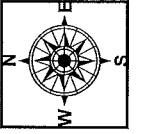


Miller  
Santo  
Leonetti

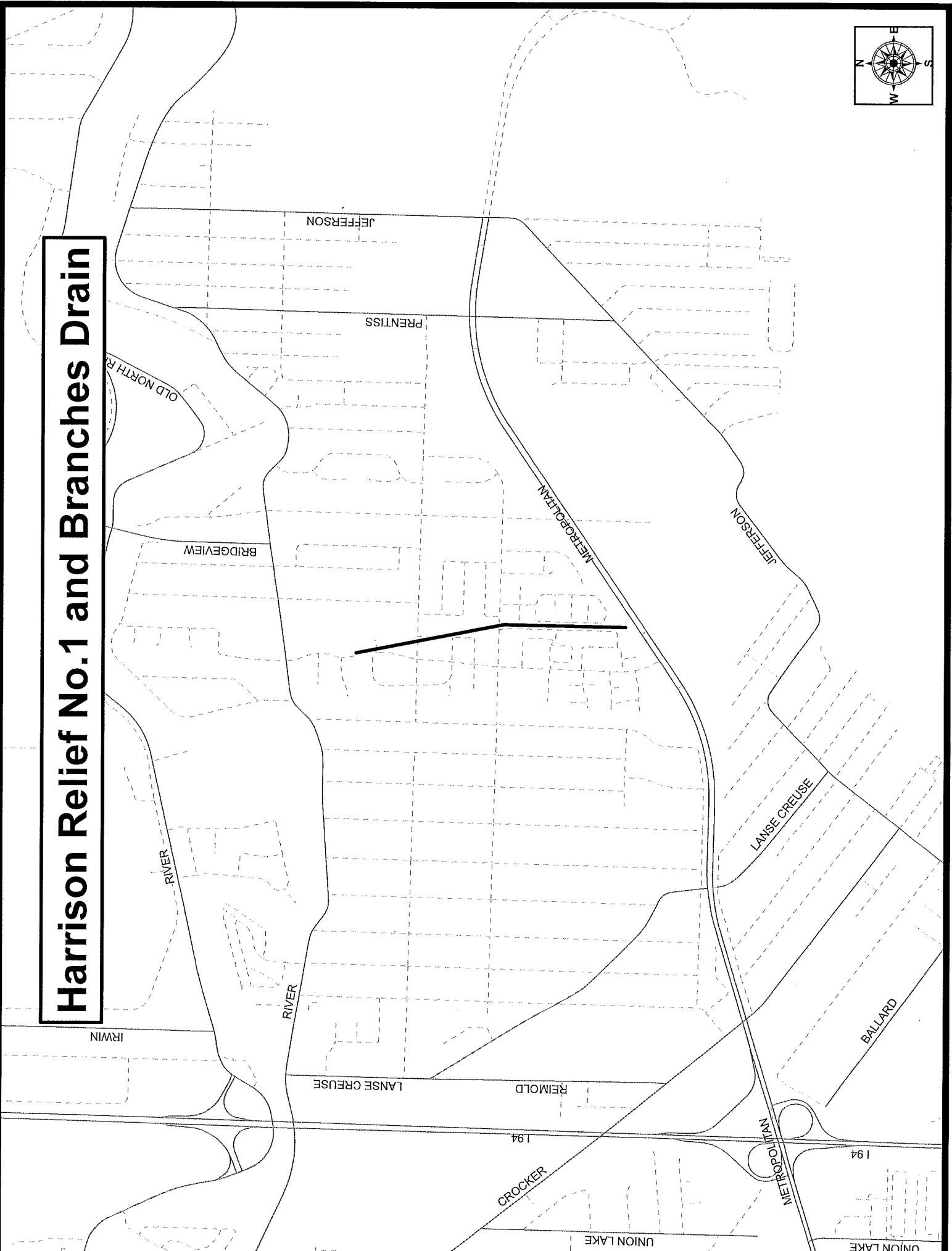
HARRISON RELIEF NO. 1 AND BRANCHES DRAIN  
INTRA-COUNTY DRAINAGE BOARD  
MAY 8, 2017  
11:45 A.M.  
AGENDA

Page No.

1. Call of meeting to order and roll call
2. Approval of Agenda for May 8, 2017
3. Approval of Minutes for October 5, 2010 3
4. Public participation
5. Motion: Approve the transfer of \$38,000 of surplus Harrison Relief No. 1 and Branches Drain funds to Harrison Township toward the replacement of the Beechwood Pump Station and associated drain cleanout costs 5
6. Financial Report – Bruce Manning 16
7. Adjourn



# Harrison Relief No.1 and Branches Drain



An adjourned meeting of the Intra-County Drainage Board for the **HARRISON RELIEF & BRANCHES #1** was held in the Office of the Macomb County Public Works Commissioner, 21777 Dunham, Clinton Township, Michigan, on October 5, 2010, at 8:00 A.M.

PRESENT: William Misterovich, Acting Chairman  
Kathleen Tocco, Member  
Andrey Duzyj, Member

ALSO PRESENT: Joseph Betz, SCADA Manager  
James Pistilli, Asst. Chief Engineer  
Gene Schabath, Deputy Public Works Commissioner  
Robert Sinnamon, Coordinator

The meeting was called to order by the Acting Chairman, William Misterovich. The meeting was opened to public participation, then closed, there being no comments from the public.

Acting Chairman presented the following invoice to the board for review and approval:


<u>Blade Action, Inc.</u>	
Invoice #8432 – Emergency Repair	
Removal of fallen tree & fence repair	\$700.00

Motion was made by Ms. Tocco, supported by Mr. Duzyj to approve the above referenced invoice as presented.

Ayes: Tocco, Duzyj, Misterovich  
Nays: None

Motion approved.

The meeting was adjourned on a motion by Ms. Tocco, seconded by Mr. Duzyj, and unanimously approved.

