

MINIMUM CRITERIA DETERMINATION CHECKLIST

TIP Project No.: B-5818

State Project No.: 45771.1.1

Project Location: Bridge No. 11 over Deadfall Creek on NC 109 in Anson County

Project Description: The North Carolina Department of Transportation (NCDOT) plans to replace Bridge No. 11 on NC 109 over Deadfall Creek (Refer to Figure 1). The existing bridge has two 10-foot lanes, is approximately 120 feet long with a reinforced concrete deck girder superstructure and was built in 1936. The project is scheduled for right of way acquisition in November 2019 and let in November 2020. The project would require a realignment of NC 109, with a project length of approximately 2,500 feet long. Minor ROW acquisition will be required (Refer to Appendix A).

Purpose and Need: NCDOT Bridge Management Unit records indicate Bridge No. 11 has a sufficiency rating of 49.51 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to a substructure condition appraisal of 4 out of 9 according to Federal Highway Administration (FHWA) standards, and is approaching the end of its useful life.

Anticipated Permit or Consultation Requirements: The proposed project has been designated as a Minimum Criteria Determination Checklist for the purposes of State Environmental Policy Act (SEPA) documentation. It is anticipated that a Nationwide or Regional General Permit, along with its corresponding Water Quality Certification (WQC), will be applicable for this project. A Nationwide Permit (NWP) 33 may also apply for temporary construction activities such as stream dewatering, work bridges, or temporary causeways that are often used during bridge construction or rehabilitation. The U.S. Army Corps of Engineers (USACE) holds the final discretion as to what permit will be required to authorize project construction. If a Section 404 permit is required, then a Section 401 WQC from the North Carolina Division of Water Quality (NCDWR) will be needed.

Special Project Information:

Environmental Commitments: Greensheet commitments are located at the end of the checklist.

Estimated Costs (Pending): The estimated costs, FY 2018, are as follows:

Utility	\$	78,900	(NCDOT)
R/W	\$	11,000	(NCDOT)
Const.	\$	4,580,000	(STV Engineers Inc.)
Total	\$	4,669,900	

Estimated Traffic:

Current 2018 1,320 vpd
Year 2040 2,640 vpd
Trucks 7%

Accidents: A crash analysis was completed on January 27, 2017, by HNTB North Carolina, P.C., on this section of NC 109 from 500 feet southwest of Bridge No.11 to 500 feet northeast of the bridge.

The crash analysis was performed using NCDOT’s TEAAS system with a study period of ten years, from December 1, 2006, to November 30, 2016. Five crashes were found occurring in the vicinity of the project. Four of the five crashes occurred at nighttime. The majority of the crashes involved single unit trucks or tractor trailers.

Design Exceptions: There are no anticipated design exceptions for this project.

Pedestrian and Bicycle Accommodations: NC 109 is not a designated NCDOT bike route, however there is an Anson County Bicycle route that follows the boundaries of the DCIA along George Ratliff Road and Long Pine Church Road. There are no existing sidewalks along the corridor, and no pedestrians were noted in the site visits.

Alternatives Discussion:

No Build – The no build alternative would not replace a deficient bridge, and thus is not a viable option.

Rehabilitation – Rehabilitation would only provide a temporary solution to the structural deficiency of the bridge.

New Alignment with Onsite Detour (Preferred Alternative) – A new alignment for NC 109 is preferred due to the cost of a temporary bridge (Refer to Appendix A). In addition, due to concerns regarding the number of school buses using the bridge and EMS response time, an offsite detour was not feasible. Therefore, an onsite detour will be utilized to maintain traffic on the existing roadway during construction of the new bridge.

Offsite Detour – According to the Division 10 Bridge Program Manager, an offsite detour was evaluated but was not acceptable because the approximate nine-mile detour route requires travel over Anson Bridge 212, which is a single lane bridge that does not have the capacity for NC 109 traffic volumes. In addition, concerns were raised by Anson County Schools and Anson County EMS regarding the length of the offsite detour and how it would affect school bus routes and EMS response times.

Agency Comments: Start of Study letters were sent to Anson County, Rocky River RPO, the NC Department of Parks and Recreation, NCDENR, NC Division of Bicycle and Pedestrian Transportation, and the US Army Corps of Engineers in December of 2015. Comments were received from the Rocky River RPO that noted the large amount of logging trucks in the area surrounding the bridge.

Input forms were sent to the Anson County Emergency Services Chief, Anson County Interim Planner and Zoning, and the Anson County Schools Transportation Administrator in April and May of 2016. Comments were received back by all three in April and May of 2016. All three noted moderate impacts would occur if the bridge were closed for up to a year.

Floodplain: Deadfall Creek, which crosses under Bridge No. 11, is located in a FEMA Zone AE Floodplain Zone. The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP) to determine status of project with regard to applicability of NCDOT’S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR). This is noted in the project commitments.

Public Involvement: A landowner notification letter was sent on February 16, 2016, to all property owners affected directly by this project to inform them of representatives being present on their property. Property owners were invited to comment. No comments have been received to date.

