



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

Page # 1
Invoice # 23270051-2016-10
Project # 23/27-0051
Client # 59
December 2, 2016

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
October 29, 2016 through November 25, 2016

ENGINEERING

TECHNICAL SERVICES

Edits to draft BCWMC project review flow chart as graphic for website; review background information regarding Medicine Lake Dam and Plymouth fish barrier in response to request from administrator; conference call and other communications with administrator regarding Medicine Lake Dam inspection and maintenance responsibilities, and Plymouth fish barrier inspections and sediment removal; communications with Minneapolis staff regarding CIP project schedule; provide annual municipal checklist to administrator; communications with administrator regarding buffers along Bassett Creek; set up meeting with Hennepin County Mesonet staff and administrator; provide BCWMC logo to BCWMC education consultant; and communications with administrator.

Leonard J. Kremer, Principal Engineer/Scientist 1.5 hours @ \$195.00 per hour	\$ 292.50
James P. Herbert, Principal Engineer/Scientist 2.5 hours @ \$180.00 per hour	\$ 450.00
Karen L. Chandler, Principal Engineer/Scientist 14.0 hours @ \$165.00 per hour	\$ 2,310.00
Sterling G. Williams, Engineer/Scientist/Specialist III 0.5 hours @ \$130.00 per hour	\$ 65.00
Technicians/Administrative.....	\$ 75.00
<i>Subtotal, Technical Services.....</i>	<i>\$ 3,192.50</i>

MONTHLY MEETING PREPARATION

Communications/coordination with administrator regarding draft/final agenda and meeting packet for November 2016 meeting; review/edit draft October meeting minutes; prepare memo for November Commission meeting regarding Medicine Lake Road/DeCola Ponds study presentation;

prepare for November Commission meeting, including set up and attend pre-meeting conference call with chair de Lambert and administrator to review meeting agenda; provide grant tracking information to administrator; and coordination and communications with administrator and internal staff regarding follow-up tasks from November Commission meeting and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 7.9 hours @ \$180.00 per hour	\$	1,422.00
Karen L. Chandler, Principal Engineer/Scientist 15.1 hours @ \$165.00 per hour	\$	2,491.50
Candice H. Kantor, Engineer/Scientist/Specialist II 0.2 hours @ \$100.00 per hour	\$	20.00
Technicians/Administrative.....	\$	<u>380.00</u>
<i>Subtotal, Monthly Meeting Preparation.....</i>	<i>\$</i>	<i>4,313.50</i>

TAC PREPARATION

Communications with administrator regarding MIDS for linear projects and alternatives; internal communications regarding Ramsey-Washington Metro WD's cost cap for linear projects; communications with administrator regarding November TAC meeting materials; review administrator's information regarding infiltration requirements for linear projects and send comments to administrator; and prepare for November TAC meeting.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$180.00 per hour	\$	90.00
Karen L. Chandler, Principal Engineer/Scientist 4.4 hours @ \$165.00 per hour	\$	726.00
Brandon J. Barnes, Engineer/Scientist/Specialist III 0.3 hours @ \$125.00 per hour	\$	<u>37.50</u>
<i>Subtotal, TAC Preparation.....</i>	<i>\$</i>	<i>853.50</i>

Subtotal Technical Services\$ 8,359.50

PLAT REVIEW

SWLRT Minneapolis (2016-17)

Review Metro Transit's responses to BCWMC comment letter.

Karen L. Chandler, Principal Engineer/Scientist 0.8 hours @ \$165.00 per hour	\$	132.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 0.9 hours @ \$125.00 per hour	\$	112.50

Candice H. Kantor, Engineer/Scientist/Specialist II		
1.0 hours @ \$100.00 per hour	\$	100.00
Josh P. Phillips, Engineer/Scientist/Specialist I		
6.4 hours @ \$70.00 per hour.....	\$	<u>448.00</u>
<i>Subtotal, SWLRT Minneapolis.....</i>	<i>\$</i>	<i>792.50</i>

226 Peninsula Road - WCA (2016-26)

Review proposed plans for potential WCA concerns.

Karen S. Wold, Engineer/Scientist/Specialist II		
0.3 hours @ \$120.00 per hour	\$	<u>36.00</u>
<i>Subtotal, 226 Peninsula Road - WCA.....</i>	<i>\$</i>	<i>36.00</i>

226 Peninsula Road (2016-26)

Review grading, drainage and erosion control plans; prepare review memo for November Commission meeting; prepare and send approval letter to city staff/officials; and communications with applicant.

