



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

Page # 1
Invoice # 23270051-2019-8
Project # 23/27-0051
Client # 59
October 4, 2019

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
August 31, 2019 through September 27, 2019

ENGINEERING

TECHNICAL SERVICES

Requirements document update: edit revised document, internal meetings to review requirements document revisions and communications with administrator regarding format of document for review; BCWMC jurisdictional boundary: internal meeting to review data sources and results of review; provide South Shore Drive flooding memo to Plymouth commissioners; communications with administrator regarding preparing for September 16 South Rice Pond/Sochacki Park meeting, including review of administrator's presentation, and follow-up with administrator after meeting; communications with administrator, Minneapolis staff, Minneapolis consultant and internal staff regarding city's proposed project in Bassett Creek Park; review BCWMC flood elevation factsheet and communications with administrator, Golden Valley staff and internal staff; locate Phase I/II information and contact for Minneapolis Irving Avenue sanitary sewer project and provide to administrator; review lake level monitoring budget and benchmarks with internal staff; review MDNR and federal floodplain regulations regarding low floor elevation requirements; communications with administrator regarding MPCA's response to BCWMC and other WMOs' letter regarding manufactured treatment devices; prepare 2018 macroinvertebrates (HBI) data graphs and provide to administrator for website; and communications with administrator regarding tunnel inspection.

James P. Herbert, Principal Engineer/Scientist 4.1 hours @ \$195.00 per hour	\$ 799.50
Karen L. Chandler, Principal Engineer/Scientist 13.2 hours @ \$175.00 per hour	\$ 2,310.00
Sterling 'Greg' Williams, Engineer/Scientist/Specialist III 0.5 hours @ \$140.00 per hour	\$ 70.00
Josh P. Phillips, Engineer/Scientist/Specialist II 3.9 hours @ \$95.00 per hour	\$ 370.50
Tyler A. Olsen, Engineer/Scientist/Specialist I 1.3 hours @ \$85.00 per hour	\$ 110.50

Technicians/Administrative.....	\$	9.50
Expenses (Postage/Webex).....	\$	<u>24.16</u>
<i>Subtotal, Technical Services.....</i>	\$	<i>3,694.16</i>

MONTHLY MEETING PREPARATION

Communications/coordination with administrator and internal staff regarding draft/final agenda and meeting packet for September Commission meeting; review/edit draft August meeting minutes; review/edit administrator's draft levy certification document; prepare for September Commission meeting, including pre-meeting conference call with Chair Prom and administrator, review meeting packet, and summarize South Shore Drive study results; and communications with administrator and internal staff regarding follow-up items from September Commission meeting and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 1.8 hours @ \$195.00 per hour.....	\$	351.00
Karen L. Chandler, Principal Engineer/Scientist 21.8 hours @ \$175.00 per hour.....	\$	3,815.00
Technicians/Administrative.....	\$	<u>550.00</u>
<i>Subtotal, Monthly Meeting Preparation.....</i>	\$	<i>4,716.00</i>

TAC PREPARATION

Review/edit draft agenda for October 4 TAC meeting and communications with administrator.

Karen L. Chandler, Principal Engineer/Scientist 0.8 hours @ \$175.00 per hour.....	\$	<u>140.00</u>
<i>Subtotal, TAC Preparation.....</i>	\$	<i>140.00</i>

Subtotal Technical Services\$ 8,550.16

PLAT REVIEW

Golden Valley Road Senior Living (2017-35)

Review revised grading, drainage and erosion control plans (complete site re-design), stormwater quality treatment, and rate control for project site and proposed future development at adjacent site; prepare and send comment letter to city staff; review revised grading, drainage and erosion control plans; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 2.7 hours @ \$195.00 per hour.....	\$	526.50
Josh P. Phillips, Engineer/Scientist/Specialist II 6.4 hours @ \$95.00 per hour.....	\$	<u>608.00</u>
<i>Subtotal, Golden Valley Road Senior Living.....</i>	\$	<i>1,134.50</i>

Northwest Campus Improvements (2019-18)

Review revised grading, drainage and erosion control plans and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$195.00 per hour	\$ 97.50
Josh P. Phillips, Engineer/Scientist/Specialist II 0.2 hours @ \$95.00 per hour	\$ 19.00
<i>Subtotal, Northwest Campus Improvements</i>	<i>\$ 116.50</i>

Damascus Way Re-Entry Center (2019-20)

Review revised grading, drainage and erosion control plans.

