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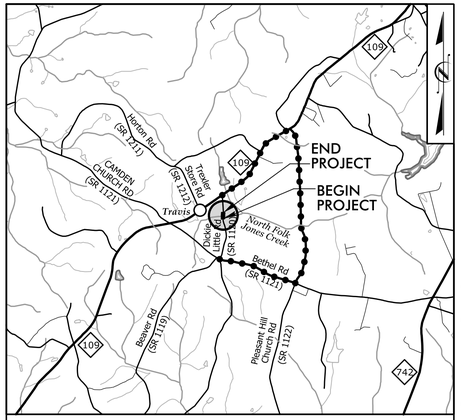
PROJECT WBS: 17BP.10.R.130

CONTRACT: DJ00335

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet



DETOUR

VICINITY MAP

N.T.S.

FINAL PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ANSON COUNTY

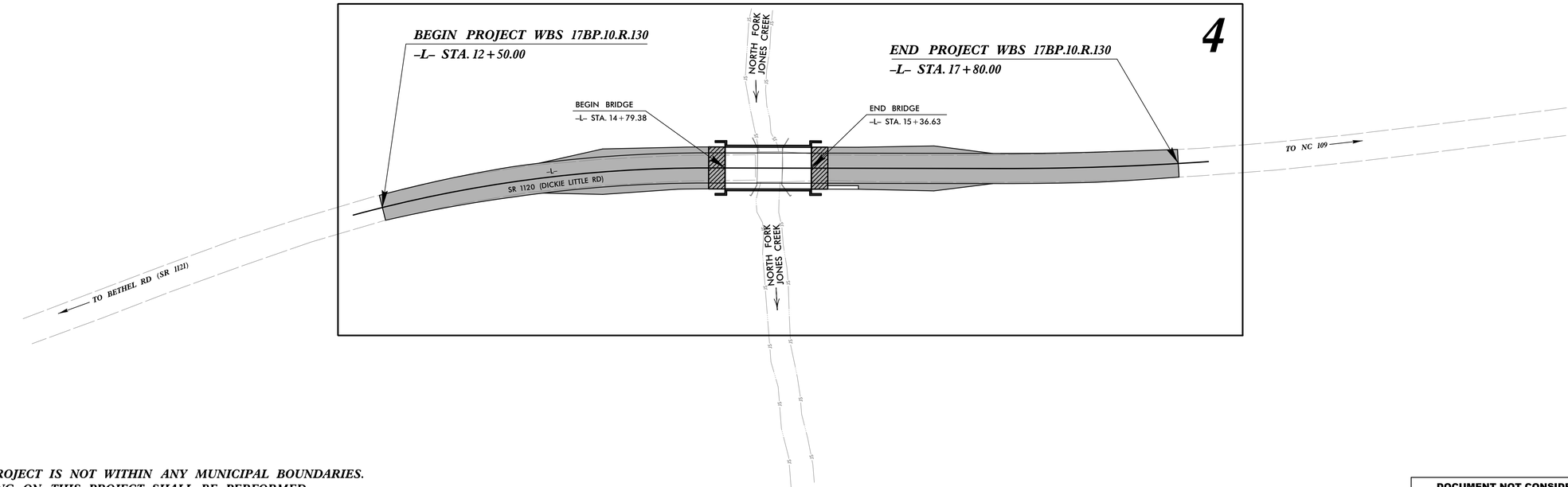
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.130	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
17BP.10.R.130		P.E.
17BP.10.R.130		RW & UTIL
17BP.10.R.130		CONST.

LOCATION: BRIDGE #030080 OVER NORTH FORK JONES CREEK ON SR 1120 (DICKIE LITTLE RD)

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

NAD 83 NSRS 2011



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

20 10 0 20 40
PLANS

20 10 0 20 40
PROFILE (HORIZONTAL)

4 2 0 4 8
PROFILE (VERTICAL)

DESIGN DATA

ADT 2014 = 260
ADT 2025 = 520
DHV = N/A
D = N/A
T = 6%
V = 55 MPH

FUNC. CLASSIFICATION: SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT WBS 17BP.10.R.130 = 0.089 MILES
LENGTH OF STRUCTURE PROJECT WBS 17BP.10.R.130 = 0.011 MILES
TOTAL LENGTH OF PROJECT WBS 17BP.10.R.130 = 0.100 MILES

NCDOT CONTACT: GARLAND HAYWOOD, PE
Division Bridge Manager

PLANS PREPARED FOR THE NCDOT BY:
STV 100 Years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUGUST 14, 2018

LETTING DATE: APRIL 17, 2019

NIKKI T. HONEYCUTT, PE
PROJECT ENGINEER

CLARK E. GROVES
PROJECT DESIGNER

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 029388 ENGINEER EDWARD J. VANCE
DocuSigned by: Edward J. Vance
SIGNATURE: 4/5/2019 P.E.

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT
DocuSigned by: Nikki T. Honeycutt
SIGNATURE: 4/5/2019 P.E.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

4/2/2019
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LomanBS

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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.
17BP.10.R.130	1A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT
3/7/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2C-1 THRU 2C-2	ROADWAY DETAILS
3	SUMMARIES AND TYPICAL SECTIONS SHEET
4 THRU 5	PLAN AND PROFILE SHEETS
TMP-1 THRU TMP-2	TRAFFIC MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLAN
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
X-1 THRU X-6	CROSS-SECTIONS
S-1 THRU S-13	STRUCTURE PLANS
SN	STRUCTURE NOTES

GENERAL NOTES

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-01-2018

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

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

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY THE DIVISION.

STANDARD DRAWINGS

2018 ROADWAY ENGLISH STANDARD DRAWINGS EFF. January, 2018

The following Roadway Standards as 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 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 4 - ASPHALT BASES AND PAVEMENTS	
422.02	Bridge Approach Fills - Type II Modified Approach Fill
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
840.02	Concrete Catch Basin
840.03	Frame, Grates, and Hood
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Junction Box - for Cast Iron Double Frame and Grates
846.01	Concrete Curb, Gutter and Curb & Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.03	Temporary Road Closures
1110.01	Stationary Work Zone Signs - Mounting Height & Lateral Clearance
1145.01	Barricades - Type III
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT	
1605.01	Temporary Silt Fence
1607.01	Gravel Construction Entrance
1630.04	Stilling Basin For Pumped Effluent
1630.06	Special Stilling Basin
1631.01	Matting Installation
1633.01	Temporary Rock Silt Check Type A
1645.01	Temporary Stream Crossing

3/7/2019
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12/2/2016

PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.30	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Computed Property Corner
- Property Monument — 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:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easment Pin and Cap
- New Permanent Easement Pin and Cap
- Vertical Benchmark
- Existing Right of Way Marker
- Existing Right of Way Line
- New Right of Way Line — RW
- New Right of Way Line with Pin and Cap — RW
- New Right of Way Line with Concrete or Granite R/W Marker — RW
- New Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- New Control of Access — CA
- Existing Easement Line — E
- New Temporary Construction Easement — E
- New Temporary Drainage Easement — TDE
- New Permanent Drainage Easement — PDE
- New Permanent Drainage / Utility Easement — DUE
- New Permanent Utility Easement — PUE
- New Temporary Utility Easement — TUE
- New 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:

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
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

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

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E*) — W
- U/G Water Line LOS C (S.U.E*) — W
- U/G Water Line LOS D (S.U.E*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — 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 Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- 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.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

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PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	2C-1
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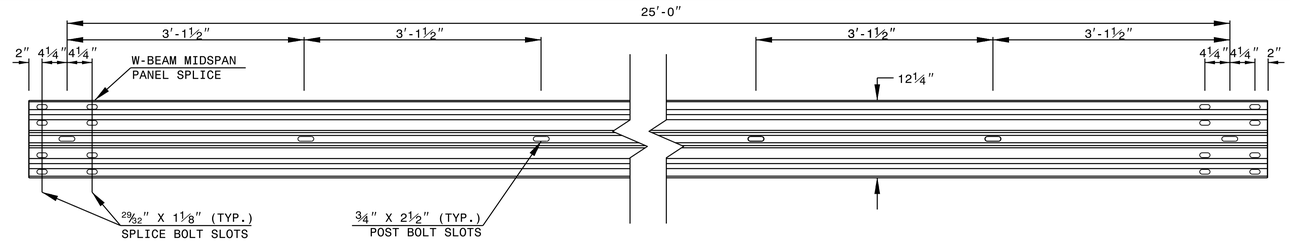
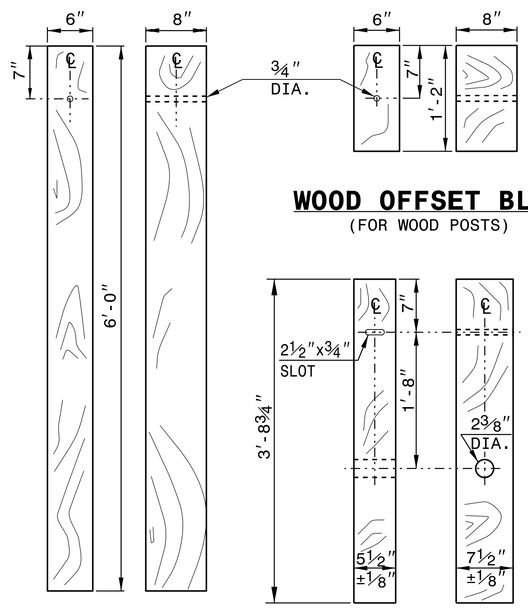
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION



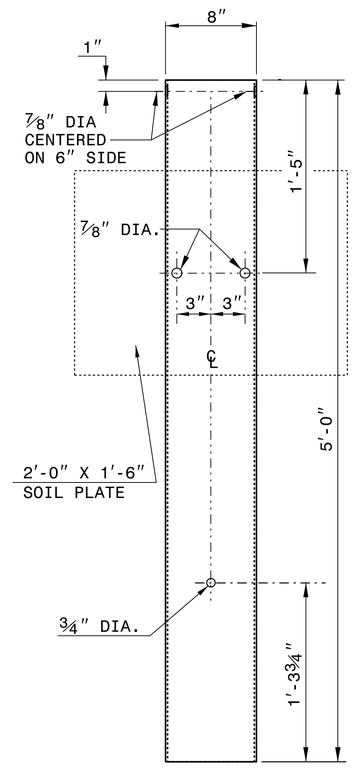
STANDARD W-BEAM GUARDRAIL



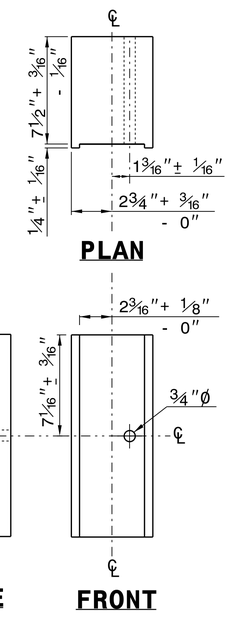
STANDARD LINE POST

WOOD OFFSET BLOCK
(FOR WOOD POSTS)

