



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

April 6, 2017

Wilmington Regulatory Field Office
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403

ATTN: Ms. Liz Hair
NCDOT Coordinator

Subject: **Revised Request for Modification to Individual Section 404 and Section 401 Water Quality Certification** for Fayetteville Outer Loop from I-95 South of Fayetteville to NC 24-87, Cumberland, Hoke, and Robeson Counties. Federal Aid Project No. NHF-DPR-0100(001), State Project No. 8.2441301, TIP Nos. X-0002 B & C, and U-2519 AA, AB, BA, BB, CA, CB, DA, & E. Debit \$570 from WBS 35196.3.19

References: Section 404 and 401 Individual Permit Application requested April 25, 2008
Section 404 Individual Permit issued October 23, 2008 (SAW-2008-01413)
Section 401 Water Quality Certification issued October 6, 2008 (003278)
Section 404 and 401 Modification requested May 21, 2010
Section 401 Modification issued June 3, 2010 (20080737 v.2)
Section 404 and 401 Modification requested October 7, 2010
Section 401 Modification issued December 16, 2010 (20080737 v.3)
Section 404 Modification issued December 21, 2010 (SAW-2008-01413)
Section 401 Modification issued May 22, 2014 (20080737 v.4)
Section 404 Modification issued June 24, 2014 (SAW-2008-01413)
Section 401 Modification issued January 19, 2017 (20080737 v.5)
Section 401 Modification issued March 29, 2017 (20080737 v.6)

Dear Ms. Hair;

The purpose of this modification request is to provide additional revisions for U-2519 CB, which is currently under construction, to include a temporary haul road and bridge. The haul road and bridge are located on Fort Bragg property in Cumberland County approximately 0.5 mile west of the Fort Bragg South Commissary and 0.5 mile east of the intersection of Chicken Road and Mac Ridge Road (Figure 1). The haul road and bridge are necessary to facilitate the construction of the Fayetteville Outer Loop. These proposed changes are in addition to revisions included the pending modification request for U-2519CB dated November 23, 2016.

The construction of the haul road will involve placement of fabric, covered with Rip Rap, and then topped with ABC stone. In addition to the road, a 30' wide bridge with a 4' total structure depth will be installed

over Stewart Creek. The bridge will span 43'. Construction plans are included with this request. Standard road building equipment will be used for construction such as excavators, cranes, dump trucks, and bulldozers.

The haul road was designed to minimize the impacts to wetlands. The haul road was designed as close to Chicken Road as possible while avoiding the water line that runs along chicken road. The temporary road will be constructed over existing electrical and communication lines. Directional boring was used to place these lines under the stream and wetland. These lines will not be impacted by the haul road. The temporary haul road will join with the alignment for the final U-2519CB design as it enters and exits the wetland.

This modification will result in 0.10 acres of temporary wetland and 35 linear feet of temporary stream impacts. NCDOT will restore approximately 0.10 acres of riparian wetland by removing the temporary haul road and bridge and replanting the wetlands. A restoration plan is included with this request. NCDOT will monitor the site for a minimum of five years or until the site is deemed successful.

Regulatory Approvals

Section 404: We are hereby requesting the modifications described above the USACE Individual 404 Permit signed October 23, 2008 (SA W-2008-01413).

Section 401: We are hereby requesting a modification to the 401 Water Quality Certification from the NCDWR issued October 6, 2008 (DWQ No. 003278).

A copy of this modification request will be posted on the NCDOT website at:
<https://connect.ncdot.gov/resources/Environmental>

Thank you for your assistance with this project. If you have any questions or need additional information, please contact James J. Rerko, PWS at 910-437-0207 or jjrerko@ncdot.gov.

