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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 # 23270051-2020-7
Project # 23/27-0051
Client # 59
August 6, 2020

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
June 27, 2020 through July 31, 2020

ENGINEERING

TECHNICAL SERVICES

Provide XP-SWMM Phase II model to Golden Valley staff and follow-up communications with city staff; prepare for and attend July 7 and July 29 MPCA MTD meetings, including communications with administrator and MPCA staff (costs shared with Elm Creek WMC); attend July 14 meeting at Fruen Mill site with property owner and Minneapolis staff regarding fence near floodplain, investigate nearby debris blockage at railroad bridge, and follow-up communications with Minneapolis staff and internal staff regarding debris blockage; communications with Golden Valley staff regarding Medley Park CIP project; provide Bassett Creek Park North plan set to Commissioner Welch; communications with Plymouth staff regarding chloride project and setting up meeting; and miscellaneous communications with administrator.

James P. Herbert, Principal Engineer/Scientist 3.9 hours @ \$200.00 per hour.....	\$ 780.00
Karen L. Chandler, Principal Engineer/Scientist 5.0 hours @ \$180.00 per hour	\$ 900.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 1.5 hours @ \$145.00 per hour	\$ 217.50
Josh P. Phillips, Engineer/Scientist/Specialist II 5.4 hours @ \$105.00 per hour	\$ 567.00
Expenses (mileage)	\$ 14.95
<i>Subtotal, Technical Services</i>	<i>\$ 2,479.45</i>

MONTHLY MEETING PREPARATION

Communications/coordination with administrator and internal staff regarding draft/final agenda and meeting packet for July Commission meeting; review/edit draft June and July meeting minutes; prepare draft North Branch water quality and biotic index monitoring presentation and Main Stem biotic index monitoring presentation and provide to administrator for review, revise draft and provide final presentation to administrator for July Commission meeting; prepare for July Commission meeting,

including pre-meeting conference call with administrator and Chair Prom and review meeting packet; and communications with administrator and internal staff regarding follow-up items from July 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 21.7 hours @ \$180.00 per hour	\$ 3,906.00
Margaret Rattei, Engineer/Scientist/Specialist III 8.0 hours @ \$140.00 per hour	\$ 1,120.00
Technicians/Administrative	\$ 757.00
<i>Subtotal, Monthly Meeting Preparation</i>	<i>\$ 6,323.00</i>

TAC PREPARATION

Subtotal, TAC Preparation..... \$ 0.00

Subtotal Technical Services \$ **8,802.45**

PLAT REVIEW

Sweeney Lake Shores (PUD) (2020-05)

Review resubmittal for erosion and sediment control; and prepare draft approval letter.

Josh P. Phillips, Engineer/Scientist/Specialist II 2.1 hours @ \$105.00 per hour	\$ 220.50
<i>Subtotal, Sweeney Lake Shores (PUD).....</i>	<i>\$ 220.50</i>

Plymouth Creek Center Renovation (2020-15)

Review resubmittal for erosion and sediment control, rate control, and water quality; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 1.0 hour @ \$200.00 per hour	\$ 200.00
Josh P. Phillips, Engineer/Scientist/Specialist II 1.1 hours @ \$105.00 per hour	\$ 115.50
<i>Subtotal, Plymouth Creek Center Renovation</i>	<i>\$ 315.50</i>

Irving Avenue Sanitary Sewer Replacement (2020-16)

Review city's July 2 response to comments, including plans and other submittals, and prepare/send responses to city staff regarding project issues, including cover over the pipe, floodplain, scour and velocities; conference calls and phone discussions with administrator, city staff and city consultant regarding comments and Commission meeting agenda; communications with city staff, city consultant and internal staff regarding modeling approach and review modeling results; site visit to Irving Avenue bridge site and sheet pile weir; and review city's July 29 response/resubmittal, including revised plans.

James P. Herbert, Principal Engineer/Scientist 23.6 hours @ \$200.00 per hour	\$ 4,720.00
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Karen L. Chandler, Principal Engineer/Scientist 7.4 hours @ \$180.00 per hour	\$ 1,332.00
Josh P. Phillips, Engineer/Scientist/Specialist II 8.2 hours @ \$105.00 per hour	\$ 861.00
<i>Subtotal, Irving Avenue Sanitary Sewer Replacement.....</i>	<i>\$ 6,913.00</i>

Bassett Creek Park North Playground (2020-17)

Review grading, drainage and erosion control plans for erosion and sediment control; prepare review memo for July Commission meeting; prepare and send approval letter to city staff; and communications with MPRB staff.

