



Mr. Jim Prom  
Bassett Creek Watershed Management Commission  
7800 Golden Valley Road  
Golden Valley, MN 55427

Page # 1  
Invoice # 23270051-2019-12  
Project # 23/27-0051  
Client # 59  
February 7, 2020

Invoice of Account with  
BARR ENGINEERING COMPANY

For professional services during the period of  
December 28, 2019 through January 31, 2020

**ENGINEERING**

TECHNICAL SERVICES

Set up 2020 tasks and budgets; file old/inactive development review files; communications with administrator and internal staff regarding 2019 biotic index monitoring report format/content, 2019 and 2020 water quality monitoring, and reporting of 2019 results; 2020-2021 MPCA/BCWMC Sweeney Branch biota and stream monitoring: review MPCA monitoring protocols vs. BCWMC protocols, and communications with MPCA staff and administrator regarding requests for changes to the MPCA's monitoring program to better align with the BCWMC monitoring protocols and biota/stream monitoring locations; communications with Golden Valley staff regarding swale design standards; review MDNR floodplain ordinance and federal requirements regarding minimum building elevations and discuss with internal staff; look into MNRAM status, review and edit administrator's draft wetland policy revisions, and communications with administrator regarding wetland policy revisions and official controls; prepare for and attend January 29 meeting at MPCA regarding MTDs, and follow-up with administrator; and communications with administrator regarding BWSR CWF grant, brownfields grants, and AIS grants.

James P. Herbert, Principal Engineer/Scientist 7.5 hours @ \$200.00 per hour.....	\$ 1,500.00
Karen L. Chandler, Principal Engineer/Scientist 24.9 hours @ \$180.00 per hour.....	\$ 4,482.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 4.8 hours @ \$140.00 per hour.....	\$ 672.00
Sterling 'Greg' Williams, Engineer/Scientist/Specialist III 0.8 hours @ \$145.00 per hour.....	\$ 116.00
Josh P. Phillips, Engineer/Scientist/Specialist II 5.1 hours @ \$105.00 per hour.....	\$ 535.50
Kelly A. Wild, Engineer/Scientist/Specialist II 1.0 hours @ \$100.00 per hour.....	\$ 100.00

Technicians/Administrative.....	\$	153.00
Expenses (Mileage) .....	\$	<u>23.00</u>
<i>Subtotal, Technical Services.....</i>	\$	<i>7,581.50</i>

**MONTHLY MEETING PREPARATION**

Communications/coordination with administrator and internal staff regarding draft/final agenda and meeting packet for January Commission meeting; review/edit draft December meeting minutes; communications with administrator regarding January agenda and Flood Control Project 2019 and 2020 budgets for resolution; prepare for January Commission meeting, including review meeting packet and prepare FEMA modeling project update; and communications with administrator and internal staff regarding follow-up items from January Commission meeting and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 2.7 hours @ \$200.00 per hour.....	\$	540.00
Karen L. Chandler, Principal Engineer/Scientist 15.8 hours @ \$180.00 per hour.....	\$	2,844.00
Ross S. Mullen, Engineer/Scientist/Specialist II 0.5 hours @ \$120.00 per hour .....	\$	60.00
Technicians/Administrative.....	\$	<u>525.00</u>
<i>Subtotal, Monthly Meeting Preparation.....</i>	\$	<i>3,969.00</i>

**WCA LGU ADMINISTRATION**

Prepare WCA 2019 annual reporting form and submit to BWSR.

Karen S. Wold, Engineer/Scientist/Specialist III 1.2 hours @ \$135.00 per hour.....	\$	<u>162.00</u>
<i>Subtotal, WCA LGU Administration.....</i>	\$	<i>162.00</i>

**TAC PREPARATION**

Review/edit administrator's draft memo to TAC; and prepare for TAC meeting, including communications with administrator and Crystal staff responding to questions regarding the value of monitoring water quality parameters without MPCA standards.

Karen L. Chandler, Principal Engineer/Scientist 3.4 hours @ \$180.00 per hour.....	\$	612.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 1.5 hours @ \$140.00 per hour.....	\$	<u>210.00</u>
<i>Subtotal, TAC Preparation.....</i>	\$	<i>822.00</i>

***Subtotal Technical Services .....*** \$ ***12,534.50***

PLAT REVIEW

Golden Valley Road Senior Living (2017-35)

Project close-out, including documentation, tracking and filing.

Josh P. Phillips, Engineer/Scientist/Specialist II  
0.5 hours @ \$105.00 per hour ..... \$ 52.50  
*Subtotal, Golden Valley Road Senior Living*..... \$ 52.50

Automotive Concepts Facility (2019-15)

Communications with applicant and internal staff regarding project resubmittal.

