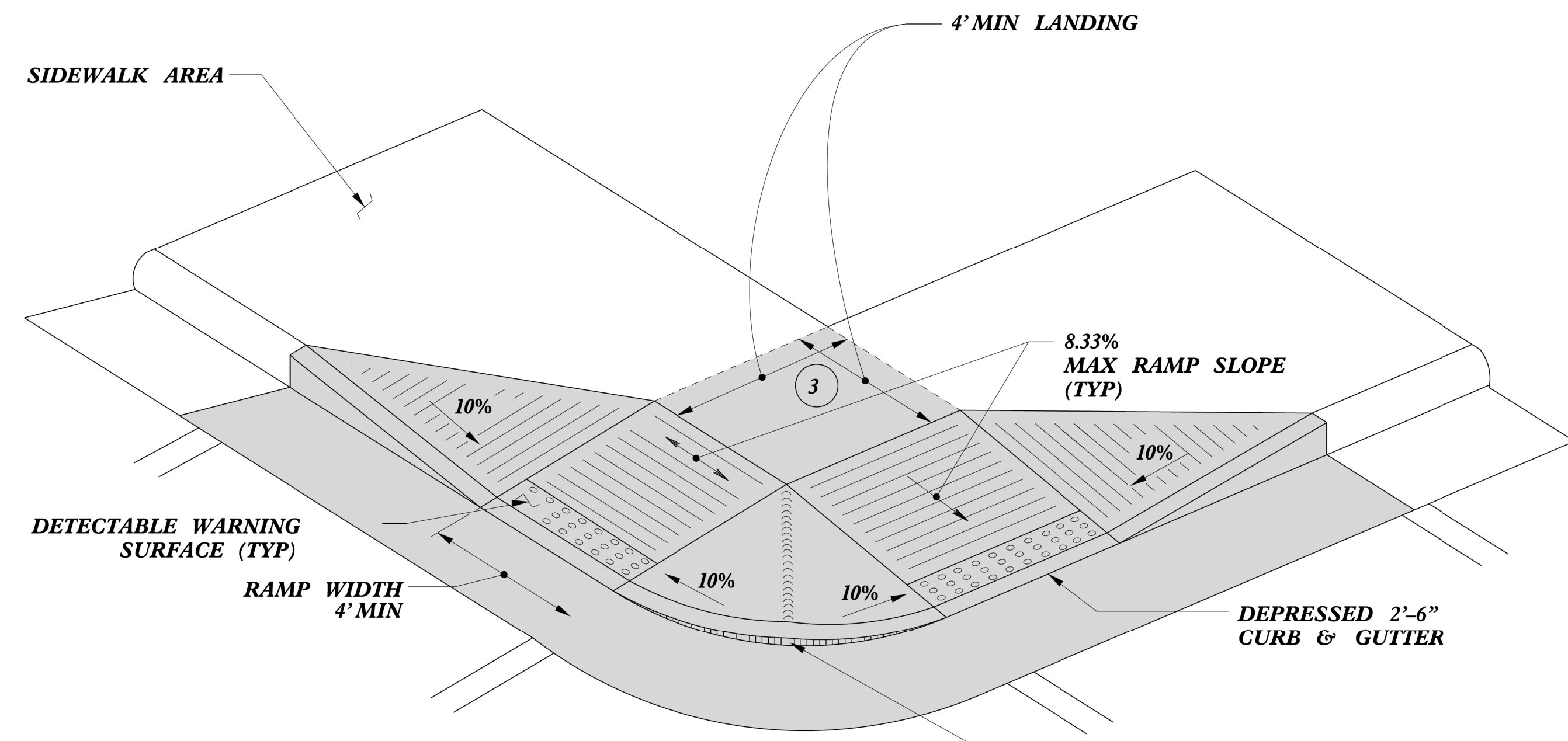


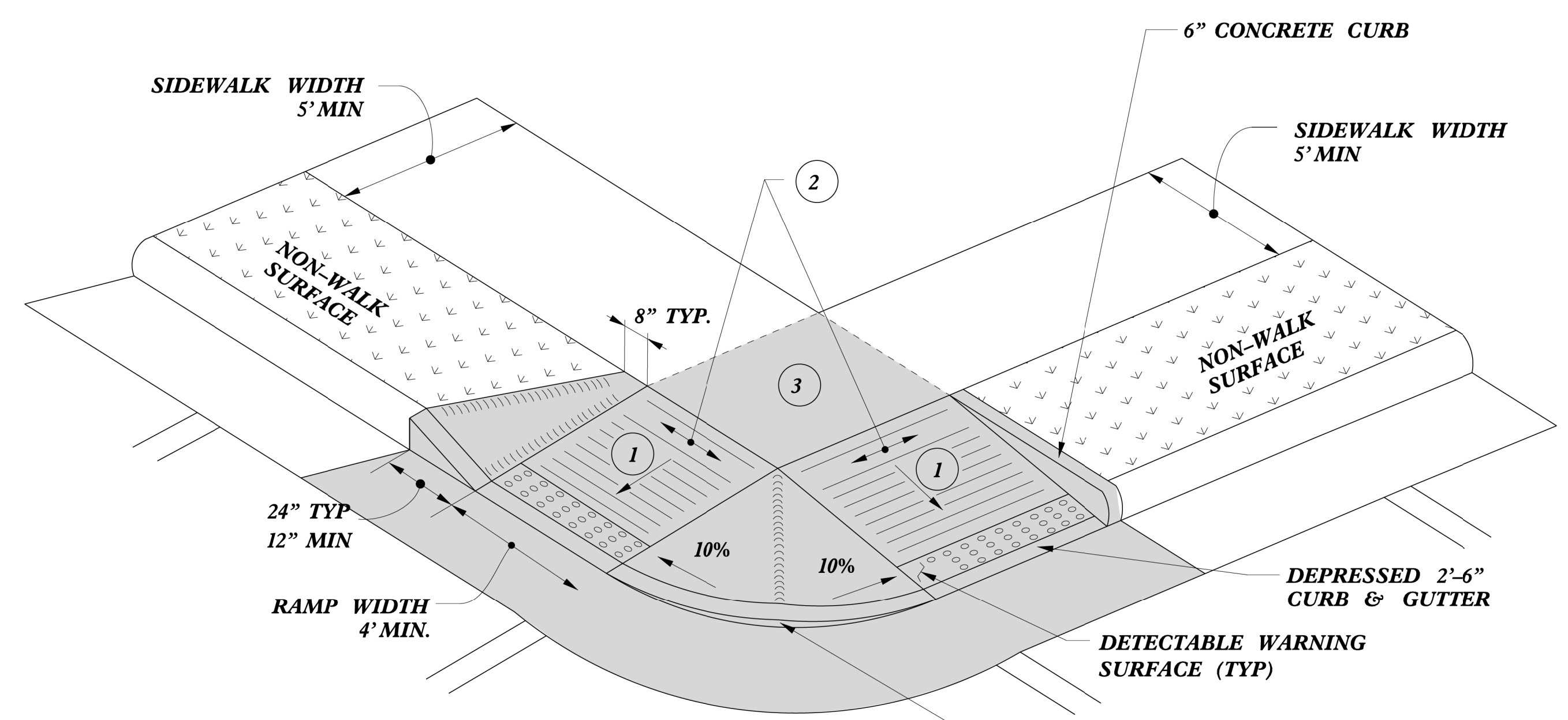
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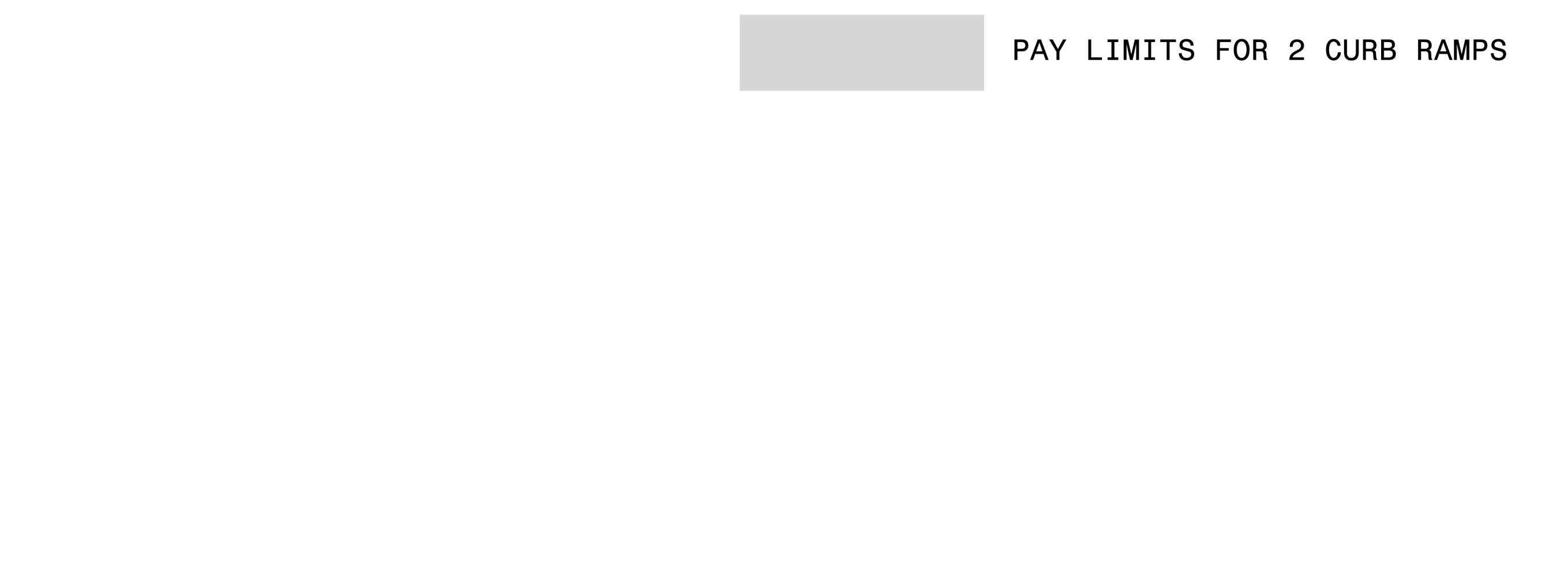
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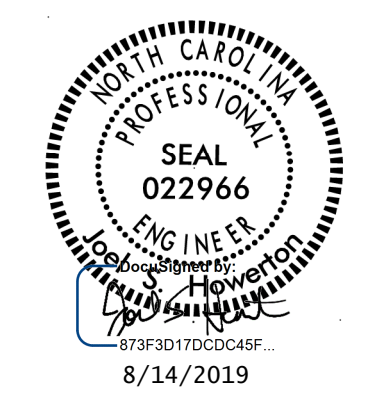


**TYPE 4A**



**TYPE 5**

- 1 8.33% (12:1) MAX RAMP SLOPE
- 2 CROSS SLOPE: 2.00%
- 3 CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.



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**CURB RAMPS**  
Shared Landing

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11  
 MODIFIED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99  
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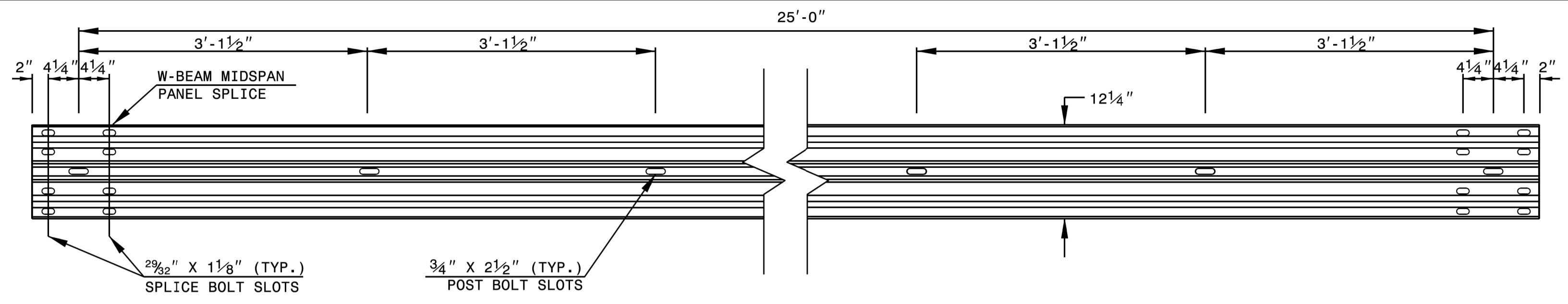
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**GUARDRAIL INSTALLATION**

SHEET 6 OF 8  
**862D02**

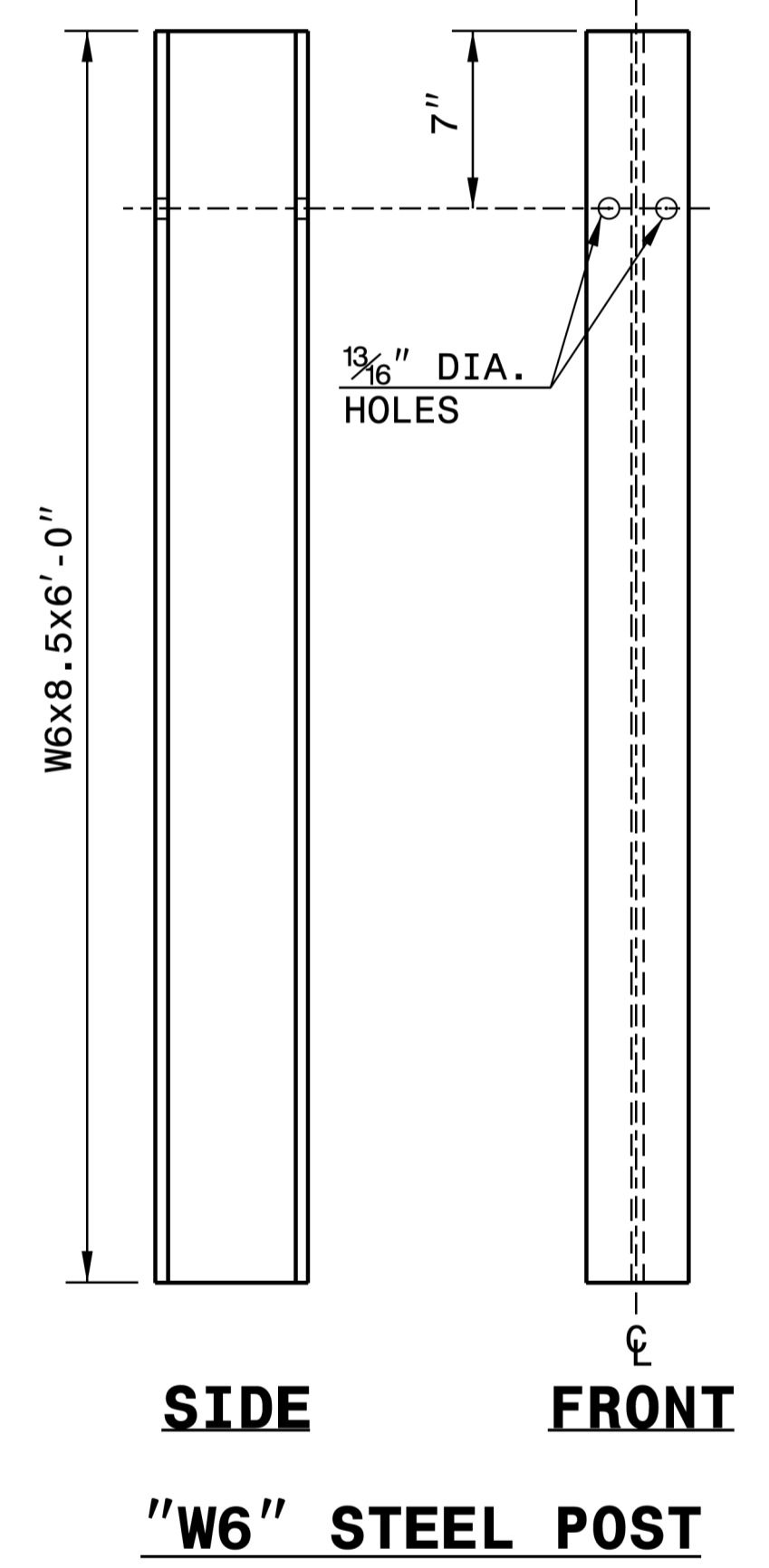
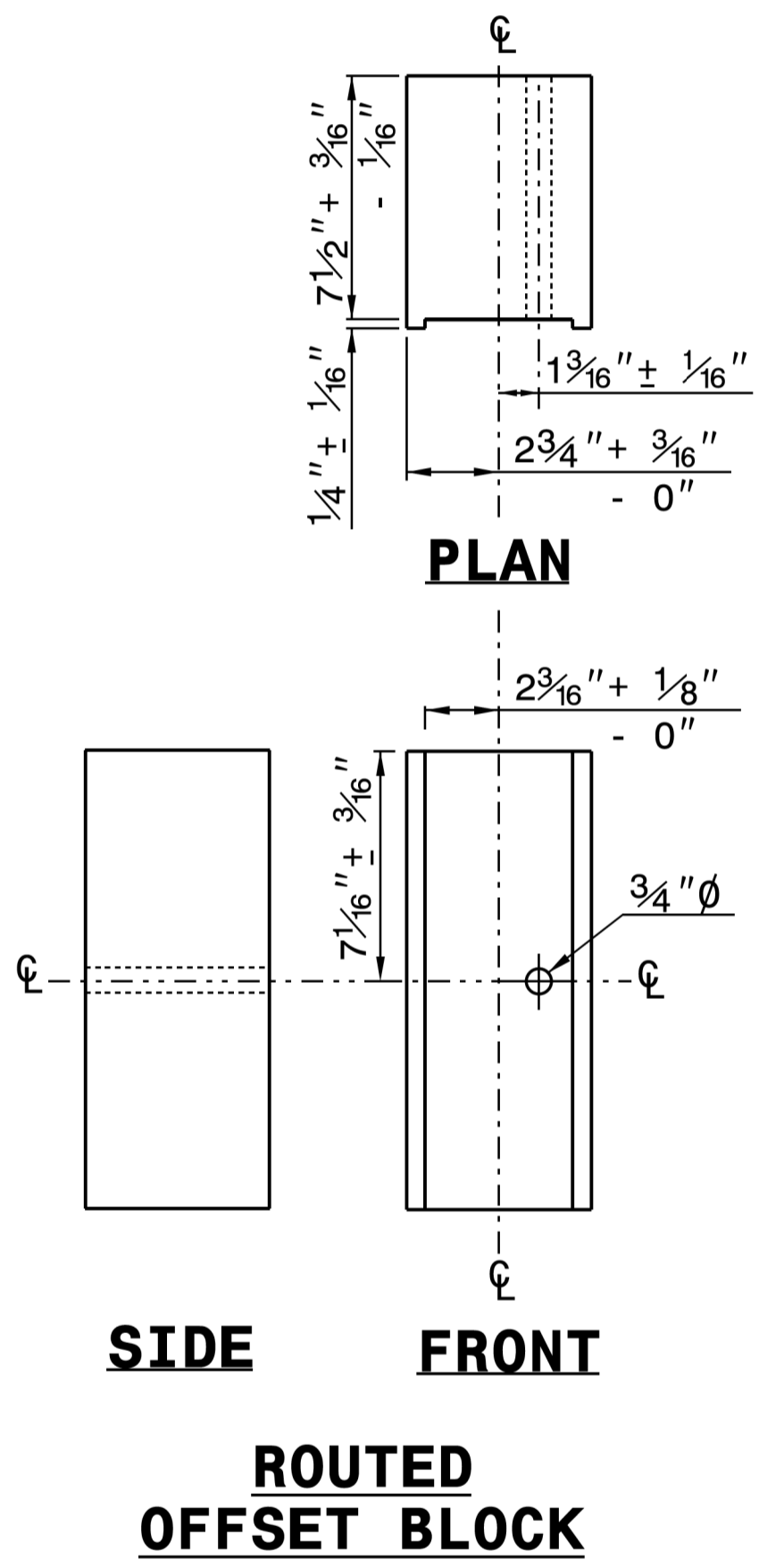
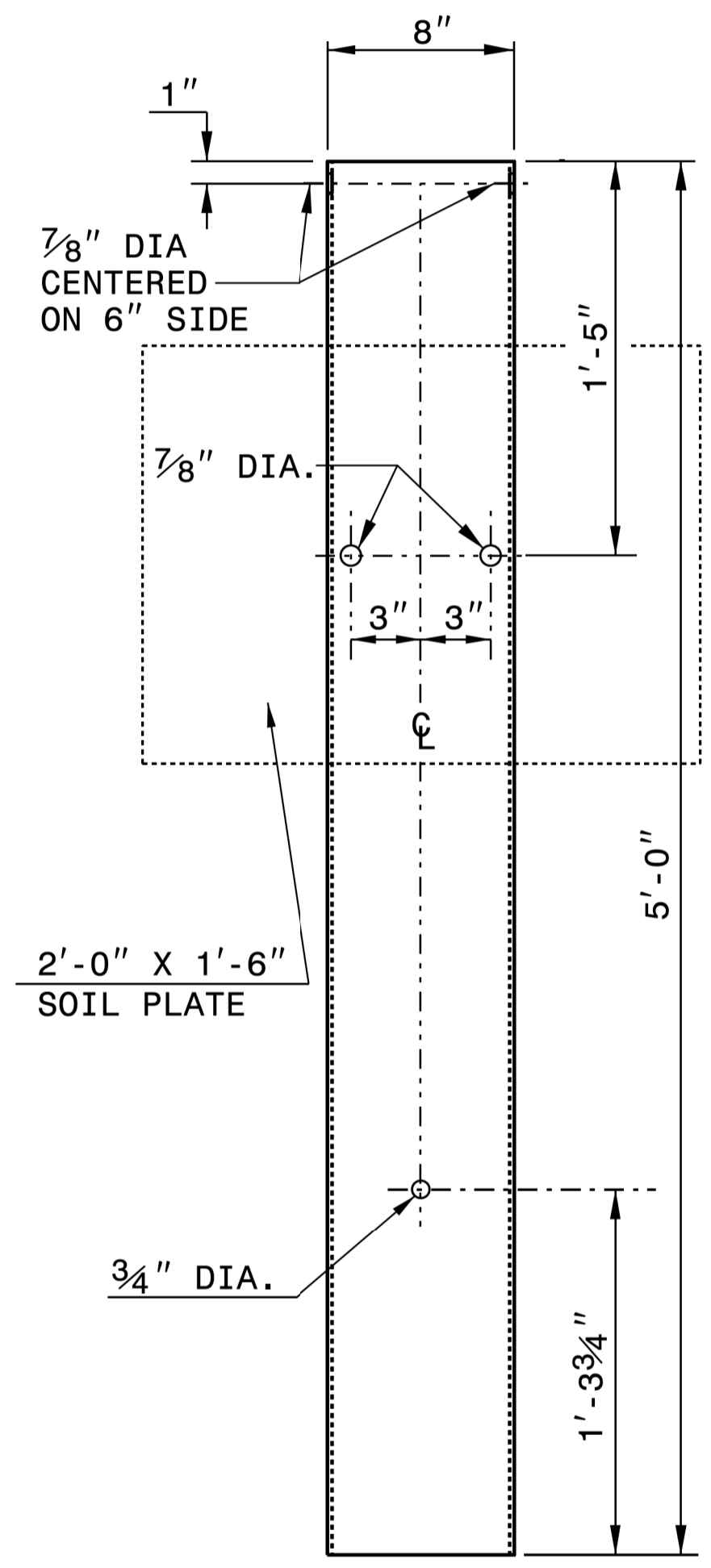
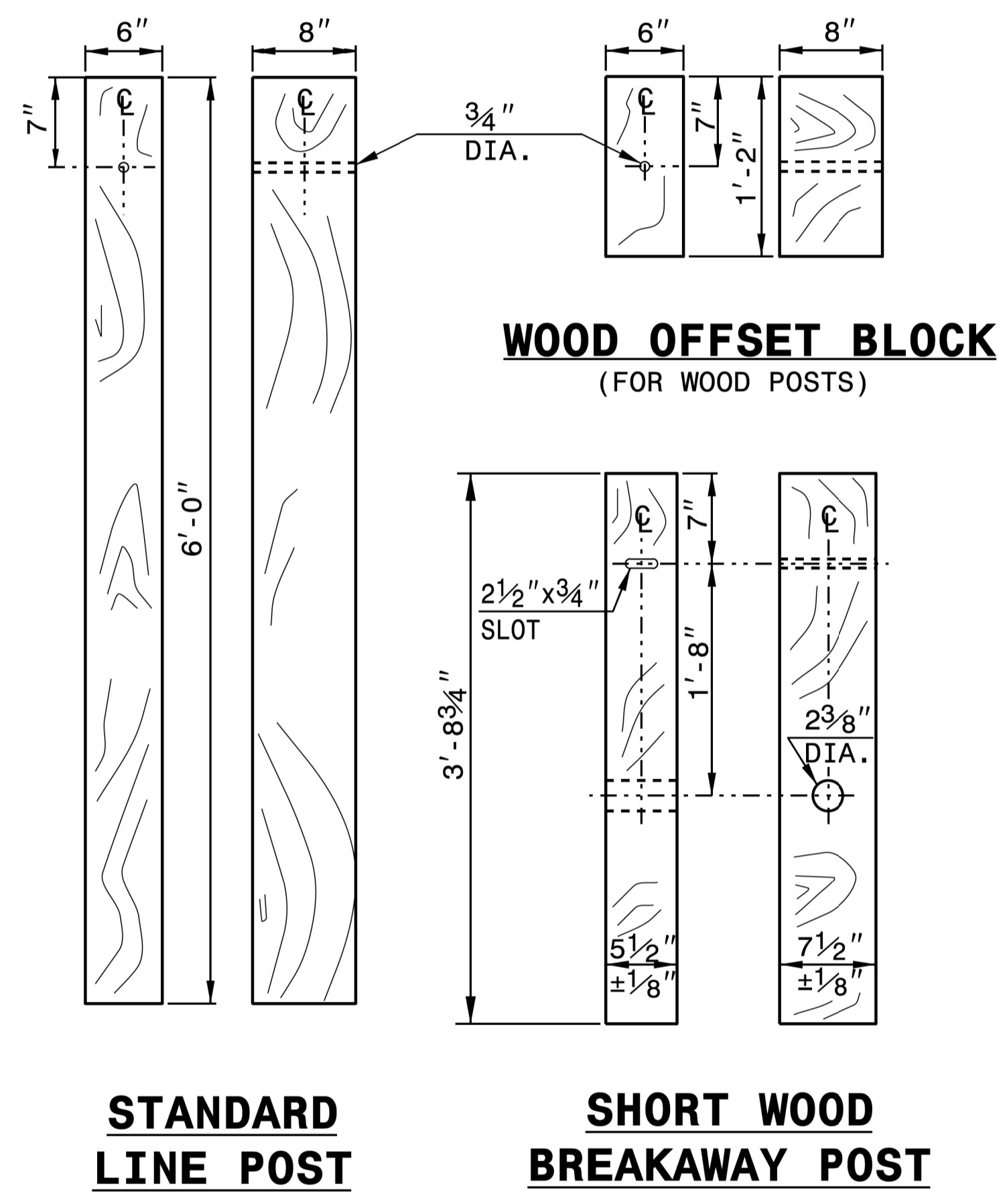
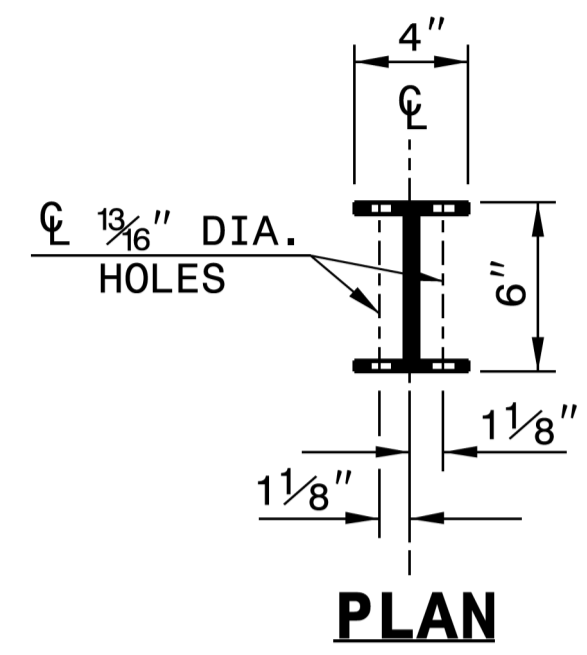
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ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

