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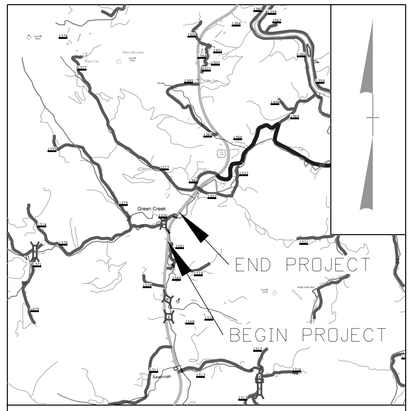
01/16/24

TIP PROJECT: HS-2414N

CONTRACT: DN01142

See Sheet 1A For Index of Sheets



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

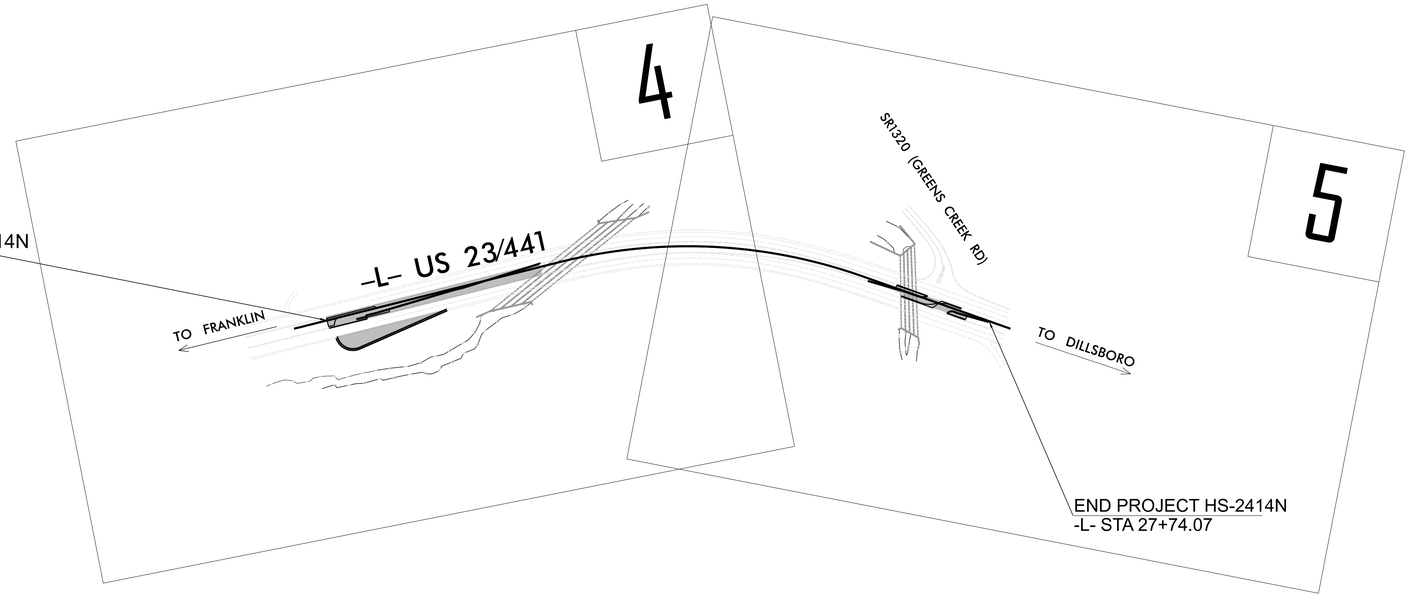
JACKSON COUNTY

LOCATION: *US 23/441 AT SR1320 (GREENS CREEK ROAD)*

TYPE OF WORK: *GRADING, DRAINING, AND PAVING*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HS-2414N	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50986.1.15	5098619	P.E.
50986.3.15	5098619	CONSTRUCTION



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT HS-2414N = 0.320 MILES

TOTAL LENGTH OF TIP PROJECT HS-2414N = 0.320 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
253 WEBSTER DR., Sylva NC, 28779

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
N/A

LETTING DATE:
JUNE 23, 2026

JAMES E HOLLINGSWORTH, PE
PROJECT ENGINEER

JAMES E HOLLINGSWORTH, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

DocuSigned by: James Hollingsworth
SIGNATURE: *P.E.*

NORTH CAROLINA PROFESSIONAL SEAL 051774 ENGINEER JAMES E. HOLLINGSWORTH III

ROADWAY DESIGN ENGINEER

DocuSigned by: James Hollingsworth
SIGNATURE: *P.E.*

NORTH CAROLINA PROFESSIONAL SEAL 051774 ENGINEER JAMES E. HOLLINGSWORTH III

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

INDEX OF SHEETS

GENERAL NOTES: 2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

STAGING

PHASE 1:

COMPLETE STEP 1 WITHIN 63 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME 1 AND LIQUIDATED DAMAGES.

STEP 1: CONSTRUCT TURN LANE AND OTHER MEDIAN IMPROVEMENTS FROM -L- STATION 10+84.24 THRU 16+32.12.

COMPLETE STEP 2 WITHIN 28 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME 2 AND LIQUIDATED DAMAGES.

STEP 2: CONSTRUCT BULB OUT LOCATION STATION -L- STATION 10+95.19 THRU 13+79.02.

PHASE 2:

COMPLETE PHASE 2 WITHIN 28 CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME 3 AND LIQUIDATED DAMAGES.

CONSTRUCT ALL WORK FROM -L- STATION 24+57.62 THRU 27+74.07.

EFF. 08-11-2025
REV. 11-26-2025
2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO. TITLE

DIVISION 2 - EARTHWORK
225.01 Guide for Grading Subgrade - Interstate and Freeway
225.03 Deceleration and Acceleration Lanes
225.05 Method of Obtaining Superelevation - Divided Highways
225.06 Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS
300.01 Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS
560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS
654.01 Pavement Repairs
DIVISION 8 - INCIDENTALS
840.18 Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.22 Frames and Wide Slot Sag Grates
840.27 Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.45 Precast Drainage Structure
840.72 Pipe Collar
852.01 Concrete Islands
DIVISION 11 - WORK ZONE TRAFFIC CONTROL
1101.01 Work Zone Advance Warning Signs
1101.02 Temporary Lane Closures
1101.03 Temporary Road Closures
1101.04 Temporary Shoulder Closures
1101.05 Work Zone Vehicle Accesses
1101.06 Warning Signs for Blasting Zones
1101.11 Traffic Control Design Tables
1110.01 Stationary Work Zone Signs
1110.02 Portable Work Zone Signs
1115.01 Flashing Arrow Boards
1130.01 Drums
1135.01 Cones
1145.01 Barricades - Type III
1150.01 Flaggers
1160.01 Temporary Crash Cushion - Reflective End Treatment
1165.01 Truck Mounted Attenuator
1170.01 Portable Concrete Barrier
1180.01 Skinny Drums

05/29/25

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

HS-2414N | 1B

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP) — EIP
- Computed Property Corner
- Existing Concrete Monument (ECM) — ECM
- Parcel / Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Existing Control of Access Line — CA
- Proposed Control of Access Line — CA
- Proposed ROW and CA Line — RW CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Permanent Construction Easement — PE
- 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 — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

** SUE - Subsurface Utility Engineering*
LOS - Level of Service - A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- U/G Power Line Test Hole (SUE - LOS A)*
- U/G Power Line (SUE - LOS B)* — P
- U/G Power Line (SUE - LOS C)* — P
- U/G Power Line (SUE - LOS D)* — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Test Hole (SUE - LOS A)*
- U/G Telephone Cable (SUE - LOS B)* — T
- U/G Telephone Cable (SUE - LOS C)* — T
- U/G Telephone Cable (SUE - LOS D)* — T
- U/G Telephone Conduit (SUE - LOS B)* — TC
- U/G Telephone Conduit (SUE - LOS C)* — TC
- U/G Telephone Conduit (SUE - LOS D)* — TC
- U/G Fiber Optics Cable (SUE - LOS B)* — T FO
- U/G Fiber Optics Cable (SUE - LOS C)* — T FO
- U/G Fiber Optics Cable (SUE - LOS D)* — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE - LOS A)*
- U/G Water Line (SUE - LOS B)* — W
- U/G Water Line (SUE - LOS C)* — W
- U/G Water Line (SUE - LOS D)* — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Test Hole (SUE - LOS A)*
- U/G TV Cable (SUE - LOS B)* — TV
- U/G TV Cable (SUE - LOS C)* — TV
- U/G TV Cable (SUE - LOS D)* — TV
- U/G Fiber Optic Cable (SUE - LOS B)* — TV FO
- U/G Fiber Optic Cable (SUE - LOS C)* — TV FO
- U/G Fiber Optic Cable (SUE - LOS D)* — TV FO

GAS:

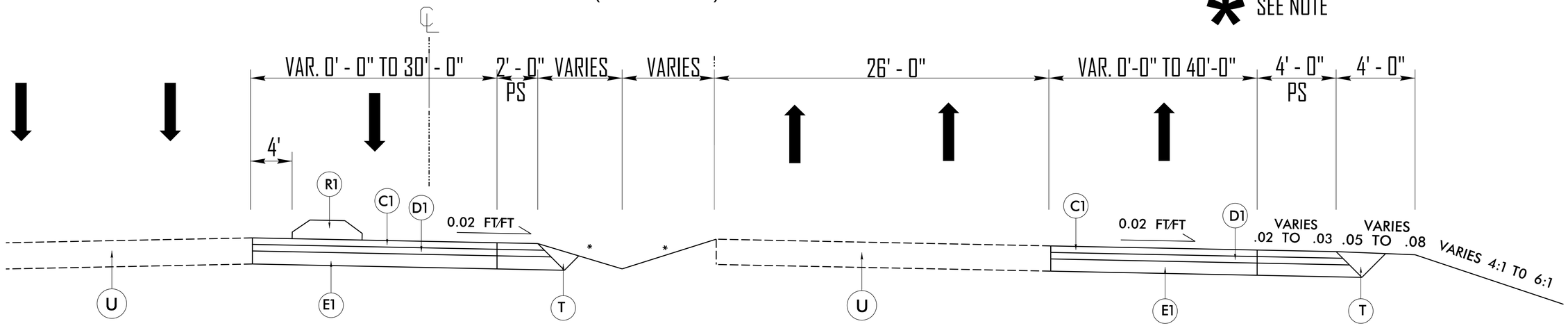
- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE - LOS A)*
- U/G Gas Line (SUE - LOS B)* — G
- U/G Gas Line (SUE - LOS C)* — G
- U/G Gas Line (SUE - LOS D)* — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Force Main Line Test Hole (SUE - LOS A)*
- SS Force Main Line (SUE - LOS B)* — FSS
- SS Force Main Line (SUE - LOS C)* — FSS
- SS Force Main Line (SUE - LOS D)* — FSS

MISCELLANEOUS:

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



* VARIABLE, SEE XSC

TYPICAL SECTION NO. 1

–L– STA. 10+84.24 THRU 16+32.12

* U-TURN BULB OUT -L- STA. 10+95.19 THRU 13+79.02

NOTE: 5″ MONOLITHIC CONCRETE ISLANDS VARIES IN WIDTH AND LOCATION
SEE PLANS FOR ACTUAL LOCATIONS

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E1	PROP. APPROX. 7″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 798 LBS. PER SQ. YD.
J	PROP. 8″ AGGREGATE BASE COURSE
R1	5″ MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
R2	5″ MONOLITHIC CONCRETE ISLAND (KEYED IN)
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	1.5″ PAVEMENT REMOVAL

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

HS-2414N
2A-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER JAMES A. ROLLINGSWORTH

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER JAMES A. ROLLINGSWORTH

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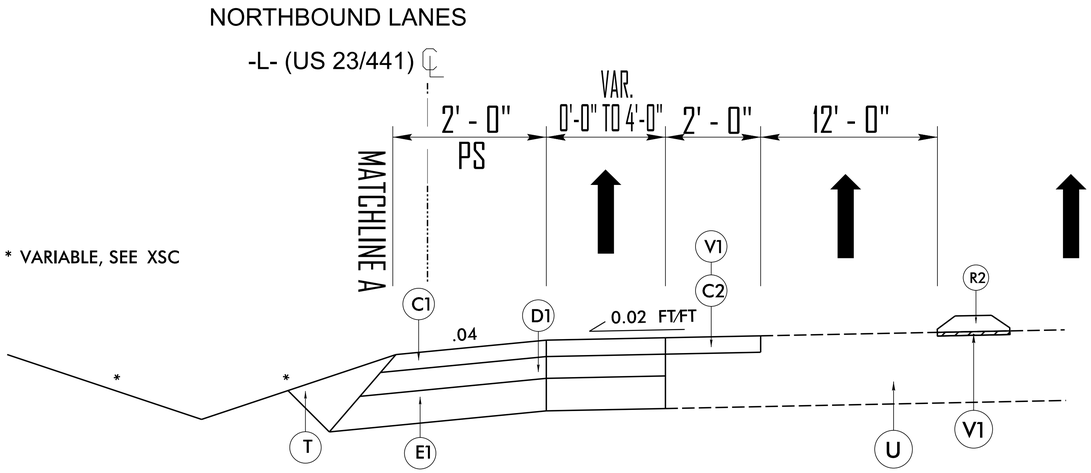
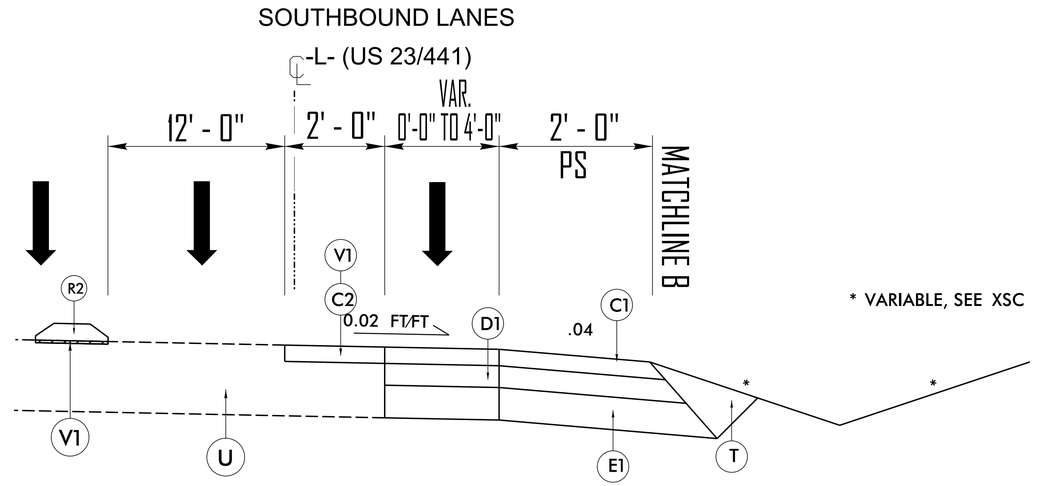


