



Regional Storm Water Treatment System

Brooklyn Center, MN

This project included preparation of a feasibility report to explore options available to provide storm water treatment to the TIF District 3 Area in Brooklyn

Center. Storm sewers servicing the neighborhood discharged directly to the Mississippi River, with little or no storm water treatment. A traditional pond was not a feasible option due to limited public right of way or available land that would be suitable for construction of a pond. Several options were evaluated in the feasibility study and a recommendation was made to construct a large, underground treatment system on the 72 inch diameter trunk storm sewer line that would treat a 493-acre drainage area.



A precast design was used for the system's walls to facilitate the construction schedule.

to facilitate a demanding construction schedule and to increase the ease of installation, WSB worked with the manufacturer of the device to implement a precast design for the structure's walls.

WSB completed plan and specifications for the City project and worked with West Mississippi Watershed Management Commission to determine the extent that this project could be used to meet the Watershed's requirements for future development in the City.

WSB also provided topographic and construction surveying, construction observation, and construction engineering services throughout the project. Construction of the underground treatment device was completed in November 2007. It is currently in operation.

Client: City of Brooklyn Center
Total project cost: \$1.0 million
Completion: November 2007

Project Awards

2009 ACEC/MN Engineering Excellence Honor Award
 2009 MSPE Merit Award
 2008 CEAM Municipal Project of the Year - Honorable Mention



The design allows large rainfall events to bypass the system to prevent resuspension of retained pollutants.

WSB designed the 52 foot wide by 64 foot long underground system to retain 80 percent of the total suspended solids flowing through the trunk storm sewer for the one inch, 24 hour rainfall event. It was also designed to retain floatable pollutants entering the device. The structure was appropriately sized to make sure that resuspension of retained materials would not occur for rainfall events up to, and including, the ten year, 24 hour event. This resulted in the design of a bypass manhole that allows large rainfall events to bypass the system. To



The treatment device is located underground so that the surface can still be used as a parking lot.