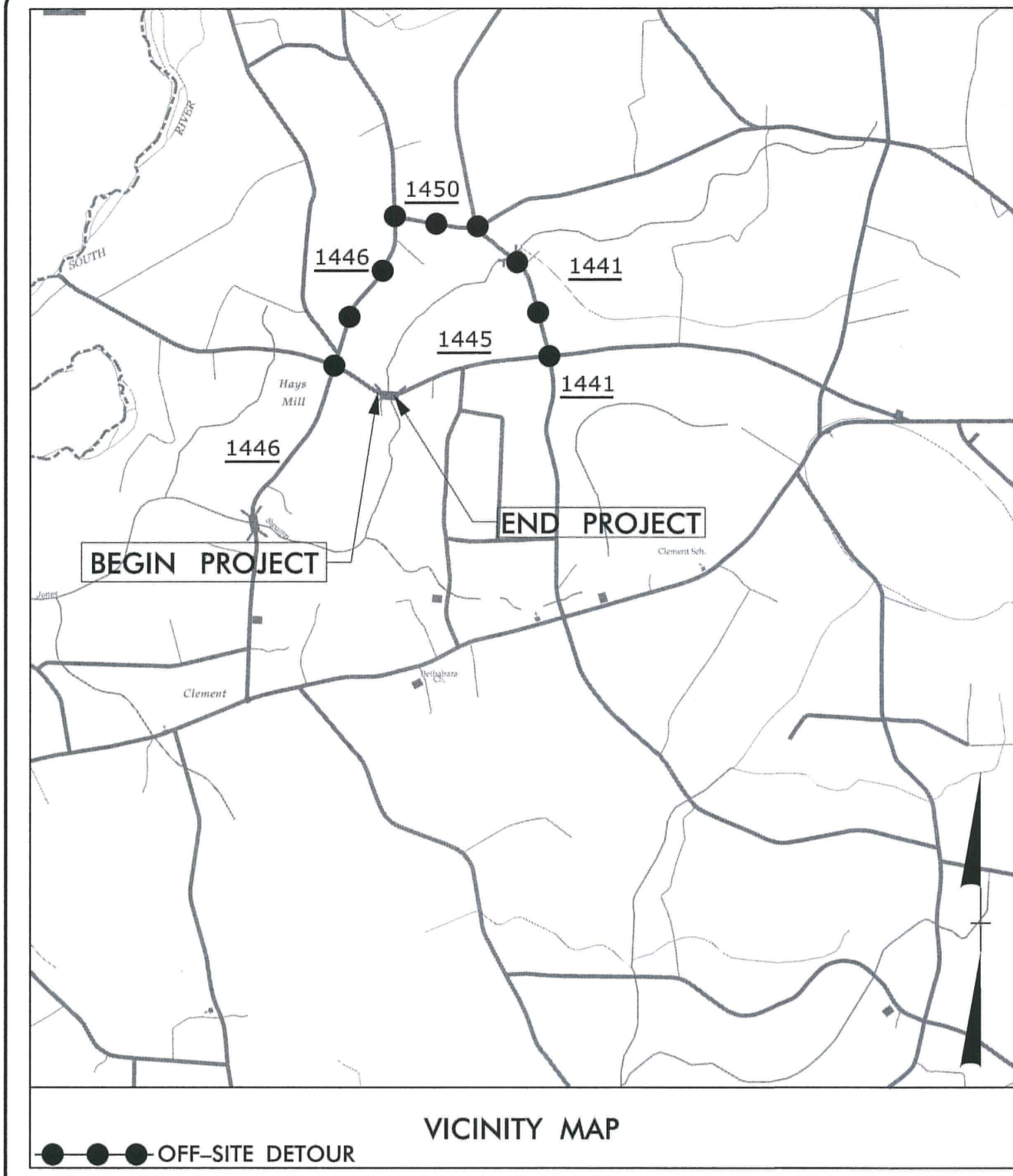


09/08/99

PROJECT: 17BP.3.R.6



See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

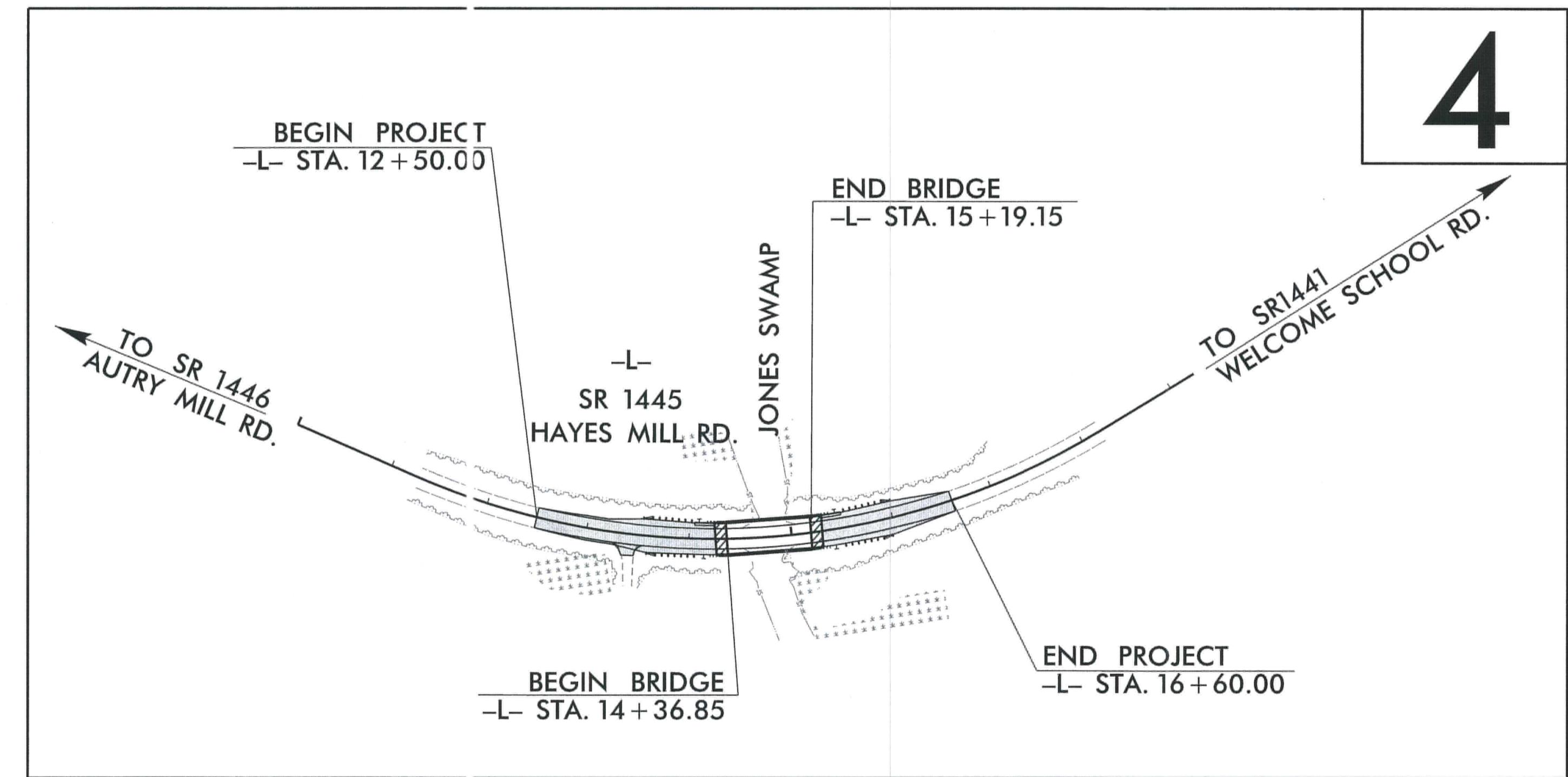
SAMPSON COUNTY

**LOCATION: BRIDGE NO. 129 OVER JONES SWAMP
ON SR 1445**

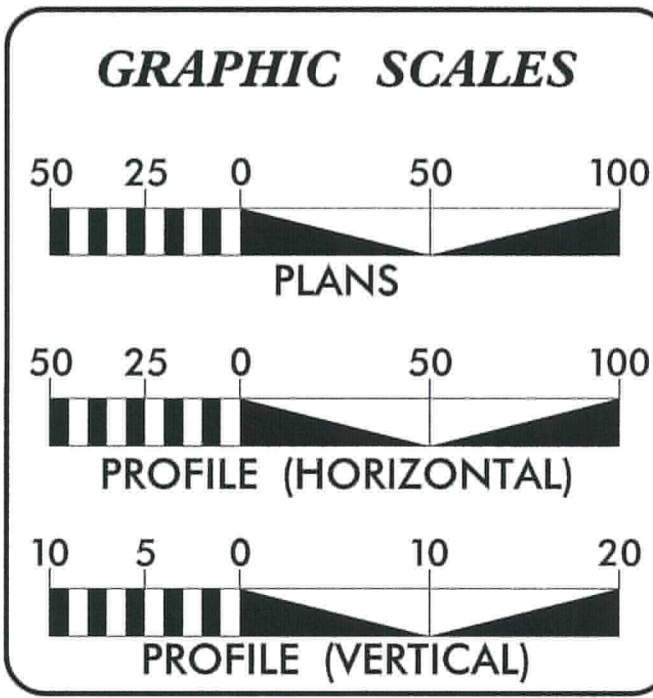
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

NAD 83/NSRS 2007

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.3.R.6	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	



CONTRACT:



DESIGN DATA

ADT 2009 = 550
ADT 2030 = N/A
DHV = N/A
D = N/A
T = 6 TTST = N/A
DUAL = N/A
V = 45 MPH
CLASS = RURAL LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT 17BP.3.R.6 = 0.062 MI
LENGTH STRUCTURE PROJECT 17BP.3.R.6 = 0.016 MI
TOTAL LENGTH PROJECT: 17BP.3.R.6 = 0.078 MI

Prepared in the Office of:
STEWART
For
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 4, 2012

LETTING DATE:
FEBRUARY 20, 2014

DAVID RUGGLES, PE
PROJECT ENGINEER

MICHAEL TAYLOR, PE
PROJECT DESIGN ENGINEER

AMANDA GLYNN, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

2/11/14

ROADWAY DESIGN ENGINEER

2-11-14



2/11/2014
X:\Proj\17BP.3.R.6\17BP.3.R.6_PSH_01.dgn
USER:mtylor

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**INDEX OF SHEETS, GENERAL NOTES, AND LIST OF
STANDARD DRAWINGS**

PROJECT REFERENCE NO.	SHEET NO.
17BP.3.R.6	1-A
RW SHEET NO.	



INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
3	EARTHWORK, DRAINAGE, GUARDRAIL, SHOULDER BERM GUTTER, ASPHALT PAVEMENT REMOVAL, AND ROW DATA SUMMARIES
4	PLAN & PROFILE SHEET
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
TMP-3	SIGN DESIGN PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
U0-1	UTILITIES BY OTHERS
X-1 THRU X-4	CROSS-SECTIONS
S-1 THRU S-16	STRUCTURE PLANS

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
DIVISION 4 - MAJOR STRUCTURES	
422.10	Reinforced Bridge Approach Fills
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

Disclaimer: This coordinate list is provided for the convenience of interested contractors and is intended for use during the project bidding process only. Coordinates are localized to this particular project and any conversion to state grid coordinates or other formats will be the responsibility of the recipient. While every effort has been made to provide up-to-date, accurate information, NCDOT makes no express guarantee as to the validity or potential for revision of this information prior to project letting.

-L- CENTERLINE COORDINATE LIST

Point#	Chain	Station	Northing(Y)	Easting (X)
1	L	10+00.00	498123.8981	2114288.7971
2	L	11+00.00	498070.3634	2114373.2603
3	L	12+00.00	498019.9063	2114459.5339
4	L	13+00.00	497981.3762	2114551.7259
5	L	14+00.00	497955.9805	2114648.3643
6	L	15+00.00	497944.2082	2114747.5881
7	L	16+00.00	497946.2861	2114847.4861
8	L	17+00.00	497962.1742	2114946.1345
9	L	18+00.00	497991.5664	2115041.6334
10	L	19+00.00	498029.8546	2115134.0108

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 11/01/11

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.

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.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

FOUR COUNTY EMC

STAR TELEPHONE MEMBERSHIP CORP

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

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

REVISIONS

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
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	(123)
Existing Fence Line	-x-x-x-
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 ---
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
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	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite Marker	-----
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----

ROADS AND RELATED FEATURES:

Proposed Permanent Easement with Iron Pin and Cap Marker	◆
Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	--- C ---
Proposed Slope Stakes Fill	--- F ---
Proposed Curb Ramp	○
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	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	○
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	□
H-Frame Pole	●
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Booth	□
Telephone Pedestal	□
Telephone Cell Tower	⊗
U/G Telephone Cable Hand Hole	□
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	○
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Satellite Dish	⊗
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	-----

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

MISCELLANEOUS:

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

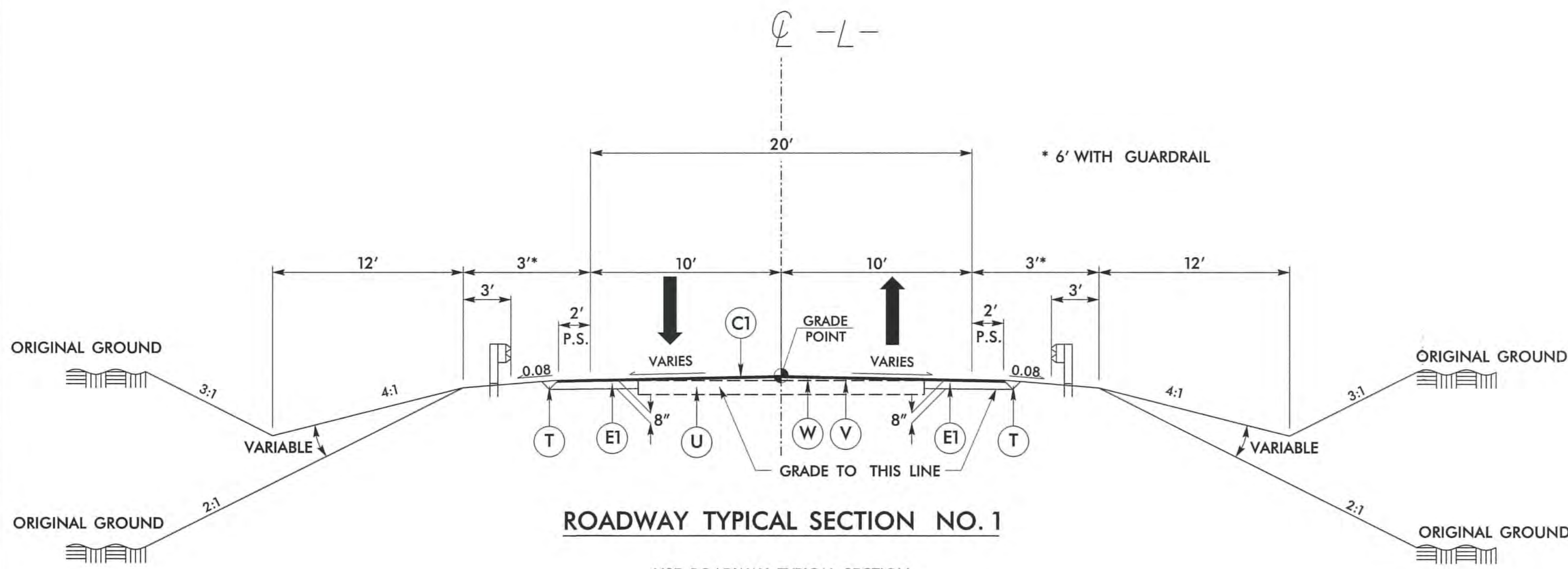
REVISIONS

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SEAL ONLY FOR
ROADWAY DESIGN
ELEMENTS



STEWART

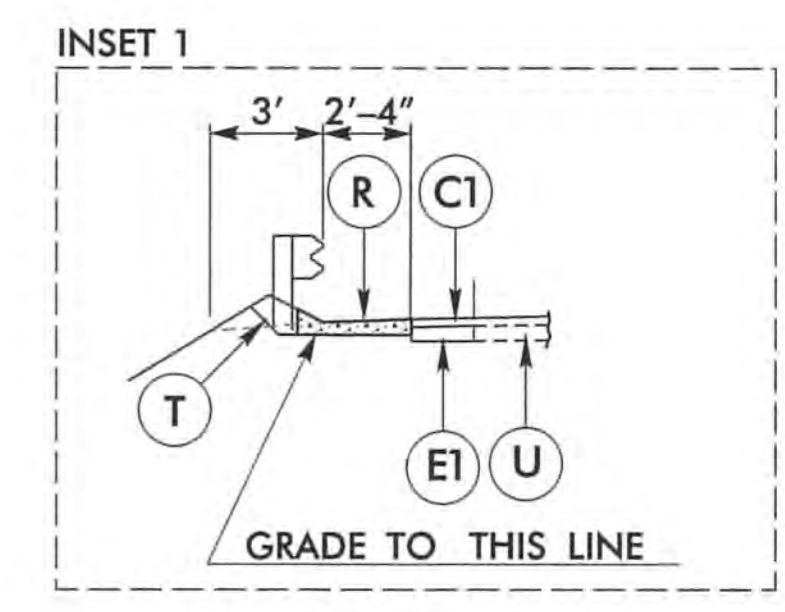


ROADWAY TYPICAL SECTION NO. 1

USE ROADWAY TYPICAL SECTION

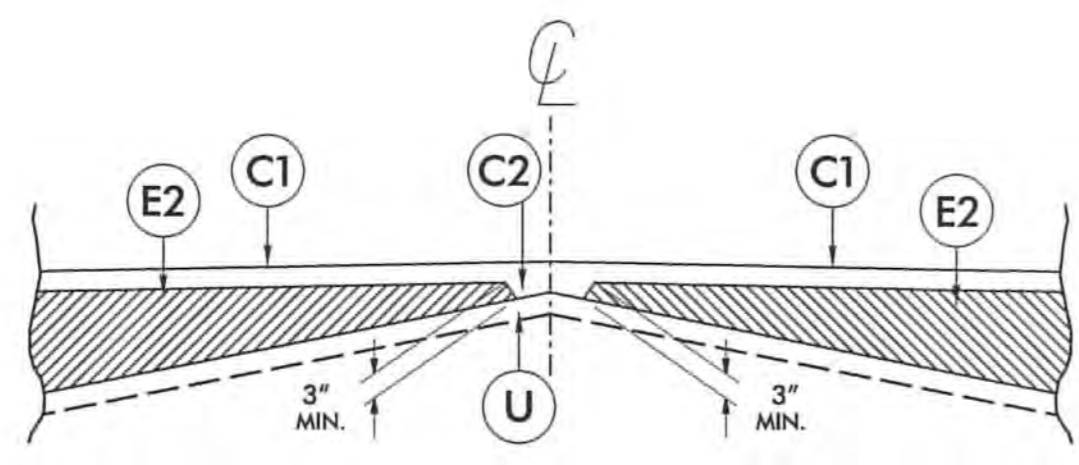
-L- STA. 12+50.00 TO -L- STA. 14+36.85 (BEGIN BRIDGE)
-L- STA. 15+19.15 (END BRIDGE) TO -L- STA. 16+60.00

NOTES: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
SEE STRUCTURE PLANS FOR ASPHALT DEPTHS

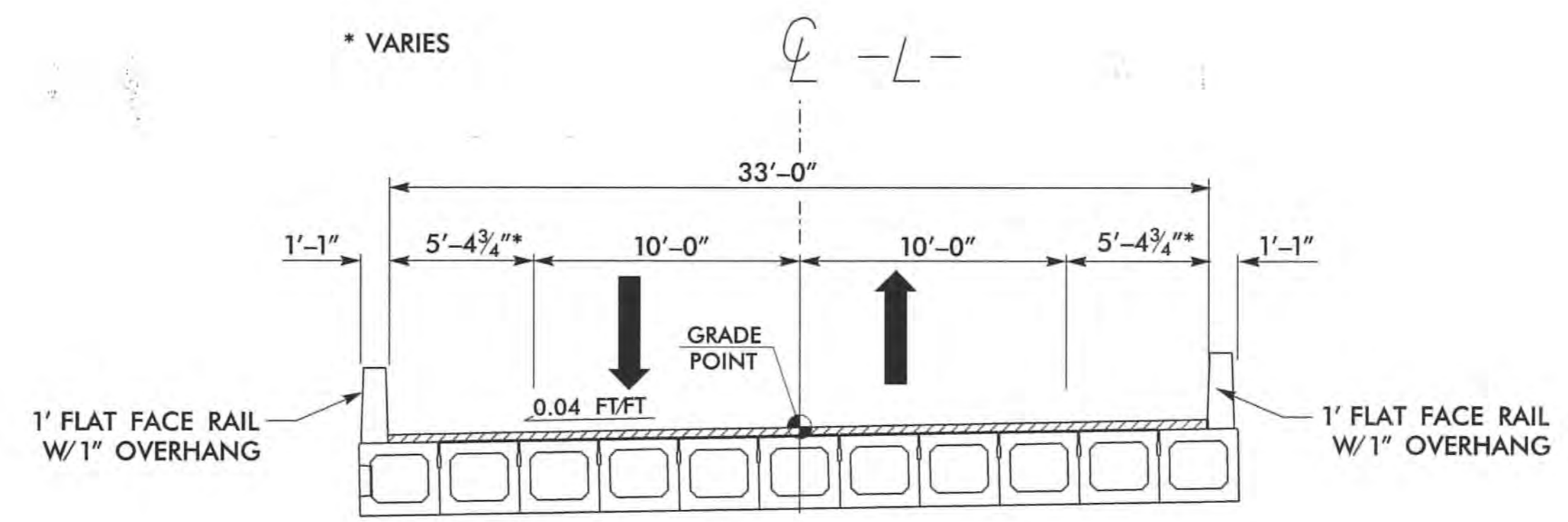


USE INSET 1

-L- STA. 14+05.30 TO -L- STA. 14+24.89 (BEGIN APP. SLAB) LT
-L- STA. 15+31.11 (END APP. SLAB) TO -L- STA. 15+50.70 LT



DETAIL SHOWING METHOD OF WEDGING



129 BRIDGE TYPICAL SECTION

-L- STA. 14+36.85 TO -L- STA. 15+19.15
BRIDGE TYPE = BOX BEAM

PAVEMENT SCHEDULE

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - _____

Item Number	Sec #	Quantity	Unit	Description	Item Number	Sec #	Quantity	Unit	Description	Item Number	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	4410000000-E	1110	94	SF	WORK ZONE SIGNS (BARR)	6071020000-E	SP	10	LB	POLYACRYLAMIDE (PAM)
0000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	4445000000-E	1205	64	LF	BARRICADES (TYPE III)	6084000000-E	1661	3	LB	SEEDING AND MULCHING
0029000000-N	SP	Lump Sum		REINF BRG APPR ***** (-L- STA. 14+78.00)	4810000000-E	1251	3280	LF	PAINT PVMT MARKINGS 4"	6090000000-E	1662	50	ACR	SEED FOR REPAIR SEEDING
0043000000-N	226	Lump Sum		GRADING	4900000000-N	1605	11	EA	PERM RAISED PVMT MARKERS	6093000000-E	1665	0.25	LB	FERT FOR REPAIR SEEDING
0335200000-E	305	14	LF	15" DRAINAGE PIPE	6000000000-E	1610	950	LF	TEMPORARY SILT FENCE	6096000000-E	1667	50	TON	SEED FOR SUPP SEEDING
1330000000-E	607	210	SY	INCIDENTAL MILLING	6006000000-E	1610	65	TON	EROS CONTRL STONE CL A	6108000000-E	SP	1.5	LB	FERTILIZER TOPDRESSING
1489000000-E	610	190	TON	ASP CONC BASE CRS B25.0B	6009000000-E	1610	15	TON	EROS CONTRL STONE CL B	6117000000-N	SP	4	TON	RESPONSE FOR EROS CONTROL
1525000000-E	610	210	TON	ASP CONC SURF CRS SF9.5A	6012000000-E	1615	10	TON	SEDIMENT CONTROL STONE	8035000000-N	402	1	EA	REMV EXIST STR ***** (-L- STA. 14+78.00)
1575000000-E	620	23	TON	ASP FOR PLANT MIX	6015000000-E	1620	0.5	ACR	TEMPORARY MULCHING	8112730000-N	450	1	LS	PDA TESTING
2286000000-N	840	1	EA	MASNRY DRAINAGE STRUCT	6018000000-E	1620	100	LB	SEED FOR TEMP SEEDING	8121000000-N	412	1	EA	UNCL STR EXCAV STA ***** (-L- STA. 14+78.00)
2355000000-N	840	1	EA	FRAME W/GRATE 840.29 STD	6021000000-E	1622	0.5	TON	FERT FOR TEMP SEEDING	8182000000-E	420	34	LS	CLASS A CONCRETE (BRIDGE)
2556000000-E	846	39.2	LF	SHOULDER BERM GUTTER	6024000000-E	SP	200	LF	TEMPORARY SLOPE DRAINS	8210000000-N	422	1	CY	BRG APPR SLAB ***** (-L- STA. 14+78.00)
3030000000-E	862	50	LF	STL BM GUARDRAIL	6029000000-E	1630	100	LF	SAFETY FENCE	8217000000-E	425	5624	LS	REINF STEEL (BRIDGE)
3150000000-N	862	3	EA	ADDIT GUARDRAIL POSTS	6030000000-E	1631	20	CY	SILT EXCAVATION	8364000000-E	450	630	LB	HP12X53 PILES
3215000000-N	862	4	EA	GR ANCHOR TYPE III	6036000000-E	SP	1250	SY	MATTING FOR EROS CONTROL	8393000000-N	450	6	LF	PILE REDRIVES
3270000000-N	862	4	EA	GR ANCHOR TYPE 350	6038000000-E	1632	35	SY	PERM SOIL REINF MAT	8505000000-E	460	160	EA	VERT CONC BARRIER RAIL
3649000000-E	876	2	TON	RIP RAP, CLASS B	6042000000-E	SP	25	LF	1/4" HARDWARE CLOTH	8608000000-E	876	200	LF	RIP RAP II (2'-0")
3656000000-E	876	200	SY	GEOTEXTILE FOR DRAINAGE	6048000000-E	SP	210	SY	FLOAT TURBIDITY CURTAIN	8657000000-N	430	1	TON	ELASTOMERIC BEARINGS
4400000000-E	1110	322	SF	WORK ZONE SIGNS (STAT)	6071012000-E	1660	140	LF	COIR FIBER WATTLE	8753100000-E	430	880	LS	3'-0"X 2'-9" PRESTR BOX BEAM

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Table with columns: STATION, UNCL. EXCAV., EMBANK. + %, BORROW, WASTE. Rows include station ranges and project/grand totals.

RIGHT OF WAY AREA DATA

Table with columns: PARCEL NO., PROPERTY OWNERS NAMES, TOTAL ACREAGE, AREA TAKEN, AREA REMAINING RT., AREA REMAINING LT., CONST. EASE., PERM. DRAIN. EASE., TEMP. DRAIN. EASE.

PAVEMENT REMOVAL SUMMARY

Table with columns: SURVEY LINE, STATION, STATION, LOCATION LT/RT/CL, SY. Rows include station ranges and a total of 154.

SHOULDER BERM GUTTER SUMMARY

Table with columns: SURVEY LINE, STATION, STATION, LOCATION, LENGTH (FT). Rows include station ranges and a total of 39.18.

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

Main table for pipes and endwalls with columns for station, location, structure no., invert elevation, pipe size, material, and quantities.

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

Table for guardrail summary with columns: SURVEY LINE, BEG. STA., END STA., LOCATION, LENGTH, WARRANT POINT, FLARE LENGTH, W, ANCHORS, IMPACT ATTENUATOR, SINGLE FACED GUARDRAIL, REMOVE EXISTING GUARDRAIL, REMOVE AND STOCKPILE EXISTING GUARDRAIL, REMARKS.

DEDUCTIONS FOR ANCHOR UNITS table with rows for TYPE III @ 18.75' and GRAU 350 @ 50'.

