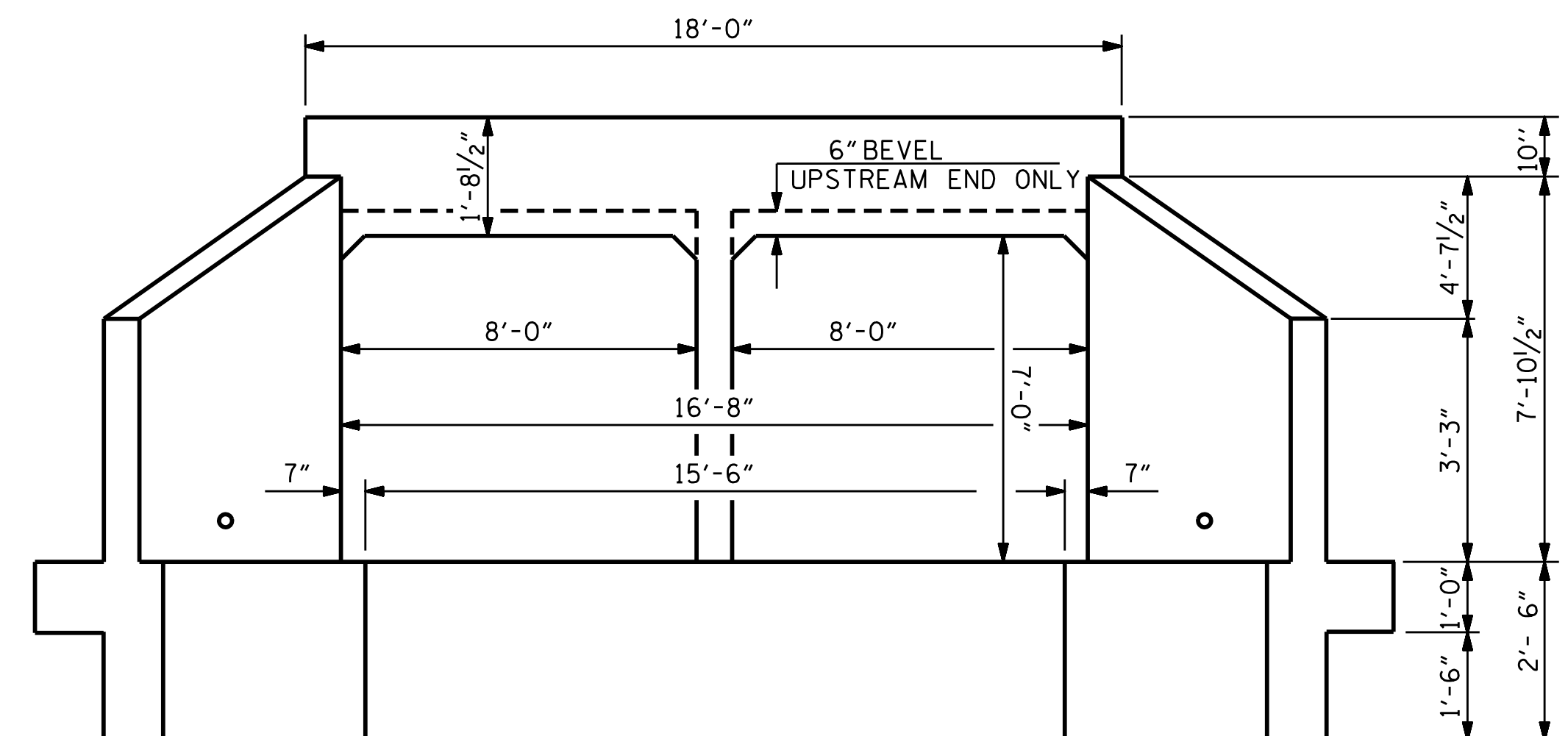


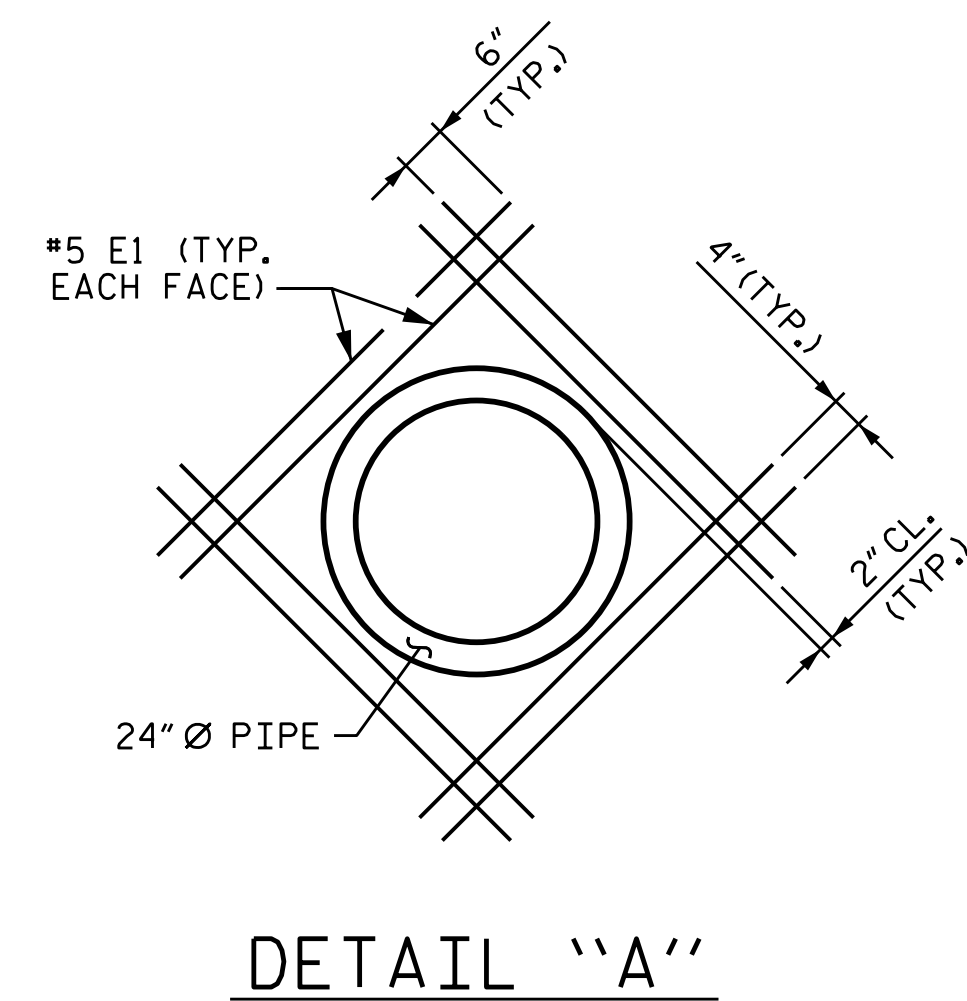
**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**



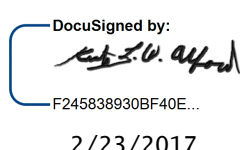
END ELEVATION
OUTLET END



DETAIL "A"

PROJECT NO. 2096110
WAYNE COUNTY
 STATION: BROOKS SWAMP

SHEET 2 OF 2



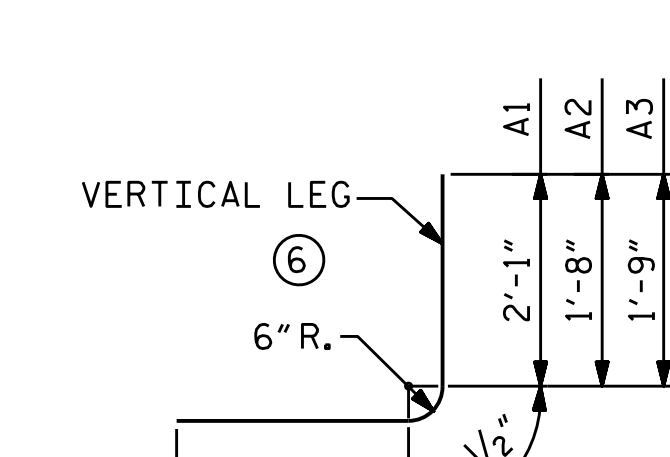
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

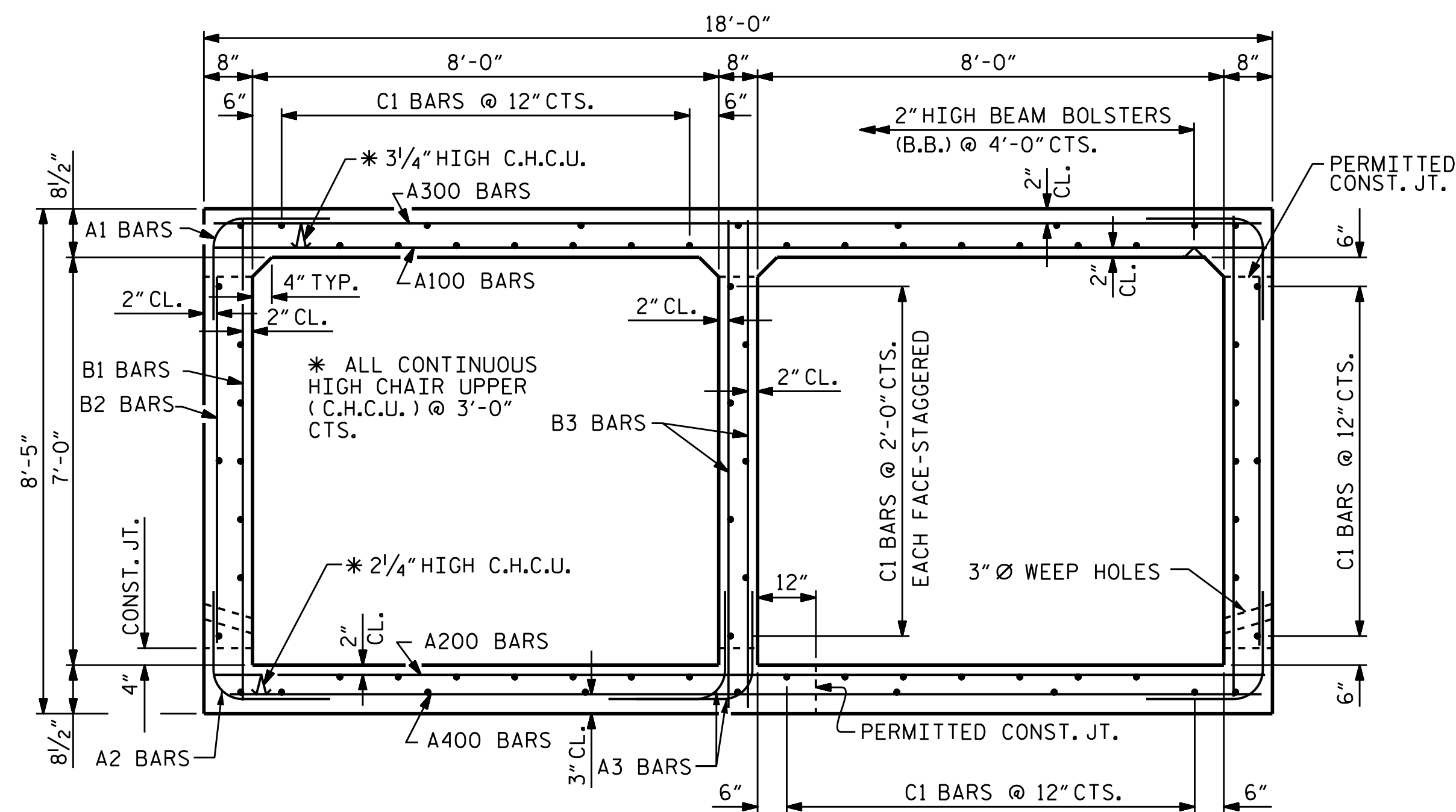
REVISIONS						SHEET NO. C-2
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 5
2			4			

ASSEMBLED BY :	<u>D. SHACKELFORD</u>	DATE :	<u>01/2017</u>
CHECKED BY :	<u>J.D. HAWK</u>	DATE :	<u>02/2017</u>
DRAWN BY :	<u>RALPH D. UNDERWOOD</u>	DATE :	<u>MAY 1971</u>
CHECKED BY :	<u>JOEL A. JOHNSON</u>	DATE :	<u>JULY 1971</u>

SPECIAL
STANDARD

REVISED 11-19-99 BY M.M. CHECKED BY R.W.W.
REDRAWN NOV. 1990 BY TSS CHECKED BY J

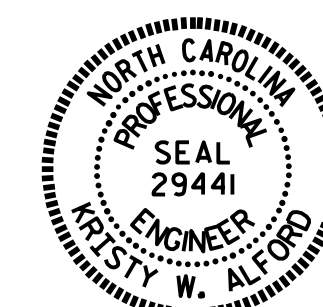
BAR TYPE			BAR SCHEDULE					
 VERTICAL LEG 6" R. A1, A2, A3 1'-7 1/2" 2'-1" 1'-8" 1'-9" 9 1/2"			BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
			A100	73	#4	STR	17'-7"	857
			A200	73	#4	STR	17'-7"	857
			A300	102	#4	STR	17'-7"	1198
			A400	102	#4	STR	17'-7"	1198
			A1	170	#4	6	4'-6"	511
			A2	170	#4	6	4'-1"	464
			A3	86	#4	6	4'-2"	239
			B1	86	#4	STR	7'-11"	455
			B2	170	#4	STR	6'-4"	719
			B3	86	#4	STR	7'-11"	455
BAR DIMENSIONS ARE OUT TO OUT			C1	138	#4	STR	22'-0"	2028
SPLICE LENGTH CHART			E1	8	#5	STR	4'-6"	38
BAR	SIZE	LENGTH	G1	8	#5	STR	17'-8"	147
C1	#4	1'-11"						
			REINFORCING STEEL = 9,166 LBS					



RIGHT ANGLE SECTION OF BARREL

THERE ARE 69 "C" BARS IN SECTION OF BARREL.

