



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.07; Released October 2016)

WBS Element: 38559.1.2 TIP No.: B-4789 County(ies): Pitt Page 1 of 1

General Project Information

WBS Element:	38559.1.2	TIP Number:	B-4789	Project Type:	Bridge Replacement	Date:	9/6/2017
NCDOT Contact:	Galen Cail		Contractor / Designer:	James Rice			
	Address:	1000 Birch Ridge Dr. Raleigh, NC 27610		Address:	555 Fayetteville St., Suite 300 Raleigh, NC 27601		
	Phone:	919-707-6711		Phone:	919-232-6621		
	Email:	gcail@ncdot.gov		Email:	james.rice@hdrinc.com		
City/Town:	Bethel		County(ies):	Pitt			
River Basin(s):	Tar-Pamlico		CAMA County?	No			
Wetlands within Project Limits?	No						

Project Description

Project Length (lin. miles or feet):	0.07 mi	Surrounding Land Use:	Rural/Agricultural					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	0.3	ac.	0.3	ac.				
Typical Cross Section Description:	2 lane road: (2) 10 foot travel lanes with 3 foot paved shoulders - Total width of 26'			2 lane road: (2) 10 foot travel lanes - Total width of 20'				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	80	Year:	2040	Existing:	40	Year:	2013
General Project Narrative: (Description of Minimization of Water Quality Impacts)	The bridge on Alpine Taylor Road (SR 1424) is being replaced. The existing 50' long bridge will be replaced with a 2 span cored slab bridge with an overall length of 85 feet. Impacts were minimized to the surrounding area by maintaining existing drainage ditches where feasible. Deck drains will not be required for the proposed bridge; bridge deck drainage will be collected off the bridge and discharged outside of the buffer area. Reworked driveways will be constructed of earthen material limiting the addition of impervious area to the project site.							

Waterbody Information

Surface Water Body (1):	Grindle Creek		NCDWR Stream Index No.:	28-100			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C					
	Supplemental Classification:	Nutrient Sensitive Waters (NSW)					
Other Stream Classification:							
Impairments:	pH						
Aquatic T&E Species?	Comments:						
NRTR Stream ID:				Buffer Rules in Effect:	Tar-Pamlico		
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	N/A		
Deck Drains Discharge Over Water Body?	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
	(If yes, provide justification in the General Project Narrative)						

09.08/99

See Sheet 1A-1 for Index of Sheets
See Sheet 1B for Sheet Symbology

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

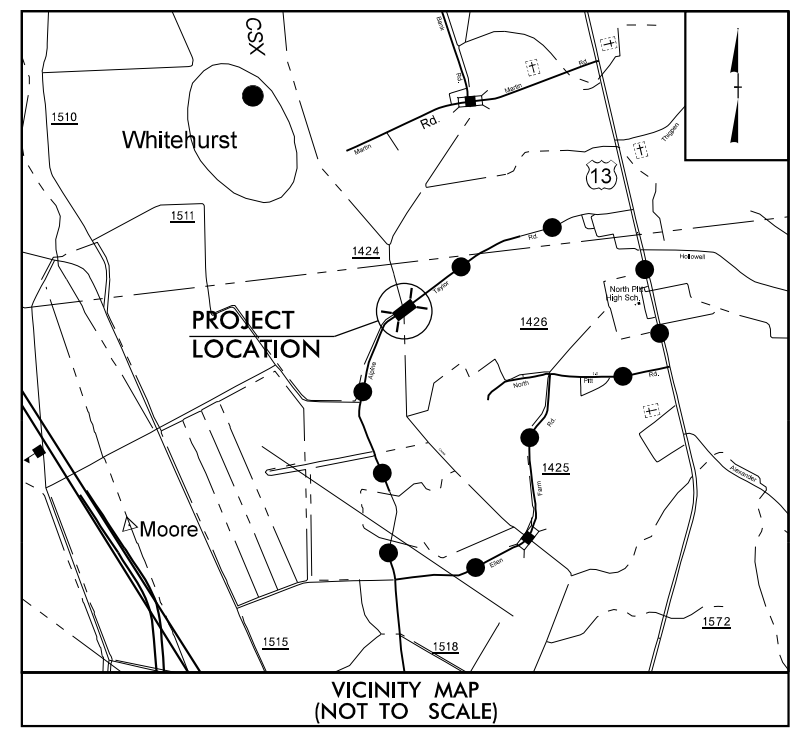
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4789	1	11
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38559.1.2	N/A	P.E.	