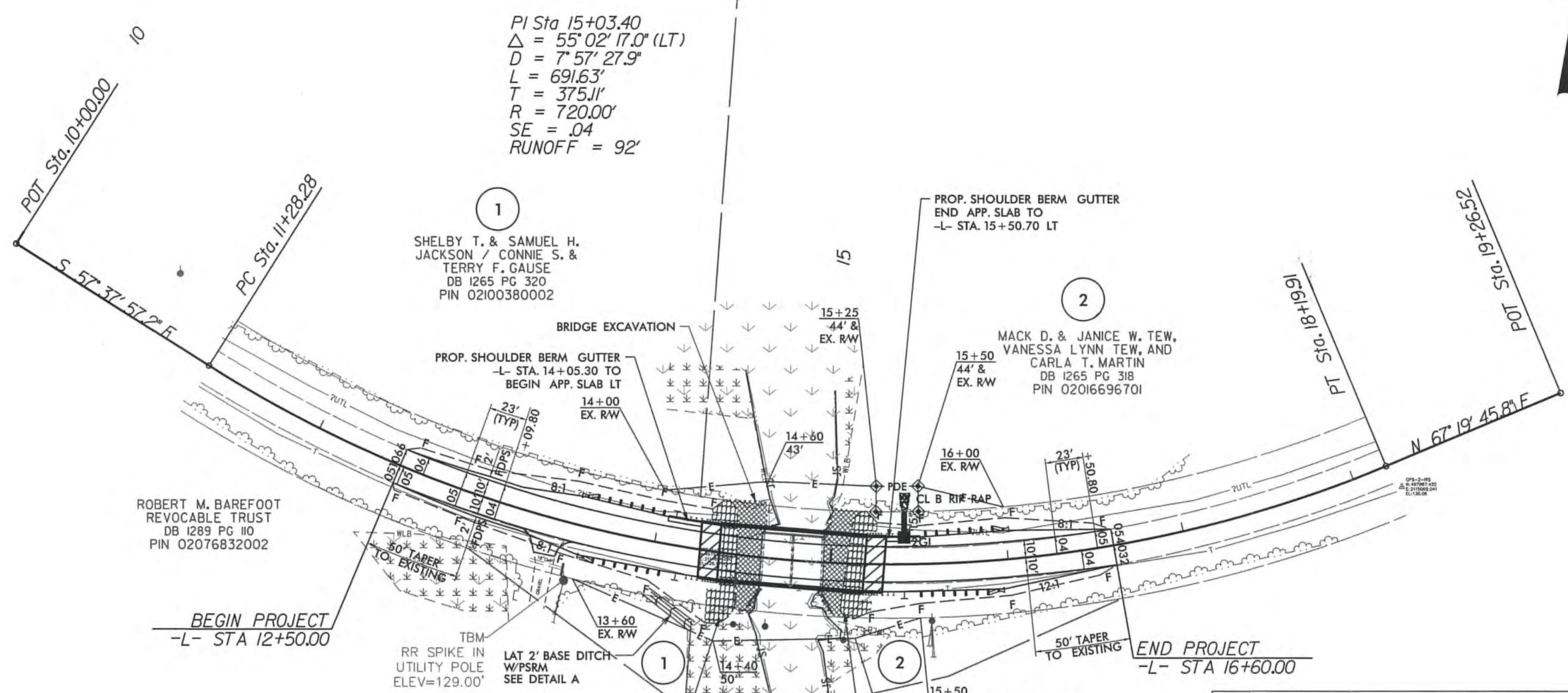
ADDITIONAL GUARDRAIL POSTS = 3

REVISIONS

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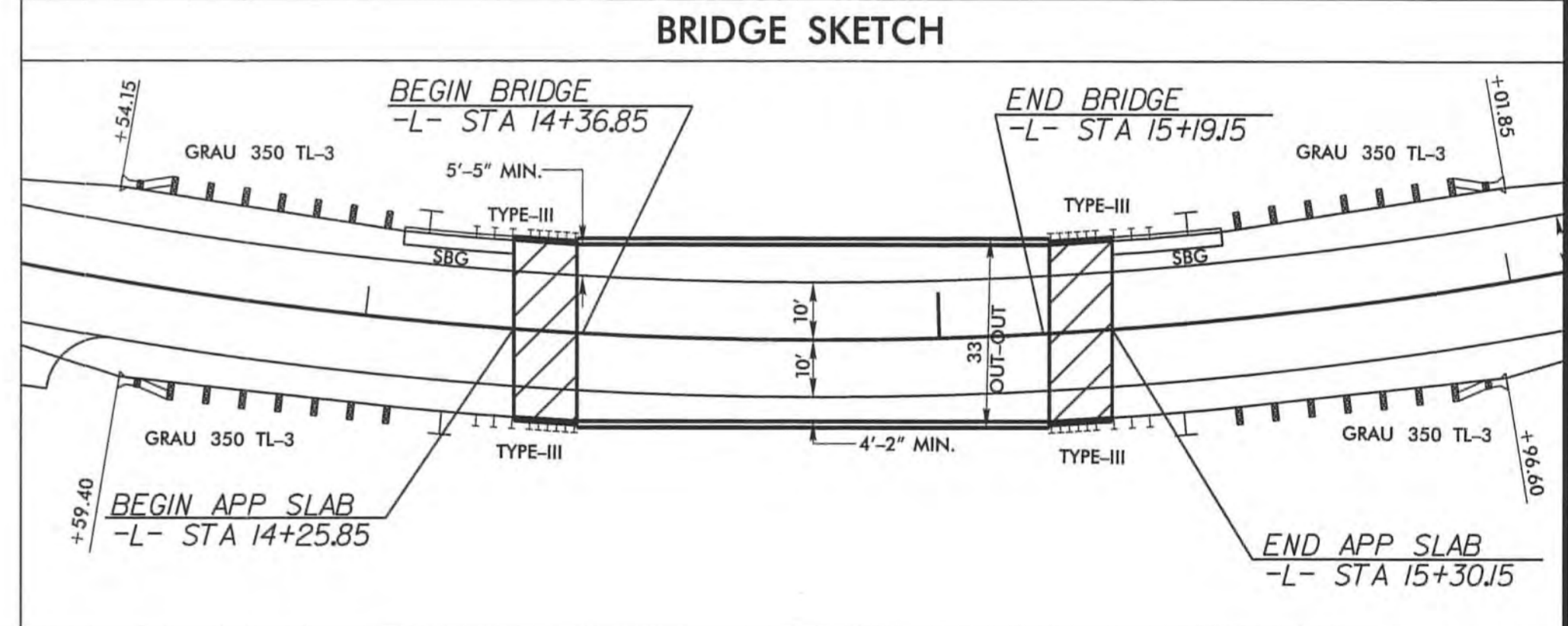
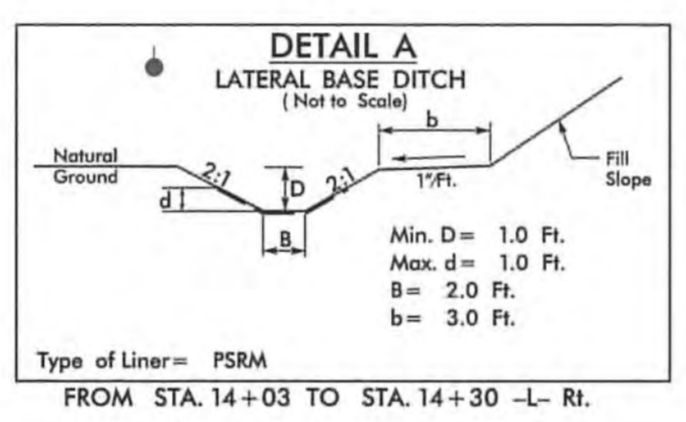
PROJECT REFERENCE NO. 17BP.3.R.6	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NSRS 2007

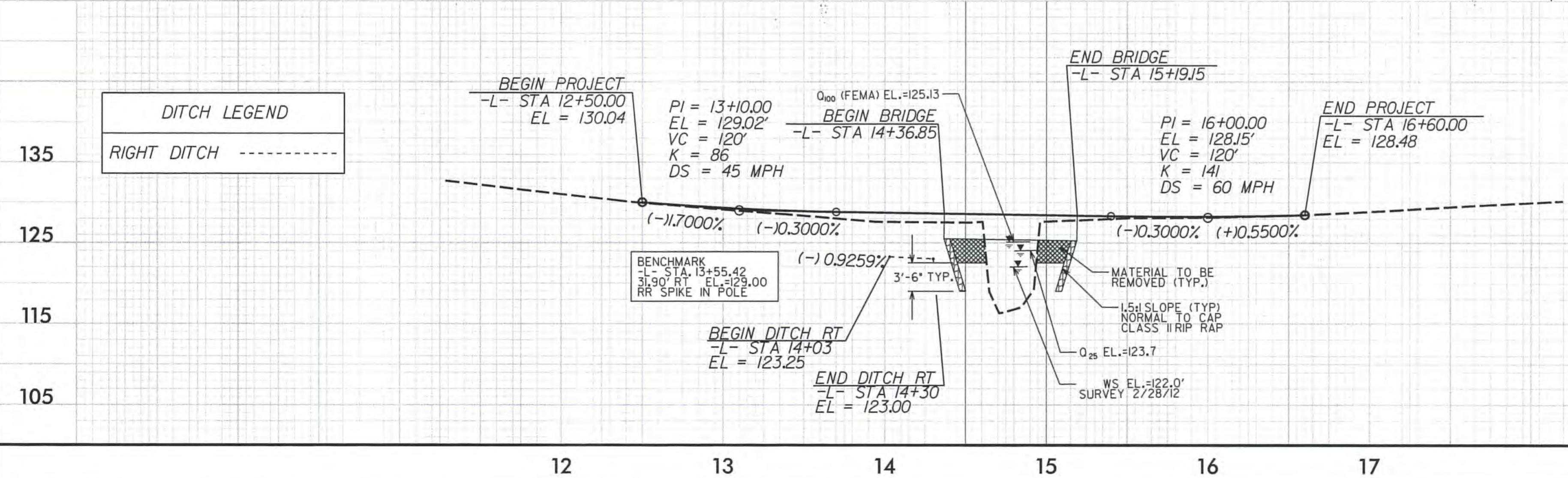


PI Sta 15+03.40
 $\Delta = 55^{\circ}02'17.0"$ (LT)
 $D = 7^{\circ}57'27.9"$
 $L = 691.63'$
 $T = 375.11'$
 $R = 720.00'$
 $SE = .04$
 $RUNOFF = 92'$

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS-1-SIR" WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF NORTHING: 497933.901(ft) EASTING: 2114694.250(ft) ELEVATION: 128.19(ft) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987452 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-1-SIR" TO -EL- STATION 10+00 IS S 64°53'31.20" E 447.76' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



DITCH LEGEND
 RIGHT DITCH - - - - -



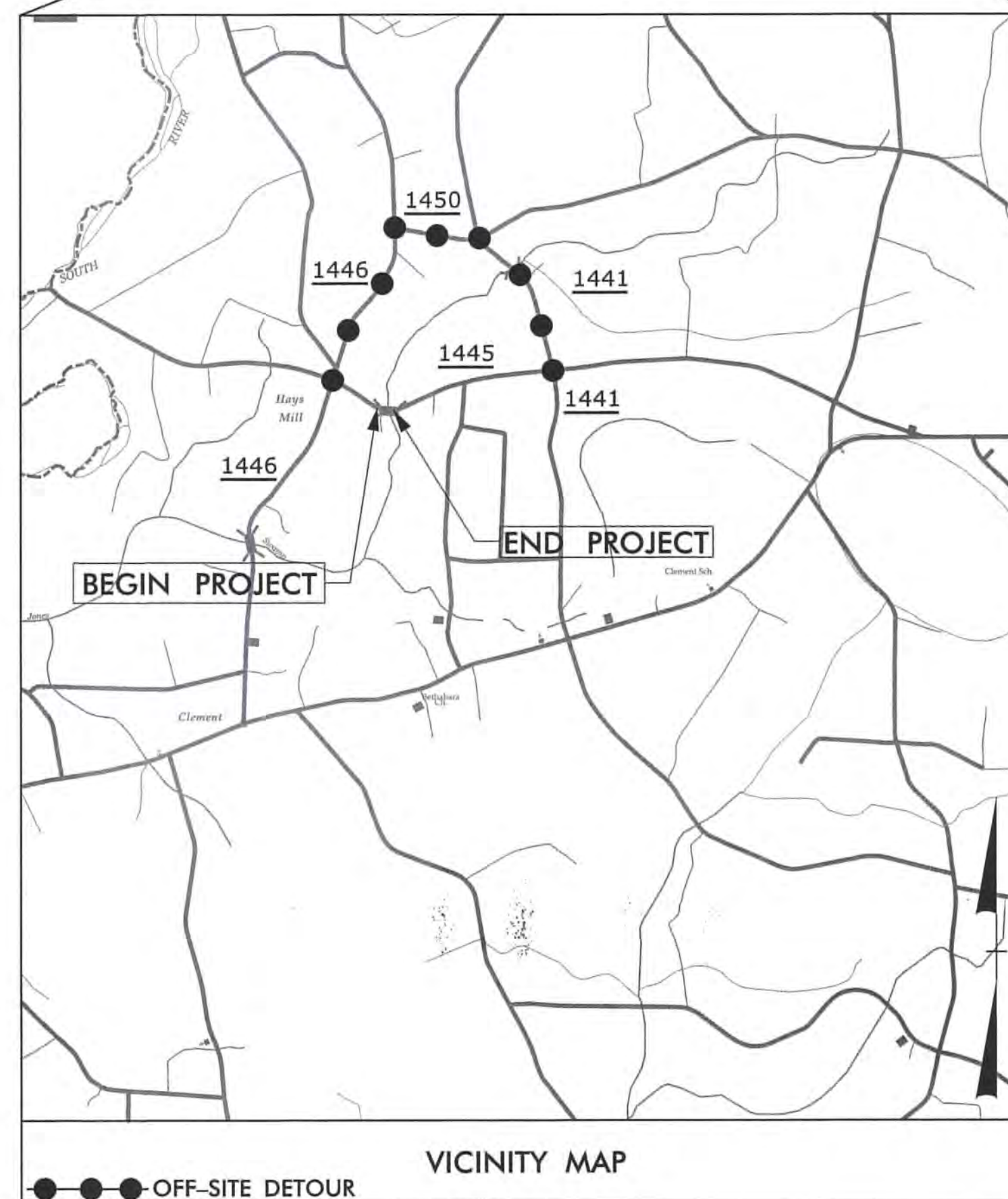
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 124.70	FT
BASE DISCHARGE	= 1117	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 125.13	FT
OVERTOPPING DISCHARGE	= 2840	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 128.80	FT
DATE OF SURVEY	= 02/28/2012	
W.S. ELEVATION AT DATE OF SURVEY	= 122.00	FT

8/17/99
 REVISIONS
 1/13/2014 810129_RDY_PSH_04.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
SAMPSON COUNTY



VICINITY MAP

●●● OFF-SITE DETOUR

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, INDEX OF SHEETS, AND LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1A	TRANSPORTATION OPERATIONS PLAN: (GENERAL NOTES, MANAGEMENT STRATEGIES, AND PHASING)
TMP-2	OFF-SITE DETOUR
TMP-3	SPECIAL SIGN DESIGN

ROADWAY STD. DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATORS SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS TYPE
1262.01	GUARDRAIL END DELINEATION



DAVID RUGGLES, PE TRAFFIC CONTROL PROJECT ENGINEER

MICHAEL TAYLOR, PE TRAFFIC CONTROL DESIGN ENGINEER

1/16/2014
\\NCP\810029_TC_TCP_01_tsh.dgn
USER:mtoyler



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

KATHERINE HITE, PE DIVISION TRAFFIC ENGINEER



APPROVED: David Ruggles
DATE: 1-16-14



17BP.3.R.6
TIP PROJECT:

SHEET NO.
TMP-1

GENERAL NOTES / LOCAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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.

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

- C) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

- D) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

- E) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- F) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

- G) INSTALL PAVEMENT MARKINGS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKINGS	MARKERS
SR 1445 (HAYES MILL ROAD)	PAINT	RAISED

- H) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

MANAGEMENT STRATEGIES

- CLOSE SR 1445 (HAYES MILL ROAD) TO THROUGH TRAFFIC BETWEEN SR 1441 AND SR 1446.
- DIRECT THROUGH TRAFFIC TO OFF SITE DETOUR.
- MAINTAIN LOCAL TRAFFIC.

PHASING

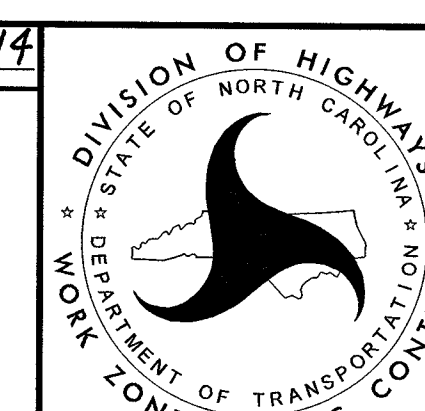
- STEP 1 INSTALL DETOUR SIGNING AS SHOWN ON SHEET TMP-2 IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9. SIGNS SHALL BE COVERED IF DETOUR IS NOT OPENED WITHIN 3 DAYS OF SIGN INSTALLATION.
- STEP 2 INSTALL BARRICADES AND CLOSE SR 1445 (HAYES MILL ROAD) TO THROUGH TRAFFIC AS SHOWN ON TMP-2 AND IN ACCORDANCE WITH ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9.
- STEP 3 PERFORM THE FOLLOWING WORK WITHIN THE ROAD CLOSURE:
- REMOVE THE EXISTING STRUCTURE.
 - CONSTRUCT THE PROPOSED STRUCTURE.
 - CONSTRUCT THE PROPOSED ROADWAY SECTION -L- UP TO AND INCLUDING THE FINAL LAYER OF SURFACE, THE FINAL PAVEMENT MARKINGS, AND THE FINAL PAVEMENT MARKERS FROM -L- STA. 12+50 TO -L- STA. 16+60.
- STEP 4 REMOVE ALL ROAD CLOSURE SIGNS AND BARRICADES AND OPEN SR 1445 (HAYES MILL ROAD) TO THROUGH TRAFFIC.



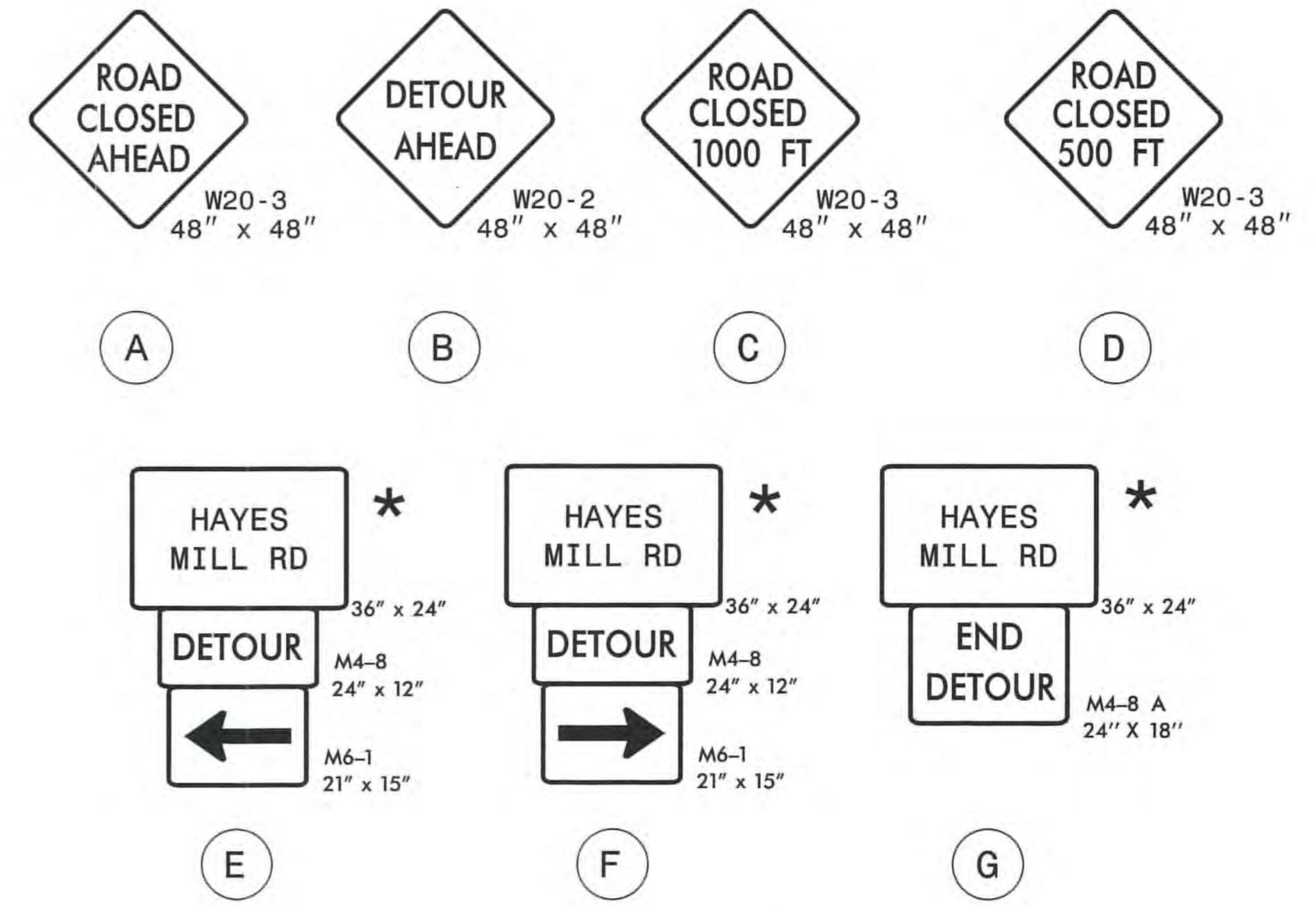
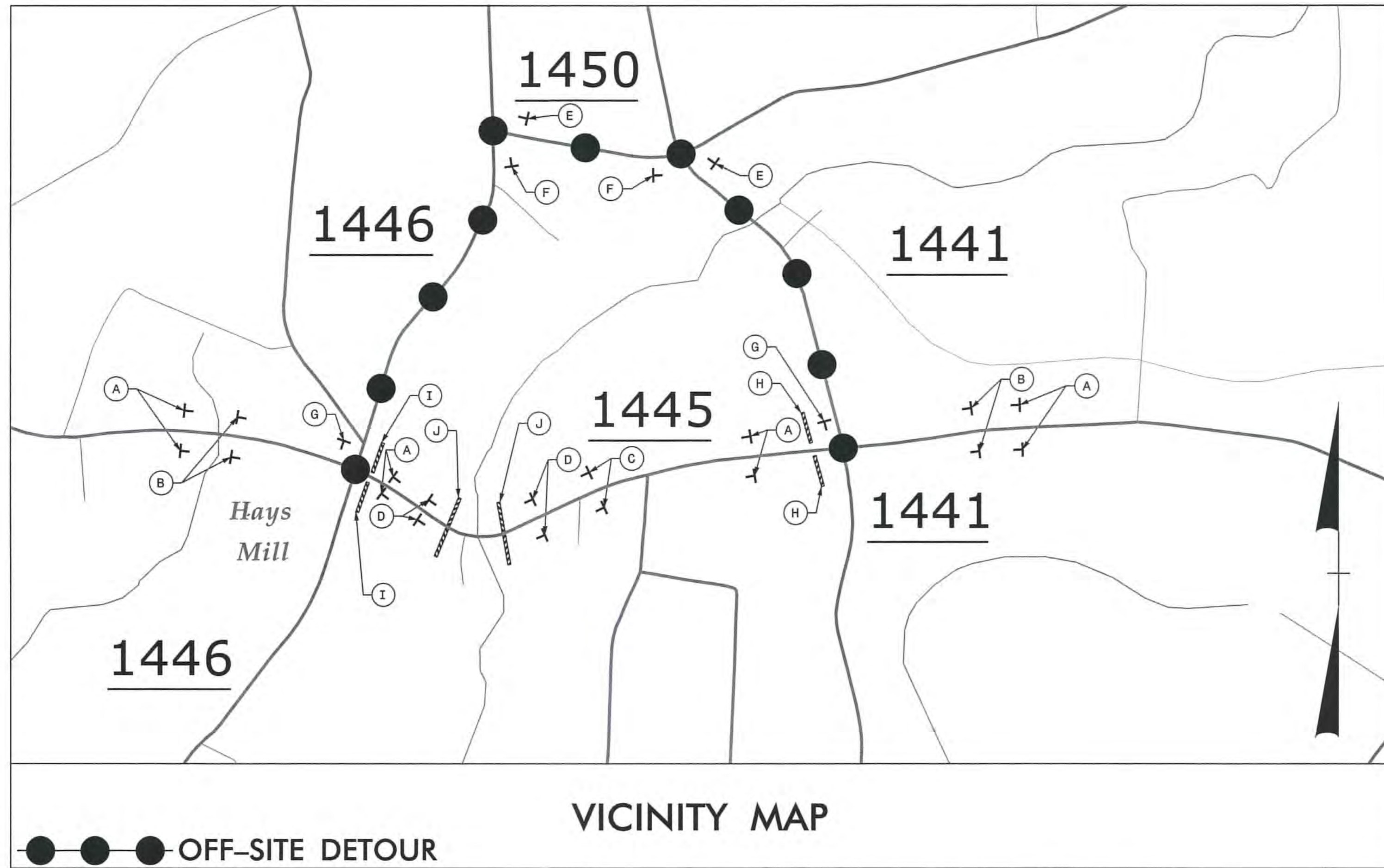
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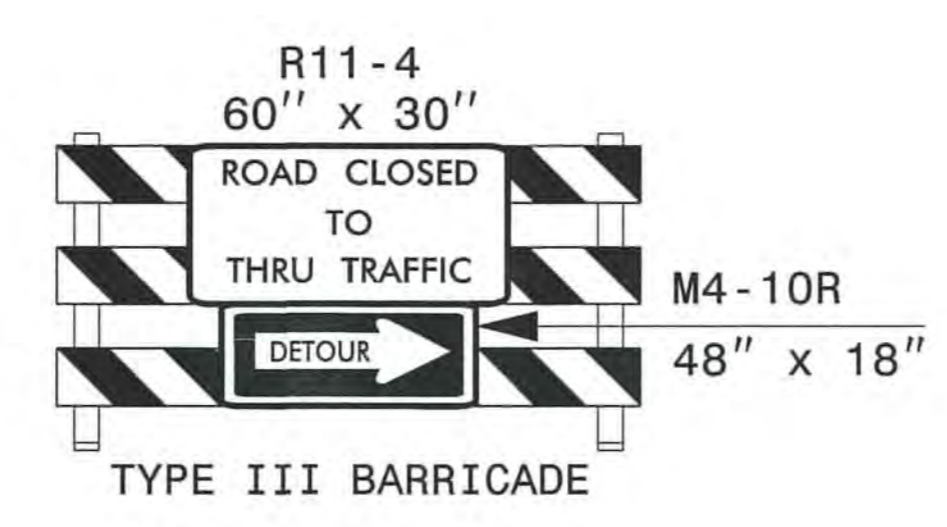
APPROVED *David Ruggels* DATE: 1-16-14



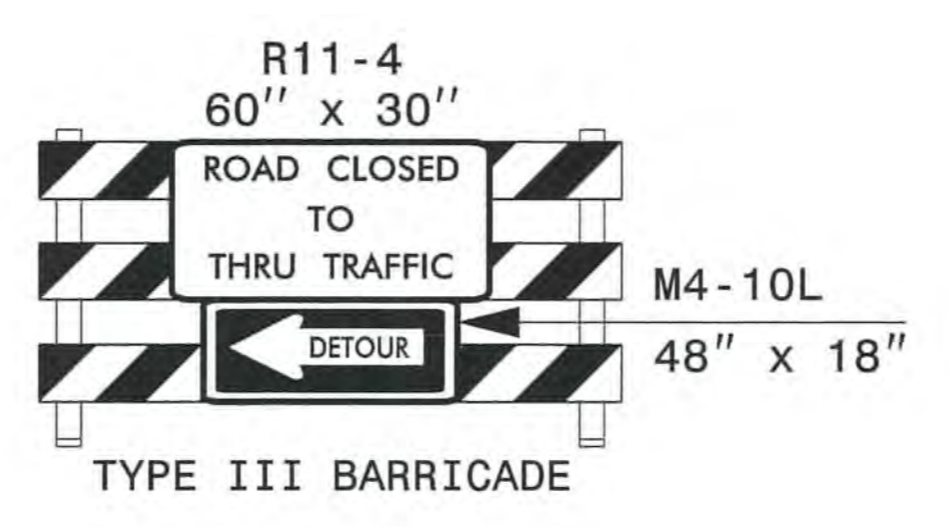
**NOTES
&
PHASING**



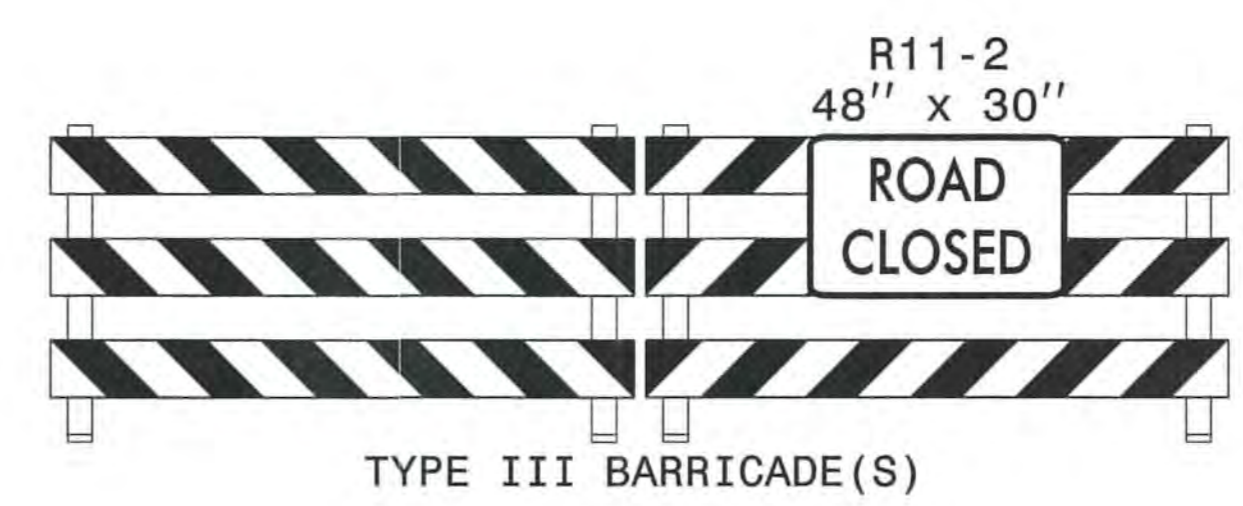
* SEE SHEET SD-1 FOR SIGN DESIGN



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Raleigh, NC 27601
T 919.380.8750
www.stewartinc.com

