

GENERAL NOTES:

DESIGN SPECIFICATIONS:

1. AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 2009, AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", 2002. DELAWARE DEPARTMENT OF TRANSPORTATION DESIGN MANUAL, MAY 2005, INCLUDING LATEST REVISIONS JANUARY 2008.

DESIGN LOADS:

1. THE DESIGN WIND SPEED IS 100 MPH (3-SECOND GUST WIND SPEED) BASED ON A 50-YEAR RECURRENCE INTERVAL.
2. THE DESIGN WEIGHT FOR THE DMS (DYNAMIC MESSAGE SIGN) IS 3500 POUNDS. DESIGN OF THE STRUCTURAL SUPPORTS AND FOUNDATIONS CONSIDERS A 4'-0" ECCENTRICITY FOR THE DMS. DESIGN FOR STATIC SIGNS IS FOR STANDARD ALUMINUM EXTRUDED SIGN PANELS.
3. THE DESIGN ICE LOAD IS 3 PSF.
4. FATIGUE DESIGN IS BASED ON AN IMPORTANCE FACTOR OF CATEGORY I FOR NATURAL WIND GUSTS AND TRUCK INDUCED GUSTS FOR ALL STATIC SIGN SUPPORT STRUCTURES AND DMS SUPPORT STRUCTURES.
5. ALL OVERHEAD SIGN STRUCTURE FOUNDATIONS ARE DESIGNED FOR 75% MINIMUM FOOTING COMPRESSION AREA AND 11KSF MAXIMUM BEARING CAPACITY.

GENERAL:

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND CONTRACT SPECIAL PROVISIONS. WELDING SHALL CONFORM TO AWS D1.1 AND ANSI/AASHTO/AWS D1.5.
2. ALL STRUCTURAL MAIN TUBES SHALL CONFORM TO ASTM A53, GRADE B, TYPE E OR S, Fy=35 KSI OR API 5L, PSL2, GRADE B.
3. ALL OTHER TUBES SHALL HAVE MIN. 36 KSI YIELD STRENGTH AND CONFORM TO ASTM A501.
4. ALL STEEL PLATE, W BEAMS AND MISCELLANEOUS SHAPES SHALL CONFORM TO AASHTO M270 (ASTM A709), GRADE 36.
5. ALL ANCHOR BOLTS SHALL CONFORM TO AASHTO M314 (ASTM F1554), GRADE 55. ALL ANCHOR NUTS SHALL CONFORM TO AASHTO M291 (ASTM A563), GRADE DH OR AASHTO M292 (ASTM A194), GRADE 2H.
6. ALL CONNECTION BOLTS SHALL CONFORM TO AASHTO M164 (ASTM A325), WASHERS AASHTO M293 (ASTM F436) & NUTS AASHTO M291 (ASTM A563), GRADE DH OR AASHTO M292 (ASTM A194), GRADE 2H.
7. STRUCTURE SHALL BE GALVANIZED TO CONFORM TO AASHTO M111 (ASTM A123).
8. ALL HARDWARE SHALL BE GALVANIZED TO CONFORM TO AASHTO M232 (ASTM A153), EXCEPT ONLY TOP 1'-10" IS GALVANIZED FOR ANCHOR BOLTS.
9. PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS SHALL BE AS FOLLOWS (f'c=28-DAY COMPRESSIVE STRENGTH):
CLASS B - PEDESTAL AND FOOTING (f'c=3000 PSI)
10. ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH 3/4" X 3/4" MILLED CHAMFER STRIPS UNLESS OTHERWISE NOTED.
11. REINFORCEMENT STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCEMENT STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED ON THE PLANS.
12. KEYED CONSTRUCTION JOINTS SHALL BE 2" X 4" OR AS NOTED. ALL EXPOSED JOINT EDGES SHALL HAVE A 3/4" V NOTCH.
13. FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE ORDERING ANY MATERIALS.
14. STEEL TEMPLATES SHALL BE USED TO SET ANCHOR BOLTS PLUMB WHEN POURING THE FOUNDATION. ANCHOR BOLT HOLES IN STEEL TEMPLATE SHALL BE 1/8" LARGER THAN ANCHOR BOLT DIAMETER.
15. ALL PLATES GREATER THAN 1/2" THICKNESS SHALL BE CVN TESTED PER SECTION 826 OF THE STANDARD SPECIFICATIONS.
16. FABRICATE ALL SIGN STRUCTURES INTO THE LARGEST PRACTICAL SECTIONS PRIOR TO GALVANIZING. SUBMIT SPLICE LOCATIONS TO THE ENGINEER FOR APPROVAL. DO NOT COMMENCE FABRICATION UNTIL SUCH SPLICE LOCATIONS ARE APPROVED.
17. SIGN STRUCTURES ARE GROUPED INTO TWO TYPES AS PRESENTED IN THE TABLE ON THIS SHEET.
18. THE SUM OF THE SIGN PANEL AREA PLUS EXIT PANEL AREA SHALL NOT EXCEED THE DESIGN SIGN AREA IN THE TABLE.
19. MINIMUM VERTICAL CLEARANCE FOR ALL SIGN STRUCTURES IS 17'-6", BASED ON MAXIMUM SIGN HEIGHT OF 18'-0".
20. PERMANENT CAMBER EQUAL TO L/1000 HAS BEEN PROVIDED IN ADDITION TO THE DEAD LOAD CAMBER.
21. OVERHEAD SIGN SUPPORTS AND FOUNDATIONS SHALL BE PAID IN ACCORDANCE WITH ITEM 605755.
22. THE EXCAVATION SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
23. IF DIRECTED BY THE ENGINEER, REMOVE UNSUITABLE MATERIAL BELOW BOTTOM OF FOOTING ELEVATION, PLACE GEOTEXTILE AT THE BOTTOM OF THE EXCAVATION AND FILL WITH DELDOT NO. 57 STONE. EXCAVATION FOR THIS ITEM TO BE PAID FOR UNDER "207000 - EXCAVATION AND BACKFILLING FOR STRUCTURES". DELDOT NO. 57 STONE TO BE IN ACCORDANCE WITH SECTION 608 OF THE DELDOT SPECIFICATIONS AND PAID UNDER ITEM "608000 - COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL". GEOTEXTILE IS TO BE IN ACCORDANCE WITH SECTION 827.06 OF THE DELDOT SPECIFICATIONS AND IS INCIDENTAL TO ITEM "608000 - COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL".
24. ROUND POSTS ARE PREFERRED. MULTI-SIDED POSTS SHALL HAVE A MINIMUM BEND RADIUS OF 3" IF CHOSEN BY THE CONTRACTOR.

INDEX OF SIGN STRUCTURE DRAWINGS	
SHT #	DRAWING TITLE
OSS-01	PROJECT NOTES AND INDEX OF DRAWINGS
OSS-02	GENERAL PLAN AND ELEVATION - SIGN STRUCTURE - SO1405
OSS-03	GENERAL PLAN AND ELEVATION - SIGN STRUCTURE - SO1410
OSS-04	TRUSS DETAILS
OSS-05	TOWER ELEVATION DETAILS
OSS-06	CONNECTION DETAILS - 1
OSS-07	CONNECTION DETAILS - 2
OSS-08	SIGN/DMS HANGER DETAILS
OSS-09	FOUNDATION DETAILS - TYPES 2 & 4
OSS-10	BAR SCHEDULE

SUMMARY OF OVERHEAD SIGN STRUCTURES						
SIGN STRUCTURE	OVERHEAD	DIRECTION	TYPE	SPAN	HEIGHT	DESIGN SIGN AREA
SO1405	241+60.00	NB	2	80'	25'	576 SF
SO1410	220+00	NB	4	68'	25'	322 SF

DRAFT
NOT FOR BIDDING
AUGUST 2015

LAST REVISED: 3/12/2008
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ADDENDUMS / REVISIONS	