PART A: MINIMUM CRITERIA

- | | | |
|--|-------------------------------------|--------------------------|
| | YES | NO |
| 1. Is the proposed project listed as a type and class of activity allowed under the Minimum Criteria Rule in which environmental documentation is <u>not</u> required? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

If the answer to number 1 is “no”, then the project does not qualify as a minimum criteria project. A state environmental assessment is required.

If yes, under which category? Category #8
 (Highway or railway modernization by means of the following activities, which involve less than a total of 10 cumulative acres of ground surface previously undisturbed by highway or railway construction, limited to a single project, noncontiguous to any other project making use of this provision:
 a) resurfacing, restoration, or reconstruction;)

If either category #8, #12(i) or #15 is used complete Part D of this checklist.

PART B: MINIMUM CRITERIA EXCEPTIONS

- | | | |
|---|--------------------------|-------------------------------------|
| | YES | NO |
| 2. Could 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"/> |

- 3. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment?
- 4. 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 the Department?
- 5. 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?
- 6. Will the proposed activity endanger the existence of a species on the Department of Interior's threatened and endangered species list?
- 7. Could the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or ground water impacts?
- 8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits or shellfish, finfish, wildlife, or their natural habitats?

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 9. 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"/> |
| 10. Does the action require the placement of temporary or permanent fill in waters of the United States? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. 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"/> |
| 12. 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"/> |
| 13. Does the project require stream relocation or channel changes? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Cultural Resources

- 14. Will the project have an “effect” on a property or site listed on the National Register of Historic Places?

15. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas?

Response to Question 9:

Habitat for the Carolina Heelsplitter (*Lasmigona decorata*) and the Atlantic Pigtoe (*Fusconaia masoni*) exists within the project study area. A review of the North Carolina Natural Heritage Program (NCNHP) database was conducted to determine if there were any records of rare mussels within the proposed project study area or receiving waters. This review indicated that the closest occurrence of the Carolina Heelsplitter occurred in Goose Creek, Union County, North Carolina, in 2015 (NCNHP). Goose Creek is greater than 100 stream miles from Deadfall Creek. The closest occurrence of the Atlantic Pigtoe occurred in the Little River in Montgomery County in 1987, which is greater than 75 stream miles from the project site (NCNHP). No dams exist along the main channel of Deadfall Creek. A mussel survey was conducted for these species on October 20, 2016. Given low abundances of other freshwater mussel taxa within the surveyed reach, and the distance to any recent element occurrences (see above data), the biological conclusion associated with this project for the Carolina Heelsplitter and Atlantic Pigtoe is “**No Effect.**”

Response to Question 10:

All measures will be taken to avoid permanent fill impacts. Temporary impacts from debris may result from demolition of the existing bridge which will occur after traffic has been routed to the new alignment.

PART D : (To be completed when either category #8, 12(i) or #15 of the rules are used.)

- 16. Project length: 2,500 feet
- 17. Right of Way width: Existing ROW: 60 feet
Proposed ROW: 80 feet
- 18. Project completion date: ROW Date: November 2019
LET Date: November 2020
- 19. Total acres of newly disturbed ground surface: 4.4 acres
- 20. Total acres of wetland impacts: 0
- 21. Total linear feet of stream impacts: Approximately 120 feet of temporary impacts
- 22. Project purpose: Replace bridge 030011 over Deadfall Creek

Reviewed by: DocuSigned by:
Elizabeth Scott
E37A1285A92246A Date: 11/7/2018
Elizabeth Scott, EI, STV Engineers Inc.

DocuSigned by:
Garland Haywood
986D887B90E4204 Date: 11/8/2018
Garland Haywood, PE, NCDOT Division
Bridge Program Manager

DocuSigned by:
Kevin Fischer
ED30A18D08EC406 Date: 11/26/2018
Kevin Fischer, PE, NCDOT Structures
Management Unit

PROJECT COMMITMENTS
Bridge No. 11 over Deadfall Creek on NC 109 in Anson County
WBS No. 45771.1.1
STIP B-5818

Structures Management Unit, Project Manager

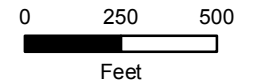
FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).



This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.



**FIGURE 1-
LOCATION MAP**



LEGEND

-  Bridge Location
-  Project Study Area
-  Floodplain
-  NWI Wetlands
-  Parcel
-  Water Body
-  Stream