PROJECT NO. 2096110
WAYNE COUNTY
 STATION: BROOKS SWAMP



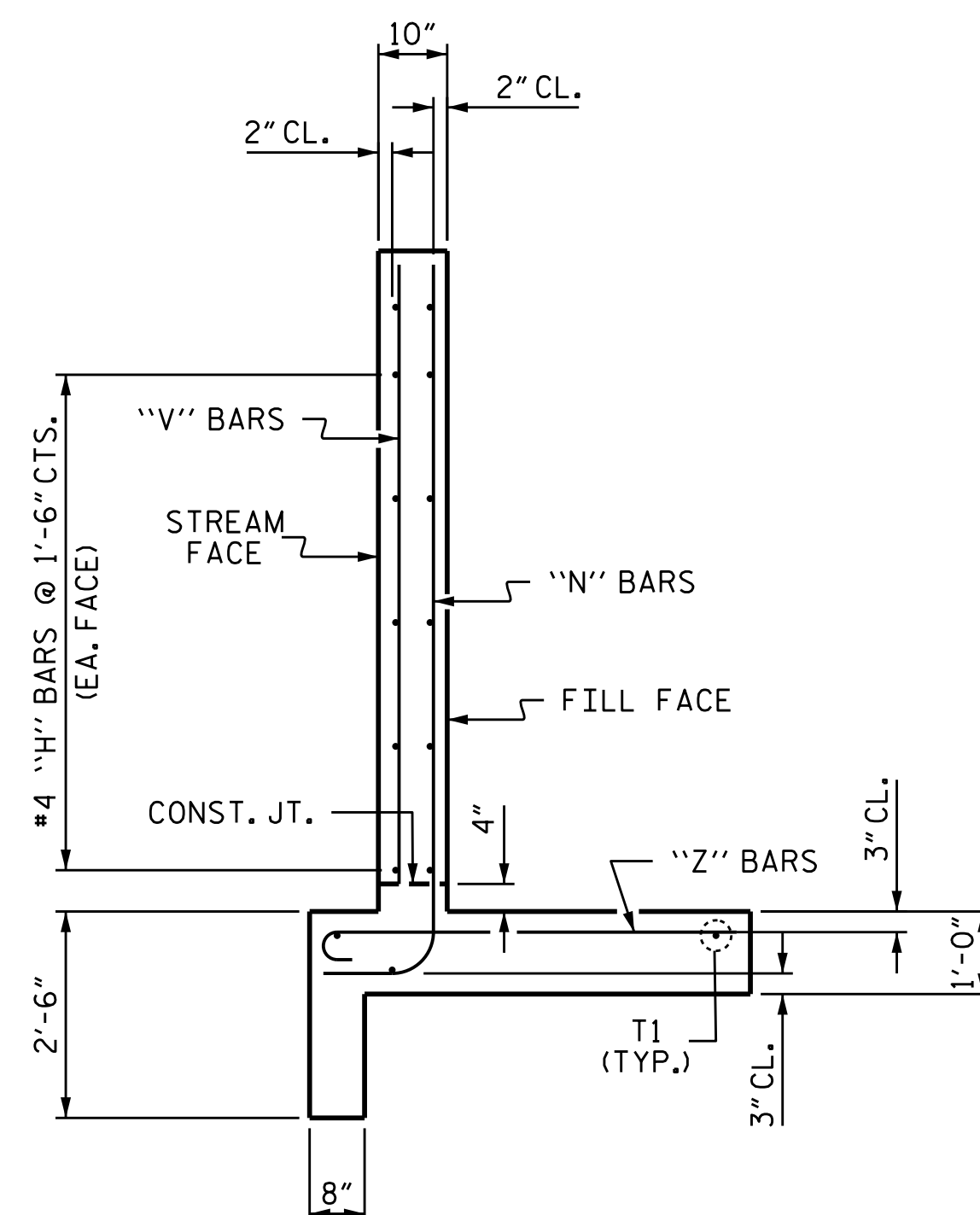
DocuSigned by:
Anthony W. Afford
E245838930BF40E...

2/23/2017

DRAWN BY : D. SHACKELFORD DATE : 02/2017
 CHECKED BY : J.D. HAWK DATE : 02/2017
 DESIGN ENGINEER OF RECORD: D. SHACKELFORD DATE : 02/2017

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

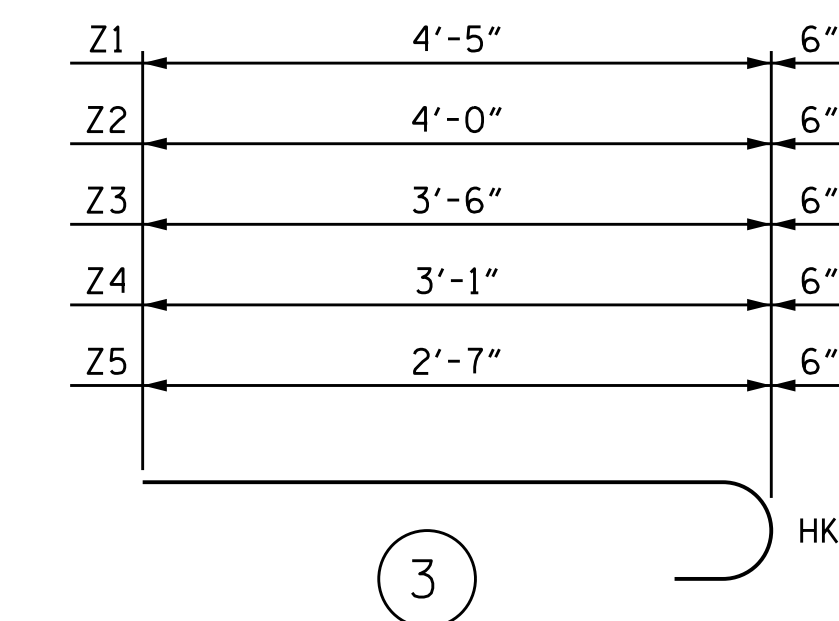
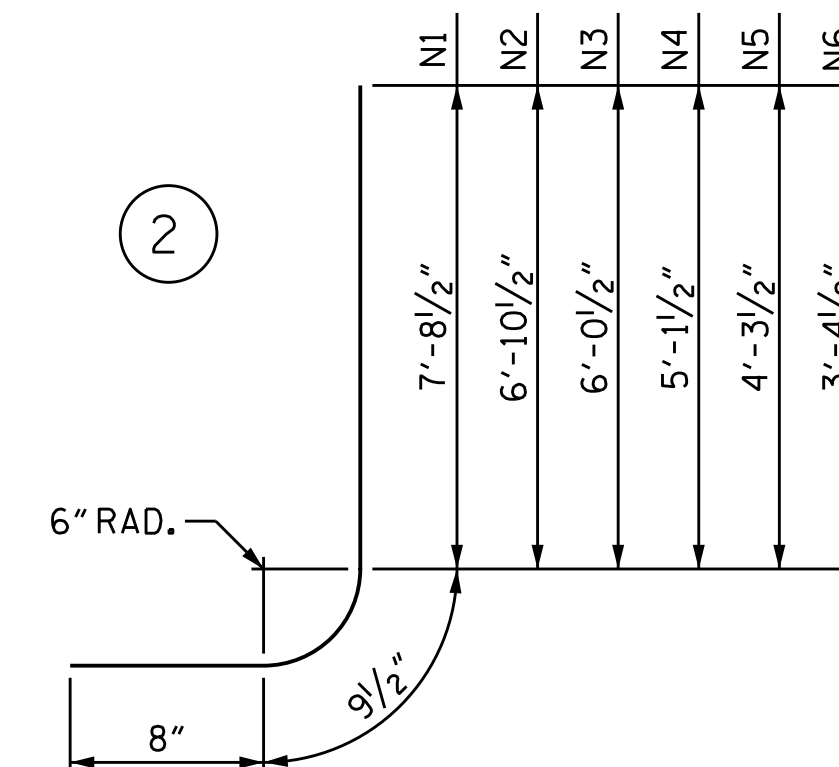
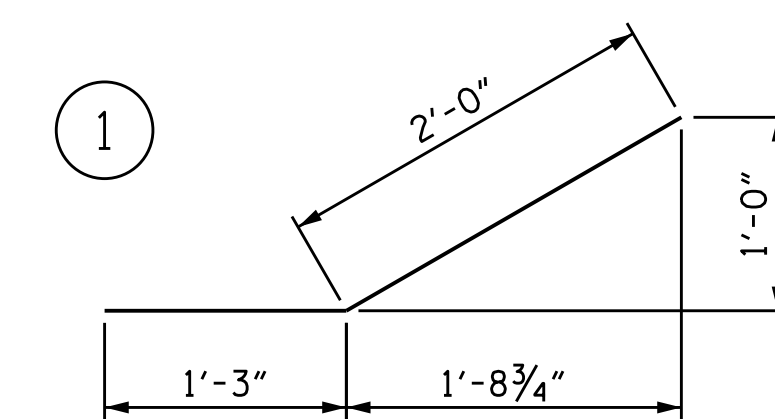
REVISONS						SHEET NO. C-3
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 5
2			4			



TYPICAL WING SECTION

BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT.



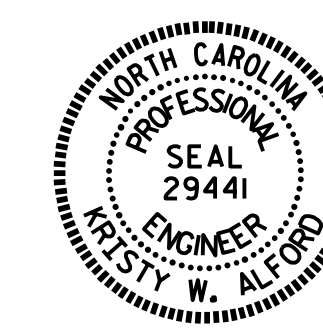
BILL OF MATERIAL

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
H1	8	#4	STR	9'-4"	50
H2	4	#4	STR	8'-6"	23
H3	4	#4	STR	5'-1"	14
H4	24	#4	1	3'-3"	52
H5	4	#4	STR	10'-3"	27
N1	4	#5	2	9'-2"	38
N2	4	#5	2	8'-4"	35
N3	4	#4	2	7'-6"	20
N4	4	#4	2	6'-7"	18
N5	4	#4	2	5'-9"	15
N6	4	#4	2	4'-10"	13
S1	6	#6	STR	6'-0"	54
T1	6	#5	STR	11'-3"	70
V1	4	#4	STR	7'-1"	19
V2	4	#4	STR	6'-4"	17
V3	4	#4	STR	5'-5"	14
V4	4	#4	STR	4'-7"	12
V5	4	#4	STR	3'-8"	10
V6	4	#4	STR	2'-10"	8
Z1	8	#4	3	4'-11"	26
Z2	4	#4	3	4'-6"	12
Z3	4	#4	3	4'-0"	11
Z4	4	#4	3	3'-7"	10
Z5	4	#4	3	3'-1"	8

TOTAL REINFORCING STEEL FOR 2 WINGS	576 LBS
--	---------

CLASS	A CONCRETE		
2	WINGS	8.6	CY
2	HEADWALLS	3.3	CY
2	END CURTAIN WALLS	1.2	CY
	TOTAL	13.1	CY

PROJECT NO. 2096110
WAYNE COUNTY
 STATION: BROOKS SWAMP



DocuSigned by:
Kyle L. V. Afford

2/23/201

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD WINGS
FOR
CONCRETE BOX CULVERT
H = 7'-0" SLOPE = 2:1
90° SKEW

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

STD. NO. CW9007

ASSEMBLED BY : <u>D. SHACKELFORD</u>	DATE : <u>01/2017</u>
CHECKED BY : <u>J.D. HAWK</u>	DATE : <u>02/2017</u>
DRAWN BY : CCJ 10/99 CHECKED BY : RWV 03/00	