James P. Herbert, Principal Engineer/Scientist  
1.0 hours @ \$200.00 per hour ..... \$ 200.00  
Josh P. Phillips, Engineer/Scientist/Specialist II  
1.1 hours @ \$105.00 per hour ..... \$ 115.50  
*Subtotal, Automotive Concepts Facility* ..... \$ 315.50

Plymouth Senior Living (2019-24)

Follow-up communications with applicant; and project close-out, including documentation, tracking and filing.

James P. Herbert, Principal Engineer/Scientist  
0.5 hours @ \$200.00 per hour ..... \$ 100.00  
Josh P. Phillips, Engineer/Scientist/Specialist II  
0.5 hours @ \$105.00 per hour ..... \$ 52.50  
*Subtotal, Plymouth Senior Living* ..... \$ 152.50

Four Seasons Mall Redevelopment (2019-25)

Communications with applicant and internal staff.

James P. Herbert, Principal Engineer/Scientist  
0.5 hours @ \$200.00 per hour ..... \$ 100.00  
*Subtotal, Four Seasons Mall Redevelopment*..... \$ 100.00

215 Peninsula Road (2019-26)

Project close-out, including documentation, tracking and filing.

Josh P. Phillips, Engineer/Scientist/Specialist II  
0.4 hours @ \$105.00 per hour ..... \$ 42.00  
*Subtotal, 215 Peninsula Road*..... \$ 42.00

Suite Living Crystal (2019-27)

Review grading, drainage and erosion control plans for erosion and sediment control, floodplain, water quality and rate control requirements; communications with applicant; and prepare and send comment letter to city staff.

James P. Herbert, Principal Engineer/Scientist 4.5 hours @ \$200.00 per hour .....	\$	900.00
Josh P. Phillips, Engineer/Scientist/Specialist II 7.6 hours @ \$105.00 per hour .....	\$	798.00
Technicians/Administrative.....	\$	60.00
Expenses (Postage) .....	\$	<u>0.50</u>
<i>Subtotal, Suite Living Crystal.....</i>	\$	<i>1,758.50</i>

Plymouth 2020 Street Reconstruction (2019-28)

Review grading, drainage and erosion control plans for erosion and sediment control and communications with applicant.

James P. Herbert, Principal Engineer/Scientist 0.8 hours @ \$200.00 per hour .....	\$	160.00
Technicians/Administrative.....	\$	50.00
Expenses (Postage) .....	\$	<u>0.50</u>
<i>Subtotal, Plymouth 2020 Street Reconstruction .....</i>	\$	<i>210.50</i>

**Subtotal Plat Review.....\$ 2,631.50**

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Prepare data and data transfer form, and provide GIS data for Golden Valley street reconstruction project to applicant; communications with MPRB staff regarding playground project at Bassett Creek Park in Minneapolis; prepare data and conditional use license and provide XP SWMM model to applicant for Bassett Creek Trail project; LEEF South development: communications with consultant, administrator, and internal staff regarding potential floodplain variance, including January 10 conference call, and follow-up communications with administrator and consultant; review two MDNR permits submitted to BCWMC and provide comments to administrator; communications with applicant regarding fee schedule and sidewalks; and communications with consultant regarding BCWMC requirements interpretation.

James P. Herbert, Principal Engineer/Scientist 9.0 hours @ \$200.00 per hour .....	\$	1,800.00
Karen L. Chandler, Principal Engineer/Scientist 1.9 hours @ \$180.00 per hour .....	\$	342.00
Josh P. Phillips, Engineer/Scientist/Specialist II 3.8 hours @ \$105.00 per hour .....	\$	399.00
Joshua R. Vosejpka, Engineer/Scientist/Specialist I 0.5 hours @ \$90.00 per hour .....	\$	<u>45.00</u>
<b>Subtotal, Preliminary Communications.....</b>	<b>\$</b>	<b>2,586.00</b>

NON-FEE REVIEWS

Bassett Creek Valley

Provide final comments to Minneapolis staff and Wenck regarding Bassett Creek Valley study report.

Karen L. Chandler, Principal Engineer/Scientist 1.2 hours @ \$180.00 per hour .....	\$ 216.00
<i>Subtotal, Bassett Creek Valley</i> .....	\$ 216.00
<b>Subtotal Non-Fee Reviews .....</b>	<b>\$ 216.00</b>
<b>Subtotal Preliminary Communications and Non-Fee Reviews .....</b>	<b>\$ 2,802.00</b>

COMMISSION AND TAC MEETINGS

Attend January 10 TAC meeting and January 16 Commission meeting.