SHEET 6 OF 8  
**862D02**



**STANDARD W-BEAM GUARDRAIL**



**SYSTEM PARTS**



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ORIGINAL BY: J. HOWERTON	DATE: 3-7-2018
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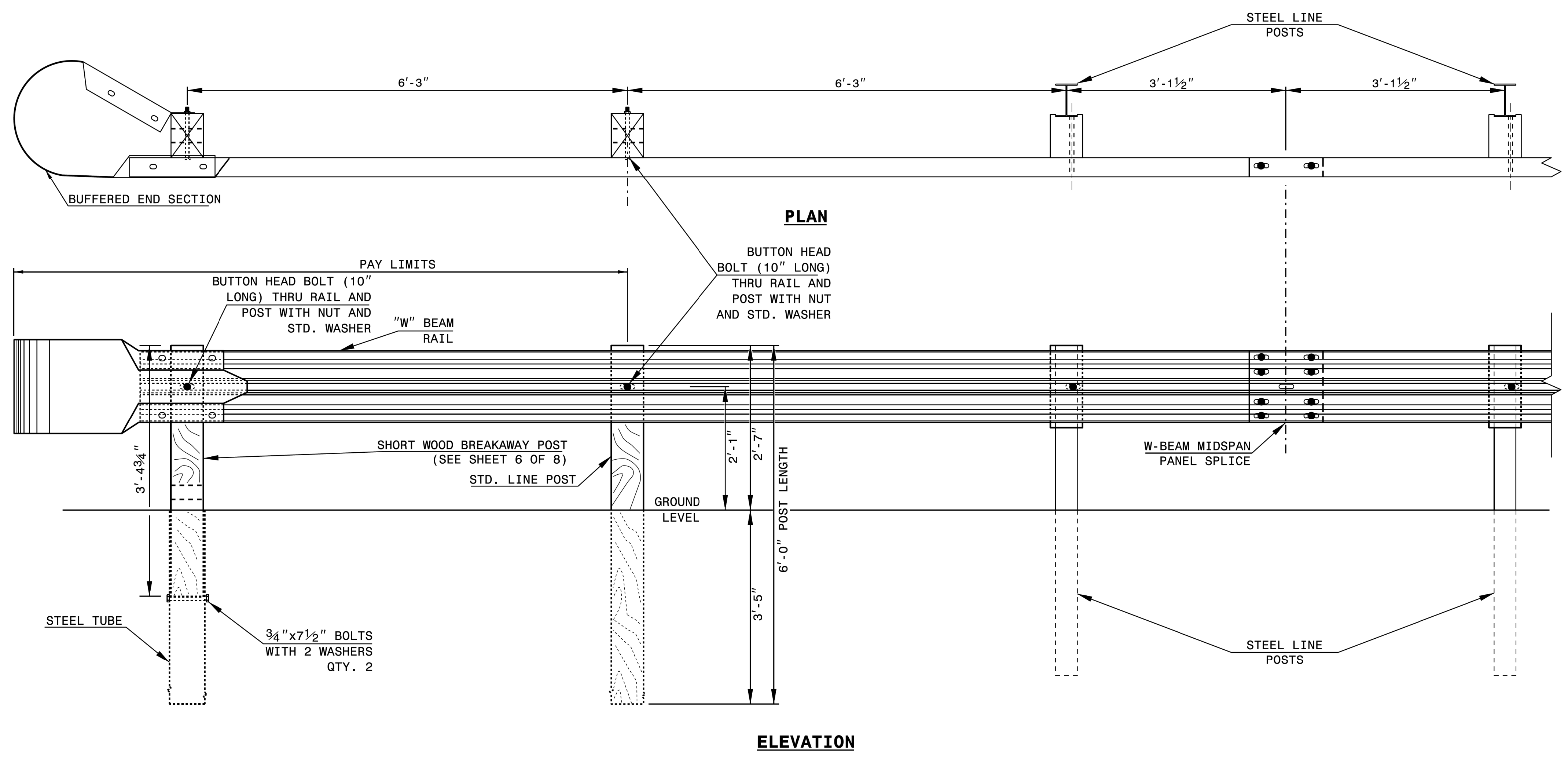
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SHEET OF

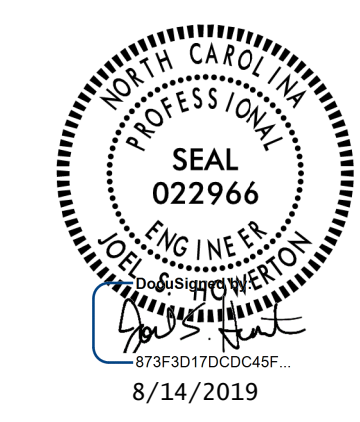
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ROADWAY DETAIL DRAWING FOR  
**GUARDRAIL INSTALLATION**

SHEET OF



**TRAILING END UNIT ASSEMBLY**  
**A.T. - 1 SYSTEM**



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<b>A.T. - 1 SYSTEM</b>	
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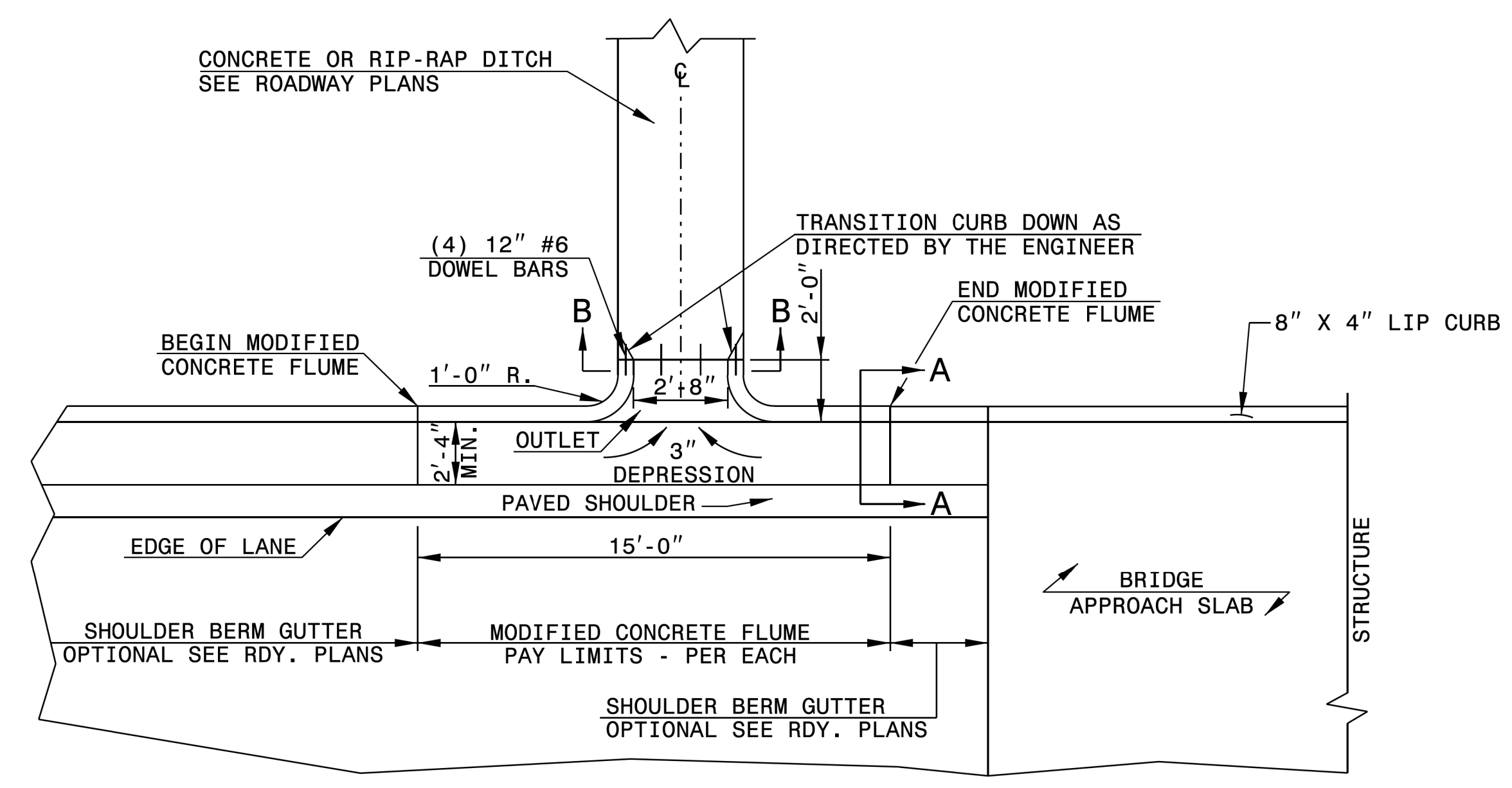
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**MODIFIED CONCRETE FLUME**  
WITH CONCRETE OR RIP-RAP DITCH

SHEET 1 OF 1  
MODFLMDTCH

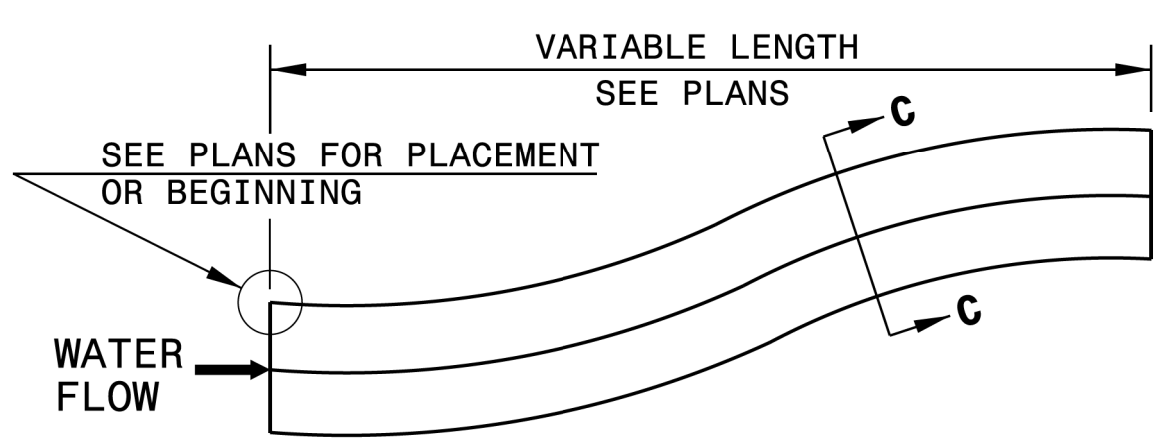
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ENGLISH DETAIL DRAWING FOR  
**MODIFIED CONCRETE FLUME**  
WITH CONCRETE OR RIP-RAP DITCH

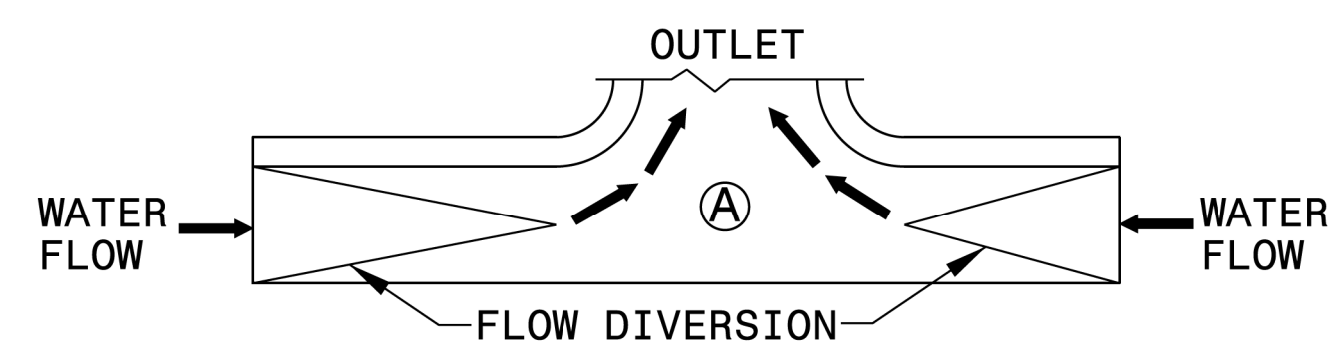
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MODFLMDTCH



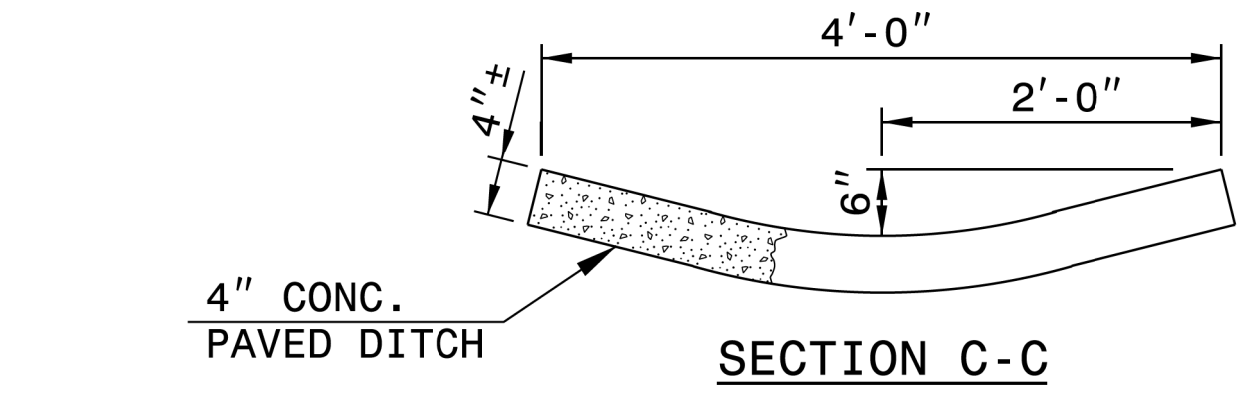
PLAN VIEW



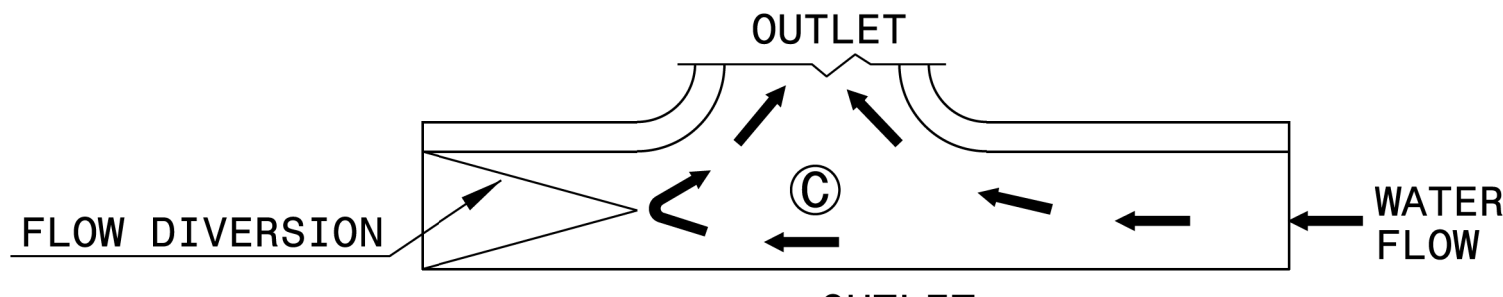
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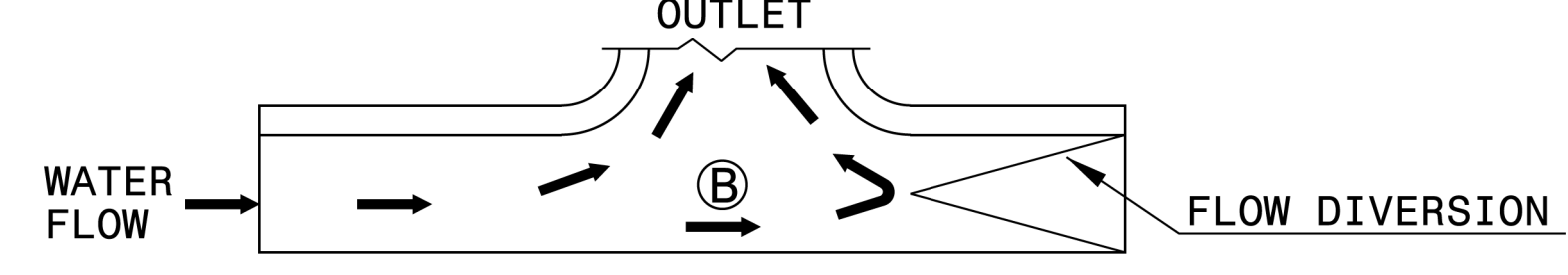
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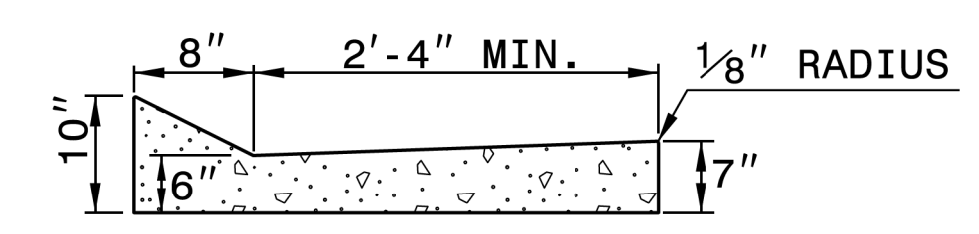
SECTION C-C



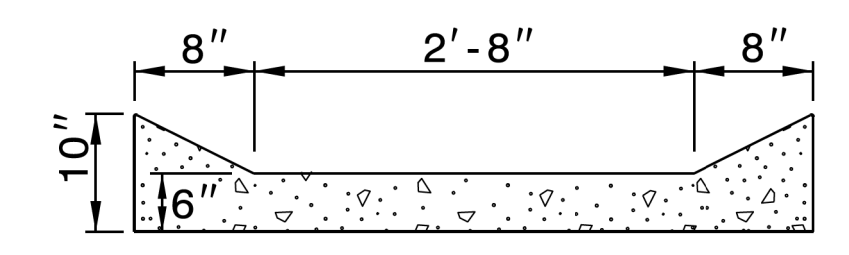
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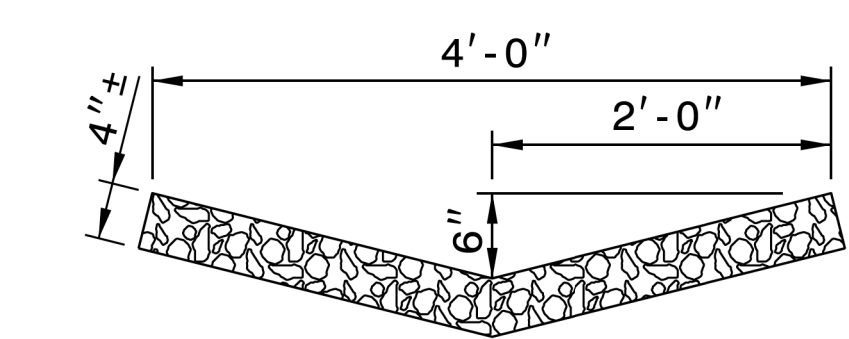
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SECTION A-A



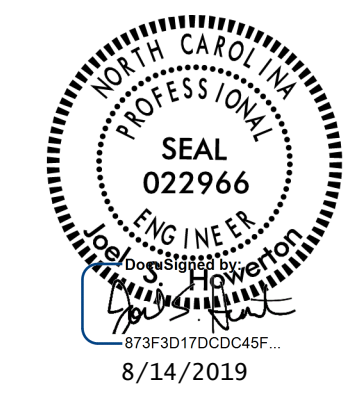
SECTION B-B



RIP-RAP LINED DITCH

- NOTES:
- CONSTRUCT MODIFIED CONCRETE FLUME AND SHOULDER BERM GUTTER IN ACCORDANCE WITH THIS DETAIL.
  - CONSTRUCT CONCRETE DITCH IN ACCORDANCE WITH STD. DWG. NO. 850.01.
  - CONSTRUCT RIP RAP LINED DITCH IN ACCORDANCE WITH THIS DETAIL, IF CALLED FOR IN PLANS.
  - CONCRETE OR RIP RAP LINED DITCH SHALL BE THE TYPE AND LENGTH SPECIFIED BY THE ROADWAY PLANS. THE DITCH SHALL TERMINATE AS SHOWN ON THE PLANS. IF NO TERMINATION IS INDICATED PLACE RIP-RAP AT THE END OF THE DITCH AS INDICATED BY STD. DWG. 876.02 FOR AN 18" PIPE. TRANSITIONS FROM THE DITCH TO TERMINATION SHALL BE AS DIRECTED BY THE ENGINEER.
  - MODIFICATIONS SHALL BE AS DICTATED BY SITE CONDITIONS AND DIRECTED BY THE ENGINEER.

