

**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.**

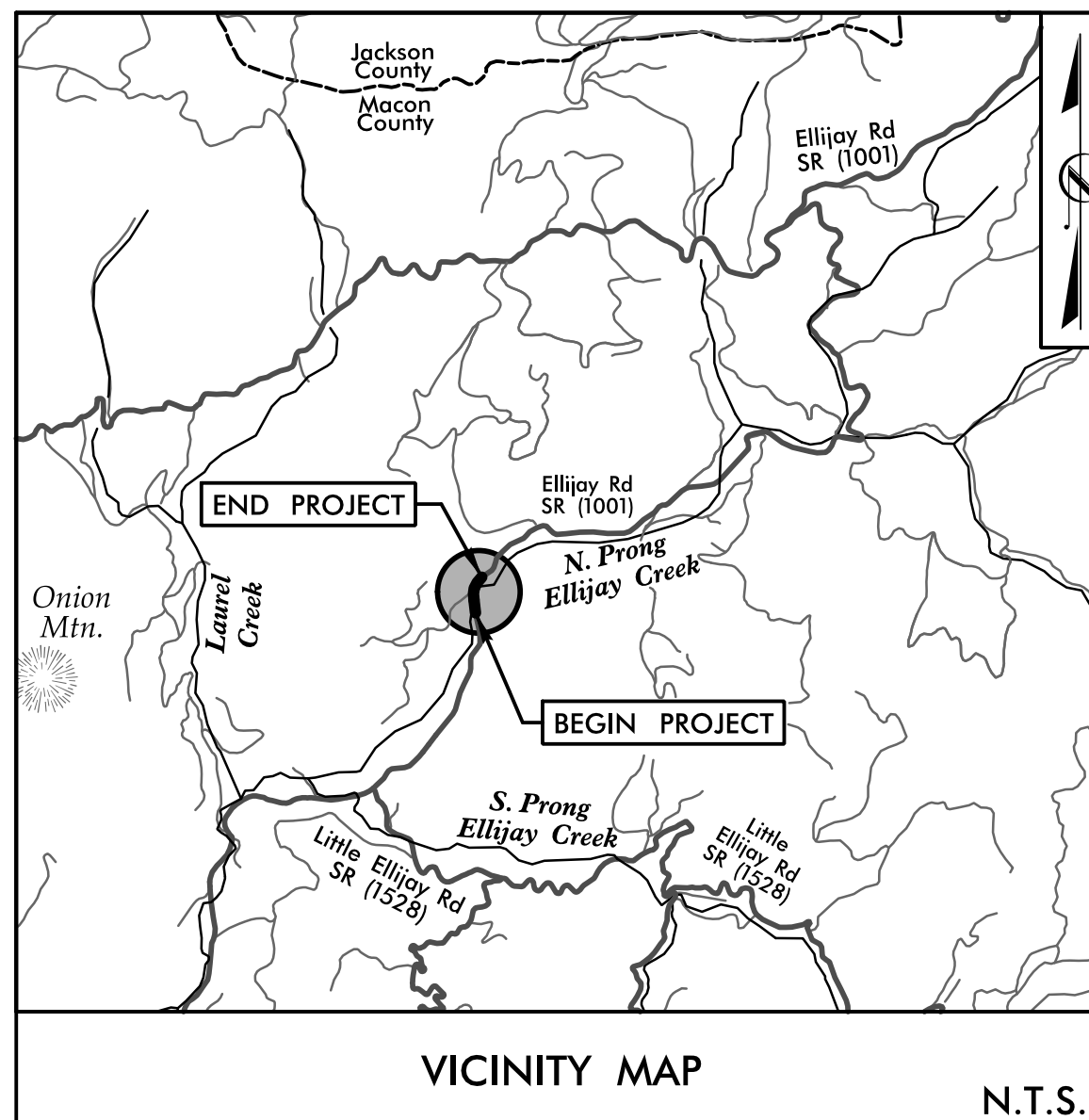
**PROJECT TIP: B-6029**

**CONTRACT: DN01148**

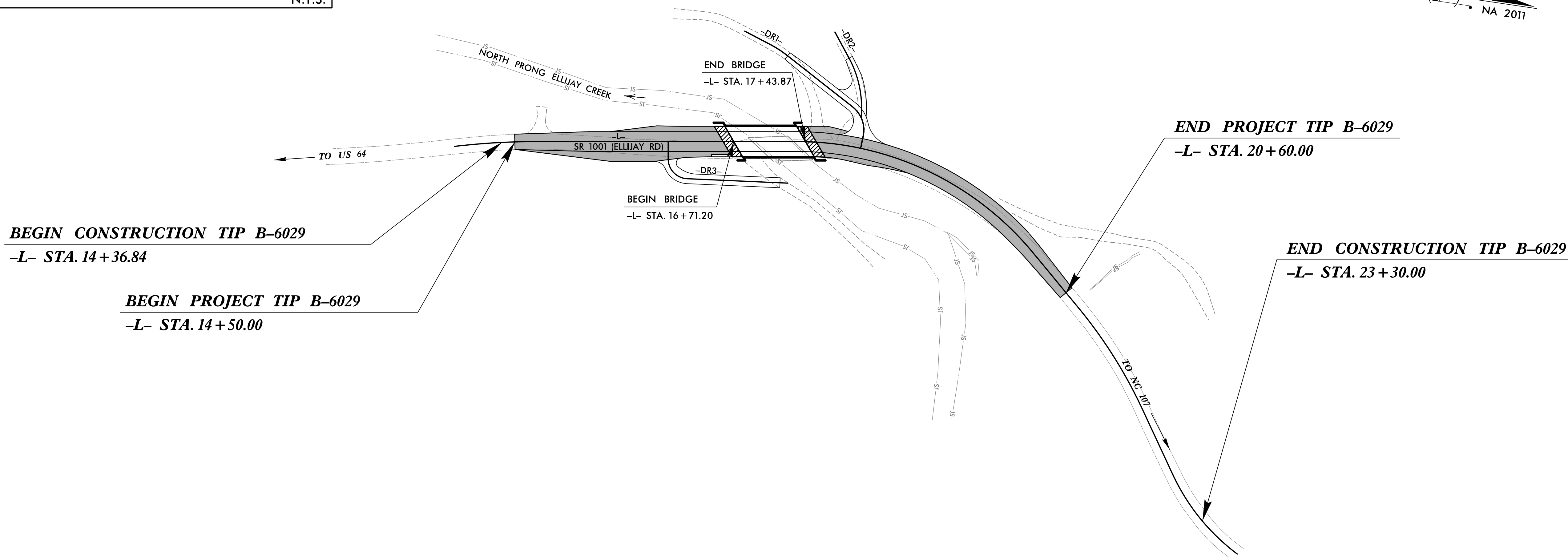
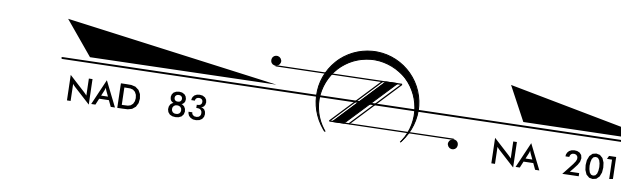
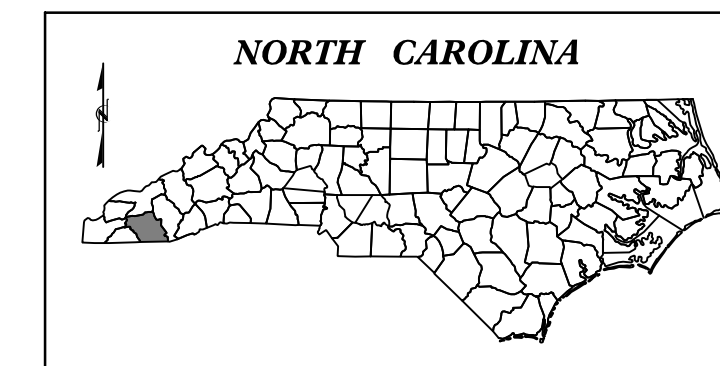
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**MACON COUNTY**

**LOCATION: BRIDGE #550009 OVER NORTH PRONG ELLIJAY CREEK ON SR 1001 (ELLIJAY RD)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-6029</b>		
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
48224.1.1		P.E.	
48224.2.1		ROW & UTILITIES	
48224.3.1		CONSTRUCTION	



**STRUCTURES**

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**DESIGN DATA**

ADT 2012 =	420
ADT 2025 =	840
DHV =	N/A
D =	N/A
T =	6%
V =	30 MPH

FUNC. CLASSIFICATION:  
COLLECTOR  
SUBREGIONAL TIER

**PROJECT LENGTH**

LENGTH OF ROADWAY PROJECT TIP B-6029 =	0.102 MILES
LENGTH OF STRUCTURE PROJECT TIP B-6029 =	0.014 MILES
TOTAL LENGTH OF PROJECT TIP B-6029 =	0.116 MILES

NCDOT CONTACT: ADAM DOCKERY  
Division Bridge Manager

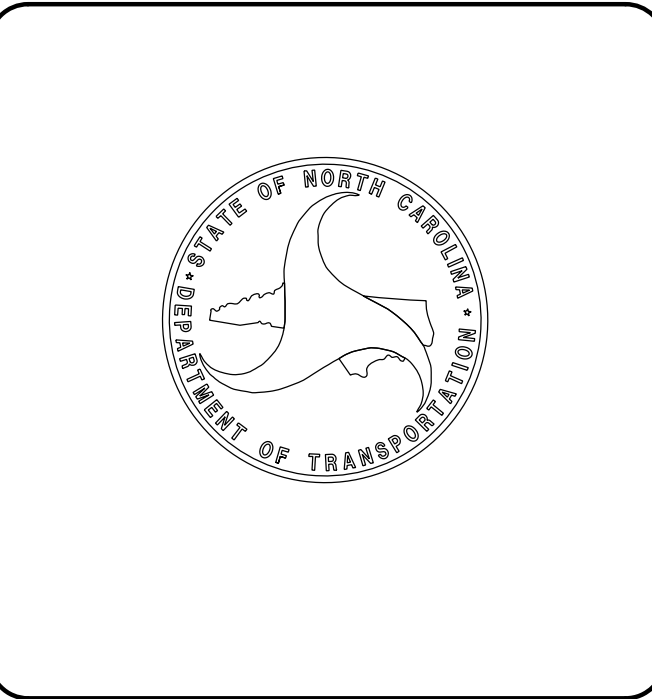
PLANS PREPARED FOR THE NCDOT BY:

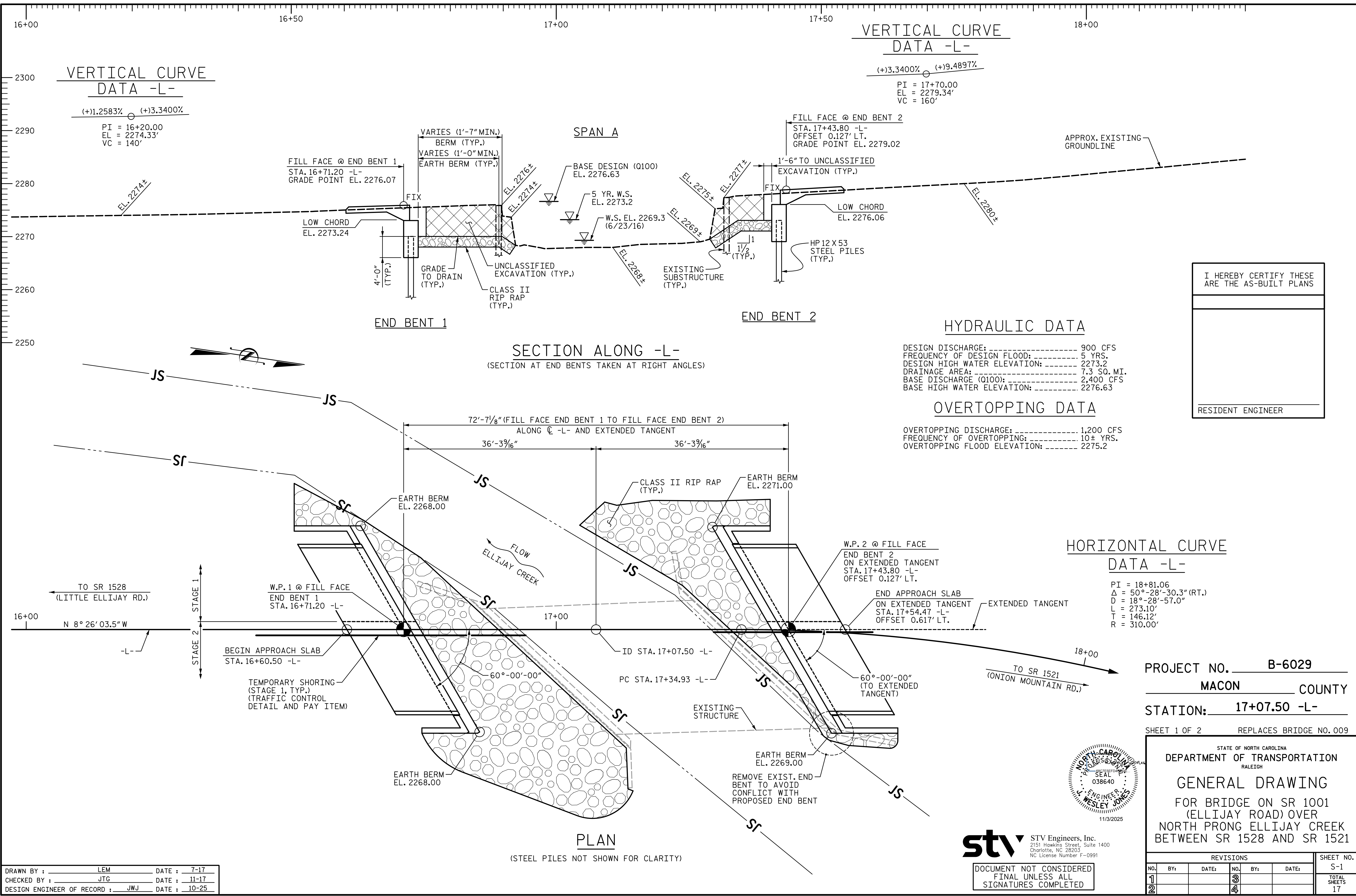
**stv** STV Engineers, Inc.  
2151 Hawks Street, Suite 1400  
Charlotte, NC 28203  
NC License Number F-0991

2024 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: SEPTEMBER 25, 2017	J. WESLEY JONES, PE PROJECT ENGINEER
LETTING DATE: FEBRUARY 10, 2026	LAURA E. MELVIN, PE PROJECT DESIGNER

STRUCTURES ENGINEER

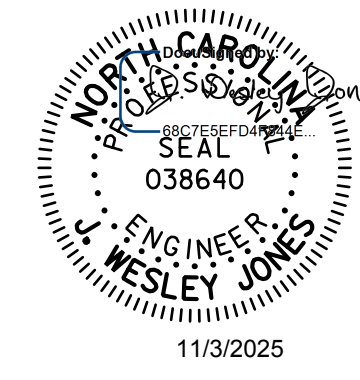
DocuSigned by:  
J. Wesley Jones  
SIGNATURE: P.E.





I HEREBY CERTIFY THESE ARE THE AS-BUILT PLANS

RESIDENT ENGINEER



**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. **B-6029**  
**MACON** COUNTY  
 STATION: **17+07.50 -L-**  
 SHEET 1 OF 2 REPLACES BRIDGE NO. 009

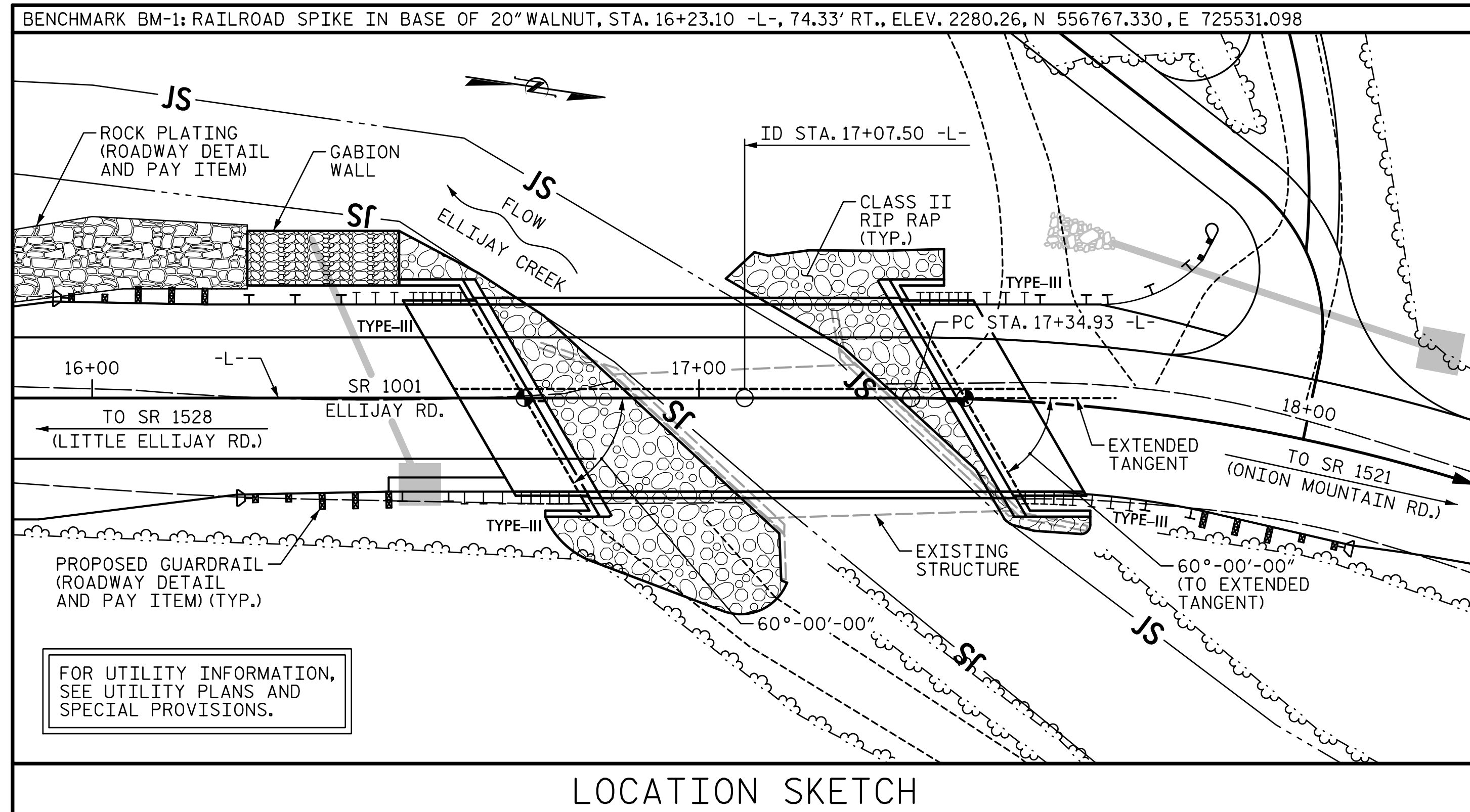
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING**  
 FOR BRIDGE ON SR 1001  
 (ELLIJAY ROAD) OVER  
 NORTH PRONG ELLIJAY CREEK  
 BETWEEN SR 1528 AND SR 1521

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

S-1  
TOTAL SHEETS 17

R:\Structures\station\401\001\TBP\14.R\158\_SML\_GD01\_001\_550009.dgn  
 10/31/2025 5:01:36 PM Jones

DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : JTG DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25

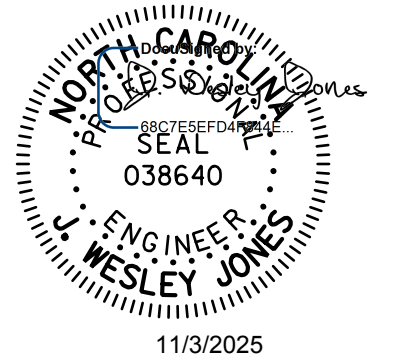


**GENERAL NOTES**

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.  
 THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.  
 THIS BRIDGE IS LOCATED IN SEISMIC ZONE 1.  
 FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE "STANDARD NOTES" SHEET.  
 FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.  
 THE EXISTING STRUCTURE CONSISTING OF (1) 41'-0"± TIMBER FLOOR ON STEEL I-BEAMS SPAN WITH A CLEAR ROADWAY WIDTH OF 24'-0 1/2" ON YOUNG MASONRY ABUTMENTS AND LOCATED AT THE PROPOSED STRUCTURE SHALL BE REMOVED IN STAGES. THE EXISTING BRIDGE IS PRESENTLY POSTED FOR LOAD LIMIT.  
 REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION FOR REVIEW IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS. SEE PLAN AND ELEVATION FOR ADDITIONAL NOTE.  
 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 17+07.50 -L-."  
 THE MATERIAL SHOWN IN THE CROSS-HATCHED AREA (ON SHEET 1 OF 2) SHALL BE EXCAVATED FOR A DISTANCE FROM THE CENTERLINE OF ROADWAY OF APPROXIMATELY 20 FT± (LEFT) AND 30 FT± (RIGHT) AT END BENT 1 AND 24 FT± (LEFT) AND 20 FT± (RIGHT) AT END BENT 2 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. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.  
 THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH "HEC 18 - EVALUATING SCOUR AT BRIDGES".  
 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.  
 ASPHALT WEARING SURFACE IS INCLUDED IN ROADWAY QUANTITY ON ROADWAY PLANS.  
 FOR LIMITS OF TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS. FOR PAY ITEM FOR TEMPORARY SHORING FOR MAINTENANCE OF TRAFFIC, SEE ROADWAY PLANS.  
 FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.

**FOUNDATION NOTES**

FOR PILES, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.  
 PILES AT END BENT 1 ARE DESIGNED FOR A FACTORED RESISTANCE OF 95 TONS PER PILE.  
 DRILLED-IN PILES ARE REQUIRED FOR END BENT 1. EXCAVATE HOLES AT PILE LOCATIONS TO ELEV. 2256.4 FEET. FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.  
 DRIVE PILES AT END BENT 1 TO A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE.  
 PILES AT END BENT 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 95 TONS PER PILE.  
 DRILLED-IN PILES ARE REQUIRED FOR END BENT 2. EXCAVATE HOLES AT PILE LOCATIONS TO ELEV. 2259.2 FEET. FOR PILE EXCAVATION, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.  
 DRIVE PILES AT END BENT 2 TO A REQUIRED DRIVING RESISTANCE OF 160 TONS PER PILE.  
 CONCRETE IS REQUIRED TO FILL HOLES FOR PILE EXCAVATION AT END BENT 1 AND END BENT 2.  
 IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 20,000 TO 30,000 FT-LBS 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.



**TOTAL BILL OF MATERIAL**

SUPER-STRUCTURE	STAGE	REMOVAL OF EXISTING STRUCTURE AT STA. 17+07.50 -L-	ASBESTOS ASSESSMENT	PILE EXCAVATION IN SOIL	PILE EXCAVATION NOT IN SOIL	UNCLASSIFIED STRUCTURE EXCAVATION	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES	HP 12 X 53 STEEL PILES	VERTICAL CONCRETE BARRIER RAIL	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE	ELASTOMERIC BEARINGS	3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLABS	GABION RETAINING WALLS		
		LUMP SUM	LUMP SUM	LN. FT.	LN. FT.	LUMP SUM	CU. YD.	LUMP SUM	LBS.	EA.	NO.	LN. FT.	LN. FT.	TONS	SQ. YDS.	LUMP SUM	NO.	LN. FT.	SQ. FT.
SUPER-STRUCTURE	STAGE 1																		
	STAGE 2																		
END BENT 1	STAGE 1				40.0		19.6		1,922	4	4	60.0						262.5	
	STAGE 2				30.0		21.1		1,988	3	3	45.0		115	125				
END BENT 2	STAGE 1			4.0	36.0		18.8		1,850	4	4	60.0							
	STAGE 2			3.0	27.0		21.9		2,060	3	3	45.0		60	70				
TOTAL		LUMP SUM	LUMP SUM	7.0	133.0	LUMP SUM	81.4	LUMP SUM	7,820	14	14	210.0	140.0	175	195	LUMP SUM	11	770.0	262.5

PROJECT NO. B-6029  
MACON COUNTY  
 STATION: 17+07.50 -L-  
 SHEET 2 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**GENERAL DRAWING**  
 FOR BRIDGE ON SR 1001  
 (ELLIJAY ROAD) OVER  
 NORTH PRONG ELLIJAY CREEK  
 BETWEEN SR 1528 AND SR 1521



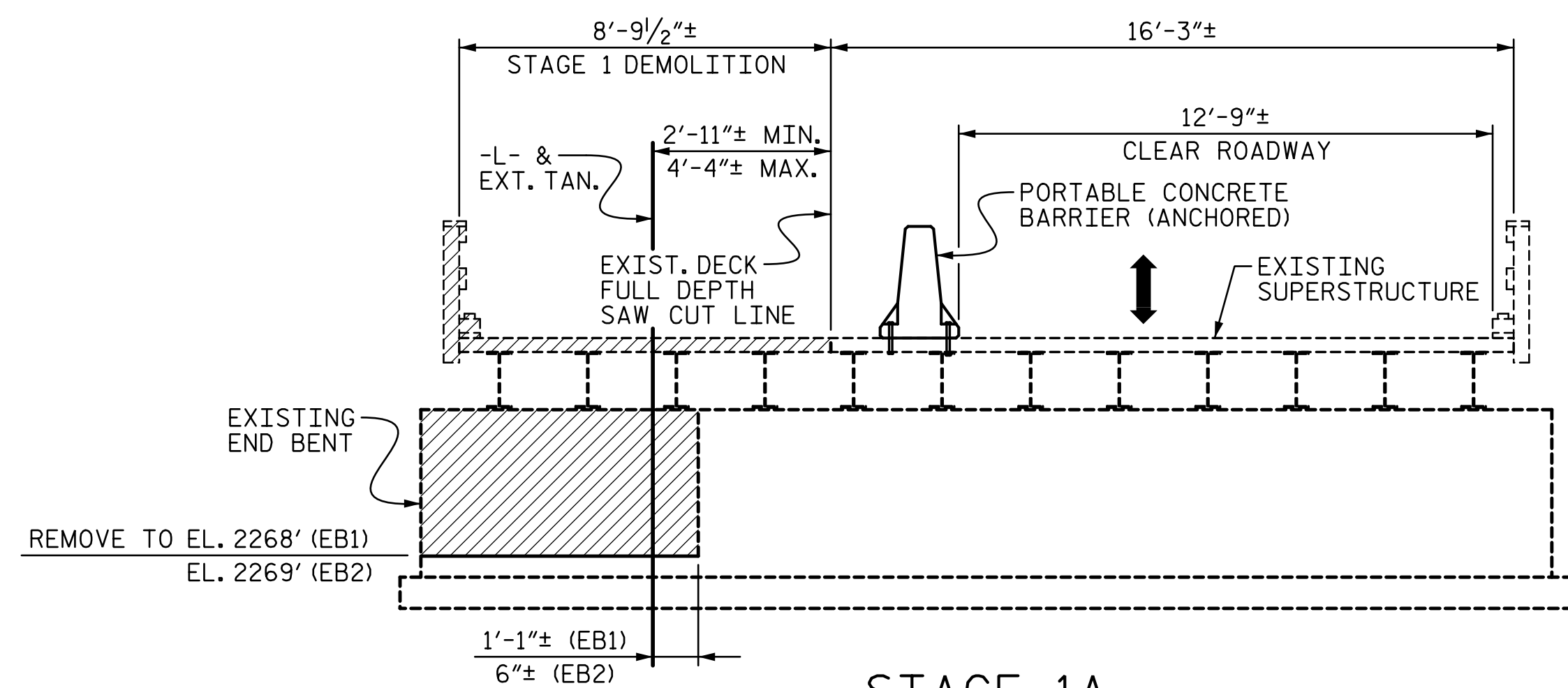
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

