

NOTES:

1. ALL WORK REQUIRED TO COMPLETE THE INSTALLATION OF EDGELINE RUMBLE STRIPS SHALL BE INCIDENTAL TO ITEM 760017 - RUMBLE STRIPS, CONCRETE OR ITEM 760015 - RUMBLE STRIPS, CONCRETE, SHALLOW DEPTH.

2. EDGELINE RUMBLE STRIPS (ROADWAY DEPTH - SEE ABOVE) SHALL BE INSTALLED ALONG ALL INSIDE SHOULDERS OF US 301, AS PER THIS DETAIL, EXCEPT FOR THE FOLLOWING LOCATIONS:

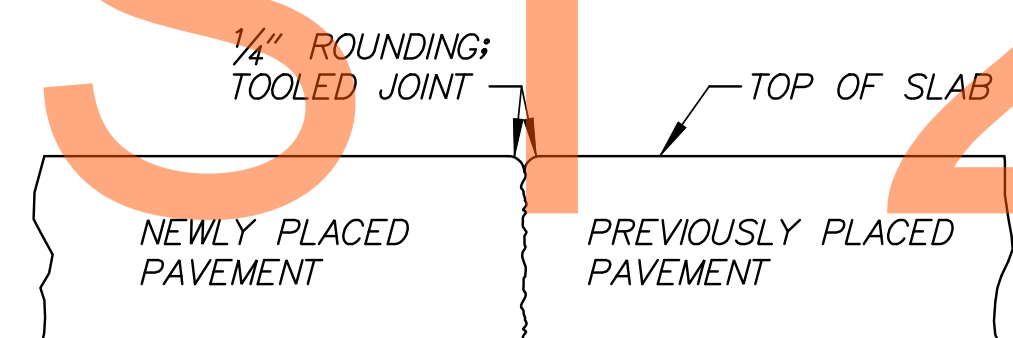
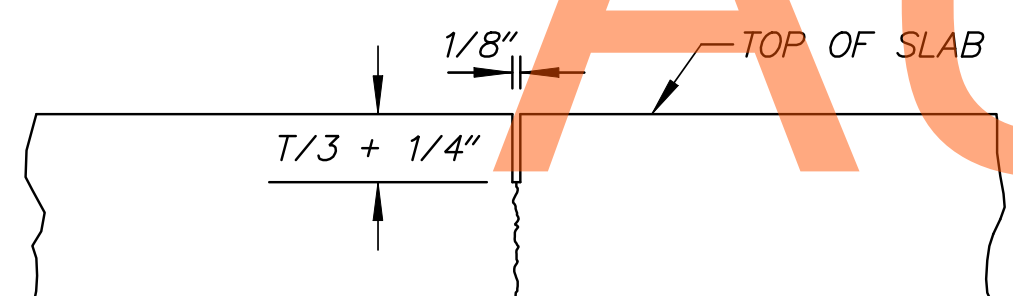
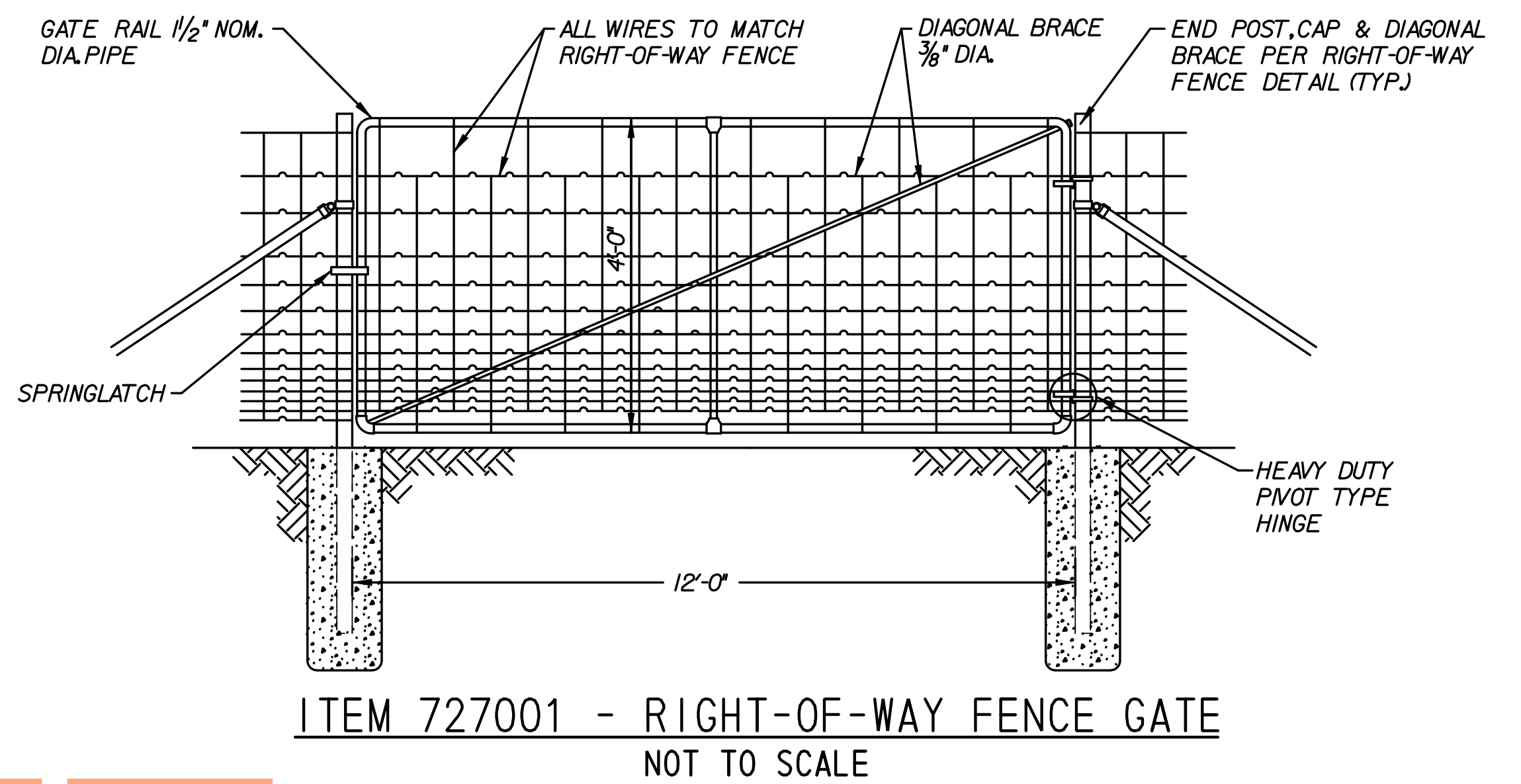
- STATION 684+50 RT. TO STATION 687+00 RT.
- STATION 805+22 RT. TO STATION 810+24 RT.
- STATION 685+00 LT. TO STATION 687+50 LT.
- STATION 806+08 LT. TO STATION 810+86 LT.

3. EDGELINE RUMBLE STRIPS SHALL BE INSTALLED ALONG THE OUTSIDE SHOULDERS OF US 301 AND RAMP Q. EDGELINE RUMBLE STRIPS SHALL BE INSTALLED ALONG BOTH SHOULDERS OF RAMP M, N, O AND P, AS PER THIS DETAIL, AT THE FOLLOWING LOCATIONS:

- |  |  |
|--|--|
| <u>US 301</u>                              | <u>RAMP N</u>                          |
| STATION 682+00 RT. TO STATION 684+50 RT.   | STATION 10+00 RT. TO STATION 26+50 RT. |
| STATION 687+00 RT. TO STATION 751+60 RT.   | STATION 15+50 LT. TO STATION 26+50 LT. |
| STATION 757+50 RT. TO STATION 784+50 RT.   |  |
| STATION 788+97 RT. TO STATION 805+22 RT.   | <u>RAMP O</u>                          |
| STATION 810+24 RT. TO STATION 848+00 RT.   | STATION 71+00 RT. TO STATION 86+00 RT. |
| STATION 687+50 LT. TO STATION 751+06 LT.   | STATION 71+00 LT. TO STATION 89+23 LT. |
| STATION 754+50 LT. TO STATION 783+50 LT.   |  |
| STATION 788+31 LT. TO STATION 806+08 LT.   | <u>RAMP M</u>                          |
| STATION 810+86 LT. TO STATION 837+50 LT.   | STATION 40+00 RT. TO STATION 48+12 RT. |
|  | <u>RAMP P</u>                          |
| <u>RAMP Q</u>                              | STATION 50+00 RT. TO STATION 57+94 RT. |
| STATION 1028+50 RT. TO STATION 1038+95 RT. |  |
| STATION 1028+50 LT. TO STATION 1038+95 LT. |  |

4. EDGELINE RUMBLE STRIPS (BRIDGE DECK DEPTH - SEE ABOVE) SHALL BE INSTALLED ALONG THE INSIDE AND OUTSIDE SHOULDERS OF US 301 (BRIDGE I-460N/I-460S) IN ACCORDANCE WITH ITEM 760015 - RUMBLE STRIPS, CONCRETE, SHALLOW DEPTH AT THE FOLLOWING LOCATIONS:

- STATION 805+22 TO 810+24 RT.
- STATION 806+08 TO 810+86 LT.



NOTES:

1. THESE JOINT DETAILS SHALL BE APPLIED IN LIEU OF THE SEALANT RESERVOIR AND SEALANT DETAILS IN THE STANDARD CONSTRUCTION DETAILS.
2. NO JOINT SEALANT IS REQUIRED TO BE PLACED IN THE PAVEMENT JOINTS, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
3. DOWEL AND TIE BARS NOT SHOWN. SEE STANDARD CONSTRUCTION DETAILS FOR DOWEL AND TIE BAR REQUIREMENTS.

PCC PAVEMENT JOINT DETAILS

NOT TO SCALE

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ADDENDUMS / REVISIONS

NOT TO SCALE

US 301,  
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: SJB
NEW CASTLE	CHECKED BY: TAO

CONSTRUCTION DETAILS

DT-01
SHEET NO.
224
TOTAL SHTS.
875

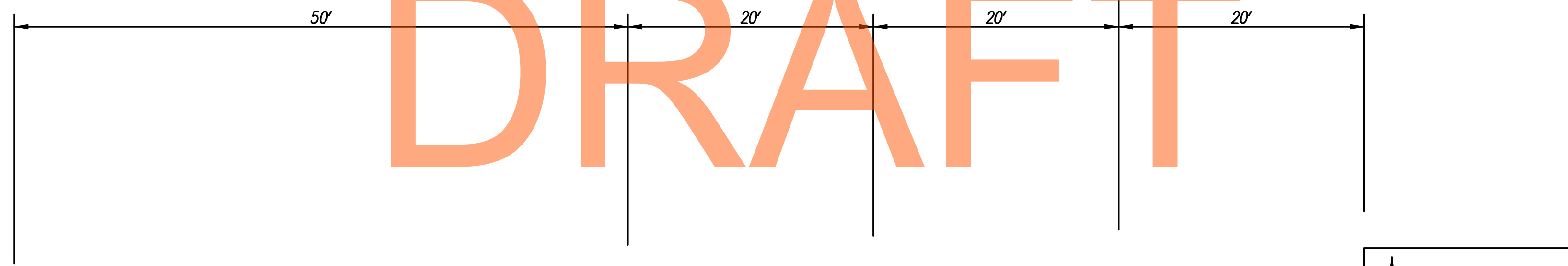
**LEGEND**

- (A) ITEM 209001 - BORROW, TYPE A
- (B) ITEM 209006 - BORROW, TYPE F
- (C) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (D) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (E) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (F) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (J) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (K) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"
- (L) ITEM 701010 - PCC CURB, TYPE 1-8
- (N) ITEM 701022 - PCC CURB AND GUTTER, TYPE 3-8
- (P) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6"
- (Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
- (R) ITEM 720052 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 3-31
- (S) ITEM 727000 - RIGHT OF WAY FENCE
- (T) ITEM 501001 - 8" PORTLAND CEMENT CONCRETE
- (U) ITEM 733002 - TOPSOILING, 6" DEPTH
- ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
- (V) ITEM 733002 - TOPSOILING, 6" DEPTH
- ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
- ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
- (W) ITEM 701016 - PCC CURB AND GUTTER, TYPE 1-4
- (X) ITEM 760017 - RUMBLE STRIPS, CONCRETE
- (Y) ITEM 705001 - PCC SIDEWALK, 4"
- (AA) ITEM 720626 - CONCRETE SINGLE FACE BARRIER, TYPE 1
- (BB) ITEM 760507 - PROFILE MILLING, HOT-MIX
- (CC) ITEM 401824 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, WEDGE
- (DD) ITEM 733001 - TOPSOILING, 4" DEPTH
- ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
- (EE) ITEM 713002 - GEOTEXTILE, SEPARATION
- (FF) ITEM 701013 - PCC CURB, TYPE 1-2

**NOTES**

1. THIS DETAIL SHALL APPLY TO PAVEMENT CONSTRUCTED BY THE FIRST CONTRACTOR TO PERFORM WORK IN THIS AREA. SELECTION OF WHICH CONTRACT WILL CONSTRUCT THIS DETAIL WILL BE BASED UPON FIELD CONDITIONS AND WILL BE AT THE DIRECTION OF THE ENGINEER. PAYMENT SHALL BE MADE UNDER THE APPLICABLE CONTRACT PAY ITEMS.
2. THE FIRST CONTRACTOR SHALL COVER THE EXPOSED PERMEABLE TREATED BASE COURSE AND SOIL CEMENT BASE COURSE, INCLUDING SIDES AND ENDS, WITH POLYETHYLENE SHEETING, PROPERLY ANCHORED AND LAPPED AT LEAST 18". NO CONSTRUCTION TRAFFIC OF ANY KIND SHALL BE PERMITTED TO TRAVERSE OVER THE PTB OR SOIL CEMENT AT ANY TIME, EITHER COVERED OR UNCOVERED WITH POLYETHYLENE, EXCEPT FOR NECESSARY EQUIPMENT UTILIZED DURING PAVING OPERATIONS. ALL COSTS FOR FURNISHING, INSTALLING AND MAINTAINING THE POLYETHYLENE SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE PTB AND SOIL CEMENT BASE COURSE PAY ITEMS.
3. THE SECOND CONTRACTOR TO PERFORM OPERATIONS IN THIS AREA SHALL REMOVE AND PROPERLY DISPOSE OF THE POLYETHYLENE AND ANCHORING IMMEDIATELY PRIOR TO BEGINNING PAVEMENT OPERATIONS WITH ALL COSTS INCIDENTAL TO THE UNIT PRICE BID FOR THE PTB AND SOIL CEMENT BASE COURSE PAY ITEMS.
4. THE SECOND CONTRACTOR SHALL ALSO SAW CUT THE ENDS OF THE PTB AND SOIL CEMENT BASE COURSE A MINIMUM OF 6" FROM THE END FINISHED BY THE FIRST CONTRACTOR OR AS DIRECTED BY THE ENGINEER. COSTS FOR SAWCUTTING THE PTB SHALL BE MEASURED FOR PAYMENT UNDER ITEM 762001 SAWCUTTING, HOT MIX. COSTS FOR SAWCUTTING THE SOIL CEMENT BASE COURSE SHALL BE MEASURED FOR PAYMENT UNDER ITEM 762002 SAWCUTTING, CONCRETE, FULL DEPTH.
5. THE FIRST CONTRACTOR SHALL CONSTRUCT AND MAINTAIN EDGE BERMS AND TEMPORARY SLOPE DRAINS ALONG THE TOP OF ALL SIDE AND END SLOPES PER THE INCREMENTAL STABILIZATION DETAILS (STANDARD NO. E-1). WHEN THE FIRST CONTRACTOR'S WORK IN THIS AREA IS COMPLETE AND ACCEPTED BY THE ENGINEER, THE FIRST CONTRACTOR SHALL LEAVE ANY E&S MATERIALS ON THE SITE NEEDED TO PROVIDE PROTECTION FOR AREAS WHERE THE SECOND CONTRACTOR IS TO PERFORM WORK WITH COSTS INCIDENTAL TO THE RESPECTIVE PAY ITEMS.
6. THE SECOND CONTRACTOR SHALL TAKE POSSESSION AND BE RESPONSIBLE FOR MAINTAINING, REPLACING AS NEEDED, REMOVING THE E&S MATERIALS AND MEASURES LEFT IN PLACE BY THE FIRST CONTRACTOR AND RESTORATION OF THE AREAS WITH ALL COSTS INCIDENTAL TO ITEM 202000.
7. THE CONTRACTOR FOR CONTRACT T200911301 IS EXPECTED TO BE THE FIRST CONTRACTOR DESCRIBED IN THE ABOVE NOTES.

1'-0" END UNDERDRAIN  
PROVIDE UNDERDRAIN OUTLET  
IF APPLICABLE



DRAFT

NOT FOR BIDDING

PAVEMENT DETAIL AT LIMIT OF CONSTRUCTION  
NOT TO SCALE

AUGUST 2015

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ADDENDUMS / REVISIONS	

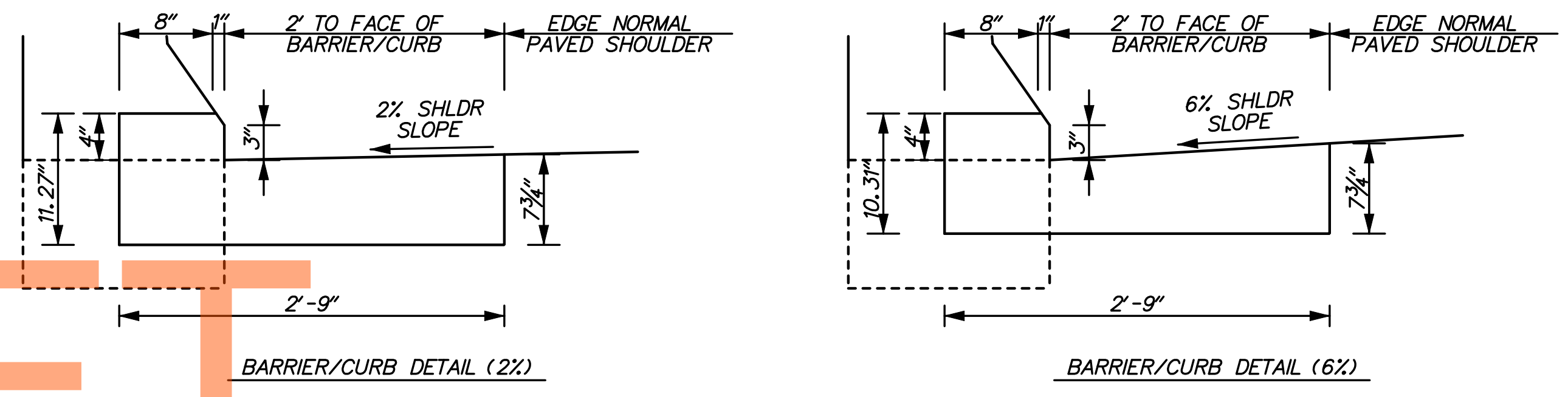
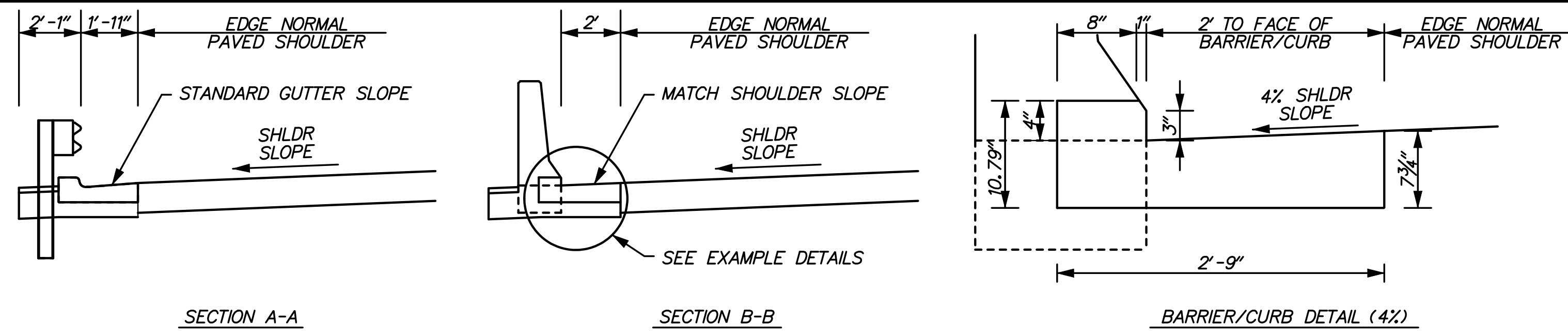
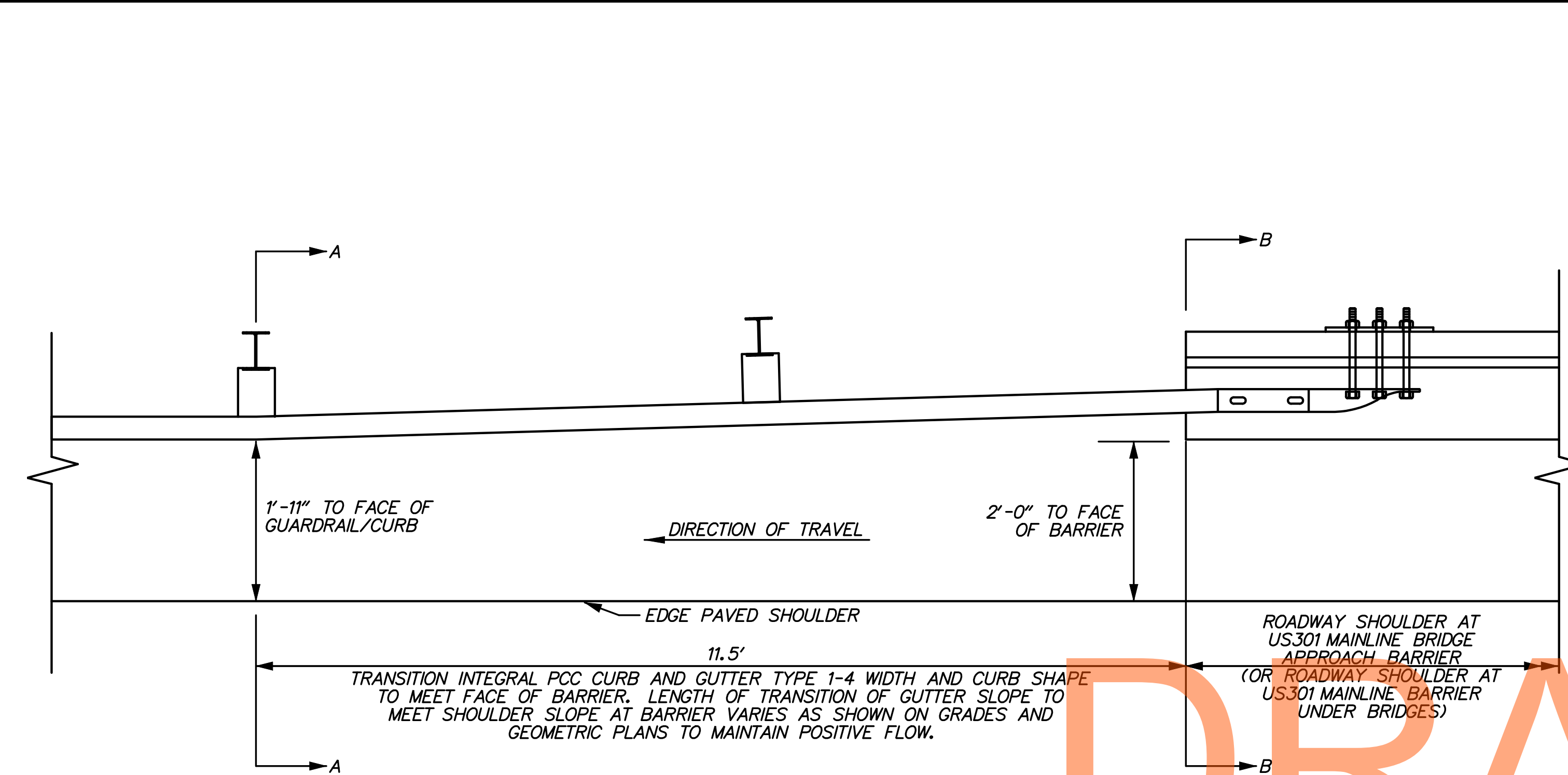
NOT TO SCALE

US 301,  
SR 896 TO SR 1

CONTRACT	BRIDGE NO.	
T200911308	DESIGNED BY:	SJB
COUNTY	CHECKED BY:	TAO
NEW CASTLE		

CONSTRUCTION DETAILS
SHEET NO. 225
TOTAL SHTS. 875

DT-02
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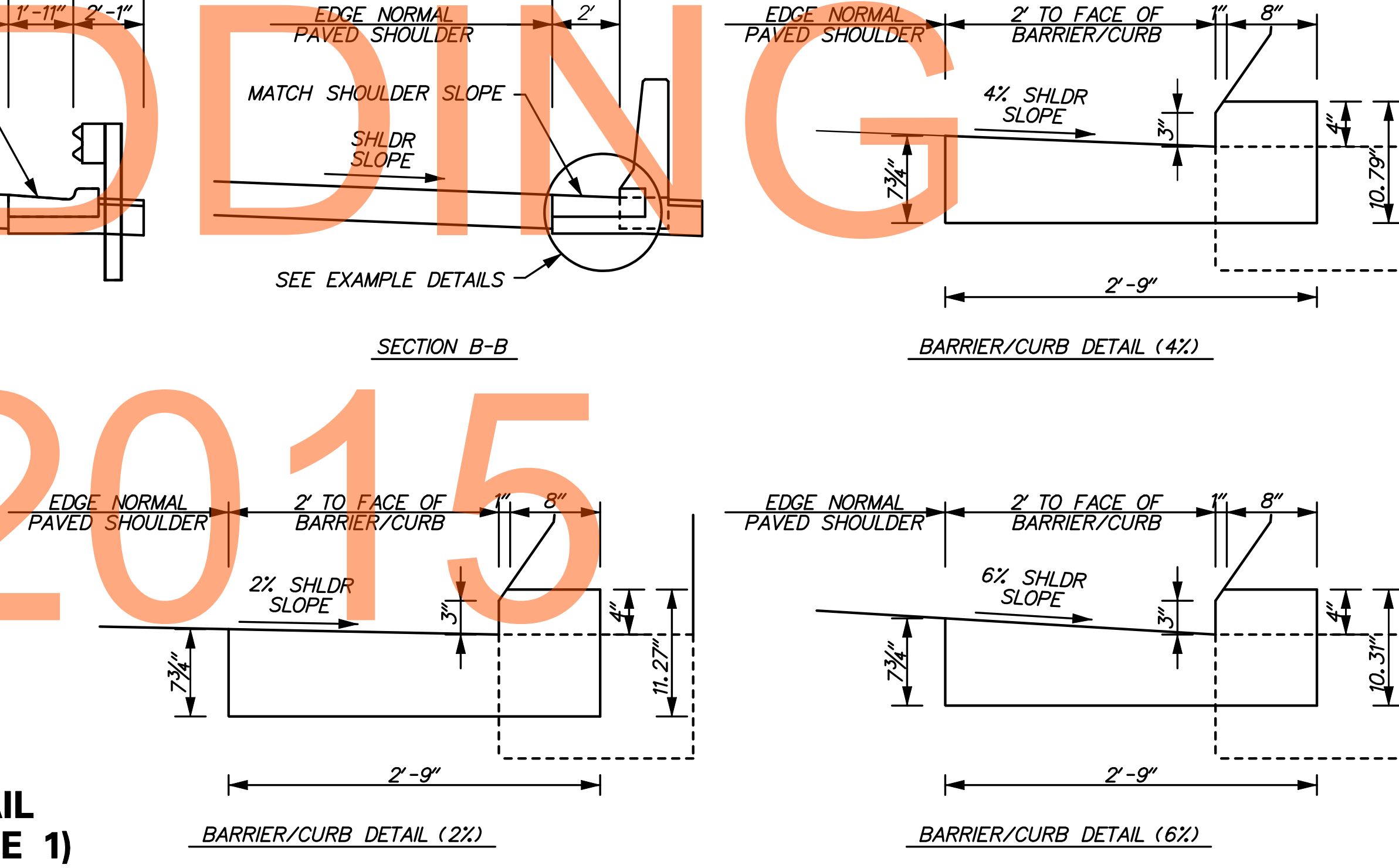
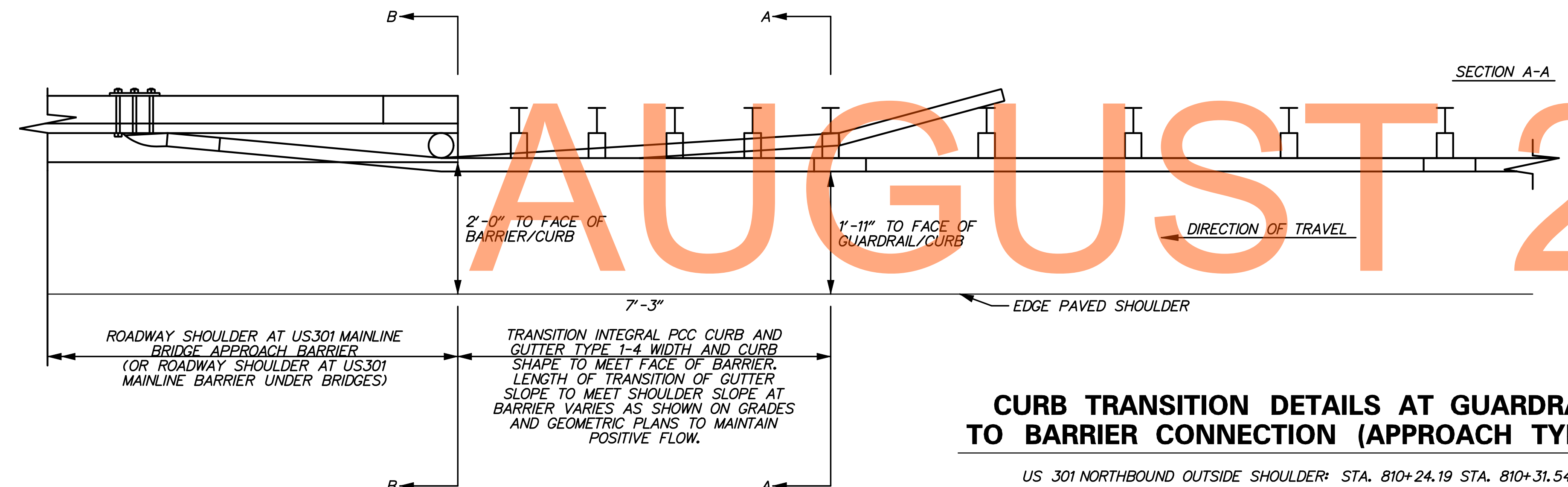
**CURB TRANSITION DETAILS AT GUARDRAIL TO BARRIER CONNECTION (EXIT TYPE)**

US 301 SOUTHBOUND INSIDE SHOULDER: STA. 805+96.40 TO STA. 806+07.90

- NOTES:**
1. PLACE PREFORMED EXPANSION JOINT MATERIAL BETWEEN END OF CURB AND BARRIER PER SECTION 701.01.
  2. TRANSITION LIMITS TO BE MEASURED FOR PAYMENT UNDER ITEM 701016 WITH ALL COSTS FOR TRANSITION INCLUDED IN ITEM 701016.

**NOT FOR BIDDING**

**AUGUST 2015**



**CURB TRANSITION DETAILS AT GUARDRAIL TO BARRIER CONNECTION (APPROACH TYPE 1)**

US 301 NORTHBOUND OUTSIDE SHOULDER: STA. 810+24.19 STA. 810+31.54  
US 301 SOUTHBOUND OUTSIDE SHOULDER: STA. 810+86.10 TO STA. 810+93.35  
HYETTS CORNER ROAD, RIGHT: STA. 908+65.35 TO STA. 908+72.60  
STA. 912+09.21 TO STA. 912+16.46  
STA. 913+72.51 TO STA. 913+79.76  
JAMISON CORNER ROAD, LEFT: STA. 120+70.50 TO STA. 120+77.75  
STA. 122+60.47 TO STA. 122+71.97

- NOTES:**
1. PLACE PREFORMED EXPANSION JOINT MATERIAL BETWEEN END OF CURB AND BARRIER PER SECTION 701.03.
  2. TRANSITION LIMITS TO BE MEASURED FOR PAYMENT UNDER ITEM 701016 WITH ALL COSTS FOR TRANSITION INCLUDED IN ITEM 701016.

