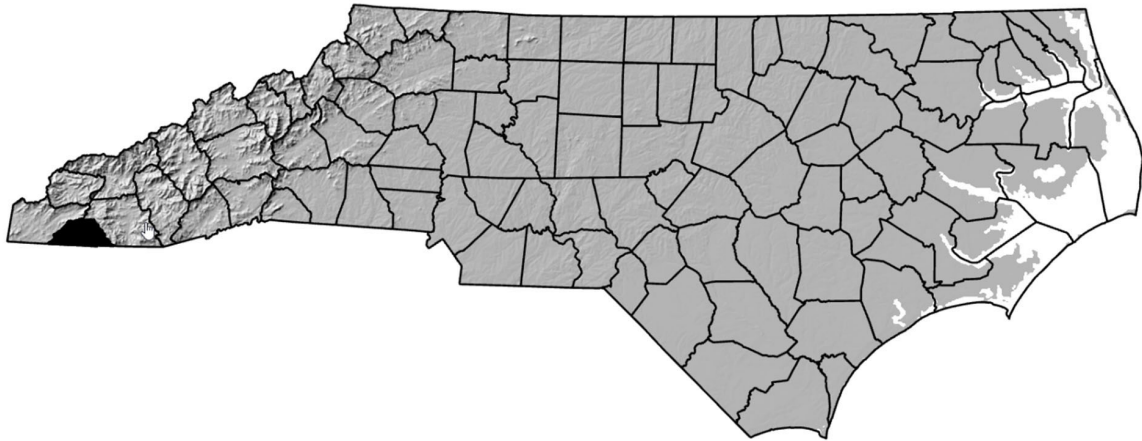


ANNUAL REPORT FOR 2023



UT to Blair Creek (Sites 10, 11, 12, 15, & 17)

Clay County

TIP No. A-0011C

COE Action ID: SAW-2019-00437

NCDWR Project #: 2019-0210



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October 2023

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SUMMARY

The following report summarizes the stream monitoring activities that have occurred during the Year 2023 at the UT to Blair Creek Sites 10, 11, and 15 mitigation sites in Clay County, hereafter, referred to as UT to Blair Creek. This report provides the monitoring results for the first formal year of monitoring (Year 2023). The Year 2023 monitoring period was the first of five scheduled years of monitoring on the UT to Blair Creek sites (See Success Criteria Section 2.1). Sites 12 and 17 were not completed at the time of monitoring in 2023. These sites will be monitored once construction and reforestation are completed.

Based on the overall conclusions of monitoring at the UT to Blair Creek sites, they have all met the required monitoring protocols for the first formal year of monitoring on the stream channel. The channel throughout the stream sites is stable at this time. The streambank planted vegetation is surviving.

NCDOT proposes to continue stream and vegetation monitoring at the UT to Blair Creek mitigation sites in 2024.

1.0 INTRODUCTION

1.1 Project Description

The following report summarizes the stream monitoring activities that have occurred during the Year 2023 at the UT to Blair Creek mitigation sites. Site locations are as follows (see Figure 1):

- Site 10 is located on NC 69 at Byers Road from Sta. 138+24 to 143+27 -L- RT.
- Site 11 is located on NC 69 at Byers Road from Sta. 145+39 to 148+03 -L- RT.
- Site 12 is located on NC 69 at Cherry Mountain Lane from Sta. 11+76 -Y16- to 160+67 -L- LT.
- Site 15 is located on NC 69 at Wayne Brooks Lane from Sta. 186+20 -L- RT. to 187+99 -L- LT.
- Site 17 is located on NC 69 from Sta. 201+34 to 204+06 -L- RT.

The UT to Blair Creek sites were relocated to offset stream impacts associated with Transportation Improvement Program (TIP) number A-0011C in Clay County.

- Site 10: 547 linear feet
- Site 11: 115 linear feet
- Site 12: 247 linear feet
- Site 15: 114 linear feet
- Site 17: 83 linear feet

The relocation of the UT to Blair Creek sites involved relocating 1,106 linear feet of UT to Blair Creek. A new channel was excavated, and the streambanks were planted. All sites, except for Site 12, utilized rip rap within the relocated channels. Site 12 had cross vanes installed to stabilize this stream relocation.

