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09/08/99

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PITT COUNTY

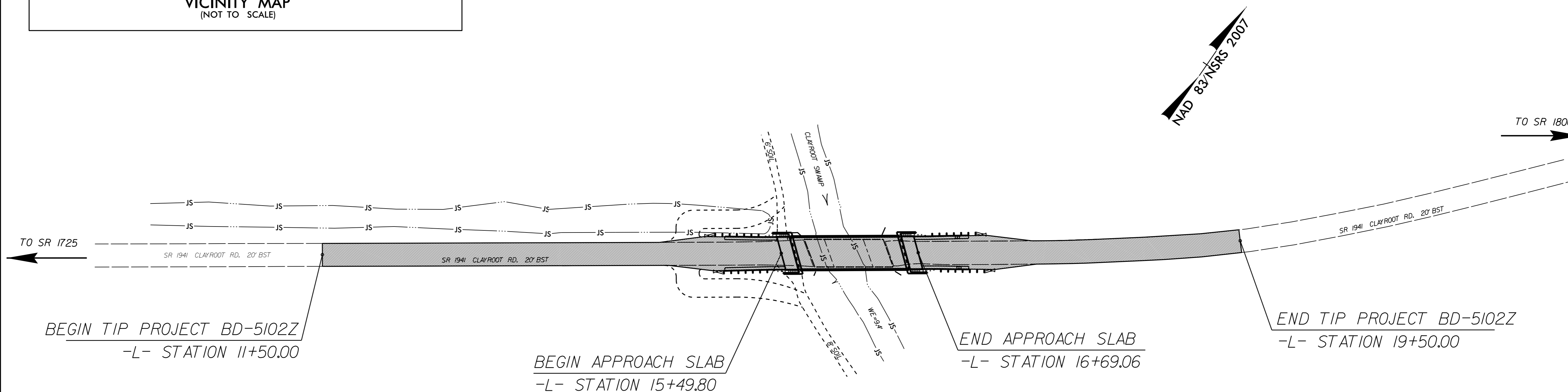
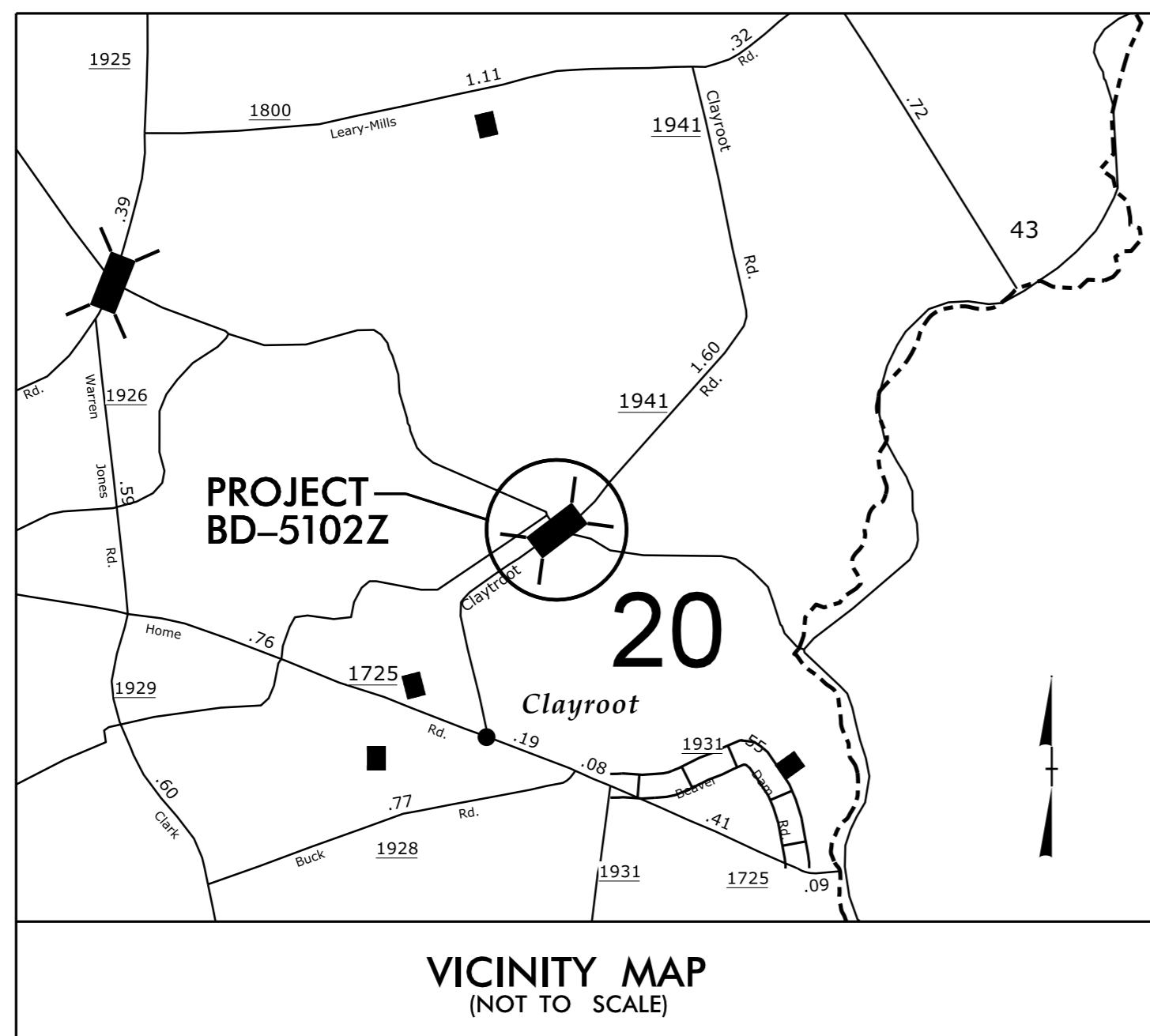
LOCATION: BRIDGE #20 OVER CLAYROOT SWAMP ON SR 1941 (CLAYROOT RD)

TYPE OF WORK: BRIDGE REPLACEMENT, GUARDRAIL, PAVING, GRADING AND DRAINAGE

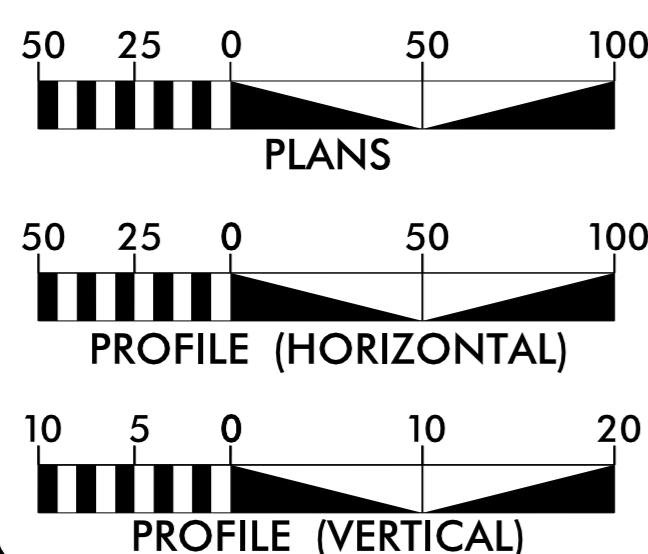
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BD-5102Z	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45348.1.26	BRZ-1941(2)	PE	
45348.2.26	BRZ-1941(2)	RW	
17BP.2.R.66		CONST	

TIP PROJECT: BD-5102Z

CONTRACT: DB00263



GRAPHIC SCALES



PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT BD-5102Z = 0.130 MILE
 LENGTH STRUCTURE TIP PROJECT BD-5102Z = 0.022 MILE
 TOTAL LENGTH TIP PROJECT BD-5102Z = 0.152 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
 105 Pictolus Hwy, Greenville NC, 27835

2012 STANDARD SPECIFICATIONS

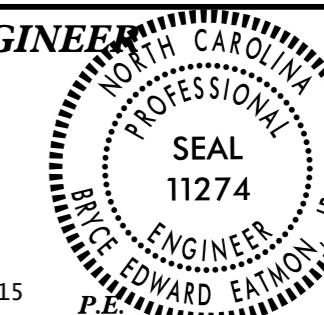
RIGHT OF WAY DATE:
 JANUARY 2014

LETTING DATE:
 APRIL 2016

ED EATMON, PE
 PROJECT ENGINEER

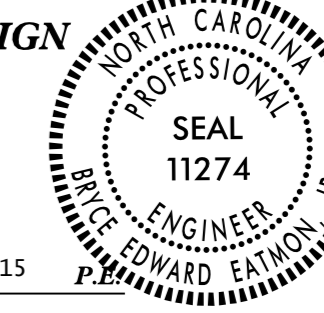
LANG JONES
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

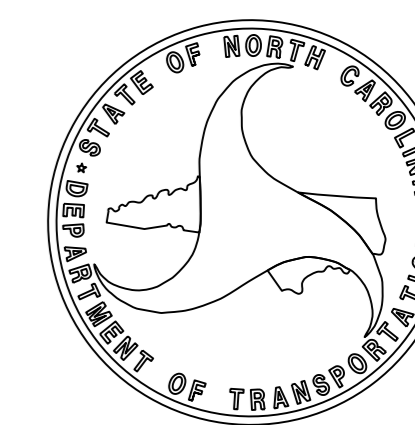


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 Ed Eatmon
 SIGNATURE: 12/4/2015

ROADWAY DESIGN ENGINEER



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 Ed Eatmon
 SIGNATURE: 12/4/2015



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INDEX OF SHEETS

1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2	TYPICAL SECTIONS
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE, GUARDRAIL AND EARTHWORK QUANTITIES
4	PLAN AND PROFILE SHEET
4A	RIGHT OF WAY SHEET
TMP1-TMP2	TRAFFIC MANAGEMENT PLANS
EC1-EC3	EROSION CONTROL SHEETS
U01	UTILITY BY OTHERS SHEET
X1A	CROSS-SECTION SUMMARY
X1-X2	CROSS-SECTIONS
S1-S16	STRUCTURE PLANS (BRIDGE)

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	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 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	
815.03	Pipe Underdrain and Blind Drain
840.00	Concrete Base Pad for Drainage Structures
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 07/30/12

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.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY ENGINEER.

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:

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

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

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	----- ----- -----
County Line	----- ----- -----
Township Line	----- ----- -----
City Line	----- ----- -----
Reservation Line	----- ----- -----
Property Line	----- ----- -----
Existing Iron Pin	○
Property Corner	⊕
Property Monument	⊕
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	-MLB-
Proposed Wetland Boundary	-MLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
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	⊕
Wetland Boundary	-MLB-
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	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

ROADS AND RELATED FEATURES:

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	-----
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.*)	-----

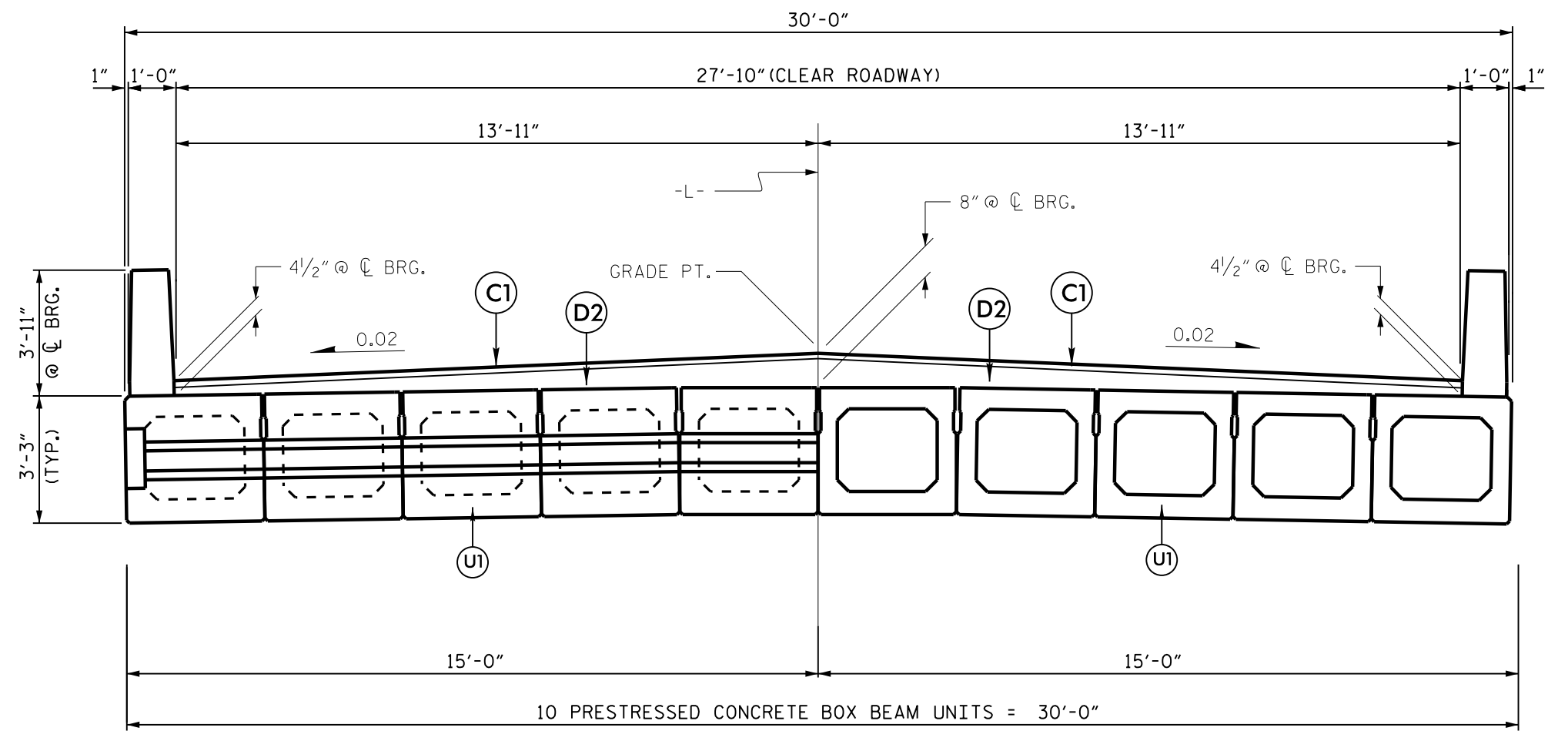
MISCELLANEOUS:

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

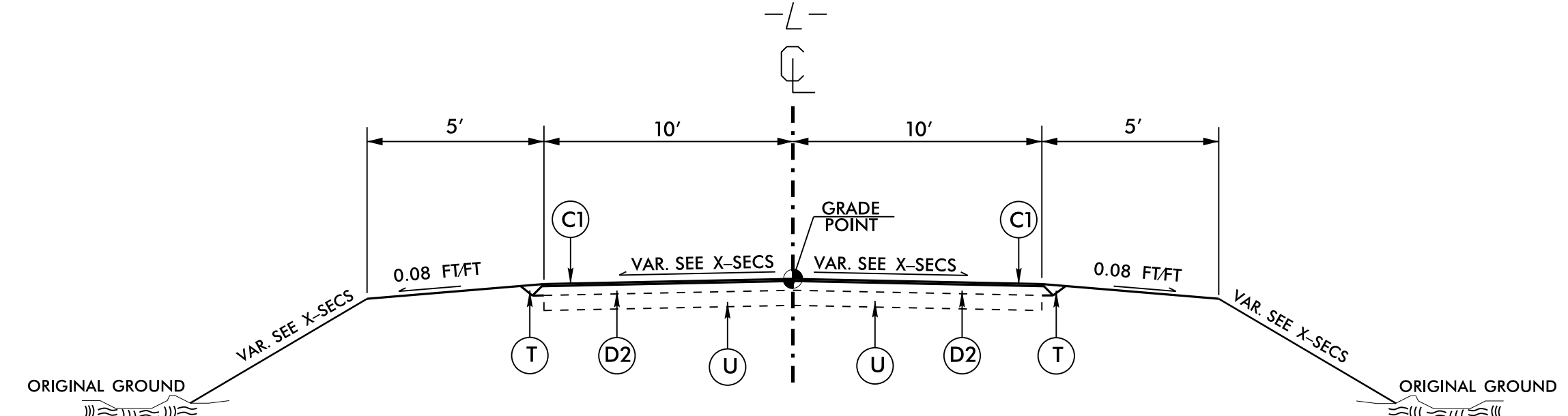
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 8/13/08

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A, AT AN AVERAGE RATE OF 336 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D2	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
J1	PROP. VARIABLE DEPTH AGGREGATE BASE COURSE
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
U1	CONCRETE BOX BEAM

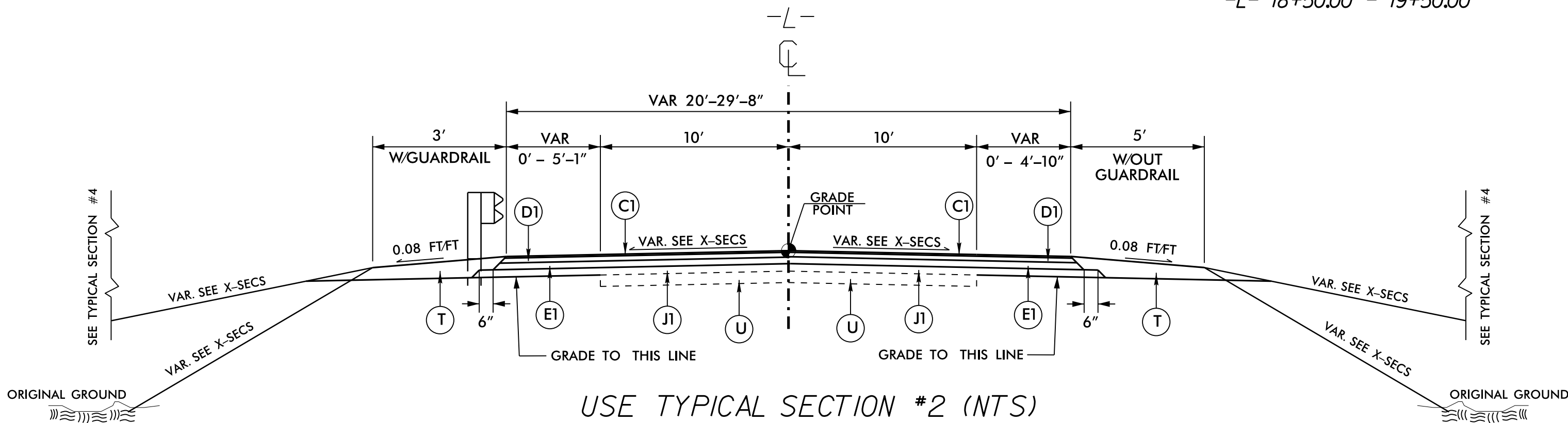
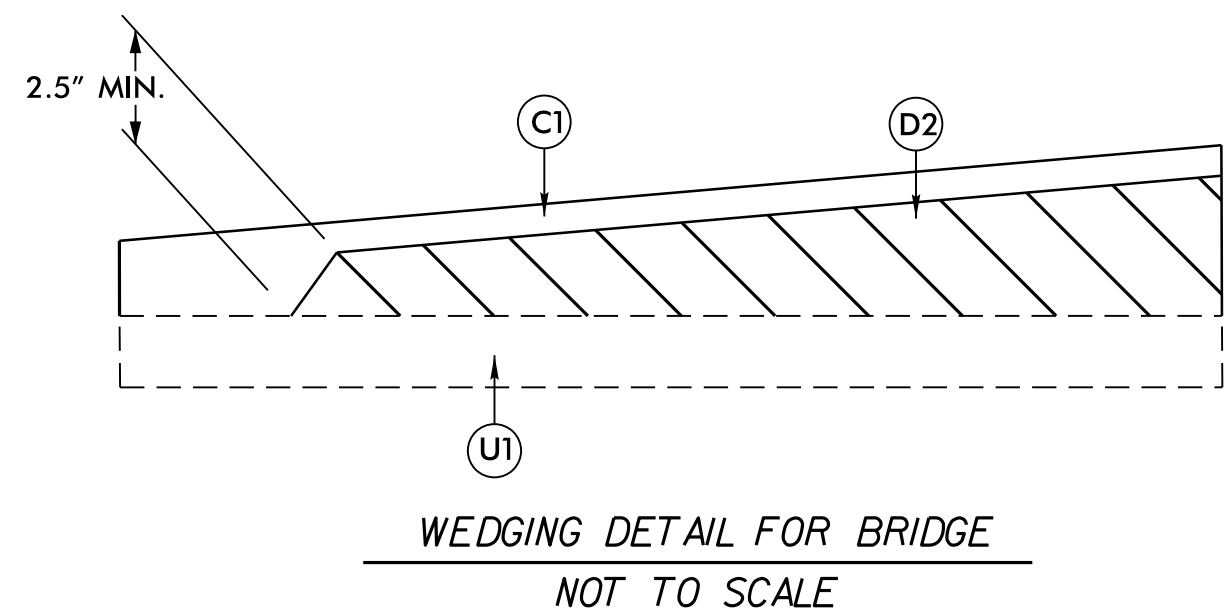
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



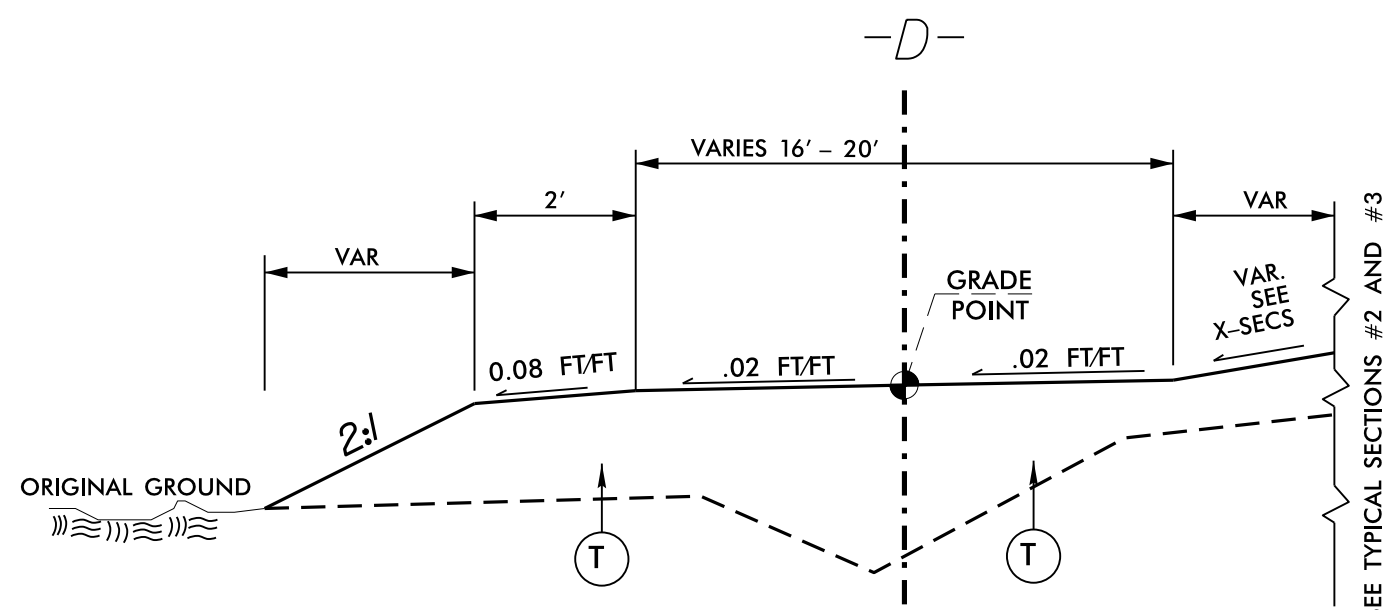
TYPICAL BRIDGE SECTION (NTS)
-L- STA 15+60.77 TO -L- STA 16+58.09



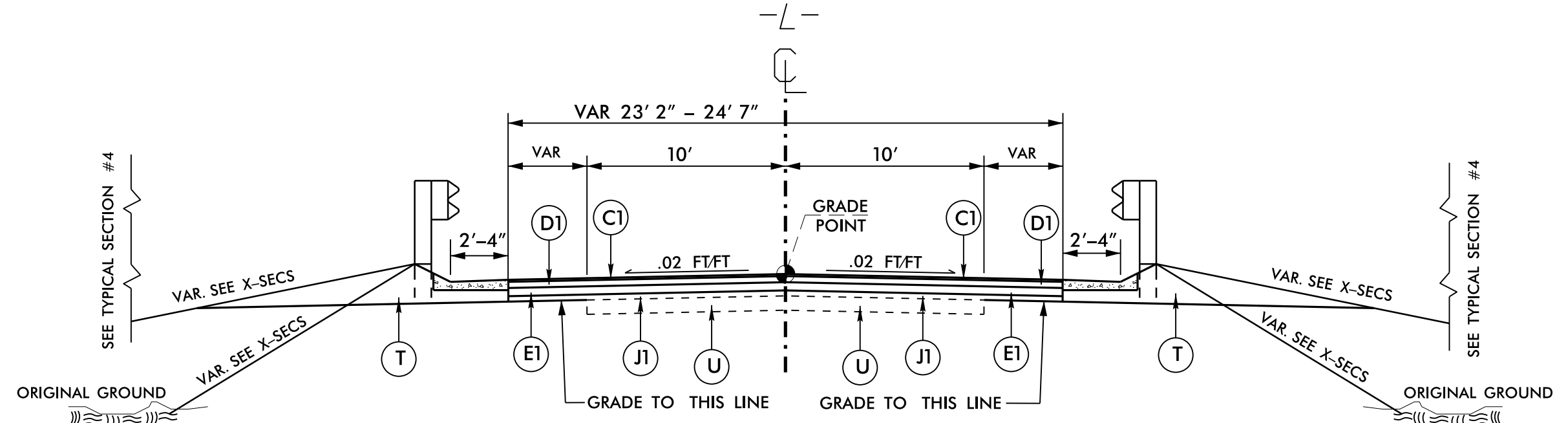
USE TYPICAL SECTION #1 (NTS)
-L- 11+50.00 - 13+00.00
-L- 18+50.00 - 19+50.00



USE TYPICAL SECTION #2 (NTS)
-L- 13+00.00 - 15+00.50
-L- 17+13.05 - 18+50.00



USE TYPICAL SECTION #4
-D- 10+00.00 - 11+08.39
-D- 11+48.23 - 12+39.10



USE TYPICAL SECTION #3 (NTS)
-L- 15+00.50 - 15+46.70
-L- 16+72.16 - 17+13.05

REVISIONS

8/17/99

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

ITEM	SECT	QUANTITY	UNIT	ITEM DESCRIPTION	ITEM	SECT	QUANTITY	UNIT	ITEM DESCRIPTION
1	800	1	LS	MOBILIZATION	33	SP	550	LF	SAFETY FENCE
2	801	1	LS	CONSTRUCTION SURVEYING	34	1630	10	CY	SILT EXCAVATION
3	SP	1	LS	REINFORCED BRIDGE APPROACH FILL, -L- STA 16+09.43	35	1631	1400	SY	MATTING FOR EROSION CONTROL
4	226	1	LS	GRADING	36	1632	140	LF	1/4" HARDWARE CLOTH
5	226	200	CY	UNDERCUT EXCAVATION	37	SP	150	SY	FLOATING TURBIDITY CURTAIN
6	300	50	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	38	SP	320	LF	WATTLE
7	300	140	SY	FOUNDATION CONDITIONING GEOTEXTILE	39	SP	1	LB	POLYACRYLAMIDE (PAM)
8	305	148	LF	24" DRAINAGE PIPE	40	1660	1	ACRE	SEEDING AND MULCHING
9	305	148	LF	42" DRAINAGE PIPE	41	1661	50	LB	SEED FOR REPAIR SEEDING
10	310	100	LF	15" R.C. PIPE CULVERTS, CLASS IV	42	1661	0.2	TON	FERTILIZER FOR REPAIR SEEDING
11	520	870	TON	AGGREGATE BASE COURSE					
12	610	300	TON	ASPHALT CONCRETE BASE COURSE, TYPE B25.0B					
13	610	330	TON	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B					
14	610	375	TON	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5A	43	402	1	LS	REMOVAL OF EXISTING STRUCTURE AT -L- STA 16+09.43
15	620	55	TON	ASPHALT BINDER FOR PLANT MIX	44	412	1	LS	UNCLASSIFIED STRUCTURE EXCAVATION
16	840	4	EA	MASONRY DRAINAGE STRUCTURES	45	SP	1	EA	PDA TESTING
17	840	4	EA	FRAME WITH GRATE, STD 840.29	46	420	56.0	CY	CLASS A CONCRETE (BRIDGE)
18	846	188	LF	SHOULDER BERM GUTTER	47	422	1	LS	BRIDGE APPROACH SLABS
19	862	25	LF	STEEL BEAM GUARDRAIL	48	425	8922	LB	REINFORCING STEEL (BRIDGE)
20	862	10	EA	ADDITIONAL GUARDRAIL POSTS	49	450	800	LF	HP 12 X 53 STEEL PILES
21	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III	50	450	10	EA	STEEL PILE POINTS
22	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	51	450	6	EA	PILE REDRIVES
23	876	5	TON	RIP RAP, CLASS I	52	SP	190	LF	VERTICAL CONCRETE BARRIER RAIL
24	876	5	TON	RIP RAP, CLASS B	53	876	174	TON	RIP RAP, CLASS II (2'-0" THICK)
25	876	14	SY	GEOTEXTILE FOR DRAINAGE	54	876	194	SY	GEOTEXTILE FOR DRAINAGE
26	1605	1500	LF	TEMPORARY SILT FENCE	55	430	1	LS	ELASTOMETRIC BEARINGS
27	1610	5	TON	STONE FOR EROSION CONTROL, CLASS B	56	430	950	LF	3'-0" X 3'-3" PRESTRESSED CONCRETE BOX BEAMS
28	1610	5	TON	SEDIMENT CONTROL STONE					
29	1615	1	ACRE	TEMPORARY MULCHING					
30	1620	50	LB	SEED FOR TEMPORARY SEEDING					
31	1620	0.2	TON	FERTILIZER FOR TEMPORARY SEEDING					
32	1622	200	LF	TEMPORARY SLOPE DRAINS					

REVISIONS

8/17/99

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

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

STATION	LOCATION (L, RT, OR CL)	STRUCTURE NO.	TOP ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC)								CORRUGATED ALUMINUM PIPE						R.C. PIPE (CLASS III)						R.C. PIPE (CLASS IV)						ENDWALLS				QUANTITIES FOR CHANGE STRUCTURES * TOTAL LF. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B')	FRAME GRATES AND HOOD STANDARD 840.03	CONCRETE TRANSITIONAL SECTION	G.D.I. FRAME WITH GRATE STD. 840.22	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	T.B.D.I. STD. 840.35	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD. 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	ABBREVIATIONS			
						12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE/PVC	.064	.064	.064	.064	.079	.109	.109	12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"													24"	30"	36"	42"
-L- 14+97.49	LT	1		11.50	11.00							148	*		*																																				
-L- 15+13.07	RT	2		15.00	13.50							148	*		*																																				
-L- 15+09.00	LT	3	23.17	19.67																				1																											
-L- 15+09.00	RT	4	23.17	19.17																			1																												
-L- 15+09.00	CL	3	4	19.67	19.17																			1																											
-L- 15+09.00	RT	4	OUT	19.17	17.15																																														
-L- 17+04.55	LT	5	23.20	18.20																				1																											
-L- 17+04.55	RT	6	23.20	19.20																				1																											
-L- 17+04.55	CL	6	5	19.20	18.20																			1																											
-L- 17+04.55	LT	5	OUT	18.20	17.15																																														
TOTALS								148	148	*	*												4																												

"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

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH (WITH ANCHOR DEDUCTIONS)			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS			IMPACT ATTENUATOR TYPE 350	SINGLE FACED GUARDRAIL	REMOVE AND RESET EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TYPE 350	TYPE III	CAT-1					
-L-	14+83.09	15+58.09	LT	6.25	0			15+58.09	2.4	5.33	50	1.0	1	1								
-L-	14+90.54	15+65.54	RT	6.25	0		15+65.54		2.4	5.33	50	1.0	1	1								
-L-	16+53.32	17+28.32	LT	6.25	0		16+53.32		2.4	5.33	50	1.0	1	1								
-L-	16+60.77	17+35.77	RT	6.25	0			16+60.77	2.4	5.33	50	1.0	1	1								
TOTAL				25	0								4	4								

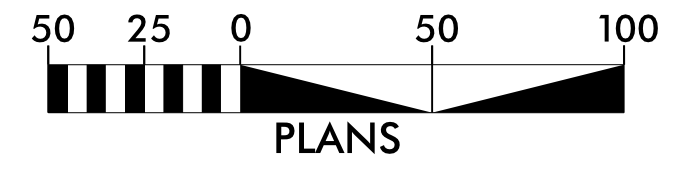
**SUMMARY OF EARTHWORK
 IN CUBIC YARDS**

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- 12+00.00 - 15+61.93	0	0	1498	1498	0
-L- 16+56.93 - 19+00.00	0	0	422	422	0
UNDERCUT (CONTINGENCY)		200	240	240	200
UNCLASSIFIED STRUCTURE EXCAVATION	200	0	0	0	200
SUB TOTAL	200	200	2160	2160	400
SAY	200	200	2160	2160	400

**PAVEMENT REMOVAL SUMMARY
 IN SQUARE YARDS**

LINE	STATION - STATION	LOCATION	REMOVAL (SY)
-L-	15+49.80 - 15+73.48	CL	58
-L-	16+43.71 - 16+69.06	CL	58
TOTAL			116
		SAY	120

NOTE:
 APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, STRUCTURE 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."



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "BL-1"

WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
 NORTHING: 599556.196 (ft) EASTING: 2521998.455 (ft)
 ELEVATION: 19.797 (ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999880060

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "BL-1" TO -L- STATION 11+50.00 IS
 S 51°07'34" W 208.6207'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

SHOULDER BERM GUTTER

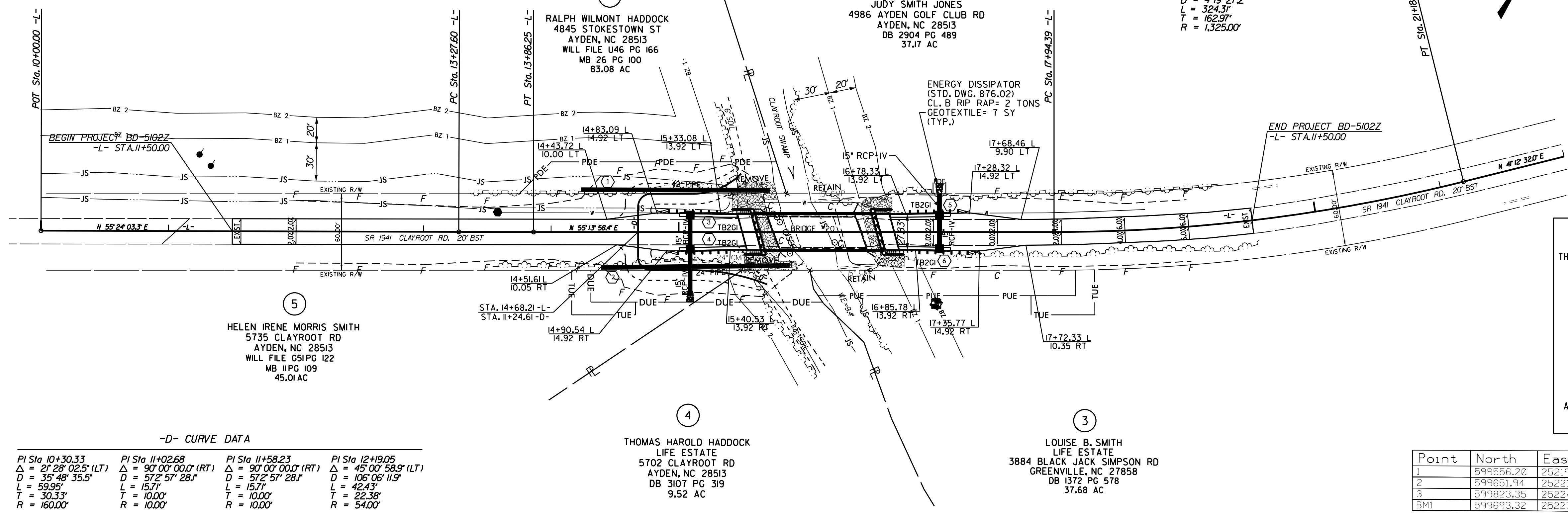
-L- STA 15+00.50 - 15+46.70	LT
-L- STA 15+00.50 - 15+52.90	RT
-L- STA 16+65.96 - 17+13.05	LT
-L- STA 16+72.16 - 17+13.05	RT

WORK POINT DESCRIPTION

WORK POINT *1	-L- STATION 15+60.77	CL
WORK POINT *2	-L- STATION 16+58.09	CL

PI Sta 13+56.93 -L-
 $\Delta = 0'10'04.9"$ (LT)
 $D = 0'17'11.3"$
 $L = 58.65'$
 $T = 29.33'$
 $R = 20,000.00'$

PI Sta 19+57.36 -L-
 $\Delta = 14'0'26.5"$ (LT)
 $D = 4'19'27.2"$
 $L = 324.3'$
 $T = 162.9'$
 $R = 1,325.00'$

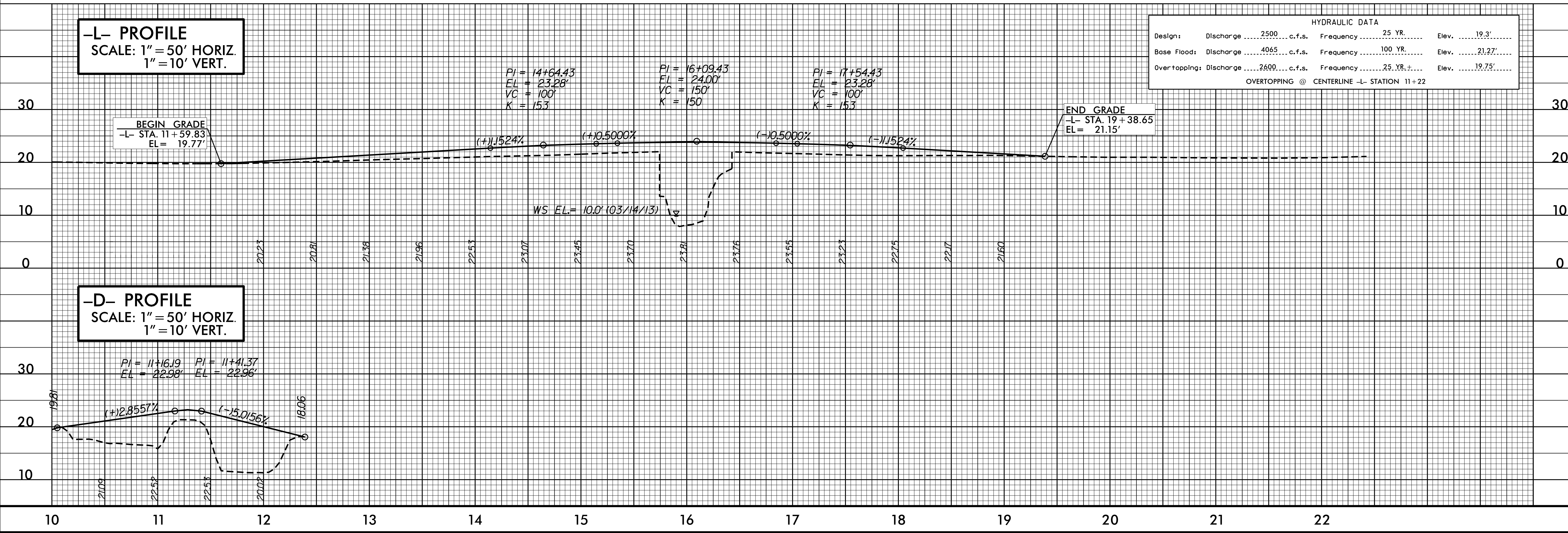


-D- CURVE DATA

PI Sta 10+30.33 $\Delta = 2'28'02.5"$ (LT) $D = 35'48'35.5"$ $L = 59.95'$ $T = 30.33'$ $R = 160.00'$	PI Sta 11+02.68 $\Delta = 9'00'00.0"$ (RT) $D = 57'25'28.1"$ $L = 15.7'$ $T = 10.00'$ $R = 10.00'$	PI Sta 11+58.23 $\Delta = 9'00'00.0"$ (RT) $D = 57'25'28.1"$ $L = 15.7'$ $T = 10.00'$ $R = 10.00'$	PI Sta 12+19.05 $\Delta = 45'00'58.9"$ (LT) $D = 106'06'11.9"$ $L = 42.43'$ $T = 22.38'$ $R = 54.00'$
---	---	---	--

Point	North	East	Elevation	Description
1	599556.20	2521998.46	19.80	NCDOT GPS BD5102Z BL-1
2	599651.94	2522192.90	21.41	BL-2
3	599823.35	2522431.87	21.23	BL-3
BMI	599693.32	2522321.94	19.69	RR SPIKE IN 15" HARDWOOD

-L- PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 10' VERT.