  
\_\_\_\_\_  
William Misterovich, Acting Chairman  
Chief Deputy Public Works Commissioner

STATE OF MICHIGAN  
COUNTY OF MACOMB

I certify that the foregoing is a true and correct copy of proceedings taken by the Intra-County Drainage Board for the Drainage District shown on the attached set of minutes, on October 5, 2010, 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.



---

William Misterovich, Acting Chairman  
Chief Deputy Public Works Commissioner

DATED: 10/5/10

H:\2010 Correspondence Saile\Sinnamon\5326.rs.doc



**C**HARTER **T**OWNSHIP OF **H**ARRISON

Office of the Supervisor

Phone: (586) 466-1445  
Fax: (586) 466-1470

May 3, 2017

Macomb County Public Works Office  
21777 Dunham Road  
Clinton Township, MI 48036  
Attention: Mrs. Candice Miller

Re: Harrison Township Beachwood Pump Station

Dear Mrs. Miller:

I am writing to you to request the assistance of the Macomb County Public Works Office (MCPWO) with upgrades to our storm sewer system. The Beachwood Pump Station is a critical part of the storm water infrastructure in Harrison Township. Almost 900 acres of storm water drainage flow through this pump station. It is positioned roughly at the intersection of Metro Parkway & the Vanter de Beuff Drain. It also accepts flow from the Harrison Relief Drain, the Savan Drain, & the Petit Conlet Drain.

Harrison Township was successful in securing a SAW Grant from the MDEQ in 2014. We used some of these funds to redesign the Beachwood Pump Station, as well as to engineer improvements to the adjacent detention pond. This engineering work was done with input from MCPWO staff engineers. We anticipate the total cost of the project to be approximately \$780,000. We have \$118,000 in funding for this project which was a required contribution from a nearby development. We have requested funding assistance from the Macomb County Department of Roads as well as the L'Anse Creuse Public Schools since they each have property within the district. The township is contributing \$100,000 from our general fund to help with the cost of the project. We have established a Special Assessment District to collect the balance of the revenue required to complete this project.

I am requesting assistance from MCPWO for the funding of this project. We have received requests from residents, asking why MCPWO isn't performing the work. We have explained that the pump station is a township asset, not a MCPWO asset. We have also explained that the township does not regularly contribute to MCPWO for drain maintenance & upgrades. However, I want to make sure that we ask for any assistance to help with the cost of this critical infrastructure upgrade. I look forward to your response. Please do not hesitate to contact me if further information is needed.

Sincerely,

Kenneth Verkest  
Supervisor



**Candice S. Miller**

Public Works Commissioner  
Macomb County

May 5, 2017

Harrison Relief No. 1 and Branches Drain Drainage Board,

Based on the request received from Harrison Township to the Macomb County Public Works office to participate in their special assessment district, it would be my recommendation that our participation would be \$40,000.

The \$40,000 participation level is constructed of the following:

- Harrison Relief Branches #1 - \$38,000
- Savan Drain - \$2,000

It is my belief that it is a necessary and appropriate expenditures of these drain funds to assist Harrison Township in their project to replace the Beachwood Pump Station as all three of these drains mentioned above flow in to that pump station. As the residents are assessing themselves, this is clearly an appropriate way for the Macomb County Public Works Office to work together with the community for the residents of Harrison Township.

Sincerely,

Candice S. Miller  
Macomb County Public Works Commissioner  
Chair, Harrison Relief No. 1 and Branches Drain Drainage District



# WADE TRIM

March 9, 2017

Charter Township of Harrison  
38151 L'Anse Creuse  
Harrison Township, MI 48045

Attention: Mr. Kenneth Verkest, Supervisor

Re: Beachwood Storm Water Pump Station

Dear Mr. Verkest:

In 2014, Harrison Township was awarded a SAW Grant through the State of Michigan. A portion of the grant funds was to be used for design engineering for the reconstruction of the Beachwood Storm Water Pump Station. The project has been designed, and bids have been received for the improvements to the station and the adjacent pond area. The purpose of this letter is to provide a brief background for the project, to summarize the responsibilities the Township has in relation to the SAW Grant, to summarize the design process and how the improvements were sized, to comment on project funding, and lastly to recommend bid award to the low bidder.

## Project Background

The Beachwood pump station was originally constructed with two pumps that were designed to operate together to provide the required pumping capacity for the original 315-acre service area. The existing pump station is powered by a 208-volt DTE service and transformer. A 208-volt service is no longer considered to be a standard power supply and is being phased out by DTE in favor of 240-volt service. Most large horsepower pumps (such as those needed for this project) are not designed to operate on 208-volt service. Currently, only one pump is operational and that pump is working at a greatly reduced capacity. In an effort to pump down the storm water pond and the Harrison Relief in-line storage, the Township staff has supplemented the one existing pump with several smaller portable pumps. These pumps require almost constant monitoring and are costly to run. Even with the additional pumps it still takes several days after a storm event to pump the pond down to normal water levels.

The current outlet for the pump station is to a box culvert that flows by gravity under Metropolitan Parkway, then through an open-channel drain approximately 3,000 feet to Lake St. Clair. The existing culvert was cleaned out by the Macomb County Department of Roads in 2012. Approximately four feet of sediment was removed from the culvert, however the downstream drain that flows to Lake St. Clair has not been cleaned out. It is estimated that the downstream drain also has three to four feet of sediment that would need to be removed

Wade Trim Associates, Inc. 734.947.9700  
25251 Northline Road 800.482.2864  
P.O. Box 10 734.947.9726 fax  
Taylor, MI 48180 www.wadetrिम.com



to allow the Beachwood pump station in its current configuration to discharge and drain properly.

#### SAW Grant Requirements

Design engineering for this project was funded through the SAW Grant. The conditions of the grant require the Township to award a contract for construction by May 7, 2017. Failure to do so means that the design engineering will no longer be eligible for grant funding. By awarding a contract for the project, the Township will fulfill its obligations under the grant agreement. The low-bid Contractor has agreed to guarantee his bid price to the Township through April 9<sup>th</sup>.

