Monitoring Data Record

Project Title: R-2248D – Charlotte Outer Loop COE Action ID: 200131321
Stream Name: Trib. to Dixon Branch (Site 19) DWQ Number: 011231
City, County and other Location Information: Mecklenburg County, Charlotte Outer Loop, R-2248D Left of Project Station 10+00 Y-7
Date Construction Completed: May 2008 Monitoring Year: (6) of 5
Ecoregion: 8 digit HUC unit 03050101
USGS Quad Name and Coordinates: 35.358416, -80.840740
Rosgen Classification: Proposed C4 stream type classification
Length of Project: 400 ft. Urban or Rural: Urban Watershed Size:
Monitoring DATA collected by: M. Green, J. Elliott, and P. Allen Date: 9/9/14
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**

The permittee shall perform the following components of Level I monitoring each year for the 5-year monitoring period or through two documented bankfull flow events: 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: 8 photos were taken from 4 photo point locations

Dates reference photos have been taken at this site: 2/23/09, 9/1/09, 3/16/10, 9/28/10, 3/2/11, 9/12/11, 1/25/12, 9/20/12, 1/23/13, 9/17/13, 3/11/14, 9/9/14

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 planted vegetation noted onsite is surviving and consisted of silky dogwood, black willow, willow oak, sycamore, river birch, yellow poplar, and green ash. Other vegetation noted onsite included alder, jewelweed, lespedeza, fescue, elderberry, briars, pokeberry, sumac, cottonwood, sweetgum, and various grasses.

On March 2, 2011, NCDOT replanted Type I and II plantings due to low survival of the planted species and remedial stream work had just taken place below the pipe.

On June 5, 2012, an onsite meeting was held between regulatory agencies and NCDOT. Regulatory agencies requested that additional planted species were needed within the buffer. The planted species had been out competed with the lespedeza that was onsite.

During the winter of 2012 and the summer of 2013, NCDOT applied herbicide applications to control the lespedeza within the buffer.

On March 11, 2014, NCDOT replanted the streambank and buffer on the east side of the stream. The streambank along the east side was live staked only where missing or dead live stakes were noted. The replanted trees and live stakes were surviving.

On April 21, 2014, an onsite meeting was held between regulatory agencies and NCDOT to review the site. NCDOT will continue to monitor plant survival at the Tributary to Dixon Branch (Site 19)

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 Dixon Branch (Site 19) stream relocation is stable for the Year 6 Summer evaluation, except for, the areas of bank scouring that still exist upstream of the pipe crossing at Sta. 10+80 Y-7 and Sta. 10+40 Y-7. The areas of bank scouring were noted behind two j-hooks. The area downstream of the pipe that had extensive erosion was repaired during May 2010 and is highly stable.

On April 21, 2014, an onsite meeting was held between regulatory agencies and NCDOT to review the site. The regulatory agencies requested that the bank scouring areas needed to be repaired. NCDOT has scoped a consultant to design remediation plans to repair the stream.

NCDOT will continue to monitor channel stability at the Tributary to Dixon Branch (Site 19)

Date 9/9/14	Station 10+80 Y-7 (additional photo)	Station 10+40 Y-7 (additional photo)	Station	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?	Bank scouring on left bank behind J-hook	Bank scouring on left bank behind J-hook			
Other problems noted?					
Bankfull event dates and how it was noted	Wrack Line 9/12/11, 1/25/12, 9/17/13, 3/11/14, 9/9/14				

Section 4. DEBIT LEDGER

The entire UT to Dixon Branch (Site 19) stream mitigation site was used for the R-2248D project to compensate for unavoidable stream impacts.