Karen L. Chandler, Principal Engineer/Scientist 6.1 hours @ \$180.00 per hour .....	\$ 1,098.00
<b>Subtotal, Commission and TAC Meetings .....</b>	<b>\$ 1,098.00</b>

SURVEYS & STUDIES

<b>Subtotal Surveys &amp; Studies .....</b>	<b>\$ 0.00</b>
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WATER QUALITY/MONITORING

Cavanaugh and Northwood Lakes Monitoring

Compute summer averages for total phosphorus, chlorophyll a and Secchi disk for Northwood and Cavanaugh Lakes; compute water quality trend analyses for Northwood Lake; prepare water quality, phytoplankton, zooplankton, plant IBI and isopleth graphs for Northwood and Cavanaugh Lakes; compute AIS suitability for Northwood and Cavanaugh Lakes; and prepare draft reports of 2019 monitoring results for Northwood Lake and Cavanaugh Lake.

Evan G. Christianson, Engineer/Scientist/Specialist IV 1.6 hours @ \$165.00 per hour .....	\$ 264.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 60.9 hours @ \$140.00 per hour .....	\$ 8,526.00
Christopher J. Bonick, Engineer/Scientist/Specialist III 3.0 hours @ \$130.00 per hour .....	\$ 390.00
Kelly A. Wild, Engineer/Scientist/Specialist II 0.6 hours @ \$100.00 per hour .....	\$ 60.00
Technicians/Administrative.....	\$ 1,091.50
<i>Subtotal, Cavanaugh and Northwood Lakes Monitoring .....</i>	<i>\$ 10,331.50</i>

North Branch Monitoring Year 2

Site visit to reinstall specific conductance/temperature sensor in stream; collect grab samples; remove equipment for the winter; review, summarize and QA/QC 2018 – 2019 North Branch monitoring data; and plan for Sweeney Branch 2020 - 2021 monitoring, including options for monitoring location.

Margaret R. Rattei, Engineer/Scientist/Specialist III 1.9 hours @ \$140.00 per hour .....	\$ 266.00
Christopher J. Bonick, Engineer/Scientist/Specialist III 28.0 hours @ \$130.00 per hour .....	\$ 3,640.00
Expenses (Verizon Wireless/mileage/2WD vehicle).....	\$ 188.40
<i>Subtotal, North Branch Monitoring Year 2 .....</i>	<i>\$ 4,094.40</i>

2018 Biotic Index Monitoring

Revise 2018 biotic index report to create separate reports for the North Branch and Main Stem biotic index monitoring.

Margaret R. Rattei, Engineer/Scientist/Specialist III 28.7 hours @ \$140.00 per hour .....	\$ 4,018.00
<i>Subtotal, 2018 Biotic Index Monitoring.....</i>	<i>\$ 4,018.00</i>

***Subtotal, Water Quality/Monitoring.....\$ 18,443.90***

WATER QUANTITY

***Subtotal, Water Quantity.....\$ 0.00***

FLOOD CONTROL PROJECT ANNUAL INSPECTION & DOUBLE BOX CULVERT INSPECTION

Annual inspection: prepare and send letters to cities and MnDOT regarding inspection results; Double box culvert inspection: process inspection data; prepare report regarding inspection results; and communications with administrator regarding report status.

James P. Herbert, Principal Engineer/Scientist 14.0 hours @ \$200.00 per hour .....	\$ 2,800.00
Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$180.00 per hour .....	\$ 90.00
Joseph A. Welna, Engineer/Scientist/Specialist III 40.5 hours @ \$145.00 per hour.....	\$ 5,872.50
Technicians/Administrative.....	\$ 114.00
<b><i>Subtotal, Flood Control Annual Proj Inspect&amp;Dbl Box Culvert \$</i></b>	<b><i>8,876.50</i></b>

DEEP TUNNEL INSPECTION

Communications with Corps of Engineers staff regarding schedule for deep tunnel inspection.

James P. Herbert, Principal Engineer/Scientist  
0.5 hours @ \$200.00 per hour ..... \$ 100.00  
**Subtotal, Deep Tunnel Inspections ..... \$ 100.00**

**TOTAL ENGINEERING ..... \$ 46,486.40**

**WATERSHED OUTLET MONITORING PROGRAM (WOMP)**

Perform January 7, 2020 flow measurement; download and process flow data; perform site reconnaissance for potential future relocation site for WOMP station; and attend January 15, 2020 MCES Twin Cities Water Monitoring and Data Assessment Group meeting.