ADDENDUMS / REVISIONS
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NOT TO SCALE

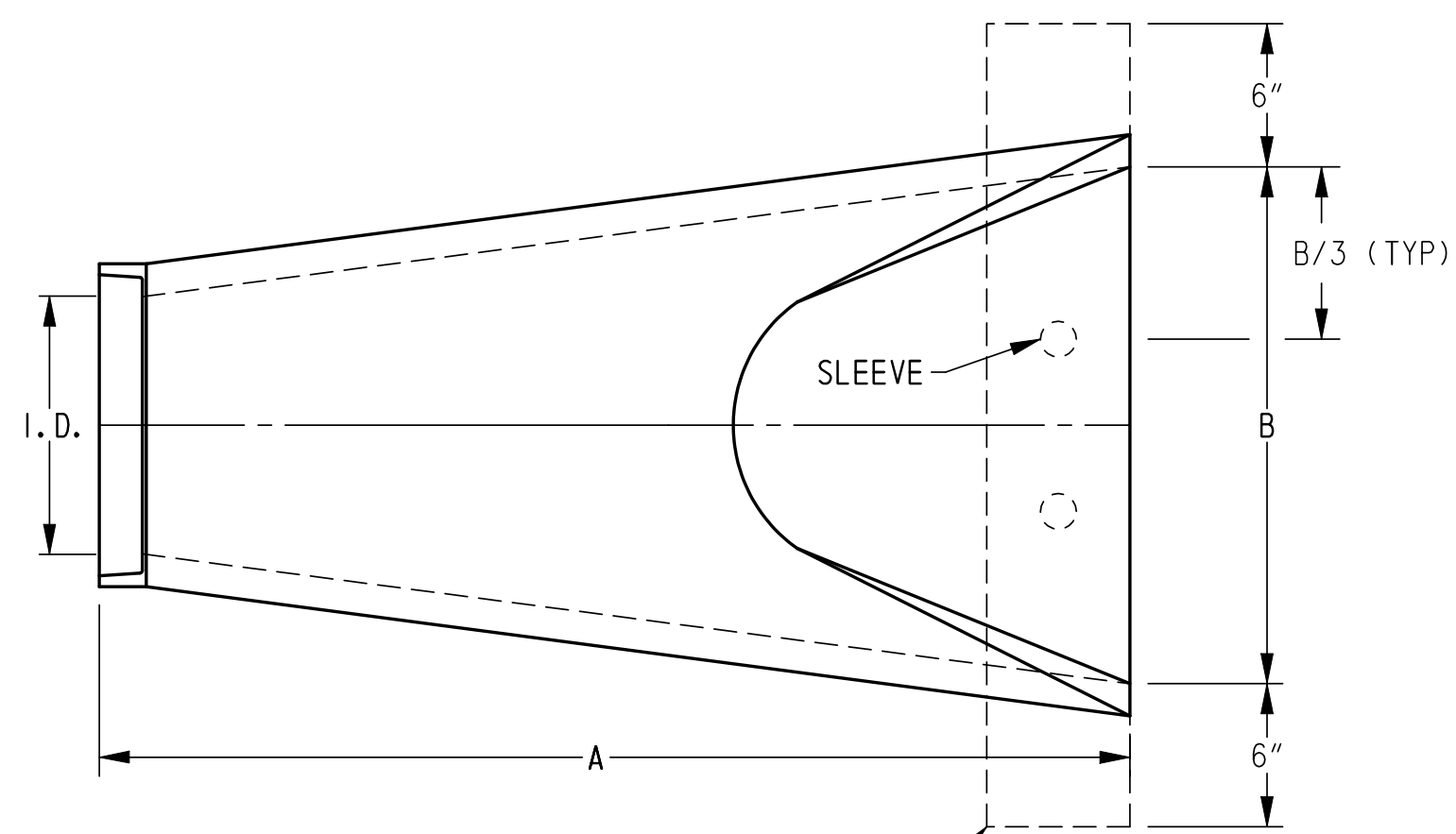
US 301, SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: KAH
NEW CASTLE	CHECKED BY: BRT

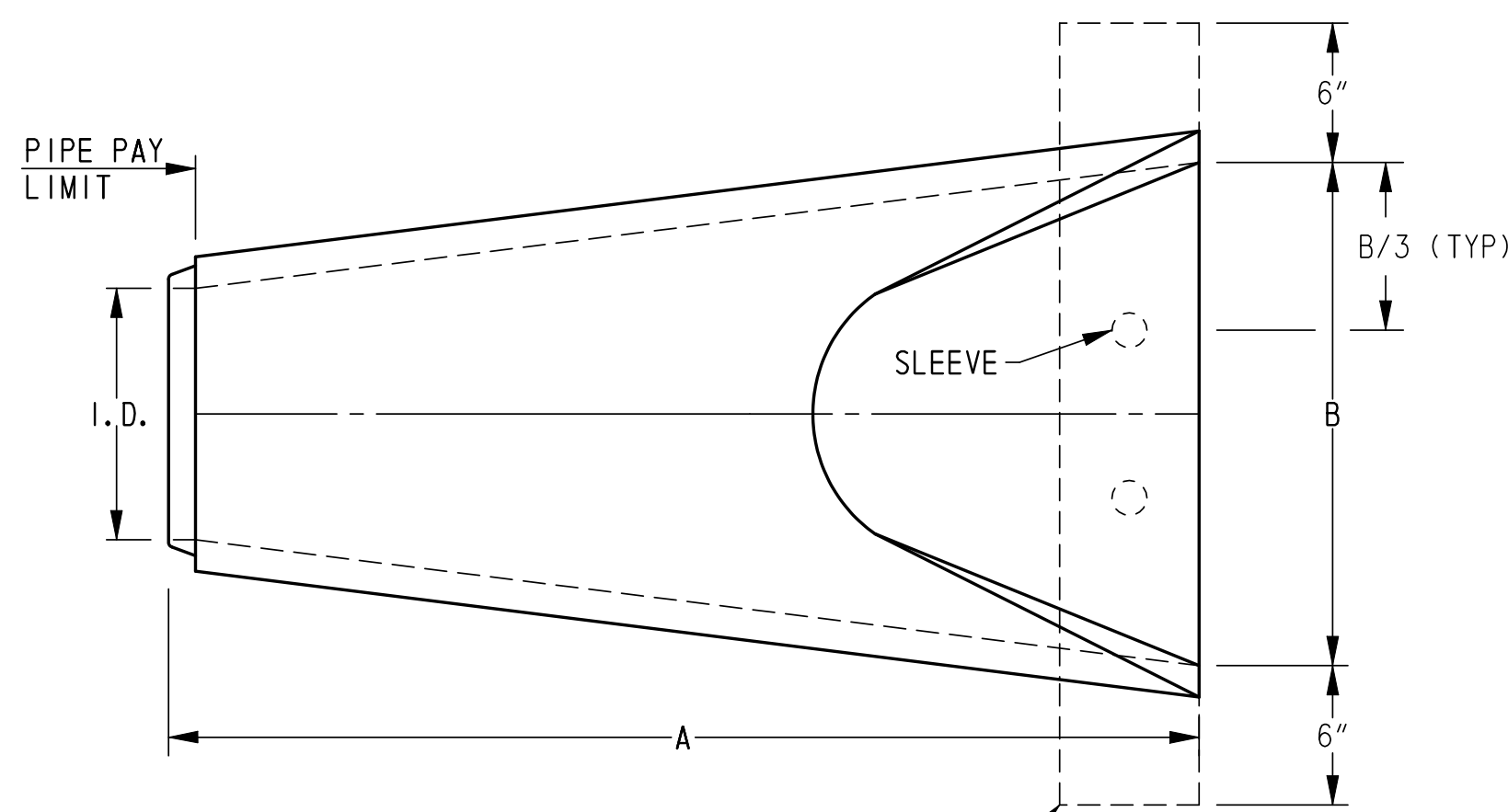
CONSTRUCTION DETAILS

DT-03
SHEET NO.
226
TOTAL SHTS.
875

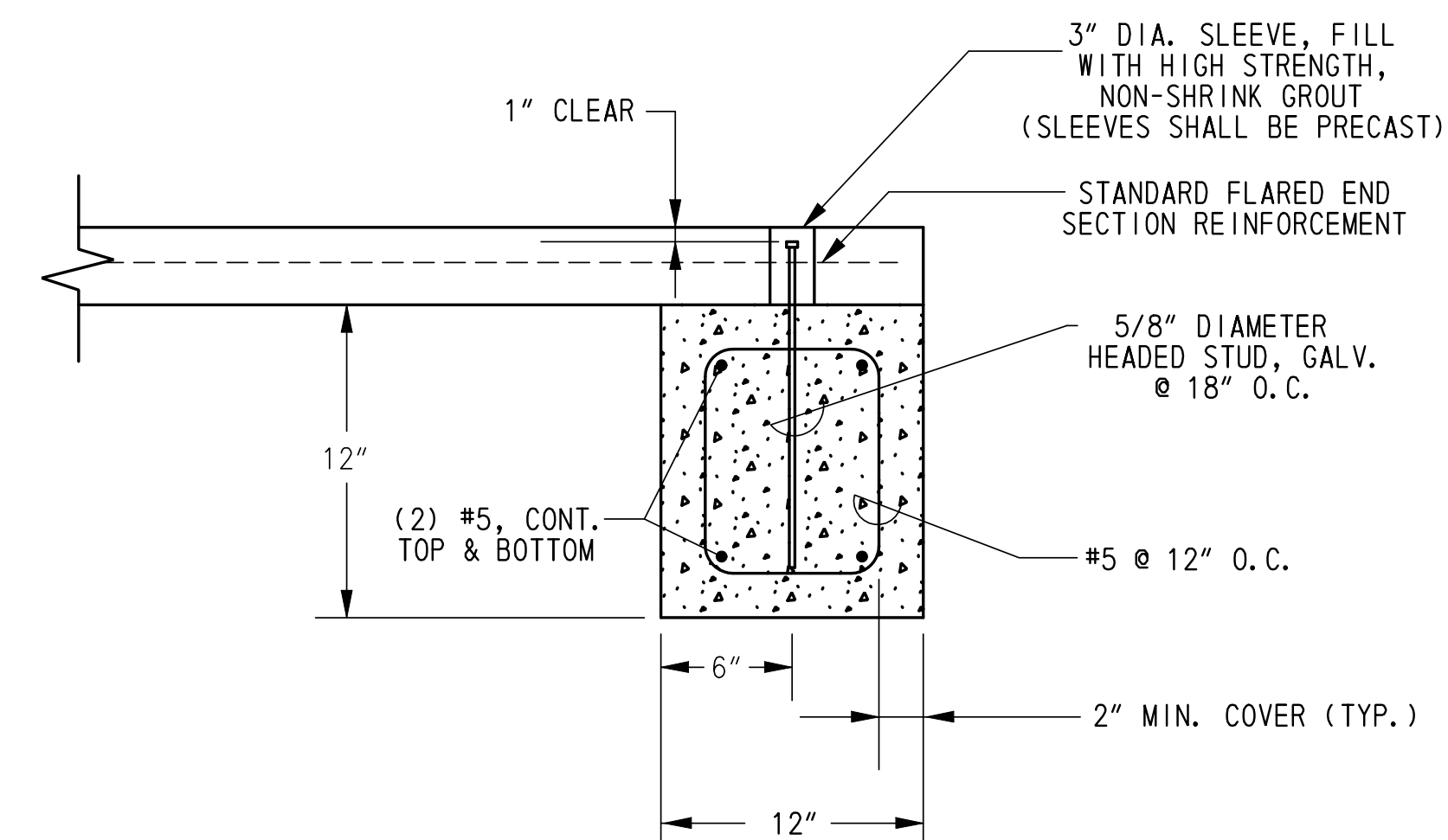
REINFORCED CONCRETE FLARED END SECTION  
12" - 33" DIAMETER



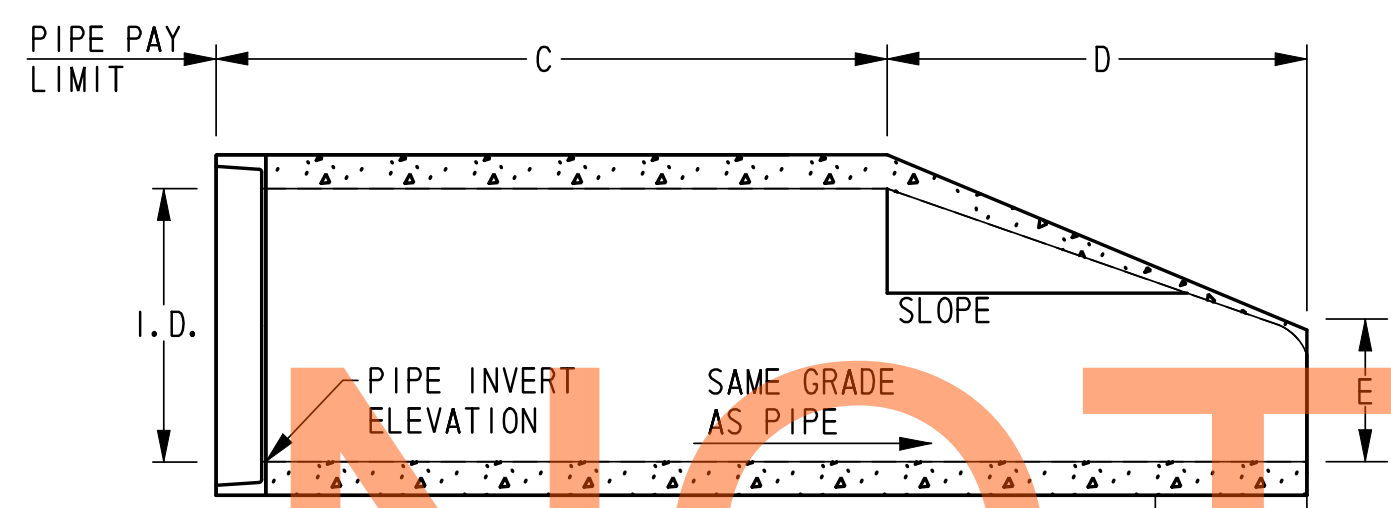
SEE CUTOFF WALL DETAIL  
**PLAN VIEW**



SEE CUTOFF WALL DETAIL  
**PLAN VIEW**

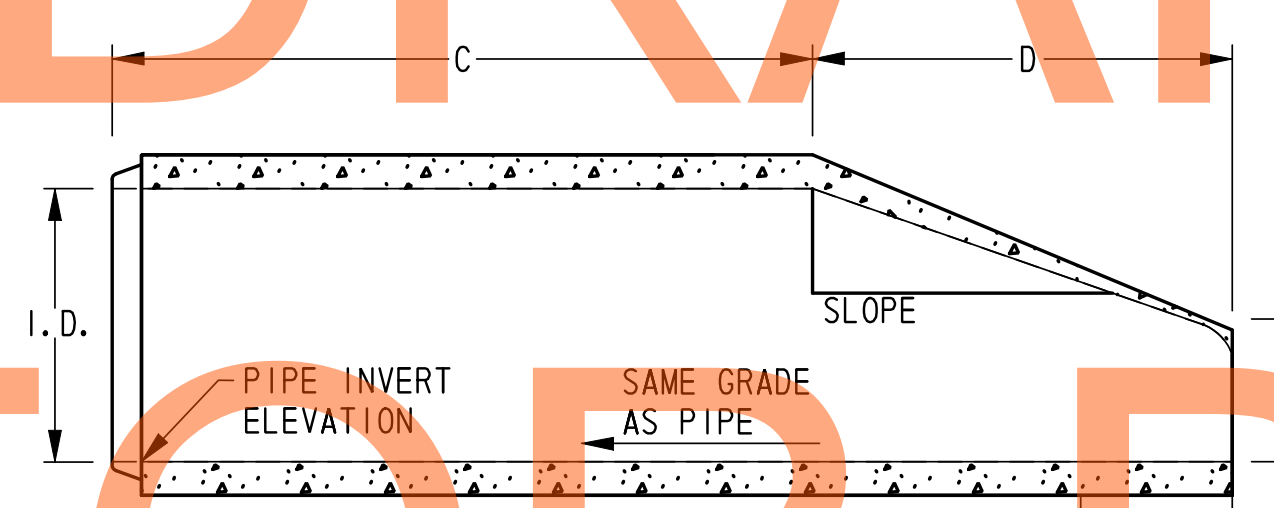


**CUTOFF WALL DETAIL  
N. T. S.**



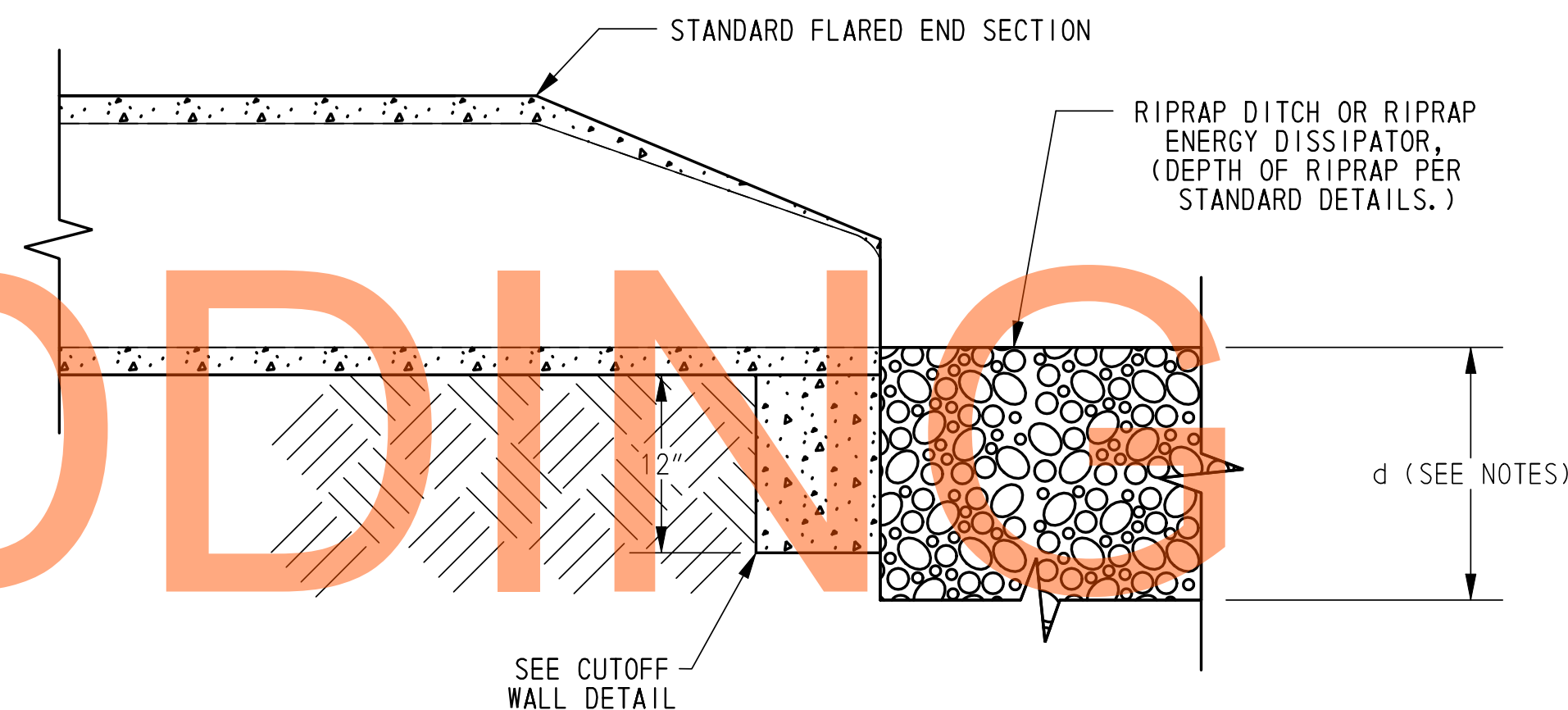
**SIDE VIEW**

**FLARED END SECTION - OUTLET  
N. T. S.**



**SIDE VIEW**

**FLARED END SECTION - INLET  
N. T. S.**



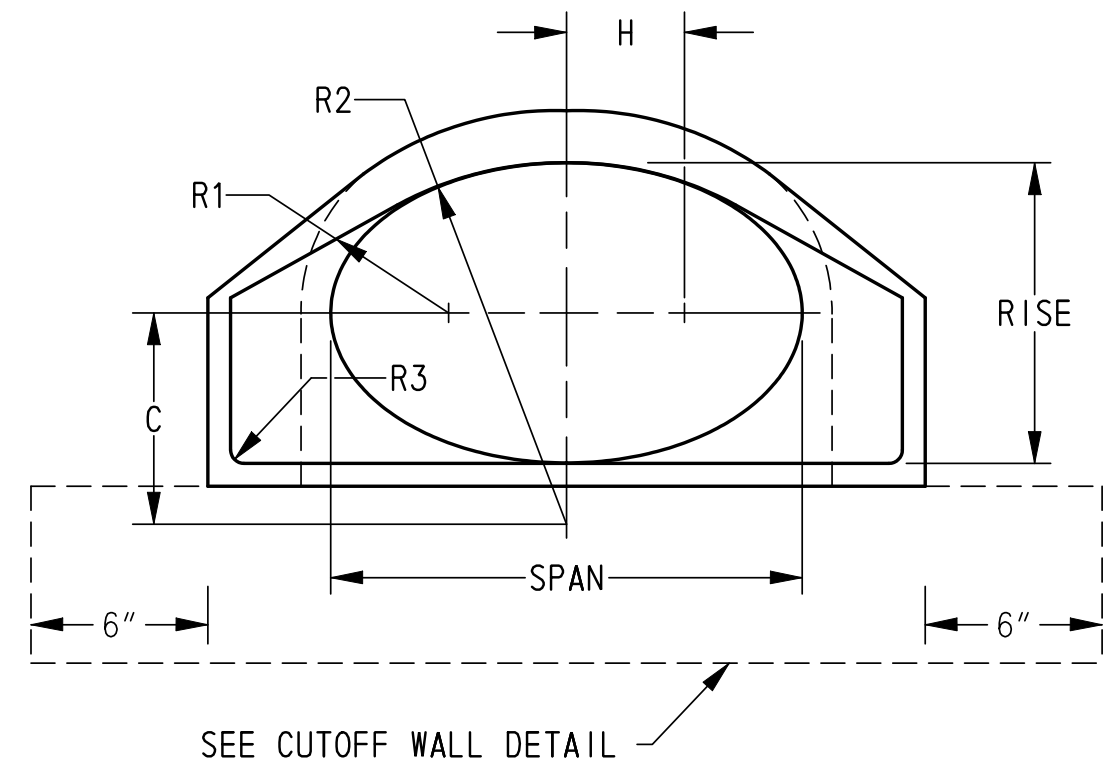
**SIDE VIEW WITH OUTLET PROTECTION  
N. T. S.**

PIPE I.D.	SLOPE	WALL	A (INCHES)	B (INCHES)	C (INCHES)	D (INCHES)	E (INCHES)
12	3:1	2	69	24	48	21	5
15	3:1	2 1/4	73	30	46	27	6
18	3:1	2 1/2	73	36	46	27	9
21	3:1	2 3/4	74	42	38	36	9
24	3:1	3	72 1/2	48	29	43 1/2	9 1/2
27	3:1	3 1/4	75	54	25 1/2	49 1/2	10 1/2
30	3:1	3 1/2	73 3/4	60	19 3/4	54	12
33	3:1	3 3/4	81	66	26	55	14

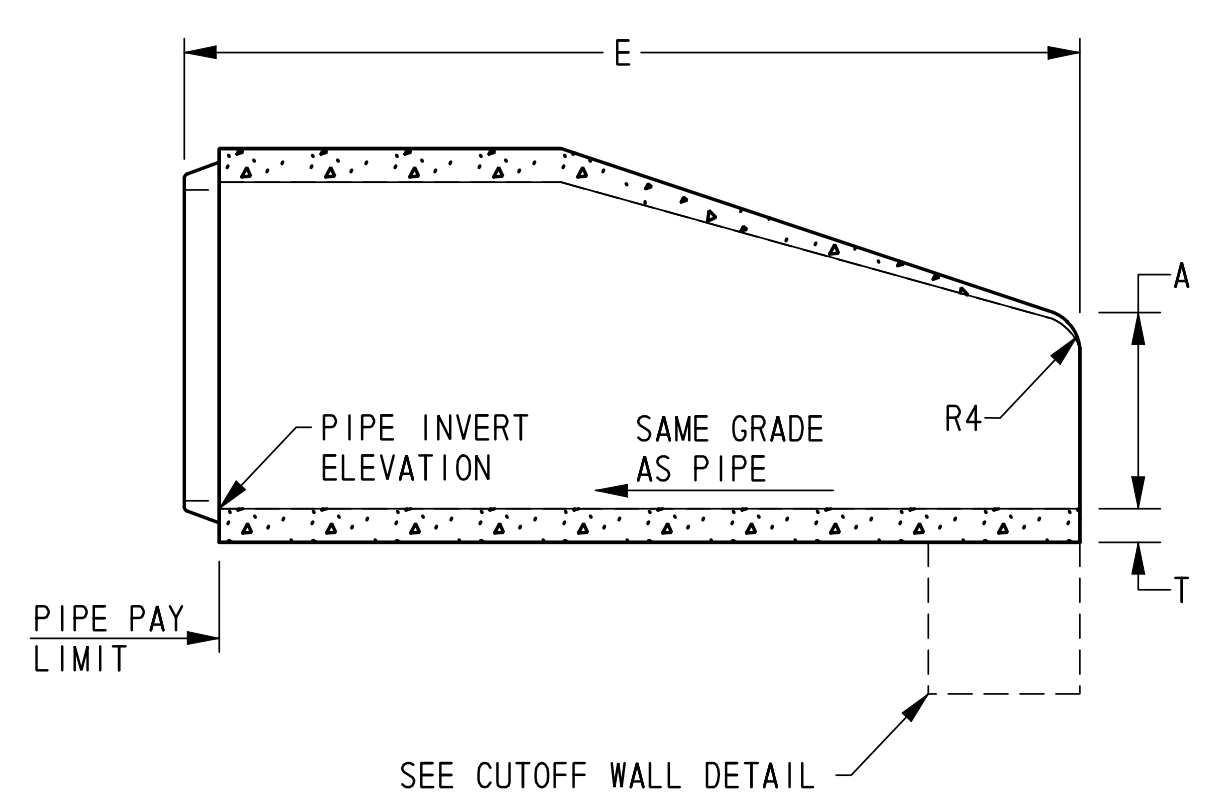
NOTES:

1. FLARED END SECTIONS SHALL BE MANUFACTURED TO ASTM C-76 AND AASHTO M-170 WITH CLASS III REINFORCEMENT.
2. FLARED END SECTIONS SHALL BE BEDDED IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATION 612, REINFORCED CONCRETE PIPE.
3. FLARED END SECTIONS 27 INCHES AND LARGER SHALL INCLUDE A 12 INCH WIDE CUTOFF WALL CONSTRUCTED AS SHOWN. CUTOFF WALL MAY BE CAST-IN-PLACE OR PRECAST CLASS B CONCRETE. ALL COSTS FOR THE CUTOFF WALL SHALL BE INCIDENTAL TO THE FLARED END SECTION.
4. DEPTH OF RIPRAP (d) PER STANDARD DETAILS.

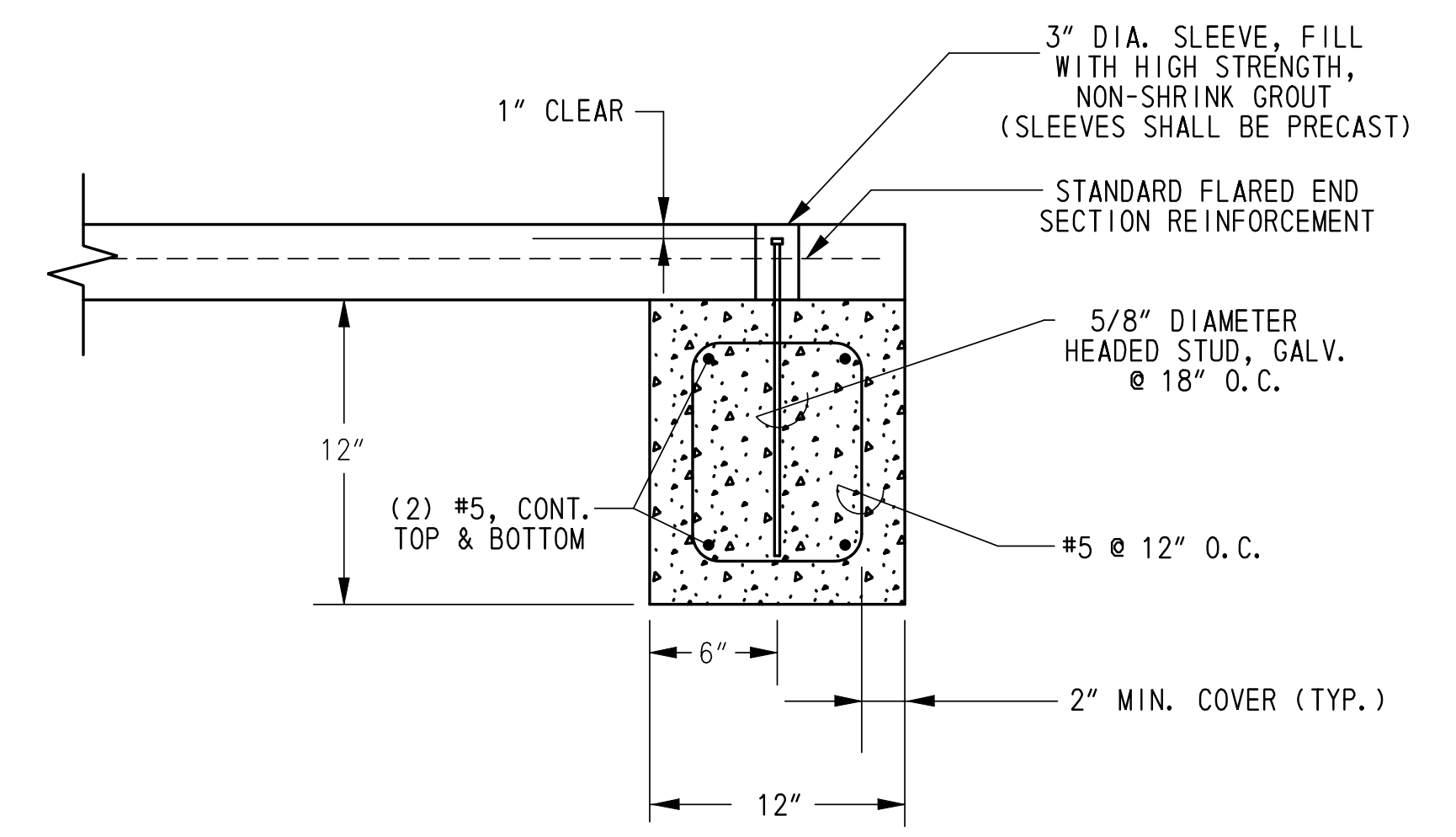
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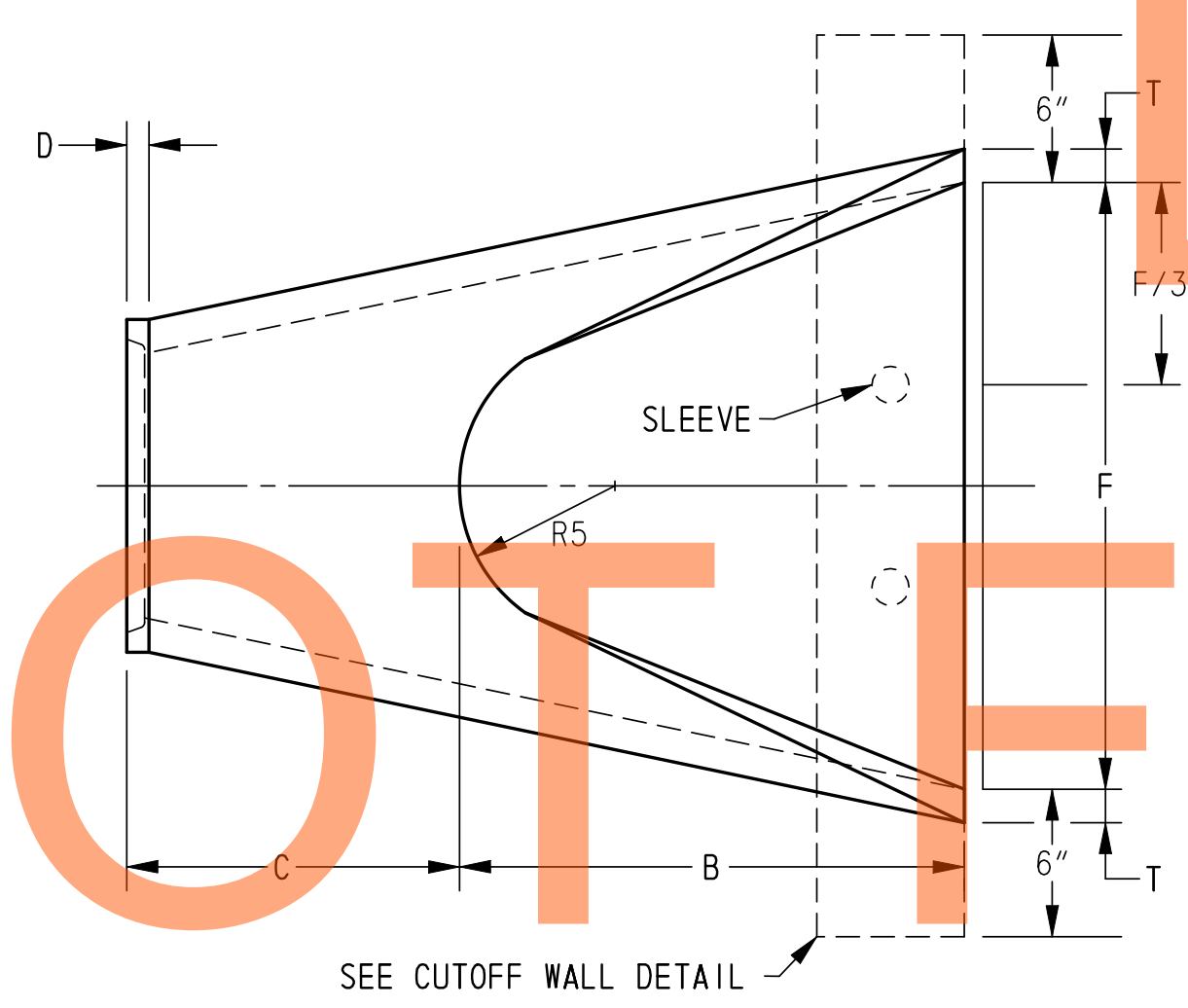
FRONT VIEW