LOAD AND RESISTANCE FACTOR RATING (LRFR)
SUMMARY FOR REINFORCED CONCRETE BOX CULVERTS

LEVEL		VEHICLE	WEIGHT (W) (TONS)	#	MINIMUM RATING FACTORS (RF)	TONS = W x RF	STRENGTH I LIMIT STATE								COMMENT NUMBER			
							LIVE-LOAD FACTORS (γ_{LL})	MOMENT				SHEAR						
								RATING FACTOR	BOX NO.	ELEMENT TYPE	DISTANCE FROM LEFT END OF ELEMENT (ft)	RATING FACTOR	BOX NO.	ELEMENT TYPE		DISTANCE FROM LEFT END OF ELEMENT (ft)		
DESIGN LOAD RATING		HL-93 (INVENTORY)	N/A	1	1.12	--	1.75	1.12	1	TOP SLAB	3.90	1.18	1	TOP SLAB	7.82			
		HL-93 (OPERATING)	N/A		1.45	--	1.35	1.45	1	TOP SLAB	3.90	1.52	1	TOP SLAB	7.82			
		HS-20 (INVENTORY)	36.000	2	1.18	42.51	1.75	1.23	1	TOP SLAB	3.90	1.18	1	BOTTOM SLAB	7.82			
		HS-20 (OPERATING)	36.000		1.53	55.10	1.35	1.60	1	TOP SLAB	3.90	1.53	1	BOTTOM SLAB	7.82			
LEGAL LOAD RATING		SINGLE VEHICLE (SV)		SNSH	13.500		2.20	29.74	1.40	2.23	1	TOP SLAB	3.90	2.20	1	TOP SLAB	7.82	
				SNGARBS2	20.000		2.07	41.43	1.40	2.10	1	TOP SLAB	3.90	2.07	1	TOP SLAB	7.82	
				SNAGRIS2	22.000		2.14	47.05	1.40	2.23	1	TOP SLAB	3.90	2.14	1	BOTTOM SLAB	7.82	
				SNCOTTS3	27.250		1.39	37.99	1.40	1.39	1	TOP SLAB	3.90	1.46	1	TOP SLAB	7.82	
				SNAGGRS4	34.925		1.49	52.15	1.40	1.84	1	TOP SLAB	3.90	1.49	1	BOTTOM SLAB	7.82	
				SNS5A	35.550		1.32	47.10	1.40	1.68	1	TOP SLAB	3.90	1.32	1	BOTTOM SLAB	7.82	
				SNS6A	39.950		1.31	52.46	1.40	1.68	1	TOP SLAB	3.90	1.31	1	BOTTOM SLAB	7.82	
				SNS7B	42.000		1.31	55.15	1.40	1.75	1	TOP SLAB	3.68	1.31	1	BOTTOM SLAB	7.82	
		TRUCK TRACTOR SEMI-TRAILER (TTST)		TNAGRIT3	33.000		1.84	60.61	1.40	2.23	1	TOP SLAB	3.90	1.84	1	BOTTOM SLAB	7.82	
				TNT4A	33.075		1.51	49.87	1.40	1.66	1	TOP SLAB	3.90	1.51	1	BOTTOM SLAB	7.82	
				TNT6A	41.600		1.52	63.42	1.40	1.70	1	TOP SLAB	3.90	1.52	1	BOTTOM SLAB	7.82	
				TNT7A	42.000		1.56	65.40	1.40	1.71	1	TOP SLAB	3.90	1.56	1	BOTTOM SLAB	7.82	
				TNT7B	42.000		1.37	57.38	1.40	1.66	1	TOP SLAB	3.90	1.37	1	BOTTOM SLAB	7.82	
				TNAGRIT4	43.000		1.27	54.71	1.40	1.58	1	TOP SLAB	3.90	1.27	1	BOTTOM SLAB	7.82	
TNAGT5A	45.000				1.29	58.14	1.40	1.62	1	TOP SLAB	3.90	1.29	1	BOTTOM SLAB	7.82			
TNAGT5B	45.000	3	1.26	56.59	1.40	1.66	1	TOP SLAB	3.90	1.26	1	BOTTOM SLAB	7.82					

LOAD FACTORS:

DESIGN LOAD RATING FACTORS

LOAD TYPE	MAX FACTOR	MIN FACTOR
DC	1.25	0.90
DW	1.50	0.65
EV	1.30	0.90
EH	1.35	0.90
ES	1.35	0.90
LS	1.75	--
WA	1.00	--

NOTE:
RATING FACTORS ARE BASED ON THE STRENGTH I LIMIT STATE.

COMMENTS:

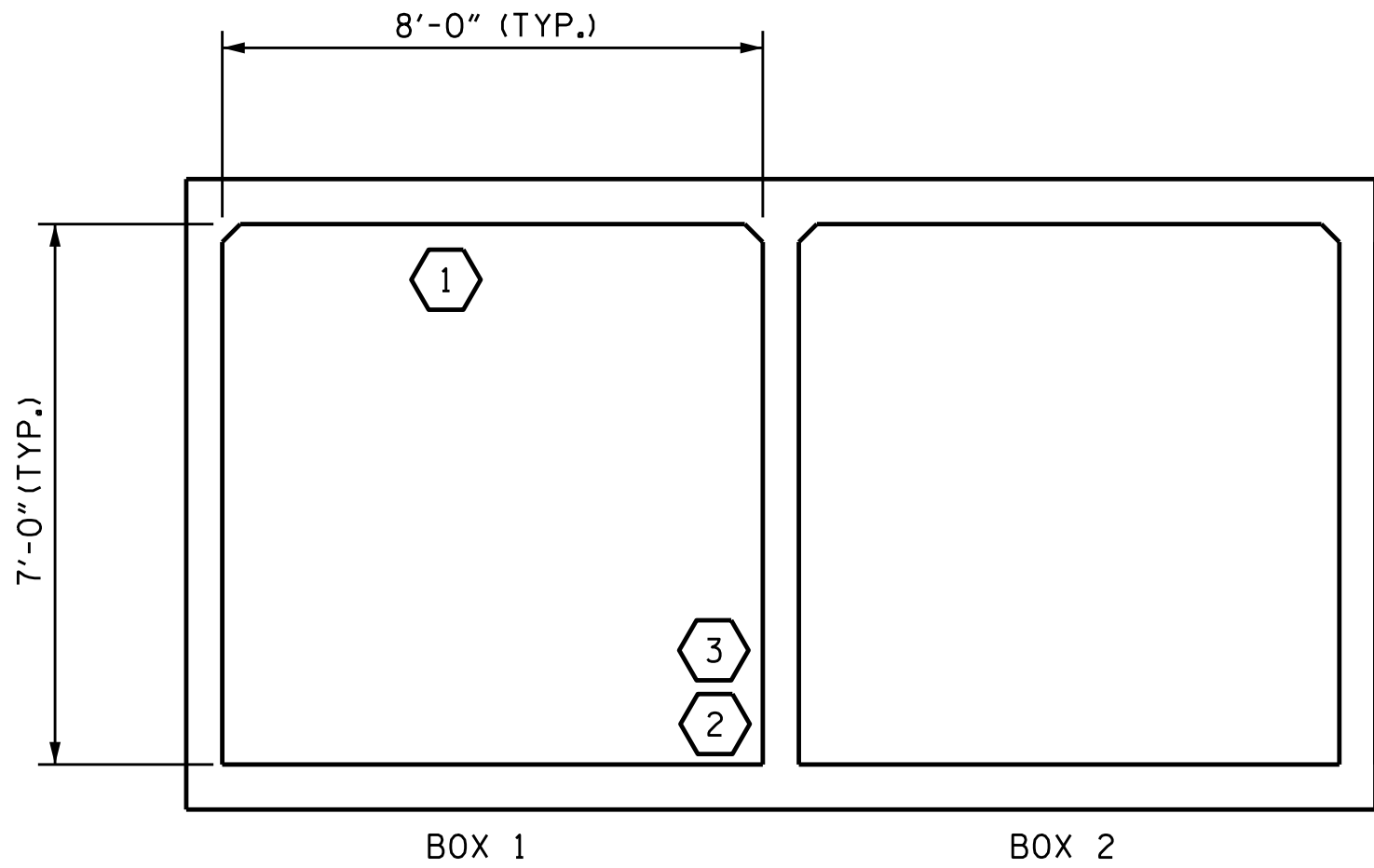
-
-
-
-

⬡ CONTROLLING LOAD RATING

⬡1 DESIGN LOAD RATING (HL-93)

⬡2 DESIGN LOAD RATING (HS-20)

⬡3 LEGAL LOAD RATING **
** SEE CHART FOR VEHICLE TYPE



LRFR SUMMARY
(LOOKING DOWNSTREAM)

PROJECT NO. 2096110
WAYNE COUNTY
STATION: BROOKS SWAMP



DocuSigned by:
Kristy W. Alford
2/23/2017

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH STANDARD LRFR SUMMARY FOR REINFORCED CONCRETE BOX CULVERTS (NON-INTERSTATE TRAFFIC)						SHEET NO. C-5
REVISIONS						TOTAL SHEETS 5
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

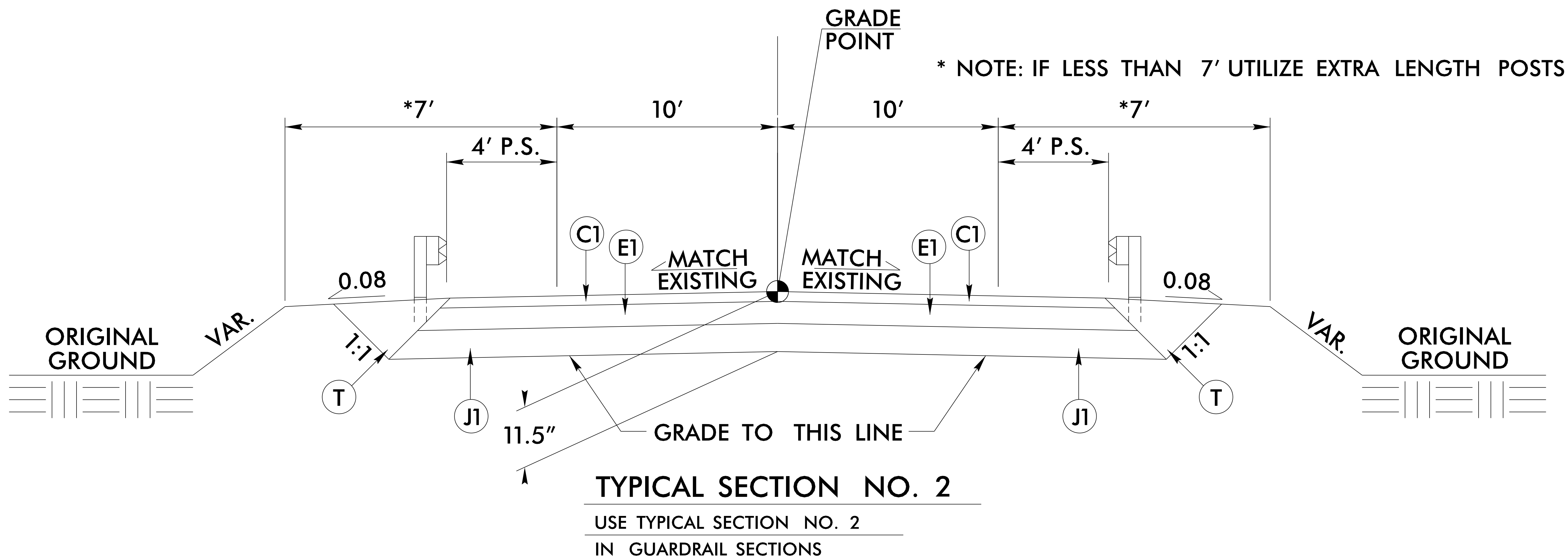
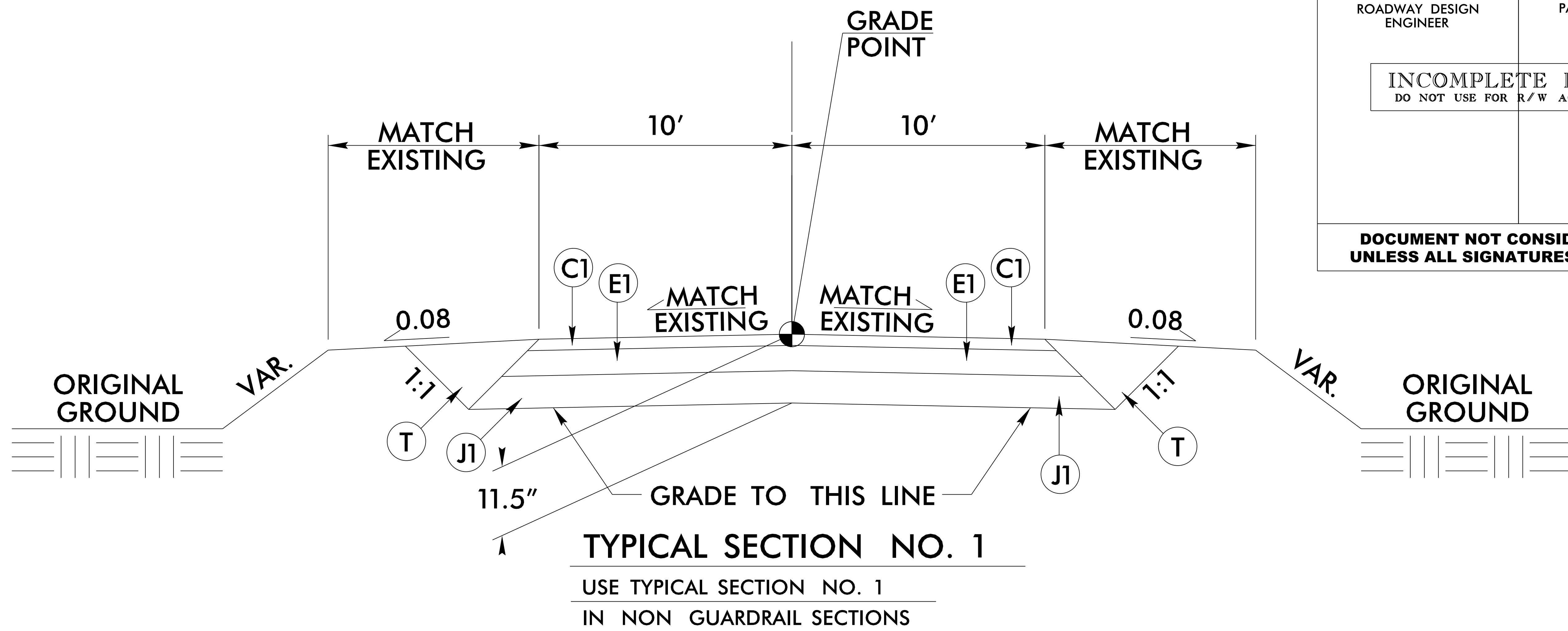
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