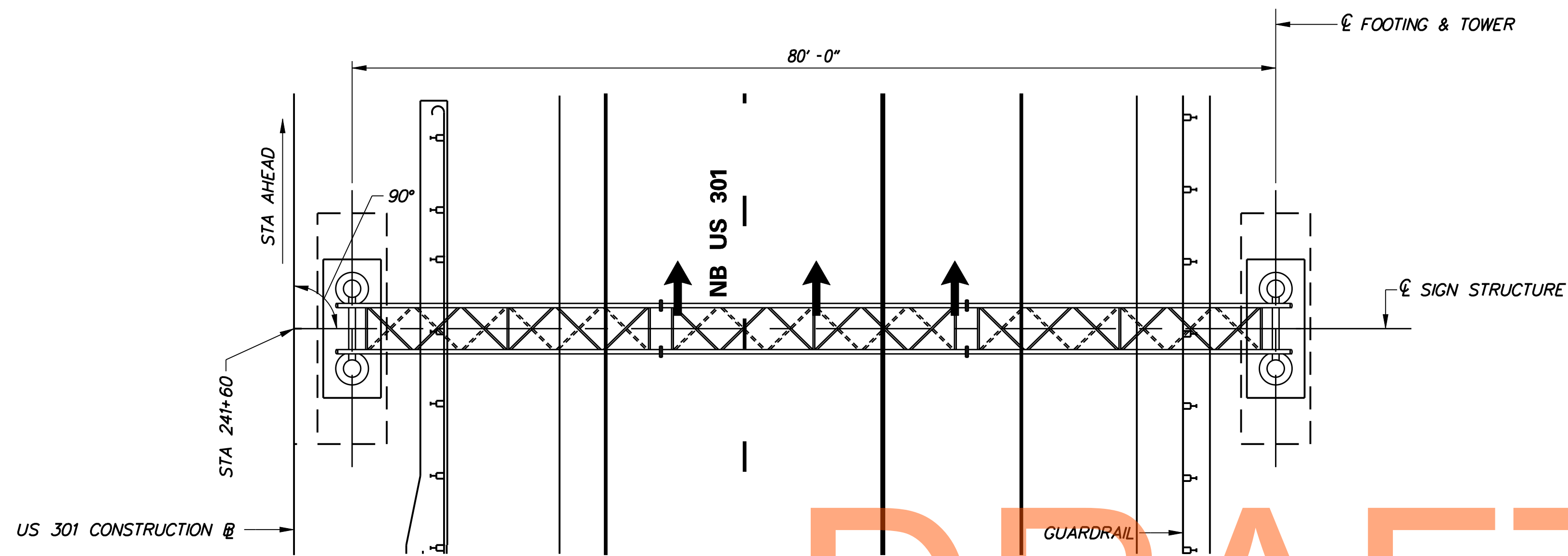
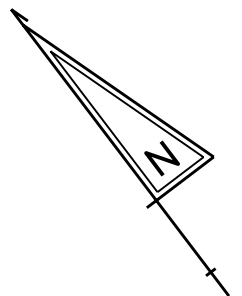
NOT TO SCALE

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

CONTRACT	BRIDGE NO.	-
T200811301	DESIGNED BY:	ADL/SPM
COUNTY	CHECKED BY:	YY/DJP
NEW CASTLE		

**PROJECT NOTES
AND
INDEX OF DRAWINGS**

OSS-01	
SHEET NO.	328
TOTAL SHTS.	850



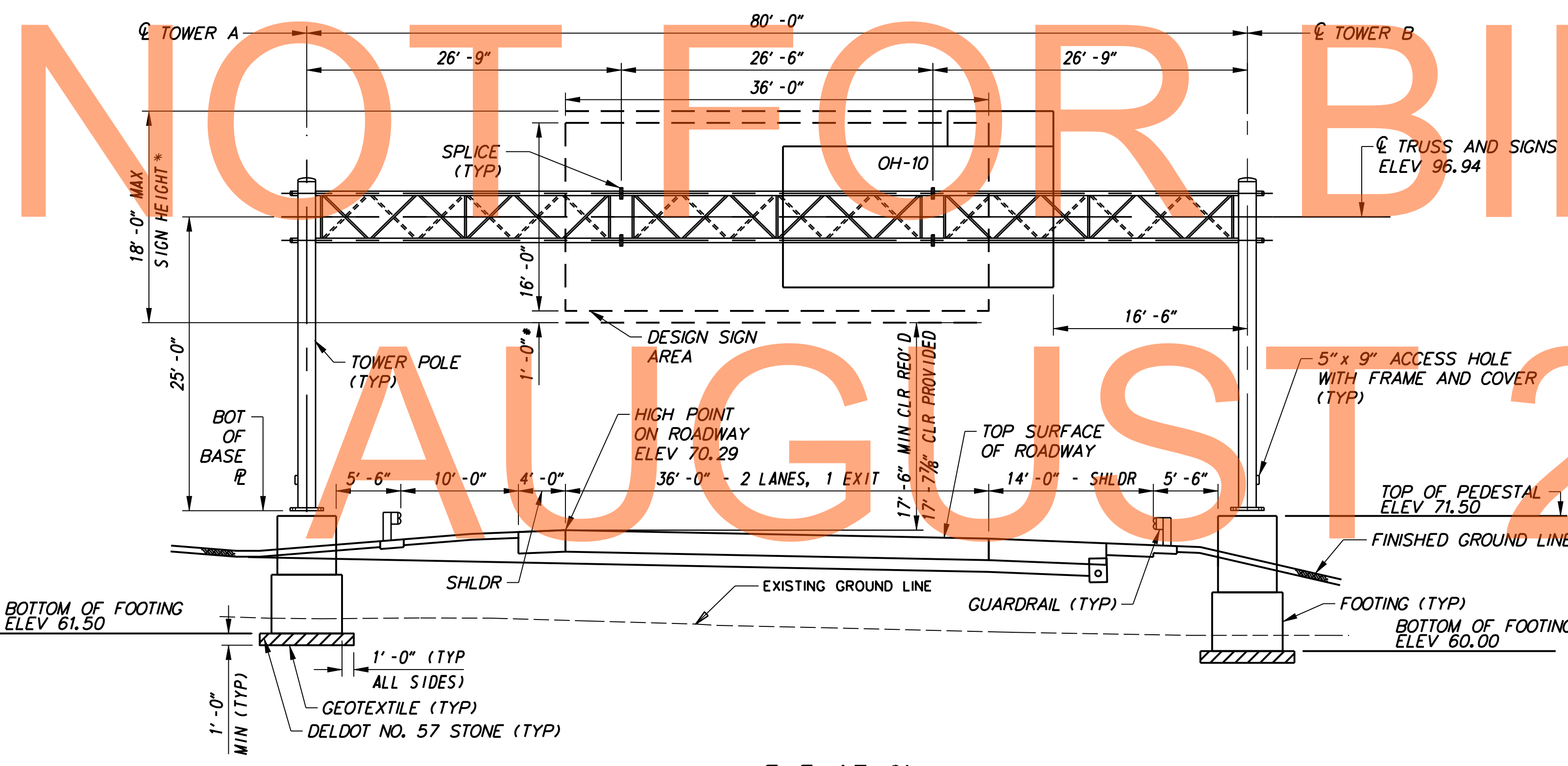
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PLAN

DESIGN CRITERIA
TYPE 2
DESIGN SIGN AREA = 576 SF
STRUCTURE HEIGHT (H) = 25'-0"
SPAN LENGTH = 80'-0"

NOTES:

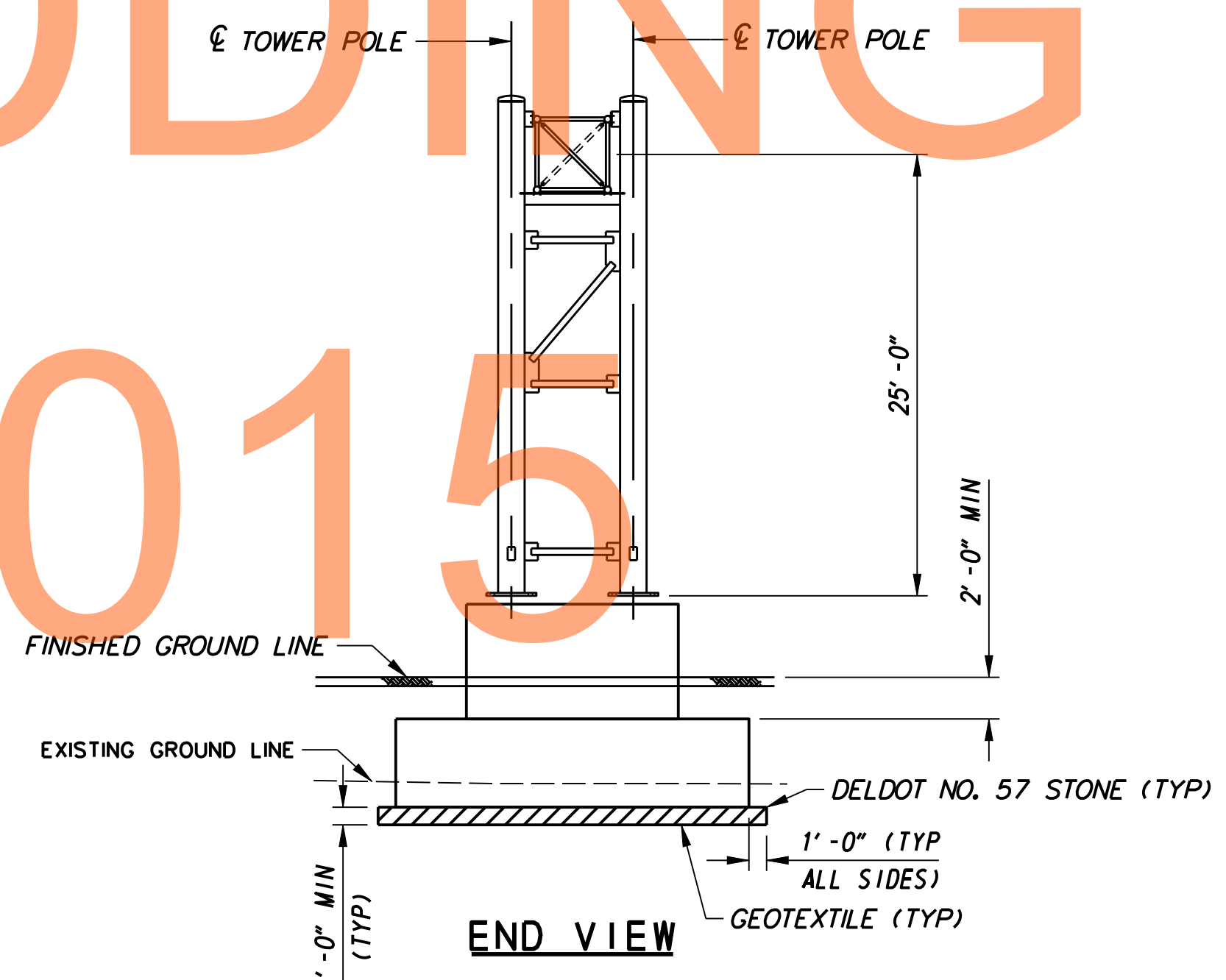
1. ALL SIGN PANELS SHALL BE INSTALLED SO THAT THE PANEL IS CENTERED VERTICALLY ALONG THE CHORD TRUSS.
2. DELDOT NO. 57 STONE TO BE IN ACCORDANCE WITH SECTION 608 OF THE DELDOT SPECIFICATIONS. GEOTEXTILE IS TO BE IN ACCORDANCE WITH SECTION 827.06 OF THE DELDOT SPECIFICATIONS. DELDOT NO. 57 STONE AND GEOTEXTILE ARE INCIDENTAL TO ITEM 605755.