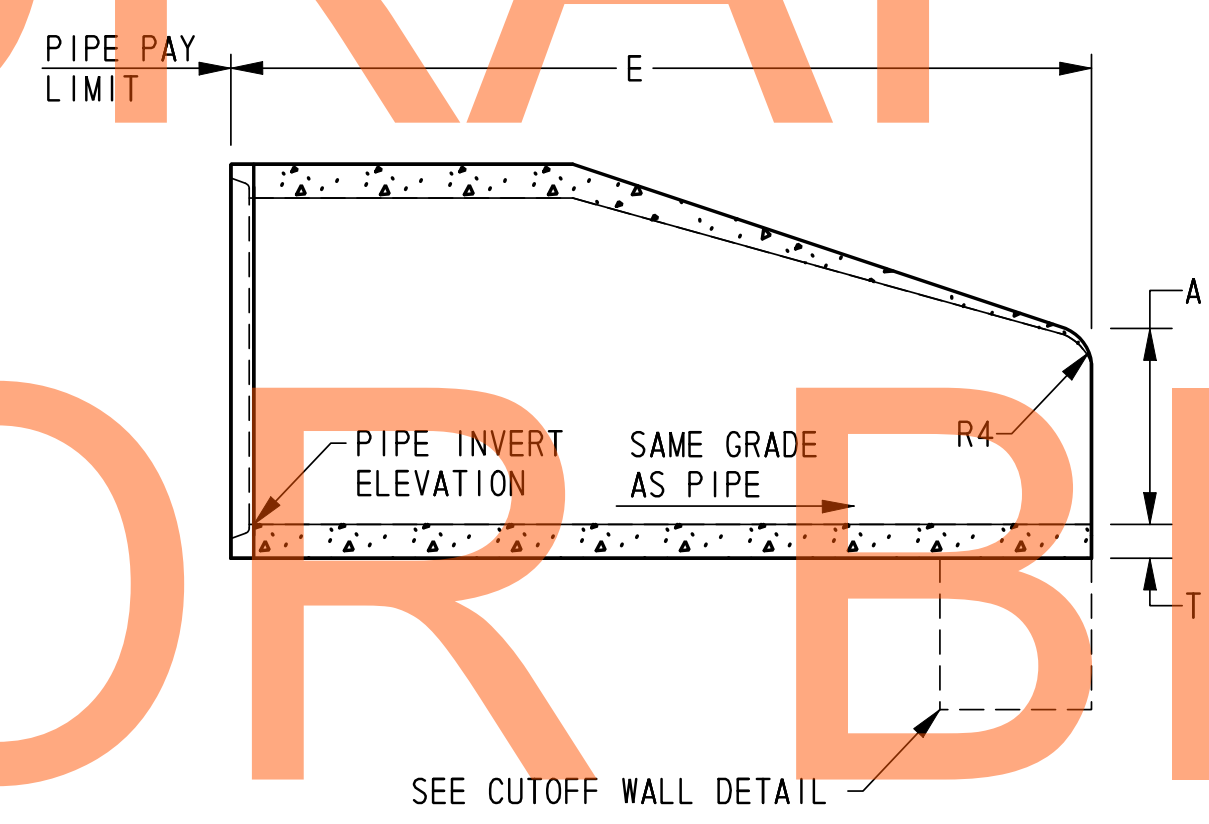
INLET SIDE VIEW



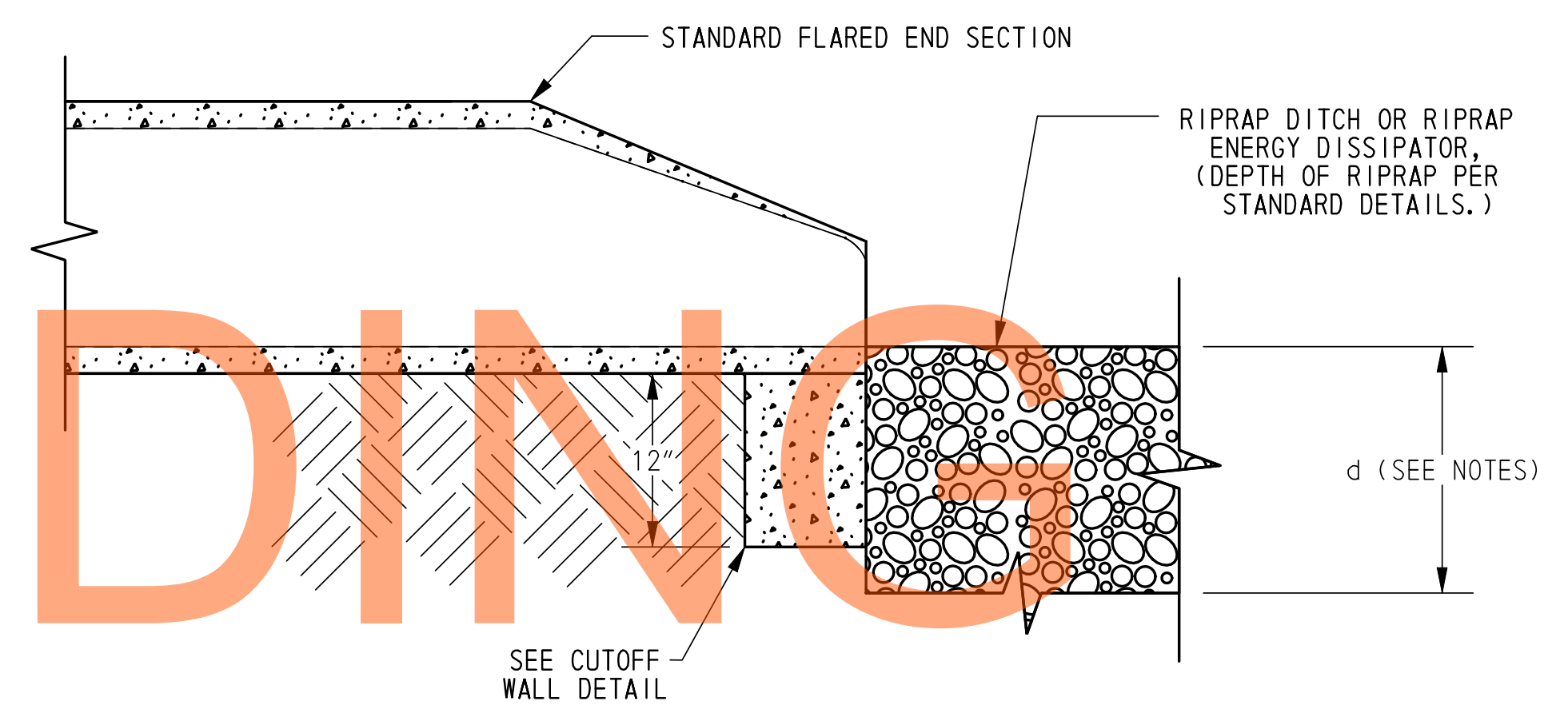
CUTOFF WALL DETAIL  
N. T. S.



TOP VIEW



OUTLET SIDE VIEW



SIDE VIEW WITH OUTLET PROTECTION  
N. T. S.

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NOT FOR BIDDING  
AUGUST 2015

FLARED END SECTION - ELLIPTICAL  
N. T. S.

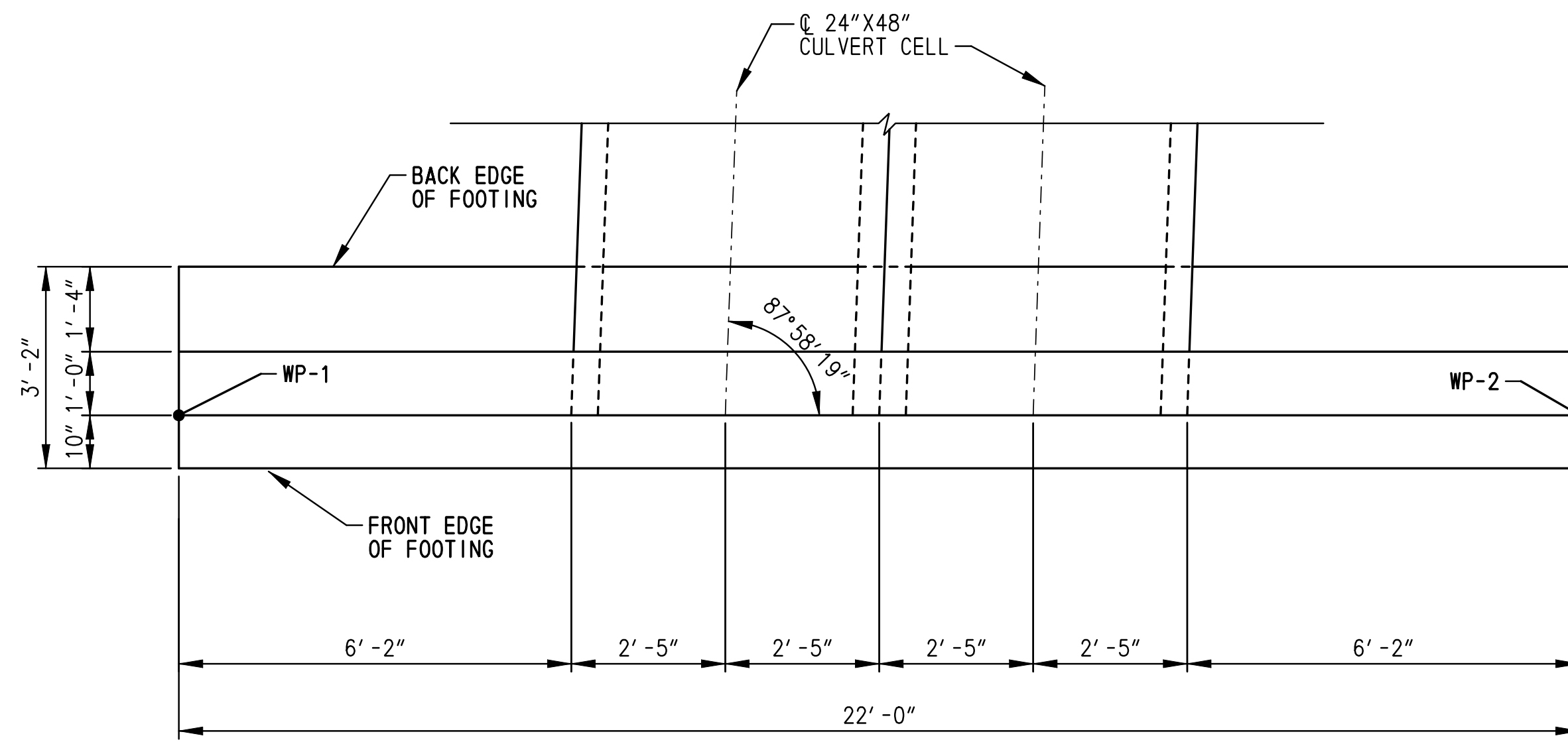
ELLIPTICAL FLARED END SECTIONS  
TABLE OF DIMENSIONS

NOMINAL RISE	EQUIVALENT DIA.	ACTUAL		T (INCHES)	A (INCHES)	B	C	D (INCHES)	E	F (INCHES)	G (INCHES)	H (INCHES)	R1 (INCHES)	R2 (INCHES)	R3 (INCHES)	R4 (INCHES)	R5 (INCHES)
		RISE	SPAN														
14	23	14 5/8	22 7/8	2 3/4	6	2'-2"	3'-11"	2	6'-1"	36	12 25/32	5 11/32	8 27/32	20 11/16	1 1/2	3	12
19	30	19 1/8	30 1/8	3 1/4	9	2'-7"	3'-6"	2	6'-1"	48	16 11/16	6 27/32	11 15/32	29 1/2	1 1/2	3	14
22	34	21 9/16	34	3 1/2	10 1/2	2'-9"	3'-4"	2 1/4	6'-1"	54	18 3/4	7 3/4	12 3/4	33 1/32	1 1/2	3	14 1/2
24	38	24	37 7/8	3 3/4	12	4'-6"	1'-6"	2 1/2	6'-0"	60	20 13/16	8 11/16	14	36 9/16	1 1/2	3	15
27	42	26 23/32	41 15/16	4 1/2	11	5'-3"	2'-9"	3	8'-0"	72	24 31/32	10 5/16	16 13/16	43 7/8	1 1/2	4	18

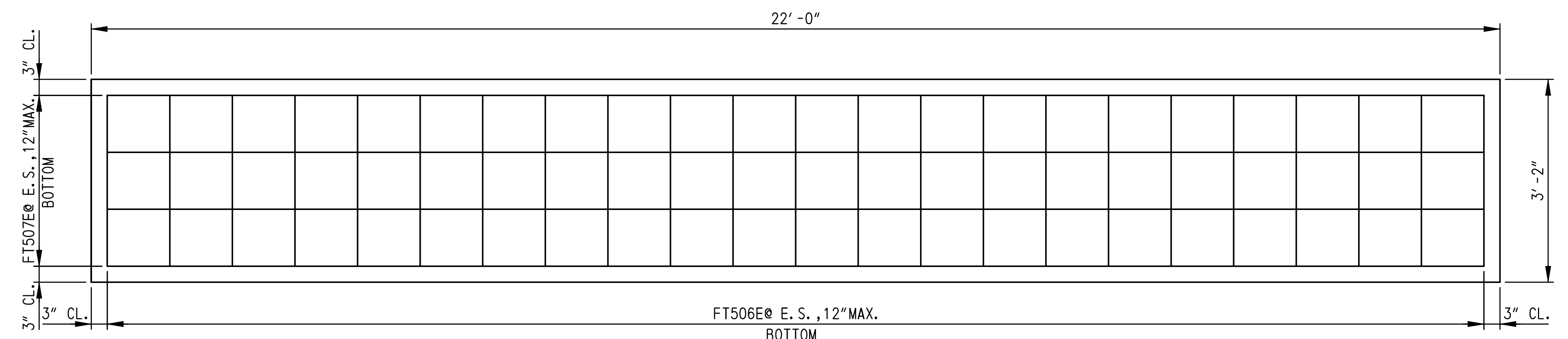
NOTES:

- FLARED END SECTIONS SHALL BE MANUFACTURED TO ASTM C-76 AND AASHTO M-170 WITH CLASS III REINFORCEMENT.
- FLARED END SECTIONS SHALL BE BEDDED IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATION 612, REINFORCED CONCRETE PIPE.
- FLARED END SECTIONS WITH A RISE OF 27 INCHES AND LARGER SHALL INCLUDE A 12 INCH WIDE CUTOFF WALL CONSTRUCTED AS SHOWN. CUTOFF WALL MAY BE CAST-IN-PLACE OR PRECAST CLASS B CONCRETE. ALL COSTS FOR THE CUTOFF WALL SHALL BE INCIDENTAL TO THE FLARED END SECTION.
- DEPTH OF RIPRAP (d) PER STANDARD DETAILS.

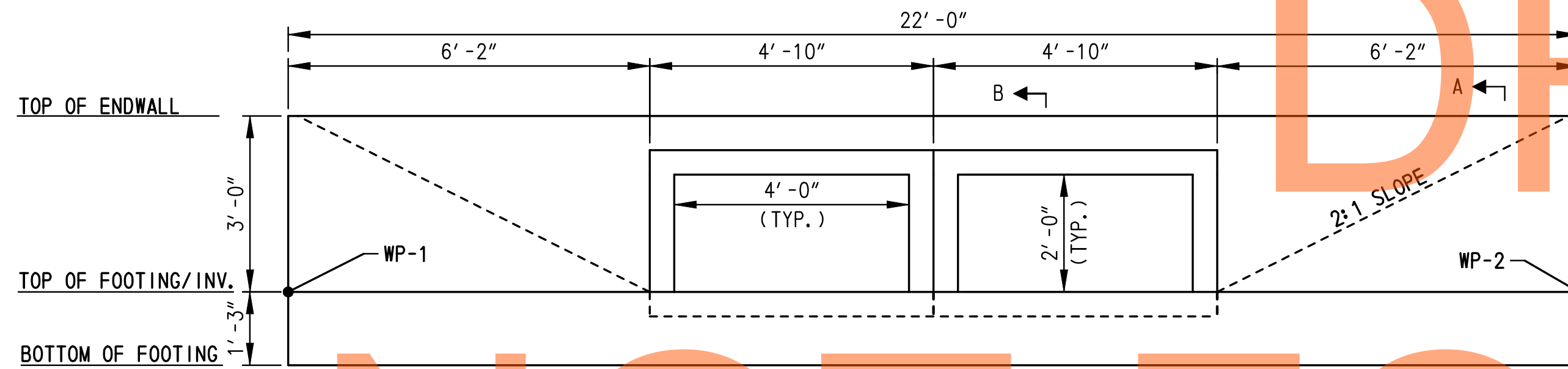
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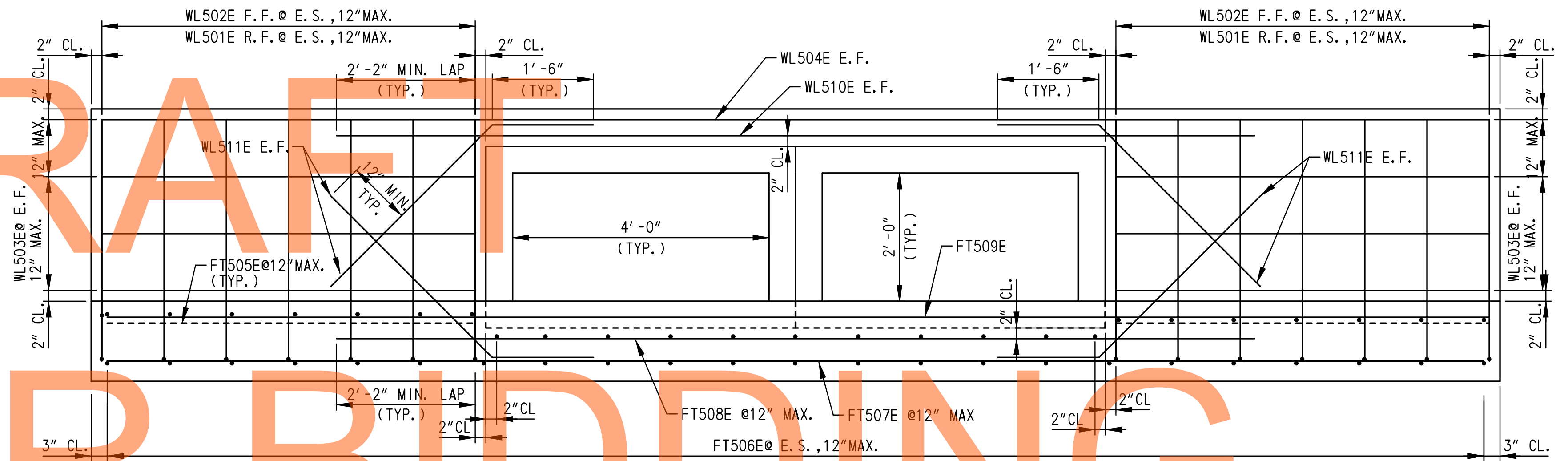
**ENDWALL NO. 201 - NO. 206 - PLAN**  
SCALE: 1/2" = 1'-0"



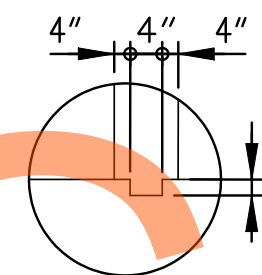
**ENDWALL NO. 201 - NO. 206 - FOOTING REINFORCEMENT PLAN**  
SCALE: 3/4" = 1'-0"



**ENDWALL NO. 201 - NO. 206 - ELEVATION**  
SCALE: 1/2" = 1'-0"



**ENDWALL NO. 201 - NO. 206 - REINFORCEMENT ELEVATION**  
SCALE: 3/4" = 1'-0"

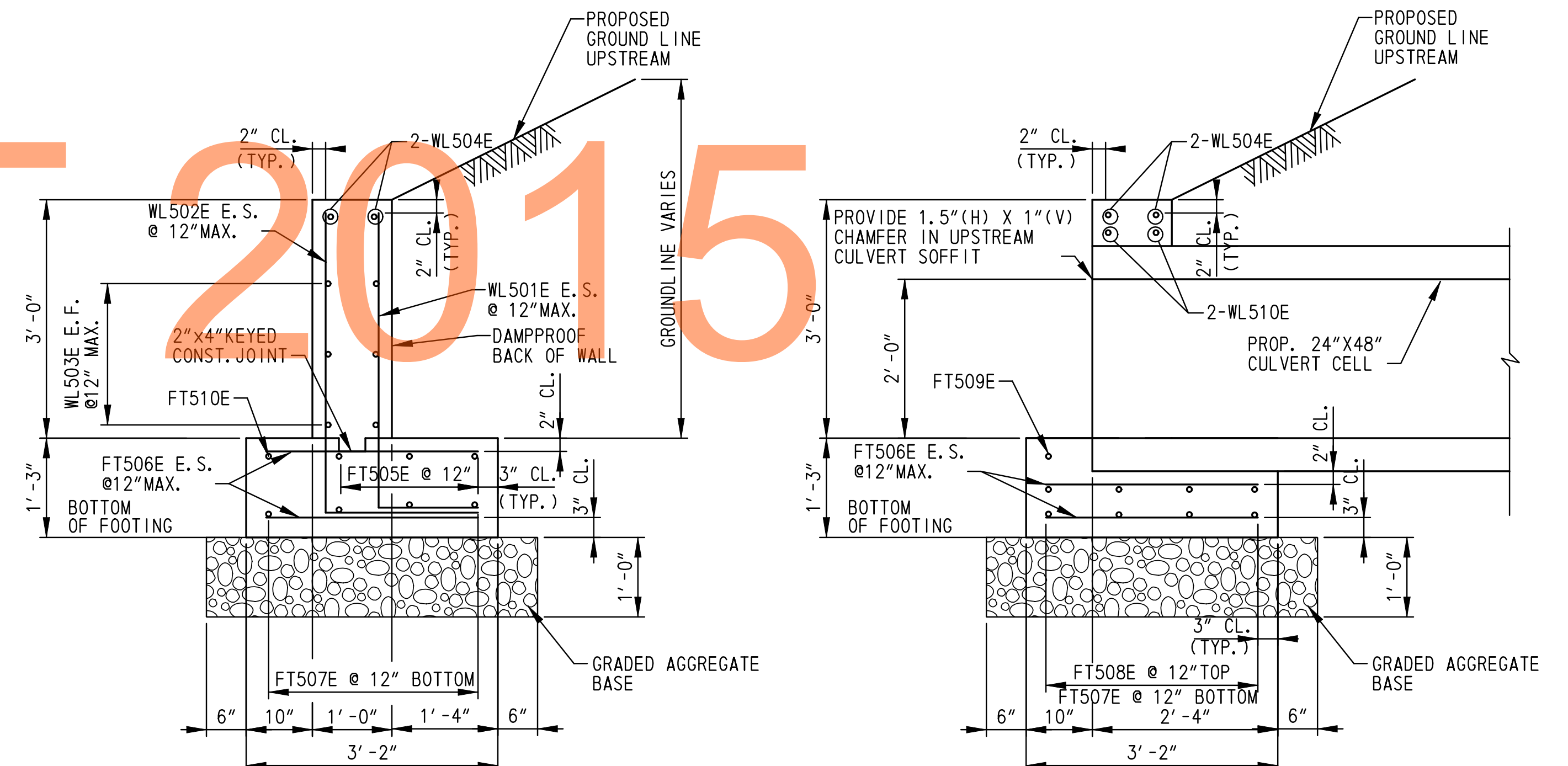


**CONSTRUCTION KEY DETAIL**  
SCALE: 1" = 1'-0"

**ENDWALL NO. 201 - NO. 206 NOTES:**

1. MAXIMUM FACTORED BEARING RESISTANCE FOR THE ENDWALL IS 2 KSF.
2. KEYS ARE NOMINAL SIZE.
3. CONCRETE SHALL BE CLASS A, 4500 PSI.
4. RIPRAP IN FRONT OF WALL NOT SHOWN FOR CLARITY.
5. ENDWALL NO. 203 SHALL BE CAST-IN-PLACE. NO PRECAST ALTERNATIVE WILL BE ALLOWED.
6. E.F. = EACH FACE  
F.F. = FRONT FACE  
R.F. = RARE FACE  
E.S. = EQUAL SPACING.
7. SEE REINFORCING BAR LIST ON DRAWING DT-09.
8. THE COST OF THE GRADED AGGREGATE BEDDING SHALL BE INCIDENTAL TO THE CONTRACT UNIT COST FOR THE ENDWALL (ITEM 617515).

WORKING POINT LOCATION			
ENDWALL NO.	WP	NORTHING	EASTING
EW/201	WP-1	551520.1908	578543.9895
	WP-2	551498.1976	578543.4409
EW/202	WP-1	551568.0458	578542.9314
	WP-2	551546.0481	578542.6144
EW/203	WP-1	551486.0955	578764.7519
	WP-2	551508.0914	578765.1753
EW/204	WP-1	551533.8078	578766.6904
	WP-2	551555.8035	578767.123
EW/205	WP-1	553435.8449	578703.304
	WP-2	553415.0226	578696.2752
EW/206	WP-1	553291.9954	578919.4179
	WP-2	553312.7364	578926.6378



**SECTION A-A**  
SCALE: 3/4" = 1'-0"

**SECTION B-B**  
SCALE: 3/4" = 1'-0"

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ADDENDUMS / REVISIONS

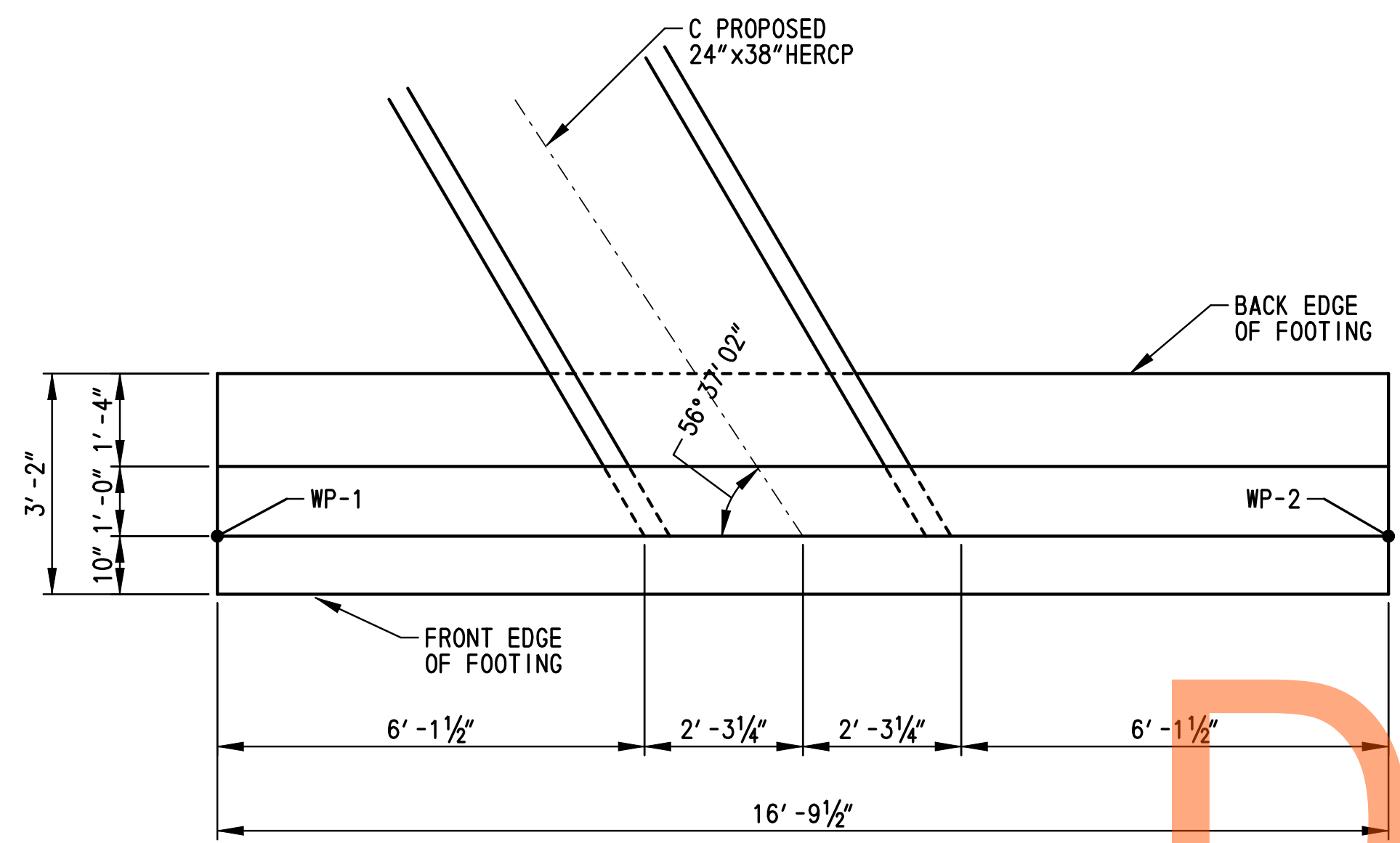
**US 301, SR 896 TO SR 1**

CONTRACT	T200911308
COUNTY	NEW CASTLE
BRIDGE NO.	DESIGNED BY: HQ
CHECKED BY:	JW

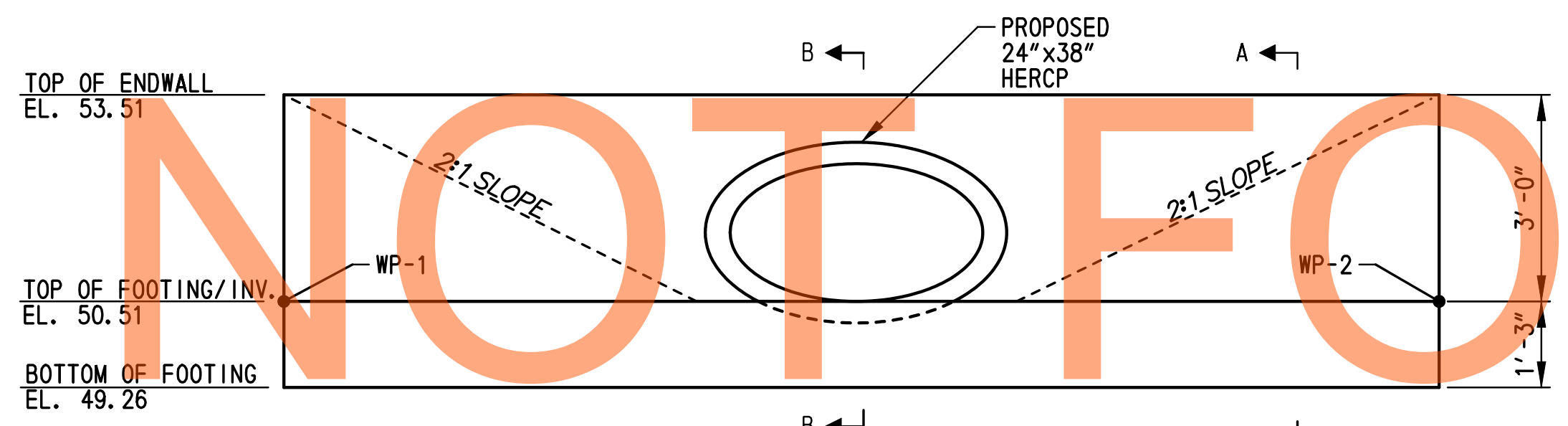
**CONSTRUCTION DETAILS**

SHEET NO.	229
TOTAL SHTS.	875

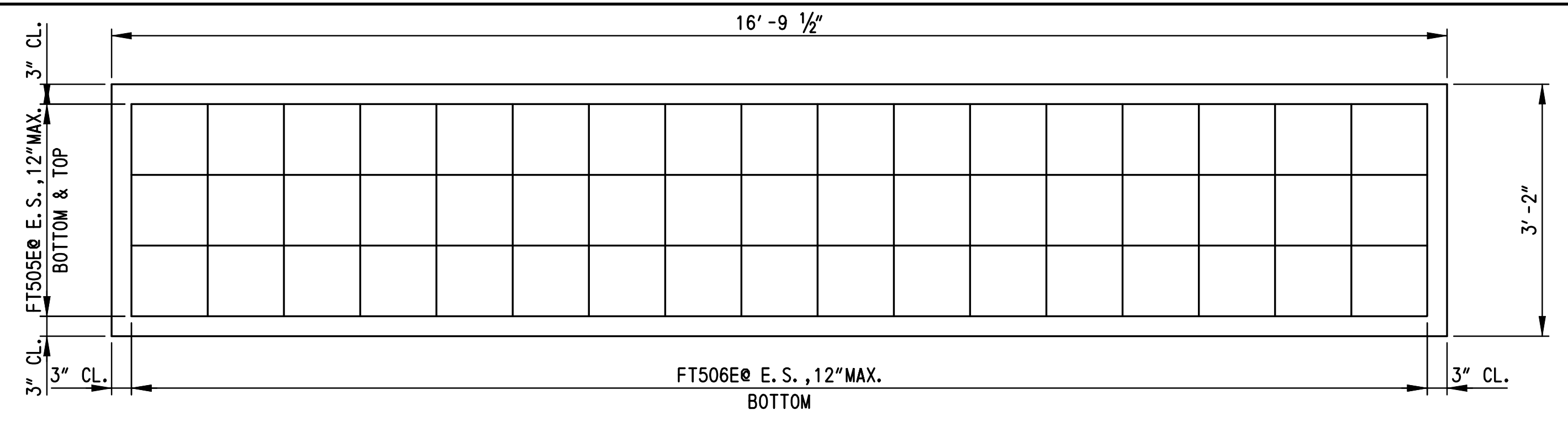
DT-06



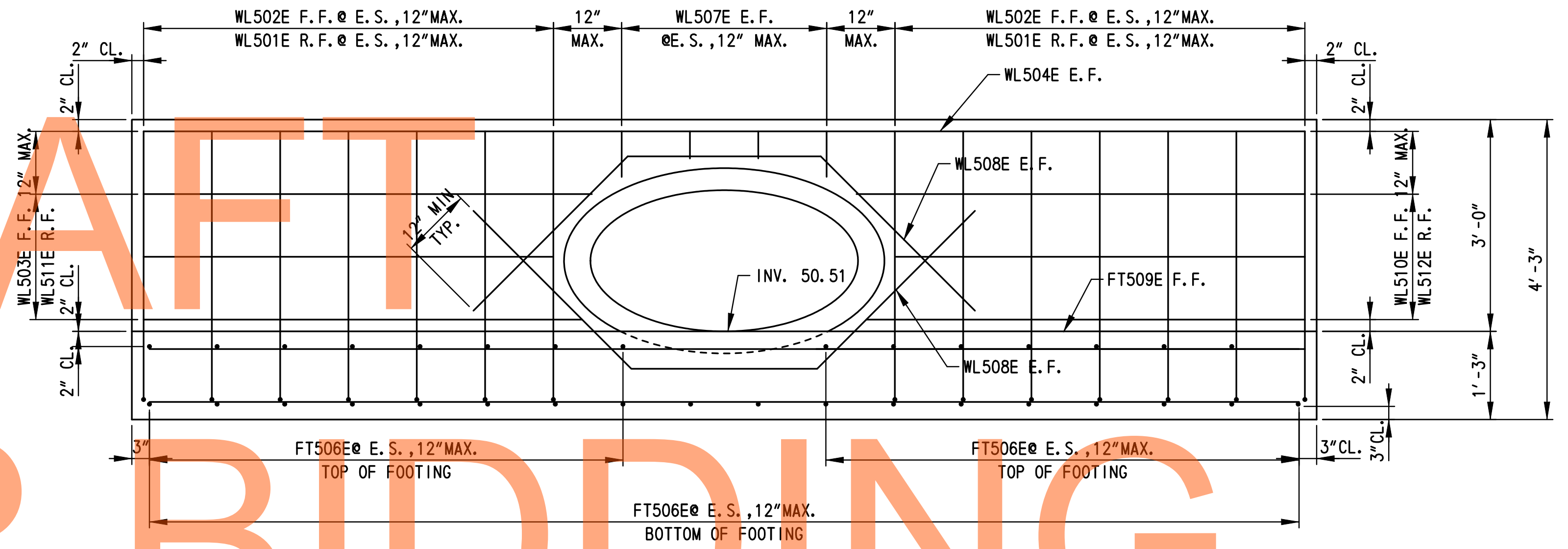
**ENDWALL NO. 240 - PLAN**  
SCALE: 1/2"=1'-0"



