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

Monitoring Data Record

Project Title: R-967CA (NC 24/27) COE Action ID: 200331135
Stream Name: UT Big Meadow Creek (Site 1) DWQ Number: 030891
City, County and other Location Information: Locust, Stanly County, NC 24/27 (Sta. 17+00 -L-)
Date Construction Completed: 7-30-04 Monitoring Year: (4) of 5
Ecoregion: 8 digit HUC unit 03040105
USGS Quad Name and Coordinates:
Rosgen Classification: B Stream Type
Length of Project: 318' Urban or Rural: Rural Watershed Size:
Monitoring DATA collected by: M. Green and J. Young Date: 2/21/11
Applicant Information:
Name: NCDOT - Roadside Environmental Unit
Address: 1425 Rock Quarry Rd., Raleigh, NC , 27610
Telephone Number: (919) 861- 3772 Email address: mlgreen@ncdot.gov
Consultant Information:
Name:
Address:
Telephone Number: Email address:
Project Status:

Monitoring Level required by COE and DWQ (404 permit/ 401 Cert.): Level **2**
Permit States: The permittee shall monitor the completed stream relocation in accordance with Monitoring Level 2 of the US Army Corps of Engineers, Wilmington District, Stream Mitigation Guidelines of April 2003. The monitoring reports, including reference photographs, plant survival data and visual inspection notes identifying specific problem areas, will be submitted to the Corps of Engineers, Asheville Regulatory Field Office within 60 days of completion of the monitoring. The monitoring report will also include a discussion of any deviations to channel stability. The success of the stream relocation as project mitigation will be evaluated based on those success criteria listed in the reference Stream Mitigation Guidelines.

Section 1. PHOTO REFERENCE SITES
(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site: 4 photo point locations with 2 photos looking upstream and downstream at each location.
Dates reference photos have been taken at this site: 3/4/08, 9/4/08, 2/23/09, 10/19/09, 1/20/10, 9/20/10, 2/21/11

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

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

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

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: The initial planting for the UT to Big Meadow Creek took place in 2004. Replanting took place on 3/4/08. Planted vegetation noted onsite consisted of black willow, silky dogwood, willow oak, blackgum, tulip poplar, and water oak. Other vegetation noted included fennel, pine, sweetgum, baccharis, briars, lespedeza, mimosa, white oak, red maple, cedar, juncus, smartweed, and various grasses.

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.

UT to Big Meadow Creek is stabilized for the Year 4 Winter evaluation, except for, a headcut at Sta. 16+40. This headcut looks to be caused by a drainage pipe coming onto the stream relocation just above the header rock on the crossvane (See Photo Point #4 Upstream Photo). There was also some bank scouring noted on the left bank @ Sta. 17+30 which is located upstream of PP#1. Both areas of instability seem to have little or no change since the last evaluation. NCDOT will continue to monitor this stream relocation for stability.

Date Inspected 9/20/10	Station Number 16+40 (PP#4 Upstream)	Station Number 17+30 (Additional Photo)	Station Number	Station Number	Station Number
Structure Type	Crossvane	Crossvane			
Is water piping through or around structure?					
Head cut or down cut present?	Headcut				
Bank or scour erosion present?		Bank scouring on left bank @ the end of the crossvane arm			
Other problems noted?					

Section 4. DEBIT LEDGER

The entire UT Big Meadow Creek (Site 1) stream mitigation site was used for the R-0967CA project to compensate for unavoidable stream impacts.

UT Big Meadow Creek

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

Photo Point #2 (Downstream)

Photo Point #3 (Upstream)

Photo Point #3 (Downstream)

