Monitoring Data Record

Project Title: R-2206B (NC 16 Bypass) COE Action ID: 200431320
Stream Name: UT to Forney Creek (Site 10B) WQC Number: 3476
City, County and other Location Information: Lincoln County, NC 16 Bypass (Sta. 159+00 LT.-L-)
Date Construction Completed: 3-3-08 Monitoring Year: (4) of 5
Ecoregion: 8 digit HUC unit 03050101
USGS Quad Name and Coordinates:
Rosgen Classification: C5
Length of Project: 463' Urban or Rural: Rural Watershed Size:
Monitoring DATA collected by: M. Green and J. Young Date: 2/9/11
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 **1**

Permit States: The permittee shall perform the following components of Level I monitoring each year for the 5-year monitoring period: Reference photos; plant survival (i.e. identify specific problem areas (missing, stressed, damaged or dead plantings), estimated causes, and proposed/required remedial action); visual inspection of channel stability. Physical measurements of channel stability/morphology will be conducted during Years 1, 3, and 5. The permittee shall submit the monitoring reports to the USACE, Raleigh Regulatory Field Office Project Manager, within sixty days after completing the monitoring. If less than two bankfull events occur during the first 5 years, the permittee shall continue monitoring until the second bankfull event is documented. The bankfull events must occur during separate monitoring years. In the event that the required bankfull events do not occur during the five-year monitoring period, the USACE, in consultation with the resource agencies, may determine that further monitoring is not required. It is suggested that all bankfull occurrences be monitored and reported through the required monitoring period. The permittee shall perform and submit photo documentation twice each year (summer and winter) for the 5-year monitoring period, and for any subsequently required monitoring period.

Section 1. PHOTO REFERENCE SITES

(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site: 10 photos were taken from 5 photo point locations looking up and down stream.

Dates reference photos have been taken at this site: 3/3/08, 9/3/08, 3/6/09, 8/10/09, 2/8/10, 9/29/10, 2/9/11

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 included with 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: Streambank reforestation consisted of black willow and silky dogwood live stakes planted along the streambank. The floodplain was planted with overcup oak, sycamore, green ash, and river birch bareroot seedlings. Planted vegetation is surviving Other vegetation noted included fennel, *Juncus* sp., goldenrod, tag alder, lespedeza, red maple, silverthorn, *Scirpus* sp., briars, 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 Forney Creek is stable for the Year 4 Winter evaluation, except for the two areas noted below in the chart. The last cross vane and the right bank looking downstream were re-worked in 2010 per DWQ's comments from October 2009. This area @ Sta. 159+40 –L- has continued to have some instability. NCDOT will continue to monitor this stream restoration project to see if remedial action is warranted.

Date 2/9/11	Sta. 160+00-L- (additional photo)	Sta. 159+40-L- (additional photo)	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?	Water piping under crossvane				
Head cut or down cut present?	Headcut has formed.				
Bank or scour erosion present?		Erosion behind left arm of last crossvane			
Other problems noted?					

Section 4. DEBIT LEDGER

The entire UT Forney Creek stream mitigation site was upfront stream mitigation. This site will be used, with regulatory approval, to offset future impacts in the Catawba river basin.

UT Forney 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

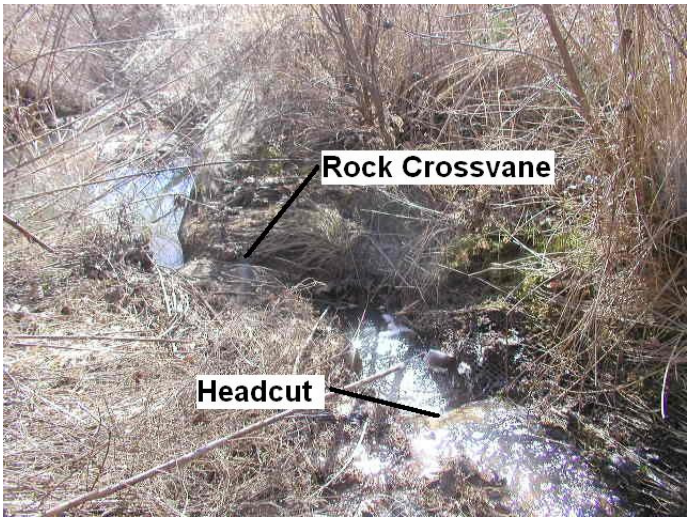
UT Forney Creek

Photo Point #4 (Upstream)

Photo Point #4 (Downstream)

