



## Memorandum

**To:** Bassett Creek Watershed Management Commission  
**From:** Barr Engineering Co.  
**Subject:** Item 4F –Golden Valley 2018 Pavement Management Program (PMP) Project  
BCWMC March 15, 2018 Meeting Agenda  
**Date:** March 7, 2018  
**Project:** 23270051 2018 2151

### 4F Golden Valley 2018 Pavement Management Program (PMP) Project BCWMC 2018-04

#### Summary:

**Proposed Work:** Excavation, Grading, Concrete Curb & Gutter, Bituminous Paving, Storm Sewer modifications, Sanitary Sewer Repair, and Water Main Replacement

**Basis for Review at Commission Meeting:** Linear Project Disturbing Over 5 Acres; Delayed Mitigation for BCWMC #2016-06 & BCWMC #2017-02 Water Quality Treatment

**Impervious Surface Area:** Decrease 0.20 Acres

**Recommendation:** Conditional Approval

#### General Background & Comments

The proposed linear project is located in the Medicine Lake Direct and Bassett Creek Main Stem subwatersheds in Golden Valley, MN. The project includes the reconstruction of portions of Ensign Avenue, Elgin Place, Duluth Street, Independence Avenue, Hillsboro Avenue, Gettysburg Avenue, Flag Avenue, and Earl Street. The proposed linear project includes excavation, grading, concrete curb & gutter, bituminous paving, storm sewer modifications, sanitary sewer repair, and water main replacement resulting in 8.37 acres of disturbance (grading). The proposed project results in a decrease in impervious surface by 0.20 acres from 5.27 acres (existing) to 5.07 acres (proposed), due to narrowing of streets.

#### Floodplain

The project does not involve work in the Bassett Creek floodplain.

#### Wetlands

The project appears to involve work adjacent to wetlands. The City of Golden Valley is the LGU for administering the Minnesota Wetland Conservation Act.

#### Stormwater Management

The proposed linear project does not create one or more acres of net new impervious surfaces and therefore does not trigger the BCWMC requirements for rate control. The BCWMC Engineer reviewed a separate request for *Diversion of Surface Water Runoff for Golden Valley 2018-2019 Pavement Management Program (PMP) Project* (BCWMC #2017-40), which will be completed as part of this project.

The proposed diversion will reroute runoff from an 8.6-acre subwatershed within the Medicine Lake Direct subwatershed to a pond on the General Mills site, and eventually to the Main Stem of Bassett Creek. With the exception of the proposed diversion, the drainage patterns under existing and proposed conditions will remain similar; this project will not result in major changes to land use or topography. This project may slightly reduce stormwater volumes and rates by decreasing the amount of impervious surface within the project area.

## Water Quality Management

2018 PMP Project: The proposed linear project does not create one or more acres of net new impervious surfaces and therefore does not trigger the BCWMC requirements for water quality treatment.

2016 PMP and 2017 PMP Projects: The BCWMC granted a variance to the City from the water quality treatment requirements for the 2016 PMP and the 2017 PMP projects (see attached variance agreements). It was anticipated that the 2018 PMP project would provide water quality treatment greater than or equal to the requirements for the 2016 PMP and 2017 PMP projects. The City developed plans for an iron-enhanced sand filter basin (IESFB) as part of the 2018 PMP project. However, due to a delay in the acquisition of one of the properties, implementation of the IESFB has been removed from the 2018 PMP project. The attached letter from the City of Golden Valley indicates that if the fourth property can be acquired and demolished before the 2018 PMP is completed, it is possible that the filtration basin will be added back into the project and constructed in 2018. Otherwise, the city will include the IESFB in its 2019-2023 Capital Improvement Program for construction by the end of 2019, or as soon thereafter as is reasonably possible. Although it likely will not be constructed as part of the 2018 PMP project, the IESFB was reviewed as part of this submittal to allow construction of the IESFB at the earliest convenience of the city.

## Erosion and Sediment Control

Since the area to be graded is greater than one acre, the proposed linear project must be submitted to the BCWMC for review. Proposed temporary erosion control features include silt fence and catch basin inlet protection. Proposed temporary erosion and sediment control features include silt fence, a rock construction entrance, and inlet protection. Permanent erosion and sediment control features include riprap and stabilization through seeding and sod.