Sincerely,



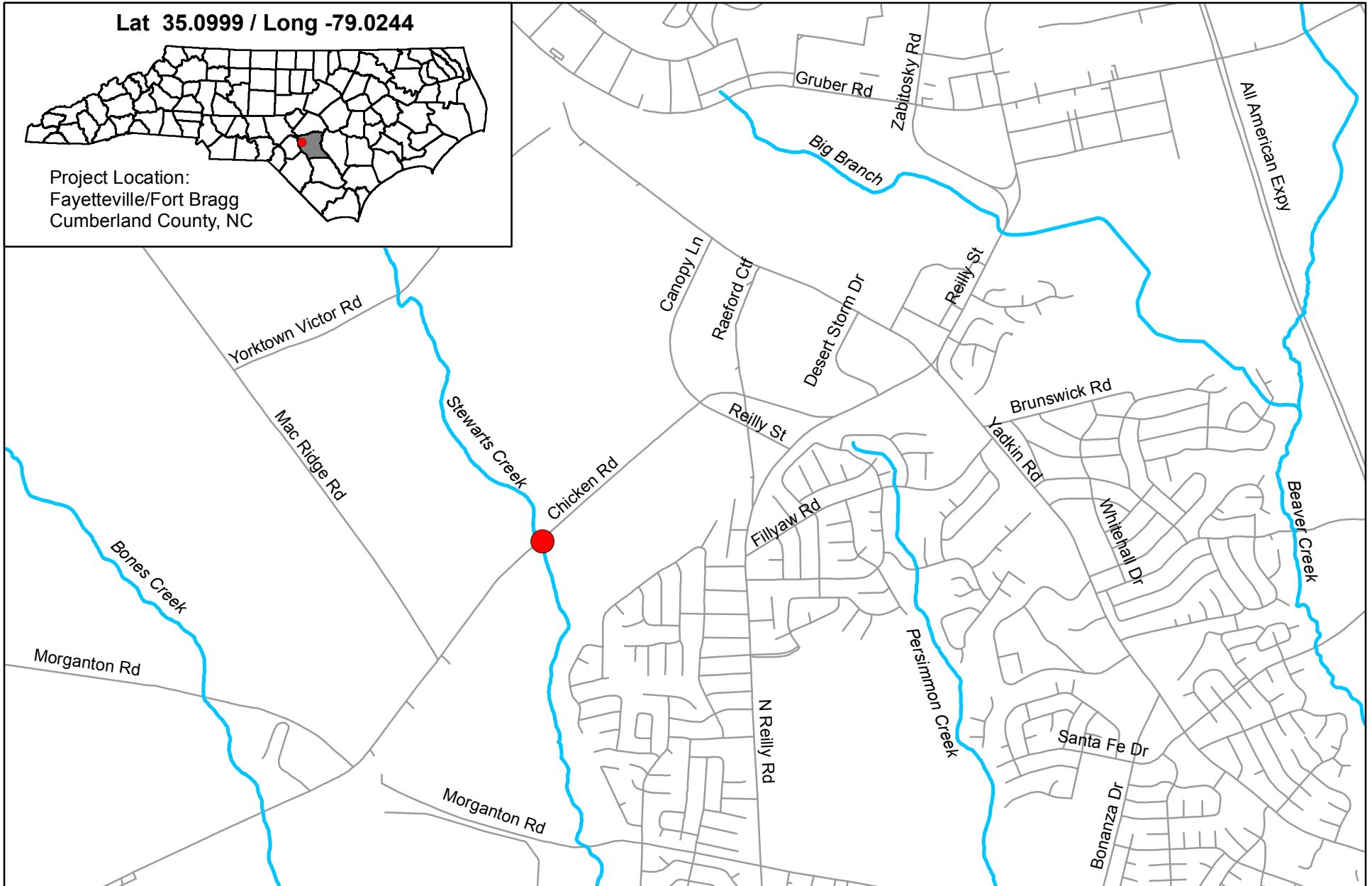
for Philip S. Harris III, P.E., C.P.M, Manager
Natural Environment Section

cc: NCDOT Permit Application Standard Distribution List.

