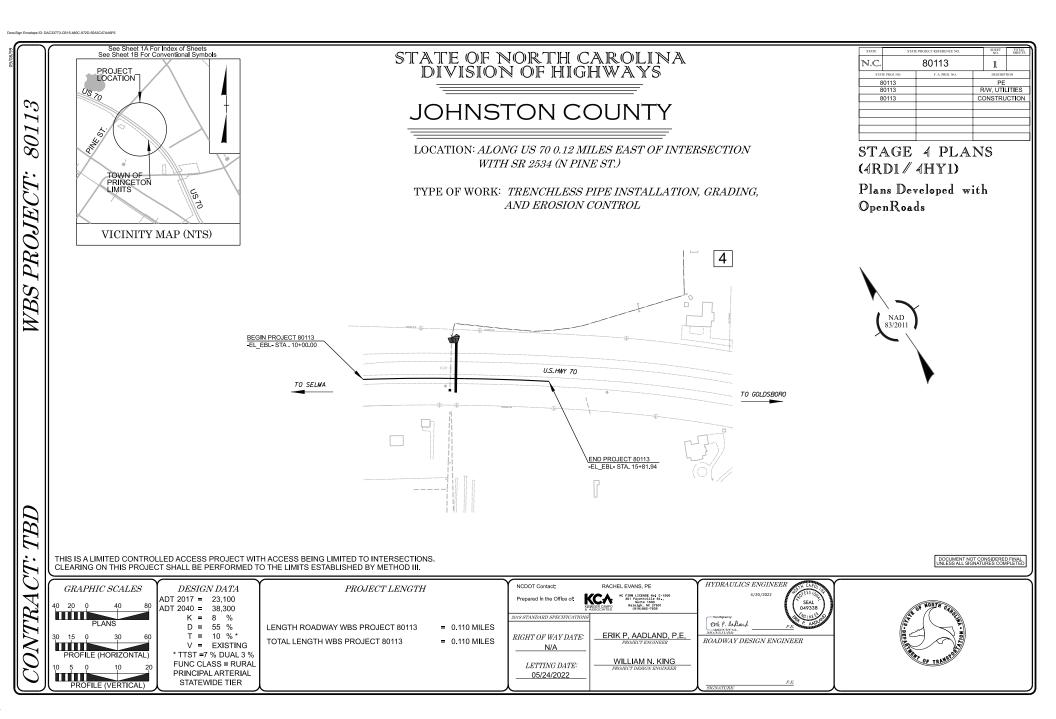
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INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
3D-1	DRAINAGE SUMMARIES
4 THRU 5	PLAN AND PROFILE SHEET
X-01	CROSS SECTION
EC-1 THRU EC-5	EROSION CONTROL PLANS

GENERAL NOTES:

2018 SPECIFICATIONS

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

WORK ZONE TRAFFIC CONTROL:

USE STANDARD INDEX 1101.01, SHEET 2 OF 3, AND INDEX 1101.04 FOR TEMPORARY SHOULDER CLOSURES ON DIVIDED FACILITIES.

2018 ROADWAY ENGLISH STANDARD DRAWINGS:

The following Roadway Standards as they appear in "Roadway Standard Drawings" Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO. TITLE

DIVISION 8 - INCIDENTALS

840.72 Pipe Collar 876.02 Guide for Rip Rap at Pipe Outlets

PROJECT NOTES:

GRADING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADING ON THIS PROJECT INCLUDING, BUT NOT LIMITED TO BORE PITS, TEMPORARY DITCHES, STREAM CHANNELS AND FINAL RESTORATION. GRADING WILL BE PAID AS A LUMP SUM UNDER THE LINE ITEM, GRADING.



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Note: Not to Scale

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

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State Line	
County Line	
Township Line	
City Line	
Reservation Line	· ·
Property Line	
Existing Iron Pin —	Q
Computed Property Corner	
Property Monument	•
Parcel / Sequence Numbe r	
Existing Fence Line	_xxx-
Proposed Woven Wire Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary Proposed Wetland Boundary	
Existing Endangered Animal Boundary	648
Existing Endangered Plant Boundary	(P3
Existing Historic Property Boundary	
Known Contamination Area: Soil	- X - s - X ·
Potential Contamination Area: Soil	- 32 - s - 32 ·
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	X X
BUILDINGS AND OTHER CULTURE:	
Gas Pump Vent or U/G Tank Cap	0
Sign ———	õ
Well	Ŷ
Small Mine	<u> </u>
Foundation ———	
Area Outline	
Cemetery	
Building ———	
School	Ċ.
Church	cth_
Dam	
HYDROLOGY:	
Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	JS
	—— BZ 1 ——
Buffer Zone 2	—— BZ 2 ——
Flow Arrow	<
Disappearing Stream>	
Spring	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Proposed Lateral, Tail, Head Ditch _____

