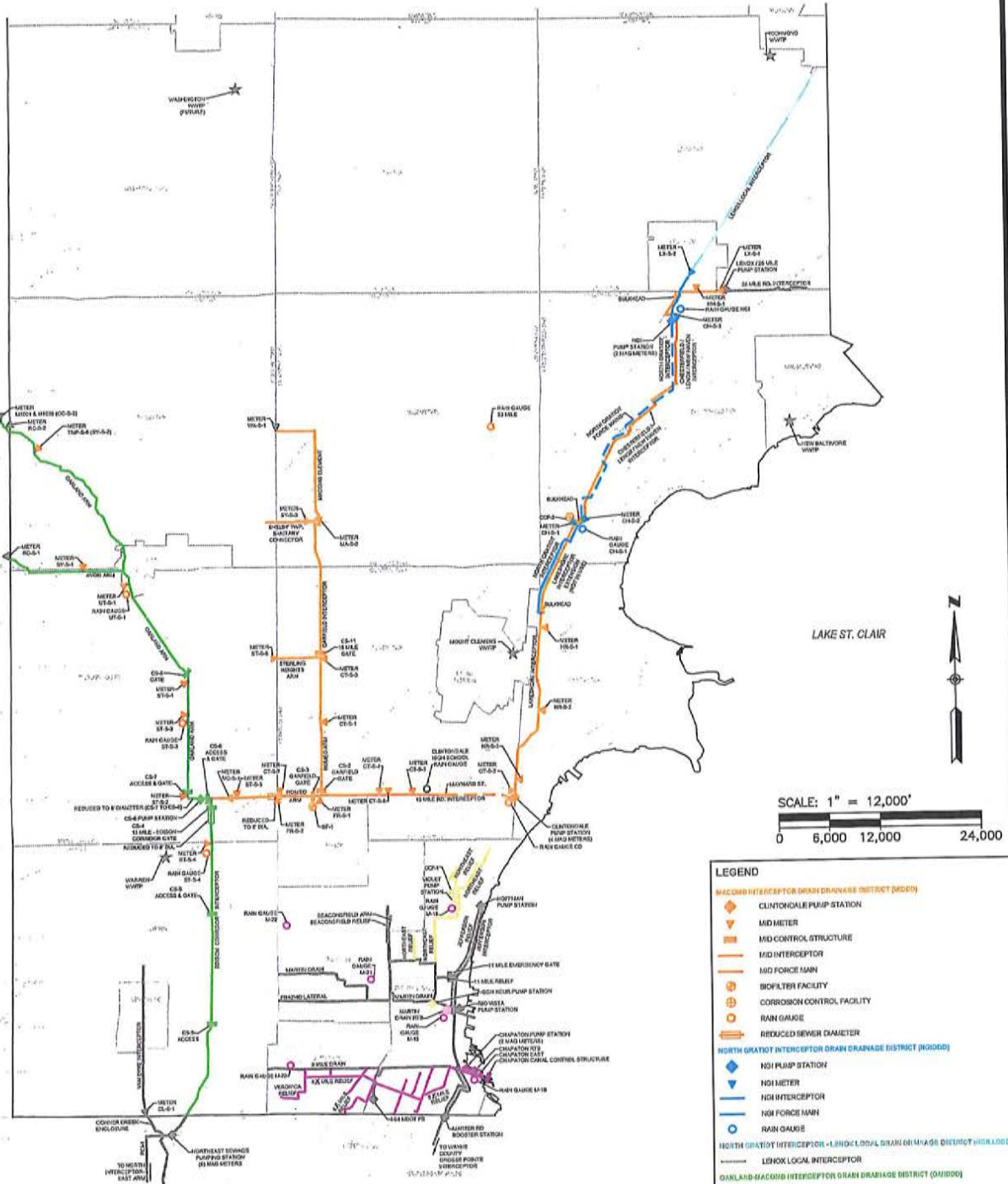


EIGHT AND ONE-HALF MILE RELIEF DRAIN  
INTRA-COUNTY DRAINAGE BOARD  
JANUARY 13, 2020  
10:15 A.M.  
AGENDA

	Page
1. Call of meeting to order and roll call	
2. Approval of Agenda for January 13, 2020	
3. Approval of Minutes for December 9, 2019	3
4. Public Participation	
5. Project Updates – Vince Astorino	
6. Chapaton RTB Canal Design Upgrades Change Order #2 – Wade Trim – Vince Astorino	5
Motion: To approve the Change Order #2 to the Wade Trim contract in the amount of \$335,263.	
7. Jacobs Odor Evaluation Study Approval Request – Vince Astorino	8
Motion: To approve the Jacobs Chapaton Odor Study proposal in the amount of \$68,639.	
8. Chapaton Canal Expansion Application – Great Lakes Bottomland/EGLE Resolution – Vince Astorino	15
Motion: To approve the resolution for application for convenience of Great Lakes Bottomlands.	
9. Grant Funding Request Letter – Chapaton Green Infrastructure Project - Jeff Bednar	17
Motion: To receive and file.	
10. Consideration for approval of invoices (see attached)	20
11. Financial Report – Bruce Manning	98
12. Adjourn	

# MACOMB COUNTY WASTEWATER SYSTEMS



LEGEND	
<b>MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT (MIGD)</b>	
	CLINTONDALE PUMP STATION
	MID METER
	MID CONTROL STRUCTURE
	MID INTERCEPTOR
	MID FORCE MAIN
	BIOFILTER FACILITY
	CORROSION CONTROL FACILITY
	RAIN GAUGE
	REDUCED SEWER DIAMETER
<b>NORTH GRATIOT INTERCEPTOR DRAIN DRAINAGE DISTRICT (NIGDD)</b>	
	NSI PUMP STATION
	NSI METER
	NSI INTERCEPTOR
	NSI FORCE MAIN
	RAIN GAUGE
<b>NORTH GRATIOT INTERCEPTOR - LENOX LOCAL DRAINAGE DISTRICT (NIGLDD)</b>	
	LENOX LOCAL INTERCEPTOR
<b>OAKLAND-MACOMB INTERCEPTOR DRAIN DRAINAGE DISTRICT (OMIDD)</b>	
	CS-6 PUMP STATION
	OMD METER
	OMD CONTROL STRUCTURE
	OMD INTERCEPTOR
	REDUCED SEWER DIAMETER
<b>\$ 1/2 MILE RELIEF DRAIN DRAINAGE DISTRICT</b>	
	CHAPATON WEST PUMP STATION
	CHAPATON RETENTION TREATMENT BASIN
	CHAPATON CANAL CONTROL GATE
	\$ 1/2 MILE INTERCEPTOR
	RAIN GAUGE
<b>SEMIWASHTON DRAINAGE DISTRICT (SEMIWASHTON)</b>	
	SEMIWASHTON PUMP STATION
	CORROSION CONTROL FACILITY
	SEMIWASHTON INTERCEPTOR
<b>MARTIN DRAINAGE DISTRICT (MARTIN)</b>	
	MARTIN DRAIN RETENTION TREATMENT BASIN
<b>OTHER SYSTEMS</b>	
	PUMP STATION
	METER
	WWTP
	INTERCEPTOR

**Candice S. Miller**  
 MACOMB COUNTY PUBLIC WORKS COMMISSIONER



UPDATED: APRIL 2017

An adjourned meeting of the Intra-County Drainage Board for the **EIGHT AND ONE-HALF MILE RELIEF DRAIN** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham, Clinton Township, Michigan, on December 9, 2019, at 10:01 A.M.

PRESENT: Candice S. Miller, Chair  
Bryan Santo, Member  
Veronica Klinefelt, Member

ALSO PRESENT: Harold Haugh, Macomb County Board of Commissioners; Vince Astorino, Operations & Flow Manager, Brian Baker, Chief Deputy, Bruce Manning, Financial Manager, Stephen Downing, Construction & Maintenance Manager, Kellie Kource, Drain Account Specialist, Dan Heaton, Communications Manager, Karen Czernel, Deputy, Macomb County Public Works

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

Adopted: YEAS: 3  
NAYS: 0

Minutes of the meeting of November 18, 2019 were presented. A motion was made by Ms. Klinefelt, supported by Mr. Santo to approve the minutes as presented.

Adopted: YEAS: 3  
NAYS: 0

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

Mr. Astorino updated the board that the first round of permits have been submitted for the canal expansion project. The office improvement project at Chapaton is moving along.

A motion was made by Ms. Klinefelt, supported by Mr. Santo to receive and file the project update by Mr. Astorino.

Adopted: YEAS: 3  
NAYS: 0

A motion was made by Mr. Santo, supported by Ms. Klinefelt to approve approve the Memorandum of Understanding (MOU) for the Chapaton boat launch relocation to Blossom Heath Park allowing for greater storage capacity at the Chapaton retention basin, saving money, and providing improved lake access for residents of Eastpointe, Roseville, and St. Clair Shores.

Adopted: YEAS: 3  
NAYS: 0

A motion was made by Ms. Klinefelt, supported by Mr. Santo to award the Chapaton Pump & Screen construction bid to J.F. Cavanaugh Company in the amount of \$1,162,472 and the construction administration proposal from HRC for \$97,860.

Adopted: YEAS: 3  
NAYS: 0

The Chair presented the invoices totaling \$638,686.70 to the board for review and approval.

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

Adopted: YEAS: 3  
NAYS: 0

A motion to receive and file the financial report given by Mr. Manning was made by Ms. Klinefelt and supported by Mr. Santo.

Adopted: YEAS: 3  
NAYS: 0

There being no further business, it was moved by Ms. Klinefelt, supported by Mr. Santo, that the meeting of the Eight and One-Half Mile Relief Drain Board be adjourned.

Adopted: YEAS: 3  
NAYS: 0

The meeting was adjourned at 10:16 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 taking by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on December 9, 2019 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: 12/9/19



To: 8 ½ Mile Relief Drain Drainage District Board Members

CC: File

From: Vincent Astorino, Operations & Flow Manager

Date: January 7, 2020

Subject: Chapaton RTB Canal Upgrades Change Order #2 – Wade Trim

The Macomb County Public Works Office (MCPWO) has been working with the consulting firm Wade Trim for design of the Chapaton Canal Expansion project. As we have gone through the design process we have been tracking items that could potentially become additional charges to the project. The goal was to use the money available and not have to come back for a change order. Unfortunately due to significant permitting efforts, a change order is now needed.

Attached you will find a breakdown of items that Wade Trim is seeking additional funds. Our office has reviewed these items and has the following comments:

- \$143,188 out of this change order is due to increased permitting efforts due to the increased requests from EGLE. The Jacobs proposal is also part of that which brings the total to \$211,827.
- The addition of the creative flushing pipe added \$9,480 to the project but in the long-term will provide significant savings to the local communities to reduce treatment costs.
- The addition of the lighthouse has added \$52,720 to the contract but will add a key landmark for the area.
- Additional testing of the sheeting on the Shore Club property and at Chapaton have provided us with increased confidence in those lengths as record drawings were not available.
- Removal of the boat launch has added increased opportunities for open space planning so while cost has increased by \$26,240 for that effort, this will provide additional opportunities.

MCPWO and Wade Trim have negotiated this change order line by line. The original submission was at \$395,573 and after a back and forth we have brought this down to \$335,263. As long as there are no other unforeseen issues with the finalization of design for this project, this should get us through final design.

I recommend awarding change order #2 to Wade Trim in the amount of \$335,263. This will not change the length of the schedule for their current design work.

Attachments: Wade Trim Additional Design Effort Request  
Change Order #2

Date of Issuance: 1/13/2020  
Owner: 8 1/2 Mile Relief Drain  
Drainage District  
Engineer: Wade Trim

Effective Date: 1/13/2020  
Owner's Contract No.: WWS-2019-002  
Engineer Contract No.: MCW200501T  
Contract Name: Chapaton Canal Upgrades

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

The addition of \$335,263.00 for additional work performed and future allowances for permitting as described in the attached document.

The original Contract Sum was:	<u>\$ 977,611.00</u>
The net change from previously approved Change Orders No. 1 to No. 2:	<u>\$ 75,000.00</u>
The Contract Sum prior to this Change Order:	<u>\$ 1,052,611.00</u>
The Contract Sum prior to this Change Order will be increased by:	<u>\$ 335,263.00</u>
The new Contract Sum, including this Change Order, will be:	<u>\$ 1,387,874.00</u>
The Contract Time will be unchanged by:	0 (days)

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

ACCEPTED:

ACCEPTED:

By: \_\_\_\_\_  
Owner (Authorized Signature)

By: \_\_\_\_\_  
Engineer (Authorized Signature)

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_



**Price Proposal**

PROPOSAL NO.: MCPWO WWS-2019-002

**CHAPATON RTB CANAL UPGRADES**

**CHAPATON RTB CANAL UPGRADES ESTIMATED ADDITIONAL EFFORT**

SUBMITTED TO: 8 1/2 Mile Relief Drain Drainage District

DESCRIPTION	PM - Sr. Professional	Principal	Sr. Professional	Prof. Engineer V	Engineer I	Project Specialist III	CADD Technician IV	Engineer IV	Project Admin	Survey	Landscape Architect	Subcontractor	Task Pricing Totals				
														Labor Hours	Labor	ODC /	
Shore Club Drilling	0	2	4	2									\$ 1,780	\$ 5,600	\$ 7,380	WT / NTH	
Commercial Diving for Sheeting Bracket Welding	8	2	4	2									\$ 1,780	\$ 7,600	\$ 9,380	WT / NTH	
Sheeting Testing by J Lynch (ODM)	18	4	4		8								\$ 3,400	\$ 5,600	\$ 9,000	WT / NTH	
Scan Historical RTB documents for Permitting	52					12		28.5	40				\$ 3,600	\$ 5,000	\$ 8,600	WT	
Permitting Efforts - To Date	308	18	228	21.5		15.5							\$ 65,081	\$ 5,000	\$ 71,081	WT / ASI Estimate	
ASTI Environmental Report for Permitting	4	2	2										\$ 880	\$ 7,000	\$ 7,880	WT / ASI Estimate	
Permitting Efforts - Future Budget Allowance	194	16	122	20		16		20			48		\$ 40,400	\$ 20,000	\$ 60,400	WT / ASI, NTH and ASTI	
Property Boundary Investigation and Survey Budget	54	2	4										\$ 11,670	\$ 5,962	\$ 17,632	WT	
Permanent Assessment Development	38	2	12				16	8					\$ 5,690	\$ 5,962	\$ 11,652	WT	
South Side Berm Layout Design	68	2	16				16	32					\$ 10,510	\$ 24,000	\$ 34,510	WT / AEW	
Control Building Architectural Design & Rework	180	20	4	18	40	18	40	40	4				\$ 27,380	\$ 14,000	\$ 41,380	WT / MKSK	
8 Mile Bypass Gate Structure	170	8	12	30	30	20	40	30					\$ 12,240	\$ 14,000	\$ 26,240	WT / MKSK	
Additional Open Space Planning Effort	78	4	4	12	15	8	32	8					\$ 11,670	\$ 11,670	\$ 23,340	WT	
Emergency Bypass Gate under Control Building	70	4	4	20	8	4	20	8					\$ 9,480	\$ 9,480	\$ 18,960	WT	
Lake Water Pipes for Flushing	84	2	4	12	4	2	24	16			24		\$ 3,045	\$ 500	\$ 3,545	WT / MKSK	
Community Outreach Support Effort - Rendering	27	3											\$ 2,625	\$ 500	\$ 3,125	WT / MKSK	
State Holder Engagement Support Effort	11	7	4										\$ -	\$ -	\$ -	-	
<b>Sub - Totals</b>	<b>1347</b>	<b>98</b>	<b>426</b>	<b>156</b>	<b>102</b>	<b>89</b>	<b>188</b>	<b>181</b>	<b>44</b>	<b>48</b>	<b>24</b>	<b>\$ 83,300</b>	<b>\$ 241,458</b>	<b>\$ 324,758</b>			
BOM Rate	\$ 215	\$ 230	\$ 215	\$ 205	\$ 100	\$ 175	\$ 100	\$ 150	\$ 85	\$ 215	\$ 100	\$ -	\$ -	\$ -	\$ -	\$ -	
	\$ 21,070	\$ 87,880	\$ 28,130	\$ 20,910	\$ 8,880	\$ 2,100	\$ 18,800	\$ 27,875	\$ 2,880	\$ 10,200	\$ 2,400	\$ -	\$ -	\$ -	\$ -	\$ -	
												<b>% Mark Up</b>					
												<b>TOTAL</b>					<b>\$ 335,263</b>



**Candice S. Miller**  
Public Works Commissioner  
Macomb County

To: 8 ½ Mile Relief Drain Drainage District Board Members

CC: FILE

From: Vincent Astorino, Operations and Flow Manager

Date: January 7, 2020

Subject: Jacobs Odor Evaluation Study Approval Request

As part of the on-going design and permitting for the Chapaton Canal Expansion project, our staff has been working closely with EGLE, the design team, and neighboring residents. Permitting for this project has far exceeded any expectations that any of our staff or design team had especially in relation to the almost identical project that was approved in the early 2000's for the initial canal expansion.

Our staff has submitted the first phase of permits and are currently waiting for comments and permit approval from EGLE and USACE. From discussions with EGLE, they are now concerned about increased odors that may come from the expansion. We have also heard concerns from local residents that odors are an issue currently, so there is concern that this project will make those worse. Our staff has a lot of historical hands-on knowledge of this facility and have been there through years of wet weather events. It is our opinion that any odors that may be experienced are actually coming from the enclosed concrete basin itself. This is something that even neighboring residents have stated have essentially disappeared in the recent years. It is thought that these may have been due to a lack of thorough cleaning of that concrete basin after wet weather events.

There are theories as to where these odors might be coming from, but there is no scientific proof to back that. So we have reached out to our odor control experts at Jacobs to come out to the site and put together a proposal to investigate this. Jacobs has proposed to come out to the site during a wet/dry weather event to take observations and track down any sources of odor. They will also put together a highly advanced air dispersion model so that they can run different scenarios.

By performing this analysis, we will be able to address citizen concerns along with having the ability to provide a report to EGLE as part of the next phase of permitting to address their concerns as well.

This is a necessary step in the sequence to get all permits approved and I recommend that the board approves the Jacobs proposal in the amount \$68,639.00 to begin work immediately. The funds to pay for this project will come out of the Canal Expansion project. Jacobs has provided additional optional tasks that we are not going to move forward with at this time. If additional data is required or Odor Control alternatives are required, then we will revisit with the board at that time.

Attachments: Jacobs Proposal



January 7, 2020

**8 ½ Mile Relief Drain Drainage District c/o:**  
Macomb County Public Works Commissioner's Office  
Attn.: Mr. Vince Astorino, Operations and Flow Manager  
21777 Dunham Road  
Clinton Township, MI 48036-1005

Subject: 8 ½ Mile Relief Drain Drainage District  
Chapaton Retention Treatment Basin (RTB) Water Quality Improvement Projects  
Initial Basin and Canal Odor Evaluation – Engineering Services Scope and Fees

Dear Mr. Astorino:

We are grateful to the Macomb County Public Works Office (MCPWO) and Commissioner Miller for the opportunity to continue assisting the MCPWO as your “pre-qualified” odor/corrosion engineering consultants. This time we have been requested by your office to leverage our global odor/corrosion expertise to provide an initial odor evaluation of the Chapaton Retention/Treatment Basin (RTB) and canal.

The Chapaton Pump Station and RTB serve the cities of St. Clair Shores and Eastpointe. The Chapaton RTB discharges disinfected combined sewage overflows to Lake St. Clair in some wet weather events in accordance with the National Pollutant Discharge Elimination System (NPDES) permit. However, MCPWO desires to increase the capture volume at the Chapaton RTB and canal to reduce the frequency and volume of treated discharges to Lake St. Clair, thereby improving water quality in the receiving waters of Lake St. Clair.

Recurring odor complaints from adjacent property owners have been received in the past, and MCPWO is interested in addressing these odor issues by implementing operational and/or capital improvements during implementation of several water quality improvements at the RTB and canal. We stand ready to continue providing our odor/corrosion engineering consulting services to MCPWO and we look forward to beginning immediately.

### **Project Understanding**

The MCPWO has requested that Jacobs perform an evaluation of the existing odor conditions at the Chapaton RTB and canal. The MCPWO is also interested in evaluating the future potential odor conditions with various physical and operational improvements to the Chapaton RTB in place. The MCPWO, on behalf of the 8 ½ Mile Relief Drain Drainage District, is currently in design to expand the canal east of the overflow weir at the Chapaton facility (and toward Lake St. Clair). This design is currently underway through a separate contract with others. Some project stakeholders and adjacent property owners have expressed concerns regarding odors in the vicinity of the basin and canal. In response, the MCPWO has requested that an evaluation be conducted by Jacobs’ global odor/corrosion experts to address these concerns.

A project walk-through at the Chapaton Pump Station, canal and other related buildings and facilities was conducted with you on November 19, 2019. This walk-through and our discussions greatly assisted us in developing our scope of work, level-of-effort and engineering fees. We understand that the MCPWO

considers this a priority issue and would like to advance this odor evaluation as much as possible and aligned with the water quality improvements design process.

## Scope of Work

Given the above and based on our knowledge of the Chapaton Pump Station, RTB and canal; our review of the proposed water quality improvements in design; and our technical expertise related to control of wastewater odors, we have prepared a scope of work comprised of the following key tasks.

### Task 1. Collect and Review Background Information

Our project manager and key members of the project team will prepare for and attend a half-day kick-off meeting with the Macomb County Public Works Office (MCPWO) staff. We will schedule this meeting to occur immediately after our Notice-to-Proceed.

Background data (influent volumes and influent and effluent pollutant concentrations), basin dewatering procedures, and previous reports will be discussed and potential facility and operation changes that could affect the project will be reviewed. A draft meeting summary will be prepared, and a final summary will be completed that incorporates MCPWO comments.

### Task 2. Perform Initial Field Investigation

Jacobs local staff will conduct a site investigation/reconnaissance with a focus on observations in the basin and canal after wet weather discharge events, if those occur in the upcoming wintertime months. We will take visual and olfactory observations and will be looking for evidence of any residual sludge or other apparent sources of odors. This information will be useful in correlating to initial air dispersion modeling findings in Task 3.

### Task 3. Air Dispersion Modeling

Using information from other similar combined sewage basin projects, the Jacobs team will execute air dispersion modeling using the U.S. EPA's AERMOD model. Surface meteorological data will be obtained from the several MCPWO-operated rain gages through the MID service area as well as at Detroit Metropolitan Airport (DTW) and the Detroit City Airport (KDET). The 5-year Integrated Surface database and ASOS 1-minute data will be downloaded from National Oceanic and Atmospheric Administration (NOAA) National Center for Environmental Information website.

Several input data components using five ancillary pre-processing tools will be used that will be assembled and preprocessed for use in AERMOD including:

- Source characterization
- Terrain characterization
- Land use characterization
- Meteorological characterization
- Off-site odor threshold and frequency targets

Each of these input parameters will be preprocessed by an auxiliary software tool to convert the data into a format ready for use in AERMOD.

