier.

Mr. Brennan commented that the other claim is a landscape issue on River Road. When it rains, water travels from the Pump Station to their backyard. They are asking for piping to be installed to drain directly into the manhole. The claim shows continuous damage as the date of event so Mr. Brennan is not sure if this is a timely claim and he is not sure if there is any causation from the Drain. This claim needs to be investigated and a response prepared.

Mr. Schulte commented that Mr. Harrington investigated and found no issues with the rear yard. Almost every yard in GPW floods this time of year due to the soil and the water level.

Mr. Brennan suggested a Board Member could go out and investigate to see if there is a cause from the Drainage District.

Mr. Strassburg commented that the grate has plastic all around the cover and maybe it is blocking the drainage.

Mr. Avery commented that this area will be restored and possibly modified during the restoration project.

Mr. Tupancy commented that there has been no change to the grading on the property.

Mr. Brennan commented that this claim should be investigated and come up with a settlement, if applicable, or there is no causation at all. We can send correspondence letting the owner know we are investigating the claim and need an exact date when the flooding began.

Mr. Walby commented that Mr. Seidel and himself will go out and look at the yard.

Mr. Smith commented that the owner claims the slope on the Milk River side changed and the wall that was built caused the water to flow into her yard.

Mr. Brennan suggested Mr. Smith email the owner letting her know the MRIDDD is in receipt of the claim and will respond within 45 days of her notice.

Mr. Smith will send the email to the homeowner and copy Mr. Gregg on the email. He commented that there have been numerous building permits for building foundation repairs in that area.

Mr. Babcock moved to receive the two claims; one claim will be investigated by the MRIDDD, and the other claim will be tendered to the contractor and insurance carrier. The motion was supported by Ms. Steele. Motion adopted.

## **6. Unfinished Business**

### **b. AT&T Cell Tower Lease**

Mr. Brennan commented that he spoke with the GPW Cell Tower Consultant who told him that GPW uses Mike Watza of Kitch, Drutchas, Wagner, Valitutti & Sherbrook, who negotiates cell tower deals for a \$10,000 retainer. He asked the Board Members if they want option: a) not interested and not worth the effort, b) interested in a professional cell tower lease negotiator or c) Mr. Brennan negotiate the cell tower lease.

Ms. Steele replied she would choose option B and possibly GPW would want to negotiate with Milk River and split the cost.

Mr. Babcock commented that SCS is still in negotiation.

Mr. Walby commented that SCS utilizes Mike Watza to negotiate their cell tower lease.

Mr. Brennan asked if he should contact Mr. Watza to get a cost and see if it would be worth pursuing.

Mr. Smith forwarded Mr. Watza's contact information to Mr. Brennan and Ms. Hicks.

Mr. Gregg commented that he liked the idea of working with Mr. Watza and getting a proposal for the next Board Meeting.

Ms. Steele moved to authorize legal counsel, Fahey, Schultz, Burzych & Rhodes, to subcontract with Mike Watza of Kitch, Drutchas, Wagner, Valitutti & Sherbrook to obtain advice and consultation on the AT&T Cell Tower Lease and authorize legal counsel to review and manage any invoices submitted by Mr. Watza related to this service. The motion was supported by Mr. Babcock. Motion adopted.

## **7. Approval of the SEMSD Operations and Maintenance Invoice**

The SEMSD Operations and Maintenance (O&M) Invoice for May 2020 was reviewed. The May 2020 O&M 5-2020 invoice totaled \$65,756.81. The total amount billed included the O&M monthly invoice and the reimbursable pass-through costs.

Mr. Babcock moved to authorize the payment of SEMSD Invoice O&M 5-2020. The motion was supported by Mr. Snyder. Motion adopted.

At 4:43 p.m., Mr. Babcock was excused from the meeting.

**8. Public Comment**

Mr. Gregg announced Public Comment, at which time:

Mr. Schulte commented that the cupolas at the Pump Station are being changed. If the old ones are being discarded, he requested permission to have them. Recently, GPW had a cupola blow off their pavilion and it would be a nice fit.

Mr. Tupancy commented the old ones had to be changed out to fit the antenna and are being thrown out by the contractor. The MRIDDD has the first right for anything they want to salvage.

Mr. Gregg commented that he sees no problem in repurposing them and asked the Board Members if they had any objection.

No objection was made so Mr. Schulte is to contact Dave Weiss tomorrow to pick them up.

Mr. Schulte thanked the Board for the cupolas.

There being no further comment, Mr. Gregg announced public comment closed.

**9. Next Drainage Board Meetings**

The next regularly scheduled board meeting is Thursday, July 16, 2020, at 10:00 a.m. located at the St. Clair Shores City Hall, Geer Conference Room, 27600 Jefferson Avenue, St. Clair Shores, MI 48081.

**10. Adjournment**

Mr. Snyder moved to adjourn the meeting. The motion was supported by Mr. Baker. Motion adopted.

There was no further discussion to come before the Drainage Board; the meeting adjourned at 4:52 p.m.

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Brian Baker, Chief Deputy Macomb County Public Works Commissioner

NOTE: The foregoing minutes are subject to Milk River Intercounty Drain Drainage Board approval.

**Milk River Intercounty Drain Drainage District  
Engineering Services and Construction Contract Status Report**

July 9, 2020

	Company	Contract Start Date	Contract End Date	Contract Amount	Latest Invoice No.	Invoiced thru Date	Amount Paid in Prior Years	Amount Paid in 2020	TOTAL Amount Paid (incl retainage)	Retainage Amount Being Held	Contract Amount % Completed	Contract Budget Remaining
<b>ENGINEERING SERVICES CONTRACTS</b>												
<b>Design and Construction Management Engineering Services for Priority 1B and Select Improvements Project</b>	Tetra Tech of Michigan, P.C.	July 30, 2014	December 31, 2020	\$3,502,117.72	61	06/30/20	\$2,708,824.56	\$322,791.54	\$3,031,616.10	N/A	100% Design and 82.83% Construction	\$470,501.62
NOTE: Contract End Date changed from 7/31/19 to 12/13/20 and Contract Amount changed from \$2,125,176.00 to \$2,474,386.00 by Amendment No. 1. Contract Amount changed from \$2,474,386.00 to \$2,562,037.00 by Amendment No. 2. Contract Amount changed from \$2,562,037.00 to \$2,642,278.60 by Amendment No. 3. Contract Amount changed from \$2,642,278.60 to \$2,908,274.20 by Amendment No. 4. Contract Amount changed from \$2,908,274.20 to \$3,502,117.72 by Amendment No. 5.												
<b>CONSTRUCTION CONTRACTS</b>												
<b>Construction of Priority 1B and Select Improvements Project</b>	Spence Brothers	Contract Effective Date: October 7, 2016 Contract Time Start Date: October 31, 2016	June 29, 2022	\$40,827,201.00	41	05/22/20	\$29,335,538.13	\$6,521,362.65	\$35,856,900.78	\$1,922,443.00	87.83%	\$4,970,300.22
NOTE: Contract Price increased from \$34,640,028.00 to \$38,448,860.00 by Change Order No. 2. Contract Price increased from \$38,448,860.00 to \$40,827,201.00 and Contract End Date changed from December 30, 2019 to June 29, 2022 by Change Order No. 3.												

**Milk River Intercounty Drain Drainage District  
Priority 1B and Select Improvements Project**

Additional Construction Cost Summary

July 9, 2020

AA No.	DATE	Description	Amount	Comments
1	3/10/17	Pay Item 35, Concrete Slab in GPW DPW yard	\$38,826.28	
2	3/23/17	Pay Item 36, GPW Permit Fees	\$80,015.00	Amt over \$10K allowance
3	5/23/17	Pay Item 37, Temp Battery Bank	\$5,745.60	
3	5/23/17	Pay Item 38, Additional pressure Relief Valve Spoolpieces	\$10,712.28	
3	5/23/17	Pay Item 39, Delete Hose Reel - Credit	(\$1,702.16)	
3	5/23/17	Pay Item 40, Delete Eye Wash Mixing Valve & Piping - Credit	(\$1,618.28)	
4	9/19/17	Pay Item 41, WCD #3, Add resteel to cast in place beams	\$1,736.49	
4	9/19/17	Pay Item 42, Relocate and Reconnect 2-1/2" FLW Pipe in MH	\$3,291.00	
4	9/19/17	Pay Item 43, SCS Permit Fees	\$13,404.00	Amt over \$10K allowance
5	9/19/17	Pay Item 25, Rem & Dispose Sludge - Credit	(\$84,232.98)	
5	9/19/17	Pay Item 44, Basin #1 Sludge, Gravel, and FLW Pipe Removal	\$573,615.97	
5	9/19/17	Pay Item 45, Bsn #1 FLW Pipe Removal - Credit	(\$26,276.25)	
6	12/15/17	Pay Item 46, No. 1 Storm Pump & Motor Refurbishment Items	\$40,313.66	Amt over \$300K allowance
7	12/21/17	Pay Item No. 47, Proposal Request B, Sodium Hypochlorite Priming Tank	\$22,525.00	
7	12/21/17	Pay Item No. 48, Replace Broken and Cracked Wedge Blocks on Sluice Gates S-1-1 and S-1-2	\$1,505.00	
7	12/21/17	Pay Item No. 49, Blower Valve Inspection	\$361.20	
7	12/21/17	Pay Item 50, Check for AT&T	\$5,880.71	
7	12/21/17	Pay Item 51, Proposal Request D, Control Valve Starters and MCC Bucket Repairs	\$5,109.83	
7	12/21/17	Pay Item 52, RFI 44, Support Column	\$4,753.45	
7	12/21/17	Pay Item 53, Proposal Request C, Increase Height of Proposed Overhead Doors	\$24,853.90	
7	12/21/17	Pay Item 54, Valve Stem Boxes	\$2,203.86	
7	12/21/17	Pay Item 55, Repair Storm Well Sump Pump Base	\$849.54	
8	4/16/18	Pay Item 56, Repair 6" Water main	\$3,312.36	
8	4/16/18	Pay Item 57, Repair Broken Pipes on Service Water System	\$28,180.39	
8	4/16/18	Pay Item 58, Storm Pump #6 Troubleshoot and Repair	\$4,377.45	
8	4/16/18	Pay Item 59, Service Water System Emergency Repairs	\$2,718.89	
8	4/16/18	Pay Item 60, Publishing River Dewater Notice	\$159.75	
8	4/16/18	Pay Item 61, Modifications to 6" ground water discharge piping system in Basin 1	\$11,073.57	
8	4/16/18	Pay Item 62, Remove Concrete Foundation in Basin 1 for grit pump sump	\$63,872.67	

**Milk River Intercounty Drain Drainage District  
Priority 1B and Select Improvements Project**

Additional Construction Cost Summary

July 9, 2020

AA No.	DATE	Description	Amount	Comments
8	4/16/18	Pay Item 63, Demo Concrete Slab along basin in DPW yard	\$11,086.80	
8	4/16/18	Pay Item 64, Modify/Repair Existing Chemical Feed Pumps	\$849.54	
8	4/16/18	Pay Item 65, AT&T Protection during Electrical Room Demolition	\$3,486.69	
8	4/16/18	Pay Item 66, Storm Pump #2 Sole Plate Replacement	\$9,237.85	
8	4/16/18	Pay Item 67, Bar Screen Cleaning, 10 Esitamted During Project	\$15,848.27	
9	7/11/18	Pay Item 68, No. 2 Storm Pump & Motor Refurbishment Items	\$374,935.52	
9	7/11/18	Pay Item 69, Replace Corroded Anchor Bolts for Sole Plate on Storm Pump No. 2.	\$3,868.34	
10	10/9/18	Pay Item 70, Cooling Water Piping for Storm Pumps.	\$41,678.29	
10	10/9/18	Pay Item 71, Smoke (Duct) Detector.	\$1,214.50	
10	10/9/18	Pay Item 72, Move Owner Files.	\$690.76	
11	10/9/18	Pay Item 73, Basin #2 Sludge Removal, Partial	\$0.00	See Note C
12	10/9/18	Pay Item No. 28, Conduit Replacement in DTE Yard.	\$0.00	See Note D
13	12/27/18	Pay Item 74, AT&T Phone Lines Temp & Permanent	\$8,498.41	
13	12/27/18	Pay Item 75, Transformer Feed Emergency Repairs	\$66,303.32	
13	12/27/18	Pay Item 76, Bridge Crane Modifications	\$340,329.35	
13	12/27/18	Pay Item 77, HVCA Intake/Combustion Flues	\$4,684.92	
13	12/27/18	Pay Item 78, Steel Conflicts with bridge crane	\$19,285.18	
14	3/21/19	Pay Item 79, Replace Broken Section of Flushing Water Main	\$11,469.29	
14	3/21/19	Pay Item 80, Storm Well Cleaning	\$7,515.50	
14	3/21/19	Pay Item 81, Dewatering Pump Rebuild	\$21,190.00	
14	3/21/19	Pay Item 82, Blower MVMS Layout	\$35,236.05	
14	3/21/19	Pay Item 83, Explosion Proof Hoist	\$22,634.02	
14	3/21/19	Pay Item 84, Electric Unit Heater Power	\$8,858.47	
14	3/21/19	Pay Item 85, Recirculation Pump Station Check Valves	\$79,328.49	
14	3/21/19	Pay Item 86, Storm Pump #6 Additionall repairs (Pump Only)	\$195,483.83	
15	3/21/19	Pay Item 87, SCADA System Fiber Optic Cable Repair	\$11,320.83	See Note E

