

Technical Memorandum

To: Linda Loomis, Administrator
Lower Minnesota River Watershed District

From: Kaci Fisher, Environmental Specialist
Katy Thompson, PE, CFM

Date: April 30, 2021

Re: Stagecoach Road Improvements (LMRWD No. 2021-015)

The City of Shakopee (the applicant and the City) has applied for an individual project permit from the Lower Minnesota River Watershed District (LMRWD) for the proposed project (Project) to improve Stagecoach Road by constructing a roundabout and an access road to Hentges Industrial Park (previously approved LMRWD No. 2021-003), as shown in Figure 1.

The Project is not located within the High Value Resource Area, Steep Slopes Overlay District, or Minnesota River floodplain. The applicant proposes to commence construction on June 1, 2021.

Because the City does not have its LMRWD municipal LGU permit, this project requires an LMRWD individual permit and, as such, is subject to an LMRWD permitting review.

Summary

<u>Project Name:</u>	Stagecoach Road Improvements
<u>Purpose:</u>	Constructing a roundabout and access road
<u>Project Size:</u>	7.99 acres disturbed; 1.27 acres existing impervious; 3.30 acres proposed impervious; net increase of 2.03 acres new impervious
<u>Location:</u>	7632 County Road 101, Shakopee, MN 55379

LMRWD Rules: Rule B—Erosion and Sediment Control
Rule D—Stormwater Management

Recommended Board Action: Approval

Discussion

The District received the following documents for review from the applicant's engineer, WSB:

- LMRWD online permit application, received April 12, 2021
- Project Map, received April 12, 2021
- Stormwater Management Report by WSB, dated April 9, 2019, received April 12, 2021
- Stormwater Pollution Prevention Plan (SWPPP) by WSB, dated April 8, 2021, received April 12, 2021, revised April 26, 2021
- Grading Plan by WSB, dated April 25, 2021, received April 26, 2021
- Staging Area by WSB, dated April 26, 2021, received April 26, 2021
- Owner and Contractor Information, dated April 23, 2021, received April 26, 2021
- P8 Model Water Quality Calculations, received April 26, 2021

The LMRWD received the minimum necessary information from the applicant for permit review, rendering the application complete on April 26, 2021.

Background

This development is part of a larger industrial development called the Hentges Industrial Park Development (Park), which is generally bounded by South Cretex Avenue to the north, the railroads to the south, Stagecoach Road to the east, and 70th Street to the west. The area was previously the Cretex concrete production site. The first phase of the Park, the Southwest Logistics Center (LMRWD No. 2021-003), was conditionally approved at the March 17, 2021, board meeting, and the permit was issued on April 21, 2021.

Rule B—Erosion and Sediment Control

The District regulates land-disturbing activities that affect one acre or more under Rule B. The proposed project would disturb approximately 7.99 acres within the LMRWD boundary. The applicant has provided a grading plan, SWPPP, and contractor/inspector contact information. The Project generally complies with Rule B; however, a copy of the NPDES permit is outstanding.

Rule D—Stormwater Management

The District requires stormwater management for projects that propose to create one acre or more of new, impervious area. The Project proposes to create a total of 2.03 acres of net new impervious surface, triggering Rule D.

Under current conditions, there is a stormwater infiltration basin that serves a neighboring parcel, owned by Gavilon Fertilizer, LLC. As stated in the Stormwater Management Report, the stormwater infiltration basin provides 1.23 acre-feet (ac-ft) of volume reduction for the Gavilon property, which the City of Shakopee validated.

The Project will construct a new combination wet pond and infiltration basin that will replace the existing infiltration basin and provide stormwater management for the Project, Gavilon Fertilizer, and future development in the Park.

Section 4.4.1 of Rule D requires that applicants demonstrate no increase in proposed runoff rates when compared with existing conditions. The proposed BMP will also provide rate control for the new impervious surfaces the Project creates, the existing Gavilon Fertilizer site, and future development. The existing and proposed rates are provided in Table 1 and meet the District rate control requirements.

Table 1. Stagecoach Road Improvements Rate Control Summary

Design Event	Existing Rates (cfs)	Proposed Rates (cfs)	Change (cfs)
2-year/24-hour	13.45	12.15	-1.30
10-year/24-hour	20.18	18.52	-1.66
100-year/24-hour	37.33	36.62	-0.71

Section 4.4.2 of Rule D requires stormwater runoff volume retention on-site to be equivalent to 1-inch of runoff from impervious surfaces. The new combined BMP provides volume reduction for both the new impervious surfaces the Project creates, the Gavilon Fertilizer property, and future development within the Park. As shown in Table 2, the required stormwater volume abstractions are 0.17 ac-ft for the Project and 1.23 ac-ft for the Gavilon property, respectively.

Table 2. Stagecoach Road Stormwater Retention Volume Requirements

Project	Impervious Area (ac)	Retention Volume (ac-ft) Required
Proposed Stagecoach Road Improvements	2.03	0.17
Gavilon Fertilizer, LLC	14.76 ¹	1.23
Total Required		1.40

The new combined BMP retains 2.84 ac-ft of volume, resulting in an excess of 1.44 ac-ft that could be allocated to future development projects within the contributing drainage areas. As presented, the new combined BMP meets the District volume requirement. Because the project meets the volume requirement, it also meets the no net increase in total phosphorus and total suspended solids water quality requirements.

Additional Considerations

In discussions with the City, the intent for oversizing the proposed BMP is to provide regional treatment for future development within Hentges Industrial Park. As presented, the new combined BMP has the remaining capacity to treat a maximum of 17.28 acres of new impervious surfaces with future developments. Because the new combined BMP will be part of the City’s MS4 system, a maintenance agreement is not required.

Recommendations

Staff recommends approval of the Stagecoach Road Improvements Project and continued coordination with the City on future development projects in Hentges Industrial Park.

Attachments

- Figure 1—Stagecoach Road Improvements Project Location Map












¹ Determined by dividing the existing BMP volume by the 1-inch required volume reduction from new impervious surfaces. City of Shakopee must confirm this when undertaking any future redevelopment projects on the Gavilon Fertilizer site.



Figure 1: Stagecoach Road Improvements Project Location



LEGEND

-  Project Location
-  Stagecoach Road
-  Impervious Surface
-  Wet Pond
-  Infiltration Basin
-  Public Waterways
-  Public Waters
-  Floodway
-  500-yr Floodplain
-  Railroads
-  Parcels

LMRWD Watershed Location Map