PITT COUNTY

LOCATION: BRIDGE #164 OVER GRINDLE CREEK ON SR 1424

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

TIP PROJECT: B-4789

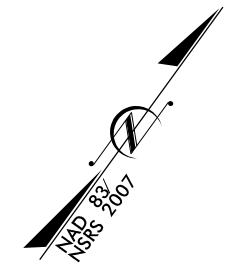
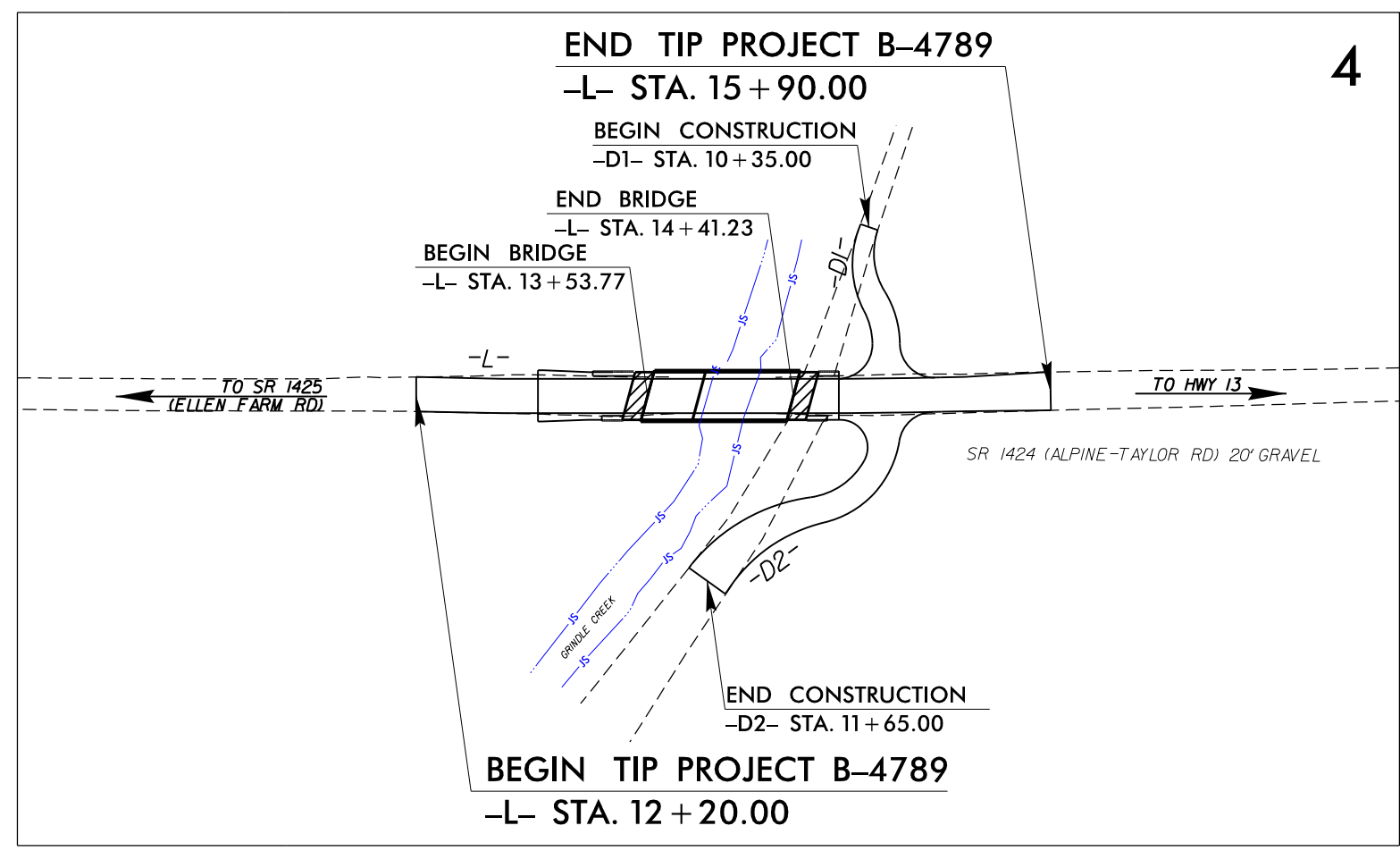