STEWART

1/16/2014 \\s01029_tcp_tcp_02_offsite_detour.dgn USER:ramr/lor

NOTE: SEE ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9 FOR SIGN SPACING

APPROVED: *David Ruggie* DATE: 1-16-14

SEAL

**OFFSITE
DETOUR
PLAN**

Erosion Control Plan



PROJECT REFERENCE NO. 17BP.3.R.6	SHEET NO. EC-01/CONST.04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Jenny Fleming, PE
LEVEL IIIA NAME
3340
LEVEL III CERTIFICATION NO.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
2012 STANDARD SPECIFICATIONS

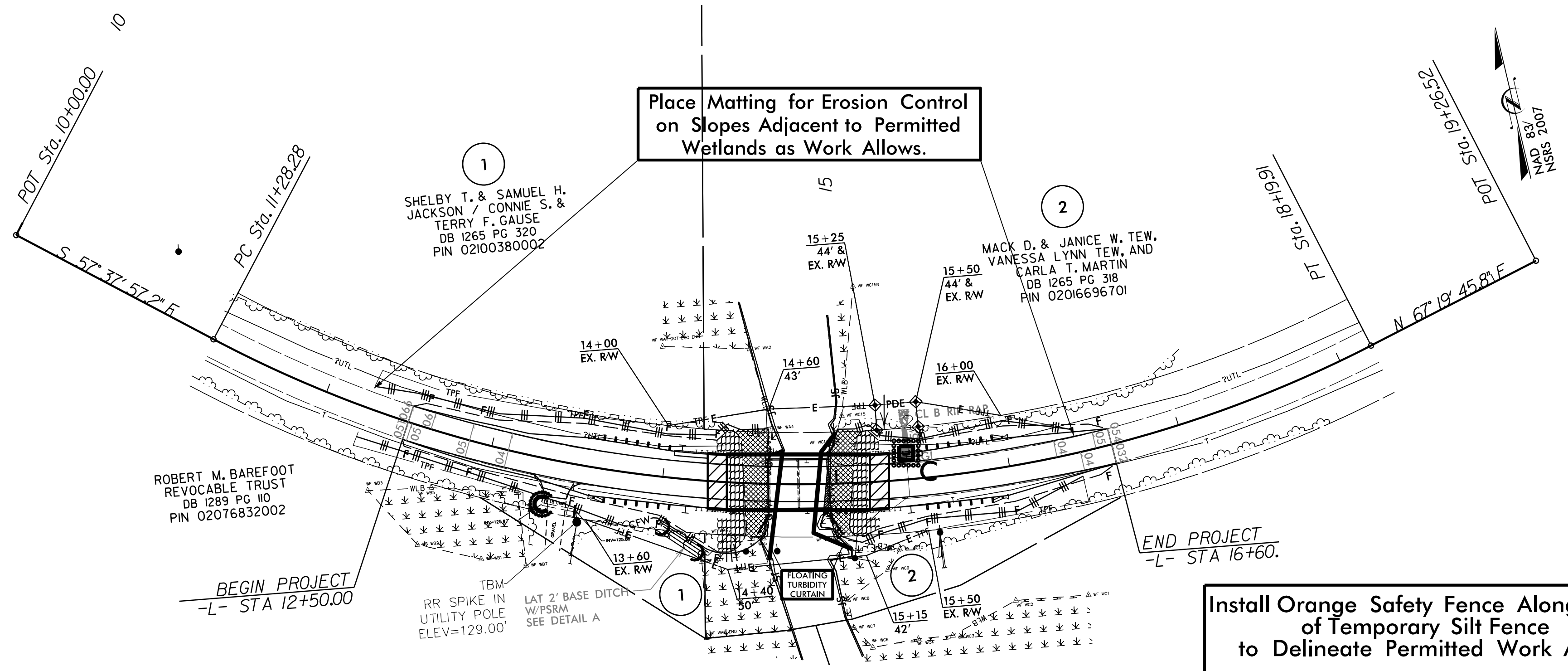
THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

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.

2012 STANDARD DRAWINGS

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	



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	
1630.05	Temporary Diversion	
1630.06	Special Stilling Basin	
1632.03	Rock Inlet Sediment Trap Type C	
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	
	Wattle with Polyacrylamide (PAM)	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	

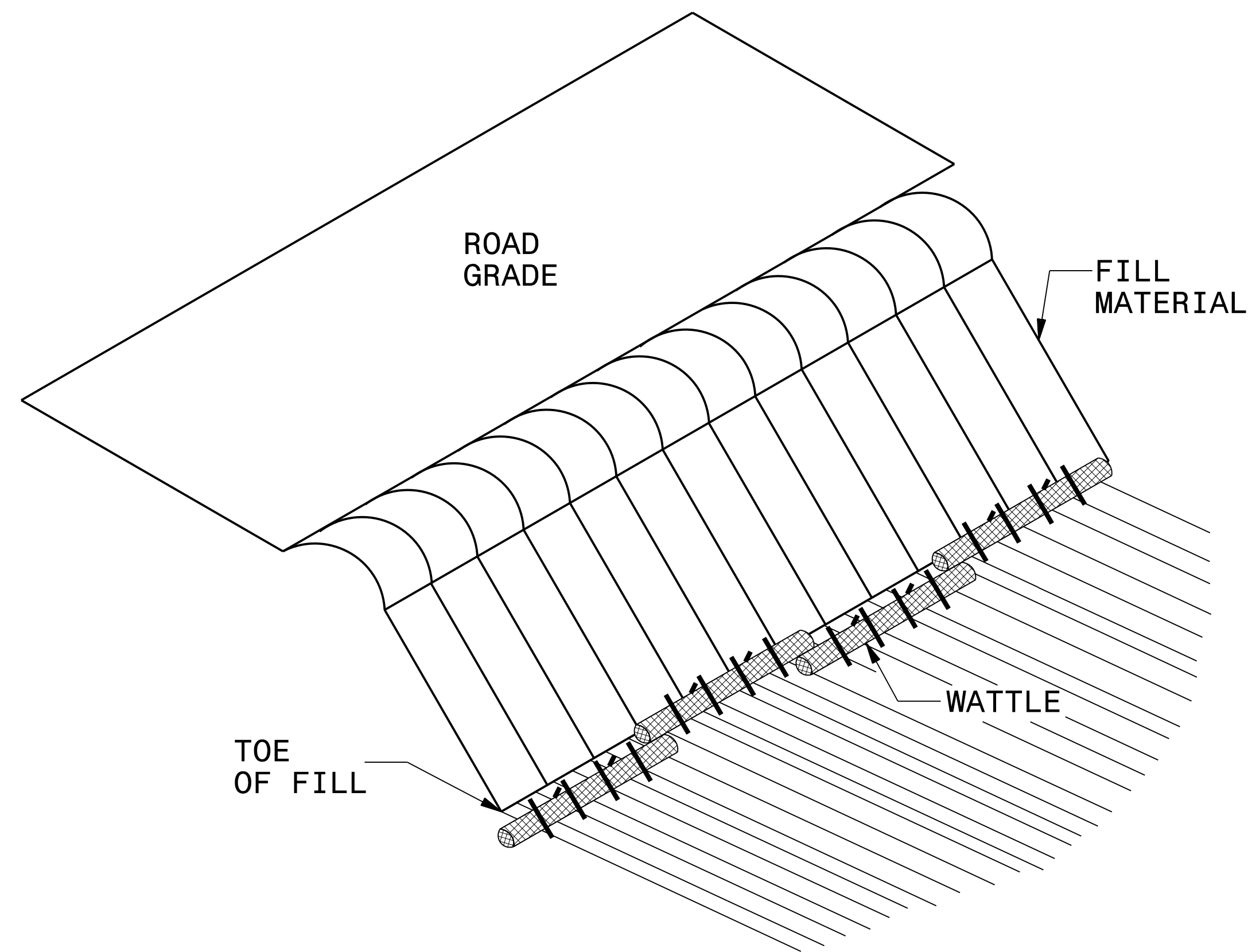
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

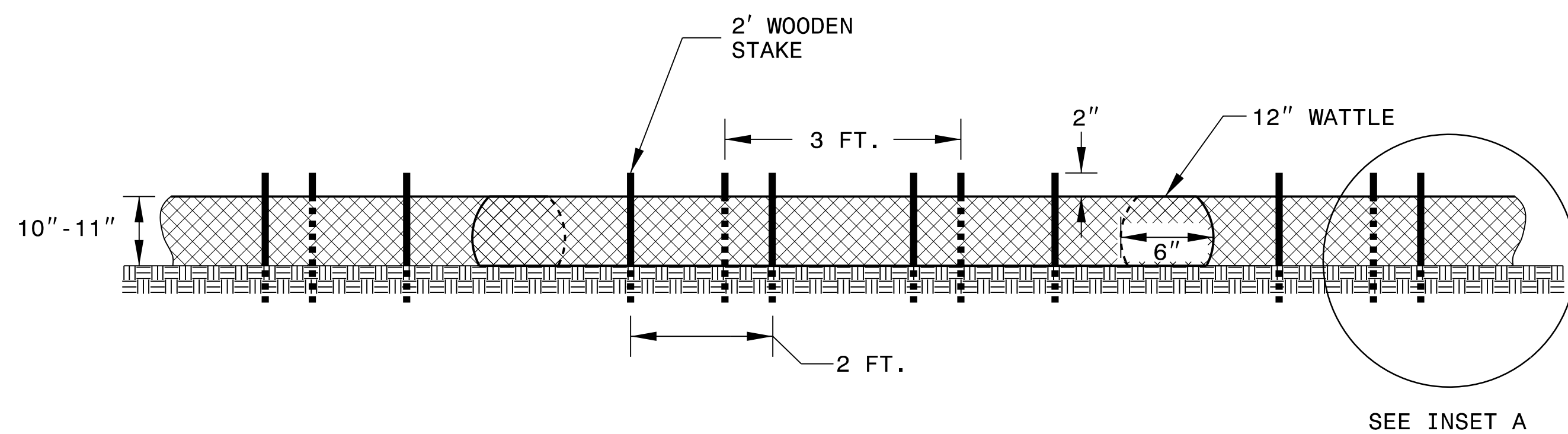
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 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.

PROJECT REFERENCE NO. 17BP.3.R.6	SHEET NO. EC-03
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW



FRONT VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

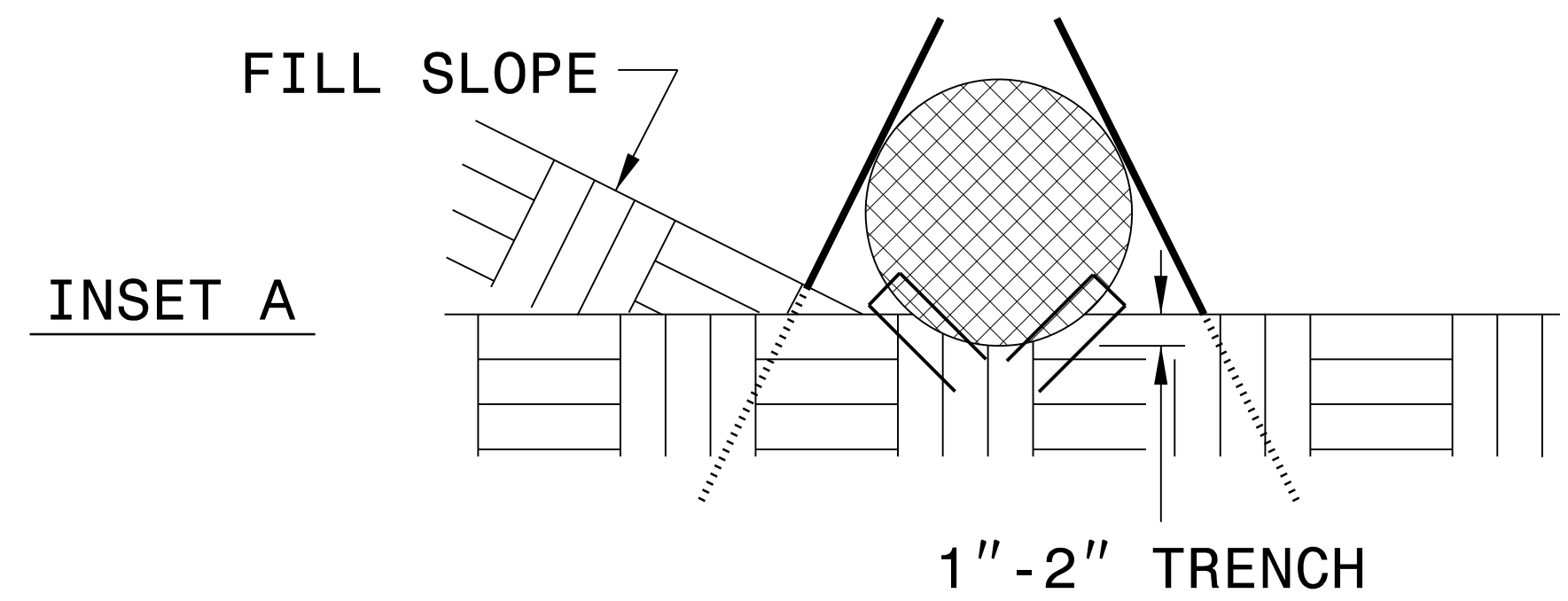
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

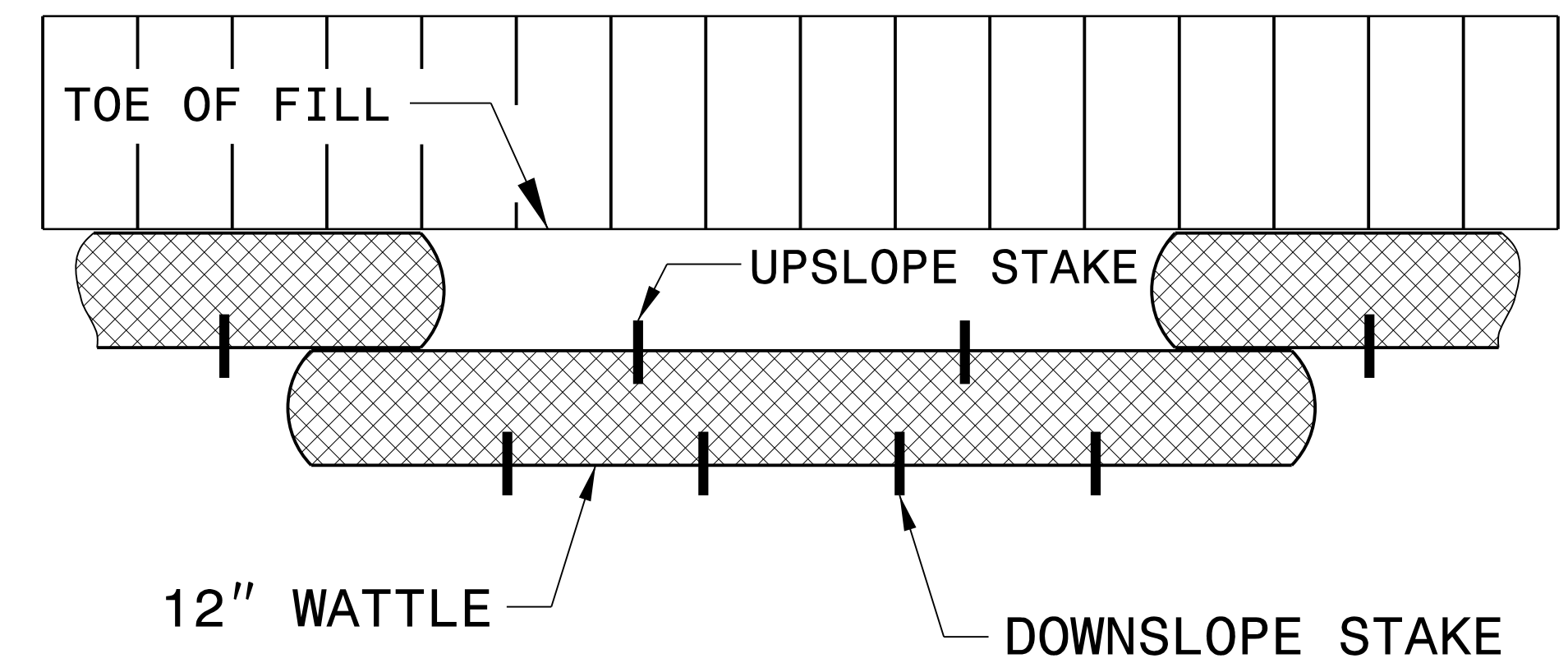
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.



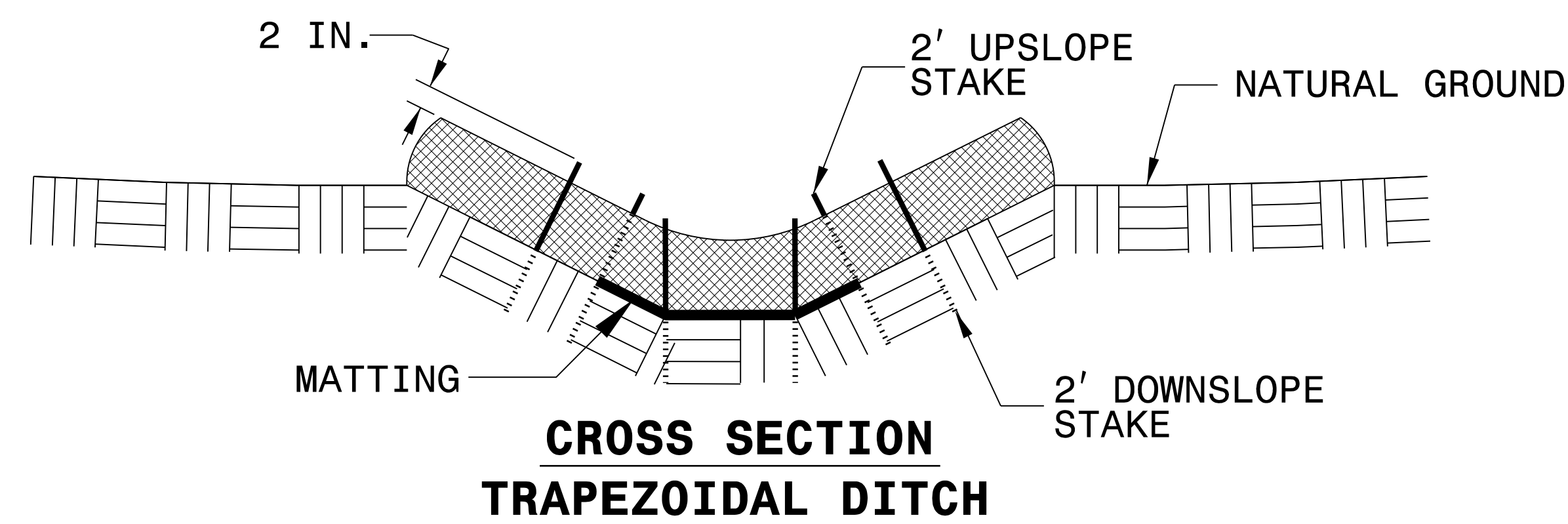
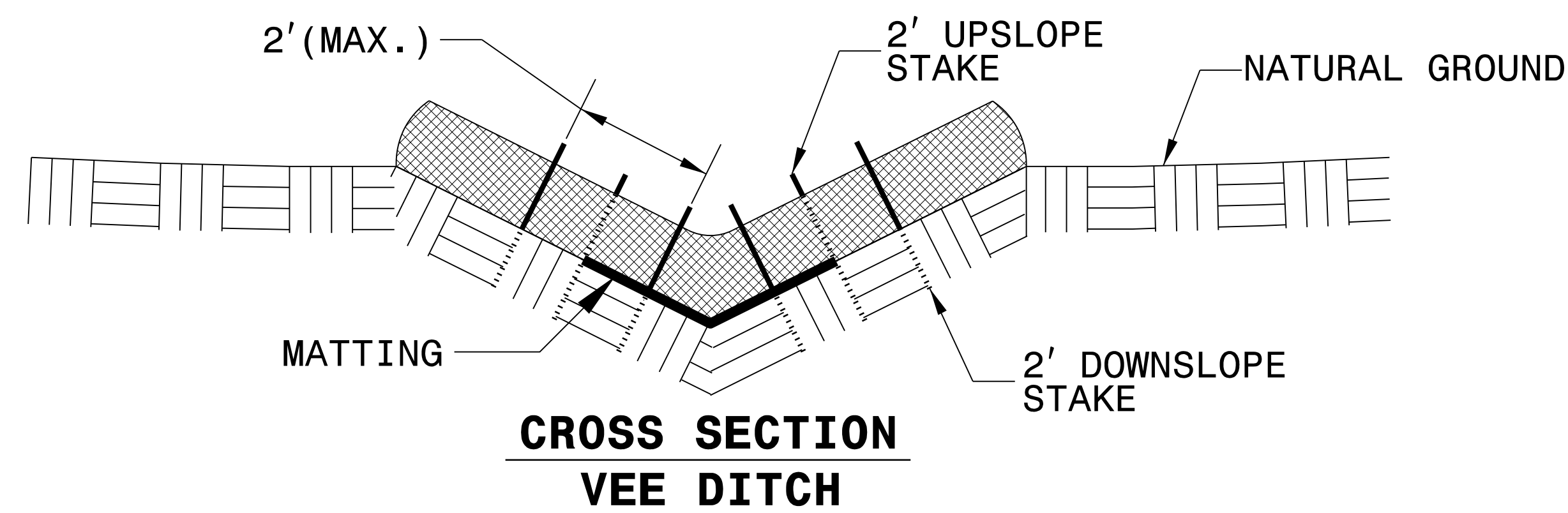
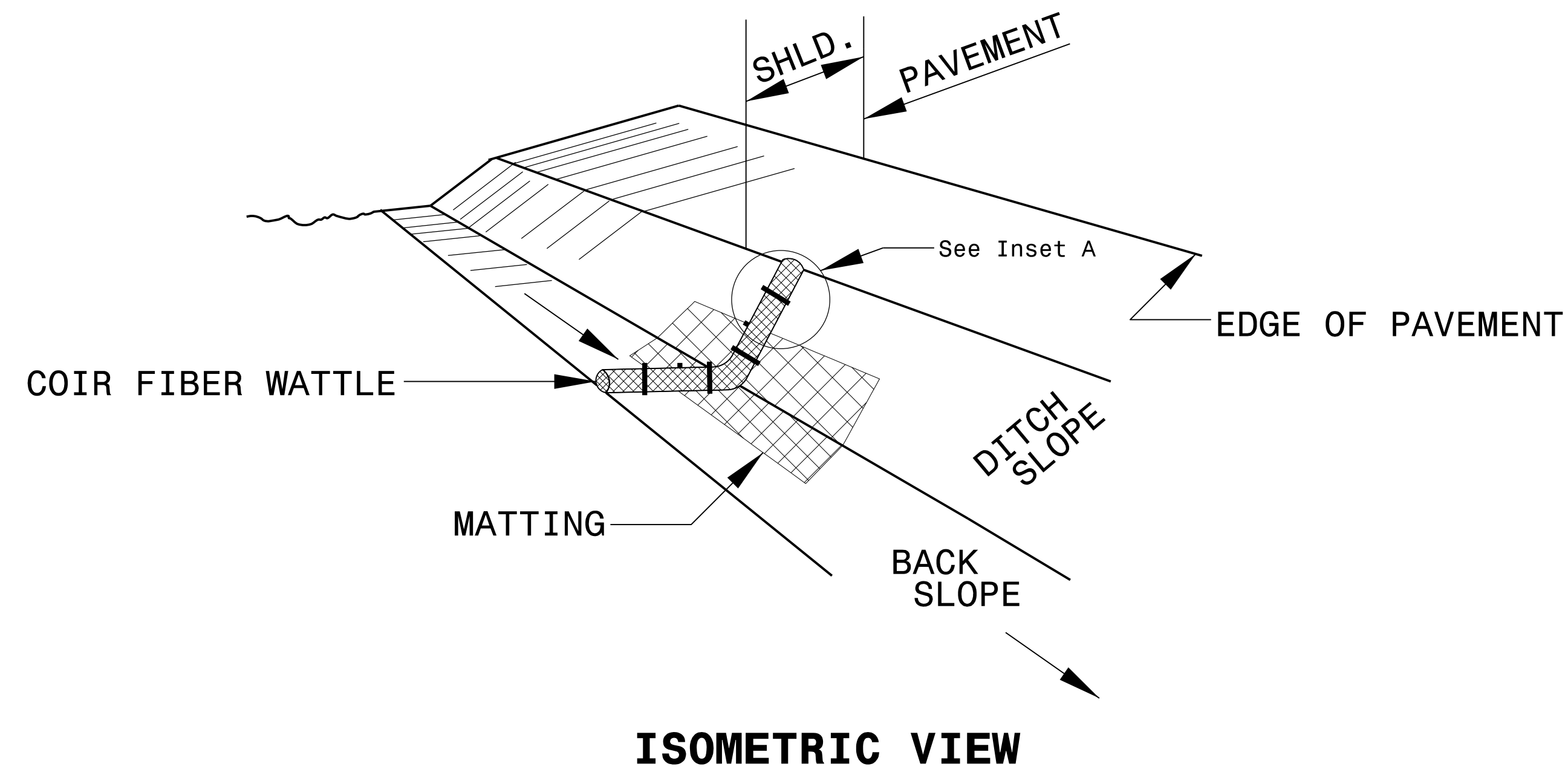
INSET A



TOP VIEW

PROJECT REFERENCE NO. 17BP.3.R.6	SHEET NO. EC-04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

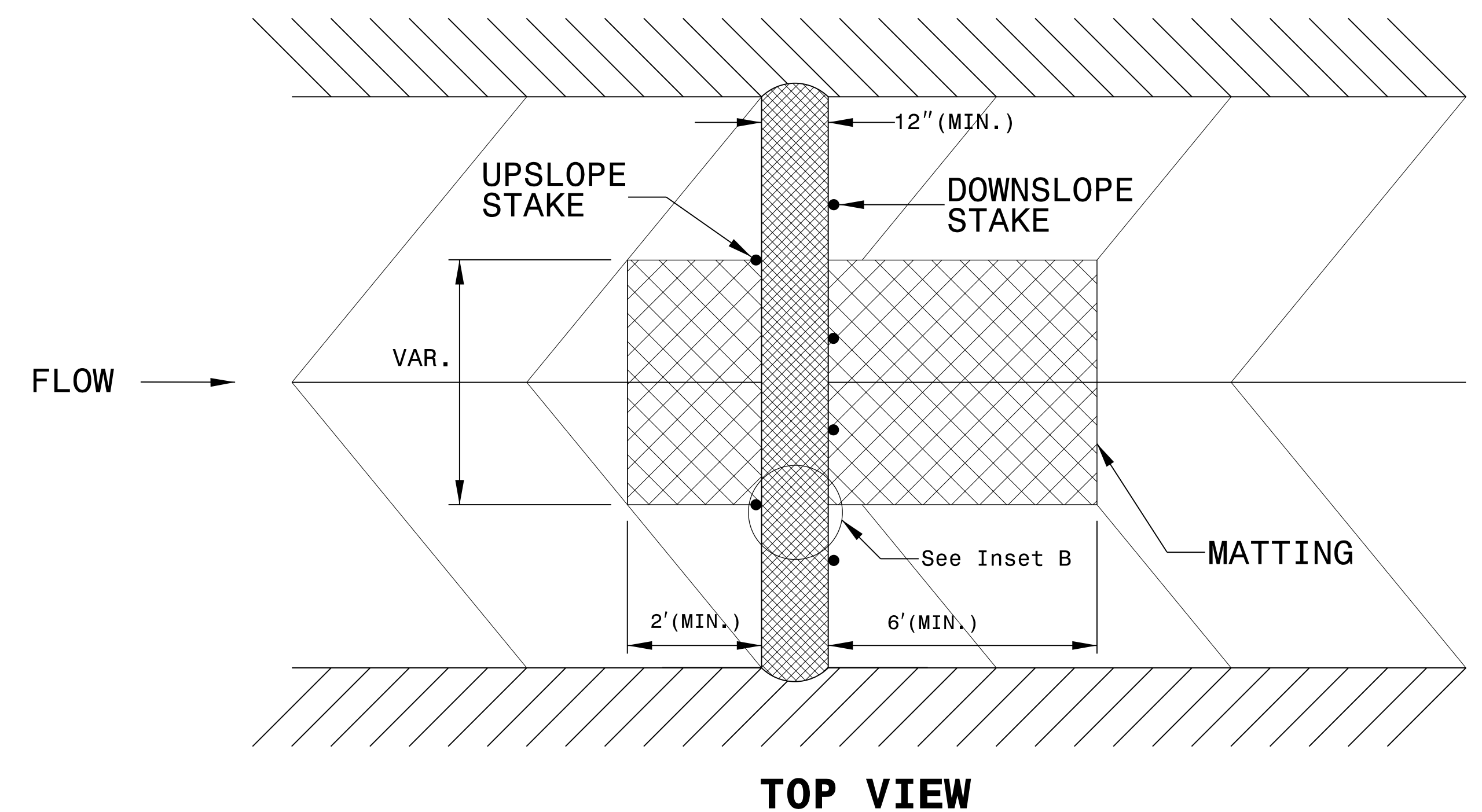
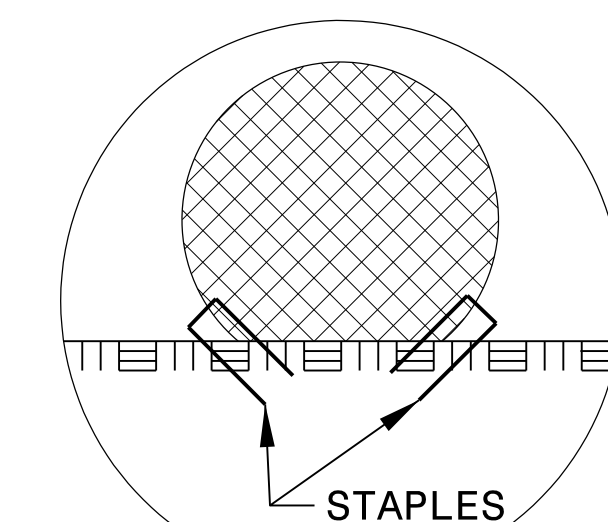
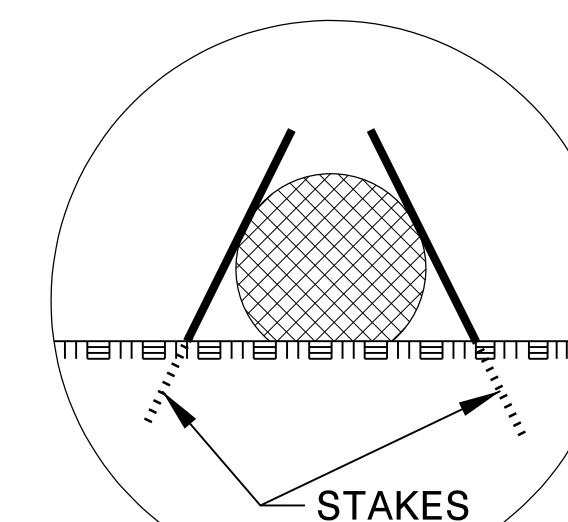
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