UT to Dixon Branch Site 19

Photo Point #1 (Upstream)

Photo Point #1 (Downstream)

Photo Point #2 (Upstream)

Photo Point #2 (Downstream)

UT to Dixon Branch Site 19

Photo Point #3 (Upstream)
Year 6 Summer – September 2014

Photo Point #3 (Downstream)

Photo Point #4 (Upstream)

Photo Point #4 (Downstream)

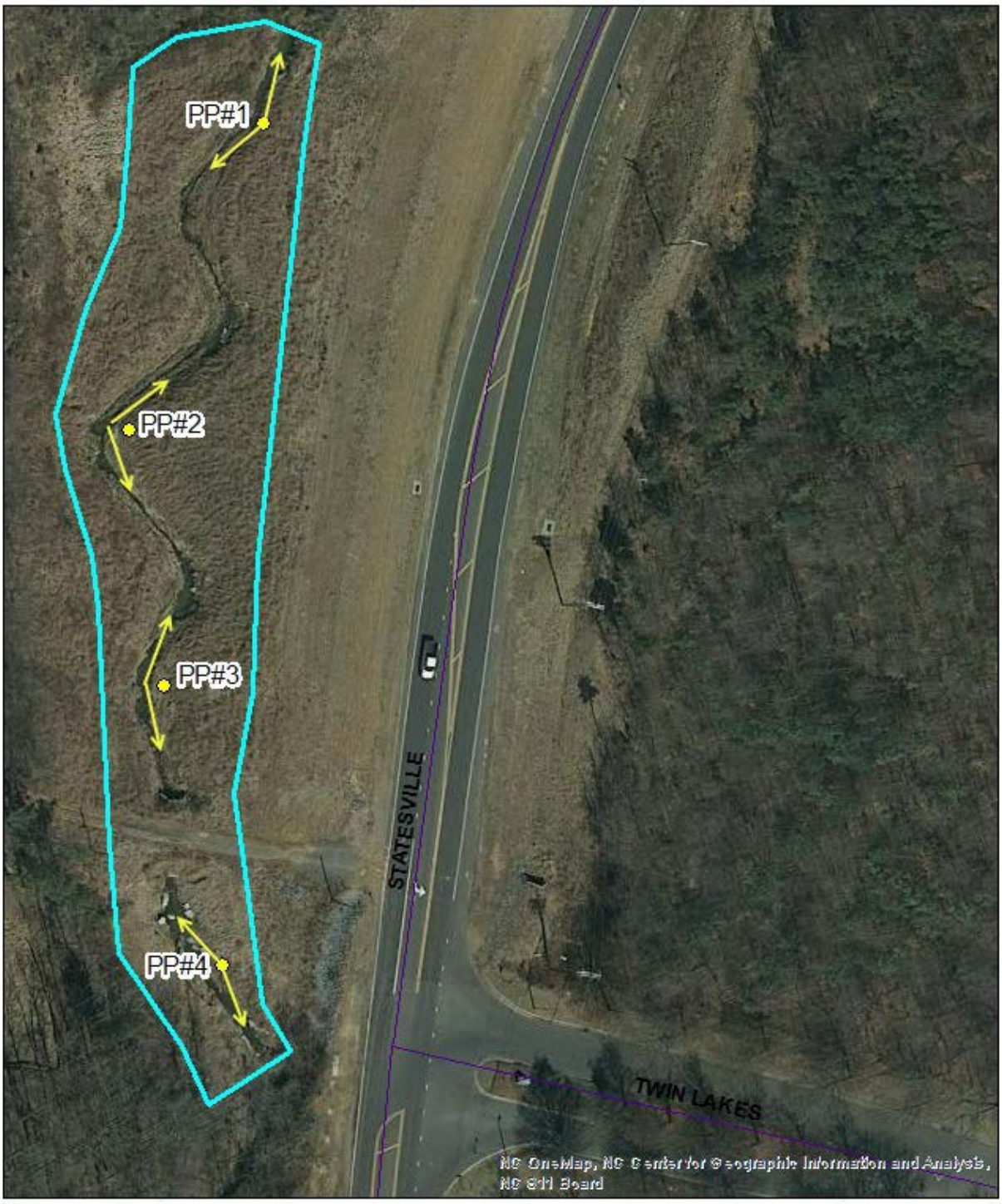
Left bank scouring at end of J-Hook @ Sta. 10+80 Y-7