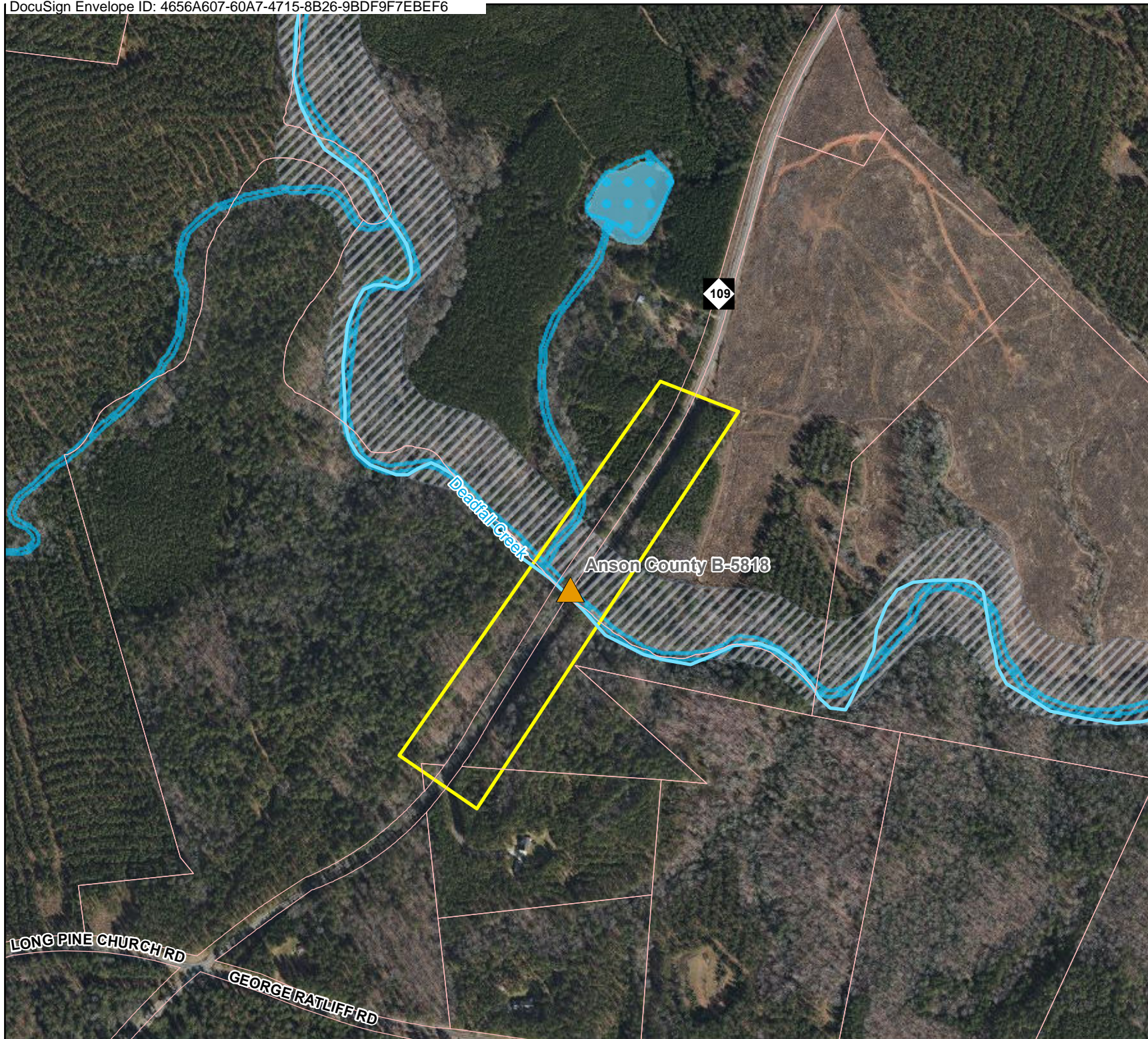


Source: USDA Geospatial Gateway; NCOneMap; USFWS

TIP Project B-5818

**Bridge Replacement
Bridge No. 11
over Deadfall Creek
on NC 109
Anson County**

October 2018



Appendix A

8/17/99

STV 100 Years
 STV Engineers, Inc.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
B-5818	1
RW SHEET NO.	

ANSON COUNTY

B-5818 BRIDGE #011

PREFERRED CONCEPT

NEW ALIGNMENT (WITH BRIDGE)

