

# Arthur Ridge Stormwater Management Facility Retrofit

## **Background:**

The Arthur Ridge stormwater management facility is an existing facility located near French Drive and Laval Drive in Eldersburg. This facility was a wet facility that had a failing riser structure. The facility was not providing adequate quantity or quality control of the subdivision runoff. Because of the condition of the pond, the County wanted to retrofit the facility to bring it up to current standards thereby ensuring that the facility provides stormwater control and can be easily maintained.

## **Scope of Work:**

The site was analyzed by CLSI to determine if infiltration would be feasible. It was determined that a recharge reservoir would be designed using the county's standard infiltration design. This design included a 6" layer of #8 stone with 4" HDPE type "SP" pipe laying on top to draw any excess water off the surface. The pipe was topped with 6" of #8 stone and then finished with 12" of a sand-soil filter mixture. A new riser was installed and designed to discharge cool water from the bottom of the facility. The barrel pipe was re-lined with a 'Snap Tite' slip liner. All of the slopes were designed at 3:1 to allow efficient machine mowing. Rifle weirs were designed to convey the stormwater into the facility. An access road was graded into the site to allow for easy access for annual maintenance. It was decided when construction began to not install the recharge reservoir because of numerous springs that would have interfered with the intent of the reservoir. The facility was designed to meet and exceed all current county and state stormwater management regulations.

## **Sequence of Construction:**

The homeowners around the facility were contacted about the retrofit in August of 2008. At that time staff members met with the adjoining property owners to discuss the proposed retrofit. The homeowners informed staff that they would like the facility to remain a wet pond. The facility went out to bid on July 24, 2009 with bids due back August 5, 2009.

The job was awarded to White Pine Construction Corp. and was slated to begin October of 2009. The contractor began working in November of 2009. The contractor completed the project in June of 2010. Hunter Landscaping was awarded the contract to landscape around the facility which was completed October 11, 2010. The as-built was accepted on September 17, 2010. The project received a grading completion certificate on July 20, 2010.

## **Project Details:**

Watershed:	Piney Run Reservoir
Drainage Area:	51.17
Impervious Surface Treated:	5.14 acres
Costs: Engineering	\$ 28,010.80
Landscaping	\$ 3,869.00
Construction	\$ 149,953.00
Time Frame:	25 Months

## **Submitted By:**

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11/24/2009



12/18/2009



04/21/2010



06/10/2010