For the purposes of estimating our fee, it is assumed that the following odorous emissions sources will be modeled:

- Chapaton RTB from the overflow weir;

- Chapaton canal to Lake St. Clair;
- A typical access point into the basin; and
- Exhaust fan at the Chapaton East Building.

The model can be run for different emission rates associated with the following scenarios:

- Existing Conditions.
- Proposed Canal Expansion (information to be provided by MCPWO).
- Up to 3 proposed odor control scenarios. This will determine what level of control is required for each of the above sources to achieve the agreed upon goals for odor.

#### **Task 4. Prepare Draft Study Report**

The draft study report will summarize the work performed in Tasks 1 through 3 and include the following items.

- AERMOD air dispersion modeling input and output files.
- Recommendation of the type of odor control system, if determined to be needed.
- Budgetary (order of magnitude) cost of recommended odor control system.

#### **Task 5. Meet with MCPWO and Project Stakeholders**

The draft report will be prepared and submitted to MCPWO and a meeting will be subsequently held with MCPWO staff to discuss our findings and recommendations and any review comments on the draft study report.

#### **Task 6. Finalize Study Report**

A final study report will be promptly prepared that incorporates MCPWO review comments. Five (5) hard copies and an electronic copy of the final study report will be provided.

#### **Optional Task: Evaluate Control Alternatives**

For the scenarios evaluated in Task 3, a conceptual design of a vapor phase odor control system can be developed that will include:

- A process flow block diagram.
- A simplified site plan.
- An estimate of the required air flow rate.
- Identification and sizing of the most appropriate odor control device based on Jacobs experience
- Identification of utilities required.
- A conceptual Class V capital and O&M cost estimate using on cost curves based on similar projects and Jacobs experience.

In addition to the vapor phase odor control system, an evaluation will be done to determine the feasibility and cost of using liquid-phase treatment odor control. The evaluation will include:

- Estimate the dose range required to mitigate odors.
- Estimate the annual chemical dose and cost for the above dosage.

#### **Optional Task: Conduct Sampling in 2020 Growing Season**

Using the Data Acquisition Plan to be developed later, our team will execute sample collection and analysis. The following is assumed for this task:

- The OdaLogs and pressure loggers used to continuously measure H<sub>2</sub>S will be installed for up to 3 weeks. It is assumed that there will at least one wet-weather event where the basin is filled. Additional sampling may be required based on the number and period of wet-weather events.
- Jacobs staff will install instruments and collect the grab liquid and air samples in the canal and basin.
- Jacobs will analyze the collected samples.
- The number and location of samples may vary based on input during the kick-off meeting.
- Based on our knowledge of the system and experience on other similar projects, confined space entry will not be required for this effort. If entry into the basin is required, then MCPWO staff will provide support and conduct the basin entry.
- It is assumed that MCPWO staff, on behalf of MIDDD, will provide the following:
  - Access to facilities;
  - Adjustments to facilities/equipment to simulate potential future operating conditions; and
  - Indoor space for performing field sampling analysis.

## Assumptions and Exclusions

This letter proposal for engineering services presents the required scope-of-work and associated costs for completion of the study phase services for this project with the following assumptions and exclusions.

- Our team will install instruments and collect the grab liquid wastewater and air samples (optional task).
- Our team will analyze all samples (optional task).
- The number and location of potential samples may vary based on input from MCPWO in spring/summer 2020.
- It is assumed that MCPWO staff, on behalf of the 8 ½ Mile Relief Drain Drainage District, will provide the following:
  - Access to facilities;
  - Adjustments to facilities/equipment to simulate potential future operating conditions; and
  - Indoor space for performing field sampling analysis.
- Air dispersion modeling will be done using the U.S. EPA's AERMOD model.
- Surface meteorological data will be obtained from the several MCPWO-operated rain gauges in southeast Macomb, the Detroit Metropolitan Airport (DTW) and the Detroit City Airport (KDET).
- Excludes design and construction phase services.
- Assumes all requested drawings of the Chapaton facilities will be made readily available to our team by the MCPWO.
- Five (5) hard copies and an electronic copy of the report will be provided.

## Project Schedule

It is expected that upon receipt of notice-to-proceed and requested background information, we will begin immediately on scheduling the kick-off meeting. Upon receipt of the necessary information, we anticipate it will take approximately 4 weeks to conduct the initial air dispersion modeling.

We anticipate preparing a draft study report and meeting with MCPWO in late February 2020 and finalizing the study in March 2020.

Mr. Astorino, MCPWO, Operations and Flow Manager  
Chapaton RTB Water Quality Improvement Projects  
Basin and Canal Odor Evaluation Letter Proposal  
January 7, 2020



This project schedule would generally align with the Chapaton Canal Expansion Project schedule. We will endeavor to expedite this process as much as possible and jump start both our sampling and air dispersion modeling efforts.

### Level-of-Effort and Engineering Fees

Given the required services necessary to complete a thorough basin and canal odor evaluation as requested by MCPWO, we respectfully request authorization of **\$68,639.00** for our engineering services under Tasks 1 through 6. Additional efforts such as liquid- and vapor-phase sampling and additional air dispersion modeling and associated additional fees will be determined later and may occur in summer 2020. We will provide these services to MCPWO under a contract between Jacobs and the 8 ½ Mile Relief Drain Drainage District, upon the District's and Jacobs' acceptance of the terms and conditions of that contract.

If this letter proposal and attached engineering services agreement are acceptable to you, then please execute by signing below, initialing the attached, and return one (1) complete copy to us for our records.

Please contact me directly at 586-453-8666 with any questions or requests for additional information regarding our scope, level-of-effort (quantity of hours) and associated engineering fees.

Sincerely,  
**JACOBS ENGINEERING**

Jason A. Matteo, P.E.  
Client Service Manager/Senior Project Manager

*If acceptable:*  
**8 ½ MILE RELIEF DRAIN DRAINAGE DISTRICT**

\_\_\_\_\_  
Candice Miller  
Commissioner

\_\_\_\_\_  
Date

**8.5 Mile Relief Drain Drainage District**  
**Chapaton RTB Water Quality Improvement Projects**  
*Level-of-Effort and Costs for Initial Basin and Canal Odor Evaluation*

Project Phase	Task No.	Task Description	Level-of-Effort (hours)								Labor Charge by Task (Using 2.84 Multiplier)
			Principal-in-Charge	Senior Project Manager	Senior Technical Consultant	Air Dispersion Modeling Lead	Staff Engineer	CAD Tech	Project Assistant/Office Admin.	Total Hours by Task	
			Mark Pochodylo \$284	Jason Matteo \$233	Bill Desing \$278	John Siczka \$210	Maddy Wax \$114				
Study	1	Collect and Review Background Data	0	4	4	4	40	0	8	60	\$8,247
	2	Perform Initial Field Investigation	0	4	0	0	8	0	0	12	\$1,840
	3	Conduct Air Dispersion Modeling	2	4	16	60	12	0	20	114	\$21,970
	4	Prepare Draft Study Report	4	8	8	16	40	24	30	130	\$18,926
	5	Meet with MCPWO and Project Stakeholders	0	4	4	0	4	0	4	16	\$2,908
	6	Finalize Study Report	2	8	4	4	16	8	16	58	\$8,747
		<b>Total Labor</b>	<b>8</b>	<b>32</b>	<b>36</b>	<b>84</b>	<b>120</b>	<b>32</b>	<b>78</b>	<b>390</b>	<b>\$62,639</b>

Jacobs Travel and Equipment Costs: \$6,000

**TOTAL FEE: \$68,639**

Optional Task: Evaluate Odor Control Alternatives (approximate): \$15,000  
Optional Task: Conduct Sampling in 2020 Growing Season (approximate): \$45,000



**Candice S. Miller**  
Public Works Commissioner  
Macomb County

To: 8 ½ Mile Relief Drain Drainage District Board Members

CC: FILE

From: Vincent Astorino, Operations and Flow Manager

Date: January 9, 2020

Subject: Chapaton Canal Expansion EGLE Conveyance Resolution

The Chapaton Canal Expansion project is through 60% design and has reached the point where permits are now being submitted for the work to be done. For the joint Part 325 permit with EGLE and USACE, there is a board resolution that is required to be passed to approve the application to transfer ownership of Great Lakes Bottomlands in the area of work to the ownership of the 8 ½ Mile Relief Drain Drainage District.

That resolution is attached and it is our recommendation to approve this resolution to fulfill the permitting requirements.

Attachments: Conveyance Resolution

January 13, 2020

At an Organizational and Regular Board Meeting of the Eight and One-Half Mile Relief Drainage District held on January 13, 2020, the following resolution was offered:

**CONVEYANCE RESOLUTION**

Moved by \_\_\_\_\_, seconded by \_\_\_\_\_, to adopt the following resolution:

WHEREAS, The Eight and One-Half Mile Relief Drainage District, which is the owner of Chapaton RTB Facility is filing an application for a conveyance of the Great Lakes Bottomlands extending waterward in the existing canal located at 23001 9 Mile Road, St. Clair Shores, MI 48080.

IT IS HEREBY RESOLVED, that the Eight and One-Half Mile Relief Drainage District does hereby approve the application for conveyance of Great Lakes Bottomlands to the State of Michigan. The Great Lakes Bottomlands to be conveyed are fully described as follows:

Awaiting Survey Information – To Be Provided at Meeting

Ayes:

Nays:

I, Candice S. Miller, Macomb County Public Works Commissioner, do hereby certify that the foregoing is a true and complete copy of the resolution adopted by the Eight and One-Half Mile Relief Drain Drainage District, at a public meeting held on January 13, 2020; the original thereof is on file in the records of my office, the meeting was conducted and public notice of said meeting was given pursuant to Act No. 267, Public Acts of Michigan, 1976, as amended, and minutes of this meeting were kept and will be made available as required.

\_\_\_\_\_  
Candice S. Miller  
Macomb County Public Works Commissioner





**Candice S. Miller**

Public Works Commissioner  
Macomb County

December 30, 2019

James D. Luke  
US Army Corps of Engineers  
477 Michigan Ave, Ste 700  
Detroit, MI 48226

Dear Mr. Luke:

The purpose of this letter is to request funding for design and construction services from the United States Army Corps of Engineers (USACE) for a green infrastructure project at the Chapaton Treatment Basin. This project will contribute to a reduction in combined sewer overflows, improve stormwater discharges into Lake St. Clair, and serve as a demonstration site for local communities and developers to promote green infrastructure within the region.

Macomb County features 25 miles of coastline on Lake St. Clair and because of this attracted many families to settle and raise their children near its shores. This was evident in the post-World War II generation as both the population and economic opportunities exploded near the lake. As development continued, public access to the shoreline became limited. This occurrence also led to flooding and pollution problems for which Macomb County Public Works Office set out to resolve.

In 1968 the Chapaton Pump Station and retention basin, owned and operated by the Macomb County Public Works Office (PWO), was built in the city of St. Clair Shores. According to the drain commissioner at that time, Chapaton was the "largest pollution abatement facility of its type in the world." This facility was intended to provide flood protection and guard Lake St. Clair from sanitary and stormwater pollution as communities in southeast Macomb County continued to grow rapidly. From its inception, this public works project was envisioned as a pollution abatement project, a flood protection project, and a land and water recreation project. Below is a summary of how the facility was designed and adapted through the early 2000s to serve these multiple uses:

- **Flood Protection:** This facility serves communities within the inner ring suburbs of Detroit characterized by over 50% impervious surfaces which results in flooding. The facility was built with three storm water pumps each capable of pumping over 200,000 gallons of water a minute to alleviate basement flooding. In the late 1970s redundant power supplies were brought to the facility to increase flooding resilience. In the 2000s a new gate system was built to alleviate street flooding during heavy rain events.
- **Pollution Abatement:** The 28 million gallon underground storage system was constructed to intercept stormwater and wastewater before polluting Lake St. Clair. In 1978, major upgrades to the basin occurred, including the addition of flushing and disinfection systems. This converted the basin to a Retention Treatment Basin (RTB) which lessened the pollution impact on the lake. In the early 2000s another major upgrade added an aeration system, a control structure, and additional storage that expanded capacity to 30 million gallons and again reduced the pollutant load on Lake St. Clair.

**OFFICE LOCATION:** 21777 Dunham Road, Clinton Township, Michigan 48036 • Phone: 586-469-5325 • Fax: 586-469-5933  
**ENGINEERING** • Phone: 586-469-5910 • Fax: 586-469-7693 ♦ **SOIL EROSION** • Phone: 586-469-5327 • Fax 586-307-8264

- **Land and Water Recreational Opportunities:** While constructing the basin in 1968, excavated material was moved lake-ward for the purpose of creating an opportunity for public lake access and a concept plan was put forward to develop recreational amenities on the newly formed peninsula. In 1978, a boat launch was constructed lake-ward of the retention basin and the basin's deck became a parking lot for cars and boat trailers. In the early 2000s, as the basin was expanded, the boat launch was relocated as well. The peninsula (referred to as Chapaton Basin Park) has over 2,500 linear feet of shoreline which has been hardened with seawall and concrete rip rap, and the recreational opportunities remain largely underdeveloped.

In 2015 the Macomb County Planning and Economic Development department partnered with the City of St. Clair Shores and other coastal communities to develop the "Planning for Coastal Resilience in Macomb County, Michigan" planning document. The Resilient Macomb project gathered diverse stakeholders to identify climate vulnerabilities and recommend actions for managing coastal resources in coastal Macomb County. Using data collected from a scenario-based flood projection, taxable value analysis and vulnerability assessment, the project team developed recommendations to increase resiliency by continuing to implement activities at the local level to reduce combined sewer overflows and manage stormwater runoff through the use of green infrastructure and wetland restoration. In addition to the recommendations developed in the report, a design charrette was held with stakeholders in St. Clair Shores. The Chapaton site was determined to be a priority.

An identified priority action in the Resilient Macomb Plan is for PWO to pilot projects like bioswales, rain gardens and other alternative stormwater control. The parking lot retrofit represents a key opportunity to implement this priority. For every 10 year/24hr (3.27 inches) storm event, 600,000 gallons of stormwater enter the basin from this parking lot. This accounts for 2% of the basin's current capacity. There are many other large parking lots in the area as this is part of the city's marina district and what is done here could be used as an example for the private property owners along the coastal zone.

This project would modify existing infrastructure at the Chapaton Retention Basin to reduce the impact of stormwater runoff by implementing green infrastructure best management practices. The deck of the basin is 5 acres in size and completely paved. It is partially utilized as a parking lot for car/trailers from the boat launch. Additionally, existing buildings on the site have conventional rooftops. Currently runoff from the parking lot and rooftops go directly into the basin for treatment. This project proposes to incorporate green infrastructure best management practices at the site such as green rooftops, bioswales, porous pavement design and other practices to promote stormwater infiltration, absorption and reduce the impact on the combined sewer system.

Local communities and private property owners interested in green infrastructure implementation and maintenance will benefit from the site as it will be highly visible and open to the public with facility tours conducted throughout the year. The project builds upon the current public outreach conducted at the facility and creates a Green Infrastructure education center by demonstrating various applications of porous pavement, grow zones, bioretention and tree planting in an urban environment to reduce stormwater runoff volumes while promoting measures to increase habitat.

The project will include the development of operation and maintenance templates for each of the GI BMPs installed.

The basin currently discharges on average 10 times per year into Lake St. Clair. According to the Great Lakes Integrated Sciences and Assessments Program (GLISA) projections for years 2041 through 2070, precipitation is projected to increase on average but also be concentrated in more intense events, likely resulting in greater periods of both extreme flooding and extreme drought. An additional 3 to 4 inches of annual precipitation is expected for Southeast Michigan, and the number of days each year experiencing heavy rain falls is expected to increase by at least 1 day per year. This facility as it is designed now will not be able to keep up with the treatment of this extra runoff and will result in more discharges to the lake.

The Chapaton retention basin treats wastewater and stormwater for over 92,000 residents and businesses within St. Clair Shores and Eastpointe. This project will not only help protect this critical facility but also the homes and businesses within the drainage district from flooding and other issues related to combined sewer overflows (CSOs). By integrating green infrastructure (GI) capacity to the basin we are maintaining its function as a flood control facility and better addressing pollution concerns to the lake which is an economic driver and key quality of life indicator for the region.

Thank you in advance for your review of this project. Please contact Jeff Bednar, Environmental Resources Manager, at (586)-746-9118 with any questions regarding this request.

Sincerely,

Candice S. Miller, Commissioner  
Macomb County Public Works Office

EIGHT AND ONE HALF MILE RELIEF DRAIN 12/17/19 - 12/30/19

Funding Source	Apportionment	Manager	Vendor	Amount	Invoice Detail	Project Summary	Project Balance		
8 1/2 Mile Relief	Chapter 20 State of MI - 16.04% County of Macomb - 2.25% Dept. of Roads - 2.25% Eastpoints - 54.33% St. Clair Shores - 25.13%	Astorino	Consumers Energy	\$ 577.57	Invoice #202518912957 - 12.12.19	Monthly Electric - Building	\$ 67,051.88		
		Astorino	Consumers Energy	\$ 736.14	Invoice #203586824582 - 12.12.19	Monthly Electric - Building	\$ 133,429.88		
		Astorino	DTE Energy	\$ 576.97	Invoice #19-561 - 11.30.19	Monthly Electric - 11.1.19 - 11.30.19			
		Astorino	DTE Energy	\$ 7,797.75	Invoice #19-581 - 12.8.19	Monthly Electric - 11.7.19 - 12.8.19			
		Astorino	Fishbeck, Thompson, Carr & Huber, Inc.	\$ 18,948.12	Invoice #388276 - 12.9.19	Chapaton Renovation			
		Astorino	Fishbeck, Thompson, Carr & Huber, Inc.	\$ 14,737.86	Invoice #387844 - 12.9.19	As-Needed Engineering			
		Astorino	Lardner Elevator	\$ 1,103.61	Invoice #187664 - 11.21.19	Door Lock, ICU Repair and Install Float Drive			
		Astorino	Motion & Control Enterprises, LLC	\$ 825.00	Invoice #Y06493-001 - 11.22.19	Accumulator Maintenance			
		Astorino	Motor City Electric Technologies	\$ 1,476.89	Invoice #92505 - 06.04.19	Flow Meter Installation			
		Astorino	Motor City Electric Technologies	\$ 1,111.34	Invoice #92505 - 04.26.19	Flow Meter Installation			
		Astorino	PVS Nolwood Chemicals	\$ 5,314.73	Invoice #662484 - 12.10.19	Sodium Hypochlorite - 45,000 lbs			
		Astorino	Premier Safety	\$ 675.00	Invoice #04170758 - 12.17.19	Latex Gloves			
		Astorino	State of Michigan	\$ 6,000.00	Invoice #10471997 - 12.1.19	NPDES Annual Permit Fee	\$ 276,660.66		
		Astorino	Tetra Tech, Inc.	\$ 23,104.82	Invoice #51533040 - 12.19.19	In-System Storage Design			
		Astorino	TREMCO/Weatherproofing Tech	\$ 2,250.00	Invoice #93756814 - 11.21.19	Roof Warranty for Chapaton			
		Astorino	Wade Trim	\$ 131,501.95	Invoice #2016457 - 12.4.19	Chapaton RTB Canal Upgrades	\$ 251,686.47		
		<b>Total</b>			\$ 216,737.75				



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type)	2. PHONE #	3. DATE
Michelle Houvener	95966	12/16/19
4. SET ID		
5. POST DATE		
VP191216MUA		

PARENT RECORD INFORMATION			
6. VENDOR NAME (Check to be issued to)	7. VENDOR NUMBER	8. ADDR CODE	9. Invoice No (MAX = 15 CHARACTERS)
CONSUMERS ENERGY	V01038	01	202518912957
			10. Invoice Date
			12/12/2019
			11. Invoice Amount
			\$ 577.57

CHILD RECORD DETAIL INFORMATION											
Line	General Ledger		Job Ledger		16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV	21. MISC	22. Sep CK
	12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object							
A	8210017M	92102	CC0004	92102	WO18006	8 1/2 MILE RELIEF	AC# 1000 0754 2523, 11/9-12/11	\$ 577.57	GEN		
B											
C											
D											
E											
F											
G											

23. Total: \$ 577.57

REV 06/2011

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

25. Finance Officer:	<i>[Signature]</i>	30. Drain:	8 1/2 MILE RELIEF
26. Chief Deputy:	<i>[Signature]</i>	31. Project Balance:	N/A
27. Engineers:	<i>[Signature]</i>	32. Staff Date:	12/30/2019
28. Managers:	<i>[Signature]</i>	33. Board Date:	1/13/2020
29. Coordinator:	<i>[Signature]</i>	34. Select For Pay Date:	



Questions:  
Visit: [ConsumersEnergy.com](http://ConsumersEnergy.com)  
Call us: 800-805-0490

Amount Due: **\$577.57**  
Please pay by: **January 03, 2020**

▶ **Thank You** - We received your last payment of **\$193.94** on **December 02, 2019**

▶ **Service Address:**  
23301 E 9 MILE RD  
SAINT CLAIR SHORES MI  
48080-0000

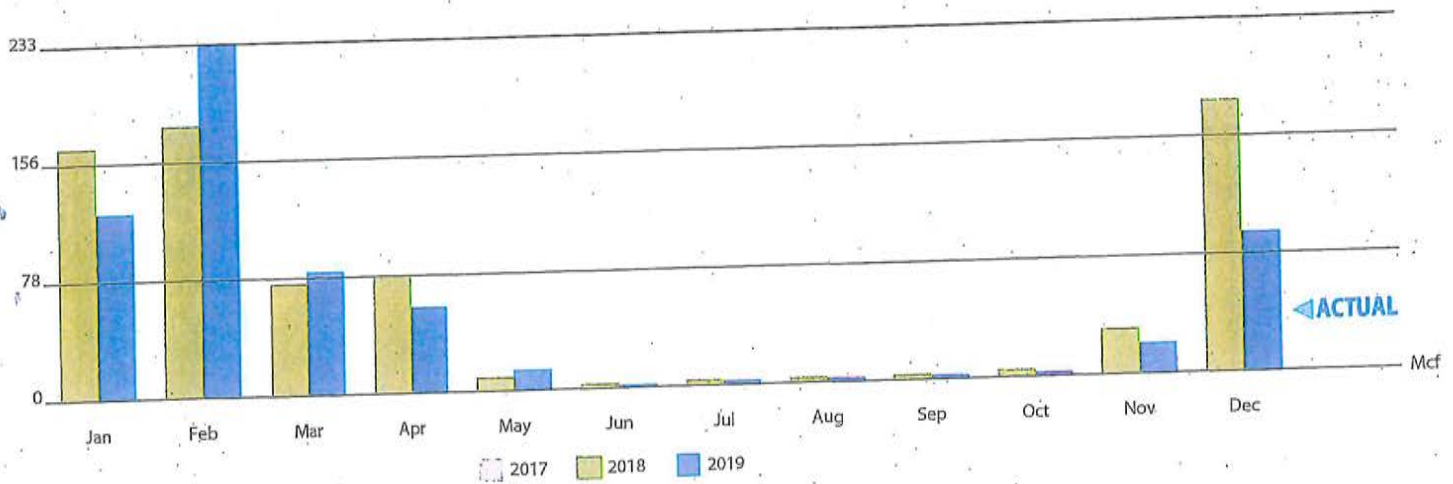
ATTN PUBLIC WORKS  
MACOMB COUNTY  
21777 DUNHAM RD  
CLINTON TOWNSHIP MI 48036-1005



