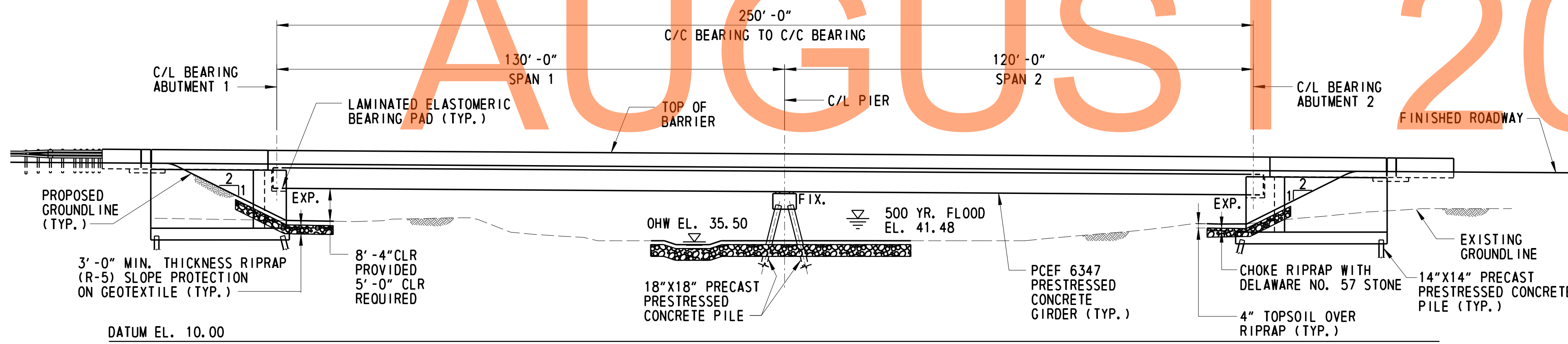
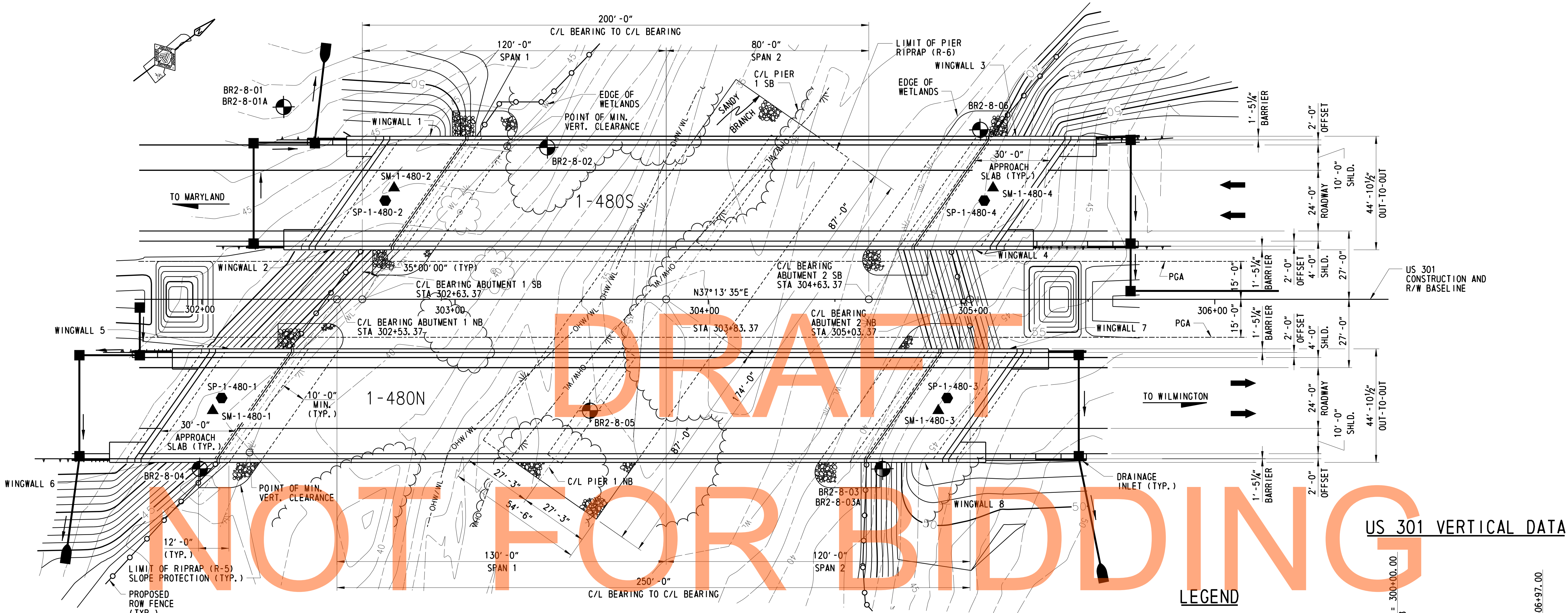


- CROSS REFERENCE NOTES:
1. FOR SETTLEMENT PLATFORM AND MONUMENT STATIONS AND OFFSETS, SEE DWG. NO. 1-480 DT-1.
 2. FOR SETTLEMENT PLATFORM DETAILS, SEE DWG. NO. 1-480 DT-1.
 3. FOR PIER RIPRAP DETAIL, SEE DWG. NO. 1-480 FT-6.
 4. RECESS AND COVER RIPRAP IN ACCORDANCE WITH THE STREAM RESTORATION AND SLOPE RIPRAP TREATMENT NOTES ON DWG. NO. EC-05.

	DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 20 40 60 FEET	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO. 1-480N&S	COUNTY NEW CASTLE	DESIGNED BY: PRH CHECKED BY: JW	US 301 MAINLINE OVER SANDY BRANCH GENERAL PLAN AND SB ELEVATION	1-480 PE-1 SHEET NO. 561 TOTAL SHTS. 1256
	AUGUST 2015									



GENERAL NOTES

1. DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, 2007, INCLUDING 2008 AND 2009 INTERIM REVISIONS, AND AS SUPPLEMENTED BY DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, MAY 2005, INCLUDING LATEST REVISIONS.

PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS, AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.

LIVE LOAD DISTRIBUTION TO BEAMS IS BASED UPON AASHTO DISTRIBUTION FACTORS.

2. LOADING:

UNIT WEIGHTS OF MATERIALS SHALL BE IN ACCORDANCE WITH THE DELAWARE BRIDGE DESIGN MANUAL.

FUTURE OVERLAY ALLOWANCE SHALL BE 25 LBS/SQ FT.

STEEL BRIDGE DECK FORMS WHICH STAY IN PLACE (INCLUDING CONCRETE IN FORM CORRUGATIONS) SHALL BE 15 LBS/SQ FT.

VEHICLE LIVE LOAD SHALL BE AASHTO HL-93 DESIGN VEHICLE, WHICH CONSISTS OF A DESIGN TRUCK OR TANDEM WITH DYNAMIC LOAD ALLOWANCE AND A LANE LOAD. RATINGS SHALL USE ALL DELAWARE LEGAL LOADS SPECIFIED IN THE BRIDGE DESIGN MANUAL.

BARRIER HAS BEEN DESIGNED FOR TEST LEVEL FOUR (TL-4).

FATIGUE DESIGN IS BASED ON THE FOLLOWING:
PRESTRESSED CONCRETE: ADTT 1,236 (2030 ONE-DIRECTIONAL).

FOR THERMAL LOADS, CONSIDER THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS, THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68F.

FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE 1, WITH A SITE CLASS = D AND IMPORTANCE CATEGORY - ESSENTIAL.

SEISMIC FORCES WERE CONSIDERED FOR ACCELERATION COEFFICIENT OF 0.08.

3. PORTLAND CEMENT CONCRETE:

PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS SHALL BE AS FOLLOWS:
(28 DAY COMPRESSIVE STRENGTH)

- ITEM NO. 602004 (CLASS B, f'c=3000 PSI) - ABUTMENT FOOTING
- ITEM NO. 602007 (CLASS A, f'c=4500 PSI) - PIER ABOVE FOOTING
- ITEM NO. 602013 (CLASS D, f'c=4500 PSI) - DECK AND DIAPHRAGMS
- ITEM NO. 602014 (CLASS D, f'c=4500 PSI) - APPROACH SLAB, MOMENT SLAB AND SLEEPER SLAB
- ITEM NO. 602015 (CLASS A, f'c=4500 PSI) - ABUTMENT ABOVE FOOTING
- ITEM NO. 602017 (CLASS A, f'c=4500 PSI) - BARRIER

RAKE FINISH ALL HORIZONTAL CONSTRUCTION, EXCEPT AS INDICATED.

CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARING.

PLACE CHEEKWALL AND BACKWALL CONCRETE AFTER BEAMS HAVE BEEN SET IN POSITION.

DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.

MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH 3/4" X 3/4" MILLED CHAMFER STRIPS UNLESS NOTED OTHERWISE, EXCEPT ON UNEXPOSED FOOTINGS OR WHERE INDICATED BY THE NOTATION ON THE PLANS, "DO NOT CHAMFER".

NO SLIP-FORMING OF BARRIERS IS PERMITTED, UNLESS NOTED OTHERWISE.

4. BAR REINFORCEMENT:

REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60.

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

FUSION-BONDED EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963), AND SHALL BE DENOTED WITH A SUFFIX "E" IN THE BAR MARKS.

DO NOT WELD GRADE 60 REINFORCING STEEL, UNLESS NOTED OTHERWISE.

5. PRESTRESSED CONCRETE DESIGN:

THE PRECAST CONCRETE GIRDERS ARE DESIGNED AS NONCOMPOSITE FOR ALL DEAD LOADS EXCEPT THE BARRIERS AND FUTURE WEARING SURFACE. THE PRECAST GIRDERS ARE DESIGNED AS CONTINUOUS AND COMPOSITE FOR LIVE LOADS AS WELL AS THE BARRIER AND FUTURE WEARING SURFACE DEAD LOADS.

PRESTRESSED CONCRETE:

THE MINIMUM COMPRESSIVE STRENGTH FOR PRESTRESSED CONCRETE AT THE AGE OF 28 DAYS SHALL BE f'c=8,000 PSI. THE MINIMUM COMPRESSIVE STRENGTH AT THE TRANSFER OF PRESTRESS SHALL BE f'c1=6,400 PSI.

BEAMS AND PIER DIAPHRAGMS:

TIME FROM CASTING OF BEAMS TO POURING OF PIER DIAPHRAGMS MUST BE NO LESS THAN 90 DAYS. IF TIME IS NOT SUFFICIENT, CONTRACTOR MUST SUBMIT DESIGN FOR APPROVAL SHOWING STRUCTURAL DESIGN CALCULATIONS TO ACCOUNT FOR RESTRAINT MOMENTS. PIER DIAPHRAGM CAN NOT BE POURED UNTIL DECK POUR 1 AND 2 ARE COMPLETE.

PRESTRESSED STEEL:

PRETENSIONING STEEL FOR GIRDERS SHALL CONSIST OF HIGH STRENGTH 7-WIRE LOW RELAXATION STRANDS, WITH A NOMINAL 0.60 INCH DIAMETER, CONFORMING TO THE REQUIREMENTS OF AASHTO M203 (ASTM A416) GRADE 270. EACH 0.60 INCH DIAMETER STRAND SHALL BE PRETENSIONED TO 43,942 LBS. (0.75 Fpu).

		ESTIMATED LOSSES (PSI)	FINAL EFFECTIVE PRESTRESS FORCE PER STRAND (LBS)
1-480 (NB)	SPAN 1	30,475	37,329
	SPAN 2	33,009	36,779
1-480 (SB)	SPAN 1	33,009	36,779
	SPAN 2	22,111	39,144

CAMBER GROWTH IN PRETENSIONED BEAMS BETWEEN THE TIME OF STRESSING AND THE TIME OF SLAB PLACEMENT IS ASSUMED TO BE 80% FOR CAMBER CALCULATIONS.

6. SERVICEABILITY:

LIVE LOAD DEFLECTION SHALL BE LIMITED TO L/800.

FOR REINFORCEMENT DISTRIBUTION REQUIREMENTS, CONSIDER CLASS 2 EXPOSURE CRITERIA FOR DECKS.

7. CONSTRUCTION JOINTS:

KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED CONSTRUCTION JOINT EDGES SHALL HAVE A 3/4" V-NOTCH, UNLESS NOTED OTHERWISE.

8. STRUCTURAL BACKFILL:

STRUCTURAL BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF BORROW TYPE C.

9. UTILITIES:

COORDINATE ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH SECTION 107.04 OF THE STANDARD SPECIFICATIONS.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISION, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

10. HYDRAULIC DATA:

SOUTHBOUND:	NORTHBOUND:
DRAINAGE AREA = 0.46 SQ. MI.	DRAINAGE AREA = 0.46 SQ. MI.
DESIGN FREQUENCY = 100 YEARS	DESIGN FREQUENCY = 100 YEARS
DESIGN FLOOD ELEVATION = 39.63	DESIGN FLOOD ELEVATION = 40.32
25-YR FLOOD ELEVATION = 38.61	25-YR FLOOD ELEVATION = 39.29
DESIGN DISCHARGE = 973 CFS	DESIGN DISCHARGE = 973 CFS
PROPOSED OPENING = 1577 SF	PROPOSED OPENING = 1903 SF

LOAD RATING SUMMARY (NORTHBOUND)

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.20	N/A	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF BEAM
HL-93 TANDEM (INVENTORY)	1.42	N/A	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF BEAM
HL-93 TRUCK TRAIN (INVENTORY)	1.33	N/A	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
HS-20 (INVENTORY)	1.75	62.83	EXTERIOR BEAM	106	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
HL-93 TRUCK (OPERATING)	1.57	N/A	EXTERIOR BEAM	104	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
HL-93 TANDEM (OPERATING)	1.91	N/A	EXTERIOR BEAM	105	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
HL-93 TRUCK TRAIN (OPERATING)	1.72	N/A	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
HS-20 (OPERATING)	2.23	80.30	EXTERIOR BEAM	106	LONG. REINF. MIN. EFFECTS MAX. SHEAR W/ CONCURRENT MOMENT
DE S220 (LEGAL)	2.49	49.72	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF GIRDER
DE S335 (LEGAL)	1.40	49.01	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF GIRDER
DE S437 (LEGAL)	1.33	48.84	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF GIRDER
DE T330 (LEGAL)	1.82	54.56	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF GIRDER
DE T435 (LEGAL)	1.58	55.29	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF GIRDER
DE T540 (LEGAL)	1.39	55.64	EXTERIOR BEAM	105	CONC. STRESS MAX. EFFECTS DL+PS+LL BOT OF GIRDER

NOTE: LOAD RATING DOES INCLUDE FUTURE WEARING SURFACE AS NOTED IN THE PLANS.

LOAD RATING SUMMARY (SOUTHBOUND)

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.35	N/A	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
HL-93 TANDEM (INVENTORY)	1.62	N/A	EXTERIOR BEAM*	207	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
HL-93 TRUCK TRAIN (INVENTORY)	1.20	N/A	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
HS-20 (INVENTORY)	1.77	63.63	EXTERIOR BEAM*	207	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
HL-93 TRUCK (OPERATING)	1.75	N/A	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
HL-93 TANDEM (OPERATING)	2.05	N/A	EXTERIOR BEAM*	207	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
HL-93 TRUCK TRAIN (OPERATING)	1.56	N/A	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
HS-20 (OPERATING)	2.24	80.51	EXTERIOR BEAM*	207	LONG. REINF. MAX. EFFECTS MAX. MOMENT W/ CONCURRENT SHEAR
DE S220 & LEGAL LANE (LEGAL)	2.47	49.32	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
DE S335 & LEGAL LANE (LEGAL)	1.63	57.09	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
DE S437 & LEGAL LANE (LEGAL)	1.56	57.29	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
DE T330 & LEGAL LANE (LEGAL)	2.15	64.53	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
DE T435 & LEGAL LANE (LEGAL)	1.90	66.56	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS
DE T540 & LEGAL LANE (LEGAL)	1.72	68.64	EXTERIOR BEAM*	110	FLEXURE MINIMUM EFFECTS

NOTE: LOAD RATING DOES INCLUDE FUTURE WEARING SURFACE AS NOTED IN THE PLANS.

* LIVE LOAD CONTINUITY CONDITION CONTROLLED RATING.

THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-18- 'EVALUATING SCOUR AT BRIDGES' AND HEC-23- 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES'. SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE OF THE OVERTOPPING FLOOD OR THE 500-YR FLOOD EVENT.

DESIGN EVENT: 500 YR DESIGN VELOCITY: 7.4 FT/S (1-480N)
5.2 FT/S (1-480S)

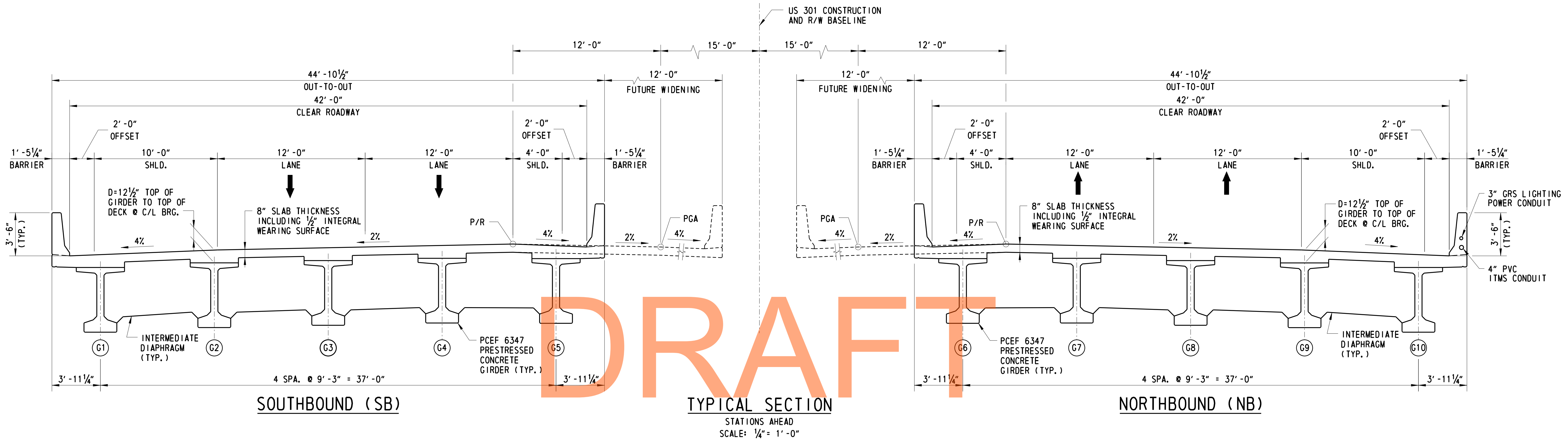
DESIGN DISCHARGE: 1640 CFS DESIGN DEPTH OF FLOW: 6.0 FT (1-480N)
6.3 FT (1-480S)

INDEX OF DRAWINGS

SHEET NO.	DRAWING NO.	TITLE
561	1-480 PE-1	GENERAL PLAN AND SB ELEVATION
562	1-480 PE-2	GENERAL PLAN AND NB ELEVATION
563	1-480 GN-1	GENERAL NOTES AND INDEX OF DRAWINGS
564	1-480 TS-1	TYPICAL SECTION AND QUANTITIES
565	1-480 FT-1	GEOMETRIC LAYOUT
566	1-480 FT-2	ABUTMENT 1 SB PILE PLAN
567	1-480 FT-3	ABUTMENT 2 SB PILE PLAN
568	1-480 FT-4	ABUTMENT 1 NB PILE PLAN
569	1-480 FT-5	ABUTMENT 2 NB PILE PLAN
570	1-480 FT-6	PIER PILE PLAN
571	1-480 PL-1	PILE DETAILS
572	1-480 AB-1	ABUTMENT 1 SB PLAN AND ELEVATION
573	1-480 AB-2	ABUTMENT 1 SB FOOTING REINFORCEMENT PLAN
574	1-480 AB-3	ABUTMENT 1 SB REINFORCEMENT DETAILS 1
575	1-480 AB-4	ABUTMENT 1 SB REINFORCEMENT DETAILS 2
576	1-480 AB-5	ABUTMENT 2 SB PLAN AND ELEVATION
577	1-480 AB-6	ABUTMENT 2 SB FOOTING REINFORCEMENT PLAN
578	1-480 AB-7	ABUTMENT 2 SB REINFORCEMENT DETAILS 1
579	1-480 AB-8	ABUTMENT 2 SB REINFORCEMENT DETAILS 2
580	1-480 WW-1	WINGWALL ELEVATIONS (1-4)
581	1-480 WW-2	WINGWALL DETAILS 1
582	1-480 WW-3	WINGWALL DETAILS 2
583	1-480 BR-1	ABUTMENT 1 SB REINFORCEMENT SCHEDULE
584	1-480 BR-2	ABUTMENT 2 SB REINFORCEMENT SCHEDULE
585	1-480 AB-9	ABUTMENT 1 NB PLAN AND ELEVATION
586	1-480 AB-10	ABUTMENT 1 NB FOOTING REINFORCEMENT PLAN
587	1-480 AB-11	ABUTMENT 1 NB REINFORCEMENT DETAILS 1
588	1-480 AB-12	ABUTMENT 1 NB REINFORCEMENT DETAILS 2
589	1-480 AB-13	ABUTMENT 2 NB PLAN AND ELEVATION
590	1-480 AB-14	ABUTMENT 2 NB FOOTING REINFORCEMENT PLAN
591	1-480 AB-15	ABUTMENT 2 NB REINFORCEMENT DETAILS 1
592	1-480 AB-16	ABUTMENT 2 NB REINFORCEMENT DETAILS 2
593	1-480 WW-4	WINGWALL ELEVATIONS (5-8)
594	1-480 WW-5	WINGWALL DETAILS 3
595	1-480 WW-6	WINGWALL DETAILS 4
596	1-480 BR-3	ABUTMENT 1 NB REINFORCEMENT SCHEDULE
597	1-480 BR-4	ABUTMENT 2 NB REINFORCEMENT SCHEDULE
598	1-480 PR-1	PIER PLAN AND ELEVATION
599	1-480 PR-2	PIER DETAILS
600	1-480 BR-5	PIER REINFORCEMENT SCHEDULE
601	1-480 BD-1	BEARING DETAILS
602	1-480 FR-1	SB FRAMING PLAN
603	1-480 BM-1	SB SPAN 1 GIRDER PLAN AND ELEVATION
604	1-480 BM-2	SB SPAN 2 GIRDER PLAN AND ELEVATION
605	1-480 BM-3	SB GIRDER SECTIONS
606	1-480 FR-2	NB FRAMING PLAN
607	1-480 BM-4	NB SPAN 1 GIRDER PLAN AND ELEVATION
608	1-480 BM-5	NB SPAN 2 GIRDER PLAN AND ELEVATION
609	1-480 BM-6	NB GIRDER SECTIONS
610	1-480 BM-7	TYPICAL GIRDER DETAILS
611	1-480 DPH-1	DIAPHRAGM DETAILS 1
612	1-480 DPH-2	DIAPHRAGM DETAILS 2
613	1-480 DK-1	SB DECK POURING SEQUENCE
614	1-480 DK-2	SB DECK AND BARRIER REINFORCEMENT
615	1-480 DK-3	NB DECK POURING SEQUENCE
616	1-480 DK-4	NB DECK AND BARRIER REINFORCEMENT
617	1-480 DK-5	DECK DETAILS
618	1-480 AS-1	SB APPROACH SLAB AND BARRIER REINFORCEMENT
619	1-480 AS-2	NB APPROACH SLAB AND BARRIER REINFORCEMENT
620	1-480 AS-3	APPROACH SLAB DETAILS
621	1-480 BR-6	SB DECK REINFORCEMENT SCHEDULE
622	1-480 BR-7	NB DECK REINFORCEMENT SCHEDULE
623	1-480 FD-1	SB SPAN 1 FINISHED DECK ELEVATIONS
624	1-480 FD-2	SB SPAN 2 FINISHED DECK ELEVATIONS
625	1-480 FD-3	NB SPAN 1 FINISHED DECK ELEVATIONS
626	1-480 FD-4	NB SPAN 2 FINISHED DECK ELEVATIONS
627	1-480 FD-5	SB FINISHED APPROACH SLAB ELEVATIONS
628	1-480 FD-6	NB FINISHED APPROACH SLAB ELEVATIONS
629	1-480 EX-1	EXPANSION JOINT DETAILS
630	1-480 DT-1	SETTLEMENT PLATFORM DETAIL
631	1-480 BO-1	TEST BORINGS

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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS	<p>US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD</p>	CONTRACT	BRIDGE NO.	<p>1-480N&S</p>	<p>US 301 MAINLINE OVER SANDY BRANCH GENERAL NOTES AND INDEX OF DRAWINGS</p>	1-480 GN-1	
			T200911303	DESIGNED BY: PRH			SHEET NO.	563
			COUNTY	CHECKED BY: JW			TOTAL SHTS.	1256



SOUTHBOUND (SB)

TYPICAL SECTION

NORTHBOUND (NB)

STATIONS AHEAD
SCALE: 1/4" = 1'-0"

ESTIMATED BRIDGE QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	SOUTHBOUND QUANTITY	NORTHBOUND QUANTITY	TOTAL
202505	SETTLEMENT PLATFORM	EACH	2	2	4
202518	SETTLEMENT MONUMENT	EACH	2	2	4
207000	EXCAVATION AND BACKFILL FOR STRUCTURES	CY	820	865	1,685
302012	DELAWARE NO. 57 STONE	TON	47	58	105
602004	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT FOOTING, CLASS B	CY	268	261	529
602007	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	CY	50	50	100
602013	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	351	421	772
602014	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	219	219	438
602015	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	416	391	807
602017	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	76	89	165
603000	BAR REINFORCEMENT	LB	46,325	43,120	89,445
604000	BAR REINFORCEMENT, EPOXY COATED	LB	169,352	198,175	367,527
605512	PREFABRICATED EXPANSION JOINT SYSTEM, 4"	LF	106	106	212
605581	ELASTOMERIC BRIDGE BEARING PAD	EACH	20	20	40
618041 (ALTERNATE)	FURNISH CAST-IN-PLACE CONCRETE PILES, 14"	LF	4,839	4,761	9,600
618046 (ALTERNATE)	FURNISH CAST-IN-PLACE CONCRETE TEST PILES, 14"	LF	112	108	220
618081	FURNISH PRECAST PRESTRESSED CONCRETE PILE, 14"x14"	LF	5,874	6,133	12,007
618083	FURNISH PRECAST PRESTRESSED CONCRETE PILE, 18"x18"	LF	1,279	1,289	2,568

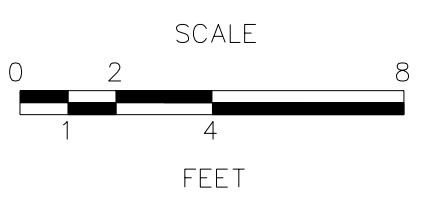
ESTIMATED BRIDGE QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	SOUTHBOUND QUANTITY	NORTHBOUND QUANTITY	TOTAL
618091	FURNISH PRECAST PRESTRESSED CONCRETE TEST PILE, 14"x14"	LF	129	137	266
618093	FURNISH PRECAST PRESTRESSED CONCRETE TEST PILE, 18"x18"	LF	85	86	171
619021 (ALTERNATE)	INSTALL CAST-IN-PLACE CONCRETE PILES, 14"	LF	4,839	4,761	9,600
619025 (ALTERNATE)	INSTALL CAST-IN-PLACE CONCRETE TEST PILES, 14"	LF	112	108	220
619061	INSTALL PRECAST PRESTRESSED CONCRETE PILE, 14"x14"	LF	5,874	6,133	12,007
619063	INSTALL PRECAST PRESTRESSED CONCRETE PILE, 18"x18"	LF	1,279	1,289	2,568
619067	INSTALL PRECAST PRESTRESSED CONCRETE TEST PILE, 14"x14"	LF	129	137	266
619069	INSTALL PRECAST PRESTRESSED CONCRETE TEST PILE, 18"x18"	LF	85	86	171
619501	PRODUCTION PILE RESTRIKE	EACH	6	6	12
619502	TEST PILE RESTRIKE	EACH	3	3	6
619519	DYNAMIC PILE TESTING BY CONTRACTOR	EACH	3	3	6
619539	SIGNAL MATCHING ANALYSIS BY CONTRACTOR	EACH	3	3	6
623003	PRESTRESSED REINFORCED CONCRETE MEMBERS, BULB TBEAM	LS	-	-	-
712006	RIPRAP, R-5	SY	229	229	458
712007	RIPRAP, R-6	SY	527	527	1,054
712531	CHANNEL BED FILL	CY	82	43	125
713003	GEOTEXTILE, RIPRAP	SY	756	756	1,512
733001	TOPSOILING, 4" DEPTH	SY	1,022	1,252	2,274

CROSS REFERENCE NOTES:

- FOR GENERAL PLAN AND SB ELEVATION, SEE DWG. NO. 1-480 PE-1.
- FOR GENERAL PLAN AND NB ELEVATION, SEE DWG. NO. 1-480 PE-2.
- FOR SB DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-1.
- FOR NB DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-3.
- FOR SB FRAMING PLAN, SEE DWG. NO. 1-480 FR-1.
- FOR NB FRAMING PLAN, SEE DWG. NO. 1-480 FR-2.
- FOR SB SPAN 1 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-1.
- FOR SB SPAN 2 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-2.
- FOR NB SPAN 1 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-4.
- FOR NB SPAN 2 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-5.
- FOR SB GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-3.
- FOR NB GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-6.
- FOR DIAPHRAGM DETAILS, SEE DWG. NOS. 1-480 DPH-1 AND 1-480 DPH-2.
- FOR SB DECK DETAILS, SEE DWG. NO. 1-480 DK-2.
- FOR NB DECK DETAILS, SEE DWG. NO. 1-480 DK-4.
- FOR CONDUIT DETAILS, SEE DWG. NO. DT-07.

ADDENDUMS / REVISIONS



US 301
LEVELS ROAD
TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

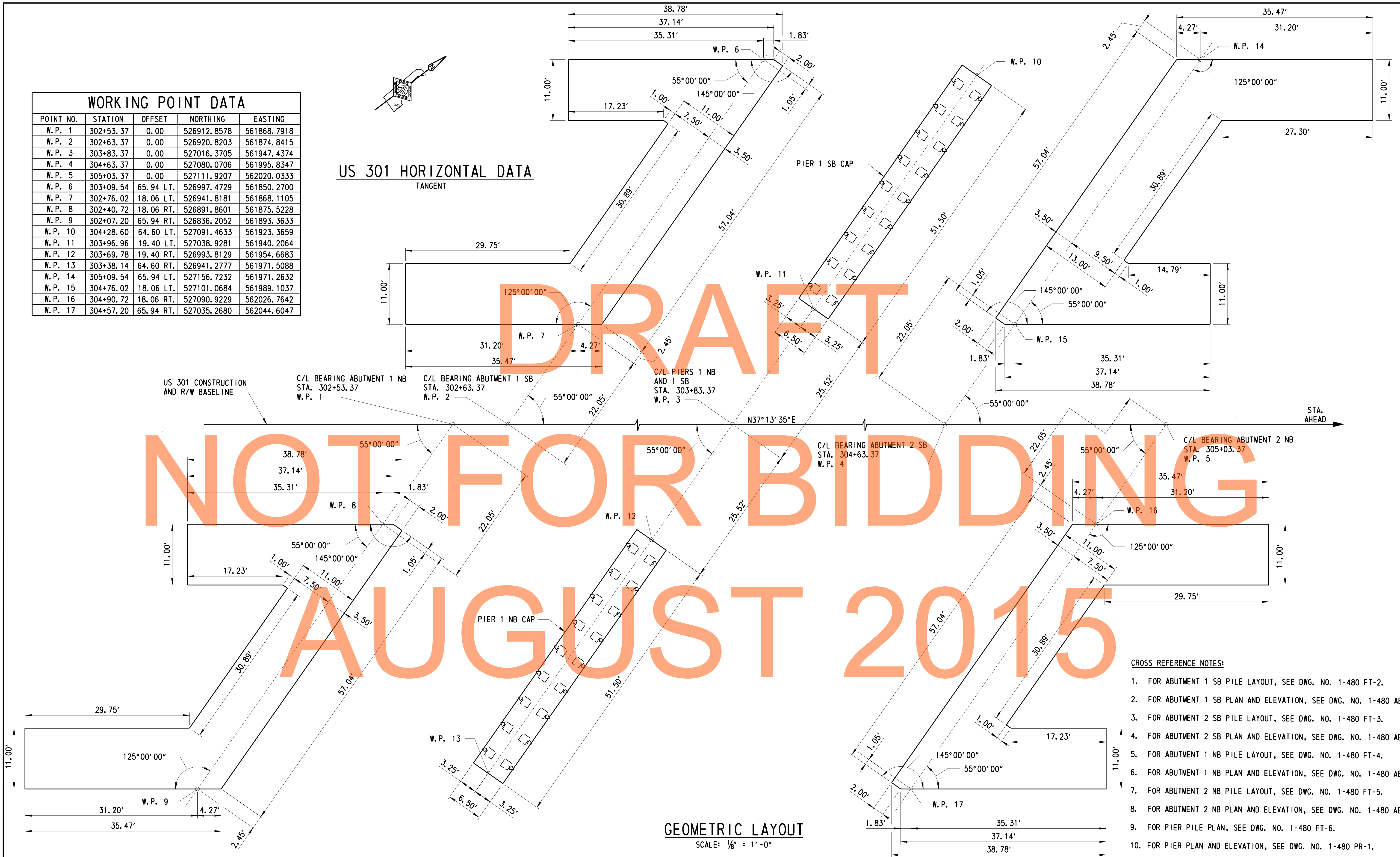
US 301 MAINLINE OVER
SANDY BRANCH
TYPICAL SECTION
AND QUANTITIES

1-480 TS-1
SHEET NO.
564
TOTAL SHTS.
1256



WORKING POINT DATA				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
W.P. 1	302+53.37	0.00	526912.8578	561868.7918
W.P. 2	302+63.37	0.00	526920.8203	561874.8415
W.P. 3	303+83.37	0.00	527016.3705	561947.4374
W.P. 4	304+63.37	0.00	527080.0706	561995.8347
W.P. 5	305+03.37	0.00	527111.9207	562020.0333
W.P. 6	303+09.54	65.94 LT.	526997.4729	561850.2700
W.P. 7	302+76.02	18.06 LT.	526941.8181	561868.1105
W.P. 8	302+40.72	18.06 RT.	526891.8601	561875.5228
W.P. 9	302+07.20	65.94 RT.	526836.2052	561893.3633
W.P. 10	304+28.60	64.60 LT.	527091.4633	561923.3659
W.P. 11	303+96.96	19.40 LT.	527038.9281	561940.2064
W.P. 12	303+69.78	19.40 RT.	526993.8129	561954.6683
W.P. 13	303+38.14	64.60 RT.	526941.2777	561971.5088
W.P. 14	305+09.54	65.94 LT.	527156.7232	561971.2632
W.P. 15	304+76.02	18.06 LT.	527101.0684	561989.1037
W.P. 16	304+90.72	18.06 RT.	527090.9229	562026.7642
W.P. 17	304+57.20	65.94 RT.	527035.2680	562044.6047

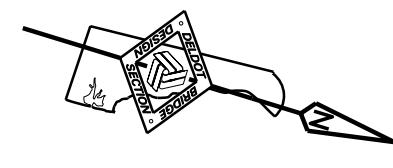
US 301 HORIZONTAL DATA
TANGENT



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AUGUST 2015

GEOMETRIC LAYOUT
SCALE: 1/8" = 1'-0"

- CROSS REFERENCE NOTES:**
1. FOR ABUTMENT 1 SB PILE LAYOUT, SEE DWG. NO. 1-480 FT-2.
 2. FOR ABUTMENT 1 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-1.
 3. FOR ABUTMENT 2 SB PILE LAYOUT, SEE DWG. NO. 1-480 FT-3.
 4. FOR ABUTMENT 2 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-5.
 5. FOR ABUTMENT 1 NB PILE LAYOUT, SEE DWG. NO. 1-480 FT-4.
 6. FOR ABUTMENT 1 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-9.
 7. FOR ABUTMENT 2 NB PILE LAYOUT, SEE DWG. NO. 1-480 FT-5.
 8. FOR ABUTMENT 2 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-13.
 9. FOR PIER PILE PLAN, SEE DWG. NO. 1-480 FT-6.
 10. FOR PIER PLAN AND ELEVATION, SEE DWG. NO. 1-480 PR-1.



US 301 CONSTRUCTION AND R/W BASELINE

C/L BEARING ABUTMENT 1 SB

STA. 302+63.37
W.P. 2

W.P. 7

W.P. 6

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ABUTMENT 1 SB - PILE PLAN

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

PILE LEGEND

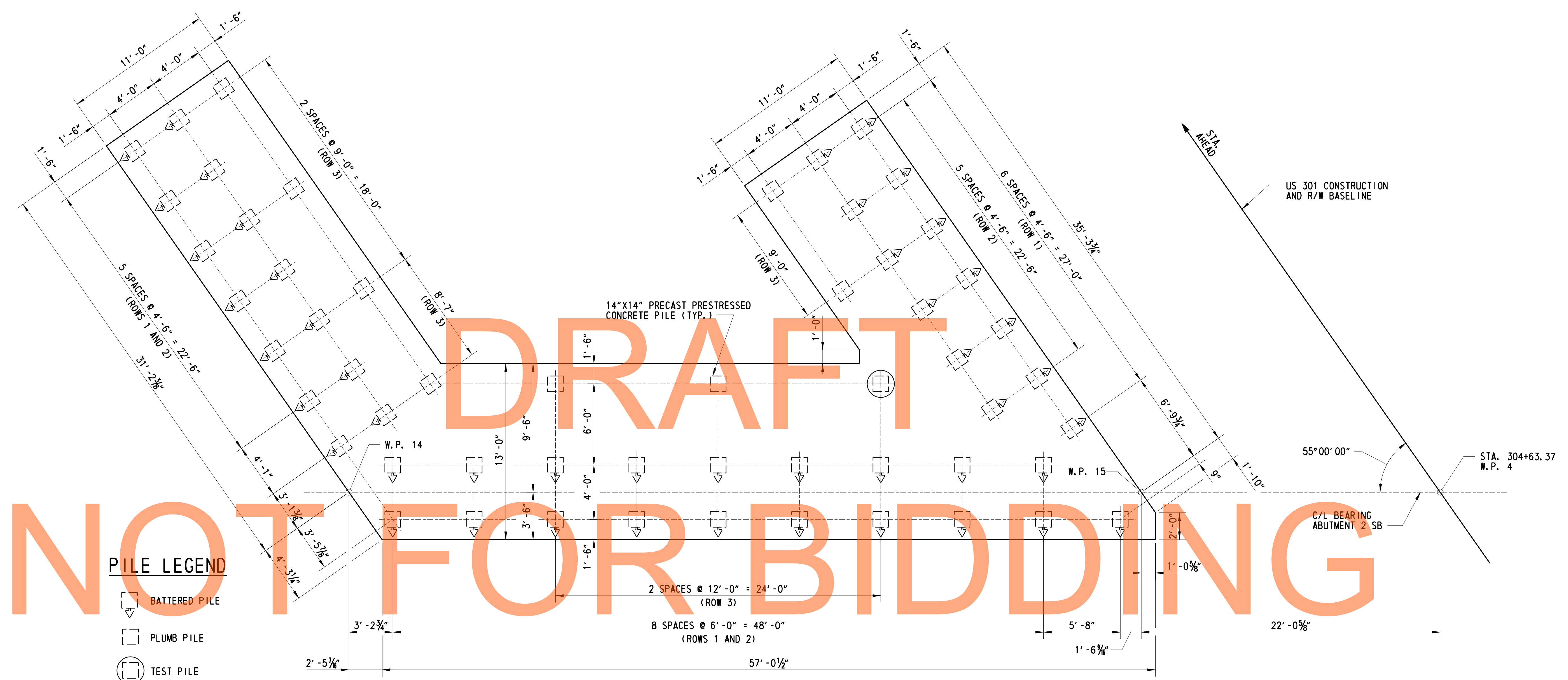
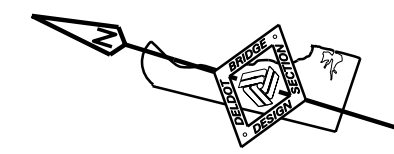
- BATTERED PILE
- PLUMB PILE
- TEST PILE

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
AVERAGE ACTUAL BLOWS/FT.:	
PILE HAMMER ENERGY:	
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 1 SB	326	N/A	-21.0		

SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 1 SB	326	N/A	-9.0		

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
 2. FOR ABUTMENT 1 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-1.
 3. FOR ABUTMENT 1 SB TYPICAL SECTION, SEE DWG. NO. 1-480 AB-3.
 4. FOR PILE DETAILS, SEE DWG. NO. 1-480 PL-1.
 5. FOR ABUTMENT 1 SB FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-2.
 6. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.



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NOT FOR BIDDING

PILE LEGEND

	BATTERED PILE
	PLUMB PILE
	TEST PILE

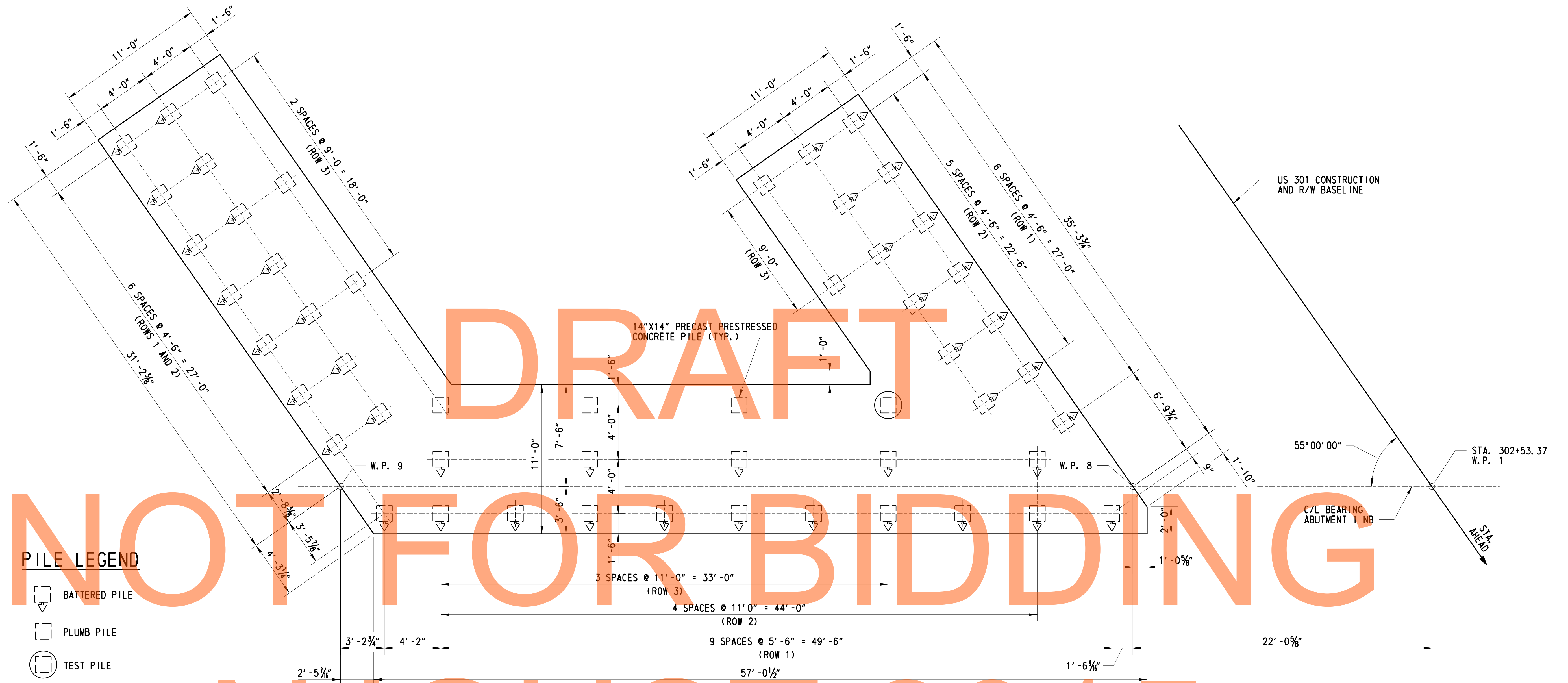
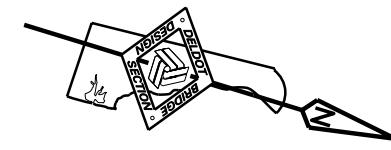
ABUTMENT 2 SB - PILE PLAN
SCALE: 1/4" = 1'-0"

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
AVERAGE ACTUAL BLOWS/FT.:	
PILE HAMMER ENERGY:	
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

PILE INSTALLATION DATA					
SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 2 SB	285	-13.0	-17.0		

PILE INSTALLATION DATA (MONOTUBE ALTERNATE)					
SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 2 SB	288	-2.0	-8.0		

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
 2. FOR ABUTMENT 2 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-5.
 3. FOR ABUTMENT 2 SB TYPICAL SECTION, SEE DWG. NO. 1-480 AB-7.
 4. FOR PILE DETAILS, SEE DWG. NO. 1-480 PL-1.
 5. FOR ABUTMENT 2 SB FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-6.
 6. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.



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PILE LEGEND

	BATTERED PILE
	PLUMB PILE
	TEST PILE

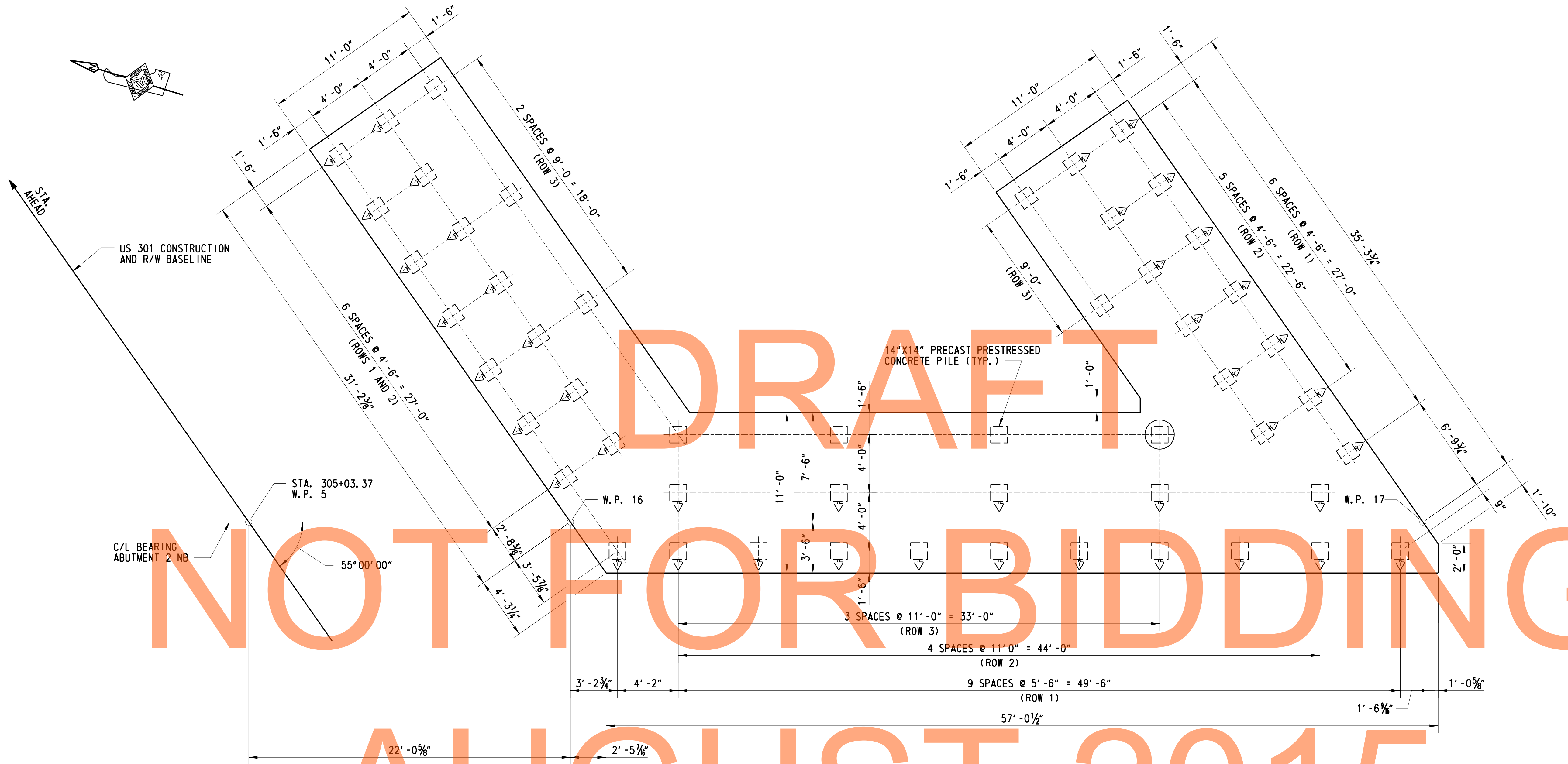
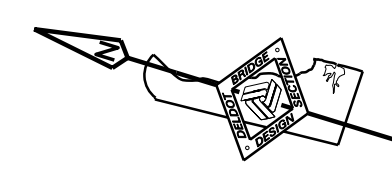
ABUTMENT 1 NB - PILE PLAN
SCALE: 1/4" = 1'-0"

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
AVERAGE ACTUAL BLOWS/FT.:	
PILE HAMMER ENERGY:	
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

PILE INSTALLATION DATA					
SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 1 NB	326	N/A	-21.0		

PILE INSTALLATION DATA (MONOTUBE ALTERNATE)					
SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 1 NB	326	N/A	-9.0		

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
 2. FOR ABUTMENT 1 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-9.
 3. FOR ABUTMENT 1 NB TYPICAL SECTION, SEE DWG. NO. 1-480 AB-11.
 4. FOR PILE DETAILS, SEE DWG. NO. 1-480 PL-1.
 5. FOR ABUTMENT 1 NB FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-10.
 6. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.



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AUGUST 2015

PILE LEGEND

- BATTERED PILE
- PLUMB PILE
- TEST PILE

ABUTMENT 2 NB - PILE PLAN

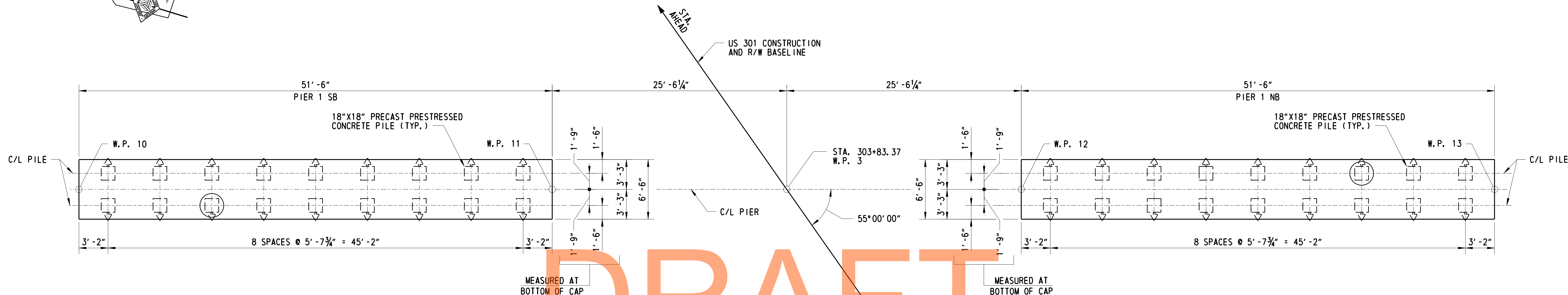
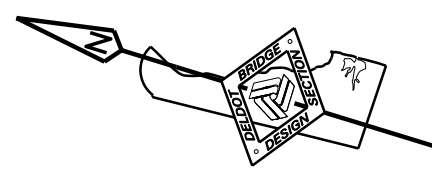
SCALE: 1/4" = 1'-0"

PILE DRIVING INFORMATION	
PILE SIZE AND TYPE:	
ACTUAL BEARING OBTAINED:	
HAMMER TYPE:	
AVERAGE ACTUAL BLOWS/FT.:	
PILE HAMMER ENERGY:	
SPECIAL DRIVING CONDITIONS AND COMMENTS:	

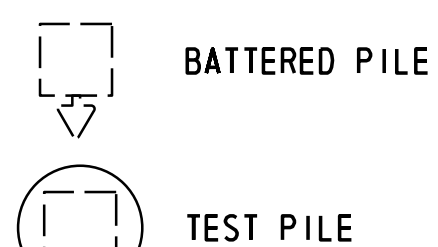
SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 2 NB	326	N/A	-23.0		

SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
ABUTMENT 2 NB	326	N/A	-10.0		

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
 2. FOR ABUTMENT 2 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-13.
 3. FOR ABUTMENT 2 NB TYPICAL SECTION, SEE DWG. NO. 1-480 AB-15.
 4. FOR PILE DETAILS, SEE DWG. NO. 1-480 PL-1.
 5. FOR ABUTMENT 2 NB FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-14.
 6. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.



PILE LEGEND



PIER - PILE PLAN

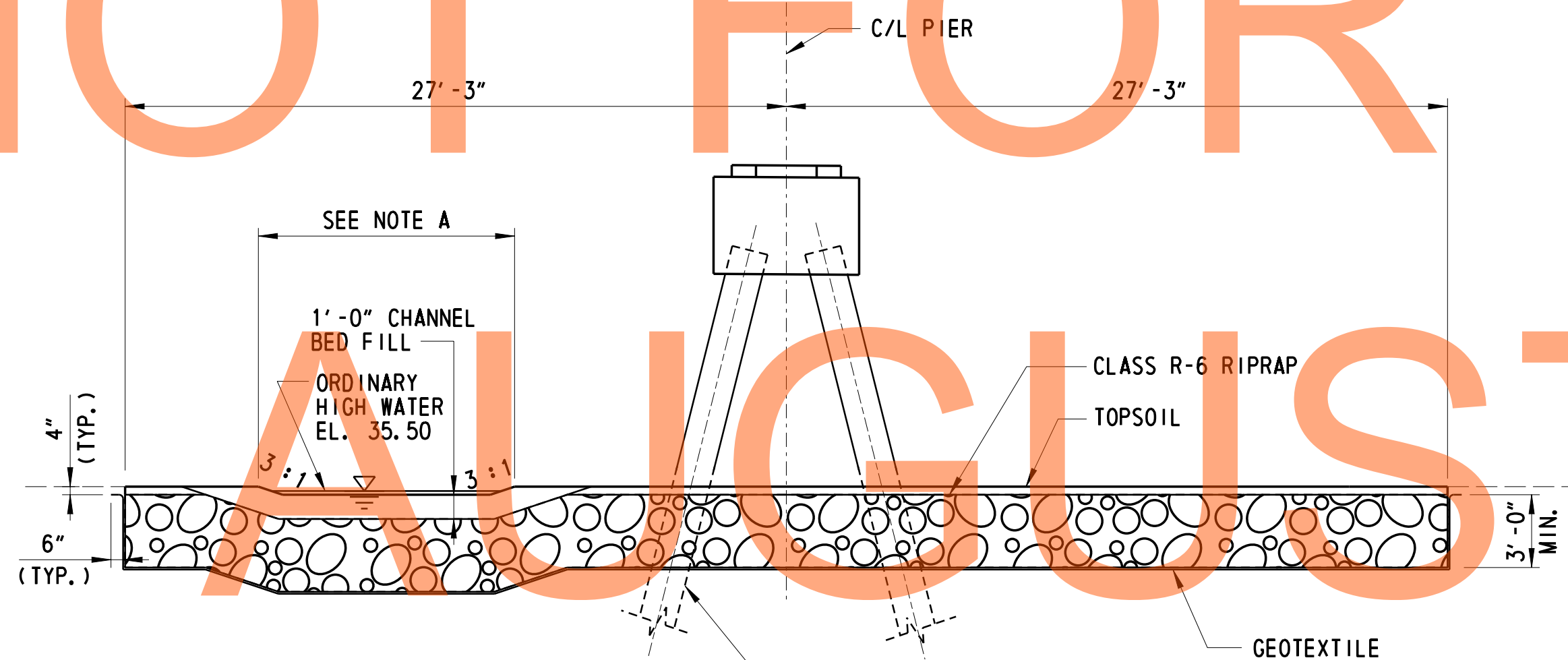
SCALE: 3/8" = 1'-0"

PILE INSTALLATION DATA

SUBSTRUCTURE UNIT	DESIGN DATA			ACTUAL FIELD DATA	
	NOMINAL PILE DRIVING RESISTANCE (KIP)	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	AVERAGE MINIMUM TIP ELEVATION	AVERAGE MAXIMUM TIP ELEVATION
PIER 1 SB	615	-21.0	-29.0		
PIER 1 NB	615	-21.0	-29.0		

PILE DRIVING INFORMATION

PILE SIZE AND TYPE: _____
 ACTUAL BEARING OBTAINED: _____
 HAMMER TYPE: _____
 AVERAGE ACTUAL BLOWS/FT.: _____
 PILE HAMMER ENERGY: _____
 SPECIAL DRIVING CONDITIONS AND COMMENTS: _____



NOTE A:

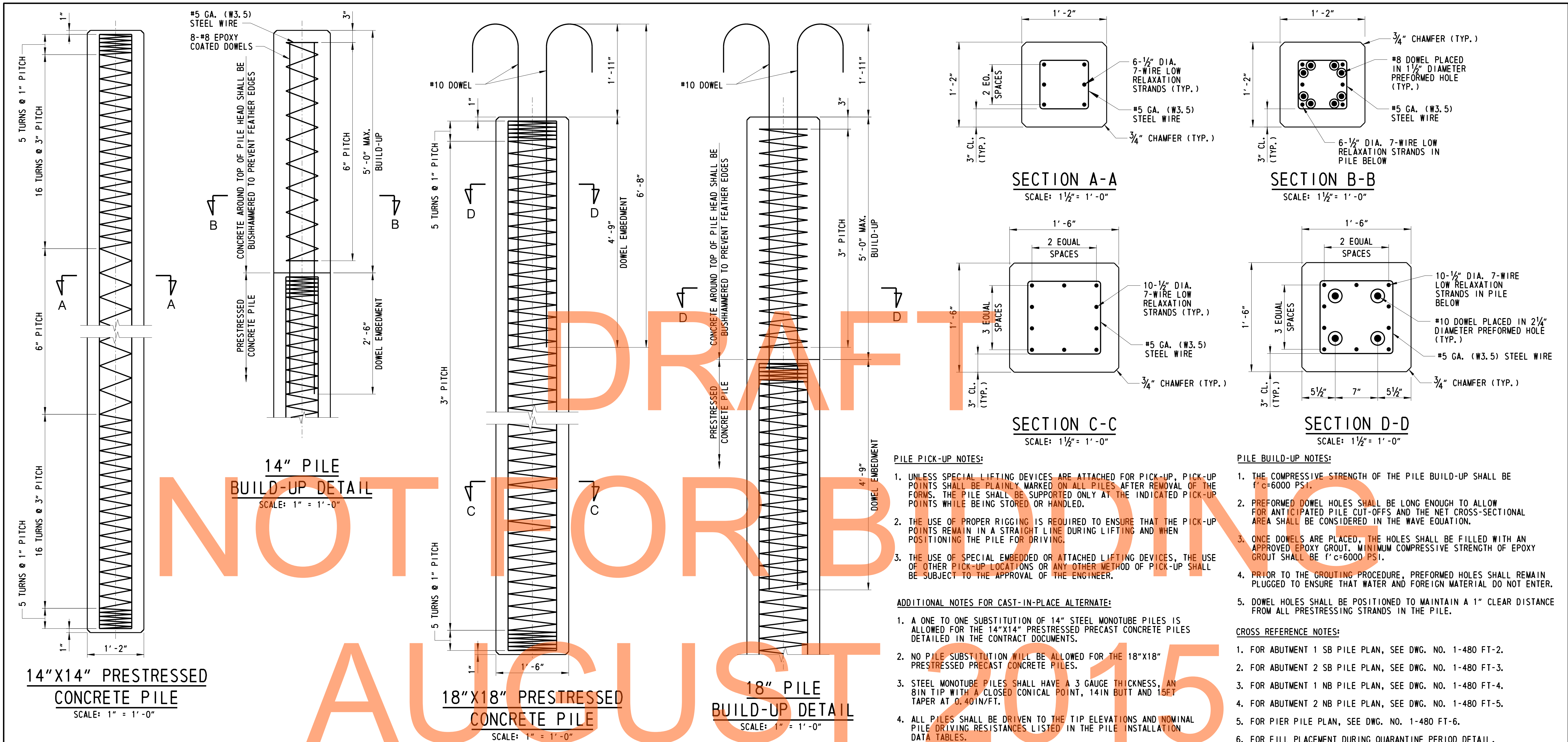
- IN AREAS WHERE RIPRAP EXTENDS INTO THE STREAM CHANNEL:
- RECORD STREAM CHANNEL WIDTH AND CHANNEL BOTTOM ELEVATION.
 - EXCAVATE BELOW STREAM BOTTOM TO PLACE GEOTEXTILE AND RIPRAP.
 - PLACE TOP OF RIPRAP ONE FOOT BELOW EXISTING STREAM BOTTOM ELEVATION.
 - PLACE UPSTREAM AND DOWNSTREAM CHANNEL BED FILL ONE FOOT THICK OVER RIPRAP. MATCH EXISTING UPSTREAM AND DOWNSTREAM STREAM BED ELEVATIONS AND CHANNEL WIDTH.

PIER RIPRAP DETAIL

SCALE: 3/8" = 1'-0"

CROSS REFERENCE NOTES:

- FOR GENERAL PLAN AND ELEVATION, SEE DWG. NOS. 1-480 PE-1 AND 1-480 PE-2.
- FOR PIER 1 SB AND NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 PR-1.
- FOR PILE DETAILS, SEE DWG. NO. 1-480 PL-1.
- FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.
- BELOW ORDINARY HIGH WATER ELEVATION, RECESS RIPRAP ONE FOOT AND COVER WITH CHANNEL BED FILL IN ACCORDANCE WITH THE STREAM RESTORATION AND SLOPE RIPRAP TREATMENT NOTES FOUND ON DWG. NO. EC-05. ABOVE ORDINARY HIGH WATER ELEVATION, RECESS RIPRAP FOUR (4) INCHES, CHOKE WITH DELAWARE #57 STONE, ITEM NO. 302012, CHOKE WITH FOUR (4) INCHES OF TOPSOIL AND BACKFILL WITH FOUR (4) INCHES TOPSOIL.



NOTICE FOR BIDDING

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AUGUST 2015

14"X14" PRESTRESSED CONCRETE PILE
SCALE: 1" = 1'-0"

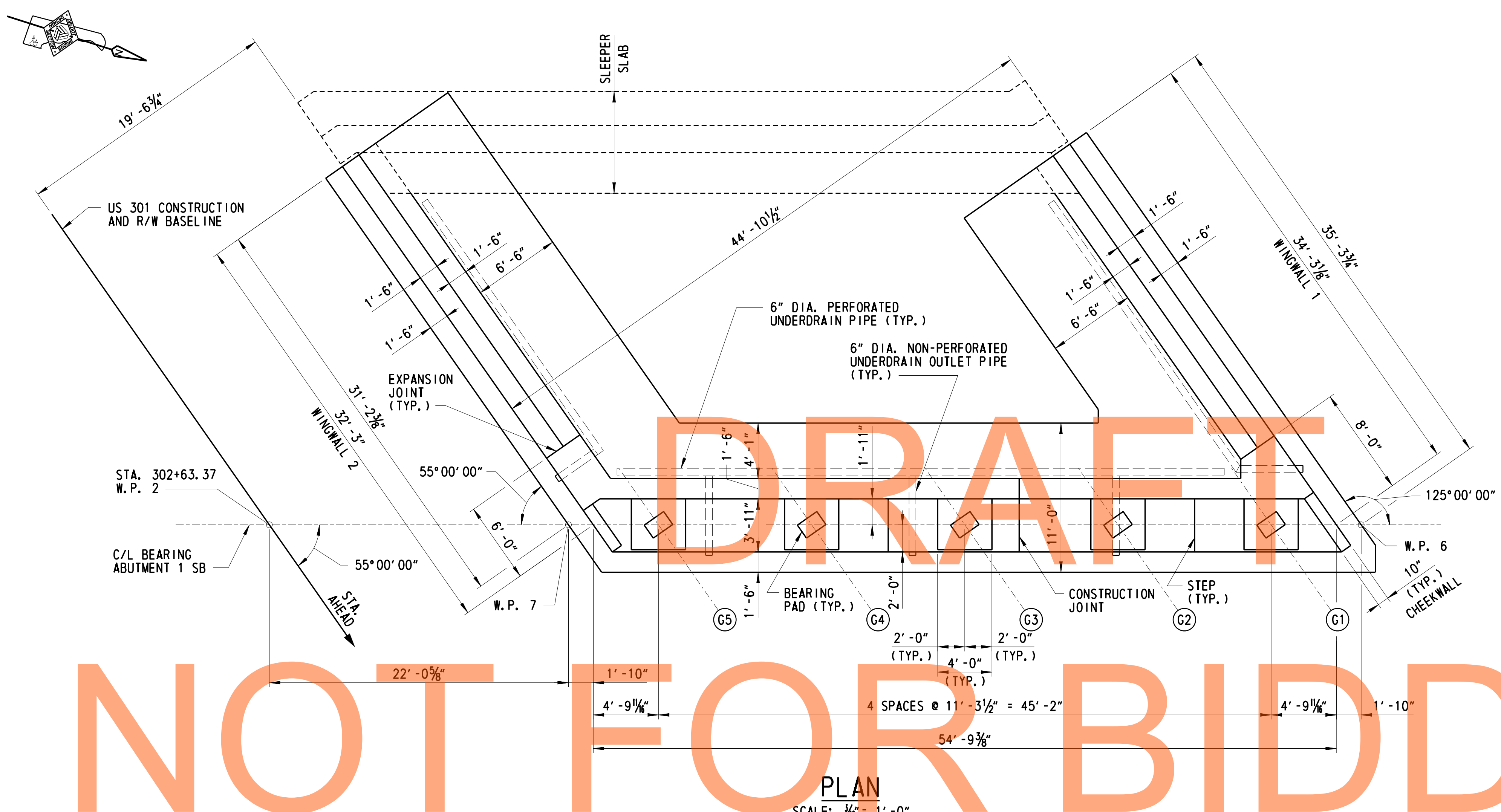
18"X18" PRESTRESSED CONCRETE PILE
SCALE: 1" = 1'-0"

- PILE NOTES:**
- ALL ABUTMENT PILES SHALL BE 14"X14" PRESTRESSED PRECAST CONCRETE PILES. ALL PIER PILES SHALL BE 18"X18" PRESTRESSED PRECAST CONCRETE PILES. PILES SHALL NOT BE COATED.
 - THE MINIMUM COMPRESSIVE STRENGTH FOR THE PRESTRESSED CONCRETE PILES AT THE AGE OF 28 DAYS SHALL BE $f'_{c}=6000$ PSI. THE MINIMUM COMPRESSIVE STRENGTH AT THE TIME OF TRANSFER OF PRESTRESS SHALL BE $f'_{ci}=4800$ PSI.
 - PRETENSIONING STEEL FOR PILES SHALL CONSIST OF 1/2" DIAMETER 7-WIRE LOW RELAXATION STRANDS CONFORMING TO THE REQUIREMENTS OF AASHTO M203 (ASTM A416) GRADE 270. EACH 1/2" DIAMETER STRAND SHALL BE PRETENSIONED TO 30,982 LBS. (0.75 Fpu).
 - SPIRAL TIES SHALL BE #5 GAGE STEEL WIRE CONFORMING TO THE REQUIREMENTS OF SECTION 618.18.
 - THE SPLICING OF PRESTRESSED PRECAST CONCRETE PILES SHALL NOT BE PERMITTED.
 - A MINIMUM QUARANTINE PERIOD OF 30 DAYS IS REQUIRED AFTER THE CONSTRUCTION OF THE FULL HEIGHT OF THE FILL AT THE ABUTMENTS IS ACHIEVED.
 - PILES MAY NOT BE DRIVEN UNTIL AFTER THE COMPLETION OF THE 30 DAY QUARANTINE PERIOD.
 - ALL TEST PILES SHALL BE 10 FT LONGER THAN PRODUCTION PILES AS INDICATED IN THE PILE INSTALLATION DATA TABLE.
 - THE ENGINEER SHALL APPROVE THE COMPLETION OF THE WAITING PERIOD, BASED ON RESULTS OF INSTRUMENTATION.
 - TEST PILES MAY BE DRIVEN PRIOR TO PLACING EMBANKMENT AND SURCHARGE MATERIAL. RESTRIKES OF THESE TEST PILES SHALL BE PERFORMED PRIOR TO PLACING EMBANKMENT IN ACCORDANCE WITH ITEM NO. 619502 - TEST PILE RESTRIKE. AFTER THE SETTLEMENT HAS BEEN ACHIEVED AND THE SUBSTRUCTURE HAS BEEN RELEASED BY THE ENGINEER, PRODUCTION PILES MAY BE INSTALLED. AT THIS POINT, THE TEST PILE SHALL BE ACTING AS A PRODUCTION PILE AND IT SHALL BE RE-STRUCK PRIOR TO PLACING ANY OTHER PRODUCTION PILES WITH PAYMENT UNDER ITEM NO. 619501 - PRODUCTION PILE RESTRIKE.
 - SEE SPECIAL PROVISIONS 202505 AND 202518 FOR SETTLEMENT MONITORING LOCATIONS AND REQUIREMENTS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A WAVE EQUATION ANALYSIS AND ALL OTHER INCIDENTALS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE WAVE EQUATION AND HIGH-STRAIN DYNAMIC PILE TESTING MUST BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 - UPON COMPLETION OF THE HIGH-STRAIN DYNAMIC PILE TESTING THE CONTRACTOR SHALL SUBMIT A SIGNAL MATCHING ANALYSIS TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 - ALL PILES SHALL BE DRIVEN TO THE NOMINAL PILE DRIVING RESISTANCE LISTED IN THE PILE INSTALLATION DATA TABLE.
 - DELDOT STANDARD SPECIFICATION 619.11(c)(6) SHALL BE MODIFIED BY REFERENCE TO SPECIAL PROVISIONS 619519 AND 619539.
 - PILE LENGTHS FOR ORDERING PURPOSES SHALL BE DETERMINED BY THE TEST PILES. A MINIMUM OF ONE PILE PER SUBSTRUCTURE, AS SHOWN ON THE PLANS, SHALL BE DYNAMICALLY TESTED WITH SIGNAL MATCHING ANALYSIS BY THE CONTRACTOR IN ACCORDANCE WITH SPECIAL PROVISIONS 619519 AND 619539. TEST AND PRODUCTION PILE RESTRIKES WILL BE PAID AS FOLLOWS:
 - ALL TEST PILE(S) WILL BE RESTRUCK AFTER A WAITING PERIOD OF AT LEAST 48 HOURS. TEST PILE RESTRIKES SHALL BE INCIDENTAL TO THE INITIAL INSTALLATION OF THE PILE PROVIDED THEY ARE REQUESTED WITHIN FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE. IF TEST PILE RESTRIKES ARE REQUESTED AFTER THE FIVE WORKING DAYS FROM THE COMPLETION OF THE INITIAL DRIVE, THE TEST PILE RESTRIKE SHALL BE PAID AS NOTED IN SPECIAL PROVISION 619502.
 - IF DIRECTED BY THE ENGINEER TO RESTRIKE A PRODUCTION PILE, THE RESTRIKE OF THE PRODUCTION PILE SHALL BE PAID SEPARATELY UNDER ITEM NO. 619501.
 - THE DEPARTMENT RESERVES THE RIGHT TO PERFORM DYNAMIC TESTING OF RESTRIKES.

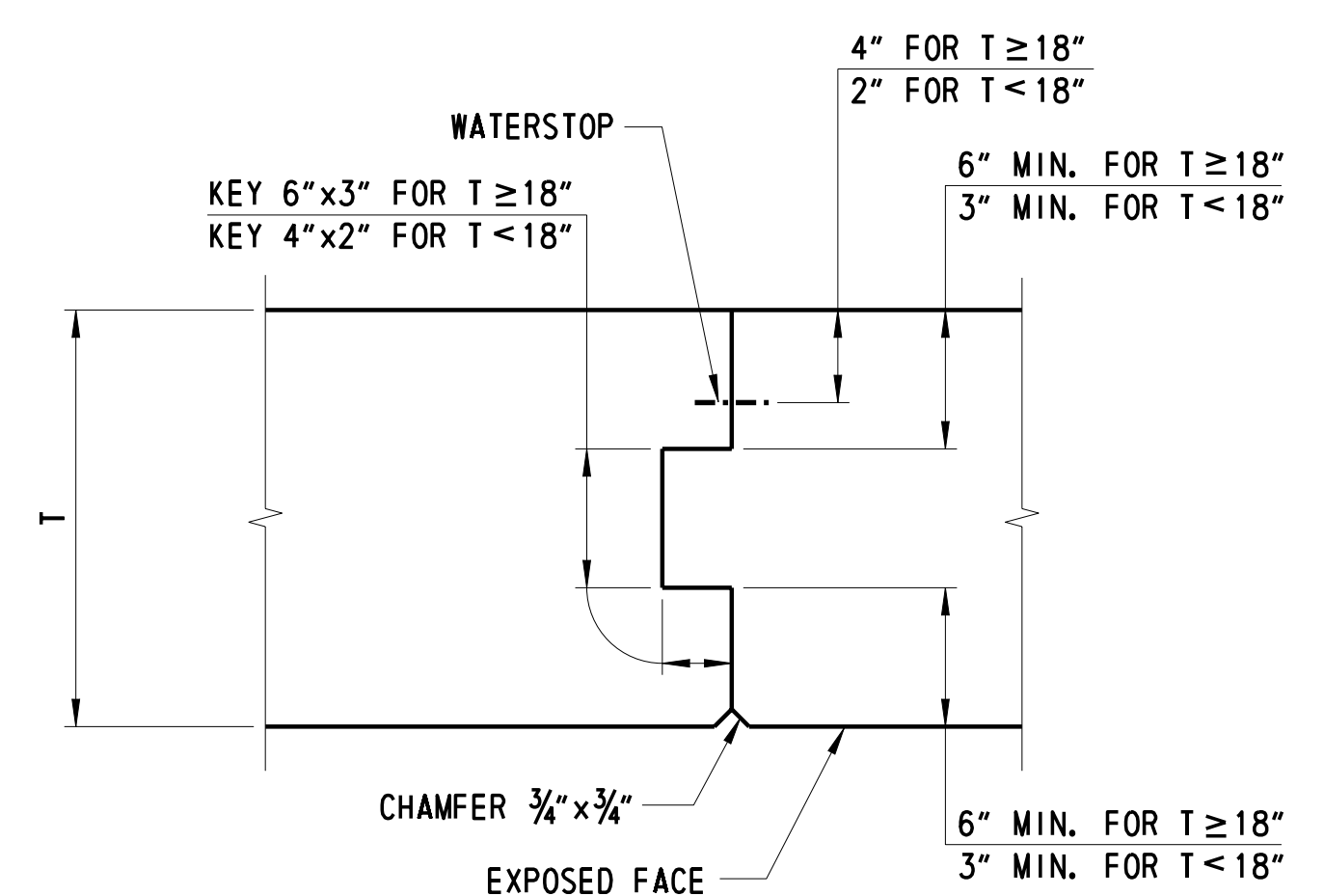
- PILE PICK-UP NOTES:**
- UNLESS SPECIAL LIFTING DEVICES ARE ATTACHED FOR PICK-UP, PICK-UP POINTS SHALL BE PLAINLY MARKED ON ALL PILES AFTER REMOVAL OF THE FORMS. THE PILE SHALL BE SUPPORTED ONLY AT THE INDICATED PICK-UP POINTS WHILE BEING STORED OR HANDLED.
 - THE USE OF PROPER RIGGING IS REQUIRED TO ENSURE THAT THE PICK-UP POINTS REMAIN IN A STRAIGHT LINE DURING LIFTING AND WHEN POSITIONING THE PILE FOR DRIVING.
 - THE USE OF SPECIAL EMBEDDED OR ATTACHED LIFTING DEVICES, THE USE OF OTHER PICK-UP LOCATIONS OR ANY OTHER METHOD OF PICK-UP SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- ADDITIONAL NOTES FOR CAST-IN-PLACE ALTERNATE:**
- A ONE TO ONE SUBSTITUTION OF 14" STEEL MONOTUBE PILES IS ALLOWED FOR THE 14"X14" PRESTRESSED PRECAST CONCRETE PILES DETAILED IN THE CONTRACT DOCUMENTS.
 - NO PILE SUBSTITUTION WILL BE ALLOWED FOR THE 18"X18" PRESTRESSED PRECAST CONCRETE PILES.
 - STEEL MONOTUBE PILES SHALL HAVE A 3 GAUGE THICKNESS, AN 8IN TIP WITH A CLOSED CONICAL POINT, 14IN BUTT AND 15FT TAPER AT 0.40IN/FT.
 - ALL PILES SHALL BE DRIVEN TO THE TIP ELEVATIONS AND NOMINAL PILE DRIVING RESISTANCES LISTED IN THE PILE INSTALLATION DATA TABLES.

