

Applicant: Joe Bergman; Endeavor Development
Consultant: Dan Sjoblom; Alliant Engineering, Inc.
Project: Nexus Innovation Center
Location: 6131 Blue Circle Drive, Eden Prairie, MN
Applicable Rule(s): 2, 4, 5, 11 and 12
Reviewer(s): Azeemuddin Ahmed and Louise Heffernan; Barr Engineering Co.

General Background & Comment

The applicant proposes the redevelopment of the 14.4-acre site located at 6131 Blue Circle Drive in Eden Prairie. The existing site consists of office buildings, a parking garage, surface parking, utilities, and site amenities. Demolition and removal of existing site infrastructure, including the commercial building structures, foundation, footings, base materials, and the existing surface parking infrastructure is proposed. The applicant proposes the construction of two buildings, surface parking, utility improvements, landscaping, and four stormwater management facilities.

The project site information includes the following:

- Total Site Area: 625,410 square feet (14.4 acres)
- Disturbed Area: 625,410 square feet (14.4 acres)
- Existing Site Impervious Area: 358,899 square feet (8.2 acres)
- Proposed Site Impervious Area: 387,248 square feet (8.9 acres)
- 7.9% increase in the site impervious area: 28,349 square feet (0.7 acres)
- 100% disturbance of existing impervious surface: 358,899 square feet (8.2 acres)
- Regulated Impervious Area: 387,248 square feet (8.9 acres)

Exhibits Reviewed:

1. Permit Application received April 10, 2024. Email correspondence dated May 1, 2024, identifying 9 review comments and items required to complete the application. Email correspondence dated May 9, 2024, identifying 3 review comments and items required to complete the application. Email correspondence dated June 6, 2024, identifying one review comment to complete the application. Email correspondence dated July 9, 2024, identifying 4 review comments and items required to complete the application. Email correspondence dated November 26, 2024, identifying 5 review comments and items required to complete the application.

2. Plans dated March 25, 2024 (received April 10, 2024), revised June 20, 2024 (received June 20, 2024), revised November 7, 2024 (received November 7, 2024), revised December 9, 2024 (received December 9, 2024), prepared by Alliant Engineering.
3. Stormwater Management Report dated March 25, 2024 (received April 10, 2024), revised June 20, 2024 (received June 20, 2024), revised November 7, 2024 (received November 7, 2024), revised December 9, 2024 (received December 9, 2024), prepared by Alliant Engineering.
4. Electronic HydroCAD modeling received June 20, 2024, revised November 8, 2024, and revised December 9, 2024, prepared by Alliant Engineering.
5. Electronic MIDS modeling received June 20, 2024, revised November 8, 2024, and revised December 9, 2024, prepared by Alliant Engineering.
6. Geotechnical Evaluation dated June 24, 2013 (received April 10, 2024), prepared by Northern Technologies, Inc.
7. Geotechnical Evaluation dated May 22, 2024 (received December 9, 2024), prepared by Terracon.
8. Soil Boring Log dated December 5, 2024 (received December 9, 2024), prepared by Terracon.
9. Site Survey dated March 11, 2024 (received May 9, 2024), prepared by Alliant Engineering.
10. Signed Property Owner Authorization dated April 10, 2024.
11. NMCWD review comment responses dated June 14, 2024, revised December 9, 2024, prepared by Alliant Engineering.

The application with the submittal items above is complete.

2.0 Floodplain Management and Drainage Alterations

Because the project will involve land-altering activities below the 100-year frequency flood elevation of a waterbody, the project must conform to the requirements of the District's Floodplain Management and Drainage Alterations Rule 2.0.

Rule 2 criteria for floodplain and drainage alterations includes the following:

2.3.1: The low floor elevation of all new and reconstructed buildings, bridges and boardwalks must be constructed in accordance with the freeboard standards in NMCWD Stormwater Rule, subsection 4.3.4.

Compliance with section 2.3.1 criteria is outlined in the **Rule 4.0 Stormwater Management** section of this report.

2.3.2: Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage is provided within the floodplain:

- a. at the same elevation +/- 1 foot for fill in the floodplain of a watercourse; or*
- b. at or below the same elevation for fill in the floodplain of a water basin or constructed stormwater facility.*

The project will result in grading below the 100-year frequency flood elevation (932.8 M.S.L.) of the waterbody located southwest of the site. The fill material placed below the 100-year frequency flood elevation will be offset by material removed from the site, creating 145 cubic yards of additional flood storage below the 100-year frequency flood elevation. The submittal demonstrates and the engineer finds the project is in conformance with subsection 2.3.2 criteria.