#### Project Basis of Design

A significant portion of the design effort for this project went into establishing the basis of design for the pump station, the overflow weir and conveyance system. When designing storm water systems there is always a balance that must be attained between the level of service of the system and the cost of construction and operation. Most storm water conveyance systems are designed for a 10-year design storm criteria. This is a storm that statistically represents the largest event that would normally happen in a 10-year period. While it is certainly possible to experience storms that meet or exceed the magnitude of a 10-year storm, this design standard is typically considered to be a good balance of protecting the public and expenditure of public funds.

During the design process, we evaluated systems that would provide service for 2-year, 5-year, 10-year, 25-year, 50-year, and 100-year storm events. The results of our analysis were presented in a technical report which was reviewed by the Township and Macomb County Public Works, who concluded that a 10-year design storm was the appropriate standard for this project. A copy of this report is available in the Sewer and Water Department for review. We would be happy to provide copies to Board Members that wish to review the report.

#### Project Funding

The grant application for the SAW Grant required the Township to identify funding sources for the construction of the Beachwood Pump Station. This was required so the State could be assured that a plan was in place to bring the project to construction, thus enabling the design engineering to be grant eligible. The SAW Grant application indicates that the project will be funded through a combination of funds placed on deposit by developers for this project with the balance of the project being funded through a special assessment district to those properties benefitting from the project.

We have verified the tributary drainage areas with Macomb County Public Works and have provided a list of properties to the Clerk's office for their use in the special assessment process. The total drainage area benefitting from this improvement is 828.09 acres. We understand that the Township attorney is researching whether public properties (Department of Roads and School District) can be included in the special assessment or not. The public property represents 139.07 acres.



The estimated project costs for this project are as follows:

Construction contract	\$708,294
Construction contingency	\$70,829
Estimate for Additional Drain clean-up work	\$40,000
Estimate for Petit-Conlet Drain clean out	\$25,000
Total Estimated Cost	\$844,123

The Township has approximately \$108,000 that was collected from previous developments as payment in lieu of making improvements to the pump station that can be applied to this project. The remaining cost that would be assessed is \$736,123. The average property size in the benefitting area is 0.45 acres. The estimated assessment cost for properties of varying sizes is shown in the following table:

Property Size	Assessment with public property included	Assessment with public property not included
0.25 acre	\$222.24	\$267.09
0.45 acre	\$400.02	\$480.76
0.75 acre	\$666.71	\$801.27
1.0 acre	\$888.94	\$1,068.36

Bid Award

On November 10, 2016, bids for the Beachwood Pump Station Project were received and public read. A total of nine bids were received. The bids ranged from \$708,294 to \$982,723 as shown on the attached bid tabulation.

<u>Contractor</u>	<u>Bid Amount</u>
Boddy Construction	\$708,294.00
M-K Construction	\$724,932.72
Teltow Contracting	\$805,735.00
DVM Utilities	\$865,800.00
Zito Construction	\$866,992.00
Pamar Enterprises	\$880,866.00
Giannetti Construction	\$890,090.00
VIL Construction	\$947,100.00
Murray Underground	\$982,723.00

The low bid was submitted by Boddy Construction of Port Huron, MI. Wade Trim has worked with this Contractor, however it was many years ago. We have checked references for projects with the Macomb County Department of Roads, St. Clair County Road Commission, Port Huron Township, Kimball Township, Port Huron Township, and the City of Marysville. Several of these projects involved pump station work. All the references indicated that Boddy Construction was good to work with, fair in dealing with change order pricing, and did good quality work.

Charter Township of Harrison  
March 9, 2017  
Page 4

We have reviewed the statement of experience and qualifications provided by the Contractor. Our review indicates that this Contractor has the necessary equipment, personnel, experience, and financial capability to perform this work in accordance with the contract documents and project specifications.

We recommend that the Township award the construction contract for the Beachwood Storm Water Pump Station to Boddy Construction in the amount of \$707,294. We further recommend that a project contingency in the amount of 10% be established to address any unforeseen project costs at the discretion of the Director of Public Services.

If you have any questions regarding the proposed project or the bid recommendation, please contact our office at 734.947.2793.

Very truly yours,

Wade Trim Associates, Inc.

A handwritten signature in cursive script that reads "David M. Nummer".

David M. Nummer, PE

DMN:jel  
HSN 2097-03T  
20170308Verkest  
Enclosure

cc: Mr. David Axtell, Director of Public Services

WADE TRIM  
 BID TABULATION  
 SUBJ Beachwood Pump Station  
 JOB # HSN 2097-011  
 CLIENT CLIENT  
 DATE March 9, 2017  
 Bid D November 10, 2016