S-2  
TOTAL SHEETS 17

DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : JTG DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25

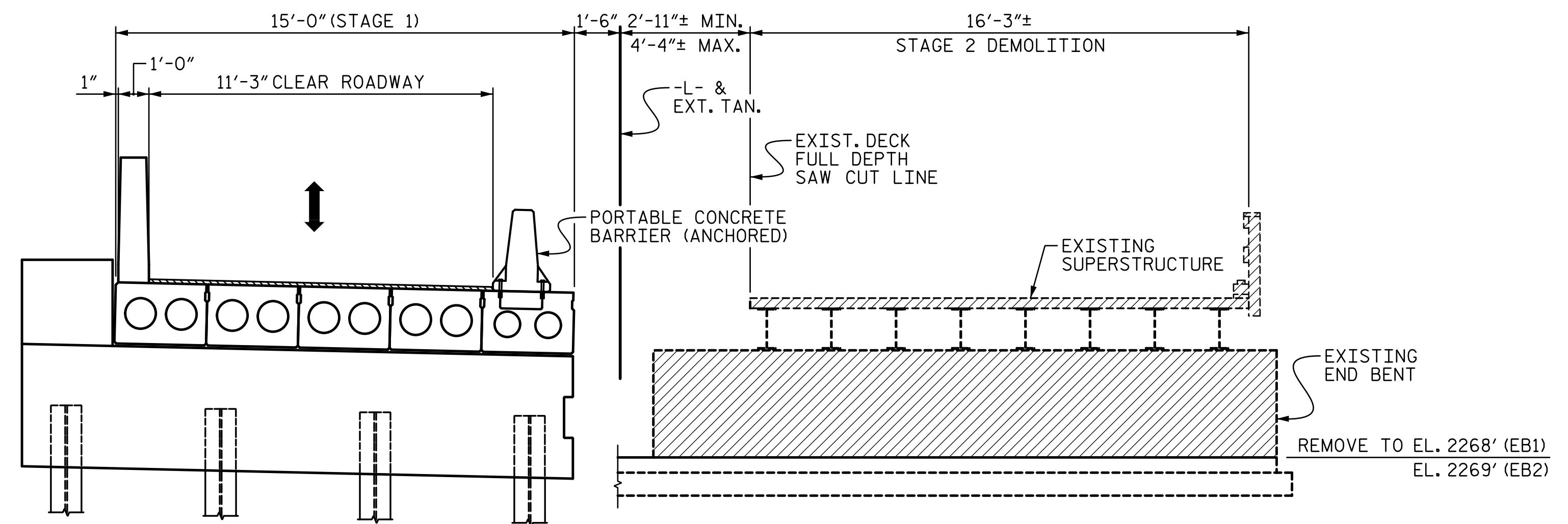
10/31/2025 5:01:37 PM R:\Structures\ustation\401\_003\_17BP\_14.R\158\_SML\_GD02\_002\_550009.dgn



### STAGE 1A

LOOKING UPSTATION  
(END BENT 1 SHOWN, END BENT 2 SIMILAR)

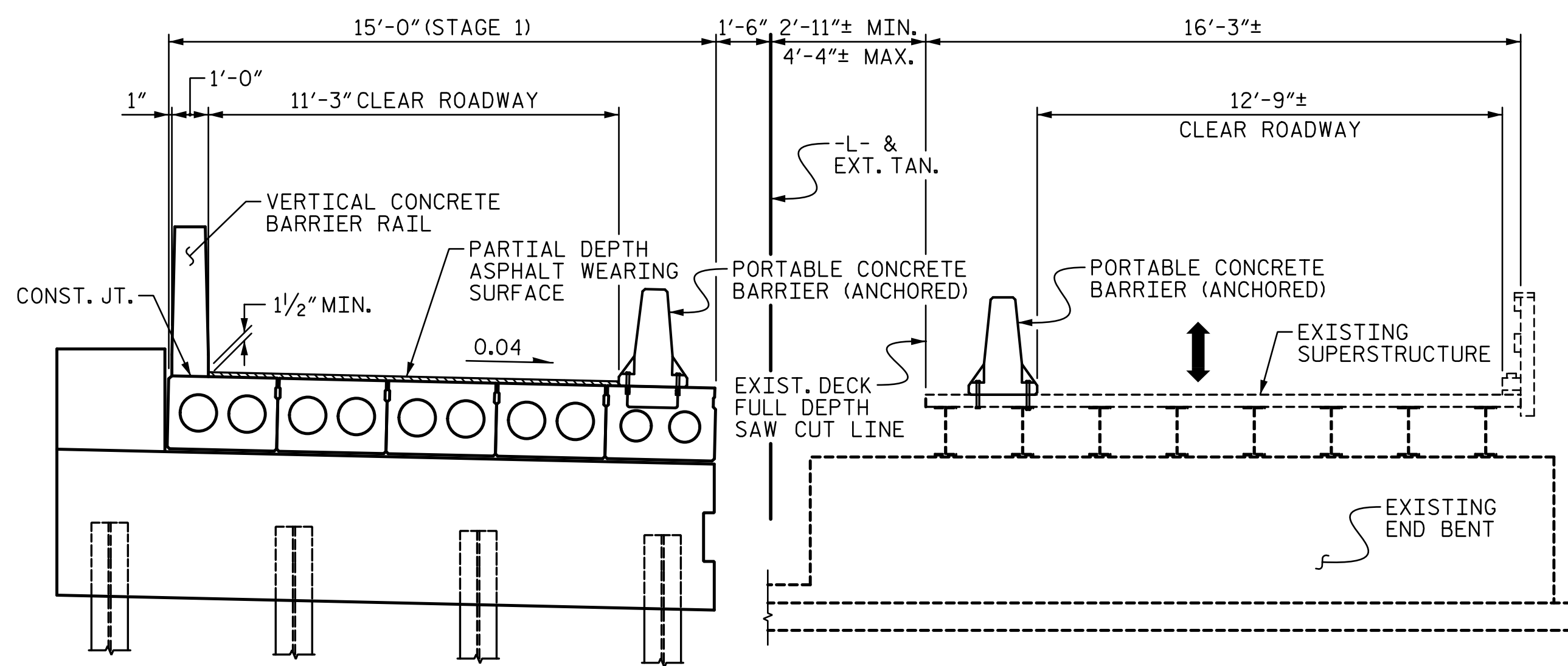
1. VERIFY EXISTING BRIDGE DIMENSIONS. CONTACT ENGINEER IF FIELD MEASUREMENTS VARY FROM PLAN DIMENSIONS.
2. ANCHOR PORTABLE CONCRETE BARRIER THROUGH EXISTING BRIDGE DECK AND TOP FLANGE OF STEEL BEAM.
3. SAW CUT AND REMOVE LEFT PORTION OF EXISTING DECK AND END BENTS.



### STAGE 2A

LOOKING UPSTATION  
(END BENT 1 SHOWN, END BENT 2 SIMILAR)

1. SHIFT TRAFFIC TO NEWLY CONSTRUCTED BRIDGE.
2. REMOVE REMAINDER OF EXISTING SUPERSTRUCTURE AND END BENTS.



### STAGE 1B

LOOKING UPSTATION  
(END BENT 1 SHOWN, END BENT 2 SIMILAR)

1. CONSTRUCT LEFT PORTION OF PROPOSED BRIDGE.
2. ANCHOR PORTABLE CONCRETE BARRIER TO NEW BRIDGE.
3. PAVE PARTIAL DEPTH ASPHALT WEARING SURFACE TO THE LIMITS SHOWN.

### NOTES:

- CONTRACTOR TO VERIFY LOCATION AND DIMENSIONS OF EXISTING BRIDGE.  
STAGED DEMOLITION SHALL BE DETERMINED BY CONTRACTOR AND APPROVED BY THE ENGINEER.  
DIMENSIONS ARE NORMAL TO  $\odot$  BRIDGE UNLESS OTHERWISE NOTED.

R:\Structures\ustation\401.005\_17BP\_14.R\58\_SML\_P01\_003\_550009.dgn

5:01:38 PM

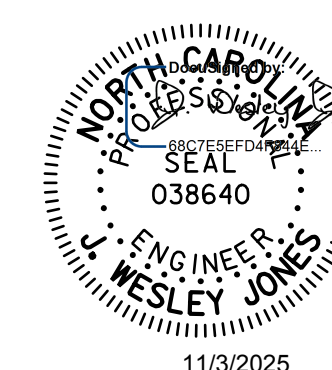
10/31/2025

Jones

DRAWN BY :	LEM	DATE :	7-17
CHECKED BY :	JTG	DATE :	11-17
DESIGN ENGINEER OF RECORD :	JWJ	DATE :	10-25

**stv** STV Engineers, Inc.  
2151 Hawkins Street, Suite 1400  
Charlotte, NC 28203  
NC License Number F-0991

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



PROJECT NO. B-6029  
MACON COUNTY  
STATION: 17+07.50 -L-

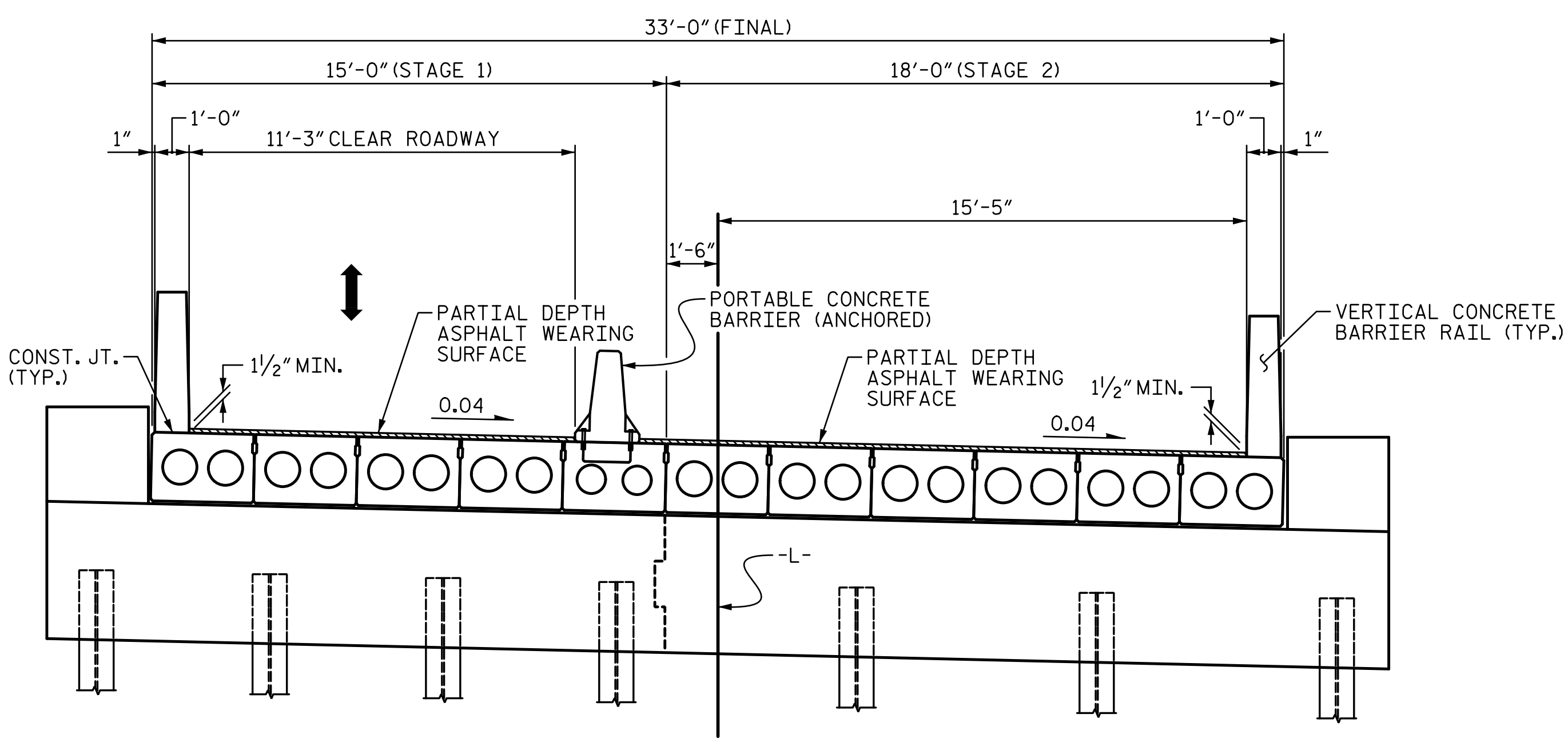
SHEET 1 OF 2

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

## BRIDGE STAGING PLAN

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

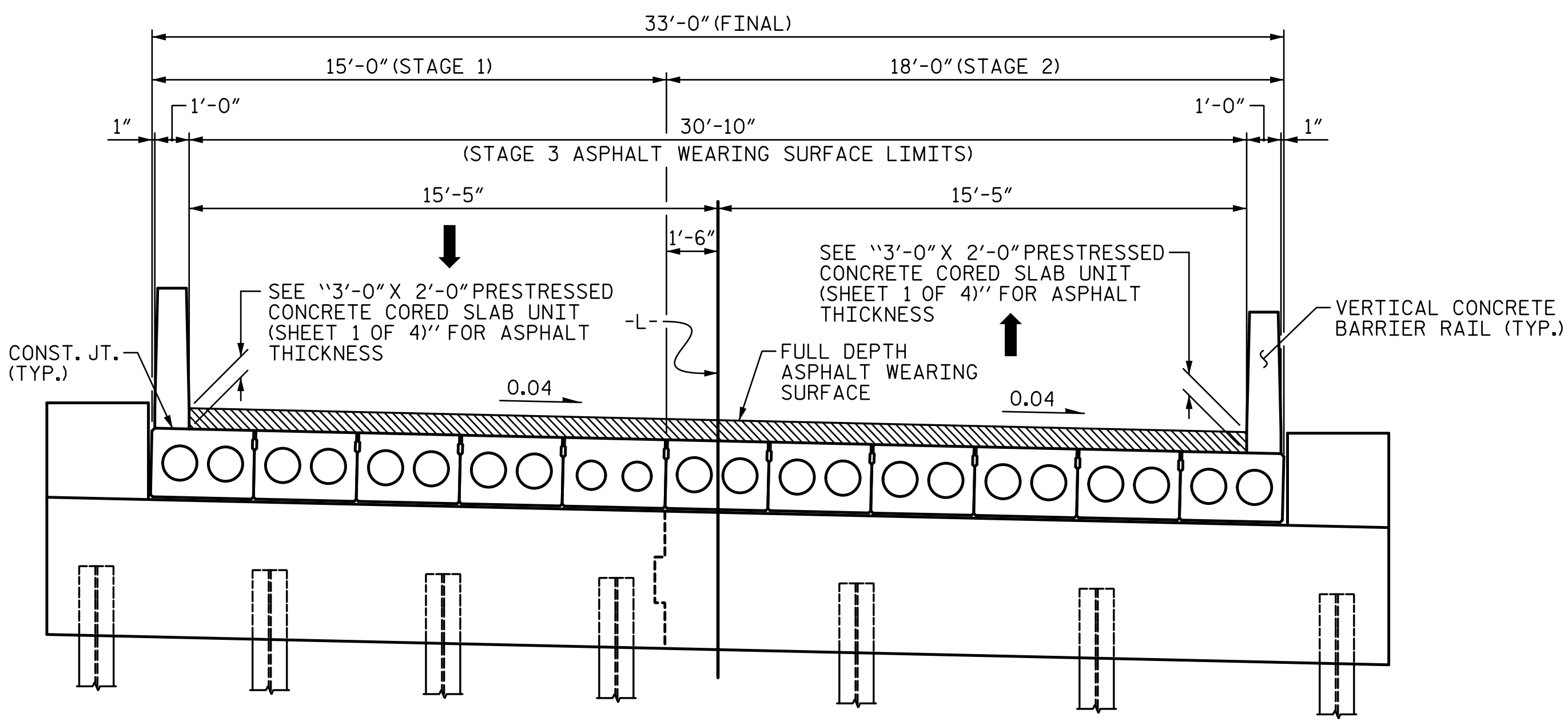
S-3
TOTAL SHEETS 17



**STAGE 2B**

LOOKING UPSTATION  
(END BENT 1 SHOWN, END BENT 2 SIMILAR)

1. CONSTRUCT RIGHT PORTION OF PROPOSED BRIDGE.
2. PAVE PARTIAL DEPTH ASPHALT WEARING SURFACE TO THE LIMITS SHOWN.



**STAGE 3**

LOOKING UPSTATION  
(END BENT 1 SHOWN, END BENT 2 SIMILAR)

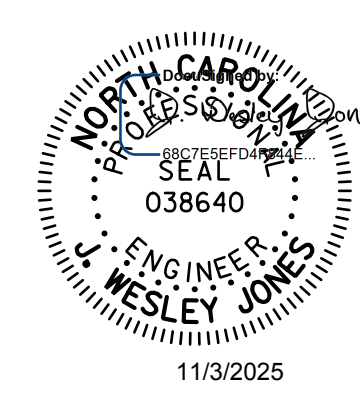
1. REMOVE PORTABLE CONCRETE BARRIER.
2. PAVE FULL DEPTH ASPHALT WEARING SURFACE TO THE LIMITS SHOWN.

PROJECT NO. B-6029

MACON COUNTY

STATION: 17+07.50 -L-

SHEET 2 OF 2



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**BRIDGE STAGING PLAN**

**stv** STV Engineers, Inc.  
2151 Hawkins Street, Suite 1400  
Charlotte, NC 28203  
NC License Number F-0991

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

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

S-4	
TOTAL SHEETS	17

R:\Structures\ustation\401\_007\_17BP\_14.R\158\_SMU\_PC02\_004\_550009.dgn 10/31/2025 5:01:39 PM Jones

DRAWN BY :	LEM	DATE :	7-17
CHECKED BY :	JTG	DATE :	11-17
DESIGN ENGINEER OF RECORD :	JWJ	DATE :	10-25

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

LOAD TYPE	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	HL-93(Inv)	N/A	<b>1</b>	1.03	--	1.75	0.248	1.04	70'	EL	34.423	0.655	1.06	70'	EL	6.885	0.80	0.248	<b>1.03</b>	70'	I	<b>34.423</b>		
	HL-93(0pr)	N/A	--	1.35	--	1.35	0.248	1.35	70'	EL	34.423	0.655	1.37	70'	EL	6.885	N/A	--	--	--	--	--		
	HS-20(Inv)	36.000	<b>2</b>	1.32	47.520	1.75	0.248	1.35	70'	EL	34.423	0.655	<b>1.32</b>	70'	EL	<b>6.885</b>	0.80	0.248	1.34	70'	I	34.423		
	HS-20(0pr)	36.000	--	1.71	61.560	1.35	0.248	1.75	70'	EL	34.423	0.655	1.71	70'	EL	6.885	N/A	--	--	--	--	--		
LEGAL LOAD	SINGLE VEHICLE (SV)	SNSH	13.500	--	2.99	40.365	1.4	0.248	3.76	70'	EL	34.423	0.655	3.9	70'	EL	6.885	0.80	0.248	2.99	70'	I	34.423	
		SNGARBS2	20.000	--	2.24	44.800	1.4	0.248	2.82	70'	EL	34.423	0.655	2.78	70'	EL	6.885	0.80	0.248	2.24	70'	I	34.423	
		SNAGRIS2	22.000	--	2.13	46.860	1.4	0.248	2.68	70'	EL	34.423	0.655	2.58	70'	EL	6.885	0.80	0.248	2.13	70'	I	34.423	
		SNCOTTS3	27.250	--	1.49	40.603	1.4	0.248	1.87	70'	EL	34.423	0.655	1.95	70'	EL	6.885	0.80	0.248	1.49	70'	I	34.423	
		SNAGGRS4	34.925	--	1.25	43.656	1.4	0.248	1.57	70'	EL	34.423	0.655	1.62	70'	EL	6.885	0.80	0.248	1.25	70'	I	34.423	
		SNS5A	35.550	--	1.22	43.371	1.4	0.248	1.54	70'	EL	34.423	0.655	1.65	70'	EL	6.885	0.80	0.248	1.22	70'	I	34.423	
		SNS6A	39.950	--	1.12	44.744	1.4	0.248	1.41	70'	EL	34.423	0.655	1.5	70'	EL	6.885	0.80	0.248	1.12	70'	I	34.423	
	TRUCK TRACTOR SEMI-TRAILER (TTST)	SNS7B	42.000	--	1.07	44.940	1.4	0.248	1.35	70'	EL	34.423	0.655	1.48	70'	EL	6.885	0.80	0.248	1.07	70'	I	34.423	
		TNAGRIT3	33.000	--	1.37	45.210	1.4	0.248	1.72	70'	EL	34.423	0.655	1.79	70'	EL	6.885	0.80	0.248	1.37	70'	I	34.423	
		TNT4A	33.075	--	1.38	45.644	1.4	0.248	1.73	70'	EL	34.423	0.655	1.74	70'	EL	6.885	0.80	0.248	1.38	70'	I	34.423	
		TNT6A	41.600	--	1.13	47.008	1.4	0.248	1.42	70'	EL	34.423	0.655	1.58	70'	EL	6.885	0.80	0.248	1.13	70'	I	34.423	
		TNT7A	42.000	--	1.13	47.460	1.4	0.248	1.43	70'	EL	34.423	0.655	1.55	70'	EL	6.885	0.80	0.248	1.13	70'	I	34.423	
		TNT7B	42.000	--	1.18	49.560	1.4	0.248	1.48	70'	EL	34.423	0.655	1.44	70'	EL	6.885	0.80	0.248	1.18	70'	I	34.423	
		TNAGRIT4	43.000	--	1.12	48.160	1.4	0.248	1.41	70'	EL	34.423	0.655	1.4	70'	EL	6.885	0.80	0.248	1.12	70'	I	34.423	
EMERGENCY VEHICLE (EV)	EV2	28.750	--	1.59	45.713	1.3	0.248	2.15	70'	EL	34.423	0.655	2.08	70'	EL	6.885	0.80	0.248	1.59	70'	I	34.423		
EV3	43.000	<b>4</b>	1.04	44.720	1.3	0.248	1.41	70'	EL	34.423	0.655	1.41	70'	EL	6.885	0.80	0.248	<b>1.04</b>	70'	I	<b>34.423</b>			

**LOAD FACTORS:**

DESIGN LOAD RATING FACTORS	LIMIT STATE	$\gamma_{DC}$	$\gamma_{DW}$
	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 \*\*

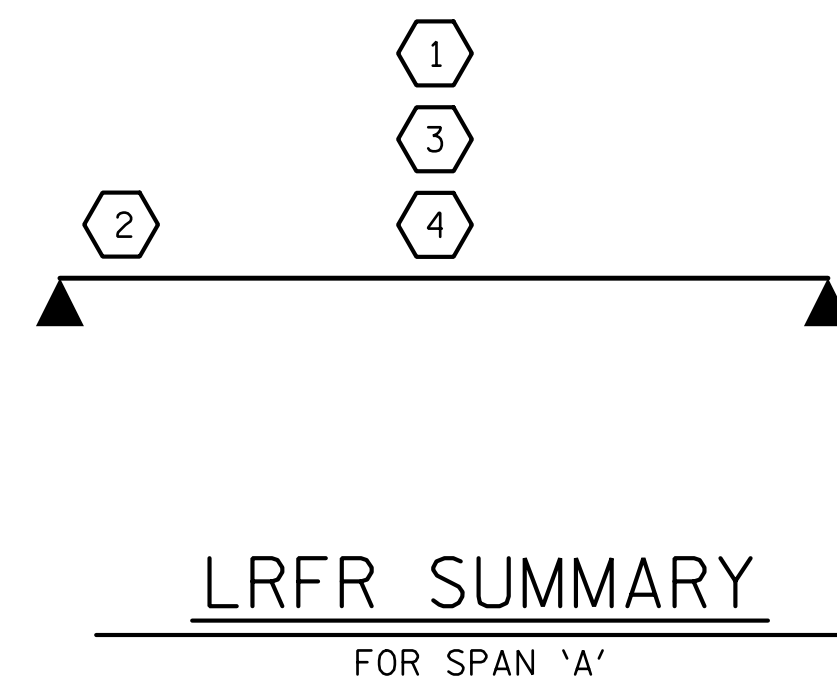
④ EMERGENCY VEHICLE LOAD RATING \*\*

\*\* SEE CHART FOR VEHICLE TYPE

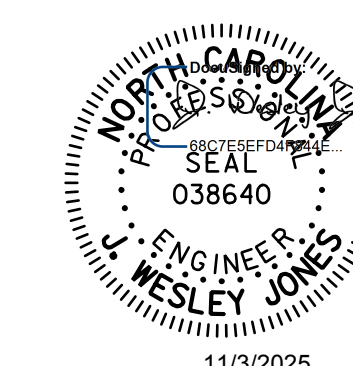
---

**GIRDER LOCATION**

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



PROJECT NO. B-6029  
MACON COUNTY  
 STATION: 17+07.50 -L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**LRFR SUMMARY FOR  
 70' CORED SLAB UNIT  
 60° SKEW  
 (NON-INTERSTATE TRAFFIC)**