## December Energy Bill

Service dates: November 09, 2019 - December 11, 2019 (33 days)

### Total Natural Gas Use (Mcf - thousand cubic feet)



**December Natural Gas Use**  
**92.2 Mcf**  
December 2018 use: 179 Mcf

Cost per day:  
**\$17.50**

Mcf per day:  
**2.794**

Prior 12 months of gas use:  
**633 Mcf**

For more information, visit [ConsumersEnergy.com/waysstopay](http://ConsumersEnergy.com/waysstopay)

**In person**  
Cash, check, card  
or money order  
Varies by authorized  
payment location  
Fee may apply



**By mail**  
Check, money order  
Consumers Energy  
Payment Center  
P.O. Box 740309  
Cincinnati, OH 45274-0309



**Same-day payment**  
866-329-9593  
Discover® MasterCard®  
or check



**Same-day payment**  
[ConsumersEnergy.com](http://ConsumersEnergy.com)  
Discover® MasterCard®  
or check



**eLockbox**  
via ACH  
Secure electronic  
payment with  
emailed remittance



**Auto-pay**  
Checking or savings  
Discover® MasterCard®  
or Visa® (Eligibility varies)



Ways to pay your energy bill:



**Questions:**  
Visit: [ConsumersEnergy.com](http://ConsumersEnergy.com)  
Call us: 800-805-0490

Amount Due: **\$577.57**  
Please pay by: **January 03, 2020**



**ATTN PUBLIC WORKS  
MACOMB COUNTY  
21777 DUNHAM RD  
CLINTON TOWNSHIP MI 48036-1005**



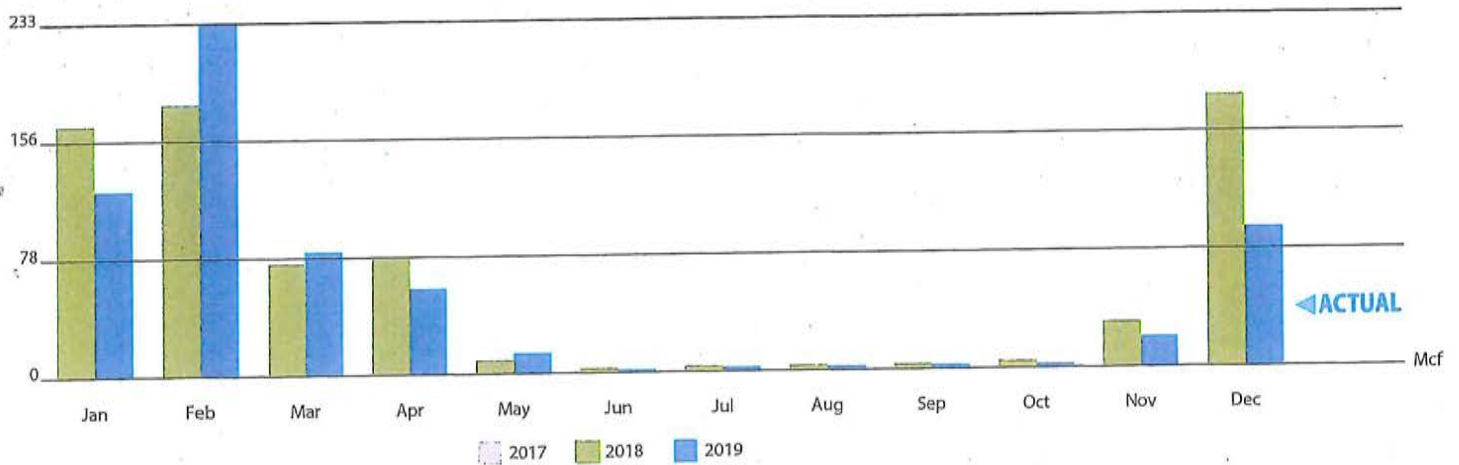
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23301 E 9 MILE RD  
SAINT CLAIR SHORES MI  
48080-0000

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**In person**  
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or money order  
Varies by authorized  
payment location  
Fee may apply

**By mail**  
Check, money order  
Consumers Energy  
Payment Center  
P.O. Box 740309  
Cincinnati, OH 45274-0309

**Same-day payment**  
866-329-9593  
Discover® MasterCard®  
or eCheck

**Same-day payment**  
[ConsumersEnergy.com](http://ConsumersEnergy.com)  
Discover® MasterCard®  
or eCheck

**eLockbox**  
Via ACH  
Secure electronic  
payment with  
emailed remittance

**Auto-pay**  
Checking or savings  
Discover® MasterCard®  
or Visa®  
(Eligibility varies)

## Ways to pay your energy bill:



# ONESolution

## ACCOUNTS PAYABLE CHECK REQUEST

### PUBLIC WORKS DIVISION

Mark A. Hackel  
County Executive

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/16/19</b>
4. SET ID <b>VP191Z16MUA</b>		5. POST DATE

<b>PARENT RECORD INFORMATION</b>	
6. VENDOR NAME (Check to be issued to) <b>CONSUMERS ENERGY</b>	7. VENDOR NUMBER <b>V01038</b>
8. ADDR CODE <b>01</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>203586824582</b>
10. Invoice Date <b>12/12/2019</b>	11. Invoice Amount <b>736.14</b>

<b>CHILD RECORD DETAIL INFORMATION</b>									
Line	General Ledger		Job Ledger						
	12. Org Key	13. Object	14. Cost Center (CCNT)						
<b>OPTIONAL</b>									
	15. Object	16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)						
	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV						
A	8210017M	92102	CC0004	92102	WO18006	8 1/2 Mile Relief	1000 0005 7313, 11/9-12/11	736.14	GEN
B									
C									
D									
E									
F									
G									

23. Total: \$ **736.14**

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

25. Finance Officer: ghm

26. Chief Deputy: pro

27. Engineers: WJ

28. Managers: KR

29. Coordinator:

30. Drain: 8 1/2 Mile Relief

31. Project Balance: N/A

32. Staff Date: 12/30/2019

33. Board Date: 1/13/2020

34. Select For Pay Date:



# Ways to pay your energy bill:



**Auto-pay**  
Checking or savings  
**Auto-pay**  
Discover® MasterCard®  
or Visa®  
(Eligibility varies)



**eLockbox**  
via ACH  
Secure electronic  
payment with  
emailed remittance



**Same-day payment**  
ConsumersEnergy.com  
Discover® MasterCard®  
or Visa® or eCheck



**Same-day payment**  
866-329-9593  
Discover® MasterCard®  
or Visa® or eCheck

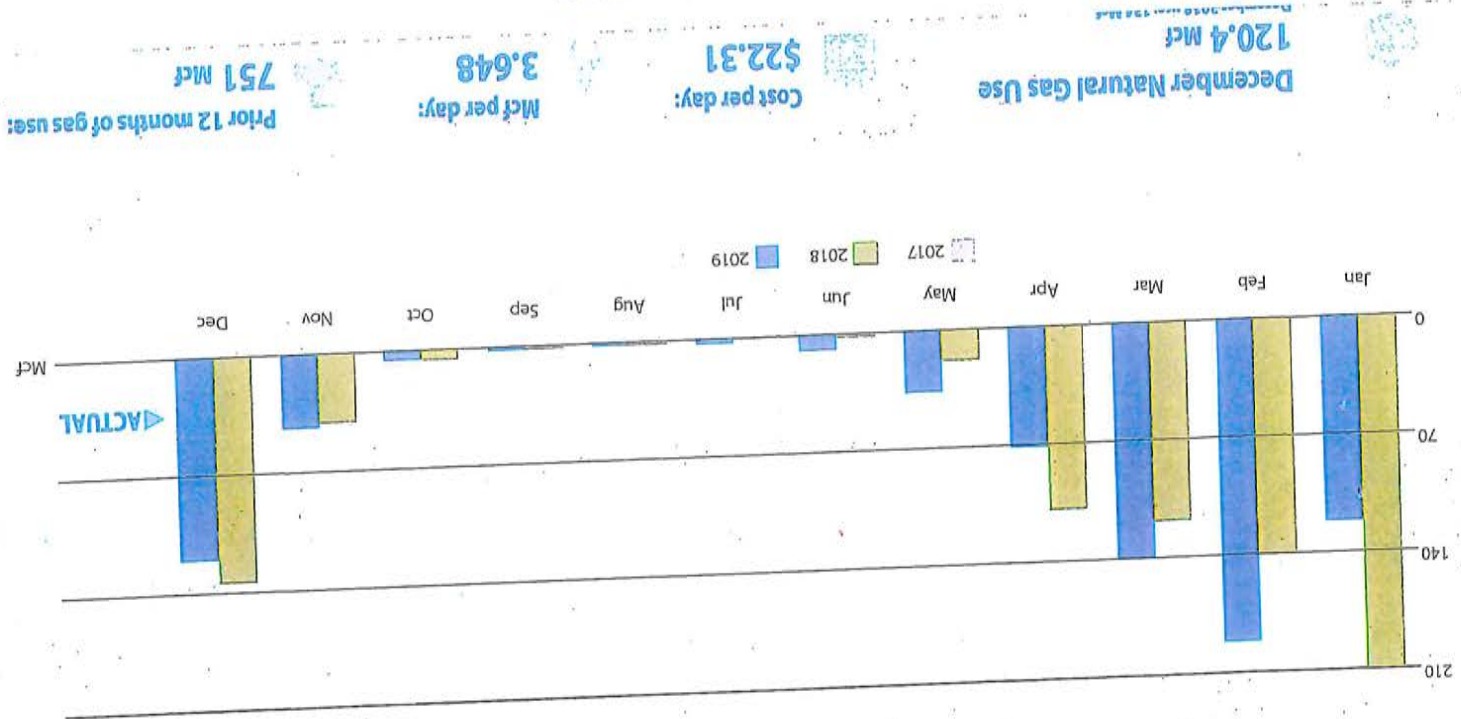


**By mail**  
Check, money order  
Consumers Energy  
Payment Center  
P.O. Box 740309  
Cincinnati, OH 45274-0309



**In person**  
Cash, check, card  
or money order  
Varies by authorized  
payment location  
Fee may apply

For more information, visit [ConsumersEnergy.com/waystopay](http://ConsumersEnergy.com/waystopay)



Total Natural Gas Use (Mcf - thousand cubic feet)

## December Energy Bill

Service dates: November 09, 2019 - December 11, 2019 (33 days)

▶ Thank You - We received your last payment of \$324.77 on November 25, 2019

▶ Service Address:  
2301 E 9 MILE RD  
SAINT CLAIR SHORES MI  
48080-1576

CHAPTON PUMPING STATION  
MACOMB CO DRAIN COMM  
21777 DUNHAM RD  
CLINTON TOWNSHIP MI 48036-1005



Account: 1000 0005 7313

Questions: Visit: [ConsumersEnergy.com](http://ConsumersEnergy.com) Call us: 800-805-0490

Amount Due: \$736.14

Please pay by: January 03, 2020



Need to talk to us? Visit [ConsumersEnergy.com](http://ConsumersEnergy.com)  
or call 800-805-0490  
Hearing/speech impaired: Call 7-1-1

Service Address: 23001 E 9 MILE RD; SAINT CLAIR SHORES  
MI 48080-1576  
Account: 1000 0005 7313

Invoice: 203586824582

**Account Information**

Bill Month: December  
Service dates: 11/09/2019 - 12/11/2019  
Days Billed: 33  
Portion: 12 12/19

**Rate Information**

Gas Gen Serv Rate GS-2 - Com  
Rate: 262

**Meter Information**

Your next scheduled meter read date is on or around 01/11/2020

**Gas Service:**

AMR Meter  
Meter Number: 96483303  
POD Number: 0000003537725  
Beginning Read Date: 11-09  
Ending Read Date: 12-11  
Beginning Read: 5863  
Ending Read: 7055 (Actual)  
Differential: 1192  
Constant: 0.1  
Correction factor: 1.01028  
Usage: 120.4 Mcf  
Total Metered Energy Use: 120.4 Mcf

**NEWS AND INFORMATION**

**Compare natural gas prices** among Consumers Energy and other gas providers at [www.Michigan.gov/CompareMIGas](http://www.Michigan.gov/CompareMIGas).  
**ALERT - Beware of phone and email scams regarding utility payments:** Consumers Energy never demands payment using only a prepaid card. Many options at

**December Energy Bill**

**Account Summary**

Last Month's Account Balance  
Payment on November 25, 2019  
Balance Forward  
Payments applied after Dec 12, 2019 are not included.

**Natural Gas Charges**

Customer Charge	120.4@ 2.449100	\$294.87
Gas Distribution		\$22.74
U 20356 RDM Refund		\$42.09
Energy Efficiency	120.4@ 0.349600	\$340.06
Gas Cost Recovery	120.4@ 2.824400	\$736.14
<b>Total Natural Gas</b>		<b>\$736.14</b>
<b>Total Energy Charges</b>		<b>\$736.14</b>

**Amount Due:**  
by January 03, 2020

If you pay after the due date, a 2% late payment charge will be added to your next bill.

Please make any inquiry or complaint about this bill before the due date listed on the front. Visit [ConsumersEnergy.com/aboutmybill](http://ConsumersEnergy.com/aboutmybill) for details about the above charges.

**Understanding Your Gas Bill:** Gas cost recovery covers the cost of the natural gas per thousand cubic feet (Mcf). This charge may change each month to reflect changes in the market price of gas. Consumers Energy does not make a profit on the natural gas, so we charge customers only what

we pay for the gas. More at [www.ConsumersEnergy.com/ratesbiz](http://www.ConsumersEnergy.com/ratesbiz).  
**Questions about your bill?** Get an explanation of charges and learn more at [www.ConsumersEnergy.com/business](http://www.ConsumersEnergy.com/business).



Mark A. Hackel  
County Executive

# ONESolution

## ACCOUNTS PAYABLE CHECK REQUEST

### PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/6/19</b>
4. SET ID <b>VP191210MVA</b>		5. POST DATE

<b>PARENT RECORD INFORMATION</b>	
6. VENDOR NAME (Check to be issued to) <b>DTE Energy</b>	7. VENDOR NUMBER <b>V01270</b>
8. ADDR CODE <b>08</b>	9. Invoice No. (MAX = 16 CHARACTERS) <b>19-561</b>
10. Invoice Date <b>11/30/2019</b>	11. Invoice Amount <b>\$ 576.97</b>

<b>CHILD RECORD DETAIL INFORMATION</b>									
Line	<b>Job Ledger</b>		16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV	21. MISC	22. Sep CK
	12. Org Key	13. Object							
A	8210017M	92101	CC0004	92101	WO18006 8 1/2 Mile Relief	\$ 576.97	GEN		
B									
C									
D									
E									
F									
G									

23. Total: \$ **576.97**

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

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25. Finance Officer: btm

26. Chief Deputy: ps

27. Engineers: vd

28. Managers: lan

29. Coordinator:

30. Drain: **8 1/2 Mile Relief**

31. Project Balance: **N/A**

32. Staff Date: **12/17/2019**

33. Board Date: **1/13/2020**

34. Select For Pay Date:

910000056739

00000057697 B



**Payment Coupon**

\_\_\_\_\_

Account Number	910000056739
Due Date:	January 02, 2020
Total Due:	\$576.97

MACOMB COUNTY  
21777 DUNHAM RD  
CLINTON TWP MI 48036-1005

19.561

Mail Payments to:  
DTE Energy  
P.O. Box 630795  
Cincinnati OH 45263-0795

Please detach and return coupon with account number on check. Agencies are not authorized to accept payment of this bill.

**Account Information**

\_\_\_\_\_

MACOMB COUNTY  
21777 DUNHAM RD  
CLINTON TWP, MI 48036

Account Number	9100-0005-6739
----------------	----------------

DTE-Energy Federal ID No.	38-3217752
---------------------------	------------

**Programs you are enrolled in:** \_\_\_\_\_

**How to contact us:**  
Billing Inquiry 1-734-397-4287

Please make any inquiry or complaint about this bill to DTE Energy before the Due Date.  
DTE Energy is regulated by the Michigan Public Service Commission, Lansing, Michigan

**Important Information**



For the average Michigan residential customer, renewable energy is estimated to avoid \$3.08 per month of new coal-fired generation costs.



# Summary Of Charges

**Account Number 9100-0005-6739**

Previous Balance as of 10/31/2019	489.25
Payment(s) and Credit(s)	- 489.25
Remaining Balance	\$0.00

## Current Charges

Service Location	Item	Service Type	Rate	Bill Period	Amount
	7004422277		EFS_E1UOHS	11/01 - 11/30/19	576.97
		Taxes			0.00
		Miscellaneous Charges			0.00
		Current Bill			\$576.97

**Amount Due on or before Due Date of 01/02/2020**

**\$576.97**

Your current charges are due on January 2, 2020. A 2% late payment charge will be applied if paid after the due date.



# Detail Charges

Invoice: 200061879374	Service Name: Streetlight	Cust Ref #90-M-300
Item: 7004422277	Cycle: 20	Street Lights OH Standard

## Billing Status Information

Total Number of days in the Billing Period	30	DAYS
Avg Kilowatthours Used Per Day This Period	61	KWH
Avg Kilowatthours Used Per Day A Year Ago	61	KWH
kWh percentage change from a year ago	0	PCT

## Charges for 11/01/2019 through 11/30/2019

### Power Supply Charges:

Energy Charge:	1,832	KWH	@\$	0.0454000	Per Total KWH	83.17
Power Supply Non Capacity Charge						
Surcharges:	1,832	KWH	@\$	0.0015600	Per Total KWH	2.86
Power Supply Cost Recovery Factor						86.03
Sub Total:						

### Delivery Charges:

Luminaire:						
100 Watt High Pressure Sodium	10	EA	@\$	14.5300000		145.30
250 Watt High Pressure Sodium	10	EA	@\$	22.2200000		222.20
Multiple Lamp Discount	2	EA	@\$	-0.5100000		- 1.02
Surcharges:						
Nuclear Surcharge	1,832	KWH	@\$	0.0008270	Per Total KWH	1.52
Energy Waste Reduction						38.51
Transitional Recovery Mechanism	1,832	KWH	@\$	0.0010300	Per Total KWH	1.89
U-18255 SIR						- 2.46
Tax Credit B						85.00
Sub Total:						490.94

### Invoice Subtotal

Michigan State Sales Tax On Taxable Portion	0.00
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### Invoice Total

**\$576.97**





Mark A. Hackel  
County Executive

# ONESolution

## ACCOUNTS PAYABLE CHECK REQUEST

### PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/16/19</b>
4. SET ID <b>191216 MUA</b>		
5. POST DATE		

<b>PARENT RECORD INFORMATION</b>			
6. VENDOR NAME (Check to be issued to) <b>DTE Energy</b>	7. VENDOR NUMBER <b>V01270</b>	8. ADDR CODE <b>08</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>19-581</b>
			10. Invoice Date <b>12/8/2019</b>
			11. Invoice Amount <b>7,797.75</b>

<b>CHILD RECORD DETAIL INFORMATION</b>								
Line	Job Ledger		16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV	21. MISC
	12. Org Key	13. Object						
A	8210017M	92101	CC0004	92101	WO18006 : 8 1/2 Mile Relief	\$ 7,797.75	GEN	
B								
C								
D								
E								
F								
G								

23. Total: \$ **7,797.75**

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

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25. Finance Officer:          **8 1/2 Mile Relief**

26. Chief Deputy:          **N/A**

27. Engineers:          **12/17/2019**

28. Managers:          **1/13/2020**

29. Coordinator:         

30. Drain:         

31. Project Balance:         

32. Staff Date:         

33. Board Date:         

34. Select For Pay Date:



**Payment Coupon**

\_\_\_\_\_

Account Number	910000053785
Due Date:	January 02, 2020
Total Due:	\$7,797.75

MACOMB COUNTY  
 MACOMB COUNTY DRAIN COMM  
 21777 DUNHAM RD  
 CLINTON TWP MI 48036-1005

19.581

Mail Payments to:  
 DTE Energy  
 P.O. Box 630795  
 Cincinnati OH 45263-0795

Please detach and return coupon with account number on check. Agencies are not authorized to accept payment of this bill.

**Account Information**

\_\_\_\_\_

MACOMB COUNTY  
 MACOMB COUNTY DRAIN COMM  
 21777 DUNHAM RD  
 CLINTON TWP, MI 48036

Account Number	9100-0005-3785
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DTE-Energy Federal ID No.	38-3217752
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**Programs you are enrolled in:**

SolarCurrents Program

**How to contact us:**

Power Outage	See Detail Charges
Billing Inquiry	1-734-397-4309

Please make any inquiry or complaint about this bill to DTE Energy before the Due Date.  
 DTE Energy is regulated by the Michigan Public Service Commission, Lansing, Michigan

**Important Information**

\_\_\_\_\_

DTE Energy has many authorized payment agents conveniently located across Michigan. Payments are sent electronically and are updated to your account within four hours. Authorized payment agents accept full or partial payments by cash, check or money order, before or after the due date. Look for the DTE Energy logo at the location. **DO NOT USE UNAUTHORIZED PAYMENT CENTERS.** For more information, visit [www.dteenergy.com](http://www.dteenergy.com).





# Summary Of Charges

Account Number 9100-0005-3785

Previous Balance as of 11/08/2019

8,338.82

Payment(s) and Credit(s)

- 8,338.82

Remaining Balance

\$0.00

## Current Charges

Service Location	Item	Service Type	Rate	Bill Period	Amount
23001 E 9 Mile Rd	7004376662		EFCND3_WP	11/07 - 12/08/19	7,797.75
		Taxes			0.00
		Miscellaneous Charges			0.00
		Current Bill			\$7,797.75

\$7,797.75

Amount Due on or before Due Date of 01/02/2020

Your current charges are due on January 2, 2020. A 2% late payment charge will be applied if paid after the due date.