AY ITEM BER	DESCRIPTION	QUANTITY	UNIT	BODDY NUMBER_1	M-K NUMBER_2	TELLOW NUMBER_3	D.V.M. UTILITIES NUMBER_4	ZITO NUMBER_5	PAMAR ENTERPRISES NUMBER_6	GIANNETTI BUILDING NUMBER_7	CONSTRUCTIO N NUMBER_8	MURRAY UNDERGROUND NUMBER_9
1	Cleatring and Grubbing	900	Syd	7.00 \$6,300.00 \$6,300.00	38.93 \$35,037.00 \$35,037.00	10.00 \$9,000.00 \$9,000.00	11.00 \$9,900.00 \$9,900.00	30.00 \$27,000.00 \$27,000.00	4.00 \$3,600.00 \$3,600.00	5.00 \$4,500.00 \$4,500.00	5.00 \$4,500.00 \$4,500.00	12.00 \$10,800.00 \$10,800.00
2	Remove and Replace Fence	30	Lft	\$30.00 \$900.00 \$900.00	\$54.00 \$1,620.00 \$1,620.00	\$50.00 \$1,500.00 \$1,500.00	\$50.00 \$1,500.00 \$1,500.00	\$90.00 \$2,700.00 \$2,700.00	\$49.00 \$1,470.00 \$1,470.00	\$58.00 \$1,740.00 \$1,740.00	\$100.00 \$3,000.00 \$3,000.00	\$80.00 \$2,400.00 \$2,400.00
3	Remove and Salvage Existing Split Rail Fence	216	Lft	\$2.00 \$432.00 \$432.00	\$9.60 \$2,073.60 \$2,073.60	\$10.00 \$2,160.00 \$2,160.00	\$10.00 \$2,160.00 \$2,160.00	\$10.00 \$2,160.00 \$2,160.00	\$4.50 \$972.00 \$972.00	\$19.00 \$4,104.00 \$4,104.00	\$7.50 \$1,620.00 \$1,620.00	\$6.00 \$1,296.00 \$1,296.00
4	Remove Existing Weir	1	L.S.	\$3,900.00 \$3,900.00 \$3,900.00	\$2,664.64 \$2,664.64 \$2,664.64	\$3,000.00 \$3,000.00 \$3,000.00	\$3,500.00 \$3,500.00 \$3,500.00	\$1,200.00 \$1,200.00 \$1,200.00	\$1,500.00 \$1,500.00 \$1,500.00	\$6,300.00 \$6,300.00 \$6,300.00	\$7,500.00 \$7,500.00 \$7,500.00	\$1,000.00 \$1,000.00 \$1,000.00
5	Remove Existing Pedestrian Bridge and Abutments	1	L.S.	\$55,000.00 \$55,000.00 \$55,000.00	\$8,696.96 \$8,696.96 \$8,696.96	\$4,000.00 \$4,000.00 \$4,000.00	\$5,000.00 \$5,000.00 \$5,000.00	\$4,500.00 \$4,500.00 \$4,500.00	\$12,500.00 \$12,500.00 \$12,500.00	\$6,700.00 \$6,700.00 \$6,700.00	\$22,500.00 \$22,500.00 \$22,500.00	\$7,000.00 \$7,000.00 \$7,000.00
6	Remove Existing Concrete Wriwwalls	1	L.S.	\$2,300.00 \$2,300.00 \$2,300.00	\$6,409.28 \$6,409.28 \$6,409.28	\$4,000.00 \$4,000.00 \$4,000.00	\$5,500.00 \$5,500.00 \$5,500.00	\$6,500.00 \$6,500.00 \$6,500.00	\$3,500.00 \$3,500.00 \$3,500.00	\$7,000.00 \$7,000.00 \$7,000.00	\$6,000.00 \$6,000.00 \$6,000.00	\$2,100.00 \$2,100.00 \$2,100.00
7	Remove Existing Bituminous Path	40	Syd	\$10.00 \$400.00 \$400.00	\$35.55 \$1,422.00 \$1,422.00	\$20.00 \$800.00 \$800.00	\$15.00 \$600.00 \$600.00	\$25.00 \$1,000.00 \$1,000.00	\$10.00 \$400.00 \$400.00	\$20.00 \$800.00 \$800.00	\$10.00 \$400.00 \$400.00	\$50.00 \$2,000.00 \$2,000.00
8	Abandon Pump Station, Complete	1	L.S.	\$10,150.00 \$10,150.00 \$10,150.00	\$13,334.74 \$13,334.74 \$13,334.74	\$12,000.00 \$12,000.00 \$12,000.00	\$10,000.00 \$10,000.00 \$10,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$15,000.00 \$15,000.00 \$15,000.00	\$41,000.00 \$41,000.00 \$41,000.00	\$27,500.00 \$27,500.00 \$27,500.00	\$7,500.00 \$7,500.00 \$7,500.00
9	Abandon Ex. 36" Pump Station Influent	40	Lft	\$49.00 \$1,960.00 \$1,960.00	\$88.01 \$3,920.40 \$3,920.40	\$100.00 \$4,000.00 \$4,000.00	\$175.00 \$7,000.00 \$7,000.00	\$60.00 \$2,400.00 \$2,400.00	\$10.00 \$400.00 \$400.00	\$70.00 \$2,800.00 \$2,800.00	\$150.00 \$6,000.00 \$6,000.00	\$40.00 \$1,600.00 \$1,600.00
10	Abandon Ex. 12" Pump Station Outfall	360	Lft	\$6.00 \$2,160.00 \$2,160.00	\$10.05 \$3,618.00 \$3,618.00	\$10.00 \$3,600.00 \$3,600.00	\$16.50 \$5,940.00 \$5,940.00	\$10.00 \$3,600.00 \$3,600.00	\$1.00 \$360.00 \$360.00	\$18.00 \$6,480.00 \$6,480.00	\$15.00 \$5,400.00 \$5,400.00	\$10.00 \$3,600.00 \$3,600.00
11	Pump Station Influent, 48 inch, C76, CHV, Trench A	130	Lft	\$261.00 \$33,930.00 \$33,930.00	\$287.17 \$37,332.10 \$37,332.10	\$270.00 \$35,100.00 \$35,100.00	\$350.00 \$45,900.00 \$45,900.00	\$415.00 \$53,950.00 \$53,950.00	\$350.00 \$45,500.00 \$45,500.00	\$330.00 \$42,900.00 \$42,900.00	\$240.00 \$31,200.00 \$31,200.00	\$160.00 \$20,800.00 \$20,800.00
12	End Section w/Animal Grate for 48 inch Influent	1	Each	\$2,500.00 \$2,500.00 \$2,500.00	\$21,711.56 \$21,711.56 \$21,711.56	\$3,500.00 \$3,500.00 \$3,500.00	\$4,500.00 \$4,500.00 \$4,500.00	\$3,000.00 \$3,000.00 \$3,000.00	\$4,000.00 \$4,000.00 \$4,000.00	\$4,800.00 \$4,800.00 \$4,800.00	\$6,500.00 \$6,500.00 \$6,500.00	\$3,300.00 \$3,300.00 \$3,300.00
13	Culvert, 12 inch, C76, CHV	30	Lft	\$34.50 \$1,035.00 \$1,035.00	\$47.16 \$1,414.80 \$1,414.80	\$70.00 \$2,100.00 \$2,100.00	\$50.00 \$1,500.00 \$1,500.00	\$55.00 \$1,650.00 \$1,650.00	\$110.00 \$3,300.00 \$3,300.00	\$99.00 \$2,970.00 \$2,970.00	\$110.00 \$3,300.00 \$3,300.00	\$45.00 \$1,350.00 \$1,350.00