- PILE BUILD-UP NOTES:**
- THE COMPRESSIVE STRENGTH OF THE PILE BUILD-UP SHALL BE $f'_{c}=6000$ PSI.
 - PREFORMED DOWEL HOLES SHALL BE LONG ENOUGH TO ALLOW FOR ANTICIPATED PILE CUT-OFFS AND THE NET CROSS-SECTIONAL AREA SHALL BE CONSIDERED IN THE WAVE EQUATION.
 - ONCE DOWELS ARE PLACED, THE HOLES SHALL BE FILLED WITH AN APPROVED EPOXY GROUT. MINIMUM COMPRESSIVE STRENGTH OF EPOXY GROUT SHALL BE $f'_{c}=6000$ PSI.
 - PRIOR TO THE GROUTING PROCEDURE, PREFORMED HOLES SHALL REMAIN PLUGGED TO ENSURE THAT WATER AND FOREIGN MATERIAL DO NOT ENTER.
 - DOWEL HOLES SHALL BE POSITIONED TO MAINTAIN A 1" CLEAR DISTANCE FROM ALL PRESTRESSING STRANDS IN THE PILE.
- CROSS REFERENCE NOTES:**
- FOR ABUTMENT 1 SB PILE PLAN, SEE DWG. NO. 1-480 FT-2.
 - FOR ABUTMENT 2 SB PILE PLAN, SEE DWG. NO. 1-480 FT-3.
 - FOR ABUTMENT 1 NB PILE PLAN, SEE DWG. NO. 1-480 FT-4.
 - FOR ABUTMENT 2 NB PILE PLAN, SEE DWG. NO. 1-480 FT-5.
 - FOR PIER PILE PLAN, SEE DWG. NO. 1-480 FT-6.
 - FOR FILL PLACEMENT DURING QUARANTINE PERIOD DETAIL, SEE DWG. NO. 1-480 DT-1.

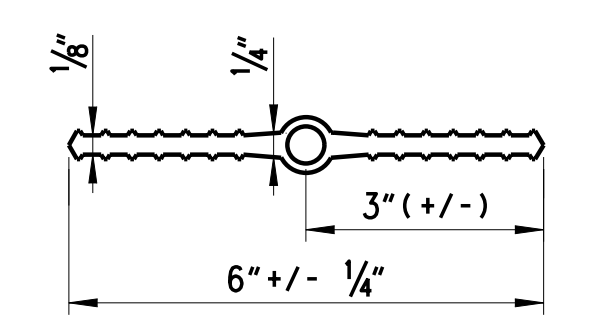
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT	BRIDGE NO.	1-480N&S	US 301 MAINLINE OVER SANDY BRANCH PILE DETAILS	SHEET NO.		
				T200911303				571	
					COUNTY		DESIGNED BY: LT, PRH		TOTAL SHTS.
					NEW CASTLE		CHECKED BY: JW, AMS		1256



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

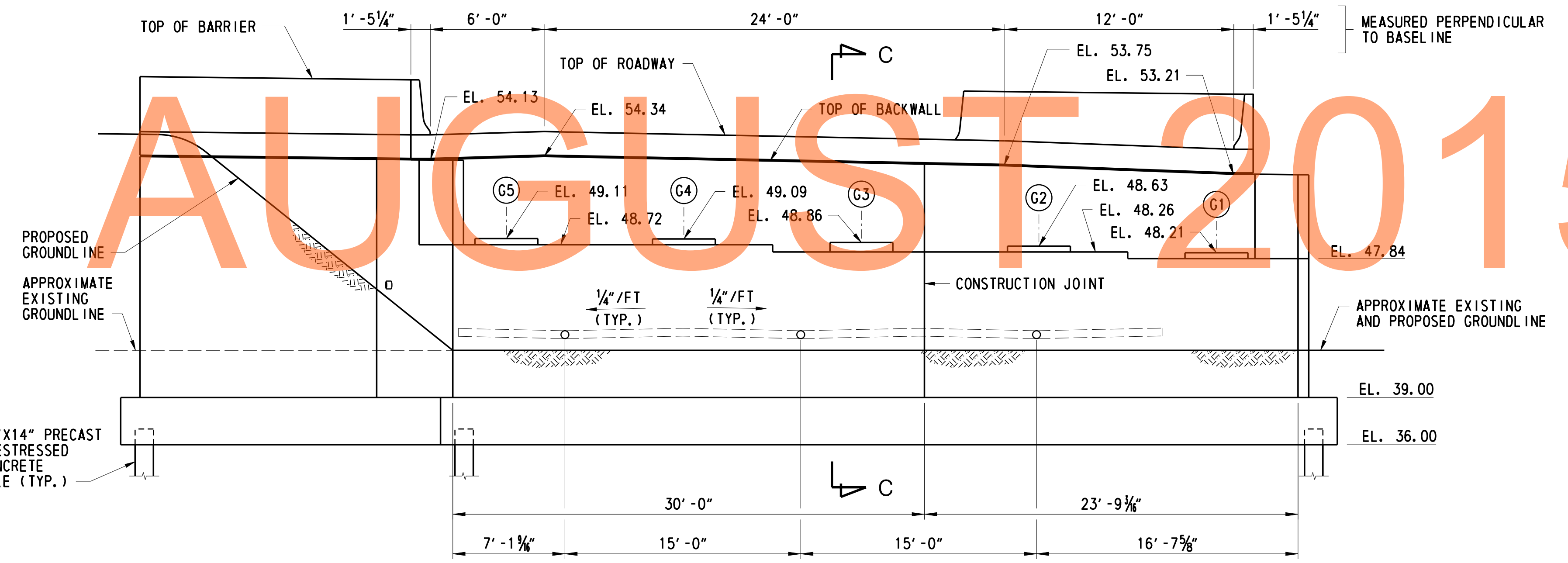


CONSTRUCTION JOINT DETAIL
SCALE: 1 1/2" = 1'-0"



POLYVINYL CHLORIDE WATERSTOP
NOT TO SCALE

- NOTES:**
1. PROVIDE HOLES OR SLOTS IN WATERSTOP, AS REQUIRED, WHEN NECESSARY TO ACCOMMODATE REINFORCEMENT BARS, BUT DO NOT COMPROMISE SEAL.
 2. STOP WATERSTOP 9" FROM TOP OF WALL.



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

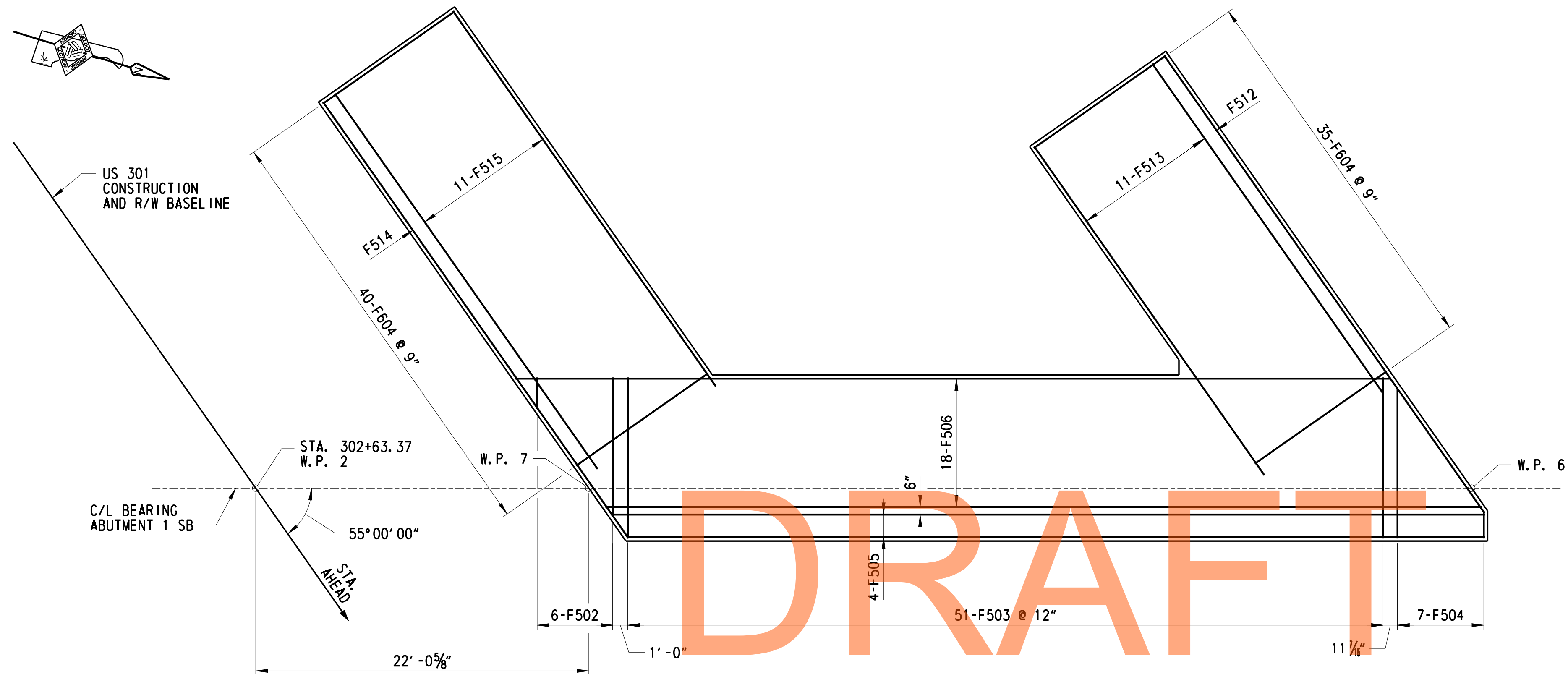
- NOTES:**
1. TOP OF ABUTMENT SEAT ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
 2. TOP OF BACKWALL ELEVATIONS SHOWN AT CENTER OF BACKWALL.
 3. ABUTMENT SEAT STEPS LOCATED MID-WAY BETWEEN GIRDERS.

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
 2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. 1-480 FT-1.
 3. FOR ABUTMENT 1 SB PILE PLAN, SEE DWG. NO. 1-480 FT-2.
 4. FOR SECTION C-C, SEE DWG. NO. 1-480 AB-3.
 5. FOR ABUTMENT 1 SB DETAILS, SEE DWG. NOS. 1-480 AB-3 AND 1-480 AB-4.
 6. FOR WINGWALL ELEVATIONS, SEE DWG. NO. 1-480 WW-1.
 7. FOR BEARING DETAILS, SEE DWG. NO. 1-480 BD-1.
 8. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.

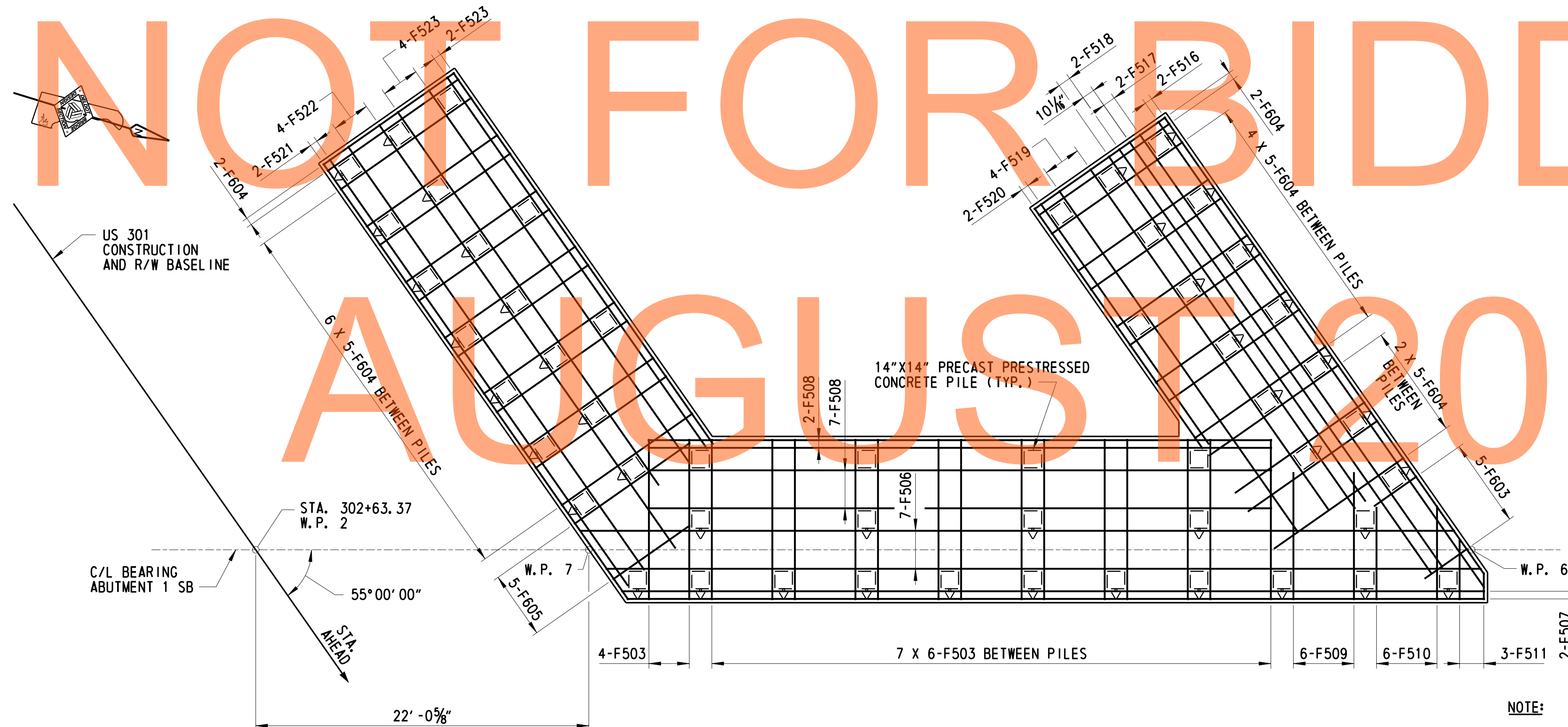
NOT FOR BIDDING

AUGUST 2015

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT	BRIDGE NO.	1-480N&S	US 301 MAINLINE OVER SANDY BRANCH ABUTMENT 1 SB PLAN AND ELEVATION	1-480 AB-1		
				T200911303	DESIGNED BY:		LT	SHEET NO.	572
					COUNTY			TOTAL SHTS.	1256
					NEW CASTLE		CHECKED BY:	JW	



ABUTMENT 1 SB - TOP MAT REINFORCEMENT PLAN
SCALE: 3/8" = 1'-0"



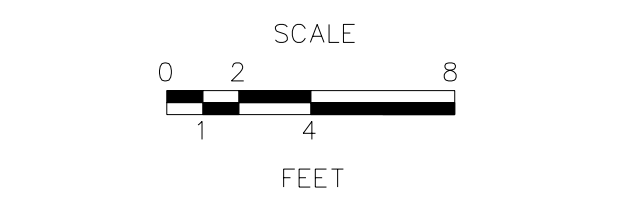
ABUTMENT 1 SB - BOTTOM MAT REINFORCEMENT PLAN
SCALE: 3/8" = 1'-0"

NOTE:
ALL REINFORCEMENT SHALL BE
2" MIN. CLEAR FROM PILES.

- CROSS REFERENCE NOTES:**
1. FOR ABUTMENT 1 SB PILE PLAN, SEE DWG. NO. 1-480 FT-2.
 2. FOR ABUTMENT 1 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-1.
 3. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-1.
 4. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.

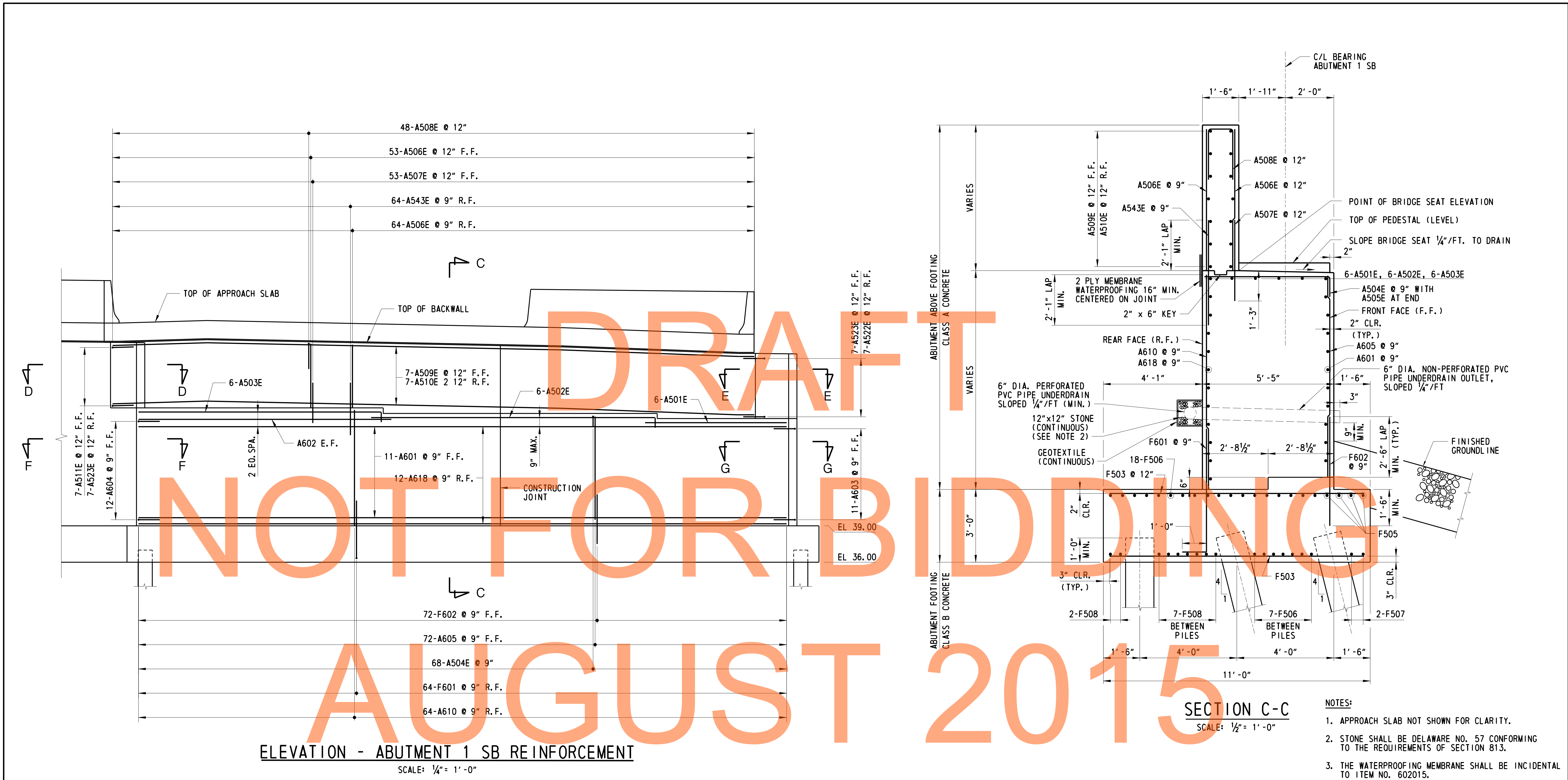
NOT FOR BIDDING
AUGUST 2015

ADDENDUMS / REVISIONS



CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 AB-2
SHEET NO.
573
TOTAL SHTS.
1256



ELEVATION - ABUTMENT 1 SB REINFORCEMENT
SCALE: 1/4" = 1'-0"

SECTION C-C
SCALE: 1/2" = 1'-0"

NOTE:
PEDESTALS AND PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY.

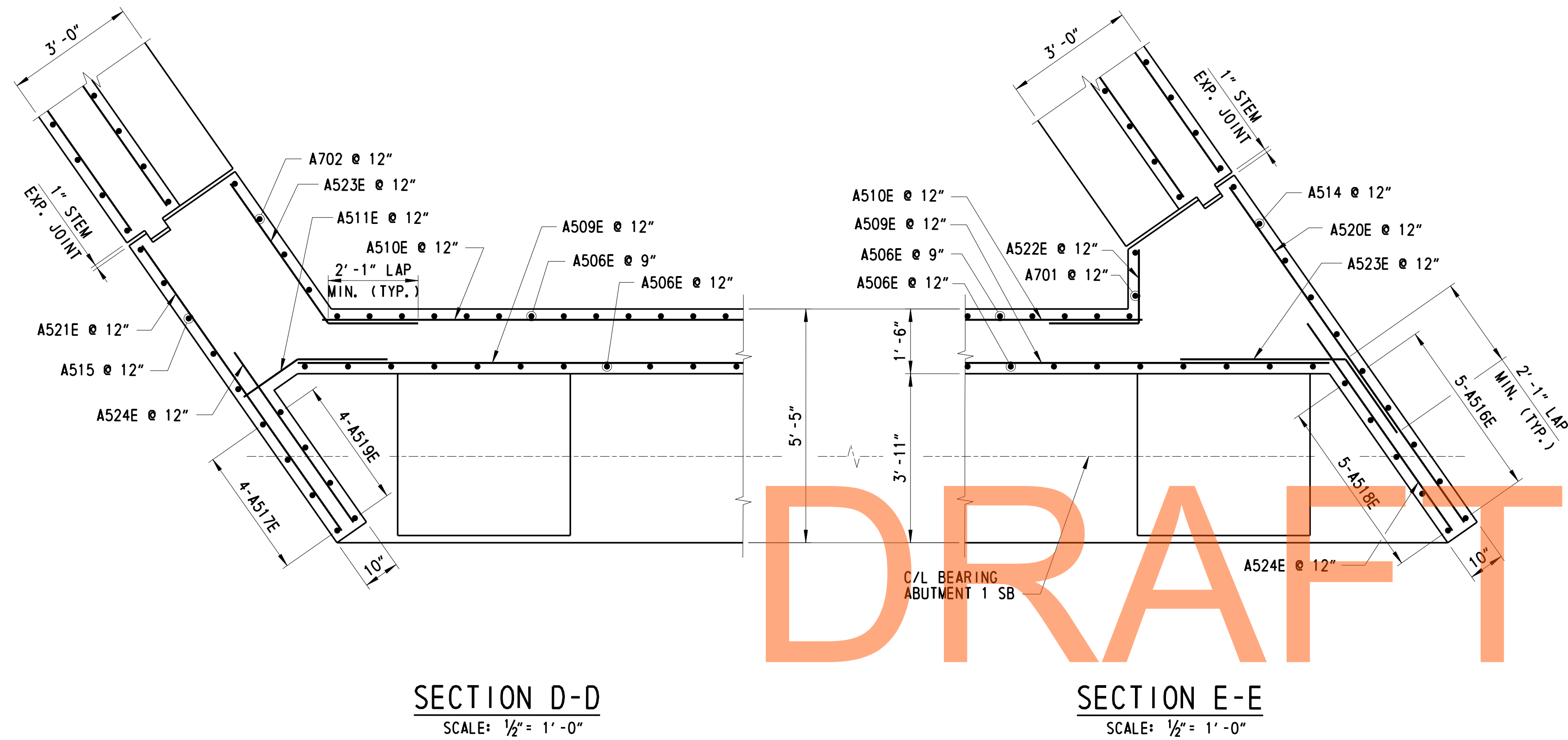
- NOTES:
1. APPROACH SLAB NOT SHOWN FOR CLARITY.
 2. STONE SHALL BE DELAWARE NO. 57 CONFORMING TO THE REQUIREMENTS OF SECTION 813.
 3. THE WATERPROOFING MEMBRANE SHALL BE INCIDENTAL TO ITEM NO. 602015.

- CROSS REFERENCE NOTES:
1. FOR ABUTMENT 1 SB PILE PLAN, SEE DWG. NO. 1-480 FT-2.
 2. FOR ABUTMENT 1 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-1.
 3. FOR ABUTMENT 1 FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-2.
 4. FOR SECTIONS D-D, E-E, F-F AND G-G, SEE DWG. NO. 1-480 AB-4.
 5. FOR PEDESTAL REINFORCEMENT DETAIL, SEE DWG. NO. 1-480 AB-4.
 6. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-1.

ADDENDUMS / REVISIONS

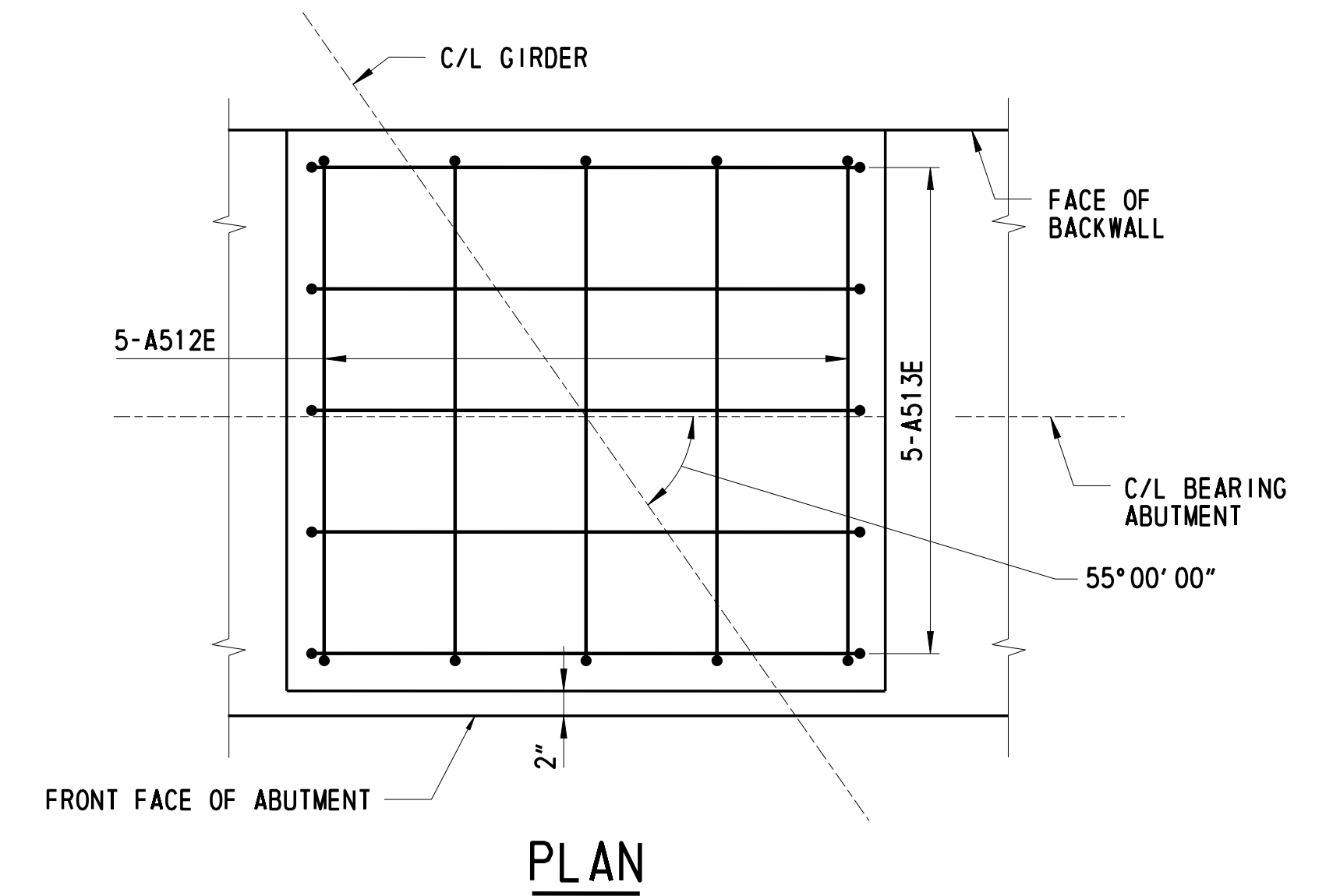
CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 AB-3
SHEET NO.
574
TOTAL SHTS.
1256

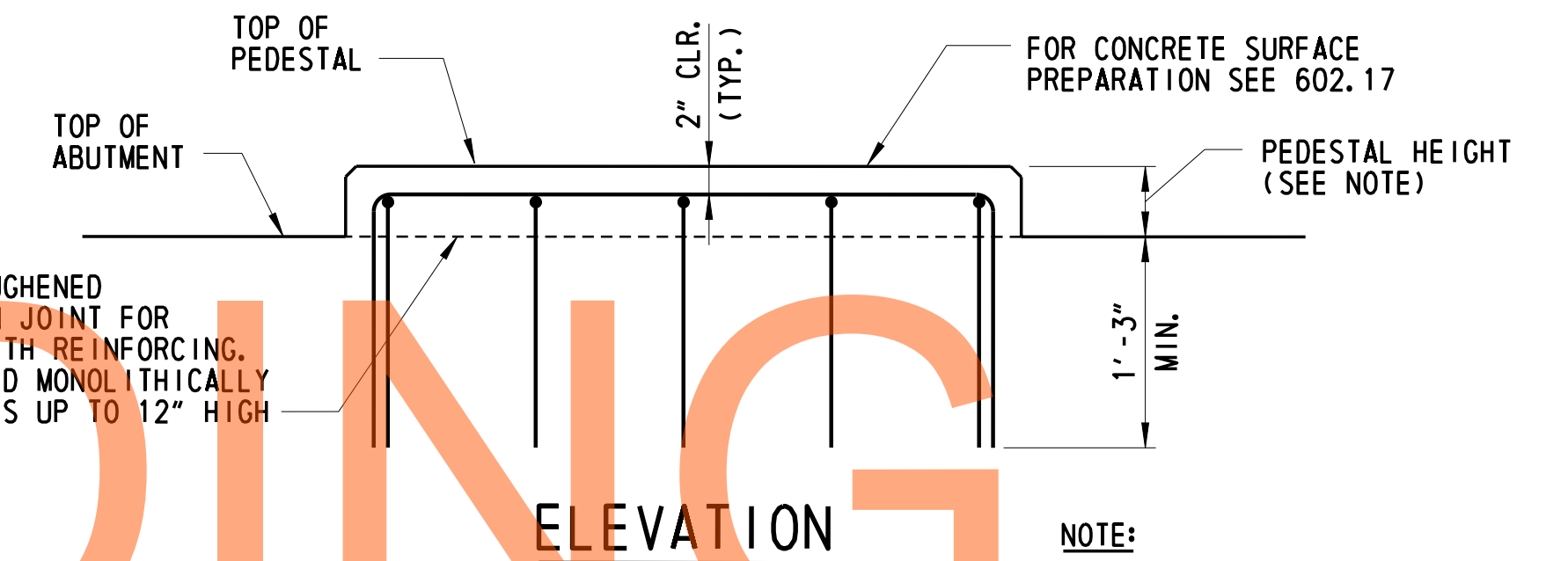


SECTION D-D
SCALE: 1/2" = 1'-0"

SECTION E-E
SCALE: 1/2" = 1'-0"



PLAN

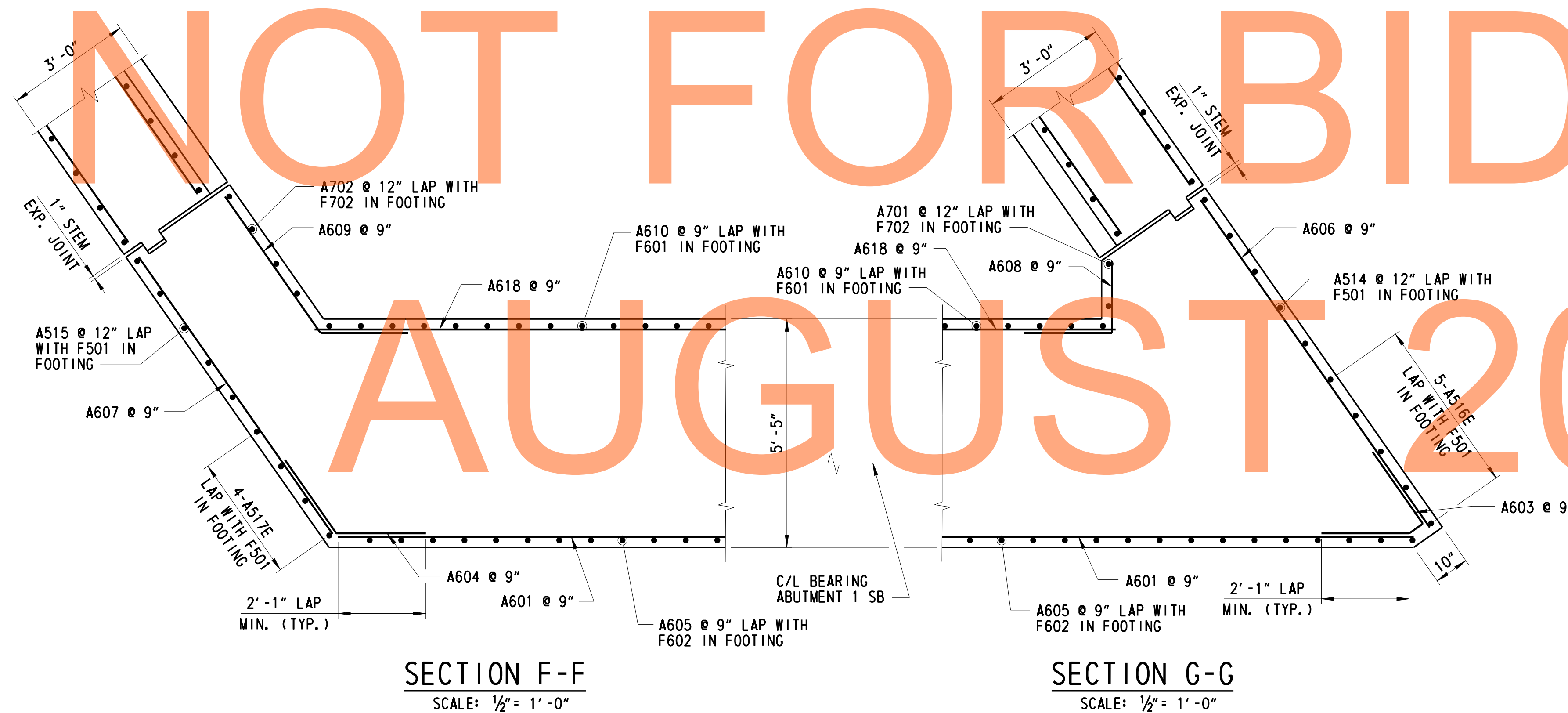


ELEVATION

MAY BE A ROUGHENED CONSTRUCTION JOINT FOR PEDESTALS WITH REINFORCING. MAY BE POURED MONOLITHICALLY FOR PEDESTALS UP TO 12" HIGH

NOTE:
PEDESTAL REINFORCEMENT NOT REQUIRED FOR PEDESTAL HEIGHTS LESS THAN 4".

PEDESTAL REINFORCEMENT DETAIL
SCALE: 1" = 1'-0"

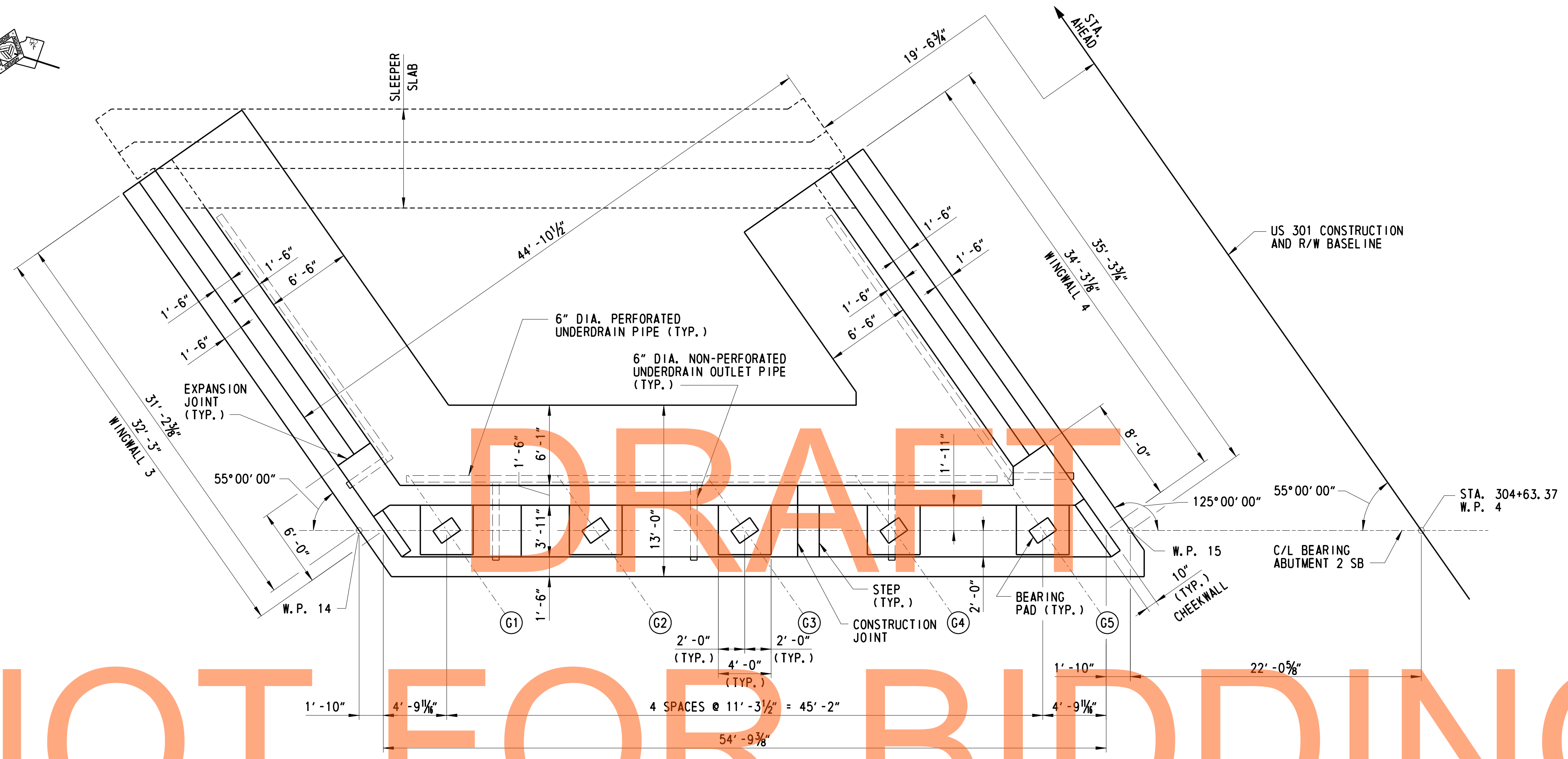
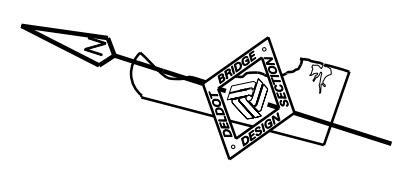


SECTION F-F
SCALE: 1/2" = 1'-0"

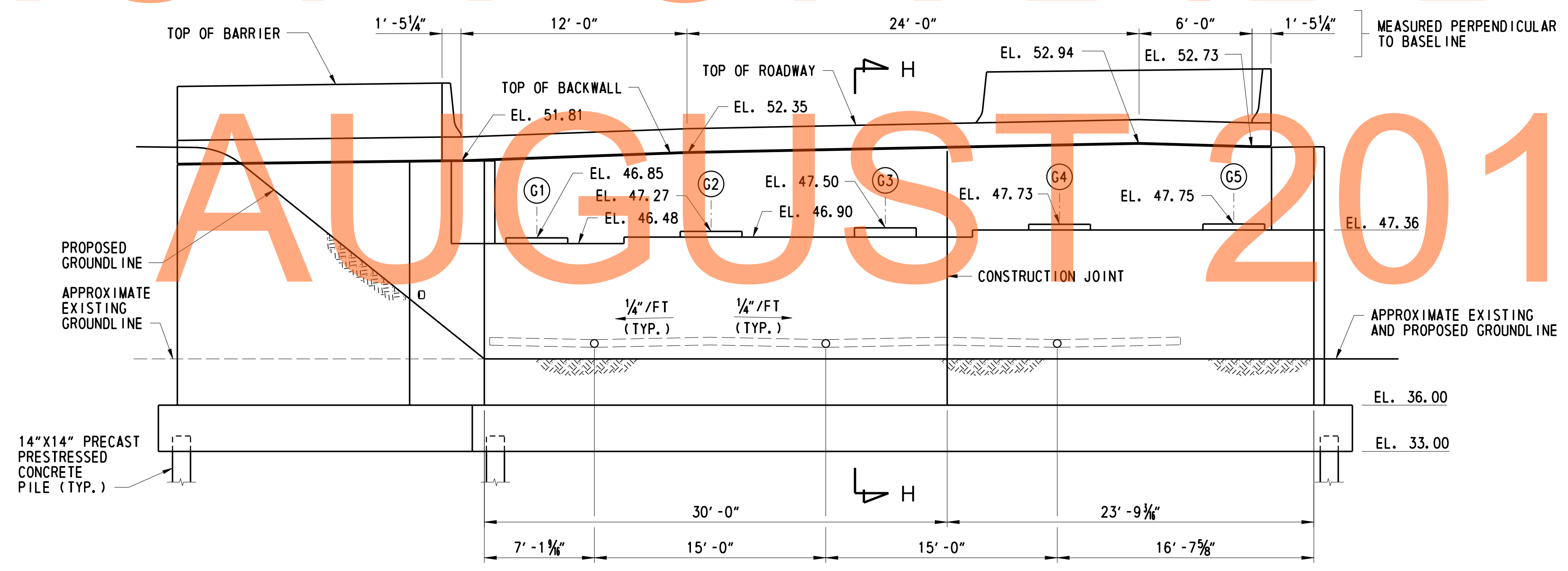
SECTION G-G
SCALE: 1/2" = 1'-0"

CROSS REFERENCE NOTES:

1. FOR ABUTMENT 1 SB PLAN AND ELEVATION, SEE DWG. NO 1-480 AB-1.
2. FOR ABUTMENT 1 SB REINFORCEMENT, SEE DWG. NO. 1-480 AB-3.
3. FOR WINGWALL REINFORCEMENT, SEE DWG. NO. 1-480 WW-2.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-1.
5. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.



PLAN
SCALE: 3/16" = 1'-0"



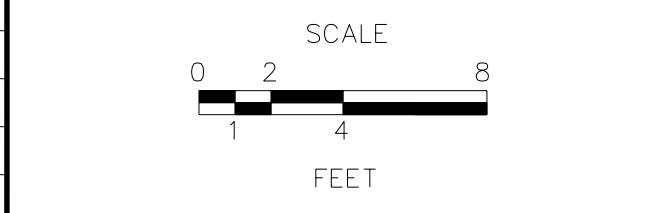
ELEVATION
SCALE: 3/16" = 1'-0"

NOT FOR BIDDING

AUGUST 2015

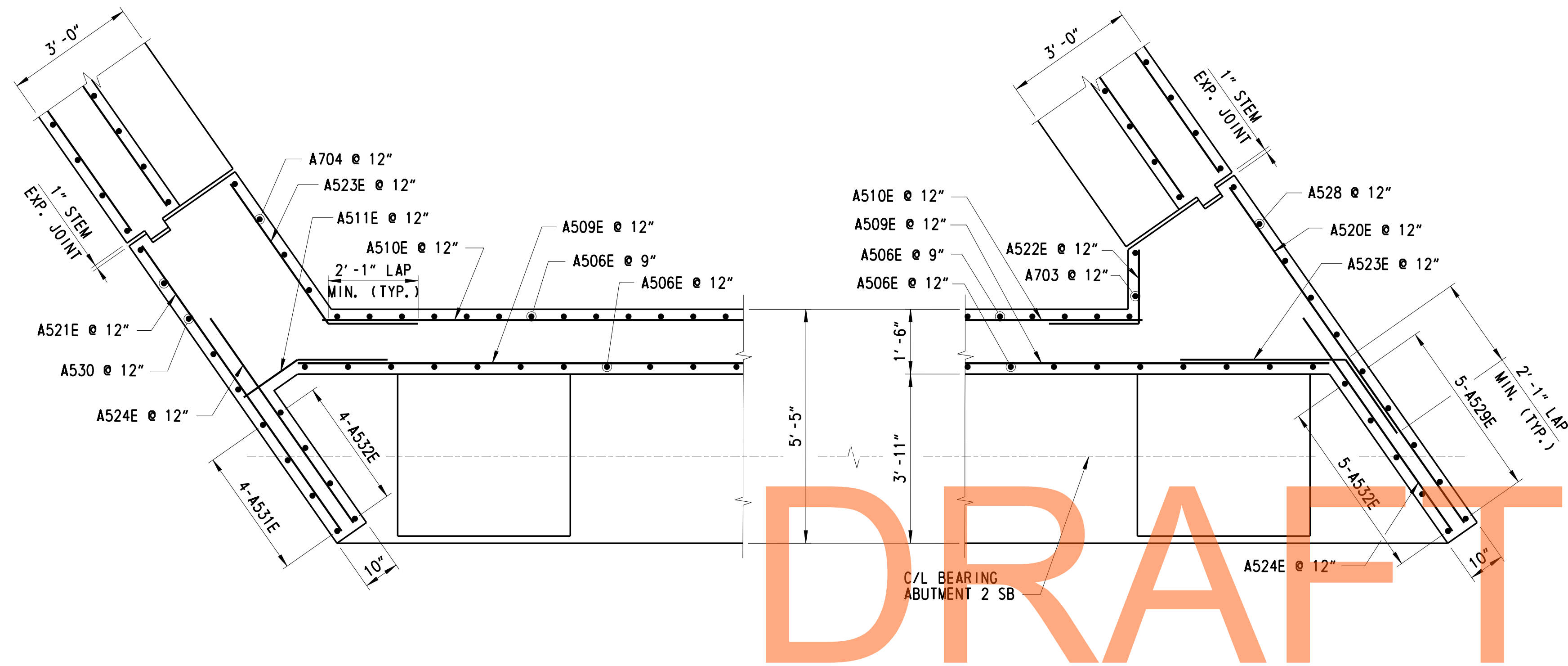
- NOTES:**
1. TOP OF ABUTMENT SEAT ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
 2. TOP OF BACKWALL ELEVATIONS SHOWN AT CENTER OF BACKWALL.
 3. ABUTMENT SEAT STEPS LOCATED MID-WAY BETWEEN GIRDERS.
- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
 2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. 1-480 FT-1.
 3. FOR ABUTMENT 2 SB PILE PLAN, SEE DWG. NO. 1-480 FT-3.
 4. FOR SECTION H-H, SEE DWG. NO. 1-480 AB-7.
 5. FOR ABUTMENT 2 SB DETAILS, SEE DWG. NOS. 1-480 AB-7 AND 1-480 AB-8.
 6. FOR WINGWALL ELEVATIONS, SEE DWG. NO. 1-480 WW-1.
 7. FOR BEARING DETAILS, SEE DWG. NO. 1-480 BD-1.
 8. FOR CONSTRUCTION JOINT DETAIL, SEE DWG. NO. 1-480 AB-1.
 9. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.

ADDENDUMS / REVISIONS



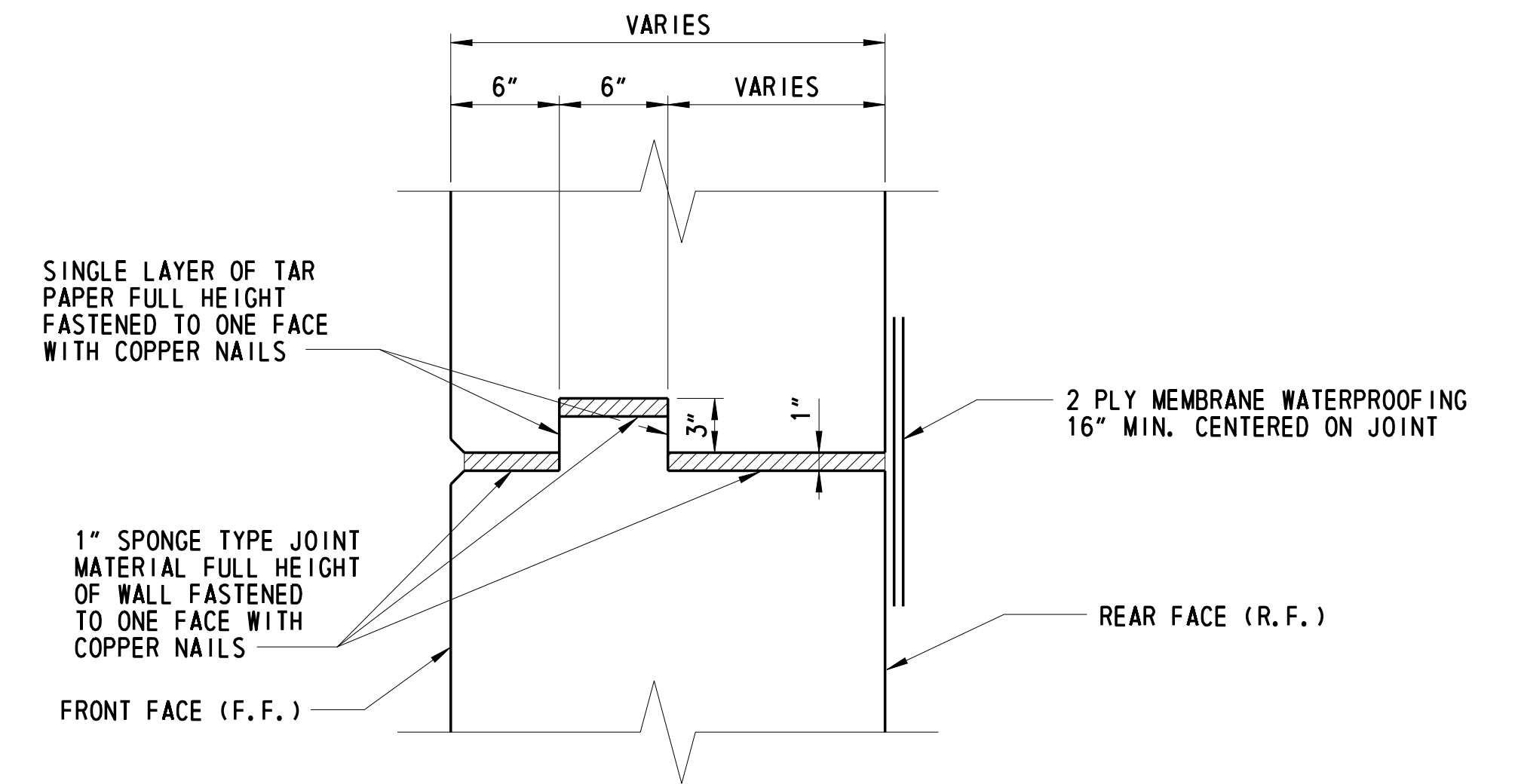
CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 AB-5
SHEET NO.
576
TOTAL SHTS.
1256

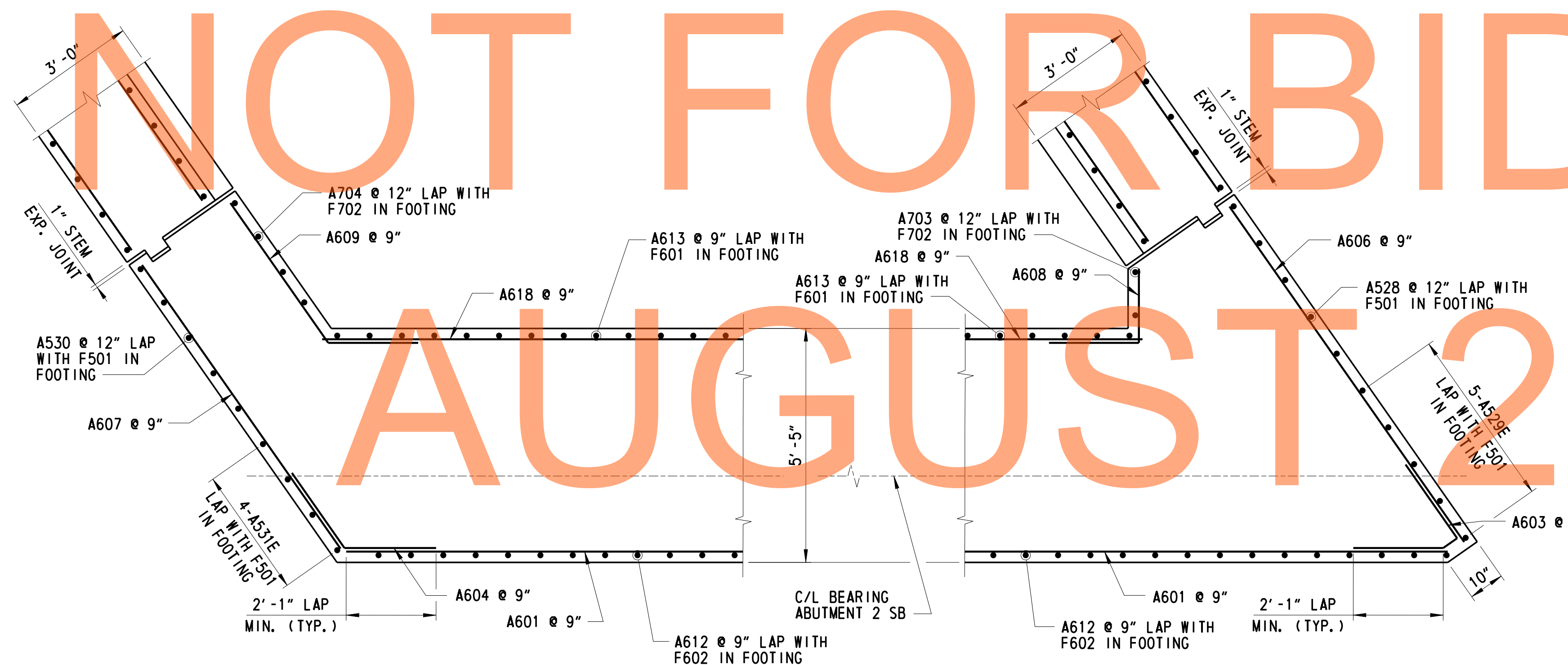


SECTION J-J
SCALE: 1/2" = 1'-0"

SECTION K-K
SCALE: 1/2" = 1'-0"



STEM EXPANSION JOINT DETAIL
SCALE: 1 1/2" = 1'-0"

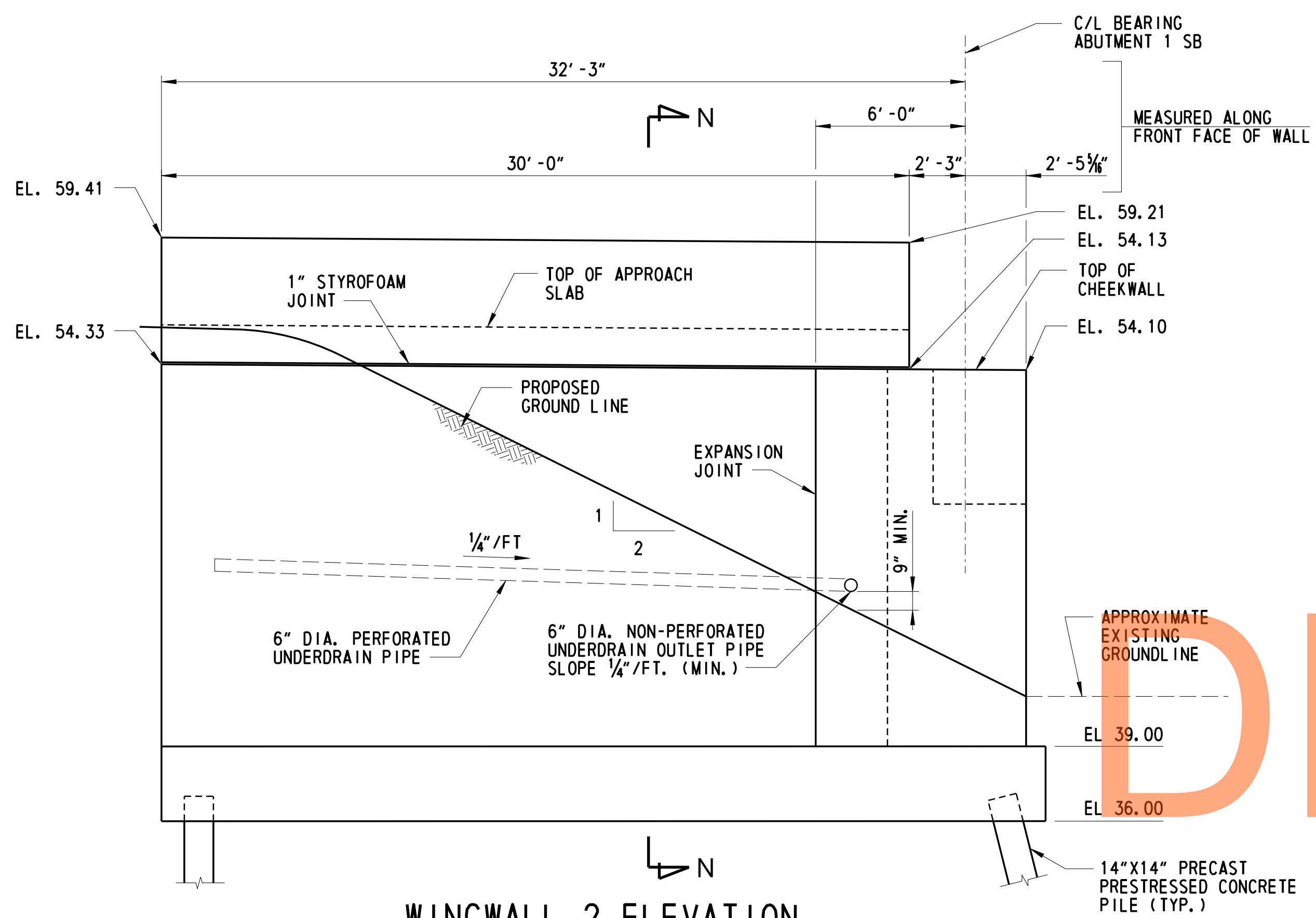


SECTION L-L
SCALE: 1/2" = 1'-0"

SECTION M-M
SCALE: 1/2" = 1'-0"

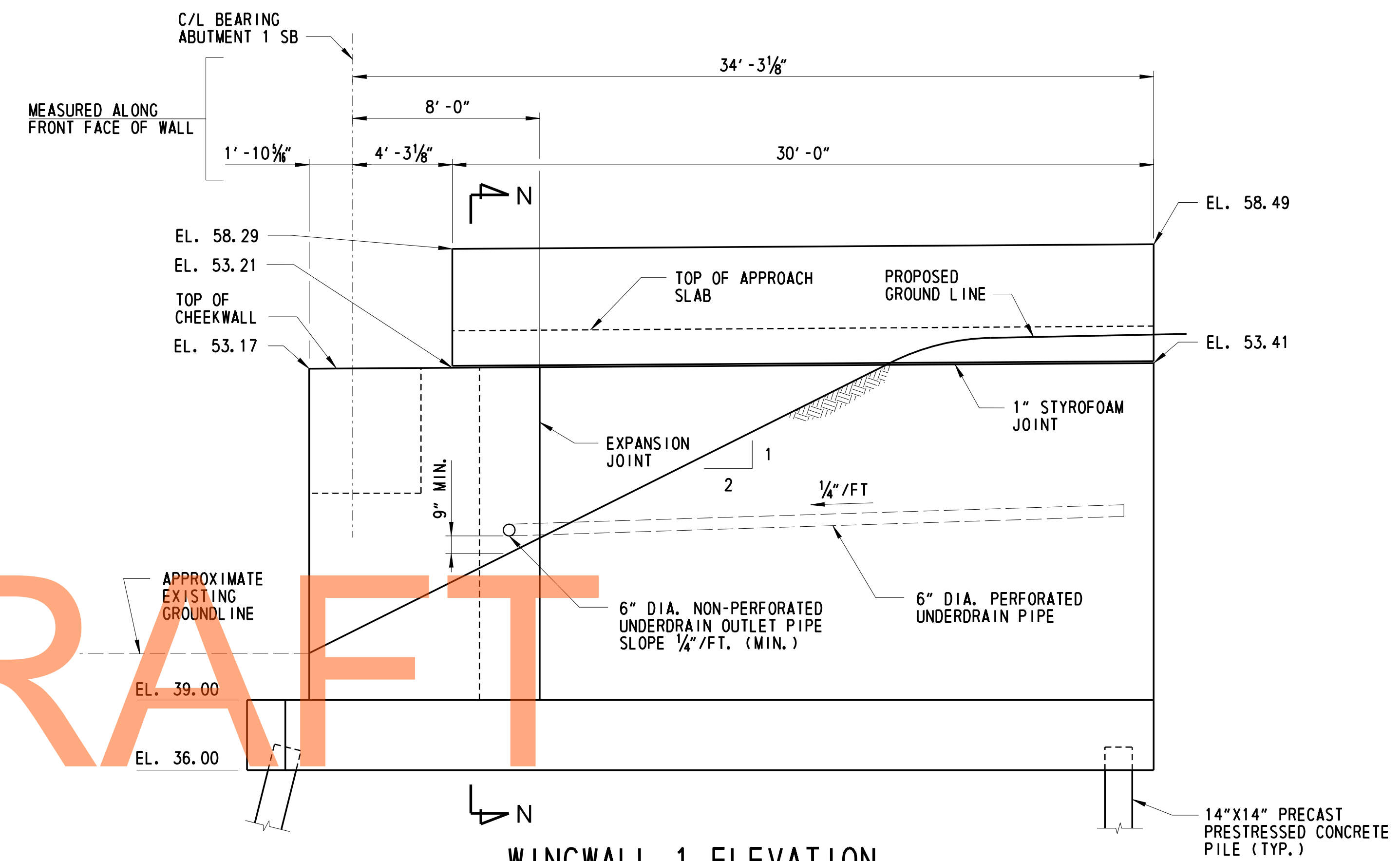
- NOTES:
1. STOP KEY 9" BELOW TOP OF WALL.
 2. REINFORCEMENT SHALL NOT PASS THROUGH EXPANSION JOINT.
 3. ONLY PLACE EXPANSION JOINT IN STEM (NO JOINT IN FOOTING).
 4. NO CHAMFER REQUIRED ON REAR FACE.
 5. THE WATERPROOFING MEMBRANE SHALL BE INCIDENTAL TO ITEM NO. 602015.

- CROSS REFERENCE NOTES:
1. FOR ABUTMENT 2 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-5.
 2. FOR ABUTMENT 2 SB REINFORCEMENT, SEE DWG. NO. 1-480 AB-7.
 3. FOR WINGWALL REINFORCEMENT, SEE DWG. NO. 1-480 WW-3.
 4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-2.



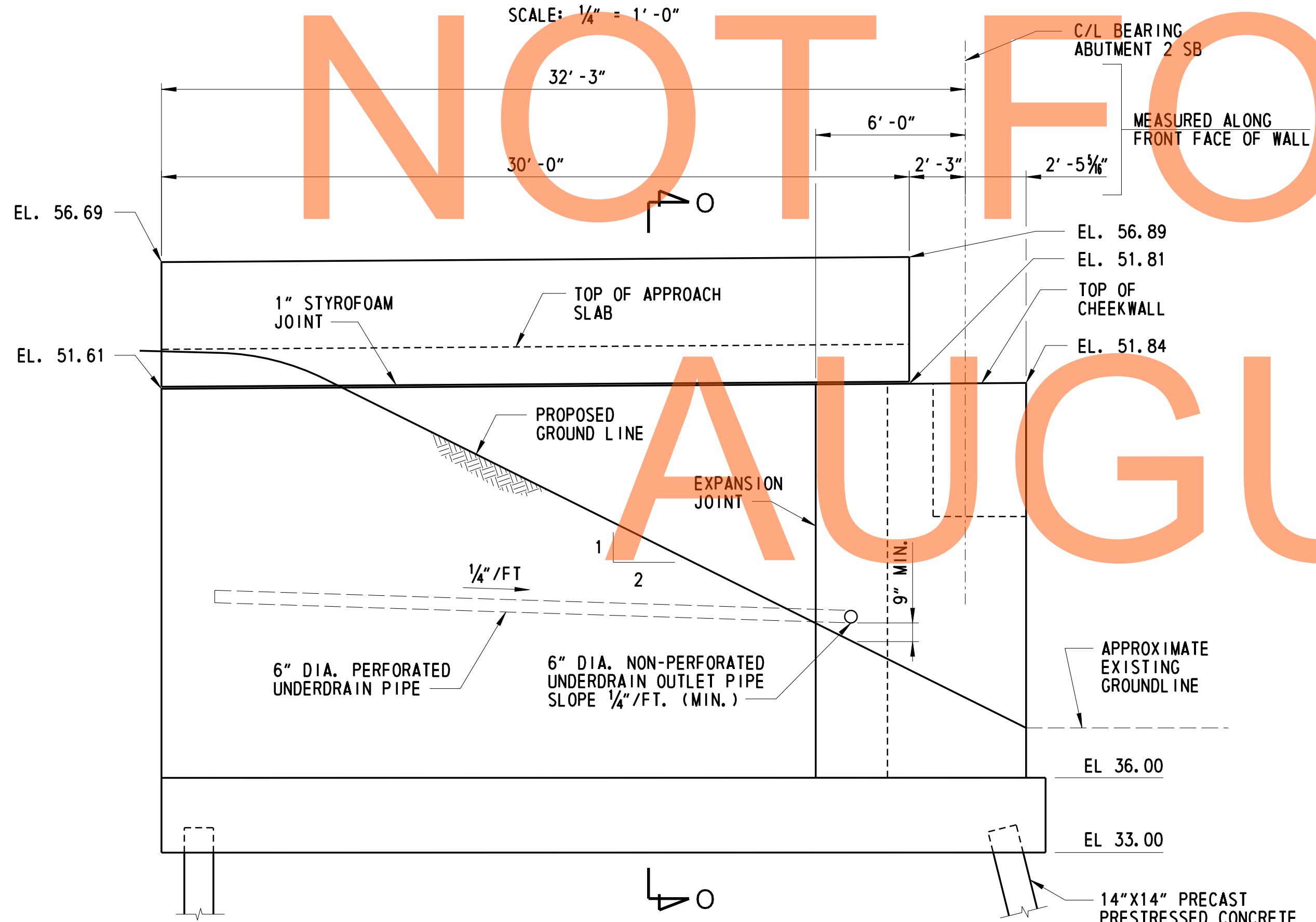
WINGWALL 2 ELEVATION

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



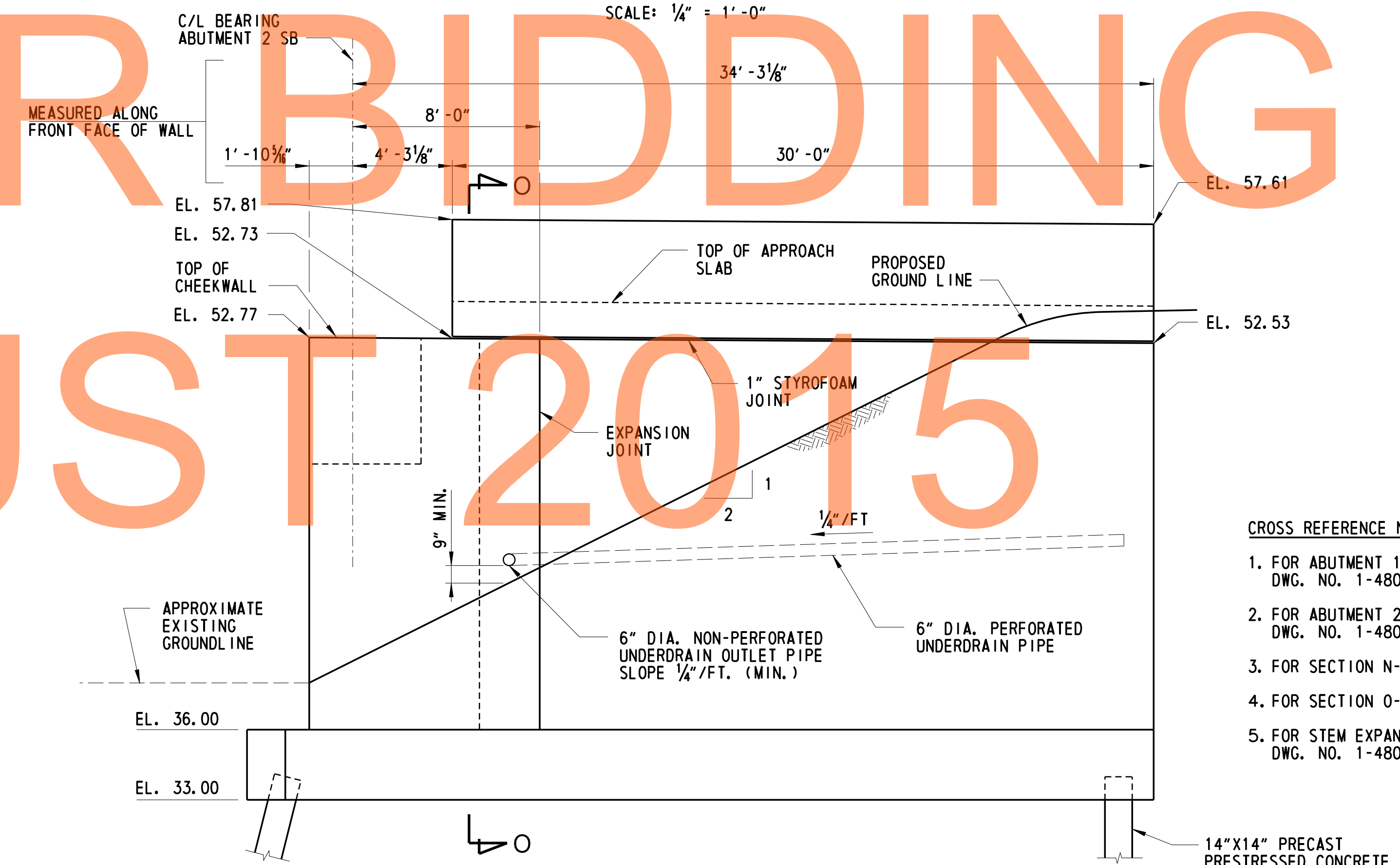
WINGWALL 1 ELEVATION

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



WINGWALL 3 ELEVATION

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



WINGWALL 4 ELEVATION

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

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NOT FOR BIDDING

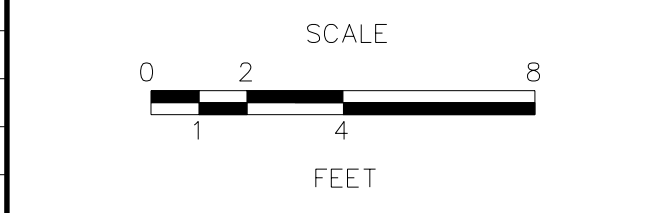
AUGUST 2015

CROSS REFERENCE NOTES:

1. FOR ABUTMENT 1 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-1.
2. FOR ABUTMENT 2 SB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-5.
3. FOR SECTION N-N, SEE DWG. NO. 1-480 WW-2.
4. FOR SECTION O-O, SEE DWG. NO. 1-480 WW-3.
5. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.



ADDENDUMS / REVISIONS



US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	KW
COUNTY	CHECKED BY:	JW
NEW CASTLE		

US 301 MAINLINE OVER SANDY BRANCH WINGWALL ELEVATIONS (1-4)

1-480 WW-1
SHEET NO.
580
TOTAL SHTS.
1256

REINFORCING BAR SCHEDULE

ABUTMENT 1 SB

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
A501E	11'-8"	6	STR.												
A502E	24'-3"	6	2	10"	23'-5"										
A503E	20'-10" TO 23'-4"	6	2	10"	20'-0" TO 22'-6"										LENGTH Δ = 6"
A504E	5'-11"	68	2	10"	5'-1"										
A505E	1'-10" TO 4'-7"	6	2	10"	1'-0" TO 3'-9"										LENGTH Δ = 1'-4 1/2"
A506E	5'-2"	117	STR.												
A507E	4'-0"	53	STR.												
A508E	5'-4"	48	17		2'-1"	1'-2"	2'-1"								
A509E	52'-0"	7	STR.												
A510E	47'-0"	7	STR.												
A511E	3'-6 1/2"	7	16			2'-1"	1'-5 1/2"				10"		1'-2 1/4"	3'-3 1/4"	
A512E	6'-11"	25	17		1'-9"	3'-5"	1'-9"								
A513E	7'-2"	25	17		1'-9"	3'-8"	1'-9"								
A514	13'-5"	5	STR.												
A515	14'-4"	5	STR.												
A516E	13'-5"	5	STR.												
A517E	14'-4"	4	STR.												
A518E	6'-10"	5	STR.												
A519E	6'-9"	4	STR.												
A520E	9'-6"	7	STR.												
A521E	8'-0"	7	STR.												
A522E	3'-8"	7	2	1'-7"	2'-1"										
A523E	5'-11"	14	16			3'-10"	2'-1"				1'-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A524E	6'-0"	14	STR.												
A525															BAR REMOVED
A543E	4'-10"	64	STR.												
A601	53'-8"	11	STR.												
A602	23'-6"	2	STR.												
A603	4'-8 1/2"	11	16		2'-1"	6 1/2"	2'-1"				1'-2 3/8"		1'-8 1/2"	2'-3"	
A604	4'-8"	12	16			2'-4"	2'-4"				1'-11"		1'-4"	3'-8"	
A605	8'-2"	72	STR.												
A606	9'-6"	11	STR.												
A607	8'-0"	12	STR.												
A608	3'-8"	12	2	1'-7"	2'-1"										
A609	5'-11"	13	16			3'-10"	2'-1"				1'-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A610	8'-8"	64	STR.												
A618	47'-0"	12	STR.												
A701	13'-11"	2	STR.												
A702	14'-10"	4	STR.												
F501	3'-9"	73	STR.												
F502	1'-11" TO 9'-0"	6	STR.												LENGTH Δ = 1'-5"
F503	10'-6"	97	STR.												
F504	1'-8" TO 9'-10"	7	STR.												LENGTH Δ = 1'-4 3/4"
F505	56'-8" TO 57'-8"	4	STR.												LENGTH Δ = 4"
F506	57'-10"	25	STR.												
F507	56'-8" TO 57'-0"	2	STR.												LENGTH Δ = 4"
F508	41'-2"	9	STR.												
F509	8'-4"	6	STR.												
F510	6'-0"	6	STR.												
F511	1'-8" TO 3'-11"	3	STR.												LENGTH Δ = 1'-1 1/2"
F512	36'-9"	1	STR.												
F513	26'-6"	11	STR.												
F514	35'-1"	1	STR.												
F515	30'-3"	11	STR.												
F516	36'-10" TO 37'-7"	2	STR.												LENGTH Δ = 9"
F517	34'-10"	2	STR.												
F518	28'-5"	2	STR.												
F519	27'-6"	4	STR.												
F520	19'-3"	2	STR.												
F521	34'-3" TO 35'-1"	2	STR.												LENGTH Δ = 10"
F522	34'-1"	4	STR.												
F523	30'-0"	6	STR.												