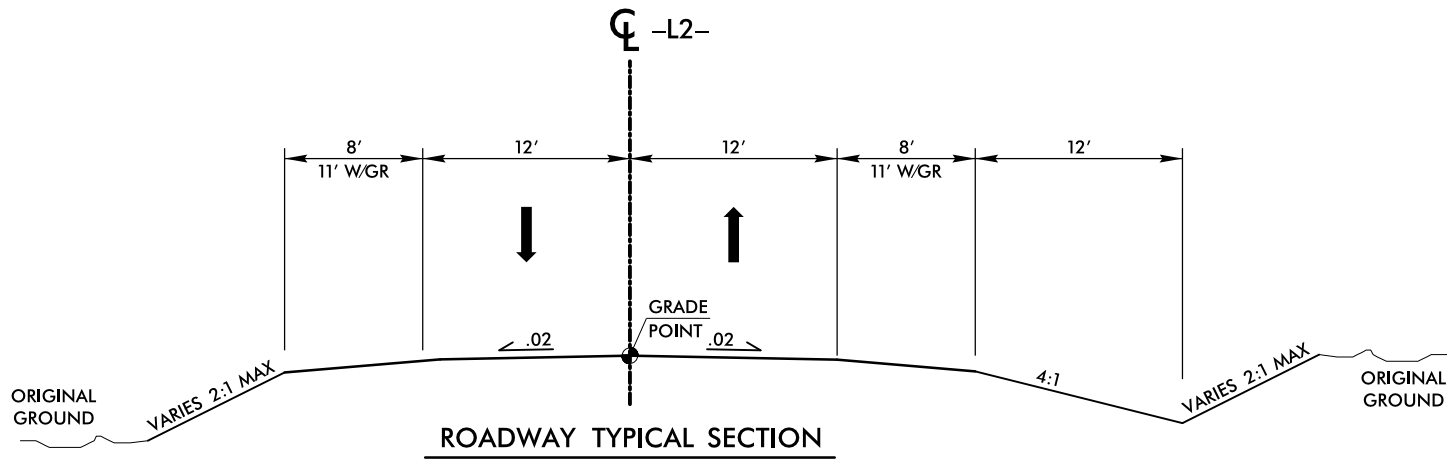
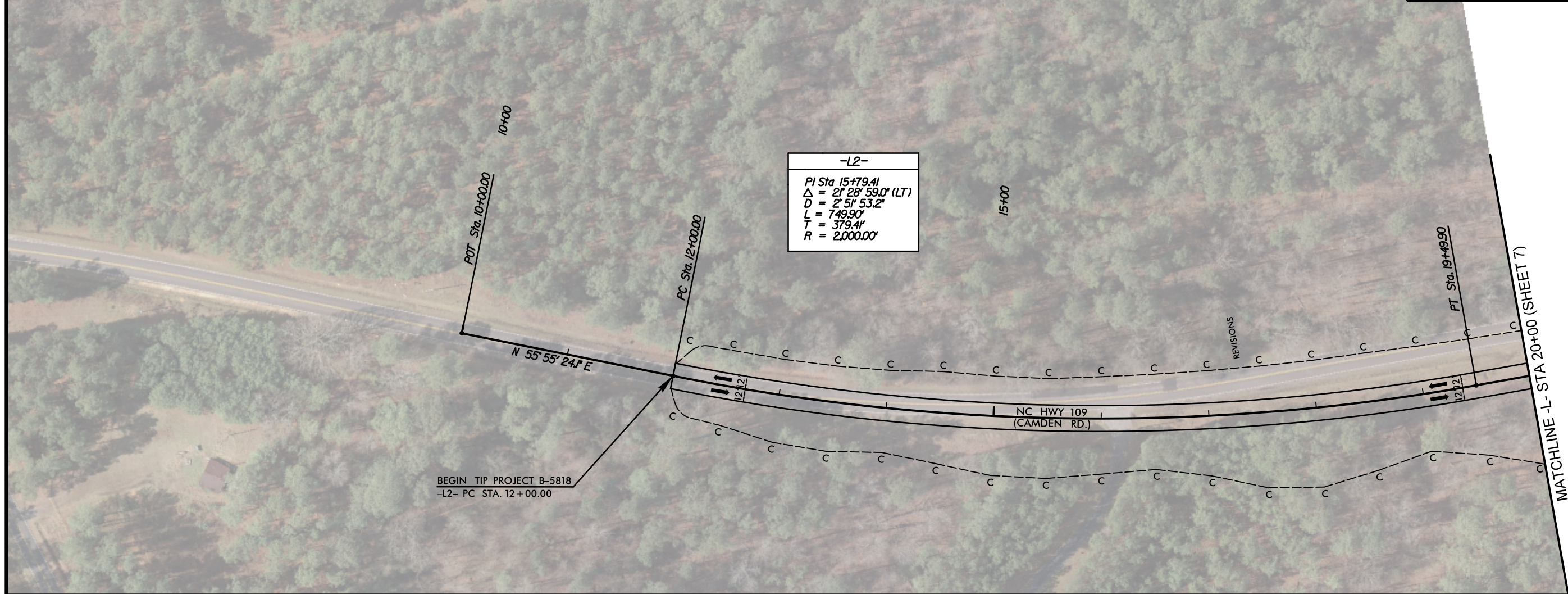
MAINTAIN TRAFFIC ON EXISTING



CONCEPT DATED
9/27/2018

CONCEPT PLANS
 SUBJECT TO CHANGE WITHOUT NOTICE

DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA	
DESIGN STANDARDS	= REGIONAL
DESIGN SPEED	= 55 MPH
ADT 2018	= 1,320
ADT 2043	= 2,640
T	= 7%
MIN. RADIUS	= 1190'
MAX. GRADE	= 7%
FUNC. CLASS	= MAJOR COLLECTOR
TERRAIN	= ROLLING
DESIGN EXCEPTION	= NONE

BRIDGE LENGTH	= 130'
BRIDGE SKEW	= 90°
BRIDGE TYPE	= GIRDER BRIDGE

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8/17/99

STV 100 Years
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 900 West Trade St., Suite 715
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PROJECT REFERENCE NO.	SHEET NO.
B-5818	2
RW SHEET NO.	

ANSON COUNTY

B-5818 BRIDGE #011

PREFERRED CONCEPT

NEW ALIGNMENT (WITH BRIDGE)

