

Bassett Creek WMO
7800 Golden Valley Road
Golden Valley, MN 55427

Page # 1
Invoice # 23270051-2012-11
Project # 23/27-0051
Client # 59
January 7, 2013

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
December 1, 2012 through December 28, 2012

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| ENGINEERING |
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TECHNICAL SERVICES

Calls/emails to or from the Commissioners, recording administrator, watershed communities, developers in the watershed, and interested citizens; coordination with recording administrator regarding post-meeting tasks; internal meetings regarding plan amendment, Schaper Pond project, FEMA models; reviewed BWSR 2013 clean water fund grant recommendations; conference call with counsel and Golden Valley staff regarding 2014 Twin Lake project; developed schedule for 2014 CIP projects and prepared memo for December Commission meeting; prepared memo for December Commission meeting regarding additional work for H&H model; reviewed City of Medicine Lake stormwater management ordinance requirements; emailed construction budget report suggested revisions to Sue Virnig; call to counsel regarding budget carryovers.

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|------------------------------------------------------|--------------------|
| Leonard J. Kremer, Principal Engineer/Scientist | |
| 2.8 hours @ \$160.00 per hour | \$ 448.00 |
| James P. Herbert, Principal Engineer/Scientist | |
| 1.0 hours @ \$145.00 per hour | \$ 145.00 |
| Karen L. Chandler, Engineer/Scientist/Specialist III | |
| 15.8 hours @ \$145.00 per hour | \$ 2,291.00 |
| Technicians/Administrative | \$ 185.00 |
| <i>Subtotal, Technical Services.....</i> | <i>\$ 3,069.00</i> |

PRELIMINARY SITE REVIEW/CORRESPONDENCE

Telephone conversations regarding proposed developments; provided watershed hydraulic information, flood profiles and BCWMC development requirements to applicants; phone call with Golden Valley staff regarding proposed development; preliminary review of Crest Ridge development in Minnetonka and coordination with City staff.

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|----------------------------------------------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$145.00 per hour | \$ 145.00 |
| Rita W. Weaver, Engineer/Scientist/Specialist II 0.7 hours @ \$100.00 per hour..... | \$ 70.00 |
| Technicians/Administrative..... | \$ 119.50 |
| <i>Subtotal, Preliminary Site Review/Correspondence</i> | <i>\$ 334.50</i> |

MONTHLY MEETING PREPARATION

Reviewed draft BCWMC meeting minutes, agenda and packet materials and discussed comments with recording administrator; communications with chair and recording administrator; internal meetings and coordination with recording administrator regarding agenda, to-do list and meeting packet for December 2012 meeting.

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|---------------------------------------------------------------------------------------------|--------------------|
| James P. Herbert, Principal Engineer/Scientist 10.7 hours @ \$145.00 per hour | \$ 1,551.50 |
| Karen L. Chandler, Engineer/Scientist/Specialist III 8.2 hours @ \$145.00 per hour | \$ 1,189.00 |
| Technicians/Administrative..... | \$ 15.00 |
| <i>Subtotal, Monthly Meeting Preparation.....</i> | <i>\$ 2,755.50</i> |

CHANNEL MAINTENANCE FUND

Reviewed Golden Valley channel maintenance fund request and prepared recommendation to BCWMC for action at January meeting.

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|---------------------------------------------------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist 2.7 hours @ \$145.00 per hour | \$ 391.50 |
| Karen L. Chandler, Engineer/Scientist/Specialist III 0.3 hours @ \$145.00 per hour | \$ 43.50 |
| <i>Subtotal, Channel Maintenance Fund.....</i> | <i>\$ 435.00</i> |

Subtotal Technical Services \$ 6,594.00

PLAT REVIEW

Note: Projects in **Bold** have provided review fees to offset review costs. Projects not in Bold are either in a preliminary stage or do not require application fee.

