COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: February 10, 2020
AGENDA NUMBER: 9
FILE NUMBER: 19-174
ITEM: River Trail Learning Center Additions and Remodeling

RECOMMENDATION: Table with 11 Conditions and 2 Stipulations

APPLICANT: Anoka Hennepin Public Schools
2727 Ferry St N
Anoka, MN 55303

PURPOSE: Building Additions and associated infrastructure

LOCATION: 1700 Coon Rapids Blvd NW, Coon Rapids MN 55433
APPLICABILITY:
1. Within 1 mile of an impaired waters.
2. One or more cumulative acres of land disturbance
3. Outwash and organic soils
4. High infiltration soils
5. Highly erodible soils
6. Endangered, Threatened or Special concern species, elements or communities

EXHIBITS:
5. Terratame\textsuperscript{2} Grass Reinforcement Mesh Exhibit; by Mike Kraft Architects, undated, received 1/29/2020.
PREVIOUS ACTION TAKEN: This is a new application.

FINDINGS:
Pre-application Meeting: The project as submitted has not received a general review during a pre-application meeting.

Ditches: There is not a public ditch on the property.

Ditch Hydraulics: A crossing of the ditch is not proposed.

Erosion and Sediment Control: Soils affected by the proposal are Nymore.
- Stabilizing vegetation is proposed for disturbed areas within seven (7) days of rough grading.
- Soil stockpiles have been proposed to be fitted with sediment-trapping measures to prevent soil loss and do have a note to stabilize within seven (7) days of inactivity.
- Adjacent properties and stormwater ponds are protected from sediment deposition.
- Construction schedules detailing when sediment trapping measures will occur; stabilization of earthen structures and the general timing of construction phases have been provided.
• Stabilization adequate to prevent erosion has been provided at the outlets of all storm sewer pipes.
• All storm sewer inlets are protected from sediment-laden water during construction.
• All work adjacent to water or related resource has taken precautions to contain sediment, and stabilize the work area during construction.
• Provisions have been made to minimize transport of sediment (mud) by runoff or vehicle tracking onto the paved surface.
• Provisions have been made for cleaning road surfaces where sediment is transported by the end of the day.
• Construction entrance points are clearly located on the erosion and sediment control plan.
• The erosion and sediment control plan does provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.
• Details have been provided for ESC (riprap, perimeter control, concrete washout, inlet protection, etc.)

Dewatering: Shallow ground water does not exist on site. Dewatering is not anticipated for this project.

Floodplain: There is no floodplain on the property according to the District model and FEMA.

Groundwater: Geotechnical information collected in June 2019 indicates long term groundwater elevation is present at 20 feet below the surface. Apparent perched water was present in 3 of 9 borings at depths of 7 to 15 feet below ground surface.

The project site is within the 10 Year Well Head Protection Area/Drinking Water Supply Management Area with a moderately vulnerable classification.

The proposal does not contain a land use discouraged or prohibited by the Safe Drinking Water Supply Act (SDSA).

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

Local Planning & Zoning: The applicant has not applied to the City. The City has not completed its review of the plans.

It is unknown if the City has water resource issues or concerns with the project at this time.

Maintenance: The owner of the Stormwater Management features and treatment practices is Anoka-Hennepin Public Schools. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
<th>Inspection &amp; Maintenance Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtration Basin</td>
<td>2</td>
<td>Anoka-Hennepin Public Schools</td>
</tr>
<tr>
<td>Infiltration Basin</td>
<td>1</td>
<td>Anoka-Hennepin Public Schools</td>
</tr>
</tbody>
</table>
A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice. The Maintenance Plan is not consistent with District Maintenance standards for each STP.

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

**Stormwater & Hydrology:** Infiltration is allowed within the project area. The 1-inch infiltration is not achieved and not all impervious is routed to a treatment BMP. The stormwater management system utilizes two filtration basins, an infiltration basin, and a rate control pond. Project is within the City of Coon Rapids which has adopted the MIDS performance standard. The 1.1-inch filtration is achieved. Calculations have been provided that illustrate the 1.1-inch filtration volume is achieved below outlet.

Drainage sensitive uses do not exist downstream from the proposed site. The rate of post-development runoff from the site does exceed predevelopment rates, or rates which would interfere with sensitive downstream land uses. Properties and waterways downstream from the project are protected from erosion due to increases in the volume, velocity, and peak water flow rates of stormwater runoff. Concentrated storm water leaving a site is discharged directly into a well-defined natural or man-made off-site receiving channel or pipe. All on-site constructed storm water conveyance channels are constructed to withstand the expected velocity from a 2-year frequency storm without erosion.

**Water Quality:** The proposed project does not cause an exceedance of State water quality standards. The project may contribute to the adverse impact of wetlands through inundation or volume of flow. All discharges into stormwater basins are not pretreated. 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 of and drains to an Impaired Water. The Impaired Water is the Mississippi River and Lower Coon Creek. The Mississippi River is impaired for aquatic consumption and Lower Coon Creek is impaired for Aquatic life/recreation. The major stressors are mercury and PCB-F and Total suspended solids, total phosphorus, and E. coli respectively. There is not an EPA approved Total Maximum Daily Load (TMDL) or Waste Load Allocation (WLA) for this water.

There are new impervious surfaces proposed as part of this project.

