STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-A32	**Crossing Start Date:** 10/27/2023	**Crossing Completion Date:** 11/12/2023
Milepost: 205.9	**Pre-Con Assessment Date:** 10/21/2023	**Post-Con Assessment Date:** 11/13/2023
Station: 10882+91	**Stream Classification:** Perennial **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 16
County: Giles	**303(d) Impairment Listing:** Not Impaired	**Riffle:Pool Complexes Present?** No

Item #	Resource Crossing Conditions	N/A	YES	NO
1.	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? N/A Fish Relocation? Yes Mussel Relocation? N/A		X	
2.	Is this resource designated a wild or stockable trout stream?			X
3.	Which crossing methods were utilized during the stream crossing? *(Select one or more)* Dam & Pump, Flume, Cofferdam, Conventional Bore, Horizontal Directional Drill (HDD) Bore?	Dam & Pump		
4.	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?		X	
5.	Was excess material not needed for backfill removed and disposed of in an upland area?	X		
6.	Was the top 12-inches of backfill made with clean native stream substrate?		X	
7.	Was the pre-construction survey data provided and utilized during restoration in attempt to re-establish pre-construction contours?		X	
8.	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?			X
9.	Were impervious trench breakers/plugs properly installed within 25-feet of top-of-bank to prevent subsurface erosion to or from the resource area?		X	
10.	Was permanent seed and stabilization material (straw or matting) applied to riparian areas and stream banks prior to re-establishing flow to the impact area of the channel?		X	
11.	Was the time of disturbance minimized by conducting resource work continuously to completion?		X	
12.	Have civil surveys been scheduled to verify as-built conditions meet pre-construction conditions in accordance with the project Mitigation Framework and federal/state permit requirements?		X	
13.	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30)?	X		
14.	Did any unauthorized discharges to unpermitted resources occur during the crossing? If so, explain the corrective actions implemented in the Comments section and include additional photos.			X

Item #	Biological Conditions	Pre-Con	Post-Con
15.	**Predominant Substrate Type (select one):** *Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay*	Cobble (2-10")	Cobble (2-10")
16.	**Channel Conditions:** **Rating:** *1-Optimal (80-100% stable banks), 2-Suboptimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks)*	1 - Optimal	1 - Optimal
17.	**Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank:** **Rating:** *1-Optimal (60-100% heavy vegetative cover), 2-Suboptimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)*	2 - Suboptimal	2 - Suboptimal
18.	**Instream Habitat Conditions:** **Examples:** *Varied substrate sizes, varied combination of water velocities/depths, presence of woody/leafy debris, stable substrate with low amount of mobile particles, low embeddedness, shade protection, undercut banks, root mats, submerged aquatic vegetation.* **Rating:** *1-Optimal (Habitat conditions present in >50% of resource), 2-Suboptimal (Habitat conditions in 30-50% of resource), 3-Marginal (Habitat conditions in 10-30% of resource), 4-Poor (Habitat conditions in 0-10% of resource)*	3 - Marginal	3 - Marginal
19.	**Channel Alterations:** **Examples:** *Straightened channel, non-MVP stream crossings, non-native riprap/rock along banks, concrete/gabions/concrete block, manmade embankments, constrictions w/in channel, livestock or agricultural impacts.* **Rating:** *1-Negligible (unaltered/natural stream), 2-Minor (20-40% of resource disrupted by channel alterations), 3-Moderate (40-80% of resource disrupted), 4-Severe (>80% of resource disrupted)*	1 - Negligible	1 - Negligible

Comments/Remarks

10/21/23- Precon meeting held, MVP EI Adam Taylor, Precon assessment complete. Some large boulders are present in banks-C. Stanley

10/27/23- Dam and pump around installed. Energy dissipator installed. Dewatering structure constructed on site. Top soil properly segregated and stabilized. Stream substrate segregated in bags. -C. Stanley

10/28/23- ECDs installed on stream buffers. -C. Stanley

10/30/23- Drilled some shot holes but not all due to the explosive team being delayed. -C. Stanley

10/31/23- Completed drilling shot holes and blasted. Blasting was contained within LOD/impact area. -C. Stanley

