

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

Monitoring Data Record

Project Title: B-4191 (Br. No. 82 over Jacktown Creek on NC 226)

COE Action ID: SAW-2009-0707 DWR Number: 20090385

Stream Name: Jacktown Creek

City, County and other Location Information: McDowell County, Bridge #82 over Jacktown Creek on NC Highway 226, approx. 0.2 miles south of I-40 adjacent to McDowell Technical Community College.

Date Construction Completed: 3/29/12 Monitoring Year: (5) of 5

Ecoregion: Eastern Blue Ridge Foothills 8 digit HUC unit 03050101

USGS Quad Name and Coordinates: Marion West 35.655352, -81.959133

Rosgen Classification: Proposed C Stream Type

Length of Project: 450' Urban or Rural: Rural Watershed Size: 1.28 sq. miles

Monitoring DATA collected by: M. Green & B. Bradley Date: 7/11/16

Applicant Information:

Name: NCDOT Roadside Environmental Unit

Address: 1425 Rock Quarry Road Raleigh, NC 27610

Telephone Number: (919) 861-3772 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 1 ~~2~~ 3

Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

Permit States: (COE Permit Requirements): NCDOT will perform Level 1 monitoring of the stream following completion of restoration. Monitoring shall be performed twice annually (summer and winter) for each of a five year period, provided at least two bankfull events have occurred during this period. Monitoring activities shall consist of reference photos, plant survival determinations and visual inspection of stream stability.

(DWR Permit Requirements): The permittee shall visually monitor the vegetative plantings to assess and ensure complete stabilization of the mitigation stream segments. The monitoring shall be conducted annually for a minimum of three (3) years after final planting. Photo documentation should be utilized to document the success of the riparian vegetation and the results submitted in a final report to DWR within sixty (60) after completing the monitoring. After three (3) years a site visit shall be conducted by DWR staff to "close out" the mitigation site.

Section 1. PHOTO REFERENCE SITES

(Monitoring at all levels must complete this section)

Total number of reference photo locations at this site:

6 photos were taken from 3 photo point locations and 1 overview photo

Dates reference photos have been taken at this site: 8/21/12, 1/9/13, 8/20/13, 1/15/14, 6/17/14, 3/10/15, 7/6/15, 7/11/16

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): _____

A small area of kudzu was noted within the east buffer adjacent to Photo Point #2.

Estimated causes, and proposed/required remedial action: NCDOT applied a herbicide application on the kudzu on 7/11/16.

ADDITIONAL COMMENTS: _____ Planted vegetation is surviving along the streambank and within the buffer area which included buttonbush and silky dogwood live stakes, sycamore, green ash, and tulip poplar bareroot seedlings. Other vegetation noted included mimosa, soft rush, Scirpus sp., jewelweed, lespedeza, black willow, cattail alder, woolgrass, maple, and various grasses. NCDOT proposes to discontinue monitoring plant survival.

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 Jacktown Creek stream restoration site is stable for the Year 5 Summer evaluation, except for, some right bank erosion at Sta. 11+90 and left bank erosion at Sta. 12+50. Bank pins were set at both locations. See the bank full dates throughout the monitoring period below and how the bankfull events were noted. This site has met the bankfull requirement of two bankfull events must occur over the five year monitoring period. NCDOT proposes to discontinue channel stability monitoring. NCDOT will schedule a field close out meeting in 2017 and at this time the bank pins will be evaluated to see if further bank erosion has occurred.

Date 7/11/16	Sta. 11+90	Sta. 12+50	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?	Right bank erosion	Left bank erosion			
Other problems noted?					

Bankfull event dates and how it was noted	8/21/12 Wrack Line 7/11/16 Wrack Line	3/29/12 Wrack Line	8/20/13 Wrack Line	1/15/14 Wrack Line	5/7/14 Wrack Line
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Section 4. DEBIT LEDGER

In accordance with the permit conditions, 175 linear feet (at a 1:1 ratio) of the Jacktown Creek stream mitigation site was used to compensate for unavoidable stream impacts on the B-4191 project. The remaining 275 linear feet of mitigation credit will be considered an onsite asset and will be available as mitigation for future projects in the service area.