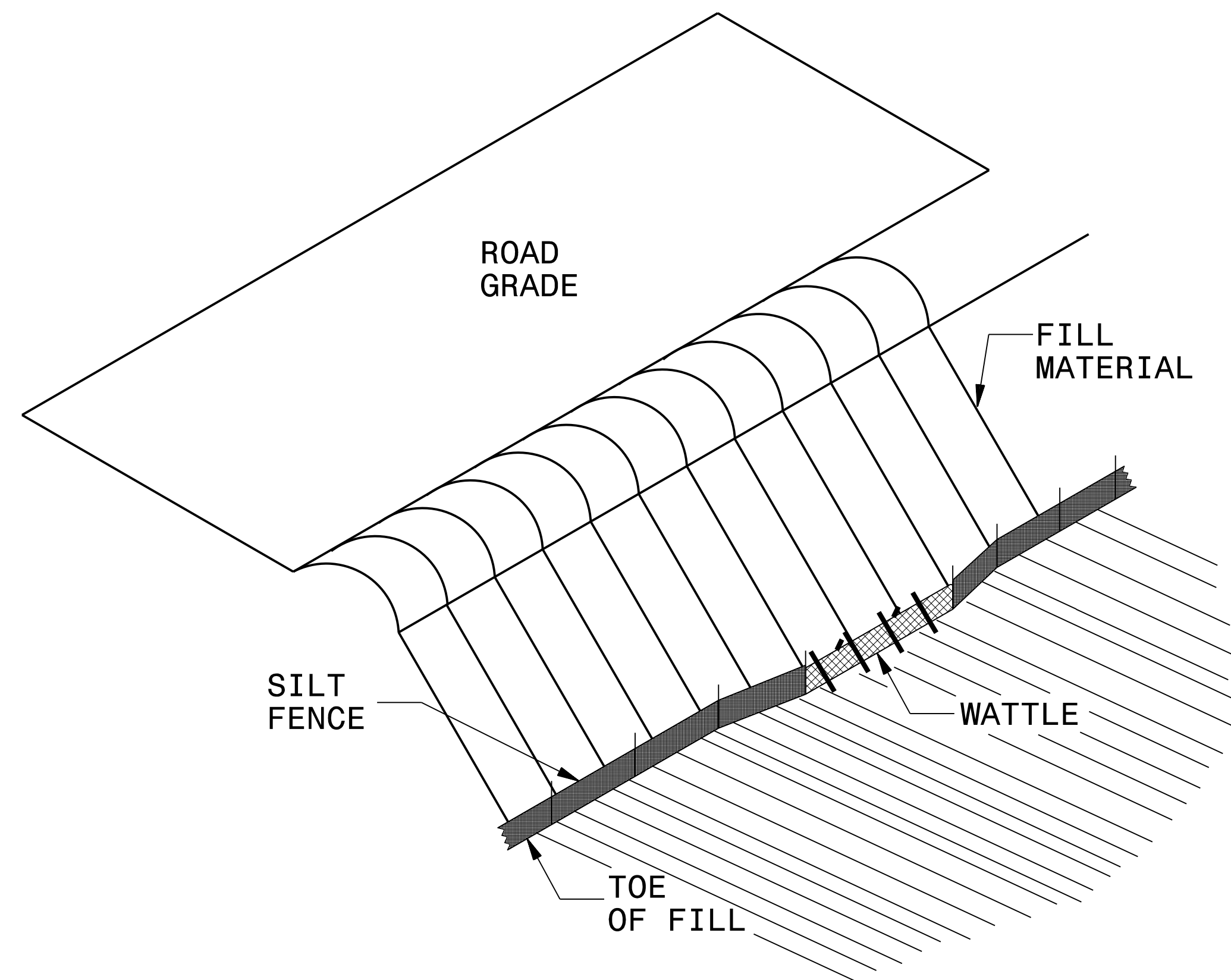
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

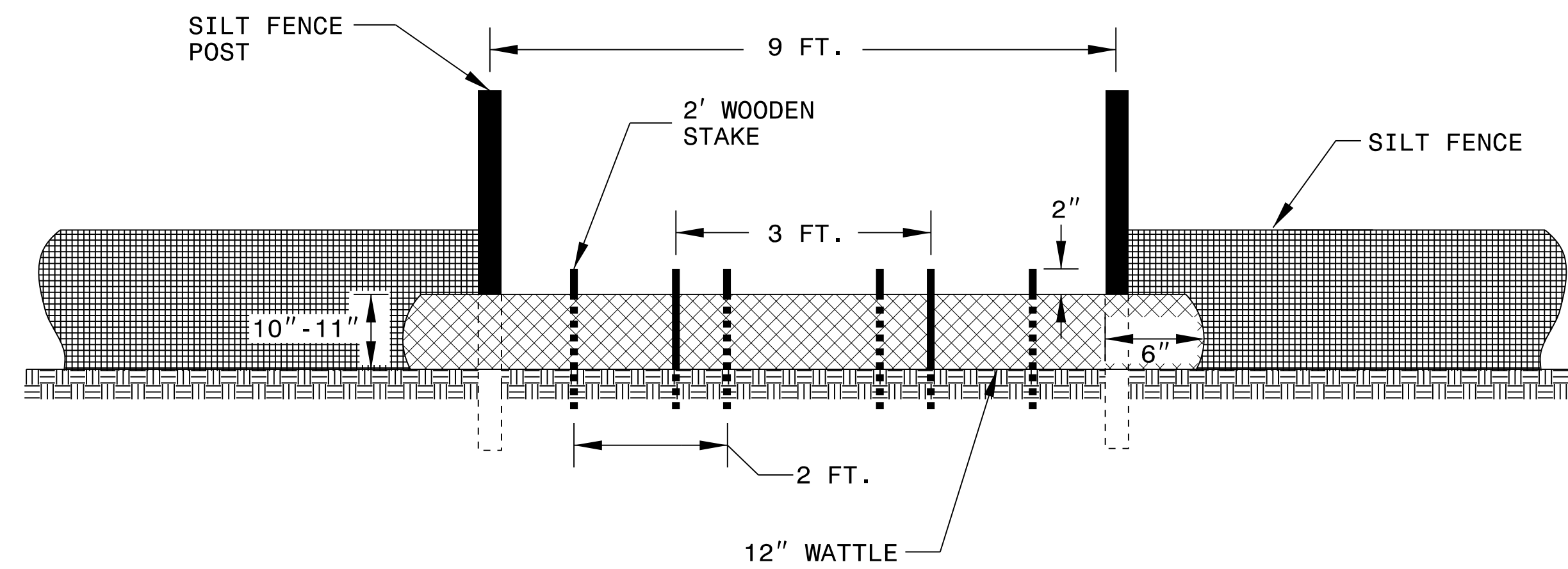


SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. 17BP.3.R.6	SHEET NO. EC-05
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

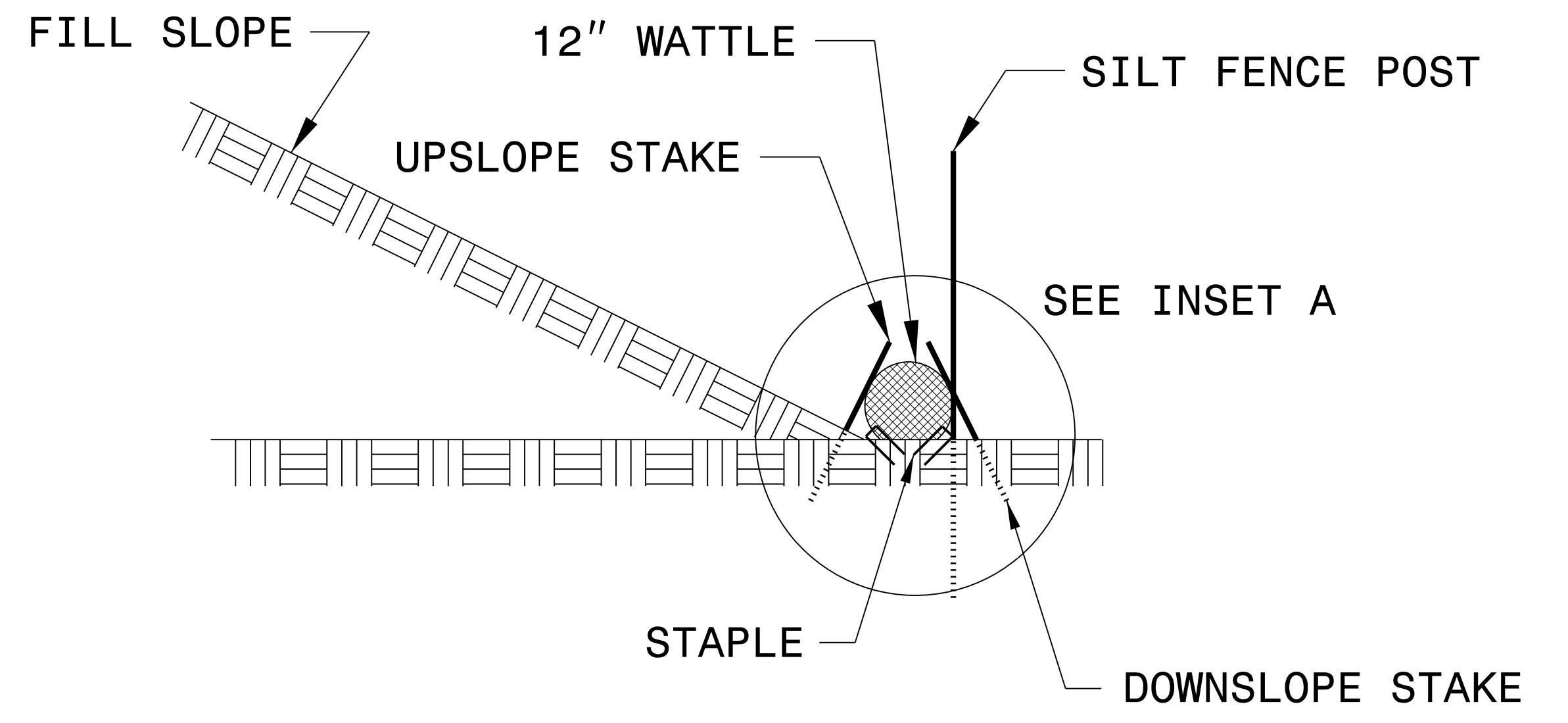
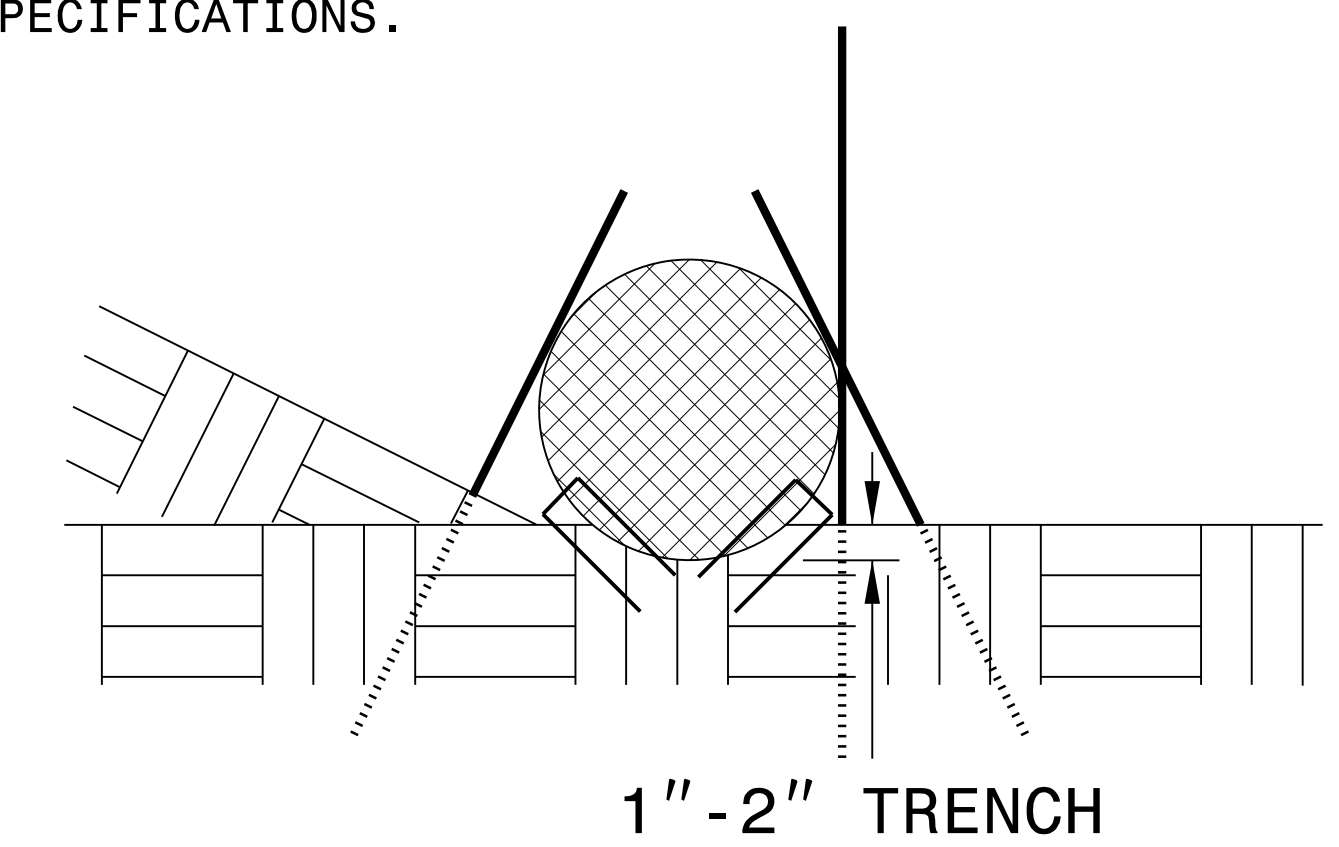


VIEW FROM SLOPE

NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

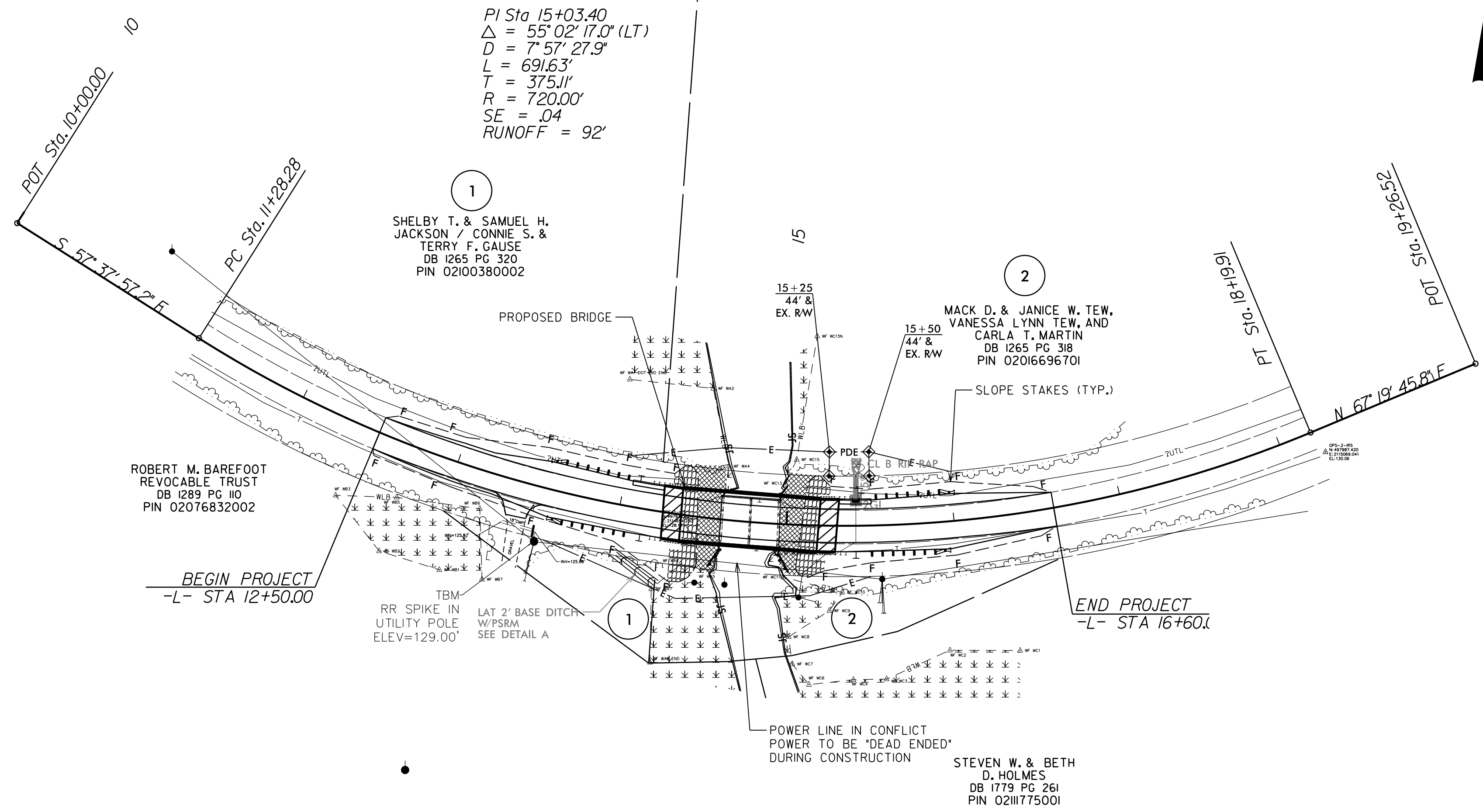
INSET A



SIDE VIEW

REVISIONS

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129_00.dwg



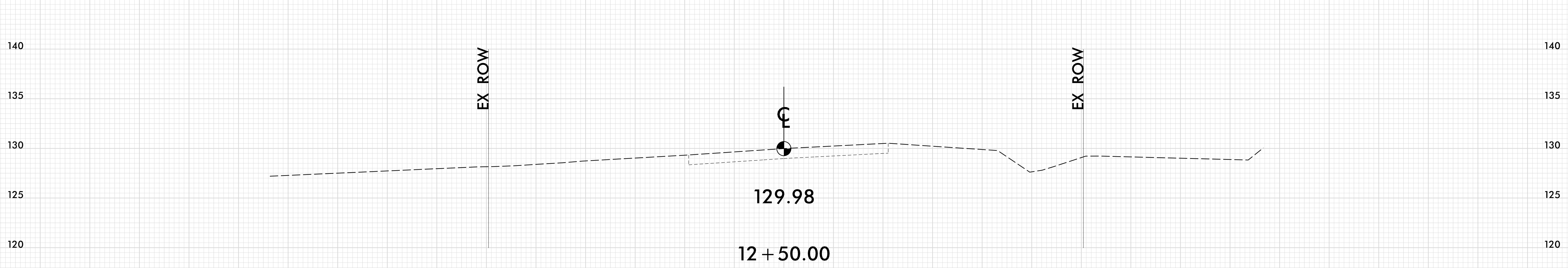
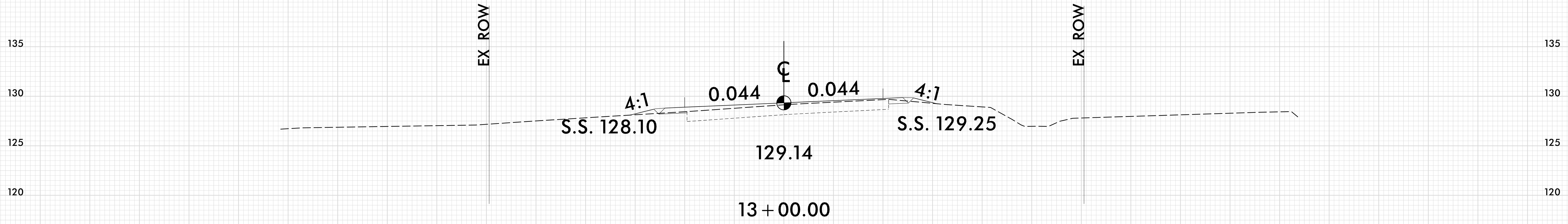
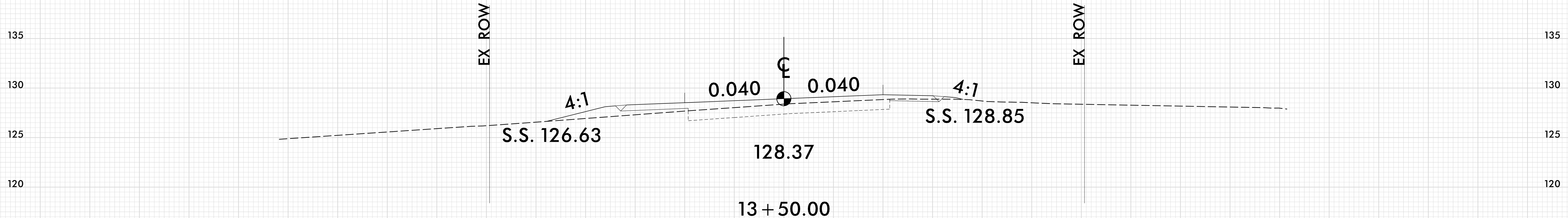
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PROJ. REFERENCE NO.	SHEET NO.
17BP.3.R.6	X-1

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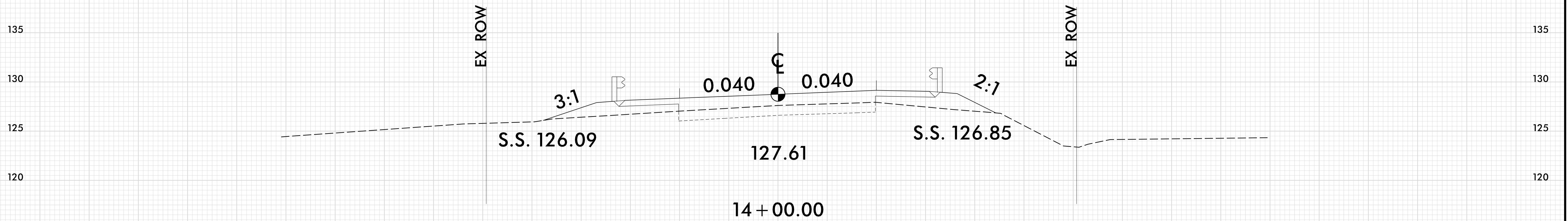
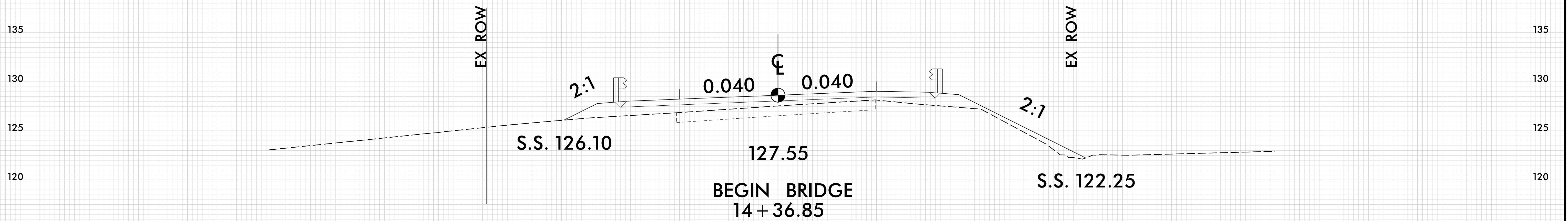
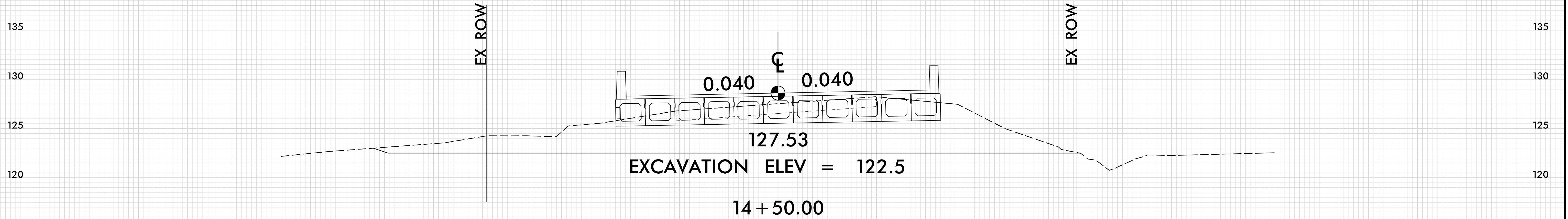
8/23/99



PROJ. REFERENCE NO.
17BP.3.R.6

SHEET NO.
X-2

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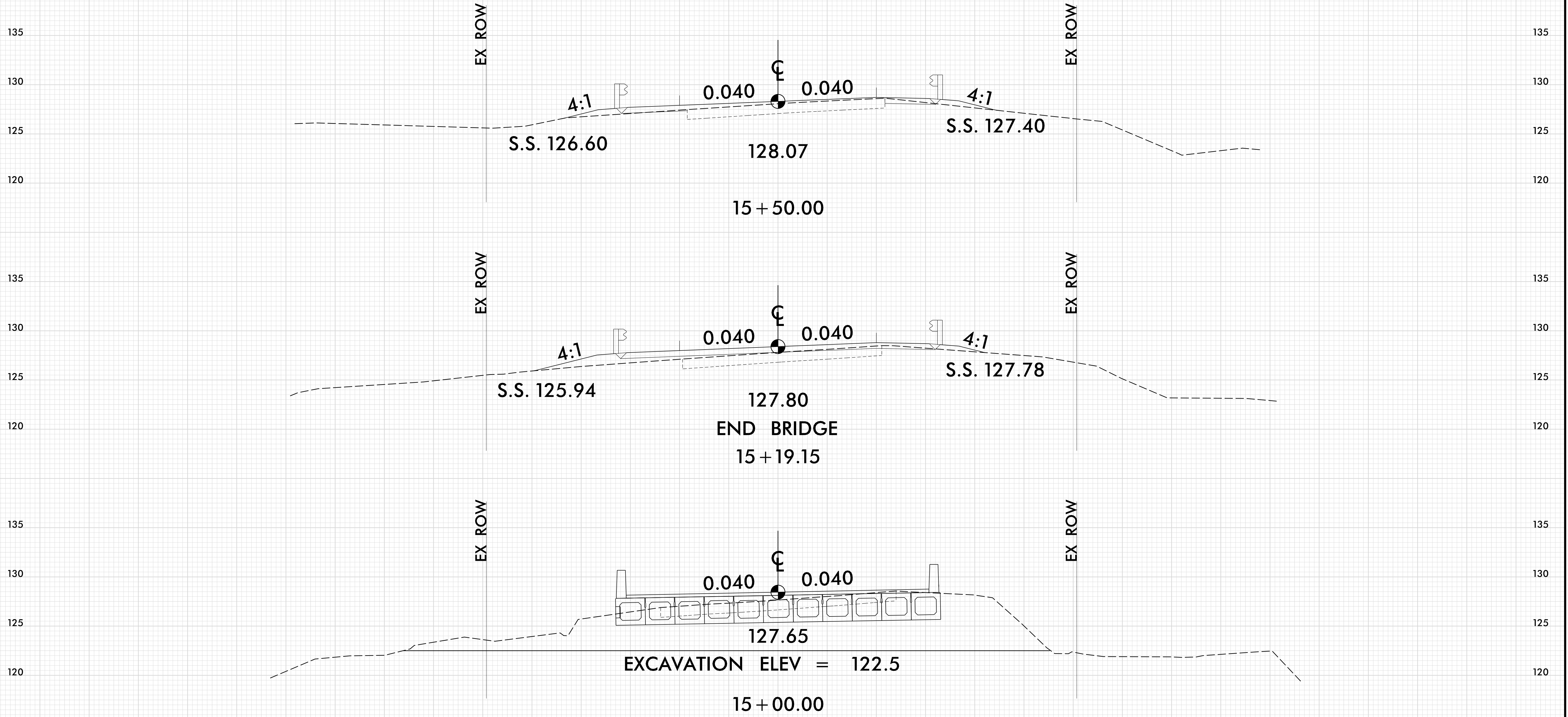
8/23/99



