COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: December 14, 2015
AGENDA NUMBER: 13
FILE NUMBER: 15 - 153
ITEM: 105th Ave NE Road Improvements

RECOMMENDATION: Table with 8 Stipulations

APPLICANT: City of Blaine
Attn: Jean Keely
10801 Town Square Dr NE
Blaine, MN 55449

PURPOSE: Reconstruction of 105th Avenue NE

LOCATION: 105th Avenue NE between Central Ave (Hwy 65) to CSAH 52 (Radisson Rd), Blaine
APPLICABILITY:
1. Any work within or adjacent to a Public Ditch within the Watershed District.
2. Any work in or adjacent to wetlands, lakes or water courses.
3. One or more cumulative acres of land disturbance.
4. The lands and water that have been, or may be covered by the regional flood.
5. High water table, outwash and organic soils.

EXHIBITS:
1. Drainage Design Report (includes HydroCAD model and construction plans) by WSB; dated August 3, 2015, received 11/24/2015.
2. Wetland Delineation Report; dated 7/21/15, received 8/31/15
3. Amended Wetland Delineation Report; dated 7/21/15, received 10/14/15
4. Wetland Application by WSB; dated 11/10/15, received 11/24/15

HISTORY & CONSIDERATIONS: The western portion of the project has high groundwater and is in a Drinking Water Source Management Area. The eastern portion of the project is within an airport fly zone that does not allow open water basins.

FINDINGS:
Ditches and Drainage: There is a public ditch on the property. The ditch is CD 41 (Sand Creek). The ditch has been inspected. There are approximately 0 acres of existing agricultural land affected by this ditch. There are no flooding concerns downstream. Alternatives to additional drainage considered and reviewed include storage, retention. The public ditch was last repaired in 1984. The ditch is not in need of repair.

Floodplain: There is floodplain on the property according to FEMA. The District Atlas 14 model predicts the 100-year elevation for the subwatershed at 898.0 feet on the south side of the project and 896.9 feet on the north side of the project. The total floodplain impact is unknown, figure provided had outdated floodplain location.

Groundwater: Geotechnical report was not provided. The site does not include groundwater sensitive areas. Information has not been provided and is not needed to substantiate low floor elevations, no buildings 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.

Maintenance: The proposed project does include a ditch maintenance easement or utility line crossings. A drainage and utility easement is provided for the storm water/infiltration ponds shown on the drainage plan. It is unknown if property owners affected by changes in drainage have been notified and have acknowledged the changes proposed.
Soils & Erosion Control: Soils affected by the proposal are Isanti and Rifle. Stabilizing vegetation is proposed for disturbed areas within two weeks of rough grading. Adjacent properties are protected from sediment deposition. All wetlands, waterbodies, ponds, infiltration basins and water conveyance systems are protected from erosion and sedimentation. Project site is greater than 1 acre; an NPDES permit is required.

Stormwater & Hydraulics: The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. Stormwater leaving the site is discharged into a well-defined receiving channel or pipe 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.

Water Quality: Project does not include new impervious drainage areas greater than 1 acre. All discharges into basins are not pretreated by a water quality structure and will affect long term infiltration capabilities of the infiltration basin. The proposal will detrimentally affect the existing water quality of the receiving water. The proposal will not cause extreme fluctuations of water levels or temperature changes.

Wetlands: Wetland do exist on site. The wetland delineation report has been reviewed and approved by the TEP.

The applicant is proposing to impact 7 wetlands throughout the corridor as follows:

<table>
<thead>
<tr>
<th>Wetland</th>
<th>Size of Impact</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetland B</td>
<td>0.04 ac</td>
<td>Type 3</td>
</tr>
<tr>
<td>Wetland C</td>
<td>0.04 ac</td>
<td>Type 3</td>
</tr>
<tr>
<td>Wetland C</td>
<td>0.02 ac (temporary)</td>
<td>Type 3</td>
</tr>
<tr>
<td>Wetland D</td>
<td>0.05 ac</td>
<td>Type 1</td>
</tr>
<tr>
<td>Wetland F</td>
<td>0.08 ac (temporary)</td>
<td>Type 3</td>
</tr>
<tr>
<td>Wetland G</td>
<td>0.03 ac</td>
<td>Type 1</td>
</tr>
<tr>
<td>Wetland H</td>
<td>0.06 ac</td>
<td>Type 1</td>
</tr>
</tbody>
</table>

The applicant has provided alternatives to the wetland impacts and explanations as to why the alternatives are not feasible.

