

Channel Mitigation Monitoring Sheets I, II, III, AND IV

Monitoring Data Record

Project Title: R-2246B COE Action ID: SAW-2012-01175/SAW-2009-1452
Stream Name: UT to Coddle Creek – Permit Site 2 DWR Number: 12-8969
City, County and other Location Information: The project is located at the end of Roberta Church Road in Cabarrus County, NC.

Date Construction Completed: _____ Final Planting: April 4, 2018

Monitoring Year: (3) of 3

Ecoregion: Southern Outer Piedmont 8 digit HUC unit 03040105

USGS Quad Name and Coordinates: Harrisburg 35.364741, -80.636008

Rosgen Classification: _____

Length of Project: 54 linear feet

Urban or Rural: Rural Watershed Size: 0.98 sq. miles

Monitoring DATA collected by: M. Green

Date: 7-30-20

Applicant Information:

Name: NCDOT Roadside Environmental Unit

Address: 1425 Rock Quarry Road Raleigh, NC 27610

Telephone Number: (919) 615-6733 Email address: mlgreen@ncdot.gov

Consultant Information:

Name: _____

Address: _____

Telephone Number: _____ Email address: _____

Project Status: Complete

Monitoring Level required by COE and DWR (404 permit/ 401 Cert.): Level

Monitoring Plan R-2246B Site 2

As part of the construction, a 72" corrugated metal pipe carrying an unnamed tributary (UT) to Coddle Creek at Permit Site 2 will be removed. This will result in 54 feet of daylighting to the UT. After the culvert is removed, NCDOT proposes to match the stream and floodplain grade with the existing upstream and downstream portions of natural ground. The site is already within NCDOT right-of-way. NCDOT proposes to replant the affected area with native vegetation. The area is currently a maintained/disturbed community. This will restore approximately 25 feet of riparian buffer to either side of the UT. NCDOT will monitor the site for three years to ensure vegetation reaches jurisdictional status. The removal of the culvert will mitigate 54 feet of stream impacts at a 1:1 ratio.

USACE Permit Condition v:

The NCDOT will remove a 72" corrugated metal pipe which carries an unnamed tributary to Coddle Creek a permit site 2. Pipe removal results in 54 linear feet of day lighted stream channel. NCDOT will replant the affected area with native vegetation in accordance with the streambank reforestation sheets 1 and 2 of the Plan. NCDOT will visually monitor the site for a minimum of 3 years, but not more than 5 years, to ensure channel stability and that the site successfully re-vegetates after planting. An as-built survey to document dimension, pattern, and profile shall be submitted to the USACE post construction at Site 2 and the NCDOT shall submit to the USACE photographic documentation, plant survival and channel stability data annually for 3 years.

NCDWR Permit Condition 10:

Fifty four linear feet of compensatory mitigation for impacts to jurisdictional stream shall be provided by day lighting a stream a site #2 pursuant to the mitigation plan submitted in the application.

Section 1. PHOTO REFERENCE SITES

(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site: A total of 2 photos were taken from 1 photo point location and 1 additional overview photo of the site.

Dates reference photos have been taken at this site: 6-19-18, 5-21-19, 7-30-20

Individual from whom additional photos can be obtained (name, address, phone): _____

Other Information relative to site photo reference: A site map is included with this report showing the photo point locations.

Section 2. PLANT SURVIVAL

Attach plan sheet indicating reference photos.

Identify specific problem areas (missing, stressed, damaged or dead plantings):

Estimated causes, and proposed/required remedial action: _____

ADDITIONAL COMMENTS: _____

April 2018: Final planting was completed

June 2018: Year 1 Monitoring noted Green Ash, Sycamore, and River Birch seedlings were surviving. Black Willow live stakes were noted surviving along the streambank as well. Kudzu was encroaching into the site from the North side of the site.

July 2018: Herbicide application on kudzu.

May 2019: Herbicide application on kudzu.

May 2019: Year 2 Monitoring noted Green Ash, Sycamore, Water Oak, River Birch and Black Willow were surviving onsite.

May 2020: Herbicide application on kudzu was completed and wood debris dumping was noted to have occurred at the site. Cabarrus Co. Maintenance removed wood debris from the site.

July 2020: Year 3 Monitoring noted Green Ash, Sycamore, River Birch and Black Willow were surviving onsite. Herbicide application on additional kudzu that was noted was completed. NCDOT proposes to discontinue plant survival monitoring.

If required to complete Level 1 and Level 2 monitoring only stop here; otherwise, complete section 3.

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

The UT to Coddle Creek onsite stream mitigation is stable for the Year 3 evaluation. A bankfull event was noted at the May 2020 site visit. Some minor bank scour exist along the left bank but remain mostly vegetated and stable at this time. NCDOT proposes to discontinue monitoring channel stability at the UT to Coddle Creek Mitigation Site.

