General Background & Comments

The project proposes the construction of a 23 stall parking lot expansion immediately east of the Creekview Office building in Bloomington. The Creekview Office building was approved by the District in 1997, Permit #97-41. The common scheme of development framework in subsection 4.2.5 for storm water management requires consideration of development and redevelopment at a site since March 2008. Since the development of the property took place prior to 2008, it is not considered in analyzing stormwater management requirements under the present permit. A permit, #2018-91, was issued for a smaller project, a 7 stall parking expansion in the same location, however the project was never started. The previously approved permit, granted for one year, has expired and is no longer valid.

Nine Mile Creek forms the southern boundary of the property. The creek’s 100-year Atlas 14 flood elevation on the site is 825 M.S.L. The project proposes to fill 363 cubic yards of material below elevation 825 M.S.L. and mitigate this proposed encroachment by creating 364 cubic yards of floodplain volume below elevation 825 M.S.L.

A wetland area on the site has been identified and boundary delineated by the permit applicant’s wetland consultant. The City of Bloomington is the LGU administering the requirements of the Wetland Conservation Act. The City of Bloomington has issued a Notice of Decision, dated May 14, 2018, approving the wetland boundary. The wetland has been identified as a medium value wetland requiring a minimum 20 foot and 40 foot average buffer in accordance with section 3.4.1b of the District rules. We have reviewed the July 12, 2018 MNRAM provide by the applicant and we concur with a medium value determination made for the wetland.

The project site information is:

- Total Site Area: 2.78 acres (1218,097 square feet)
• Existing Total Site Impervious Area: 1.16 acres (50,530 square feet)
• New Total Site Impervious Area: 63,473 square feet
• Increase in the site impervious area: 12,943 square feet
• 25.6% increase in the Site Impervious Area
• Total Area to be Disturbed: 38,246 square feet

The Nine Mile Creek Watershed District’s Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on a parcel or will increase the imperviousness of the parcel by more than 50%, storm water management will apply to the entire project parcel. Otherwise, the storm water requirements will apply only to the disturbed areas and additional impervious area on the parcel. Since the increase in the on-site impervious area is 25.6%, storm water management is required for the 38,246 square feet of disturbed area that includes 12,943 square feet of new impervious area.

The District’s requirements for both storm water management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5000 square feet or more surface area disturbed, Rules 4.2.1a and b and 5.2.1a and b.

Storm water management is to be provided within a rainwater garden/infiltration area that will provide volume retention, rate control and water quality management.

Silt fence is to be constructed at the limits of construction, inlet protection, and a rock construction entrance will be provided for erosion control.

Exhibits
5. E-mail correspondence from Barr Engineering dated July 12, 2018 agreeing with the medium value wetland identification for the wetland area along the creek.
6. Notice of Decision issue by the City of Bloomington dated May 14, 2018 approving the on-site wetlands boundary determination.
7. E-mail correspondence dated November 21, 2019 outlining 4 items requiring information for the submittal to be considered complete by the District.

The submittal is complete.

2.0 Floodplain Management and Drainage Alterations

A 100-year frequency floodplain elevation of 825 M.S.L. has been established along the South Fork of Nine Mile Creek that forms the southern boundary of the property. The project proposes to fill approximately 363 cubic yards of material within the floodplain of the creek. To
mitigate the loss of floodplain volume, 364 cubic yards of floodplain volume is to be created on the site complying with Rule 2.3.2. 

Cut/fill calculations for the floodplain volume created below elevation 825 M.S.L. is to be compensated for at the same elevation (+/- 1 foot) complying with Rule 2.3.2.

The following addresses Rule 2.3.3:

- Since the floodplain encroachment/impacts are to be compensated at the same elevation, there will be no impacts to upstream or downstream property owners, complying with Rule 2.3.3.
- Work is not proposed within the creek nor is there an increase in the rate and volume of runoff generated by the project therefore channel stability will not be affected by the project.
- Inflow capacity to the groundwater will be improved to the interface with the native soils within the areas of fill with the material likely to be more conducive to infiltration.
- The stream base flow will not be affected since there is not increase in volume or rate of runoff as a result of the project nor is work proposed within the channel of the creek.
- The water quality will not be affected with areas altered being restored to pervious conditions. Runoff from the project site will be directed to a stormwater basin to be constructed to provide water quality management.
- Buffer areas are to be provided riparian to the on-site wetland to promote habitat.

Rule 2.3.4 states that, no structure may be placed, constructed or reconstructed and no surface may be paved within 50 feet of the centerline of any water course. The minimum distance between the parking lot and the centerline of the creek is 55 feet, complying with Rule 2.3.4.

3.0 Wetlands Management

As previously stated, the wetland area on the site has been identified and boundary determined by the permit applicant’s wetland consultant. The City of Bloomington, being the LGU administering the requirements of the Wetland Conservation Act, has issued a Notice of Decision dated May 14, 2018 approving of the wetland boundary determination. The wetland has been identified as a medium value wetland requiring a minimum 20 foot and 40 foot average buffer in accordance with section 3.4.1b of the District rules. We are in agreement with the medium value determination for the wetland.