James P. Herbert, Principal Engineer/Scientist 4.7 hours @ \$200.00 per hour	\$ 940.00
Josh P. Phillips, Engineer/Scientist/Specialist II 3.0 hours @ \$105.00 per hour	\$ 315.00
Technicians/Administrative	\$ 63.00
<i>Subtotal, Bassett Creek Park North Playground.....</i>	<i>\$ 1,318.00</i>

Angelo Drive Shoreline Repair (2020-18)

Review shoreline repair plans for work in Sweeney Lake floodplain; prepare review memo for July Commission meeting; prepare and send approval letter to city staff; and communications with applicant and city staff.

James P. Herbert, Principal Engineer/Scientist 6.9 hours @ \$200.00 per hour	\$ 1,380.00
Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$180.00 per hour	\$ 90.00
Josh P. Phillips, Engineer/Scientist/Specialist II 3.7 hours @ \$105.00 per hour	\$ 388.50
Technicians/Administrative	\$ 36.00
<i>Subtotal, Angelo Drive Shoreline Repair.....</i>	<i>\$ 1,894.50</i>

Rude Landscaping 11625 26th Ave N (2020-19)

Review grading plans for shoreline restoration work in Medicine Lake floodplain; provide preliminary comments to applicant; review supplemental submittal information; prepare draft review memo for August Commission meeting; and communications with applicant and city staff.

James P. Herbert, Principal Engineer/Scientist 2.8 hours @ \$200.00 per hour	\$ 560.00
Karen L. Chandler, Principal Engineer/Scientist 0.3 hours @ \$180.00 per hour	\$ 54.00
Josh P. Phillips, Engineer/Scientist/Specialist II 4.6 hours @ \$105.00 per hour	\$ 483.00
Technicians/Administrative	\$ 104.50
<i>Subtotal, Rude Landscaping 11625 26th Ave N.....</i>	<i>\$ 1,201.50</i>

Retro Company Comp Home Care Facility (2020-20)

Plat review set-up; and preliminary review of plans.

James P. Herbert, Principal Engineer/Scientist 1.3 hours @ \$200.00 per hour	\$ 260.00
Technicians/Administrative	\$ <u>80.00</u>
<i>Subtotal, Retro Company Comp Home Care Facility.....</i>	<i>\$ 340.00</i>

Brose Shoreline Repair (2020-21)

Review grading plans for shoreline restoration work in Medicine Lake floodplain; provide preliminary comments to applicant; prepare draft review memo for August Commission meeting; and communications with applicant and city staff.

James P. Herbert, Principal Engineer/Scientist 2.4 hours @ \$200.00 per hour	\$ 480.00
Karen L. Chandler, Principal Engineer/Scientist 0.4 hours @ \$180.00 per hour	\$ 72.00
Josh P. Phillips, Engineer/Scientist/Specialist II 3.4 hours @ \$105.00 per hour	\$ 357.00
Technicians/Administrative	\$ <u>60.00</u>
<i>Subtotal, Brose Shoreline Repair</i>	<i>\$ 969.00</i>

Xchange Medical Office Bldg (2020-22)

Plat review set-up; preliminary review of plans; and communications with applicant and city staff.

James P. Herbert, Principal Engineer/Scientist 0.3 hours @ \$200.00 per hour	\$ 60.00
Karen L. Chandler, Principal Engineer/Scientist 0.6 hours @ \$180.00 per hour	\$ 108.00
Josh P. Phillips, Engineer/Scientist/Specialist II 0.3 hours @ \$105.00 per hour	\$ 31.50
Technicians/Administrative	\$ 113.00
Expenses (postage)	\$ <u>.50</u>
<i>Subtotal, Xchange Medical Office Bldg.....</i>	<i>\$ 313.00</i>

Subtotal Plat Review..... \$ 13,485.00

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Review MDNR water appropriation permit application submitted to BCWMC for review/comment, and provide comments to administrator/MDNR; review MDNR dewatering permit application and provide response to administrator; communications with Plymouth staff and applicant regarding proposed 10th Ave. project site; communications with St. Louis Park staff regarding proposed project in city; and communications with Golden Valley staff and internal staff regarding flood elevations on Douglas Drive properties.

James P. Herbert, Principal Engineer/Scientist 7.7 hours @ \$200.00 per hour	\$ 1,540.00
Karen L. Chandler, Principal Engineer/Scientist 1.5 hours @ \$180.00 per hour	\$ 270.00
Evan Christianson, Engineer/Scientist/Specialist IV 2.3 hours @ \$165.00 per hour	\$ 379.50
Lulu Fang, Engineer/Scientist/Specialist II 1.4 hours @ \$105.00 per hour	\$ 147.00
Josh P. Phillips, Engineer/Scientist/Specialist II 0.3 hours @ \$105.00 per hour	\$ 31.50
<i>Subtotal, Preliminary Communications.....</i>	<i>\$ 2,368.00</i>

NON-FEE REVIEWS

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

***Subtotal Preliminary Communications and Non-Fee Reviews* \$ 2,368.00**

COMMISSION AND TAC MEETINGS

Attend July 16 Commission meeting (virtual), including presentation of North Branch water quality and biotic index monitoring results and Main Stem biotic index monitoring results.