ASSEMBLED BY : D. SHACKELFORD	DATE : 01/2017
CHECKED BY : J.D. HAWK	DATE : 02/2017
DRAWN BY : WMC	7/11
CHECKED BY : GM	7/11

REV. 10/1/11 MAA/GM

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.
J1	PROP. APPROX. 6" AGGREGATE BASE COURSE
T	EARTH MATERIAL

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



GUARDRAIL SUMMARY

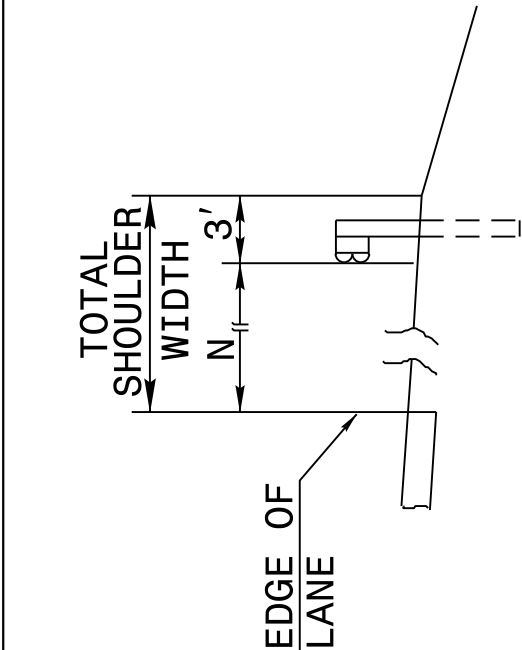
[illegible]

S:\4-MAY-2017\515-projects\Standard Drawings\Standard Drawings\Details in Lieu of Standards\Division 8\862d01 862d03 862d03\862d01.dgn
JHOWERTON 05/05/2017 09:25:55

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

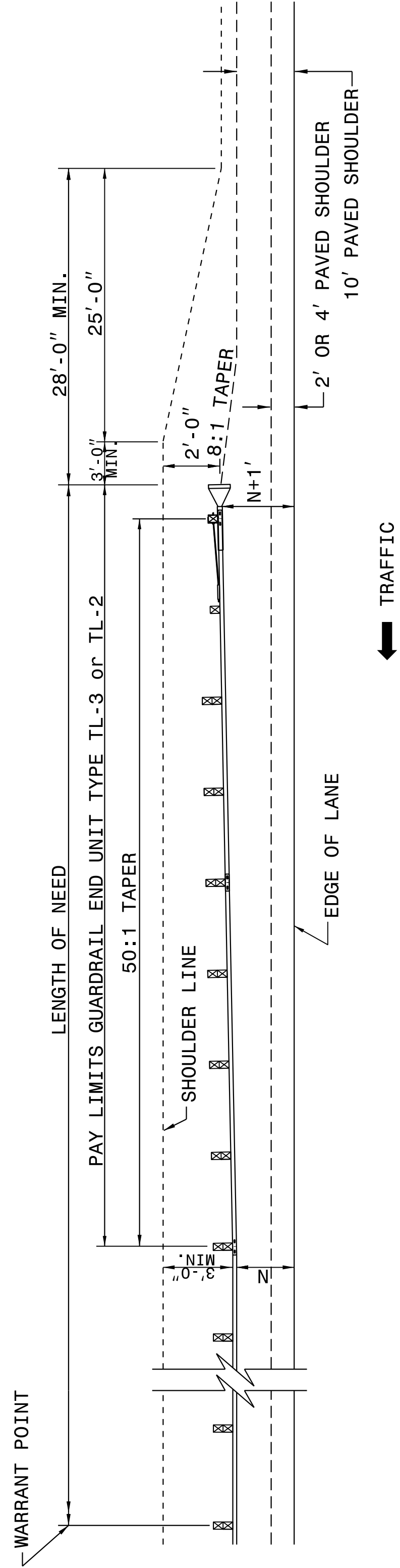
ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 6 OF 11
862D01



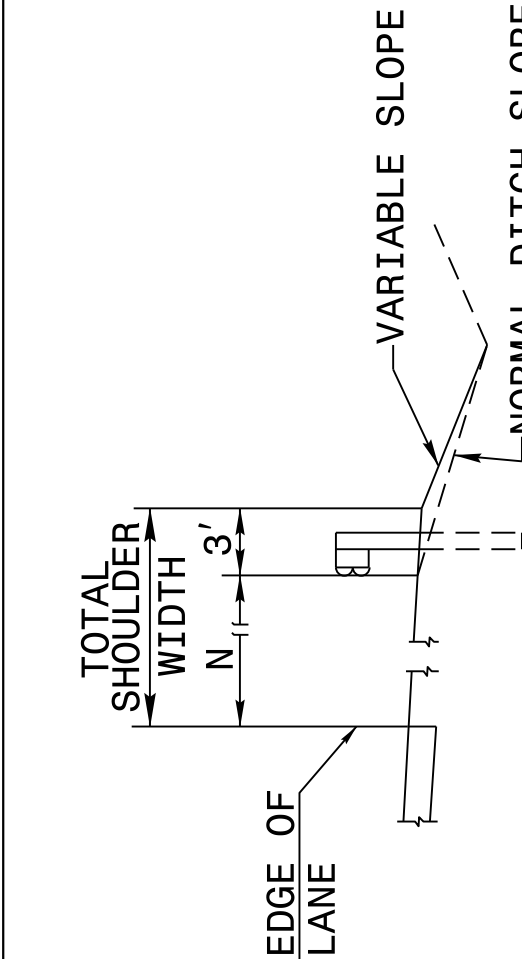
FILL SECTION

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



FOR POSTED SPEEDS $\geq$ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS $<$ 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION



CUT SECTION

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

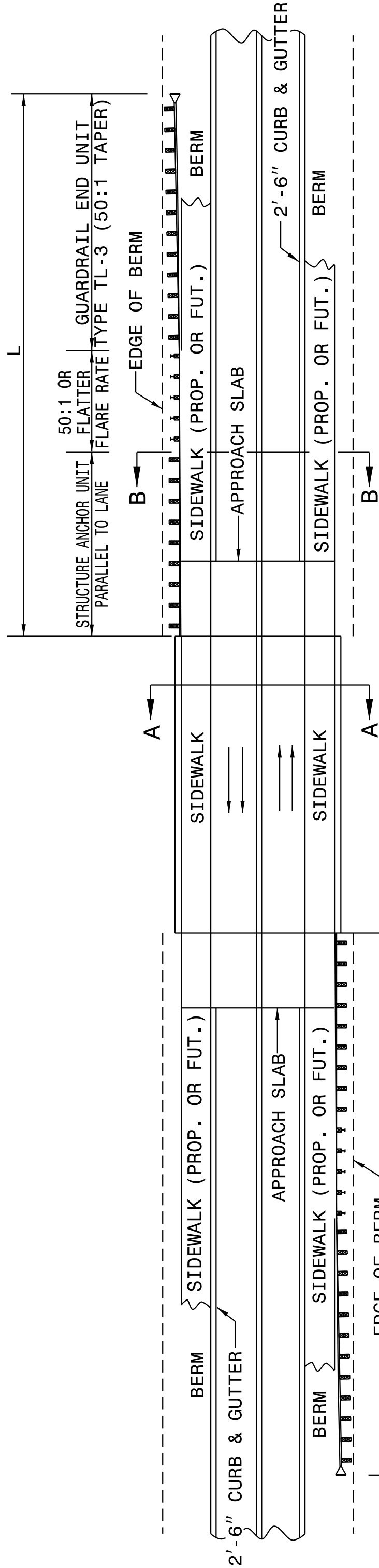
SHEET 6 OF 11
862D01

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

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 5 OF 11
862D01



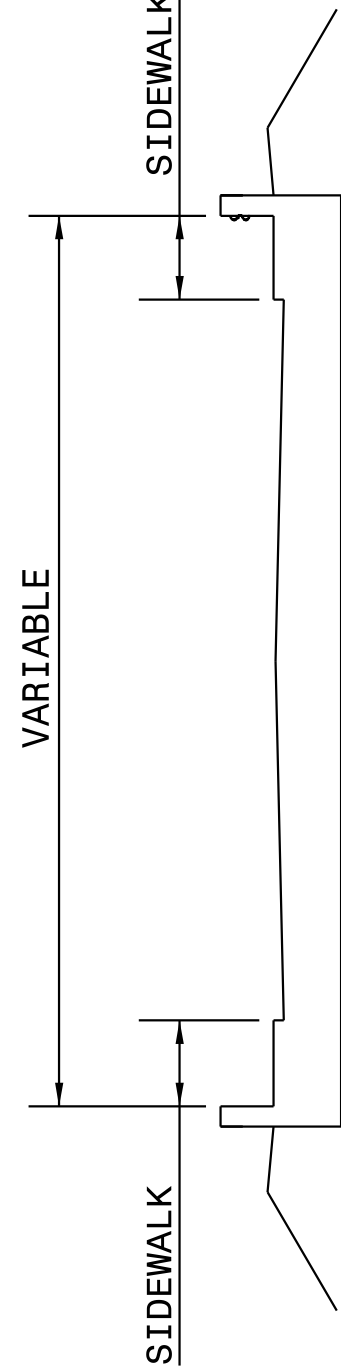
MINIMUM GUARDRAIL LENGTHS "L" REQUIRED AT
BRIDGE APPROACHES ON 2'-6" CONCRETE CURB
AND GUTTER ROADWAYS

DESIGN SPEED (MPH)	"L"
40	150'
50	225'

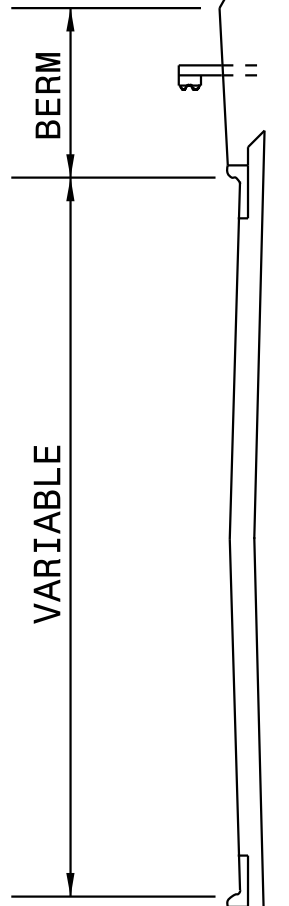
NOTE: "L" VALUES ARE BASED ON NO HAZARDS
OTHER THAN END OF BRIDGE BEING
PRESENT WITHIN THE CLEAR ZONE.

SEE STD. 862D03 FOR STRUCTURE ANCHOR UNITS.

FOR POSTED SPEEDS $\geq$ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS $<$ 45mph USE GREU TYPE TL-2



