

MINIMUM CRITERIA DETERMINATION CHECKLIST

**TIP Project No.**                B-4935      
**W.B.S. Project No.**          40154.1.1    

**Project Location:** Bridge No. 120 on SR 1003 over a Branch of Deep Creek in Halifax County

**Project Description:** The proposed project involves replacing Bridge No. 120 on SR 1003 (Moonlight Road) over a branch of Deep Creek in Halifax County. The proposed project is included in the 2016-2025 North Carolina State Transportation Improvement Program (STIP). Right of way acquisition and construction are scheduled for state fiscal years 2018 and 2019, respectively, in the draft 2017-2027 STIP.

The replacement structure will be a bridge approximately 70 feet long providing a 30-foot ten-inch clear roadway width. The bridge will include two 12-foot lanes and three-foot five-inch offsets. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be raised to match the existing low steel elevation of the existing bridge.

Construction along SR 1003 will extend approximately 250 feet from the south end and 225 feet from the north end of the new bridge. The existing approaches will be widened to 22 feet with two 11-foot lanes. Three-foot grass shoulders will be provided on each side (six-foot shoulders where guardrail is included). The roadway will be designed as a Rural Collector using Sub-Regional Tier Guidelines with a 60 mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure 1).

The total cost for the project included in the draft 2017-2027 STIP is \$575,000. Of this total, \$50,000 is for right of way acquisition and \$525,000 is for construction. Current cost estimates for the project are as follows:

Right of Way Acquisition:	\$50,000*
Utilities:	\$67,000
<u>Construction:</u>	<u>\$775,000 (offsite detour)</u>
Total:	\$892,000

\*STIP estimate.

These estimates are based on the functional design. As project development continues in the design phase, project costs will be updated.

**Purpose and Need:** The purpose of the proposed project is to replace a deficient and functionally obsolete bridge. NCDOT Bridge Management Unit records indicate Bridge No. 120 has a sufficiency rating of 50.98 out of a possible 100 for a new structure.

Bridge No. 120 is 35 feet long with a clear roadway width of approximately 24 feet. The bridge is expected to carry 1,110 vehicles per day in the design year (2039). The posted weight limit on the bridge is 20 tons for single vehicles and 29 tons for truck-tractor semi-trailers. The bridge was constructed in 1963 and is approaching the end of its useful life.

**Anticipated Permit or Consultation Requirements:** A Nationwide Permit (NWP) 3 (maintenance) and NC Water Quality Certification No. 3883 will likely be required for impacts to “Waters of the United States” resulting from this project. Other permits that may apply include a NWP No. 33 for temporary construction activities such as stream dewatering, work bridges, or temporary causeways that are often used during bridge demolition. The corresponding Water Quality Certifications (likely 4085 and 4094) will also be required.

The US Army Corps of Engineers holds the final discretion as to what permit will be required for the project.

Authorization from the NC Division of Water Resources will be required under the Tar-Pamlico River Basin Buffer Rules for project impacts to riparian buffer along the branch to Deep Creek.

**Environmental Commitments:** The list of project commitments is located at the end of the checklist.

**Pedestrian and Bicycle Accommodations:** This portion of SR 1003 is not a part of a designated bicycle route nor is a bicycle project listed in the STIP along SR 1003. No temporary bicycle or pedestrian accommodations are required for this project.

**Bridge Demolition:** The substructure of bridge No. 120 is constructed entirely of timber with a concrete deck and concrete rails. Based on standard demolition practices, it should be possible to remove with no resulting debris in the water.

#### **Alternatives Considered:**

**No Build** – The no build alternative would result in eventually closing the road. Given the volume of traffic served by SR 1003, this is not acceptable.

**Rehabilitation** – Rehabilitation of the old bridge is not practical due to its age and deteriorated condition.

**Onsite Detour** – One citizen comment was received that requested an onsite detour due to the length of the offsite detour. A temporary onsite detour was investigated, but was not recommended due to cost and increased impacts. A temporary onsite detour will add approximately \$600,000 to the construction cost of the project, which would increase the project cost by over fifty percent. The onsite detour would also increase wetland impacts of the project from 0.3 acre to 0.7 acre.

**Staged Construction** – Staged construction was not considered because of the availability of an acceptable offsite detour.