Karen L. Chandler, Principal Engineer/Scientist  
0.3 hours @ \$180.00 per hour ..... \$ 54.00  
Christopher J. Bonick, Engineer/Scientist/Specialist III  
6.5 hours @ \$130.00 per hour ..... \$ 845.00  
Technicians/Administrative..... \$ 184.00  
Expenses (Sontek ADV/mileage/2WD vehicle)..... \$ 113.48  
*Subtotal, Watershed Outlet Monitoring Program ..... \$ 1,196.48*  
**TOTAL WOMP ..... \$ 1,196.48**

**APM/AIS WORK**

**TOTAL APM/AIS WORK.....\$ 0.00**

**CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)**

FOUR SEASONS AREA WQ PROJECT (NL-2)

Communications with applicant regarding initial review comments.

Josh P. Phillips, Engineer/Scientist/Specialist II  
0.3 hours @ \$105.00 per hour..... \$ 31.50  
**Subtotal, Four Seasons Area WQ Project (NL-2) ..... \$ 31.50**

SCHAPER POND 2018 MONITORING AND REPORTING (SL-3)

Develop overlay of previous two bathymetric surveys; and prepare/review surveys for comparison.

Gregory J. Wilson, Engineer/Scientist/Specialist IV 3.5 hours @ \$170.00 per hour .....	\$	595.00
Technicians/Administrative.....	\$	96.00
<b>Subtotal, Schaper Pond 2018 Monitoring and Reporting.....</b>	<b>\$</b>	<b>691.00</b>

MAIN STEM DREDGING PROJECT FEASIBILITY STUDY (2021) (BC-7)

Prepare draft memo to the MDNR regarding threatened and endangered species review; prepare summary of cultural resources and SHPO desktop review findings; internal meeting regarding evaluation/quantification of water quality impacts of concepts; compile lagoon stage/storage curves and figures; trouble shoot lagoon cross sections in XP SWMM model; communications with administrator regarding draft flyer for public meeting; and prepare and send project email updates.

Karen L. Chandler, Principal Engineer/Scientist 2.0 hours @ \$180.00 per hour .....	\$	360.00
Gregory J. Wilson, Engineer/Scientist/Specialist IV 1.0 hours @ \$170.00 per hour .....	\$	170.00
Daniel M. Tix, Engineer/Scientist/Specialist III 2.2 hours @ \$150.00 per hour .....	\$	330.00
Patrick E. Brockamp, Engineer/Scientist/Specialist II 4.6 hours @ \$115.00 per hour .....	\$	529.00
Lulu Fang, Engineer/Scientist/Specialist II 0.5 hours @ \$105.00 per hour .....	\$	52.50
Tyler A. Conley, Engineer/Scientist/Specialist I 3.5 hours @ \$85.00 per hour .....	\$	297.50
<b>Subtotal, Main Stem Dredging Project Feasibility Study.....</b>	<b>\$</b>	<b>1,739.00</b>

MOUNT OLIVET STREAM STABILIZATION PROJECT (2021)(ML-20) AND PARKERS LAKE DRAINAGE IMPROVEMENT PROJECT (2021)(PL-7) FEASIBILITY STUDY

Mount Olivet Stream Stabilization Project Feasibility Study (2021)(ML-20)

Complete site tree survey and documentation; revise conceptual alternatives and figures based on agency meeting comments; coordinate and prepare draft boards for public meeting; develop cost estimates for alternatives and develop stream erosion estimates.

Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$180.00 per hour .....	\$	90.00
John W. Kubiak, Engineer/Scientist/Specialist III 1.8 hours @ \$130.00 per hour .....	\$	234.00



Peter J. Hinck, Engineer/Scientist/Specialist III 0.3 hours @ \$140.00 per hour.....	\$	42.00
Adam K. Howard, Engineer/Scientist/Specialist III 8.2 hours @ \$130.00 per hour.....	\$	1,066.00
Kallie B, Doeden, Engineer/Scientist/Specialist II 17.5 hours @ \$100.00 per hour.....	\$	1,750.00
Brendan H. Dougherty, Engineer/Scientist/Specialist II 11.9 hours @ \$100.00 per hour.....	\$	1,190.00
Joshua R. Vosejpka, Engineer/Scientist/Specialist I 5.5 hours @ \$90.00 per hour .....	\$	495.00
Technicians/Administrative.....	\$	658.00
Expenses (Mileage) .....	\$	<u>25.30</u>
<i>Subtotal, Mount Olivet Stream Stabilization Project Feas Study.....</i>	<i>\$</i>	<i>5,550.30</i>

Parkers Lake Drainage Improvement Project (2021)(PL-7)

Complete site tree survey and documentation; revise conceptual alternatives and figures based on agency meeting comments; coordinate and prepare draft boards for public meeting; develop cost estimates for stream and water quality alternatives; develop stream erosion estimates; complete XP-SWMM and P8 modeling for alternatives analysis; and develop preliminary grading for water quality improvements.

