

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4G – Golden Valley Golf Course and Country Club Pedestrian Bridge Replacement
BCWMC February 20, 2014
Date: February 12, 2014
Project: 23270051 2014 2001

4G. Golden Valley Golf Course and Country Club Pedestrian Bridge Replacement: Golden Valley

Summary

Proposed Work: Replacement of an existing pedestrian bridge over Bassett Creek

Basis for Commission Review: Work in floodplain

Change in Impervious Surface: None

Recommendation: Conditional Approval

General Background & Comments

An existing pedestrian bridge spanning Bassett Creek within the Golden Valley Golf Course and Country Club is proposed to be replaced. The existing abutments will remain in place and be slightly modified so they can be utilized for the new bridge. BCWMC review of the above-referenced project is required due to work being completed in the 100-year floodplain. The project will result in no change of impervious area.

Floodplain

The 100-year floodplain elevation at the location of the pedestrian bridge is approximately 873.5. The existing bridge and the proposed bridge both have portions of the bridge deck lower than the 100-year floodplain elevation, however, the proposed bridge deck will be approximately 1-foot higher than the existing deck at its center because of the arch of the new bridge. The conveyance area under the bridge will be increased by approximately 20 square feet under proposed conditions.

Typically, the BCWMC requests bridges to be installed so the low structural member is 1-foot above the regulatory floodplain elevation to minimize obstruction of flood flows. The floodplain in this area is over 600 feet wide, thus spanning the floodplain to avoid impacts is not feasible. Also, raising the bridge abutments would be counterproductive because fill would be needed at the bridge approaches, which would reduce the cross-sectional area of the floodplain. At this location along the creek, the majority of the conveyance area is in the floodplain, so the slight modification in the bridge elevation

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should not significantly alter the 100-year flow rate. Due to the wide floodplain, flood flows will pass around the proposed bridge, thus, the new bridge will not result in significant stage increases during flooding.

Stormwater Management

The proposed work on the site will not change stormwater drainage; the bridge and its abutments drain directly to Bassett Creek.

Water Quality Management

There will be no change in runoff as a result of this project. Because there is no change in impervious area, this project is not required to meet the BCWMC's non-degradation policy or Level 1 water quality treatment requirements.