James P. Herbert, Principal Engineer/Scientist 0.4 hours @ \$195.00 per hour	\$ 78.00
<i>Subtotal, Damascus Way Re-Entry Center</i>	<i>\$ 78.00</i>

Association Free Lutheran Bible School (2019-21)

Review grading, drainage and erosion control plans; stormwater quality treatment, and rate control; prepare and send comment letter to city staff; and communications with applicant.

James P. Herbert, Principal Engineer/Scientist 0.9 hours @ \$195.00 per hour	\$ 175.50
Josh P. Phillips, Engineer/Scientist/Specialist II 2.6 hours @ \$95.00 per hour	\$ 247.00
Technicians/Administrative	\$ 47.50
<i>Subtotal, Association Free Lutheran Bible School</i>	<i>\$ 470.00</i>

Morrie's Cadillac Parking Expansion (2019-22)

Review grading, drainage and erosion control plans; prepare and send comment letter to city staff; and communications with applicant; review revised grading, drainage and erosion control plans; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 1.4 hours @ \$195.00 per hour	\$ 273.00
Josh P. Phillips, Engineer/Scientist/Specialist II 1.7 hours @ \$95.00 per hour	\$ 161.50
Technicians/Administrative	\$ 57.00
Expenses (Postage)	\$ 0.50
<i>Subtotal, Morrie's Cadillac Parking Expansion</i>	<i>\$ 492.00</i>

Banner – Outlot A (2019-23)

Review revised grading, drainage and erosion control plans for erosion and sediment control; prepare and send comment letter to city staff; review revised grading, drainage and erosion control plans; prepare and send approval letter to city staff; and communications with applicant and city staff.

James P. Herbert, Principal Engineer/Scientist 2.1 hours @ \$195.00 per hour	\$ 409.50
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Karen L. Chandler, Principal Engineer/Scientist 1.6 hours @ \$175.00 per hour	\$	280.00
Josh P. Phillips, Engineer/Scientist/Specialist II 2.2 hours @ \$95.00 per hour	\$	209.00
Technicians/Administrative.....	\$	47.50
Expenses (Postage)	\$	0.50
<i>Subtotal, Banner – Outlot A.....</i>	<i>\$</i>	<i>946.50</i>
Subtotal Plat Review	\$	3,237.50

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Communications with Minnetonka staff and consultants regarding Ridgedale Center project and available BCWMC information/models; communications and follow-up with consultant regarding BCWMC requirements for tree farm at Hennepin County correctional facility (directed consultant to contact the City of Plymouth); communications with Crystal staff regarding 3501 Douglas Drive site and BCWMC requirements; communications with consultant regarding proposed work in City of Medicine Lake; and communications with consultant regarding project near Sweeney Lake in Golden Valley.

James P. Herbert, Principal Engineer/Scientist 2.0 hours @ \$195.00 per hour	\$	390.00
Karen L. Chandler, Principal Engineer/Scientist 0.6 hours @ \$175.00 per hour	\$	105.00
Josh P. Phillips, Engineer/Scientist/Specialist II 0.4 hours @ \$95.00 per hour	\$	38.00
Subtotal, Preliminary Communications.....	\$	533.00

NON-FEE REVIEWS

Bassett Creek Valley

Prepare for and attend September 24 meeting regarding corridor alternative refinement; and internal communications regarding XP SWMM boundary.

Karen L. Chandler, Principal Engineer/Scientist 5.0 hours @ \$175.00 per hour	\$	875.00
Expenses (Mileage)	\$	5.80
<i>Subtotal, Bassett Creek Valley.....</i>	<i>\$</i>	<i>880.80</i>
Subtotal Non-Fee Reviews	\$	880.80
Subtotal Preliminary Communications and Non-Fee Reviews	\$	1,413.80

COMMISSION AND TAC MEETINGS

Attend September 19 Commission meeting.