ELEVATION

STA 241+60
(LOOKING STATION AHEAD)

* ADDITIONAL SIGN HEIGHT ALLOWANCE FOR LARGE SIGNS. TOTAL DESIGN AREA MUST NOT BE EXCEEDED.



END VIEW

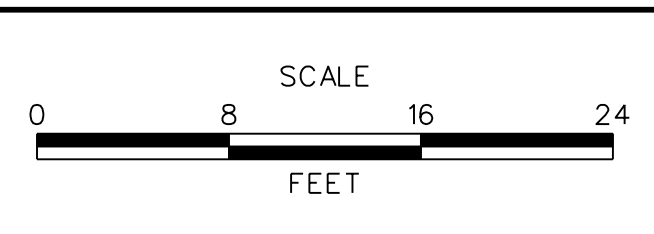
REFERENCES:

- | | |
|-------------------------|-------------------|
| GENERAL NOTES | OSS-01 |
| TRUSS AND TOWER DETAILS | OSS-04 AND OSS-05 |
| SIGN/DMS HANGER DETAILS | OSS-08 |
| FOUNDATION DETAILS | OSS-09 |

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ADDENDUMS / REVISIONS

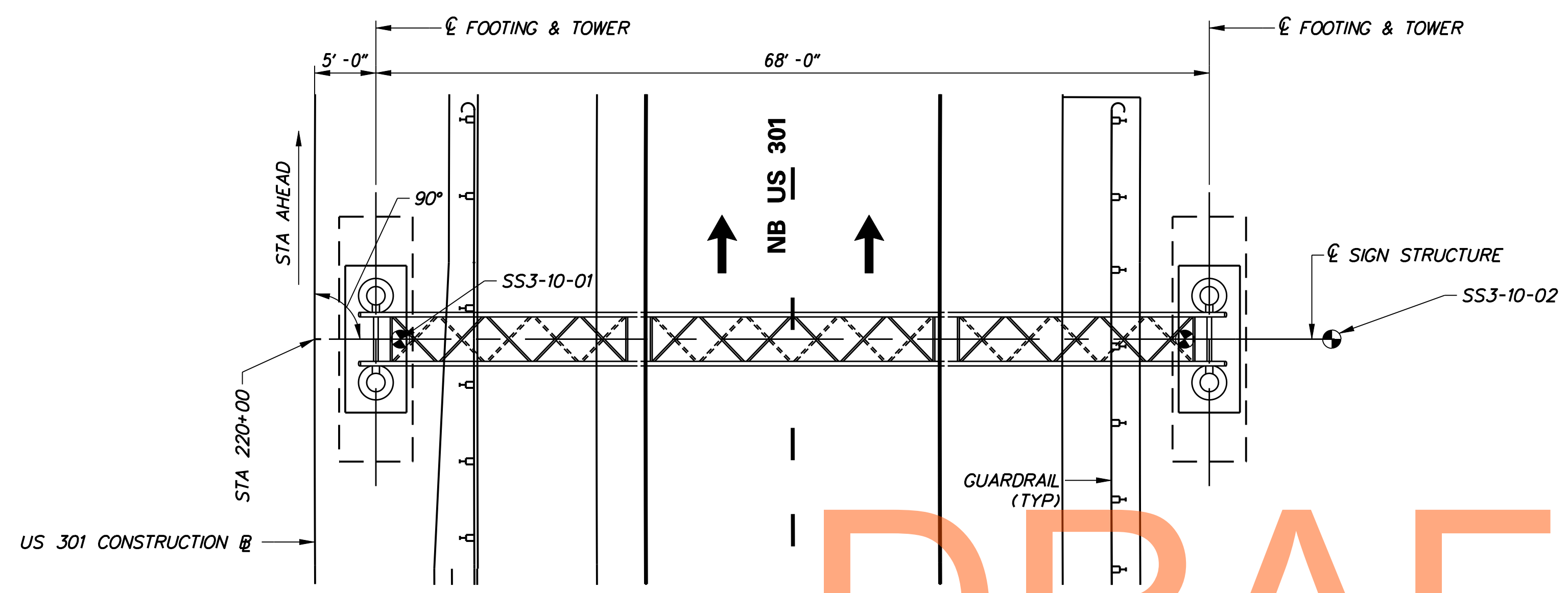
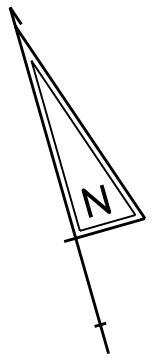