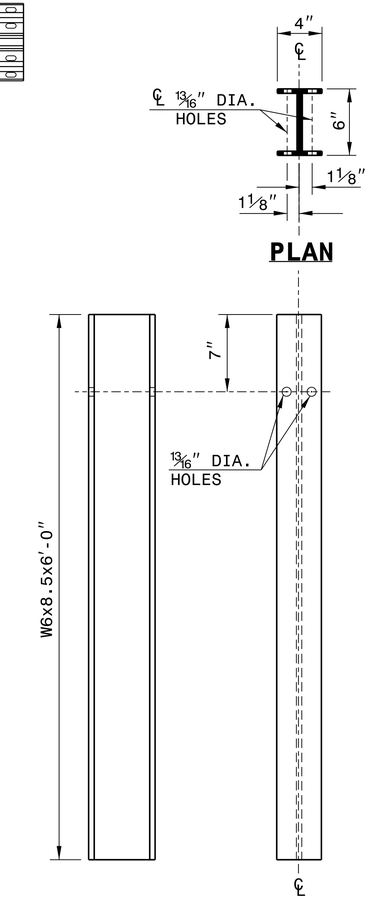
SHORT WOOD BREAKAWAY POST



STEEL TUBE
TS 6"x8"x0.1875"



ROUTED OFFSET BLOCK



"W6" STEEL POST

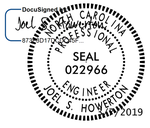
SYSTEM PARTS

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

SHEET 6 OF 8
862D02



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

SEE TITLE BLOCK

ORIGINAL BY: J.HOWERTON DATE: 3-7-2018
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

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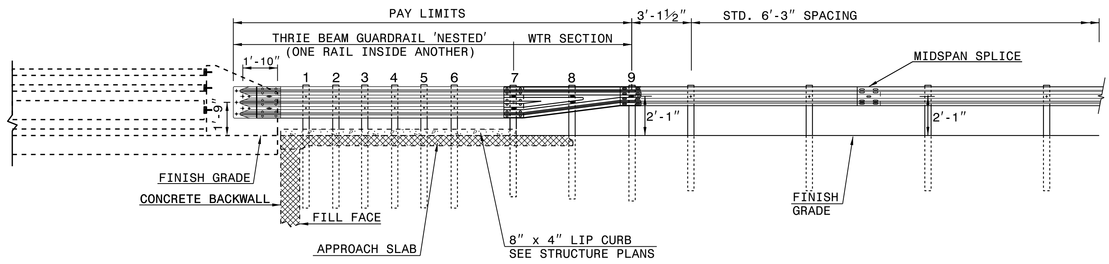
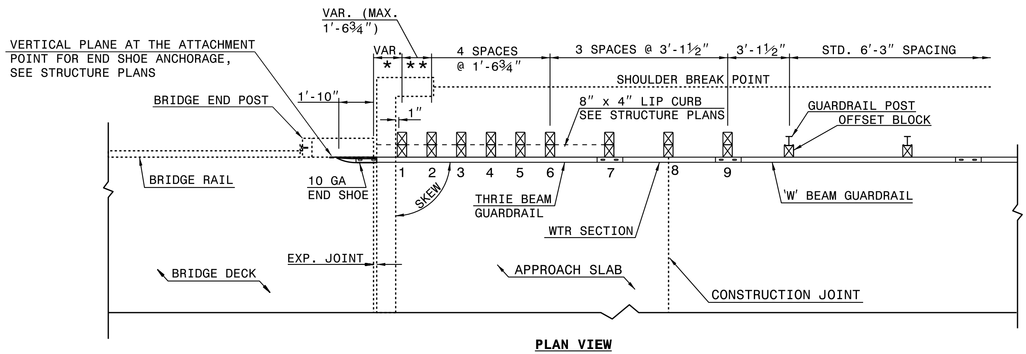
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE



ELEVATION

NOTE:
**POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
*THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
-SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
-MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
-LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
-SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.



PLAN VIEW

GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03

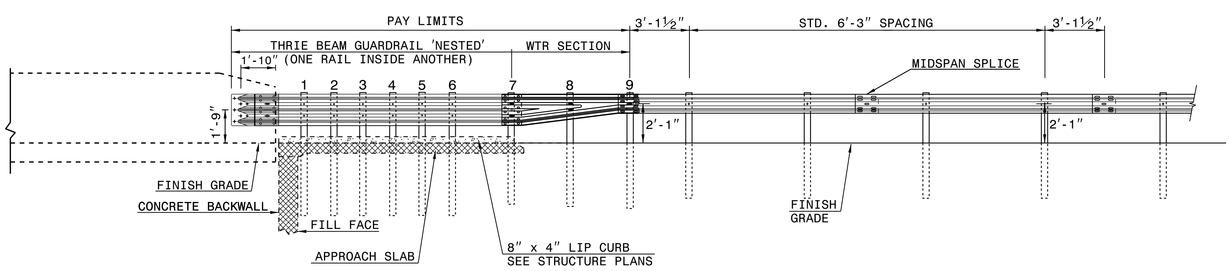
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03

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

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER



ELEVATION

NOTE:
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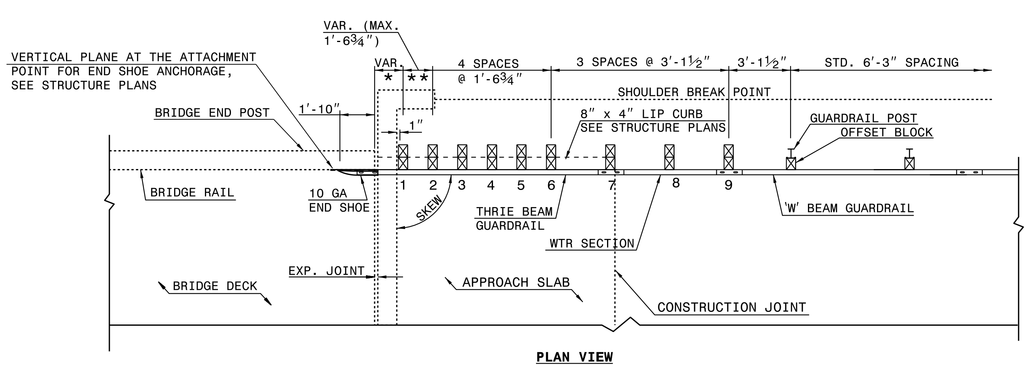
-SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.



PLAN VIEW

GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862D03

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

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862D03

SEE TITLE BLOCK

ORIGINAL BY: J. HOWERTON DATE: 06-22-12
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FILE SPEC.:

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

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STATE OF NORTH CAROLINA
PROFESSIONAL ENGINEER
SEAL 022966
12/14/2017
J. Howerton
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PROJECT REFERENCE NO. 17BP.10.R.130
SHEET NO. 2C-2

DocuSign Envelope ID: 2E78FEC3-680F-44F4-8963-4F7DD29498D8

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

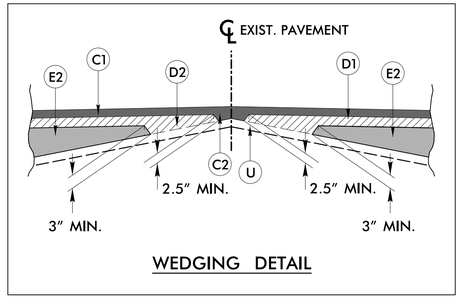
STV 100 Years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT ENGINEER
DocuSign NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER MICHAEL T. HONEYCUTT 3/7/2019	PAVEMENT DESIGN PROVIDED BY NCDOT

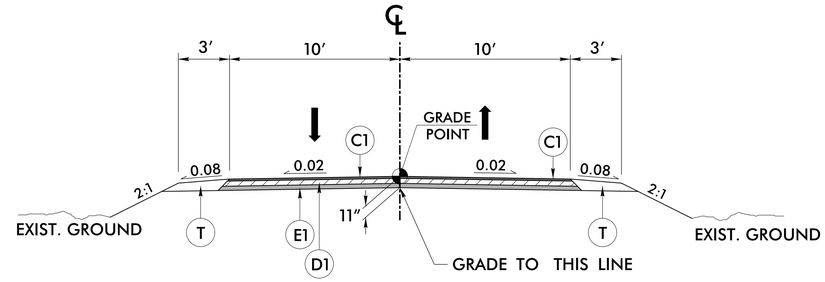
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	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. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4.0" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3.0" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
R	CONCRETE SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	PAVEMENT WEDGING

ALL PAVEMENT SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

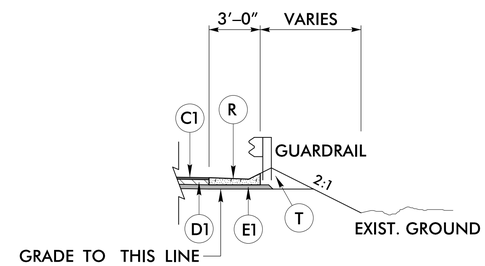


WEDGING DETAIL



TYPICAL SECTION 1

-L- STA. 12+50.00 TO 14+79.38 (BEGIN BRIDGE)
-L- STA. 15+36.63 (END BRIDGE) TO 17+80.00



DETAIL A
-L- STA. 15+47.50 TO 15+67.87 (RT)

EARTHWORK SUMMARY (IN CUBIC YARDS)

CHAIN	FROM STATION	TO STATION	SIDE	UNCL. EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L-	12+50.00	14+79.38	LT & RT	89		198	109	
-L-	15+36.63	17+80.00	LT & RT	61		376	315	
TOTAL				150		574	424	
LOSS DUE TO CLEARING AND GRUBBING								
WASTE IN LIEU OF BORROW								
PROJECT TOTAL				150		574	424	
ESTIMATE 5% FOR TOPSOIL ON BORROW PITS							21	
GRAND TOTAL				150		574	445	
SAY				155			450	

EST DDE 27 CY

NOTE: Approximate quantities only. Unclassified Excavation, Borrow Excavation, 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."