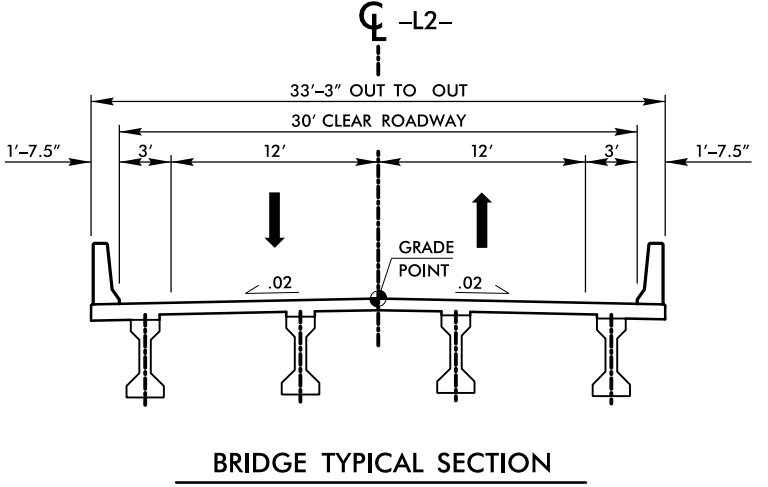
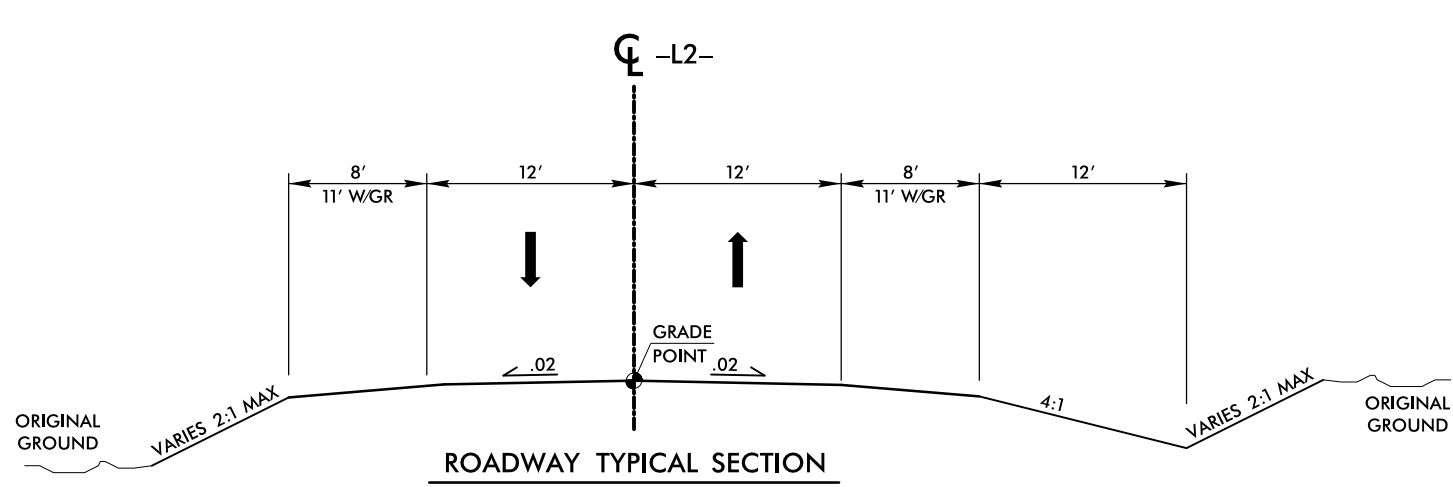
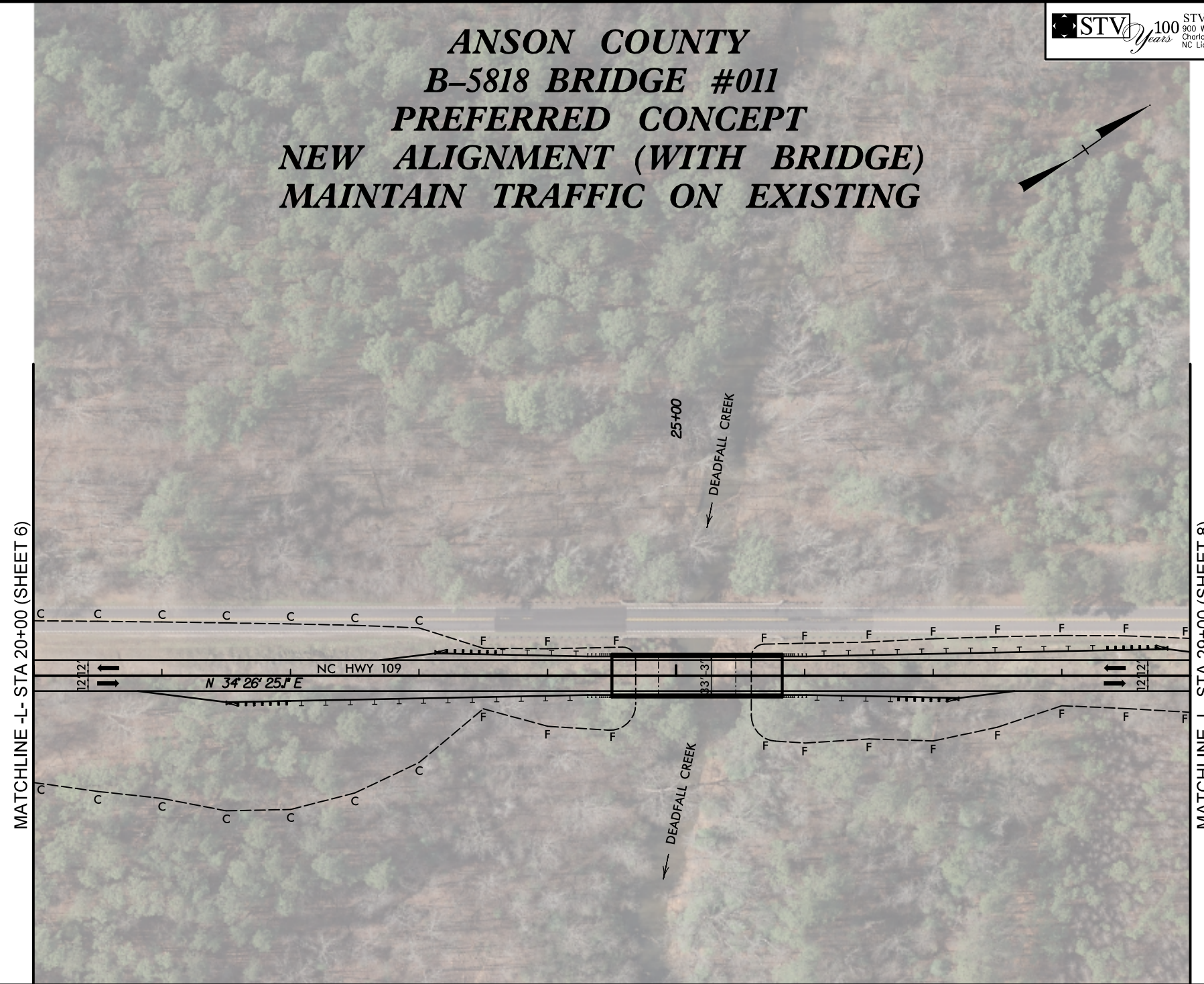
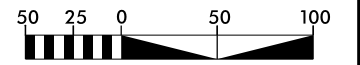
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 modeling