Boone Avenue Convenience Center and Retail

Reviewed revised grading, drainage and erosion control plan for project in the City of Golden Valley.

| | |
|----------------------------------------------------------------------------------------|-----------------|
| Rita W. Weaver, Engineer/Scientist/Specialist II 0.8 hours @ \$100.00 per hour..... | \$ 80.00 |
| <i>Subtotal, Boone Avenue Convenience Ctr and Retail</i> | <i>\$ 80.00</i> |

237 Peninsula Road

Correspondence with applicant regarding withdrawal of plan in the City of Medicine Lake due to poor soil issues.

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|------------------------------------------------|-----------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 0.5 hours @ \$145.00 per hour | \$ 72.50 |
| <i>Subtotal, 237 Peninsula Road.....</i> | <i>\$ 72.50</i> |

Turtle Lake Drainage Improvement

Telephone conversation with applicant; review of site plan; preparation of memorandum to the Commission; prepared letter of recommendation to the City of Plymouth and Mn/DNR.

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|---------------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 1.9 hours @ \$145.00 per hour | \$ 275.50 |
| Karen L. Chandler, Engineer/Scientist/Specialist III | |
| 0.4 hours @ \$145.00 per hour | \$ 58.00 |
| Rita W. Weaver, Engineer/Scientist/Specialist II | |
| 3.2 hours @ \$100.00 per hour..... | \$ 320.00 |
| <i>Subtotal, Turtle Lake Drainage Improvement</i> | <i>\$ 653.50</i> |

45th & Nathan Lane Drainage Improvement

Telephone conversation with applicant; review of site plan; preparation of memorandum to the Commission; prepared letter of recommendation to the City of Plymouth and Mn/DNR.

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|-------------------------------------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 1.8 hours @ \$145.00 per hour | \$ 261.00 |
| Karen L. Chandler, Engineer/Scientist/Specialist III | |
| 0.3 hours @ \$145.00 per hour | \$ 43.50 |
| Rita W. Weaver, Engineer/Scientist/Specialist II | |
| 2.5 hours @ \$100.00 per hour..... | \$ 250.00 |
| <i>Subtotal, 45th & Nathan Lane Drainage Improvement</i> | <i>\$ 554.50</i> |

Sunset Hill Elementary 2013 Bldg Add'n and Renovation

Telephone conversations and emails with city staff and applicant; reviewed grading, drainage and erosion control plan; prepared letter of recommendation to City of Plymouth.

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|--------------------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 4.3 hours @ \$145.00 per hour | \$ 623.50 |
| Rita W. Weaver, Engineer/Scientist/Specialist II | |
| 1.4 hours @ \$100.00 per hour..... | \$ 140.00 |
| <i>Subtotal, Sunset Hill Elementary 2013 Bldg Add'n.....</i> | <i>\$ 763.50</i> |

Eliot Park Apartments

Telephone conversations and emails with city staff and applicant; prepared preliminary comments to applicant and City of St. Louis Park.

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|------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 1.0 hours @ \$145.00 per hour | \$ 145.00 |
| <i>Subtotal, Eliot Park Apartments</i> | <i>\$ 145.00</i> |

Colonnade Apartments

Telephone conversations and emails with city staff and applicant; prepared preliminary comments to applicant and City of Golden Valley; reviewed historical plans and regional pond requirements.

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|--------------------------------------------------|------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 5.0 hours @ \$145.00 per hour | \$ 725.00 |
| Rita W. Weaver, Engineer/Scientist/Specialist II | |
| 0.7 hours @ \$100.00 per hour..... | \$ 70.00 |
| <i>Subtotal, Colonnade Apartments</i> | <i>\$ 795.00</i> |

Greenwood Elementary School

Telephone conversations and emails with city staff and applicant; reviewed grading, drainage and erosion control plan; prepared letter of recommendation to city of Plymouth.