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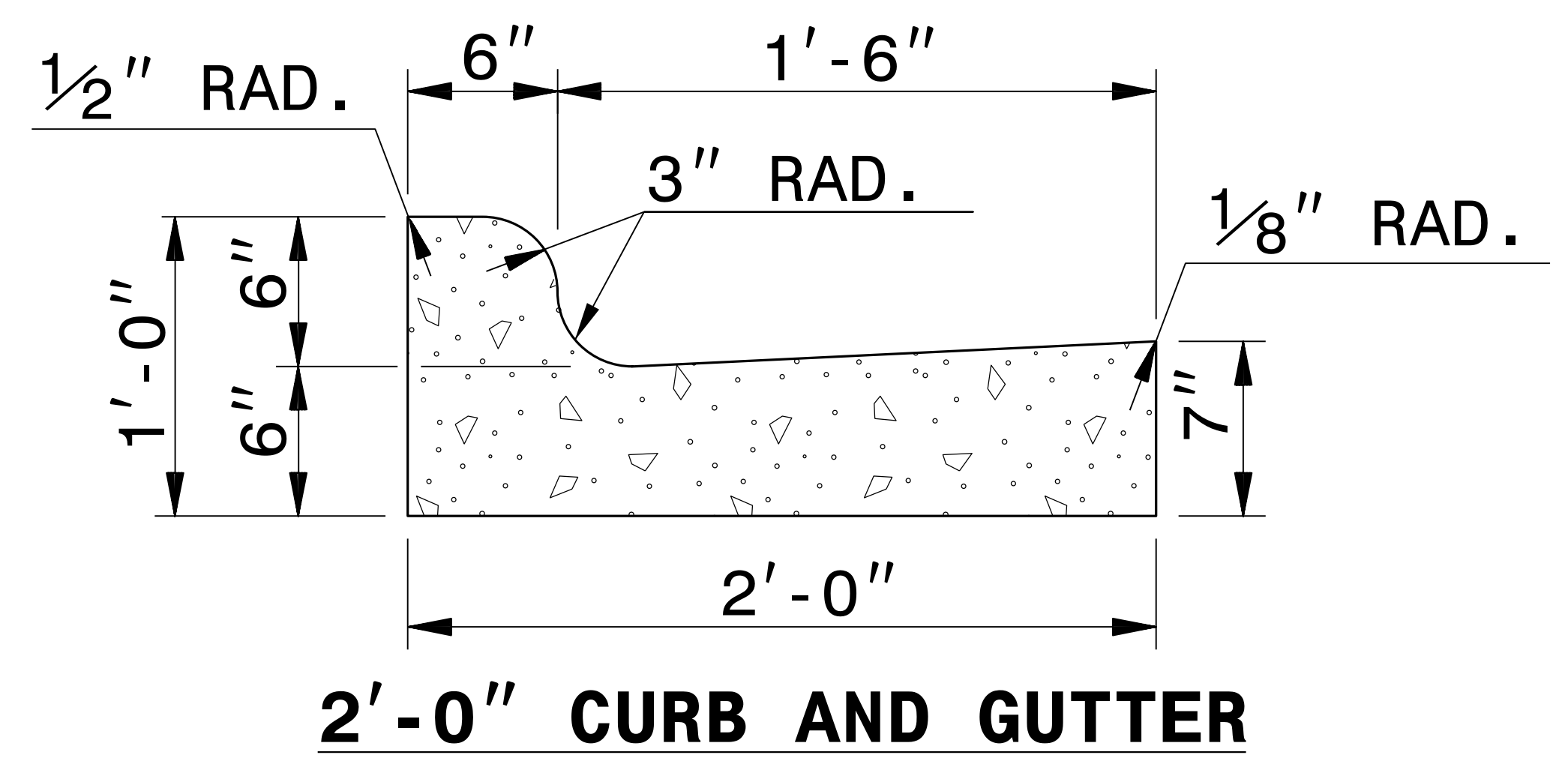
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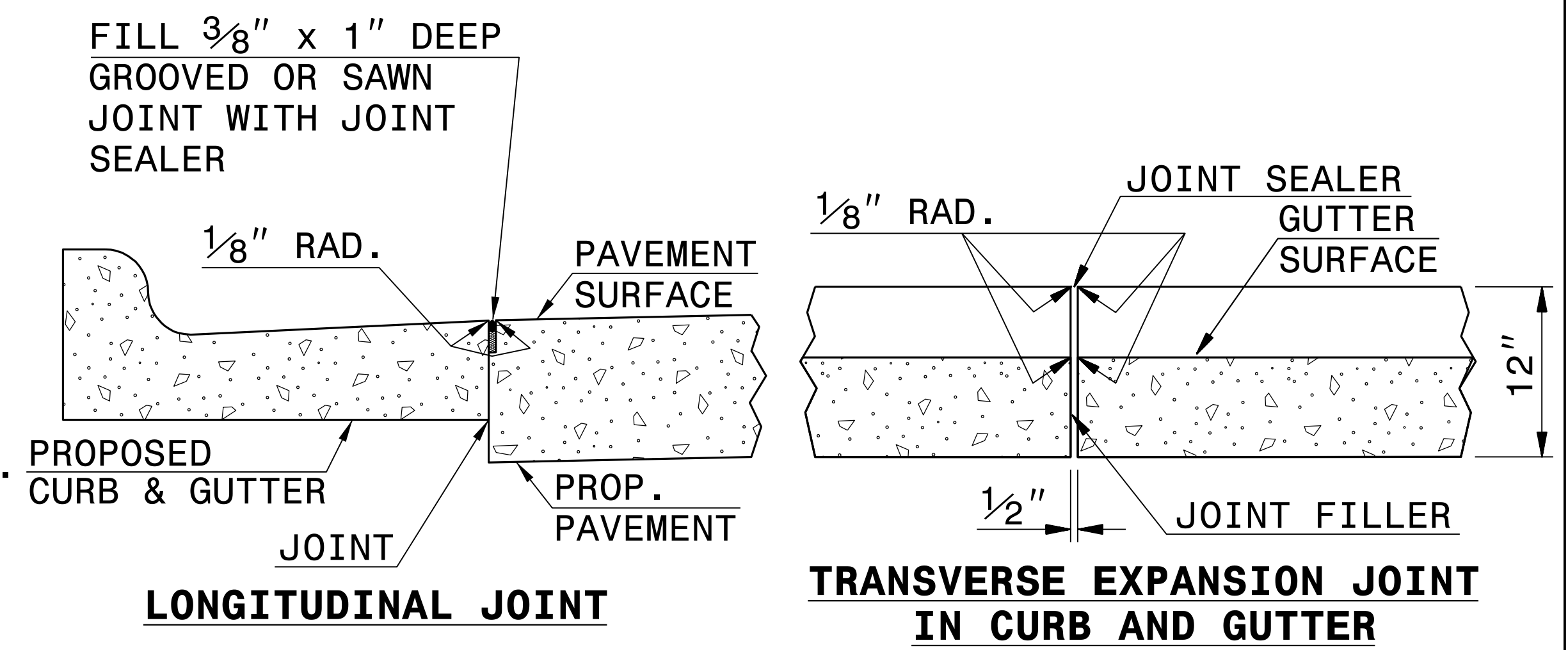
ROADWAY DETAIL DRAWING FOR  
**2'-0" CONCRETE CURB & GUTTER**

SHEET 1 OF 3  
**846d01**



**SECTION VIEW**

- GENERAL NOTES:
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
  - JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
  - CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.
  - FILL ALL CONSTRUCTION JOINTS WITH JOINT FILLER AND SEALER.
  - SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.



**LONGITUDINAL JOINT**

**TRANSVERSE EXPANSION JOINT IN CURB AND GUTTER**

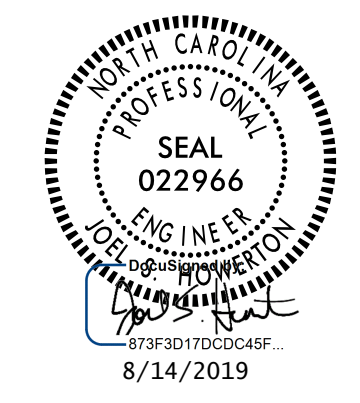
**SECTION VIEW OF JOINTS**

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ROADWAY DETAIL DRAWING FOR  
**2'-0" CONCRETE CURB & GUTTER**

SHEET 1 OF 3  
**846d01**

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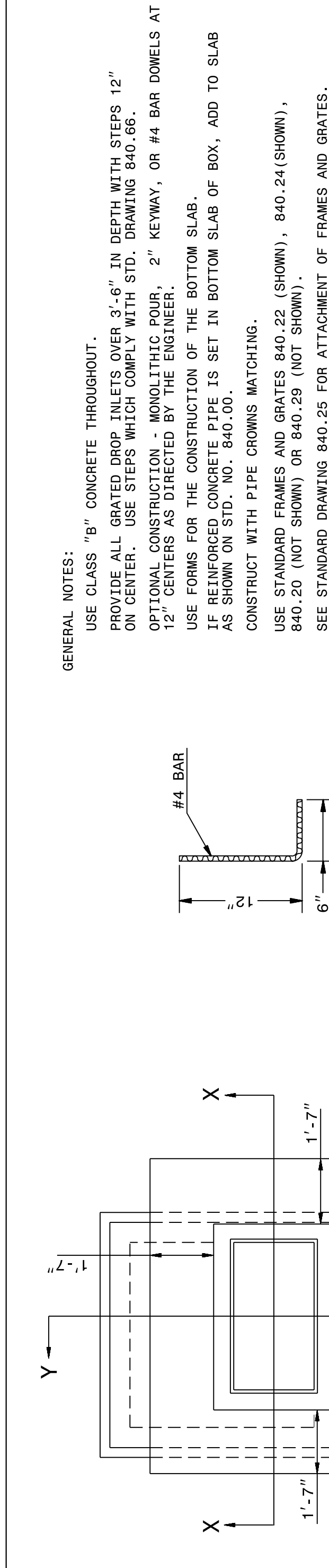
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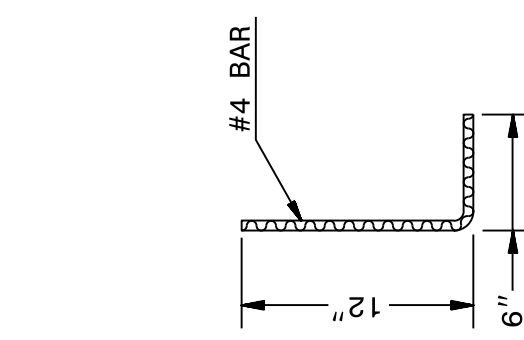
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ENGLISH DETAIL DRAWING FOR  
**CONCRETE GRATED DROP INLET TYPE 'A'**  
12" THRU 72" PIPE

SHEET 1 OF 2  
**840d17**



**DOWEL - A**

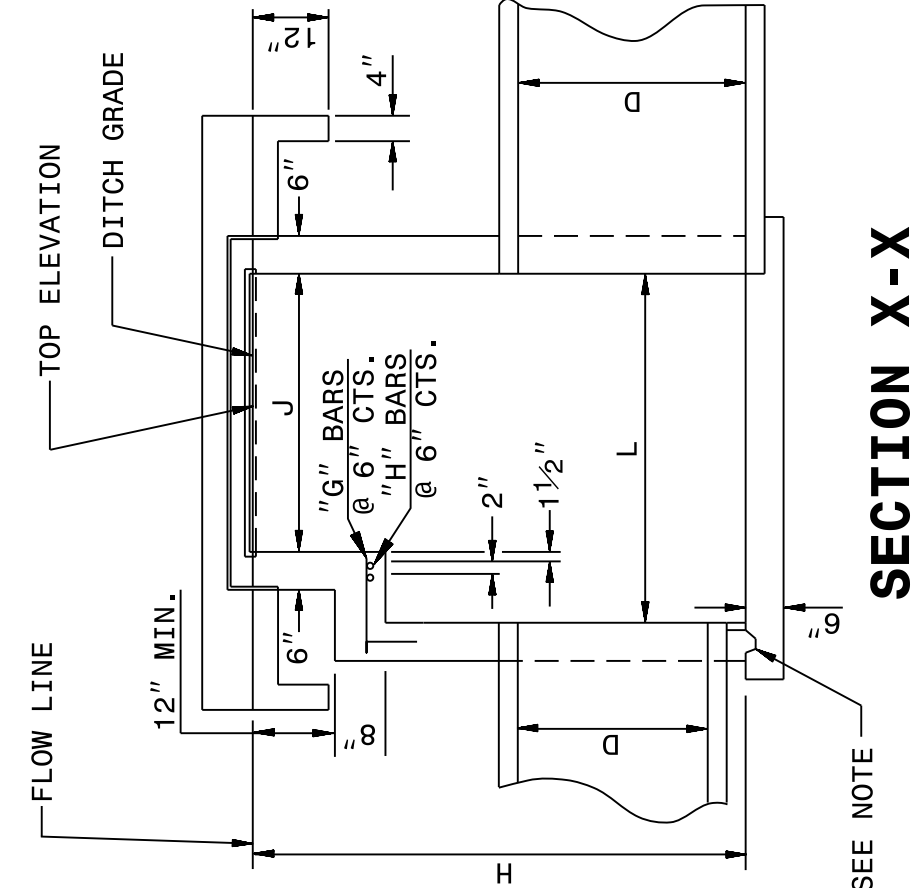


GENERAL NOTES:  
USE CLASS "B" CONCRETE THROUGHOUT.  
PROVIDE ALL GRATED DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.  
CONSTRUCT WITH PIPE CROWNS MATCHING.  
USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.20 (NOT SHOWN) OR 840.29 (NOT SHOWN).  
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.  
CHAMFER ALL EXPOSED CORNERS 1".  
DRAWING NOT TO SCALE.  
MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

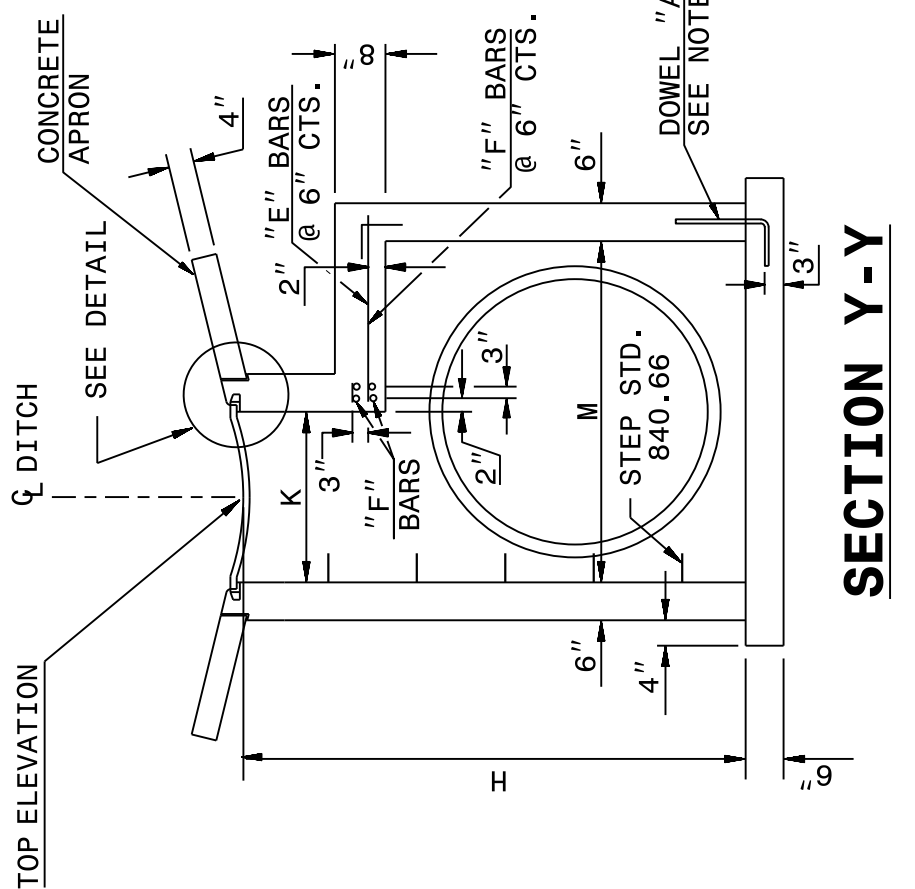
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ENGLISH DETAIL DRAWING FOR  
**CONCRETE GRATED DROP INLET TYPE 'A'**  
MINIMUM DEPTH  
12" THRU 72" PIPE

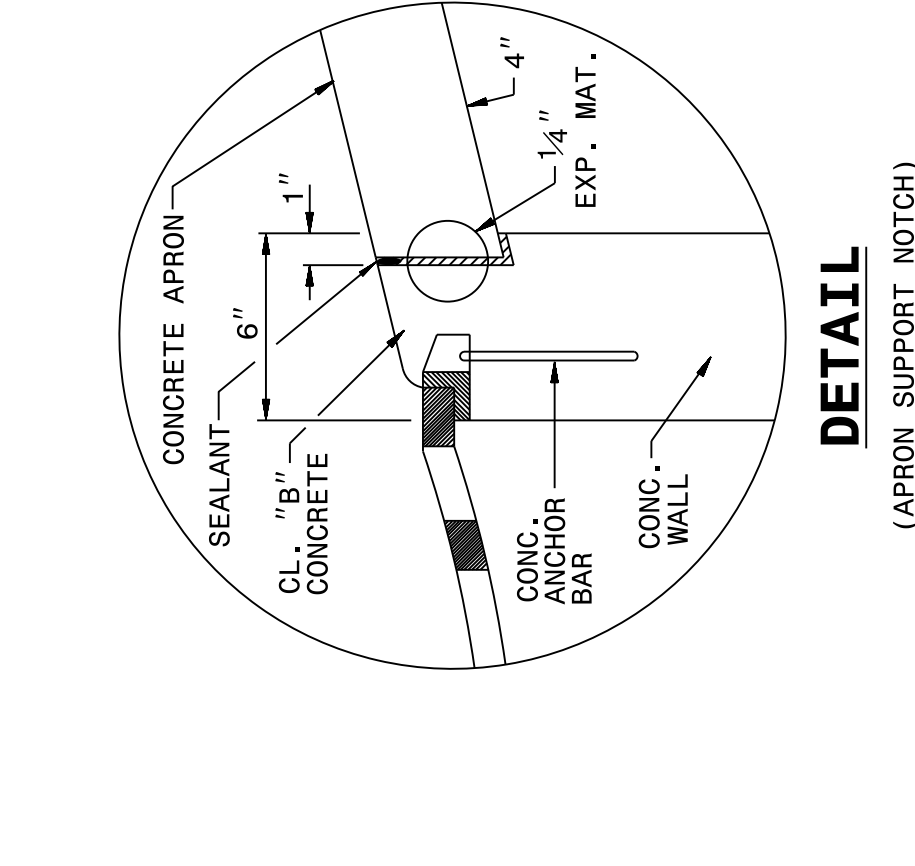
SHEET 1 OF 2  
**840d17**



**SECTION X-X**



**SECTION Y-Y**



**DETAIL**  
(APRON SUPPORT NOTCH)

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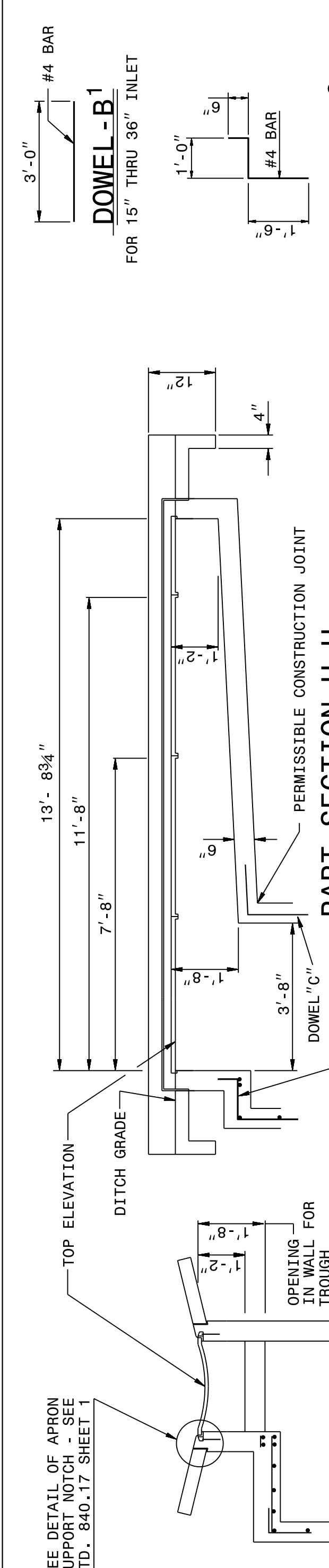
ENGLISH DETAIL DRAWING FOR  
**CONCRETE GRATED DROP INLET TYPE 'A'**  
MINIMUM DEPTH  
12" THRU 72" PIPE

