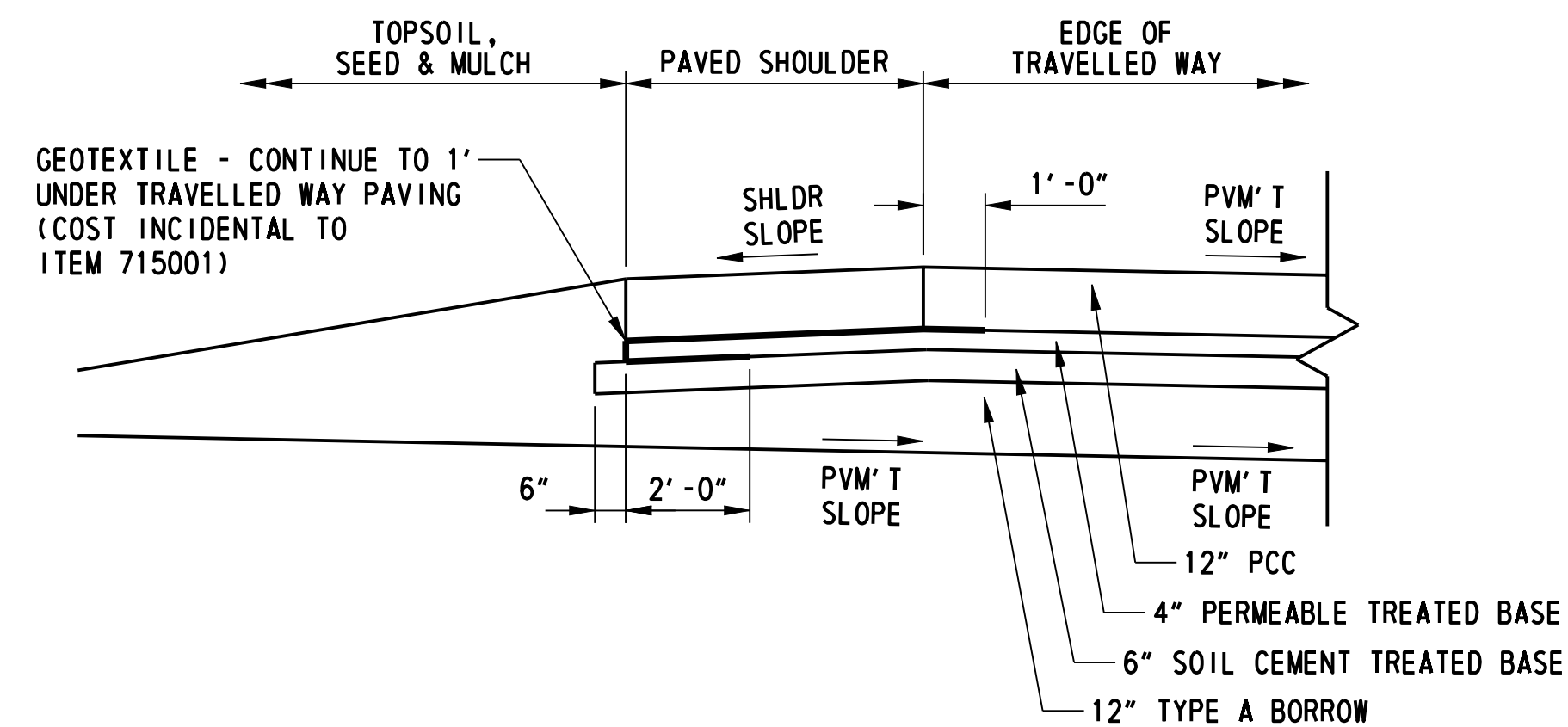
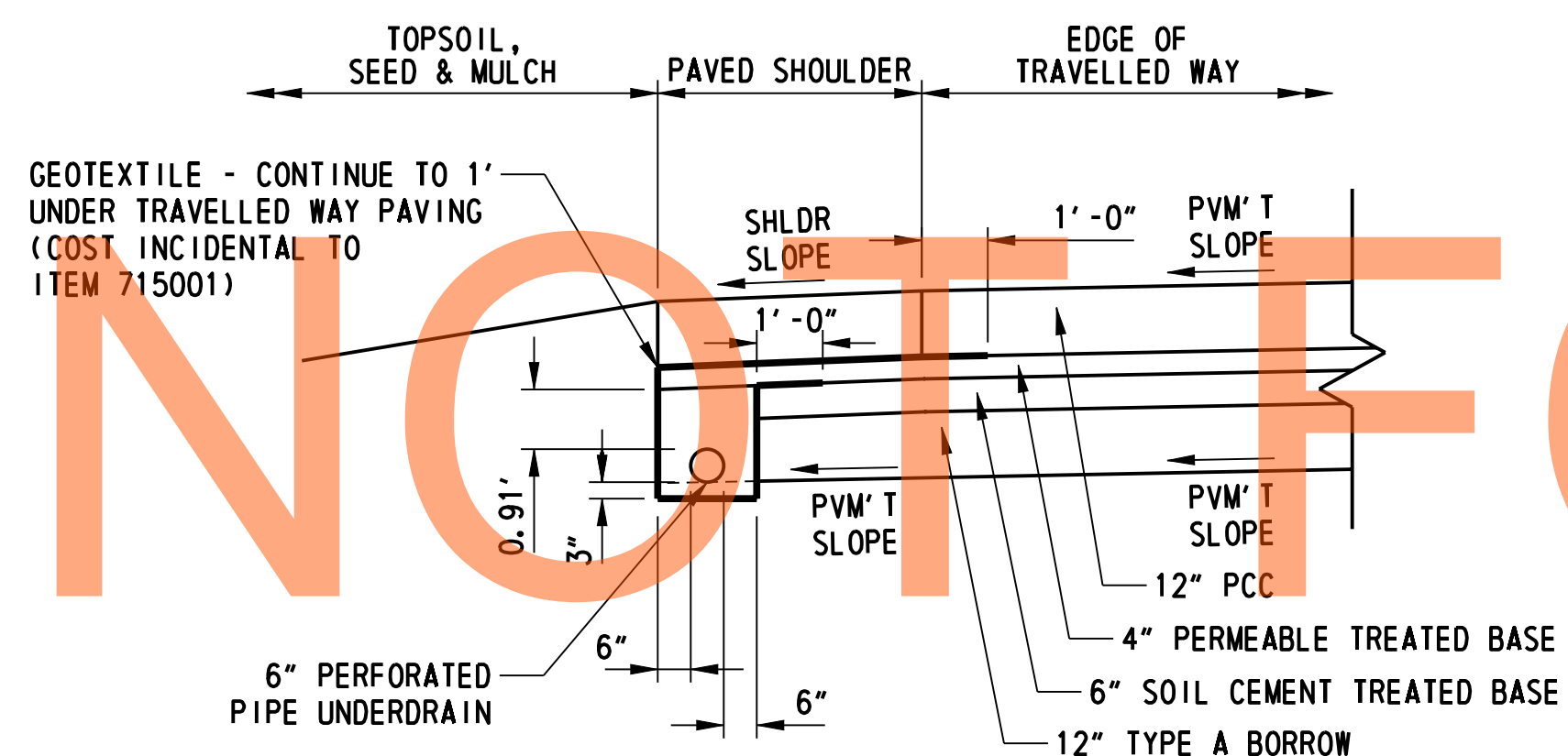


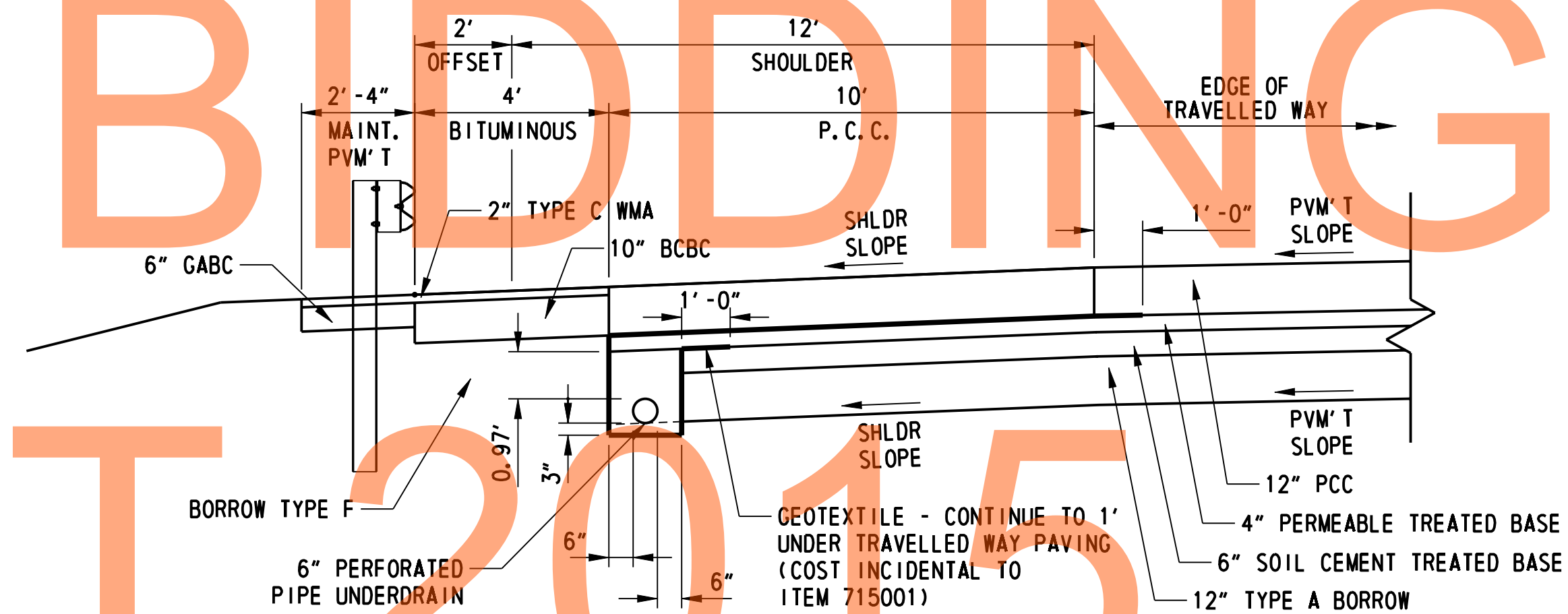
US 301 MAINLINE OUTSIDE SHOULDER & RAMP 6' SHOULDER UNDERDRAIN DETAIL



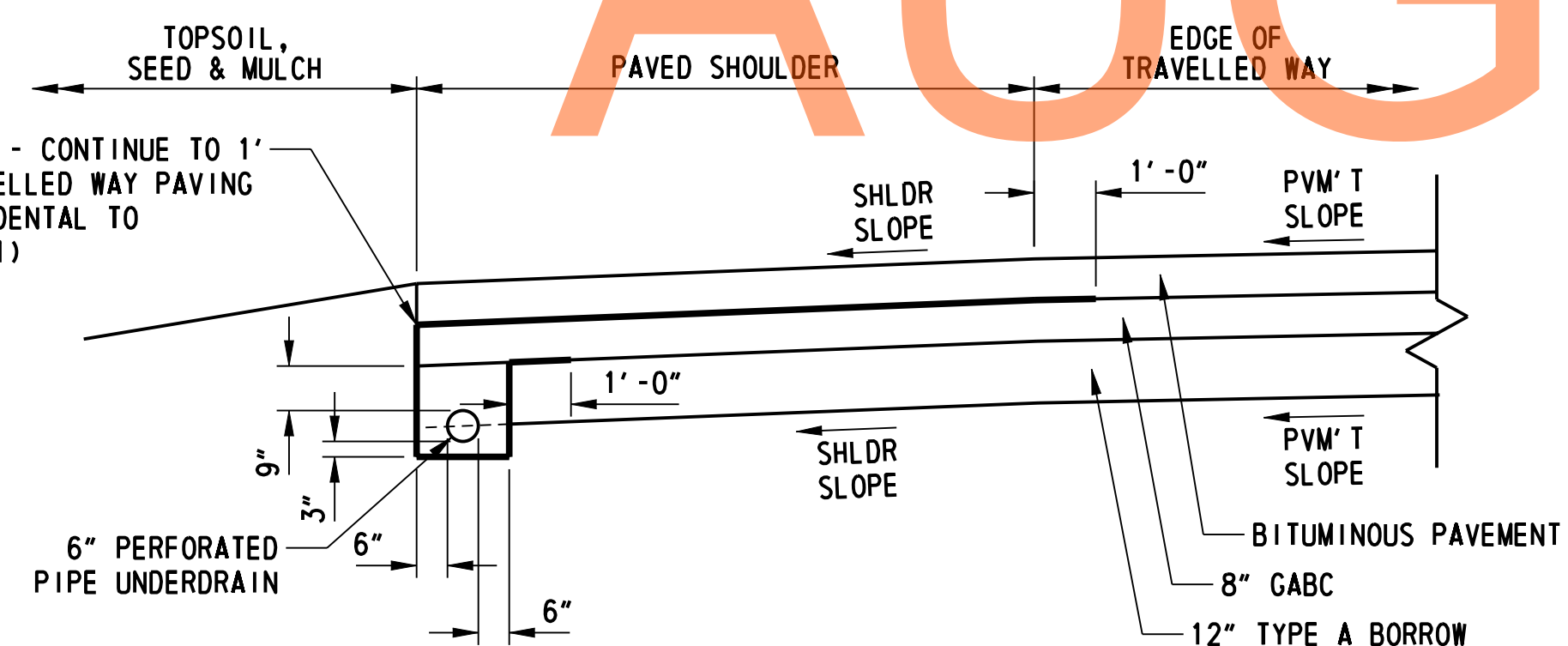
US 301 MAINLINE INSIDE SHOULDER & RAMP 4' SHOULDER WITHOUT UNDERDRAIN DETAIL



US 301 MAINLINE INSIDE SHOULDER & RAMP 4' SHOULDER UNDERDRAIN DETAIL



US 301 MAINLINE OUTSIDE SHOULDER WITH GUARDRAIL UNDERDRAIN DETAIL



BITUMINOUS PAVEMENT UNDERDRAIN DETAIL

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_001.DGN

ADDENDUMS / REVISIONS

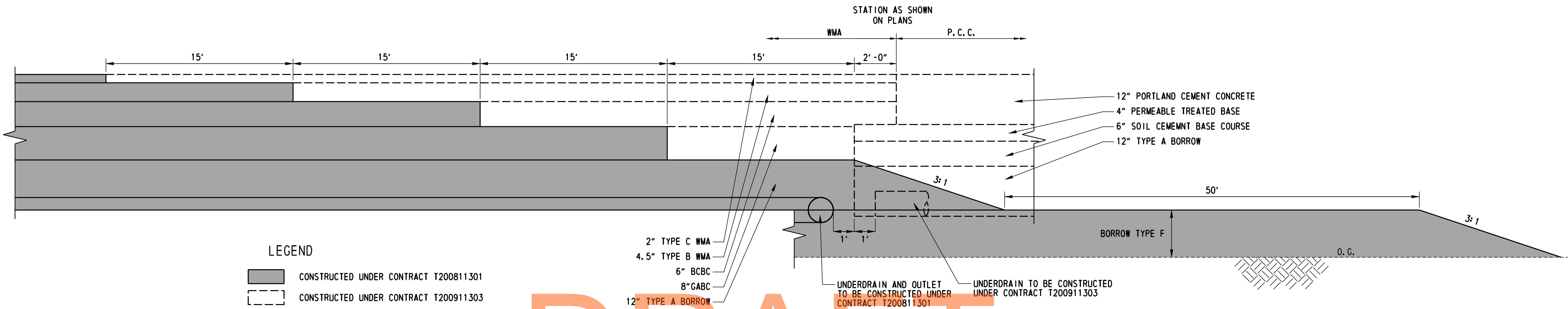
NOT TO SCALE

**US 301**  
**MARYLAND STATE LINE**  
**TO LEVELS ROAD**

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: MFM
	CHECKED BY: SKH

**CONSTRUCTION DETAILS**

<b>DT-01</b>
SHEET NO. 214
TOTAL SHTS. 850

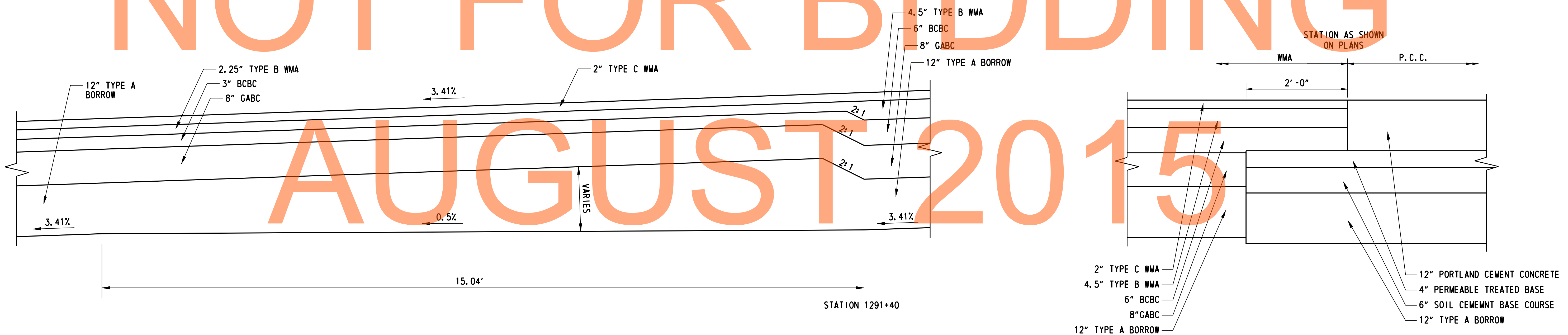


**LEGEND**  
 [Solid Grey Box] CONSTRUCTED UNDER CONTRACT T200811301  
 [Dashed Line Box] CONSTRUCTED UNDER CONTRACT T200911303

2" TYPE C WMA  
 4.5" TYPE B WMA  
 6" BCBC  
 8" GABC  
 12" TYPE A BORROW  
 UNDERDRAIN AND OUTLET TO BE CONSTRUCTED UNDER CONTRACT T200811301  
 UNDERDRAIN TO BE CONSTRUCTED UNDER CONTRACT T200911303

**DRAFT**  
 P.C.C. RAMP/WMA RAMP  
 INTERFACE - RAMPS C & F

**NOT FOR BIDDING**



WARWICK/LEVELS ROAD PAVEMENT TRANSITION

P.C.C. RAMP/WMA RAMP  
 INTERFACE - RAMPS D & E

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_002.DGN

ADDENDUMS / REVISIONS	

NOT TO SCALE

**US 301**  
**MARYLAND STATE LINE**  
**TO LEVELS ROAD**

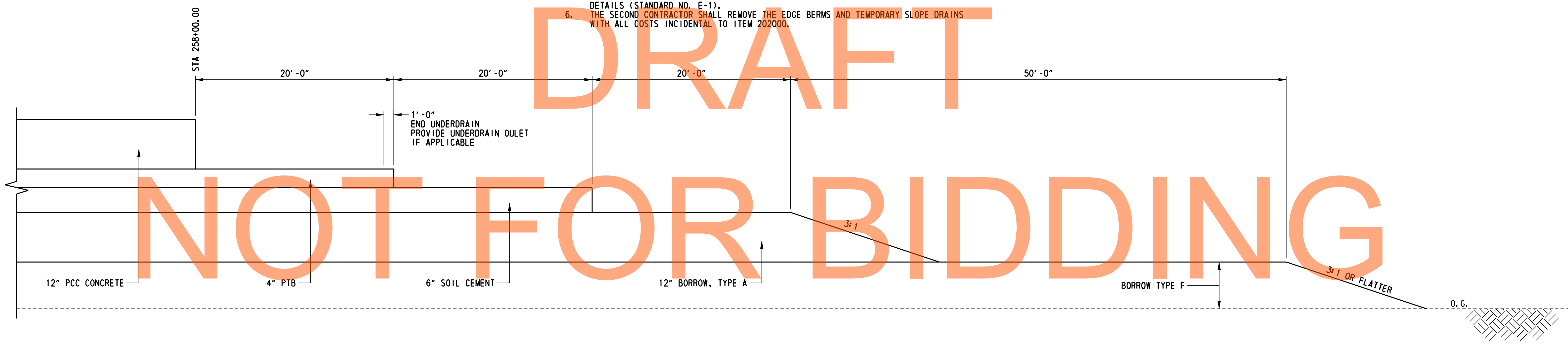
CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: MFM
	CHECKED BY: SKH

**CONSTRUCTION DETAILS**

<b>DT-02</b>
SHEET NO. 215
TOTAL SHTS. 850

- 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 THE 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 SIDES AND END SLOPES PER THE INCIDENTAL STABILIZATION DETAILS (STANDARD NO. E-1).
  6. THE SECOND CONTRACTOR SHALL REMOVE THE EDGE BERMS AND TEMPORARY SLOPE DRAINS WITH ALL COSTS INCIDENTAL TO ITEM 202000.

(THIS STATION ASSUMES CONTRACT T200811301 WILL PERFORM WORK IN THIS AREA FIRST)



PAVEMENT DETAIL AT LIMIT OF CONSTRUCTION

DRAFT  
NOT FOR BIDDING

AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_003.DGN

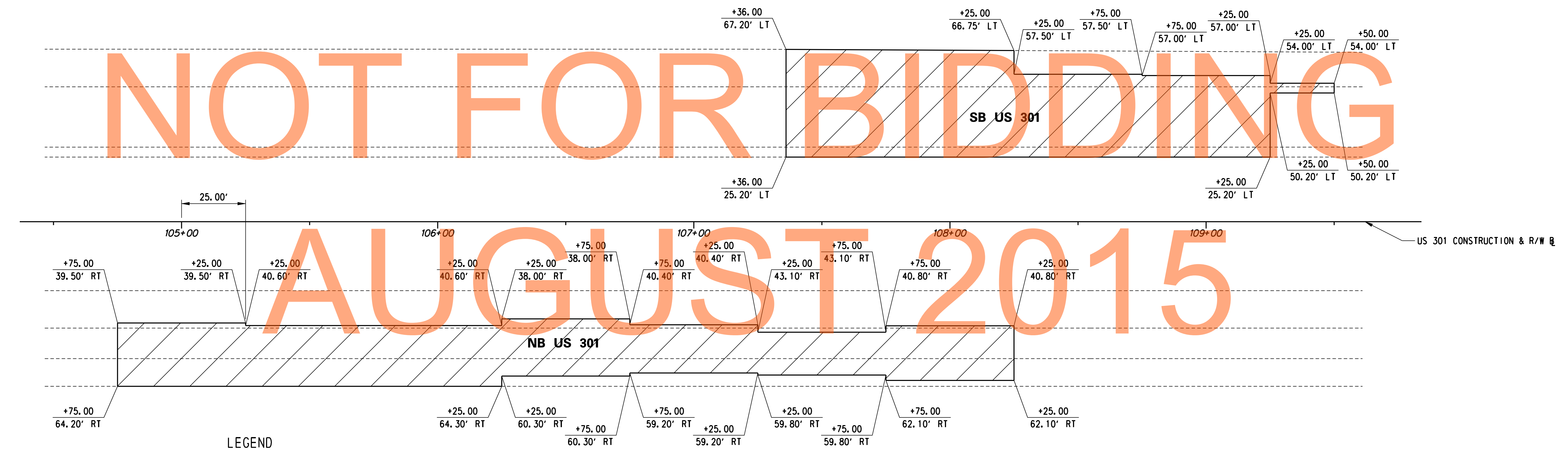
<b>DELAWARE DEPARTMENT OF TRANSPORTATION</b>	ADDENDUMS / REVISIONS	NOT TO SCALE	<b>US 301 MARYLAND STATE LINE TO LEVELS ROAD</b>	CONTRACT	BRIDGE NO.	<b>CONSTRUCTION DETAILS</b>	SHEET NO.
					T200811301		
				COUNTY	CHECKED BY: SKH	TOTAL SHTS.	850
				NEW CASTLE			

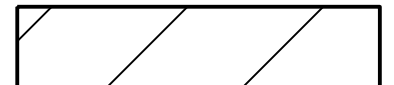
**DT-03**

# DRAFT

# NOT FOR BIDDING

# AUGUST 2015



**LEGEND**  
 LIMITS OF ITEM 760507 - PROFILE MILLING, HOT-MIX

PROFILE MILLING LIMITS

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_004.DGN



ADDENDUMS / REVISIONS	

NOT TO SCALE

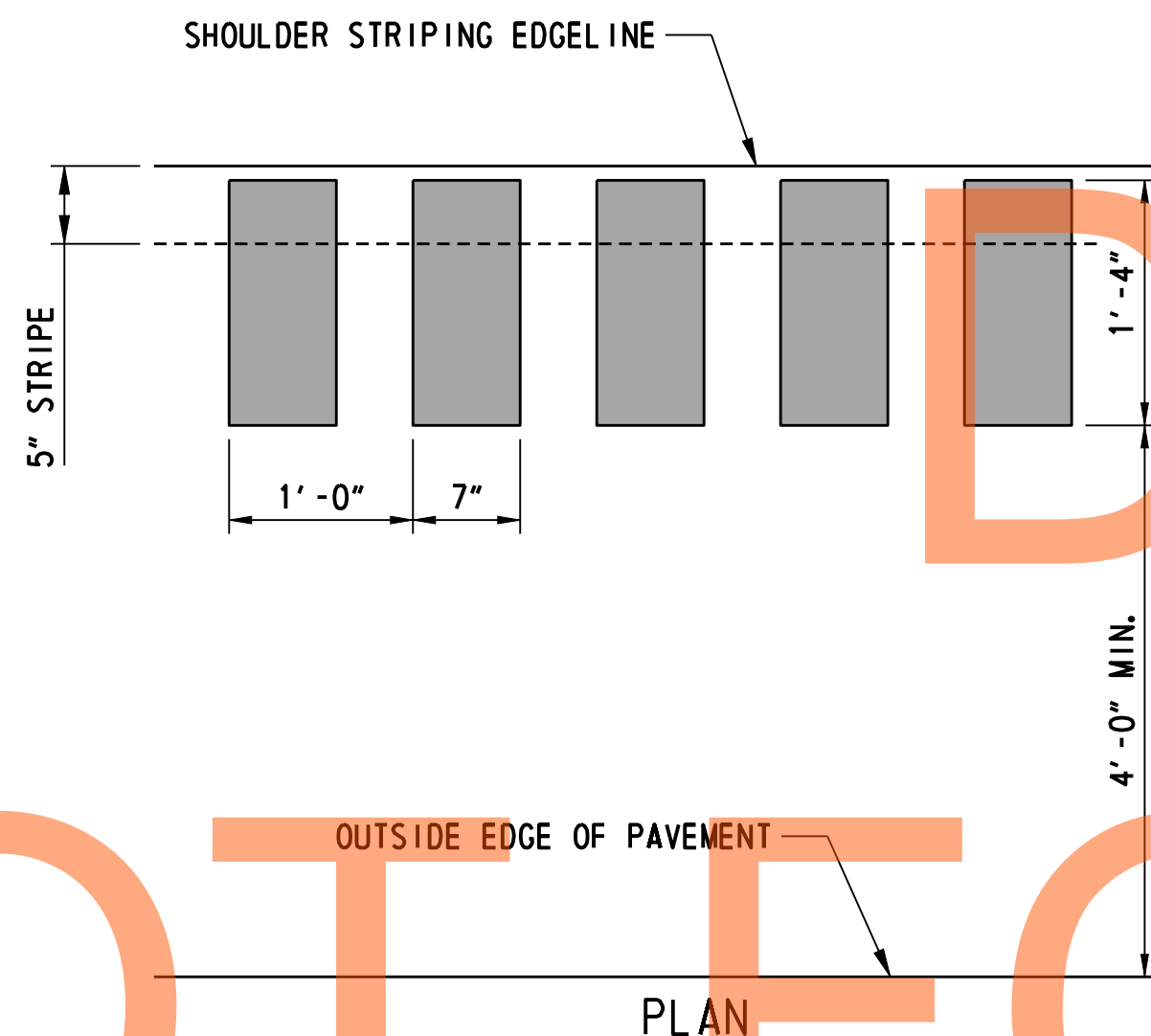
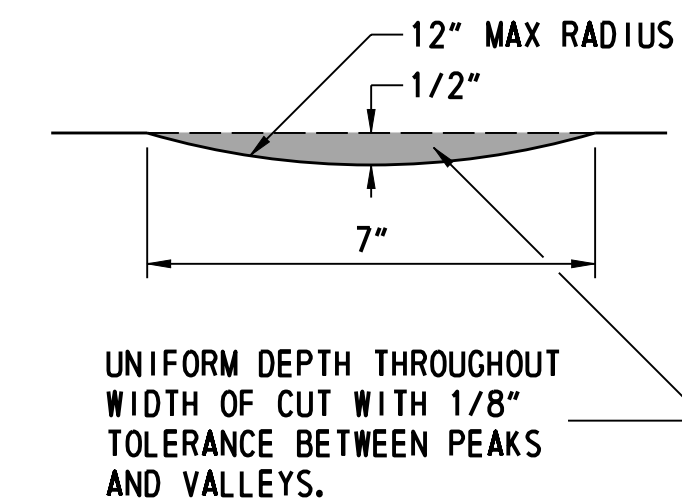
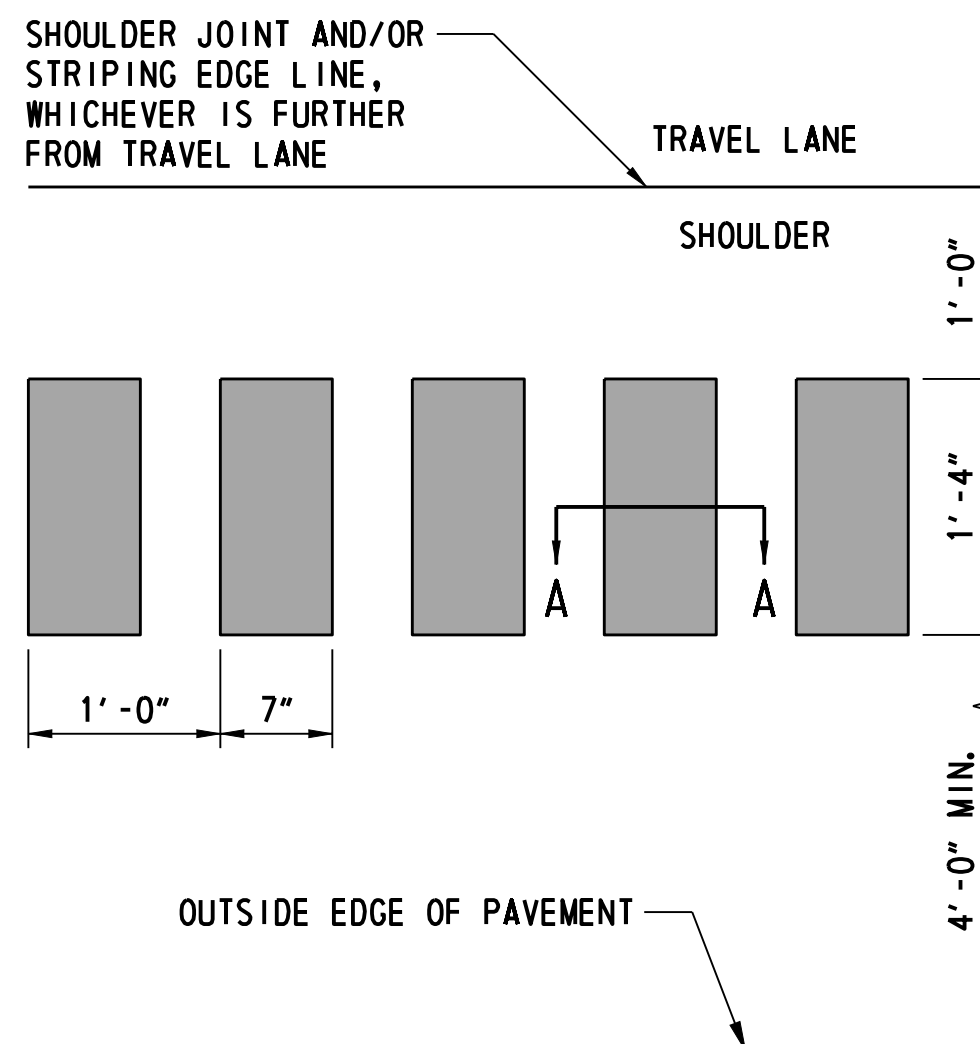
US 301  
 MARYLAND STATE LINE  
 TO LEVELS ROAD

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: MFM
	CHECKED BY: SKH

CONSTRUCTION DETAILS

DT-04

SHEET NO. 217
TOTAL SHTS. 850

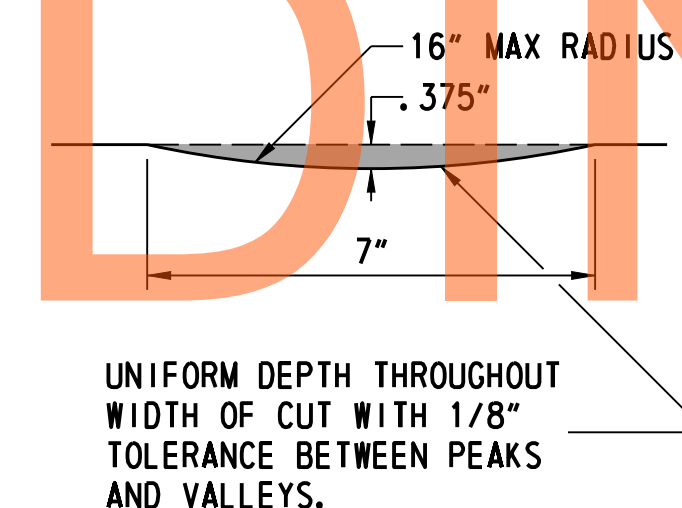
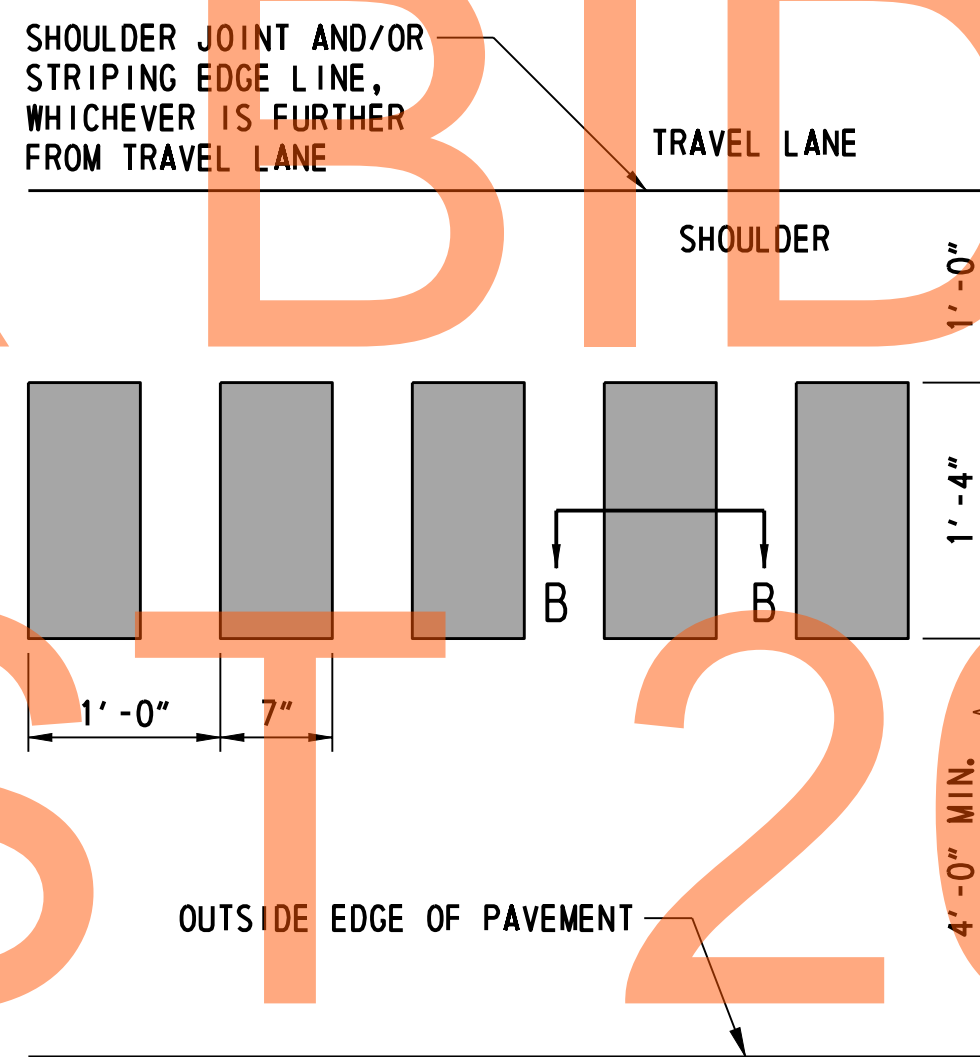


BICYCLE-FRIENDLY EDGELINE RUMBLE STRIPS  
DETAIL APPLIES TO STRAWBERRY LANE ONLY

NOTES:

1. ALL WORK REQUIRED TO COMPLETE THE INSTALLATION OF EDGELINE RUMBLE STRIPS SHALL BE INCIDENTAL TO ITEM 760016 - RUMBLE STRIPS, HOT-MIX AND/OR ITEM 760017 - RUMBLE STRIPS, CONCRETE.
2. EDGELINE RUMBLE STRIPS SHALL BE INSTALLED ALONG ALL INSIDE AND OUTSIDE SHOULDERS, AS PER THIS DETAIL, AND AS SHOWN ON TYPICAL APPLICATION DETAILS.

EDGELINE RUMBLE STRIPS



NOTES:

1. ALL WORK REQUIRED TO COMPLETE THE INSTALLATION OF EDGELINE RUMBLE STRIPS SHALL BE INCIDENTAL TO ITEM 760012 - RUMBLE STRIPS, BIKE-FRIENDLY, HOT-MIX.
2. THE BIKE-FRIENDLY EDGELINE RUMBLE STRIP PATTERN SHALL CONSIST OF 40' LONG SEGMENTS OF RUMBLE STRIPS WITH 12' SEGMENTS OF NO RUMBLE STRIPS.
3. EDGELINE RUMBLE STRIPS SHALL BE INSTALLED ALONG ALL INSIDE AND OUTSIDE SHOULDERS, AS PER THIS DETAIL, AND AS SHOWN ON TYPICAL APPLICATION DETAILS.

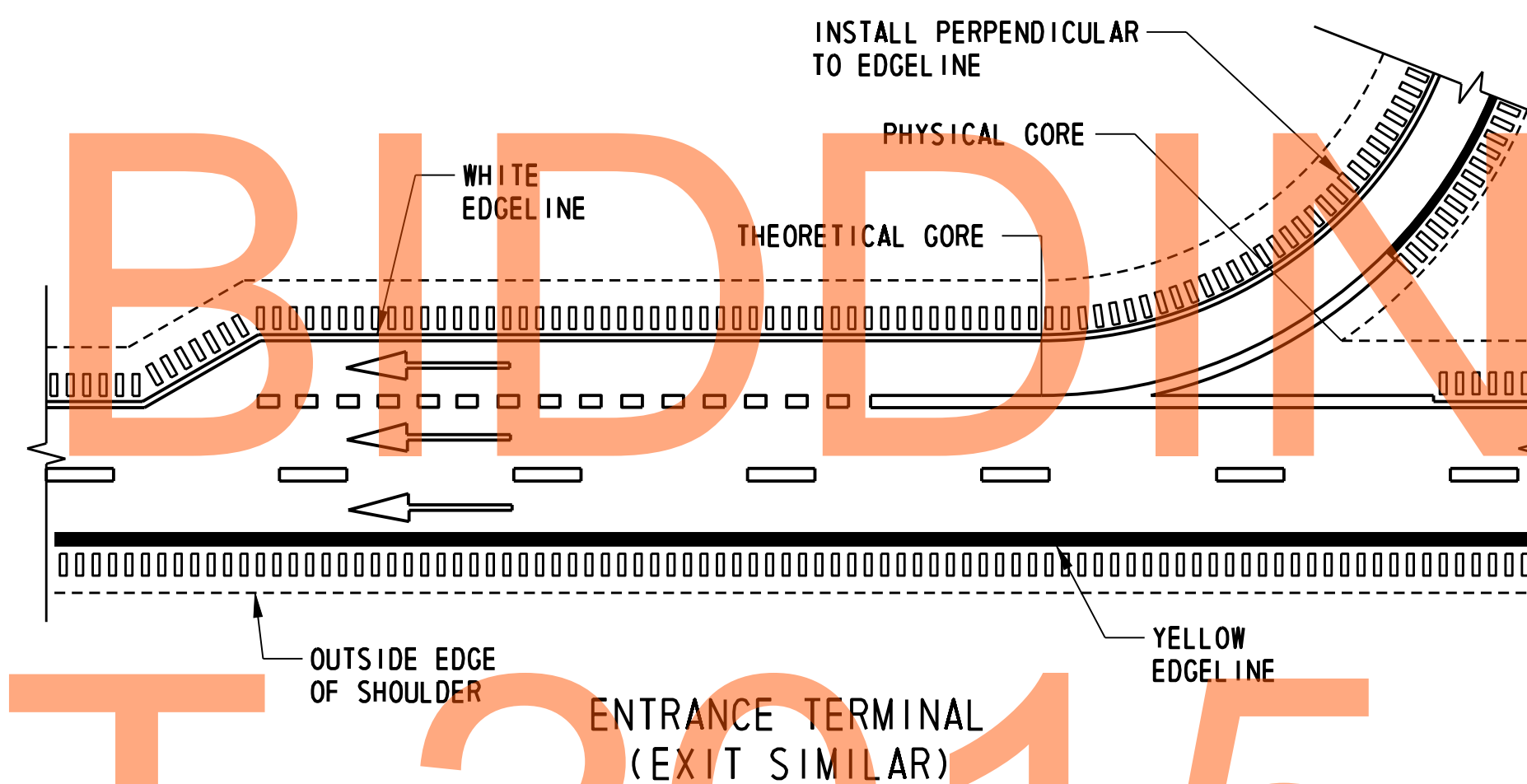
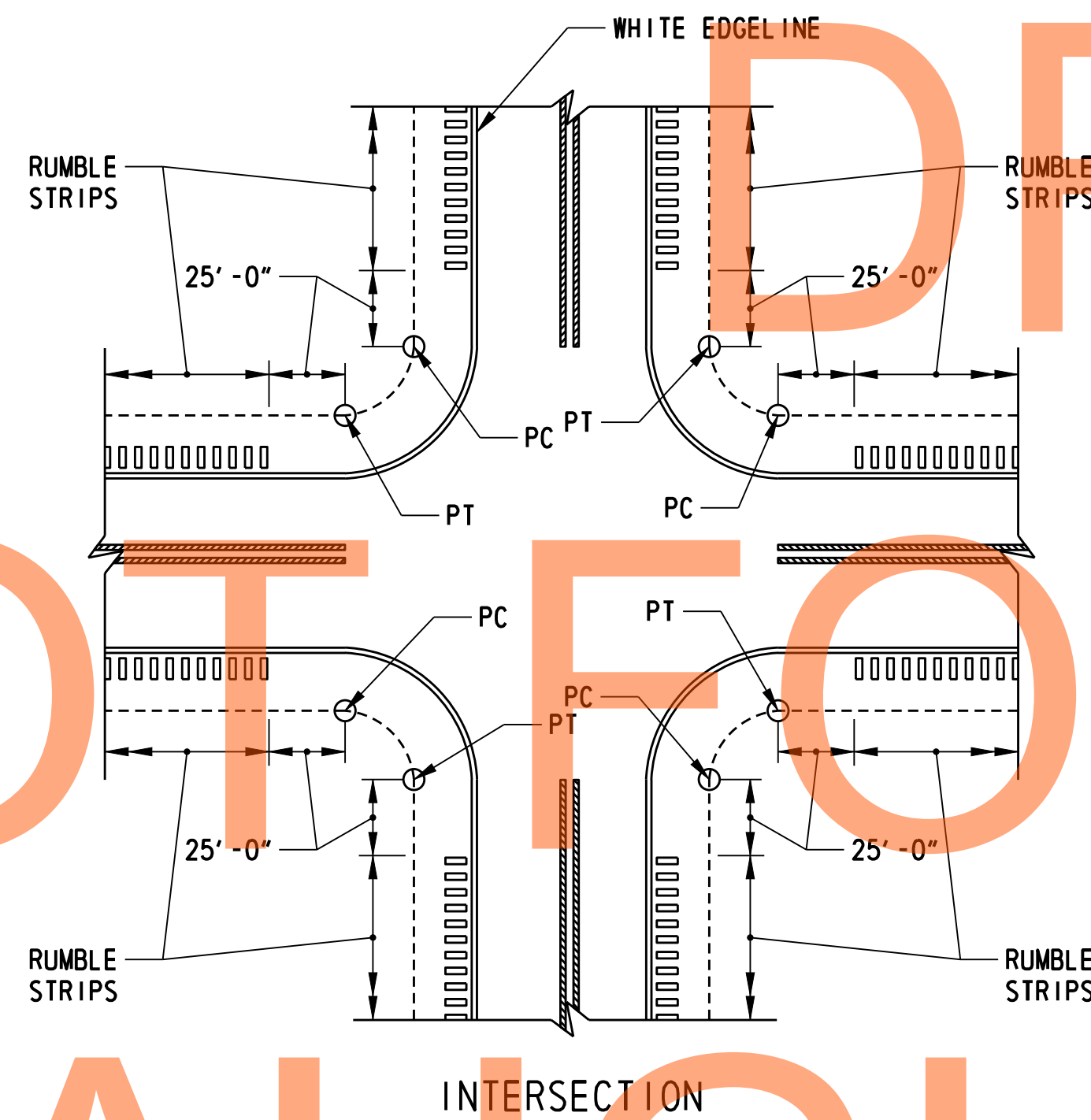
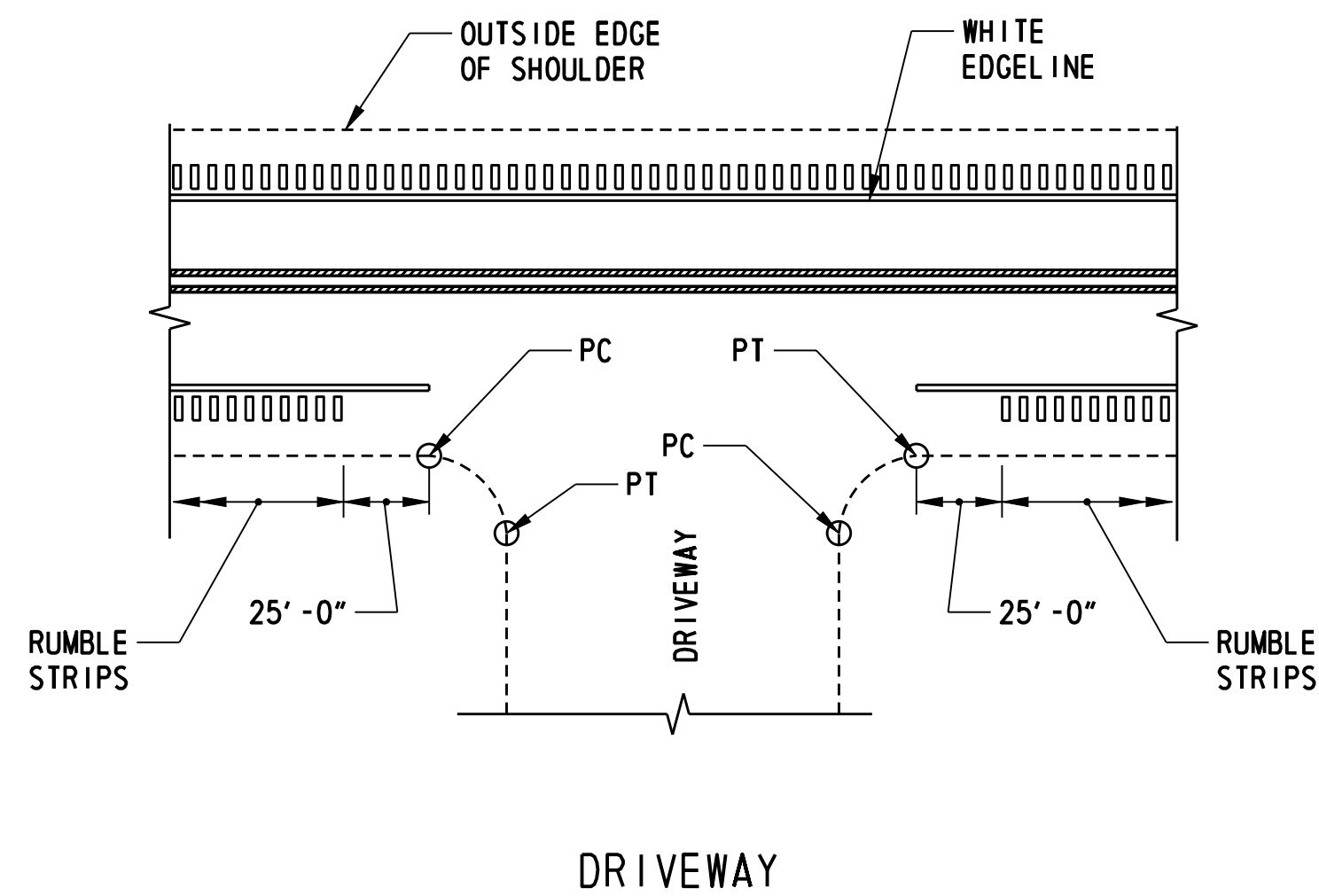
BIKE-FRIENDLY EDGELINE RUMBLE STRIPS

DRAFT

NOT FOR BIDDING

AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_005.DGN



NOTES:

1. RUMBLE STRIPS ARE TO BE BROKEN FOR ALL INTERSECTIONS AND DRIVEWAY ENTRANCES WHERE THE EDGELINE PAVEMENT MARKINGS TIE INTO THE DRIVEWAY ENTRANCE OR WHERE THE EDGELINE PAVEMENT MARKINGS ARE BROKEN.
2. PRIOR TO THE INSTALLATION OF EDGELINE RUMBLE STRIPS, THE CONTRACTOR SHALL SUBMIT A PLAN WITH THE TYPE AND LAYOUT OF PROPOSED RUMBLE STRIPS FOR APPROVAL BY THE ENGINEER.
3. EDGELINE RUMBLE STRIPS ARE NOT TO BE INSTALLED ON BRIDGE DECKS OF BR1-486 (STRAWBERRY LANE) AND BR1-482 (LEVELS ROAD). RUMBLE STRIPS SHOULD BE STOPPED 10' PRIOR TO THE BRIDGE APPROACH SLAB.
4. ON CONCRETE SHOULDER PAVEMENTS, THE RUMBLE STRIPS SHALL BE INSTALLED A MINIMUM OF FIVE INCHES FROM THE TRANSVERSE JOINTS. THE CONTRACTOR SHALL LAYOUT THE RUMBLE STRIPS BETWEEN THE TRANSVERSE JOINTS PER THE DETAIL AND BALANCE THE AVAILABLE DISTANCE BETWEEN THE TRAVERSE JOINTS AND THE FIRST AND LAST RUMBLE STRIPS. THE LAYOUT SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEGINNING WORK.