False Sump -

 $\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow$

 \triangleleft

Standard Gauge RR Signal Milepost-O MULERYDST 25 Switch ----SWITCH RR Abandoned RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

RAILROADS:

n.	Primary Horiz Control Point	Ô
	Primary Horiz and Vert Control Point	
	Secondary Horiz and Vert Control Point	
	Vertical Benchmark ———	Ň
	Existing Right of Way Monument———	\triangle
	Proposed Right of Way Monument ——— (Rebar and Cap)	
	Proposed Right of Way Monument ——— (Concrete)	۲
	Existing Permanent Easement Monument——	\diamond
	Proposed Permanent Easement Monument— (Rebar and Cap)	۲
	Existing C/A Monument	\land
	Proposed C/A Monument (Rebar and Cap) —	A
	Proposed C/A Monument (Concrete) ———	۲
	Existing Right of Way Line	
	Proposed Right of Way Line	
	Existing Control of Access Line	-(<u>Ē</u>)-
	Proposed Control of Access Line	ക
	Proposed ROW and CA Line	- ă
	Existing Easement Line	—Ε —
	Proposed Temporary Construction Easement-	— E —
	Proposed Temporary Drainage Easement	- TDE -
	Proposed Permanent Drainage Easement	— PDE —
	Proposed Permanent Drainage/Utility Easement	- DUE-
	Proposed Permanent Utility Easement	— PUE —
	Proposed Temporary Utility Easement	— TUE —
	Proposed Aerial Utility Easement	- AUE -

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb ————	
Proposed Slope Stakes Cut	<u>c</u>
Proposed Slope Stakes Fill	£
Proposed Curb Ramp	CR
Existing Metal Guardrail	
Proposed Guardrail	<u> </u>
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	Ð
Pavement Removal	×××××
VEGETATION:	
Single Tree	ය
Single Shrub	0

Hedge	~~~~	~~~~	~~~~	~~~
Woods Line		<u>~~</u> ^	h.m	<u>.</u>
Orchard ———	÷	٥	٥	٨
Vineyard		Viney	yard	
EXISTING STRUCTURES:				
MAJOR:				
Bridge, Tunnel or Box Culvert		CONC		
Bridge Wing Wall, Head Wall and End Wall -	•)•	CONC W	∾(
MINOR: Head and End Wall Pipe Culvert				
Footbridge ————	≻			-≺
Drainage Box: Catch Basin, DI or JB Paved Ditch Gutter				
Storm Sewer		~		
UTILITIES:				
POWER:				
Existing Power Pole		♦		
Proposed Power Pole		9		
Existing Joint Use Pole		-	-	
Proposed Joint Use Pole		- 	-	
Power Manhole ———		ø		
Power Line Tower		\boxtimes		
Power Transformer				

Power Manhole —	®
Power Line Tower	\boxtimes
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	••
U/G Power Line LOS B (S.U.E.*)	
U/G Power Line LOS C (S.U.E.*)	

U/G Power Line LOS D (S.U.E.*) ----TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	-0-
Telephone Manhole	Ū
Telephone Pedestal ———	Ξ
Telephone Cell Tower	"
U/G Telephone Cable Hand Hole	E.
U/G Telephone Cable LOS B (S.U.E.*)	
U/G Telephone Cable LOS C (S.U.E.*)	t
U/G Telephone Cable LOS D (S.U.E.*)	
U/G Telephone Conduit LOS B (S.U.E.*)	
U/G Telephone Conduit LOS C (S.U.E.*)	π
U/G Telephone Conduit LOS D (S.U.E.*)	
U/G Fiber Optics Cable LOS B (S.U.E.*)	T FO ·
U/G Fiber Optics Cable LOS C (S.U.E.*)	THO
U/G Fiber Optics Cable LOS D (S.U.E.*)	TP0