**New Alignment** – Given that the alignment for SR 1003 is acceptable, a new alignment was not considered as an alternative.

**Offsite Detour** – Bridge No. 120 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. The offsite detour for this project will include NC 125-903 and SR 1117 (Mary Chapel Road). The majority of traffic on the road is through traffic. The detour for the average road user would result in 9.3 miles of additional travel and approximately ten minutes additional travel time. School bus service in the area will be maintained by utilizing existing driveways for turnarounds.

**Public Involvement:**

A landowner notification letter was sent to all property owners affected directly by this project in February 2015. Property owners were invited to comment. One comment was received requesting the replacement bridge be built on new location just north of the existing bridge. The commenter stated “this would allow for a much improved sight distance for slow-moving, 18’+ wide farm equipment” and “would permit traffic to stay on the old roadway until construction was completed.” An onsite detour alignment was investigated to address this concern, but is not recommended due to the cost and impacts.

**PART A: MINIMUM CRITERIA**

- |  | YES                                 | NO                                  |
|--|-------------------------------------|-------------------------------------|
| 1. Will the proposed project involve land disturbing activity of more than ten acres that will result in substantial, permanent changes in the natural cover or topography of those lands? | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 2. Will the proposed project require the expenditure of more than ten million dollars in public funds?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 3. Is the proposed project listed as a type and class of activity which would qualify as a Non-Major Action under the Minimum Criteria rules?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

If “yes”, under which category?

Category #9

(Note: If either Category #8 or #15 is used, complete Part D of this checklist.)

If “yes” is selected for either Question 1 or 2 and “no” is selected for Question 3, then the project does not qualify as a Non-Major Action. A state environmental impact statement (SEIS) or state environmental assessment (SEA) will be required.

**PART B: MINIMUM CRITERIA EXCEPTIONS**

- |  | YES                      | NO                                  |
|--|--------------------------|-------------------------------------|
| 4. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Will the proposed activity endanger the existence of a species on the Department of Interior’s threatened and endangered species list?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Would the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Would the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or groundwater impacts?   | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Is the proposed activity expected to have a significant adverse effect on shellfish, finfish, wildlife, or their natural habitats?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to NCDOT?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Note: If any of Questions 4 through 11 in part B are answered “YES”, the proposed project does not qualify as a Non-Major Action. A SEIS or SEA will be required.

**PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS**

	YES	NO
<u>Ecological Impacts</u>		
12. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Does the action require the placement of fill in waters of the United States?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Does the project require stream relocation or channel changes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is the proposed action located in an Area of Environmental Concern, as defined in the Coastal Area Management Act?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Cultural Resources</u>		
17. Will the project have an “effect” on a property or site listed on the National Register of Historic Places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Question 12: Potential habitat for the federally-listed dwarf wedgemussel (*Alasmidonta heterodon*) exists in the project area in the branch of Deep Creek. Surveys for dwarf wedgemussel were conducted on June 18, 2015 and the biological conclusion was No Effect.

Although not listed for Halifax County, the US Fish and Wildlife Service has developed a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration, the US Army Corps of Engineers, and NCDOT for the northern long-eared bat (NLEB) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is “May Affect, Likely to Adversely Affect.” The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five year for all NCDOT project with a federal nexus in Divisions 1-8, which includes Halifax County.

Question 13: The new bridge will require the placement of bents in the water and rip-rap on end slopes. This work is considered placement of fill in Waters of the US. If constructed, the onsite detour alignment is anticipated to impact approximately 0.5 acres of wetland. The total project would impact approximately 0.7 acres of wetland because a portion of the wetlands impacted by the detour alignment would also be impacted by the bridge replacement. If an offsite detour is utilized, the bridge replacement will impact approximately 0.3 acres of wetland. These areas are based on the functional design slope stakes (construction limit) plus a forty-foot buffer.

