COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: July 25, 2016
AGENDA NUMBER: 12
FILE NUMBER: 16-112
ITEM: Westwood Middle School

RECOMMENDATION: Table with 8 Stipulations

APPLICANT: Spring Lake Park Schools – Westwood Middle School
1415 81st Avenue NE,
Spring Lake Park, MN 55432

PURPOSE: Addition of a parking lot for buses.

LOCATION: 711 91st Avenue NE, Blaine
APPLICABILITY:
1. Any work within or adjacent to a Public ditch within the Watershed District.
2. One or more cumulative acres of land disturbance
3. The lands and waters that have been, or may be covered by the regional flood.
4. High infiltration soils
5. Highly erodible soils

EXHIBITS:
1) Stormwater Mgmt. Report from Anderson-Johnson Assoc. (AJA) dated 6-29-16, received 7-12-16.
2) Geotechnical report from Braun Intertec dated 6-24-16, received 7-12-16
3) Plan Set from AJA dated 6-29-16, received 7-12-16.

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 a public ditch on the property. The public ditch is County Ditch 17 according to the public drainage map. The observed elevations through this property are 893 ft MSL at the downstream end and 893.6 ft MSL at the upstream end. There is no work proposed on the County Ditch.

Alternatives to repair and additional drainage have been considered and reviewed.

The ditch is a 4th order stream. The ditch serves the primary role of
a. Collector system

The ditch serves approximately 0 acres of agricultural land. Land use in the area is toward residential. There are no flooding concerns upstream and/or downstream.

The ditch has been inspected. Existing elevations, slopes and condition of ditch are good. The ditch is not in need of repair.

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

Erosion and Sediment Control: Soils affected by the proposal are Lino, Isanti, and Zimmerman.

- 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.
- 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.
- Stormwater runoff does pass through a sediment basin or other sediment trapping BMP with equal or greater storage capacity.
- 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 racking 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 provides for the repair and maintenance of all temporary and permanent erosion and sediment control practices.

Dewatering:
Shallow ground water does not exist on site. The project does not require dewatering.

Floodplain: There is floodplain on the property according to the District model and FEMA. The project does not propose to place fill within the floodplain. There are no flooding concerns upstream and/or downstream.
**Groundwater:** Geotechnical information collected in May 2016 and indicates long term groundwater elevation is present at 7.5 feet below the surface.

The site is within a Municipal Drinking Water Supply Area (DWSMA).

The project site is not within the Emergency Response Area/10 Year Well Head Protection Area/Drinking Water Supply Management Area.

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 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 Spring Lake Park School District. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
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<tbody>
<tr>
<td>Pervious pavement with underground infiltration basin</td>
<td>1</td>
</tr>
<tr>
<td>Raingarden</td>
<td>1</td>
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</table>

Inspection and maintenance of stormwater facilities will be the responsibility of Spring Lake Park School District. A maintenance agreement has not been executed. The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

Easements:
The proposed project does not include 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 not allowed within the project area from roadways and parking lots without pretreatment as this project area is within 1 mile of a DWSMA. The 1-inch infiltration may be achieved. The stormwater management system utilizes pervious pavement which directs runoff to an underground infiltration area. The project also utilizes a raingarden. Stormwater leaving the site is discharged into a well-defined receiving channel and routed to a public drainage system.
Drainage sensitive uses do not 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 based on current design. 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. It is unknown if on-site constructed storm water conveyance channels are constructed to withstand the expected velocity from a 2-year frequency storm without erosion at the swale to the infiltration basin.

**Water Quality:** The proposed project does not cause an exceedance of State water quality standards. The project does not contribute to the adverse impact of wetlands through inundation or volume of flow. 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 aquatic life. Springbrook Creek is impaired for Aquatic Life (Macro-invertebrates). 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 do not exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey.

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

**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:** $3,715.00
**Wetland Escrow:** N/A
There are not ditch liens on the property.

### ISSUES/CONCERNS:

<table>
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<tr>
<th>ISSUE</th>
<th>NEED</th>
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<tbody>
<tr>
<td><strong>Escrows:</strong> $2,000 + (3.43 ac * $500) = $3,715.00</td>
<td>1. Receipt of escrows.</td>
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<tr>
<td><strong>Groundwater:</strong> The project is within a DWSMA which requires filtration of runoff from roads/parking lots prior to</td>
<td>2. Site needs to provide filtration prior to any infiltration.</td>
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</table>
infiltration. Current site design has infiltration proposed but will need to be redesigned for filtration prior to infiltration.

| 3. | The applicant must acknowledge that they will conduct a post construction test on the infiltration/filtration systems. The Coon Creek Watershed District shall be notified prior to the test to witness the results. |

**Maintenance:** The applicant has not submitted a Maintenance Plan for each Stormwater Treatment Practice.

| 4. | Provide a Maintenance Plan that is consistent with District Maintenance standards for each STP (infiltration basin and pervious pavers). |

**Stormwater & Hydraulics:** Model appears to meet rate control; however, drainage maps were not provided to ensure accurate Subcatchment delineation.

| 5. | Subwatershed maps to confirm routing for the existing and proposed scenarios. |

It is unknown if on-site constructed storm water conveyance channels are constructed to withstand the expected velocity from a 2-year frequency storm without erosion at the swale to the infiltration basin.

| 6. | A defined curb cut and stabilization for the flow from the driveway to the infiltration area to ensure pretreatment and erosion protection. |

**Soils & Erosion Control:** Infiltration basin is not protected from erosion and sedimentation during construction. After initial grading the District requires that infiltration basin be completely surrounded by erosion control measures to prevent the basin from clogging.

| 7. | After initial grading completely surrounded the proposed infiltration basins with erosion control measures to prevent the basin from clogging. |

**Water Quality:** Discharge into infiltration basin needs to be pretreated to prevent sedimentation of basin.

| 8. | Provide pretreatment into infiltration basin. RainGuardians or riprap are options at curb cuts to provide pretreatment. |

**RECOMMENDATION:** Table with 8 Stipulations

**Stipulations:**
1. Receipt of escrows.
2. Site needs to provide filtration prior to any infiltration.
3. The applicant must acknowledge that they will conduct a post construction test on the stormwater features. The Coon Creek Watershed District shall be notified prior to the test to witness the results.

4. Provide a Maintenance Plan that is consistent with District Maintenance standards for each STP (infiltration basin and pervious pavers).

5. Subwatershed maps to confirm routing for the existing and proposed scenarios.

6. A defined curb cut and stabilization for the flow from the driveway to the infiltration area to ensure pretreatment and erosion protection.

7. After initial grading completely surround the proposed infiltration basins with erosion control measures to prevent the basin from clogging.

8. Provide pretreatment into infiltration basin. RainGuardians or riprap are options at curb cuts to provide pretreatment.