Water Manhole -Water Meter -Water Valve -Water Hydrant -U/G Water Line LOS B (S.U.E*) ----_ _ _ _ _ _ _ _ _ _ _ _ U/G Water Line LOS C (S.U.E*) U/G Water Line LOS D (S.U.E*) ----Above Ground Water Line -----A/G Water TV: TV Pedestal -TV Tower -----U/G TV Cable Hand Hole -----U/G TV Cable LOS B (S.U.E.*) ----U/G TV Cable LOS C (S.U.E.*) U/G TV Cable LOS D (S.U.E *) U/G Fiber Optic Cable LOS B (S.U.E.*) -----U/G Fiber Optic Cable LOS C (S.U.E.*) ------U/G Fiber Optic Cable LOS D (S.U.E.*) -----GAS: Gas Valve — Gas Meter ----U/G Gas Line LOS B (S.U.E.*) ----_ _ _ _ _ _ _ _ _ _ _ _ _ U/G Gas Line LOS C (S.U.E.*) ______ _____ U/G Gas Line LOS D (S.U.E.*) Above Ground Gas Line SANITARY SEWER: Sanitary Sewer Manhole -Sanitary Sewer Cleanout U/G Sanitary Sewer Line _____ Above Ground Sanitary Sewer ______ A/G Sanitary Sewer SS Forced Main Line LOS B (S.U.E.*) _____ -------SS Forced Main Line LOS C (S.U.E.*) _____ _____

MISCELLANEOUS:

-		
	Utility Pole	•
	Utility Pole with Base	
	Utility Located Object	0
	Utility Traffic Signal Box	S
	Utility Unknown U/G Line LOS B (S.U.E.*)	
	U/G Tank; Water, Gas, Oil	
	Underground Storage Tank, Approx. Loc	UST
	A/G Tank; Water, Gas, Oil	
	Geoenvironmental Boring	•
	U/G Test Hole LOS A (S.U.E.*)	۲
	Abandoned According to Utility Records	AATUR
	End of Information	E.O.I.

SS Forced Main Line LOS D (S.U.E.*) _____ not see the second seco



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8

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C \otimes

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A/G Gas

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*S.U.E. = Subsurface Utility Engineering

WATER:

NOTE:

COMPUTED BY

CHECKED BY

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ALL GRADING ON THIS PROJECT INCLUDING, BUT NOT LIMITED TO BORE PITS, TEMPORARY DITCHES, STREAM CHANNELS AND FINAL RESTORATION SHALL BE PAID AS A LUMP SUM UNDER THE LINE ITEM, GRADING.

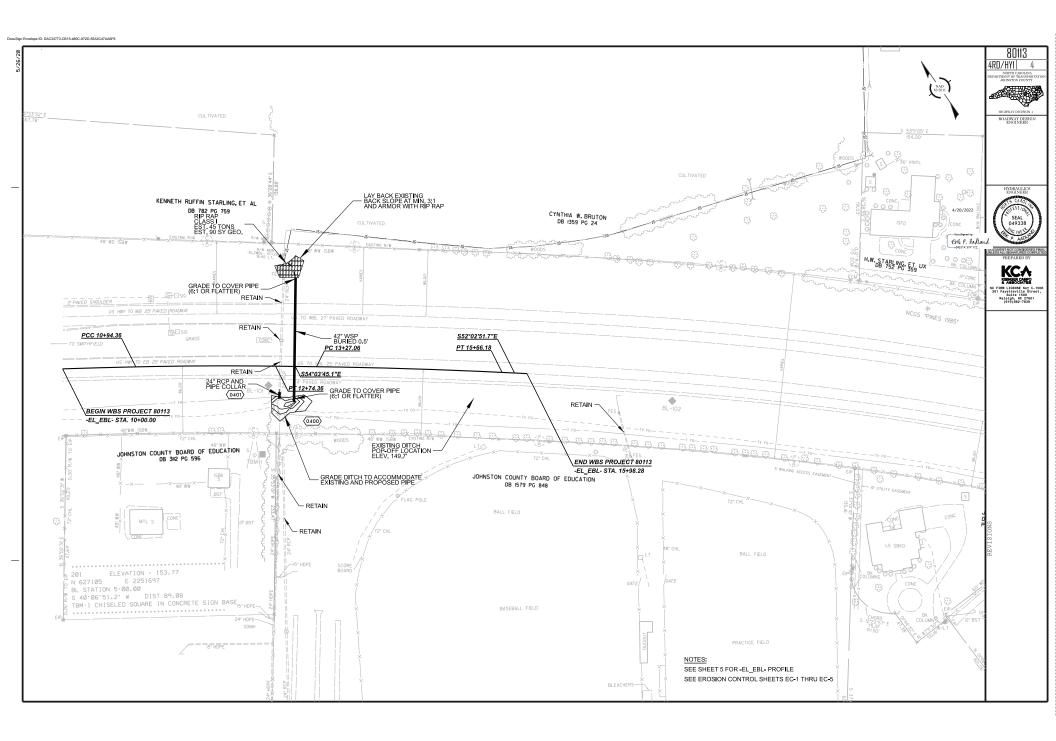
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS**