Erosion and Sediment Control

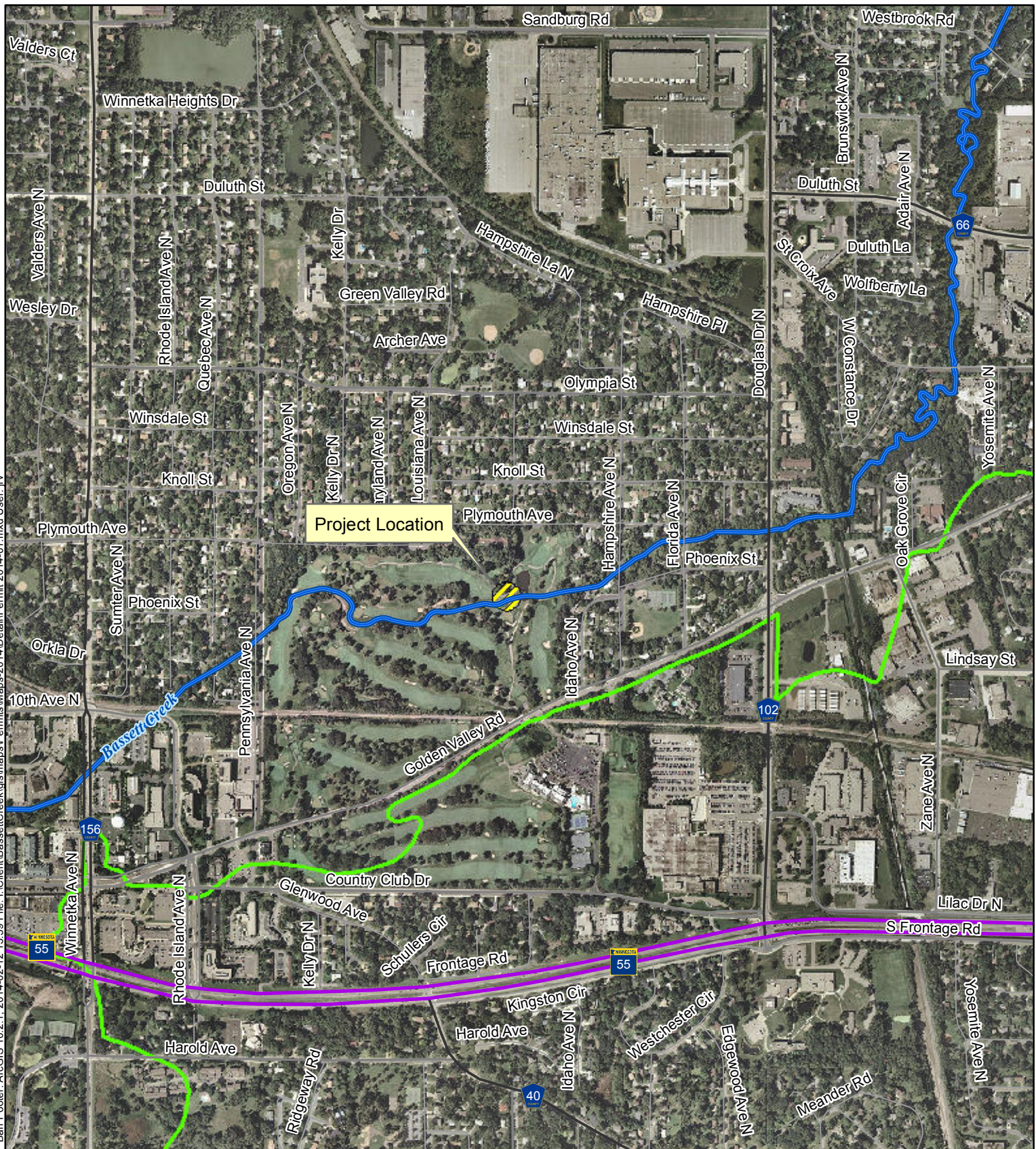
Silt fence and floating silt curtain will be placed around areas to be graded.

Recommendation

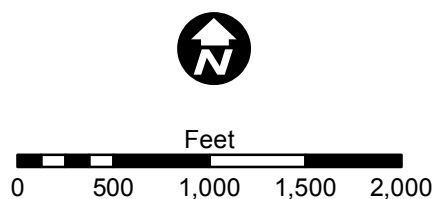
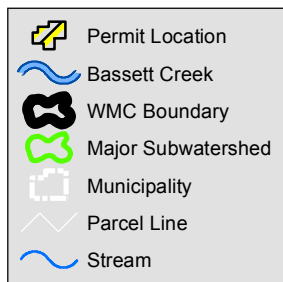
Conditional approval based on the following comments:

1. Applicant must ensure riprap under the bridge is appropriately sized to protect the embankments from erosion. Filter must be used under all riprap.
2. Silt fence and silt curtain details must be added to the drawings.
3. The following erosion control comments must be added to the plans:
 - a. All exposed soil areas must be stabilized as soon as possible, but in no case later than 14 days after the construction activity has temporarily or permanently ceased.
 - b. Provide a temporary vegetative cover consisting of a suitable, fast-growing, dense grass-seed mix spread at 1.5 times the usual rate per acre.
 - c. Specify a permanent vegetation cover consisting of sod, a suitable grass-seed mixture, or a combination thereof. Seeded areas shall be either mulched or covered by fibrous blankets to protect seeds and limit erosion.
4. Revised plans must be submitted to the BCWMC engineer for review and approval.

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Imagery Source: Aerial Express (2009)



LOCATION MAP
APPLICATION 2014-01
Golden Valley Golf Course
Pedestrian Bridge Replacement
Golden Valley, MN