8/17/99

STV 100 Years
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PROJECT REFERENCE NO.	SHEET NO.
B-5818	3
RW SHEET NO.	

ANSON COUNTY

B-5818 BRIDGE #011

PREFERRED CONCEPT

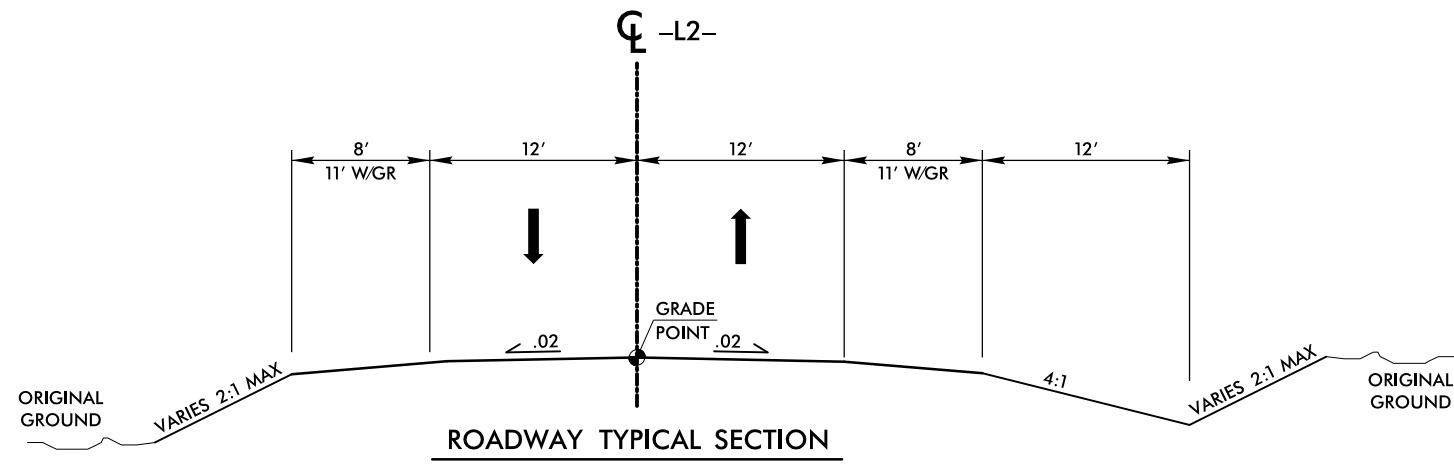
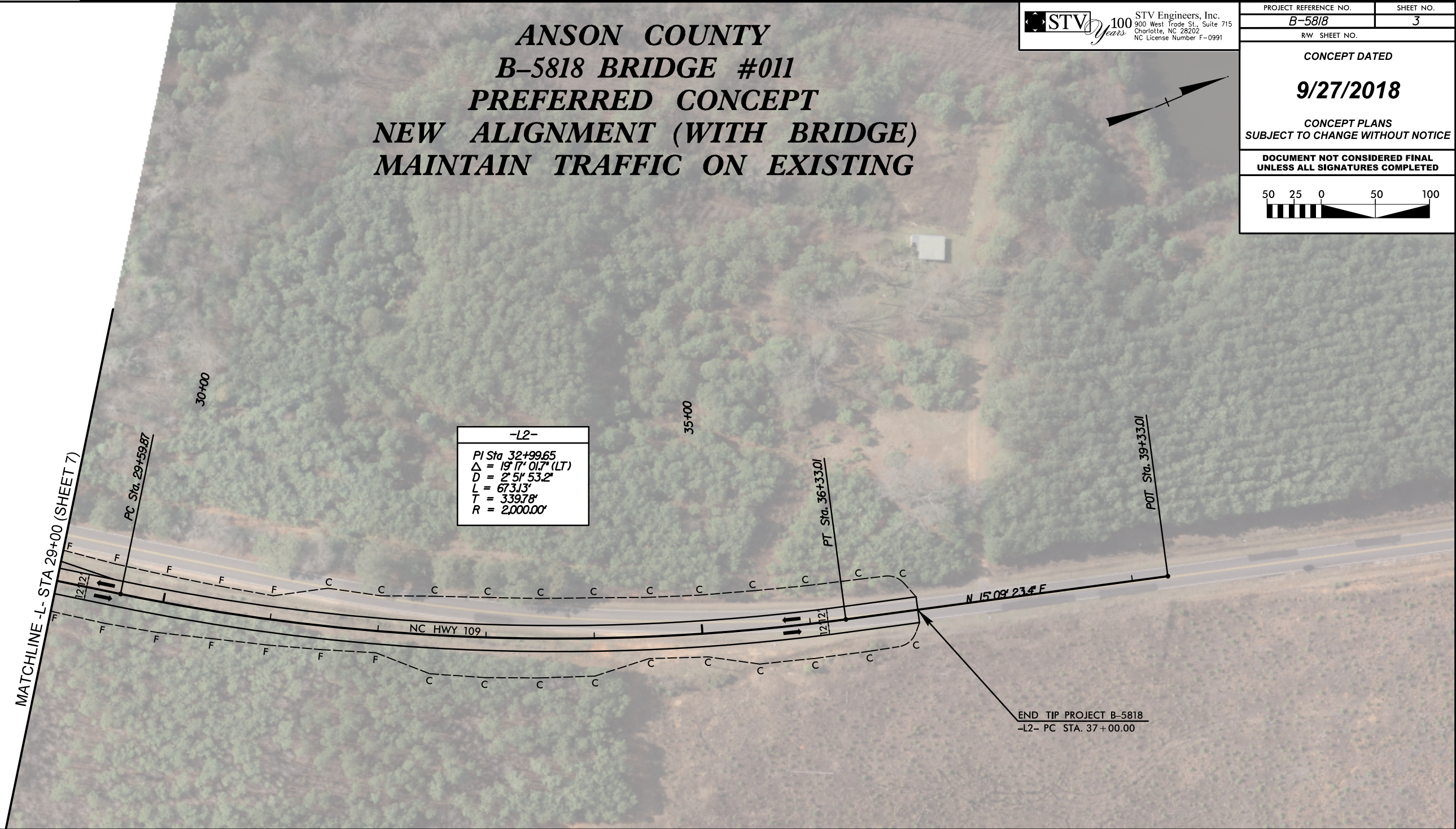
NEW ALIGNMENT (WITH BRIDGE)

