COON CREEK WATERSHED DISTRICT
PERMIT REVIEW

MEETING DATE: May 12, 2014
AGENDA NUMBER: 12
FILE NUMBER: 14-029
ITEM: Magnum Freight

RECOMMENDATION: Table with 15 Stipulations

APPLICANT: Scott Quiring/Mark Huus
Amcon Corporation
1715 Yankee Doodle Rd
Eagan MN
Mark Gadberry
Magnum Trucking Co.
3701 85th Ave NE
Blaine MN

PURPOSE: Site grading, sewer, and landscape improvements

LOCATION: North of the intersection of Evergreen Blvd. and 87th Ln. NW, Coon Rapids, MN
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. High infiltration soils.
5. Highly erodible soils

EXHIBITS:
1. Plan set by Oliver Surveying and Engineering Inc.; dated 4-30-14; received 4-30-2014
2. Proposed Conditions HydroCad reports by Oliver Surveying and Engineering Inc.; dated 4/30/14; received 4/30/14.
3. Existing Conditions HydroCad reports by Oliver Surveying and Engineering Inc.; dated 4/29/14; received 4/30/14.
4. Impervious surface computations by John Oliver and Associates; dated 4-30-14 received 4-30-14
5. Existing conditions drainage map dated 4-30-14; received 4-30-30-14
6. Atlas 14 information dated 3-30-2014; received 4-30-2014

HISTORY & CONSIDERATIONS:
This site is on an old alignment of CD 17 (Springbrook Creek). An earlier application was reviewed under 13-056 Stanton CD 17 in 2013.

FINDINGS:
Ditches and Drainage: There is a public ditch on the property. The ditch is old County Ditch 17. The project site is tributary to County Ditch 17. The trend in land use for this drainage area is toward industrial. There are flooding concerns downstream. Alternatives to additional drainage considered and reviewed include storage, and retention.

Floodplain: There is no floodplain on the property according to FEMA. The District Atlas 14 model predicts the 100-year elevation for the subwatershed at 875.2 feet as referenced to the NGVD 1929 vertical datum. The conversion between NGVD 1929 and NAVD 1988 is +0.22 feet. Therefore, the 1988 date Atlas 14 100-year is 875.4.

The applicant is required to run the 100-year elevation for interior ponds using the NOAA Atlas 14 information as shown in the following web link.
http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mn

Groundwater: No groundwater information was provided, and is not needed for slab on grade construction.

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 not include a ditch maintenance easement or utility line crossing. A drainage and utility easement is not provided for the storm water/infiltration ponds shown on the drainage plan. 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 Zimmerman. Stabilizing vegetation is not proposed for disturbed areas within two weeks of rough grading. Adjacent properties are not protected from sediment deposition. All wetlands, water bodies, ponds, infiltration basins and water conveyance systems are not 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 exceed predevelopment rates, or rates which would interfere with sensitive downstream land uses.

Water Quality: Project does include new impervious drainage areas greater than 1 acre. All discharges into wetlands are pretreated by a sediment basin/water quality pond and are not designed correctly. The proposal does not provide enough information to determine if the project will detrimentally affect the existing water quality of the receiving water. The proposal does not provide enough information to determine if it will cause extreme fluctuations of water levels or temperature changes.

Wetlands: Wetlands do exist on-site according to the 1987 Federal Manual and its associated supplement(s), NWI, and Soils Survey. A wetland delineation was completed in 2005. The Wetland Conservation Act states that wetland delineations are only good for 5 years. A new wetland delineation needs to be completed for this project.

Wildlife: The proposed project does not include endangered & threatened species, rare natural communities, colonial waterbird nesting sites, migratory waterfowl concentration areas, deer wintering areas, wildlife travel corridors. No substantial adverse alteration or significant detrimental impact on a species food supply, security or reproductive cycle or the alteration or removal of a plant species will occur.

Performance escrow: $13,545.00
**ISSUES/CONCERNS**  |  **NEEDS**
---|---
**Stormwater & Hydraulics:** The applicant is not meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation. All projects in the Coon Creek Watershed District must meet this requirement. | 1. Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.

