COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: March 28, 2016
AGENDA NUMBER: 8
FILE NUMBER: 16-022
ITEM: DaVinci Academy

RECOMMENDATION: Approve with 4 Stipulations

APPLICANT: DaVinci Academy ABC, LLC
1335 Pierce Butler Route
St. Paul, MN 55104

PURPOSE: New Charter School

LOCATION: Southwest quadrant of the intersection of Bunker Lake Blvd and Jefferson Street, Ham Lake, MN 55304
APPLICABILITY:
1) Use or Appropriation of State protected waters
2) Any building within the floodplain of any natural water course (1.07 sub 1)
3) Any activity involving drainage, filling or alteration of wetlands (1.09)
4) Development of land not authorized by the municipal drainage plan (1.04)
5) Diversion of water, casting of dredge or dewatering for construction (1.14 sub 3)
6) Construction, removal or abandonment of a water impoundment (1.16 Sub 1)
7) Construction of 1 acre or greater of impervious surface
8) Any land alteration within 1 mile of an impaired water
9) Project site is greater than 5 acres, a NPDES permit is required

EXHIBITS:
1. Plan Set (5 sheets) by Rehder & Associates; dated March 16, 2016; received March 16, 2016
2. Storm Water Management Calculations by Rehder & Associates; dated March 16, 2016; received March 16, 2016

HISTORY & CONSIDERATIONS: The subject property was formerly a horse farm with a single family home and several outbuildings. Ground cover consists of primarily pasture grassland with areas of gravel surface.

FINDINGS:
**Ditches:** There is not a public ditch on the property. County Ditch 23 is located approximately 500 feet west of the property.

**Erosion and Sediment Control:** Soils affected by the proposal are Zimmerman B fine sand, Zimmerman C sand or fine sand, and Seeleyville muck. Stabilizing vegetation is proposed for disturbed areas within seven days (7 days) of rough grading. Adjacent properties are protected from sediment deposition. All wetlands, infiltration basins, and water conveyance systems are protected from erosion and sedimentation. Project site is greater than 1 acre, a NPDES permit is required.

**Floodplain:** There is floodplain on the property according to the District model and FEMA. The District Atlas 14 model predicts the 100-year elevation for the subwatershed at 887.9 feet. The project does not propose to place fill within the floodplain. There are flooding concerns downstream.

**Groundwater:** Geotechnical information has been partially submitted. Boring logs from three out of the nineteen proposed borings was submitted. Geotechnical information collected in March 2016 indicates long term groundwater elevation is present at greater than 13.5 feet below the surface.

The site is not within a Drinking Water Supply Management Area (DWSMA).

**High Water Flooding:**
Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Ham Lake; 1 ft above mottled soil or 100 yr.

**Dewatering:**
The project does not require dewatering.

**Historic Sites:** The proposed project does not include sites of historic or archeological significance.

**Local Planning & Zoning:** The proposed project is consistent with local planning and zoning. There is an approved local water plan.

Property owners affected by changes in drainage have been notified and acknowledge the changes proposed.

**Maintenance:** The Owner of the Stormwater Management features and treatment practices is DaVinci Academy. DaVinci has not agreed to maintain the Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Treatment Basin</td>
<td>1</td>
</tr>
<tr>
<td>Infiltration Basin</td>
<td>1</td>
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</tbody>
</table>
The owner has not submitted a Maintenance Plan for each Stormwater Treatment Practice. It is unknown if the Maintenance Plan is consistent with District Maintenance standards for each STP.

The owner has not agreed to maintain in perpetuity the Stormwater Treatment Practices in accordance with the approved maintenance plans and in a manner that will permit the Practices to perform the purposes for which they were designed and constructed. The Owner has not signed a District Operations and Maintenance Agreement for Stormwater Facilities.

Easements: The proposed project does not include ditch maintenance easement. A maintenance access to all storm water management features is not provided.

Inspection and maintenance of stormwater facilities will be the responsibility of DaVinci Academy. A maintenance agreement has not been executed.

**Stormwater & Hydrology:** Infiltration is allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system utilizes a pretreatment basin and infiltration basin. Stormwater leaving the site is discharged into a well-defined receiving channel and routed to a wetland. The infiltration overflow for the 1-, 2-, 10-, and 100-year storms will be fully contained in the on-site wetland. Drainage sensitive uses exist downstream from the proposed site. The rate of post-development runoff from the site does not exceed predevelopment rates, or rates which would interfere with sensitive downstream land uses.

**Water Quality:** The proposed project does not cause an exceedence of State water quality standards. The project does not contribute to the adverse impact of wetlands through inundation or volume of flow. All discharges into wetlands are pretreated by a sediment basin/water quality pond, and are designed correctly. All work adjacent to wetlands, waterbodies and water conveyance systems are protected from erosion. The proposal will not detrimentally affect the existing water quality of the receiving water. The proposal will not cause extreme fluctuations of water levels or temperature changes.

**Impairments:** This project is within one (1) mile and drains to an Impaired Water. The Impaired Water is Coon Creek. Coon Creek is impaired for Aquatic Life (Macro-invertebrates). The major stressors are Total Suspended Solids (TSS) and Total Phosphorus (TP). There is an EPA approved Total Maximum Daily Load (TMDL) or Waste Load Allocation (WLA) for this water.

The project does propose site stabilization within 7 days after construction. The proposed stormwater system does retain at least one inch of runoff from the project site.

There are new impervious surfaces proposed as part of this project.
Wetlands: Wetland do exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. Wetlands have been delineated. Construction limits have been verified. Wetland Delineation has not been reviewed because project submittal is outside of growing season. The most recent delineation was completed on November 15, 2015. The wetland boundary has not been checked.

The wetland is not a DNR protected water.

The total proposed wetland impact is 0 square feet.

Wetland Replacement Plan: A wetland replacement plan has not been submitted and is not required because no wetlands will be impacted.

Wildlife: The proposed project does include endangered or threatened species, rare natural communities, ground water dependent water resources colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors. No substantial adverse alteration or significant detrimental impact on a species food supply, security or reproductive cycle or the alteration or removal of a plant species will occur. Applicant is required to complete NHIS data request through the DNR.

Public access to the significant resource is proposed to be controlled to minimize intrusion and impact upon the resource.

There are not Ground Water Dependent water resources on site.

Performance Escrow: $10,885.00
Wetland Escrow: N/A

FINDINGS/ISSUES/CONCERNS:

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
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<tbody>
<tr>
<td>Stormwater &amp; Hydraulics: Based on the model, the applicant is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. Post-construction, the infiltration shall be verified in the field.</td>
<td>1. The applicant must acknowledge that they will perform a post-construction test on the infiltration basin by filling the basin to a minimum depth of 6 inches with water and monitor the time necessary to drain. The Coon Creek Watershed District shall be notified prior to the test to witness the results.</td>
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<td>Escrows: $2,000 + (17.77 ac * $500/ac) = $10,885.00</td>
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<tr>
<td>3. Receipt of Escrows</td>
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**RECOMMENDATION:** Approve with 3 Stipulations

**Stipulations:**

1. Receipt of escrows.

2. The applicant must acknowledge that they will conduct a post-construction test on the infiltration basin by filling the basin to a minimum depth of 6 inches with water and monitor the time necessary to drain. The Coon Creek Watershed District shall be notified prior to the test to witness the results.

3. The applicant must prepare and submit a Maintenance Plan for each Stormwater Treatment Practice and agree to maintain in perpetuity each STP in a manner consistent with the District Maintenance standards for each STP.