

Carroll County Maintenance Center Stormwater Management Facility Retrofit

Background:

The Carroll County Maintenance Center stormwater management facility is an existing facility located off of Old Meadow Branch Road in Westminster. This facility was targeted because it was no longer functioning as it was designed. Due to the condition of the facility the County wanted to bring it up to current standards thereby ensuring that the facility provides stormwater control for the entire contributing drainage area, and it could be easily maintained.

Scope of Work:

The design for this facility was completed by Carroll Land Service, Inc. The site was analyzed to determine if the facility was capturing the intended drainage area. The Phase I design for the facility included improving the slopes, connecting to the existing storm drain system and conveying it into the facility, while providing additional volume in the facility for future expansion at the Maintenance Center. A new embankment was also constructed. The bottom of the facility was excavated to accommodate the filter media. The filter media was comprised of an 20” layer of #8 stone with 6” and 8” HDPE type “SP” pipe laying on top to draw any excess water off the surface. The pipe was topped with 18” of a sand-soil green wood chip mixture. All of the slopes were designed at 4:1 to allow efficient machine mowing. The Phase II Construction included the installation of a storm drain system through the maintenance bays to capture and convey drainage off the buildings and pavement into the facility for treatment. The facility was designed to meet and exceed all current county and state stormwater management regulations. The County is currently monitoring the facility to determine the efficiency of the filter media at removing pollutants. A detailed monitoring plan was developed by the Center for Watershed Protection. Grant funding from MD DNR and the National Fish and Wildlife Foundation paid for \$ 751,876.26 of the construction costs.

Sequence of Construction:

The County met with staff from the Department of Public Works in 2014. During the design process the county worked closely with the staff from the Bureau’s of Facilities, Fleet, and Roads. State and federal permits were obtained for the construction of this project. The facility went out to bid in October of 2015 with bids due back November 4, 2015.

Phase I was awarded to White Pine Construction, Inc. in December. Phase II Construction was awarded to Conewago Enterprises. Phase I Construction began the Spring of 2016, followed by Phase 2 in September. The pre construction meeting was held on March 24, 2016 for both Phase I and Phase II. Phase I was completed in September, but the contractor had to wait for a 2” stand of grass to be established before the grading completion certificate was issued. Phase II Construction was complete by the end of November. The grading completion certificate was issued on December 13, 2016. The as-built was accepted by the County on December 16, 2016.

Project Details:

Watershed:	Double Pipe Creek
Drainage Area:	45.49 acres
Impervious Surface Treated:	25.05 acres
Costs: Engineering	\$ 44,110.00
Construction Phase I	\$ 583,255.00
Construction Phase II	\$ 249,362.00
Time Frame:	36 Months

Submitted By:

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