

Elderwood SWM Basin #2/Oklahoma Phase IV SWM Retrofit

Background:

The Elderwood SWM Basin #2/Oklahoma Phase IV retrofit includes the retrofit of the existing Elderwood Basin #2 and Oklahoma Phase IV SWM Facilities while removing the water quality basin #1 located on Parcel F. These facilities are located off of Monroe Avenue in Eldersburg. The SWM Basin #2 and Oklahoma IV facility both lie in valleys with streams running into them. The Elderwood Basin was an existing wet detention facility treating runoff from MD 26, South Carroll Industrial Park and nearby residential development. The Oklahoma Phase IV facility was constructed to treat runoff from the adjacent residential development. Both facilities were brought up to current standards, treating the drainage area for quantity, water quality, and channel protection.

Scope of Work:

Carroll Land Services was awarded the design contract in March of 2012. It was decided to install surface sand filter design for both facilities, since this is a Use III watershed. The new facilities were sized to provide Q10 management, water quality, and channel protection for the combined drainage area. A dedicated pipe was installed under the filter media to convey stream baseflow through the facility. The downstream embankment of the facility had a filter diaphragm designed and installed as part of this project. The facilities each have a drop structure that the stream feeds into, during storm events the storm flows are diverted into the facilities for treatment. The filter media is 24" deep and consists of a 4:1:1 mixture of sand, soil, and green wood chips. Below the filter media is 10" of No. 8 stone in which the 8" underdrain manifold runs.

Sequence of Construction:

The County worked with various homeowners associations and business entities throughout the project to secure the necessary parcels to construct the facility. The County was awarded \$1,047,466.00 from the Maryland State Highway Administration Alternatives Program for the construction of the facility in April of 2015. This project had to be reviewed by various departments at the county and state for approvals. It also required permitting from Maryland Department of the Environment and the US Army Corps of Engineers.

Construction of the facility was awarded to Kibler Construction Company on August 30, 2018. Construction began later that fall. Construction of the facility wrapped up in the Winter of 2019, although final payment could not be made til the Summer of 2020.

Project Details:

Watershed:	Liberty Reservoir
Drainage Area:	206.00 acres
Impervious Surface Treated:	88.37 acres (SHA-5.69/County-82.68)
Costs: Engineering	\$ 167,592.00
Construction	\$2,368,250.74
Time Frame:	8 years

Submitted By:

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