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

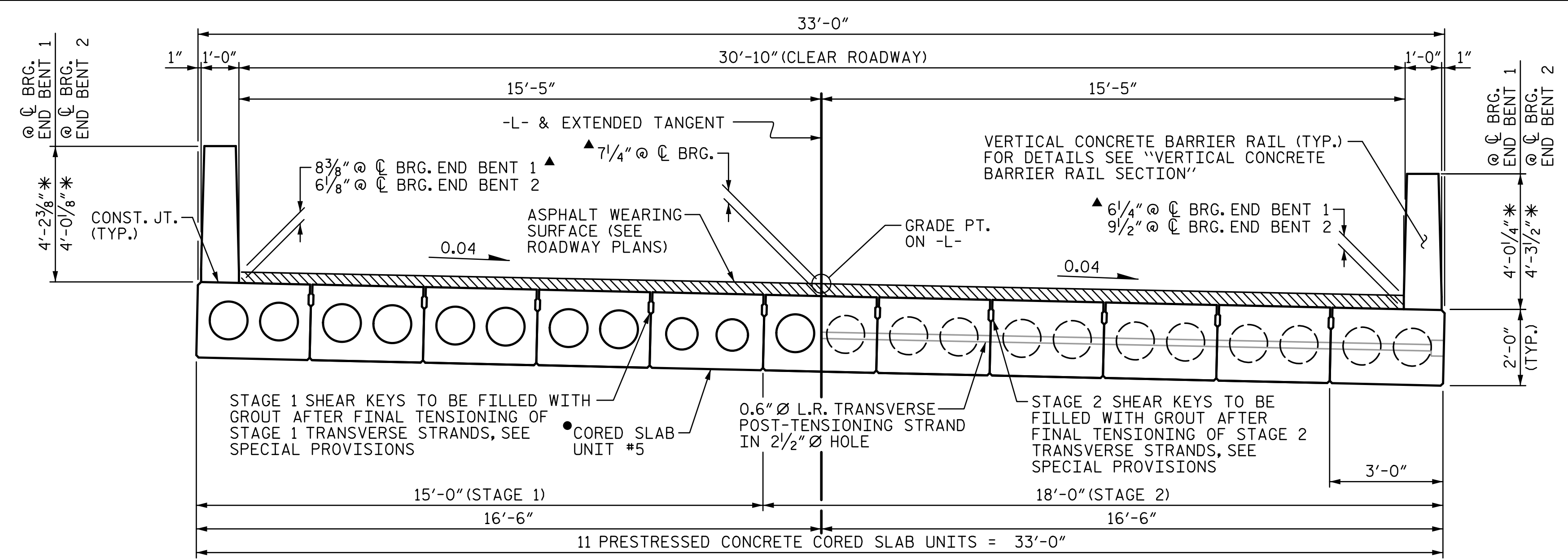
DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

REVISIONS				SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			17
2			4			

R:\Structures\ustation\401\_009\_17BP\_14.R\58\_SML\_LRFR\_005\_550009.dgn

10/31/2025 5:01:40 PM

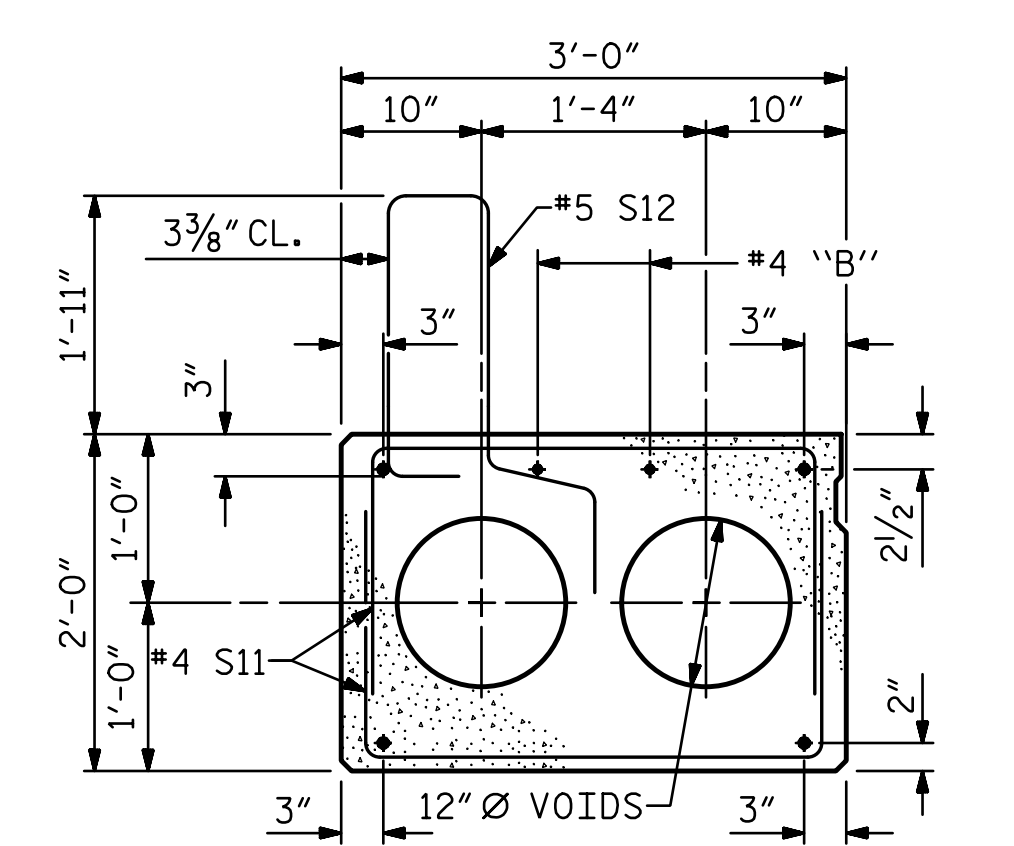
DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : JTG DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25



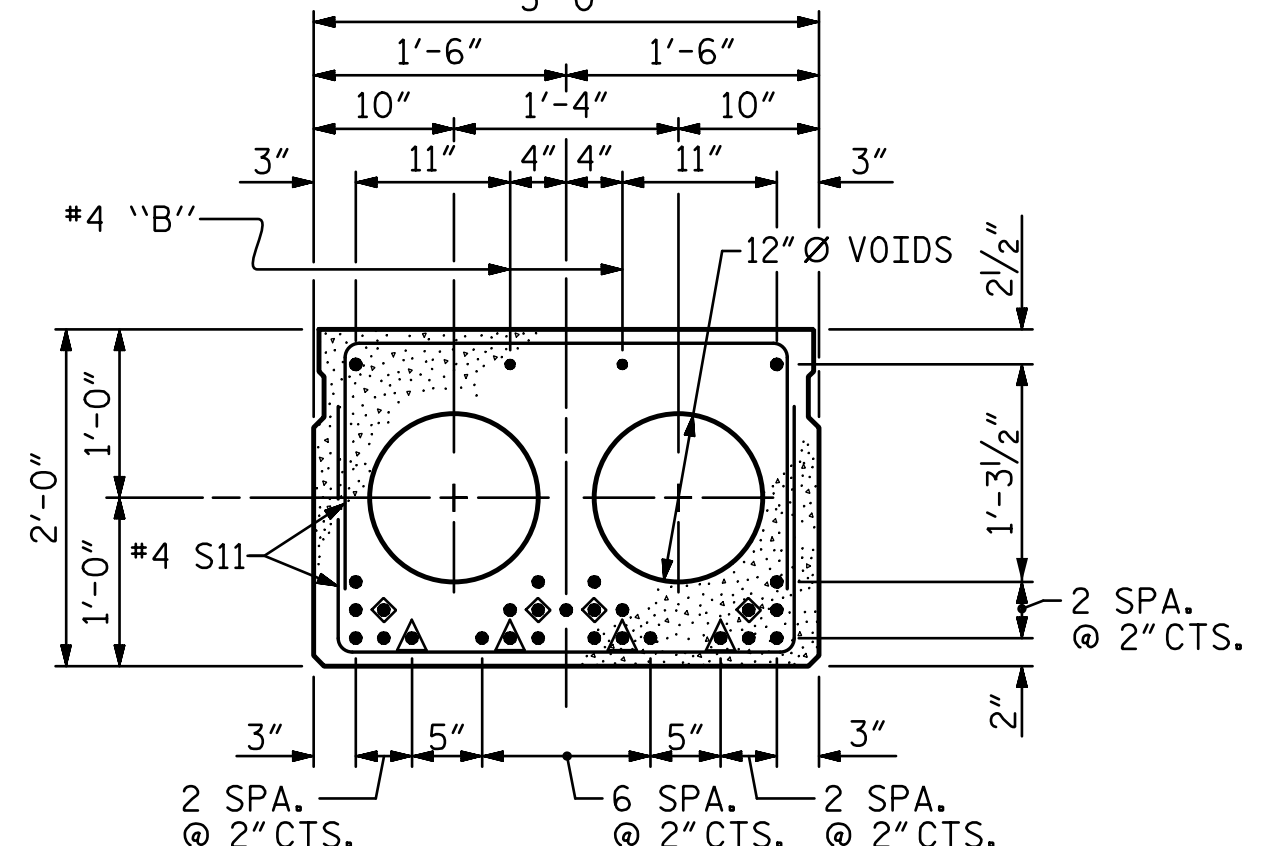
HALF SECTION THROUGH VOIDS  
**TYPICAL SECTION**  
 HALF SECTION AT INTERMEDIATE DIAPHRAGMS

▲ ASPHALT THICKNESS SHOWN IS FOR THE FINAL CONDITION. FOR ASPHALT THICKNESS AT STAGES, SEE "BRIDGE STAGING PLAN" SHEETS.  
 ● CORED SLAB UNITS ARE NUMBERED FROM LEFT TO RIGHT, LOOKING UPSTATION.

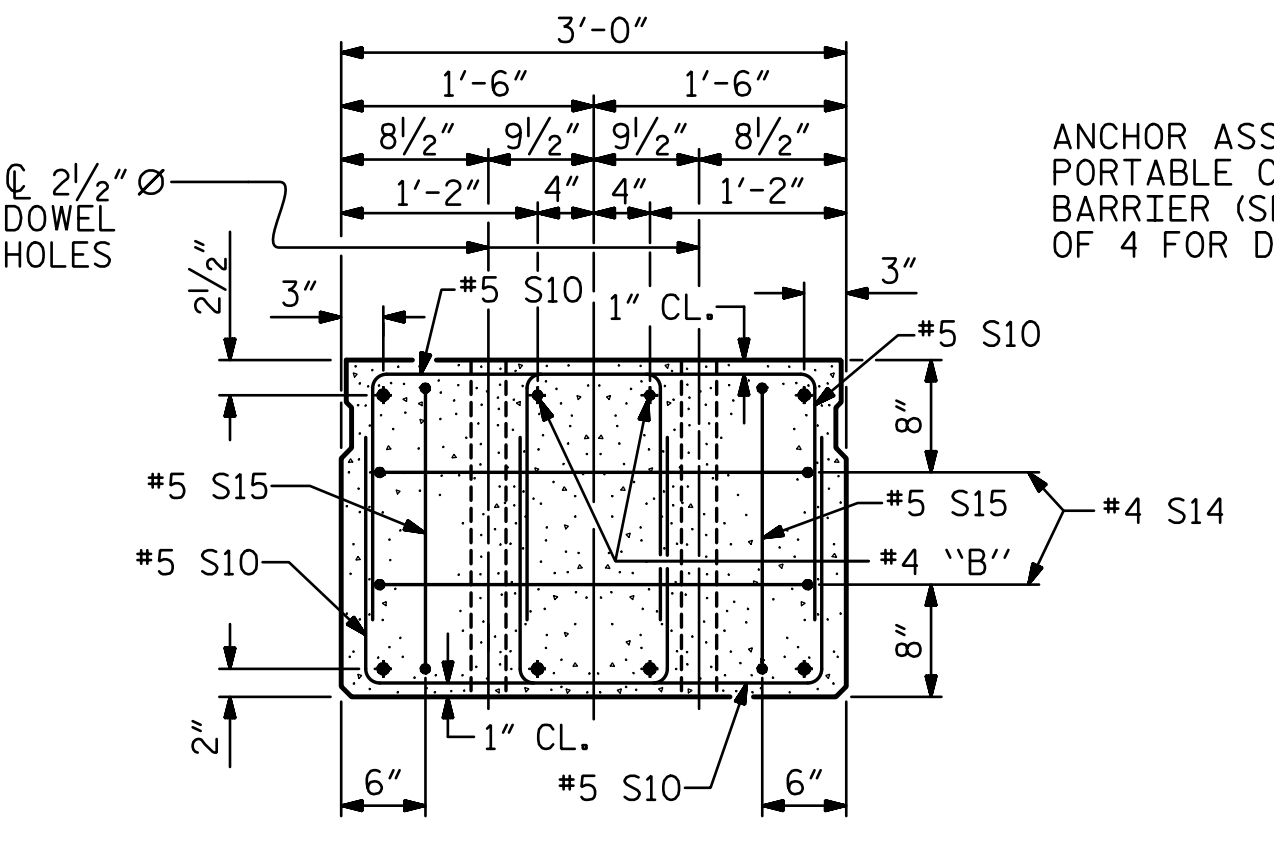
\* - THE MAXIMUM BARRIER RAIL HEIGHT AND ASPHALT THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND ASPHALT THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND ASPHALT THICKNESS, SEE THE "VERTICAL CONCRETE BARRIER RAIL SECTION" DETAIL.



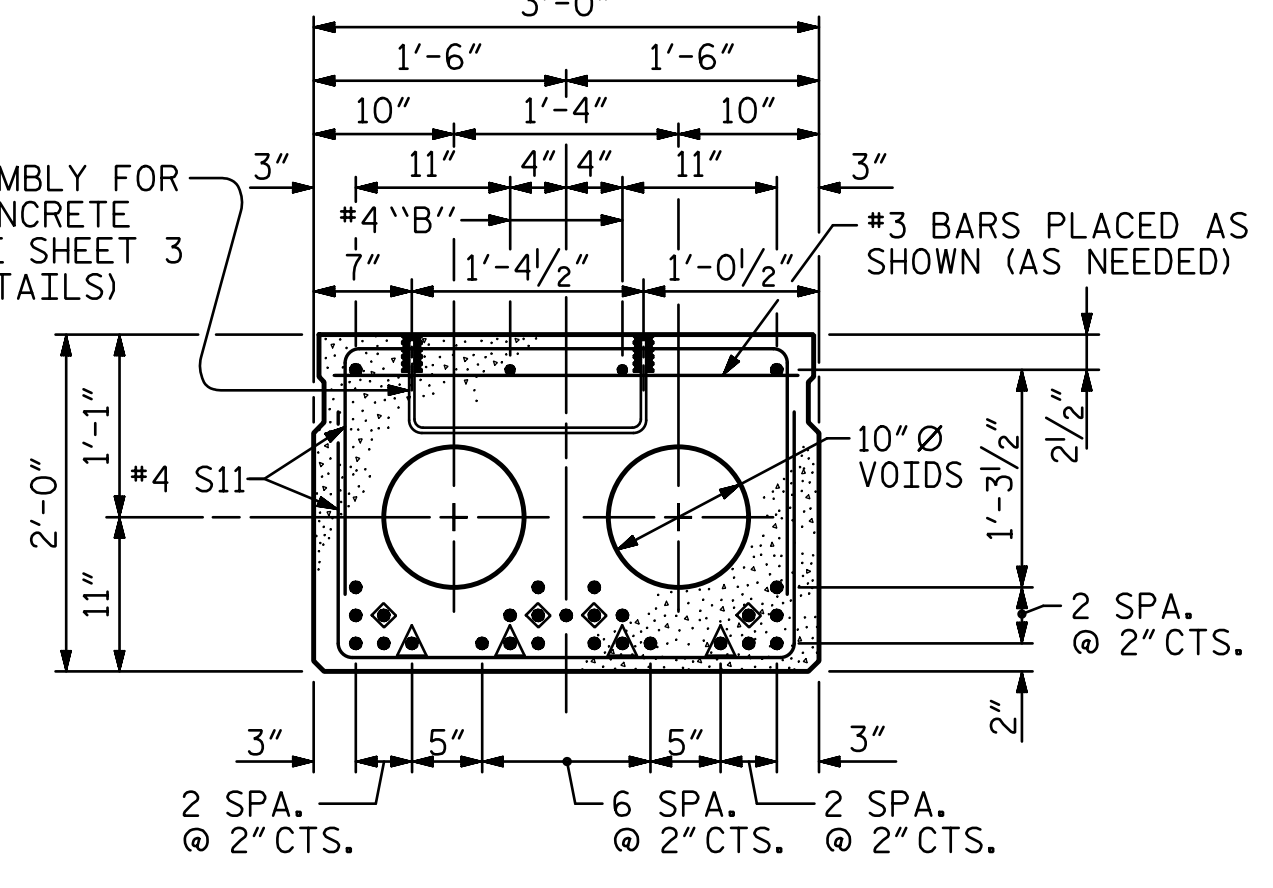
**EXTERIOR SLAB SECTION**  
 (FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION.)



**INTERIOR SLAB SECTION (EXCEPT C.S.U. 5)**  
 (27 STRANDS REQUIRED)

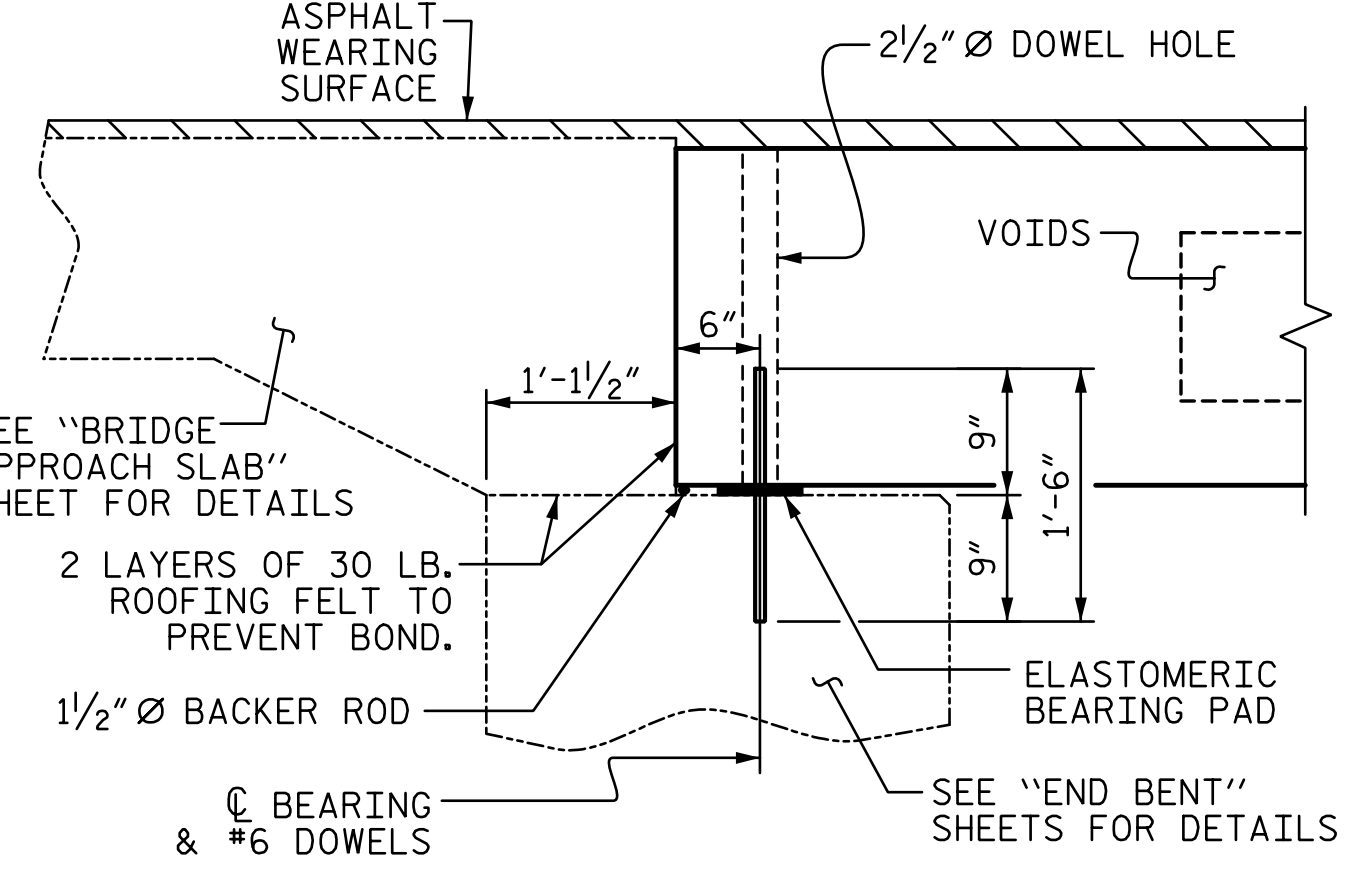


**END ELEVATION**  
 SHOWING PLACEMENT OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES. (STRAND LAYOUT NOT SHOWN.)  
 INTERIOR SLAB UNIT SHOWN-EXTERIOR SLAB UNIT SIMILAR EXCEPT SHEAR KEY LOCATION.

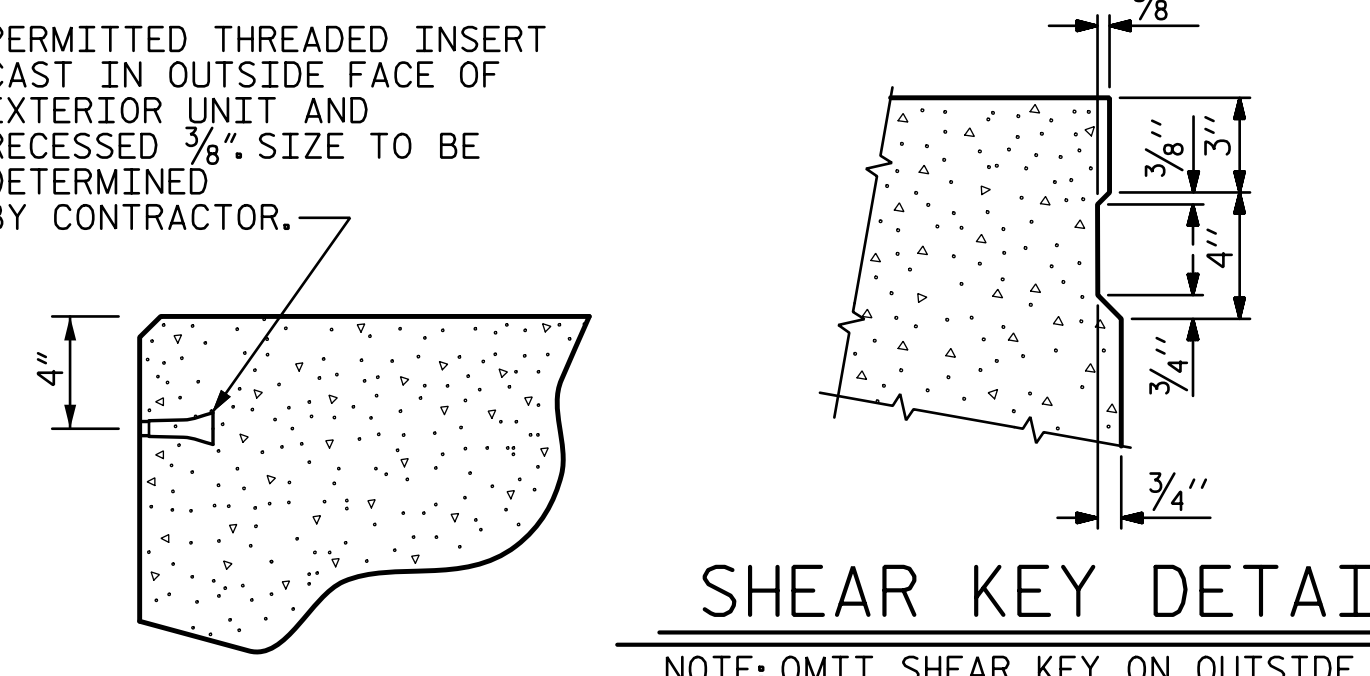


**INTERIOR SLAB SECTION (C.S.U. 5 ONLY)**  
 (27 STRANDS REQUIRED)  
 THE #3 BARS ARE INCIDENTAL AND THE COST SHALL BE INCLUDED IN THE PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS

**0.6" Ø LOW RELAXATION STRAND LAYOUT**



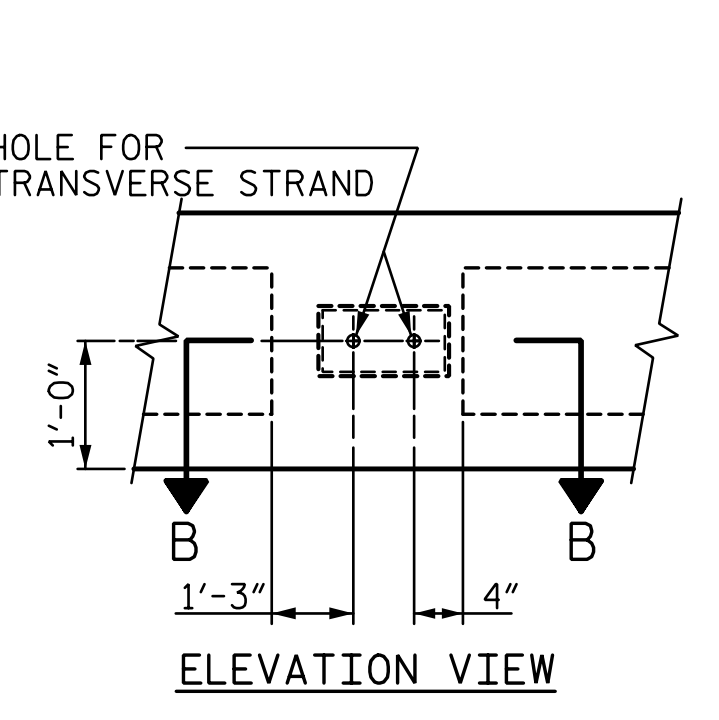
**SECTION AT END BENT**



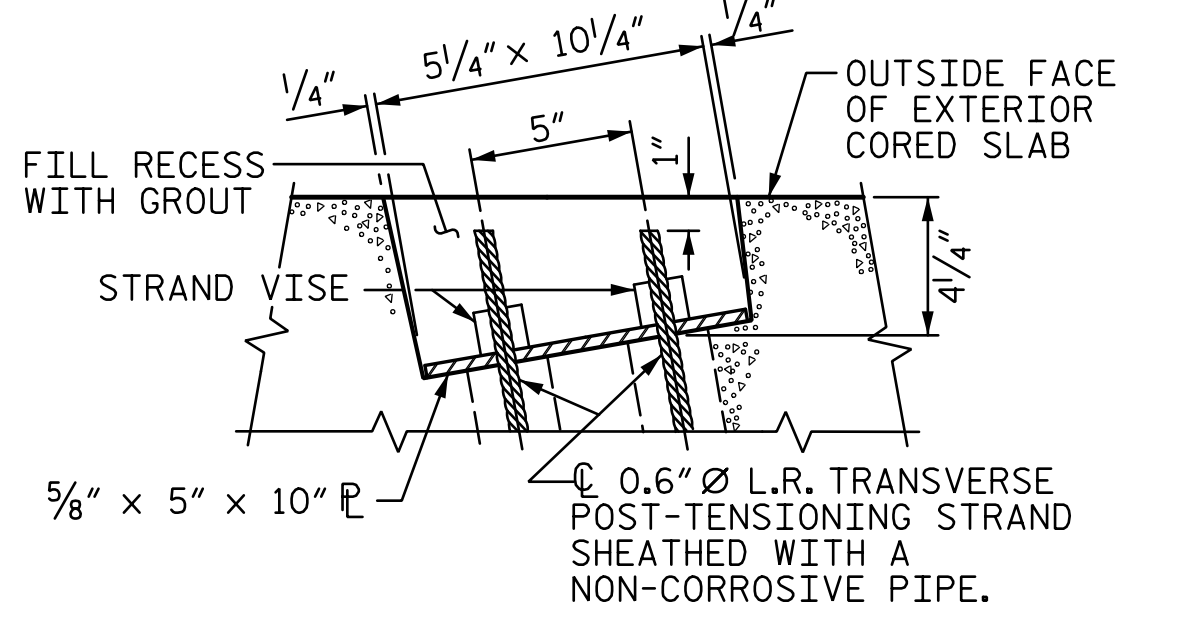
**SHEAR KEY DETAIL**  
 NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR CORED SLABS.