Instead of using the hydrodynamic device in subwatersheds 6S, 21S, and 22S, the District would like the applicant to consider using the medians south of the parking area as depressed infiltration areas. | a. Consider using the grass medians west of subwatersheds 6S, 21S, and 22S for depressed infiltration areas.

The applicant is not meeting rate control for the 2-year. The 10-year existing conditions were not provided. Existing conditions rates for the 2, 10, and 100-year Atlas 14 events must be higher than the proposed rates for the respective storms. The District indicated in previous discussions that the pond west of Evergreen Blvd. could receive the drainage leaving the site towards Evergreen Blvd. This would help towards meeting the District rate control standards. | 2. The applicant must provide calculations showing that they are meeting the District rate control standards.
   a. Consider using the pond west of Evergreen Blvd. for rate control.

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Table 1. Existing Conditions Rates and volumes leaving the site based on the 4-30-14 submittal results

<table>
<thead>
<tr>
<th>Node</th>
<th>Description</th>
<th>2-Year Peak Flow (cfs)</th>
<th>2-Year Volume (Ac-ft)</th>
<th>10-Year Peak Flow (cfs)</th>
<th>10-Year Volume (Ac-ft)</th>
<th>100-Year Peak Flow (cfs)</th>
<th>100-Year Volume (Ac-ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S</td>
<td>Drains to the wetland along south line</td>
<td>4.3</td>
<td>0.2</td>
<td>20.0</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2S</td>
<td>Drains to evergreen</td>
<td>4.4</td>
<td>0.3</td>
<td>21.4</td>
<td>1.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3S</td>
<td>Drains to old CD 17</td>
<td>9.3</td>
<td>0.7</td>
<td>46.3</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4S</td>
<td>Drains to old CD 17</td>
<td>7.9</td>
<td>0.6</td>
<td>39.3</td>
<td>2.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5S</td>
<td>Drainse to Dpressed area</td>
<td>1.6</td>
<td>0.1</td>
<td>7.5</td>
<td>0.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>27.5</strong></td>
<td><strong>1.8</strong></td>
<td><strong>134.4</strong></td>
<td><strong>9.0</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Proposed conditions rates leaving the site based on the 4-30-14 submittal results

<table>
<thead>
<tr>
<th>Node</th>
<th>Description</th>
<th>2-Year</th>
<th></th>
<th>10-Year</th>
<th></th>
<th>100-Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Peak</td>
<td>Volume</td>
<td>Peak</td>
<td>Volume</td>
<td>Peak</td>
<td>Volume</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flow (cfs)</td>
<td>(Ac-ft)</td>
<td>Flow (cfs)</td>
<td>(Ac-ft)</td>
<td>Flow (cfs)</td>
<td>(Ac-ft)</td>
</tr>
<tr>
<td>11s</td>
<td>Truck yard south east side</td>
<td>6.7</td>
<td>0.3</td>
<td>10.0</td>
<td>0.5</td>
<td>17.0</td>
<td>0.9</td>
</tr>
<tr>
<td>3P</td>
<td>Springbrook Drive Pond</td>
<td>8.2</td>
<td>1.9</td>
<td>16.5</td>
<td>3.2</td>
<td>33.8</td>
<td>5.9</td>
</tr>
<tr>
<td>1P</td>
<td>Evergreen Pond</td>
<td>3.1</td>
<td>0.3</td>
<td>5.1</td>
<td>0.5</td>
<td>8.0</td>
<td>0.9</td>
</tr>
<tr>
<td>2P</td>
<td>Swale along South Line</td>
<td>6.6</td>
<td>0.6</td>
<td>10.5</td>
<td>1.0</td>
<td>17.5</td>
<td>1.8</td>
</tr>
<tr>
<td>4P</td>
<td>Evergreen Hyd Dyn Separator</td>
<td>8.3</td>
<td>0.4</td>
<td>13.1</td>
<td>0.7</td>
<td>23.0</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>32.9</strong></td>
<td><strong>3.6</strong></td>
<td><strong>55.1</strong></td>
<td><strong>5.9</strong></td>
<td><strong>99.2</strong></td>
<td><strong>10.7</strong></td>
</tr>
</tbody>
</table>

It appears that the overflow for the adjacent City pond south of the site has an overflow elevation of 877.8. At this elevation there will be backwatering from the southern City pond that will affect the drainage off site. The backwatering needs to be considered as a downstream boundary condition in the proposed model or the southern City pond and contributing areas need to be explicitly modeled.