11/1/23- Started trenching the blasted rock and installed a timber mat bridge on the road. -C. Stanley

11/2/23- Trenching and rock hammering. - C.Stanley

11/3/23- Trenching and rock hammering continues. Trench dewatering active and clean water pump around functioning properly - C. Stanley

11/4/23- Finished trenching and move the first pipe section into place and started welding. -C. Stanley

11/6/23- Finished the first and second weld. -C. Stanley

11/7/23- Finished third weld and made a cut in preparation for the last weld. -C. Stanley

11/8/23- Finished welding, X-rays and placing sandbags under pipe, ready to start padding. -C. Stanley

11/9/23- Finished sand blasting, finished coating and installed trench breakers. Clean water pump around remains functional. Started padding in the stream buffer. -C. Stanley
11/10/23- Rained out. -C. Stanley

11/11/23- Finished backfilling the stream buffers and will start contouring tomorrow. -C. Stanley

11/12/23- Final contouring and topsoil restoration complete. Seed and stabilization applied to buffer zones and stream channel. Dam and pump removed and flow restored. No biological impacts to the stream observed. -C. Stanley

In accordance with the Mountain Valley Pipeline Consent Decree, Case No. CL18006874-00, (Issued October 11, 2019) this independent report was completed to document the on-site monitoring of instream invertebrate and fisheries resources during all construction activity related to waterbody and wetland crossings, and document instream conditions and any impacts to the resources.

This report was written by	Cody Stanley *Print Name*	 *Signature*	11/16/2023 *Date*

Required Photos

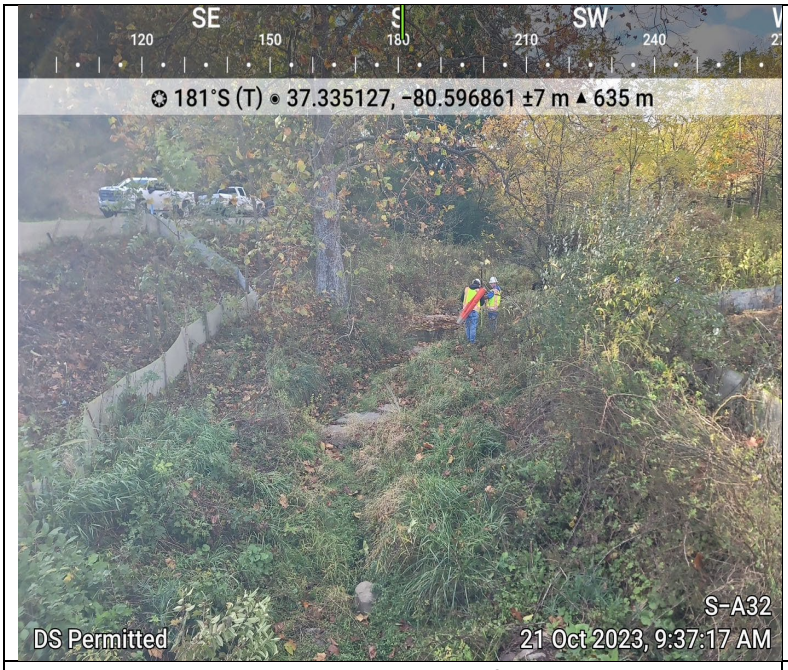

Photo Description: Downstream view of permitted impact area during pre-construction assessment.

Photo Description: Conditions of the downstream area outside the ROW during pre-construction assessment.