◆ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 10'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.  
 ▲ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 12'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

**DEBONDING LEGEND**

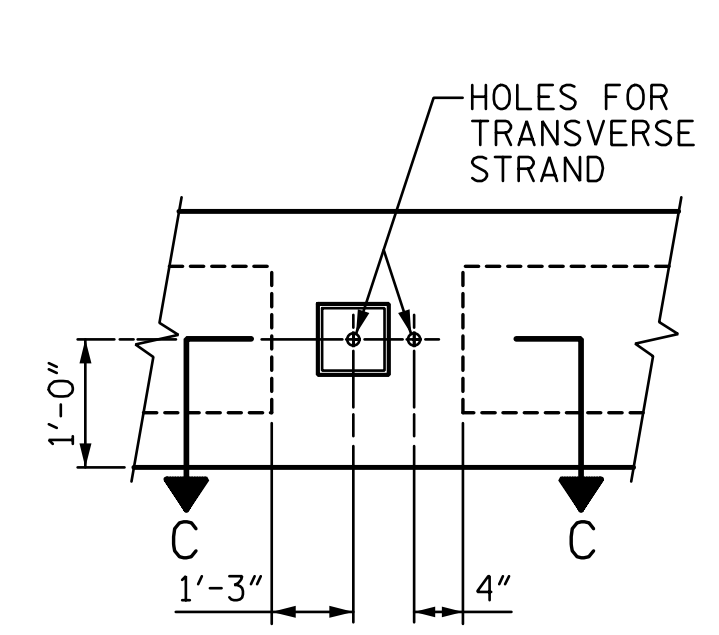


**ELEVATION VIEW**

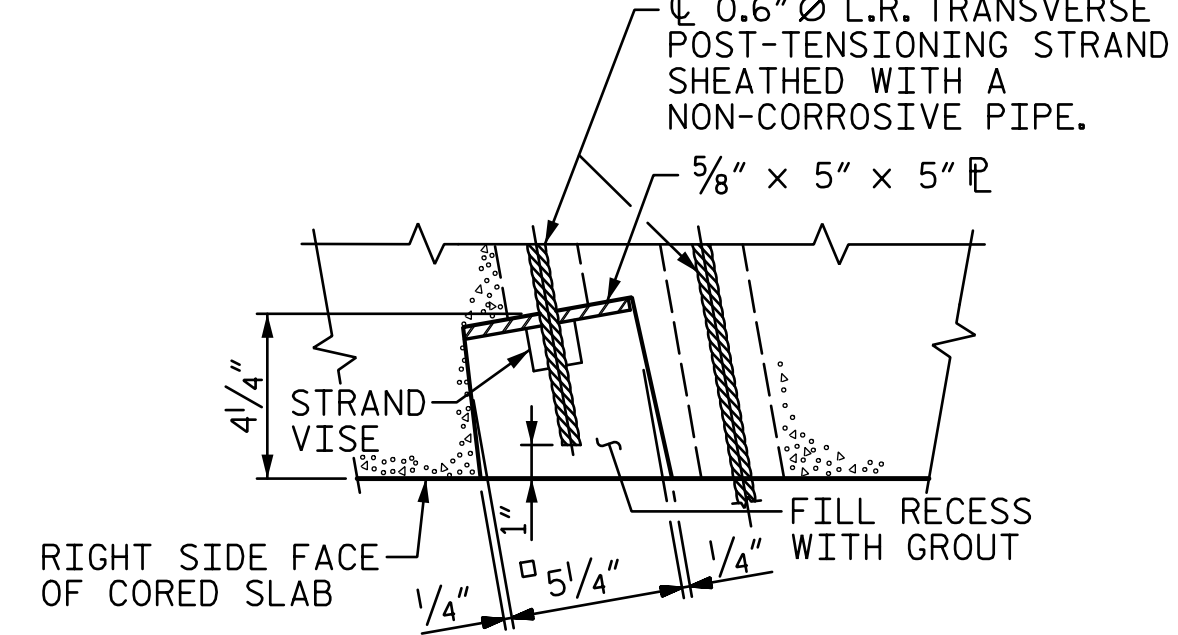


**SECTION B-B**

**CORED SLAB UNIT #1**

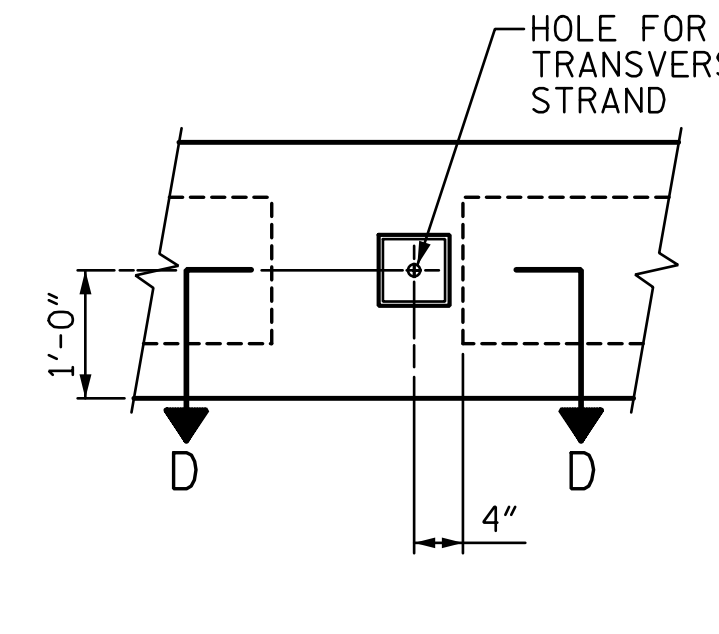


**ELEVATION VIEW**

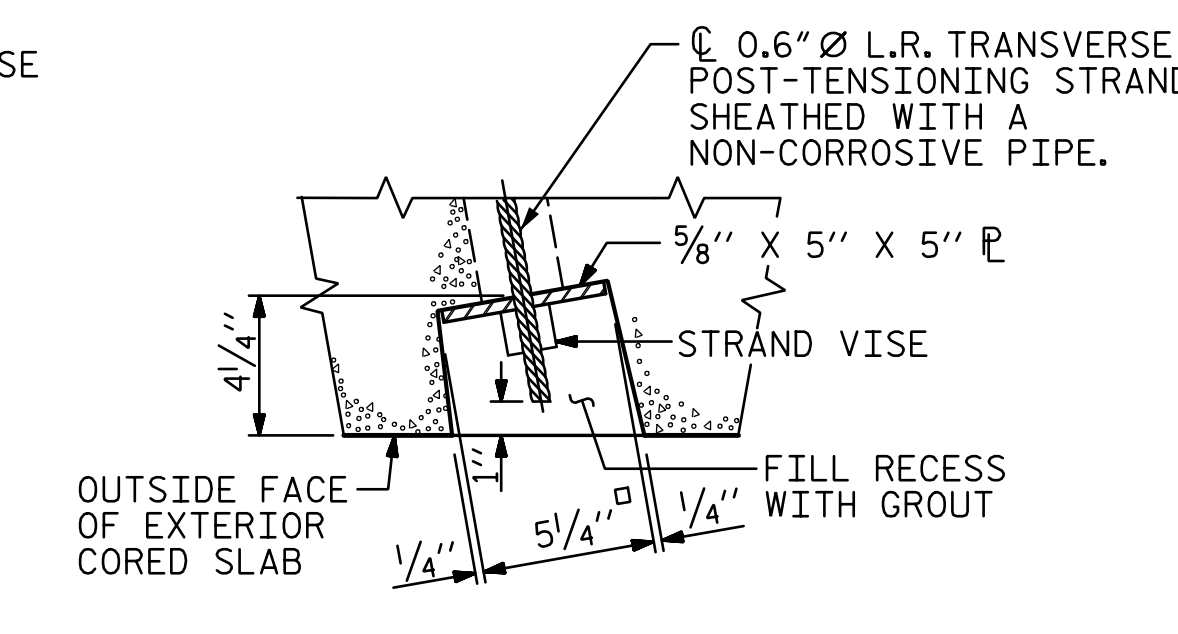


**SECTION C-C**

**CORED SLAB UNIT #5**



**ELEVATION VIEW**



**SECTION D-D**

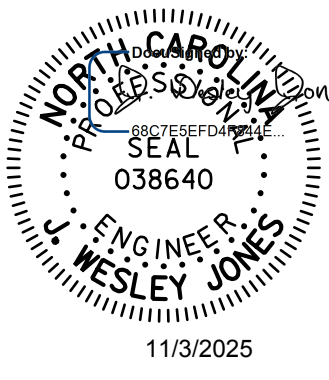
**CORED SLAB UNIT #11**

**GROUTED RECESS AT END OF POST-TENSIONED STRAND CORED SLABS**

(SEE SHEET 2 OF 4 FOR LOCATIONS)

PROJECT NO. **B-6029**  
**MACON** COUNTY  
 STATION: **17+07.50 -L-**

SHEET 1 OF 4



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**3'-0" X 2'-0"**  
**PRESTRESSED CONCRETE**  
**CORED SLAB UNIT**  
**60° SKEW**

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

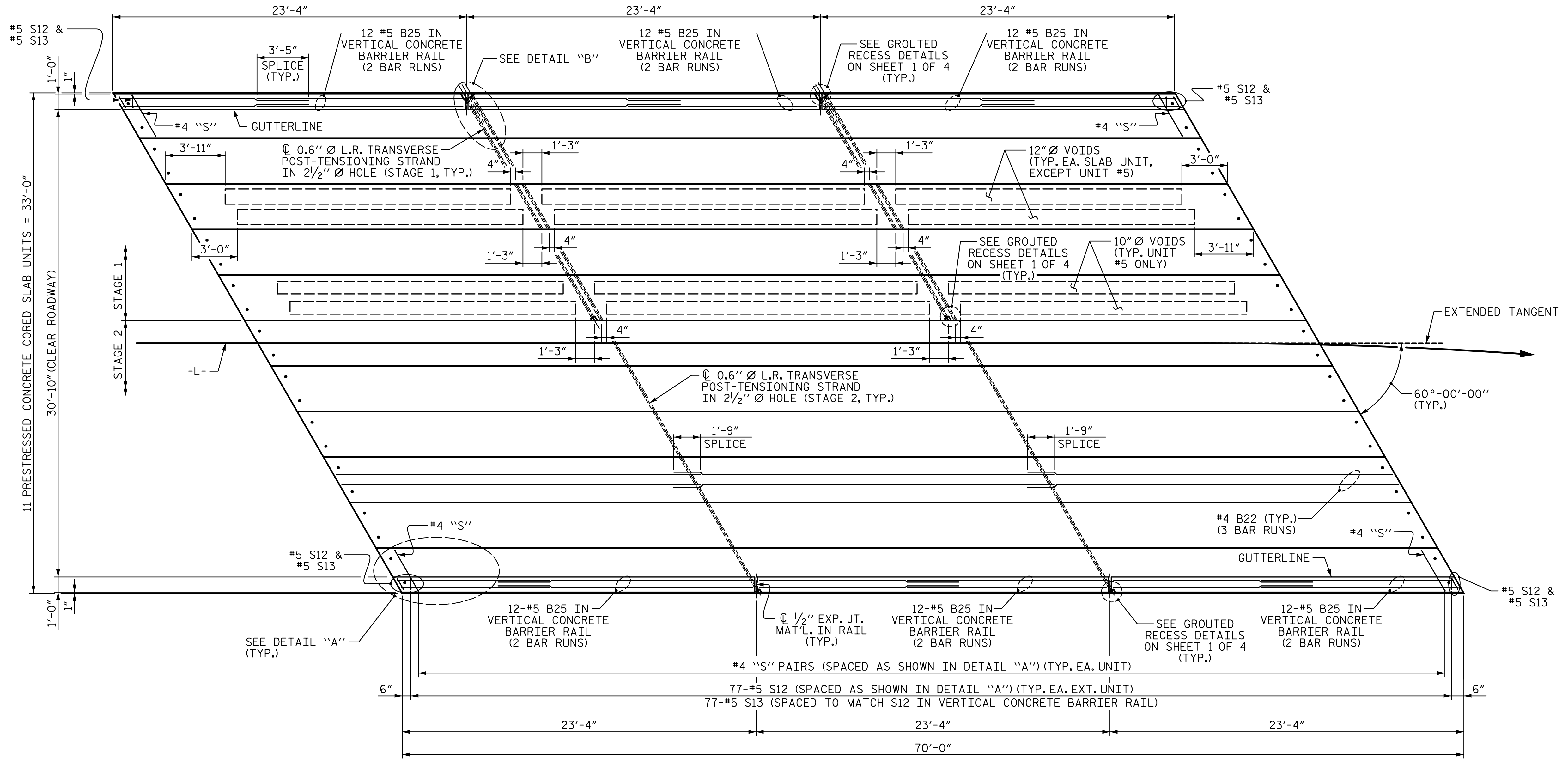
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

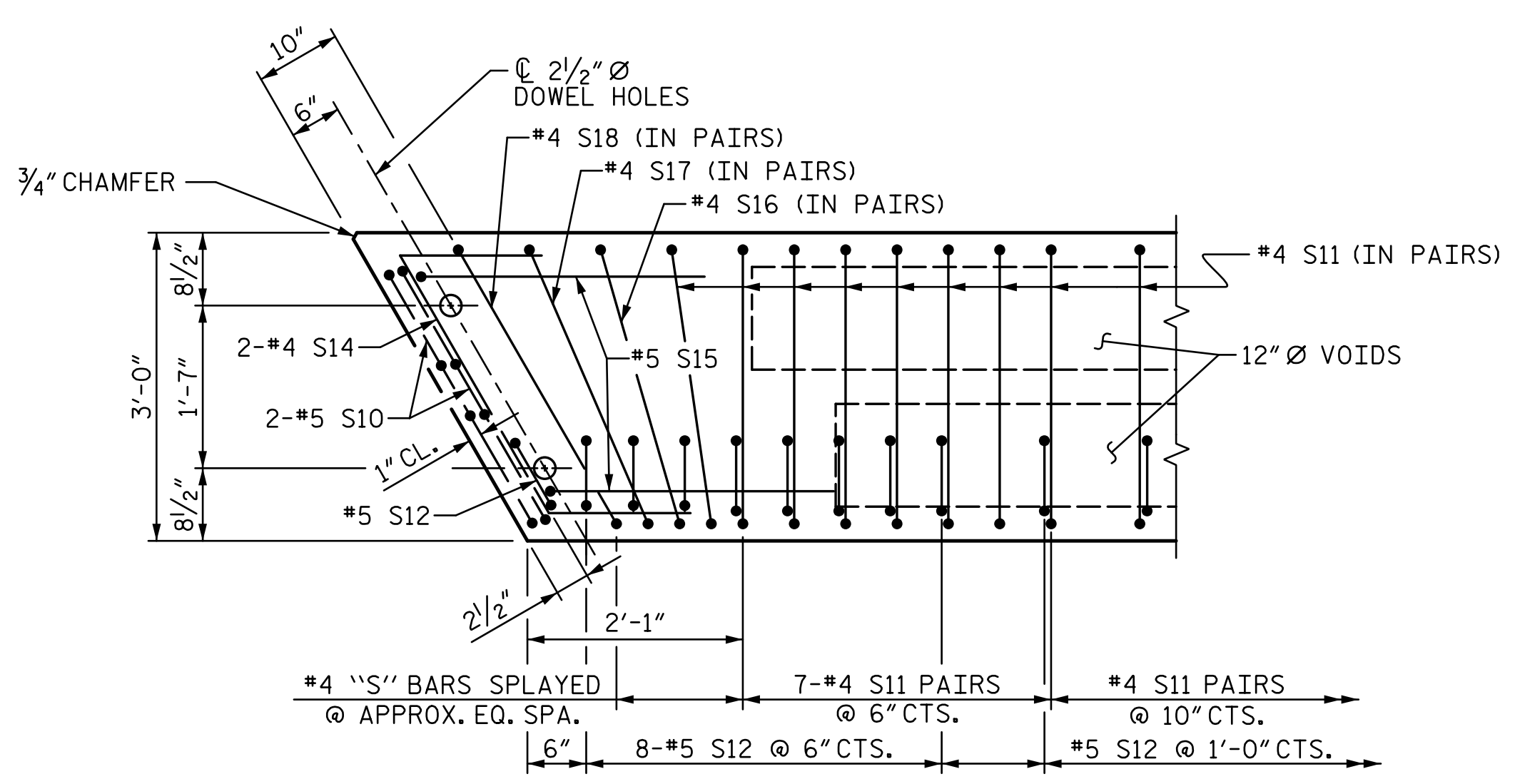
S-6  
 TOTAL SHEETS 17

R:\Structures\ustation\401\_01\_17BP\_14.RJ5B\_SMU\_PCCS01\_006\_550009.dgn 10/31/2025 5:01:41 PM Jones

R:\Structures\ustation\401.013.17BP.14.R.158.SML.PCCS02.007.550009.dgn 10/31/2025 5:01:42 PM Jones

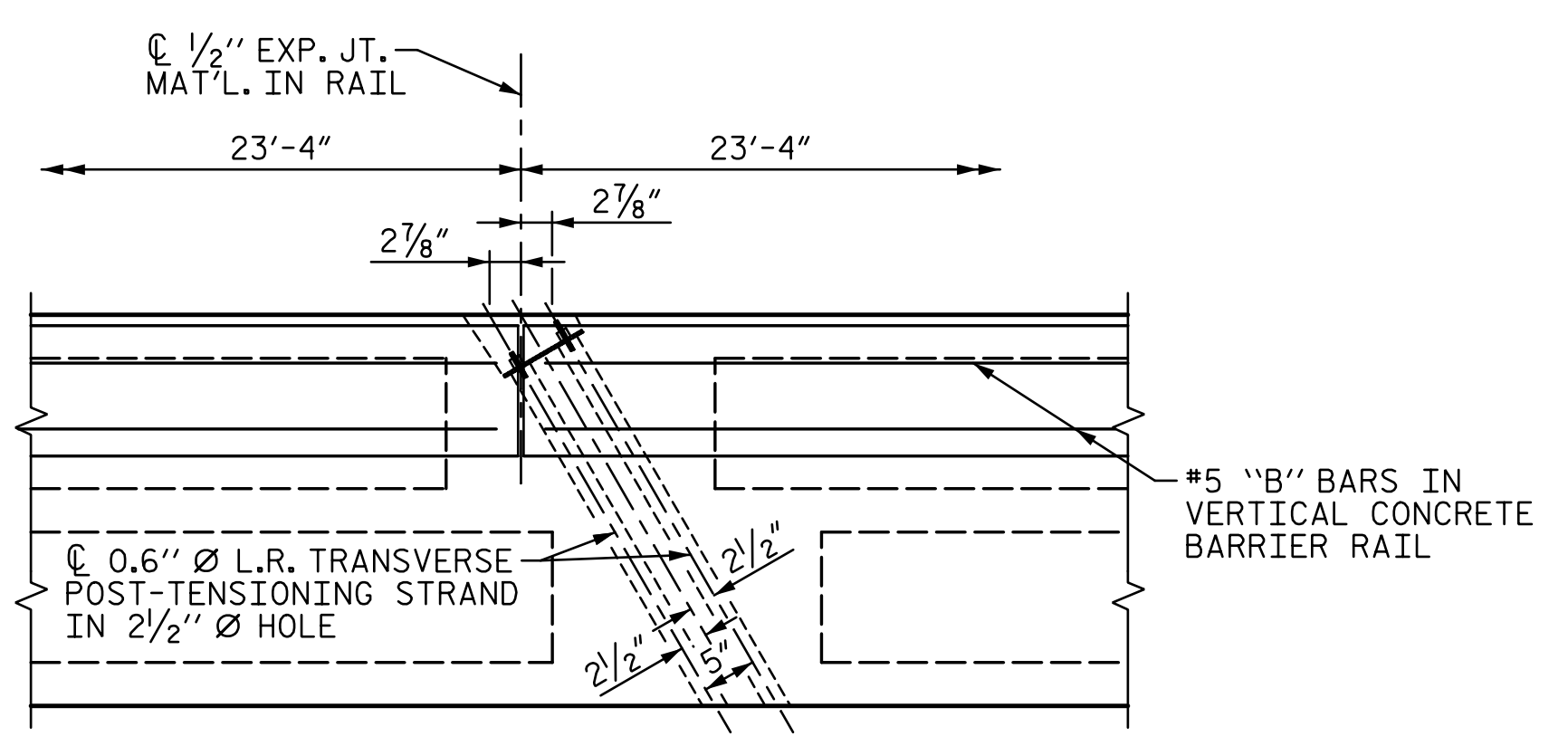


PLAN OF UNIT



DETAIL "A"

(SIMILAR EACH END OF UNIT)  
NOTE: EXTERIOR UNIT SHOWN - INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S12 BARS.

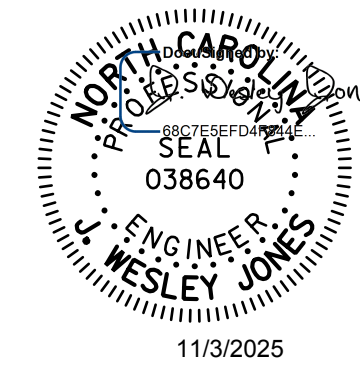


DETAIL "B"

#4 S11 BARS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO GROUDED RECESS AND 2 1/2" Ø TRANSVERSE POST-TENSIONING STRAND HOLES



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PROJECT NO. B-6029  
MACON COUNTY  
 STATION: 17+07.50 -L-  
 SHEET 2 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PLAN OF 70' UNIT 30'-10" CLEAR ROADWAY 60° SKEW					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-7
					TOTAL SHEETS 17

### ANCHOR ASSEMBLY NOTES

THE ANCHOR ASSEMBLY FOR PORTABLE CONCRETE BARRIER SHALL CONSIST OF THE FOLLOWING COMPONENTS:

A. FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF AASHTO M169, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 2 1/2".

B. 2 - 1/4" Ø BOLTS WITH WASHERS. BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS MAY BE USED AS AN ALTERNATE FOR THE 1/4" Ø GALVANIZED BOLTS 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.)

C. WIRE STRUTS SHOWN IN THE ANCHOR ASSEMBLY FOR TEMPORARY GUARDRAIL DETAIL ARE THE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 P.S.I.

ANCHOR ASSEMBLY WITH BOLTS SHALL BE ASSEMBLED IN THE SHOP. BOLT THREADS MAY BE RECUT AS NECESSARY TO ENSURE FIT.

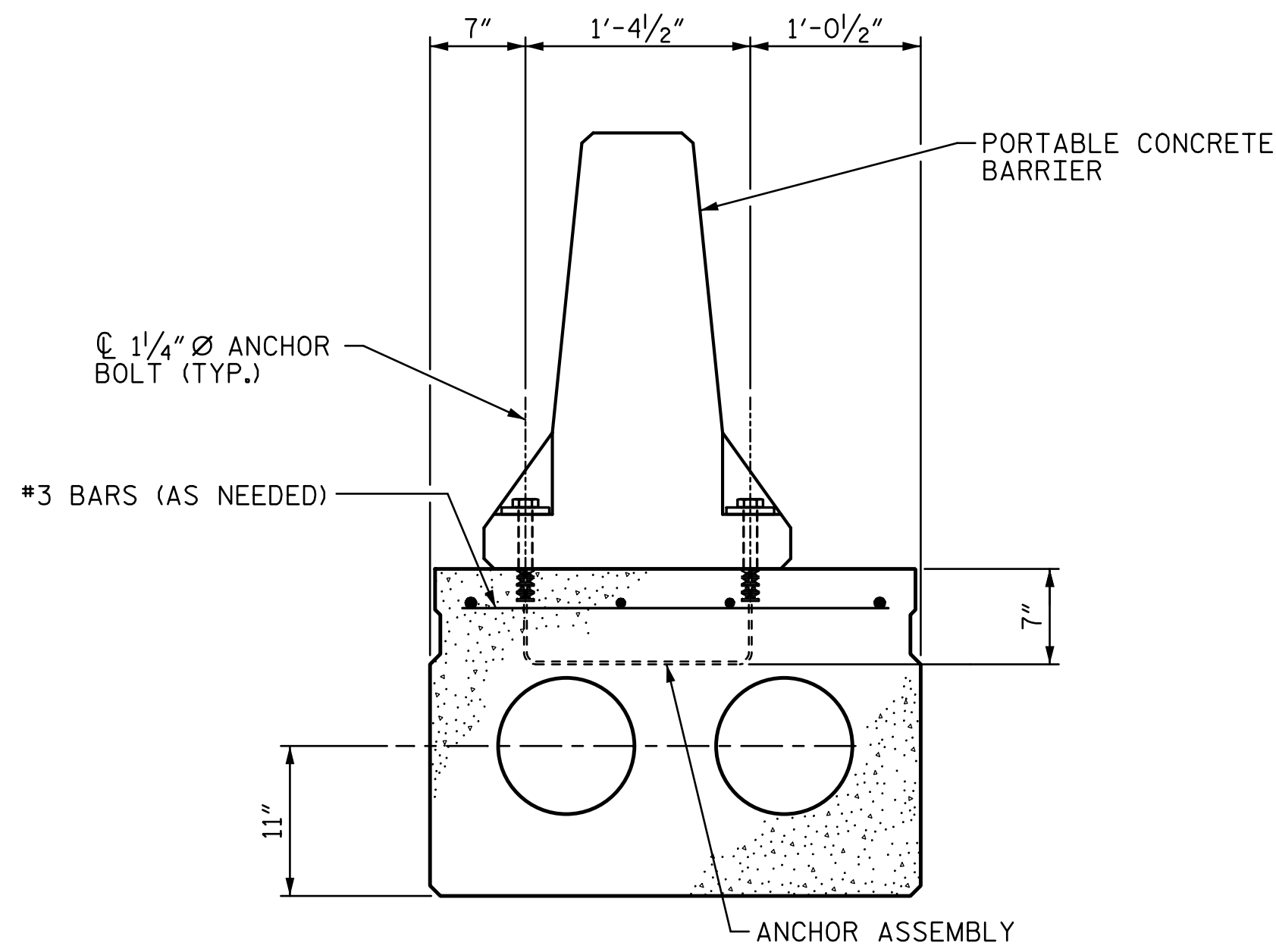
THE COST OF THE ANCHOR ASSEMBLY, COMPLETE IN PLACE, SHALL BE INCLUDED, AS APPLICABLE, IN THE UNIT CONTRACT PRICE BID FOR 3'-0" X 2'-0" PRESTRESSED CONCRETE CORED SLAB OR LUMP SUM FOR THE APPROACH SLABS.

