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engineering and environmental consultants

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

Page # 1
Invoice # 23270051-2020-13
Project # 23/27-0051
Client # 59
February 5, 2021

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
December 26, 2020 through January 29, 2021

ENGINEERING

TECHNICAL SERVICES

Communications with MPCA staff, internal staff and administrator regarding current/anticipated use of MTDs in the BCWMC; create draft revised Requirements Document to allow administrative review of single-family home shoreline projects, along with other clarifications, revise document based on comments from January Commission meeting, and communications with administrator and Commission attorney; communications with administrator and internal staff regarding 2020 budget status; set up FY 2021 project number, tasks and budgets and internal communications regarding upcoming change in BCWMC deputy treasurer.

James P. Herbert, Principal Engineer/Scientist 2.4 hours @ \$200.00 per hour.....	\$ 480.00
Karen L. Chandler, Principal Engineer/Scientist 7.4 hours @ \$185.00 per hour.....	\$ 1,369.00
Josh P. Phillips, Engineer/Scientist/Specialist II 6.2 hours @ \$115.00 per hour	\$ 713.00
<i>Subtotal, Technical Services</i>	<i>\$ 2,562.00</i>

MONTHLY MEETING PREPARATION

Communications/coordination with administrator and internal staff regarding draft/final agenda and meeting packet for January meeting; review/edit draft December meeting minutes; prepare for January Commission meeting, including pre-meeting conference call with administrator and Commissioner Prom, review and provide annual Flood Control Project Inspection and deep tunnel inspection reports to administrator, and review/edit memo regarding FEMA model status; 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 5.6 hours @ \$200.00 per hour	\$ 1,120.00
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Karen L. Chandler, Principal Engineer/Scientist
21.2 hours @ \$185.00 per hour \$ 3,922.00
Technicians/Administrative..... \$ 900.00
Subtotal, Monthly Meeting Preparation..... \$ 5,942.00

WCA LGU ADMINISTRATION

Prepare Wetland Conservation Act (WCA) 2020 annual reporting form.

Karen S. Wold, Engineer/Scientist/Specialist III
0.7 hours @ \$135.00 per hour \$ 98.00
Subtotal, WCA LGU Administration..... \$ 98.00

TAC PREPARATION

Prepare for February 4 TAC meeting, including communications with administrator regarding TAC meeting agenda and review meeting materials.

Karen L. Chandler, Principal Engineer/Scientist
1.1 hours @ \$180.00 per hour \$ 203.50
Subtotal, TAC Preparation..... \$ 203.50
***Subtotal, Technical Services* \$ 8,805.50**

PLAT REVIEW

Golden Valley 2020 PMP (2020-01)

Review resubmittal.

Josh P. Phillips, Engineer/Scientist/Specialist II
0.3 hours @ \$115.00 per hour \$ 34.50
Subtotal, Golden Valley 2020 PMP (2020-01)..... \$ 34.50

Sweeney Lake Shores (PUD) (2020-05)

Communications with applicant.

James P. Herbert, Principal Engineer/Scientist
0.4 hours @ \$200.00 per hour \$ 80.00
Josh P. Phillips, Engineer/Scientist/Specialist II
0.1 hours @ \$115.00 per hour \$ 11.50
Subtotal, Sweeney Lake Shores (PUD) (2020-05)..... \$ 91.50

Irving Ave Sanitary Sewer Replacement (2020-16)

Communications with applicant regarding stream restoration measures.

James P. Herbert, Principal Engineer/Scientist
0.6 hours @ \$200.00 per hour \$ 120.00
Subtotal, Irving Ave Sanitary Sewer Replacement (2020-16)..... \$ 120.00

Van Heest Retaining Wall (2020-26)

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

Josh P. Phillips, Engineer/Scientist/Specialist II
0.6 hours @ \$115.00 per hour \$ 69.00
Subtotal, Van Heest Retaining Wall (2020-26)..... \$ 69.00

1875 Kyle Pl. Shoreline Restoration (2020-27)

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

Josh P. Phillips, Engineer/Scientist/Specialist II
0.4 hours @ \$115.00 per hour \$ 46.00
Subtotal, 1875 Kyle Pl. Shoreline Restoration (2020-27)..... \$ 46.00

Currie Commons (2020-28)

Communications with applicant and city staff regarding water quality requirements.

