



Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5D – TH 169 SP 2772-111 – Plymouth
BCWMC November 16, 2016 Meeting Agenda
Date: November 8, 2016
Project: 23270051 2016 3007

5D TH 169 SP 2772-111 – Plymouth BCWMC 2015-33

Summary:

Proposed Work: Reconstruction of existing storm sewer and gutter, construction of new storm sewer, mill and overlay of Kilmer Lane

Basis for Commission Review: Work within the floodplain

Impervious Surface Area: 0.96 acres of impervious surface disturbed

Recommendation: Approval

General Background & Comments

The proposed project includes reconstruction of the storm sewer on TH 169 and Kilmer Lane between 26th Avenue North and 23rd Avenue and on 24th Avenue between Kilmer Lane and Medicine Lake Boulevard to eliminate low point flooding on TH 169 and Medicine Lake Boulevard in Plymouth. The project is located in the Medicine Lake direct subwatershed. Approximately 2.11 acres will be graded and the project impacts an impervious area of 0.96 acres, a portion of which is mill and overlay of Kilmer Lane.

Floodplain

The project is located within the Medicine Lake 100-year floodplain (elevation 890.3 ft.). A flared end section with riprap and filter material will be placed within the Medicine Lake floodplain. The project plans indicate that no fill shall be added to the floodplain; existing material will be removed to facilitate placement of the new flared end section with riprap and filter material at the existing grades in the Medicine Lake Water Quality Pond BC-98. Medicine Lake Water Quality Pond BC-98 is part of the Medicine Lake floodplain; the work in the floodplain for the project is the storm sewer installation in the pond. The project will involve minor excavation within the floodplain and will result in no net loss in floodplain storage.

Wetlands

The project appears to involve work near wetlands. The City of Plymouth is the LGU for administering the Minnesota Wetland Conservation Act of 1991.

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Stormwater Management

Under existing conditions, the project is tributary to a storm sewer which drains south on TH 169 and west on 24th Avenue North to the Medicine Lake Water Quality Pond BC-98. Under proposed conditions, the drainage patterns will ultimately remain the same; however, portions of the storm sewer will be reconstructed and a new outfall will be constructed to the Medicine Lake Water Quality Pond BC-98. The new outfall will help reduce flooding in the project area. The new outfall is also sized to accommodate a storm sewer connection to the future City of Plymouth, Kilmer Creek Stream Restoration project.

Water Quality Management

The project is a drainage improvement plan that creates less than one acre of new and/or fully reconstructed impervious surfaces. Based on the September 2015 BCWMC *Requirements for Improvements and Development Proposals* (Requirements) document, additional water quality treatment is not required. Water quality treatment for the site is currently provided by the Medicine Lake Water Quality Pond BC-98. Because the project will not change drainage areas or impervious area within the project site, the project will not have an impact on the water quality treatment provided by the Medicine Lake Water Quality Pond BC-98 as it is modeled in the BCWMC P8 model.

Erosion and Sediment Control

Since the area to be graded is greater than 10,000 square feet, the proposed project must meet the BCWMC erosion control requirements. Proposed temporary erosion control features include flotation silt curtain, inlet protection, silt fence, and sediment control log.

Recommendation

Approval; however, it is recommended that the volume of accumulated sediment in Medicine Lake Water Quality Pond BC-98 be evaluated and removed as necessary to restore the pond to its original design contours.