# Detail Charges

For Service at: 23001 E 9 Mile Rd, St Clair Shores, MI 48082

Outage Contact Number: 1-313-235-1300

Invoice: 200001932504

Billing Period: 11/07/2019 through 12/08/2019

Days Billed: 32

## Metering Information

Meter Number	Start Date	Start Read	Stop Date	Stop Read	Read Difference	Units Multiplier	Usage Used	Type
6321448	11/07	379.6A	12/08	384.4A	4.8	6,400.0000	30,720.0	P - In-V
6321448	11/07	477.9A	12/08	484.6A	6.7	6,400.0000	42,880.0	P - In-W
6321449	11/07	1.3A	12/08	1.3A	0.0	- 6400.000	0.0	P - Out-V
6321449	11/07	0.0A	12/08	0.0A	0.0	- 6400.000	0.0	P - Out-W
6321451	11/07	0.5A	12/08	0.5A	0.0	6,400.0000	0.0	P - In-V
6321451	11/07	0.5A	12/08	0.5A	0.0	6,400.0000	0.0	P - In-W
<b>Total KVARH</b>							<b>30,720.00</b>	
<b>Total KWH</b>							<b>42,880.00</b>	

Invoice: 200001932504	Service Name: Chapaton Pumping Station	General Service Municipal Pumping-Net Metering Cat1
Item: 7004376662	Cycle: 05	

## Billing Status Information

1	On-peak Billing Demand	230	KW	ESTABLISHED	12/02/2019	17:00
3	65% High OP Bill Dmd June-Oct prec 11 mths	1105	KW	ESTABLISHED	09/17/2019	18:00
8	Highest Single Billing Demand	266	KW	ESTABLISHED	12/03/2019	01:00
A	Current PV High Monthly Demand	266	KW	ESTABLISHED	12/03/2019	01:00
B	50% of the Contract Capacity for PV	0	KW			
C	Primary Voltage Maximum Demand	4956	KW	ESTABLISHED	05/01/2019	04:30
	Contract Capacity for Location	6738	KW	ESTABLISHED	08/16/2016	05:00
	Power Factor (ratio) for all voltages	81	PCT			
	Total Number of days in the Billing Period	32	DAYS			
	Avg Kilowatthours Used Per Day This Period	1340	KWH			
	Avg Kilowatthours Used Per Day A Year Ago	1479	KWH			
	kWh percentage change from a year ago	-9	PCT			
	Metered outflow	0	KWH			
	Net Delivery Billed (inflow)	42880	KWH			
	Net Inflow (In - Out)	42880	KWH			

## Charges for 11/07/2019 through 12/08/2019

### Power Supply Charges:

Power Supply Energy:	42,880	KWH	@ \$	0.0329700	Per Total KWH	1,413.75
Power Supply Capacity Charge	42,880	KWH	@ \$	0.0464000	Per Total KWH	1,989.63
Power Supply Non Capacity Charge						
Surcharges:	42,880	KWH	@ \$	0.0015600	Per Total KWH	66.89
Power Supply Cost Recovery Factor						3,470.27
<b>Sub Total:</b>						<b>11.25</b>

### Delivery Charges:

Service Charge						
Distribution:	42,880	KWH	@ \$	0.0386600	Per Total KWH	1,657.74
Distribution Energy						
Surcharges:	42,880	KWH	@ \$	0.0010300	Per Total KWH	44.17
Transitional Recovery Mechanism	42,880	KWH	@ \$	0.0008270	Per Total KWH	35.46
Nuclear Surcharge	2	MTR	@ \$	38.5100000		77.02
Energy Waste Reduction	2	MTR	@ \$	0.9200000		1.84
LIEAF Factor						1,827.48
<b>Sub Total:</b>						<b>2,500.00</b>
Special Facilities Charge						7,797.75

### Invoice Subtotal

Michigan State Sales Tax On Taxable Portion

0.00

### Invoice Total

**\$7,797.75**





Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/13/19</b>
4. SET ID <b>VP191216MA</b>		5. POST DATE

6. VENDOR NAME (Check to be issued to) <b>FTCH</b>		7. VENDOR NUMBER <b>V44063</b>	8. ADDR CODE <b>01</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>388276</b>	10. Invoice Date <b>12/9/2019</b>	11. Invoice Amount <b>18,948.12</b>
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PARENT RECORD INFORMATION

General Ledger			Job Ledger		OPTIONAL			19. Amount	20. DIV	21. MISC
12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object	16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)				
A	8210017M	80138	CC0004	80138	WO19082	8 1/2 Mile Relief	Pjt #191498 thru 11/29/19	\$ 18,948.12	GEN	
B										
C										
D										
E										
F										
G										

23. Total: \$ **18,948.12**

REV 09/201

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

25. Finance Officer: *DM*      30. Drain: **8 1/2 Mile Relief**

26. Chief Deputy: *MB*      31. Project Balance: **\$67,051.88**

27. Engineers: *JA*      32. Staff Date: **12/17/2019**

28. Managers: *KK*      33. Board Date: **1/13/2020**

29. Coordinator: \_\_\_\_\_      34. Select For Pay Date: \_\_\_\_\_



**Payment Options**

Remit Wire/ACH payments to Acct: 100094457 ABA: 072413829  
 Remit checks to: 1515 Arboretum Drive, SE, Grand Rapids, Michigan 49546  
 Remittance Advice: accounts.receivable@fishbeck.com  
 616.575.3824  
 Federal I.D. No. 38-1841857 | Incorporated

**Attention:** Mr Vincent Astorino  
**Macomb County Public Works Commissioner**  
 21777 Dunham Road  
 Clinton Township, MI 48036  
 United States

**Invoice :** 388276  
**Invoice Date :** 12/9/2019  
**Project :** 191498  
**Project Name :** Macomb Co PW/Chapaton Bldg  
 Renovation  
**Bill Term :** 1

**For Professional Services Rendered Through 11/29/2019**

WO19082 WWS-2019-016

Fee	% Complete	Billings		
		To Date	Previous	Current
86,000.00	22.03	18,948.12	0.00	18,948.12
			<b>Current Billings</b>	<u>18,948.12</u>
			<b>Amount Due This Bill</b>	<u>18,948.12</u>

Project: 191498 - Macomb Co PW/Chapaton Bldg Renovation

Rate Labor Class	Hours	Rate	Amount
	0.50	130.0000	65.00
Architect	25.50	130.0000	3,315.00
Engineer	26.50	155.0000	4,107.50
Senior Architect	21.50	164.0000	3,526.00
Senior Engineer	11.00	110.0000	1,210.00
Staff Engineer	69.25	94.0000	6,509.50
Technician			
<b>Total Rate Labor</b>			<b>18,733.00</b>

Unit Rate Expenses Account / Unit	Quantity	Rate	Amount
<b>Company Vehicle Use</b>	72.00	0.5600	40.32
Mileage - Company Vehicle			
<b>Mileage</b>	310.00	0.5600	173.60
Mileage - Employee Vehicle			
<b>Reproduction</b>	6.00	0.2000	1.20
KIP Plotter			
<b>Total Unit Rate Expenses</b>			<b>215.12</b>

**Total Bill Task: 191498 - Macomb Co PW/Chapaton Bldg Renovation** **18,948.12**

**Total Project: 191498 - Macomb Co PW/Chapaton Bldg Renovation**

**18,948.12**



# ONESolution

## ACCOUNTS PAYABLE CHECK REQUEST

### PUBLIC WORKS DIVISION

Mark A. Hackel  
County Executive

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/13/19</b>
4. SET ID <b>VP191216MA</b>		5. POST DATE

<b>PARENT RECORD INFORMATION</b>		
6. VENDOR NAME (Check to be issued to) <b>FTCH</b>	7. VENDOR NUMBER <b>V44063</b>	8. ADDR CODE <b>01</b>
9. Invoice No (MAX = 16 CHARACTERS) <b>387844</b>	10. Invoice Date <b>12/9/2019</b>	11. Invoice Amount <b>\$ 14,737.86</b>

CHILD RECORD DETAIL INFORMATION				20. DIV	21. MISC	22. Sep CK
General Ledger		Job Ledger		19. Amount		
12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object			
A	8210017M	80138	80138	\$ 9,963.77	GEN	
B	8210017M	80138	80138	\$ 2,324.14	GEN	0
C	8210017M	80138	80138	\$ 2,449.95	GEN	0
D						
E						
F						
G						
				<b>23. Total: \$</b>		<b>14,737.86</b>

REV 09/201

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
**As Needed Services through 11/29/19/19**

25. Finance Officer:	<i>[Signature]</i>	30. Drain:	8 1/2 Mile Relief
26. Chief Deputy:	<i>[Signature]</i>	31. Project Balance:	\$133,429.88
27. Engineers:	<i>[Signature]</i>	32. Staff Date:	12/17/2019
28. Managers:	<i>[Signature]</i>	33. Board Date:	1/13/2020
29. Coordinator:	<i>[Signature]</i>	34. Select For Pay Date:	

**Payment Options**

Remit Wire/ACH payments to Acct: 100094457 ABA: 072413829  
 Remit checks to: 1515 Arboretum Drive, SE, Grand Rapids, Michigan 49546  
 Remittance Advice: accounts.receivable@fishbeck.com  
 616.575.3824  
 Federal I.D. No. 38-1841857 | Incorporated

**Attention:** Mr Vincent Astorino  
**Macomb County Public Works Commissioner**  
 21777 Dunham Road  
 Clinton Township, MI 48036  
 United States

**Invoice :** 387844  
**Invoice Date :** 12/9/2019  
**Project :** 190051  
**Project Name :** Macomb Co PW/8.5 As-needed  
 Engineering  
**Bill Term :** 1

**For Professional Services Rendered Through 11/29/2019**

WO19005

	Fee	Available	Billings		
			To Date	Previous	Current
1 - Task 1 - Genral As Needed	2,286.75	2,286.75	0.00	0.00	0.00
1.A - Task 1a - Chapaton Structural Study	60,663.00	26,754.96	36,357.99	33,908.04	2,449.95
Rate Labor	246.00				
Expenses	2,203.95				
1.B - Task 1b - 9 Mile Pipe Repair	16,256.00	7,173.63	11,406.51	9,082.37	2,324.14
Rate Labor	1,476.00				
Expenses	848.14				
1.C - Task 1c - In-System Storage As-Needed	5,250.00	5,250.00	0.00	0.00	0.00
1.D - Task 1d - Office Improvements	21,393.90	0.00	21,393.90	21,393.90	0.00
1.E - Task 1e - Maps	7,500.00	5,828.00	1,672.00	1,672.00	0.00
1.F - Task 1f - Chapaton Sampling Plan	4,065.60	0.00	4,065.60	4,065.60	0.00
1.G - Task 1g - Chapaton Survey	2,084.25	0.00	2,084.25	2,084.25	0.00
1.H - Task 1h - Chapaton Bar Screen Hydraulic Isolation	2,976.75	0.00	2,976.75	2,976.75	0.00
1.I - Task 1i - Chapaton Environmental Study	9,730.00	6,653.65	7,295.12	3,076.35	4,218.77
Rate Labor	3,254.50				
Expenses	786.19				
Unit Rate Expense	178.08				
Total Expense	964.27				
1.j - Task 1j - Chapaton Flow Meter Drawings	3,000.00	2,508.00	2,680.00	492.00	2,188.00
Rate Labor	2,188.00				
1.k - Task 1k - Chapaton High Water Protection	14,175.00	14,175.00	0.00	0.00	0.00
1.l - Task 1l - Chapaton 3D Animation	4,000.00	4,000.00	3,557.00	0.00	3,557.00
Rate Labor	3,557.00				

Current Billings	<u>14,737.86</u>
Amount Due This Bill	14,737.86



**Project: 190051 - Macomb Co PW/8.5 As-needed Engineering**

**1.A - Task 1a - Chapaton Structural Study**

Rate Labor Class	Hours	Rate	Amount
Senior Engineer	1.50	164.0000	246.00
<b>Total Rate Labor</b>			<b>246.00</b>

Expenses Account / Vendor	Cost	Multiplier	Amount
<b>Subconsultant</b>	924.00	1.05	970.20
Anderson Eckstein & Westrick Inc	1,175.00	1.05	1,233.75
NTH Consultants Ltd	2,099.00		2,203.95
<b>Total Subconsultant</b>			<b>2,203.95</b>
<b>Total Expenses</b>			<b>2,449.95</b>

**Total Bill Task: 1.A - Task 1a - Chapaton Structural Study**

**1.B - Task 1b - 9 Mile Pipe Repair**

Rate Labor Class	Hours	Rate	Amount
Senior Engineer	9.00	164.0000	1,476.00
<b>Total Rate Labor</b>			<b>1,476.00</b>

Expenses Account / Vendor	Cost	Multiplier	Amount
<b>Subconsultant</b>	807.75	1.05	848.14
NTH Consultants Ltd			848.14
<b>Total Expenses</b>			<b>848.14</b>
			<b>2,324.14</b>

**Total Bill Task: 1.B - Task 1b - 9 Mile Pipe Repair**

**EN2 - Environmental - Task 2**

Rate Labor Class	Hours	Rate	Amount
Production Support	1.00	79.0000	79.00
Staff Technician	42.00	73.0000	3,066.00
Technician	1.50	73.0000	109.50
<b>Total Rate Labor</b>			<b>3,254.50</b>

Expenses Account / Vendor	Cost	Multiplier	Amount
<b>Subconsultant</b>	573.25	1.05	601.91
EMLab P&K LLC	175.50	1.05	184.28
EMSL Analytical Inc	748.75		786.19
<b>Total Subconsultant</b>			<b>786.19</b>
<b>Total Expenses</b>			<b>786.19</b>

Unit Rate Expenses Account / Unit	Quantity	Rate	Amount
Mileage	318.00	0.5600	178.08
Mileage - Employee Vehicle			178.08
<b>Total Unit Rate Expenses</b>			<b>178.08</b>
			<b>4,218.77</b>

**Total Bill Task: EN2 - Environmental - Task 2**

**WW - Water Wastewater**

Rate Labor Class	Hours	Rate	Amount
Engineer	8.00	130.0000	1,040.00
Senior Engineer	7.00	164.0000	1,148.00

Project: 190051 - Macomb Co PW/8.5 As-needed Engineering

WW - Water Wastewater **Total Rate Labor** 2,188.00

**Total Bill Task: WW - Water Wastewater** **2,188.00**

WW - Water Wastewater			
Rate Labor Class	Hours	Rate	Amount
	7.00	130.0000	910.00
Engineer	7.00	164.0000	1,148.00
Senior Engineer	6.00	105.0000	630.00
Senior Technician	11.00	79.0000	869.00
Staff Consultant			<b>3,557.00</b>
<b>Total Rate Labor</b>			<b>3,557.00</b>

**Total Bill Task: WW - Water Wastewater** **14,737.86**

**Total Project: 190051 - Macomb Co PW/8.5 As-needed Engineering**

**MACOMB COUNTY PUBLIC WORKS OFFICE  
ENGINEERING INVOICE COVER SHEET**

**WORK ORDER NUMBER** WO19005

**PROJECT NUMBER** WWS-2019-001

**PROJECT NAME** As-Needed General Engineering Services

**DRAINAGE DISTRICT** Eight and One-Half Mile Relief Drain Drainage District

**CONSULTANT NAME** Fishbeck

**INVOICE DATE** 12/6/2019

**INVOICE START DATE** 11/2/2019

**INVOICE END DATE** 11/29/2019

<b>ORIGINAL CONTRACT AMOUNT</b>	\$ 151,919.00
<b>CHANGE ORDER TOTAL</b>	\$ 75,000.00
Change Order No. 1	\$ 75,000.00
Change Order No. 2	
Change Order No. 3	
Change Order No. 4	
<b>TOTAL REVISED CONTRACT AMOUNT</b> (includes all approved change orders only)	\$ 226,919.00
<b>TOTAL AMOUNT PREVIOUSLY INVOICED</b>	\$ 78,751.26
<b>TOTAL AMOUNT DUE THIS INVOICE</b>	\$ 14,737.86
<b>TOTAL BUDGET REMAINING</b> (Includes Total Revised Contract Amount Less Total Invoiced Previously and Total Invoiced Current)	\$ 133,429.88



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/9/19</b>
4. SET ID		5. POST DATE
<b>VPI91210M-AA</b>		

**PARENT RECORD INFORMATION**

6. VENDOR NAME (Check to be issued to) <b>Lardner Elevator</b>	7. VENDOR NUMBER <b>V02788</b>	8. ADDR CODE <b>01</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>187664</b>	10. Invoice Date <b>11/21/2019</b>	11. Invoice Amount <b>\$ 1,103.61</b>
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**CHILD RECORD DETAIL INFORMATION**

Line	General Ledger		Job Ledger		16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV	21. MISC	22. Sep CK
	12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object							
A	8210017M	93005	CC0004	93005	WO18006	8 1/2 Mile Relief	Acct#00-6198-4, Job 3110	\$ 1,103.61	GEN		
B											
C											
D											
E											
F											
G											

23. Total: \$ 1,103.61

REV 09/201

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

25. Finance Officer: John      30. Drain: 8 1/2 Mile Relief

26. Chief Deputy: AB      31. Project Balance: N/A

27. Engineers: WTS      32. Staff Date: 12/17/2019

28. Managers: WTS      33. Board Date: 1/13/2020


29. Coordinator: WTS      34. Select For Pay Date:

# LARDNER↑ ↓ELEVATOR

729 Meldrum, Detroit, MI 48207  
 Phone: (313) 568-1600 Fax: (313) 568-0488  
 Email: info@lardnerelevator.com  
 www.lardnerelevator.com

## INVOICE

Invoice #
187664

Bill To:   
 Chapaton Pump Station  
 23001 E. Nine Mile  
 St. Clair Shores, MI 48080

Account: Chapaton Pump Station  
 23001 E. Nine Mile  
 St. Clair Shores, MI 48080  
 Account #: 00-6198-4

Date	Nov 21, 2019	Terms	Upon Receipt	Route	Non-contract	Job #	3110
Inv. #	187664	PO #	18-9318	Territory	LECO	Type	Repair

Quantity	Description	Taxable	Measure	Price	Amount
2.50	Mechanic R/T - #198	No	Each	215.00	\$537.50
1.00	Zone - #198	No	Each	16.28	\$16.28
2.50	Mechanic R/T - #231	No	Each	215.00	\$537.50
1.00	Zone - #231	No	Each	12.33	\$12.33
11/12/2019 TT# 154252 & 154330 E# 11101 2nd floor door lock not making. Adjusted lock as needed. Checked operation. ICU not working. Troubleshoot unit is bad. Needs to be replaced. Install float dive in pit to capture elevator & send to top floor.  <div style="font-size: 2em; font-family: cursive; margin-left: 100px;">Chap</div>					
				Taxable	\$0.00
				Non-Taxable	\$1,103.61
				<b>Sub-Total</b>	<b>\$1,103.61</b>
				Sales Tax	\$0.00
				<b>TOTAL</b>	<b>\$1,103.61</b>

PLEASE DETACH THIS PORTION AND RETURN WITH PAYMENT



**Lardner Elevator Company**  
 729 Meldrum  
 Detroit, MI 48207

Account # 00-6198-4  
 Chapaton Pump Station  
 Invoice # 187664  
 Amount \$ 1,103.61  
 Paid \$



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/9/19</b>
4. SET ID <b>VP191210MAA</b>		5. POST DATE

**PARENT RECORD INFORMATION**

6. VENDOR NAME (Check to be issued to) <b>Motion &amp; Control Enterprises, LLC</b>	7. VENDOR NUMBER <b>01</b>	8. ADDR CODE <b>01</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>Y06493-001</b>	10. Invoice Date <b>11/22/2019</b>	11. Invoice Amount <b>825.00</b>
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**CHILD RECORD DETAIL INFORMATION**

Line	General Ledger		15. Object	16. Work Order Number	OPTIONAL		19. Amount	20. DIV	21. MISC	22 Sep CK
	12. Org Key	13. Object			14. Cost Center (CCNT)	17. Secondary Reference (MAX = 16 CHARACTERS)				
A	8210017M	93002	CC0004	WO18006	8 1/2 Mile Relief	Cust #M3425, Accumulator Maint	\$ 825.00	GEN		
B										
C										
D										
E										
F										
G										

23. Total: \$ **825.00**

REV 09/20

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

25. Finance Officer: PHM      30. Drain: 8 1/2 Mile Relief

26. Chief Deputy: AS      31. Project Balance: N/A

27. Engineers: UP      32. Staff Date: 12/17/2019

28. Managers: KK      33. Board Date: 1/13/2020

29. Coordinator: KK      34. Select For Pay Date:

# RITTERTECH

a division of MCE»»

MAIL REMITTANCE TO:  
MOTION & CONTROL ENTERPRISES LLC  
P.O. BOX 775888  
CHICAGO, IL 60677-5888

## INVOICE

ENTERING OFFICE:

RITTERTECH-MI  
18855 E 14 MILE ROAD  
CLINTON TWP MI 48035

Customer PO No. VERBAL KRIS

INVOICE NUMBER Y06493-001	TRAN CODE DI
INVOICE DATE 11/22/19	PAGE 1

SALES TERMS found @ www.mceautomation.com Any different or additional terms that may be embodied in your purchase order are hereby objected to. If your order is not an acceptance of our proposal, this will operate as an acceptance of your order only in the event you agree to the terms hereof. The terms and conditions contained above and attached shall apply.

LINE NO.	QUANTITY			PART NUMBER DESCRIPTION	UNIT OF MEASURE PRODUCT	UNIT PRICE DISCOUNT %	EXTENDED AMOUNT		
	TOTAL ORDERED	BACK ORDERED	THIS SHIPMENT						
10	1		1	<p>www.mceautomation.com</p> <p>!!!PLEASE NOTE OUR NEW REMITTANCE ADDRESS!!!</p> <p>MOTION &amp; CONTROL ENTERPRISES LLC</p> <p>P.O. BOX 775888</p> <p>CHICAGO, IL 60677-5888</p> <p>BUYER NAME: KRIS</p> <p>WORK ORDER # 8417</p> <p>TROUBLESHOOT 671Z EA</p> <p>-CHANGE VERSA VALVES AND FILTERS ON SYSTEM A</p> <p>-CHANGE FILTER ON SYSTEM C</p> <p>-CHANGE FILTERS ON SYSTEM D</p> <p>ON SITE 11/21/19, 7.5 HOURS</p> <p>INBOUND FRT IS: .00</p>		825.0000	825.00		
CUST. NO. M3425		ORDER DATE 11/22/19	TERR \$T	PC 05	ORD S	Written By KAH	DATE SHIPPED 11/22/19	WHSE 05	AMOUNT 825.00
Carrier: ON SITE			FOB: SP,PREPD&ADDED			<b>ORIGINAL INVOICE</b>		FRGHT/INS/HNDL .00	SALES TAX .00
Terms of Payment: NET 30 DAYS NO RETURNS WITHOUT PRIOR AUTHORIZATION. BACKORDERED ITEMS MAY NOT BE ON INVOICE. QUOTED PRICES VALID FOR 30 DAYS...								<b>INVOICE TOTAL</b>	<b>825.00</b> <small>Please Pay This Amount</small>

*Chapaton  
accumulator  
maint*

ORDER ISSUED IN: CLINTON TWP  
PHONE: 586-554-7470

S  
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MACOMB COUNTY D.P.W.  
23001 E 9 MILE ROAD  
ST CLAIR SHORES MI 48080

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MACOMB COUNTY D.P.W.  
23001 E. 9 MILE ROAD  
ST CLAIR SHRS MI 48080

Customer PO No. VERBAL KRIS

Invoice No Y06493-001

Mark No.