PROJ. REFERENCE NO.
17BP.3.R.6

SHEET NO.
X-3

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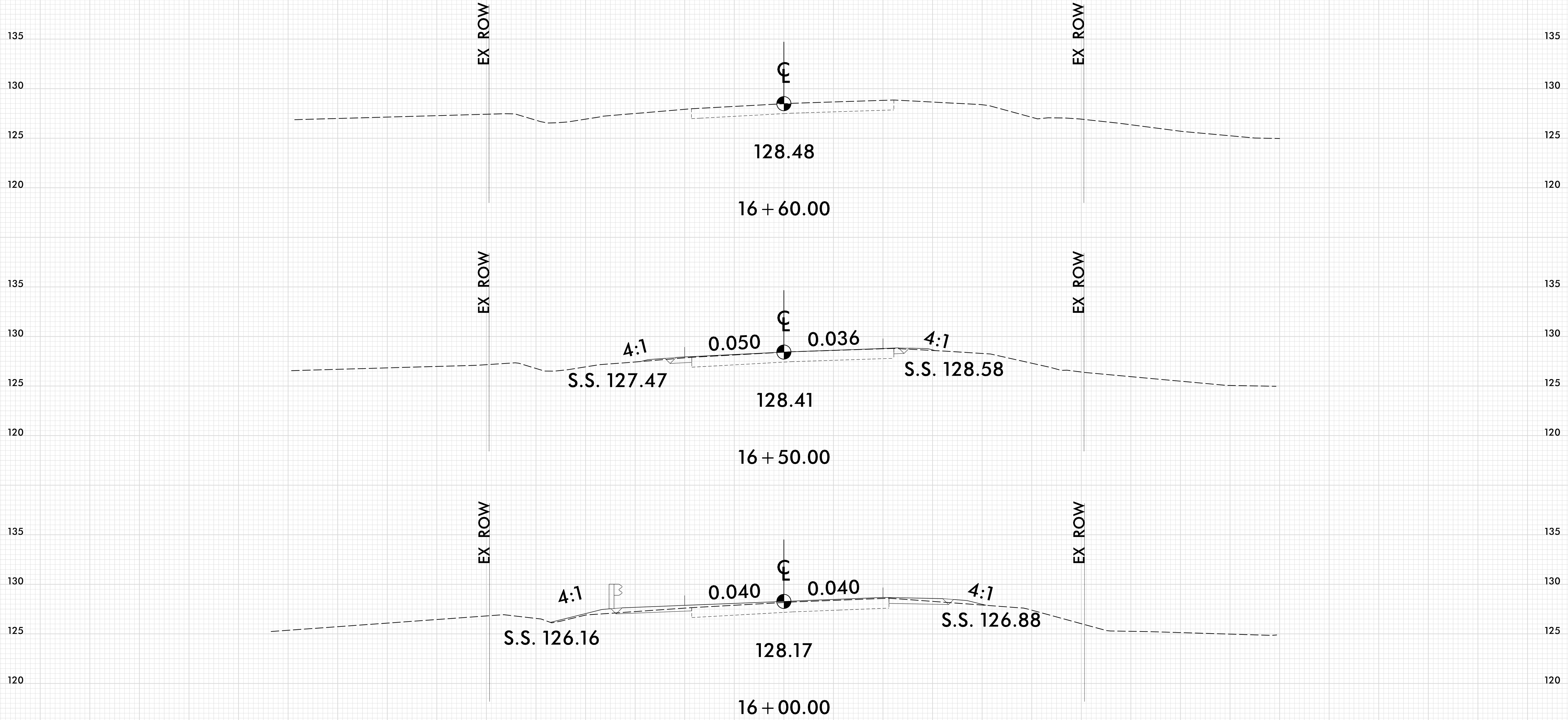
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8/23/99



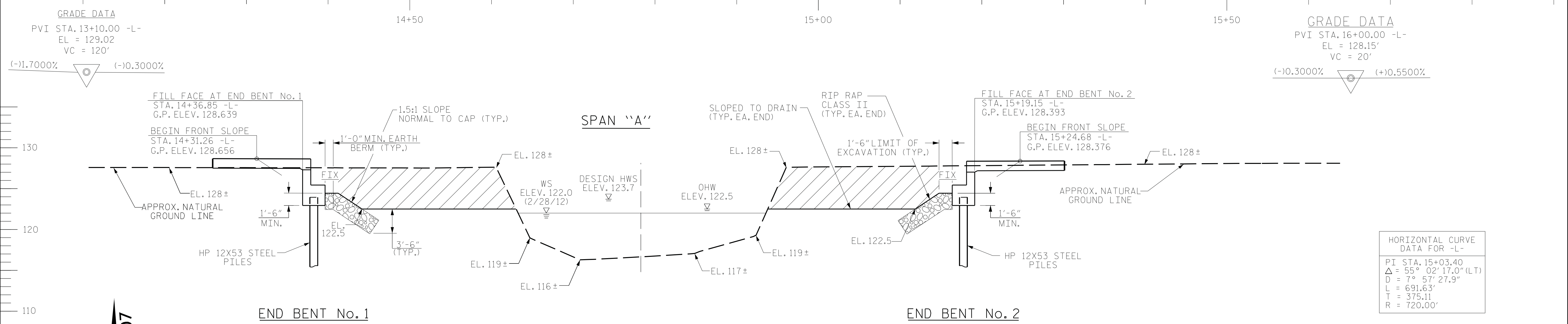
PROJ. REFERENCE NO.	SHEET NO.
17BP.3.R.6	X-4

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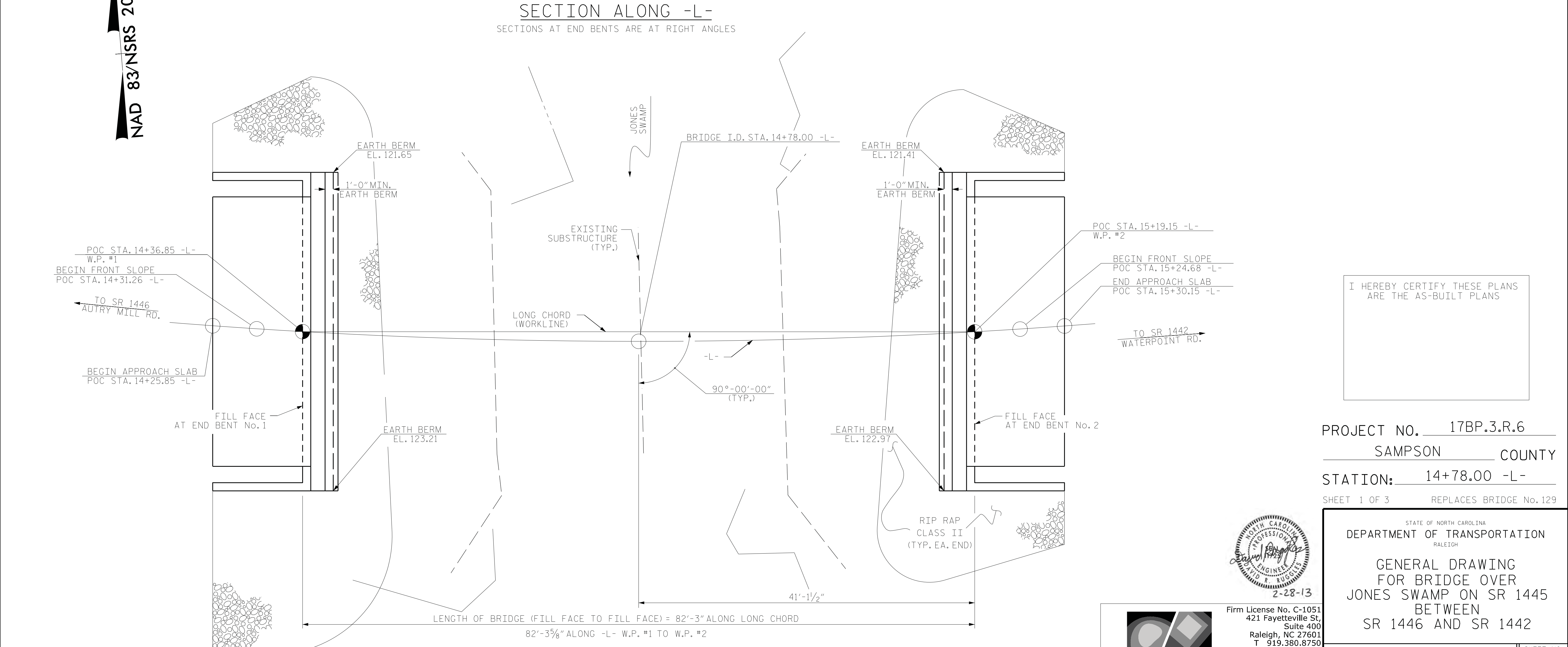


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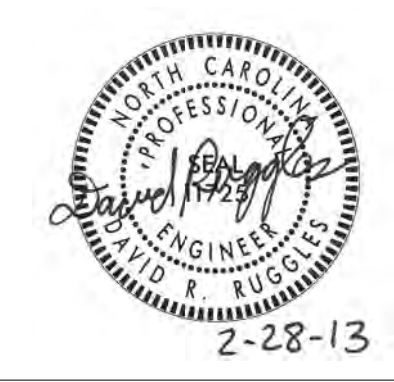


NAD 83/NSRS 2007

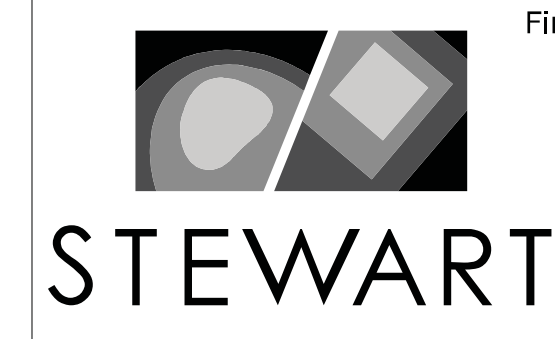


I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 1 OF 3 REPLACES BRIDGE No. 129



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 Raleigh, NC 27601
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 www.stewartinc.com



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE OVER
 JONES SWAMP ON SR 1445
 BETWEEN
 SR 1446 AND SR 1442

DRAWN BY: JMA
 CHECKED BY: PLJ
 DATE: 6/21/12
 DATE: 6/22/12

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			16

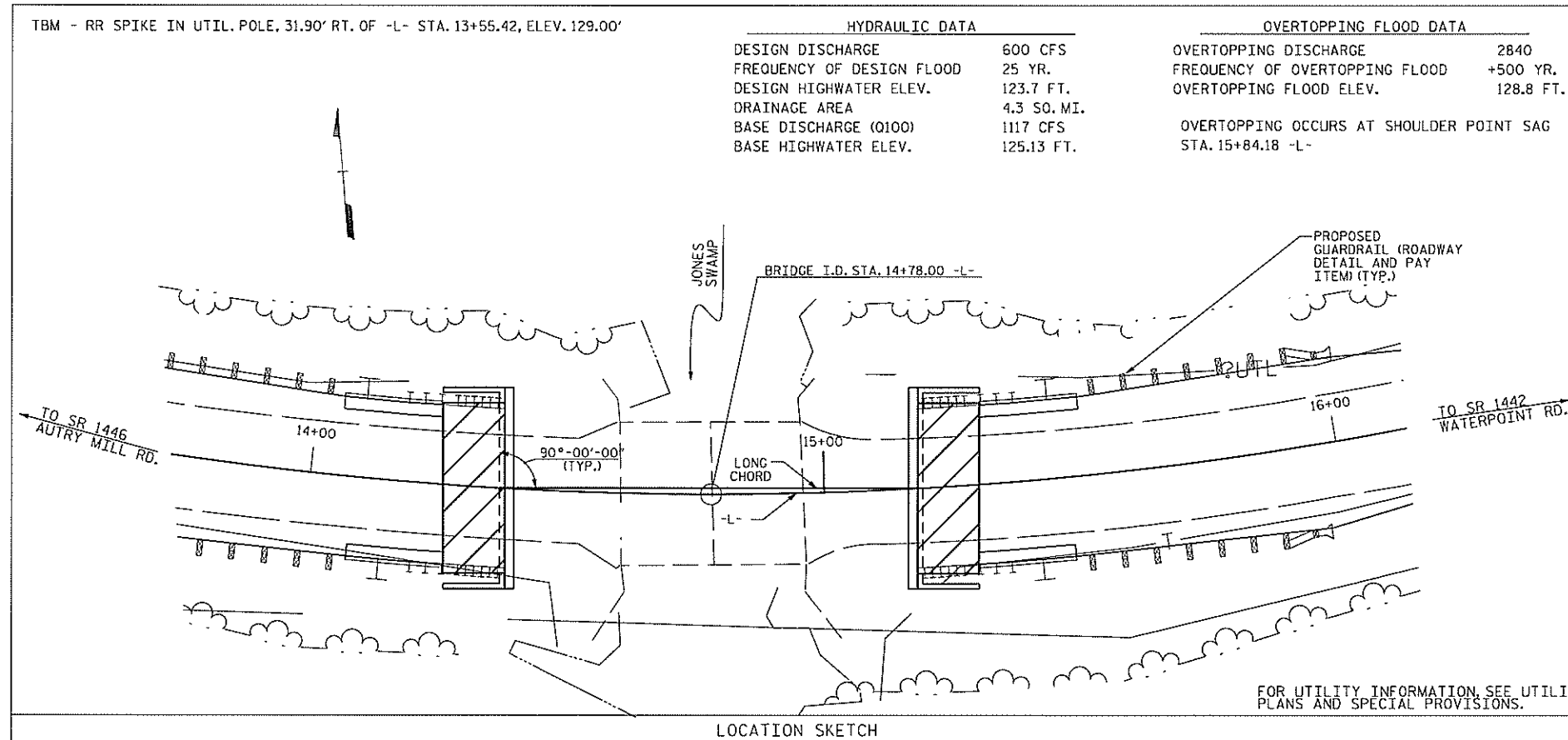
GENERAL NOTES:

1. ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.
2. THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.
3. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", MAY 2001.
4. REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
5. THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 20 FT. EACH SIDE OF CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.
6. FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
7. FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
7. FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
8. FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
9. FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
10. FOR ALL OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET 5N.
11. FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
12. THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
13. ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.

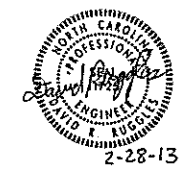
FOUNDATION NOTES:

1. PILES AT END BENT No. 1 AND 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 75 TONS PER PILE.
2. DRIVE PILES AT END BENT No. 1 AND 2 TO A REQUIRED DRIVING RESISTANCE OF 125 TONS PER PILE.
3. TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED AT END BENTS No. 1 OR 2. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.
4. PILE RESTRIKES ARE RECOMMENDED.

	REMOVAL OF EXISTING STRUCTURE AT STATION 14+78.00 -L-	PDA TESTING	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION 14+78.00 -L-	CLASS A CONCRETE	BRIDGE APPROACH SLABS AT STATION 14+78.00 -L-	REINFORCING STEEL	HP 12X53 STEEL PILES		PILE REDRIVES	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	ELASTOMERIC BEARINGS	3'-0" x 2'-9" PRESTRESSED CONCRETE BOX BEAMS	
	LUMP SUM	EACH	LUMP SUM	CY	LUMP SUM	LBS	No.	LF	EACH	LF	TON	LUMP SUM	No.	LF
SUPERSTRUCTURE	LUMP SUM	---	---	---	LUMP SUM	---	---	---	---	160.0	---	LUMP SUM	11	880
END BENT No. 1	---	1	LUMP SUM	17.0	---	2812	7	315	3	---	110	---	---	---
END BENT No. 2	---	---	LUMP SUM	17.0	---	2812	7	315	3	---	90	---	---	---
TOTAL	LUMP SUM	1	LUMP SUM	34.0	LUMP SUM	5624	14	630	6	160.0	200	LUMP SUM	11	880



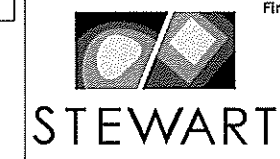
PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 2 OF 3



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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE OVER
 JONES SWAMP ON SR 1445
 BETWEEN
 SR 1446 AND SR 1442

DRAWN BY: PLJ DATE: 2/26/13
 CHECKED BY: DRR DATE: 2/27/13



REVISIONS						SHEET NO. S-2
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{DW}
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING	MINIMUM RATING FACTORS (RF)	TONS = W X RF	STRENGTH I LIMIT STATE										SERVICE III LIMIT STATE					COMMENT NUMBER			
						LIVELOAD FACTORS	MOMENT					SHEAR					LIVELOAD FACTORS	MOMENT						
							DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)		DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(InV)	N/A	1	1.155	--	1.75	0.273	1.72	A	EL	39.25	0.502	1.51	A	EL	7.85	0.80	0.273	1.15	A	EL	39.25		
	HL-93(OPr)	N/A	--	1.958	--	1.35	0.273	2.23	A	EL	39.25	0.502	1.96	A	EL	7.85	N/A	--	--	--	--	--		
	HS-20(InV)	36.000	2	1.533	55.181	1.75	0.273	2.28	A	EL	39.25	0.502	1.91	A	EL	7.85	0.80	0.273	1.53	A	EL	39.25		
	HS-20(OPr)	36.000	--	2.473	89.021	1.35	0.273	2.96	A	EL	39.25	0.502	2.47	A	EL	7.85	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SY	SNSH	13.500	--	3.509	47.376	1.4	0.273	6.53	A	EL	39.25	0.502	5.73	A	EL	7.85	0.80	0.273	3.51	A	EL	39.25	
		SNGARBS2	20.000	--	2.594	51.88	1.4	0.273	4.82	A	EL	39.25	0.502	4.06	A	EL	7.85	0.80	0.273	2.59	A	EL	39.25	
		SNAGRIS2	22.000	--	2.448	53.85	1.4	0.273	4.55	A	EL	39.25	0.502	3.76	A	EL	7.85	0.80	0.273	2.45	A	EL	39.25	
		SNCOTTS3	27.250	--	1.746	47.571	1.4	0.273	3.25	A	EL	39.25	0.502	2.86	A	EL	7.85	0.80	0.273	1.75	A	EL	39.25	
		SNAGGRS4	34.925	--	1.451	50.667	1.4	0.273	2.7	A	EL	39.25	0.502	2.36	A	EL	7.85	0.80	0.273	1.45	A	EL	39.25	
		SNS5A	35.550	--	1.419	50.453	1.4	0.273	2.64	A	EL	39.25	0.502	2.38	A	EL	7.85	0.80	0.273	1.42	A	EL	39.25	
		SNS6A	39.950	--	1.299	51.885	1.4	0.273	2.42	A	EL	39.25	0.502	2.17	A	EL	7.85	0.80	0.273	1.30	A	EL	39.25	
	SNS7B	42.000	--	1.237	51.941	1.4	0.273	2.3	A	EL	39.25	0.502	2.13	A	EL	7.85	0.80	0.273	1.24	A	EL	39.25		
	TTST	TNAGRIT3	33.000	--	1.583	52.231	1.4	0.273	2.94	A	EL	39.25	0.502	2.59	A	EL	7.85	0.80	0.273	1.58	A	EL	39.25	
		TNT4A	33.075	--	1.589	52.55	1.4	0.273	2.96	A	EL	39.25	0.502	2.53	A	EL	7.85	0.80	0.273	1.59	A	EL	39.25	
		TNT6A	41.600	--	1.296	53.907	1.4	0.273	2.41	A	EL	39.25	0.502	2.25	A	EL	7.85	0.80	0.273	1.30	A	EL	39.25	
		TNT7A	42.000	--	1.301	54.625	1.4	0.273	2.42	A	EL	39.25	0.502	2.21	A	EL	7.85	0.80	0.273	1.30	A	EL	39.25	
		TNT7B	42.000	--	1.341	56.333	1.4	0.273	2.49	A	EL	39.25	0.502	2.08	A	EL	7.85	0.80	0.273	1.34	A	EL	39.25	
		TNAGRIT4	43.000	--	1.279	55.001	1.4	0.273	2.38	A	EL	39.25	0.502	2.02	A	EL	7.85	0.80	0.273	1.28	A	EL	39.25	
TNAGT5A		45.000	--	1.207	54.337	1.4	0.273	2.25	A	EL	39.25	0.502	2	A	EL	7.85	0.80	0.273	1.21	A	EL	39.25		
TNACT5B	45.000	3	1.194	53.739	1.4	0.273	2.22	A	EL	39.25	0.502	1.92	A	EL	7.85	0.80	0.273	1.19	A	EL	39.25			

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

- 1.
- 2.
- 3.
- 4.

CONTROLLING LOAD RATING

1 DESIGN LOAD RATING (HL-93)

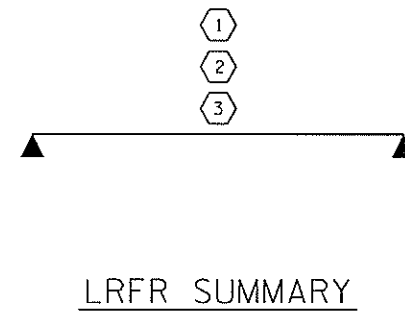
2 DESIGN LOAD RATING (HS-20)

3 LEGAL LOAD RATING **

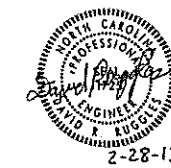
** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER



PROJECT NO. 17BP.3.R.6
SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 3 OF 3



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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 LRFR SUMMARY FOR
 80' BOX BEAM UNIT
 90° SKEW
 (NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			16

ASSEMBLED BY: JMA DATE: 6/21/12
 CHECKED BY: PLJ DATE: 6/22/12
 DRAWN BY: TMG II/II
 CHECKED BY: AAC II/II

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE BOX BEAM SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE BOX BEAMS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF BOX BEAM SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 102B OF THE STANDARD SPECIFICATIONS.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE BOX BEAM UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN 6000 PSI.

ALL REINFORCING STEEL IN VERTICAL CONCRETE BARRIER RAILS SHALL BE EPOXY COATED.

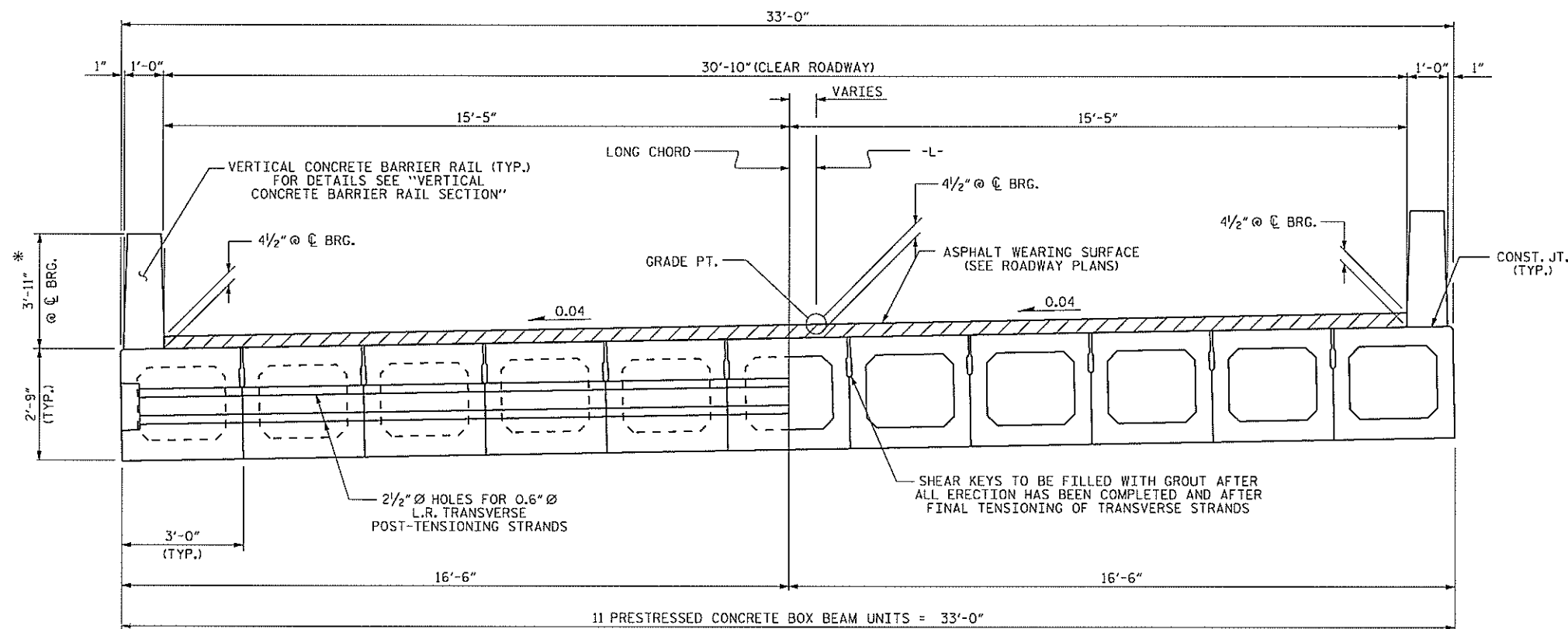
PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE BOX BEAM UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO BOX BEAM UNIT ENDS.

VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A VERTICAL CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

THE LOCATION OF THE VOID DRAINS MAY BE SHIFTED SLIGHTLY WHERE NECESSARY TO CLEAR PRESTRESSING STRANDS OR TRANSVERSE REINFORCING STEEL.

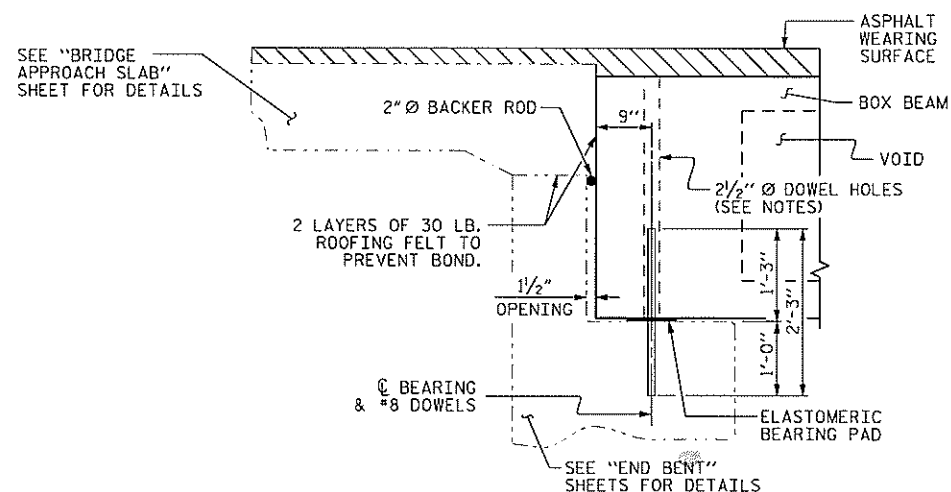
FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.



HALF SECTION AT INTERMEDIATE DIAPHRAGMS
TYPICAL SECTION
 HALF SECTION THROUGH VOIDS

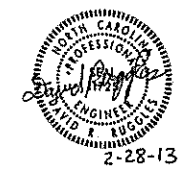
* - THE MAXIMUM BARRIER RAIL HEIGHT AND ASPHALT THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND ASPHALT THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND ASPHALT THICKNESS SEE THE "VERTICAL CONCRETE BARRIER RAIL SECTION" DETAIL.