James P. Herbert, Principal Engineer/Scientist		
1.3 hours @ \$180.00 per hour	\$	234.00
Karen L. Chandler, Principal Engineer/Scientist		
1.1 hours @ \$165.00 per hour	\$	181.50
Candice H. Kantor, Engineer/Scientist/Specialist II		
3.3 hours @ \$100.00 per hour	\$	330.00
Josh P. Phillips, Engineer/Scientist/Specialist I		
0.7 hours @ \$70.00 per hour.....	\$	49.00
Technicians/Administrative.....	\$	<u>27.00</u>
<i>Subtotal, 226 Peninsula Road.....</i>	<i>\$</i>	<i>821.50</i>

Ridgedale Corner Shoppes (2016-34)

Review revised submittals; communications with applicant's consultant; and prepare draft approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist		
4.4 hours @ \$180.00 per hour	\$	792.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III		
2.1 hours @ \$125.00 per hour	\$	262.50
Josh P. Phillips, Engineer/Scientist/Specialist I		
10.6 hours @ \$70.00 per hour.....	\$	<u>742.00</u>
<i>Subtotal, Ridgedale Corner Shoppes.....</i>	<i>\$</i>	<i>1,796.50</i>

Minneapolis Marriott West (2016-35)

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

James P. Herbert, Principal Engineer/Scientist 2.0 hours @ \$180.00 per hour	\$	360.00
Josh P. Phillips, Engineer/Scientist/Specialist I 1.4 hours @ \$70.00 per hour	\$	<u>98.00</u>
<i>Subtotal, Minneapolis Marriott West</i>	\$	458.00
Subtotal Plat Review	\$	3,904.50

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Communications with consultant regarding Plymouth project; review District 600 building DNR permit and email comments to administrator; communications with consultant regarding Minneapolis site, communications with consultant regarding Minnetonka site; communications with BNSF consultant regarding bridge work; and communications with Minnetonka staff regarding proposed project.

James P. Herbert, Principal Engineer/Scientist 3.5 hours @ \$180.00 per hour	\$	630.00
Karen L. Chandler, Principal Engineer/Scientist 0.6 hours @ \$165.00 per hour	\$	<u>99.00</u>
Subtotal, Plat Review – Preliminary Communications	\$	729.00

NON-FEE REVIEWS

BLUE LINE LRT/BOTTINEAU TRANSITWAY

Follow up with Blue Line LRT consultant regarding survey data request; communications with Blue Line LRT consultant regarding meeting agenda; coordination regarding floodplain and light rail crossing of Bassett Creek; prepare for November 15 meeting with Blue Line LRT consultant and cities, including internal meeting to review modeling results in old channel area and other agenda items; site visit to old channel area/bridge area; attend November 15 meeting with Blue Line LRT consultants, administrator, Golden Valley staff, and Minneapolis staff regarding bridge in old channel area, floodplain fill/mitigation, and status of BCWMC XP SWMM Phase 2 model; discussions with other watershed staff regarding their enforcement of Atlas 14 flood elevations on LRT projects; and communications with Blue Line LRT consultant.

James P. Herbert, Principal Engineer/Scientist 5.6 hours @ \$180.00 per hour	\$	1,008.00
Karen L. Chandler, Principal Engineer/Scientist 7.2 hours @ \$165.00 per hour	\$	<u>1,188.00</u>

Jennifer A. Koehler, Engineer/Scientist/Specialist III 6.2 hours @ \$125.00 per hour	\$ 775.00
Expenses (Mileage)	\$ 5.94
<i>Subtotal, Blue Line LRT/Bottineau Transitway</i>	\$ 2,976.94

SP 2772-111 TH 169 Drainage Improvements (2015-33)

Review revised grading, drainage and erosion control plans; review drainage areas; review phosphorus removal efficiencies of pond to estimate potential water quality impacts of proposed project; prepare review memorandum for November Commission meeting; follow up meetings and communications with applicant; prepare and send approval letter to city; and communications with city.

James P. Herbert, Principal Engineer/Scientist 4.2 hours @ \$180.00 per hour	\$ 756.00
Karen L. Chandler, Principal Engineer/Scientist 2.3 hours @ \$165.00 per hour	\$ 379.50
Gregory J. Wilson, Consultant/Advisor 1.0 hours @ \$155.00 per hour	\$ 155.00
Candice H. Kantor, Engineer/Scientist/Specialist II 6.4 hours @ \$100.00 per hour	\$ 640.00
Josh P. Phillips, Engineer/Scientist/Specialist I 0.7 hours @ \$70.00 per hour	\$ 49.00
<i>Subtotal, SP 2772-111 TH 169</i>	\$ 1,979.50

Subtotal Non-Fee Reviews \$ 4,956.44

Subtotal Preliminary Communications and Non-Fee Reviews \$ 5,685.44

COMMISSION AND TAC MEETINGS

Attend November 16 Commission meeting.