SECTION A-A



SECTION B-B

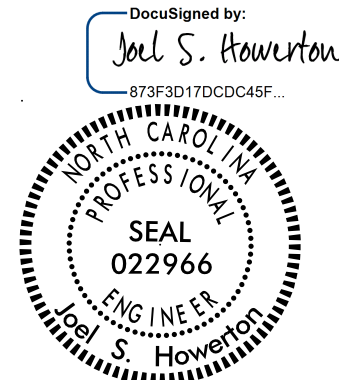
STANDARD GUARDRAIL PLACEMENT AT BRIDGES WITH 2'-6" CONCRETE CURB AND GUTTER

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

SEE TITLE BLOCK

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

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

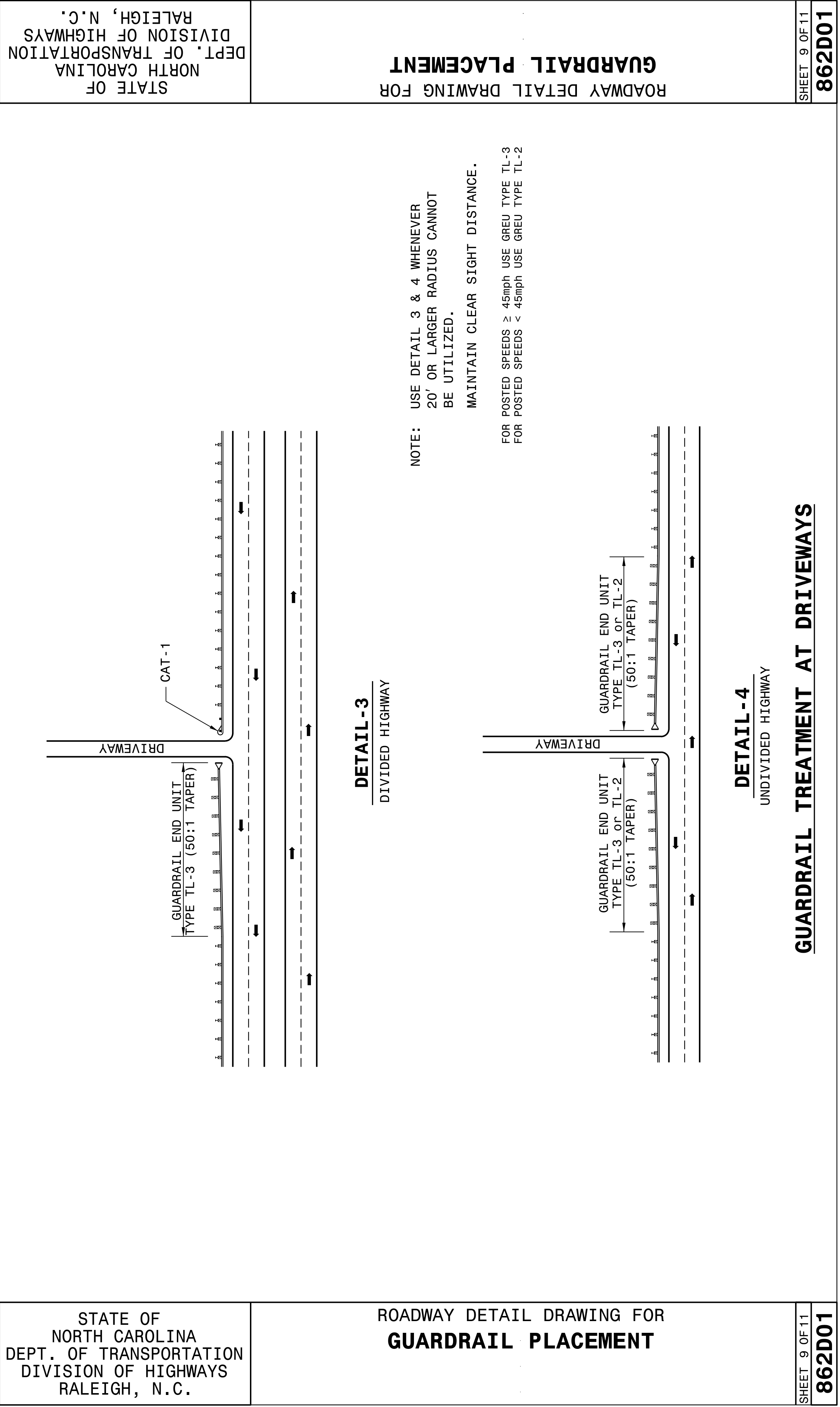
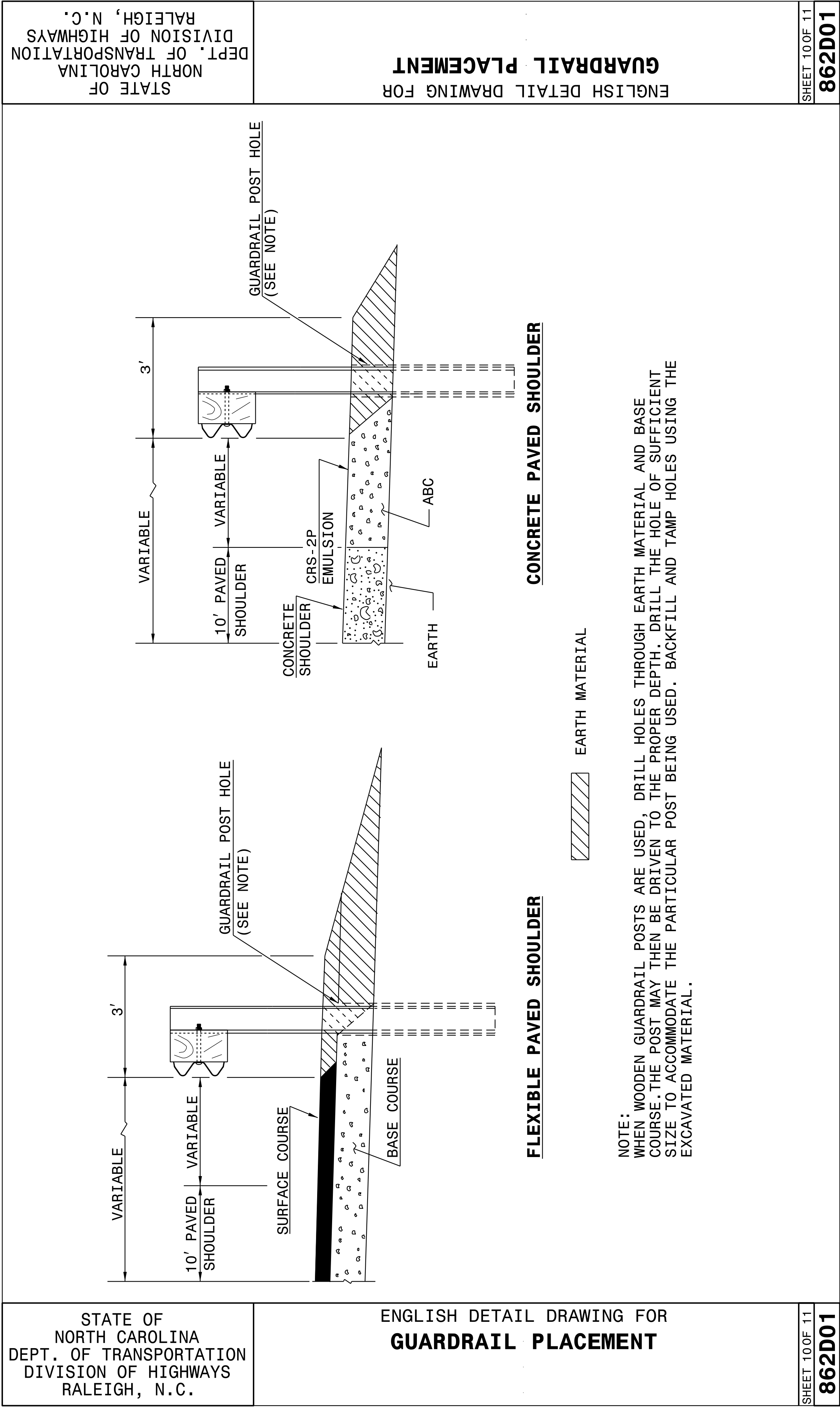


9/5/2017

PROJECT REFERENCE NO.
DD00232

SHEET NO.
2A-1

Q:\MAY-2017\546 Projects\Special Details\Jhowerton\Standard Drawings\Details in Lieu of Standards\Division 8\862d01 862d03 862d03\862d01.dgn
Jhowerton AT CSD-262966



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
CONTRACT STANDARDS AND DEVELOPMENT UNIT Office 919-707-6950 FAX 919-250-4119	
SEE TITLE BLOCK	
ORIGINAL BY: J HOWERTON	DATE: 06-22-12
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

9/5/2017

Seal of Joel S. Howerton, Professional Engineer, No. 022966, State of North Carolina

DocuSigned by:
Joel S. Howerton
878F3D17DDC45F...

23-MAY-2017 12:50
S:\Contracts\Projects\Special Details\Howerton\Standard Drawings\Details in Lieu of Standards\Division 8\862d01 862d03 862d03\862d02.dgn
Howerton A1 CS0-272595

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

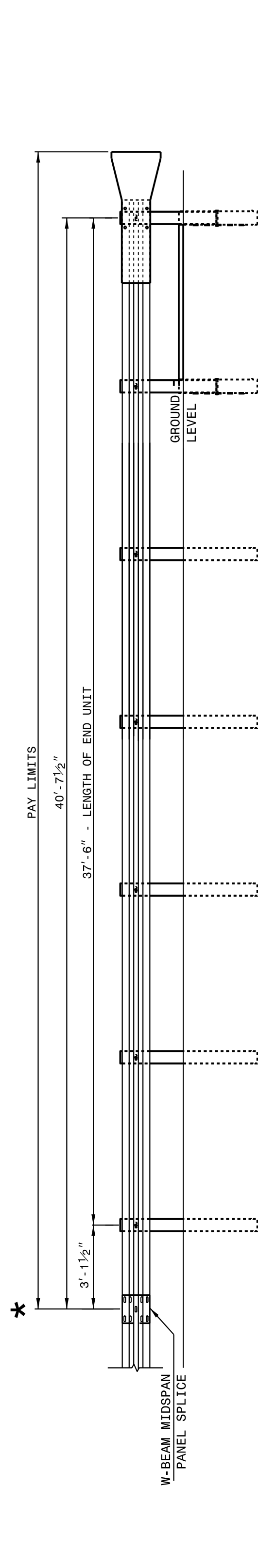
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 8
862D02

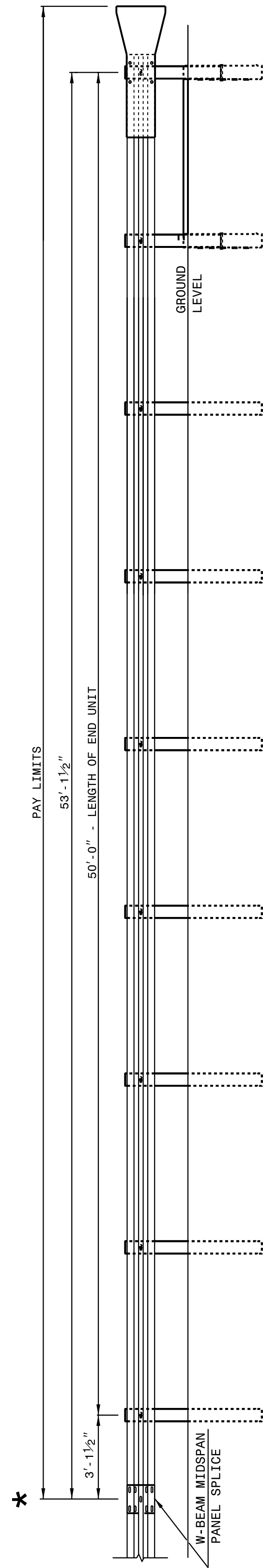
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 2 OF 8
862D02



FLARED AND TANGENT
ELEVATION VIEW



FLARED AND TANGENT
ELEVATION VIEW

APPROACH END UNITS

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

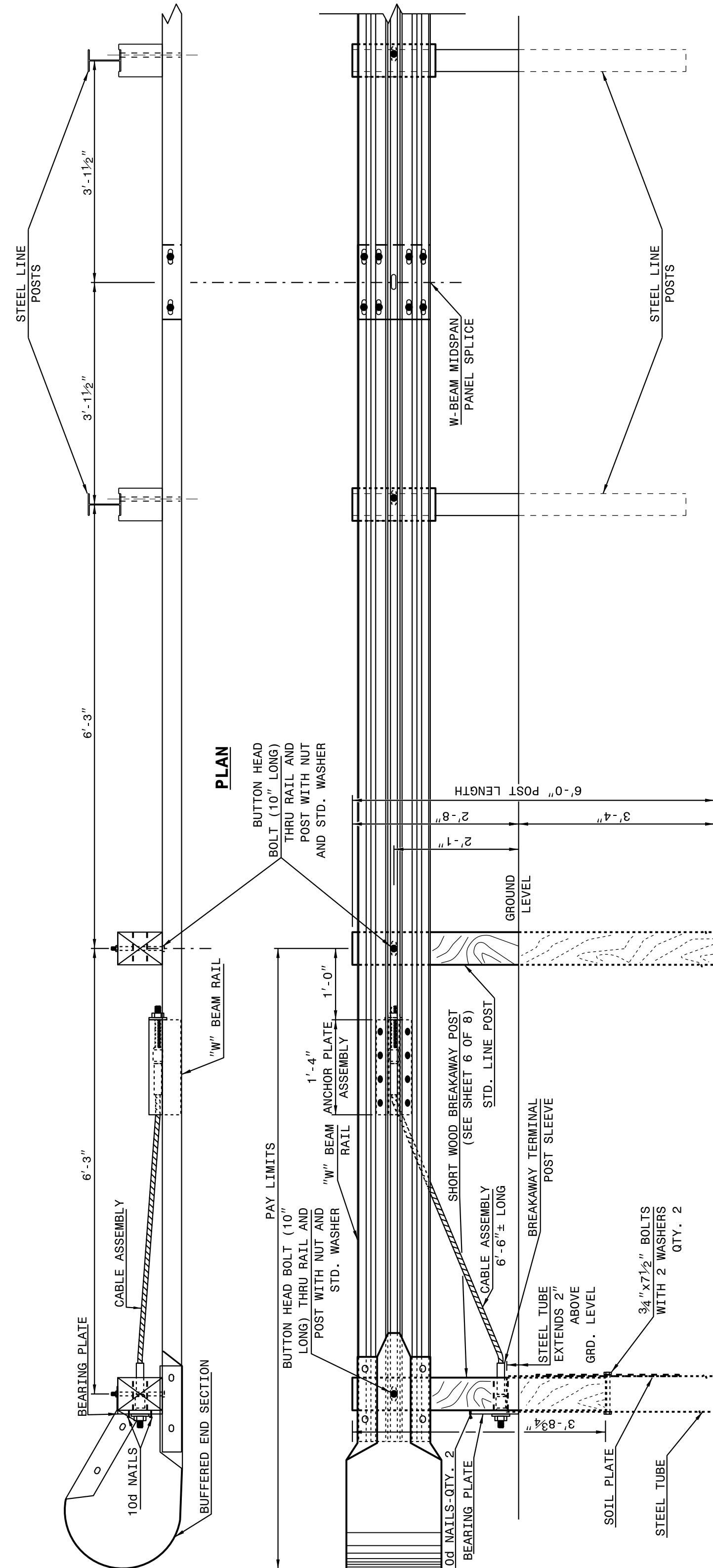
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 8
862D02

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 1 OF 8
862D02



ELEVATION

TRAILING END UNIT ASSEMBLY

C.A.T.-1 SYSTEM

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE BLOCK

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

DocuSigned by:
Joel S. Howerton
022966
NORTH CAROLINA
PROFESSIONAL
ENGINEER
Seal S. Howerton
9/5/2017

