COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: August 12, 2019
AGENDA NUMBER: 19-137
FILE NUMBER: 19-137
ITEM: Wow Kids Playtorium

RECOMMENDATION: Table with 9 Stipulations

APPLICANT: Corey Gaitwood
2094 Arnold Palmer Drive
Blaine, MN 55449

PURPOSE: Family Entertainment Center

LOCATION: 2321 124th Court NE, Blaine, MN

APPLICABILITY:
1. One or more cumulative acres of land disturbance
2. The lands and waters that have been, or may be covered by the regional flood.
EXHIBITS:
1. Construction Plan set (11 sheets); by Loucks, dated 5/17/19, received 7/31/19.
2. Hydrology Report; by Loucks, dated 7/31/19, received 7/31/19.
3. Geotechnical Report; by Haugo GeoTechnical Services, dated 7/26/19, received 7/31/19.
4. Phase 1 Environmental Site Assessment; by Pinnacle Engineering, dated 5/2/12, received 7/31/19.

PREVIOUS ACTION TAKEN: This is a new application.

FINDINGS:
Pre-application Meeting: The project as submitted has received a general review during a pre-application meeting.

Ditches: There is not a public ditch on the property.
Ditch Hydraulics: There is a well-defined roadside ditch flowing east to west along the north side of the property. It appears the flow in the ditch will be rerouted as a result of land disturbing activities. Ensure that drainage capacity will not be reduced as a result of land disturbing activities. Additional spot elevations may be required to determine existing centerline/drainage path of roadside ditch.

Erosion and Sediment Control: Soils affected by the proposal are Rifle.
- 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 but do not 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.
- Stormwater runoff is not required to 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 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 provided for ESC (riprap, perimeter control, concrete washout, inlet protection, etc.)

Dewatering: Shallow ground water is not anticipated but may exist on-site. It is unknown if dewatering will be required during construction of underground infiltration system and subsequent utilities.

Floodplain: There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 896.6 feet. The project does not propose to place fill within the floodplain. Compensatory storage is not needed. There are no flooding concerns downstream. If drainage capacity of adjacent roadside ditch is reduced, there may be flooding concerns upstream.
High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Blaine; 2 feet above mottled, 2 feet above 100 year.

Groundwater: Geotechnical information collected in July 2019 indicates long term groundwater elevation is present at depths ranging from about 9 to 12 feet below the ground surface.

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.

Maintenance: The owner of the Stormwater Management features and treatment practices is unknown. 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>Infiltration Basin</td>
<td>1</td>
<td>Unknown</td>
</tr>
<tr>
<td>Underground Infiltration System</td>
<td>1</td>
<td>Unknown</td>
</tr>
<tr>
<td>Sump</td>
<td>2</td>
<td>Unknown</td>
</tr>
<tr>
<td>Grassed Swale</td>
<td>1</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

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 allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system utilizes a grassed swale, an underground infiltration system, and an infiltration basin. Calculations have been provided that illustrate the 1-inch infiltration 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 not 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 does not contribute to the adverse impact of wetlands through inundation or volume of flow. Discharge into the infiltration basin is pretreated by a grassed swale. All discharges from the site to existing storm sewer are pretreated by sumps. 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 not within one (1) mile of an Impaired 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. Wetlands have not been delineated and do not need to be.

**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. The applicant has not contacted the MDNR natural heritage or endangered species program and is not required to.

If the project is present, the project does not propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species will occur.

**Performance Escrow:** $2,710.00
**Wetland Escrow:** $ N/A
There are not ditch liens on the property.

**ISSUES/CONCERNS:**

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>NEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escrows: $2,000 + (1.42 ac * $500/ac = $2,710.00</td>
<td>1. Receipt of escrows.</td>
</tr>
</tbody>
</table>
### Stormwater & Hydraulics:
It appears the drainage of the adjacent roadside ditch will be altered due to land disturbing activities.

The applicant is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. A post construction test on the infiltration basin will be required to verify the assumed infiltration rates are obtained.

The HydroCAD model does not appear to consider soil compaction as a result of mass grading.

Inverts of the underground infiltration chamber are inconsistent in the HydroCAD model (894.36 and 894.86) and on the construction plans (896.5 and 897.0).

| 2. | Additional spot elevations may be required to ensure that ditch drainage path and capacity will not be altered from existing conditions. |
| 3. | The applicant has provided a note (Note 12) on the Utility Plan (Sheet C4-1) that a flood test or double ring infiltrometer test shall be completed for all infiltration systems per Coon Creek Watershed District (CCWD) requirements. Revise Note 12 to include: The CCWD shall be notified prior to the test to witness the results. |
| 4. | Provide note on Grading Plan to scarify soil to a minimum depth of 6 inches. If soil scarification will not be performed, downgrade the proposed pervious CN in HydroCAD report to next hydrologic soil group. |
| 5. | Update the inverts of the underground infiltration chamber in the HydroCAD model to be consistent with the inverts shown on the construction plans. |

### Soils & Erosion Control:
Stabilization adequate to prevent erosion has been provided at the outlets of all storm sewer pipes.

District requires that soil stockpiles be stabilized within seven (7) days of inactivity.

It is unclear if dewatering is needed during the construction of the proposed project.

| 6. | Update SWPPP and Erosion Control Plan to include the following: |
| a. | Add riprap to SWPPP Legend. |
| b. | Revise SWPPP Note 8 on Sheet C3-3 to include: soil stockpiles shall be stabilized within 7 days of inactivity. |
| 7. | Provide statement whether dewatering will be required for the construction of the proposed project. If yes, provide well-field location, rates, discharge location, schedule and quantities. |
**Water Quality:** All discharges from infiltration practices are pretreated by sediment sump manholes prior to discharging to existing storm sewer. These sump manholes are designed to depth of three (3) feet.

| 8. | The CCWD recommends a four (4) foot sump depth to prevent resuspension. |

**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.

| 9. | Provide an O&M Agreement that meets District requirements. |

**RECOMMENDATION:** Table with 9 Stipulations

**Stipulations:**

1. Receipt of escrows.
2. Additional spot elevations may be required to ensure that ditch drainage path and capacity will not be altered from existing conditions.
3. The applicant has provided a note (Note 12) on the Utility Plan (Sheet C4-1) that a flood test or double ring infiltrometer test shall be completed for all infiltration systems per Coon Creek Watershed District (CCWD) requirements. Revise Note 12 to include: The CCWD shall be notified prior to the test to witness the results.
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5. Update the inverts of the underground infiltration chamber in the HydroCAD model to be consistent with the inverts shown on the construction plans.
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   b. Revise SWPPP Note 8 on Sheet C3-3 to include: soil stockpiles shall be stabilized within 7 days of inactivity.
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9. Provide an O&M Agreement that meets District requirements.