**Milk River Intercounty Drain Drainage District**  
**Priority 1B and Select Improvements Project**

Additional Construction Cost Summary

July 9, 2020

AA No.	DATE	Description	Amount	Comments
16	7/31/19	Pay Item No. 88, Sludge Removal, Basin 1A	\$32,822.97	
16	7/31/19	Pay Item No. 89, Sludge Removal, Basin 2, Partial	\$343,600.52	
16	7/31/19	Pay Item No. 90, PCO #81, MCC-A Dewatering Pump Buckets Replacement	\$36,507.91	
16	7/31/19	Pay Item No. 91, Standby Generator Rental (Part 1 of 2)	\$146,741.31	
17	9/25/19	Pay Item No. 92, Sludge Removal, Basin2, Non-Disputed Amount	\$985,421.08	
18	10/21/19	Pay Item No. 93, Standby Generator Rental (Part 2 of 2)	\$164,951.20	
19	12/10/19	Pay Item No. 94, Drilled Pier and Foundation Addition	\$12,692.90	
19	12/10/19	Pay Item No. 95, Drilled Pier Obstruction Claim	\$51,275.38	
19	12/10/19	Pay Item No. 96, Level Sensors	\$7,768.07	
19	12/10/19	Pay Item No. 97, EDH-1 Source Feed	\$880.53	
19	12/10/19	Pay Item No. 98, Exhaust Fan EF-14 Voltage	\$2,787.32	
19	12/10/19	Pay Item No. 99, Pump Station Power Loss	\$6,007.10	
19	12/10/19	Pay Item No. 100, Sample Room Power and Control Wirings	\$891.88	
19	12/10/19	Pay Item No. 101, Air Conditioning Unit Voltage	\$2,519.90	
19	12/10/19	Pay Item No. 102, AA No. 6 & 9 Adjustments	(\$1,970.78)	
20	2/26/20	Pay Item No. 103, Storm Pump #6 Additional repairs (Motor Only)	\$196,171.88	
20	2/26/20	Pay Item No. 104, Storm Pump #7 Additional repairs (Motor Only)	\$196,171.88	
20	2/26/20	Pay Item 105, Storm Pump #3 Additional repairs (Pump Only)	\$244,664.68	
21	4/16/20	Add Pay Item 106, Basin 2 Sludge Removal, Disputed Amount	\$406,700.54	
21	4/16/20	Add Pay Item 107, Sludge Press Enclosure	\$29,982.09	
21	4/16/20	Add Pay Item 108, SG-1 through 4 Basin 2 Gate Wedges	\$7,762.14	
		Sub-Total	<b>\$5,004,952.90</b>	
		Contract Unforeseen Conditions Allowance including CO Nos. 2 & 3	\$7,487,173.00	
		Balance Unforeseen Conditions	\$2,482,220.10	

**NOTES**

- A Contract Unforeseen Conditions Allowance is not part of SRF Loan
- B SRF Loan Contingency is \$2,182,539
- C \$32,890.33 transferred from Pay Item No. 25, Remove and Dispose of Sludge from Retention Basins. No Unforeseen Conditions Allowance used.
- D Authorized use of \$60K from \$75K Allowance for Electrical Service Metering Modifications. No Unforeseen Conditions Allowance used.
- E Not SRF Loan Eligible. Fiber cable connects Marter Road Booster Pump Station to NESDS SCADA System. Damage not caused by Milk River project. Cost should be charged to SEMSD.

**MILK RIVER INTERCOUNTY DRAIN DRAINAGE DISTRICT****STATEMENT OF OPERATIONS****OCTOBER 1, 2019 thru MAY 31, 2020**

	O & M FUND MILK RIVER 54458	REPLACEMENT / RESERVE FUND 54831	CONSTRUCTION MILK RIVER 54724	TOTAL
<b>REVENUE</b>	\$ 2,481,438	\$ -	\$ 7,147,541	\$ 9,628,979
	-	-	-	-
<b>EXPENDITURES</b>	2,021,985	-	5,499,609	7,521,594
<b>REVENUES OVER (UNDER) EXPENDITURES</b>	459,453	-	1,647,932	2,107,386
<b>CARRIED FORWARD: FUND BALANCE, SEPTEMBER 30, 2019</b>	1,050,630	341,790	(3,527,230)	(2,134,810)
	-			-
<b>FUND BALANCE, MAY 31, 2020</b>	<u>\$ 1,510,083</u>	<u>\$ 341,790</u>	<u>\$ (1,879,297)</u>	<u>\$ (27,424)</u>

**PROJECTED ACTIVITY THRU SEPTEMBER 30, 2020**

SRF Draw Posted After 5/31/20 (#23)			\$ 1,931,750	\$ 1,931,750
Remaining SFR Loan Draws			\$ 3,221,994	\$ 3,221,994
Supplemental Assessment			288,142	288,142
Pending 4th Quarter Assessment	773,465			773,465
Remaining AT&T Lease Revenue	12,020			12,020
Estimated Engineering & Construction Expenses				
Spence Brothers			(7,428,971)	(7,428,971)
Tetra Tech			(303,236)	(303,236)
Remaining Mediation Settlement			(400,000)	(400,000)
O&M Costs	(836,510)			(836,510)
<b>TOTAL</b>	<u>\$ (51,025)</u>		<u>\$ (2,690,321)</u>	<u>\$ (2,741,346)</u>

**PROJECTED FUND BALANCE, SEPTEMBER 30, 2020**

<b>PROJECTED FUND BALANCE, SEPTEMBER 30, 2020</b>	<u>\$ 1,459,058</u>	<u>\$ 341,790</u>	<u>\$ (4,569,618)</u>	<u>\$ (2,768,770)</u>
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**MILK RIVER INTERCOUNTY DRAIN DRAINAGE DISTRICT**  
**PROJECTED CONSTRUCTION CASH BALANCE AS OF SEPTEMBER 30, 2020**

Reconciled Cash Balance as of May 31, 2020 \$ 1,214,678

Estimated Revenues June 1, 2020 thru September 30, 2020

Draw #23	1,931,750	
Q3 & Q4 Supplemental Funding	288,142	
Replacement Fund Cash	341,790	
Remaining SRF Loan Funds for Draw	3,221,994	
Projected Available Funds September 30, 2020		\$ 6,998,354

Estimated Expenses June 1, 2020 thru September 30, 2020

Spence Brothers Invoices in Process 38-40 through April	\$ (3,428,971)	
Estimated Construction Costs (5 months @ \$800,000)	(4,000,000)	
Tetra Tech Invoices in Process 58-60 through May	(139,236)	
Estimated Engineering Costs (4 months @ \$41,000)	(164,000)	
Remaining Mediation Settlement	(400,000)	
Total		\$ (8,132,207)

**Projected Cash Balance as of September 30, 2020** **\$ (1,133,853)**

Estimated Project Expenses Beyond September 30, 2020 (thru June 2022)

Balance of Tetra Tech Contract	\$ (624,169)	
Balance of Spence Brothers' Contract	(2,241,146)	
Estimated Change Order #4 for Spence Brothers Contract	(1,200,000)	
Estimated cost for landscaping design	(20,000)	
Estimated cost for landscaping construction	(100,000)	
Estimated cost for basin access hatch design	(20,000)	
Estimated cost for basin access hatch construction	(175,000)	
Milk River Hydraulic Modeling (Flooding Study)	(27,366)	
RTB Weir Extension construction cost	(80,654)	
Construction Contingency Amount for Overruns	(580,000)	
Estimated bond issuance costs (series 2020)	(182,812)	
		\$ (5,251,147)

**Projected Cash Shortage / Additional Funding Required for Project Completion** **\$ (6,385,000)**



CITY OF ST. CLAIR SHORES

June 16, 2020

JUN 22 2020

CITY MANAGER

MDOT  
Bureau of Bridges & Structures  
425 W. Ottawa Street  
PO Box 30050  
Lansing, MI 48909

RE: Rosedale Street Bridge  
Structure Number 6421  
Owner: City of St. Clair Shores

Dear Sir/Madam,

This office represents two respective St. Clair Shores residents that live immediately southwest of the above referenced bridge. We have enclosed a map that highlights the bridge and both of their lots, along with the Milk River Pump Station that will be discussed further below. We have also enclosed reports from the two previous inspections for the bridge. Both reports indicate, among other things, that the sub-structure condition is barely avoiding a poor rating, that the scour condition is barely avoiding a poor rating, and that the bridge itself is 61-years old.

I bring this to your attention because the conditions surrounding this bridge have changed dramatically with the very recent high water levels. According to the Army Corp of Engineers, these high water levels will be present for the foreseeable future. Nevertheless, prior to the high water levels, this bridge received barely passing grades and barely met safe standards. Currently, the sub-structure is submerged under water, there is zero room for drift, in fact, the City of St. Clair Shores has placed sandbags on top of the bridge to prevent the deck from flooding.

This office has taken issue with the maintenance of the bridge and the embankment for years. The City has contracted with a third-party to provide my clients and the other residents along the river a sandbag wall. However, this is not an acceptable solution. Currently the bridge is effectively a dam. It is a dam that is not far north of the Milk River Pump Station. The Milk River Pump Station has six strong pumps that send water back up the river towards Lake St. Clair. For years, even prior to the new high water levels, when all pumps were initiated, this water would flow into the bridge and rebound into the residents' back yards, south of the bridge.

JEFF M. BURNS, PLC  
ATTORNEY AT LAW

25400 Little Mack Avenue  
St. Clair Shores, MI 48081

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Fax: 586-778-8045

jmb@jeffmburns.com  
jeffmburns.com



Page 2  
June 16, 2020

The sandbag walls that were constructed are literally five feet tall for residents south of the bridge. For residents north of the bridge, the sandbag walls were constructed to be a merely two feet tall. The difference in height is clear evidence that the City of St. Clair Shores is aware that this is a major problem. Before the recent high water levels, this bridge was nearly failing many areas of safety, based upon your own inspections. **The current high water levels made this bridge deficient and not safe.** The unique location of this bridge so close the a pump station makes this a more urgent situation.

The deficient bridge does not allow my clients' to quietly enjoy their property as we all deserve and have a right to. Their property is at risk and the crux of the problem is this deficient bridge that is now effectively a dam.

I am officially requesting an updated inspection that provides a safety recommendation based upon the new water levels. Specifically, I am asking for an opinion as to:

1. The sub-structure condition that is now submerged,
2. The scour condition,
3. Water adequacy,
4. Embankment protection along with channel drift, and
5. A sufficiency rating based upon the current circumstances

I look forward to your input and thoughts and do not hesitate to contact this office should you have any questions or need anything further.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff M. Burns", written over a printed name label.

Jeff M. Burns

JMB:dmh

cc: Liz Koti, City Planner  
Matt Coppler, City Manager  
St. Clair Shores City Clerk

JEFF M. BURNS, PLC  
ATTORNEY AT LAW

25400 Little Mack Avenue  
St. Clair Shores, MI 48081

Phone: 586-778-8005  
Fax: 586-778-8045

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Assumption Greek  
Orthodox Church

Police  
Department

Local Bridge Condition

Owner	ST. CLAIR SHORES
Facility	ROSEDALE STREET
Feature Intersects	MILK RIVER
Structure Number	6421
County	Macomb
Region	Metro
Area	3,026
Clear Roadway	29.90
Lanes	2
ADT	2,592
Year Built	1959
Year Reconstruct	
Main Structure Type	204
Inspection Date	4/23/2019
Inspection Frequency	24
Deck Condition	7
Superstructure Condition	5
Substructure Condition	6
Culvert Condition	N
Lowest Rating	5
Structure Open, Posted, or Closed to Traffic	P
Posted Loading	223182
Temporary Measures	
Scour Critical	5
NBISLEN	
SERV TYPON	5

## Facts

Name:	ROSEDALE STREET over MILK RIVER
Structure number:	000000000006421
Old structure number:	505640600035B02 <i>(from 1992 edition)</i>
Location:	IN SAINT CLAIR SHORES
Purpose:	Carries highway and pedestrian walkway over waterway
Route classification:	Local (Urban) [19]
Length of largest span:	24.0 ft. [7.3 m]
Total length:	73.8 ft. [22.5 m]
Roadway width between curbs:	29.9 ft. [9.1 m]
Deck width edge-to-edge:	41.0 ft. [12.5 m]
Skew angle:	25°
Owner:	City or Municipal Highway Agency [04]
Year built:	1959
Historic significance:	Bridge is not eligible for the National Register of Historic Places [5]
Design load:	MS 13.5 / HS 15 [3]
Number of main spans:	3
Main spans material:	Concrete continuous [2]
Main spans design:	Tee beam [04]
Deck type:	Concrete Cast-in-Place [1]
Wearing surface:	Monolithic Concrete (concurrently placed with structural deck) [1]

## Latest Available Inspection: April 2015

Status:	Posted for load [P]
Average daily traffic:	2,592 [as of 1997]
Deck condition:	Good [7 out of 9]
Superstructure condition:	Fair [5 out of 9]