TYPICAL SECTION NO. 2

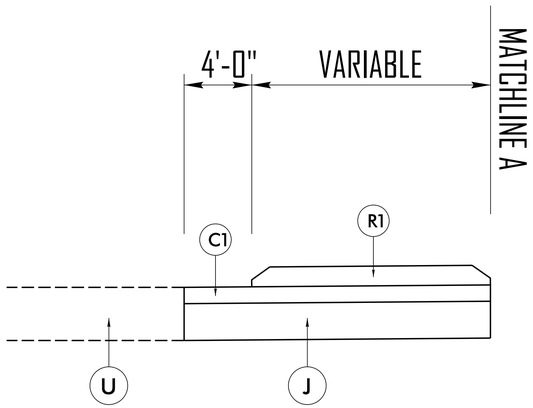
–L– STA. 24+57.62 THRU 26+38.00



TYPICAL SECTION NO. 3

–L– STA. 26+38.00 THRU 27+74.07

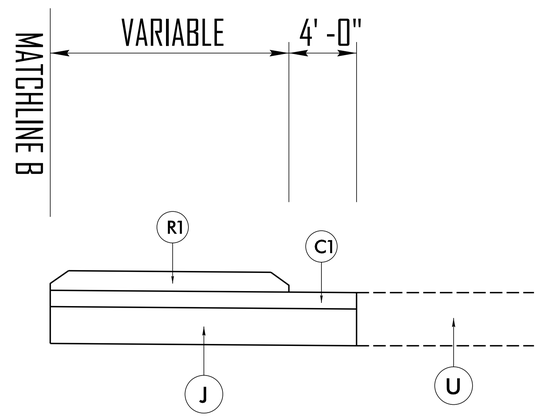
NOTE: 5″ MONOLITHIC CONCRETE ISLANDS VARIES IN WIDTH AND LOCATION
SEE PLANS FOR ACTUAL LOCATIONS



INSET A

USE WITH TYPICAL SECTION 2

–L– STA. 25+28.75 THRU 26+07.09



INSET B

USE WITH TYPICAL SECTION 3

–L– STA. 26+72.09 THRU 27+18.19

PAVEMENT SCHEDULE

C1	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 2.5″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
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T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	1.5″ PAVEMENT REMOVAL

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 26577 JAMES T. ROLLINGSWORTH

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 25177 JAMES T. ROLLINGSWORTH

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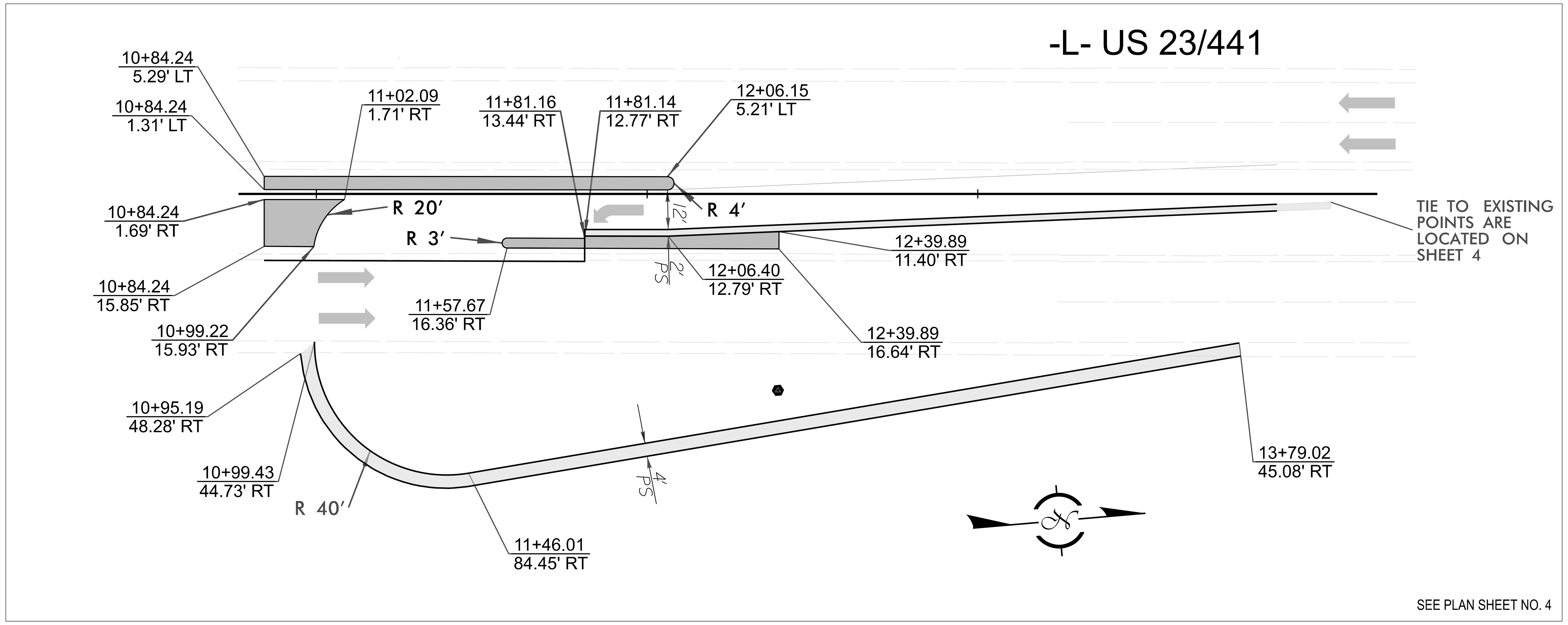
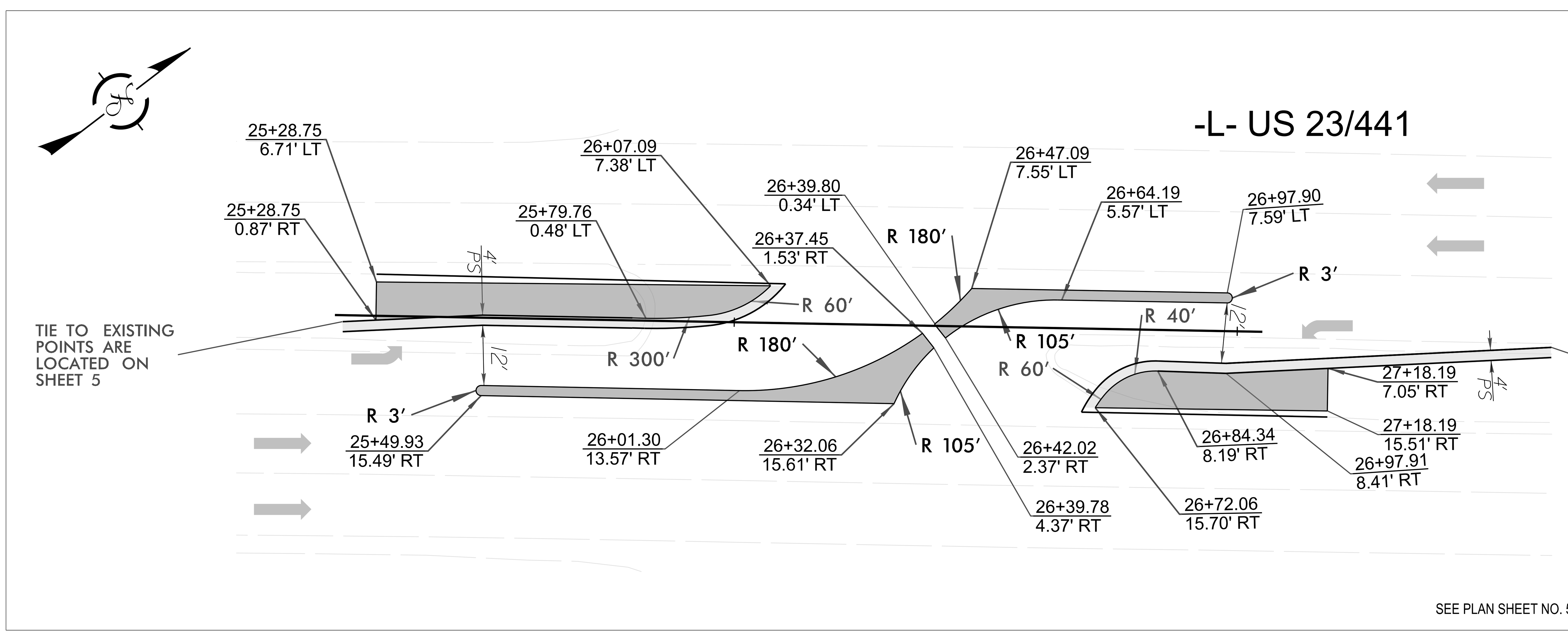
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER





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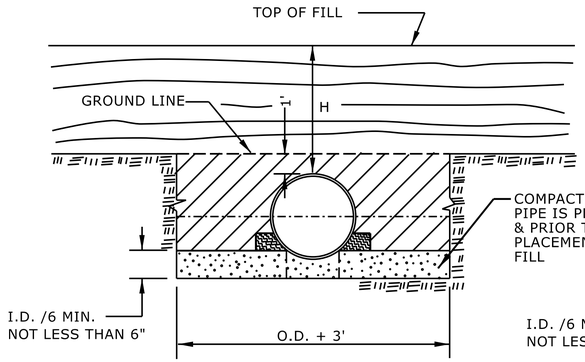
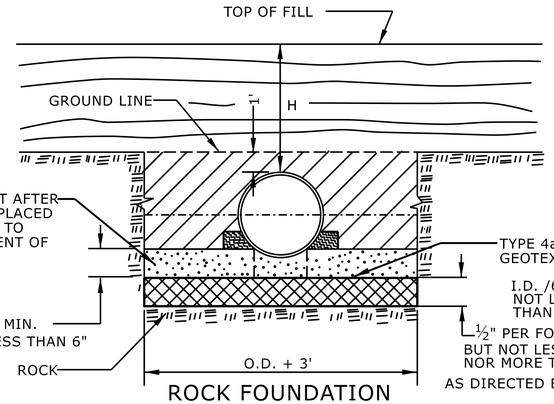
CONCRETE ISLAND & U–TURN LAYOUTS

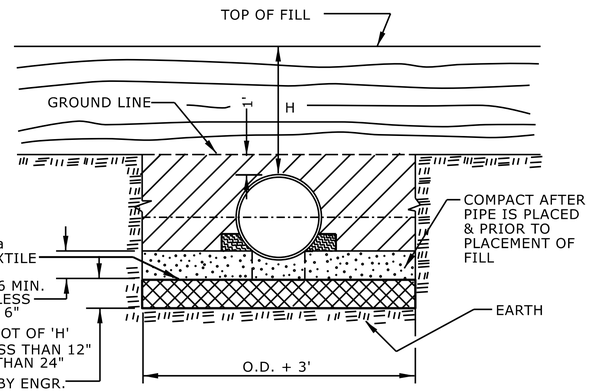
PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	2C-1