HYDRAULIC DATA

Design:	Discharge	2500	c.f.s.	Frequency	25	YR.	Elev.	19.3'
Base Flood:	Discharge	4065	c.f.s.	Frequency	100	YR.	Elev.	21.27'
Overtopping:	Discharge	2600	c.f.s.	Frequency	25	YR.	Elev.	19.75'

OVERTOPPING @ CENTERLINE -L- STATION 11+22

-D- PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 10' VERT.

8/17/99
 20-NOV-2015 06:59
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REVISIONS

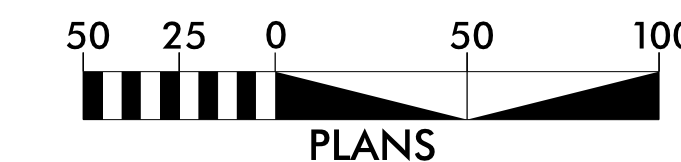
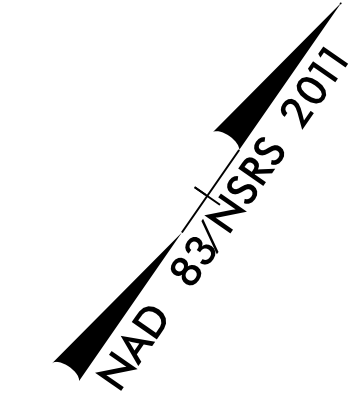
8/17/99

RIGHT OF WAY AREA SUMMARY

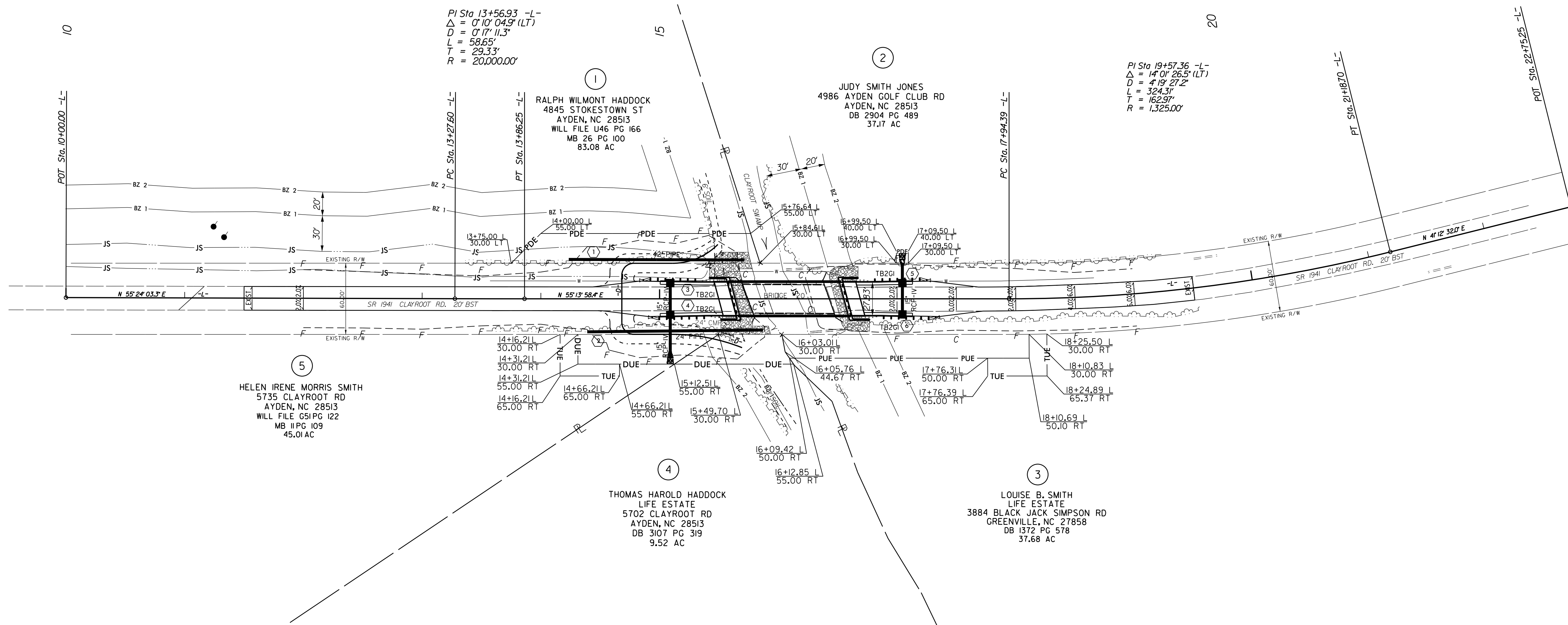
PARCEL NO.	PROPERTY OWNER NAME	LOCATION	TOTAL PARCEL AREA [ACRES]	AREA TO BE PURCHASED (P.U.E./D.U.E./P.D.E.) [ACRES]	AREA TO BE DEDICATED (T.U.E.) [ACRES]	PARCEL AREA REMAINING [ACRES]
1	RALPH WILMONT HADDOCK	LT	83.08	0.111		82.97
2	JUDY SMITH JONES	LT	37.17	0.002		37.16
3	LOUISE B. SMITH	RT	37.68	0.095	0.024	37.56
4	THOMAS HAROLD HADDOCK	RT	9.52	0.043		9.48
5	HELEN IRENE MORRIS SMITH	RT	45.01	0.057	0.020	44.93

D.U.E. = DRAINAGE UTILITY EASEMENT
P.D.E. = PERMANENT DRAINAGE EASEMENT
P.U.E. = PERMANENT UTILITY EASEMENT
T.U.E. = TEMPORARY UTILITY EASEMENT

PROJECT REFERENCE NO. <i>BD-5102Z</i>	SHEET NO. 4A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER



REVISIONS



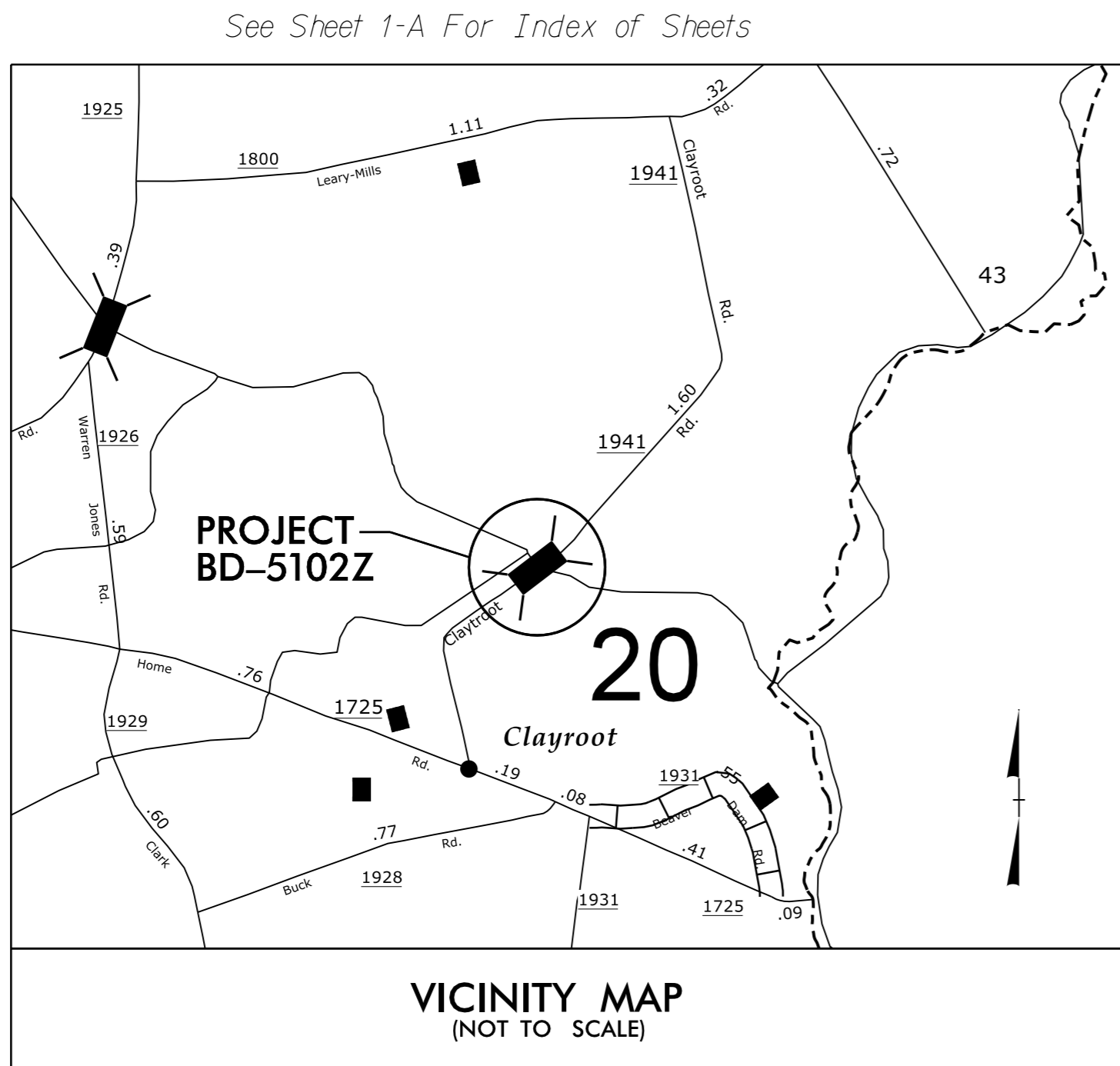
20 JUL 2015 3:21 PM
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9:58 AM

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BD-5102Z	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45348.1.26	BRZ-1941(2)	PE	
45348.2.26	BRZ-1941(2)	RW	
45348.3.26	BRZ-1941(2)	CONST	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

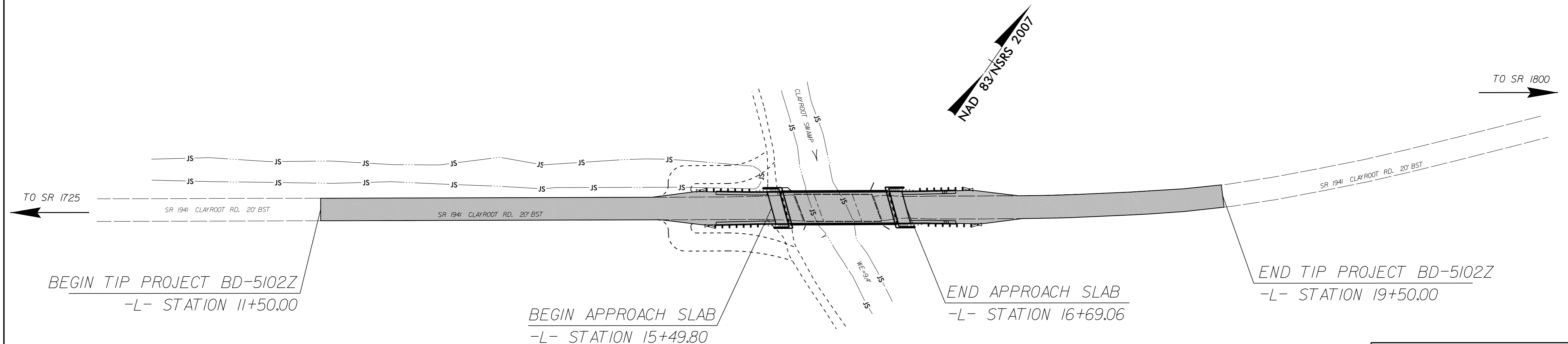
PITT COUNTY

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1605.01	High Vis Temporary Silt Fence.....	— III — III — III
1632.03	Rock Inlet Sediment Trap Type C.....	□
SP	Wattle.....	C
SP	Wattle with Polyacrylamide.....	⊙

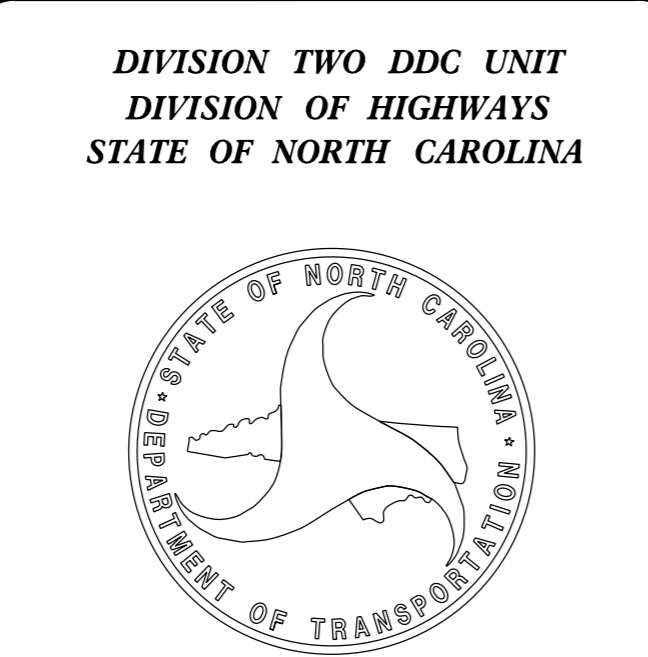
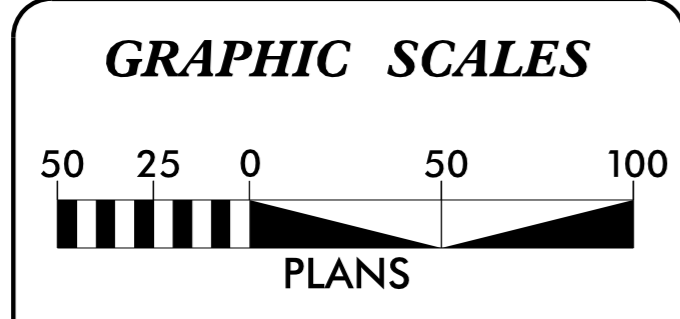


ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
Refer To E. C. Special Provisions for Special Considerations.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

TIP PROJECT: BD-5102Z

CONTRACT:



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.

2012 STANDARD SPECIFICATIONS

Prepared in the Office of:
DIVISION 2 DDC
PO Box 1587
Greenville, NC 27835

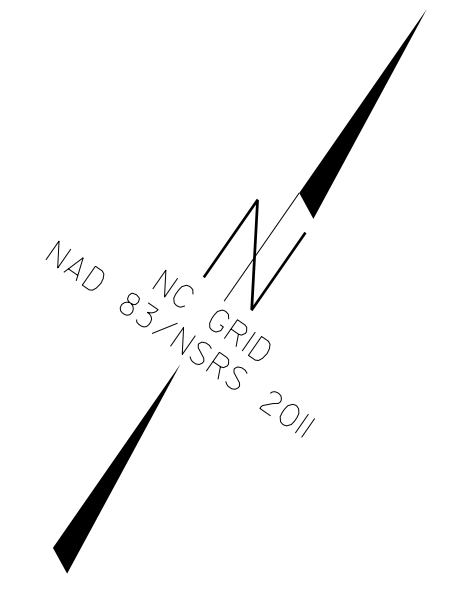
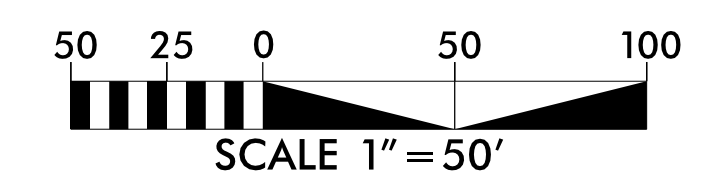
Josh Wilder, DDC Technician
Level III
Certification #3332

Roadway Standard Drawings

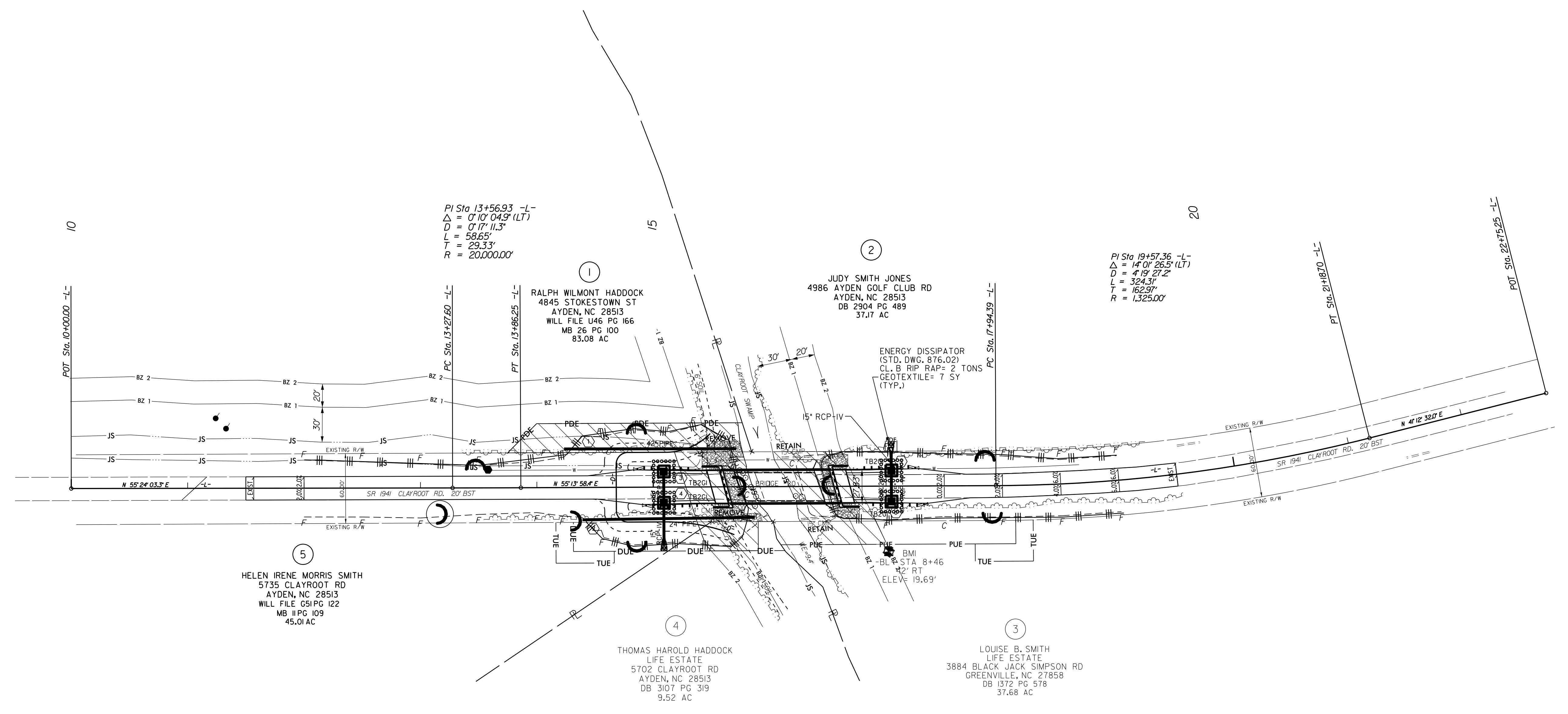
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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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REVISIONS



SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) 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 HOW ZONES.

Scd. #	Description	Symbol
1605.01	High Vis Temporary Silt Fence	
1652.05	Rock Inlet Sediment Trap Type C	
SP	Wattle	
SP	Wattle with Polyacrylamide	

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

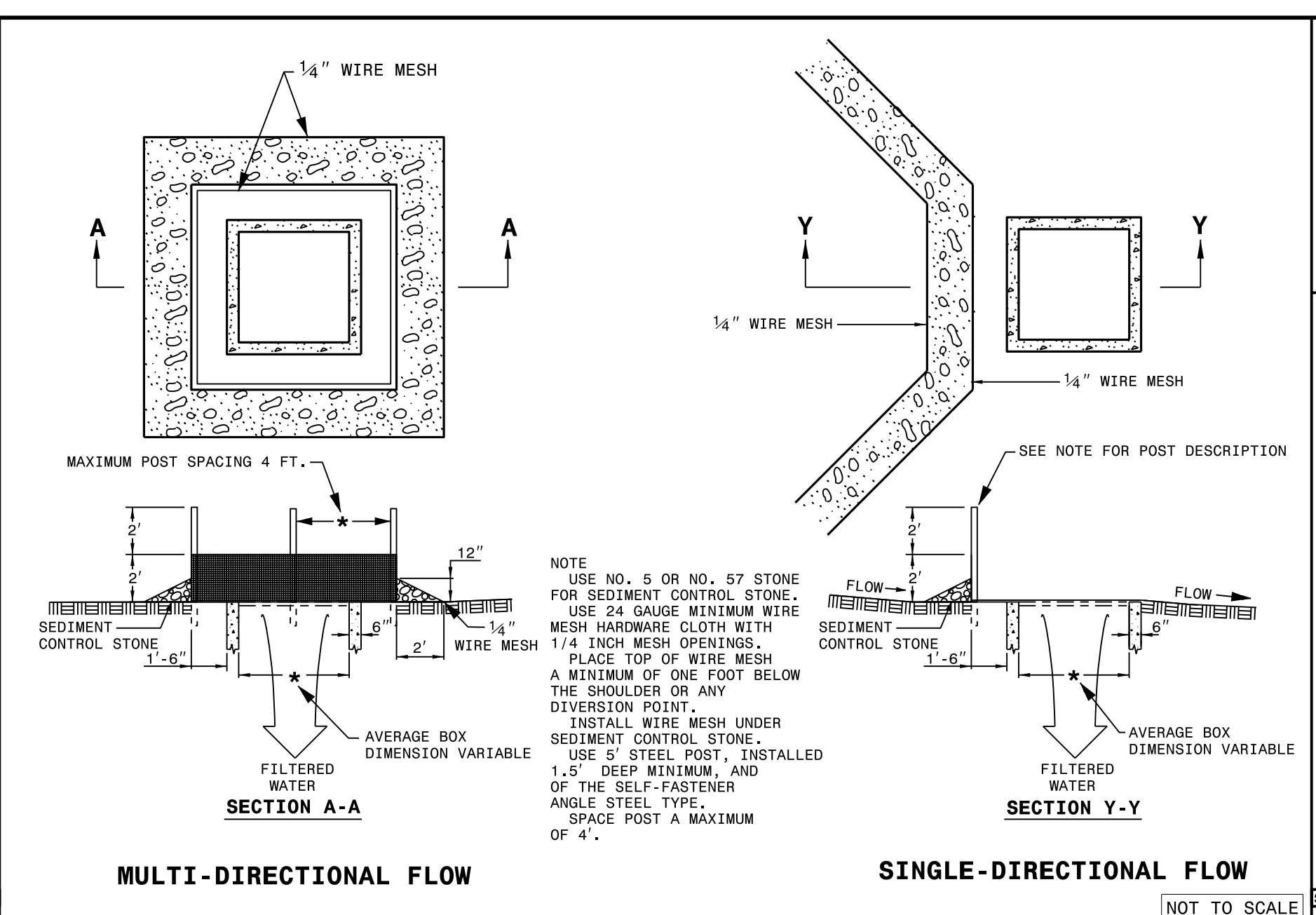
NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.
CONTRACTOR SHALL INSTALL SPECIAL SEDIMENT CONTROL FENCE OR WATTLES IN LOW AREAS OF SILT FENCE AS NEEDED OR DIRECTED BY THE ENGINEER.

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

ENGLISH STANDARD DRAWING FOR **ROCK INLET SEDIMENT TRAP TYPE 'C'**

SHEET 1 OF 1
1632.03



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

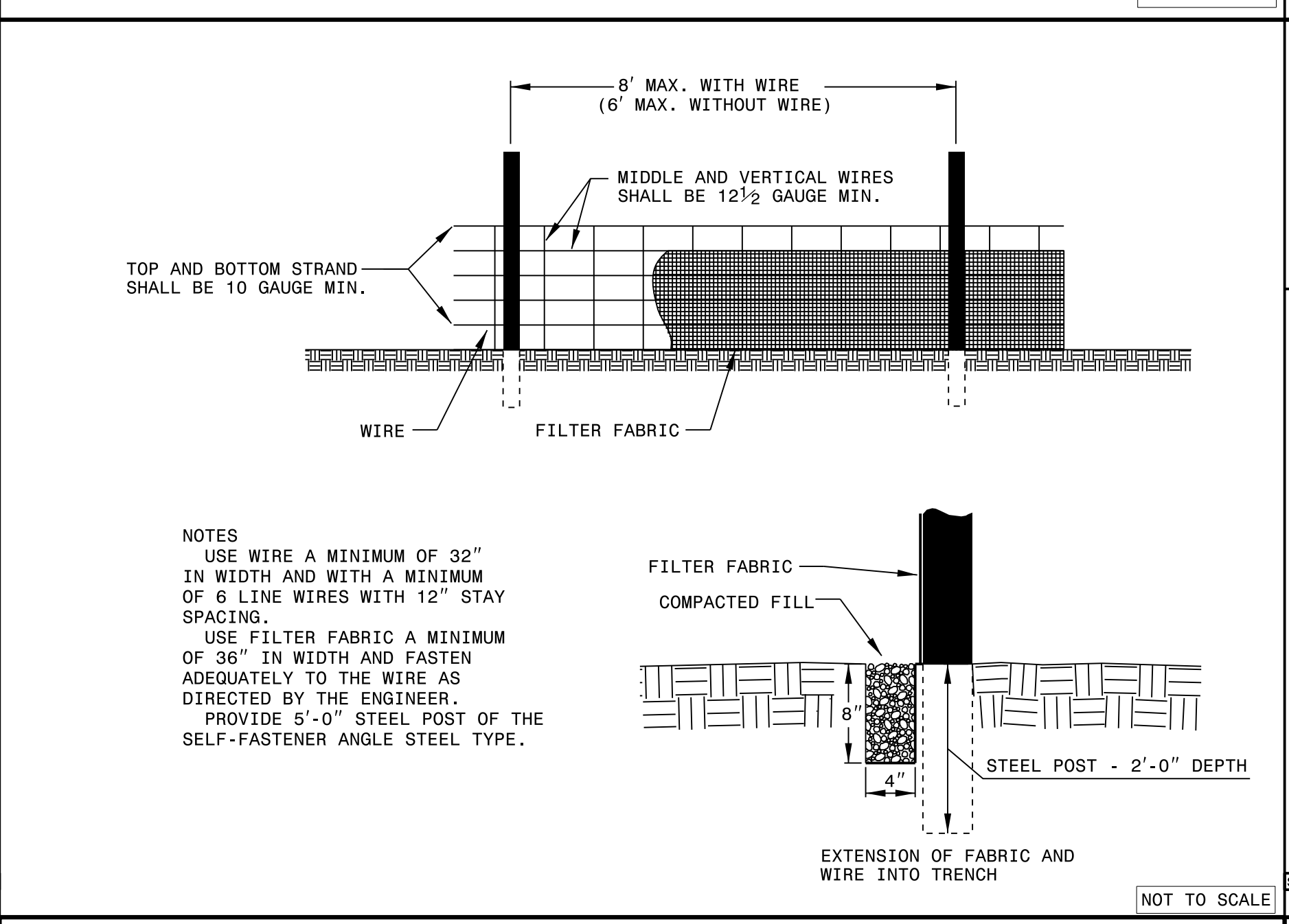
ENGLISH STANDARD DRAWING FOR **ROCK INLET SEDIMENT TRAP TYPE 'C'**

SHEET 1 OF 1
1632.03

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

ENGLISH STANDARD DRAWING FOR **TEMPORARY SILT FENCE**

SHEET 1 OF 1
1605.01



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

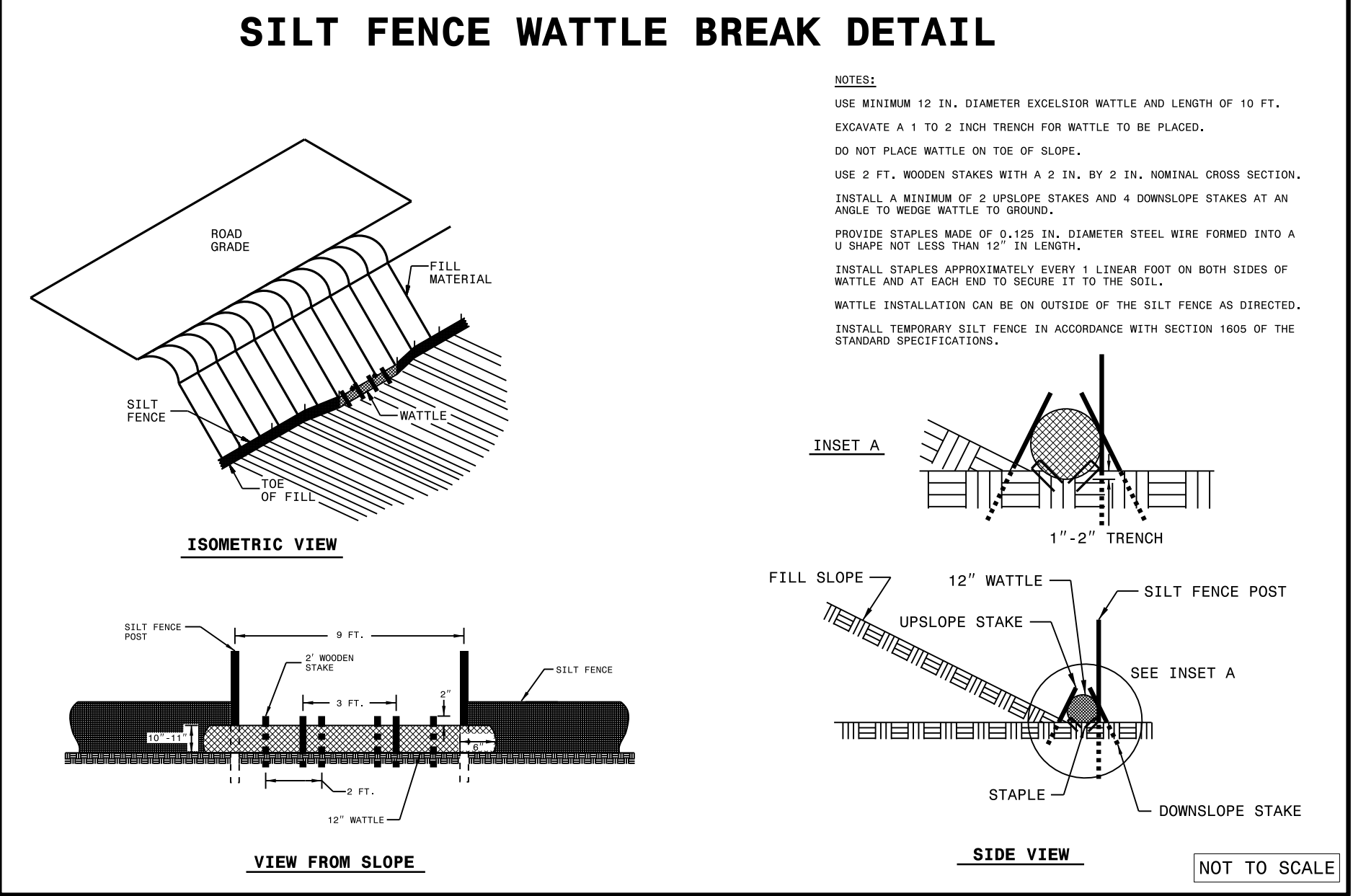
ENGLISH STANDARD DRAWING FOR **TEMPORARY SILT FENCE**

SHEET 1 OF 1
1605.01

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

ENGLISH STANDARD DRAWING FOR **SILT FENCE WATTLE BREAK DETAIL**

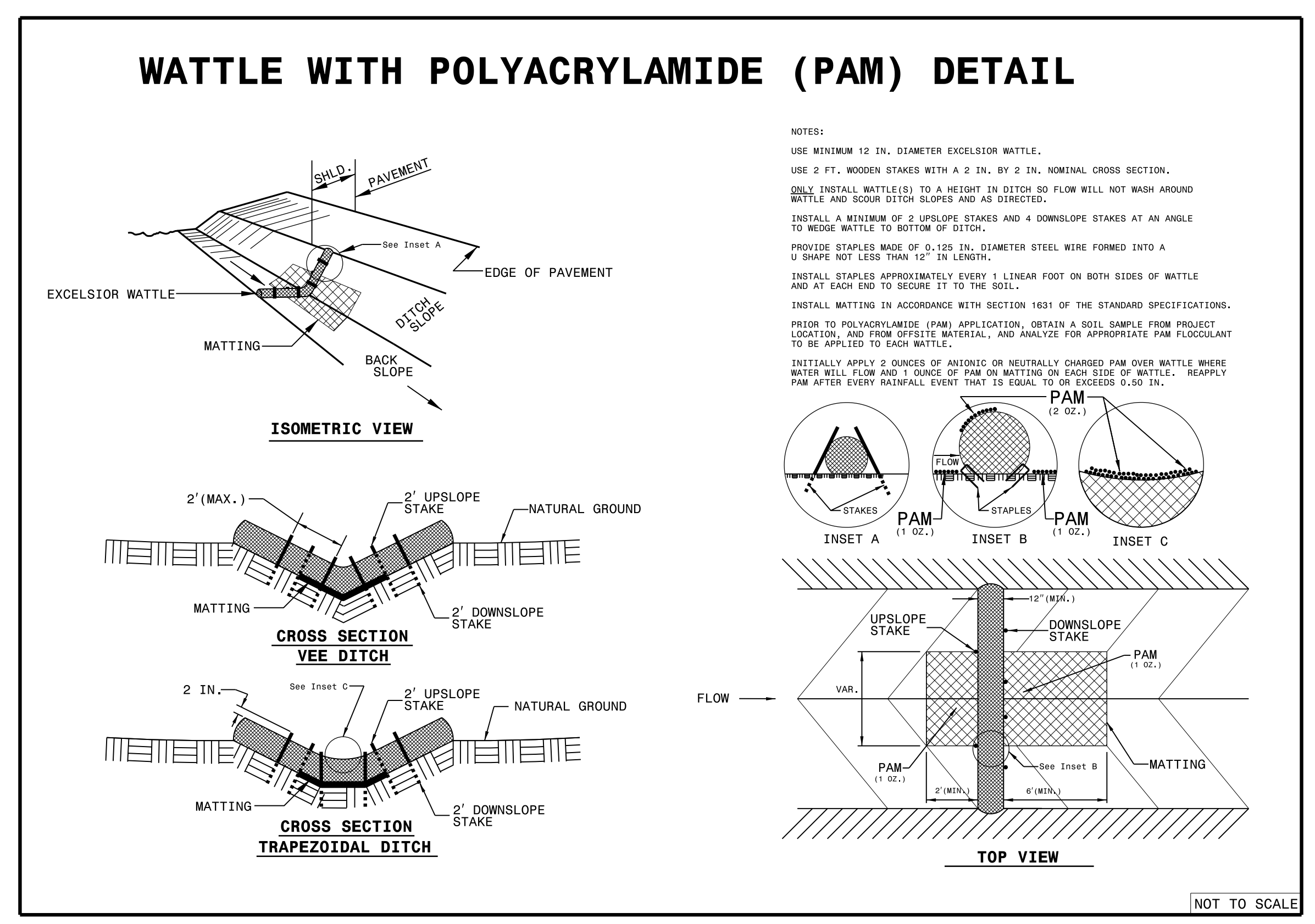
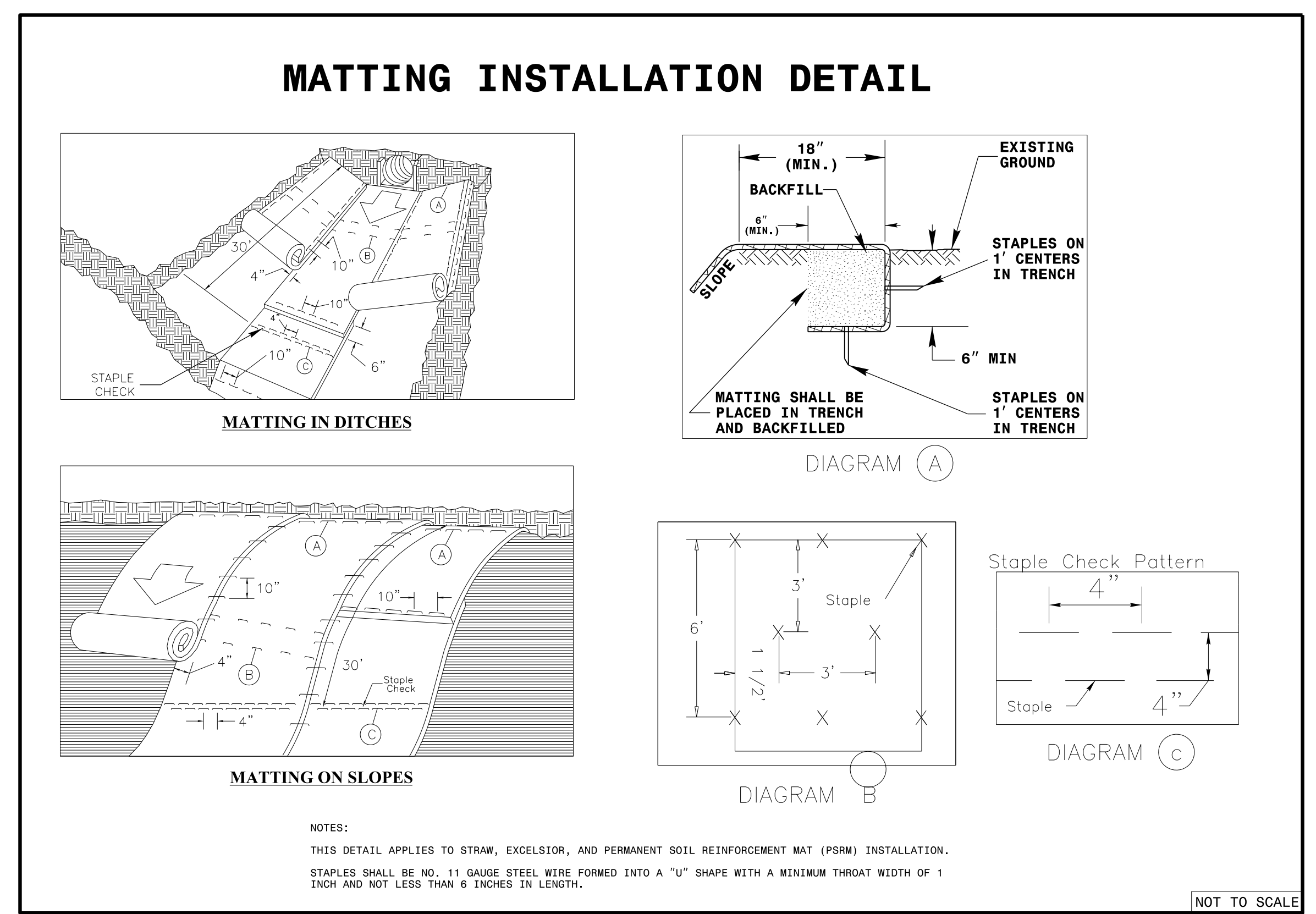
SHEET 1 OF 1
1605.01



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

ENGLISH STANDARD DRAWING FOR **SILT FENCE WATTLE BREAK DETAIL**

SHEET 1 OF 1
1605.01



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

ENGLISH STANDARD DRAWING FOR **WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL**

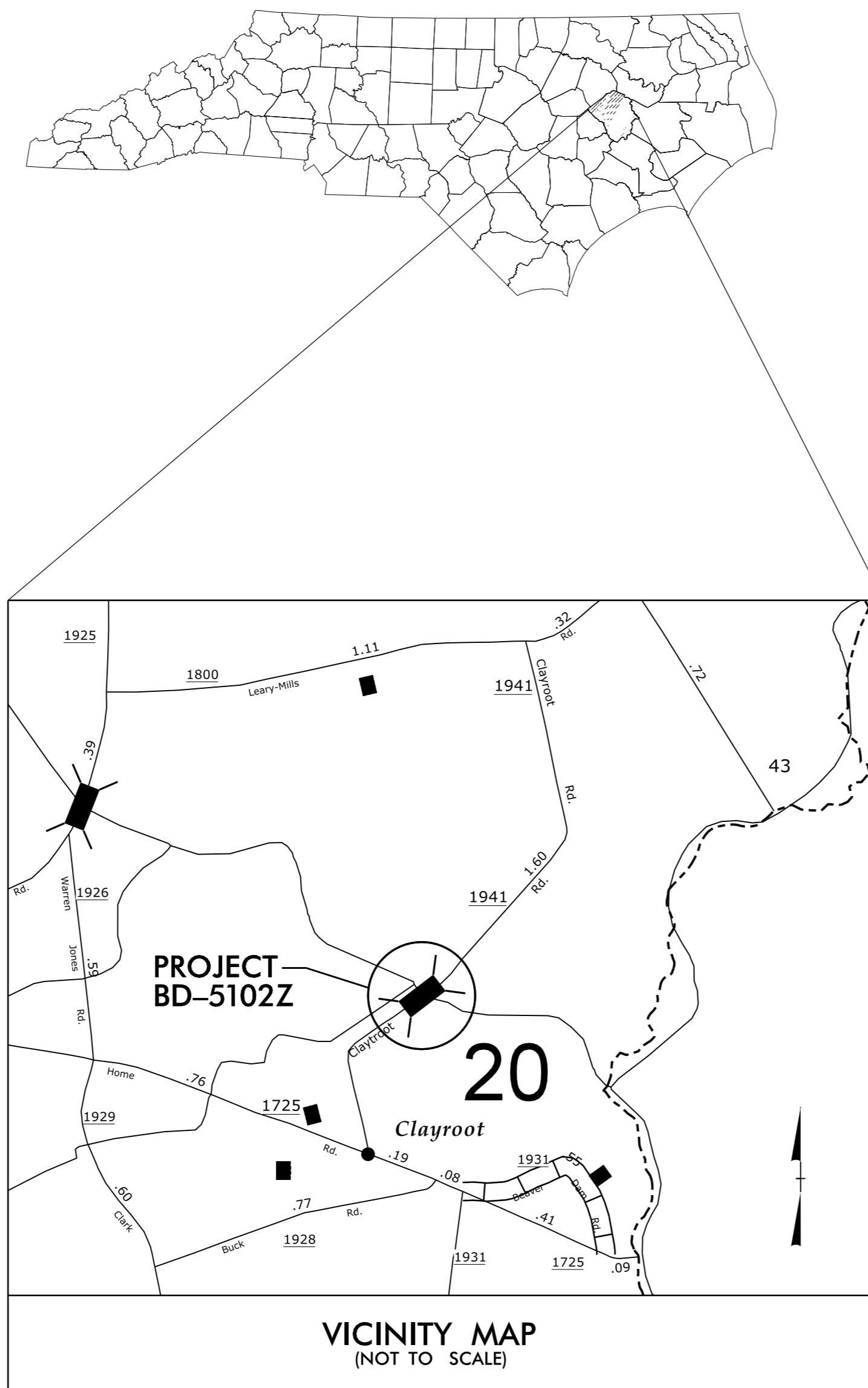
SHEET 1 OF 1
1605.01

REVISIONS
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

PITT COUNTY



VICINITY MAP
(NOT TO SCALE)

SHEET NO.
TMP-1

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET WITH VICINITY MAP & INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND.
TMP-2	PROJECT NOTES, DETOUR AND PLANS.

