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Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Company
Subject: Item 5C – Theodore Wirth Park Bridge: Golden Valley
BCWMC February 18, 2010 Meeting Agenda
Date: February 15, 2010
Project: 23/27 0051 2010 003

5C. Theodore Wirth Golf Course Bridge Replacement: Golden Valley

Summary

Proposed Work: Pedestrian/Golf Cart Bridge Replacement over Bassett Creek

Basis for Commission Review: Work in floodplain

Change in Impervious Surface: Not applicable

Recommendation: Conditional approval

General Background & Comments

This item was originally intended for the March BCWMC agenda, however, based on preliminary review, and in order to meet Met Council's proposed schedule, staff is requesting BCWMC input since it will affect final design. A request was received by the City of Golden Valley for replacement of a pedestrian/golf cart bridge across Bassett Creek in Theodore Wirth Golf Course approximately 150 feet downstream of Golden Valley Road. The bridge would replace an existing bridge and also be installed 15 feet upstream of another existing pedestrian bridge. The current bridge is rotting and may not be safe for maintenance vehicles that are need to maintain the course. The existing 38 ft. by 10 ft. bridge will be replaced by a 40 ft. by 10 ft. bridge.

Floodplain

The BCWMC regulatory floodplain elevation is 827.2 ft. at the proposed location. 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 400 feet wide, thus spanning the floodplain to avoid impacts is not feasible. The applicant has provided a preliminary plan to provide 1-foot freeboard over the channel. However, the plan results in floodplain fill at the approaches and abutment at each side of the creek. The fill also reduces the cross sectional area of the floodway that may increase flood profiles.

Floodplain storage is critical along this reach of Bassett Creek. Based on our review of this reach of creek, staff believes the watershed may be best served by eliminating all proposed fill and setting the new bridge at 826.0 to match the existing conditions. Due to the wide floodplain, flood flows will then pass around

the proposed bridge at the existing elevation. Thus, the new bridge will not result in stage increases during flooding.

Similar projects have been approved in the past by the BCWMC – the General Mills/Golden Valley pedestrian bridge also constructed in the floodplain without fill and was approved at the BCWMCs July 21, 2005 meeting.

Wetlands

N.A

Stormwater Management

N.A.

Water Quality Management

N.A.

Erosion and Sediment Control

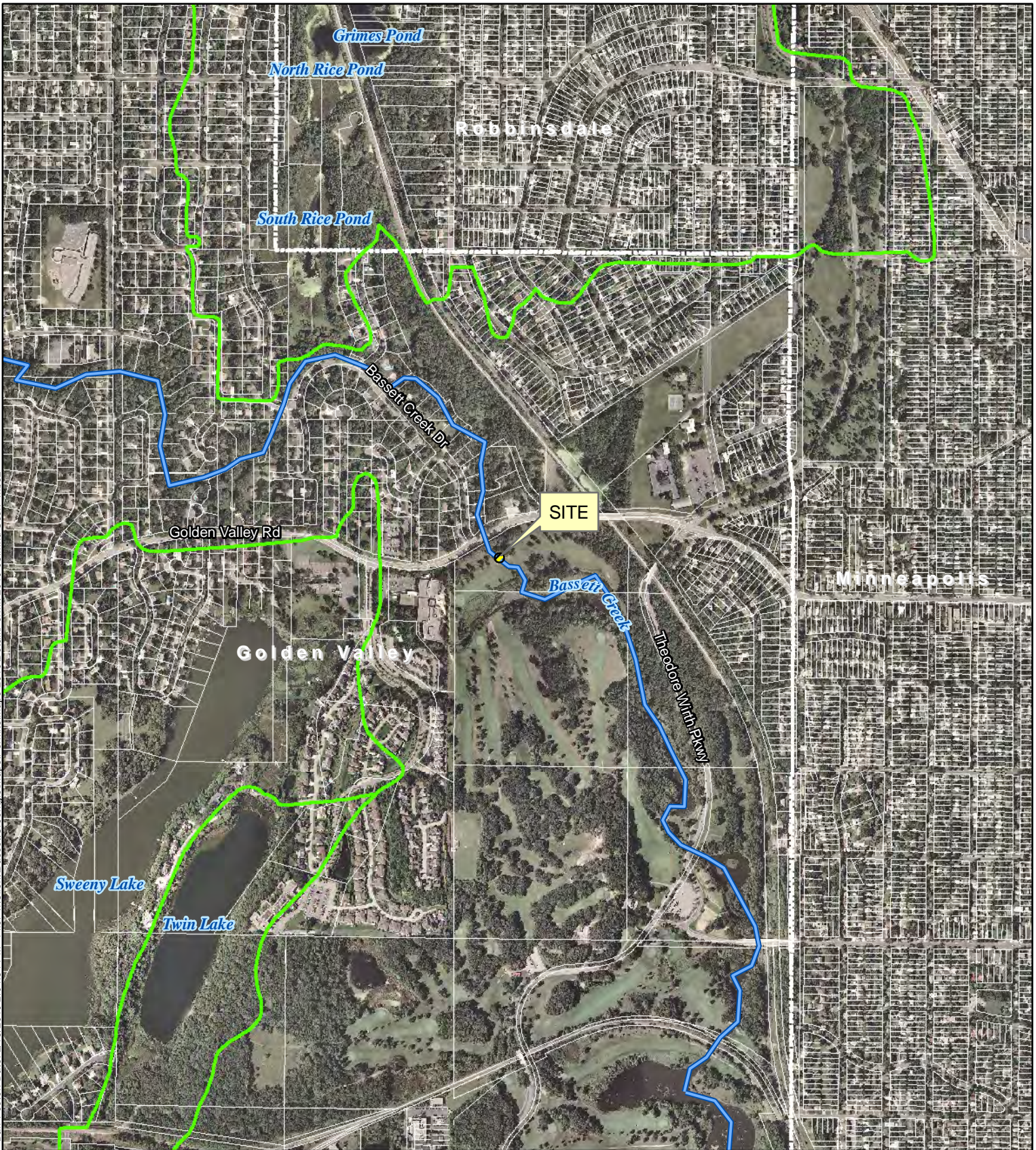
Permanent erosion control includes riprap and filter material beneath the structure. Silt curtain is proposed downstream.

Recommendation








Conditional approval contingent on following:

- a. Final plans and BCWMC application must be provided for staff review.
- b. Trail construction must not result in raising the existing grade along each side of the proposed bridge. Existing elevations must generally be maintained for the proposed trail to allow flood flows to pass around bridge abutments.
- c. The cross section of Bassett Creek must not decrease as a result of the project.
- d. Storage volume below the floodplain must not be reduced from existing conditions as a result of the project.
- e. Bridge abutments and footings must be adequately protected to prevent erosion.
- f. Disturbance in the creek must be minimized during construction.

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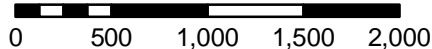


Imagery Source: Aerials Express, 2009

-  Permit Location
-  Bassett Creek
-  WMC Boundary
-  Major Subwatershed
-  Municipality
-  Parcel Line
-  Stream



Feet



LOCATION MAP
APPLICATION 2010-03
Theodore Wirth Golf Course
Bridge Replacement
Golden Valley, MN