

Memorandum

To: Bassett Creek Water Management Commission
From: Barr Engineering Company
Subject: Items on the Commission June 19, 2003 Meeting Agenda
Date: June 12, 2003
Project: 23/27 051

1. Breck School Synthetic Turf Field Construction: Golden Valley

Summary

Proposed Work: Stadium track and practice field improvements

Basis for Commission Review: Work in floodplain

Recommendation: Approval

Breck School has requested review of a grading, drainage, and erosion control plan for the above-referenced project. Breck School is roughly bounded by Highway 100 on the west, MN&S Railroad right-of-way on the north, Ottawa Avenue on the east, and Lilac Drive on the south. The site is in the Sweeney Lake Watershed. The project includes the installation of synthetic turf at the stadium field and the Ottawa field. Currently, both fields are natural grass. Grading will occur on 3.5 acres.

Background

Phase I of the Breck School expansion was previously reviewed by the Commission at its August 19, 1999 meeting. Phase I included the construction of several additions to the existing structure, parking modifications and additions, and the construction of a water quality treatment pond treating the western portion of the site. Phase II of the expansion was reviewed at its March 17, 2000 meeting. Phase II of the project consisted of the remodeling of the existing stadium, addition of a fieldhouse, other building additions, parking improvements and additions, soccer field improvements, and the construction of two water quality ponds on the eastern portion of the site. The Breck School soccer fields were reviewed at the Commission's February 21, 2002 and May 16, 2002 meetings. The proposed plan includes additional modifications to the stadium and Ottawa fields.

Water Quality Issues

The site is located within the Sweeney Lake Branch of Bassett Creek. The Sweeney Lake Branch has a Level I management classification. Runoff from the stadium field generally discharges to

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the west stormwater pond and runoff from the Ottawa field generally discharges to the southeast stormwater pond. The proposed improvements will not significantly increase the runoff from the site based on the Level 1 conditions. The proposed synthetic turf field contains a pervious material that will infiltrate rainfall. The existing natural grass fields, which are comprised of fairly heavy soils (clay), will have its crown lowered from 2% to 0.7% (for the synthetic turf fields), thereby decreasing the runoff. After passing through subsurface drainage rock and soils, drain tile will collect and discharge excessive subsurface water to the respective ponds. An orifice will be installed along the drain tile outlet to promote infiltration and to slow the rate of runoff. The existing ponds are adequately sized to handle potential minimal increases in runoff.

Floodplain Issues

The Commission's floodplain management envelope is elevation 840.1. Grading the site will lower Ottawa field resulting in the creation of approximately 1.5 acre-feet of floodplain storage.

Wetland Issues

Golden Valley is the LGU for the site and is responsible for reviewing the plan for conformance to the 1991 Wetland Conservation Act.

Recommendation: Approval, contingent on following modifications and comments:

- a. Sheet C4: FES 1 must be relocated to the southwest corner of the receiving pond to minimize short-circuiting.
- b. Sheet C4: Filter material must be placed below all riprap on site.

2. For Information Only

a. Stone Creek Village: Plymouth

A revised grading, drainage, and erosion control plan was reviewed. A letter of approval was sent to the City of Plymouth.