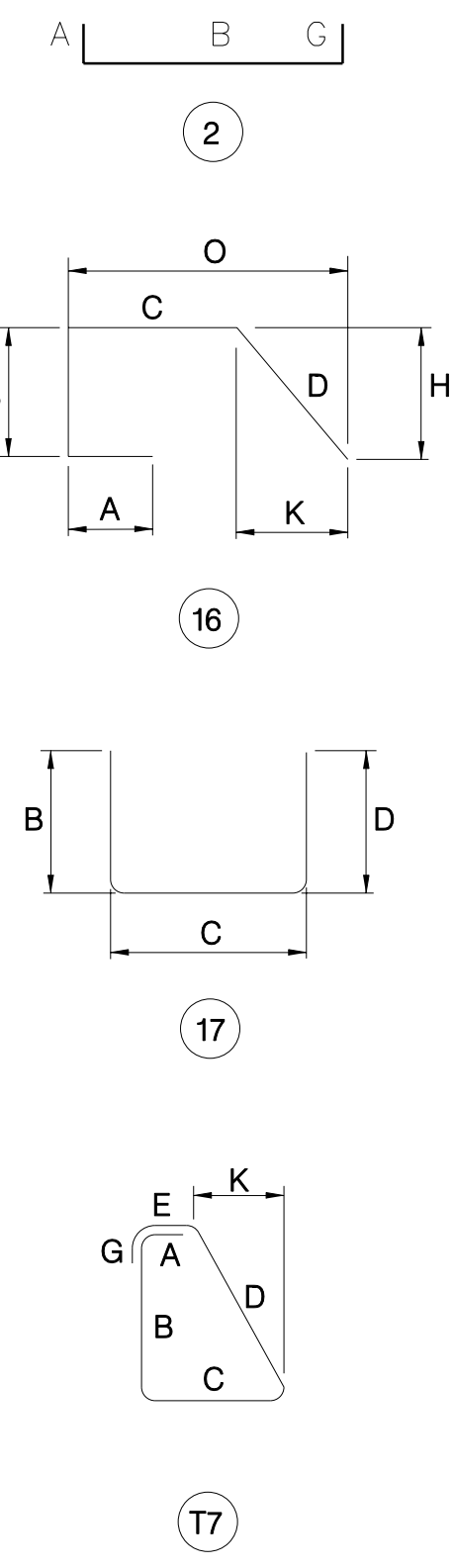
ABUTMENT 1 SB

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
F601	7'-1"	64	2	1'-0"	6'-1"										
F602	5'-5"	72	STR.												
F603	3'-4"	5	STR.												
F604	10'-6"	139	STR.												
F605	6'-1" TO 9'-3"	5	STR.												LENGTH Δ = 9 1/2"
F701	7'-3"	54	17			1'-2"	6'-1"							7 1/4"	
F702	7'-3"	6	2	1'-2"	6'-1"										
W501	7'-3"	54	17		2'-1"	1'-2"	4'-0"								
W502	26'-0"	29	STR.												
W503	25'-11"	31	STR.												
W504	13'-6"	27	STR.												
W505	14'-5"	27	STR.												
W701	14'-0"	27	STR.												
W702	14'-9"	27	STR.												

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REINFORCING BAR SCHEDULE

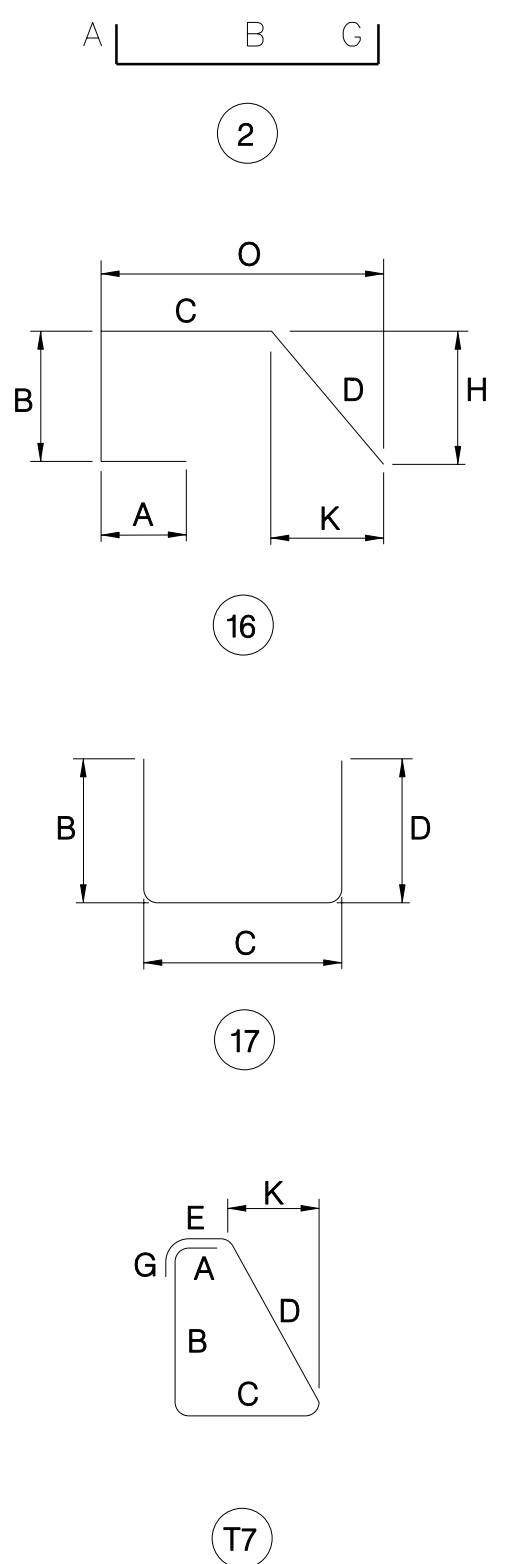
ABUTMENT 2 SB															
MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
A502E	24'-3"	6	2	10"	23'-5"										
A504E	5'-11"	68	2	10"	5'-1"										
A505E	1'-10" TO 4'-7"	6	2	10"	1'-0" TO 3'-9"										LENGTH Δ = 1'-4 1/2"
A506E	5'-2"	117	STR.												
A507E	4'-0"	53	STR.												
A508E	5'-4"	48	17		2'-1"	1'-2"	2'-1"								
A509E	52'-0"	7	STR.												
A510E	47'-0"	7	STR.												
A511E	3'-6 1/2"	7	16			2'-1"	1' 5 1/2"				10"		1'-2 1/4"	3'-3 1/4"	
A512E	6'-11"	25	17		1'-9"	3'-5"	1'-9"								
A513E	7'-2"	25	17		1'-9"	3'-8"	1'-9"								
A520E	9'-6"	7	STR.												
A521E	8'-0"	7	STR.												
A522E	3'-8"	7	2	1'-7"	2'-1"										
A523E	5'-11"	14	16			3'-10"	2'-1"				1-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A524E	6'-0"	14	STR.												
A525															BAR REMOVED
A526E	11'-8"	6	STR.												
A527E	20'-2" TO 22'-8"	6	2	10"	19'-4" TO 21'-10"										LENGTH Δ = 6"
A528	15'-11"	5	STR.												
A529E	15'-11"	5	STR.												
A530	15'-0"	5	STR.												
A531E	15'-0"	4	STR.												
A532E	6'-9"	9	STR.												
A543E	4'-10"	64	STR.												
A601	53'-8"	13	STR.												
A603	4'-8 1/2"	14	16		2'-1"	6 1/2"	2'-1"				1'-2 3/8"		1'-8 1/2"	2'-3"	
A604	4'-8"	13	16			2'-4"	2'-4"				1'-11"		1'-4"	3'-8"	
A606	9'-6"	14	STR.												
A607	8'-0"	13	STR.												
A608	3'-8"	14	2	1'-7"	2'-1"										
A609	5'-11"	14	16			3'-10"	2'-1"				1-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A611	22'-10"	2	STR.												
A612	9'-10"	72	STR.												
A613	9'-4"	64	STR.												
A618	47'-0"	14	STR.												
A703	16'-5"	2	STR.												
A704	15'-6"	4	STR.												
F501	3'-9"	73	STR.												
F505	56'-8" TO 57'-8"	4	STR.												LENGTH Δ = 4"
F506	57'-10"	29	STR.												
F507	56'-8" TO 57'-0"	2	STR.												LENGTH Δ = 4"
F509	8'-4"	7	STR.												
F510	6'-0"	6	STR.												
F511	1'-8" TO 3'-11"	3	STR.												LENGTH Δ = 1'-1 1/2"
F512	36'-9"	1	STR.												
F514	35'-1"	1	STR.												
F516	36'-10" TO 37'-7"	2	STR.												LENGTH Δ = 9"
F517	34'-10"	2	STR.												
F518	28'-5"	2	STR.												
F519	27'-6"	4	STR.												
F521	34'-3" TO 35'-1"	2	STR.												LENGTH Δ = 10"
F523	30'-0"	10	STR.												
F524	40'-4" TO 45'-7"	8	STR.												LENGTH Δ = 9"
F525	38'-0"	4	STR.												
F526	2'-1" TO 6'-10"	4	STR.												LENGTH Δ = 1'-7"
F527	9'-6"	4	STR.												
F528	12'-6"	45	STR.												
F529	16'-11"	2	STR.												
F530	24'-3"	11	STR.												
F531	28'-0"	11	STR.												

ABUTMENT 2 SB															
MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
F601	7'-1"	64	2	1'-0"	6'-1"										
F602	5'-5"	72	STR.												
F604	10'-6"	122	STR.												
F606	1'-9" TO 11'-6"	10	STR.												LENGTH Δ = 1'-1"
F607	12'-6"	66	STR.												
F608	1'-8" TO 11'-11"	11	STR.												LENGTH Δ = 1'-0 1/4"
F609	10'-2"	8	STR.												
F610	8'-7"	5	STR.												
F611	3'-7"	5	STR.												
F701	7'-3"	54	17			1'-2"	6'-1"							7 1/4"	
F702	7'-3"	6	2	1'-2"	6'-1"										
W501	7'-3"	54	17		2'-1"	1'-2"	4'-0"								
W502	26'-0"	35	STR.												
W503	25'-11"	33	STR.												
W506	15'-10"	27	STR.												
W507	14'-11"	27	STR.												
W703	16'-4"	27	STR.												
W704	15'-5"	27	STR.												

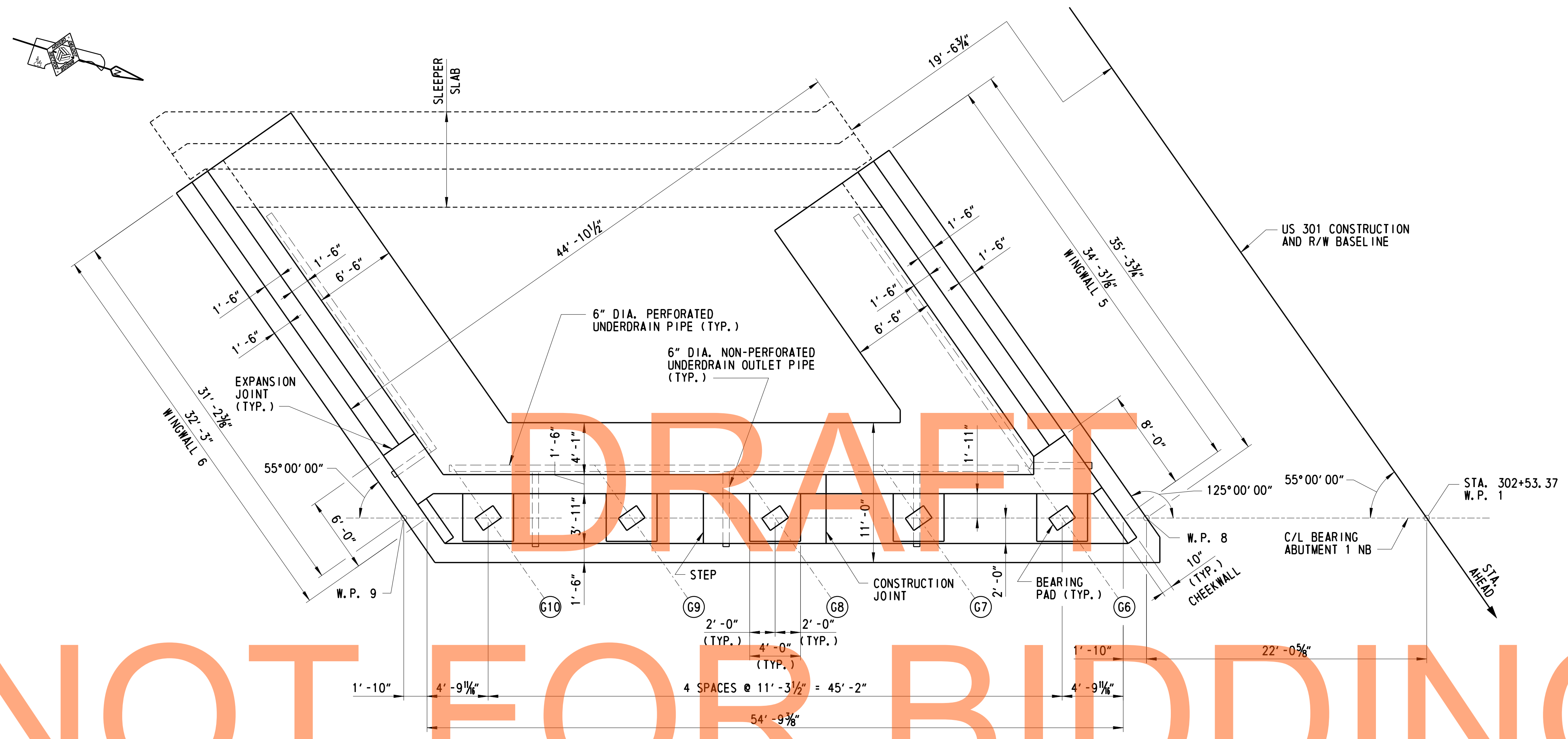
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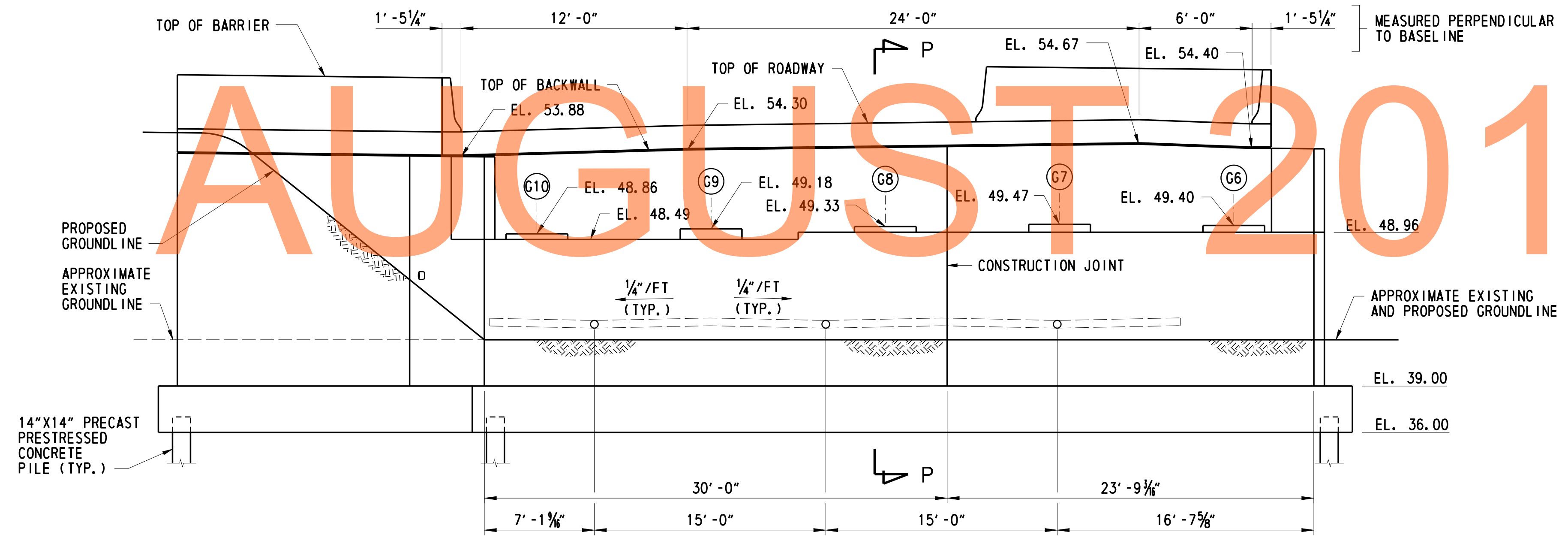
AUGUST 2015



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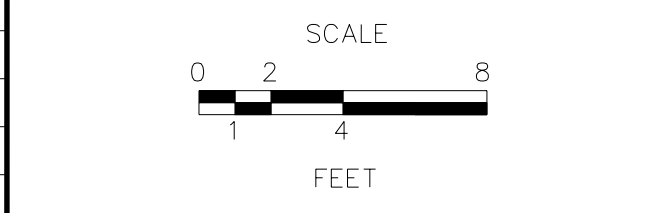
PLAN
SCALE: 3/8" = 1'-0"



ELEVATION
SCALE: 3/8" = 1'-0"

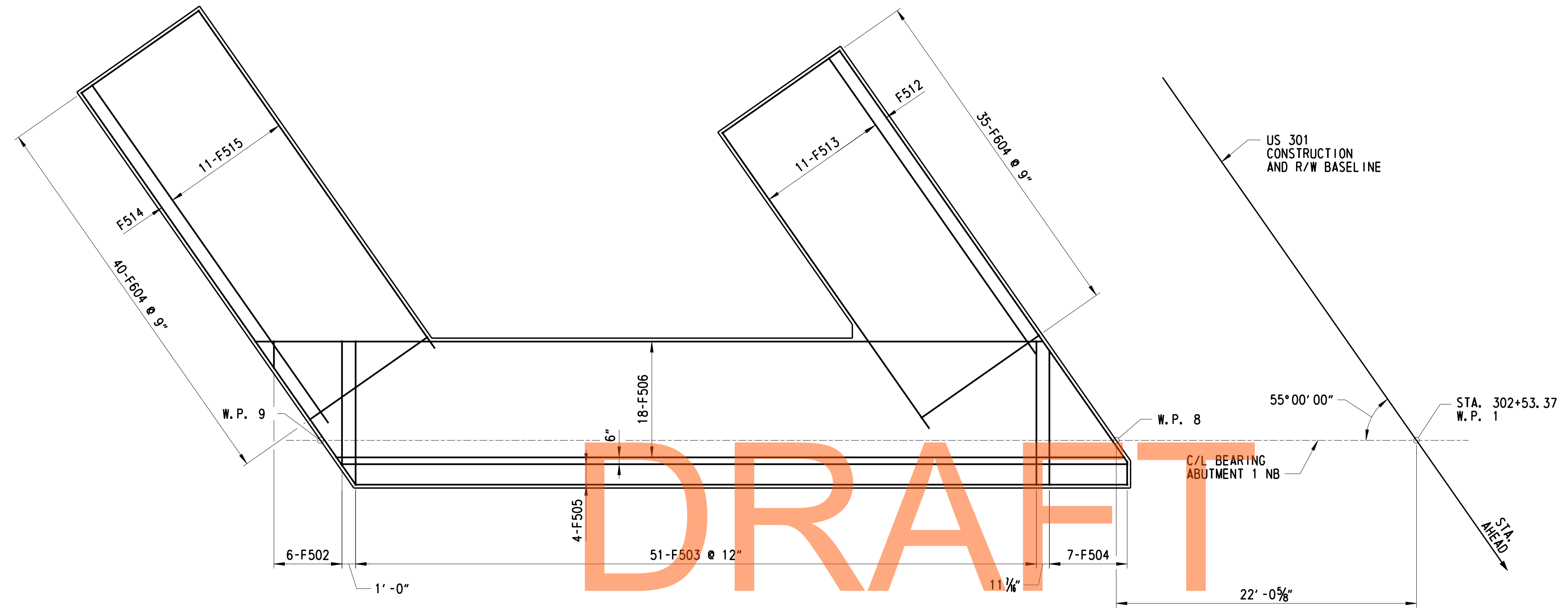
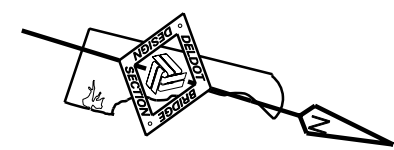
- NOTES:**
1. TOP OF ABUTMENT SEAT ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
 2. TOP OF BACKWALL ELEVATIONS SHOWN AT CENTER OF BACKWALL.
 3. ABUTMENT SEAT STEPS LOCATED MID-WAY BETWEEN GIRDERS.
- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
 2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. 1-480 FT-1.
 3. FOR ABUTMENT 1 NB PILE PLAN, SEE DWG. NO. 1-480 FT-4.
 4. FOR SECTION P-P, SEE DWG. NO. 1-480 AB-11.
 5. FOR ABUTMENT 1 NB DETAILS, SEE DWG. NOS. 1-480 AB-11 AND 1-480 AB-12.
 6. FOR WINGWALL ELEVATIONS, SEE DWG. NO. 1-480 WW-4.
 7. FOR BEARING DETAILS, SEE DWG. NO. 1-480 BD-1.
 8. FOR CONSTRUCTION JOINT DETAIL, SEE DWG. NO. 1-480 AB-1.
 9. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.

ADDENDUMS / REVISIONS

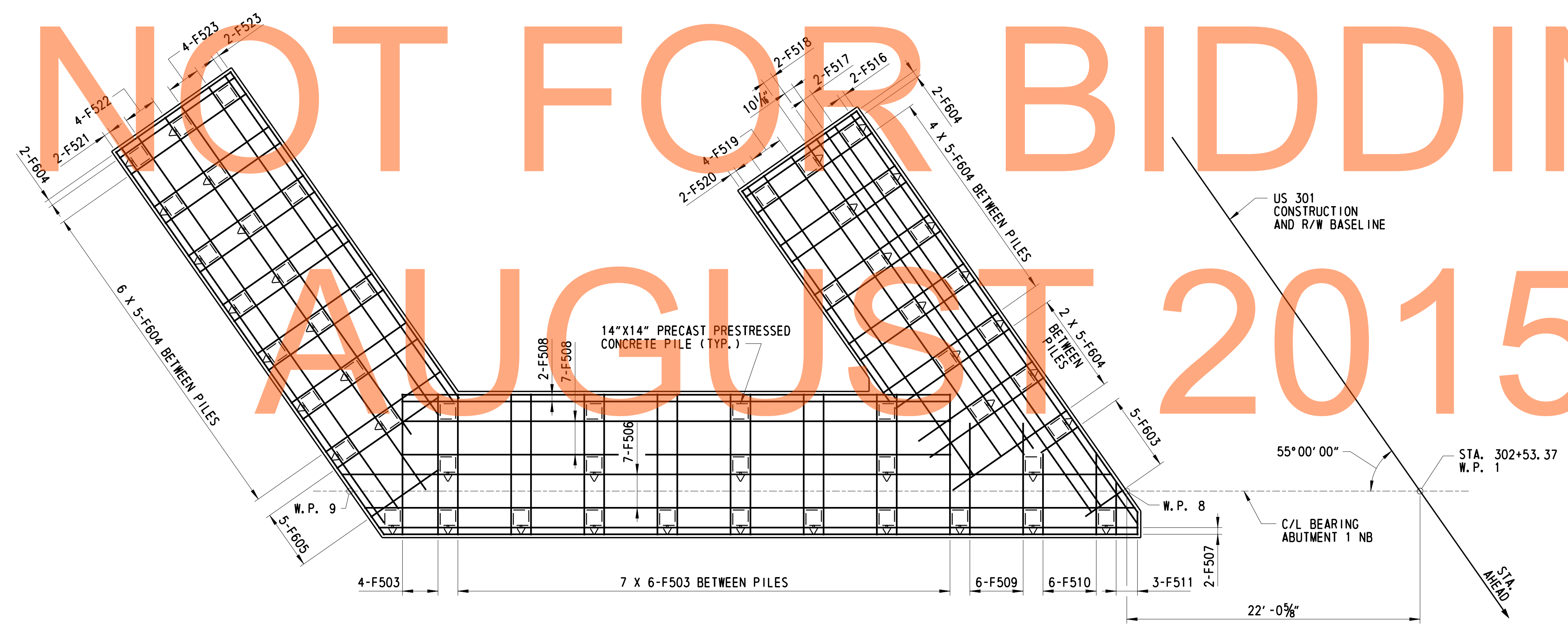


CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 AB-9
SHEET NO.
585
TOTAL SHTS.
1256



ABUTMENT 1 NB - TOP MAT REINFORCEMENT PLAN
SCALE: 3/16" = 1'-0"



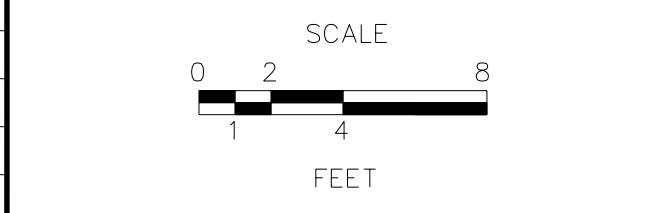
ABUTMENT 1 NB - BOTTOM MAT REINFORCEMENT PLAN
SCALE: 3/16" = 1'-0"

NOTE:
ALL REINFORCEMENT SHALL BE
2" MIN. CLEAR FROM PILES.

- CROSS REFERENCE NOTES:**
1. FOR ABUTMENT 1 NB PILE PLAN, SEE DWG. NO. 1-480 FT-4.
 2. FOR ABUTMENT 1 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-9.
 3. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-3.
 4. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.

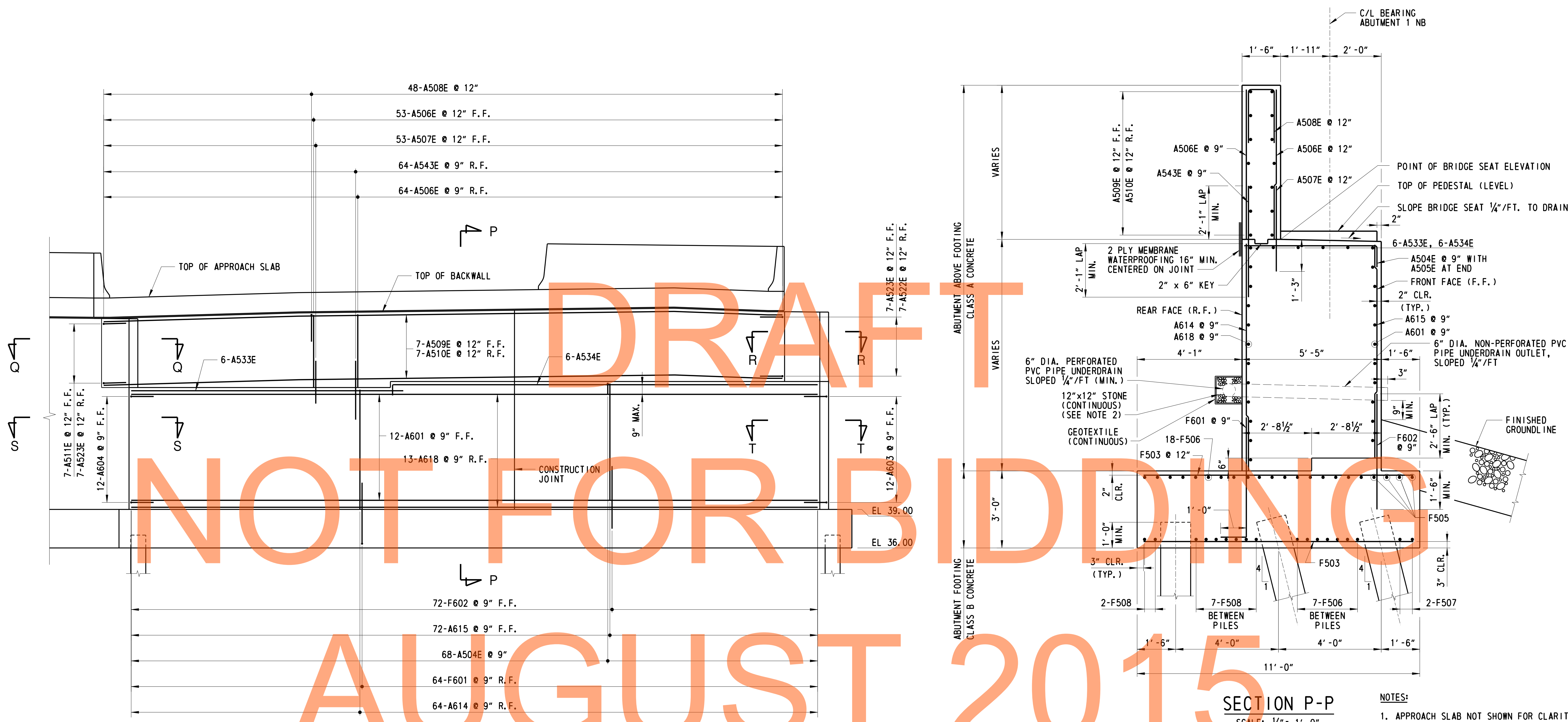
NOT FOR BIDDING
AUGUST 2015

ADDENDUMS / REVISIONS



CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: LT CHECKED BY: JW

1-480 AB-10
SHEET NO. 586
TOTAL SHTS. 1256



ELEVATION - ABUTMENT 1 NB REINFORCEMENT
SCALE: 1/4" = 1' - 0"

SECTION P-P
SCALE: 1/2" = 1' - 0"

NOTE:
PEDESTALS AND PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY.

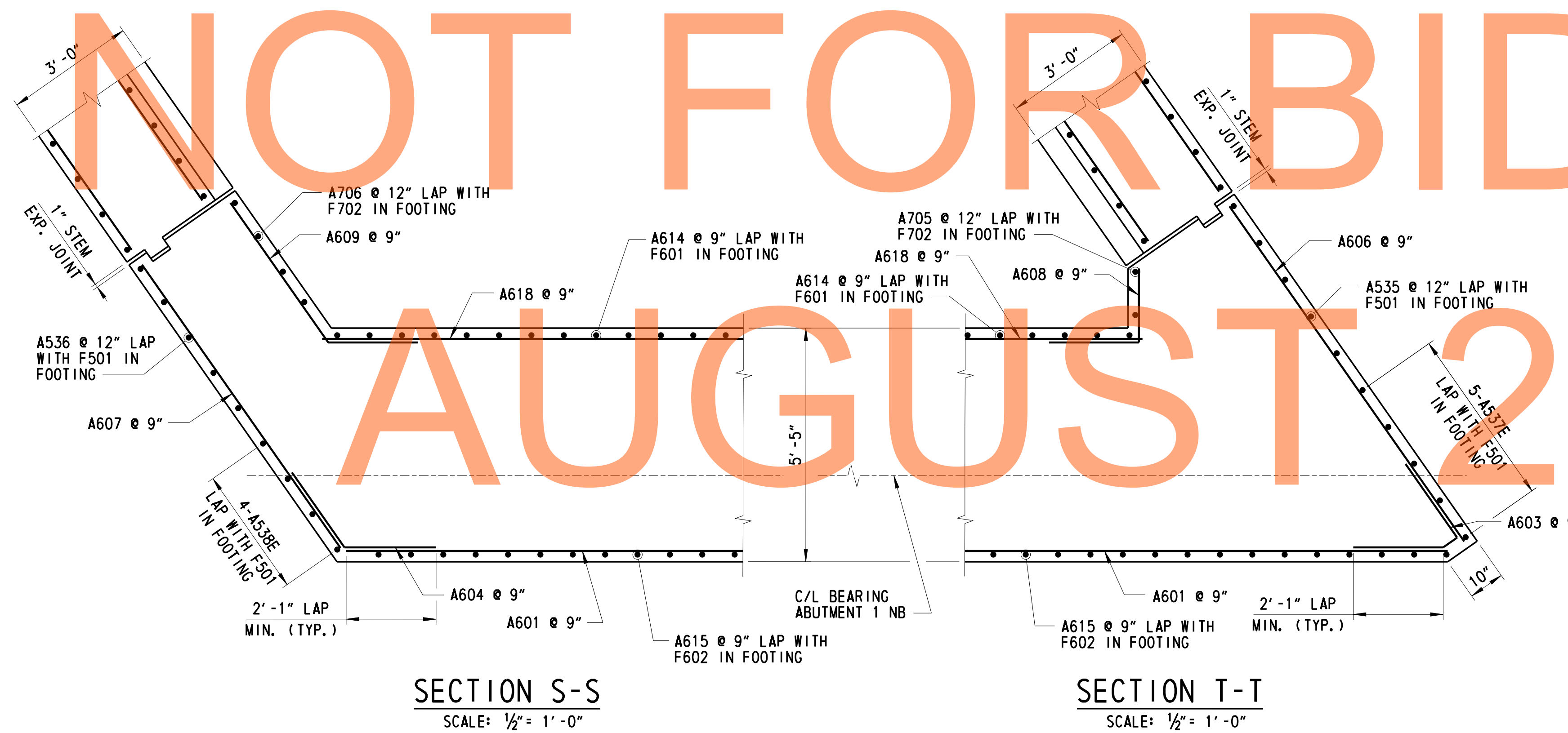
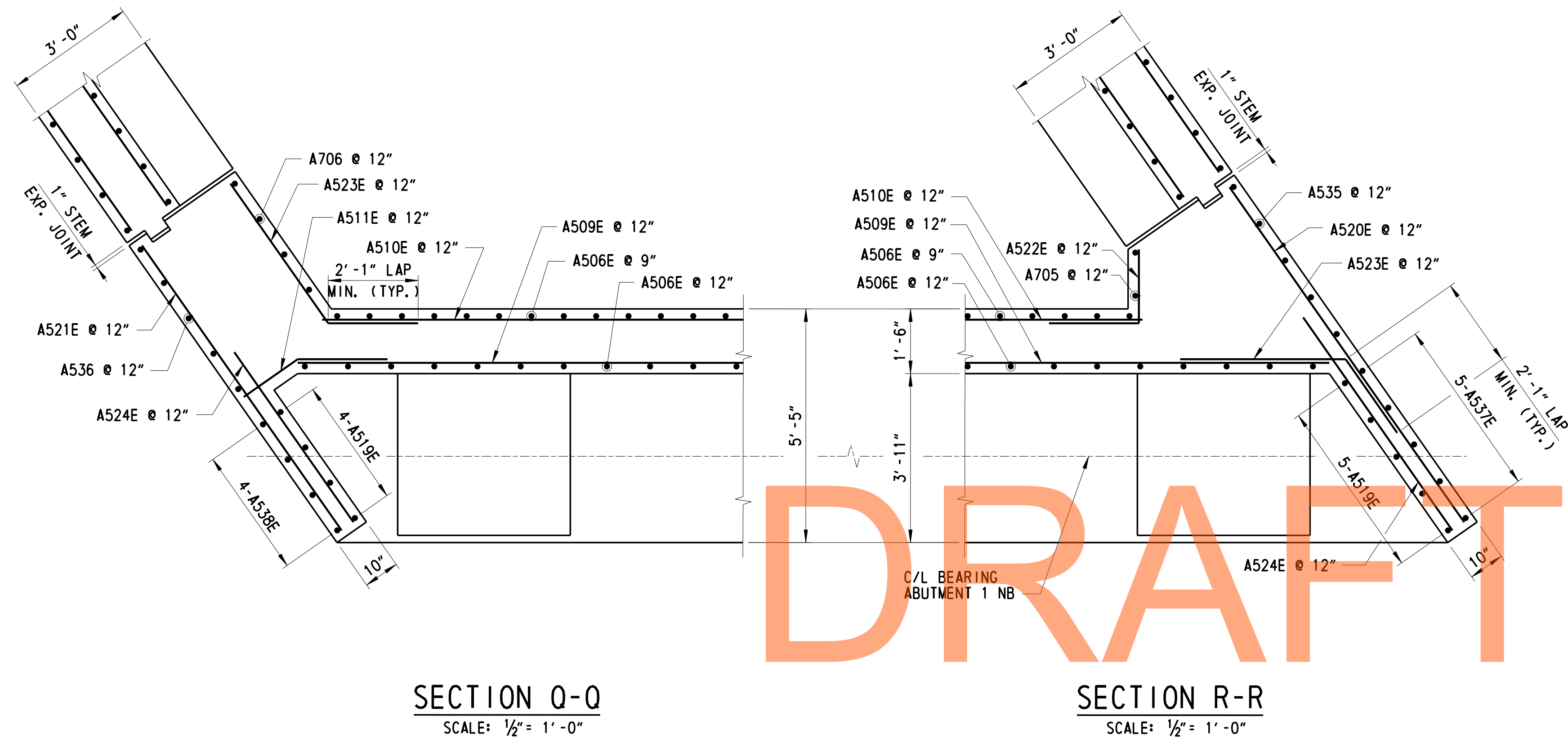
- NOTES:**
1. APPROACH SLAB NOT SHOWN FOR CLARITY.
 2. STONE SHALL BE DELAWARE NO. 57 CONFORMING TO THE REQUIREMENTS OF SECTION 813.
 3. THE WATERPROOFING MEMBRANE SHALL BE INCIDENTAL TO ITEM NO. 602015.

- CROSS REFERENCE NOTES:**
1. FOR ABUTMENT 1 NB PILE PLAN, SEE DWG. NO. 1-480 FT-4.
 2. FOR ABUTMENT 1 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-9.
 3. FOR ABUTMENT 1 FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-10.
 4. FOR SECTIONS O-O, R-R, S-S AND T-T, SEE DWG. NO. 1-480 AB-12.
 5. FOR PEDESTAL REINFORCEMENT DETAIL, SEE DWG. NO. 1-480 AB-4.
 6. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-3.

ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 AB-11
SHEET NO.
587
TOTAL SHTS.
1256

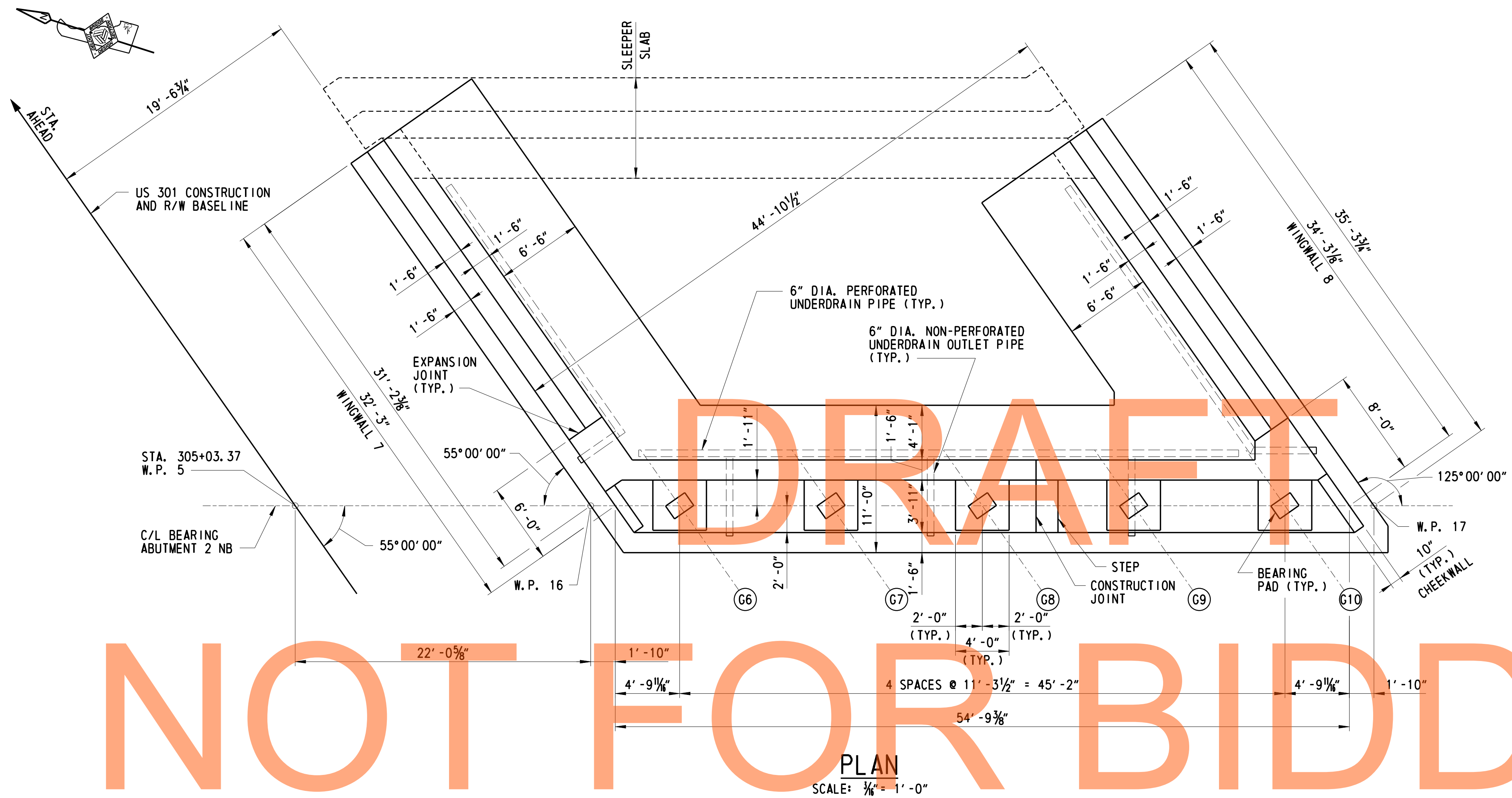


NOT FOR BIDDING

AUGUST 2015

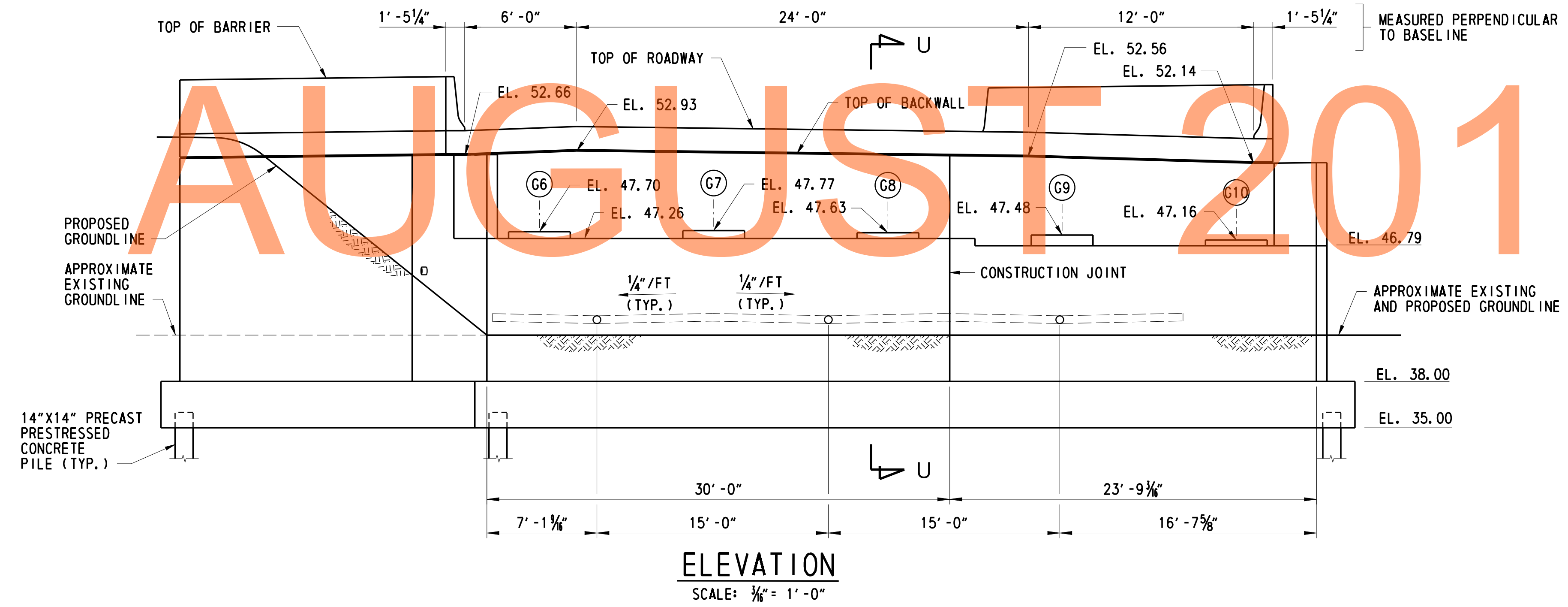
CROSS REFERENCE NOTES:

1. FOR ABUTMENT 1 NB PLAN AND ELEVATION, SEE DWG. NO 1-480 AB-9.
2. FOR ABUTMENT 1 NB REINFORCEMENT, SEE DWG. NO. 1-480 AB-11.
3. FOR WINGWALL REINFORCEMENT, SEE DWG. NO. 1-480 WW-5.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-3.
5. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.

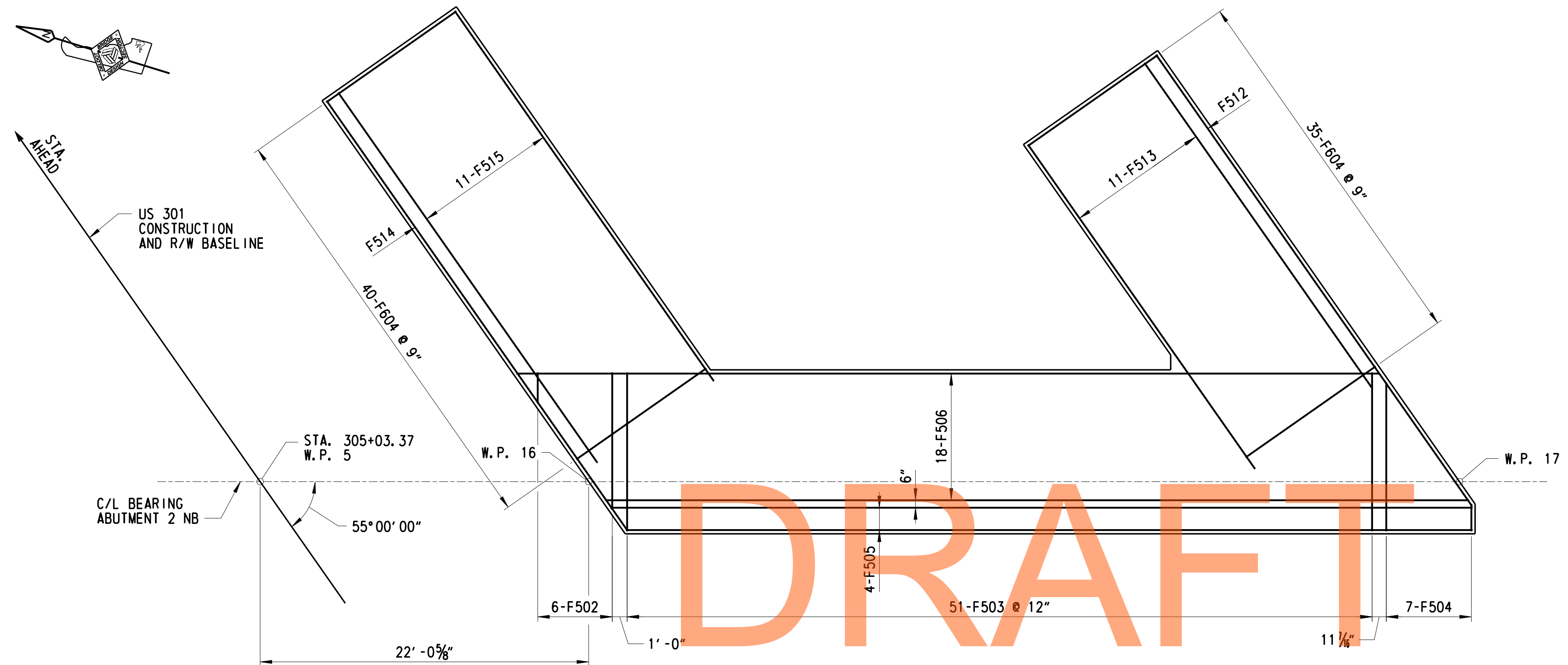


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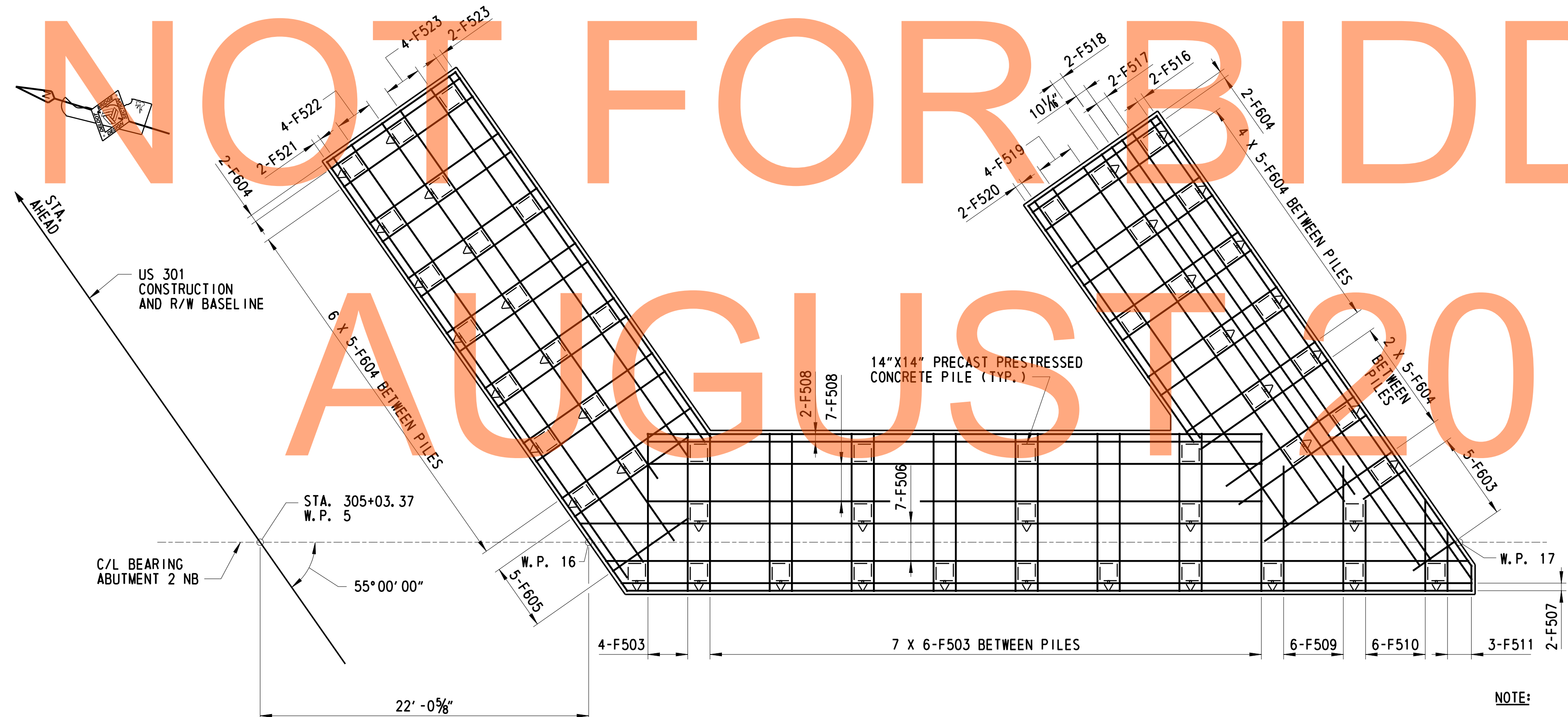
NOT FOR BIDDING



- NOTES:**
- TOP OF ABUTMENT SEAT ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
 - TOP OF BACKWALL ELEVATIONS SHOWN AT CENTER OF BACKWALL.
 - ABUTMENT SEAT STEPS LOCATED MID-WAY BETWEEN GIRDERS.
- CROSS REFERENCE NOTES:**
- FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
 - FOR GEOMETRIC LAYOUT, SEE DWG. NO. 1-480 FT-1.
 - FOR ABUTMENT 2 NB PILE PLAN, SEE DWG. NO. 1-480 FT-5.
 - FOR SECTION U-U, SEE DWG. NO. 1-480 AB-15.
 - FOR ABUTMENT 2 NB DETAILS, SEE DWG. NOS. 1-480 AB-15 AND 1-480 AB-16.
 - FOR WINGWALL ELEVATIONS, SEE DWG. NO. 1-480 WW-4.
 - FOR BEARING DETAILS, SEE DWG. NO. 1-480 BD-1.
 - FOR CONSTRUCTION JOINT DETAIL, SEE DWG. NO. 1-480 AB-1.
 - FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.



ABUTMENT 2 NB - TOP MAT REINFORCEMENT PLAN
SCALE: 3/8" = 1'-0"



ABUTMENT 2 NB - BOTTOM MAT REINFORCEMENT PLAN
SCALE: 3/8" = 1'-0"

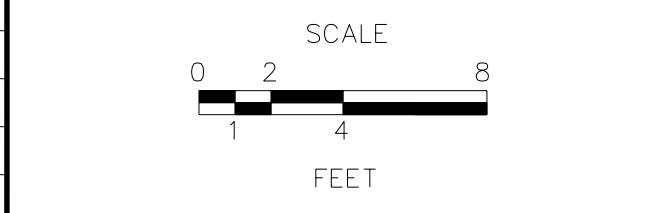
CROSS REFERENCE NOTES:

1. FOR ABUTMENT 2 NB PILE PLAN, SEE DWG. NO. 1-480 FT-5.
2. FOR ABUTMENT 2 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-13.
3. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-4.
4. FOR WORKING POINT COORDINATES, SEE DWG. NO. 1-480 FT-1.

NOTE:

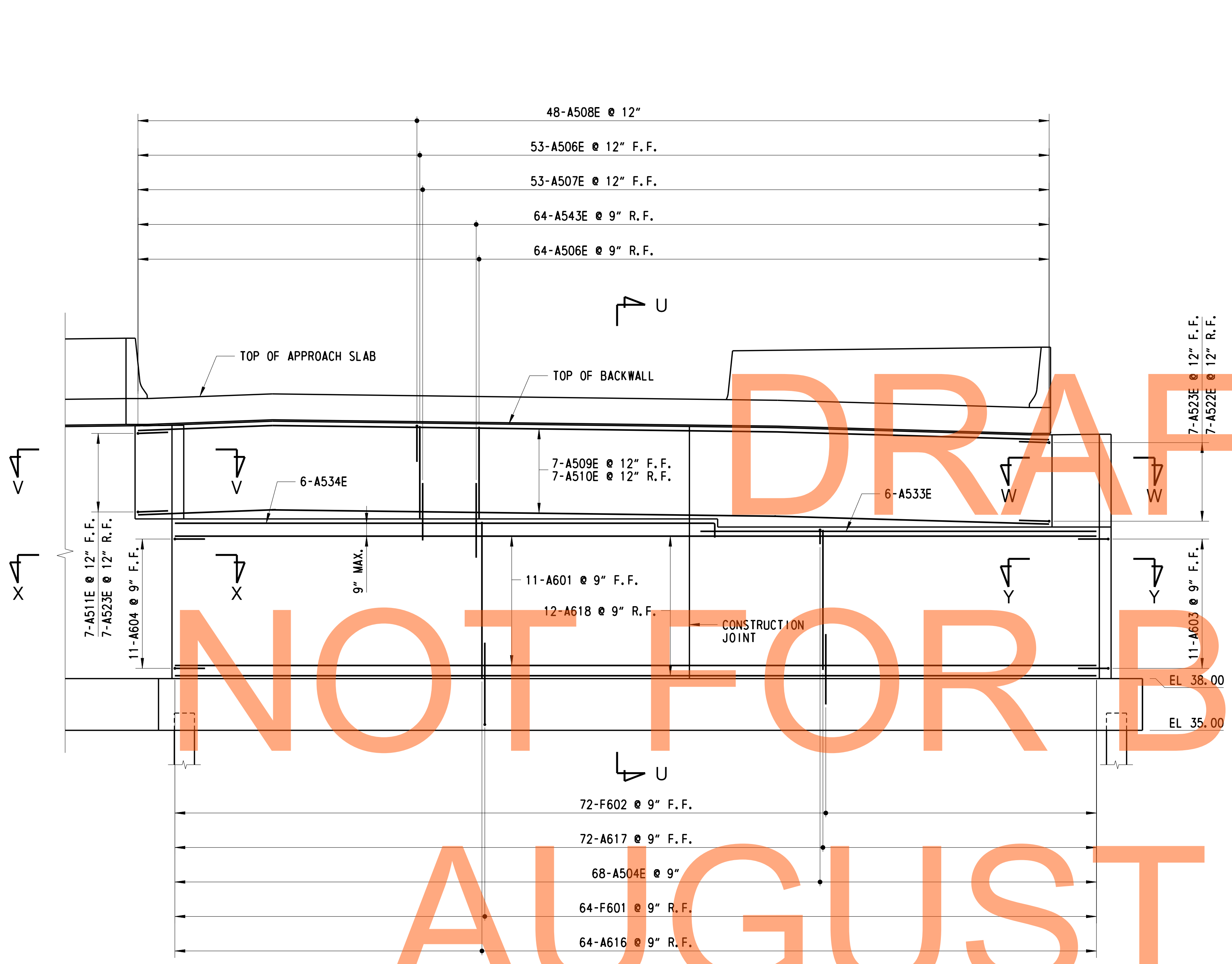
ALL REINFORCEMENT SHALL BE 2" MIN. CLEAR FROM PILES.

ADDENDUMS / REVISIONS



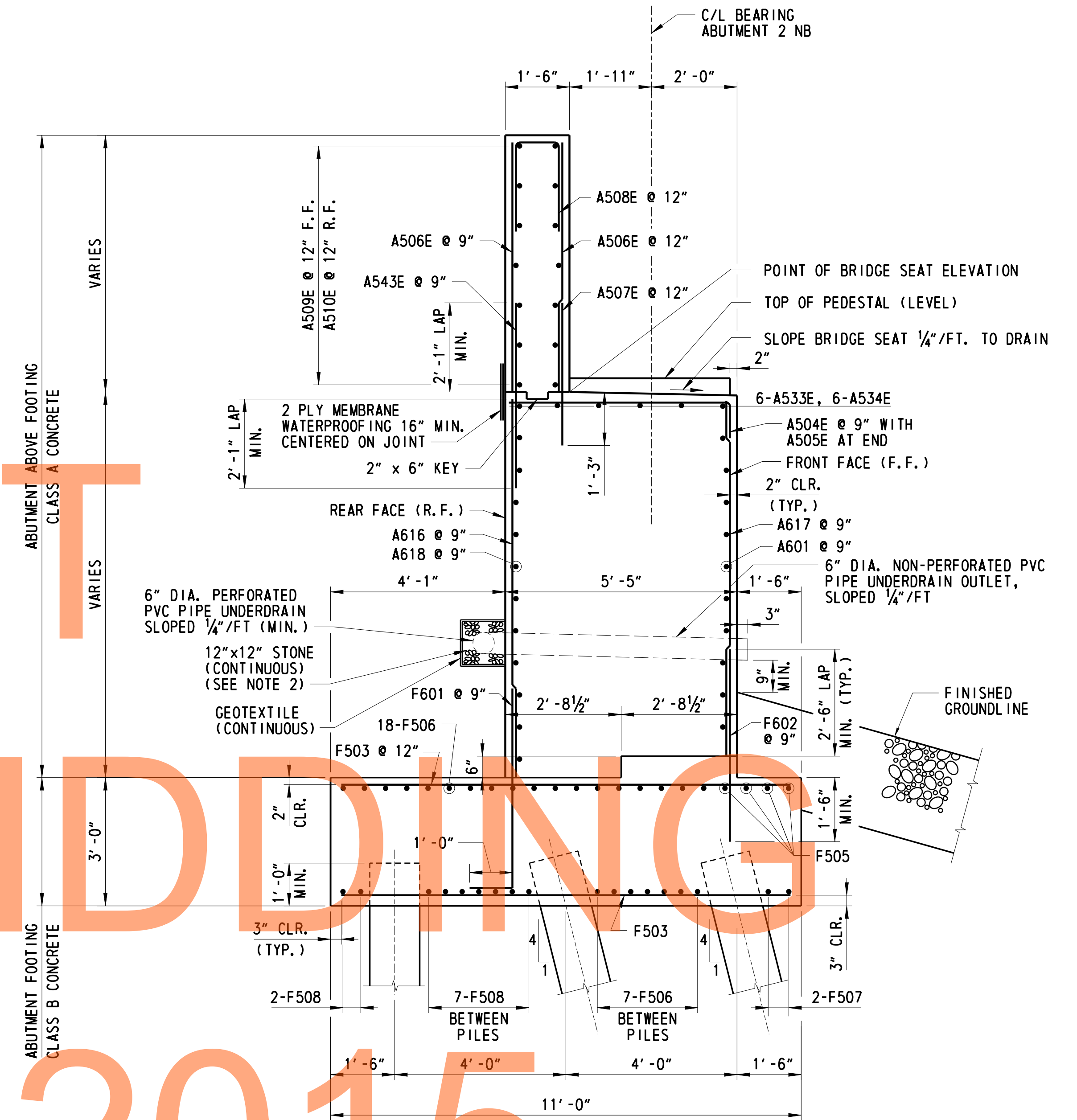
CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 AB-14
SHEET NO.
590
TOTAL SHTS.
1256



ELEVATION - ABUTMENT 2 NB REINFORCEMENT
SCALE: 1/4" = 1'-0"

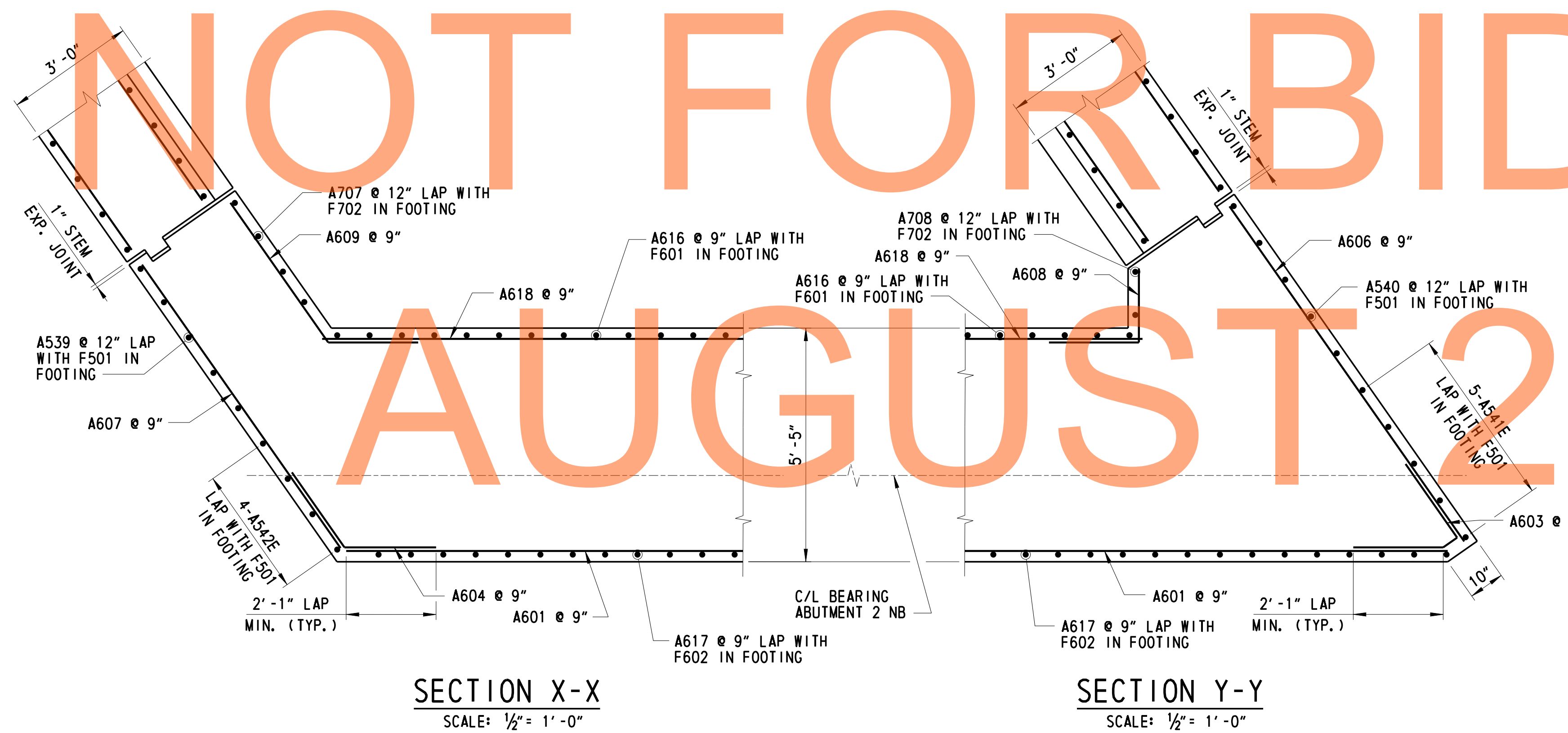
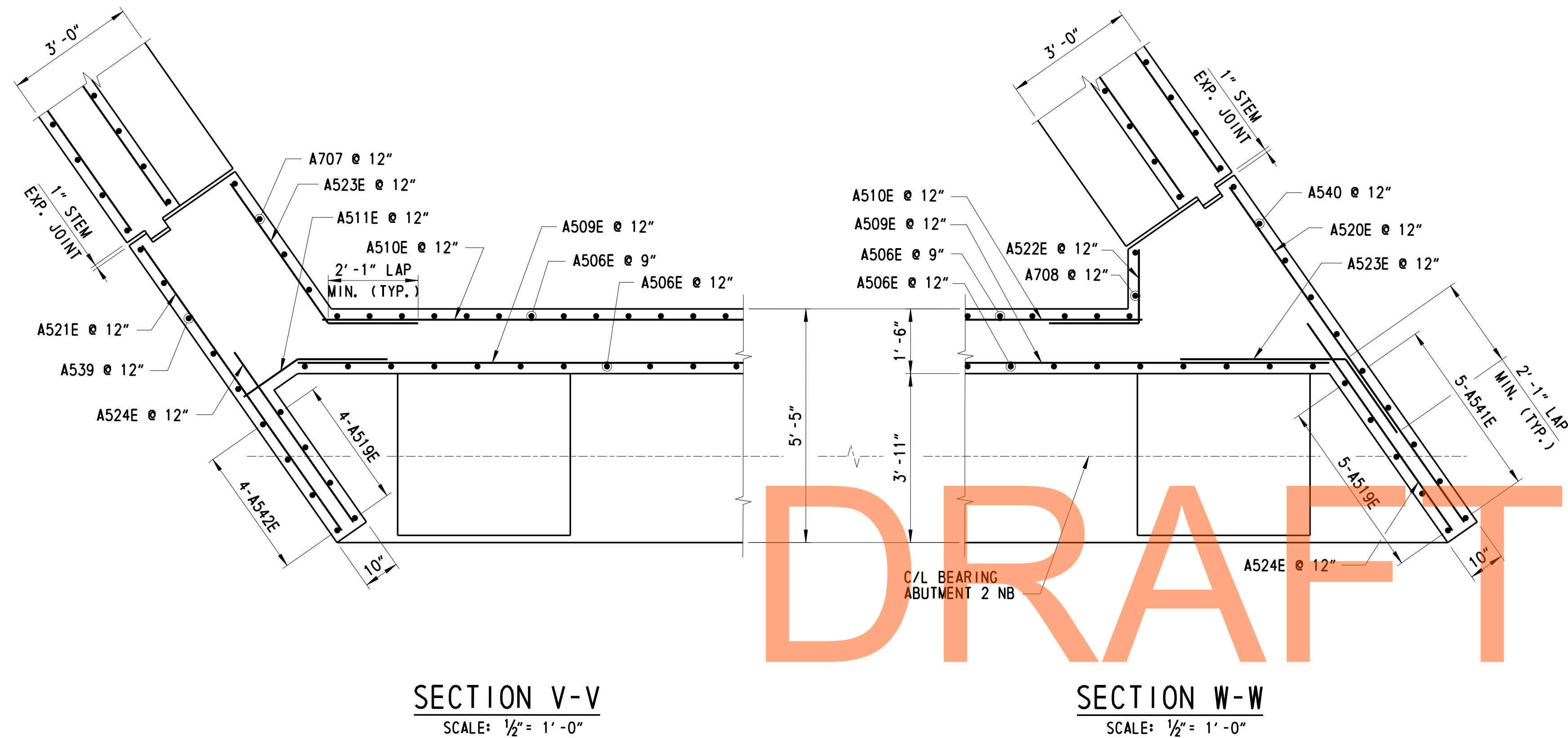
NOTE:
PEDESTALS AND PEDESTAL REINFORCEMENT NOT SHOWN FOR CLARITY.



SECTION U-U
SCALE: 1/2" = 1'-0"

- NOTES:**
1. APPROACH SLAB NOT SHOWN FOR CLARITY.
 2. STONE SHALL BE DELAWARE NO. 57 CONFORMING TO THE REQUIREMENTS OF SECTION 813.
 3. THE WATERPROOFING MEMBRANE SHALL BE INCIDENTAL TO ITEM NO. 602015.

- CROSS REFERENCE NOTES:**
1. FOR ABUTMENT 2 NB PILE PLAN, SEE DWG. NO. 1-480 FT-5.
 2. FOR ABUTMENT 2 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-13.
 3. FOR ABUTMENT 2 NB FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-14.
 4. FOR SECTIONS V-V, W-W, X-X AND Y-Y, SEE DWG. NO. 1-480 AB-16.
 5. FOR PEDESTAL REINFORCEMENT DETAIL, SEE DWG. NO. 1-480 AB-4.
 6. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-4.



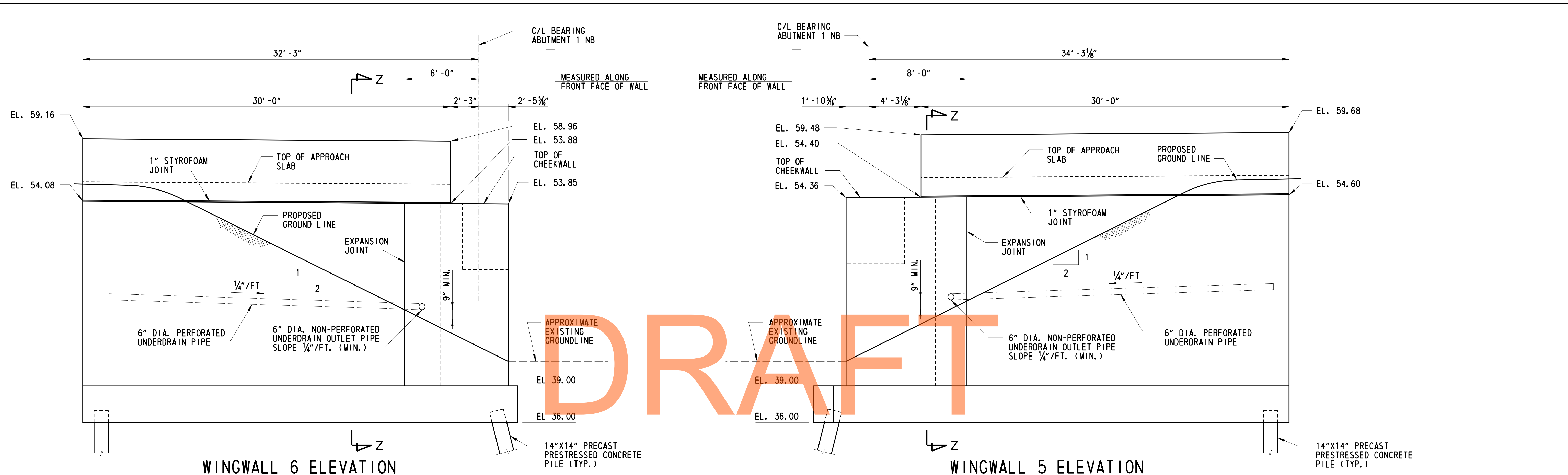
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NOT FOR BIDDING

AUGUST 2015

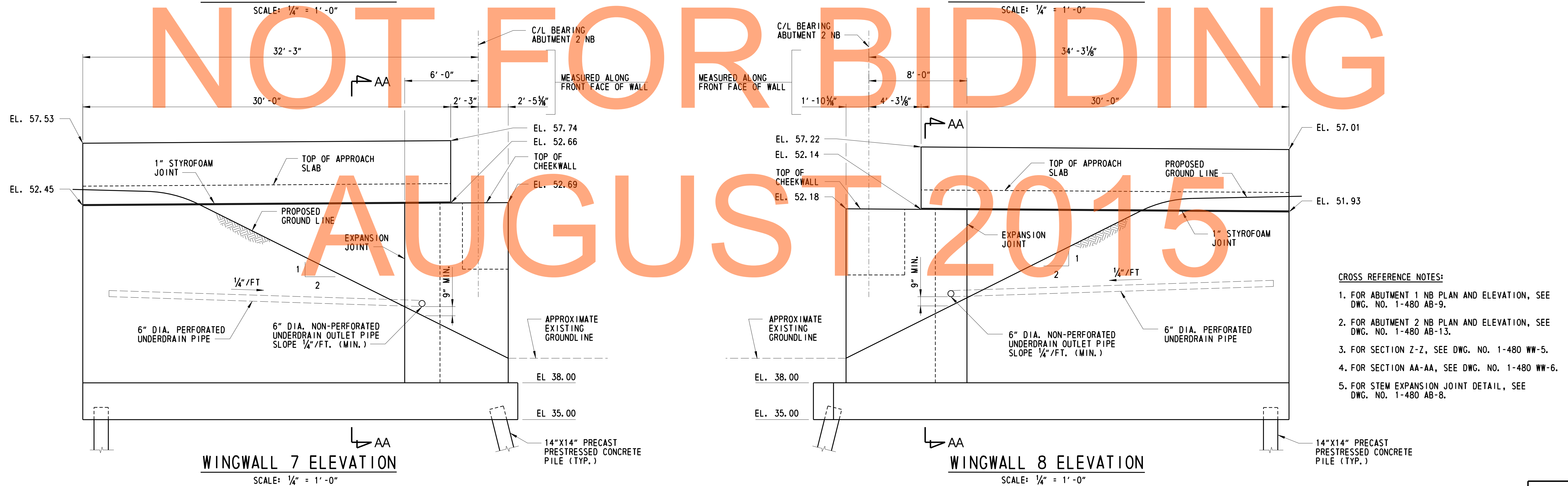
CROSS REFERENCE NOTES:

1. FOR ABUTMENT 2 NB PLAN AND ELEVATION, SEE DWG. NO 1-480 AB-13.
2. FOR ABUTMENT 2 NB REINFORCEMENT, SEE DWG. NO. 1-480 AB-15.
3. FOR WINGWALL REINFORCEMENT, SEE DWG. NO. 1-480 WW-6.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-4.
5. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.