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 | C.S. PIPE (UNLESS NOTED OTHERWISE) 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | ALTERNATIVE 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 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" | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | 24" SIDE DRAIN PIPE | ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P. | CU. YDS. C.S.P. | QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') PER EACH (0' THRU 5.0') | LIN. *FT. A 5.0' THRU 10.0' | LIN. *FT. 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 | D.I. STD. 840.14 OR STD. 840.15 | D.I. FRAME AND GRATE STD. 840.16 | G.D.I. TYPE "A" STD. 840.17 OR 840.26 | G.D.I. TYPE "B" STD. 840.18 OR 840.27 | G.D.I. TYPE "D" STD. 840.19 OR 840.28 | TRAFFIC BEARING G.D.I. STD. 840.35 | G.D.I. FRAME WITH GRATE STD. 840.20 | G.D.I. FRAME WITH TWO GRATES STD. 840.22 | G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29 | G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24 | J.B. STD. 840.31 OR 840.32 | 15" C.S. ELBOW | CONC. COLLARS C.L. "B" C.Y. STD 840.72 | CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71 | PIPE REMOVAL LIN.FT. | REMARKS |
|---|---|---|---|---|---|---|---|---

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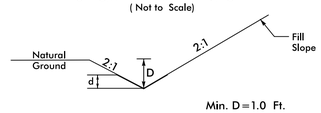
8/17/99

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "03-0080-2"
WITH NAD 83/NSRS 2011 STATE PLANE GRID COORDINATES OF NORTHING: 424042.0177 (ft) EASTING: 1661188.5100 (ft)
ELEVATION: 436.55 (ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987018 1/X: 1.000129836.
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "03-0080-2" TO -L- STATION 15+30.10 IS S 03°26'24.78" E 280.63'(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

BM-1	N 424098	E 1661242	ELEV 435.98'
BM-2	N 423944	E 1661164	ELEV 442.24'
BL-1(03-0080-1)	N 424552.903	E 1661221.283	ELEV 436.16'
BL-2(03-0080-2)	N 424042.017	E 1661188.510	ELEV 436.55'
BL-3(03-0080-3)	N 423602.717	E 1661256.762	ELEV 458.80'

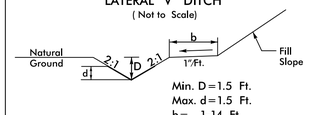
DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= PSRM

FROM -L- STA. 12+96 LT TO 13+07 LT
FROM -L- STA. 13+84 LT TO 14+17 LT
FROM -L- STA. 13+58 RT TO 14+50 RT
FROM -L- STA. 15+50 LT TO 16+00 LT
FROM -L- STA. 15+50 RT TO 16+50 RT

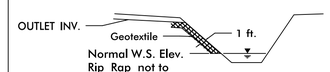
DETAIL B
LATERAL 'V' DITCH
(Not to Scale)



Type of Liner= PSRM

FROM -L- STA. 14+17 LT TO 14+70 LT
FROM -L- STA. 14+50 RT TO 14+77 RT
FROM -L- STA. 15+22 LT TO 15+50 LT
FROM -L- STA. 15+23 RT TO 15+50 RT

DETAIL C
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= CL-II Rip-Rap w/Geotextile for Drainage

FROM -L- STA. 14+70 LT TO 14+76 LT
FROM -L- STA. 15+12 LT TO 15+22 LT
FROM -L- STA. 14+77 RT TO 14+86 RT
FROM -L- STA. 15+15 RT TO 15+23 RT

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Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
1 NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT 11/14/2019

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 029388 ENGINEER EDWARD J. VANCE 11/14/2019

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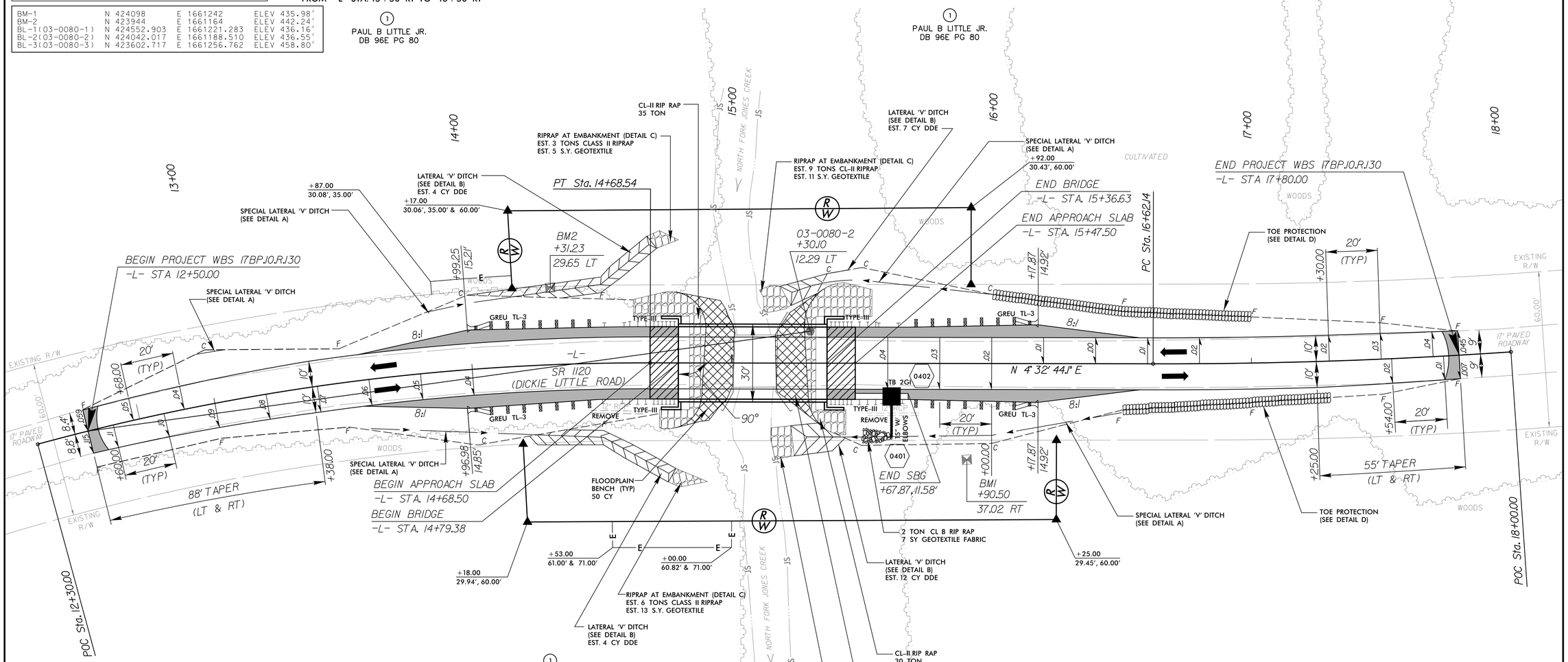
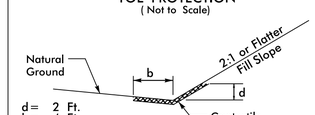
NAD 83 NSRS 2011



PI Sta 13+09.05
Δ = 20° 45' 58.4" (RT)
D = 6° 26' 15.8"
L = 322.57'
T = 163.07'
R = 890.00'

PI Sta 17+84.44
Δ = 7° 10' 37.5" (LT)
D = 2° 56' 17.7"
L = 244.26'
T = 122.29'
R = 1,950.00'

DETAIL D
TOE PROTECTION
(Not to Scale)



Type of Liner= CL-II Rip-Rap

FROM -L- STA. 16+50 RT TO STA. 17+30 RT
FROM -L- STA. 16+00 LT TO STA. 17+00 LT

3/7/2019
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17BP.10.R.130	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
DocuSigned by: Nikki T. Honeycutt
NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT
8/17/2019

HYDRAULICS ENGINEER
DocuSigned by: Edward L. Vance
NORTH CAROLINA PROFESSIONAL SEAL 029388 ENGINEER EDWARD L. VANCE
8/17/2019

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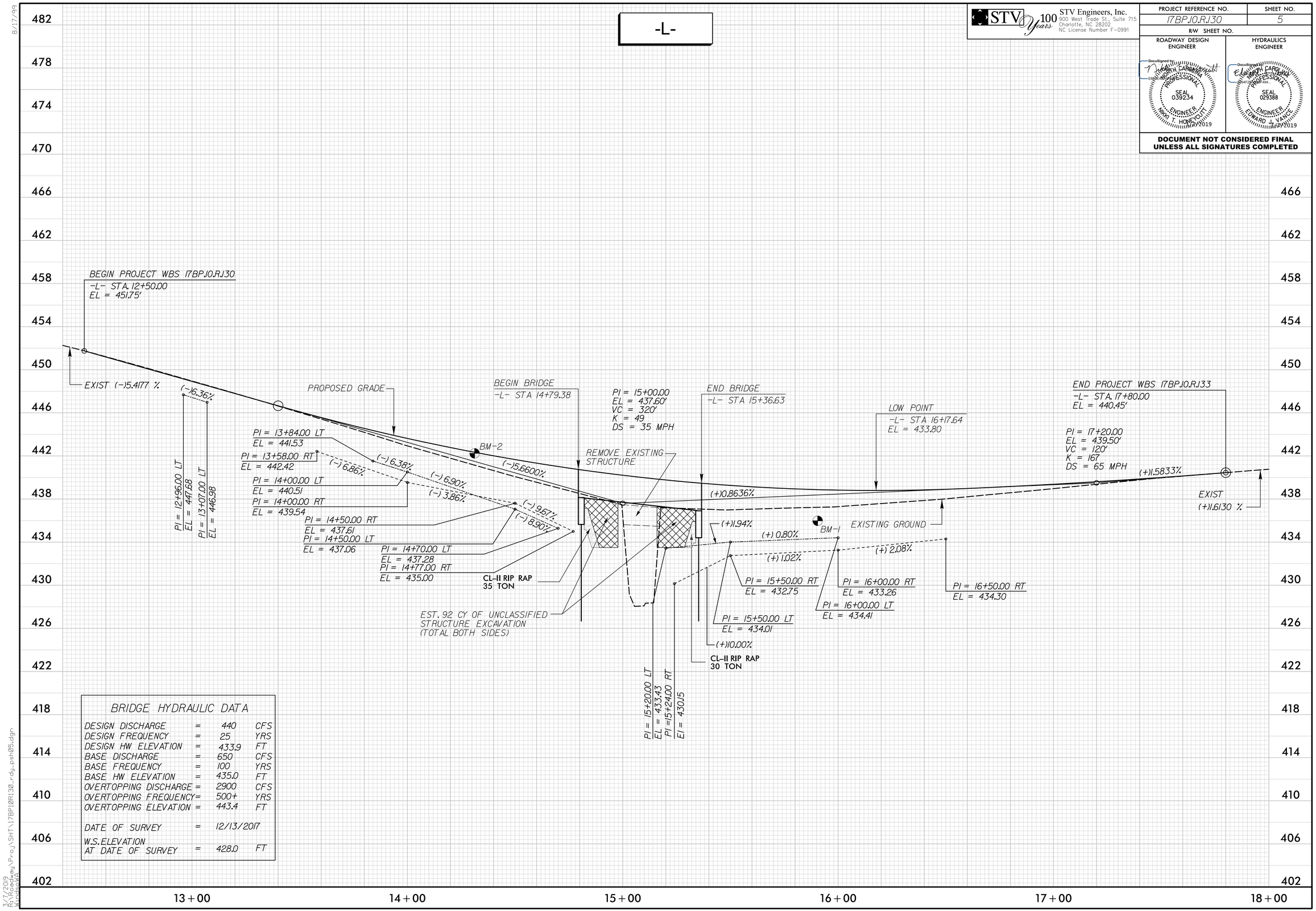

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	440	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	433.9	FT
BASE DISCHARGE	=	650	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	435.0	FT
OVERTOPPING DISCHARGE	=	2900	CFS
OVERTOPPING FREQUENCY	=	500+	YRS
OVERTOPPING ELEVATION	=	443.4	FT
DATE OF SURVEY	=	12/13/2017	
W.S.ELEVATION AT DATE OF SURVEY	=	428.0	FT

8/17/2019
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WindsonWA

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OFF-SITE DETOUR SIGNING AND ROAD CLOSURE SIGNING

PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.J30	TMP-1
R/W SHEET NO.	