Karen L. Chandler, Principal Engineer/Scientist
2.6 hours @ \$180.00 per hour

\$ 468.00

Margaret R. Rattei, Engineer/Scientist/Specialist III
2.0 @ \$140.00 per hour

\$ 280.00

***Subtotal, Commission and TAC Meetings.....* \$ 748.00**

SURVEYS & STUDIES

***Subtotal Surveys & Studies* \$ 0.00**

WATER QUALITY/MONITORING

General Water Quality

Communications with MPCA staff, administrator and internal staff regarding obtaining information from the MPCA about streams meeting/not meeting the M-IBI standard; and update biotic index and water quality monitoring report.

Margaret R. Rattei, Engineer/Scientist/Specialist III
1.3 @ \$140.00 per hour

\$ 182.00

Technicians/Administrative

\$ 24.00

Subtotal, General Water Quality..... \$ 206.00

Sweeney – Twin Lake Monitoring

Review lab report from June monitoring, communications with lab regarding report, and file June lab report; communications with Green Water Lab regarding PTOX results, review PTOX results, and communications with administrator and internal staff regarding results; prepare for and conduct July 13

monitoring of Sweeney Lake and Twin Lake, including ordering bottles; communications with administrator and internal staff regarding response to administrator's and resident's questions about potential E. coli pollution in Twin Lake and why E. coli monitoring is not included in BCWMC monitoring program; order bottles for July and early August monitoring; and prepare for early August monitoring.

Karen L. Chandler, Principal Engineer/Scientist 1.9 hours @ \$180.00 per hour	\$ 342.00
Terri A. Olson, Engineer/Scientist/Specialist III 2.2 hours @ \$145.00 per hour	\$ 319.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 3.7 hours @ \$140.00 per hour	\$ 518.00
Technicians/Administrative	\$ 1,067.00
Expenses (Pace Analytical/FedEx/mileage/2WD vehicle/4WD vehicle/ canoe/WQ meter/bottle sampler/ice/turbidimeter)	\$ 841.15
<i>Subtotal, Sweeney-Twin Lake Monitoring.....</i>	<i>\$ 3,087.15</i>

Sweeney Branch Monitoring Year 1

Collect Sweeney Branch grab sample on July 31; and complete field coordination tasks.

Heather N. Hlavaty, Engineer/Scientist/Specialist II 1.6 hours @ \$110.00 per hour	\$ 176.00
Kallie B, Doeden, Engineer/Scientist/Specialist II 0.2 hours @ \$100.00 per hour	\$ 20.00
Expenses (Verizon Wireless/mileage).....	\$ 68.37
<i>Subtotal, Sweeney Branch Monitoring Year 1.....</i>	<i>\$ 264.37</i>

2020 Sweeney Branch Biotic Index Monitoring

Communications with internal staff and MPCA staff regarding 2020 Sweeney Branch biotic index and quantitative habitat monitoring.

Karen L. Chandler, Principal Engineer/Scientist 0.3 hours @ \$180.00 per hour	\$ 54.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 0.7 hours @ \$140.00 per hour	\$ 98.00
<i>Subtotal, Sweeney Branch Biotic Index Monitoring.....</i>	<i>\$ 152.00</i>

Subtotal, Water Quality/Monitoring.....\$ 3,709.52

WATER QUANTITY

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

Technicians/Administrative	\$ 800.00
Expenses (milage/2WD vehicle).....	\$ 130.00
<i>Subtotal, Water Quantity.....</i>	<i>\$ 930.00</i>

FLOOD CONTROL PROJECT ANNUAL INSPECTION & DOUBLE BOX CULVERT INSPECTION

Double box culvert 2019 inspection: internal communications regarding engineering and construction cost estimate for tunnel repair; finalize report; and distribute double box culvert drawings.

James P. Herbert, Principal Engineer/Scientist 2.5 hours @ \$200.00 per hour	\$	500.00
Joseph A. Welna, Engineer/Scientist/Specialist III 2.1 hours @ \$145.00 per hour	\$	304.50
<i>Subtotal, Flood Control Annual Proj Inspect&Dbl Box Culvert</i>	\$	804.50
TOTAL ENGINEERING	\$	30,847.47

ANNUAL REPORT

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

Perform July 3 flow measurement at WOMP station; download flow file; and send flow measurement information to MCES staff.