NORMAL EARTH FOUNDATION

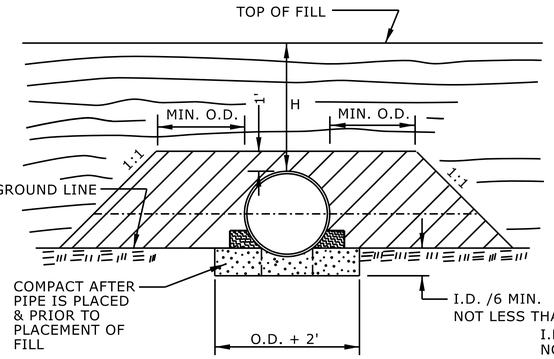


ROCK FOUNDATION

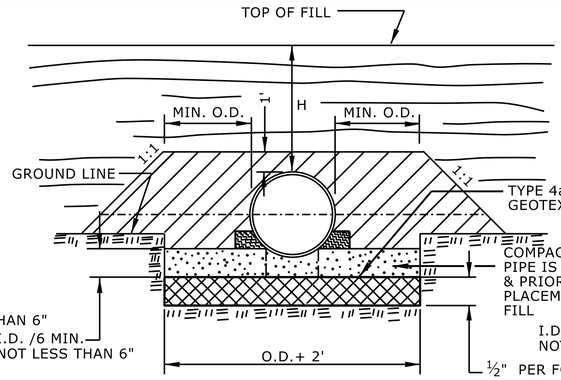


UNSUITABLE MATERIAL FOUNDATION

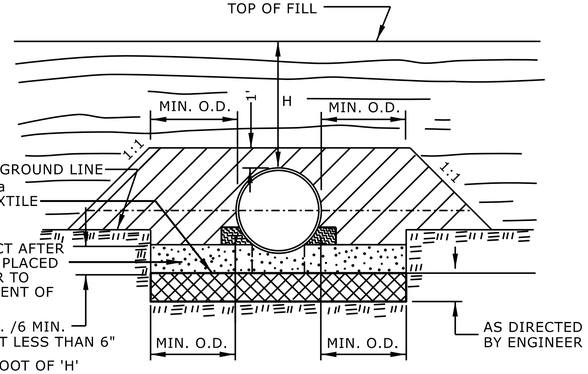
PIPE IN TRENCH



NORMAL EARTH FOUNDATION



ROCK FOUNDATION



UNSUITABLE MATERIAL FOUNDATION

PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 2

300.01

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

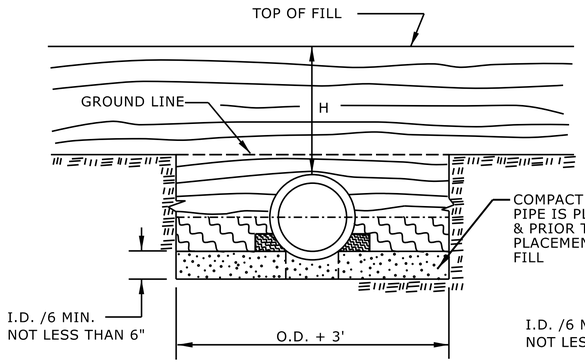
CONTRACTS STANDARDS AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

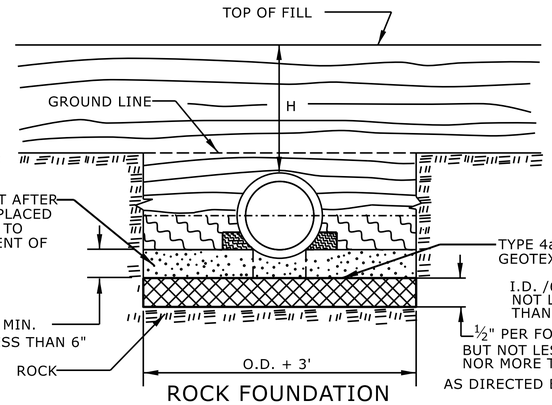
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

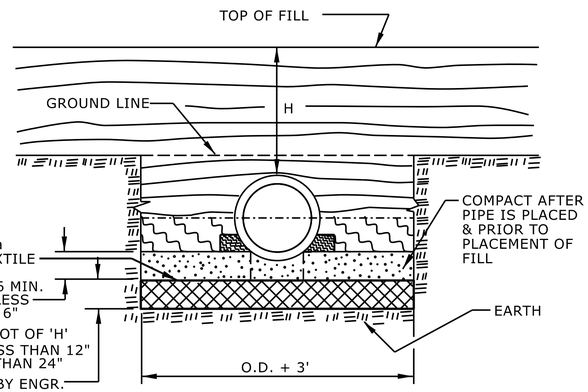
PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	2C-2



NORMAL EARTH FOUNDATION

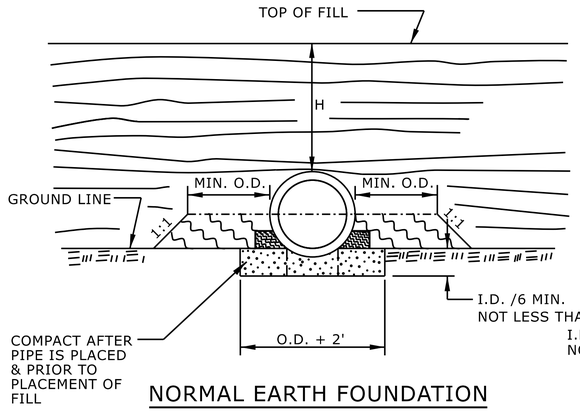


ROCK FOUNDATION

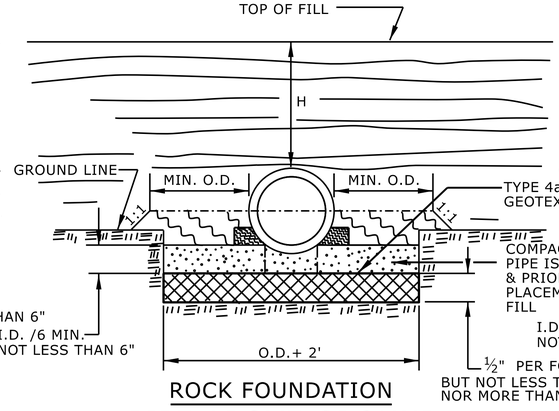


UNSUITABLE MATERIAL FOUNDATION

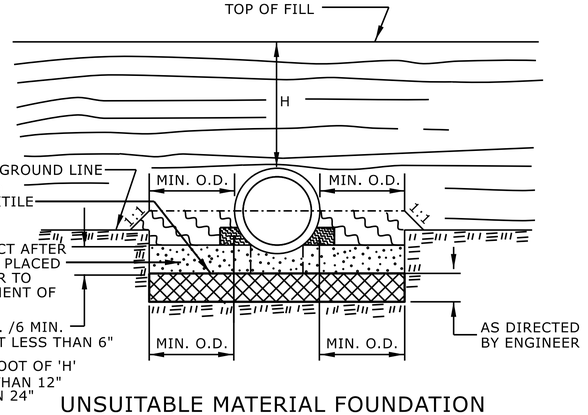
PIPE IN TRENCH



NORMAL EARTH FOUNDATION



ROCK FOUNDATION



UNSUITABLE MATERIAL FOUNDATION

PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 2

300.01

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 039141 NICOLE M. HACKETT 5884323D3436405...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SUMMARY OF EARTHWORK

IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
10+84.24	27+74.07	500	80		420
SUBTOTALS:		500	80		420
PROJECT TOTALS:		500	80		420
GRAND TOTALS:		500	80		420
SAY:		500	80		420
ESTIMATED UNDERCUT = 75 CY (CONTINGENCY)					

NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR GRADING.

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300–5".

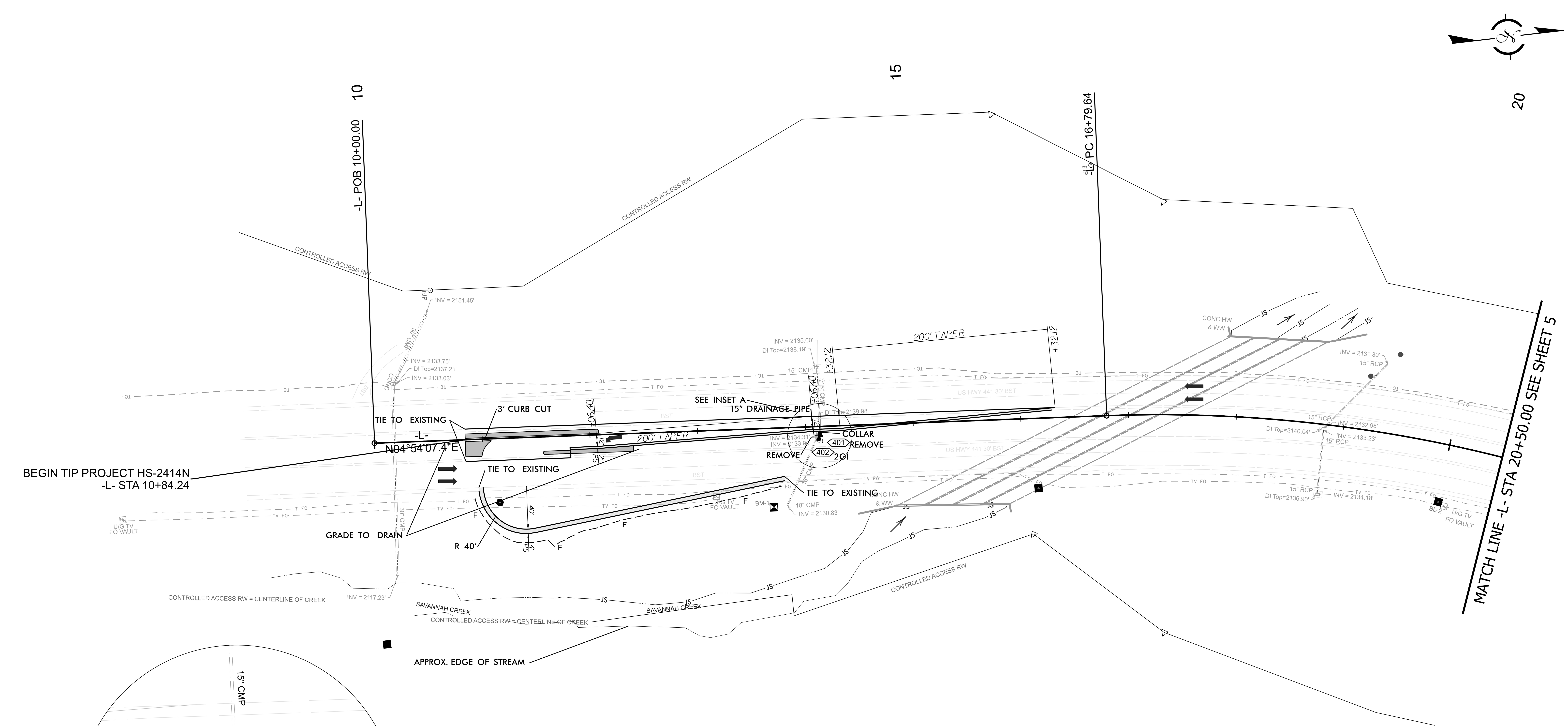
LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

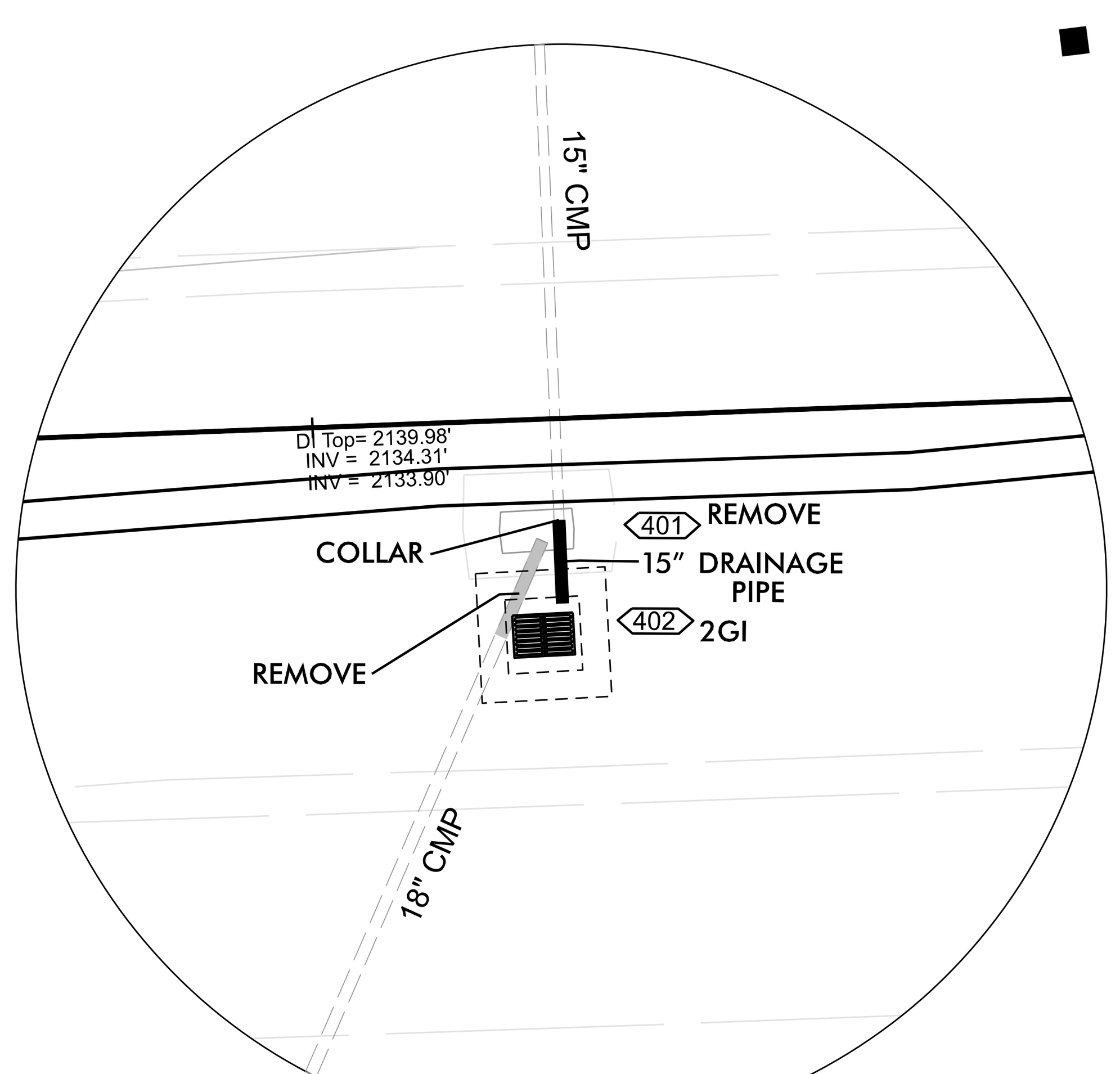
STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE OR ALUMINIZED C.S. PIPE, TYPE IR OR HDPE PIPE, TYPE S OR D 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE 12" .064	15" .064	18" .064	24" .064	36" .079	42" .109	48" .109	R.C. PIPE (CLASS III) 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE (CLASS IV) 12"	15"	18"	24"	30"	36"	42"	48"	**" R. C. PIPE (CLASS V)	**" R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	**" R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.05 CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. *FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G		CONCRETE TRANSITIONAL SECTION CATCH BASIN	DROP INLET	G.D.I. TYPE "B" STD. 840.18, 840.27, OR 840.45	G.D.I (W.S. SAG) FRAME W/2 GRATES STD 840.22						CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
14+12.05	LT	402		DETERMINE	IN	FIELD																																											1	2									1	1									
14+12.05	LT	401	402	DETERMINE	IN	FIELD			6'																																																									0.3990		6	
24+74.60	LT	401																																																																		REMOVE
TOTALS									6'																																								1	2									1	1						0.3990		6	