SHEET 2 OF 2  
**840d17**

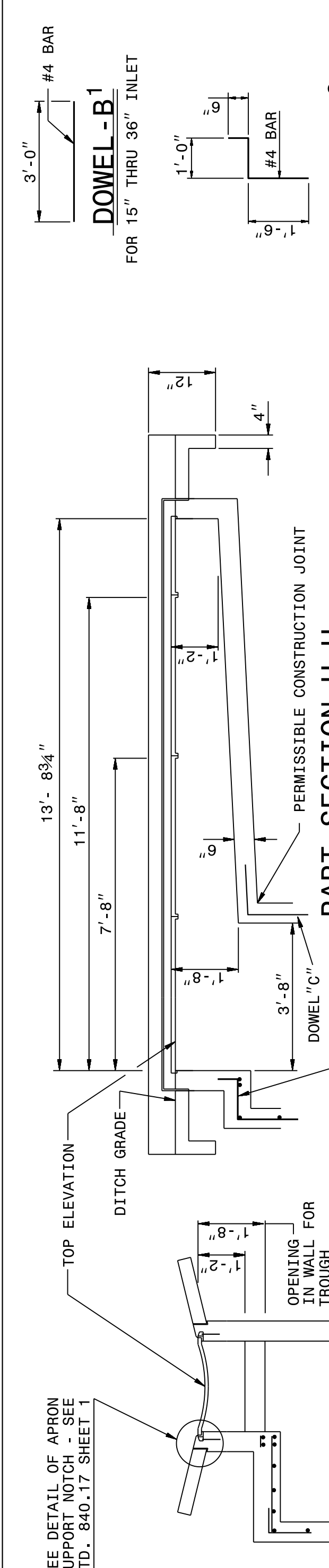
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ENGLISH DETAIL DRAWING FOR  
**CONCRETE GRATED DROP INLET TYPE 'A'**  
12" THRU 72" PIPE

SHEET 2 OF 2  
**840d17**



**PART SECTION V-V**

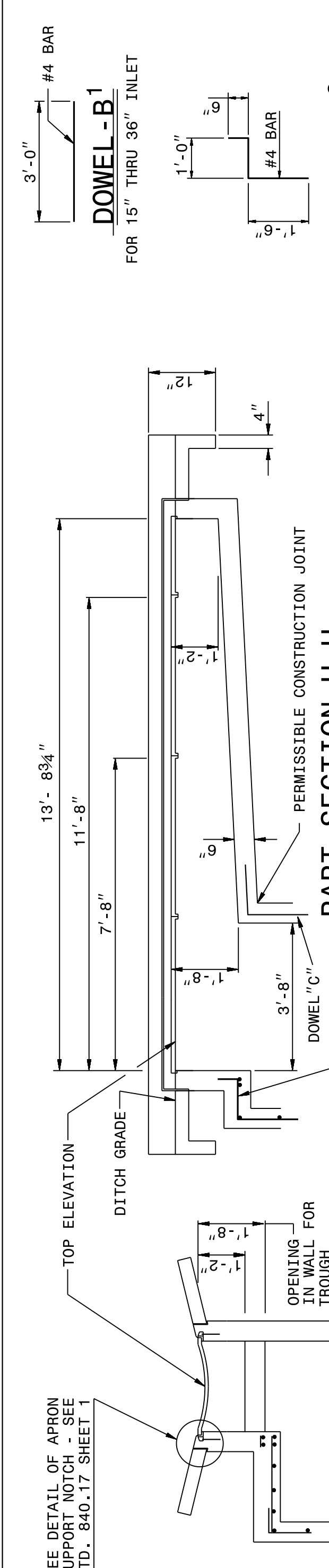


**PART SECTION U-U**

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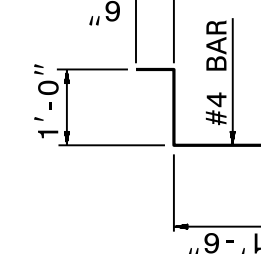
ENGLISH DETAIL DRAWING FOR  
**CONCRETE GRATED DROP INLET TYPE 'A'**  
MINIMUM DEPTH  
12" THRU 72" PIPE

SHEET 2 OF 2  
**840d17**



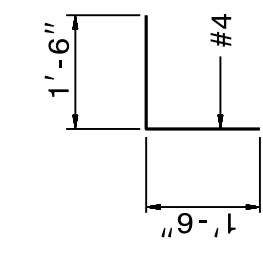
**DOWEL - B-1**

FOR 15" THRU 36" INLET



**DOWEL - B-2**

FOR 42" INLET



**DOWEL - B-3**

QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING

ADDITIONAL INLETS	2'-0"	4'-0"	6'-0"	8'-0"	10'-0"	12'-0"
CONCRETE CU. YDS.	0.191	0.417	0.665	0.897	1.145	1.380
CONCRETE APRON CU. YDS.	0.074	0.148	0.222	0.296	0.370	0.444

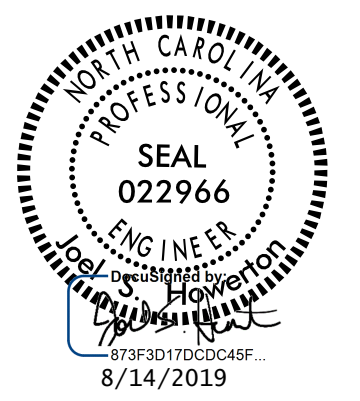
PIPE	DIMENSIONS OF BOX AND PIPE		REINFORCING STEEL - NO. 4 BARS				MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET (BASED ON MIN. HEIGHT, H)		CU YDS CONC. IN BOX		DEDUCTIONS FOR ONE PIPE			
	SPAN	WIDTH	NO.	LENGTH	NO.	LENGTH	BARS H	TOTAL	APRON	TOTAL	C.S.	R.C.		
12"	3'-8"	2'-0"	2'-0"	2'-3"	—	—	—	0.362	0.926	0.247	0.395	1.683	0.015	0.024
15"	3'-8"	2'-0"	2'-5"	—	—	—	—	0.362	0.988	0.247	0.395	1.745	0.023	0.036
18"	—	—	2'-0"	2'-8"	—	—	—	0.362	1.050	0.247	—	1.807	0.033	0.049
24"	—	—	2'-10"	3'-3"	8	1'-5"	6	4'-9"	—	—	27	0.444	1.362	0.278
30"	—	—	3'-5"	3'-10"	8	2'-0"	7	4'-9"	—	—	33	0.502	1.644	0.288
36"	—	—	4'-0"	4'-4"	8	2'-5"	8	4'-11"	4	0'-9"	2	4'-11"	1.931	0.321
42"	—	—	4'-10"	5'-0"	10	3'-1"	9	5'-7"	3	5'-7"	67	0.704	2.500	0.370
48"	—	—	5'-4"	5'-6"	11	3'-7"	10	6'-1"	1'-11"	4	87	0.823	3.013	0.407
54"	—	—	6'-0"	6'-0"	12	4'-1"	11	6'-7"	2'-5"	5	107	0.951	3.589	0.444
60"	—	—	6'-6"	6'-7"	13	4'-9"	12	7'-3"	3'-1"	6	135	1.311	4.539	0.494
66"	—	—	7'-2"	7'-1"	14	5'-4"	14	7'-10"	3'-7"	7	168	1.136	5.061	0.537
72"	—	—	7'-8"	7'-8"	15	5'-11"	15	8'-5"	4	4'-3"	199	1.500	5.860	0.580

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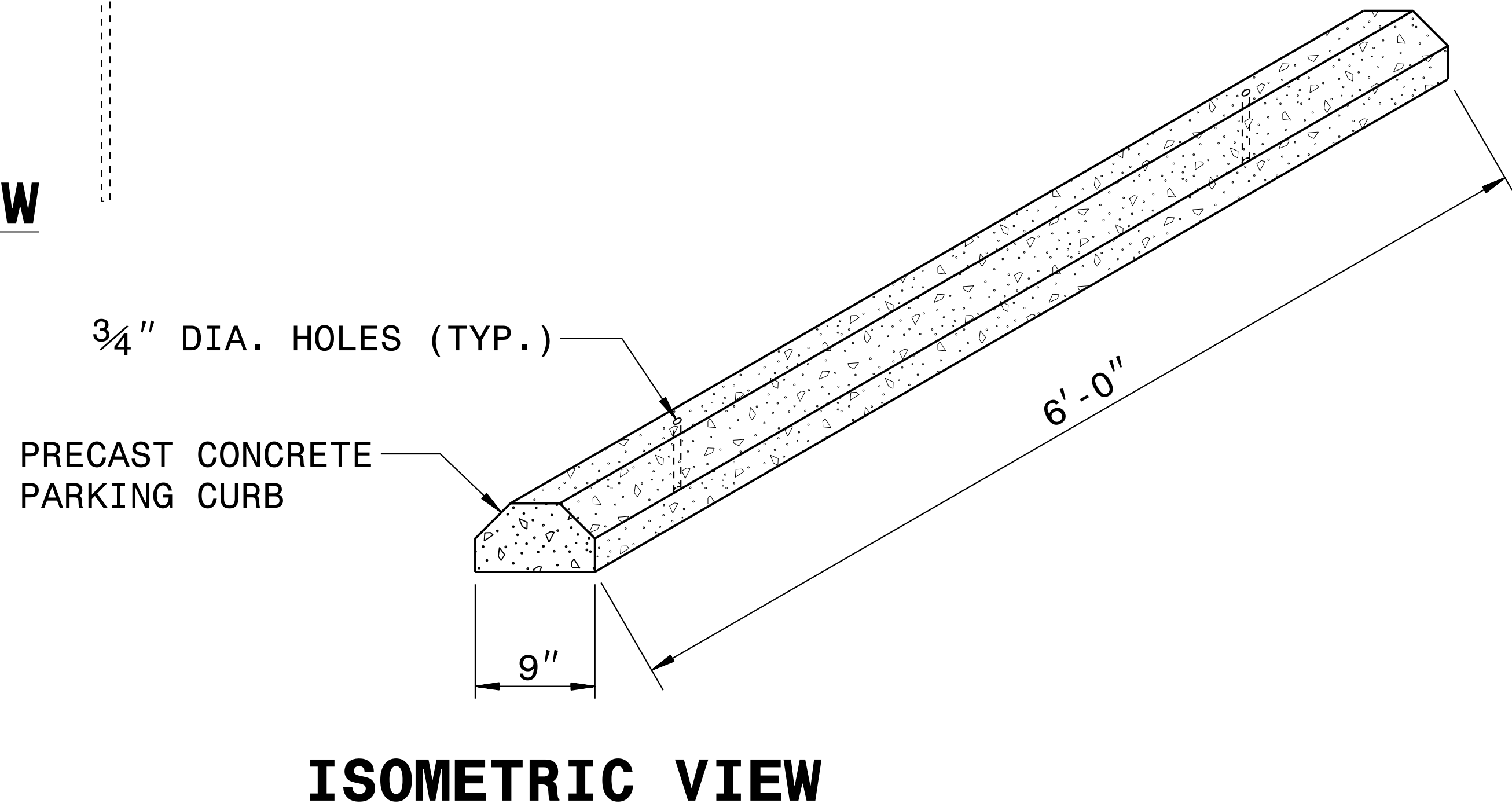
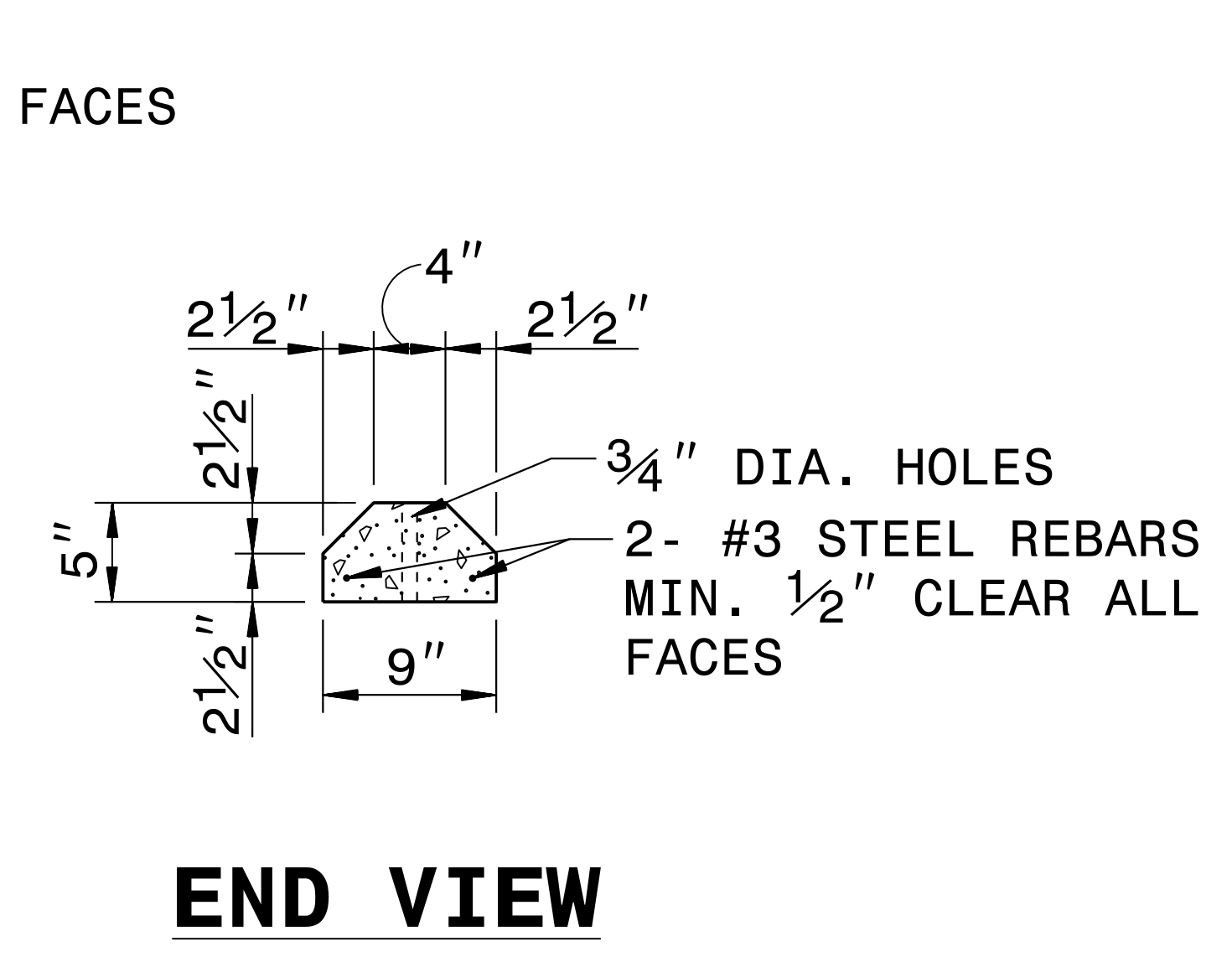
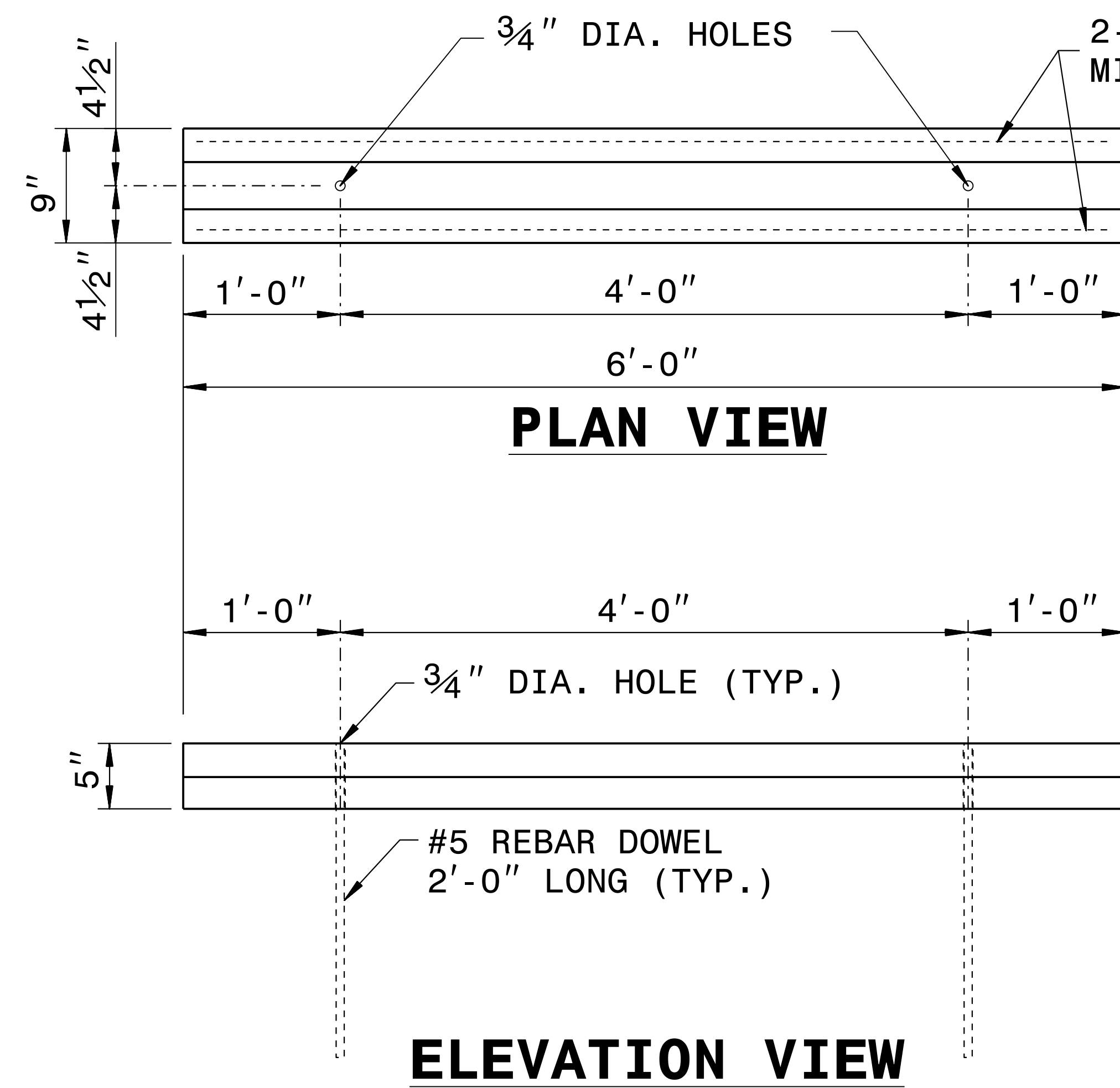


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ENGLISH DETAIL DRAWING FOR  
**PRECAST CONCRETE PARKING CURB**

SHEET 1 OF 1  
**PRCSTCRB**



GENERAL NOTES:  
-CONCRETE COMPRESSIVE STRENGTH  
4000psi MIN.  
-ASTM A615M - GRADE 400 REINFORCING  
STEEL.