WADE TRIM  
 BID TABULATION  
 SUBJ Beachwood Pump Station  
 JOB I HSN 2097-01T  
 CLIENT  
 DATE March 9, 2017  
 Bid D November 10, 2016

AY ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	BODDY NUMBER 1	M-K NUMBER 2	TELTOW NUMBER 3	D.V.M. UTILITIES NUMBER 4	ZITO NUMBER 5	PAMAR ENTERPRISES NUMBER 6	GIANNETTI BUILDING NUMBER 7	CONSTRUCTO N NUMBER 8	MURRAY UNDERGROUND NUMBER 9
14	End Sections for 12 inch RCP Culvert	Each	2	\$480.00 \$900.00 \$900.00	\$756.00 \$1,512.00 \$1,512.00	\$600.00 \$1,200.00 \$1,200.00	\$700.00 \$1,400.00 \$1,400.00	\$630.00 \$1,260.00 \$1,260.00	\$600.00 \$1,200.00 \$1,200.00	\$1,000.00 \$2,000.00 \$2,000.00	\$700.00 \$1,400.00 \$1,400.00	\$500.00 \$1,000.00 \$1,000.00
15	Culvert, Precast Concrete Box, 8' x 6'	Lift	30	\$940.00 \$28,200.00 \$28,200.00	\$1,181.30 \$35,439.00 \$35,439.00	\$1,808.00 \$4,240.00 \$4,240.00	\$1,250.00 \$37,500.00 \$37,500.00	\$2,100.00 \$63,000.00 \$63,000.00	\$1,350.00 \$40,500.00 \$40,500.00	\$1,900.00 \$57,000.00 \$57,000.00	\$2,500.00 \$75,000.00 \$75,000.00	\$1,250.00 \$37,500.00 \$37,500.00
16	Concrete Collar	L.S.	1	\$3,700.00 \$3,700.00 \$3,700.00	\$15,173.92 \$15,173.92 \$15,173.92	\$3,750.00 \$3,750.00 \$3,750.00	\$5,000.00 \$5,000.00 \$5,000.00	\$4,500.00 \$4,500.00 \$4,500.00	\$3,500.00 \$3,500.00 \$3,500.00	\$13,000.00 \$13,000.00 \$13,000.00	\$2,500.00 \$2,500.00 \$2,500.00	\$3,200.00 \$3,200.00 \$3,200.00
17	Concrete Headwall on Box Culvert	L.S.	1	\$3,700.00 \$3,700.00 \$3,700.00	\$3,178.48 \$3,178.48 \$3,178.48	\$4,000.00 \$4,000.00 \$4,000.00	\$4,500.00 \$4,500.00 \$4,500.00	\$2,000.00 \$2,000.00 \$2,000.00	\$2,500.00 \$2,500.00 \$2,500.00	\$8,000.00 \$8,000.00 \$8,000.00	\$3,500.00 \$3,500.00 \$3,500.00	\$4,200.00 \$4,200.00 \$4,200.00
18	Concrete Cut-off Wall on Box Culvert	L.S.	1	\$750.00 \$750.00 \$750.00	\$4,858.48 \$4,858.48 \$4,858.48	\$6,000.00 \$6,000.00 \$6,000.00	\$5,000.00 \$5,000.00 \$5,000.00	\$2,750.00 \$2,750.00 \$2,750.00	\$1,500.00 \$1,500.00 \$1,500.00	\$9,000.00 \$9,000.00 \$9,000.00	\$4,000.00 \$4,000.00 \$4,000.00	\$2,500.00 \$2,500.00 \$2,500.00
19	Concrete Settling Basin	L.S.	1	\$6,800.00 \$6,800.00 \$6,800.00	\$10,103.55 \$10,103.55 \$10,103.55	\$6,000.00 \$6,000.00 \$6,000.00	\$9,500.00 \$9,500.00 \$9,500.00	\$11,700.00 \$11,700.00 \$11,700.00	\$15,600.00 \$15,600.00 \$15,600.00	\$13,000.00 \$13,000.00 \$13,000.00	\$12,500.00 \$12,500.00 \$12,500.00	\$6,500.00 \$6,500.00 \$6,500.00
20	Site Grading	L.S.	1	\$7,738.00 \$7,738.00 \$7,738.00	\$7,197.25 \$7,197.25 \$7,197.25	\$12,000.00 \$12,000.00 \$12,000.00	\$10,000.00 \$10,000.00 \$10,000.00	\$30,000.00 \$30,000.00 \$30,000.00	\$12,500.00 \$12,500.00 \$12,500.00	\$6,300.00 \$6,300.00 \$6,300.00	\$85,000.00 \$85,000.00 \$85,000.00	\$15,000.00 \$15,000.00 \$15,000.00
21	Embankment	L.S.	1	\$3,100.00 \$3,100.00 \$3,100.00	\$1,799.31 \$1,799.31 \$1,799.31	\$15,000.00 \$15,000.00 \$15,000.00	\$10,000.00 \$10,000.00 \$10,000.00	\$5,000.00 \$5,000.00 \$5,000.00	\$2,500.00 \$2,500.00 \$2,500.00	\$3,800.00 \$3,800.00 \$3,800.00	\$12,500.00 \$12,500.00 \$12,500.00	\$10,800.00 \$10,800.00 \$10,800.00
22	Conceret Drive Approach, 9 inch	Syd	390	\$65.00 \$25,350.00 \$25,350.00	\$63.68 \$24,835.20 \$24,835.20	\$55.50 \$21,645.00 \$21,645.00	\$95.00 \$37,050.00 \$37,050.00	\$65.00 \$25,350.00 \$25,350.00	\$55.00 \$21,450.00 \$21,450.00	\$104.00 \$40,560.00 \$40,560.00	\$65.00 \$25,350.00 \$25,350.00	\$52.00 \$20,280.00 \$20,280.00
23	Concrete Weir	Lift	38	\$276.00 \$10,488.00 \$10,488.00	\$189.36 \$7,195.68 \$7,205.94	\$100.00 \$3,800.00 \$3,800.00	\$150.00 \$5,700.00 \$5,700.00	\$140.00 \$5,320.00 \$5,320.00	\$150.00 \$5,700.00 \$5,700.00	\$201.00 \$7,638.00 \$7,638.00	\$200.00 \$7,600.00 \$7,600.00	\$140.00 \$5,320.00 \$5,320.00
24	Heavy Riprap	Syd	60	\$95.00 \$5,700.00 \$5,700.00	\$84.96 \$5,097.60 \$5,097.60	\$70.00 \$4,200.00 \$4,200.00	\$200.00 \$12,000.00 \$12,000.00	\$90.00 \$5,400.00 \$5,400.00	\$75.00 \$4,500.00 \$4,500.00	\$25.00 \$1,500.00 \$1,500.00	\$225.00 \$13,500.00 \$13,500.00	\$54.00 \$3,240.00 \$3,240.00
25	Pump Station, Complete	L.S.	1	\$379,054.00 \$379,054.00 \$379,054.00	\$360,904.53 \$360,904.53 \$360,904.53	\$482,480.00 \$482,480.00 \$482,480.00	\$500,000.00 \$500,000.00 \$500,000.00	\$472,625.00 \$472,625.00 \$472,625.00	\$575,000.00 \$575,000.00 \$575,000.00	\$446,000.00 \$446,000.00 \$446,000.00	\$440,000.00 \$440,000.00 \$440,000.00	\$695,000.00 \$695,000.00 \$695,000.00
26	Allowance for DTE Electric Service	L.S.	1	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00	\$25,000.00 \$25,000.00 \$25,000.00