**ENDWALL NO. 240 - ELEVATION**  
SCALE: 1/2"=1'-0"



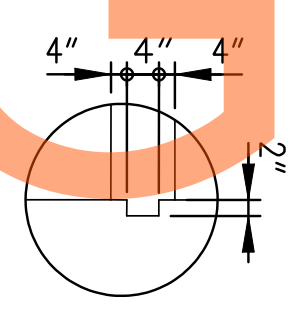
**ENDWALL NO. 240 - FOOTING REINFORCEMENT PLAN**  
SCALE: 3/4"=1'-0"



**ENDWALL NO. 240 - REINFORCEMENT ELEVATION**  
SCALE: 3/4"=1'-0"

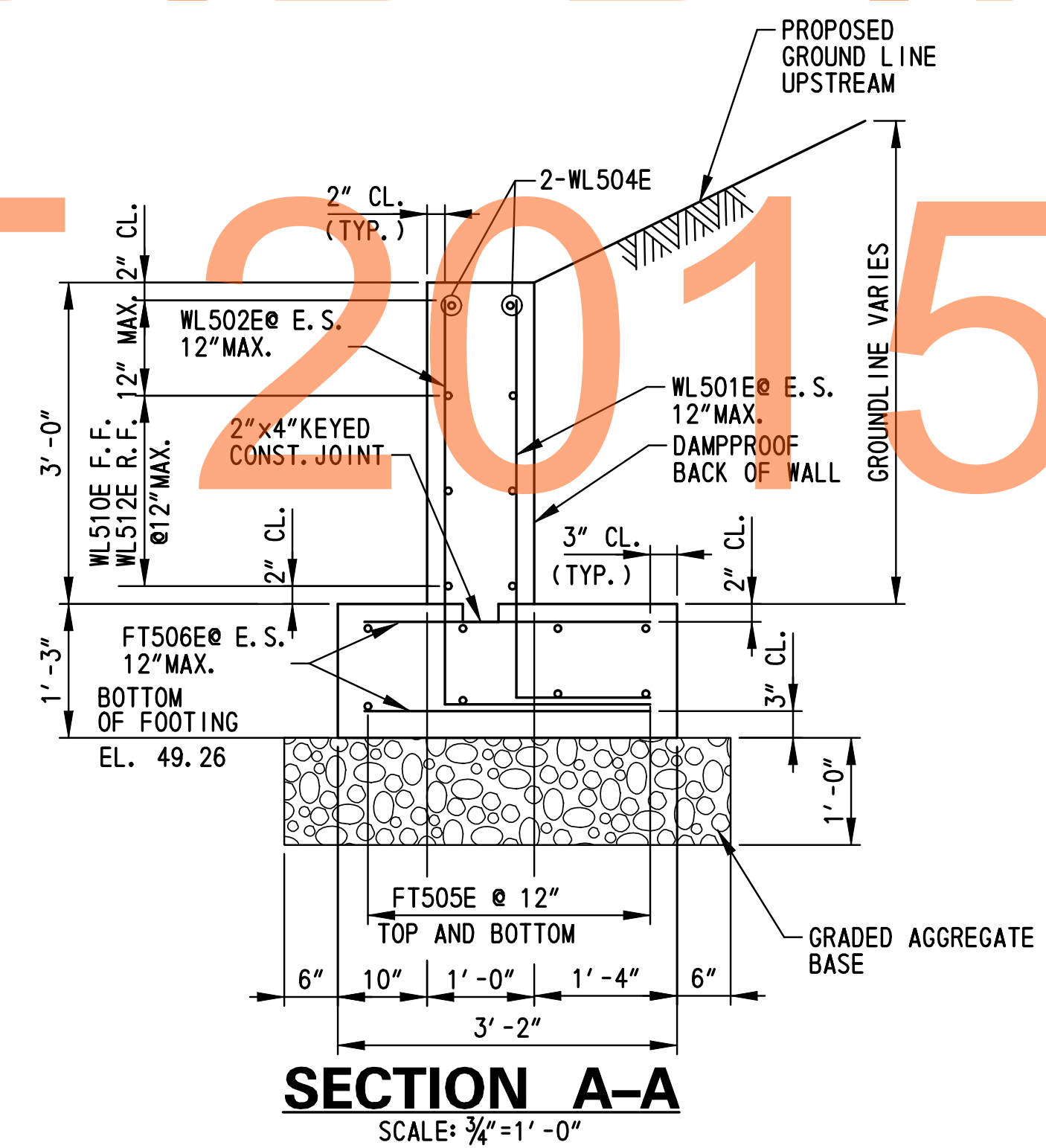
**ENDWALL NO. 241 NOTES:**

1. MAXIMUM FACTORED BEARING RESISTANCE FOR THE ENDWALL IS 2 KSF.
2. KEYS ARE NOMINAL SIZE.
3. CONCRETE SHALL BE CLASS A, 4500 PSI.
4. RIPRAP IN FRONT OF WALL NOT SHOWN FOR CLARITY.
5. E. F. = EACH FACE  
F. F. = FRONT FACE  
R. F. = RARE FACE  
E. S. = EQUAL SPACING.
7. SEE REINFORCING BAR LIST ON DRAWING DT-10.
8. THE COST OF THE GRADED AGGREGATE BEDDING SHALL BE INCIDENTAL TO THE CONTRACT UNIT COST FOR THE ENDWALL (ITEM617515).

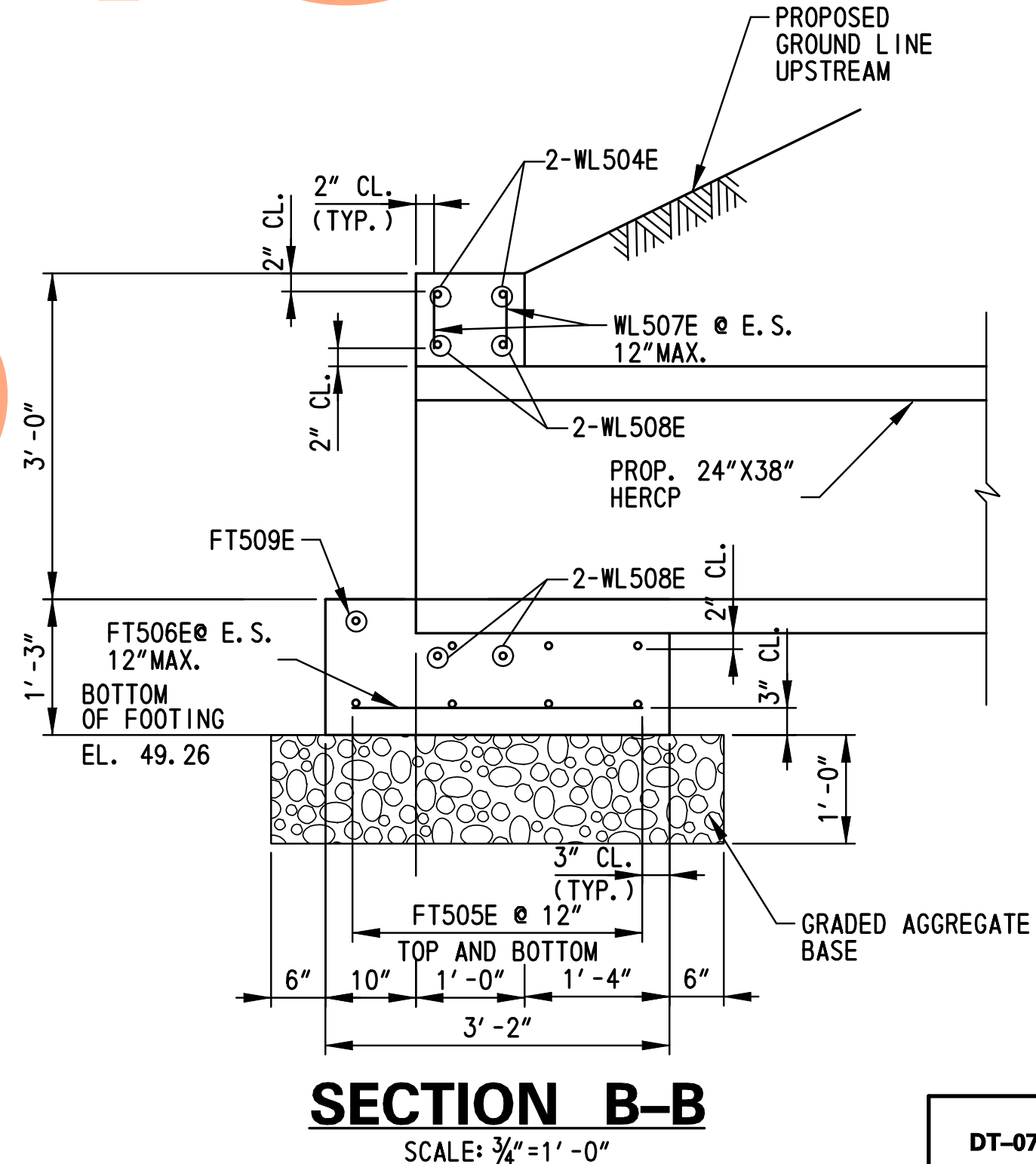


**CONSTRUCTION KEY DETAIL**  
SCALE: 1"=1'-0"

WORKING POINT COORDINATE		
WORKING POINT	NORTHING	EASTING
WP-1	555531.6193	585111.2089
WP-2	555532.1564	585094.5676



**SECTION A-A**  
SCALE: 3/4"=1'-0"



**SECTION B-B**  
SCALE: 3/4"=1'-0"

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ADDENDUMS / REVISIONS	

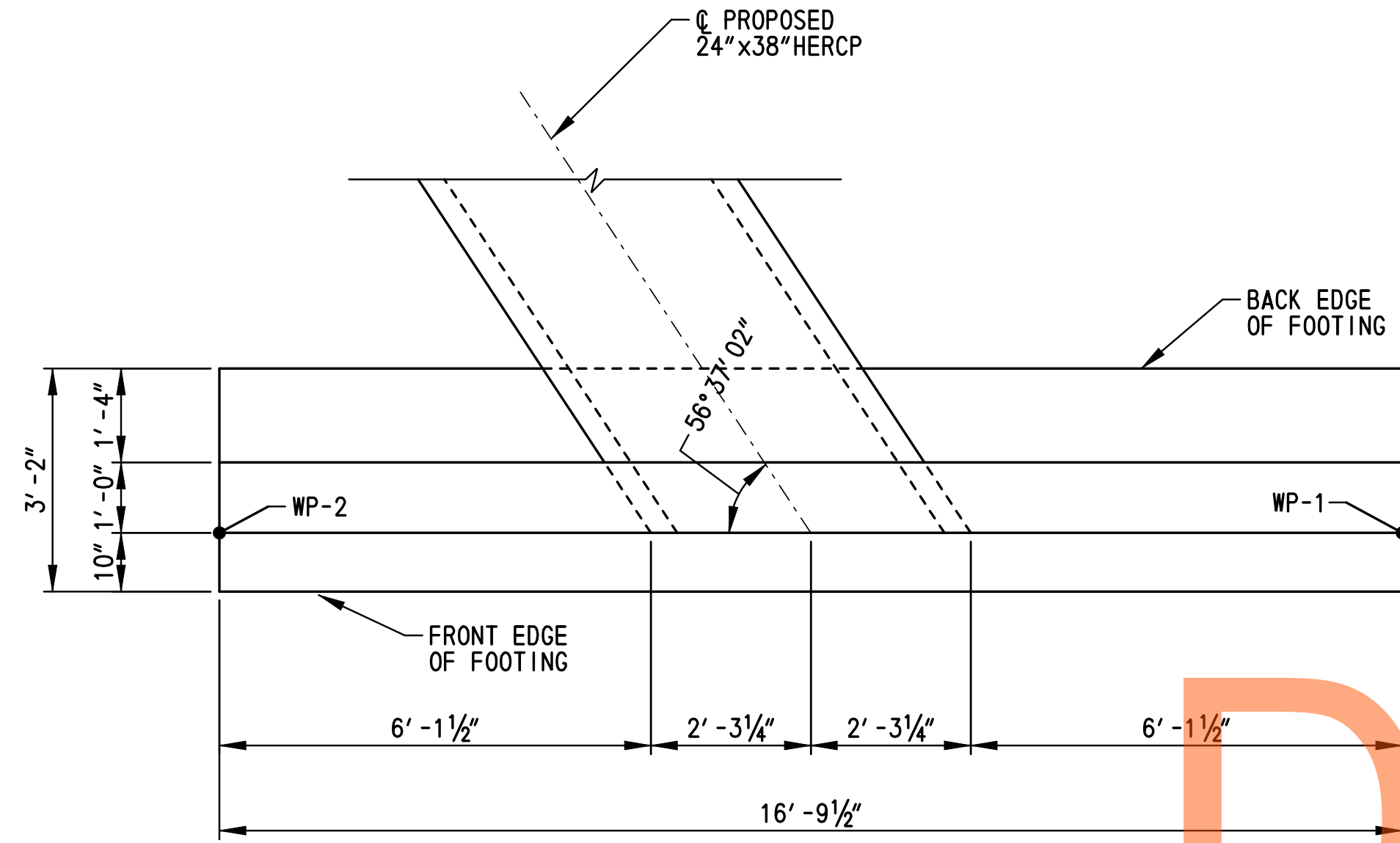
**US 301,  
SR 896 TO SR 1**

CONTRACT	T200911308	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	HQ
		CHECKED BY:	JW

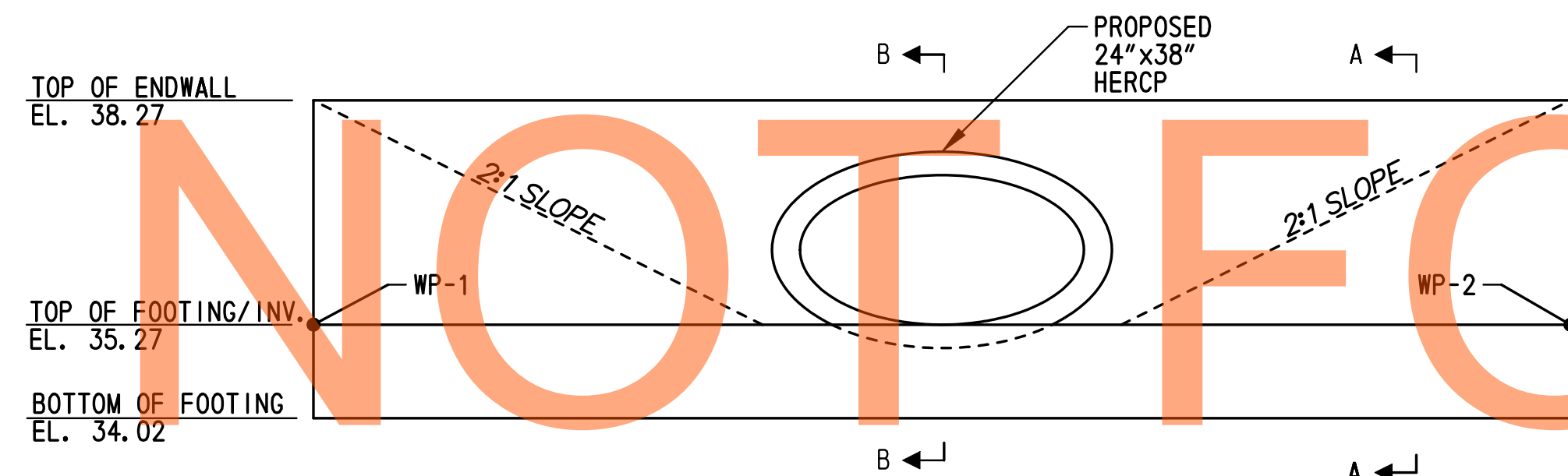
**CONSTRUCTION DETAILS**

SHEET NO.	230
TOTAL SHTS.	875

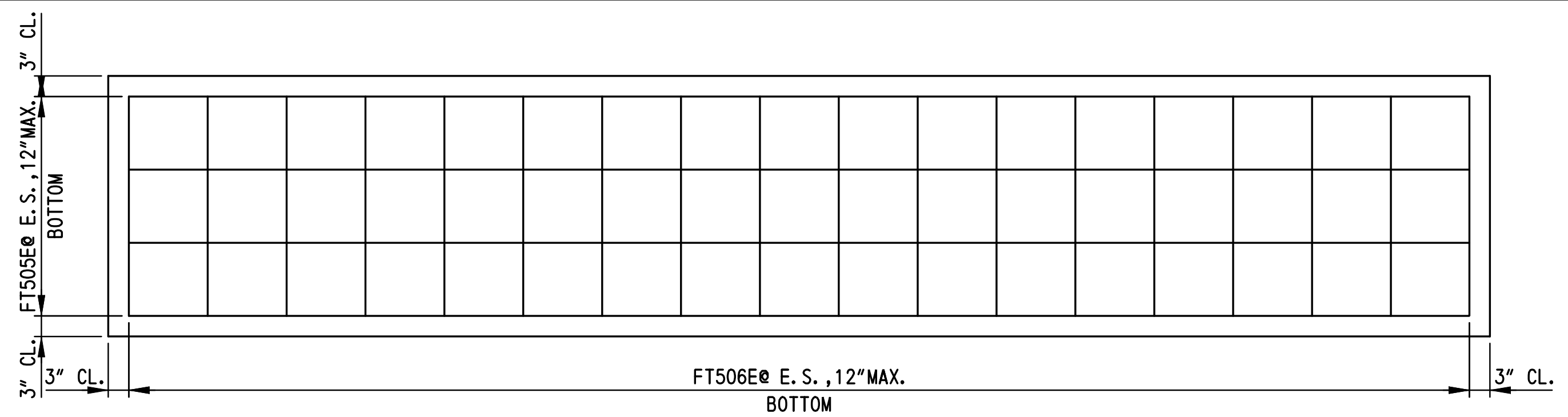
DT-07



**ENDWALL NO. 241 - PLAN**  
SCALE: 1/2"=1'-0"

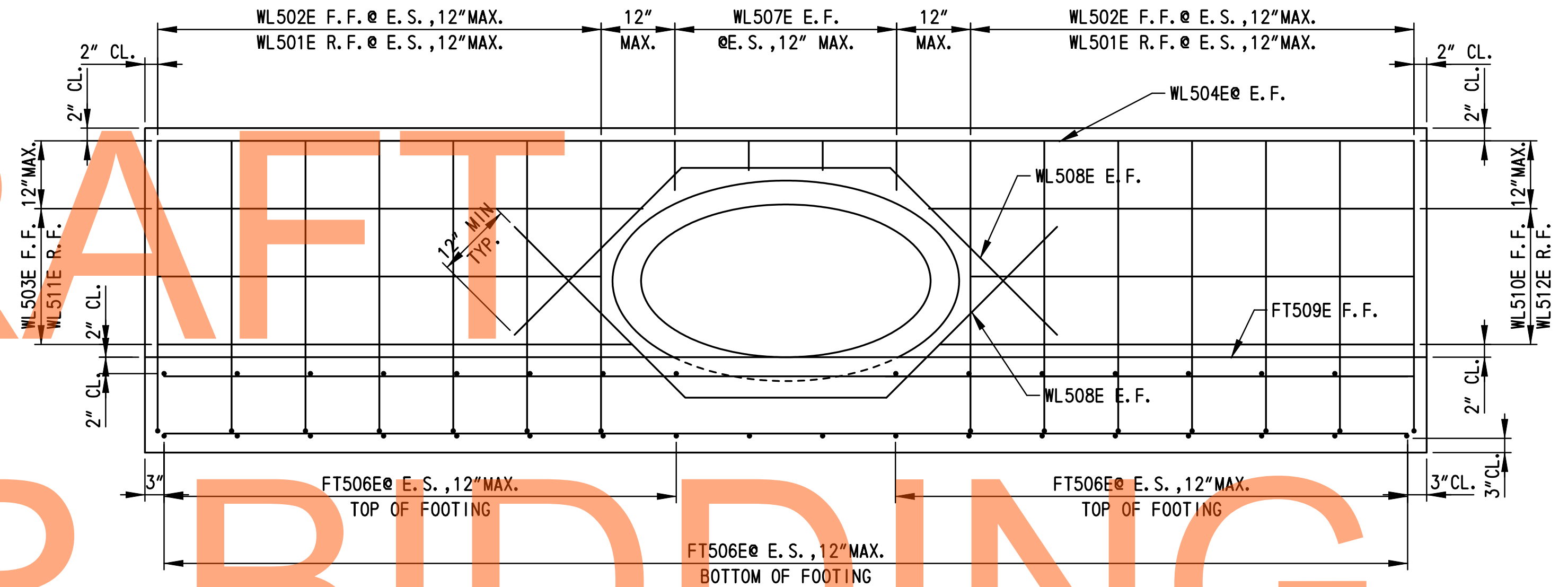


**ENDWALL NO. 241 - ELEVATION**  
SCALE: 1/2"=1'-0"



**ENDWALL NO. 241 - FOOTING REINFORCEMENT PLAN**

SCALE: 3/4"=1'-0"

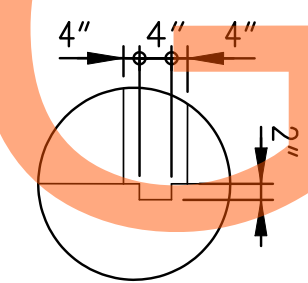


**ENDWALL NO. 241 - REINFORCEMENT ELEVATION**

SCALE: 3/4"=1'-0"

**ENDWALL NO. 241 NOTES:**

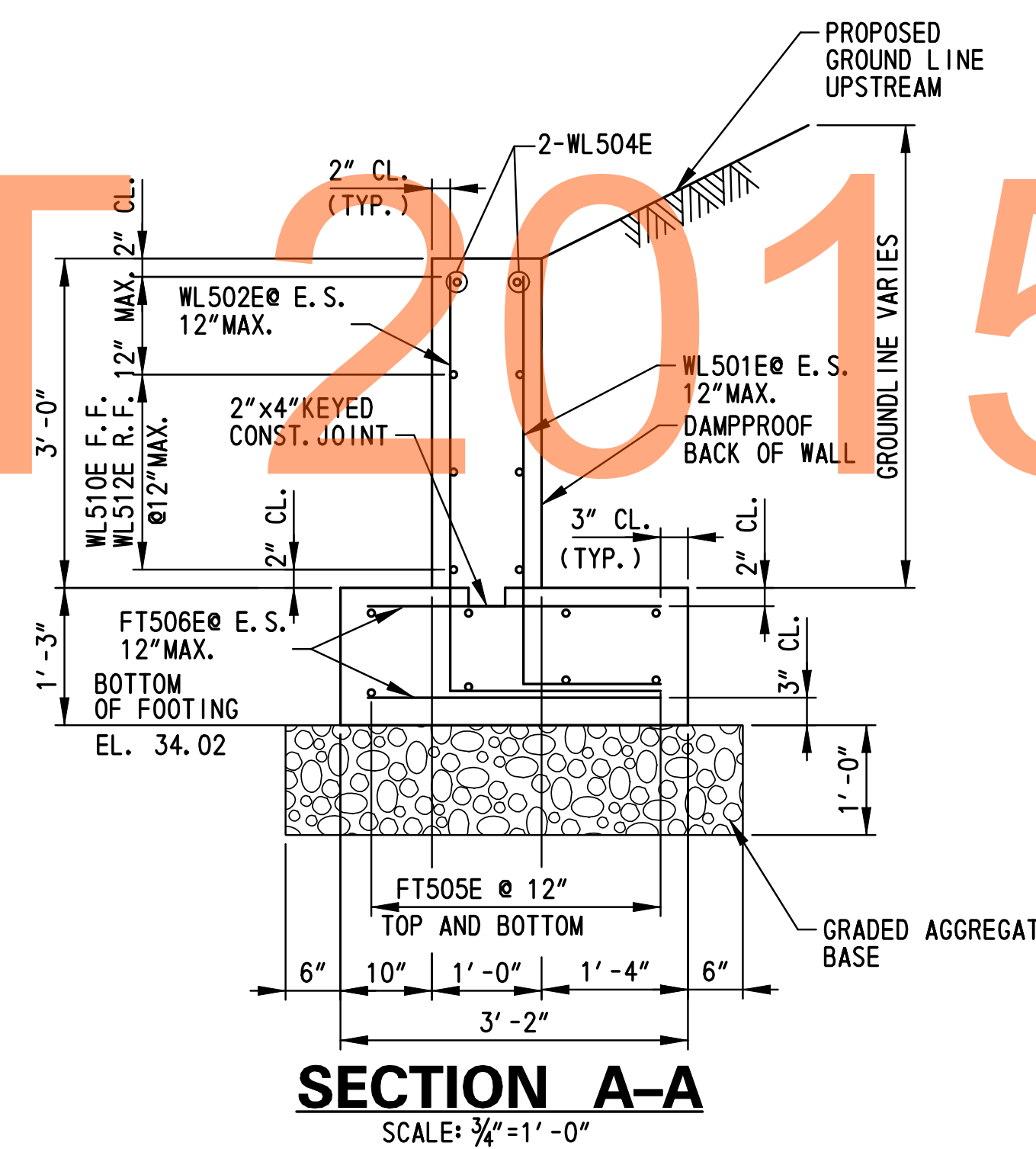
1. MAXIMUM FACTORED BEARING RESISTANCE FOR THE ENDWALL IS 2 KSF.
2. KEYS ARE NOMINAL SIZE.
3. CONCRETE SHALL BE CLASS A, 4500 PSI.
4. RIPRAP IN FRONT OF WALL NOT SHOWN FOR CLARITY.
5. E.F. = EACH FACE  
F.F. = FRONT FACE  
R.F. = RARE FACE  
E.S. = EQUAL SPACING.
6. SEE REINFORCING BAR LIST ON DRAWING DT-10.
7. THE COST OF THE GRADED AGGREGATE BEDDING SHALL BE INCIDENTAL TO THE CONTRACT UNIT COST FOR THE ENDWALL (ITEM617515).