ABBREVIATIONS

- C.B. CATCH BASIN
- N.D.I. NARROW DROP INLET
- D.I. DROP INLET
- G.D.I. GRATED DROP INLET
- G.D.I. (N.S.) GRATED DROP INLET (NARROW SLOT)
- J.B. JUNCTION BOX
- M.H. MANHOLE
- T.B.D.I. TRAFFIC BEARING DROP INLET
- T.B.J.B. TRAFFIC BEARING JUNCTION BOX

11/14/23





INSET A

SEE DETAIL SHEET 2B-1 FOR ISLAND LAYOUT

PROP MONOLITHIC CONC ISLAND

FOR -L- PROFILE, SEE SHEET 6

HS-2414N

4

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

ROADWAY DESIGN ENGINEER

5/22/2026

HYDRAULICS ENGINEER

5/22/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DOT/ext-dcrivenbark1- 5/22/2026

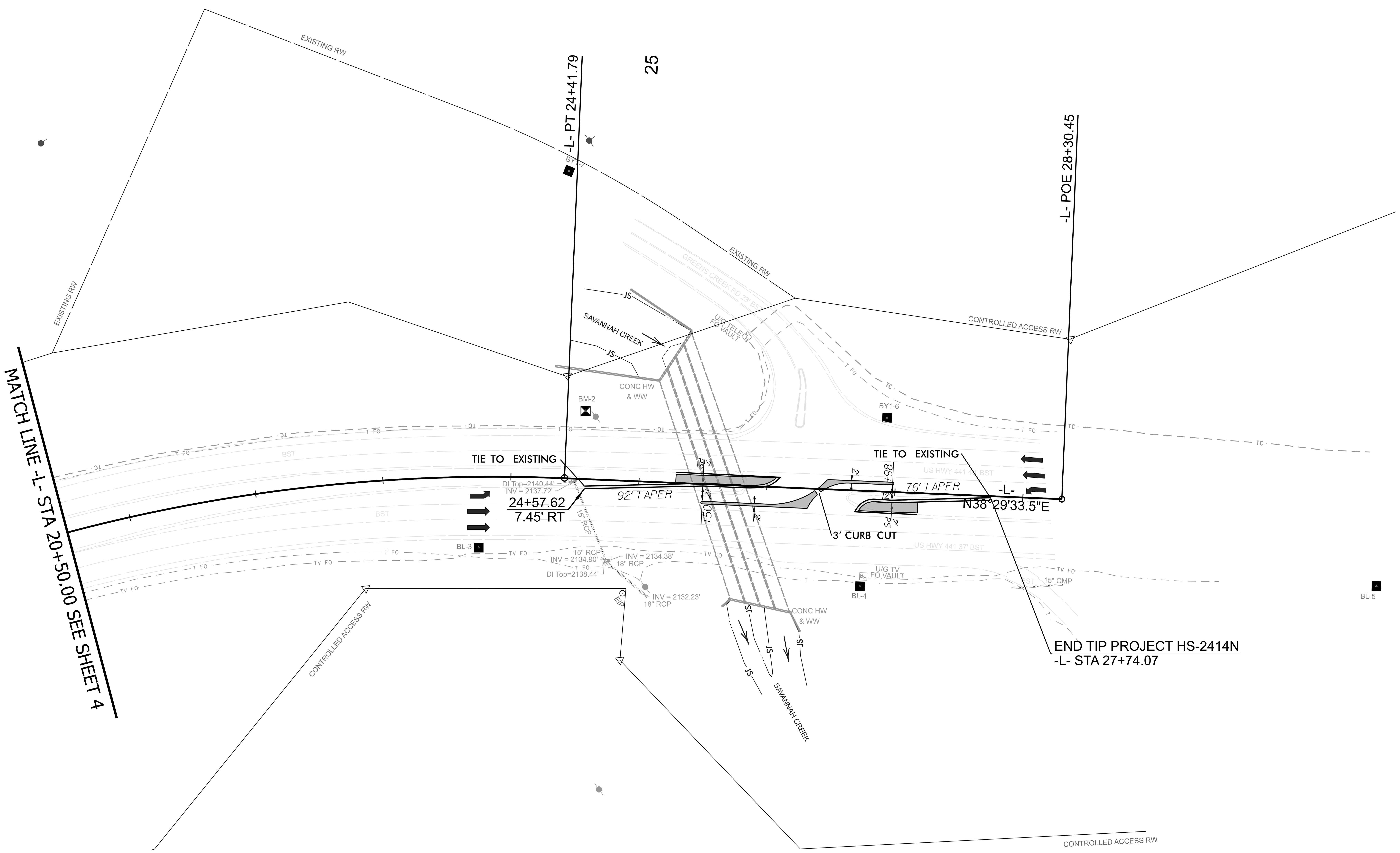
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

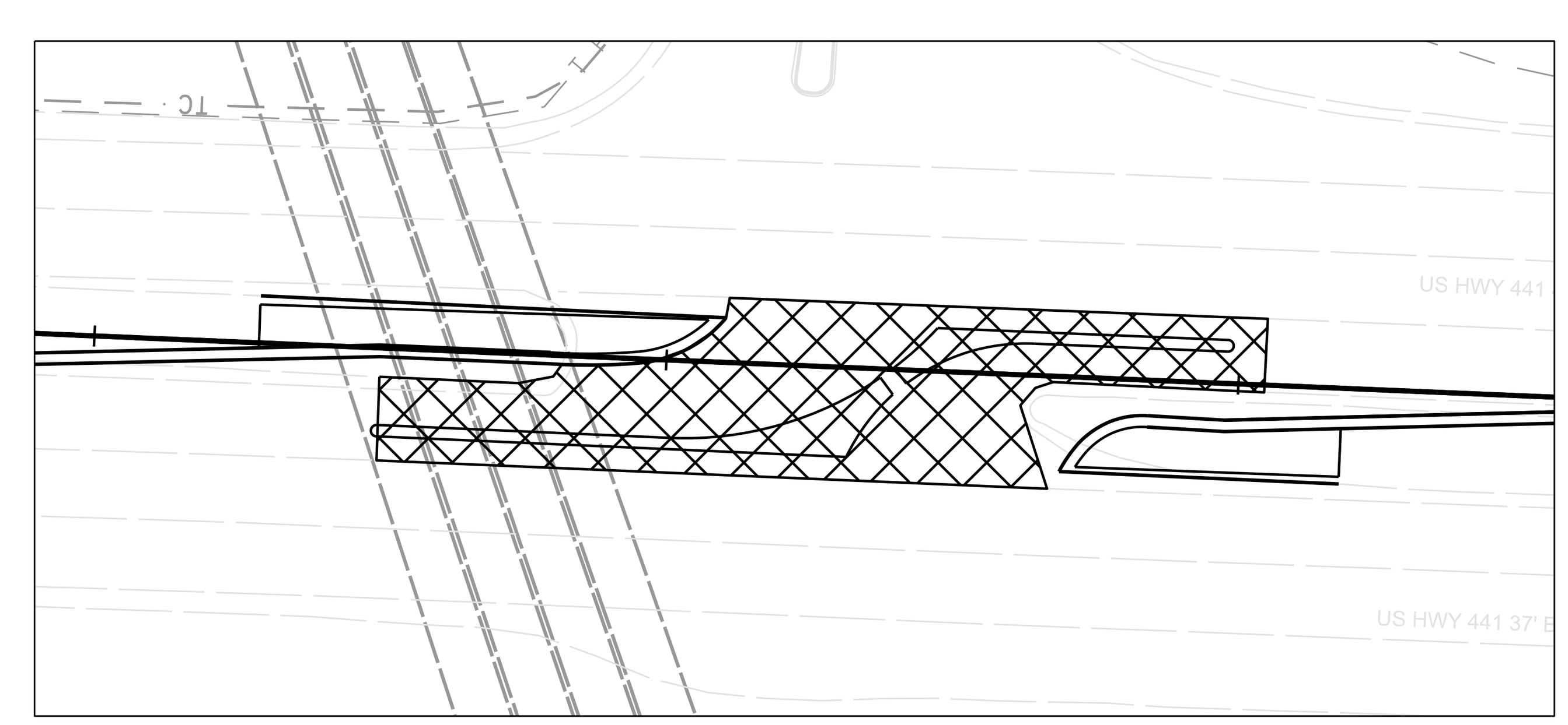
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



CUR DATA -L-
PIc 20+72.02
Δc = 33°35'26.1" (RT)
D = 04°24'26.5"
Lc = 762.15
Tc = 392.38
R = 1,300
SE = 0.000



NOTE: USE ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C (LEVELING COURSE) AS DIRECTED BY THE ENGINEER TO ALLOW FOR POSITIVE DRAINAGE.

SEE DETAIL SHEET 2B-1 FOR ISLAND LAYOUT

S9.5C LEVELING COURSE

PROP MONOLITHIC CONC ISLAND

FOR -L- PROFILE, SEE SHEET 6

HS-2414N | 6

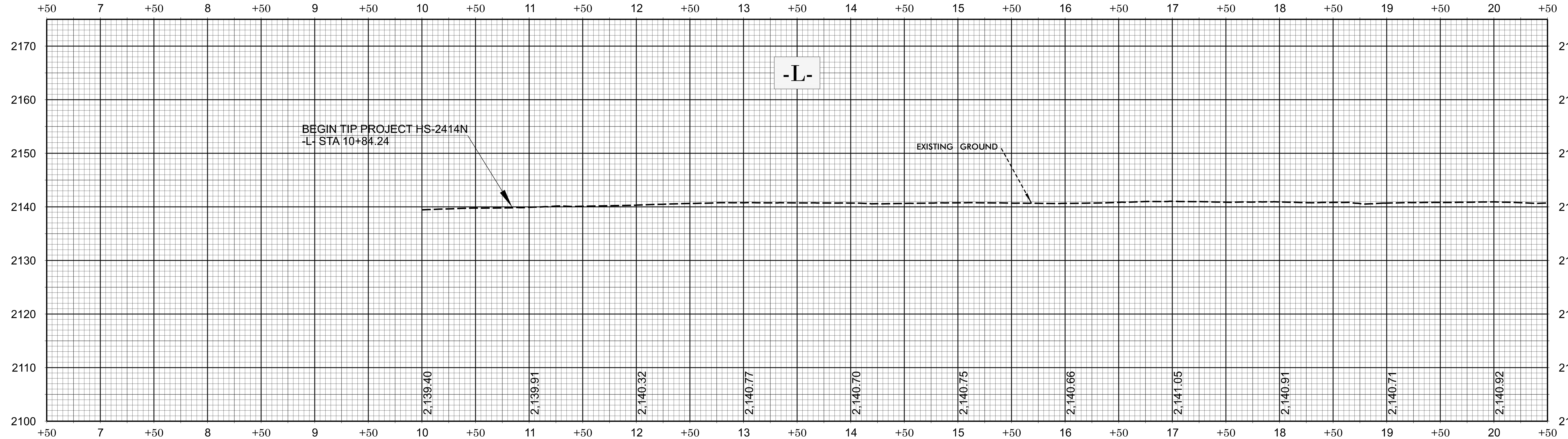
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROADWAY DESIGN UNIT