EDGELINE RUMBLE STRIP TYPICAL APPLICATIONS

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_006.DGN



ADDENDUMS / REVISIONS	

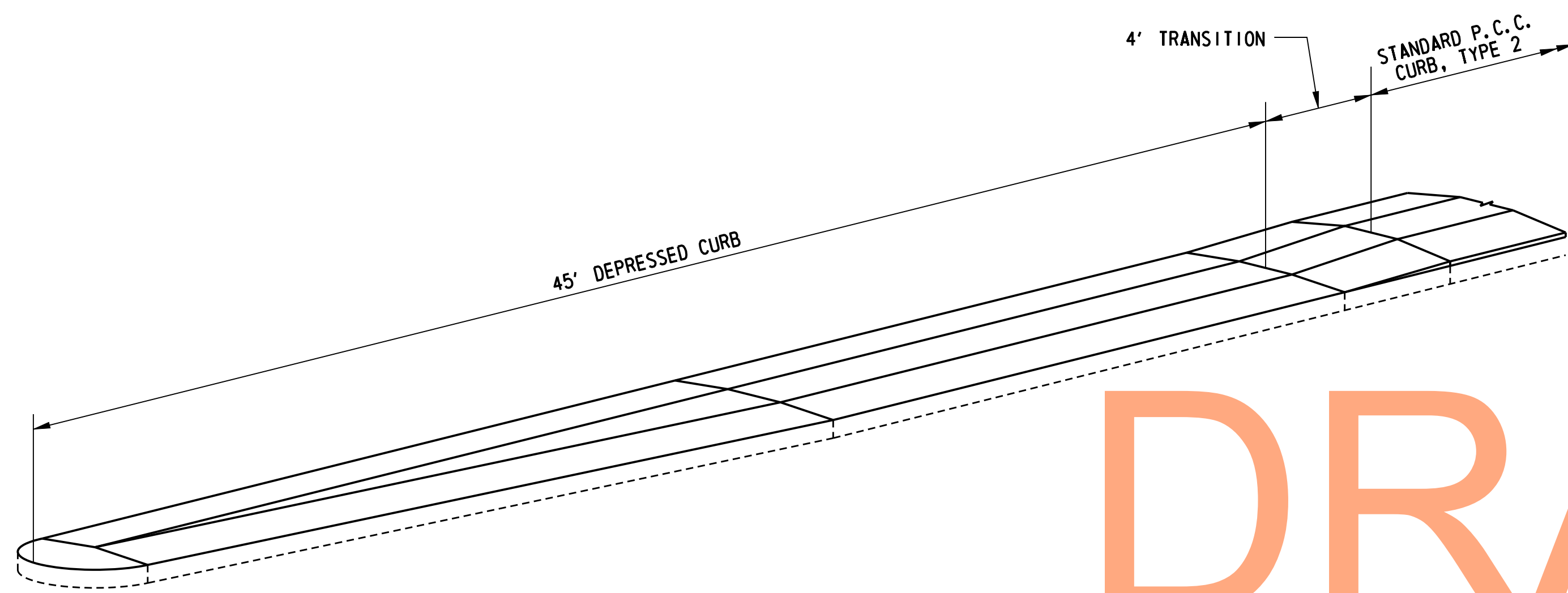
NOT TO SCALE

US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

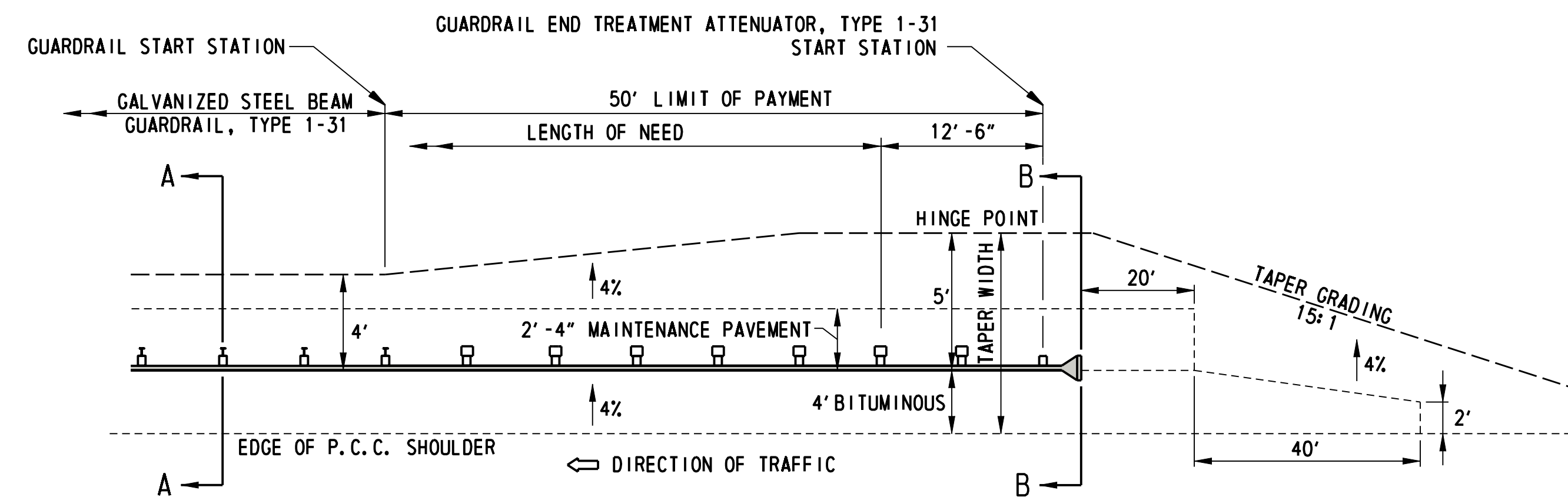
CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: MFM
	CHECKED BY: SKH

CONSTRUCTION DETAILS	SHEET NO. 219
	TOTAL SHTS. 850

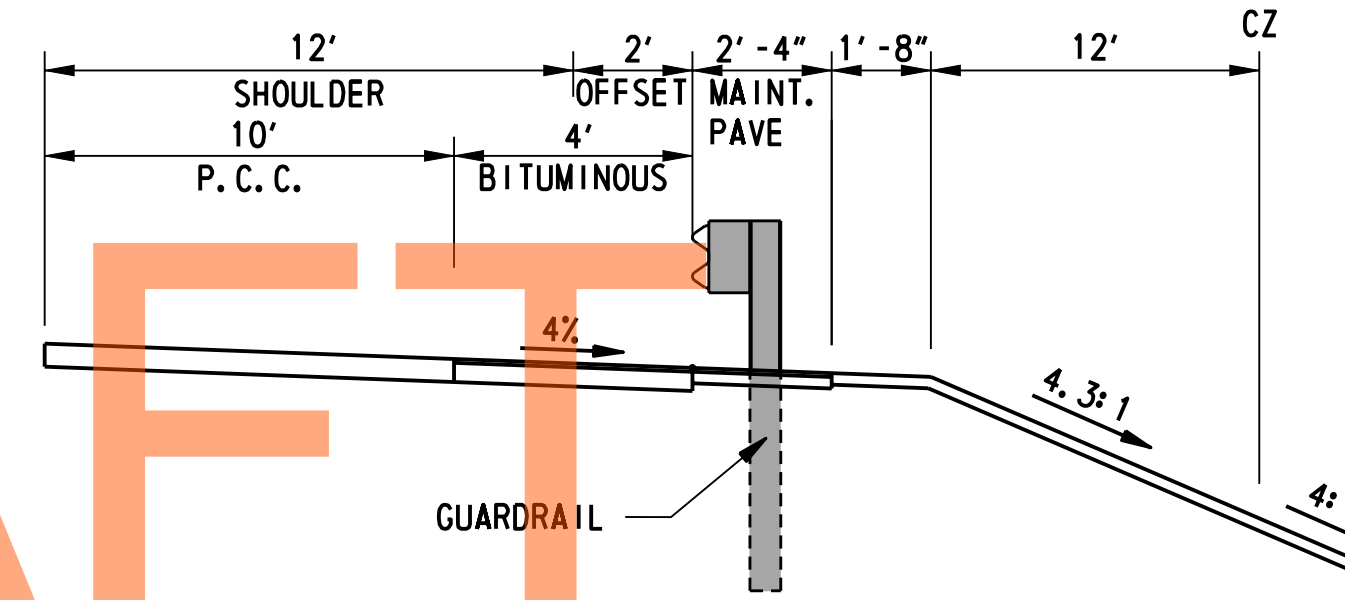
DT-06



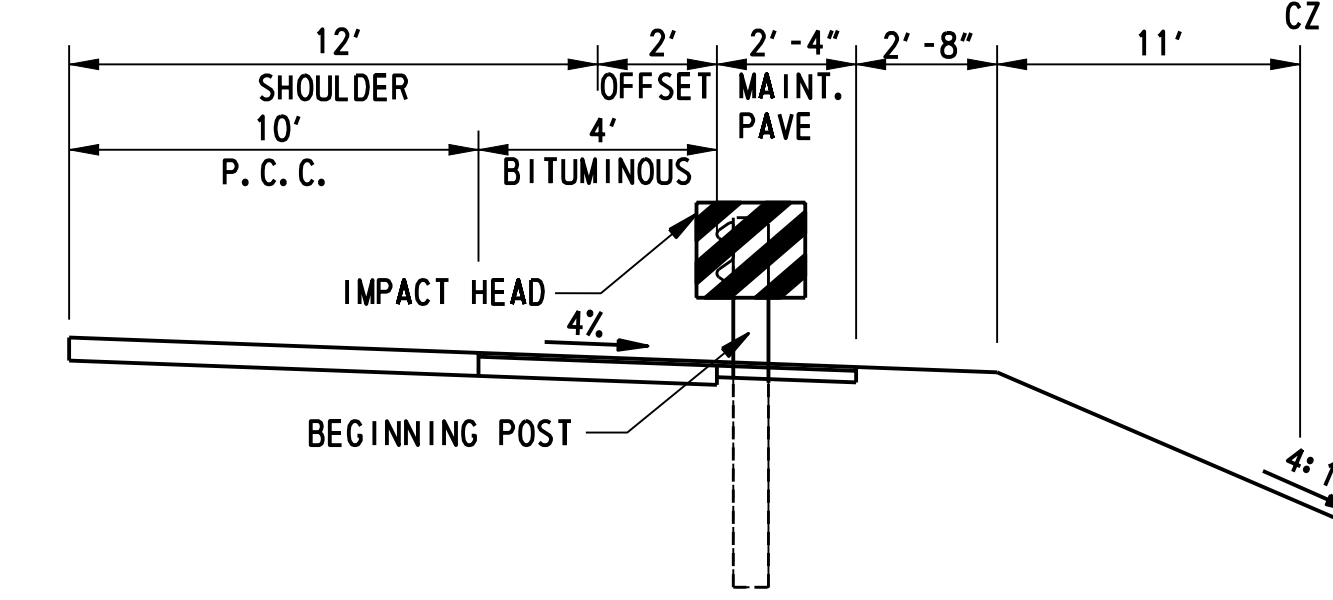
DEPRESSED P.C.C. CURB ISOMETRIC VIEW



PLAN VIEW



SECTION A-A



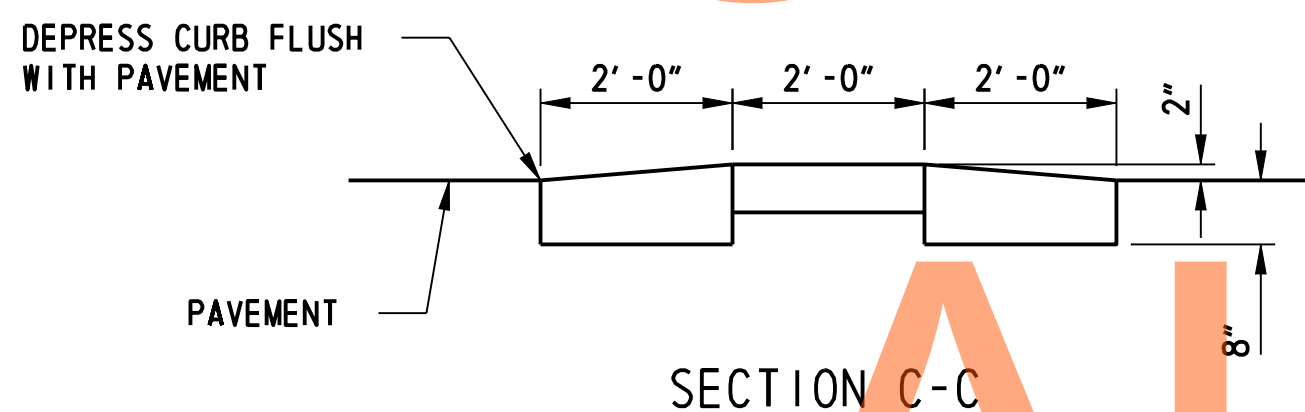
SECTION B-B

GRADING FOR GUARDRAIL END TREATMENT ATTENUATOR, TYPE 1

DRAFT

NOT FOR BIDDING

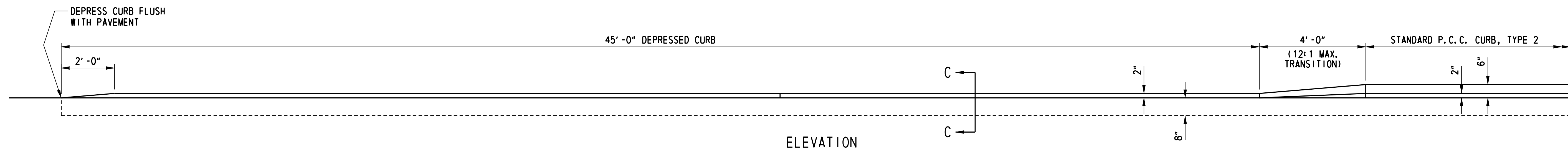
AUGUST 2015



SECTION C-C

NOTES:

1. DEPRESS OUTSIDE EDGE OF CURB FLUSH WITH PAVEMENT WITHIN DEPRESSED CURB REGION.
2. SLOPE VERTICAL TAPERS AT 12:1 MAX.
3. REFER TO GRADES AND GEOMETRICS FOR HORIZONTAL AND VERTICAL LAYOUT DATA.
4. PAYMENT FOR CURB AND SIDEWALK WITHIN DEPRESSED AND TRANSITION ZONES TO BE INCLUDED IN THE RESPECTIVE UNIT PRICE BIDS FOR ITEM 701011 - P.C.C. CURB, TYPE 2 AND ITEM 705002 - P.C.C. SIDEWALK, 6".



ELEVATION

DEPRESSED P.C.C. CURB, TYPE 2 DETAIL

DETAIL APPLIES TO LEVELS ROAD  
STATION 1293+07.46 TO STATION 1293+56.46

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_007.DGN



ADDENDUMS / REVISIONS

NOT TO SCALE

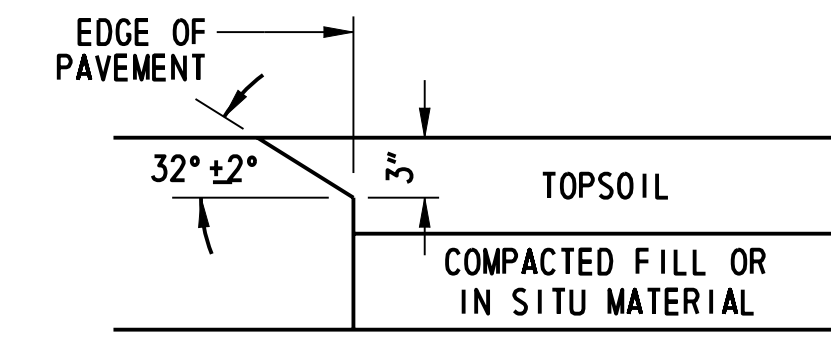
US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: MFM
NEW CASTLE	CHECKED BY: SKH

CONSTRUCTION DETAILS

DT-07

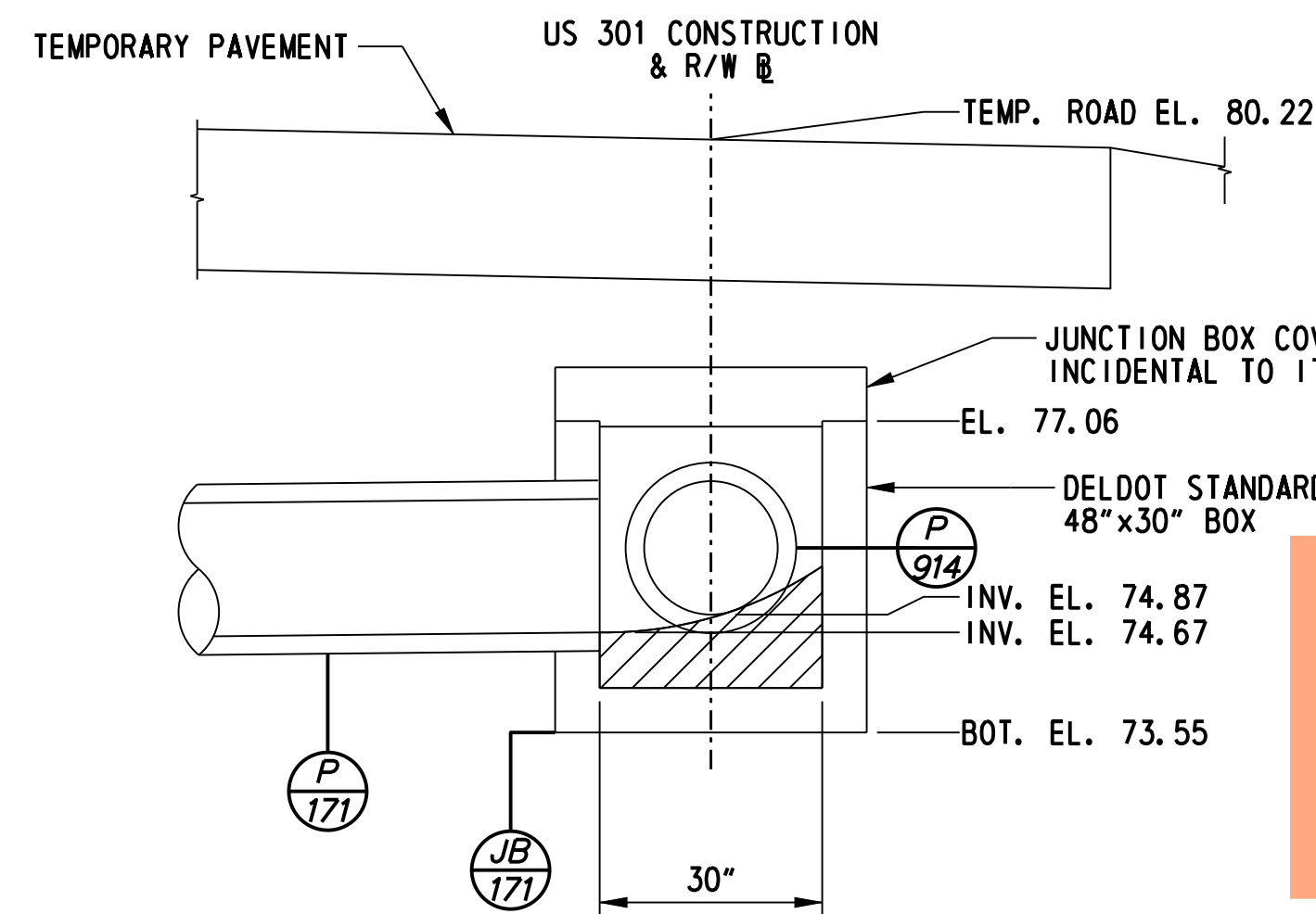
SHEET NO.
220
TOTAL SHTS.
850



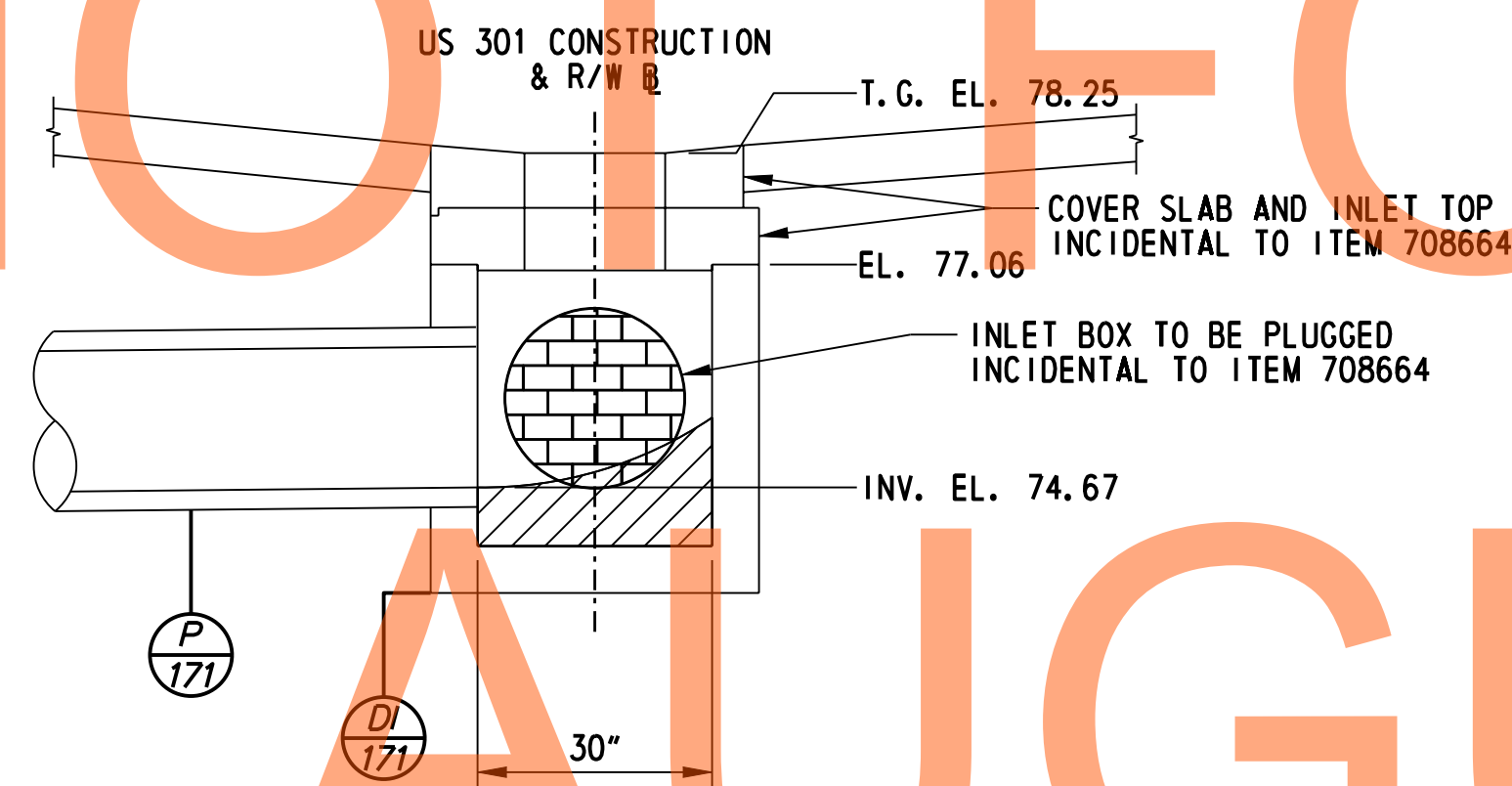
CONCRETE PAVEMENTS

NOTES:

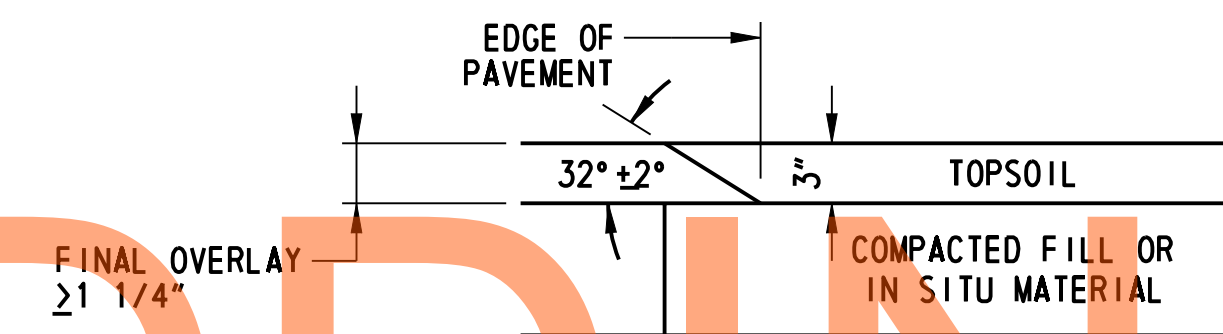
1. FOR ADDITIONAL INFORMATION, SEE ITEM 401752 SAFETY EDGE FOR ROADWAY PAVEMENT.
2. THE SAFETY EDGE SHALL NOT BE CONSTRUCTED ADJACENT TO OTHER PAVEMENTS, CURB, CURB & GUTTER, CONCRETE SAFETY BARRIER OR MAINTENANCE PAVEMENT UNDER GUARDRAIL. THE CONTRACTOR SHALL STAKE OUT THE LIMITS OF THE AREAS NOT TO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



SECTION @ STATION 171+00  
FINAL CONDITION OF CONTRACT 200811301



SECTION @ STATION 171+00  
FINAL CONDITION OF CONTRACT 200911303  
(FOR INFORMATION ONLY)  
JUNCTION BOX JB-171



BITUMINOUS CONCRETE PAVEMENTS AND OVERLAYS

NOTES:

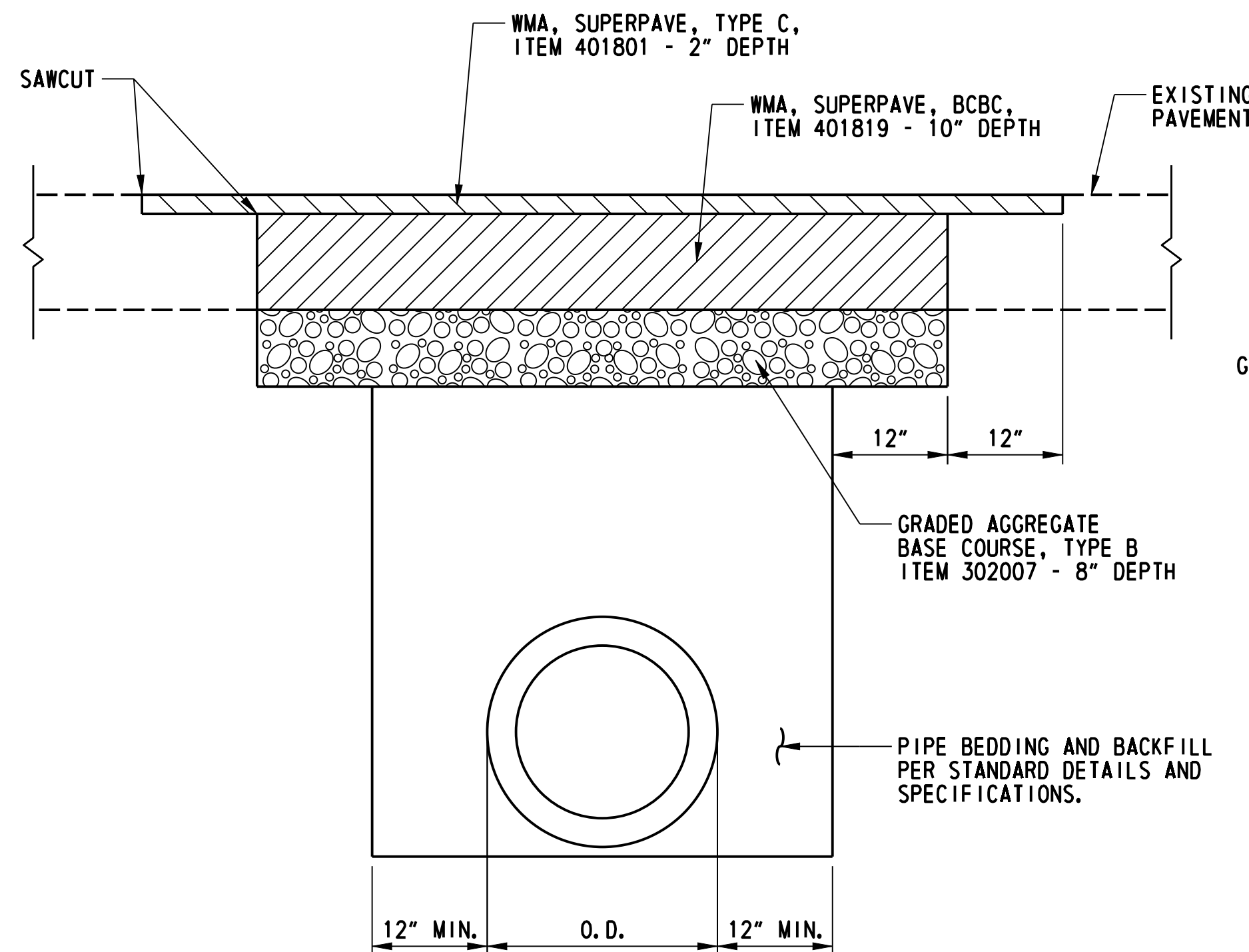
1. FOR ADDITIONAL INFORMATION, SEE ITEM 401752 SAFETY EDGE FOR ROADWAY PAVEMENT.
2. THE SAFETY EDGE SHALL NOT BE CONSTRUCTED ADJACENT TO OTHER PAVEMENTS, CURB, CURB & GUTTER, CONCRETE SAFETY BARRIER OR MAINTENANCE PAVEMENT UNDER GUARDRAIL. THE CONTRACTOR SHALL STAKE OUT THE LIMITS OF THE AREAS NOT TO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

ROADWAY SAFETY EDGE

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

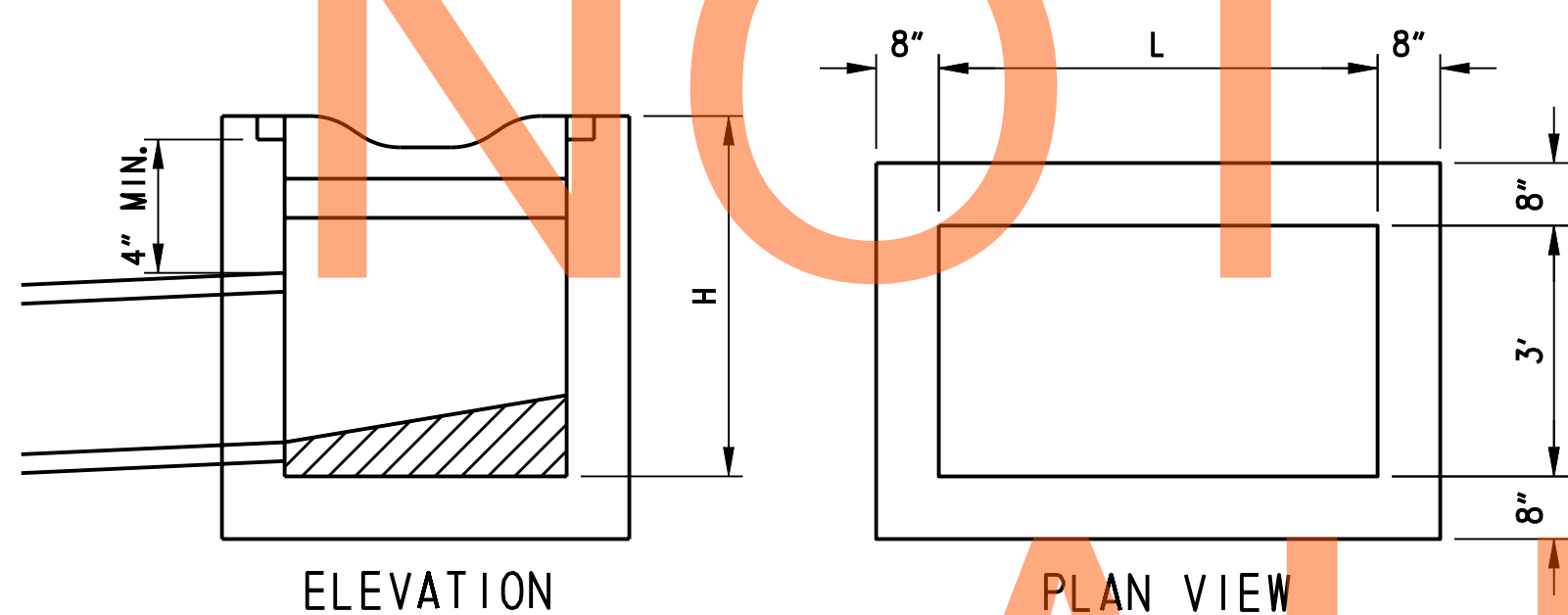
J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_008.DGN





**PIPE TRENCH PAVEMENT PATCH DETAIL**

DETAIL APPLIES TO PIPE NO. 13, 15, 16, 17, 18, 112, 129



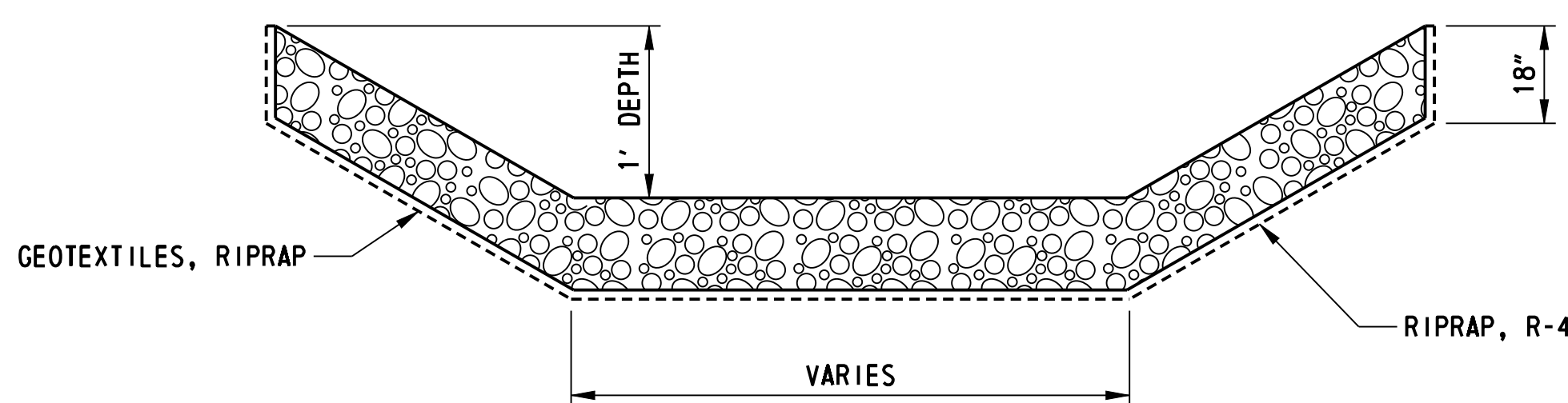
DI NO.	H	L
109	3'	3'-6"
112	2'-6"	3'-6"
115	2'-6"	3'-6"
123	3'	3'-6"
125	2'-6"	3'-6"
2*	4'	4'-0"

\* DO NOT CONSTRUCT CONCRETE GUTTER OPENING

**NOTES:**

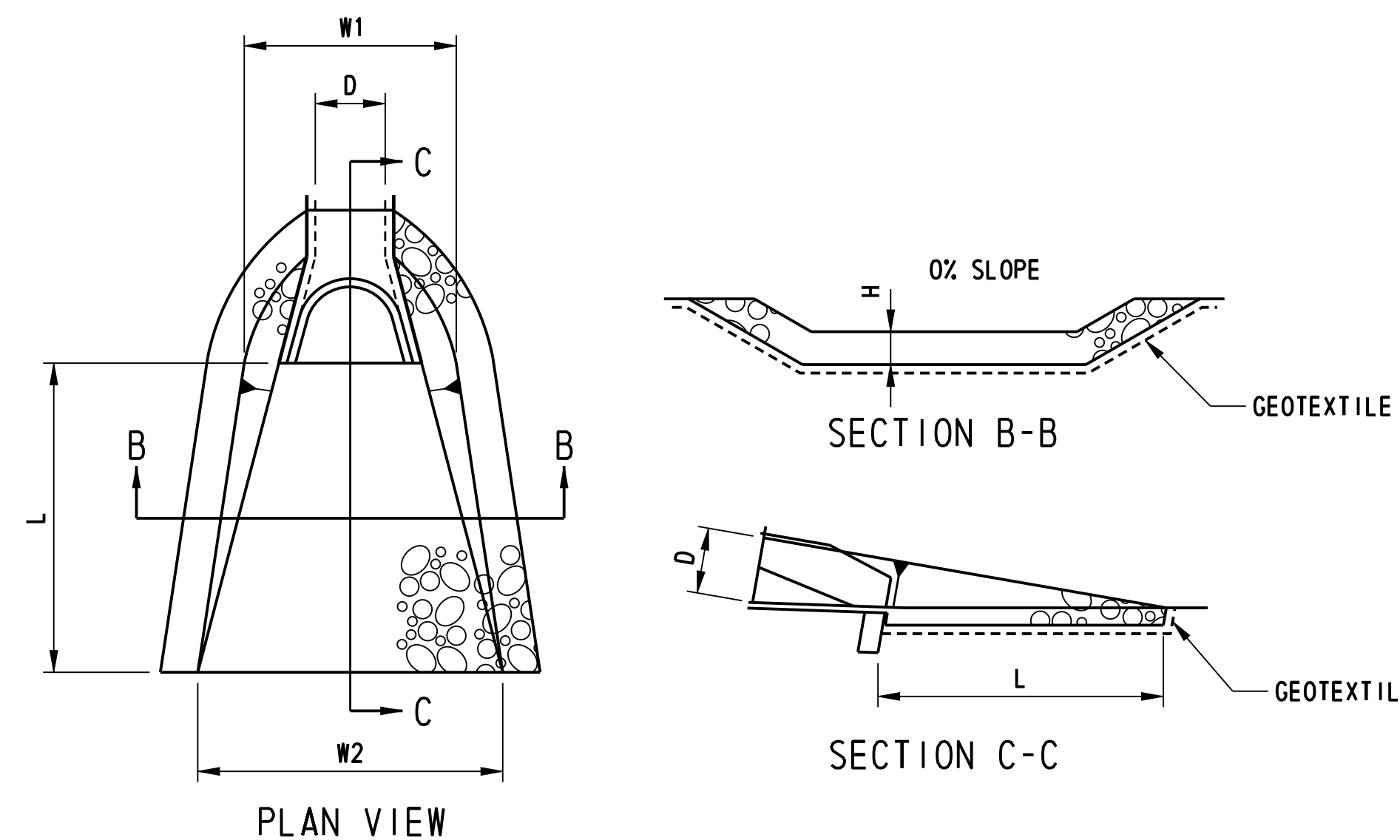
- SEE SHA STANDARD NO. MD 378.11 FOR MATERIALS, REINFORCEMENT REQUIREMENTS, AND ALL OTHER DIMENSIONS.
- FOR INLETS WITH L > 3'-6", SEE SHA STANDARD NO. MD 378.04 FOR GRATE DETAIL.

**SINGLE PRECAST TYPE K INLET MODIFIED**



**DITCH BEND RIPRAP PROTECTION**

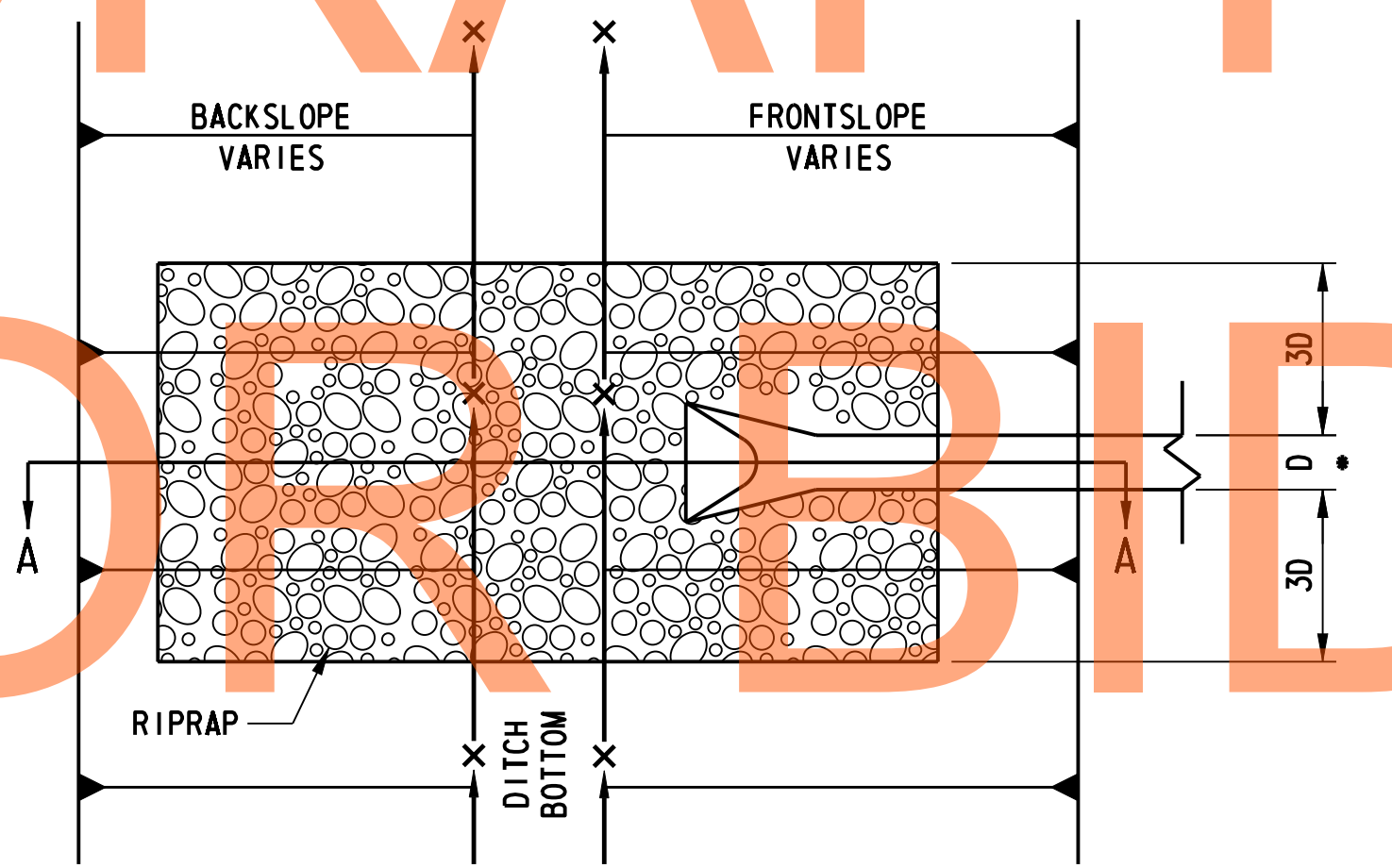
DETAIL APPLIES TO RR-140, RR-174, RR-203, RR-302.



