COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: March 25, 2018
AGENDA NUMBER: 14
FILE NUMBER: 18-158
ITEM: Shadowbrook North

RECOMMENDATION: Table with 7 Stipulations

APPLICANT: Jan Thomas
2115 North 3rd Ave.
Anoka, MN 55303

PURPOSE: Residential development
13 Lots on 7.2 Acres

LOCATION: South end of Butternut St. NW, South of Andover Blvd.,
Andover, MN
APPLICABILITY:
1. Within 1 mile of an impaired waters.
2. Any work within or adjacent to a Public ditch within the Watershed District.
3. Any work in or adjacent to wetlands, lakes or water courses
4. One or more cumulative acres of land disturbance
5. The lands and waters that have been or may be covered by the regional flood.
6. High water table, outwash and organic soils
7. High infiltration soils
8. Highly erodible soils
9. Endangered, Threatened or Special concern species, elements or communities

EXHIBITS:
1. Construction Plan set (10 sheets); by Carlson McCain, dated 2/27/19, received 2/27/19.
3. Geotechnical Report; by Haugo Geotechnical Services, dated 12/31/18, received 2/27/19.
4. Permit Application Status Response to comments, received 2/27/19

PREVIOUS ACTION TAKEN: This application was tabled at the February 25 meeting with 17 stipulations:
1. Receipt of escrows.
2. Update HydroCAD model with correct areas to meet the 1.1-inch requirement or explain why it cannot be met.
3. Provide HydroCAD model with Coon Creek tailwater conditions at 880.7.
4. Exclude exfiltration as an outlet device for Pond 100.
5. Infiltration is not feasible, update construction plans and details to display Filtration Basin 100 and Filtration Basin 200. Update Details to display liner and perforated draintile (without plug) for both Filtration Basins.
6. Update Utility Plan to reflect correct pipe size.
7. Provide the floodway line on plans.
8. Any fill within floodway will need to have an accompanying no rise analysis on the ditch. The no rise analysis will need to be approved by the MnDNR and the City of Andover.
9. Provide HydroCAD table displaying time and elevation data for Pond 100, Filtration Basin 100, and Filtration Basin 200.
10. Provide statement from City that this is acceptable.
11. Provide an as-built of utility crossings under Coon Creek.
12. Provide an O&M Agreement that meets District requirements
13. Update plans to include rip rap at the storm sewer outlet to Coon Creek. Provide note on plans to keep the top of rip rap even with the existing grade.
14. Provide a detail for rip rap at flared end sections.
15. 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.
16. Provide MN Joint Application for confirmation of exemption approval.
17. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors, and if present address how impacts will be avoided.

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 57 according to the public drainage map. The approved/as-built elevations through this property are 869.3 ft MSL at the downstream end and 869.6 ft MSL at the upstream end.
The ditch is a 5th order stream. The ditch serves the primary role of
a. Trunk drainage system

The ditch serves approximately 0 acres of agricultural land. Land use in the area is toward residential. There are flooding concerns upstream and downstream.

The ditch has been inspected. Existing elevations, slopes and condition of ditch are fair. The ditch 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 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 does provide for the repair and maintenance of all temporary and permanent erosion and sediment control practices.

**Dewatering:** Shallow ground water does exist on site. The project will likely require dewatering.
**Floodplain:** There is floodplain on the property according to the District model and FEMA. The District’s floodplain elevation is at 880.7 feet. The project does propose to place fill within the floodplain. The total floodplain impact is 1.2 acre-feet. The proposed impact may be within the floodway and flood fringe. Compensatory storage is provided. There may be flooding concerns upstream or downstream. Floodplain lines are inaccurate on plans, applicant to provide LOMR at a later date.

High Water Flooding: Information has been provided to substantiate low floor elevations. Low floor elevations meet the criteria for the City of Andover; 3 ft above mottled soils/groundwater, 2 ft over 100 yr.

**Groundwater:** Geotechnical information collected in December 2018 indicates long term groundwater elevation is present at 3 to 19 feet below the surface.

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

**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 City of Andover. 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>Stormwater Pond</td>
<td>1</td>
<td>City</td>
</tr>
<tr>
<td>Filtration Basin</td>
<td>2</td>
<td>Owner</td>
</tr>
</tbody>
</table>

As a requirement of the City’s MS4 program, the city will inspect and maintain the stormwater facilities. The City’s policy is maintenance of infiltration basins are the responsibility of the landowner.