Karen L. Chandler, Principal Engineer/Scientist 3.3 hours @ \$175.00 per hour	\$	577.50
Subtotal, Commission and TAC Meetings	\$	577.50

SURVEYS & STUDIES

Water Monitoring Program Review

Review past and current water monitoring program elements of BCWMC and partners; prepare draft presentation regarding past/current water monitoring program for October 4 TAC meeting; provide draft presentation to administrator for review; revise presentation per administrator comments and provide to administrator for review; meetings with internal staff; and communications with administrator.

Karen L. Chandler, Principal Engineer/Scientist 9.2 hours @ \$175.00 per hour	\$	1,610.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 22.3 hours @ \$135.00 per hour	\$	3,010.50
Technicians/Administrative	\$	770.50
<i>Subtotal, Water Monitoring Program Review</i>	<i>\$</i>	<i>5,391.00</i>
Subtotal Surveys & Studies	\$	5,391.00

WATER QUALITY/MONITORING

Cavanaugh and Northwood Lakes Monitoring

Subcontractor charges from Endangered Resource Services, LLC for August aquatic plant surveys of Cavanaugh Lake and Northwood Lake; file August plant survey data and perform quality assurance review of data; communications with Endangered Resource Services, LLC regarding plant survey data; complete September 10 monitoring of Northwood Lake and Cavanaugh Lake; review lab results and lab quality assurance data for September 10 monitoring event and file the lab report; lab costs for August 19 and September 10 monitoring events; analyze phytoplankton samples collected from Northwood and Cavanaugh lakes on September 10; and analyze zooplankton sample collected from Cavanaugh Lake on September 10.

Margaret R. Rattei, Engineer/Scientist/Specialist III 8.3 hours @ \$135.00 per hour	\$	1,120.50
Josh R. Vosejpk, Engineer/Scientist/Specialist I 0.5 hours @ \$85.00 per hour	\$	42.50
Technicians/Administrative	\$	685.00
Expenses (Endangered Resource Services/Pace Analytical Services/WQ meter/filtration apparatus/Kemmerer Vertical bottle sample/canoe/mileage/2WD vehicle)	\$	5,557.80
<i>Subtotal, Cavanaugh and Northwood Lakes Monitoring</i>	<i>\$</i>	<i>7,405.80</i>

North Branch Monitoring Year 2

Troubleshoot sampler on September 10; monitor September 12-13 storm event; clean sample bottles from September 12-13 storm event; and collect grab sample on September 26.

Margaret R. Rattei, Engineer/Scientist/Specialist III 0.6 hours @ \$135.00 per hour.....	\$	81.00
Christopher J. Bonick, Engineer/Scientist/Specialist III 3.0 hours @ \$125.00 per hour.....	\$	375.00
Heather N. Hlavaty, Engineer/Scientist/Specialist II 4.5 hours @ \$100.00 per hour.....	\$	450.00
Technicians/Administrative.....	\$	27.00
Expenses (Verizon Wireless/mileage/2WD vehicle).....	\$	<u>139.61</u>
<i>Subtotal, North Branch Monitoring Year 2</i>	\$	<i>1,072.61</i>
Subtotal, Water Quality/Monitoring.....	\$	8,478.41

WATER QUANTITY

Perform Parkers Lake benchmark survey; and communications with Plymouth staff and internal staff regarding survey results.

Karen L. Chandler, Principal Engineer/Scientist 0.8 hours @ \$175.00 per hour.....	\$	140.00
Technicians/Administrative.....	\$	575.00
Expenses (2WD vehicle/mileage).....	\$	<u>42.34</u>
Subtotal, Water Quantity.....	\$	757.34

FLOOD CONTROL PROJECT ANNUAL INSPECTION & DOUBLE BOX CULVERT INSPECTION

Meeting and communications with internal staff regarding inspection; coordinate with Plymouth staff regarding monitoring of Medicine Lake dam; and send email to administrator, city staff, COE staff, and MDNR staff regarding upcoming inspection and reminder to complete maintenance record from 2018 inspection.