Substructure condition: Satisfactory [6 out of 9]

Structural appraisal: Meets minimum tolerable limits to be left in place as is [4]

Deck geometry appraisal: Meets minimum tolerable limits to be left in place as is [4]

Water adequacy appraisal: Equal to present desirable criteria [8]

Roadway alignment appraisal: Equal to present desirable criteria [8]

Channel protection: Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel have minor amounts of drift. [7]

Scour condition: Bridge foundations determined to be stable for assessed or calculated scour condition. [5]

Operating rating: 27.0 tons [24.5 metric tons]

Inventory rating: 17.1 tons [15.5 metric tons]

Sufficiency rating: 55.3

## Previous Inspections

Date	Suff. rating	Evaluation	Deck	Super.	Sub.	ADT
April 2015	55.3	Not deficient	Good	Fair	Satisfactory	2592
April 2013	55.3	Not deficient	Good	Fair	Satisfactory	2592
April 2011	55.3	Not deficient	Good	Fair	Satisfactory	2592
April 2009	55.3	Not deficient	Good	Fair	Satisfactory	2592
April 2007	55.3	Not deficient	Good	Fair	Satisfactory	2592
April 2005	55.3	Not deficient	Good	Fair	Satisfactory	2592
October 2002	55.5	Not deficient	Good	Fair	Good	2592
March 2000	55.5	Not deficient	Good	Fair	Good	2592
April 1998	62.4	Not deficient	Good	Fair	Good	100
May 1996	62.4	Not deficient	Good	Fair	Good	100
March 1994	62.0	Not deficient	Good	Fair	Good	100
July 1991	62.0	Not deficient	Good	Fair	Good	100

# SEMSD/MRIDDD 2019 Metering Program

*Prepared for*  
Southeast Macomb Sanitary District (SEMSD) &  
Milk River Intercounty Drain Drainage District  
(MRIDDD)

June 23, 2020

AEW Project Nos.  
0208-0089  
0251-0003

**Prepared by:**



ANDERSON, ECKSTEIN & WESTRICK, INC.  
CIVIL ENGINEERS SURVEYORS ARCHITECTS

51301 SCHOENHERR RD. SHELBY TOWNSHIP, MI 48315  
[www.aewinc.com](http://www.aewinc.com) p(586)726-1234



## 1.0 STUDY BACKGROUND AND PURPOSE

The Southeast Macomb Sanitary District (SEMSD) is a separated and combined sewer system that services the cities of Eastpointe, St. Clair Shores, Roseville, Grosse Pointe Shores, Grosse Pointe Woods, Harper Woods and the Milk River Intercounty Drain Drainage District (MRIDDD).

In September 2018 the SEMSD purchased the Marter Road Booster Station, the Grosse Pointe Interceptor and the Kerby Road Pump Station from Wayne County. Additionally, in September 2018 the SEMSD commenced the operation and maintenance for the Milk River Retention Treatment Basin (RTB).

As established by contract with the Great Lakes Water Authority (GLWA), the SEMSD is allowed a peak discharge of 127 cfs from the system, which ultimately flows to the GLWA's Water Resource Recovery Facility in Detroit. The following is the apportionment of the contractual flows within the SEMSD system.

Eastpointe, St. Clair Shores, Roseville	102 cfs
MRIDDD (Combination of Harper Woods and Grosse Pointe Woods)	22 cfs
<u>Grosse Pointe Shores</u>	<u>3 cfs</u>
Total SEMSD System	127 cfs

During wet weather events, when flows exceed the SEMSD's contractual flow, excess wet weather flow is diverted to three RTBs known as the Martin RTB, the Chapaton RTB and the Milk River RTB for storage, treatment and potential discharge to waters of the state.

Currently, the Cook Road sewer that conveys the Grosse Pointe Shores (GPS) flow to the GPI is metered by utilizing a strap on totalizer and manually reading and recording

the totalized flow. Additionally, the newly managed system was found to not have a detailed network of level sensors to help manage flow.

A temporary metering program was implemented at select locations in the SEMSD and MRIDDD systems. There were a total of five temporary meters installed in the MRIDDD system and four temporary meters installed in the SEMSD system. The temporary meters were installed between March 8, 2019 to March 12, 2019 and removed on September 17, 2019.

The purpose of this metering program was to evaluate the possible locations to;

- Install a permanent flow meter to measure Grosse Pointe Shores flow to the SEMSD system.
- Provide insystem sewer levels in order to maximize in system and RTB storage.
- Provide insystem sewer levels to manage flows through the Grosse Pointe Interceptor.

The Macomb County Public Works Office (MCPWO) installed the temporary meters, collected, reviewed and processed the meter data. Meter servicing occurred several times throughout the monitoring period by MCPWO.

The temporary metering program was used as a test for implementation of permanent monitoring locations. The main purpose of the prospective permanent level sensors is to provide upstream sewer levels that will allow monitoring of in-system storage activities; therefore, reducing combined sewer overflow (CSO) volumes.

## **2.0 TEMPORARY METERS**

The SEMSD flow meter locations were selected for two primary reasons; monitor the hydraulic grade line (HGL) through the Grosse Pointe Interceptor (GPI) or for use as a billing meter for Grosse Pointe Shores (GPS) combined sewage. The MRIDDD temporary flow meters were primarily installed at locations that allowed operators to determine available in-system storage to manage overflows at the Milk River RTB.







Exhibit A displays the temporary meter locations within the system. Temporary meter installation sheets produced by MCPWO are attached in Appendix A. The following descriptions provide the location and main purpose of each meter.

## **2.1 Temporary Meter Locations**

### **MRIDDD Temporary Meters**

- **MRIDDD-01**
  - Street Location: Marter & Vernier
  - System Location: Milk River Tunnel, just upstream of Girard Tunnel Drain
  - Purpose: Monitor Levels in the Milk River Tunnel for CSO management
- **MRIDDD-02**
  - Street Location: S Renaud & N Renaud
  - System Location: Black Marsh Drain
  - Purpose: Monitor Levels in the Milk River Tunnel for CSO management
- **MRIDDD-03**
  - Street Location: Marter & Vernier
  - System Location: Girard Tunnel Drain, just upstream of Milk River Tunnel
  - Purpose: Monitor Levels and incoming flows from the Girard Tunnel Drain
- **MRIDDD-04**
  - Street Location: Torrey Pump Station
  - System Location: Influent pipe of Torrey PS
  - Purpose: Measure incoming flow to Torrey PS
- **MRIDDD-05**
  - Street Location: 1776 Manchester Rd, Grosse Pointe Woods
  - System Location: Upstream of Harper Woods diversion chamber
  - Purpose: Measure flow upstream of Harper Woods diversion chamber

### **SEMSD Temporary Meters**

- **SEMSD-01**
  - Street Location: Chalfonte Ave south of Cook Rd sewer.
  - System Location: Grosse Pointe Interceptor downstream of Cook Rd sewer
  - Purpose: Monitor the HGL through the GPI
- **SEMSD-02**
  - Street Location: Marter & Parkway
  - System Location: Grosse Pointe Interceptor
  - Purpose: Monitor the HGL through the GPI
- **SEMSD-03**
  - Street Location: Cook & Chalfonte
  - System Location: Cook Rd combined sewer on 10" connection to the GPI
  - Purpose: Monitor flow rates from Grosse Pointe Shores
- **SEMSD-04**
  - Street Location: Cook & Chalfonte

- System Location: Cook Rd combined sewer on 30" connection to the GPI
- Purpose: Monitor flow rates from Grosse Pointe Shores

SEMSD-03 washed out on April 26, 2019 and SEMSD-01 washed out on July 2, 2019, therefore the data set was limited to the wash out dates, respectively.

## 2.2 Grosse Pointe Interceptor Hydraulic Grade Line

The Hydraulic Grade Line (HGL) along the GPI regulates flow from the direct inputs into the GPI. Using data collected from the temporary meter program, the HGL along the GPI was plotted for several wet weather events. Not all meters were in service for all of the events. There is a noticeable difference in HGL for events after 5/2/2019 since the meter in the GPI downstream of Cook Road was washed out. The loss of this meter causes the HGL to be over estimated between the Kerby Road Pump Station and just downstream of the Milk River connection.