ROADWAY 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
1101.03 (SHT. 1 OF 9)	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES (TYPE III)

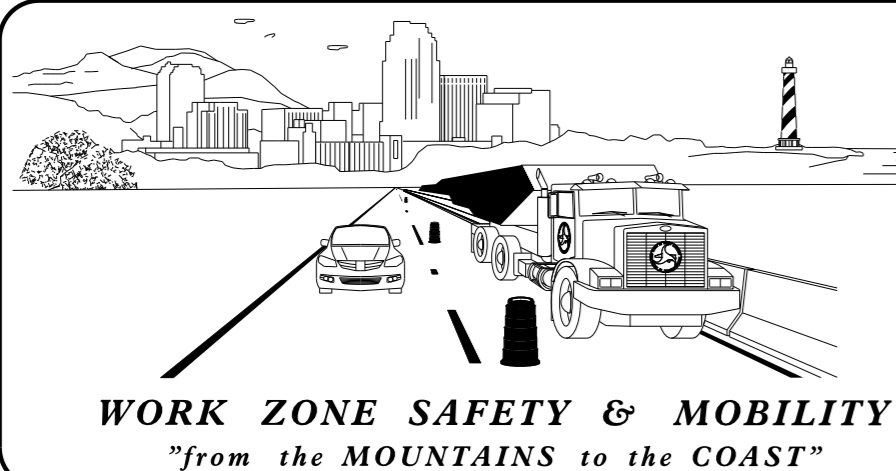
LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT.
- EXIST. PVMT.
- WORK AREA

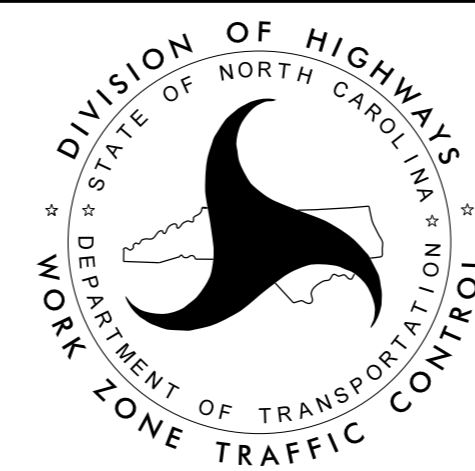
TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
P.O. BOX 1587, GREENVILLE, NC 27835
105 PACTOLUS HWY. (NC 33), GREENVILLE, NC 27835
PHONE: (252) 830-3490 FAX: (252) 830-3352

ED EATMON, PE **TRAFFIC ENGINEER**
ED EATMON, PE **TRAFFIC CONTROL PROJECT ENGINEER**
LANG JONES **TRAFFIC CONTROL PROJECT DESIGN ENGINEER**
VAN TRAN **TRAFFIC CONTROL DESIGN ENGINEER**



APPROVED:
DATE: 12/14/2015

SEAL

BD-5102Z

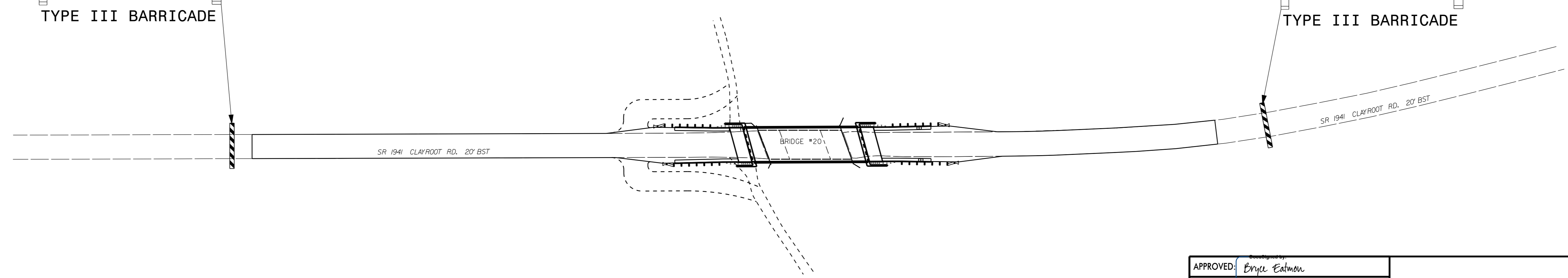
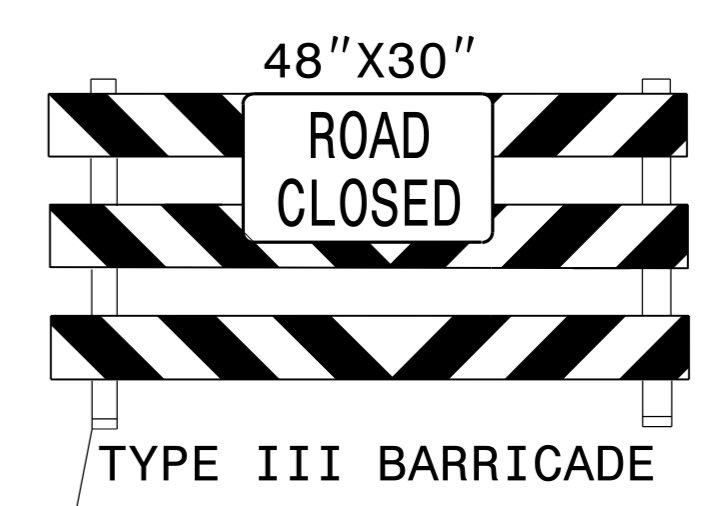
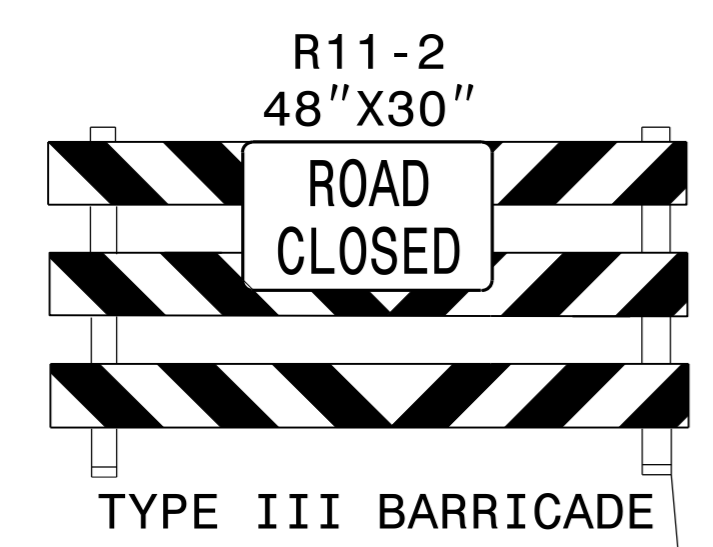
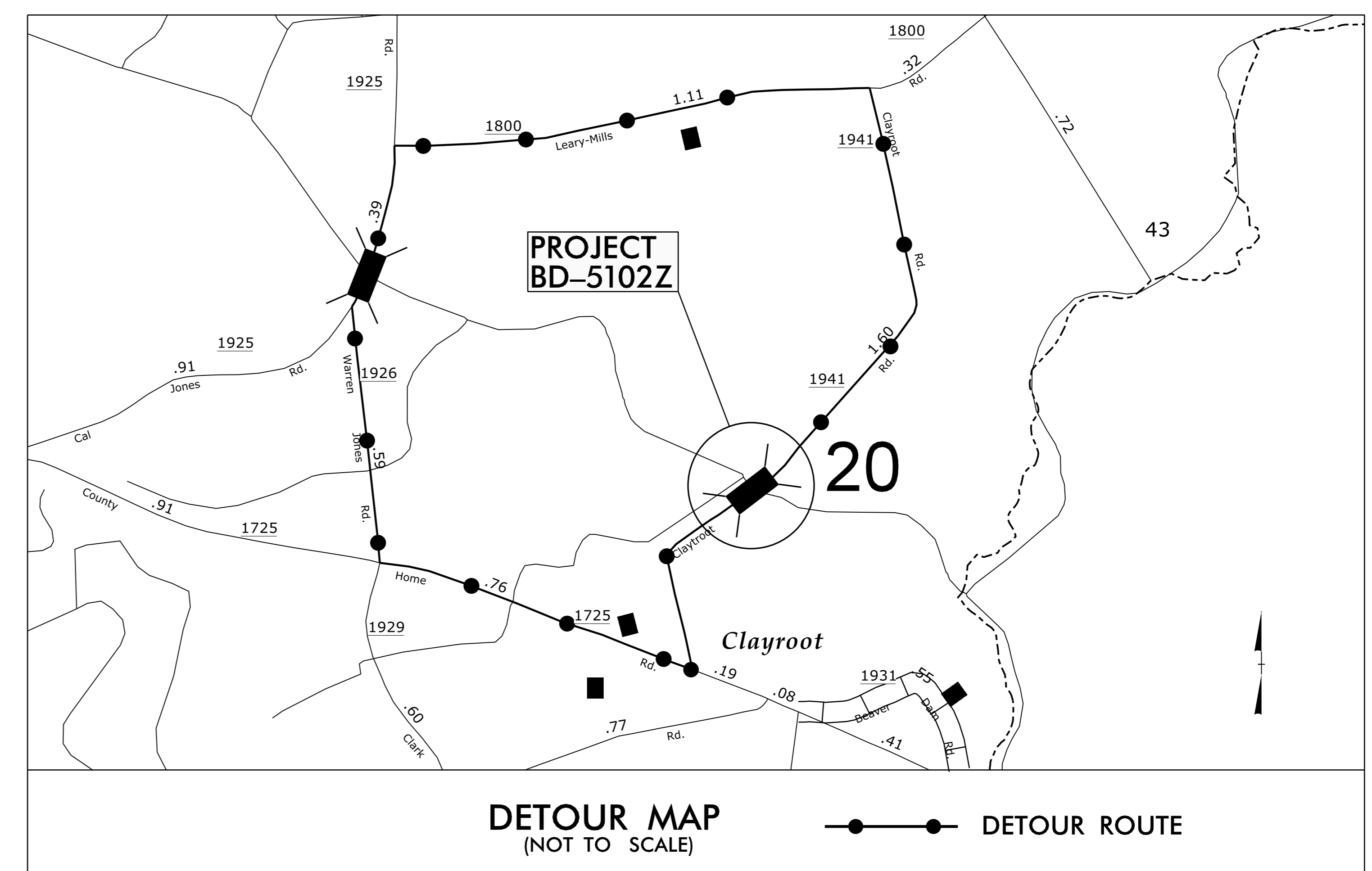
TIP PROJECT:

GENERAL NOTES

IMPLEMENT TRAFFIC CONTROL IN ACCORDANCE WITH THE ROADWAY STANDARD DRAWINGS LISTED ON TMP-1.

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 UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

STATE FORCES WILL INSTALL AND MAINTAIN THE PROJECT DETOUR AND THE TYPE III BARRICADES AT THE PROJECT LIMITS. STATE FORCES WILL INSTALL PAINT AND MARKERS ON THE FINISHED PROJECT. CALL JIM EVANS AT 252-830-3493 FOR COORDINATION.



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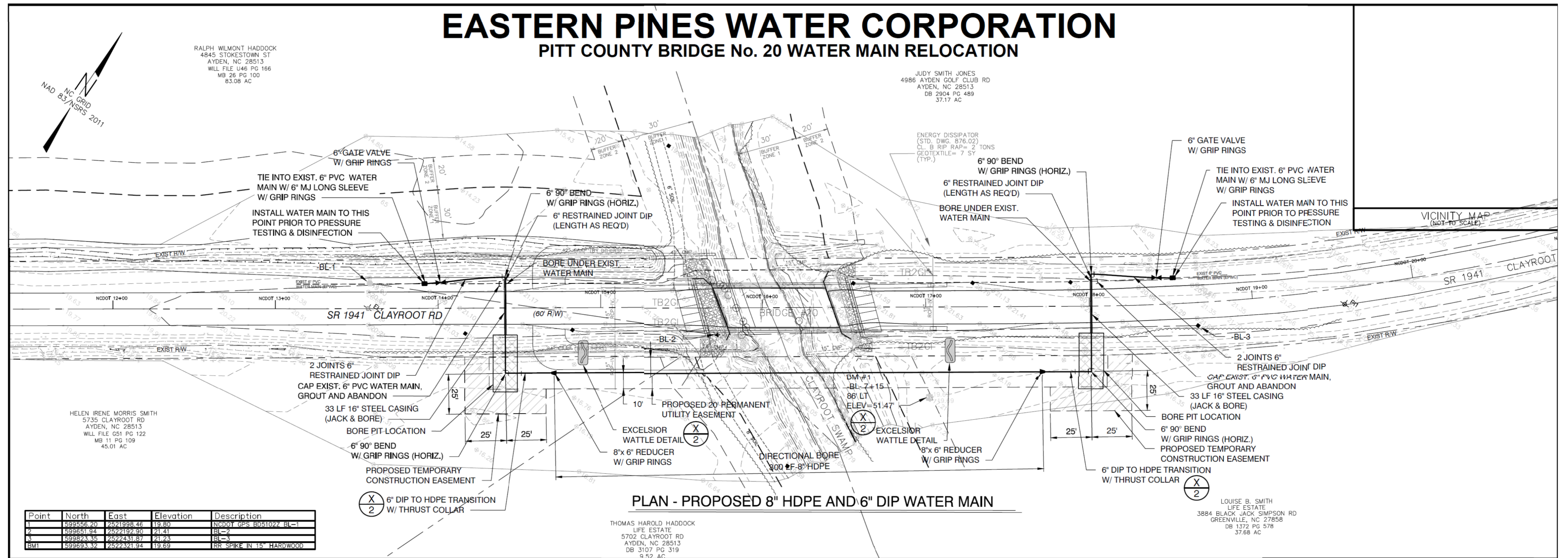
APPROVED: <i>Bryce Edmon</i>	PROJECT NOTES								
SCALE: NONE	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS							
REVISIONS									
DATE: 10/03/13									
DWG. BY: LJ									
DESIGN BY: LJ									
REVIEWED BY: VT	CADD FILE								

UTILITY OWNERS ON PROJECT
 EASTERN PINES WATER CORPORATION (EPWC)

UTILITIES BY OTHERS

NOTE:
 ALL PROPOSED UTILITY WORK
 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS PRIOR TO
 BRIDGE REPLACEMENT.

NOT TO SCALE



Point	North	East	Elevation	Description
1	599555.20	2521998.46	19.80	N0001 GPS 1051072 BL-1
2	599551.94	2521992.90	21.41	BL-2
3	599523.35	2522431.87	21.23	BL-3
BMT	599593.32	2522321.34	19.69	RR SPIKE IN 15' HOLLOWOOD

PLAN - PROPOSED 8" HDPE AND 6" DIP WATER MAIN

THOMAS HAROLD HADDOCK
 LIFE ESTATE
 5702 CLAYROOT RD
 AYDEN, NC 28513
 DB 3107 PG 319
 9.52 AC

LOUISE B. SMITH
 LIFE ESTATE
 3884 BLACK JACK SIMPSON RD
 GREENVILLE, NC 27858
 DB 1372 PG 578
 37.68 AC

5/14/99

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

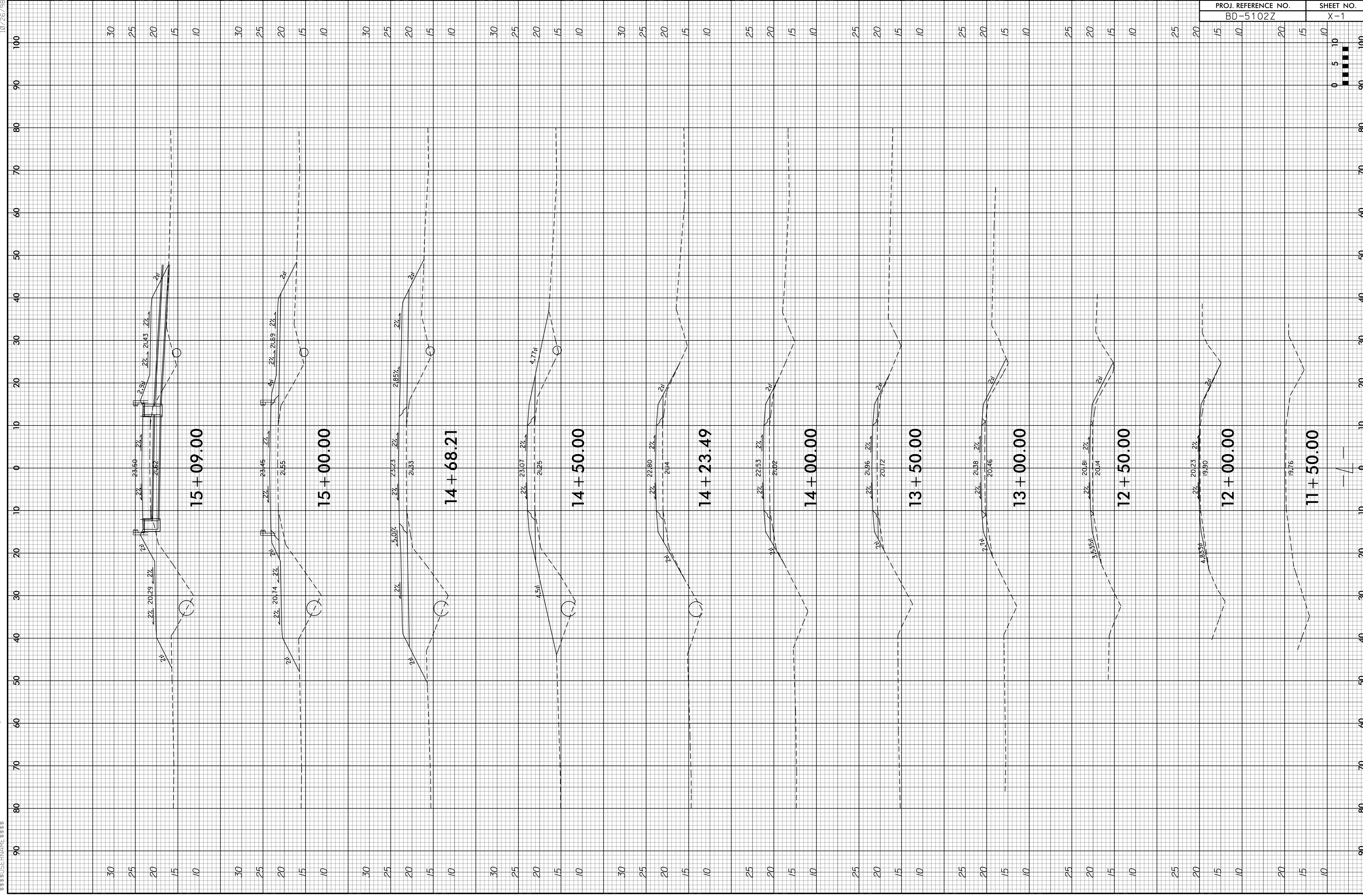
CROSS-SECTION SUMMARY

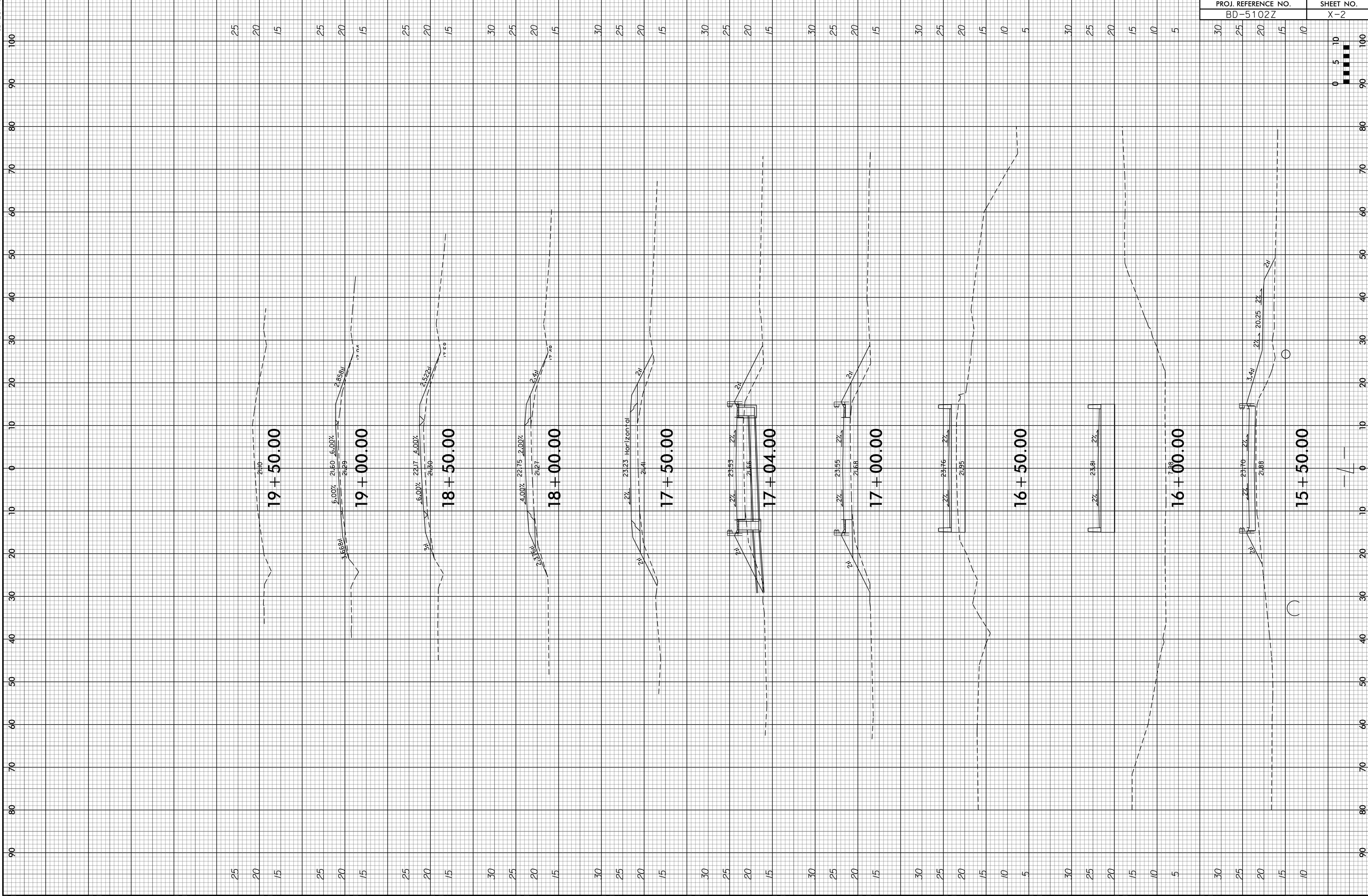
IN CUBIC YARDS

NOTE: Approximate quantities only. Unclassified excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, Removal of Existing Pavement and Breaking of Existing Pavement will be paid for at the contract Lump Sum price for "Grading".

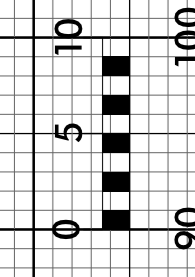
NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT.

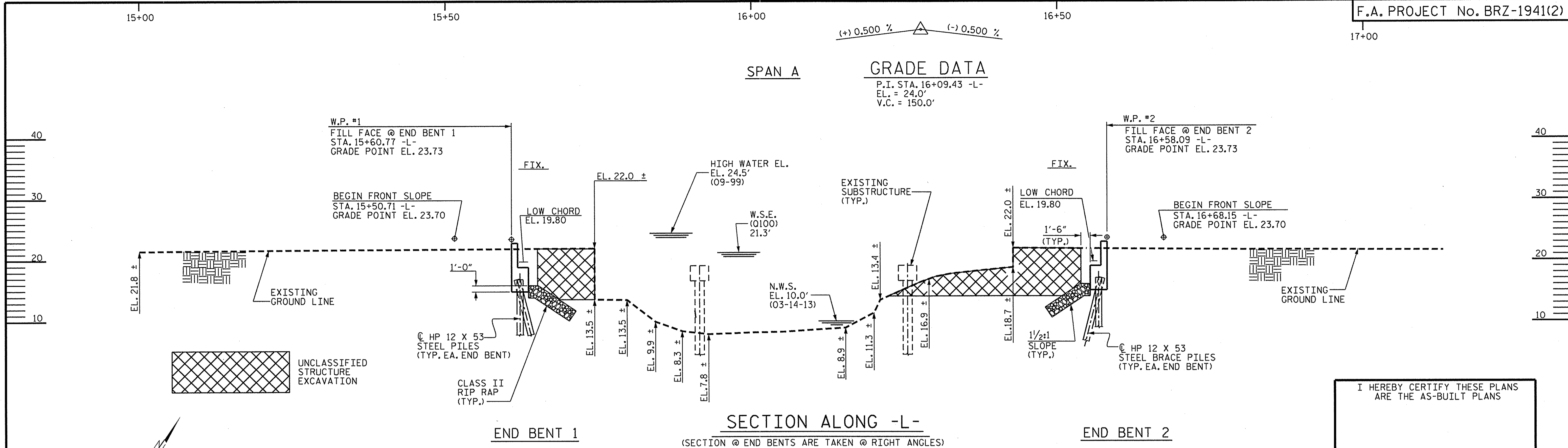
LOCATION (-L-)	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT
<i>12+00.00</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>12+50.00</i>	<i>0</i>	<i>0</i>	<i>24</i>
<i>13+00.00</i>	<i>0</i>	<i>0</i>	<i>35</i>
<i>13+50.00</i>	<i>0</i>	<i>0</i>	<i>32</i>
<i>14+00.00</i>	<i>0</i>	<i>0</i>	<i>28</i>
<i>14+23.49</i>	<i>0</i>	<i>0</i>	<i>16</i>
<i>14+39.07</i>	<i>0</i>	<i>0</i>	<i>40</i>
<i>14+50.00</i>	<i>0</i>	<i>0</i>	<i>60</i>
<i>14+68.21</i>	<i>0</i>	<i>0</i>	<i>182</i>
<i>15+00.00</i>	<i>0</i>	<i>0</i>	<i>392</i>
<i>15+09.00</i>	<i>0</i>	<i>0</i>	<i>99</i>
<i>15+50.00</i>	<i>0</i>	<i>0</i>	<i>308</i>
<i>15+61.93</i>	<i>0</i>	<i>0</i>	<i>32</i>
BRIDGE			
<i>16+56.93</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>16+68.93</i>	<i>0</i>	<i>0</i>	<i>26</i>
<i>17+00.00</i>	<i>0</i>	<i>0</i>	<i>76</i>
<i>17+04.00</i>	<i>0</i>	<i>0</i>	<i>10</i>
<i>17+50.00</i>	<i>0</i>	<i>0</i>	<i>101</i>
<i>18+00.00</i>	<i>0</i>	<i>0</i>	<i>70</i>
<i>18+50.00</i>	<i>0</i>	<i>0</i>	<i>39</i>
<i>19+00.00</i>	<i>0</i>	<i>0</i>	<i>30</i>



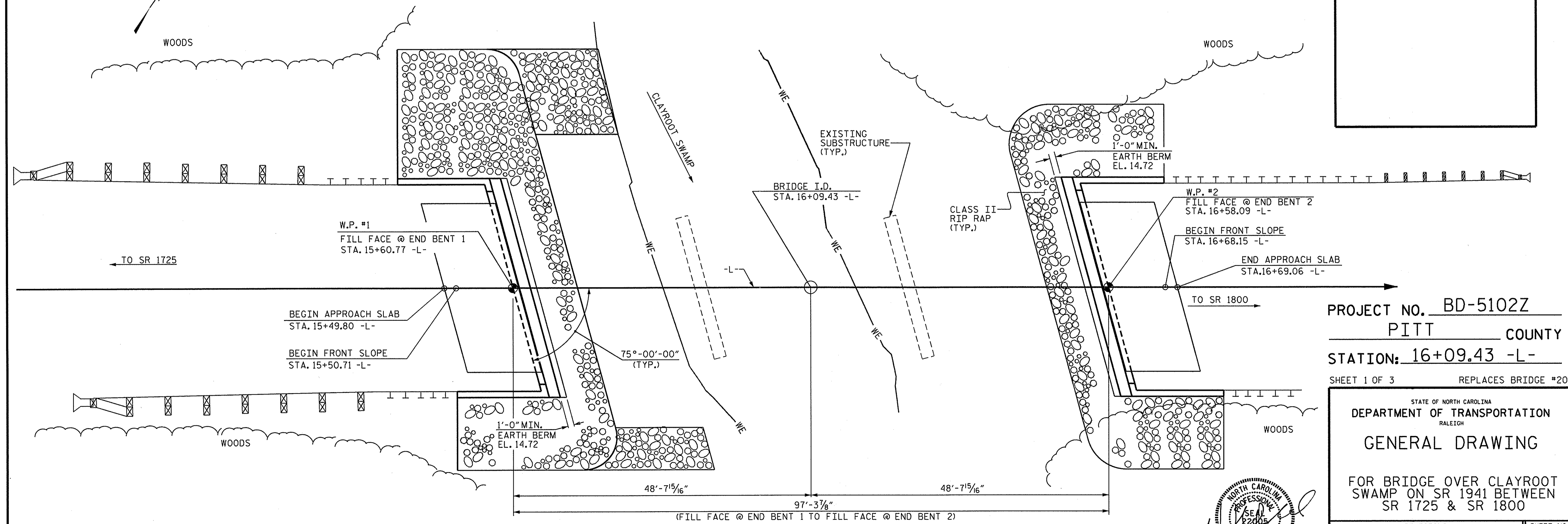


PROJ. REFERENCE NO.		SHEET NO.	
BD-5102Z		X-2	



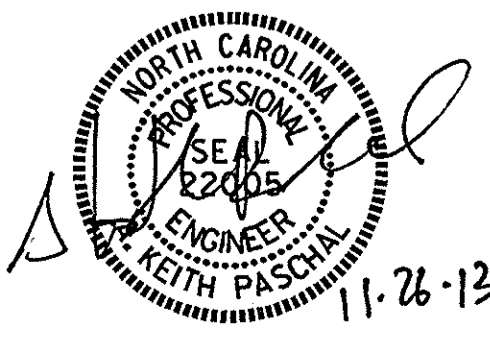


I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS



PLAN

DRAWN BY: M. D. PISO DATE: 10-18-13
 CHECKED BY: C. B. PRUETT DATE: 11-4-13
 DESIGN ENGINEER OF RECORD: A. K. PASCHAL DATE: 11-12-13



PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-
 SHEET 1 OF 3 REPLACES BRIDGE #20

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

FOUNDATION NOTES:

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

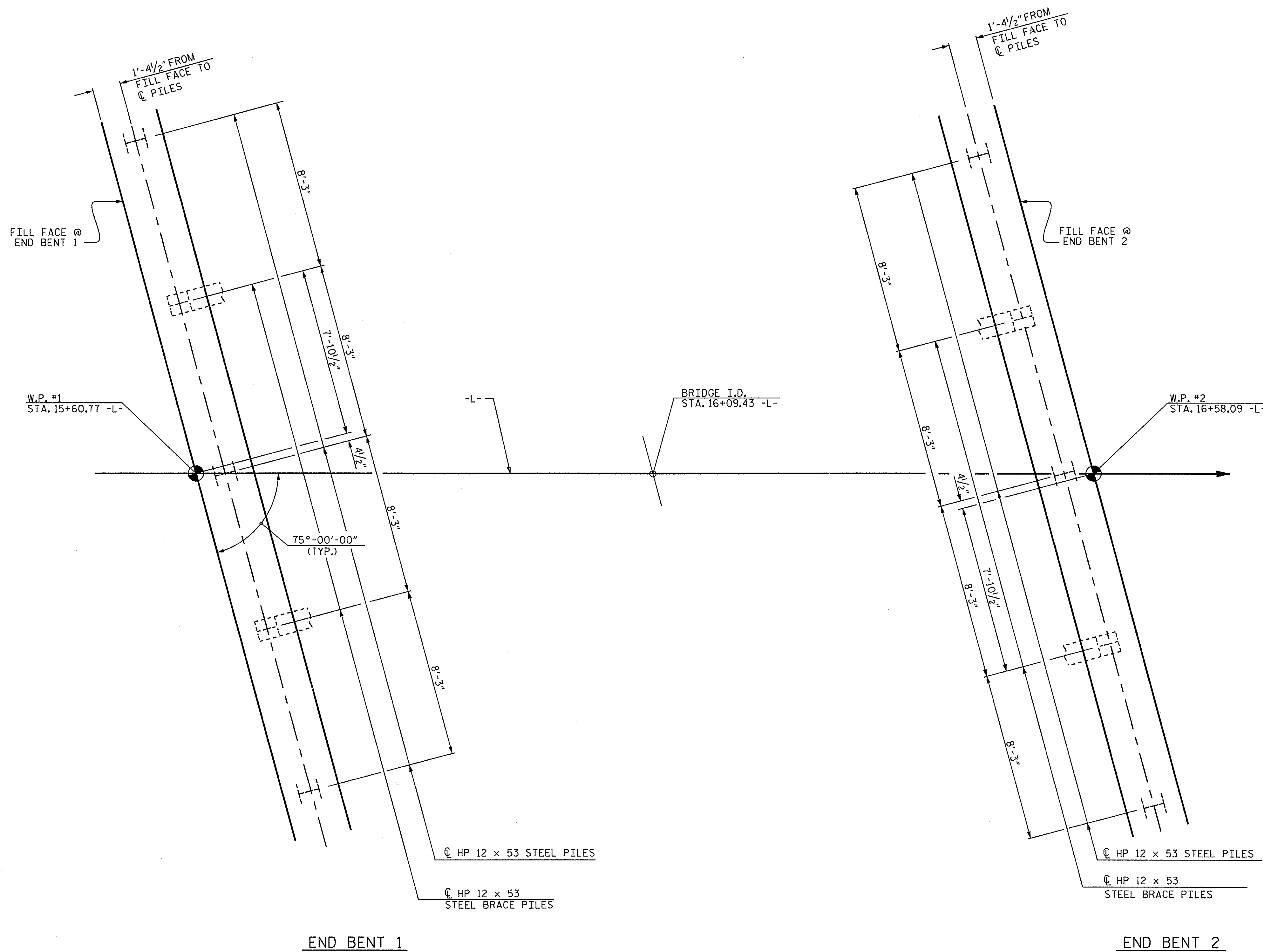
PILES AT END BENT 1 AND 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 135 TONS PER PILE.

DRIVE PILES AT END BENT 1 AND 2 TO A REQUIRED DRIVING RESISTANCE OF 225 TONS PER PILE.

STEEL H-PILE POINTS ARE REQUIRED FOR STEEL H-PILES AT END BENT 1 AND 2. FOR STEEL PILE POINTS, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 50 TO 75 FT. KIPS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT 1 AND END BENT 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.

TESTING THE FIRST PRODUCTION PILE WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS AND FOR PILE DRIVING CRITERIA, SEE PILE DRIVING CRITERIA PROVISION.

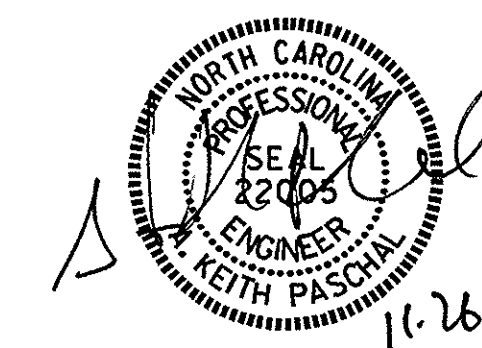


FOUNDATION LAYOUT PLAN

PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE OVER CLAYROOT SWAMP ON SR 1941 BETWEEN SR 1725 & SR 1800

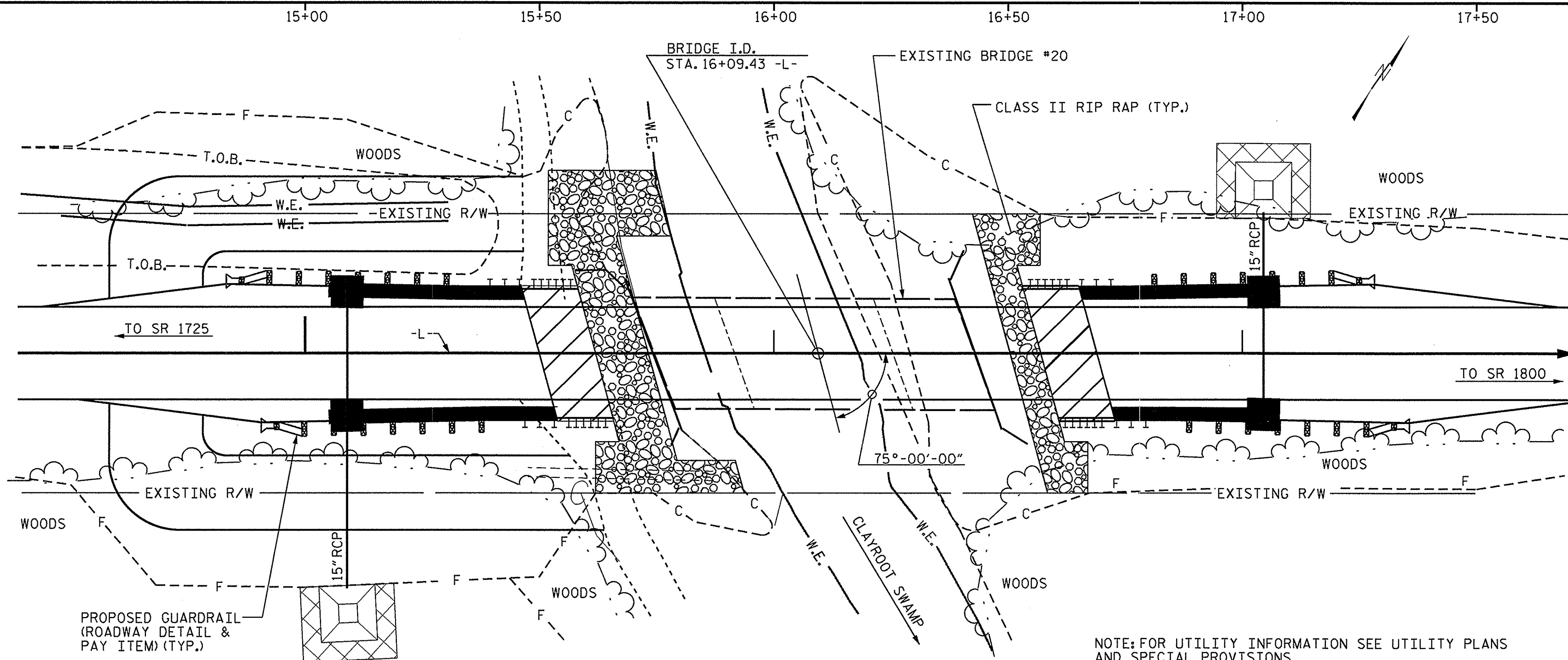


DRAWN BY : M. D. PISO DATE : 10-18-13
 CHECKED BY : C. B. PRUETT DATE : 11-4-13
 DESIGN ENGINEER OF RECORD: A. K. PASCHAL DATE : 11-12-13

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 Kpaschal

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

BENCHMARK "BM1", RAILROAD SPIKE IN 15" HARDWOOD TREE, 56' RT. OF -L- STA. 17+02.00, EL. 19.69'



LOCATION SKETCH

NOTES:

- ASSUMED LIVE LOAD = HL-93 OR ALTERNATIVE LOADING.
- FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.
- THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- THE EXISTING STRUCTURE CONSISTING OF THREE SPANS, 1 @ 17'-9", 1 @ 34'-0" AND 1 @ 17'-8" ON TIMBER JOISTS WITH A CLEAR ROADWAY WIDTH OF 24'-1", A TIMBER FLOOR ON TIMBER JOISTS AND I-BEAMS ON TIMBER CAPS AND PILES AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED.
- THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE PLUS A MINIMUM LAP SPLICE OF 30 BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.
- ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.
- THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA SHALL BE EXCAVATED FOR A DISTANCE OF 30 FT. EACH SIDE OF THE CENTERLINE ROADWAY AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR UNCLASSIFIED STRUCTURE EXCAVATION. SEE SECTION 412 OF THE STANDARD SPECIFICATIONS.
- THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. 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.
- REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING INTO THE WATER. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18-EVALUATING SCOUR AT BRIDGES."
- INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 16+09.43 -L-".