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ROADWAY DESIGN

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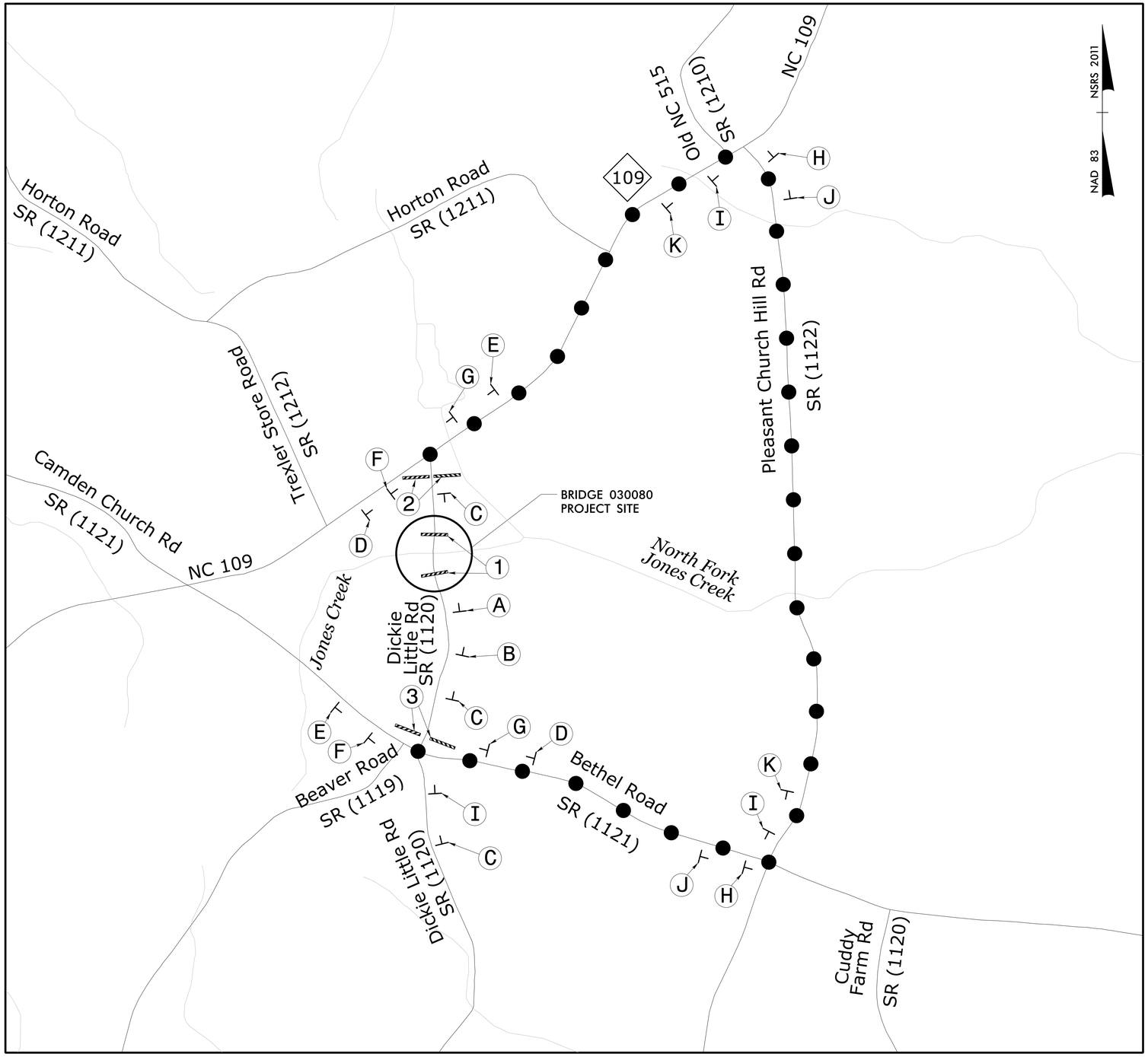
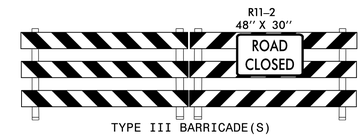
NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKKI T. HONEYCUTT
MAY 2019





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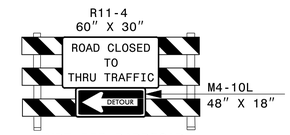

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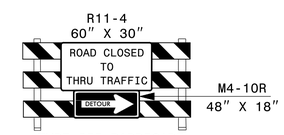


3

A

B

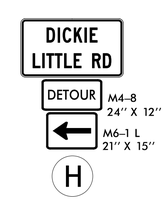
C

D

E

F

G



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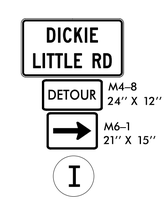

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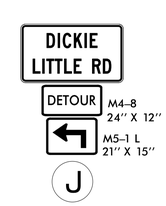

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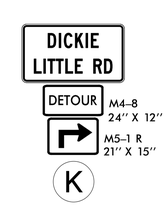

K

SEE ROADWAY STD DWG 1101.03, SHEET 1 OF 9 FOR ADVANCE WARNING AND BARRICADE PLACEMENT.

800 400 0 800 1600
Scale: 1" = 800'

3/7/2019
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WindsorWA

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PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	TMP-2
R/W SHEET NO.	

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ROADWAY DESIGN ENGINEER

BRIDGE #030080

SIGN NUMBER: I-1
TYPE: D
QUANTITY: See Plans

BACKG COLOR: Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 42″
HEIGHT: 24″
TOTAL AREA: 7.0 Sq.Ft.

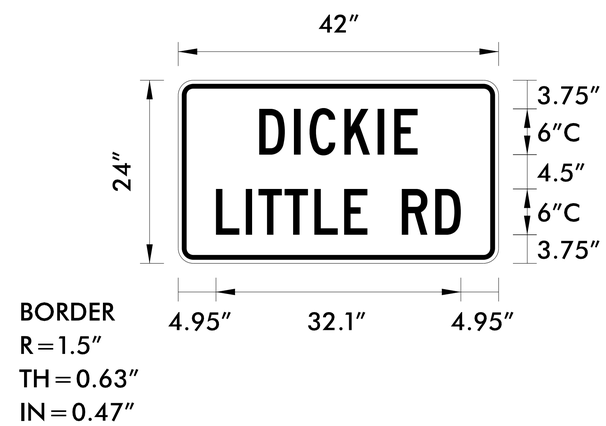
BORDER TYPE: FLUSH
RECESS: 0.47″
WIDTH: 0.63″
RADII: 1.5″

NO. Z BARS:
LENGTH:

MAT'L: 0.080″ (2.0 mm) ALUMINUM

USE NOTES: 1,2
1. Legend and border shall be direct applied encapsulated lens reflective sheeting.
2. Background shall be NC Grade B fluorescent.

DESIGN BY: JCT
CHECKED BY: GMM
PROJECT ID: 17BP.10.R.130
DIV: 10
DATE: Nov 2, 2018



Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter positions are to the lower left corners

																											Series/Size Text Length
	D	I	C	K	I	E																					C 2000 / 6
	10.6	15.2	17.2	21.8	26.2	28.3																					20.8
	L	I	T	T	L	E		R	D																		C 2000 / 6
	5	8.9	10.5	14	17.9	21.8	24.8	29.3	33.7																		32.1

NORTH CAROLINA D.O.T. SIGN DETAIL

3/7/2019
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WindsoWA

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PAVEMENT MARKING PLAN

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17BP.10.R.130	PMP-1
R/W SHEET NO.	

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ROADWAY DESIGN ENGINEER

DocuSigned by: Edward Lomanbs
NORTH CAROLINA PROFESSIONAL SEAL 039234 ENGINEER NIKAL T. HONEYCUTT
4/2/2019

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - 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
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

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.

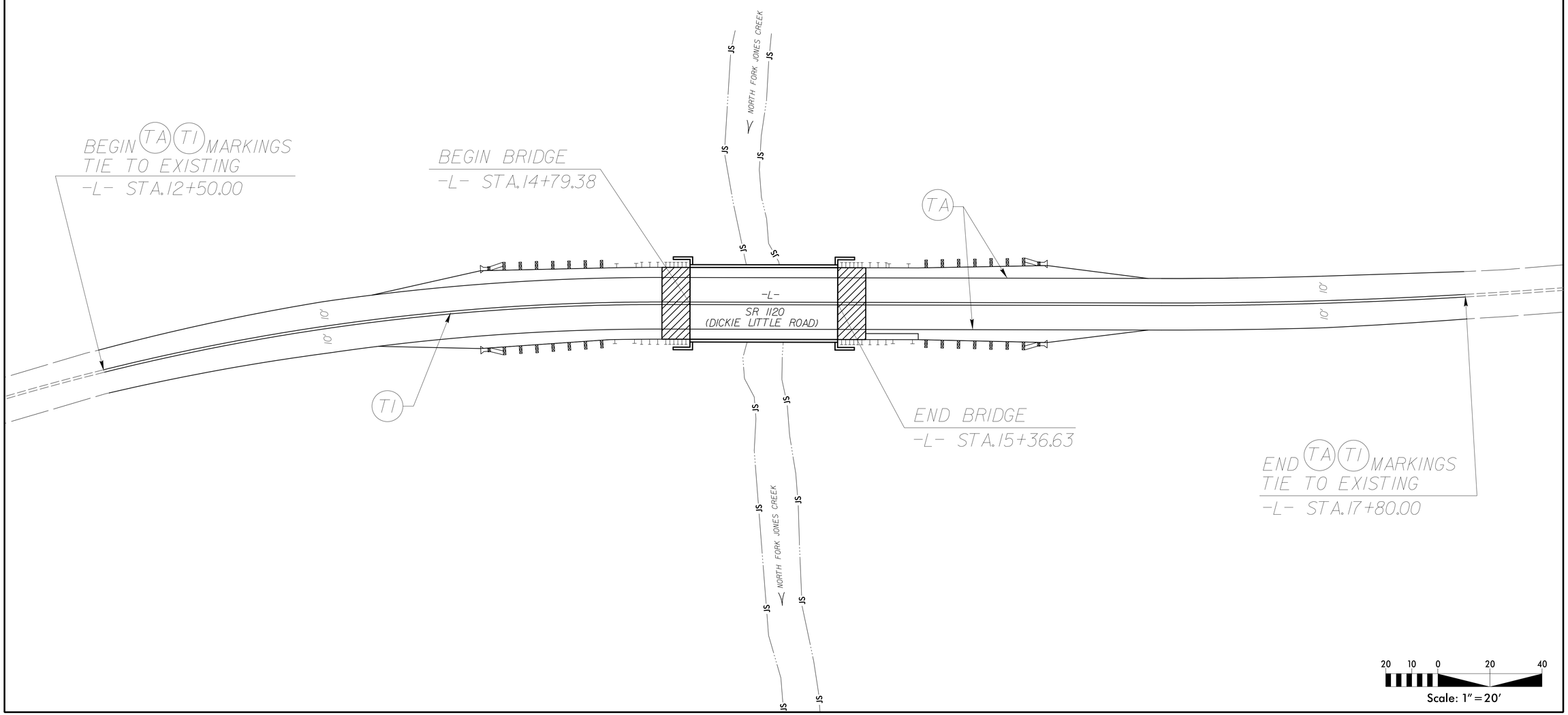
A) INSTALL PAVEMENT MARKINGS ON THE FINAL SURFACE.

ROAD NAME	MARKING
SR 1120 (DICKIE LITTLE RD)	THERMOPLASTIC

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
E) REPLACE ANY PAVEMENT MARKINGS BEYOND THE PROJECT LIMITS DAMAGED BY THE CONTRACTORS' OPERATIONS DURING CONSTRUCTION.
F) PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AS REQUIRED BY TEMPERATURE RESTRICTIONS FOR THERMOPLASTIC APPLICATIONS. REFER TO ICT #2 FOR THERMOPLASTIC PAVEMENT MARKING DATE RESTRICTIONS.