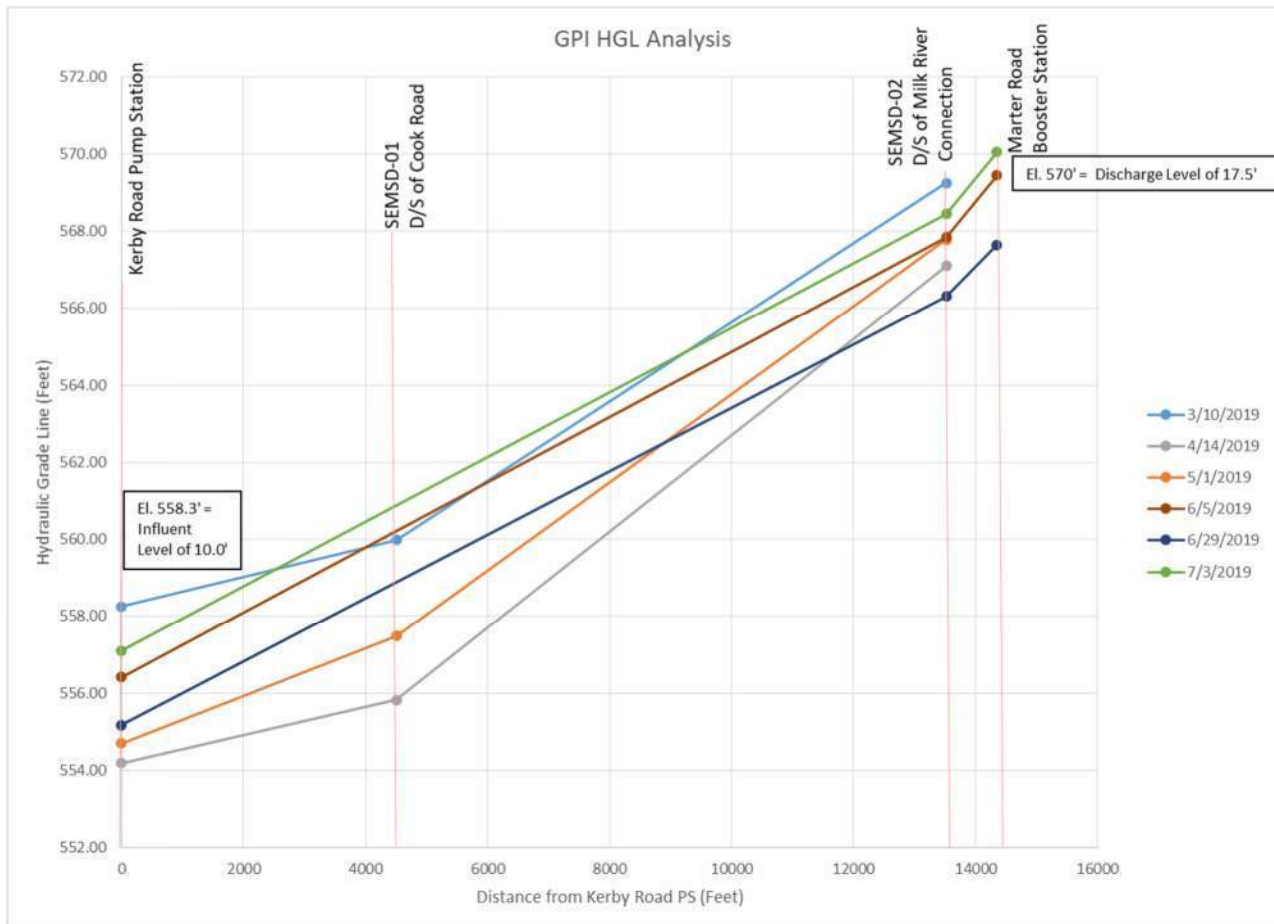


Figure 1 – Grosse Pointe Interceptor Hydraulic Grade Line

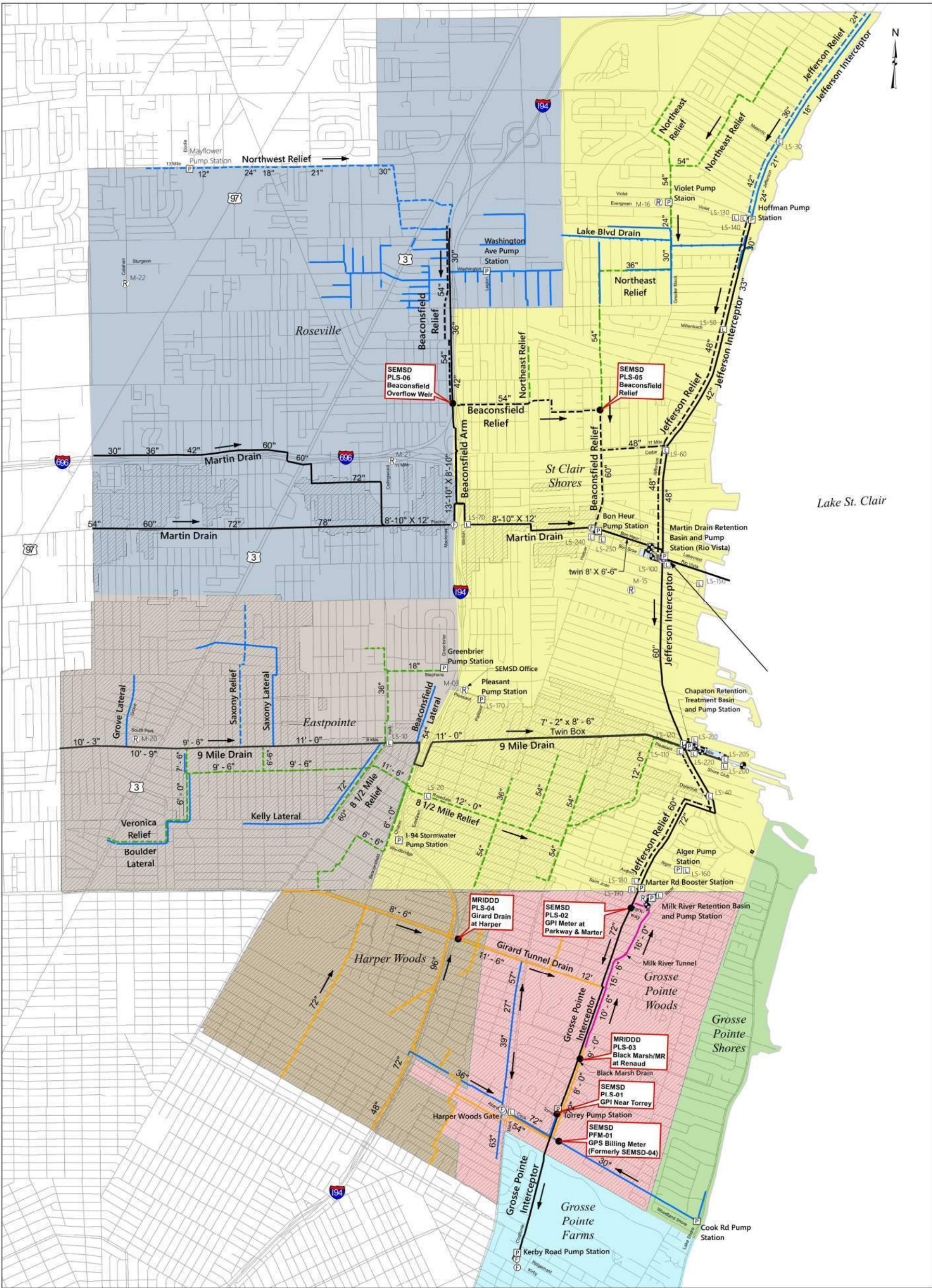
The GPI HGL has a direct effect on the flow that is received from the Marter Road Booster Station, the Milk River RTB, and the Harper Woods Gate. By providing permanent level sensors along the GPI, the system may be operated more efficiently to allow the potential for more flow to be contributed from these facilities.


### **3.0 PERMANENT MONITORING**

Seven locations are proposed for permanent monitoring equipment. An ultrasonic level transducer is proposed for six locations and an area-velocity meter is proposed for the seventh location. The ultrasonic level sensors will provide sewer levels in various locations throughout the system that will allow monitoring of in-system storage activities. Each location has been identified to have an overhead power pole for a potential power drop. The feasibility of the power drop will need to be confirmed with the local power company.


Proposed permanent monitoring locations are shown in Exhibit B. The following descriptions provide the location and main purpose of each proposed permanent monitoring location.







**SEMSD**  
SOUTHEAST MACOMB SANITARY DISTRICT



**ANDERSON, ECKSTEIN AND WESTRICK, INC.**  
CIVIL ENGINEERS SURVEYORS ARCHITECTS  
11101 Schenck Rd.  
Bellaire, Texas 77401  
Phone 281.224.2344  
Fax 281.224.2345  
www.aewr.com

DATE PRINTED: 6/23/2020  
SCALE: NTS  
PROJECT NO: 0208-0009

DATE CREATED: 12/17/2019  
MAP DOCUMENT: Permanent Monitoring.mxd  
CREATED BY: JLS  
CHECKED BY: GJS, DJT

# *Southeast Macomb Sanitary District*

## Exhibit B: Proposed Permanent Monitoring

REFERENCE SHEET NUMBER	PANEL NUMBER
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<b>CAUTION</b> THIS MAP IS INTENDED FOR REFERENCE PURPOSES ONLY. ANDERSON, ECKSTEIN AND WESTRICK, INC. AND THE SEMSD DO NOT GUARANTEE THE ACCURACY OF THIS INFORMATION AND DISCLAIM ALL LIABILITY FROM ALL CLAIMS, SUITS, DEMANDS AND JUDGEMENTS ARISING FROM THE USE OF THIS INFORMATION.	



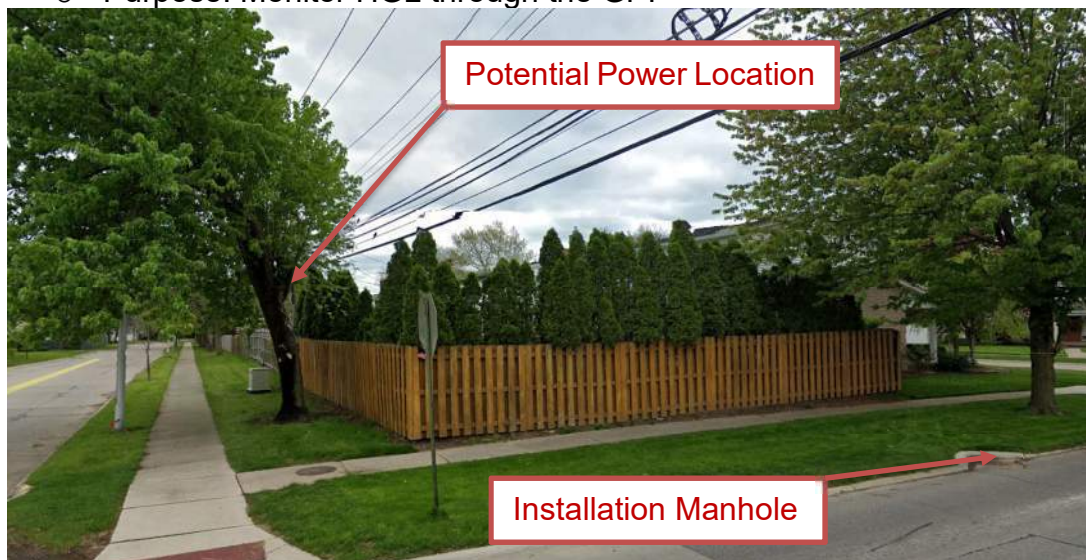
### 3.1 Permanent Monitoring Locations

- Proposed Level Sensor 1 (PLS-01 - SEMSD)
  - Street Location: Torrey Road near Torrey Pump Station
  - System Location: GPI at Torrey
  - Purpose: Monitor HGL through the GPI



**Figure 1: Proposed Level Sensor 1 Street View**

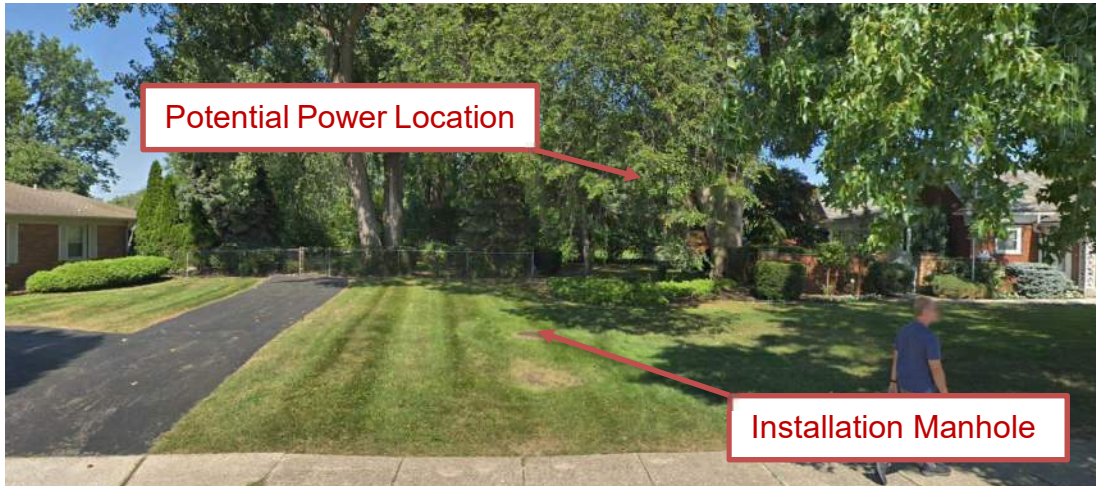
- Proposed Level Sensor 2 (PLS-02 - SEMSD)
  - Street Location: Marter Road (downstream of Parkway)
  - System Location: GPI at Parkway
  - Purpose: Monitor HGL through the GPI



**Figure 2: Proposed Level Sensor 2 Street View**



- Proposed Level Sensor 3 (PLS-03 - MRIDDD)
  - Street Location: S Renaud & N Renaud
  - System Location: Black Marsh Drain (Milk River Drain) at Renaud
  - Purpose: Monitor HGL through the Milk River Drain



**Figure 3: Proposed Level Sensor 3 Street View**

- Proposed Level Sensor 4 (PLS-04 - MRIDDD)
  - Street Location: Vernier & Harper
  - System Location: Girard Drain at Harper.
  - Purpose: Monitor HGL through the Girard Drain



**Figure 4: Proposed Level Sensor 4 Street View**

- Proposed Level Sensor 5 (PLS-05 - SEMSD)
  - Street Location: Harper & Stanley
  - System Location: Beaconsfield Relief at Harper and Stanley
  - Purpose: Monitor HGL through the Beaconsfield Relief



**Figure 5: Proposed Level Sensor 5 Street View**

- Proposed Level Sensor 6 (PLS-06 - SEMSD)
  - Street Location: I-94 and Meier
  - System Location: Beaconsfield Overflow Weir
  - Purpose: Monitor flow over overflow weir at the Beaconsfield and Beaconsfield Relief intersection



**Figure 6: Proposed Level Sensor 6 Street View**



- Proposed Flow Meter 1 (PFM-01 - SEMSD)
  - GPS Billing Meter (Same as temporary meters SEMSD-03/SEMSD-04)
  - Street Location: Cook & Chalfonte
  - System Location: Cook Rd combined sewer on 30" sewer upstream of the GPI
  - Purpose: Potential billing meter for GPS



**Figure 7: Proposed Flow Meter 1 Street View**

PLS-5 and PLS-6 are recommended as a permanent level sensor, but were not part of the 2019 temporary metering program. These locations were added to provide information on potential in-system storage upstream of the Bon Heur Pump Station and identify when the weir is overflowing to the Beaconsfield Relief sewer. Meter locations were selected based on system location, available area for meter cabinet, public interference, and ease of power supply.

PLS-3 and PLS-4 were placed to monitor in-system storage upstream of the Milk River RTB. These meters were placed further up in the system compared to the equivalent temporary meters (MRIDDD-01 and MRIDDD-03) due to ease installation and cabinet location. There is about 3.8 million gallons of in-system storage between the level of the first pump and the last pump turning on at Milk River. The available storage upstream of the Milk River RTB is shown below in Table 1. The added potential storage column

compares the wet well with one pump running at various stages up to the level where all pumps are turned on.

**Table 1: In-System Storage Upstream of Milk River RTB**

---

Wet Well Elevation (Ft)	Wet Well Depth (Ft)	Total In-system Storage (MG)	Added Potential Storage (MG)
555	25	3.58	0
556	26	4.34	0.76
557	27	5.13	1.55
558	28	5.93	2.35
559	29	6.7	3.12
560	30	7.4	3.82

PLS-5 and PLS-6 are located upstream in the Martin Drain District. These proposed level sensors will provide upstream water surface for estimating in-system storage. PLS-6 is also located at an overflow weir, and will be used to determine if and how much flow is going to the Beaconsfield Relief Sewer and Bon Heur Pump Station.

### **3.2 Engineers Opinion of Probable Cost**

Due to the interconnection between the two systems it is recommended that a cost sharing plan be used based on location of the installation. PLS-03 and PLS-04 are located on the MRIDDD system, and are recommended to be funded by the MRIDDD. The remaining meter locations are located on the SEMSD system and are recommended to be funded by the SEMSD.