90% PLANS

DETOUR

WETLAND AND
STREAM IMPACTS

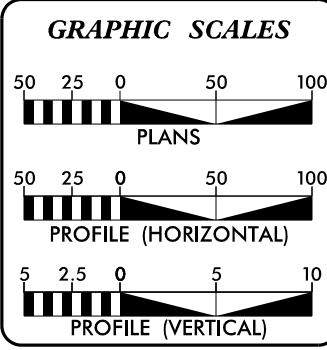
PERMIT DRAWING
SHEET 1 OF 5



THERE IS NO CONTROL OF ACCESS ON THIS PROJECT

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2013 =	40
ADT 2040 =	80
K =	0 %
D =	0 %
T =	0 %
V =	50 MPH
(TTST = 0% + DUAL = 0%)	
FUNC CLASS =	
LOCAL RURAL	
SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4789 =	0.053 MILES
LENGTH STRUCTURES TIP PROJECT B-4789 =	0.017 MILES
TOTAL LENGTH TIP PROJECT B-4789 =	0.070 MILES

Prepared In the Office of:
HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St., Suite 900 Raleigh, NC 27601
N.C.B.E.L.S. License Number: F-0116

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 10, 2017

LETTING DATE:
MARCH 28, 2018

PHILLIP E. ROGERS, P.E. PROJECT ENGINEER
ANTHONY G. THOMPSON, P.E. PROJECT DESIGN ENGINEER
HEATHER LANE, P.E. NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER


SIGNATURE: _____ P.E.

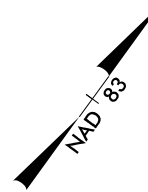
**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