Lat 35.0999 / Long -79.0244

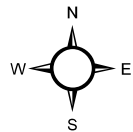


Project Location:
Fayetteville/Fort Bragg
Cumberland County, NC



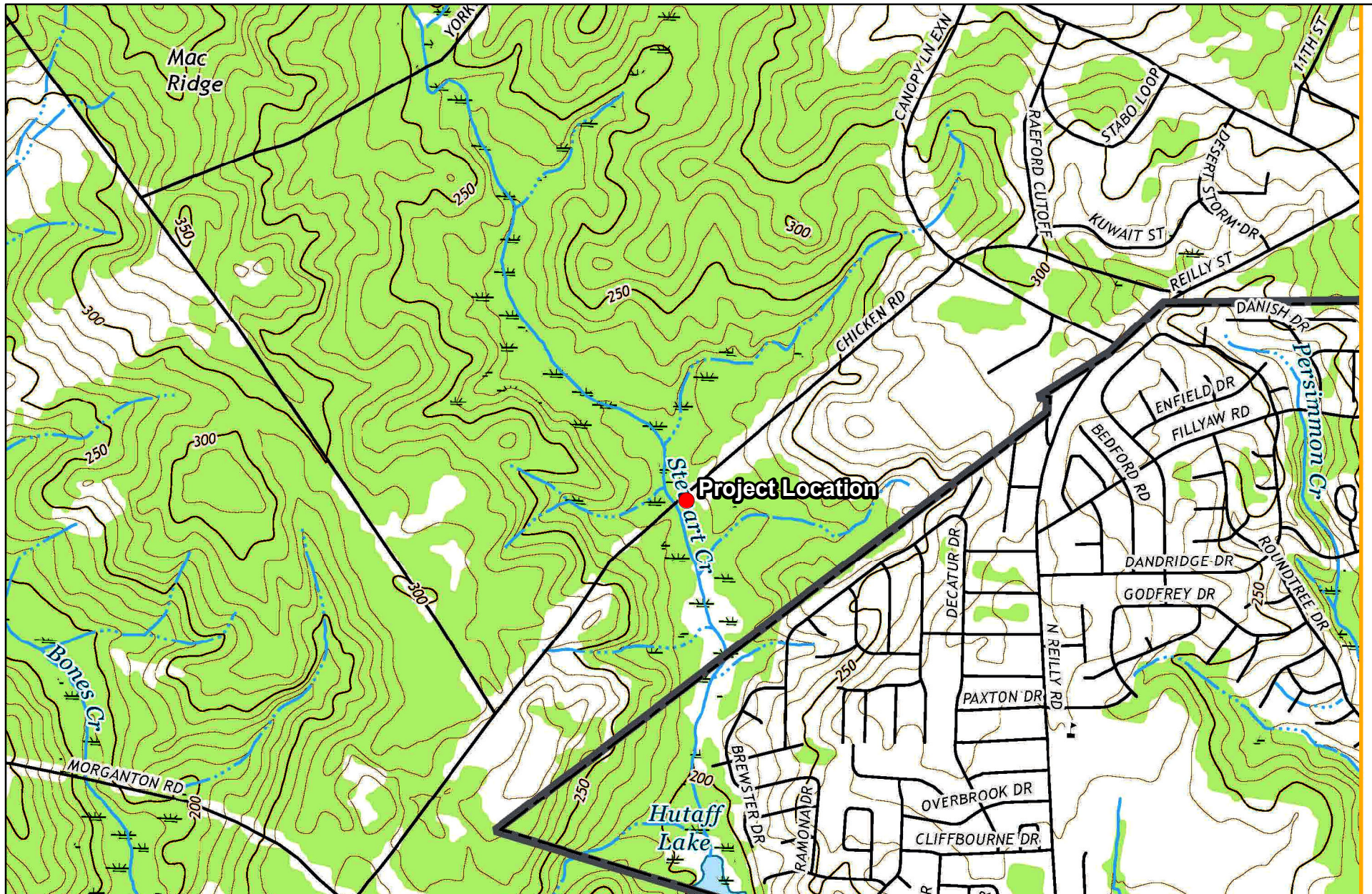
 Project Location

 USGS Named Streams

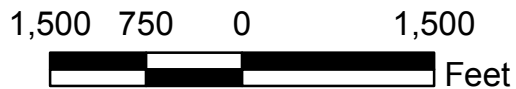
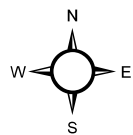


Map created: March 2017
Image Source: NAIP 2014

Figure 1: Vicinity Map
Chicken Road Temporary Haul Road
U-2519CB
Cumberland County



● Project Location

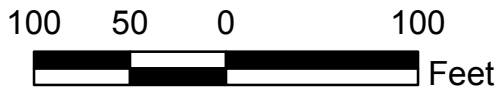
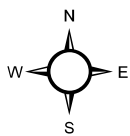


Map created: March 2017
 Image Source: Clifdale USGS 1:24000 Quadrangle Map

Figure 2: USGS Map
Chicken Road Temporary Haul Road
U-2519CB
Cumberland County



- Temporary Haul Road and Bridge
- Existing Wetland Boundary
- Stewart Creek
- Temporary Wetland Impact Area (0.10 ac)



Map created: March 2017
Image Source: NAIP 2014

Figure 3: Impact Map
Chicken Road Temporary Haul Road
U-2519CB
Cumberland County

**Restoration Plan for Stewart Creek Wetlands
On Chicken Road
Cumberland County**

**TIP U-2519CB
Federal Aid Project No. NHF-DPR-0100(001)
WBS No. 35196.3.19
March 29, 2017**

The North Carolina Department of Transportation (NCDOT) will perform on-site mitigation for temporary wetland impacts associated with the construction of a temporary haul road and bridge at the Chicken Road overpass of Stewart Creek. This temporary haul road and bridge are necessary for the construction of U-2519CB. The project is located approximately 20 feet south of Chicken Road, approximately 250 feet east and west of Stewart Creek. NCDOT will restore approximately 0.10 acres (4,500 square feet) of riparian wetland by removing the temporary haul road and bridge and replanting the wetlands.

EXISTING CONDITIONS:

The project is located on Fort Bragg property in Cumberland County approximately 0.5 mile west of the Fort Bragg South Commissary and 0.5 mile east of the intersection of Chicken Road and Mac Ridge Road. Surrounding land use is a mixture of residential, commercial, and silvicultural.

The location of the proposed haul road is located partially in the floodplain of Stewart Creek. The floodplain wetland consists mainly of a mature riverine swamp forest dominated by canopy species of bald cypress (*Taxodium distichum*), and swamp tupelo (*Nyssa biflora*). The swamp wetland defined by the toe of slope of Chicken Road on its northern end. As the swamp wetland grades away from Stewart Creek, the vegetation transitions to include fewer trees and more herbaceous vegetation like *Juncus effusus*.

PROPOSED CONDITIONS:

The proposed wetland mitigation will consist of restoring approximately 0.10 acres (4,500 square feet) acres of riverine swamp wetland. Restoration will involve the removal of the temporary road fill to match the adjacent swamp wetland elevation. The restored area will be planted with species commonly found in riverine swamp communities.

DESIGN/CONSTRUCTION:

WETLAND MITIGATION GRADING

The design of the wetland mitigation area shall consist of removing fill associated with the temporary haul road. Target elevations will be based on elevations taken in the swamp wetland areas adjacent to the proposed restoration areas. All excavated areas shall be ripped and disked prior to planting of the site.

The Natural Environment Section shall be contacted to provide construction oversight to ensure that the wetland mitigation area is constructed appropriately.