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/11/19</b>
4. SET ID <b>VP19IZIIMB</b>		5. POST DATE

6. VENDOR NAME (Check to be issued to) <b>Motor City Electric Technologies</b>		7. VENDOR NUMBER <b>V17465</b>	8. ADDR CODE <b>02</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>92505</b>	10. Invoice Date <b>6/4/2019</b>	11. Invoice Amount <b>1,476.89</b>
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General Ledger			Job Ledger		OPTIONAL		19. Amount	20. DIV	21. MISC	22. Sep CK
12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object	16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)				
A	8210017M	93002	93002	WO18006	8 1/2 Mile Relief	Job #919500, 4/25/19	\$ 1,476.89	GEN		
B										
C										
D										
E										
F										
G										

23. Total: \$ **1,476.89**

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
**Install and wire 3 Issco 2108 analog modules. Install and wire 2 Allen Bradley 1762-IF4 analog input cards**

25. Finance Officer: *JHM*      30. Drain: **8 1/2 Mile Relief**

26. Chief Deputy: *MS*      31. Project Balance: **N/A**

27. Engineers: \_\_\_\_\_      32. Staff Date: **12/17/2019**

28. Managers: *VB*      33. Board Date: **1/13/2020**

29. Coordinator: *KC*      34. Select For Pay Date: \_\_\_\_\_





**MOTOR CITY ELECTRIC TECHNOLOGIES INC.**  
 AUTOMATION AND CONTROLS SOLUTIONS  
 9440 GRINNELL  
 DETROIT, MI 48213-1151  
 PHONE (313) 921-5300 FAX (313) 921-5310  
 "AN EQUAL OPPORTUNITY EMPLOYER"

# INVOICE

13030 MACOMB COUNTY PUBLIC WORKS  
 21777 DUNHAM ROAD  
 CLINTON TOWNSHIP, MI 48036

JOE BETZ

Job Number	919500	Sub Job	0	Contract Number	001	Date Performed	4/25/2019	Date	6/4/2019	Application Number	92505
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Customer PO Number

Item No	Description of Work	Contract Amount	Previous Billings	Current Amount	To Date Complete & Stored	Balance To Finish	Current Retainage
001	T&M	\$1,476.89	-	\$1,476.89	\$1,476.89	-	-
<b>Totals:</b>		\$1,476.89		\$1,476.89	\$1,476.89		
Less Retained:							
Invoice Total:				\$1,476.89			

AS NEEDED ELECTRICAL AND ENGINEERING SERVICE

SEE ATTACHED INVOICE SUMMARY AND FIELD REPORT

100%: 8 1/2 = \$1,476.89

complete electrical construction

"We hereby certify that the articles and services covered by this invoice were produced and performed in compliance with all applicable requirements of Section 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof."



# Invoice Summary

Macomb County Public Works

Motor City Electric Technologies Inc.  
9440 Grinnell, Detroit, MI 48213-1151

Job No: 919500  
Invoice No: 92505  
Invoice Date: 6/4/2019

## Invoice Detail

INVOICE DETAIL	ST HRS	OT HRS	DT HRS	COST	TAX	MARKUP	OH & P	INVOICE TOTAL
				\$690.00		\$0.00	\$0.00	\$690.00
Labor	10.00			\$684.25	\$0.00	\$102.64	\$102.64	\$786.89
Material				\$1,374.25		\$102.64	\$0.00	\$1,476.89
Invoice Totals:	10.00							

## Invoice Detail by Field Report

4/25/2019 Chapaton Pump Station

Report Number: G190429-0912	ST HRS	OT HRS	DT HRS	COST	TAX	MARKUP	OH & P	REPORT TOTAL
				\$690.00		\$0.00	\$0.00	\$690.00
Labor	10.00			\$684.25	\$0.00	\$102.64	\$0.00	\$786.89
Material				\$1,374.25		\$102.64	\$0.00	\$1,476.89
Report Totals:	10.00							





# FIELD REPORT

MOTOR CITY ELECTRIC TECHNOLOGIES - (313) 921-5300/FAX (313) 923-5310

CUSTOMER: Macomb County Public Works DATE: April 25, 2019 JOB NO: 919500 SHEET 1 OF 1

LOCATION OF WORK: Chapaton Pump Station CUSTOMER ORDER NO: \_\_\_\_\_

WORK PERFORMED: Install and wire 3 Issco 2108 analog modules. Install and wire 2 Allen Bradley 1762-IF4 analog input cards.  
(BE AS DESCRIPTIVE AS POSSIBLE)

## LABOR

	NAME	CLASSIFICATION	STRAIGHT TIME	TIME AND ONE HALF	DOUBLE TIME	SHIFT	COMMENTS
1	Travis Osterland	ENGINEER	8.00	0.00	0.00	1	
2	John Bartas	FORMAN	2.00	0.00	0.00	1	
3							
4							
5							
6							
TOTAL HOURS			10.00	0.00	0.00		

## EQUIPMENT

DESCRIPTION	QUANTITY	DESCRIPTION	QUANTITY	DESCRIPTION	QUANTITY
1 Service Truck	0	6 < None >	0	11 < None >	0
2 Pick Up Truck	0	7 < None >	0	12 < None >	0
3 Rolling Set Up	0	8 < None >	0	13 < None >	0
4 Manlift Scissors to 25'	0	9 < None >	0	14	
5 Manlift Boom to 40'	0	10 < None >	0	15	

## MATERIALS

QTY	DESCRIPTION	PRICE	PER	EXTENSION
2	1762-IF4	\$309.30	E	\$618.60
1	1489-M1C050	\$36.17	E	\$36.17
20	1492-J4	\$1.20	E	\$24.00
4	1492-J4G	\$1.37	E	\$5.48
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
LOT	EXPENDABLES		LOT	
MATERIAL TOTAL				\$684.25

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
(SUPERVISOR SIGNATURE)

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

Travis Osterland  
(PRINT NAME)

Brent Welser  
(PRINT NAME)



**McNAUGHTON-McKAY**  
**ELECTRIC COMPANY**  
 1357 East Lincoln Avenue  
 Madison Heights, MI 48071  
 (248) 399-7500  
 FAX (248) 399-6828

# ACKNOWLEDGEMENT

DOCUMENT: Order Acknowledgement

CUST.#: 20354

CUSTOMER FAX: (248) 824-3704



PURCHASE ORDER: 1006526-~~025000~~

919500

ORDER #
16485653-00
PAGE #
1
ENTERED BY
sak
DATE ENTERED
04/16/19

BILL TO:

MOTOR CITY ELEC TECH  
 9440 GRINNELL ST  
 DETROIT, MI 48213-1151

SHIP TO:

MOTOR CITY ELEC TECH  
 9440 GRINNELL ST  
 DETROIT, MI 48213-1151

INSTRUCTIONS:		TERMS	
		2% 10 Net 30	
SHIP POINT	VIA	COD	SHIPPED
MADISON HEIGHTS BRANCH	UPS GROUND		

UNLESS OTHERWISE NOTIFIED THIS ACKNOWLEDGMENT CONFIRMS ITEMS ORDERED.

LINE NO.	PRODUCT AND DESCRIPTION	QUANTITY ORDERED	EXPECTED SHIP DATE	QTY. U/M	UNIT PRICE	PRICE U/M	AMOUNT (NET)
1	ABZ1762IF4 A-B 1762-IF4 4 CHNL CURRENT/VLTG ANLG INPUT Interchange Prod: 1762IF4	3		EACH	309.30	E	927.90
2	ABZ1489M1C050 A-B 1489-M1C050 UL489 5 A MINI C/B Interchange Prod: 1489M1C050	2		EACH	36.17	E	72.34
3	ABZ1492J4 A-B 1492-J4 TERM BLK Interchange Prod: 1492J4	40		each	1.20	E	48.00
4	ABZ1492J4G A-B 1492-J4-G IEC 1-CKT FD-THRU BLK 4MM Interchange Prod: 1492J4G	15		each	1.37	E	20.55
4	Lines Total	Qty Shipped Total	60		Total Invoice Total		1068.79 1068.79

Last Page

Date: 04/16/19 Time: 14:37 User: sak

The sale of products and services by Seller is subject to Seller's general terms and conditions of sale ("Seller's Terms") as attached to this document or as otherwise posted on Seller's website at <https://www.mc-mc.com/terms>. Seller objects to and rejects any terms or conditions that may appear on or are referenced in Customer's purchase order or other document that are in addition to or otherwise inconsistent with Seller's Terms. Customer's receipt or acceptance of delivery of any ordered item above will constitute its acceptance of Seller's Terms. The above link also includes Seller's Return Policy for customer reference.



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type)	2. PHONE #	3. DATE
Michelle Houvener	95966	12/11/19
4. SET ID	5. POST DATE	
V191211MB		

PARENT RECORD INFORMATION			
6. VENDOR NAME (Check to be issued to)	7. VENDOR NUMBER	8. ADDR CODE	9. Invoice No (MAX = 16 CHARACTERS)
Motor City Electric Technologies	V17465	02	92506
			10. Invoice Date
			6/4/2019
			11. Invoice Amount
			1,111.34

CHILD RECORD DETAIL INFORMATION										
Line	General Ledger		Job Ledger		OPTIONAL	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV	21. MISC	22 Sep CK
	12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object						
A	8210017M	93002	CC0014	93002	WO18006	8 1/2 Mile Relief	\$	1,111.34	GEN	
B										
C										
D										
E										
F										
G										

23. Total: \$ 1,111.34

REV 09/2018

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
Install and wire 2 lssco 2108 analog modules. Install and wire 1 Allen Bradley 1762-IF4 analog input card

25. Finance Officer: hpm

26. Chief Deputy: ps

27. Engineers: WJS

28. Managers: PK

29. Coordinator: PK

30. Drain: 8 1/2 Mile Relief

31. Project Balance: N/A

32. Staff Date: 12/17/2019

33. Board Date: 1/13/2020

34. Select For Pay Date:



**MOTOR CITY ELECTRIC TECHNOLOGIES INC.**  
 AUTOMATION AND CONTROLS SOLUTIONS  
 9440 GRINNELL  
 DETROIT, MI 48213-1151  
 PHONE (313) 921-5300 FAX (313) 921-5310  
 \*AN EQUAL OPPORTUNITY EMPLOYER\*

# INVOICE

13030 MACOMB COUNTY PUBLIC WORKS  
 21777 DUNHAM ROAD  
 CLINTON TOWNSHIP, MI 48036

Job Number	Sub Job	Contract Number	Date Performed	Date	Application Number
919500	0	001	4/26/2019	6/4/2019	92506

Customer PO Number

JOE BETZ

Item No	Description of Work	Contract Amount	Previous Billings	Current Amount	To Date Complete & Stored	Balance To Finish	Current Retainage
001	T&M	\$1,111.34	-	\$1,111.34	\$1,111.34	-	-
<b>Totals:</b>		\$1,111.34		\$1,111.34	\$1,111.34		
Less Retained:							
Invoice Total:				\$1,111.34			

AS NEEDED ELECTRICAL AND ENGINEERING SERVICE  
 SEE ATTACHED INVOICE SUMMARY AND FIELD REPORT

100%: 8 1/2 = \$1,111.34

complete electrical construction

"We hereby certify that the articles and services covered by this invoice were produced and performed in compliance with all applicable requirements of Section 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of regulations and orders of the United States Department of Labor issued under Section 14 thereof."



# Invoice Summary

Macomb County Public Works

Motor City Electric Technologies Inc.  
9440 Grinnell, Detroit, MI 48213-1151

Job No: 919500  
 Invoice No: 92506  
 Invoice Date: 6/4/2019

## Invoice Detail

INVOICE DETAIL	ST HRS	OT HRS	DT HRS	COST	TAX	MARKUP	OH & P	INVOICE TOTAL
Labor	10.00			\$690.00		\$0.00	\$0.00	\$690.00
Material				\$366.38	\$0.00	\$54.96	\$54.96	\$421.34
Invoice Totals:	10.00			\$1,056.38		\$54.96	\$0.00	\$1,111.34

## Invoice Detail by Field Report

4/26/2019 Malvern

Report Number: G190429-0922	ST HRS	OT HRS	DT HRS	COST	TAX	MARKUP	OH & P	REPORT TOTAL
Labor	10.00			\$690.00		\$0.00	\$0.00	\$690.00
Material				\$366.38	\$0.00	\$54.96	\$0.00	\$421.34
Report Totals:	10.00			\$1,056.38		\$54.96	\$0.00	\$1,111.34





9440 GRINNELL, DETROIT, MI 48213-1151

**FIELD REPORT**  
MOTOR CITY ELECTRIC TECHNOLOGIES

REPORT NO: G190429-  
092218

CUSTOMER: Macomb County Public Works DATE: 4/26/2019 MCE JOB NO: 919500 SHEET    OF     
LOCATION OF WORK: Malvern CUSTOMER ORDER NO:                     

**WORK PERFORMED:**  
Install and wire 2 Issco 2108 analog modules. Install and wire 1 Allen Bradley 1762-IF4 analog input card.

**LABOR**

LABOR CLASSIFICATION / NAME	STRAIGHT TIME			TIME AND ONE HALF			DOUBLE TIME			TOTAL	
	HRS	RATE	COST	HRS	RATE	COST	HRS	RATE	COST		
<i>Engineer-Controls/PLC/SCADA</i>										<i>Subtotal:</i>	<i>\$600.00</i>
Osterland, Travis	8.00	\$75.00	\$600.00		\$105.00	\$0.00		\$185.00	\$0.00		\$600.00
<i>Shop Labor</i>										<i>Subtotal:</i>	<i>\$90.00</i>
Bartas, John	2.00	\$45.00	\$90.00		\$65.00	\$0.00		\$0.00	\$0.00		\$90.00
										<b>TOTAL:</b>	<b>\$690.00</b>

**MATERIAL**

QTY	DESCRIPTION	UNIT COST	U/M	EXTENDED COST	
1	1762-IF4	\$309.30		\$309.30	
1	1489-M1C050	\$36.17		\$36.17	
14	1492-J4	\$1.20		\$16.80	
3	1492-J4G	\$1.37		\$4.11	
				<b>TOTAL:</b>	<b>\$366.38</b>

REPORT SUMMARY	ST HRS	OT HRS	DT HRS	COST	TAX	MARKUP	OH & P	REPORT TOTAL
Labor	10.00			\$690.00		\$0.00	\$0.00	\$690.00
Material				\$366.38	\$0.00	\$54.96	\$0.00	\$421.34
<b>REPORT TOTALS:</b>	<b>10.00</b>			<b>\$1,056.38</b>	<b>\$0.00</b>	<b>\$54.96</b>	<b>\$0.00</b>	<b>\$1,111.34</b>



# FIELD REPORT

FORM #  
**G 919500-190429-092218**  
 Job No YMMDD HHMMSS

MOTOR CITY ELECTRIC TECHNOLOGIES - (313) 921-5300/FAX (313) 923-5310

CUSTOMER: Macomb County Public Works DATE: April 26, 2019 JOB NO: 919500 SHEET 1 OF 1

LOCATION OF WORK: Malvern CUSTOMER ORDER NO: \_\_\_\_\_

WORK PERFORMED: Install and wire 2 Issco 2108 analog modules. Install and wire 1 Allen Bradley 1762-IF4 analog input card.  
(BE AS DESCRIPTIVE AS POSSIBLE)

## LABOR

	NAME	CLASSIFICATION	STRAIGHT TIME	TIME AND ONE HALF	DOUBLE TIME	SHIFT	COMMENTS
1	Travis Osterland	ENGINEER	8.00	0.00	0.00	1	
2	John Bartas	FORMAN	2.00	0.00	0.00	1	
3							
4							
5							
6							

TOTAL HOURS 10.00 0.00 0.00

## EQUIPMENT

DESCRIPTION	QUANTITY	DESCRIPTION	QUANTITY	DESCRIPTION	QUANTITY
1 Service Truck	0	6 < None >	0	11 < None >	
2 Pick Up Truck	0	7 < None >	0	12 < None >	
3 Rolling Set Up	0	8 < None >	0	13 < None >	
4 Manlift Scissors to 25'	0	9 < None >	0	14	
5 Manlift Boom to 40'	0	10 < None >	0	15	

## MATERIALS

QTY	DESCRIPTION	PRICE	PER	EXTENSION
1	1762-IF4	\$309.30	E	\$309.30
1	1489-M1C050	\$36.17	E	\$36.17
14	1492-J4	\$1.20	E	\$16.80
3	1492-J4G	\$1.37	E	\$4.11
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
LOT	EXPENDABLES		LOT	
<b>MATERIAL TOTAL</b>				<b>\$366.38</b>

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
(SUPERVISOR SIGNATURE)

BY: \_\_\_\_\_ DATE \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

Travis Osterland  
(PRINT NAME)

Brent Welser  
(PRINT NAME)



**McNAUGHTON-McKAY**  
**ELECTRIC COMPANY**  
 1357 East Lincoln Avenue  
 Madison Heights, MI 48071  
 (248) 399-7500  
 FAX (248) 399-6828

# ACKNOWLEDGEMENT

DOCUMENT: Order Acknowledgement

CUST#: 20354

CUSTOMER FAX: (248) 824-3704

ORDER #
16485653-00
PAGE #
1
ENTERED BY
sak
DATE ENTERED
04/16/19

BILL TO:

MOTOR CITY ELEC TECH  
 9440 GRINNELL ST  
 DETROIT, MI 48213-1151



PURCHASE ORDER: 1006526-~~825000~~

919500

SHIP TO:

MOTOR CITY ELEC TECH  
 9440 GRINNELL ST  
 DETROIT, MI 48213-1151

INSTRUCTIONS:		TERMS	
		2% 10 Net 30	
SHIP POINT	VIA	COD	SHIPPED
MADISON HEIGHTS BRANCH	UPS GROUND		

**UNLESS OTHERWISE NOTIFIED THIS ACKNOWLEDGMENT CONFIRMS ITEMS ORDERED.**

LINE NO.	PRODUCT AND DESCRIPTION	QUANTITY ORDERED	EXPECTED SHIP DATE	QTY. U/M	UNIT PRICE	PRICE U/M	AMOUNT (NET)
1	ABZ1762IF4 A-B 1762-IF4 4 CHNL CURRENT/VLTG ANLG INPUT Interchange Prod: 1762IF4	3		EACH	309.30	E	927.90
2	ABZ1489MIC050 A-B 1489-MIC050 UL489 5 A MINI C/B Interchange Prod: 1489MIC050	2		EACH	36.17	E	72.34
3	ABZ1492J4 A-B 1492-J4 TERM BLK Interchange Prod: 1492J4	40		each	1.20	E	48.00
4	ABZ1492J4G A-B 1492-J4-G IEC 1-CKT FD-THRU BLK 4MM Interchange Prod: 1492J4G	15		each	1.37	E	20.55
4	Lines Total	Qty Shipped Total	60		Total		1068.79
					Invoice Total		1068.79

Last Page

Date: 04/16/19 Time: 14:37 User: sak

The sale of products and services by Seller is subject to Seller's general terms and conditions of sale ("Seller's Terms") as attached to this document or as otherwise posted on Seller's website at <https://www.mc-mc.com/terms>. Seller objects to and rejects any terms or conditions that may appear on or are referenced in Customer's purchase order or other document that are in addition to or otherwise inconsistent with Seller's Terms. Customer's receipt or acceptance of delivery of any ordered item above will constitute its acceptance of Seller's Terms. The above link also includes Seller's Return Policy for customer reference.



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/18/19</b>
4. SET ID <b>VPI9128MUA</b>		5. POST DATE

6. VENDOR NAME (Check to be issued to) <b>PVS Nolwood Chemicals</b>		7. VENDOR NUMBER <b>V65311</b>	8. ADDR CODE <b>01</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>662484</b>	10. Invoice Date <b>12/10/2019</b>	11. Invoice Amount <b>\$ 5,314.73</b>
--	--	-----------------------------------	---------------------------	--	---------------------------------------	--

General Ledger			Job Ledger		OPTIONAL		19. Amount	20. DIV	21. MISC
12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object	16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)			
A	8210017M	72650	72650	WO18006	8 1/2 Mile Relief	Sales Order: 656784	\$ 5,314.73	GEN	
B									
C									
D									
E									
F									
G									

23. Total: \$ **5,314.73**

REV 09/20

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

25. Finance Officer: *bhm*

26. Chief Deputy: *poj*

27. Engineers: *us*

28. Managers: *klc*

29. Coordinator: \_\_\_\_\_

30. Drain: **8 1/2 Mile Relief**

31. Project Balance: **N/A**

32. Staff Date: **12/30/2019**

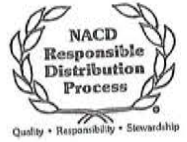
33. Board Date: **1/13/2020**

34. Select For Pay Date: \_\_\_\_\_



# PVS Nolwood Chemicals, Inc.

10900 Harper Avenue, Detroit, MI 48213  
Telephone: 313-925-0300 Fax: 313-571-2225



**INVOICE**  
No. 662484

**Sold To:** Macomb County Public Works  
57769 21777 Dumham  
Clinton Twp, MI 48036

**Ship To:** Chapaton Retention Basin  
57770 23001 Nine Mile Rd.  
St. Clair Shores, MI 48089

<b>Ship ID:</b> 697219	<b>Load ID:</b> 121019rich3/2517/263	<b>Payment Terms:</b> Net 30 Days
<b>Sales Order:</b>	656784	<b>Freight Type:</b> Delivered
<b>Customer PO:</b> pete		<b>Ship Via:</b> pvsnw bulk
<b>Invoice / Ship Date:</b> 12/10/2019		<b>Originating Warehouse:</b> HUBW

SO Line	Quantity Ordered	Ord UOM	Qty to Follow	Product Description	Quantity Shipped	Quantity Invoiced	Inv UOM	Unit Price	Total
1	45,000.00	LB	0.00	PVS N Sodium Hypochlorite 12.5% Bulk	45,200.00	4,476.15970	GA	1.16500	5,214.73
2	1.00	EA	1.00	Fuel Surcharge Bulk	1.00	1.00000	EA	100.00000	100.00

**Please Pay This Amount**  
**\$5,314.73**

**Please Remit To: PVS Nolwood Chemicals, Inc.**  
**25210 Network Place**  
**Chicago, IL 60673-1503**

Our preferred method of payment is ACH/EFT.  
Please email [corporatecredit@pvschemicals.com](mailto:corporatecredit@pvschemicals.com) for more information.  
Please include a copy of this invoice with your request.