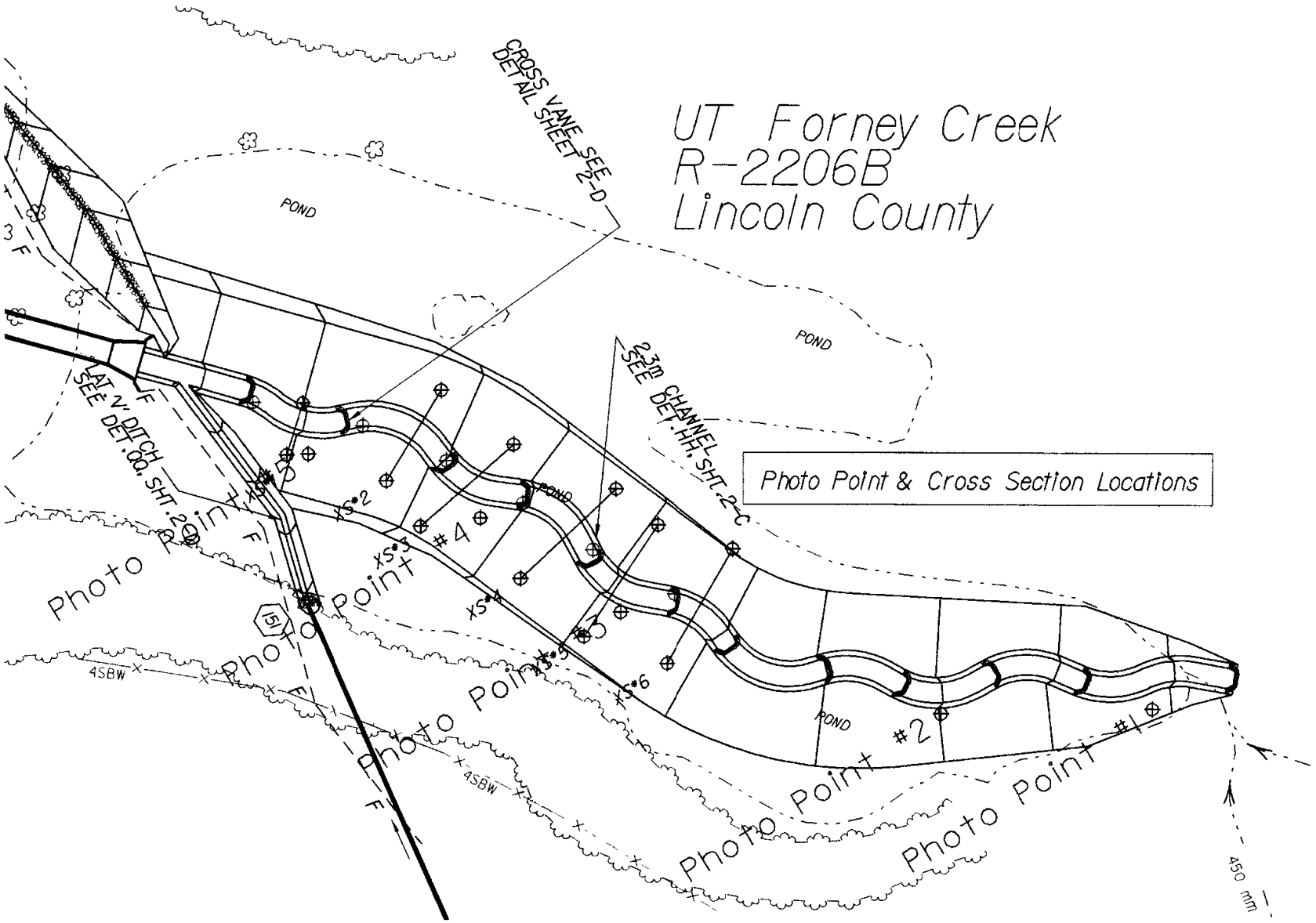
Photo Point #5 (Upstream)

Photo Point #5 (Downstream)



Headcut at Sta. 160+00 downstream of Cross Section #6
Year 4 Winter – February 2011

Erosion behind left arm of last crossvane
at Sta. 159+50


UT Forney Creek
R-2206B
Lincoln County
Photo Point & Cross Section Locations
CROSS VANE SEE DETAIL SHEET 2-D
23m CHANNEL SEE DET. HH, SHT. 2-C
LAT. 'V' DITCH SEE DET. QQ, SHT. 2-D
POND
POND
POND
POND
XS#1
XS#2
XS#3
XS#4
XS#5
XS#6
Photo Point #1
Photo Point #2
Photo Point #3
Photo Point #4
Photo Point #5
151
4SBW
4SBW
450 mm