FERRULES TO BE PLUGGED DURING CASTING OF THE CORED SLAB UNITS OR POURING OF APPROACH SLABS AS RECOMMENDED BY THE MANUFACTURER.

AT THE CONTRACTOR'S OPTION, FERRULES WITH OPEN OR CLOSED ENDS MAY BE USED.

PAYMENT FOR PORTABLE CONCRETE BARRIER IS INCLUDED IN THE TRAFFIC CONTROL PLANS.

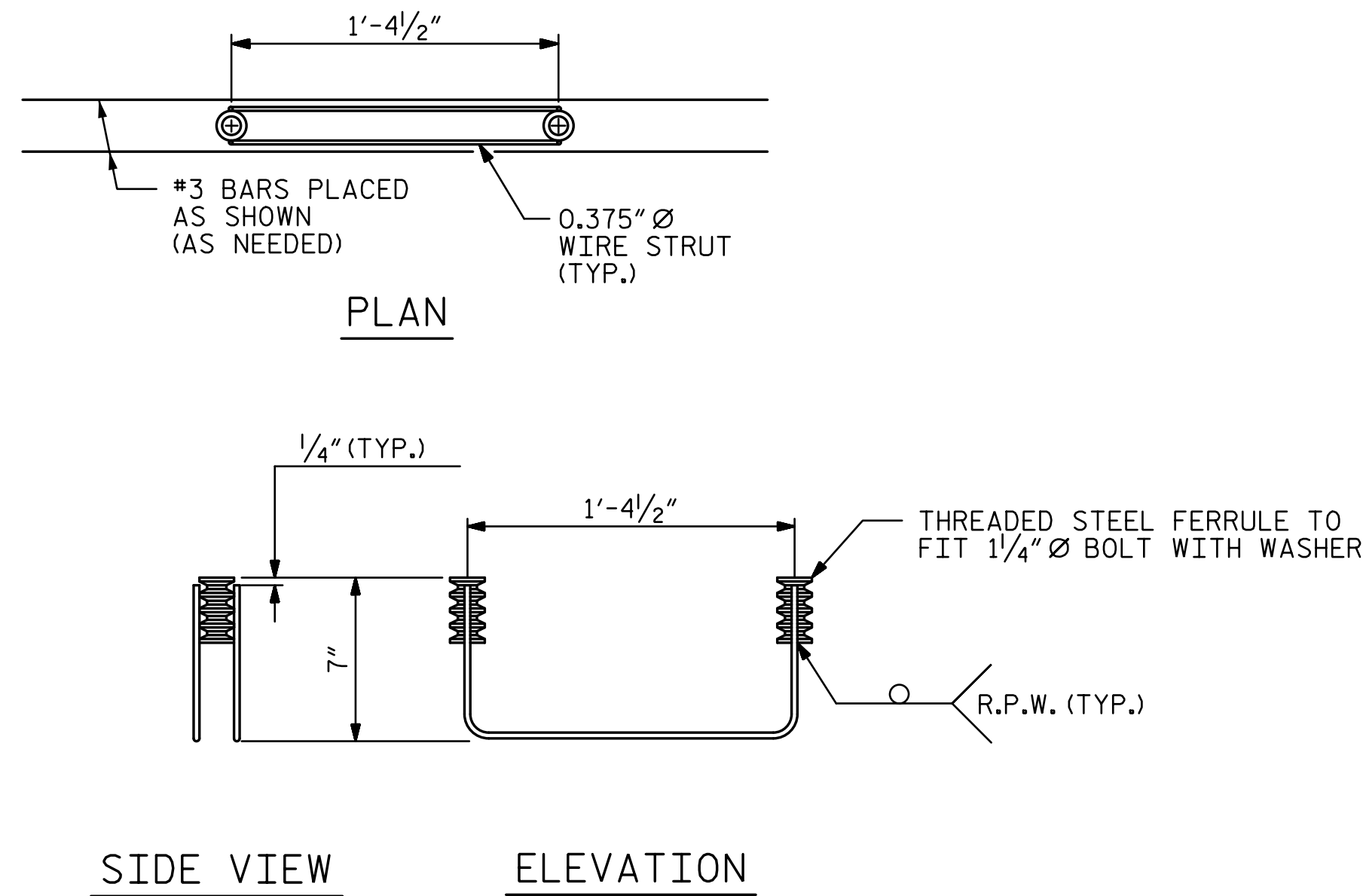
ONCE PORTABLE CONCRETE BARRIER HAS BEEN REMOVED, COMPLETELY FILL ANCHOR ASSEMBLY HOLES WITH AN NCDOT APPROVED, NON-SHRINK, NON-METALLIC GROUT, OR AS DIRECTED BY THE ENGINEER.



### SECTION A-A

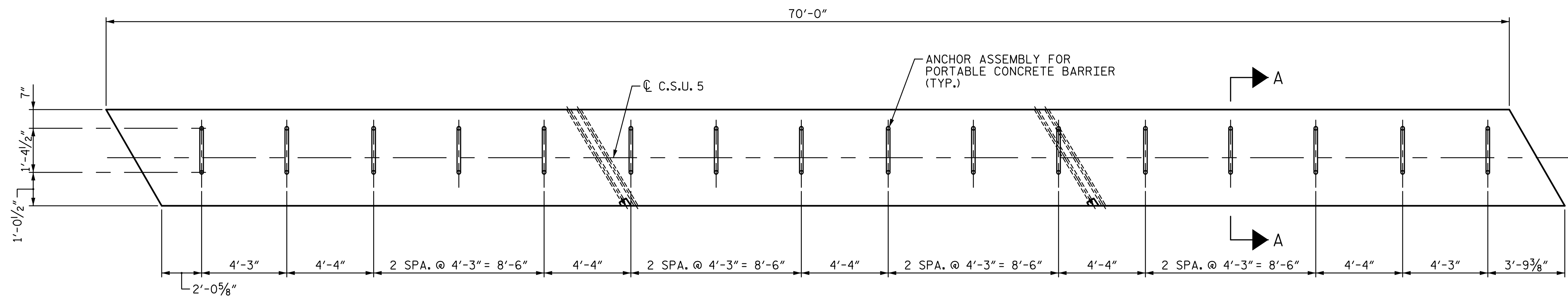
(SHOWING PLACEMENT OF ANCHOR ASSEMBLIES)

NOTE: THE #3 BARS ARE INCIDENTAL AND THEIR COST SHALL BE INCLUDED IN THE PRICE BID FOR THE PRESTRESSED CONCRETE CORED SLAB.



### ANCHOR ASSEMBLY FOR PORTABLE CONCRETE BARRIER

(16 ASSEMBLIES REQUIRED IN CORED SLAB UNIT 5,  
6 ASSEMBLIES REQUIRED IN APPROACH SLABS)



### PLAN OF CORED SLAB UNIT #5

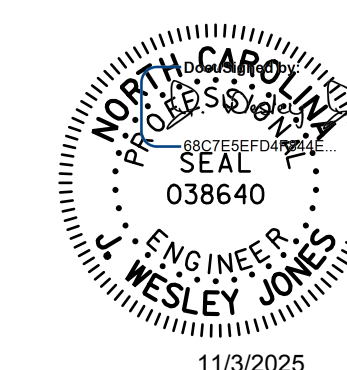
(SHOWING LOCATION OF ANCHOR ASSEMBLIES)  
(FOR ANCHOR ASSEMBLY SPACING ON APPROACH SLABS, SEE "BRIDGE APPROACH SLAB FOR PRESTRESSED CONCRETE CORED SLAB UNIT")

PROJECT NO. B-6029

MACON COUNTY

STATION: 17+07.50 -L-

SHEET 3 OF 4



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
**3'-0" X 2'-0"**  
**PRESTRESSED CONCRETE**  
**CORED SLAB UNIT**  
**60° SKEW**

**stv** STV Engineers, Inc.  
2151 Hawkins Street, Suite 1400  
Charlotte, NC 28203  
NC License Number F-0991

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

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

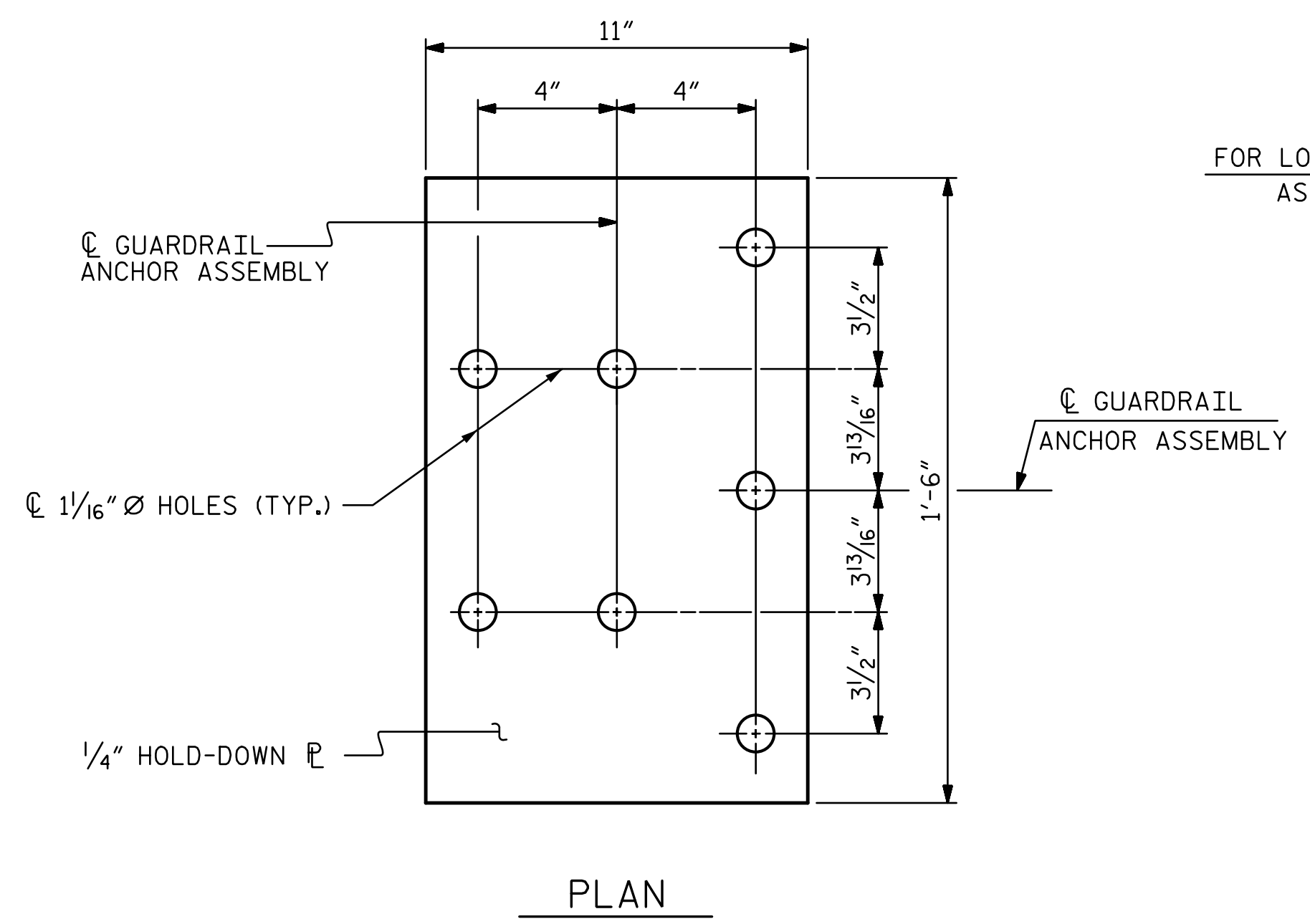
S-8  
TOTAL SHEETS 17

DRAWN BY : LEM	DATE : 7-17
CHECKED BY : JTG	DATE : 11-17
DESIGN ENGINEER OF RECORD : JWJ	DATE : 10-25

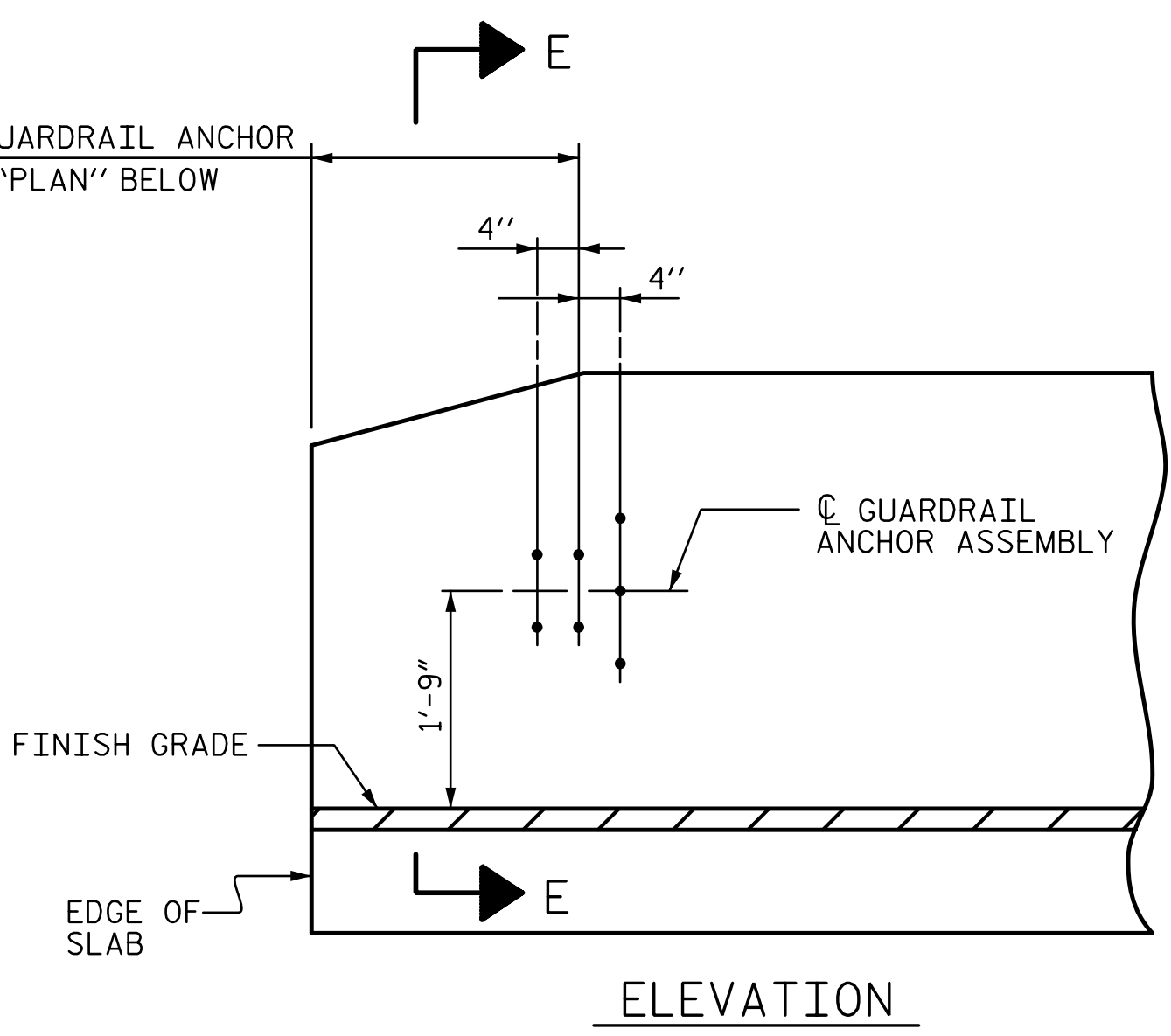
R:\Structures\ustation\401.015.17BP.14.R.158\_SML\_PCCS03\_008\_550009.dgn 10/31/2025 5:01:43 PM Jones



R:\Structures\ustation\401.019.17BP.14.R.158.SML.GRA.010.550009.dgn 10/31/2025 5:01:45 PM J.Jones

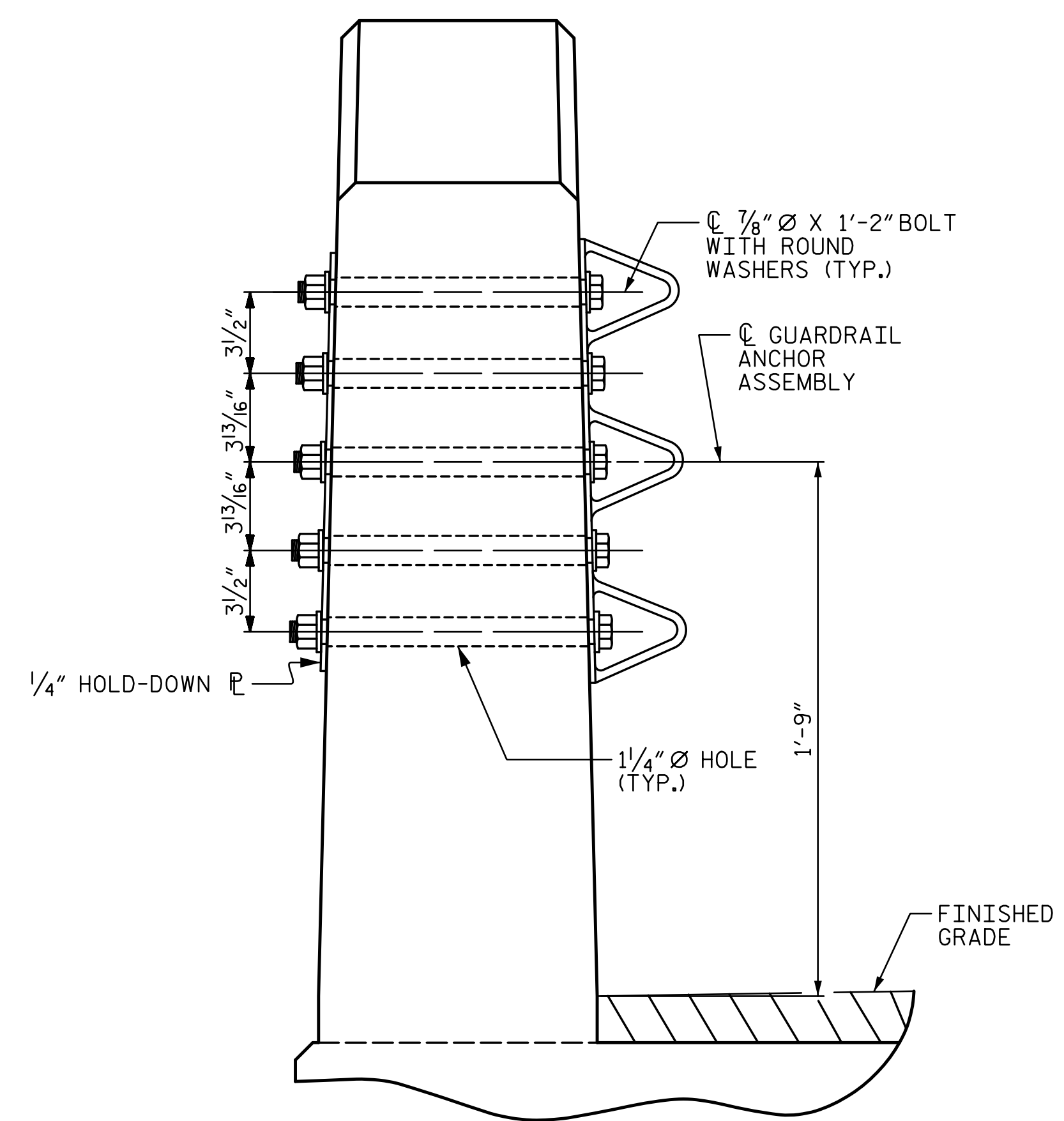


FOR LOCATION OF GUARDRAIL ANCHOR ASSEMBLY, SEE "PLAN" BELOW

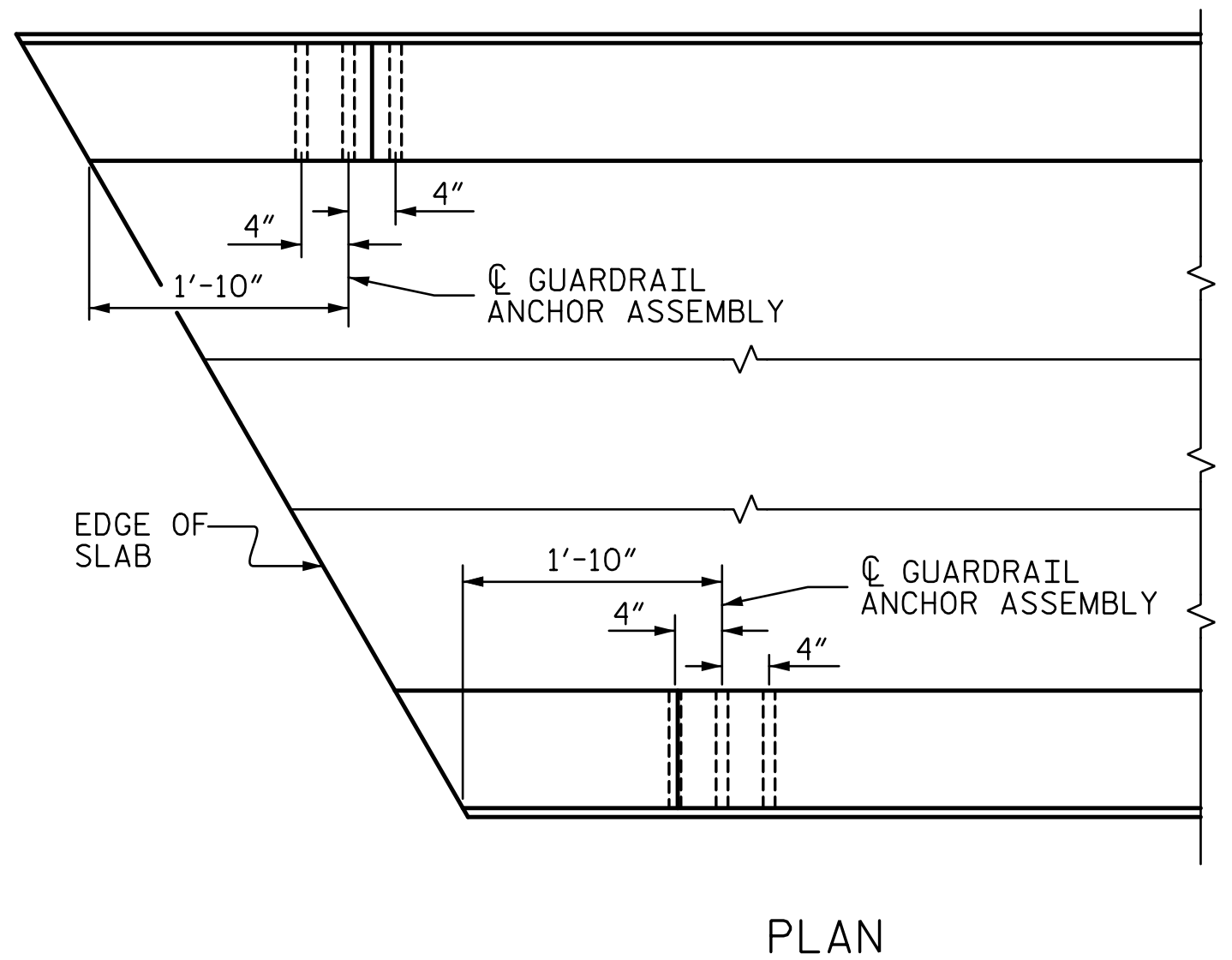


PLAN

ELEVATION

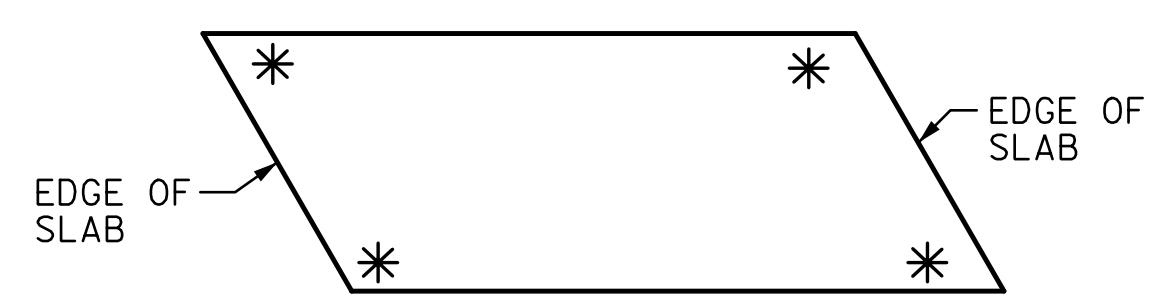


SECTION E-E  
GUARDRAIL ANCHOR ASSEMBLY DETAILS



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 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO 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 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

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

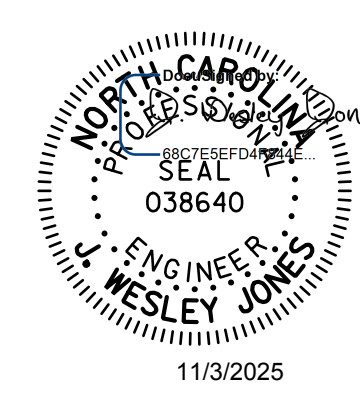
AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

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

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

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

PROJECT NO. B-6029  
MACON COUNTY  
 STATION: 17+07.50 -L-



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

ASSEMBLED BY : LEM	DATE : 7-17
CHECKED BY : JTG	DATE : 11-17
DESIGN ENGINEER OF RECORD : JWJ	DATE : 11-23
DRAWN BY : MAA 5/10	REV. 12/5/11 MAA/GM
CHECKED BY : GM 5/10	REV. 6/13 MAA/GM
	REV. 1/15 MAA/TMG

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

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

TOTAL SHEETS 17

**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.

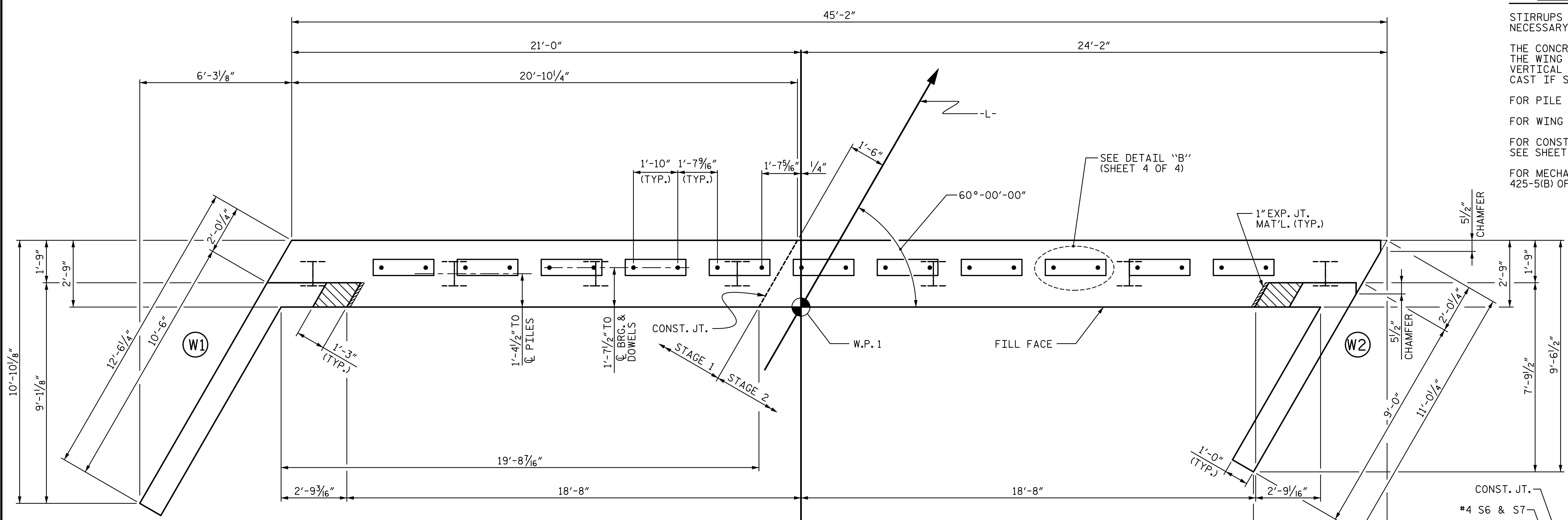
FOR PILE SPLICE DETAILS, SEE SHEET 4 OF 4.