An area of 12,550 square feet is required for the 40 foot average buffer. The plans show a buffer area of 12,555 square feet will be provided. The closest point between the proposed modular block wall and the wetland boundary is 43 feet, a minimum of 20 feet is required.

4.0 Stormwater Management

Storm water management is to be provided within a rainwater garden/ infiltration basin that will provide volume retention, rate control and water quality
The existing and proposed 2, 10 and 100 year frequency discharges from the site are:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Existing Discharge c.f.s.</th>
<th>Proposed Discharge c.f.s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 year</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>10 year</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>100 year</td>
<td>3.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

There is one discharge point from the project area. Rule 4.3.1b is met.

An infiltration volume of 1,186 cubic feet is required from the 12,943 square feet of new impervious area. The soil borings show the underlying soil in the area of the proposed stormwater basin/infiltration facility as a clayey-sand (SC) having an infiltration rate of 0.2 inches/hour using the Minnesota Storm Water Manual. A volume of 1,933 cubic feet is proposed to be provide (1,186 cubic feet required) with an area of 1,483 square feet. At an inundation depth of 0.8 feet based on the 0.2 inches/hour infiltration rate to comply with the basin to be drawdown in 48 hours (4.3.1a (ii)) an area of 2,560 square feet is to be provide (1,483 square feet required). Rule 4.3.1a is met.

The District’s water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. The results of the MIDS calculator show that the rainwater garden/infiltration basin will provide an annual removal efficiency of 93% for total suspended solids (99.8 lbs.) and an annual removal efficiency of 93% for total phosphorus (0.55 lbs.). Rule 4.3.1c is met.

From the file for Permit #97-41, the finished floor of the existing on-site building is shown to be 830 M.S.L. The calculated 100-year flood elevation of the proposed rainwater garden/infiltration basin is 828.8 M.S.L. the surface overflow from the basin is shown to be 828.9 M.S.L. Rule 4.3.3c, Low floor elevation, states the low floor elevation of a building must be at least two feet above the 100-year high water elevation or one foot above the emergency overflow of a constructed facility. A stormwater facility must also be constructed at an elevation that ensures that no habitable building will be brought into noncompliance with a standard in subsection 4.3.3. 1.1 feet of separation will be provided between the overflow elevation of the rainwater garden/infiltration basin and the finished floor elevation of the existing structure.

In accordance with Rule 4.3.1a (i), the pre-treatment of runoff prior to reaching the rainwater garden/infiltration basin will be provide by a Rain Guardian Turrent pretreatment chamber constructed at the edge of the parking lot.

Rule 4.5.4d (i), requires a minimum separation of 3 feet between the bottom of an infiltration facility, practice or system. From the ATE geotechnical report, groundwater was encountered in boring B-2 at a depth of 6 feet, elevation 823.5 M.S.L. The bottom of the rainwater garden/infiltration basin is shown to be 826.8 M.S.L. providing a separation of 3.3 feet complying with Rule 4.5.4d (i).
In accordance with Rule 4.3.4, 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.

5.0 Erosion and Sediment Control
The submitted erosion and sediment control plan includes silt fence at the limits of construction, inlet control, and a gravel construction entrance. The project contact is Vick Van Dell, Loucks, Inc.

11.0 Fees
Fees for the project are:
Rules 2.0-6.0 $2,250

12.0 Financial Assurances
Financial Assurances for the project are:
Rule 4.0 Volume Retention: 1,483 sq. ft. x $12/sq. ft. = $17,796 $17,796
Chloride Management: $5000
Rule 5: Silt fence: 1,100 L.F. x $2.50/L.F. = $2,750
Inlet Control: 2 x $100/each = $200
Site restoration: 0.9 acres x $2500/acre = $2,250 $5,200
Contingency and Administration $9,904

Findings
The proposed project includes the information necessary, plan sheets and erosion control plan, for review.
1. Rules 2, 3, 4 and 5 are met.
2. Permit #2018-91 was issued for a smaller project, a 7 stall parking expansion in the same location, however the project was never started. The previously approved permit, granted for one year, has expired and is no longer valid.

Recommendation
Approval, contingent upon:
1. General Conditions
2. Financial Assurance in the amount of $37,900 - $32,900 for stormwater management, erosion control and site restoration and $5,000 for compliance with the chloride management requirements.
3. Submission of documentation that a drainage easement over the stormwater-management facilities has been submitted to Bloomington (4.5.4i), if such easement is required by the city, and a receipt showing recordation of a maintenance declaration for the on-site storm water management facilities and wetland buffer area. 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:

1. Per Rule 4.5.6, an as-built drawing of the storm water facilities conforming to the design specifications, including a stage volume relationship in tabular form for the basin, as approved by the District must be submitted.

2. Buffer markers, in accordance with the requirements of District Rule 3.4.5, must be installed.

3. 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 chloride-management plan has been provided and approved by the District’s Administrator.

4. For the release of the $32,900 financial assurance required in Recommendation #2, Rule 12.4.1b requires demonstration and confirmation that the storm water management facilities have been constructed or installed and are functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the storm water facilities used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.