



## Memorandum

**To:** Bassett Creek Watershed Management Commission (BCWMC)  
**From:** Barr Engineering Co. (Barr)  
**Subject:** Item 4K: Ridgedale Mall Sears Redevelopment – Minnetonka, MN  
BCWMC May 21, 2020 Meeting Agenda  
**Date:** May 13, 2020  
**Project:** 23270051 2020 2213

### 4K Ridgedale Mall Sears Redevelopment – Minnetonka, MN BCWMC 2020-08

#### Summary:

**Proposed Work:** Redevelopment/remodel of Ridgedale Sears and parking lot improvements

**Basis for Review at Commission Meeting:** Use of alternative BMP

**Impervious Surface Area:** Decrease 0.27 acres

**Recommendation:** Approval

#### General Project Information

The proposed project is in the Crane Lake subwatershed within the Ridgedale Mall complex in Minnetonka. The proposed project includes redevelopment of the existing Sears retail store, the structure of which is to remain, and parking lot improvements, resulting in 6.58 acres of grading (disturbance). The proposed project creates 2.33 acres of fully reconstructed impervious surfaces and results in a decrease of 0.28 acres of impervious surfaces, from 6.51 acres (existing) to 6.24 acres (proposed).

#### Floodplain

The proposed project does not involve work in the Bassett Creek 1% (base flood elevation, 100-year) floodplain; therefore, BCWMC floodplain review is not required.

#### Wetlands

The proposed project does not involve work in or adjacent to wetlands.

#### Rate Control

The October 2019 BCWMC Requirements document states that projects that create more than one (1) acre of new or fully reconstructed impervious area *must manage stormwater such that peak flow rates leaving the site are equal to or less than the existing rate leaving the site for the 2-, 10-, and 100-year events, based on Atlas 14 precipitation amounts and using a nested 24-hour rainfall distribution.*

In both existing and proposed conditions, stormwater runoff is collected by a storm sewer system and eventually discharges to a pond to the south of the Ridgedale Mall facility.

In proposed conditions, the underground stormwater detention system and reduction of impervious surfaces results in reduced overall peak discharge rates. Table 1 summarizes the existing and proposed peak discharge rates for the proposed project as provided by the applicant, and shows that the proposed stormwater management system meets the BCWMC requirements for rate control.

**Table 1: Existing and Proposed Peak Discharge Rates**

	2-Year Peak (cfs)	10-Year Peak (cfs)	100-Year Peak (cfs)
Existing	22.4	35.1	61.0
Proposed	11.6	22.9	58.7

## Water Quality

The BCWMC Requirements document states that projects on sites without restrictions *that create one or more acres of new and/or fully reconstructed impervious surfaces shall capture and retain on-site 1.1 inches of runoff from the new and/or fully reconstructed impervious surfaces*. If the applicant is unable to achieve the performance goals due to site restrictions, the BCWMC Flexible Treatment Options approach shall be used following the BCWMC Design Sequence Flow Chart.

The proposed project creates 2.33 acres of fully reconstructed impervious area. Due to the presence of clay and organic subsoils, which are not conducive to infiltration, the applicant is unable to meet the BCWMC performance goal or Flexible Treatment Option (FTO) #1. The applicant followed the BCWMC Design Sequence Flow Chart and determined that the proposed project must meet (FTO) #2. FTO #2 requires that the proposed project remove 60% of the annual total phosphorus (TP) load from the new and/or fully reconstructed impervious surfaces. The applicant proposed an underground detention system and Bayfilter to provide stormwater treatment. The Bayfilter is a stormwater manufactured treatment device (MTD) with General Use Level Designation (GULD) from the Washington Department of Ecology's Technology Assessment Protocol – Ecology (TAPE) program. The BCWMC Requirements document allows the use of stormwater MTDs to meet flexible treatment options, if the applicant provides verification that the MTDs have achieved GULD designation (the applicant provided this verification). The Requirements document states that the applicant *may then apply 50% total phosphorus (TP) and 80% total suspended solids (TSS) removals for stormwater MTDs, as long as the stormwater MTDs are designed in accordance with the manufacturer's and TAPE's recommendations and guidelines*. The underground detention and filtration system will collect runoff from reconstructed impervious surfaces as well as a portion of the parking lot designated for mill and overlay. Table 2 summarizes the annual TP loading, annual TP removals, and overall percent TP removal for the proposed project and shows that the proposed stormwater treatment system meets the BCWMC requirement for water quality.

**Table 2: Summary of TP Loading and TP Removals**

	<b>Imp. Area (acres)</b>	<b>Total Phosphorus Loading (lbs/year)</b>	<b>Percent Removal (%)</b>	<b>Total Phosphorus Removal (lbs/year)</b>
TP loading and required removal from reconstructed imp. surfaces	2.33 <sup>1</sup>	4.2	60% <sup>2</sup>	2.5 (required)
TP loading and proposed removal from MTD drainage area	3.45 <sup>3</sup>	6.2	50% <sup>4</sup>	3.1 (proposed)
<b>Overall Percent TP Removal for BCWMC Requirement</b>			<b>74%</b>	

<sup>1</sup> Area of fully reconstructed impervious surface.

<sup>2</sup> Per BCWMC guidelines for FTO #2

<sup>3</sup> Impervious area to be treated by MTD

<sup>4</sup> Per BCWMC guidelines for assumed TP Removal for Manufactured Treatment Devices (MTD) with General Use Level Designation from Washington Department of Ecology's TAPE program.

## Erosion and Sediment Control

The proposed project results in more than 10,000 square feet of land disturbance; therefore, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include a rock construction entrance, silt fence, biologs, and inlet protection. Permanent erosion and sediment control features include erosion control blanket and stabilization with sod or seed and mulch.

## Recommendation

Approval.

Preliminary review comments were provided to the City and to the applicant on May 7, 2020. The applicant addressed the comments and submitted revised plans on May 11, 2020 for staff review.





Project Location

Project Location

Ridgedale Center

Minnetonka

Plymouth Rd

Cartway La

Wayzata Blvd Ser Rd

Wayzata Blvd

Wayzata Blvd

Ridgedale Dr

Ymca La

Sherwood La

Norway Pine Cir

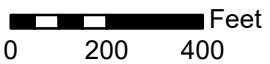
Austrian Pine La

Dwight La

Cambridge Ct

Sherwood Pl

- Project Location
- Municipality
- BCWMC Legal Boundary
- Major Subwatershed
- Bassett Creek



BCWMC #2020-08  
 RIDGEDALE MALL SEARS  
 REDEVELOPMENT  
 12401 Wayzata Blvd  
 Minnetonka, MN  
 LOCATION MAP