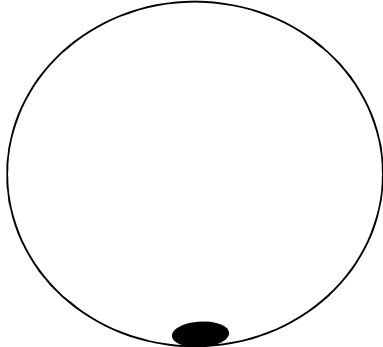
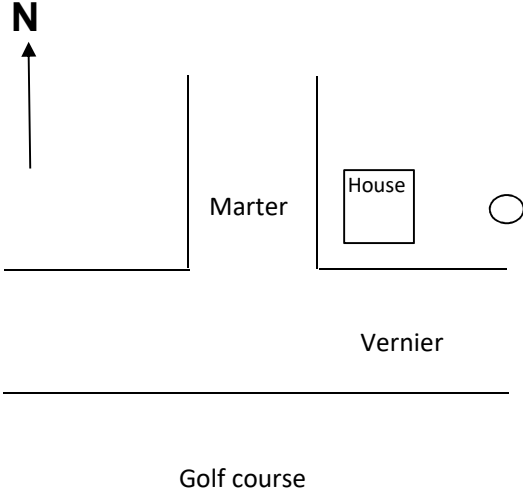
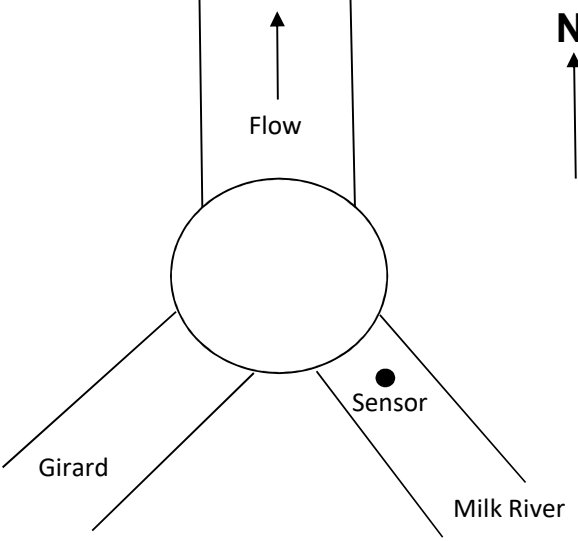
An Engineer's opinion of probable cost was created for the proposed permanent measurement locations. In order to install and connect each location to SCADA, it is estimated to cost approximately \$330,000 for the SEMSD and \$144,000 for the MRIDDD. This cost estimate is a preliminary estimate and will be refined during the design phase of the project. A breakdown of the line items can be found by owner in Appendix B.


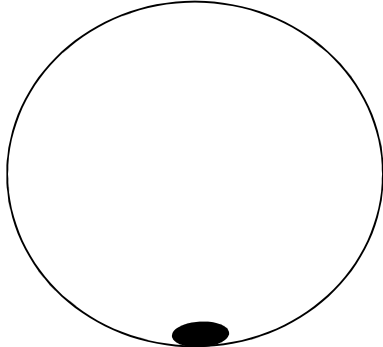
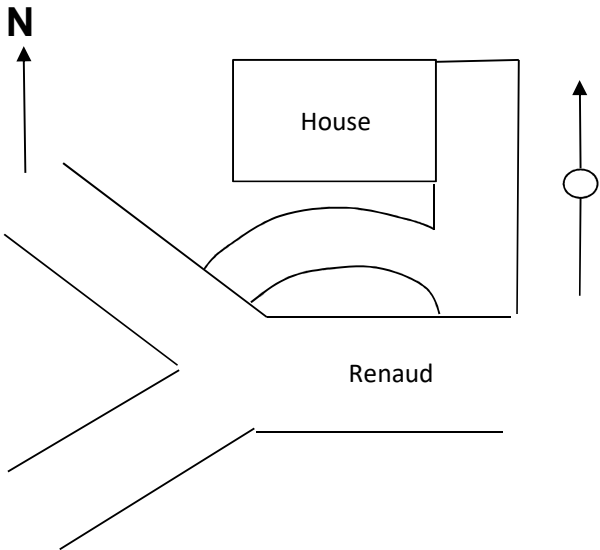
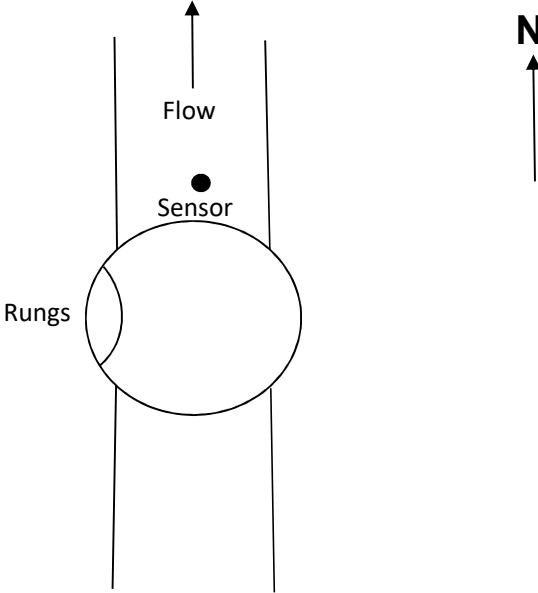
## **4.0 CONCLUSIONS**

The temporary metering program has been beneficial by providing information about the system, but was not able to be used in real time. Installing the proposed permanent level sensors and flow meters and connecting them to the SEMSD SCADA system will allow for effective in-system storage in the drains by using real time data and decision making. It is recommended that the SEMSD proceed with preliminary design of the proposed permanent monitoring locations.


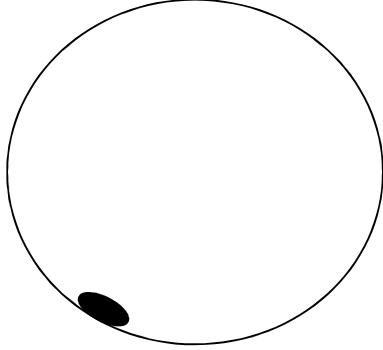
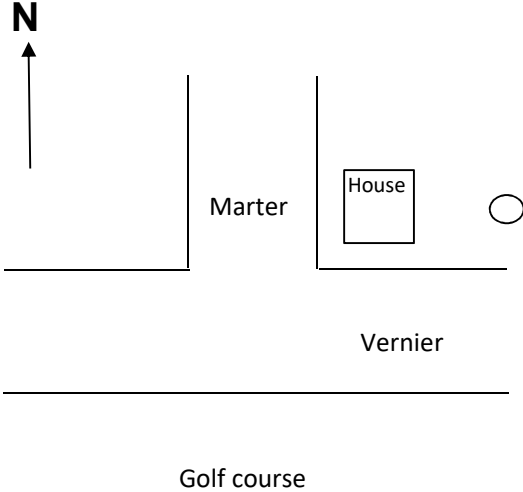
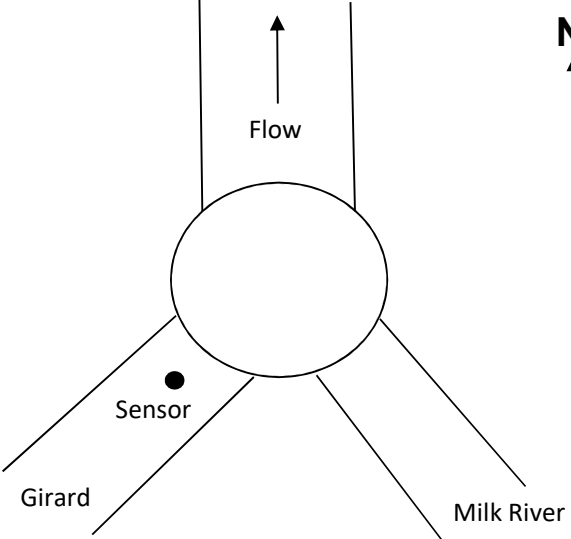
Data collected during the temporary monitoring program is available upon request by emailing Taylor Sting at [tsting@aeawinc.com](mailto:tsting@aeawinc.com).


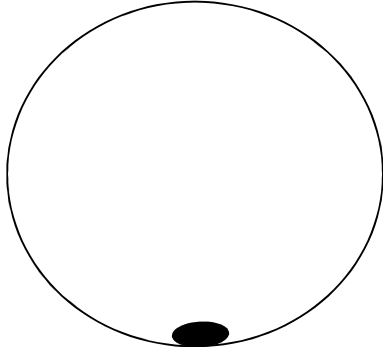
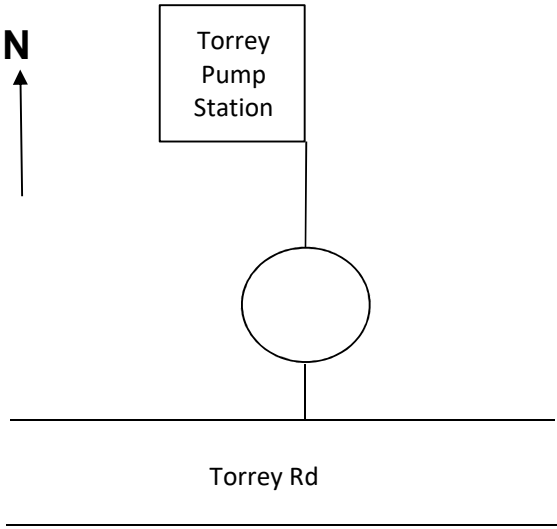
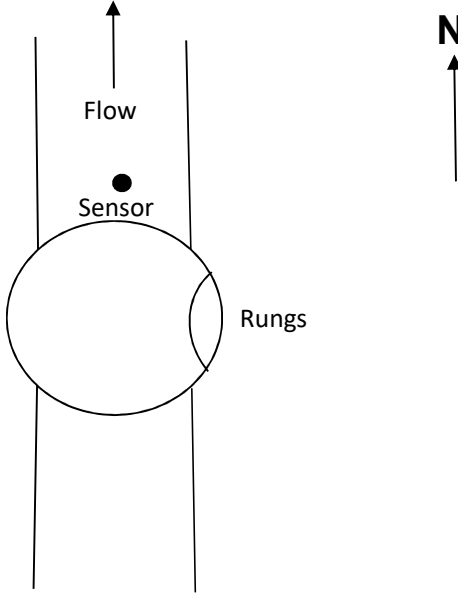
## **APPENDIX A**


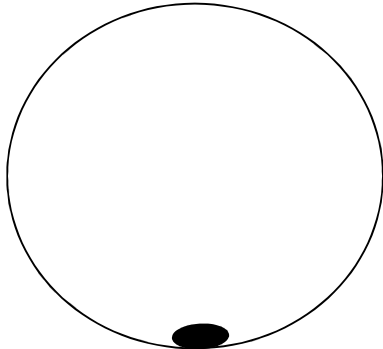
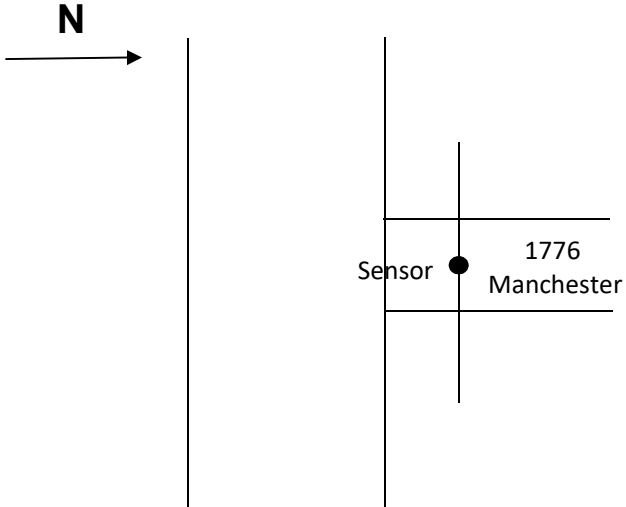
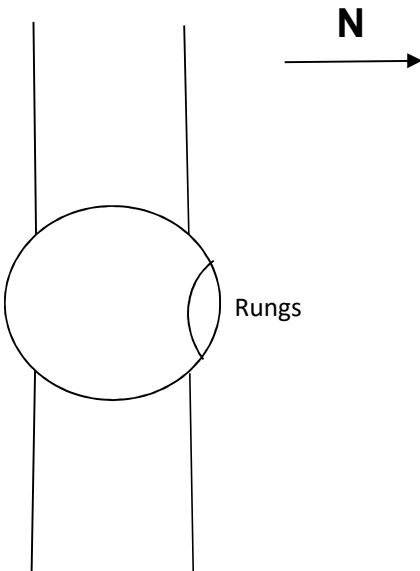
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Location:		<b>Marter &amp; Vernier (Milk)</b>			Site Name/#: <b>MRIDDD-01</b>			
City / Township:		<b>Grosse Pointe Woods</b>	Installed By:	<b>VA</b>	Meter BC/SN:	<b>218C02434</b>		
Wastewater <input checked="" type="checkbox"/>	Storm <input type="checkbox"/>	Other <input type="checkbox"/>	Recorded By:	<b>SR</b>	Probe BC/SN:	<b>218C03050</b>		
Date:		<b>3/12/2019</b>		Arrival Time:	<b>9:50 AM</b>			
Metered Sewer Size:		<b>10' 6"</b>	Inches	Weather:	<b>35°F - Sunny</b>			
				Meter Type:	<b>AV2150</b>			
<b>METER MANHOLE CONDITIONS:</b>			<b>SENSOR PLACEMENT</b>					
Rungs Condition:		<b>Poor</b>		Show Sensor Location				
Depth (INV to RIM in Feet):				Inlet or Outlet:	<b>Inlet</b>			
Evidence of Surge?		<b>Y</b>		Offset to Invert:				
Sediment / Grease?		<b>N</b>		Silt Depth:				
GPS Position:		<b>-</b>		Band Setback:	<b>8'</b>			
<b>SITE LAYOUT</b>			<b>MANHOLE LAYOUT</b>					
								