1.2 Purpose

In order for a mitigation site to be considered successful, the site must meet the success criteria. This report details the monitoring in 2023 at the UT to Blair Creek mitigation sites. Hydrologic monitoring was not required for these sites.

1.3 Project History

March 2023	Streambank Reforestation Completed (Sites 10, 11, & 15)
July 2023	Stream Channel and Vegetation Monitoring (Year 1)

1.4 Debit Ledger

All of the UT to Blair Creek stream mitigation sites were used for the A-0011C project to compensate for unavoidable stream impacts.

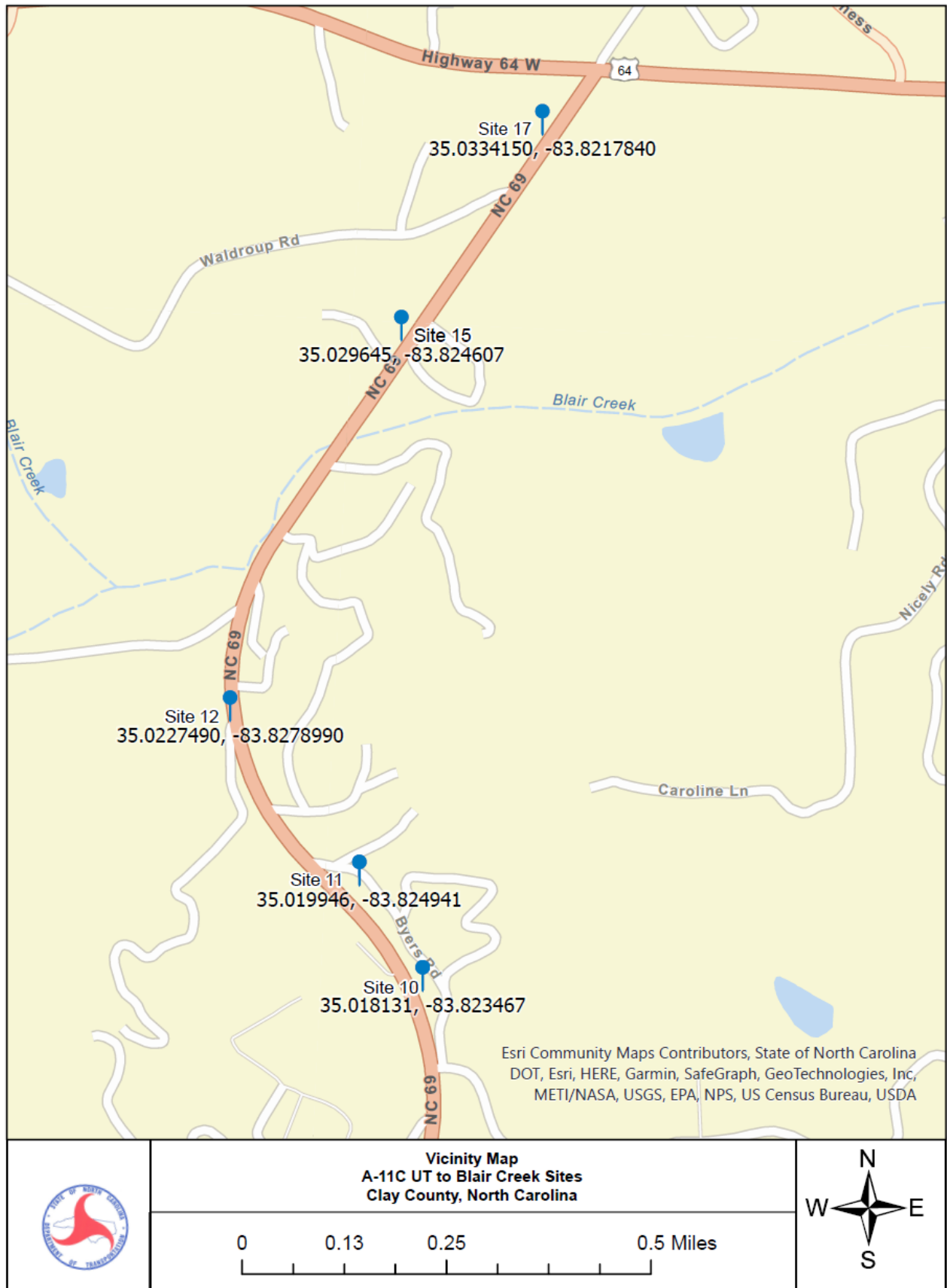


Figure 1. Vicinity Map

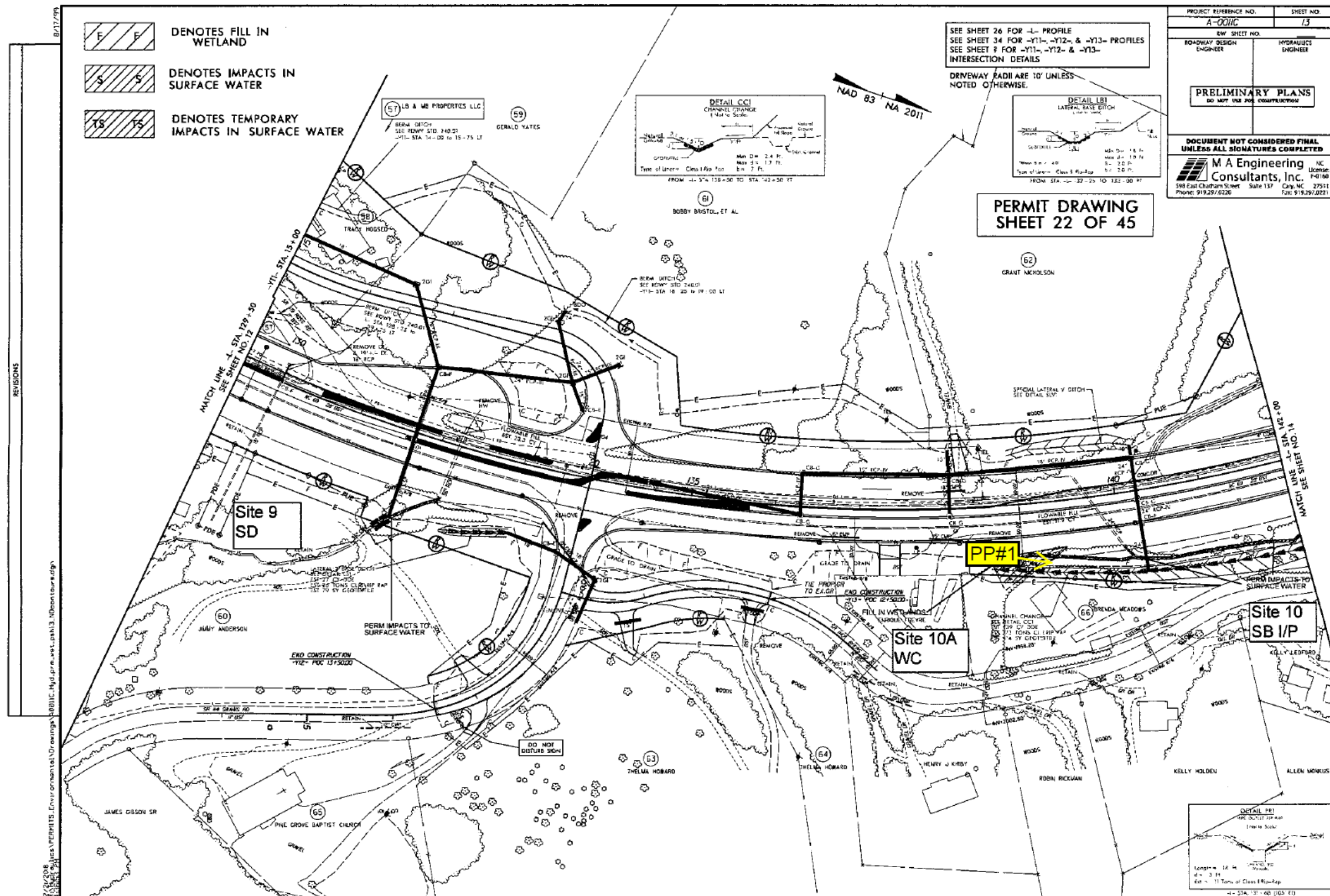


Figure 2. Site 10 Permit Drawing

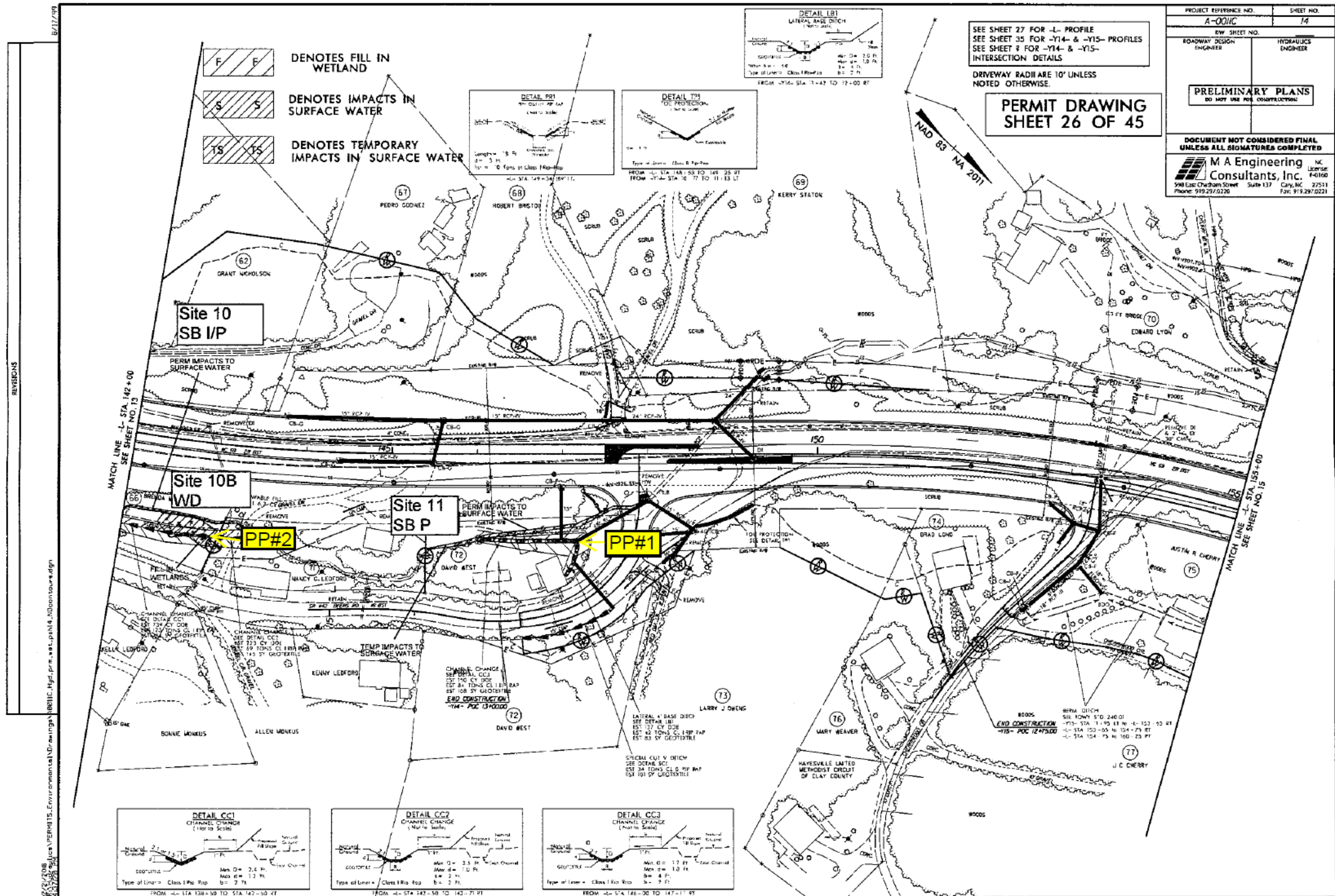


Figure 3. Site 10 and 11 Permit Drawing

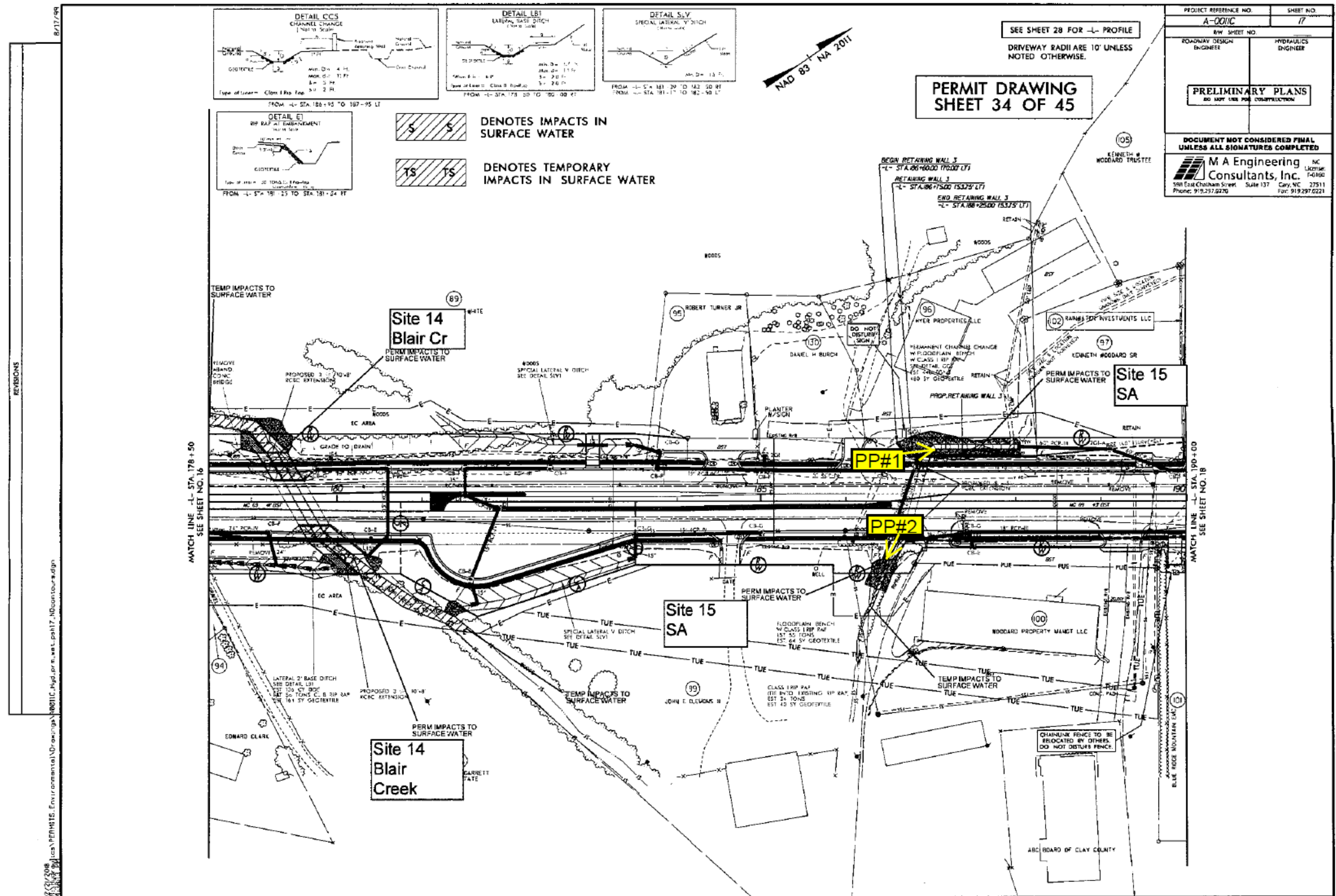


Figure 5. Site 15 Permit Drawing

2.0 STREAM ASSESSMENT

2.1 Success Criteria