James P. Herbert, Principal Engineer/Scientist
2.1 hours @ \$200.00 per hour \$ 420.00
Subtotal, Currie Commons (2020-28) \$ 420.00

Harbor Ln Drainage Impr (2020-29)

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

Josh P. Phillips, Engineer/Scientist/Specialist II
0.5 hours @ \$115.00 per hour \$ 57.50
Subtotal, Harbor Ln Drainage Impr (2020-29)..... \$ 57.50

New Home - 10406 South Shore Dr (2020-30)

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

Josh P. Phillips, Engineer/Scientist/Specialist II
0.5 hours @ \$115.00 per hour \$ 57.50
Subtotal, New Home - 10406 South Shore Dr (2020-30) \$ 57.50

4710 Killarney Dr. Shore Impr. (2020-32)

Review submittal for floodplain and shoreline; prepare memo for January Commission meeting and provide to administrator; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist
1.3 hours @ \$200.00 per hour \$ 260.00
Karen L. Chandler, Principal Engineer/Scientist
0.2 hours @ \$185.00 per hour \$ 37.00
Josh P. Phillips, Engineer/Scientist/Specialist II
3.9 hours @ \$115.00 per hour \$ 448.50
Technicians/Administrative..... \$ 47.50
Subtotal, 4710 Killarney Dr. Shore Impr. (2020-32)..... \$ 793.00

Plymouth Fire Station 2 Reconstr. (2020-33)

Preliminary review of grading, drainage and erosion control plans.

Josh P. Phillips, Engineer/Scientist/Specialist II 2.1 hours @ \$115.00 per hour	\$ 241.50
Technicians/Administrative.....	\$ 63.00
<i>Subtotal, Plymouth Fire Station 2 Reconstr. (2020-33)</i>	<i>\$ 304.50</i>
Subtotal Plat Review.....	\$ 1,993.50

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Review MDNR appropriation permit application 2020-3448 and provide comments to administrator; preliminary review and coordination regarding North Branch culvert crossing at Louisiana Avenue in Crystal, including communications with Crystal staff, Crystal consultant, administrator, and internal staff regarding BCWMC requirements, attend virtual meeting with Crystal, MDNR and Crystal consultant staff regarding approval/permitting requirements, and provide BCWMC XPSWMM model to Crystal consultant, per city request; communications with consultant regarding Dundee project in Plymouth; communications with administrator regarding attendance at meeting about new bridge across bay of Medicine Lake; and communications with Plymouth staff regarding proposed work at Plymouth Commons.

James P. Herbert, Principal Engineer/Scientist 0.8 hours @ \$200.00 per hour	\$ 160.00
Karen L. Chandler, Principal Engineer/Scientist 5.8 hours @ \$185.00 per hour	\$ 1,073.00
Jennifer Koehler, Engineer/Scientist/Specialist IV 3.7 hours @ \$155.00 per hour	\$ 573.50
Josh P. Phillips, Engineer/Scientist/Specialist II 0.5 hours @ \$115.00 per hour	\$ 57.50
Technicians/Administrative.....	\$ 140.00
<i>Subtotal, Preliminary Communications</i>	<i>\$ 2,004.00</i>

NON-FEE REVIEWS

Subtotal Non-Fee Reviews..... \$ 0.00

Subtotal Preliminary Communications and Non-Fee Reviews..... \$ 2,004.00

COMMISSION AND TAC MEETINGS

Attend January 21 Commission meeting (virtual).

Karen L. Chandler, Principal Engineer/Scientist 2.6 hours @ \$185.00 per hour	\$ 481.00
Subtotal, Commission and TAC Meetings.....	\$ 481.00

SURVEYS & STUDIES

Medicine Lake Staff Gage

Prepare for and attend on-site meeting with Plymouth staff regarding setting new staff gage at Medicine Lake weir, and obtain supplies for installation.

James P. Herbert, Principal Engineer/Scientist 3.1 hours @ \$200.00 per hour	\$ 620.00
Technicians/Administrative.....	\$ 873.00
Expenses (vehicle/supplies/mileage)	\$ 75.91
<i>Subtotal, Medicine Lake Staff Gage.....</i>	<i>\$ 1,568.91</i>
Subtotal Surveys & Studies	\$ 1,568.91

WATER QUALITY/MONITORING

General Water Quality

Review MCES chloride trends report and provide comments to administrator.