VEGETATION PLANTING

The restoration areas will be planted following the completion of the site grading. The following riverine swamp tree species will be planted:

Riverine Swamp Forest– 0.10 acres

Common Name	Scientific Name	Wetland Indicator
Water tupelo	<i>Nyssa aquatica</i>	OBL
Bald cypress	<i>Taxodium distichum</i>	OBL

The hardwood tree species utilized shall be 18”-30” in size and shall be bare root seedlings that are at least one growing season in age. Planting density shall be 680 seedlings per acre, which equates to a plant spacing of 8 feet on-center.

An herbaceous seed mix composed of appropriate native species will also be developed and used to further stabilize and restore the wetland.

MONITORING:

Upon successful completion of construction, the following monitoring strategy is proposed for the mitigation site. NCDOT will document monitoring activities on the site in an annual report distributed to the regulatory agencies.

HYDROLOGIC MONITORING

No specific hydrological monitoring is proposed for this restoration site. The target elevation will be based on the adjacent wetland and verified during construction. Constructing the site at the adjacent wetland elevation will ensure the hydrology in the restored area is similar to the hydrology in the reference area.

VEGETATION SUCCESS CRITERIA

NCDOT shall monitor the restoration site by visual observation and photo points for survival of planted seedlings. NCDOT shall monitor the site for a minimum of five years or until the site is deemed successful. Monitoring will be initiated upon completion of the site planting.



1. Swamp Forest looking east. Silt fencing has been placed around the wetland boundary



4. Swamp Forest looking east. Silt fencing has been placed around the wetland boundary



2. Swamp Forest looking north from the U-2519CB temporary construction bridge.



5. Evidence of previous beaver activity in the wetland.

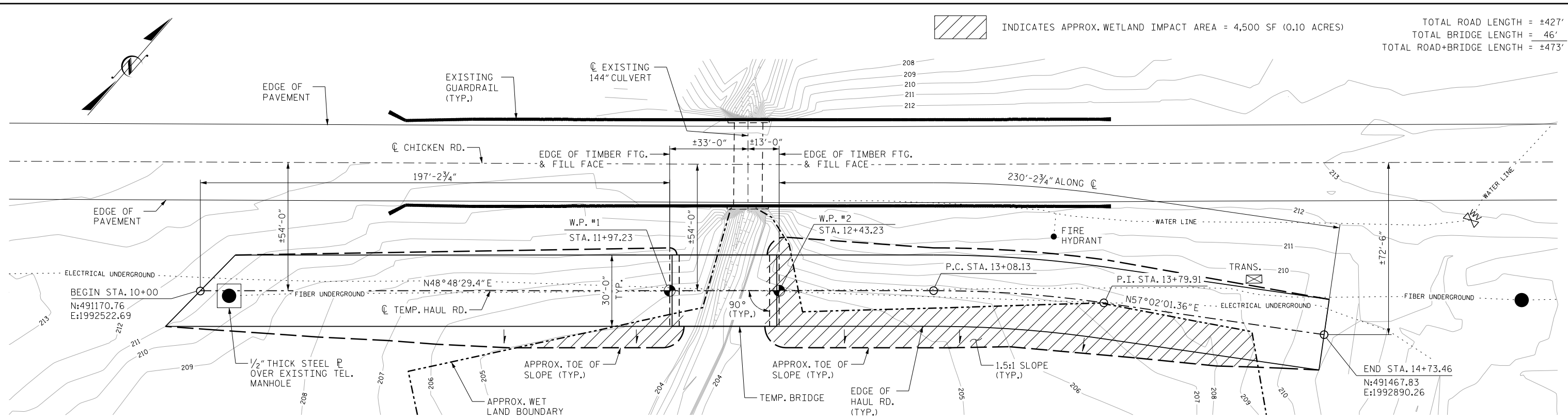


3. Swamp Forest looking south from Chicken Road. U-2519CB temporary construction bridge in background.



6. Stewart Creek flowing south under Chicken Road.

3/29/2017 1:Jobs\2014 Jobs\C14-70 Fayetteville Outer Loop - Cont\Task 91 (HaulRoad)\Cadd\FinalDrawings.dgn AMC

