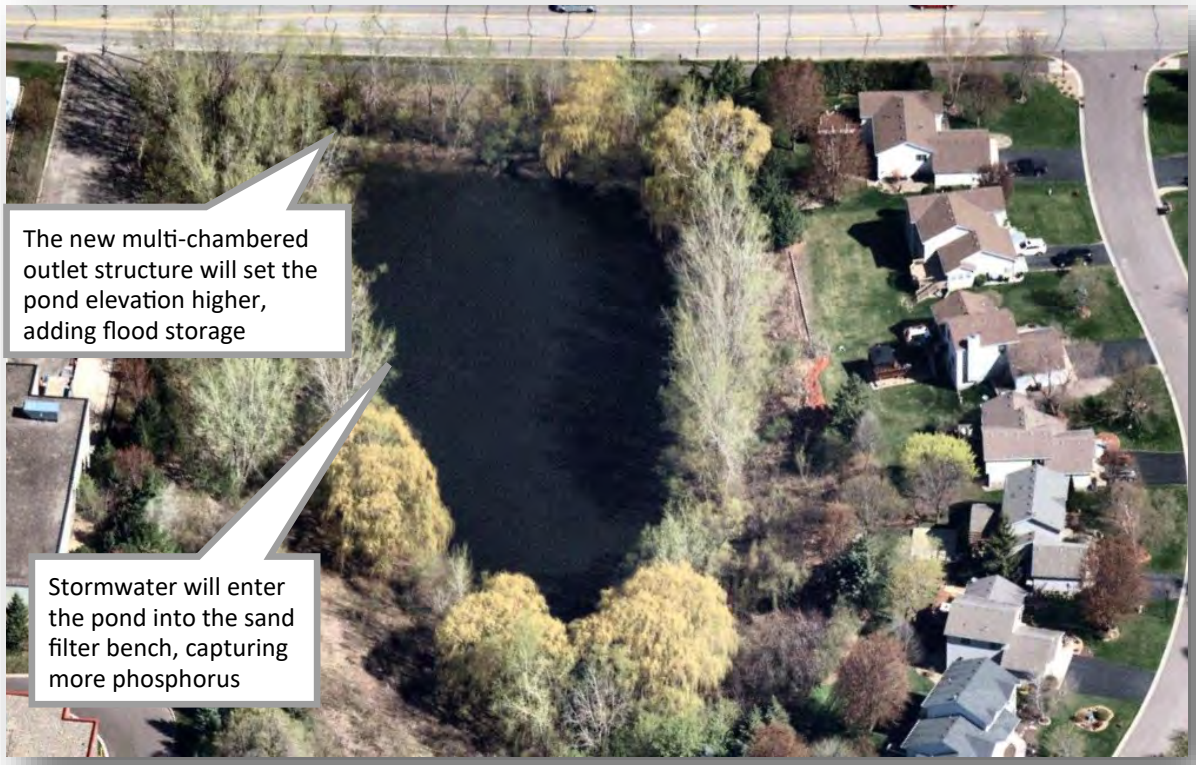
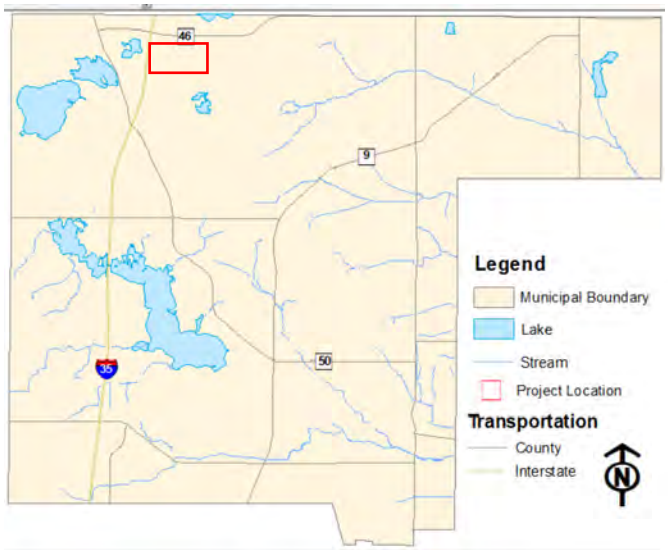
165th Stormwater Pond Improvement Project

Overview

With flood storage volume lacking in the Lee Lake/Crystal Lake watersheds, the stormwater pond located at the intersection of 165th St. and Kenrick Ave. has struggled to retain flood volumes related to increasing storm intensities. To improve water quality within these watersheds, the City received a grant to expand pond live storage volume, improve the pond outlet and add a sand filter to increase pond phosphorus reduction potential. In addition, peak flows will be reduced by 25% for the 10-year event and larger storms.





Total Phosphorus Reduction

6.1 lb/year

Funding

Grant Funding: $250,000

City of Lakeville: $51,200

Project Cost: $301,200

Live Storage Addition

8.6 ac-ft

Practices

- Stormwater retrofit
- Flood water attenuation

Project Benefits

- Improved water quality
- Nonpoint source pollution reduction
- Runoff volume reduction