<b>FIELD MEASUREMENTS</b>			<b>METER REAL-TIME READS</b>					
Actual Depth - Ruler (in.)		Velocity Meter Read (fps)		Depth (in.)	Velocity (fps)	Flow (cfs)	Signal (%)	Battery (Volts)
<b>5.5</b>				<b>5.321</b>	<b>1.971</b>		<b>80</b>	<b>12.09</b>
Notes / Comments / Other Equipment Installed / Bar Codes								
<b>Extension Cable</b>								
Install Crew Initials: <b>SR, VA, JS, TS, ZH</b>								


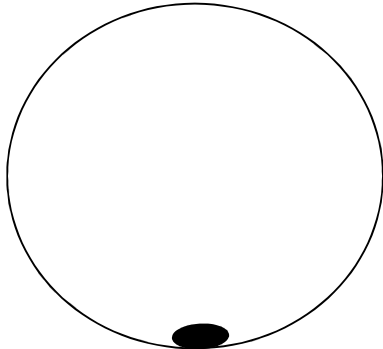
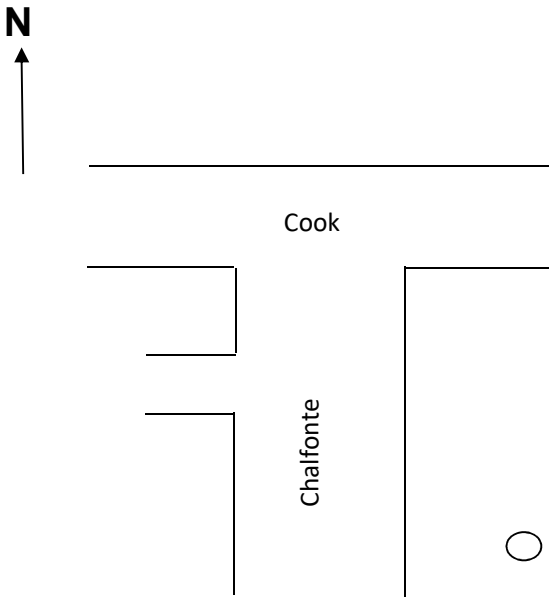
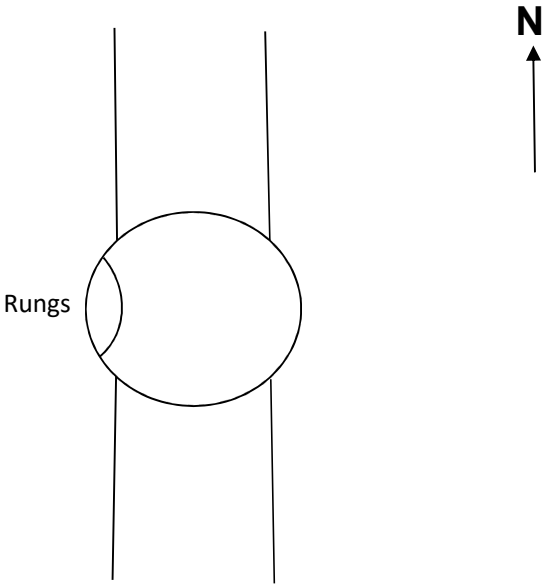
<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District	<b>MRIDDD</b>	
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Location:		<b>Renaud St</b>			Site Name/#:	<b>MRIDDD-02</b>
City / Township:		<b>Grosse Pointe Woods</b>	Installed By:	<b>VA</b>	Meter BC/SN:	<b>218C02427</b>
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Date:		<b>3/12/2019</b>	Arrival Time:	<b>8:42 AM</b>	Battery BC/SN:	<b>218C03352</b>
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					<b>AV2150</b>	
<b>METER MANHOLE CONDITIONS:</b>			<b>SENSOR PLACEMENT</b>			
Rungs Condition:		<b>Poor</b>	Show Sensor Location			
Depth (INV to RIM in Feet):		<b>28' 3"</b>	Inlet or Outlet:	<b>Outlet</b>		
Evidence of Surge?		<b>Y</b>	Offset to Invert:	<b>6:00</b>		
Sediment / Grease?		<b>N</b>	Silt Depth:	<b>-</b>		
GPS Position:		<b>-</b>	Band Setback:	<b>13'</b>		
<b>SITE LAYOUT</b>			<b>MANHOLE LAYOUT</b>			
						
<b>FIELD MEASUREMENTS</b>			<b>METER REAL-TIME READS</b>			
Actual Depth - Ruler (in.)	Velocity Meter Read (fps)	Depth (in.)	Velocity (fps)	Flow (cfs)	Signal (%)	Battery (Volts)
<b>3.125</b>	<b>-</b>	<b>3.015</b>	<b>2.375</b>	<b>5.53</b>	<b>70</b>	<b>12.337</b>
Notes / Comments / Other Equipment Installed / Bar Codes						
<b>Extension Cable</b>						
Install Crew Initials: <b>SR, VA, JS, TS, ZH</b>						


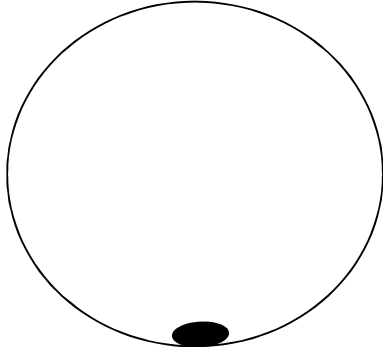
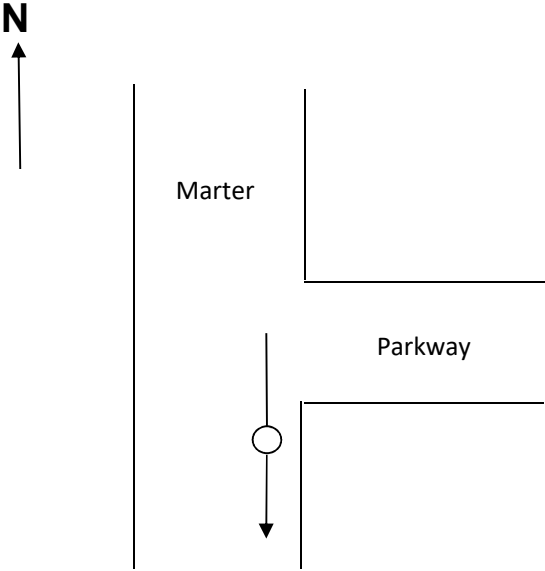
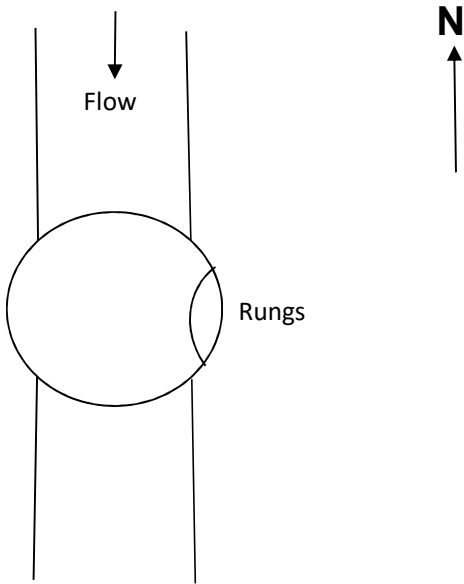



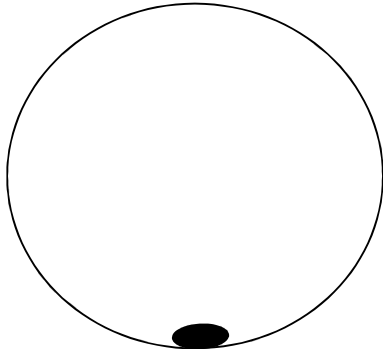
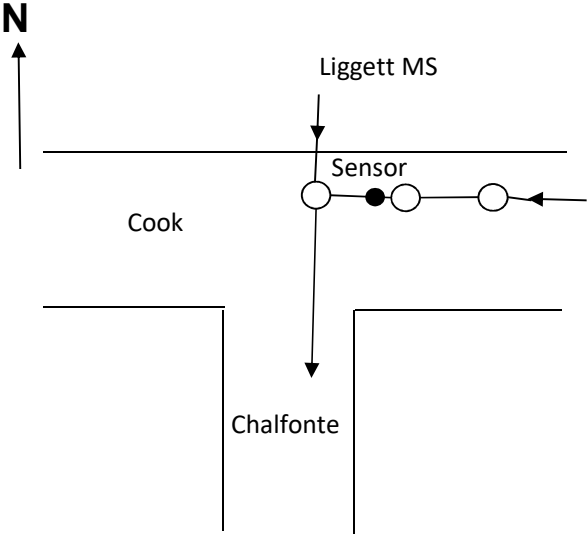
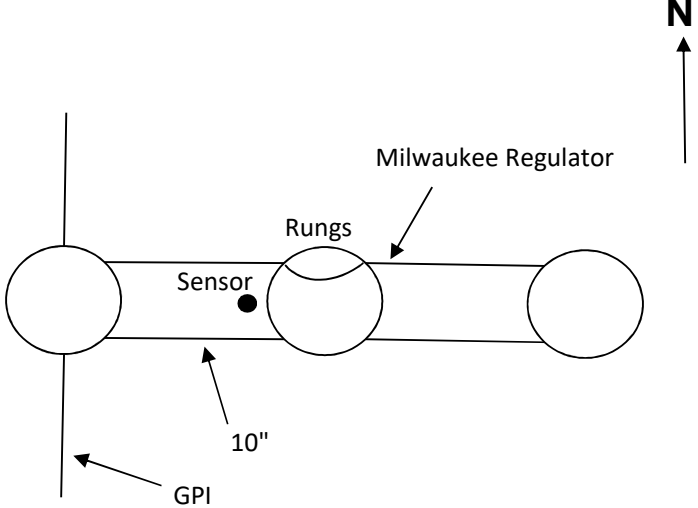
<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District		<b>MRIDDD</b>			
<b>FLOW METER INSTALLATION REPORT</b>									
Location:		<b>Marter &amp; Vernier (Girard)</b>			Site Name/#:		<b>MRIDDD-03</b>		
City / Township:		<b>Grosse Pointe Woods</b>		Installed By:		<b>VA</b>			
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Date:		<b>3/12/2019</b>		Arrival Time:		<b>9:50 AM</b>			
Metered Sewer Size: <b>12</b> Feet		Weather:		<b>35°F - Sunny</b>		Battery BC/SN: <b>218C02385</b> Meter Type:			
<b>METER MANHOLE CONDITIONS:</b>				<b>SENSOR PLACEMENT</b>					
Rungs Condition:		<b>Poor</b>		Show Sensor Location					
Depth (INV to RIM in Feet):				Inlet or Outlet:				<b>Inlet</b>	
Evidence of Surge?		<b>Y</b>		Offset to Invert:				<b>7:00</b>	
Sediment / Grease?		<b>N</b>		Silt Depth:				<b>??</b>	
GPS Position:		<b>-</b>		Band Setback:				<b>8'</b>	
<b>SITE LAYOUT</b>				<b>MANHOLE LAYOUT</b>					
									
<b>FIELD MEASUREMENTS</b>				<b>METER REAL-TIME READS</b>					
Actual Depth - Ruler (in.)		Velocity Meter Read (fps)		Depth (in.)		Velocity (fps)			
<b>10</b>		<b>-</b>		<b>10.1</b>		<b>0.17</b>			
						Flow (cfs)			
						<b>5</b>			
						Signal (%)			
						<b>12.01</b>			
						Battery (Volts)			
<b>Notes / Comments / Other Equipment Installed / Bar Codes</b>									
<b>Extension Cable</b>									
Install Crew Initials: <b>SR, VA, JS, TS, ZH</b>									