The applicant is proposing to utilize the MN Local Government Road Wetland Replacement Program as this project qualifies as the existing road does not meet current road safety standards.

The wetland impacts have not been reviewed by the TEP. It is scheduled for review on Wednesday, December 16, 2015.
**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:** $10,705.00

### ISSUES/CONCERNS:

<table>
<thead>
<tr>
<th><strong>Floodplain:</strong> Floodplain location used to determine impacts is outdated. However, the flood elevations used were correct.</th>
<th>1. Provide updated floodplain impact calculations using the attached updated floodplain map.</th>
</tr>
</thead>
</table>
| **Stormwater & Hydraulics:** The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. Since infiltration is not feasible on the eastern portion of the site, filtration should be used with Pond 1 to meet volume management requirements. | 2. Provide additional volume management:  
   a. Provide drain tile in Pond 1 for filtration.  
   b. Use soil amendments along project length for areas not being directed into basins. |
| Also, soil amendment should be used between the sidewalk and road along project length to meet volume management for areas that are not being directed into basins. | 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. |
| A post construction test on the infiltration basin will be required to verify the assumed infiltration rates are obtained. 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. | 4. Provide documentation that adjacent property owners are aware of the changes in drainage. |
| **Maintenance:** It is unknown if property owners affected by changes in drainage have been notified and have acknowledged the changes proposed. | 5. **Water Quality:** Stormwater plans indicate WQ devices will be provided at structure  
   a. Size sumps to meet EPA |
5301. Provide details regarding this device (also listed as special structure #5 in stormwater pipe calculations and SHASM calculations.

Sumps need to be sized to EPA requirements (1.5x diameter of manhole) and SHASM should be used to determine water quality benefits of the sumps to ensure water quality treatment requirements are being met.

Details regarding “Ditch Treatment” being used for DA4 needs to be provided/explained. DA4 enters the private ditch through structure 5207 before entering CD 41 approximately 200 feet to the east. The private ditch by itself is not expected to provide any water quality benefits.

Pretreatment needs to be added to structures 5337 and 5804 to ensure long term infiltration capabilities of Pond 2.

6. Provide pretreatment at structures 5337 and 5804 to ensure long term infiltration capabilities of Pond 2.

**Wetlands:** The applicant is proposing to permanently impact 0.22 ac of wetland for the project. The TEP has not approved the wetland impacts.

7. TEP approval of the wetland impacts.

**Escrow:** $2,000 + (17.41 ac * $500/ac) = $10,705.00

8. Receipt of escrows.
**RECOMMENDATION:** Tabled with 8 Stipulations

**Stipulations:**
1. Receipt of escrows: $10,705.00
2. Provide additional volume management:
   a. Provide drain tile in Pond 1 for filtration.
   b. Use soil amendments along project length for areas not being directed into basins.
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.
4. Provide pretreatment at structures 5337 and 5804 to ensure long term infiltration capabilities of Pond 2.
5. Water Quality:
   a. Size sumps to meet EPA requirements of 1.5x diameter of structure. This includes updating sump depths for structures 5112 and 5101. Provide SHASM calculations to determine removal rates.
   b. Provide details for Structure 5301 and SHASM calculations to determine water quality benefits/removal rates.
   c. Provide details regarding Ditch Treatment being used for DA4.
6. Provide documentation that adjacent property owners are aware of the changes in drainage.
7. Provide updated floodplain impact calculations using the attached updated floodplain map.
8. TEP approval of the wetland impacts.