WINGWALL 6 ELEVATION
SCALE: 1/4" = 1'-0"

WINGWALL 5 ELEVATION
SCALE: 1/4" = 1'-0"



WINGWALL 7 ELEVATION
SCALE: 1/4" = 1'-0"

WINGWALL 8 ELEVATION
SCALE: 1/4" = 1'-0"

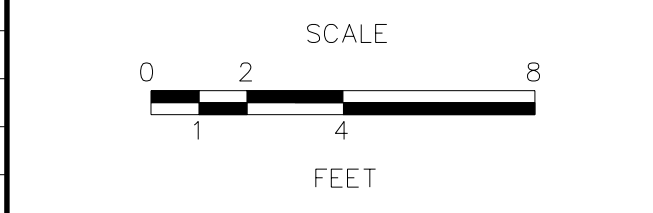
- CROSS REFERENCE NOTES:**
1. FOR ABUTMENT 1 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-9.
 2. FOR ABUTMENT 2 NB PLAN AND ELEVATION, SEE DWG. NO. 1-480 AB-13.
 3. FOR SECTION Z-Z, SEE DWG. NO. 1-480 WW-5.
 4. FOR SECTION AA-AA, SEE DWG. NO. 1-480 WW-6.
 5. FOR STEM EXPANSION JOINT DETAIL, SEE DWG. NO. 1-480 AB-8.

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NOT FOR BIDDING

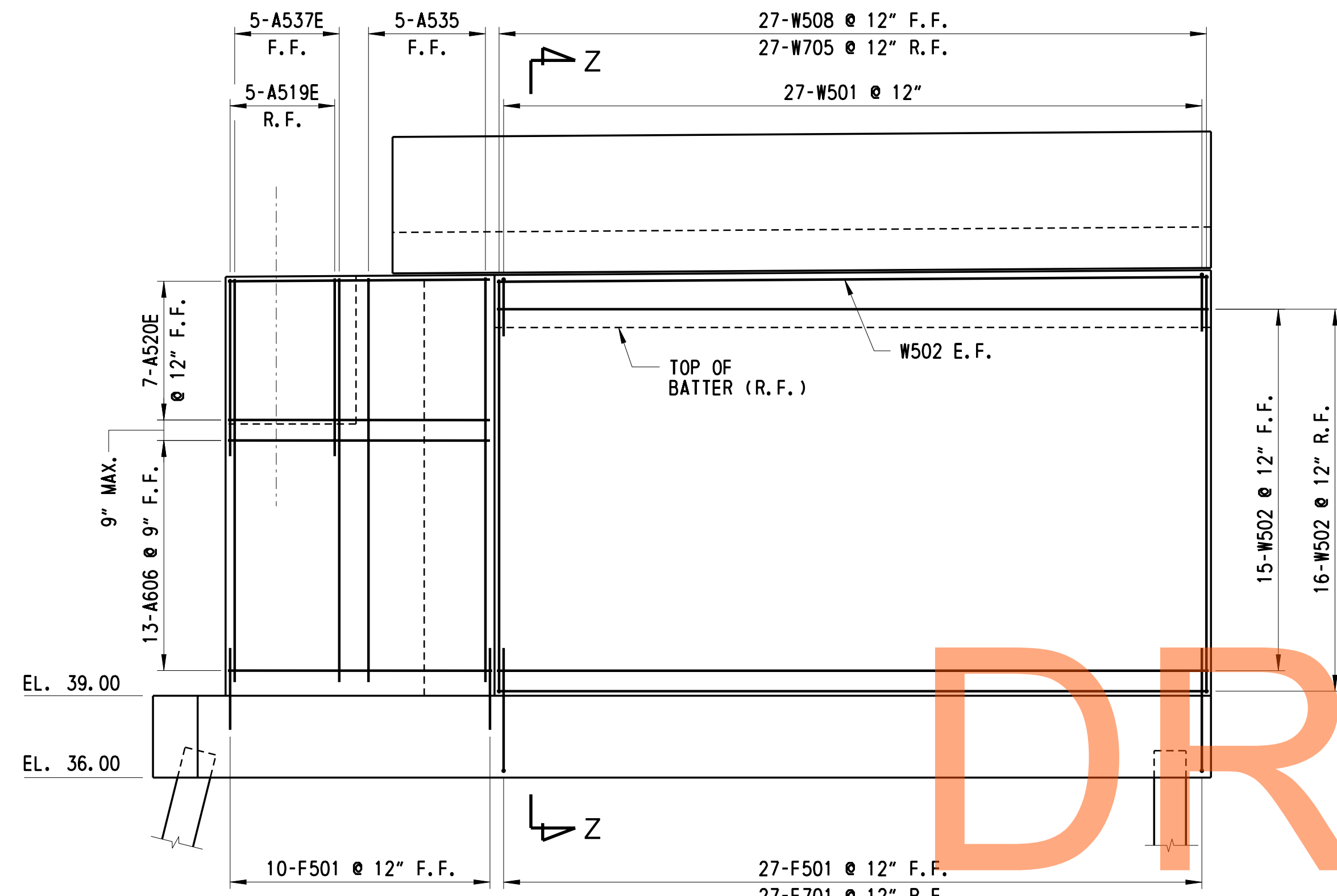
AUGUST 2015

ADDENDUMS / REVISIONS



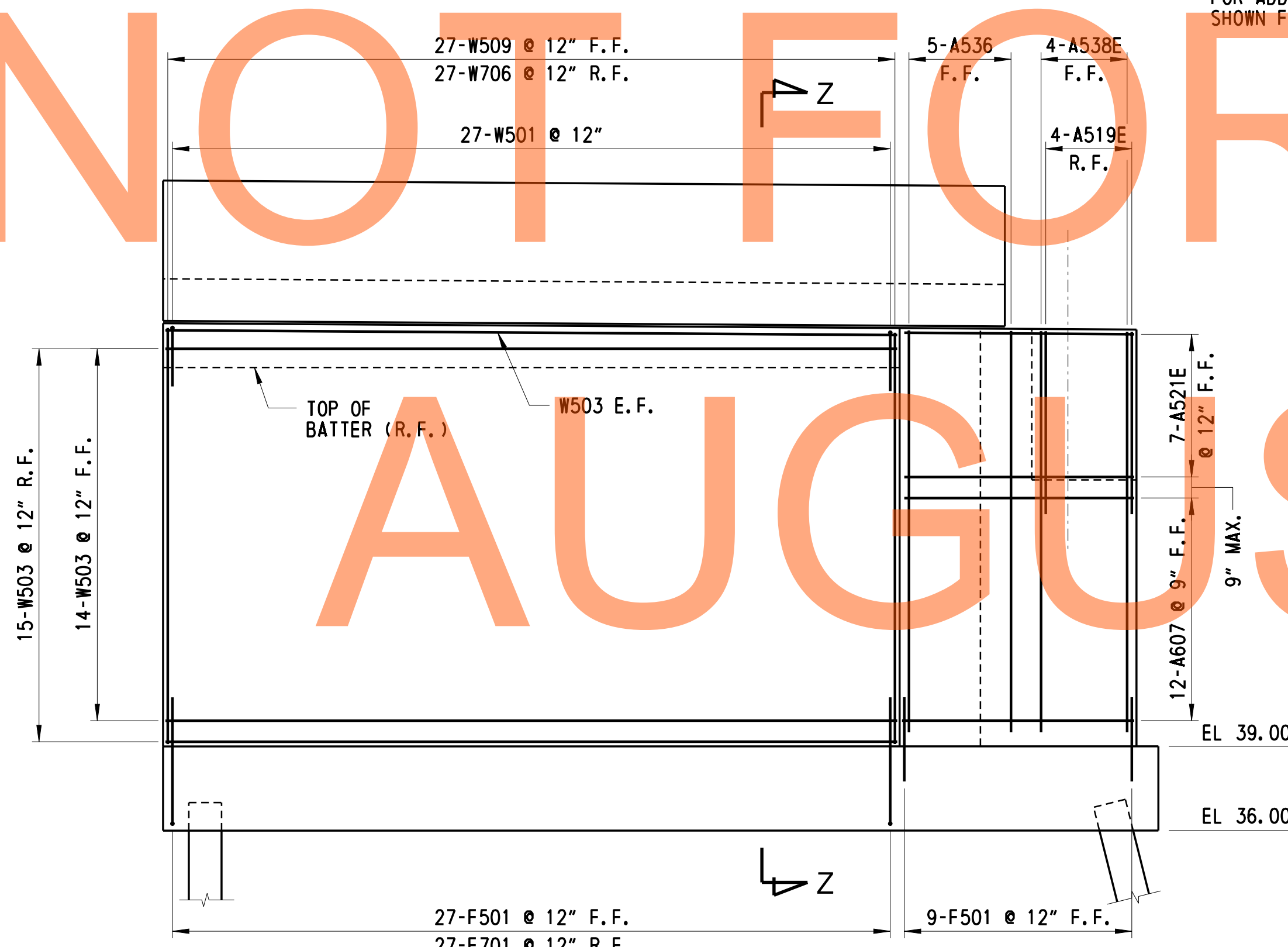
CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	KW
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 WW-4
SHEET NO.
593
TOTAL SHTS.
1256



WINGWALL 5 ELEVATION

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

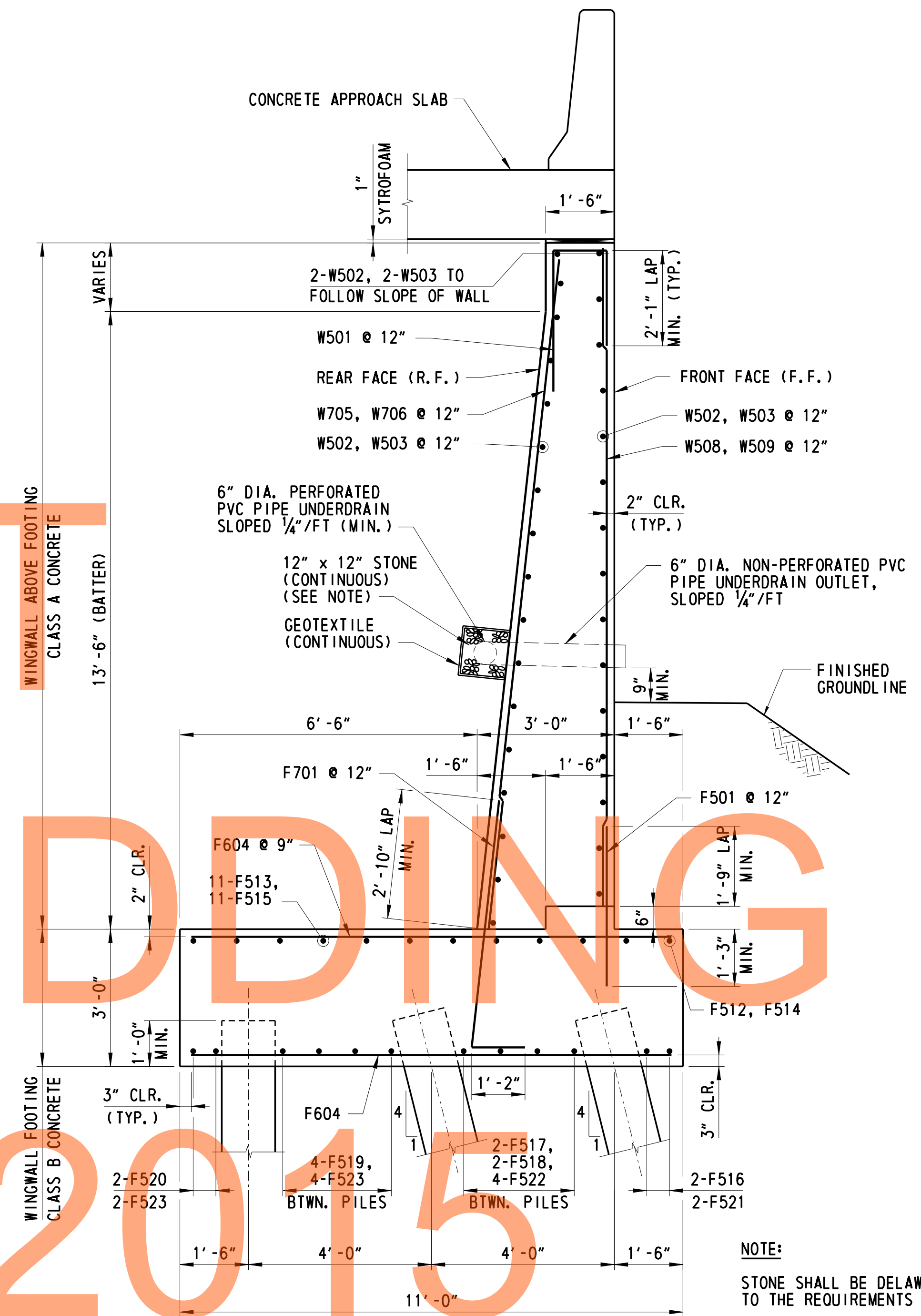


WINGWALL 6 ELEVATION

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

NOTE:

FOR ADDITIONAL ABUTMENT REINFORCEMENT, NOT SHOWN FOR CLARITY, SEE DWG. NO. 1-480 AB-12.



SECTION Z-Z

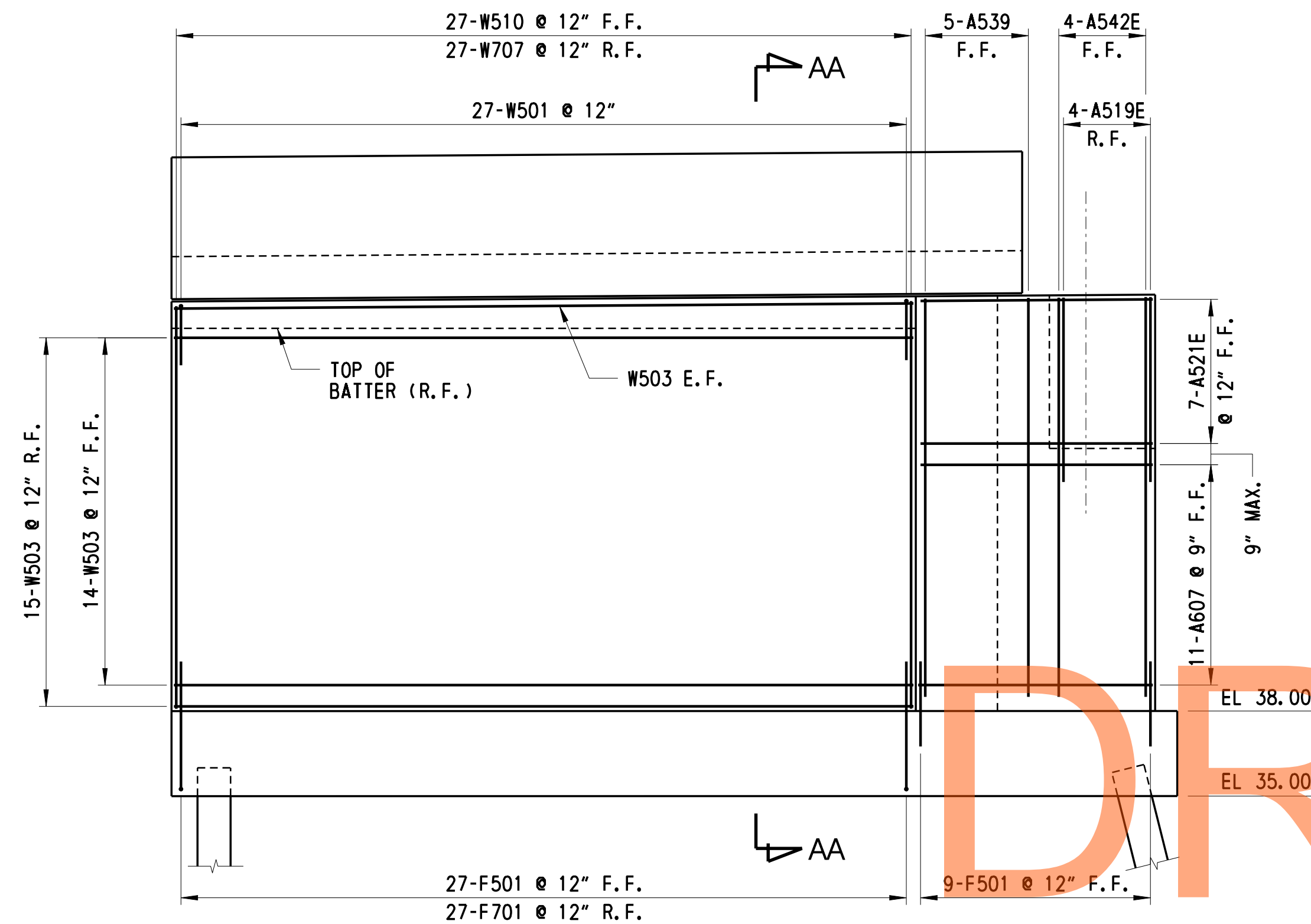
SCALE: 1/2" = 1'-0"

NOTE:

STONE SHALL BE DELAWARE NO. 57 CONFORMING TO THE REQUIREMENTS OF SECTION 813.

CROSS REFERENCE NOTES:

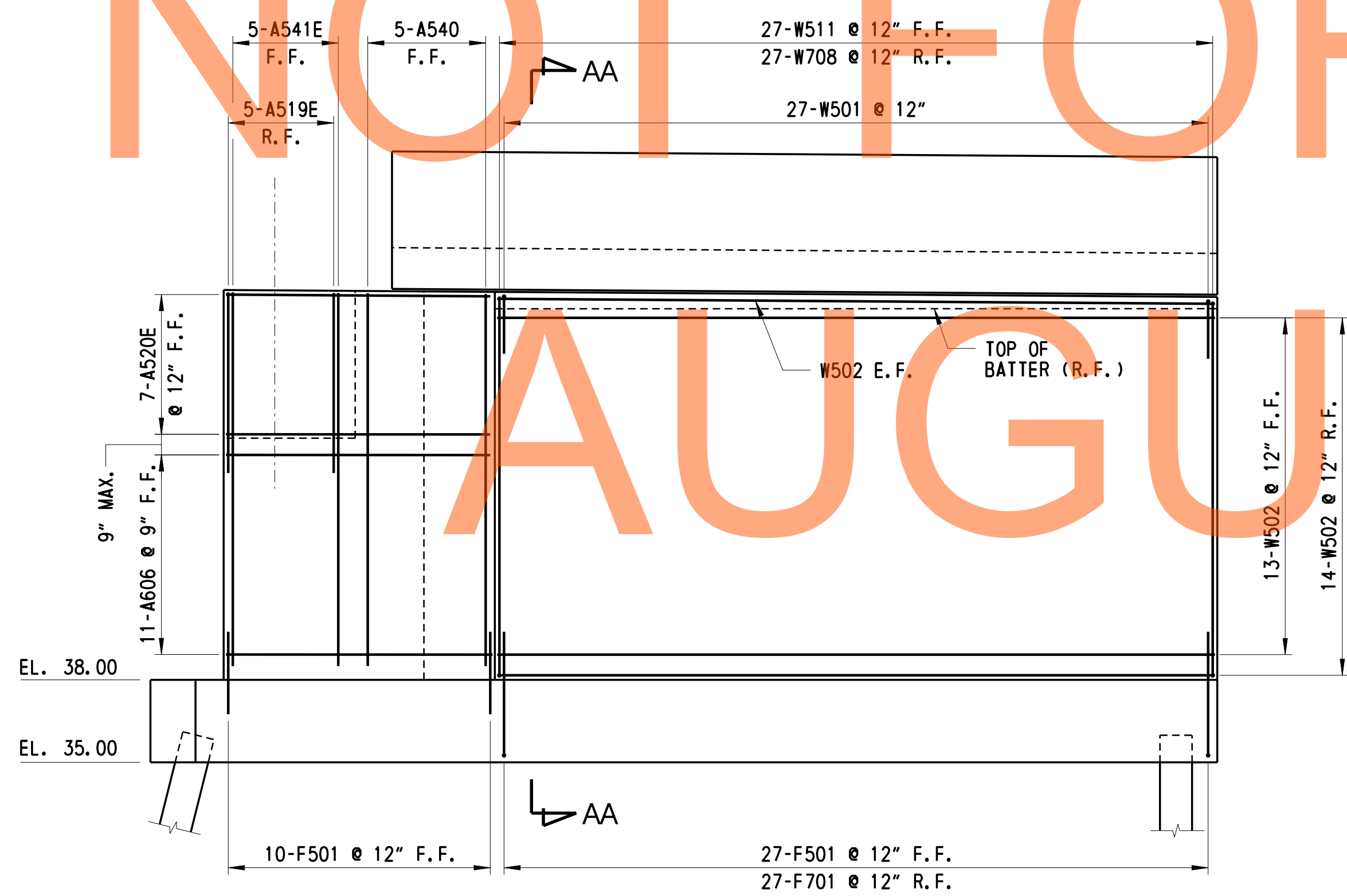
1. FOR WINGWALL ELEVATIONS, SEE DWG. NO. 1-480 WW-4.
2. FOR FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-10.
3. FOR APPROACH SLAB REINFORCEMENT, SEE DWG. NO. 1-480 AS-2.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-3.



WINGWALL 7 ELEVATION

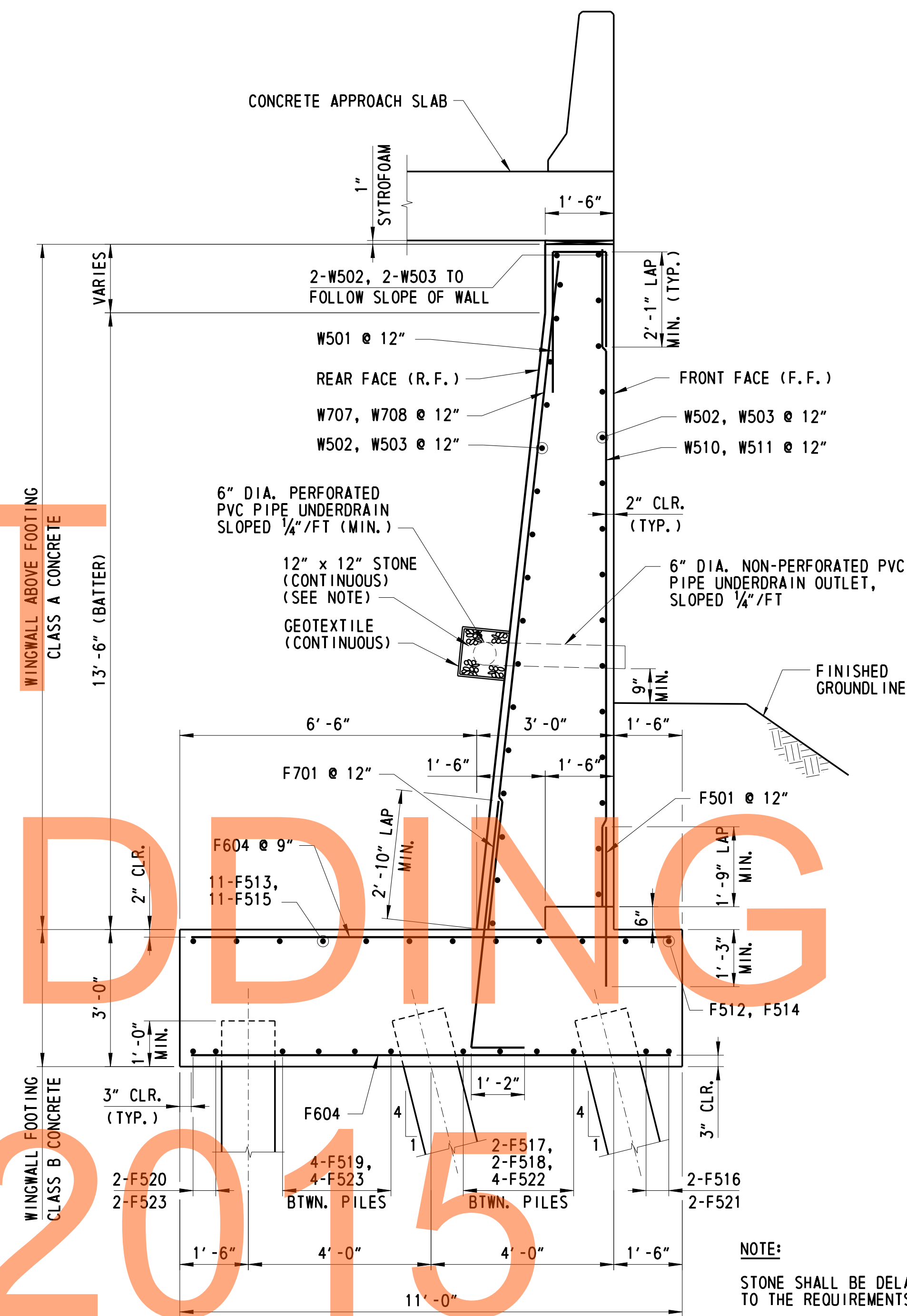
SCALE: 1/4" = 1'-0"

NOTE:
FOR ADDITIONAL ABUTMENT REINFORCEMENT, NOT SHOWN FOR CLARITY, SEE DWG. NO. 1-480 AB-16.



WINGWALL 8 ELEVATION

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



SECTION AA-AA

SCALE: 1/2" = 1'-0"

NOTE:
STONE SHALL BE DELAWARE NO. 57 CONFORMING TO THE REQUIREMENTS OF SECTION 813.

CROSS REFERENCE NOTES:

1. FOR WINGWALL ELEVATIONS, SEE DWG. NO. 1-480 WW-4.
2. FOR FOOTING REINFORCEMENT, SEE DWG. NO. 1-480 AB-14.
3. FOR APPROACH SLAB REINFORCEMENT, SEE DWG. NO. 1-480 AS-2.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-4.

REINFORCING BAR SCHEDULE

ABUTMENT 1 NB

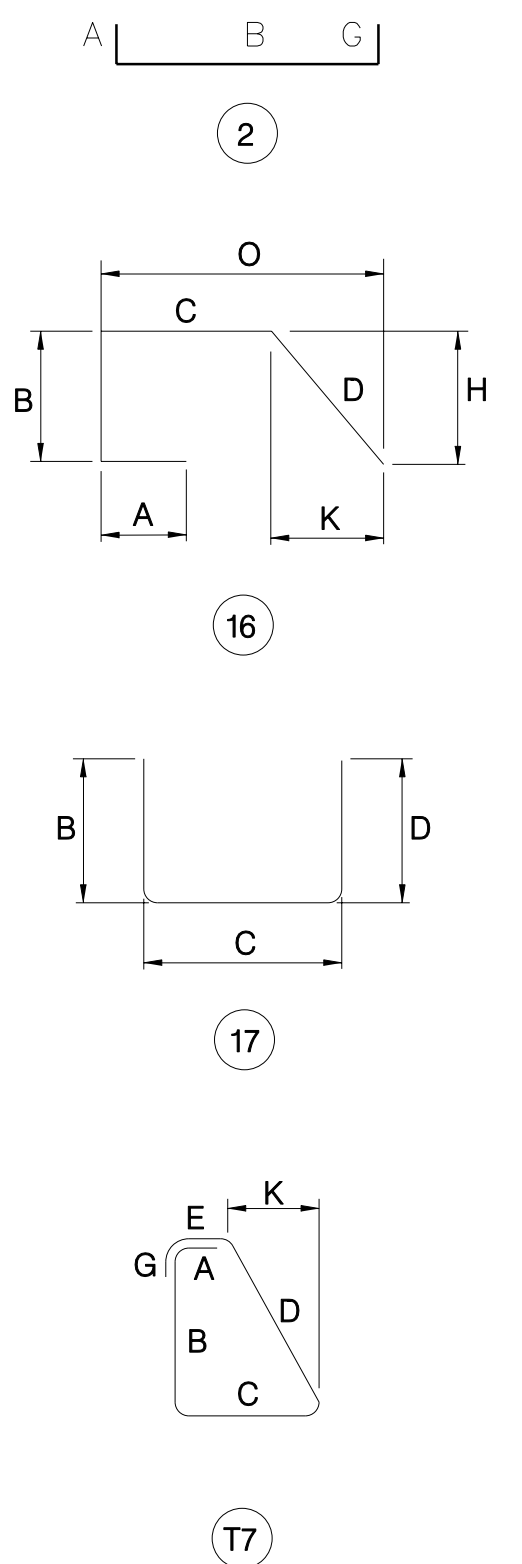
ABUTMENT 1 NB

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
A504E	5'-11"	68	2	10"	5'-1"										
A505E	1'-10" TO 4'-7"	6	2	10"	1'-0" TO 3'-9"										LENGTH Δ = 1'-4 1/2"
A506E	5'-2"	117	STR.												
A507E	4'-0"	53	STR.												
A508E	5'-4"	48	17		2'-1"	1'-2"	2'-1"								
A509E	52'-0"	7	STR.												
A510E	47'-0"	7	STR.												
A511E	3'-6 1/2"	7	16			2'-1"	1'-5 1/2"				10"		1'-2 1/4"	3'-3 1/4"	
A512E	6'-11"	25	17		1'-9"	3'-5"	1'-9"								
A513E	7'-2"	25	17		1'-9"	3'-8"	1'-9"								
A519E	6'-9"	9	STR.												
A520E	9'-6"	7	STR.												
A521E	8'-0"	7	STR.												
A522E	3'-8"	7	2	1'-7"	2'-1"										
A523E	5'-11"	14	16			3'-10"	2'-1"				1'-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A524E	6'-0"	14	STR.												
A525															BAR REMOVED
A533E	20'-3" TO 22'-9"	6	STR.												LENGTH Δ = 6"
A534E	31'-5" TO 33'-11"	6	2	10"	30'-7" TO 33'-1"										LENGTH Δ = 6"
A535	14'-8"	5	STR.												
A536	14'-2"	5	STR.												
A537E	14'-8"	5	STR.												
A538E	14'-2"	4	STR.												
A543E	4'-10"	64	STR.												
A601	53'-8"	12	STR.												
A603	4'-8 1/2"	12	16		2'-1"	6 1/2"	2'-1"				1'-2 3/8"		1'-8 1/2"	2'-3"	
A604	4'-8"	12	16			2'-4"	2'-4"				1'-11"		1'-4"	3'-8"	
A606	9'-6"	13	STR.												
A607	8'-0"	12	STR.												
A608	3'-8"	13	2	1'-7"	2'-1"										
A609	5'-11"	13	16			3'-10"	2'-1"				1'-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A614	9'-4"	64	STR.												
A615	8'-10"	72	STR.												
A618	47'-0"	13	STR.												
A705	15'-2"	2	STR.												
A706	14'-8"	4	STR.												
F501	3'-9"	73	STR.												
F502	1'-11" TO 9'-0"	6	STR.												LENGTH Δ = 1'-5"
F503	10'-6"	97	STR.												
F504	1'-8" TO 9'-10"	7	STR.												LENGTH Δ = 1'-4 3/8"
F505	56'-8" TO 57'-8"	4	STR.												LENGTH Δ = 4"
F506	57'-10"	25	STR.												
F507	56'-8" TO 57'-0"	2	STR.												LENGTH Δ = 4"
F508	41'-2"	9	STR.												
F509	8'-4"	6	STR.												
F510	6'-0"	6	STR.												
F511	1'-8" TO 3'-11"	3	STR.												LENGTH Δ = 1'-1 1/2"
F512	36'-9"	1	STR.												
F513	26'-6"	11	STR.												
F514	35'-1"	1	STR.												
F515	30'-3"	11	STR.												
F516	36'-10" TO 37'-7"	2	STR.												LENGTH Δ = 9"
F517	34'-10"	2	STR.												
F518	28'-5"	2	STR.												
F519	27'-6"	4	STR.												
F520	19'-3"	2	STR.												
F521	34'-3" TO 35'-1"	2	STR.												LENGTH Δ = 10"
F522	34'-1"	4	STR.												
F523	30'-0"	6	STR.												

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
F601	7'-1"	64	2	1'-0"	6'-1"										
F602	5'-5"	72	STR.												
F603	3'-4"	5	STR.												
F604	10'-6"	139	STR.												
F605	6'-1" TO 9'-3"	5	STR.												LENGTH Δ = 9 1/2"
F701	7'-3"	54	T7			1'-2"	6'-1"								7 1/4"
F702	7'-3"	6	2	1'-2"	6'-1"										
W501	7'-3"	54	17		2'-1"	1'-2"	4'-0"								
W502	26'-0"	31	STR.												
W503	25'-11"	31	STR.												
W508	14'-9"	27	STR.												
W509	14'-2"	27	STR.												
W705	15'-3"	27	STR.												
W706	14'-8"	27	STR.												

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NOT FOR BIDDING
AUGUST 2015



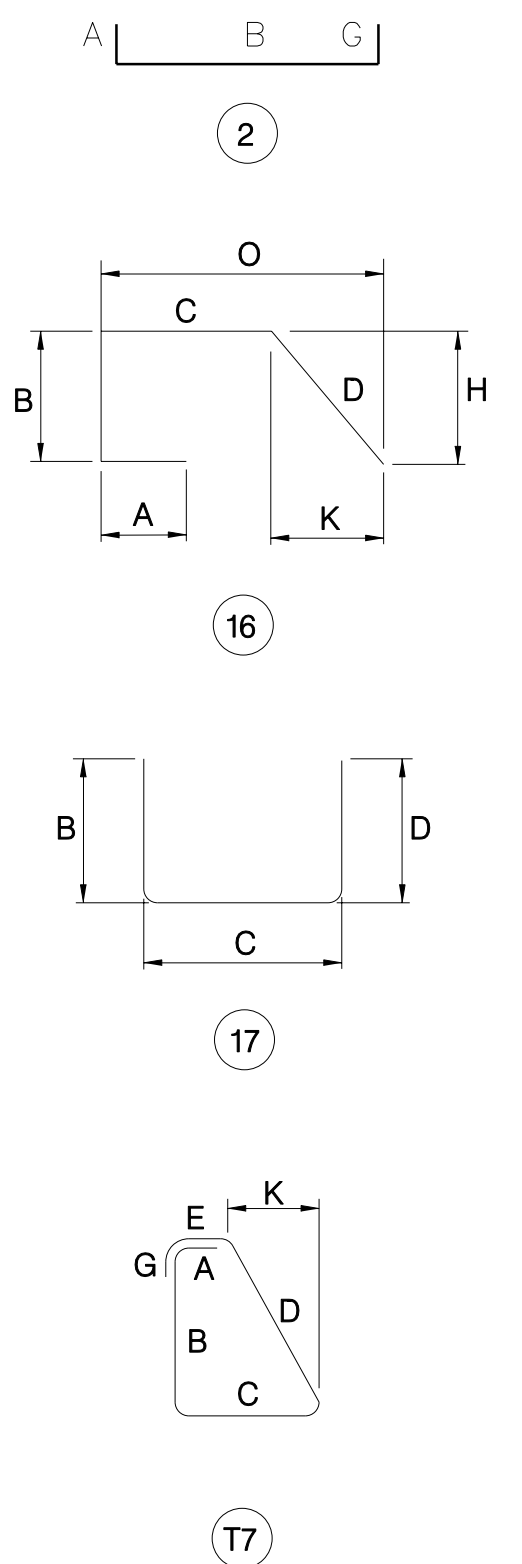
REINFORCING BAR SCHEDULE

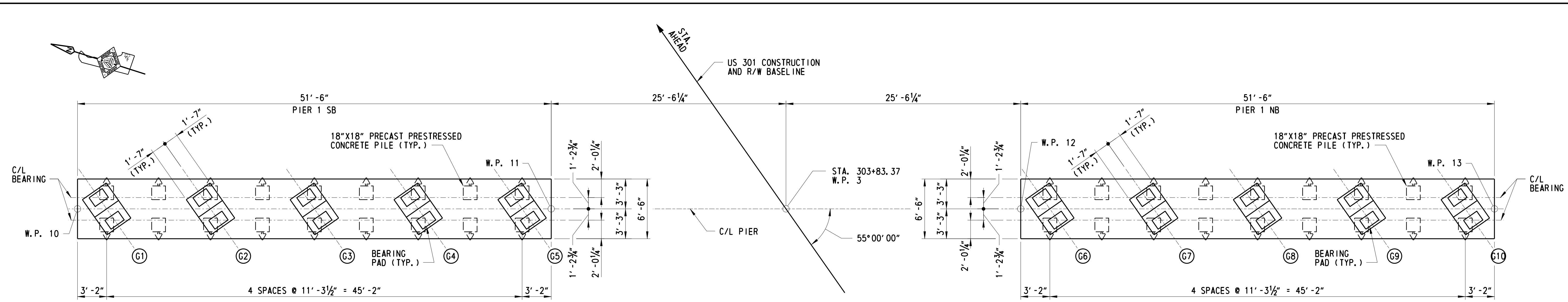
ABUTMENT 2 NB															
MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
A504E	5'-11"	68	2	10"	5'-1"										
A505E	1'-10" TO 4'-7"	6	2	10"	1'-0" TO 3'-9"										LENGTH Δ = 1'-4 1/2"
A506E	5'-2"	117	STR.												
A507E	4'-0"	53	STR.												
A508E	5'-4"	48	17		2'-1"	1'-2"	2'-1"								
A509E	52'-0"	7	STR.												
A510E	47'-0"	7	STR.												
A511E	3'-6 1/2"	7	16			2'-1"	1'-5 1/2"				10"		1'-2 1/4"	3'-3 1/4"	
A512E	6'-11"	25	17		1'-9"	3'-5"	1'-9"								
A513E	7'-2"	25	17		1'-9"	3'-8"	1'-9"								
A519E	6'-6"	9	STR.												
A520E	9'-0"	7	STR.												
A521E	8'-0"	7	STR.												
A522E	3'-8"	7	2	1'-7"	2'-1"										
A523E	5'-11"	14	16			3'-10"	2'-1"				1'-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A524E	6'-0"	14	STR.												
A525															BAR REMOVED
A533E	20'-3" TO 22'-9"	6	STR.												LENGTH Δ = 6"
A534E	31'-5" TO 33'-11"	6	2	10"	30'-7" TO 33'-1"										LENGTH Δ = 6"
A539	14'-0"	5	STR.												
A540	13'-6"	5	STR.												
A541E	13'-6"	5	STR.												
A542E	14'-0"	4	STR.												
A543E	4'-10"	64	STR.												
A601	53'-8"	11	STR.												
A603	4'-8 1/2"	11	16		2'-1"	6 1/2"	2'-1"				1'-2 3/8"		1'-8 1/2"	2'-3"	
A604	4'-8"	11	16			2'-4"	2'-4"				1'-11"		1'-4"	3'-8"	
A606	9'-6"	11	STR.												
A607	8'-0"	11	STR.												
A608	3'-8"	12	2	1'-7"	2'-1"										
A609	5'-11"	12	16			3'-10"	2'-1"				1'-8 1/2"		1'-2 3/8"	5'-0 3/8"	
A616	8'-7 1/2"	64	STR.												
A617	8'-1 1/2"	72	STR.												
A618	47'-0"	12	STR.												
A707	14'-6"	4	STR.												
A708	14'-0"	2	STR.												
F501	3'-9"	73	STR.												
F502	1'-11" TO 9'-0"	6	STR.												LENGTH Δ = 1'-5"
F503	10'-6"	97	STR.												
F504	1'-8" TO 9'-10"	7	STR.												LENGTH Δ = 1'-4 3/8"
F505	56'-8" TO 57'-8"	4	STR.												LENGTH Δ = 4"
F506	57'-10"	25	STR.												
F507	56'-8" TO 57'-0"	2	STR.												LENGTH Δ = 4"
F508	41'-2"	9	STR.												
F509	8'-4"	6	STR.												
F510	6'-0"	6	STR.												
F511	1'-8" TO 3'-11"	3	STR.												LENGTH Δ = 1'-1 1/2"
F512	36'-9"	1	STR.												
F513	26'-6"	11	STR.												
F514	35'-1"	1	STR.												
F515	30'-3"	11	STR.												
F516	36'-10" TO 37'-7"	2	STR.												LENGTH Δ = 9"
F517	34'-10"	2	STR.												
F518	28'-5"	2	STR.												
F519	27'-6"	4	STR.												
F520	19'-3"	2	STR.												
F521	34'-3" TO 35'-1"	2	STR.												LENGTH Δ = 10"
F522	34'-1"	4	STR.												
F523	30'-0"	6	STR.												

ABUTMENT 2 NB															
MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	F	G	H	J	K	O	REMARKS
F601	7'-1"	64	2	1'-0"	6'-1"										
F602	5'-5"	72	STR.												
F603	3'-4"	5	STR.												
F604	10'-6"	139	STR.												
F605	6'-1" TO 9'-3"	5	STR.												LENGTH Δ = 9 1/2"
F701	7'-3"	54	T7			1'-2"	6'-1"								7 1/4"
F702	7'-3"	6	2	1'-2"	6'-1"										
W501	7'-3"	54	17		2'-1"	1'-2"	4'-0"								
W502	26'-0"	29	STR.												
W503	25'-11"	29	STR.												
W510	13'-9"	27	STR.												
W511	13'-3"	27	STR.												
W707	14'-3"	27	STR.												
W708	13'-9"	27	STR.												

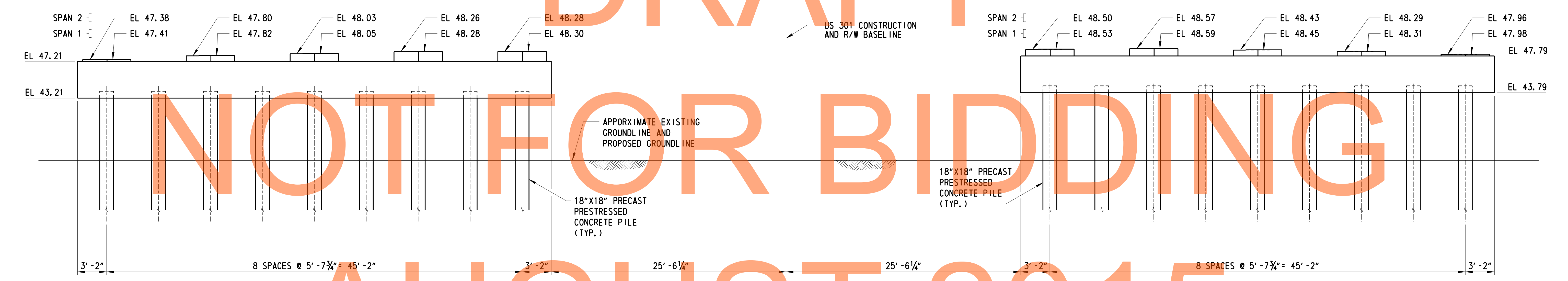
DRAFT

NOT FOR BIDDING
AUGUST 2015





PLAN
SCALE: 3/8" = 1'-0"



ELEVATION
SCALE: 3/8" = 1'-0"

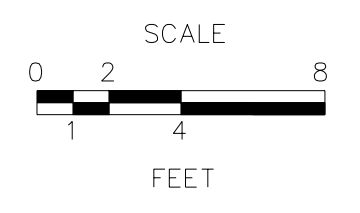
DRAFT

NOT FOR BIDDING

AUGUST 2015

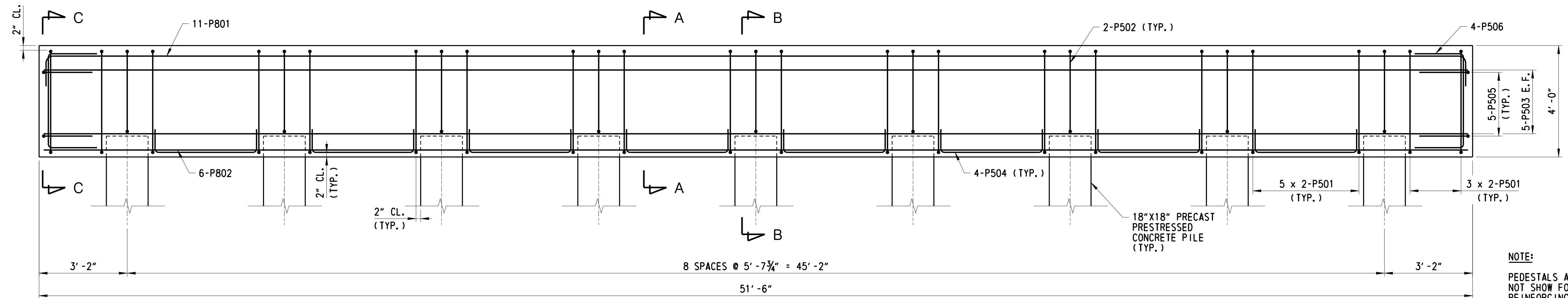
- CROSS REFERENCE NOTES:
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NOS. 1-480 PE-1
1-480 PE-2.
 2. FOR GEOMETRIC LAYOUT, SEE DWG. NO. 1-480 FT-1.
 3. FOR PIER PILE PLAN, SEE DWG. NO. 1-480 FT-6.
 4. FOR PIER DETAILS, SEE DWG. NO. 1-480 PR-2.

ADDENDUMS / REVISIONS



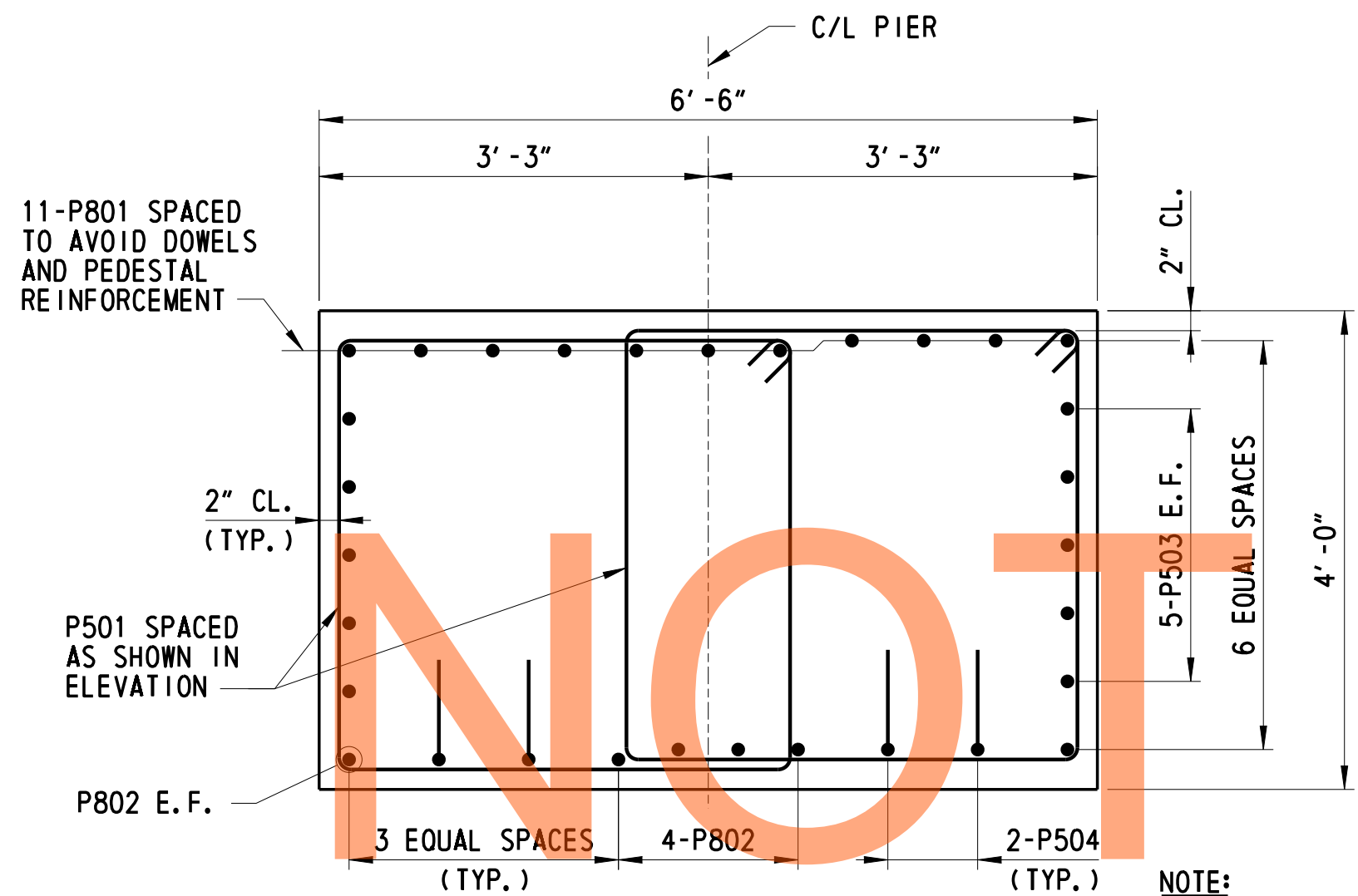
CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: PRH CHECKED BY: AMS

1-480 PR-1
SHEET NO. 598
TOTAL SHTS. 1256



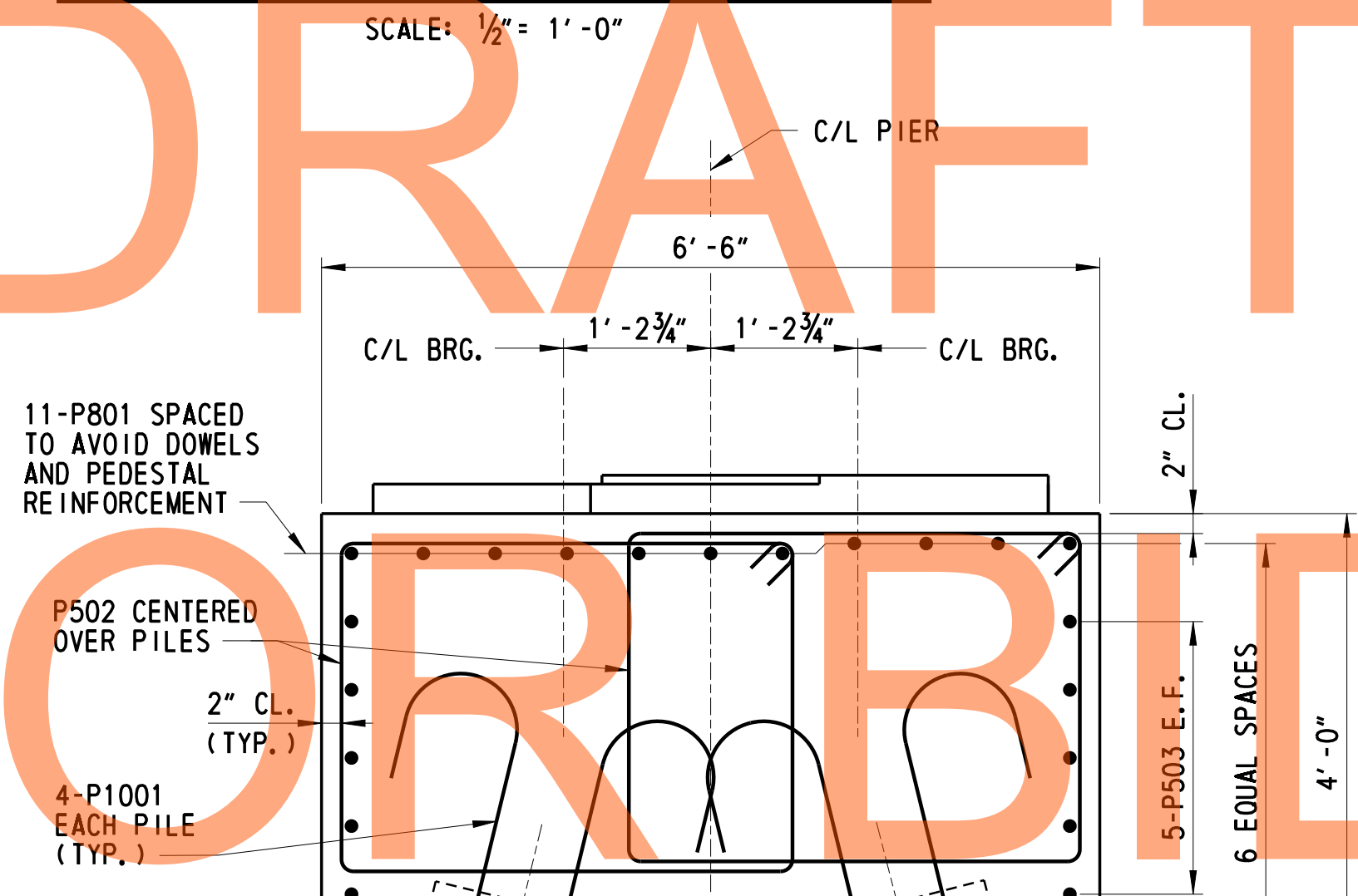
NOTE:
PEDESTALS AND PEDESTAL REINFORCING NOT SHOWN FOR CLARITY. FOR PEDESTAL REINFORCING, SEE DETAIL THIS SHEET.

ELEVATION - PIER REINFORCING
SCALE: 1/2" = 1'-0"

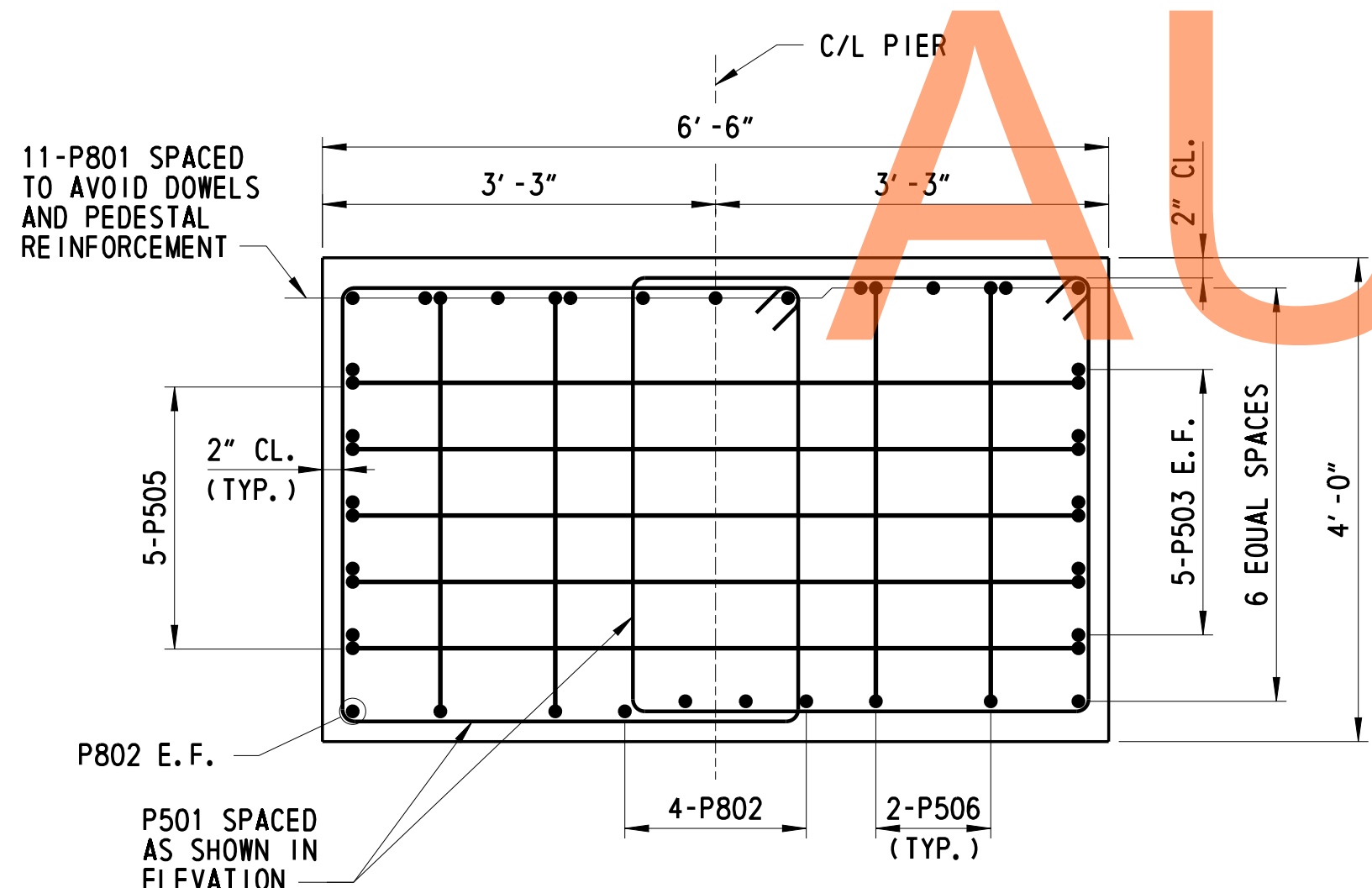


SECTION A-A
SCALE: 3/4" = 1'-0"

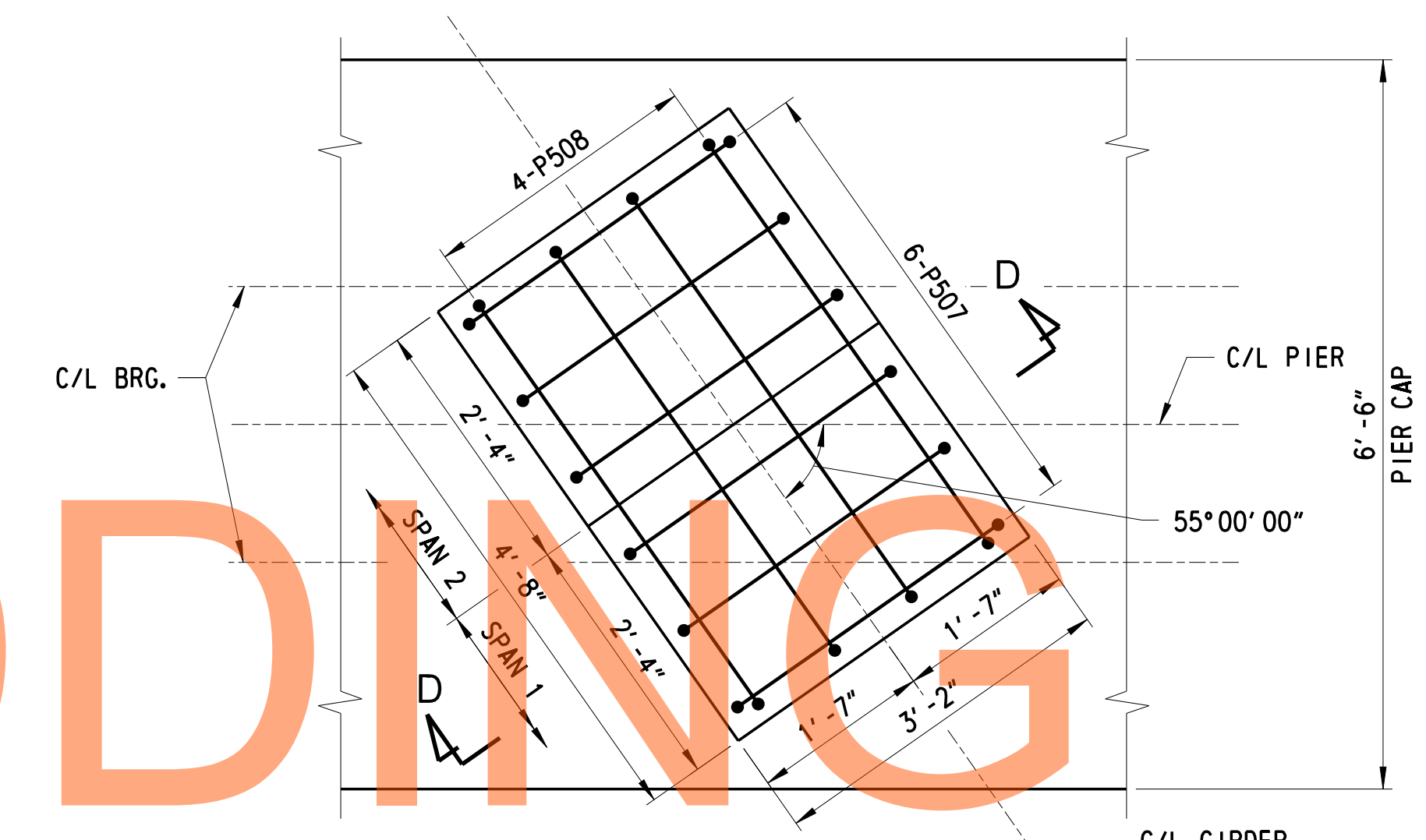
NOTE:
FOR DOWEL DETAIL, SEE DWG. NO. 1-480 DPH-2.



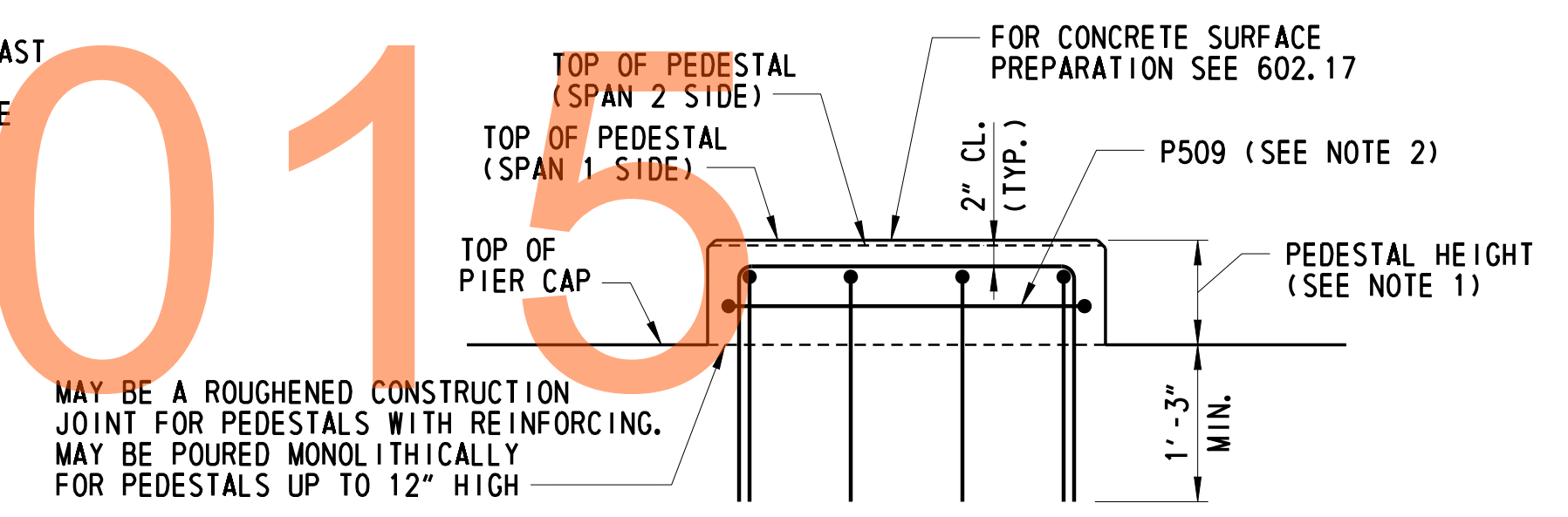
SECTION B-B
SCALE: 3/4" = 1'-0"



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



PLAN



SECTION D-D

PEDESTAL REINFORCING DETAIL
SCALE: 3/4" = 1'-0"

MAY BE A ROUGHENED CONSTRUCTION JOINT FOR PEDESTALS WITH REINFORCING. MAY BE POURED MONOLITHICALLY FOR PEDESTALS UP TO 12" HIGH

- NOTES:**
1. PEDESTAL REINFORCING NOT REQUIRED FOR PEDESTAL HEIGHTS LESS THAN 4".
 2. THIS BAR ONLY REQUIRED FOR PEDESTAL HEIGHTS OF 9" OR GREATER. BAR SHALL BE PLACED AT MID-HEIGHT OF PEDESTAL.

- CROSS REFERENCE NOTES:**
1. FOR PIER PILE PLAN, SEE DWG. NO. 1-480 FT-6.
 2. FOR PIER PLAN AND ELEVATION, SEE DWG. NO. 1-480 PR-1.
 3. FOR PILE DETAILS, SEE DWG. NO. 1-480 PL-1.
 4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-5.

ADDENDUMS / REVISIONS

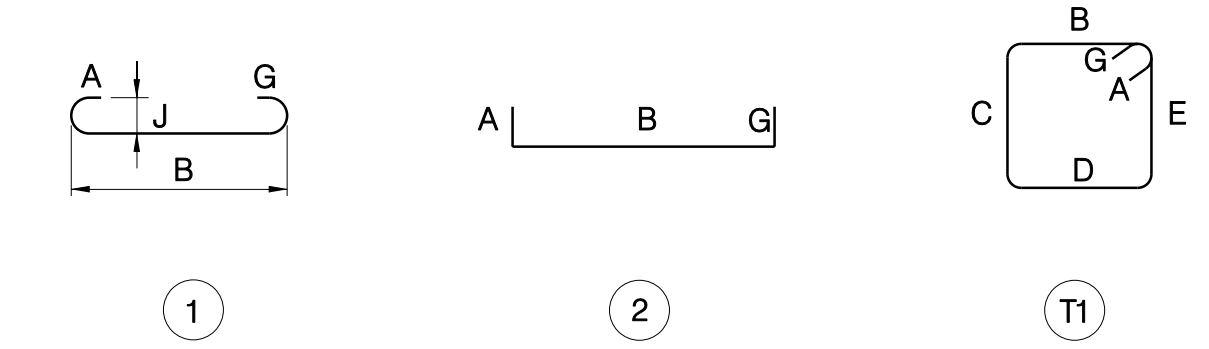
CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	PRH
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 PR-2
SHEET NO.
599
TOTAL SHTS.
1256

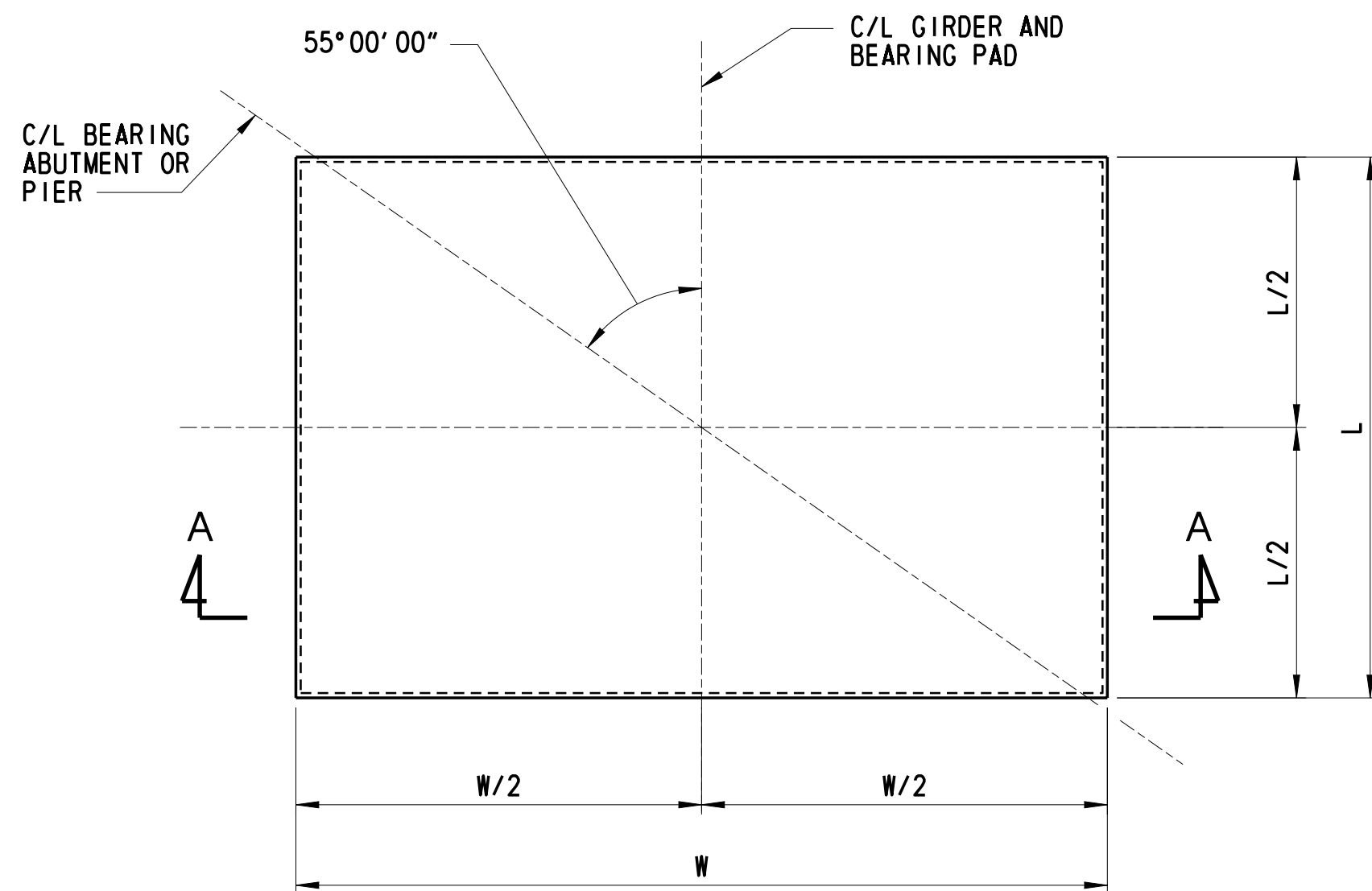
REINFORCING BAR SCHEDULE

SB PIER BAR SCHEDULE															NB PIER BAR SCHEDULE																
MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS	MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
P501	16'-0"	92	T1	7"	3'-9"	3'-8"	3'-9"	3'-8"	7"							P501	16'-0"	92	T1	7"	3'-9"	3'-8"	3'-9"	3'-8"	7"						
P502	14'-2"	18	T1	7"	3'-9"	2'-9"	3'-9"	2'-9"	7"							P502	14'-2"	18	T1	7"	3'-9"	2'-9"	3'-9"	2'-9"	7"						
P503	51'-2"	10	STR.													P503	51'-2"	10	STR.												
P504	5'-4"	32	2	10"	3'-8"				10"							P504	5'-4"	32	2	10"	3'-8"				10"						
P505	10'-6"	10	2	2'-2"	6'-2"				2'-2"							P505	10'-6"	10	2	2'-2"	6'-2"				2'-2"						
P506	7'-10 1/2"	8	2	2'-2"	3'-6 1/2"				2'-2"							P506	7'-10 1/2"	8	2	2'-2"	3'-6 1/2"				2'-2"						
P507	7'-6"	30	2	2'-5"	2'-8"				2'-5"							P507	7'-6"	30	2	2'-5"	2'-8"				2'-5"						
P508	8'-10"	20	2	2'-4"	4'-2"				2'-4"							P508	8'-10"	20	2	2'-4"	4'-2"				2'-4"						
P509	15'-6"	2	T1	7"	2'-10"	4'-4"	2'-10"	4'-4"	7"							P509	15'-6"	3	T1	7"	2'-10"	4'-4"	2'-10"	4'-4"	7"						
P801	53'-10"	11	2	1'-4"	51'-2"				1'-4"							P801	53'-10"	11	2	1'-4"	51'-2"				1'-4"						
P802	51'-2"	6	STR.													P802	51'-2"	6	STR.												
P1001	7'-1 1/2"	72	1	5 1/2"	6'-8"									10 1/4"		P1001	7'-1 1/2"	72	1	5 1/2"	6'-8"								10 1/4"		

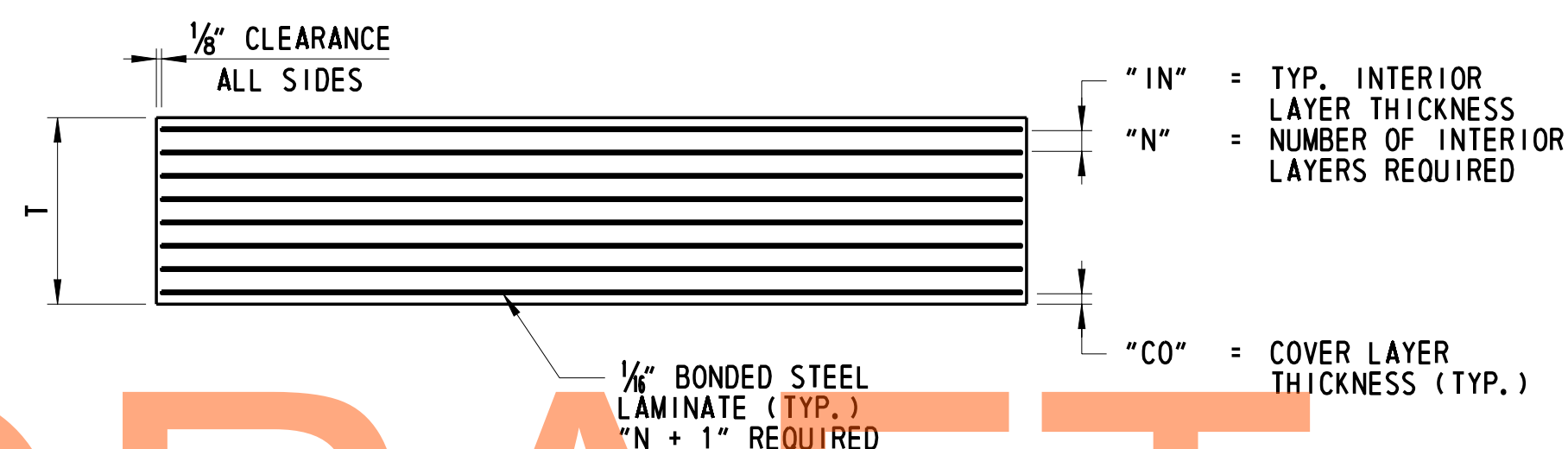
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PLAN



SECTION A-A

NOTES:

- ELASTOMERIC BEARINGS SHALL BE 60 DUROMETER HARDNESS SHORE TYPE A.
- MINIMUM LOW TEMPERATURE ELASTOMER SHALL BE GRADE 3.
- ALL BEARINGS ARE TO BE MOLDED TO DESIGN DIMENSIONS. CUTTING TO SIZE AFTER FABRICATION IS PROHIBITED.
- HOLES ARE NOT PERMITTED IN THE ELASTOMERIC BEARINGS.
- VULCANIZE PATCH PIN GROOVES.
- STEEL LAMINATE SHALL HAVE A MINIMUM YIELD STRENGTH (Fy) OF 36 KSI.
- MAXIMUM DESIGN LOAD (SERVICE):

ABUTMENT 1 SB (EXP.):	DL = 192 KIPS
	LL = 119 KIPS
PIER 1 SB (FIXED):	DL = 161 KIPS
	LL = 112 KIPS
ABUTMENT 2 SB (EXP.):	DL = 137 KIPS
	LL = 105 KIPS
ABUTMENT 1 NB (EXP.):	DL = 203 KIPS
	LL = 124 KIPS
PIER 1 NB (FIXED):	DL = 177 KIPS
	LL = 125 KIPS
ABUTMENT 2 NB (EXP.):	DL = 190 KIPS
	LL = 120 KIPS

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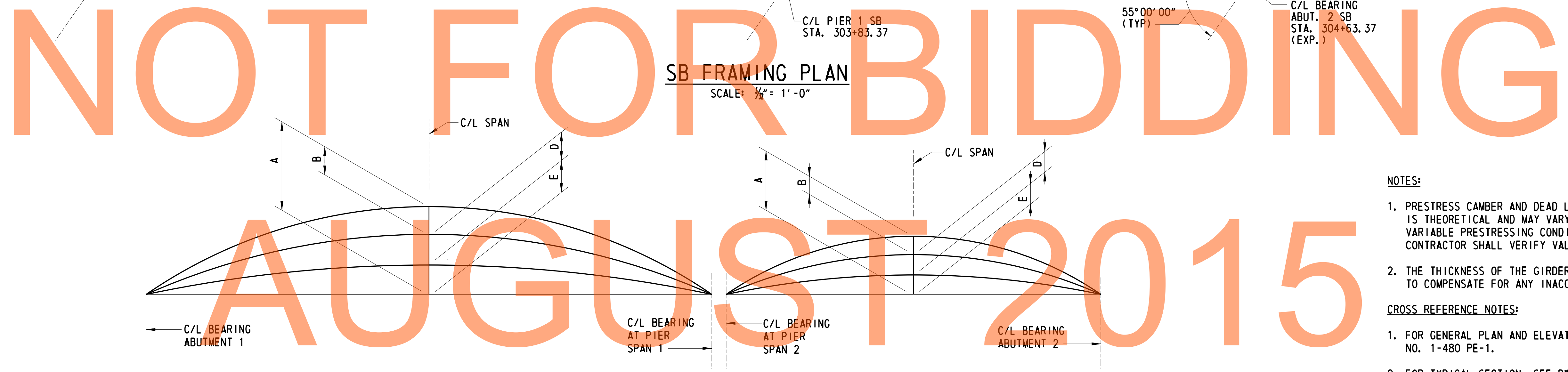
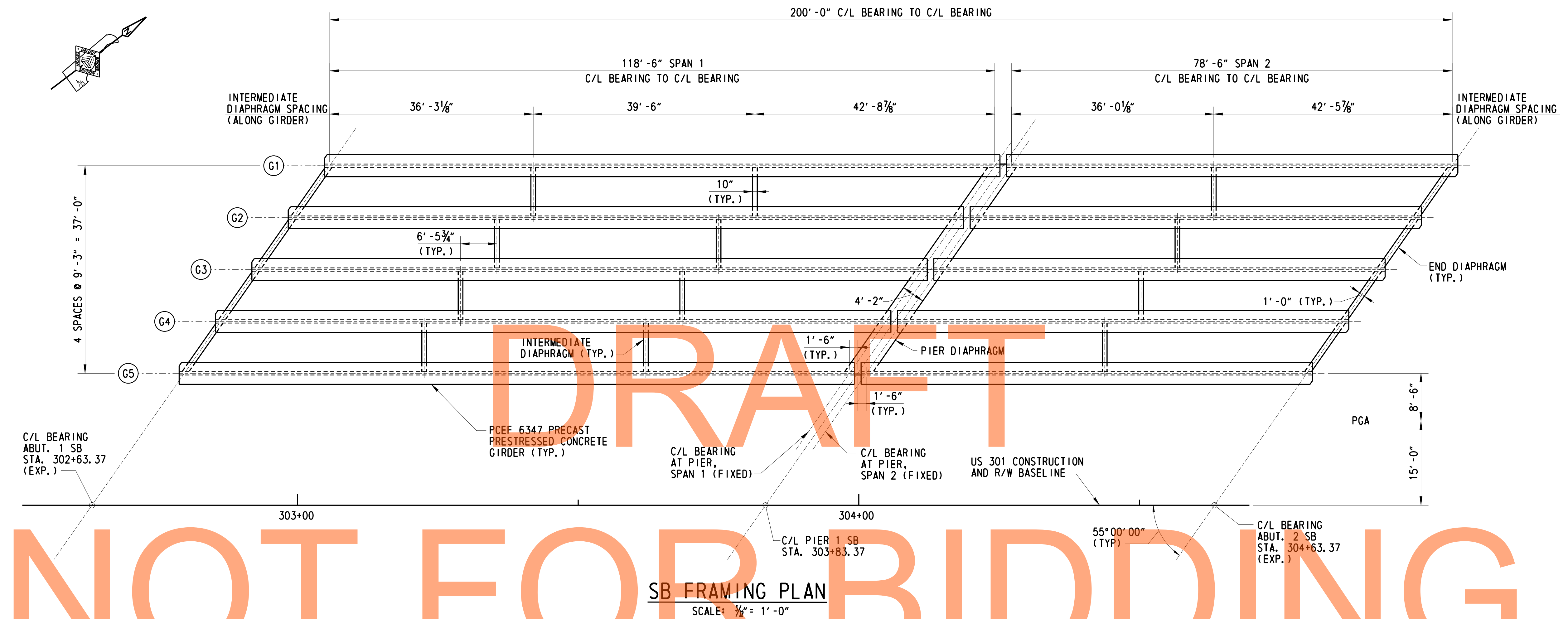
NOT FOR BIDDING

STEEL REINFORCED ELASTOMERIC BEARING PAD

SCALE: 3" = 1'-0"

BEARING PAD DATA								
LOCATION	QUANTITY	L (IN)	W (IN)	T (IN)	IN (IN)	N	N + 1	CO (IN)
ABUT. 1 SB (EXP.)	5	14	21	4 1/2	1/2	7	8	1/4
PIER 1 SB (FIXED)	10	14	21	4 1/2	1/2	7	8	1/4
ABUT. 2 SB (EXP.)	5	14	21	4 1/2	1/2	7	8	1/4
ABUT. 1 NB (EXP.)	5	14	21	4 1/2	1/2	7	8	1/4
PIER 1 NB (FIXED)	10	14	21	4 1/2	1/2	7	8	1/4
ABUT. 2 NB (EXP.)	5	14	21	4 1/2	1/2	7	8	1/4

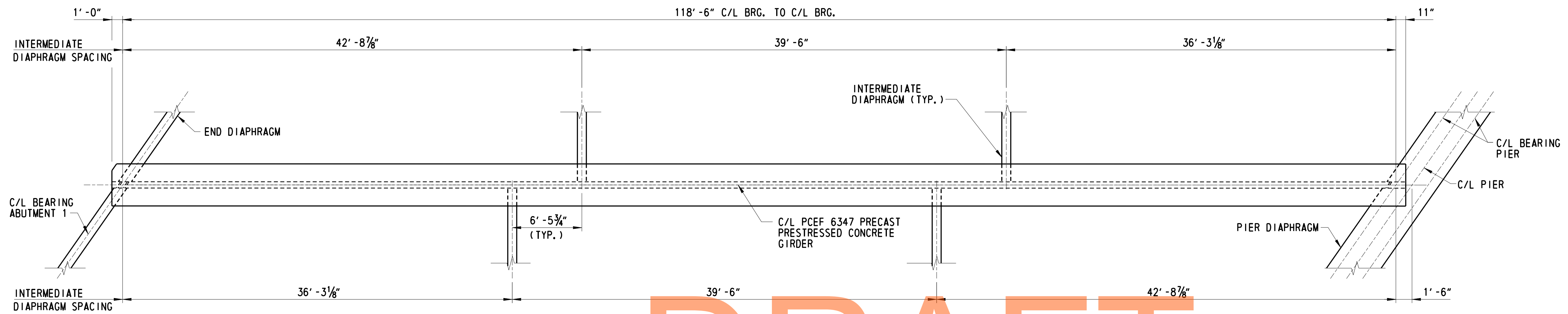
AUGUST 2015



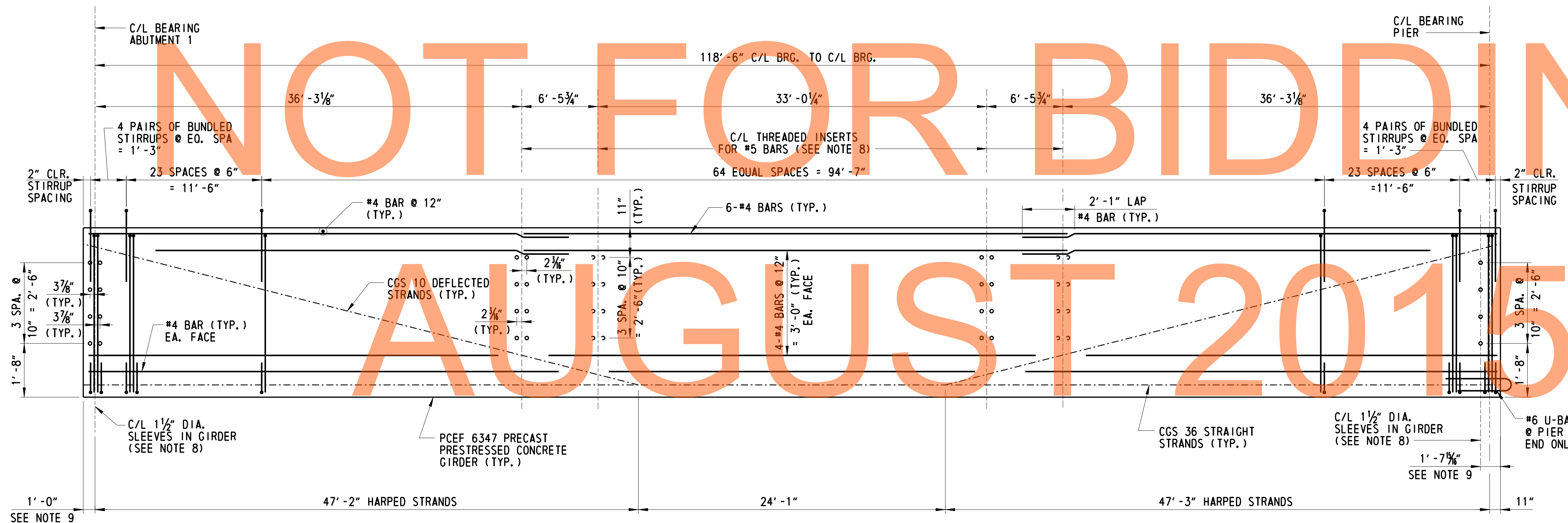
- LEGEND:**
- A = CAMBER DUE TO PRESTRESS AT ERECTION, CREEP MULTIPLIER = 1.8.
 - B = DEFLECTION DUE TO GIRDER DEAD LOAD AT ERECTION, CREEP MULTIPLIER = 1.85.
 - C = A+B
 - D = DEFLECTION DUE TO SLAB, DIAPHRAGMS, SIP FORMS, AND BARRIERS.
 - E = NET CAMBER, C+D.