**US 301
MARYLAND STATE LINE
TO LEVELS ROAD**

CONTRACT T200811301	BRIDGE NO. -
COUNTY NEW CASTLE	DESIGNED BY: ADL/SPM CHECKED BY: YY/DJP

**GENERAL PLAN
AND ELEVATION
SIGN STRUCTURE
S01405**

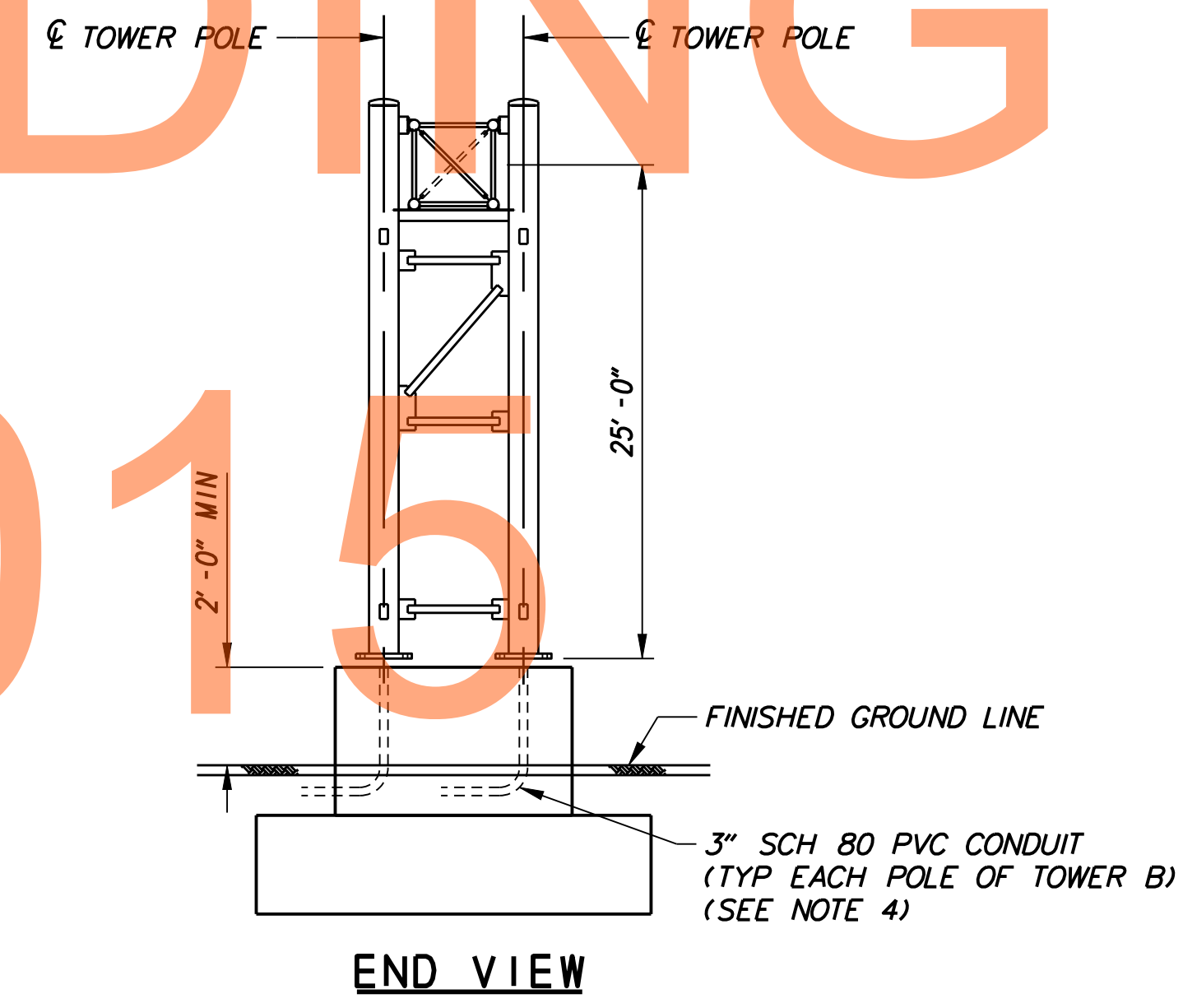
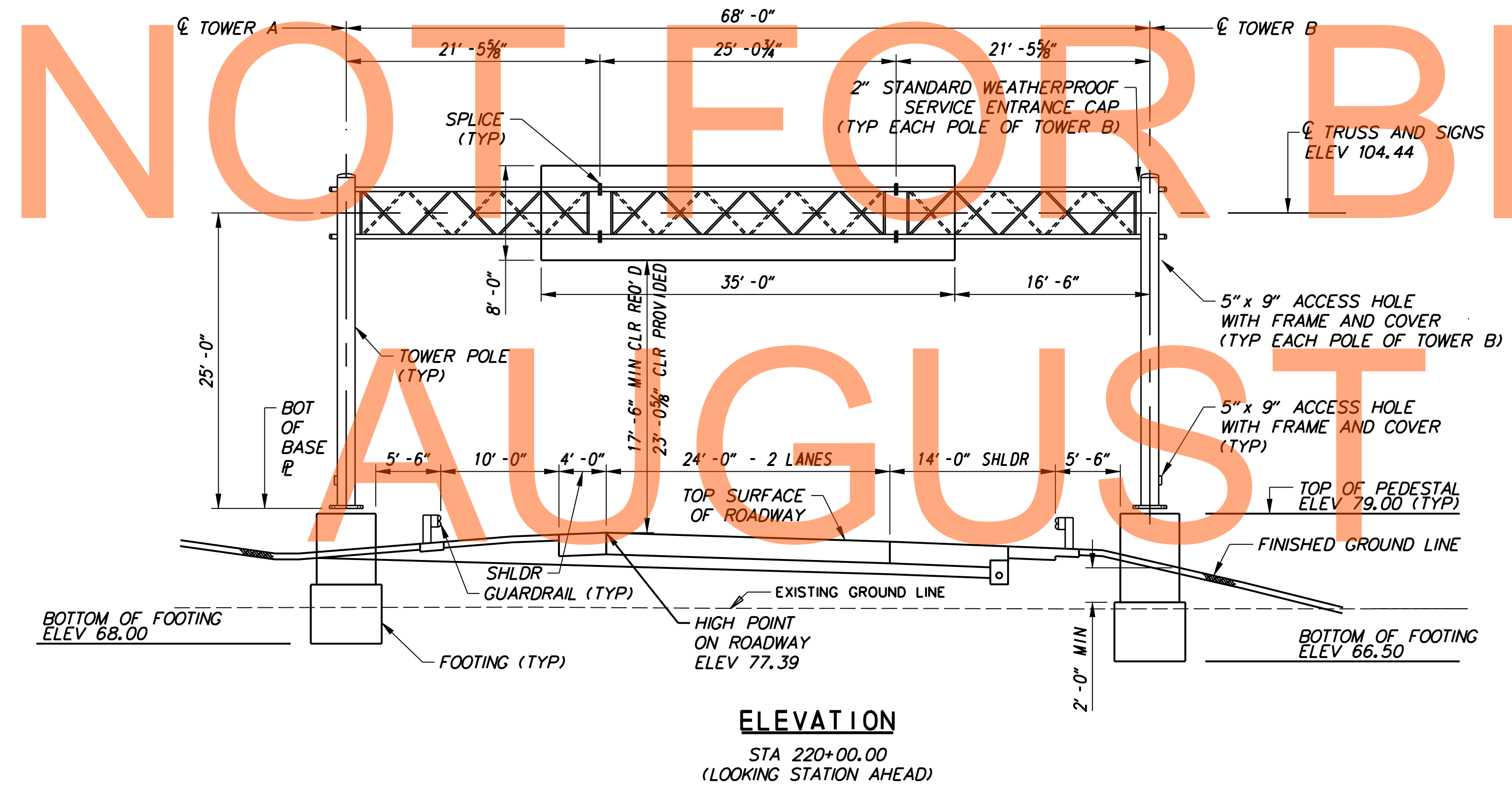
OSS-02
SHEET NO. 329
TOTAL SHTS. 850



DRAFT

DESIGN CRITERIA
TYPE 4
DESIGN SIGN AREA = 322 SF
STRUCTURE HEIGHT (H) = 25'-0"
SPAN LENGTH = 68'-0"

- NOTES:**
- DMS SHALL BE INSTALLED SO THAT IT IS CENTERED VERTICALLY ALONG THE CHORD TRUSS.
 - DESIGN SIGN AREA INCLUDES ADDITIONAL 15% SIGN AREA FOR FUTURE SIGN REPLACEMENT.
 - SEE SIGNING, STRIPING & CONDUIT PLANS FOR CABINET BASE AND ITMS CONDUIT SIZE AND ROUTING.
 - CONDUITS AND FITTINGS FROM ITMS CABINET TO STRUCTURE ARE INCIDENTAL TO ITEM NO. 605755.



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AUGUST 2015

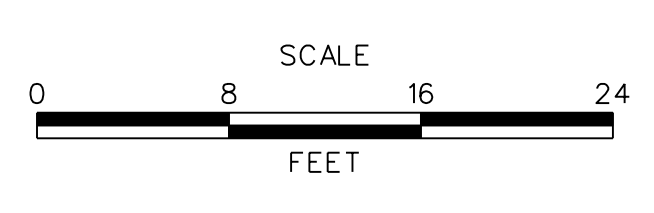
REFERENCES:

GENERAL NOTES	OSS-01
TRUSS AND TOWER DETAILS	OSS-04 AND OSS-05
SIGN/DMS HANGER DETAILS	OSS-08
FOUNDATION DETAILS	OSS-09

OSS-03



ADDENDUMS / REVISIONS



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

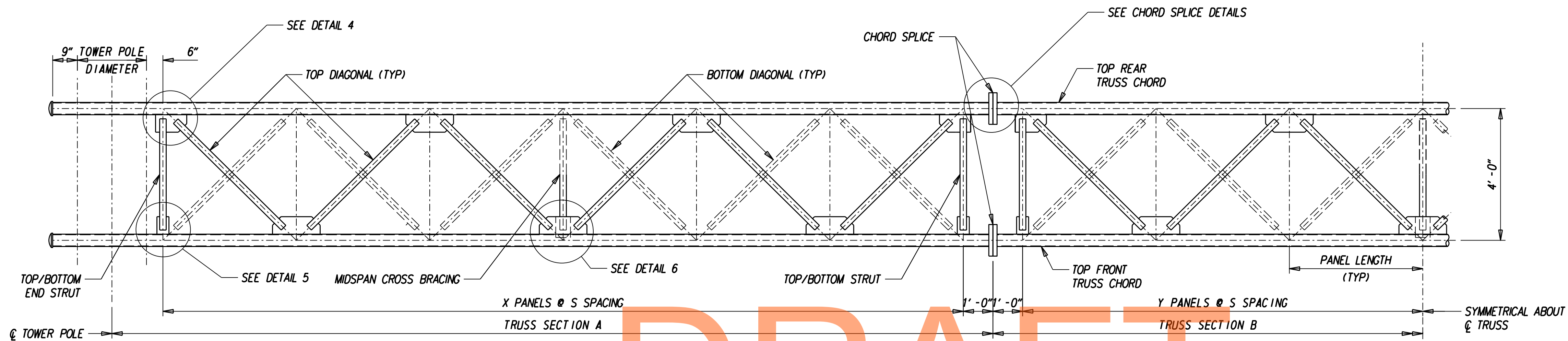
CONTRACT	BRIDGE NO.	-
T200811301	DESIGNED BY:	ADL/SPM
COUNTY	CHECKED BY:	YY/DJP
NEW CASTLE		