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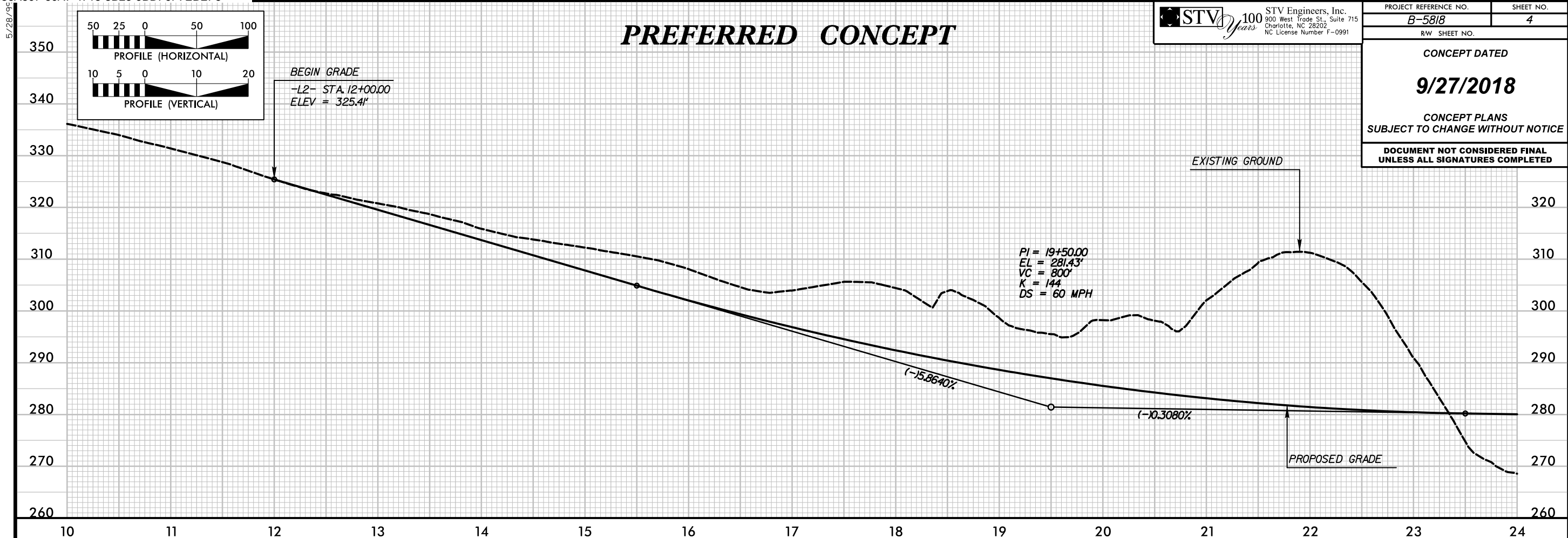
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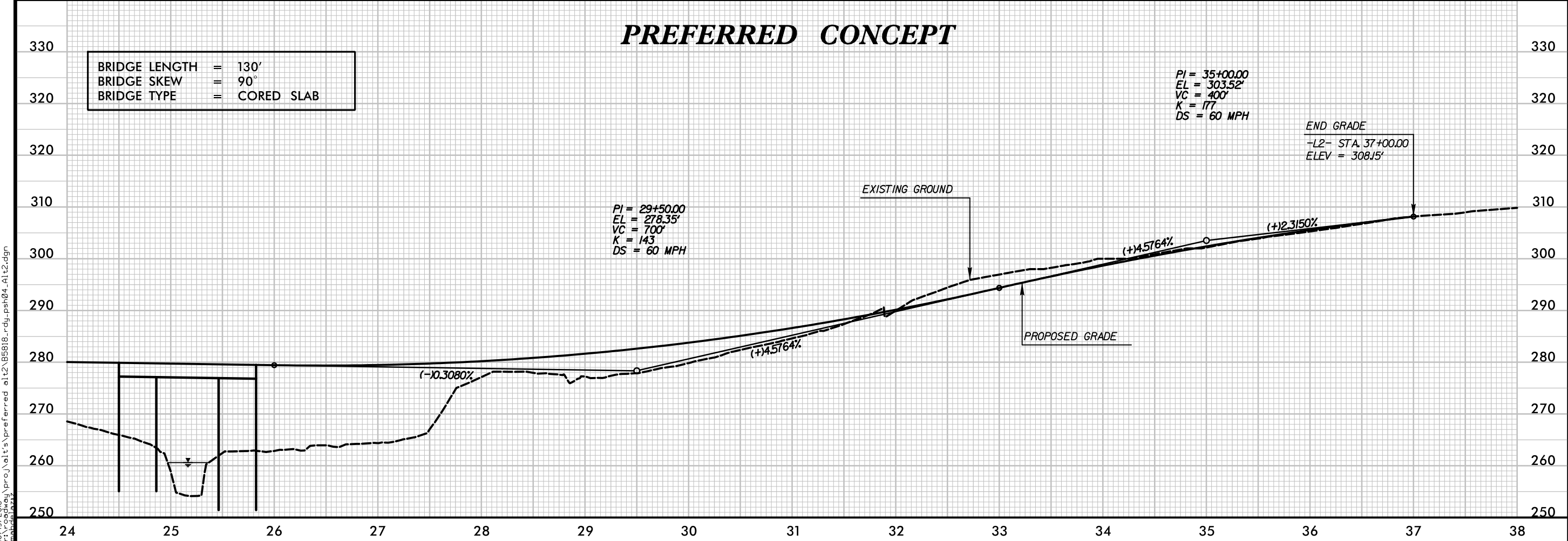
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B-5818	4
RW SHEET NO.	
CONCEPT DATED	
9/27/2018	
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PREFERRED CONCEPT