Gregory J. Wilson, Engineer/Scientist/Specialist IV 1.5 hours @ \$175.00 per hour	\$ 262.50
<i>Subtotal, General Water Quality.....</i>	<i>\$ 262.50</i>

Sweeney – Twin Lake Monitoring

Prepare total phosphorus, temperature, dissolved oxygen, and specific conductance isopleth graphs for Twin Lake and Sweeney Lake (north and south basins); complete 10-year and 20-year trend analyses for Twin Lake and Sweeney Lake data and prepare historical data graphs with trend lines for the past 10 years; complete plant IBI computations for Sweeney Lake and Twin Lake and prepare plant IBI graphs of species richness and Floristic Quality Index; summarize Twin Lake and Sweeney Lake 2020 and historical water quality data (total phosphorus, chlorophyll a, Secchi disc, and chloride concentrations), phytoplankton data, and zooplankton data, including tables and graphs; and perform AIS suitability analyses.

Evan Christianson, Engineer/Scientist/Specialist IV 1.3 hours @ \$170.00 per hour	\$ 221.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 75.1 hours @ \$145.00 per hour.....	\$ 10,889.50
Chris Bonick, Engineer/Scientist/Specialist III 7.2 hours @ \$135.00 per hour	\$ 972.00
Technicians/Administrative.....	\$ 522.00
<i>Subtotal, Sweeney-Twin Lake Monitoring</i>	<i>\$ 12,604.50</i>

Medicine Lake Monitoring

Summarize Medicine Lake 2020 and historical water quality data.

Margaret R. Rattei, Engineer/Scientist/Specialist III 4.5 hours @ \$145.00 per hour.....	\$ 652.50
<i>Subtotal, Medicine Lake Monitoring</i>	<i>\$ 652.50</i>

Sweeney Branch Monitoring Year 1

Remove and replace battery at the Sweeney Branch stream monitoring station; collect January 21 water quality grab sample and deliver the sample to the MCES laboratory; summarize and QA/QC 2020 data; and prepare and load the 2020 monitoring data into the EQUIS database.

Margaret R. Rattei, Engineer/Scientist/Specialist III 1.2 hours @ \$145.00 per hour.....	\$	174.00
Chris Bonick, Engineer/Scientist/Specialist III 40.0 hours @ \$135.00 per hour.....	\$	5,400.00
Kallie Doeden, Engineer/Scientist/Specialist II 3.3 hours @ \$110.00 per hour.....	\$	363.00
Technicians/Administrative.....	\$	692.00
Expenses (Verizon Wireless/mileage/vehicle)	\$	<u>156.89</u>
<i>Subtotal, Sweeney Branch Monitoring Year 1</i>	\$	6,785.89

Sweeney Branch Biotic Index Monitoring

Summarize 2020 habitat data collected on September 29, 2020 and prepare data summary table.

Margaret R. Rattei, Engineer/Scientist/Specialist III 8.1 hours @ \$145.00 per hour.....	\$	1,174.50
Technicians/Administrative.....	\$	<u>54.00</u>
<i>Subtotal, Sweeney Branch Biotic Index Monitoring.....</i>	\$	1,228.50
<i>Subtotal, Water Quality/Monitoring.....</i>	\$	<i>21,533.89</i>

WATER QUANTITY

Measure and review lake elevations as part of the lake-gauging program.

Technicians/Administrative.....	\$	472.50
Expenses (mileage/2WD vehicle)	\$	<u>64.25</u>
<i>Subtotal, Water Quantity</i>	\$	<i>536.75</i>

ANNUAL FLOOD CONTROL PROJECT INSPECTIONS

Flood Control Project Inspection-Annual

Complete inspection report memo, and prepare and distribute inspection letters to cities, MnDOT, MDNR, and the US Army Corps of Engineers.