**GENERAL PLAN
AND ELEVATION
SIGN STRUCTURE
S01410**

SHEET NO.	330
TOTAL SHTS.	850

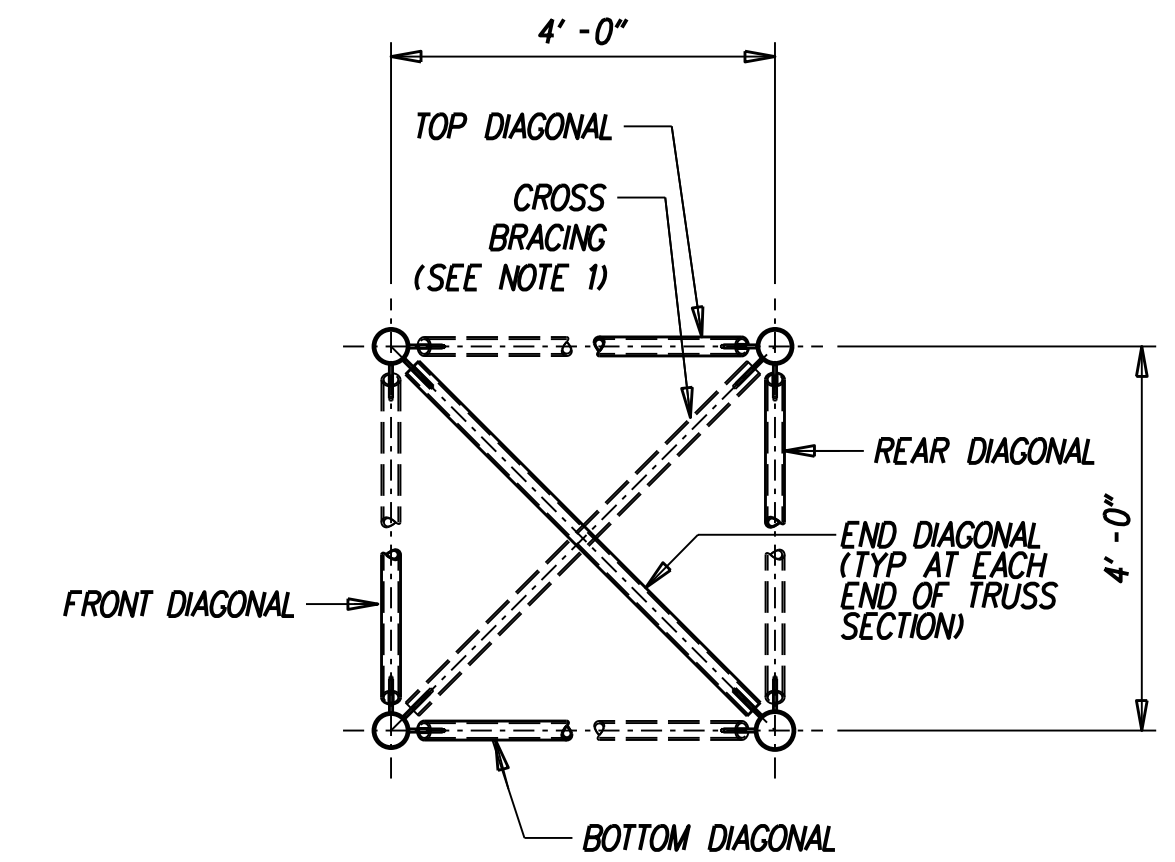
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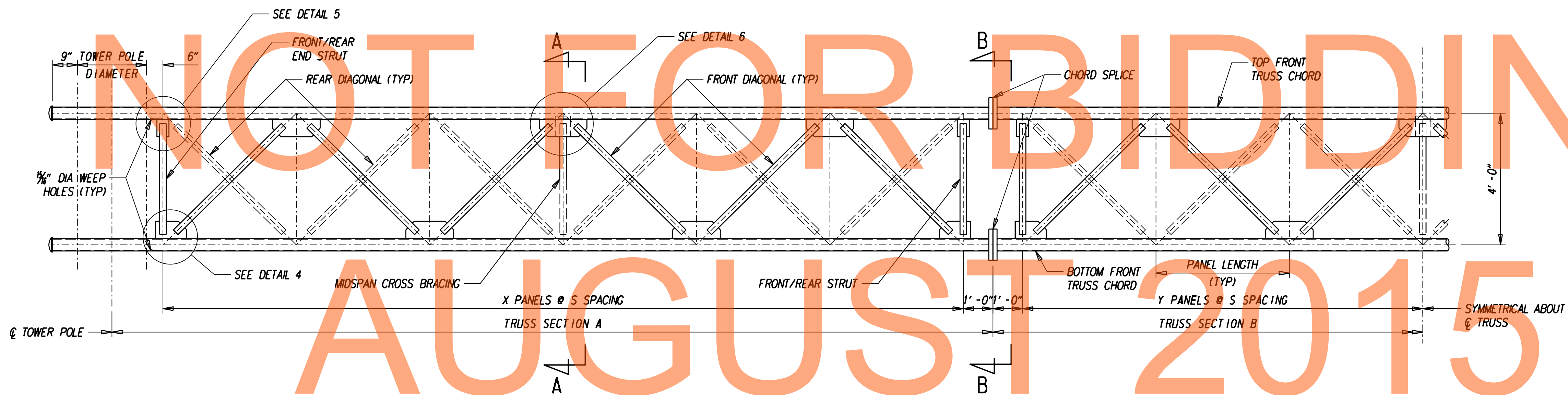


TOP VIEW OF TRUSS

(TYPE 2 TRUSS SHOWN. SEE TRUSS DIMENSIONS TABLE BELOW FOR TYPE 4)

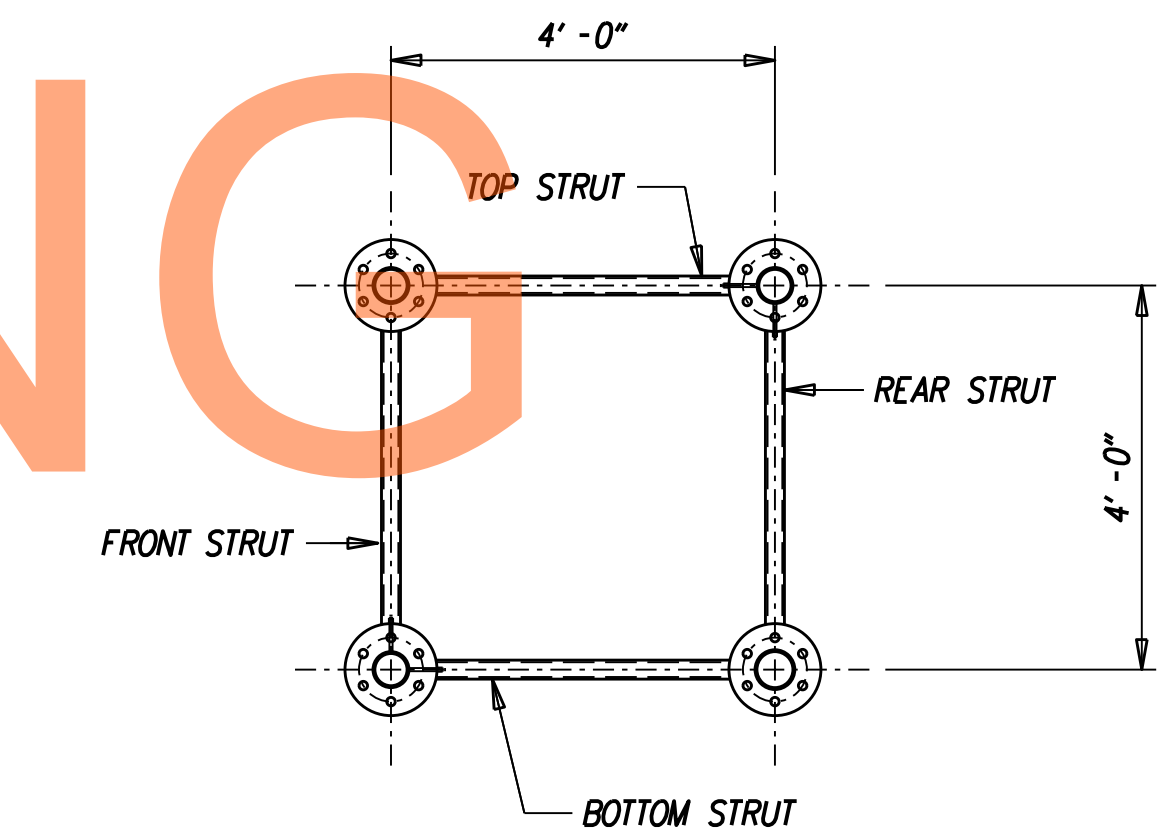


SECTION A-A



FRONT VIEW OF TRUSS

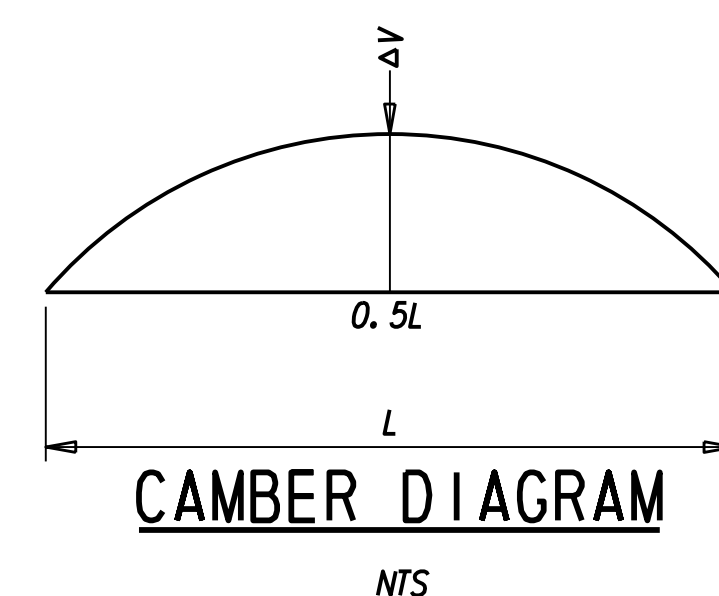
(TYPE 2 TRUSS SHOWN. SEE TRUSS DIMENSIONS TABLE BELOW FOR TYPE 4)



SECTION B-B

TRUSS DIMENSIONS						
TYPE	S: SPACING	X: # OF PANELS	Y: # OF PANELS	TOWER POLE DIAMETER	TRUSS SECTION A	TRUSS SECTION B
2	4' - 1"	6	3	1' - 6"	26' - 9"	26' - 6"
4	3' - 10 1/8"	5	3	1' - 6"	21' - 5 5/8"	25' - 0 3/4"