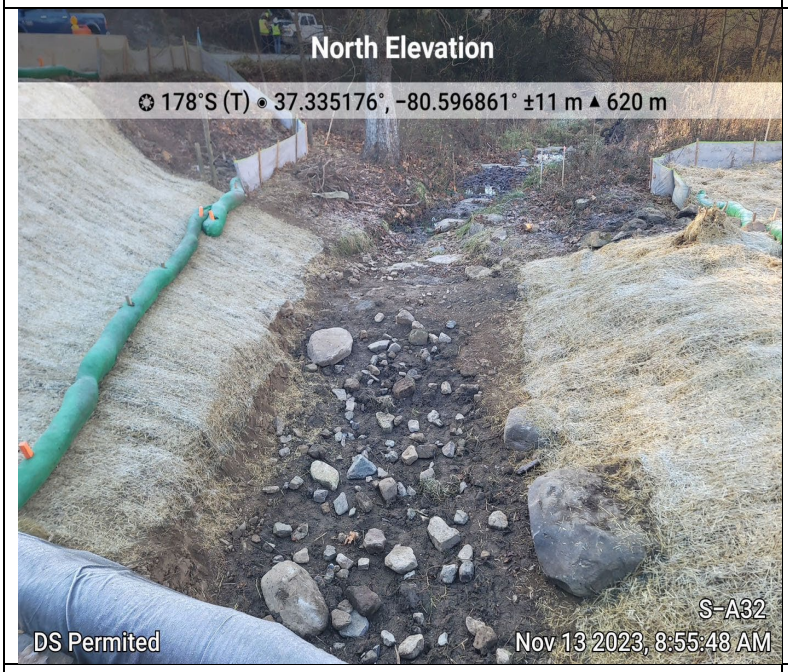

Photo Description: Downstream view of permitted impact area during post-construction assessment.

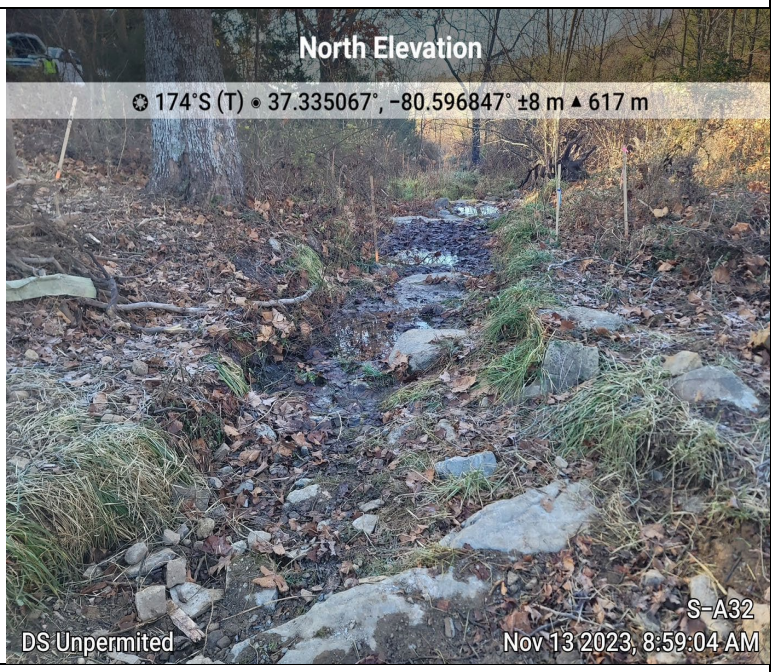

Photo Description: Conditions of the downstream area outside the ROW during post-construction assessment.