Karen L. Chandler, Principal Engineer/Scientist 4.0 hours @ \$165.00 per hour	\$ 660.00
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Subtotal, Commission and TAC Meetings \$ 660.00

SURVEYS & STUDIES

APM/AIS TASK FORCE

Review November 30 APM/AIS committee meeting packet.

Karen L. Chandler, Principal Engineer/Scientist 0.2 hours @ \$165.00 per hour	\$ 33.00
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Subtotal, APM/AIS Task Force \$ 33.00

Subtotal, Surveys & Studies \$ 33.00

WATER QUALITY/MONITORING

Medicine Lake 2016 monitoring: analysis of Medicine Lake phytoplankton and zooplankton samples, and internal communications regarding data summary/analyses; Northwood and Crane Lakes 2016 monitoring: prepare water quality data summaries for Northwood and Crane Lakes; and review and file laboratory reports.

Margaret R. Rattei, Engineer/Scientist/Specialist III 35.6 hours @ \$130.00 per hour	\$ 4,628.00
Erin M. Dietrich, Engineer/Scientist/Specialist III 0.4 hours @ \$135.00 per hour	\$ 54.00
Technicians/Administrative.....	\$ 369.00
Subtotal, Water Quality/Monitoring.....	\$ 5,051.00

SHORELAND HABITAT MONITORING

Prepare draft habitat monitoring plan and revise per administrator review; and communications with administrator.

Karen L. Chandler, Principal Engineer/Scientist 1.2 hours @ \$165.00 per hour	\$ 198.00
Sterling G. Williams, Engineer/Scientist/Specialist III 8.1 hours @ \$130.00 per hour	\$ 1,053.00
Karen S. Wold, Engineer/Scientist/Specialist II 0.5 hours @ \$120.00 per hour	\$ 60.00
Subtotal, Shoreland Habitat Monitoring	\$ 1,311.00

FLOOD CONTROL PROJECT INSPECTION

Prepare draft report of annual BCWMC Flood Control Project structures inspection.

James P. Herbert, Principal Engineer/Scientist 3.0 hours @ \$180.00 per hour	\$ 540.00
Patrick E. Brockamp, Engineer/Scientist/Specialist I 1.2 hours @ \$85.00 per hour.....	\$ 102.00
Josh P. Phillips, Engineer/Scientist/Specialist I 0.9 hours @ \$70.00 per hour.....	\$ 63.00
Technicians/Administrative.....	\$ 187.50
Subtotal, Flood Control Project Inspection	\$ 892.50

TOTAL ENGINEERING \$ **25,896.94**

SECRETARIAL SERVICES

SECRETARIAL SERVICES EXPENSES

TOTAL SECRETARIAL SERVICES EXPENSES.....\$ 0.00

ANNUAL REPORT

TOTAL ANNUAL REPORT\$ 0.00

PUBLIC COMMUNICATIONS

TOTAL PUBLIC COMMUNICATIONS\$ 0.00

WEBSITE

TOTAL WEBSITE\$ 0.00

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

Attend WOMP flow measurement workshop at MCES; perform flow measurement; download data; Sontek file download; obtain 2016 rainfall data; and communications with MCES staff.

Christopher J. Bonick, Engineer/Scientist/Specialist II

7.5 hours @ \$120.00 per hour\$ 900.00

Subtotal, Watershed Outlet Monitoring Program\$ 900.00

TOTAL WOMP\$ 900.00

DIGITIZE HISTORIC PAPER FILES

TOTAL DIGITIZE HISTORIC PAPER FILES.....\$ 0.00

CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

FOUR SEASONS MALL AREA WATER QUALITY PROJECT (NL-2)

Prepare for and attend November 18 meeting with Plymouth staff, administrator, developer and developer's consultants regarding proposed project and best management practices; and coordination with internal staff regarding review.

James P. Herbert, Principal Engineer/Scientist

5.0 hours @ \$180.00 per hour\$ 900.00

Karen L. Chandler, Principal Engineer/Scientist 1.7 hours @ \$165.00 per hour	\$ 280.50
<i>Subtotal, Four Seasons Mall Area Water Quality Project (NL-2).....</i>	
	<i>\$ 1,180.50</i>

MAIN STEM CHANNEL RESTORATION, CEDAR LK RD TO DUPONT, PLUS FRUEN MILL (2017CR-M)

Complete and compile Hennepin County Environmental Response Fund grant application and submit to Hennepin County.

