

CAT BRANCH STREAM RESTORATION & SEWER LINE PROTECTION



DESCRIPTION

PHOTOS

● Annapolis, Anne Arundel County, MD

Construction was recently completed for the Cat Branch Expedited Stream Restoration & Sewer Line Protection project near the intersection of College Parkway and Cape St. Claire Road in Annapolis, Maryland. BayLand Consultants & Designers, Inc. completed expedited engineering analysis, design, permitting and construction period services for the Cat Branch Expedited Stream Restoration & Sewer Line Protection project.

Downstream of the sewer crossing, Cat Branch is highly incised with four to six feet high stream banks, likely caused by the effects of historic farm ponds and altered hydrologic regime due to development prior to modern stormwater management regulations. Design is complete for the downstream restoration reaches with construction to proceed in 2019. The next phase of the project will include raising and reconnecting the entire reach to the floodplain through stream and valley restoration with a stable low flow channel and valley-wide wetland complex.

The project design approach included stream and valley restoration to provide a functional low flow channel and an active, well connected floodplain to maximize surface-groundwater exchange and promote improved nutrient retention and removal. Combination log-stone riffles, a valley grade control structure, and a clay groundwater dam were installed upstream of the sewer line to stabilize active head cuts, provide long term grade control and raise groundwater hydrology which will enhance adjacent wetland areas that were being drained due to channel incision. A riffle grade control structure was constructed just downstream of the exposed sewer line to protect the utility crossing.

Permits were obtained from USACE, MDE, Anne Arundel Department of Inspections and Permits, and Anne Arundel Soil Conservation District. A DNR grant was awarded for construction, and construction was completed in October 2019. The project was awarded honorable mention for Best Stream Restoration by the Chesapeake Stormwater Network for the BUBBA and is currently part of a joint research project between the County and the University of Louisville.

● Client | Anne Arundel County Department of Public Works

Engineer | BayLand

Contractor | Pay Dirt, LLC

Completed | 2019