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|---------------------------------------------------|--------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 1.5 hours @ \$145.00 per hour | \$ 217.50 |
| Rita W. Weaver, Engineer/Scientist/Specialist II | |
| 5.2 hours @ \$100.00 per hour..... | \$ 520.00 |
| Technicians/Administrative..... | \$ 37.50 |
| <i>Subtotal, Greenwood Elementary School.....</i> | <i>\$ 775.00</i> |
| <i>Subtotal Plat Review</i> | <i>\$ 3,839.00</i> |

COMMISSION AND TAC MEETINGS

Attended December 20 pre-meeting visioning session and regular Commission meeting

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| Karen L. Chandler, Engineer/Scientist/Specialist III | |
| 4.0 hours @ \$145.00 per hour..... | \$ 580.00 |
| <i>Subtotal, Commission Meetings.....</i> | <i>\$ 580.00</i> |

WATER QUALITY MONITORING

Review of water quality data; preliminary preparation of report; and identification of invertebrates for biotic index monitoring program.

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|------------------------------------------------------|--------------------|
| Margaret R. Rattei, Engineer/Scientist/Specialist II | |
| 0.3 hours @ \$115.00 per hour | \$ 34.50 |
| Technicians/Administrative..... | \$ 16.00 |
| Subconsultant (Dean C. Hansen) | \$ 1,925.00 |
| <i>Subtotal, Water Quality Monitoring</i> | <i>\$ 1,975.50</i> |

WATER QUANTITY

Measured and reviewed lake level elevations as part of the lake-gauging program; requested flow data from city of Golden Valley staff; performed survey of Medicine Lake outlet structure.

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|-------------------------------------------------------|--------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 2.0 hours @ \$145.00 per hour | \$ 290.00 |
| Technicians/Administrative..... | \$ 901.00 |
| Expenses (Mileage/2WD vehicle/GPS survey system)..... | \$ 201.62 |
| <i>Subtotal, Water Quantity.....</i> | <i>\$ 1,392.62</i> |

FLOOD CONTROL PROJECT INSPECTION

Coordination with City staff, performed 2012 annual flood control structure inspections and prepared inspection memorandum and memorandum to the Commission.

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|------------------------------------------------|--------------------|
| James P. Herbert, Principal Engineer/Scientist | |
| 9.8 hours @ \$145.00 per hour | \$ 1,421.00 |
| Technicians/Administrative..... | \$ 1,314.00 |
| <i>Subtotal, Watershed Inspection</i> | <i>\$ 2,735.00</i> |

TOTAL ENGINEERING.....\$ 17,116.12

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| SECRETARIAL SERVICES |
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SECRETARIAL SERVICES EXPENSES

Administrative expenses requested by Amy Herbert including: copies, color copies for meeting packet; postage.

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| Expenses (B&W/color copies/postage)..... | \$ 368.09 |
|------------------------------------------|-----------|

TOTAL SECRETARIAL SERVICES EXPENSES\$ 368.09

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| PLANNING |
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WATERSHED-WIDE XP-SWMM MODEL

Obtained Bassett Creek flow stage/data for selected storm events; prepared map of road crossings and table of bridges; revised subwatershed links; input new culverts, control structures and crossing overflow structures into model; updated the watersheds with rating curves in the model; developed storage capacity curve for ML11 and updated culvert and structure data from flood control plans; input precipitation for storm and modeled overflows at crossings; imported Wirth Lake Model; restructured a few watersheds; georeferenced nodes; completed pond surveys and flood volume calculations; prepared Mainstream West watershed table updates; obtained precipitation data from high density network and nearby airports; prepared main map edits, modeled outlet estimates; processed precipitation hourly data from Nexrad August 2010, August 2011 and April 2011; model calibration.