PAVEMENT MARKING SCHEDULE	
TA - THERMO	WHITE EDGELINE (4", 90MIL)
TI - THERMO	YELLOW DOUBLE CENTER LINE (4", 90MIL)

NAD 83 | NSRS 2011



20 10 0 20 40
Scale: 1" = 20'

4/2/2019
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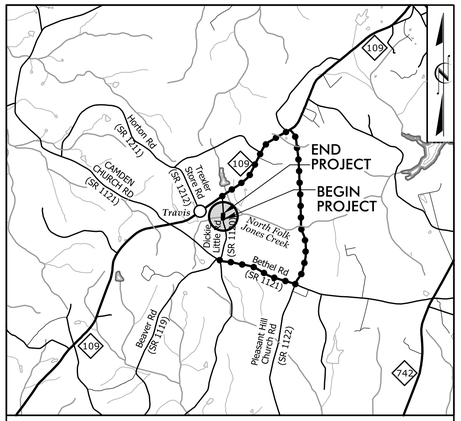
PROJECT WBS: 17BP.10.R.130

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.130	EC-1	7

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
17BP.10.R.130		P.E.
17BP.10.R.130		RW & UTIL
17BP.10.R.130		CONST.



VICINITY MAP

N.T.S.

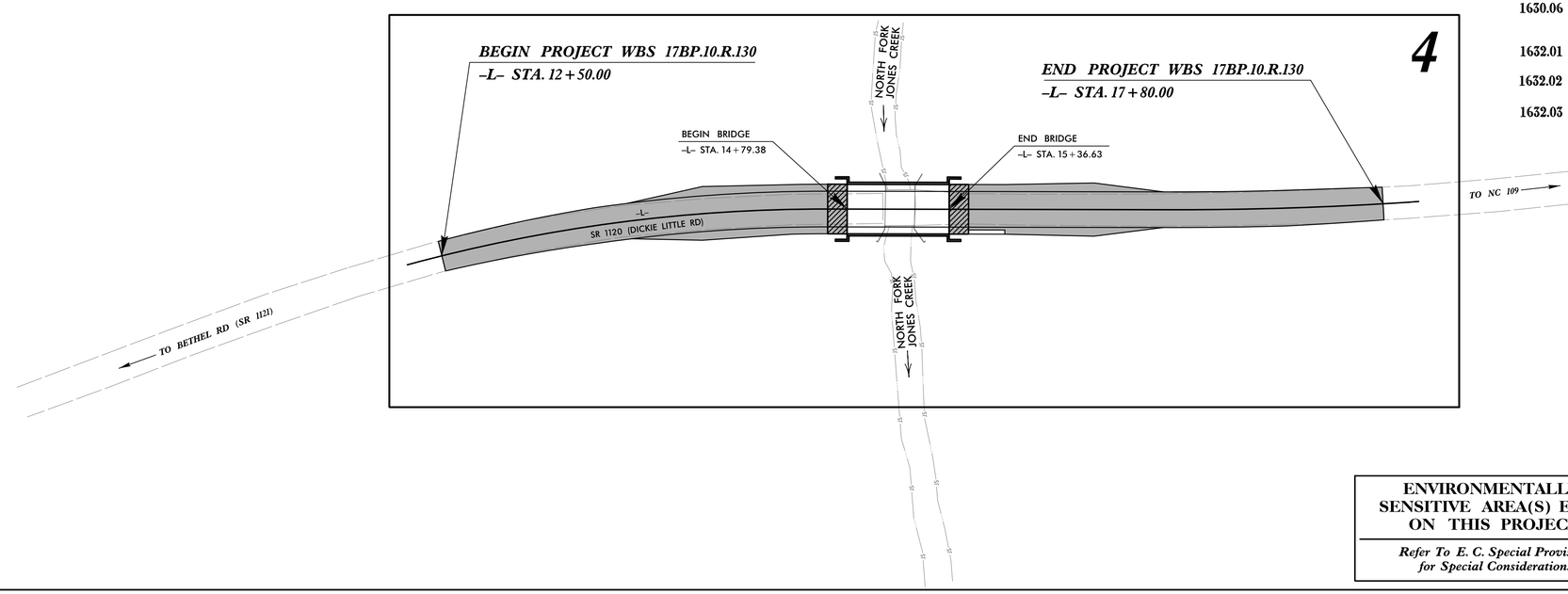
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED HIGHWAY EROSION CONTROL

ANSON COUNTY

LOCATION: BRIDGE #030080 OVER JONES CREEK ON SR 1120 (DICKIE LITTLE RD)

NAD 83 NSRS 2011



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle/ Coir Fiber Wattle	EW CFW
	Wattle/ Coir Fiber Wattle with Polyacrylamide (PAM)	
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	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

NORTH CAROLINA

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT

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

HIGH QUALITY WATER(S) EXIST ON THIS PROJECT

High Quality Water Zone(s) Exist
From Sta. 14+44
to Sta. 15+71
Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

20 10 0 20
PLANS

20 10 0 20
PROFILE (HORIZONTAL)

4 2 0 4
PROFILE (VERTICAL)

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared In the Office of:

STV ENGINEERS, INC.
900 WEST TRADE STREET, SUITE 715
CHARLOTTE, NC 28202
NC LICENSE NUMBER F-0991

Designed by:

DAVIN C. MORRISON, PE ***3126***
NAME *LEVEL III CERTIFICATION NO.*

Reviewed In the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

PHIL SUGGS, CPESC

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2018 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

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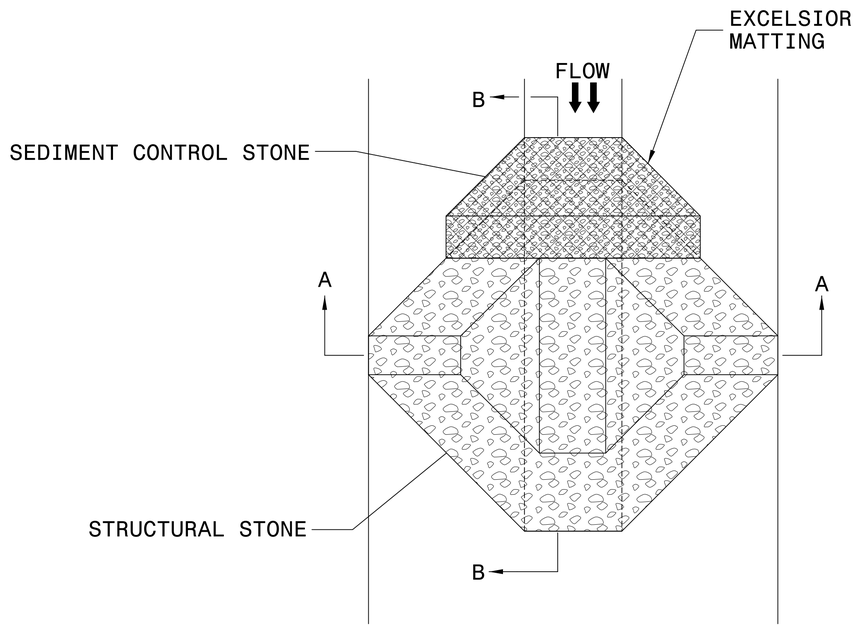
PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	EC-2

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN

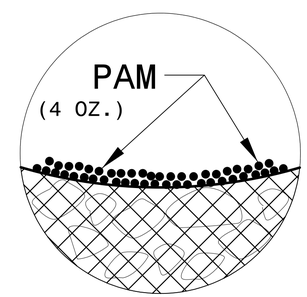
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

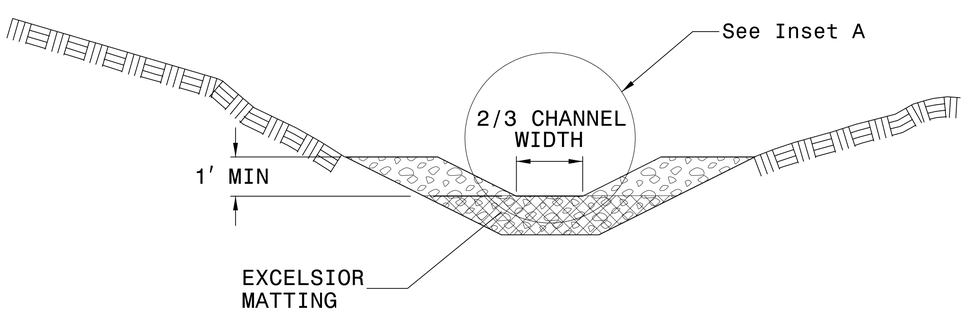
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

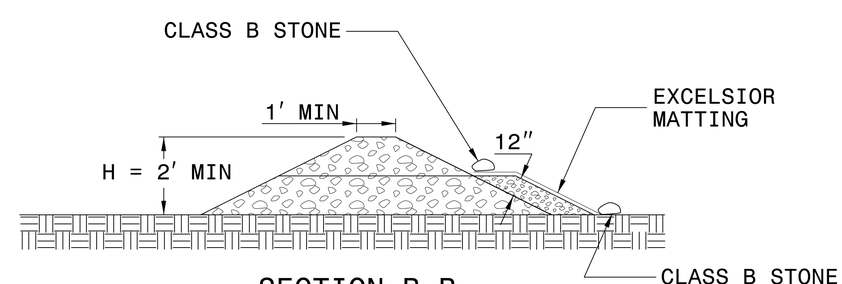
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

NOT TO SCALE

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PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	EC-3

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 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

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PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	EC-3A

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)
				SUBTOTAL	
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					
				TOTAL	
				SAY	

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L- 'V' DITCH	13+65	14+70	LT.	55
4	-L- 'V' DITCH	13+79	14+77	RT.	55
4	-L- 'V' DITCH	15+20	16+00	LT.	75
4	-L- 'V' DITCH	15+23	16+50	RT.	70
				SUBTOTAL	255
		ADDITIONAL PSRM TO BE INSTALLED			0
				TOTAL	255
				SAY	260

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PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	EC-4