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER) TOTAL L.F. FOR PAY QUANTITY SHALL BE CO 'A' + (1.3 X COL'B') ABBREVIATIONS QUANTITIES FOR DRAINAGE STRUCTURES INVERT ELEVATION INVERT ELEVATION SLOPE CRITICAL FRAME, GRATES, AND HOOD STANDARD 840.03 STATION NO. TOP ELEVATION NAGE PIPE C.S. PIPE R.C. PIPE CLASS III R.C. PIPE CLASS IV (RCP, CSP, CAAP, HDPE, or PVC) STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE CATCH BASIN C.B. N.D.I. CATCH BASIN NARROW DROP INLET DROP INLET GRATED DROP INLET (NARROW SLOT) JUNCTION BOX 840.71 TRU 840.72 D.I. G.D.I. G.D.I.(N.S.) J.B. M.H. T.B.D.I. STD. 1 STD. LIN 15" 18" 24" 30" 36" 42" 4 "B" C.Y. 15" 18" 24" 30" 36" 42" 48" 12" 15" 18" 24" 30" 36" 42" 48" 12" MANHOLE TRAFFIC BEARING DROP INLET TRAFFIC BEARING SIZE CU, YARDS A B VERUS LIN. FT COLLARS CL " USE T.B.J.B. ABOVE TYPE OF GRATE THICKNESS OR GAUGE TO C.P. JUNCTION BOX AND E E REMARKS 12+90.64 -EL_EBL- RT 401 12+98.66 -EL_EBL- RT 400A 400A 400B 147.73 8 0.55 147.20 146.70 0.3% 160 BURIED 0.5 12+98.66-EL_EBL- LT 400B SHEET TOTALS

WNK DATE: 3/29/2022 EPA DATE: 3/29/2022





10 +5011 +5012 +5013 +5014 +5015 +50200 200 -EL_EBL-190 190 CROSS PIPE HYDRAULIC DATA (EX 24" & PROP. 42") DESIGN DISCHARGE = 190 CFS BASE DISCHARGE = 210 CFS OVERTOPPING DISCHARGE = 1600 CFS DESIGN FREQUENCY = 50 YRS BASE FREQUENCY = 100 YRS OVERTOPPING FREQUENCY = 500+ YRS 180 180 DESIGN HW ELEVATION = 152.1 FT BASE HW ELEVATION = 152.3 FT OVERTOPPING HW ELEVATION = 155.19 FT 170 170 EXISTING GROUND @ CL OF -EL_EBL-160 160 150 150 EXISTING DITCH POP-OFF LOCATION-ELEV. 149.70' EXISTING DITCH RT CL STA. 12+80.64 ELEV CL STA. 12+98.66 _PROPOSED 42" WSP INV.=147.06' BURIED 0.5' EXISTING 24" RCP INV =147.56 140 140 130 130 SEE SHEET 4 FOR -EL_EBL- PLAN 120 120 110 110 155.85 155.19 154.82 154.09 154.43 155.56 100 100 10 +5011 +5012 +5013 +5014 +5015 +50

BOIII3 ARD/HYI 5 NORTH CAROLINA MERARDINENT OF TRANSPORTATION JUNISTIC CAROLINA MICHWAY DIVISION 4 RICHWAY DIVISION 4 ROADWAY DESIGN

> HYDRAULICS ENGINEER

SEAL 7

PREPARED BY

C FIRM LICENSE No: C-150 301 Fayetteville Street, Suite 1500 Raleigh, NC 27601 (919)882-7839

P. AAD

4/20/2022

Enk P. Andland

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