FOR WING DETAILS, SEE SHEET 3 OF 4.

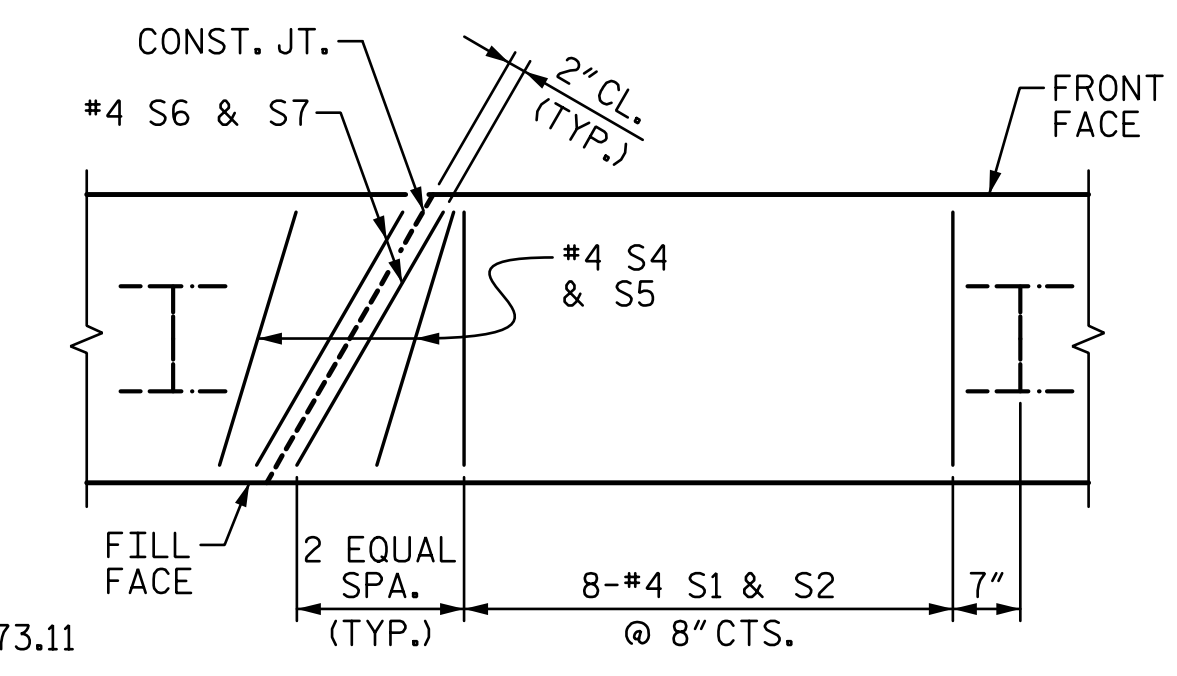
FOR CONSTRUCTION JOINT DETAILS, SEE SHEET 4 OF 4.

FOR MECHANICAL SPLICES, SEE SECTION 425-5(B) OF THE STANDARD SPECIFICATIONS.

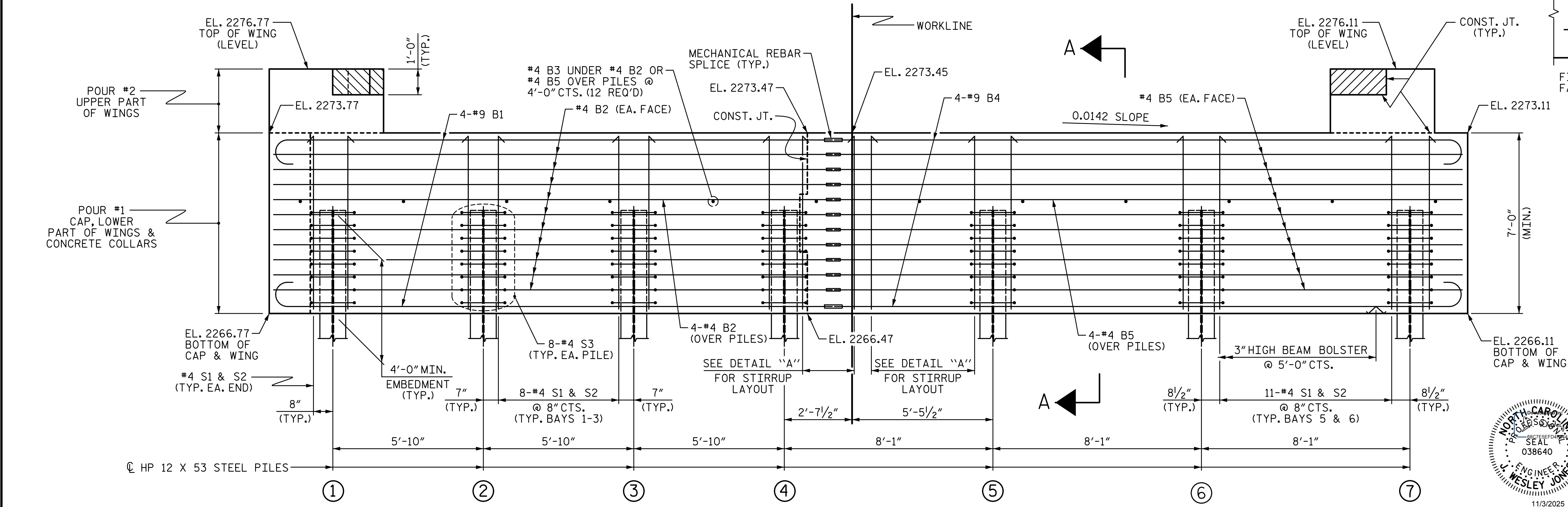
TOP OF PILE ELEVATIONS	
①	2270.74
②	2270.66
③	2270.57
④	2270.49
⑤	2270.38
⑥	2270.26
⑦	2270.15



**PLAN**



**DETAIL "A"**

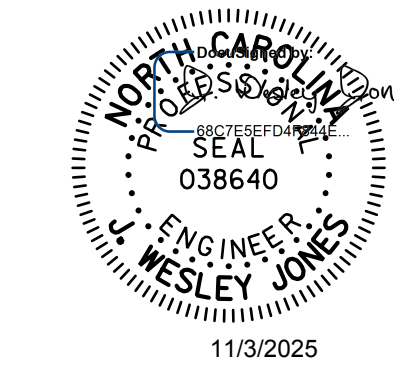


**ELEVATION**

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. **B-6029**  
**MACON** COUNTY  
 STATION: **17+07.50 -L-**  
 SHEET 1 OF 4



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**SUBSTRUCTURE  
 END BENT No. 1**

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

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

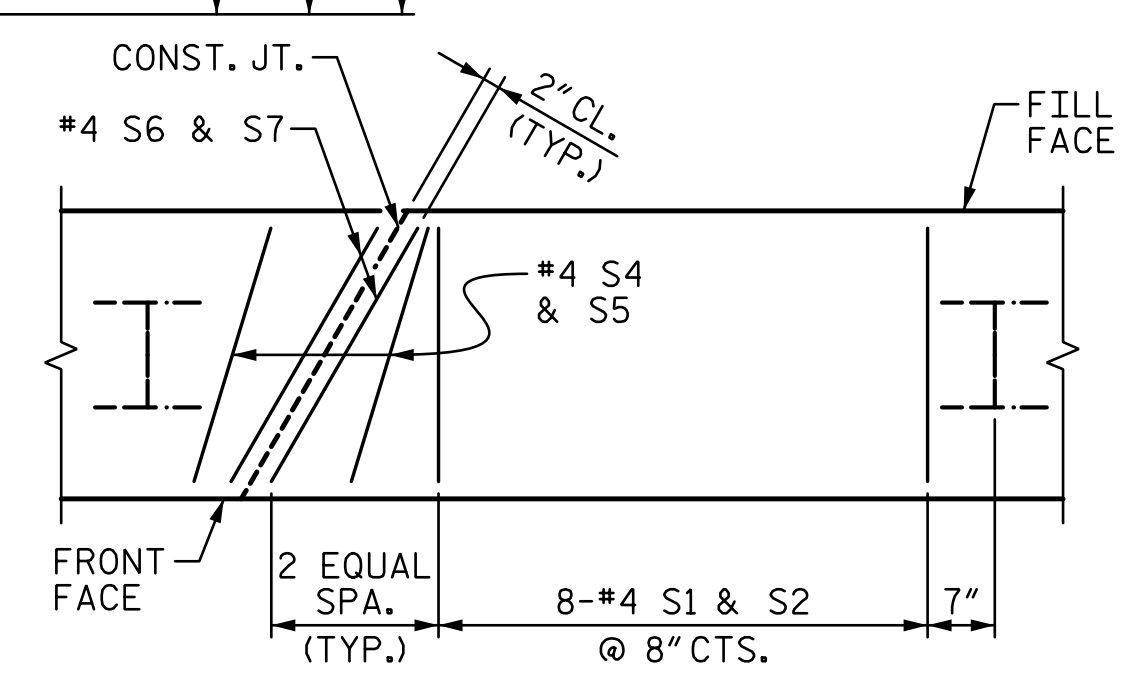
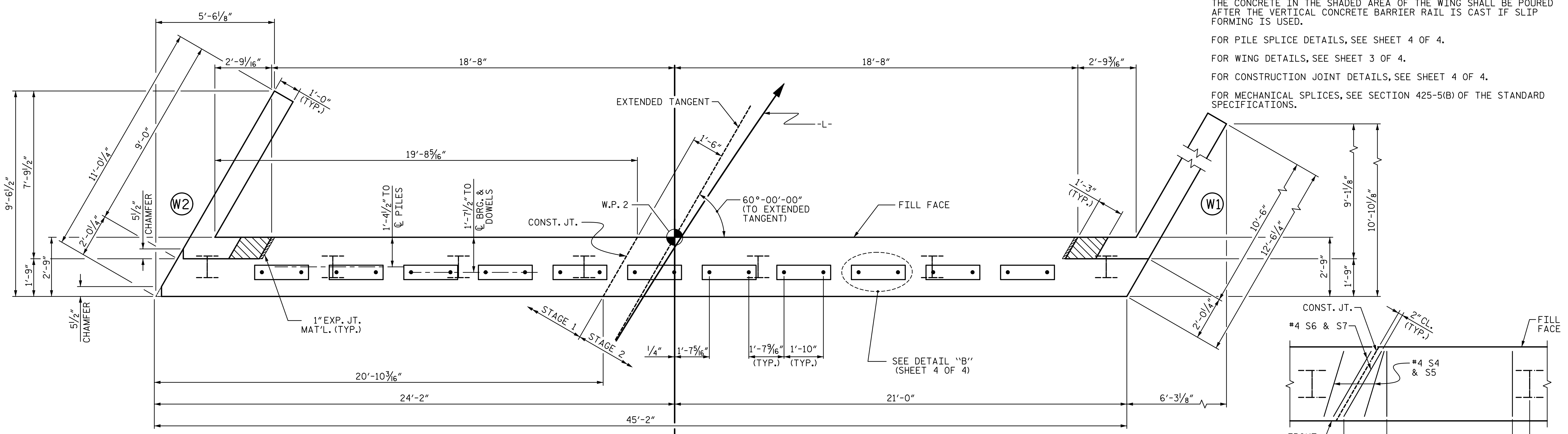
S-11  
 TOTAL SHEETS 17

R:\Structures\ustation\401.02\17BP.14.R.158\_SML\_EB01\_OIL\_5500009.dgn  
 10/31/2025 5:01:46 PM Jones

DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : JTG DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25

### 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.
- FOR CONSTRUCTION JOINT DETAILS, SEE SHEET 4 OF 4.
- FOR MECHANICAL SPLICES, SEE SECTION 425-5(B) OF THE STANDARD SPECIFICATIONS.

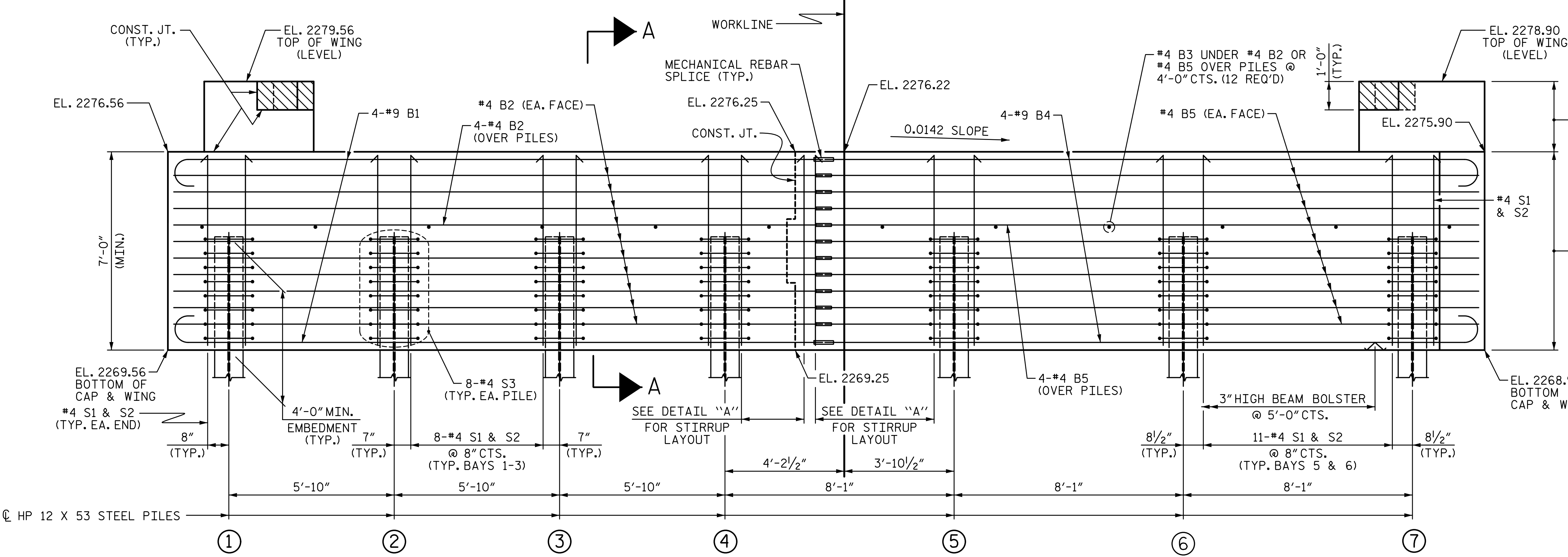


PLAN

DETAIL "A"

TOP OF PILE ELEVATIONS	
①	2273.53
②	2273.45
③	2273.36
④	2273.28
⑤	2273.17
⑥	2273.05
⑦	2272.94

PROJECT NO. **B-6029**  
**MACON** COUNTY  
 STATION: **17+07.50 -L-**  
 SHEET 2 OF 4

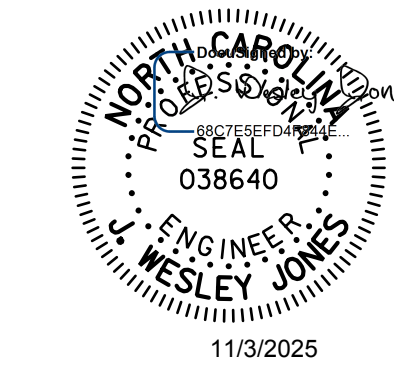


ELEVATION

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.

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED



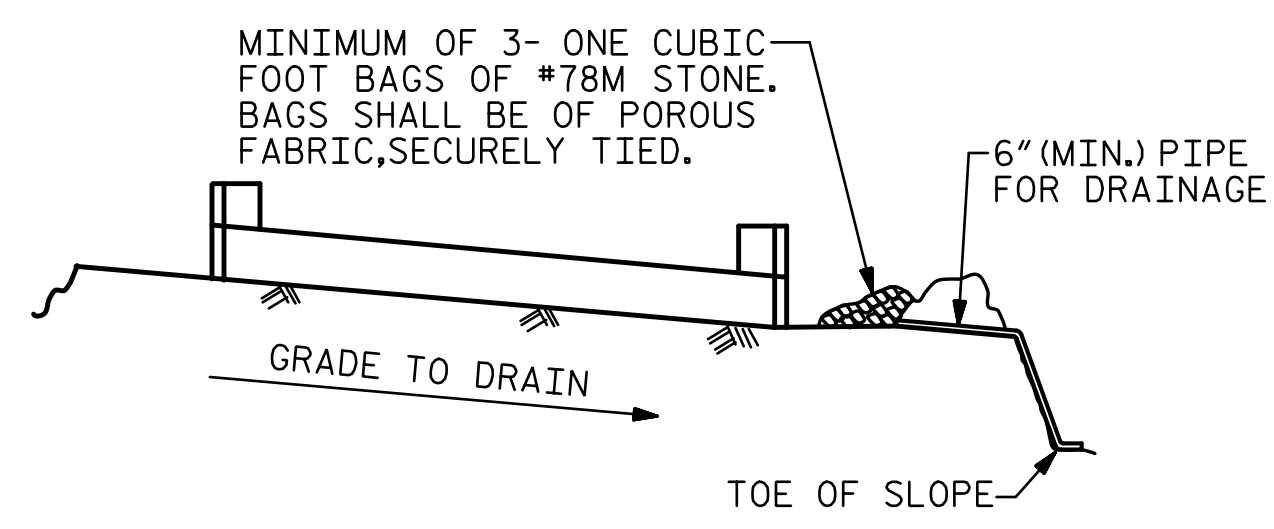
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

S-12  
TOTAL SHEETS 17

10/31/2025 5:01:47 PM R:\Structures\ustation\401\_023\_17BP\_14\_R\_158\_SMU\_EB02\_012\_5500009.dgn Jones

DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : JTG DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25



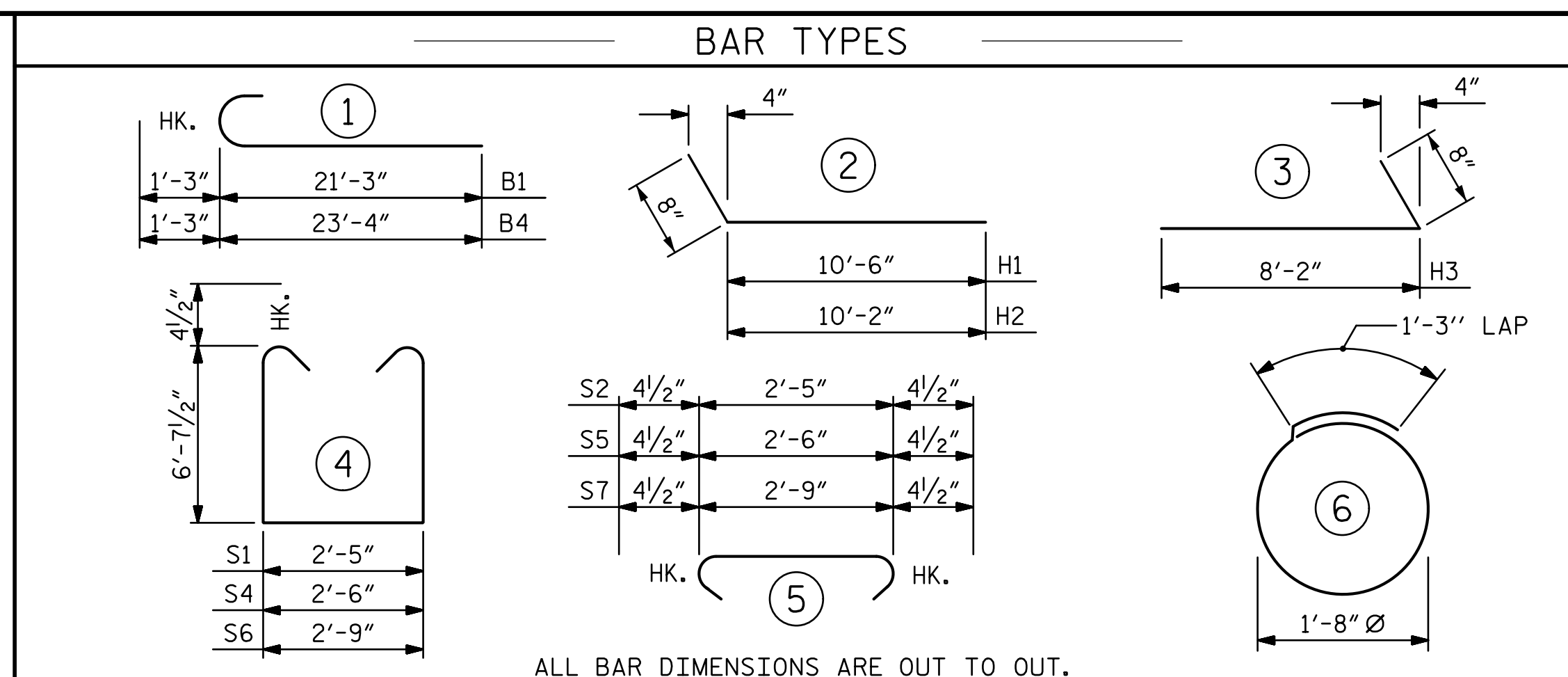


BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

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.

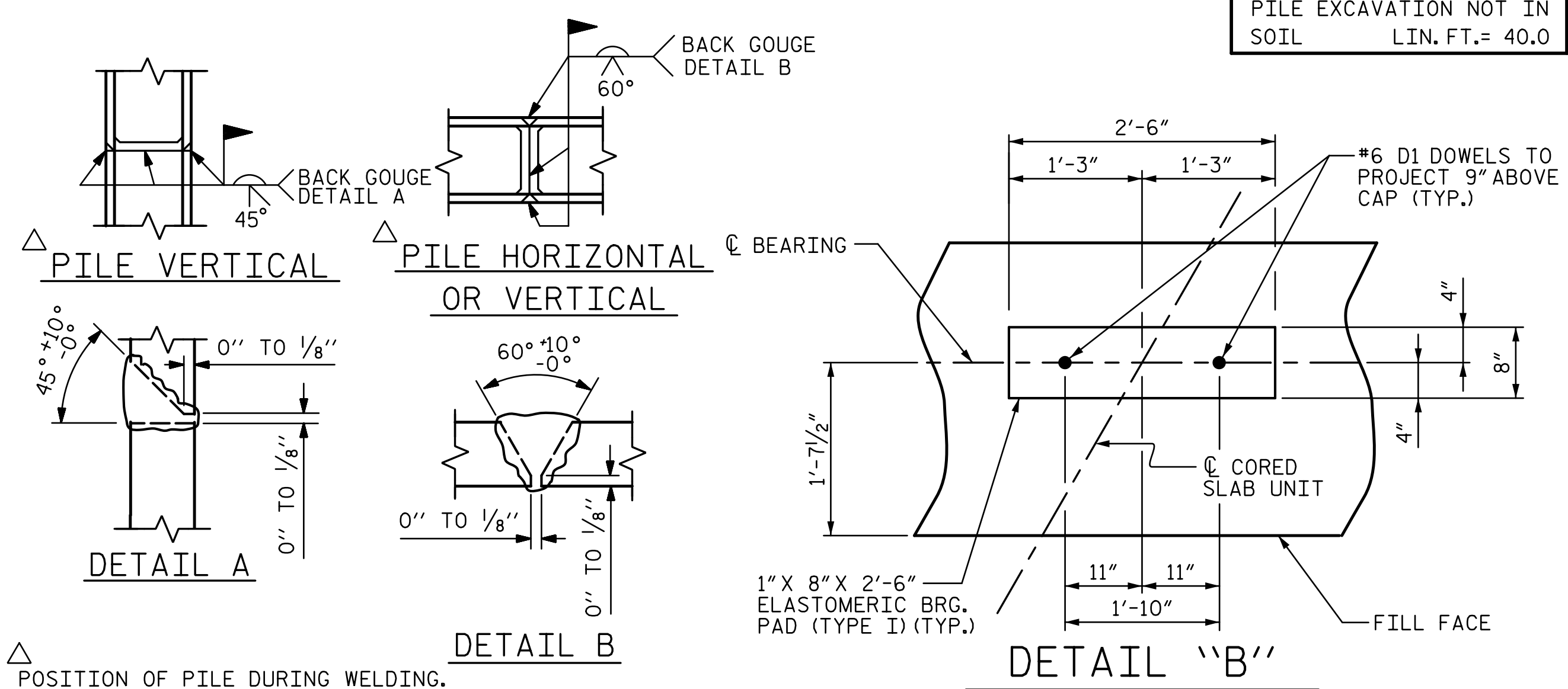
### TEMPORARY DRAINAGE AT END BENT



ALL BAR DIMENSIONS ARE OUT TO OUT.