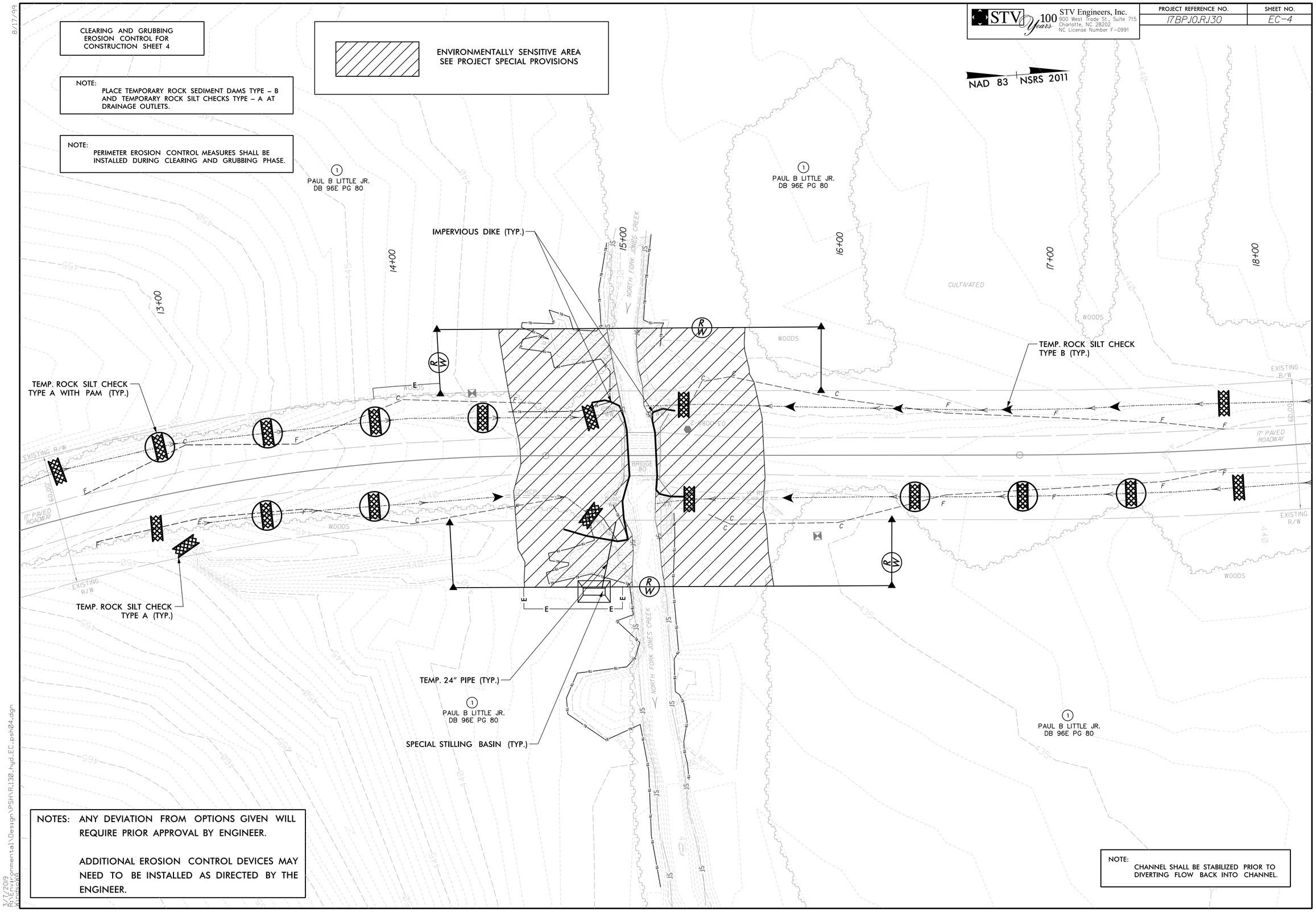
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

NAD 83 NSRS 2011

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE – B AND TEMPORARY ROCK SILT CHECKS TYPE – A AT DRAINAGE OUTLETS.

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE:
CHANNEL SHALL BE STABILIZED PRIOR TO DIVERTING FLOW BACK INTO CHANNEL.

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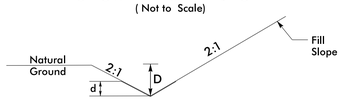
PROJECT REFERENCE NO.	SHEET NO.
17BP.10.R.130	EC-5

DETAIL A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

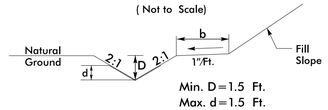


Min. D=1.5 Ft.
Max. d=1.5 Ft.

Type of Liner= PSRM

FROM –L– STA. 12+96 LT TO 13+07 LT
FROM –L– STA. 13+84 LT TO 14+17 LT
FROM –L– STA. 13+58 RT TO 14+50 RT
FROM –L– STA. 15+50 LT TO 16+00 LT
FROM –L– STA. 15+50 RT TO 16+50 RT

DETAIL B
LATERAL 'V' DITCH
(Not to Scale)



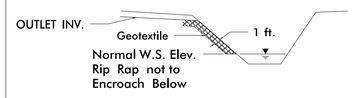
Min. D=1.5 Ft.
Max. d=1.5 Ft.
b= 1–14 Ft.

Type of Liner= PSRM

FROM –L– STA. 14+17 LT TO 14+70 LT
FROM –L– STA. 14+50 RT TO 14+77 RT
FROM –L– STA. 15+20 LT TO 15+50 LT
FROM –L– STA. 15+23 RT TO 15+50 RT

1
PAUL B LITTLE JR.
DB 96E PG 80

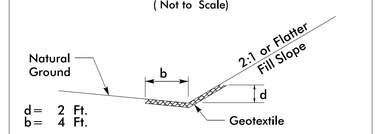
DETAIL C
RIP RAP AT EMBANKMENT
(Not to Scale)



Type of Liner= CL–II Rip–Rap w/Geotextile for Drainage

FROM –L– STA. 14+70 LT TO 14+76 LT
FROM –L– STA. 15+22 LT TO 15+12 LT
FROM –L– STA. 14+77 RT TO 14+86 RT
FROM –L– STA. 15+23 RT TO 15+15 RT

DETAIL D
TOE PROTECTION
(Not to Scale)



d= 2 Ft.
b= 4 Ft.

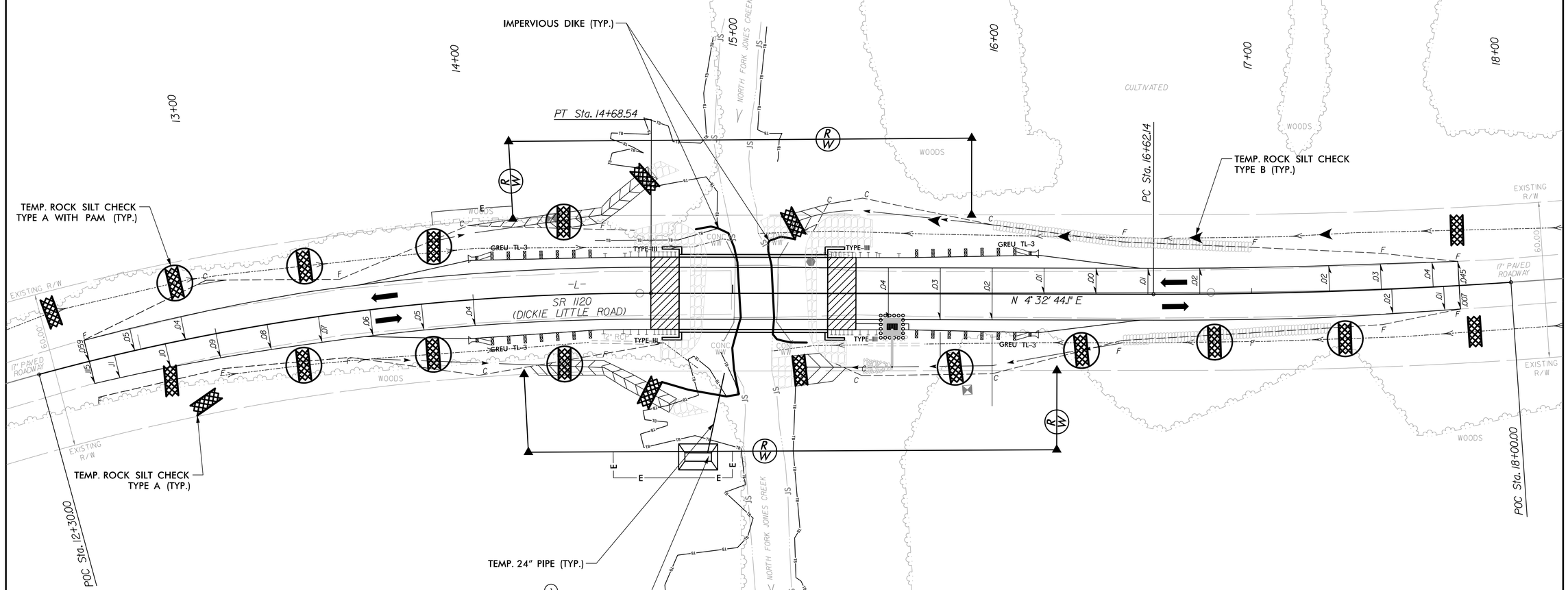
Type of Liner= CL–II Rip–Rap

FROM –L– STA. 17+30 RT TO STA. 16+50 RT
FROM –L– STA. 17+00 LT TO STA. 16+00 LT

1
PAUL B LITTLE JR.
DB 96E PG 80

NAD 83 NSRS 2011

FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

NOTE:
CHANNEL SHALL BE STABILIZED PRIOR TO DIVERTING FLOW BACK INTO CHANNEL.

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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.130	RF-1	7
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	

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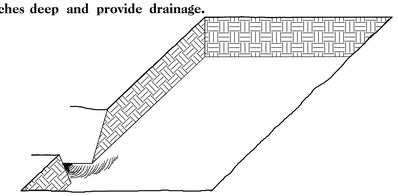
PLANTING DETAILS

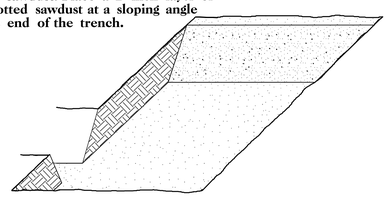
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

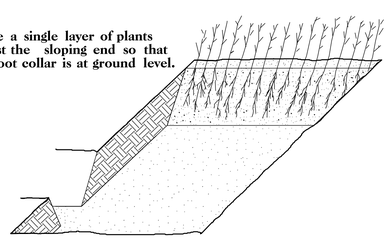
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



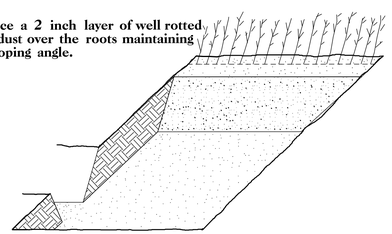
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

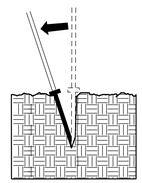


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

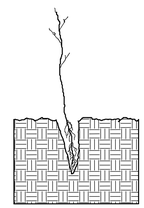


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

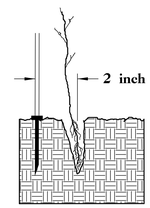
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



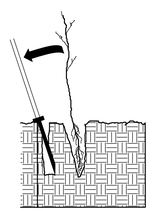
1. Insert planting bar as shown and pull handle toward planter.



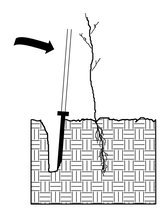
2. Remove planting bar and place seedling at correct depth.



