

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – 10th Avenue North Culvert Replacement – Golden Valley, MN
BCWMC May 18, 2017 Meeting Agenda
Date: May 10, 2017
Project: 23270051 2017 2119

4F 10th Avenue North Culvert Replacement – Golden Valley, MN BCWMC 2017-12

Summary:

Proposed Work: Removal of three existing corrugated metal pipe culverts and construction of two reinforced concrete box culverts (8' x 6')

Basis for Commission Review: Work in the floodplain, creek crossing

Impervious Surface Area: No change

Recommendation: Conditional Approval

General Background & Comments

The proposed project includes the removal of three existing corrugated steel pipes, installation of two reinforced concrete box culverts (8' x 6'), storm sewer replacement, reconstruction of the bituminous concrete roadway, reconstruction of concrete sidewalk, and site grading. The project is located in the Bassett Creek Main Stem subwatershed. The project results in 1.25 acres of disturbance (grading), 0.53 acre of reconstructed impervious, and no new impervious surface.

Floodplain

The current floodplain elevation of Bassett Creek at the 10th Avenue North culverts is 882.9.0 feet NGVD29 (883.1 ft. NAVD88) The updated, but not yet adopted, Phase 2 XPSWMM (Atlas 14 precipitation) floodplain elevation at the 10th Avenue North culverts varies from 884.8 feet NGVD29 (885.0 ft. NAVD88) to 883.9 feet NGVD29 (884.1 ft. NAVD88) from upstream of 10th Avenue North to downstream of 10th Avenue North, respectively.

The Commission provided the Phase 1 XP-SWMM model to the City for use in the evaluation of the 10th Avenue culvert crossing, as the Phase 2 XP-SWMM model was still in the process of being developed and calibrated. The Phase 1 XP-SWMM model was provided to demonstrate relative change in the (TP-40) 100-year flood elevation (e.g. no rise in the proposed conditions upstream and downstream of the proposed project).

The models provided by the applicant indicates that the proposed 100-year flood elevation immediately upstream of the 10th Avenue culvert crossing is expected to decrease by 0.1 feet, and there are no

expected increases in the 100-year flood elevation in the channel section downstream of the 10th Avenue culvert crossing. This meets Policy 38 in the 2015-2025 BCWMC Watershed Management Plan (Plan) that requires projects to maintain no increase in flood level at any point along the trunk system with “no increase in flood level” to be managed to a precision of 0.00 feet. This precision is based on directives from the Minnesota Department of Natural Resources (MnDNR) pertaining to no-rise certificates in Federal Emergency Management Agency (FEMA) floodplain “AE” zones (zones where there are published flood elevations).

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 of 1991.

Stormwater Management

The drainage patterns under existing and proposed conditions will remain the same; this project will not result in changes to land use or topography.

Water Quality Management

The project results in 0.53 acre of reconstructed impervious surface and therefore does not trigger water quality review or treatment to MIDS performance goals.

Erosion and Sediment Control

Since the area to be graded for the project is greater than 10,000 square feet, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include silt fence, redundant rock berms, storm drain inlet protection, rock construction entrances, and rapid stabilization. Permanent erosion and sediment control features include seeding and erosion control blanket.

Recommendation







Conditional approval based on the following comments:

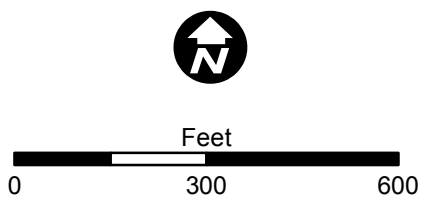
1. Rock construction entrances must include a wash-off berm with a minimum height of 2 feet above the adjacent roadway and with maximum side slopes of 4:1.
2. Revised Drawings (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.



Barr Footer: ArcGIS 10.4.1, 2017-05-04 14:20 File: \\barr.com\gis\client\BassettCreek\gis\maps\Permits\Maps-2017\2017-12.mxd User: EMA

Imagery Source: Aerial Express (2009)

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



**LOCATION MAP
APPLICATION 2017-12
10th Ave N Culvert Replacement
Golden Valley, MN**