**PART D: (To be completed when either category #8 or #15 of the rules is used.)**

- 19. Project length:
  - 20. Right of Way width:
  - 21. Total Acres of Disturbed Ground Surface:
  - 22. Total Acres of Wetland Impacts:
  - 23. Total Linear Feet of Stream Impacts:
  - 24. Project Purpose:
- 

Reviewed by:

9/29/2017	DocuSigned by: <i>Aaron M. Heustess</i> 6F60CB5533A14FA...
Date	Aaron Heustess, PE Consultant Project Manager Kimley-Horn and Associates, Inc

9/29/2017	DocuSigned by: <i>Gregory M. Blakeney</i> 0A7CD75F10174B5...
Date	Gregory M. Blakeney Project Planning Engineer Project Development & Environmental Analysis Unit

9/29/2017	DocuSigned by: <i>James McInnis Jr.</i> 08B0E38DDE8141B...
Date	James McInnis Jr, PE Project Engineer Project Development & Environmental Analysis Unit

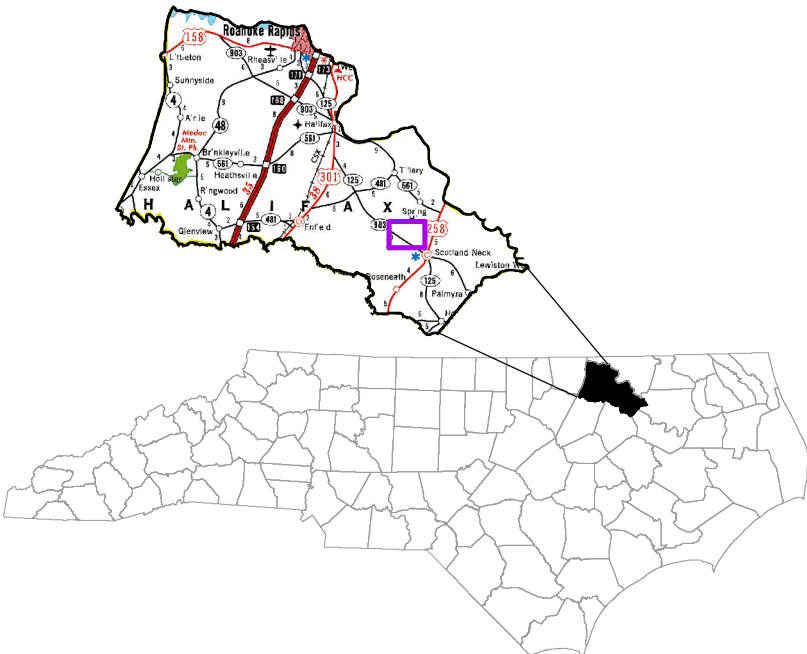
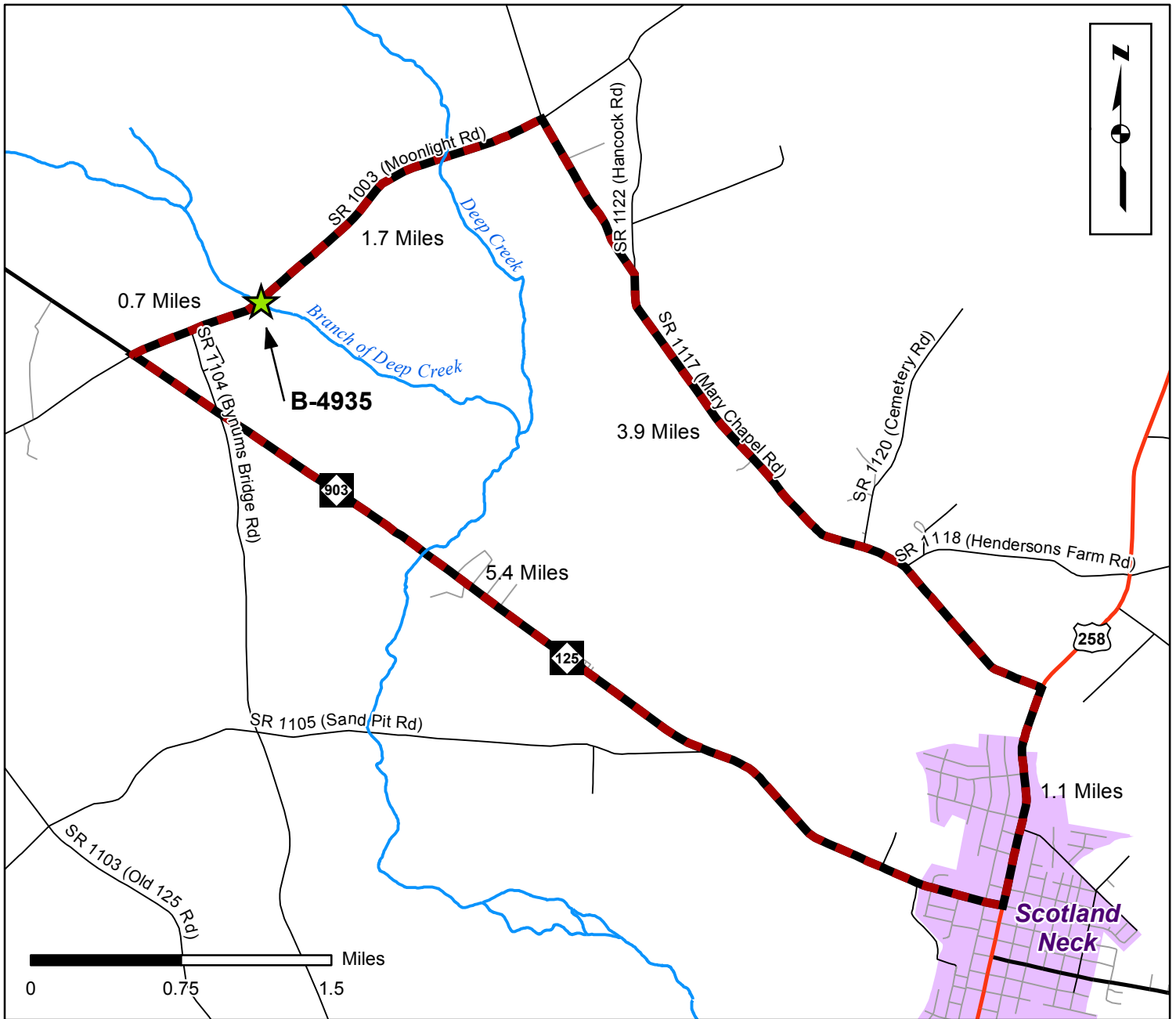
**PROJECT COMMITMENTS:**