Optional Additional Photos

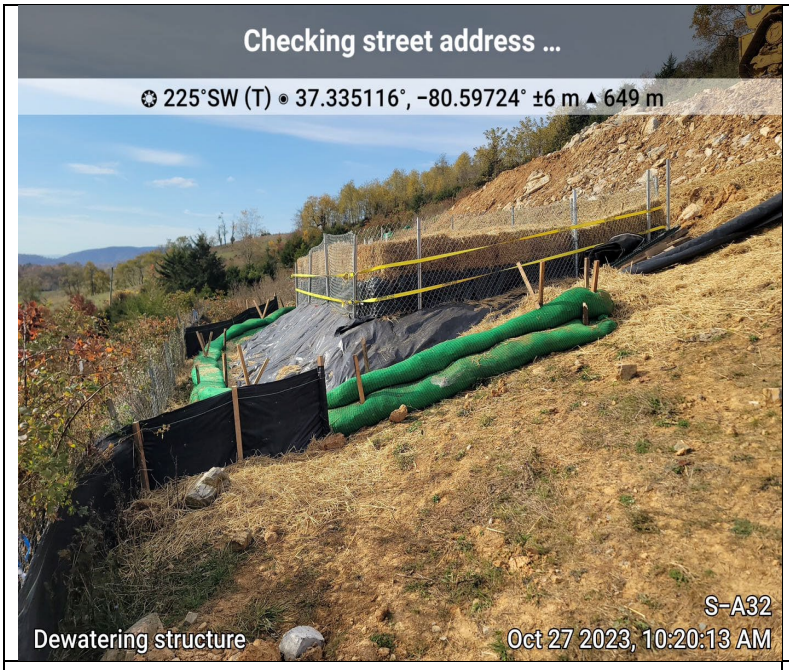

Photo Description: Dewatering structure

Photo Description: Trench breakers

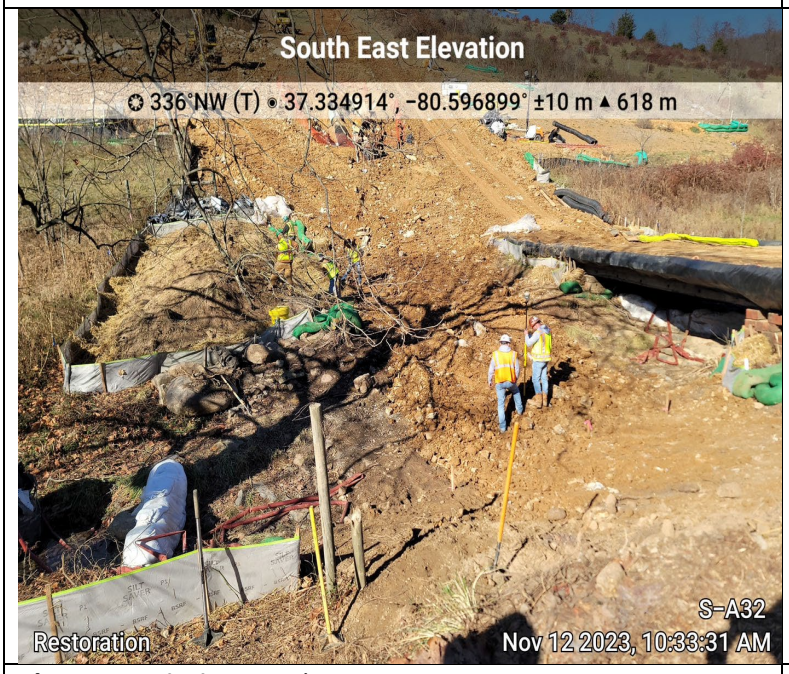

Photo Description: Final contouring, preconstruction contours stakeout.

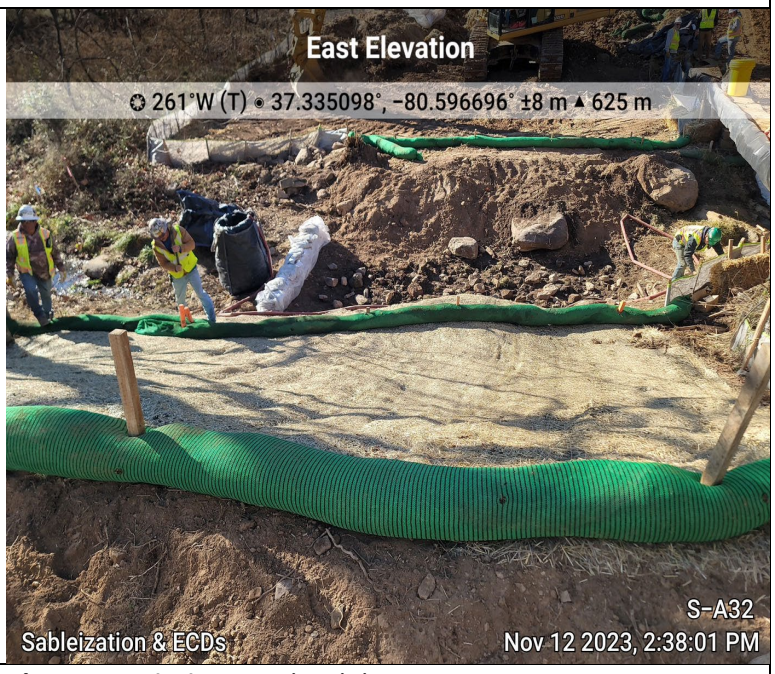

Photo Description: Final stabilization