Easements: The proposed project does include ditch maintenance easement. A ditch maintenance easement is required. A maintenance access to all storm water management features is provided.

**Stormwater & Hydrology:** Infiltration is allowed within the project area. Due to site constraints of saturated soils and the seasonally high-water table infiltration is not feasible; filtration is required. The 1.1-inch filtration is achieved. The current stormwater
management system proposes wet ponds and filtration basins. Calculations have been provided that illustrate the 1.1-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 exceed predevelopment rates discharging to the south by 0.01 cfs for the 2-year, 0.03 cfs for the 10-year, and 0.02 cfs for the 25-year event. The increase in discharge is not anticipated to have adverse impacts downstream. The rate of post-development runoff from the site does exceed predevelopment rates discharging to the northeast by 0.06 cfs for the 2-year, 0.44 cfs for the 10-year, 0.93 cfs for the 25-year, and 1.97 cfs for the 100-year event. The discharge to the northeast is collected by infiltration basin C (Catchers Creek East) which is adequately sized for the additional runoff. 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 the 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. 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 of 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 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 exist on-site according to the 1987 Federal manual, NWI, PWI and Soil Survey. Wetlands have been delineated. The wetland boundary has been checked. The most recent delineation was approved on 10/16/18.

The wetland is not a DNR protected water.

The total proposed wetland impact is 450 square feet. The impact is through fill in the location as shown below:
The de minimis is 2,500 sf (type 1 2, 6, 7, 8). TEP members have not been notified with a complete plan and have not been requested to submit comments. The project is not wetland dependent.

The project is exempt.

The applicant does not need to contact the DNR area hydrologist and the Corps of Engineers.

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

**Wildlife:** The proposed project may 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 contacted the MDNR natural heritage or endangered species program on 2/08/19 and is required to. No response from the DNR has been provided.

It is unknown if the project does propose substantial adverse alteration or significant detrimental impact on a species or removal of a plant species.

**Performance Escrow:** $5,100
**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 + (6.2 ac * $500/ac) = $5,100</td>
<td>1. Receipt of escrows.</td>
</tr>
<tr>
<td><strong>Floodplain:</strong></td>
<td>2. Provide the updated floodway line on plans once LOMR is complete.</td>
</tr>
<tr>
<td>The proposed fill may be in a FEMA floodway as indicated by the effective FIRM 27003C0307E (effective 12/16/15). Noted that LOMR is being completed.</td>
<td>3. Any fill within floodway will need to have an accompanying no rise analysis on the ditch. The no rise analysis will need to be approved by the MnDNR and the City of Andover.</td>
</tr>
<tr>
<td>Floodplain analysis is required to determine available compensatory storage during 100-year event.</td>
<td><strong>Maintenance:</strong> A maintenance agreement has not been executed for the privately-owned filtration basins.</td>
</tr>
<tr>
<td><strong>Soils and Erosion Control:</strong></td>
<td>4. Provide an O&amp;M Agreement that meets District requirements.</td>
</tr>
<tr>
<td>Detail not provided for concrete headwall at the outlet of Filtration Basin 200 drain tile.</td>
<td>5. Provide a detail for concrete headwall at the outlet of Filtration Basin 200 drain tile.</td>
</tr>
<tr>
<td><strong>Wetlands:</strong></td>
<td>6. Provide wetland buffer signage detail that is acceptable to the district.</td>
</tr>
<tr>
<td>Wetland buffer signs shown on plan but no details.</td>
<td><strong>Wildlife:</strong> The proposed project may include endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors.</td>
</tr>
<tr>
<td>7. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors, and if present address how impacts will be avoided.</td>
<td></td>
</tr>
</tbody>
</table>

RECOMMENDATION: Table with 7 Stipulations

Stipulations:
1. Receipt of escrows.
2. Provide the floodway line on plans.
3. Any fill within floodway will need to have an accompanying no rise analysis on the ditch. The no rise analysis will need to be approved by the MnDNR and the City of Andover.
4. Provide an O&M Agreement that meets District requirements.
5. Provide a detail for concrete headwall at the outlet of Filtration Basin 200 drain tile.
6. Provide wetland buffer signage detail that is acceptable to the district.
7. Provide documentation from the DNR if the proposed project includes endangered or threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas or wildlife travel corridors, and if present address how impacts will be avoided.