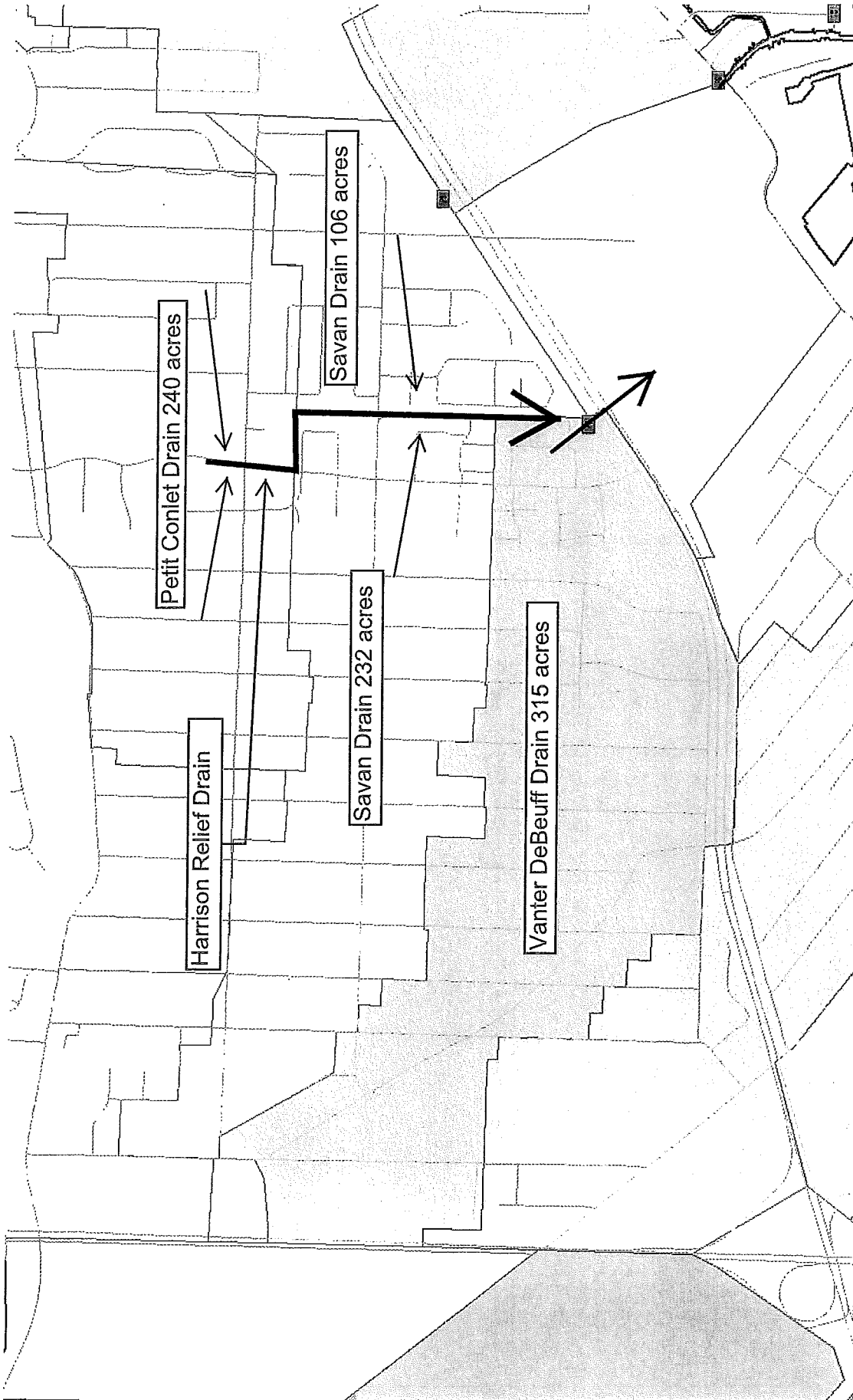
WADE TRIM  
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 SUBJ Beachwood Pump Station  
 JOB I HSN 2097-01T  
 CLIER CLIENT  
 DATE March 9, 2017  
 Bid D November 10, 2016