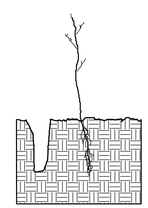
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



5. Push handle forward firming soil at top.



6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

25 0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in – 18 in BR
25 0	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	12 in – 18 in BR
25 0	FRAXINUS PENNSYLVANICA	GREEN ASH	12 in – 18 in BR
25 0	BETULA NIGRA	RIVER BIRCH	12 in – 18 in BR

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

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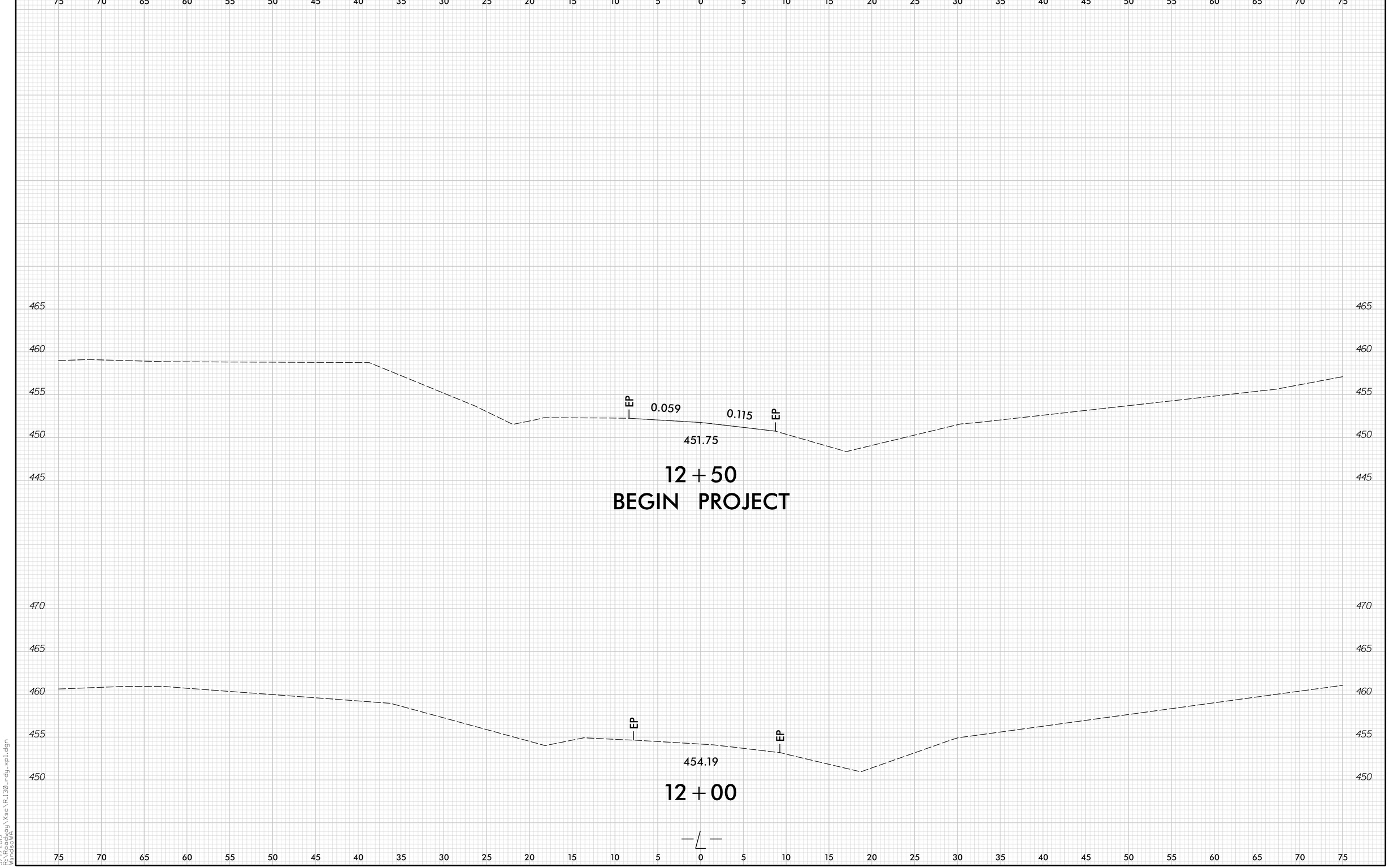

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6/23/16

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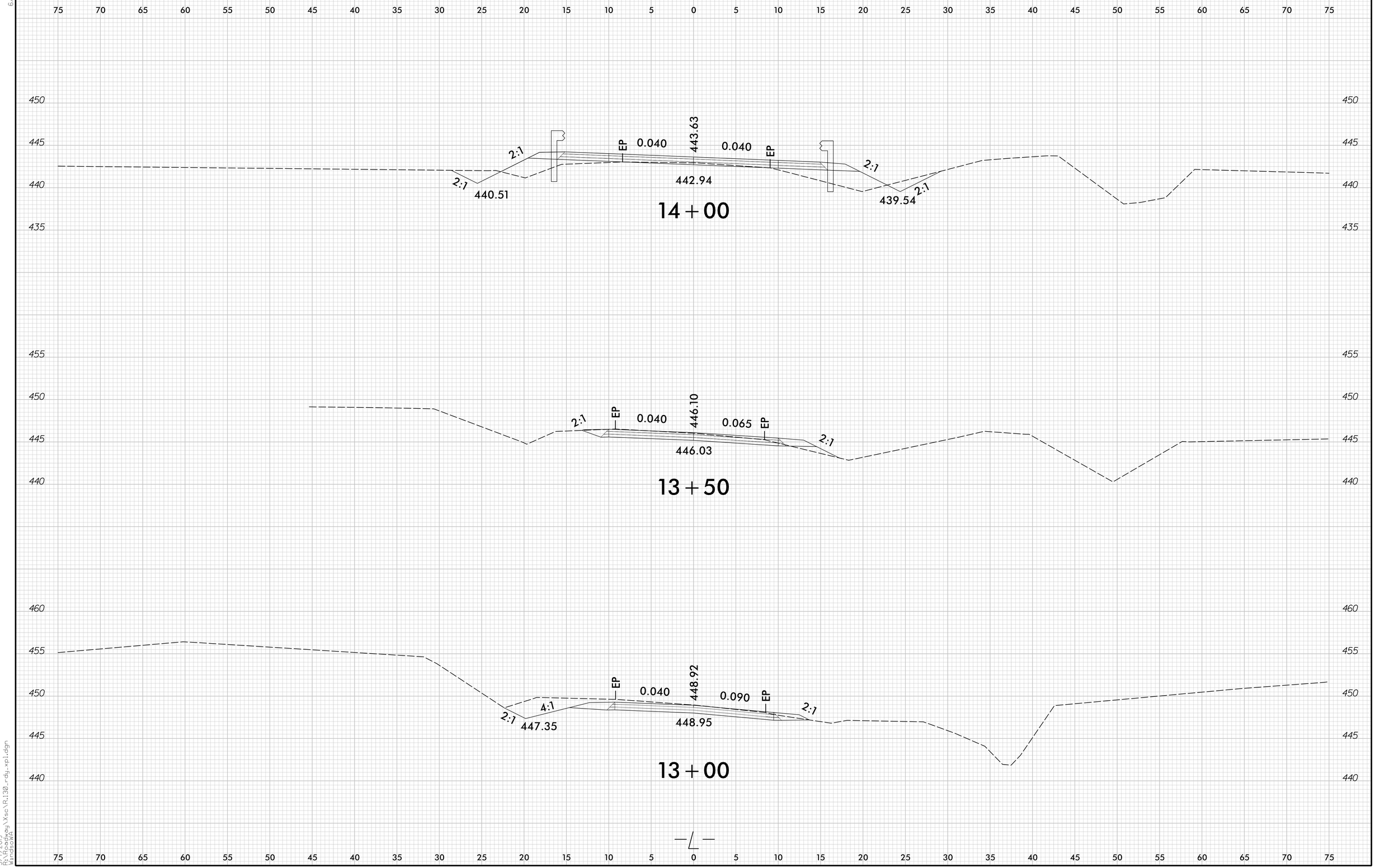

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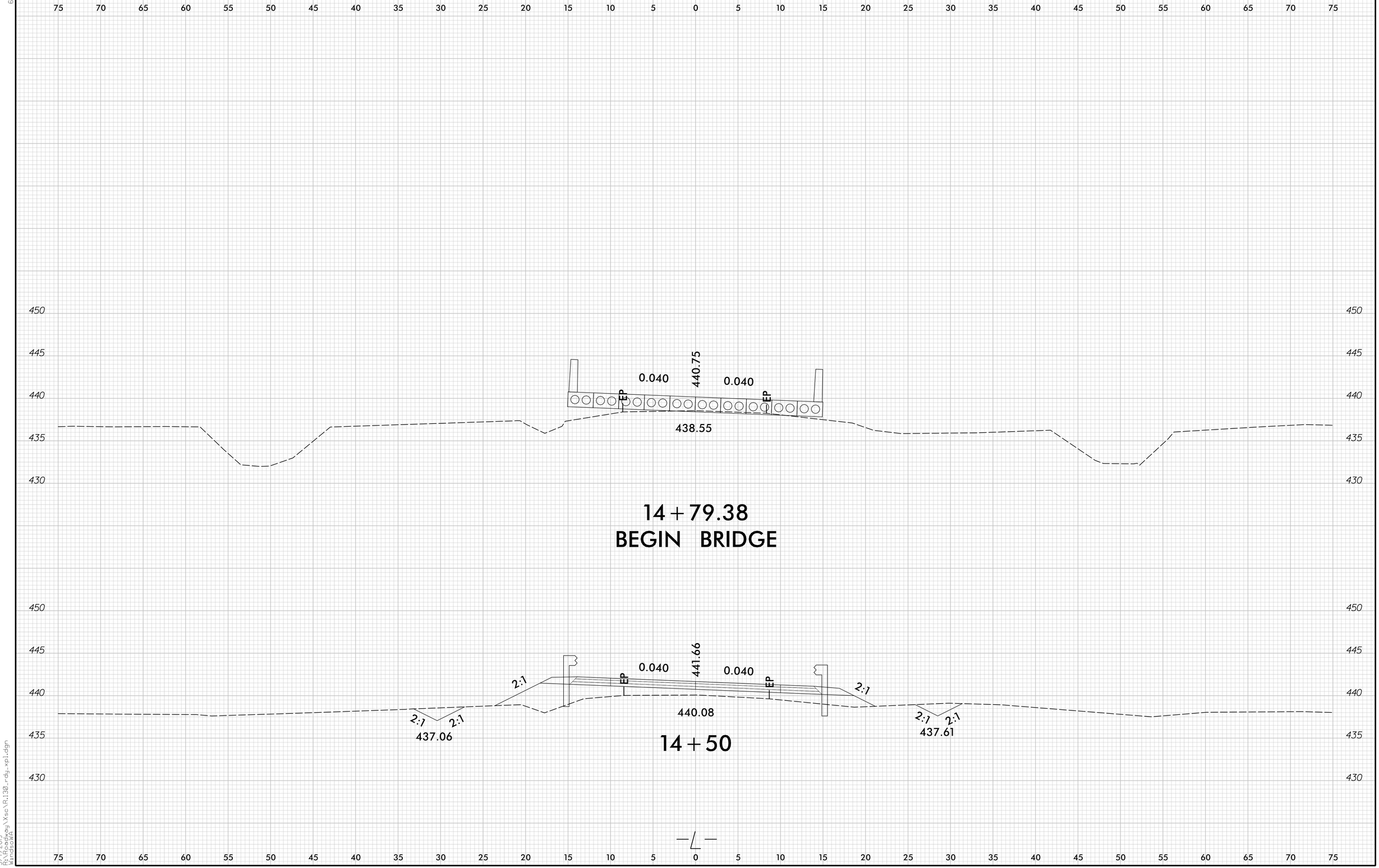