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/18/19</b>
4. SET ID <b>VP191218MA</b>		
5. POST DATE		

6. VENDOR NAME (Check to be issued to) <b>Premier Safety</b>		7. VENDOR NUMBER <b>V62291</b>	8. ADDR CODE <b>01</b>	9. Invoice No (MAX = 16 CHARACTERS) <b>04170758</b>	10. Invoice Date <b>12/17/2019</b>	11. Invoice Amount <b>900.00</b>
---	--	-----------------------------------	---------------------------	--	---------------------------------------	-------------------------------------

PARENT RECORD INFORMATION				CHILD RECORD DETAIL INFORMATION			
General Ledger		Job Ledger		OPTIONAL			
12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object	16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)	19. Amount
A	8210017M	72613	72613	WO18006	8 1/2 Mile	Cust #1007555, Order #04108532	\$ 675.00
B	8210072M	72613			Martin	Cust #1007555, Order #04108532	\$ 135.00
C	8713018M	72613			SEMCWWDS	Cust #1007555, Order #04108532	\$ 90.00
D							
E							
F							
G							

23. Total: \$ **900.00**

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
Gloves

30. Drain: **8 1/2 Mile; Martin; SEMCWWDS**

31. Project Balance: **N/A**

32. Staff Date: **12/30/2019**

33. Board Date: **N/A**

34. Select For Pay Date:

25. Finance Officer: *bhm*

26. Chief Deputy: *AB*

27. Engineers: *UNA*

28. Managers: *CC*

29. Coordinator:



46400 CONTINENTAL DR  
 CHESTERFIELD, MI 48047-5206  
 PH 586-840-3200 FX 586-840-3201

REMIT TO  
 Premier Safety  
 PO Box 33757  
 Detroit MI 48232-3757

**Sales Invoice**

INVOICE #	04170758
LOCATION	04
DATE	12/17/19
PAGE	1 of 2

**BILL TO**

1007555  
 MACOMB CTY PUBLIC WORKS  
 ATTN:\*\*\*\*\*EMAIL INVOICES\*\*\*\*\*  
 21777 DUNHAM RD  
 CLINTON TOWNSHIP, MI 48036-1005

**SHIP TO**

MACOMB COUNTY DPW  
 23001 E 9 MILE RD  
 SAINT CLAIR SHORES, MI 48080-1

ORDER NUMBER 04108532	ORDER DATE 11/27/19	CUSTOMER P/O NUMBER AUTHORIZED KRISTOFER	PAYMENT TERMS NET 30 DAYS
CUSTOMER SALES REP DALE TAYLOR		CONTACT KRISTOFER BENDA	SHIP VIA OTHER
FREIGHT TERMS PICK UP		JOB NUMBER	SALES PERSON DIMITRI PERVOLARAKIS

PRODUCT/DESCRIPTION	QUANTITY OPEN	QUANTITY SHIPPED	QUANTITY BACKORDERED	PRICE	U/M	EXTENSION
<b>MMCSG-375XL</b> SAFEGRIP POWDER-FREE LATEX GLOVE 50/BX	5	5	0	180.0000	CS	900.00

MERCHANDISE TOTAL	FREIGHT & HANDLING	MISC CHARGE	TAX	INVOICE TOTAL
900.00	0.00	0.00	0.00	900.00

PAYMENT APPLIED	0.00
CREDIT APPLIED	0.00
BALANCE DUE	900.00

**Premier Safety** The smart choice for safety and environmental solutions  
 Visit us online at [www.PremierSafety.com](http://www.PremierSafety.com)



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type) <b>Michelle Houvener</b>	2. PHONE # <b>95966</b>	3. DATE <b>12/9/19</b>
4. SET ID <b>VPI91210MAF</b>		
5. POST DATE		

**PARENT RECORD INFORMATION**

6. VENDOR NAME (Check to be issued to) State of MI	7. VENDOR NUMBER V04719	8. ADDR CODE DA	9. Invoice No (MAX = 16 CHARACTERS) 10471997	10. Invoice Date 12/1/2019	11. Invoice Amount 6,000.00
---	----------------------------	--------------------	---	-------------------------------	--------------------------------

**CHILD RECORD DETAIL INFORMATION**

Line	General Ledger		Job Ledger		16. Work Order Number	OPTIONAL		19. Amount	20. DIV	21. MISC	22. Sep CK
	12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object		17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)				
A	8210017M	96901	CC0004	96901	WO18006	8 1/2 Mile Relief	NPDES Annual Permit Fee	\$ 6,000.00	GEN		
B											
C											
D											
E											
F											
G											

23. Total: \$ 6,000.00

REV 09/201

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:

NPDES Annual Permit Fee

25. Finance Officer:	<i>pkm</i>	30. Drain:	8 1/2 Mile Relief
26. Chief Deputy:	<i>AG</i>	31. Project Balance:	N/A
27. Engineers:		32. Staff Date:	12/17/2019
28. Managers:	<i>LVB</i>	33. Board Date:	1/13/2020
29. Coordinator:	<i>GC</i>	34. Select For Pay Date:	



12/9/2019

Chapaton

Mailing Instructions

Please send your payment to one of the following:

Regular Mail

EGLE-Cashiers Office-WRD  
P.O. Box 30657  
Lansing, MI 48909-8157

Overnight Mail

EGLE-Cashiers Office-WRD  
425 W. Ottawa Street  
Lansing, MI 48933

Make checks payable to **State of Michigan**.

Please include the below payment voucher with your payment.



Payment Voucher

Keep a copy of this voucher for your records. You may access this information electronically by clicking on the Financials menu option.

Fee Details

Invoice Number: 10471997

Created On: 12/01/2019

Description: NPDES Annual Permit Fee, Municipal Minor CSO (IP), 2020

Amount Due: USD \$ 6,000.00



# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type)	2. PHONE #	3. DATE
Michelle Houvener	95966	12/19/19
4. SET ID		5. POST DATE
VP191227MAX		

<b>PARENT RECORD INFORMATION</b>		
6. VENDOR NAME (Check to be issued to)	9. Invoice No (MAX = 16 CHARACTERS)	11. Invoice Amount
Tetra Tech, Inc.	51533040	\$ 23,104.82
7. VENDOR NUMBER	8. ADDR CODE	10. Invoice Date
V16060	02	12/19/2019

CHILD RECORD DETAIL INFORMATION										
Line	General Ledger		Job Ledger		16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)	19. Amount	20. DIV	21. MISC
	12. Org Key	13. Object	14. Cost Center (CCNT)	15. Object						
A	8210017M	80138	CC0004	80138	WO19085	8 1/2 Mile Relief	Pjt #200-16347-19001 thru 11/22/19	\$ 23,104.82	GEN	
B										
C										
D										
E										
F										
G										

23. Total: \$ 23,104.82

REV 09/2018

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
In-System Storage Devices

---

25. Finance Officer: BTM

26. Chief Deputy: PSO

27. Engineers:

28. Managers: UP

29. Coordinator: CK

---

30. Drain: 8 1/2 Mile Relief

31. Project Balance: \$276,660.66

32. Staff Date: 12/30/2019

33. Board Date: 1/13/2020

34. Select For Pay Date:

**MACOMB COUNTY PUBLIC WORKS OFFICE  
ENGINEERING INVOICE COVER SHEET**

**WORK ORDER NUMBER** WO19085

**PROJECT NUMBER** WWS-2019-003 (Tetra Tech# 200-16347-19001)

**PROJECT NAME** In-System Storage Devices

**DRAINAGE DISTRICT** Eight and One-Half Mile Relief Drain Drainage District

**CONSULTANT NAME** Tetra Tech of Michigan

**INVOICE DATE** 12/19/2019 (Invoice 51533040)

**INVOICE START DATE** 10/26/2019

**INVOICE END DATE** 11/22/2019

<b>ORIGINAL CONTRACT AMOUNT</b>	\$ 481,098.00
<b>CHANGE ORDER TOTAL</b>	\$ -
Change Order No. 1	
Change Order No. 2	
Change Order No. 3	
Change Order No. 4	
<b>TOTAL REVISED CONTRACT AMOUNT</b> (includes all approved change orders only)	\$ 481,098.00
<b>TOTAL AMOUNT PREVIOUSLY INVOICED</b>	\$ 181,332.52
<b>TOTAL AMOUNT DUE THIS INVOICE</b>	\$ 23,104.82
<b>TOTAL BUDGET REMAINING</b> (Includes Total Revised Contract Amount Less Total Invoiced Previously and Total Invoiced Current)	\$ 276,660.66



**Tetra Tech, Inc.**  
 424 Lewis Hargett Cir.  
 Ste. 110  
 Lexington, KY 40503  
 (859) 223-8000

**BILL TO:** MACOMB COUNTY  
**ATTN:** FINANCE DEPARTMENT  
 OFFICE OF PUBLIC WORKS  
 COMMISSIONER  
 21777 DUNHAM RD  
 PO BOX 806  
 CLINTON TOWNSHIP. MI 48036

**INVOICE NUMBER:** 51533040  
**INVOICE DATE:** 12/19/2019  
**SERVICES THROUGH:** 11/22/2019  
**FEDERAL TAX ID#:** 95-4148514  
**TERMS:** NET 30

ESA dated 10July 2019

Client Contact: Vince Astorino. Email vincent.astorino@macombgov.org

**PROFESSIONAL SERVICES:**

Project Number	200-16347-19001	In-System Storage Devices			
Top Task	01A	Project Management			
EMPLOYEE		TITLE	CURRENT LABOR HOURS	LABOR RATE	CURRENT LABOR AMOUNT
Lopez Lopez, Daniela S.		Engineer 2	26.00	\$125.00	\$3,250.00
<b>TOTAL LABOR</b>			<b>26.00</b>		<b>\$3,250.00</b>
			<b>SUBTOTAL</b>		<b>\$3,250.00</b>
<b>Total Top Task# 01A</b>					<b>\$3,250.00</b>

Top Task	01D	Basis of Design			
EMPLOYEE		TITLE	CURRENT LABOR HOURS	LABOR RATE	CURRENT LABOR AMOUNT
Fortier, Véronique		Sr Modeler	2.00	\$210.00	\$420.00
Geerlings, Eric P.		Project Engineer 1	55.00	\$155.00	\$8,525.00
Irgang, Laura M.		Project Engineer 1	20.50	\$155.00	\$3,177.50
Kaliman, Roger G.		Sr Engineer 1	12.50	\$180.00	\$2,250.00
Nolta, Michael C.		Project Administrator	1.00	\$90.00	\$90.00
Rubel, Brian M.		Program Manager	13.00	\$225.00	\$2,925.00
Tao, Qing D.		Ingénieur principal	1.50	\$250.00	\$375.00
Voss, Justin D.		Project Engineer 1	6.50	\$155.00	\$1,007.50
Watts, Debra		Technician 3	2.50	\$115.00	\$287.50
<b>TOTAL LABOR</b>			<b>114.50</b>		<b>\$19,057.50</b>
			<b>SUBTOTAL</b>		<b>\$19,057.50</b>

OTHER DIRECT CHARGES	TYPE	CURRENT QUANTITY	UNIT RATE	CURRENT AMOUNT
Rubel, Brian M.	Mileage (unit)	129.00	\$0.58	\$74.82
<b>TOTAL OTHER DIRECT CHARGES</b>				<b>\$74.82</b>
		<b>SUBTOTAL</b>		<b>\$74.82</b>
<b>Total Top Task# 01D</b>				<b>\$19,132.32</b>

Top Task	01DS	Basis of Design Subcontractors		CURRENT AMOUNT
SUBCONTRACTOR		TYPE		
ENVIRONMENTAL CONSULTING & TECHNOLOGY INC		Subcontractor-External		\$722.50
<b>TOTAL SUBCONTRACTOR CHARGES</b>				<b>\$722.50</b>

**BILL TO:** MACOMB COUNTY  
**ATTN:** FINANCE DEPARTMENT  
 OFFICE OF PUBLIC WORKS  
 COMMISSIONER  
 21777 DUNHAM RD  
 PO BOX 806  
 CLINTON TOWNSHIP, MI 48036

**INVOICE NUMBER:** 51533040  
**INVOICE DATE:** 12/19/2019  
**SERVICES THROUGH:** 11/22/2019  
**FEDERAL TAX ID#:** 95-4148514  
**TERMS:** NET 30

<b>SUBTOTAL</b>	<b>\$722.50</b>
Total Top Task# 01DS	\$722.50
Total Project# 200-16347-19001	\$23,104.82

**TOTAL AMOUNT DUE THIS INVOICE:** **\$23,104.82**

<b>Gross Contract Summary</b>	
Contract Amount	\$481,098.00
Previously Billed	\$181,332.52
Current Billing	\$23,104.82
Total Billed to Date	\$204,437.34
Contract Balance Remaining	\$276,660.66

**REMIT PAYMENT TO:**

**TETRA TECH, INC.**  
 PO BOX 911967  
 DENVER, CO 80291-1967

To ensure accurate posting, please note the invoice number on your check. Interest will be charged on all past-due amounts per contract terms and conditions.

PP



# Environmental Consulting & Technology, Inc.

ACH

3701 Northwest 98th Street  
Gainesville, FL 32606 - 352-332-0444

TETRA TECH OF MICHIGAN  
710 AVIS DRIVE  
STE 100  
ANN ARBOR, MI 48108

Invoice #: 195432  
Invoice Date: 11/19/2019  
Project: 190509  
Project Name: MACOMB IN-SYS STRGE DEVICE-L  
Fed ID: 59-2924038

P.O. 1166619-1  
Client Ref: TTPN-200-16347-19001

Attention: BRIAN RUBEL P E

For Professional Services Rendered through: 11/1/2019  
EMAIL INVOICE TO BRIAN.RUBEL@TETRATECH.COM

Phase Code / Name	Phase Fee	Previous Amount	Current Amount	% Complete	Total Fee Earned
0100 -- STUDY	23,068.00	0.00	722.50	3.13	722.50
<b>Total Fee:</b>	23,068.00				

Total Fee Earned To Date	722.50
Less Previous Billings	0.00
<b>Amount Due this Invoice</b>	<b>722.50</b>

Project Manager: PATRICK J. JUDD  
Billings: 000596

A 129566  
200-16347-19001. OLDS  
SUB-EXT  
200 LEW AA

OK to pay  
when paid  
11/21/19  
B. Rubel  
TB

NOV 21 2019  
RECEIVED

PP



Denise Harwood &lt;denise.harwood@macombgov.org&gt;

## Fwd: Macomb County In-System Storage Project WWS-2019-003 / Tetra Tech Proj 200-16347-19001 / Invoice 51533040 / Progress Report

1 message

Thu, Dec 19, 2019 at 9:35 AM

**Vincent Astorino** <vincent.astorino@macombgov.org>  
 To: Denise Harwood <denise.harwood@macombgov.org>

Here is another one for you.

**Vincent Astorino**  
 Operations and Flow Manager  
 Macomb County Public Works Commissioner Candice S. Miller  
 21777 Dunham Road, Clinton Township, MI 48036  
 Office: 586.469.6320 | Cell: 586.615.2436  
[Publicworks.macombgov.org](http://Publicworks.macombgov.org)

### Follow us!



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----- Forwarded message -----

From: **Kelly, Judy** <Judy.Kelly@tetrattech.com>  
 Date: Thu, Dec 19, 2019 at 8:00 AM  
 Subject: Macomb County In-System Storage Project WWS-2019-003 / Tetra Tech Proj 200-16347-19001 / Invoice 51533040 / Progress Report  
 To: Vincent Astorino <vincent.astorino@macombgov.org>  
 Cc: Rubel, Brian <Brian.Rubel@tetrattech.com>, Geerlings, Eric <Eric.Geerlings@tetrattech.com>, Michelle Houvener <michelle.houvener@macombgov.org>

Good morning, everyone.

Vincent/Michelle:

Attached for your use and reference are two PDF files specific to the invoicing for the above subject Project. These include Tetra Tech Invoice **51533040** and the associated Progress Report for the billing period through **November 22, 2019**.

If you have any questions or need any additional information, please let me know at any time.

Thank you and have a wonderful holiday season!

**Judy Kelly | Project Accountant**

Direct: 734.213.4045 | Main: 734.665.6000 | FAX: 734.213.4006

[Judy.Kelly@tetrattech.com](mailto:Judy.Kelly@tetrattech.com)

**Tetra Tech** | Complex World, Clear Solutions™ | United States Infrastructure - IEW Unit Finance Dept.

710 Avis Drive, Suite 100 | Ann Arbor, Mi 48108 | [www.tetrattech.com](http://www.tetrattech.com)

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**2 attachments**



**51533040.pdf**

217K



**PROJECT-STATUS-Macomb In-System Storage Nov 2019.pdf**

29K





# PROJECT STATUS COMMUNICATION

DATE: December 2, 2019

PREPARED BY: Brian Rubel / Eric Geerlings

PROJECT: Macomb Co. In-System Storage Devices

Tt PROJECT NO: 200-16347-19001 CONTACT: Mr. Vince Astorino  
(INVOICE 51533040)

### Tasks completed or in-progress since last status communication.

#### November Updates:

On November 4<sup>th</sup>, a meeting was held with the City of St. Clair Shores Parks and Maintenance Department. Design storm hydraulics were estimated for a 3-bypass gate and a 10-bypass gate storage structure. On November 20<sup>th</sup>, held a face to face monthly meeting with MCPWO to review Welsh Park storage structure designs and hydraulics. Contacted vendor regarding sizing options for inflatable hinge gates (adjustable height weirs) per MCPWO's request. Researched and developed options to provide redundancy and fail-safe options for sluice gates. Initiated the Community Enhancement Design and Landscape Architecture. Initiated the Transient Analysis.

### Opportunities for cost avoidance or added value.

### Impediments, roadblocks, assistance needed.

Tetra Tech anticipates receiving detailed design information from MCPWO for the Chapaton Pump Station project. The expected modifications to pump setpoint levels are relevant to SWMM modeling of storm events and Real Time Control (RTC) schemes. Additional information about MCPWO instrumentation preferences are anticipated whenever decisions are made for other ongoing MCPWO projects.

### Change (or potential change) of scope items or customer concession. (Details on attached Request to Change Authorization)

The Nine Mile portion of the study was dropped and may cause inefficiencies in completing the 8.5 Mile study. Tetra Tech will monitor this as the study proceeds.

### Schedule:

December 18<sup>th</sup> is the next scheduled Progress Meeting. Study is scheduled for completion in February and is on track.

### Next task or action items.

1. Present results of the Utility and Boundary Survey, including relevant easements.
2. Progress Community Enhancement Design and Landscape Architecture.
3. Complete Control Structure Selection after completing review of adjustable height weirs.
4. Progress Transient Evaluation including the need for venting.
5. Complete Geotechnical Evaluation.
6. Progress Risk Analysis.
7. Progress Feasibility Analysis.
8. Schedule EGLE Coordination in January per MCPWO's request.

Tetra Tech is preparing a scope of work for the design phase for discussion at the December meeting

Please do not hesitate to contact any member of our Team at any time.

Brian Rubel Phone: (734) 213-4081 Email: Brian.Rubel@tetratech.com  
Project Manager



Mark A. Hackel  
County Executive

# ONESolution

ACCOUNTS PAYABLE CHECK REQUEST

## PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type)	2. PHONE #	3. DATE
Michelle Houvener	95966	12/9/19
4. SET ID	5. POST DATE	
V191210MAA		

PARENT RECORD INFORMATION		
6. VENDOR NAME (Check to be issued to)	8. ADDR CODE	10. Invoice Date
TREMCO/Weatherproofing Tech	01	11/21/2019
7. VENDOR NUMBER	9. Invoice No (MAX = 16 CHARACTERS)	11. Invoice Amount
V05021	95756814	\$ 2,250.00

CHILD RECORD DETAIL INFORMATION				20. DIV	21. MISC					
Line	12. Org Key	13. Object	14. Job Ledger		19. Amount					
			14. Cost Center (CCNT)	15. Object						
			16. Work Order Number	17. Secondary Reference (MAX = 16 CHARACTERS)	18. Description (MAX = 30 CHARACTERS)					
A	8210017M	93001	CC0004	93001	WO18006	8 1/2 Mile Relief	\$	2,250.00	GEN	
B										
C										
D										
E										
F										
G										

23. Total: \$ 2,250.00

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
Roof warranty for Chapaton West, East and Service Garage

25. Finance Officer: [Signature] 30. Drain: 8 1/2 Mile Relief

26. Chief Deputy: [Signature] 31. Project Balance: N/A

27. Engineers: [Signature] 32. Staff Date: 12/17/2019

28. Managers: [Signature] 33. Board Date: 1/13/2020

29. Coordinator: [Signature] 34. Select For Pay Date:



TREMCO  
3735 GREEN ROAD, BEACHWOOD, OH 44122-5730 (216)292-5000

ACCOUNT NUMBER 6054709

RECEIPT OF THIS ORDER SHALL BE ACCEPTANCE OF ALL TERMS AND CONDITIONS CONTAINED ON THE FRONT AND BACK HEREOF. (V 6.2001)

**SHIP TO**

COUNTY OF MACOMB  
PUBLIC WORKS COMMISSION  
LAKE SAINT CLAIR CLEAN WATER INITIA  
CHAPATON EAST/WEST & SERVICE GARAGE  
23001 EAST NINE MILE ROAD  
SAINT CLAIR SHORES MI 48080

**CHARGE TO**

COUNTY OF MACOMB  
PUBLIC WORKS COMMISSION  
LAKE SAINT CLAIR CLEAN WATER INITIATIVE  
23001 EAST NINE MILE ROAD  
ST CLAIR SHORES MI 48080

(PLEASE MAKE ANY CORRECTIONS TO ABOVE INFORMATION)  
NO RETURN MERCHANDISE UNLESS AUTHORIZED BY OUR REPRESENTATIVE

REPRESENTATIVES Srbu, Earl

INVOICE NO. 95756814	INVOICE DATE 11/21/2019	DUE DATE 12/21/2019
CUST. P.O. RENEWAL - YEARS 6-10		
ORDER NUMBER 30025454		
TERMS Net 30		
SHIPPED FROM		SHIP DATE 11/21/2019
ROUTING - IF SPECIFIED		DELIVERY NO.

FREIGHT (F.O.B.: SHIPPING POINT)  
PPA PREPAID AND ADD

QTY	FORMULA NO. AND DESCRIPTION	UNIT	QTY	PRICE	AMOUNT
1	TREMCARE PB BILLING PLAN - TREMCARE PLATINUM COUNTY OF MACOMB PUBLIC WORKS COMMISSION - CHAPATON EAST - CHAPATON WEST - SERVICE GARAGE JOB/AGREEMENT NUMBER: 138882  COUNTY OF MACOMB-138882	EA	1	2,250.00	2,250.00
If you would prefer to receive your invoices by email or fax, please contact Customer Service.					

LOCAL TAX	0.00	COUNTY TAX	0.00	STATE TAX	0.00	SUBTOTAL	2,250.00
						SALES TAX	0.00
						SHIPPING	0.00
						TOTAL DUE	2,250.00

PLEASE RETURN THIS PORTION WITH YOUR REMITTANCE

COUNTY OF MACOMB  
PUBLIC WORKS COMMISSION  
LAKE SAINT CLAIR CLEAN WATER INITIATIVE  
23001 EAST NINE MILE ROAD  
ST CLAIR SHORES MI 48080

ACCOUNT NUMBER: 6054709  
CUST. P.O.: RENEWAL - YEARS 6-10  
TERMS: Net 30

INVOICE NO. 95756814	INVOICE DATE 11/21/2019
-------------------------	----------------------------

SUBTOTAL 2,250.00  
SALES TAX 0.00  
SHIPPING 0.00  
TOTAL DUE 2,250.00 USD

IF THIS ORDER IS SALES TAX  
EXEMPT AND WE HAVE  
CHARGED SALES TAX,  
MARK BOX AND RETURN  
A COMPLETED, SIGNED  
SALES TAX EXEMPTION  
CERTIFICATE WITH YOUR  
REMITTANCE. THANK YOU.

COMMENTS:

Mail check to address shown or call to pay  
by ACH or wire transfer.  
Credit card accepted at time of purchase.

Tremco/Weatherproofing Technologies, Inc.  
P.O. BOX 931111  
CLEVELAND, OH 44193-0511

Thank you for your payment. We appreciate your business.