AY ITEM BER	DESCRIPTION	UNIT	QUANTITY	BODDY NUMBER 1	M-K NUMBER 2	TELLOW NUMBER 3	D.V.M. UTILITIES NUMBER 4	ZITO NUMBER 5	PAMAR ENTERPRISES NUMBER 6	GIANNETTI BUILDING NUMBER 7	V.I.L. CONSTRUCTO N NUMBER 8	MURRAY UNDERGROUND NUMBER 9
27	Allowance for CMS Gas Service	L.S.	1	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00
28	21AA Aggregate, Base Course	Ton	150	\$20.00 \$3,000.00 \$3,000.00 \$3,000.00	\$33.59 \$5,038.50 \$5,038.50 \$5,038.50	\$29.00 \$4,350.00 \$4,350.00 \$4,350.00	\$40.00 \$6,000.00 \$6,000.00 \$6,000.00	\$35.00 \$5,250.00 \$5,250.00 \$5,250.00	\$20.00 \$3,000.00 \$3,000.00 \$3,000.00	\$27.00 \$4,050.00 \$4,050.00 \$4,050.00	\$40.00 \$6,000.00 \$6,000.00 \$6,000.00	\$28.00 \$4,200.00 \$4,200.00 \$4,200.00
29	Shared Use Path, HMA	Ton	21	\$100.00 \$2,100.00 \$2,100.00 \$2,100.00	\$240.00 \$5,040.00 \$5,040.00 \$5,040.00	\$200.00 \$4,200.00 \$4,200.00 \$4,200.00	\$175.00 \$3,675.00 \$3,675.00 \$3,675.00	\$250.00 \$5,250.00 \$5,250.00 \$5,250.00	\$365.00 \$7,665.00 \$7,665.00 \$7,665.00	\$178.00 \$3,738.00 \$3,738.00 \$3,738.00	\$350.00 \$7,350.00 \$7,350.00 \$7,350.00	\$385.00 \$8,085.00 \$8,085.00 \$8,085.00
30	Gate, Chain Link, 6' H, 22 foot	Each	1	\$1,950.00 \$1,950.00 \$1,950.00 \$1,950.00	\$1,980.00 \$1,980.00 \$1,980.00 \$1,980.00	\$3,950.00 \$3,950.00 \$3,950.00 \$3,950.00	\$3,000.00 \$3,000.00 \$3,000.00 \$3,000.00	\$4,000.00 \$4,000.00 \$4,000.00 \$4,000.00	\$1,791.00 \$1,791.00 \$1,791.00 \$1,791.00	\$7,000.00 \$7,000.00 \$7,000.00 \$7,000.00	\$4,500.00 \$4,500.00 \$4,500.00 \$4,500.00	\$4,500.00 \$4,500.00 \$4,500.00 \$4,500.00
31	Install Salvaged Split Rail Fence	Lft	96	\$22.00 \$2,112.00 \$2,112.00 \$2,112.00	\$48.00 \$4,608.00 \$4,608.00 \$4,608.00	\$10.00 \$960.00 \$960.00 \$960.00	\$25.00 \$2,400.00 \$2,400.00 \$2,400.00	\$12.00 \$1,152.00 \$1,152.00 \$1,152.00	\$19.25 \$1,848.00 \$1,848.00 \$1,848.00	\$25.00 \$2,400.00 \$2,400.00 \$2,400.00	\$30.00 \$2,880.00 \$2,880.00 \$2,880.00	\$12.00 \$1,152.00 \$1,152.00 \$1,152.00
32	Chain Link Fence, Black Vinyl Coated, 4'	Lft	20	\$31.00 \$620.00 \$620.00 \$620.00	\$84.00 \$1,680.00 \$1,680.00 \$1,680.00	\$80.00 \$1,600.00 \$1,600.00 \$1,600.00	\$55.00 \$1,100.00 \$1,100.00 \$1,100.00	\$95.00 \$1,900.00 \$1,900.00 \$1,900.00	\$45.50 \$910.00 \$910.00 \$910.00	\$30.00 \$600.00 \$600.00 \$600.00	\$100.00 \$2,000.00 \$2,000.00 \$2,000.00	\$100.00 \$2,000.00 \$2,000.00 \$2,000.00
33	Ditch Sediment Trap w/Enviroberm Check Dam	Each	5	\$400.00 \$2,000.00 \$2,000.00 \$2,000.00	\$428.46 \$2,142.30 \$2,142.30 \$2,142.30	\$750.00 \$3,750.00 \$3,750.00 \$3,750.00	\$700.00 \$3,500.00 \$3,500.00 \$3,500.00	\$225.00 \$1,125.00 \$1,125.00 \$1,125.00	\$100.00 \$500.00 \$500.00 \$500.00	\$275.00 \$1,375.00 \$1,375.00 \$1,375.00	\$500.00 \$2,500.00 \$2,500.00 \$2,500.00	\$500.00 \$2,500.00 \$2,500.00 \$2,500.00
34	Silt Fence	Lft	900	\$3.00 \$2,700.00 \$2,700.00 \$2,700.00	\$2.73 \$2,457.00 \$2,457.00 \$2,457.00	\$1.00 \$900.00 \$900.00 \$900.00	\$3.75 \$3,375.00 \$3,375.00 \$3,375.00	\$3.00 \$2,700.00 \$2,700.00 \$2,700.00	\$1.50 \$1,350.00 \$1,350.00 \$1,350.00	\$2.50 \$2,250.00 \$2,250.00 \$2,250.00	\$4.00 \$3,600.00 \$3,600.00 \$3,600.00	\$1.50 \$1,350.00 \$1,350.00 \$1,350.00
35	Temporary Gravel Construction Entrance/ Exit	Each	2	\$2,300.00 \$4,600.00 \$4,600.00 \$4,600.00	\$5,362.32 \$10,724.64 \$10,724.64 \$10,724.64	\$3,000.00 \$6,000.00 \$6,000.00 \$6,000.00	\$5,500.00 \$11,000.00 \$11,000.00 \$11,000.00	\$1,500.00 \$3,000.00 \$3,000.00 \$3,000.00	\$1,500.00 \$3,000.00 \$3,000.00 \$3,000.00	\$2,345.00 \$4,690.00 \$4,690.00 \$4,690.00	\$3,500.00 \$7,000.00 \$7,000.00 \$7,000.00	\$4,100.00 \$8,200.00 \$8,200.00 \$8,200.00
36	Restoration with 3 inches Topsoil, Seed, Fertilizer and Mulch	L.S.	1	\$22,880.00 \$22,880.00 \$22,880.00 \$22,880.00	\$9,939.20 \$9,939.20 \$9,939.20 \$9,939.20	\$11,000.00 \$11,000.00 \$11,000.00 \$11,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$15,000.00 \$15,000.00 \$15,000.00 \$15,000.00	\$7,800.00 \$7,800.00 \$7,800.00 \$7,800.00	\$29,600.00 \$29,600.00 \$29,600.00 \$29,600.00	\$32,500.00 \$32,500.00 \$32,500.00 \$32,500.00	\$6,000.00 \$6,000.00 \$6,000.00 \$6,000.00
37	Mulch Blanket	S.Y.	300	\$0.75 \$225.00 \$225.00 \$225.00	\$1.51 \$453.00 \$453.00 \$453.00	\$5.00 \$1,500.00 \$1,500.00 \$1,500.00	\$5.00 \$1,500.00 \$1,500.00 \$1,500.00	\$3.50 \$1,050.00 \$1,050.00 \$1,050.00	\$5.50 \$1,650.00 \$1,650.00 \$1,650.00	\$2.65 \$795.00 \$795.00 \$795.00	\$5.00 \$1,500.00 \$1,500.00 \$1,500.00	\$1.50 \$450.00 \$450.00 \$450.00
38	Traffic Maintenance and Control	L.S.	1	\$9,010.00 \$9,010.00 \$9,010.00 \$9,010.00	\$3,120.00 \$3,120.00 \$3,120.00 \$3,120.00	\$7,000.00 \$7,000.00 \$7,000.00 \$7,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00	\$24,000.00 \$24,000.00 \$24,000.00 \$24,000.00	\$25,000.00 \$25,000.00 \$25,000.00 \$25,000.00	\$10,000.00 \$10,000.00 \$10,000.00 \$10,000.00
39	Audiot/ Video Route Survey	L.S.	1	\$900.00 \$900.00 \$900.00 \$900.00	\$8,500.00 \$8,500.00 \$8,500.00 \$8,500.00	\$1,700.00 \$1,700.00 \$1,700.00 \$1,700.00	\$2,000.00 \$2,000.00 \$2,000.00 \$2,000.00	\$1,500.00 \$1,500.00 \$1,500.00 \$1,500.00	\$1,000.00 \$1,000.00 \$1,000.00 \$1,000.00	\$1,700.00 \$1,700.00 \$1,700.00 \$1,700.00	\$1,500.00 \$1,500.00 \$1,500.00 \$1,500.00	\$2,500.00 \$2,500.00 \$2,500.00 \$2,500.00
40	Inspector Days	\$/Day	\$550	45	34	45	60	30	48	60	50	50