FIXED END



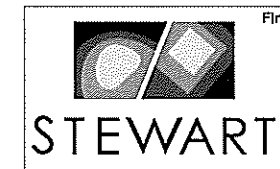
SECTION AT END BENT

PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 1 OF 6



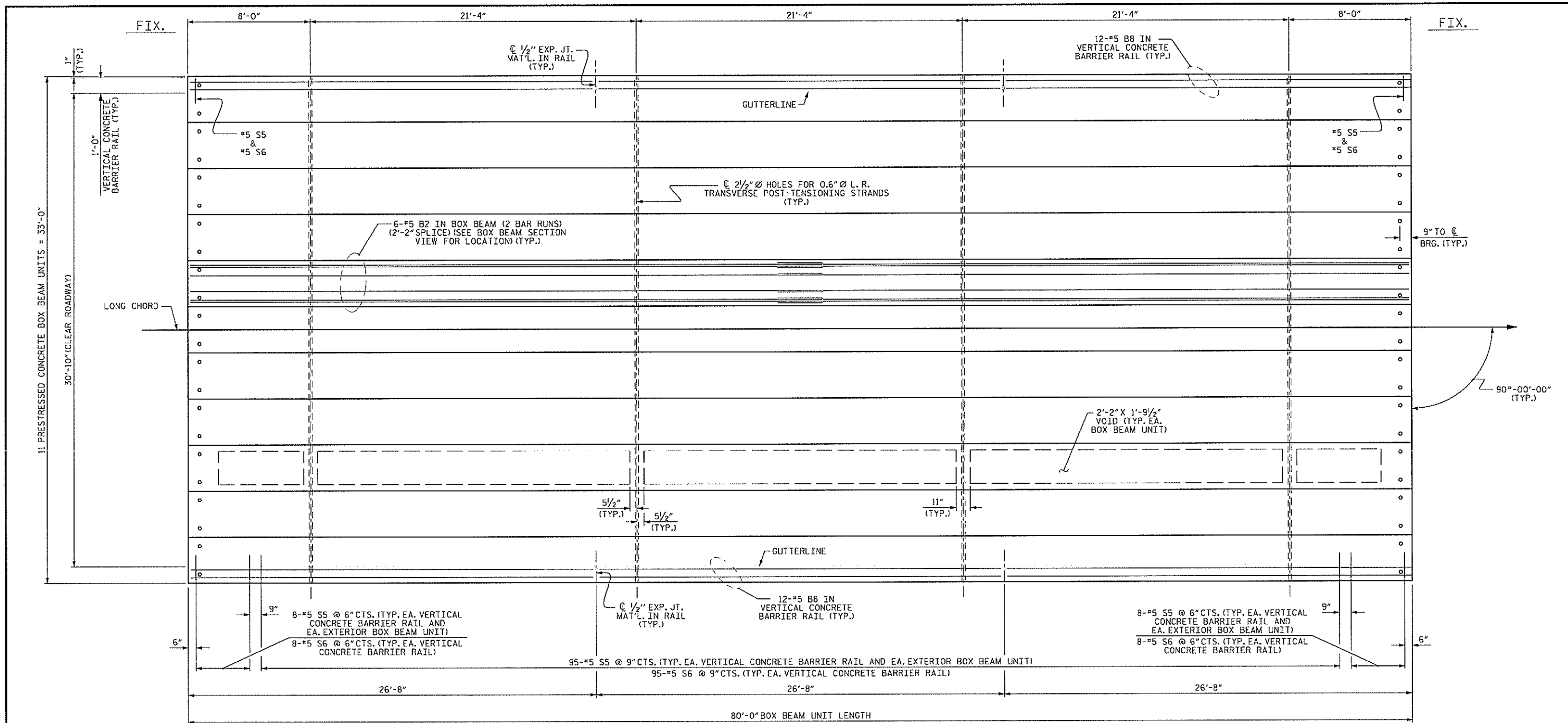
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 3'-0" X 2'-9"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT

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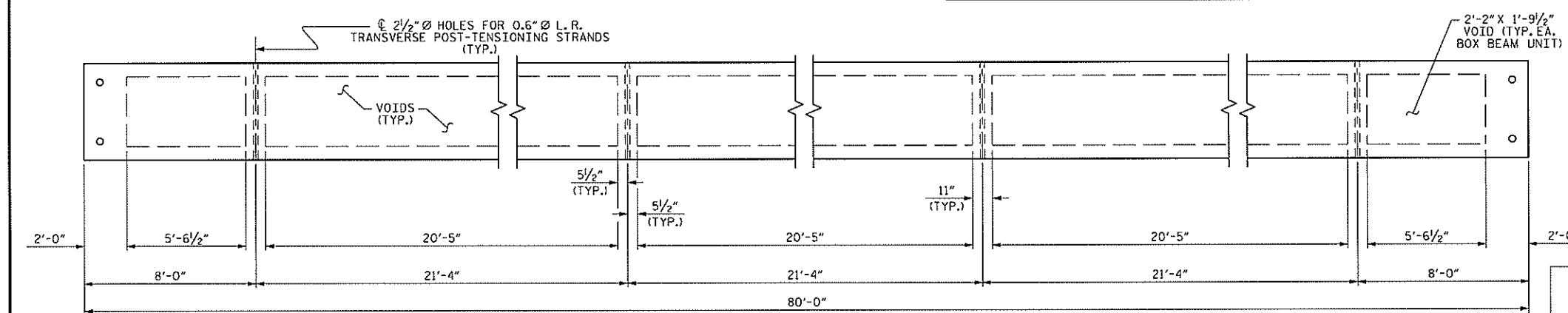


ASSEMBLED BY : JMA DATE : 6/21/12
 CHECKED BY : PLJ DATE : 6/22/12
 DRAWN BY : DGE 8/11
 CHECKED BY : TMG 11/11

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	5-4
1			3			TOTAL SHEETS
2			4			16



PLAN OF UNIT



DIAPHRAGM AND VOID LAYOUT

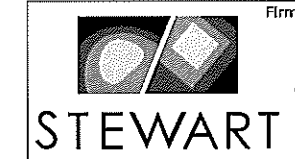
PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 2 OF 6



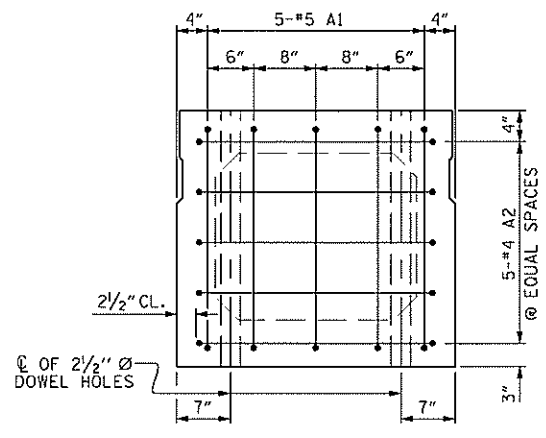
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PLAN OF 80' UNIT
 30'-10" CLEAR ROADWAY
 90° SKEW

ASSEMBLED BY: JMA DATE: 6/21/12
 CHECKED BY: PLJ DATE: 6/22/12
 DRAWN BY: DGE 8/11
 CHECKED BY: TMG 11/11

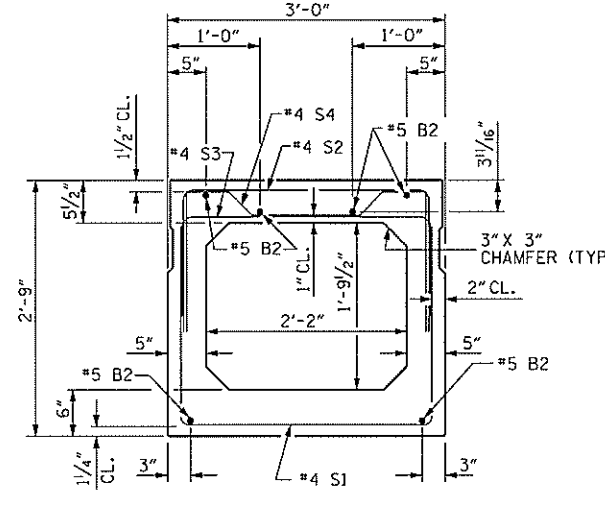


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS 16
2			4			



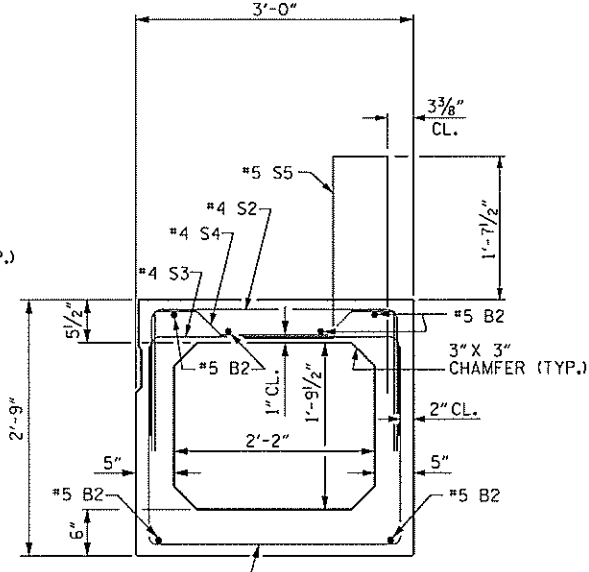
END ELEVATION

SHOWING PLACEMENT OF #5 & #4 "A" BARS AND LOCATION OF DOWEL HOLES. (INTERIOR BOX BEAM SECTION SHOWN-EXTERIOR SECTION SIMILAR EXCEPT SHEAR KEY LOCATION. STRAND LAYOUT NOT SHOWN.)



INTERIOR BOX BEAM SECTION

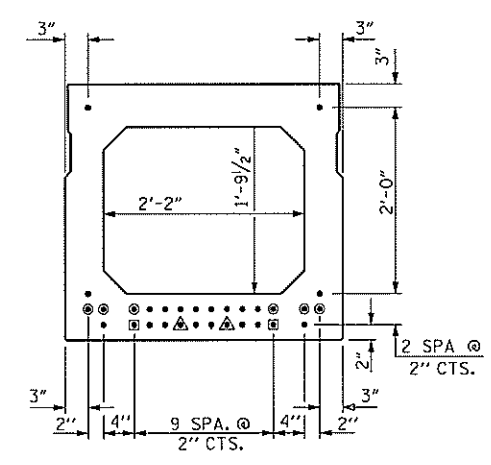
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT

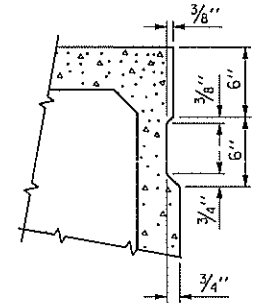


TYPICAL STRAND LOCATION

(24 STRANDS REQUIRED)

DEBONDING LEGEND

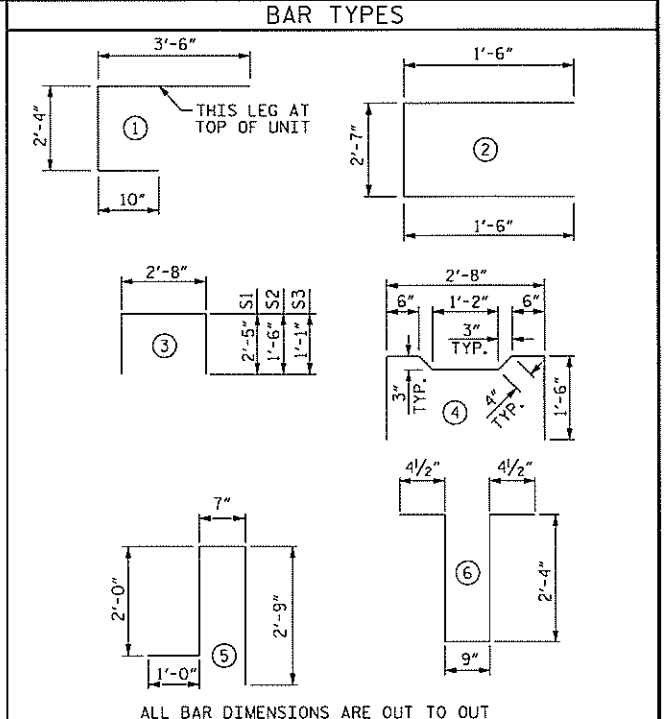
- FULLY BONDED STRANDS
 - ◻ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER
 - ◻ STRANDS DEBONDED FOR 10'-0" FROM END OF GIRDER
 - OPTIONAL FULL LENGTH DEBONDED STRANDS. THESE STRANDS ARE NOT REQUIRED. IF THE FABRICATOR CHOOSES TO INCLUDE THESE STRANDS IN THE BOX BEAM UNIT, THE STRANDS SHALL BE DEBONDED FOR THE FULL LENGTH OF THE UNIT AT NO ADDITIONAL COST.
- BOND SHALL BE BROKEN ON STRANDS AS SHOWN FOR THE SPECIFIED LENGTH FROM EACH END OF THE BOX BEAM. SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.



SHEAR KEY DETAIL

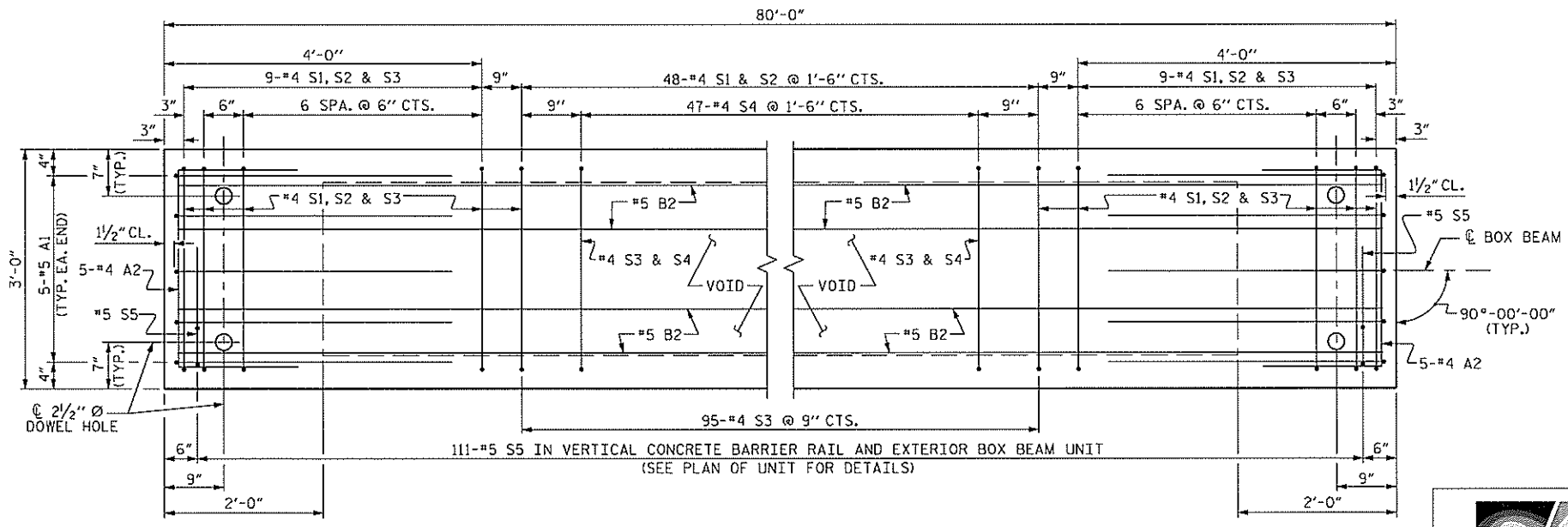
NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR BOX BEAMS.

GRADE 270 STRANDS	
0.6" Ø L.R.	
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE BOX BEAM SECTION							
BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	6'-8"	70	6'-8"	70
A2	34	#4	2	5'-7"	127	5'-7"	127
B2	12	#5	STR	40'-11"	512	40'-11"	512
K1	12	#4	6	6'-2"	49	6'-2"	49
K2	8	#4	STR	2'-7"	14	2'-7"	14
S1	66	#4	3	7'-6"	331	7'-6"	331
S2	66	#4	3	5'-8"	250	5'-8"	250
S3	113	#4	3	4'-10"	365	4'-10"	365
S4	47	#4	4	5'-10"	183	5'-10"	183
*S5	111	#5	5	6'-4"	733	--	--
REINFORCING STEEL				1901	LBS.	1901	LBS.
* EPOXY COATED REINF. STEEL				733	LBS.		
8000 P.S.I. CONCRETE				14.2	CU. YDS.	14.1	CU. YDS.
0.6" Ø L.R. STRANDS				No. 24		No. 24	



PLAN OF BOX BEAM

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. FOR LOCATION OF DIAPHRAGMS, SEE PLAN OF UNIT. FOR REINFORCING STEEL IN DIAPHRAGMS, SEE DIAPHRAGM DETAILS.

PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 3 OF 6

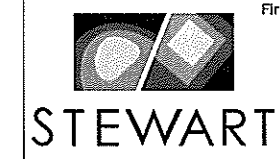


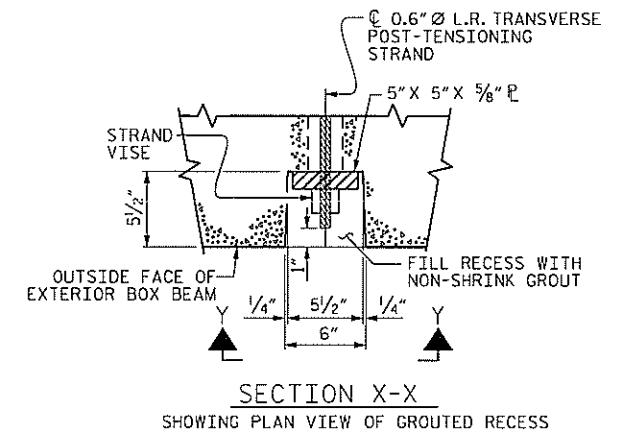
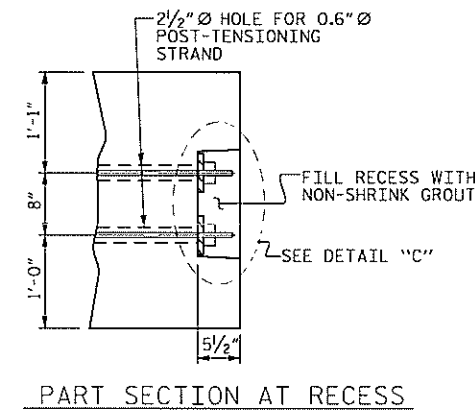
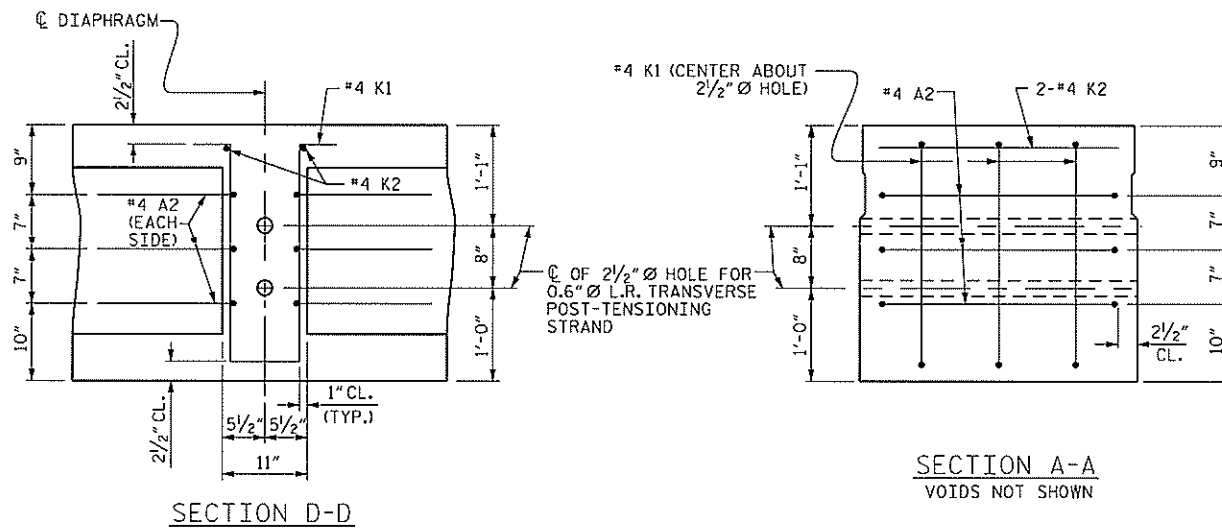
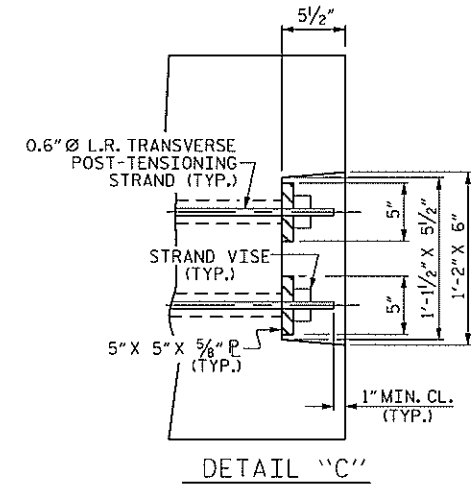
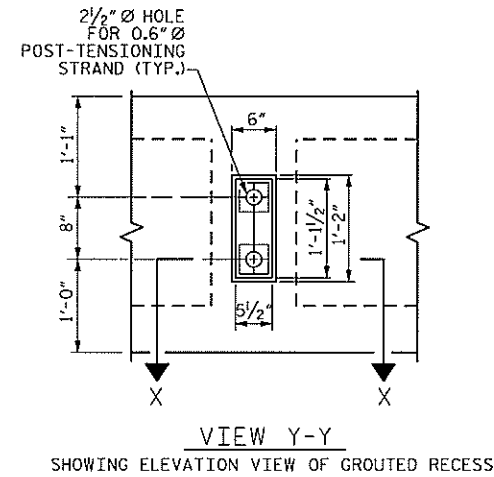
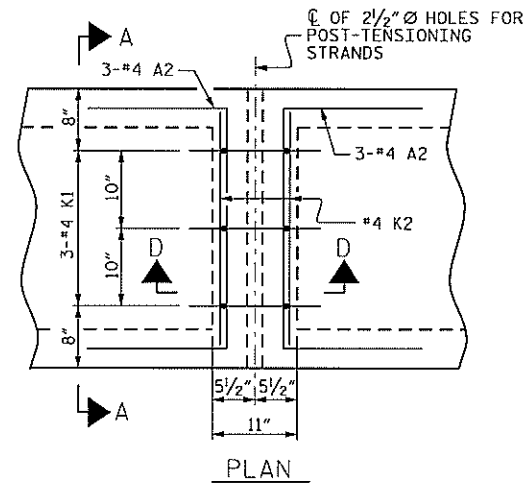
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 3'-0" X 2'-9"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT

REVISIONS						SHEET NO. S-6
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

ASSEMBLED BY : JMA	DATE : 6/21/12
CHECKED BY : PLJ	DATE : 6/22/12
DRAWN BY : DGE 10/11	
CHECKED BY : TMG 11/11	

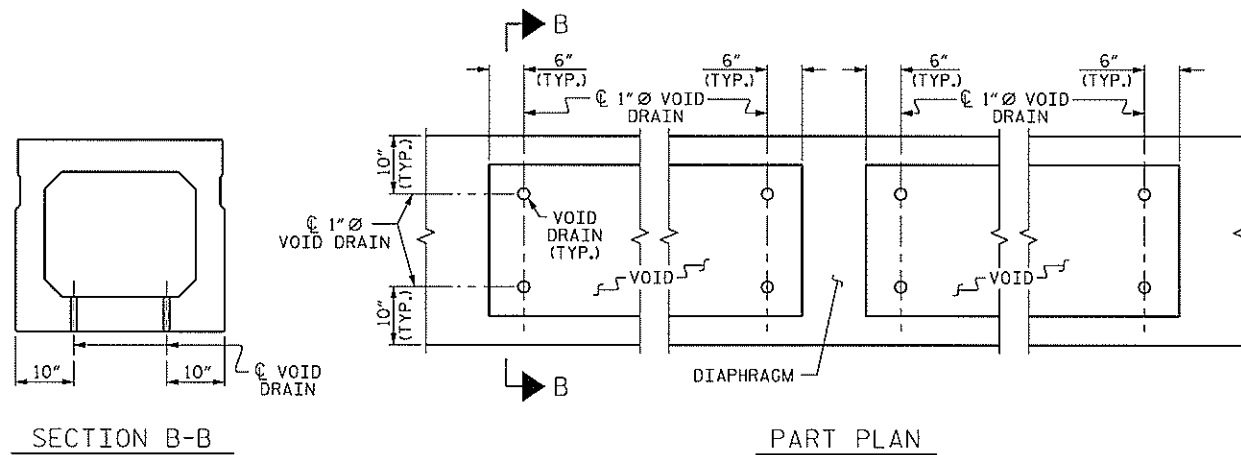




DOUBLE DIAPHRAGM DETAILS

#4 "S" BARS NOT SHOWN. #4 "S" BARS MAY BE SHIFTED SLIGHTLY TO CLEAR 2" Ø HOLE.