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ENGLISH DETAIL DRAWING FOR  
**PRECAST CONCRETE PARKING CURB**

SHEET 1 OF 1  
**PRCSTCRB**

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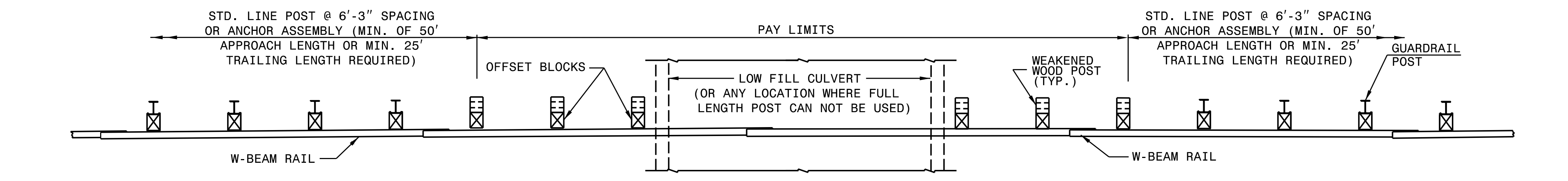
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

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

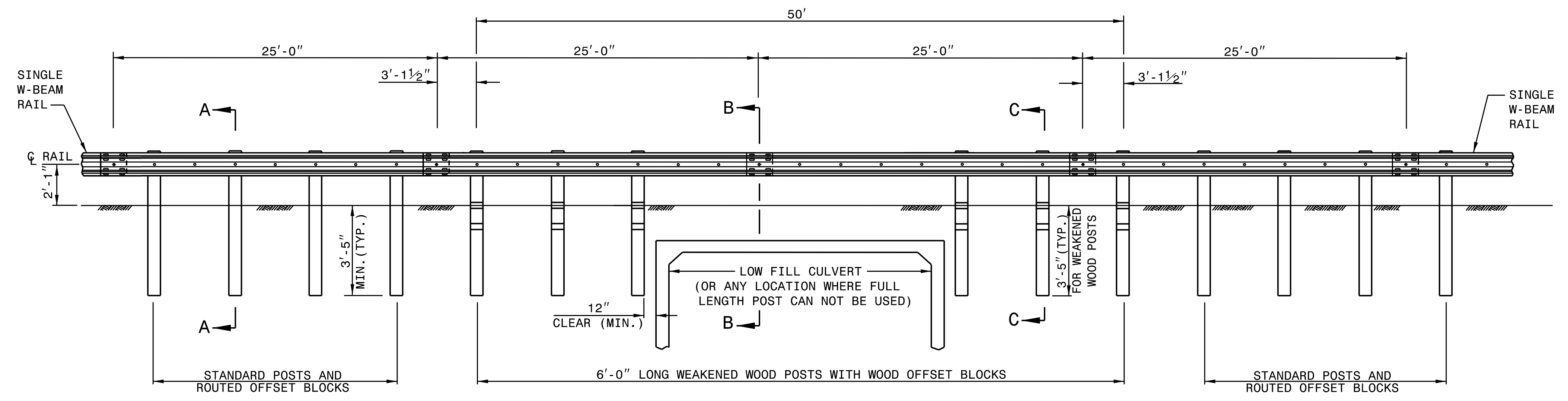
SPECIAL DETAIL FOR  
**GUARDRAIL PLACEMENT**  
25'-0" CLEAR SPAN

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

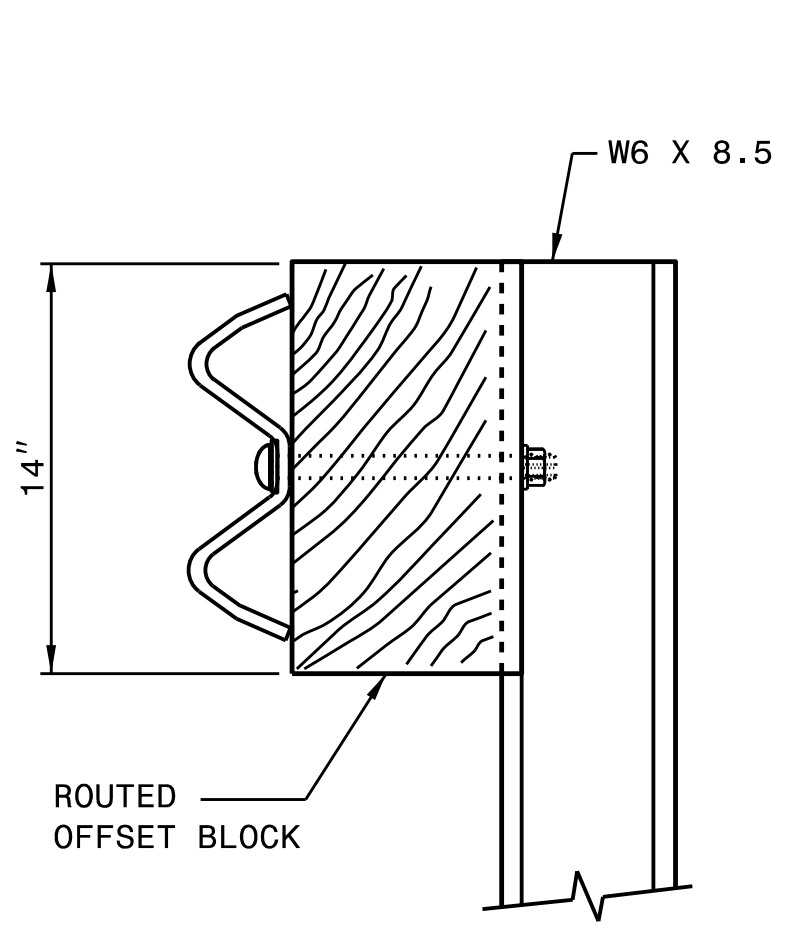
SPECIAL DETAIL FOR  
**GUARDRAIL PLACEMENT**  
25'-0" CLEAR SPAN



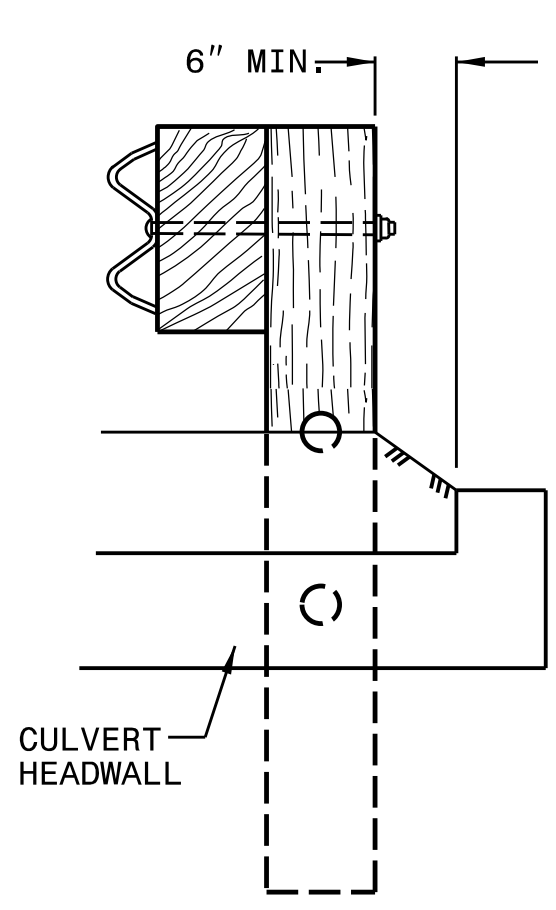
**PLAN**



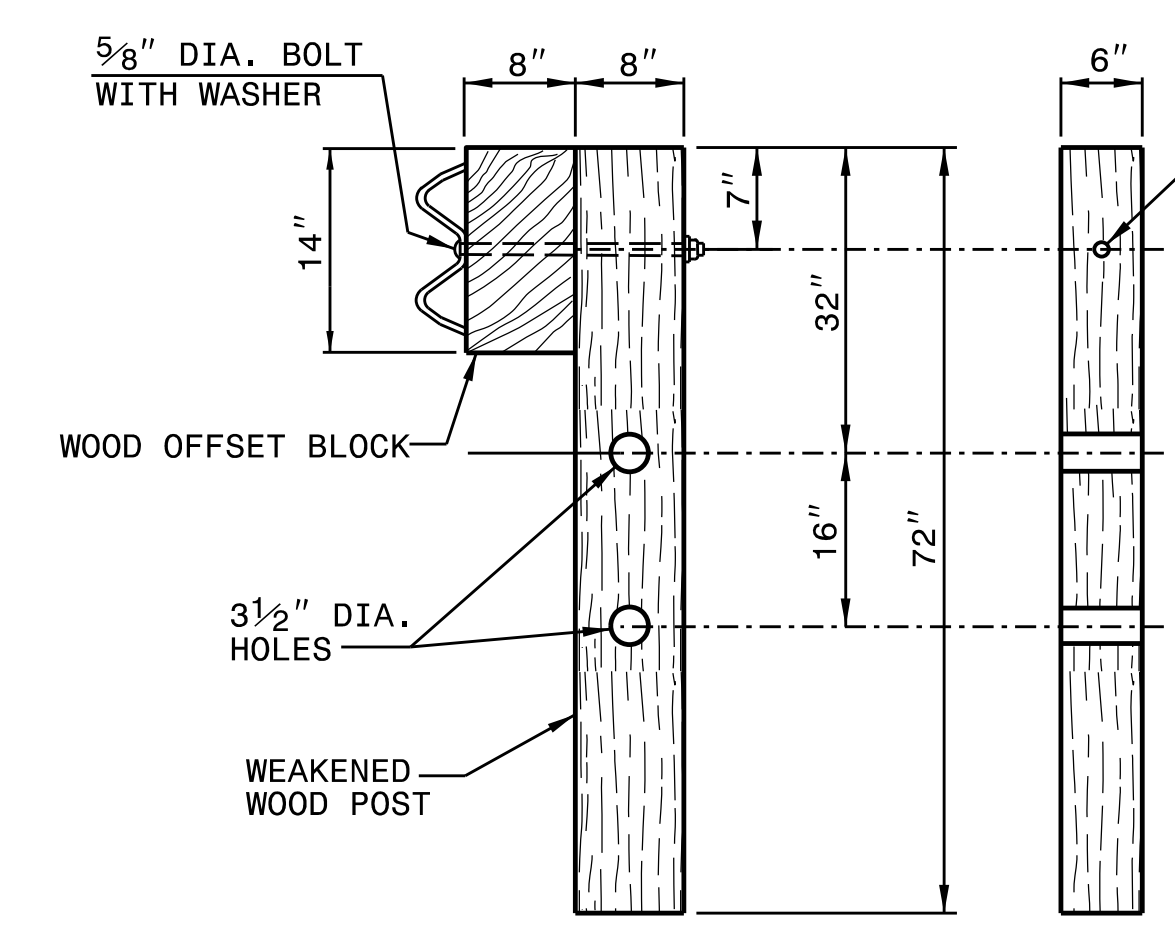
**ELEVATION  
25'-0" GUARDRAIL SPAN**



**SECTION A-A**



**SECTION B-B**

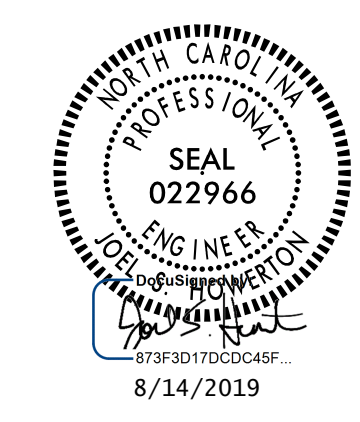


**SECTION C-C FRONT  
WEAKENED WOOD POST**

- GENERAL NOTES:
1. LAP RAIL IN THE DIRECTION OF TRAFFIC FLOW.
  2. SEE ROADWAY PLANS FOR LOCATIONS AND CONTINUATION OF RAIL OR END SECTIONS.
  3. MINIMUM DISTANCE OF 5 FEET BEHIND THE GUARDRAIL SHOULD BE CLEAR OF ANY FIXED-OBJECT HAZARDS THAT COULD SNAG AN IMPACTING VEHICLE.

SHEET - OF -  
**862D01**

SHEET - OF -  
**862D01**



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

**25'-0" CLEAR SPAN GUARDRAIL PLACEMENT**

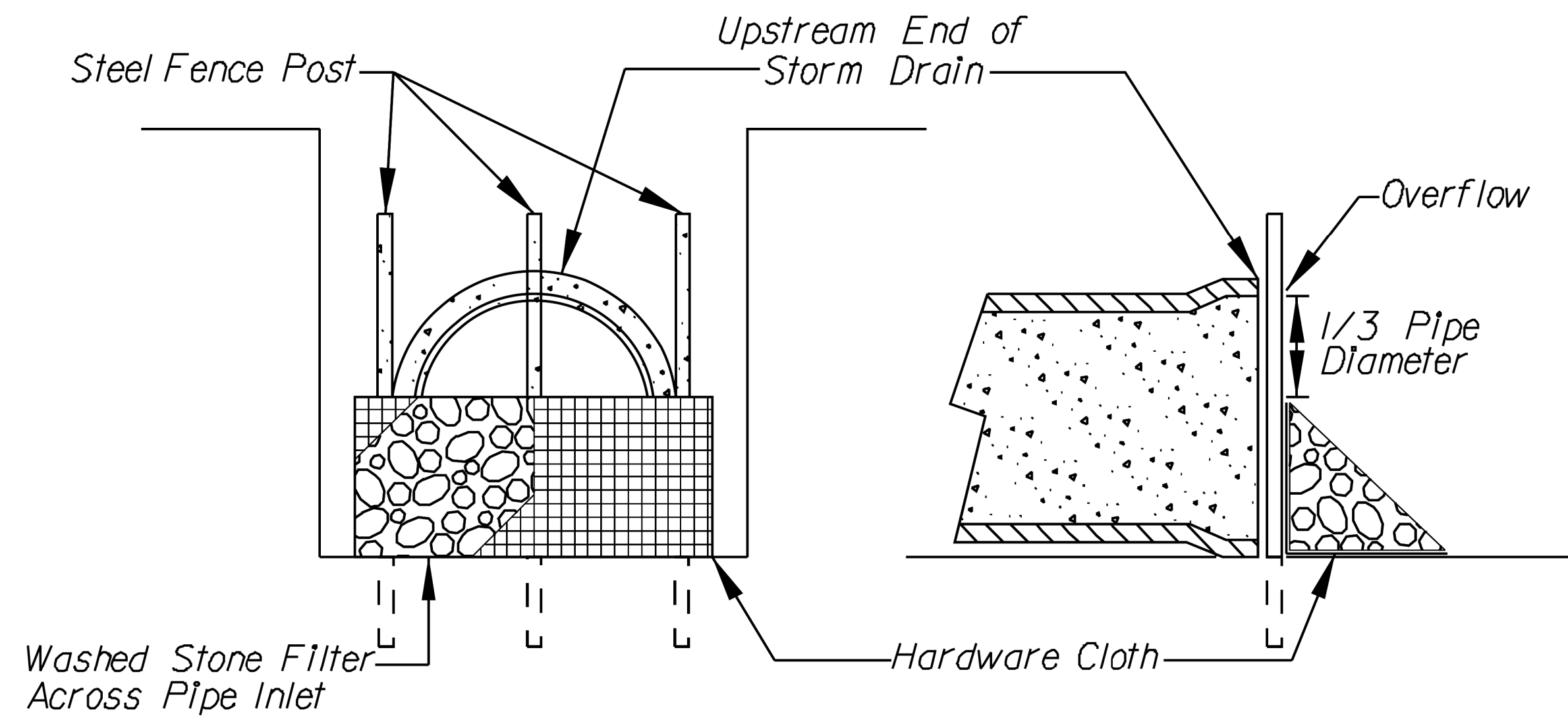
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DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



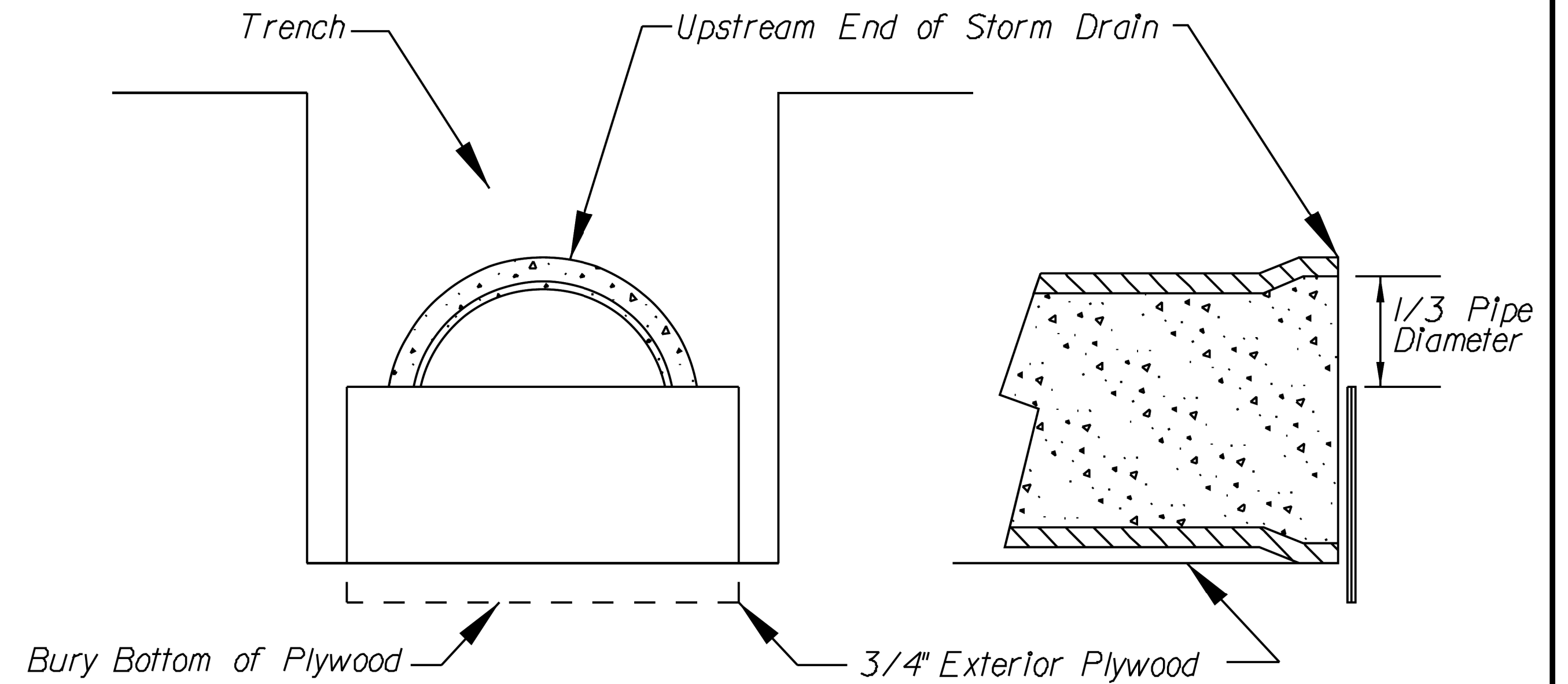
**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

### STONE FILTER INLET PROTECTION FOR STORM DRAIN UNDER CONSTRUCTION

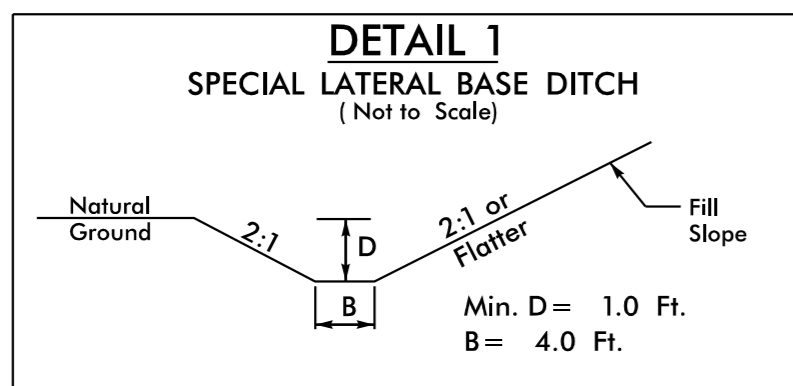


STONE FILTER INLET PROTECTION WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE PER LINEAR FOOT OF PIPE CULVERT INSTALLATION.

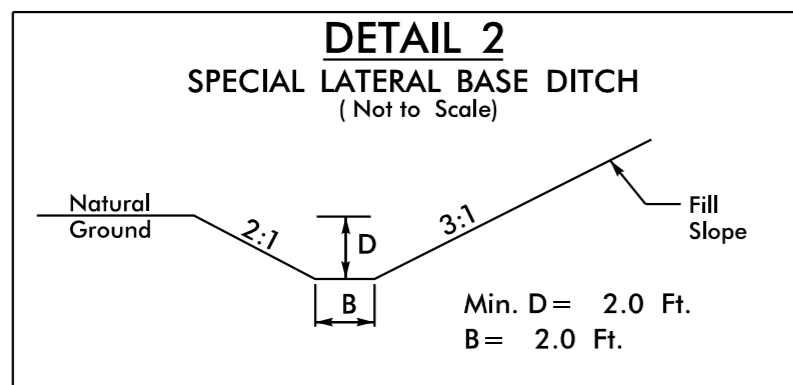
### PLYWOOD INLET PROTECTION FOR STORM DRAIN UNDER CONSTRUCTION



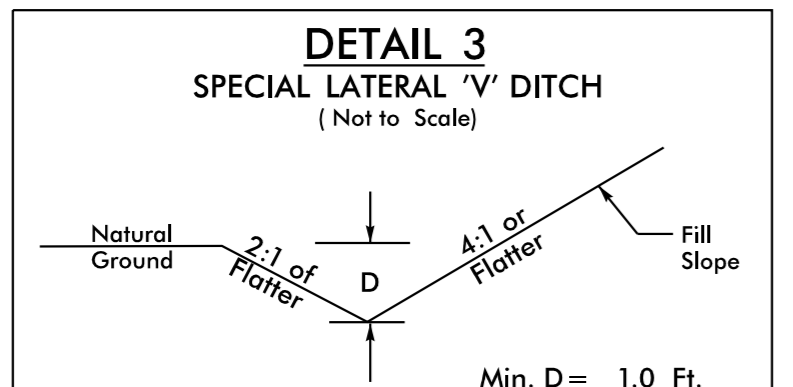
PLYWOOD INLET PROTECTION WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE PER LINEAR FOOT OF PIPE CULVERT INSTALLATION.



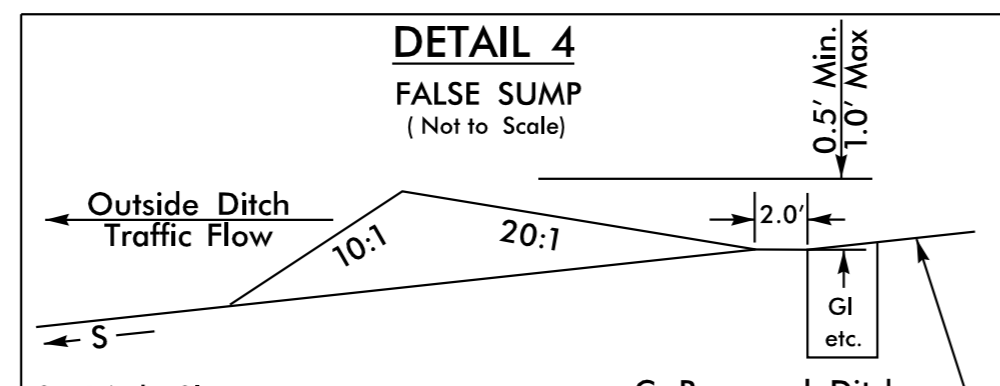
FROM STA. 89+00 TO STA. 89+28 -L- (RT)



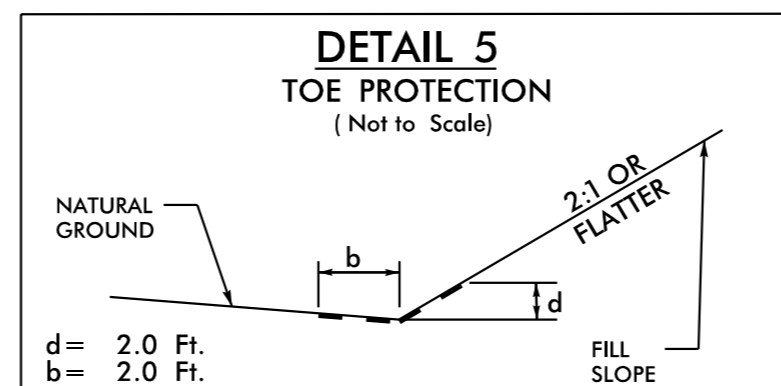
FROM STA. 119+10 TO STA. 120+57 -L- (RT)