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$195.00 per hour.....	\$	195.00
Patrick E. Brockamp, Engineer/Scientist/Specialist II 0.8 hours @ \$105.00 per hour.....	\$	84.00
Josh P. Phillips, Engineer/Scientist/Specialist II 0.9 hours @ \$95.00 per hour.....	\$	<u>85.50</u>
Subtotal, Flood Control Annual Proj Inspect&Dbl Box Culvert	\$	364.50

TOTAL ENGINEERING.....\$ 28,770.21

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

TOTAL WOMP\$ 0.00

APM/AIS WORK

Subcontractor charges from Endangered Resource Services, LLC for August aquatic plant surveys; file August AIS plant survey data; and perform quality assurance review of data.

Margaret R. Rattei, Engineer/Scientist/Specialist III
 2.0 hours @ \$135.00 per hour\$ 270.00
 Expenses (Endangered Resource Services).....\$ 7,181.00

TOTAL APM/AIS WORK.....\$ 7,451.00

CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

SCHAPER POND 2018 MONITORING AND REPORTING (SL-3)

Prepare report on 2018-19 monitoring and carp surveys in preparation for presentation at October Commission meeting.

Gregory J. Wilson, Consultant/Advisor
 5.1 hours @ \$165.00 per hour\$ 841.50

Subtotal, Schaper Pond 2018 Monitoring and Reporting.....\$ 841.50

BRYN MAWR MEADOWS WATER QUALITY IMPROVEMENT PROJECT (2020) (BC-5)

Review/edit draft BWSR Clean Water Fund Grant application and send to administrator for further review; and provide P8 model and neighborhood development history information to administrator for grant application.

Karen L. Chandler, Principal Engineer/Scientist
 3.8 hours @ \$175.00 per hour\$ 665.00

Jennifer L. Brekken, Consultant/Advisor
 0.3 hours @ \$155.00 per hour\$ 46.50

Subtotal, Bryn Mawr Meadows Water Quality Imp Project.....\$ 711.50

JEVNE PARK STORMWATER IMPROVEMENT PROJECT (2020) (ML-21)

Review agreement language and communications with administrator regarding agreement language.

Karen L. Chandler, Principal Engineer/Scientist
 0.7 hours @ \$175.00 per hour\$ 122.50

Subtotal, Jevne Park Stormwater Improvement Project.....\$ 122.50

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

Internal meetings and coordination with field staff; perform topographic and bathymetric survey of Lagoons D, E, and F and associated expenses; survey of XP SWMM cross sections; and prepare/send project email updates.

Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$175.00 per hour	\$	87.50
Jeff D. Weiss, Engineer/Scientist/Specialist III 0.5 hours @ \$135.00 per hour	\$	67.50
Patrick E. Brockamp, Engineer/Scientist/Specialist II 2.4 hours @ \$105.00 per hour	\$	252.00
Technicians/Administrative.....	\$	8,466.00
Expenses (Mileage/2WD field vehicle/RTK GPS survey system)	\$	<u>1,192.62</u>
Subtotal, Main Stem Dredging Project Feasibility Study.....		\$ 10,065.62

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)

Prepare for and attend September 13 project kickoff meeting with city staff, administrator, Chair Prom, alternate commissioner Cesnik, and TRPD staff, including preparing agenda and communications with administrator and internal staff; and prepare wetland delineation report and application form for delineation review/concurrence.