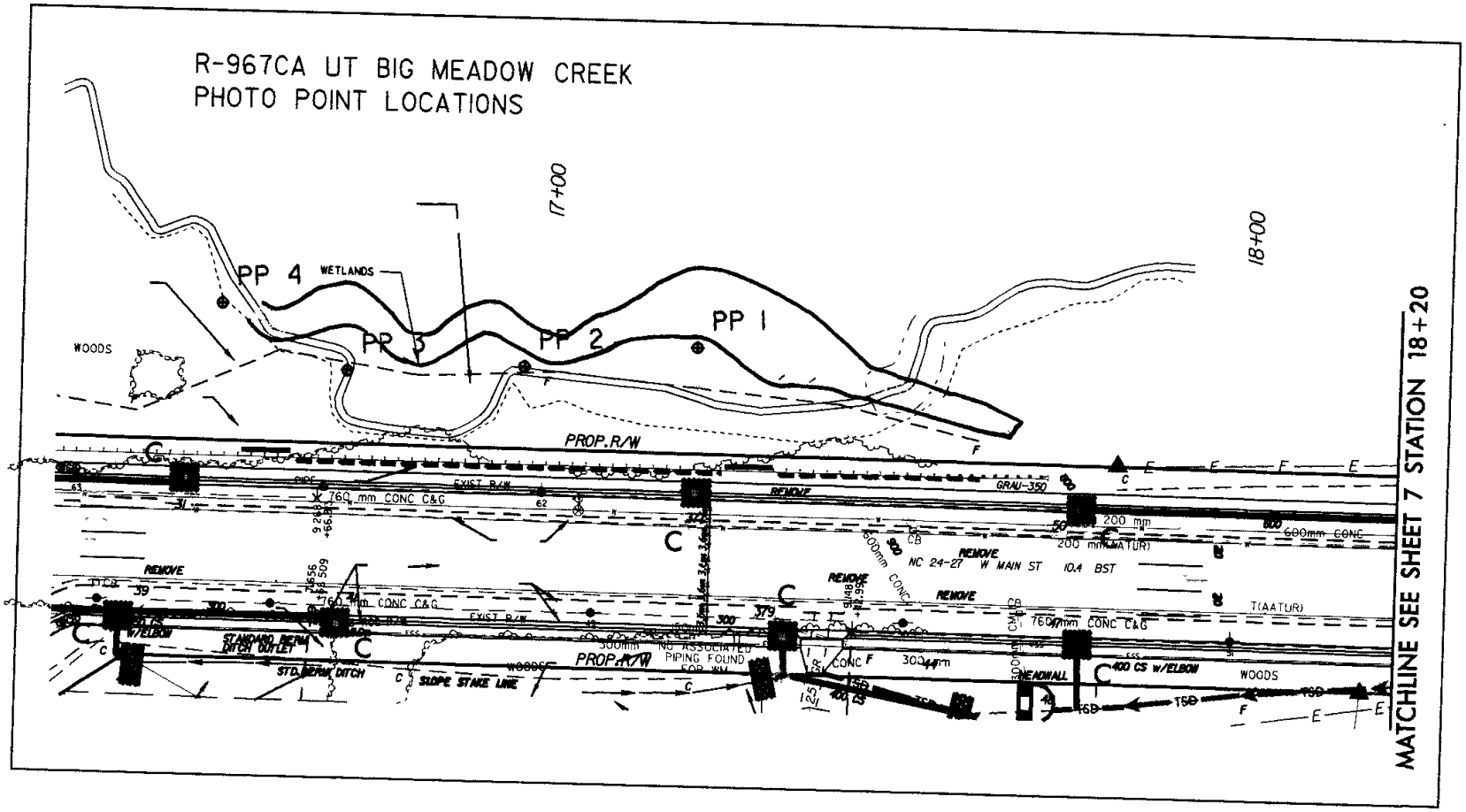
Year 4 Winter – February 2011

UT Big Meadow Creek

Photo Point #4 (Upstream)

Photo Point #4 (Downstream)

Bank scouring on left bank @ Sta. 17+30
Year 4 Winter – February 2011


R-967CA UT BIG MEADOW CREEK
PHOTO POINT LOCATIONS
17+00
18+00
PP 4
WETLANDS
PP 3
PP 2
PP 1
WOODS
PROP. R/W
EXIST R/W
760 mm CONC C&G
REMOVE
GRAU-350
200 mm
600mm CONC
NC 24-27 W MAIN ST 10.4 BST
T(AATUR)
STANDARD BERM DITCH OUTLET
STD. BERM DITCH
SLOPE STAKE LINE
NO ASSOCIATED PIPING FOUND FOR R/W
HEADWALL
400 CS W/ELBOW
MATCHLINE SEE SHEET 7 STATION 18+20