3. Provide the control structure rim and invert elevations for the southern City pond.

There is no detail for outlet control structure OCS 128 as is stated in the pipe schedule. Also pipe L C31 does not show up in the pipe schedule. Include all pipes and structures in the system in the pipe schedule.

4. Provide details showing all pipes and structures in the system in the pipe schedule.

**Water Quality:** The proposal does not provide enough information to determine if the project will detrimentally affect the existing water quality of the receiving water. The proposal does not provide enough information to determine if it will cause extreme fluctuations of water levels or temperature changes.

5. Provide water quality performance information for the hydrodynamic separator.

**Soils & Erosion Control:** Ponds are not protected from erosion and sedimentation during construction. After initial grading the District requires that basins be completely surrounded by erosion control measures.

6. After initial grading completely surrounded the proposed basins with erosion control measures.

There is no silt fence along the perimeter of construction. Adjacent landowners need to be protected from sedimentation.

7. Install erosion control along the perimeter of the construction to protect adjacent landowners.
<table>
<thead>
<tr>
<th>The erosion control plan does not state that the site will be stabilized within 14 days of rough grading.</th>
<th>8. Provide statement in erosion control plan that stabilizing vegetation is proposed within 14 days of rough grading.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No detail was provided for the riprap downstream of the curb cutouts.</td>
<td>9. Provide a detail for proposed riprap downstream of the curb cutouts along the south curb line.</td>
</tr>
<tr>
<td><strong>Maintenance:</strong> A utility easement for the CD 17 alignment needs to be shown on the plans.</td>
<td>10. Provide a 20’ utility easement for the CD 17 alignment</td>
</tr>
<tr>
<td>The ponds also need to have utility easements.</td>
<td>11. Provide a utility easement for the proposed stormwater ponds</td>
</tr>
<tr>
<td>An operations and maintenance plan for the hydrodynamic separators must be provided.</td>
<td>12. Provide an Operations and Maintenance Plan for the hydrodynamic separators.</td>
</tr>
<tr>
<td><strong>Wetlands:</strong> A wetland delineation was completed in 2005. The Wetland Conservation Act states that wetland delineations are only good for 5 years.</td>
<td>13. A new wetland delineation needs to be completed for this project.</td>
</tr>
<tr>
<td>The Army Corps of Engineers requires a permit to relocate the abandoned ditch.</td>
<td>14. Provide a copy of the Army Corps of Engineers permit for the ditch relocation</td>
</tr>
<tr>
<td><strong>Escrows:</strong> $2,000 + (23.09 ac x $500/ac) = $13,545.00</td>
<td>15. Receipt of escrows</td>
</tr>
</tbody>
</table>

**RECOMMENDATION:** Table with 15 Stipulations

**Stipulations:**
1. Receipt of escrows.
2. After initial grading completely surrounded the proposed basins with erosion control measures.
3. Provide stormwater runoff calculations that show the site is meeting the volume management requirement equivalent to infiltrating runoff from the first inch of precipitation.
   a. Consider using the grass medians west of subwatersheds 6S, 21S, and 22S for depressed infiltration areas.
4. Provide the control structure rim and invert elevations for the southern City pond.
5. Provide a detail for proposed riprap downstream of the curb cutouts along the south curb line.
6. Install erosion control along the perimeter of the construction to protect adjacent landowners.
7. Provide statement in erosion control plan that stabilizing vegetation is proposed within 14 days of rough grading.

8. Provide a 20’ utility easement for the CD 17 alignment,


10. Provide a utility easement for the proposed stormwater ponds.

11. Provide details showing all pipes and structures in the system in the pipe schedule.

12. Provide water quality performance information for the hydrodynamic separators.

13. The applicant must provide calculations showing that they are meeting the District rate control standards.

   b. Consider using the pond west of Evergreen Blvd. for rate control.

14. Provide a copy of the Army Corps of Engineers permit for the ditch relocation

15. Provide updated wetland delineation.