Date Inspected	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					

Section 4. DEBIT LEDGER

The entire 54 linear feet of UT to Coddle Creek stream mitigation site was used at a 1:1 ratio for the R-2246B project to compensate for unavoidable stream impacts.

UT to Coddle Creek Mitigation Site



PP #1 Upstream



PP#1 Downstream



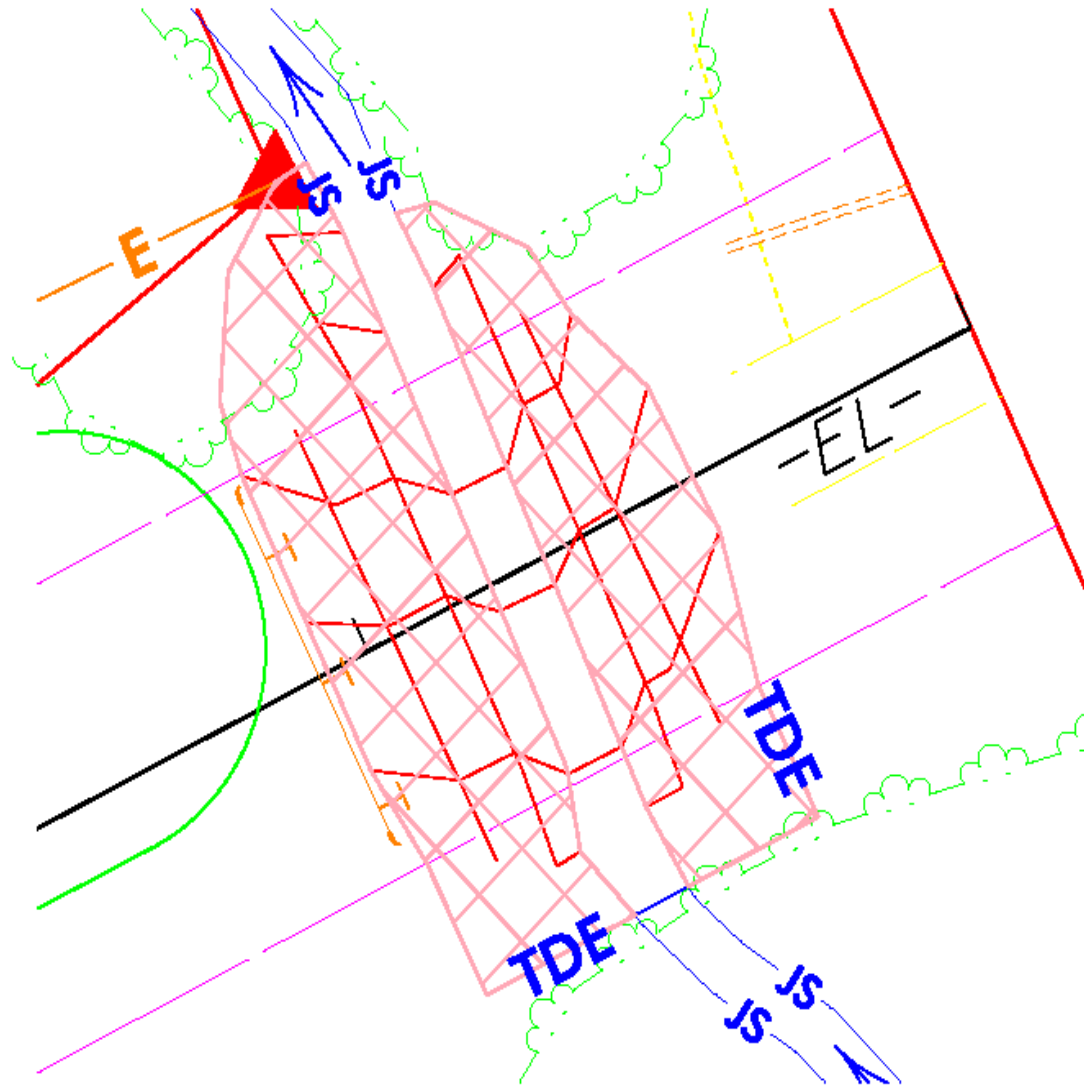
Bank scour along left bank at PP#1



Overview photo taking from Roberta Church Rd

July 2020

0.11 ACRE STREAMBANK REFORESTATION



SEE RF-2, RF-3 AND PROJECT SPECIAL PROVISIONS

R-2246B Site Map

UT to Coddle Creek

Legend

● PP#1

PP#1

Roberta Church Rd

Google earth

© 2018 Google


80 ft



R-2246B Vicinity Map

UT to Coddle Creek
35.364741, -80.636008

Legend

 R-2246B UT to Coddle Creek