2.3.3. The District will issue a permit to alter surface flows only if it finds that the alteration is not reasonably likely to have a significant adverse impact on any upstream or downstream landowner and is not reasonably likely to have a significant adverse effect on flood risk, basin or channel stability, groundwater hydrology, stream base-flow, water quality or aquatic or riparian habitat.

As stated in the subsection 2.3.2 analysis, the project will result in an increase in flood storage volume (145 cubic yards) below the 100-year frequency flood elevation of the waterbody. The project will not result in an alteration of surface flows from the site, and the proposed grading will not extend the current 100-year flooding extents of inundation from the property onto neighboring properties (e.g., flood risk is not reasonably likely to be transferred to other properties). The applicant proposes to construct four stormwater management facilities which maintain discharge rates, and the project is not reasonably likely to adversely affect flood risk or transferring flood risk to upstream or downstream landowners, in compliance with subsection 2.3.3 criteria.

Stream baseflow will not be changed and/or altered because stream baseflow conditions will not be implicated by the project. Because the project does not propose any work impacting the bed or bank of the water basin, the project is not reasonably likely to adversely impact the basin stability.

The project is not likely to deter wildlife (such as waterfowl, amphibians, reptiles) from using the area adjacent to the water basin, if currently used, because the project does not propose to remove or deteriorate habitat conditions. Because wildlife native to the area will be able to continue using the existing habitat, the NMCWD engineer concurs that the proposed project complies with subsection 2.3.3 criteria. Groundwater hydrology will not be changed and/or altered as a result of the project.

Erosion prevention and sediment control measures are to be installed to prevent material from the disturbed surfaces and to capture sediment onsite to maintain the water quality of the water basin. With the temporary erosion control measures and a decrease in impervious surfaces, the project is not reasonably likely to have a significant adverse impact on water quality in accordance with Rule 2.3.3 criteria.

The applicant demonstrates and the NMCWD engineer finds that the project is not reasonably likely to have significant adverse impacts in conformance with Rule 2.3.3 criteria.

2.3.4 No structure may be placed, constructed, or reconstructed and no new impervious surface may be constructed within 50 feet of the centerline of any water course, except that this provision does not apply to:

a. Bridges, culverts, and other structures and associated impervious surface regulated under Rule 6.0;

b. Trails 10 feet wide or less, designed primarily for nonmotorized use.

No structure is proposed to be placed, constructed, or reconstructed as part of the project and no new impervious surface will be constructed within 50 feet of the centerline of a water course. The engineer finds that the project is in conformance with Rule 2.3.4 criteria.

4.0 Stormwater Management

NMCWD’s requirements for stormwater management apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b.

The NMCWD’s Rule for Redevelopment, Rule 4.2.3, states, if the proposed activity will increase the total impervious surface on the site by 50 percent or more or will disturb 50 percent or more of the existing impervious surface on the site, the stormwater criteria will apply to the entire site. Otherwise, the criteria of section 4.3 will apply only to the disturbed areas, and replaced and net additional impervious surface on the project site. Since the proposed activities will disturb 100% of the existing site impervious area, the district’s stormwater management criteria will apply to the entire 14.4-acre site, including the 387,248 square feet (8.9 acres) of regulated impervious area.

Stormwater management for compliance with subsection 4.3.1 criteria will be provided by two underground stormwater management facilities (UGSWMFs) and two stormwater ponds to provide rate control, volume retention and water quality management for the entire site.

Rule 4.3.1b requires the 2-, 10-, and 100-year post development peak runoff rates be equal to or less than the existing discharge rates for the collection points where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates. The existing and proposed 2-, 10- and 100-year frequency discharge rates are summarized in the tables below.

Peak Discharge Rates (Existing)

Location	Existing 2-Year 24-hr (c.f.s.)	Existing 10-Year 24-hr (c.f.s.)	Existing 100-Year 24-hr (c.f.s.)
To East (offsite)	18.2	29.2	54.6
To South (MnDOT right-of-way)	17.5	29.5	57.8

Peak Discharge Rates (Proposed)

Location	Proposed 2-Year 24-hr (c.f.s.)	Proposed 10-Year 24-hr (c.f.s.)	Proposed 100-Year 24-hr (c.f.s.)
To East (offsite)	16.0	27.8	54.3
To South (MnDOT right-of-way)	4.9	8.4	16.7

The proposed stormwater management plan provides rate control in compliance with the NMCWD requirements for the 2-, 10-, and 100-year events. Rule 4.3.1b is met.