## Recommendation

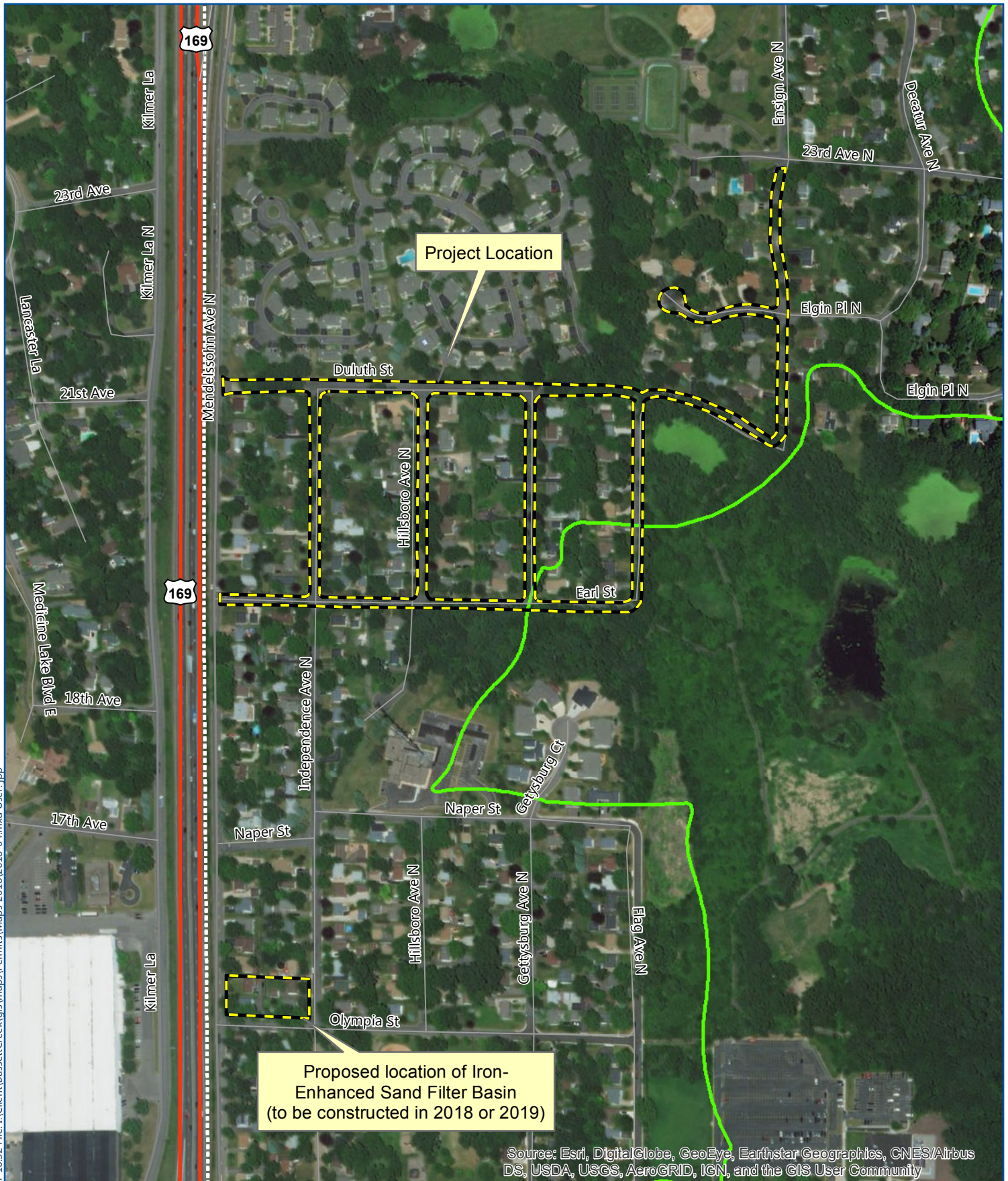
Conditional approval based on the following comments:

1. Final approval for the *Request for Diversion of Surface Water Runoff for Golden Valley 2018-2019 Pavement Management Program (PMP) Project* (BCWMC #2017-40) must be received prior to, or in conjunction with, this approval to confirm the diversion does not adversely impact lakes, streams, or wetlands.
2. We recommend maximizing the distance between FES1 and the pond outlet and FES2 and the pond outlet to limit short-circuiting of the existing stormwater pond.
3. We recommend adding floating silt curtain around FES1 and FES2 for improved sediment control during construction.
4. The draintile for the iron-enhanced sand filter basin (IESFB) must be lowered to the bottom of the iron enhanced sand (directly on top of the liner) to allow the basin to draw down completely and






prevent the iron-enhanced sand from becoming anoxic (which could release the chemically-bonded dissolved phosphorus).