Left bank scouring at end of J-Hook @ Sta. 10+40 Y-7

UT to Dixon Branch Site 19

Overview Photo of Site 19
Year 6 Summer – September 2014

Overview Photo of Site 19

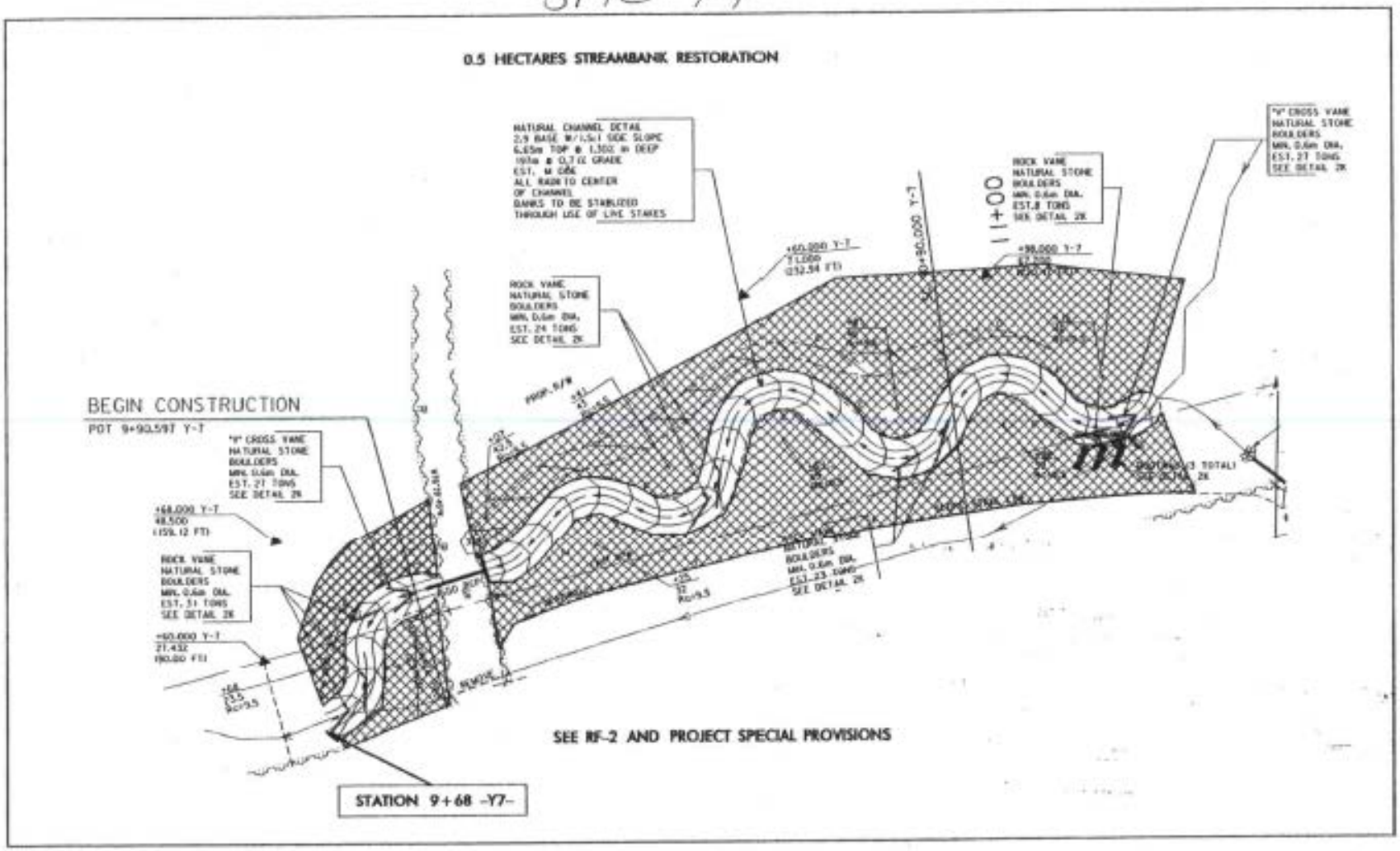


UT to Dixon Branch Mitigation Site 19
Site Map (Photo Point Locations)
Mecklenburg County, North Carolina

0 0.01 0.02 0.04 Miles

N
W E
S

Site 19



Streambank Reforestation Plan
R-2248D UT to Dixon Branch Site 19
Mecklenburg County, North Carolina

Vicinity Map
UT to Dixon Branch Mitigation Site 19
Mecklenburg County, North Carolina

0 0.1 0.2 0.4 Miles

N
W E
S