MEMBER SIZES		
TYPE	TRUSS CHORD	TRUSS CHORD BRACING
2	4.5" OD x .237" THICK	2.375" OD x .154" THICK
4	6.63" OD x .280" THICK	4.000" OD x .226" THICK



TYPE	ΔV
2	1.78"
4	1.17"

NOTES:

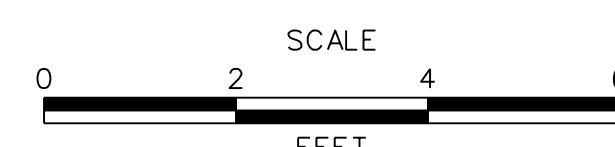
- CROSS BRACING MEMBERS ALTERNATE IN DIRECTION AT PANEL POINT NEAREST CENTER LINE OF TRUSS SECTION. FOR TYPE 4 IN TRUSS SECTION WITH 5 PANELS, PROVIDE CROSS BRACING TWO PANELS FROM THE SPLICE.
- TRUSSES SHALL BE FABRICATED WITH CAMBER AT THE CENTER OF THE SPAN EQUAL TO THE VALUE GIVEN BY THE CAMBER DIAGRAM. ALL TRUSSES SHALL BE ASSEMBLED IN THE SHOP IN A NO LOAD CONDITION TO ENSURE FIT AT SPLICES AND TO CHECK CAMBER.

REFERENCES:

- GENERAL NOTES - OSS-01
 CONNECTION DETAILS - 1 OSS-06
 CONNECTION DETAILS - 2 OSS-07



ADDENDUMS / REVISIONS



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

CONTRACT	BRIDGE NO.	-
T200811301	DESIGNED BY:	ADL/SPM
COUNTY	CHECKED BY:	YY/DJP
NEW CASTLE		

TRUSS DETAILS

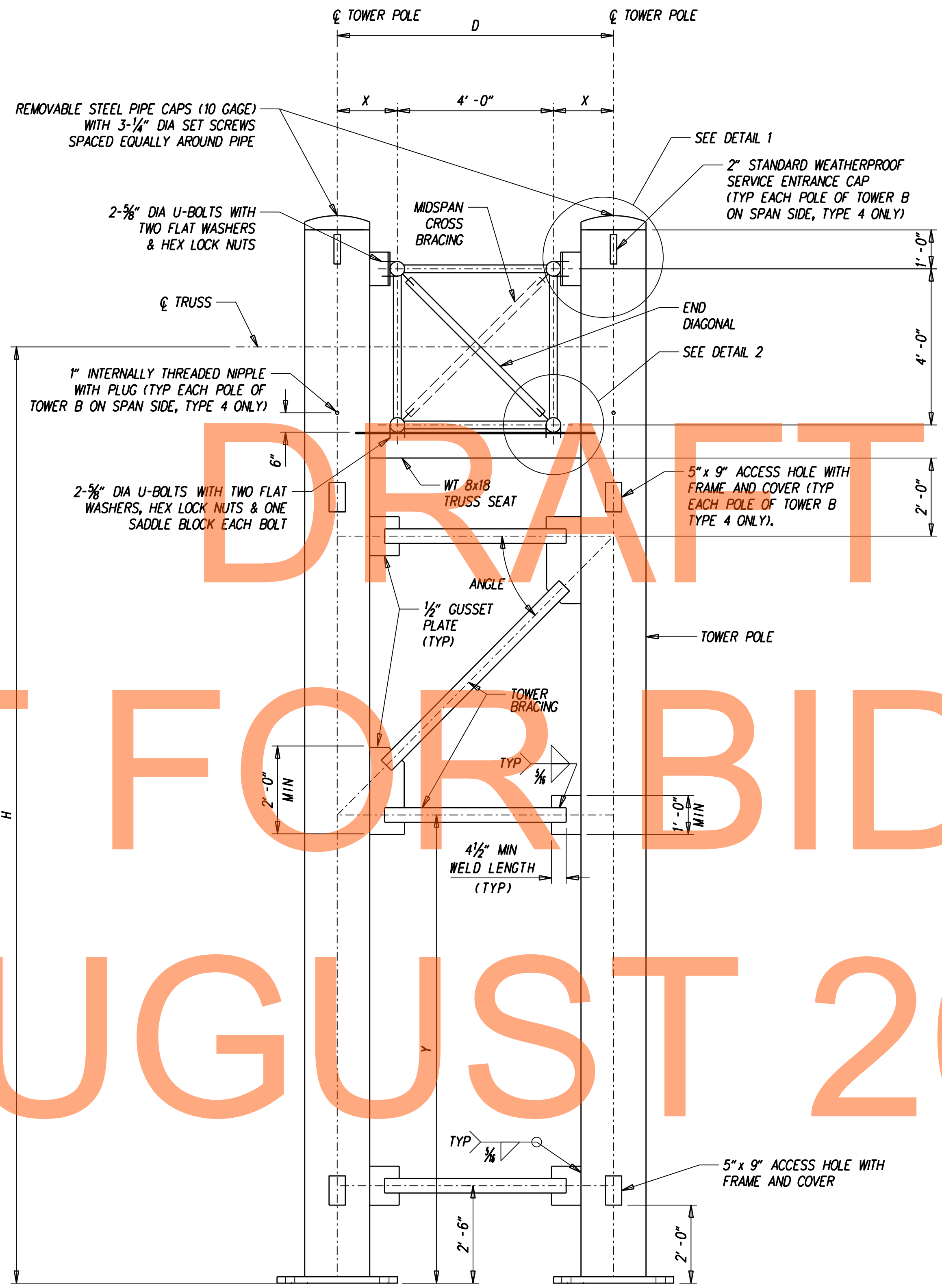
OSS-04

SHEET NO.	331
TOTAL SHTS.	850

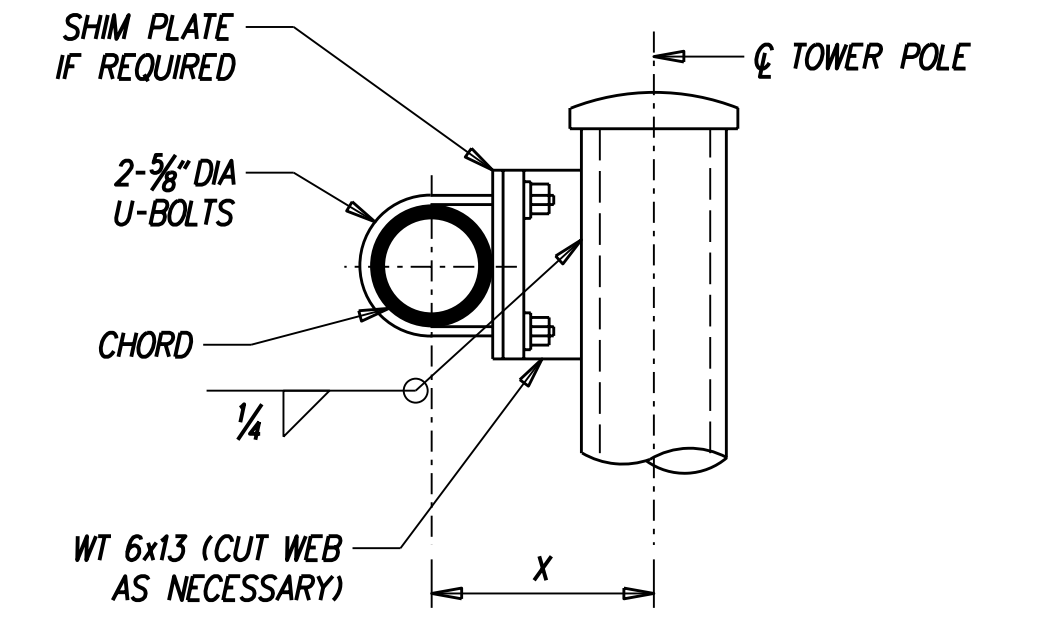
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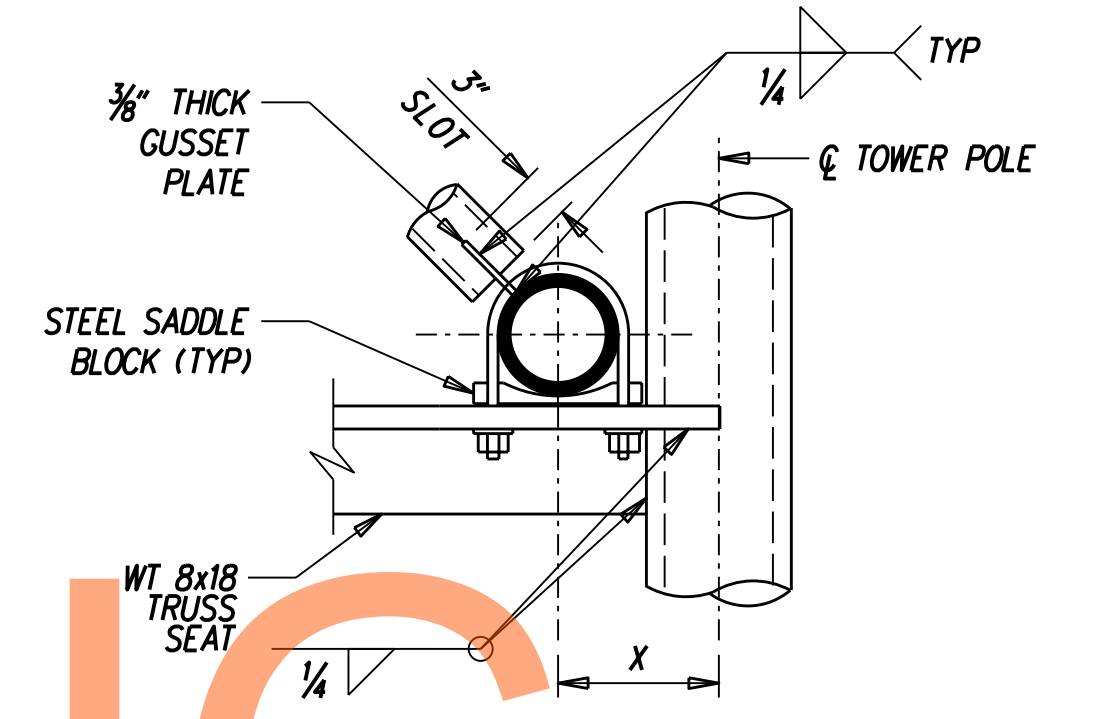
AUGUST 2015