**CONSTRUCTION KEY DETAIL**

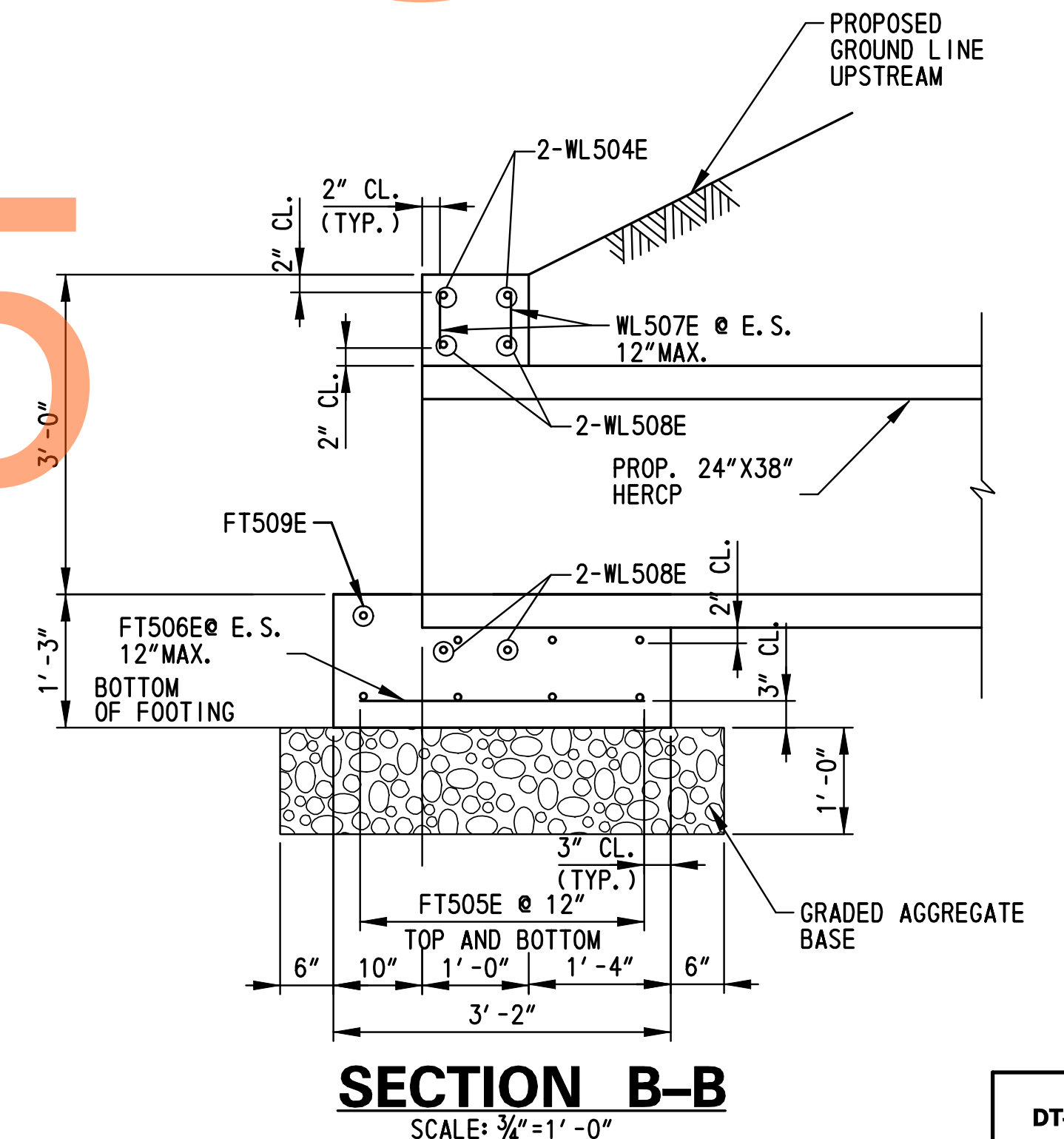
SCALE: 1"=1'-0"

WORKING POINT COORDINATE		
WORKING POINT	NORTHING	EASTING
WP-1	555260.0006	585242.4235
WP-2	555258.566	585259.1545



**SECTION A-A**

SCALE: 3/4"=1'-0"



**SECTION B-B**

SCALE: 3/4"=1'-0"

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- ① ANY MARK NUMBER WITH SUFFIX 'E' DENOTES EPOXY COATED REINFORCING STEEL.  
 ② ALL MARK 'LOCATION PREFIXES' SHALL CONSIST OF TWO LETTERS AND ARE AS FOLLOWS: AB = ABUTMENT, AS = APPROACH SLAB, BC = BOX CULVERT, BW = BACKWALL, CL = COLUMN, DK = DECK, DL = DOWEL, FT = FOOTING, HW = HEADWALL, MS = MISC. BARS, PA = PARAPET, PR = PIER, SC = SHEETPILE CAP, SL = SLAB, TW = TOEWALL, WL = WALL (UNIQUE LOCATION), WW = WINGWALL

SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)												
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O	
ENDWALL NO. 240																
14	5	5-10	WL501E	17		3-100	1-30									
14	5	5-90	WL502E	17		3-100	1-110									
1X3	5	5-73	WL503E	STR		5-73										
		TO				TO										
		5-22				5-22										
2	5	16-52	WL504E	STR		16-52										
8	5	16-32	FT505E	STR		16-32										
32	5	2-80	FT506E	STR		2-80										
2X4	5	0-73	WL507E	STR		0-73										
		TO				TO										
		0-73				0-40										
4	5	8-110	WL508E	4			3-10	2-90	3-10			2-21		2-21	7-12	
1X3	5	5-102	WL509E	STR		5-102										
		TO				TO										
		5-52				5-52										
1X3	5	5-22	WL510E	STR		5-22										
		TO				TO										
		4-92				4-92										
1X3	5	6-32	WL511E	STR		6-32										
		TO				TO										
		5-102				5-102										

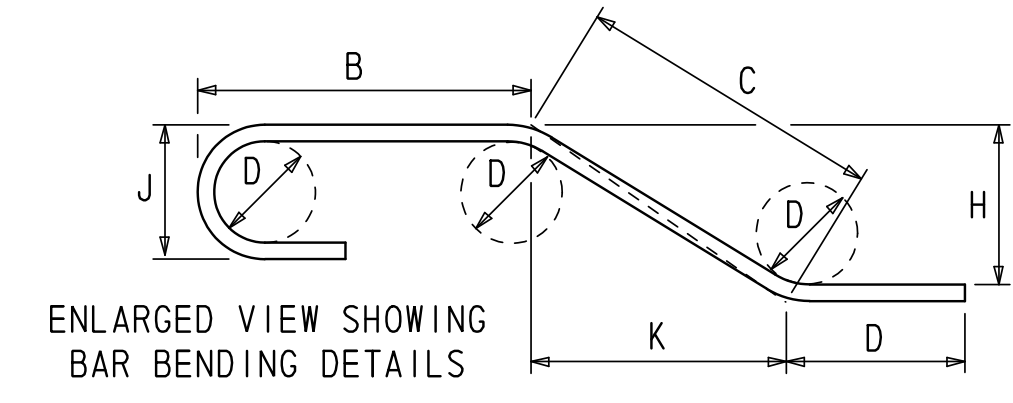
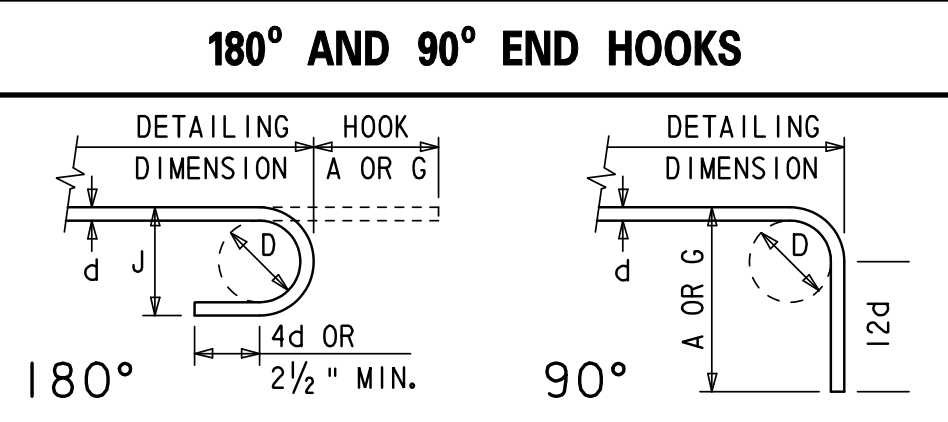
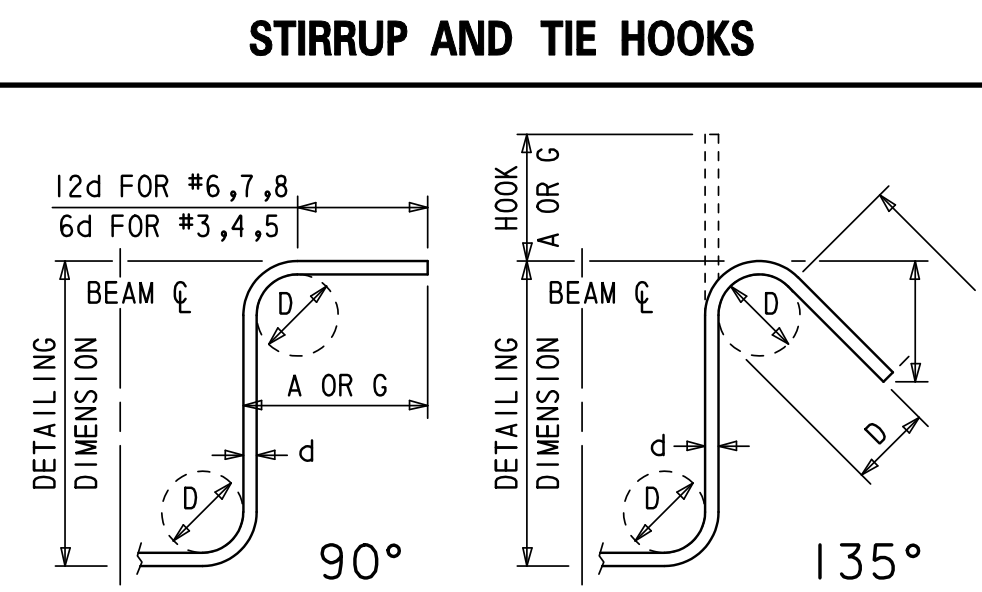
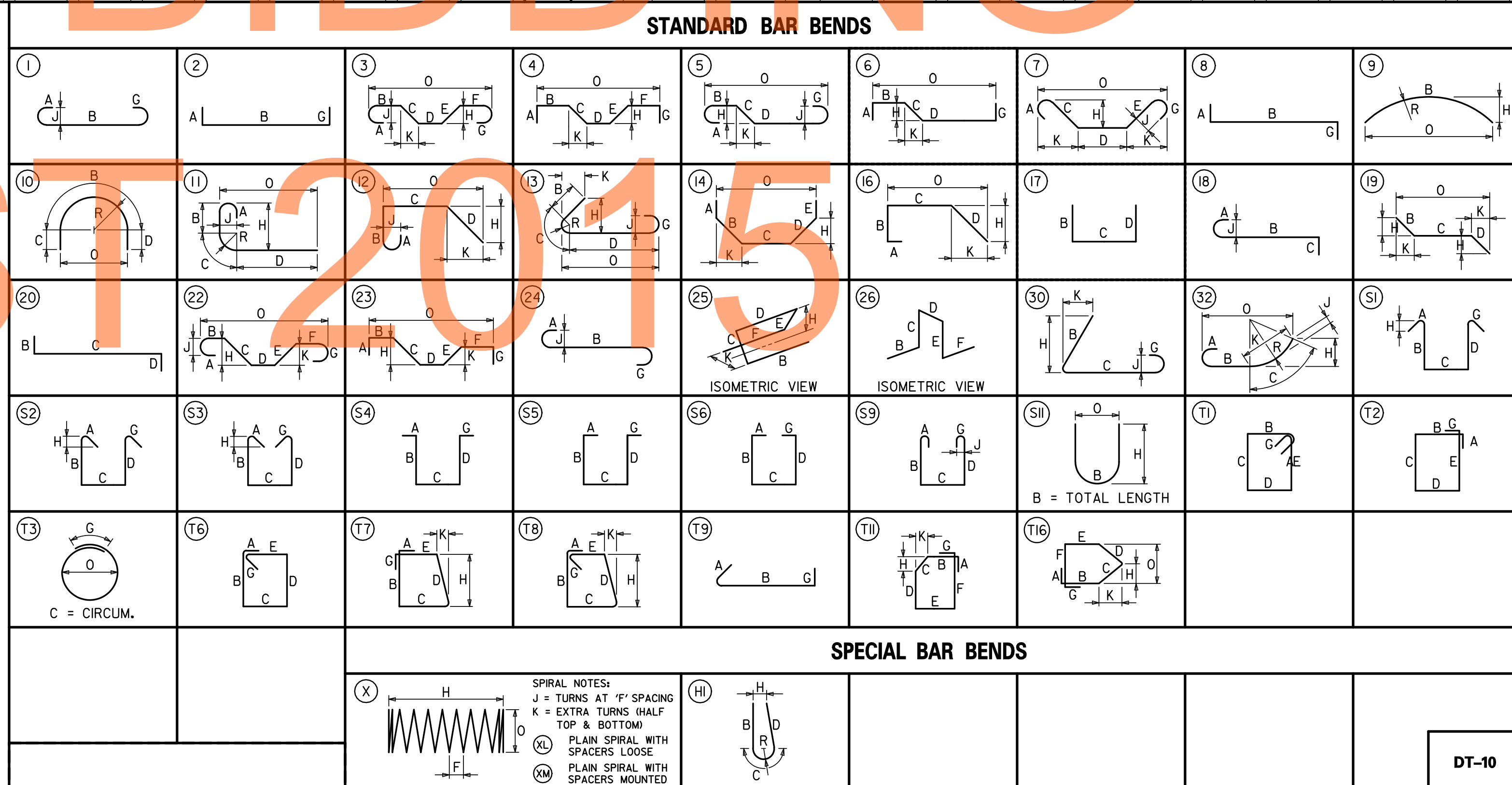
SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)												
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O	
		TO				TO										
		4-92				4-92										
1X3	5	6-32	WL511E	STR		6-32										
		TO				TO										
		5-102				5-102										

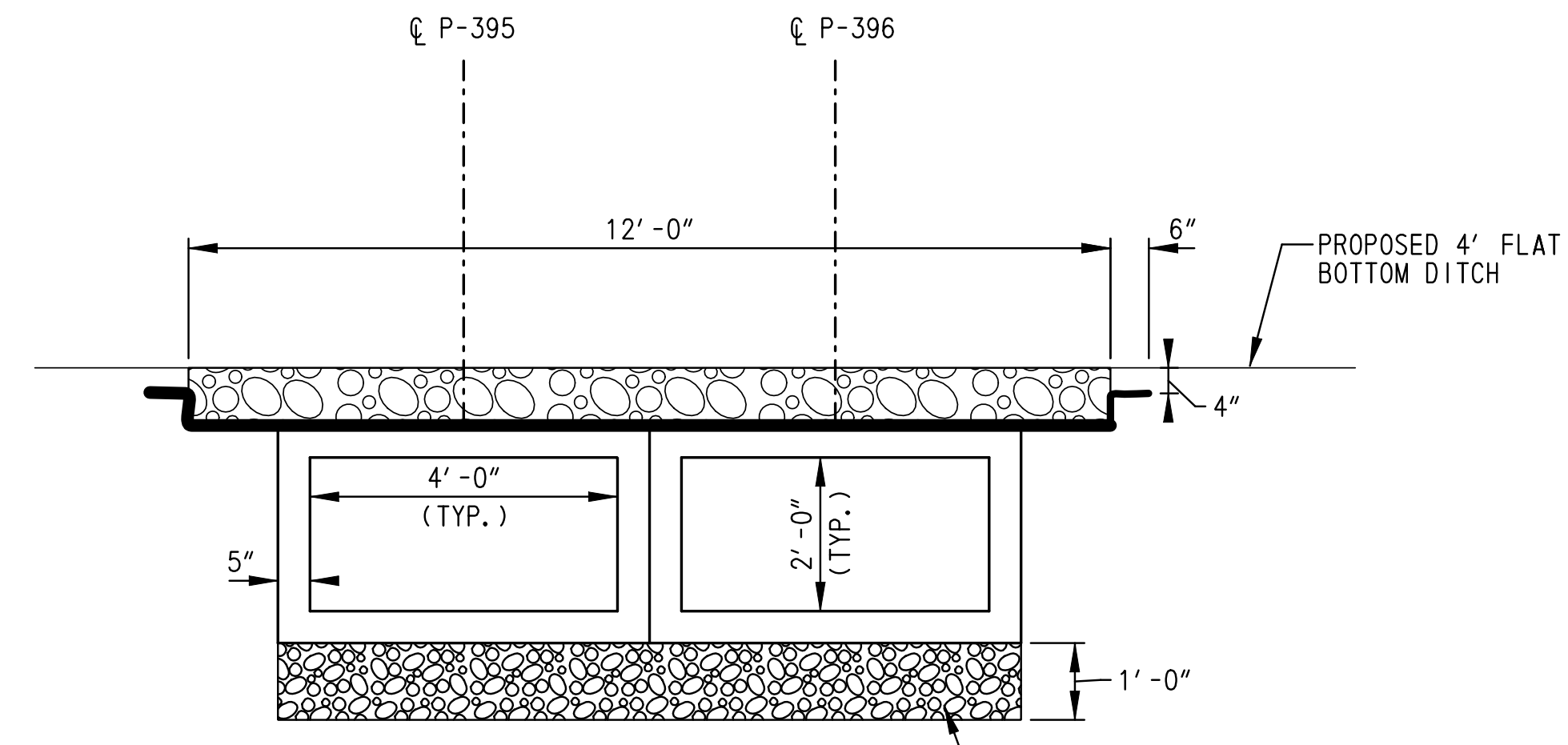
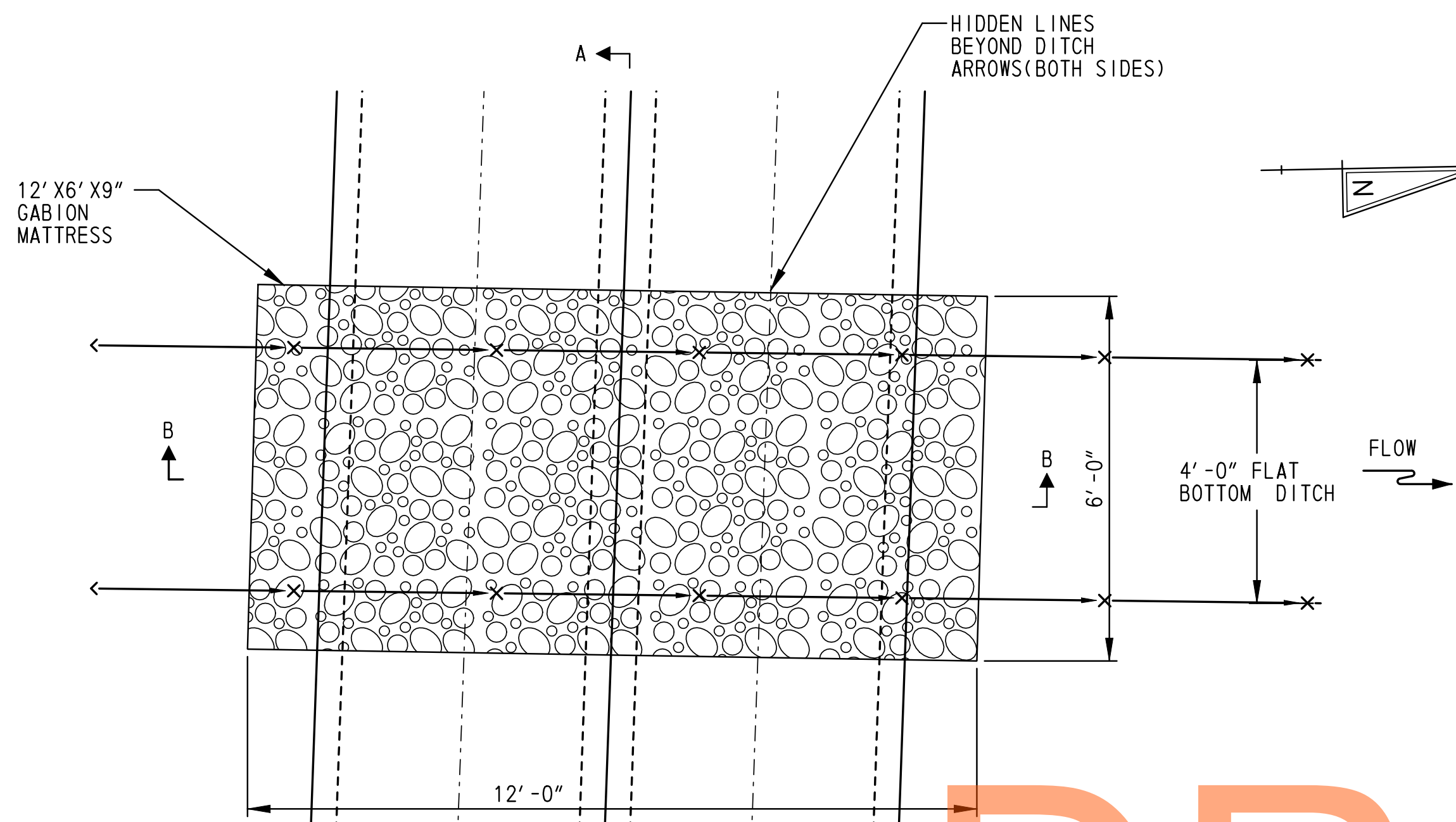
SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)												
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O	

BAR SIZE	NOMINAL DIMENSIONS			180° HOOKS		90° HOOKS		90° HOOK		135° HOOK	
	DIAMETER (INCHES)	AREA (INCHES <sup>2</sup> )	WEIGHT (LBS./FT.)	D	A OR G	J	A OR G	D	A OR G	A OR G	A OR G
3	0.375	0.110	0.376	2 1/4"	5"	3"	6"	1 1/2"	4"	4"	2 1/2"
4	0.500	0.200	0.668	3"	6"	4"	8"	2"	4 1/2"	4 1/2"	3"
5	0.625	0.310	1.043	3 3/4"	7"	5"	10"	2 1/2"	6"	5 1/2"	3 3/4"
6	0.750	0.440	1.502	4 1/2"	8"	6"	1-0"	4 1/2"	1-0"	8"	4 1/2"
7	0.875	0.600	2.044	5 1/2"	10"	7"	1-2"	5 1/4"	1-2"	9"	5 1/4"
8	1.000	0.790	2.670	6"	11"	8"	1-4"	6"	1-4"	10 1/2"	6"
9	1.128	1.000	3.400	9 1/2"	1-3"	11 3/4"	1-7"				
10	1.270	1.270	4.303	10 3/4"	1-5"	1-1 1/4"	1-10"				
11	1.410	1.560	5.313	1-0"	1-7"	1-2 3/4"	2-0"				
14	1.693	2.250	7.650	1-6 1/4"	2-3"	1-9 3/4"	2-7"				
18	2.257	4.000	13.600	2-0"	3-0"	2-4 1/2"	3-5"				

**NOTES:**

- FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
- STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
- ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "C" ON STD. 180° AND 135° HOOKS.
- "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H".
- WHERE "J" CAN EXCEED "H", IT SHALL BE SHOWN.
- "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
- UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
- WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
- WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
- FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRS1' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
- TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.





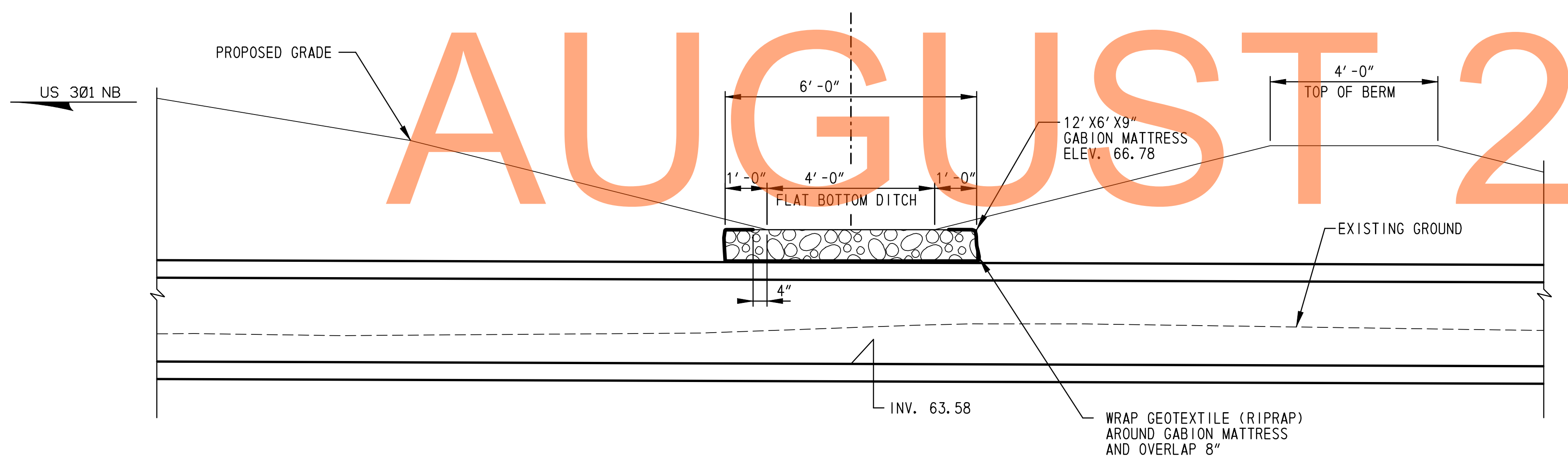
**SECTION B-B**  
SCALE: 1/2" = 1' - 0"

DRAFT

NOT FOR BIDDING

AUGUST 2015

**PLAN - PIPES 395 & 396 GABION MATTRESS PROTECTION**  
SCALE: 1/2" = 1' - 0"



**SECTION A-A**  
SCALE: 1/2" = 1' - 0"

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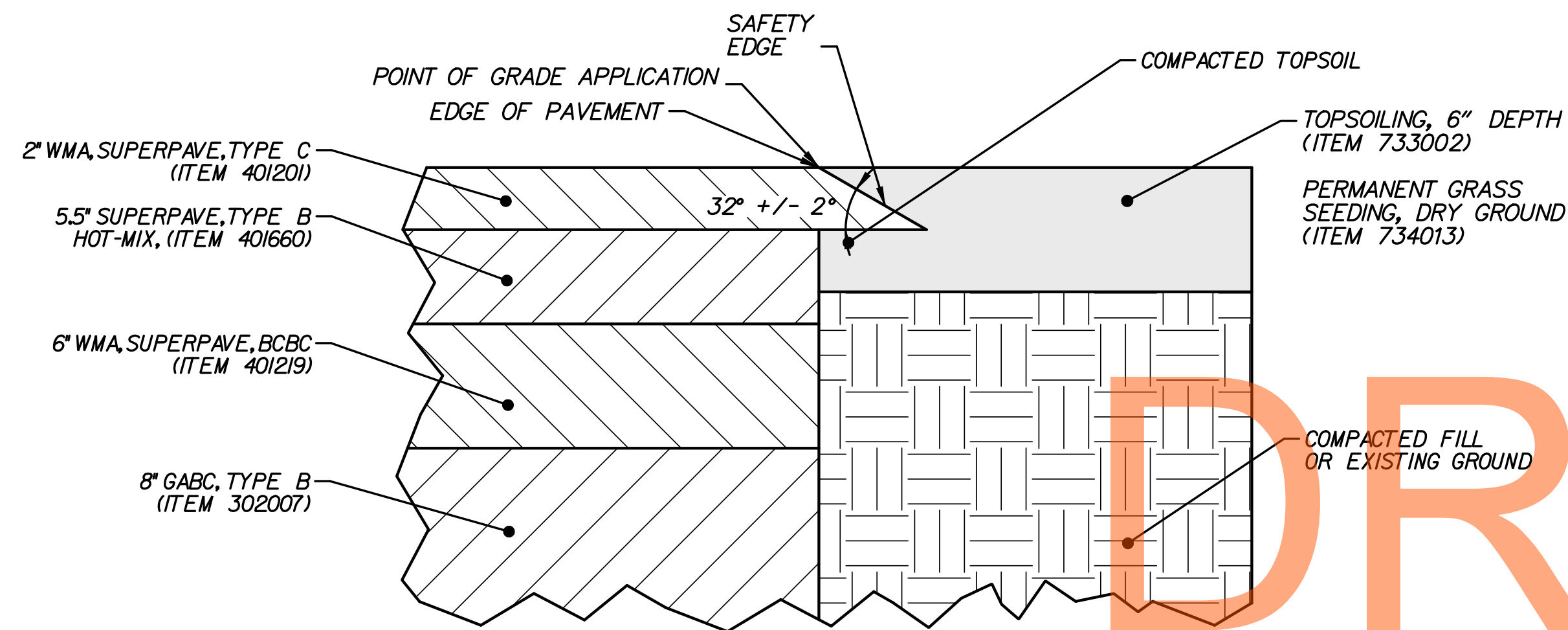
ADDENDUMS / REVISIONS	

**US 301,  
SR 896 TO SR 1**

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: DLH
NEW CASTLE	CHECKED BY: JDC

**CONSTRUCTION DETAILS**

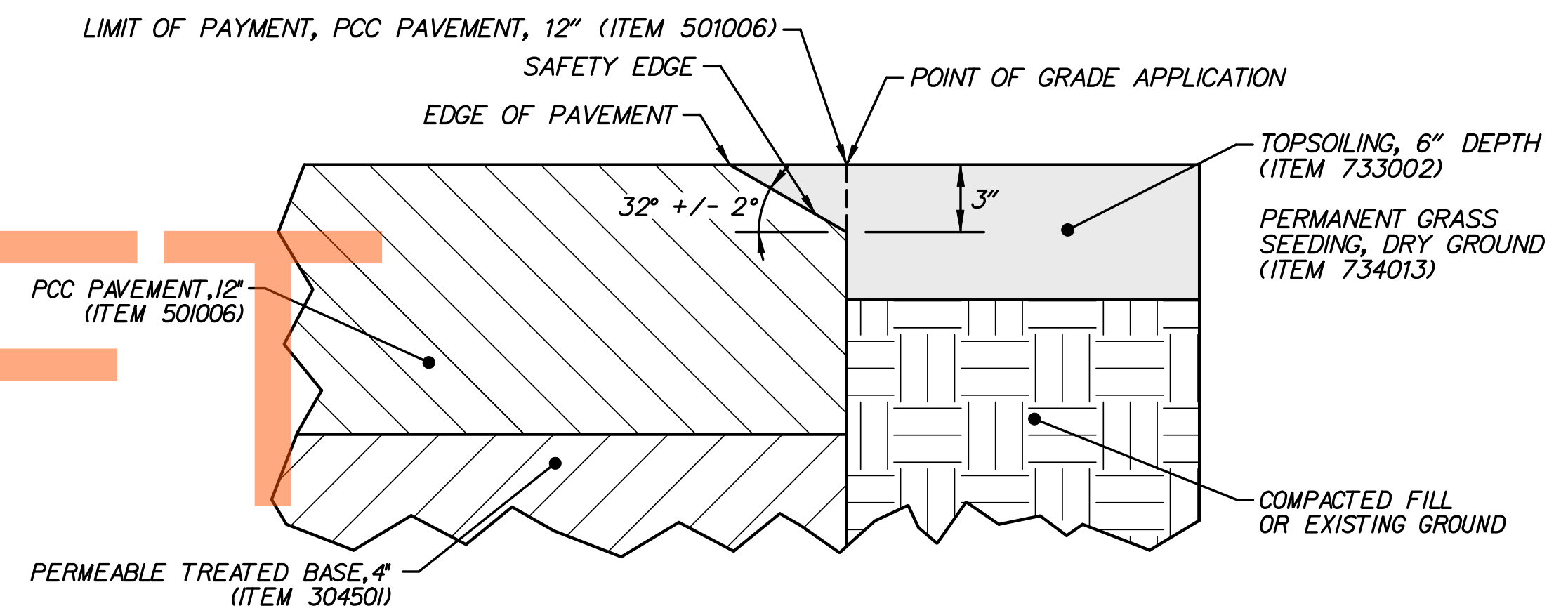
<b>DT-11</b>
SHEET NO.
234
TOTAL SHTS.
875



**NOTE:**

1. FOR ADDITIONAL INFORMATION, SEE ITEM 401752 SAFETY EDGE FOR ROADWAY PAVEMENT.
2. THE SAFETY EDGE SHALL NOT BE CONSTRUCTED ADJACENT TO OTHER PAVEMENTS, CURB, CURB & GUTTER, CONCRETE SAFETY BARRIER OR MAINTENANCE PAVEMENT UNDER GUARDRAIL. THE CONTRACTOR SHALL STAKE OUT THE LIMITS OF THE AREAS NOT TO RECEIVE THE SAFETY EDGE FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING PAVEMENT OPERATIONS.
3. IN BITUMINOUS CONCRETE PAVEMENT SECTIONS, PRIOR TO THE CONSTRUCTION OF THE SAFETY EDGE IN OVERLAY SECTIONS AND MILL/OVERLAY SECTIONS, THE EXISTING TOPSOIL OR IN-SITU MATERIAL AT THE EDGE OF PAVEMENT SHALL BE COMPACTED SO THAT IT IS LEVEL WITH THE BOTTOM OF THE FINAL SURFACE LAYER PRIOR TO PLACING THE FINAL SURFACE OVERLAY. AFTER THE FINAL SURFACE OVERLAY IS PLACED, TOPSOIL SHALL BE PLACED TO THE TOP OF THE FINAL SURFACE OVERLAY.
4. IN BITUMINOUS CONCRETE PAVEMENT SECTIONS WHERE FULL DEPTH TOPSOIL IS PROPOSED TO BE PLACED ADJACENT TO THE EDGE OF PAVEMENT, THE TOPSOIL SHALL BE PLACED AND COMPACTED ALONG THE PAVEMENT EDGE TO THAT IS IT LEVEL WITH THE BOTTOM OF THE FINAL SURFACE LAYER PRIOR TO PACING THE FINAL SURFACE OVERLAY. AFTER THE FINAL SURFACE OVERLAY IS PLACED, THE TOPSOIL SHALL BE PLACED TO THE TOP OF THE FINAL SURFACE OVERLAY. ALL COSTS FOR PLACING AND COMPACTING THE TOPSOIL SHALL BE INCLUDED IN THE PRICE OF THE TOPSOIL ITEM.

**SAFETY EDGE - BITUMINOUS PAVEMENT AND OVERLAYS**  
NOT TO SCALE



**NOTE:**

1. FOR ADDITIONAL INFORMATION, SEE ITEM 401752 SAFETY EDGE FOR ROADWAY PAVEMENT.
2. THE SAFETY EDGE SHALL NOT BE CONSTRUCTED ADJACENT TO OTHER PAVEMENTS, CURB, CURB & GUTTER, CONCRETE SAFETY BARRIER OR MAINTENANCE PAVEMENT UNDER GUARDRAIL. THE CONTRACTOR SHALL STAKE OUT THE LIMITS OF THE AREAS NOT TO RECEIVE THE SAFETY EDGE FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING PAVEMENT OPERATIONS.