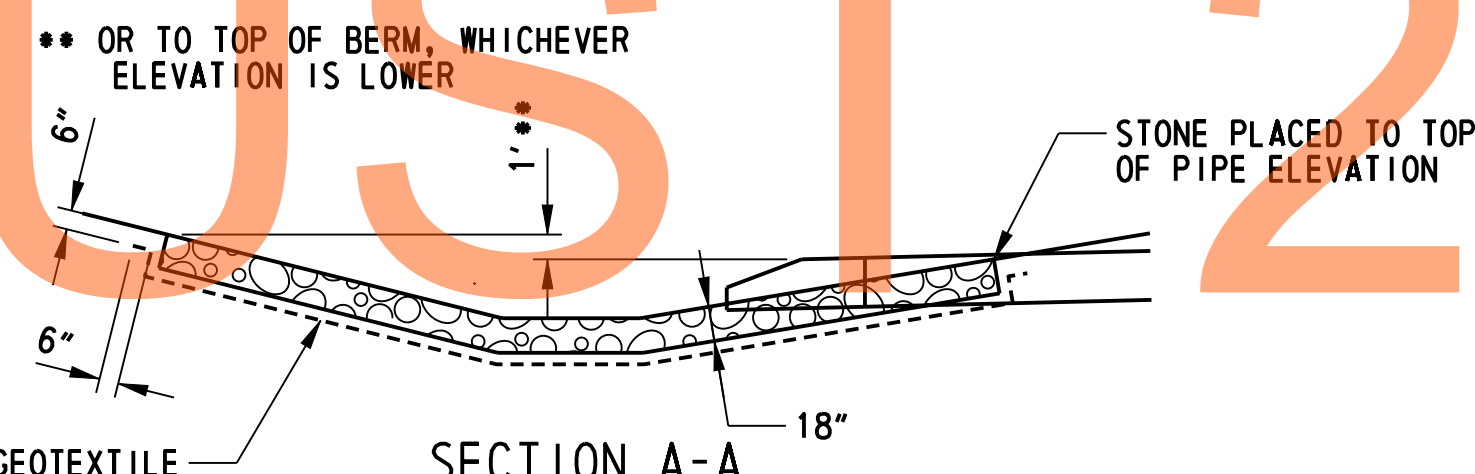
**RIPRAP APRON**

**DRAFT**

**NOT FOR BIDDING**



\* DIAMETER OR CIRCULAR EQUIVALENT IF PIPE IS ELLIPTICAL



**MEDIAN PIPE OUTLET TO DITCH PROTECTION**

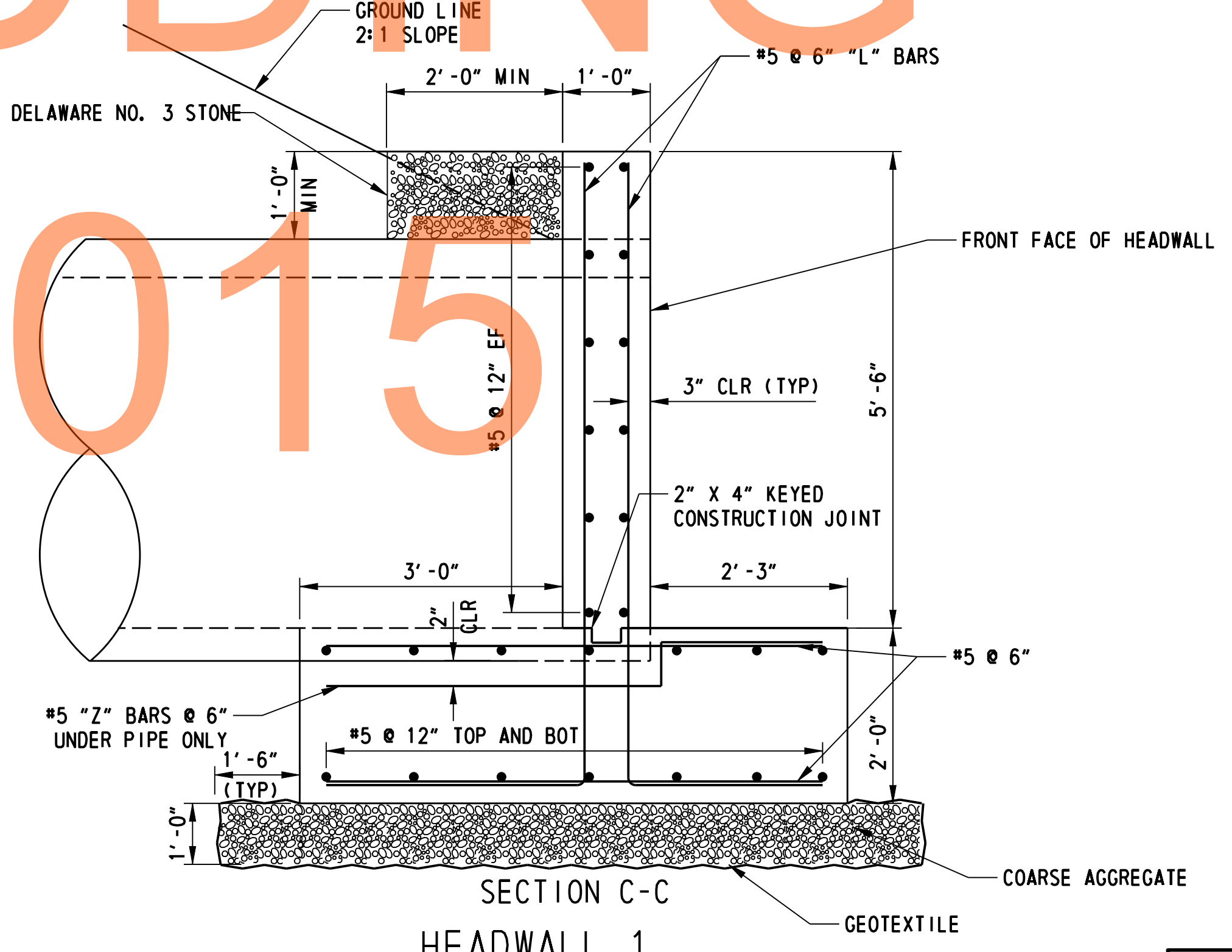
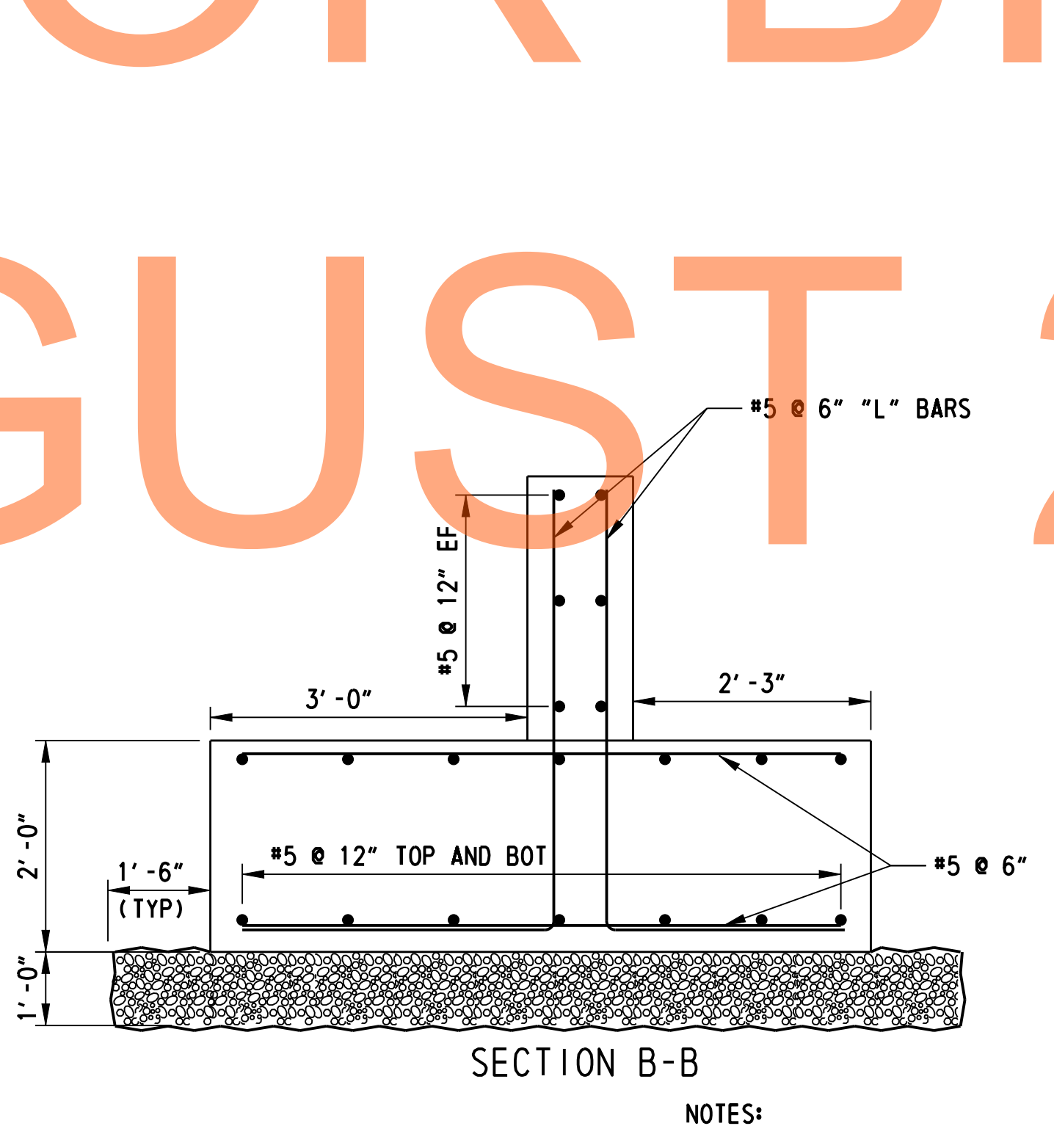
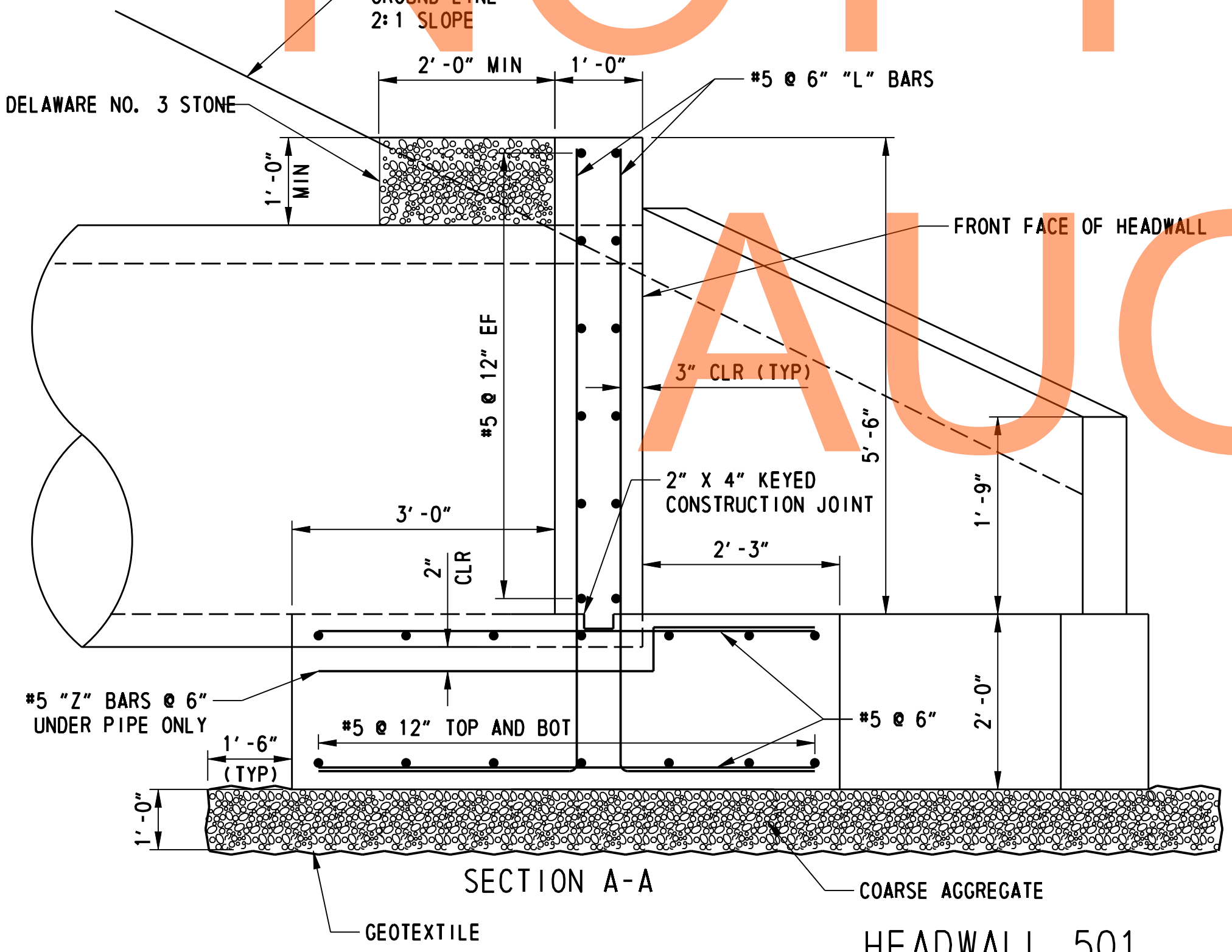
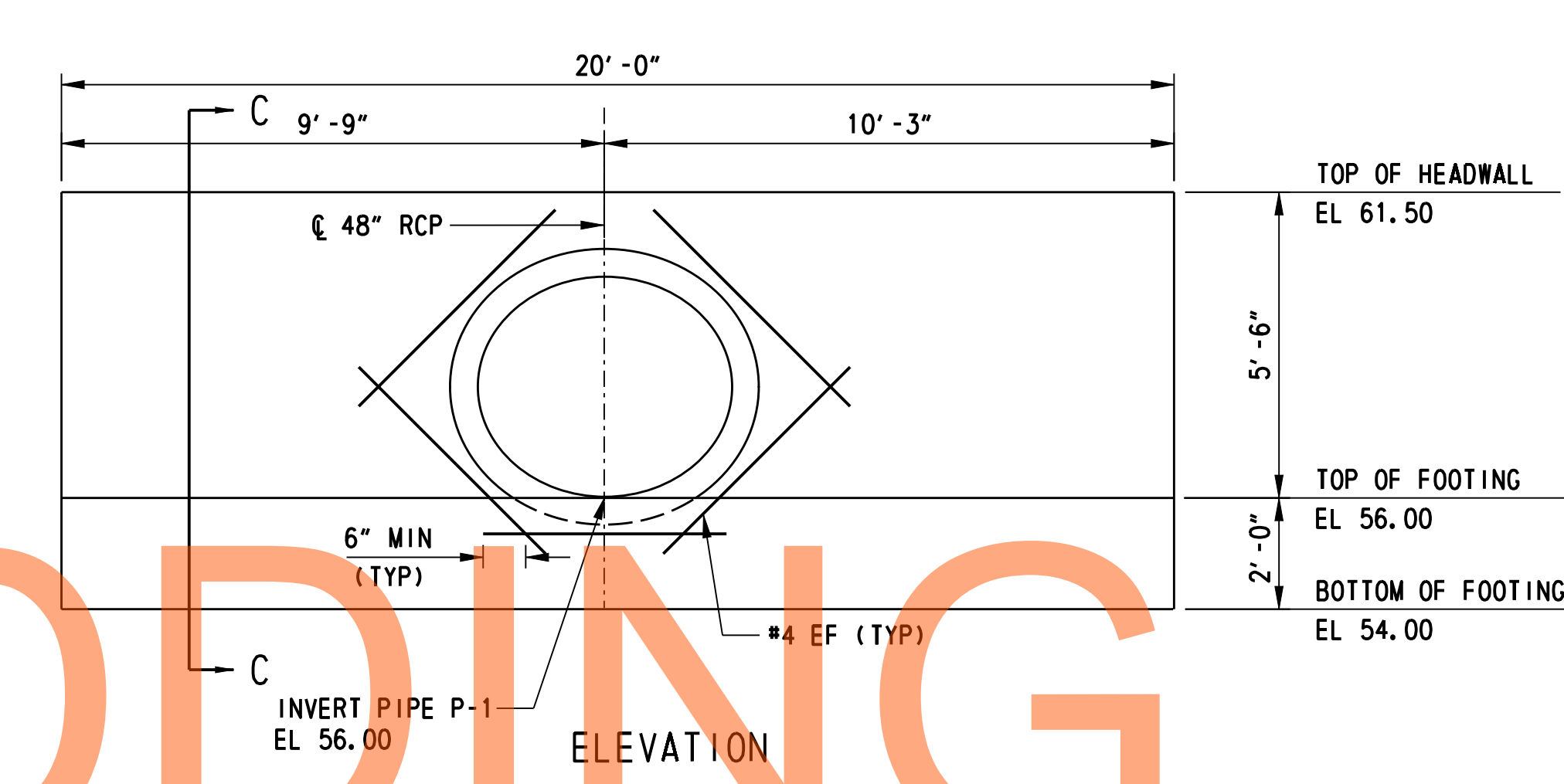
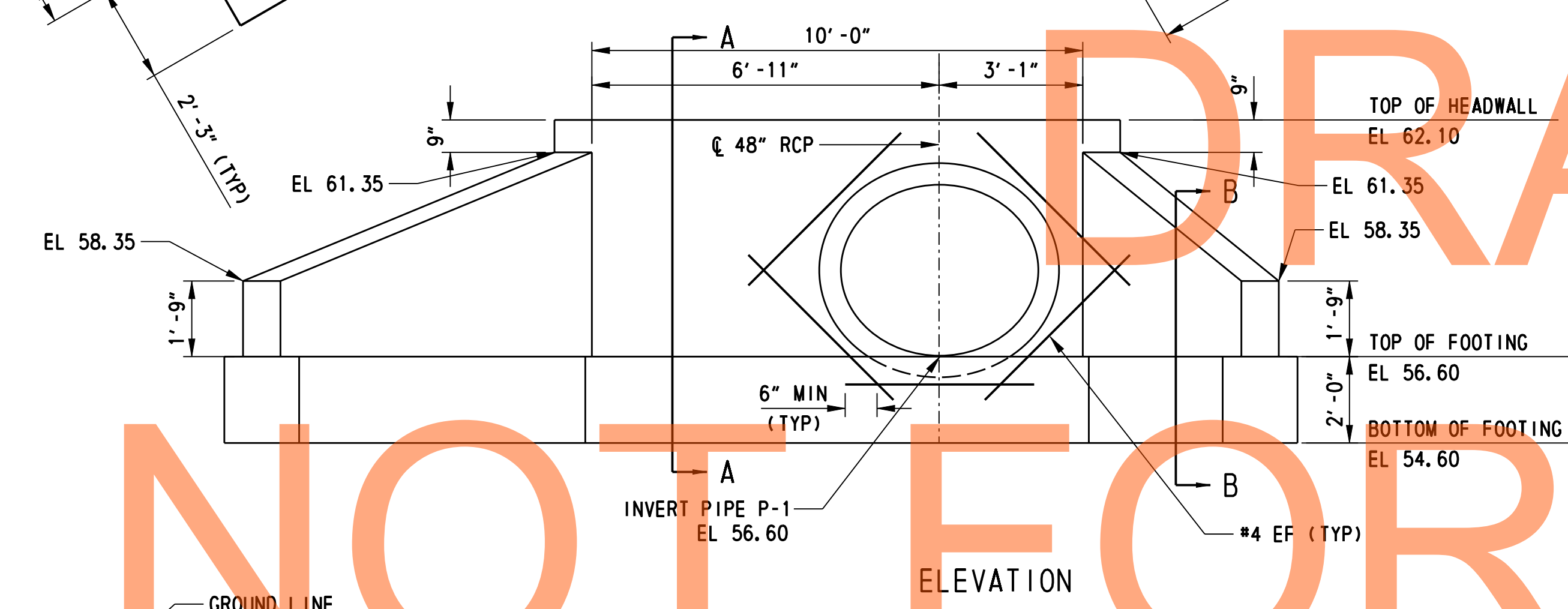
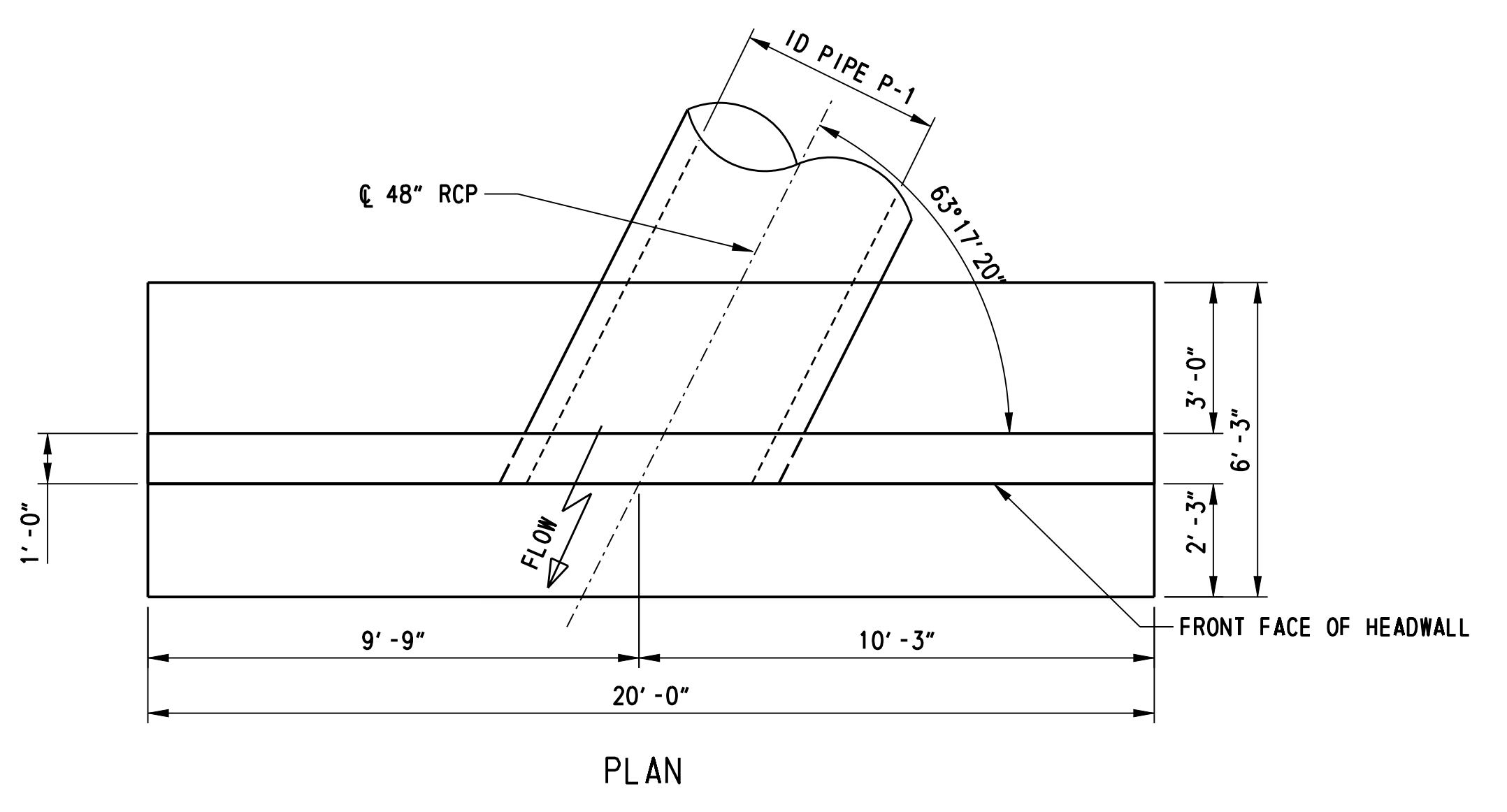
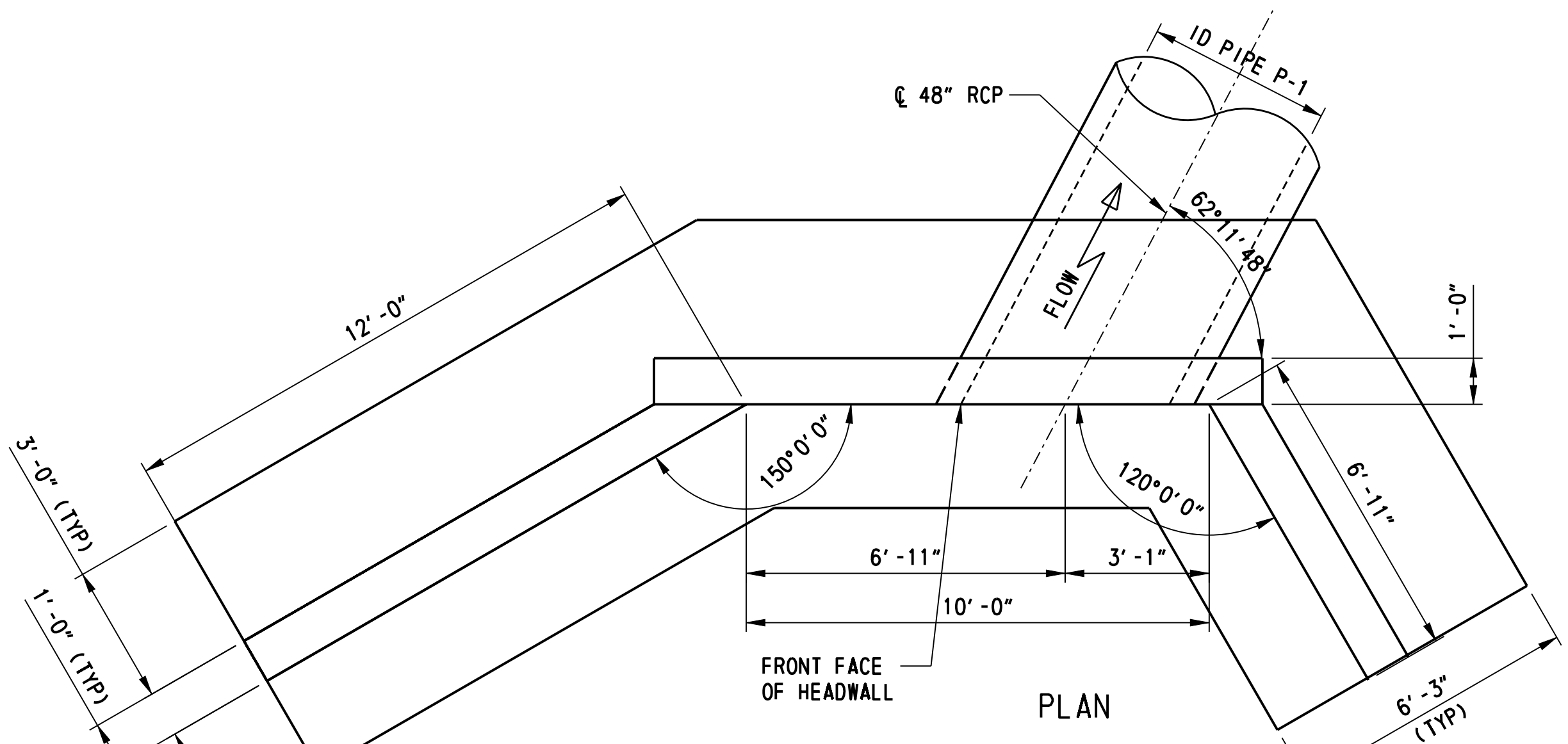
RIPRAP No.	RIPRAP SIZE	GEOTEXTILE
112	CLASS 1	CLASS C
115	CLASS 1	CLASS C
77	R-4	GEOTEXTILES, RIPRAP
78	R-4	GEOTEXTILES, RIPRAP
136	R-4	GEOTEXTILES, RIPRAP
156	R-4	GEOTEXTILES, RIPRAP
211	R-4	GEOTEXTILES, RIPRAP
290	R-4	GEOTEXTILES, RIPRAP
54	R-4	GEOTEXTILES, RIPRAP
33	R-4	GEOTEXTILES, RIPRAP
11	R-4	GEOTEXTILES, RIPRAP

RIPRAP NO.	PIPE DIA D (IN)	RIPRAP		APRON		GEOTEXTILE	
		SIZE	THICK H (IN)	LENGTH L (FT)	INITIAL WIDTH W1 (FT)		TERMINAL WIDTH W2 (FT)
109	24	CLASS 1	18	10	6	10	CLASS C
123	24	CLASS 1	18	10	6	10	CLASS C
125	24	CLASS 1	18	10	6	10	CLASS C
1	48	R-4	21	16**	14	23	GEOTEXTILES, RIPRAP
501	48	R-4	21	16**	14	23	GEOTEXTILES, RIPRAP
129	24	R-4	21	8	6	12	GEOTEXTILES, RIPRAP
146	24	R-4	21	8	6	12	GEOTEXTILES, RIPRAP
175	24	R-5	30	8	6	12	GEOTEXTILES, RIPRAP
180	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
190	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
196	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
204	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
219	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
222	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
230	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
234	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
238	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
41	18*	R-4	21	6	10	14	GEOTEXTILES, RIPRAP
255	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
294	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
52	24	R-4	21	8	6	12	GEOTEXTILES, RIPRAP
51	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
301	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
110	42	R-6	26	14	19	21	GEOTEXTILES, RIPRAP
53	30	R-4	21	10	8	15	GEOTEXTILES, RIPRAP
3	30*	R-4	21	10	16	23	GEOTEXTILES, RIPRAP
5	18*	R-4	21	6	10	14	GEOTEXTILES, RIPRAP
7	18*	R-4	21	6	10	14	GEOTEXTILES, RIPRAP
79	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
12	12	R-4	21	4	3	6	GEOTEXTILES, RIPRAP
15	24*	R-4	21	8	18	24	GEOTEXTILES, RIPRAP
100	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
24	24*	R-5	30	8	18	24	GEOTEXTILES, RIPRAP
60	36	R-4	21	12	9	17	GEOTEXTILES, RIPRAP
61	42*	R-5	30	14	22	32	GEOTEXTILES, RIPRAP
37	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
38	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
49	18*	R-4	21	6	10	14	GEOTEXTILES, RIPRAP
48	60	R-4	21	18	28	26	GEOTEXTILES, RIPRAP
9	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
14	24	R-4	21	8	6	12	GEOTEXTILES, RIPRAP
81	18	R-4	21	6	5	9	GEOTEXTILES, RIPRAP
70	18*	R-4	21	6	10	14	GEOTEXTILES, RIPRAP

\* MULTIPLE BARREL PIPE LOCATION. PLACE APRON AT CENTERLINE OF OUTFALL.

\*\*AVERAGE APRON LENGTH

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_009.DGN



NOTES:  
1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET DT-13.

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_010.DGN

ADDENDUMS / REVISIONS	

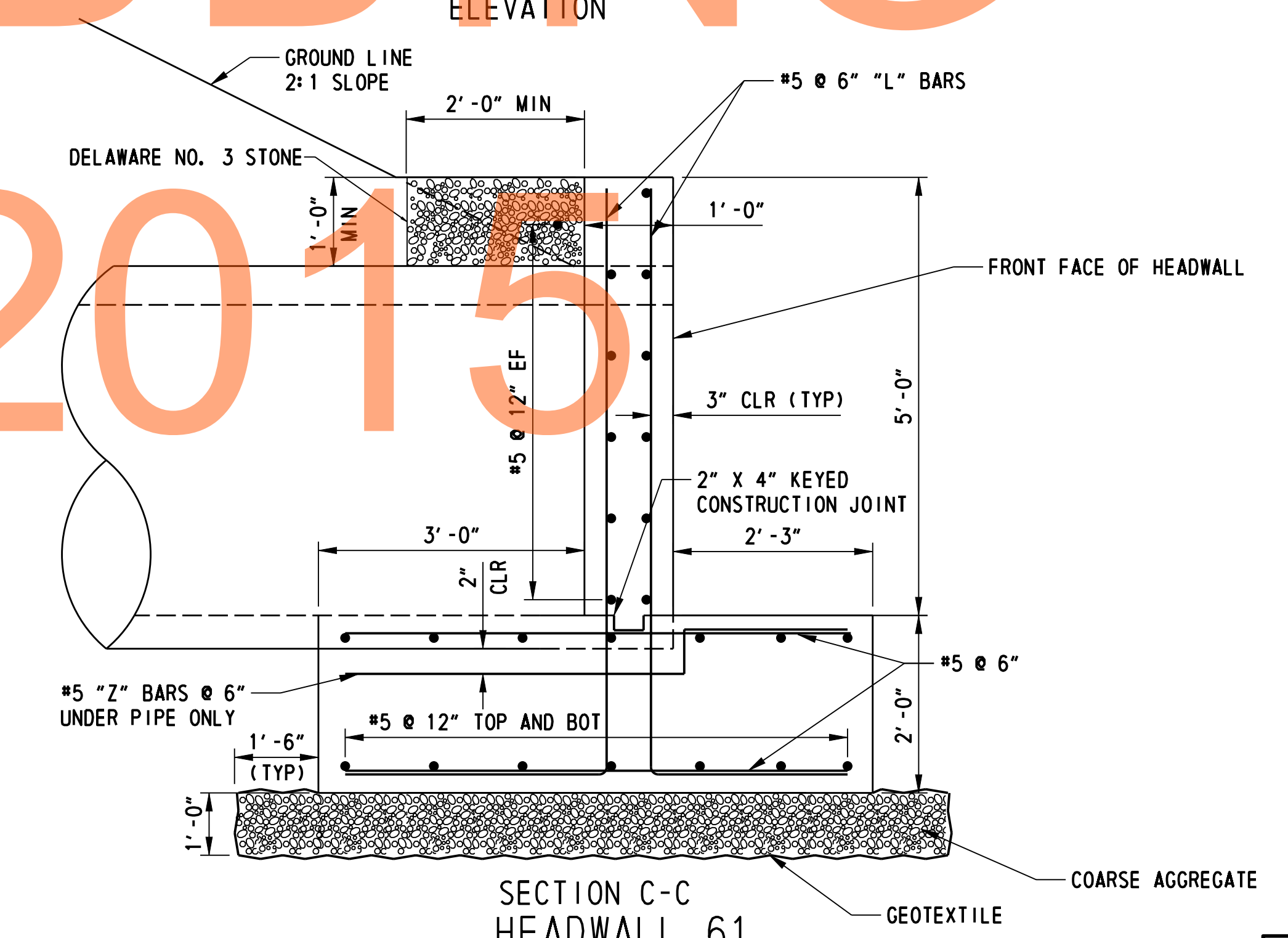
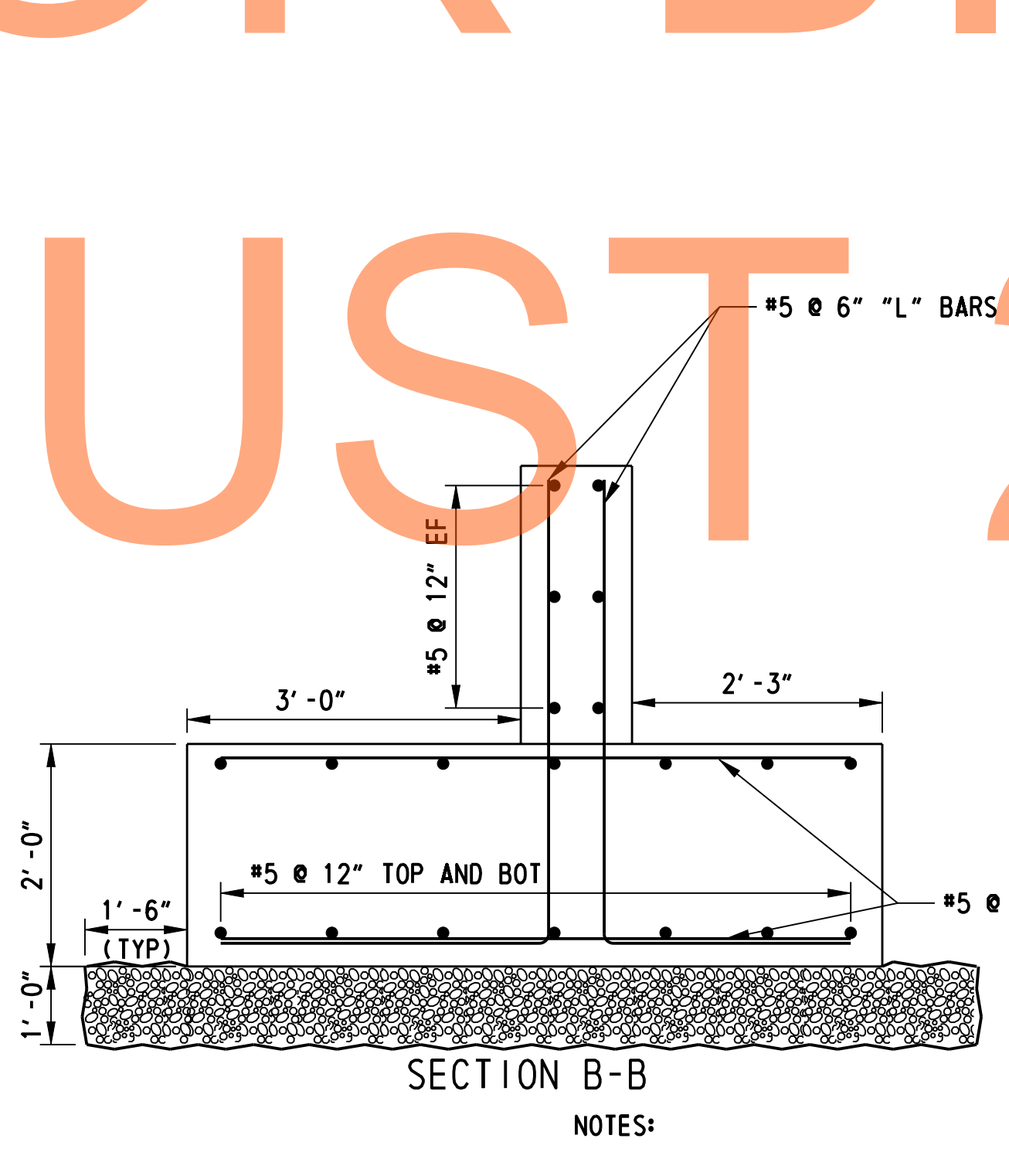
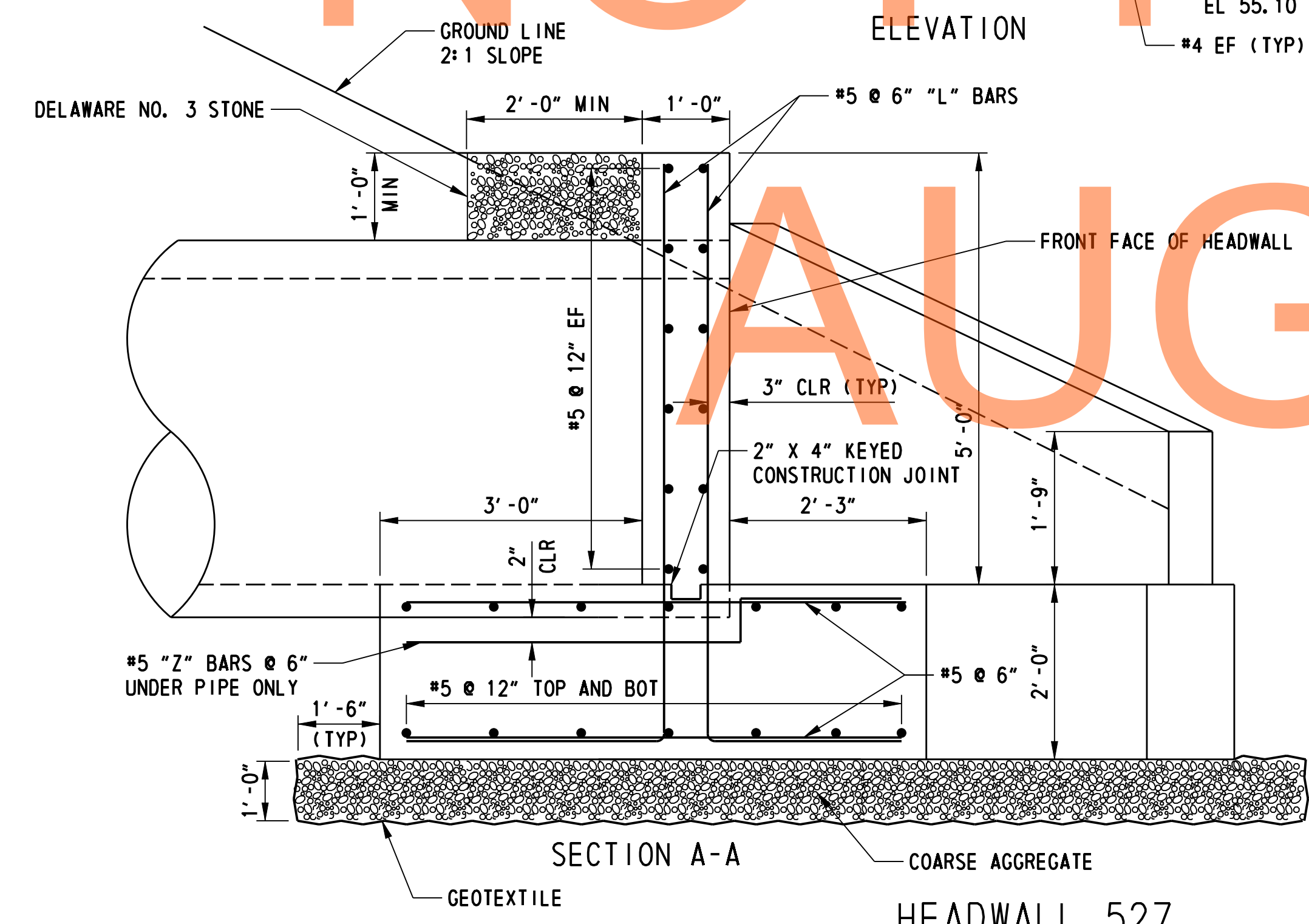
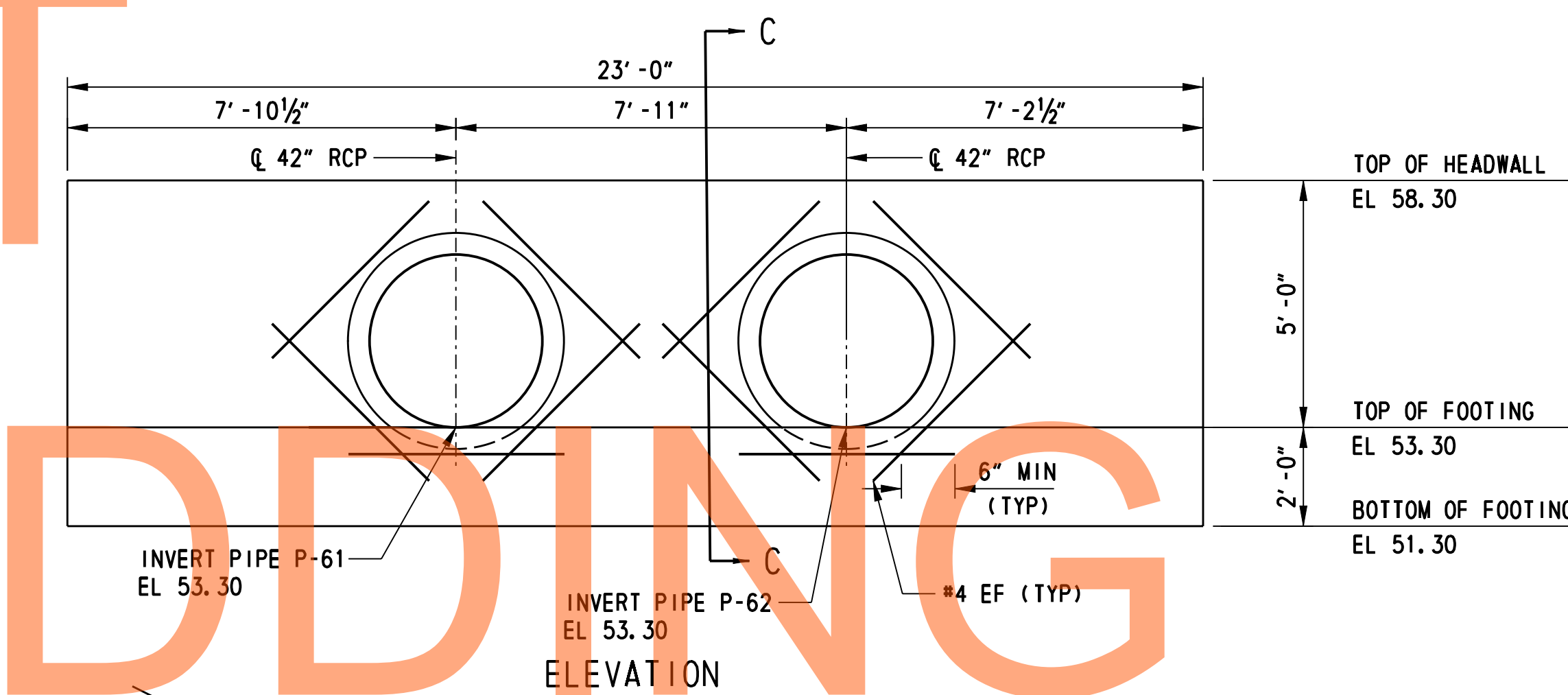
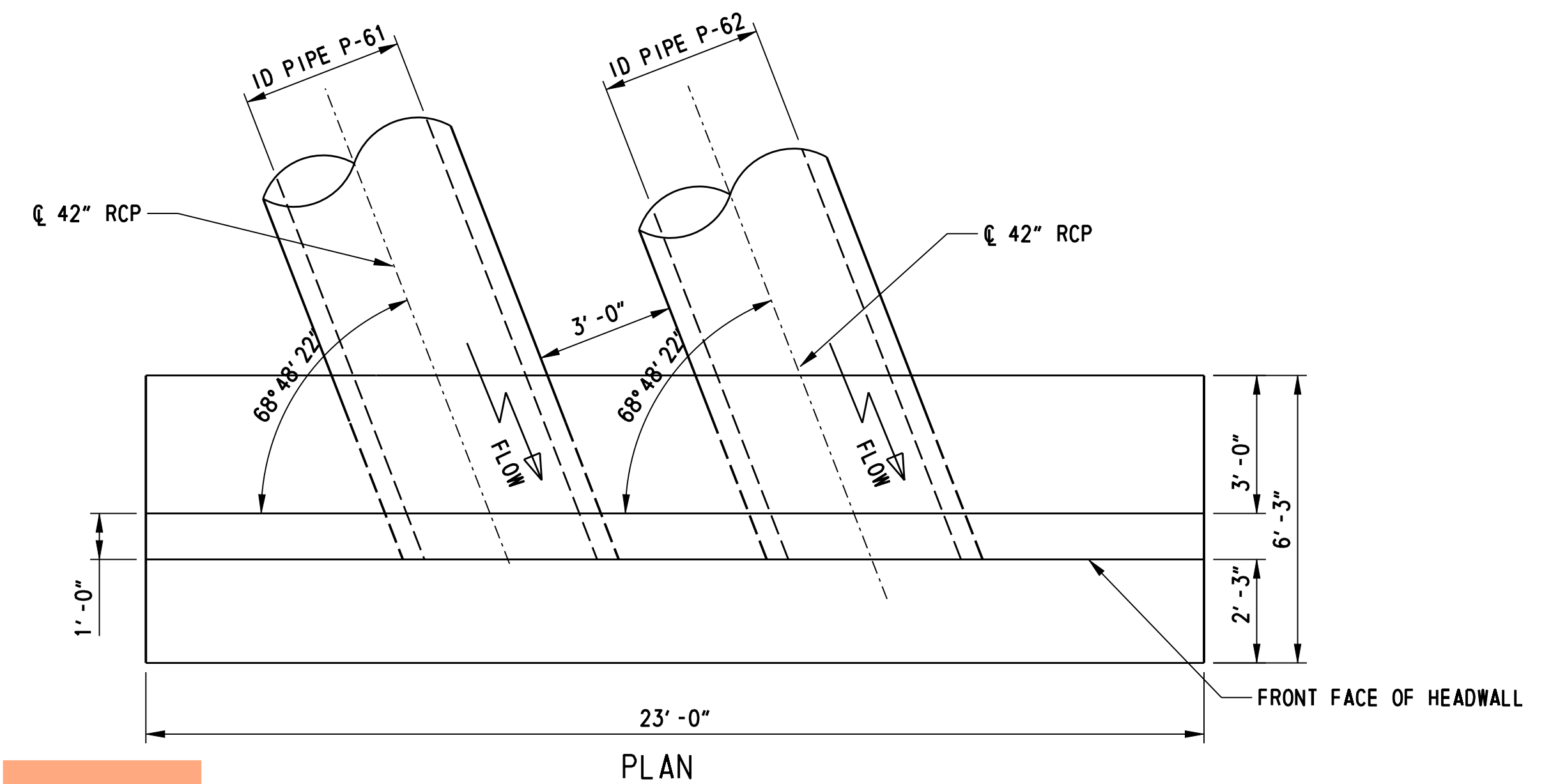
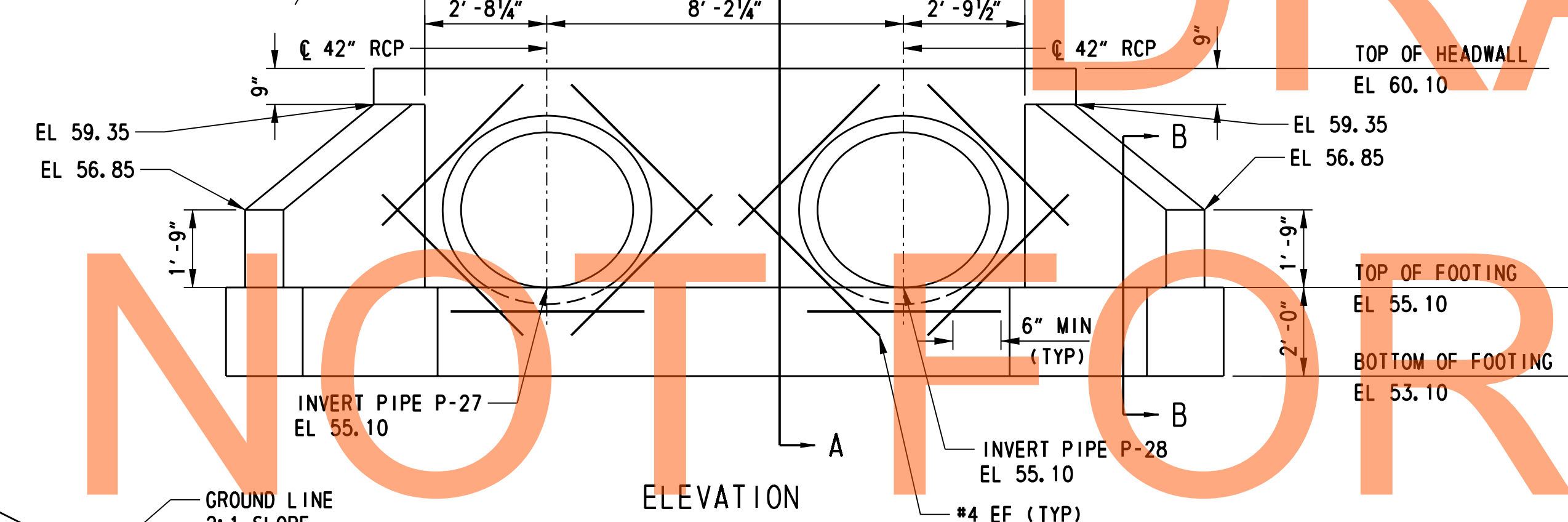
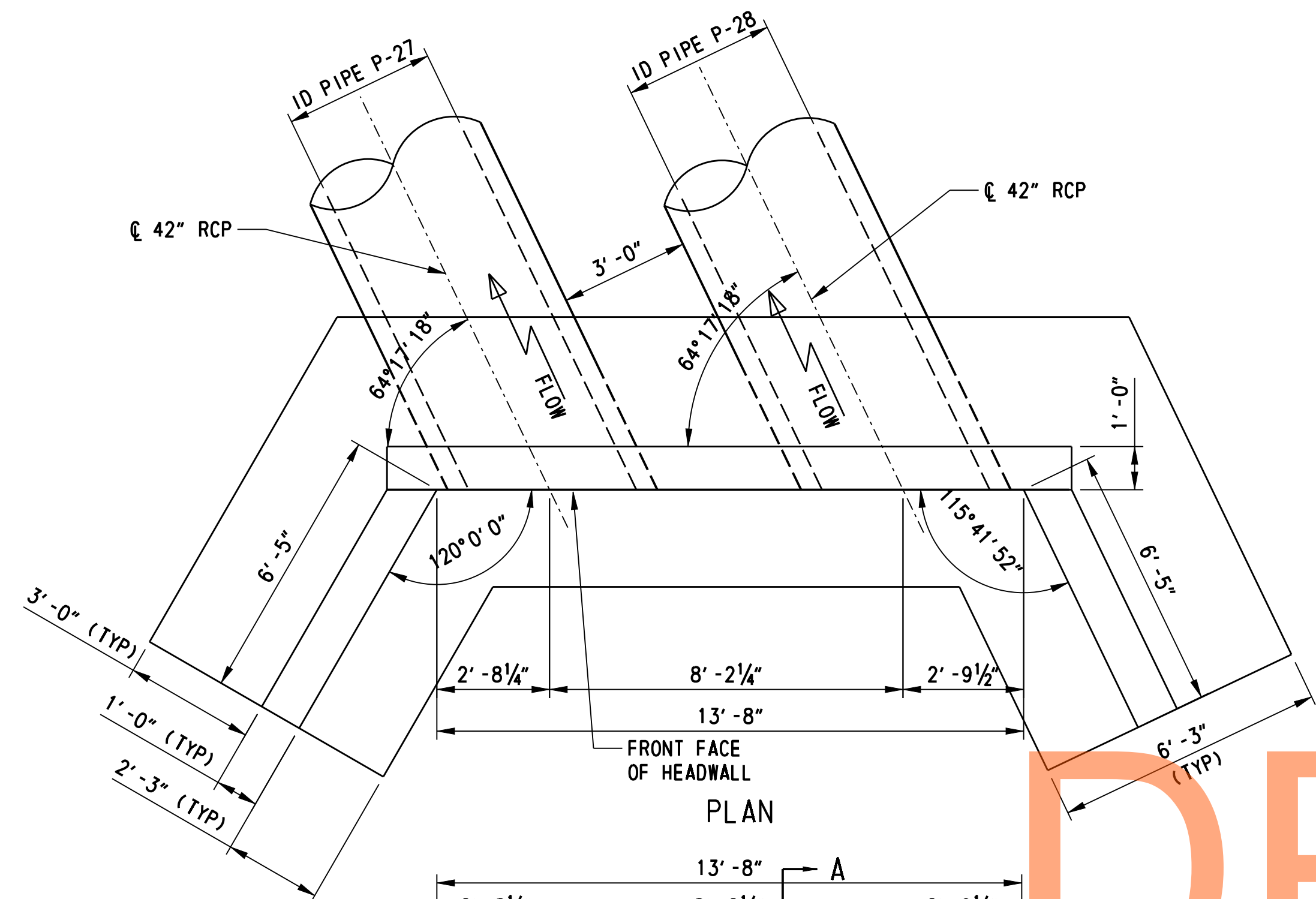
**NOT TO SCALE**

**US 301**  
**MARYLAND STATE LINE**  
**TO LEVELS ROAD**

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SPM
	CHECKED BY: DJP

**CONSTRUCTION DETAILS**

<b>DT-10</b>
SHEET NO. 223
TOTAL SHTS. 850



NOTES:  
1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET DT-13.