# ONESolution

## ACCOUNTS PAYABLE CHECK REQUEST

### PUBLIC WORKS DIVISION

1. PREPARED BY (Please Type)	2. PHONE #	3. DATE
Michelle Houvener	95966	12/4/19
4. SET ID		5. POST DATE
VP191205MA		

PARENT RECORD INFORMATION				
6. VENDOR NAME (Check to be issued to)	7. VENDOR NUMBER	8. ADDR CODE	9. Invoice No (MAX = 16 CHARACTERS)	10. Invoice Date
Wade Trim	V09446	02	2016457	12/4/2019
				11. Invoice Amount
				131,501.95

CHILD RECORD DETAIL INFORMATION									
Line	General Ledger		15. Work Order Number	16. Secondary Reference (MAX = 16 CHARACTERS)	17. Description (MAX = 30 CHARACTERS)	18. Amount	19. DIV	20. MISC	21. Sep CK
	12. Org Key	13. Object							
A	8210017C	80138	CC0004	80138	8 1/2 Mile Relief	\$ 131,501.95	GEN		
B									
C									
D									
E									
F									
G									

23. Total: \$ 131,501.95

24. COMMENTS, INSTRUCTIONS OR ADDITIONAL NOTES:  
 Chapaton RTB Canal Upgrades, 10/26-11/29

25. Finance Officer:	<i>hfm</i>	30. Drain:	8 1/2 Mile Relief
26. Chief Deputy:	<i>AS</i>	31. Project Balance:	\$251,686.47 (Grant Balance: \$2,199,075.47)
27. Engineers:		32. Staff Date:	12/17/2019
28. Managers:		33. Board Date:	1/13/2020
29. Coordinator:	<i>PC</i>	34. Select For Pay Date:	

**MACOMB COUNTY PUBLIC WORKS OFFICE  
ENGINEERING INVOICE COVER SHEET**

<b>WORK ORDER NUMBER</b>	19004
<b>PROJECT NUMBER</b>	WWS-2019-002
<b>PROJECT NAME</b>	Chapaton RTB Canal Upgrades
<b>DRAINAGE DISTRICT</b>	Eight and One-Half Mile Drainage District
<b>CONSULTANT NAME</b>	Wade Trim Associates Inc
<b>INVOICE DATE</b>	12/4/2019
<b>INVOICE START DATE</b>	10/26/2019
<b>INVOICE END DATE</b>	11/29/2019
<b>ORIGINAL CONTRACT AMOUNT</b>	\$ 977,611.00
<b>CHANGE ORDER TOTAL</b>	\$ 75,000.00 ✓
Change Order No. 1	\$ 75,000.00
Change Order No. 2	
Change Order No. 3	
Change Order No. 4	
<b>TOTAL REVISED CONTRACT AMOUNT</b>	\$ 1,052,611.00
(includes all approved change orders only)	
<b>TOTAL AMOUNT PREVIOUSLY INVOICED</b>	\$ 669,422.58
<b>TOTAL AMOUNT DUE THIS INVOICE</b>	\$ 131,501.95
<b>TOTAL BUDGET REMAINING</b>	\$ 251,686.47
(Includes Total Revised Contract Amount Less Total Invoiced Previously and Total Invoiced Current)	



25251 Northline Road • Taylor, MI 48180  
734.947.9700 • www.wadetrtrim.com

# INVOICE

Terms: Net 30 Days  
1.5% Per Month After 30 Days  
18% Annual Rate

ACH payments accepted. Send inquiries to remit@wadetrtrim.com

Remit Payment To: Wade Trim, 25251 Northline Road, Taylor, MI 48180

Attention: Vince Astorino  
Operations and Flow Manager  
Macomb County Public Works  
21777 Dunham Road  
Clinton Township, MI 48036

Invoice : 2016457  
Invoice Date : 12/4/2019  
Project : MCW200501T  
Project Name : Chapaton RTB Canal Upgrades

For Professional Services Rendered For 10/26/2019 Through 11/29/2019

\*\* All subconsultant invoices marked up 5% \*\*

		Billings				
		Fee	Available	To Date	Previous	Current
		1,052,611.00	383,188.42	800,924.53	669,422.58	131,501.95
Rate Labor	113,617.00					
Multiplier Labor	623.28					
Total Labor	114,240.28					
Expenses	16,891.75					
Unit Rate Expense	369.92					
Total Expense	17,261.67					

<b>Current Billings</b>	<u>131,501.95</u>
<b>Amount Due This Bill</b>	<u>131,501.95</u>

Total Fee : 1,052,611.00  
To Date Billings : 800,924.53  
Total Remaining : 251,686.47

Outstanding Receivables	Invoice Number	Date	Amount	Balance Due
	2016150	11/1/2019	140,190.80	140,190.80
				<u>140,190.80</u>

**1A1 - Project Management**

**Rate Labor**

*Class / Employee*

*Date*

*Hours*

*Rate*

*Amount*

**Senior Professional**

John Arvai

Date	Hours	Rate	Amount
10/28/2019	2.00	215.0000	430.00
10/29/2019	2.00	215.0000	430.00
10/30/2019	2.00	215.0000	430.00
10/31/2019	1.00	215.0000	215.00
11/1/2019	1.00	215.0000	215.00
11/4/2019	2.00	215.0000	430.00
11/11/2019	1.00	215.0000	215.00
11/12/2019	1.00	215.0000	215.00
11/14/2019	2.00	215.0000	430.00
11/21/2019	1.00	215.0000	215.00
11/22/2019	2.00	215.0000	430.00
11/25/2019	2.00	215.0000	430.00
	19.00		4,085.00

**Total Senior Professional**

**Total Rate Labor**

**4,085.00**

**4,085.00**

**Total Bill Task: 1A1 - Project Management**

**1A2 - Project Management Support**

**Rate Labor**

*Class / Employee*

*Date*

*Hours*

*Rate*

*Amount*

**Engineer I**

Jason Obrycki-Smith

Date	Hours	Rate	Amount
10/28/2019	1.00	100.0000	100.00
10/29/2019	2.00	100.0000	200.00
11/5/2019	2.00	100.0000	200.00
11/11/2019	1.50	100.0000	150.00
11/14/2019	1.50	100.0000	150.00
11/18/2019	5.00	100.0000	500.00
11/19/2019	5.00	100.0000	500.00
	18.00		1,800.00

**Total Engineer I**

**Professional Engineer IV**

Oskar E Nordstrom

Date	Hours	Rate	Amount
11/15/2019	0.25	190.0000	47.50
11/26/2019	1.50	190.0000	285.00
11/27/2019	1.00	190.0000	190.00
	2.75		522.50

**Total Professional Engineer IV**

**Project Aide II**

Melanie A Phillips

Date	Hours	Rate	Amount
10/28/2019	1.00	95.0000	95.00
11/18/2019	1.00	95.0000	95.00
	2.00		190.00

**Total Project Aide II**

**Total Rate Labor**

**2,512.50**

**2,512.50**

**Total Bill Task: 1A2 - Project Management Support**

1EXP - Project Management Expenses

Expenses Account / Vendor	Doc Number	Date	Cost	Multiplier	Amount
<b>Architectural/Engineering Supplies</b>					
John Arvai	ER000151687	10/14/2019	11.99	1.100	13.19
Jason Obrycki-Smith	ER000151286	10/29/2019	11.99	1.100	13.19
	ER000151755	11/29/2019	11.99	1.100	13.19
			23.98		26.38
			35.97		39.57
<b>Total Jason Obrycki-Smith</b>					
<b>Total Architectural/Engineering Supplies</b>					<b>39.57</b>
<b>Total Expenses</b>					

Unit Rate Expenses

Account / Unit / Vendor	Quantity	Rate	Amount
<b>Employee Mileage - Regular Rate</b>			
Employee Mileage	157.00	0.6400	100.48
John Arvai			100.48
<b>Total Employee Mileage - Regular Rate</b>			<b>100.48</b>
<b>Total Unit Rate Expenses</b>			
			<b>140.05</b>

Total Bill Task: 1EXP - Project Management Expenses

3D1 - 60% Process

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Engineer I</b>				
Jason Obrycki-Smith	11/6/2019	3.00	100.0000	300.00
	11/7/2019	3.00	100.0000	300.00
	11/8/2019	2.00	100.0000	200.00
		8.00		800.00
<b>Total Engineer I</b>				
<b>Engineering Specialist II</b>				
Robert J Marker	11/4/2019	1.00	170.0000	170.00
	11/5/2019	0.50	170.0000	85.00
		1.50		255.00
<b>Total Engineering Specialist II</b>				
<b>Principal</b>				
Steven A Kalinowski	11/1/2019	1.00	230.0000	230.00
	11/4/2019	0.50	230.0000	115.00
		1.50		345.00
<b>Total Principal</b>				
<b>Project Specialist II</b>				
John K Golden	10/28/2019	5.00	150.0000	750.00
	10/29/2019	1.00	150.0000	150.00
		6.00		900.00
<b>Total Project Specialist II</b>				
<b>Senior Professional</b>				
Jeffrey W Reynhout	10/28/2019	3.00	215.0000	645.00
	10/29/2019	1.00	215.0000	215.00
	11/4/2019	1.00	215.0000	215.00
	11/6/2019	2.00	215.0000	430.00
		7.00		1,505.00
<b>Total Senior Professional</b>				



3D1 - 60% Process

Total Rate Labor

3,805.00

Total Bill Task: 3D1 - 60% Process

3,805.00

3D10 - 60% Permit Assistance

Rate Labor

Class / Employee

Date

Hours

Rate

Amount

Engineer I

Jason Obrycki-Smith

11/6/2019	2.00	100.0000	200.00
11/7/2019	1.00	100.0000	100.00
11/8/2019	5.00	100.0000	500.00
	8.00		800.00

Total Engineer I

Engineer IV

Tyler Barkho

11/4/2019	6.00	150.0000	900.00
11/6/2019	8.00	150.0000	1,200.00
11/7/2019	7.00	150.0000	1,050.00
11/8/2019	5.00	150.0000	750.00
	26.00		3,900.00

Total Engineer IV

Landscape Architect II

David M Richards

11/4/2019	4.50	85.0000	382.50
11/7/2019	1.50	85.0000	127.50
	6.00		510.00

Total Landscape Architect II

Principal

Steven A Kalinowski

10/28/2019	1.00	230.0000	230.00
10/30/2019	2.00	230.0000	460.00
10/31/2019	2.00	230.0000	460.00
11/5/2019	2.00	230.0000	460.00
11/6/2019	2.00	230.0000	460.00
11/7/2019	3.00	230.0000	690.00
11/8/2019	3.00	230.0000	690.00
11/11/2019	1.00	230.0000	230.00
11/12/2019	1.00	230.0000	230.00
11/13/2019	4.00	230.0000	920.00
11/14/2019	2.00	230.0000	460.00
11/18/2019	1.00	230.0000	230.00
11/19/2019	2.00	230.0000	460.00
11/20/2019	1.00	230.0000	230.00
11/22/2019	1.00	230.0000	230.00
11/27/2019	1.00	230.0000	230.00

Anthony C Igwe

11/11/2019	3.00	230.0000	690.00
11/12/2019	3.00	230.0000	690.00
11/15/2019	4.00	230.0000	920.00
11/18/2019	2.00	230.0000	460.00
11/19/2019	3.00	230.0000	690.00
11/20/2019	2.00	230.0000	460.00

**3D10 - 60% Permit Assistance**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Total Principal</b>		46.00		10,580.00
<b>Senior Professional</b>				
John Arvai	11/12/2019	0.50	215.0000	107.50
	11/15/2019	1.00	215.0000	215.00
	11/19/2019	1.00	215.0000	215.00
David L. Anthony	11/8/2019	2.00	215.0000	430.00
	11/19/2019	1.00	215.0000	215.00
<b>Total Senior Professional</b>		5.50		1,182.50
			<b>Total Rate Labor</b>	<b>16,972.50</b>
<b>Total Bill Task: 3D10 - 60% Permit Assistance</b>				<b>16,972.50</b>

**3D11 - 60% Constructability Review**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Professional LA III</b>				
Scot Lautzenheiser	11/19/2019	0.25	150.0000	37.50
	11/27/2019	0.25	150.0000	37.50
<b>Total Professional LA III</b>		0.50		75.00
			<b>Total Rate Labor</b>	<b>75.00</b>
<b>Total Bill Task: 3D11 - 60% Constructability Review</b>				<b>75.00</b>

**3D12 - 60% Construction Schedule Update**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Senior Professional</b>				
John Arvai	11/14/2019	0.50	215.0000	107.50
	11/18/2019	0.50	215.0000	107.50
	11/19/2019	0.50	215.0000	107.50
	11/25/2019	0.50	215.0000	107.50
	11/26/2019	1.00	215.0000	215.00
<b>Total Senior Professional</b>		3.00		645.00
			<b>Total Rate Labor</b>	<b>645.00</b>
<b>Total Bill Task: 3D12 - 60% Construction Schedule Update</b>				<b>645.00</b>

**3D13 - 60% Engineer's Cost Estimate**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Project Specialist III</b>				
Daniel T DiPonio	10/29/2019	6.00	175.0000	1,050.00
	10/30/2019	4.00	175.0000	700.00
	11/4/2019	3.00	175.0000	525.00
	11/5/2019	1.00	175.0000	175.00
<b>Total Project Specialist III</b>		14.00		2,450.00

3D13 - 60% Engineer's Cost Estimate

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Senior Professional</b>				
John Arvai	10/28/2019	1.00	215.0000	215.00
	11/1/2019	1.50	215.0000	322.50
	11/5/2019	3.00	215.0000	645.00
	11/26/2019	1.00	215.0000	215.00
		-----		1,397.50
<b>Total Senior Professional</b>		6.50		
			<b>Total Rate Labor</b>	<b>3,847.50</b>
<b>Total Bill Task: 3D13 - 60% Engineer's Cost Estimate</b>				<b>3,847.50</b>

3D14 - 60% Meetings

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Engineer I</b>				
Jason Obrycki-Smith	10/30/2019	1.50	100.0000	150.00
<b>Senior Professional</b>				
John Arvai	10/30/2019	4.00	215.0000	860.00
	10/31/2019	0.50	215.0000	107.50
	11/11/2019	0.50	215.0000	107.50
	11/12/2019	0.50	215.0000	107.50
		-----		1,182.50
<b>Total Senior Professional</b>		5.50		
			<b>Total Rate Labor</b>	<b>1,332.50</b>
<b>Total Bill Task: 3D14 - 60% Meetings</b>				<b>1,332.50</b>

3D15 - 60% Review Workshop

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Engineer I</b>				
Jason Obrycki-Smith	11/19/2019	2.50	100.0000	250.00
	11/20/2019	4.00	100.0000	400.00
	11/21/2019	3.00	100.0000	300.00
	11/26/2019	0.50	100.0000	50.00
		-----		1,000.00
<b>Total Engineer I</b>		10.00		
<b>Engineer III</b>				
Thomas J Stark	11/25/2019	7.00	130.0000	910.00
<b>LA Staff</b>				
Catherine A Dennis	11/19/2019	2.50	100.0000	250.00
	11/29/2019	2.50	100.0000	250.00
		-----		500.00
<b>Total LA Staff</b>		5.00		
<b>Senior Professional</b>				
Alan M Schwab	11/19/2019	2.00	215.0000	430.00
	11/25/2019	8.00	215.0000	1,720.00
John Arvai	11/19/2019	2.00	215.0000	430.00

**3D15 - 60% Review Workshop**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Senior Professional</b>				
Jeffrey W Reynhout	11/19/2019	3.00	215.0000	645.00
	11/20/2019	1.00	215.0000	215.00
	11/21/2019	1.00	215.0000	215.00
	11/26/2019	1.00	215.0000	215.00
		18.00		3,870.00
<b>Total Senior Professional</b>				<b>6,280.00</b>
			<b>Total Rate Labor</b>	<b>6,280.00</b>
<b>Total Bill Task: 3D15 - 60% Review Workshop</b>				<b>6,280.00</b>

**3D2 - 60% Electrical & I&C**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Engineer III</b>				
Thomas J Stark	10/28/2019	8.00	130.0000	1,040.00
	10/29/2019	8.00	130.0000	1,040.00
	10/30/2019	4.00	130.0000	520.00
		20.00		2,600.00
<b>Total Engineer III</b>				
<b>Engineering Specialist II</b>				
Robert J Marker	10/31/2019	0.50	170.0000	85.00
	11/4/2019	1.00	170.0000	170.00
	11/5/2019	0.50	170.0000	85.00
		2.00		340.00
<b>Total Engineering Specialist II</b>				
<b>Principal</b>				
Steven A Kalinowski	10/30/2019	1.00	230.0000	230.00
	11/1/2019	1.00	230.0000	230.00
	11/4/2019	0.50	230.0000	115.00
		2.50		575.00
<b>Total Principal</b>				
<b>Project Specialist II</b>				
John K Golden	10/29/2019	2.00	150.0000	300.00
<b>Senior Professional</b>				
Alan M Schwab	10/28/2019	8.00	215.0000	1,720.00
	10/29/2019	2.00	215.0000	430.00
	10/30/2019	8.00	215.0000	1,720.00
	10/31/2019	8.00	215.0000	1,720.00
	11/1/2019	4.00	215.0000	860.00
		30.00		6,450.00
<b>Total Senior Professional</b>				<b>10,265.00</b>
			<b>Total Rate Labor</b>	<b>10,265.00</b>
<b>Total Bill Task: 3D2 - 60% Electrical &amp; I&amp;C</b>				<b>10,265.00</b>

**3D3 - 60% Landscape/Green Infrastructure**

**Rate Labor**

<i>Class / Employee</i>	<i>Date</i>	<i>Hours</i>	<i>Rate</i>	<i>Amount</i>
<b>Engineering Specialist II</b>				
Robert J Marker	11/4/2019	1.00	170.0000	170.00
	11/5/2019	0.50	170.0000	85.00
		-----		255.00
<b>Total Engineering Specialist II</b>				
<b>LA Staff</b>				
Catherine A Dennis	11/7/2019	2.50	100.0000	250.00
Melissa O Hernandez	10/28/2019	3.50	100.0000	350.00
		-----		600.00
<b>Total LA Staff</b>				
<b>Principal</b>				
Steven A Kalinowski	10/31/2019	1.00	230.0000	230.00
	11/1/2019	1.00	230.0000	230.00
	11/4/2019	1.00	230.0000	230.00
	11/7/2019	1.00	230.0000	230.00
	11/8/2019	1.00	230.0000	230.00
	11/12/2019	1.00	230.0000	230.00
	11/14/2019	1.00	230.0000	230.00
		-----		1,610.00
<b>Total Principal</b>				
<b>Professional LA III</b>				
Scot Lautzenheiser	10/28/2019	1.50	150.0000	225.00
	11/4/2019	2.50	150.0000	375.00
	11/5/2019	0.25	150.0000	37.50
		-----		637.50
<b>Total Professional LA III</b>				
<b>Senior Professional</b>				
John Arvai	10/28/2019	1.00	215.0000	215.00
<b>Total Rate Labor</b>				<b>3,317.50</b>
<b>Total Bill Task: 3D3 - 60% Landscape/Green Infrastructure</b>				<b>3,317.50</b>

**3D4 - 60% Structural**

**Rate Labor**

<i>Class / Employee</i>	<i>Date</i>	<i>Hours</i>	<i>Rate</i>	<i>Amount</i>
<b>CADD Technician I</b>				
Rachelle Setser	11/13/2019	3.00	70.0000	210.00
<b>Engineer II</b>				
Zuzanna Sobczak	10/28/2019	1.00	110.0000	110.00
	10/29/2019	4.00	110.0000	440.00
	10/30/2019	5.00	110.0000	550.00
	11/5/2019	1.00	110.0000	110.00
	11/6/2019	3.00	110.0000	330.00
		-----		1,540.00
<b>Total Engineer II</b>				
<b>Engineer IV</b>				
Tyler Barkho	10/28/2019	5.00	150.0000	750.00
	10/29/2019	6.00	150.0000	900.00
	11/13/2019	1.00	150.0000	150.00

**3D4 - 60% Structural**

**Rate Labor**

*Class / Employee*

*Date                      Hours                      Rate                      Amount*

**Engineer IV**

Tyler Barkho

11/14/2019	1.00	150.0000	150.00
	-----		-----
	13.00		1,950.00

**Total Engineer IV**

**Engineering Specialist II**

Robert J Marker

11/4/2019	1.00	170.0000	170.00
11/5/2019	0.50	170.0000	85.00
	-----		-----
	1.50		255.00

**Total Engineering Specialist II**

**Principal**

Steven A Kalinowski

11/7/2019	1.00	230.0000	230.00
-----------	------	----------	--------

**Professional Engineer IV**

Italo Gonzalez

11/7/2019	8.00	190.0000	1,520.00
11/8/2019	4.00	190.0000	760.00
11/11/2019	8.00	190.0000	1,520.00
11/12/2019	6.00	190.0000	1,140.00
11/13/2019	2.00	190.0000	380.00
11/15/2019	4.00	190.0000	760.00
	-----		-----
	32.00		6,080.00

**Total Professional Engineer IV**

**Senior Professional**

James K White

10/28/2019	1.00	215.0000	215.00
10/30/2019	3.00	215.0000	645.00
11/1/2019	2.00	215.0000	430.00
11/4/2019	4.00	215.0000	860.00
11/7/2019	4.00	215.0000	860.00
11/14/2019	1.00	215.0000	215.00
11/15/2019	2.00	215.0000	430.00
10/31/2019	0.50	215.0000	107.50
	-----		-----
	17.50		3,762.50

**Total Senior Professional**

**Total Rate Labor**

**14,027.50**

**14,027.50**

**Total Bill Task: 3D4 - 60% Structural**

**3D5 - 60% Mechanical**

**Rate Labor**

*Class / Employee*

*Date                      Hours                      Rate                      Amount*

**Engineer I**

Jason Obrycki-Smith

10/28/2019	3.00	100.0000	300.00
10/31/2019	1.00	100.0000	100.00
11/1/2019	1.50	100.0000	150.00
11/4/2019	8.00	100.0000	800.00
11/5/2019	4.00	100.0000	400.00
11/6/2019	3.00	100.0000	300.00
11/7/2019	2.00	100.0000	200.00
	-----		-----
	22.50		2,250.00

**Total Engineer I**

**3D5 - 60% Mechanical**

**Rate Labor**

*Class / Employee*

*Date*

*Hours*

*Rate*

*Amount*

**Engineering Specialist II**

Robert J Marker

Date	Hours	Rate	Amount
10/31/2019	2.00	170.0000	340.00
11/4/2019	1.00	170.0000	170.00
11/5/2019	0.50	170.0000	85.00
	-----		-----
	3.50		595.00

**Total Engineering Specialist II**

**Total Rate Labor**

**2,845.00**

**2,845.00**

**Total Bill Task: 3D5 - 60% Mechanical**

**3D6 - 60% Civil / Site**

**Rate Labor**

*Class / Employee*

*Date*

*Hours*

*Rate*

*Amount*

**CADD Technician I**

Rachelle Setser

Date	Hours	Rate	Amount
10/28/2019	1.00	70.0000	70.00

**Engineer IV**

Tyler Barkho

Date	Hours	Rate	Amount
10/28/2019	3.00	150.0000	450.00
10/29/2019	2.00	150.0000	300.00
10/30/2019	2.50	150.0000	375.00
10/31/2019	0.50	150.0000	75.00
11/1/2019	4.00	150.0000	600.00
11/4/2019	1.00	150.0000	150.00
	-----		-----
	13.00		1,950.00