**SAFETY EDGE - CONCRETE PAVEMENT**  
NOT TO SCALE

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ADDENDUMS / REVISIONS	

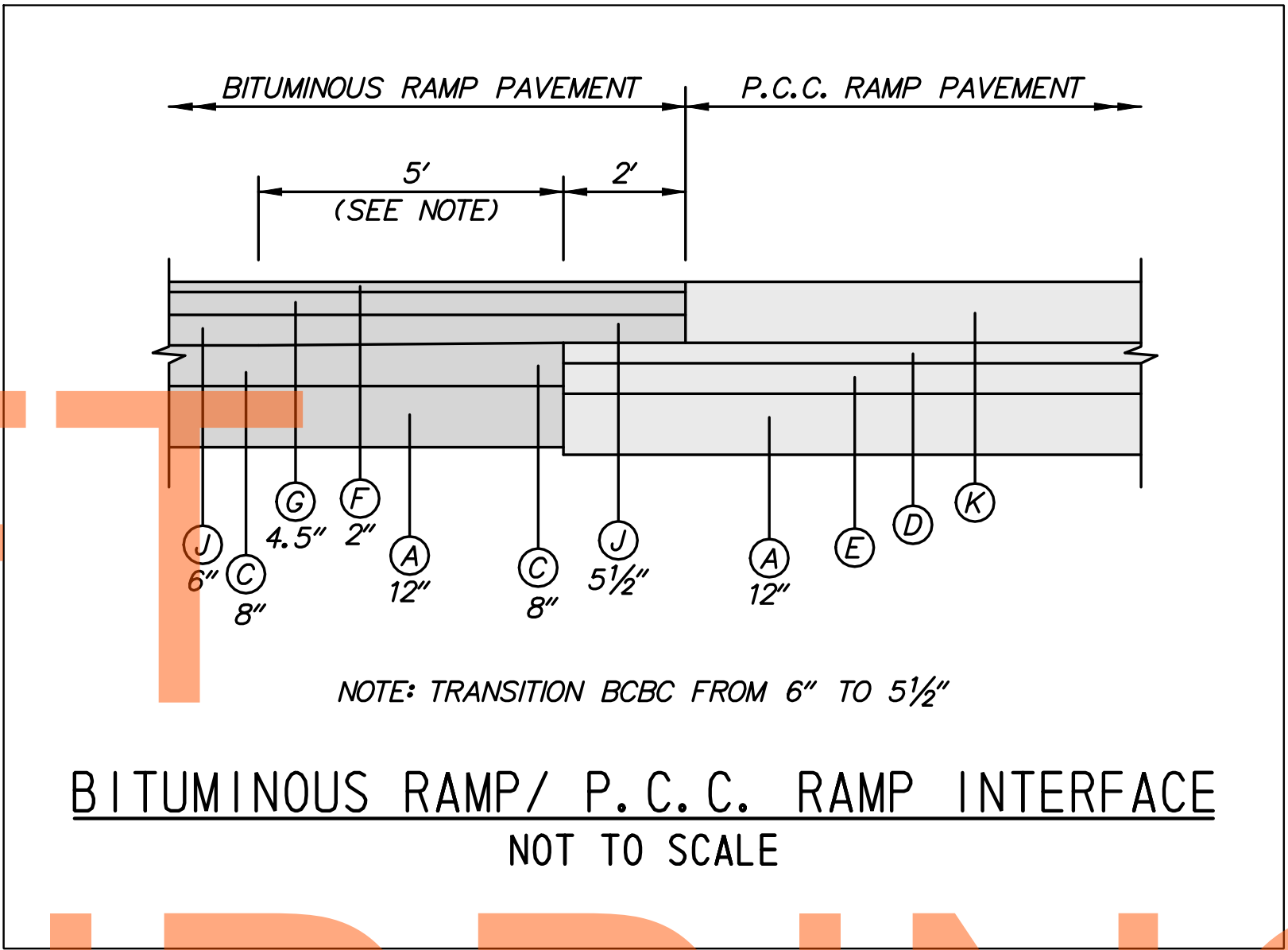
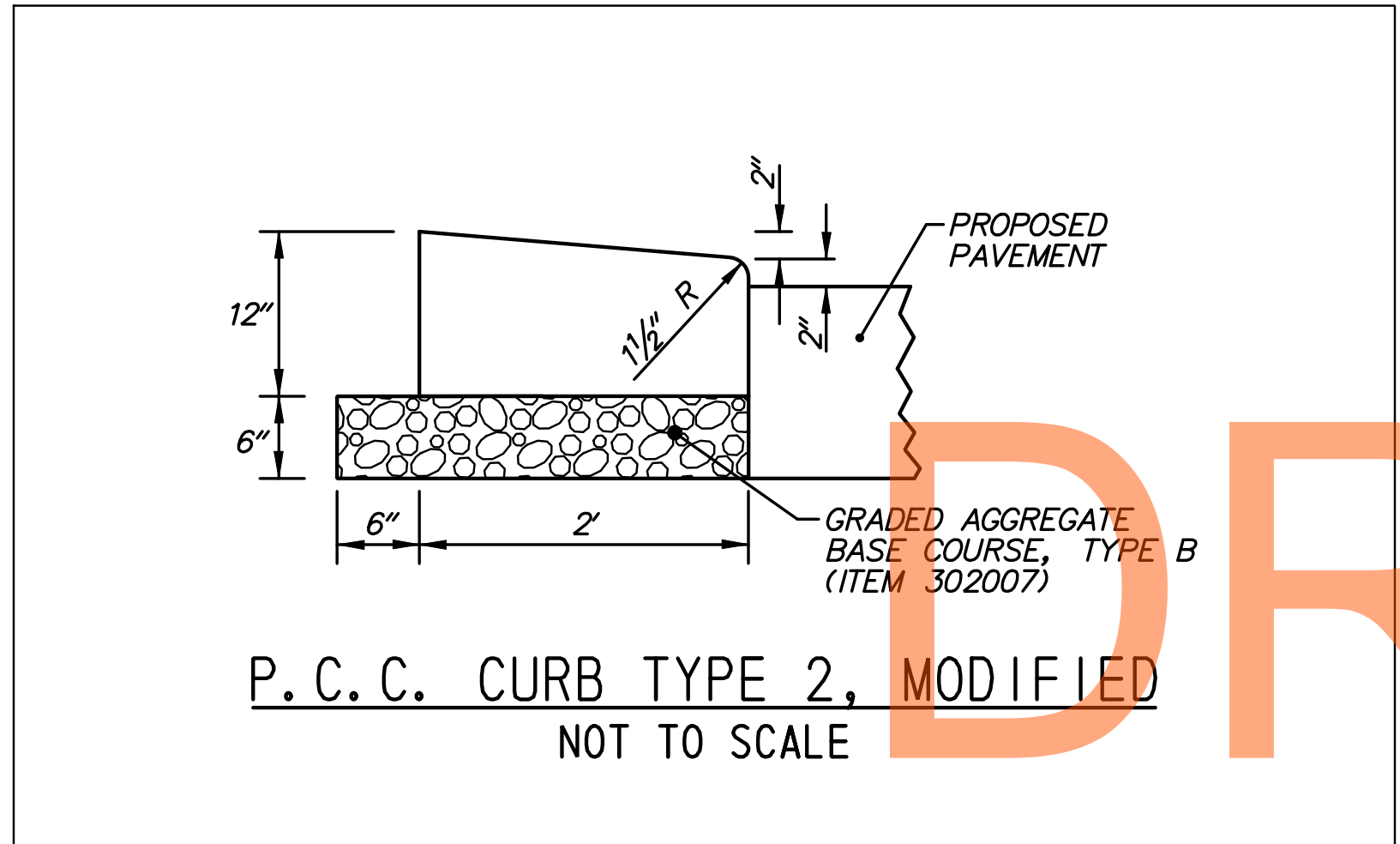
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US 301,  
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: SJB
NEW CASTLE	CHECKED BY: TAO

CONSTRUCTION DETAILS

DT-12
SHEET NO.
235
TOTAL SHTS.
875



**LEGEND**

- (A) ITEM 209001 - BORROW, TYPE A
- (C) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (D) ITEM 304501 - PERMEABLE TREATED BASE, 4"
- (E) ITEM 304502 - SOIL CEMENT BASE COURSE, 6"
- (F) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22
- (G) ITEM 401810 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22
- (J) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (K) ITEM 501006 - PORTLAND CEMENT CONCRETE PAVEMENT, 12"

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NOT FOR BIDDING

AUGUST 2015

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ADDENDUMS / REVISIONS

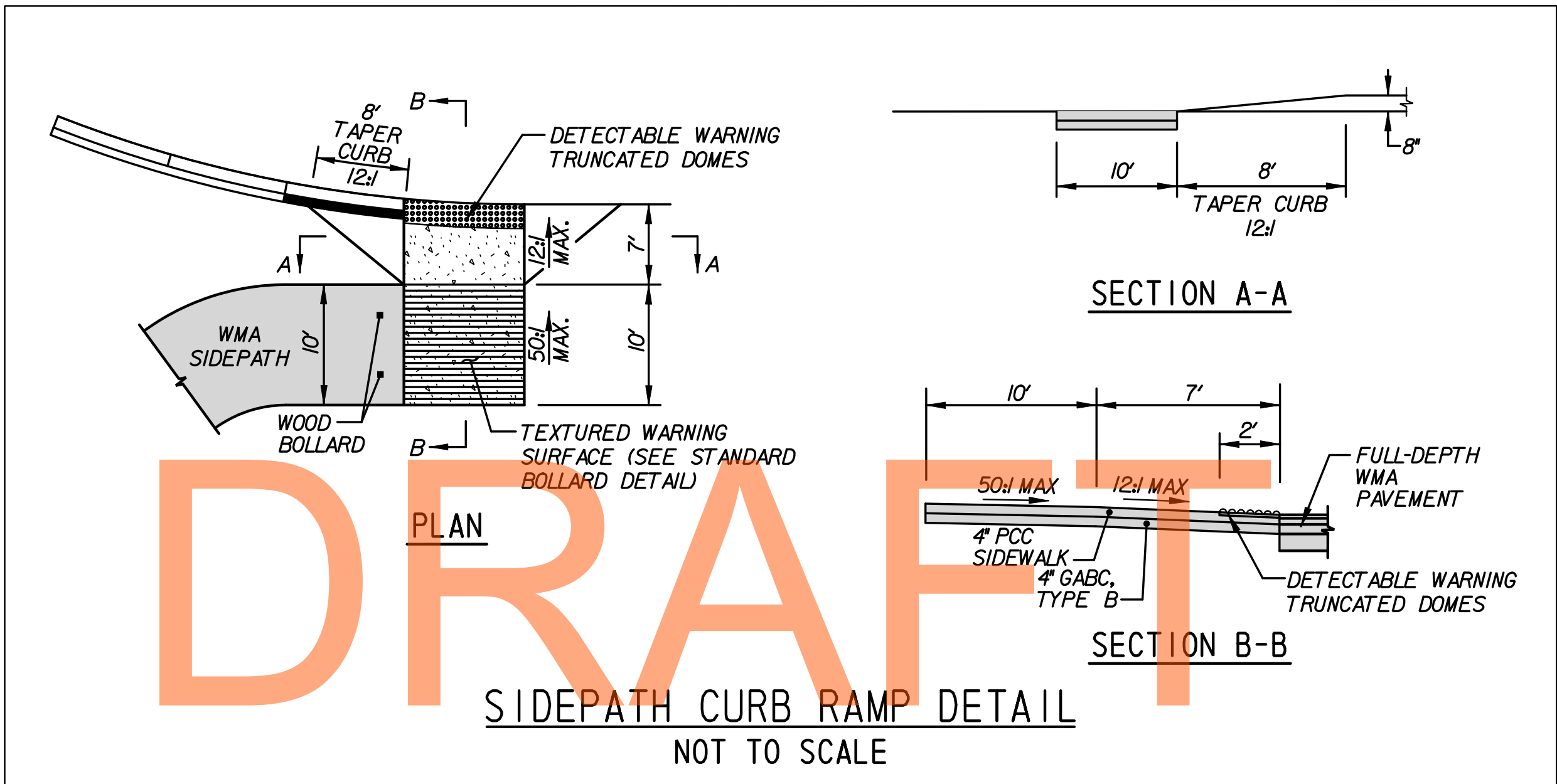
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US 301,  
SR 896 TO SR 1

CONTRACT T200911308	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SJB CHECKED BY: TAO

CONSTRUCTION DETAILS

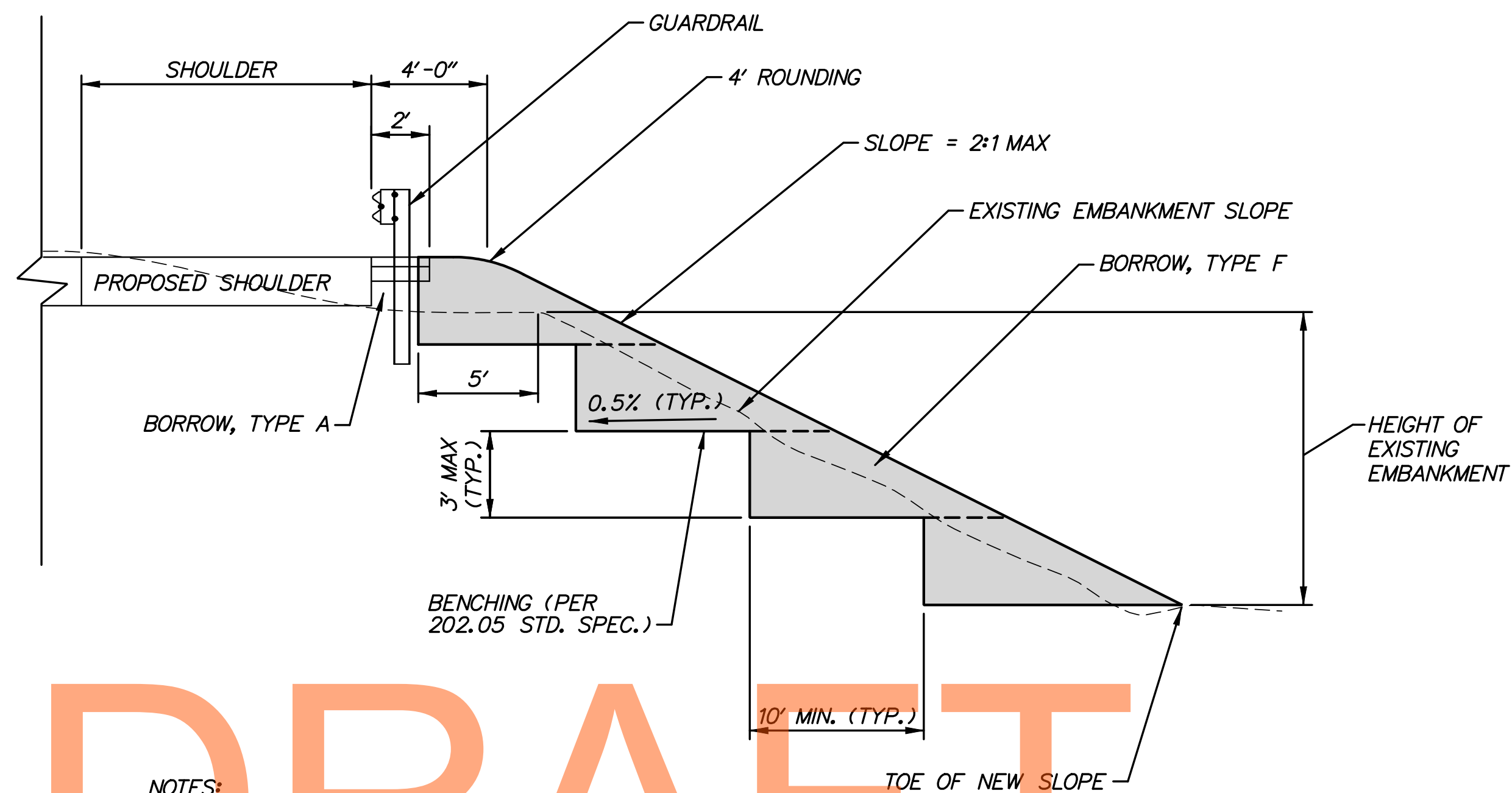
DT-13
SHEET NO. 236
TOTAL SHTS. 875



NOT FOR BIDDING

AUGUST 2015

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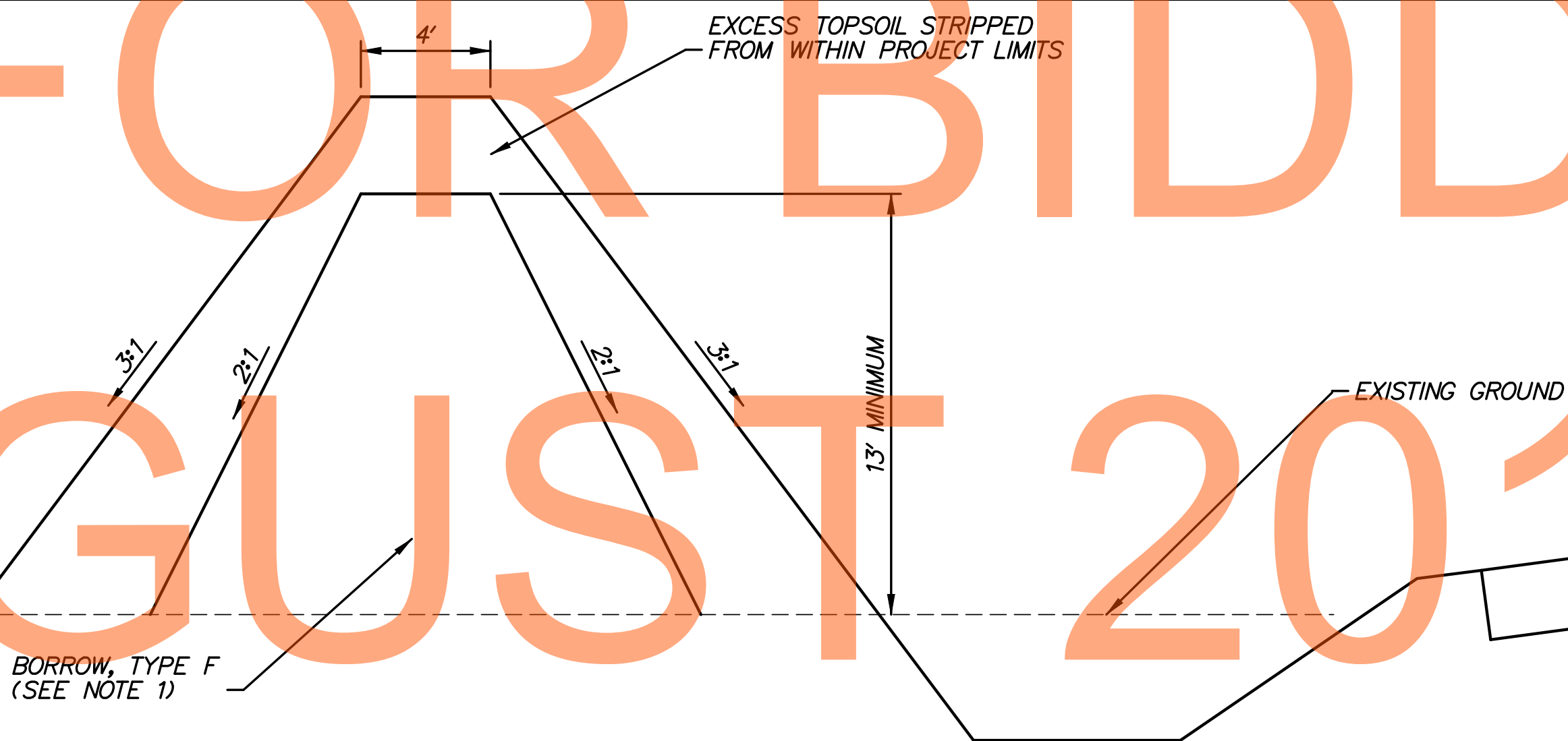


NOTES:  
 BENCHING SHALL CONFORM TO THIS DETAIL  
 AT ALL LOCATIONS WHERE EXISTING EMBANKMENTS  
 WITH A SLOPE 4:1 OR STEEPER, AND A HEIGHT OF  
 3' OR MORE, ARE WIDENED.

**BENCHING DETAIL**

NOT TO SCALE

NOT FOR BIDDING  
 AUGUST 2015



- NOTES:
1. BORROW, TYPE F SHALL BE PLACED PRIOR TO PLACING EXCESS TOPSOIL OUTSIDE OF THE LIMITS OF THE EXISTING BERM.
  2. WITHIN THE LIMITS OF THE EXISTING BERM THE EXISTING EMBANKMENT SHALL BE BENCHED AS REQUIRED BY THE BENCHING DETAIL ON THIS SHEET PRIOR TO PLACING EXCESS TOPSOIL.
  3. CONTRACTOR SHALL NOT STRIP TOPSOIL THAT WILL REMAIN UNDER THE PROPOSED EARTH BERM. TOPSOIL STRIPPED FROM THIS AREA WILL NOT BE MEASURED OR PAID. CONSTRUCTION OF BERM IS INCIDENTAL TO ITEM 202000.

**EARTH BERM**

NOT TO SCALE

ADDENDUMS / REVISIONS


NOT TO SCALE

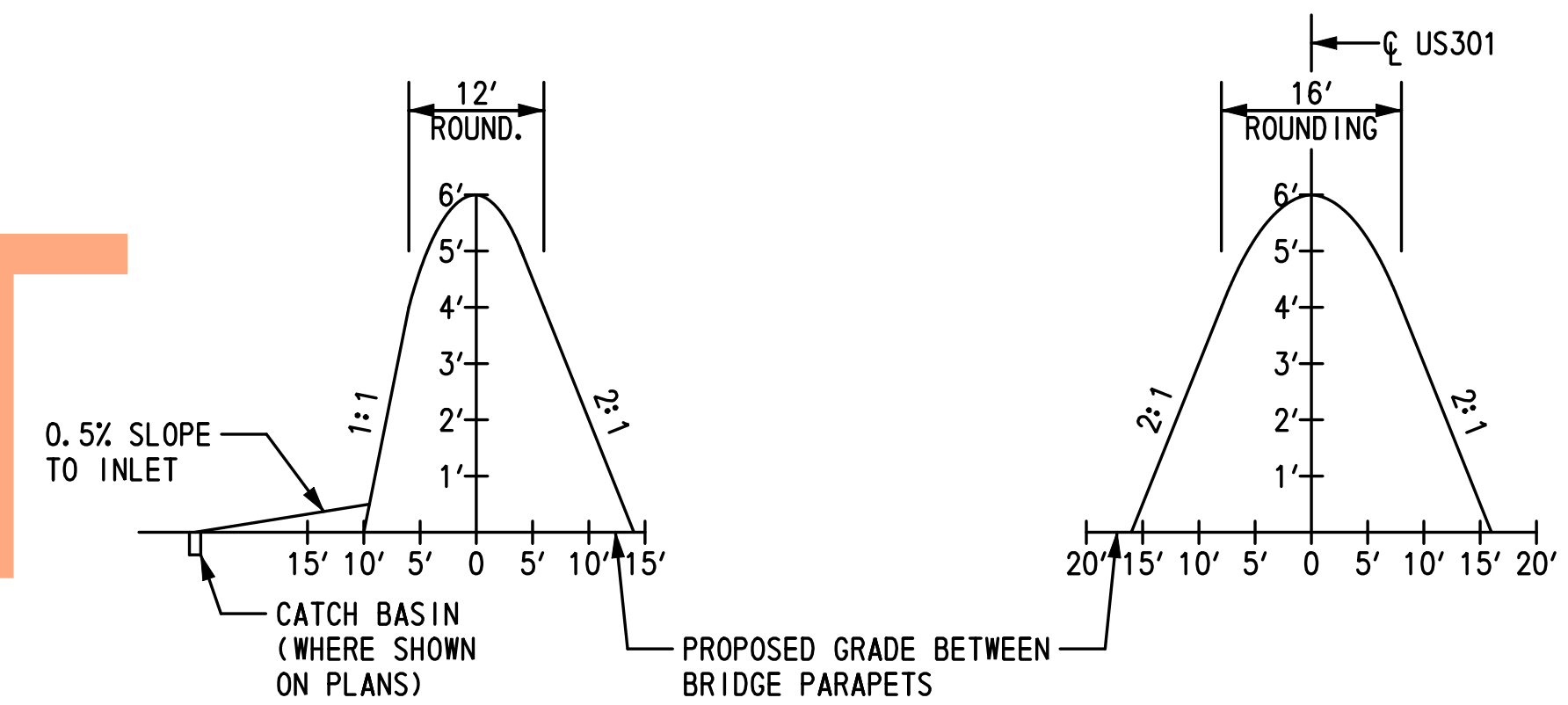
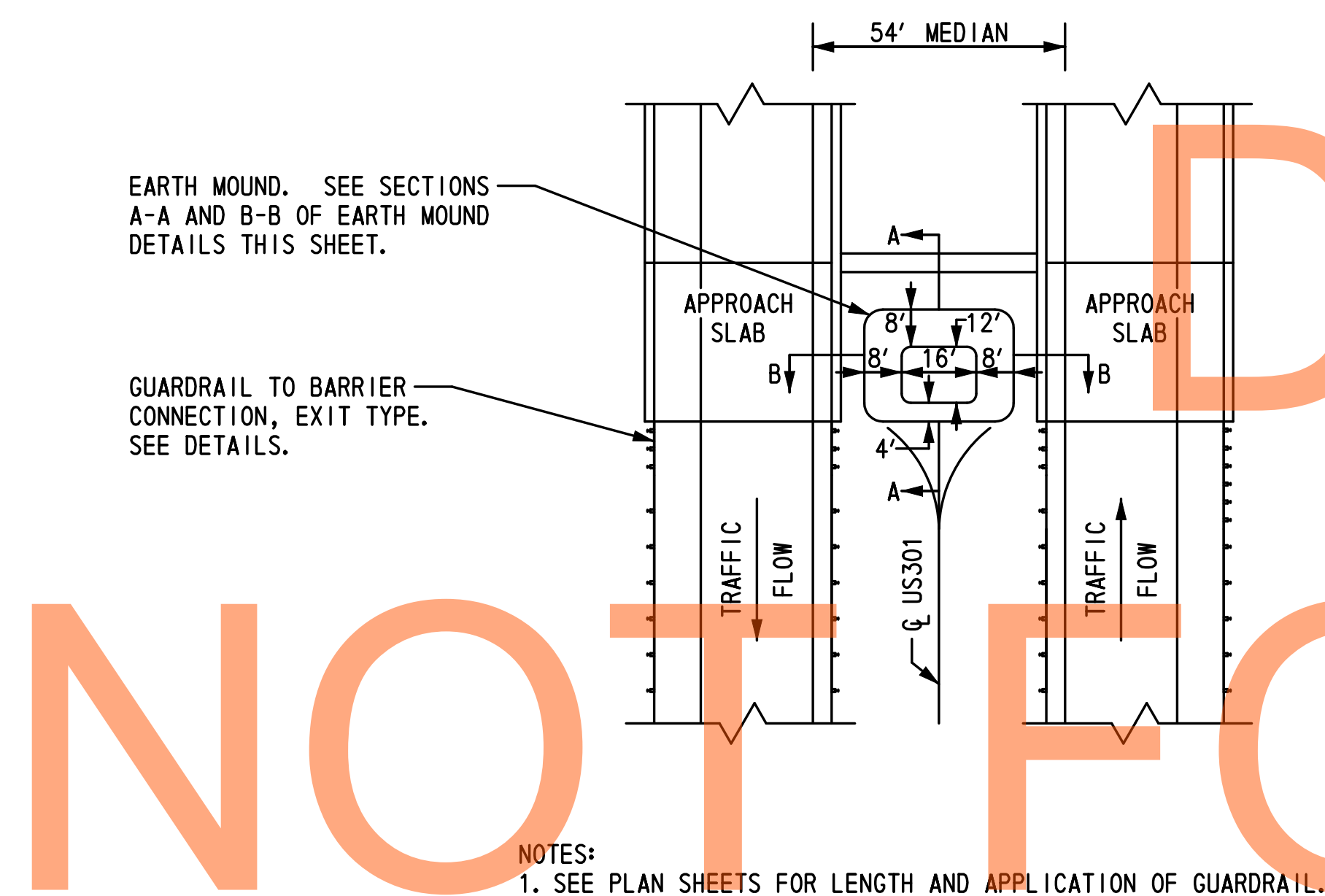
US 301,  
 SR 896 TO SR 1

CONTRACT T200911308	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SJB
	CHECKED BY: TAO

CONSTRUCTION DETAILS

DT-15
SHEET NO. 238
TOTAL SHTS. 875

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- NOTES:
1. DISTANCE BETWEEN THE OUTSIDE FACE OF BRIDGE PARAPET AND THE TOE OF SLOPE FOR THE EARTH MOUND SHALL NOT EXCEED FOUR (4) FEET.
  2. SEE PLAN SHEETS AND BRIDGE PLANS FOR THE LOCATIONS OF EARTH MOUNDS AT BRIDGE APPROACHES.
  3. EARTH MOUND SHALL BE CONSTRUCTED OF MATERIALS MEETING THE REQUIREMENTS OF BORROW, TYPE F AND COMPACTED IN ACCORDANCE WITH SECTION 202.
  4. STABILIZE MOUND SURFACE WITH TOPSOIL, SEED AND MULCH PER ROADWAY TYPICAL SECTIONS.

BRIDGE PROTECTION SYSTEM  
MAINLINE BRIDGE PARAPET AND  
MEDIAN OPENING PROTECTION PLAN  
NOT TO SCALE

EARTH MOUND DETAILS  
AT BRIDGE APPROACHES  
NOT TO SCALE

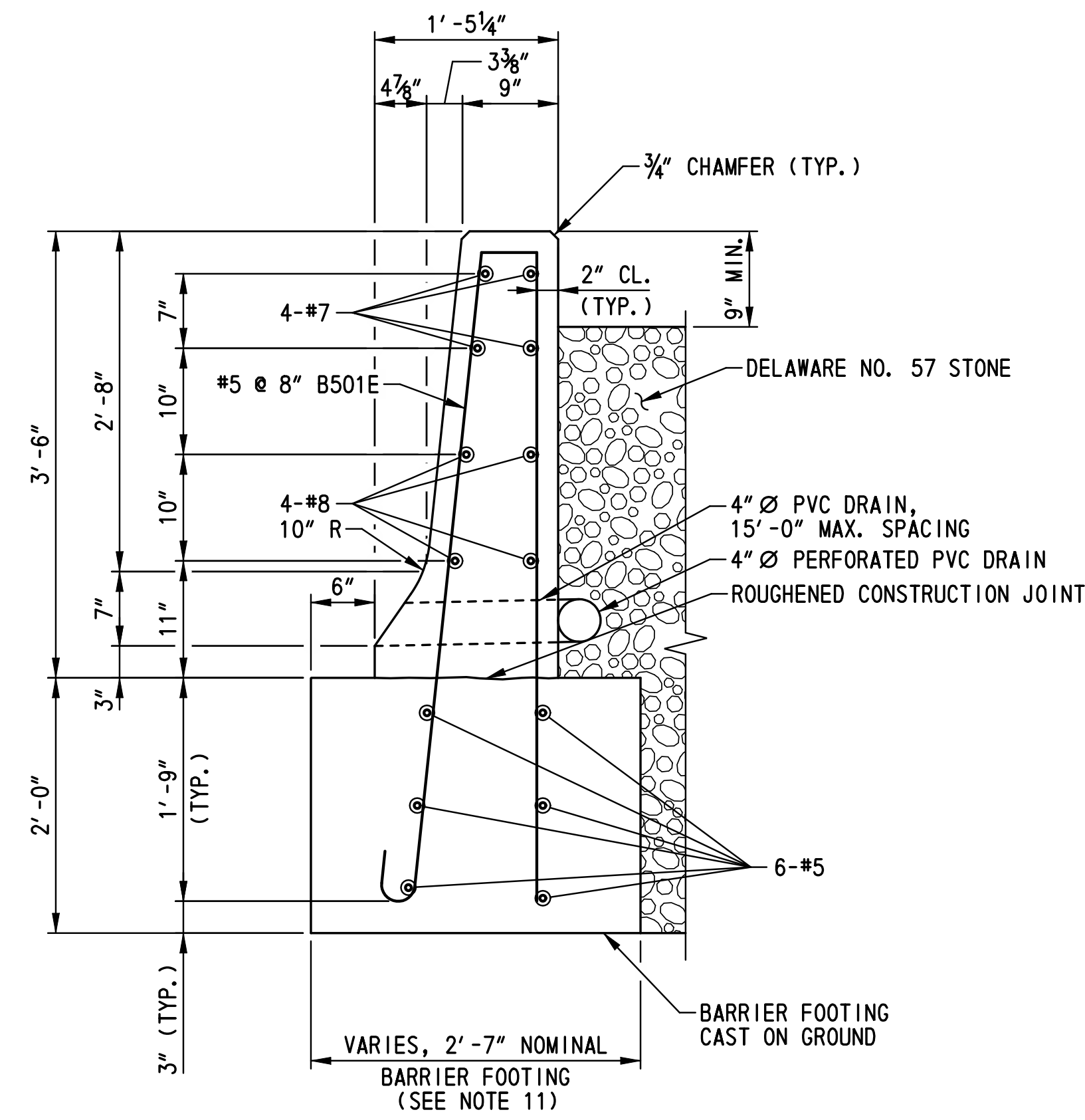
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NOT FOR BIDDING

