

Monitoring Data Record

Project Title: R-2248BB – Charlotte Outer Loop COE Action ID: 200131321
 Stream Name: UT Thomas Pond (Site 9) DWQ Number: 011231
 City, County and other Location Information: Mecklenburg County, Charlotte Outer Loop, NC 27 Exit (Mount Holly Road)
 Date Construction Completed: April 2005 Monitoring Year: (5) of 5
 Ecoregion: _____ 8 digit HUC unit 03050101
 USGS Quad Name and Coordinates: _____

Rosgen Classification: _____

Length of Project: 1148 ft. Urban or Rural: Rural Watershed Size: _____
 Monitoring DATA collected by: M. Green and J. Young Date: 1/24/12

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 not be required. 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: 14 photos were taken from 7 photo point locations.

Dates reference photos have been taken at this site: 2/6/08, 9/3/08, 3/6/09, 9/1/09, 3/16/10, 9/28/10, 2/21/11, 9/12/11, 1/24/12

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):

DWQ requested NCDOT to do a supplemental planting in the buffer around PP#5 and PP#6 (Loop E Area) that had previously been mowed.

Estimated causes, and proposed/required remedial action: NCDOT completed a supplemental planting in the buffer around PP#5 and PP#6 (Loop E Area) on January 24, 2012 with sycamore and river birch bareroot seedlings being planted. NCDOT installed signs to prevent further site disturbance.

ADDITIONAL COMMENTS: The planted vegetation is surviving and consisted of black willow, silky dogwood, green ash, tulip poplar, tag alder, swamp chestnut oak, and sycamore. Other vegetation noted included fennel, goldenrod, cattail, jewelweed, pokeberry, briars, maple, sedge, cottonwood, *Juncus* sp., *Scirpus* sp., sweetgum, pine, winged elm, lespedeza, cedar, 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.

This completes the Year 5 Winter evaluation for the UT Thomas Pond stream relocation. There are some areas of concern which are listed in the table below. There were no grade control structures installed within the sections of stream where these headcuts have formed.

A site visit was conducted on July 21, 2011 with the regulatory agencies and NCDOT personnel present. There was some concern over the section of stream that had migrated from the original channel and formed a new channel and over the headcuts that have formed and but not practical at this time to put equipment on the site.

NCDOT will continue to monitor this stream relocation for channel stability.

Date 1/24/12	Station Number 217+80 –L- (PP#1 Upstream)	Station Number 219+00 –L- (Additional Photo)	Station Number 0+20 Loop E (Additional Photo)	Station Number 0+60 Loop E (Additional Photo)	Station Number 2+80 Loop E (Additional Photo)
Structure Type	Crossvane				
Is water piping through or around structure?	Water piping under crossvane				
Head cut or down cut present?		Headcut has not moved upstream since Feb. 2011 evaluation	Headcut has not moved upstream since Feb. 2011 evaluation	Headcut has not moved upstream since Sept. 2011 evaluation	
Bank or scour erosion present?					
Other problems noted?		New channel has formed but is stable			Debris (old beaver dam) was breached in Sept. 2011

Section 4. DEBIT LEDGER

The entire UT Thomas Pond stream mitigation site was used for the R-2248BB project to compensate for unavoidable stream impacts.

UT Thomas Pond



Photo Point #1 (Upstream)



Photo Point # 1 (Downstream)



Photo Point # 2 (Upstream)



Photo Point #2 (Downstream)



Photo Point #3 (Upstream)
Year 5 Winter – January 2012



Photo Point #3 (Downstream)

UT Thomas Pond



Photo Point # 4 (Upstream)



Photo Point #4 (Downstream)



Photo Point #5 (Upstream)



Photo Point #5 (Downstream)



Photo Point #6 (Upstream)
Year 5 Winter – January 2012



Photo Point #6 (Downstream)

UT Thomas Pond



Photo Point #7 (Upstream)



Photo Point #7 (Downstream)



Sta. 219+00 -L-
Headcut has not moved upstream since Feb. 2011 evaluation



Sta. 0+20 -Loop E (Headcut has not moved upstream since Feb. 2011 evaluation)