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_011.DGN

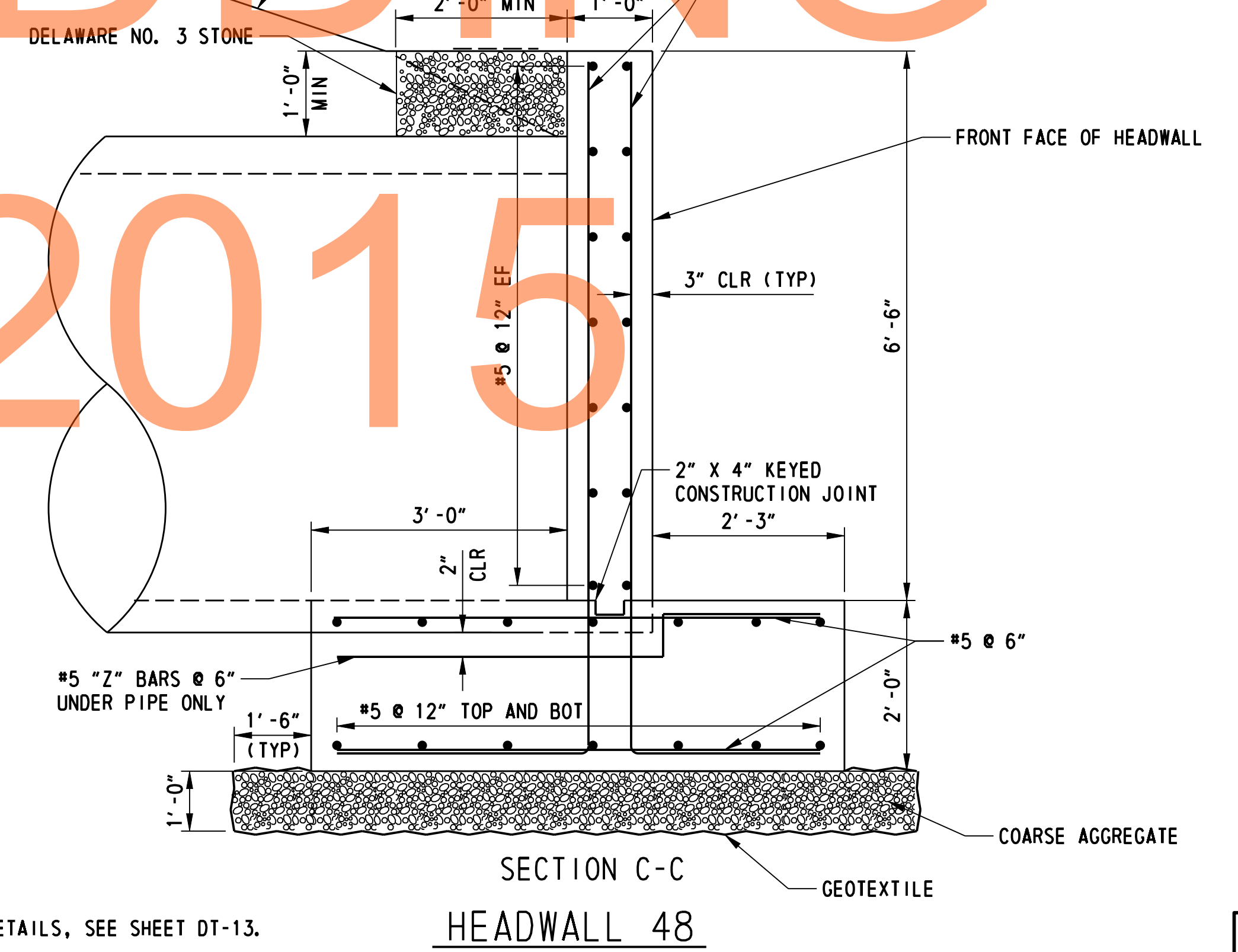
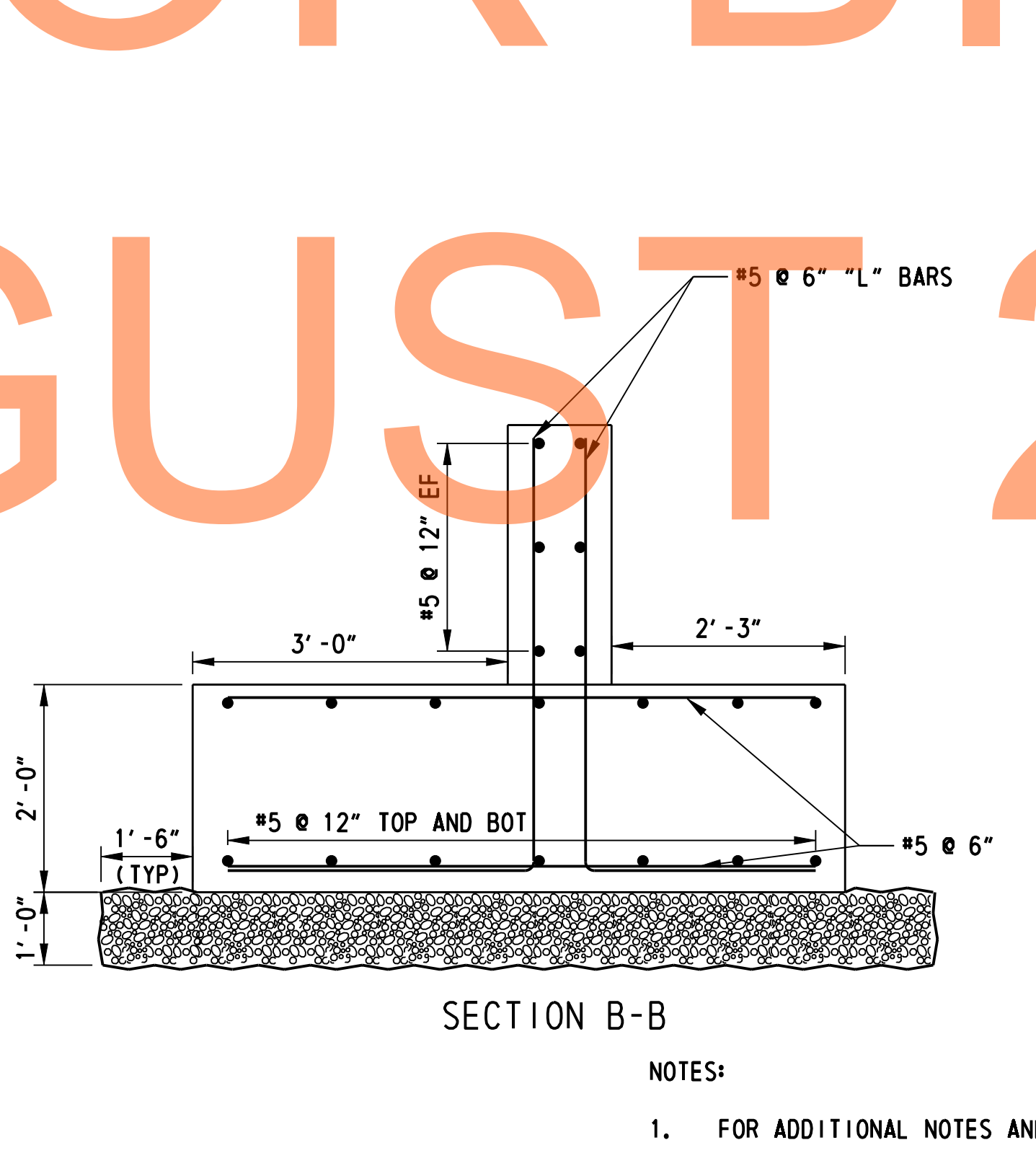
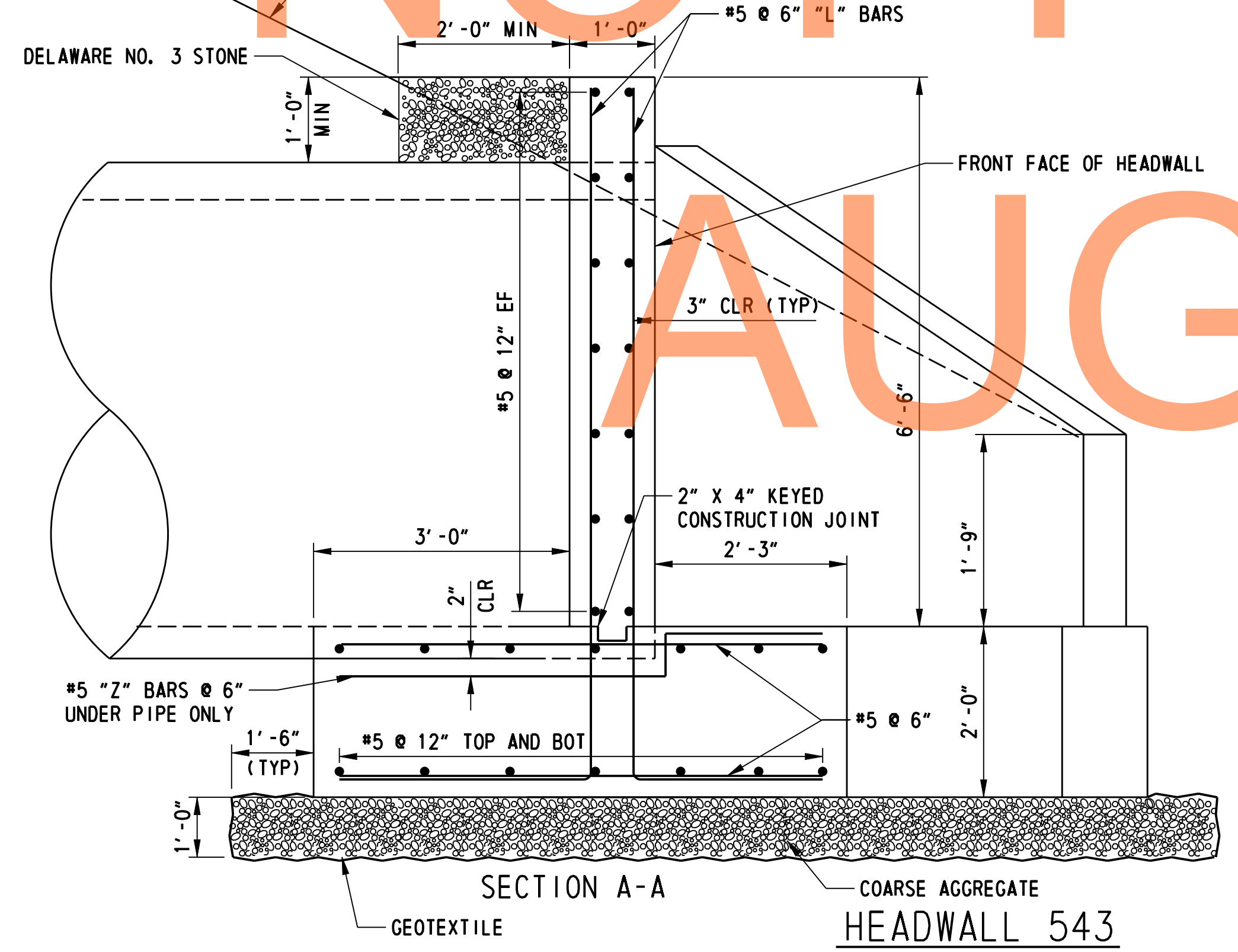
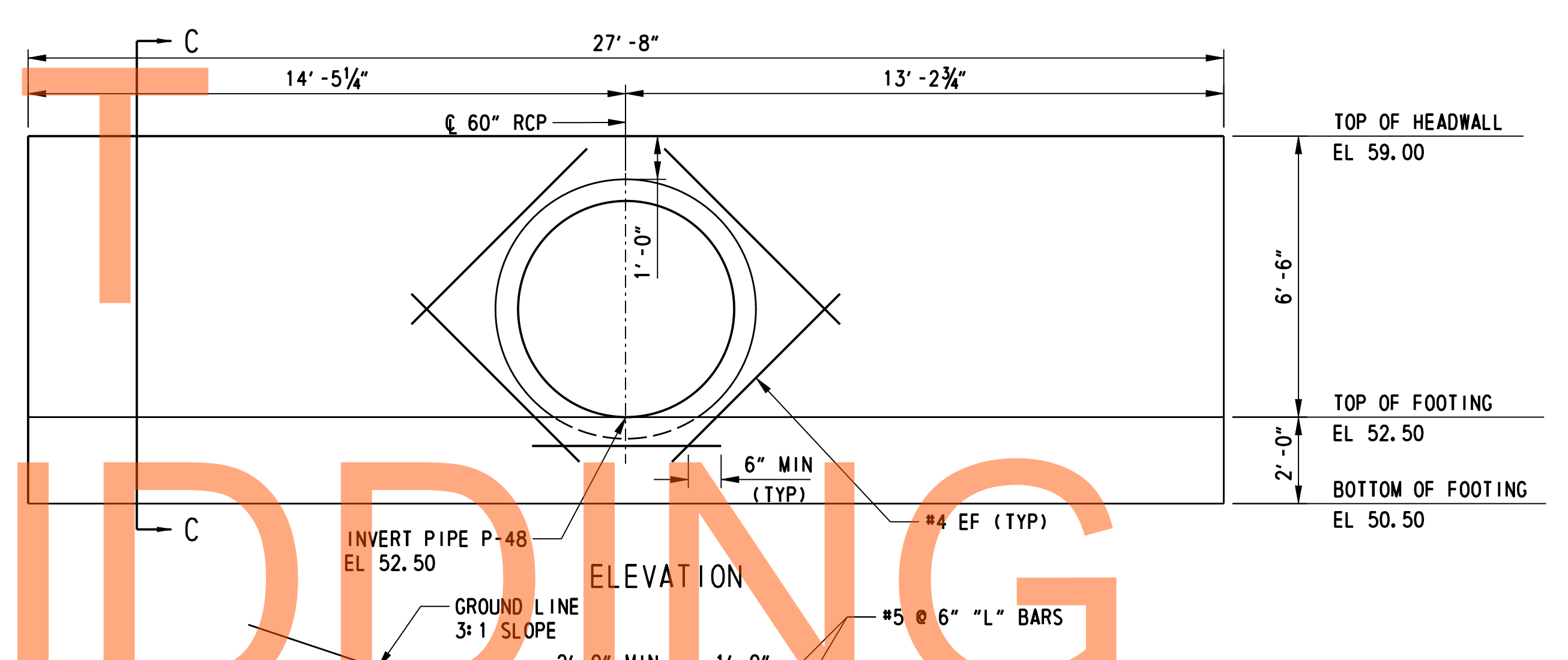
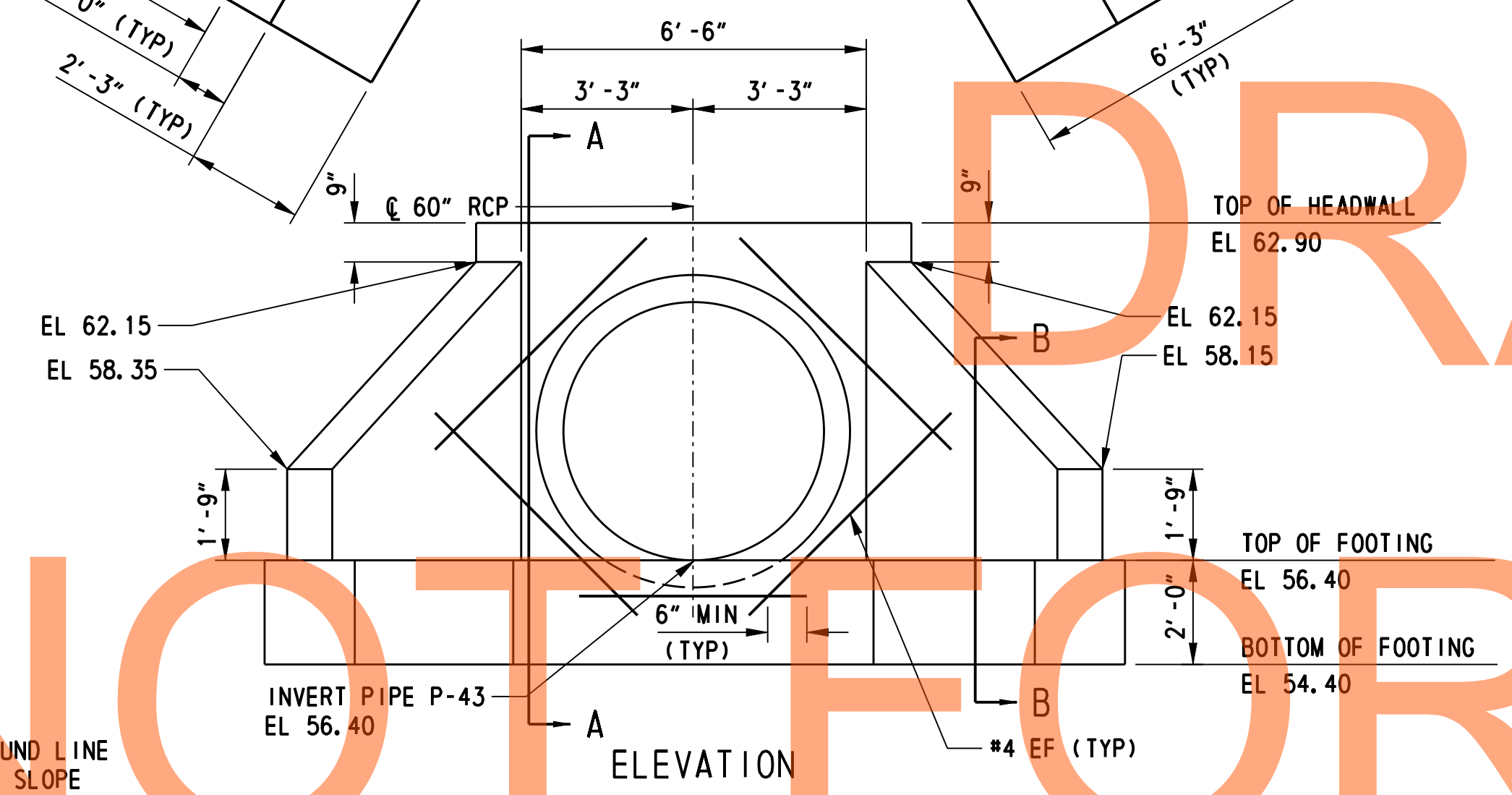
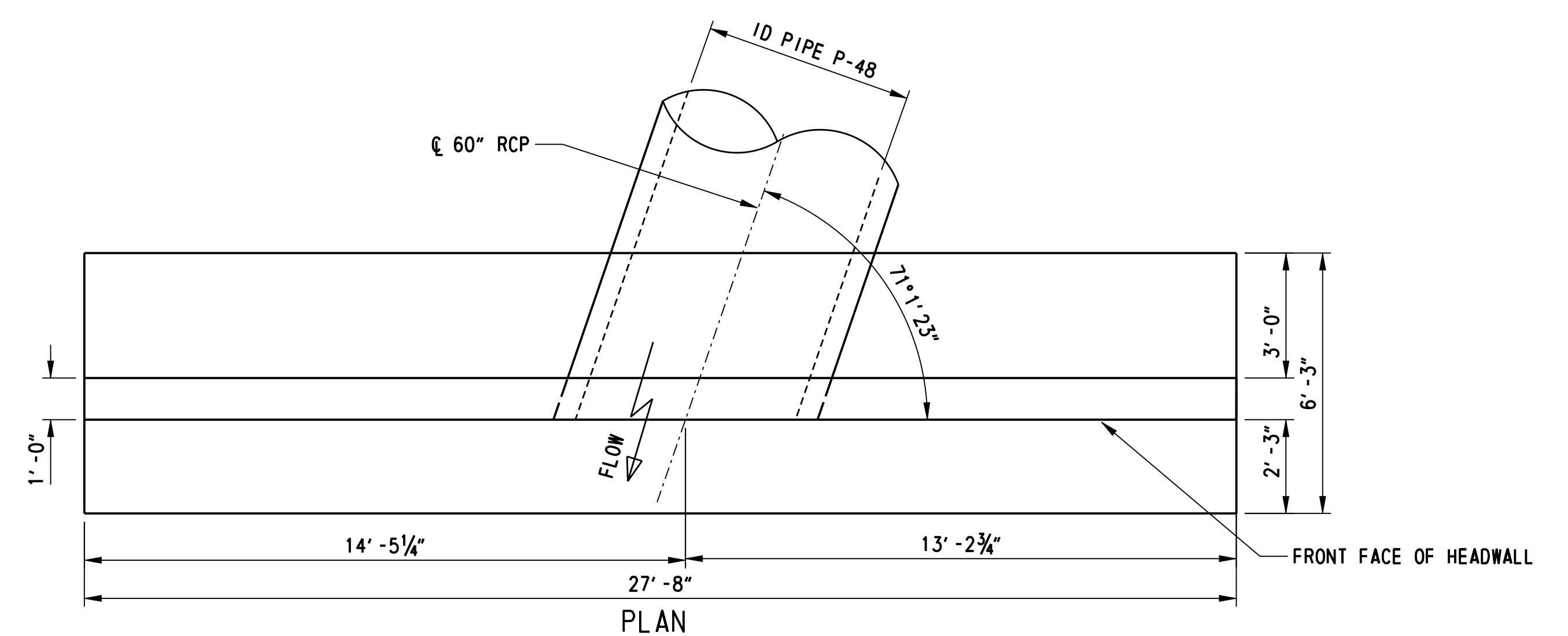
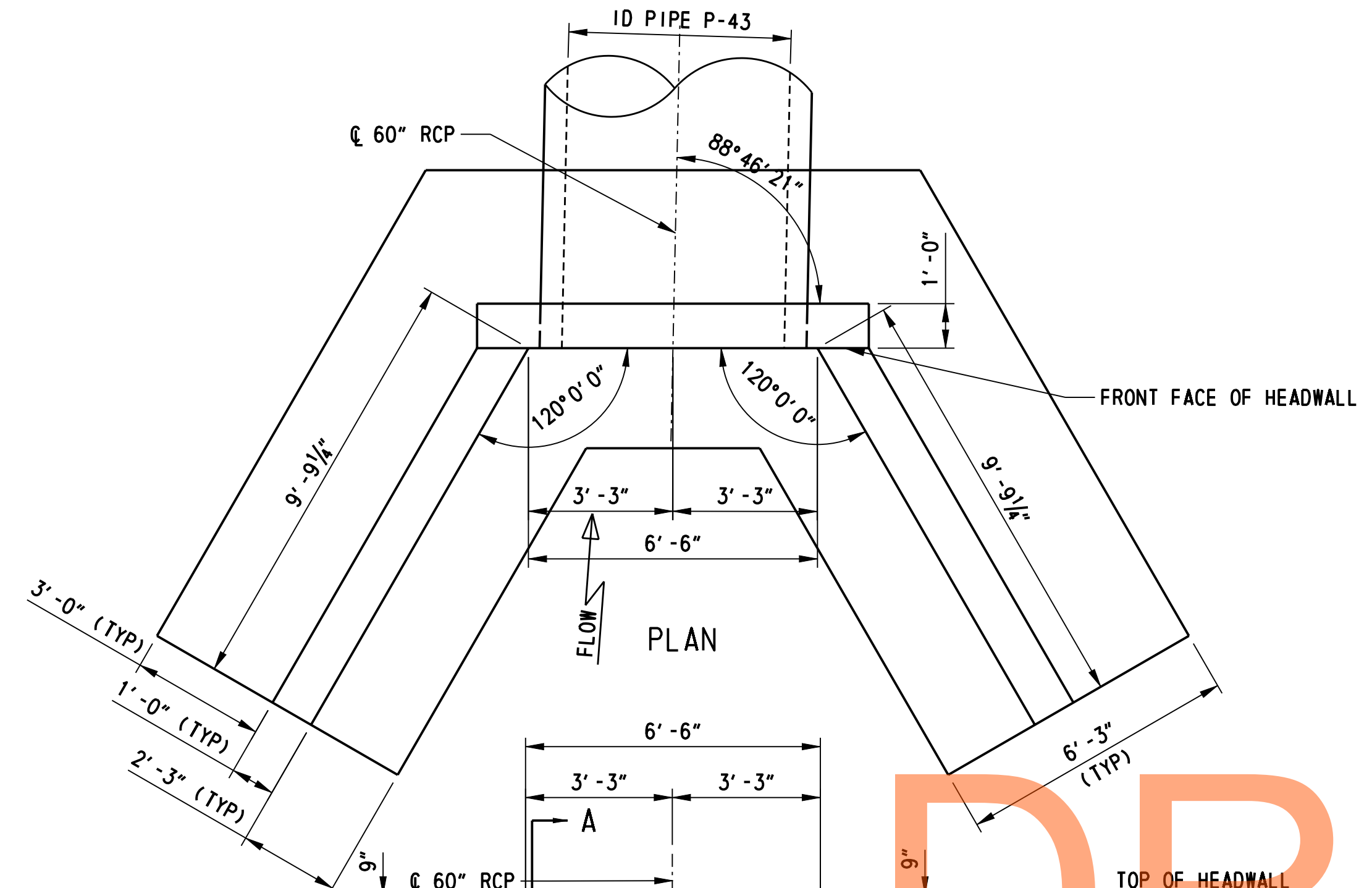
ADDENDUMS / REVISIONS	

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SPM
	CHECKED BY: DJP

DRAFT

NOT FOR BIDDING

AUGUST 2015



NOTES:

1. FOR ADDITIONAL NOTES AND DETAILS, SEE SHEET DT-13.

J:\2008 PROJECTS\E3\34801\700CADD\750AET\ROADWAY\DT\_301AET\_012.DGN

ADDENDUMS / REVISIONS	

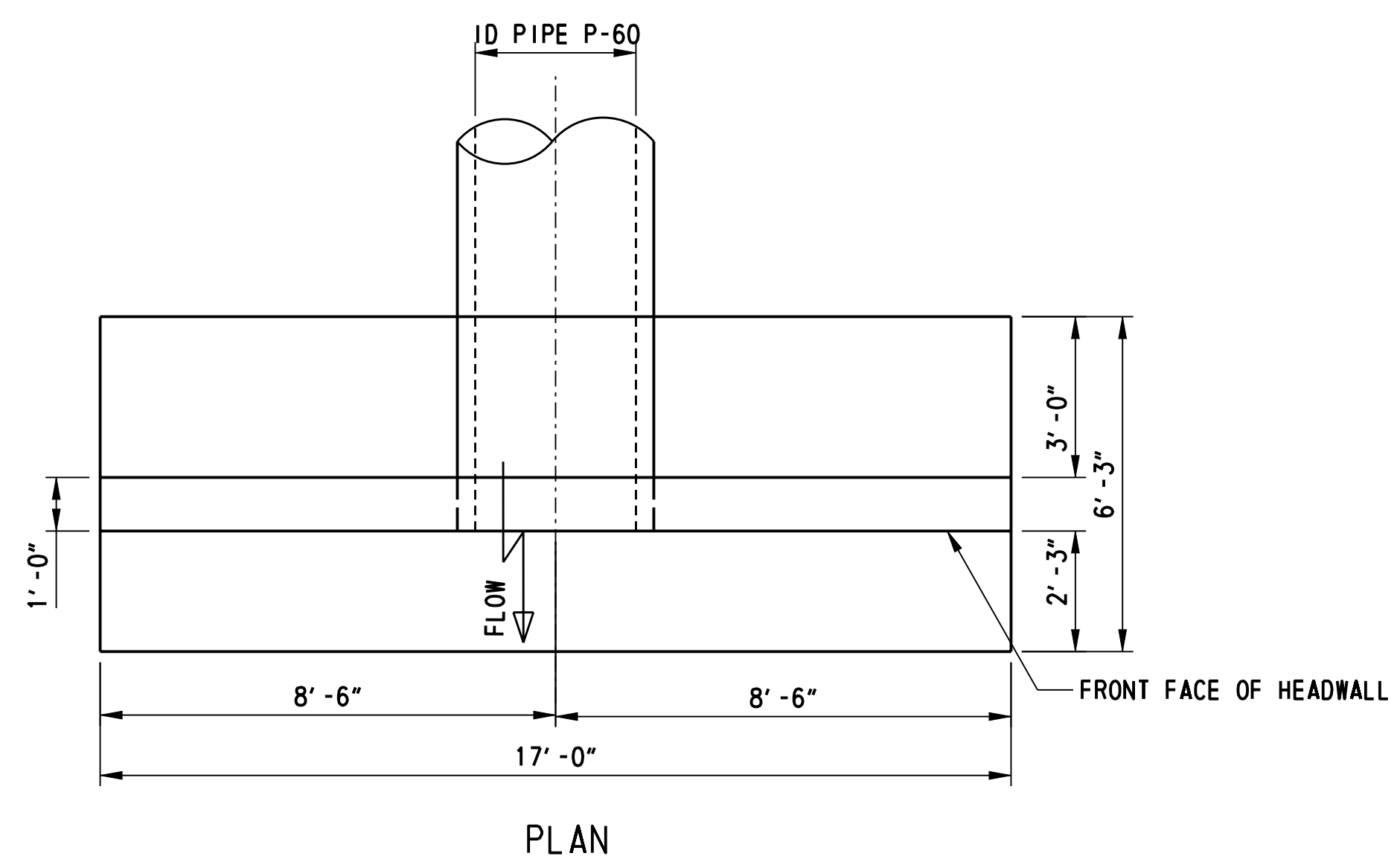
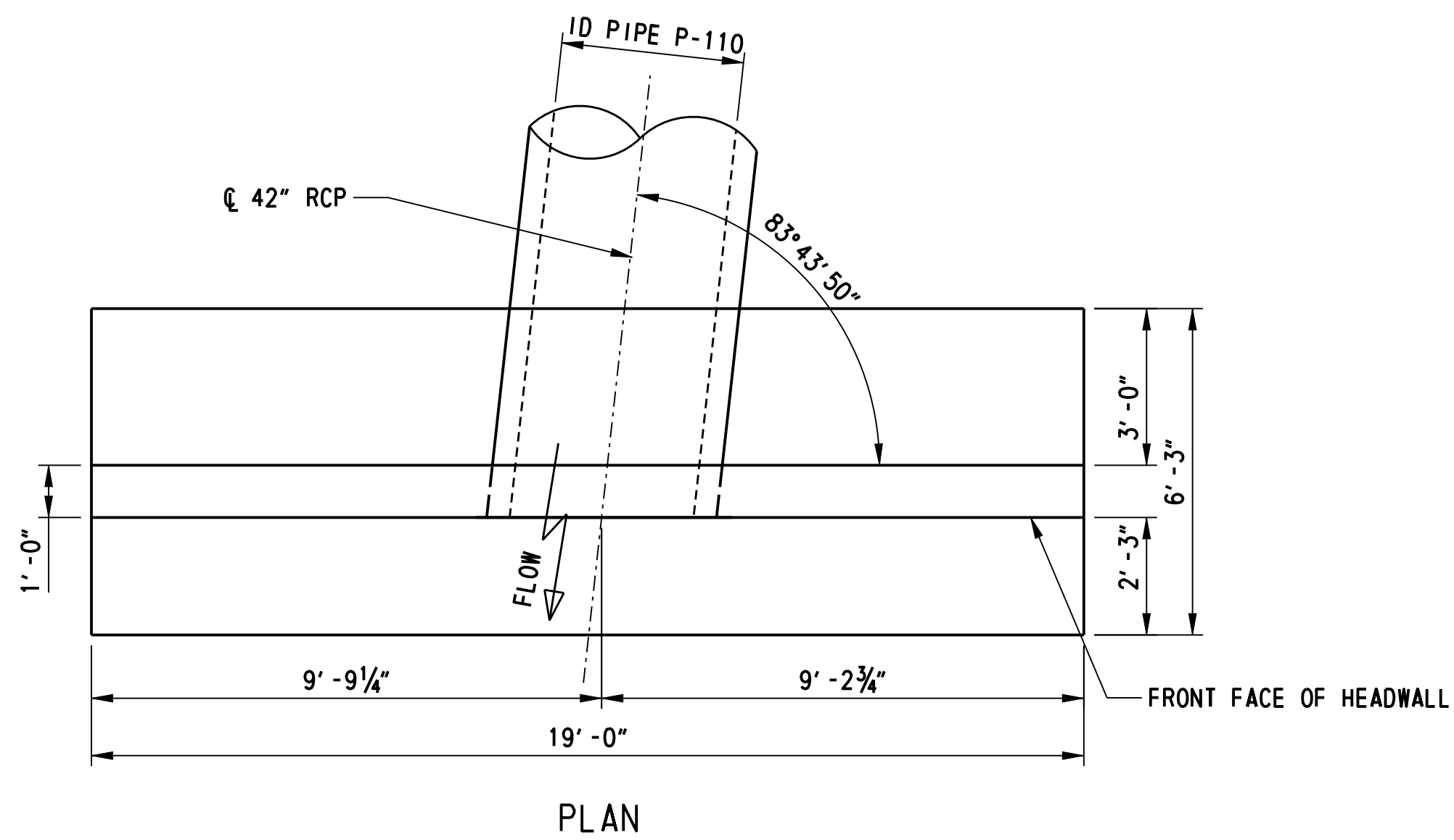
NOT TO SCALE

US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

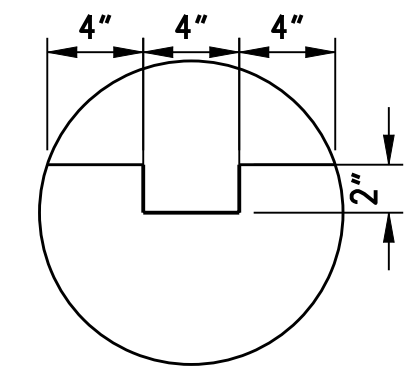
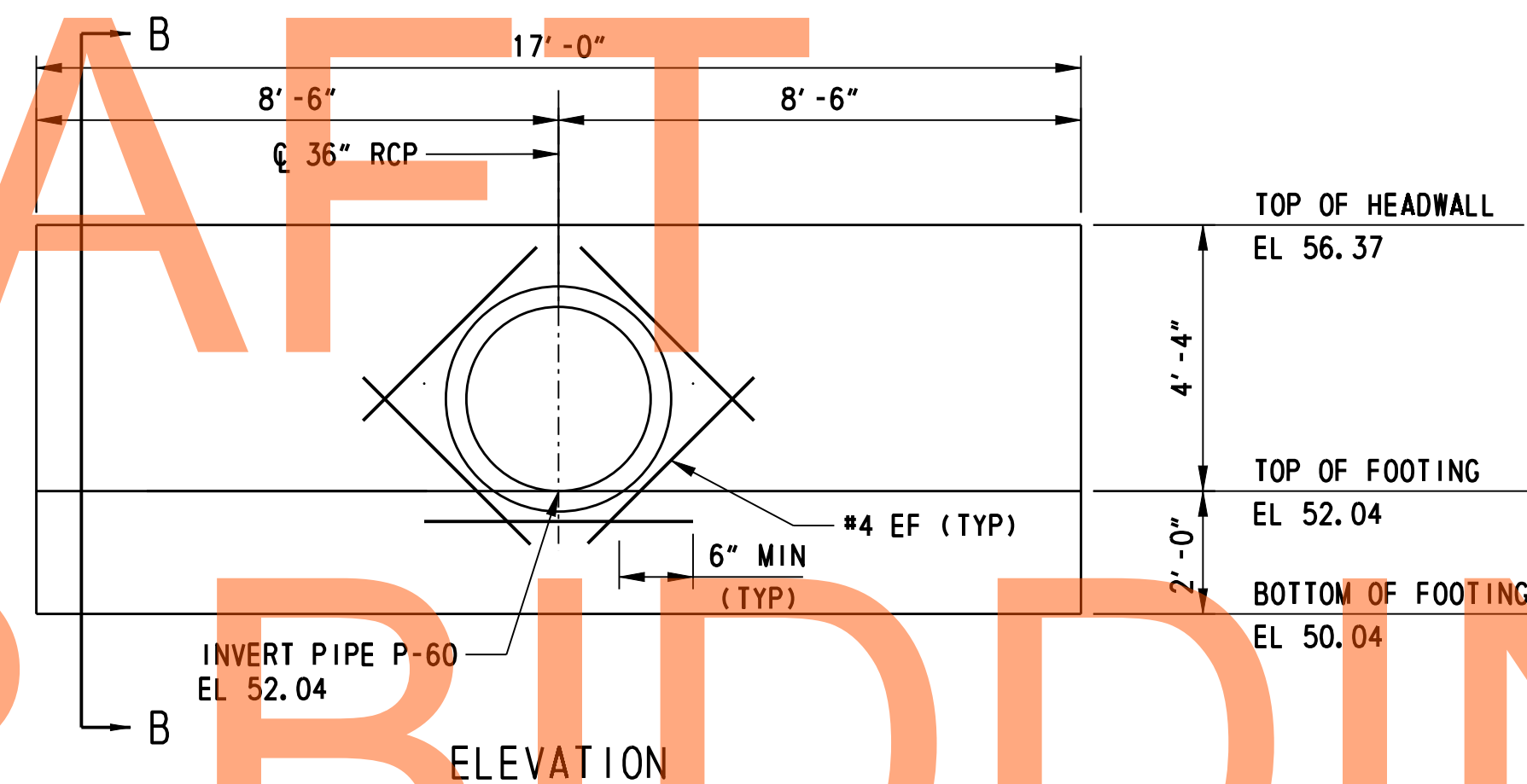
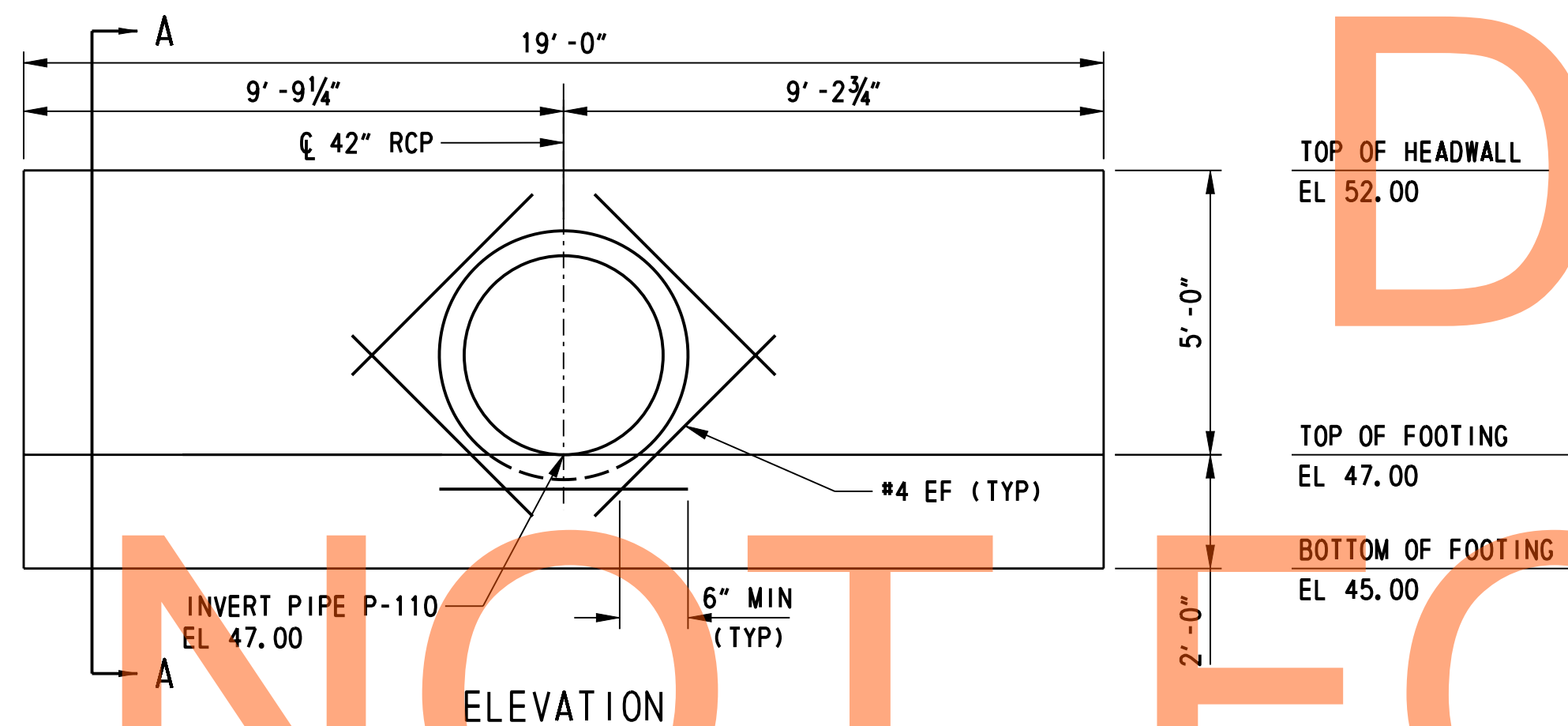
CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SPM
	CHECKED BY: DJP

**CONSTRUCTION DETAILS**

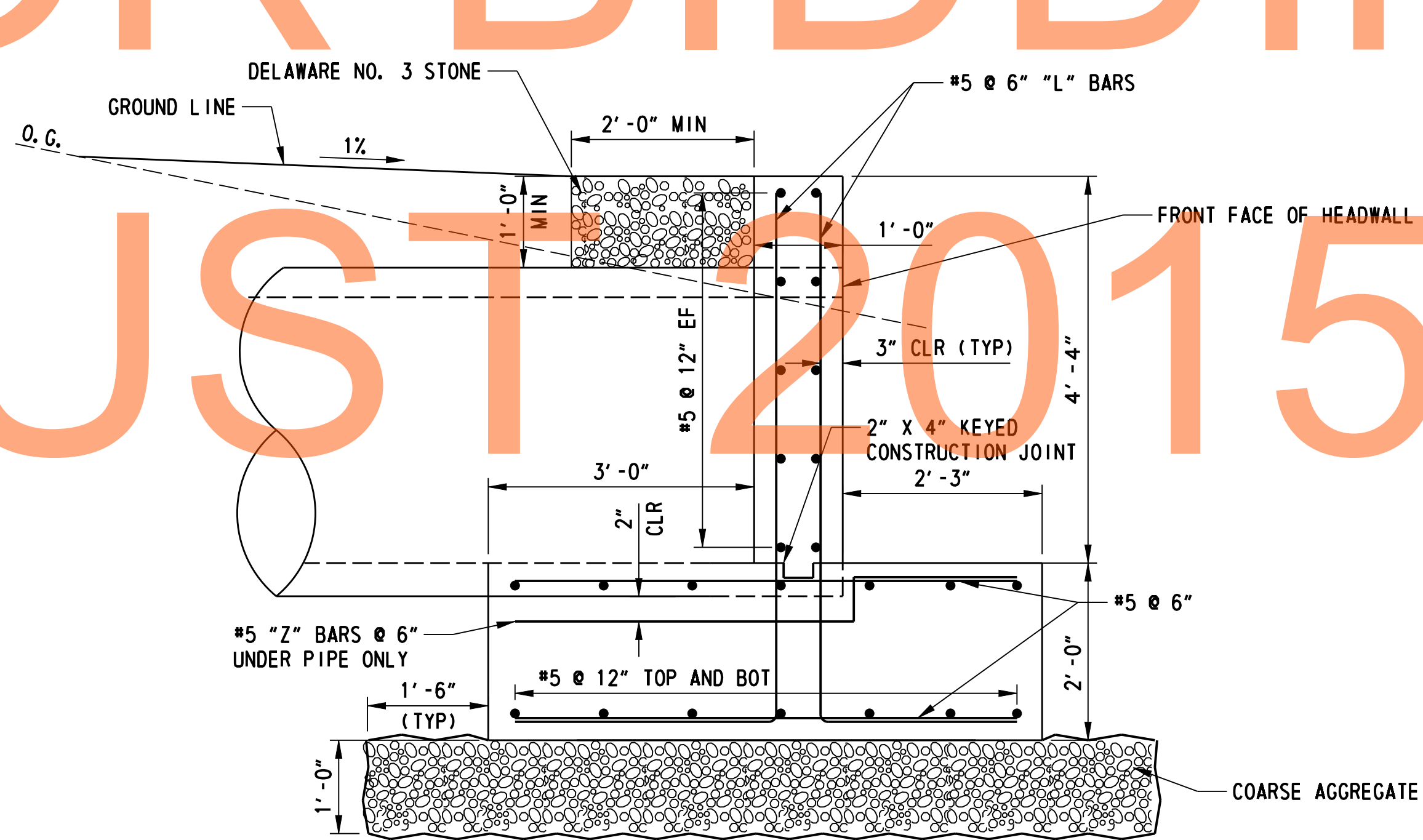
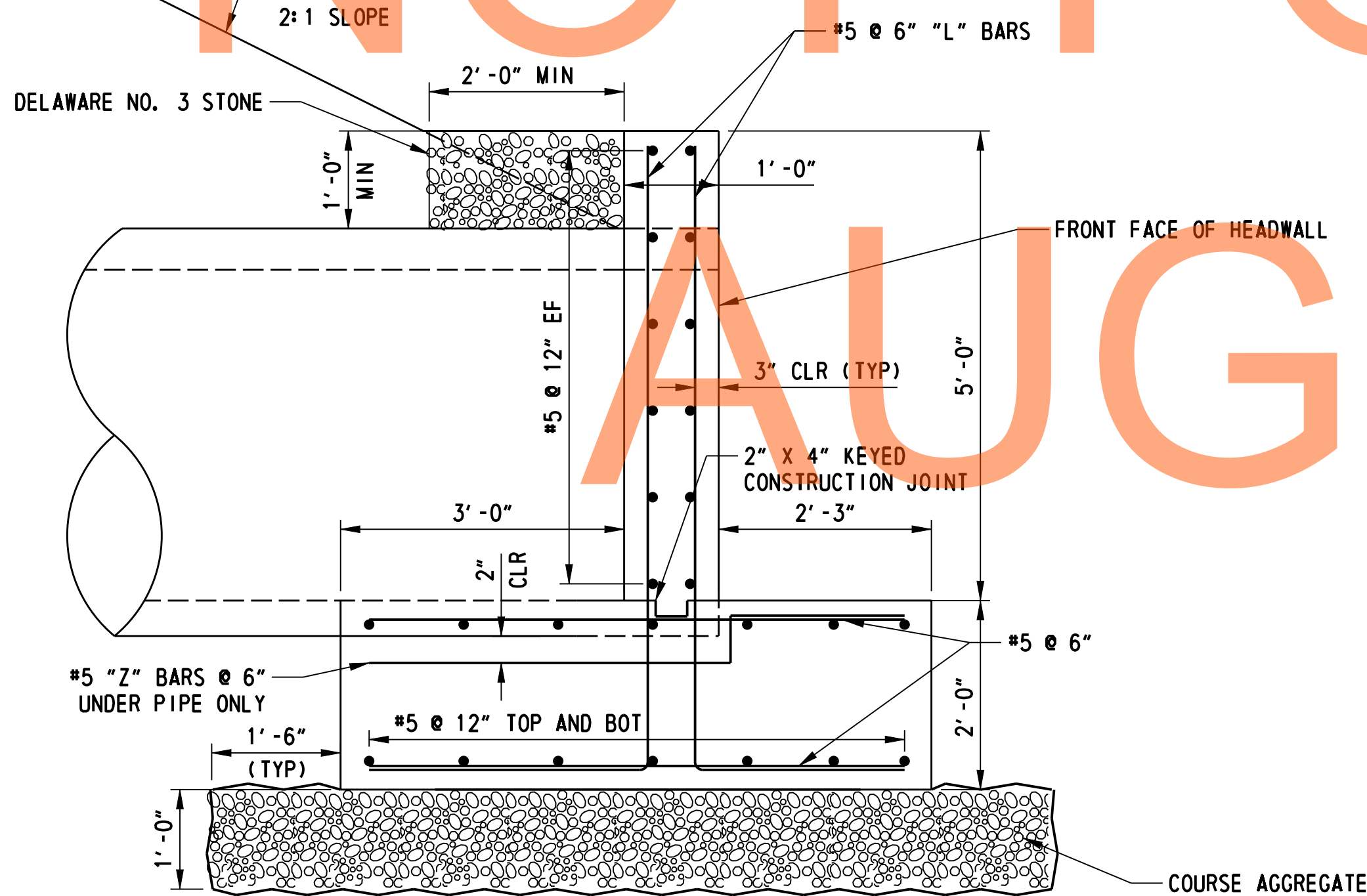
<b>DT-12</b>
SHEET NO. 225
TOTAL SHTS. 850



- NOTES:
1. THESE DETAILS PRESENT GENERAL DESIGN REQUIREMENTS. ACTUAL DIMENSIONS AND REINFORCEMENT DETAILS ARE TO BE BASED ON DESIGN, SHOP DRAWING AND DESIGN CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF DELAWARE, SHALL BE SUBMITTED FOR APPROVAL FOR ALL NON-STANDARD DRAINAGE STRUCTURES. SEE SPECIAL PROVISIONS.
  2. ALL HEADWALLS SHALL BE DESIGNED IN ACCORDANCE WITH LRFD STANDARDS.
  3. THE EXCAVATION SHOULD BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
  4. NON-STANDARD HEADWALLS TO BE PAID UNDER ITEM "617518 - DRAINAGE HEADWALLS, MODIFIED."
  5. COARSE AGGREGATE TO BE IN ACCORDANCE WITH SECTION 608 OF THE DELDOT SPECIFICATIONS. GEOTEXTILE IS TO BE IN ACCORDANCE WITH SECTION 827.06 OF THE DELDOT SPECIFICATIONS. COARSE AGGREGATE, DELAWARE NO. 3 STONE AND GEOTEXTILE ARE INCIDENTAL TO "617518 - DRAINAGE HEADWALLS, MODIFIED."