**Wetlands:** Wetlands may exist on site according to the 1987 Federal manual, NWI, PWI and soil survey. Wetlands have been delineated. The wetland boundary has not been checked or approved.
The total proposed wetland impact is unknown.

**Wetland Replacement Plan:** A wetland replacement plan has not been submitted.

**Wildlife:** The proposed project does not include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

**Performance Escrow:** $3,750.00

**Wetland Escrow:** $ N/A

There are not ditch liens on the property.

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
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<tbody>
<tr>
<td>Escrows: $2,000 + (3.5 ac * $500/ac = $3,750.00</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Local Planning &amp; Zoning:</strong> It is unknown if the plans are constant with city planning, zoning, and engineering</td>
<td>2. Provide updated plans to the city and provide comments from the city.</td>
</tr>
<tr>
<td><strong>Stormwater &amp; Hydraulics:</strong> The 1-inch volume is provided through a combination of infiltration and filtration; however, volume reduction is not achieved as filtration is not a volume reduction practice. The new/reconstructed impervious for the site is 1.73 acres. Infiltration Basin 1P provides volume reduction of 4,105 cf. A large portion of the new impervious from drainage area P2 is not being routed to a treatment practice. It appears that space is available for an infiltration practice on the northwest side of the site. Soil boring ST-3 shows Poorly Graded Sand (SP) to a depth of 12 feet. Filtration basin detail calls for a minimum of 18” filter media depth. Filtration basin 3P has the 6” drain tile invert at 858.5 and the bottom of the basin is at 861 which provides 12” filter media depth over the drain tile. Proposed HydroCAD model inconsistent with Construction Plans. Proposed HydroCAD model is being modeled with a Type II 24-hour rainfall distribution.</td>
<td>3. Provide infiltration practice for drainage area P2 such that volume reduction requirements are met for the site. If applicants cannot meet the volume management requirement due to site constraints in its entirety, they must meet it to the greatest extent and explain why it cannot be met.</td>
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<td><strong>Proposed HydroCAD model inconsistent with Construction Plans. Proposed HydroCAD model is being modeled with a Type II 24-hour rainfall distribution.</strong></td>
<td>4. Lower the drain tile in filtration basin 3P to provide 18” filter media depth over top of drain tile.</td>
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<td><strong>Proposed HydroCAD model inconsistent with Construction Plans. Proposed HydroCAD model is being modeled with a Type II 24-hour rainfall distribution.</strong></td>
<td>5. Revise Proposed HydroCAD model: a. Update rainfall distribution for proposed HydroCAD model from</td>
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It appears no energy dissipation is proposed for the infiltration or filtration basins.

**Water Quality:** It appears that no pretreatment devices are proposed for the infiltration or filtration practices.

**Maintenance:** It is unknown who will be responsible for the inspection and maintenance of stormwater facilities. A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

**Wetlands:** Impacts are unknown. Delineation was received outside of the growing season and cannot be reviewed until spring growing season commences. See wetland page on website.

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Stipulations</th>
</tr>
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</table>
| 1. Receipt of escrows. | 2. Provide updated plans to the city and provide comments from the city.  
3. Provide infiltration practice for drainage area P2 such that volume reduction requirements are met for the site. If applicants cannot meet the volume management requirement due to |
| 4. Provide energy dissipation to prevent scour for flows entering infiltration and filtration basins. | 5. Provide pretreatment for infiltration and filtration practices. If sump manholes are proposed, provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension. |
| 6. Provide energy dissipation to prevent scour for flows entering infiltration and filtration basins. | 7. Provide pretreatment for infiltration and filtration practices. If sump manholes are proposed, provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension. |
| 8. Provide an O&M Agreement that meets District requirements. | 9. Approval from LGU of wetland boundary will not occur until spring growing season. Acknowledge rip rap installation will not occur until boundary has been verified.  
10. Update the wetland boundary once delineation has been approved.  
11. Provide detail of vegetated riprap. |
site constraints in its entirety, they must meet it to the greatest extent and explain why it cannot be met.

4. Lower the drain tile in filtration basin 3P to provide 18” filter media depth over top of drain tile.

5. Revise Proposed HydroCAD model:
   a. Update rainfall distribution for proposed HydroCAD model from Type II 24-hour to MSE3 24-hour.
   b. Update invert elevations of 6” round outlet pipe and 6” drain tile for Filtration Basin 2P to be consistent with plans.

6. Provide energy dissipation to prevent scour for flows entering infiltration and filtration basins.

7. Provide pretreatment for infiltration and filtration practices. If sump manholes are proposed, provide calculations (SHSAM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS for OK110 particle size. A minimum of 4-foot depth is required to prevent resuspension.

8. Provide an O&M Agreement that meets District requirements or confirmation that the BMP maintenance will be performed under the school district MS4 permit.

9. Approval from LGU of wetland boundary will not occur until spring growing season. Acknowledge rip rap installation will not occur until boundary has been verified.

10. Update the wetland boundary once delineation has been approved.

11. Provide detail of vegetated riprap.

Stipulations:

1. Submittal of as-builds for stormwater features; including but not limited to invert elevations, sump depth, and basin volumes.

2. Completion of post construction infiltration/filtration tests on Infiltration Basin 1P, Filtration Basin 2P, and Filtration Basin 3P by filling the basins to a minimum depth of 6 inches with water and monitoring the time necessary to drain, or a double ring infiltration test to ASTM standards. The Coon Creek Watershed District shall be notified prior to the test to witness the results.