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WETLAND AND STREAM IMPACTS

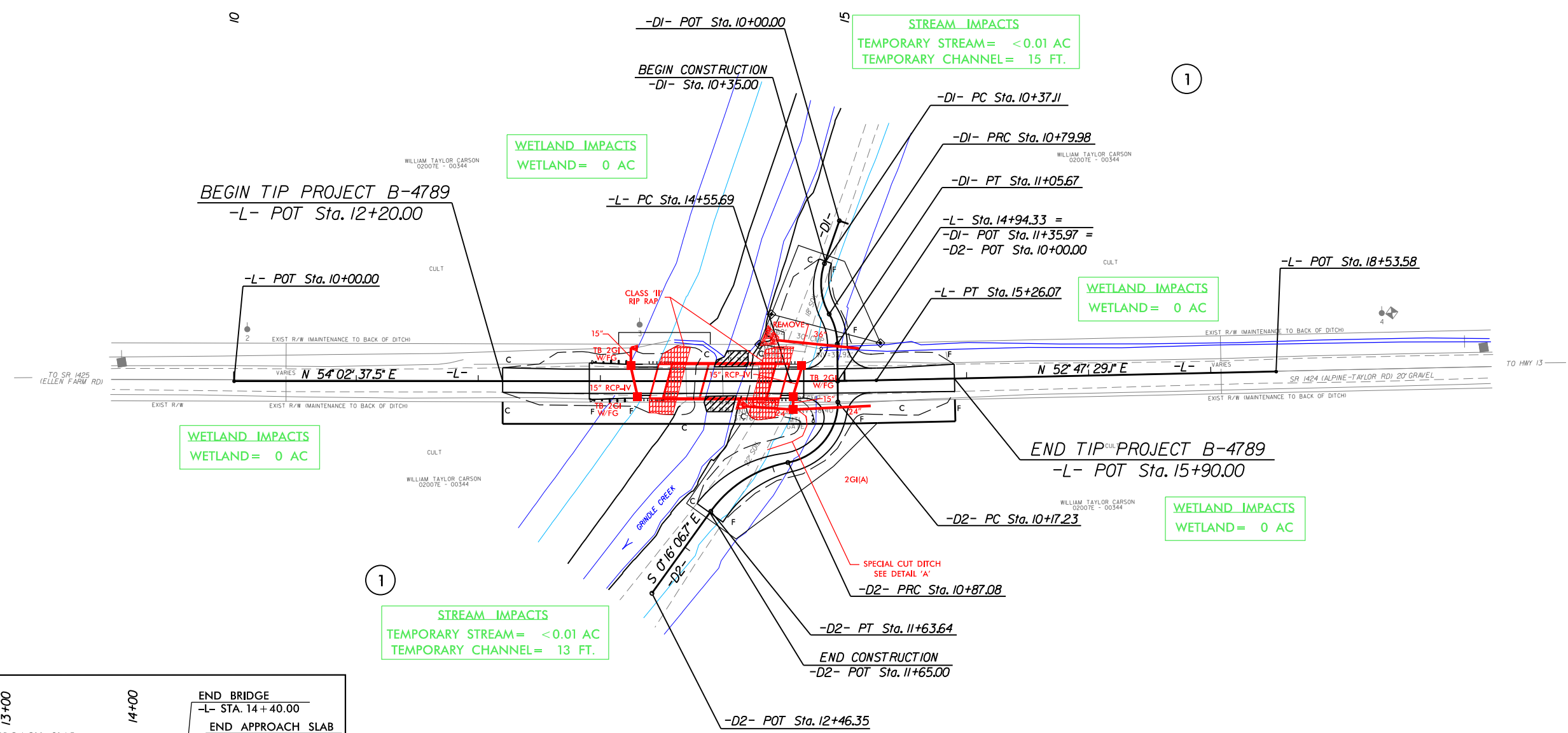
TOTAL TEMPORARY STREAM IMPACTS = 28 LF

PROJECT REFERENCE NO. B-4789	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
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LEGEND:

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER



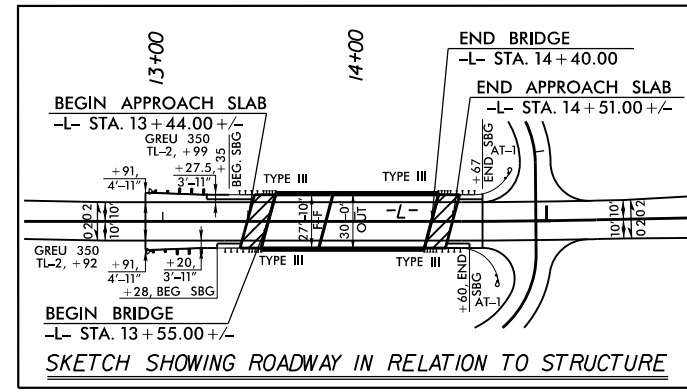
WETLAND IMPACTS
WETLAND= 0 AC

STREAM IMPACTS
TEMPORARY STREAM= <0.01 AC
TEMPORARY CHANNEL= 15 FT.

STREAM IMPACTS
TEMPORARY STREAM= <0.01 AC
TEMPORARY CHANNEL= 13 FT.

WETLAND IMPACTS
WETLAND= 0 AC

WETLAND IMPACTS
WETLAND= 0 AC



PERMIT DRAWING
SHEET 2 OF 5


SEE SHEET 5 FOR PROFILES

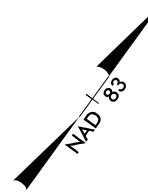
REVISIONS

8/17/99
 1/30/2018
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WETLAND AND STREAM IMPACTS