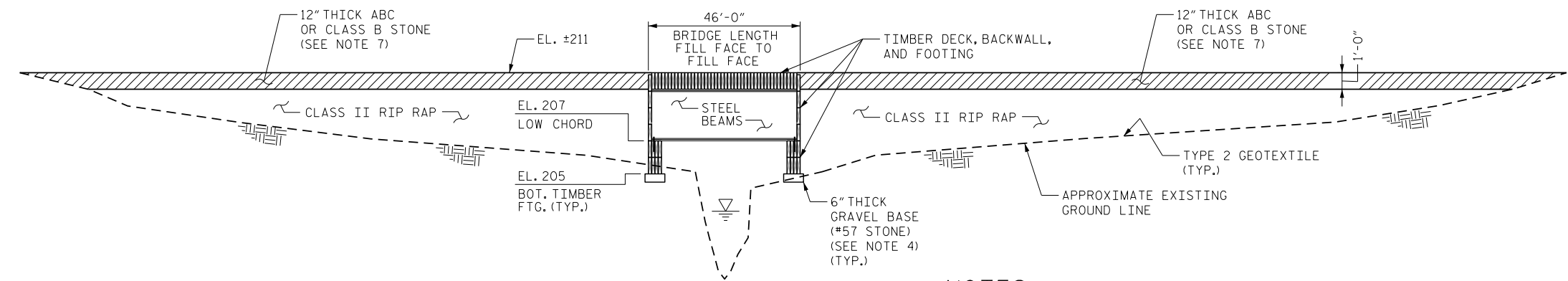


PLAN

EXISTING CONTOURS SHOWN

HORIZONTAL CURVE INFORMATION

P.I. STA. = 13+44.08
 $\Delta = 8^\circ 13' 31.92''$
 $T = 35.95'$
 $L = 71.78'$
 $R = 500.00'$

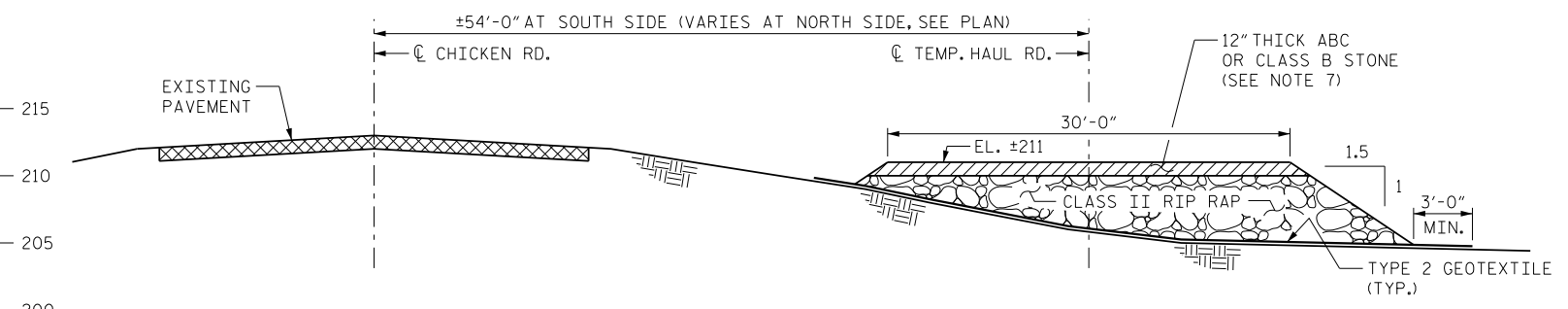


PROFILE

EXAGGERATED 5V:1H

NOTES

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED 2012.
- BRIDGE DESIGNED FOR CATERPILLAR CAT 740B (43.5 TON CAPACITY) OFF ROAD VEHICLE OR EQUAL. TOTAL WEIGHT IS 163,000 LBS.
- TIMBER DECK AND SUBSTRUCTURE BENTS CONSIST OF HARDWOOD TIMBER CRANE MATS 12" THICK NEW OR USED IN GOOD CONDITION.
- PREPARE GROUND UNDER FOOTING, STRIP, UNDERCUT AS NECESSARY AND LEVEL BEARING AREA UNDER FOOTING. COMPACT AS NECESSARY FOR AN ALLOWABLE BEARING PRESSURE OF 3000 PSF. A MIN. 6" THICK LAYER OF #57 STONE SHALL BE PLACED UNDER TIMBER MAT FOOTING.
- STEEL BEAMS AND PLATE SHALL BE ASTM A36 OR BETTER. WELDS SHALL BE ETOXX OR BETTER.
- LAG SCREWS SHALL BE ASTM A307, BOLTS SHALL BE ASTM A325 UNLESS NOTED OTHERWISE. GALVANIZE ALL BOLTS AND SCREWS.
- ABC OR CLASS B STONE MAY BE USED AS THE 12" THICK "RIDING" SURFACE. BOTH WILL REQUIRE MAINTENANCE TO REDUCE RUTTING. IF ABC MATERIAL IS USED, IT SHALL BE PROPERLY COMPACTED.
- DO NOT BEGIN CONSTRUCTION OF TEMPORARY HAUL ROAD PRIOR TO APPROVAL OF PERMIT MODIFICATION DOCUMENTS AND RESTORATION PLAN.
- IT IS ACCEPTABLE TO VARY LOCATION OF BRIDGE AND HAUL ROAD SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS.
- EROSION CONTROL IS BY OTHERS.
- GUARDRAIL AT TEMPORARY HAUL ROAD (IF REQUIRED) IS BY OTHERS.