CAMBER/DEFLECTION TABLE (INCHES)					
SPAN 1					
GIRDER NO.	A	B	C	D	E
G1 & G5	7 7/8"	-3 1/4"	4 5/8"	-1 7/8"	2 3/4"
G2 - G4	7 7/8"	-3 1/4"	4 5/8"	-2 1/8"	2 1/2"
SPAN 2					
GIRDER NO.	A	B	C	D	E
G1 & G5	1 7/8"	-5/8"	1 1/4"	-3/8"	7/8"
G2 - G4	1 7/8"	-5/8"	1 1/4"	-3/8"	7/8"

- NOTES:**
- PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN IS THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES. CONTRACTOR SHALL VERIFY VALUES IN THE FIELD.
 - THE THICKNESS OF THE GIRDER HAUNCHES SHALL BE VARIED TO COMPENSATE FOR ANY INACCURACIES IN THE FINAL CAMBER.
- CROSS REFERENCE NOTES:**
- FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
 - FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
 - FOR GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-1 AND 1-480 BM-2.
 - FOR GIRDER DETAILS, SEE DWG. NO. 1-480 BM-3.
 - FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE DWG. NO. 1-480 DPH-1.
 - FOR PIER DIAPHRAGM DETAILS, SEE DWG. NO. 1-480 DPH-2.



SB SPAN 1 GIRDER PLAN
NTS



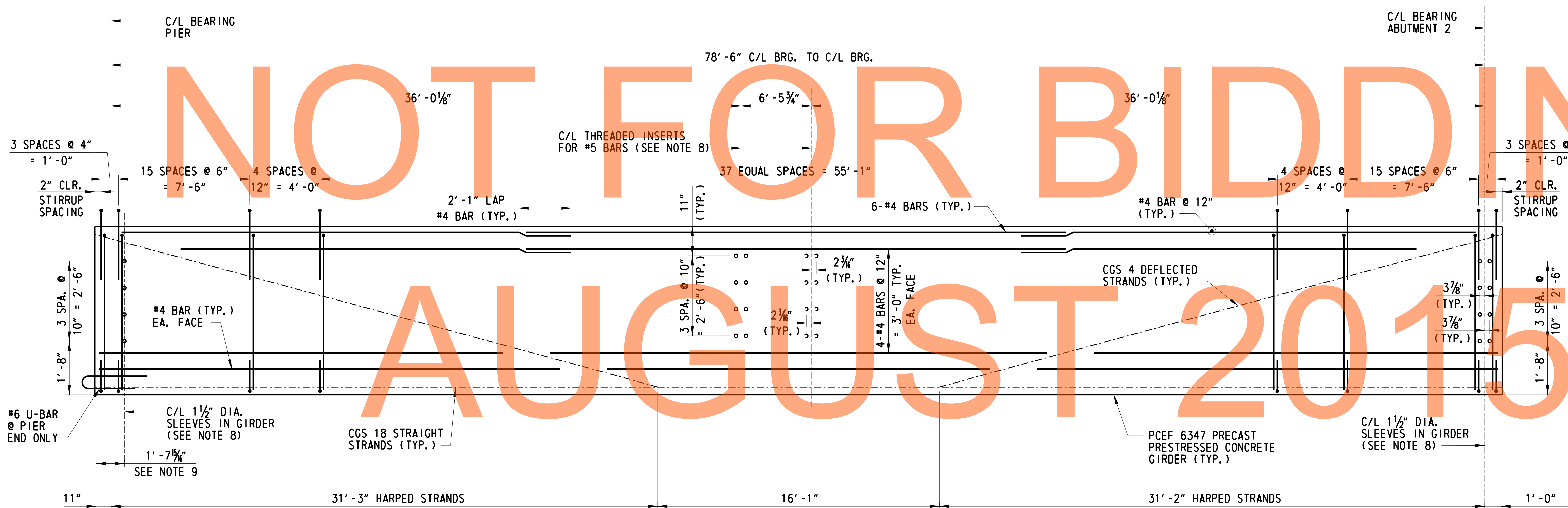
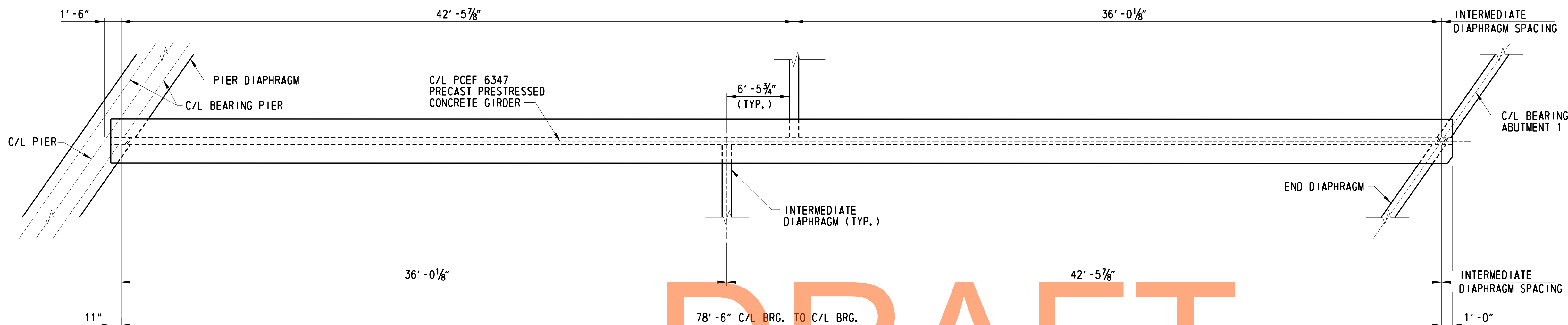
SB SPAN 1 GIRDER ELEVATION
NTS

NOTES:

1. NOT ALL PRESTRESSING STRANDS SHOWN FOR CLARITY. CENTER OF GRAVITY FOR STRANDS GROUP (CGS) SHOWN ONLY.
2. GIRDER LENGTHS IN CASTING BED SHALL BE DETERMINED AND DEPICTED IN SHOP DRAWINGS TO COMPENSATE FOR GRADE SHORTENING DUE TO PRESTRESS EFFECTS.
3. SECTION IS A PCEF 6347.
4. ALL MILD STEEL REINFORCEMENT IN GIRDERS SHALL BE EPOXY COATED.
5. TOP SURFACE OF GIRDERS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF A 1/4" AND SCRUBBED TRANSVERSELY WITH A COURSE WIRE BRUSH TO REMOVE ALL LAITANCE TO PRODUCE A ROUGHENED SURFACE FOR BONDING.
6. END ZONE REINFORCEMENT MAY BE INCREASED BY THE FABRICATOR TO REFLECT FABRICATORS EXPERIENCE AND/OR TO CONTROL CRACKING.
7. NO CLEAR COVER LESS THAN AS SHOWN ON THESE PLANS WILL BE ACCEPTED.
8. OMIT SLEEVES AND THREADED INSERTS ON THE EXTERIOR FACE OF FASCIA GIRDERS.
9. DIMENSION REFERENCED FROM C/L OF GIRDER WEB.
10. FABRICATOR TO CHECK GIRDER STABILITY FOR HANDLING, TRANSPORTATION AND ERECTION.

CROSS REFERENCE NOTES:

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
2. FOR GENERAL NOTES, SEE DWG. NO. 1-480 GN-1.
3. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
4. FOR FRAMING PLAN, SEE DWG. NO. 1-480 FR-1.
5. FOR GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-3.
6. FOR CAMBER SCHEDULE, SEE DWG. NO. 1-480 FR-1.
7. FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE DWG. NOS. 1-480 DPH-1 AND 1-480 DPH-2.
8. FOR TYPICAL GIRDER DETAILS, SEE DWG. NO. 1-480 BM-7.



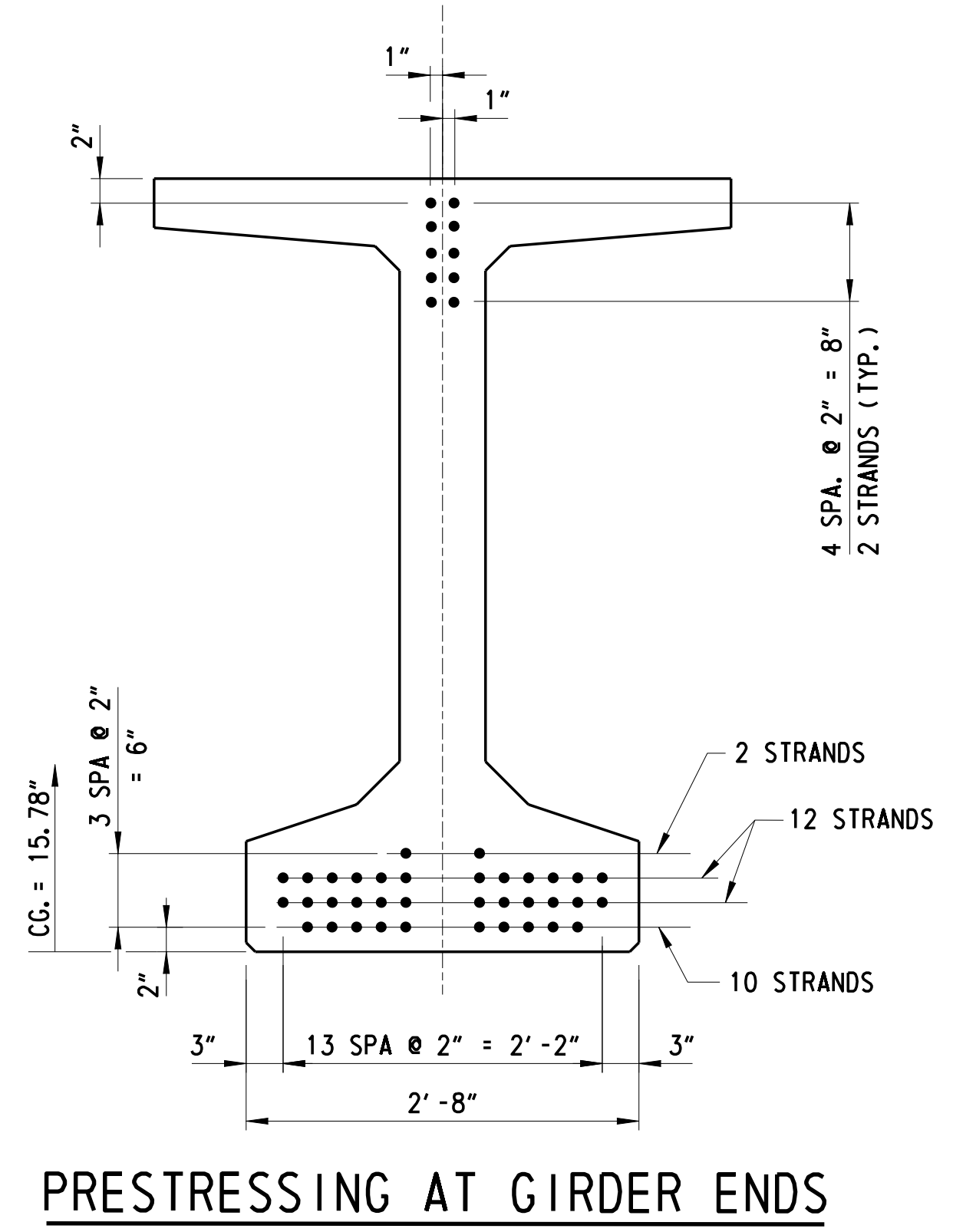
- NOTES:**
1. NOT ALL PRESTRESSING STRANDS SHOWN FOR CLARITY. CENTER OF GRAVITY FOR STRANDS GROUP (CGS) SHOWN ONLY.
 2. GIRDER LENGTHS IN CASTING BED SHALL BE DETERMINED AND DEPICTED IN SHOP DRAWINGS TO COMPENSATE FOR GRADE SHORTENING DUE TO PRESTRESS EFFECTS.
 3. SECTION IS A PCEF 6347.
 4. ALL MILD STEEL REINFORCEMENT IN GIRDERS SHALL BE EPOXY COATED.
 5. TOP SURFACE OF GIRDERS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF A 1/4" AND SCRUBBED TRANSVERSELY WITH A COURSE WIRE BRUSH TO REMOVE ALL LAITANCE TO PRODUCE A ROUGHENED SURFACE FOR BONDING.
 6. END ZONE REINFORCEMENT MAY BE INCREASED BY THE FABRICATOR TO REFLECT FABRICATORS EXPERIENCE AND/OR TO CONTROL CRACKING.
 7. NO CLEAR COVER LESS THAN AS SHOWN ON THESE PLANS WILL BE ACCEPTED.
 8. OMIT SLEEVES AND THREADED INSERTS ON THE EXTERIOR FACE OF FASCIA GIRDERS.
 9. DIMENSION REFERENCED FROM C/L OF GIRDER WEB.
 10. FABRICATOR TO CHECK GIRDER STABILITY FOR HANDLING, TRANSPORTATION AND ERECTION.

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-1.
 2. FOR GENERAL NOTES, SEE DWG. NO. 1-480 GN-1.
 3. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
 4. FOR FRAMING PLAN, SEE DWG. NO. 1-480 FR-1.
 5. FOR GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-3.
 6. FOR CAMBER SCHEDULE, SEE DWG. NO. 1-480 FR-1.
 7. FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE DWG. NOS. 1-480 DPH-1 AND 1-480 DPH-2.
 8. FOR TYPICAL GIRDER DETAILS, SEE DWG. NO. 1-480 BM-7.

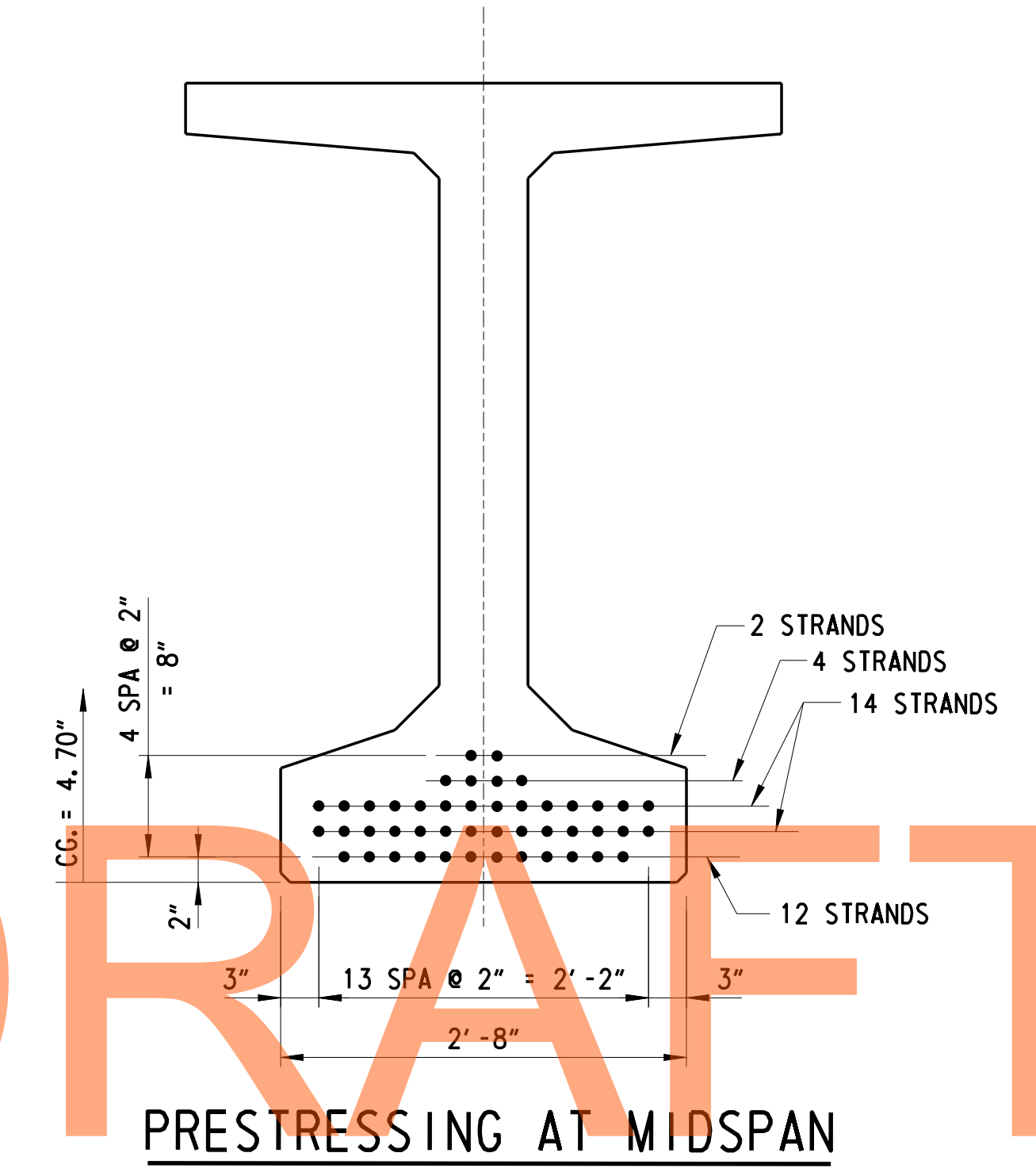
ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	BCW
NEW CASTLE		

1-480 BM-2
SHEET NO.
604
TOTAL SHTS.
1256

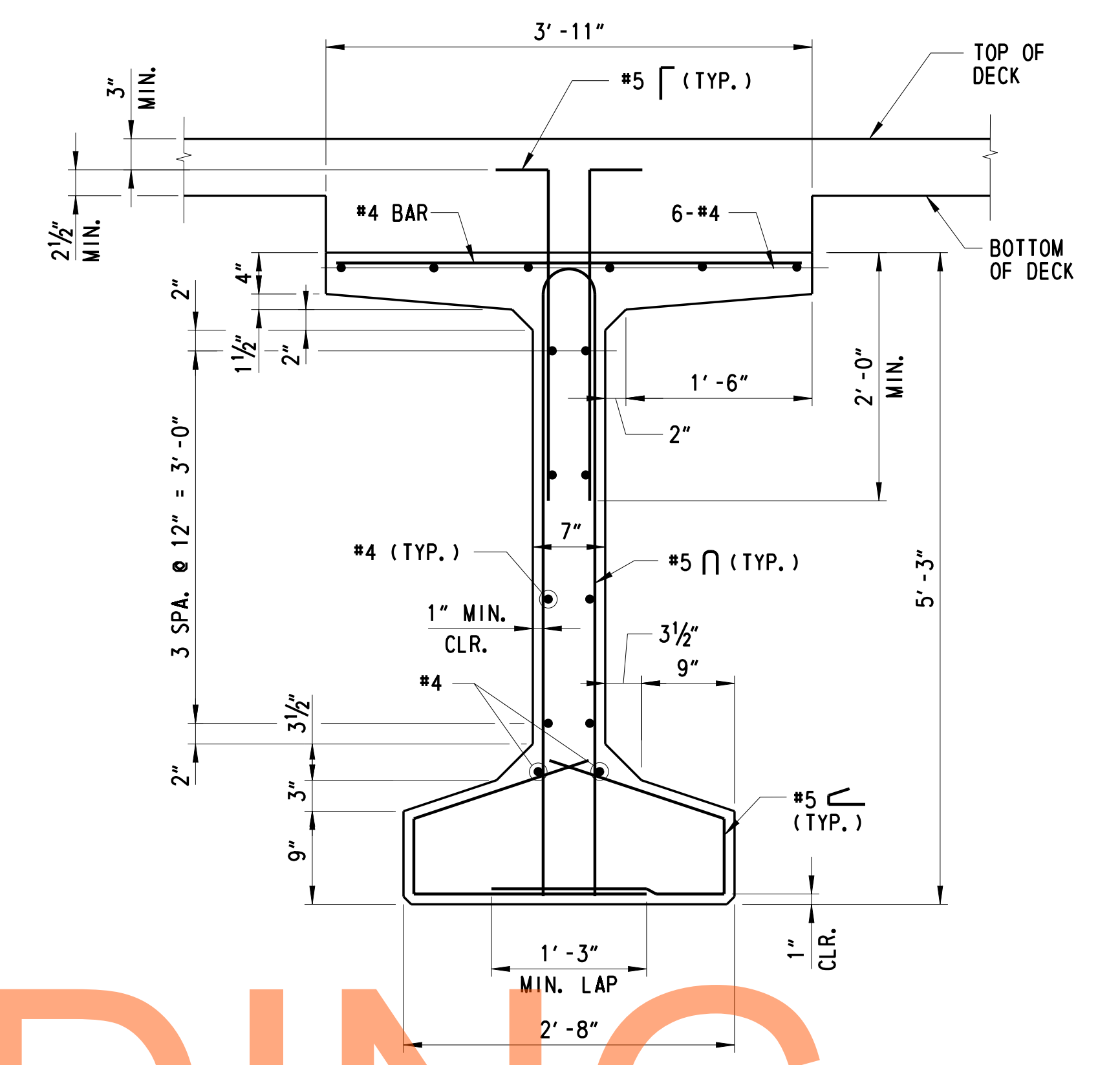


PRESTRESSING AT GIRDER ENDS

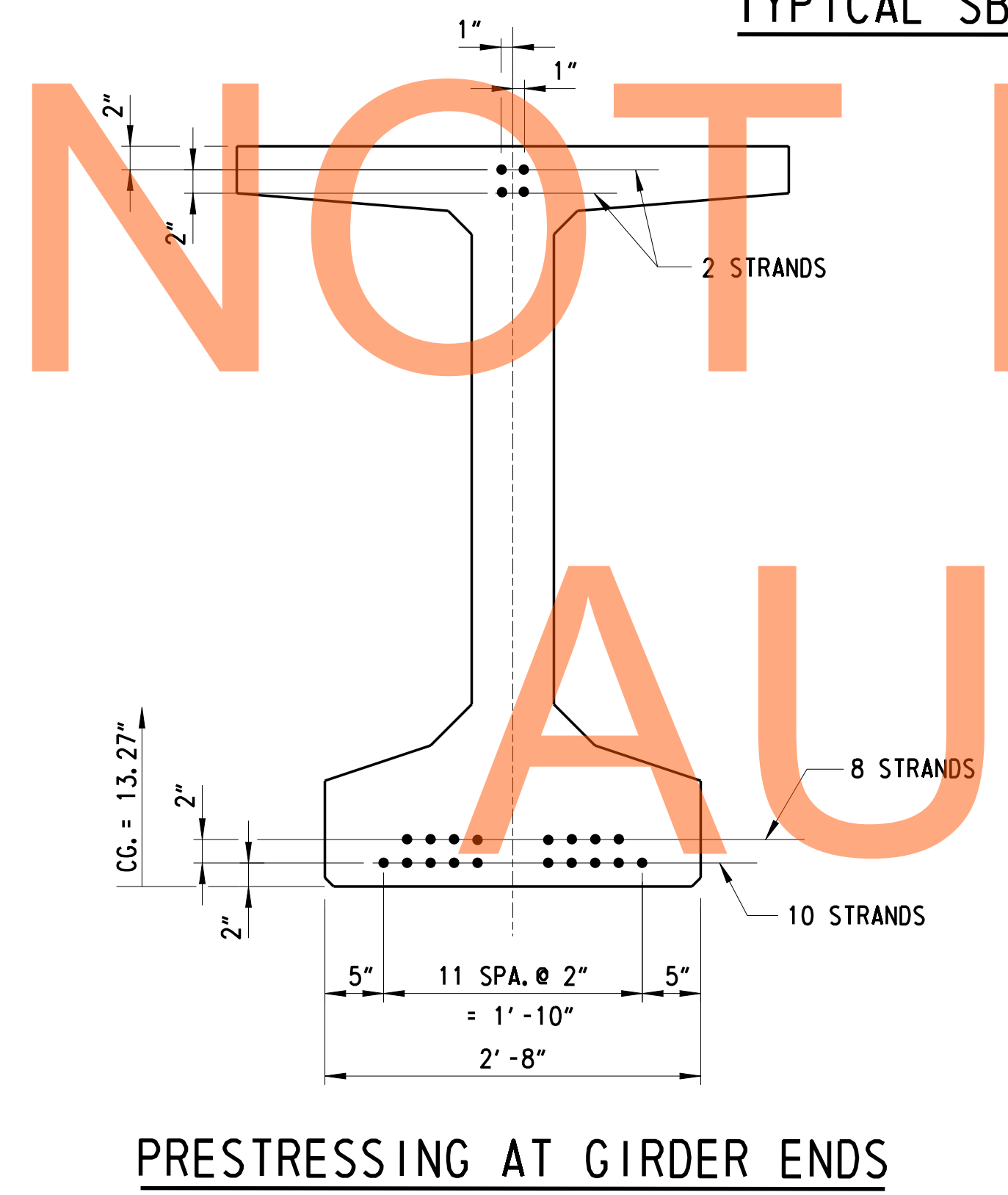


PRESTRESSING AT MIDSPAN

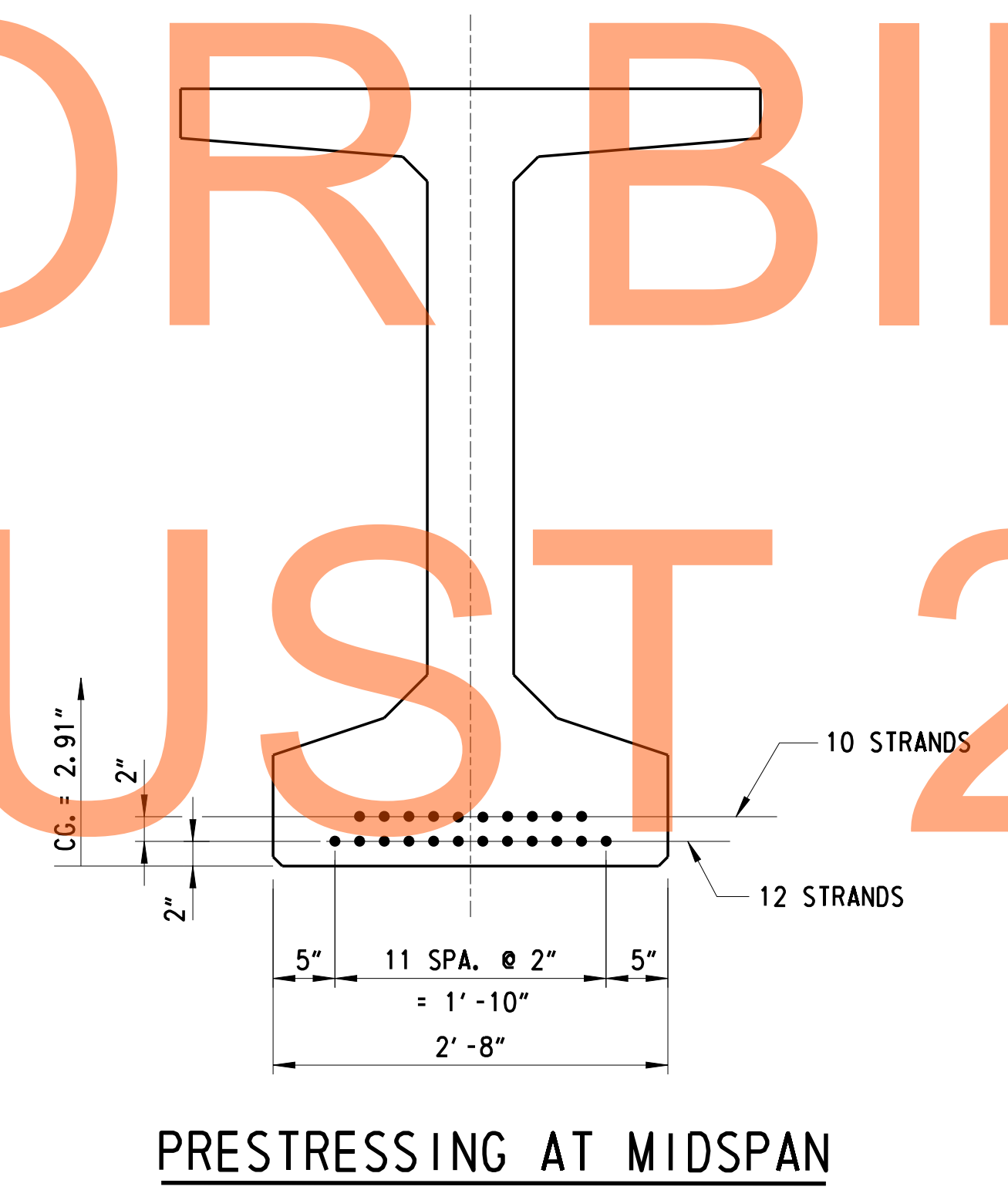
TYPICAL SB SPAN 1 GIRDER SECTIONS
SCALE: 1" = 1'-0"



TYPICAL REINFORCEMENT



PRESTRESSING AT GIRDER ENDS



PRESTRESSING AT MIDSPAN

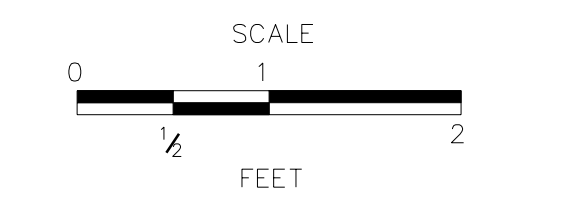
TYPICAL SB SPAN 2 GIRDER SECTIONS
SCALE: 1" = 1'-0"

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- NOTES:**
- GIRDER LIFTING DETAILS SHALL BE PROVIDED BY THE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - TYPICAL COVER - 1" CLR. TO STIRRUPS, 1/2" CLR. TO LONGITUDINAL BARS AND STRANDS.

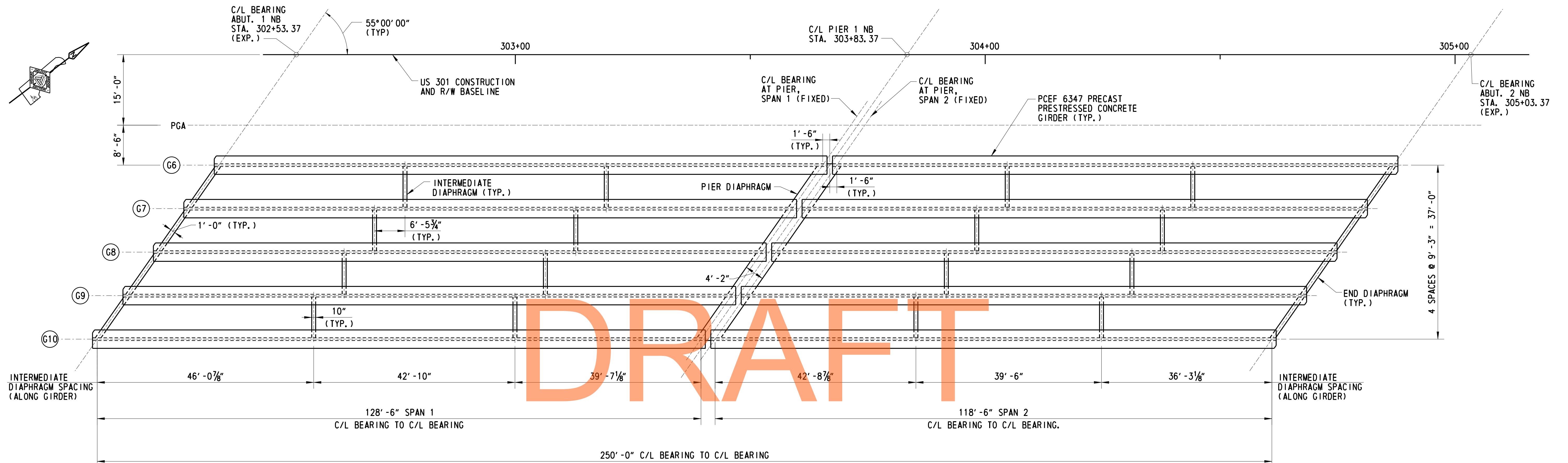
- CROSS REFERENCE NOTES:**
- FOR GIRDER PLAN AND ELEVATION, SEE DWG. NOS. 1-480 BM-1 AND 1-480N BM-2.
 - FOR FRAMING PLAN AND CAMBER SCHEDULE, SEE DWG. NO. 1-480 FR-1.
 - FOR TYPICAL GIRDER DETAILS, SEE DWG. NO 1-480 BM-7.
 - FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.

ADDENDUMS / REVISIONS



CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	BCW
NEW CASTLE		

1-480 BM-3
SHEET NO.
605
TOTAL SHTS.
1256



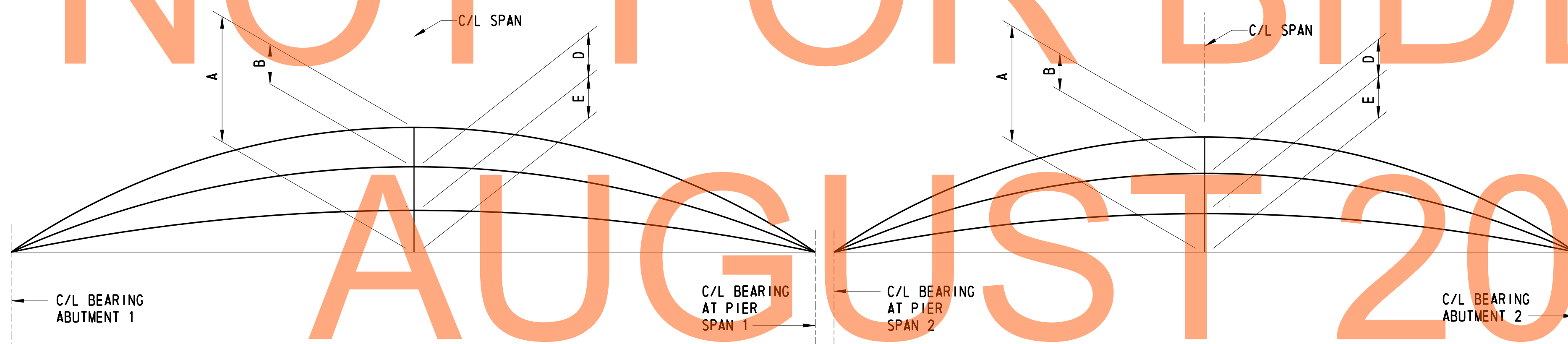
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NB FRAMING PLAN

SCALE: 1/8" = 1'-0"



LEGEND:

- A = CAMBER DUE TO PRESTRESS AT ERECTION, CREEP MULTIPLIER = 1.8.
- B = DEFLECTION DUE TO GIRDER DEAD LOAD AT ERECTION, CREEP MULTIPLIER = 1.85.
- C = A+B
- D = DEFLECTION DUE TO SLAB, DIAPHRAGMS, SIP FORMS, AND BARRIERS.
- E = NET CAMBER, C+D.

CAMBER/DEFLECTION TABLE (INCHES)

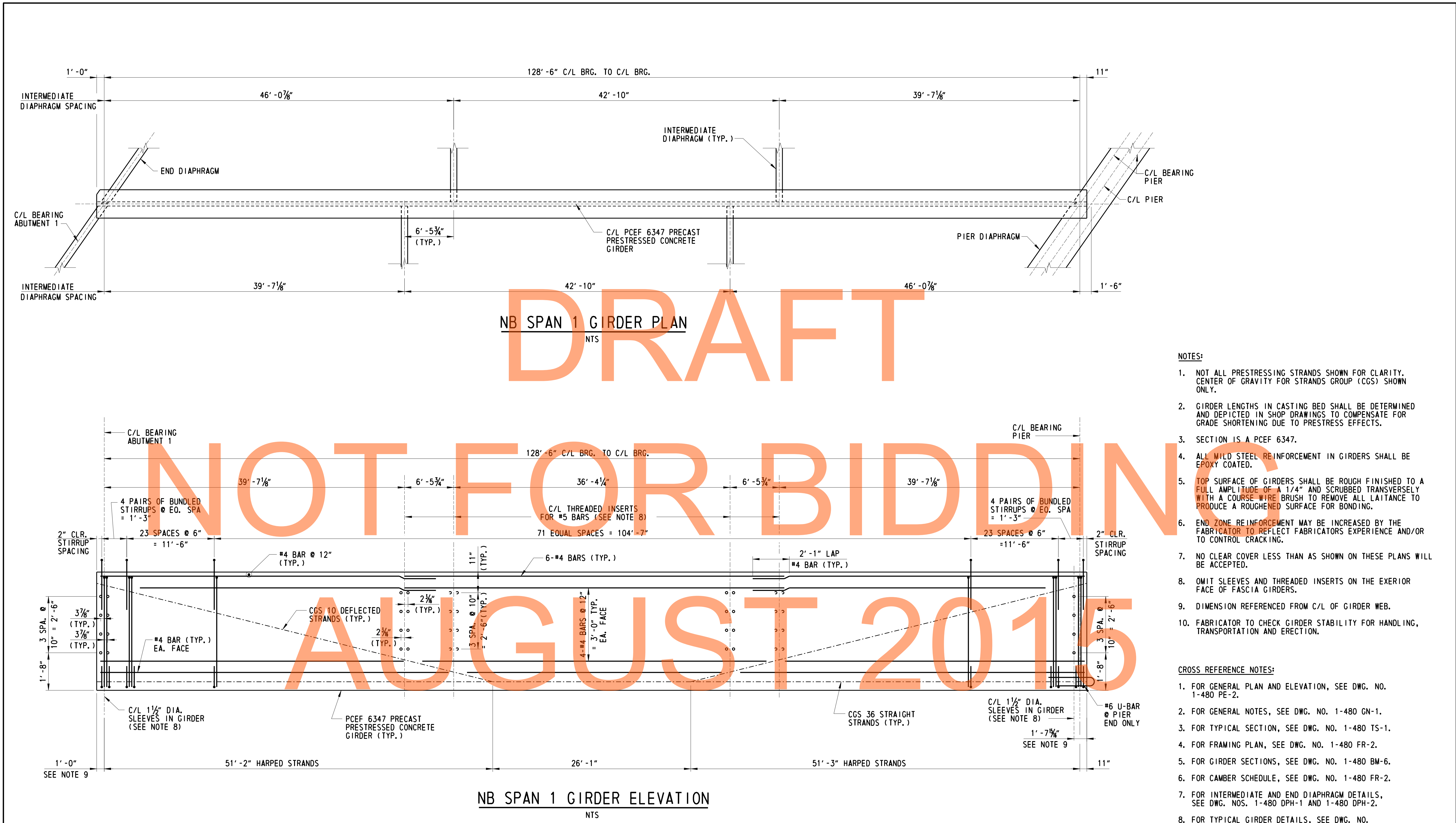
SPAN 1					
GIRDER NO.	A	B	C	D	E
G6 & G10	9 3/8"	-4 1/2"	4 1/8"	-2 5/8"	2 1/8"
G7 - G9	9 3/8"	-4 1/2"	4 1/8"	-2 7/8"	1 1/8"
SPAN 2					
GIRDER NO.	A	B	C	D	E
G6 & G10	7 1/8"	-3 1/4"	4 3/8"	-1 7/8"	2 1/8"
G7 - G9	7 1/8"	-3 1/4"	4 3/8"	-2 1/8"	2 1/2"

NOTES:

1. PRESTRESS CAMBER AND DEAD LOAD DEFLECTION DATA SHOWN IS THEORETICAL AND MAY VARY WITH CONCRETE STRENGTH, VARIABLE PRESTRESSING CONDITIONS AND PRESTRESS LOSSES. CONTRACTOR SHALL VERIFY VALUES IN THE FIELD.
2. THE THICKNESS OF THE GIRDER HAUNCHES SHALL BE VARIED TO COMPENSATE FOR ANY INACCURACIES IN THE FINAL CAMBER.

CROSS REFERENCE NOTES:

1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
2. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
3. FOR GIRDER PLAN AND ELEVATION, SEE DWG. NOS. 1-480 BM-4 AND 1-480 BM-5.
4. FOR GIRDER DETAILS, SEE DWG. NO. 1-480 BM-6.
5. FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE DWG. NO. 1-480 DPH-1.
6. FOR PIER DIAPHRAGM DETAILS, SEE DWG. NO. 1-480 DPH-2.



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NOT FOR BIDDING

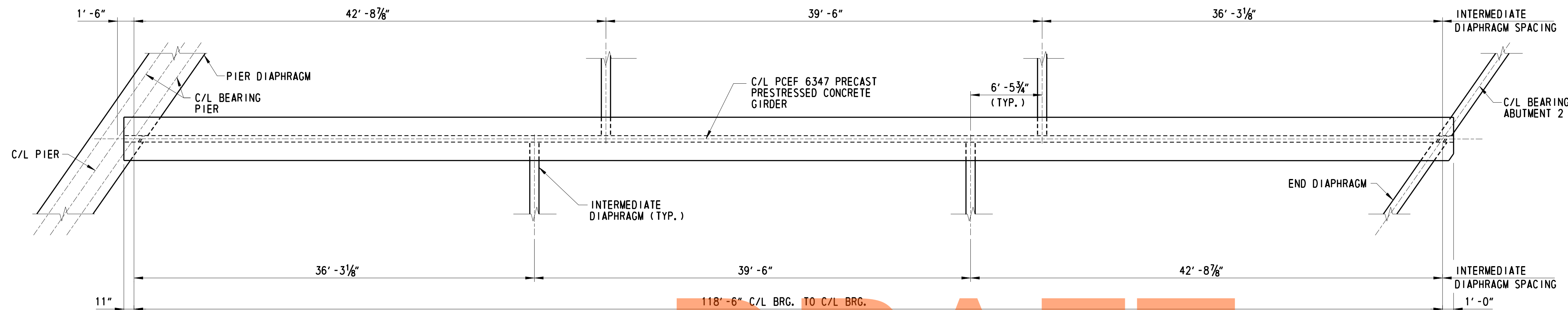
AUGUST 2015

- NOTES:**
1. NOT ALL PRESTRESSING STRANDS SHOWN FOR CLARITY. CENTER OF GRAVITY FOR STRANDS GROUP (CGS) SHOWN ONLY.
 2. GIRDER LENGTHS IN CASTING BED SHALL BE DETERMINED AND DEPICTED IN SHOP DRAWINGS TO COMPENSATE FOR GRADE SHORTENING DUE TO PRESTRESS EFFECTS.
 3. SECTION IS A PCEF 6347.
 4. ALL MILD STEEL REINFORCEMENT IN GIRDERS SHALL BE EPOXY COATED.
 5. TOP SURFACE OF GIRDERS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF A 1/4" AND SCRUBBED TRANSVERSELY WITH A COURSE WIRE BRUSH TO REMOVE ALL LAITANCE TO PRODUCE A ROUGHENED SURFACE FOR BONDING.
 6. END ZONE REINFORCEMENT MAY BE INCREASED BY THE FABRICATOR TO REFLECT FABRICATORS EXPERIENCE AND/OR TO CONTROL CRACKING.
 7. NO CLEAR COVER LESS THAN AS SHOWN ON THESE PLANS WILL BE ACCEPTED.
 8. OMIT SLEEVES AND THREADED INSERTS ON THE EXTERIOR FACE OF FASCIA GIRDERS.
 9. DIMENSION REFERENCED FROM C/L OF GIRDER WEB.
 10. FABRICATOR TO CHECK GIRDER STABILITY FOR HANDLING, TRANSPORTATION AND ERECTION.

- CROSS REFERENCE NOTES:**
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
 2. FOR GENERAL NOTES, SEE DWG. NO. 1-480 GN-1.
 3. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
 4. FOR FRAMING PLAN, SEE DWG. NO. 1-480 FR-2.
 5. FOR GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-6.
 6. FOR CAMBER SCHEDULE, SEE DWG. NO. 1-480 FR-2.
 7. FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE DWG. NOS. 1-480 DPH-1 AND 1-480 DPH-2.
 8. FOR TYPICAL GIRDER DETAILS, SEE DWG. NO. 1-480 BM-7.

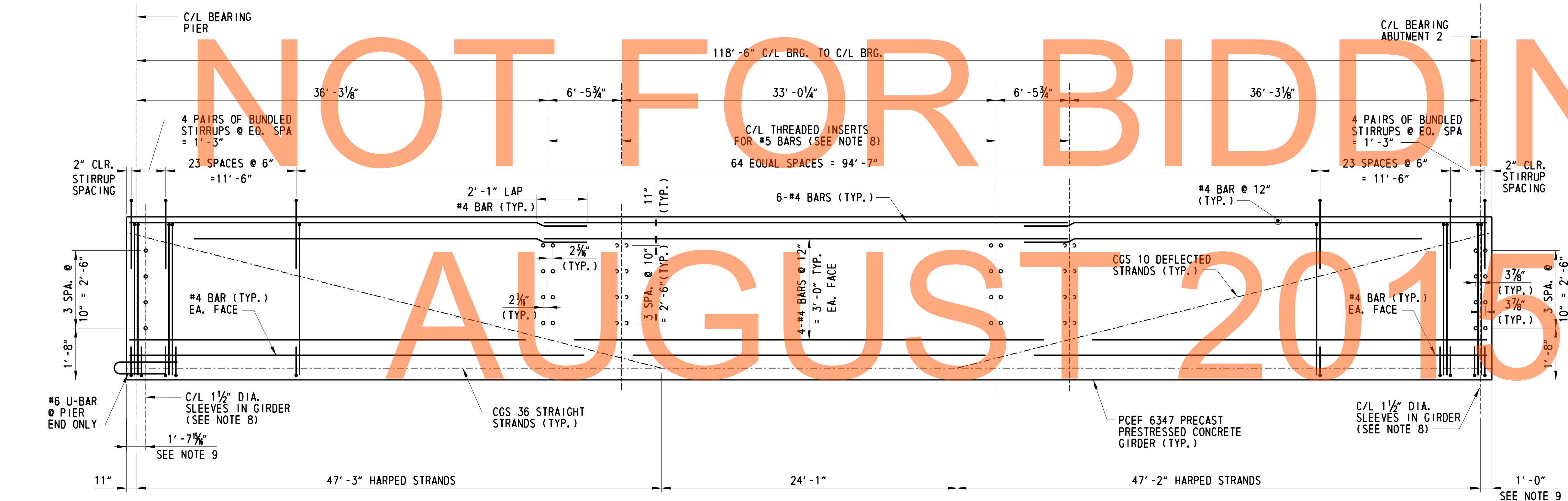
NB SPAN 1 GIRDER ELEVATION
NTS

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT	BRIDGE NO.	1-480N&S	US 301 MAINLINE OVER SANDY BRANCH NB SPAN 1 GIRDER PLAN AND ELEVATION	SHEET NO.	1-480 BM-4
				T200911303	DESIGNED BY:			LT	607
				COUNTY	CHECKED BY:	BCW		TOTAL SHTS.	1256
				NEW CASTLE					



NB SPAN 2 GIRDER PLAN
NTS

DRAFT



NB SPAN 2 GIRDER ELEVATION
NTS

NOTES:

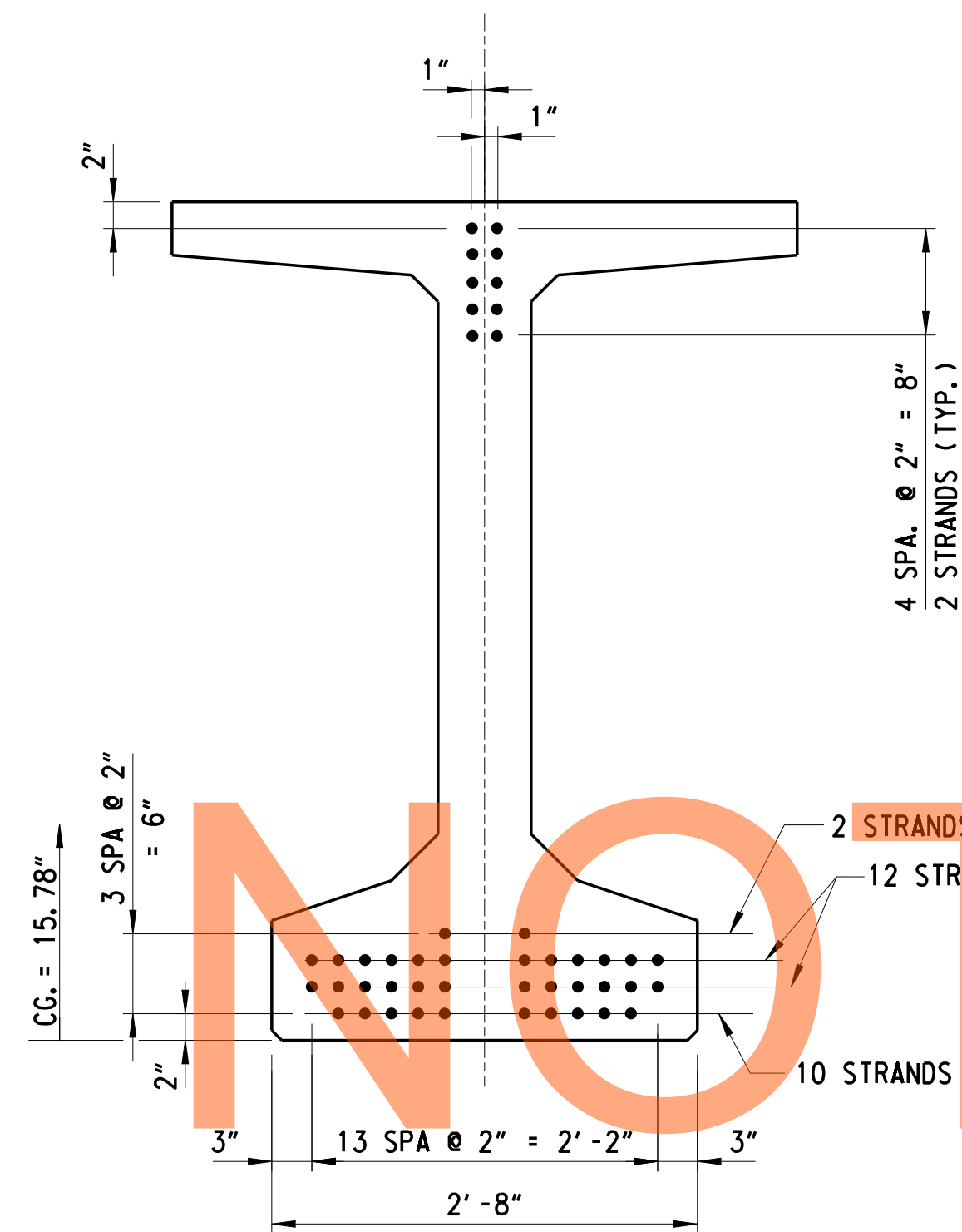
1. NOT ALL PRESTRESSING STRANDS SHOWN FOR CLARITY. CENTER OF GRAVITY FOR STRANDS GROUP (CGS) SHOWN ONLY.
2. GIRDER LENGTHS IN CASTING BED SHALL BE DETERMINED AND DEPICTED IN SHOP DRAWINGS TO COMPENSATE FOR GRADE SHORTENING DUE TO PRESTRESS EFFECTS.
3. SECTION IS A PCEF 6347.
4. ALL MILD STEEL REINFORCEMENT IN GIRDERS SHALL BE EPOXY COATED.
5. TOP SURFACE OF GIRDERS SHALL BE ROUGH FINISHED TO A FULL AMPLITUDE OF A 1/4" AND SCRUBBED TRANSVERSELY WITH A COURSE WIRE BRUSH TO REMOVE ALL LAITANCE TO PRODUCE A ROUGHENED SURFACE FOR BONDING.
6. END ZONE REINFORCEMENT MAY BE INCREASED BY THE FABRICATOR TO REFLECT FABRICATORS EXPERIENCE AND/OR TO CONTROL CRACKING.
7. NO CLEAR COVER LESS THAN AS SHOWN ON THESE PLANS WILL BE ACCEPTED.
8. OMIT SLEEVES AND THREADED INSERTS ON THE EXTERIOR FACE OF FASCIA GIRDERS.
9. DIMENSION REFERENCED FROM C/L OF GIRDER WEB.
10. FABRICATOR TO CHECK GIRDER STABILITY FOR HANDLING, TRANSPORTATION AND ERECTION.

CROSS REFERENCE NOTES:

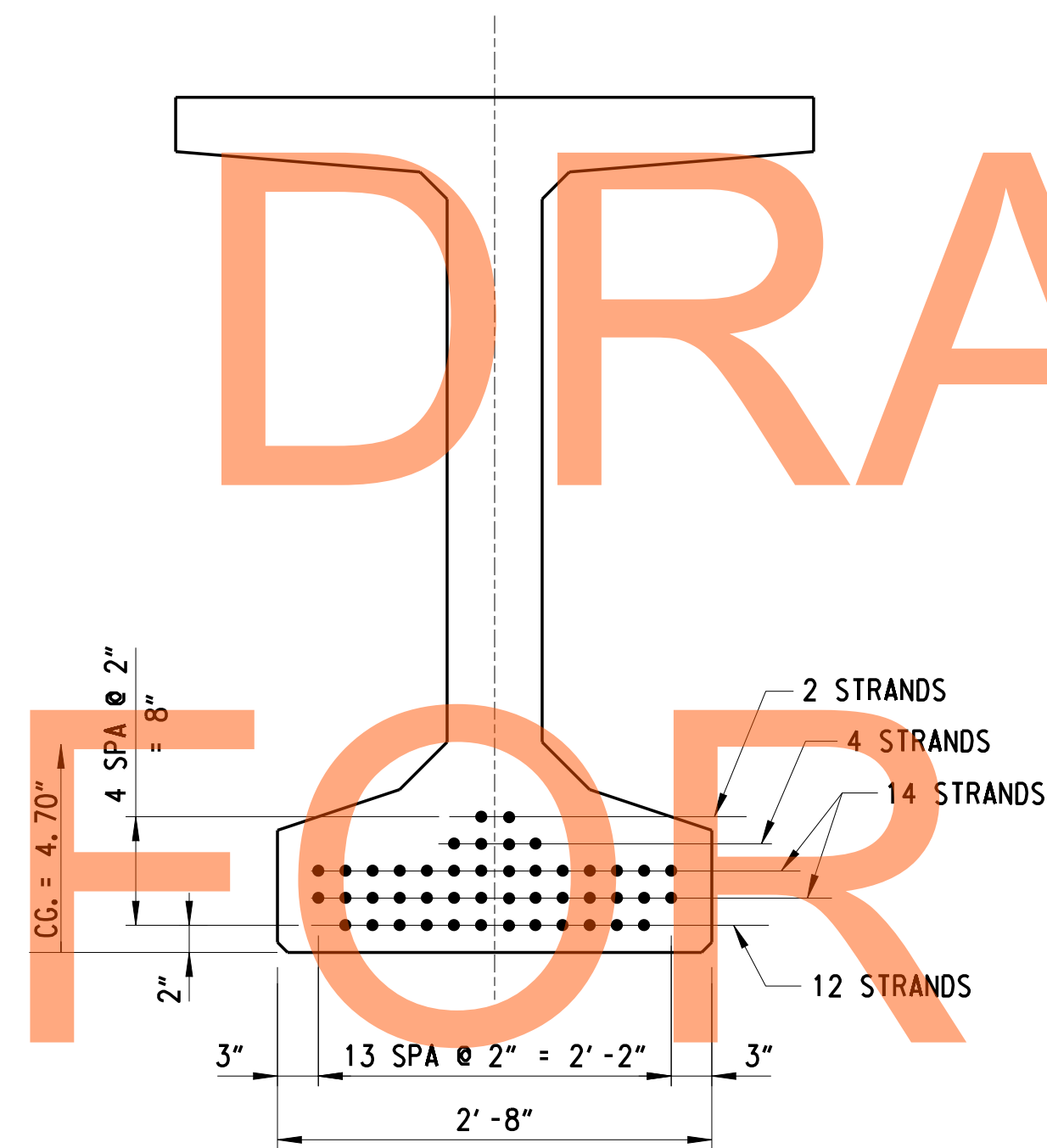
1. FOR GENERAL PLAN AND ELEVATION, SEE DWG. NO. 1-480 PE-2.
2. FOR GENERAL NOTES, SEE DWG. NO. 1-480 GN-1.
3. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
4. FOR FRAMING PLAN, SEE DWG. NO. 1-480 FR-2.
5. FOR GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-6.
6. FOR CAMBER SCHEDULE, SEE DWG. NO. 1-480 FR-2.
7. FOR INTERMEDIATE AND END DIAPHRAGM DETAILS, SEE DWG. NOS. 1-480 DPH-1 AND 1-480 DPH-2.
8. FOR TYPICAL GIRDER DETAILS, SEE DWG. NO. 1-480 BM-7.

ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	LT
COUNTY	CHECKED BY:	BCW
NEW CASTLE		



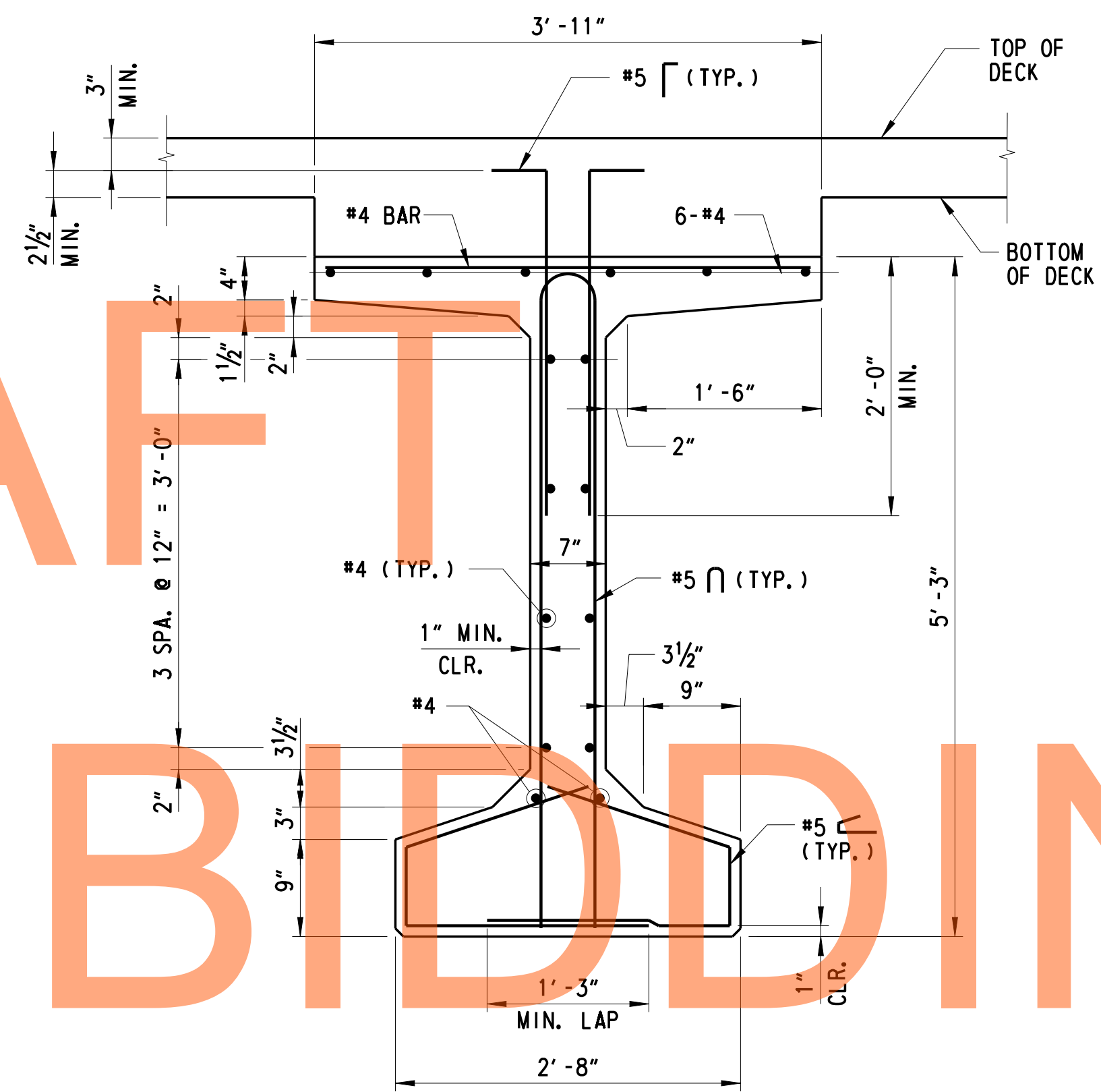
PRESTRESSING AT GIRDER ENDS



PRESTRESSING AT MIDSPAN

TYPICAL NB GIRDER SECTIONS

SCALE: 1" = 1'-0"



TYPICAL REINFORCEMENT

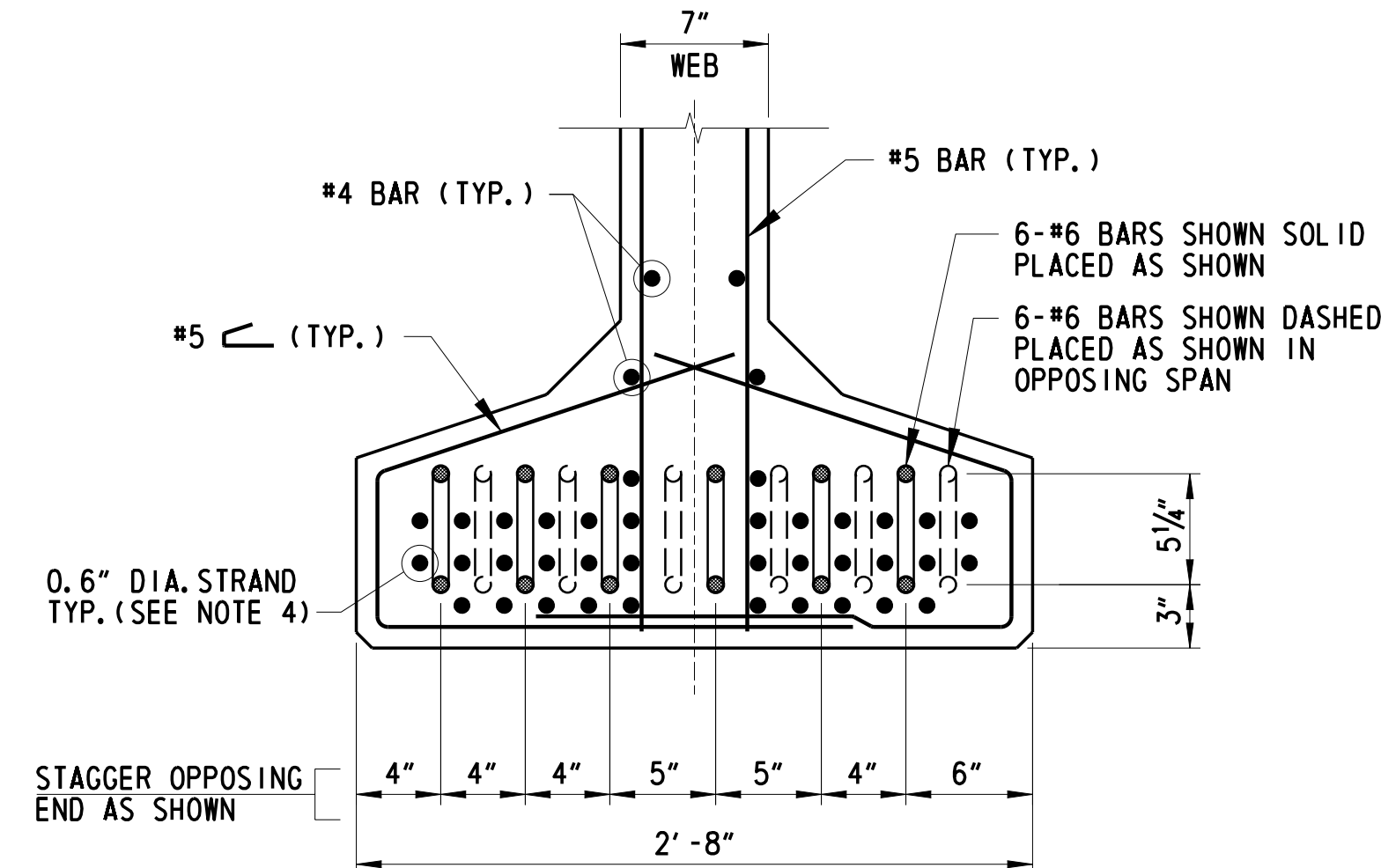
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NOTES:

- GIRDER LIFTING DETAILS SHALL BE PROVIDED BY THE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- TYPICAL COVER - 1" CLR. TO STIRRUPS, 1 1/2" CLR. TO LONGITUDINAL BARS AND STRANDS.

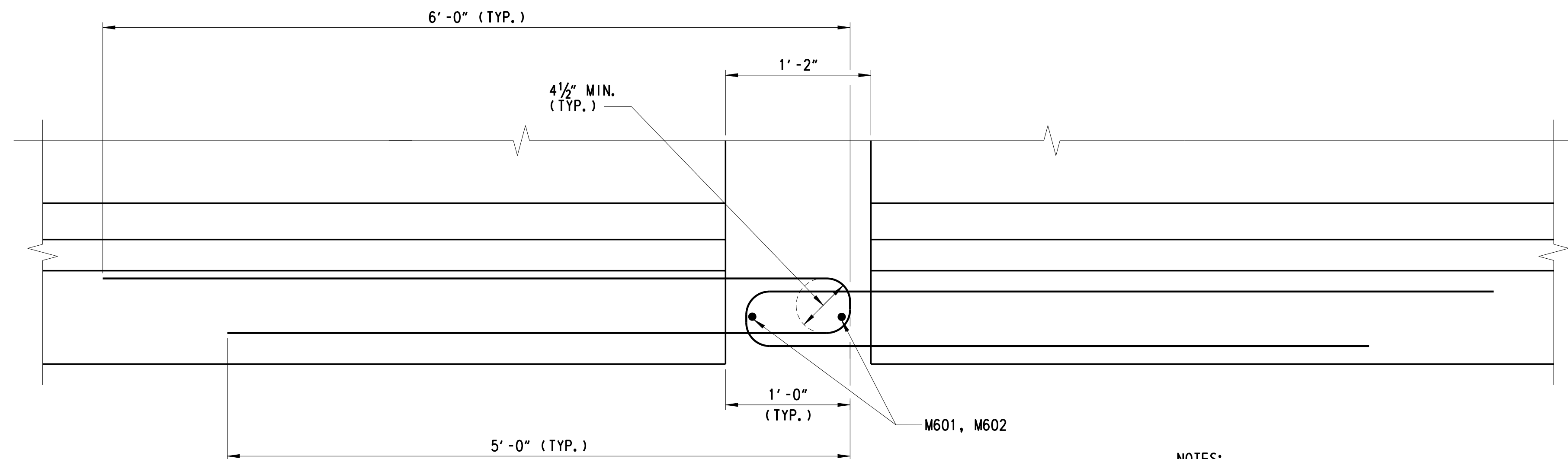
CROSS REFERENCE NOTES:

- FOR GIRDER PLAN AND ELEVATION, SEE DWG. NOS. 1-480 BM-4 AND 1-480 BM-5.
- FOR FRAMING PLAN AND CAMBER SCHEDULE, SEE DWG. NO. 1-480 FR-2.
- FOR GIRDER DETAILS, SEE DWG. NO. 1-480 BM-7.
- FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.