Jacktown 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)

Jacktown Creek



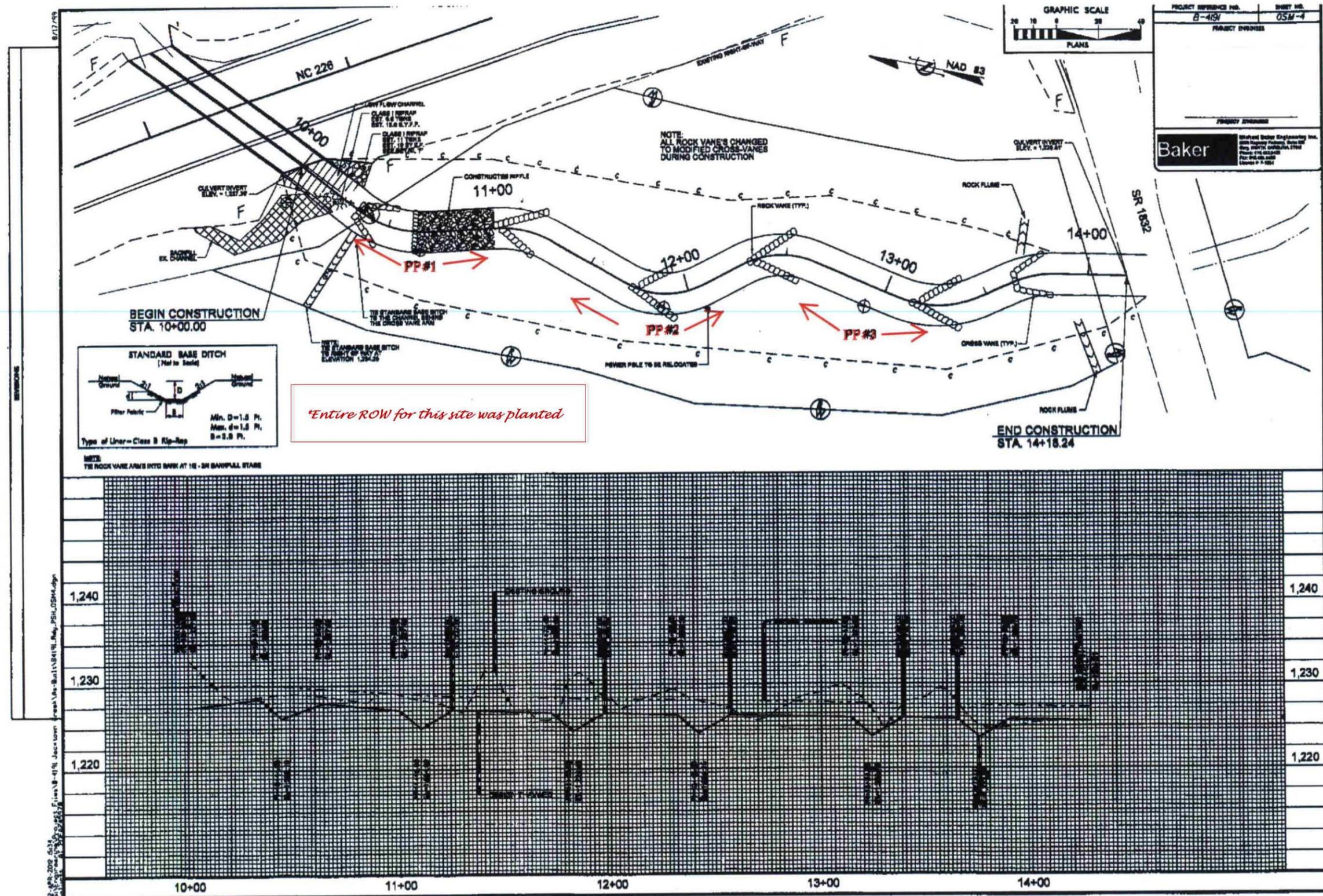
Bank Pin #1 (Sta. 11+90 right bank erosion)



Bank Pin #2 (Sta. 12+50 left bank erosion)



Overview Photo Looking Upstream from SR 1832



2:00:00 2009 05:31
 C:\Users\jacobson\Documents\Projects\B-4191\B-4191.dwg
 Jacobson



	<p style="text-align: center;"> Site Map B-4181 Jacktown Creek Mitigation Site Photo Point & Bank Pin Locations MoDowell County, North Carolina </p> <p style="text-align: center;"> 0 40 80 160 Feet </p>	
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