James P. Herbert, Principal Engineer/Scientist 5.8 hours @ \$200.00 per hour.....	\$	1,160.00
Patrick Brockamp, Engineer/Scientist/Specialist III 0.2 hours @ \$125.00 per hour.....	\$	25.00
Josh P. Phillips, Engineer/Scientist/Specialist II 4.0 hours @ \$115.00 per hour.....	\$	460.00
Technicians/Administrative.....	\$	<u>300.00</u>
<i>Subtotal, Flood Control Project Inspection-Annual.....</i>	\$	1,945.00

Deep Tunnel Inspection

Complete inspection report.

James P. Herbert, Principal Engineer/Scientist 5.6 hours @ \$200.00 per hour.....	\$	1,120.00
Joe Welna, Engineer/Scientist/Specialist IV 39.0 hours @ \$155.00 per hour	\$	6,045.00
Colleen Long, Engineer/Scientist/Specialist II 4.6 hours @ \$100.00 per hour.....	\$	460.00
<i>Subtotal, Deep Tunnel Inspection</i>	\$	7,625.00
<i>Subtotal, Annual Flood Control Project Inspections</i>	\$	9,570.00

REVIEW MUNICIPAL PLANS

<i>Subtotal, Review Municipal Plans</i>	\$	0.00
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TOTAL ENGINEERING	\$	46,493.55
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ANNUAL REPORT

TOTAL ANNUAL REPORT	\$	0.00
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WATERSHED OUTLET MONITORING PROGRAM (WOMP)

WOMP Rating Curve

Communications with MCES staff regarding new flow monitoring location.

Chris Bonick, Engineer/Scientist/Specialist III 0.5 hours @ \$135.00 per hour.....	\$	67.50
<i>Subtotal, WOMP Rating Curve</i>	\$	67.50
TOTAL WOMP	\$	67.50

APM/AIS WORK

TOTAL APM/AIS WORK	\$	0.00
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CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

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

Review draft memorandum of understanding and internal communications.

Michelle Kimble, Engineer/Scientist/Specialist IV 1.0 hours @ \$155.00 per hour.....	\$	155.00
<i>Subtotal, Bryn Mawr Meadows WQ Imp Project (2020) (BC-5)</i> ...	\$	155.00

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

Carp Control Options Design-Permit-Implement

Communications with Carp Solutions regarding final reporting on results of 2020 carp control efforts and recommendations for implementation; communications with administrator and Golden Valley staff to plan for Commission meeting and discuss carp control alternatives; assisting administrator with annual

reporting on 319 grant expenditures; and develop memorandum to report carp control results and recommendations.

Gregory J. Wilson, Engineer/Scientist/Specialist IV	
12.7 hours @ \$175.00 per hour.....	\$ 2,222.50
<i>Subtotal, Carp Control Options Design-Permit-Implement.....</i>	<i>\$ 2,222.50</i>
<i>Subtotal, Sweeney Lake Water Quality Improvement Project (2020) (SL-8)</i>	<i>\$ 2,222.50</i>

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

Communications with administrator regarding Hennepin County Opportunity Grant application.

Karen L. Chandler, Principal Engineer/Scientist	
0.4 hours @ \$185.00 per hour.....	\$ 74.00
<i>Subtotal, Main Stem Dredging Project (2021)(BC-7)</i>	<i>\$ 74.00</i>

DECOLA PONDS - SEA SCHOOL/WILDWOOD PARK FLOOD STORAGE PROJECT FEASIBILITY STUDY (2022) (BC-2, 3, 8, 10)

MPCA file review notes for feasibility study; submit USACE jurisdictional determination request; develop and review three design concepts, including grading plans, hydrologic and hydraulic modeling, water quality modeling, and impact evaluation/summary; and attend meeting with city staff to review preliminary concept grading/features.

Jennifer Brekken, Engineer/Scientist/Specialist IV	
0.4 hours @ \$165.00 per hour.....	\$ 66.00
Jennifer Koehler, Engineer/Scientist/Specialist IV	
12.8 hours @ \$155.00 per hour.....	\$ 1,984.00
Katelyn Turpin-Nagel, Engineer/Scientist/Specialist II	
83.5 hours @ \$120.00 per hour.....	\$ 10,020.00
Tyler Conley, Engineer/Scientist/Specialist II	
1.0 hours @ \$100.00 per hour.....	\$ 100.00
Erin Feehily, Engineer/Scientist/Specialist II	
10.0 hours @ \$100.00 per hour.....	\$ 1,000.00
<i>Subtotal, DeCola Ponds - SEA School/Wildwood Park Flood Storage Project Feasibility Study (2022) (BC-2, 3, 8, 10)</i>	<i>\$ 13,170.00</i>

MEDLEY PARK STORMWATER TREATMENT FACILITY FEASIBILITY STUDY (2022) (ML-12)

Drafting report write-up for field investigations and desktop review tasks; develop concept designs (layout, grading, flood and water quality volume estimates); develop high-level cost estimate; and communications with City staff and administrator regarding funding concerns.