GROUTED RECESS DETAIL AT END OF POST-TENSIONED STRANDS OF EXTERIOR BOX BEAM



VOID DRAIN DETAILS

(DIMENSIONS SHOWN ARE TYPICAL FOR EACH VOID)

DEAD LOAD DEFLECTION AND CAMBER	
80' BOX BEAM UNIT (NC)	3'-0" x 2'-9"
CAMBER (SLAB ALONE IN PLACE)	0.6" Ø L.R. STRAND
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD**	3" ↑
FINAL CAMBER	1/2" ↓
	2 1/2" ↑

** INCLUDES FUTURE WEARING SURFACE

PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 4 OF 6



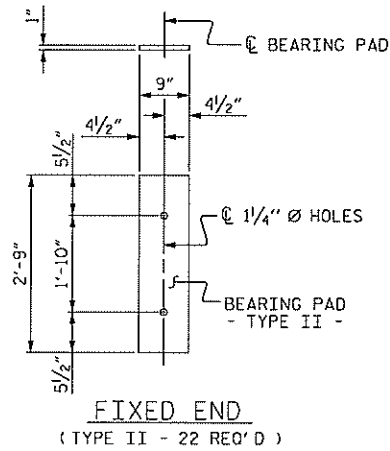
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 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 3'-0" X 2'-9"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS 16
2			4			

ASSEMBLED BY : JMA DATE : 6/21/12
 CHECKED BY : PLJ DATE : 6/22/12
 DRAWN BY : DGE 10/11
 CHECKED BY : TMG 11/11

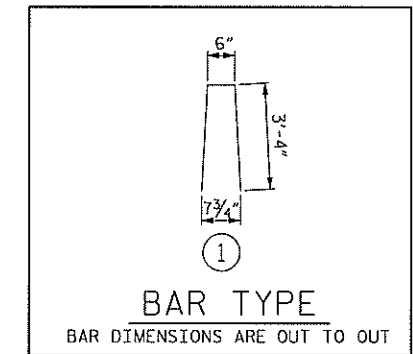


ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

BOX BEAM UNITS REQUIRED

	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR B.B.	2	80'-0"	160'-0"
INTERIOR B.B.	9	80'-0"	720'-0"
TOTAL	11		880'-0"

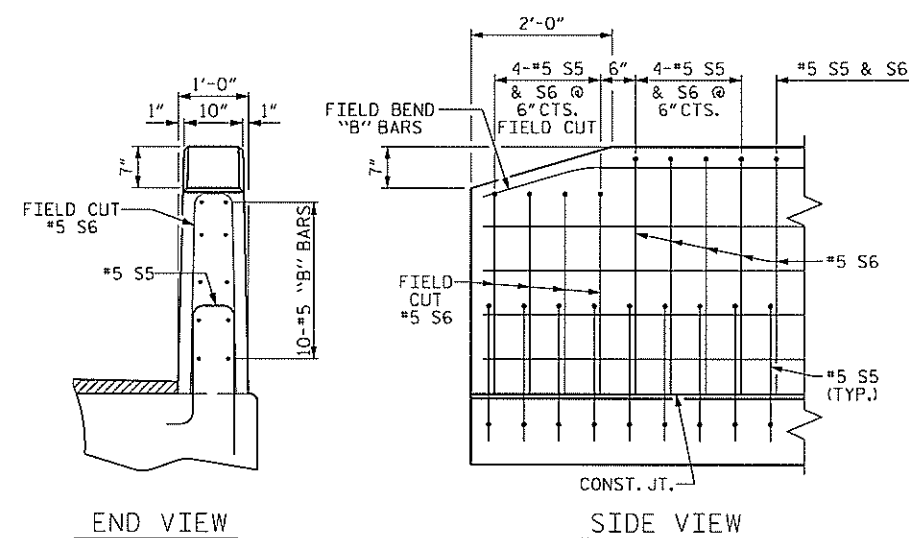
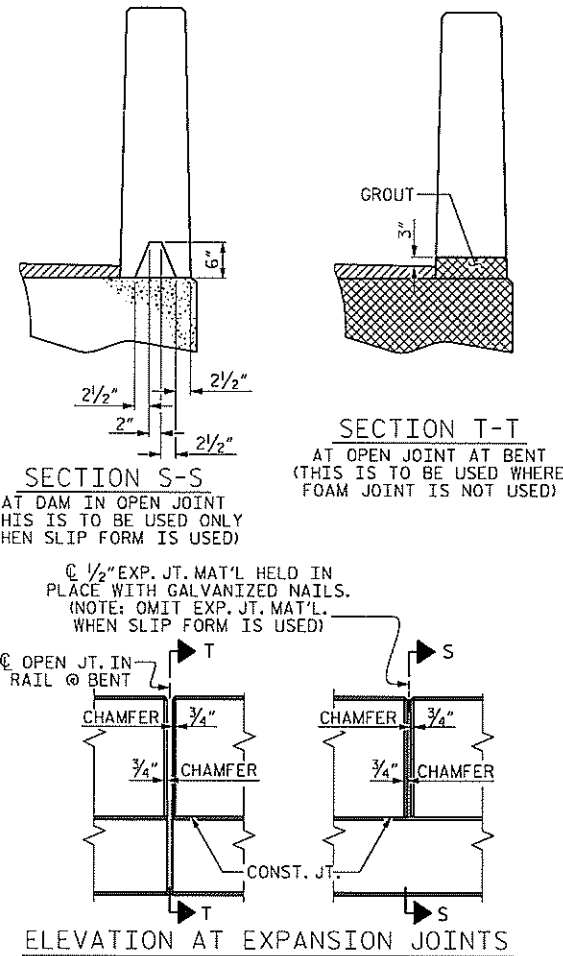
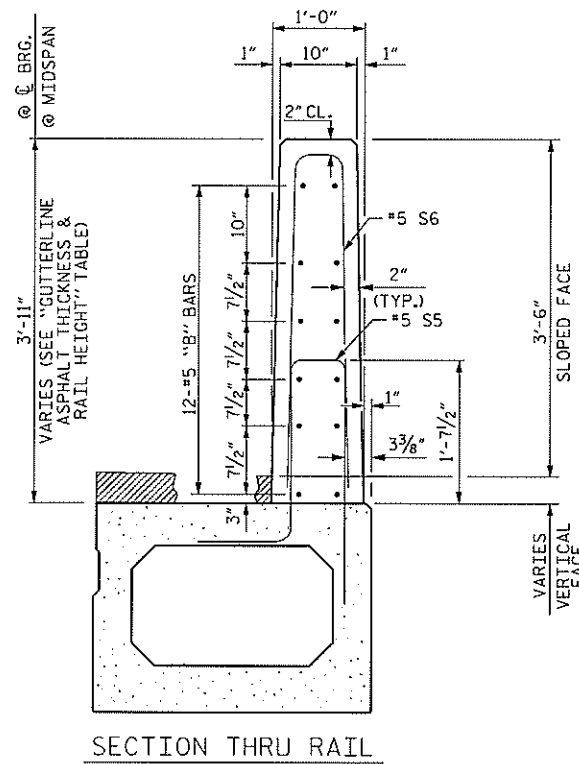


BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL

BAR	BARS PER PAIR OF EXTERIOR UNITS	SIZE	TYPE	LENGTH	WEIGHT
80' UNIT					
* B8	72	#5	STR	26'-3"	1971
* S6	222	#5	1	7'-2"	1659
* EPOXY COATED REINFORCING STEEL				LBS.	3630
CLASS AA CONCRETE				CU.YDS.	21.5
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.	160.0

GUTTERLINE ASPHALT THICKNESS & RAIL HEIGHT

	ASPHALT OVERLAY THICKNESS @ MID-SPAN	RAIL HEIGHT @ MID-SPAN
80' UNITS	2"	3'-8 1/2"



VERTICAL CONCRETE BARRIER RAIL DETAILS

PROJECT NO. 17BP.3.R.6
SAMPSON COUNTY
STATION: 14+78.00 -L-
SHEET 5 OF 6



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
3'-0" X 2'-9"
PRESTRESSED CONCRETE
BOX BEAM UNIT

ASSEMBLED BY: PLJ DATE: 11/13/12
CHECKED BY: DRR DATE: 11/13/12
DRAWN BY: DGE 10/11
CHECKED BY: TMG 11/11

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REVISIONS						SHEET NO. S-8
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M11.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

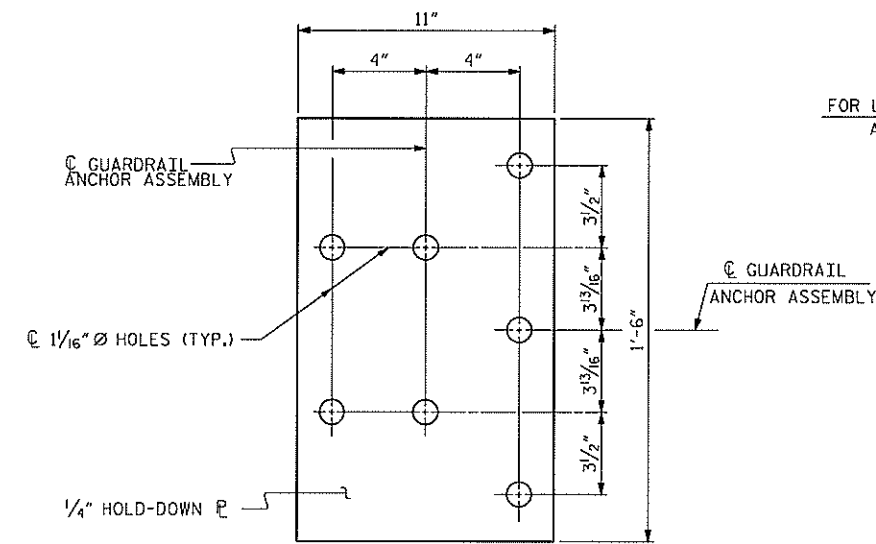
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

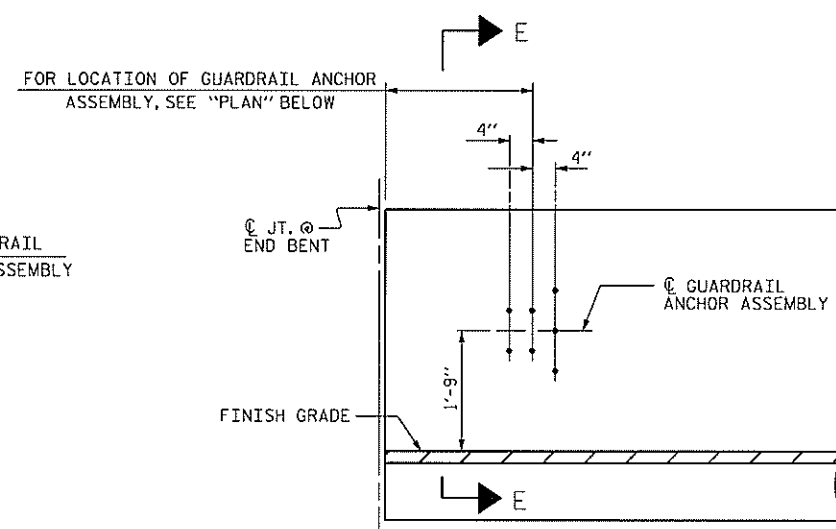
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

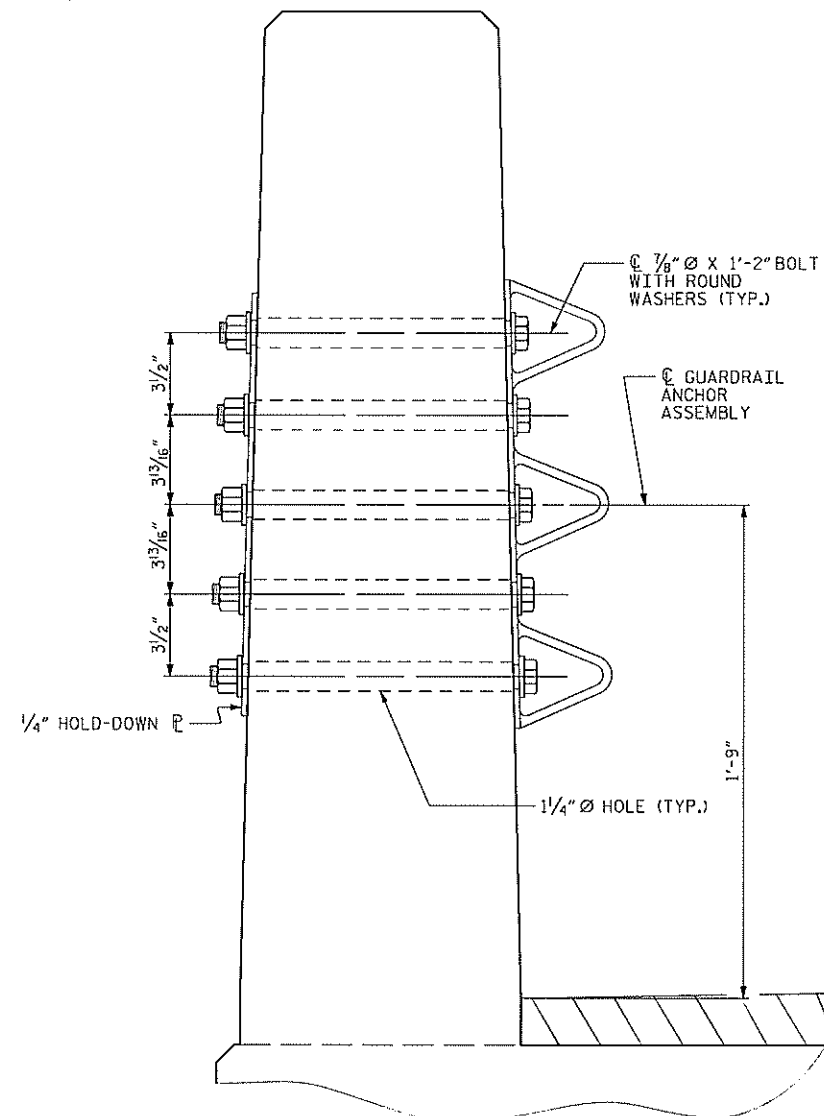
THE 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



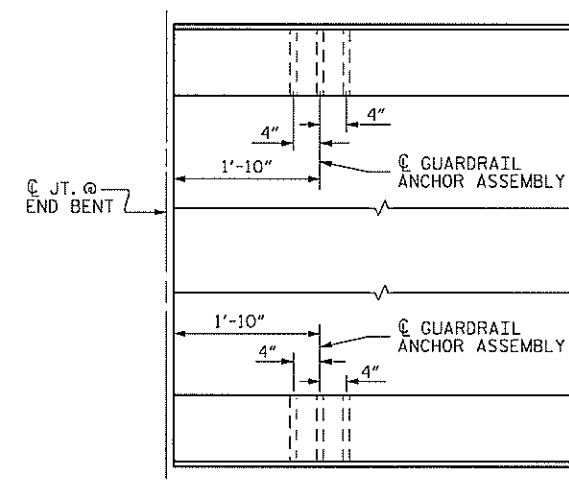
PLAN



ELEVATION



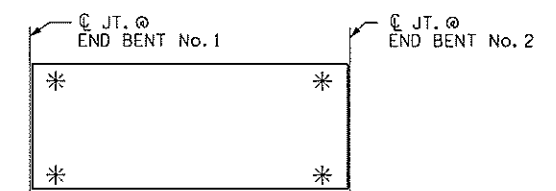
SECTION E-E
GUARDRAIL ANCHOR ASSEMBLY DETAILS



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR.



SKETCH SHOWING POINTS OF ATTACHMENT

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. 17BP.3.R.6

SAMPSON COUNTY

STATION: 14+78.00 -L-

SHEET 6 OF 6



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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
GUARDRAIL ANCHORAGE
FOR VERTICAL CONCRETE
BARRIER RAIL

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	5-9	
1			3			TOTAL SHEETS	
2			4			16	



(SHT 1) STD. NO. GRA3

ASSEMBLED BY : JMA	DATE : 6/21/12
CHECKED BY : PLJ	DATE : 6/22/12
DRAWN BY : MAA 5/10	ADDED 5/6/10
CHECKED BY : GM 5/10	REV. 10/1/11
	REV. 12/5/11
	MAA/GM
	MAA/GM

NOTES

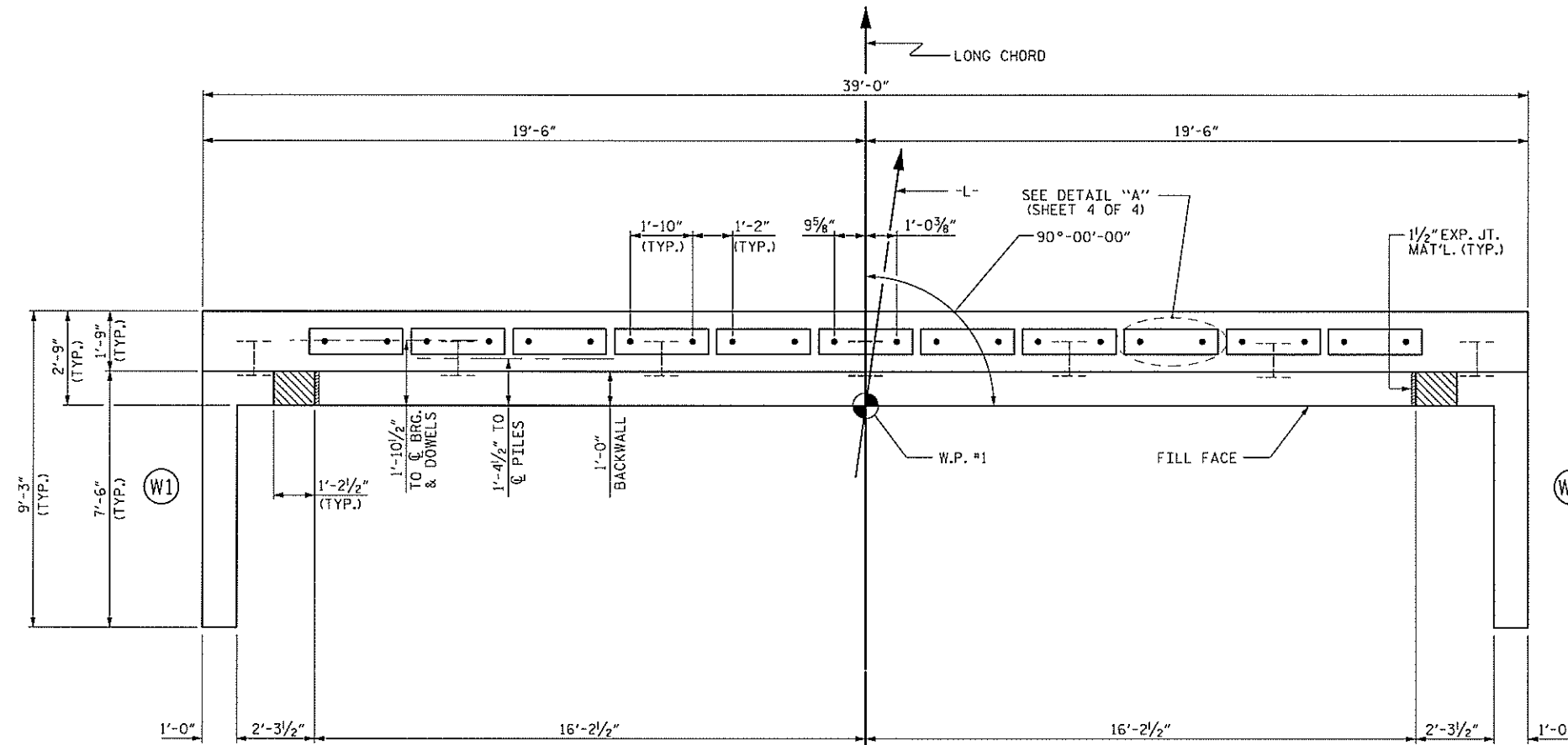
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE VERTICAL CONCRETE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

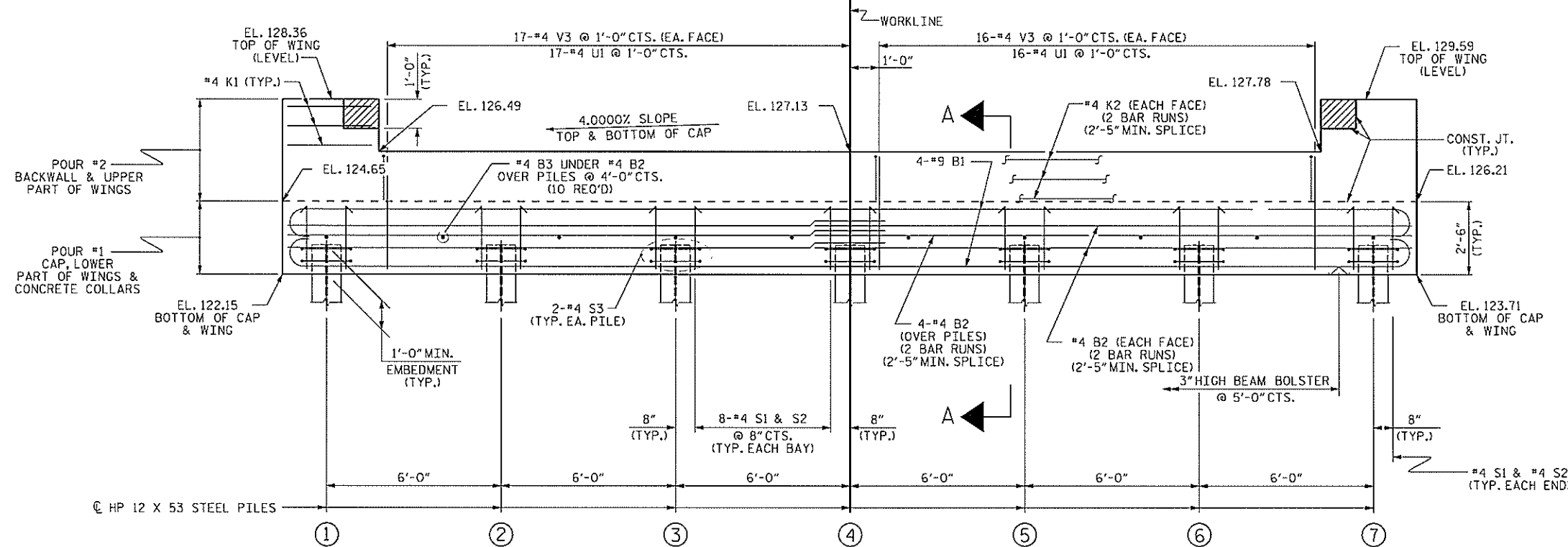
FOR PILE SPlice DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.

INSTALL THE 4" DIA. DRAIN PIPE THROUGH THE WING WALL AS REQUIRED FOR REINFORCED BRIDGE APPROACH FILLS, SEE ROADWAY PLANS. REINFORCING STEEL IN THE WING WALL MAY BE SHIFTED AS NECESSARY TO CLEAR THE DRAIN PIPE.



PLAN

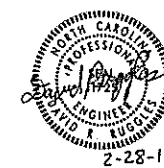


ELEVATION

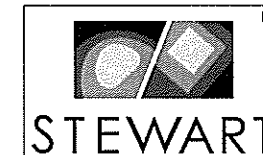
WINGS NOT SHOWN FOR CLARITY.
FOR SECTION A-A, SEE SHEET 4 OF 4.
CONCRETE COLLARS FOR STEEL PILES NOT SHOWN IN PLAN AND ELEVATION VIEWS FOR CLARITY.
SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL", SHEET 4 OF 4.

TOP OF PILE ELEVATIONS	
①	123.23
②	123.47
③	123.71
④	123.95
⑤	124.19
⑥	124.43
⑦	124.67

PROJECT NO. 17BP.3.R.6
SAMPSON COUNTY
STATION: 14+78.00 -L-
SHEET 1 OF 4



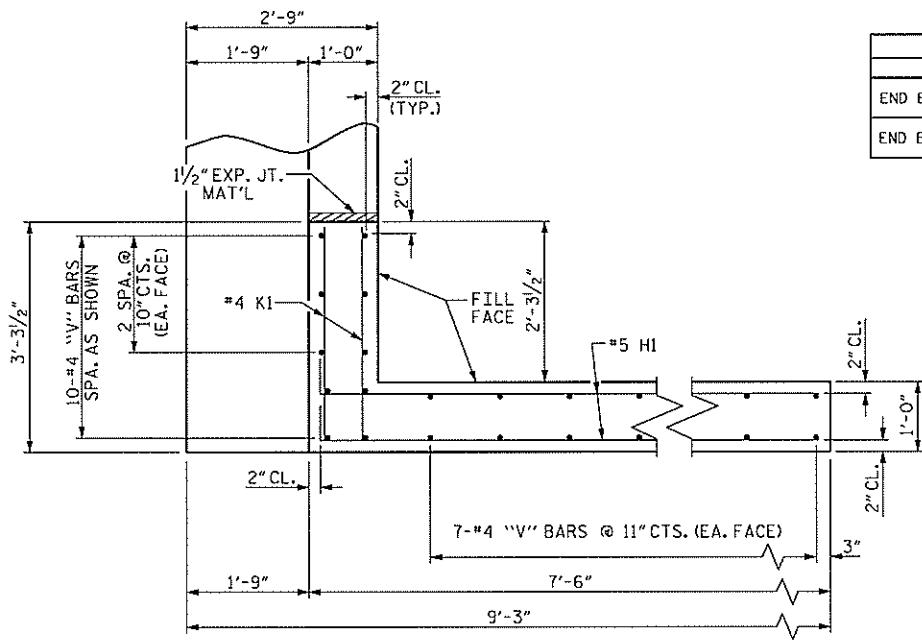
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE END BENT No. 1					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

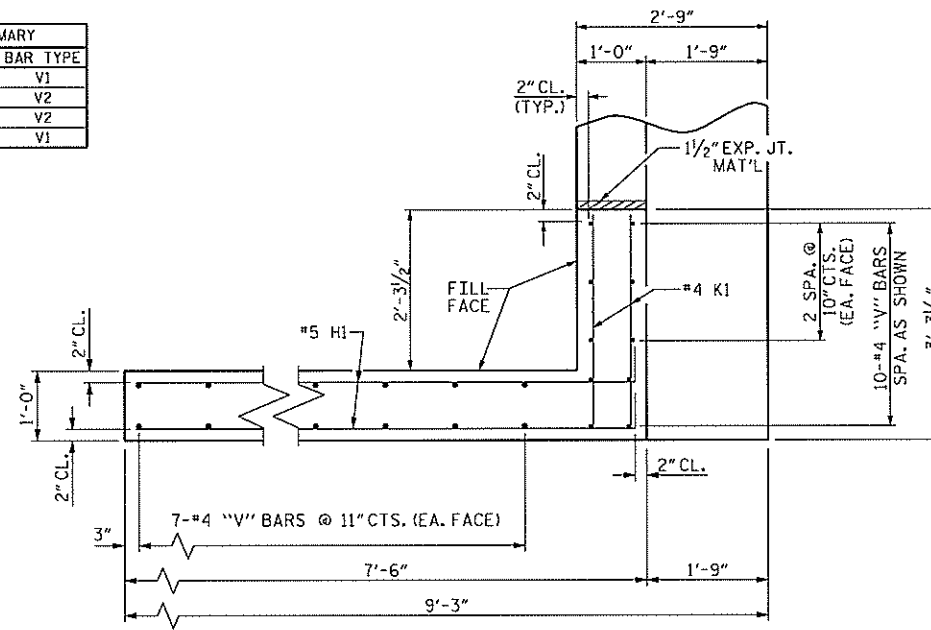
SHEET NO. S-10
TOTAL SHEETS 16

ASSEMBLED BY : JMA
CHECKED BY : PLJ
DATE : 6/21/12
DATE : 6/22/12

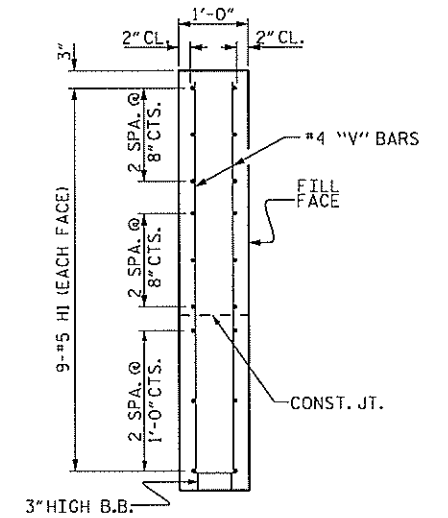


PLAN OF WING (W1)

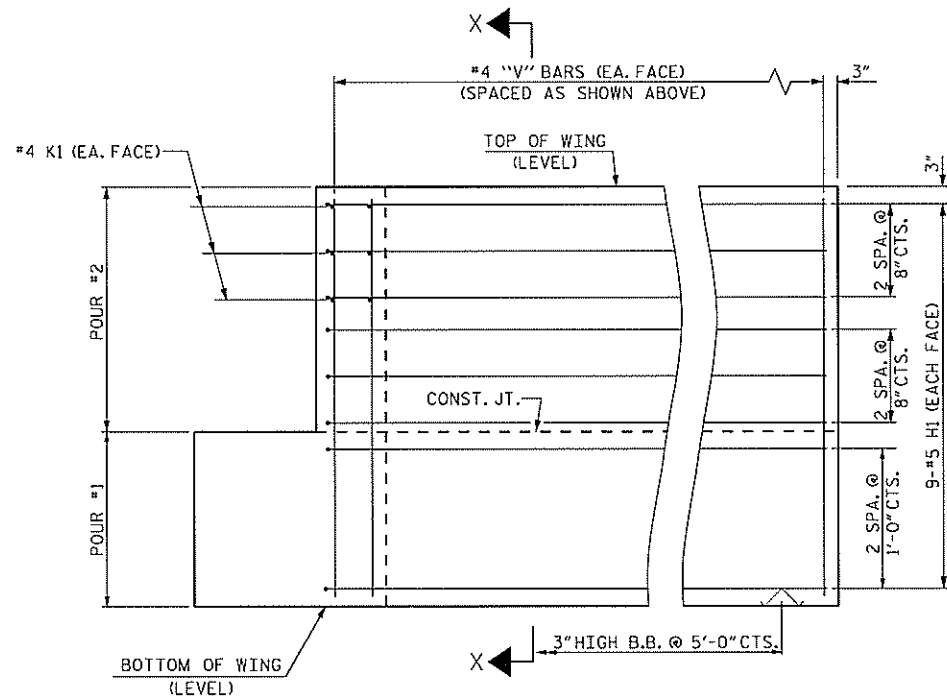
"V" BAR SUMMARY		
	WING BAR TYPE	
END BENT 1	W1	V1
	W2	V2
END BENT 2	W1	V2
	W2	V1



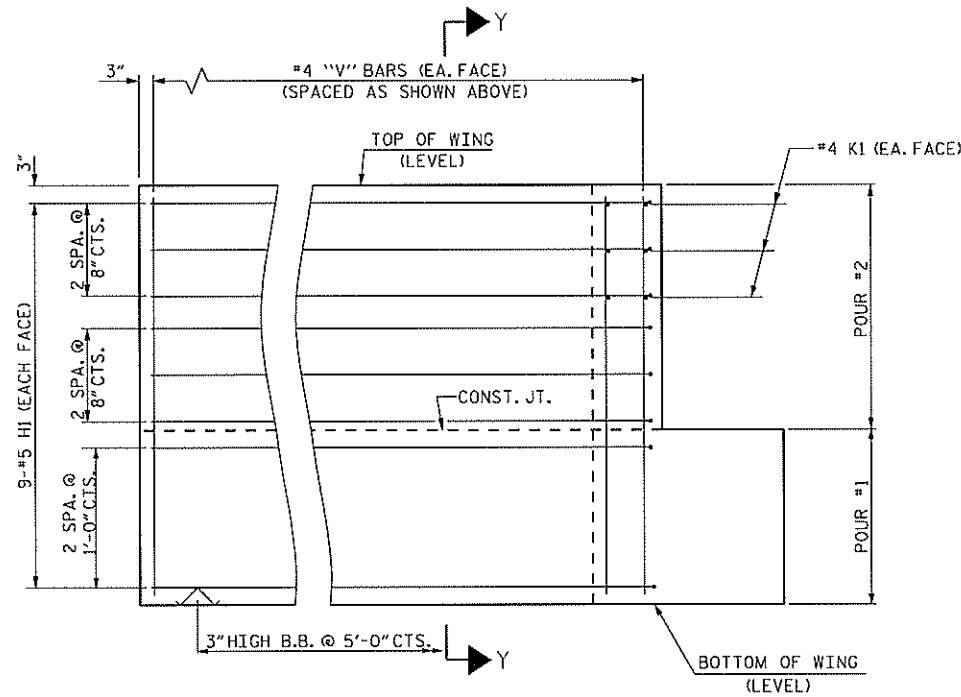
PLAN OF WING (W2)