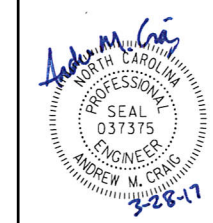


TYPICAL SECTION

ENGINEERS
 PLANNERS
 SCIENTISTS
 CONSTRUCTION MANAGERS

KCI
 ASSOCIATES OF NC www.kci.com

KCI ASSOCIATES OF NORTH CAROLINA, P.A.
 9711 SOUTHERN PINE BLVD
 SUITE A
 CHARLOTTE, NC 28273
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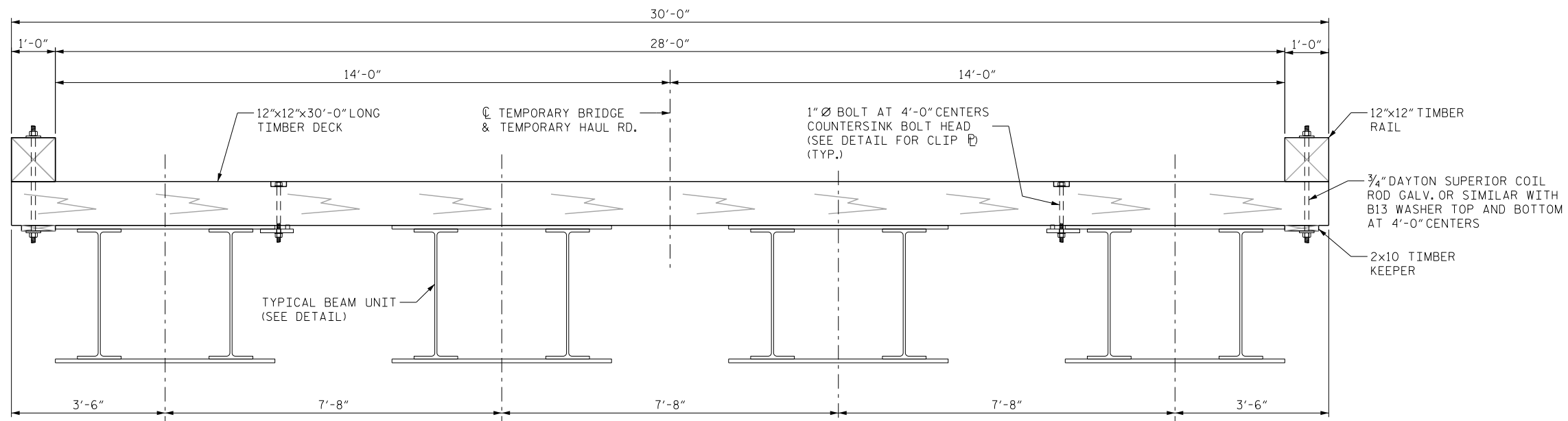


TEMP HAUL RD.
 FAYETTEVILLE OUTER LOOP
 NEAR STR. #5 AND #6

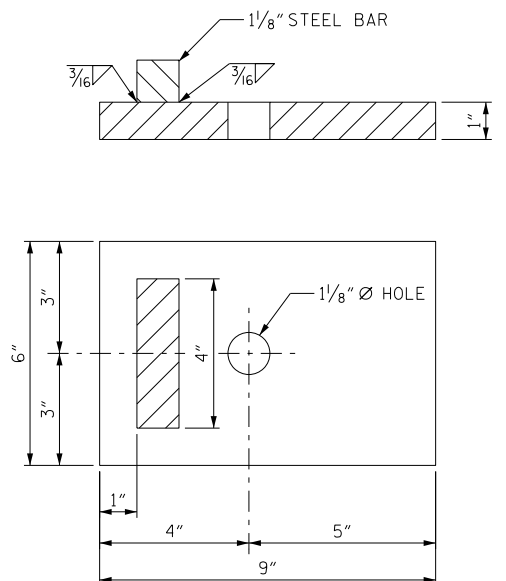
CUMBERLAND COUNTY, NC
 NCDOT TIP PROJ.: U-2519CB