TOTAL TEMPORARY STREAM IMPACTS = 28 LF

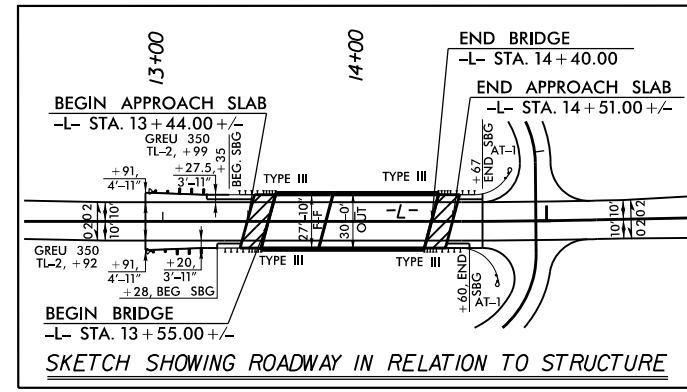
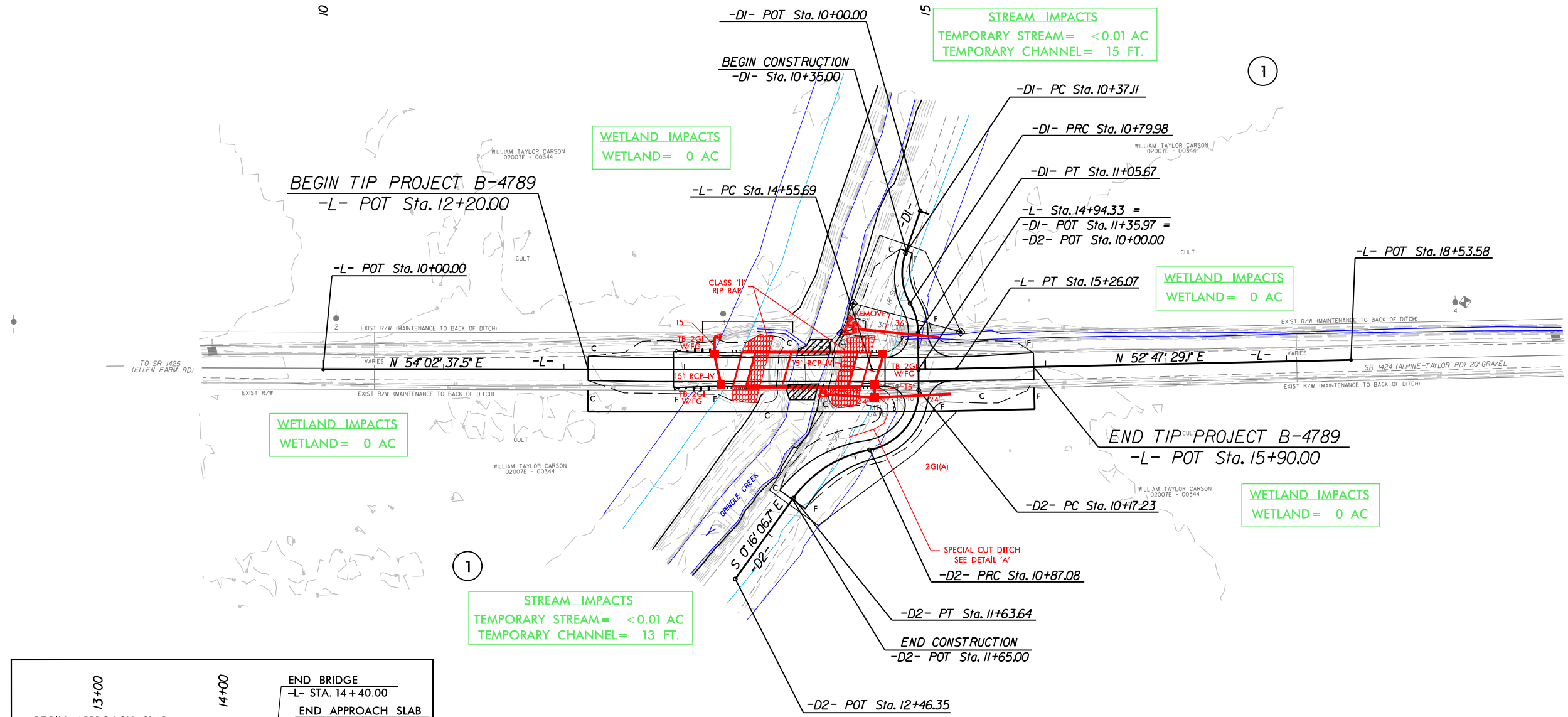
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LEGEND:



TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PERMIT DRAWING
SHEET 3 OF 5

SEE SHEET 5 FOR PROFILES

REVISIONS

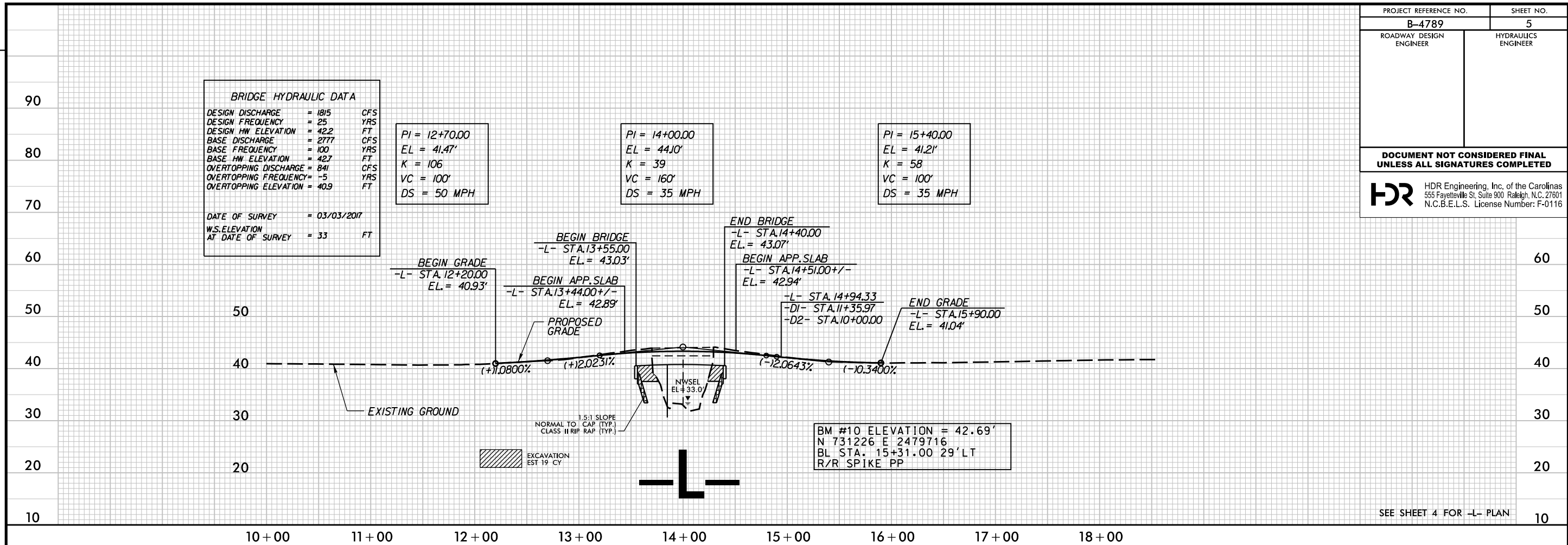
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BRIDGE HYDRAULIC DATA		
DESIGN DISCHARGE	= 1815	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW. ELEVATION	= 42.2	FT
BASE DISCHARGE	= 2777	CFS
BASE FREQUENCY	= 100	YRS
BASE HW. ELEVATION	= 42.7	FT
OVERTOPPING DISCHARGE	= 841	CFS
OVERTOPPING FREQUENCY	= 5	YRS
OVERTOPPING ELEVATION	= 40.9	FT
DATE OF SURVEY = 03/03/2017		
W.S. ELEVATION AT DATE OF SURVEY = 33 FT		