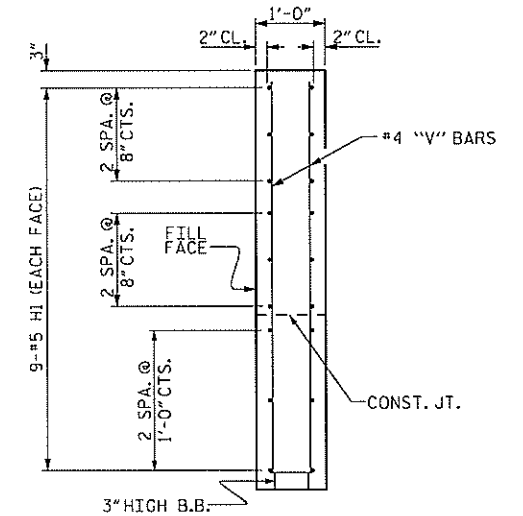
SECTION X-X



ELEVATION OF WING (W1)



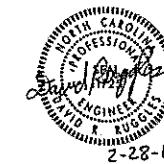
ELEVATION OF WING (W2)



SECTION Y-Y

WING DETAILS

PROJECT NO. 17BP.3.R.6
 SAMPSON COUNTY
 STATION: 14+78.00 -L-
 SHEET 3 OF 4

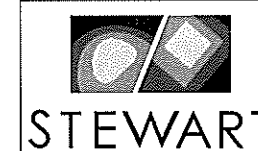


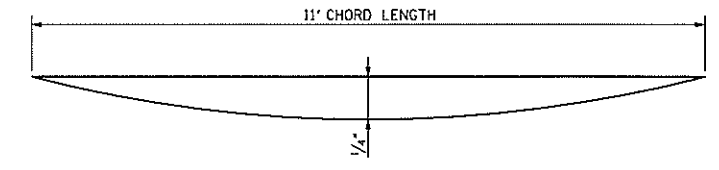
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STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 END BENT
 WING DETAILS

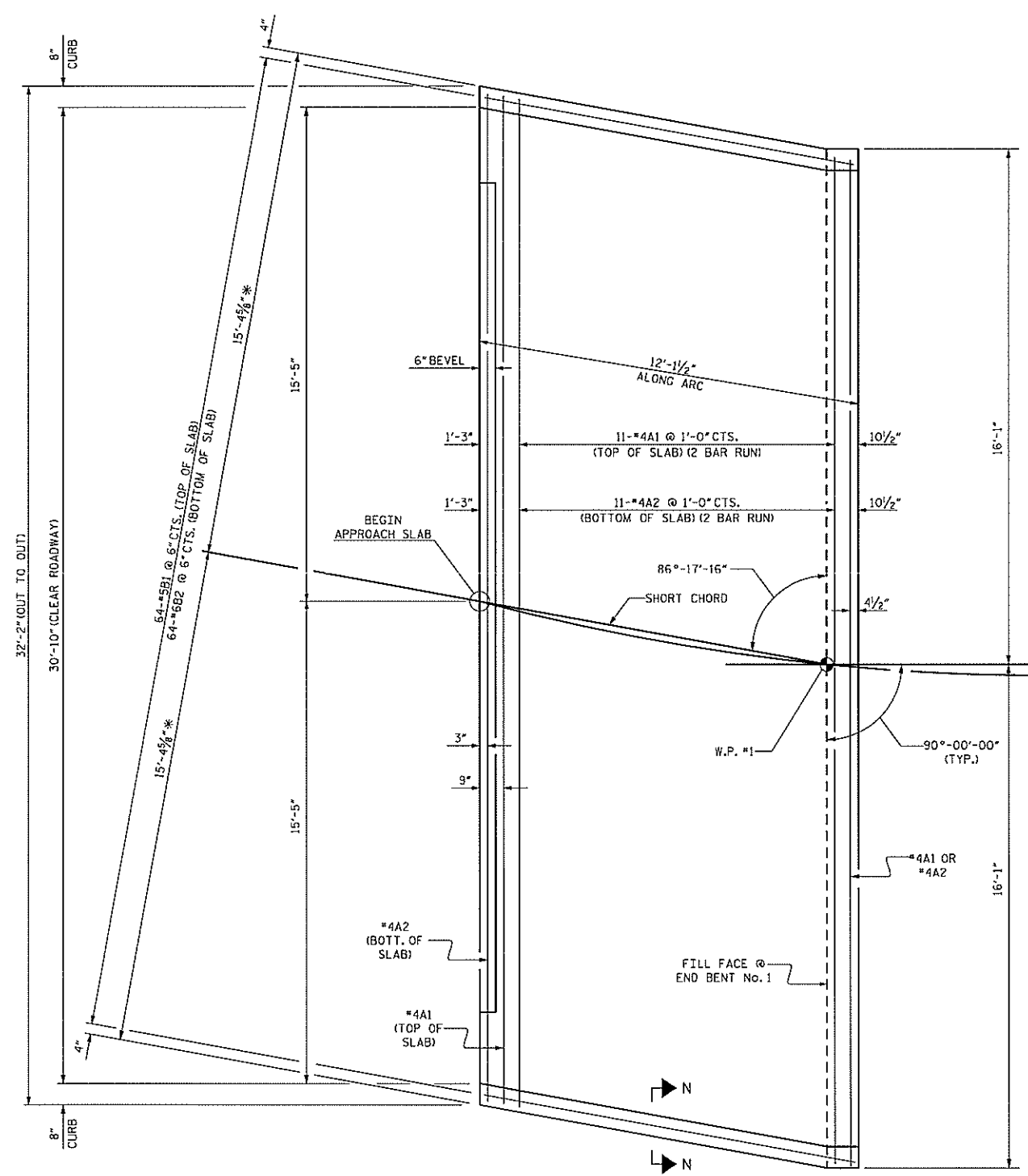
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12	
1			3			TOTAL SHEETS 16	
2			4				

ASSEMBLED BY: JMA
 CHECKED BY: PLJ
 DATE: 6/21/12
 DATE: 6/22/12

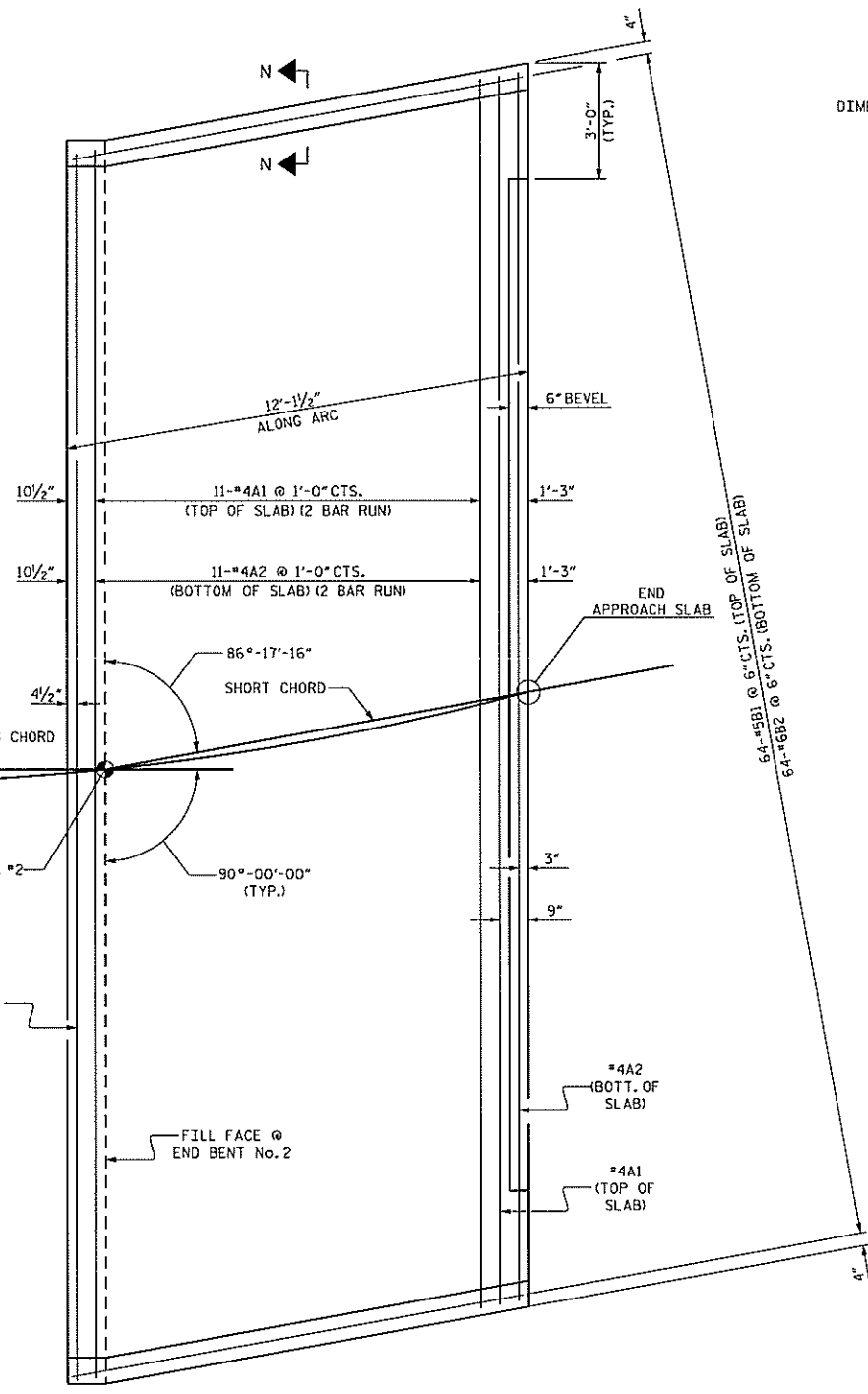




ARC OFFSETS
DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS



PLAN @ END BENT No. 1



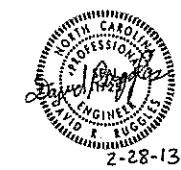
PLAN @ END BENT No. 2

PLAN OF APPROACH SLABS

BEGIN AND END APPROACH SLABS ARE PARALLEL TO FILL FACE.
EDGES OF APPROACH SLAB ARE PARALLEL TO -L- TANGENT.

* MEASURED RADIALLY

PROJECT NO. 17BP.3.R.6
SAMPSON COUNTY
STATION: 14+78.00 -L-
SHEET 1 OF 2

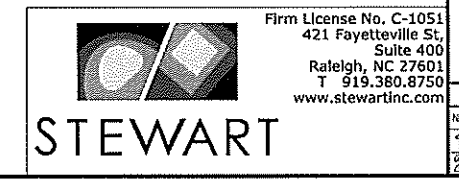


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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
BRIDGE APPROACH SLAB FOR PRESTRESSED CONCRETE BOX BEAM UNIT
90° SKEW

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-14	
1			3			TOTAL SHEETS 16	
2			4				

DRAWN BY: PLJ
CHECKED BY: DRR
DATE: 2/26/13
DATE: 2/27/13

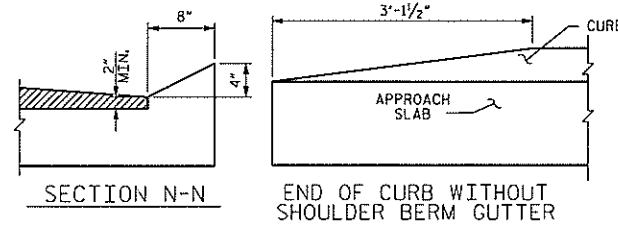


NOTES

FOR REINFORCED BRIDGE APPROACH FILL INCLUDING GEOTEXTILE, IMPERMEABLE GEOMEMBRANE, 4" Ø DRAINAGE PIPE, *78M STONE, AND SELECT MATERIAL, SEE ROADWAY PLANS.

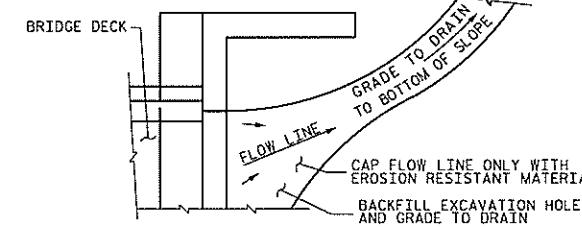
AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED. SEE ROADWAY PLANS.

APPROACH SLAB GROOVING IS NOT REQUIRED.



CURB DETAILS

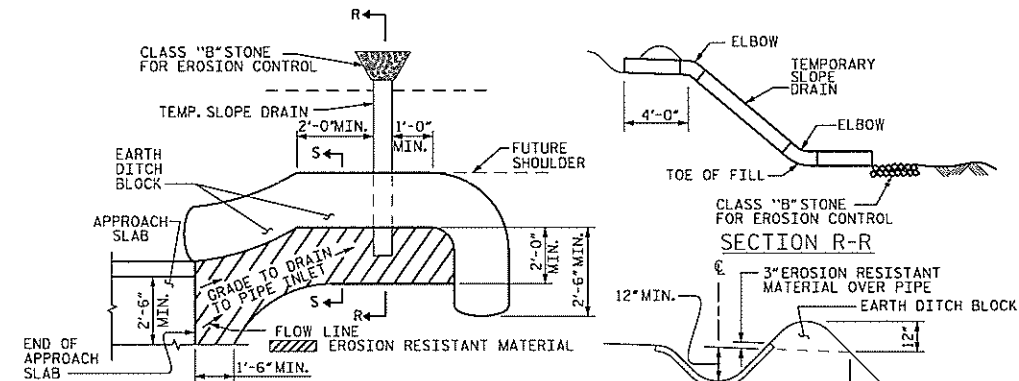
SPLICE LENGTHS		
BAR SIZE	EPOXY COATED	UNCOATED
#4	2'-0"	1'-9"
#5	2'-6"	2'-2"
#6	3'-10"	2'-7"



NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

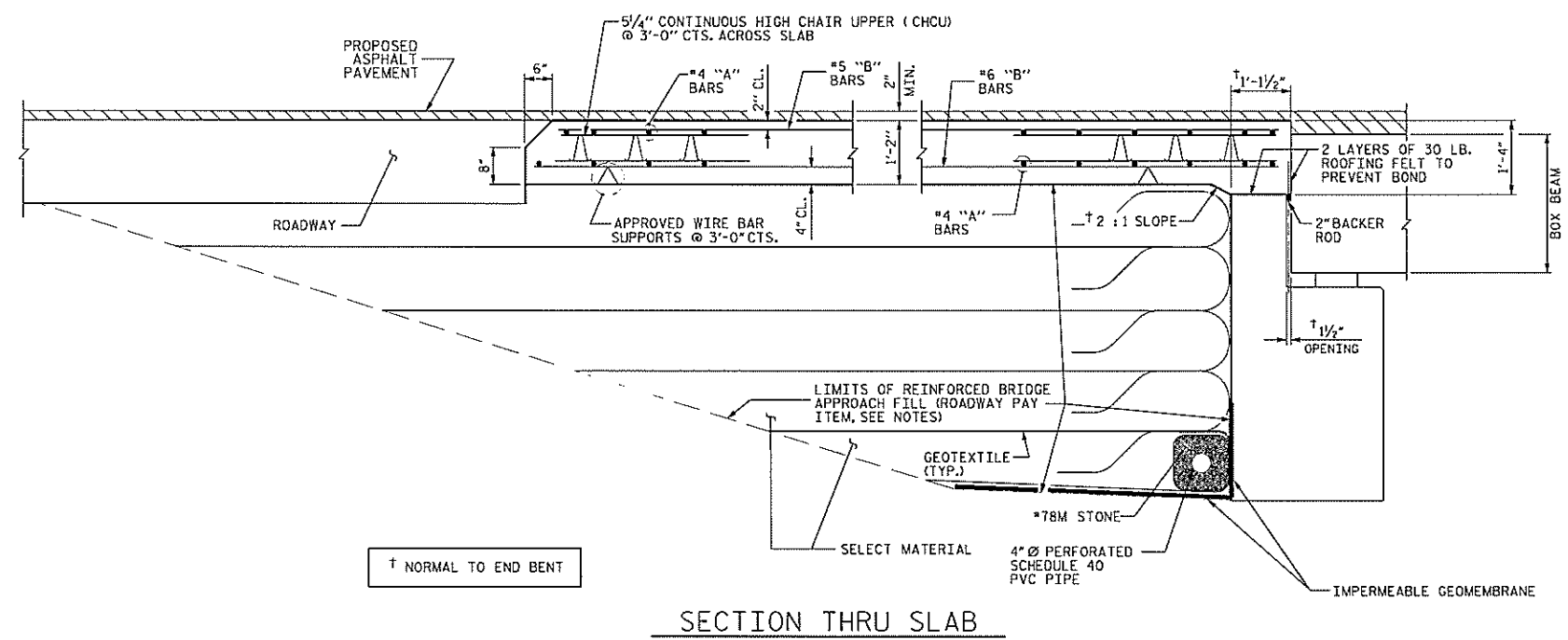
TEMPORARY DRAINAGE DETAIL

BILL OF MATERIAL					
APPROACH SLAB AT EB #1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	26	#4	STR	16'-11"	294
A2	26	#4	STR	16'-9"	291
*B1	64	#5	STR	11'-2"	745
B2	64	#6	STR	11'-8"	1121
REINFORCING STEEL				LBS.	1412
*EPOXY COATED REINFORCING STEEL				LBS.	1039
CLASS AA CONCRETE				C.Y.	17.2
APPROACH SLAB AT EB #2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	26	#4	STR	16'-11"	294
A2	26	#4	STR	16'-9"	291
*B1	64	#5	STR	11'-2"	745
B2	64	#6	STR	11'-8"	1121
REINFORCING STEEL				LBS.	1412
*EPOXY COATED REINFORCING STEEL				LBS.	1039
CLASS AA CONCRETE				C.Y.	17.2



NOTE: IMMEDIATELY AFTER THE CONSTRUCTION OF THE APPROACH SLAB, THE CONTRACTOR SHALL PROVIDE TEMPORARY BERM AND SLOPE DRAIN. CONTRACTOR SHALL GRADE TO PIPE INLET AND PROVIDE EROSION RESISTANT MATERIAL AS SHOWN. THE EROSION RESISTANT MATERIAL SHALL BE EITHER 1) ASPHALT PLANT MIX, TYPE 1 OR TYPE 2, MIN. 2" DEPTH, 2) EROSION CONTROL MAT, OR 3) CONCRETE, AS DIRECTED BY THE ENGINEER. THE SLOPE DRAIN SHALL CONSIST OF A NON-PERFORATED TEMPORARY DRAINAGE PIPE, 12 INCHES IN DIAMETER.

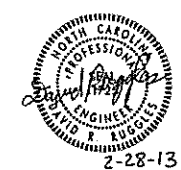
TEMPORARY BERM AND SLOPE DRAIN DETAILS
(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



SECTION THRU SLAB

ASSEMBLED BY : PLJ	DATE : 2/26/13
CHECKED BY : DRR	DATE : 2/27/13
DRAWN BY : MAA 11/11	
CHECKED BY : AAC 11/11	

PROJECT NO. 17BP.3.R.6
SAMPSON COUNTY
STATION: 14+78.00 -L-
SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
BRIDGE APPROACH SLAB
FOR PRESTRESSED CONCRETE
BOX BEAM UNIT
90° SKEW

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STEWART

REVISIONS						SHEET NO. S-15
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	--	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT.
		(MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

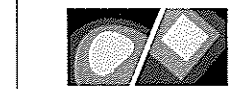
SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

PROJECT NO. 17BP.3.R.6
SAMPSON COUNTY
STATION: 14+78.00 -L-



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T 919.380.8750
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STEWART

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD NOTES

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.	S-16
TOTAL SHEETS	16

ASSEMBLED BY :	JMA	DATE :	6/21/12
CHECKED BY :	PLJ	DATE :	6/22/12
DRAWN BY :	SHS/JAA 5-09	REV. 12-11	JAA/AAC
CHECKED BY :	BCH 5-09		

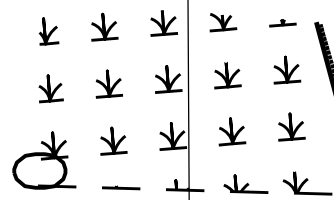
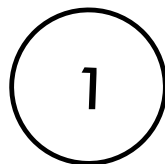
INCOMPLETE PLANS
DO NOT USE FOR ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



SHELBY T. & SAMUEL H. JACKSON / CONNIE S. & TERRY F. GAUSE
DB 1265 PG 320
PIN 02100380002

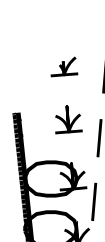
MACK D. & JANICE W. TEW, VANESSA LYNN TEW, AND CARLA T. MARTIN
DB 1265 PG 318
PIN 02016696701

13+00



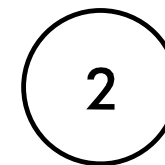
14+00

JONES SWAMP



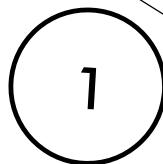
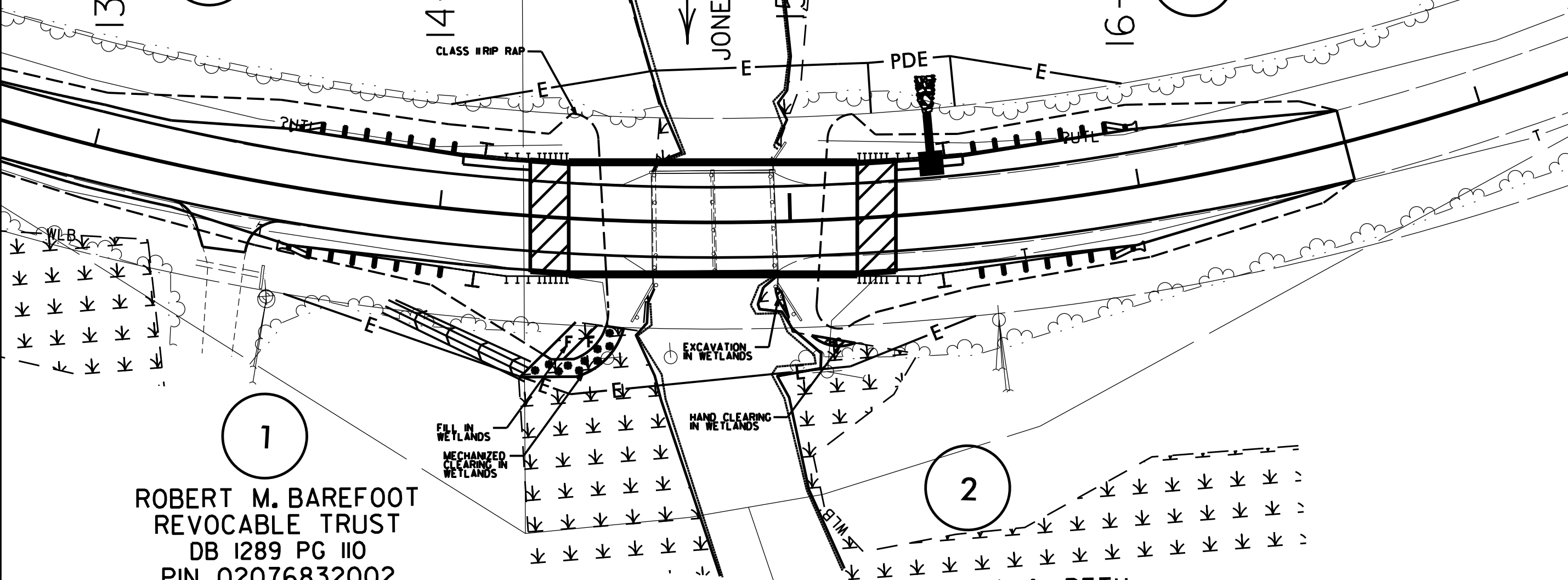
15+00

16+00

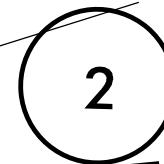


CLASS II RIP RAP

PDE



ROBERT M. BAREFOOT REVOCABLE TRUST
DB 1289 PG 110
PIN 02076832002



STEVEN W. & BETH D. HOLMES
DB 1779 PG 261
PIN 02111775001



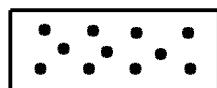
DENOTES FILL IN WETLAND



DENOTES EXCAVATION IN WETLAND



DENOTES HAND CLEARING



DENOTES MECHANIZED CLEARING

HALF SIZE PLAN (11x17) SCALE



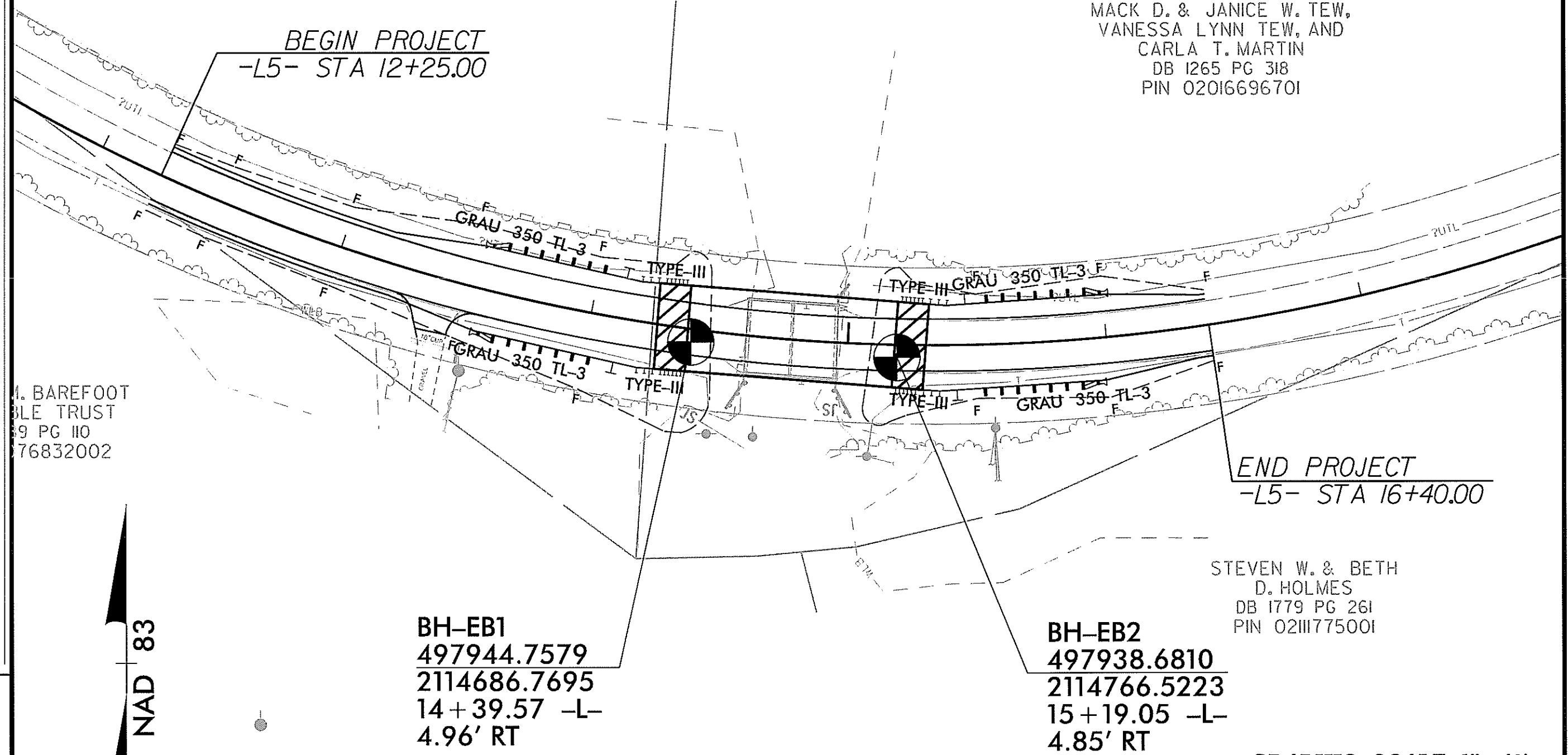
PLANS 1" = 30'

REVISIONS

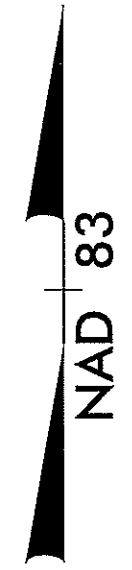
8.17/99

SHELBY T. & SAMUEL H. JACKSON / CONNIE S. & TERRY F. GAUSE
DB 1265 PG 320
PIN 02100380002

MACK D. & JANICE W. TEW, VANESSA LYNN TEW, AND CARLA T. MARTIN
DB 1265 PG 318
PIN 02016696701



BAREFOOT TRUST
PG 110
76832002

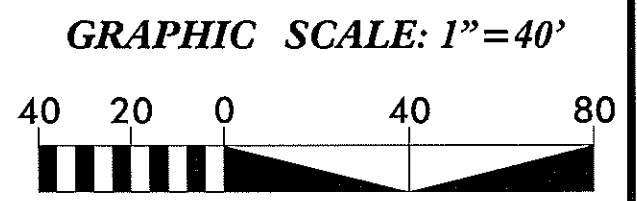


BH-EB1
497944.7579
2114686.7695
14+39.57 -L-
4.96' RT

BH-EB2
497938.6810
2114766.5223
15+19.05 -L-
4.85' RT

STEVEN W. & BETH D. HOLMES
DB 1779 PG 261
PIN 02111775001

BORING LOCATION DIAGRAM



REVISIONS

5/16/2012
17BP.R.3.6_010129_DED_EXH.dgn