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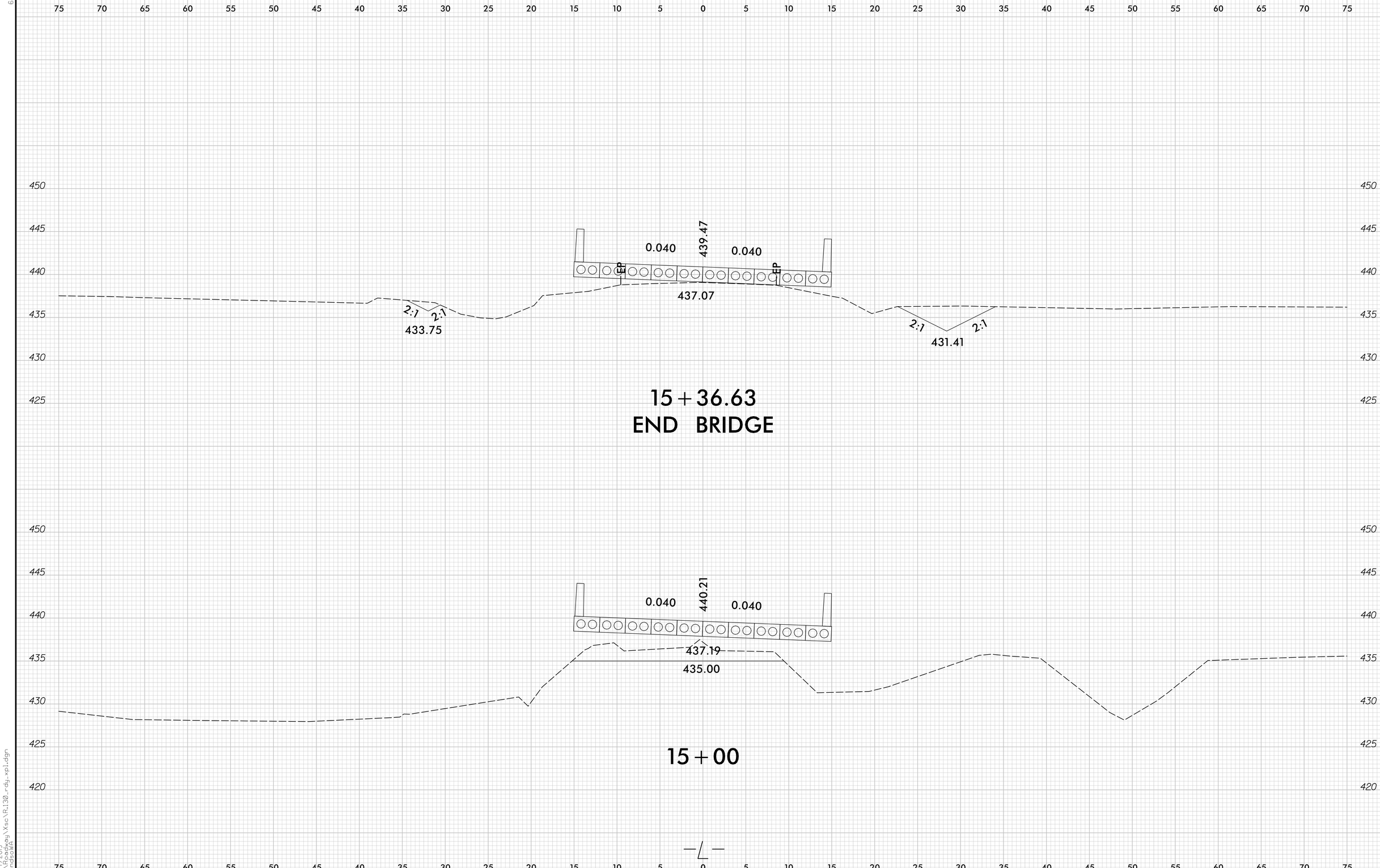

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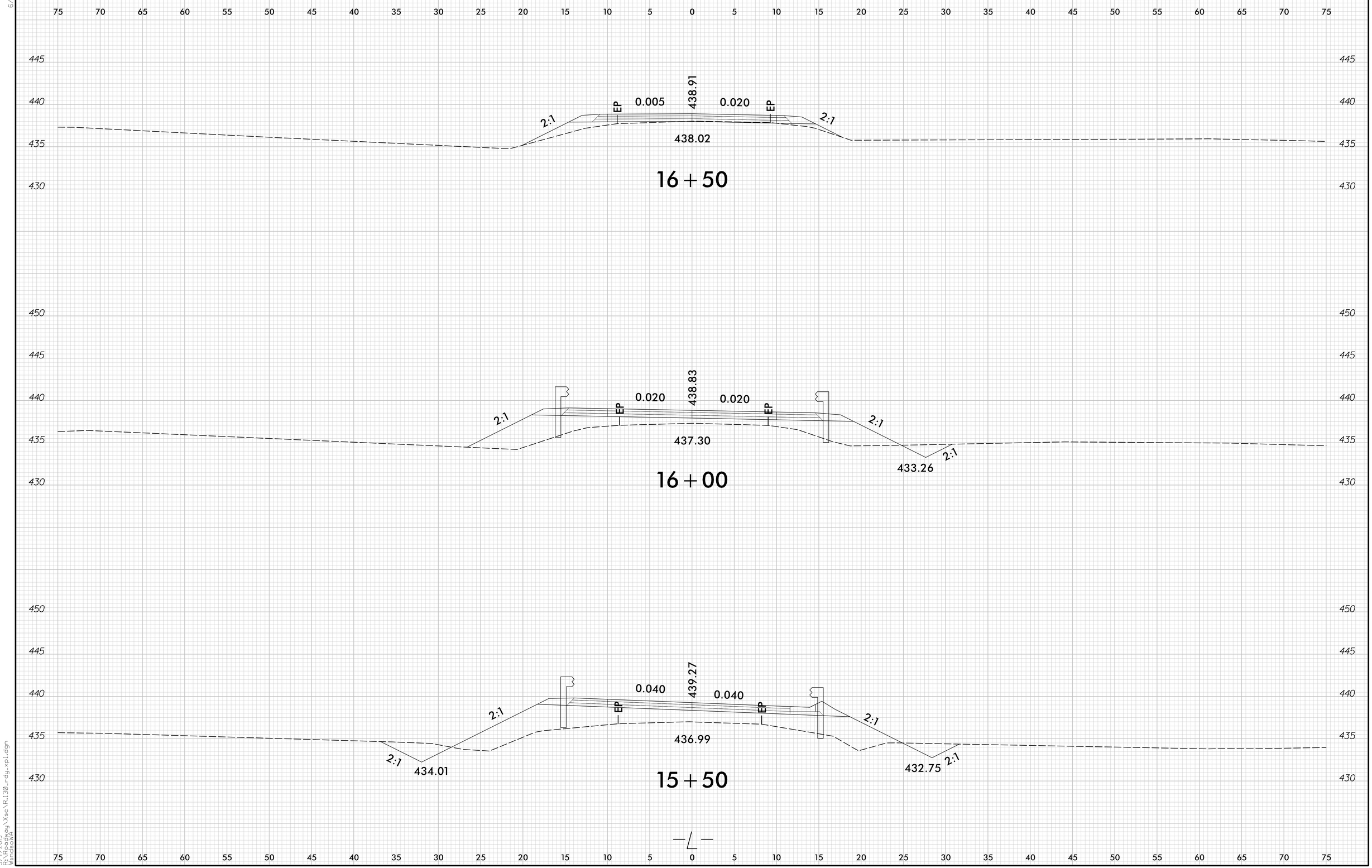

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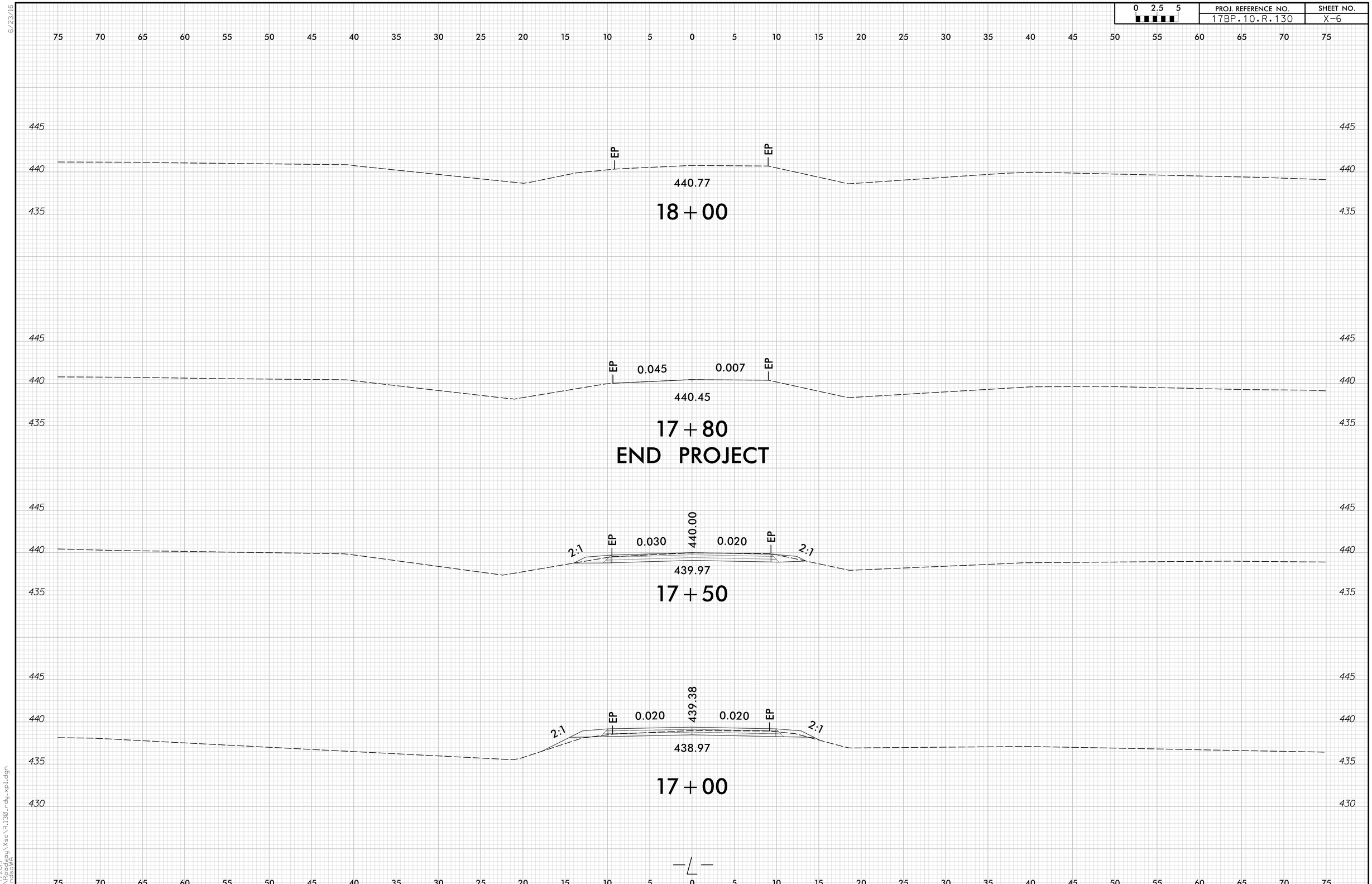

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