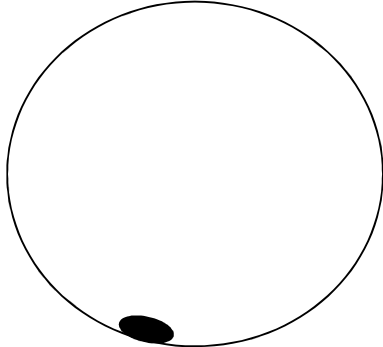
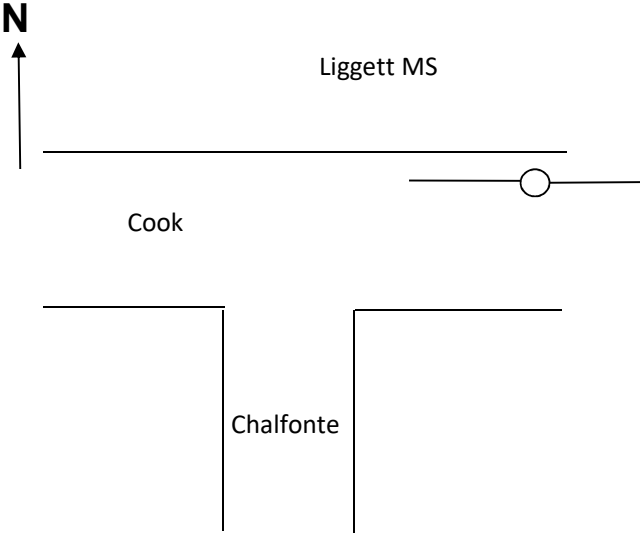
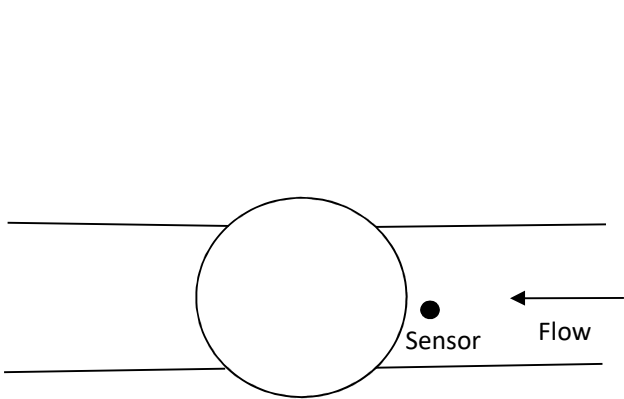
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<b>FLOW METER INSTALLATION REPORT</b>						
Location:		<b>Torrey PS (U/S)</b>			Site Name/#:	<b>MRIDDD-04</b>
City / Township:		<b>Grosse Pointe Woods</b>	Installed By:	<b>VA</b>	Meter BC/SN:	<b>218C02399</b>
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Date:		<b>3/12/2019</b>	Arrival Time:	<b>7:44 AM</b>	Battery BC/SN:	<b>218C03358</b>
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<b>METER MANHOLE CONDITIONS:</b>			<b>SENSOR PLACEMENT</b>			
Rungs Condition:		<b>Good</b>	Show Sensor Location			
Depth (INV to RIM in Feet):		<b>28' 9"</b>	Inlet or Outlet:	<b>Outlet</b>		
Evidence of Surge?		<b>Y</b>	Offset to Invert:	<b>6:00</b>		
Sediment / Grease?		<b>N</b>	Silt Depth:	<b>-</b>		
GPS Position:		<b>-</b>	Band Setback:	<b>8'</b>		
<b>SITE LAYOUT</b>			<b>MANHOLE LAYOUT</b>			
						
<b>FIELD MEASUREMENTS</b>			<b>METER REAL-TIME READS</b>			
Actual Depth - Ruler (in.)	Velocity Meter Read (fps)	Depth (in.)	Velocity (fps)	Flow (cfs)	Signal (%)	Battery (Volts)
<b>6.5</b>	<b>-</b>	<b>6.696</b>	<b>0.648</b>	<b>1.105</b>	<b>61</b>	<b>12.262</b>
Notes / Comments / Other Equipment Installed / Bar Codes						
<b>Extension Cable</b>						
Install Crew Initials: <b>SR, VA, JS, TS, ZH</b>						

<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District		<b>MRIDDD</b>	
<b>FLOW METER INSTALLATION REPORT</b>							
Location:		<b>1776 Manchester</b>				Site Name/#:	
City / Township:		<b>Grosse Pointe Woods</b>		Installed By:		<b>VA</b>	
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Date:		<b>3/8/2019</b>		Arrival Time:		<b>1:00 PM</b>	
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<b>35°F - Sunny</b>		Meter Type:		<b>AV2150</b>			
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Rungs Condition:		<b>Good</b>		Show Sensor Location			
Depth (INV to RIM in Feet):		<b>19' 4"</b>		Inlet or Outlet:			
Evidence of Surge?		<b>N</b>		Offset to Invert:			
Sediment / Grease?		<b>N</b>		Silt Depth:			
GPS Position:		<b>-</b>		Band Setback:			
<b>12"</b>							
<b>SITE LAYOUT</b>				<b>MANHOLE LAYOUT</b>			
							
<b>FIELD MEASUREMENTS</b>				<b>METER REAL-TIME READS</b>			
Actual Depth - Ruler (in.)		Velocity Meter Read (fps)		Depth (in.)		Velocity (fps)	
<b>9.375</b>		<b>-</b>		<b>9.21</b>		<b>1.701</b>	
<b>2.311</b>		<b>31</b>		<b>12.06</b>			
<b>Notes / Comments / Other Equipment Installed / Bar Codes</b>							
Install Crew Initials: <b>SR, VA, JS, KB</b>							

<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District		<b>SEMSD</b>			
<b>FLOW METER INSTALLATION REPORT</b>									
Location:		<b>Chalfonte Ave D/S Cook Rd</b>			Site Name/#:		<b>SEMSD-01</b>		
City / Township:		<b>Grosse Pointe Woods</b>		Installed By:		<b>VA</b>			
Wastewater <input checked="" type="checkbox"/> Storm <input type="checkbox"/> Other <input type="checkbox"/>		Recorded By:		<b>SR</b>		Meter BC/SN: <b>218C00680</b>			
Date:		<b>3/8/2019</b>		Arrival Time:		<b>10:10 AM</b>			
Metered Sewer Size: <b>72</b> Inches		Weather:		<b>30°F - Sunny</b>		Probe BC/SN: <b>218C03049</b> Battery BC/SN: <b>218C03356</b>			
Meter Type:		<b>AV2150</b>							
<b>METER MANHOLE CONDITIONS:</b>				<b>SENSOR PLACEMENT</b>					
Rungs Condition:		<b>Poor</b>		Show Sensor Location					
Depth (INV to RIM in Feet):		<b>32' 8"</b>		Inlet or Outlet:				<b>Inlet</b>	
Evidence of Surge?		<b>Y</b>		Offset to Invert:				<b>6:00</b>	
Sediment / Grease?		<b>N</b>		Silt Depth:				<b>-</b>	
GPS Position:		<b>-</b>		Band Setback:				<b>50"</b>	
<b>SITE LAYOUT</b>				<b>MANHOLE LAYOUT</b>					
									
<b>FIELD MEASUREMENTS</b>				<b>METER REAL-TIME READS</b>					
Actual Depth - Ruler (in.)		Velocity Meter Read (fps)		Depth (in.)		Velocity (fps)			
Flow (cfs)		Signal (%)		Battery (Volts)					
<b>26.25</b>		<b>-</b>		<b>25.208</b>		<b>1.108</b>			
<b>8.775</b>		<b>18</b>		<b>12.04</b>					
<b>Notes / Comments / Other Equipment Installed / Bar Codes</b>									
<b>Extension Cable. Bottom jagged.</b>									
Install Crew Initials: <b>SR, VA, JS, KB</b>									

<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District	<b>SEMSD</b>	
<b>FLOW METER INSTALLATION REPORT</b>						
Location:		<b>Marter &amp; Parkway</b>			Site Name/#:	<b>SEMSD-02</b>
City / Township:		<b>Grosse Pointe Woods</b>	Installed By:	<b>VA</b>	Meter BC/SN:	<b>218C02436</b>
Wastewater <input checked="" type="checkbox"/>	Storm <input type="checkbox"/>	Other <input type="checkbox"/>	Recorded By:	<b>SR</b>	Probe BC/SN:	<b>218C03046</b>
Date:		<b>3/8/2019</b>	Arrival Time:	<b>8:30 AM</b>	Battery BC/SN:	<b>218C03354</b>
Metered Sewer Size:		<b>72</b> Inches	Weather:	<b>30°F - Sunny</b>	Meter Type:	<b>AV2150</b>
<b>METER MANHOLE CONDITIONS:</b>			<b>SENSOR PLACEMENT</b>			
Rungs Condition:		<b>Good</b>	Show Sensor Location			
Depth (INV to RIM in Feet):		<b>28' 11"</b>	Inlet or Outlet:	<b>Inlet</b>		
Evidence of Surge?		<b>Y</b>	Offset to Invert:	<b>6:00</b>		
Sediment / Grease?		<b>N</b>	Silt Depth:	<b>-</b>		
GPS Position:		<b>-</b>	Band Setback:	<b>40"</b>		
<b>SITE LAYOUT</b>			<b>MANHOLE LAYOUT</b>			
						
<b>FIELD MEASUREMENTS</b>			<b>METER REAL-TIME READS</b>			
Actual Depth - Ruler (in.)	Velocity Meter Read (fps)	Depth (in.)	Velocity (fps)	Flow (cfs)	Signal (%)	Battery (Volts)
<b>22</b>	<b>-</b>	<b>22.01</b>	<b>1.456</b>	<b>10.285</b>	<b>60</b>	<b>12.233</b>
Notes / Comments / Other Equipment Installed / Bar Codes						
<b>Extension Cable. Bottom is jagged. Not flush.</b>						
Install Crew Initials: <b>SR, VA, JS, KB</b>						

<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District	<b>SEMSD</b>	
<b>FLOW METER INSTALLATION REPORT</b>						
Location:		<b>Cook &amp; Chalfonte 10"</b>			Site Name/#:	<b>SEMSD-03</b>
City / Township:		<b>Grosse Pointe Woods</b>	Installed By:	<b>VA</b>	Meter BC/SN:	<b>218C00683</b>
Wastewater <input checked="" type="checkbox"/>	Storm <input type="checkbox"/>	Other <input type="checkbox"/>	Recorded By:	<b>SR</b>	Probe BC/SN:	<b>218C00247</b>
Date:		<b>3/8/2019</b>	Arrival Time:	<b>12:10 PM</b>	Battery BC/SN:	<b>218C03345</b>
Metered Sewer Size:		<b>10</b> Inches	Weather:	<b>30°F - Sunny</b>	Meter Type:	<b>AV2150</b>
<b>METER MANHOLE CONDITIONS:</b>			<b>SENSOR PLACEMENT</b>			
Rungs Condition:		<b>Good</b>	Show Sensor Location			
Depth (INV to RIM in Feet):		<b>10' 3"</b>	Inlet or Outlet:	<b>Outlet</b>		
Evidence of Surge?		<b>Y</b>	Offset to Invert:	<b>6:00</b>		
Sediment / Grease?		<b>N</b>	Silt Depth:	<b>-</b>		
GPS Position:		<b>-</b>	Band Setback:	<b>12"</b>		
<b>SITE LAYOUT</b>			<b>MANHOLE LAYOUT</b>			
						
<b>FIELD MEASUREMENTS</b>			<b>METER REAL-TIME READS</b>			
Actual Depth - Ruler (in.)	Velocity Meter Read (fps)	Depth (in.)	Velocity (fps)	Flow (cfs)	Signal (%)	Battery (Volts)
		<b>2.489</b>	<b>3.3</b>	<b>0.349</b>	<b>95</b>	<b>12.24</b>
Notes / Comments / Other Equipment Installed / Bar Codes						
<b>Debris removed from 8" outlet.</b>						
Install Crew Initials:		<b>SR, VA, JS, KB</b>				

<b>Macomb County Public Works</b> <b>21777 Dunham Road</b> <b>Clinton Township, MI 48036</b>				Drainage District		<b>SEMSD</b>		
<b>FLOW METER INSTALLATION REPORT</b>								
Location:		<b>Cook &amp; Chalfonte 30"</b>				Site Name/#: <b>SEMSD-04</b>		
City / Township:		<b>Grosse Pointe Woods</b>		Installed By: <b>VA</b>		Meter BC/SN: <b>218C02397</b>		
Wastewater <input checked="" type="checkbox"/> Storm <input type="checkbox"/> Other <input type="checkbox"/>		Recorded By: <b>SR</b>		Probe BC/SN: <b>218C03055</b>				
Date: <b>3/8/2019</b>		Arrival Time: <b>11:15 AM</b>		Battery BC/SN: <b>218C02384</b>				
Metered Sewer Size: <b>30</b> Inches		Weather: <b>30°F - Sunny</b>		Meter Type: <b>AV2150</b>				
<b>METER MANHOLE CONDITIONS:</b>				<b>SENSOR PLACEMENT</b>				
Rungs Condition: <b>Good</b>		Show Sensor Location						
Depth (INV to RIM in Feet): <b>8' 1"</b>		Inlet or Outlet: <b>Inlet</b>						
Evidence of Surge? <b>Y</b>		Offset to Invert: <b>6:30</b>						
Sediment / Grease? <b>Y</b>		Silt Depth: <b>-</b>						
GPS Position: <b>-</b>		Band Setback: <b>12"</b>						
<b>SITE LAYOUT</b>				<b>MANHOLE LAYOUT</b>				
								
<b>FIELD MEASUREMENTS</b>				<b>METER REAL-TIME READS</b>				
Actual Depth - Ruler (in.)		Velocity Meter Read (fps)		Depth (in.)	Velocity (fps)	Flow (cfs)	Signal (%)	Battery (Volts)
<b>7.75</b>				<b>7.486</b>	<b>0.965</b>	<b>1.501</b>	<b>60</b>	<b>12</b>
<b>Notes / Comments / Other Equipment Installed / Bar Codes</b>								
Install Crew Initials: <b>SR, VA, JS, KB</b>								

## **APPENDIX B**





**ANDERSON, ECKSTEIN & WESTRICK, INC.**  
51301 Schoenherr Road  
Shelby Township, MI 48315  
Phone: 586-726-1234  
Fax No: 586-726-8780