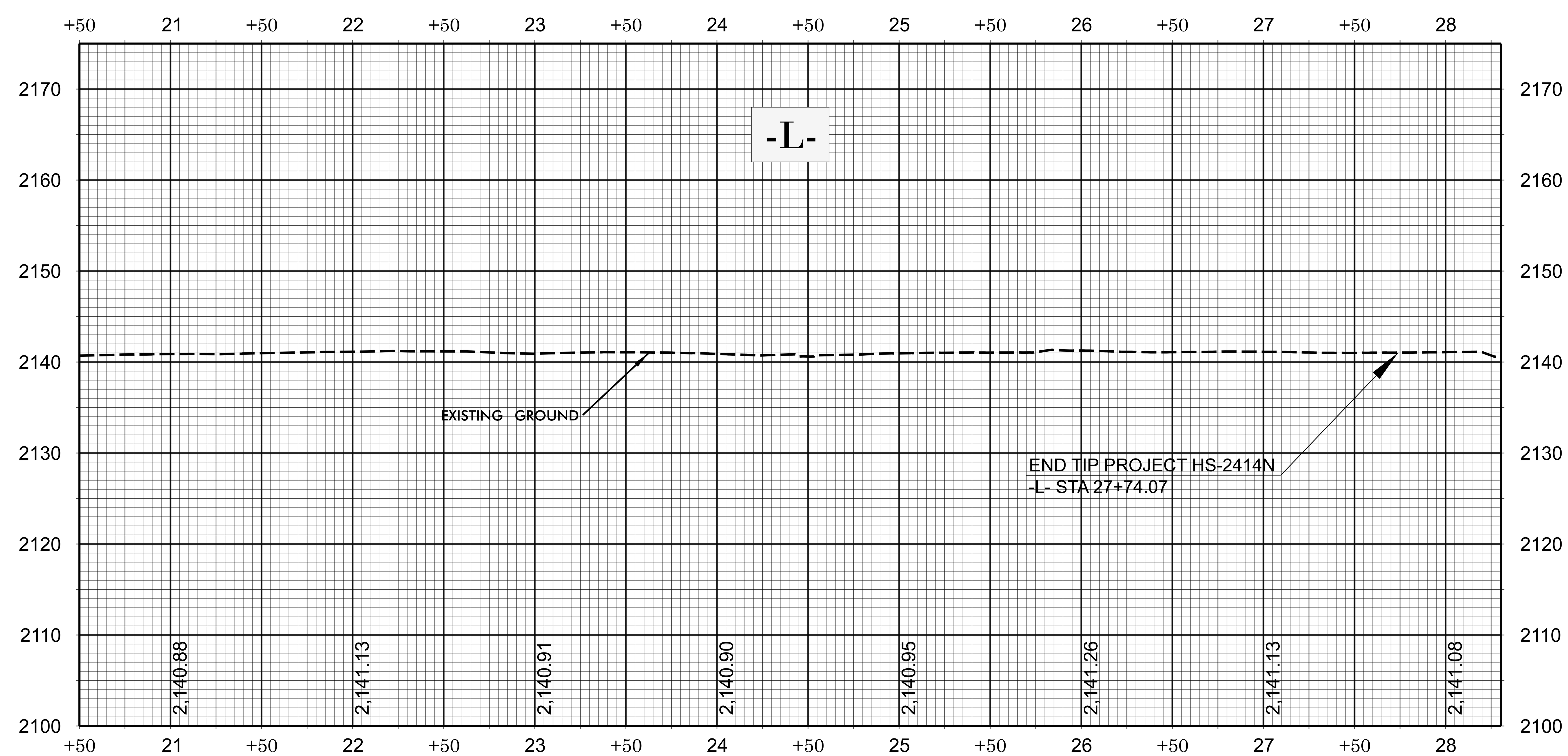
ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



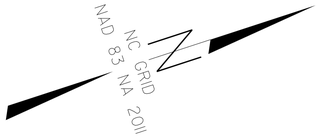
FOR -L- PLAN, SEE SHEET 4



FOR -L- PLAN, SEE SHEET 5

5/26/20

PRIMARY SURVEY CONTROL SHEET



PRIMARY CONTROL TABLE				
POINT	NORTH	EAST	ELEVATION	DESCRIPTION
GPS-1	600282.9613	729171.2099	2136.77	REBAR & METAL CAP
GPS-2	600891.4936	729226.1175	2139.30	REBAR & METAL CAP

I, MARK A. PARRIS, PLS, CERTIFY THAT THE PRIMARY PROJECT CONTROL WAS PERFORMED UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

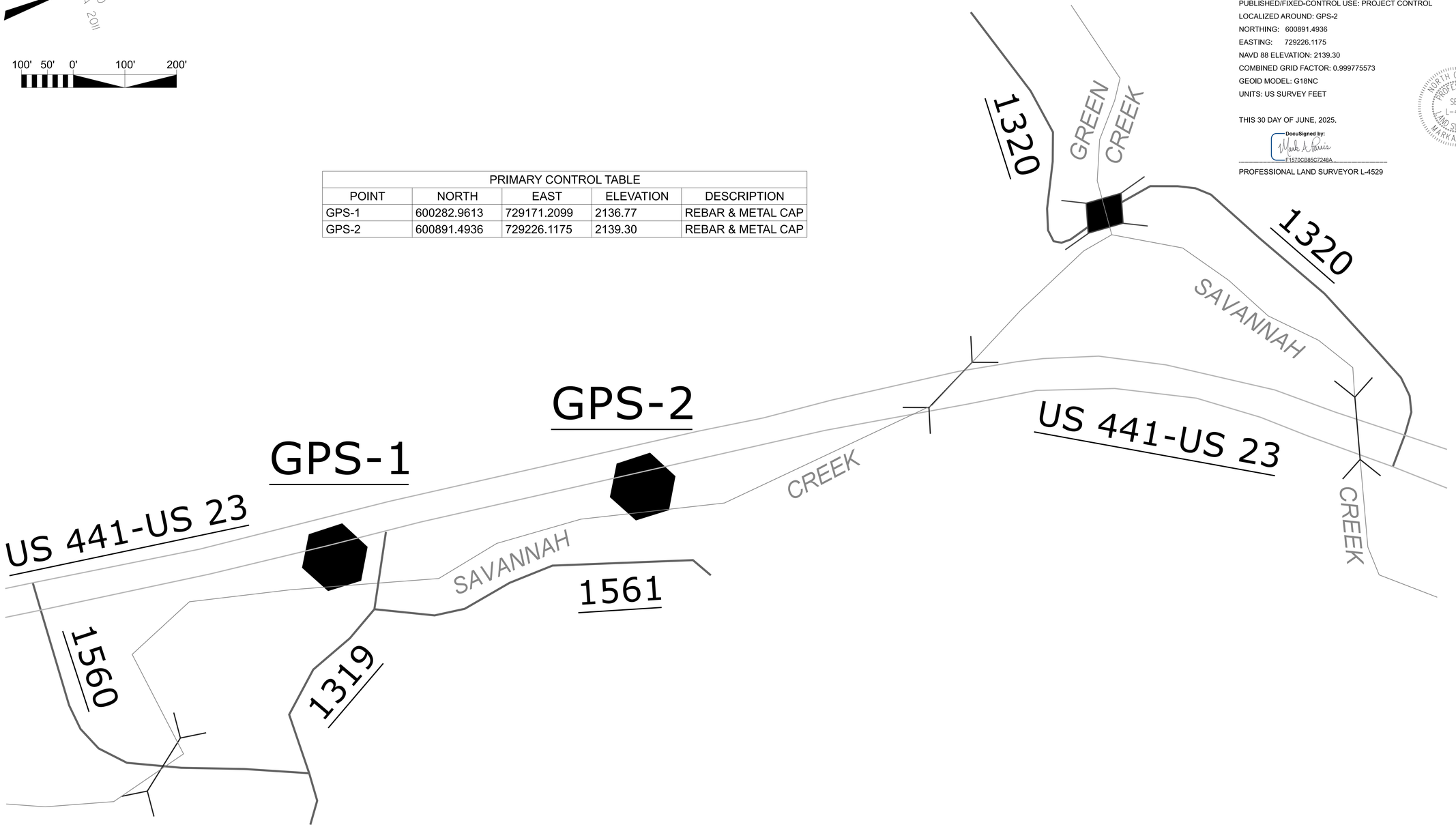
CLASS OF SURVEY: ***AA***
TYPE OF GPS FIELD PROCEDURE: RTN
DATES OF SURVEY: MAY - JUNE 2025
DATUM/EPOCH: NAD 83 / NA 2011
PUBLISHED/FIXED-CONTROL USE: PROJECT CONTROL
LOCALIZED AROUND: GPS-2
NORTHING: 600891.4936
EASTING: 729226.1175
NAVD 88 ELEVATION: 2139.30
COMBINED GRID FACTOR: 0.999775573
GEOID MODEL: G18NC
UNITS: US SURVEY FEET

THIS 30 DAY OF JUNE, 2025.

DocuSigned by:
Mark A Parris
F1570CB85C7248A...

PROFESSIONAL LAND SURVEYOR L-4529

NORTH CAROLINA PROFESSIONAL SEAL L-4529 LAND SURVEYOR MARK A. PARRIS



NOTES:

1. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HS-2414N
R/W | 02C-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2024 STANDARD SPECIFICATIONS

TIP PROJECT: HS-2414N
County: Jackson

PREPARED FOR

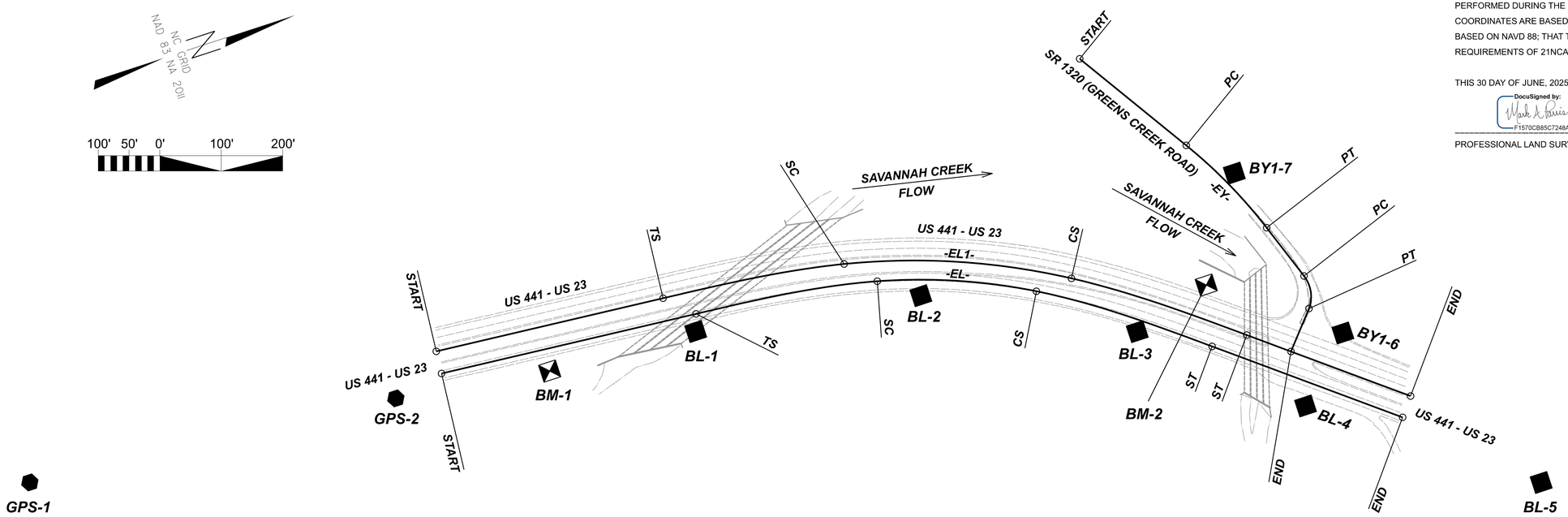
LOCATION AND SURVEYS UNIT

PREPARED BY

5/26/20

SECONDARY SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



I, MARK A. PARRIS, PLS, CERTIFY THAT THE SECONDARY BASELINE CONTROL FOR THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION UTILIZING PRIMARY GPS CONTROL SET BY OTHERS; THAT ALL HORIZONTAL CLOSURES HAD A MINIMUM RATIO OF PRECISION OF 1:20,000 (CLASS AA) AND VERTICAL ACCURACY TO 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED DURING THE MONTHS OF MAY & JUNE, 2025 , AND ALL COORDINATES ARE BASED ON NAD 83 / NA 2011 AND ALL ELEVATIONS ARE BASED ON NAVD 88; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 30 DAY OF JUNE, 2025.

DocuSigned by:
Mark A. Parris
F1570CB85C7248A...