PREFERRED CONCEPT



North Carolina Department of Transportation
 Preliminary Estimate

TIP No. **B-5818**

Func

County: Anson

Route
 From
 Typical Section

CONSTR. COST
\$4,580,000

Prepared By: G. McCauley
 Requested By:

Date 9/27/2018
 Date

Line Item	Des	Sec No.	Description	Quantity	Unit	Price	Amount
			Clearing and Grubbing	1.0	Acre	\$ 20,000.00	\$ 20,000.00
			Earthwork	50,000	CY	\$ 30.00	\$ 1,500,000.00
			Drainage New Location	0.02	Miles	\$ 200,000.00	\$ 4,000.00
			Fine Grading	6,910	SY	\$ 10.00	\$ 69,100.00
			New Pavement	6,910	SY	\$ 75.00	\$ 518,250.00
			Pavement Resurfacing		SY	\$ 20.00	\$ -
			Erosion Control	1.5	Acres	\$ 50,000.00	\$ 75,000.00
			Traffic Control	1.0	LS	\$ 20,000.00	\$ 20,000.00
			Thermo and Markers	0.5	Miles	\$ 30,000.00	\$ 15,000.00
			Structures				
			ML / Creek 33'3"Wx 132.5'L	4,410.00	SF	\$ 150.00	\$ 661,500.00
				1.00			
			Misc. & Mob (15% Strs&Util)				\$ 99,225.00
			Misc. & Mob (45% Functional)				\$ 999,607.50

Lgth 0.47 Miles

Contract Cost \$ 3,981,682.50
E. & C. 15% \$ 597,252.38
Construction Cost **\$ 4,578,934.88**