NOTE: FOR UTILITY INFORMATION SEE UTILITY PLANS AND SPECIAL PROVISIONS.

HYDRAULIC DATA

DESIGN DISCHARGE	=	2,500 C.F.S.
FREQUENCY OF DESIGN FLOOD	=	25 YEARS
DESIGN HIGH WATER ELEVATION	=	19.3 FT.
DRAINAGE AREA	=	46 SQ. MILES
BASE DISCHARGE (Q100)	=	4,065 C.F.S.
BASE HIGH WATER ELEVATION	=	21.3 FT.

OVERTOPPING FLOOD DATA

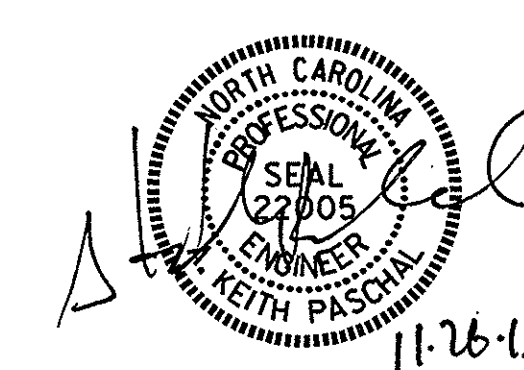
OVERTOPPING DISCHARGE	=	2,600 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	=	25 YEARS (+)
OVERTOPPING FLOOD ELEVATION	=	19.8 FT.

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE	UNCLASSIFIED STRUCTURE EXCAVATION	PDA TESTING	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	HP 12 X 53 STEEL PILES		STEEL PILE POINTS	PILE REDRIVES	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 3'-3" PRESTRESSED CONC. BOX BEAMS	
	LUMP SUM	LUMP SUM	EA.	CU. YDS.	LUMP SUM	LBS.	NO.	LIN. FT.	EA.	EA.	LIN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LIN. FT.
SUPERSTRUCTURE					LUMP SUM						190.0			LUMP SUM	10	950.0
END BENT 1				28.0		4,461	5	400	5	3		113	126			
END BENT 2				28.0		4,461	5	400	5	3		61	68			
TOTAL	LUMP SUM	LUMP SUM	1	56.0	LUMP SUM	8,922	10	800	10	6	190.0	174	194	LUMP SUM	10	950.0

DRAWN BY: M. D. PISO DATE: 10-21-13
 CHECKED BY: C. B. PRUETT DATE: 11-4-13
 DESIGN ENGINEER OF RECORD: A. K. PASCHAL DATE: 11-12-13

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PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE OVER CLAYROOT SWAMP ON SR 1941 BETWEEN SR 1725 & SR 1800

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

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

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			
						MOMENT					SHEAR					MOMENT								
						LIVELOAD FACTORS	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)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN		GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING	HL-93(Inv)	N/A	1	1.335	--	1.75	0.268	1.52	A	EL	46.724	0.574	1.35	A	EL	9.345	0.80	0.268	1.34	A	EL	46.724		
	HL-93(0pr)	N/A	--	1.752	--	1.35	0.268	1.97	A	EL	46.724	0.574	1.75	A	EL	9.345	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	2	1.784	64.228	1.75	0.268	2.09	A	EL	46.724	0.574	1.78	A	EL	9.345	0.80	0.268	1.84	A	EL	46.724		
	HS-20(0pr)	36.000	--	2.313	83.258	1.35	0.268	2.71	A	EL	46.724	0.574	2.31	A	EL	9.345	N/A	--	--	--	--	--		
LEGAL LOAD RATING	SV	SNSH	13.500	--	4.32	58.323	1.4	0.268	6.14	A	EL	46.724	0.574	5.46	A	EL	9.345	0.80	0.268	4.32	A	EL	46.724	
		SNGARBS2	20.000	--	3.143	62.855	1.4	0.268	4.47	A	EL	46.724	0.574	3.83	A	EL	9.345	0.80	0.268	3.14	A	EL	46.724	
		SNAGRIS2	22.000	--	2.945	64.794	1.4	0.268	4.19	A	EL	46.724	0.574	3.54	A	EL	9.345	0.80	0.268	2.95	A	EL	46.724	
		SNCOTTS3	27.250	--	2.148	58.522	1.4	0.268	3.05	A	EL	46.724	0.574	2.72	A	EL	9.345	0.80	0.268	2.15	A	EL	46.724	
		SNAGGRS4	34.925	--	1.765	61.649	1.4	0.268	2.51	A	EL	46.724	0.574	2.22	A	EL	9.345	0.80	0.268	1.77	A	EL	46.724	
		SNS5A	35.550	--	1.728	61.435	1.4	0.268	2.46	A	EL	46.724	0.574	2.24	A	EL	9.345	0.80	0.268	1.73	A	EL	46.724	
		SNS6A	39.950	--	1.573	62.861	1.4	0.268	2.24	A	EL	46.724	0.574	2.03	A	EL	9.345	0.80	0.268	1.57	A	EL	46.724	
	TTST	TNAGRIT3	33.000	--	1.915	63.203	1.4	0.268	2.72	A	EL	46.724	0.574	2.42	A	EL	9.345	0.80	0.268	1.92	A	EL	46.724	
		TNT4A	33.075	--	1.92	63.518	1.4	0.268	2.73	A	EL	46.724	0.574	2.37	A	EL	9.345	0.80	0.268	1.92	A	EL	46.724	
		TNT6A	41.600	--	1.559	64.849	1.4	0.268	2.22	A	EL	46.724	0.574	2.07	A	EL	9.345	0.80	0.268	1.56	A	EL	46.724	
		TNT7A	42.000	--	1.561	65.548	1.4	0.268	2.22	A	EL	46.724	0.574	2.04	A	EL	9.345	0.80	0.268	1.56	A	EL	46.724	
		TNT7B	42.000	--	1.6	67.198	1.4	0.268	2.28	A	EL	46.724	0.574	1.94	A	EL	9.345	0.80	0.268	1.60	A	EL	46.724	
		TNAGRIT4	43.000	--	1.533	65.913	1.4	0.268	2.18	A	EL	46.724	0.574	1.88	A	EL	9.345	0.80	0.268	1.53	A	EL	46.724	
		TNACT5A	45.000	--	1.45	65.269	1.4	0.268	2.06	A	EL	46.724	0.574	1.85	A	EL	9.345	0.80	0.268	1.45	A	EL	46.724	
TNACT5B	45.000	3	1.437	64.685	1.4	0.268	2.04	A	EL	46.724	0.574	1.79	A	EL	9.345	0.80	0.268	1.44	A	EL	46.724			

LOAD FACTORS:

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

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)

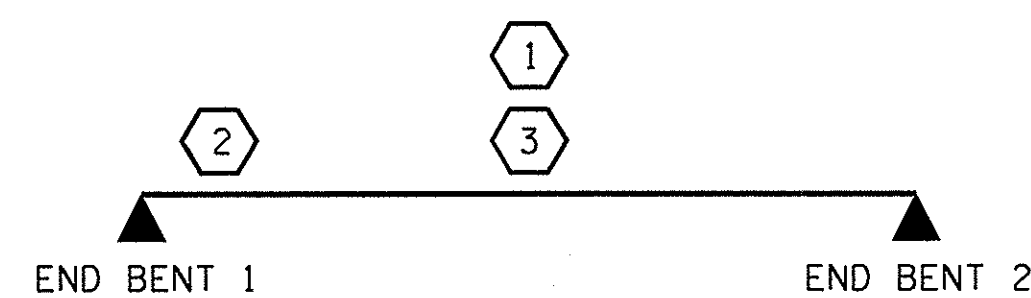
② DESIGN LOAD RATING (HS-20)

③ LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

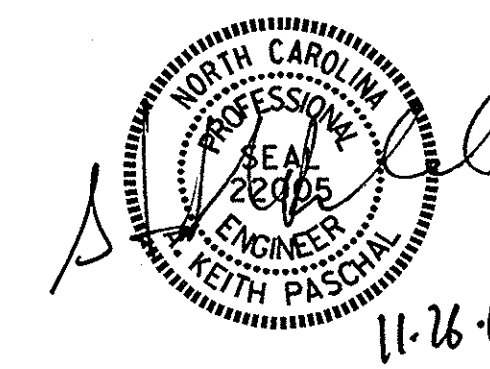
GIRDER LOCATION

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



LRFR SUMMARY
FOR SPAN 'A'

PROJECT NO. BD-5102Z
PITT COUNTY
STATION: 16+09.43 -L-



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
LRFR SUMMARY FOR
95' BOX BEAM UNIT
75° SKEW & 105° SKEW
(NON-INTERSTATE TRAFFIC)

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

ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
CHECKED BY : M. D. PISO DATE : 10/25/13
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 BACKERS ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER, SEE SECTION 1028 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 5500 PSI.

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

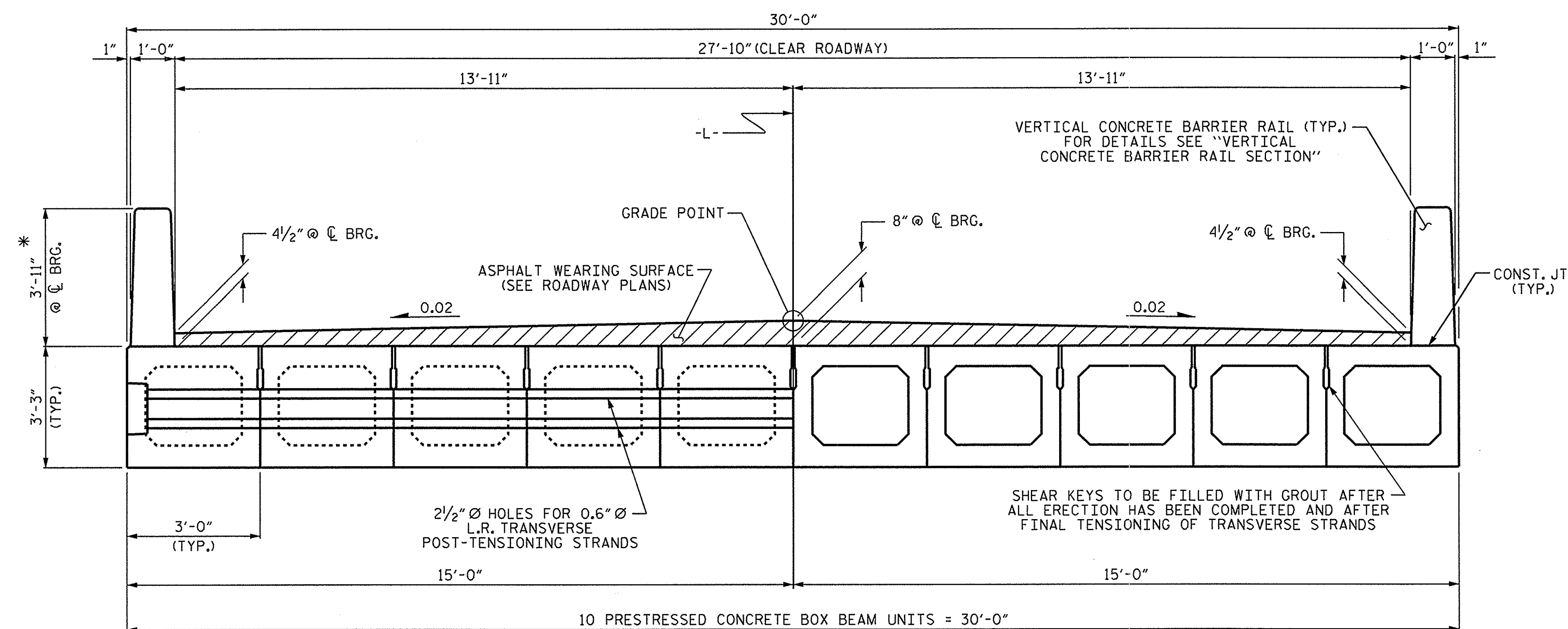
PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE BOX BEAM UNIT ENDS.

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.

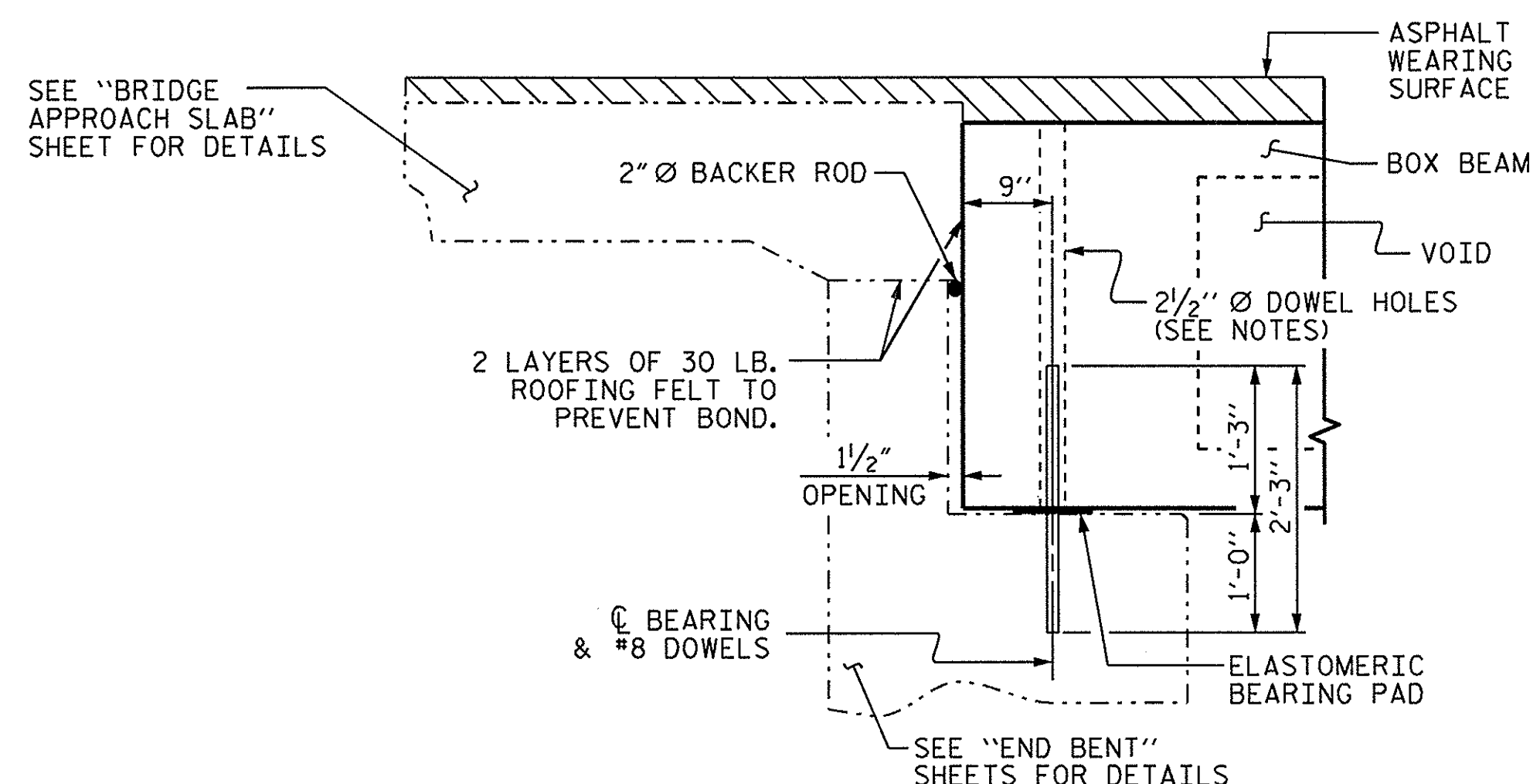
FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.



HALF SECTION AT INTERMEDIATE DIAPHRAGMS
 HALF SECTION THROUGH VOIDS
TYPICAL SECTION

* 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. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

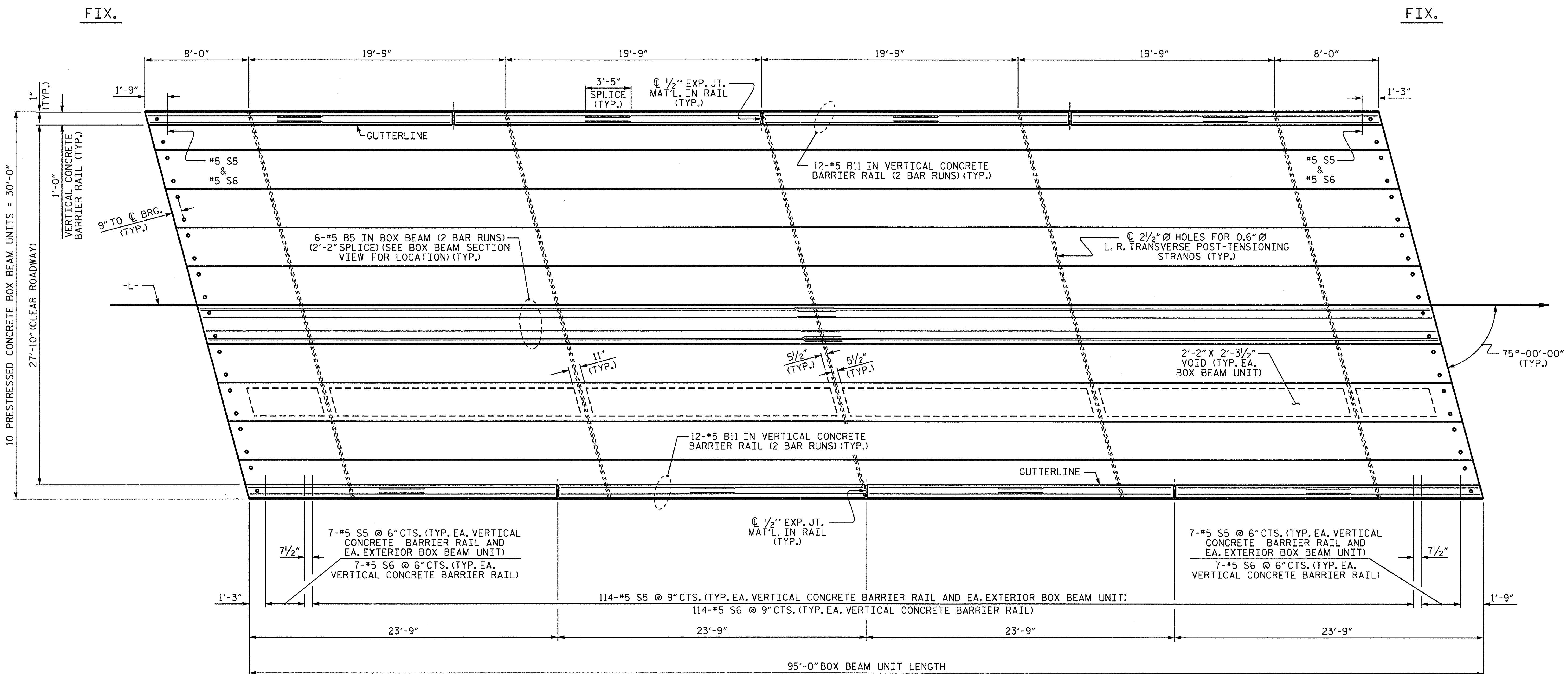
SHEET 1 OF 5

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

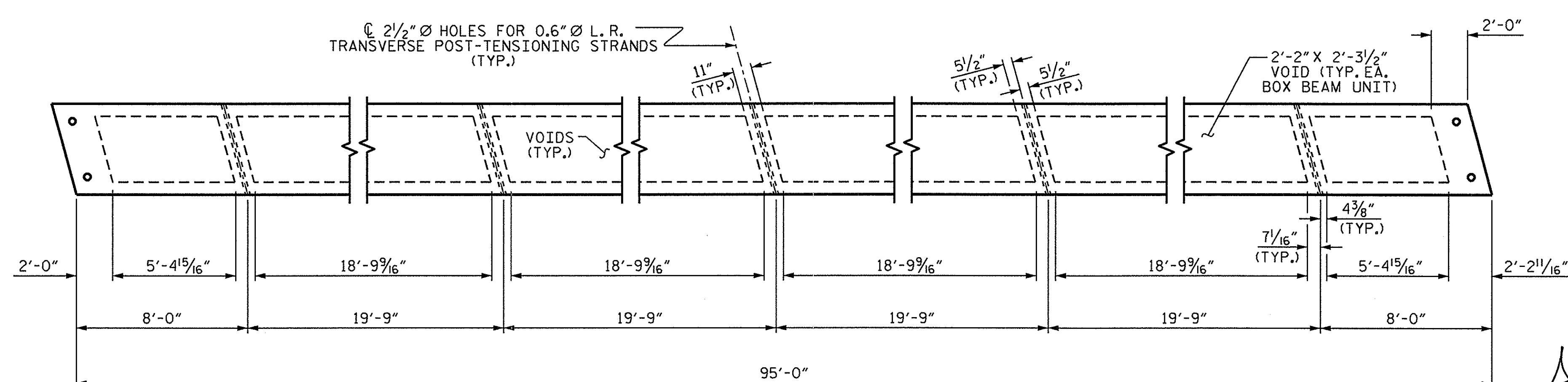


ASSEMBLED BY : C. B. PRUETT	DATE : 10/17/13
CHECKED BY : M. D. PISO	DATE : 10/25/13
DRAWN BY : DGE 8/II	
CHECKED BY : TMC 11/II	

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



PLAN OF UNIT



DIAPHRAGM AND VOID LAYOUT

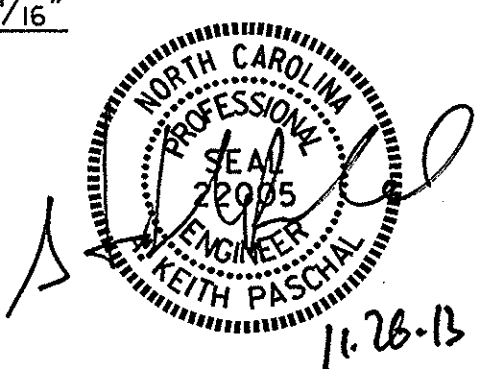
PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 2 OF 5

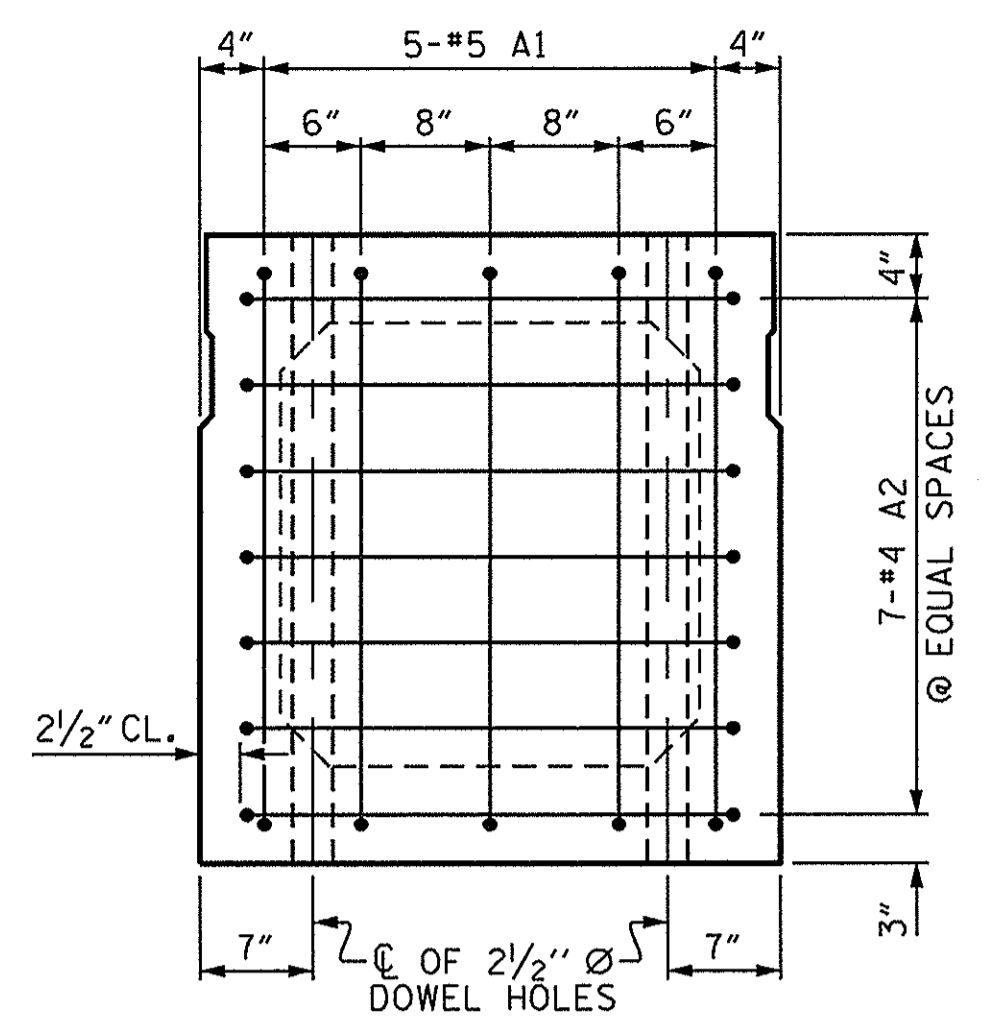
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF 95' UNIT
 27'-10" CLEAR ROADWAY
 75° SKEW

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

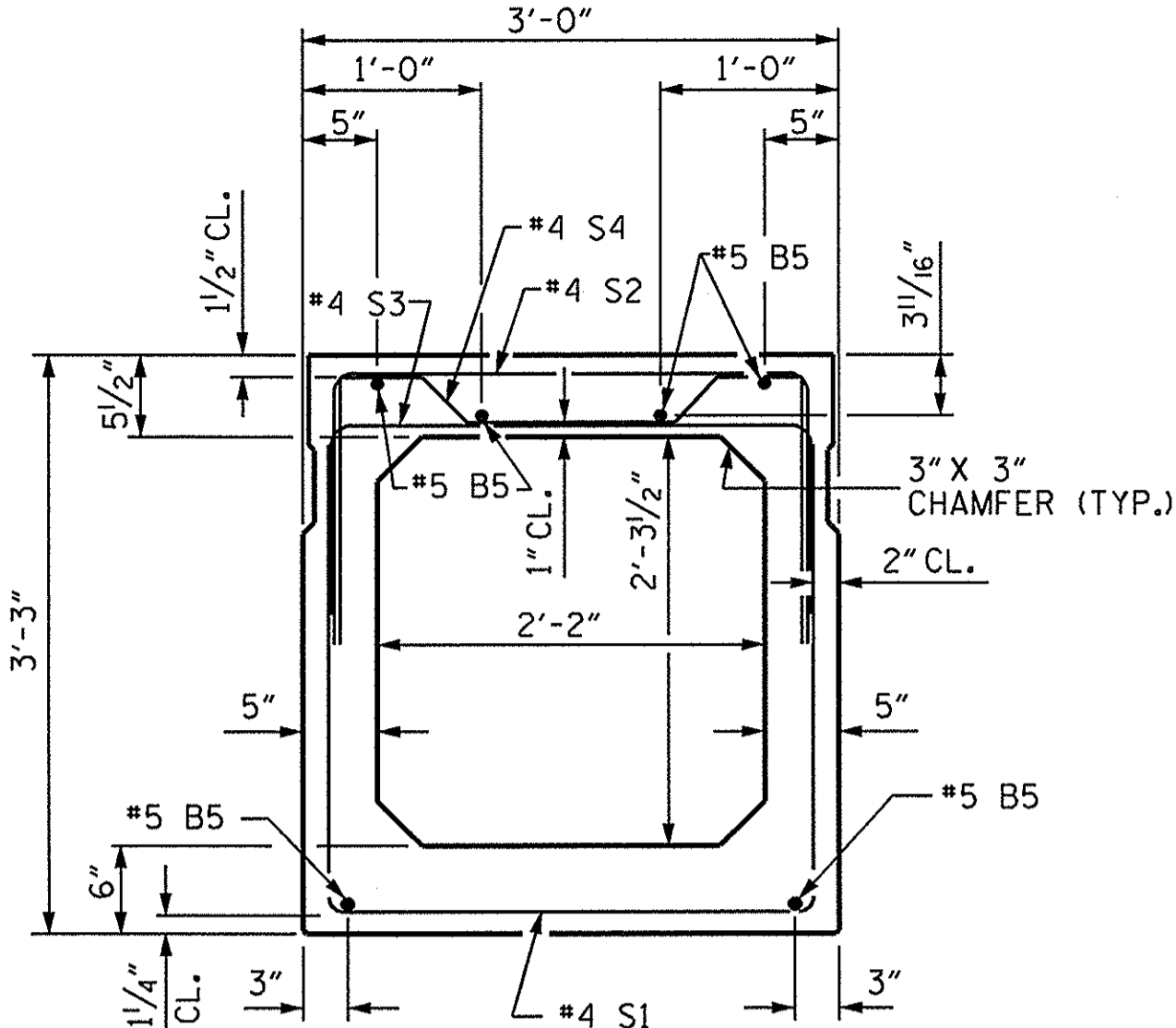


ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
 CHECKED BY : M. D. PISO DATE : 10/25/13
 DRAWN BY : DGE 8/11
 CHECKED BY : TMG 11/11



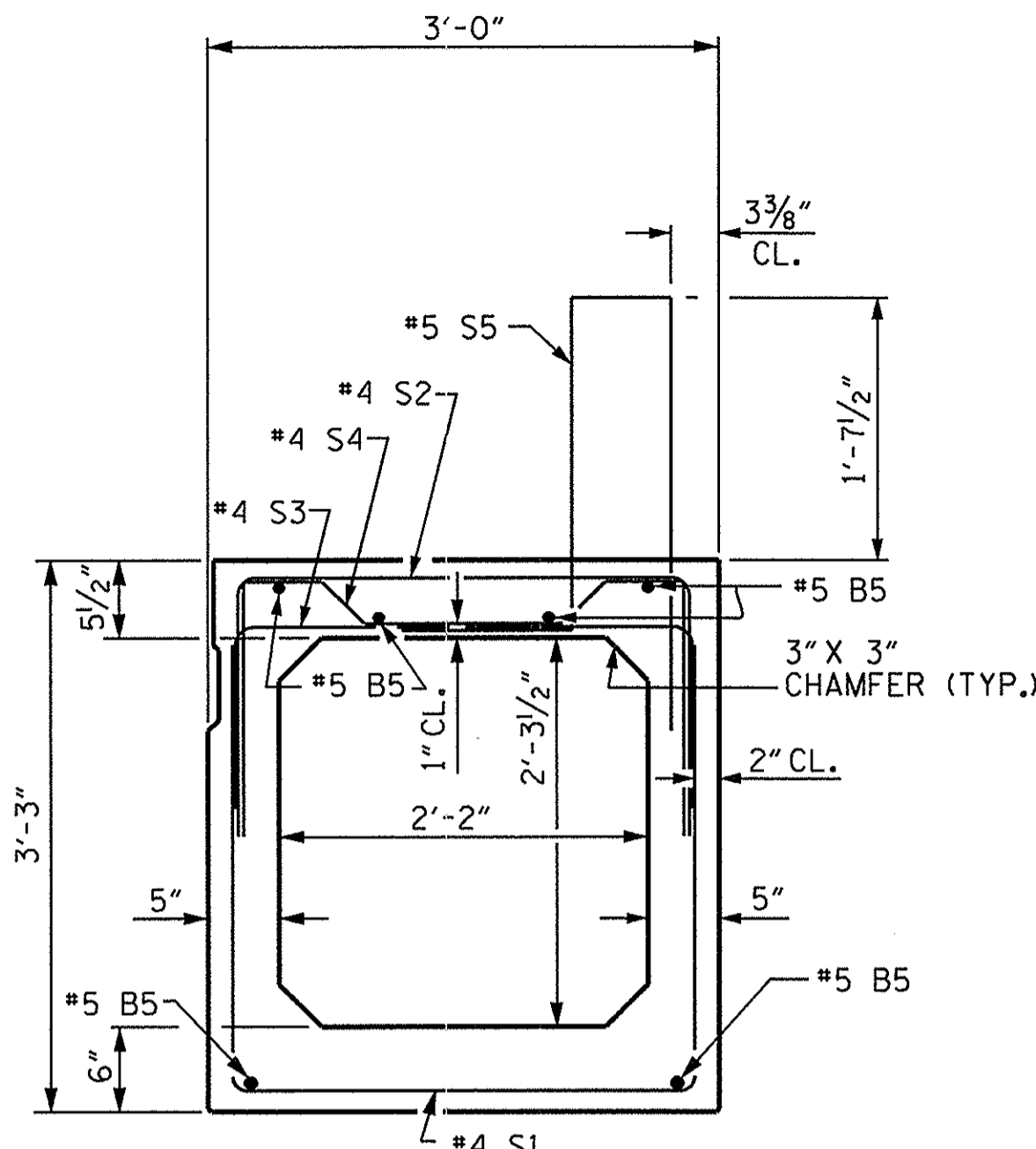
END ELEVATION

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

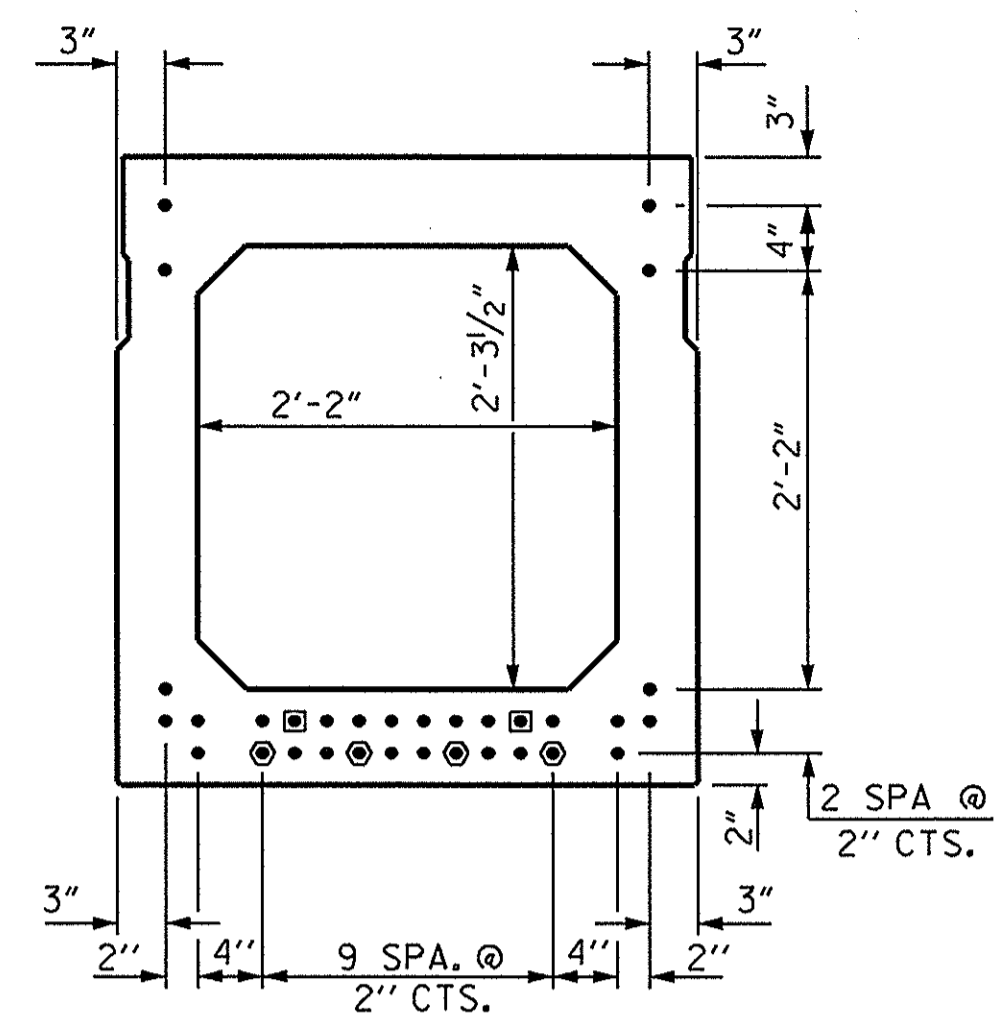
(STRAND LAYOUT NOT SHOWN)



EXTERIOR BOX BEAM SECTION

(STRAND LAYOUT NOT SHOWN)

0.6" Ø LOW RELAXATION STRAND LAYOUT



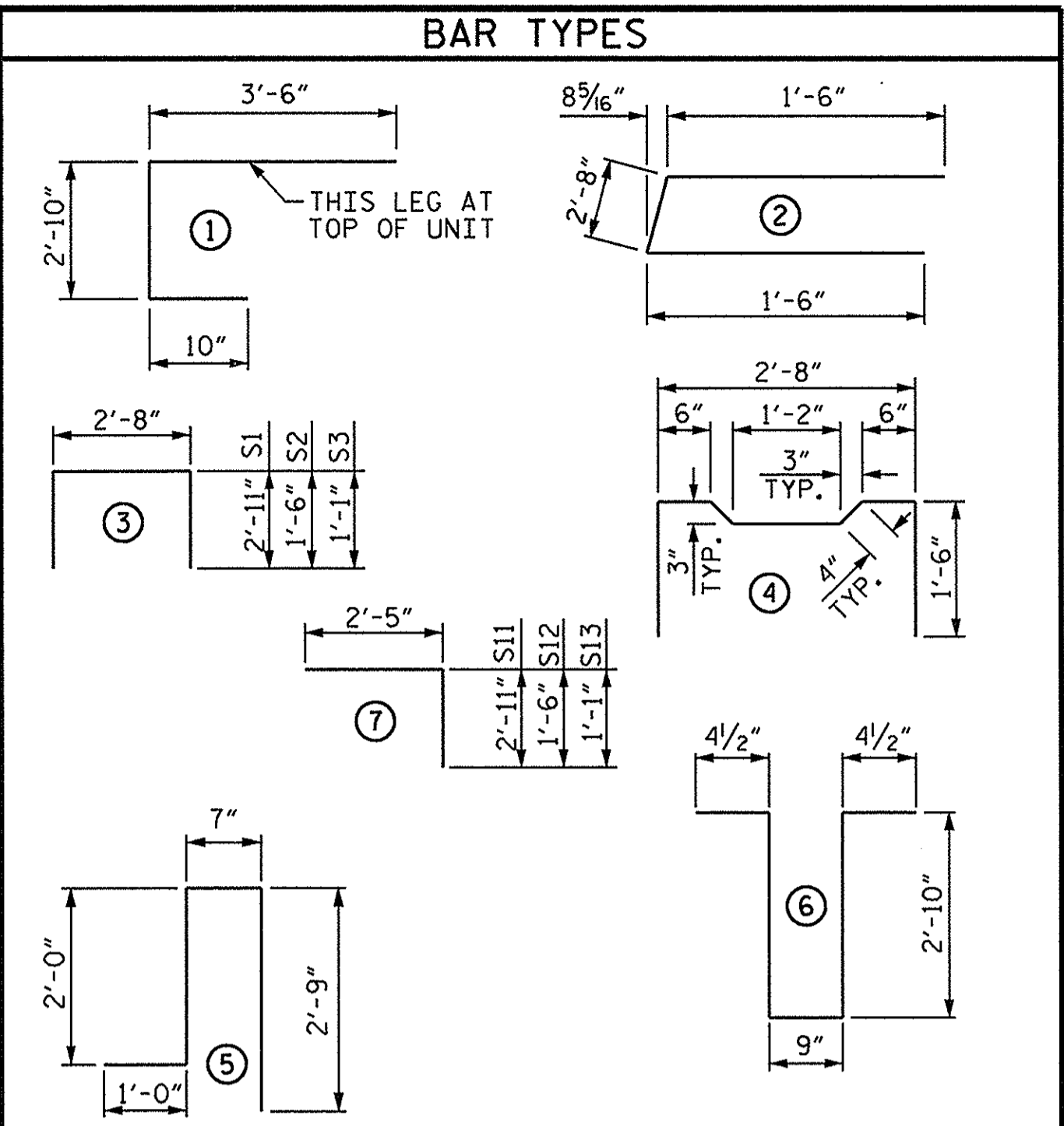
TYPICAL STRAND LOCATION

(32 STRANDS REQUIRED)

DEBONDING LEGEND

- FULLY BONDED STRANDS
- ◐ STRANDS DEBONDED FOR 4'-0" FROM END OF GIRDER
- ◑ STRANDS DEBONDED FOR 12'-0" FROM END OF GIRDER

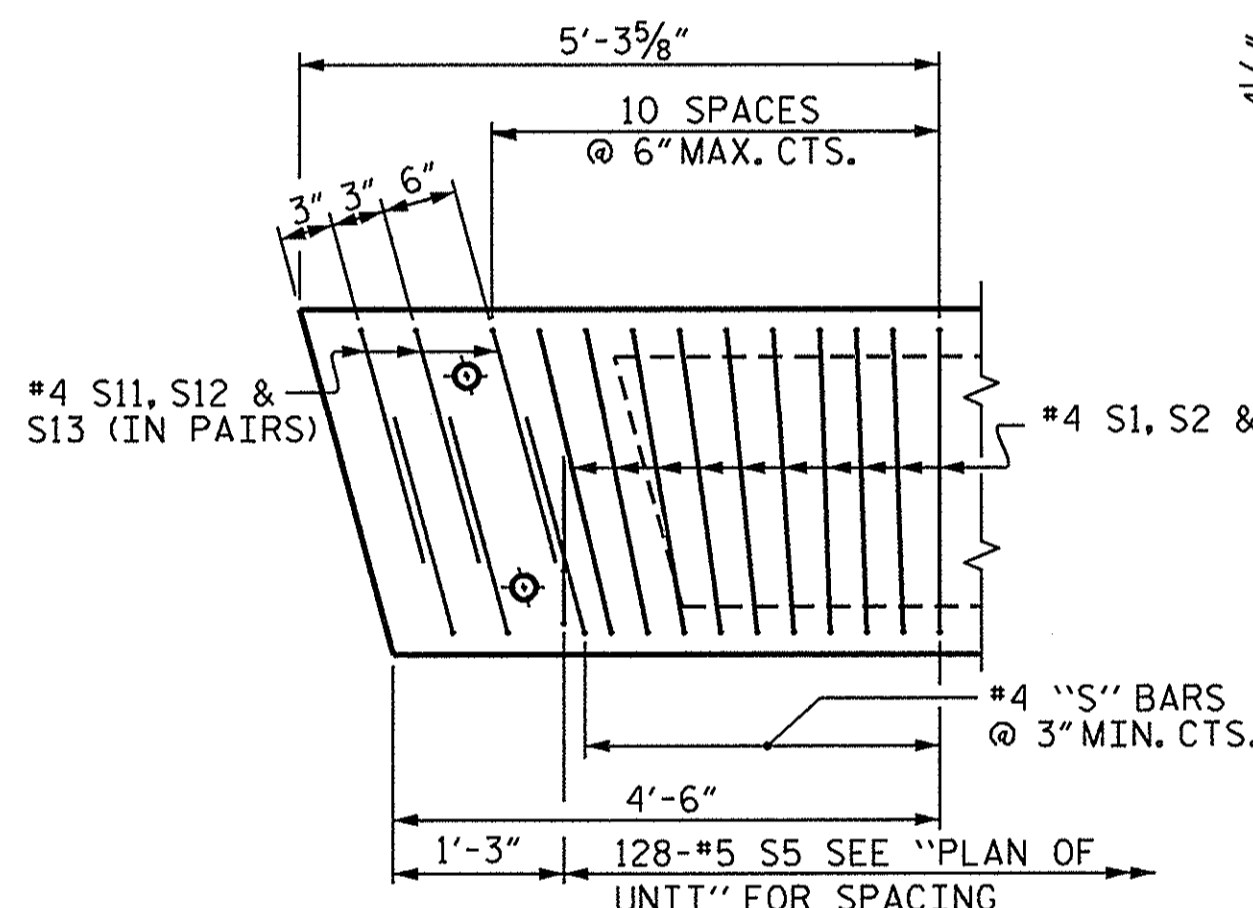
BOND SHALL BE BROKEN ON STRANDS AS SHOWN FOR THE SPECIFIED LENGTH FROM EACH END OF THE BOX BEAM. SEE STANDARD SPECIFICATIONS ARTICLE 1078-7.