PROFESSIONAL LAND SURVEYOR L-4529

NORTH CAROLINA PROFESSIONAL SEAL L-4529 LAND SURVEYOR MARK A. PARRIS

EXISTING ALIGNMENT NAME: -EL-									
POINT	NORTHING	EASTING	BEARING	DIST	D	D	L	T	R
START	600974.6271	729210.6921							
LINE			N04°54'07.4""E	425.29					
SC	601695.1995	729288.1123							
CURVE					15°36'47.5"" Right	06°00'00.0""	260.22	130.92	954.93
ST	602180.2417	729557.9630							
LINE			N38°29'33.5""E	330.72					
END	602439.0936	729763.8088							

EXISTING ALIGNMENT NAME: -EL1-									
POINT	NORTHING	EASTING	BEARING	DIST	D	D	L	T	R
START	600977.6729	729173.8362							
LINE			N04°54'07.4""E	379.03					
SC	601652.6039	729244.7243							
CURVE					18°36'48.6"" Right	05°00'00.0""	372.27	187.79	1145.92
ST	602239.5486	729557.8524							
LINE			N38°29'33.5""E	284.37					
END	602462.1229	729734.8493							

EXISTING ALIGNMENT NAME: -EY-									
POINT	NORTHING	EASTING	BEARING	DIST	D	D	L	T	R
START	602120.5558	729046.5061							
LINE			N57°09'56.0""E	223.29					
PC	602241.6290	729234.1271							
CURVE					13°08'10.3"" Right	07°00'00.0""	187.66	94.24	818.51
PT	602324.4951	729402.0422							
LINE			N70°18'06.3""E	99.23					
PC	602357.9422	729495.4654							
CURVE					58°15'52.6"" Right	104°10'26.9""	55.93	30.65	55.00
PT	602349.1645	729548.2922							
LINE			S49°12'41.4""E	75.77					
END	602299.6664	729605.6596							

PRIMARY CONTROL TABLE				
POINT	NORTH	EAST	ELEVATION	DESC
GPS-1	600282.9613	729171.2099	2136.77	REBAR & METAL CAP
GPS-2	600891.4936	729226.1175	2139.30	REBAR & METAL CAP

BASELINE POINTS TABLE				
POINT	NORTH	EAST	ELEVATION	DESC
BL -1	601388.9570	729274.0810	2140.27	REBAR & METAL CAP
BL- 2	601755.3171	729332.2863	2138.58	REBAR & METAL CAP
BL- 3	602071.8981	729497.2623	2140.19	REBAR & METAL CAP
BL -4	602294.6765	729696.9852	2139.32	REBAR & METAL CAP
BL -5	602620.5683	729934.2980	2137.38	REBAR & METAL CAP
BY1-6	602389.2609	729603.0892	2139.99	REBAR & METAL CAP
BY1-7	602302.0413	729301.1272	2121.44	REBAR & METAL CAP

BENCHMARK POINTS TABLE				
POINT	NORTH	EAST	ELEVATION	DESC
BM-1	601143.1690	729261.5500	2138.19	RR SPIKE IN 15" POPLAR
BM-2	602202.1564	729460.2040	2140.99	RR SPIKE IN 12" PINE

NOTES:

1. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HS-2414N

R/W | 02C-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2024 STANDARD SPECIFICATIONS

TIP PROJECT: HS-2414N

County: Jackson

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY

JMT

5/26/20

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
JACKSON COUNTY
LOCATION: US23/441 AT SR 1320 (GREENS CREEK ROAD)

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1205.15	PAVEMENT MARKINGS - SUPERSTREETS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION
1267.01	FLEXIBLE DELINEATORS - INSTALLATION
1267.02	FLEXIBLE DELINEATORS - SPACING TABLES
1267.03	FLEXIBLE DELINEATORS - INTERCHANGE PLACEMENT

INDEX

PLAN PREPARED BY: N.C.D.O.T. DIVISION OF HIGHWAYS

JAMES HOLLINGSWORTH, PE — PROJECT ENGINEER

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US 23/441	THERMOPLASTIC	NON CAST IRON SNOWPLOWABLE
SR 1320	THERMOPLASTIC	NON CAST IRON SNOWPLOWABLE

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
PAVEMENT MARKINGS	
THERMOPLASTIC (6", 90 MIL)	
T20	(6") WHITE EDGELINE
T23	(6") 3 FT. - 9 FT./SP WHITE MINISKIP
T24	(6") 2 FT. - 6 FT./SP WHITE MINISKIP
T30	(6") YELLOW EDGELINE
T34	(6") 2 FT. - 6 FT./SP YELLOW MINISKIP
THERMOPLASTIC (12", 90 MIL)	
T50	(12") WHITE GORELINE
T51	(12") WHITE DIAGONAL
THERMOPLASTIC (90 MIL)	
T70	LEFT TURN ARROW
T71	RIGHT TURN ARROW
T72	STRAIGHT ARROW
T77	U-TURN ARROW

HS-2414N

PMP | 1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROVED: _____

DATE: _____

SEAL:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 052427 JAMES HOLLINGSWORTH

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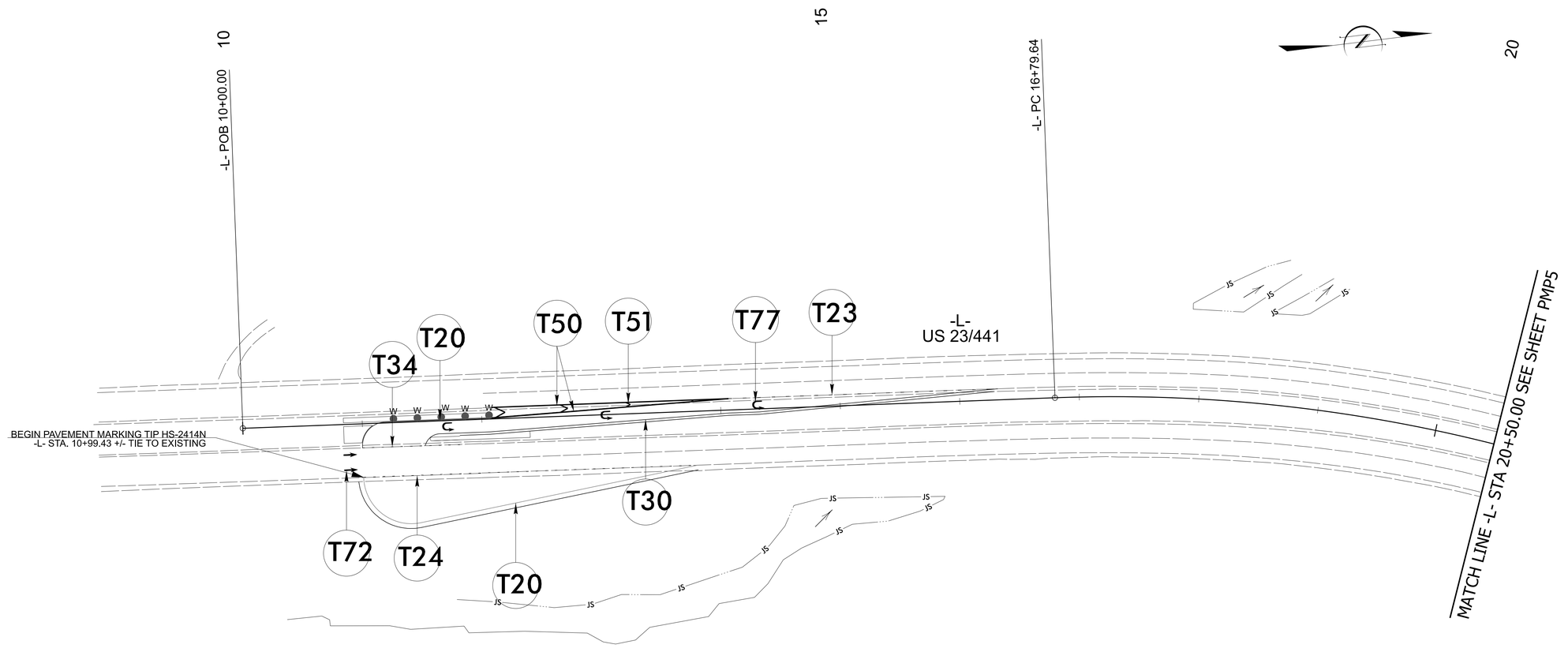
STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION

T.I.P.: HS-2414N

CONTRACT: DN01142



W WHITE FLEXIBLE DILENEATORS

HS-2414N

PMP-4

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

APPROVED: _____

DATE: _____

SEAL

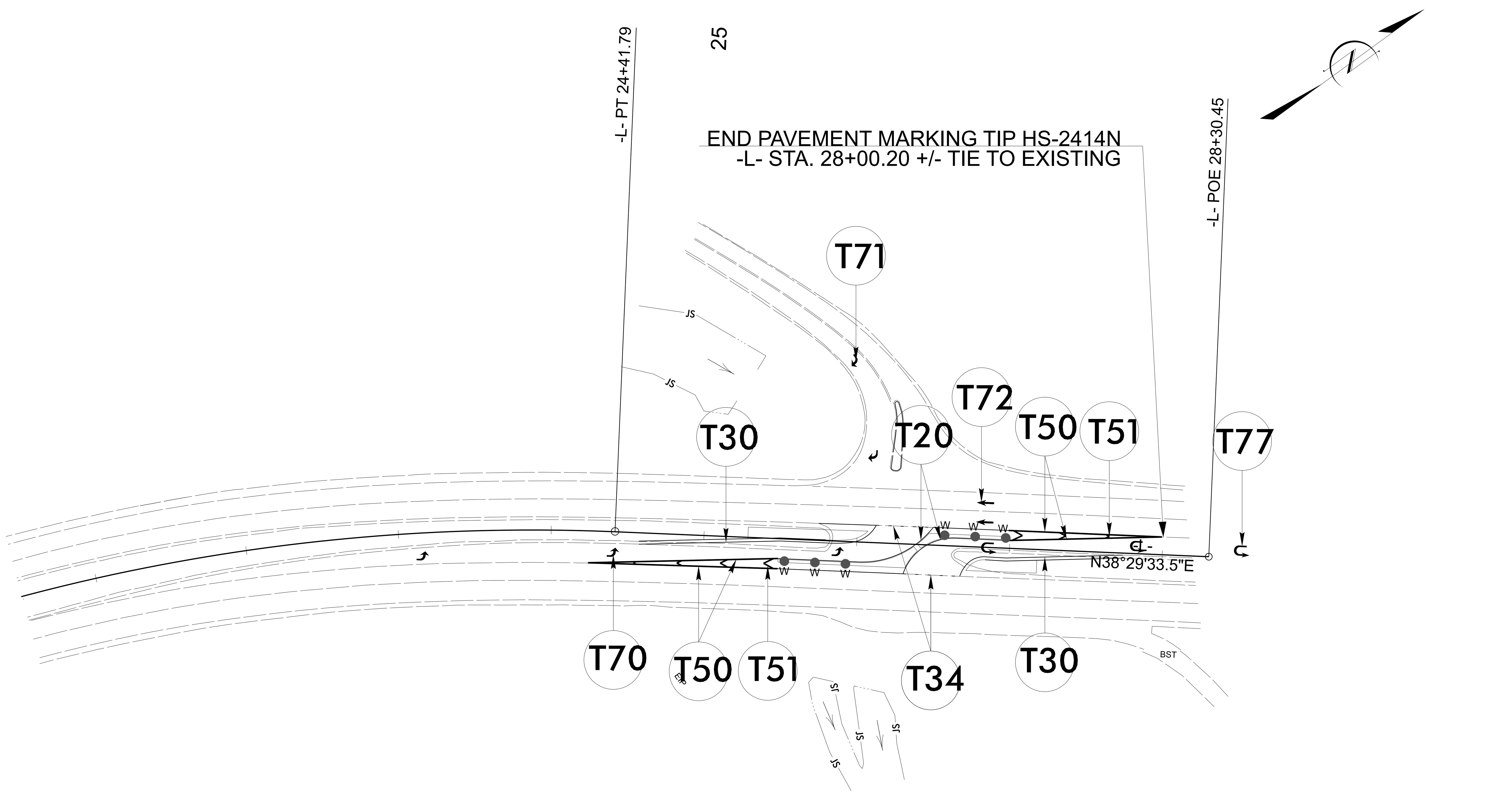
NORTH CAROLINA PROFESSIONAL ENGINEER JAMES F. HOLLINGSWORTH III

SEAL 051774 Digitally signed by James Hollingsworth III DocuSigned by:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

11/14/23



HS-2414N

PMP-5

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

APPROVED:

DATE:

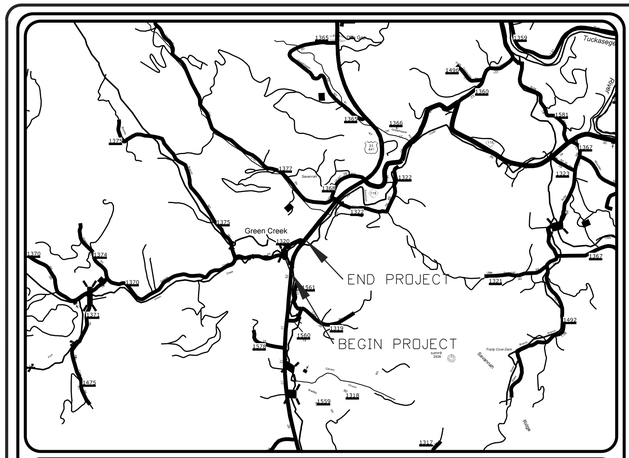
SEAL:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 051774 JAMES E. HOLLINGSWORTH

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

$$$-USER NAME-$$$ - $$$-DATE-$$$

CONTRACT: DN01142 TIP PROJECT: HS-2414N



VICINITY MAP
NOT TO SCALE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HS-2414N	EC-1	