**Halifax County  
Bridge No. 120 on SR 1003  
Over a Branch of Deep Creek  
W.B.S. No. 40154.1.1  
STIP Project B-4935**

**Division Four Construction**

In order to have time to adequately reroute school buses, Halifax County Schools will be contacted at (252) 583-2831 at least one month prior to road closure.

Halifax County Emergency Services will be contacted at (252) 583-2088 at least one month prior to road closure to make the necessary temporary reassignments to primary response units.



 B-4935 Studied Detour Route



NORTH CAROLINA DEPARTMENT OF  
TRANSPORTATION  
DIVISION OF HIGHWAYS  
PROJECT DEVELOPMENT &  
ENVIRONMENTAL ANALYSIS UNIT

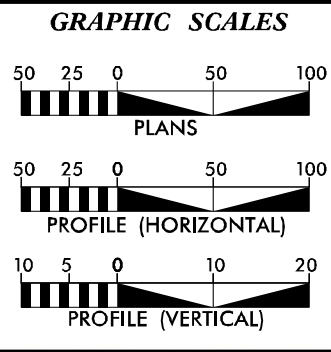
**HALIFAX COUNTY  
REPLACE BRIDGE NO. 120 ON SR 1003  
OVER A BRANCH OF DEEP CREEK  
TIP PROJECT B-4935  
VICINITY MAP**

Figure 1



**DESIGN DATA**

- a. SUB-REGIONAL TIER
- b. DS = 60 MPH
- c. ADT (2019) = 590 VPD
- d. ADT (2039) = 1110 VPD
- e. DHV = UNKNOWN
- f. DIR = UNKNOWN
- g. DUAL = UNKNOWN
- h. TTST = 6%
- i. MIN RADIUS = 1500'
- j. MAX GRADE = 5%
- k. SE MAX = 0.04
- l. K SAG = 136
- m. K CREST = 151
- n. RURAL COLLECTOR
- o. LEVEL TERRAIN
- p. NO DESIGN EXCEPTIONS



**FUNCTIONAL DESIGN**  
 B-4935  
 REPLACE BRIDGE 120 OVER A  
 BRANCH OF DEEP CREEK ON SR 1003  
 HALIFAX COUNTY

-L-  
 PI Sta. 17+34.27  
 $\Delta = 22^\circ 22' 42.8''$  (LT)  
 $D = 5^\circ 45' 56.8''$   
 $L = 388.13'$   
 $T = 196.65'$   
 $R = 994.14'$   
 $SE = 0.04$   
 DS = 50 MPH