PROJECT: SEMSD/MRIDDD Permanent Monitoring

OWNER: MRIDDD

PREPARED BY: Taylor Sting

DATE: 6/18/2020

**PRELIMINARY ENGINEERS ESTIMATE  
MRIDDD**

AEW PROJECT NO. 0208-0089/0251-0003

CHECKED BY: Kyle Seidel

DATE: 6/18/2020

**WORK ITEM**

1. Meter Cabinet With SCADA remote connection, Ultrasonic Level  
Transducers & Appurtenances with Electrical Installation
2. DTE Electrical
3. Contingencies ( 10%)

**QUANTITY UNIT**

1 LS

2 EA

1 LS

**UNIT PRICE**

\$

106,168.86

2,000.00

11,000.00

\$

**AMOUNT**

106,168.86

4,000.00

11,000.00

**Subtotal \$ 121,168.86**

**TOTAL CONSTRUCTION COST 121,168.86**

**CONSTRUCTION COST**

Engineering Plans (2.0% Eng Estimate)

Permits (5.0%)

Construction Engineering

**TOTAL COST**

121,168.86

2,423.38

5,000.00

15,000.00

**\$143,592.23**



**ANDERSON, ECKSTEIN & WESTRICK, INC.**  
51301 Schoenherr Road  
Shelby Township, MI 48315  
Phone: 586-726-1234  
Fax No: 586-726-8780

PROJECT: SEMSD/MRIDDD Permanent Monitoring

OWNER: SEMSD

PREPARED BY: Taylor Sting

DATE: 6/18/2020

**PRELIMINARY ENGINEERS ESTIMATE  
SEMSD**

AEW PROJECT NO. 0208-0089/0251-0003

CHECKED BY: Kyle Seidel

DATE: 6/18/2020

**WORK ITEM**

1. Meter Cabinet With SCADA remote connection, Area/Velocity Flow Meter, Ultrasonic Level Transducers & Appurtenances with Electrical Installation
2. DTE Electrical
3. Contingencies ( 10%)

**QUANTITY UNIT**

**UNIT PRICE**

**AMOUNT**

1 LS

\$

\$

265,422.14

265,422.14

5 EA

2,000.00

10,000.00

1 LS

28,000.00

28,000.00

**Subtotal \$ 303,422.14**

**TOTAL CONSTRUCTION COST 303,422.14**

**CONSTRUCTION COST**

303,422.14

Engineering Plans (2.0% Eng Estimate)

6,068.44

Permits (5.0%)

5,000.00

Construction Engineering

15,000.00

**TOTAL COST**

**\$329,490.59**



# Motor City Electric Technologies Inc.

A Subsidiary of Motor City Electric Co.

9440 Grinnell St.  
Detroit, MI 48213-1151  
TEL: (313) 921-5300  
FAX: (313) 921-5310  
[www.mceco.com](http://www.mceco.com)

July 7, 2020

Milk River Intercounty Drain Drainage District (MRIDDD)  
Constitution Hall  
525 West Allegan Street  
PO Box 30017  
Lansing, MI 48909

Attention: Mr. Michael Gregg

Subject: Milk River Intercounty Drain Drainage District (MRIDDD)  
New Level and Flow monitoring locations – 2019 Metering Program  
Motor City Electric Technologies Proposal No. 20-0907

Dear Mr. Gregg:

Motor City Electric Technologies is pleased to offer our **budgetary** proposal for electrical engineering services, control panel fabrication, electrical installation and supply of related electrical equipment necessary for the implementation of the proposed new level and flow monitoring locations PLS-03, PLS-04.

## **SCOPE OF SERVICES**

Motor City Electric Technologies will provide electrical engineering, layouts, detail design drafting, necessary calculations, programming, control panel material, panel fabrication, electrical installation and software/material as outlined in the Scope of Services section of this bid document.

A. Electrical engineering will include the following as required:

1. Control Panel Hardware Engineering
2. Panel Drawings with Bills of Material.
3. PLC programming and documentation
4. DIGI cellular modem provisioning and programming
5. Headend SCADA programming for new locations.
6. O&M Manuals. (1 hard copy, 1 electronic)
7. Start-up/Debug
8. Field Device Calibration.
9. Training. (8 hour session)
10. Update electrical drawings to “as-built” condition per marked up drawings provided by the field installation contractor.

B. Our proposal includes furnishing the following material:

**Two (2) New Level Sensor Locations – the following will be furnished and electrically installed at PLS-03, PLS-04:**

- NEMA 4x Enclosure
- Sub-plate
- Allen Bradley PLC with I/O
- DIGI Cellular Modem
- Power Monitoring Relay
- New antenna, connectors, antenna cable
- A/R – circuit breakers, terminals, relays, tags, etc.
- Battery Backup with Trickle Charger
- Vega WL61 Radar Level Sensor

**Electrical installation at each location will include (typical):**

1. Furnish and install an equipment rack consisting of the DTE Energy Meter, the Service Entrance Disconnect Switch, and the SCADA/Monitoring Panel.
2. Furnish and install an underground conduit from the DTE Energy Meter to a utility pole up to one hundred lineal feet (100 LFT).
3. Furnish and install a conduit from the SCADA/Monitoring Panel to the manhole where the Level/Flow Sensors are to be mounted.
4. Install the Level Sensors in the manholes and extend the sensor cables to the SCADA/Monitoring Panels.
5. Excavation, backfill, and restoration.
6. Electrical permits.
7. Applicable taxes.

**PRICING**

Total price for engineering, panel fabrication, material, electrical installation and start-up/commissioning services as stated above for the above will be One Hundred Six Thousand One Hundred Sixty Eight and 86/100 **(\$106,168.86)** Dollars.

Material	\$9,680.00
Shop Labor/Panel Fabrication	3,312.00
Electrical Installation	82,679.86
Engineering/Project Management	<u>10,497.00</u>
<b>Total</b>	<b>\$106,168.86</b>

**SCHEDULE**

In accordance with the above, it is Motor City Electric Technologies' intention to begin work on this project immediately upon receipt of order and complete all work within a mutually agreed upon time frame.

## **TERMS AND CONDITIONS**

1. All prices shall remain in effect subject to your acceptance for 60 days.
2. Our terms of payment are thirty (30) days net from date of invoice. We will invoice the last working day of each month for all engineering performed that month. We will invoice for field equipment upon shipment of equipment.
3. Our controls and electrical price does not include the following:
  - Mechanical/Pneumatic Installation
  - Field Painting
  - Spare Parts
  - Road permits
  - Road ROW/Line of Sight Studies
  - DTE Charges
  - Bonds/fees
  - DIGI monthly fees
  - Taxes
4. Motor City Electric Technologies will not be responsible for correctness or accuracy of any information supplied by others or the subsequent errors resulting from such incorrect information.
5. We will use our best judgment and accepted design practices in the development of our engineering and drafting, and thereby limit responsibility solely to the correction of errors and/or omission in the documents, drawings and panel fabrication to provide a workable system.
6. Motor City Electric Technologies will not be held liable for any schedule delays due to drawing approval delays and/or errors or omissions of others. Control panel fabrication will begin only after approved design drawings have been returned to Motor City Electric Technologies.
7. Back charges for any field additions, deletions, modifications or “corrections” authorized and implemented without our knowledge and consent will not be accepted.

Thank you for the opportunity to quote these services. We look forward to working with you on this project. Should you have any questions regarding our proposal, please do not hesitate to call.

Sincerely,

Robert R. Maechtle

Senior Estimator/Project Manager

/re

**INVOICE # O&M 6-2020**

July 16, 2020

Ms. Suzanne Abouzenni, MBA, CPA  
Division Director  
Management & Budget  
DPS Finance Division  
400 Monroe, 3<sup>rd</sup> Floor  
Detroit, MI 48226

Mr. James Grezlik  
Department Manager 2, Budget Analyst  
Management & Budget  
DPS Finance Division Environmental Services  
400 Monroe, 3<sup>rd</sup> Floor  
Detroit, MI 48226

Dear Ms. Abouzenni & Mr. Grezlik:

The MRIDDD's monthly bill for the operation and maintenance of the system is \$619,037.52 per year or \$51,586.46 per month. In addition, the SEMSD will pass-through costs for approved budget items.

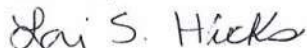
June 2020 Amount Due

Operation and Maintenance .....	\$51,586.46
Pass-Through Costs for Reimbursement.....	\$11,383.69
Total Due.....	<b>\$62,970.15</b>

Attached is a summary of the pass-through costs along with a copy of the invoices for services rendered or material purchased for your records. Please note that this payment is due within 30 days of the date of this invoice. Make checks payable to the Southeast Macomb Sanitary District, reference the invoice number on the check, and mail to Marie Tighe at 20001 Pleasant, St. Clair Shores, MI 48080.

If you have any questions, feel free to contact our office at (586) 777-1284.

Sincerely,



Lori S. Hicks  
Administrative Assistant/Controller

Attachments: FYTD Pass-Through Costs  
Summary of Pass-Through Costs  
Pass-Through Invoices

FY20 to Date SEMSD Pass Through Costs to MRIDDD 06/2020				
Account	Approved Budget	Actual Spent	Remaining	% Spent
Parts - Other Equipment	\$ 15,000.00	\$ 9,856.01	\$ 5,143.99	66%
Bulk Chemicals	\$ 32,000.00	\$ 20,791.00	\$ 11,209.00	65%
Miscellaneous Fees	\$ 6,500.00	\$ 6,048.74	\$ 451.26	93%
Laboratory Services	\$ 8,000.00	\$ 7,096.00	\$ 904.00	89%
Miscellaneous Contractual Services	\$ 34,000.00	\$ 8,341.32	\$ 25,658.68	25%
Building Repairs & Maintenance	\$ 8,000.00	\$ 4,334.49	\$ 3,665.51	54%
Equipment Repairs & Maintenance	\$ 25,000.00	\$ 6,450.65	\$ 18,549.35	26%
Equipment Rental	\$ 12,000.00	\$ 1,334.66	\$ 10,665.34	11%
<b>Total</b>	<b>\$ 140,500.00</b>	<b>\$ 64,252.87</b>	<b>\$ 76,247.13</b>	<b>46%</b>



**Summary of SEMSD Pass-Through Costs to MRIDDD**  
**SEMSD July, 2020 O&M Invoice # O&M 06-2020**

Account	Date of Invoice	Vendor	Description of Expense	Amount
Equipment Repairs & Maintenance	1/2/2020	BPH Pump & Equipment	Magnetic Drive Pump	\$ 1,962.91
Equipment Repairs & Maintenance	4/8/2020	Office Depot	Cable & Keyboard	\$ 114.46
Miscellaneous Contractual Services	4/17/2020	SCADA	Replace CSO Pump #1 Exciter Controls	\$ 858.00
Building Repairs & Maintenance	5/8/2020	The Sherwin Williams Company	Paint	\$ 38.64
Building Repairs & Maintenance	5/8/2020	The Sherwin Williams Company	Paint	\$ 180.40
Parts - Other Equipment	5/29/2020	Fisher Scientific	RTB Discharge Supplies	\$ 1,428.53
Parts - Other Equipment	6/1/2020	Fisher Scientific	RTB Discharge Supplies	\$ 71.83
Building Repairs & Maintenance	6/2/2020	Home Depot	2 Drill Bit Sets & Push Broom	\$ 174.98
Equipment Rental	6/4/2020	Universal Handling Equipment Company	3 Yard Dumpster (Spare)	\$ 657.26
Building Repairs & Maintenance	6/8/2020	Fire Extinguisher Sales & Service	Annual Inspection & Tagging	\$ 99.64
Parts - Other Equipment	6/8/2020	Fisher Scientific	RTB Discharge Supplies	\$ 332.32
Parts - Other Equipment	6/9/2020	Gilbert's Pro Hardware	Hand Trucks	\$ 81.98
Parts - Other Equipment	6/11/2020	Hach	RTB Discharge Supplies	\$ 224.62
Miscellaneous Contractual Services	6/11/2020	Comcast (6/15/20 - 7/14/20)	Internet and Cable	\$ 237.92
Building Repairs & Maintenance	6/17/2020	Home Depot	Sink and Faucet	\$ 208.00
Bulk Chemical	6/26/2020	JCI Jones Chemicals, Inc.	Refill Chlorine	\$ 3,770.60
Equipment Repairs & Maintenance	6/30/2020	Joe's Trailer	Trailer Strap	\$ 46.60
Laboratory Services	7/7/2020	Paragon Lab (Inv 213244 - DOS 6/27/20)	RTB Discharge Laboratory Analysis	\$ 250.00
Laboratory Services	7/7/2020	Paragon Lab (Inv 213245 - DOS 6/27/20)	RTB Discharge Laboratory Analysis	\$ 395.00
Laboratory Services	7/7/2020	Paragon Lab (Inv 213246 - DOS 6/27/20)	RTB Discharge Laboratory Analysis	\$ 125.00
Laboratory Services	7/7/2020	Paragon Lab (Inv 213248 - DOS 6/27/20)	RTB Discharge Laboratory Analysis	\$ 125.00
			<b>Total Pass-Through Costs</b>	<b>\$ 11,383.69</b>