The applicant has requested that the site be considered restricted under subsection 4.3.2 of the NMCWD Rules. For restricted sites, subsection 4.3.2 of requires rate control in accordance

with subsection 4.3.1b and that retention and water-quality protection be provided in accordance with the following priority sequence: (a) Retention of at least 0.55 inches of runoff from the regulated impervious surface and treatment of all runoff to the standard in paragraph 4.3.1c; or (b) Retention of runoff on-site to the maximum extent practicable (MEP) and treatment of all runoff to the standard in paragraph 4.3.1c; or (c) Off-site retention and treatment within the watershed to the standards in paragraph 4.3.1a and 4.3.1c.

The soil borings completed onsite predominantly identify soils across the site as clayey (SC and CL) soils. The engineer concurs with the soil boring analyses identifying the presence of site soil textures with low permeability. Given the clayey soils that are not conducive to infiltration, the NMCWD engineer agrees that the site is restricted. Rule 4.3.2a requires the retention onsite of 0.55 inches of runoff from the regulated impervious surface of the site. A retention volume of 17,750 cubic feet is required from the 387,248 square feet (8.9 acres) of regulated impervious surface. Although the majority of the site was found to have soils with low permeability, the applicant proposes infiltration in two locations with soils with higher permeability to meet volume retention requirements as described below.

Boring B-106 completed by Terracon, dated May 14, 2024, identifies poorly-graded sand (SP) soils near the bottom of the south UGSWMF. A design infiltration rate of 0.8 inches per hour has been used for the south UGSWMF, conforming with infiltration rates identified in the Minnesota Stormwater Manual. Boring S-400 completed by Terracon, dated December 5, 2024, identifies poorly-graded sand with silt (SP-SM) soils near the bottom of the north UGSWMF. The SP-SM soils are underlain by one-foot of clayey sand (SC) soils. See the **Recommendations** section which identifies a condition to over-excavate the SC soils down to the poorly-graded sand (SP) soils. A design infiltration rate of 0.8 inches per hour has been used for the north UGSWMF. Once the SC soils are over-excavated per the condition in the **Recommendations** section, the design infiltration rate will conform with infiltration rates identified in the Minnesota Stormwater Manual.

The table below summarizes the volume retention required and volume retention achieved by the proposed UGSWMFs. The proposed project is in conformance with subsection 4.3.1a.

Volume Retention Summary

Stormwater Management Facility	Required Volume Retention (cubic feet)	Provided Volume Retention (cubic feet)	*Maximum Infiltration Depth Allowable (feet)	Provided Infiltration Depth (feet)
North UGSWMF	-	12,230	8.0	3.2
South UGSWMF	-	5,867	8.0	3.2
TOTAL	17,750	18,097	-	-

*Maximum inundation depth allowable for each proposed UGSWMF to draw down within 48-hours based on a design infiltration rate of 0.8 inches/hour and 40% rock voids.

The provided infiltration depth is within the maximum allowable depth and the volume below the outlet is drawn down within the required 48-hours for each UGSWMF, complying with Rule 4.3.1a (ii).

Rule 4.5.4d (i) requires at least three feet of separation between the bottom of a stormwater management facility and groundwater. Per the geotechnical evaluation by Terracon, groundwater was not encountered to the bottom of boring B-106, elevation 925.5 M.S.L. The

bottom of the south UGSWMF is 931.3 M.S.L., providing a separation of 5.8 feet (to the elevation where groundwater was not encountered). Groundwater was not encountered to the bottom of boring S-400, elevation 924.0 M.S.L. The bottom of the north UGSWMF is 930.3 M.S.L., providing a separation of 6.3 feet (to the elevation where groundwater was not encountered). Rule 4.5.4d (i) is met.

NMCWD's water quality criterion requires 60% annual removal efficiency for total phosphorus (TP) and 90% annual removal efficiency for total suspended solids (TSS) from the regulated site runoff. A MIDS model was used to evaluate the proposed stormwater management facilities annual removal efficiencies. The results of the MIDS modeling are summarized in the table below. The NMCWD engineer agrees with the modeling results and the project is in conformance with Rule 4.3.1c criteria.

Annual TSS and TP Removal Summary

Pollutant of Interest	Regulated Site Loading (lbs./year)	Required Load Removal (lbs./year)	Provided Load Reduction (lbs./year)
Total Suspended Solids (TSS)	3408.1	3067.3 (90%)	3107.8 (91%)
Total Phosphorus (TP)	18.76	11.26 (60%)	14.30 (76%)

Rule 4.3.4 states that all new and reconstructed buildings must be constructed such that the low floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a constructed facility. Additionally, Rule 4.3.4 states that all new and reconstructed buildings must be constructed such that no opening where surface flow can enter the structure is less than two feet above the 100-year high-water elevation of an adjacent facility. Rule 4.3.4 also states that a stormwater management facility must be constructed at an elevation that ensures no adjacent habitable building will be brought into noncompliance with a standard in subsection 4.3.4.