Christopher Bonick, Engineer/Scientist/Specialist III 4.5 hours @ \$100.00 per hour	\$	585.00
Expenses (AVD/mileage/4WD Vehicle).....	\$	122.80
<i>Subtotal, Watershed Outlet Monitoring Program (WOMP)</i>	<i>\$</i>	<i>707.80</i>
TOTAL WOMP	\$	707.80

APM/AIS WORK

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

FOUR SEASONS AREA WQ PROJECT (NL-2)

Communications with administrator and Plymouth staff regarding response to MCES questions about wetland ACOE permit, including review of 2017 wetland permit application.

Karen L. Chandler, Principal Engineer/Scientist 0.9 hours @ \$180.00 per hour	\$	162.00
<i>Subtotal, Four Seasons Area WQ Project</i>	<i>\$</i>	<i>162.00</i>

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

Prepare and send final email update; and prepare for and attend July 30 meeting with Hennepin County Commissioner Fernando regarding maximum levy request adjustment, including review of administrator's draft and final talking points document.

Karen L. Chandler, Principal Engineer/Scientist 2.5 hours @ \$180.00 per hour	\$	450.00
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Patrick E. Brockamp, Engineer/Scientist/Specialist II
 0.9 hours @ \$115.00 per hour..... \$ 103.50

Subtotal, Main Stem Dredging Project Feasibility Study.....\$ 553.50

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

Engineer and Perform In-lake Alum Treatment

Communications with alum applicator to obtain cost estimate; and follow-up on alum dose application rates.

Gregory J. Wilson, Engineer/Scientist/Specialist IV
 2.0 hours @ \$170.00 per hour \$ 340.00

Subtotal, Engineer and Perform In-lake Alum Treatment.....\$ 340.00

Carp Control Options Design-Permit-Implement

Oversight and coordination of carp survey activities; summarize results of first round of carp removal efforts; schedule second round of carp removal activities; and communications with internal staff and Carp Solutions regarding invoice status.

Karen L. Chandler, Principal Engineer/Scientist
 0.4 hours @ \$180.00 per hour \$ 72.00

Gregory J. Wilson, Engineer/Scientist/Specialist IV
 11.9 hours @ \$170.00 per hour..... \$ 2023.00

Subtotal, Carp Control Options Design-Permit-Implement\$ 2,095.00

Carp Control Options Design-Permit-Implement (Carp Solutions Only)

Subcontractor (Carp Solutions) charges for carp survey and carp removal efforts, including electrofishing and marking carp caught in Sweeney Lake and Schaper Pond, setting and baiting box nets in Sweeney Lake and Schaper Pond, completing the first round of carp removal activities in Schaper Pond and both rounds of carp removal activities in Sweeney Lake.

Expenses (Carp Solutions)..... \$ 37,823.00

*Subtotal, Carp Control Options Design-Permit-Implement
 (Carp Solutions Only).....\$ 37,823.00*

Subtotal, Sweeney Lake Water Quality Improvements.....\$ 40,258.00

TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)\$ 40,973.50

TMDL WORK

TOTAL TMDL WORK\$ 0.00

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

Hydraulic Analysis

Review and incorporate MDNR and Plymouth comments into all models (floodplain and preliminary floodway models), including review of plan sets, review incorporated status, and review survey data;

review model revisions; perform QAQC on model and results; perform final model runs for all design storm events in floodplain and preliminary floodway models; call with MDNR staff regarding floodway model and node limitations; and July 23, 2020 call with MDNR staff regarding mapping deliverable guidance and requested mapping audit.

Jennifer A. Koehler, Engineer/Scientist/Specialist III 8.0 hours @ \$145.00 per hour	\$ 1,160.00
Michael B. McKinney, Engineer/Scientist/Specialist II 18.9 hours @ \$115.00 per hour	\$ 2,173.50
<i>Subtotal, Hydraulic Analysis</i>	\$ 3,333.50

Floodplain, Floodway, Cross-Section Shapefiles

Communications with MDNR staff and internal staff regarding meeting on spatial data.

Karen L. Chandler, Principal Engineer/Scientist 0.2 hours @ \$180.00 per hour	\$ 36.00
Joshua Vosejpk, Engineer/Scientist/Specialist I 0.5 hours @ \$90.00 per hour	\$ 45.00
<i>Subtotal, Floodplain, Floodway, Cross-Section Shapefiles</i>	\$ 81.00

TOTAL IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR).....\$ 3,414.50

SUMMARY TOTALS

Total Engineering	\$ 30,847.47
Total WOMP	\$ 707.80
Total Annual Report	\$ 0.00
Total APM/AIS Work	\$ 0.00
Total TMDL Work	\$ 0.00
Total Capital Improvement Projects (Tax Levy)	\$ 40,973.50
Total Improved FEMA Floodplain Modeling & Mapping (MDNR)	\$ 3,414.50
TOTAL PAYABLE	\$ 75,943.27

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

Jim Herbers