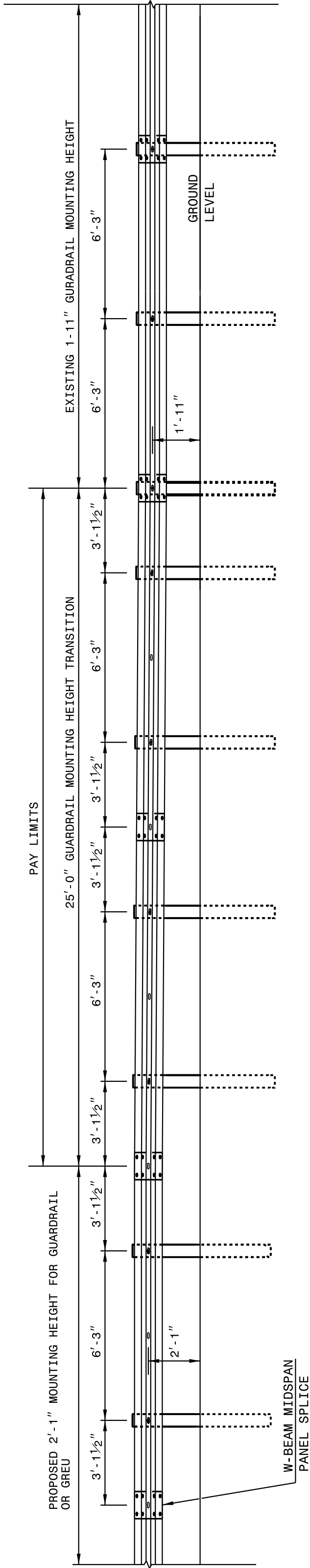
I:\7-MAY-2017 07430
S:\Contracts\ContractDetails\Special Details\Standard Drawings\Details in Lieu of Standards\Division 8\862d01 862d03 862d03\862d02.dgn
Howerton A1 CS0-272945

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 4 OF 8
862D02

NOTE: IF EXISTING GUARDRAIL IS LOWER THAN 1'-11", USE AN ADDITIONAL 12'-6" LONG SECTION OF GUARDRAIL,
FOR EVERY 1" OF HEIGHT DIFFERENCE, TO TRANSITION FROM EXISTING GUARDRAIL TO PROPOSED 2'-1" GUARDRAIL.



ELEVATION VIEW

TRANSITION FROM OR 1'-11" TO 2'-1" W-BEAM GUARDRAIL MOUNTING HEIGHT

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

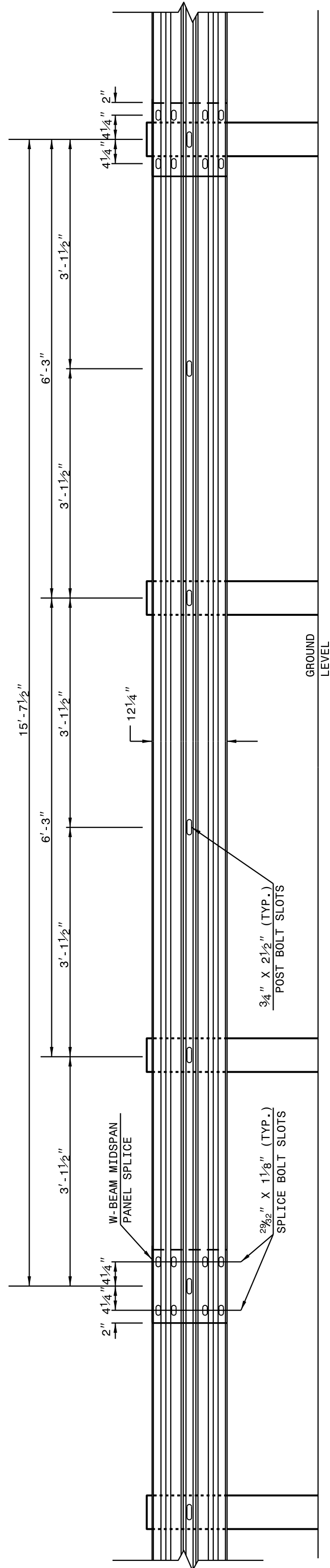
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 4 OF 8
862D02

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 3 OF 8
862D02



15'-7 1/2" W-BEAM GUARDRAIL PANEL

NOTE: USE 5-SPACE 15'-7 1/2" W-BEAM GUARDRAIL PANEL
AT THE DOWNSTREAM END OF AN END UNIT OR EXISTING GUARDRAIL
THAT DOES NOT OFFSET THE W-BEAM PANEL SPLICE TO MIDSPAN

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

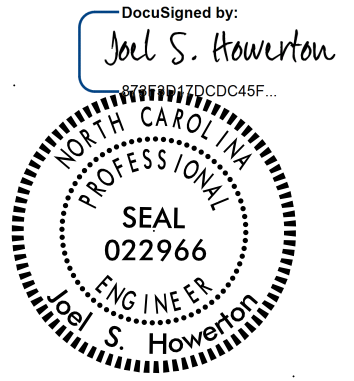
SHEET 3 OF 8
862D02

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

SEE TITLE BLOCK

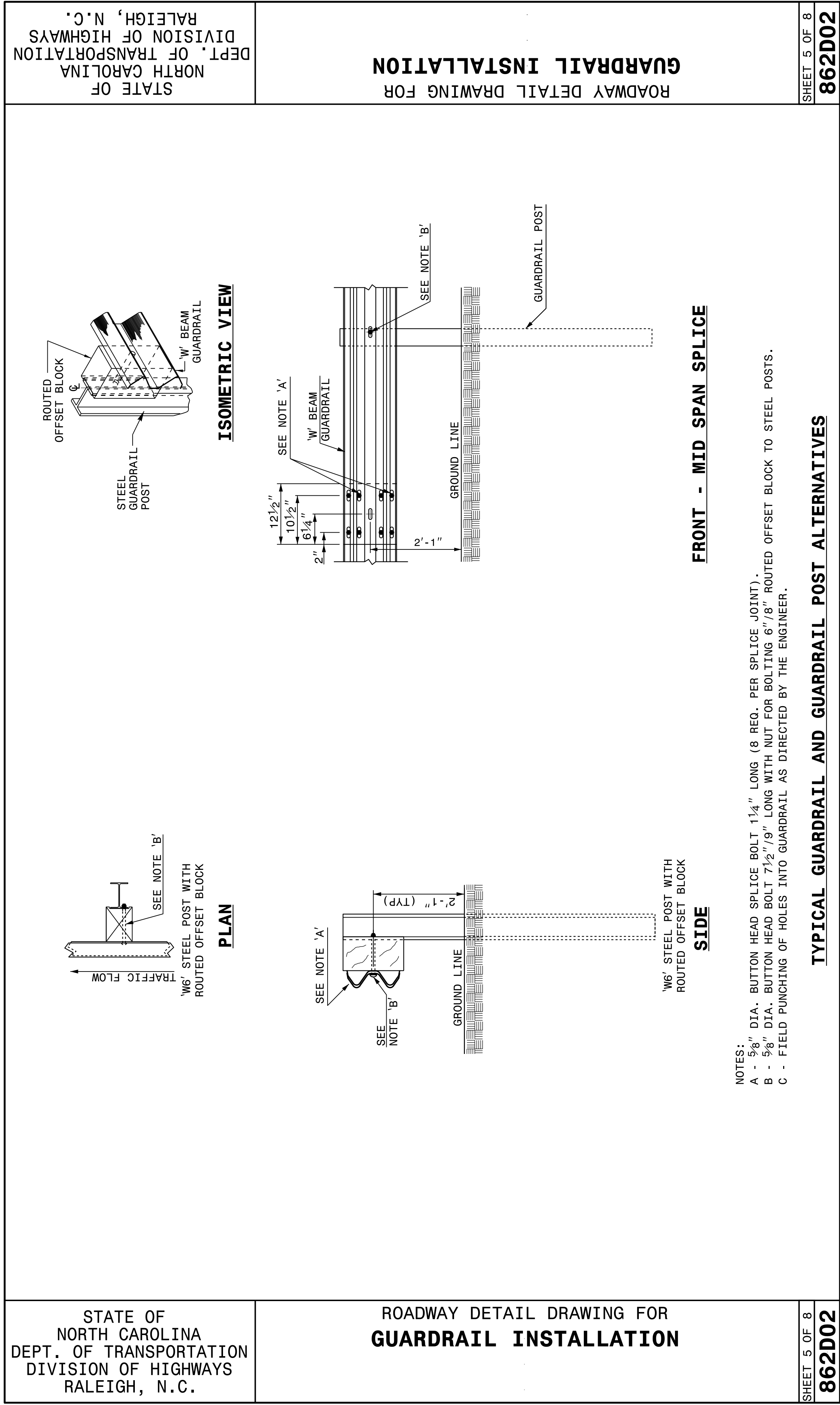
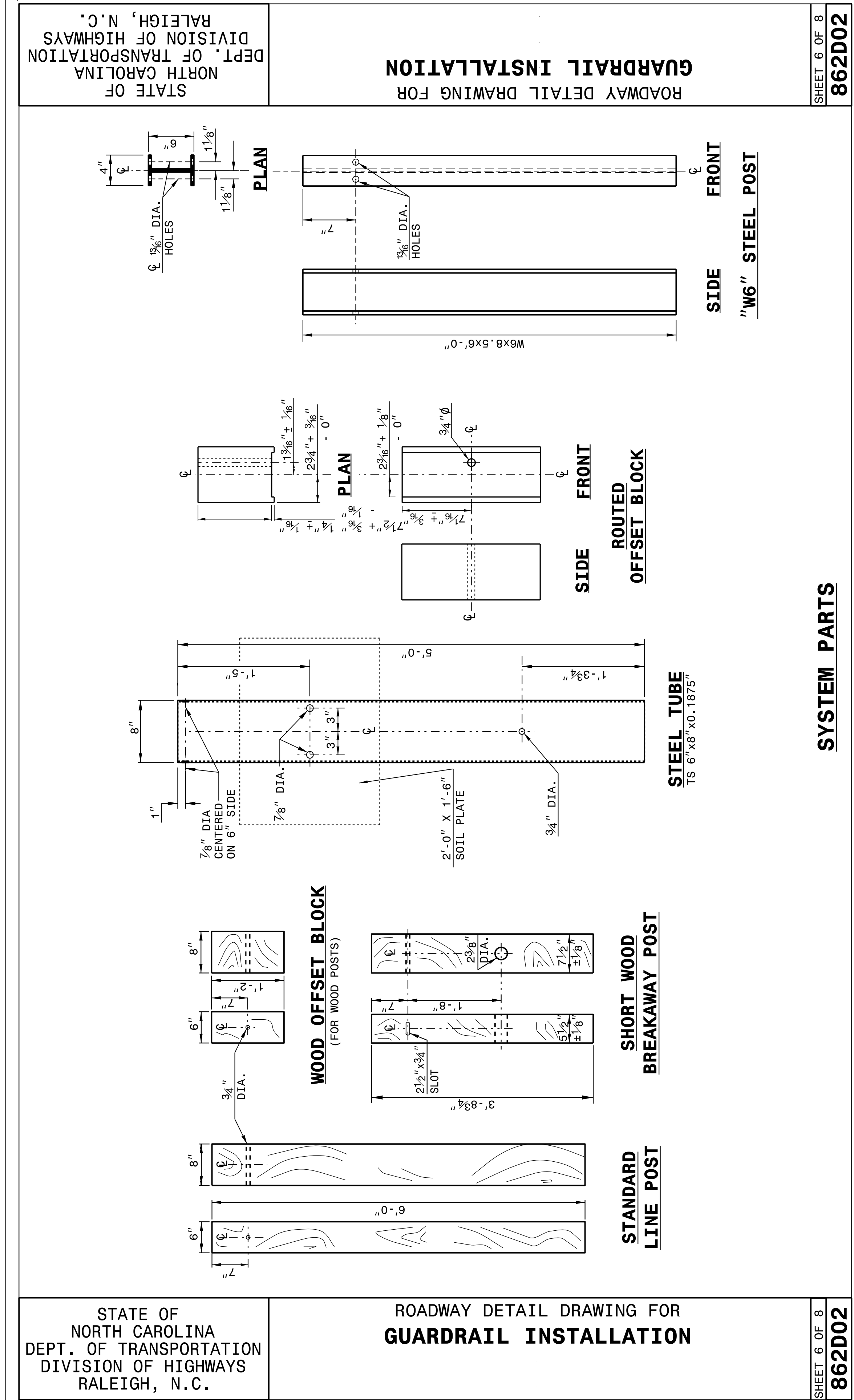
ORIGINAL BY: J. HOWERTON DATE: 06-22-12
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



9/5/2017

PROJECT REFERENCE NO.	SHEET NO.
DD00232	2A-5



DocuSigned by:
Joel S. Howerton
873E3D17DCDC45F...



The seal is circular with a double-lined border. The outer ring contains the text "NORTH CAROLINA" at the top and "Joel S. Howerton" at the bottom. The inner circle contains the text "PROFESSIONAL" at the top, "SEAL" in the center, "022966" below the seal, and "ENGINEER" at the bottom.