5. The MPCA recommends a minimum of 18 inches of filtration for sand filters. Although it is not specified whether the draintile can be located within this 18-inch depth, we recommend providing a minimum of 18 inches of filtration above the crown of the draintile (i.e., 18 inches of filter material) to maximize the filtration potential and limit the potential for short-circuiting.
6. Soil borings or a geotechnical report must be provided to demonstrate that the bottom of the sand filter is located a minimum of 3 feet above the seasonally high water table.
7. The city must develop a maintenance plan for the iron-enhanced sand filter basin (IESFB).
8. Revised Drawings (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

-  Project Location
-  Municipality
-  Bassett Creek
-  WMC Boundary
-  Major Subwatershed



0 100 200 400 600 800 Feet



BCWMC #2018-04  
Golden Valley 2018 PMP  
Golden Valley, MN

LOCATION MAP



# MEMORANDUM

## Physical Development Department

763-593-8030 / 763-593-3988 (fax)

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**Date:** March 5, 2018

**To:** Jim Herbert, Barr Engineering

**From:** Jeff Oliver, City Engineer

**Subject:** 2018 PMP Stormwater Filtration Basin

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For the past couple years, the City has been working with four property owners located in the 2017 Pavement Management Program (PMP) area who have experienced repeat flood damage to their homes. As part of the DNR's flood damage reduction program, the City is acquiring the properties and removing the homes. As you recall, all four properties are needed to create space for the construction of the iron enhanced sand filtration basin included in the City's 2018 PMP plans. The stormwater basin is being constructed to meet MIDs performance goals to mitigate for the City's 2016 PMP (BCWMC 2016-06) and 2017 PMP (BCWMC 2017-02) projects.

The City has acquired three of the four properties and demolition is underway. The City has a purchase agreement on the fourth property. However, due to unforeseen circumstances beyond the City's control, the sale of the fourth property is experiencing a temporary delay. With this temporary delay in acquisition, the City has no choice but to award its 2018 PMP contract without the filtration basin included.

If the fourth property can be acquired and demolished before the 2018 PMP is completed, it is possible that the filtration basin will be added back into the project and constructed in 2018. If the timing does not work out, the City will include the filtration basin in its 2019-2023 Capital Improvement Program for construction in 2019.

The City is committed to fulfilling its intent and obligation to construct a stormwater filtration basin that will benefit the water quality of Medicine Lake. Please accept this memo as notification to the BCWMC that the City will provide the required offsite treatment by the end of 2019 or as soon thereafter as reasonably possible.



**A RESOLUTION GRANTING A VARIANCE FROM WATER QUALITY TREATMENT  
REQUIREMENTS FOR THE 2016 GOLDEN VALLEY PAVEMENT MANAGEMENT  
PROGRAM**

Bassett Creek Watershed Management Commission  
Resolution #16-06

**WHEREAS**, the Bassett Creek Watershed Management Commission ("BCWMC") received a letter from the City of Golden Valley ("City") requesting a variance from the BCWMC water quality treatment requirements, known as the Minimal Impact Design Standards ("MIDS") performance goals, for the 2016 Golden Valley Pavement Management Program ("Project");

**WHEREAS**, the City and its consulting engineer have studied the options available to meet the MIDS treatment standards for the Project and have determined that it is not feasible to satisfy the standards as part of the Project because of the linear nature of the Project, the existence of poor soils in the Project area that are not conducive to volume reduction, and the confined right-of-way area in which the Project will be constructed;

**WHEREAS**, the City will construct all practical and feasible water quality best management practices available in conjunction with this Project, including reducing impervious area and installing sump manholes with SAFL baffles, but despite these efforts the Project will not meet the MIDS performance goals including the three flexible treatment options;

**WHEREAS**, the City can provide equivalent offsite treatment to meet the MIDS performance goals for the Project by the end of 2018; and

**WHEREAS**, the Board of Commissioners ("Board") has considered the request, the standards for issuing variances in the BCWMC's Requirements for Improvements and Development Proposals, and finds and determines as follows:

- a. The linear nature of the Project, the poor soils, and the limited area in which the Project will be constructed constitute special circumstances or conditions such that the strict application of the provisions of the standards and criteria would deprive the City of the reasonable use of its right-of-way and its ability to construct improvements;
- b. The requested variance is necessary for the preservation and enjoyment of a substantial property right of the applicant in that the City is working to improve its right-of-way for the benefit of the public;
- c. Granting the variance will not be detrimental to the public welfare or injurious to the other property in the territory of the right-of-way being improved in that the Project will be increasing safety and addressing existing surface water issues;

- d. The Project does not relate to a use in the 1% (base flood elevation, 100-year flood) floodplain set forth in Table 2-9 of the Plan;
- e. Granting the variance will not be contrary to the intent of taking all reasonable and practical steps to improve water quality within the watershed in that the City will implement all practical and feasible water quality best management practices available in conjunction with this Project, including reducing impervious area and installing sump manholes with SAFL baffles.