Mitigation Plan

General Monitoring Plan

Monitoring data collected at the sites will include reference photos. Stream morphology is proposed to be visually monitored annually for a period of five years. The results of visual monitoring will be reported in all monitoring reports. Monitoring will be conducted by NCDOT or its duly authorized representatives. Monitoring reports of the data collected will be submitted to USACE annually, no later than April 1 of the year following the monitoring year.

Visual Monitoring

As noted previously, the sites will be visually monitored annually to identify problems with results documented (photo) and recommended courses of action identified for approval by USACE.

Remedial Actions

Monitoring reports will address remedial actions. However, identified needs for remedial action will be communicated as soon as possible after identification to USACE.

2.2 Stream Description

2.2.1 Post-Construction Conditions

The relocation of the UT to Blair Creek mitigation sites involved relocating 1,106 linear feet of UT to Blair Creek. A new channel was excavated, and the streambanks were planted. All sites, except for Site 12, utilized rip rap within the relocated channels. Site 12 had cross vanes installed to stabilize this channel relocation.

2.2.2 Monitoring Conditions

The objective of the UT to Blair Creek stream relocations was to relocate the streams due to the roadway widening. A visual stream assessment will be conducted annually each year of the monitoring period.

2.3 Results of the Stream Assessment

2.3.1 Site Data

The visual assessment of the stream noted that the stream relocations appear stable with little to no active bank erosion noted. NCDOT will continue to monitor the channel stability at UT to Blair Creek sites in 2024.