Karen L. Chandler, Principal Engineer/Scientist 3.7 hours @ \$175.00 per hour	\$	647.50
Jeffrey D. Weiss, Engineer/Scientist/Specialist III 1.9 hours @ \$130.00 per hour	\$	256.50
Karen S. Wold, Engineer/Scientist/Specialist III 1.4 hours @ \$130.00 per hour	\$	182.00
Kallie B. Doeden, Engineer/Scientist/Specialist I 1.8 hours @ \$95.00 per hour	\$	171.00
Josh R. Vosejka, Engineer/Scientist/Specialist I 0.5 hours @ \$85.00 per hour	\$	42.50
Rachel C. Mitcavish, Engineer/Scientist/Specialist I 3.1 hours @ \$80.00 per hour	\$	248.00
Tyler A. Conley, Engineer/Scientist/Specialist I 10.3 hours @ \$75.00 per hour	\$	<u>772.50</u>
Subtotal, Mount Olivet Stream Stabilization Project Feas Study.....		\$ 2,320.00

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

Prepare for and attend September 13 project kickoff meeting with city staff, administrator, Chair Prom, alternate commissioner Cesnik, and TRPD staff, including preparing agenda and communications with administrator and internal staff; prepare wetland delineation report and application form for delineation review/concurrence; update the BCWMC XP SWMM model based on information provided by city staff; and begin developing concept plans.

Karen L. Chandler, Principal Engineer/Scientist 4.9 hours @ \$175.00 per hour	\$	857.50
Gregory J. Wilson, Consultant/Advisor 0.4 hours @ \$165.00 per hour	\$	66.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 8.2 hours @ \$140.00 per hour	\$	1,148.00
Karen S. Wold, Engineer/Scientist/Specialist III 1.4 hours @ \$130.00 per hour	\$	182.00
Jeffrey D. Weiss, Engineer/Scientist/Specialist III 3.2 hours @ \$130.00 per hour	\$	432.00
Ross S. Mullen, Engineer/Scientist/Specialist II 6.1 hours @ \$110.00 per hour	\$	671.00
Kallie B. Doeden, Engineer/Scientist/Specialist I 1.8 hours @ \$95.00 per hour	\$	171.00
Samantha A. Beck, Engineer/Scientist/Specialist I 14.8 hours @ \$80.00 per hour	\$	1,184.00
Tyler A. Conley, Engineer/Scientist/Specialist I 10.2 hours @ \$75.00 per hour	\$	765.00
Technicians/Administrative.....	\$	19.00
Expenses (Mileage)	\$	<u>6.96</u>
<i>Subtotal, Parkers Lake Drainage Improvement Project Feas Study</i>	\$	5,502.46
<i>Subtotal, Mt. Olivet Stream Stabilization Project & Parkers Lake Drainage Improvement Project Feasibility Study.....</i>	\$	7,822.46
TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)	\$	19,563.58

TMDL WORK

TOTAL TMDL WORK	\$	0.00
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IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

Hydrologic Analysis

Review the hydrologic routing of orphaned areas adjacent to the Elm Creek/Bassett Creek watershed boundary.

Ross S. Mullen, Engineer/Scientist/Specialist II
 0.2 hours @ \$110.00 per hour \$ 22.00
Subtotal, Hydrologic Analysis..... \$ 22.00

Develop Depth Grids

Develop Quality Control Plan for verification of mapping of road, culvert, and other hydraulic structures.

Ross S. Mullen, Engineer/Scientist/Specialist II
 2.1 hours @ \$110.00 per hour \$ 231.00
Subtotal, Develop Depth Grids..... \$ 231.00

Develop Project Narrative

Update the project narrative and project documentation to address the MDNR's review comments, including revisions to the Phase II report, updated discussion of recent projects (Parkers Lake drainage improvements and South Shore Drive projects) and updated discussion on orphaned areas.

Karen L. Chandler, Principal Engineer/Scientist
 2.8 hours @ \$175.00 per hour \$ 490.00
 Ross S. Mullen, Engineer/Scientist/Specialist II
 12.5 hours @ \$110.00 per hour \$ 1,375.00
Subtotal, Develop Project Narrative \$ 1,865.00

TOTAL IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)..... \$ 2,118.00

SUMMARY TOTALS

Total Engineering \$ 28,770.21
Total WOMP..... \$ 0.00
Total APM/AIS Work..... \$ 7,451.00
Total TMDL Work \$ 0.00
Total Capital Improvement Projects (Tax Levy)..... \$ 19,563.58
Total Improved FEMA Floodplain Modeling & Mapping (MDNR) \$ 2,118.00
TOTAL PAYABLE..... \$ 57,902.79

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