PI = 12+70.00
EL = 41.47'
K = 106
VC = 100'
DS = 50 MPH

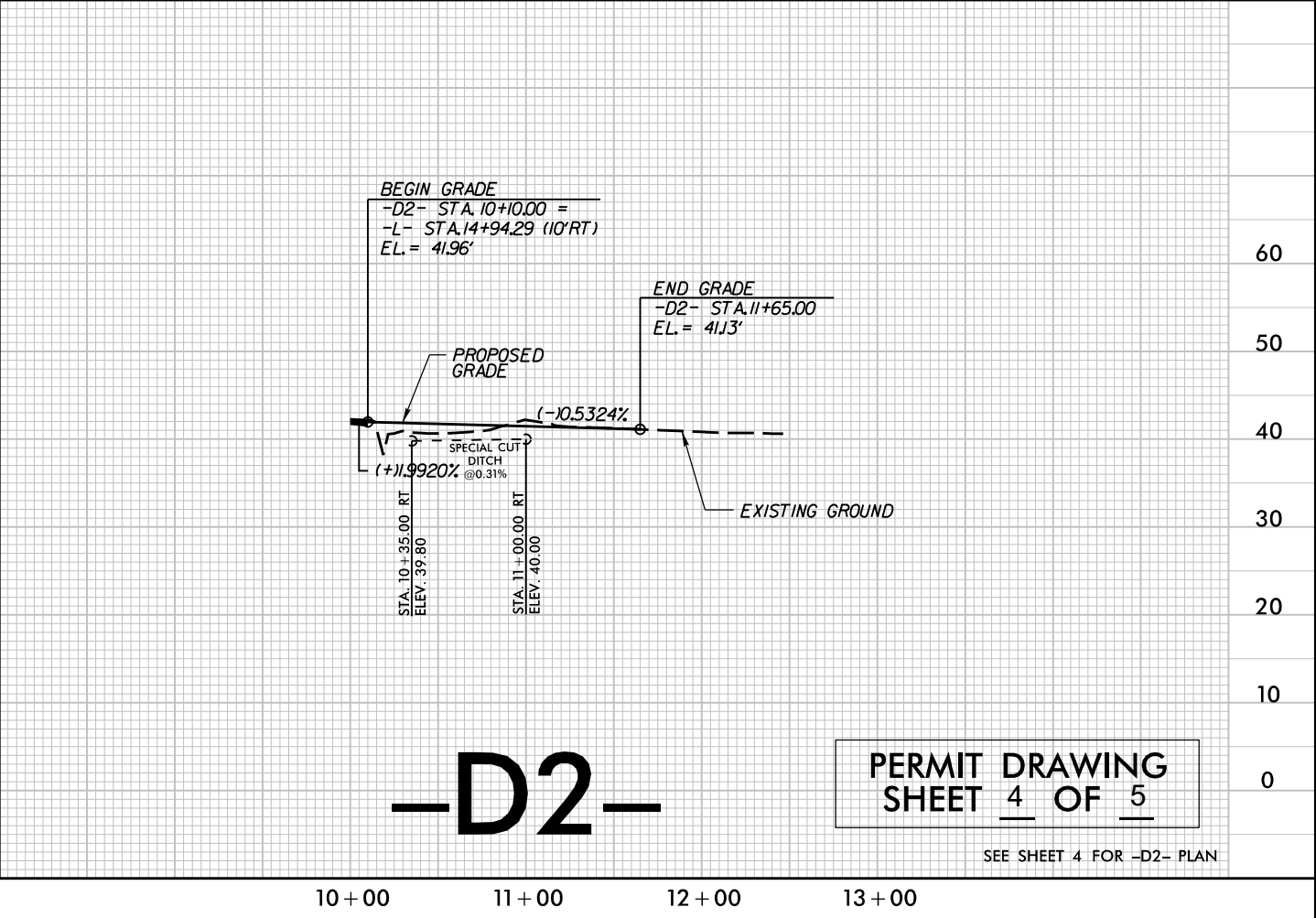
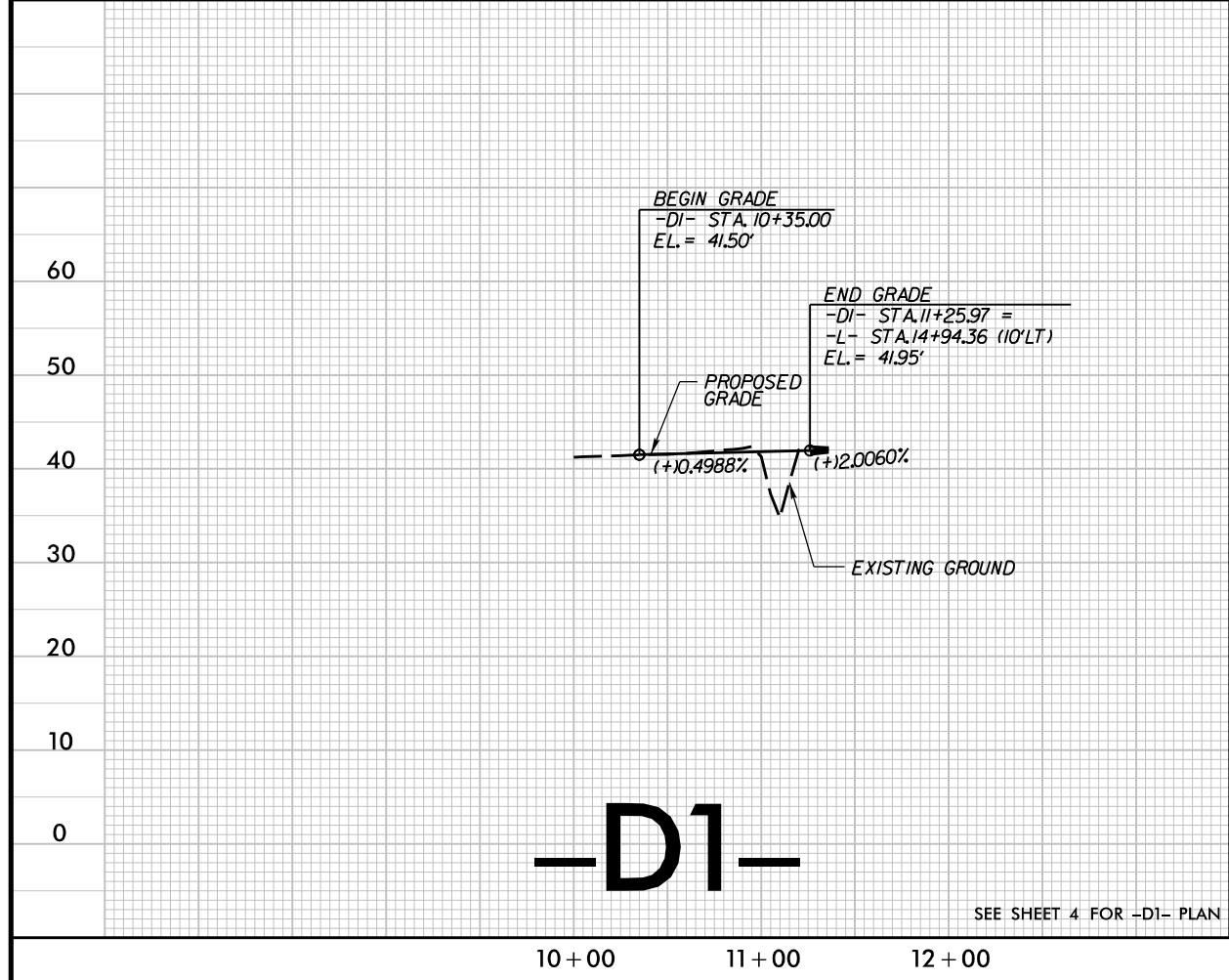
PI = 14+00.00
EL = 44.10'
K = 39
VC = 160'
DS = 35 MPH

PI = 15+40.00
EL = 41.21'
K = 58
VC = 100'
DS = 35 MPH



SEE SHEET 4 FOR -L- PLAN

REVISIONS



**PERMIT DRAWING
SHEET 4 OF 5**

WETLAND AND SURFACE WATER IMPACTS SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	13+85 to 14+20	BRIDGE						0.01		28		
TOTALS*:								0.01	0	28	0	

*Rounded totals are sum of actual impacts

NOTES:

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 01/30/2018
 PITT COUNTY
 B-4789
 38559.1.2
 SHEET 5 OF 5