Karen L. Chandler, Principal Engineer/Scientist 0.2 hours @ \$180.00 per hour .....	\$	36.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 12.1 hours @ \$145.00 per hour.....	\$	1,754.50
Jessica C. Olson, Engineer/Scientist/Specialist III 0.4 hours @ \$140.00 per hour.....	\$	56.00
John W. Kubiak, Engineer/Scientist/Specialist III 1.8 hours @ \$130.00 per hour .....	\$	234.00
Adam K. Howard, Engineer/Scientist/Specialist III 8.3 hours @ \$130.00 per hour.....	\$	1,079.00
Brendan H. Dougherty, Engineer/Scientist/Specialist II 8.1 hours @ \$100.00 per hour.....	\$	810.00
Kallie B, Doeden, Engineer/Scientist/Specialist II 39.9 hours @ \$100.00 per hour .....	\$	3,990.00
Joshua R. Vosejpka, Engineer/Scientist/Specialist I 5.7 hours @ \$90.00 per hour .....	\$	513.00
Samantha A. Beck, Engineer/Scientist/Specialist I 16.7 hours @ \$90.00 per hour .....	\$	1,503.00

Technicians/Administrative.....	\$	582.50
Expenses (Mileage) .....	\$	<u>5.18</u>
<i>Subtotal, Parkers Lake Drainage Improvement Project Feas Study</i> \$ 10,563.18		
<b><i>Subtotal, Mt. Olivet Stream Stabilization Project &amp; Parkers Lake Drainage Improvement Project Feasibility Study.....</i></b> \$ <b>16,113.48</b>		

SWEENEY LAKE WATER QUALITY IMPROVEMENT PROJECT (2020) (SL-8)

Project setup; plan curly-leaf pondweed treatment of Sweeney Lake, including communications with herbicide applicator regarding contracting and MDNR staff regarding permitting; communications with administrator, Sweeney Lake Association member, and internal staff regarding carp management and commercial fishing in response to questions/comments from Sweeney Lake Association member and develop subcontract with Carp Solutions.

James P. Herbert, Principal Engineer/Scientist 1.5 hours @ \$200.00 per hour .....	\$	300.00
Karen L. Chandler, Principal Engineer/Scientist 1.1 hours @ \$180.00 per hour .....	\$	198.00
Gregory J. Wilson, Engineer/Scientist/Specialist IV 18.2 hours @ \$170.00 per hour .....	\$	3,094.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 1.4 hours @ \$140.00 per hour .....	\$	<u>196.00</u>
<b><i>Subtotal, Sweeney Lake Water Quality Improvements.....</i></b> \$ <b>3,788.00</b>		
<b>TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy) .....</b> \$ <b>22,362.98</b>		

<b>TMDL WORK</b>
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<b>TOTAL TMDL WORK .....</b>	<b>\$</b>	<b>0.00</b>
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<b>IMPROVED FEMA FLOODPLAIN MODELING &amp; MAPPING (MDNR)</b>
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IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

Develop Project Narrative

Review/edit reimbursement spreadsheet for administrator to use to seek reimbursement from the MDNR.

Karen L. Chandler, Principal Engineer/Scientist 0.6 hours @ \$180.00 per hour .....	\$	108.00
Ross S. Mullen, Engineer/Scientist/Specialist II 0.3 hours @ \$120.00 per hour .....	\$	<u>36.00</u>
<i>Subtotal, Develop Project Narrative .....</i> \$ 144.00		
<b>TOTAL IMPROVED FEMA FLOODPLAIN MODELING &amp; MAPPING (MDNR).....</b> \$ <b>144.00</b>		

**SUMMARY TOTALS**

<b>Total Engineering .....</b>	<b>\$ 46,486.40</b>
<b>Total WOMP.....</b>	<b>\$ 1,196.48</b>
<b>Total APM/AIS Work.....</b>	<b>\$ 0.00</b>
<b>Total TMDL Work .....</b>	<b>\$ 0.00</b>
<b>Total Capital Improvement Projects (Tax Levy).....</b>	<b>\$ 22,362.98</b>
<b>Total Improved FEMA Floodplain Modeling &amp; Mapping (MDNR).....</b>	<b>\$ 144.00</b>
<b>TOTAL PAYABLE.....</b>	<b>\$ 70,189.86</b>

Barr declares under the penalties of law that this account, claim or demand is just and that no part of it has been paid.



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