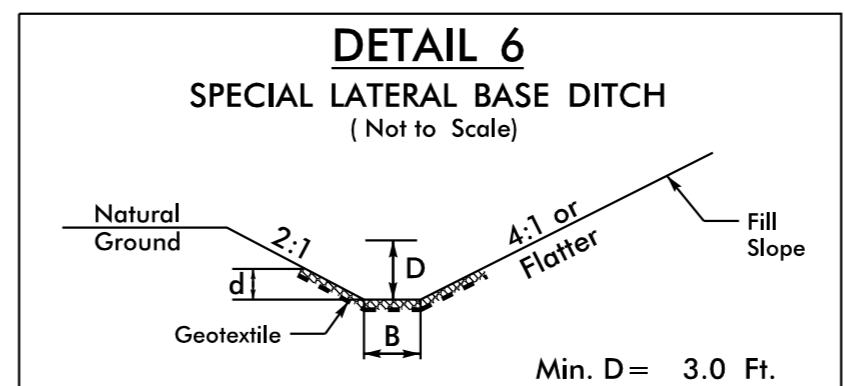
FROM STA. 21+00 TO STA. 23+50 -Y2- (RT)  
 FROM STA. 24+90 TO STA. 29+00 -Y2- (RT)  
 FROM STA. 14+00 TO STA. 14+50 -Y2A- (RT)  
 FROM STA. 43+79 TO STA. 47+00 -L- (LT)  
 FROM STA. 14+00 TO STA. 14+50 -Y4- (LT)  
 FROM STA. 61+56 TO STA. 61+75 -L- (LT)  
 FROM STA. 61+75 TO STA. 63+00 -L- (LT)  
 FROM STA. 72+96 TO STA. 74+00 -L- (LT)  
 FROM STA. 74+60 TO STA. 75+00 -L- (LT)  
 FROM STA. 75+00 TO STA. 76+00 -L- (LT)  
 FROM STA. 79+50 TO STA. 81+16 -L- (LT)  
 FROM STA. 81+60 TO STA. 83+00 -L- (LT)  
 FROM STA. 84+15 TO STA. 85+00 -L- (LT)  
 FROM STA. 85+50 TO STA. 86+75 -L- (LT)  
 FROM STA. 87+25 TO STA. 89+90 -L- (LT)  
 FROM STA. 89+90 TO STA. 90+47 -L- (LT)  
 FROM STA. 17+10 TO STA. 18+00 -Y7- (RT)  
 FROM STA. 16+00 TO STA. 18+00 -Y7- (LT)  
 FROM STA. 91+33 TO STA. 93+00 -L- (RT)  
 FROM STA. 96+27 TO STA. 97+50 -L- (RT)  
 FROM STA. 101+50 TO STA. 102+40 -L- (RT)  
 FROM STA. 102+40 TO STA. 104+00 -L- (RT)  
 FROM STA. 103+20 TO STA. 104+50 -L- (LT)  
 FROM STA. 131+00 TO STA. 134+00 -L- (RT)  
 FROM STA. 134+20 TO STA. 136+00 -L- (RT)  
 FROM STA. 148+00 TO STA. 149+62 -L- (RT)  
 FROM STA. 149+62 TO STA. 153+00 -L- (RT)  
 FROM STA. 18+80 TO STA. 19+50 -Y8- (RT)  
 FROM STA. 13+50 TO STA. 15+50 -Y8- (RT)  
 FROM STA. 13+50 TO STA. 14+00 -Y8- (LT)  
 FROM STA. 25+00 TO STA. 26+50 -Y8- (RT)  
 FROM STA. 153+00 TO STA. 155+50 -L- (LT)  
 FROM STA. 154+00 TO STA. 157+10 -L- (RT)  
 FROM STA. 18+20 TO STA. 18+30 -Y9- (RT)  
 FROM STA. 163+50 TO STA. 169+00 -L- (RT)  
 FROM STA. 171+00 TO STA. 173+00 -L- (LT)  
 FROM STA. 176+00 TO STA. 177+00 -L- (LT)  
 FROM STA. 178+50 TO STA. 180+50 -L- (RT)  
 FROM STA. 181+00 TO STA. 187+75 -L- (LT)  
 FROM STA. 182+15 TO STA. 184+00 -L- (RT)  
 FROM STA. 221+50 TO STA. 222+50 -L- (LT)  
 FROM STA. 227+50 TO STA. 230+00 -L- (LT)  
 FROM STA. 243+00 TO STA. 246+00 -L- (LT)  
 FROM STA. 250+70 TO STA. 251+50 -L- (LT)  
 FROM STA. 251+50 TO STA. 253+00 -L- (LT)  
 FROM STA. 251+50 TO STA. 253+00 -L- (RT)  
 FROM STA. 253+00 TO STA. 254+30 -L- (LT)  
 FROM STA. 11+00 TO STA. 12+50 -Y12- (RT)  
 FROM STA. 13+00 TO STA. 15+00 -Y12- (RT)  
 FROM STA. 14+90 TO STA. 16+00 -Y12- (LT)  
 FROM STA. 276+65 TO STA. 277+50 -L- (LT)  
 FROM STA. 15+50 TO STA. 16+72 -Y13- (RT)  
 FROM STA. 11+50 TO STA. 13+00 -Y14- (LT)  
 FROM STA. 13+50 TO STA. 14+00 -Y14- (LT)  
 FROM STA. 11+50 TO STA. 13+00 -Y15- (RT)  
 FROM STA. 15+00 TO STA. 16+95 -Y15- (RT)  
 FROM STA. 331+50 TO STA. 332+50 -L- (RT)  
 FROM STA. 364+50 TO STA. 369+50 -L- (RT)  
 FROM STA. 379+00 TO STA. 381+00 -L- (LT)



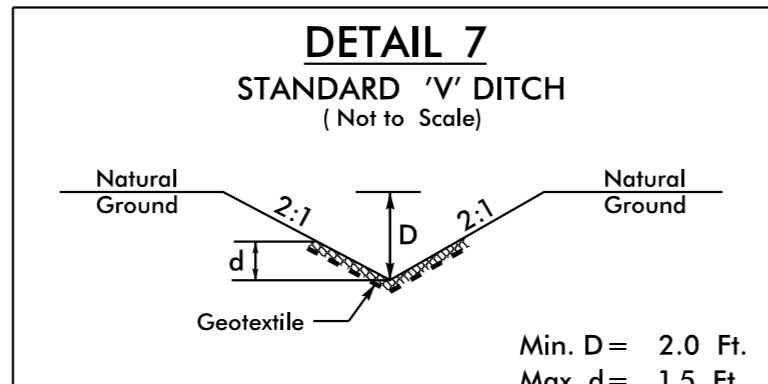
S = Ditch Slope  
 STA. 116+85 -L- (LT) STA. 199+85 -L- (LT) STA. 326+64 -L- (RT)  
 STA. 118+85 -L- (LT) STA. 206+15 -L- (RT) STA. 329+63 -L- (RT)  
 STA. 121+85 -L- (LT) STA. 208+15 -L- (RT) STA. 335+13 -L- (RT)  
 STA. 130+15 -L- (RT) STA. 209+65 -L- (RT) STA. 364+85 -L- (LT)  
 STA. 134+15 -L- (RT) STA. 251+15 -L- (RT) STA. 387+85 -L- (LT)  
 STA. 136+15 -L- (RT) STA. 260+84 -L- (LT) STA. 393+70 -L- (LT)  
 STA. 158+35 -L- (RT) STA. 269+15 -L- (RT)  
 STA. 190+55 -L- (RT)  
 STA. 191+65 -L- (RT)



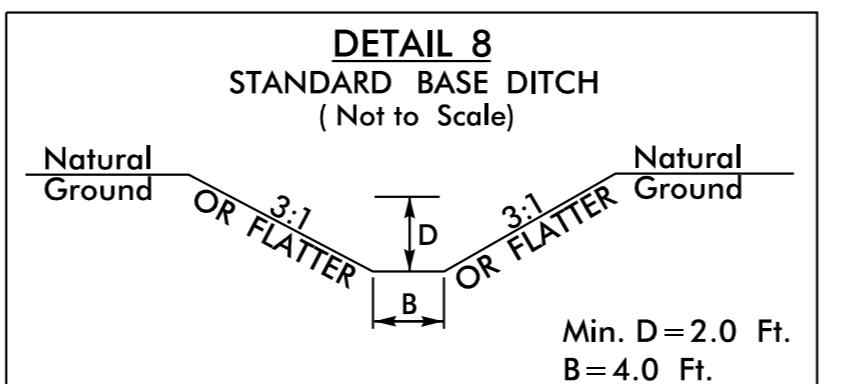
FROM STA. 11+50 TO STA. 12+00 -Y2A- (LT)  
 FROM STA. 74+30 TO STA. 75+50 -L- (RT)  
 FROM STA. 136+50 TO STA. 138+00 -L- (RT)  
 FROM STA. 142+00 TO STA. 143+22 -L- (LT)  
 FROM STA. 177+40 TO STA. 179+25 -L- (LT)  
 FROM STA. 244+00 TO STA. 245+00 -L- (RT)  
 FROM STA. 255+00 TO STA. 256+00 -L- (RT)



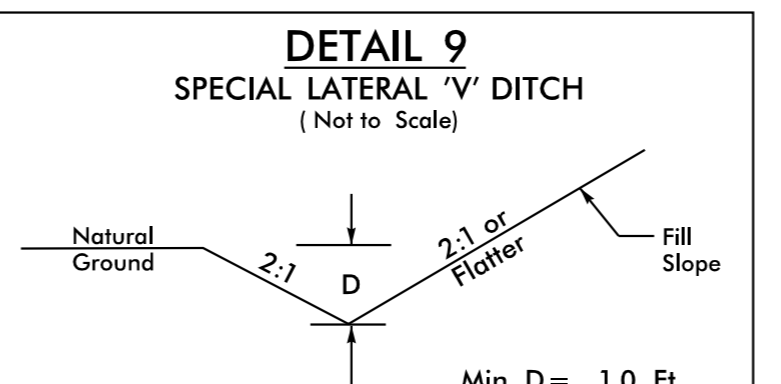
Type of Liner = Class 'B' Rip-Rap  
 FROM STA. 157+10 TO STA. 163+50 -L- (RT)  
 FROM STA. 282+00 TO STA. 284+00 -L- (LT)  
 FROM STA. 285+50 TO STA. 290+00 -L- (RT)



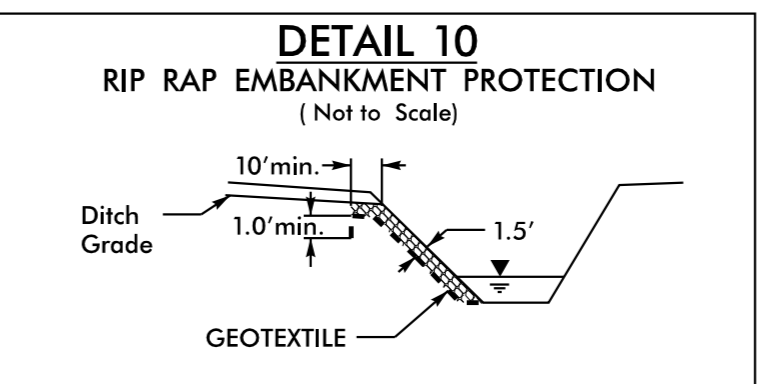
STA. 63+40 -L- (LT)



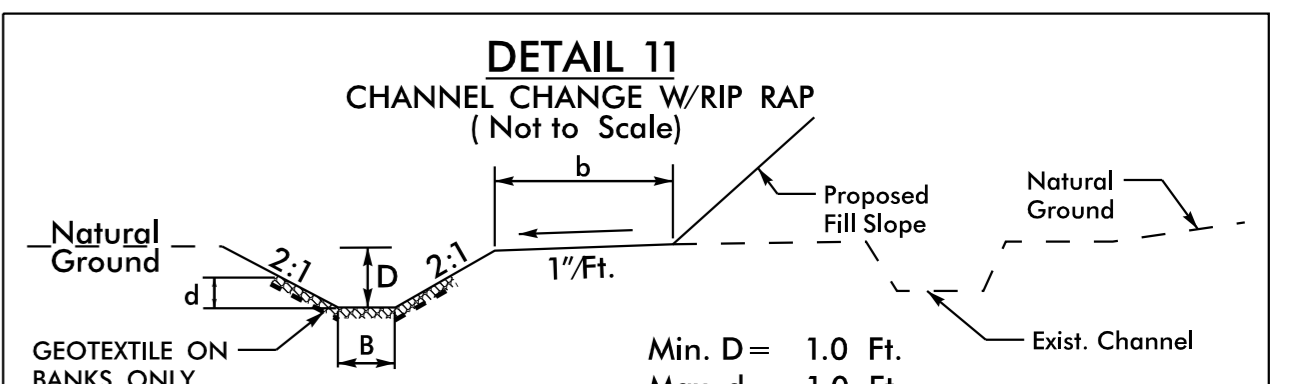
FROM STA. 53+86 TO STA. 54+50 -L- (LT)  
 FROM STA. 253+00 TO STA. 253+53 -L- (RT)



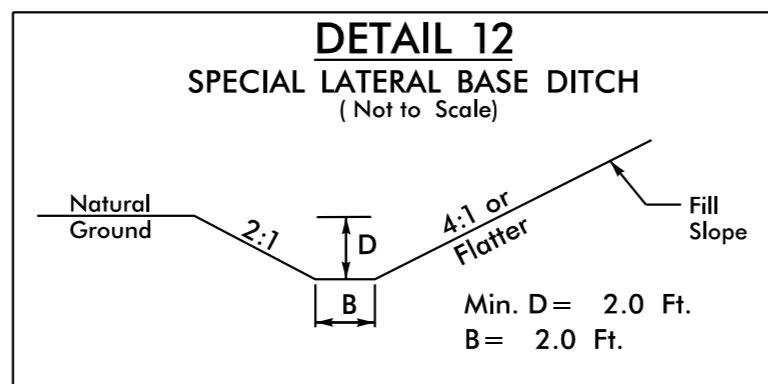
FROM STA. 14+90 TO STA. 16+00 -Y1- (RT)  
 FROM STA. 27+00 TO STA. 31+00 -Y2- (LT)  
 FROM STA. 48+50 TO STA. 51+50 -L- (LT)  
 FROM STA. 65+65 TO STA. 67+00 -L- (LT)  
 FROM STA. 67+00 TO STA. 68+50 -L- (LT)  
 FROM STA. 10+85 TO STA. 12+25 -Y6- (LT)



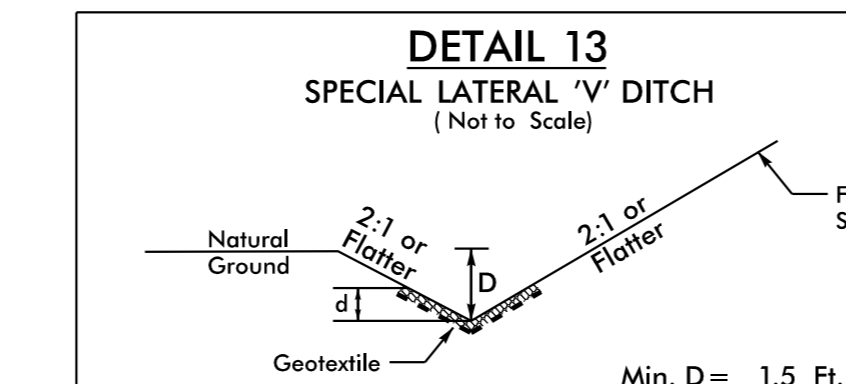
STA. 53+35 -L- (LT)  
 STA. 53+86 -L- (LT)  
 STA. 232+50 -L- (RT)  
 STA. 233+50 -L- (RT)  
 STA. 375+40 -L- (LT)  
 STA. 375+45 -L- (LT)  
 STA. 380+60 -L- (RT)



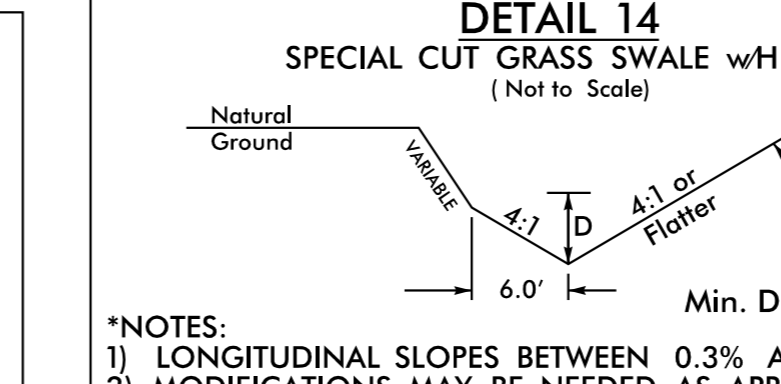
Type of Liner = Class I Rip-Rap  
 FROM STA. 52+72 TO STA. 53+25 -L- (RT)



FROM STA. 142+00 TO STA. 143+25 -L- (RT)

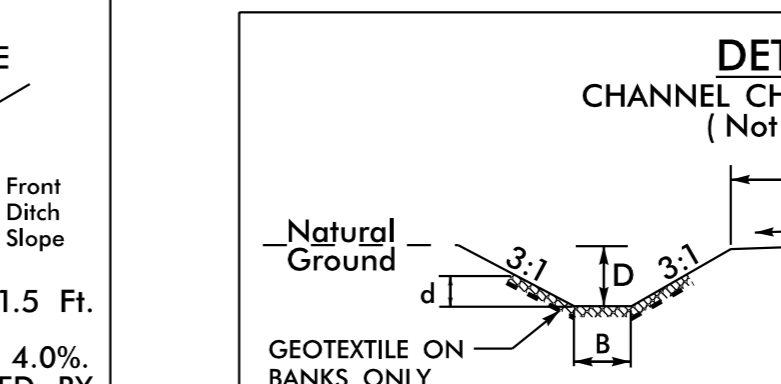


FROM STA. 51+50 TO STA. 53+10 -L- (LT)

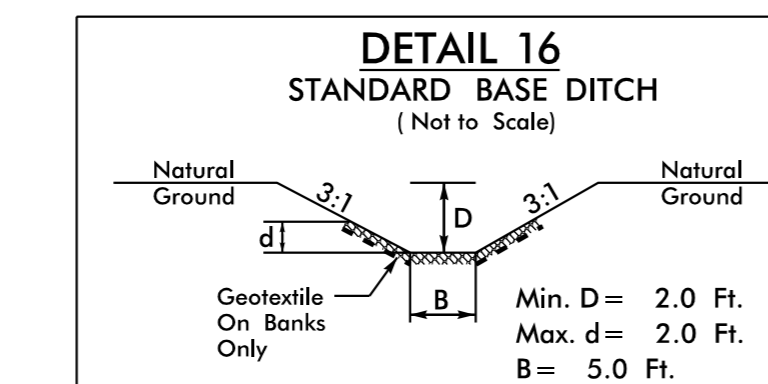


\*NOTES:  
 1) LONGITUDINAL SLOPES BETWEEN 0.3% AND 4.0%.  
 2) MODIFICATIONS MAY BE NEEDED, AS APPROVED BY ENGINEER.

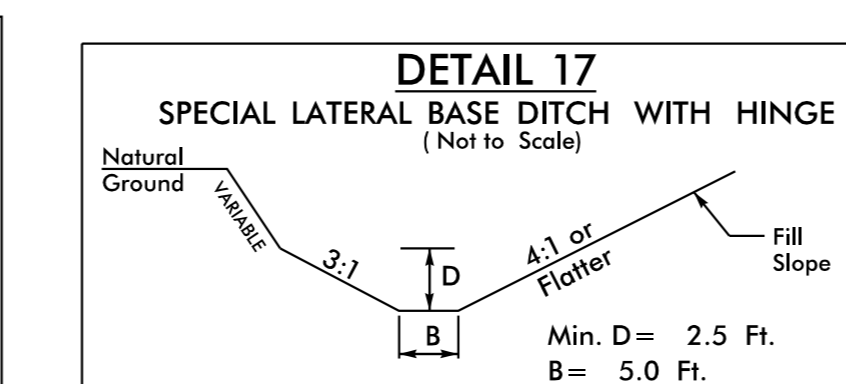
FROM STA. 144+00 TO STA. 145+50 -L- (RT)  
 FROM STA. 177+15 TO STA. 178+50 -L- (RT)  
 FROM STA. 196+00 TO STA. 197+25 -L- (RT)  
 FROM STA. 258+00 TO STA. 259+00 -L- (LT)  
 FROM STA. 351+50 TO STA. 353+00 -L- (LT)  
 FROM STA. 388+50 TO STA. 393+00 -L- (LT)



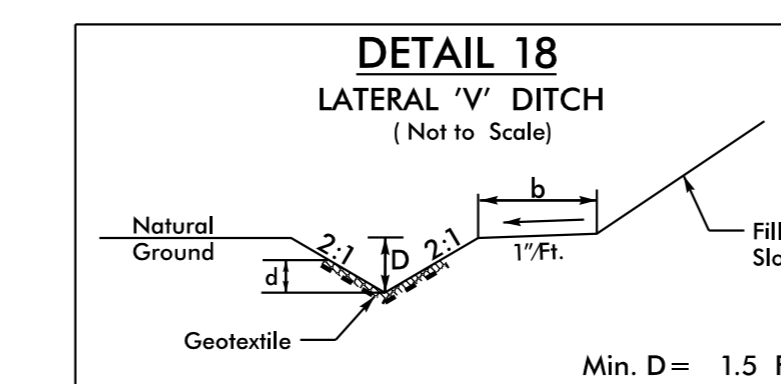
Type of Liner = Class I Rip-Rap  
 FROM STA. 38+90 TO STA. 40+35 -L- (RT)



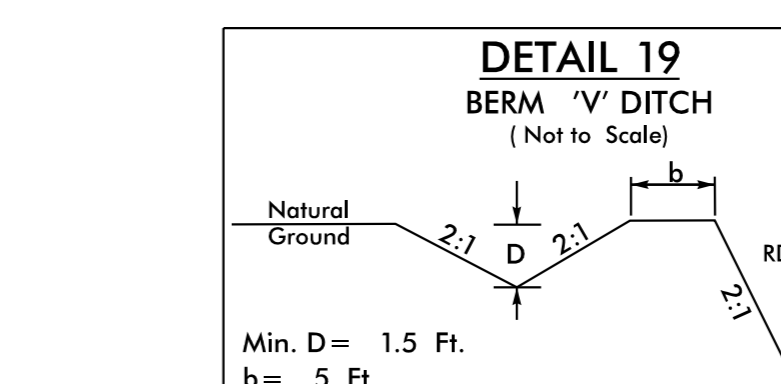
STA. 40+35 -L- (RT)



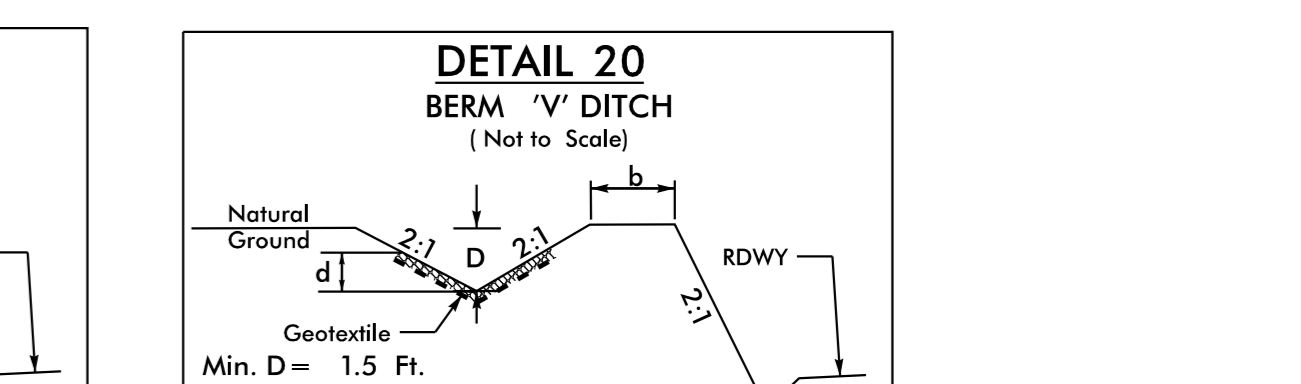
FROM STA. 293+00 TO STA. 297+50 -L- (RT)