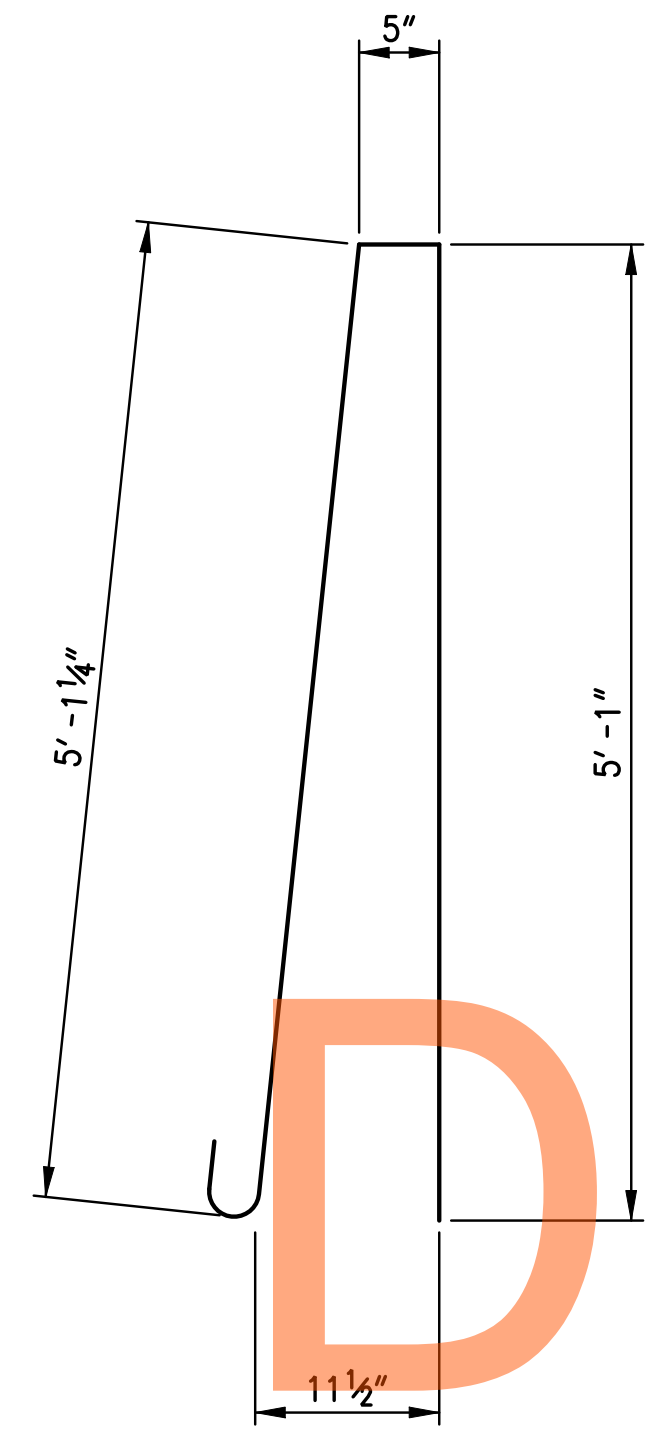
AUGUST 2015

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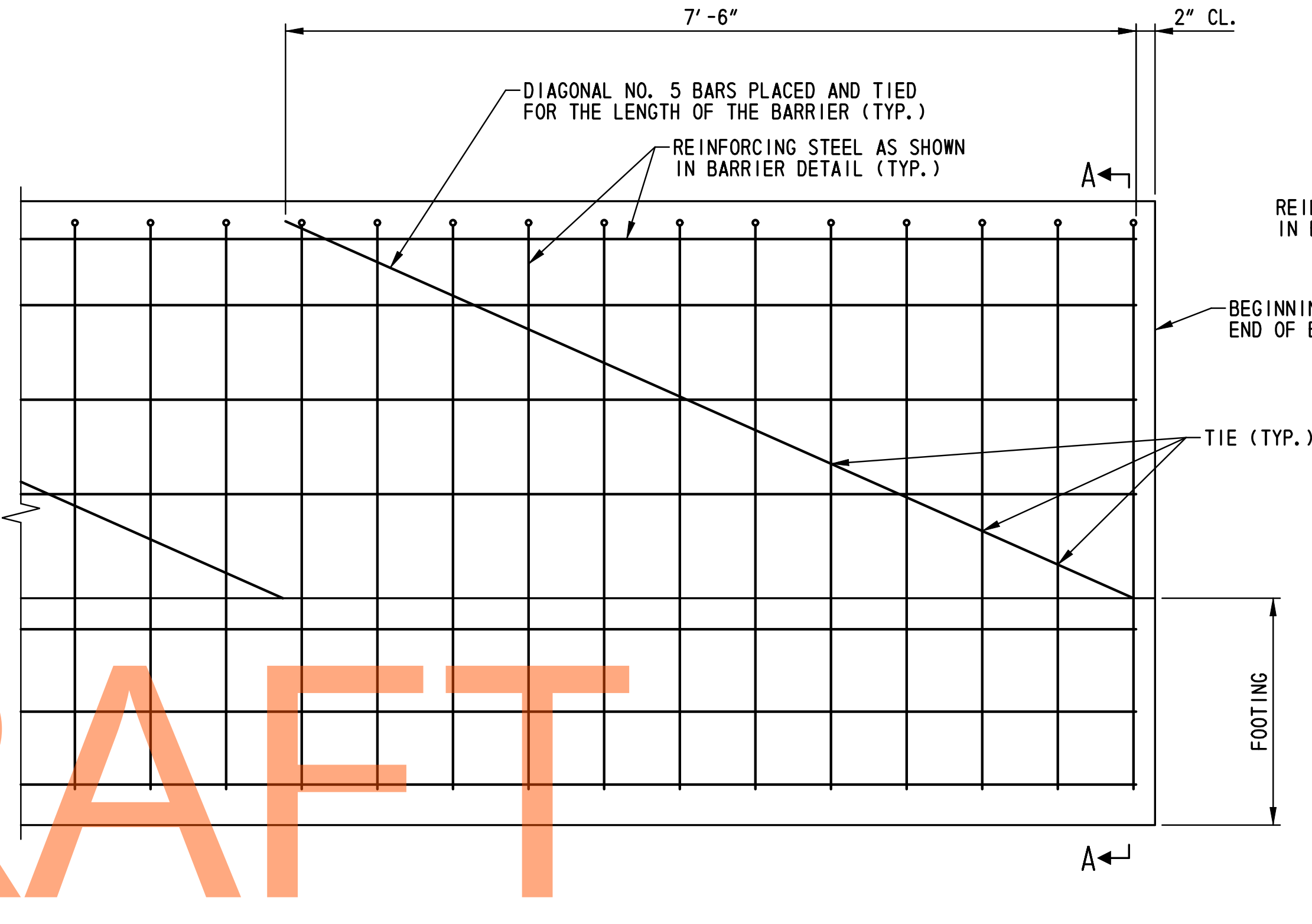




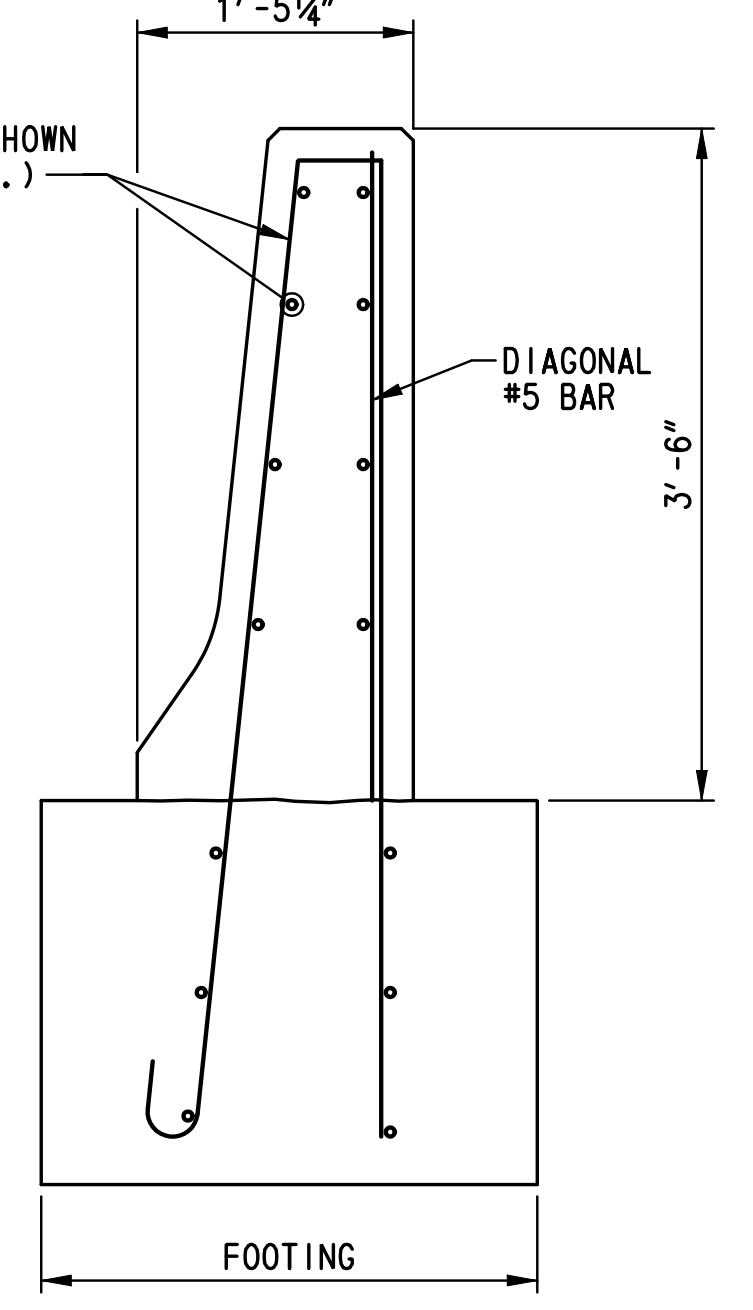
CONCRETE SINGLE FACE BARRIER TYPE 1  
SCALE: 1"=1'-0"



B501E  
SCALE: 1"=1'-0"



ELEVATION

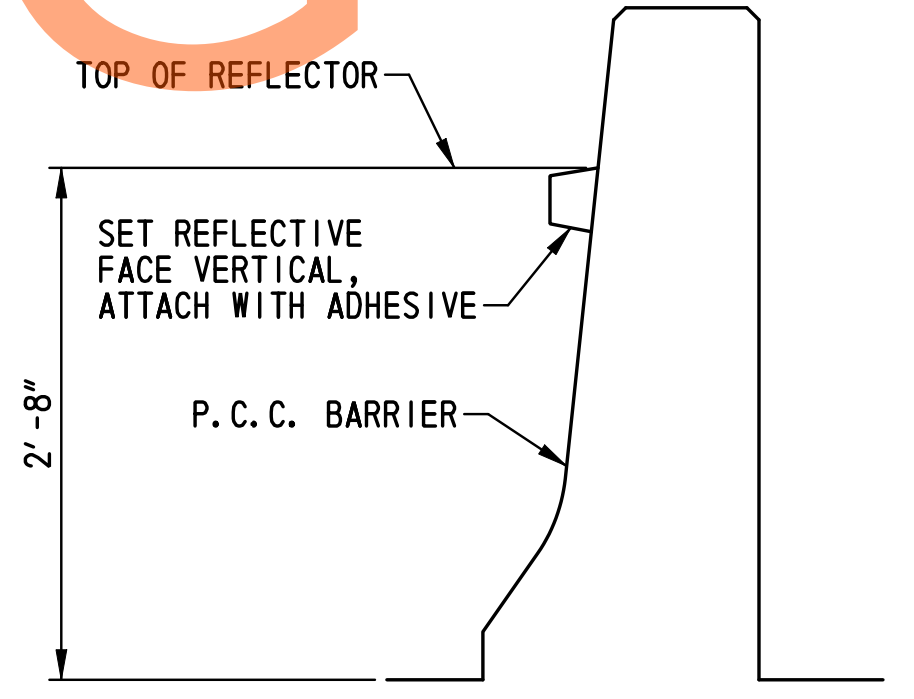


SECTION A-A CONCRETE SINGLE FACE BARRIER TYPE 1

CONCRETE BARRIER NOTES:

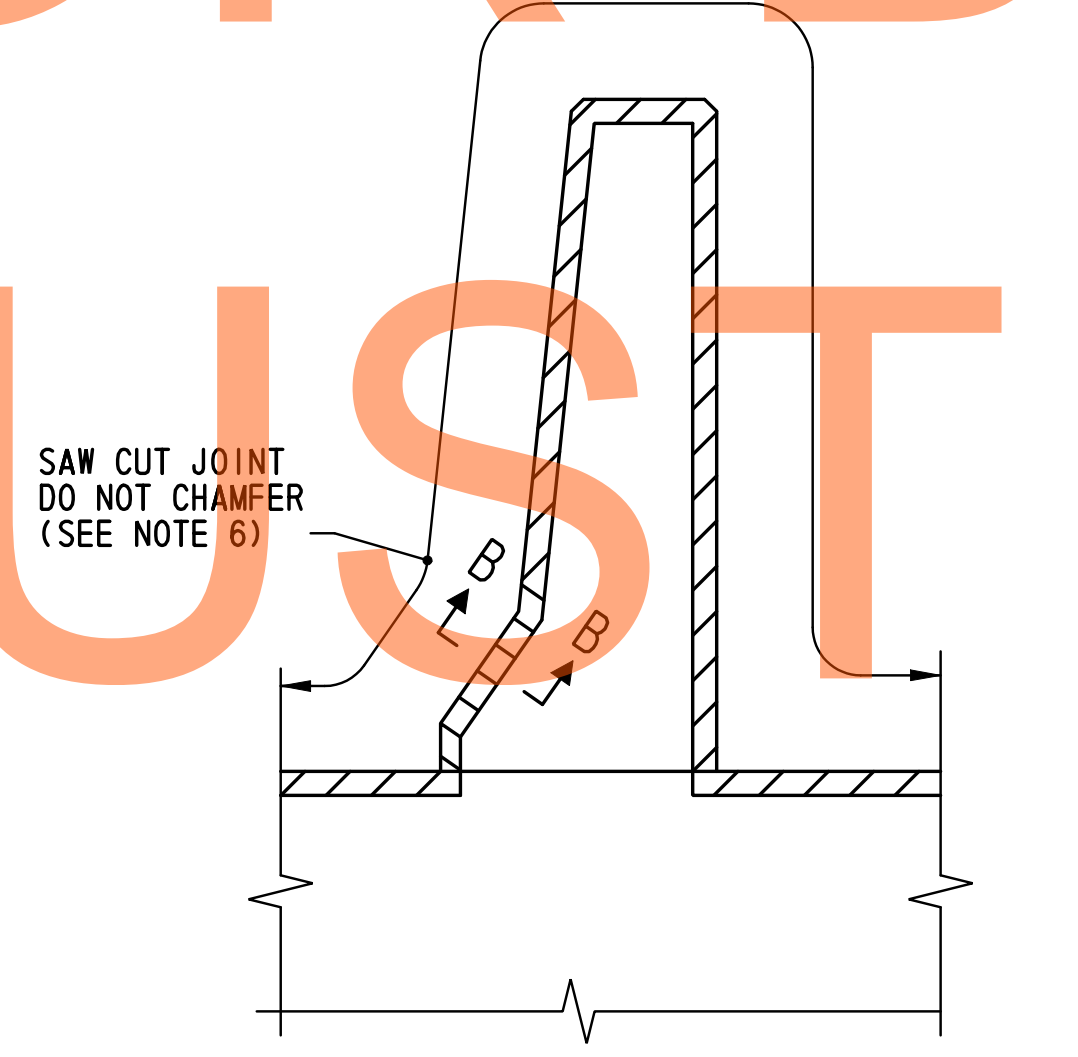
1. CONCRETE SINGLE FACE BARRIER TYPE 1 MEET TL-4 LOADING CRITERIA AS SPECIFIED IN NCHRP REPORT 350.
2. THE BARRIER AND FOOTING SHALL BE CAST SEPARATELY USING THE FIXED FORM OR THE SLIP FORM CONSTRUCTION METHOD. ALL CONCRETE SHALL BE CLASS A PORTLAND CEMENT CONCRETE (f'c = 4,500 PSI AT 28 DAYS) AND SHALL BE CONTINUOUSLY PLACED WHEN USING FIXED FORM CONSTRUCTION. ALL CONCRETE SHALL BE CLASS B PORTLAND CEMENT CONCRETE (f'c = 3,000 PSI AT 28 DAYS) WHEN USING THE SLIP FORMING CONSTRUCTION METHOD. WHEN USING THE SLIP FORMING CONSTRUCTION METHOD, THE SLIP FORMING MACHINE SHALL BE SUPPORTED OFF OF THE CONCRETE SOIL CEMENT BASE COURSE REQUIRED FOR THE ADJACENT ROADWAY.
3. ALL REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF AASHTO M 31 (ASTM A 615), GRADE 60 AND SHALL BE BENT BEFORE APPLYING EPOXY COATING. ALL BAR LAPS SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND ALL BARS SHALL BE TIED TOGETHER.
4. ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION-BONDED EPOXY CONFORMING AASHTO M 284 (ASTM A 775).
5. WHEN THE BARRIER IS CONSTRUCTED USING THE SLIP FORM METHOD, DIAGONAL NO. 5 BARS ARE REQUIRED.
6. SPACING OF BARRIER CONTROL JOINTS SHALL BE A MAXIMUM OF 10 FEET REGARDLESS OF CONSTRUCTION METHOD, SEE DETAIL THIS SHEET. SPACING OF FOOTING CONTROL JOINTS SHALL BE A MAXIMUM OF 10 FEET AND ALIGN WITH THE CONTROL JOINTS IN THE BARRIER.
7. THE CONTRACTOR HAS THE OPTION TO CONSTRUCT THE FOOTING AND BARRIER AFTER CONSTRUCTION OF THE PAVEMENT. THE FOOTING FORMS, IF USED, SHALL BE REMOVED IF THE BARRIER AND FOOTING ARE CONSTRUCTED BEFORE THE PAVEMENT.
8. THE FOOTING REAR VERTICAL WALL SHALL BE FORMED OR THE CONCRETE PLACED AGAINST THE VERTICAL EARTH SIDE IF APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION FOR ADDITIONAL CONCRETE WILL BE PAID IF THE CONCRETE IS PLACED AGAINST THE EARTH.
9. THE CONTRACTOR SHALL ATTACH THE YELLOW AND/OR WHITE REFLECTORS TO THE BARRIERS AS SHOWN IN THE DETAIL ON THIS SHEET. PAYMENT FOR THE REFLECTORS SHALL BE IN ACCORDANCE WITH ITEM NOS. 720544 AND 720545 AS APPROPRIATE.
10. PRIOR TO PLACING BARRIER CONCRETE ADJACENT TO EXISTING CONCRETE PAVEMENT, OR PRIOR TO PLACING CONCRETE PAVEMENT ADJACENT TO EXISTING BARRIER CONCRETE, AN APPROVED BOND BREAKER SHALL BE APPLIED TO THE EXISTING CONCRETE VERTICAL FACE. THIS LONGITUDINAL JOINT AT THE INTERFACE BETWEEN THE CONCRETE PAVEMENT AND THE BARRIER CONCRETE SHALL NOT BE SEALED. VERTICAL CRACKS IN THE EXISTING CONCRETE FACE SHALL BE COVERED OR SEALED AS APPROVED BY THE ENGINEER TO PREVENT INTRUSION OF THE NEW CONCRETE INTO THE EXISTING CONCRETE. ALL WORK SHALL BE INCIDENTAL TO THE APPROPRIATE BARRIER ITEM.
11. BARRIER FOOTING WIDTH VARIES ALONG THE THE FRONT FACE OF MSE WALLS AS INDICATED BELOW:  
2'-5" MIN. AT BRIDGE NO. 1-436A, ABUTMENT B  
2'-0" MIN. AT BRIDGE NO. 1-460A, ABUTMENT A  
2'-0 1/4" MIN. AT BRIDGE NO. 1-460A, ABUTMENT B
12. PLACE 1-INCH THICK x 2'-0" EXPANDED POLYSTYRENE BETWEEN BARRIER FOOTING AND FRONT FACE OF MSE WALL AT THESE LOCATIONS. EXPANDED POLYSTYRENE SHALL CONFORM TO ASTM C 578, EXCEPT THAT THE MAXIMUM ALLOWABLE WATER ABSORPTION SHALL BE 2%.
12. COST OF THE CONCRETE SINGLE FACE BARRIER TYPE 1 CONCRETE FOOTING, REINFORCING STEEL, PVC DRAIN PIPE, PERFORATED PVC DRAIN PIPE, DELAWARE NO. 57 STONE, EXPANDED POLYSTYRENE, BOND BREAKER AND EXCAVATION SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR CONCRETE SINGLE FACE BARRIER TYPE 1 (720626).

DIAGONAL BAR DETAIL  
SCALE: 1"=1'-0"

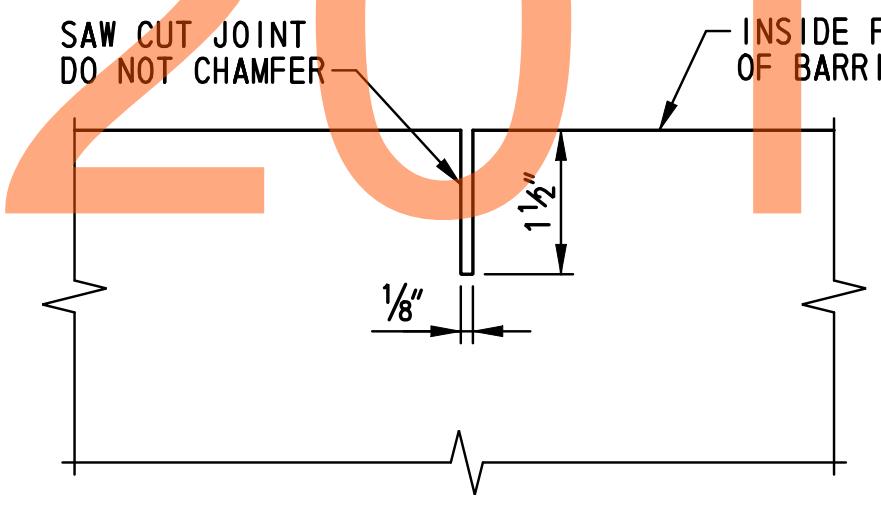


REFLECTOR DETAIL  
SCALE: 1"=1'-0"

- REFLECTOR DETAIL NOTES:
1. COLOR OF REFLECTOR ON TRAFFIC SIDE SHALL MATCH ADJACENT LANE LINE COLOR. BACK SIDE OF ALL REFLECTORS SHALL BE RED.
  2. THE SPACING OF REFLECTORS ON PERMANENT P.C.C. BARRIER SHALL BE COORDINATED WITH THE DELINEATORS AT THE APPROACHES TO THE BARRIER SUCH THAT THE SPACING OF DELINEATORS/REFLECTORS DOES NOT EXCEED 100 FT.
  3. ALL COST SHALL BE INCLUDED IN ITEM 720544 - REFLECTORS, WHITE, CONCRETE AND 720545 - REFLECTORS, YELLOW, CONCRETE.



BARRIER CONTROL JOINT DETAIL  
SCALE: 1"=1'-0"



SECTION B-B  
SCALE: 6"=1'-0"

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ADDENDUMS / REVISIONS	

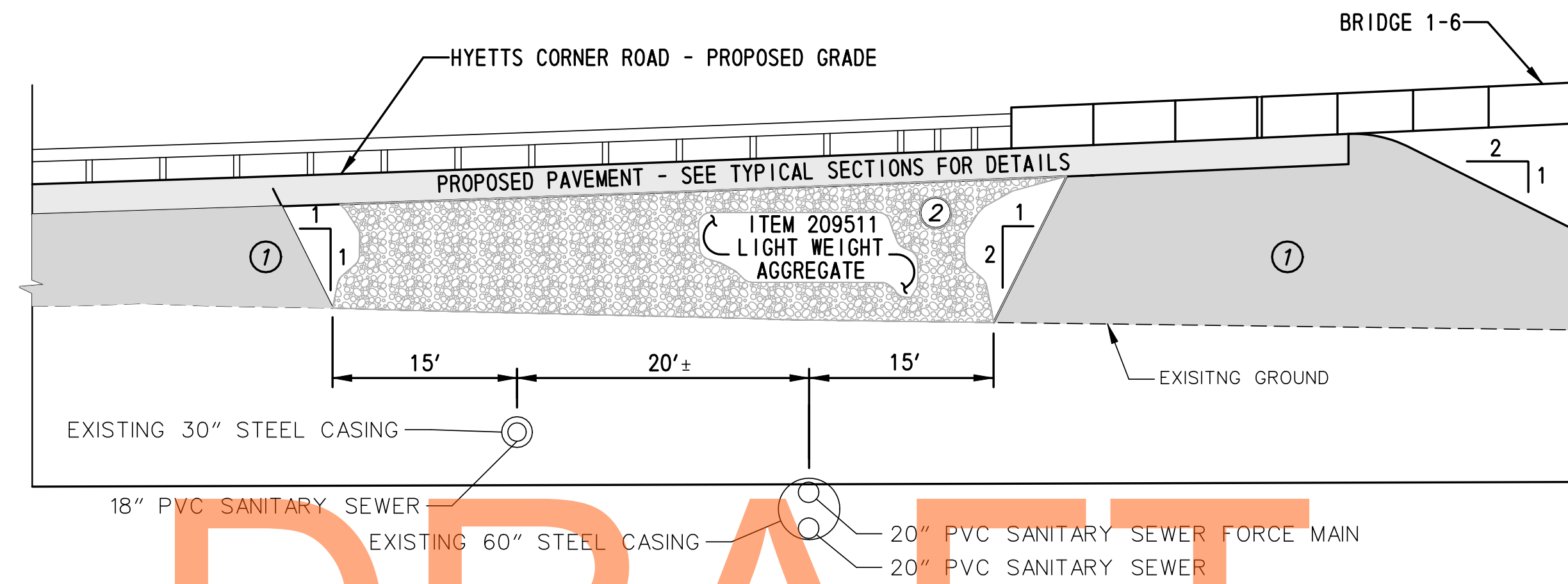
SCALE: AS NOTED

**US 301,  
SR 896 TO SR 1**

CONTRACT T200911308	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: B.K.B.
	CHECKED BY: W.A.G.

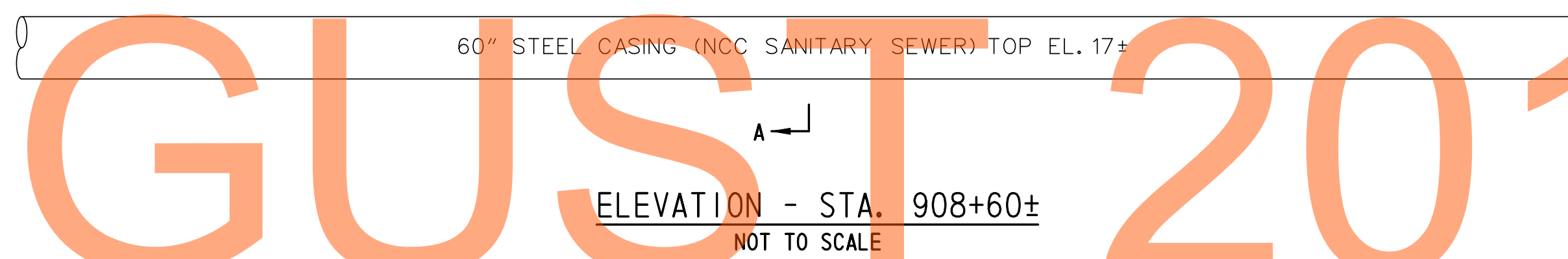
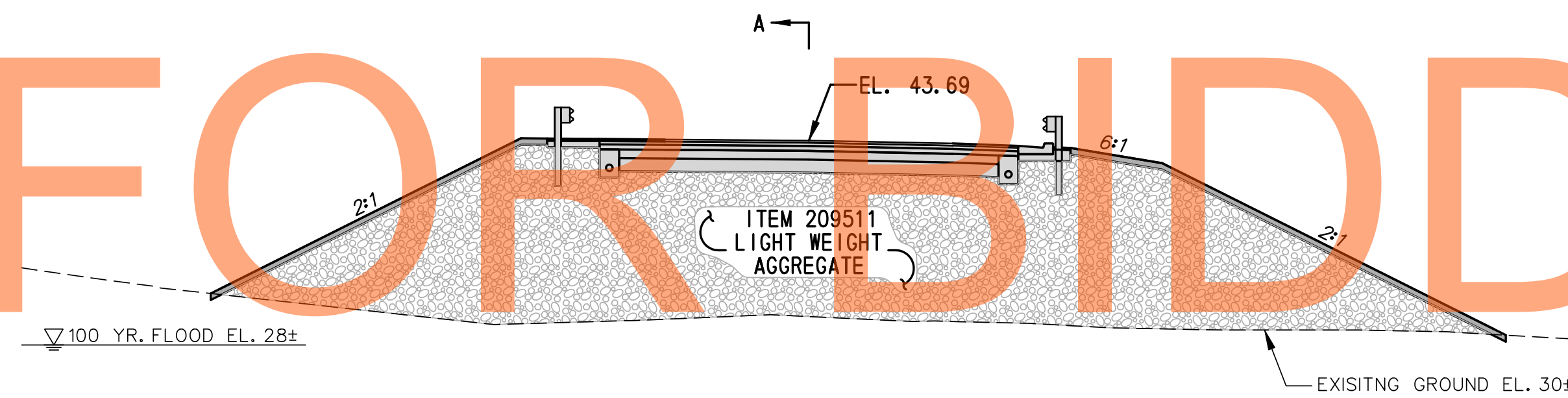
**CONSTRUCTION DETAILS**

DT-17
SHEET NO. 240
TOTAL SHTS. 875



SECTION A-A  
NOT TO SCALE

- NOTES:
- ① CONSTRUCT PROPOSED EMBANKMENT ON BOTH ENDS
  - ② CONSTRUCT LIGHT WEIGHT AGGREGATE FILL EMBANKMENT



HYETTS CORNER ROAD LIGHT WEIGHT  
AGGREGATE FILL EMBANKMENT DETAIL  
NOT TO SCALE

NOTE: SEE DT-19 FOR SEQUENCE OF CONSTRUCTION

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

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ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301,  
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: SES
NEW CASTLE	CHECKED BY: BRT

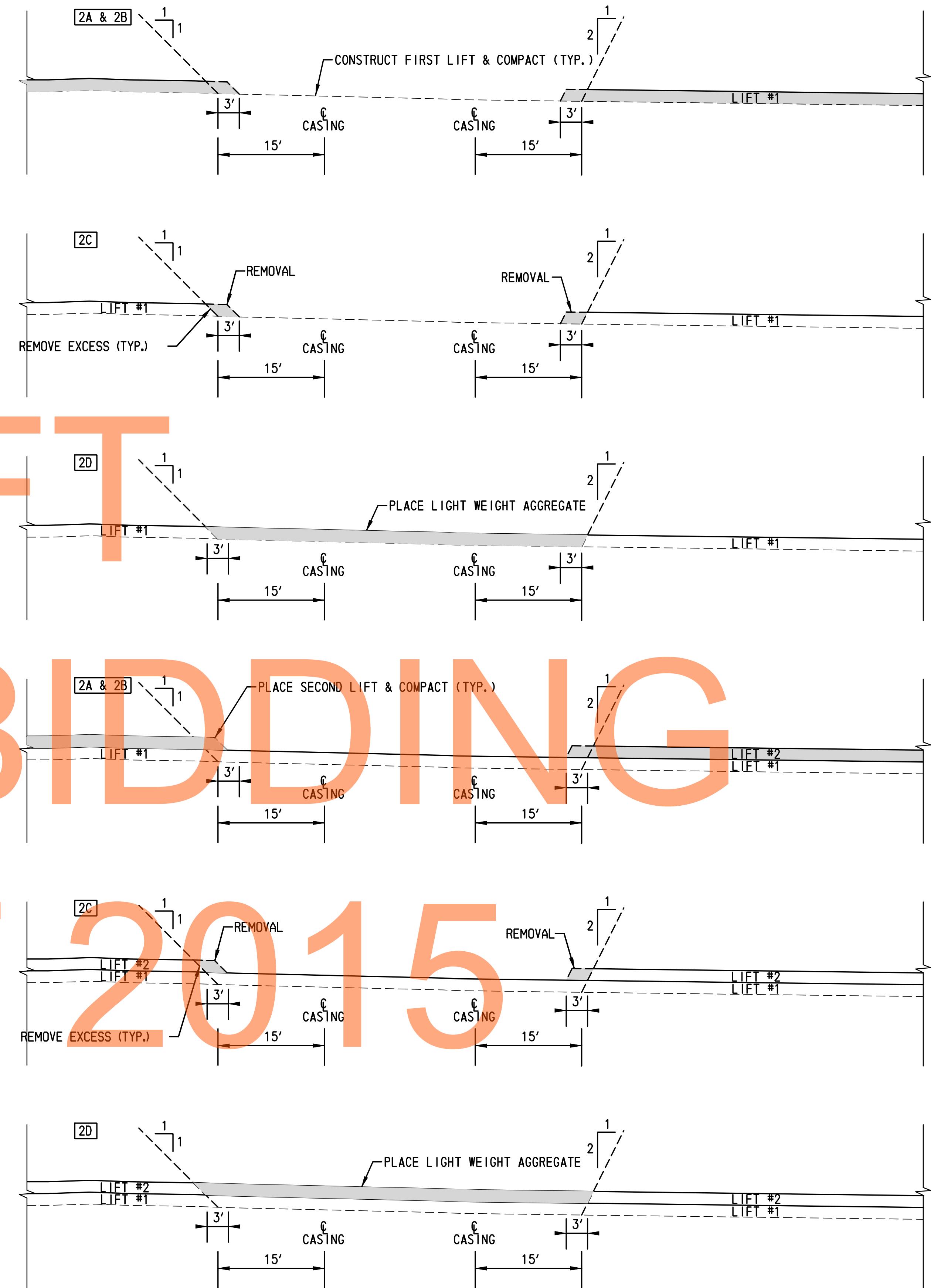
CONSTRUCTION DETAILS

DT-18
SHEET NO.
241
TOTAL SHTS.
875

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FOR BIDDING  
AUGUST 2015

SEQUENCE OF CONSTRUCTION

1. REMOVE EXISTING ROADWAY AND BASE, AND PREPARE SUBGRADE UNDER EXISTING ROADWAY.
2. REPEAT THE FOLLOWING IN STANDARD LIFT HEIGHTS REQUIRED FOR COMPACTION, UNTIL THE ENTIRE ROADWAY SUBGRADE IS COMPLETE:
  - A. CONSTRUCT FIRST LIFT OF BRIDGE 1-6 ABUTMENT A MSE WALL ON EAST SIDE OF EXISTING SANITARY SEWER, USING BORROW TYPE B, BORROW TYPE C, AND/OR #57 STONE AS SHOWN ON BRIDGE 1-6, ABUTMENT A TYPICAL SECTION DETAILS. EXTEND MATERIAL PLACEMENT 3' INTO ULTIMATE LIGHT WEIGHT AGGREGATE AREA (12' FROM CENTERLINE OF PIPE) AND COMPACT ENTIRE LIFT. ADDITIONAL MATERIAL PLACED SHALL BE INCIDENTAL TO THE APPLICABLE MATERIAL AND SHALL NOT BE MEASURED OR PAID FOR.
  - B. CONSTRUCT FIRST LIFT OF TYPE F EMBANKMENT ON WEST SIDE OF EXISTING SANITARY SEWER SLEEVE AS SHOWN; EXTEND MATERIAL PLACEMENT 3' INTO ULTIMATE LIGHT WEIGHT AGGREGATE AREA AND COMPACT ENTIRE LIFT. NOTE THAT ADDITIONAL MATERIAL PLACED SHALL BE INCIDENTAL TO THE APPLICABLE MATERIAL AND SHALL NOT BE MEASURED OR PAID FOR.
  - C. REMOVE THE EXCESS 3' OF MATERIAL FROM EITHER SIDE OF THE TRENCH.
  - D. FILL WITH LIGHTWEIGHT AGGREGATE, EVEN WITH THE LIFTS ON EITHER SIDE OF THE TRENCH, AND COMPACT PER SPECIFICATION FOR ITEM #209511.
3. CONSTRUCT ROADWAY ON FINAL EMBANKMENT PER THE TYPICAL SECTION AND PLANS.



REPEAT FOR ALL LIFTS UNTIL SUBGRADE IS COMPLETE.