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|---------------------------------------------------------|---------------------|
| Rita W. Weaver, Engineer/Scientist/Specialist II | |
| 21.3 hours @ \$100.00 per hour | \$ 2,130.00 |
| Christopher J. Bonick, Engineer/Scientist/Specialist II | |
| 1.5 hours @ \$105.00 per hour | \$ 157.50 |
| John E. McCarthy, Engineer/Scientist/Specialist I | |
| 91.5 hours @ \$75.00 per hour | \$ 6,862.50 |
| Kelly A. Wild, Engineer/Scientist/Specialist I | |
| 1.5 hours @ \$65.00 per hour | \$ 97.50 |
| Ross S. Mullen, Engineer/Scientist/Specialist I | |
| 17.0 hours @ \$65.00 per hour | \$ 1,105.00 |
| Margaret A. Wright, Engineer/Scientist/Specialist I | |
| 14.0 hours @ \$65.00 per hour | \$ 910.00 |
| Joshua R. Vosejpka, Engineer/Scientist/Specialist I | |
| 1.2 hours @ \$65.00 per hour | \$ 78.00 |
| <i>Subtotal, Watershed-wide XP-SWMM Model.....</i> | <i>\$ 11,340.50</i> |

WATERSHED-WIDE P8 WATER QUALITY MODEL

Performed pond survey and flood volume calculations; input watershed divides and P8 updates; main map edits, performed outlet estimates; updated watershed inputs; processed data from pond surveys and incorporated pond survey data to P8 input spreadsheets; P8 model mapping and QA/QC review.

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| Gregory J. Wilson, Engineer/Scientist/Specialist III | |
| 4.0 hours @ \$140.00 per hour | \$ 560.00 |
| Margaret R. Rattei, Engineer/Scientist/Specialist II | |
| 22.7 hours @ \$115.00 per hour | \$ 2,610.50 |
| Ross S. Mullen, Engineer/Scientist/Specialist I | |
| 6.9 hours @ \$65.00 per hour | \$ 448.50 |
| Amy R. Mikus, Engineer/Scientist/Specialist I | |
| 3.0 hours @ \$80.00 per hour | \$ 240.00 |

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|-------------------------------------------------------------|--------------------|
| Kevin J. Mueller, Engineer/Scientist/Specialist I | |
| 15.3 hours @ \$70.00 per hour | \$ 1,071.00 |
| Joshua R. Vosejpka, Engineer/Scientist/Specialist I | |
| 14.4 hours @ \$65.00 per hour | \$ 936.00 |
| Technicians/Administrative..... | \$ 584.50 |
| <i>Subtotal, Watershed-wide P8 Water Quality Model.....</i> | <i>\$ 6,450.50</i> |

NEXT GENERATION PLAN

Gaps Analysis

Internal meetings to review revised section of gaps analysis and to review document revisions; prepared final gaps analysis document for discussion at Commission December meeting.

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|--------------------------------------------------------|--------------------|
| Karen L. Chandler, Engineer/Scientist/Specialist III | |
| 4.3 hours @ \$145.00 per hour | \$ 623.50 |
| Sterling G. Williams, Engineer/Scientist/Specialist II | |
| 8.4 hours @ \$95.00 per hour | \$ 798.00 |
| <i>Subtotal, Gaps Analysis.....</i> | <i>\$ 1,421.50</i> |
| <i>Subtotal, Next Generation Plan.....</i> | <i>\$ 1,421.50</i> |

TOTAL PLANNING \$ **19,212.50**

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| ANNUAL REPORT |
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TOTAL ANNUAL REPORT \$ **0.00**

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| WATERSHED OUTLET MONITORING PROGRAM (WOMP) |
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Coordination regarding flow measurement at WOMP site; reviewed rating curve and high flow points at site.

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|-----------------------------------------------------------|------------------|
| Christopher J. Bonick, Engineer/Scientist/Specialist II | |
| 2.0 hours @ \$105.00 per hour | \$ 210.00 |
| <i>Subtotal, Watershed Outlet Monitoring Program.....</i> | <i>\$ 210.00</i> |
| TOTAL WOMP..... | \$ 210.00 |

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| CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy) |
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PLYMOUTH CREEK RESTORATION PROJECT (2010 CR)

Reviewed grant reporting requirements; prepared grant narrative update and performed end of year grants review, photo submission, final reporting; and grant close-out; prepared memorandum to Commission meeting regarding final grant closeout.