ALL BAR DIMENSIONS ARE OUT TO OUT

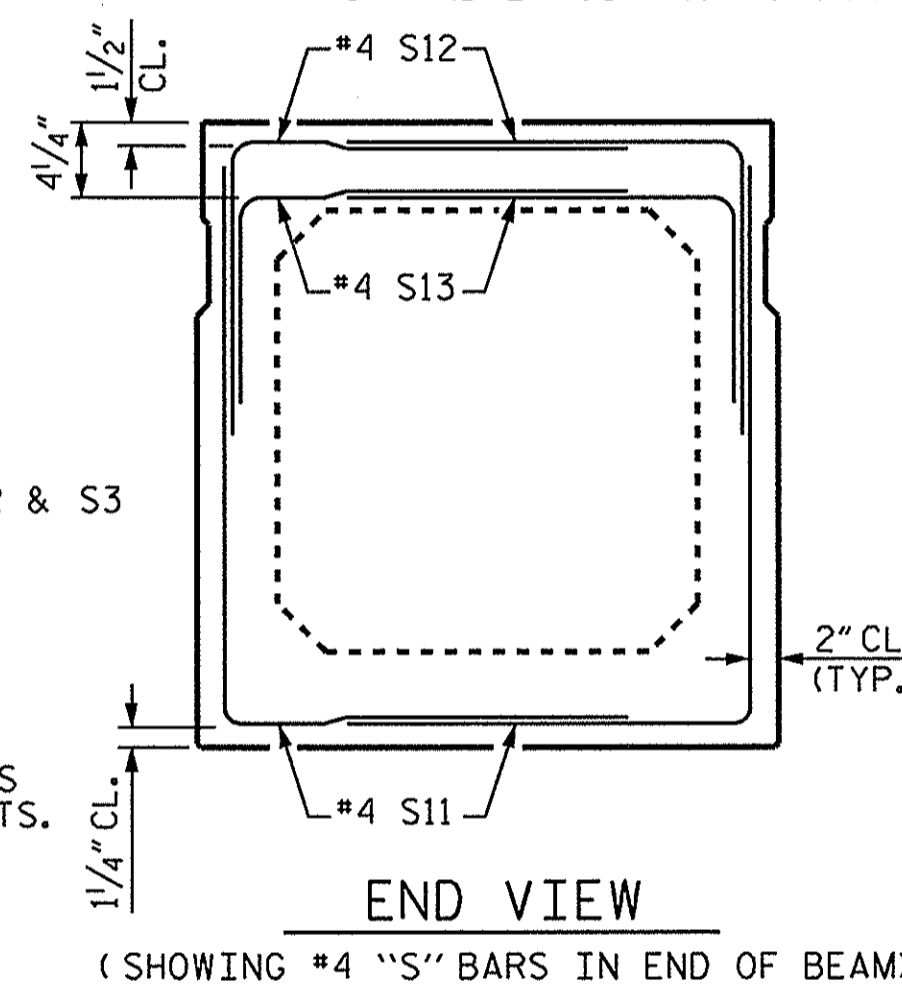
BILL OF MATERIAL FOR ONE BOX BEAM SECTION

BAR	NUMBER	SIZE	TYPE	EXTERIOR UNIT		INTERIOR UNIT	
				LENGTH	WEIGHT	LENGTH	WEIGHT
A1	10	#5	1	7'-2"	75	7'-2"	75
A2	44	#4	2	5'-8"	167	5'-8"	167
B5	12	#5	STR	48'-5"	606	48'-5"	606
K1	15	#4	6	7'-2"	72	7'-2"	72
K2	10	#4	STR	2'-7"	17	2'-7"	17
S1	77	#4	3	8'-6"	437	8'-6"	437
S2	77	#4	3	5'-8"	291	5'-8"	291
S3	133	#4	3	4'-10"	429	4'-10"	429
S4	56	#4	4	5'-10"	218	5'-10"	218
S11	12	#4	7	5'-4"	43	5'-4"	43
S12	12	#4	7	3'-11"	31	3'-11"	31
S13	12	#4	7	3'-6"	28	3'-6"	28
* S5	128	#5	5	6'-4"	846	--	--
REINFORCING STEEL				2414	LBS.	2414	LBS.
* EPOXY COATED REINF. STEEL				846	LBS.		
7500 P.S.I. CONCRETE				18.7	CU. YDS.	18.5	CU. YDS.
0.6" Ø L.R. STRANDS				No. 32		No. 32	



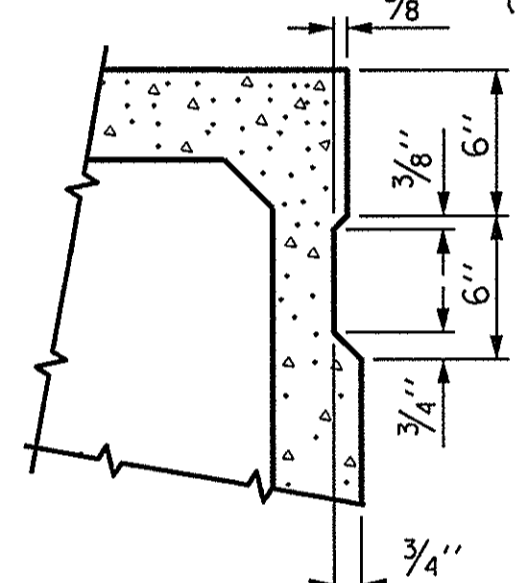
DETAIL "B"

EXTERIOR UNIT SHOWN, INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S5 BARS. "B" BARS AND "A" BARS NOT SHOWN.



END VIEW

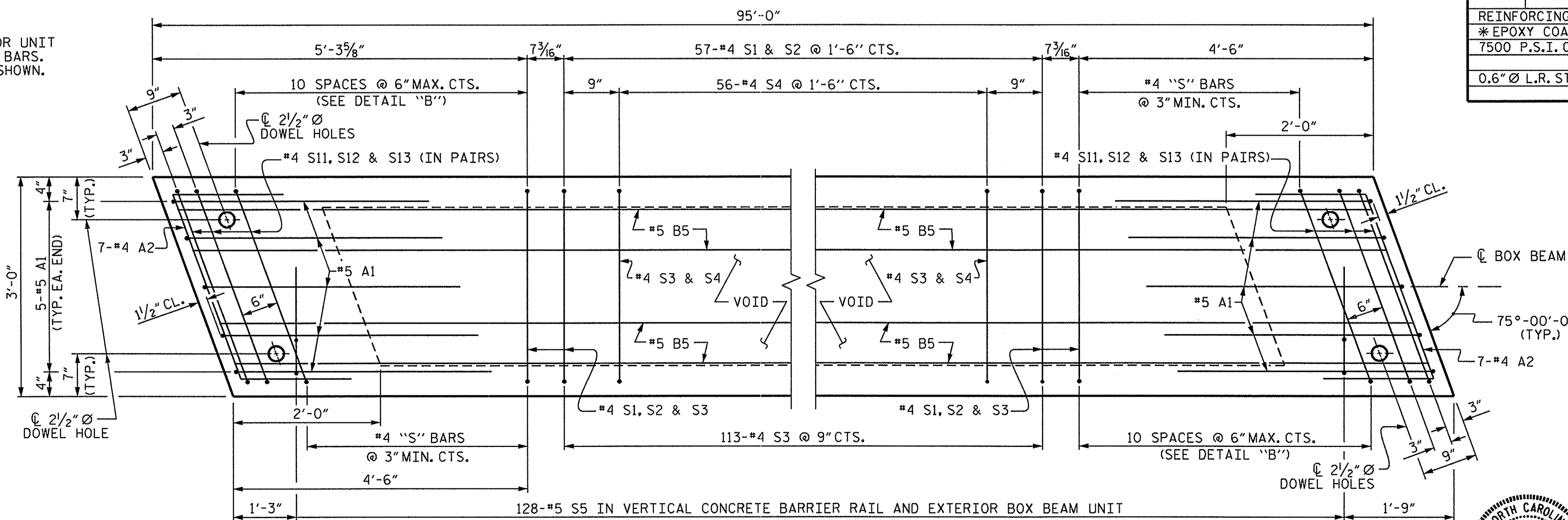
(SHOWING #4 "S" BARS IN END OF BEAM)



SHEAR KEY DETAIL

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

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



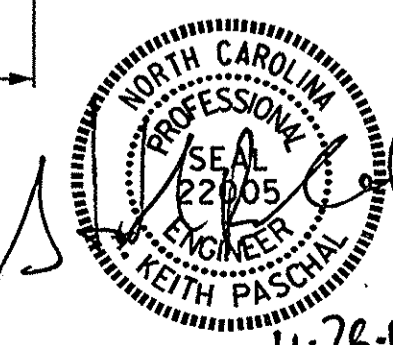
PLAN OF BOX BEAM

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.

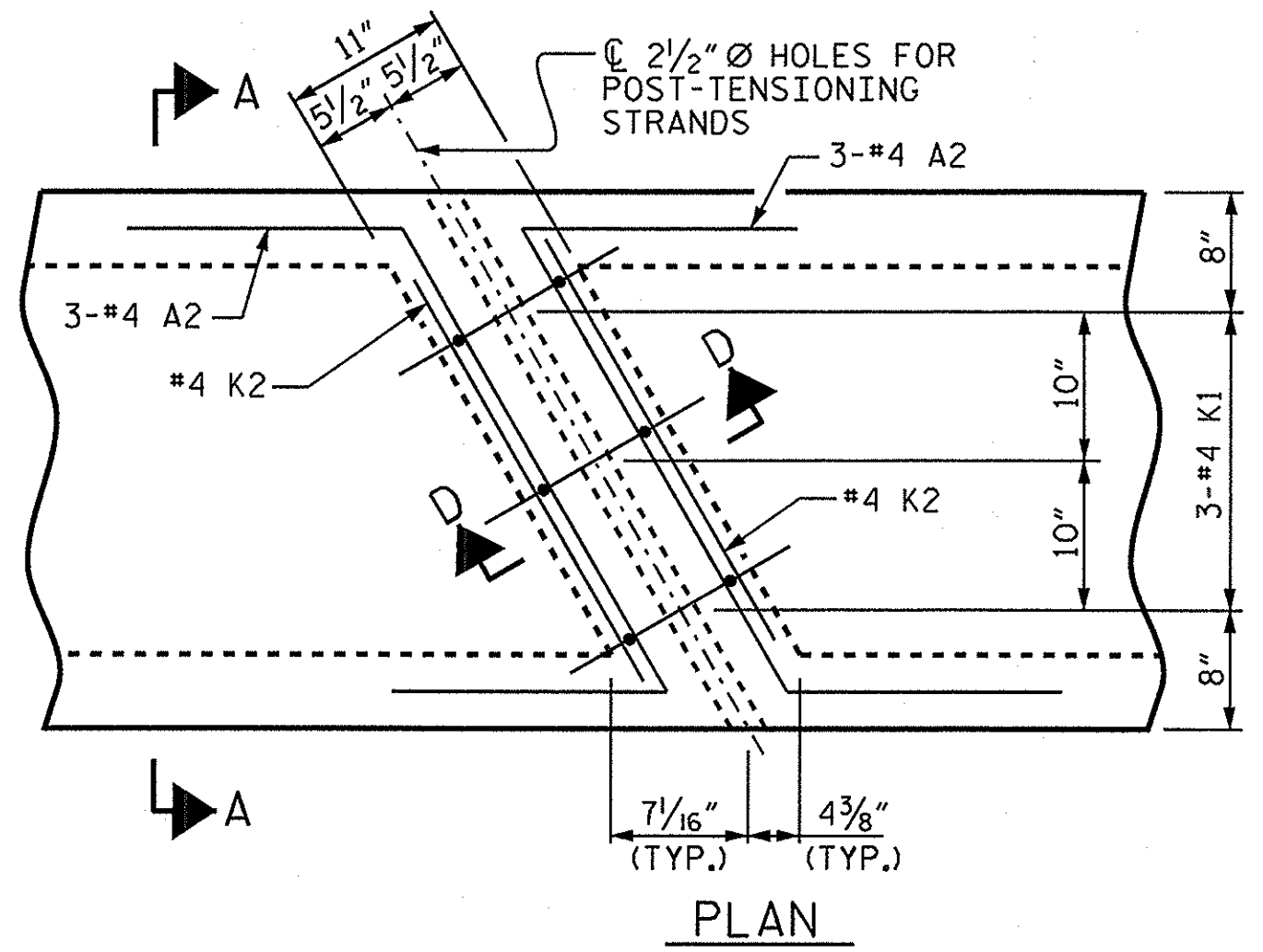
PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 3 OF 5

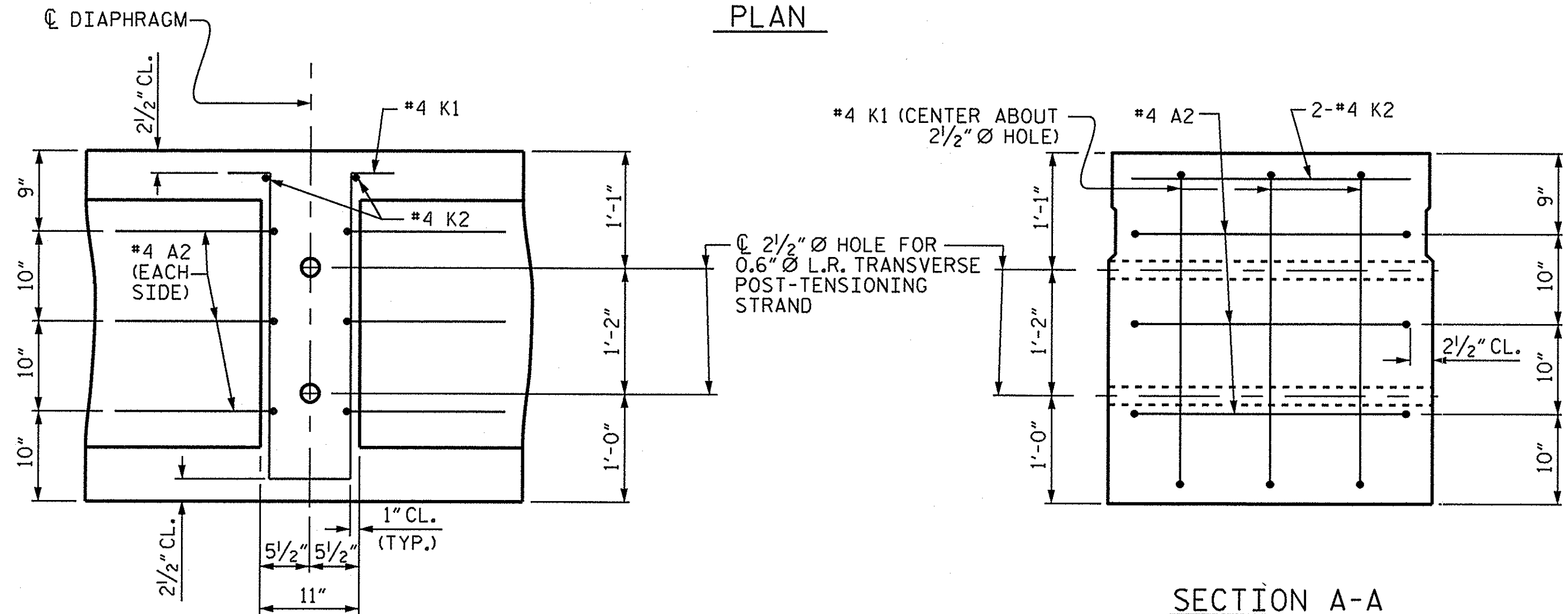
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD					
3'-0" X 3'-3" PRESTRESSED CONCRETE BOX BEAM UNIT					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		



ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
 CHECKED BY : M. D. PISO DATE : 10/25/13
 DRAWN BY : DGE II/II
 CHECKED BY : TMG II/II



PLAN

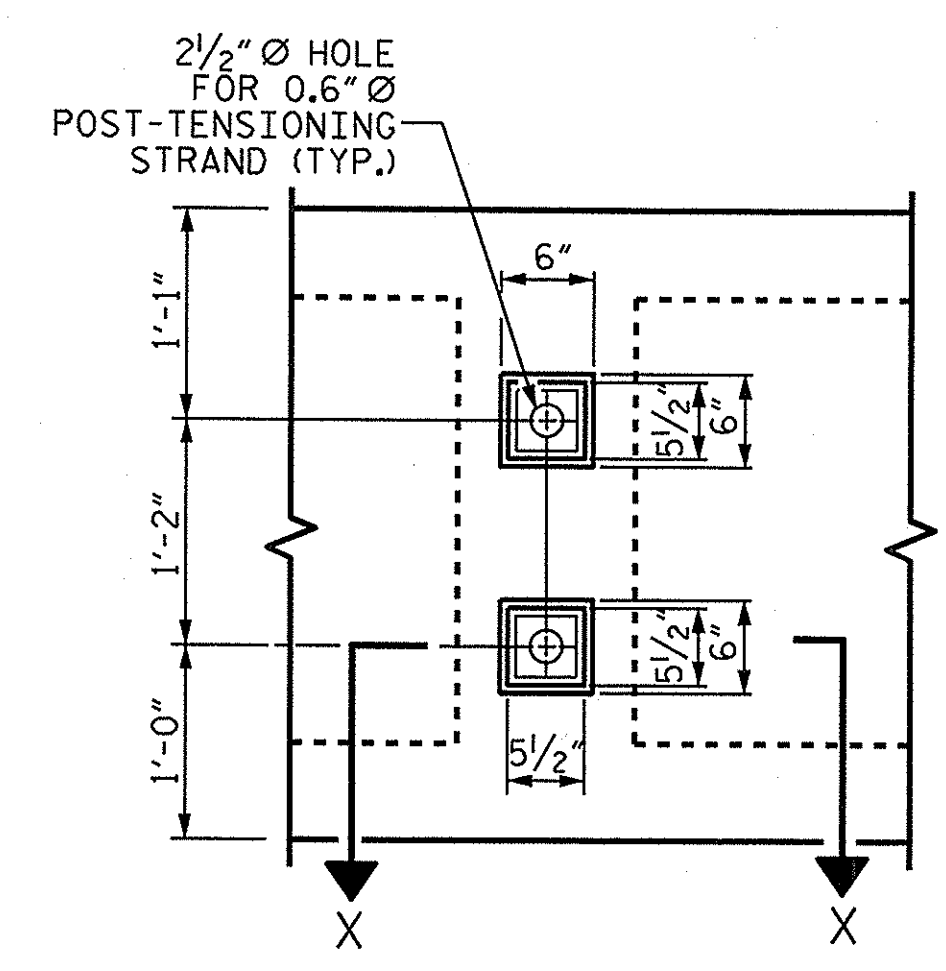


SECTION D-D

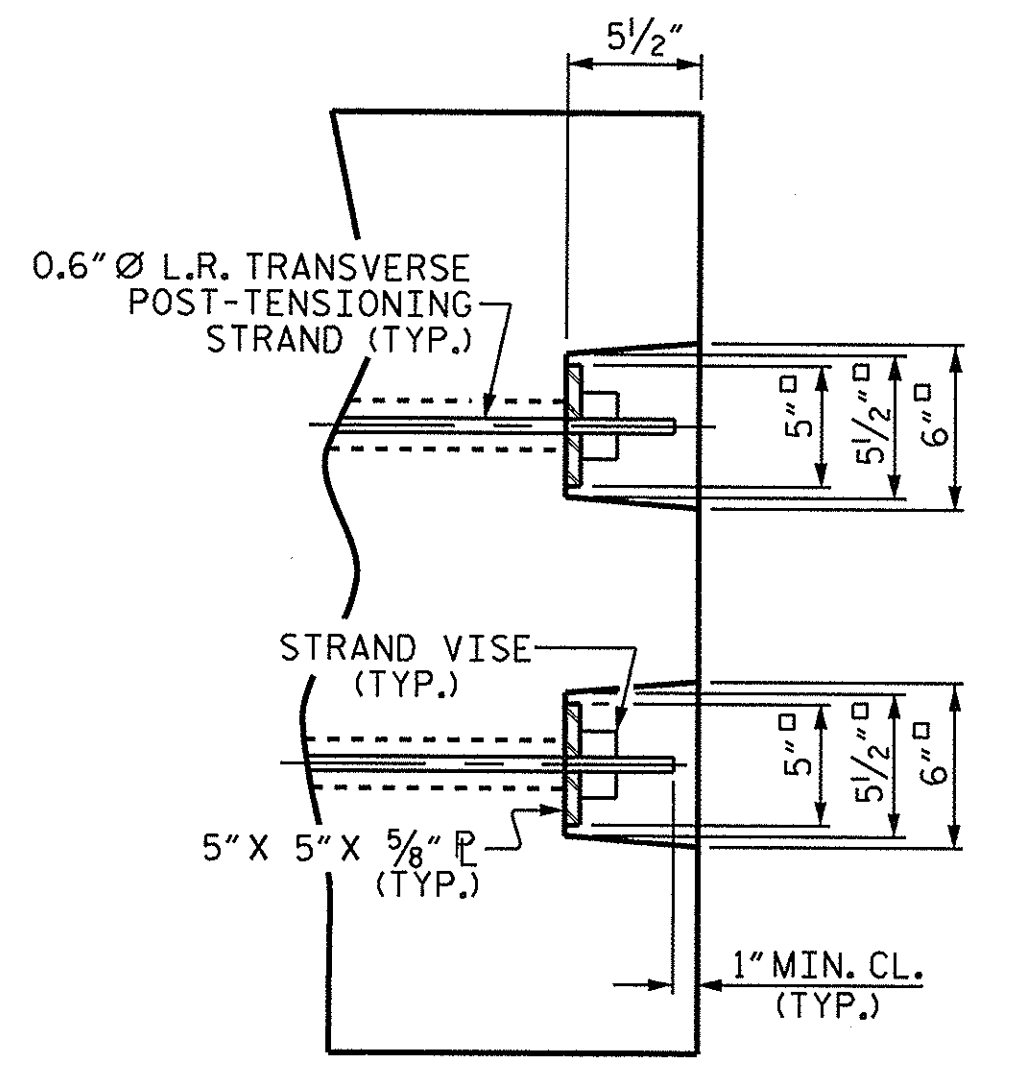
SECTION A-A
VOIDS NOT SHOWN

DOUBLE DIAPHRAGM DETAILS

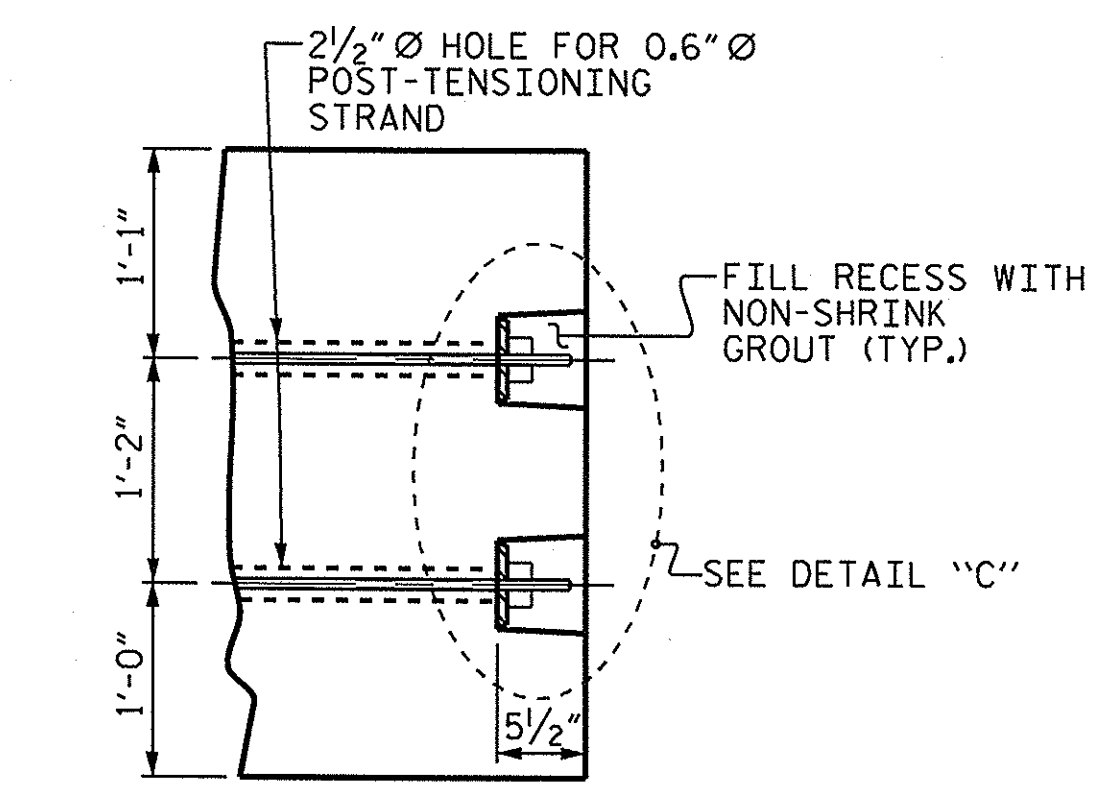
#4 "S" BARS NOT SHOWN. #4 "S" BARS MAY BE SHIFTED SLIGHTLY TO CLEAR 2 1/2" Ø HOLE.



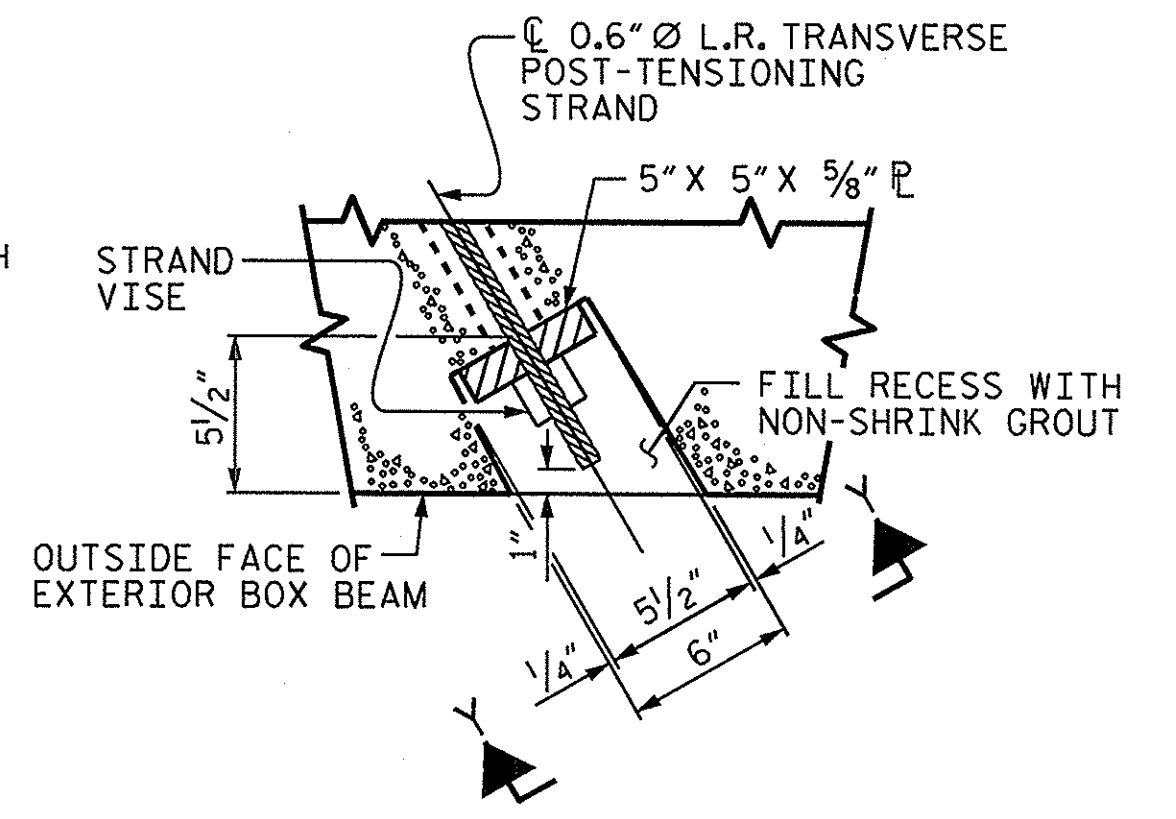
VIEW Y-Y
SHOWING ELEVATION VIEW OF GROUTED RECESS



DETAIL "C"

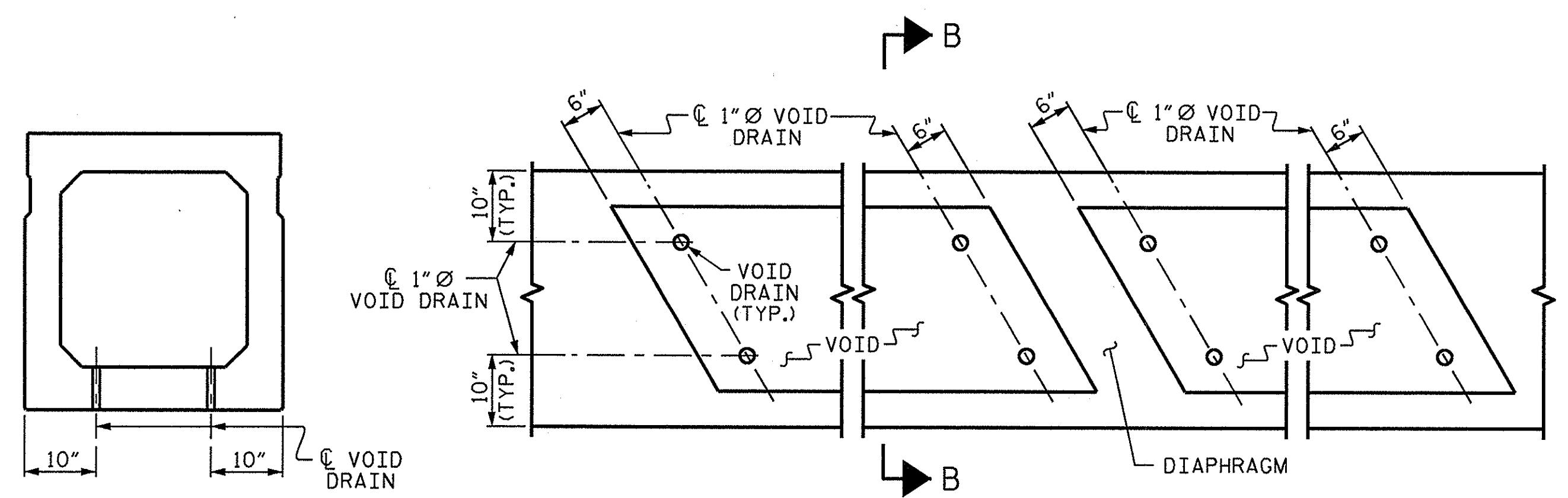


PART SECTION AT RECESS



SECTION X-X
SHOWING PLAN VIEW OF GROUTED RECESS

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



SECTION B-B

PART PLAN

VOID DRAIN DETAILS

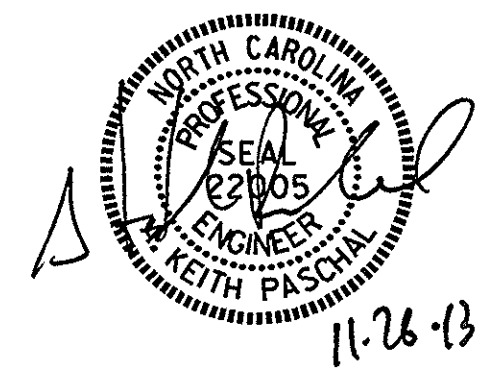
(DIMENSIONS SHOWN ARE TYPICAL FOR EACH VOID)