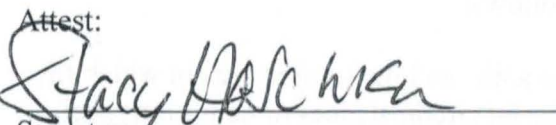
**NOW, THEREFORE, BE IT RESOLVED**, by the Board of the BCWMC that, pursuant to its variance procedure the BCWMC Requirements for Improvements and Development Proposals, the findings contained herein, and the record of this matter, it hereby grants the City a variance from the MIDS performance goals for the Project conditioned on compliance with each of the following:

- 1. The City shall implement all practical and feasible water quality best management practices, including reducing impervious area and installing sump manholes with SAFL baffles, related to the construction of the Project; and
- 2. The City shall provide offsite treatment to meet the MIDS performance goals for the Project by the end of 2018 or as soon thereafter as is reasonably possible.

Adopted by the Board of Commissioners of the Bassett Creek Watershed Management Commission this 17<sup>th</sup> day of March, 2016.

  
Chair

Attest:

  
Secretary

Resolution No.16-06: Offered by Commissioner Hoschka, seconded by Alternate Commissioner Tobelmann, adopted by a vote of 7 - 0 at the regular meeting of the Board of Commissioners of Bassett Creek Watershed Management Commission on March 17, 2016.



**A RESOLUTION GRANTING A VARIANCE FROM WATER QUALITY TREATMENT REQUIREMENTS FOR THE 2017 GOLDEN VALLEY PAVEMENT MANAGEMENT PROGRAM**

Bassett Creek Watershed Management Commission  
Resolution #17-04

**WHEREAS**, the City of Golden Valley (“City”) requests a variance from the Bassett Creek Watershed Management Commission (“BCWMC”) water quality treatment requirements, known as the Minimal Impact Design Standards (“MIDS”) performance goals, for the 2017 Golden Valley Pavement Management Program (“Project”);

**WHEREAS**, the City and its consulting engineer have studied the options available to meet the MIDS treatment standards for the Project and have determined that it is not feasible to satisfy the standards as part of the Project because of the linear nature of the Project, the existence of poor soils in the Project area that are not conducive to volume reduction, and the confined right-of-way area in which the Project will be constructed;

**WHEREAS**, the City will construct all practical and feasible water quality best management practices available in conjunction with this Project, including reducing impervious area and installing sump manholes with SAFL baffles, but despite these efforts the Project will not meet the MIDS performance goals including the three flexible treatment options;

**WHEREAS**, the City can provide equivalent offsite treatment to meet the MIDS performance goals for the Project by the end of 2018; and

**WHEREAS**, the Board of Commissioners (“Board”) has considered the request, the standards for issuing variances in the BCWMC’s Requirements for Improvements and Development Proposals, and finds and determines as follows:

1. The linear nature of the Project, the poor soils, and the limited area in which the Project will be constructed constitute special circumstances or conditions such that the strict application of the provisions of the standards and criteria would deprive the City of the reasonable use of its right-of-way and its ability to construct improvements;
2. The requested variance is necessary for the preservation and enjoyment of a substantial property right of the applicant in that the City is working to improve its right-of-way for the benefit of the public;
3. Granting the variance will not be detrimental to the public welfare or injurious to the other property in the territory of the right-of-way being improved in that the Project will be increasing safety and addressing existing surface water issues;
4. The Project does not relate to a use in the 1% (base flood elevation, 100-year flood) floodplain set forth in Table 2-9 of the Plan;



5. Granting the variance will not be contrary to the intent of taking all reasonable and practical steps to improve water quality within the watershed in that the City will implement all practical and feasible water quality best management practices available in conjunction with this Project, including reducing impervious area and installing sump manholes with SAFL baffles.

**NOW, THEREFORE, BE IT RESOLVED**, by the Board of the BCWMC that, pursuant to its variance procedure the BCWMC Requirements for Improvements and Development Proposals, the findings contained herein, and the record of this matter, it hereby grants the City a variance from the MIDS performance goals for the Project conditioned on the City agreeing to 1) implement all practical and feasible water quality best management practices, including reducing impervious area and installing sump manholes with SAFL baffles, related to the construction of the Project; and 2) provide equivalent offsite treatment to meet the MIDS performance goals for the Project by the end of 2018.

Adopted by the Board of Commissioners of the Bassett Creek Watershed Management Commission this 16<sup>th</sup> day of March, 2017.

  
Chair

Attest:

  
Secretary

Resolution No. 17-04: Offered by Commissioner Harwell, seconded by Commissioner Scanlan, adopted by a vote of 6-2 at the regular meeting of the Board of Commissioners of Bassett Creek Watershed Management Commission on March 16, 2017.