KCI #25157442
 CONTRACTOR REF. #C14-70

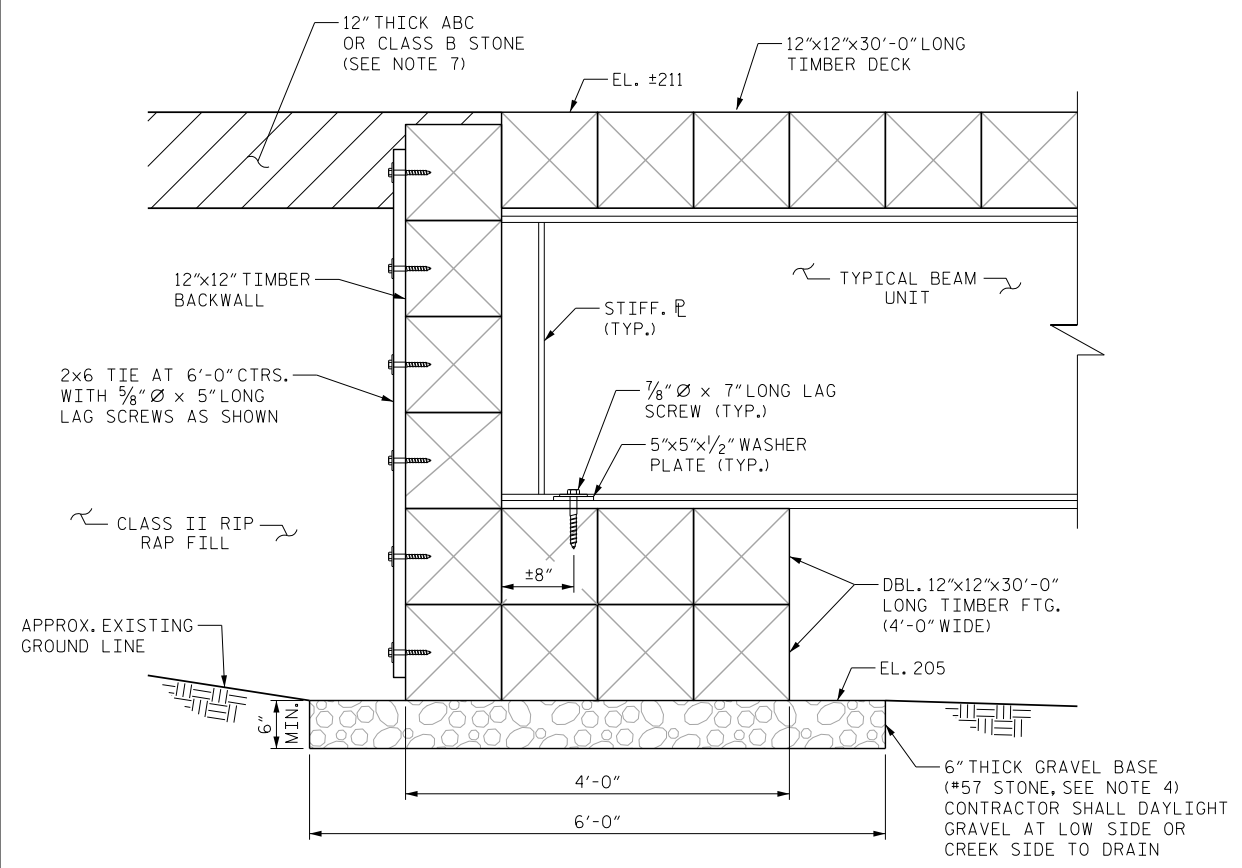
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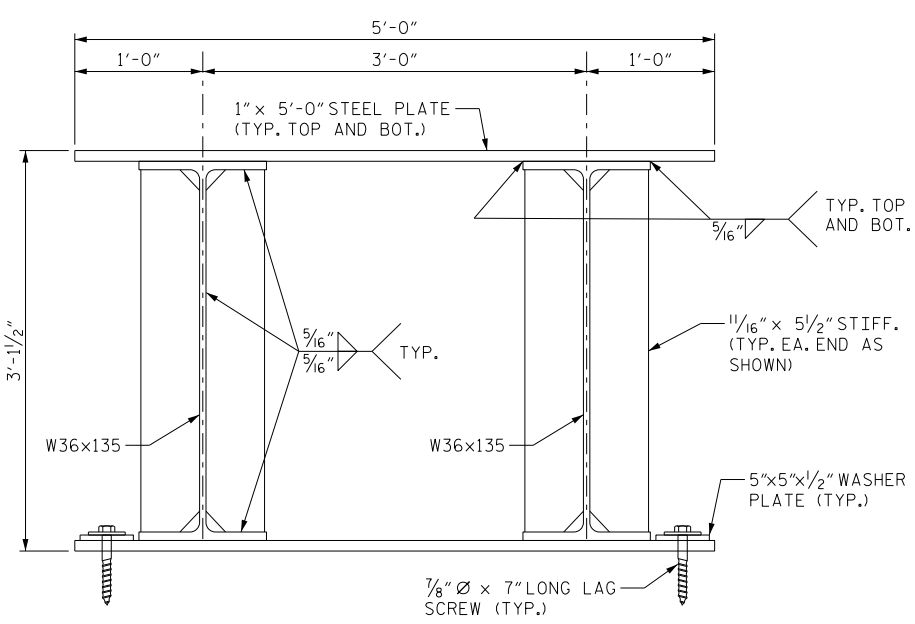
TYPICAL SECTION AT BRIDGE



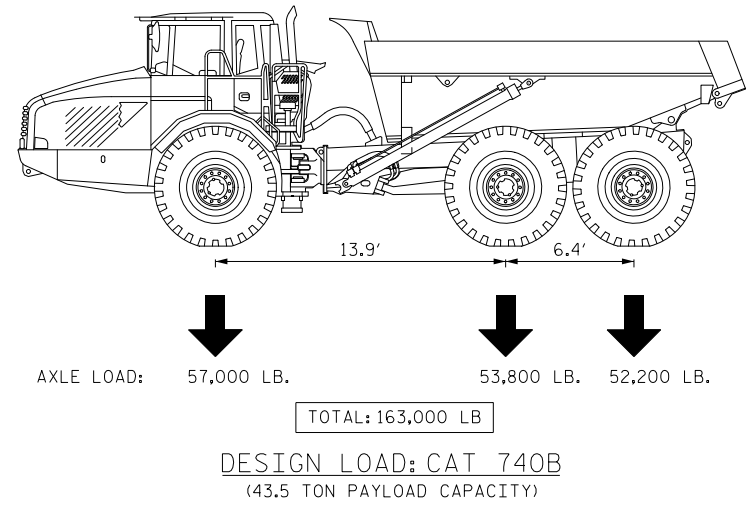
CLIP PLATE
 SAME AS CLIP FROM TRESTLE AT STR. 9/10