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

** INCLUDES FUTURE WEARING SURFACE

PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 4 OF 5

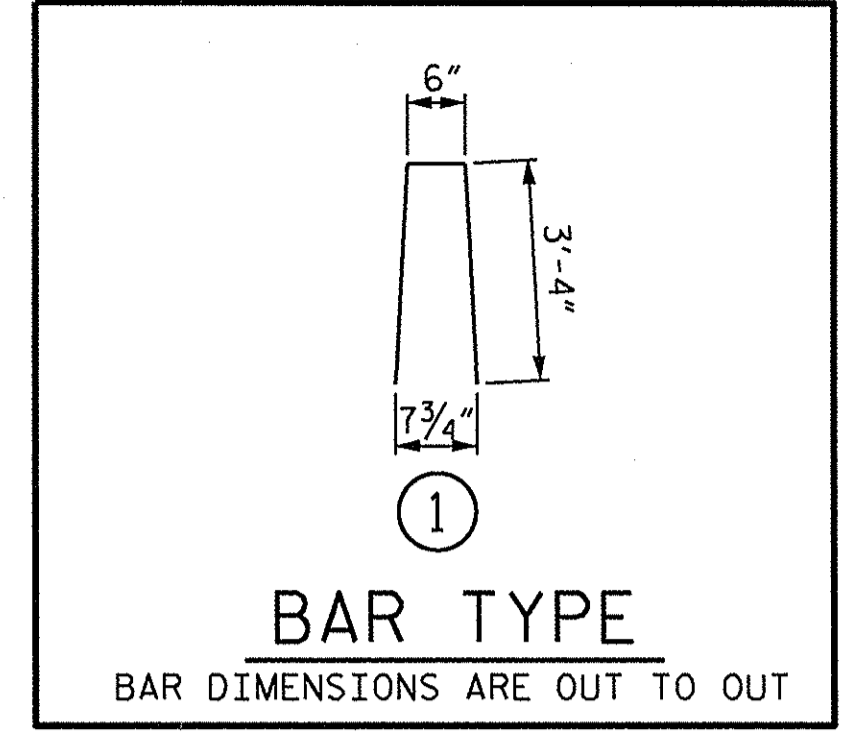
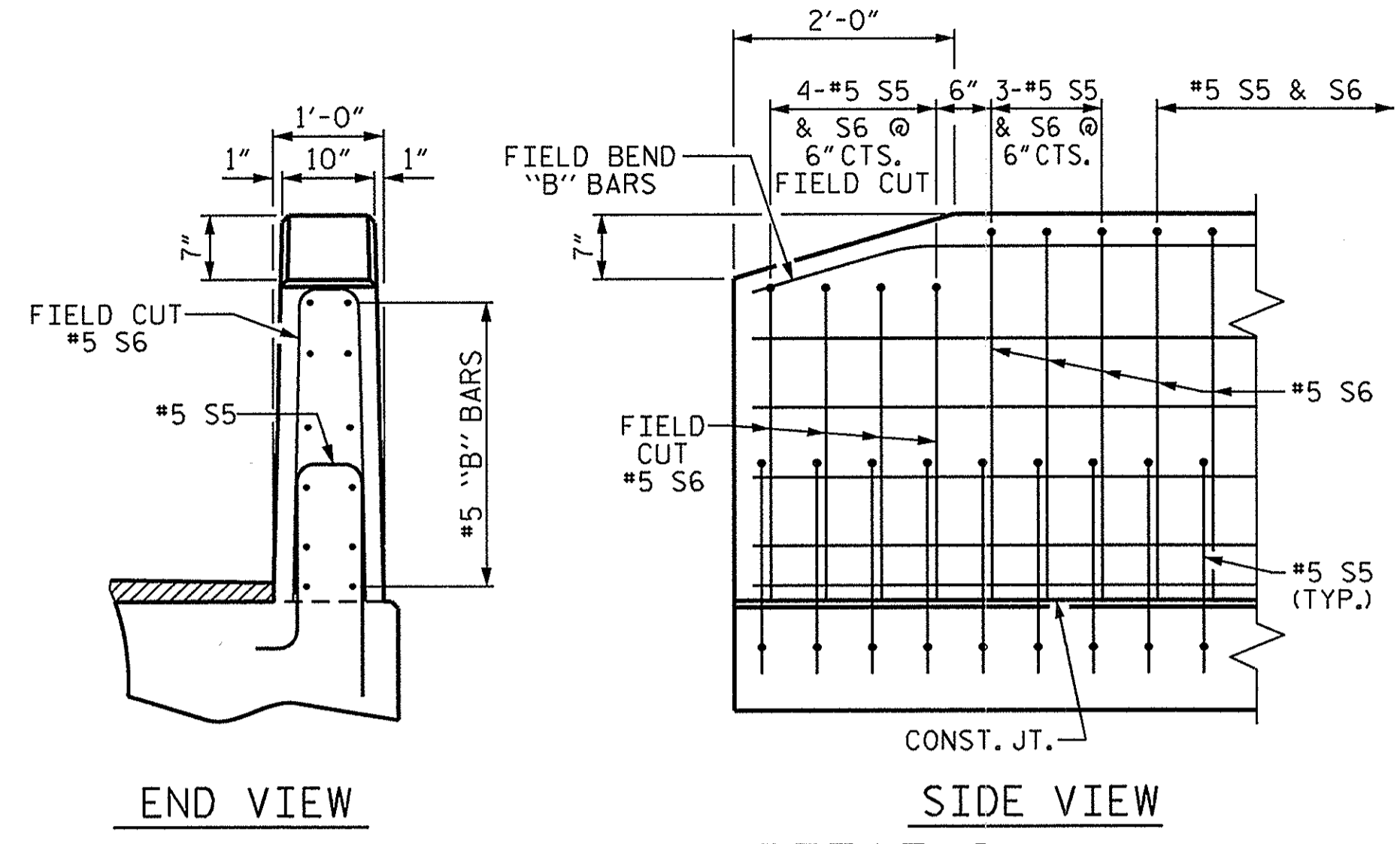
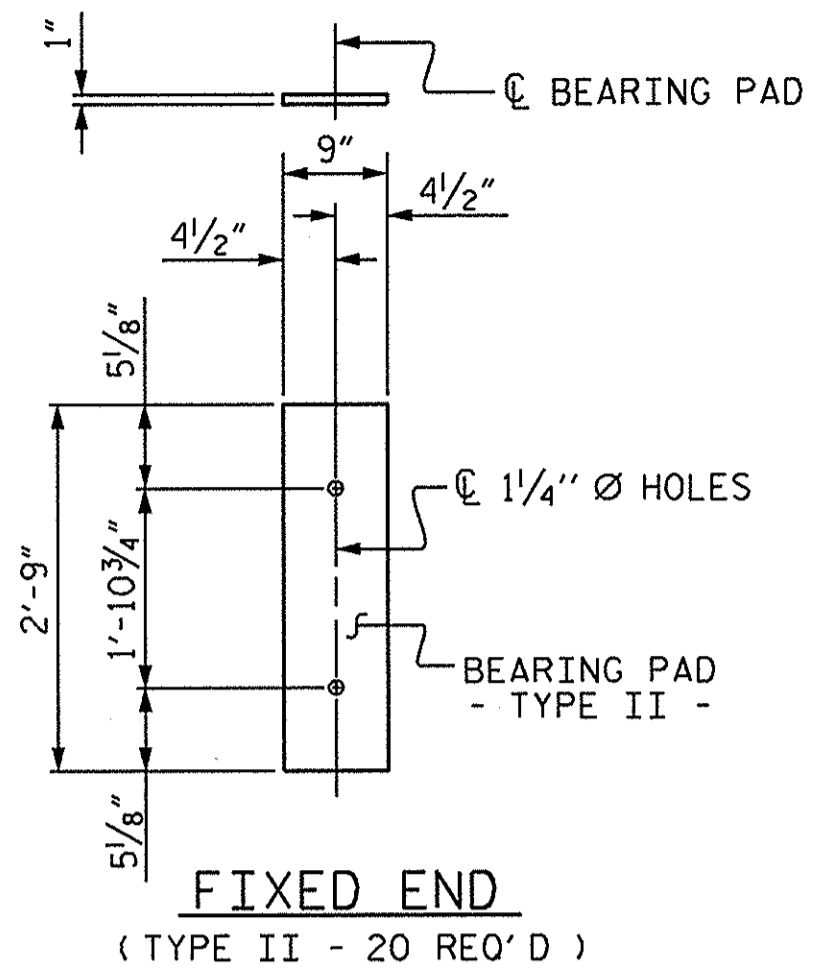


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 3'-0" X 3'-3"
 PRESTRESSED CONCRETE
 BOX BEAM UNIT

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

TOTAL SHEETS 16

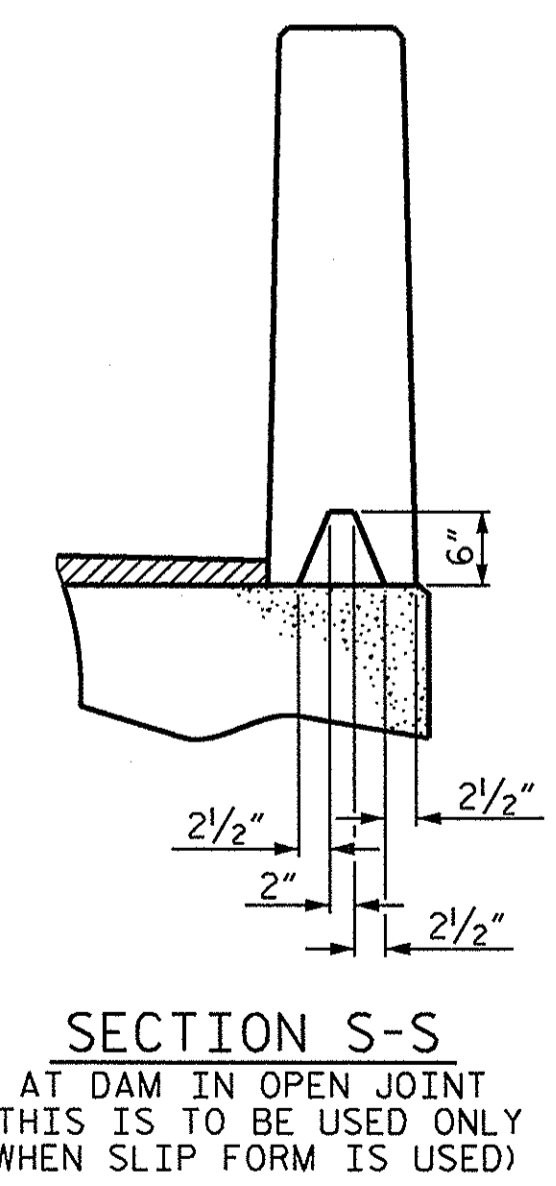
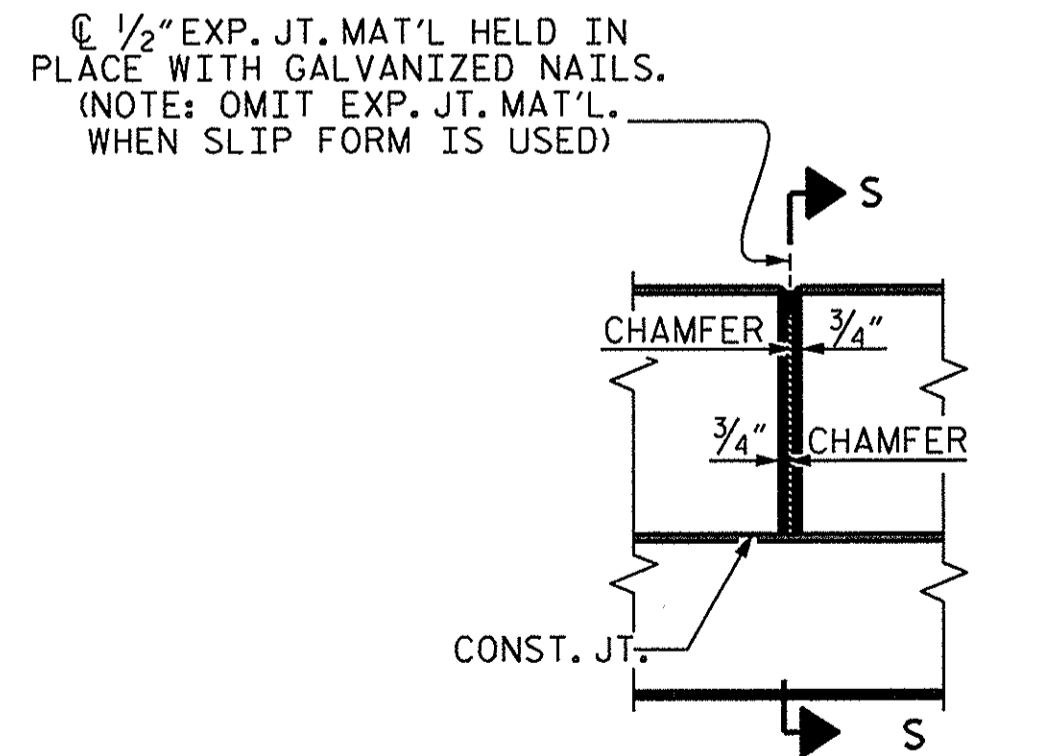
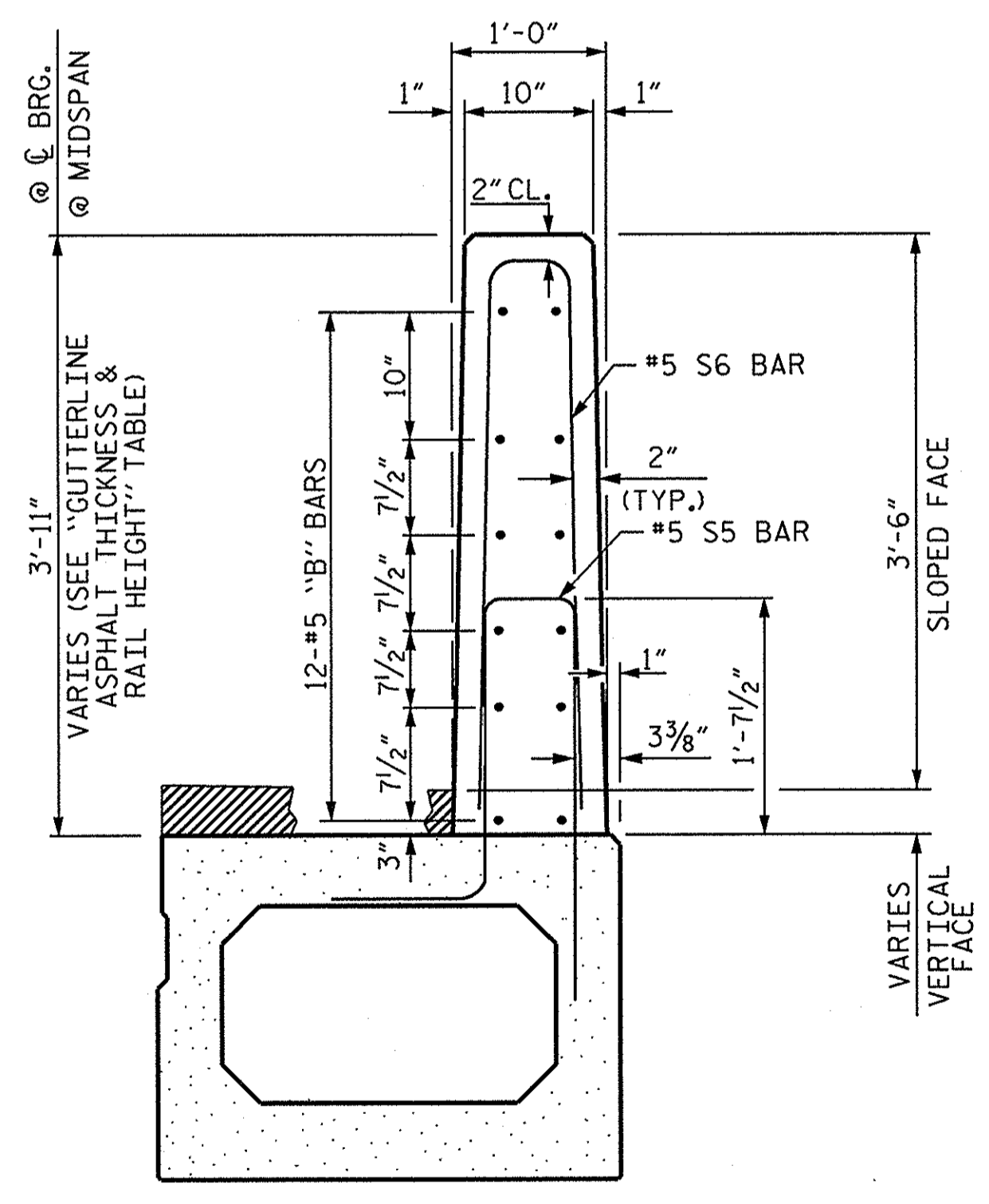
ASSEMBLED BY: C. B. PRUETT DATE: 10/17/13
 CHECKED BY: M. D. PISO DATE: 10/25/13
 DRAWN BY: DGE II/II
 CHECKED BY: TMC II/II



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

ELASTOMERIC BEARING DETAILS
 ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL					
BAR	BARS PER PAIR OF EXTERIOR UNITS	SIZE	TYPE	LENGTH	WEIGHT
	95' UNIT				
*B11	192	#5	STR	13'-6"	2703
*S6	256	#5	1	7'-2"	1914
* EPOXY COATED REINFORCING STEEL				LBS.	4617
CLASS AA CONCRETE				CU.YDS.	25.5
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.	190.0



BOX BEAM UNITS REQUIRED			
	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR B.B.	2	95'-0"	190'-0"
INTERIOR B.B.	8	95'-0"	760'-0"
TOTAL	10		950'-0"

SECTION THRU RAIL

ELEVATION AT EXPANSION JOINTS

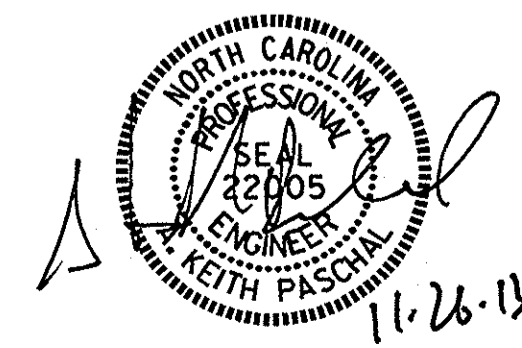
SECTION S-S
 AT DAM IN OPEN JOINT
 (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

VERTICAL CONCRETE BARRIER RAIL DETAILS

PROJECT NO. BD-5012Z
PITT COUNTY
 STATION: 16+09.43 -L-

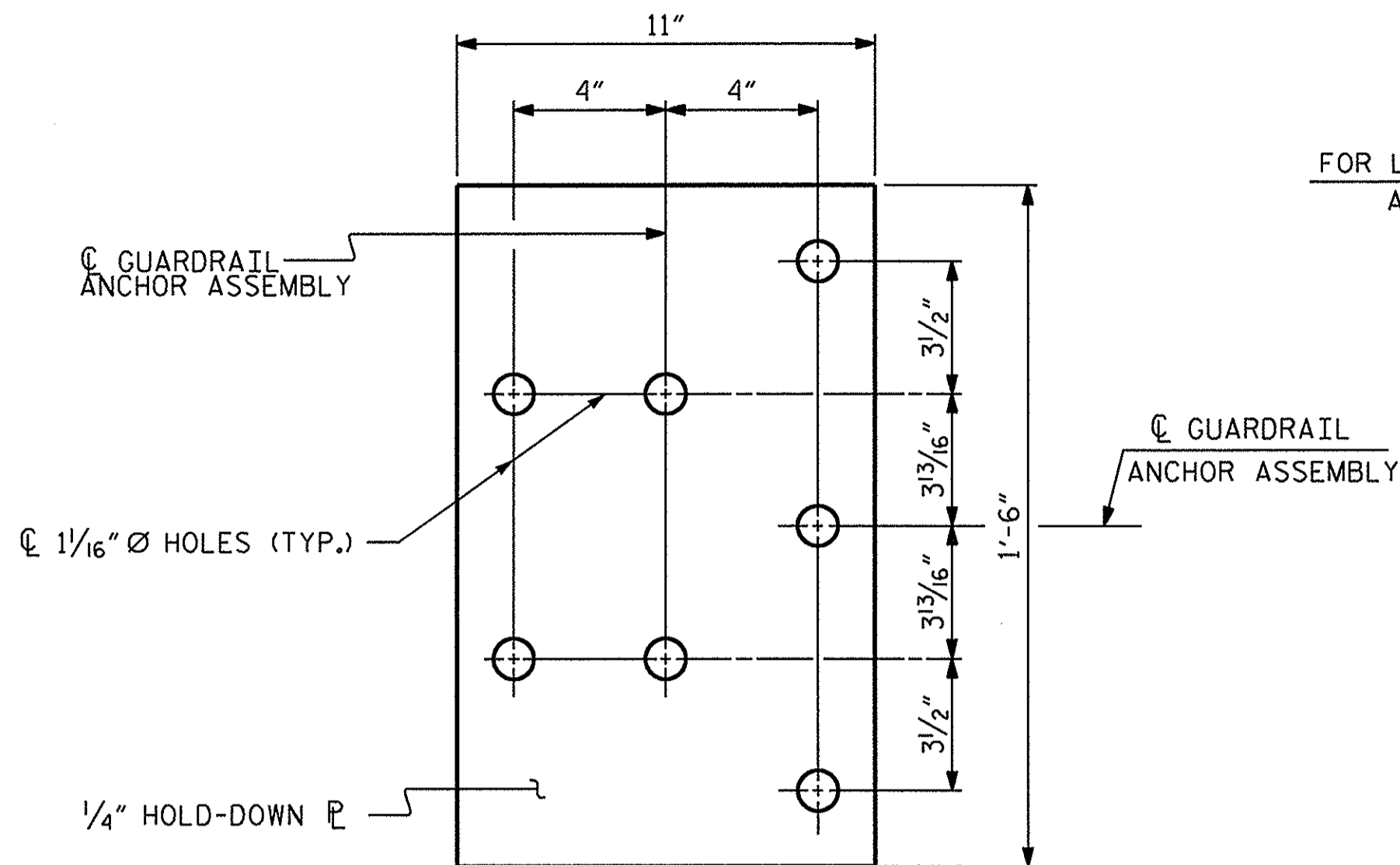
SHEET 5 OF 5

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



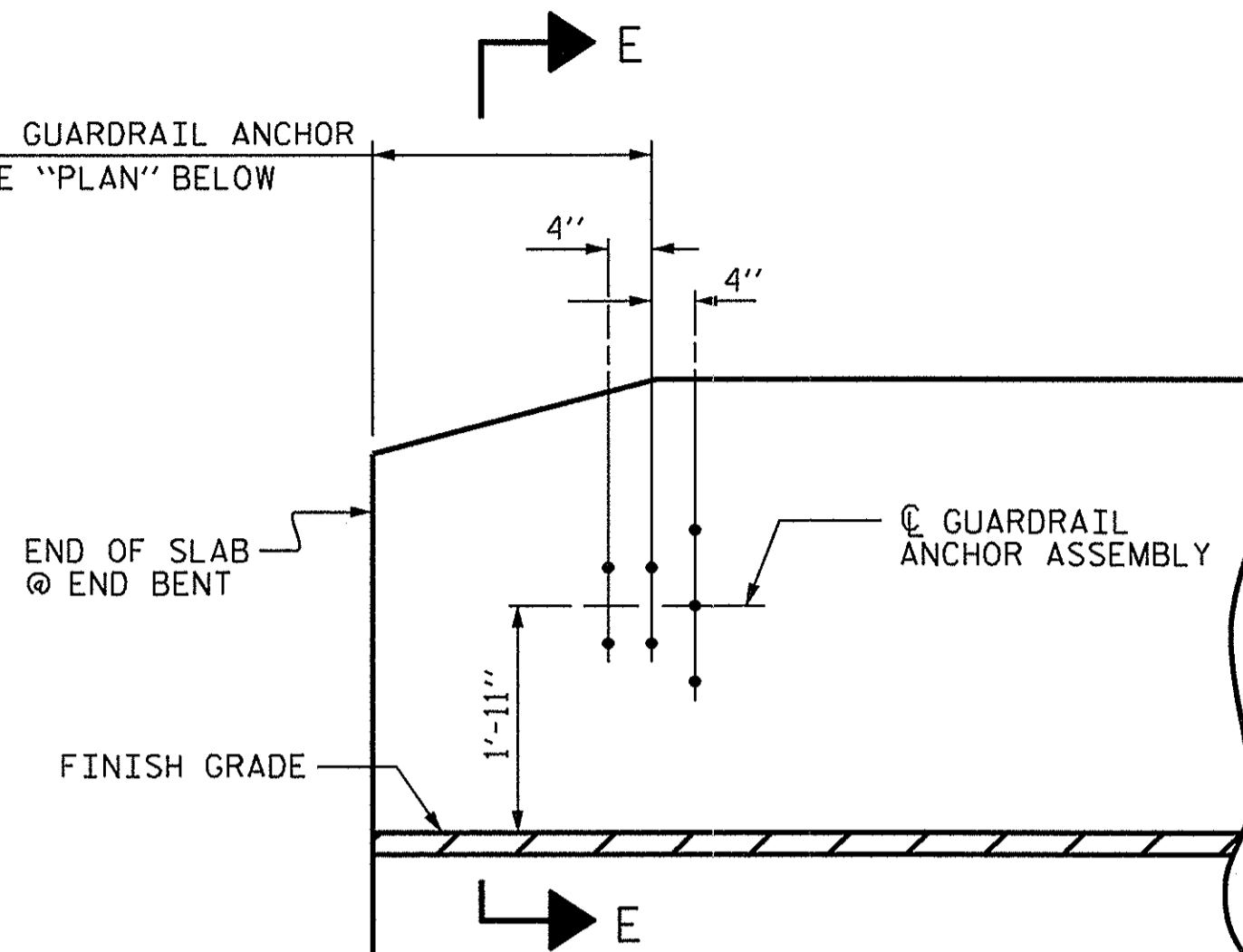
ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
 CHECKED BY : M. D. PISO DATE : 10/25/13
 DRAWN BY : DGE 10/11
 CHECKED BY : TMG 11/11

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

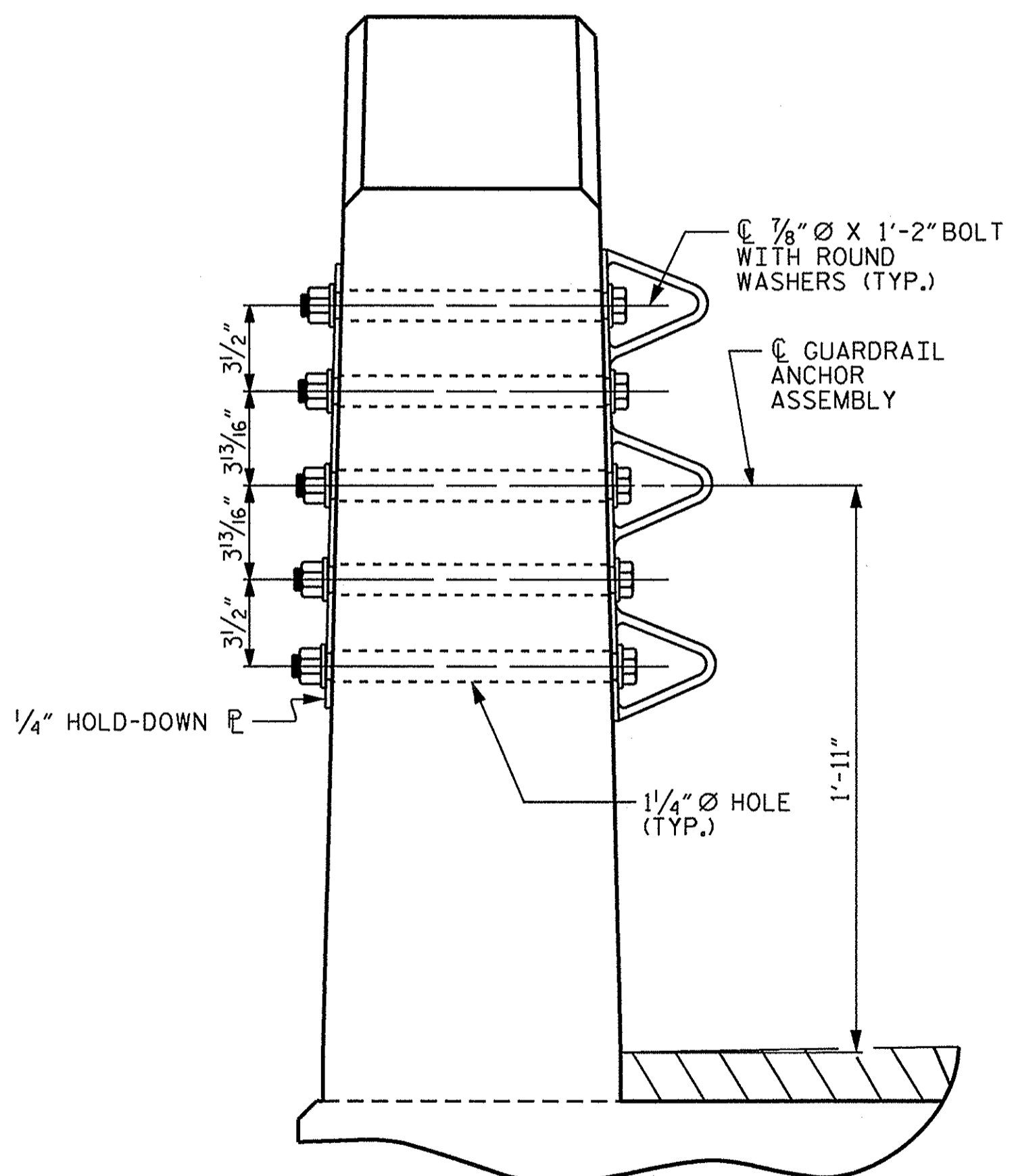


PLAN

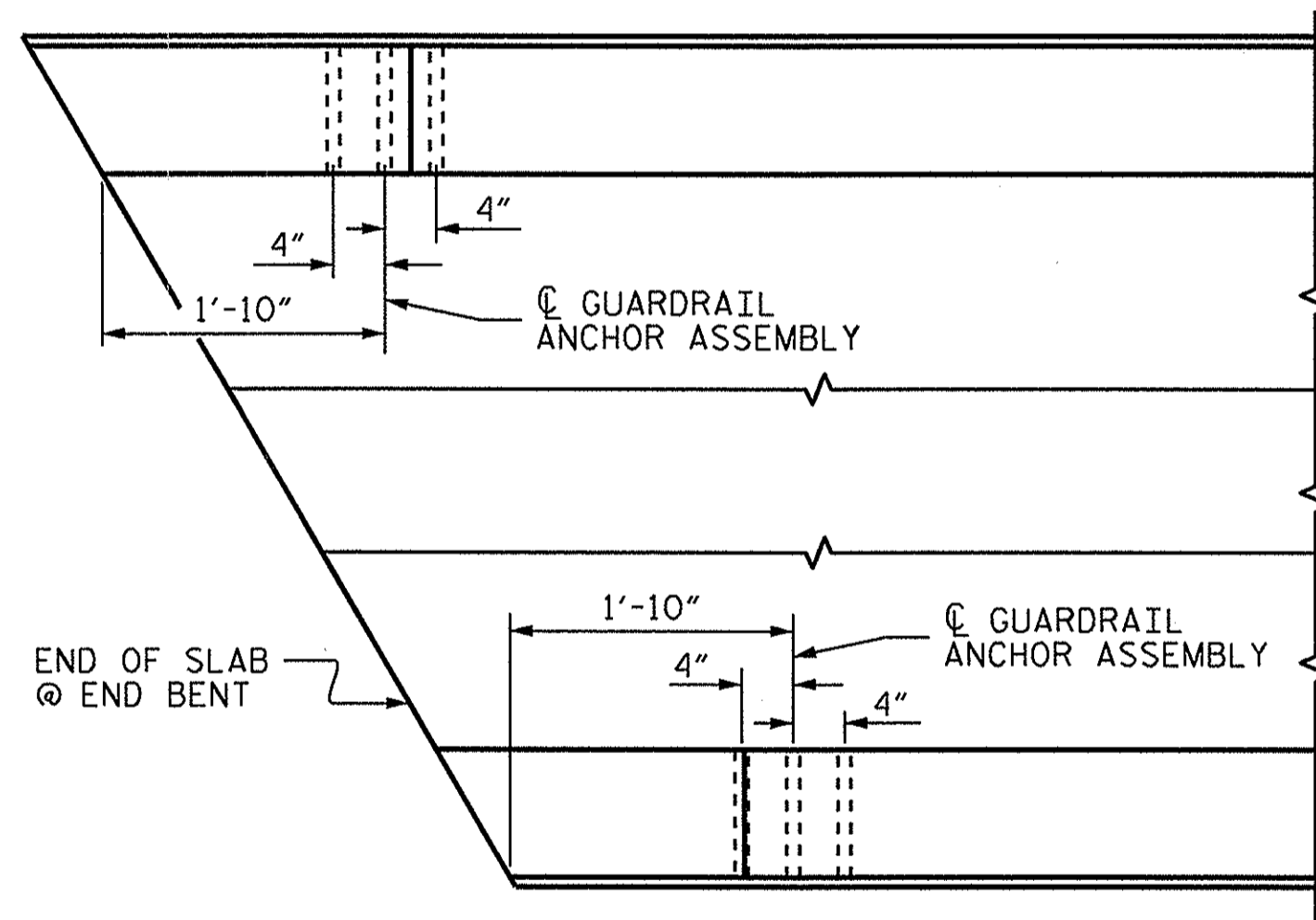
FOR LOCATION OF GUARDRAIL ANCHOR ASSEMBLY, SEE "PLAN" BELOW



ELEVATION



SECTION E-E
GUARDRAIL ANCHOR ASSEMBLY DETAILS



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT 1 SHOWN, END BENT 2 SIMILAR.



SKETCH SHOWING POINTS OF ATTACHMENT

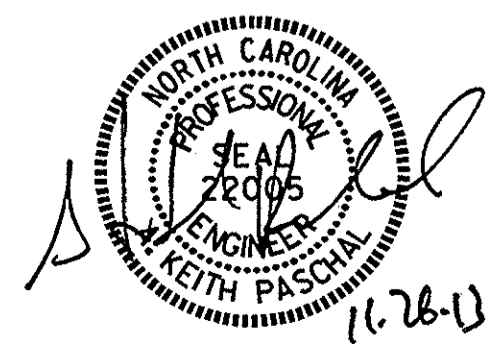
* DENOTES GUARDRAIL ANCHOR ASSEMBLY

NOTES

- THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 1/8" 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 M111.
- 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 1/8" 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 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.

PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

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



REVISIONS						SHEET NO. S-10
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

ASSEMBLED BY : C. B. PRUETT	DATE : 10/17/13
CHECKED BY : M. D. PISO	DATE : 10/25/13
DRAWN BY : MAA 5/10	REV. 10/1/11 MAA/GM
CHECKED BY : GM 5/10	REV. 12/5/11 MAA/GM
	REV. 6/13 MAA/GM

NOTES

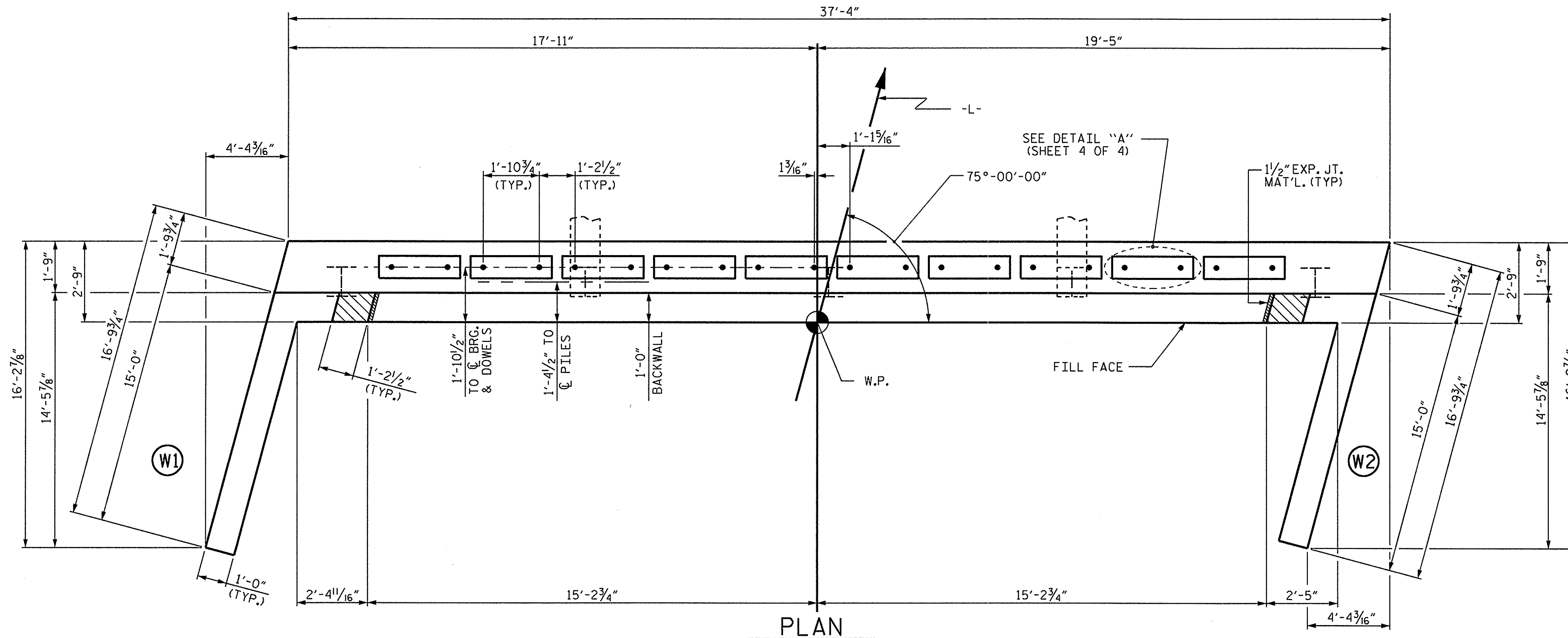
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

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.

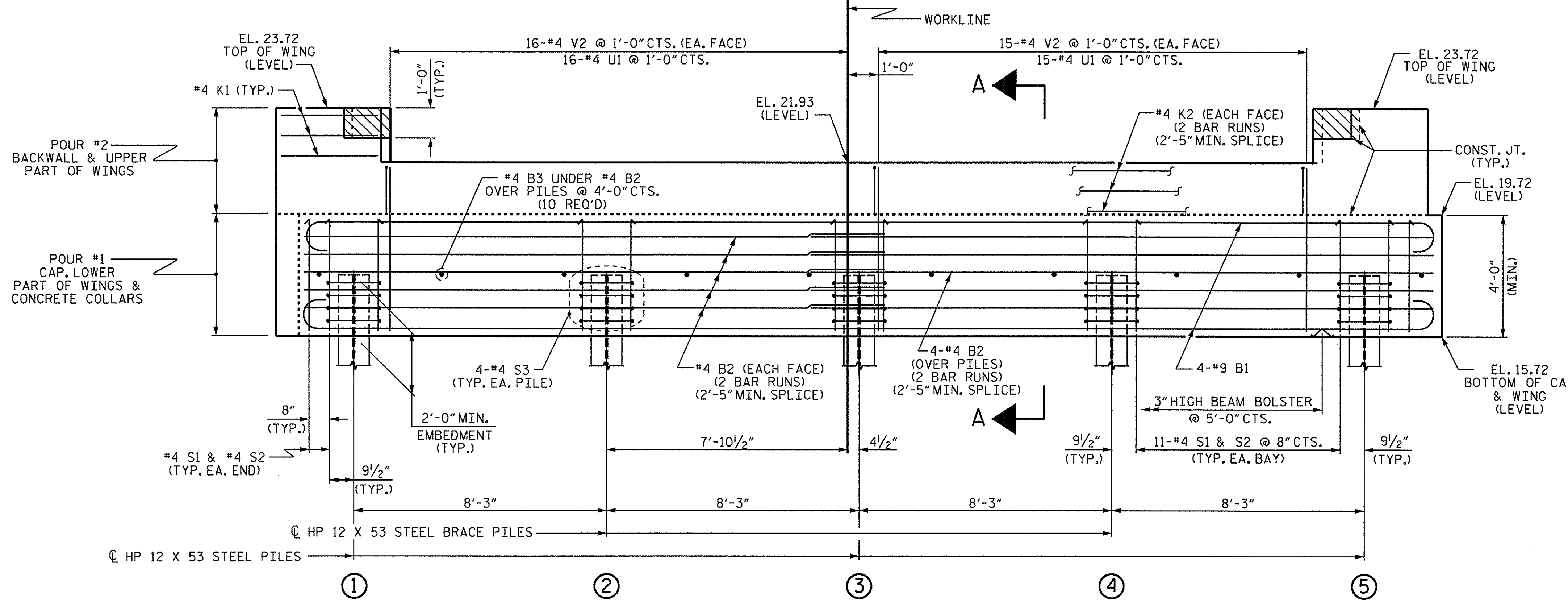
FOR PILE SPLICE DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.

INSTALL THE 4" DIAMETER DRAIN PIPE THROUGH THE WING WALL AS REQUIRED. FOR REINFORCED BRIDGE APPROACH FILLS, SEE THE 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.

PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 1 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT No. 1



ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
 CHECKED BY : M. D. PISO DATE : 10/25/13

DRAWN BY : WJH 12/11
 CHECKED BY : AAC 12/11

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			16

NOTES

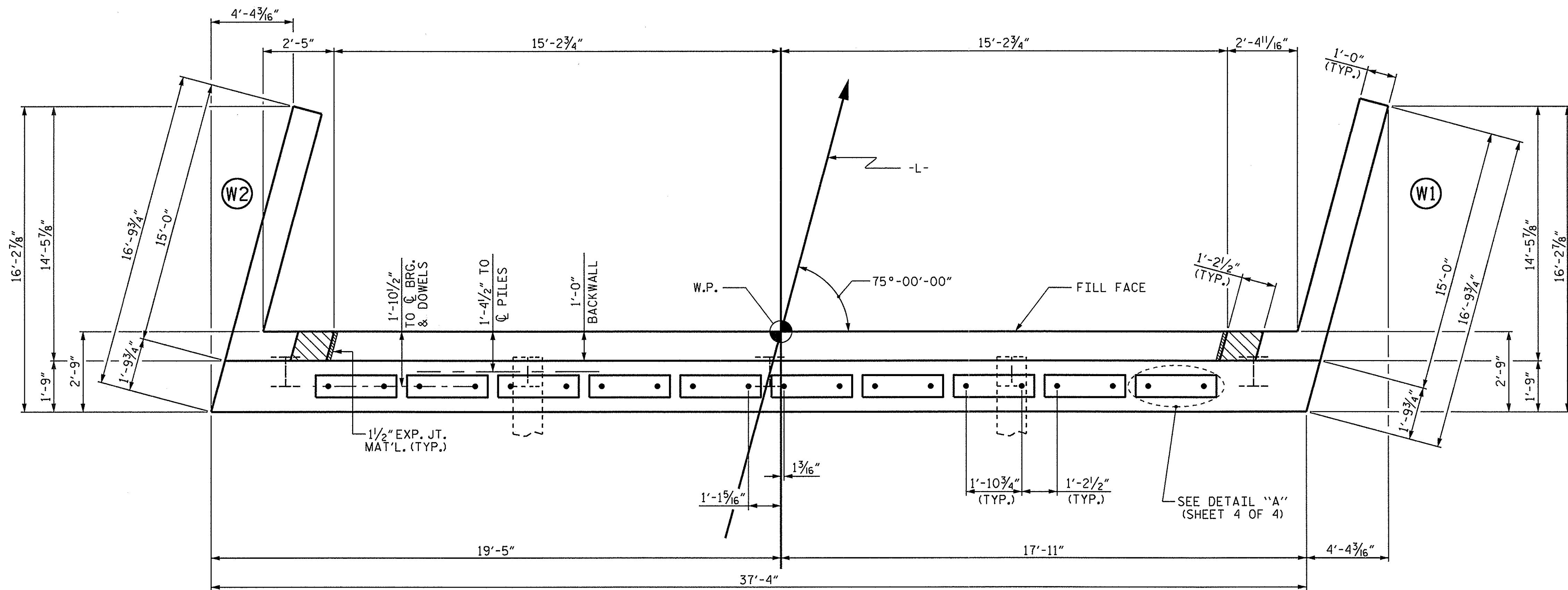
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

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.