Karen L. Chandler, Principal Engineer/Scientist	
3.5 hours @ \$185.00 per hour.....	\$ 647.50
Kurt Leuthold, Principal Engineer/Scientist	
1.2 hours @ \$200.00 per hour.....	\$ 240.00
Jennifer Koehler, Engineer/Scientist/Specialist IV	
2.0 hours @ \$155.00 per hour.....	\$ 310.00

Jennifer Brekken, Engineer/Scientist/Specialist IV 2.0 hours @ \$165.00 per hour	\$	330.00
Alec Bateman, Engineer/Scientist/Specialist II 0.9 hours @ \$100.00 per hour	\$	90.00
John Juntilla, Engineer/Scientist/Specialist III 1.1 hours @ \$130.00 per hour	\$	143.00
Kevin Menken, Engineer/Scientist/Specialist III 9.8 hours @ \$125.00 per hour	\$	1,255.00
Katelyn Turpin-Nagel, Engineer/Scientist/Specialist II 22.6 hours @ \$120.00 per hour.....	\$	2,712.00
Terri Olson, Engineer/Scientist/Specialist III 0.3 hours @ \$150.00 per hour	\$	45.00
Tyler Olsen, Engineer/Scientist/Specialist II 46.3 hours @ \$105.00 per hour.....	\$	4,861.50
Technicians/Administrative.....	\$	130.00
Expenses (mileage).....	\$	5.75

**Subtotal, Medley Park Stormwater Treatment Facility
 Feasibility Study (2022)(ML-12)\$ 10,739.75**

TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)\$ 26,361.25

TMDL WORK

P8 Model Update

Prepare for 2021 P8 model updates.

Gregory J. Wilson, Engineer/Scientist/Specialist IV 1.5 hours @ \$175.00 per hour	\$	262.50
<i>Subtotal, P8 Model Update.....</i>	\$	262.50

TOTAL TMDL WORK.....\$ 262.50

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

Floodplain, Floodway, Cross-Section Shapefiles

Prepare for an attend January 4 meeting with MDNR staff and administrator regarding future management of upstream storage in Bassett Creek FEMA model; create figures, including potentially impacted structures, for meeting with cities regarding zone classifications; prepare for and attend January 8 meeting with MDNR staff, Golden Valley staff, and administrator regarding Zone A/AE and other mapping items; prepare for an attend January 15 meeting with MDNR staff, Plymouth staff, Medicine Lake consultant and administrator regarding Zone A/AE and upstream storage; follow-up on SFHA questions/comments from MDNR staff; and communications with MDNR staff regarding preliminary floodway modeling and preliminary floodway mapping.

Karen L. Chandler, Principal Engineer/Scientist 8.1 hours @ \$185.00 per hour	\$ 1,498.50
Jennifer A. Koehler, Engineer/Scientist/Specialist IV 14.0 hours @ \$155.00 per hour	\$ <u>2,170.00</u>
Joshua Vosejka, Engineer/Scientist/Specialist II 10.8 hours @ \$100.00 per hour	\$ <u>1,080.00</u>
<i>Subtotal, Floodplain, Floodway, Cross-Section Shapefiles</i>	\$ 4,748.50
TOTAL IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)	\$ 4,748.50

SUMMARY TOTALS

Total Engineering.....	\$ 46,493.55
Total WOMP.....	\$ 67.50
Total Annual Report.....	\$ 0.00
Total APM/AIS Work.....	\$ 0.00
Total TMDL Work.....	\$ 262.50
Total Capital Improvement Projects (Tax Levy)	\$ 26,361.25
Total Improved FEMA Floodplain Modeling & Mapping (MDNR)	\$ <u>4,748.50</u>
TOTAL PAYABLE.....	\$ 77,933.30

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