**Total Engineer IV**

**Engineering Specialist II**

Robert J Marker

Date	Hours	Rate	Amount
11/1/2019	2.10	170.0000	357.00
11/5/2019	1.50	170.0000	255.00
	-----		-----
	3.60		612.00

**Total Engineering Specialist II**

**Principal**

Steven A Kalinowski

Date	Hours	Rate	Amount
10/28/2019	1.00	230.0000	230.00
10/30/2019	1.00	230.0000	230.00
10/31/2019	1.00	230.0000	230.00
11/1/2019	1.00	230.0000	230.00
11/4/2019	1.00	230.0000	230.00
11/5/2019	2.00	230.0000	460.00
11/7/2019	1.00	230.0000	230.00
11/12/2019	1.00	230.0000	230.00
	-----		-----
	9.00		2,070.00

**Total Principal**

**Total Rate Labor**

**4,702.00**

**4,702.00**

**Total Bill Task: 3D6 - 60% Civil / Site**

**3D7 - 60% QA / QC**

**Rate Labor**

*Class / Employee*

*Date*

*Hours*

*Rate*

*Amount*

**Engineer I**

Tyler S Davidek

Date	Hours	Rate	Amount
10/31/2019	2.00	100.0000	200.00

Project: MCW200501T - Chapaton RTB Canal Upgrades

3D7 - 60% QA / QC

Rate Labor  
Class / Employee

Engineer IV

Tyler Barkho

Date	Hours	Rate	Amount
11/20/2019	1.00	150.0000	150.00
11/21/2019	7.00	150.0000	1,050.00
11/22/2019	6.00	150.0000	900.00
11/25/2019	8.00	150.0000	1,200.00
11/26/2019	2.00	150.0000	300.00
11/27/2019	4.00	150.0000	600.00
	-----		4,200.00
	28.00		

Total Engineer IV

Principal

Steven A Kalinowski

11/4/2019	2.00	230.0000	460.00
11/6/2019	1.00	230.0000	230.00
11/8/2019	1.00	230.0000	230.00
11/11/2019	1.00	230.0000	230.00
11/14/2019	2.00	230.0000	460.00
11/18/2019	1.00	230.0000	230.00
11/19/2019	2.00	230.0000	460.00
11/20/2019	2.00	230.0000	460.00
11/22/2019	1.00	230.0000	230.00
11/27/2019	1.00	230.0000	230.00
	-----		3,220.00
	14.00		

Total Principal

Project Aide II

Jack R Simmons

11/18/2019	2.00	95.0000	190.00
11/19/2019	1.00	95.0000	95.00
11/20/2019	1.00	95.0000	95.00
11/21/2019	2.00	95.0000	190.00
	-----		570.00
	6.00		

Total Project Aide II

Total Rate Labor

8,190.00  
8,190.00

Total Bill Task: 3D7 - 60% QA / QC

3D8 - 60% Administrative

Rate Labor  
Class / Employee

Project Aide II

Jack R Simmons

Date	Hours	Rate	Amount
11/11/2019	5.00	95.0000	475.00
11/12/2019	5.00	95.0000	475.00
11/13/2019	5.00	95.0000	475.00
	-----		1,425.00
	15.00		

Total Project Aide II

Total Rate Labor

1,425.00  
1,425.00

Total Bill Task: 3D8 - 60% Administrative



Project: MCW200501T - Chapaton RTB Canal Upgrades

3D9 - 60% Add'l Features Engineering

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Principal</b>				
Steven A Kalinowski	10/31/2019	1.00	230.0000	230.00
	11/8/2019	1.00	230.0000	230.00
		-----		460.00
<b>Total Principal</b>		2.00		
	<b>Total Rate Labor</b>			<b>460.00</b>

Total Bill Task: 3D9 - 60% Add'l Features Engineering

3E13 - 90% Meetings

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Senior Professional</b>				
John Arvai	11/18/2019	0.50	215.0000	107.50
	11/20/2019	1.00	215.0000	215.00
	11/26/2019	0.50	215.0000	107.50
		-----		430.00
<b>Total Senior Professional</b>		2.00		
	<b>Total Rate Labor</b>			<b>430.00</b>

Total Bill Task: 3E13 - 90% Meetings

3E2 - 90% Electrical & I&C

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Engineer III</b>				
Thomas J Stark	11/26/2019	6.00	130.0000	780.00
	11/27/2019	7.00	130.0000	910.00
		-----		1,690.00
<b>Total Engineer III</b>		13.00		
	<b>Total Rate Labor</b>			<b>1,690.00</b>

Total Bill Task: 3E2 - 90% Electrical & I&C

3E15 - 90% Lighthouse

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Principal</b>				
Steven A Kalinowski	11/21/2019	1.00	230.0000	230.00
<b>Project Specialist II</b>				
John K Golden	11/21/2019	6.00	150.0000	900.00
	11/22/2019	0.50	150.0000	75.00
		-----		975.00
<b>- Total Project Specialist II</b>		6.50		
<b>Senior Professional</b>				
James K White	11/20/2019	2.00	215.0000	430.00
John Arvai	11/20/2019	1.00	215.0000	215.00
	11/21/2019	1.50	215.0000	322.50
		-----		967.50
<b>Total Senior Professional</b>		4.50		
	<b>Total Rate Labor</b>			<b>2,172.50</b>

Project: MCW200501T - Chapaton RTB Canal Upgrades

2,172.50

**Total Bill Task: 3E15 - 90% Lighthouse**

**3E3 - 90% Landscape/Green Infrastructure**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
LA Staff				
Melissa O Hernandez	11/27/2019	3.50	100.0000	350.00
<b>Total Rate Labor</b>				<b>350.00</b>

**3E4 - 90% Structural**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
CADD Technician I				
Rachelle Setser	11/22/2019	0.50	70.0000	35.00
	11/25/2019	4.00	70.0000	280.00
		4.50		315.00
<b>Total CADD Technician I</b>				
Professional Engineer IV				
Italo Gonzalez	11/21/2019	3.00	190.0000	570.00
	11/22/2019	8.00	190.0000	1,520.00
	11/25/2019	3.00	190.0000	570.00
	11/27/2019	8.00	190.0000	1,520.00
		22.00		4,180.00
<b>Total Professional Engineer IV</b>				
Senior Professional				
James K White	11/19/2019	2.00	215.0000	430.00
	11/20/2019	2.00	215.0000	430.00
	11/21/2019	2.00	215.0000	430.00
		6.00		1,290.00
<b>Total Senior Professional</b>				
<b>Total Rate Labor</b>				<b>5,785.00</b>
<b>Total Rate Labor</b>				<b>5,785.00</b>

**Total Bill Task: 3E4 - 90% Structural**

**3E5 - 90% Mechanical**

Rate Labor Class / Employee	Date	Hours	Rate	Amount
Engineer I				
Jason Obrycki-Smith	11/22/2019	1.00	100.0000	100.00
<b>Total Rate Labor</b>				<b>100.00</b>

**3EXP - Expenses**

Expenses Account / Vendor	Doc Number	Date	Cost	Multiplier	Amount
Employee Travel					
Italo Gonzalez	ER000151541	11/7/2019	5.75	1.100	6.33
	ER000151541	11/7/2019	5.75	1.100	6.33
	ER000151541	11/7/2019	25.00	1.100	27.50
			36.50		40.16
<b>Total Italo Gonzalez</b>					
<b>Total Employee Travel</b>					<b>40.16</b>

Project: MCW200501T - Chapaton RTB Canal Upgrades

3EXP - Expenses

Expenses Account / Vendor	Doc Number	Date	Cost	Multiplier	Amount
<b>Employee Travel / Subsistence</b>					
Italo Gonzalez	ER000151541	11/7/2019	7.60	1.100	8.36
	ER000151541	11/7/2019	15.13	1.100	16.64
			22.73		25.00
<b>Total Italo Gonzalez</b>			22.73		25.00
<b>Total Employee Travel / Subsistence</b>					<b>65.16</b>
<b>Total Expenses</b>					

Unit Rate Expenses

Account / Unit / Vendor	Quantity	Rate	Amount
<b>Employee Mileage - Regular Rate</b>			
Employee Mileage	71.00	0.6400	45.44
Jason Obrycki-Smith			
<b>Employee Mileage - Regular Rate</b>			
Employee Mileage	350.00	0.6400	224.00
Italo Gonzalez			
<b>Total Unit Rate Expenses</b>			<b>269.44</b>
			<b>334.60</b>

Total Bill Task: 3EXP - Expenses

6A1 - Applied Science

Expenses Account / Vendor	Doc Number	Date	Cost	Multiplier	Amount
<b>Subconsultants</b>					
Applied Science Inc	0020017182	11/26/2019	5,230.00	1.050	5,491.50
<b>Total Expenses</b>					<b>5,491.50</b>

6A2 - NTH Consultants

Expenses Account / Vendor	Doc Number	Date	Cost	Multiplier	Amount
<b>Subconsultants</b>					
NTH Consultants LTD	0020017138	11/15/2019	4,748.50	1.050	4,985.93
<b>Total Expenses</b>					<b>4,985.93</b>

6A3 - MKSK

Expenses Account / Vendor	Doc Number	Date	Cost	Multiplier	Amount
<b>Subconsultants</b>					
MKSK INC	0020017163	10/31/2019	6,009.13	1.050	6,309.59
<b>Total Expenses</b>					<b>6,309.59</b>

7A1 - Flushing System Study

Rate Labor Class / Employee	Date	Hours	Rate	Amount
<b>Engineer I</b>				
Tyler S Davidek	10/31/2019	1.00	100.0000	100.00
	11/1/2019	5.00	100.0000	500.00
	11/4/2019	2.00	100.0000	200.00
	11/12/2019	2.00	100.0000	200.00
	11/13/2019	1.50	100.0000	150.00
	11/14/2019	8.00	100.0000	800.00

7A1 - Flushing System Study

Rate Labor

Class / Employee

	<u>Date</u>	<u>Hours</u>	<u>Rate</u>	<u>Amount</u>
<b>Engineer I</b>				
Tyler S Davidek	11/15/2019	7.00	100.0000	700.00
	11/18/2019	5.00	100.0000	500.00
	11/19/2019	8.00	100.0000	800.00
	11/20/2019	7.00	100.0000	700.00
	11/21/2019	5.00	100.0000	500.00
	11/22/2019	2.00	100.0000	200.00
	11/25/2019	7.00	100.0000	700.00
	11/26/2019	5.00	100.0000	500.00
	11/27/2019	2.00	100.0000	200.00
		-----		-----
		67.50		6,750.00
<b>Total Engineer I</b>				
<b>Project Specialist II</b>				
John K Golden	10/30/2019	2.00	150.0000	300.00
	11/1/2019	2.00	150.0000	300.00
	11/7/2019	6.00	150.0000	900.00
	11/8/2019	8.00	150.0000	1,200.00
	11/11/2019	4.00	150.0000	600.00
	11/13/2019	2.00	150.0000	300.00
	11/15/2019	5.00	150.0000	750.00
		-----		-----
		29.00		4,350.00
<b>Total Project Specialist II</b>				
<b>Senior Professional</b>				
John Arvai	11/1/2019	0.50	215.0000	107.50
	11/4/2019	0.50	215.0000	107.50
	11/11/2019	0.50	215.0000	107.50
	11/15/2019	1.00	215.0000	215.00
	11/21/2019	0.50	215.0000	107.50
	11/26/2019	0.50	215.0000	107.50
Jeffrey W Reynhout	11/4/2019	1.00	215.0000	215.00
	11/14/2019	3.00	215.0000	645.00
	11/15/2019	6.00	215.0000	1,290.00
	11/18/2019	2.00	215.0000	430.00
	11/20/2019	4.00	215.0000	860.00
	11/21/2019	4.00	215.0000	860.00
	11/22/2019	3.00	215.0000	645.00
	11/25/2019	2.00	215.0000	430.00
	11/26/2019	2.00	215.0000	430.00
	11/27/2019	3.00	215.0000	645.00
		-----		-----
		33.50		7,202.50
<b>Total Senior Professional</b>				
<b>Total Rate Labor</b>				<b>18,302.50</b>

7A1 - Flushing System Study

Multiplier Labor

Class / Employee

Professional Engineer V

Mark S Pribak

	<u>Date</u>	<u>Hours</u>	<u>Cost Rate</u>	<u>Multiplier</u>	<u>Amount</u>
	11/25/2019	2.00	67.0200	3.100	415.52
	11/26/2019	1.00	67.0200	3.100	207.76
		3.00			623.28
<b>Total Professional Engineer V</b>					<b>623.28</b>
			<b>Total Multiplier Labor</b>		<b>623.28</b>
<b>Total Bill Task: 7A1 - Flushing System Study</b>					<b>18,925.78</b>

Total Project: MCW200501T - Chapaton RTB Canal Upgrades

131,501.95

Work Description:

Chapaton RTB Canal Upgrade:

Project management and coordination of design activities, staff and team meetings. Prepared monthly invoice and progress report. Project Progress meeting with MCPWO on October 30, 2019. Continued additional permitting efforts and assisting with coordinated response. Regulatory review of EGLE concern regarding Part 22 GW Discharge Rules and liner alternatives. Supplemental Permitting Document review meeting on November 19, 2019. Continued development of open space planning concepts. Continued due diligence and architect proposal solicitation for light house control building design. Issued contract to AEW for architectural services. Continued progressing design drawings and specifications to 60% level and QA/QC review. Construction 60% estimate and schedule development. Project drawing and specification review workshop for 60% design phase on November 19, 2019. Updated drawings with 60% review workshop comments. Commenced Chapaton RTB flushing system study work.



# Applied Science, Inc.

300 River Place Suite 5400 Detroit, MI 48207  
Phone: (313) 567-3990 Fax: (313) 567-3750  
www.asi-detroit.com

November 25, 2019

Invoice #7 (ASI Inv. #7476)

John Arvai, P.E.  
Wade Trim  
25251 Northline Road  
Taylor, Michigan 48180

RE: RTB Canal Upgrades  
(ASI Job No. 1831)

Services provided from September 22, 2019 through November 16, 2019.

<u>Employee</u>	<u>Classification</u>	<u>Direct Labor Hrs.</u>	<u>Hourly Rate</u>	<u>Total</u>
John Michalski	Sr. Project Manager	21.0	\$ 155.00	\$ 3,255.00
Paul Szaga	Project Engineer	10.0	\$ 115.00	\$ 1,150.00
Doria Herold Jackson	CADD	5.0	\$ 96.00	\$ 480.00
Dane Weibe	Project Engineer	3.0	\$ 115.00	\$ 345.00
Total this invoice:				\$ 5,230.00
Previous Amount Invoiced:				\$ 54,965.00
Total Invoiced To-Date:				\$ 60,195.00
Not To Exceed:				\$ 68,005.00
Amount Remaining:				\$ 7,810.00
<b>Total Amount Due This Invoice:</b>				<b>\$ 5,230.00</b>



462 South Ludlow Alley  
 Columbus, OH 43215  
 614-621-2796

Wade Trim Associates  
 John Arvai  
 jarvai@wadetrim.com  
 25251 Northline Road  
 Taylor, MI 48180

Invoice number 2191439  
 Date 11/19/2019

Project **k18101 St Clair Shores, Chapaton CSO Basin**

Professional Services for the Period ended October 31, 2019:

**\*\*Service Summary\*\***

**Professional Fees**

Standard Professional Services  
 Preliminary - Final Design

	Hours	Rate	Billed Amount
Landscape Architect II	37.00	115.00	4,255.00
Principal	8.00	210.00	1,680.00
Phase subtotal	45.00		5,935.00
Standard Professional Services subtotal			5,935.00
Professional Fees subtotal	45.00		5,935.00

**Reimbursable Expenses**

Reimbursable Expenses  
 Reimbursable Expenses

	Units	Cost Amount	Rate	Billed Amount
Mileage	33.90	19.66	0.58	19.66
<i>Meeting with SCS, Eastpointe, Roseville</i>				
<i>Meeting at Chapaton site</i>	34.80	20.18	0.58	20.18
Reproduction		34.29		34.29
<i>OVS Color - H. Wolfe, 10-22-219</i>				
Phase subtotal				74.13
Reimbursable Expenses subtotal				74.13
Reimbursable Expenses subtotal		74.13		74.13

Invoice total **6,009.13**



Wade Trim Associates  
 Project k18101 St Clair Shores, Chapaton CSO Basin

Invoice number 2191439  
 Date 11/19/2019

**Invoice Summary**

Description	Contract Amount	Prior Billed	Total Billed	Current Billed
Standard Professional Services				
Preliminary - Final Design	24,380.00	8,967.50	14,902.50	5,935.00
Reimbursable Expenses				
Reimbursable Expenses	0.00	428.72	502.85	74.13
<b>Total</b>	<b>24,380.00</b>	<b>9,396.22</b>	<b>15,405.35</b>	<b>6,009.13</b>

**Aging Summary**

Invoice Number	Invoice Date	Outstanding	Current	Over 30	Over 60	Over 90	Over 120
2191280	10/23/2019	8,417.92		8,417.92			
2191439	11/19/2019	6,009.13	6,009.13				
	<b>Total</b>	<b>14,427.05</b>	<b>6,009.13</b>	<b>8,417.92</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Approved by:

Christopher E. Hostettler, C.P.A.  
 C.F.O.

*Professional Services for the Period ended October 31, 2019:*

- *Concept Review & Coordination*
- *Design Revisions for Boardwalk and Pier*
- *Project Management and Base File Coordination*
- *Development of Image Preference Booklet & Meetings for Review*
- *Project and client team meetings*



0020017138



NTH Consultants, Ltd.

Infrastructure Engineering and Environmental Services

INVOICE

Wade-Trim Associates, Inc.  
25251 Northline  
Taylor MI 48180

Invoice #: 620558  
Project: 62190022  
Invoice Group: \*\*  
Invoice Date: 11/20/2019

Attention: Accounts Payable

For Professional Services Rendered through: 11/15/2019

P.O./Ref.#: Authorization per NTH/Wade Trim Standard Subconsultant Agreement dated February 28, 2019.

Engineering services related to the expansion of the Chapaton Basin

Phase Name	Maximum Budget	Previous Billings	Current Charges	Remaining Budget
10 -- Project Management	28,890.00	12,685.83	430.00	15,774.17
20 -- *C* - Preliminary Design	99,060.00	99,031.49	0.00	28.51
30 -- Final Design	91,200.00	5,540.25	4,318.50	81,341.25
40 -- Bidding Assistance	9,360.00	0.00	0.00	9,360.00
Project Total	228,510.00	117,257.57	4,748.50	106,503.93

Amount Due This Invoice :

\$ 4,748.50

REMIT TO: NTH Consultants, Ltd. - 41780 Six Mile Road - Suite 200 - Northville MI - 48168-3459  
Please include Project No. and Invoice No. on remittance.

TERMS: Due upon receipt. One percent (1%) interest per month charged on invoices over 30 days old.

Payment for all invoices is expected as per contract terms. All retainers are held and applied to final invoice for a project. Checks will be issued for any amounts collected as retainers that exceed the final invoice. Call 248-553-6300 with questions.

Budget to Actual  
 8.5 Mile Relief  
 As of December 31, 2019 = 25%

DESCRIPTION	2020 FINAL BUDGET	ENCUMBERED	ACTUAL	REMAINING BUDGET	PCT UTILIZED
<b>REVENUE ACCOUNTS</b>					
Interest Earned	80,000		67,696	12,304	84.6%
Other Revenue	5,000			5,000	0.0%
State Grant	-			-	100.0%
8.5 O&M/Charge Required Revenue	4,279,768		2,139,884	2,139,884	50.0%
PY Revenue-Fund Balance	3,098,050			3,098,050	0.0%
Rental Fee	16,464		4,116	12,348	25.0%
<i>Total Revenue Accounts</i>	7,479,282	-	2,211,696	5,267,586	29.6%
<b>EXPENSE ACCOUNTS</b>					
Application/Permit Fee	3,000		6,000	(3,000)	200.0%
Dues, Training, Conf, Subs.	5,750		66	5,684	1.1%
<b>Engineering</b>					
As needed Engineering	75,000			75,000	0.0%
Chapaton Improvements-Office Space	500,000			500,000	0.0%
Disinfection system upgrade (Design and Construction)	1,000,000			1,000,000	0.0%
Basin Structural Integrity Study**	-		36,232	(36,232)	0.0%
HVAC Design	200,000			200,000	0.0%
Flushing Study	75,000			75,000	0.0%
RTB/PS Ventilation Design	120,000			120,000	0.0%
Chapaton Improvements-Lab Relocation	250,000		18,948	231,052	7.6%
Basin Expansion Design	775,000		251,904	523,096	32.5%
In-System Storage Design(Gates on 8.5 Tunnel)	1,200,000		82,163	1,117,837	6.8%
9 Mile & 8 1/2 Mile Rehab	75,000		6,507	68,493	8.7%
New Equipment	23,500		303	23,197	1.3%
Office Supplies	1,000		46	954	4.6%
Operating Supplies	74,600		10,356	64,244	13.9%
Other Professional Svcs	46,800		2,168	44,632	4.6%
Personnel Services	979,953			979,953	0.0%
Repair & Maintenance	148,500		38,278	110,222	25.8%
Pumping and screening improvements	1,150,000			1,150,000	0.0%
SRF Replacement Reserve	259,215			259,215	0.0%
Scada System	243,839		411	243,428	0.2%
Utilities	273,125		21,446	251,679	7.9%
<i>Total Expense Accounts</i>	7,479,282	-	474,828	7,004,454	6.3%

	O&M Balance 9/30/2019	O&M	Total 12/31/2019
Cash - Operating	8,846,231	1,736,868	10,583,099
Accounts Receivable			0
Assets			0
Liabilities			0
Revenues		2,211,696	2,211,696
Expenditures		474,828	474,828
			0
Equity*	8,846,231		10,583,099

**Detail of 2019 Equity\***

Disinfection system upgrade (Design and Construction)	100,000	Basin Expansion Design	450,000
RTB/PS Ventilation Design	120,000	Pumping and screening improvements	1,215,000
Chapaton Improvements-Office Space	228,000	PLC Replacements at Chapaton East	40,000
In-System Storage Design (Gates on 8.5 Tunnel)	425,000	SRF Replacement Reserve	1,814,505
9 Mile & 8 1/2 Mile Rehab	67,800	Expansion Reserve (From State)	3,000,000
Scada Reserve	109,025	Capital Reserve	936,901
Phase 1 TRC Basin Equipment	100,000	Basin Structural Integrity Study**	60,000
As needed Engineering	40,000	Painting interior and garage façade	20,000
HVAC Design	60,000	Security Fence Structure-Gate Act	60,000

\*\* Project was projected to be completed during 18/19 budget cycle. However it was not, so funds designated in 18/19 for this project will be used in 19/20