Daniel J. Fetter, Principal Engineer/Scientist 0.5 hours @ \$200.00 per hour	\$ 100.00
Jennifer L. Brekken, Engineer/Scientist/Specialist III 3.6 hours @ \$140.00 per hour	\$ 504.00
Technicians/Administrative.....	\$ 52.50
Expenses (FedX)	<u>\$ 12.59</u>
<i>Subtotal, Main Stem Channel Restoration, Cedar Lk Rd to Dupont, Plus Fruen Mill.....</i>	
	<i>\$ 669.09</i>

BASSETT CREEK PARK & WINNETKA PONDS DREDGING FEASIBILITY STUDY

Review revised sediment sample analytical laboratory reports; prepare figures showing sediment sampling locations; begin drafting sediment characterization results memo; expenses for laboratory analysis of sediment samples (Pace Analytical Services Inc.); draft wetland delineation report; communications regarding submitting the wetland delineation report for review; complete the wetland joint application form and submit to the LGU; review original design and as-built information for Bassett Creek Park Pond and Winnetka Pond East; prepare and review estimated original conditions contours for Bassett Creek Park Pond and Winnetka Pond East; create figures showing current survey conditions and estimated original conditions contours for Bassett Creek Park Pond and Winnetka Pond East; and communications with Crystal staff and administrator.

Karen L. Chandler, Principal Engineer/Scientist 1.7 hours @ \$165.00 per hour	\$ 280.50
Terri A. Olson, Engineer/Scientist/Specialist III 0.5 hours @ \$130.00 per hour	\$ 65.00
Brian K. Burgner, Engineer/Scientist/Specialist II 14.4 hours @ \$95.00 per hour	\$ 1,368.00
Candice H. Kantor, Engineer/Scientist/Specialist II 1.6 hours @ \$100.00 per hour	\$ 160.00
Kevin D. Menken, Engineer/Scientist/Specialist II 2.0 hours @ \$110.00 per hour	\$ 220.00
Joshua R. Vosejпка, Engineer/Scientist/Specialist I 1.0 hours @ \$75.00 per hour.....	\$ 75.00

Charles M. Hinds, Engineer/Scientist/Specialist I 13.9 hours @ \$75.00 per hour.....	\$ 1,042.50
Technicians/Administrative.....	\$ 42.00
Expenses (Pace Analytical Services)	<u>\$ 115.50</u>
<i>Subtotal, Bassett Creek Park & Winnetka Ponds Dredging Feasibility Study.....</i>	
	<i>\$ 3,368.50</i>
TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)	\$ 5,218.09

TMDL WORK

TMDL IMPLEMENTATION REPORTING

Revise/update P8 model for Northwood Lake watershed/Agora-Four Seasons development.

Gregory J. Wilson, Consultant/Advisor 7.8 hours @ \$155.00 per hour.....	\$ <u>1,209.00</u>
<i>Subtotal, TMDL Implementation Reporting</i>	
	<i>\$ 1,209.00</i>
TOTAL TMDL WORK.....	\$ 1,209.00

XP-SWMM PHASE II

XP-SWMM PHASE II

North Branch & Main Stem Modeling

QAQC of XP-SWMM model downstream of Medicine Lake; revisions to model per QAQC review; internal meeting to discuss initial calibration runs; calibrate model for North Branch Bassett Creek and Wisconsin Avenue structure; process NEXRAD precipitation data for downstream portion of the model; update model around Highway 55 backwater area based on survey data from Blue Line LRT consultant; and compile draft figures for draft report.

Jennifer A. Koehler, Engineer/Scientist/Specialist III 11.7 hours @ \$125.00 per hour.....	\$ 1,462.50
Ross S. Mullen, Engineer/Scientist/Specialist I 6.7 hours @ \$90.00 per hour	\$ 603.00
Josiah J. Hawley, Engineer/Scientist/Specialist I 1.8 hours @ \$90.00 per hour	\$ 162.00
Joshua R. Vosejpka, Engineer/Scientist/Specialist I 1.0 hours @ \$75.00 per hour.....	\$ 300.00
Lulu Fang, Engineer/Scientist/Specialist I 30.0 hours @ \$75.00 per hour	\$ 2,250.00

Technicians/Administrative.....	\$	17.00
<i>Subtotal, XP-SWMM Phase II.....</i>	\$	4,794.50
TOTAL XP-SWMM PHASE II.....	\$	4,794.50

SUMMARY TOTALS

Total Engineering	\$	25,896.94
Total Secretarial Services Expenses	\$	0.00
Total Annual Report/Website/Public Communications	\$	0.00
Total WOMP.....	\$	900.00
Total Digitize Historic Paper Files.....	\$	0.00
Total Capital Improvement Projects (Tax Levy).....	\$	5,218.09
Total TMDL Work	\$	1,209.00
Total XP-SWMM Phase II.....	\$	4,794.50
 TOTAL PAYABLE.....	 \$	 38,018.53

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