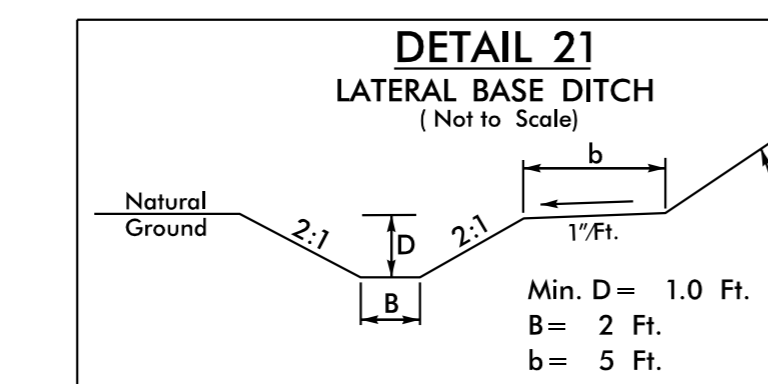
Type of Liner = Class 'B' Rip-Rap  
 FROM STA. 100+95 TO STA. 102+00 -L- (LT)  
 FROM STA. 126+50 TO STA. 129+00 -L- (LT)  
 FROM STA. 363+32 TO STA. 364+50 -L- (RT)  
 FROM STA. 375+45 TO STA. 377+50 -L- (LT)



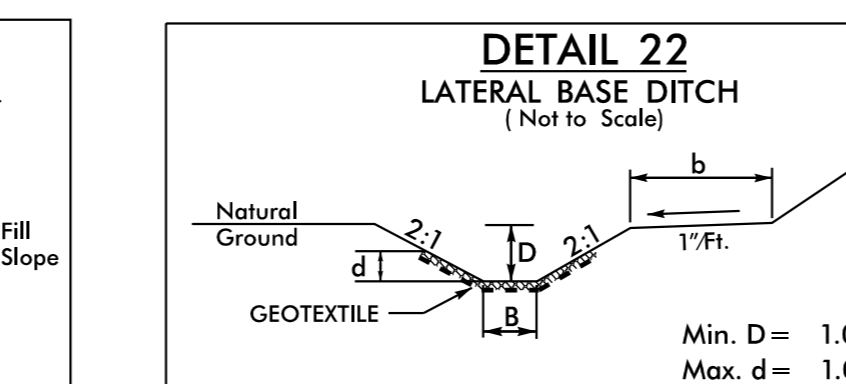
FROM STA. 119+00 TO STA. 121+80 -L- (LT)  
 FROM STA. 124+00 TO STA. 124+68 -L- (LT)  
 FROM STA. 127+50 TO STA. 129+00 -L- (RT)  
 FROM STA. 129+00 TO STA. 130+00 -L- (RT)  
 FROM STA. 186+50 TO STA. 188+89 -L- (RT)  
 FROM STA. 189+21 TO STA. 190+40 -L- (RT)  
 FROM STA. 190+40 TO STA. 192+35 -L- (RT)  
 FROM STA. 203+00 TO STA. 203+50 -L- (RT)  
 FROM STA. 203+50 TO STA. 205+00 -L- (RT)  
 FROM STA. 208+00 TO STA. 208+50 -L- (RT)  
 FROM STA. 208+50 TO STA. 209+50 -L- (LT)  
 FROM STA. 268+50 TO STA. 269+85 -L- (LT)  
 FROM STA. 272+00 TO STA. 273+00 -L- (LT)  
 FROM STA. 296+20 TO STA. 297+50 -L- (LT)  
 FROM STA. 297+50 TO STA. 300+00 -L- (LT)  
 FROM STA. 300+00 TO STA. 301+00 -L- (LT)  
 FROM STA. 301+00 TO STA. 302+00 -L- (LT)



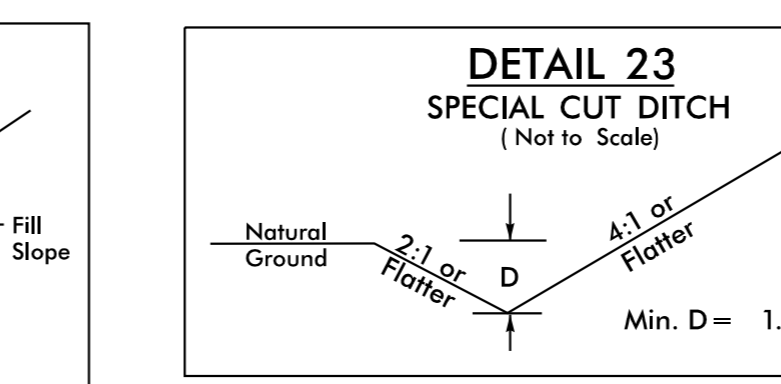
Type of Liner = Class 'B' Rip-Rap  
 FROM STA. 122+00 TO STA. 124+00 -L- (LT)  
 FROM STA. 136+00 TO STA. 138+00 -L- (LT)  
 FROM STA. 138+00 TO STA. 141+50 -L- (LT)  
 FROM STA. 205+00 TO STA. 208+00 -L- (RT)  
 FROM STA. 209+50 TO STA. 212+00 -L- (LT)  
 FROM STA. 270+15 TO STA. 272+50 -L- (LT)  
 FROM STA. 273+00 TO STA. 274+50 -L- (LT)  
 FROM STA. 274+50 TO STA. 275+25 -L- (LT)  
 FROM STA. 302+00 TO STA. 304+00 -L- (LT)  
 FROM STA. 311+00 TO STA. 313+80 -L- (RT)  
 FROM STA. 314+00 TO STA. 317+80 -L- (RT)  
 FROM STA. 318+00 TO STA. 320+50 -L- (RT)



FROM STA. 53+25 TO STA. 53+80 -L- (RT)  
 FROM STA. 150+00 TO STA. 152+00 -L- (LT)  
 FROM STA. 198+30 TO STA. 199+00 -L- (RT)



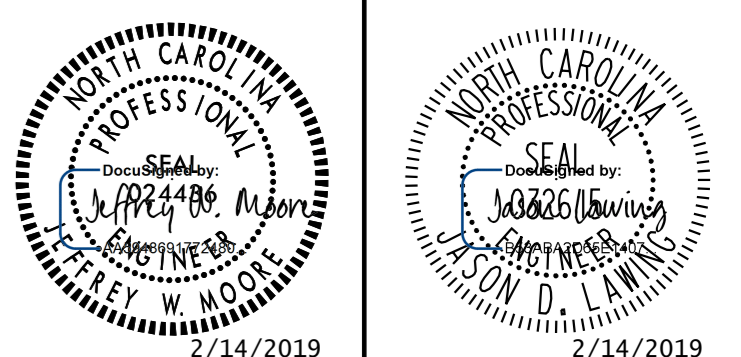
Type of Liner = Class 'B' Rip-Rap  
 FROM STA. 148+70 TO STA. 150+00 -L- (LT)  
 FROM STA. 199+00 TO STA. 200+50 -L- (RT)  
 FROM STA. 362+00 TO STA. 363+05 -L- (LT)  
 FROM STA. 381+00 TO STA. 382+20 -L- (LT)



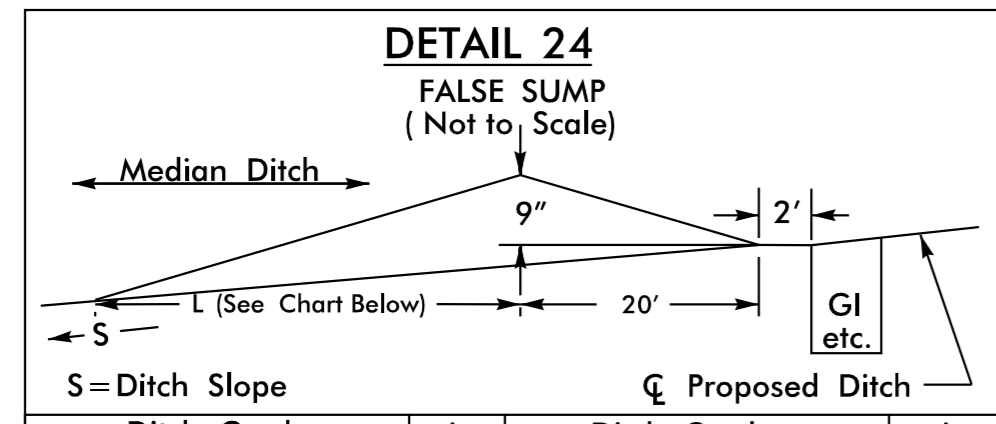
FROM STA. 12+00 TO STA. 14+05 -Y2A- (LT)  
 FROM STA. 57+90 TO STA. 60+87.38 -L- (LT)  
 FROM STA. 14+00 TO STA. 14+31.28 -Y4- (RT)  
 FROM STA. 77+00 TO STA. 79+50 -L- (LT)  
 FROM STA. 19+50 TO STA. 20+00 -Y8- (RT)  
 FROM STA. 17+50 TO STA. 18+00 -Y9- (LT)  
 FROM STA. 173+50 TO STA. 174+50 -L- (RT)  
 FROM STA. 247+00 TO STA. 249+00 -L- (LT)  
 FROM STA. 277+50 TO STA. 278+50 -L- (LT)  
 FROM STA. 13+72 TO STA. 14+50 -Y13- (LT)

REVISIONS

**Kimley Horn**  
 P.O. BOX 33068 • RALEIGH, N.C. 27636-3068  
 ROADWAY DESIGN ENGINEER  
 HYDRAULICS ENGINEER  
 PROJECT REFERENCE NO. R-2530B  
 SHEET NO. 2D-1  
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

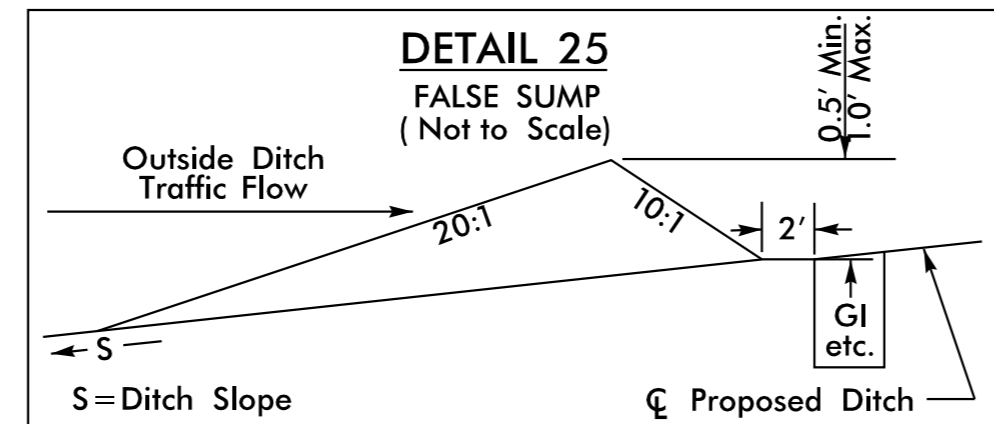


**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

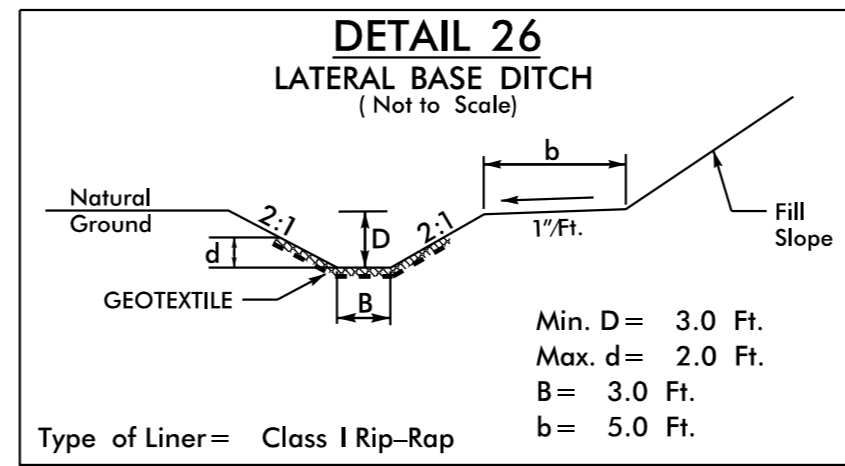


Ditch Grade	L	Ditch Grade	L
0.0% To 2.0%	20'	Over 4.0% To 6.0%	40'
Over 2.0% To 4.0%	30'	Over 6.0%	50'

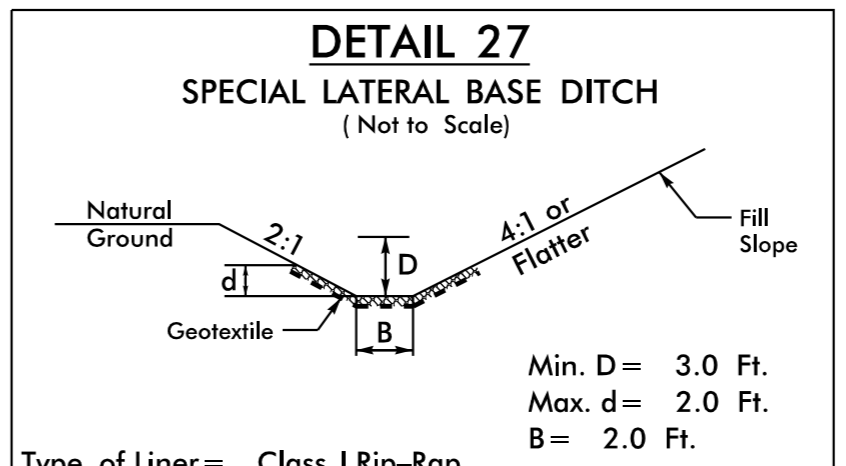
STA. 101+59 -L-	STA. 215+65 -L-	STA. 302+14 -L-
STA. 107+36 -L-	STA. 221+14 -L-	STA. 308+86 -L-
STA. 113+17 -L-	STA. 232+14 -L-	STA. 310+36 -L-
STA. 122+85 -L-	STA. 243+18 -L-	STA. 313+86 -L-
STA. 130+15 -L-	STA. 251+20 -L-	STA. 317+86 -L-
STA. 134+15 -L-	STA. 253+20 -L-	STA. 325+13 -L-
STA. 136+15 -L-	STA. 260+30 -L-	STA. 326+64 -L-
STA. 155+85 -L-	STA. 269+15 -L-	STA. 335+13 -L-
STA. 156+85 -L-	STA. 272+15 -L-	STA. 351+65 -L-
STA. 159+85 -L-	STA. 276+15 -L-	STA. 357+15 -L-
STA. 163+35 -L-	STA. 278+70 -L-	STA. 359+13 -L-
STA. 166+85 -L-	STA. 281+40 -L-	STA. 362+65 -L-
STA. 170+85 -L-	STA. 287+14 -L-	STA. 363+85 -L-
STA. 178+65 -L-	STA. 289+13 -L-	STA. 371+50 -L-
STA. 191+65 -L-	STA. 293+14 -L-	STA. 374+85 -L-
STA. 212+15 -L-	STA. 297+65 -L-	STA. 380+85 -L-
		STA. 382+85 -L-



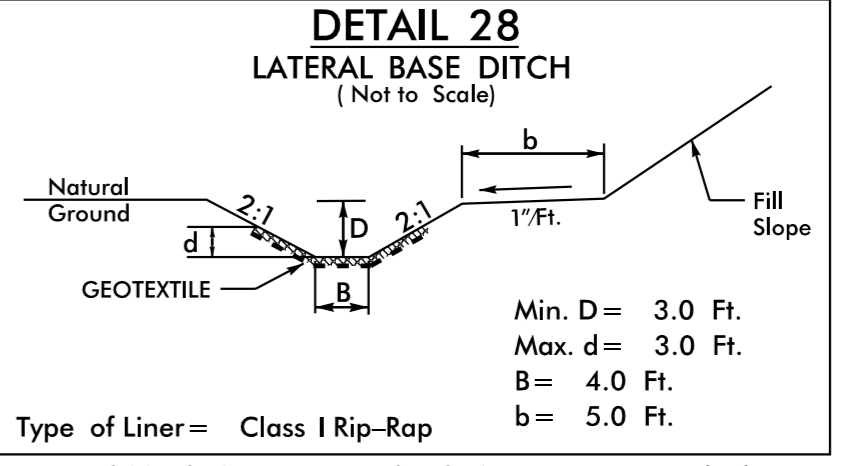
STA. 93+15 -L- (LT)	STA. 274+65 -L- (LT)
STA. 122+84 -L- (RT)	STA. 276+15 -L- (LT)
STA. 139+15 -L- (LT)	STA. 291+64 -L- (LT)
STA. 141+65 -L- (LT)	STA. 297+63 -L- (LT)
STA. 184+40 -L- (RT)	STA. 301+14 -L- (LT)
STA. 205+15 -L- (LT)	STA. 304+64 -L- (LT)
STA. 208+65 -L- (LT)	STA. 310+37 -L- (RT)
STA. 212+15 -L- (LT)	STA. 313+87 -L- (RT)
STA. 215+65 -L- (LT)	STA. 317+86 -L- (RT)
STA. 221+14 -L- (LT)	STA. 326+64 -L- (LT)
STA. 230+15 -L- (LT)	STA. 329+14 -L- (LT)
STA. 272+15 -L- (LT)	STA. 334+10 -L- (LT) (BY OTHERS)
	STA. 393+50 -L- (RT)



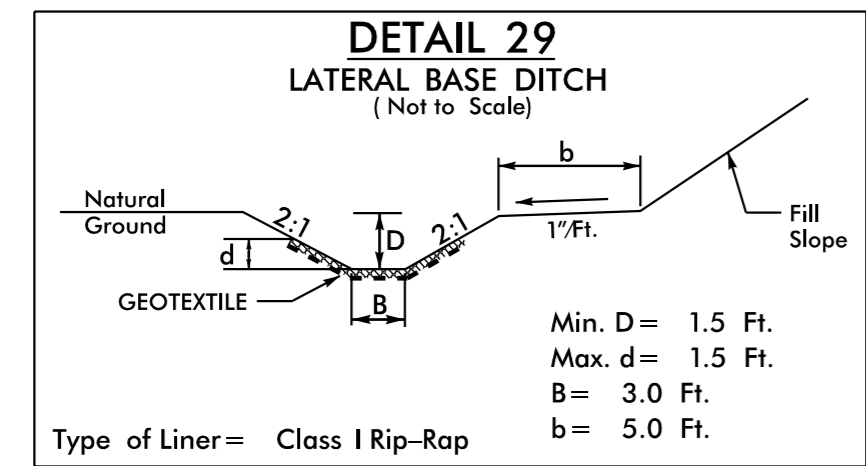
Min. D = 3.0 Ft.  
Max. d = 2.0 Ft.  
B = 3.0 Ft.  
b = 5.0 Ft.



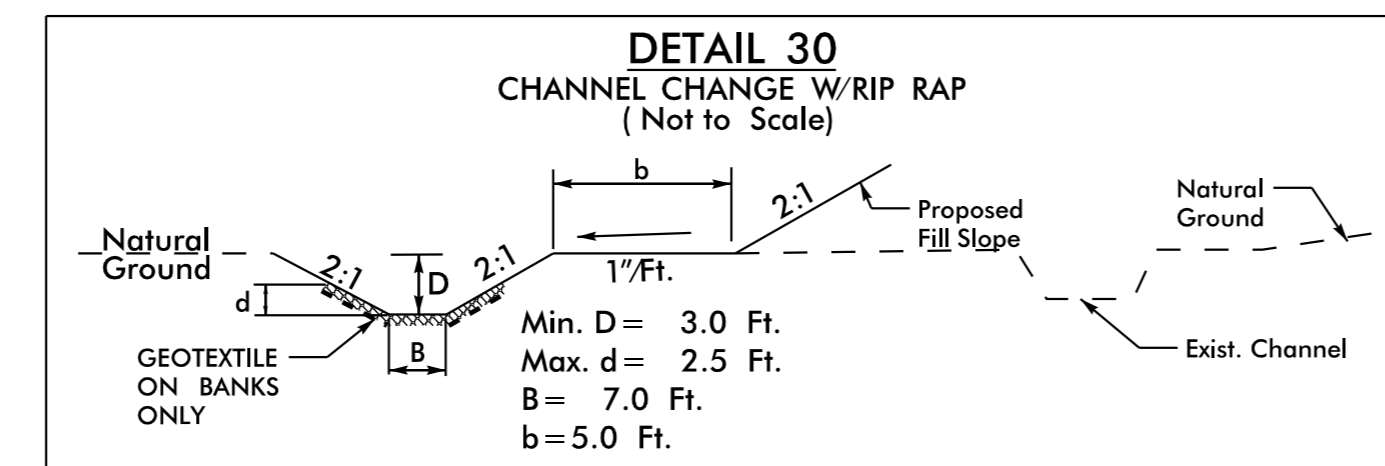
Min. D = 3.0 Ft.  
Max. d = 2.0 Ft.  
B = 2.0 Ft.



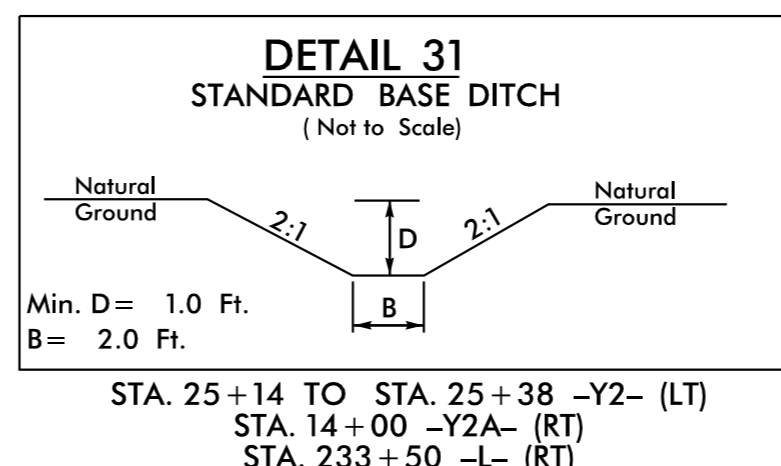
Min. D = 3.0 Ft.  
Max. d = 3.0 Ft.  
B = 4.0 Ft.  
b = 5.0 Ft.



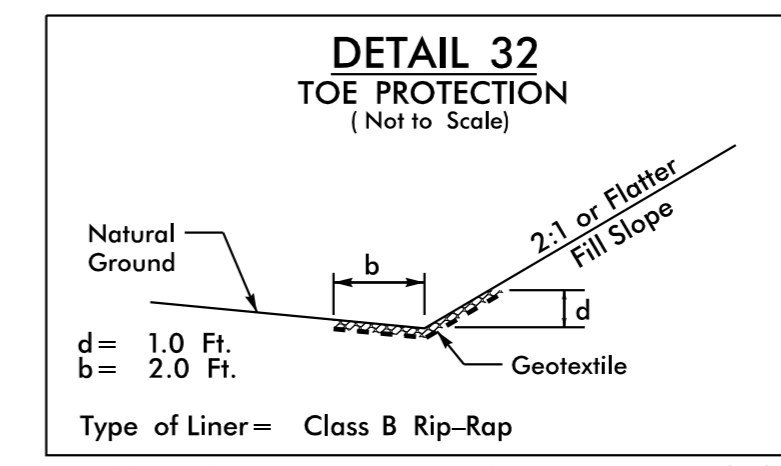
Min. D = 1.5 Ft.  
Max. d = 1.5 Ft.  
B = 3.0 Ft.  
b = 5.0 Ft.