The low floor and low opening elevation of both proposed buildings is 942.0 M.S.L., 4.4 feet above the 100-year high-water elevation of the south UGSWMF (937.6 M.S.L.) and 5.4 feet above the 100-year high-water elevation of the north UGSWMF (936.6 M.S.L.). Rule 4.3.4 is met. The 942.0 M.S.L. low floor and low opening elevation is situated 4.4 feet above the 937.6 M.S.L. 100-year high water elevation of the south stormwater pond and 16 feet above the 926.0 M.S.L. 100-year high water elevation of the east stormwater pond. Rule 4.3.4 criteria is met.

In accordance with Rule 4.3.5, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site.

Subsection 4.3.6 requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. The applicant must provide a receipt showing recordation of a maintenance declaration for the operation and maintenance of the onsite stormwater management facilities.

In accordance with Rule 4.3.1a (i), where infiltration or filtration facilities, practices or systems are proposed, pre-treatment of runoff must be provided. Pretreatment will be provided by sump structures and SAFL baffles, complying with Rule 4.3.1a (i).

5.0 Erosion and Sediment Control

The district’s requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion control plan prepared by Alliant Engineering includes installation of perimeter erosion control (silt fence), inlet protection, and a construction entrance.

The contractor for the project will need to designate a contact who will remain liable to the district for performance under the District’s Erosion and Sediment Control Rule 5.0 from the time the permitted activities commence until vegetative cover is established, in accordance with subsection 5.4.1e. NMCWD must be notified if the responsible individual changes during the permit term.

11.0 Fees

Fees for the project are:

Rule 2:	\$1,500
Rule 4:	\$1,500
Rule 5:	\$1,500
Total Fees:	\$4,500

12.0 Financial Assurances

Financial Assurances for the project are:

Rule 4: Stormwater Facility: 5,550 S.F. x \$12/S.F. =	\$66,600
Rule 5: Perimeter Control: 2,800 L.F. x \$2.50/L.F. =	\$7,000
Inlet Protection: 27 x \$100 =	\$2,700
Site Restoration: 14.4 acres x \$2,500/acre =	\$36,000
Chloride Management	\$5,000
Contingency and Administration	\$48,300

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rules 4 and 5 with the fulfilment of the conditions identified below. The project conforms to Rule 2.
3. The proposed stormwater facilities will provide volume retention in accordance with subsection 4.3.2a, and rate control and water quality management in accordance with subsections 4.3.1b and 4.3.1c criteria.

4. In accordance with NMCWD Rule 4.3.6, the applicant must provide a maintenance and inspection plan that identifies and protects the design, capacity, and functionality of each stormwater management facility, and record the plan in a declaration on the property title.

Recommendation

Approval, contingent upon:

Compliance with the General Provisions (attached).

Financial Assurance in the amount of \$165,600; \$160,600 for stormwater management, erosion control and site restoration and \$5,000 for compliance with the chloride management requirements.

Identify a note on the plans to over-excavate any encountered clayey soils down to the poorly-graded sand (SP) soils and backfilling with soil that aligns with the design infiltration rate of 0.8 inches per hour used for the underground stormwater management facilities used for infiltration.

The applicant providing a name and contact information for the individual responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

Per Rule 4.3.6, a receipt showing recordation of a maintenance declaration for the operation and maintenance of each stormwater management facilities is required. A draft of the declaration must be approved by the district prior to recordation.

By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit and release of the financial assurance after the project:

The work associated with the proposed redevelopment and site improvements at 6131 Blue Circle Drive under the terms of Permit #2024-049 must have an impervious surface area and configuration materially consistent with the approved plans. A design that differs materially from the approved plans will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.

Per Rule 4.5.6, an as-built drawing of each of the stormwater management facilities conforming to the design specifications, based on relevant survey information (bottom of system, outlet, overflow, etc.), and including a stage volume relationship in tabular form for each stormwater management facility, as approved by the district, must be provided.

Submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt applicator engaged in the implementation of the chloride-use plan for the site. The release of the \$5,000 of the financial assurance required for the chloride-management plan requires that the chloride-management plan has been provided to and approved by the District's Administrator.

Per Rule 12.4.1b, demonstration and confirmation that each underground stormwater management facility for infiltration has been constructed or installed and functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing each stormwater management facility used for volume retention has drawn

down within 48 hours from the completion of two half-inch (approximate) separate rainfall events.