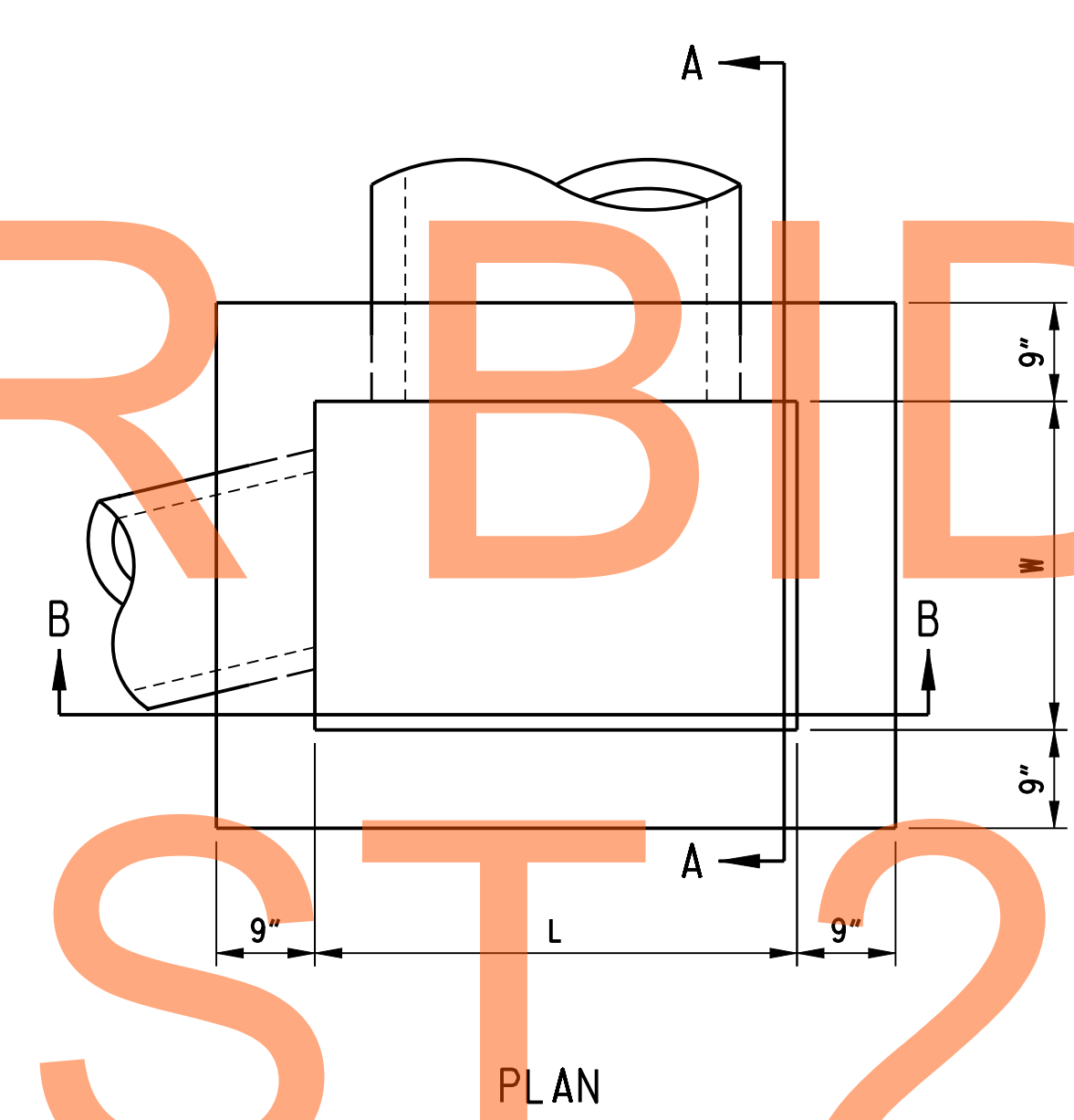
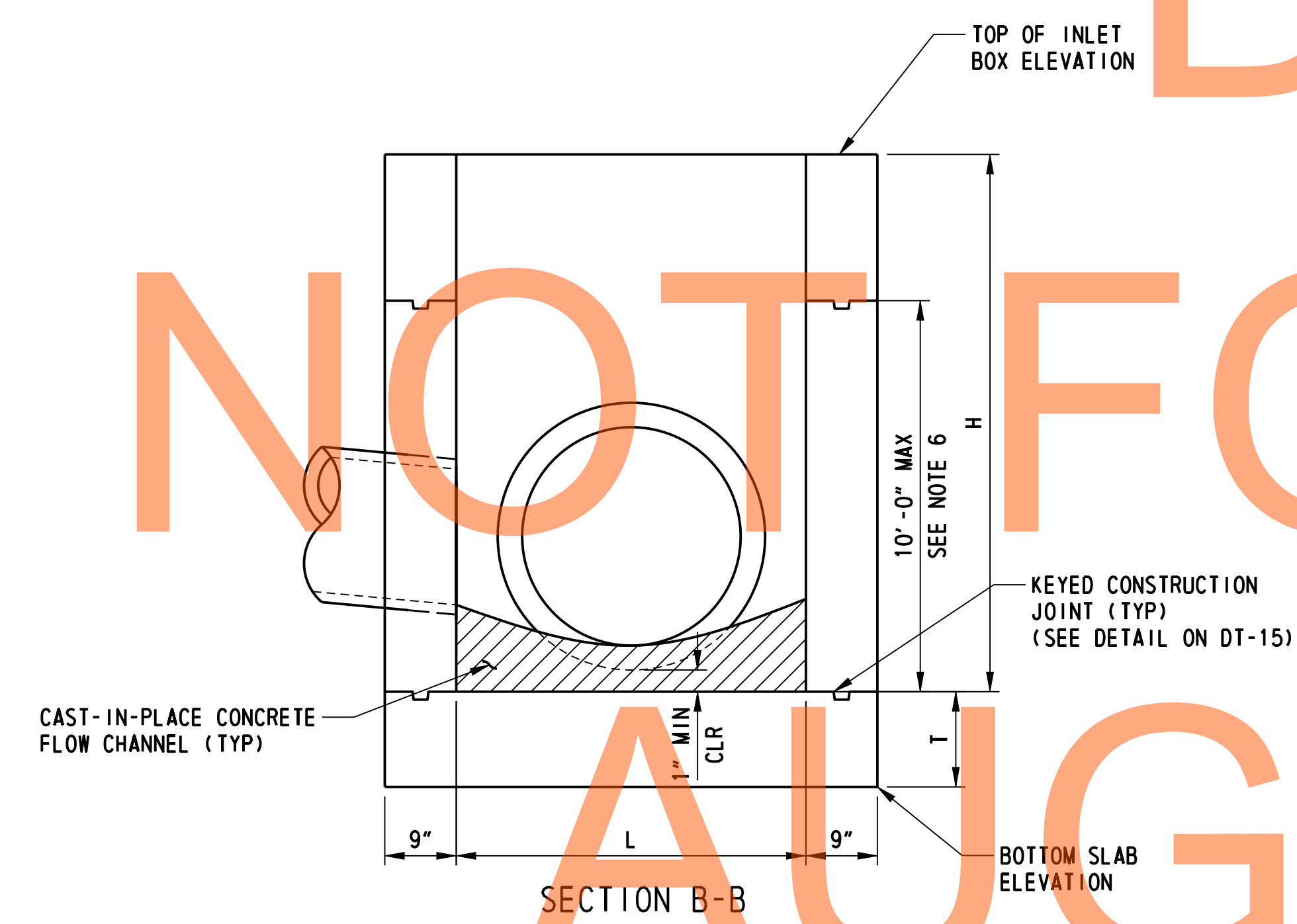
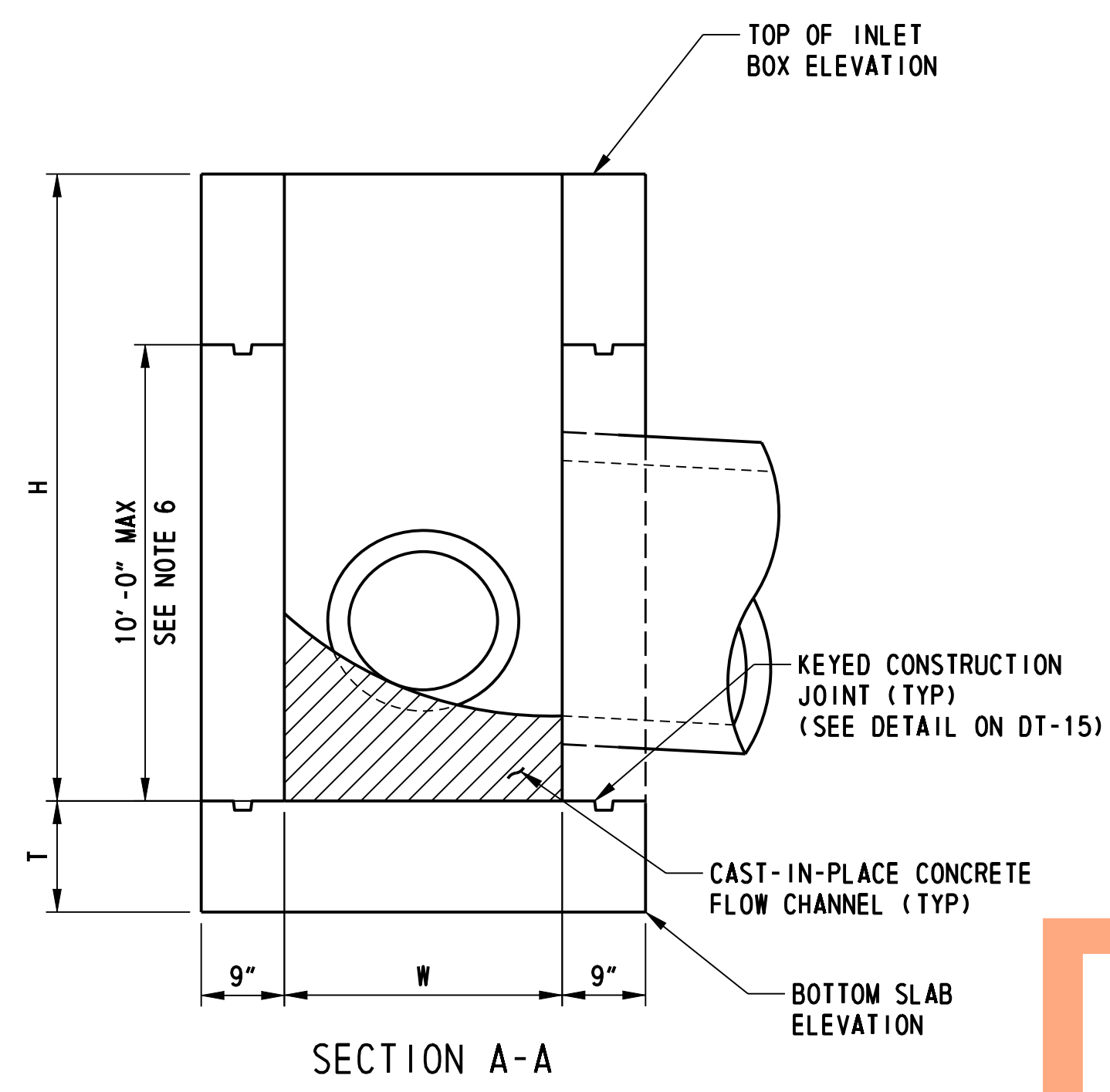
CONSTRUCTION KEY DETAIL



SECTION A-A  
HEADWALL 110

SECTION B-B  
HEADWALL 60

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_013.DGN



DRAFT

NOT FOR BIDDING

AUGUST 2015

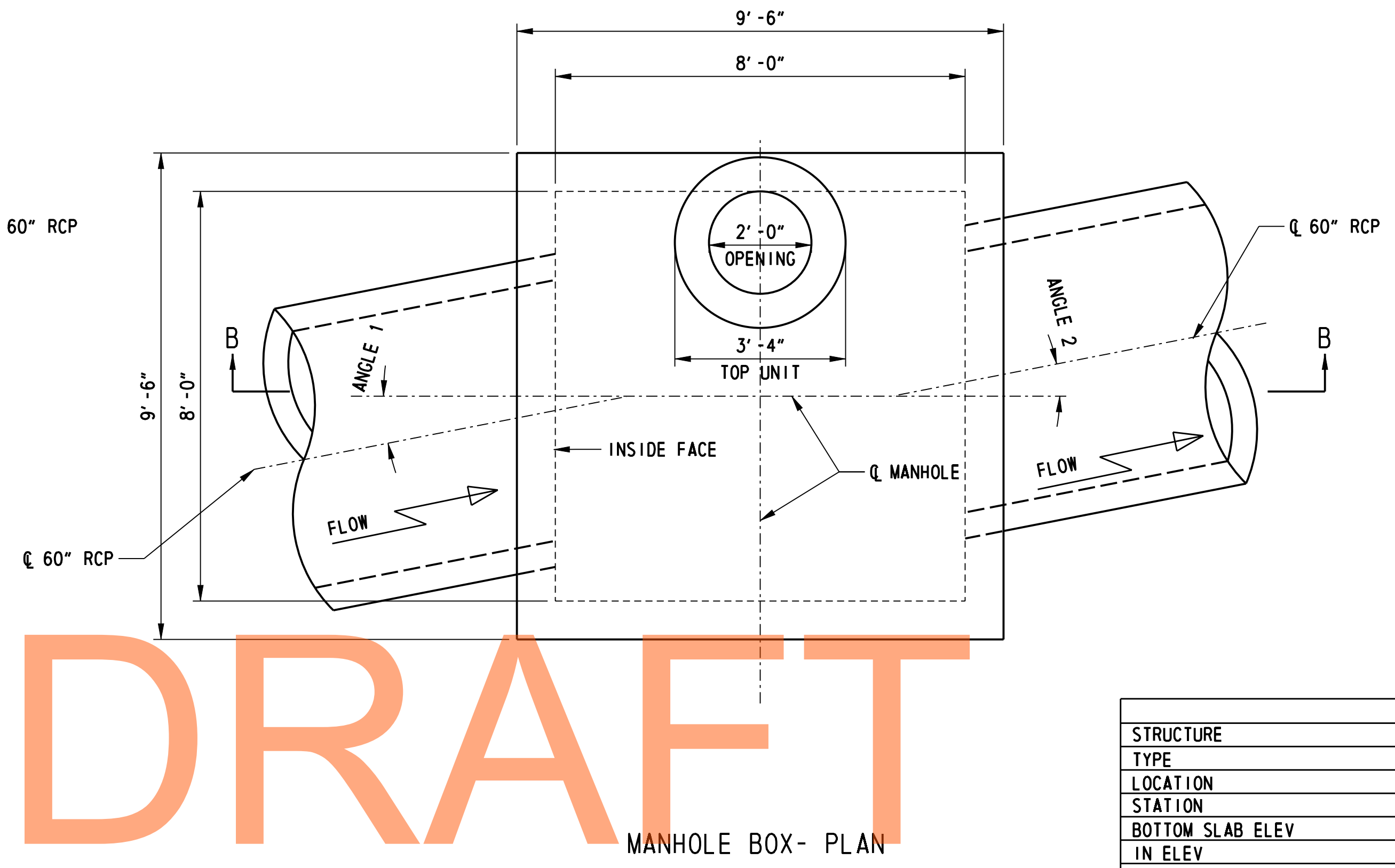
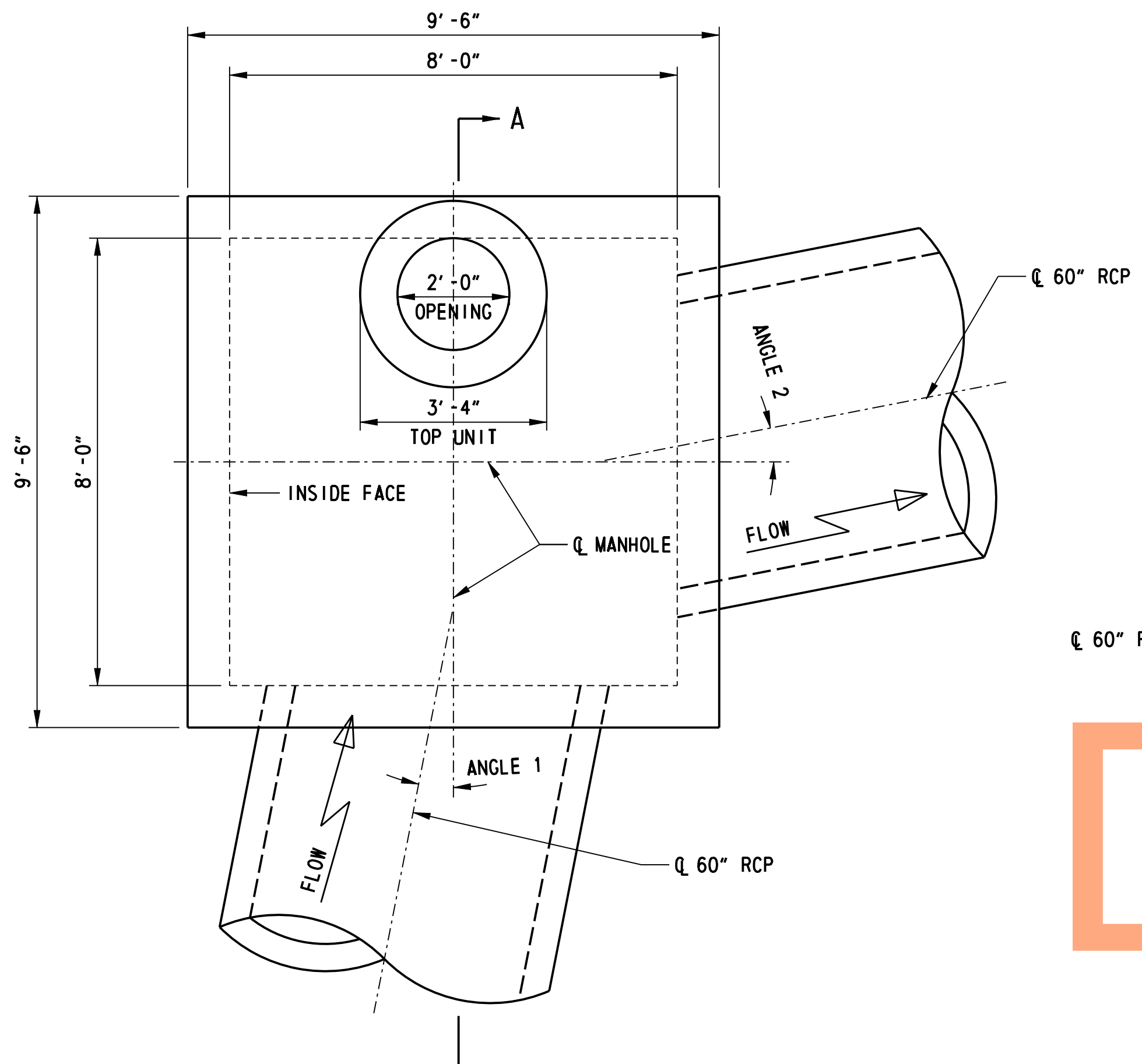
DRAINAGE INLET

- NOTES:
1. THESE DETAILS PRESENT GENERAL DESIGN REQUIREMENTS. ACTUAL DIMENSIONS AND REINFORCEMENT DETAILS ARE TO BE BASED ON DESIGN SHOP DRAWING AND DESIGN CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF DELAWARE, SHALL BE SUBMITTED FOR APPROVAL FOR ALL NON-STANDARD DRAINAGE STRUCTURES. SEE SPECIAL PROVISIONS.
  2. ALL DRAINAGE INLETS SHALL BE DESIGNED IN ACCORDANCE WITH LRFD STANDARDS.
  3. THE EXCAVATION SHOULD BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
  4. DRAINAGE INLET COVER SLAB SHALL FOLLOW DELDOT STANDARD CONSTRUCTION DETAILS D-5 AND MATCH OUTSIDE TO OUTSIDE DIMENSIONS OF DRAINAGE STRUCTURE. TYPE 3 JOINT DETAIL SHALL BE MODIFIED TO MATCH DRAINAGE STRUCTURE WALL THICKNESS.
  5. OTHER DRAINAGE INLET STRUCTURE COMPONENTS NOT SHOWN SHALL FOLLOW DELDOT STANDARD CONSTRUCTION DETAILS D-4 AND D-5.
  6. INLET BOX SECTIONS SHALL NOT EXCEED 10'-0" IN HEIGHT. PROVIDE A KEYED CONSTRUCTION JOINT BETWEEN INLET BOX SECTIONS. SEE KEYED CONSTRUCTION JOINT DETAIL ON SHEET DT-15.
  7. NON-STANDARD DRAINAGE INLETS TO BE PAID UNDER ITEM "708658 - DRAINAGE INLETS, MODIFIED."

MODIFIED DRAINAGE INLET STRUCTURES								
STRUCTURE	L (IN)	W (IN)	TG ELEV	TOP INLET BOX ELEV *	INVERT OUT ELEV	BOTTOM SLAB ELEV *	H * (FT)	T (IN)
DI-14	48	30	88.16	86.91	70.05	69.01	17.15	9
DI-294	72	24	76.21	74.96	59.55	58.43	15.70	10
DI-301	72	24	72.30	71.05	54.05	52.93	17.29	10
DI-110	66	66	65.00	63.83	47.27	45.98	17.02	10
DI-302	72	72	65.47	64.30	47.54	46.25	17.22	10
DI-303	66	66	65.83	64.66	48.20	46.95	16.88	10
DI-321	48	48	65.20	64.03	52.25	51.17	12.11	9
DI-322	48	48	70.97	69.80	54.10	53.06	15.99	9
DI-323	48	48	70.94	69.77	53.31	52.23	16.79	9
DI-325	48	48	69.17	67.92	54.52	53.48	13.69	9
DI-326	48	48	68.68	67.43	55.10	54.06	12.62	9
DI-327	48	30	66.79	65.54	55.39	54.35	10.44	9

\* BASED ON ASSUMED INLET TOP THICKNESS. CONTRACTOR TO VERIFY BASED ON ACTUAL INLET TOP THICKNESS.

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_30AET\_014.DGN

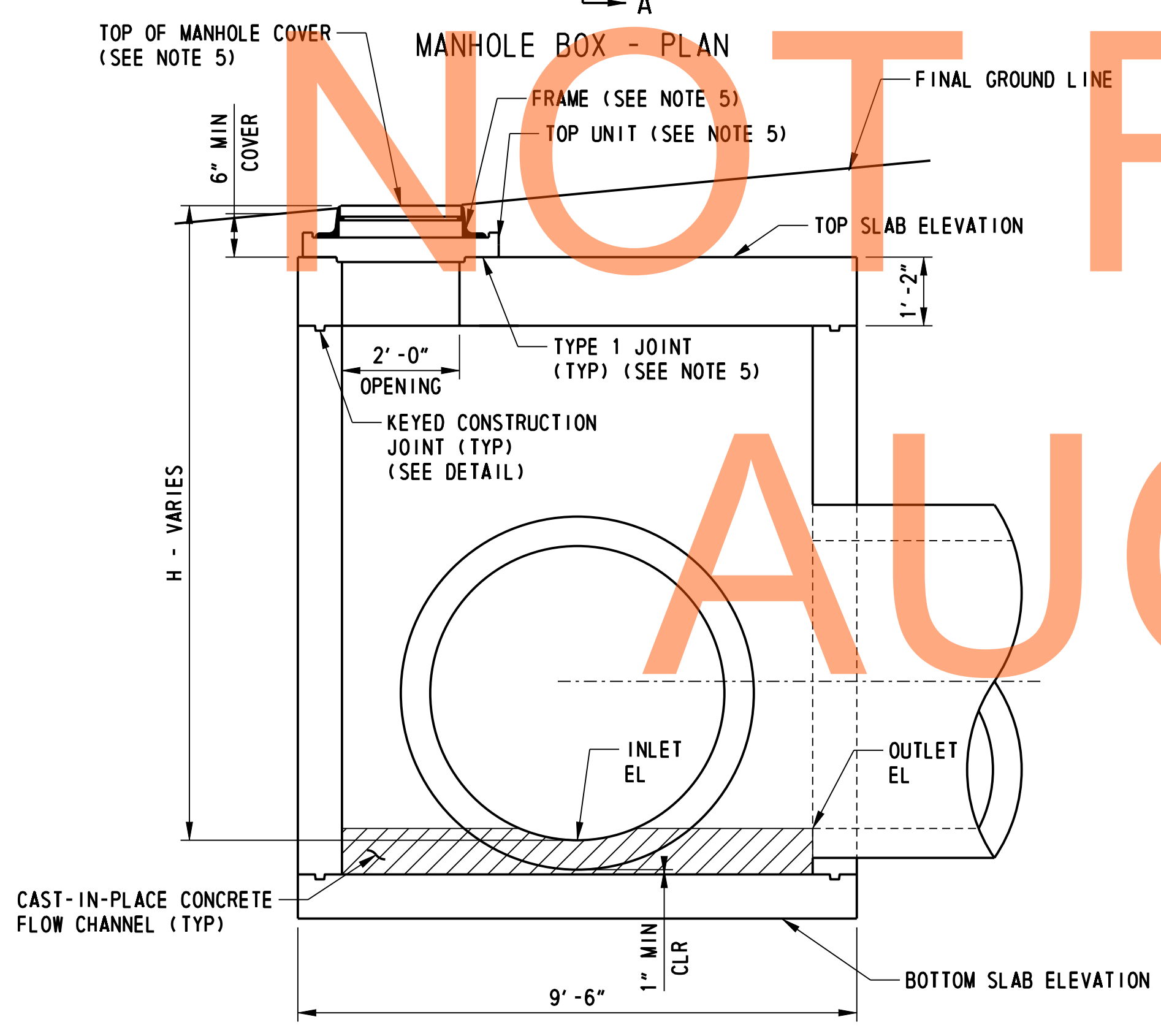


- NOTES:
1. THESE DETAILS PRESENT GENERAL DESIGN REQUIREMENTS. ACTUAL DIMENSIONS AND REINFORCEMENT DETAILS ARE TO BE BASED ON DESIGN SHOP DRAWING AND DESIGN CALCULATIONS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF DELAWARE, SHALL BE SUBMITTED FOR APPROVAL FOR ALL NON-STANDARD DRAINAGE STRUCTURES. SEE SPECIAL PROVISIONS.
  2. ALL MANHOLE BOXES SHALL BE DESIGNED IN ACCORDANCE WITH LRFD STANDARDS.
  3. THE EXCAVATION SHOULD BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
  4. CONCRETE FLOW CHANNEL SHALL BE WARPED FOR POSITIVE DRAINAGE.
  5. REFER TO STANDARD NUMBER D-6 OF "THE DELDOT STANDARD CONSTRUCTION DETAILS" FOR SUPPLEMENTAL DETAILS.
  6. FOR REINFORCEMENT DETAILS, SEE SHEET DT-16.
  7. NON-STANDARD DRAINAGE MANHOLES TO BE PAID UNDER ITEM "708659 - DRAINAGE MANHOLES, MODIFIED."

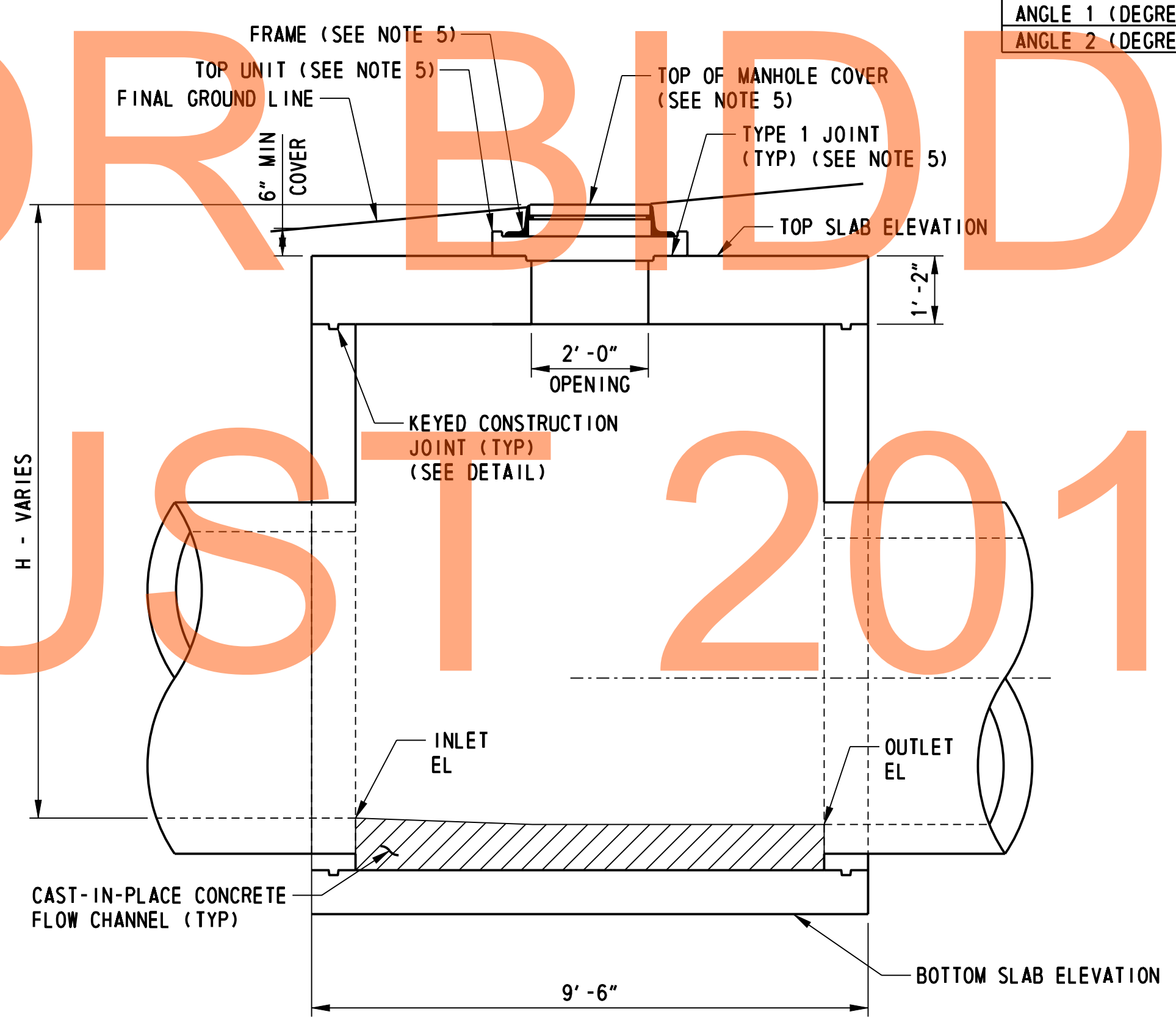
DRAFT

MANHOLE BOX- PLAN

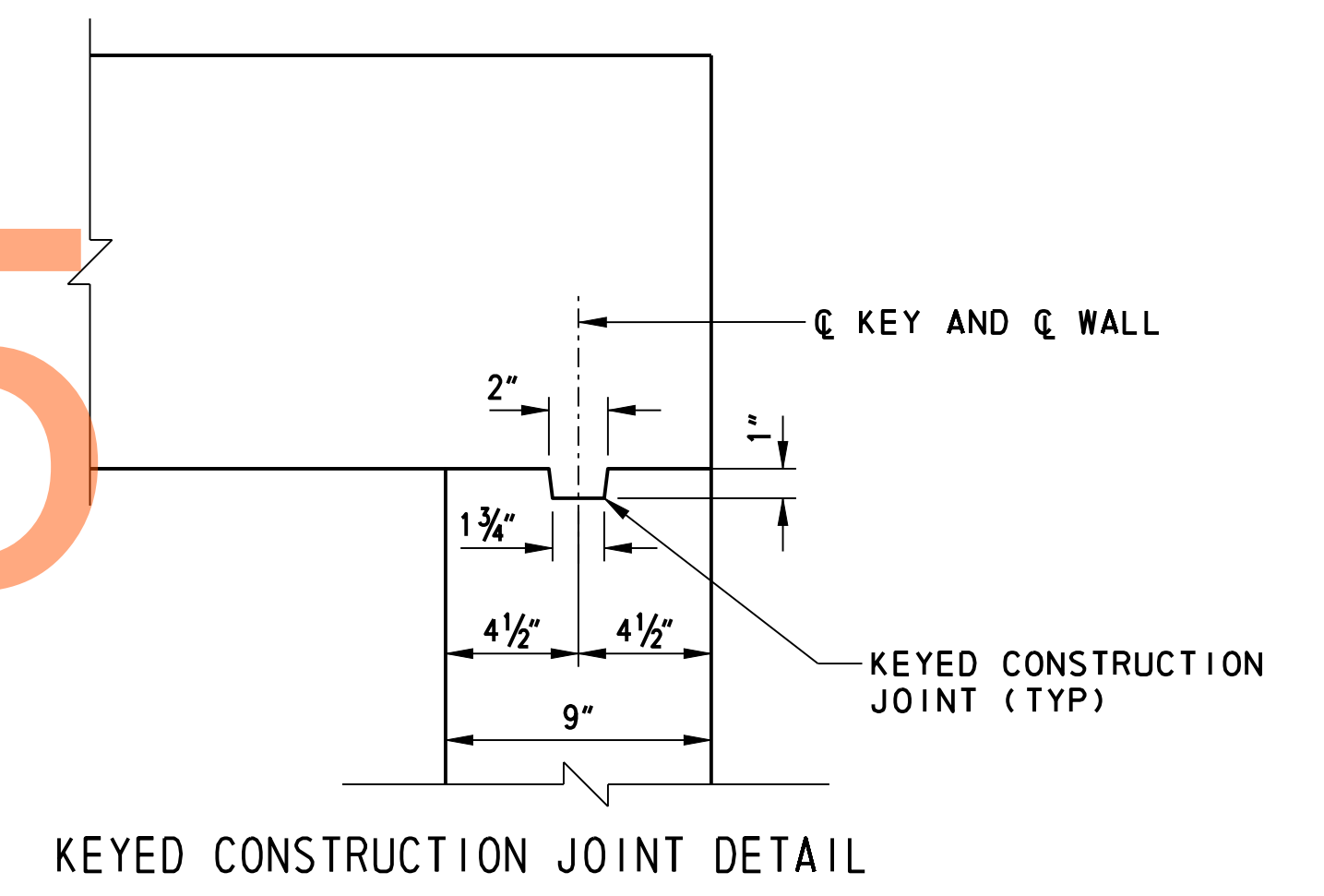
STRUCTURE TYPE	MANHOLE STRUCTURES				
	MH-10 TYPE 2	MH-11 TYPE 1	MH-12 TYPE 2	MH-13 TYPE 2	MH-14 TYPE 1
LOCATION	US 301 @	US 301 @	WARWICK RD @	WARWICK RD @	WARWICK RD @
STATION	241 + 90.0	241 + 90.0	1275 + 60.0	1277 + 50.0	1279 + 25.0
BOTTOM SLAB ELEV	54.40	53.85	52.77	52.01	51.43
IN ELEV	55.96	55.38	54.30	53.54	52.96
OUT ELEV	55.73	55.18	54.10	53.34	52.76
TOP SLAB ELEV	65.63	65.08	63.83	62.73	61.43
TOP OF MANHOLE COVER ELEV	66.50	65.95	64.70	63.60	62.30
H - HEIGHT (FT)	10.77	10.77	10.60	10.26	9.54
ANGLE 1 (DEGREES)	0	11.06	0	0	7.47
ANGLE 2 (DEGREES)	0	11.06	7.68	4.97	8.13



SECTION A-A  
TYPE 1 MANHOLE BOX



SECTION B-B  
TYPE 2 MANHOLE BOX

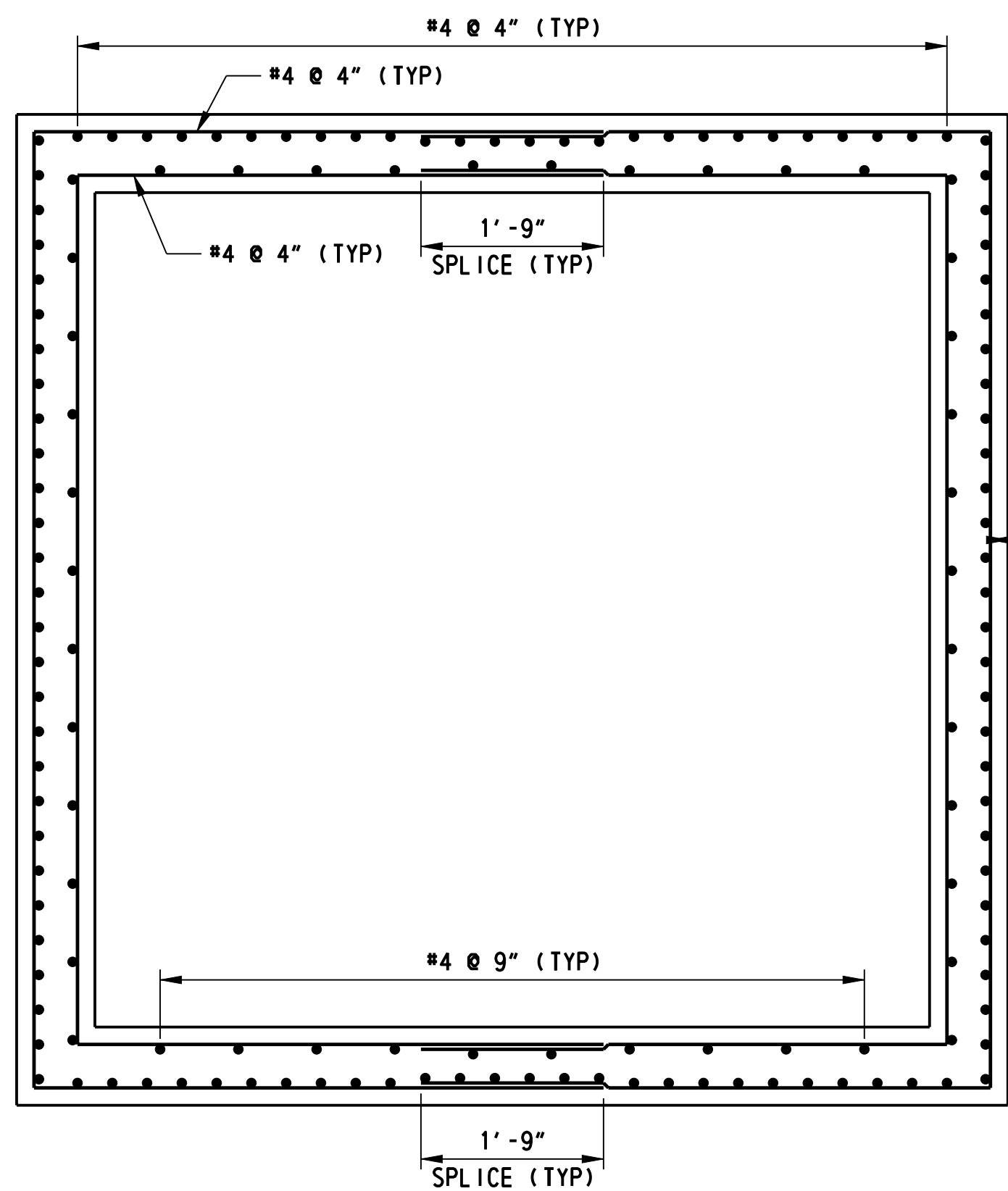


KEYED CONSTRUCTION JOINT DETAIL

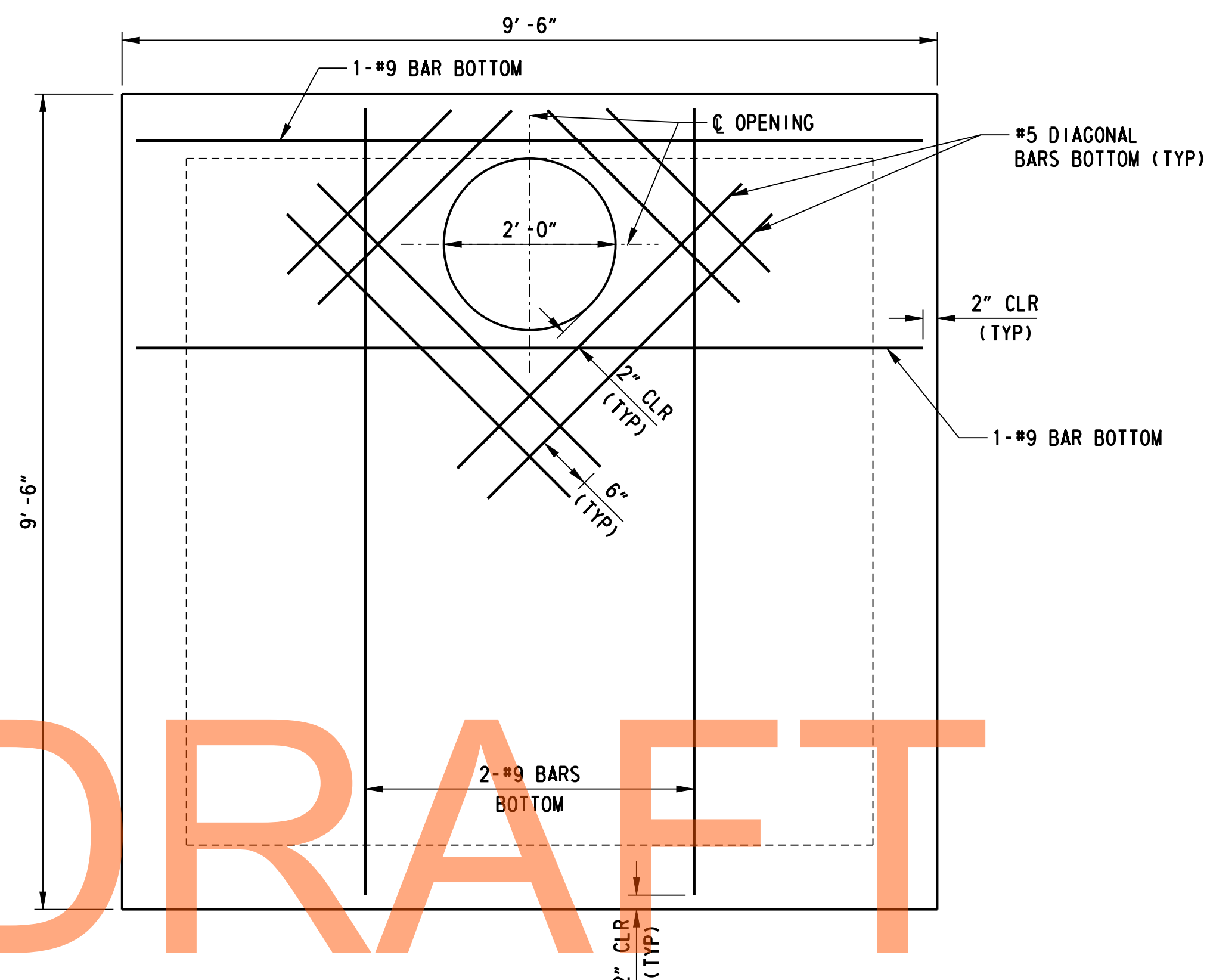
NOT FOR BIDDING

AUGUST 2015

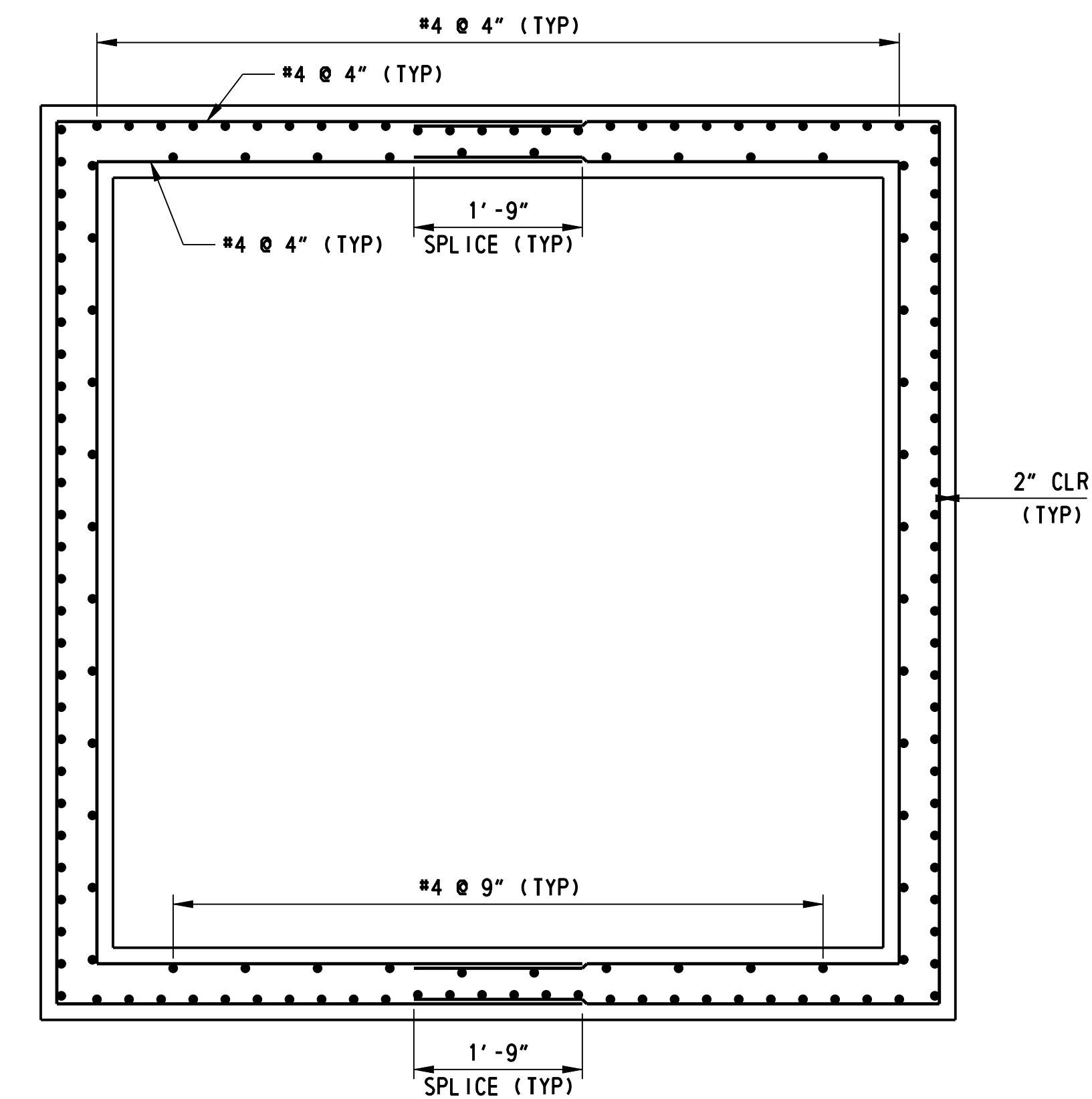
J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_015.DGN



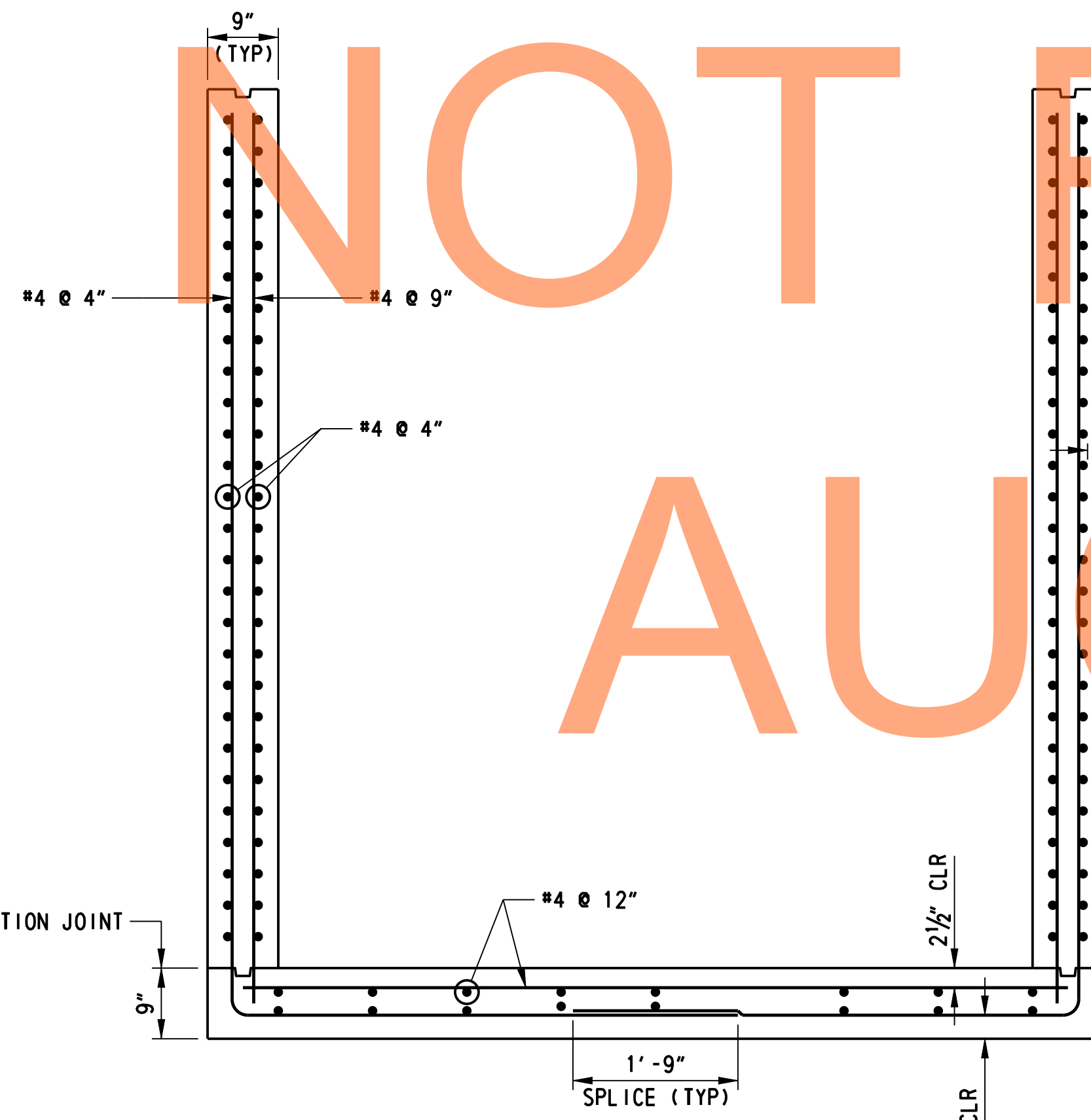
MANHOLE BOX - HORIZONTAL SECTION



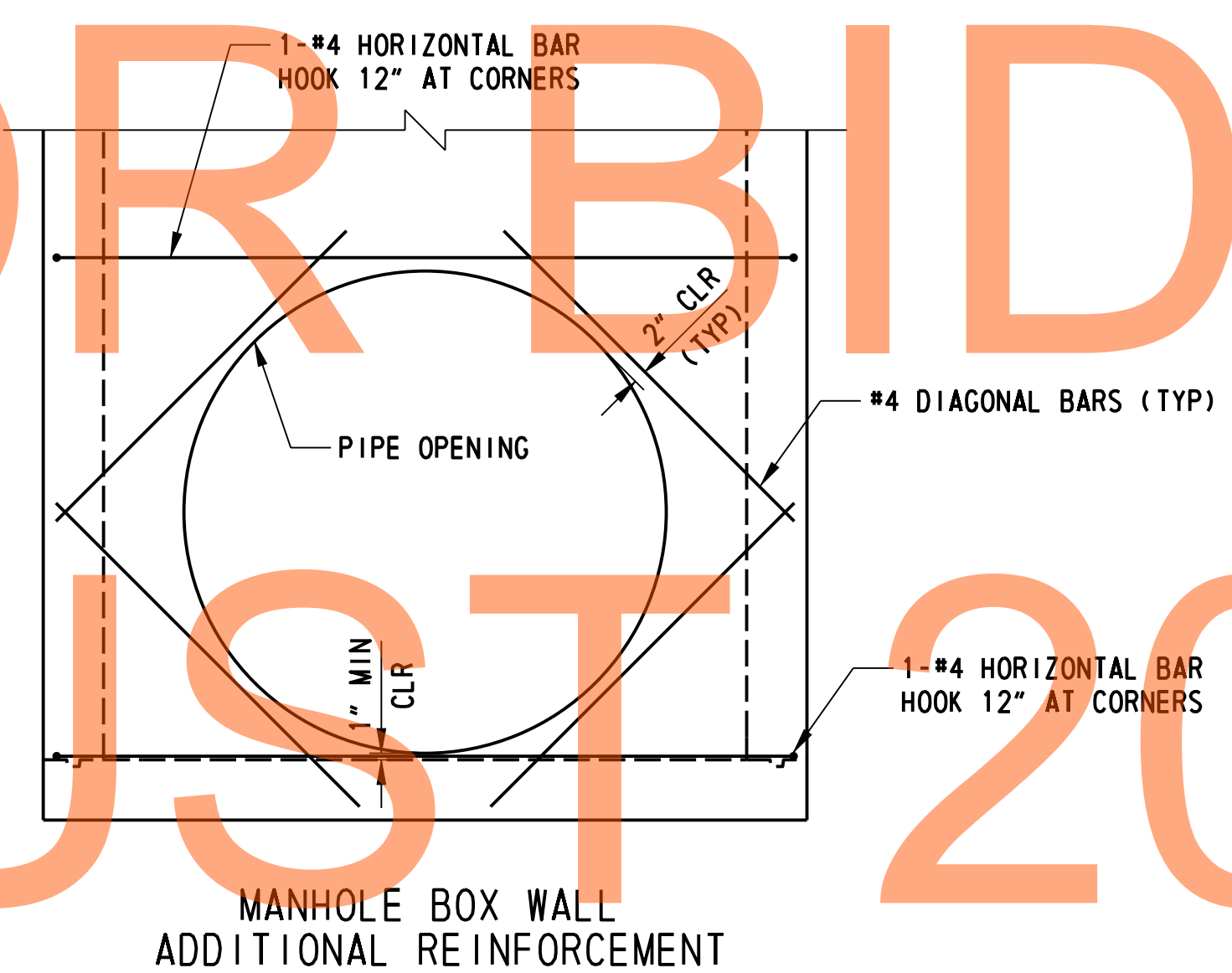
TOP SLAB - ADDITIONAL REINFORCEMENT PLAN



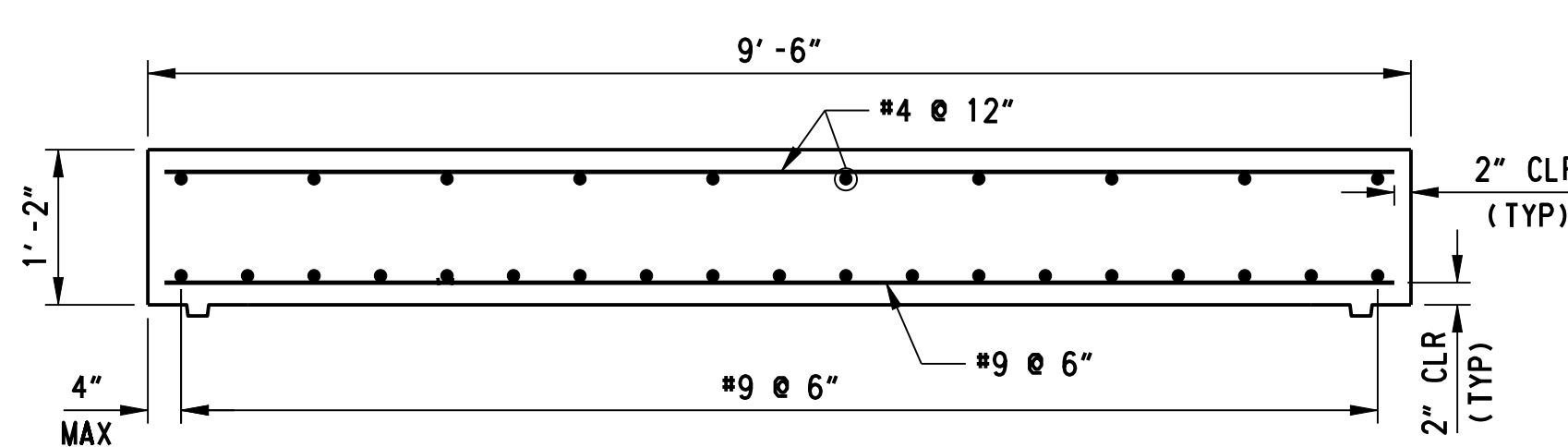
INLET BOX - HORIZONTAL SECTION



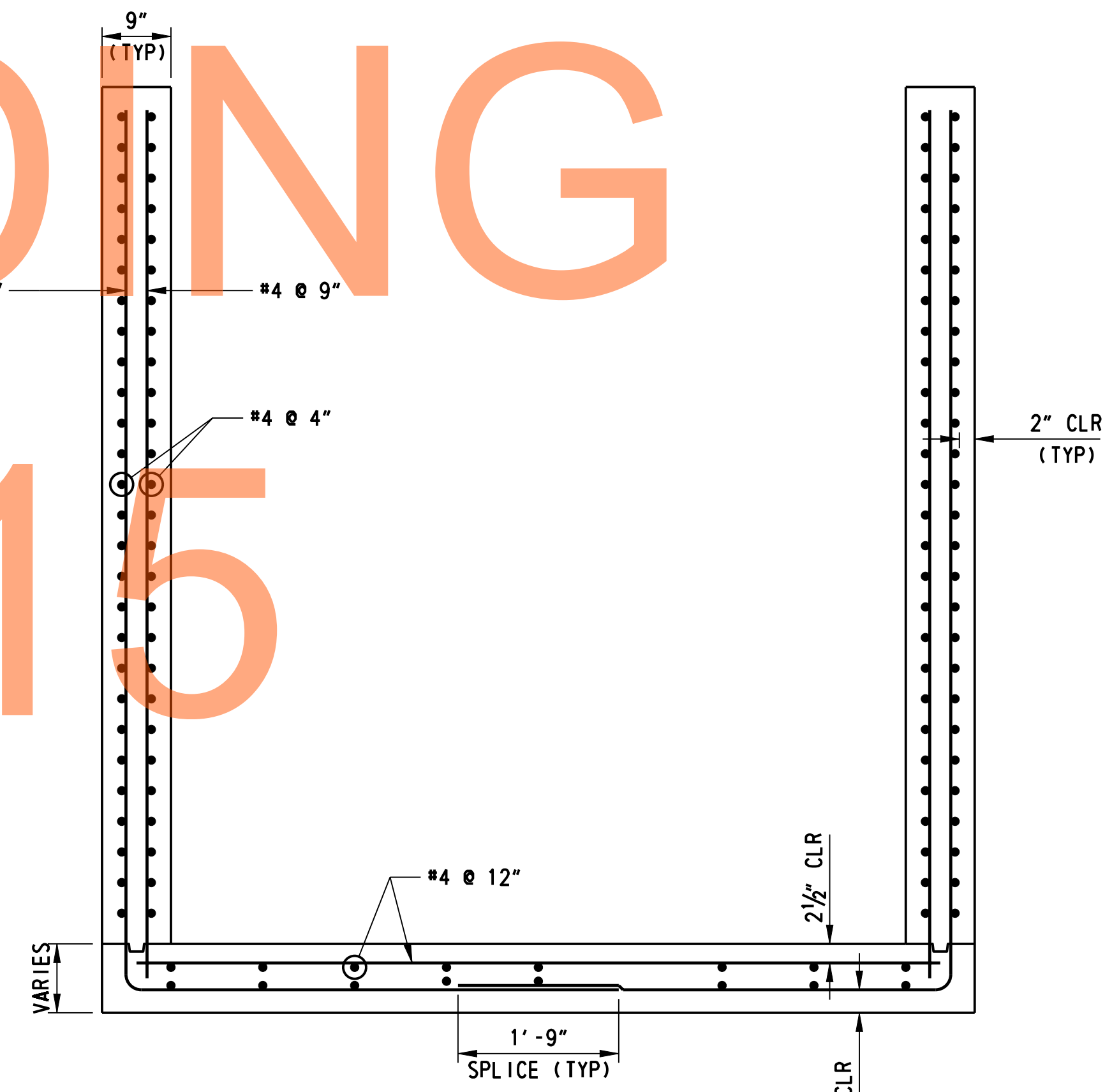
MANHOLE BOX - VERTICAL SECTION



MANHOLE BOX WALL ADDITIONAL REINFORCEMENT



TOP SLAB - SECTION



INLET BOX - VERTICAL SECTION

- NOTES:
1. FOR MANHOLE LOCATIONS, GEOMETRY, AND NOTES, SEE SHEET DT-15.
  2. FOR INLET LOCATIONS, GEOMETRY AND NOTES SEE SHEET DT-14.