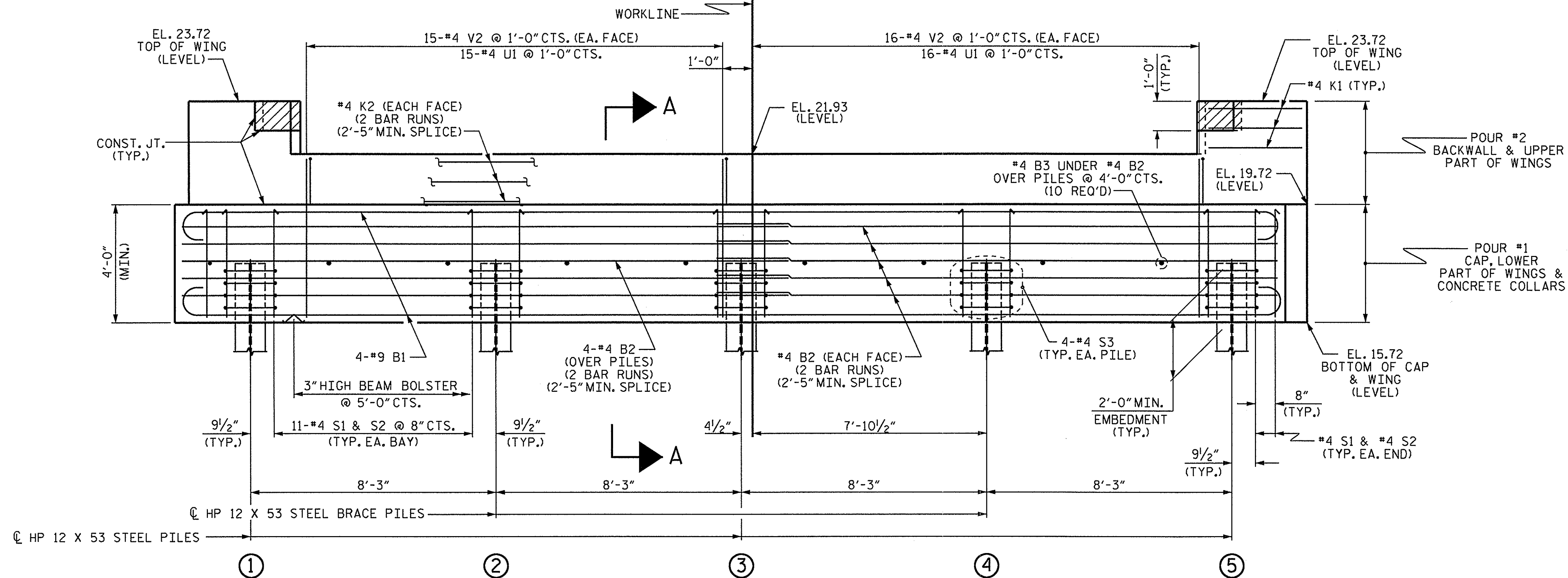
FOR PILE SPLICE DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.

INSTALL THE 4" DIAMETER DRAIN PIPE THROUGH THE WING WALL AS REQUIRED. FOR REINFORCED BRIDGE APPROACH FILLS, SEE THE 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.

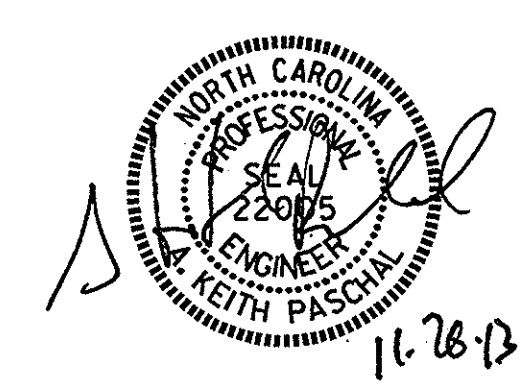
PROJECT NO. BD-5102Z
PITT COUNTY
STATION: 16+09.43 -L-

SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT No. 2

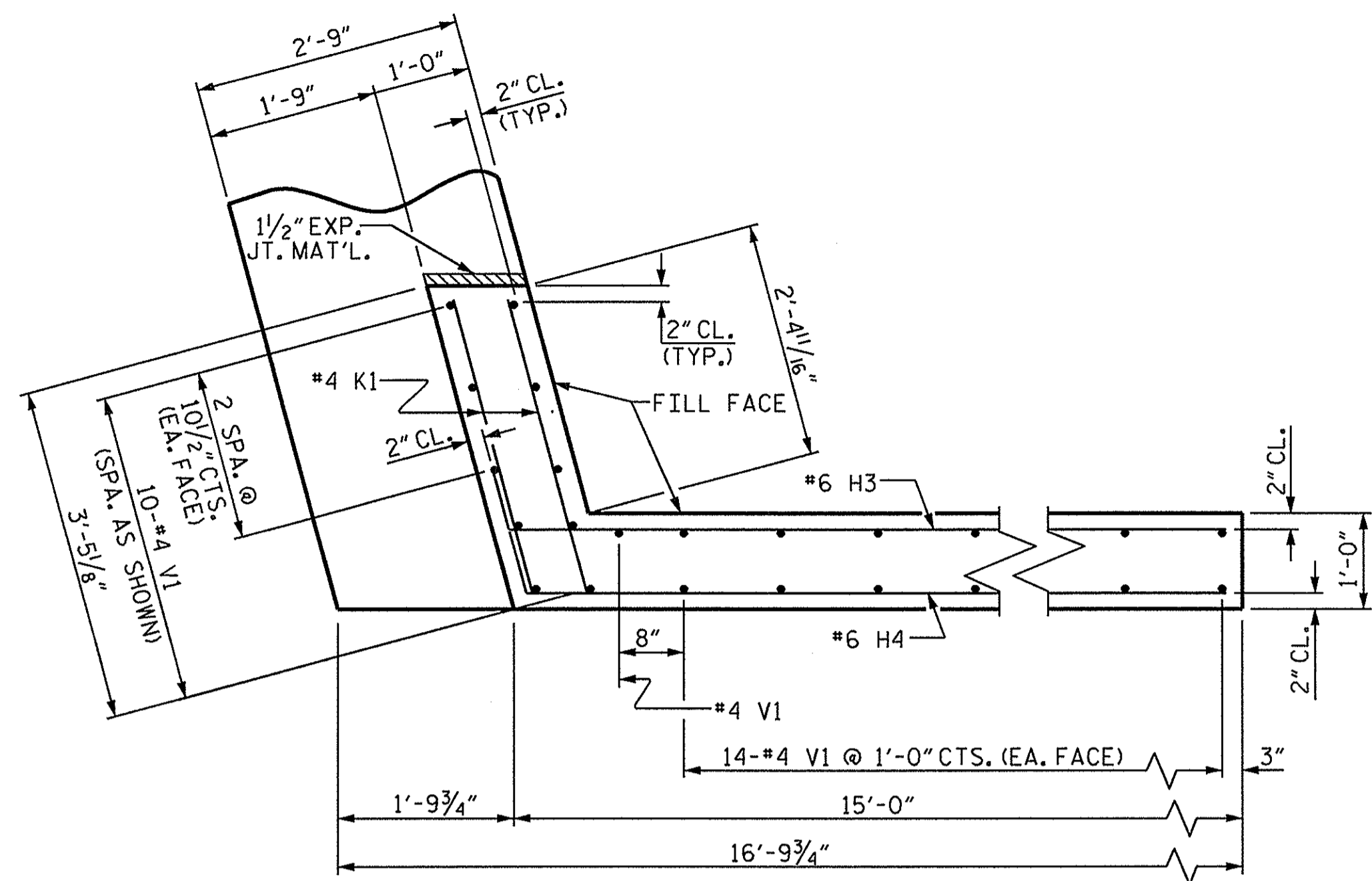
REVISIONS						SHEET NO. S-12
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			



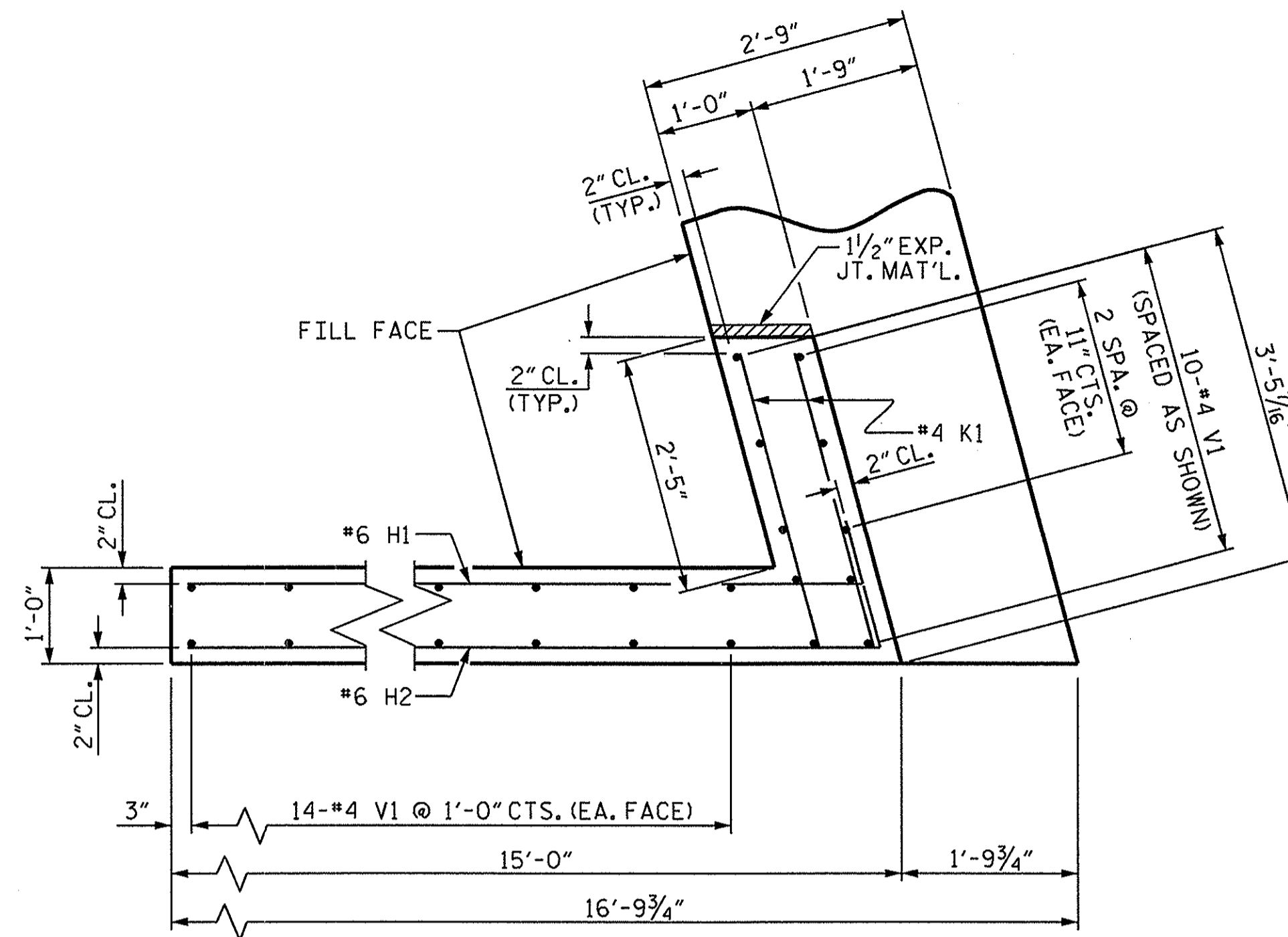
ASSEMBLED BY : C. B. PRUETT	DATE : 10/17/13
CHECKED BY : M. D. PISO	DATE : 10/25/13
DRAWN BY : WJH 12/11	
CHECKED BY : AAC 12/11	

26-NOV-2013 07:47
S:\DPO\Ker\16-5102Z\Final Plans\BD-5102Z_SD_BX.dgn
kpaschal

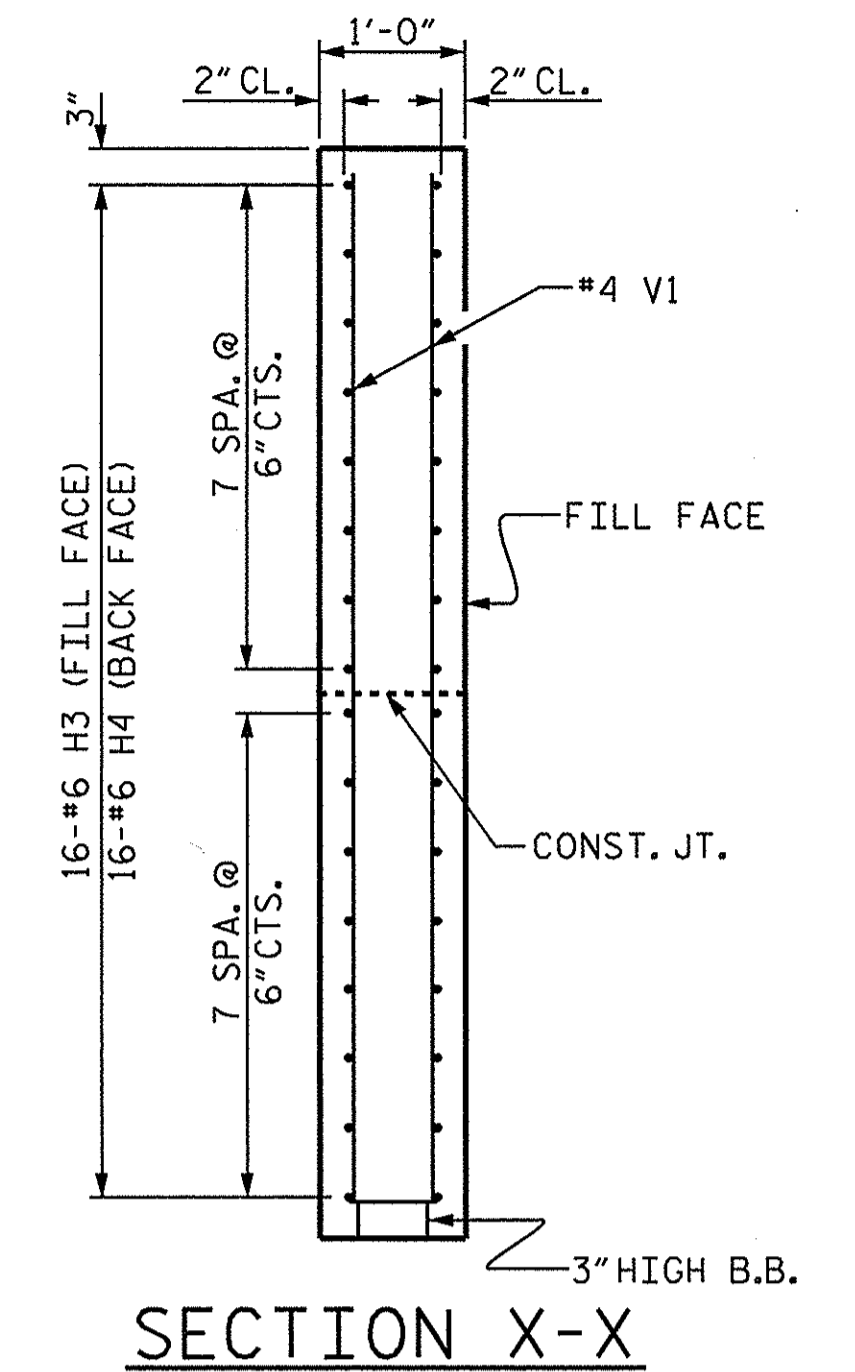
STD. NO. EB_30_75S4_39BB



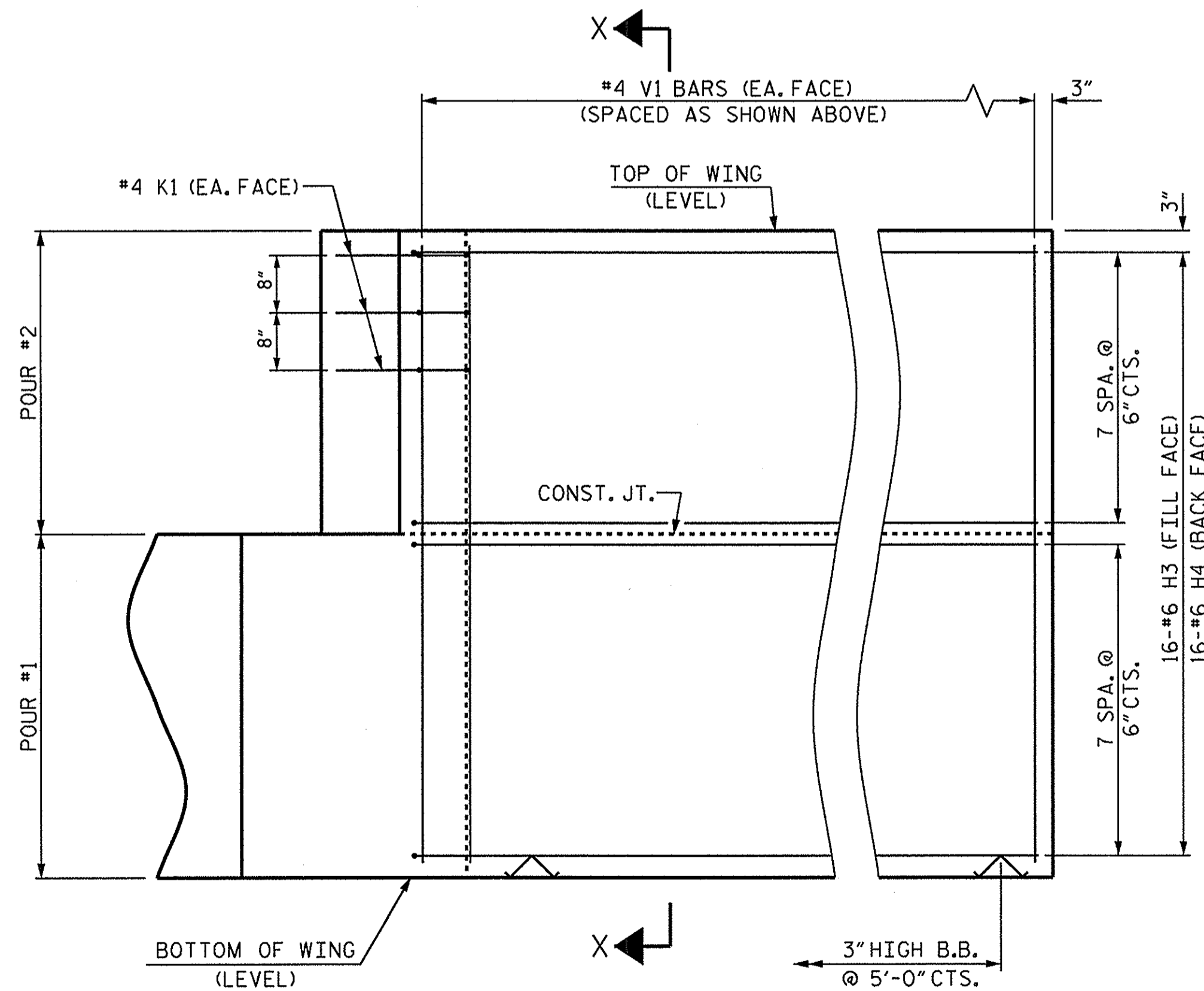
PLAN OF WING (W1)



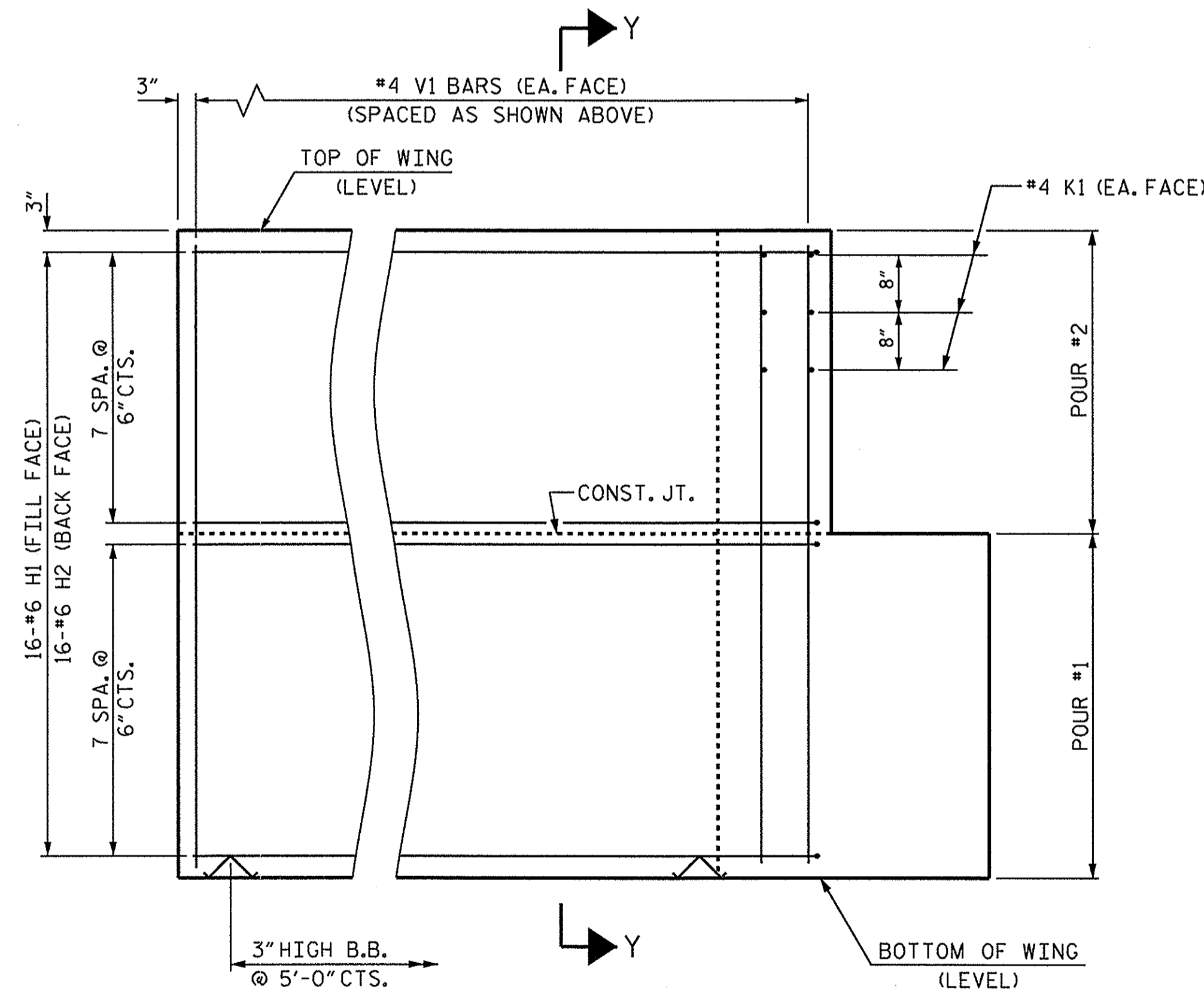
PLAN OF WING (W2)



SECTION X-X

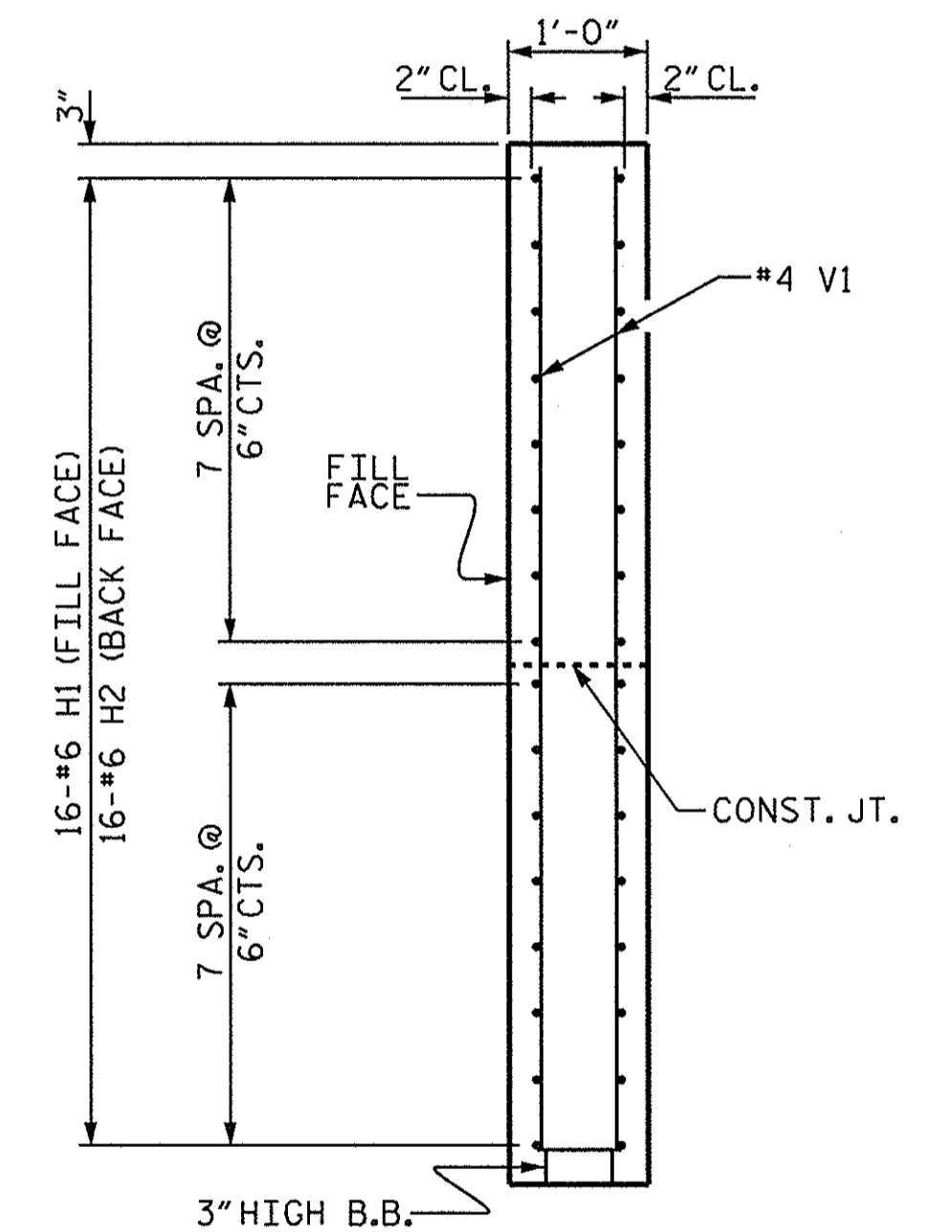


ELEVATION OF WING (W1)



ELEVATION OF WING (W2)

WING DETAILS



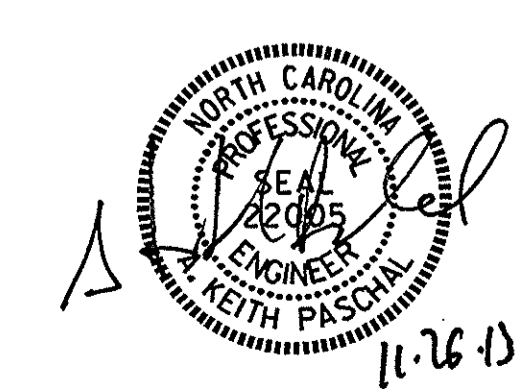
SECTION Y-Y

PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE
 END BENT
 WING DETAILS

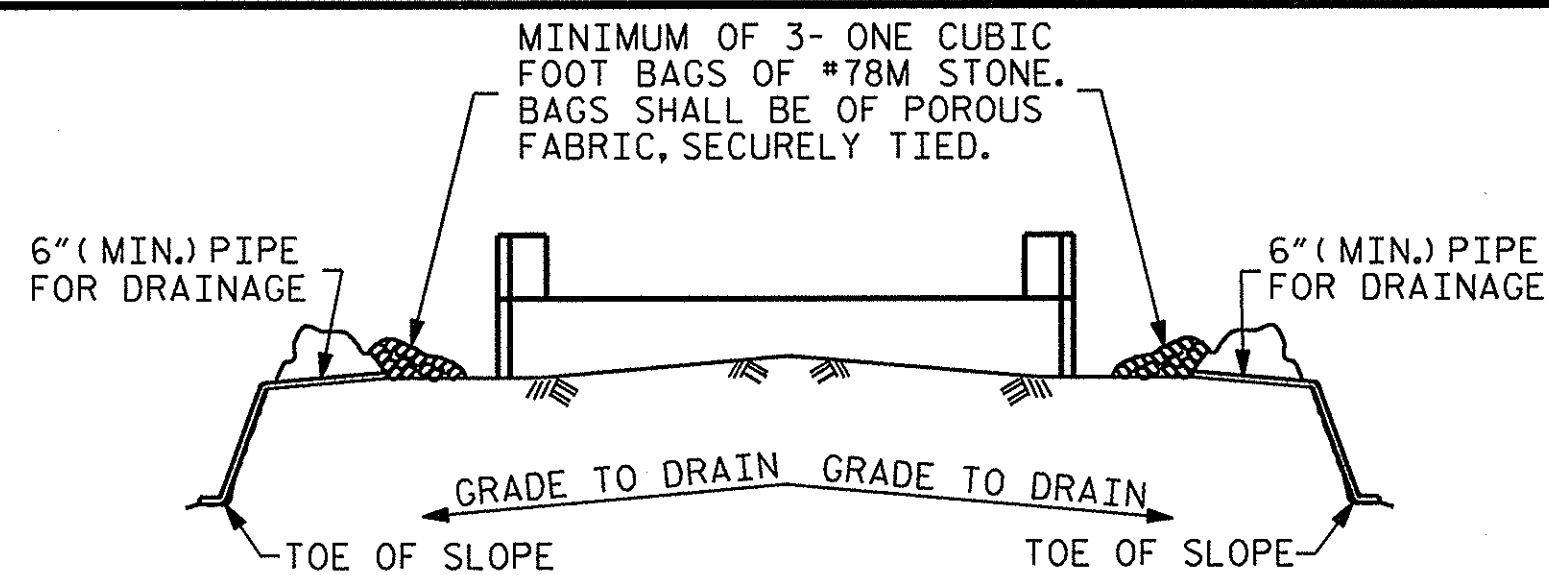


REVISIONS						SHEET NO. S-13
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 16
2			4			

ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
 CHECKED BY : M. D. PISO DATE : 10/25/13
 DRAWN BY : WJH 12/11
 CHECKED BY : AAC 12/11

26-NOV-2013 07:47
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 KPaschal

STD. NO. EB_30_75S4_39BB

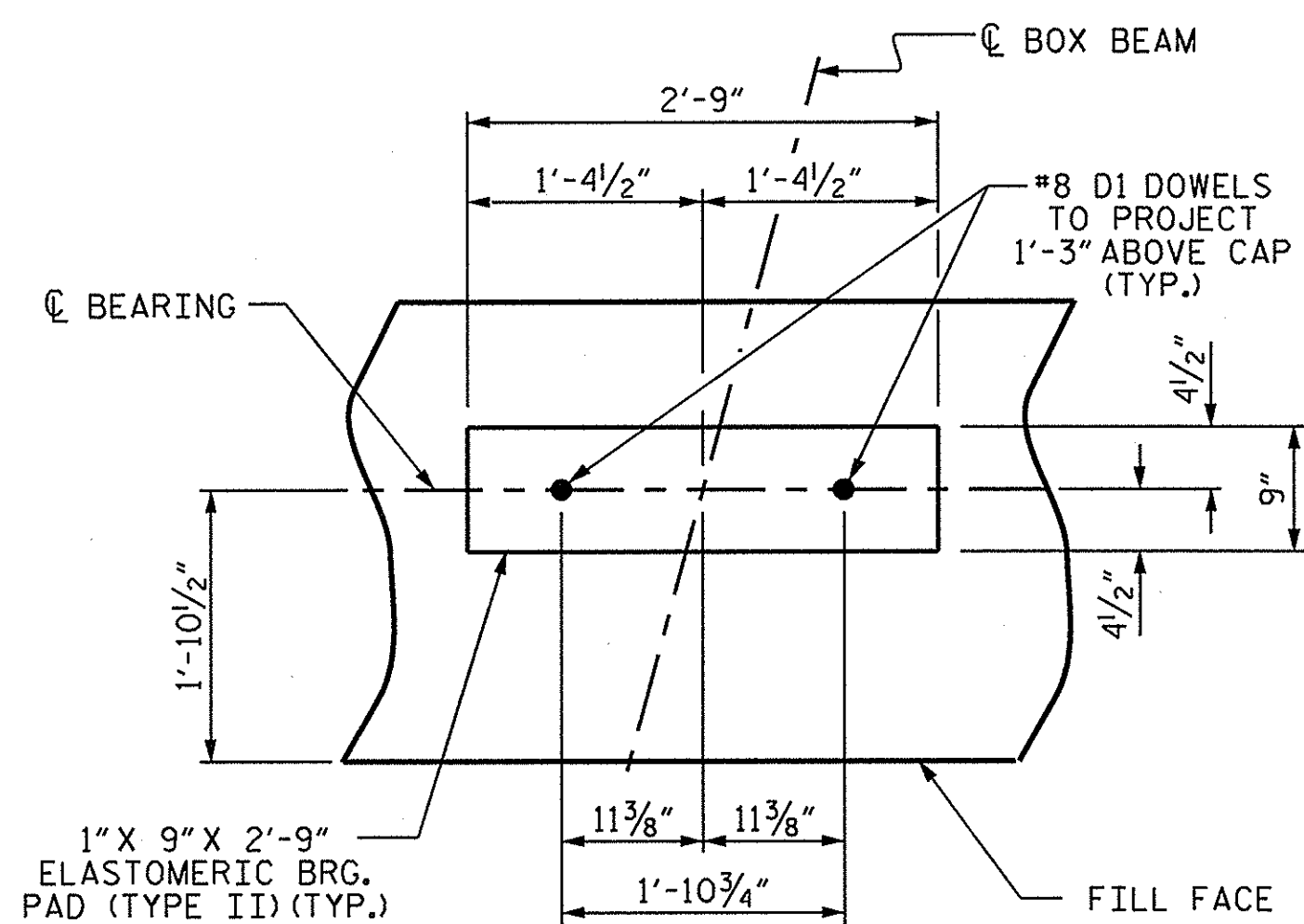


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

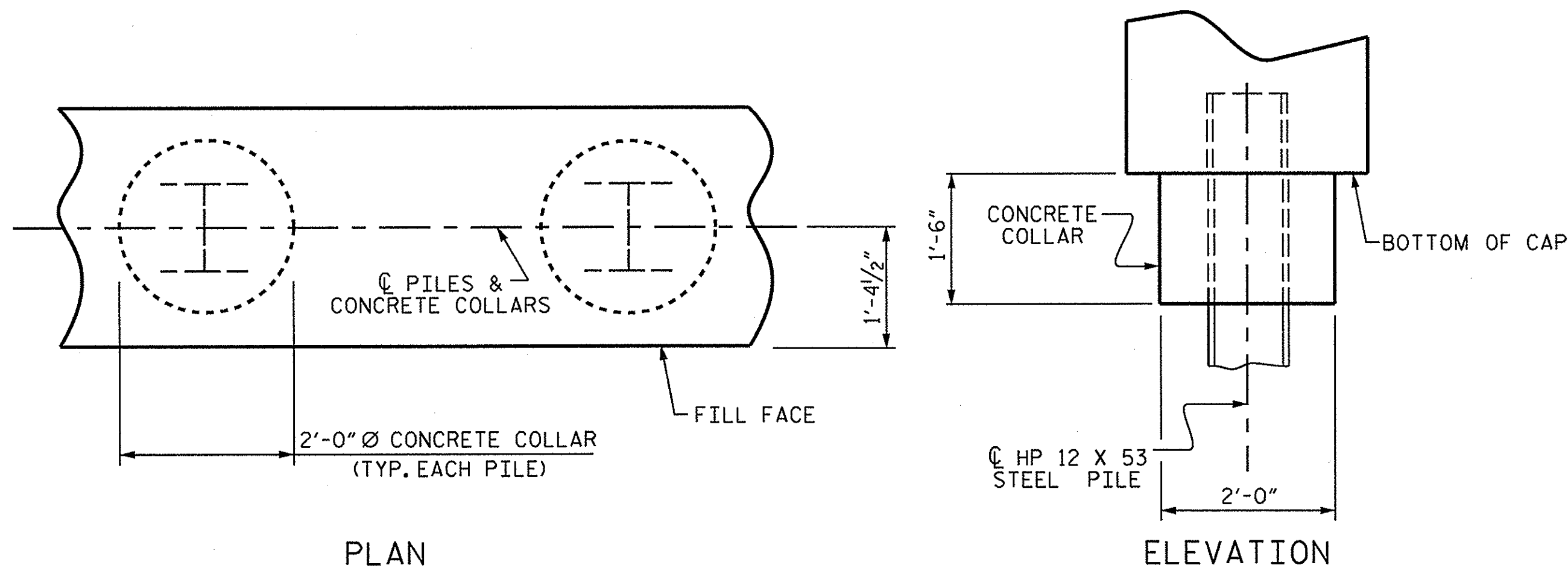
NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

TEMPORARY DRAINAGE AT END BENT



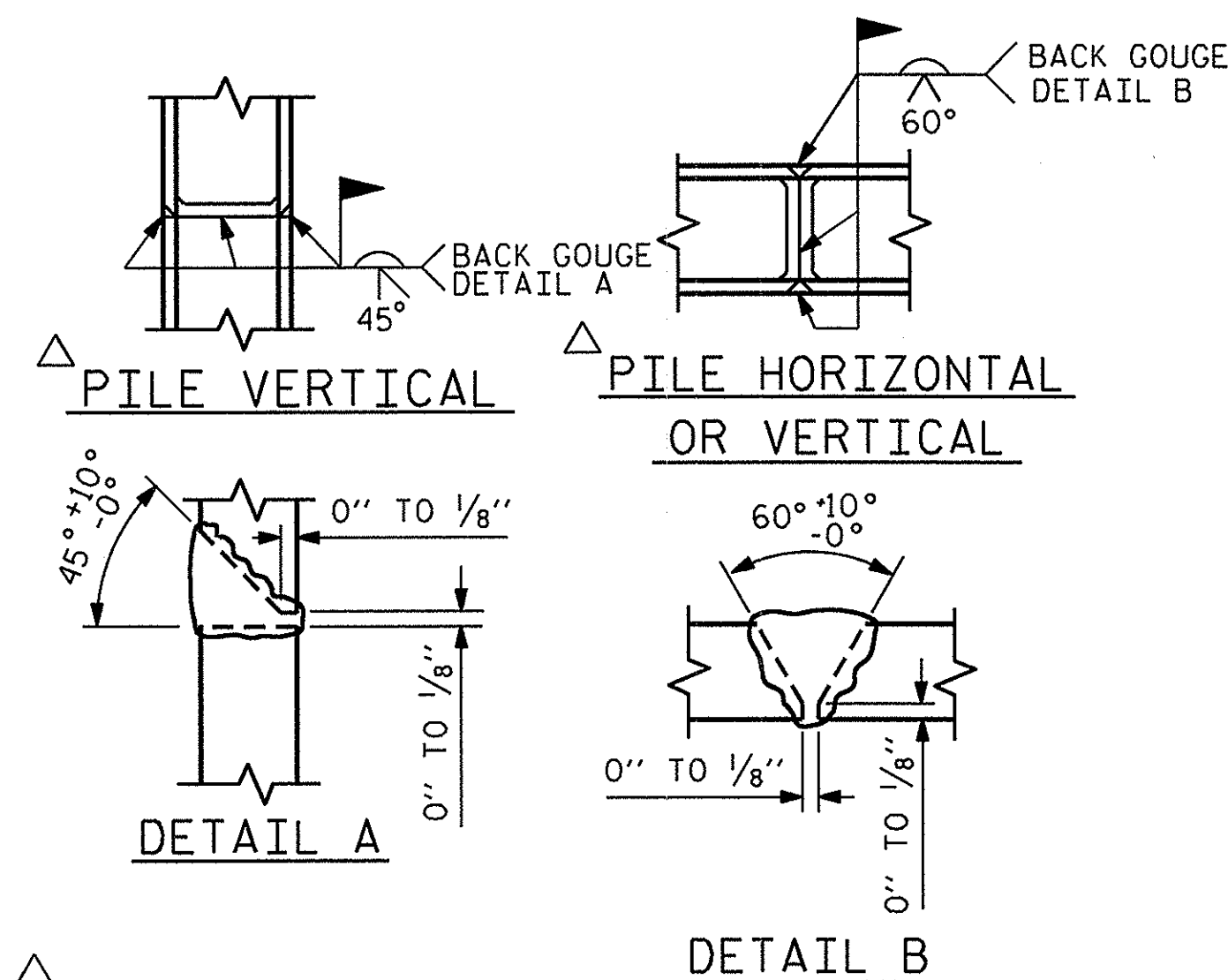
DETAIL "A"

(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



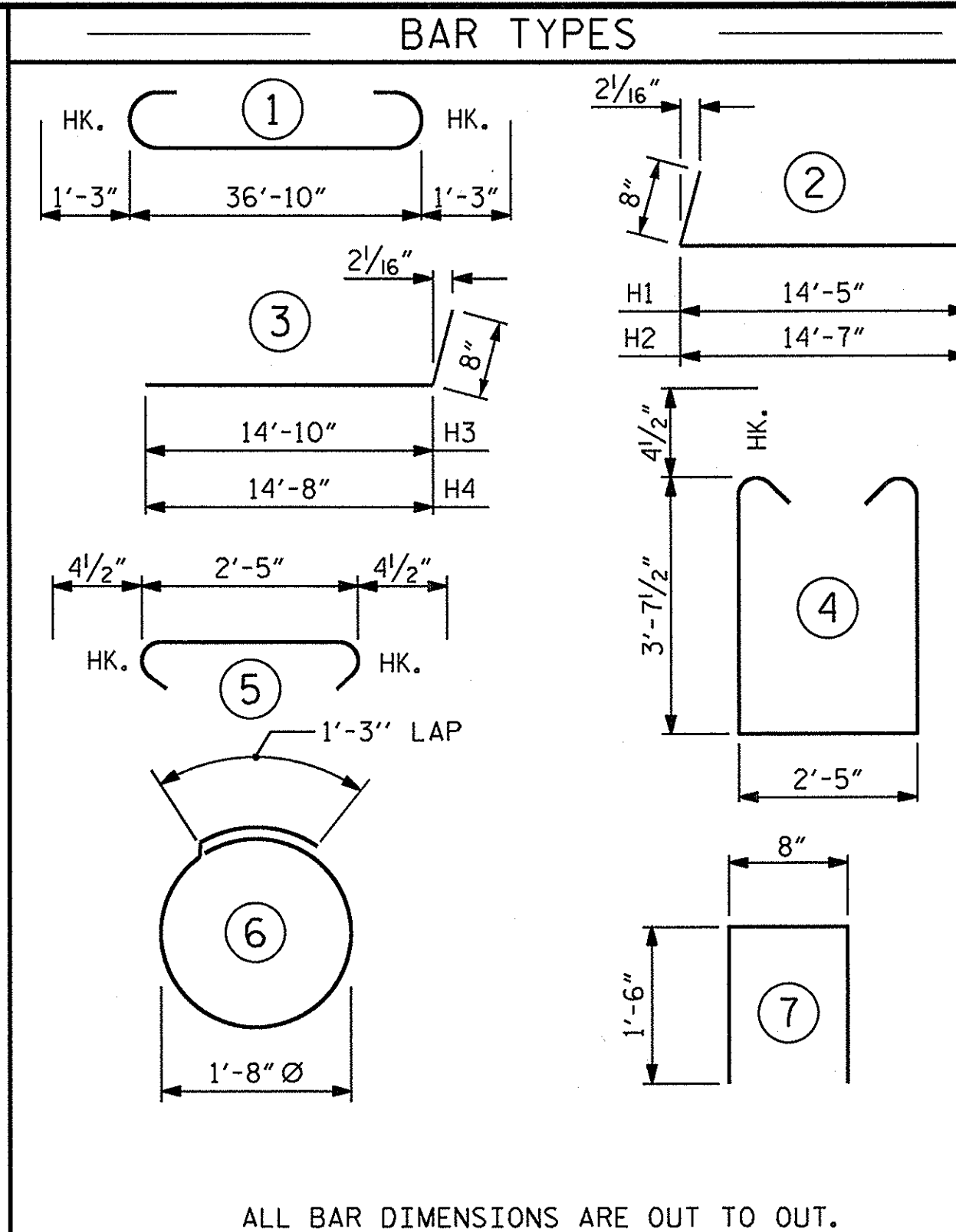
CORROSION PROTECTION FOR STEEL PILES DETAIL

(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)



△ POSITION OF PILE DURING WELDING.