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|---------------------------------------------------------|-----------|-----------------|
| Karen L. Chandler, Engineer/Scientist/Specialist III | | |
| 1.4 hours @ \$145.00 per hour | \$ | 203.00 |
| Jeffrey D. Weiss, Engineer/Scientist/Specialist II | | |
| 8.3 hours @ \$100.00 per hour | \$ | 830.00 |
| Amy R. Mikus, Engineer/Scientist/Specialist I | | |
| 5.0 hours @ \$80.00 per hour | \$ | 400.00 |
| Michael B. McKinney, Engineer/Scientist/Specialist I | | |
| 1.4 hours @ \$75.00 per hour | \$ | 105.00 |
| <i>Subtotal, Plymouth Crk Restoration Project</i> | <i>\$</i> | <i>1,538.00</i> |

CRYSTAL-REGENT AVENUE (2010 CR)

Reviewed grant reporting requirements; prepared grant narrative update and performed end of year grants review, photo submission, final reporting; and grant close-out; prepared memorandum to Commission meeting regarding final grant closeout.

| | | |
|------------------------------------------------------|-----------|-----------------|
| Karen L. Chandler, Engineer/Scientist/Specialist III | | |
| 1.5 hours @ \$145.00 per hour | \$ | 217.50 |
| Jeffrey D. Weiss, Engineer/Scientist/Specialist II | | |
| 8.3 hours @ \$100.00 per hour | \$ | 830.00 |
| Amy R. Mikus, Engineer/Scientist/Specialist I | | |
| 5.0 hours @ \$80.00 per hour | \$ | 400.00 |
| Michael B. McKinney, Engineer/Scientist/Specialist I | | |
| 1.3 hours @ \$75.00 per hour | \$ | 97.50 |
| <i>Subtotal, Crystal-Regent Avenue</i> | <i>\$</i> | <i>1,545.00</i> |

TOTAL CAPITAL IMP PROJECTS (Tax Levy)\$ 3,083.00

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| CAPITAL IMPROVEMENT PROJECTS (Funded through Flood Control Project Long-term Maintenance Funds) |
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**TOTAL CAPITAL IMPROVEMENT PROJECTS
(Maintenance Funds)\$ 0.00**

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| TMDL STUDIES |
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TMDL IMPLEMENTATION

Responded to questions about MS4 permitting, TMDL and waste-load allocation (WLA) reporting requirements; reviewed TMDL reporting requirements; MPCA staff communications; internal communications regarding implementation reporting.

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| Karen L. Chandler, Engineer/Scientist/Specialist III | | |
| 0.5 hours @ \$145.00 per hour | \$ | 72.50 |

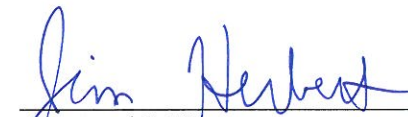
Gregory J. Wilson, Engineer/Scientist/Specialist III
9.5 hours @ \$140.00 per hour\$ 1,330.00
Subtotal, TMDL Implementation\$ 1,402.50

TOTAL TMDL STUDIES.....\$ 1,402.50

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| SUMMARY TOTALS |
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|---------------------------------------------------------------------|-------------------------|
| Total Engineering..... | \$ 17,116.12 |
| Total Secretarial Services Expenses | \$ 368.09 |
| Total Planning..... | \$ 19,212.50 |
| Total Annual Report | \$ 00.0 |
| Total WOMP | \$ 210.00 |
| Total Capital Improvement Projects (Tax Levy) | \$ 3,083.00 |
| Total Capital Improvement Projects (Maintenance Funds) | \$ 0.00 |
| Total TMDL Studies | \$ 1,402.50 |
| TOTAL PAYABLE | \$ 41,392.21 |

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



Leonard J. Kremer