Partners

- MN Board of Water and Soil Resources

Contractors

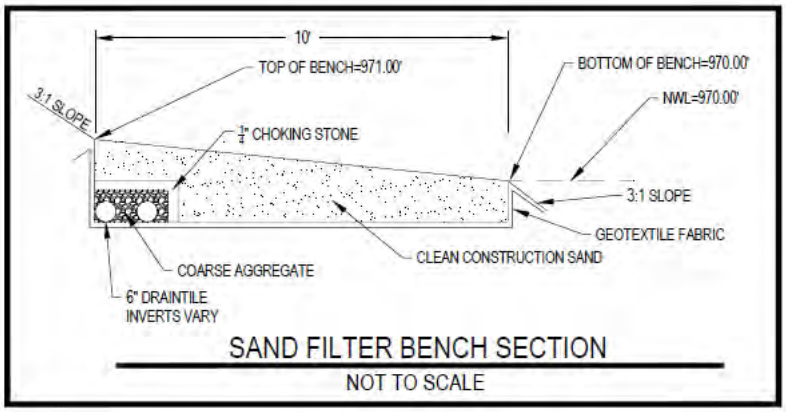
- Stantec Engineering
- Ashwill Companies

Timeline

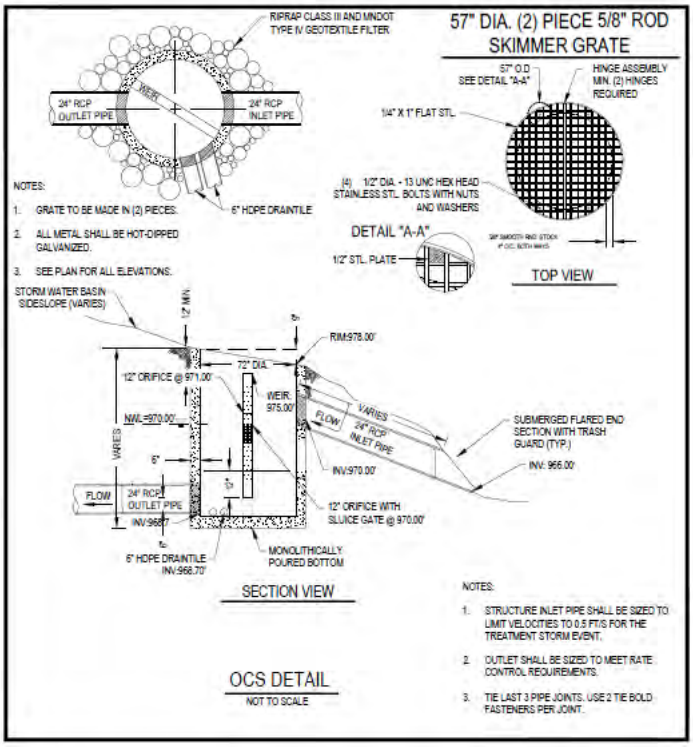
- Construction initiation—Winter, 2021/2022
- Final stabilization—Spring, 2022

Project made possible with funding assistance from Minnesota's Clean Water Fund

CLEAN WATER LAND & LEGACY AMENDMENT



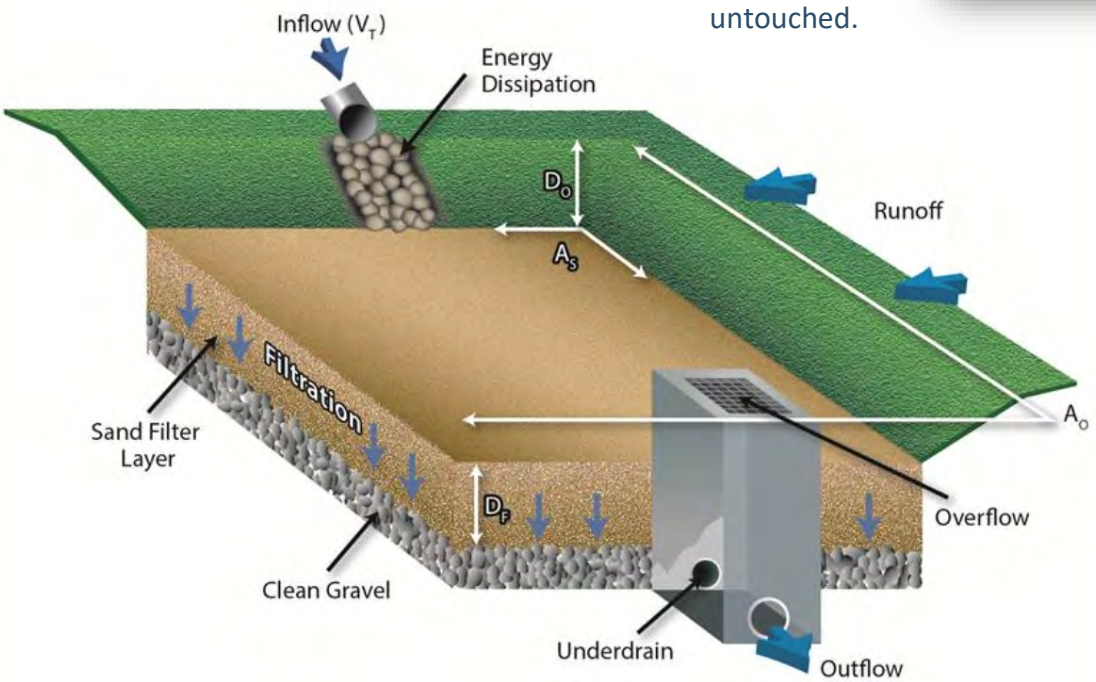
(*Above*) Cross-section of sand filter bench shows filtration media for stormwater to run through before being redirected to the live storage holding area.



(*Above*) A cross section of the new outlet structure shows the engineering behind the new, increased pond storage.

(Above) Pond outlet prior to improvements.

(Right) Tree clearing on the west side of the pond will take place winter, 2021/2022 to facilitate improve-ments. Much of the tree cover will remain untouched.



(Left) A schematic drawing of a sand filter included in the Minnesota Stormwater Manual helps conceptualize water flow through the cell. Sand filters work to remove pollutants through settling and filtration of solids, taking attached phosphorus along with the settled sediment.