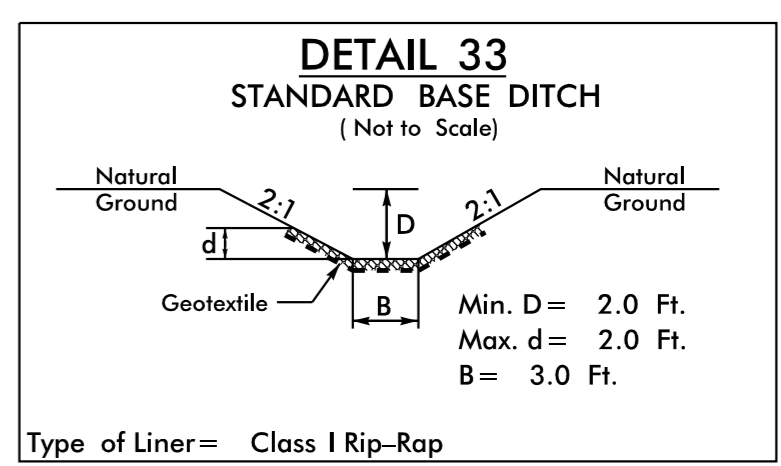
Min. D = 3.0 Ft.  
Max. d = 2.5 Ft.  
B = 7.0 Ft.  
b = 5.0 Ft.



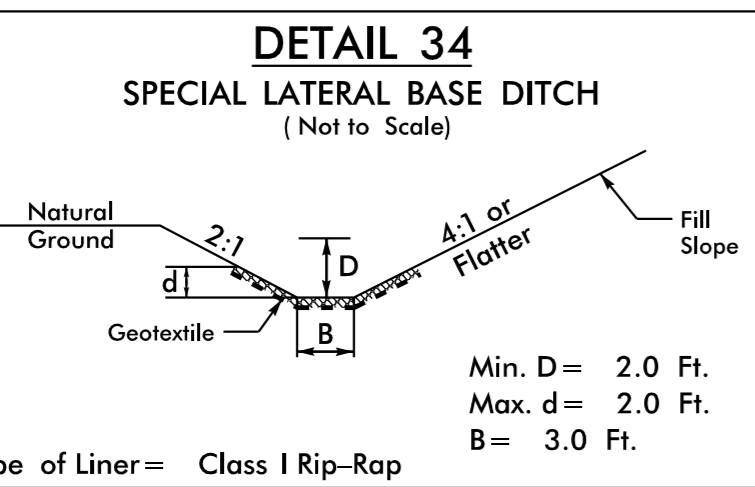
Min. D = 1.0 Ft.  
B = 2.0 Ft.



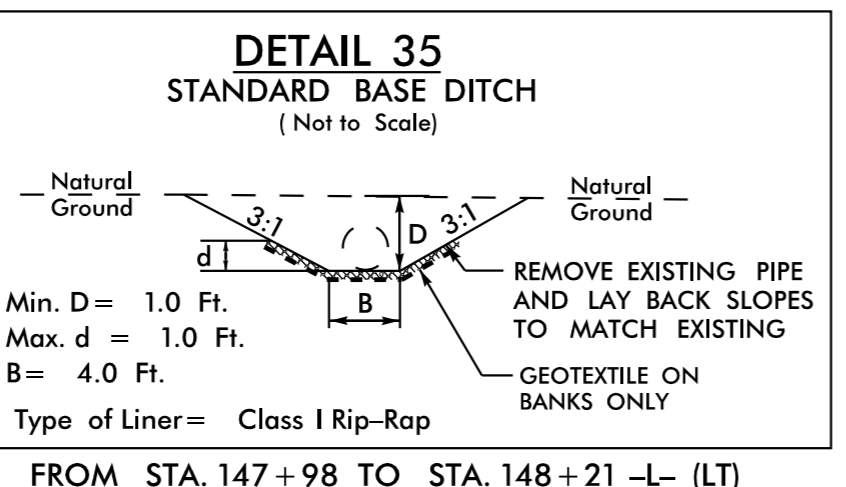
d = 1.0 Ft.  
b = 2.0 Ft.



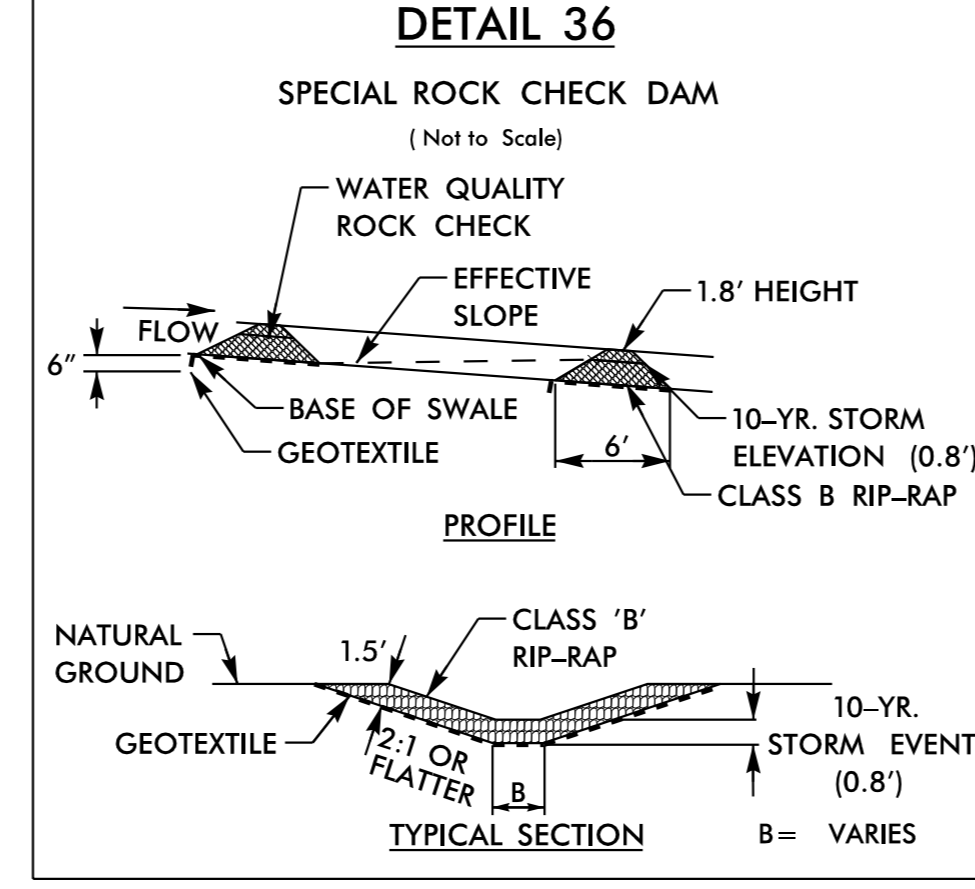
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 3.0 Ft.



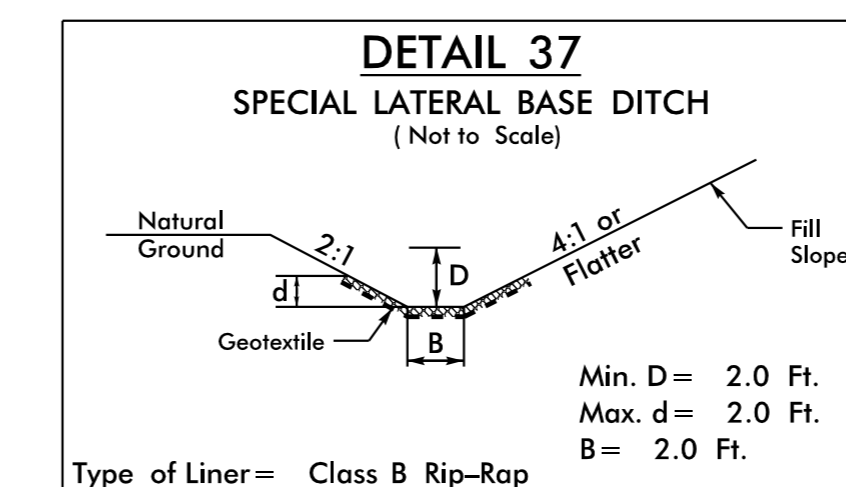
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 3.0 Ft.



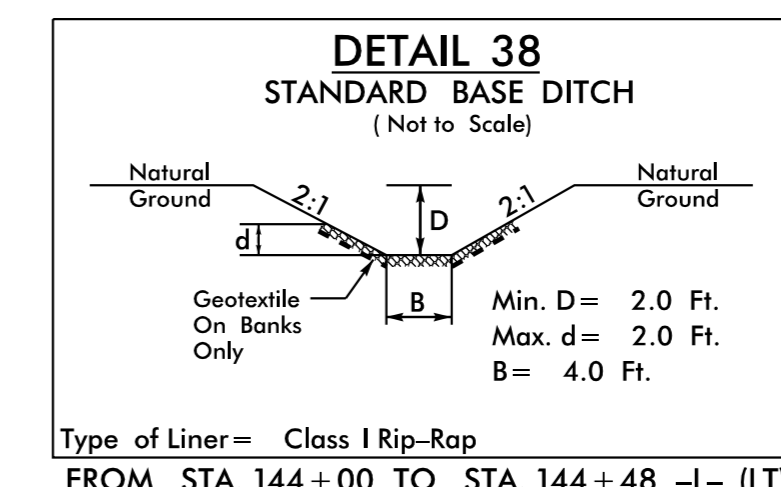
Min. D = 1.0 Ft.  
Max. d = 1.0 Ft.  
B = 4.0 Ft.



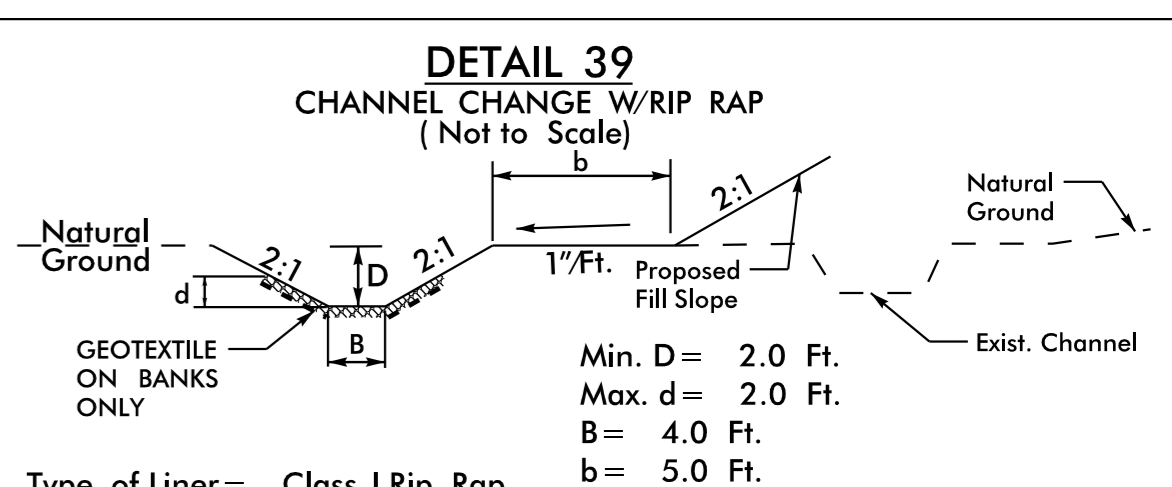
FROM STA. 276+50 TO STA. 277+75 -L- (RT)  
FROM STA. 290+50 TO STA. 297+50 -L- (RT)  
FROM STA. 307+00 TO STA. 308+50 -L- (LT)  
FROM STA. 332+00 TO STA. 334+00 -L- (LT)



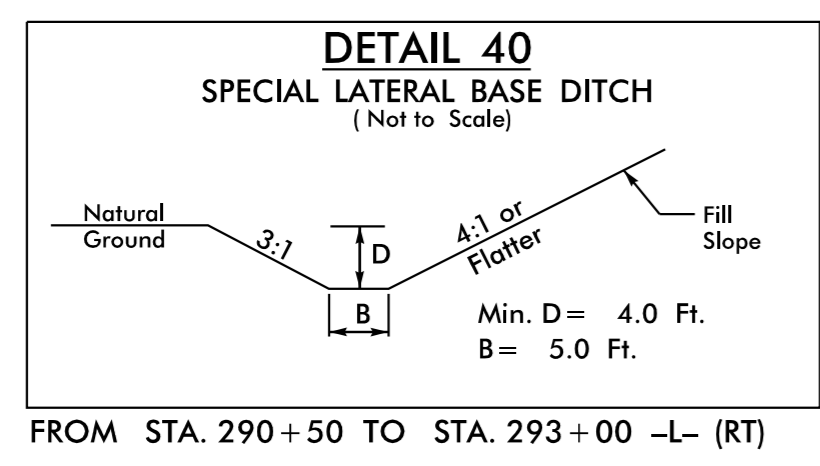
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 2.0 Ft.



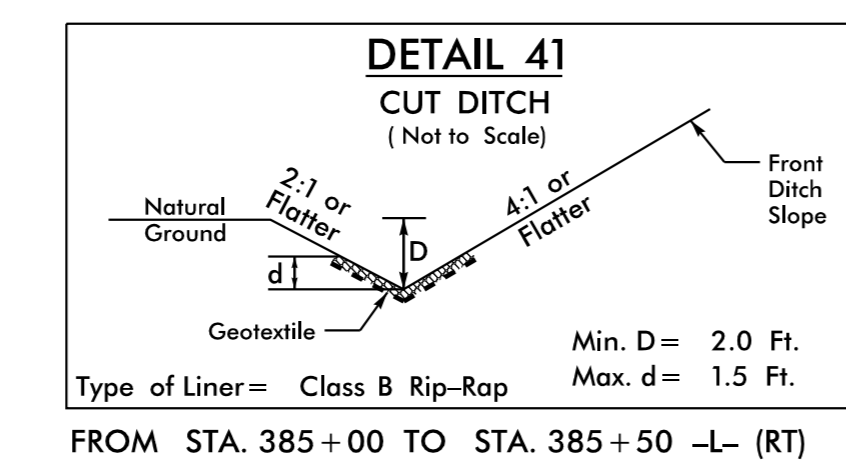
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 4.0 Ft.



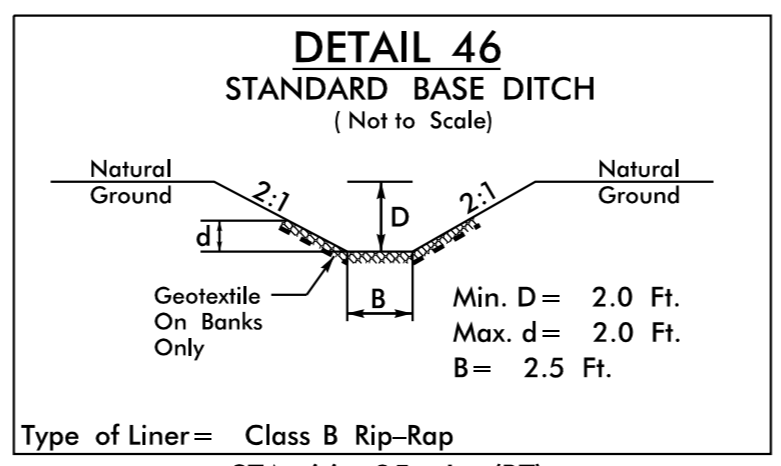
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 4.0 Ft.  
b = 5.0 Ft.



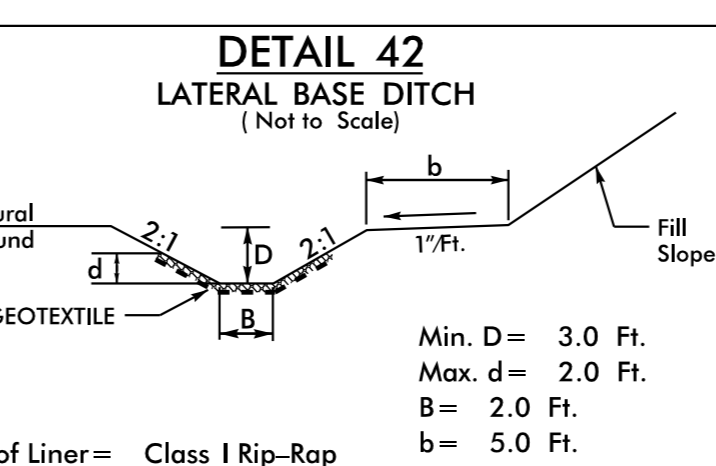
Min. D = 4.0 Ft.  
B = 5.0 Ft.



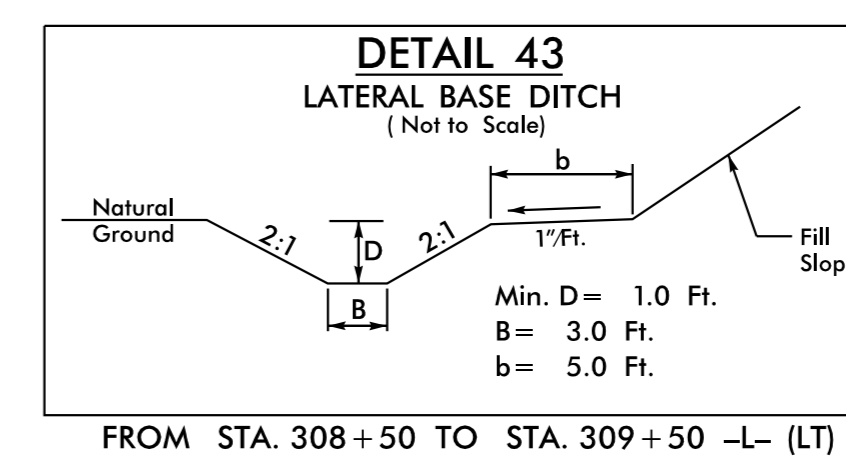
Min. D = 2.0 Ft.  
Max. d = 1.5 Ft.



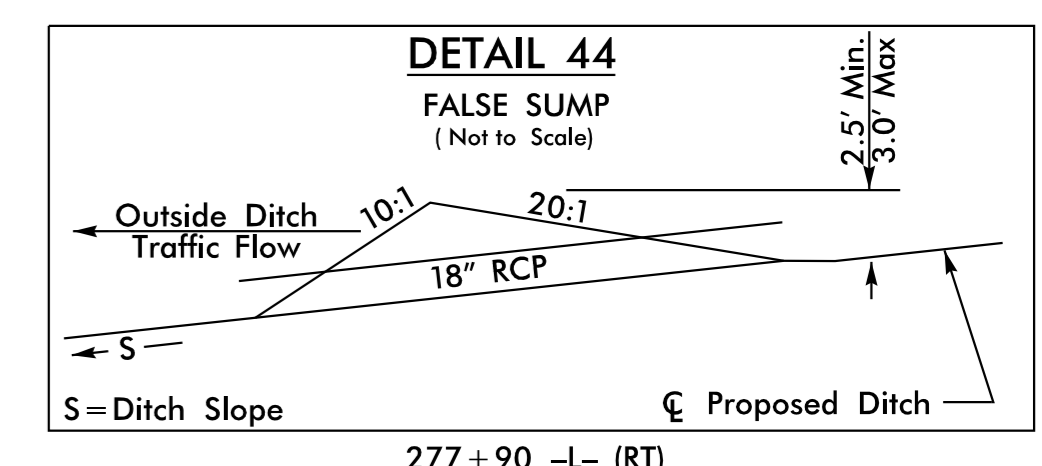
Min. D = 2.0 Ft.  
Max. d = 2.0 Ft.  
B = 2.5 Ft.



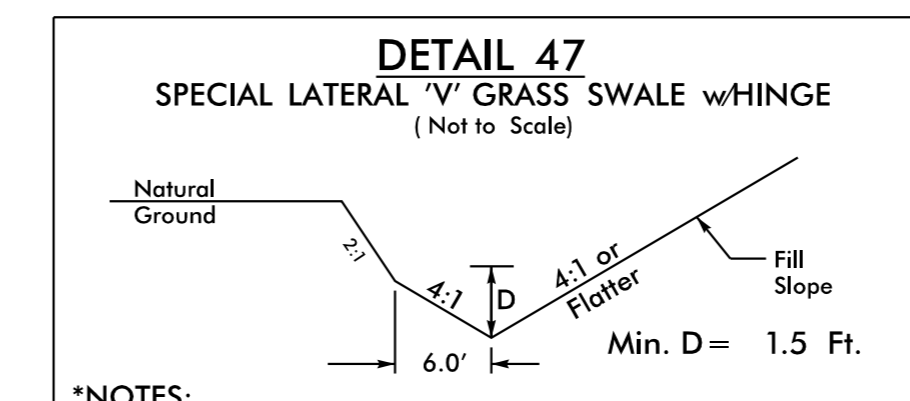
Min. D = 3.0 Ft.  
Max. d = 2.0 Ft.  
B = 2.0 Ft.  
b = 5.0 Ft.



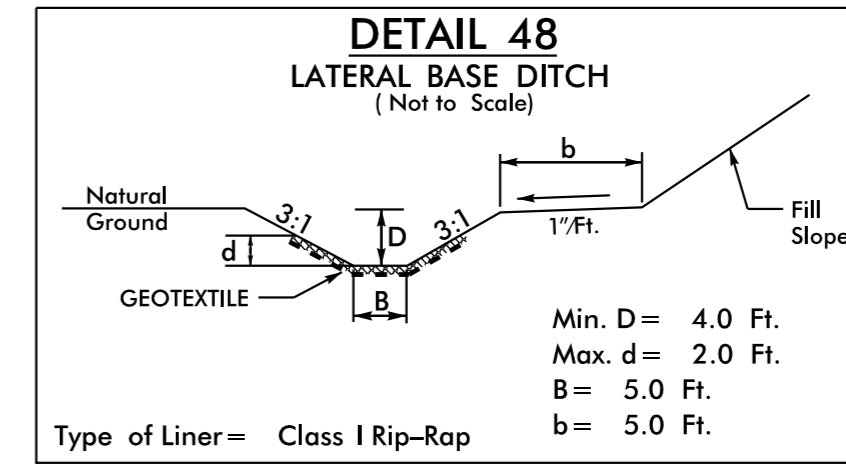
Min. D = 1.0 Ft.  
B = 3.0 Ft.  
b = 5.0 Ft.



277+90 -L- (RT)



Min. D = 1.5 Ft.



Min. D = 4.0 Ft.  
Max. d = 2.0 Ft.  
B = 5.0 Ft.  
b = 5.0 Ft.

REVISIONS