COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: September 16, 2016
AGENDA NUMBER: 14
FILE NUMBER: 16-134
ITEM: Parent Office Building

RECOMMENDATION: Table with 11 Stipulations

APPLICANT: Parent Custom Homes LLC
3919 Coon Rapids Blvd
Coon Rapids MN 55433

PURPOSE: New Office Building

LOCATION: 13632 Van Buren St NE, Ham Lake, MN

APPLICABILITY:
1. Any work in or adjacent to wetlands, lakes or water courses
2. One or more cumulative acres of land disturbance
3. Activities upstream from land that is dependent upon removal of water from the soil profile for their continued use (Drainage Sensitive Land Uses)
4. Endangered, Threatened or Special concern species, elements or communities

EXHIBITS:
1) Geotechnical Report by Interstate Geotechnical Engineering, Inc.; dated 7/25/16, received 8/24/16.
2) Stormwater Management Plan by The Gregory Group, Inc; dated 6/14/16, received 8/24/16.
3) Construction Plan set (4 sheets) by The Gregory Group, Inc.; dated 6/14/16, received 8/24/16.

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.

Ditch Hydraulics: A crossing of the ditch is not proposed.
**Erosion and Sediment Control:** Soils affected by the proposal are Cut & Fill 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 not 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 does provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.

**Dewatering:**
Shallow ground water does not exist on site. It is unknown if the project will require dewatering.

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

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

**Groundwater:** Geotechnical information collected in July 2016 indicates long term groundwater elevation is present at 8.2 feet below the surface which correlates to 886.7 feet. The existing basin on the west side was indicated to have OHW of 889.2 feet. Three (3) feet separation between bottom of infiltration basin and OHW (seasonal high groundwater) is not meet.
The site is not 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). That use is:

- Storage, production, disposal or treatment of hazardous materials
- Dry cleaning, dyeing, printing, photo processing or any other uses of hazardous materials
- Disposal of septage or septic sludge
- Vehicle or equipment maintenance/fueling area
- Underground storage tanks
- Storage and use of petroleum products
- Chemical/pesticide/herbicide storage
- Storage and use of petroleum products exceeding fifty-five (55) gallons

Underground storage tanks are not proposed.

**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.

It is unknown if 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 unknown. The Stormwater Treatment Practices (STPs) consisting of the following:

<table>
<thead>
<tr>
<th>Stormwater Treatment Practices</th>
<th>Number</th>
</tr>
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<tbody>
<tr>
<td>Infiltration Basin</td>
<td>1</td>
</tr>
<tr>
<td>Detention Basin</td>
<td>1</td>
</tr>
<tr>
<td>Sump</td>
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</table>

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.

Easements: The proposed project does not include ditch maintenance easement. A ditch maintenance easement is not required.

**Stormwater & Hydrology:** Infiltration is allowed within the project area. The 1-inch infiltration is achieved. The stormwater management system uses a sedimentation basin.
and wet pond. Stormwater leaving the site is discharged into a well-defined receiving channel or pipe and routed to a public drainage system.

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. 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.

**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 discharges into wetlands or infiltration basins are pretreated by a sediment basin/water quality pond, and are not designed correctly. All work adjacent to wetlands, waterbodies and water conveyance systems are not 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) / Aquatic Recreation (E. coli)). The major stressors are Total Suspended Solids (TSS) / Total Phosphorus (TP) / E.coli. 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:** Wetland 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 include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.

The endangered or threatened species, rare natural community is the Black Huckleberry (*Gaylussacia baccata*).

The applicant has not contacted the MDNR natural heritage or endangered species program.
If the project is present, it is unknown if the project proposes substantial adverse alteration or significant detrimental impact on a species or removal of a plant species will occur.

**Performance Escrow:** $2,585.00  
**Wetland Escrow:** N/A  
There are not ditch liens on the property.

### ISSUES/CONCERNS:

<table>
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<th>NEED</th>
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<td>2. Submit an O&amp;M agreement that meets District standards for the Stormwater Treatment Practices proposed on site.</td>
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<td>Stormwater &amp; Hydraulics: 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.</td>
<td>3. 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.</td>
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| Model updates:  
  a. Pipe information does not match between plan set and model for CB 501 and 502.  
  b. Pond 1 is a wet pond and therefore is not expected to offer infiltration benefits.  
  c. MSE distribution should be used with Atlas 14 rainfall.  
  d. Weighted CN should not be used for Subcatchments. | 4. Model Updates  
  a. Provide consistent information for CB 501 and 502 pipes.  
  b. Remove infiltration from model for Pond 1 (existing).  
  c. Update rainfall distribution to MSE (in HydroCAD v 10 build 16 and higher)  
  d. Do not use weighted CN to calculate runoff values in subcatchments. |
| Soils & Erosion Control: Infiltration basins are not protected from erosion and sedimentation during construction. After initial grading the District requires that infiltration basins be completely surrounded the proposed infiltration basins with erosion control measures to prevent the basin from clogging. | 5. After initial grading completely surrounded the proposed infiltration basins with erosion control measures to prevent the basin from clogging. |
surrounded by erosion control measures to prevent the basin from clogging.

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

6. 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.

**Groundwater:** Three (3) foot separation between seasonal high groundwater (taken to be the OWH of the existing basin at 889.2 ft) and bottom of infiltration basin is not met.

7. Bottom of infiltration basin should be no lower than 892.2 feet to meet three feet separation requirement.

**Water Quality:** All discharges into infiltration basins are not pretreated by a sediment sump manhole. These sump manholes are not designed correctly for water quality treatment prior to discharge into infiltration basin.

8. Provide calculations (SHASM can be used) to indicate sumps are appropriately sized to meet district removal rates of 80% TSS. A minimum of 4 foot depth is required to prevent resuspension.

Existing outlet in wet basin doesn’t appear to extend to water level. Possible scouring could occur.

9. Inspect the existing outlet in basin and extend riprap to basin bottom as needed to prevent scouring.

Mulch in infiltration basin will likely move during rain events and washout which will clog downstream systems.

10. Provide a vegetation plan for the infiltration basin instead of using mulch.

**Wildlife:** The proposed project may include the endangered or threatened species, Black Huckleberry (Gaylussacia baccata)

11. Contact the DNR to have a DNR Natural Heritage Information System (NHIS) data review completed to determine if any records of state-protected species may be located within the boundary of this project.

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d. Do not use weighted CN to calculate runoff values in subcatchments.

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

6. 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.

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