END VIEW OF TOWER



DETAIL 1



DETAIL 2

(VERTICAL AND HORIZONTAL TRUSS MEMBERS NOT SHOWN FOR CLARITY)

TOWER DIMENSIONS					
TYPE	H	D	ANGLE	X	Y
2	25' - 0"	6' - 11"	49.4°	1' - 5 1/2"	12' - 0"
4	25' - 0"	7' - 11"	48.4°	1' - 6 1/2"	12' - 0"

MEMBER SIZES		
TYPE	TOWER POLE	TOWER BRACING
2	18" OD x .25" THICK	4.5" OD x .237" THICK
4	18" OD x .25" THICK	4.5" OD x .237" THICK

NOTES:

1. PROVIDE SLOT IN TOWER BRACING MEMBERS FOR CONNECTION TO GUSSET PLATES.

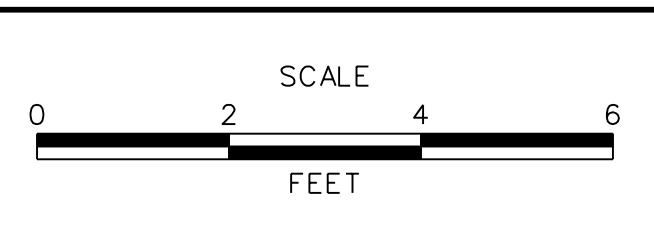
REFERENCES:

GENERAL NOTES OSS-01

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ADDENDUMS / REVISIONS

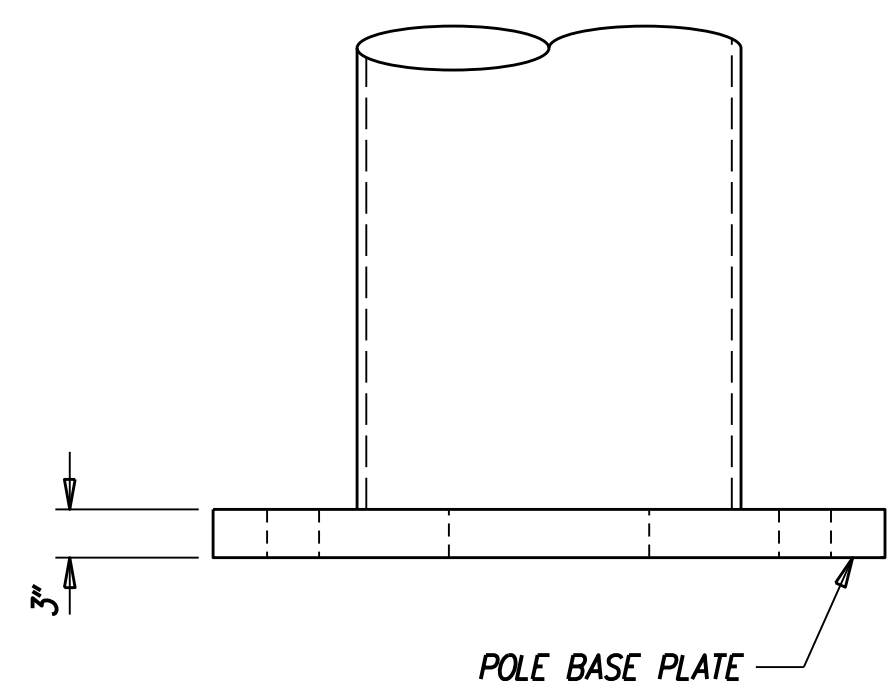


**US 301
MARYLAND STATE LINE
TO LEVELS ROAD**

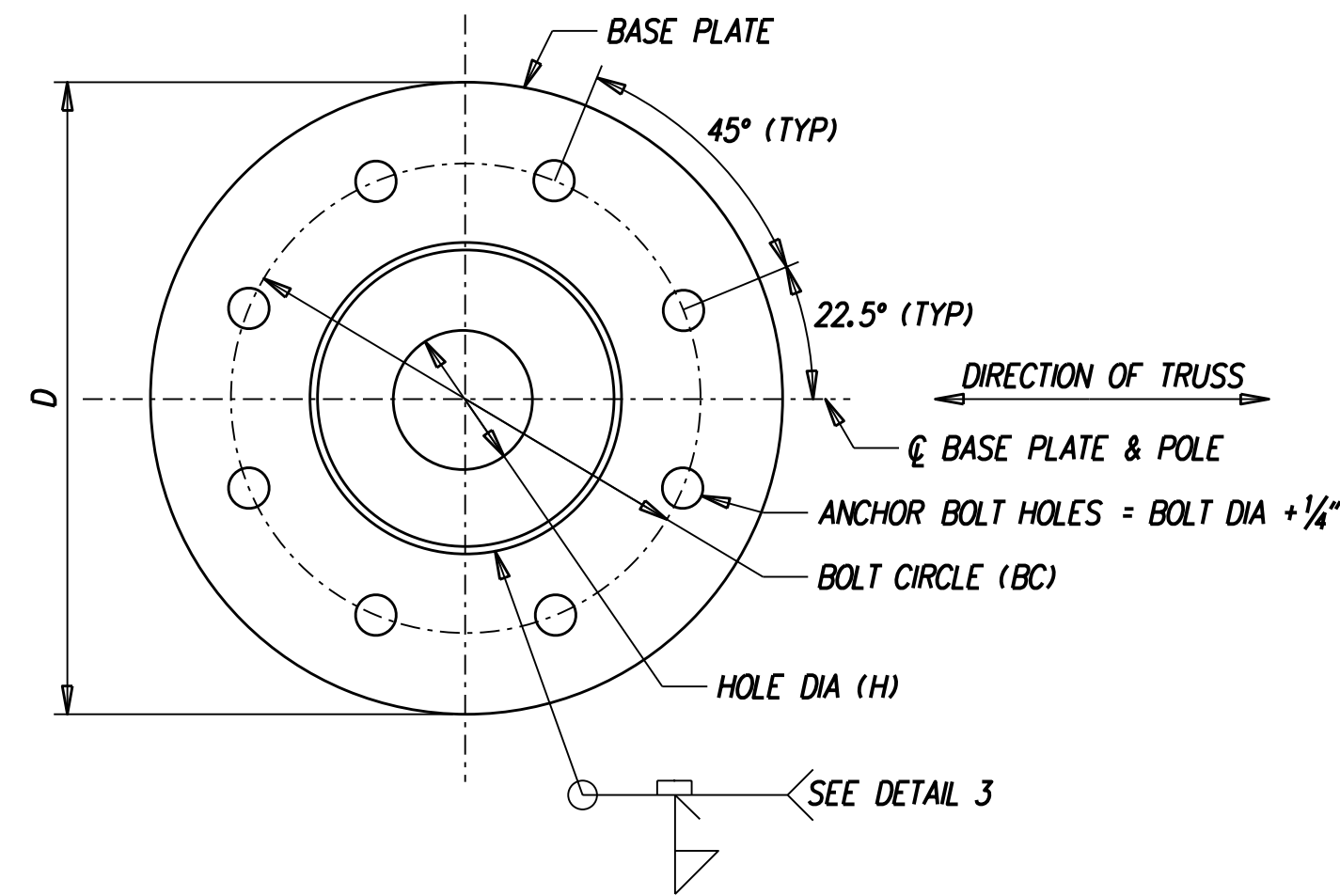
CONTRACT T200811301	BRIDGE NO. -
COUNTY NEW CASTLE	DESIGNED BY: ADL/SPM CHECKED BY: YY/DJP