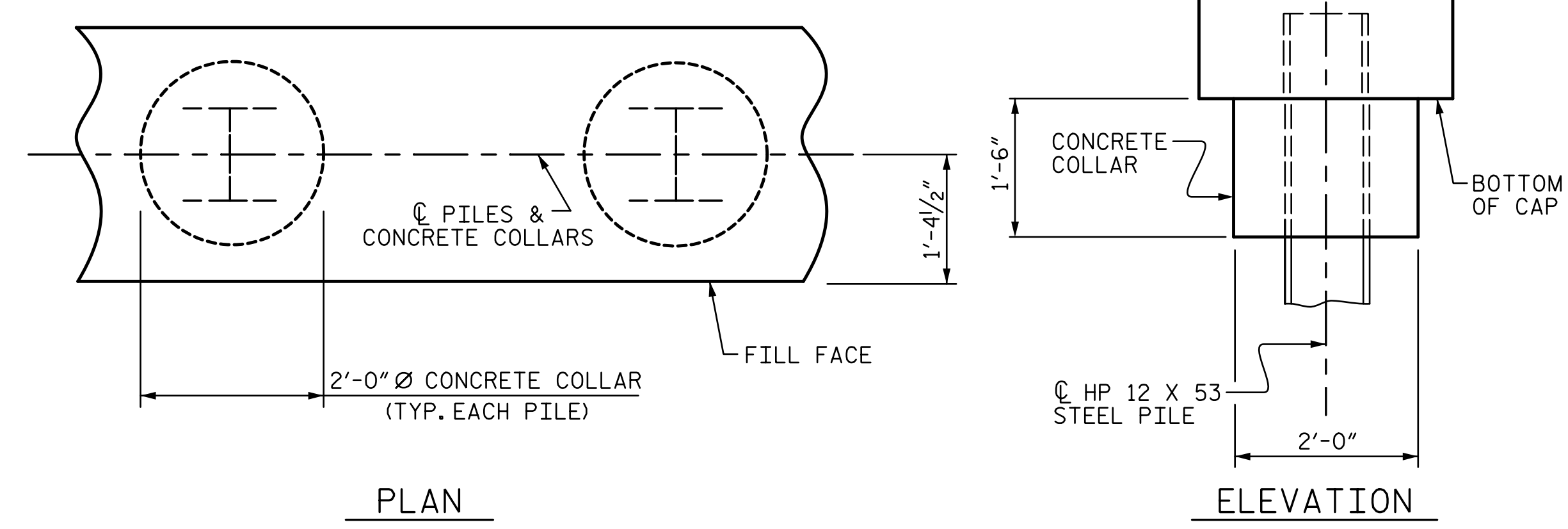
END BENT No. 1 (STAGE 1) HP 12 X 53 STEEL PILES NO: 4 LIN. FT.= 60.0	END BENT No. 1 (STAGE 2) HP 12 X 53 STEEL PILES NO: 3 LIN. FT.= 45.0	END BENT No. 2 (STAGE 1) HP 12 X 53 STEEL PILES NO: 4 LIN. FT.= 60.0	END BENT No. 2 (STAGE 2) HP 12 X 53 STEEL PILES NO: 3 LIN. FT.= 45.0
PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES NO: 4	PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES NO: 3	PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES NO: 4	PILE DRIVING EQUIPMENT SETUP FOR HP 12 X 53 STEEL PILES NO: 3
PILE EXCAVATION IN SOIL LIN. FT.= 0.0	PILE EXCAVATION IN SOIL LIN. FT.= 0.0	PILE EXCAVATION IN SOIL LIN. FT.= 4.0	PILE EXCAVATION IN SOIL LIN. FT.= 3.0
PILE EXCAVATION NOT IN SOIL LIN. FT.= 40.0	PILE EXCAVATION NOT IN SOIL LIN. FT.= 30.0	PILE EXCAVATION NOT IN SOIL LIN. FT.= 36.0	PILE EXCAVATION NOT IN SOIL LIN. FT.= 27.0

BILL OF MATERIAL					BILL OF MATERIAL						
END BENT 1 (STAGE 1)					END BENT 1 (STAGE 2)						
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	1	22'-6"	612	B3	6	#4	STR	2'-5"	10
B2	24	#4	STR	21'-3"	341	B4	8	#9	1	24'-7"	669
B3	6	#4	STR	2'-5"	10	B5	24	#4	STR	23'-4"	374
D1	10	#6	STR	1'-6"	23	D1	12	#6	STR	1'-6"	27
H1	16	#4	2	11'-2"	119	H3	32	#4	3	8'-10"	189
H2	16	#4	2	10'-10"	116						
K1	8	#4	STR	3'-3"	17	K1	8	#4	STR	3'-3"	17
S1	25	#4	4	16'-5"	274	S1	31	#4	4	16'-5"	340
S2	25	#4	5	3'-2"	53	S2	31	#4	5	3'-2"	66
S3	32	#4	6	6'-6"	139	S3	24	#4	6	6'-6"	104
S4	1	#4	4	16'-6"	11	S4	1	#4	4	16'-6"	11
S5	1	#4	5	3'-3"	2	S5	1	#4	5	3'-3"	2
S6	1	#4	4	16'-9"	11	S6	1	#4	4	16'-9"	11
S7	1	#4	5	3'-6"	2	S7	1	#4	5	3'-6"	2
V1	30	#4	STR	9'-7"	192	V1	26	#4	STR	9'-7"	166
REINFORCING STEEL 1922 LBS.					REINFORCING STEEL 1988 LBS.						
CLASS A CONCRETE BREAKDOWN POUR #1 CAP, LOWER PART OF WINGS & COLLARS 18.1 C.Y.					CLASS A CONCRETE BREAKDOWN POUR #1 CAP, LOWER PART OF WINGS & COLLARS 19.8 C.Y.						
POUR #2 UPPER PART OF WINGS 1.5 C.Y.					POUR #2 UPPER PART OF WINGS 1.3 C.Y.						
TOTAL CLASS A CONCRETE 19.6 C.Y.					TOTAL CLASS A CONCRETE 21.1 C.Y.						



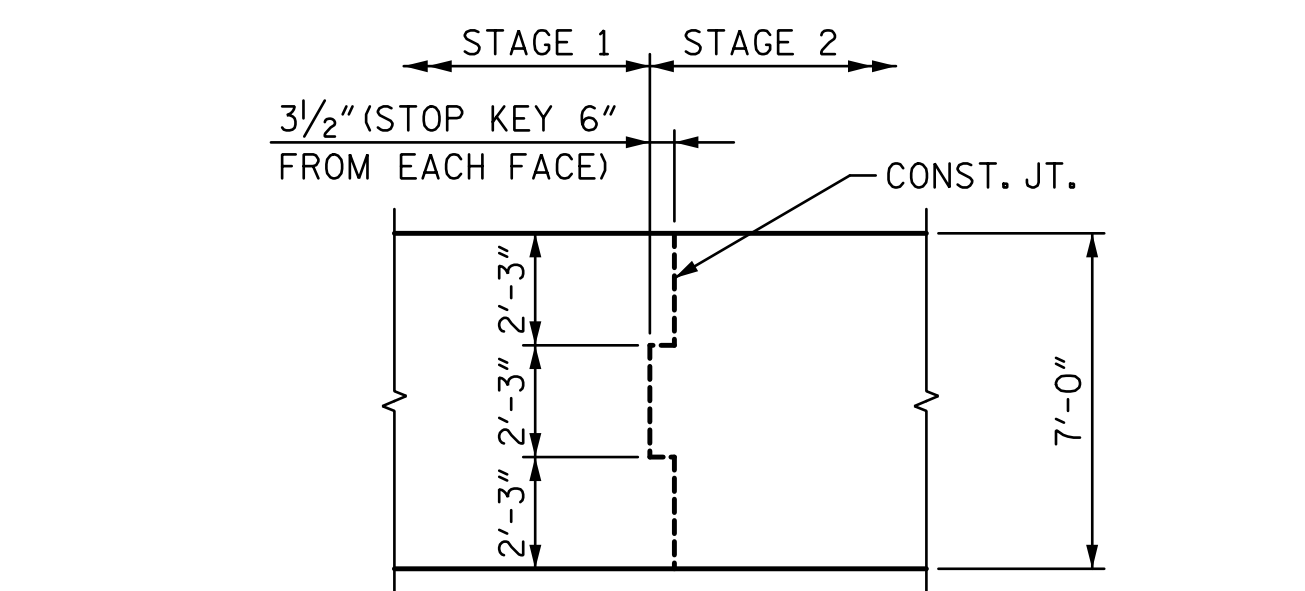
### PILE SPLICE DETAILS

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

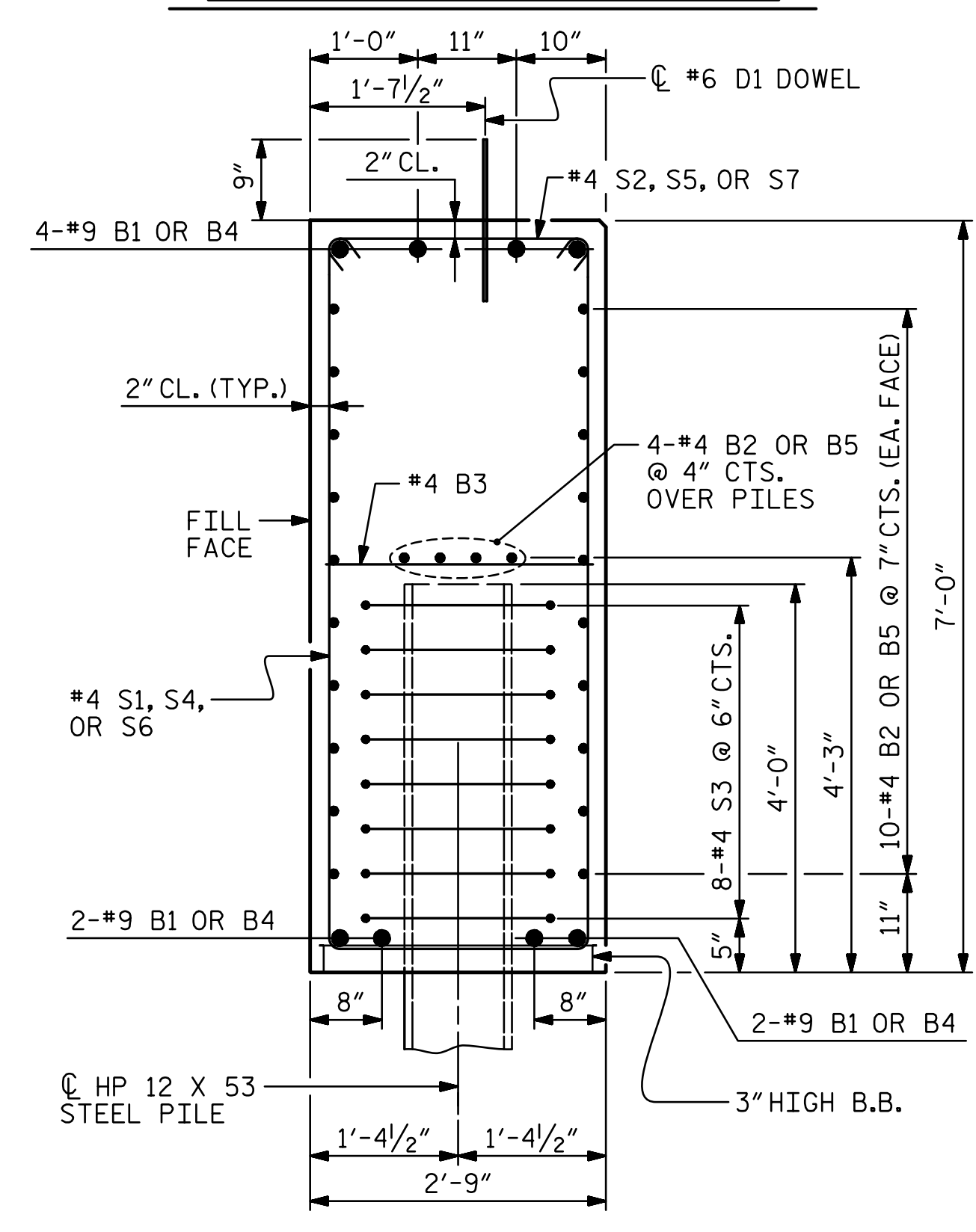


### CORROSION PROTECTION FOR STEEL PILES DETAIL

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



### CONST. JT. DETAIL

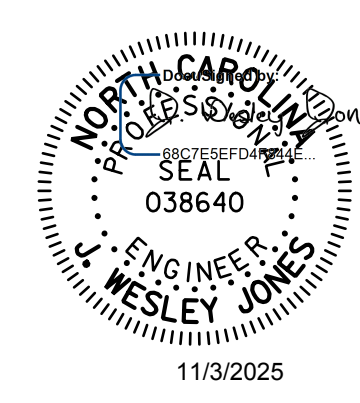


### SECTION A-A

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

END BENT 2 (STAGE 1)					END BENT 2 (STAGE 2)						
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#9	1	22'-6"	612	B3	6	#4	STR	2'-5"	10
B2	24	#4	STR	21'-3"	341	B4	8	#9	1	24'-7"	669
B3	6	#4	STR	2'-5"	10	B5	24	#4	STR	23'-4"	374
D1	10	#6	STR	1'-6"	23	D1	12	#6	STR	1'-6"	27
H3	32	#4	3	8'-10"	189	H1	16	#4	2	11'-2"	119
						H2	16	#4	2	10'-10"	116
K1	8	#4	STR	3'-3"	17	K1	8	#4	STR	3'-3"	17
S1	25	#4	4	16'-5"	274	S1	31	#4	4	16'-5"	340
S2	25	#4	5	3'-2"	53	S2	31	#4	5	3'-2"	66
S3	32	#4	6	6'-6"	139	S3	24	#4	6	6'-6"	104
S4	1	#4	4	16'-6"	11	S4	1	#4	4	16'-6"	11
S5	1	#4	5	3'-3"	2	S5	1	#4	5	3'-3"	2
S6	1	#4	4	16'-9"	11	S6	1	#4	4	16'-9"	11
S7	1	#4	5	3'-6"	2	S7	1	#4	5	3'-6"	2
V1	26	#4	STR	9'-7"	166	V1	30	#4	STR	9'-7"	192
REINFORCING STEEL 1850 LBS.					REINFORCING STEEL 2060 LBS.						
CLASS A CONCRETE BREAKDOWN POUR #1 CAP, LOWER PART OF WINGS & COLLARS 17.5 C.Y.					CLASS A CONCRETE BREAKDOWN POUR #1 CAP, LOWER PART OF WINGS & COLLARS 20.4 C.Y.						
POUR #2 UPPER PART OF WINGS 1.3 C.Y.					POUR #2 UPPER PART OF WINGS 1.5 C.Y.						
TOTAL CLASS A CONCRETE 18.8 C.Y.					TOTAL CLASS A CONCRETE 21.9 C.Y.						

PROJECT NO. **B-6029**  
**MACON** COUNTY  
 STATION: **17+07.50 -L-**  
 SHEET 4 OF 4



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

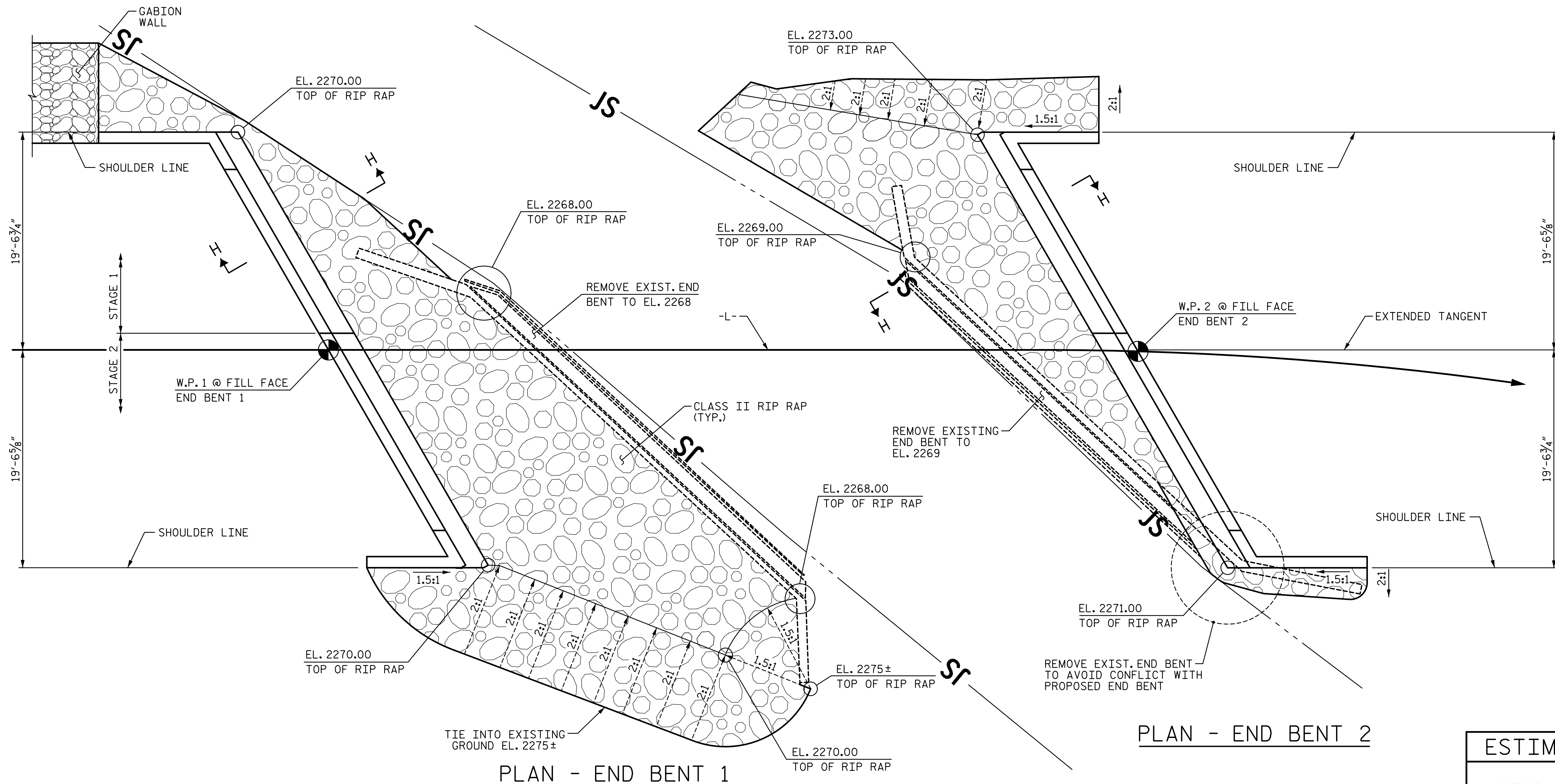
**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

10/31/2025 5:01:49 PM R:\Structures\ustation\401\_027\_17BP\_14.R\_158\_SMU\_EB04\_014\_550009.dgn Jones

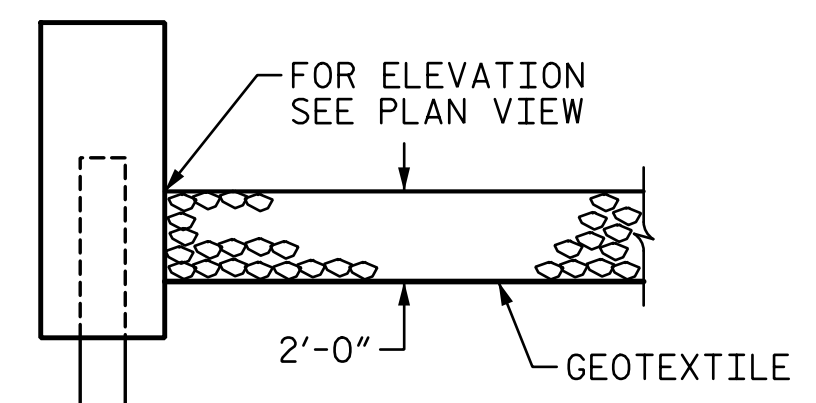
DRAWN BY: LEM DATE: 7-17  
 CHECKED BY: JTG DATE: 11-17  
 DESIGN ENGINEER OF RECORD: JWJ DATE: 10-25



PLAN - END BENT 1

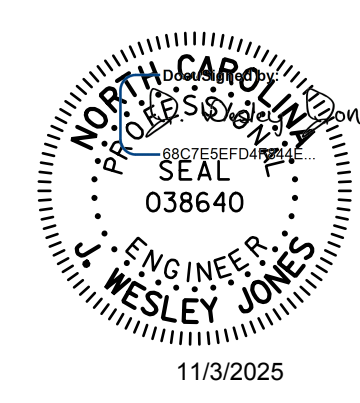
PLAN - END BENT 2

ESTIMATED QUANTITIES		
BRIDGE @ STA. 17+07.50 -L-	RIP RAP CLASS II (2'-0" THICK)	GEOTEXTILE FOR DRAINAGE
	TONS	SQUARE YARDS
END BENT 1	115	125
END BENT 2	60	70



SECTION H-H

PROJECT NO. B-6029  
MACON COUNTY  
 STATION: 17+07.50 -L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**RIP RAP DETAILS**

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

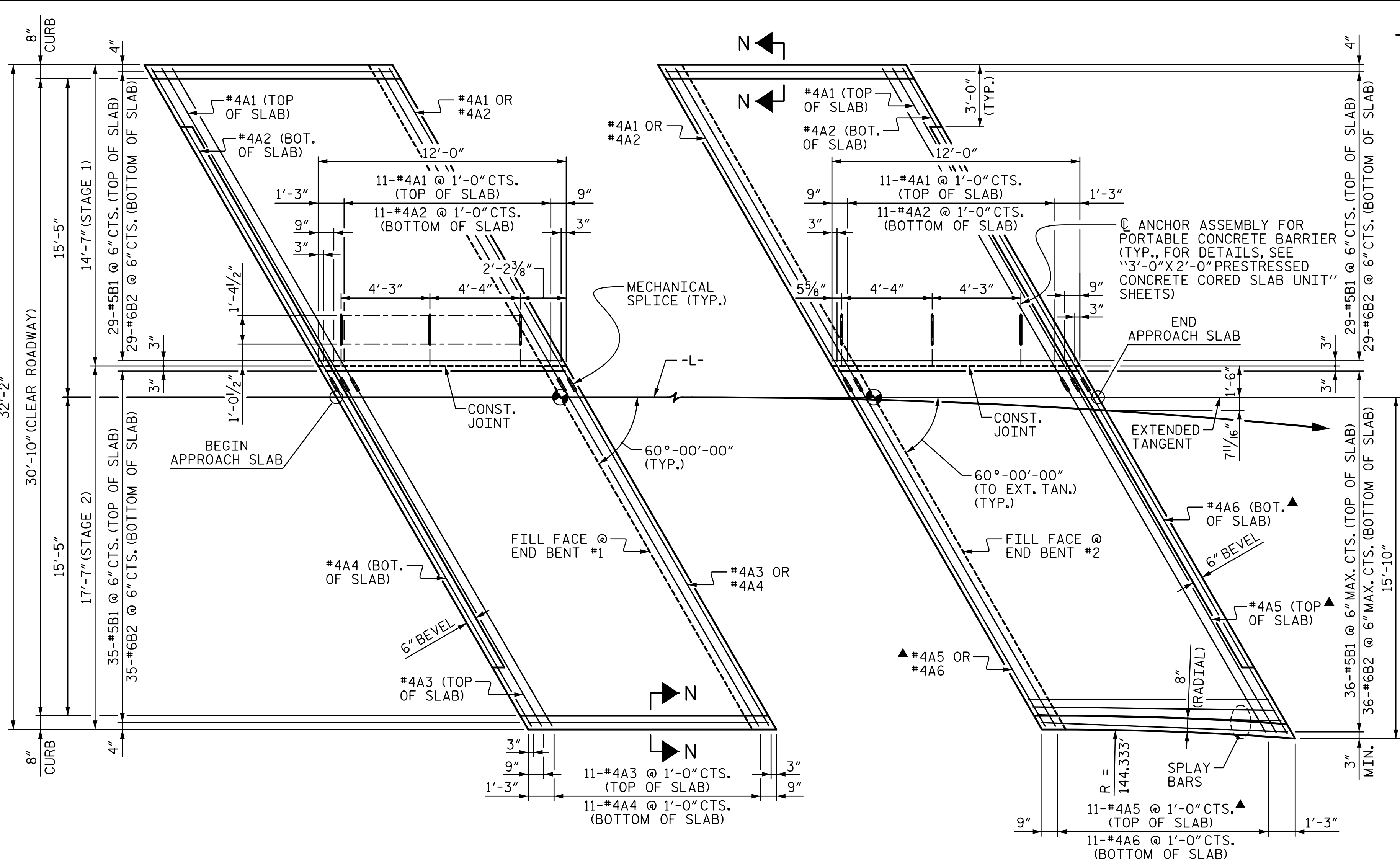
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 17

10/31/2025 5:04:50 PM R:\Structures\ustation\401\_029\_17BP\_14.R\_158\_SMU\_RR\_015\_550009.dgn

DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : JTG DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25

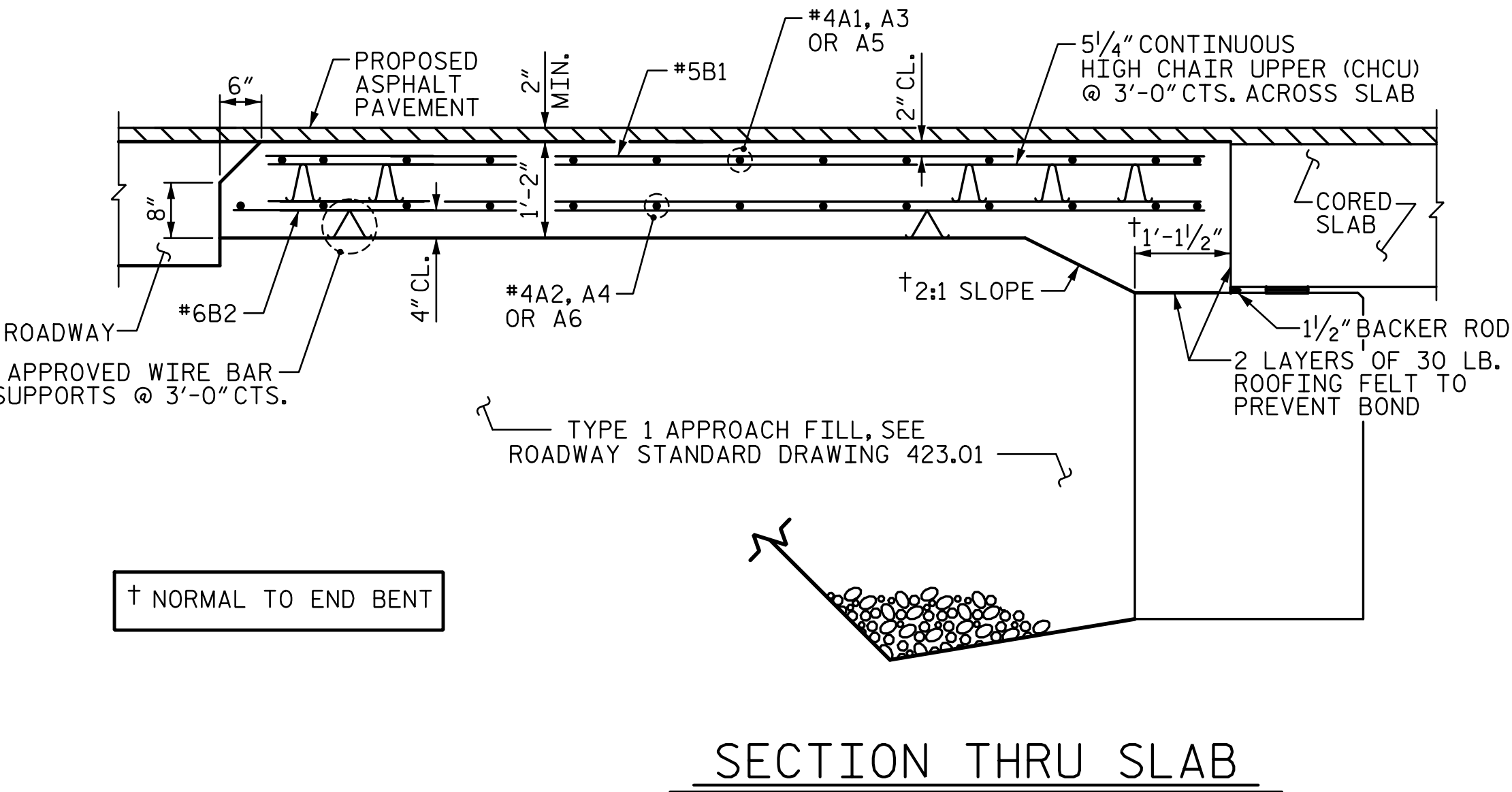
R:\Structures\ustation\401.031\17BP.14.R.158\_SML\_BAS\_016\_550009.dgn 5:04:51 PM 10/31/2025 Jones