J:\2008 PROJECTS\E3\34801\700CADD\750AET\ROADWAY\DT\_301AET\_016.DGN

ADDENDUMS / REVISIONS

NOT TO SCALE

**US 301 MARYLAND STATE ROAD TO LEVELS ROAD**

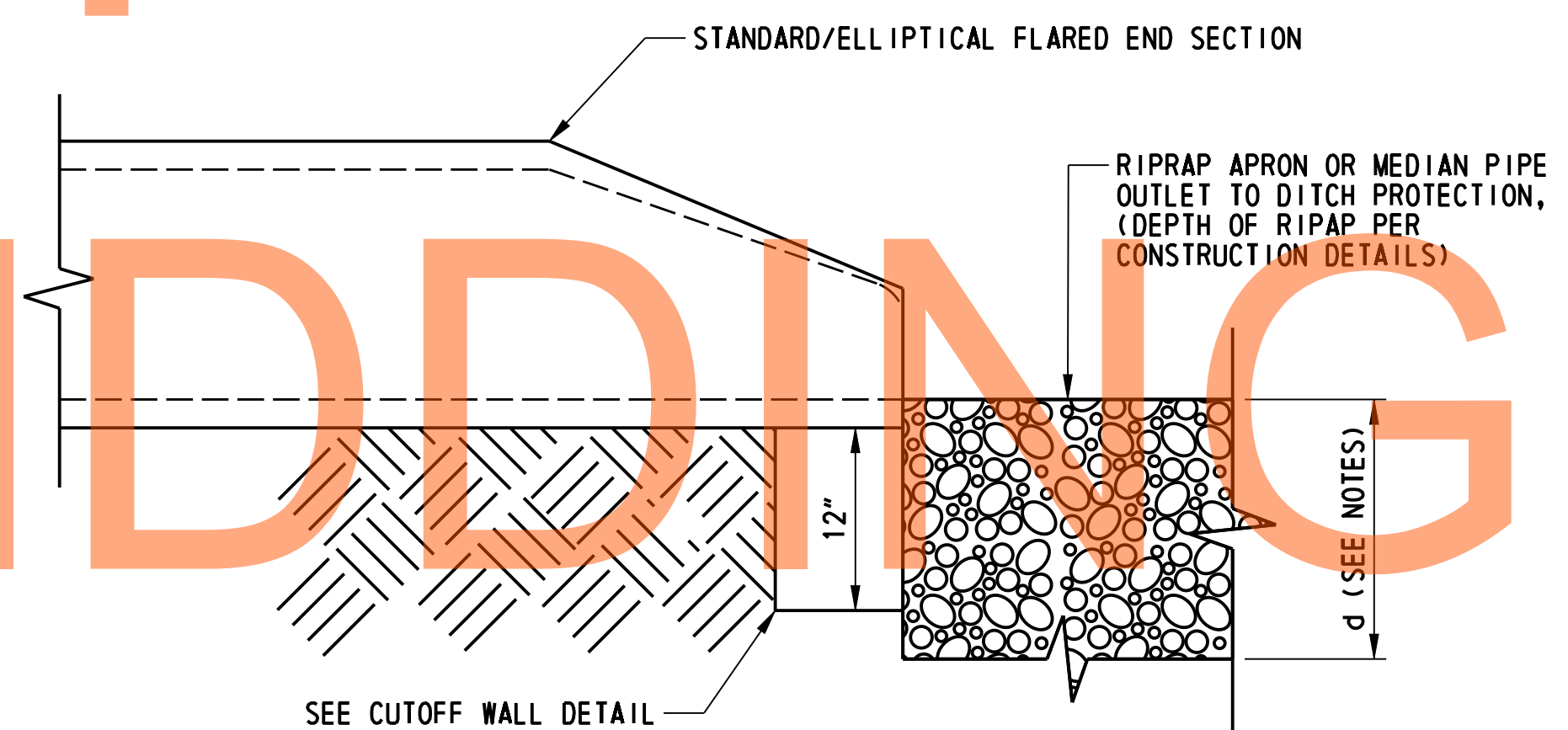
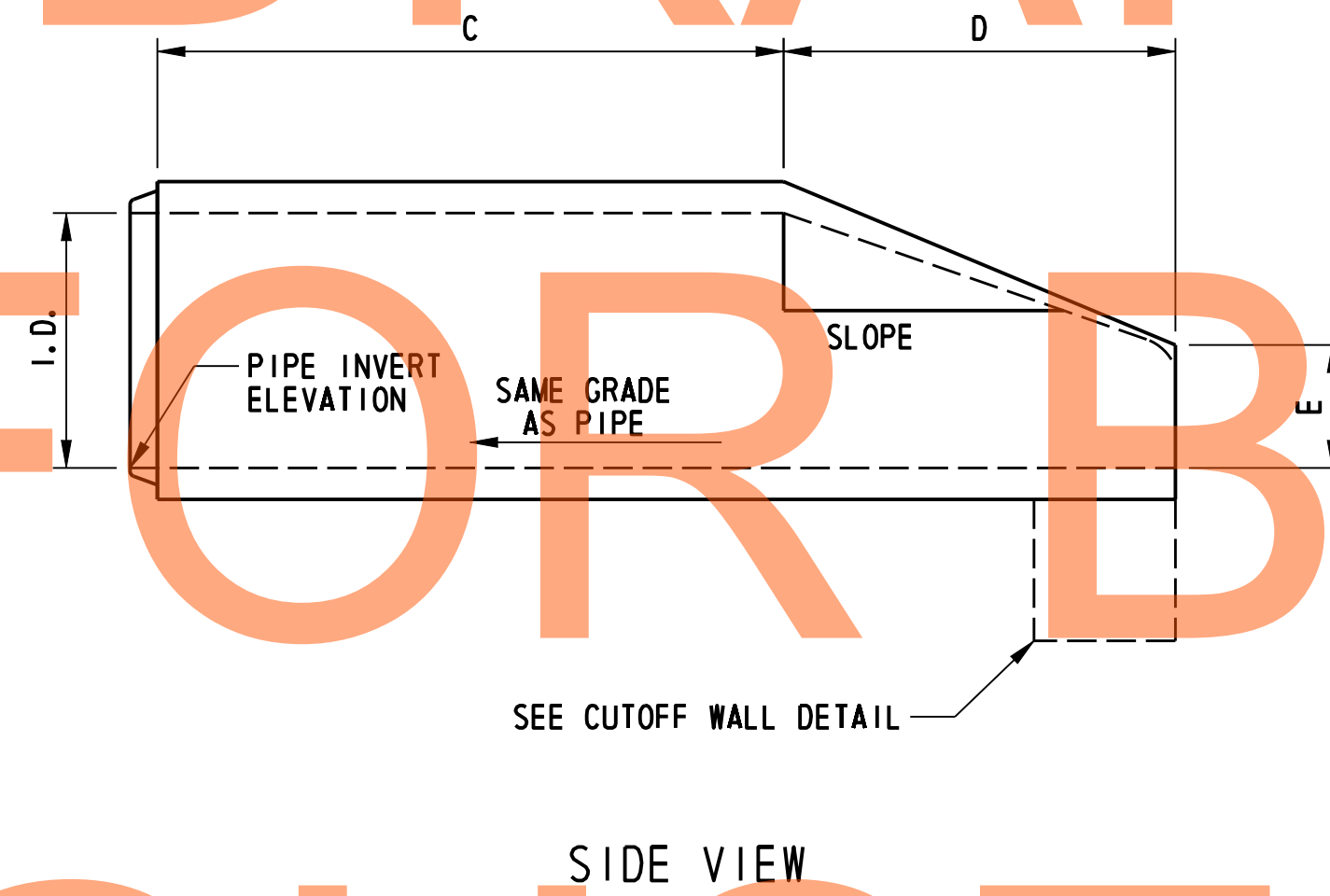
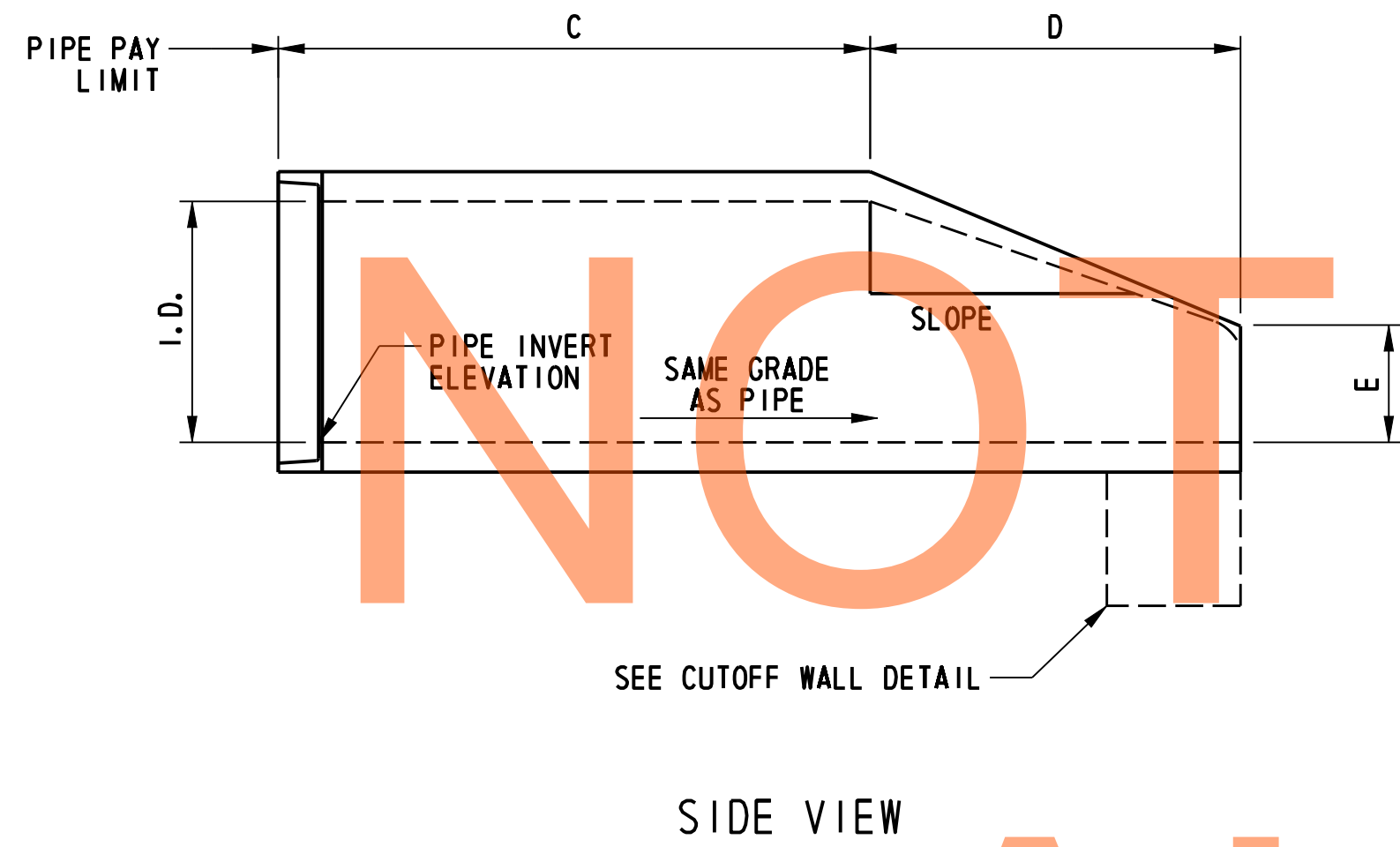
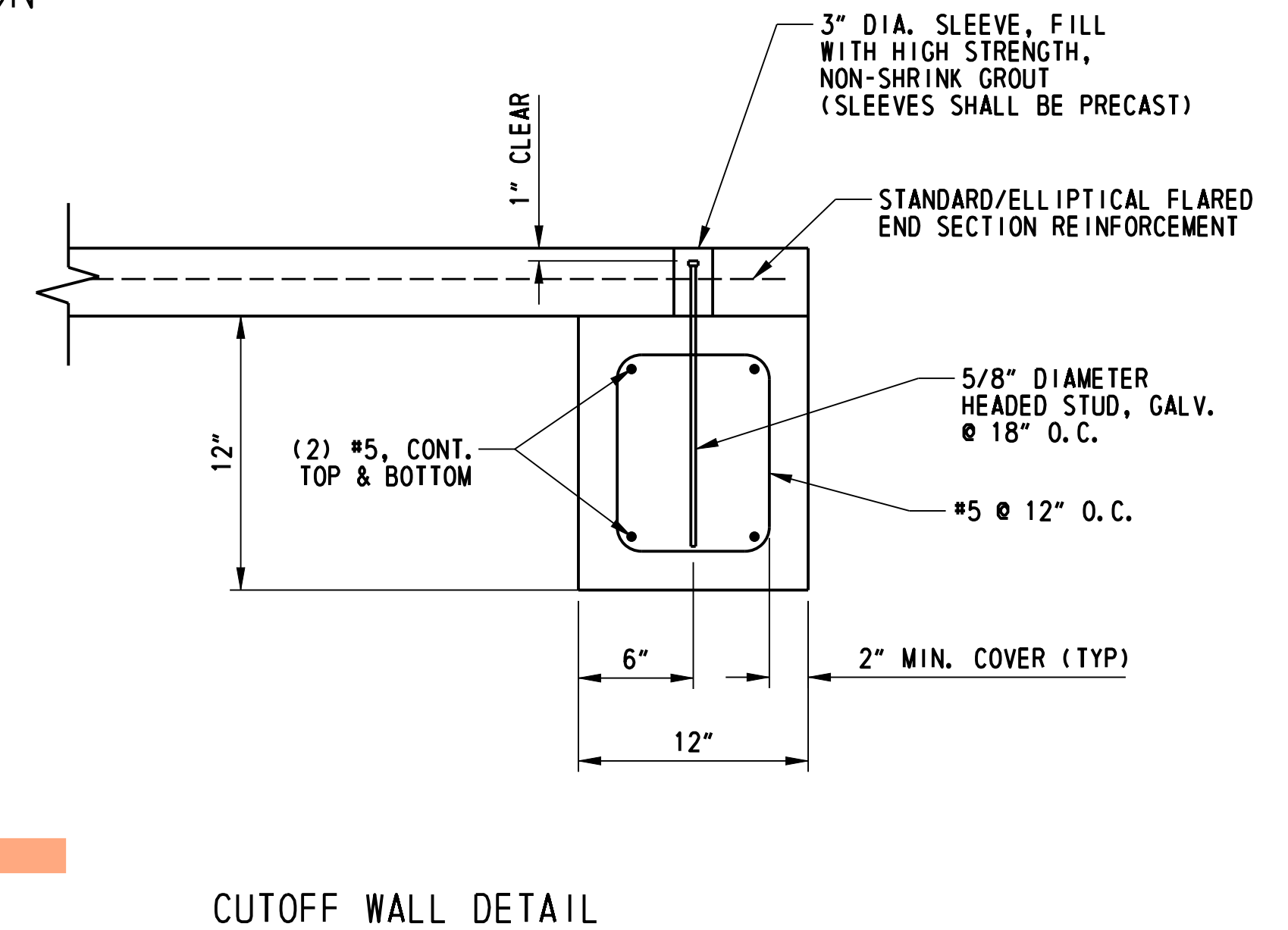
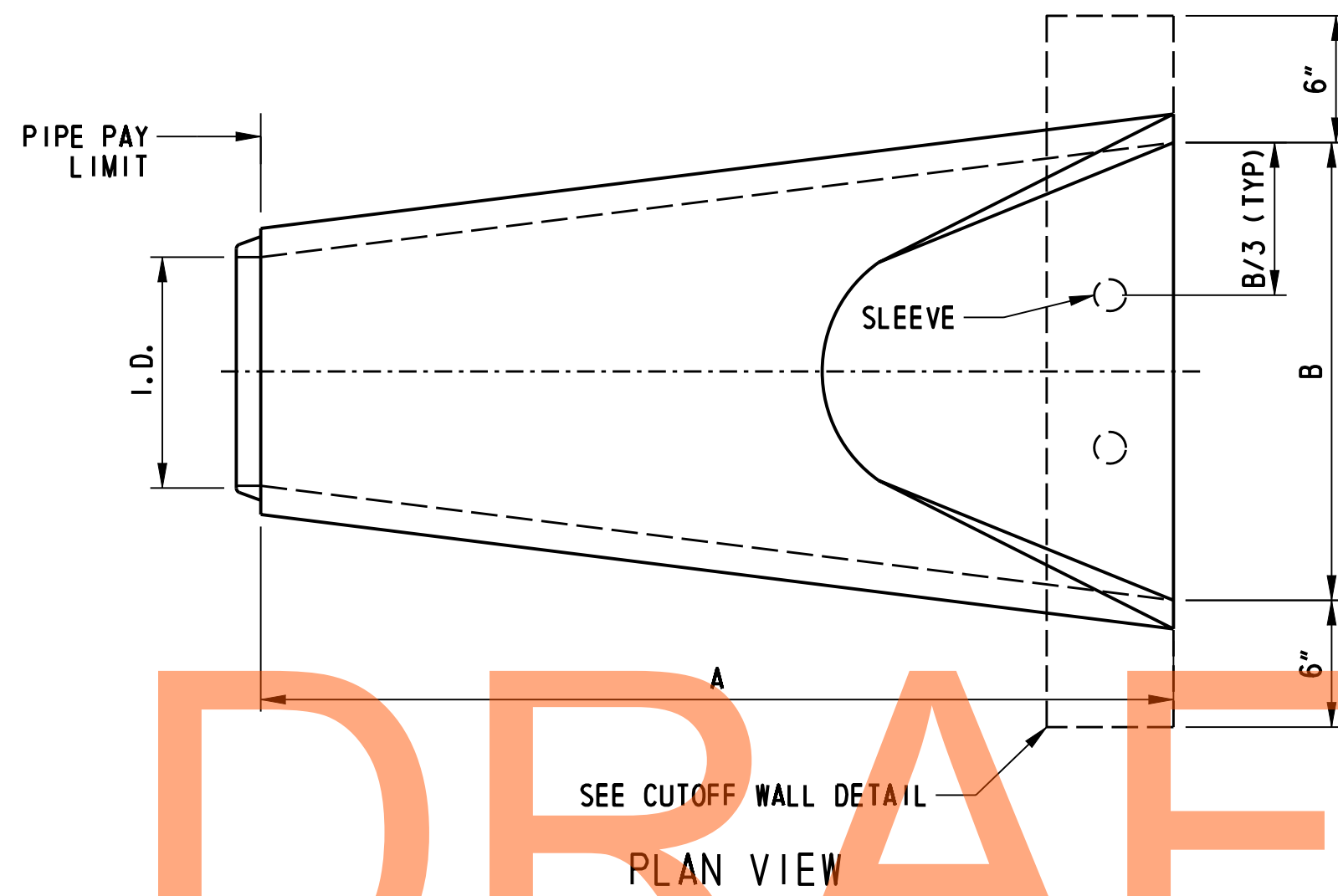
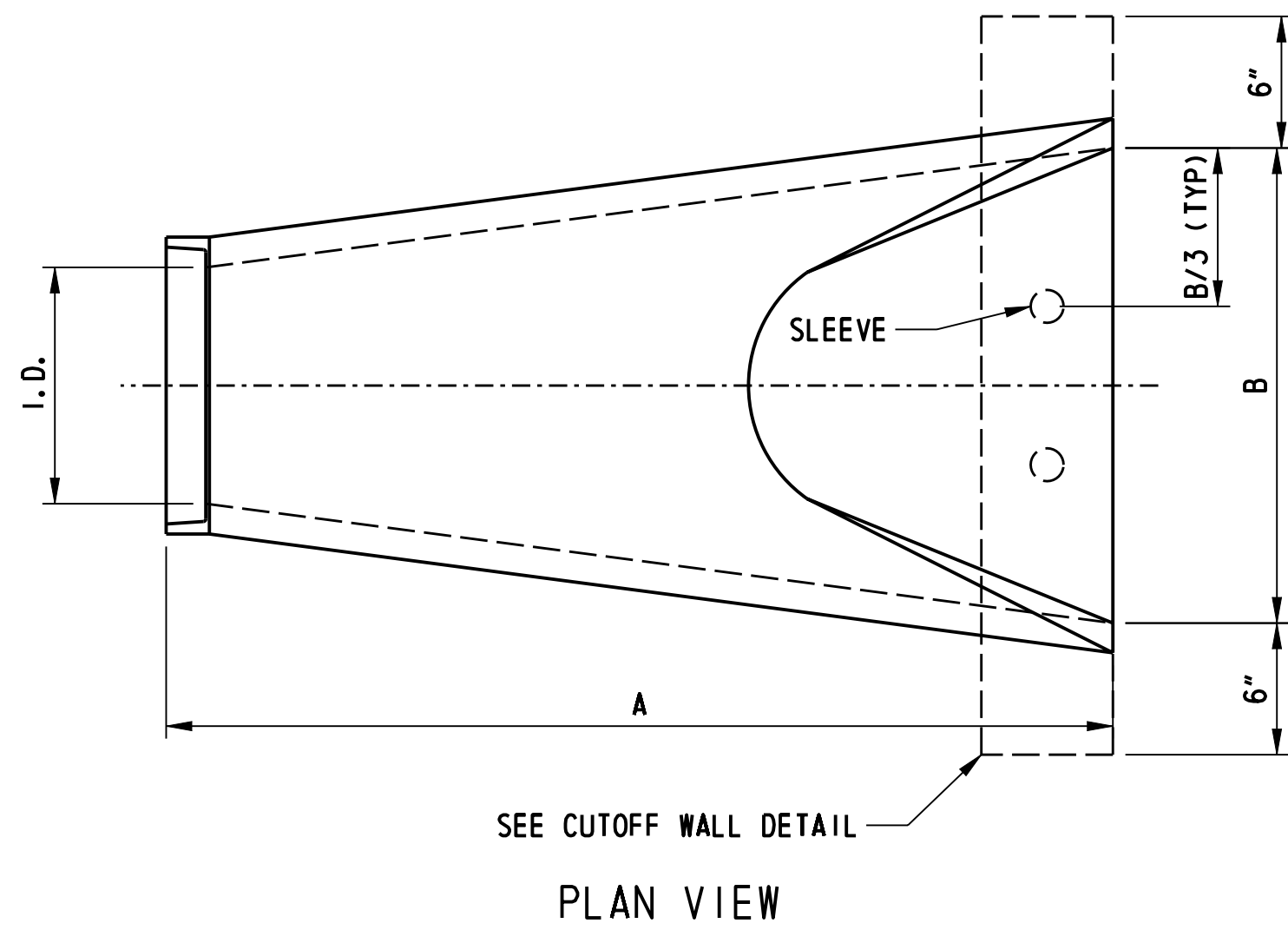
CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: SPM
	CHECKED BY: DJP

**CONSTRUCTION DETAILS**

<b>DT-16</b>
SHEET NO. 229
TOTAL SHTS. 850



REINFORCED CONCRETE FLARED END SECTION  
12" - 30" DIAMETER



FLARED END SECTION - OUTLET  
N. T. S.

FLARED END SECTION - INLET  
N. T. S.

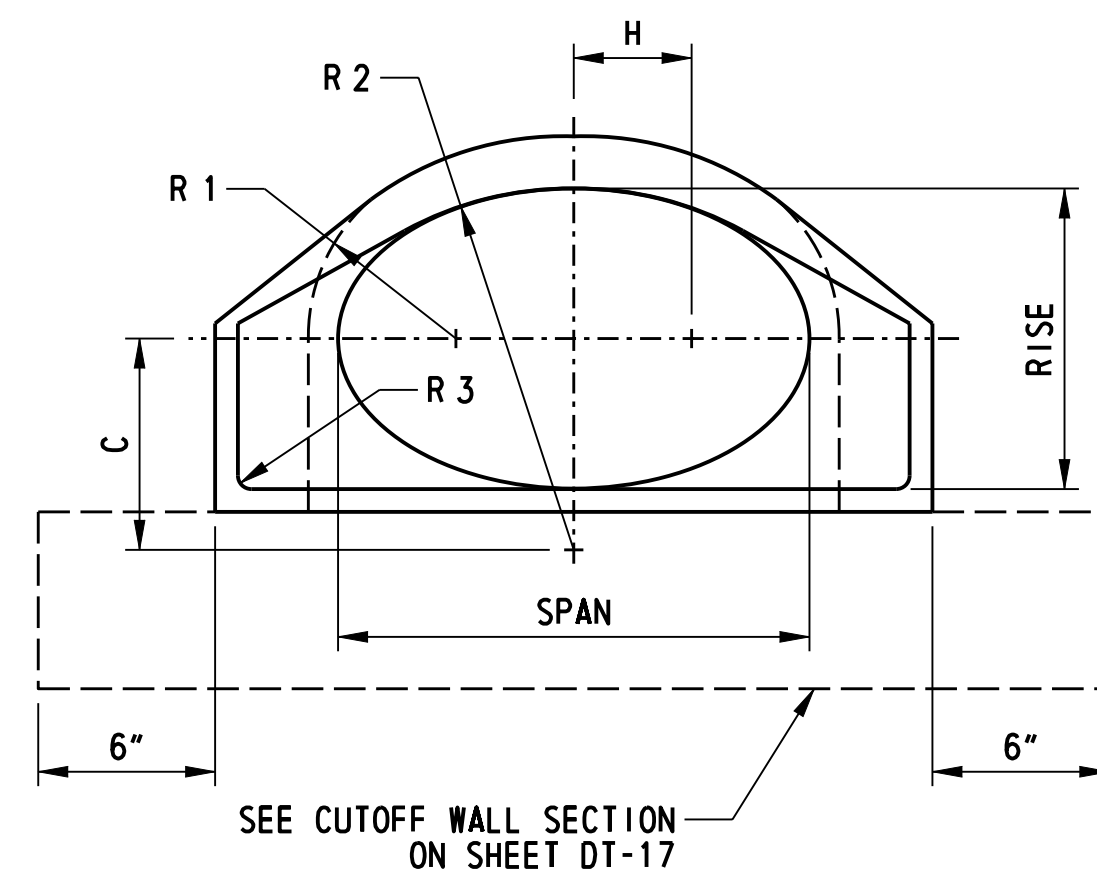
SIDE VIEW WITH OUTLET PROTECTION

PIPE I. D.	SLOPE	WALL	A (INCHES)	B (INCHES)	C (INCHES)	D (INCHES)	E (INCHES)
12	3:1	2	69	24	48	21	5
18	3:1	2 1/2	73	36	46	27	9
24	3:1	3	72 1/2	48	29	43 1/2	9 1/2
30	3:1	3 1/2	73 3/4	60	19 3/4	54	12

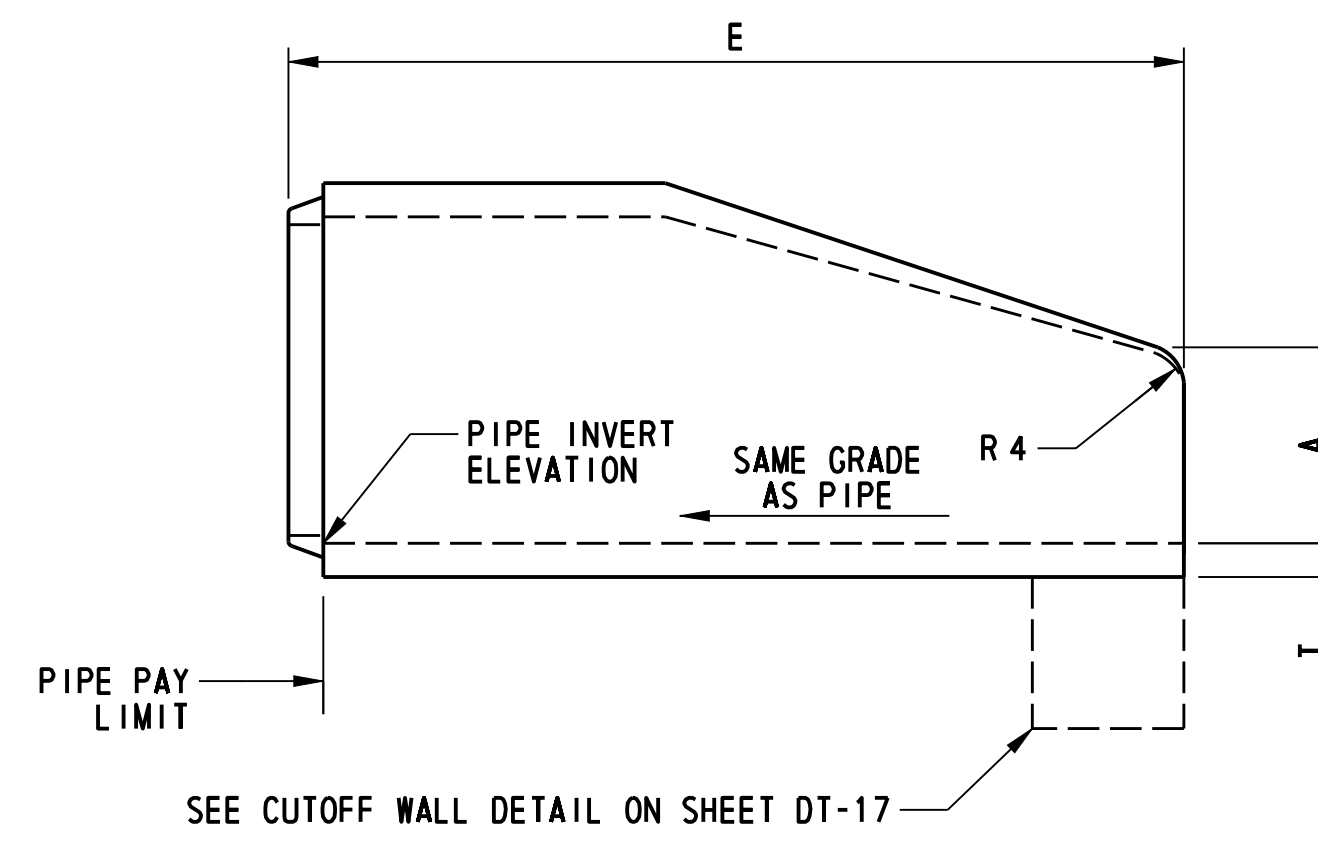
NOTES:

- 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 CAST CLASS B CONCRETE. ALL COSTS FOR THE CUTOFF WALL SHALL BE INCIDENTAL TO THE FLARED END SECTION.
- DEPTH OF RIPRAP (d) PER CONSTRUCTION DETAILS.

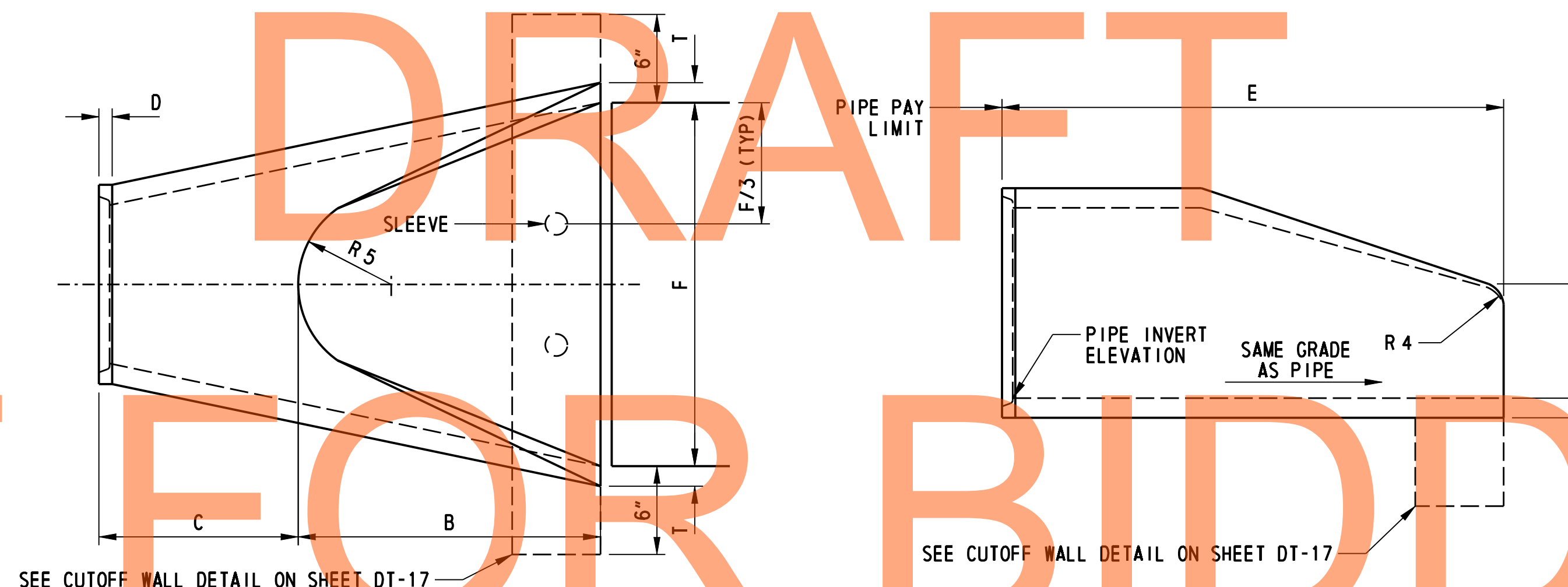
J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_017.DGN



FRONT VIEW



INLET SIDE VIEW



TOP VIEW

OUTLET SIDE VIEW

DRAFT  
NOT FOR BIDDING  
AUGUST 2015

FLARED END SECTION - ELLIPTICAL

N. T. S.

ELLIPTICAL FLARED END SECTIONS  
TABLE OF DIMENSIONS

NOMINAL RISE	EQUIVALENT SPAN	EQUIVALENT DIA.	ACTUAL RISE	ACTUAL SPAN	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)
14	23	18	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	24	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	27	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	30	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

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 CAST CLASS B CONCRETE. ALL COSTS FOR THE CUTOFF WALL SHALL BE INCIDENTAL TO THE FLARED END SECTION.
- DEPTH OF RIPRAP (d) PER CONSTRUCTION DETAILS.

ADDENDUMS / REVISIONS

NOT TO SCALE

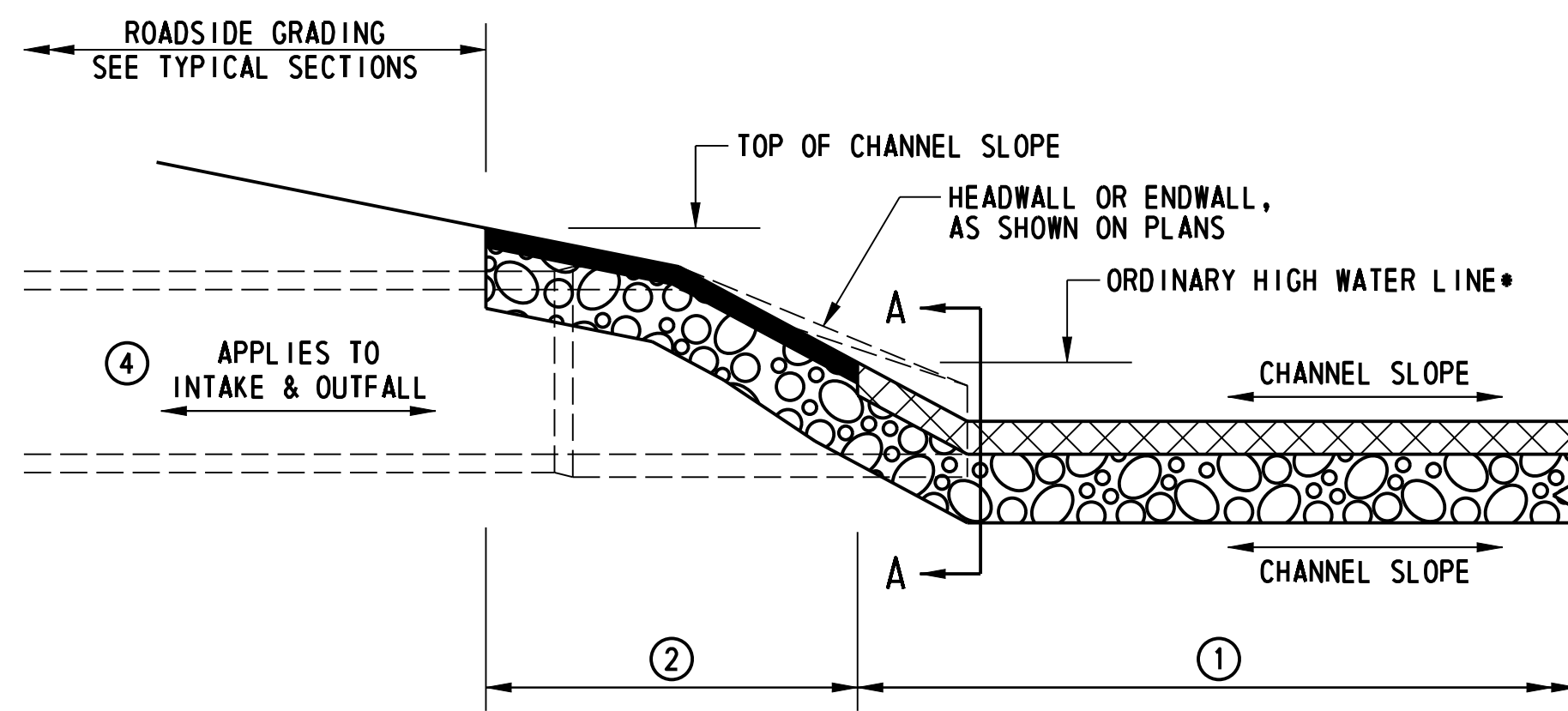
US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: MFM
NEW CASTLE	CHECKED BY: SKH

CONSTRUCTION DETAILS

DT-18

SHEET NO.
231
TOTAL SHTS.
850

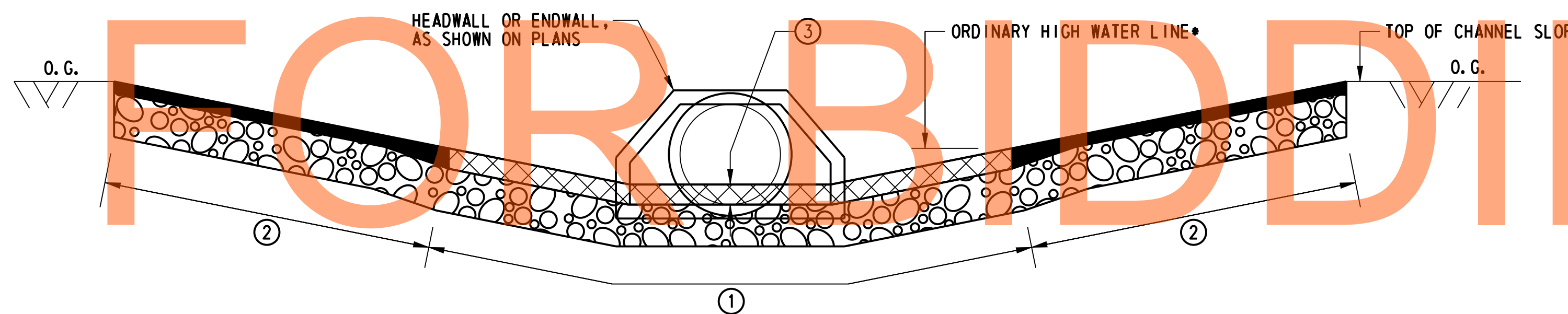


TYPICAL CROSS SECTION AT PIPE

DRAFT

ORDINARY HIGH WATER ELEVATION*			
PIPE NO.	LOCATION	INTAKE ELEV.	OUTFALL ELEV.
1	CP-04	60.32	59.44
7, 8	CP-27	-	63.75
61, 62	CP-33	-	55.61

NOT FOR BIDDING



SECTION A-A

AUGUST 2015

- ORDINARY HIGH WATER LINE IS ASSUMED TO BE THE 1-YEAR STORM ELEVATION UNLESS OTHERWISE INDICATED BY SITE CONDITIONS OR PERMIT REQUIREMENTS.
- ① BELOW ORDINARY HIGH WATER LINE: RIPRAP PER PLANS. PLACE TOP OF RIPRAP TO MATCH INVERT OF PIPE. CHOKe RIPRAP VOIDS WITH BORROW, TYPE B. PLACE CHANNEL BED FILL (ITEM NO. 712531) TO MATCH CHANNEL BED ELEVATIONS.
- ② ABOVE ORDINARY HIGH WATER LINE: RIPRAP PER PLANS. CHOKe RIPRAP VOIDS WITH DELAWARE #57 STONE. FILL REMAINING VOIDS TO TOP OF RIPRAP WITH TOPSOIL. PLACE ADDITIONAL 4" TOPSOIL, STREAM BANK SEED MIX (ITEM NO. 734531) AND SOIL RETENTION BLANKET MULCH, TYPE 5. TOPSOIL DEPTH TRANSITION TO BE INCIDENTAL TO TOPSOIL/TOPSOILING ITEM.
- ③ RECESS PIPE NO. 1 INVERT 12". PIPES 7, 8, 61, AND 62 ARE NOT TO BE RECESSED.
- ④ RIPRAP DETAIL APPLIES ONLY TO OUTFALL FOR PIPES 7, 8, 61, AND 62.

**PIPE AND RIPRAP RECESS DETAIL**

DETAIL APPLIES TO CULVERT CROSSINGS  
US 301 AT STATION 126+09, 198+00, AND  
STRAWBERRY LANE STATION 1019+00 ONLY

J:\2008 PROJECTS\E3\34801\700CADD\750AET\ROADWAY\DT\_301AET\_019.DGN



ADDENDUMS / REVISIONS

NOT TO SCALE

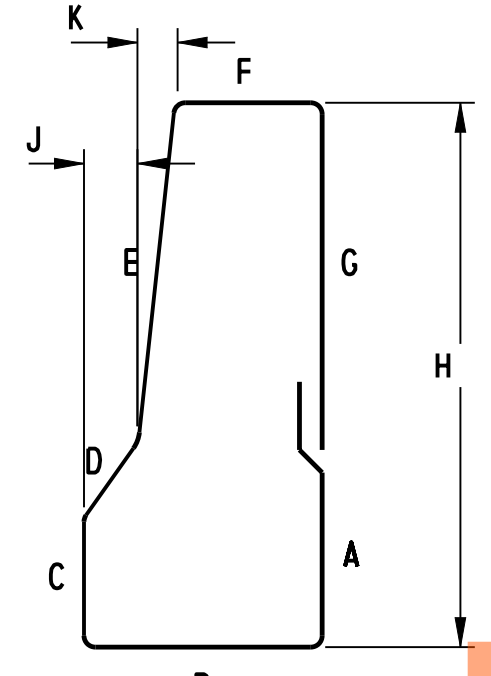
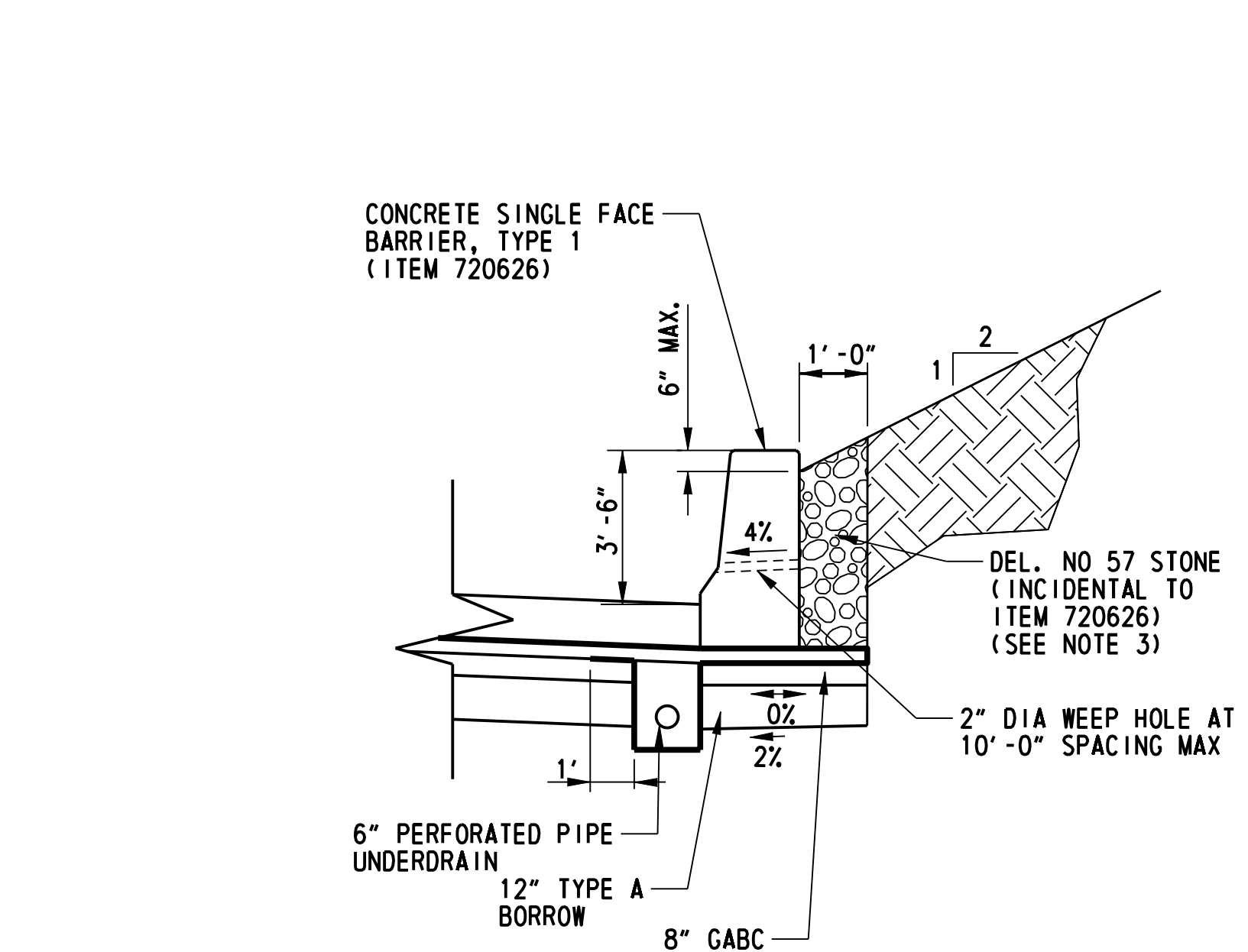
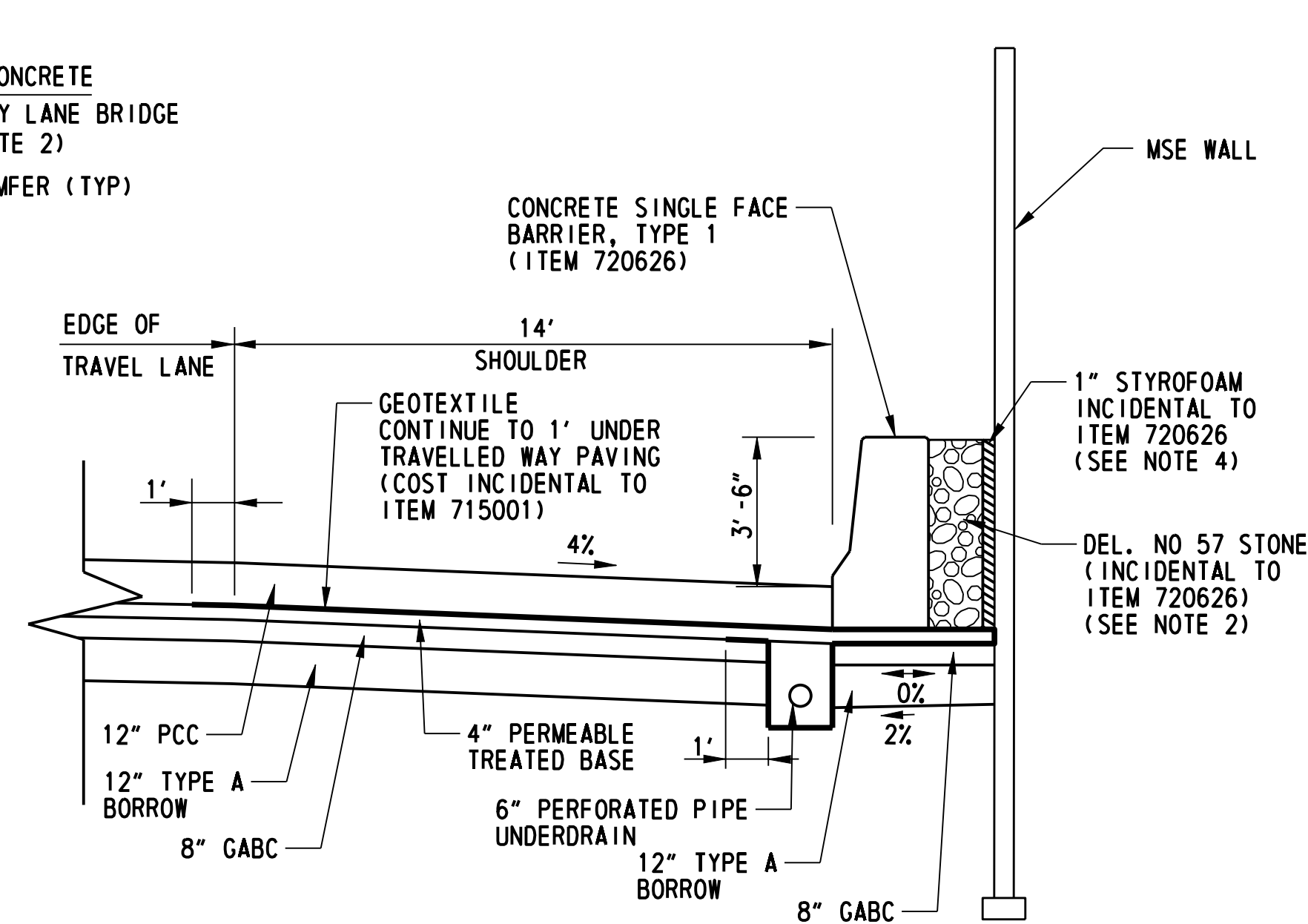
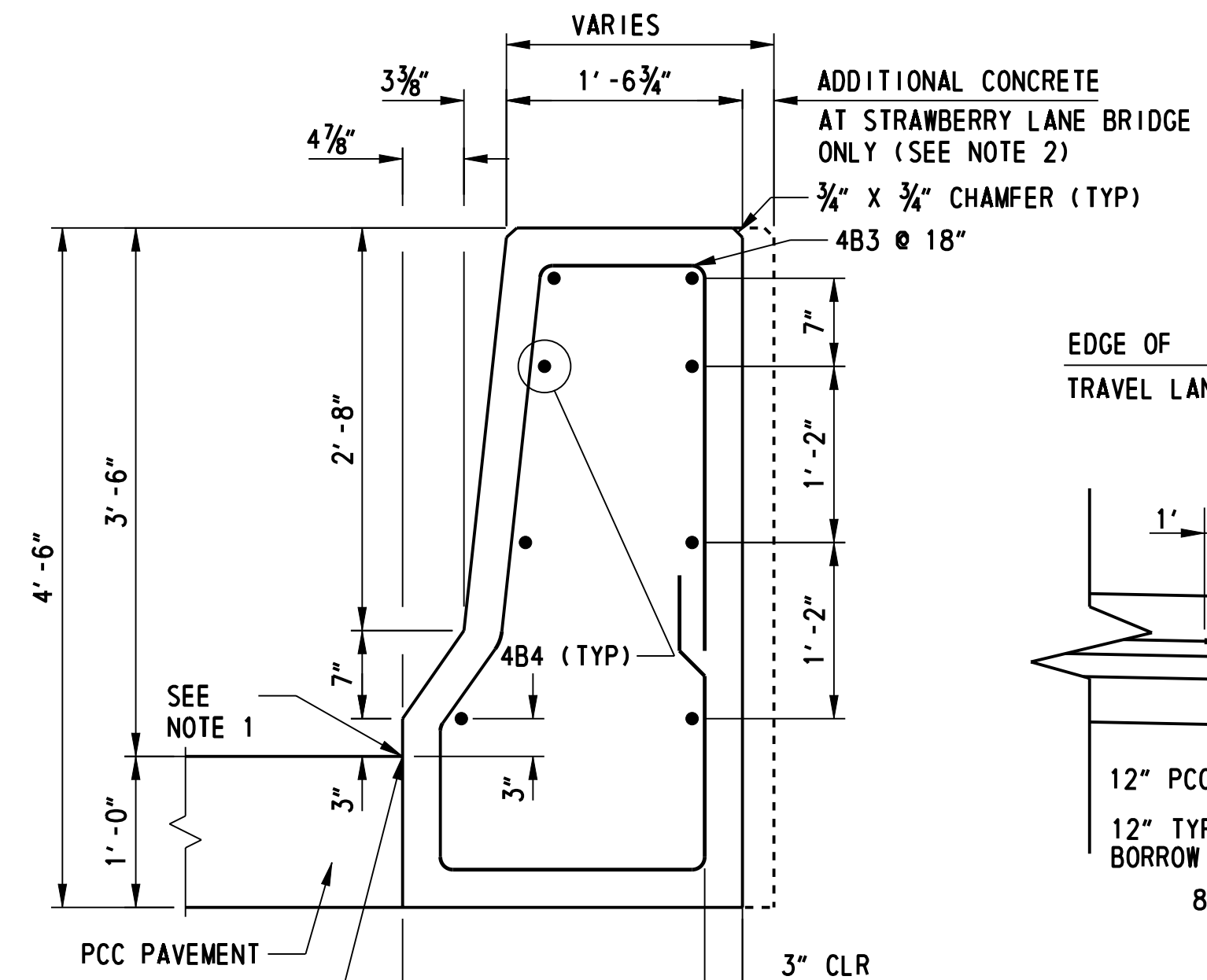
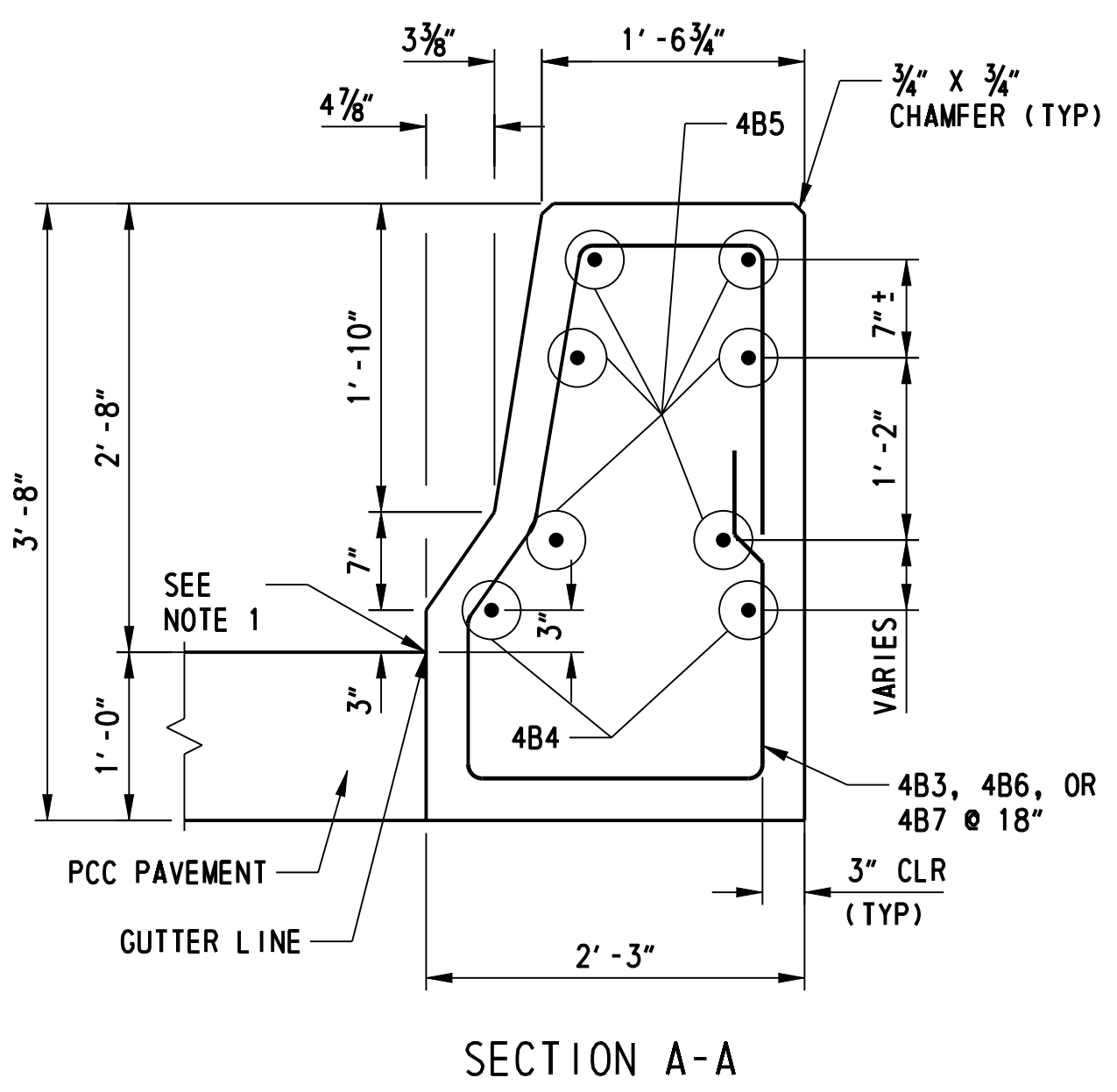
US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