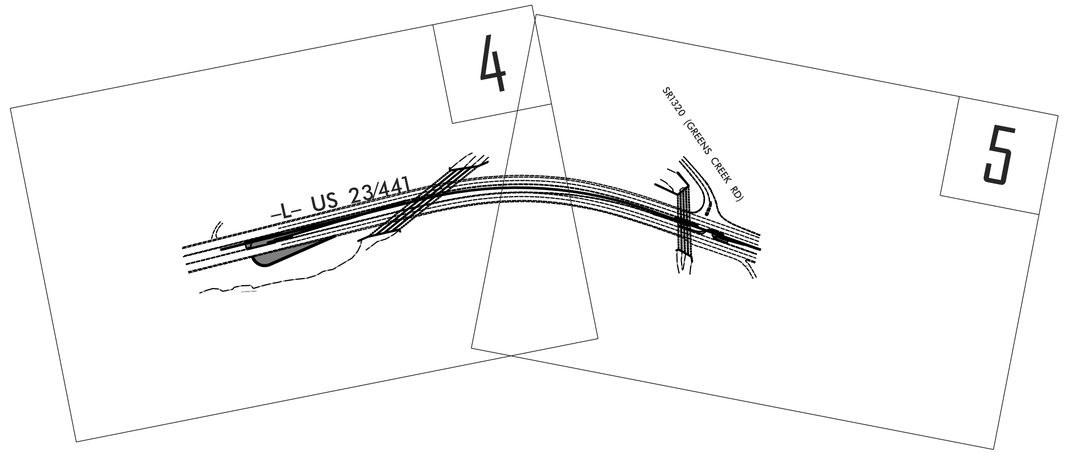
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
50986.1.15		P.E.
50986.3.15		CONSTRUCTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

LOCATION: *US 23/441 AT SR1320 (GREENS CREEK ROAD)*

TYPE OF WORK: *GRADING, DRAINING, AND PAVING*



THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

50 25 0 50 100

PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

Prepared In the Office of:

DIVISION OF HIGHWAYS

253 Webster Rd.
Sylva, NC 28779

2024 STANDARD SPECIFICATIONS

Designed by:

DREW C. RIVENBARK *4342*

NAME *LEVEL III CERTIFICATION NO.*

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$SYSDATE$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	EC-2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

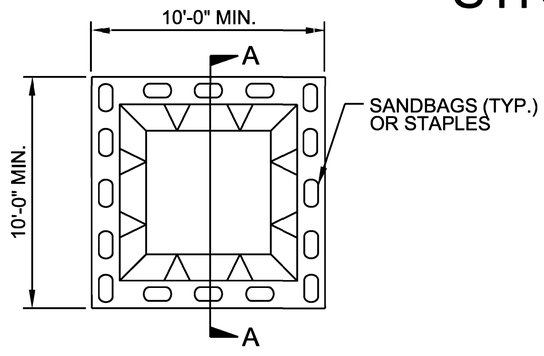
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.04	Stilling Basin	
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C

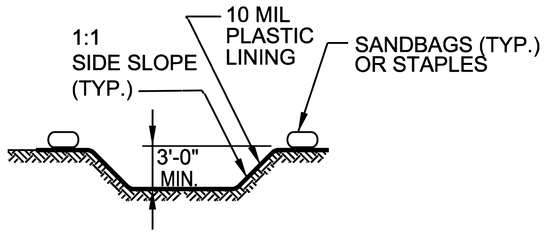
Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	A
1635.02	Rock Pipe Inlet Sediment Trap Type B	B
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	EW
	Silt Fence Coir Fiber Wattle Break	CFW
1636.03	Excelsior Wattle Barrier	EW EW EW
1636.03	Coir Fiber Wattle Barrier	CFW CFW CFW

PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

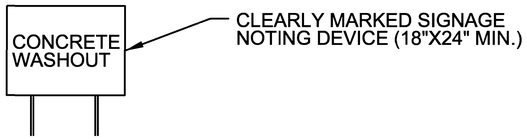
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A



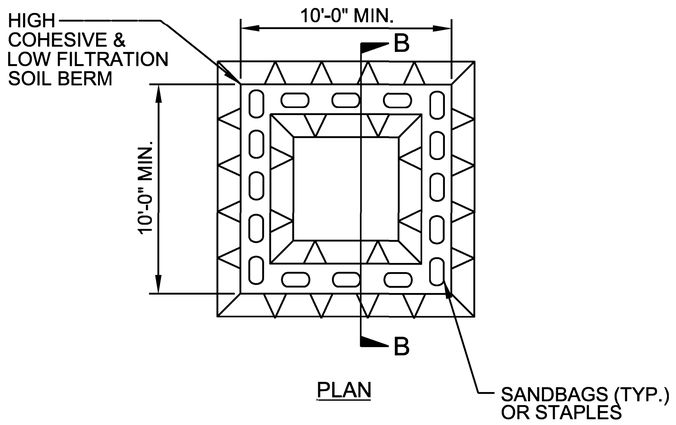
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

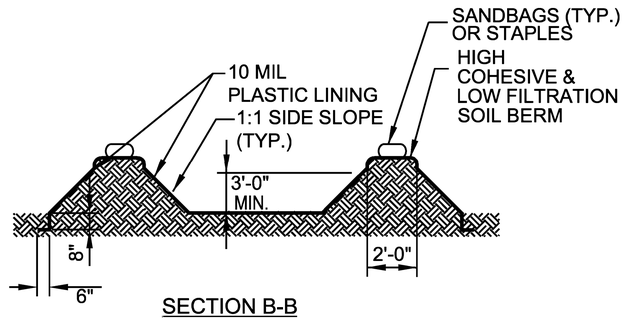
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

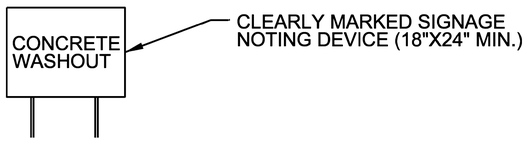
NOT TO SCALE



PLAN



SECTION B-B



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	EC-3
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	-L-	27+18	27+74	CL	76
				SUBTOTAL	76
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					500
				TOTAL	576
				SAY	600

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4					
				SUBTOTAL	
	ADDITIONAL PSRM TO BE INSTALLED				
				TOTAL	
				SAY	

PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	EC-3B
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

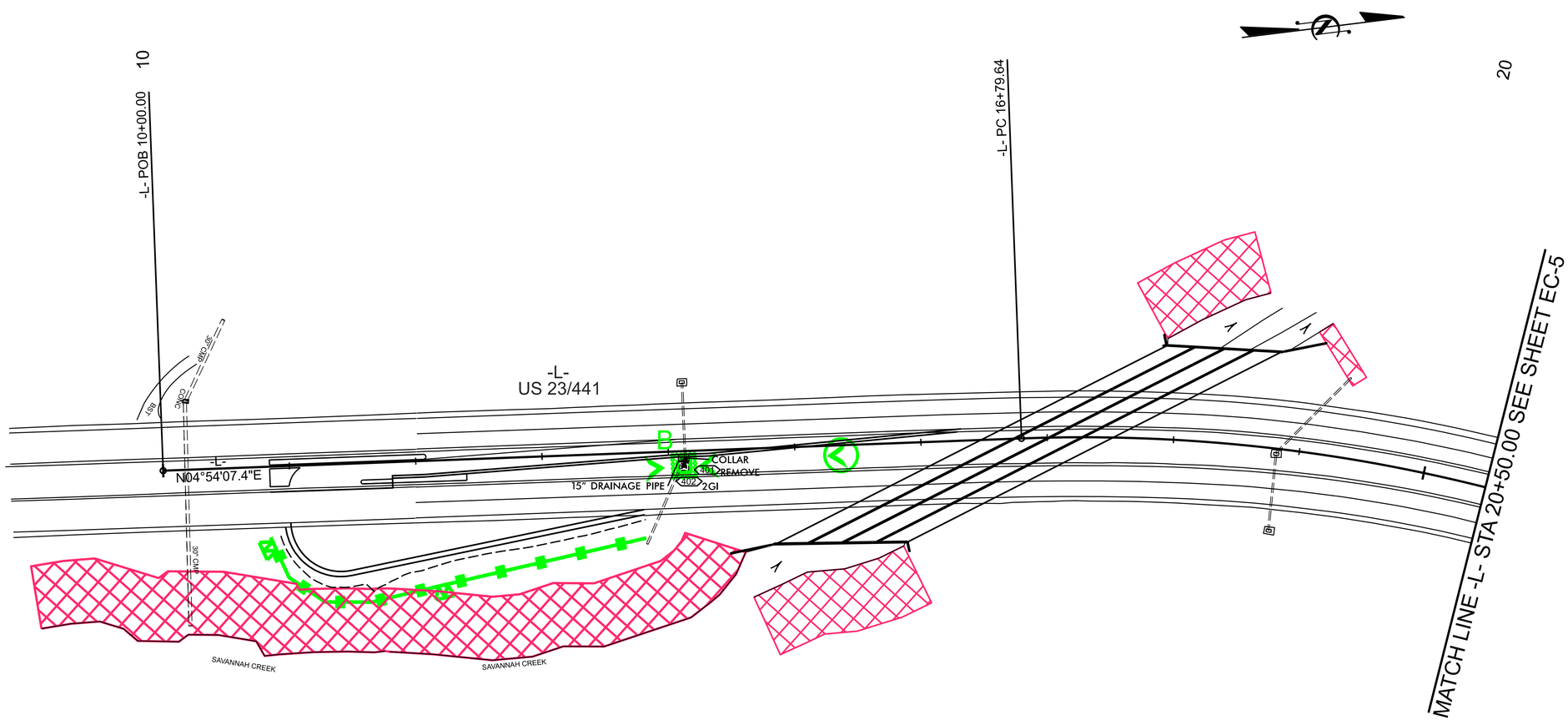
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	*STABILIZATION TIME*	*TIMEFRAME EXCEPTIONS*
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

5/26/20

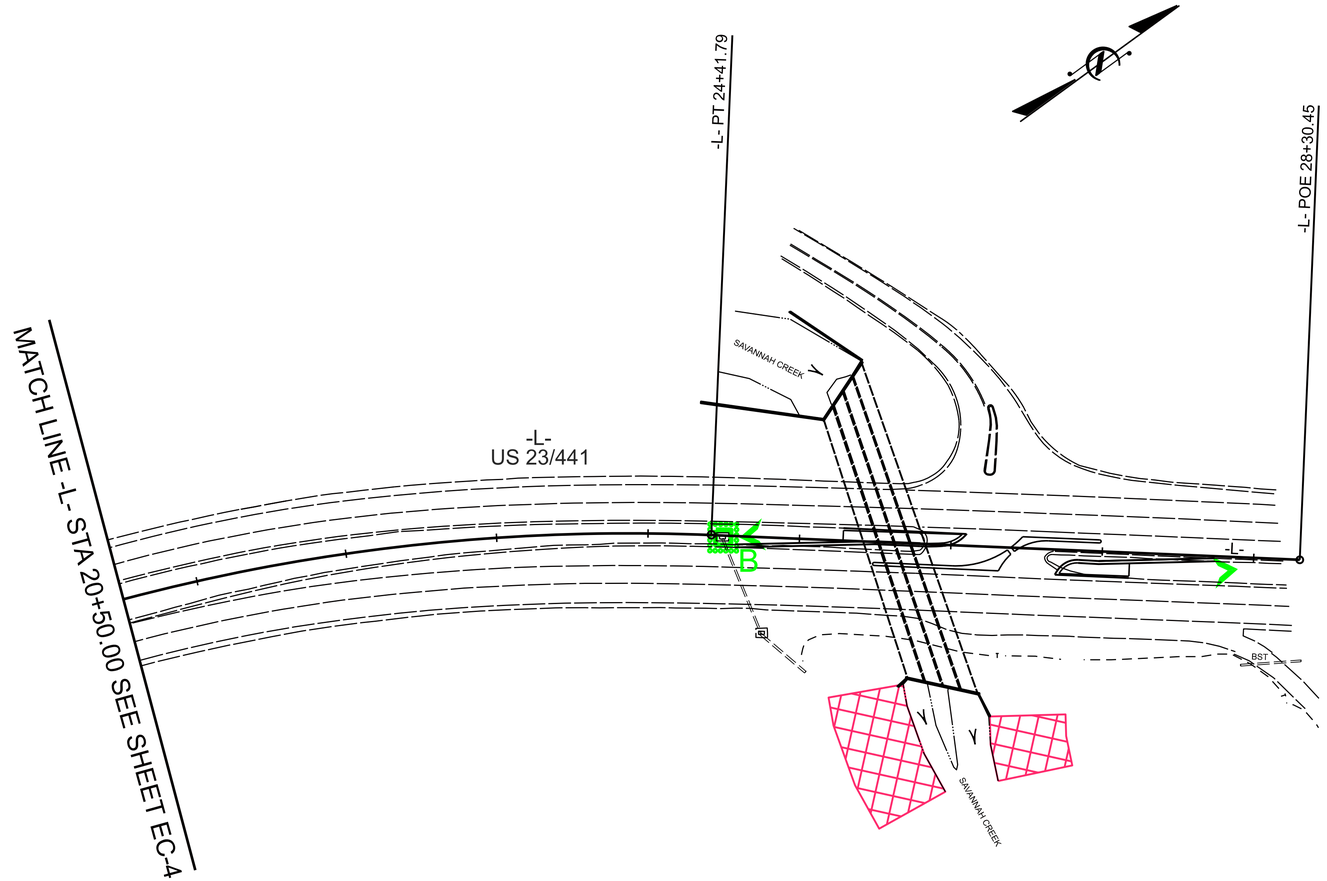
PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

5/26/20

PROJECT REFERENCE NO.	SHEET NO.
HS-2414N	EC-5/CONST.5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

5/26/20

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
JACKSON COUNTY

LOCATION: US23/441 AT SR 1320 (GREENS CREEK ROAD)

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
901.50	ARROWS AND SHIELDS
902.10	FOUNDATIONS FOR GROUND MOUNTED SIGNS
903.10	GROUND MOUNTED SIGN SUPPORTS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.20	SECONDARY SIGN MOUNTING
904.30	SUPPLEMENTAL SIGN MOUNTING
904.50	MOUNTING OF TYPE `D', `E' AND `F' SIGNS ON `U' CHANNEL POSTS
910.30	SIGNING UNSIGNALIZED REDUCED CONFLICT INTERSECTIONS

GENERAL NOTES

. SIGNS FURNISHED BY STATE

. CONFIRM IN WRITING AT LEAST 4 MONTHS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.

. ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TW0 U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.

. IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.

. WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER

. ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.

. WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.

. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

. DO NOT BEGIN FABRICATION FOR TYPES A & B SIGNS MOUNTED ON OVERHEAD STRUCTURES OR STEEL SUPPORTS UNTIL "S" DIMENSIONS HAVE BEEN FIELD VERIFIED.

. SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

. RELOCATION, REMOVAL, AND/OR REPLACEMENT OF LOGO SIGNS SHALL BE COORDINATED WITH NORTH CAROLINA SIGNING PROGRAM.

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	270	L.F.
4102000000	904	SIGN ERECTION, TYPE E	14	EA.
4108000000	904	SIGN ERECTION, TYPE F	3	EA.
4238000000	907	DISPOSAL OF SIGN, D, E OR F	2	EA.

INDEX

PLAN PREPARED BY: N.C.D.O.T. DIVISION OF HIGHWAYS

JAMES HOLLINGSWORTH, PE — PROJECT ENGINEER

HS-2414N

SIGN 1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROVED: _____

DATE: _____

SEAL:

NORTH CAROLINA PROFESSIONAL SEAL 047711 ENGINEER JAMES HOLLINGSWORTH

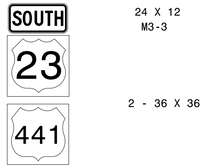
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

CONTRACT: DN01142 T.I.P.#: HS-2414N

5/26/20

(401) QUANTITY REQ'D 1



24 X 12
M3-3

2 - 36 X 36

ONE "U" POSTS PER SIGN

(402) QUANTITY REQ'D 2

42 X 30
R5-1A

ONE "U" POSTS PER SIGN

(403) QUANTITY REQ'D 1

48 X 18
R6-1L

TWO "U" POSTS PER SIGN

(404) QUANTITY REQ'D 2

36 X 36
R5-1

TWO "U" POSTS PER SIGN

(405) QUANTITY REQ'D 1

24 X 12
M3-1

2 - 36 X 36

U-TURN
SEE THIS SHEET
FOR DESIGN

TWO "U" POSTS PER SIGN

(406) QUANTITY REQ'D 1

24 X 12
M3-1

2 - 36 X 36

ONE "U" POSTS PER SIGN

(407) QUANTITY REQ'D 2

36 X 36

MOUNTED ON EXISTING POST

(501) QUANTITY REQ'D 2

36 X 36
R3-4

ONE "U" POSTS PER SIGN

(502) QUANTITY REQ'D 2

30 X 36
R3-5R

ONE "U" POSTS PER SIGN

(503) QUANTITY REQ'D 1

36 X 36
R5-1

ONE "U" POSTS PER SIGN

(504) QUANTITY REQ'D 2

24 X 12
M4-4

36 X 36
R3-4

ONE "U" POSTS PER SIGN

SIGN NUMR:
TYPE: F Ground
QUANTITY: 1
SIGN WIDTH: 1'-9"
HEIGHT: 1'-9"
TOTAL AREA: 3.1 Sq.Ft.

MAT'L: 0.063" ALUMINUM

BORDER TYPE: RECESSED
RECESS: 0.38"
WIDTH: 0.63"
RADII: 1.5"

NO. Z BARS:
LENGTH:

BACKG. COLOR: White
COPY COLOR: Black

DESIGN BY:
PROJECT ID:

CHK BY:
DIV:

STD #:
DATE:

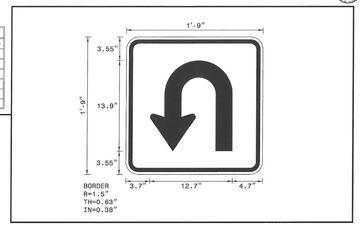
N. C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
TRANSPORTATION MOBILITY & SAFETY
SIGNING & DELINEATION UNIT

SYMBOL	X	Y	WID	HT
u arrow	3.7	3.5	12.7	13.9

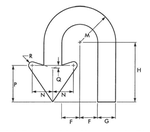
NOTES:

1. Legend and border shall be direct applied Non-reflective sheeting.

2. Background shall be Grade C reflective sheeting.



Arrow Details



ARROW DIMENSIONS (INCHES)	F	G	H	M	N	P	Q	R
	2.625	2.625	8.659	5.25	3	5.25	0.375	0.5

Spacing Factor is 1 unless specified otherwise

FILENAME: GSEN5

HS-2414N

SIGN 2

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

APPROVED: _____

DATE: _____

SEAL:

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 051774 JAMES HOLLINGSWORTH III

SEALED BY: James Hollingsworth

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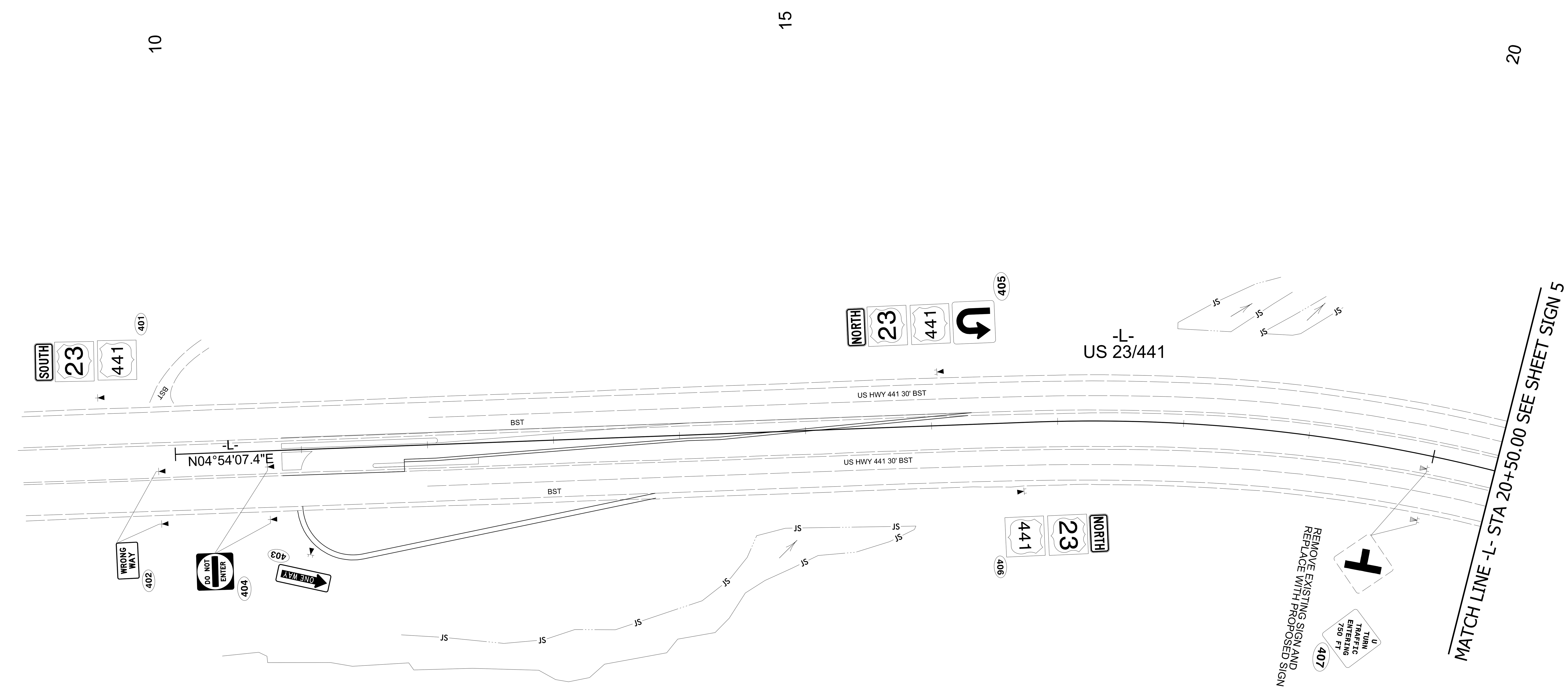
STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·



HS-2414N

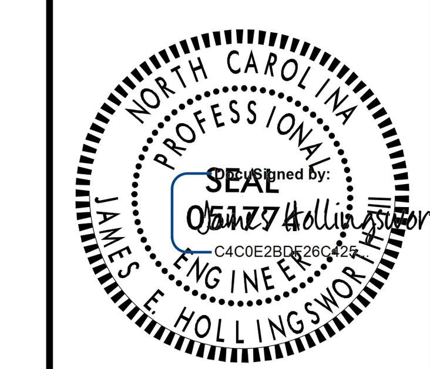
SIGN	4

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

APPROVED:

DATE:

SEAL:



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5/26/20

HS-2414N

SIGN 5

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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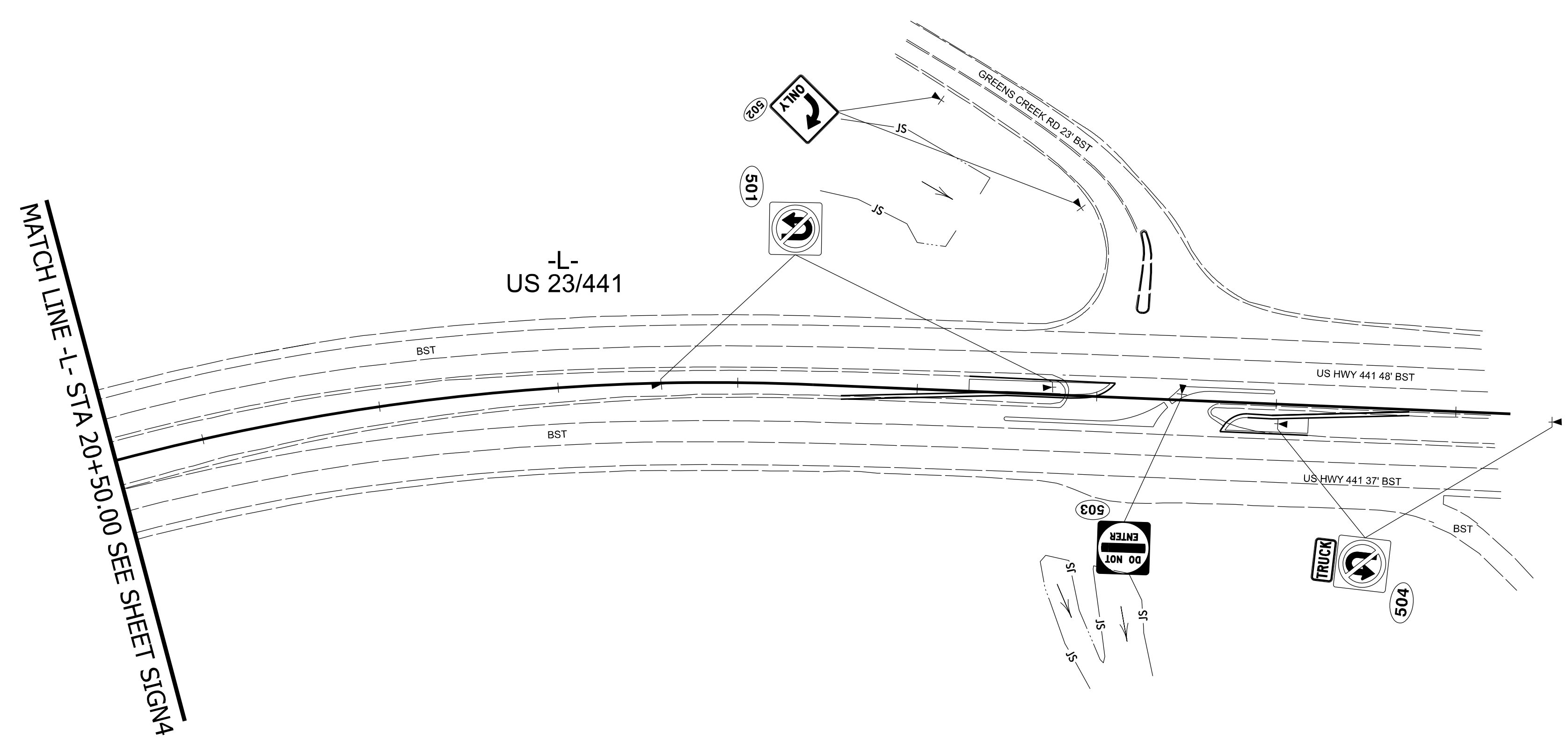
25



501

502

503

504