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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

SEE TITLE BLOCK

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

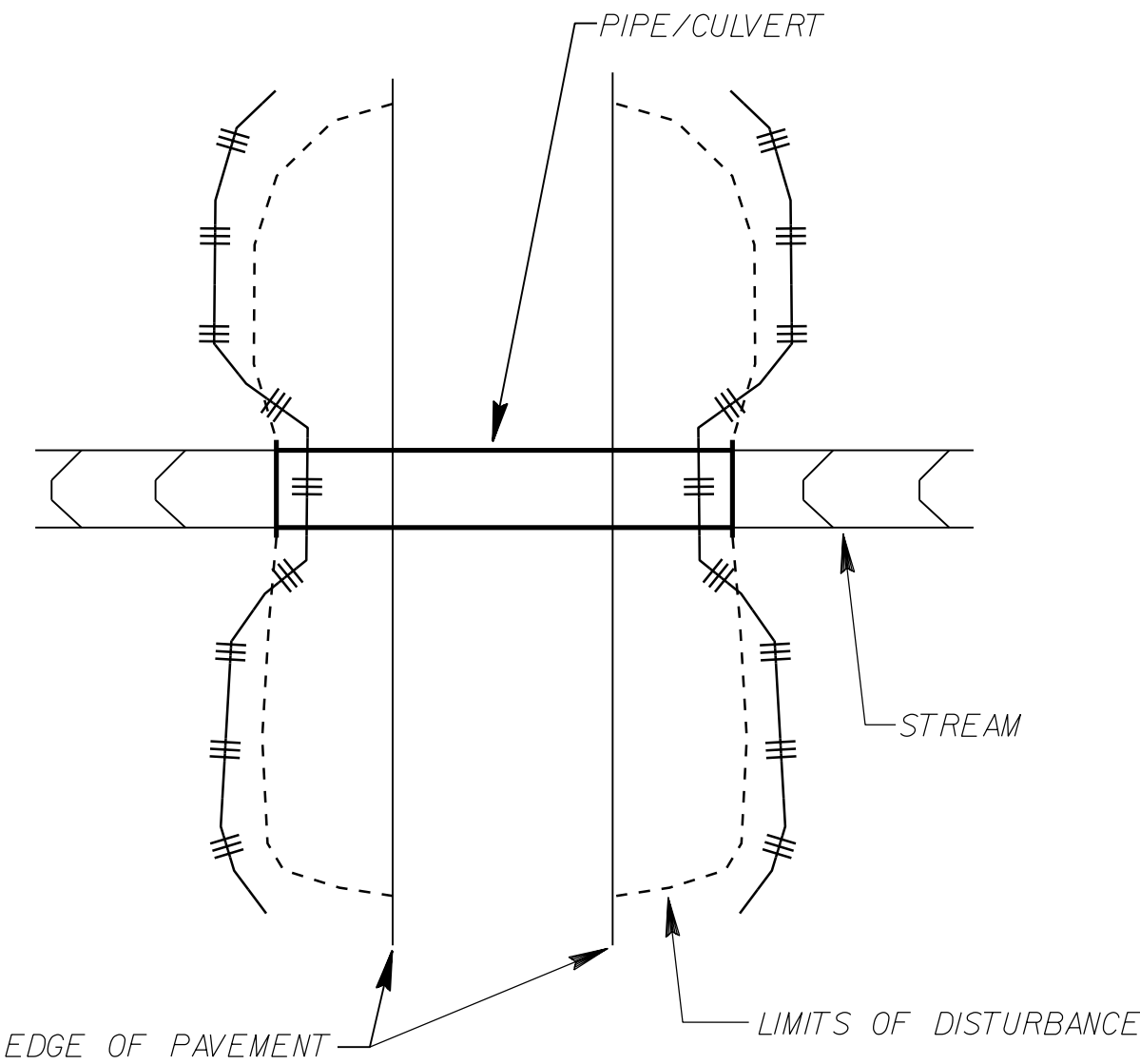
PROJECT REFERENCE NO.	SHEET NO.
DD00232	2A-6

PIPE REPLACEMENT EROSION CONTROL DETAIL

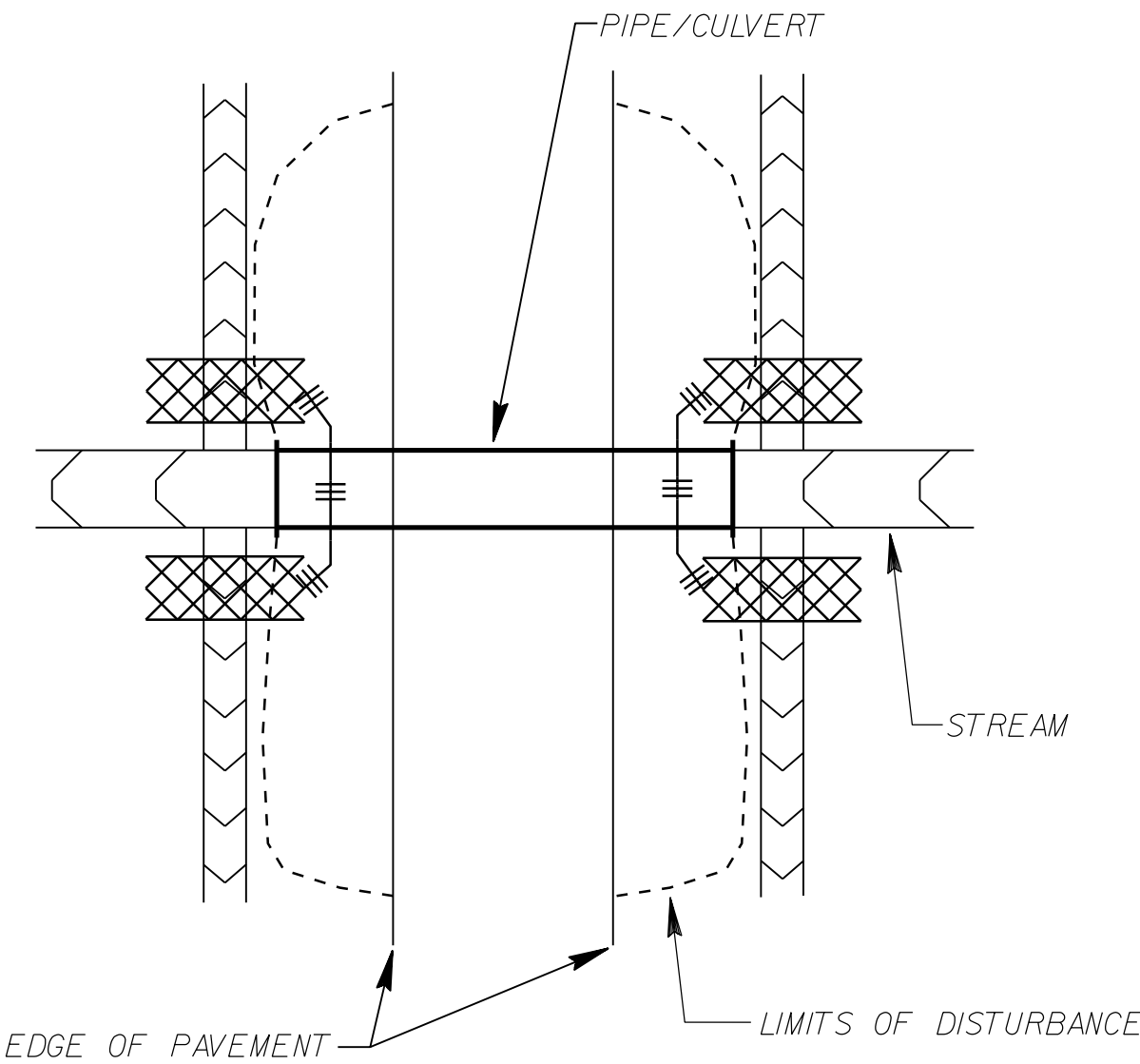
PROJECT REFERENCE NO.	SHEET NO.
X-XXXX	EC-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NOTES: INSTALL EROSION CONTROL MEASURES PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
INSTALL SPECIAL SEDIMENT CONTROL FENCE BREAKS OR TEMPORARY ROCK SILT CHECKS TYPE-A AT LOW POINTS IN SILT FENCE.
FOR OPTION 1 INSTALL SILT FENCE SUCH THAT ALL EARTH DISTURBANCE IS CONTAINED.
FOR CULVERT CONSTRUCTION SEQUENCING SEE THE PUMP AROUND DETAIL OR CONSULT "BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITES".

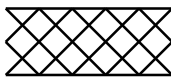
OPTION 1



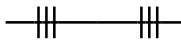
OPTION 2
(WHEN ROADSIDE DITCHES ARE PRESENT)



