

Westminster High School Stormwater Management Facility

Background:

The Westminster High School Stormwater Management Facility is located off of Kate Wagner Road behind Westminster High School and the Carroll County Career and Tech Center. The old sediment trap was targeted because of its current condition and the lack of stormwater management in the watershed. Due to the condition of the trap, the County wanted to install a facility that would meet current stormwater management standards thereby ensuring that the facility would provide stormwater management for the heavily developed drainage area and the facility could be easily maintained.

Scope of Work:

The drainage area was analyzed by KCI to determine the type of facility that would best treat the currently untreated drainage area. It was determined that a surface sand filter facility with a concrete weir wall would be the best design. Two manholes were connected to direct water into the new facility, one from an existing storm drain system from the Westminster High School property and one attached to a cross culvert coming under MD Route 97. A stream diversion was installed in the manhole coming from the high school property to divert base flow into a newly created channel that flowed around the new facility while still diverting storm flows into the facility for treatment. The surface sand filter facility was designed to consist a main 10" under drain and a series of 6" underdrains running off the main to help drain the water down through the filter media. The filter media consisted of 18" of No. 8 stone topped with 18" of sand/soil/wood chip mixture. The side slopes of the facility were graded to 3:1 to allow for efficient mowing. The facility was designed to meet current state and local stormwater management standards for the contributing drainage area.

Sequence of Construction:

The County met with the Carroll County Public School to discuss the potential project. They were willing to participate in the project, but needed the existing cross country trail route to still be viable upon completion of the project. KCI completed the design of the project. The necessary permits were obtained from Maryland Department of the Environment and U.S. Army Corps of Engineers.

The Board of County Commissioners voted to award the project to Kibler Construction Inc. on September 26, 2012. The pre-construction meeting was held on October 7, 2012, Partial funding for this project was obtained by Maryland State Highway Administration's Transportation Enhancement Program. The project was issued a grading completion certification in November of 2013.

Project Details:

Watershed:	Liberty Reservoir
Drainage Area:	117.25 acres
Impervious Surface Treated:	44.81 acres
Costs: Engineering	\$ 88,003.46
Construction	\$ 1,005,667.86
Time Frame:	48 Months

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