CONTRACT	BRIDGE NO.
T200811301	
COUNTY	DESIGNED BY: MFM
NEW CASTLE	CHECKED BY: SKH

CONSTRUCTION DETAILS

DT-19

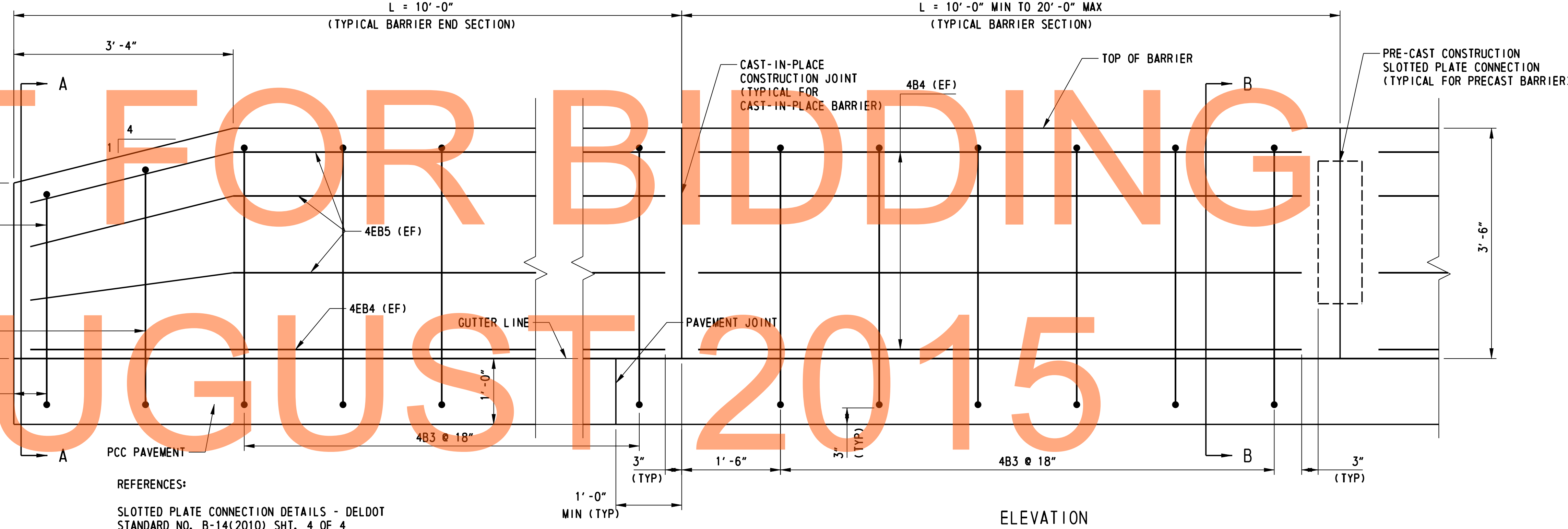
SHEET NO.
232
TOTAL SHTS.
850



CONCRETE SINGLE FACE BARRIER, TYPE 1  
INTERFACE WITH PAVEMENT AND MSE WALL

CONCRETE SINGLE FACE BARRIER, TYPE 1  
INTERFACE WITH PAVEMENT AND EMBANKMENT FILL

DRAFT



- NOTES: TYPE '2' BAR      TYPE '3' BAR
- 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 ITEM 720626.
  - PROVIDE DELDOT NO. 57 CRUSHED STONE BETWEEN BARRIER AND MSE WALL AT LEVELS ROAD BRIDGE WHERE ADJACENT TO MSE WALL ONLY. CAST BARRIER DIRECTLY AGAINST STYROFOAM AT STRAWBERRY LANE BRIDGE. ADDITIONAL BARRIER CONCRETE WIDTH AT STRAWBERRY LANE BRIDGE VARIES FROM 3/8" TO 1 1/8" AT ABUTMENT 1 AND 2 3/8" TO 2 1/2" AT ABUTMENT 2.
  - PROVIDE CRUSHED STONE BEHIND BARRIER AS SHOWN FOR LENGTH OF BARRIER IN EMBANKMENT FILL CONDITION.
  - STYROFOAM MUST MEET ASTM C-578, TYPE 1, MATERIAL REQUIREMENTS EXCEPT THE MAXIMUM WATER ABSORPTION TO BE 2%.

BAR OFFSETS	
NOMINAL LENGTH OF BARRIER SECTION (L)	NO. REQ'D FOR EACH BARRIER SECTION
20'	13
18'	12
16'	10
14'	9
12'	8
10'	6

BAR LIST - (END BARRIER SECTION)														
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K
4B3	4	6	12'-9 3/4"	2	2'-10"	1'-9"	11 5/8"	8 3/8"	2'-5 3/4"	1'-1"	3'-0"	4'-0"	4 5/8"	3 1/8"
4B4	4	2	*	STR.										
4B5	4	6	9'-7 1/4"	3	3'-2 1/4"	6'-5"	9 1/4"							
4B6	4	1	12'-0 1/8"	2	2'-10"	1'-9"	11 5/8"	8 3/8"	2'-0 5/8"	1'-1"	2'-7 1/2"	3'-7 1/2"	4 5/8"	2 3/8"
4B7	4	1	11'-3 1/2"	2	2'-10"	1'-9"	11 5/8"	8 3/8"	1'-8 1/2"	1'-1"	2'-3"	3'-3"	4 3/8"	3"

BAR LIST - (TYPICAL BARRIER SECTION)														
MARK	SIZE	NUMBER IN EACH SECTION	LENGTH	TYPE	A	B	C	D	E	F	G	H	J	K
4B3	4	**	12'-9 3/4"	2	2'-10"	1'-9"	11 5/8"	8 3/8"	2'-5 3/4"	1'-1"	3'-0"	4'-0"	4 5/8"	3 1/8"
4B4	4	8	*	STR.										

- \* THE LENGTH OF BAR 4B4 SHALL BE 6" SHORTER IN LENGTH THAN THE NOMINAL SIZE OF THE BARRIER IN WHICH IT IS USED.
- \*\* SEE "BAR OFFSETS" CHART ON THIS SHEET FOR MORE INFORMATION.

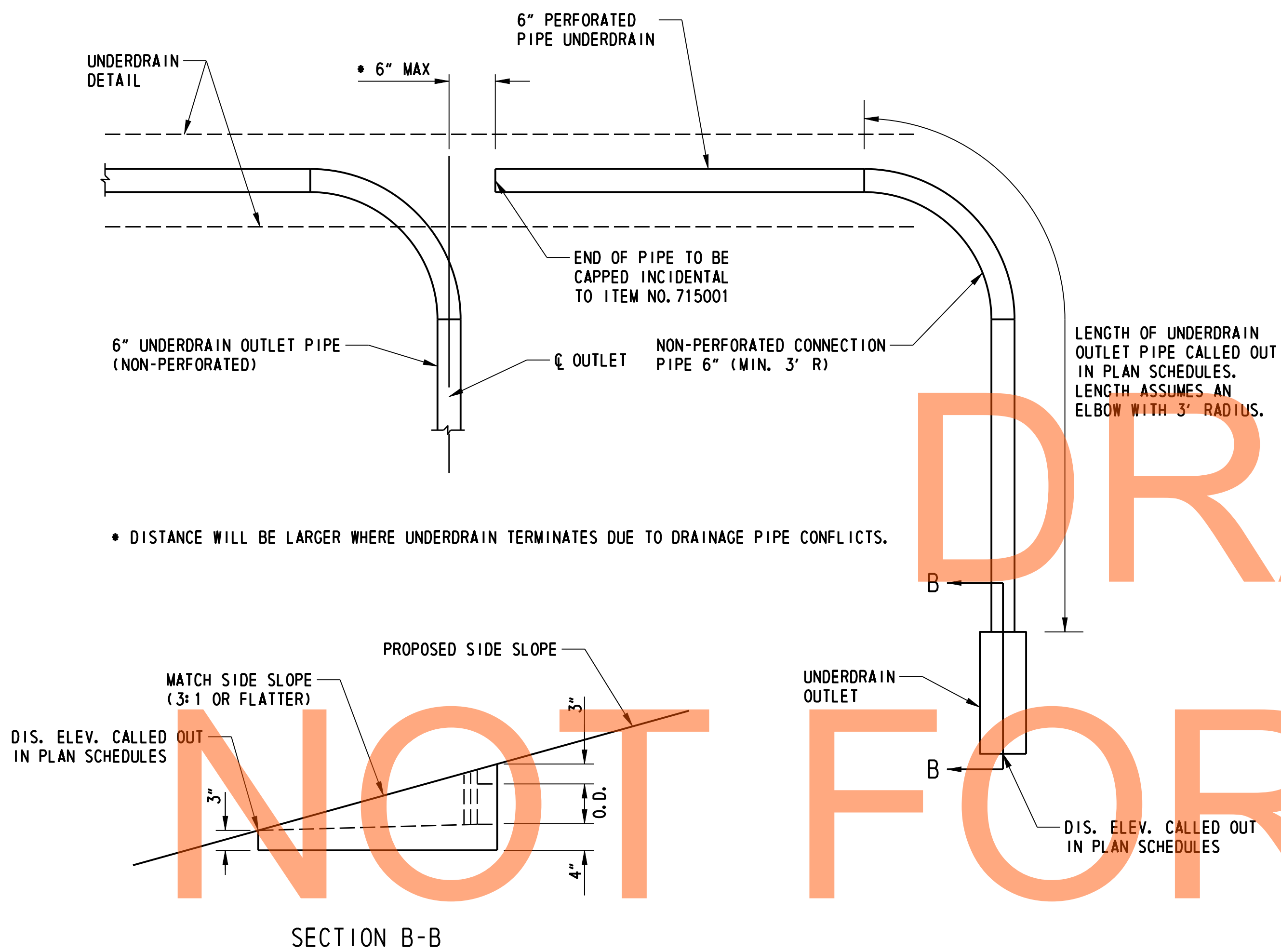
CONCRETE SINGLE FACE BARRIER, TYPE 1

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_020.DGN

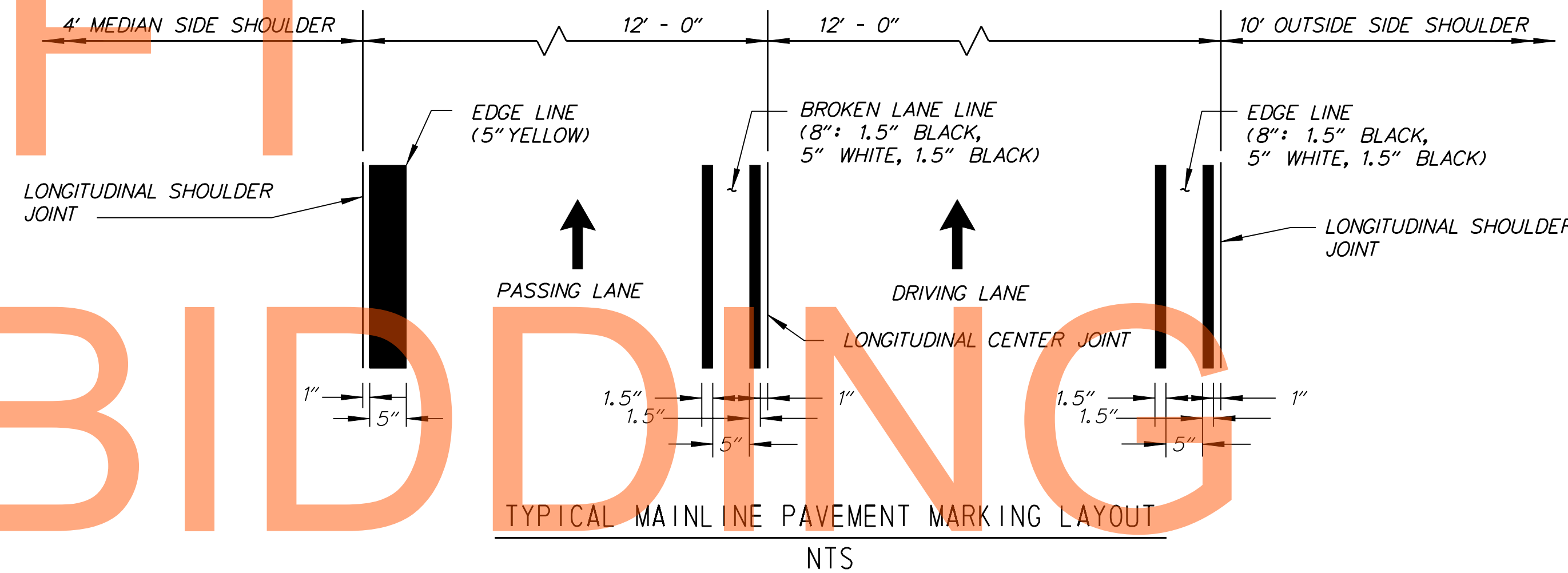
<p><b>DELAWARE DEPARTMENT OF TRANSPORTATION</b></p>	ADDENDUMS / REVISIONS		NOT TO SCALE	<p><b>US 301 MARYLAND STATE LINE TO LEVELS ROAD</b></p>	CONTRACT	BRIDGE NO.	<p><b>CONSTRUCTION DETAILS</b></p>	SHEET NO.
	T200811301				DESIGNED BY: SPM	233		
	COUNTY				CHECKED BY: DJP	TOTAL SHTS.		
					NEW CASTLE			850

DT-20

J:\2008 PROJECTS\EX34801\700CADD\750AET\ROADWAY\DT\_301AET\_021.DGN



• DISTANCE WILL BE LARGER WHERE UNDERDRAIN TERMINATES DUE TO DRAINAGE PIPE CONFLICTS.



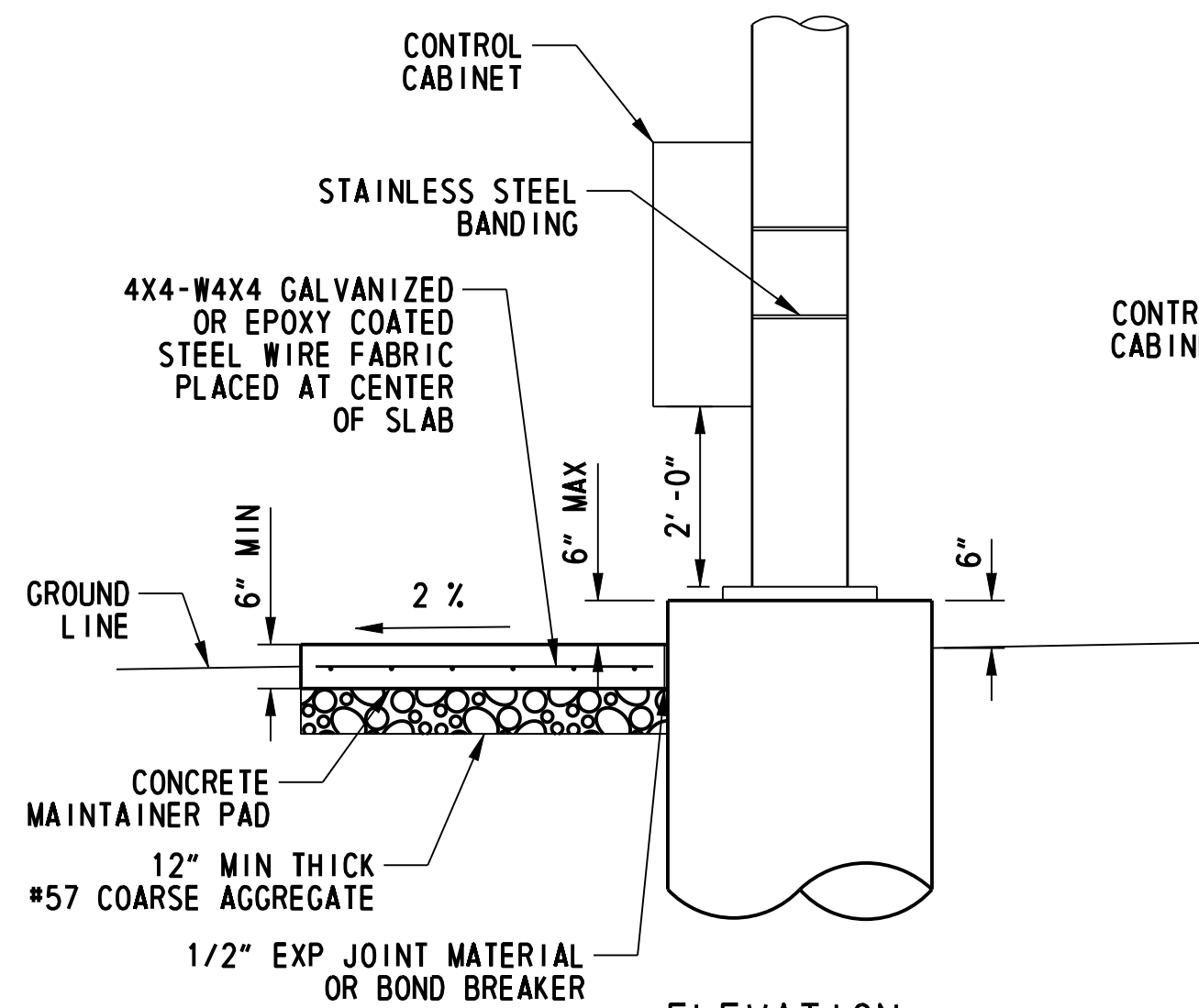
NOTE:

FOR ADDITIONAL INFORMATION REGARDING PAVEMENT MARKING AND RECESSED PAVEMENT MARKER LAYOUT SEE THE DELAWARE MUTCD.

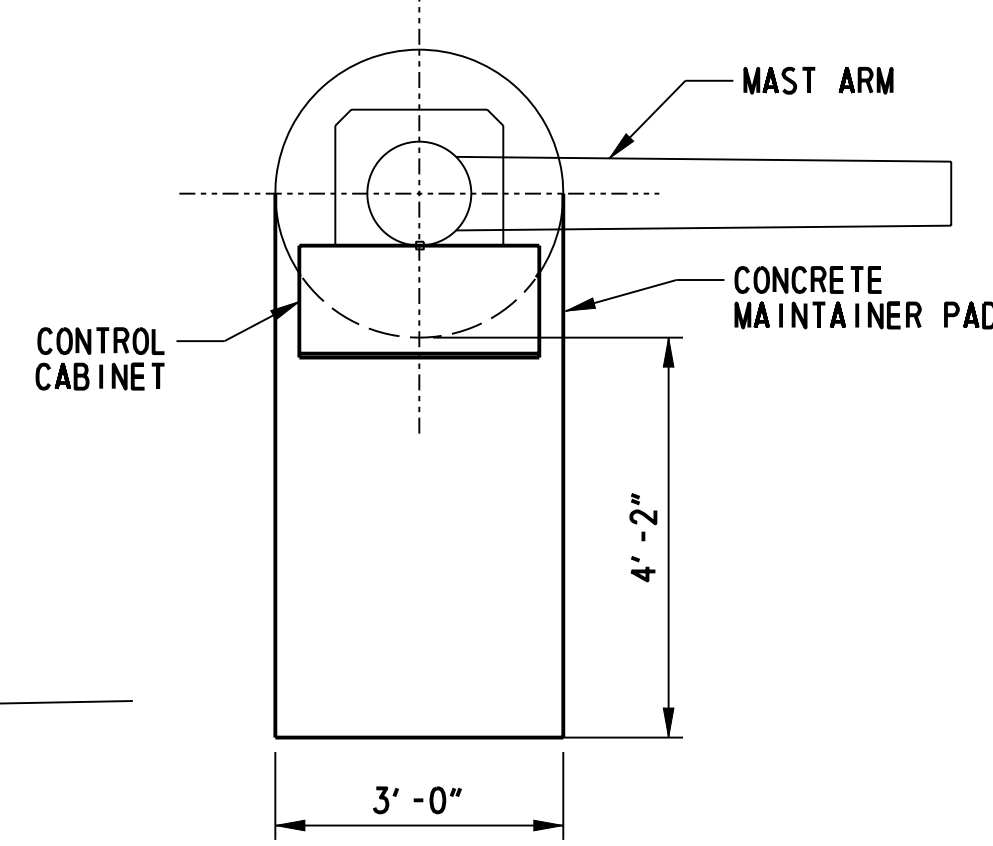
NOTES:

- CONNECT PIPE UNDERDRAINS TO INLETS USING A THREE FOOT LENGTH OF NON-PERFORATED CONNECTION PIPE. FURNISHING AND INSTALLING CONNECTION PIPE AND PIPE END CAPS TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 715001 - PERFORATED PIPE UNDERDRAINS, 6". CONNECTION PIPES AND END CAPS SHALL BE THE SAME MATERIAL AS FOR PERFORATED PIPE UNDERDRAINS.
- PAYMENT FOR CONNECTING PIPE UNDERDRAINS OR UNDERDRAIN OUTLET PIPE TO INLETS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE ITEM.
- CONNECTION PIPE SHALL BE INSTALLED WITH A MINIMUM RADIUS OF 3 FEET.
- CUT GEOTEXTILE IN WALL OF UNDERDRAIN TRENCH FOR CONNECTION PIPE SO AS TO MINIMIZE EXPOSURE OF TRENCH. WRAP SECTION OF CONNECTION PIPE OUTSIDE TRENCH IN GEOTEXTILE AND PROVIDE SIX INCH LAP AROUND CONNECTION PIPE AT UNDERDRAIN TRENCH WALL. GEOTEXTILE TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 715001 - PERFORATED PIPE UNDERDRAINS, 6".
- NON-PERFORATED UNDERDRAIN OUTLET PIPE SHALL HAVE A SMOOTH INSIDE WALL AND BE THE SAME MATERIAL AS FOR PERFORATED PIPE UNDERDRAINS OR AS APPROVED BY THE ENGINEER. ALL REQUIRED CONNECTIONS SHALL BE INCIDENTAL TO ITEM NO. 715001, UNDERDRAIN OUTLET PIPE, 6".
- SLOPE OF UNDERDRAIN OUTLET SHALL MATCH THE ROAD SIDE SLOPE AT OUTLET LOCATION. FOR SLOPES STEEPER THAN 3:1, USE A 3:1 SLOPED HEADWALL.

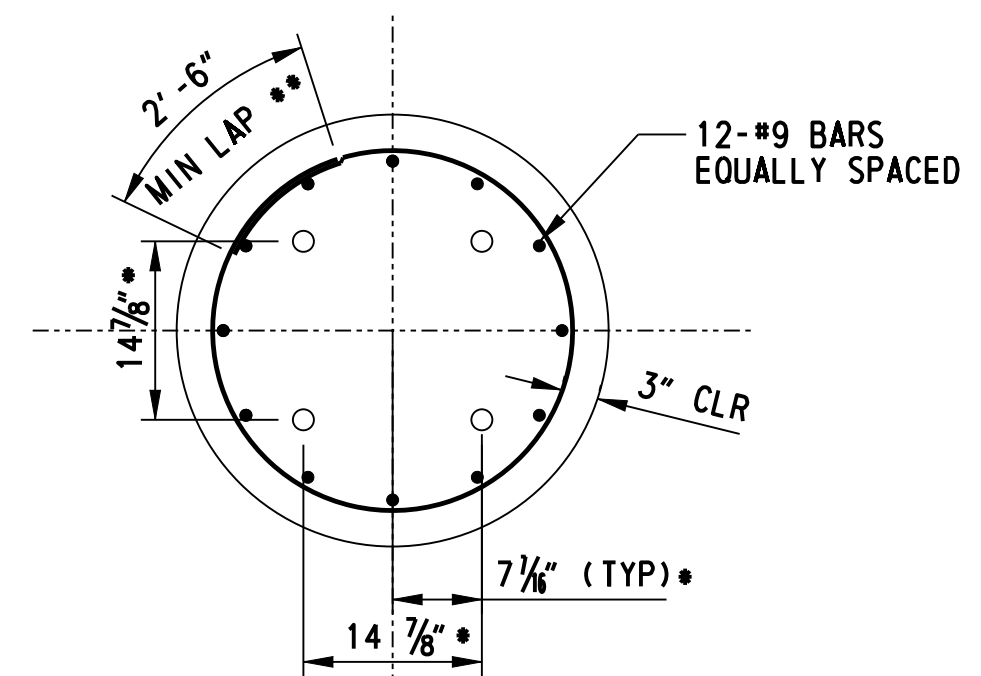
UNDERDRAIN OUTLET



ELEVATION

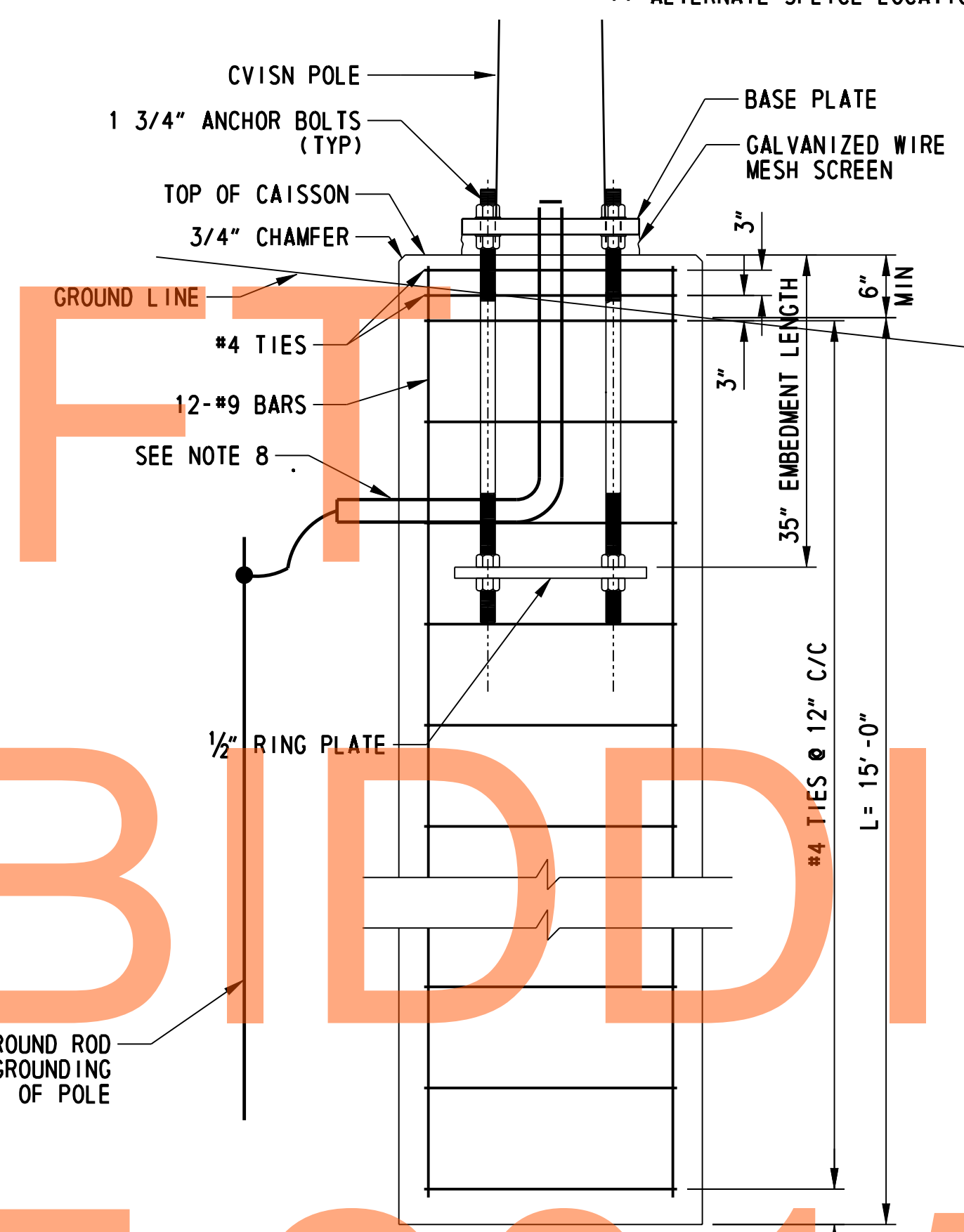


PLAN

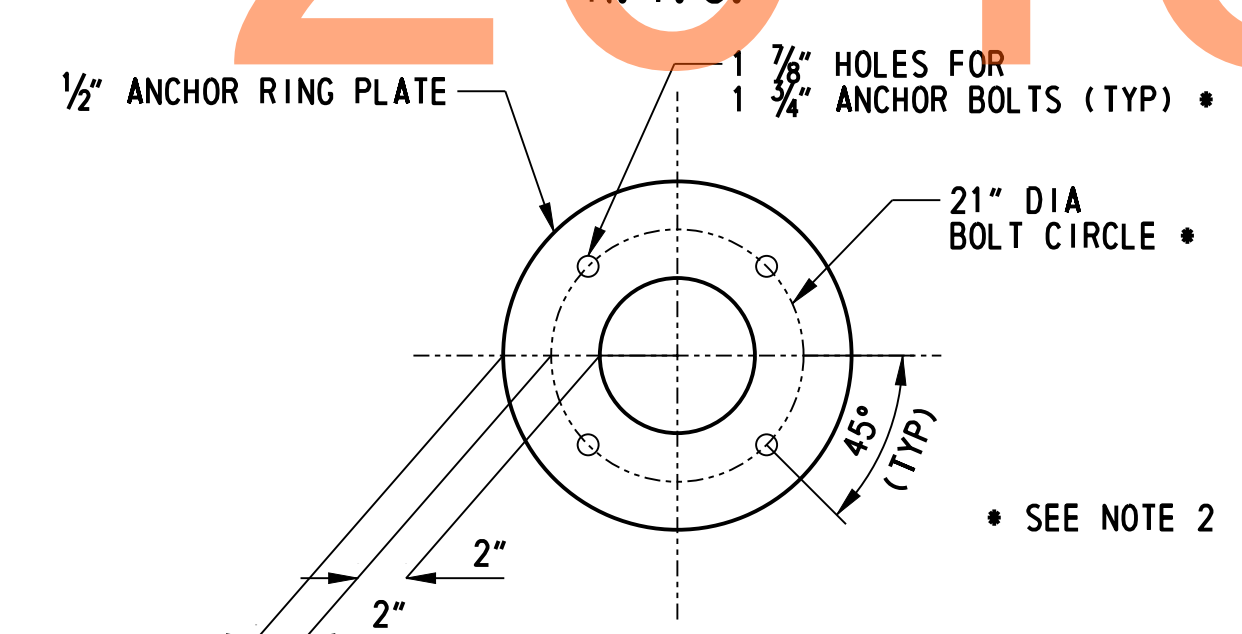


PLAN

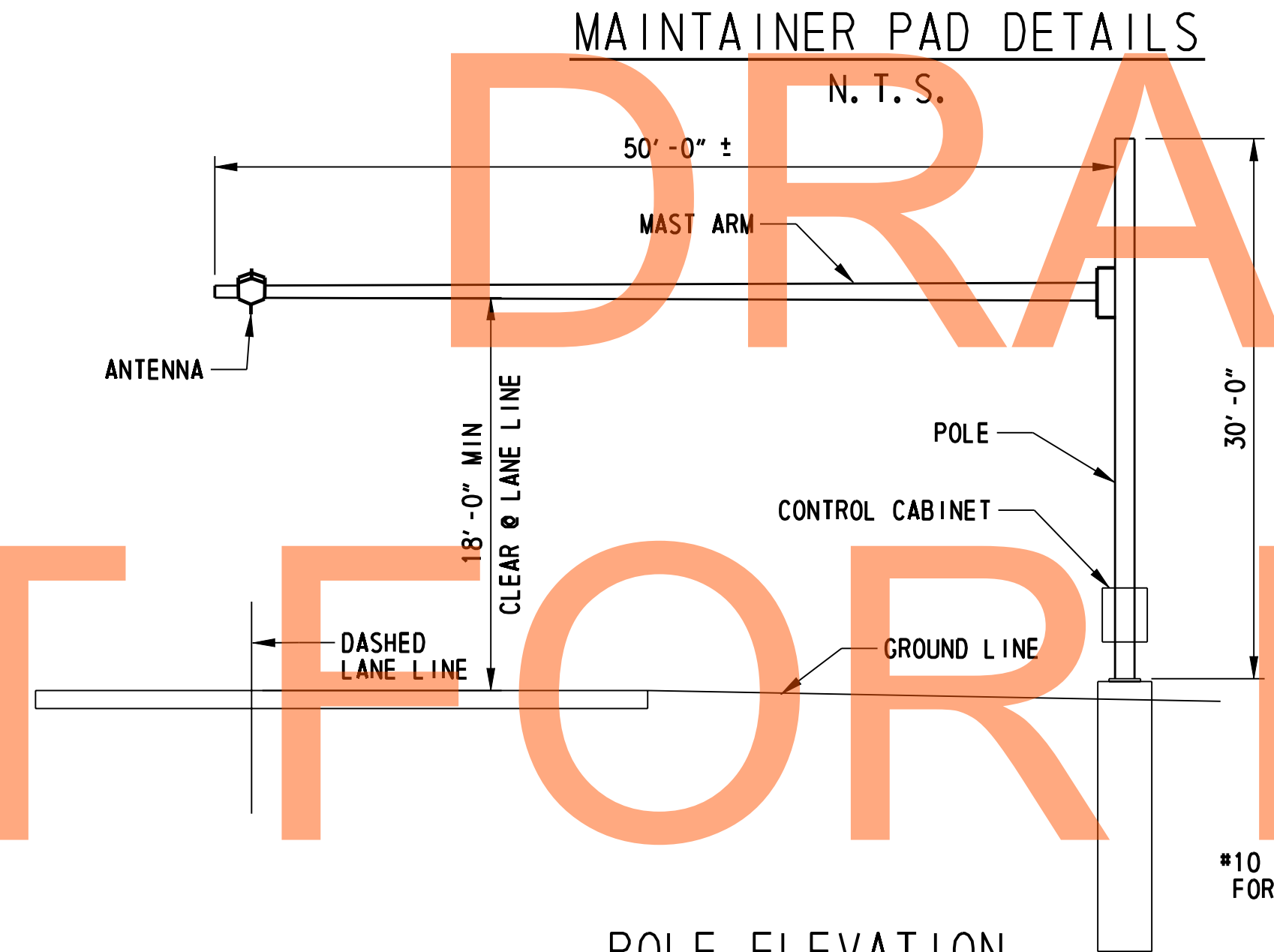
• SEE NOTE 2  
•• ALTERNATE SPLICE LOCATIONS



ELEVATION  
POLE CAISSON FOUNDATION  
N. T. S.



ANCHOR RING PLATE DETAIL  
N. T. S.



POLE ELEVATION  
N. T. S.

- CVISN POLE RELOCATION NOTES:
1. ESTABLISH FINAL GRADE IN POLE VICINITY PRIOR TO FOUNDATION CONSTRUCTION.
  2. FIELD VERIFY EXISTING ANCHOR BOLT DIAMETERS AND ANCHOR BOLT CIRCLE DIMENSION OF EXISTING POLE PRIOR TO NEW FOUNDATION CONSTRUCTION.
  3. PROVIDE NEW ANCHOR RING PLATE, ANCHOR BOLTS, FLAT WASHERS, LOCK WASHERS, AND HEAVY HEX NUTS WITH NEW CAISSON FOUNDATION AS SHOWN.
  4. RELOCATE EXISTING POLE AND MAST ARM ON NEW CAISSON FOUNDATION AND REINSTALL CONTROL CABINET AND ANTENNA.
  5. MAINTAIN THE SAME WIRING CONFIGURATIONS.
  6. MAINTAIN 18'-0" VERTICAL CLEARANCE.
  7. ALL WORK FOR RELOCATION OF CVISN POLE AND MAST ARM SHALL BE PAID UNDER ITEM NO. 746951.
  8. INSTALL 2-2" CONDUIT EXITING FOUNDATION OPPOSITE OF ROADWAY (COMMS AND POWER). 1-2" CONDUIT PERPENDICULAR WITH ROADWAY (WIM/SPARE) AND 1 3/4" CONDUIT FOR GROUNDING.
  9. SEE SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.

CVISN POLE DETAIL  
NB US 301 STATION 153+50

DRAFT

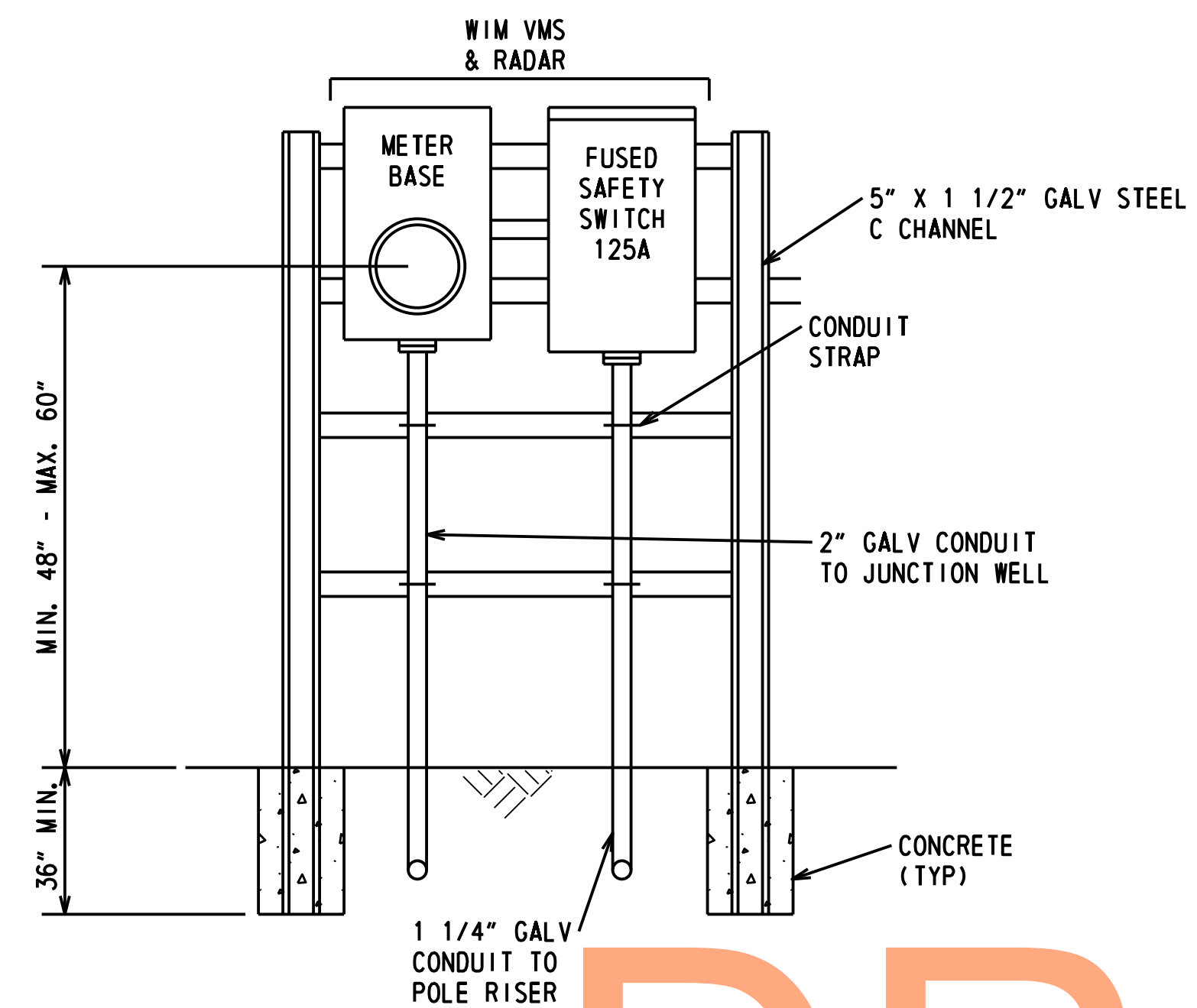
NOT FOR BIDDING

AUGUST 2015

J:\2008 PROJECTS\E3X34801\700CADD\750AET\ROADWAY\DT\_301AET\_022.DGN

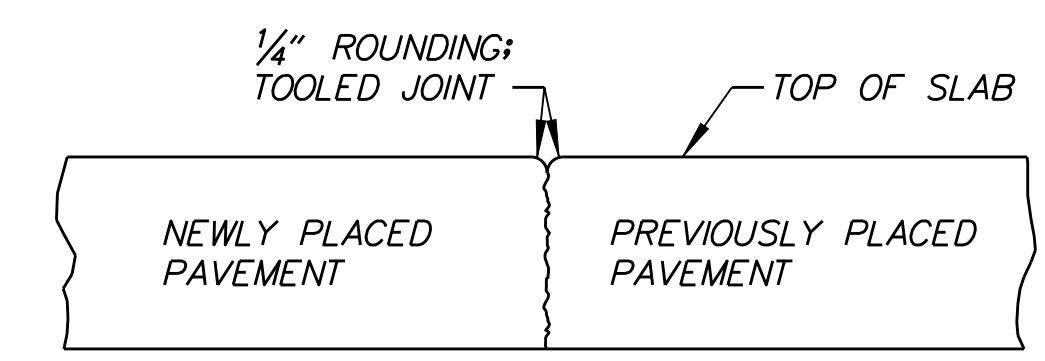
<b>DELAWARE DEPARTMENT OF TRANSPORTATION</b>	ADDENDUMS / REVISIONS	<b>NOT TO SCALE</b>	<b>US 301 MARYLAND STATE LINE TO LEVELS ROAD</b>	CONTRACT T200811301	BRIDGE NO.	<b>CONSTRUCTION DETAILS</b>	SHEET NO. 235	
					COUNTY NEW CASTLE		DESIGNED BY: SPM	TOTAL SHTS. 850
					CHECKED BY: DJP			

**DT-22**

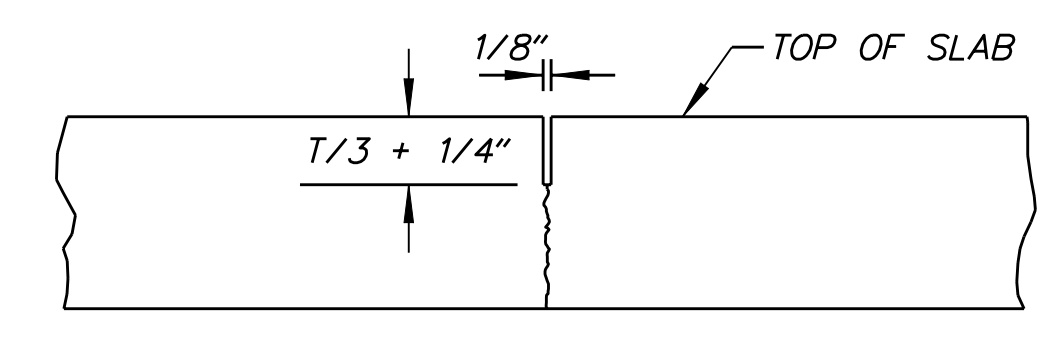


SERVICE RACK AT STRAWBERRY LANE STA 1016+55 RT.  
FOR WIM EQUIPMENT

ELECTRIC SERVICE ON RACK DETAIL



LONGITUDINAL AND TRANSVERSE CONSTRUCTION JOINT DETAIL



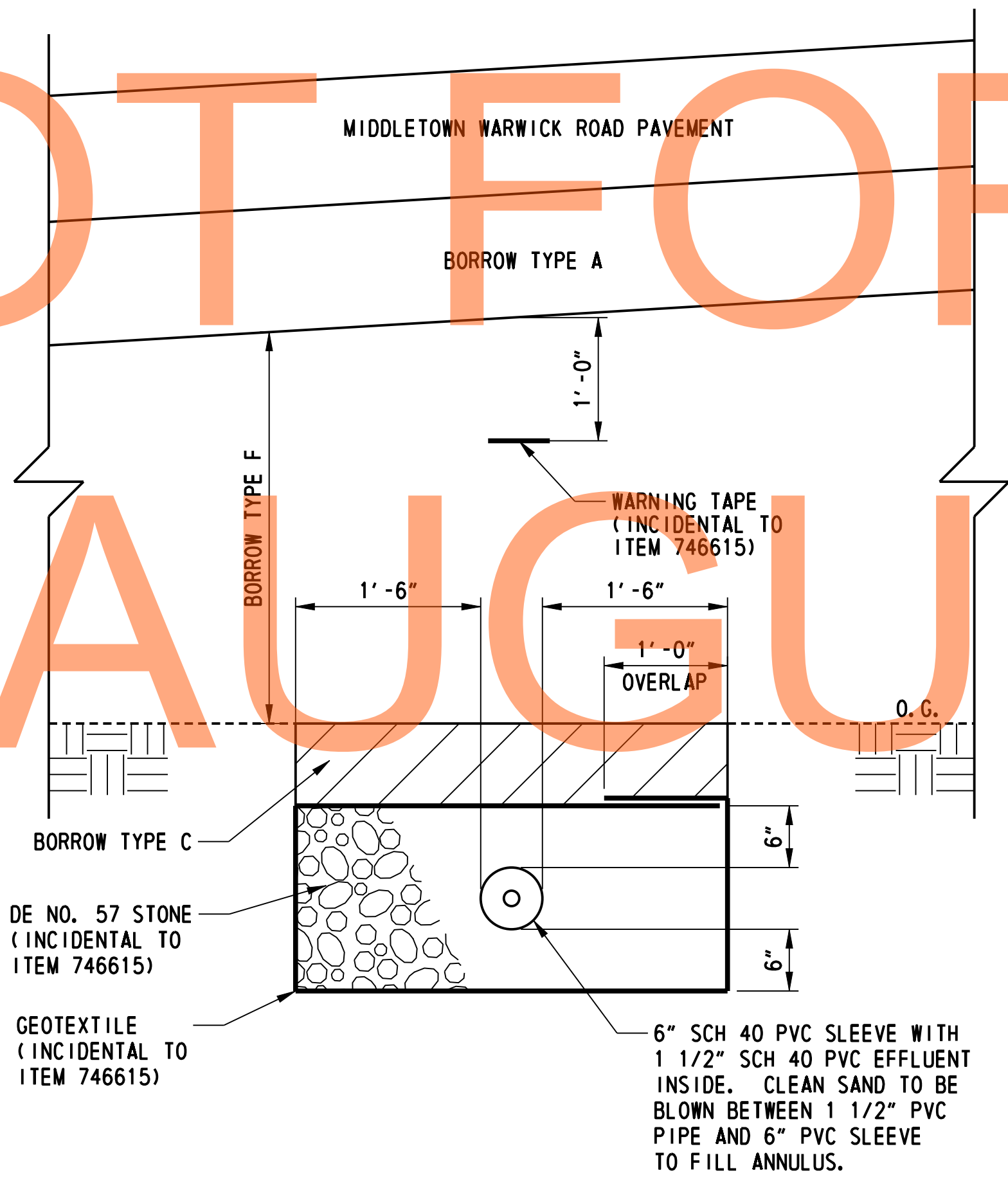
T = PAVEMENT THICKNESS IN INCHES

LONGITUDINAL AND TRANSVERSE SAW-CUT JOINT DETAIL

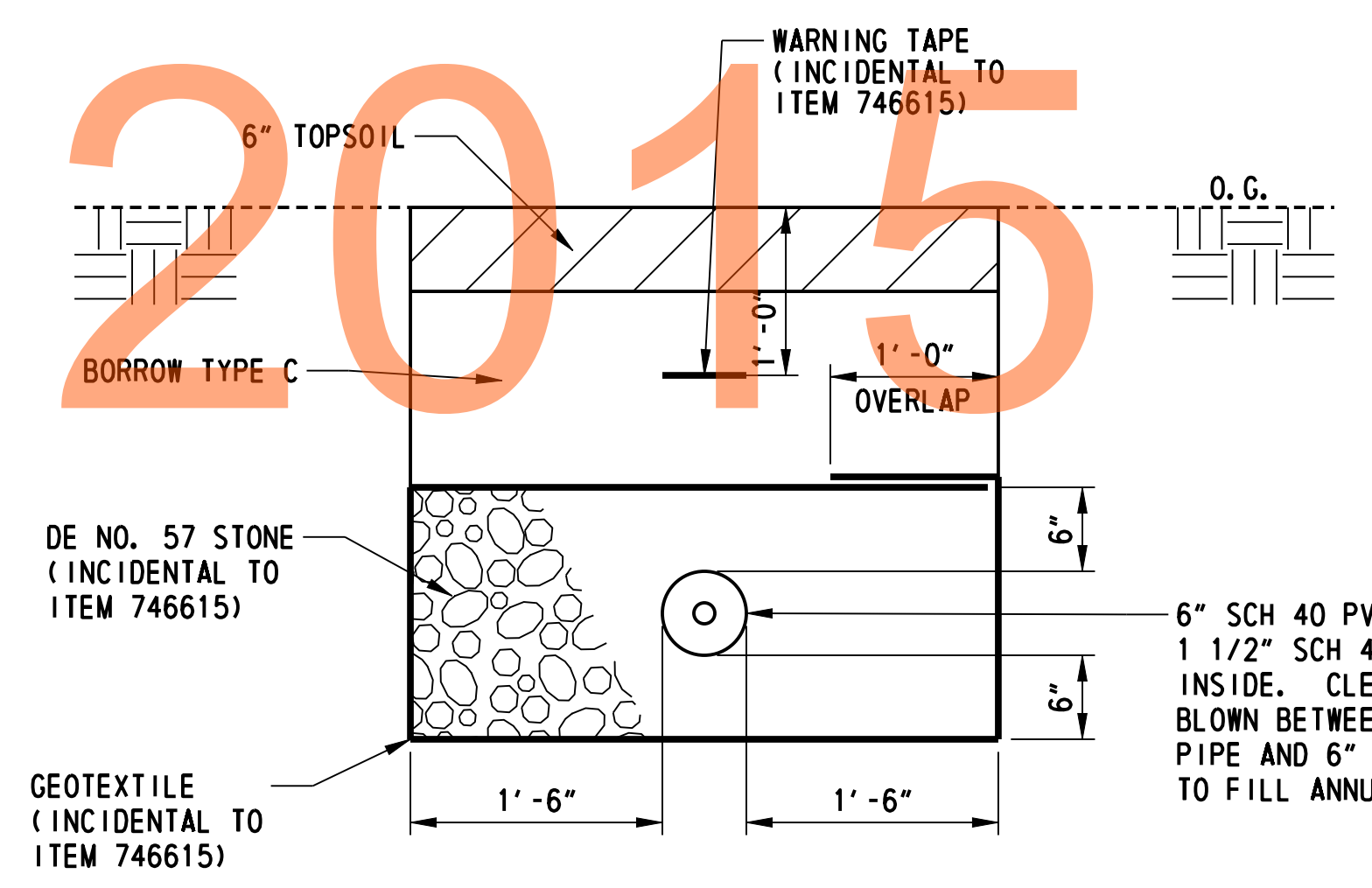
NOTES:

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.