WADE TRIM  
 BID TABULATION  
 SUBJ Beachwood Pump Station  
 JOB HSN 2097-01T  
 CLIENT  
 DATE March 9, 2017  
 Bid D November 10, 2016

AY ITEM BER	DESCRIPTION	QUANTITY	UNIT	BODDY NUMBER 1	M-K NUMBER 2	TELTOW NUMBER 3	D.V.M. UTILITIES NUMBER 4	ZITO NUMBER 5	PAMAR ENTERPRISES NUMBER 6	GIANNETTI BUILDING NUMBER 7	V.I.L. CONSTRUCTIO N NUMBER 8	MURRAY UNDERGROUND NUMBER 9
				\$24,750.00	\$18,700.00	\$24,750.00	\$33,000.00	\$16,500.00	\$26,400.00	\$33,000.00	\$27,500.00	\$27,500.00
				\$24,750.00	\$18,700.00	\$24,750.00	\$33,000.00	\$16,500.00	\$26,400.00	\$33,000.00	\$27,500.00	\$27,500.00
41	Total Contract Price			\$708,294.00	\$724,932.72 *	\$805,735.00	\$865,800.00	\$866,992.00	\$880,866.00	\$890,090.00	\$947,100.00	\$982,723.00 *
				\$708,294.00	\$724,942.98	\$805,735.00	\$865,800.00	\$866,992.00	\$880,866.00	\$890,090.00	\$947,100.00	\$973,723.00

\*=correction made



Map showing the original area tributary to the Beachwood Pump Station (315 acres) and the additional area added by the Harrison Relief Drain (578 acres).

**YTD Trial Balance**

**Fund: Harrison Relief Branches #1**

**As of Fiscal Period: Oct 1, 2016-April 30, 2017**

	<b>O&amp;M Balance 9/30/2016</b>	<b>O&amp;M</b>	<b>Total 4/30/2017</b>
<b>Cash - Operating</b>	48,717.52	(1,430.97)	47,286.55
<b>Accounts Receivable</b>			0.00
<b>Assets</b>			0.00
<b>Liabilities</b>		8,680.52	8,680.52
<b>Revenues</b>		70.36	70.36
<b>Expenditures</b>		10,181.85	10,181.85
<b>Equity</b>	48,717.52		38,606.03

**NOTES**

Available Cash 38,606.03



**YTD Trial Balance**

**Fund: Savan & Extension**

**As of Fiscal Period: Oct 1, 2016-April 30, 2017**

	<b>O&amp;M Balance 9/30/2016</b>	<b>O&amp;M</b>	<b>Total 4/30/2017</b>
<b>Cash - Operating</b>	16,048.09		16,048.09
<b>Accounts Receivable</b>			0.00
<b>Assets</b>			0.00
<b>Liabilities</b>	16,031.10	(2,750.00)	13,281.10
<b>Revenues</b>		2,750.00	2,750.00
<b>Expenditures</b>			0.00
<b>Equity</b>	16.99		2,766.99

**Notes**

Available Cash 2,766.99