LEGEND



..... TEMPORARY ROCK SILT CHECK TYPE-A



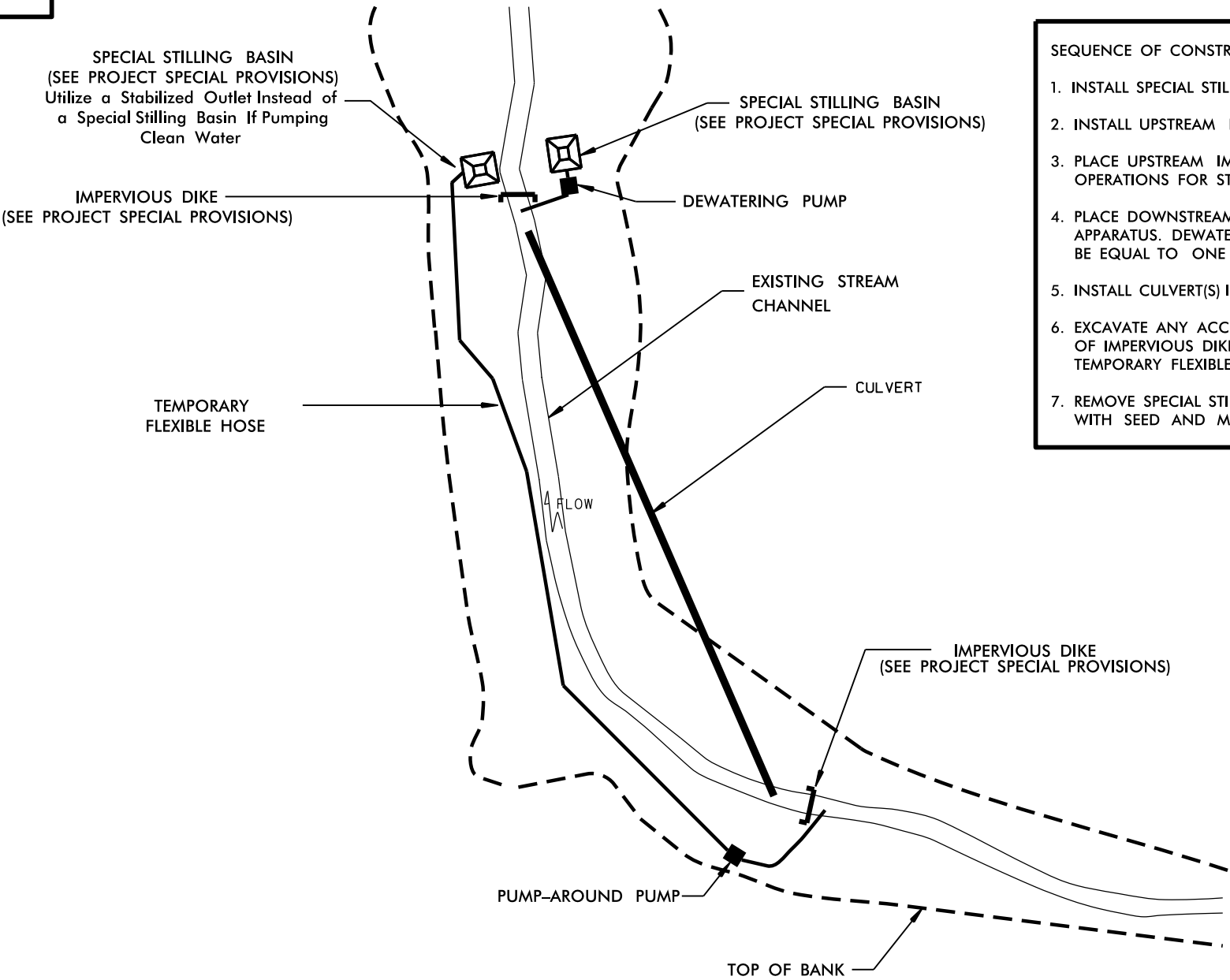
..... TEMPORARY SILT FENCE

NOT TO SCALE

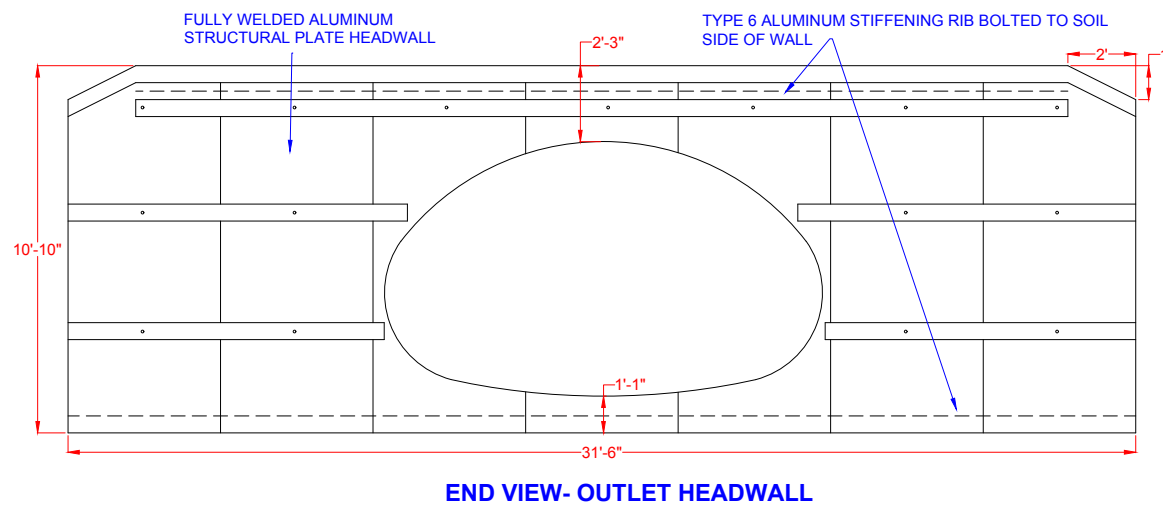
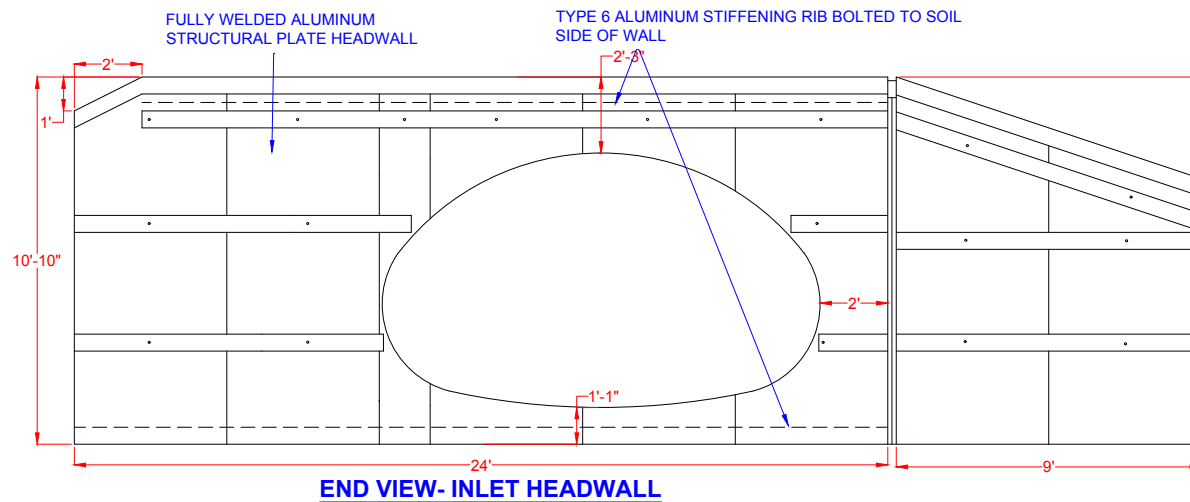
EXAMPLE OF PUMP-AROUND OPERATION

PROJECT REFERENCE NO.	SHEET NO.
X-XXXX	EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

- NOTES:
- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
 - 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
 - 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
 - 4) Pumps and hoses shall be of sufficient size to dewater the work area.



- SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA
1. INSTALL SPECIAL STILLING BASIN(S).
 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
 5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
 7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.



DESCRIPTION

NCDOT WAYNE CO
SR-1926 OLD MT OLIVE HWY
SITE #175

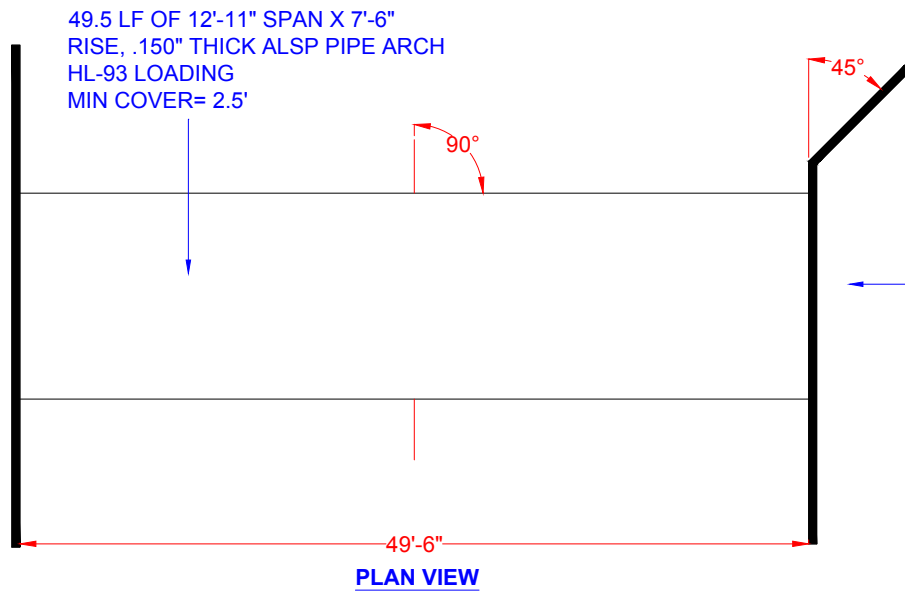
FIRM:

PROJECT:

DATE:
NOV 29, 2016

SHEET

NOT TO SCALE



PROPOSED ELEVATIONS:

TOP ϵ ROAD= 100.00
 TOP HW= 98.75
 TOP PIPE= 96.50
 INV STREAM= 90.00
 INV PIPE= 89.00

DESCRIPTION

NCDOT WAYNE CO
 SR-1926 OLD MT OLIVE HWY
 SITE #175

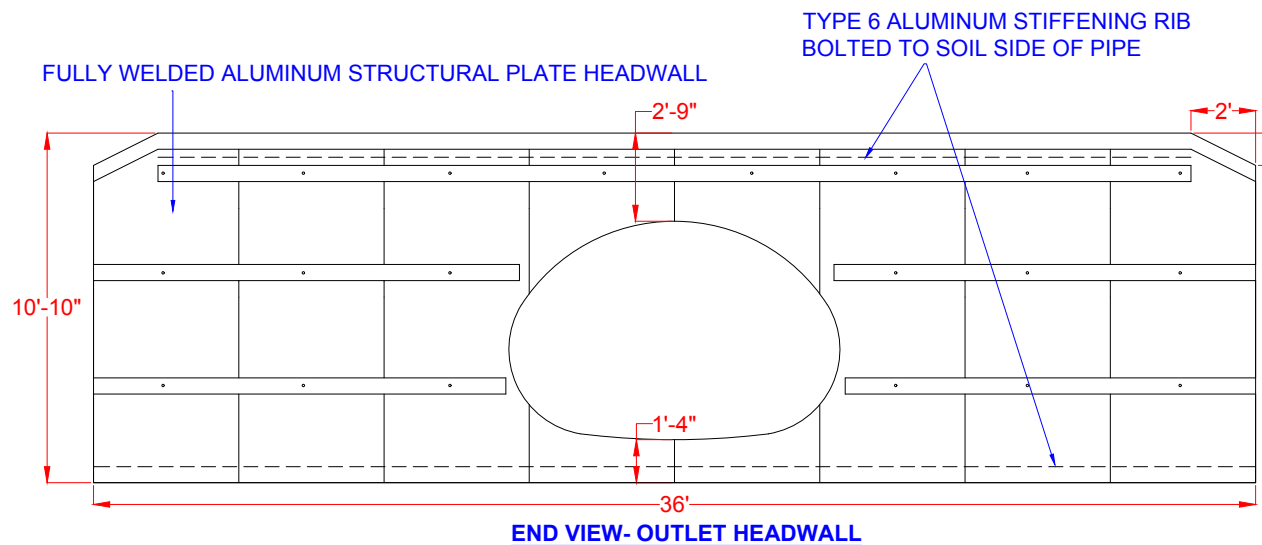
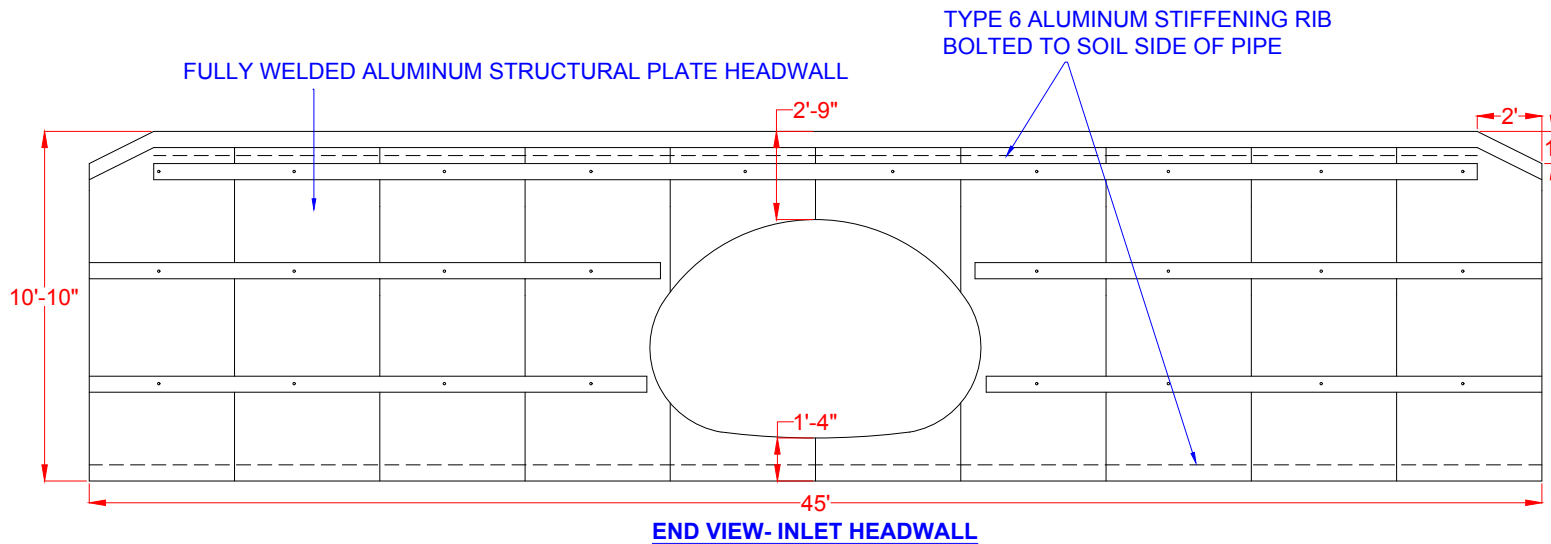
FIRM:

PROJECT:

DATE:
 NOV 29, 2016

SHEET

NOT TO SCALE



DESCRIPTION

NCDOT WAYNE CO
SR-1938 OLD MT OLIVE HWY
SITE #180

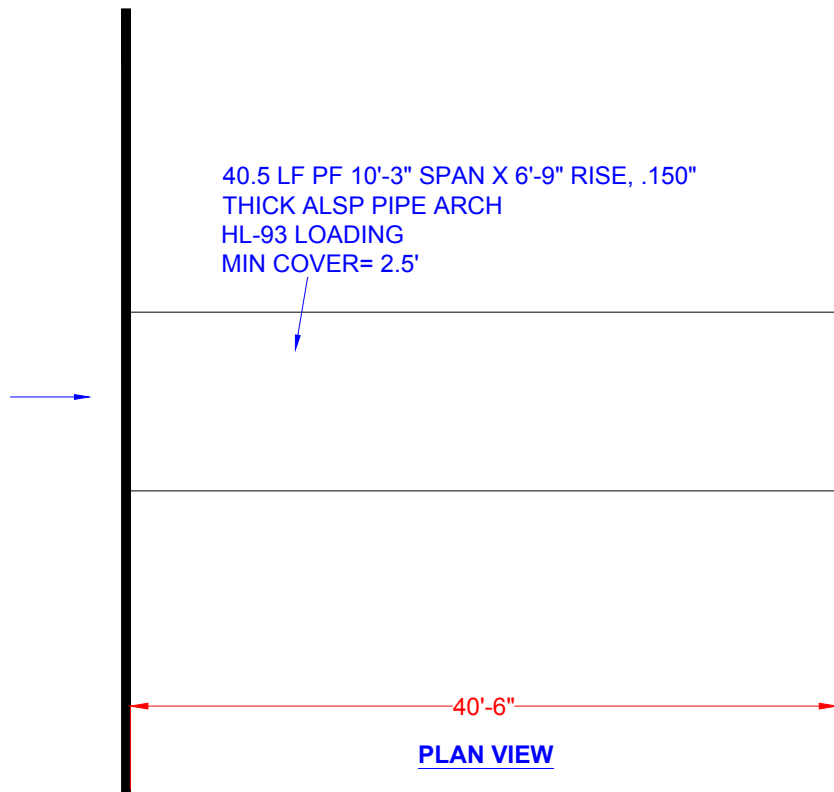
FIRM:

PROJECT:

DATE:
NOV 29, 2016

SHEET

NOT TO SCALE



PROPOSED ELEVATIONS:

TOP ϵ ROAD= 100.00
TOP HW= 99.00
TOP PIPE= 96.25
INV STREAM= 90.50
INV PIPE= 89.50

DESCRIPTION	
NCDOT WAYNE CO SR-1938 OLD MT OLIVE HWY SITE #180	
FIRM:	
PROJECT:	
DATE: NOV 29, 2016	SHEET
NOT TO SCALE	