NOT FOR BIDDING  
AUGUST 2015



6" SCHEDULE 40 PVC ENCASEMENT TRENCH UNDER ROADWAY



6" SCHEDULE 40 PVC ENCASEMENT TRENCH UNDER NON-PAVED AREA

J:\2008 PROJECTS\E3\34801\700CADD\750AET\ROADWAY\DT\_301AET\_023.DGN

ADDENDUMS / REVISIONS	

NOT TO SCALE

US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

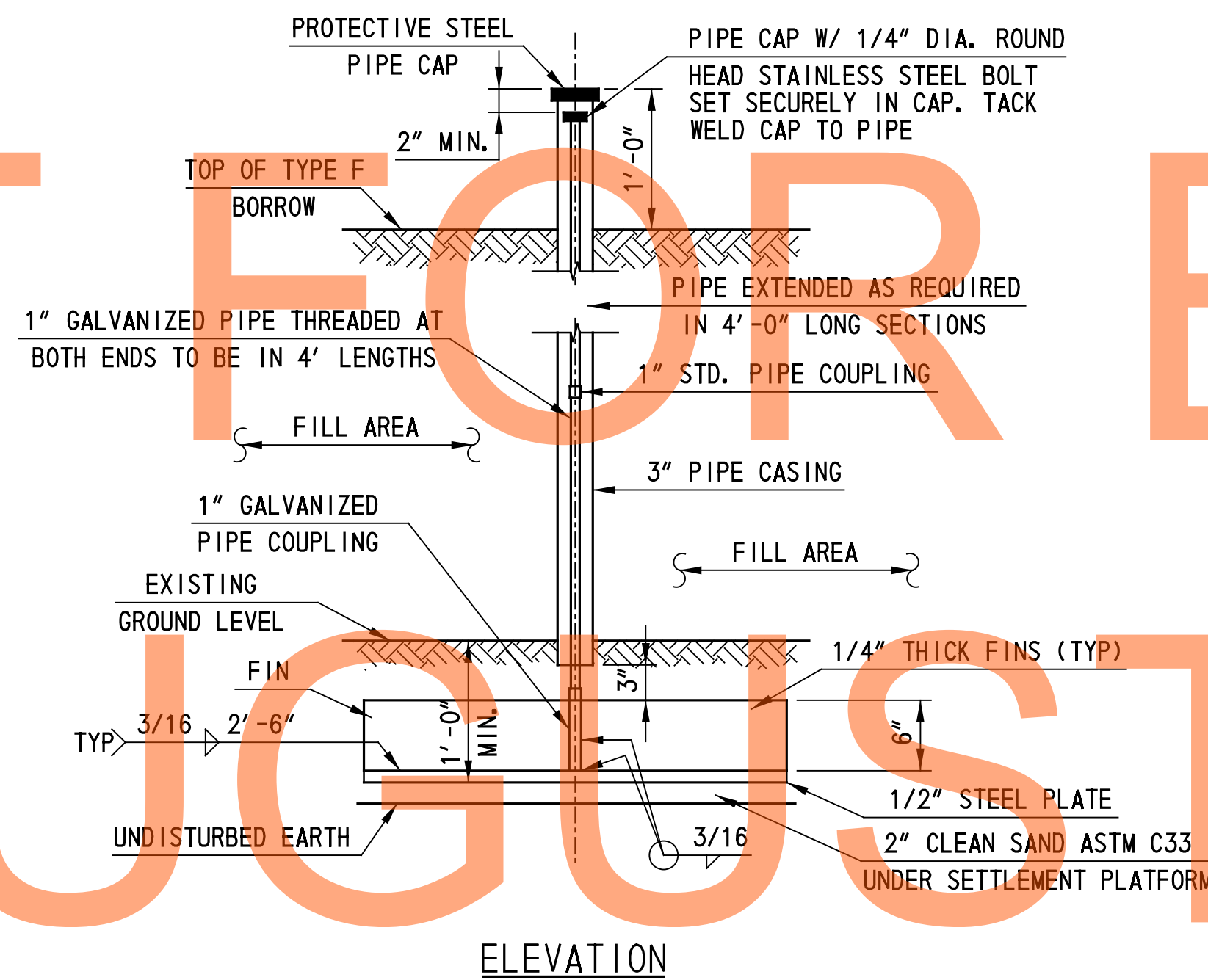
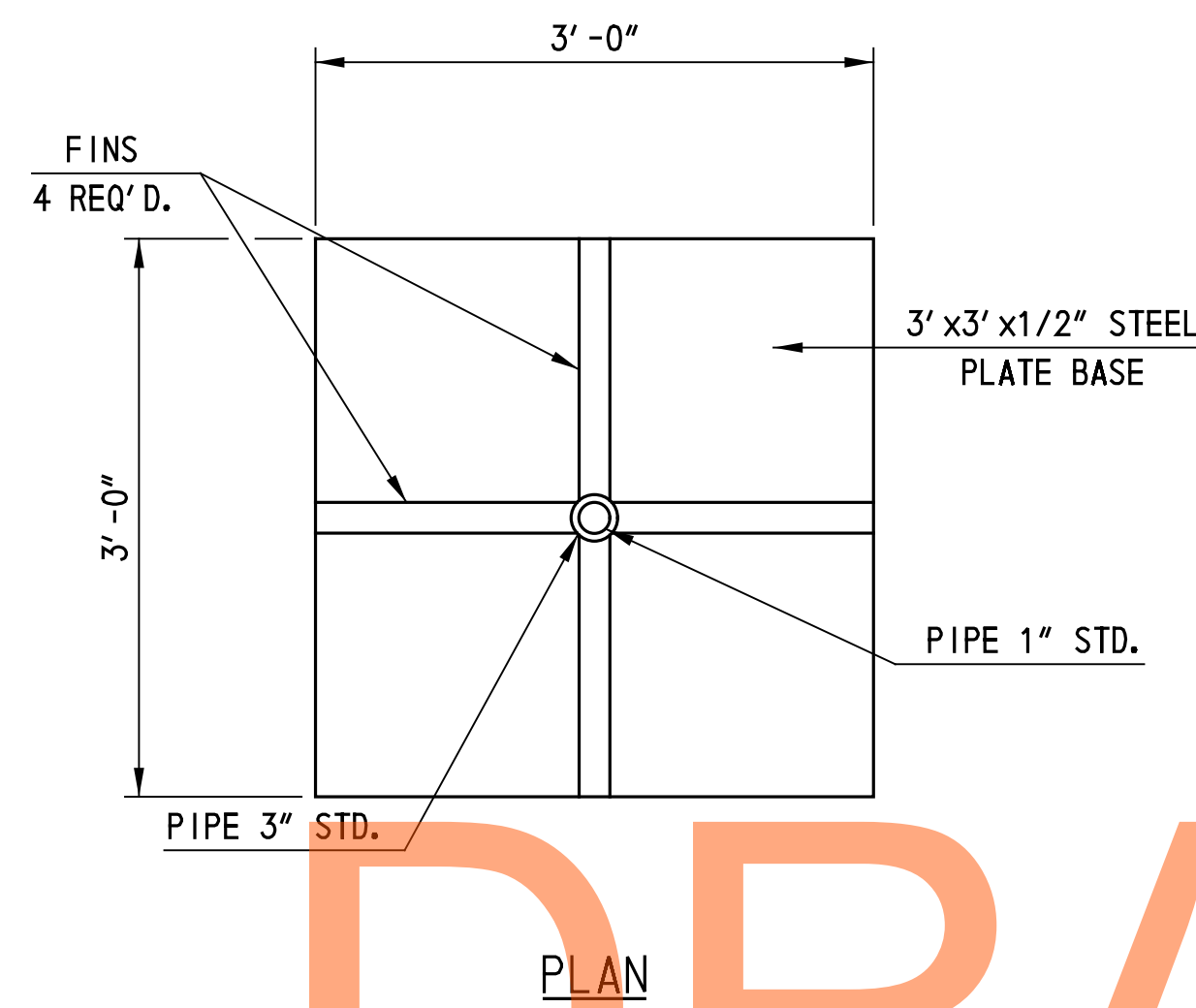
CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: RB
	CHECKED BY: SKH

**CONSTRUCTION DETAILS**

DT-23

SHEET NO. 236
TOTAL SHTS. 850

EMBANKMENT SETTLEMENT MONITORING LOCATIONS								
STRUCTURE NO.	INSTRUMENT NAME	INSTRUMENTATION TYPE	COORDINATES		BASELINE	STATION	OFFSET	ANTICIPATED SETTLEMENT
			NORTHING	EASTING				
BR1-486	BR1-486-SP-1	SETTLEMENT PLATFORM	515592.04	557156.31	STRAW. LN	1010+28.80	14 RT	1.5 INCH
BR1-486	BR1-486-SP-2	SETTLEMENT PLATFORM	515618.47	557165.56	STRAW. LN	1010+28.80	14 LT	1.5 INCH
BR1-486	BR1-486-SP-3	SETTLEMENT PLATFORM	515550.37	557360.13	STRAW. LN	1012+34.94	14 LT	1.5 INCH
BR1-486	BR1-486-SP-4	SETTLEMENT PLATFORM	515523.95	557350.88	STRAW. LN	1012+34.94	14 RT	1.5 INCH
BR1-482	BR1-482-SP-1	SETTLEMENT PLATFORM	526476.93	561402.29	LEVELS RD	1295+60.00	25 RT	1.3 INCH
BR1-482	BR1-482-SP-2	SETTLEMENT PLATFORM	526507.19	561425.28	LEVELS RD	1295+60.00	13 LT	1.3 INCH
BR1-482	BR1-482-SP-3	SETTLEMENT PLATFORM	526377.12	531576.48	LEVELS RD	1297+75.00	13 LT	1.3 INCH
BR1-482	BR1-482-SP-4	SETTLEMENT PLATFORM	526346.87	561573.49	LEVELS RD	1297+75.00	25 RT	1.3 INCH



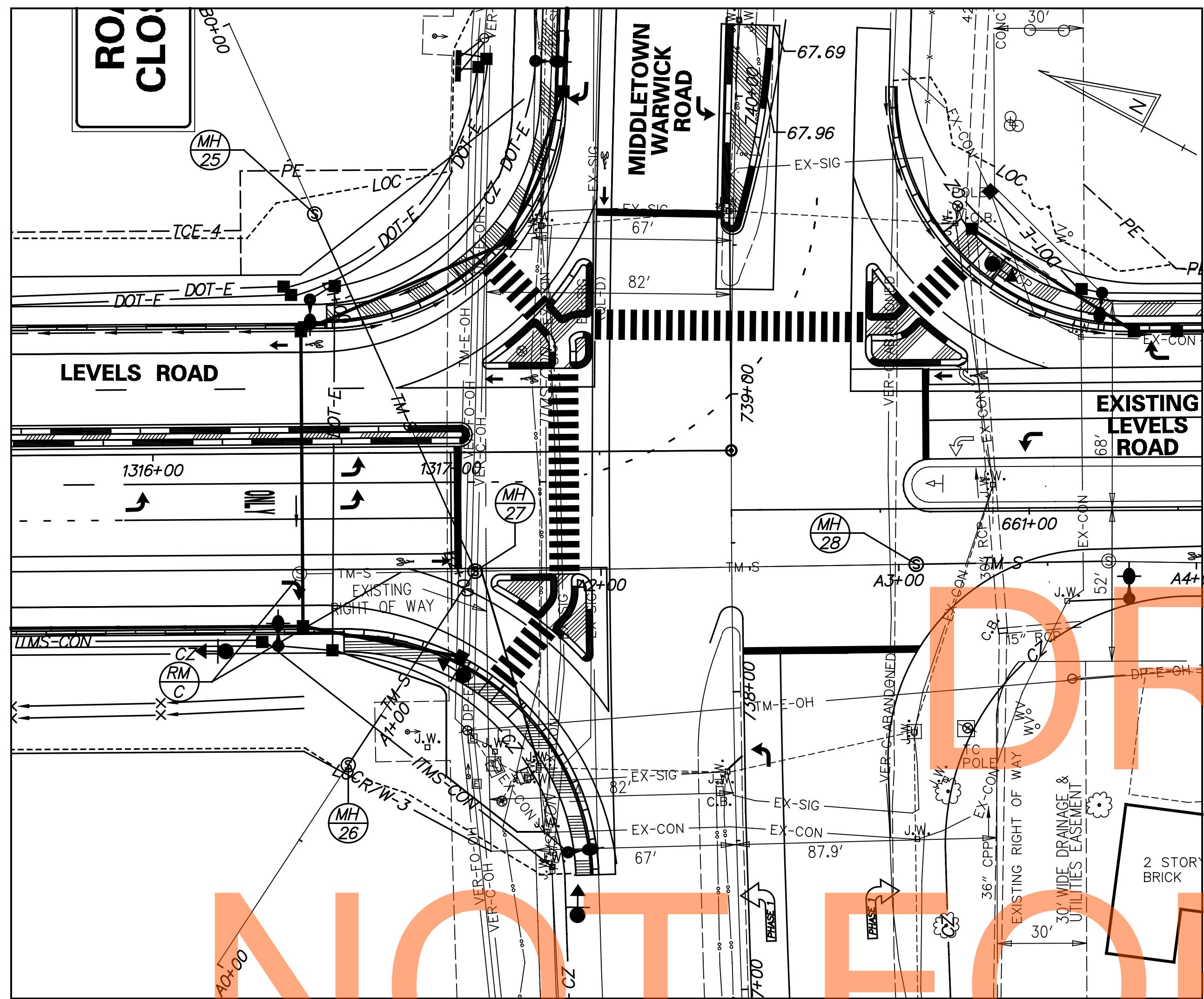
NOTES:

- SETTLEMENT PLATFORMS SHALL BE INSTALLED AND PAID FOR IN ACCORDANCE WITH SPECIAL PROVISION AND ITEM "202505 - SETTLEMENT PLATFORM".
- THE SETTLEMENT PLATFORM SHALL BE INSTALLED WITH THE PIPE PLUMB.
- THE ELEVATION OF THE SETTLEMENT PLATFORMS AND GROUND SURFACE NEAR THE INSTRUMENTS SHALL BE SURVEYED UPON INSTALLATION, AND AGAIN 24-72 HOURS AFTER INSTALLATION TO VERIFY INITIAL DATA.
- READINGS ON THE SETTLEMENT PLATFORMS SHALL BE MADE AFTER THE INITIAL INSTALLATION OF THE RISER AND CASING PIPES, AND INSTALLATION RECORD SHEETS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FILL PLACEMENT.
- DURING FILL PLACEMENT, READINGS ON ALL SETTLEMENT PLATFORMS SHALL BE TAKEN AT A MINIMUM OF 3 CALENDAR DAY INTERVALS AND SUBMITTED TO THE ENGINEER.
- FOLLOWING THE COMPLETION OF FILL PLACEMENT, THE CONTRACTOR SHALL ALLOW FOR A 30 DAY QUARANTINE PERIOD FOR SETTLEMENT TO OCCUR. DURING THE QUARANTINE PERIOD, READINGS ON ALL SETTLEMENT PLATFORMS SHALL BE TAKEN AT A MINIMUM OF 3 CALENDAR DAY INTERVALS. IF THE SETTLEMENT HAS CEASED BY CALENDAR DAY 6, THAT IS THREE READINGS AFTER THE COMPLETION OF THE FILL, THE SUBSTRUCTURE WILL BE RELEASED BY THE ENGINEER FOR FINAL GRADING WITHIN THREE WORKING DAYS OF RECEIPT OF SETTLEMENT MONITORING RESULTS.
- WHEN MEASURING SETTLEMENTS CONTRACTOR SHALL ALSO MEASURE ELEVATION AT THE TOP OF FILL ADJACENT TO SETTLEMENT PLATFORMS.
- THE CONTRACTOR SHALL PROTECT ALL SETTLEMENT PLATFORMS FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS, WEATHER, TRAFFIC AND VANDALISM. IF A SETTLEMENT PLATFORM IS DAMAGED, THE CONTRACTOR SHALL REPAIR OR REPLACE THE DAMAGED SETTLEMENT PLATFORM AT NO ADDITIONAL COST TO THE DEPARTMENT.
- AFTER OBTAINING APPROVAL FROM THE ENGINEER THAT THE SETTLEMENT PLATFORMS ARE NO LONGER REQUIRED REMOVE TO ONE FOOT BELOW LIMITS OF TYPE F BORROW AND FILL WITH FINE AGGREGATE MEETING THE REQUIREMENTS OF AASHTO M6. QUANTITY TO FILL 1" GALVANIZED PIPE AND 3" STANDARD PIPE CASING SHALL BE INCIDENTAL TO ITEM "202505 - SETTLEMENT PLATFORM".

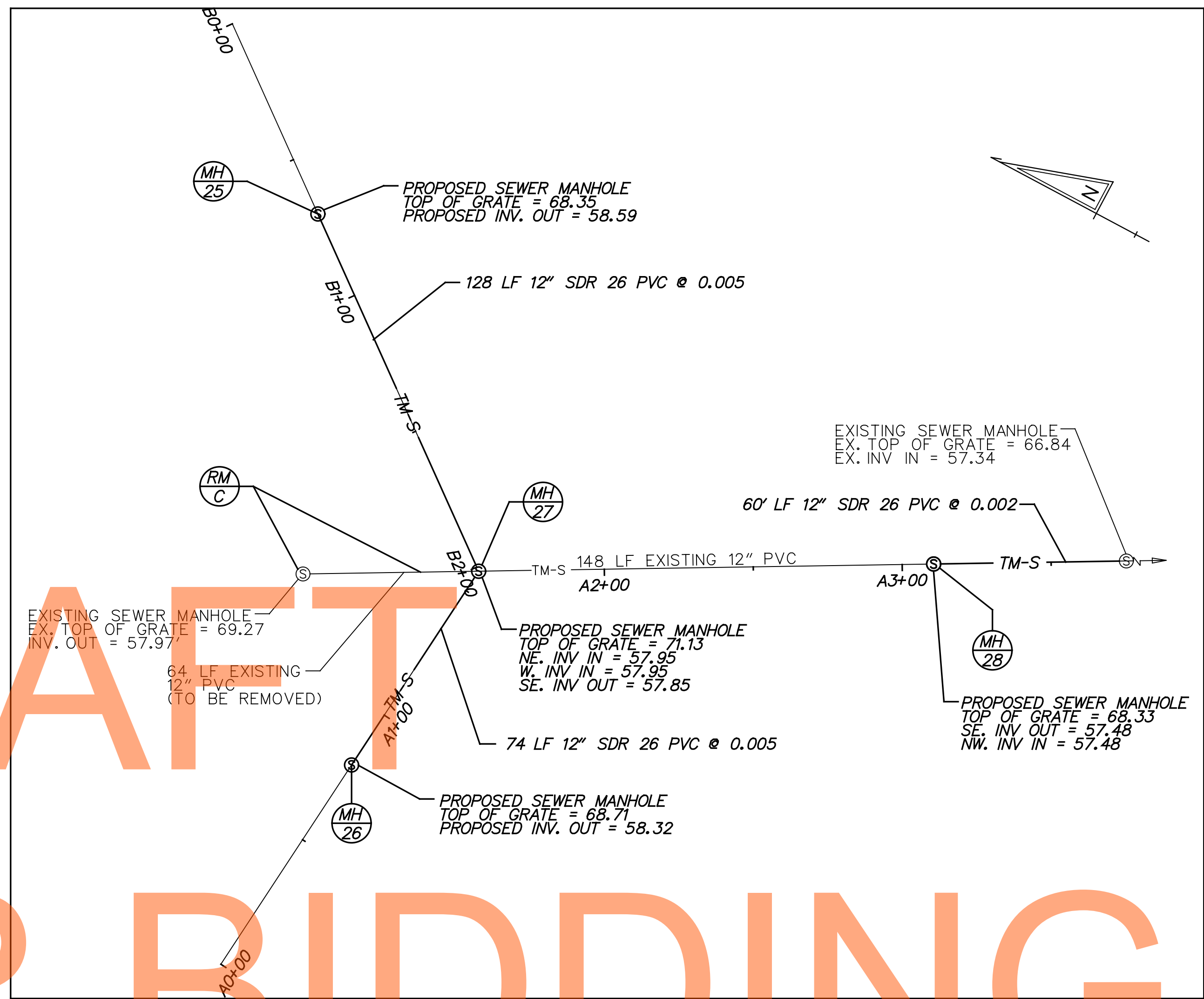
SETTLEMENT MONITORING PLATFORM DETAIL

DRAFT  
NOT FOR BIDDING  
AUGUST 2010

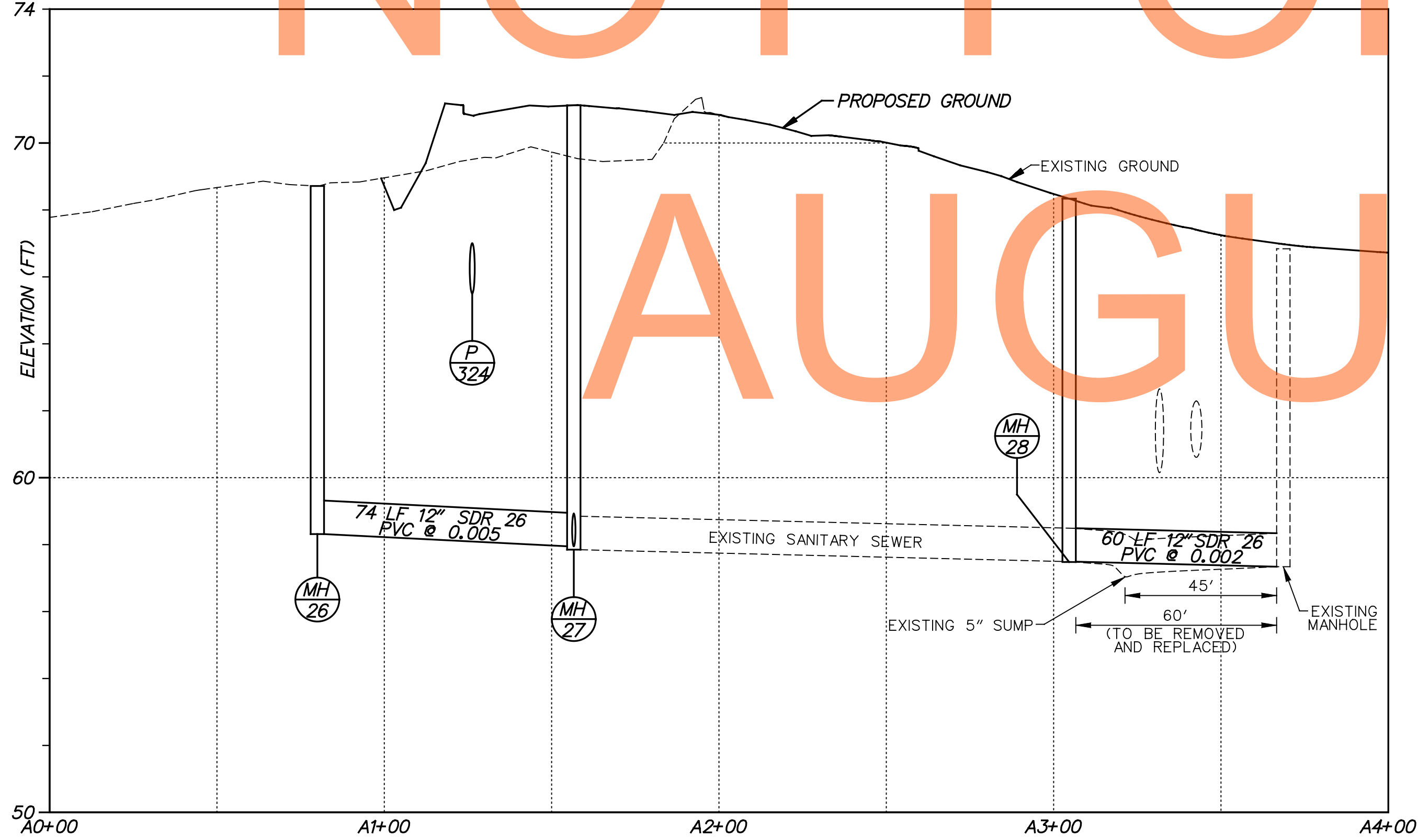




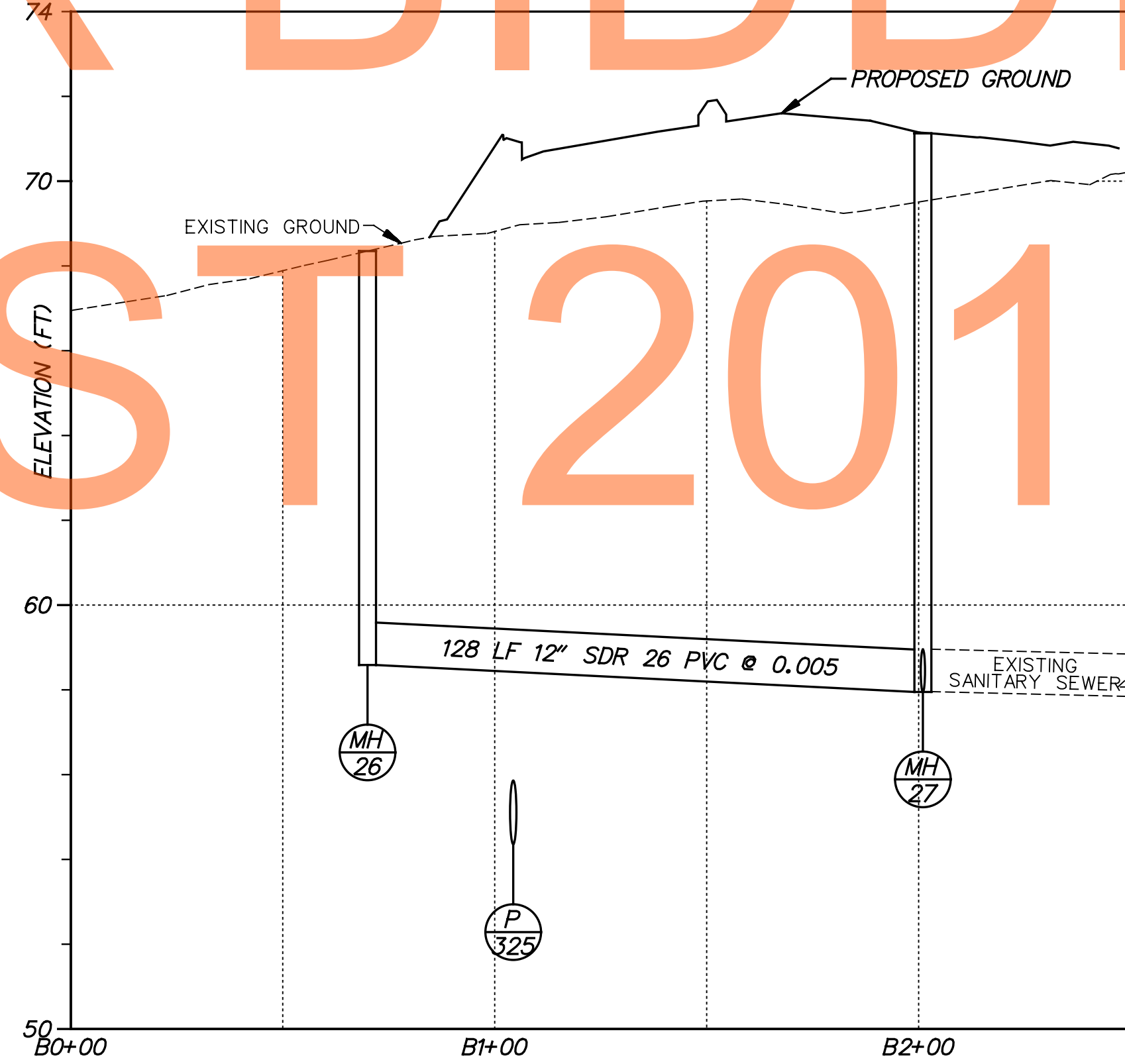
PLAN VIEW



SANITARY SEWER DETAIL



WESTERN SPUR / LEVELS ROAD SEWER PROFILE



NORTHERN SPUR SEWER PROFILE

**LEGEND**

**EXISTING UTILITIES**

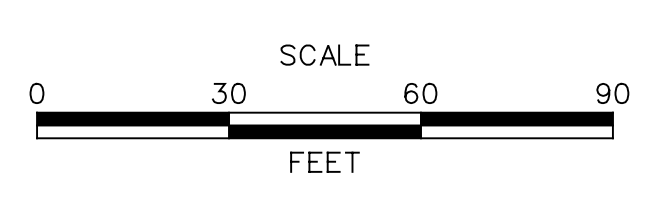
- AW-W ARTESIAN WATER COMPANY
- DP-E DELMARVA POWER - ELECTRIC
- DP-E-OH DELMARVA POWER - ELECTRIC (OVERHEAD)
- EX-CON DEDOT MULTIDUCT CONDUIT
- VER-C VERIZON
- VER-C-OH VERIZON (OVERHEAD)
- VER-FO-OH VERIZON FIBER-OPTIC (OVERHEAD)
- EX-SIG DELDOT SIGNAL CONDUIT
- TM-S TOWN OF MIDDLETOWN - SEWER

**PROPOSED UTILITIES**

- AW-W ARTESIAN WATER COMPANY
- DP-E DELMARVA POWER - ELECTRIC
- DP-E-OH DELMARVA POWER - ELECTRIC (OVERHEAD)
- DOT-E DELDOT - ELECTRIC
- ITMS-CON DELDOT MULTIDUCT CONDUIT
- SIG-CON DELDOT SIGNAL CONDUIT
- VER-C VERIZON
- VER-C-OH VERIZON (OVERHEAD)
- VER-FO VERIZON - FIBER OPTIC
- VER-FO-OH VERIZON - FIBER OPTIC (OVERHEAD)
- TM-S TOWN OF MIDDLETOWN - SEWER
- WIM-E WIM ELECTRICAL CONDUIT
- WIM-COM WIM COMMUNICATIONS CONDUIT



ADDENDUMS / REVISIONS

US 301  
MARYLAND STATE LINE  
TO LEVELS ROAD

CONTRACT T200811301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: MAG/TAM
	CHECKED BY: PAH

**SANITARY SEWER DETAIL**

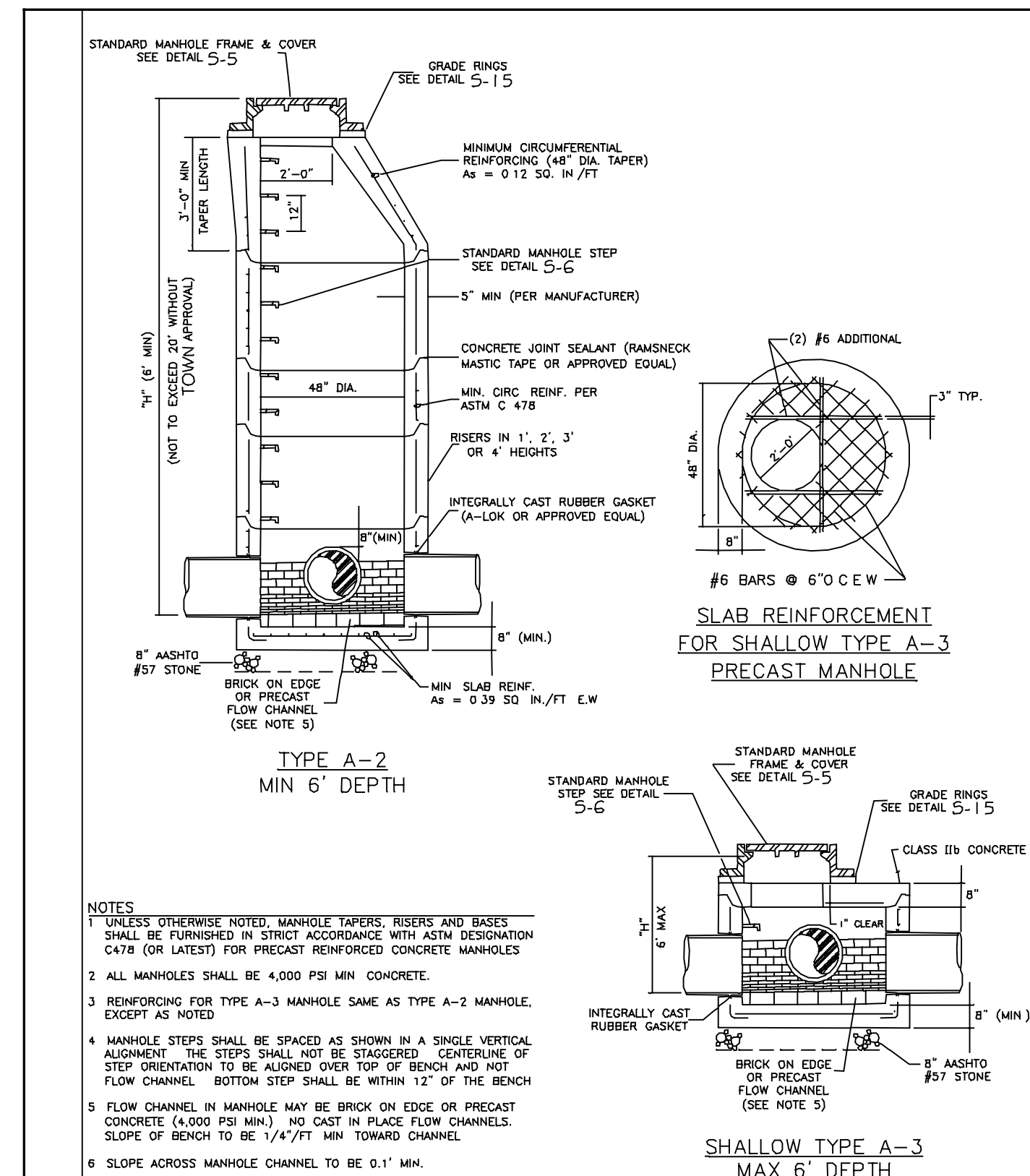
SHEET NO. 238
TOTAL SHTS. 850

DRAFT

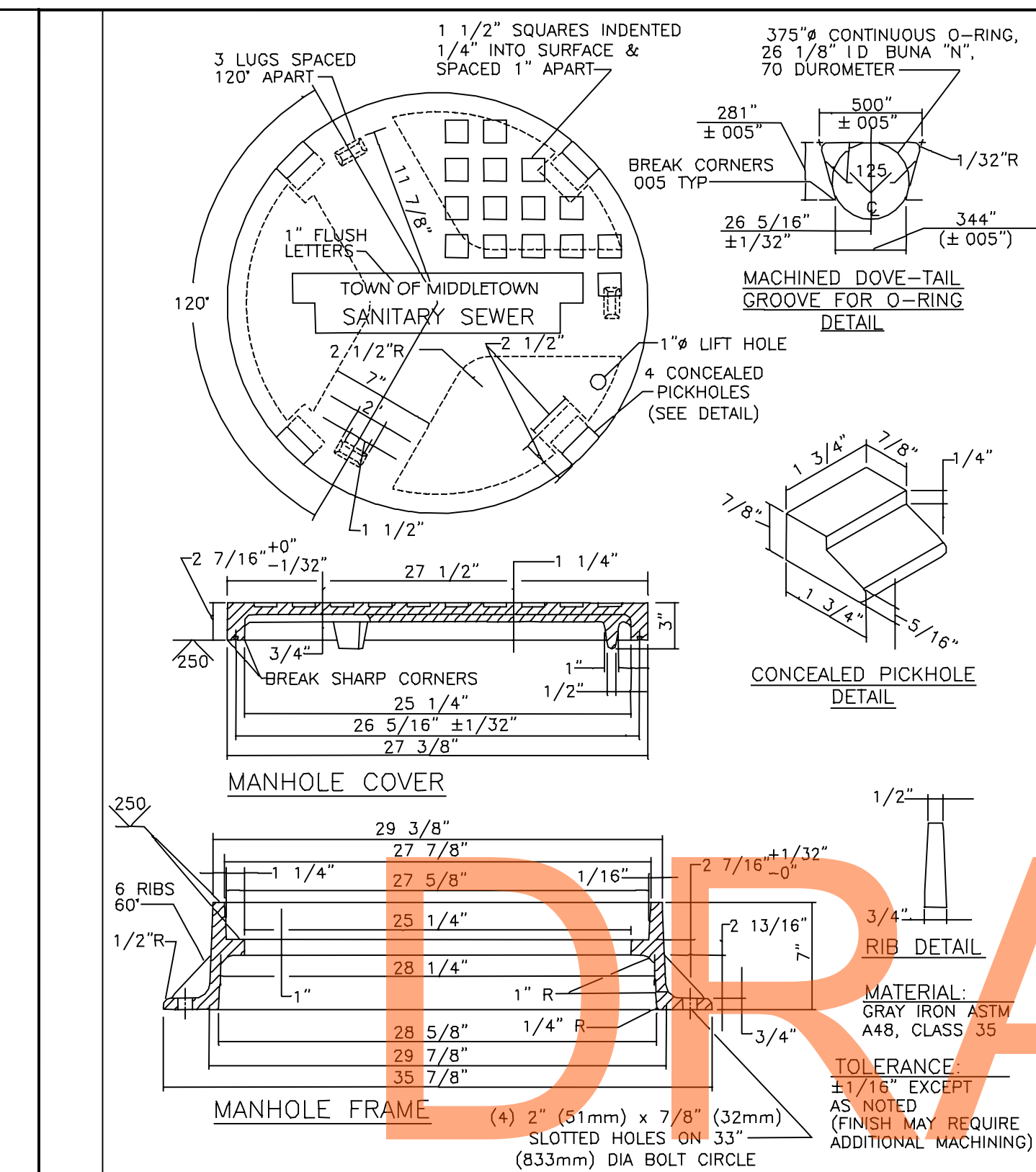
NOT FOR BIDDING

AUGUST 2015

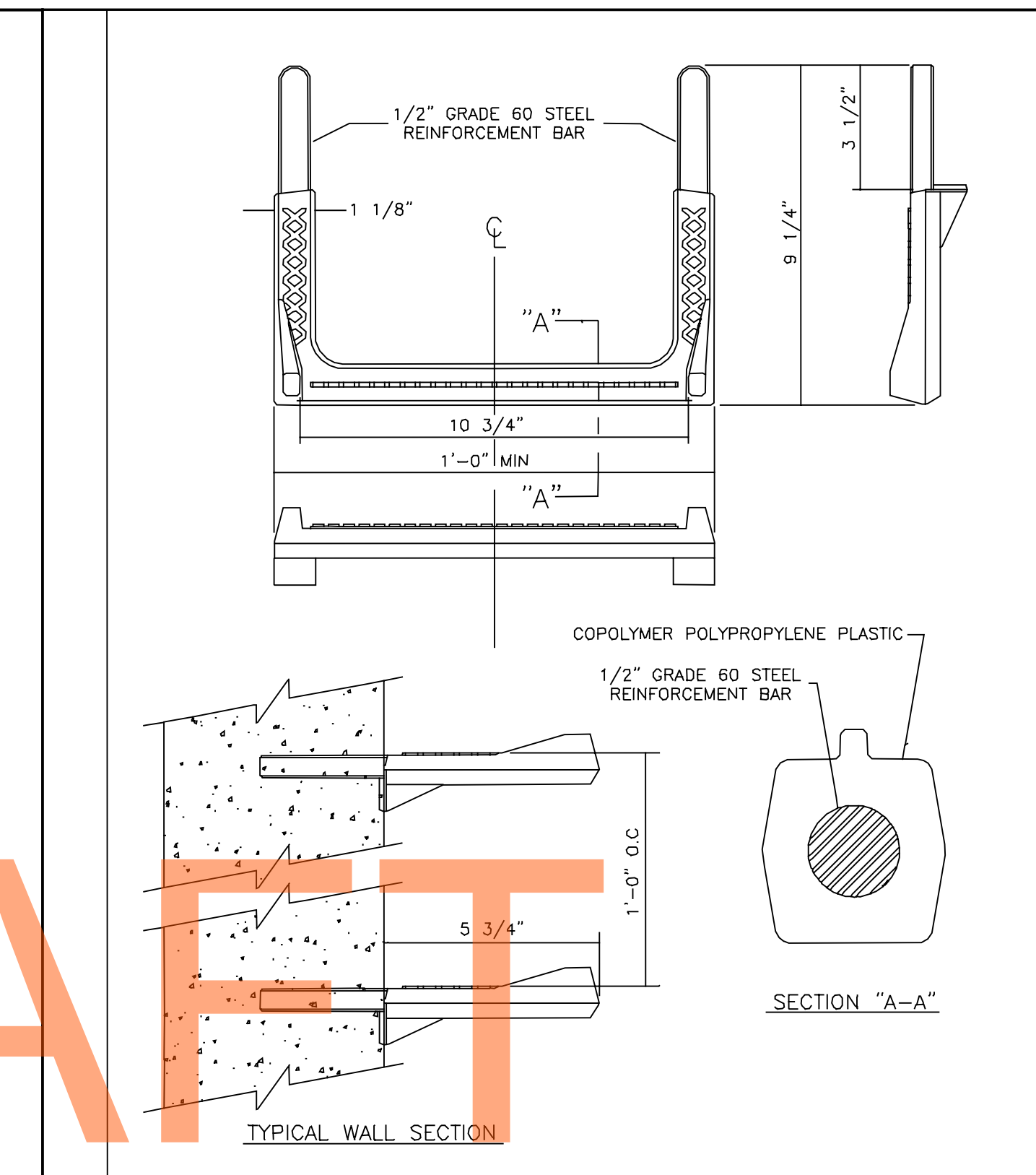
DT-25



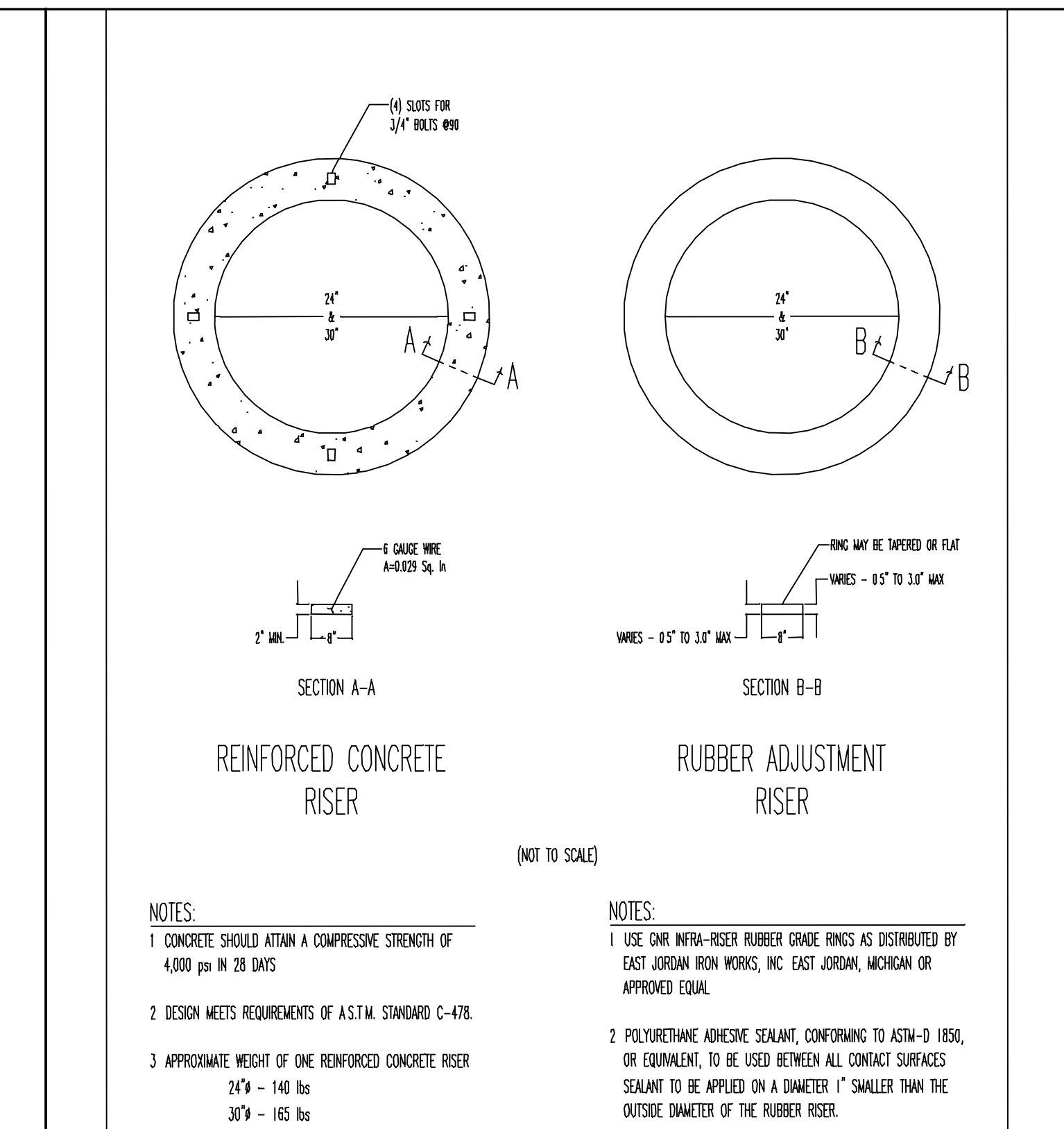
ISSUED	2010		STANDARD 48" PRECAST CONCRETE MANHOLE
REVISED			
SANITARY SEWER DETAILS			
SOURCE	NEW CASTLE COUNTY	DEPARTMENT OF PUBLIC WORKS	STANDARD NO. 5-2



ISSUED	2010		STANDARD MANHOLE FRAME AND COVER
REVISED			
SANITARY SEWER DETAILS			
SOURCE	NEW CASTLE COUNTY	DEPARTMENT OF PUBLIC WORKS	STANDARD NO. 5-5



ISSUED	2010		SANITARY SEWER MANHOLE STEPS
REVISED			
SANITARY SEWER DETAILS			
SOURCE	NEW CASTLE COUNTY	DEPARTMENT OF PUBLIC WORKS	STANDARD NO. 5-6



ISSUED	2010		RISER RING DETAIL
REVISED			
SANITARY SEWER DETAILS			
SOURCE	NEW CASTLE COUNTY	DEPARTMENT OF PUBLIC WORKS	STANDARD NO. 5-15

NOT FOR BIDDING

AUGUST 2015