**END OF GIRDER REINFORCEMENT DETAIL
SECTION AT PIER**

SCALE: 1 1/2" = 1' - 0"

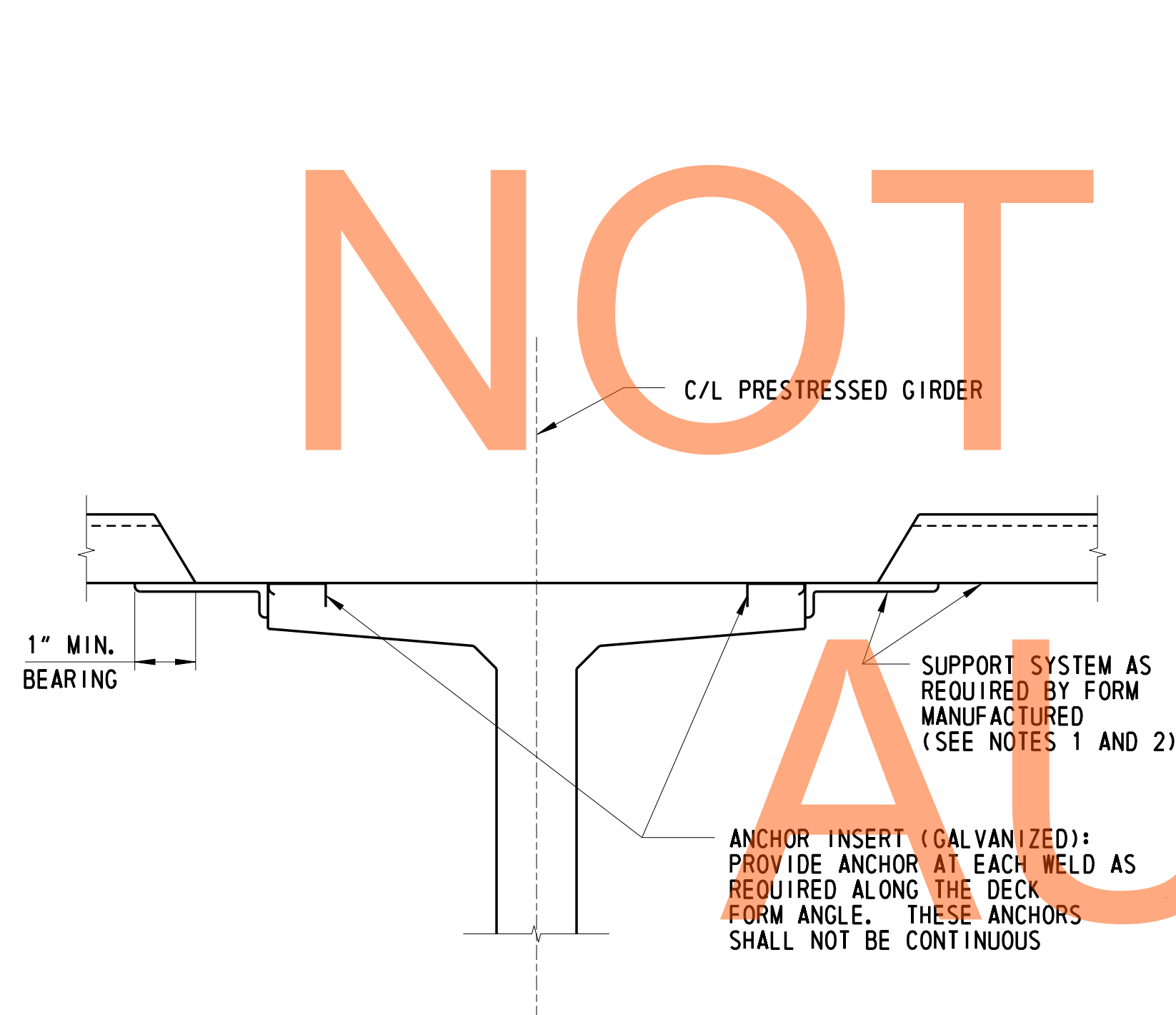


GIRDER END DETAIL AT PIER

SCALE: 1 1/2" = 1' - 0"

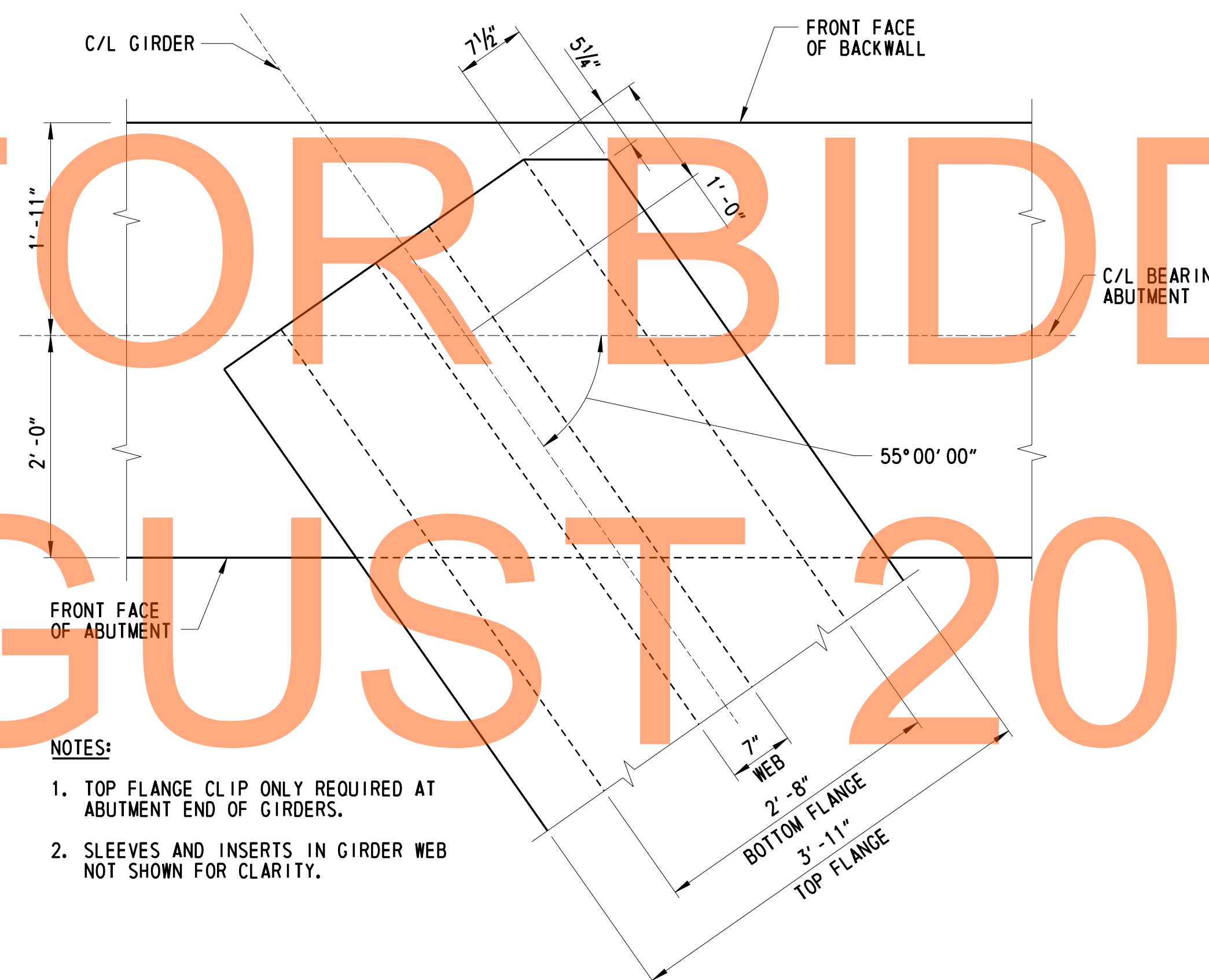
NOTES:

1. PRESTRESSING STRANDS AND MILD REINFORCEMENT NOT SHOWN FOR CLARITY.
2. U-BARS SHOWN STAGGERED FOR CLARITY.
3. ORIENTATION OF THE LONG LEG OF THE U-BARS SHALL ALTERNATE TO STAGGER THE TERMINATION OF THE BARS WITHIN THE GIRDER.



FORM ANCHOR DETAIL

SCALE: 1" = 1' - 0"



GIRDER END DETAIL AT ABUTMENT

SCALE: 1" = 1' - 0"

NOTES:

1. TOP FLANGE CLIP ONLY REQUIRED AT ABUTMENT END OF GIRDERS.
2. SLEEVES AND INSERTS IN GIRDER WEB NOT SHOWN FOR CLARITY.

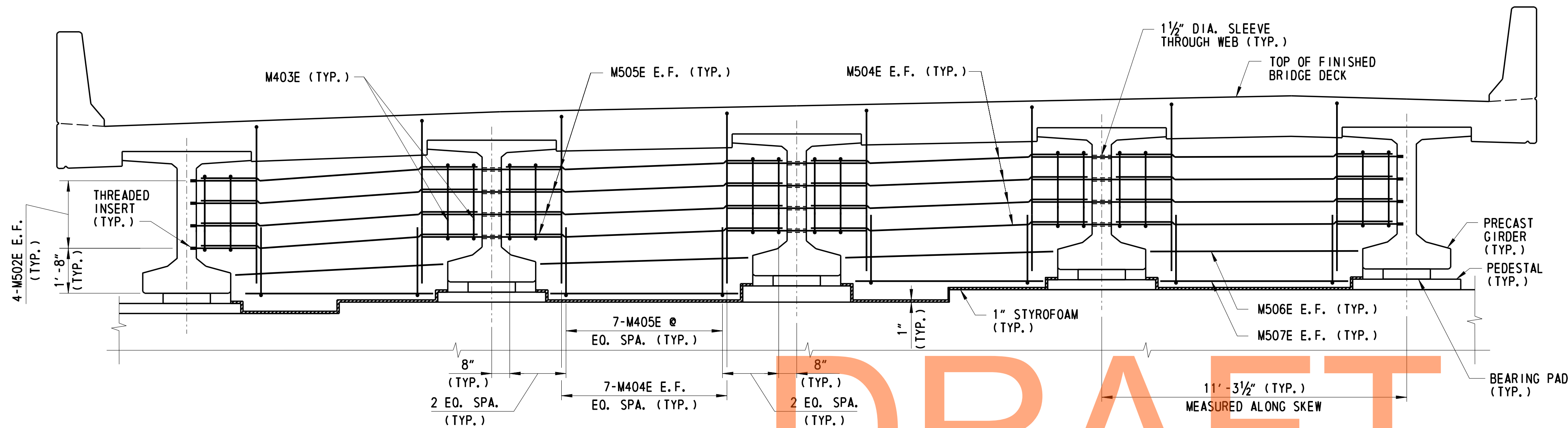
NOTES:

1. PERMANENT STEEL BRIDGE DECK FORMS AND SUPPORTS SHALL BE PROVIDED CONFORMING TO THE REQUIREMENTS OF SECTION 602 OF THE DELDOT STANDARD SPECIFICATIONS AND AS SHOWN IN THE BDM.
2. ANY PERMANENTLY EXPOSED FORM METAL WHERE THE GALVANIZED COATING HAS BEEN DAMAGED SHALL BE THOROUGHLY CLEANED, WIRE BRUSHED AND PAINTED WITH TWO COATS OF ZINC DUST-ZINC OXIDE PAINT, NO COLOR ADDED TO THE SATISFACTION OF THE ENGINEER. MINOR HEAT DISCOLORATION IN AREAS OF WELDS NEED NOT BE TOUCHED UP.
3. SECTION OF NORTHBOUND GIRDERS SHOWN. SOUTHBOUND GIRDERS ARE SIMILAR.

CROSS REFERENCE NOTES:

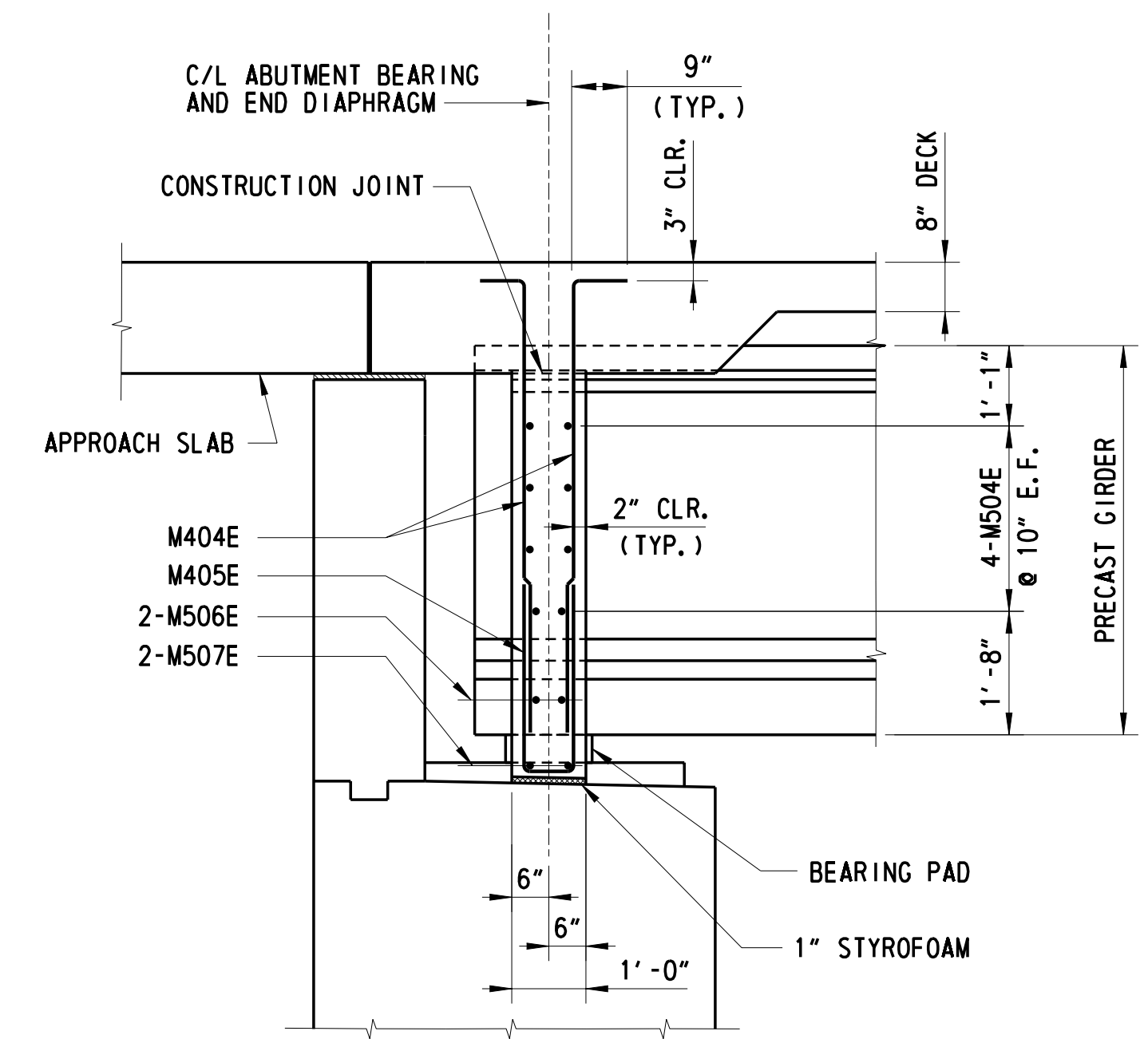
1. FOR TYPICAL SECTION, SEE DWG. NO. 1-480N TS-1
2. FOR SB SPAN 1 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-1.
3. FOR SB SPAN 2 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-2.
4. FOR NB SPAN 1 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-4.
5. FOR NB SPAN 2 GIRDER PLAN AND ELEVATION, SEE DWG. NO. 1-480 BM-5.
6. FOR SB GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-3.
7. FOR NB GIRDER SECTIONS, SEE DWG. NO. 1-480 BM-6.
8. FOR SB FRAMING PLAN, SEE DWG. NO. 1-480N FR-1
9. FOR NB FRAMING PLAN, SEE DWG. NO. 1-480N FR-2.

NOT FOR BIDDING
AUGUST 2015



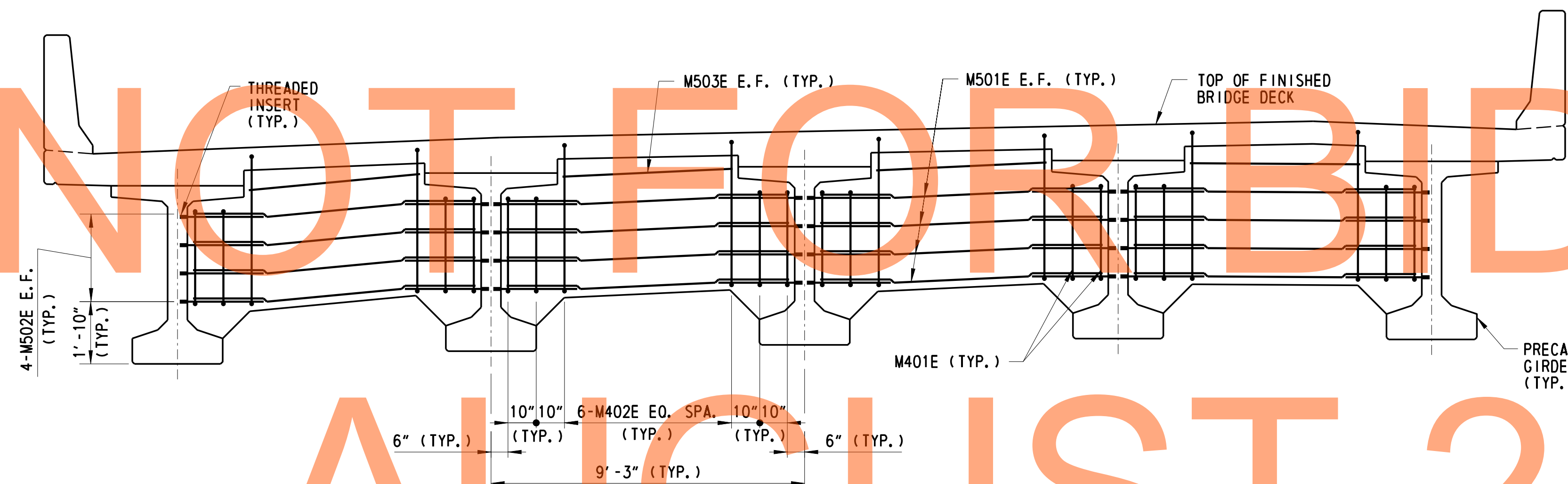
TYPICAL END DIAPHRAGM AT ABUTMENT (EXPANSION)

SCALE: 3/8" = 1'-0"



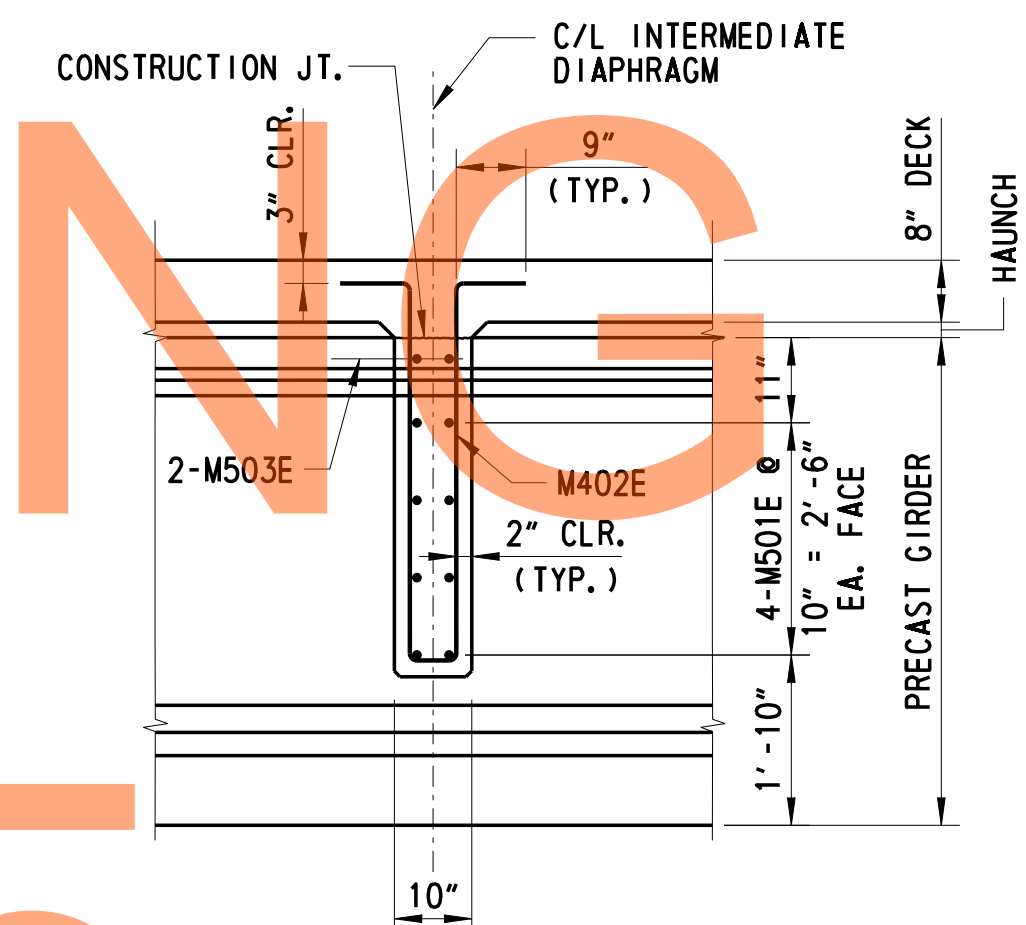
END DIAPHRAGM BETWEEN GIRDERS

SCALE: 1/2" = 1'-0"



TYPICAL INTERMEDIATE DIAPHRAGM

SCALE: 3/8" = 1'-0"



INTERMEDIATE DIAPHRAGM BETWEEN GIRDERS

SCALE: 1/2" = 1'-0"

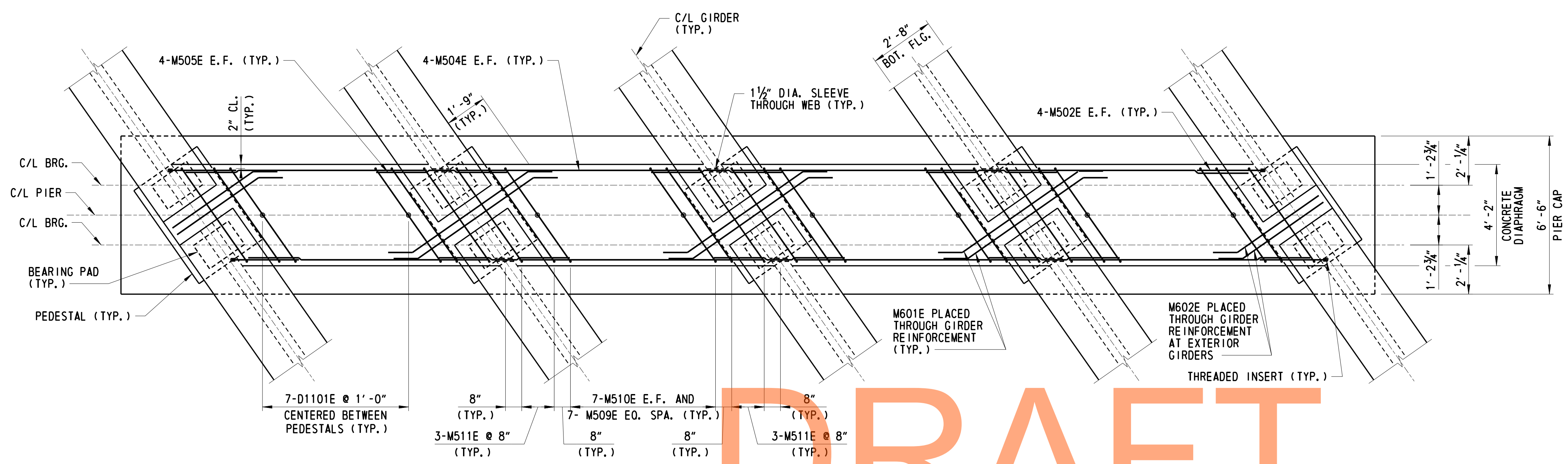
NOTE:

- MINIMUM LAP SPLICE LENGTHS:
- #4 BAR - 1'-8"
- #5 BAR - 2'-1"

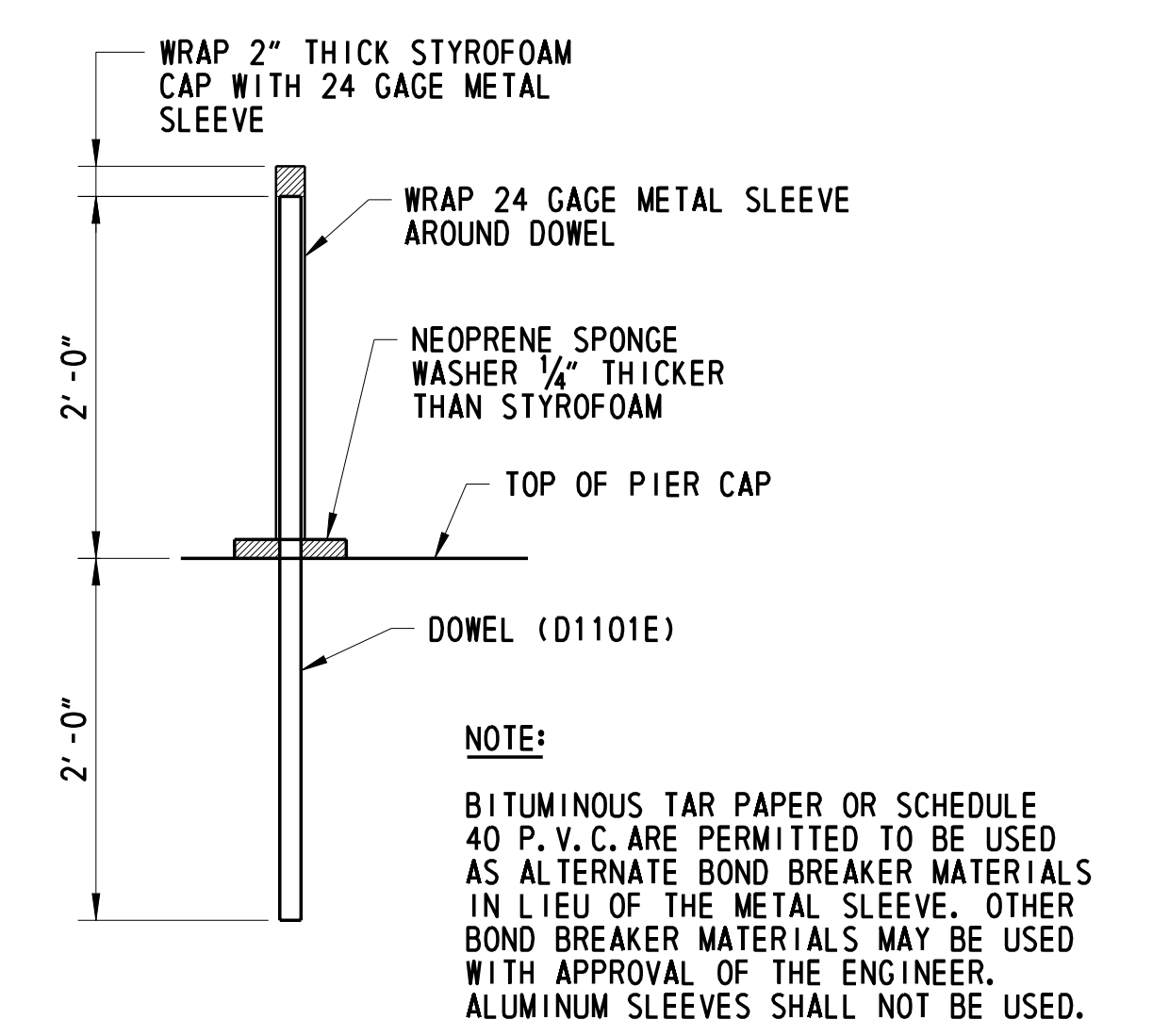
CROSS REFERENCE NOTES:

1. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
2. FOR SB FRAMING PLAN, SEE DWG. NO. 1-480 FR-1.
3. FOR NB FRAMING PLAN, SEE DWG. NO. 1-480 FR-2.
4. FOR SB DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-1.
5. FOR NB DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-3.

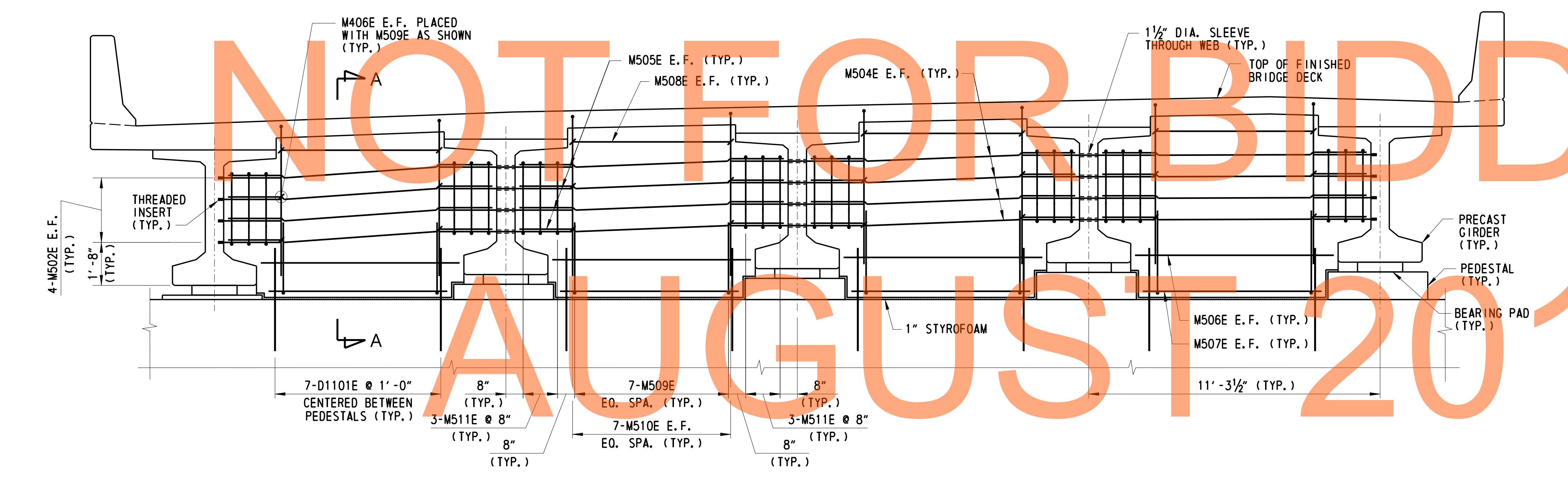
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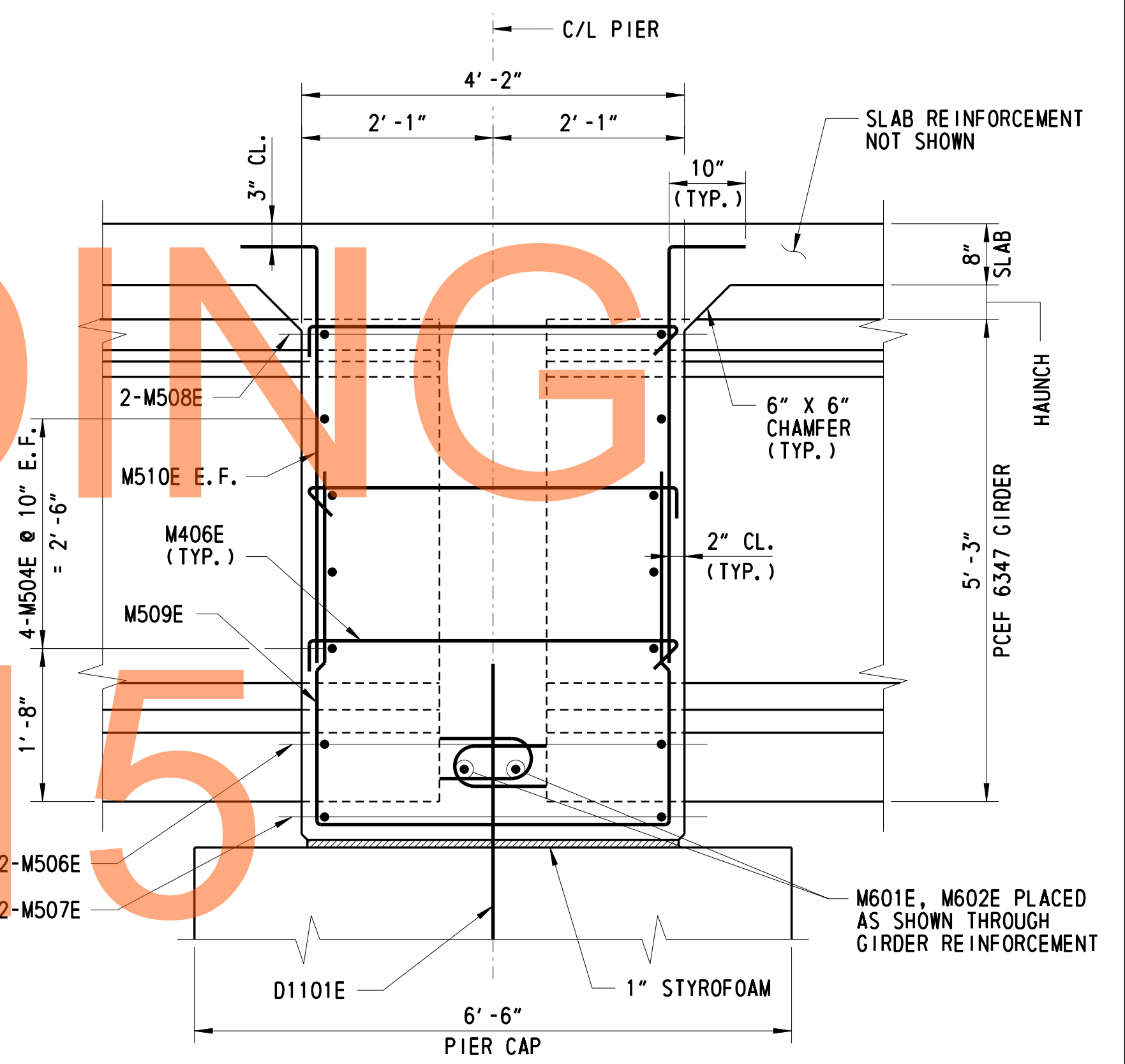
PIER DIAPHRAGM PLAN (FIXED)
SCALE: 3/8" = 1'-0"



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



PIER DIAPHRAGM ELEVATION (FIXED)
SCALE: 3/8" = 1'-0"



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

NOTE:

MINIMUM LAP SPLICE LENGTHS:
#5 BAR - 2'-1"

CROSS REFERENCE NOTES:

1. FOR TYPICAL SECTION, SEE DWG. NO. 1-480 TS-1.
2. FOR FRAMING PLAN, SEE DWG. NO. 1-480 FR-1 AND 1-480 FR-2.
3. FOR DECK DETAILS, SEE DWG. NOS. 1-480 DK-2, 1-480 DK-4, AND 1-480 DK-5.

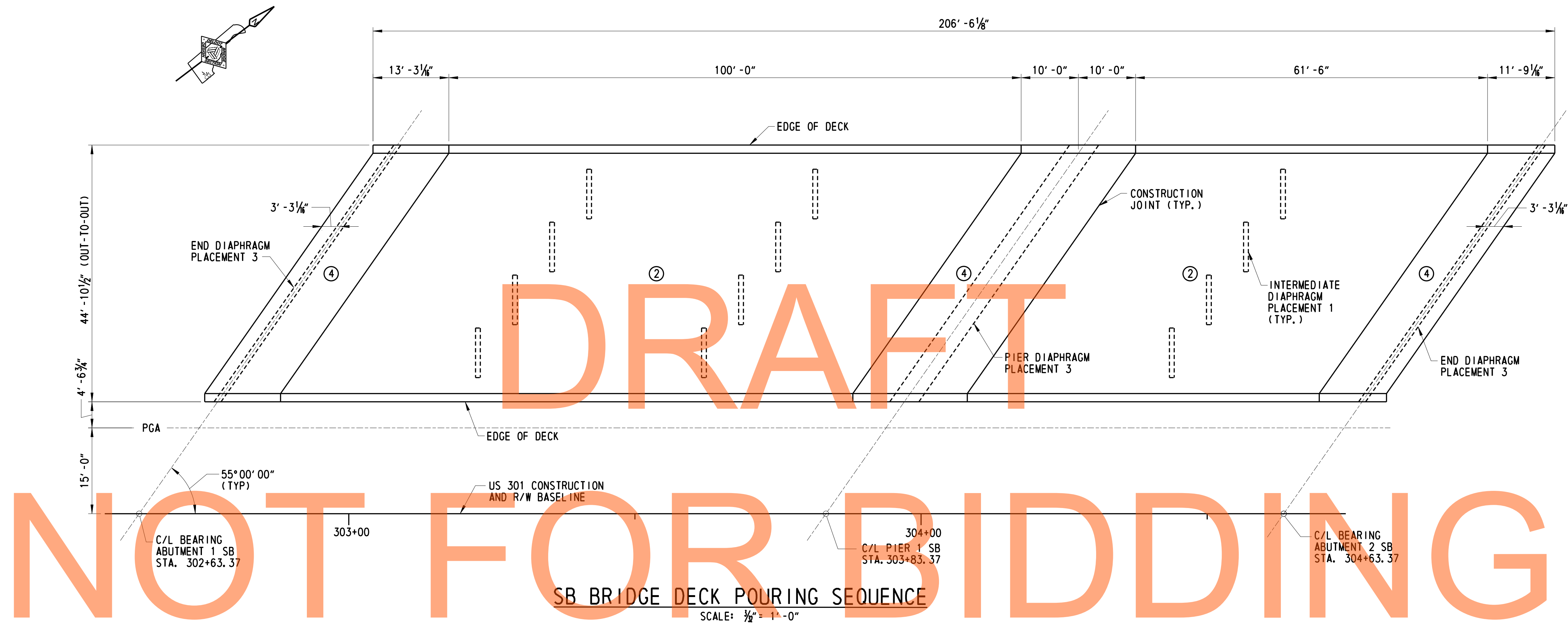
NOTE:

FOR DOWEL BAR (D1101E),
SEE DETAIL THIS SHEET

ADDENDUMS / REVISIONS

CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: BCM CHECKED BY: BCW

1-480 DPH-2
SHEET NO. 612
TOTAL SHTS. 1256

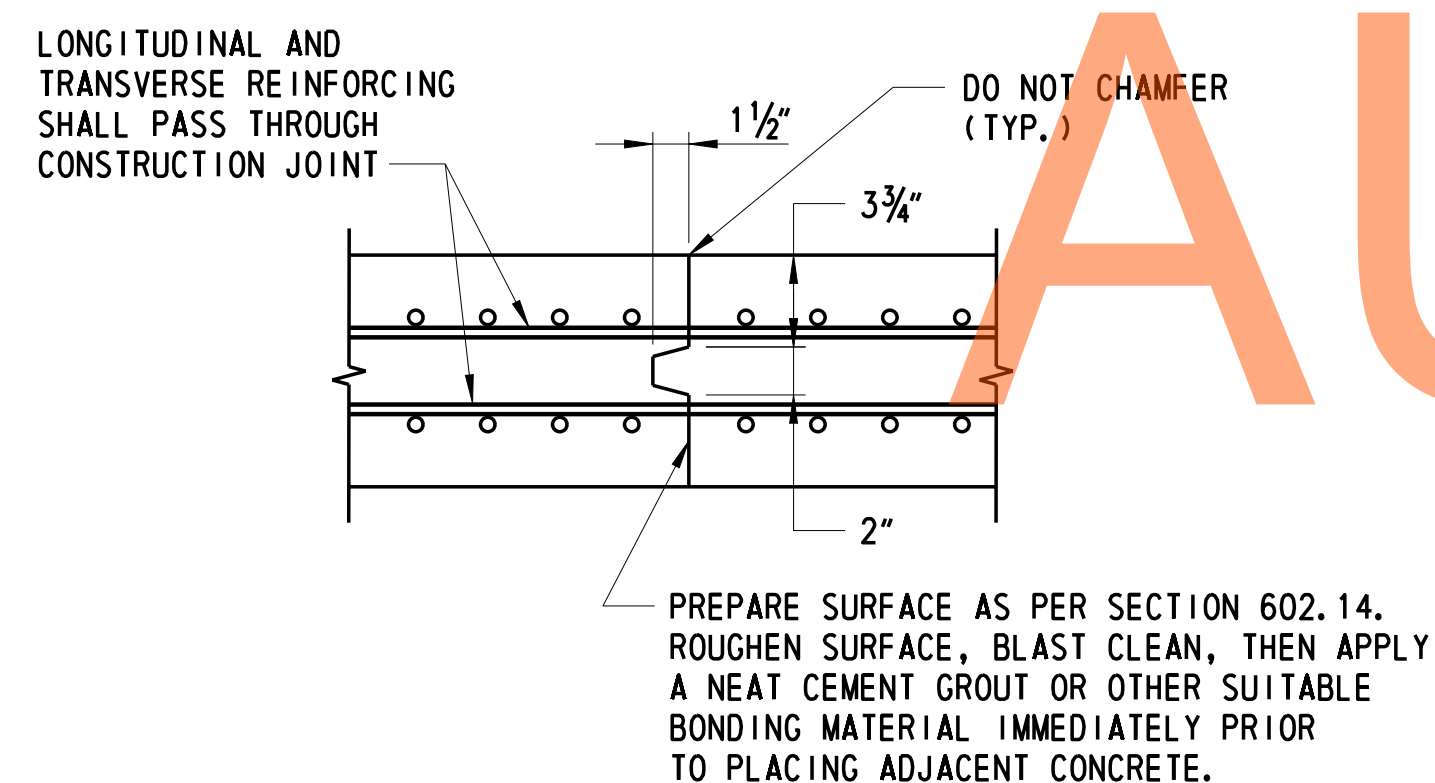


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AUGUST 2015

SB BRIDGE DECK POURING SEQUENCE
SCALE: 1/8" = 1'-0"



**BRIDGE DECK
CONSTRUCTION JOINT**
NTS

PLACEMENT SEQUENCE:

1. CAST INTERMEDIATE DIAPHRAGMS.
2. CAST POUR NO. 2 AS SHOWN.
3. CAST END DIAPHRAGMS AT ABUTMENTS AND DIAPHRAGM AT PIER.
4. CAST POUR NO. 4 AS SHOWN.

NOTES:

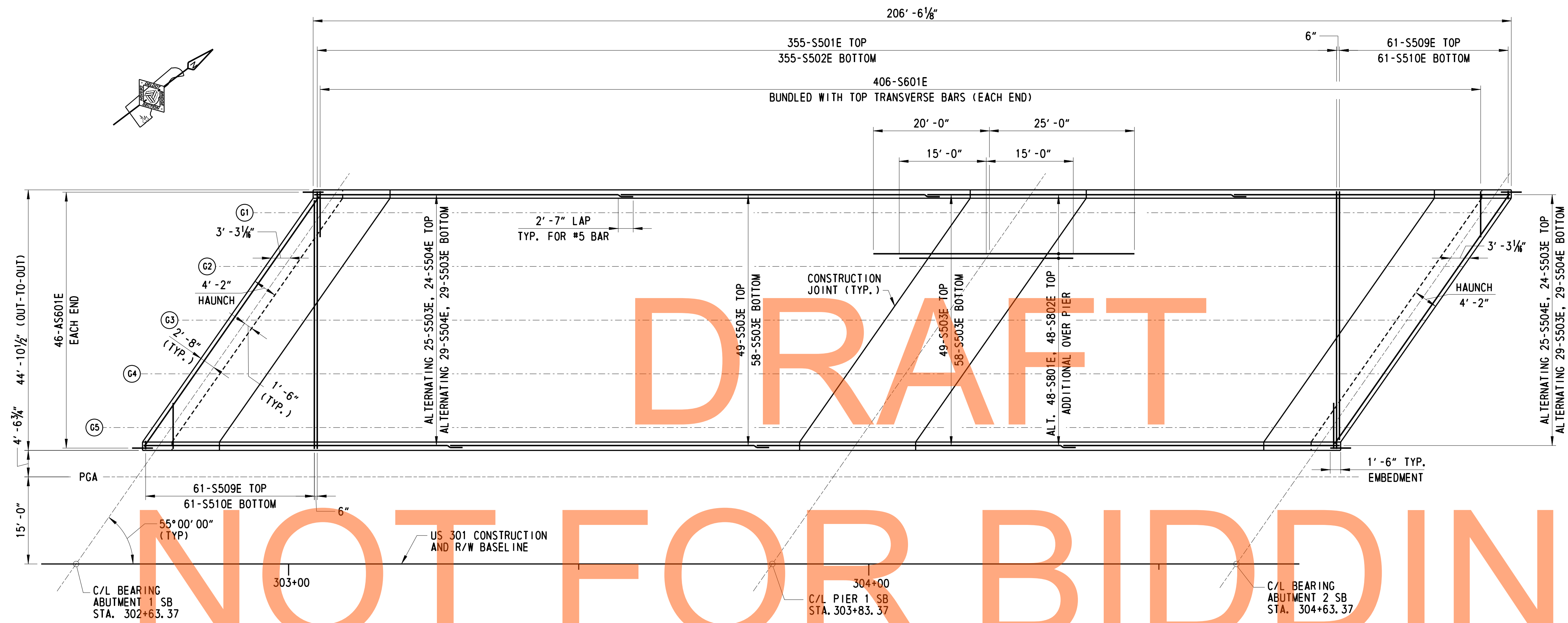
1. THE CONTRACTOR MAY USE TWO CREWS AND TWO SETS OF EQUIPMENT TO CONSTRUCT POURS OVER END DIAPHRAGMS AND PIER SIMULTANEOUSLY.

CROSS REFERENCE NOTES:

1. FOR DECK REINFORCEMENT PLAN, SEE DWG. NO. 1-480 DK-2.
2. FOR DECK DETAILS, SEE DWG. NO. 1-480 DK-5.
3. FOR FINISHED DECK ELEVATIONS, SEE DWG. NOS. 1-480 FD-1 AND 1-480 FD-2.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-6.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	US 301 LEVELS ROAD TO SUMMIT BRIDGE ROAD	CONTRACT T200911303	BRIDGE NO. 1-480N&S	US 301 MAINLINE OVER SANDY BRANCH SB DECK POURING SEQUENCE	SHEET NO. 613
				DESIGNED BY: PRH		TOTAL SHTS. 1256
				COUNTY NEW CASTLE		CHECKED BY: BCW

1-480 DK-1
SHEET NO. 613
TOTAL SHTS. 1256

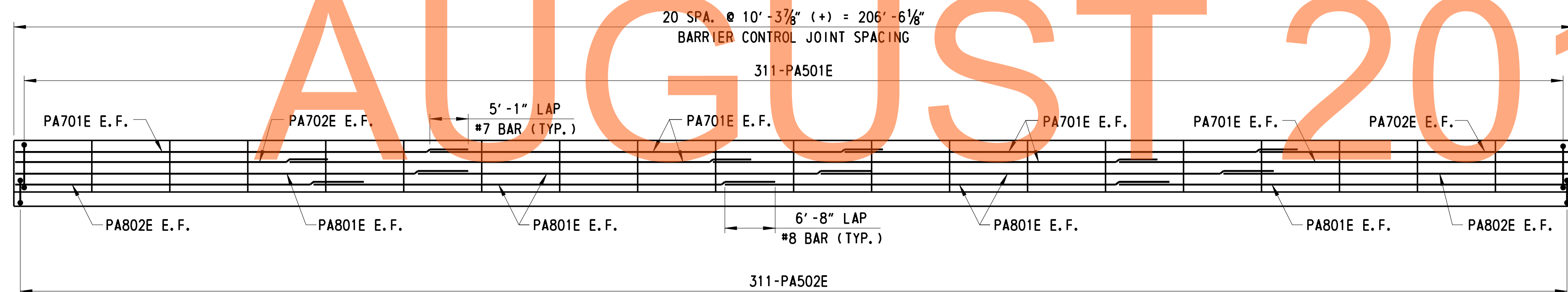


SB BRIDGE DECK REINFORCEMENT PLAN

SCALE: 1/8" = 1' - 0"

NOTE:

BARRIER REINFORCEMENT NOT SHOWN IN PLAN VIEW FOR CLARITY.

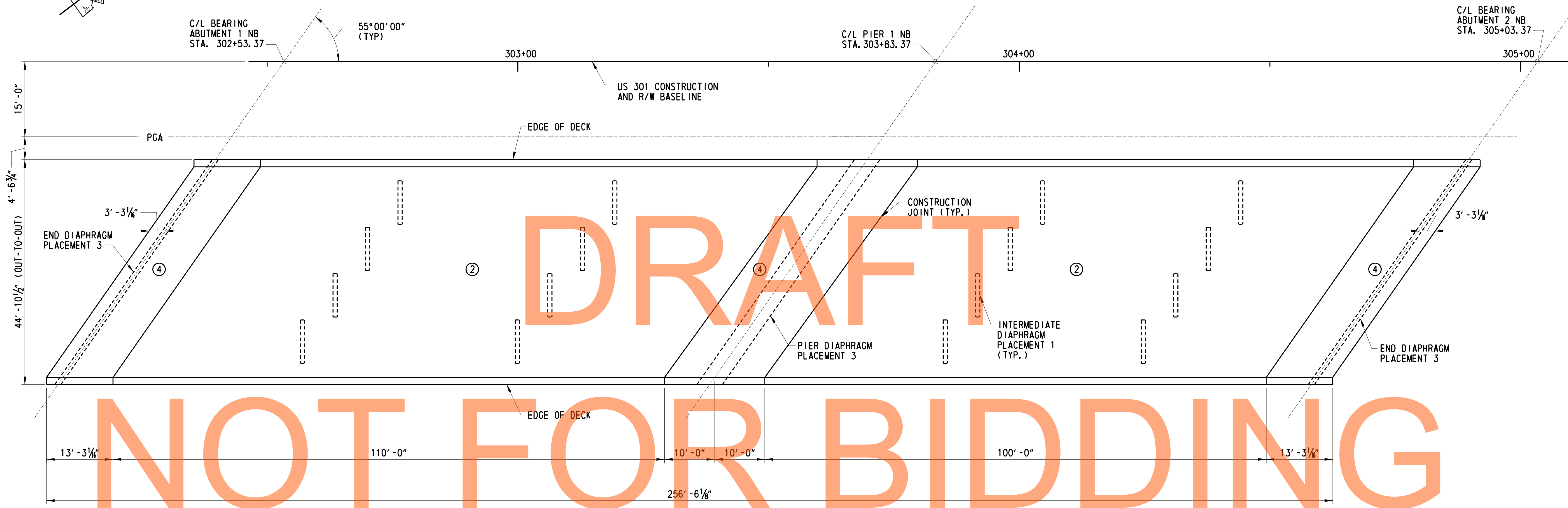
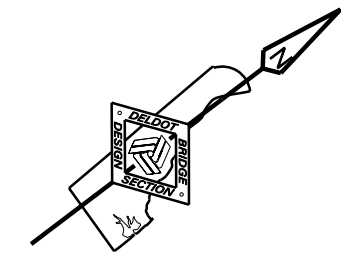


ELEVATION - DECK AND BARRIER REINFORCEMENT

NTS

CROSS REFERENCE NOTES:

1. FOR TYPICAL DECK AND PARAPET REINFORCEMENT SECTIONS, SEE DWG. NO. 1-480 DK-5.
2. FOR FINISHED DECK ELEVATIONS, SEE DWG. NOS. 1-480 FD-1 AND 1-480 FD-2.
3. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-6.
4. FOR DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-1.
5. FOR BARRIER CONTROL JOINT DETAIL. SEE DWG. NO. 1-480 DK-5.



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NOT FOR BIDDING

NB BRIDGE DECK POURING SEQUENCE

SCALE: 1/8" = 1'-0"

AUGUST 2015

PLACEMENT SEQUENCE:

1. CAST INTERMEDIATE DIAPHRAGMS.
2. CAST POUR NO. 2 AS SHOWN.
3. CAST END DIAPHRAGMS AT ABUTMENTS AND DIAPHRAGM AT PIER.
4. CAST POUR NO. 4 AS SHOWN.

NOTES:

1. THE CONTRACTOR MAY USE TWO CREWS AND TWO SETS OF EQUIPMENT TO CONSTRUCT POURS OVER END DIAPHRAGMS AND PIER SIMULTANEOUSLY.

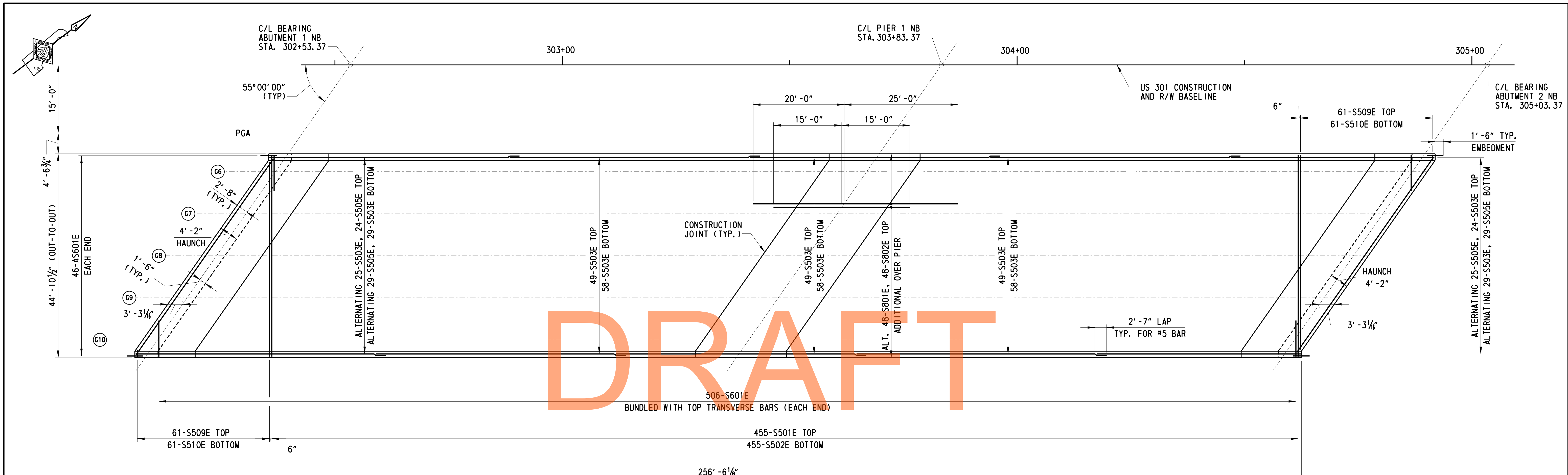
CROSS REFERENCE NOTES:

1. FOR DECK REINFORCEMENT PLAN, SEE DWG. NO. 1-480 DK-4.
2. FOR DECK DETAILS, SEE DWG. NO. 1-480 DK-5.
3. FOR FINISHED DECK ELEVATIONS, SEE DWG. NOS. 1-480 FD-3 AND 1-480 FD-4.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-6.
5. FOR BRIDGE DECK CONSTRUCTION JOINT DETAIL, SEE DWG. NO. 1-480 DK-1.

ADDENDUMS / REVISIONS

CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: PRH CHECKED BY: BCW

1-480 DK-3
SHEET NO. 615
TOTAL SHTS. 1256



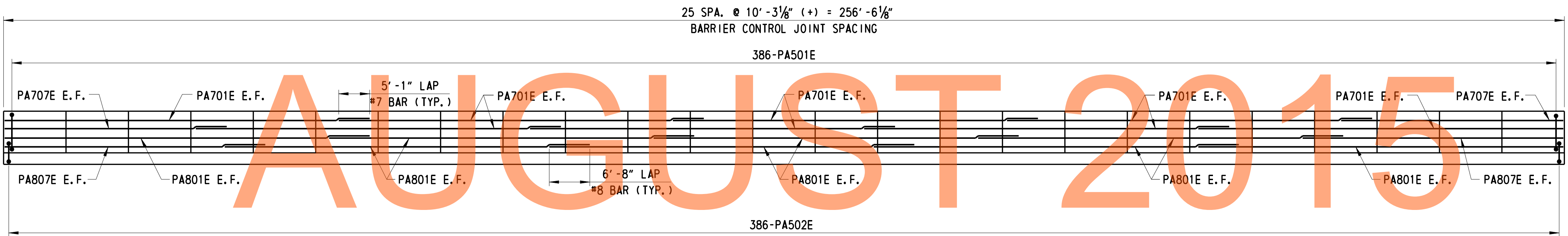
DRAFT

NOT FOR BIDDING

NB BRIDGE DECK REINFORCEMENT PLAN

SCALE: 1/8" = 1'-0"

NOTE:
BARRIER REINFORCEMENT NOT SHOWN IN PLAN VIEW FOR CLARITY.



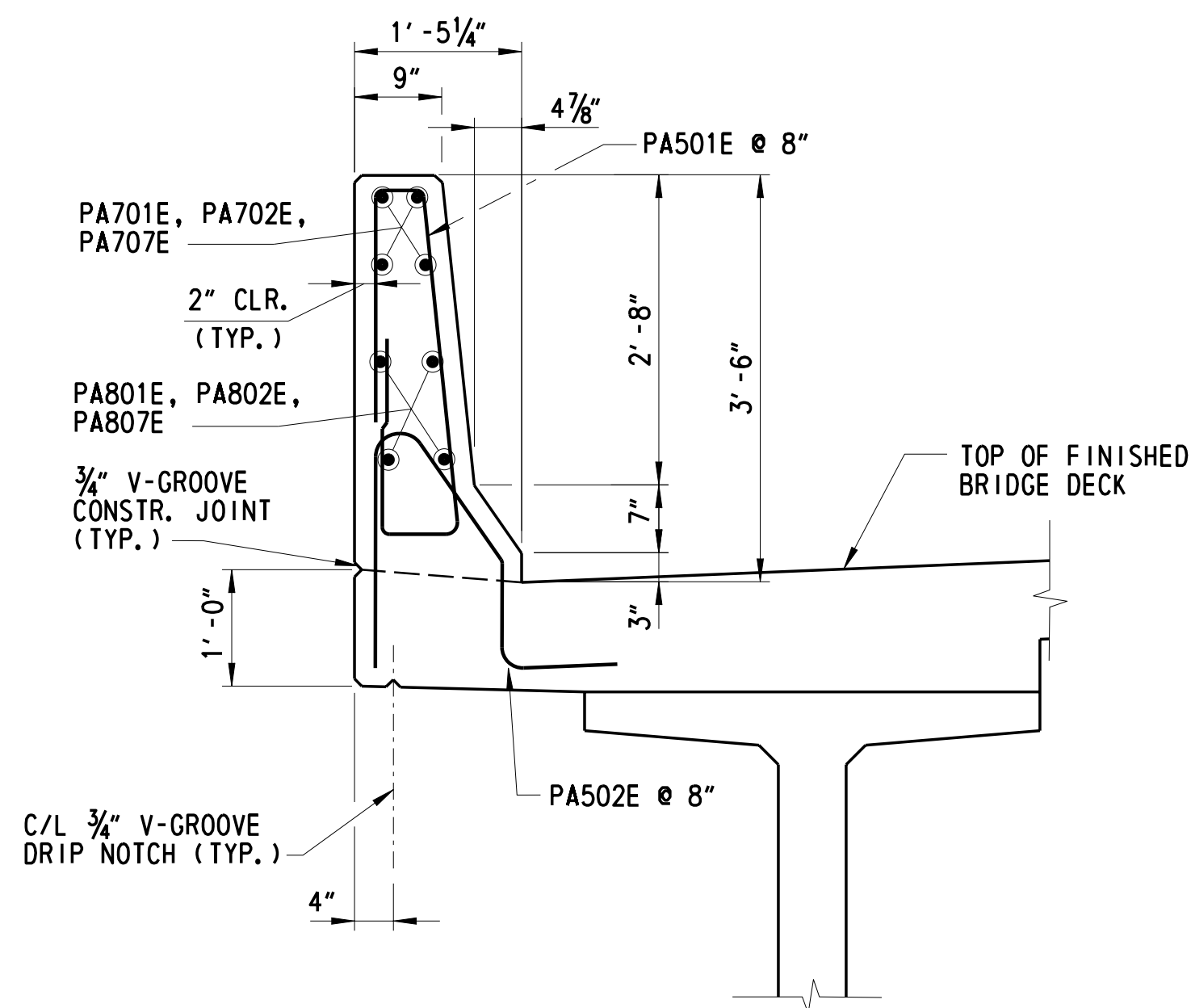
ELEVATION - DECK AND BARRIER REINFORCEMENT
NTS

- CROSS REFERENCE NOTES:**
- FOR TYPICAL DECK AND PARAPET REINFORCEMENT SECTIONS, SEE DWG. NO. 1-480 DK-5.
 - FOR FINISHED DECK ELEVATIONS, SEE DWG. NOS. 1-480 FD-3 AND 1-480 FD-4.
 - FOR REINFORCING BAR SCHEDULE, SEE DWG. NO. 1-480 BR-7.
 - FOR DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-3.
 - FOR BARRIER CONTROL JOINT DETAIL, SEE DWG. NO. 1-480 DK-5.

ADDENDUMS / REVISIONS

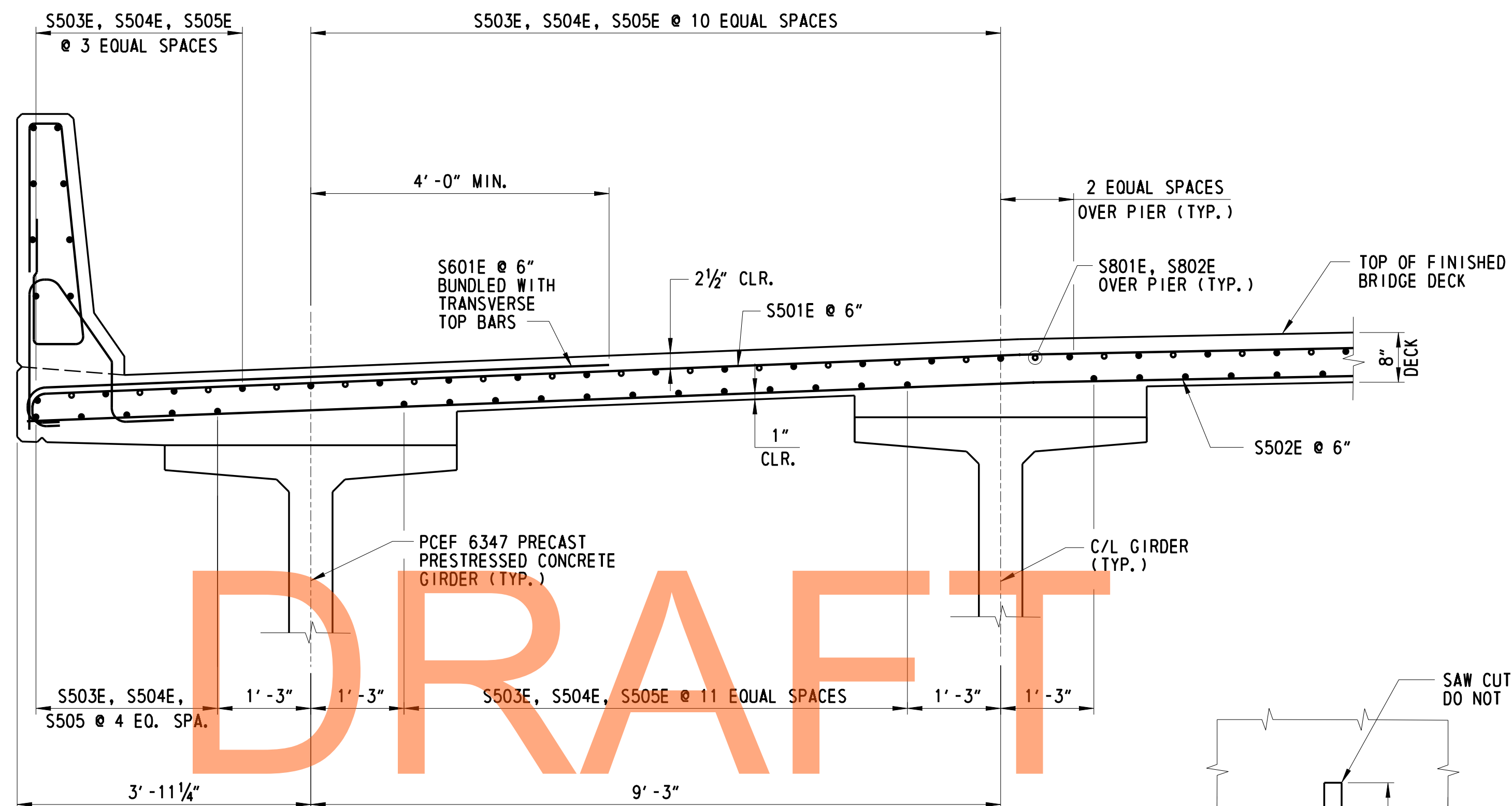
CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: EE CHECKED BY: BCW

1-480 DK-4
SHEET NO. 616
TOTAL SHTS. 1256



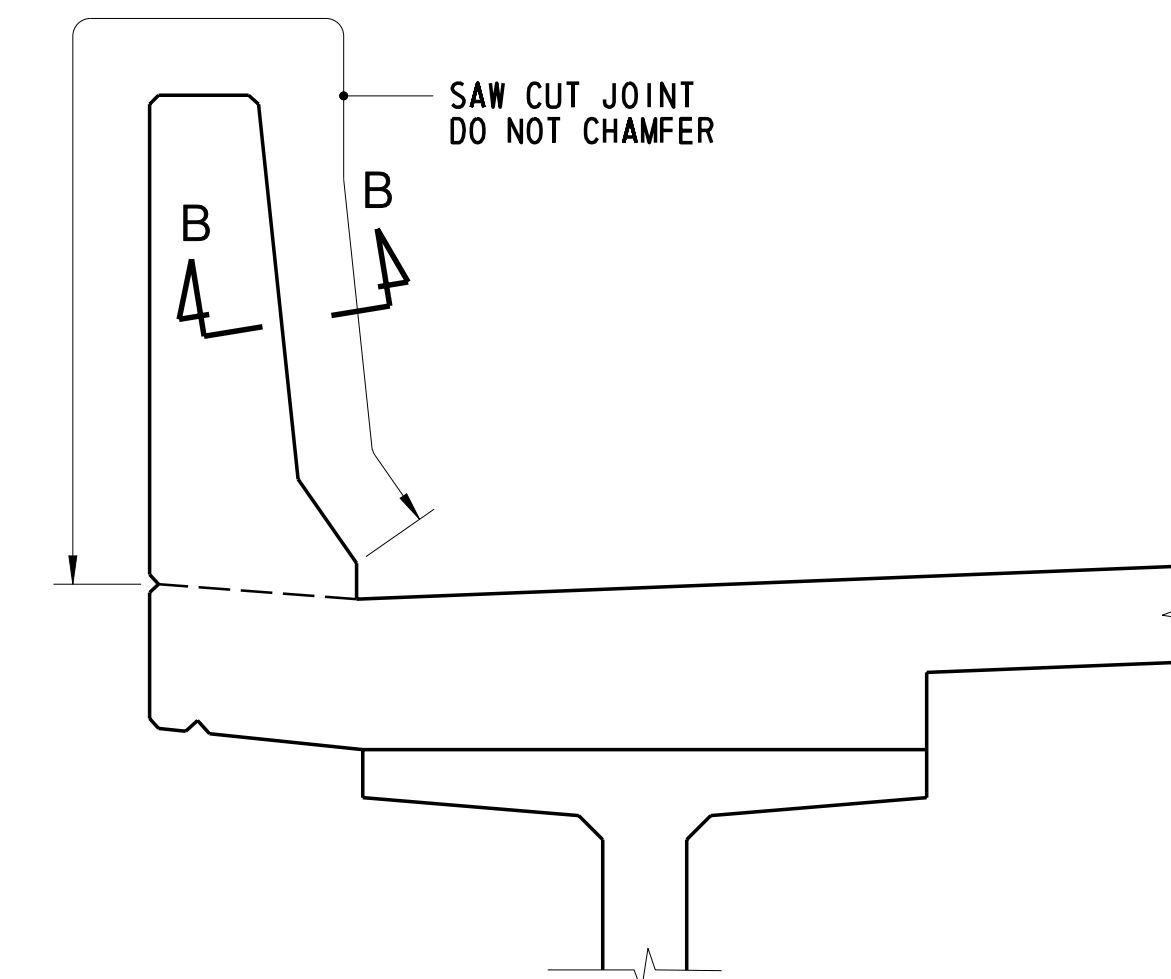
TYPICAL BARRIER REINFORCING SECTION @ DECK SLAB

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



TYPICAL DECK REINFORCING SECTION

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

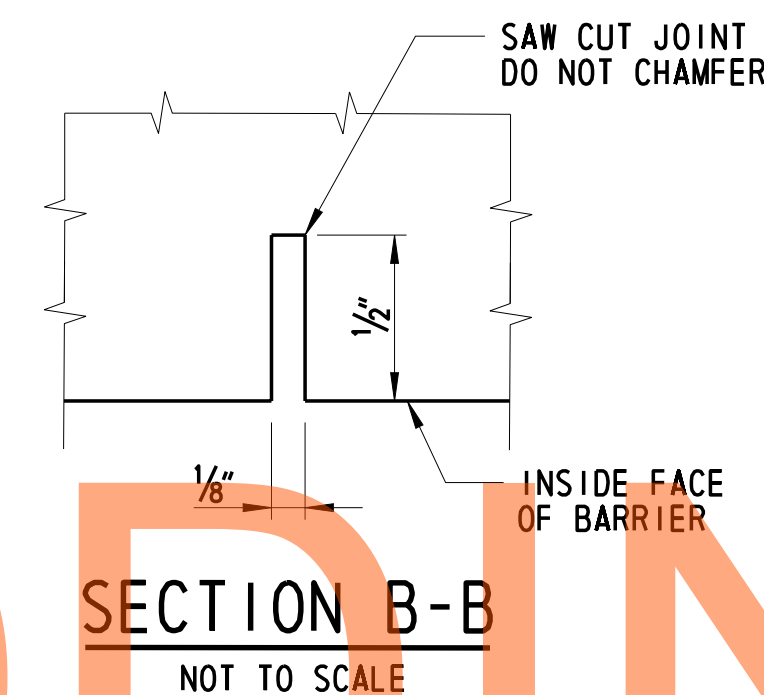


BARRIER CONTROL JOINT DETAIL

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

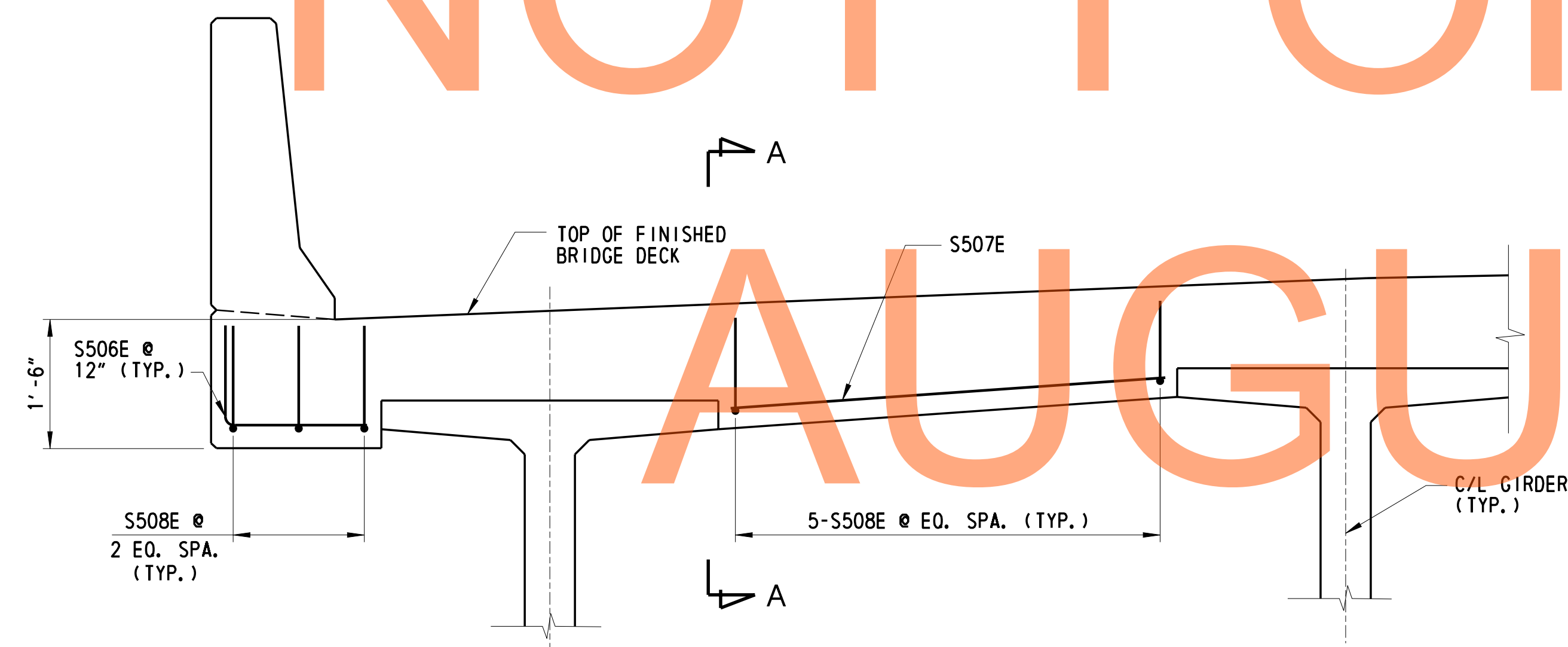
NOTES:

1. SAW CUT CONTROL JOINTS THE SAME DAY THAT THE FORMS ARE STRIPPED.
2. DETAIL FOR BARRIER ON APPROACH SLAB SIMILAR.



SECTION B-B

NOT TO SCALE

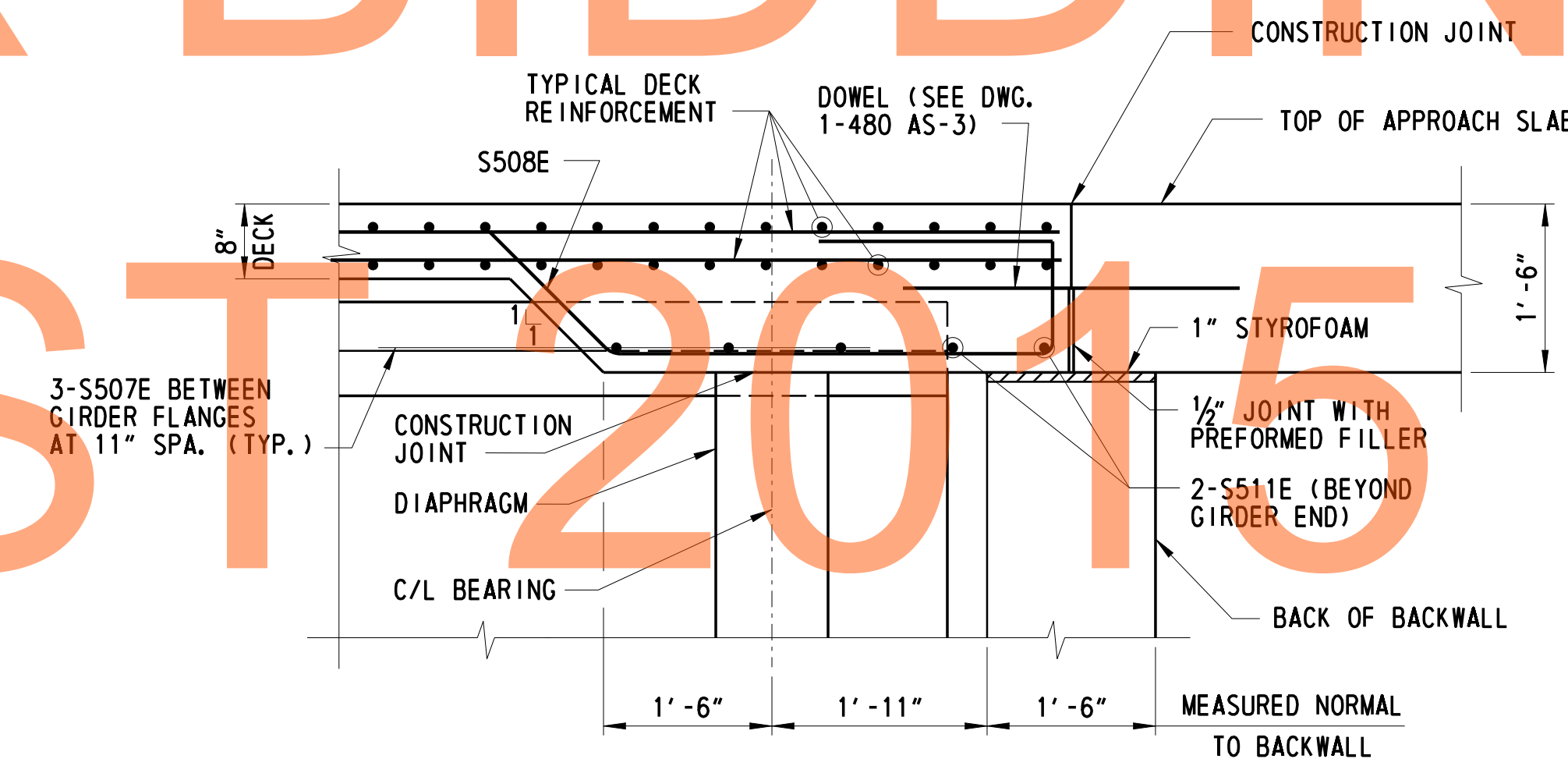


TYPICAL END HAUNCH SECTION

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

NOTE:

TYPICAL DECK REINFORCEMENT NOT SHOWN FOR CLARITY.