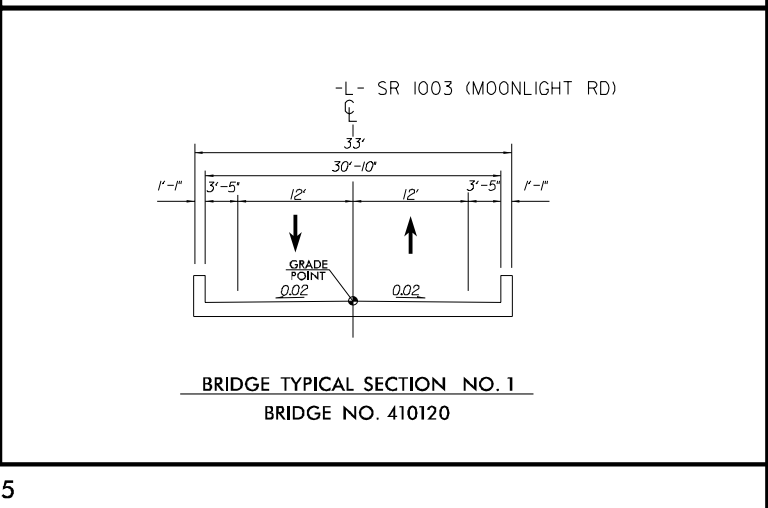
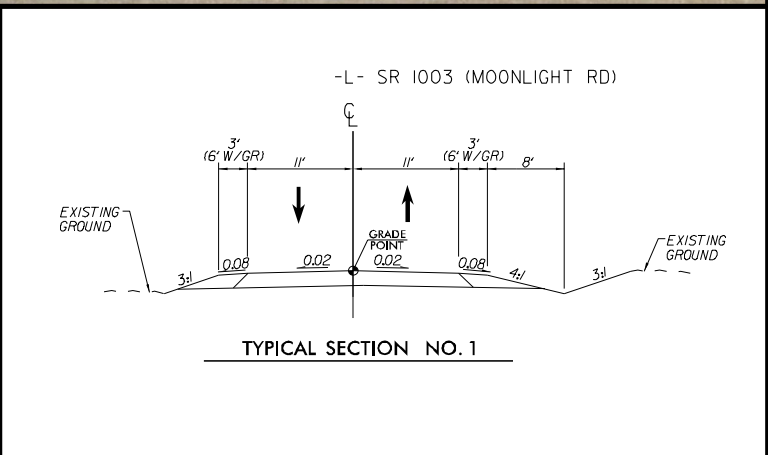
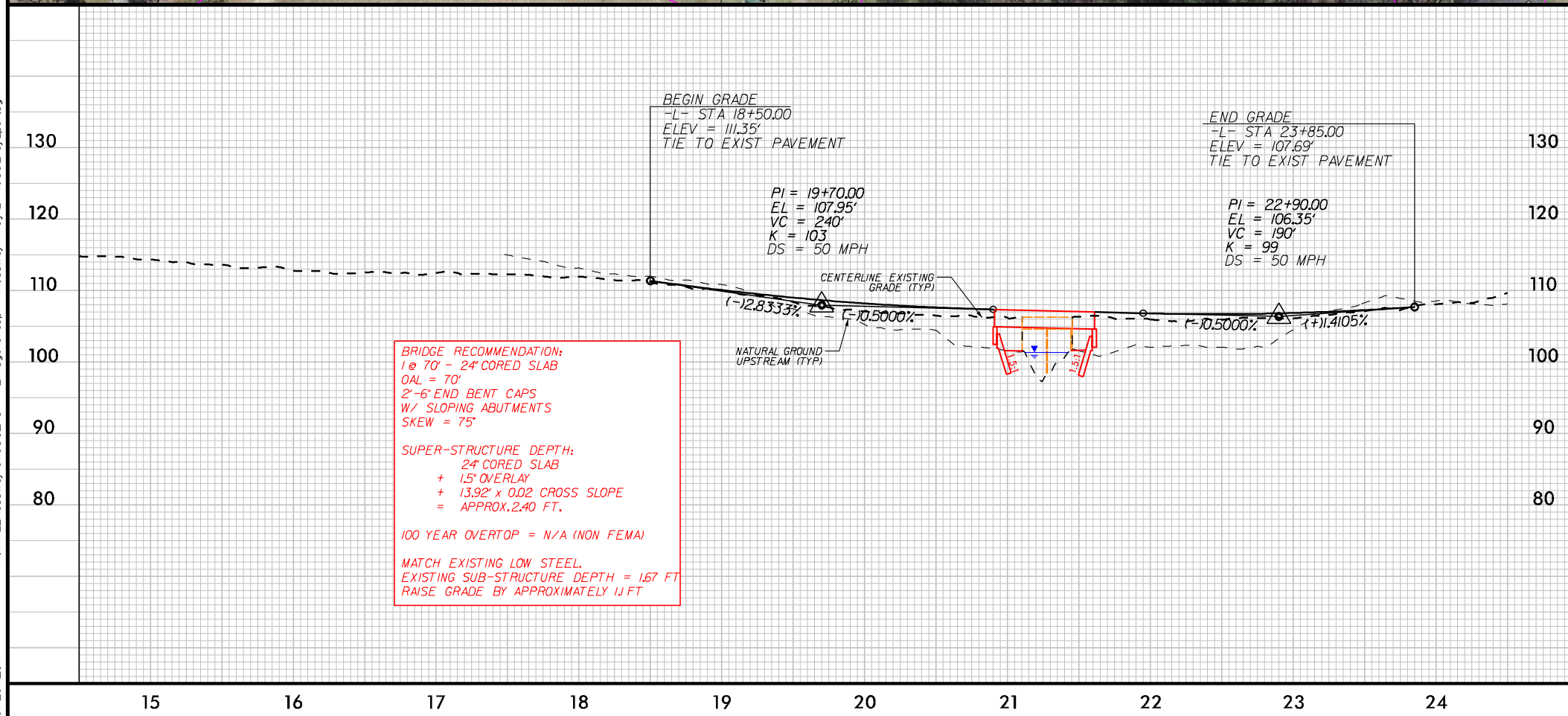
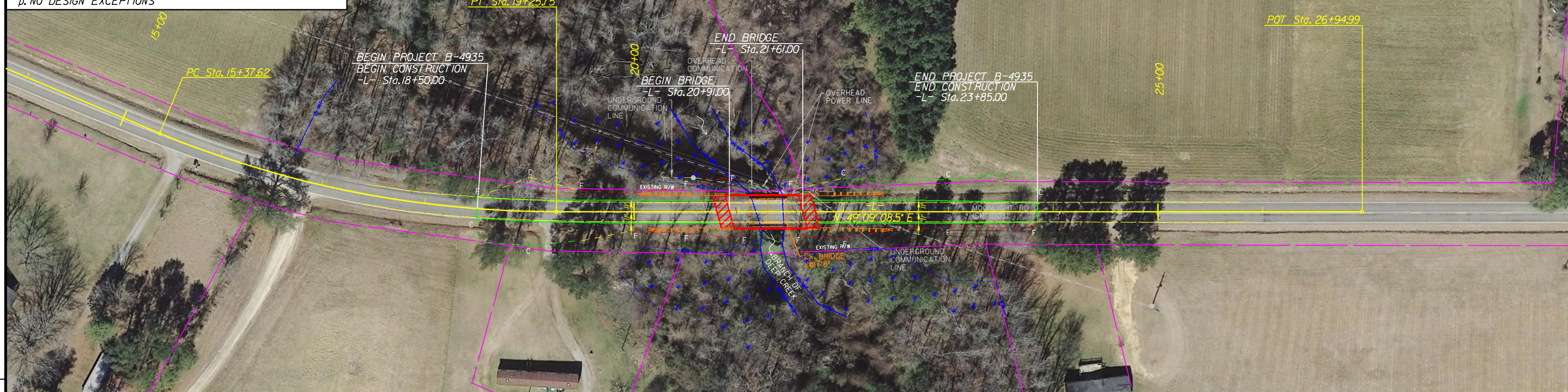
PROJECT REFERENCE NO. B-4935	SHEET NO. 4
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**Kimley Horn**

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

REVISIONS



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