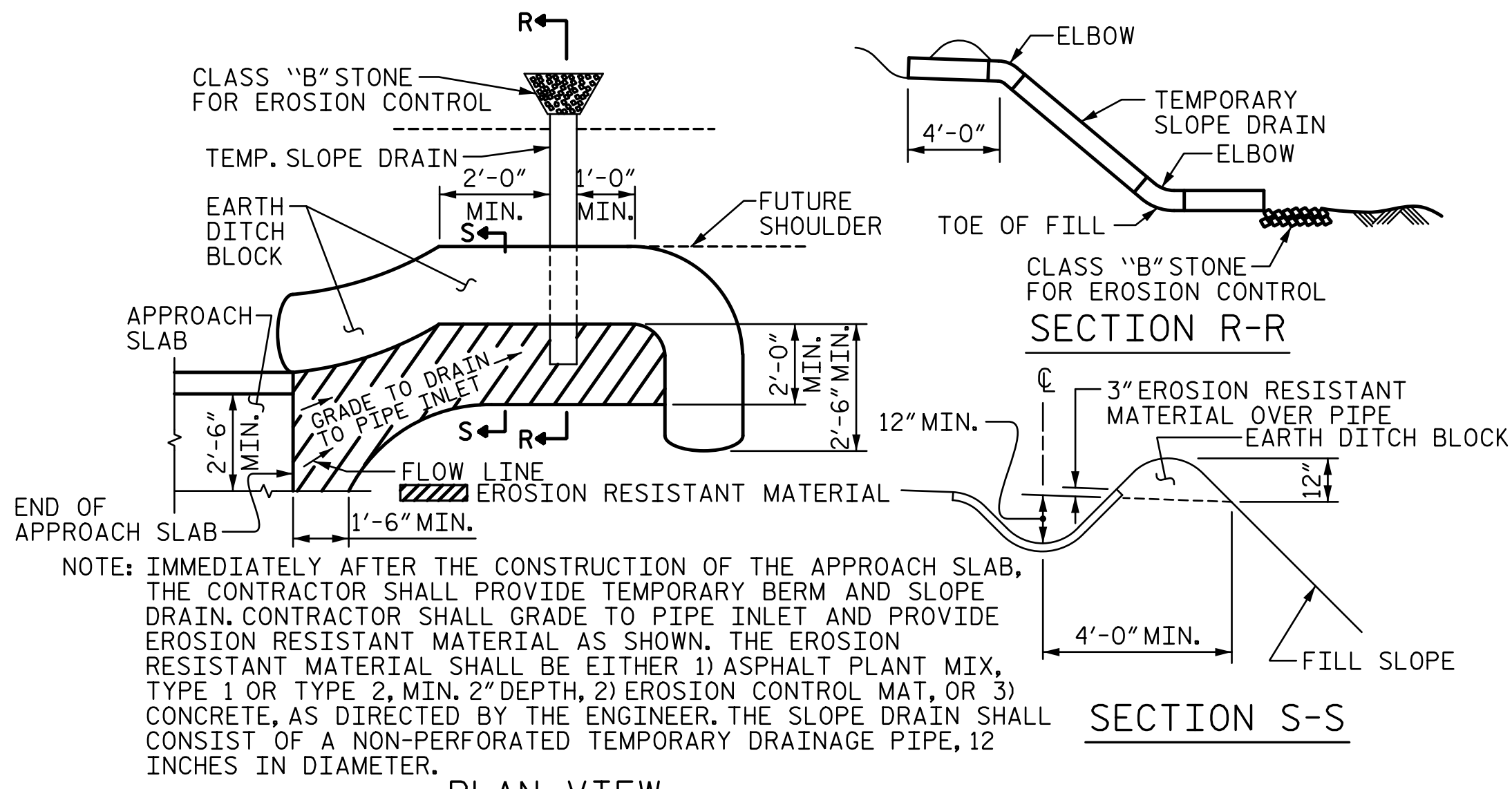
**PLAN @ END BENT 1**

**PLAN @ END BENT 2**

(DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS, U.N.O.)  
 ▲ CONTRACTOR SHALL FIELD CUT BARS, AS NECESSARY, TO MAINTAIN 2" MIN. CLEARANCE.



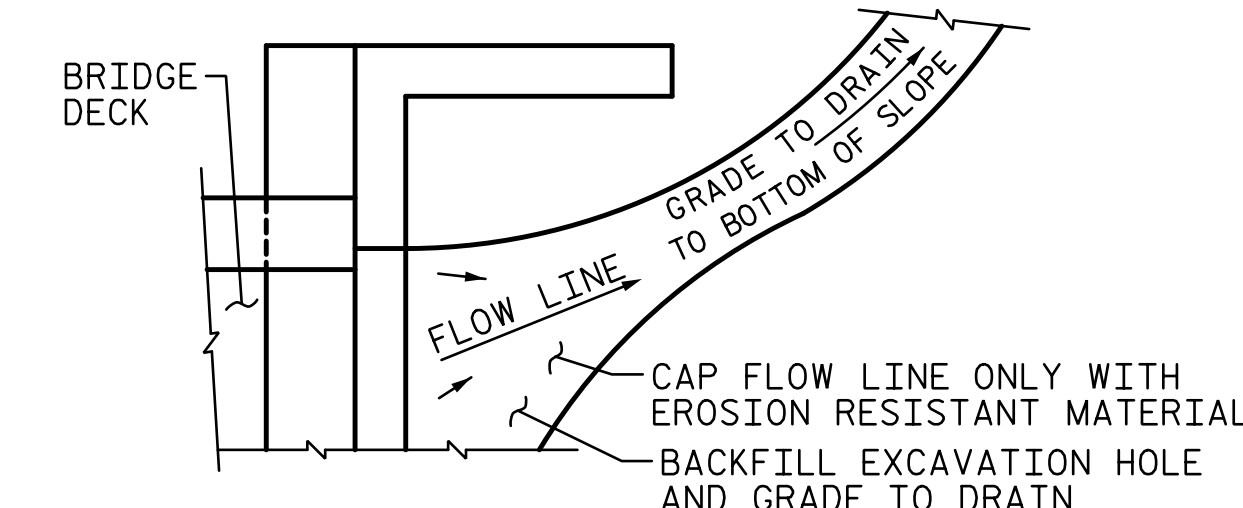
**SECTION THRU SLAB**



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

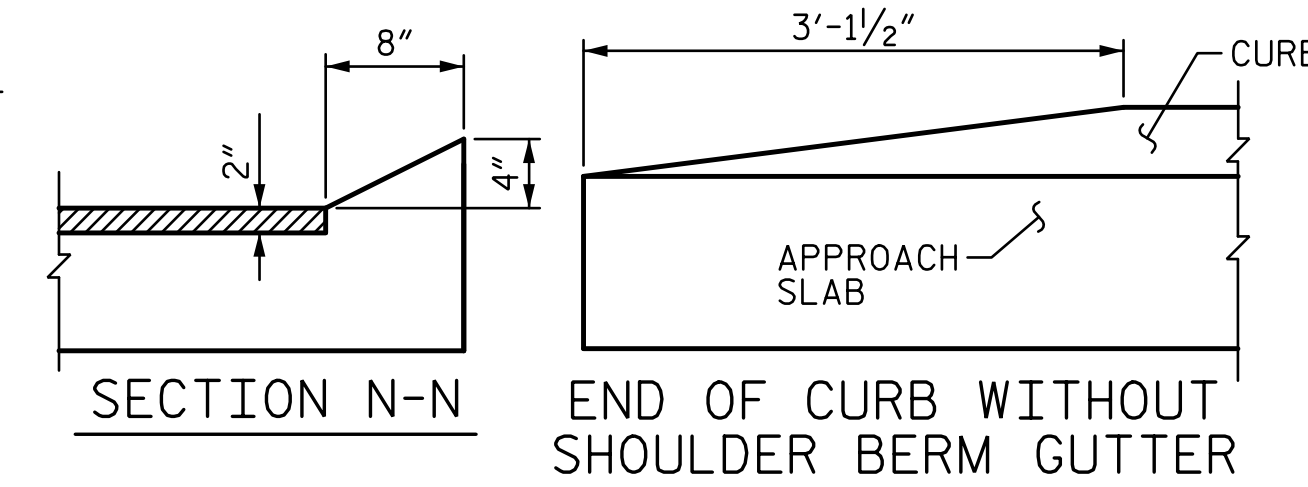
**NOTES**

FOR BRIDGE APPROACH FILL, SEE ROADWAY PLANS.  
 AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED. SEE ROADWAY PLANS.  
 APPROACH SLAB GROOVING IS NOT REQUIRED.  
 FOR MECHANICAL SPLICES, SEE SECTION 425-5(B) OF THE STANDARD SPECIFICATIONS.



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.

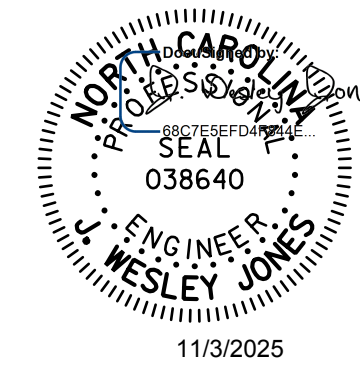
**TEMPORARY DRAINAGE DETAIL**



**CURB DETAILS**

BILL OF MATERIAL					
<b>APPROACH SLAB AT EB 1 (STAGE 1)</b>					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	13	#4	STR	17'-8"	153
A2	13	#4	STR	17'-8"	153
*B1	29	#5	STR	11'-1"	335
B2	29	#6	STR	11'-7"	505
REINFORCING STEEL				LBS.	658
* EPOXY COATED REINFORCING STEEL				LBS.	488
CLASS AA CONCRETE				C. Y.	9.8
<b>APPROACH SLAB AT EB 1 (STAGE 2)</b>					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A3	13	#4	STR	19'-1"	166
A4	13	#4	STR	19'-1"	166
*B1	35	#5	STR	11'-1"	405
B2	35	#6	STR	11'-7"	609
REINFORCING STEEL				LBS.	775
* EPOXY COATED REINFORCING STEEL				LBS.	571
CLASS AA CONCRETE				C. Y.	11.5
<b>APPROACH SLAB AT EB 2 (STAGE 1)</b>					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	13	#4	STR	17'-8"	153
A2	13	#4	STR	17'-8"	153
*B1	29	#5	STR	11'-1"	335
B2	29	#6	STR	11'-7"	505
REINFORCING STEEL				LBS.	658
* EPOXY COATED REINFORCING STEEL				LBS.	488
CLASS AA CONCRETE				C. Y.	9.6
<b>APPROACH SLAB AT EB 2 (STAGE 2)</b>					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A5	13	#4	STR	19'-6"	169
A6	13	#4	STR	19'-6"	169
*B1	36	#5	STR	11'-1"	416
B2	36	#6	STR	11'-7"	626
REINFORCING STEEL				LBS.	795
* EPOXY COATED REINFORCING STEEL				LBS.	585
CLASS AA CONCRETE				C. Y.	12.0

PROJECT NO. **B-6029**  
**MACON** COUNTY  
 STATION: **17+07.50 -L-**



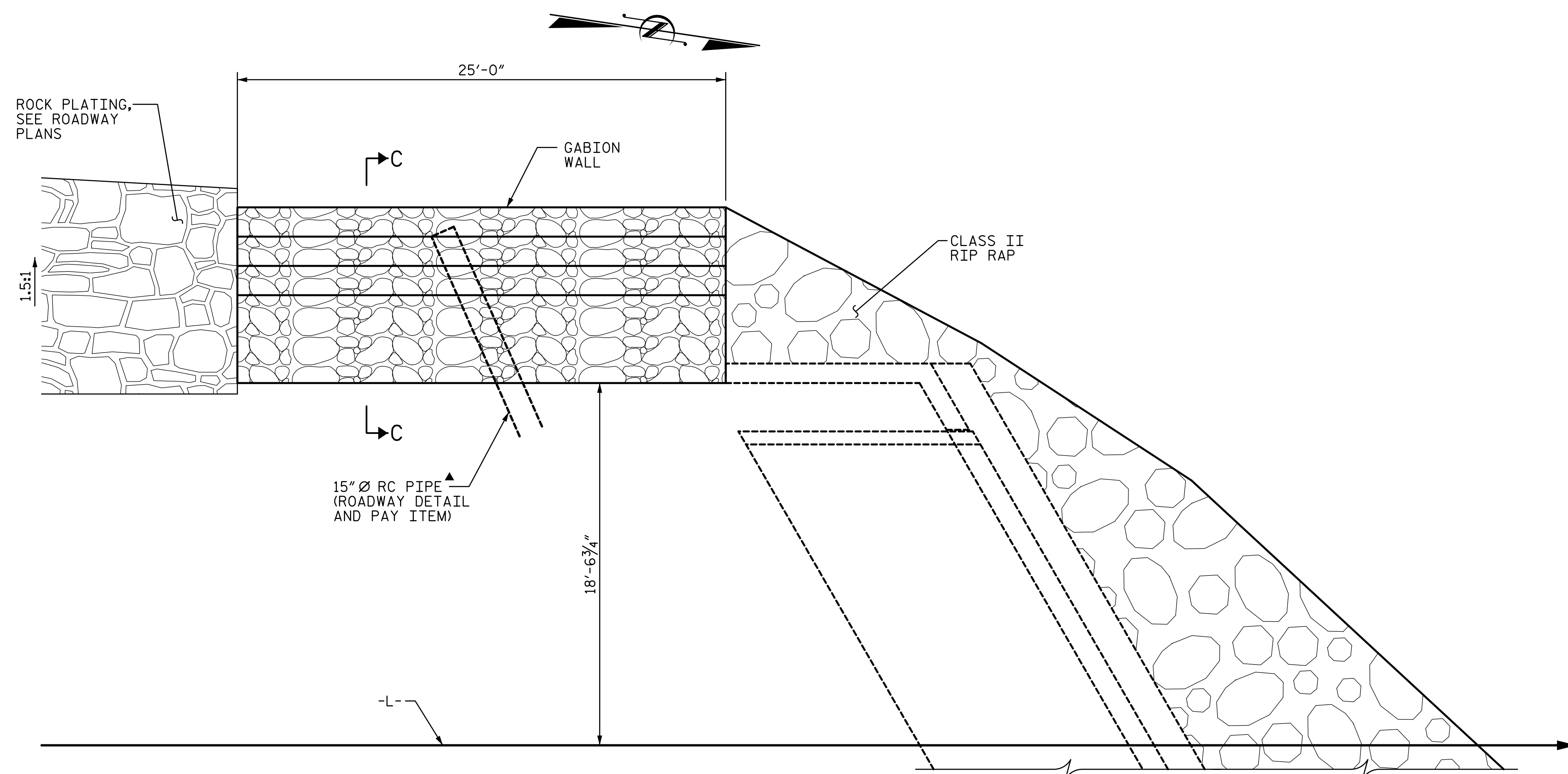
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**BRIDGE APPROACH SLAB FOR PRESTRESSED CONCRETE CORED SLAB UNIT (SUB-REGIONAL TIER) 60° SKEW**

DRAWN BY : LEM DATE : 7-17  
 CHECKED BY : MLO DATE : 11-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

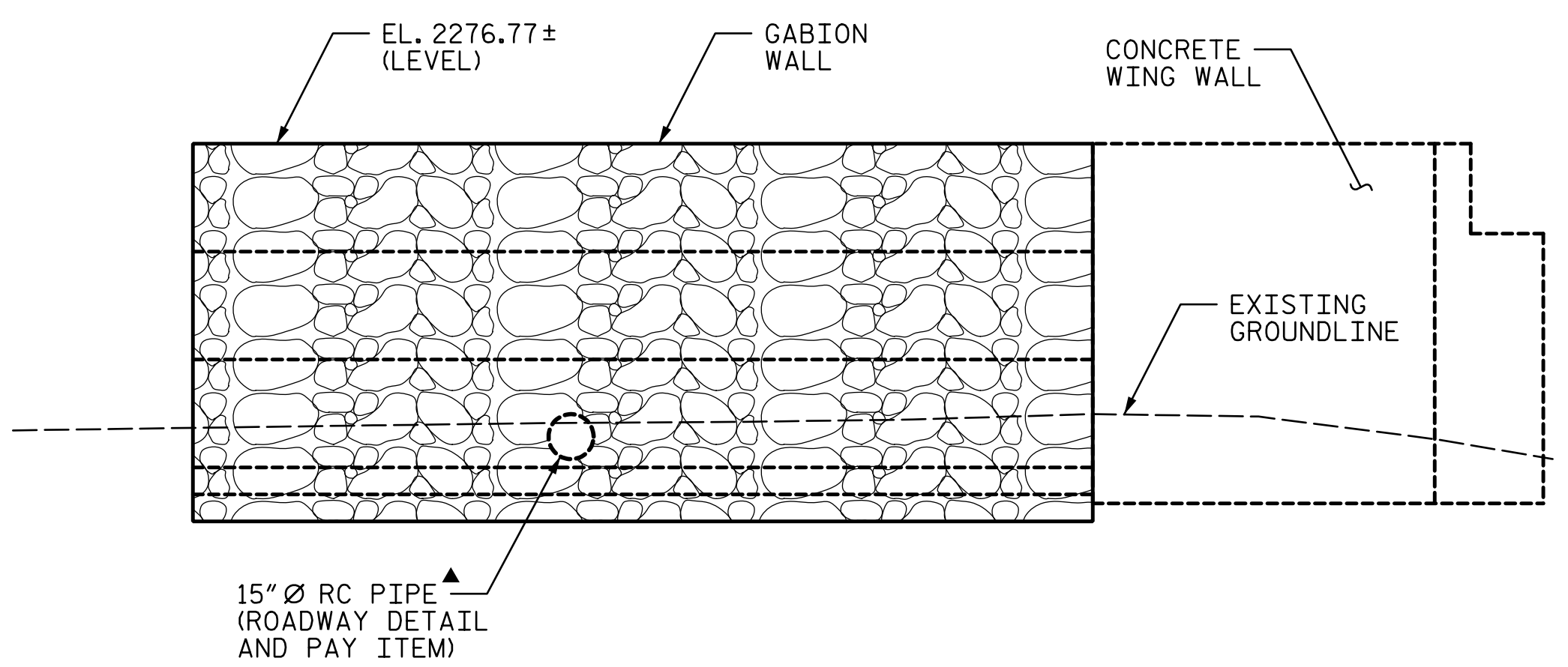
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS				SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS
2			4			17

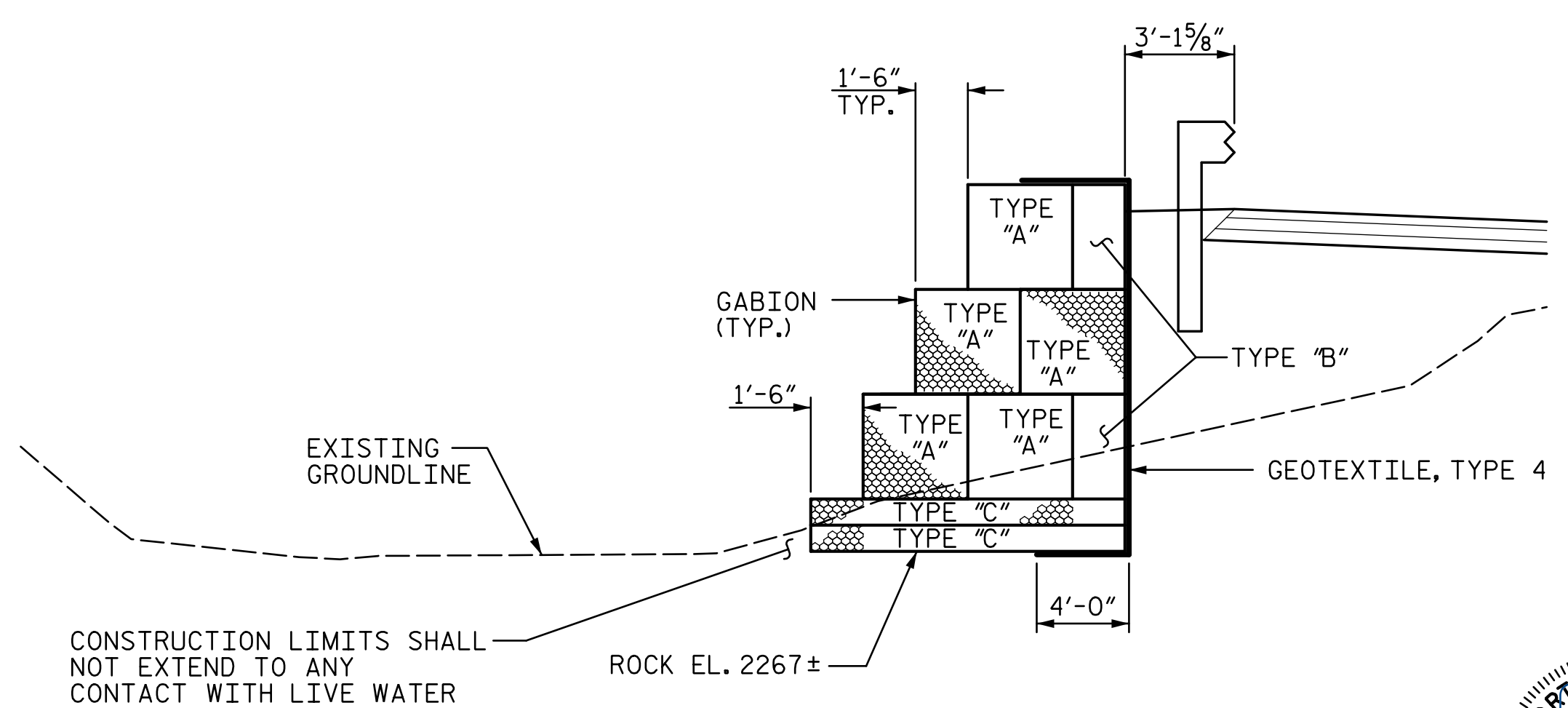


PLAN

▲ PIPE TO OUTLET THROUGH GABION WALL AS SHOWN. CONTRACTOR SHALL ACCOMODATE FOR PIPE PENETRATION DURING CONSTRUCTION OF GABION WALL.



ELEVATION



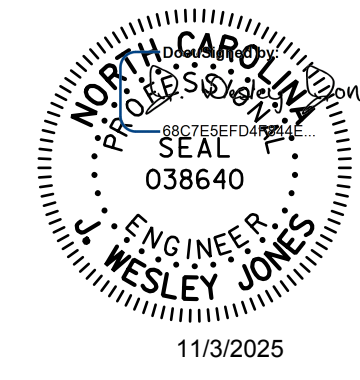
SECTION C-C

NOTES:

- THE CONTRACTOR SHALL FIELD VERIFY THAT THERE ARE NO CONFLICTS BETWEEN WALL SYSTEM AND EXISTING UTILITIES PRIOR TO INSTALLING ANY PORTION OF THE WALL.
- INSTALL GABIONS PER THE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.
- BACKFILL GABIONS WITH SELECT MATERIAL, CLASS II, TYPE I IN ACCORDANCE WITH SECTION 1016 OF THE STANDARD SPECIFICATIONS.
- A MINIMUM BEARING OF 2,000 PSF SHALL BE VERIFIED PRIOR TO CONSTRUCTION OF WALL. IF NECESSARY, CONTRACTOR SHALL PREPARE AND/OR MAKE GROUND MODIFICATIONS IN ORDER TO SATISFY MINIMUM BEARING PRESSURE.
- GABION INFILL MATERIAL ASSUMED TO HAVE A UNIT WEIGHT OF 120 PCF FOR DESIGN. CONTRACTOR SHALL VERIFY DESIGN BASED ON ACTUAL INFILL MATERIALS.
- OVERLAP GEOTEXTILE A MINIMUM OF 18" OR AS DIRECTED BY THE ENGINEER.
- IF REQUIRED, TYPE "C" GABION TO BE CUT AND FILLED TO CREATE A LEVEL PLATFORM FOR THE GABIONS IN ACCORDANCE TO THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.
- BACKFILL BEHIND GABION WALL WITH CLASS II TYPE I SELECT MATERIAL IN ACCORDANCE WITH SECTION 1016 OF THE STANDARD SPECIFICATIONS.
- FOR GABION RETAINING WALL, SEE SPECIAL PROVISIONS.

GABION TYPE	WIDTH	HEIGHT
TYPE "A" GABION	3'-0"	3'-0"
TYPE "B" GABION	1'-6"	3'-0"
TYPE "C" GABION	9'-0"	9"

PROJECT NO. B-6029  
MACON COUNTY  
 STATION: 17+07.50 -L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

## GABION WALL

**stv** STV Engineers, Inc.  
 2151 Hawkins Street, Suite 1400  
 Charlotte, NC 28203  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

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

W-1
TOTAL SHEETS
17

R:\Structures\ustation\401.033\_17BP.14.R.158\_SMU\_RW\_017\_550009.dgn 10/31/2025 5:04:52 PM J.Jones

DRAWN BY : JWJ DATE : 1-18  
 CHECKED BY : JTG DATE : 1-18  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 10-25

## 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 2024 "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  $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO  $\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A  $\frac{1}{4}$ " 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  $\frac{1}{4}$ " 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  $\frac{7}{8}$ "  $\emptyset$  SHEAR STUDS FOR THE  $\frac{3}{4}$ "  $\emptyset$  STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF  $\frac{7}{8}$ "  $\emptyset$  STUDS ALONG THE BEAM AS SHOWN FOR  $\frac{3}{4}$ "  $\emptyset$  STUDS BASED ON THE RATIO OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  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  $\frac{5}{16}$ " 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  $\frac{1}{16}$  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