Year 5 Winter – January 2012

UT Thomas Pond



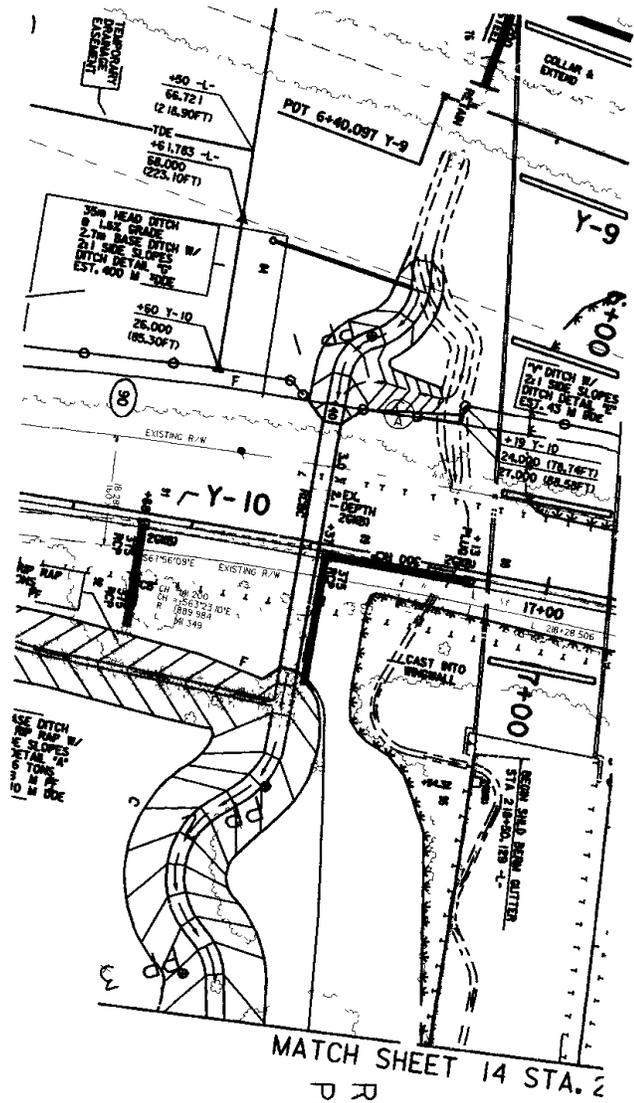
Sta. 2+80 –Loop E-
Breached debris in channel in Sept. 2011



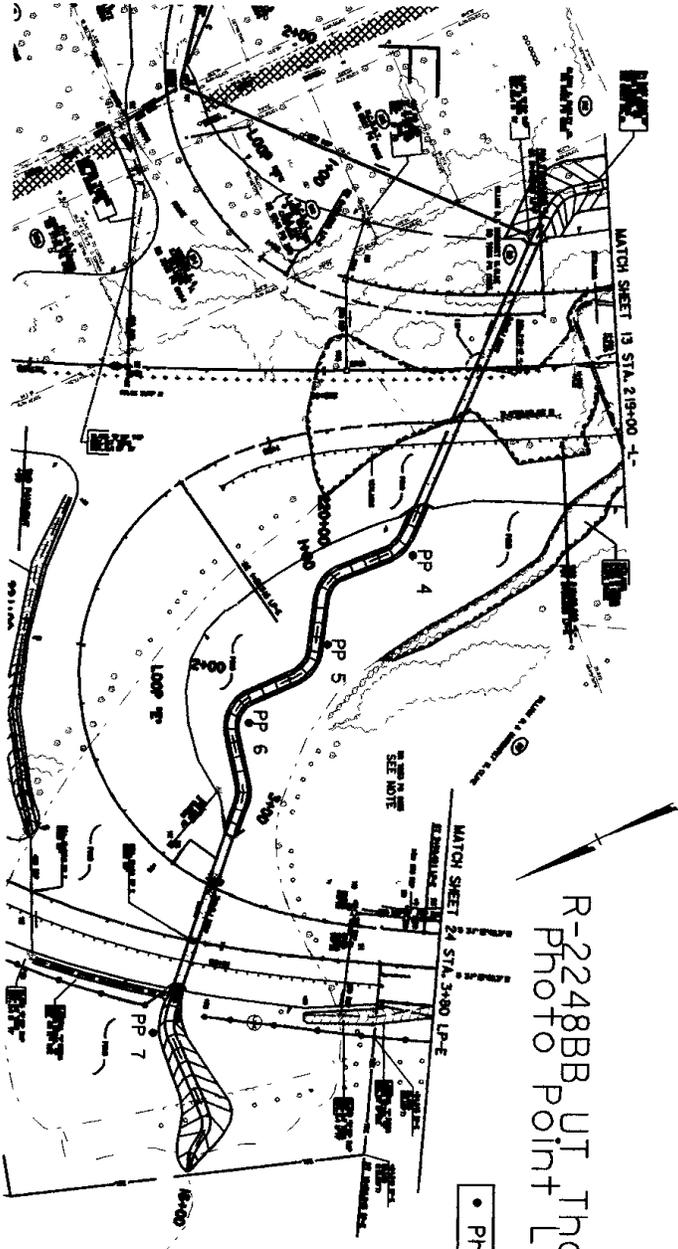
Sta. 0+60-Loop E-
Headcut b/t PP#4 and PP# 5 has not moved upstream since
Sept. 2011



Sta. 219+00-L-
Newly formed channel to the right is stable at this time
Year 5 Winter – January 2012



R2248BB UT Thomas Pond
 Photo Point Locations
 ⊕ Photo Points



R-2248BB UT Thomas Pond
Photo Point Locations

• Photo Points