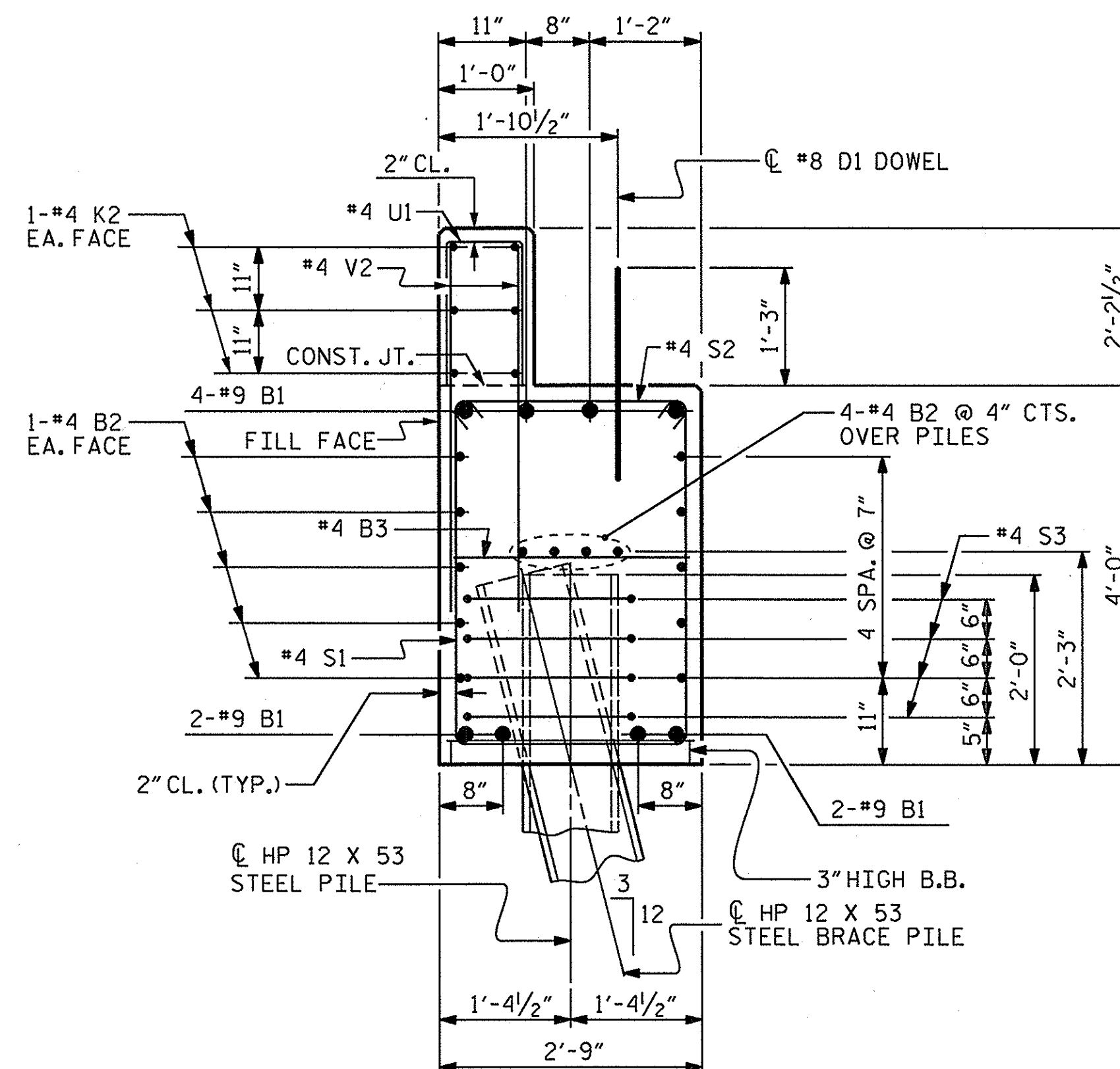
PILE SPLICE DETAILS



ALL BAR DIMENSIONS ARE OUT TO OUT.

END BENT No. 1		END BENT No. 2	
HP 12 X 53 STEEL PILES	NO: 5	HP 12 X 53 STEEL PILES	NO: 5
PILE REDRIVES	EA. 3	PILE REDRIVES	EA. 3
STEEL PILE POINTS	EA. 5	STEEL PILE POINTS	EA. 5

BILL OF MATERIAL					
FOR ONE END BENT					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9		39'-4"	1070
B2	28	#4	STR	19'-9"	369
B3	10	#4	STR	2'-5"	16
D1	20	#8	STR	2'-3"	120
H1	16	#6	2	15'-1"	362
H2	16	#6	2	15'-3"	366
H3	16	#6	3	15'-6"	372
H4	16	#6	3	15'-4"	368
K1	12	#4	STR	3'-1"	25
K2	12	#4	STR	19'-9"	158
S1	48	#4	4	10'-5"	334
S2	48	#4	5	3'-2"	102
S3	20	#4	6	6'-6"	87
U1	31	#4	7	3'-8"	76
V1	77	#4	STR	7'-8"	394
V2	62	#4	STR	5'-10"	242
REINFORCING STEEL (FOR ONE END BENT)					4461 LBS.
CLASS A CONCRETE BREAKDOWN (FOR ONE END BENT)					
POUR #1 CAP, LOWER PART OF WINGS & COLLARS					20.3 C.Y.
POUR #2 BACKWALL & UPPER PART OF WINGS					7.7 C.Y.
TOTAL CLASS A CONCRETE					28.0 C.Y.



SECTION A-A

(CONCRETE COLLAR NOT SHOWN FOR CLARITY. SEE "CORROSION PROTECTION FOR STEEL PILES DETAIL.")



PROJECT NO. BD-5102Z
PITT COUNTY
 STATION: 16+09.43 -L-

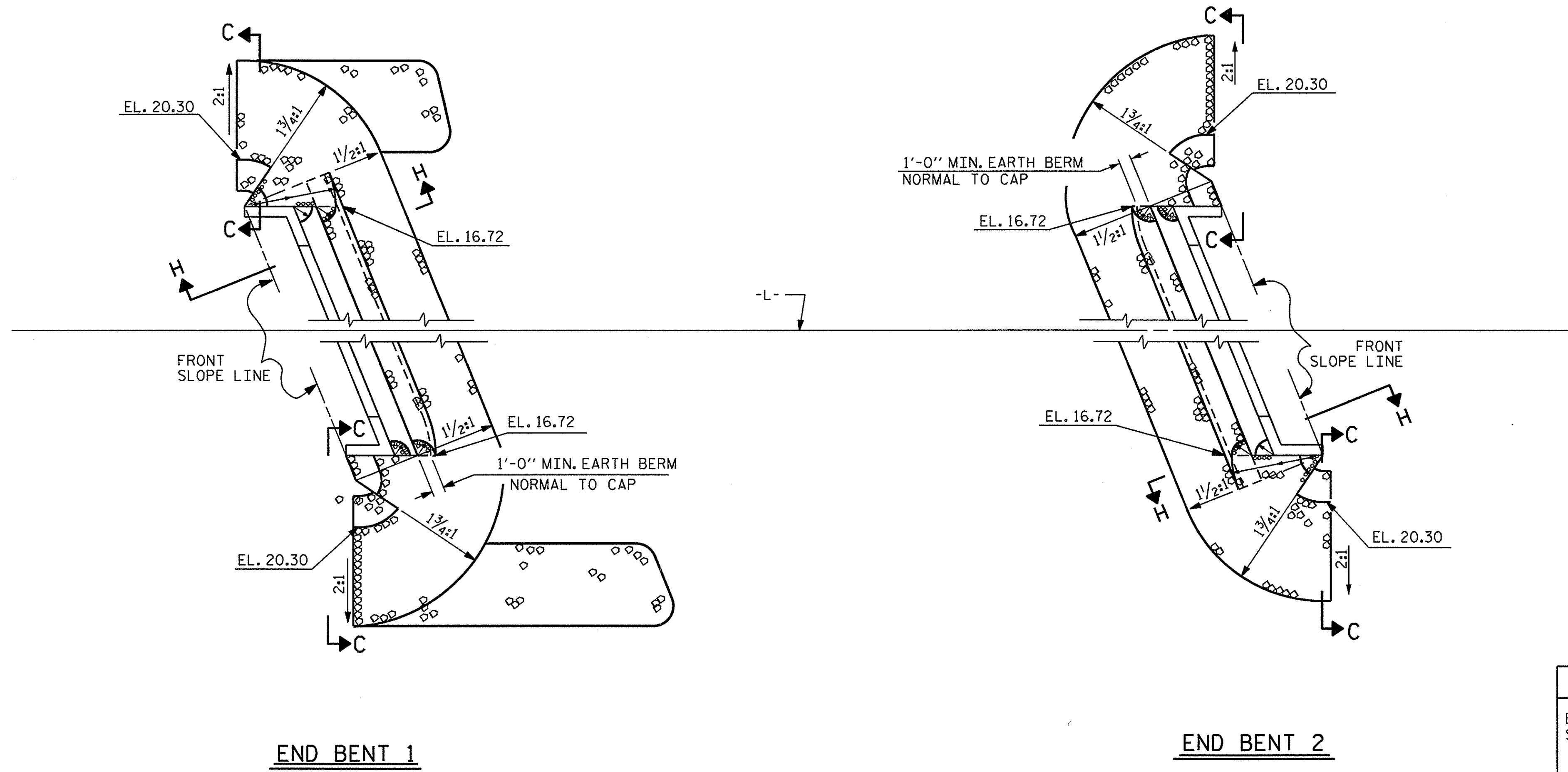
SHEET 4 OF 4

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

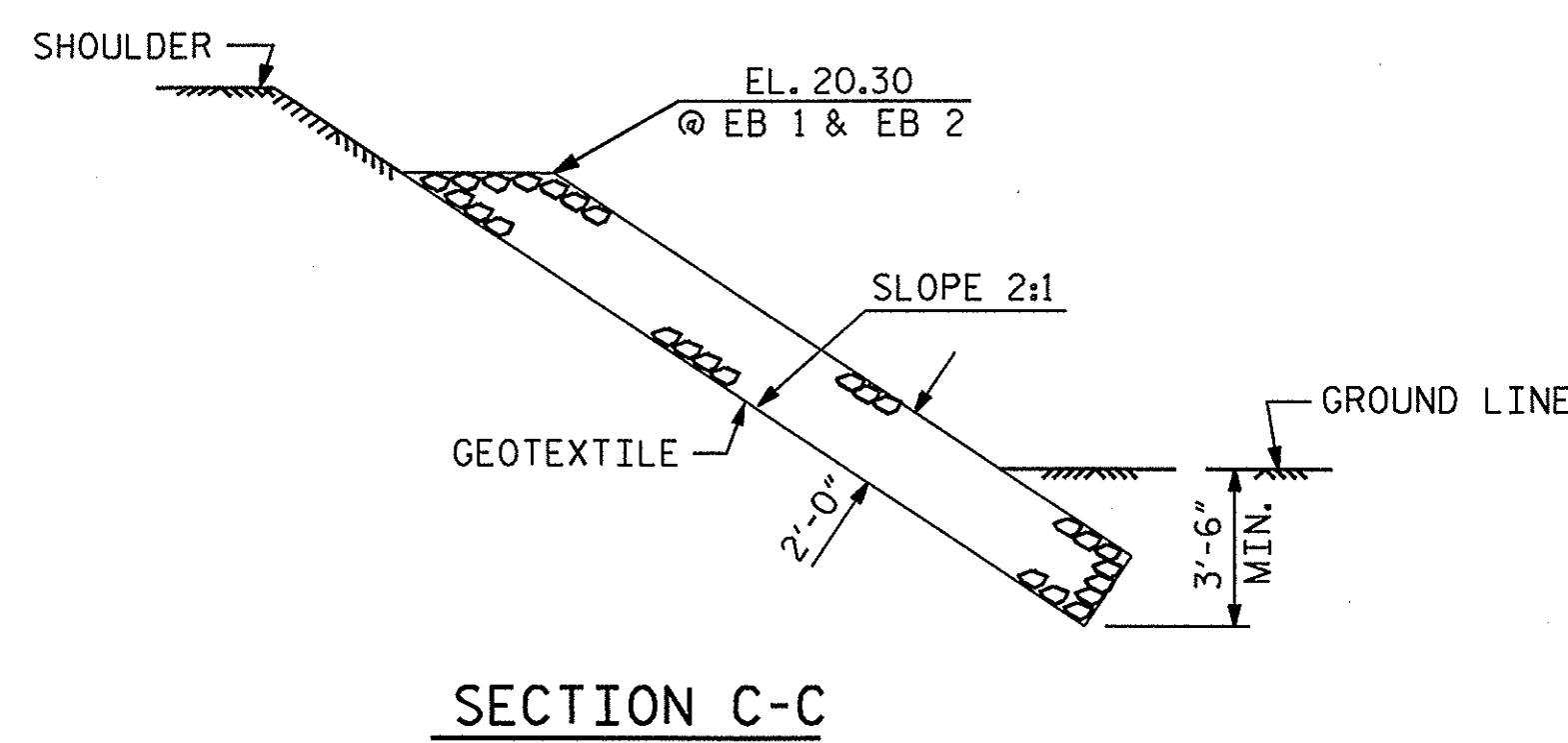
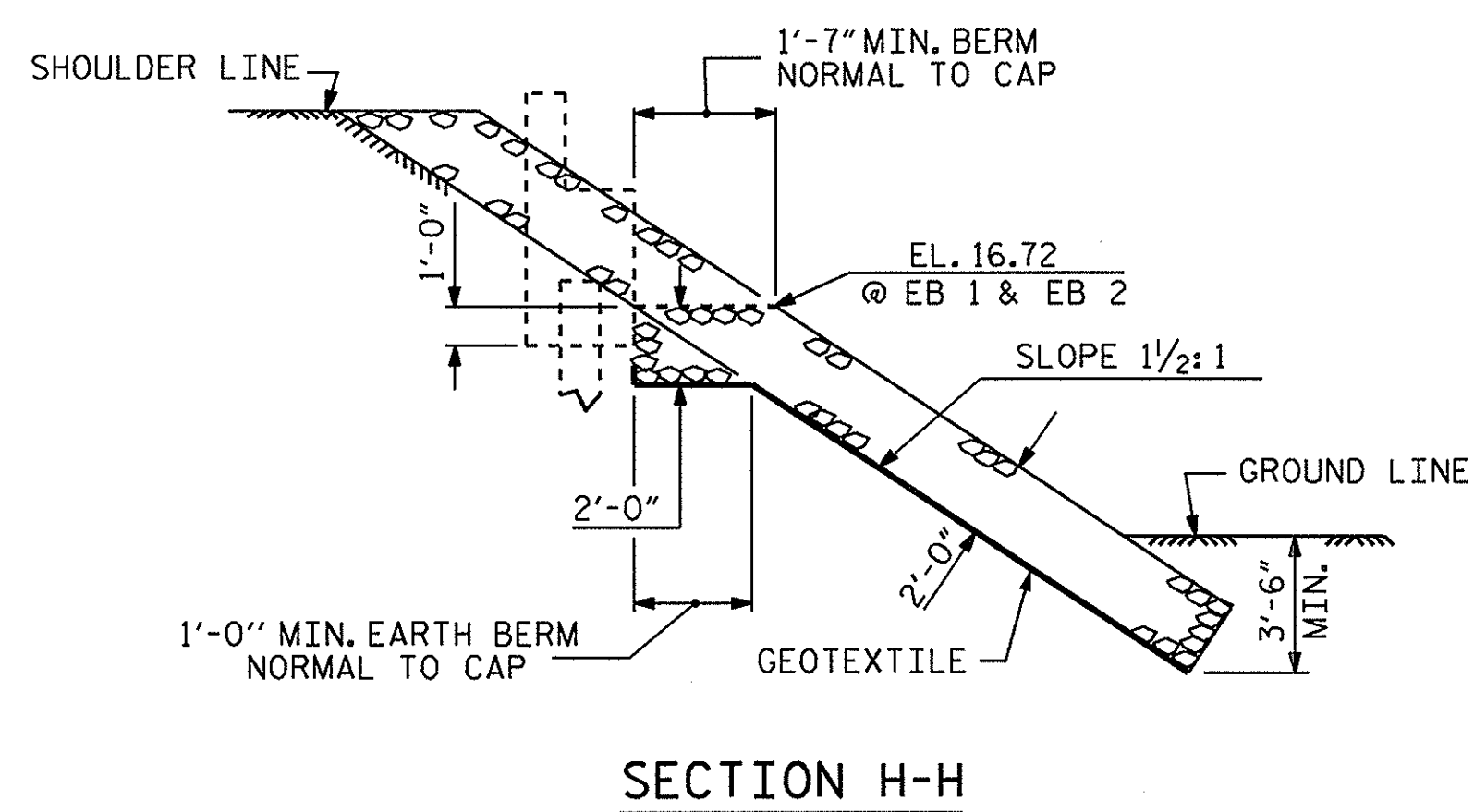
SHEET NO. S-14				
TOTAL SHEETS 16				

ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
 CHECKED BY : M. D. PISO DATE : 10/25/13
 DRAWN BY : WJH 12/11
 CHECKED BY : AAC 12/11

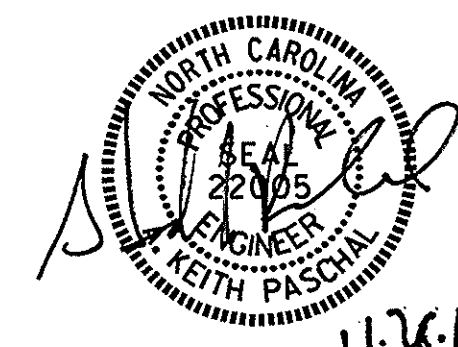
NOTES :
FOR BERM WIDTH DIMENSIONS, SEE GENERAL DRAWING.



ESTIMATED QUANTITIES		
BRIDGE @ STA. 16+09.43 -L-	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	113	126
END BENT 2	61	68

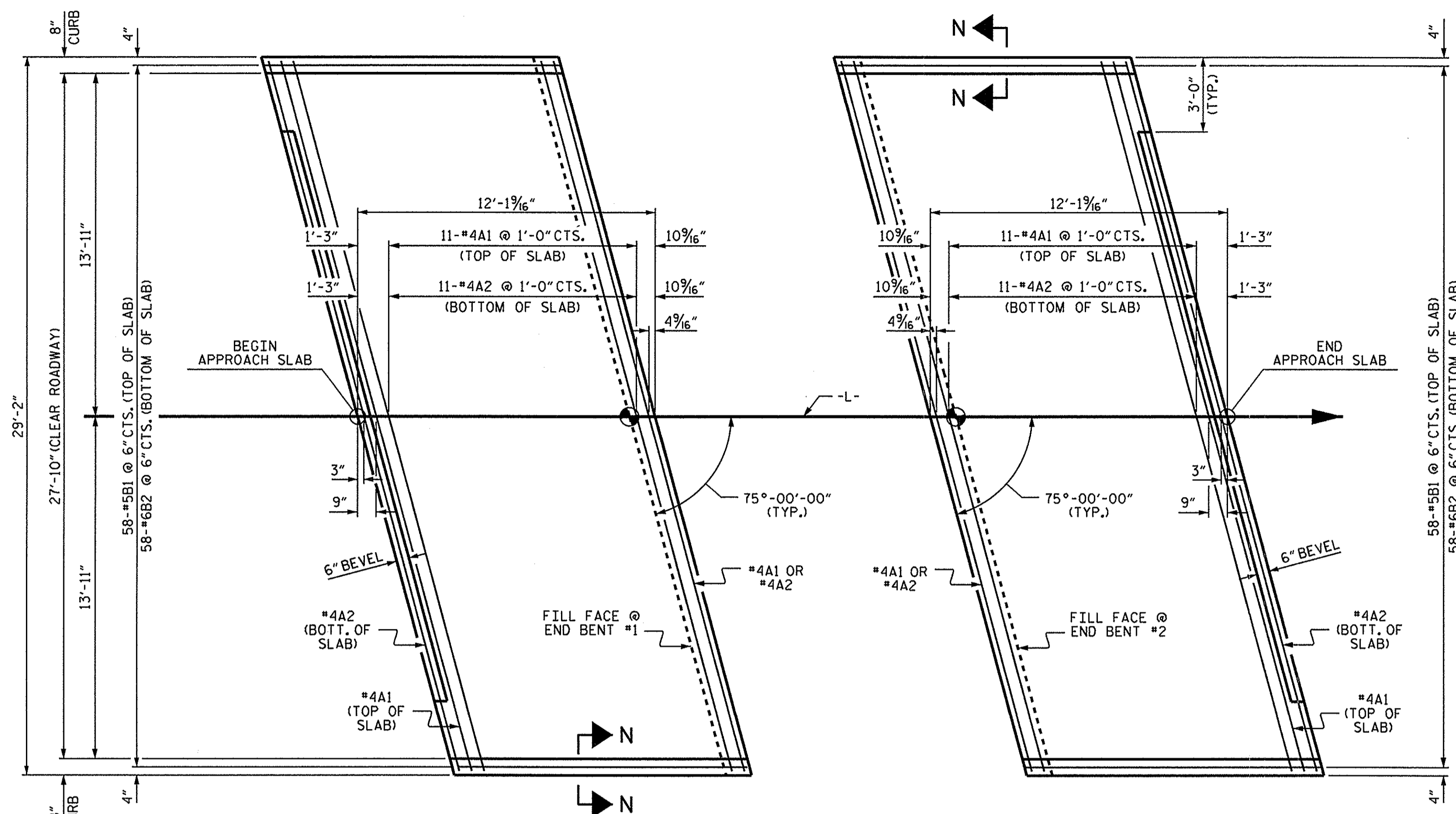


PROJECT NO. BD-5102Z
PITT COUNTY
STATION: 16+09.43 -L-

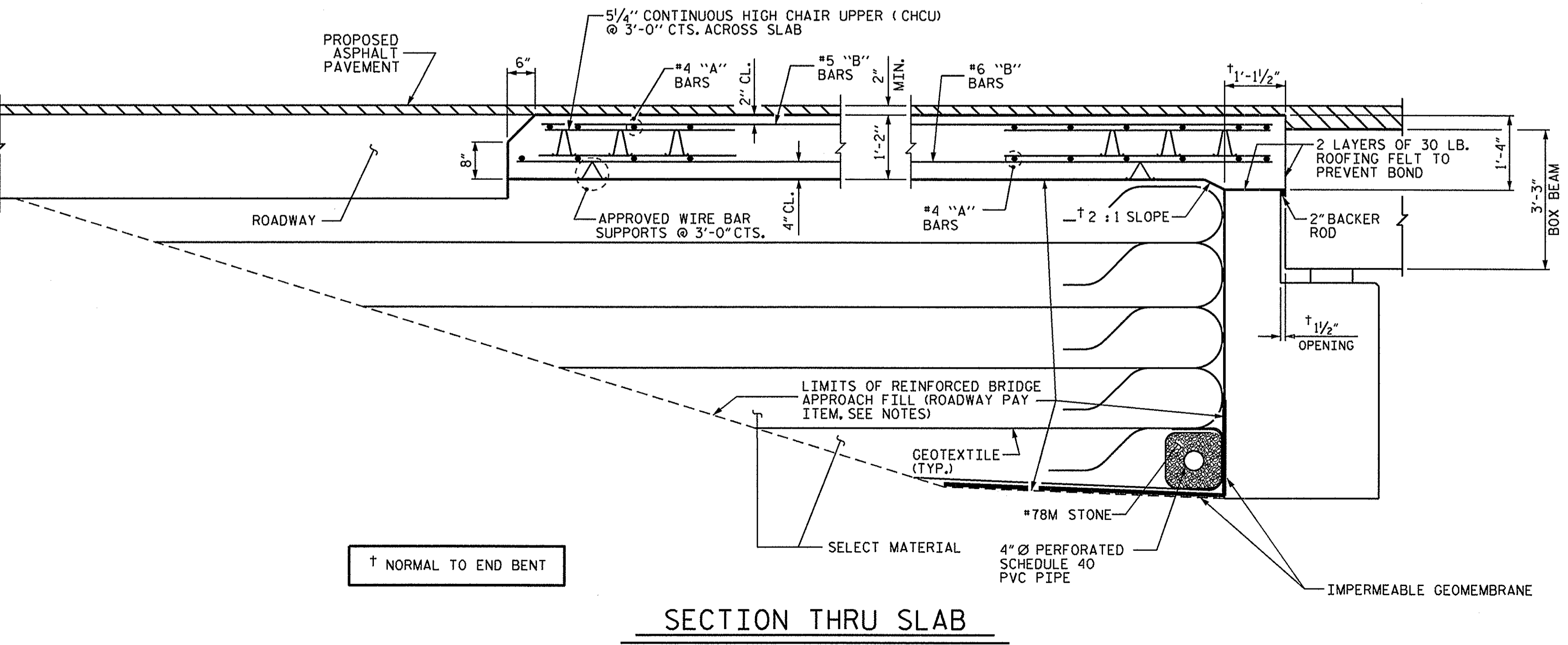


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH STANDARD RIP RAP DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-15
					TOTAL SHEETS 16

ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
CHECKED BY : M. D. PISO DATE : 10/25/13
DRAWN BY : REK 1/84 REV. 5/1/06R TLA/GM
CHECKED BY : RDU 1/84 REV. 10/1/11 MAA/GM
REV. 12/21/11 MAA/GM



PLAN @ END BENT #1 PLAN @ END BENT #2
DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS

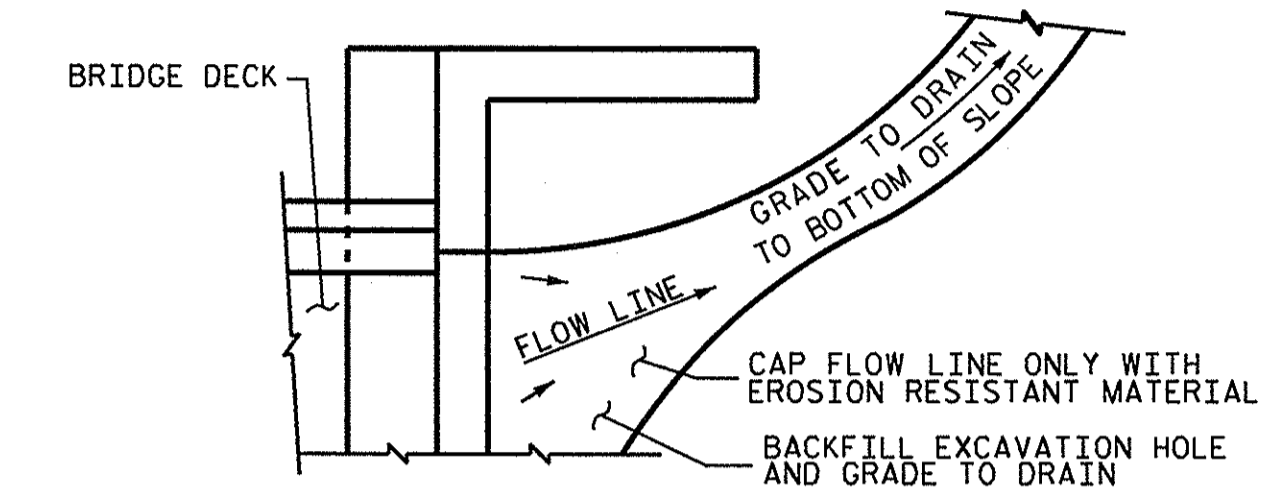


SECTION THRU SLAB

NOTES
FOR REINFORCED BRIDGE APPROACH FILL INCLUDING GEOTEXTILE, IMPERMEABLE GEOMEMBRANE, 4\"/>

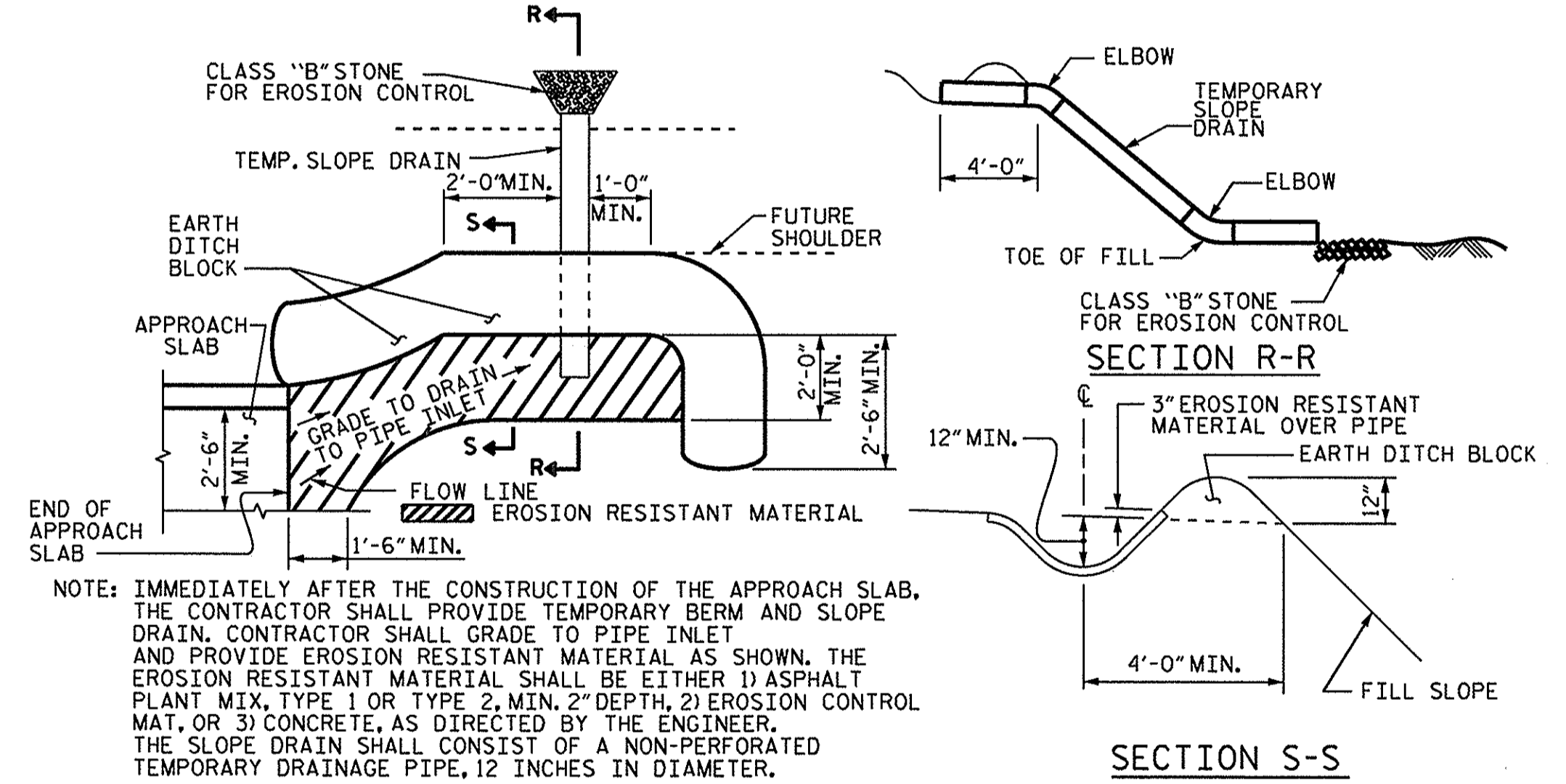
AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED, SEE ROADWAY PLANS.

APPROACH SLAB GROOVING IS NOT REQUIRED.



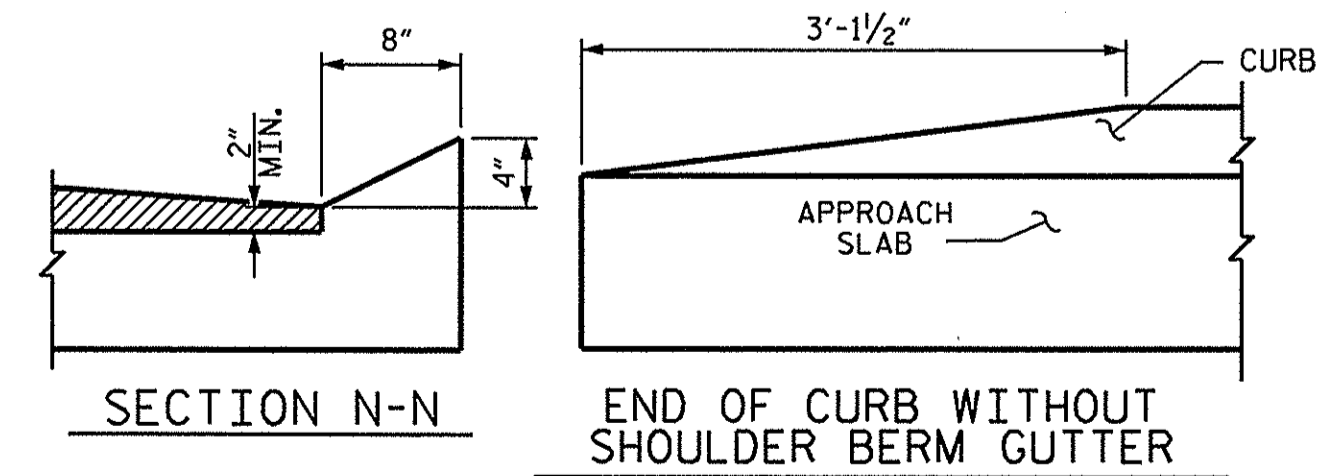
NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT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

TEMPORARY DRAINAGE DETAIL



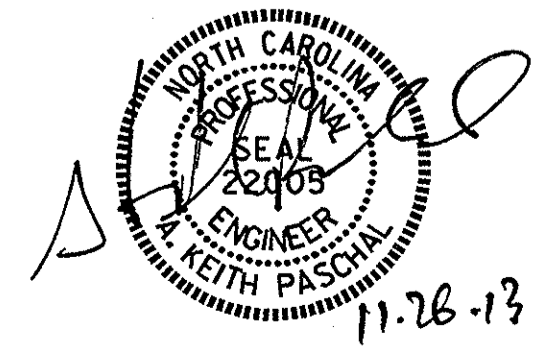
NOTE: IMMEDIATELY AFTER THE CONSTRUCTION OF THE APPROACH SLAB, THE CONTRACTOR SHALL PROVIDE TEMPORARY BERM AND SLOPE DRAIN. CONTRACTOR SHALL GRADE TO PIPE INLET AND PROVIDE EROSION RESISTANT MATERIAL AS SHOWN. THE EROSION RESISTANT MATERIAL SHALL BE EITHER 1) ASPHALT PLANT MIX, TYPE 1 OR TYPE 2, MIN. 2\"/>

PLAN VIEW
TEMPORARY BERM AND SLOPE DRAIN DETAILS
(TO BE USED WHEN SHOULDER BERM GUTTER IS 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"



BILL OF MATERIAL						
APPROACH SLAB AT EB #1						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
*A1	13	#4	STR	29'-10"	259	
A2	13	#4	STR	29'-10"	259	
*B1	58	#5	STR	11'-1"	670	
B2	58	#6	STR	11'-7"	1009	
REINFORCING STEEL					LBS.	1268
* EPOXY COATED REINFORCING STEEL					LBS.	929
CLASS AA CONCRETE					C. Y.	15.6
APPROACH SLAB AT EB #2						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
*A1	13	#4	STR	29'-10"	259	
A2	13	#4	STR	29'-10"	259	
*B1	58	#5	STR	11'-1"	670	
B2	58	#6	STR	11'-7"	1009	
REINFORCING STEEL					LBS.	1268
* EPOXY COATED REINFORCING STEEL					LBS.	929
CLASS AA CONCRETE					C. Y.	15.6

ASSEMBLED BY : C. B. PRUETT DATE : 10/17/13
CHECKED BY : M. D. PISO DATE : 10/25/13
DRAWN BY : MAA 11/11
CHECKED BY : AAC 11/11

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PROJECT NO. BD-5102Z
PITT COUNTY
STATION: 16+09.43 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD BRIDGE APPROACH SLAB FOR PRESTRESSED CONCRETE BOX BEAM UNIT					
75° SKEW					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 16

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.

ENGLISH

JANUARY, 1990