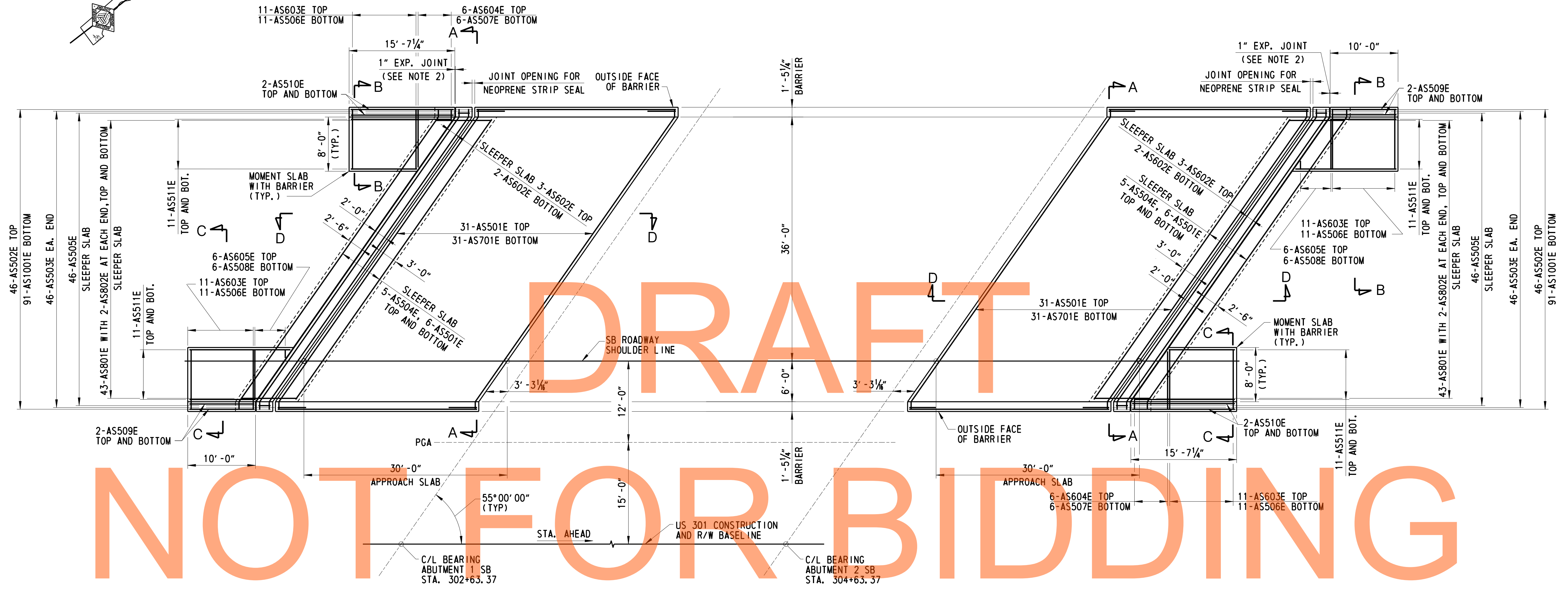
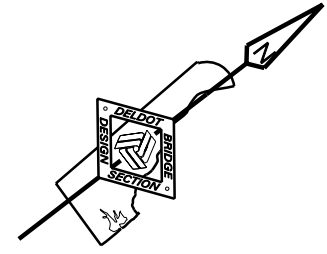
SECTION A-A

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

CROSS REFERENCE NOTES:

1. BRIDGE DECK REINFORCEMENT PLAN, SEE DWG. NOS. 1-480 DK-2 AND 1-480 DK-4.
2. FOR BRIDGE DECK POURING SEQUENCE, SEE DWG. NOS. 1-480 DK-1 AND 1-480 DK-3.
3. FOR FINISHED BRIDGE DECK ELEVATIONS, SEE DWG. NOS. 1-480 FD-1, 1-480 FD-2, 1-480 FD-3, AND 1-480 FD-4.
4. FOR REINFORCING BAR SCHEDULE, SEE DWG. NOS. 1-480 BR-6 AND 1-480 BR-7.

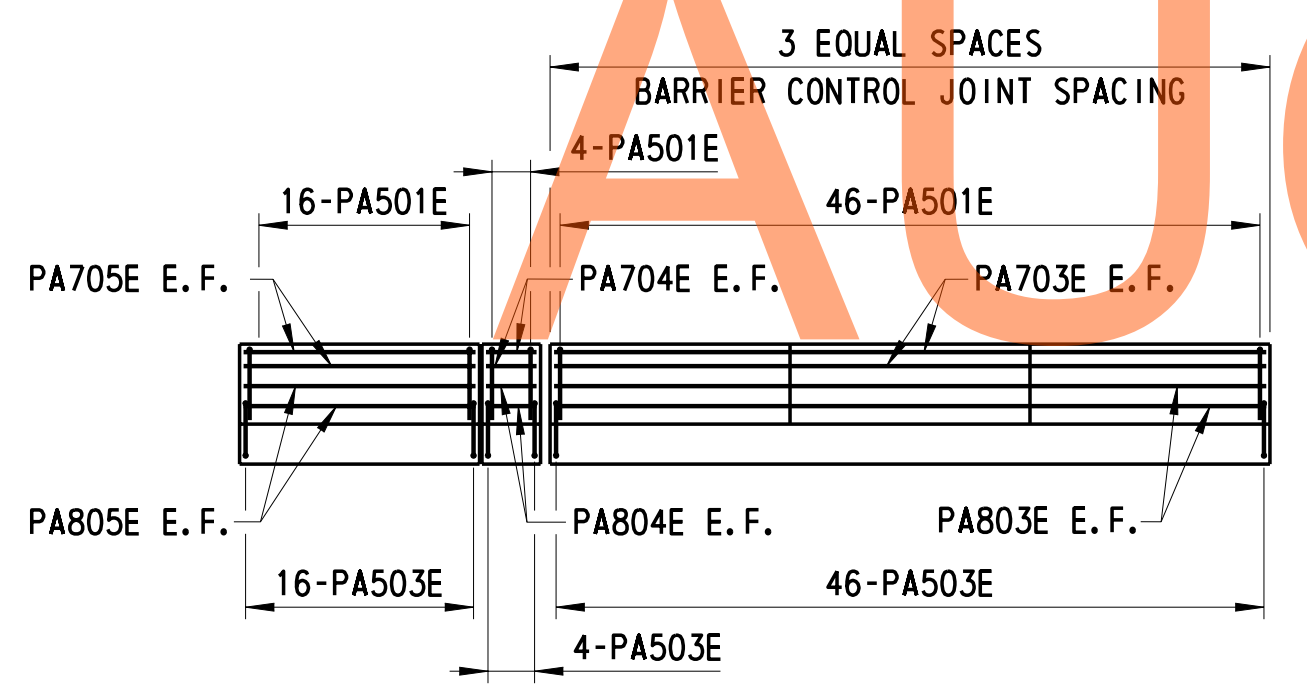
NOT FOR BIDDING
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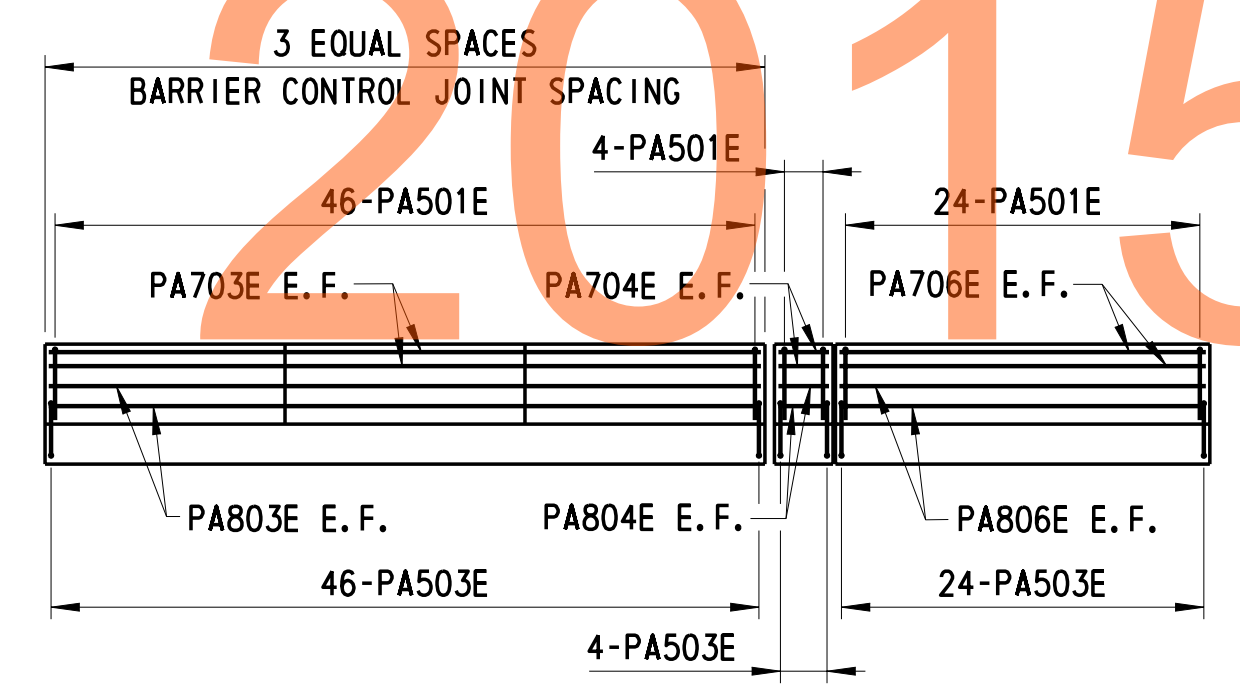
DRAFT

NOT FOR BIDDING

SB APPROACH SLAB REINFORCEMENT PLAN
SCALE: 1/8" = 1'-0"



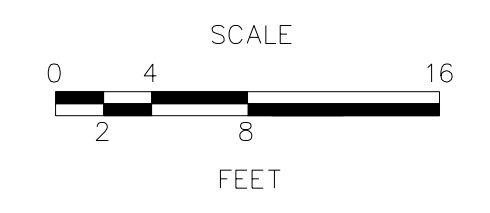
ELEVATION - APPROACH SLAB AND BARRIER
SCALE: 1/8" = 1'-0"



ELEVATION - APPROACH SLAB AND BARRIER
SCALE: 1/8" = 1'-0"

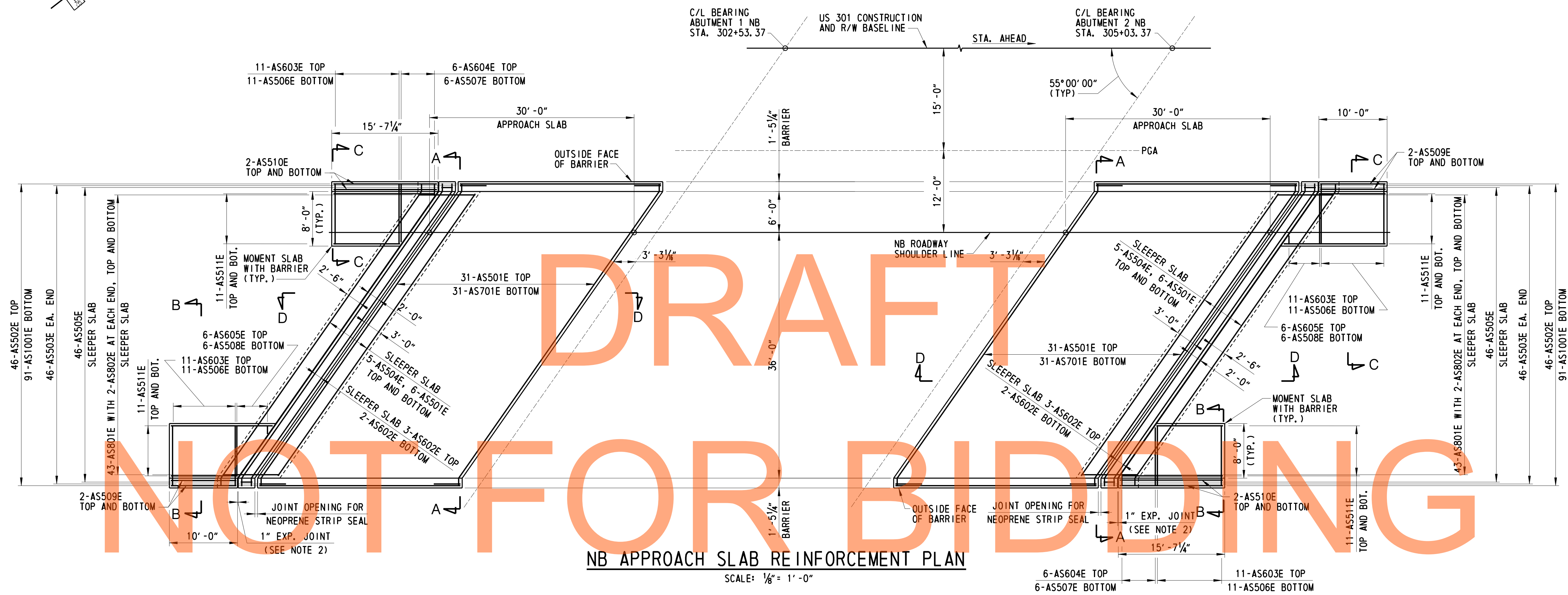
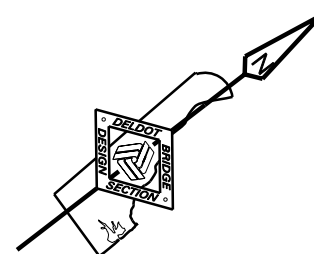
- NOTES:**
1. BARRIER REINFORCEMENT NOT SHOWN IN PLAN VIEW FOR CLARITY.
 2. PROVIDE 1" FLUSH EXPANSION JOINT BETWEEN MOMENT SLAB AND SLEEPER SLAB (SEE DELDOT STANDARD P-1).
- CROSS REFERENCE NOTES:**
1. FOR SECTION A-A, B-B, C-C, AND D-D SEE DWG. NO. 1-480 AS-3.
 2. FOR FINISHED APPROACH SLAB ELEVATIONS, SEE DWG. NOS. 1-480 FD-5 AND 1-480 FD-6.
 3. FOR REINFORCING SCHEDULE, SEE DWG. NO. 1-480 BR-6.
 4. FOR EXPANSION JOINT DETAILS, SEE DWG. NO. 1-480 EX-1.
 5. FOR BARRIER CONTROL JOINT DETAIL, SEE DWG. NO. 1-480 DK-5.

ADDENDUMS / REVISIONS



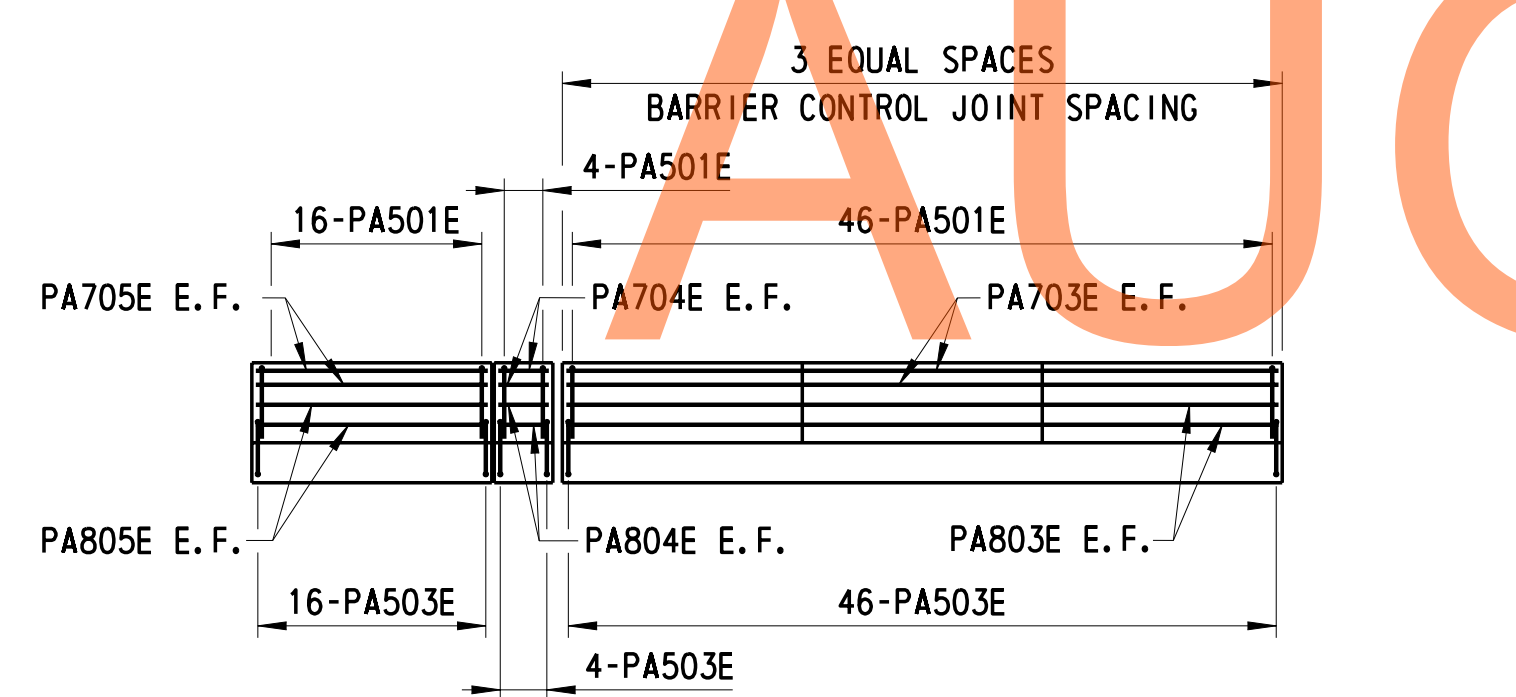
CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: EE CHECKED BY: JW

1-480 AS-1
SHEET NO. 618
TOTAL SHTS. 1256



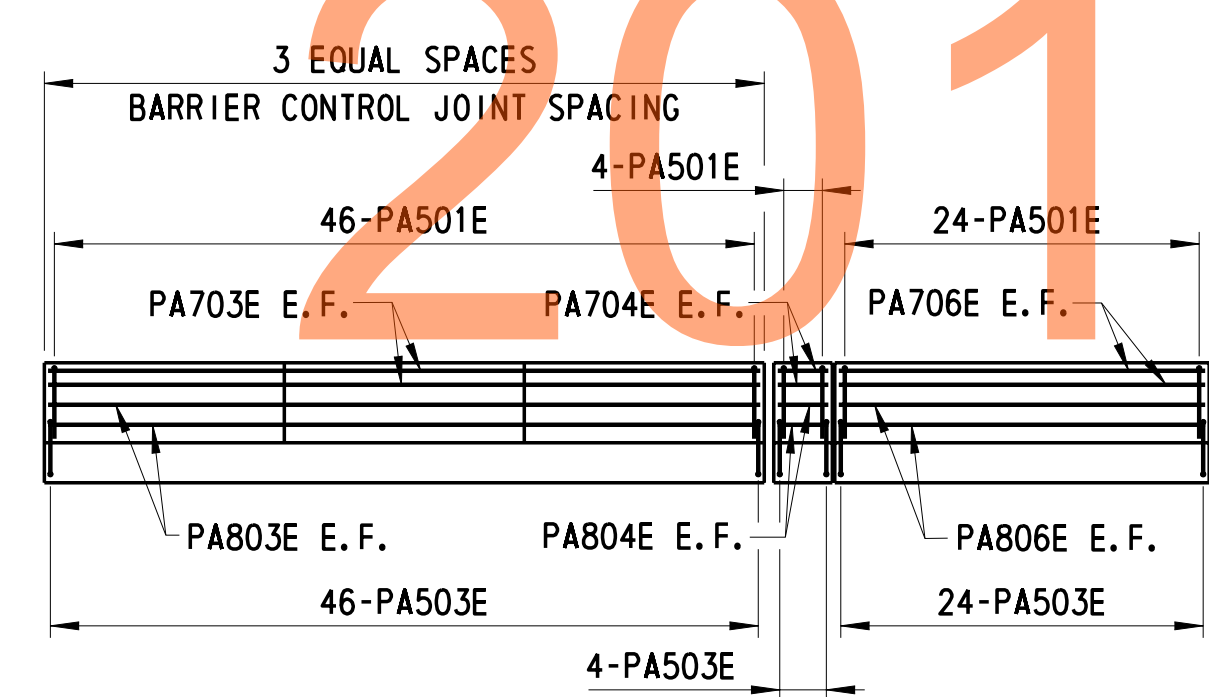
NB APPROACH SLAB REINFORCEMENT PLAN

SCALE: 1/8" = 1'-0"



ELEVATION - APPROACH SLAB AND BARRIER

SCALE: 1/8" = 1'-0"

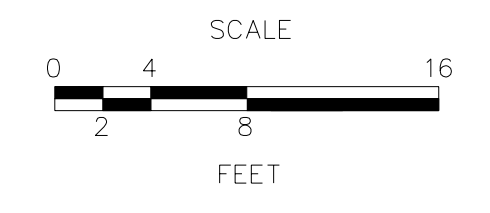


ELEVATION - APPROACH SLAB AND BARRIER

SCALE: 1/8" = 1'-0"

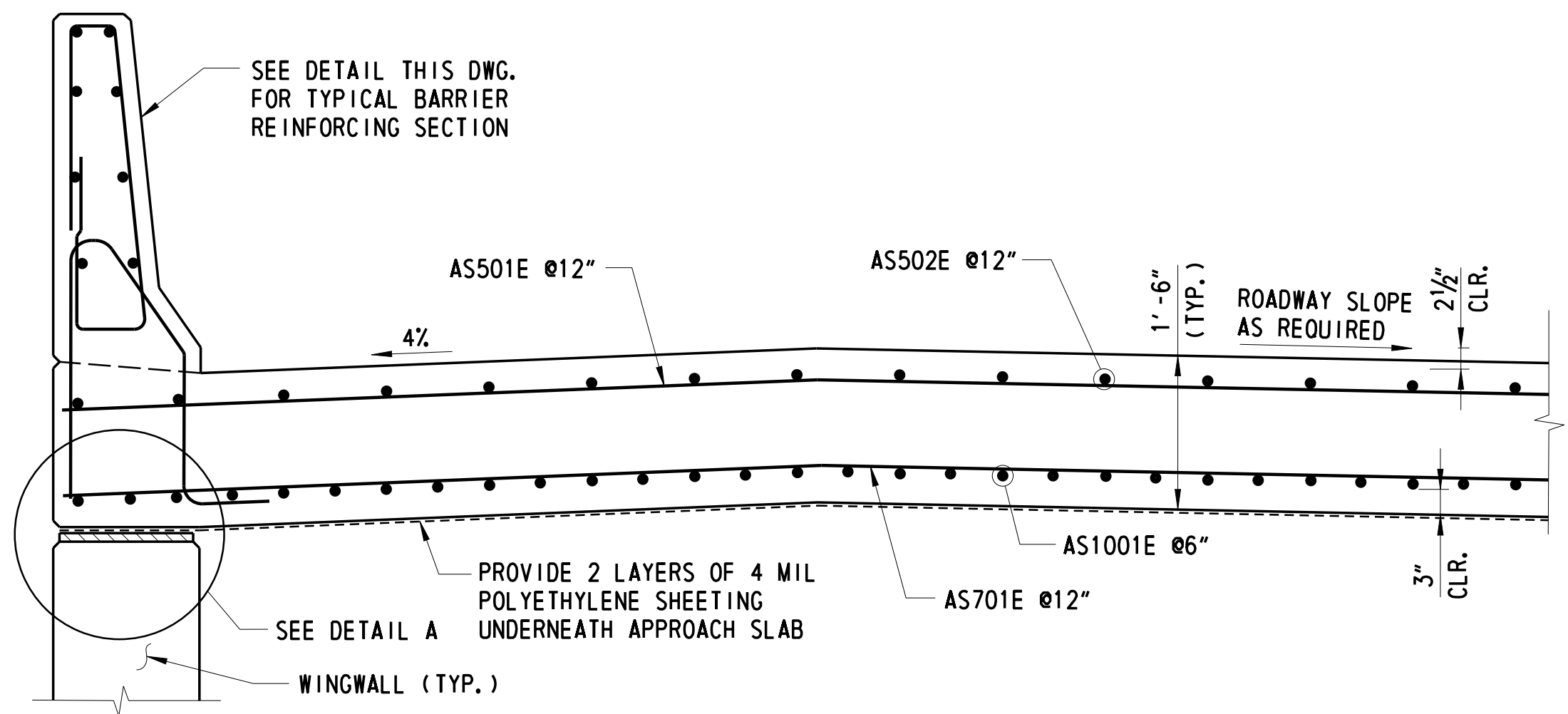
- NOTES:**
1. BARRIER REINFORCEMENT NOT SHOWN IN PLAN VIEW FOR CLARITY.
 2. PROVIDE 1" FLUSH EXPANSION JOINT BETWEEN MOMENT SLAB AND SLEEPER SLAB (SEE DELDOT STANDARD P-1).
- CROSS REFERENCE NOTES:**
1. FOR SECTION A-A, B-B, C-C, AND D-D SEE DWG. NO. 1-480 AS-3.
 2. FOR FINISHED APPROACH SLAB ELEVATIONS, SEE DWG. NO. 1-480 FD-5 AND 1-480 FD-6.
 3. FOR REINFORCING SCHEDULE, SEE DWG. NO. 1-480 BR-7.
 4. FOR EXPANSION JOINT DETAILS, SEE DWG. NO. 1-480 EX-1.
 5. FOR BARRIER CONTROL JOINT DETAIL, SEE DWG. NO. 1-480 DK-5.

ADDENDUMS / REVISIONS

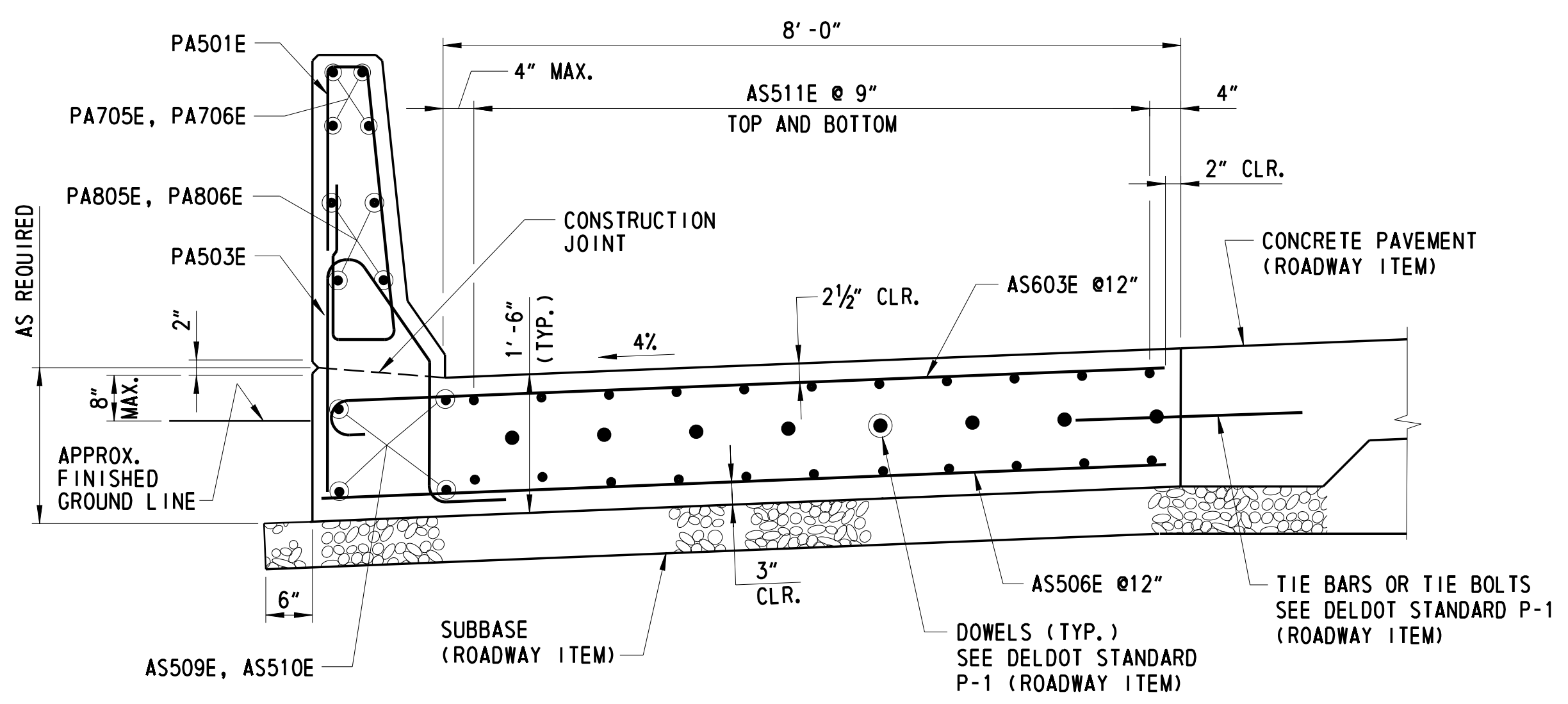


CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	EE
COUNTY	CHECKED BY:	JW
NEW CASTLE		

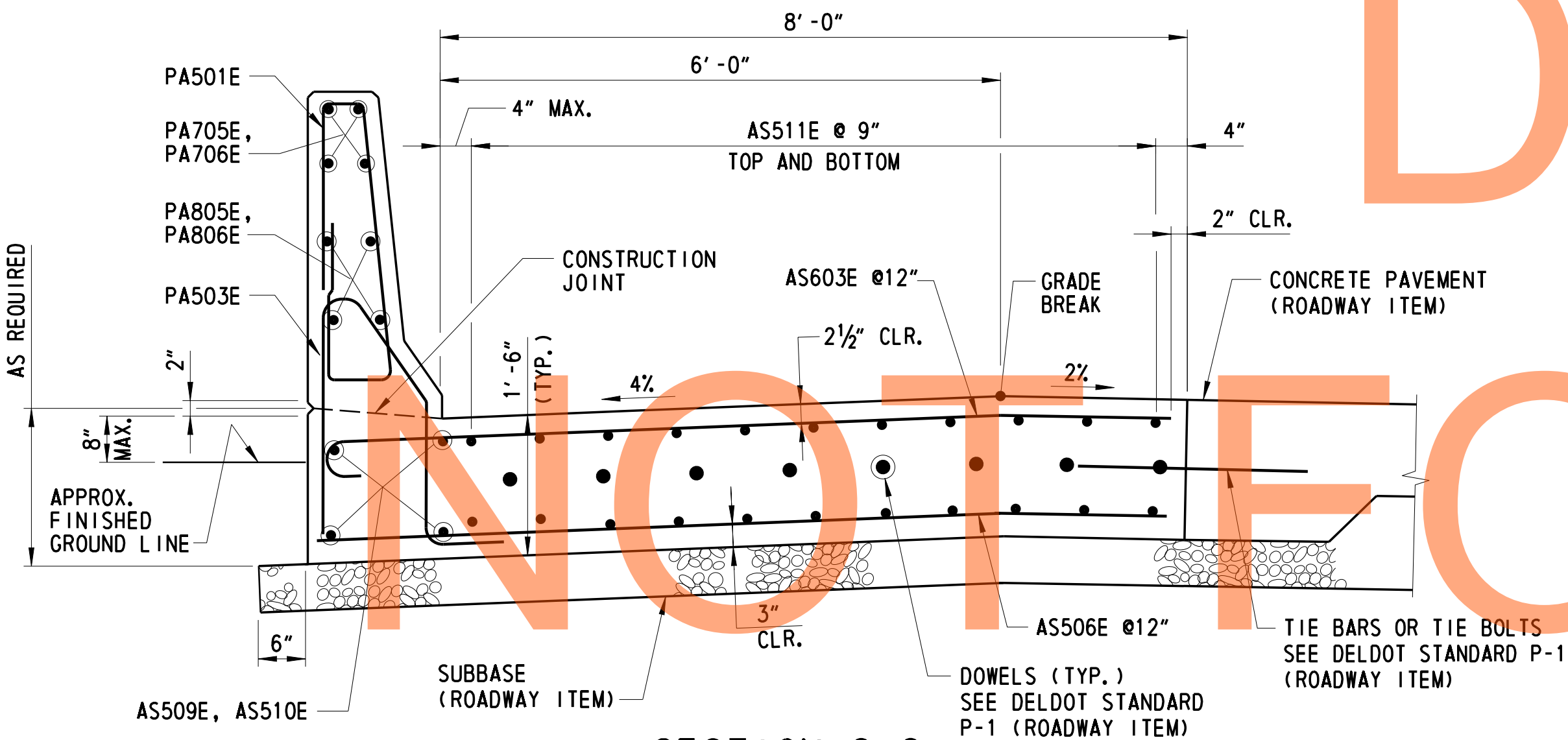
1-480 AS-2
SHEET NO.
619
TOTAL SHTS.
1256



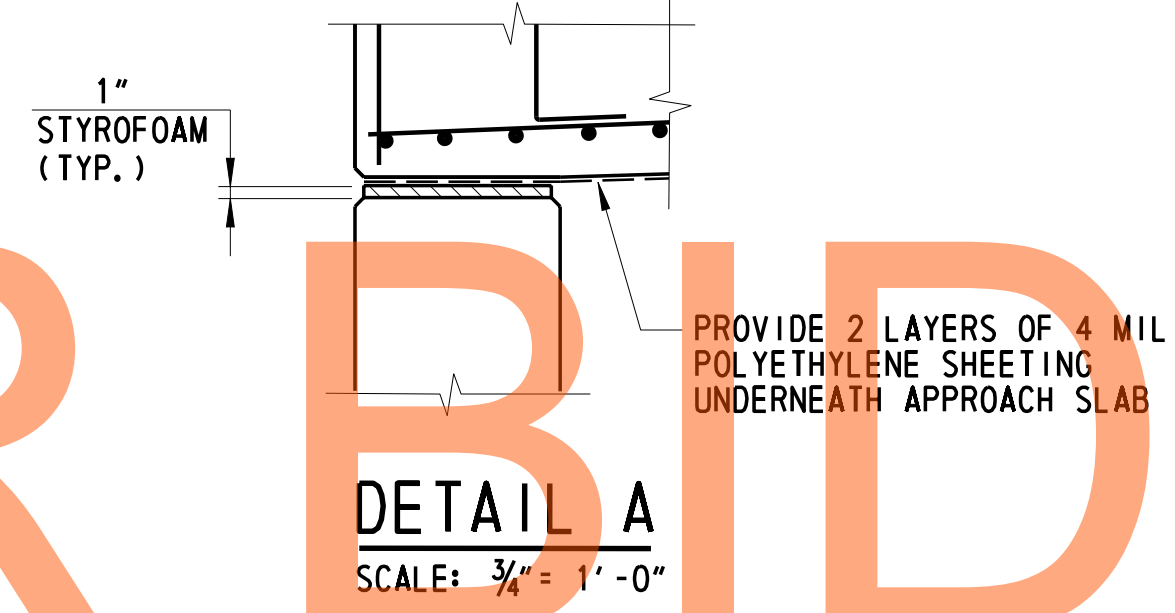
SECTION A-A
SCALE: 3/4" = 1'-0"



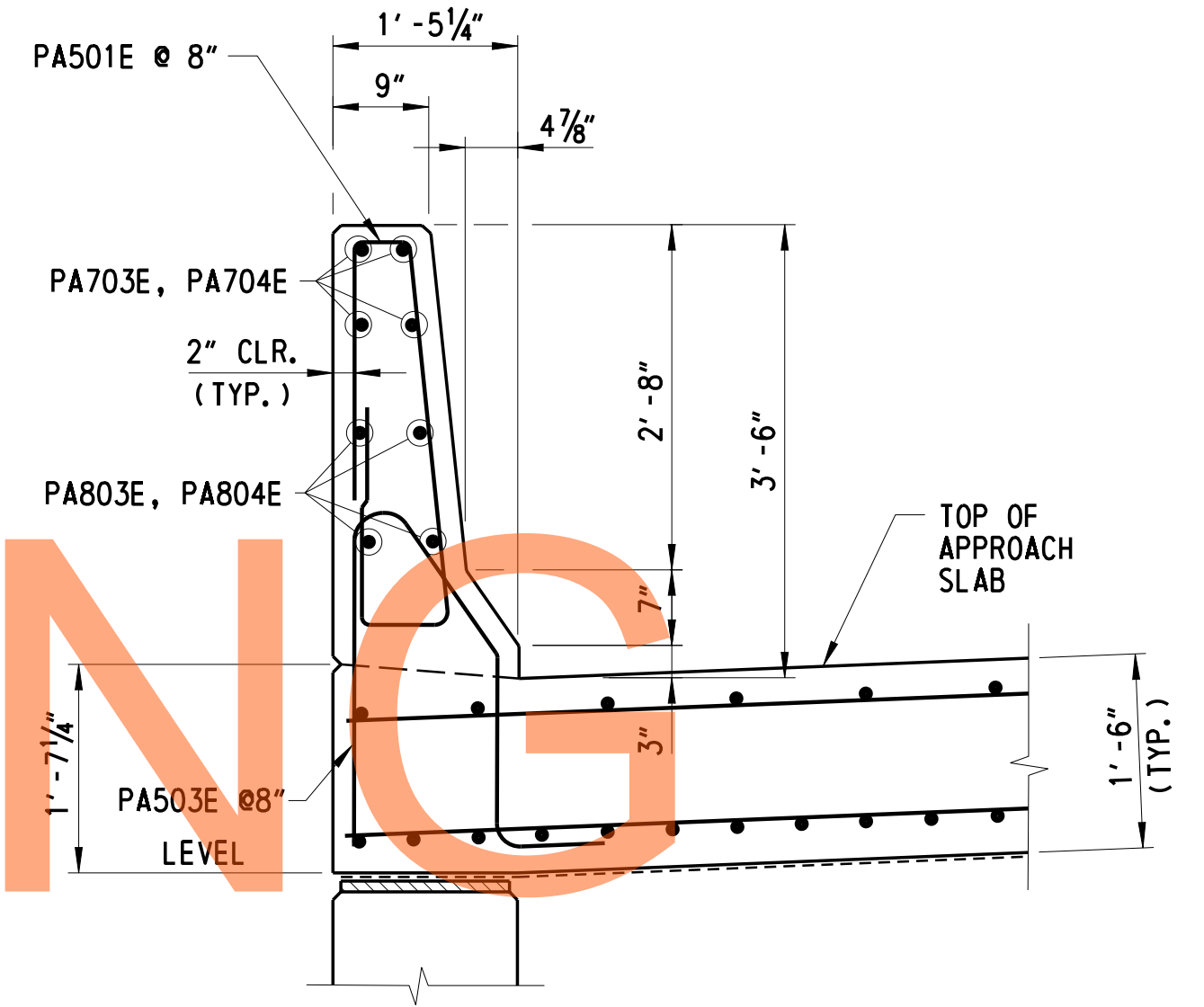
SECTION B-B
SCALE: 3/4" = 1'-0"



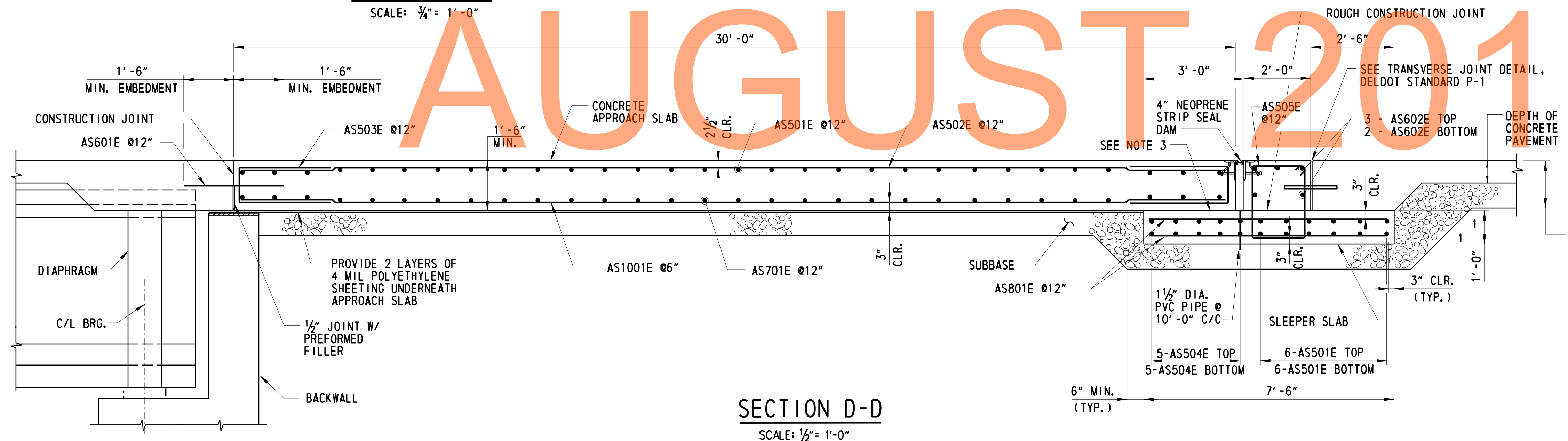
SECTION C-C
SCALE: 3/4" = 1'-0"



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



TYPICAL BARRIER REINFORCING SECTION
SCALE: 3/4" = 1'-0"



SECTION D-D
SCALE: 1/2" = 1'-0"

- NOTES:**
- SECTION D-D SHOWN LEVEL FOR CLARITY. SLOPE APPROACH SLAB AND SLEEPER SLAB AS REQUIRED TO MATCH ROADWAY PROFILE.
 - SLEEPER SLAB AND ABUTMENT SHOWN NORMAL TO ABUTMENT FOR CLARITY.
 - TROWEL SMOOTH AND PLACE 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING.
- CROSS REFERENCE NOTES:**
- FOR APPROACH SLAB REINFORCEMENT PLAN, SEE DWG. NOS. 1-480 AS-1 AND 1-480 AS-2.
 - FOR FINISHED APPROACH SLAB ELEVATIONS, SEE DWG. NOS. 1-480 FD-5 AND 1-480 FD-6.
 - FOR REINFORCING BAR SCHEDULE, SEE DWG. NOS. 1-480 BR-6 AND 1-480 BR-7.
 - FOR EXPANSION JOINT DETAILS, SEE DWG. NO. 1-480 EX-1.

ADDENDUMS / REVISIONS

CONTRACT	T200911303
COUNTY	NEW CASTLE
BRIDGE NO.	1-480N&S
DESIGNED BY:	EE
CHECKED BY:	JW

1-480 AS-3
SHEET NO.
620
TOTAL SHTS.
1256

REINFORCING BAR SCHEDULE

SB DECK BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
S501E	45'-8 1/2"	355	1	7"	44'-6 1/2"				7"		5"				
S502E	44'-6 1/2"	355	STR.												
S503E	55'-0"	321	STR.												
S504E	48'-11"	107	STR.												
S506E	3'-2"	12	2	1'-2"	2'-0"										
S507E	6'-1 1/4"	24	STR.												
S508E	9'-9 7/8"	52	16	2'-1"	1'-2 1/2"	4'-8 1/4"	1'-10 1/8"			1'-2 1/2"		1'-5 3/4"	6'-2"		
S509E	1'-10 1/4" TO 43'-2"	122	1	7"	1'-3 3/4"						5"				LENGTH Δ = 8 1/4", 2 SETS
S510E	1'-3 3/4" TO 42'-7"	122	STR.												LENGTH Δ = 8 1/4", 2 SETS
S511E	53'-9 3/4"	4	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
S601E	8'-6"	812	1	8"	7'-10"						6"				
S801E	45'-0"	48	STR.												
S802E	30'-0"	48	STR.												

SB APPROACH SLAB BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
AS501E	53'-9 3/4"	86	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
AS502E	29'-8"	92	STR.												
AS503E	7'-0 1/2"	184	2	3'-0"	1'-0 1/2"				3'-0"						
AS504E	50'-10 1/4"	20	STR.												
AS505E	8'-7"	92	T1	7"	1'-8"	2'-0 1/2"	1'-8"	2'-0 1/2"	7"						
AS506E	9'-1 1/4"	44	STR.												
AS507E	1'-10" TO 8'-6"	12	STR.												LENGTH Δ = 1'-4", 2 SETS
AS508E	2'-0" TO 7'-4"	12	STR.												LENGTH Δ = 1'-0 7/8", 2 SETS
AS509E	9'-8"	8	STR.												
AS510E	15'-3 1/4"	8	STR.												
AS511E	9'-10 1/4" TO 15'-0"	88	STR.												LENGTH Δ = 6 1/8", 8 SETS
AS601E	3'-0"	92	STR.												DOWEL
AS602E	53'-9 3/4"	10	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
AS603E	9'-9 1/4"	44	1	8"	9'-1 1/4"						6"				
AS604E	2'-6" TO 9'-2"	12	1	8"	1'-10" TO 8'-6"						6"				LENGTH Δ = 1'-4", 2 SETS
AS605E	2'-0" TO 7'-4"	12	STR.												LENGTH Δ = 1'-0 7/8", 2 SETS
AS701E	53'-9 3/4"	62	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
AS801E	8'-6 1/2"	172	STR.												
AS802E	5'-0"	16	STR.												
AS1001E	29'-8"	182	STR.												

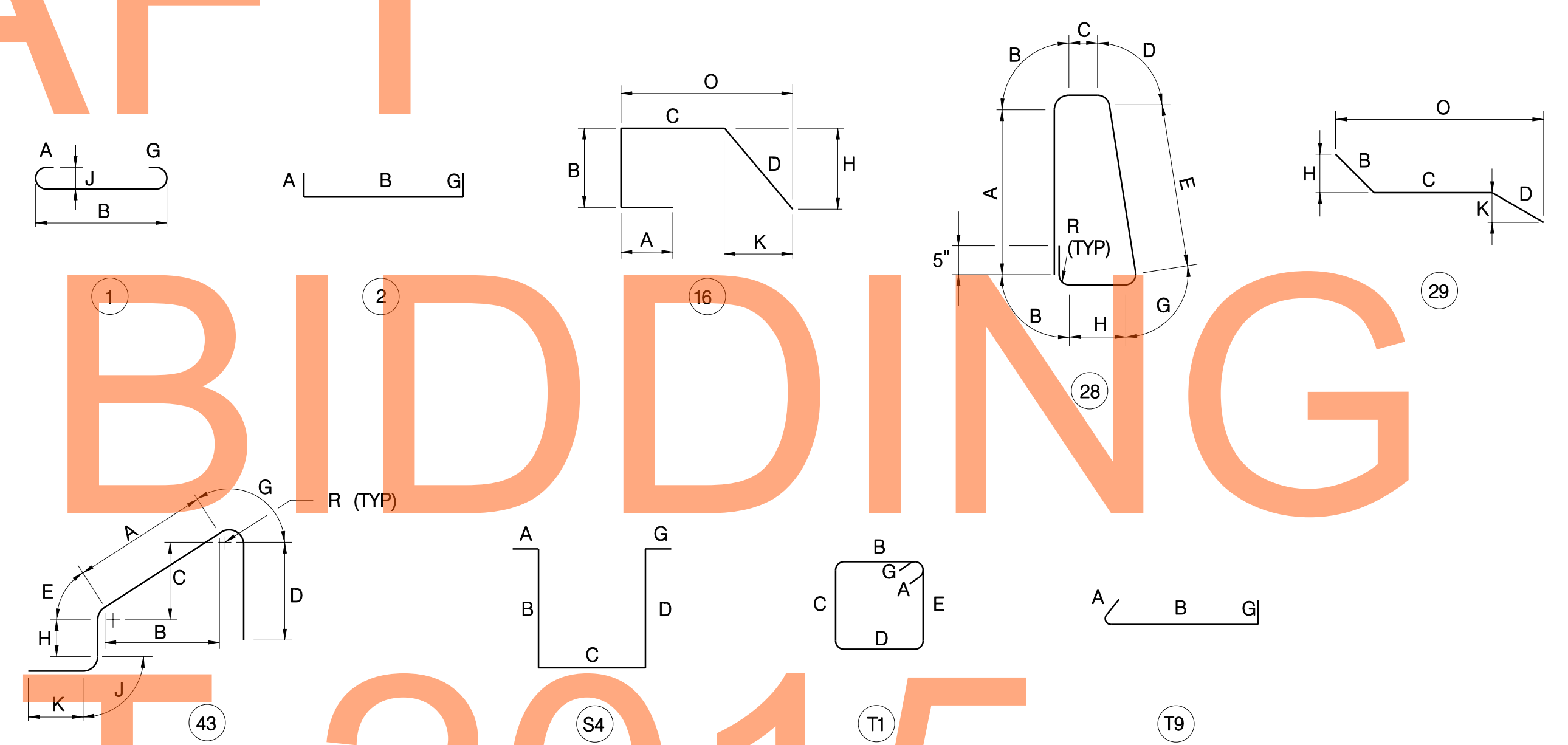
SB DIAPHRAGM BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
M401E	7'-6"	48	T1	6"	6"	2'-9"	6"	2'-9"	6"						
M402E	9'-10"	72	S4	9"	3'-11"	6"	3'-11"		9"						
M403E	8'-1 1/2"	32	T1	6"	9 3/4"	2'-9"	9 3/4"	2'-9"	6"						
M404E	7'-0"	112	2	9"	6'-3"										
M405E	5'-11 3/4"	56	2	2'-7"	9 3/4"			2'-7"							
M406E	6'-0"	84	T9	8"	4'-8"			8"							
M501E	8'-4"	96	STR.												
M502E	2'-5"	224	STR.												
M503E	5'-0"	24	STR.												
M504E	10'-3"	96	STR.												
M505E	5'-2"	72	STR.												
M506E	7'-8"	24	STR.												
M507E	6'-11 1/2"	24	STR.												
M508E	6'-2 1/4"	8	STR.												
M509E	11'-2"	28	2	3'-3"	4'-8"					3'-3"					
M510E	7'-2"	56	2	10"	6'-4"										
M511E	16'-0"	24	T1	7"	4'-8"	2'-9"	4'-8"	2'-9"	7"						
M601E	7'-10"	6	29		1'-0"	5'-10"	1'-0"			6 7/8"		6 7/8"	7'-5 5/8"		
M602E	5'-1"	4	29		1'-0"	4'-1"				6 7/8"		6 7/8"	4'-10 1/8"		
D1101E	4'-0"	28	STR.												DOWEL

SB BARRIER BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
PA501E	7'-6"	692	28	2'-8 3/4"	3 3/8"	1/2"	3 5/8"	2'-8 1/8"	4 1/4"	3 1/4"				3 3/4"	
PA502E	5'-4 3/4"	422	43	1'-2 1/2"	8 1/4"	11 7/8"	1'-10 3/8"	1 3/8"	6 3/8"	6 1/8"	4"	10"		3 3/4"	
PA503E	6'-8 3/4"	270	43	1'-2 1/2"	8 1/4"	11 7/8"	2'-6 3/8"	1 3/8"	6 3/8"	1'-2 1/8"	4"	10"		3 3/4"	
PA701E	60'-0"	24	STR.												
PA702E	41'-5"	8	STR.												
PA703E	29'-8"	16	STR.												
PA704E	2'-1 1/4"	16	STR.												
PA705E	9'-8"	8	STR.												
PA706E	15'-3 1/4"	8	STR.												
PA801E	60'-0"	24	STR.												
PA802E	46'-2"	8	STR.												
PA803E	29'-8"	16	STR.												
PA804E	2'-1 1/4"	16	STR.												
PA805E	9'-8"	8	STR.												
PA806E	15'-3 1/4"	8	STR.												

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AUGUST 2015



REINFORCING BAR SCHEDULE

NB DECK BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
S501E	45'-8 1/2"	455	1	7"	44'-6 1/2"				7"		5"				
S502E	44'-6 1/2"	455	STR.												
S503E	55'-0"	428	STR.												
S505E	46'-6"	107	STR.												
S506E	3'-2"	12	2	1'-2"	2'-0"										
S507E	6'-1 1/4"	24	STR.												
S508E	9'-9 7/8"	52	16	2'-1"	1'-2 1/2"	4'-8 1/4"	1'-10 1/8"			1'-2 1/2"		1'-5 3/4"	6'-2"		
S509E	1'-10 1/4" TO 43'-2"	122	1	7"	1'-3 3/4" TO 42'-7"						5"				LENGTH Δ = 8 1/4", 2 SETS
S510E	1'-3 3/4" TO 42'-7"	122	STR.												LENGTH Δ = 8 1/4", 2 SETS
S511E	53'-9 3/4"	4	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
S601E	8'-6"	1012	1	8"	7'-10"						6"				
S801E	45'-0"	48	STR.												
S802E	30'-0"	48	STR.												

NB APPROACH SLAB BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
AS501E	53'-9 3/4"	86	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
AS502E	29'-8"	92	STR.												
AS503E	7'-0 1/2"	184	2	3'-0"	1'-0 1/2"				3'-0"						
AS504E	50'-10 1/4"	20	STR.												
AS505E	8'-7"	92	T1	7"	1'-8"	2'-0 1/2"	1'-8"	2'-0 1/2"	7"						
AS506E	9'-1 1/4"	44	STR.												
AS507E	1'-10" TO 8'-6"	12	STR.												LENGTH Δ = 1'-4", 2 SETS
AS508E	2'-0" TO 7'-4"	12	STR.												LENGTH Δ = 1'-0 7/8", 2 SETS
AS509E	9'-8"	8	STR.												
AS510E	15'-3 1/4"	8	STR.												
AS511E	9'-10 1/4" TO 15'-0"	88	STR.												LENGTH Δ = 6 1/8", 8 SETS
AS601E	3'-0"	92	STR.												DOWEL
AS602E	53'-9 3/4"	10	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
AS603E	9'-9 1/4"	44	1	8"	9'-1 1/4"						6"				
AS604E	2'-6" TO 9'-2"	12	1	8"	1'-10" TO 8'-6"						6"				LENGTH Δ = 1'-4", 2 SETS
AS605E	2'-0" TO 7'-4"	12	STR.												LENGTH Δ = 1'-0 7/8", 2 SETS
AS701E	53'-9 3/4"	62	29		1'-3 1/4"	51'-3 1/4"	1'-3 1/4"			9 1/4"		9 1/4"	53'-6 1/4"		
AS801E	8'-6 1/2"	172	STR.												
AS802E	5'-0"	16	STR.												
AS1001E	29'-8"	182	STR.												

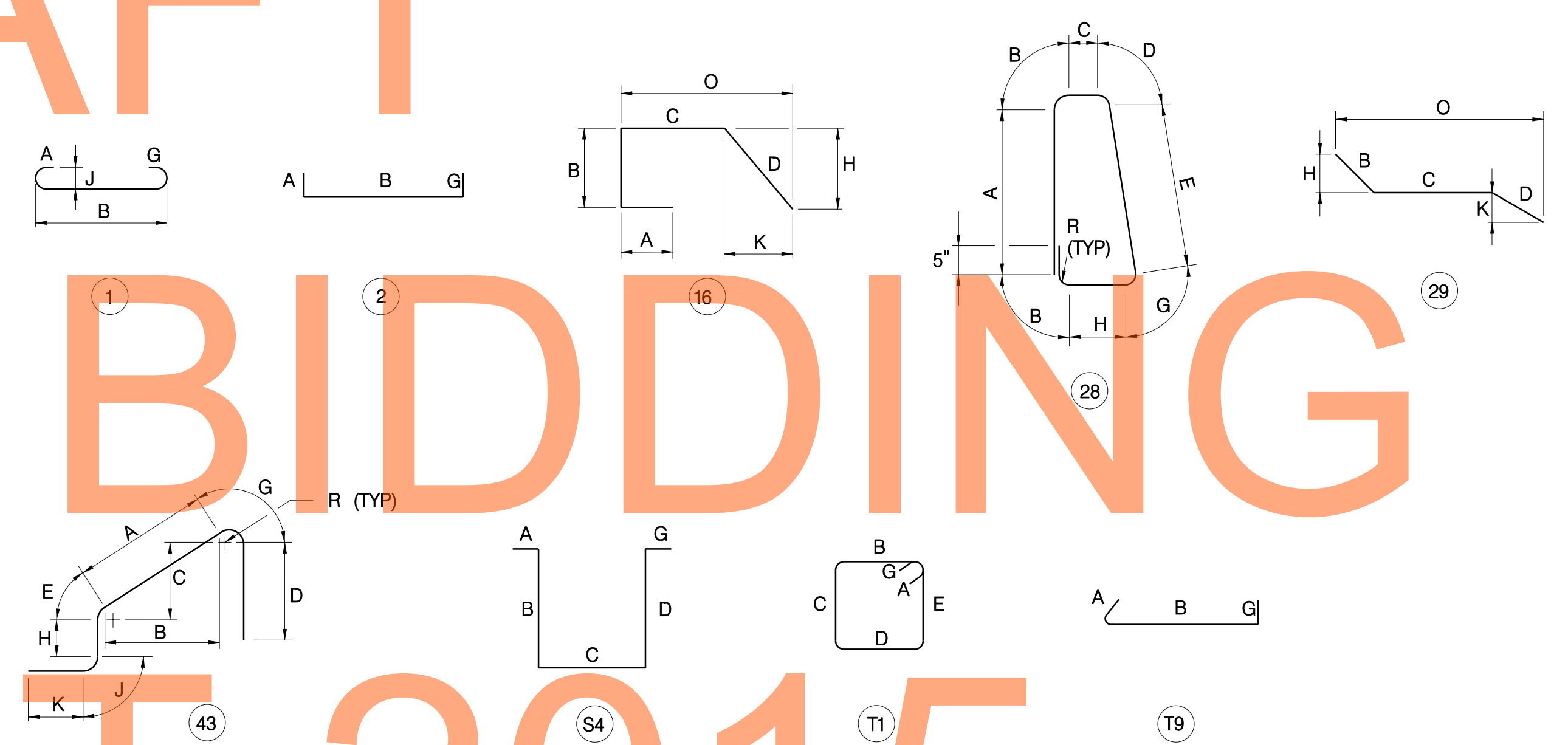
NB DIAPHRAGM BAR SCHEDULE

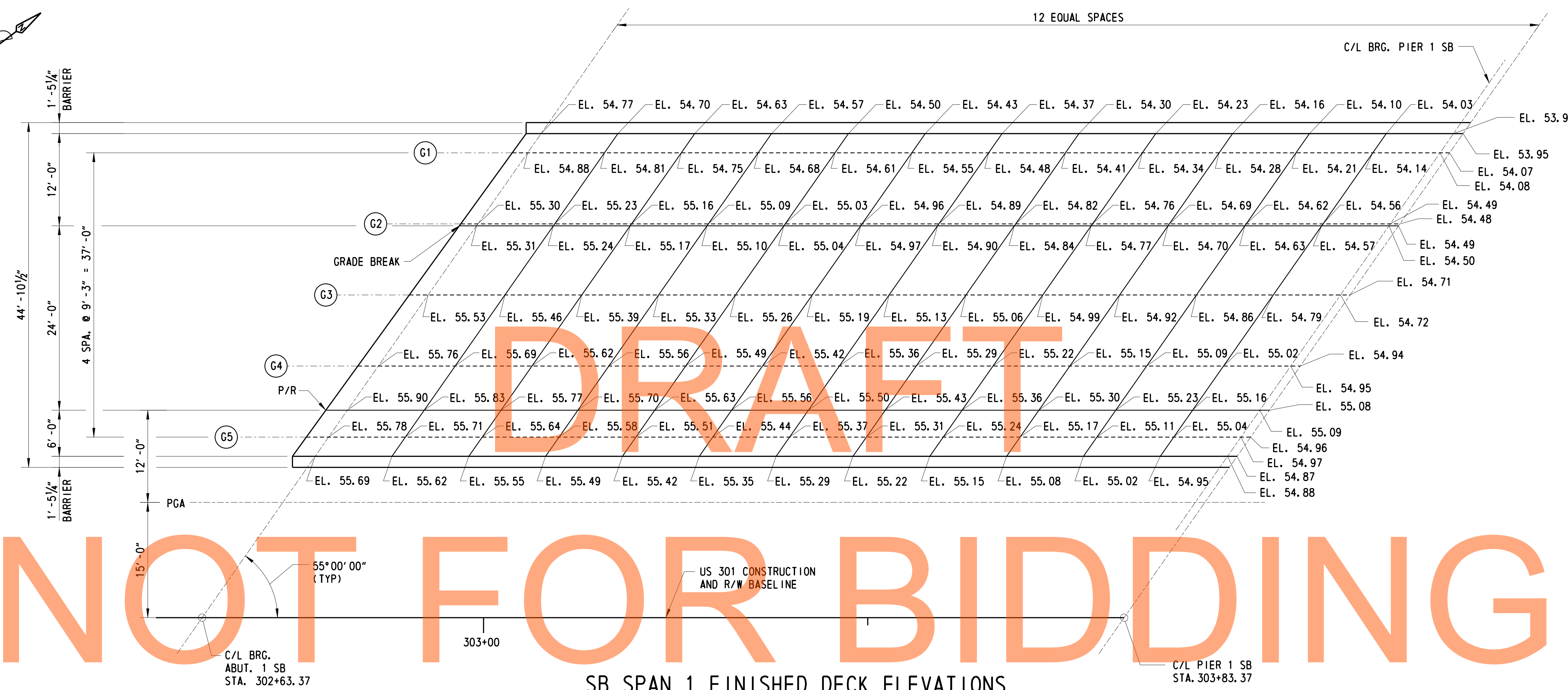
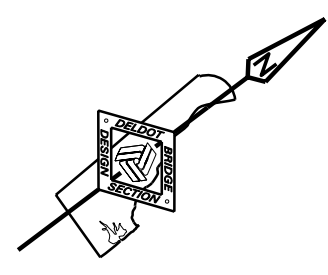
MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
M401E	7'-6"	64	T1	6"	6"	2'-9"	6"	2'-9"	6"						
M402E	9'-10"	96	S4	9"	3'-11"	6"	3'-11"	9"							
M403E	8'-1 1/2"	32	T1	6"	9 3/4"	2'-9"	9 3/4"	2'-9"	6"						
M404E	7'-0"	112	2	9"	6'-3"										
M405E	5'-11 3/4"	56	2	2'-7"	9 3/4"			2'-7"							
M406E	6'-0"	84	T9	8"	4'-8"			8"							
M501E	8'-4"	128	STR.												
M502E	2'-5"	288	STR.												
M503E	5'-0"	32	STR.												
M504E	10'-3"	96	STR.												
M505E	5'-2"	72	STR.												
M506E	7'-8"	24	STR.												
M507E	6'-11 1/2"	24	STR.												
M508E	6'-2 1/4"	8	STR.												
M509E	11'-2"	28	2	3'-3"	4'-8"			3'-3"							
M510E	7'-2"	56	2	10"	6'-4"										
M511E	16'-0"	24	T1	7"	4'-8"	2'-9"	4'-8"	2'-9"	7"						
M601E	7'-10"	6	29		1'-0"	5'-10"	1'-0"			6 7/8"		6 7/8"	7'-5 5/8"		
M602E	5'-1"	4	29		1'-0"	4'-1"				6 7/8"		6 7/8"	4'-10 1/8"		
D1101E	4'-0"	28	STR.												DOWEL

NB BARRIER BAR SCHEDULE

MARK	LENGTH	NO. BARS	TYPE	A	B	C	D	E	G	H	J	K	O	R	REMARKS
PA501E	7'-6"	692	28	2'-8 3/4"	3 7/8"	1/2"	3 5/8"	2'-8 1/8"	4 1/4"	3 1/4"				3 3/4"	
PA502E	5'-4 3/4"	422	43	1'-2 1/2"	8 1/4"	11 7/8"	1'-10 3/8"	1 3/8"	6 3/8"	6 1/8"	4"	10"		3 3/4"	
PA503E	6'-8 3/4"	270	43	1'-2 1/2"	8 1/4"	11 7/8"	2'-6 3/8"	1 3/8"	6 3/8"	1'-2 1/8"	4"	10"		3 3/4"	
PA701E	60'-0"	32	STR.												
PA703E	29'-8"	16	STR.												
PA704E	2'-1 1/4"	16	STR.												
PA705E	9'-8"	8	STR.												
PA706E	15'-3 1/4"	8	STR.												
PA707E	36'-6"	8	STR.												
PA801E	60'-0"	32	STR.												
PA803E	29'-8"	16	STR.												
PA804E	2'-1 1/4"	16	STR.												
PA805E	9'-8"	8	STR.												
PA806E	15'-3 1/4"	8	STR.												
PA807E	42'-10"	8	STR.												

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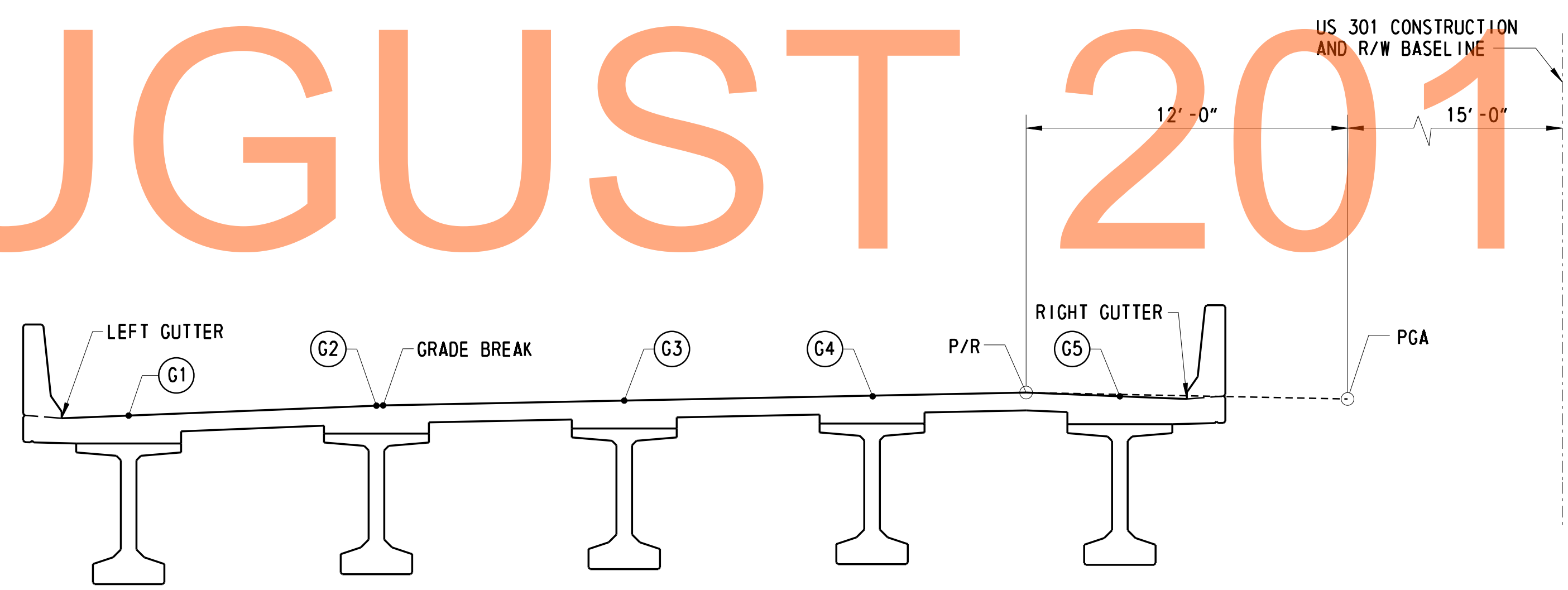


NOT FOR BIDDING

SB SPAN 1 FINISHED DECK ELEVATIONS

SCALE: 1/8" = 1'-0"

AUGUST 2015



TYPICAL SECTION

STATIONS AHEAD
SCALE: 1/4" = 1'-0"

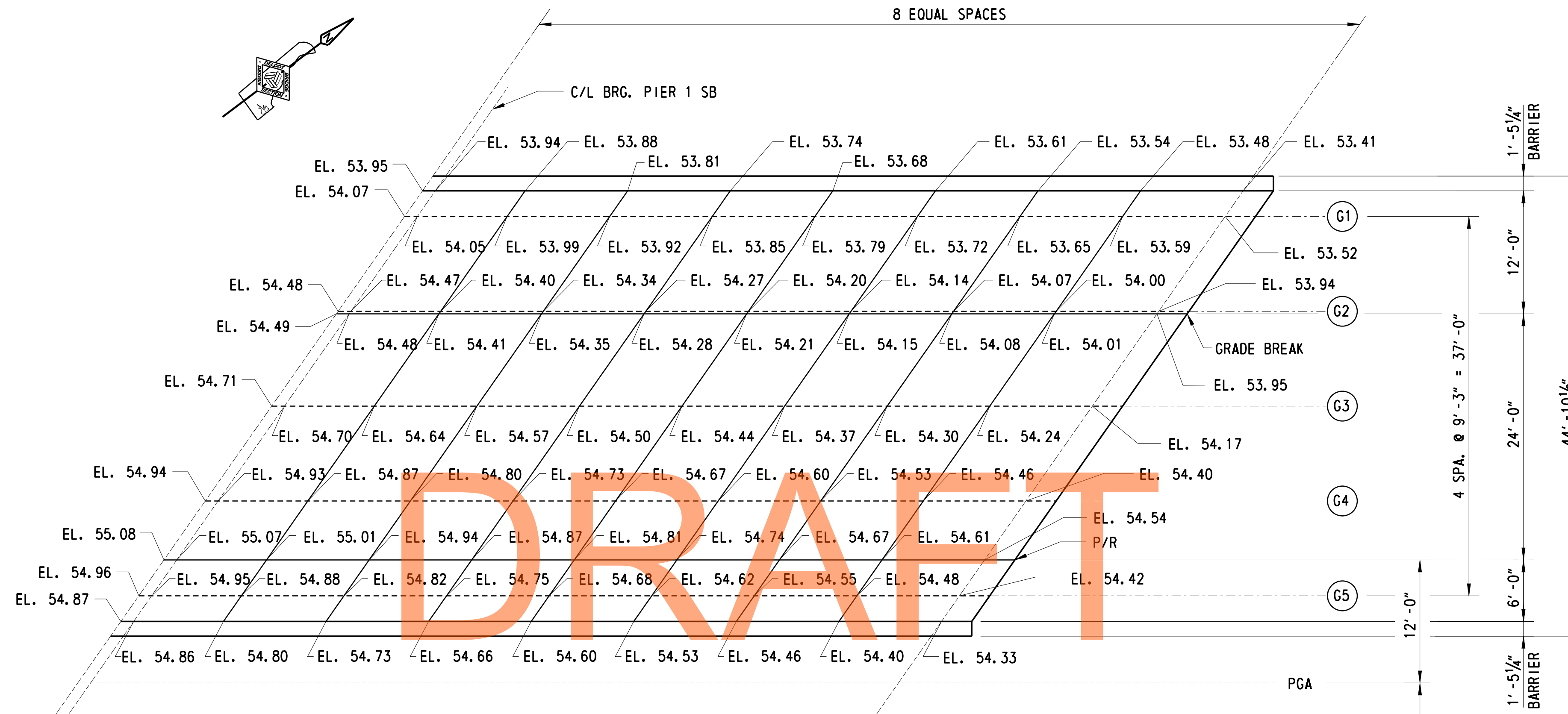
CROSS REFERENCE NOTES:

1. FOR VERTICAL CURVE DATA, SEE DWG. NO. 1-480 PE-1.
2. FOR DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-1.
3. FOR DECK REINFORCEMENT PLAN, SEE DWG. NO. 1-480 DK-2.
4. FOR DECK DETAILS, SEE DWG. NO. 1-480 DK-5.
5. FOR CROSS SLOPES, SEE DWG. NO. 1-480 TS-1.

ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	DW
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 FD-1
SHEET NO.
623
TOTAL SHTS.
1256

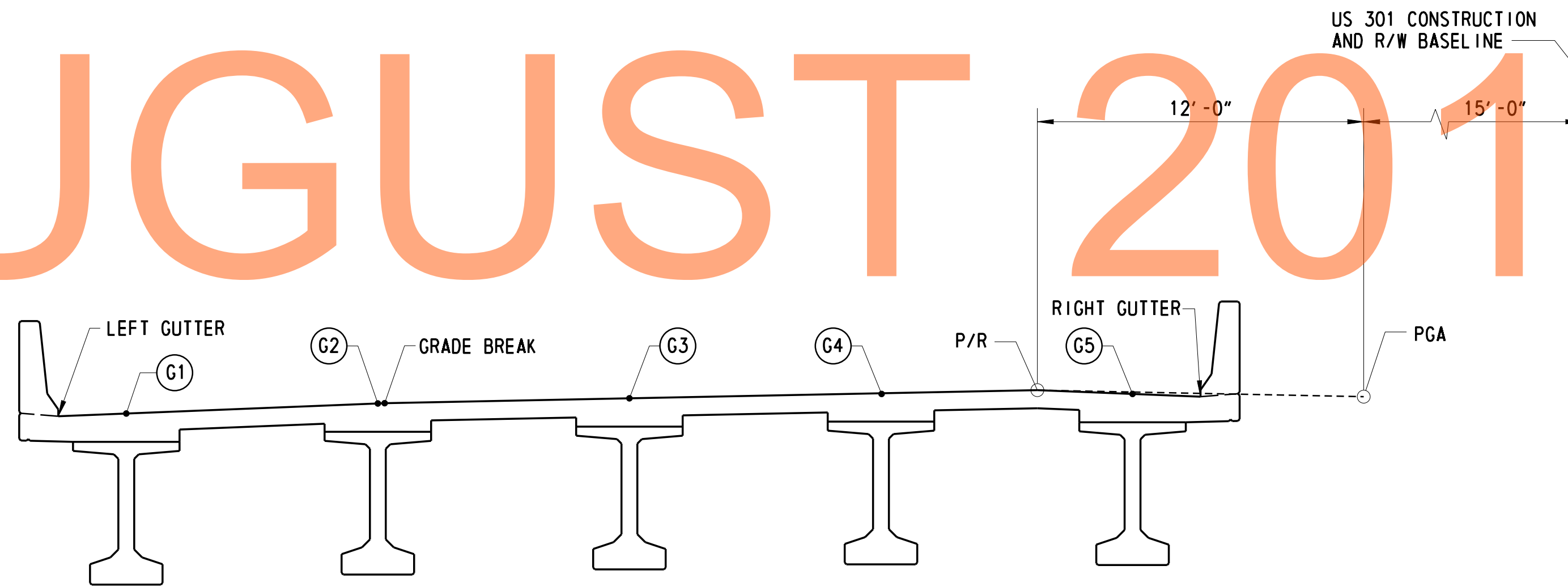


NOT FOR BIDDING

SB SPAN 2 FINISHED DECK ELEVATIONS

SCALE: 1/8" = 1'-0"

AUGUST 2015

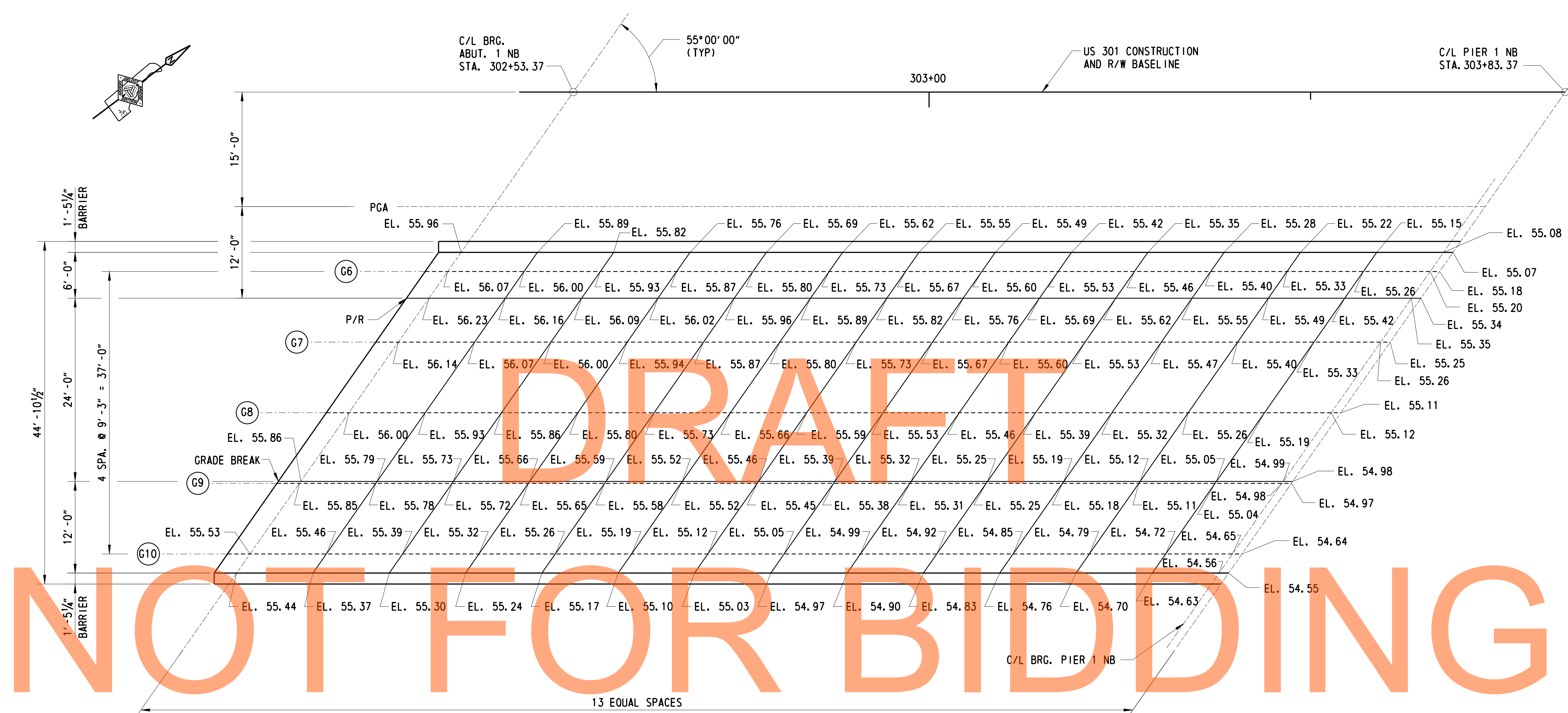


TYPICAL SECTION

STATIONS AHEAD
SCALE: 1/4" = 1'-0"

CROSS REFERENCE NOTES:

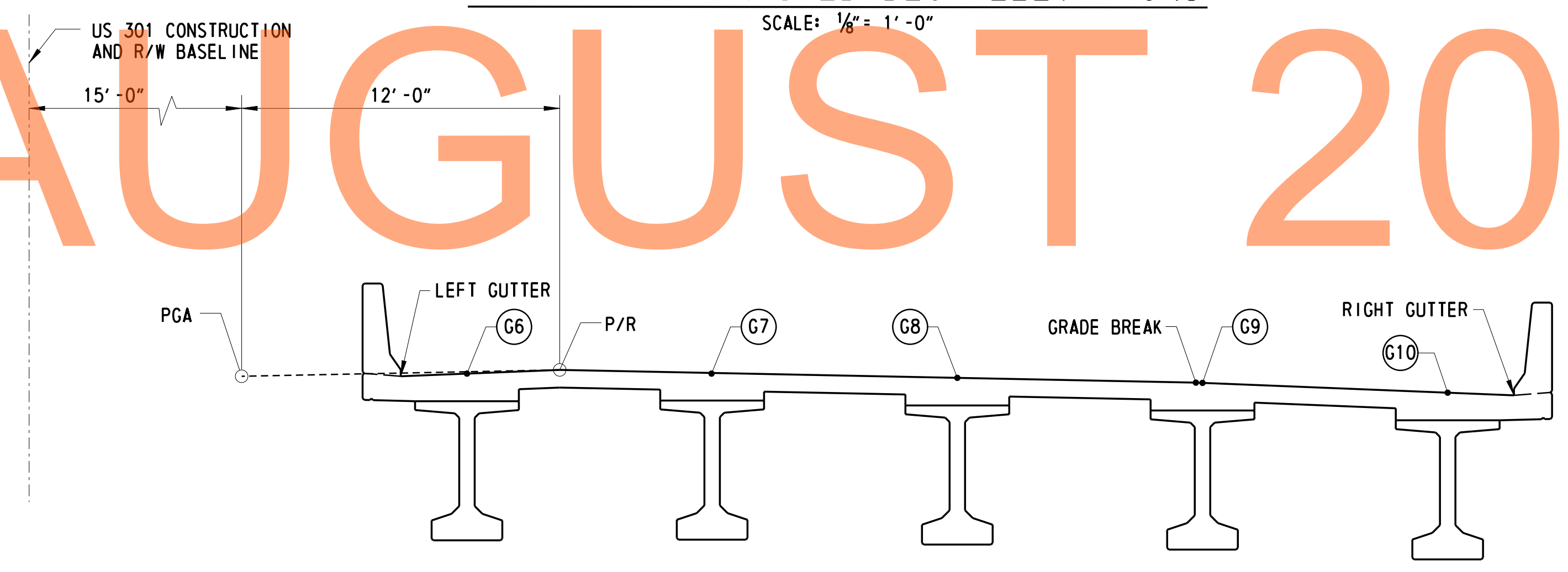
1. FOR VERTICAL CURVE DATA, SEE DWG. NO. 1-480 PE-1.
2. FOR DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-1.
3. FOR DECK REINFORCEMENT PLAN, SEE DWG. NO. 1-480 DK-2.
4. FOR DECK DETAILS, SEE DWG. NO. 1-480 DK-5.
5. FOR CROSS SLOPES, SEE DWG. NO. 1-480 TS-1.



NOT FOR BIDDING

NB SPAN 1 FINISHED DECK ELEVATIONS

AUGUST 2015



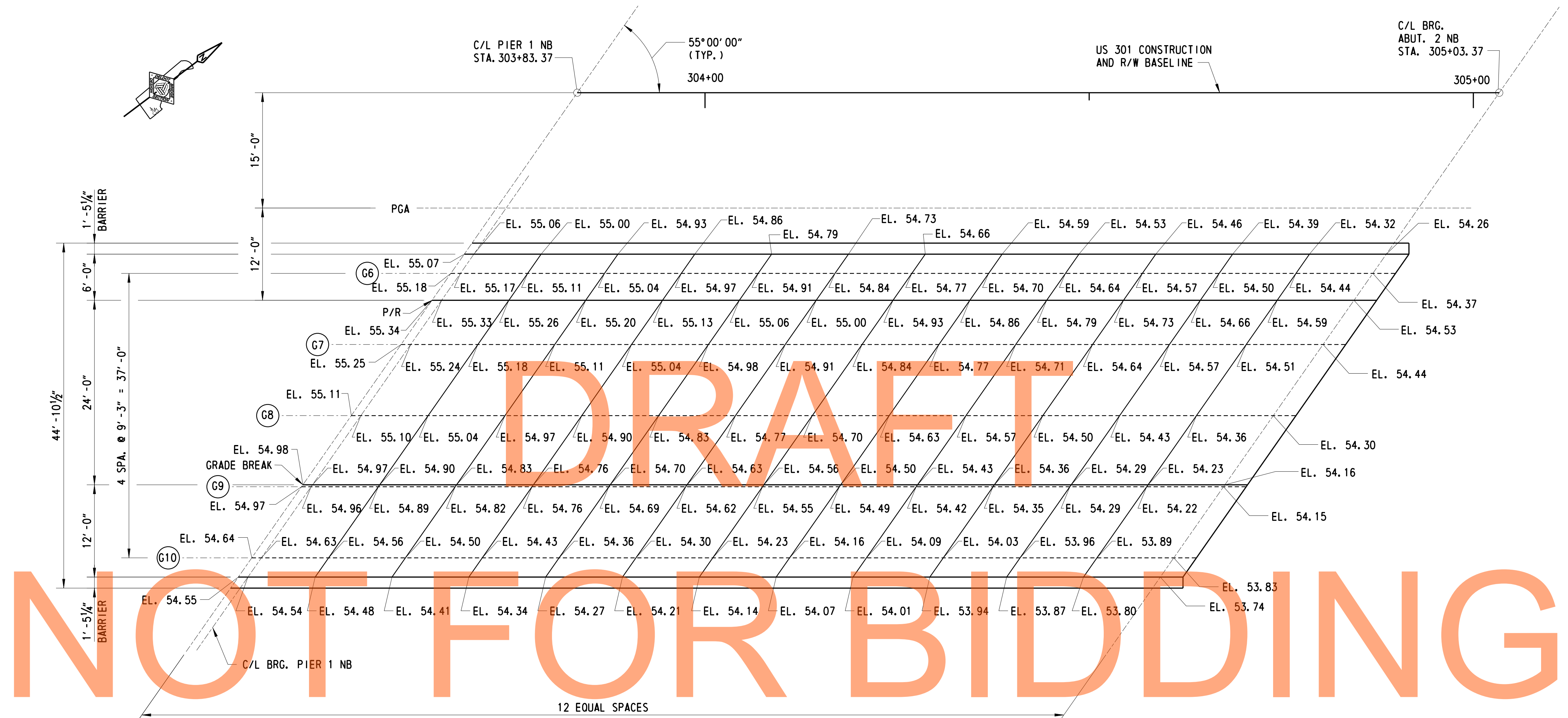
TYPICAL SECTION
STATIONS AHEAD
SCALE: 1/4" = 1'-0"

- CROSS REFERENCE NOTES:**
1. FOR VERTICAL CURVE DATA, SEE DWG. NO. 1-480 PE-2.
 2. FOR DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-3.
 3. FOR DECK REINFORCEMENT PLAN, SEE DWG. NO. 1-480 DK-4.
 4. FOR DECK DETAILS, SEE DWG. NO. 1-480 DK-5.
 5. FOR CROSS SLOPES, SEE DWG. NO. 1-480 TS-1.

ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	DW
COUNTY	CHECKED BY:	JW
NEW CASTLE		

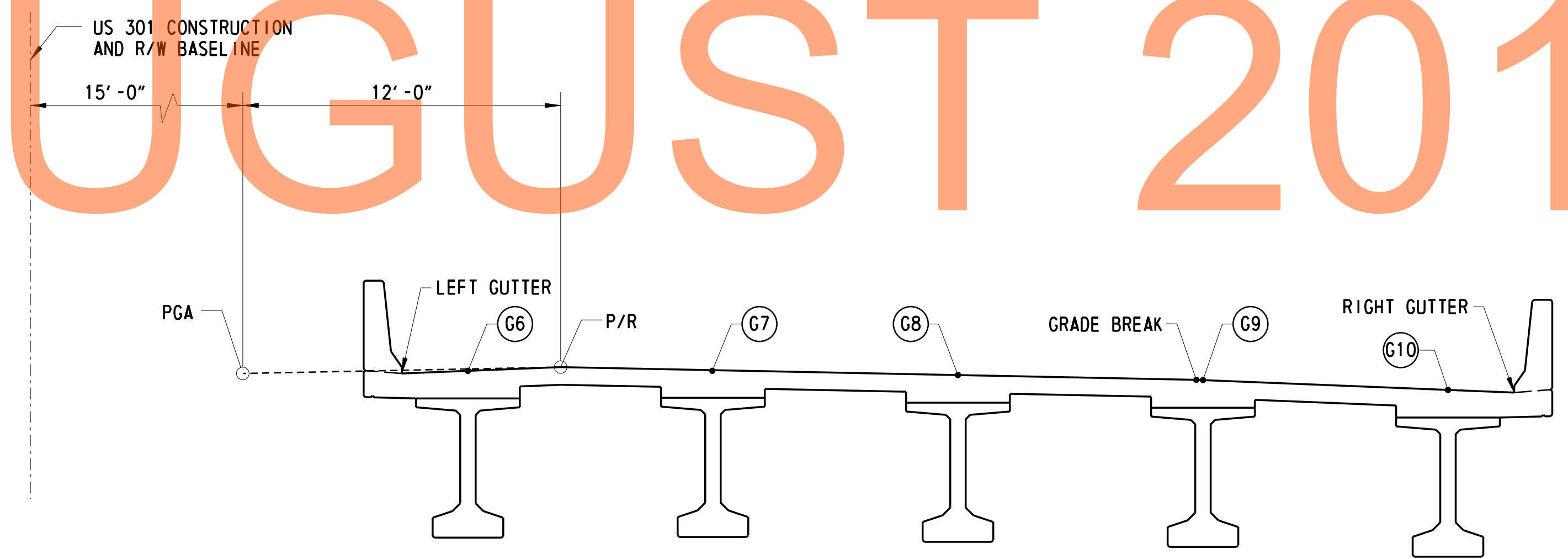
1-480 FD-3
SHEET NO.
625
TOTAL SHTS.
1256



NB SPAN 2 FINISHED DECK ELEVATIONS

SCALE: 1/8" = 1'-0"

AUGUST 2015



TYPICAL SECTION

STATIONS AHEAD
SCALE: 1/4" = 1'-0"

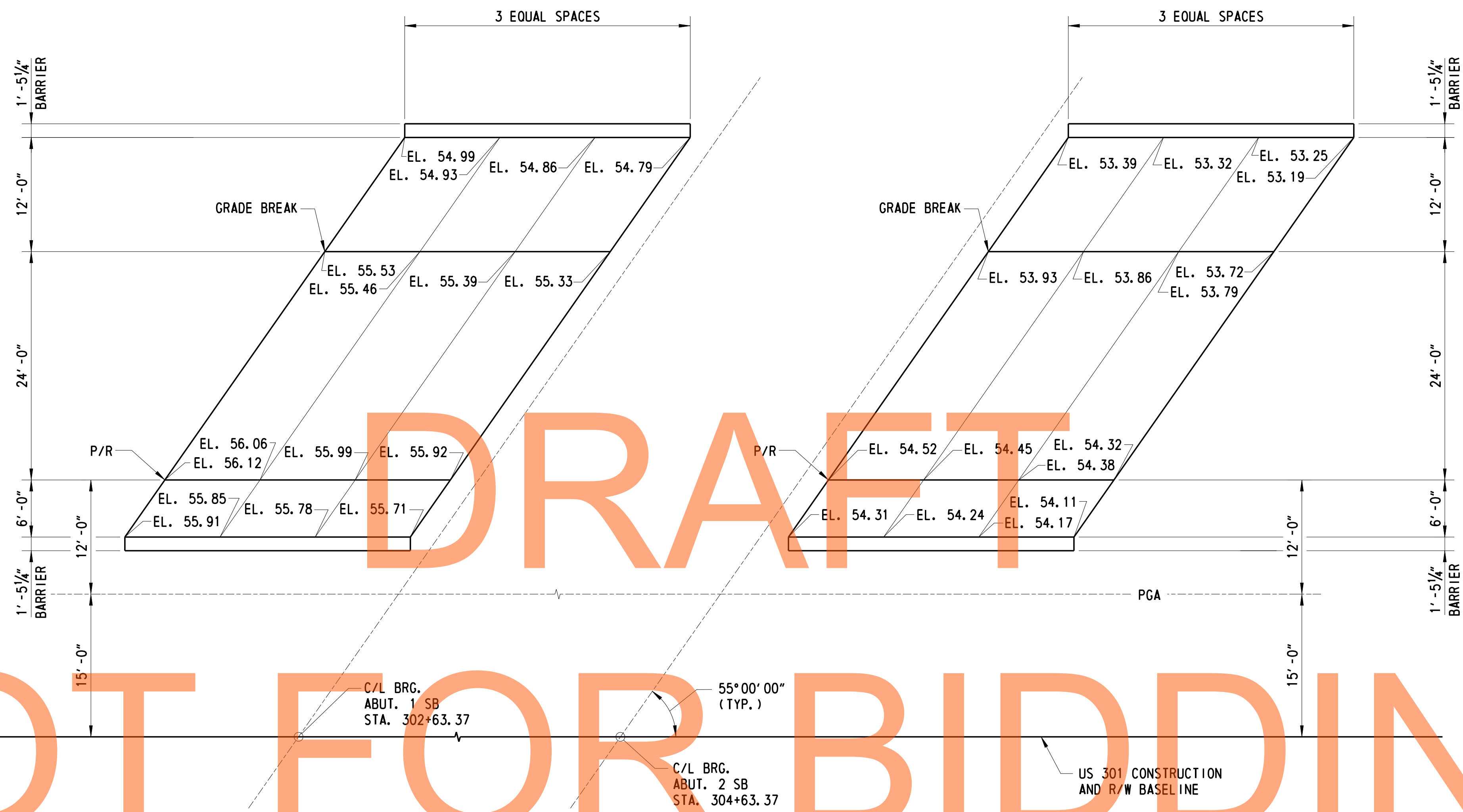
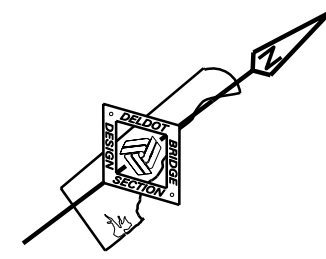
CROSS REFERENCE NOTES:

1. FOR VERTICAL CURVE DATA, SEE DWG. NO. 1-480 PE-2.
2. FOR DECK POURING SEQUENCE, SEE DWG. NO. 1-480 DK-3.
3. FOR DECK REINFORCEMENT PLAN, SEE DWG. NO. 1-480 DK-4.
4. FOR DECK DETAILS, SEE DWG. NO. 1-480 DK-5.
5. FOR CROSS SLOPES, SEE DWG. NO. 1-480 TS-1.

ADDENDUMS / REVISIONS

CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: DW CHECKED BY: JW

1-480 FD-4
SHEET NO. 626
TOTAL SHTS. 1256



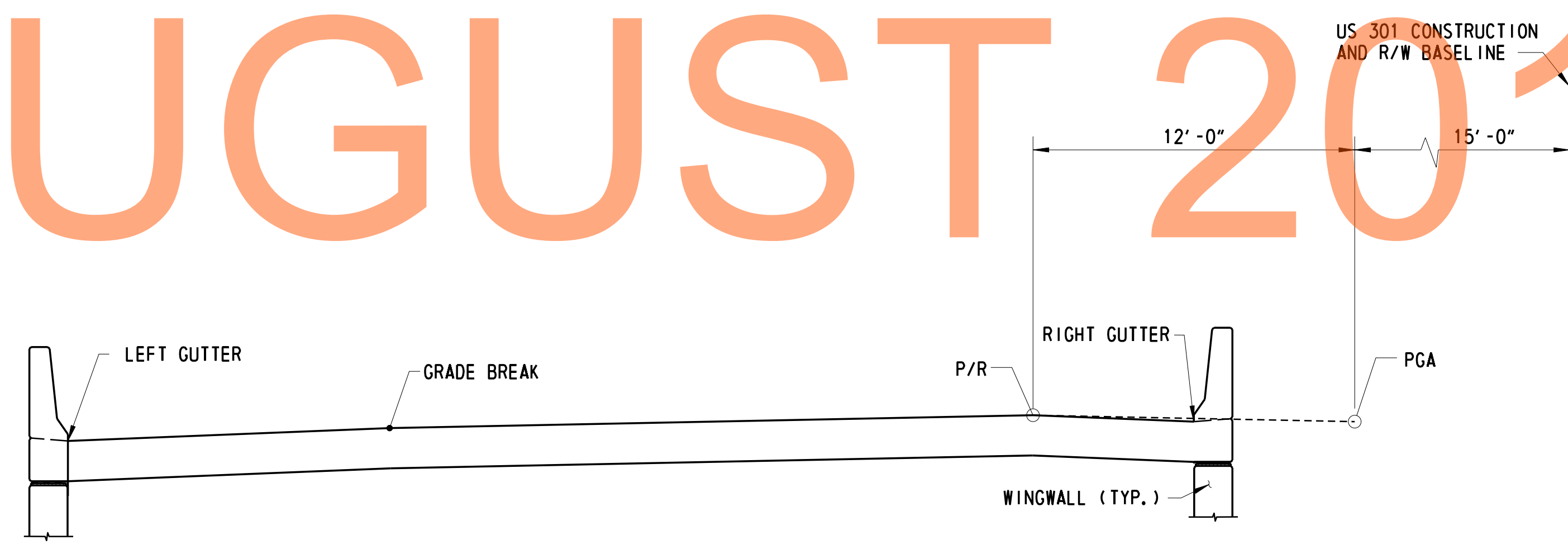
DRAFT

NOT FOR BIDDING

SB FINISHED APPROACH SLAB ELEVATIONS

SCALE: 1/8" = 1' - 0"

AUGUST 2015



TYPICAL SECTION

STATIONS AHEAD
SCALE: 1/4" = 1' - 0"

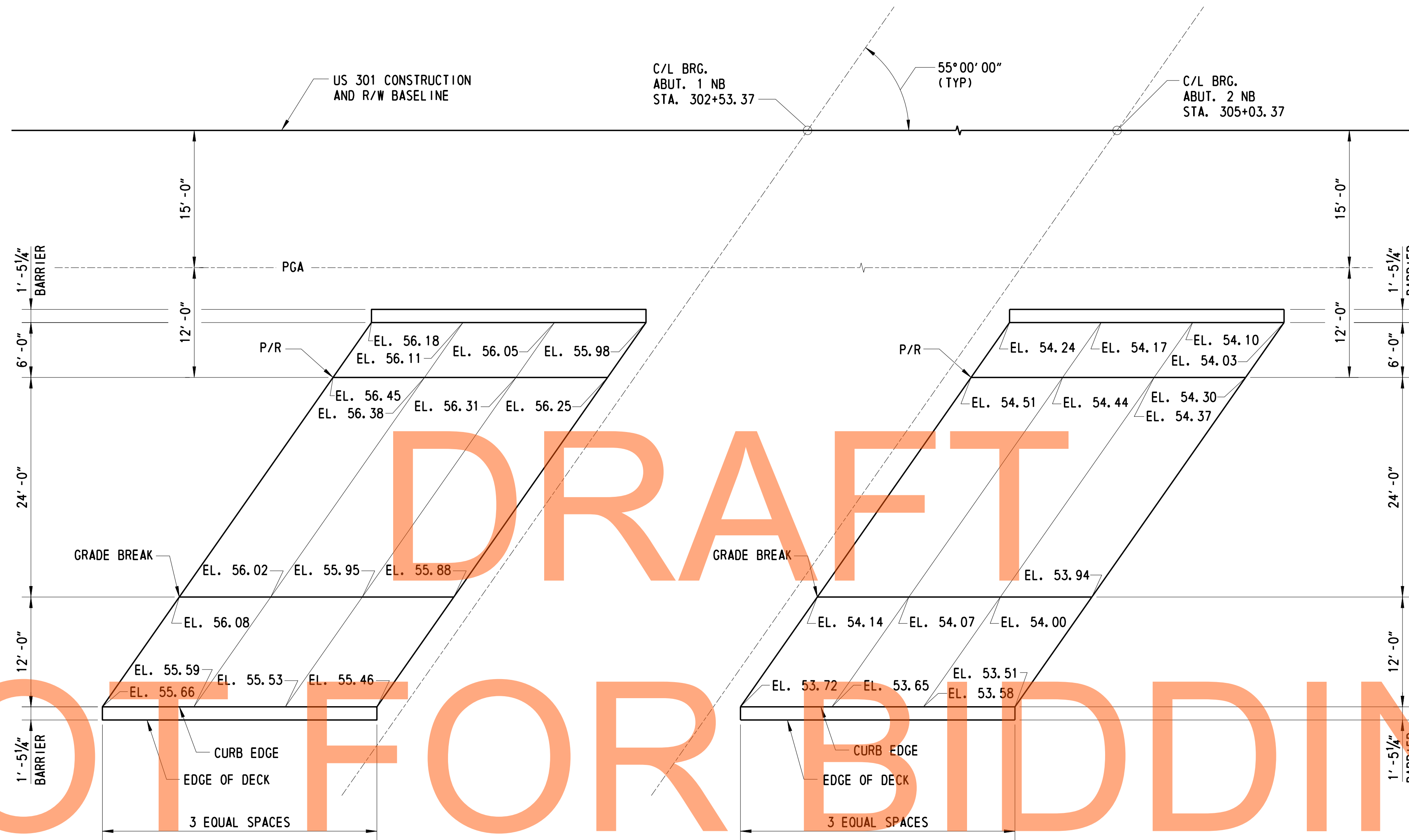
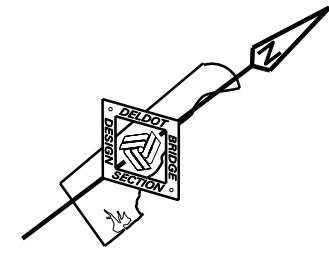
CROSS REFERENCE NOTES:

1. FOR VERTICAL CURVE DATA, SEE DWG. NO. 1-480 PE-1.
2. FOR APPROACH SLAB REINFORCEMENT PLAN, SEE DWG. NO. 1-480 AS-1.
3. FOR APPROACH SLAB DETAILS, SEE DWG. NO. 1-480 AS-3.

ADDENDUMS / REVISIONS

CONTRACT T200911303	BRIDGE NO. 1-480N&S
COUNTY NEW CASTLE	DESIGNED BY: PRH CHECKED BY: JW

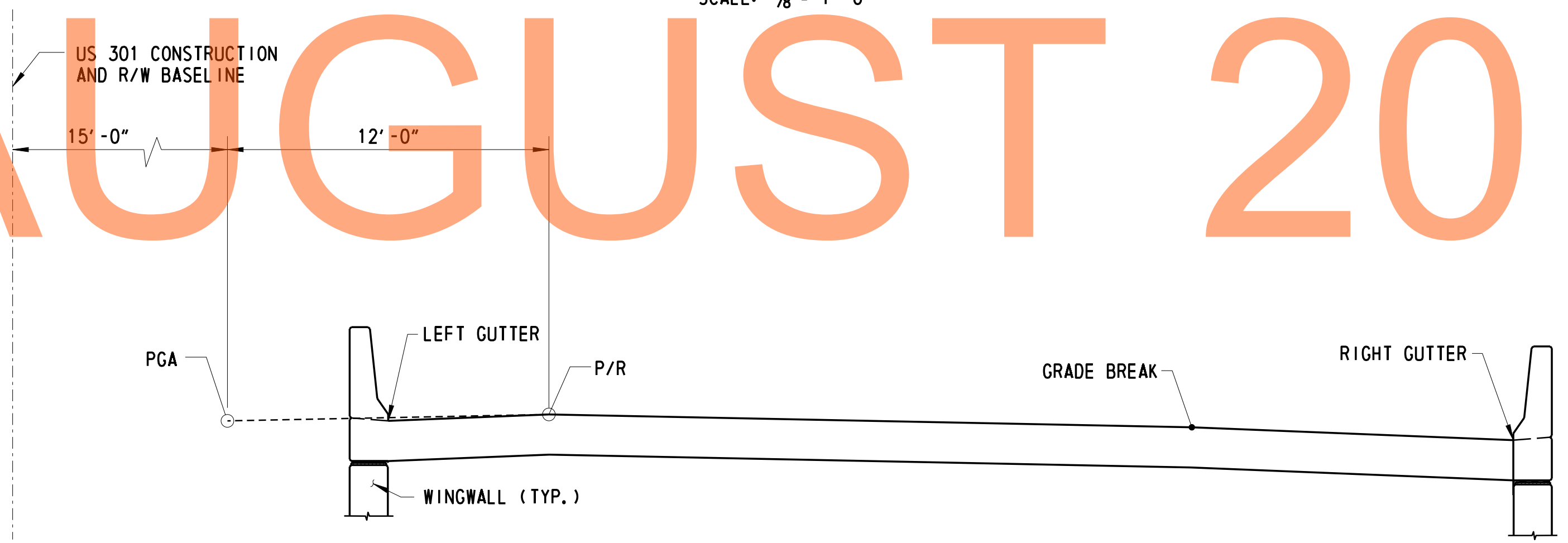
1-480 FD-5
SHEET NO. 627
TOTAL SHTS. 1256



NB FINISHED APPROACH SLAB ELEVATIONS

SCALE: 1/8" = 1'-0"

AUGUST 2015



TYPICAL SECTION

STATIONS AHEAD
SCALE: 1/4" = 1'-0"

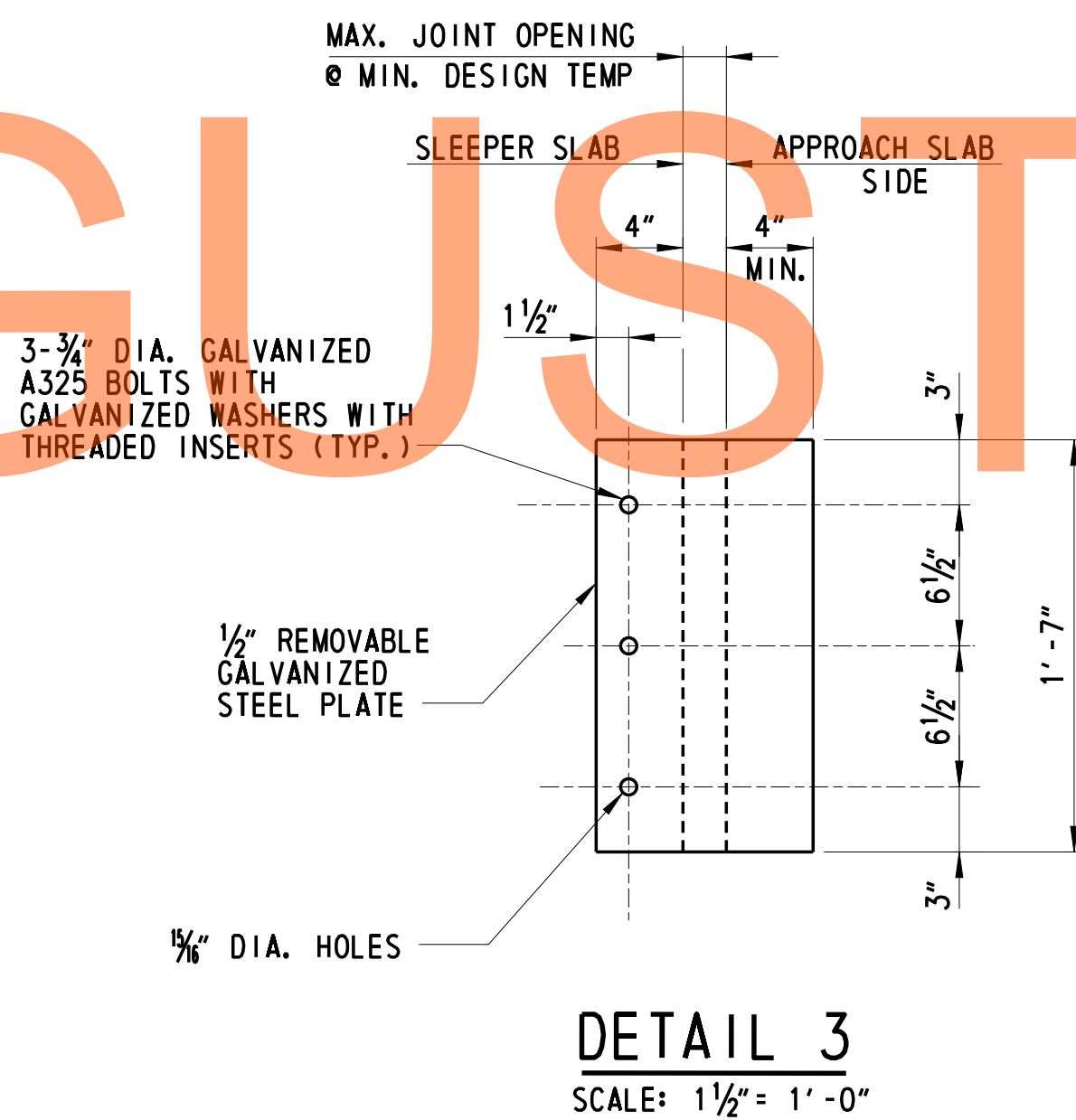
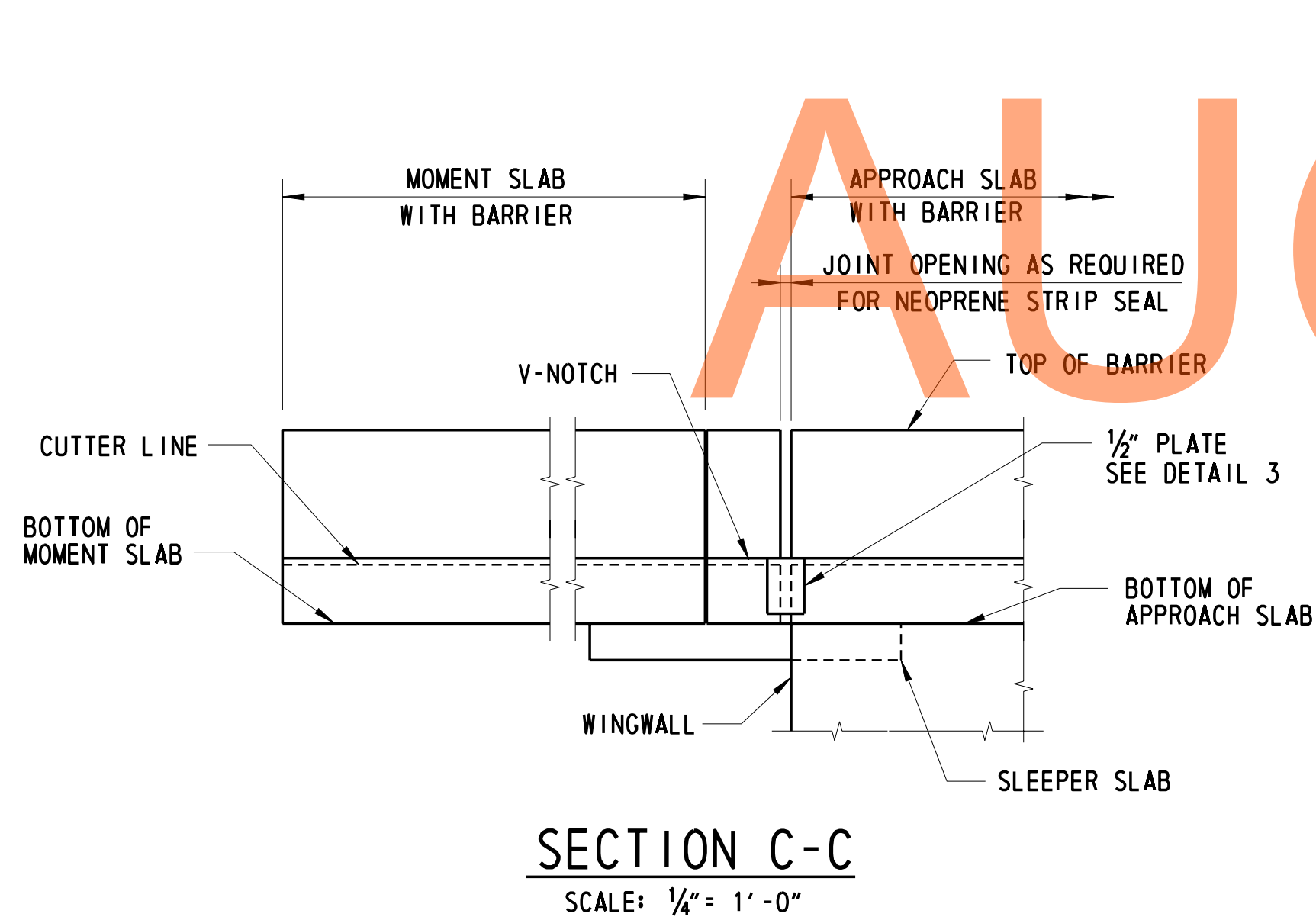
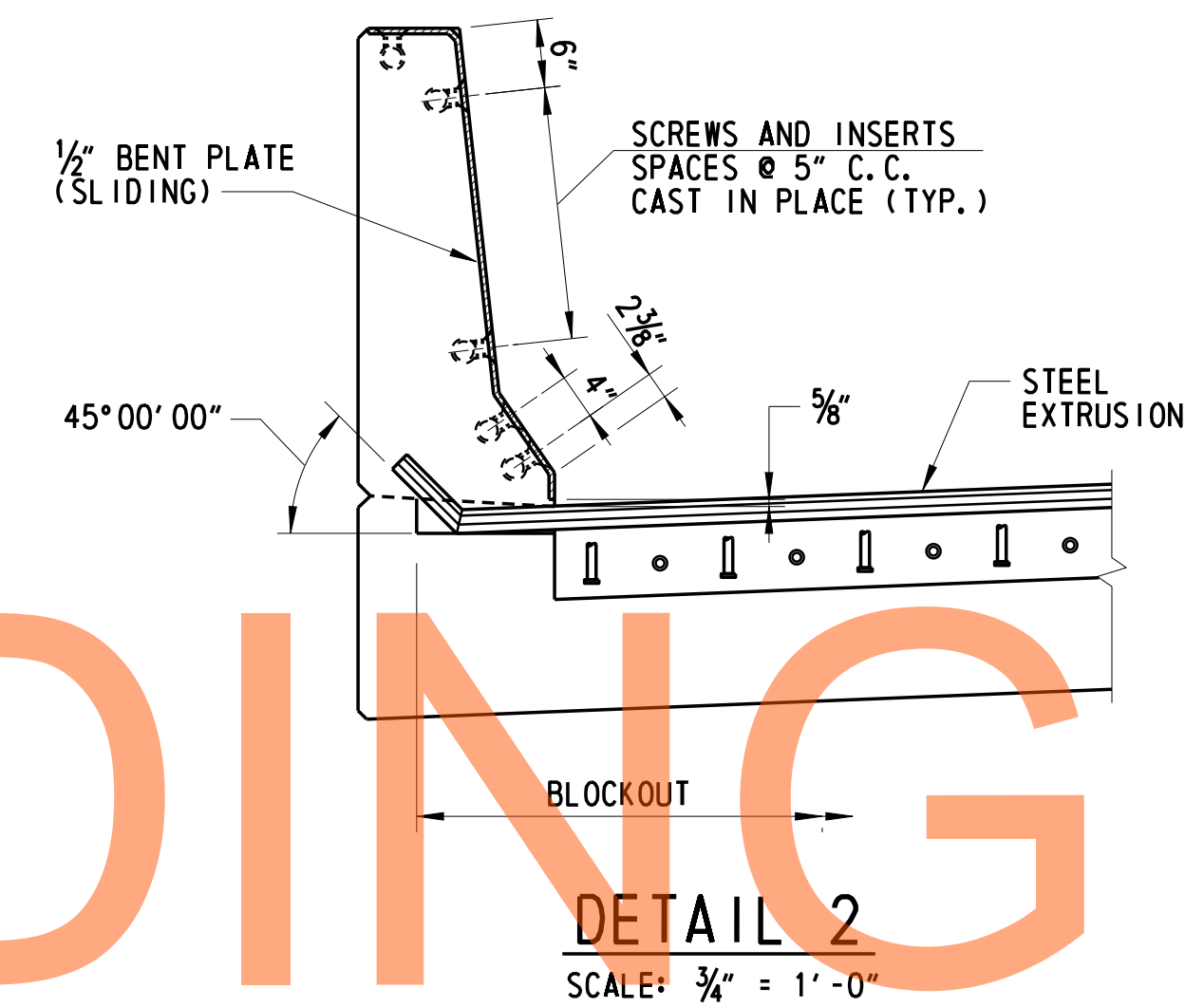
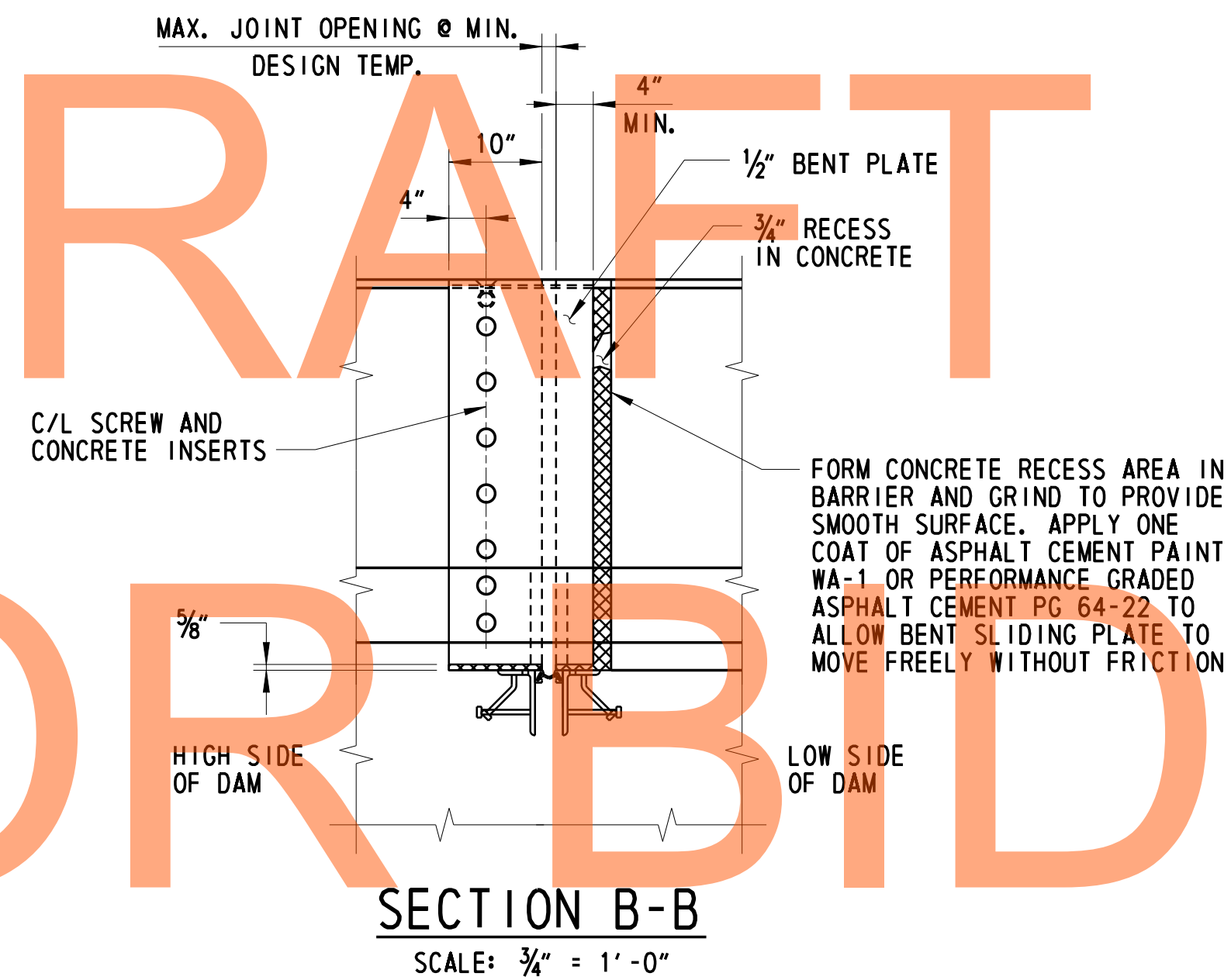
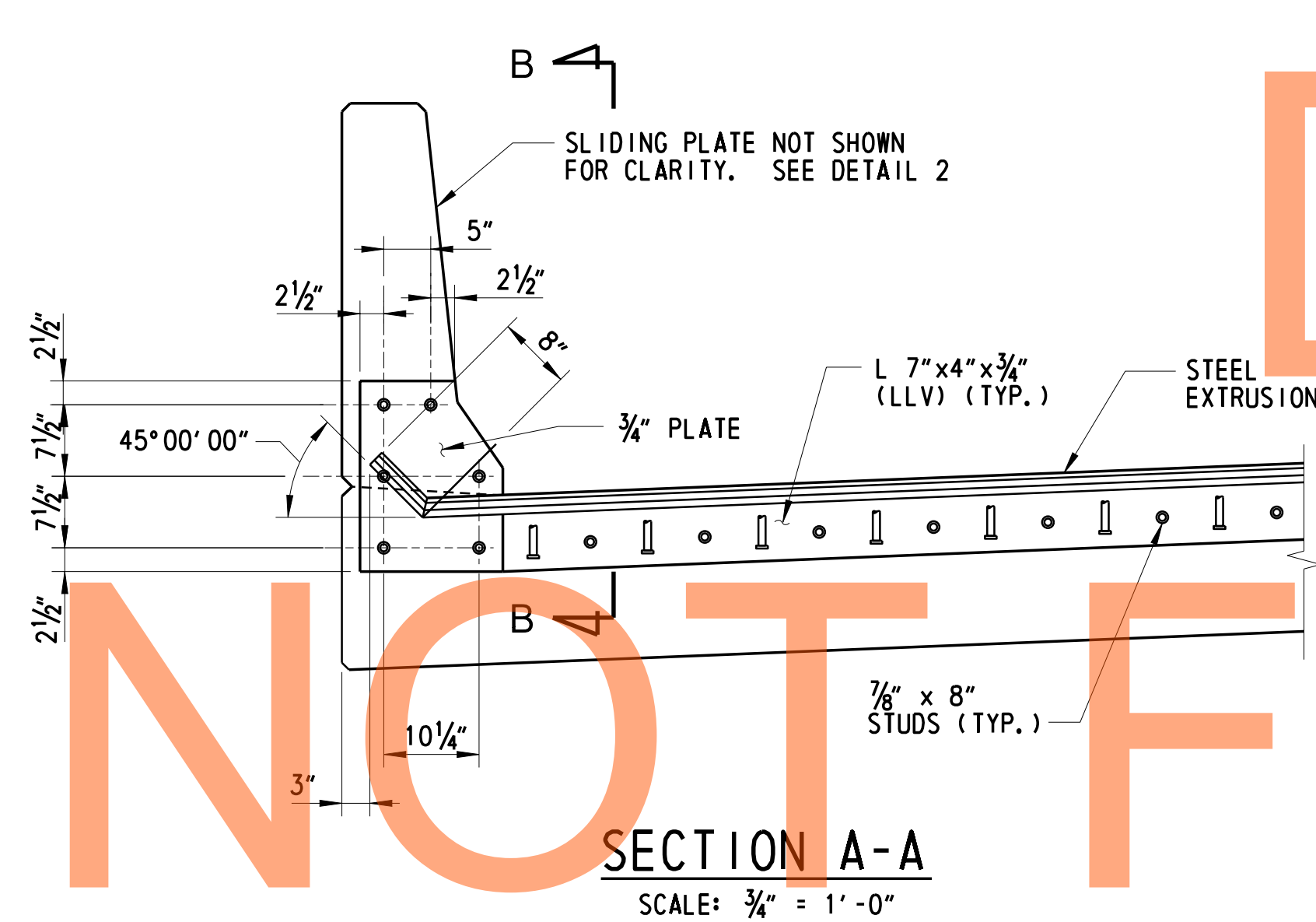
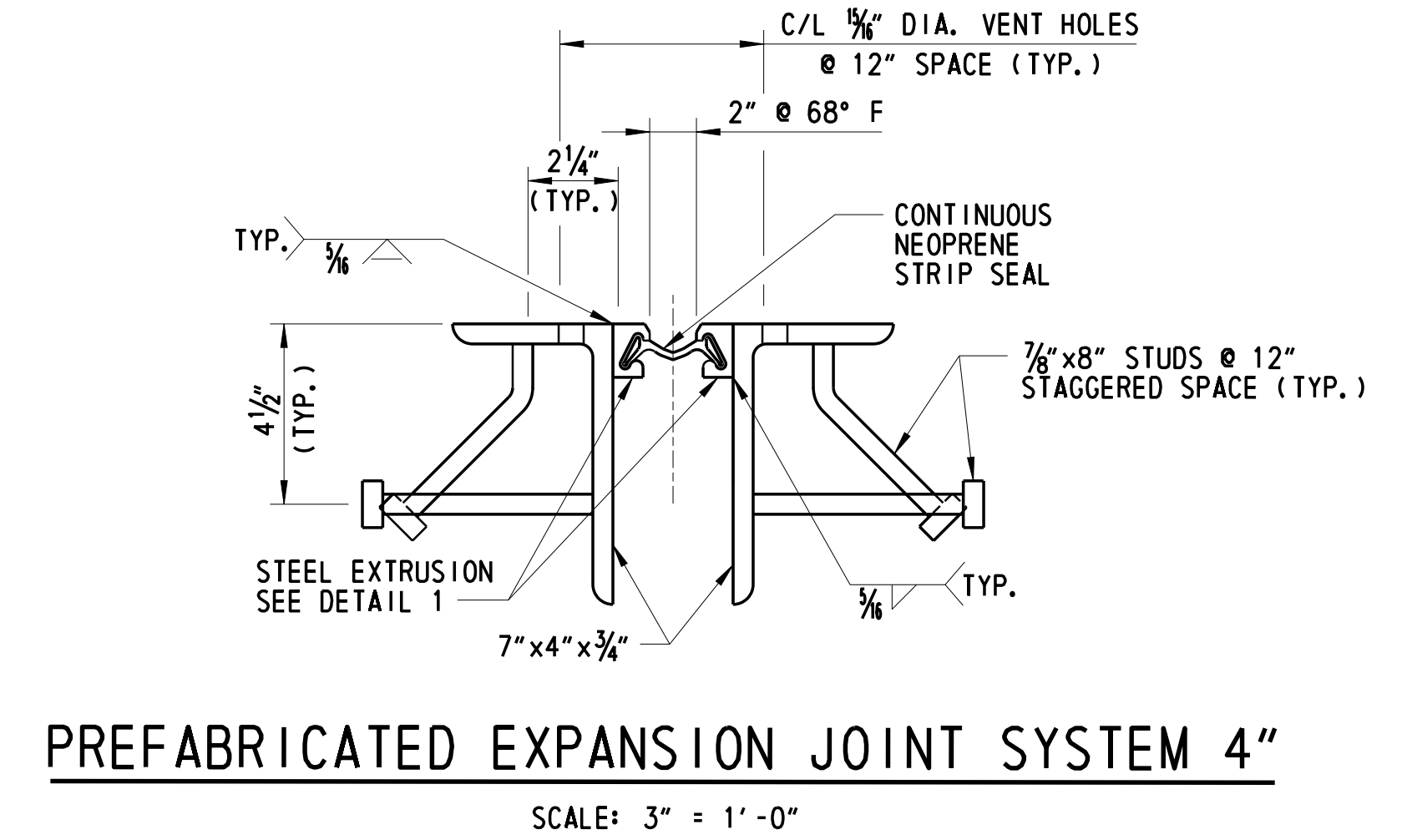
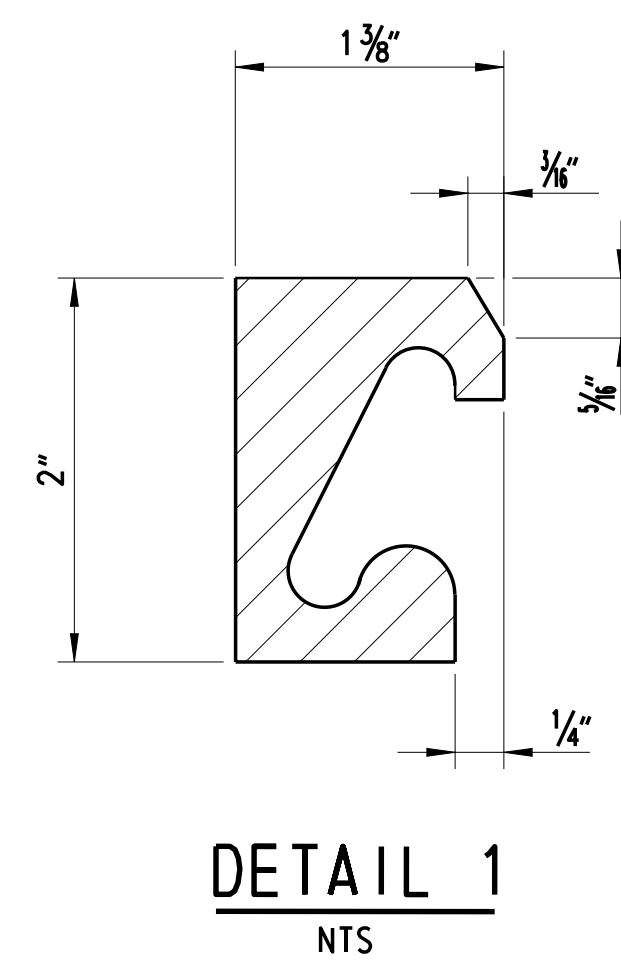
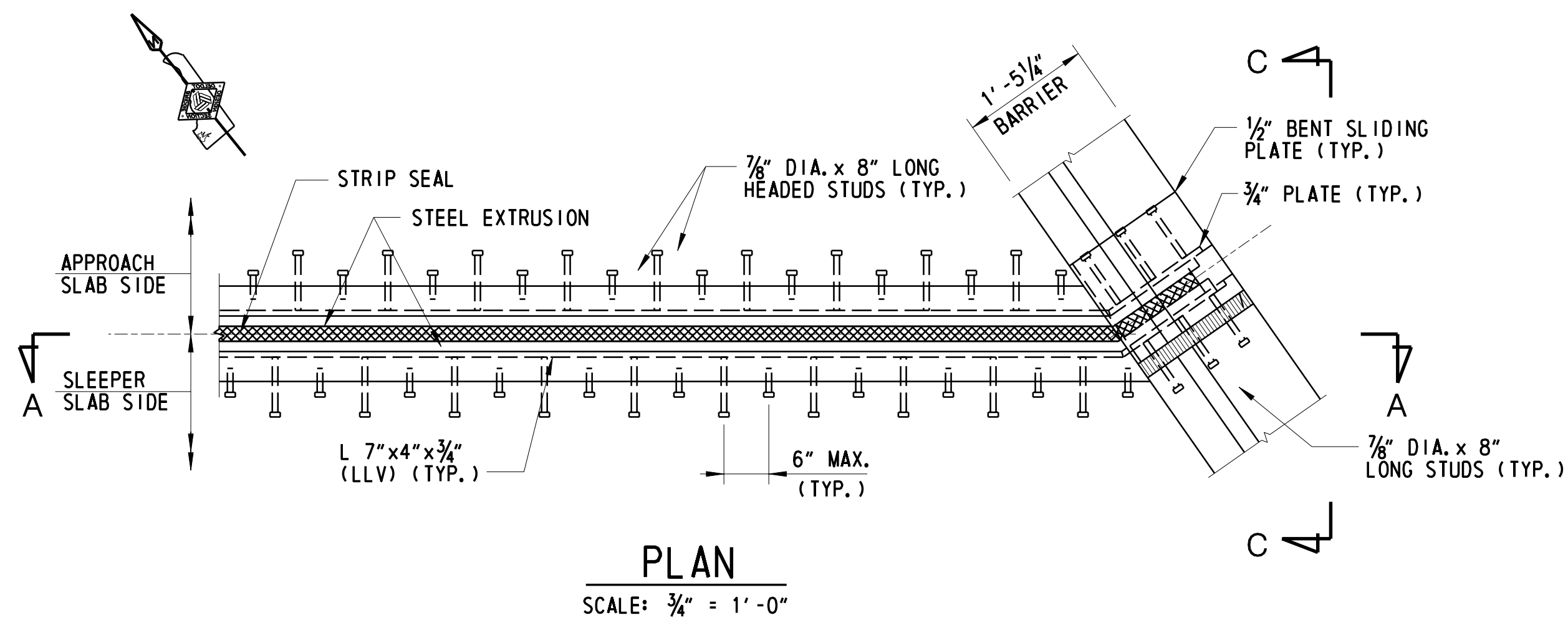
CROSS REFERENCE NOTES:

1. FOR VERTICAL CURVE DATA, SEE DWG. NO. 1-480 PE-2.
2. FOR APPROACH SLAB REINFORCEMENT PLAN, SEE DWG. NO. 1-480 AS-2.
3. FOR APPROACH SLAB DETAILS, SEE DWG. NO. 1-480 AS-3.

ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	PRH
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 FD-6
SHEET NO.
628
TOTAL SHTS.
1256

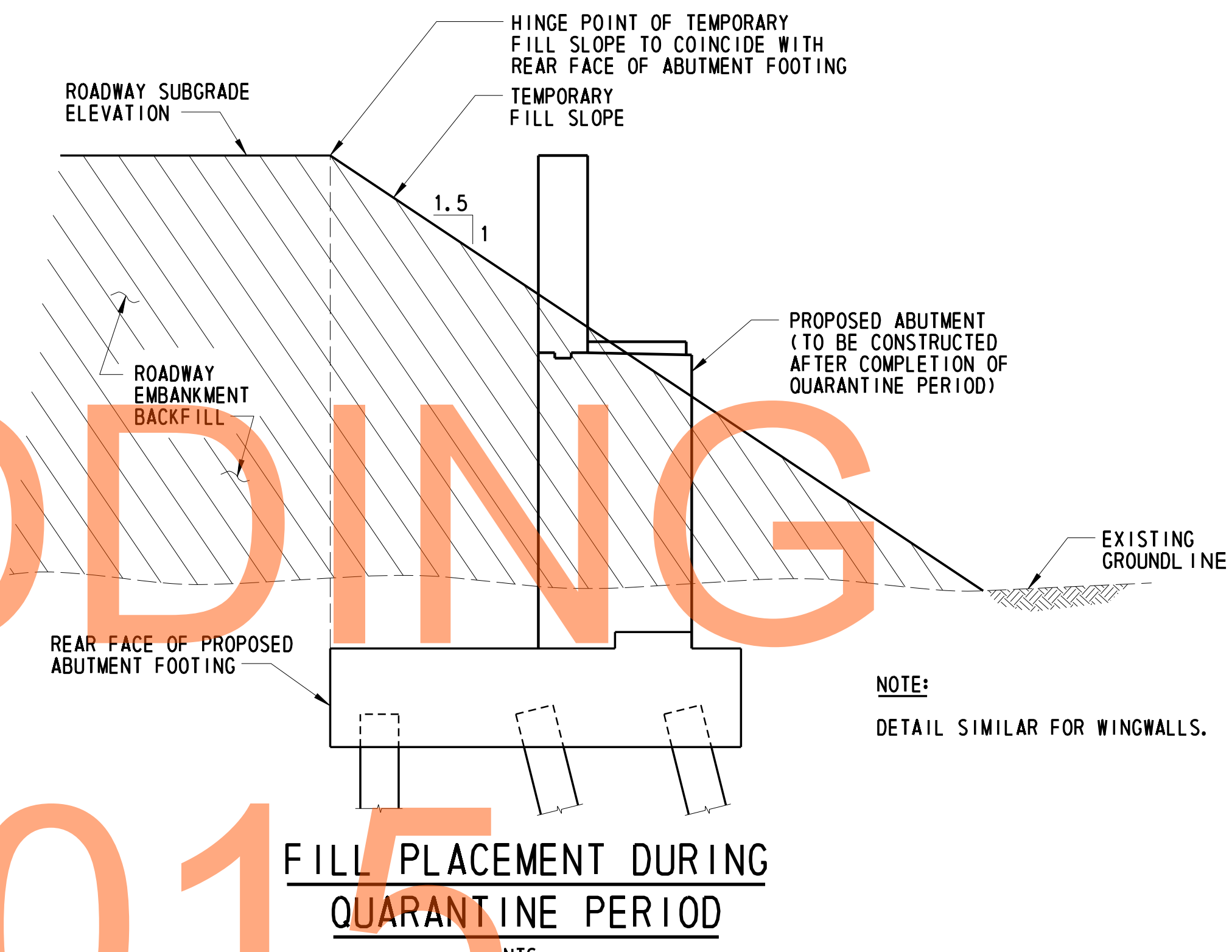
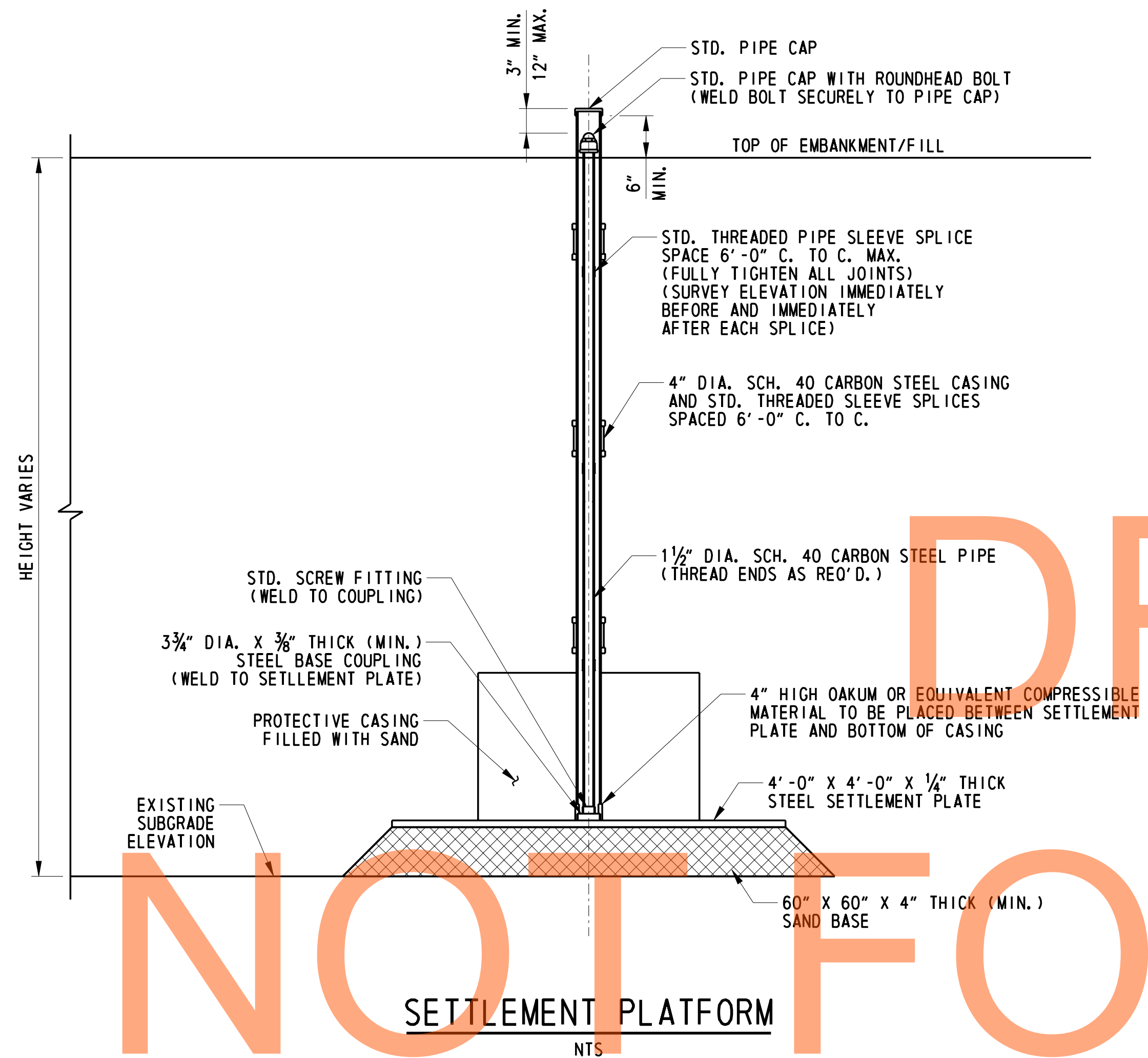


LOCATION	JOINT OPENING (INCH)							
	TEMPERATURE (°F)							
	10	20	30	40	50	60	70	80
ABUTMENT 1 SB	2 3/4	2 3/8	2 1/2	2 3/8	2 1/4	2 1/8	2	1 3/4
ABUTMENT 2 SB	2 3/4	2 1/2	2 3/8	2 1/4	2 3/8	2 1/8	2	1 7/8
ABUTMENT 1 NB	2 1/4	2 1/8	2 3/8	2 3/8	2 1/4	2 1/8	2	1 3/4
ABUTMENT 2 NB	2 3/4	2 3/8	2 1/2	2 3/8	2 1/4	2 1/8	2	1 3/4

NOTES:

- STRUCTURAL STEEL FOR DECK JOINTS SHALL CONFORM TO AASHTO M270, GRADE 36.
- STEEL EXTRUSIONS FOR DECK JOINTS SHALL CONFORM TO AASHTO M270, GRADE 36.
- THE NEOPRENE STRIP SEAL SHALL BE PROVIDED CONTINUOUS THROUGHOUT THE LIMITS OF THE DECK. SPLICING OF THE NEOPRENE STRIP SEAL IS NOT PERMITTED.
- COST FOR MATERIALS, FABRICATION AND INSTALLATION OF STRIP SEAL EXPANSION JOINTS, 4" MOVEMENT CLASSIFICATION, WITH STEEL ELEMENTS INCLUDING STUDS AND STEEL EXTRUSIONS, SHALL BE PAID FOR UNDER ITEM 605512.
- CONSTRUCT EXPANSION JOINT TO MATCH ROADWAY GRADE AND CROSS SLOPE.
- GRIND ALL STEEL EDGES EXPOSED TO TRAFFIC TO 3/16" MIN. RADIUS.
- BOND NEOPRENE STRIP SEAL TO EXTRUSION WITH APPROVED ADHESIVE.

SETTLEMENT PLATFORM	STATION	OFFSET	SETTLEMENT MONUMENT	STATION	OFFSET
SP-1-480-1	302+07.81	39.00' RT	SM-1-480-1	302+04.31	44.00' RT
SP-1-480-2	302+72.43	39.00' LT	SM-1-480-2	302+75.93	44.00' LT
SP-1-480-3	304+94.32	39.00' RT	SM-1-480-3	304+90.82	44.00' RT
SP-1-480-4	305+08.94	39.00' LT	SM-1-480-4	305+12.44	44.00' LT



NOTES:

1. THE BASE OF THE SETTLEMENT PLATFORM SHALL BE PLACED ON THE TOP OF THE EXISTING GROUND.
2. READINGS ON THE SETTLEMENT PLATFORMS SHALL BE MADE AFTER THE INITIAL INSTALLATION OF THE RISER AND CASING PIPES AND INSTALLATION RECORD SHEETS ARE APPROVED BY THE ENGINEER AND PRIOR TO FILL PLACEMENT. DURING FILL PLACEMENT, READINGS ON ALL SETTLEMENT PLATFORMS SHALL BE TAKEN AT A MINIMUM OF THREE (3) CALENDAR DAY INTERVALS. AFTER COMPLETION OF THE FILL AND SURCHARGE PLACEMENT, INSTALL SETTLEMENT MONUMENTS IF INDICATED ON THE BRIDGE PLANS AND TAKE INITIAL READINGS. READINGS ON ALL SETTLEMENT MONITORING DEVICES SHALL THEN BE TAKEN AT A MINIMUM OF THREE (3) CALENDAR DAY INTERVALS. AFTER THE FILL HAS BEEN COMPLETED AND TWO (2) SUCCESSIVE READINGS OF EACH DEVICE HAS RECORDED LESS THAN OR EQUAL TO 0.1 INCH, THE IMMEDIATE SETTLEMENT WILL BE DEEMED COMPLETE AND THE GEOTECHNICAL ENGINEER CAN RELEASE THE SUBSTRUCTURE FOR REMOVAL OF SURCHARGE AND INSTALLATION OF PRODUCTION PILES. AFTER COMPLETION OF THE ABUTMENT, THE CONTRACTOR SHALL ESTABLISH REFERENCE POINTS TO MONITOR SETTLEMENT ON TOP OF THE ABUTMENT SEAT WITHIN 5 FEET OF ALL ENDS AND CORNERS AND AT THE CENTER OF BRIDGES AND THE CENTERLINE OF US301. AFTER THE CONCRETE ABUTMENTS HAVE BEEN CONSTRUCTED, READINGS ON ALL SETTLEMENT MONITORING DEVICES AND REFERENCE POINTS SHALL CONTINUE TO BE TAKEN AT A MINIMUM OF THIRTY (30) DAY INTERVALS FOR THE NEXT SIX (6) MONTHS OR AS DIRECTED BY THE ENGINEER.

NOTE:

DETAIL SIMILAR FOR WINGWALLS.

FILL PLACEMENT DURING QUARANTINE PERIOD

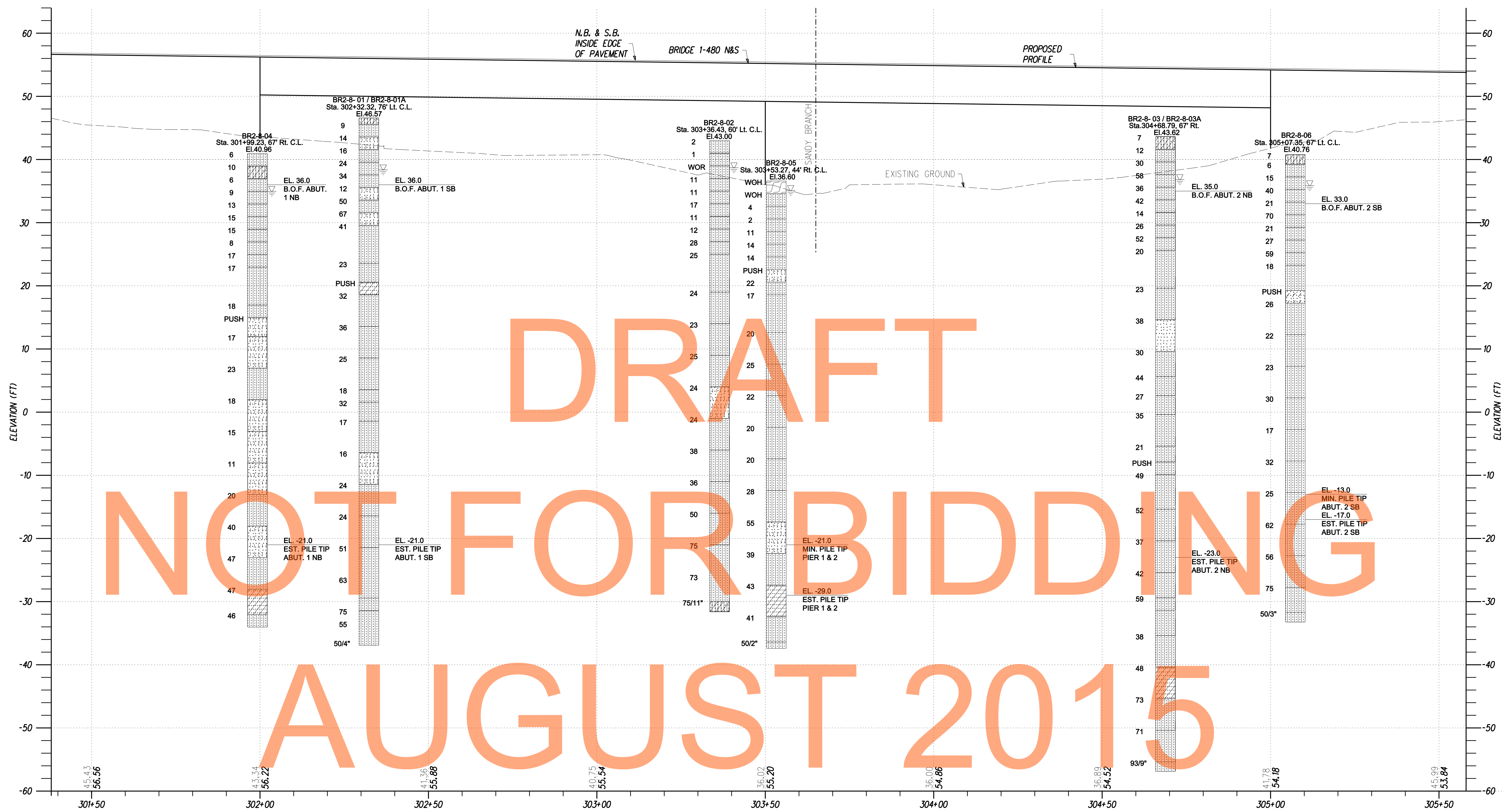
CROSS REFERENCE NOTE:

FOR LOCATION OF SETTLEMENT PLATFORMS AND MONUMENTS, SEE DWG. NOS. 1-480 PE-1 AND 1-480 PE-2.

ADDENDUMS / REVISIONS

CONTRACT	BRIDGE NO.	1-480N&S
T200911303	DESIGNED BY:	PRH
COUNTY	CHECKED BY:	JW
NEW CASTLE		

1-480 DT-1	
SHEET NO.	630
TOTAL SHTS.	1256



DRAFT
NOT FOR BIDDING
AUGUST 2015

SYMBOL DESCRIPTION		KEY TO SYMBOLS	
STRATA SYMBOLS			
	SILTY SAND		POORLY GRADED SAND
	CLAYEY SAND		LOW PLASTICITY ORGANIC SILTS
	POORLY GRADED CLAYEY SILTY SAND		POORLY GRADED SAND WITH CLAY
	POORLY GRADED SAND WITH SILT	MISC. SYMBOLS	
			WATER TABLE DURING DRILLING

