Permit Application Review Permit No. 2018-61
Received complete: June 26, 2018

Applicant:	Mark Krogh; Sundance Java Kiddie Academy Edina, LLC.
Consultant:	Nate Dingels; Civil Site Design
Project:	Kiddie Academy Recreation Area
Location:	7711 Computer Avenue: Edina
Rule(s):	4,5,11,12
Reviewer:	BCO

General Background & Comments

The project proposes to remove a portion of the existing parking lot pavement to construct a recreation area to the east of the Kiddie Academy building located at 7711 Computer Avenue in Edina.

The project site information is:

- Total Site Area: 87,139 square feet
- Existing Total Site Impervious Area: 48,954 square feet
- New Total Site Impervious Area : 44,485 square feet (a 4,469 square foot reduction in impervious area)
- 9.1% decrease in the site impervious area
- Existing impervious area to be disturbed: 15,809 square feet
- Disturbed and Replaced Impervious Area: 11,340 square feet
- 23.1% of the existing impervious area disturbed and replaced
- Total Site Disturbed Area: 36,936 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 there is a net reduction in the on-site impervious area (9.1%) and 23.1% of the site impervious area is to be disturbed and replaced, storm water management is required for the disturbed area of the site,

36,936 square feet, which includes the 11,340 square feet of disturbed and replaced impervious area.

The project site is not within the floodplain of Nine Mile Creek or any other water body or an existing constructed stormwater facility, the requirements of the District's floodplain rule do not apply. Nonetheless, the Pentagon Park/Border Basin Regional Stormwater Management Plan, April 2018 (Plan) has identified a 100-year frequency flood elevation of 822.7 M.S.L. on this site, i.e. parking lots and other incidental flood-storage area on the property are inundated to 822.7 M.S.L. during the 100-year event. The finished floor elevation of the existing building is 823.6 M.S.L. (0.9 feet above the flood elevation); the remainder of the site is below the 822.7 M.S.L. flood elevation. The Plan identifies 2.75 acre-feet of flood storage that exists on the site, however a field survey provided by the applicant shows 2.84 acre-feet of flood storage below elevation 822.7 M.S.L., and the engineer concurs in this determination. The project, as proposed, will provide 3.08 acre-feet of flood storage - a net gain of 0.24 acre-feet. Though the District's floodplain rule, Rule 2.2.1, does not require compensatory storage (because it does not apply here) the City of Edina's floodplain management requirements however do not allow for a reduction in flood storage provided on a site resulting from development or redevelopment. (The information in the preceding paragraph is provided for information only.)

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 proposed surface storm water basin that will provide volume retention and water quality management. Rate control will be provided by the reduction in 4,469 square feet of site impervious area.

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

1. Permit Application dated May 15, 2018, submitted June 8, 2018.
2. Plans with a last revision date of June 25, 2018 prepared by Civil Site Design.
3. Storm Water Management calculations latest revision June 26, 2018, prepared by Civil Site Design.
4. E-mails dated June 12, 2018 summarizing review comments of the project information submitted including a statement that the application was considered incomplete until the information requested had been provided.

The submittal is now complete.

4.0 Stormwater Management

A surface stormwater basin (infiltration basin) is to be constructed on the eastern side of the site that will provide volume retention, rate control and water quality management. There are two discharge points from the site. The existing and proposed 2, 10 and 100 year frequency discharges are:

Frequency	Existing Discharge to Computer Ave. c.f.s.	Proposed Discharge to Computer Ave. c.f.s.
2 year	3.4	3.6
10 year	5.7	5.8
100 year	10.8	10.9

Frequency	Existing Discharge to the East c.f.s.	Proposed Discharge to the East c.f.s.
2 year	3.1	>1.0
10 year	5.0	>1.0
100 year	9.4	2.6

The discharges calculated are within the degree of engineering accuracy in assessing compliance with Rule 4.3.1b.

An infiltration volume of 1,040 cubic feet is required from the 11,340 square feet of site impervious area. Soil borings indicate the underlying soil as silty clay (CL). An infiltration rate of 0.06 inches/hour has been assumed using the Minnesota Storm Water Manual. An area of 4,433 square feet is required for volume retention using this infiltration rate. The basin will provide a retention volume of 1,242 cubic feet (1,040 cubic feet required) and an area of 5,323 square feet (4,433 square feet required) at a depth of 0.24 feet, required for the basin to drawdown in 48 hours (4.3.1a (ii)). Since the basin size is being dictated by the compensatory flood storage required to be provided, the permit applicant has not requested that this site be considered as a Restricted Site, Rule 4.3.2, because of the underlying on-site (clay) soils.

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 basin will provide an annual removal efficiency of 93.7% for total suspended solids (246 lbs.) and an annual removal efficiency of 85.2% for total phosphorus (0.7 lbs.). Rule 4.3.1c is met.

The soil boring logs indicates that groundwater was encountered at a depth of 8 feet, approximately elevation 812 +/- M.S.L. The bottom of the basin is shown to be 815.8 M.S.L., a separation of 3.8 feet. A 3 foot of separation is required between the bottom of an infiltration facility and groundwater.

The HydroCAD modelling provided shows the 100-year frequency flood elevation of the proposed on-site basin as 817.1 M.S.L. The finished floor of the existing building is 823.6 M.S.L. a 6.5 foot separation. District Rule 4.3.3 states that a stormwater management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with a standard in subsections 4.3.3 a, b, or c. Only subsection 4.3.3c is applicable in this situation requiring at least two feet of separation provided between

the 100-year high water elevation of a constructed facility and the low floor elevation of a structure. Rule 4.3.3 is met.

In accordance with Rule 4.3.1a (i), the pre-treatment of runoff prior to reaching the basin will be provided by runoff from the project area sheet flowing across the 50 foot wide pervious area soccer field. Since there is no on-site storm sewer, sheet-flowing runoff across a pervious area provides the most feasible method for pre-treatment of storm water prior to discharging to an infiltration facility.

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 Nathan Dingels, Civil Site Design.

11.0 Fees

Fees for the project are:

Rules 2.0-6.0	$750

12.0 Financial Assurances

Financial Assurances for the project are:

Rule 4.0 Volume Retention: 4,333 sq. ft. x $12/sq. ft. = $51,996	$51,996
Chloride Management: $5000	
Rule 5: Silt fence: 850 L.F. x $2.50/L.F.= $2,125	
Inlet Protection: 6 x $100/each = $600	
Site restoration: 1.0 acres x $2500/acre = $2,500	$5,225
Contingency and Administration	$24,679

Findings

The proposed project includes the information necessary, plan sheets and erosion control plan, for review.

1. Rules 4 and 5 are met.

Recommendation

Approval, contingent upon:

1. General Conditions
2. Financial Assurance in the amount of $86,900 - $81,900 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 facility has been submitted to Edina (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 facility. 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 as approved by the District must be submitted.
2. 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.
3. For the release of the $81,900 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.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2018-61 with the conditions recommended by staff.