TYPICAL END BENT



TYPICAL BEAM DETAIL
 SAME AS BEAM FROM TRESTLE AT STR. 9/10



NOTE: BRIDGE IS ALSO RATED FOR HS20 (TYPICAL LEGAL LOAD TRUCKS)

3/28/2017 1:Jobs\2014 Jobs\C14-70 Fayetteville Outer Loop - Cont\Task 91 (HaulRoad)\Cadd\FinalDrawings.dgn AMC

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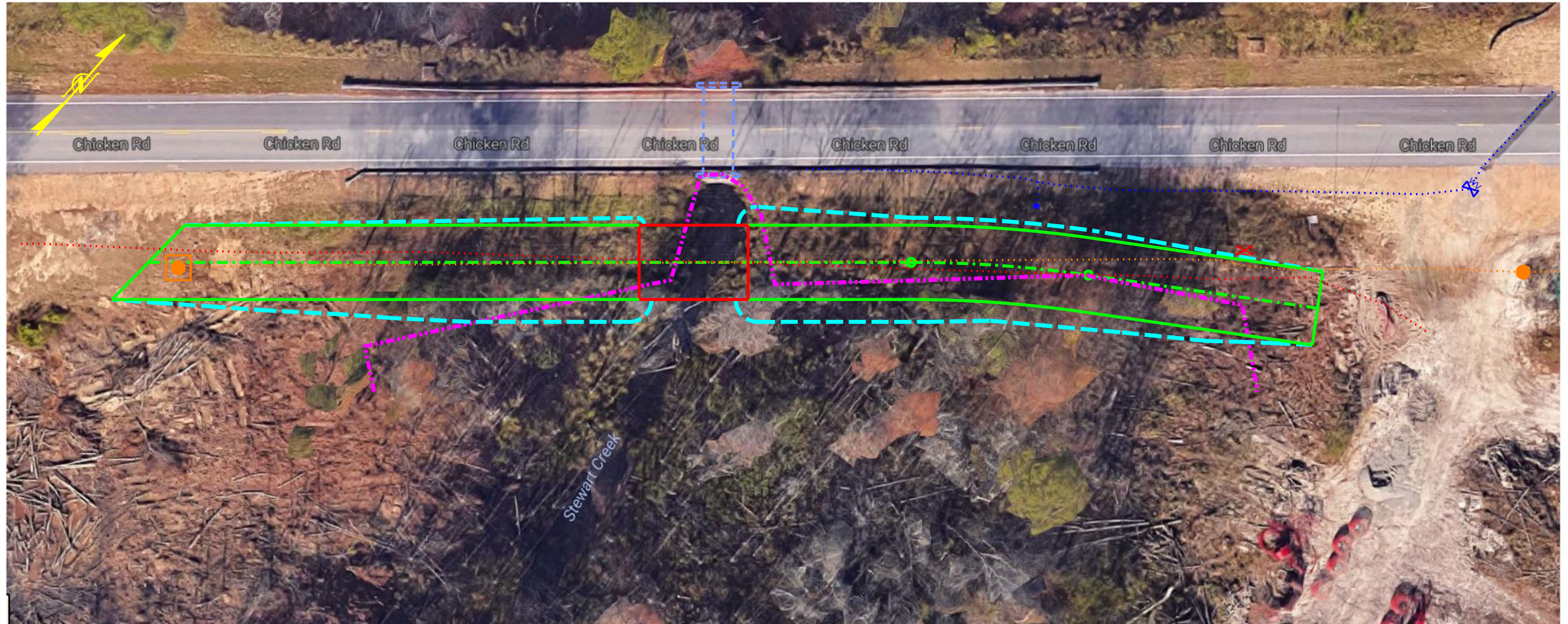
Andrew Craig
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 037375
 ENGINEER
 ANDREW M. CRAIG
 3-28-17

TEMP HAUL RD.
 FAYETTEVILLE OUTER LOOP
 NEAR STR. #5 AND #6

CUMBERLAND COUNTY, NC
 NCDOT TIP PROJ.: U-2519CB
 CONTRACTOR REF. #C14-70


KCI #25157442

DES. BY : AMC	CKD. BY : JCM	DATE : 3/17	SCALE : NONE	SHEET NO. : 2 OF 2
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FOR INFORMATION ONLY
SEE PLANS FOR DETAILS AND DIMENSIONS

##USERNAME##DATE## ##FILE##

 KCI ASSOCIATES OF NC www.kci.com	ENGINEERS	KCI ASSOCIATES OF NORTH CAROLINA, P.A. 9711 SOUTHERN PINE BLVD SUITE A CHARLOTTE, NC 28273 704-499-9452
	PLANNERS	
	SCIENTISTS	
	CONSTRUCTION MANAGERS	

TEMP HAUL RD.
FAYETTEVILLE OUTER LOOP
NEAR STR. #5 AND #6

CUMBERLAND COUNTY, NC KCI #25157442
NCDOT TIP PROJ.: U-2519CB CONTRACTOR REF. #C14-70

DES. BY :	CKD. BY :	DATE :	SCALE :	SHEET NO.:
AMC		3/17	NONE	1 OF 1