3.0 VEGETATION: UT to BLAIR CREEK SITES

3.1 Description of Species

The following tree species were planted on the streambank:

Salix nigra, Black Willow

Cornus amomum, Silky Dogwood

3.2 Results of Vegetation Monitoring

Streambank Vegetation: Black willow and silky dogwood live stakes were noted surviving throughout the stream relocations. Sites 10 and 11 had some kudzu within and outside of NCDOT's ROW.

3.3 Conclusions

NCDOT will continue to monitor the planted vegetation and treat invasive species as needed at the UT to Blair Creek sites in 2024.

4.0 OVERALL CONCLUSIONS/RECOMMENDATIONS

The UT to Blair Creek mitigation sites have met the required monitoring protocols for the first formal year of monitoring. The channel throughout the stream sites is stable at this time. The planted vegetation is surviving at this time.

NCDOT proposes to continue stream and vegetation monitoring the UT to Blair Creek mitigation sites in 2024.

5.0 REFERENCES

Sites 10, 11, 12, 15, and 17 A-11 Stream Relocation Monitoring Plan UT to Blair Creek Clay County, Version 1.0, February 14, 2019, NCDOT Division 14.

Department of the Army Permit, Permittee: North Carolina Department of Transportation, NC 69 Improvement Project, Clay County, Action ID: SAW-2019-00437, TIP No. A-0011.

North Carolina Environmental Quality, Approval of 401 Water Quality Certification with Additional Conditions, February 28, 2019, A-11 Widening of Highway 69 in Clay County, WBS Element No. 32574.1.FD7, TIP A-0011, NCDWR Project No. 2019-0210.

APPENDIX A

SITE PHOTOGRAPHS

UT to Blair Creek Sites



Site 10 Photo Point #1 (Downstream)



Site 10 Photo Point #2 (Upstream)



Site 11 Photo Point #1 (Upstream)



Site 15 Photo Point #1 (Upstream)



Site 15 Photo Point #2 (Downstream)

July 2023