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ADDENDUMS / REVISIONS	

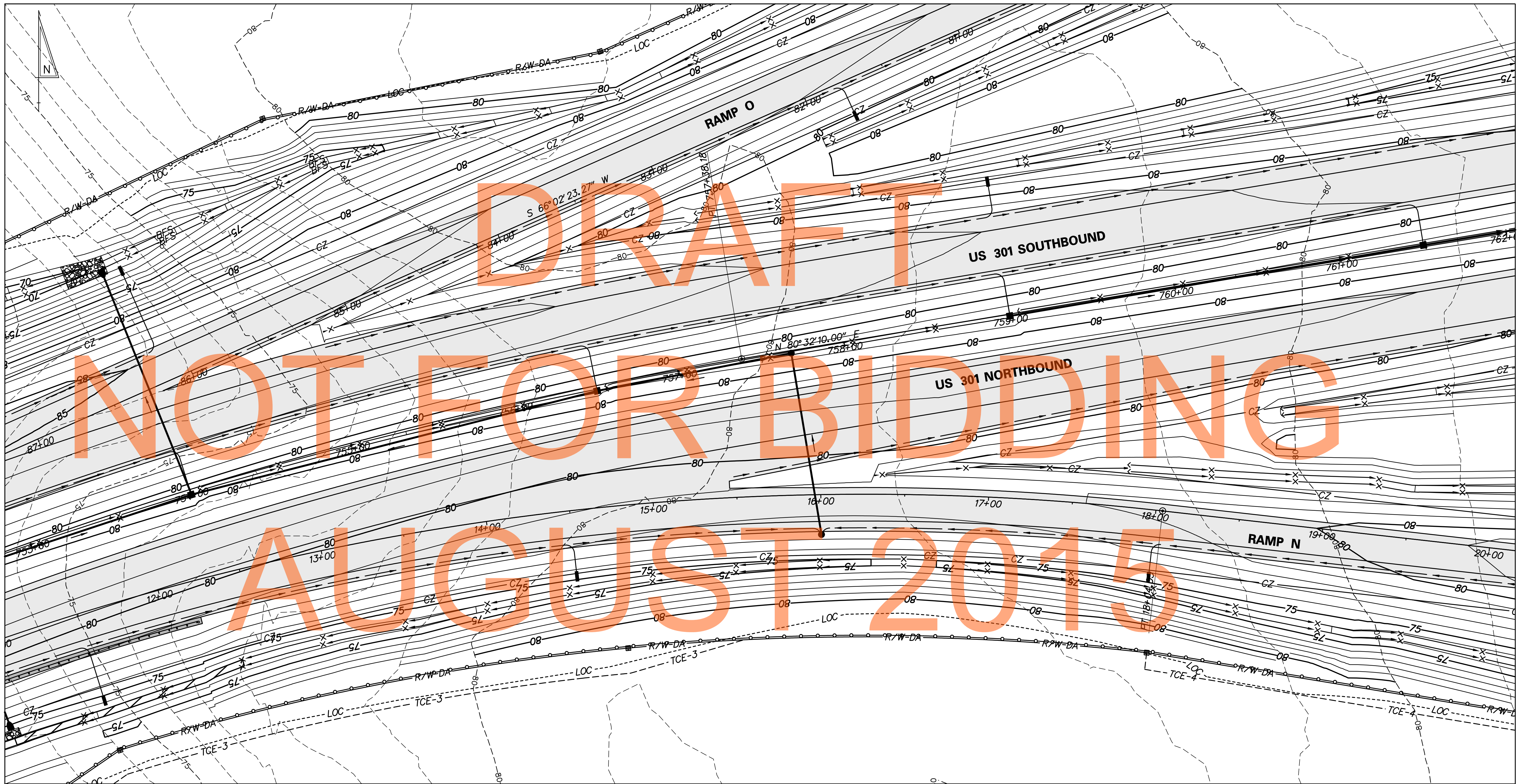
NOT TO SCALE

US 301,  
SR 896 TO SR 1

CONTRACT T200911308	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SES
	CHECKED BY: BRT

CONSTRUCTION DETAILS

DT-19
SHEET NO. 242
TOTAL SHTS. 875

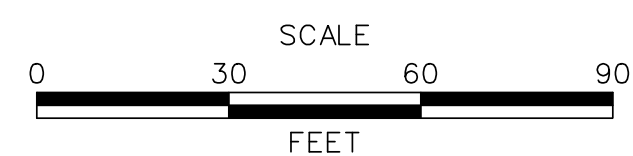


GORE AREA GRADING PLAN - RAMP N AND RAMP O

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ADDENDUMS / REVISIONS

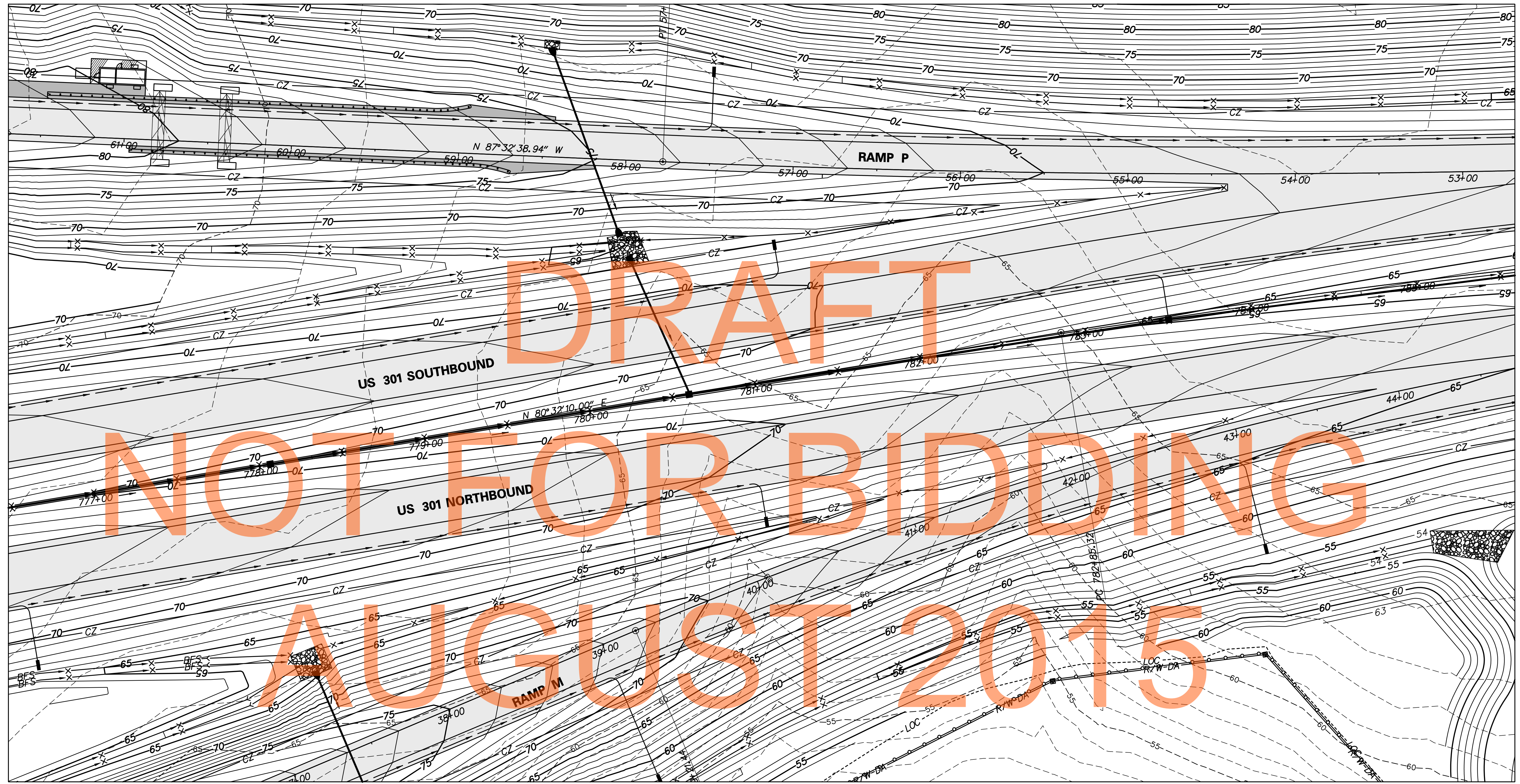
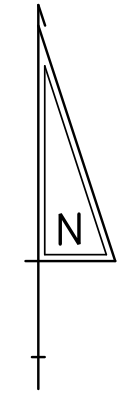


US 301,  
SR 896 TO SR 1

CONTRACT	BRIDGE NO.
T200911308	
COUNTY	DESIGNED BY: KGMA
NEW CASTLE	CHECKED BY: TAO

CONSTRUCTION DETAILS

DT-20
SHEET NO.
243
TOTAL SHTS.
875

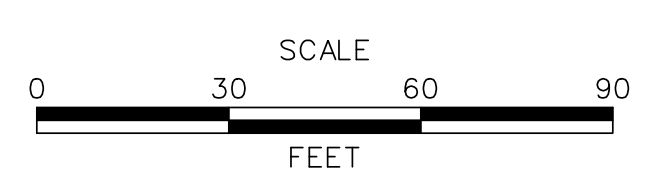


GORE AREA GRADING PLAN - RAMP M AND RAMP P

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ADDENDUMS / REVISIONS	

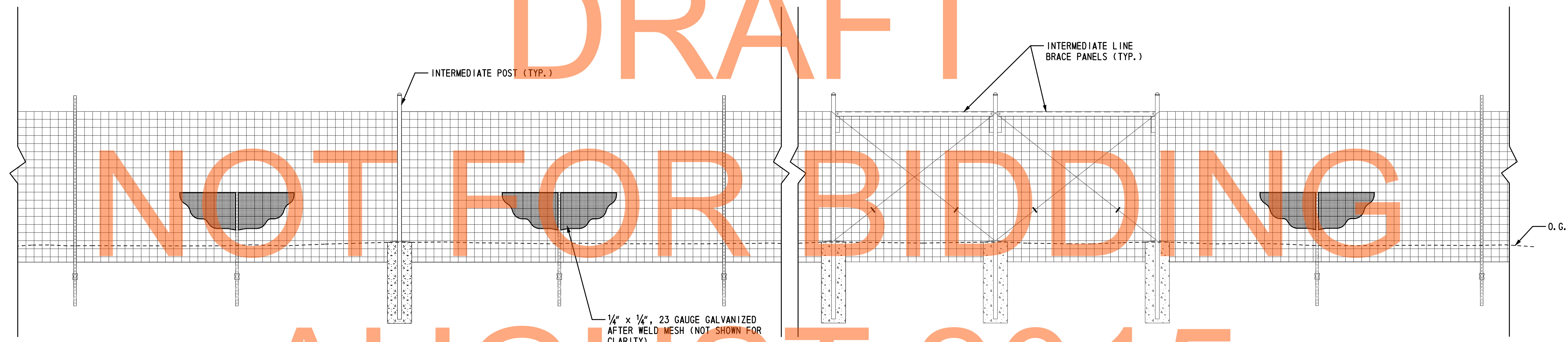
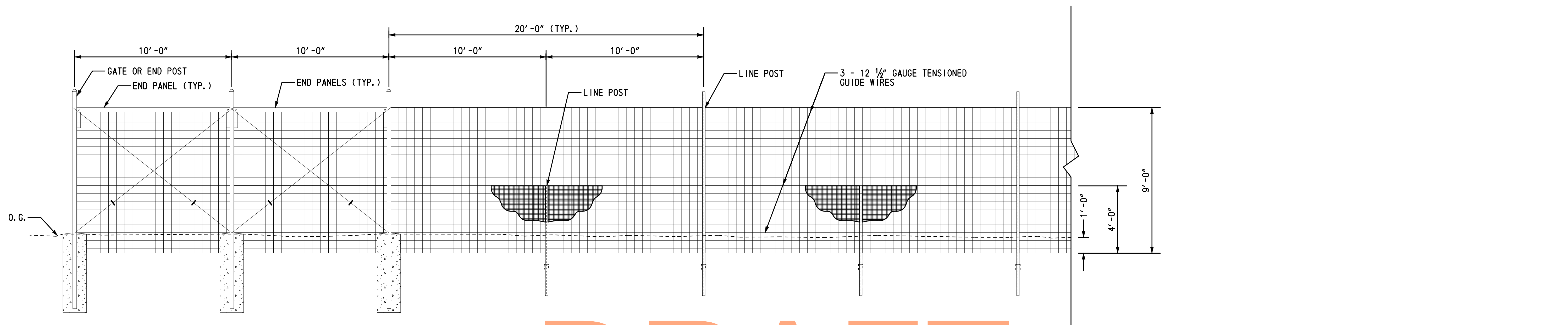


**US 301,**  
**SR 896 TO SR 1**

CONTRACT T200911308	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: KGMA
	CHECKED BY: TAO

**CONSTRUCTION DETAILS**

<b>DT-21</b>
SHEET NO. 244
TOTAL SHTS. 875



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NOT FOR BIDDING

AUGUST 2015

WILDLIFE EXCLUSION FENCE DETAIL  
NOT TO SCALE

**NOTES**

1. THE WILDLIFE EXCLUSION FENCE WILL BE CONSTRUCTED WITH WOVEN WIRE FENCE FABRIC AND WELDED WIRE MESH. ATTACH WELDED WIRE MESH TO WOVEN WIRE FABRIC USING 9 GAUGE HOG RINGS AT 2' INTERVALS (TOP, CENTER AND BOTTOM OF WELDED WIRE MESH).
2. WILDLIFE EXCLUSION FENCE WILL BE BURIED 1' INTO THE GROUND. TRIM FENCE AS NECESSARY AROUND CONCRETE FOOTING.
3. INTERMEDIATE POSTS SHALL BE PLACED AT THE LOW POINT OF A DIP AND AT THE CROWN OF A HUMP. THE MAXIMUM SPACING BETWEEN INTERMEDIATE POSTS SHALL NOT EXCEED 120 FEET.
4. INTERMEDIATE LINE BRACE PANELS (2) SHALL BE PLACED AT DRAMATIC CHANGES (WHERE GRADE CHANGES EXCEED 15%) IN THE TOPOGRAPHY. THE MAXIMUM SPACING BETWEEN LINE BRACES SHALL NOT EXCEED 1320 FEET.
5. TENSION GUIDE WIRES SHALL BE TIED OFF AT BOTH ENDS OF THE FENCE THEN TENSIONED IN THE MIDDLE OF THE PULL.
6. GENERAL FENCE INSTALLATION SHALL ADHERE TO THE GUIDELINES WRITTEN BY THE FENCING MANUFACTURER.

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ADDENDUMS / REVISIONS	

**NOT TO SCALE**

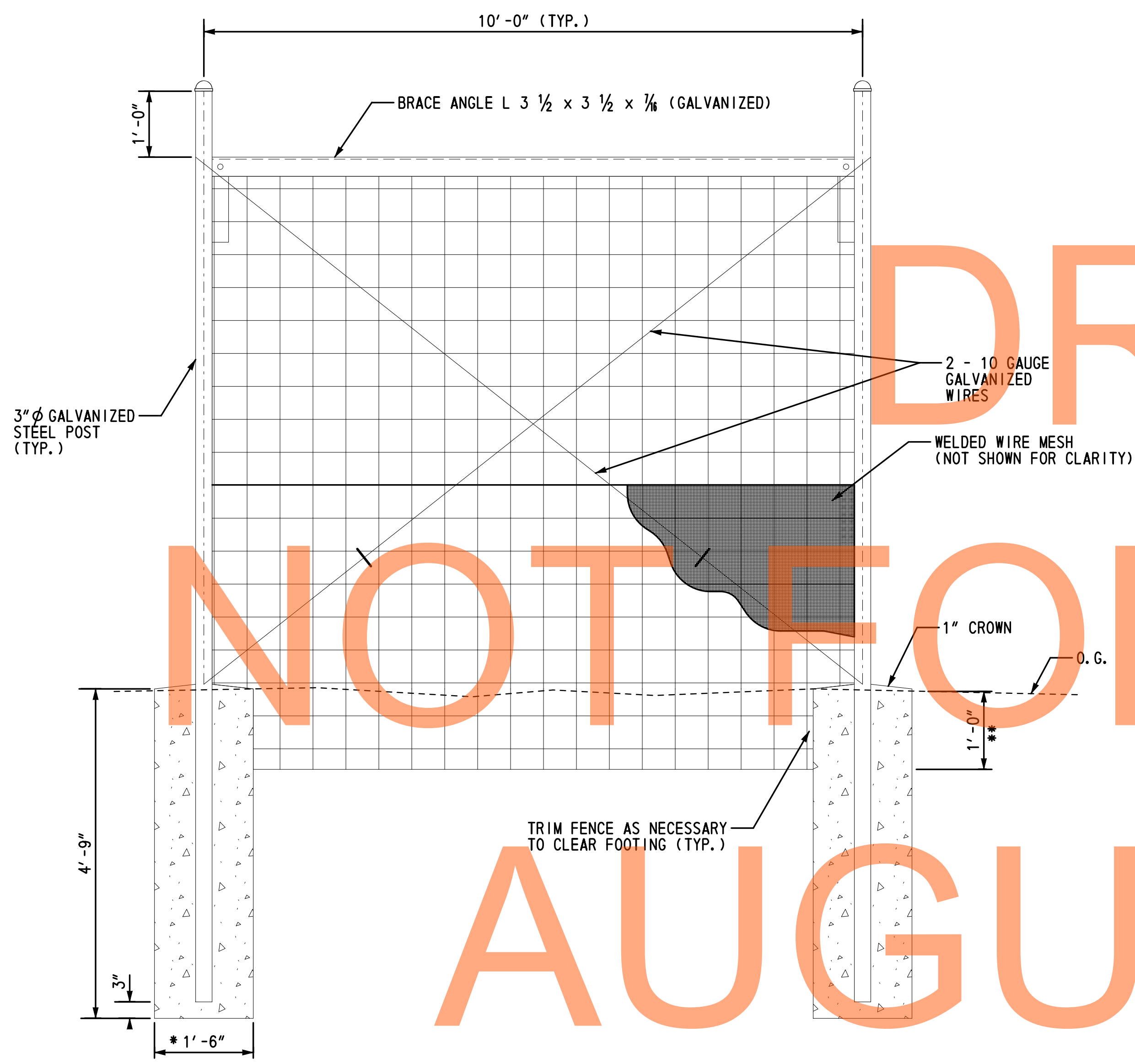
**US 301,  
SR 896 TO SR 1**

CONTRACT T200911308	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: LB
	CHECKED BY: MAA

**CONSTRUCTION DETAILS**

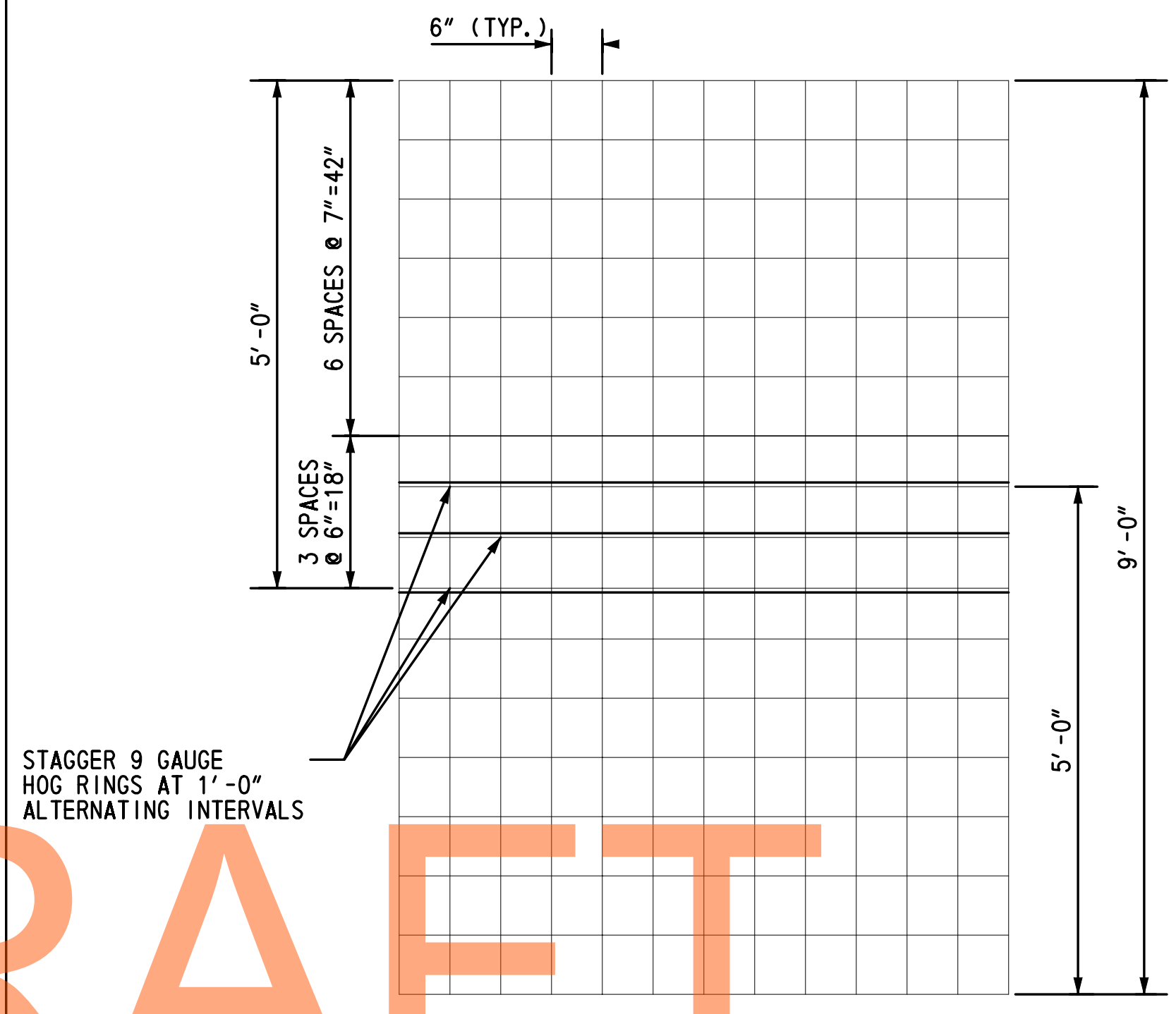
<b>DT-22</b>
SHEET NO. 245
TOTAL SHTS. 875

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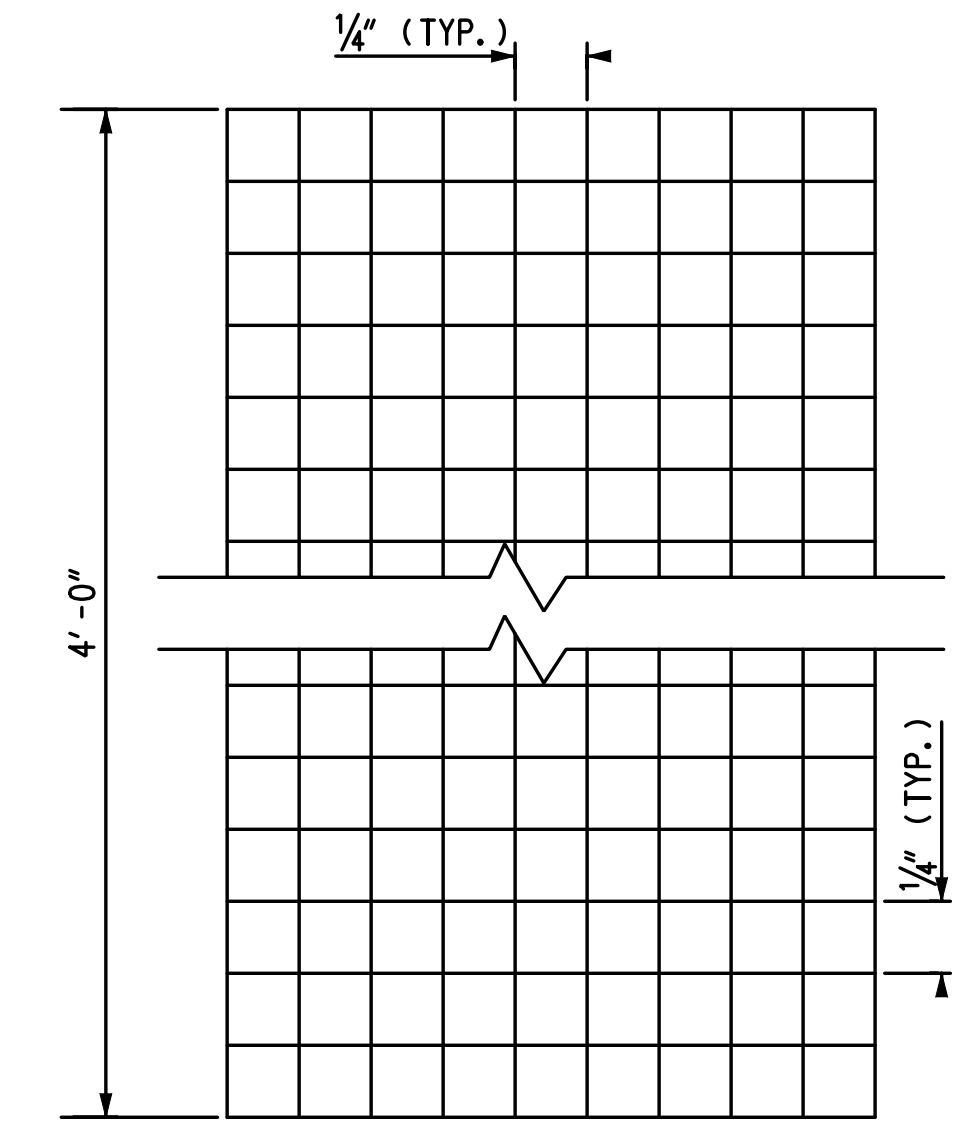


**END PANEL AND INTERMEDIATE BRACE PANEL**  
SCALE: 3/4"=1'

\* 1'-0" INTERMEDIATE POSTS  
\*\* BURY 1'-0" WIRE FENCE AND WELDED WIRE MESH

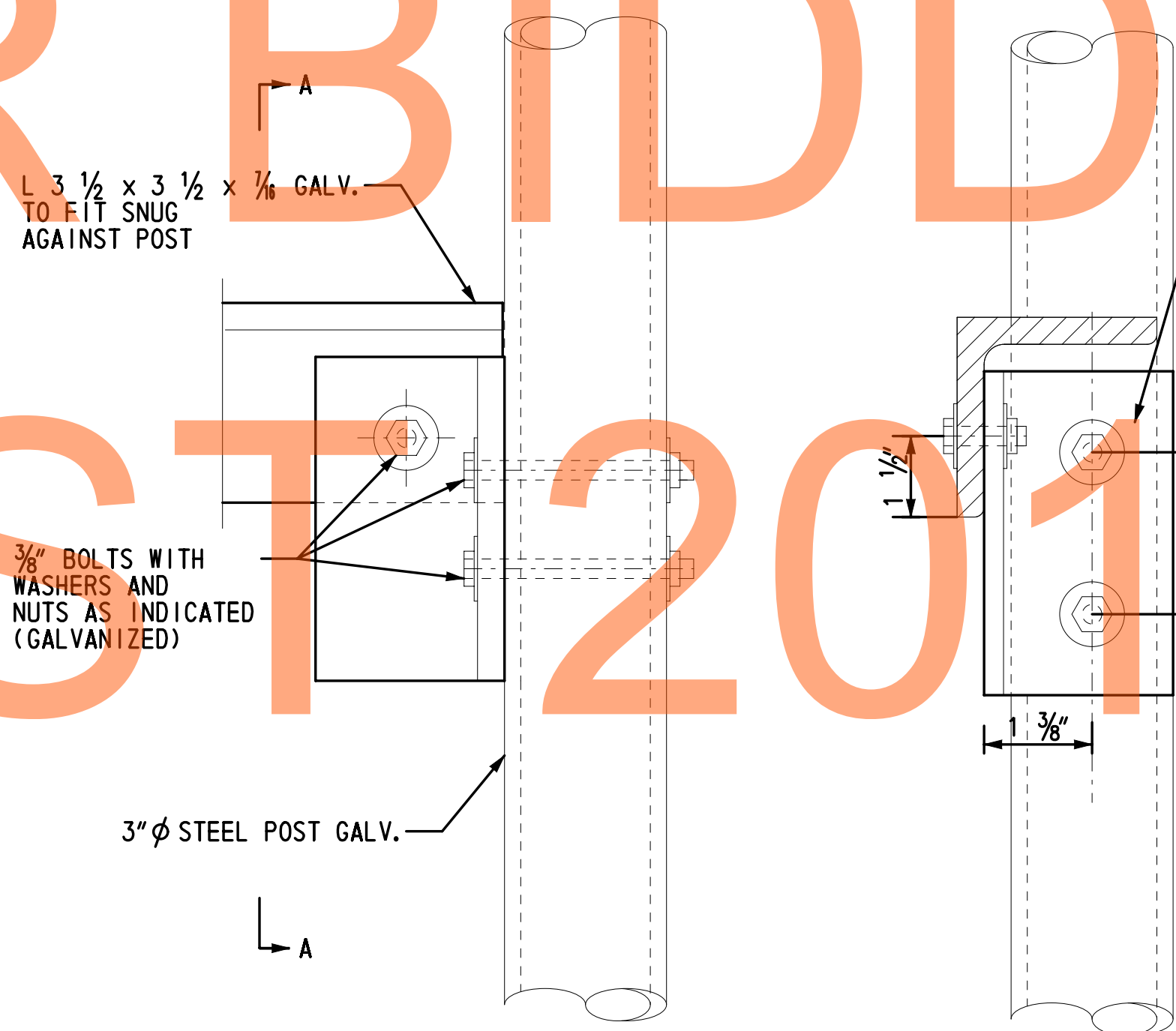


**WIRE FENCE FABRIC DETAIL**  
SCALE: 3/4"=1'

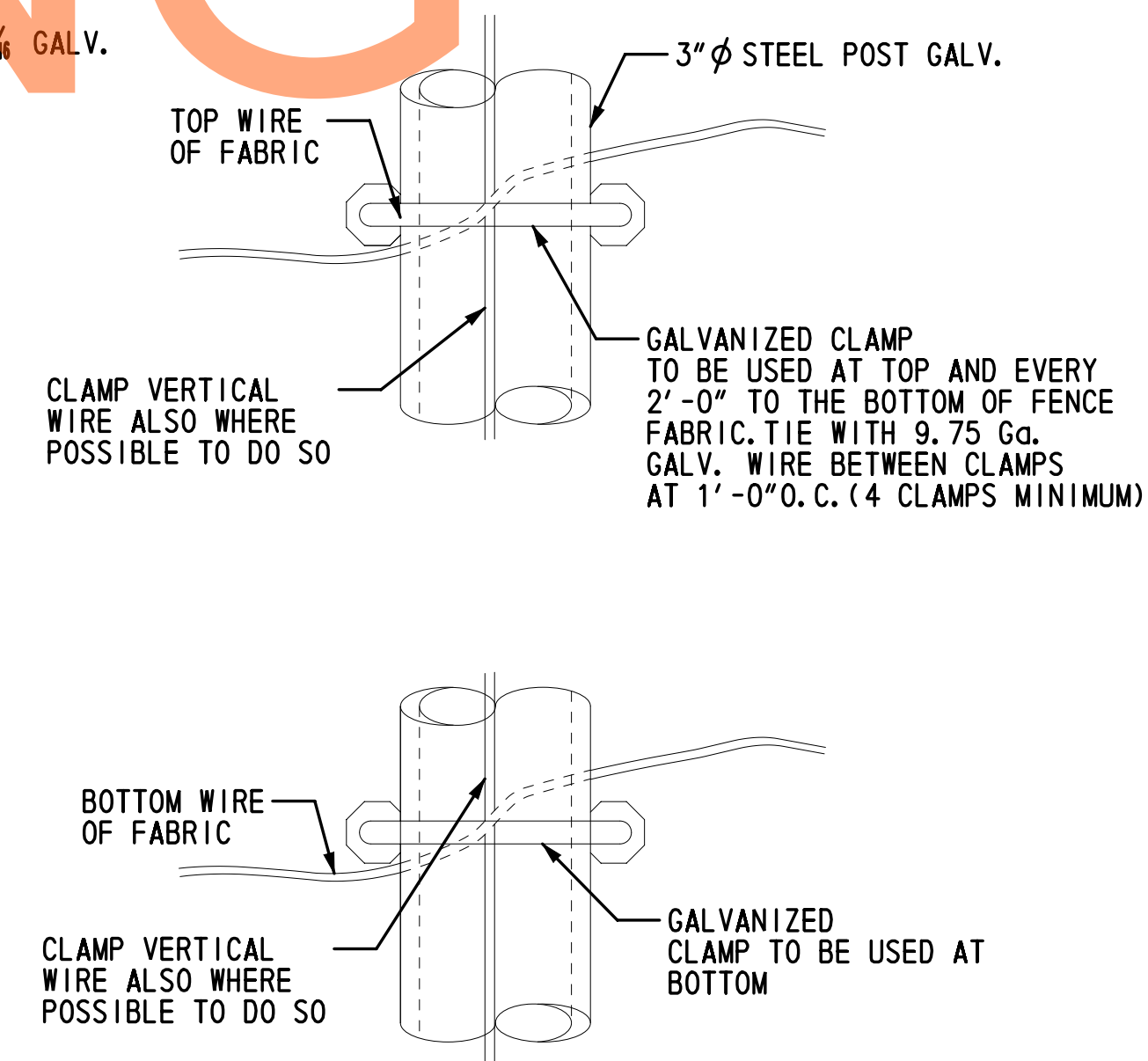


**WELDED WIRE MESH DETAIL**  
NOT TO SCALE

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NOT FOR BIDDING  
AUGUST 2015



**ELEVATION**  
**SECTION A-A**



**WIRE FABRIC FASTENING**

**FASTENING DETAILS FOR STEEL POSTS**  
SCALE: 3/8"=1'