TOWER ELEVATION DETAILS	
SHEET NO. 332	TOTAL SHTS. 850

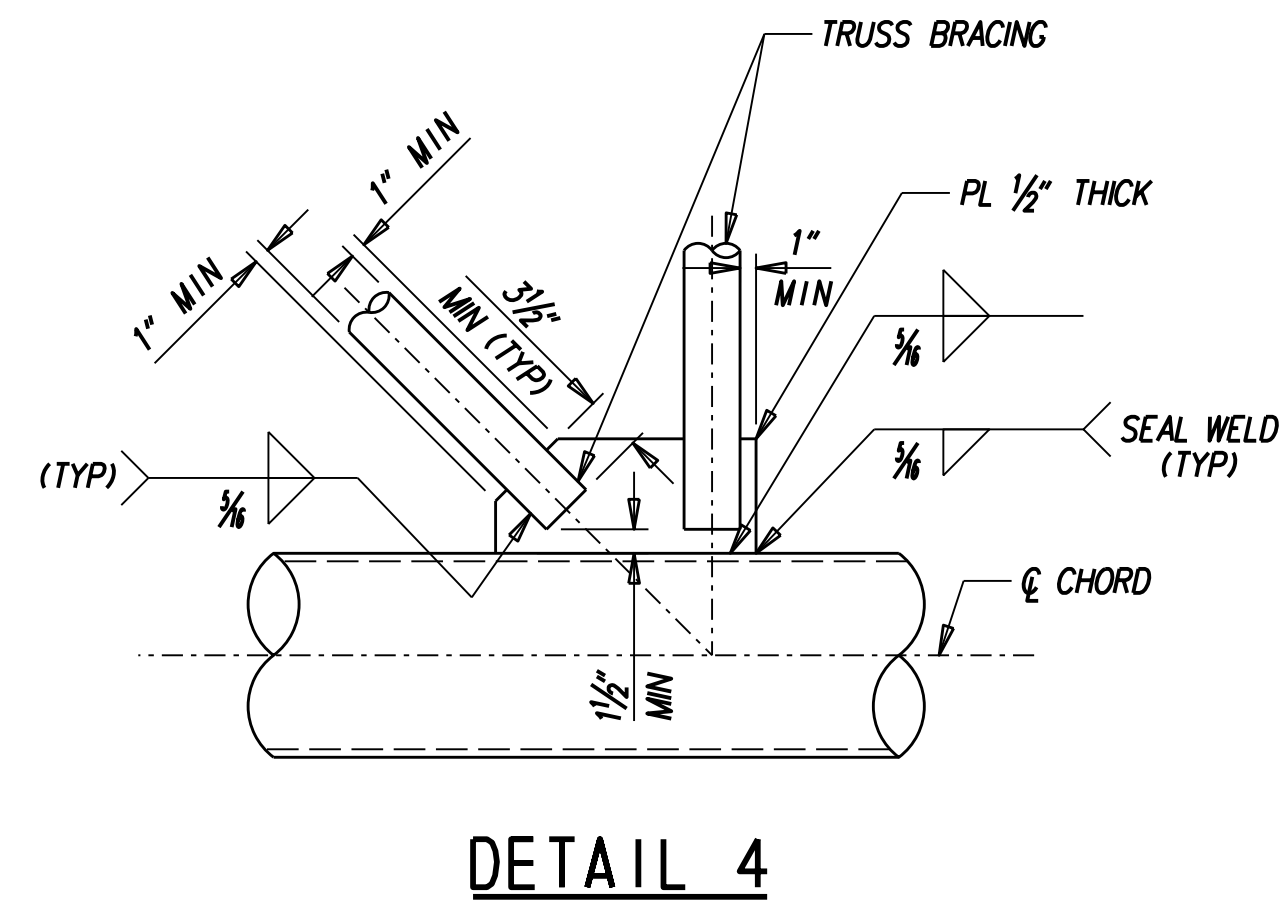
OSS-05



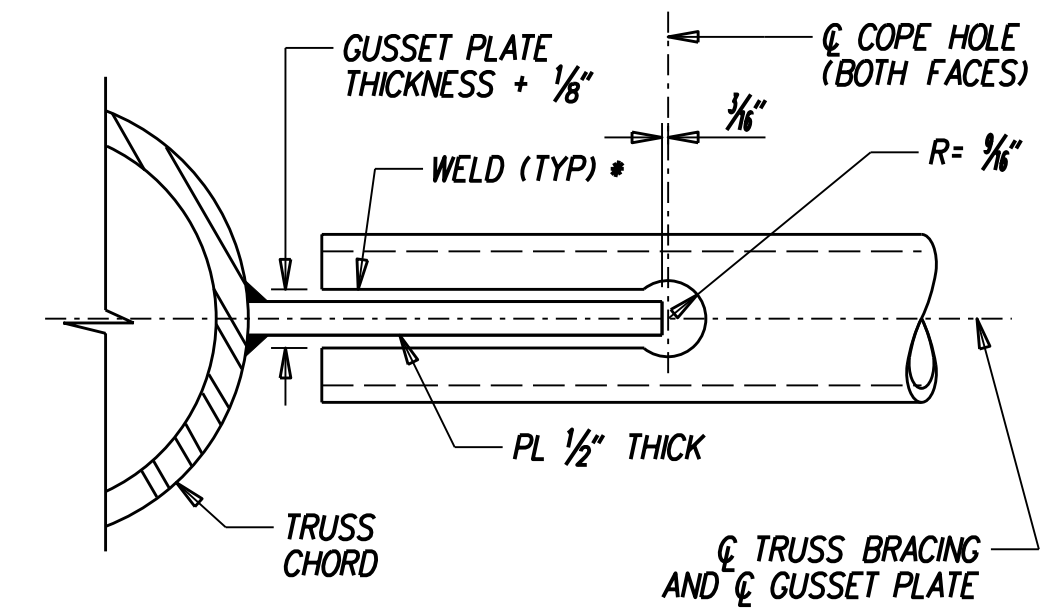
ELEVATION - POLE BASE PLATE



PLAN - POLE BASE PLATE

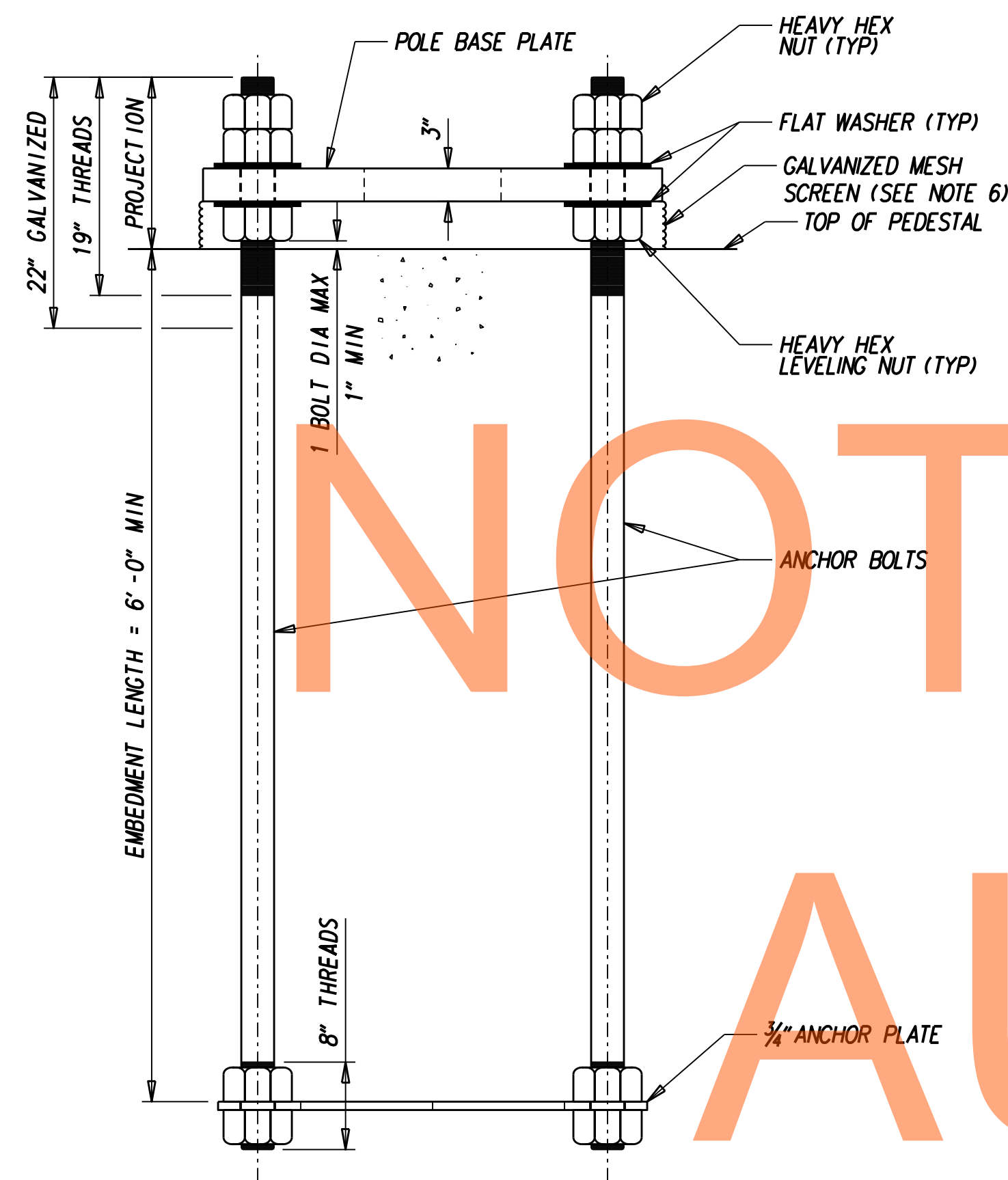


DETAIL 4

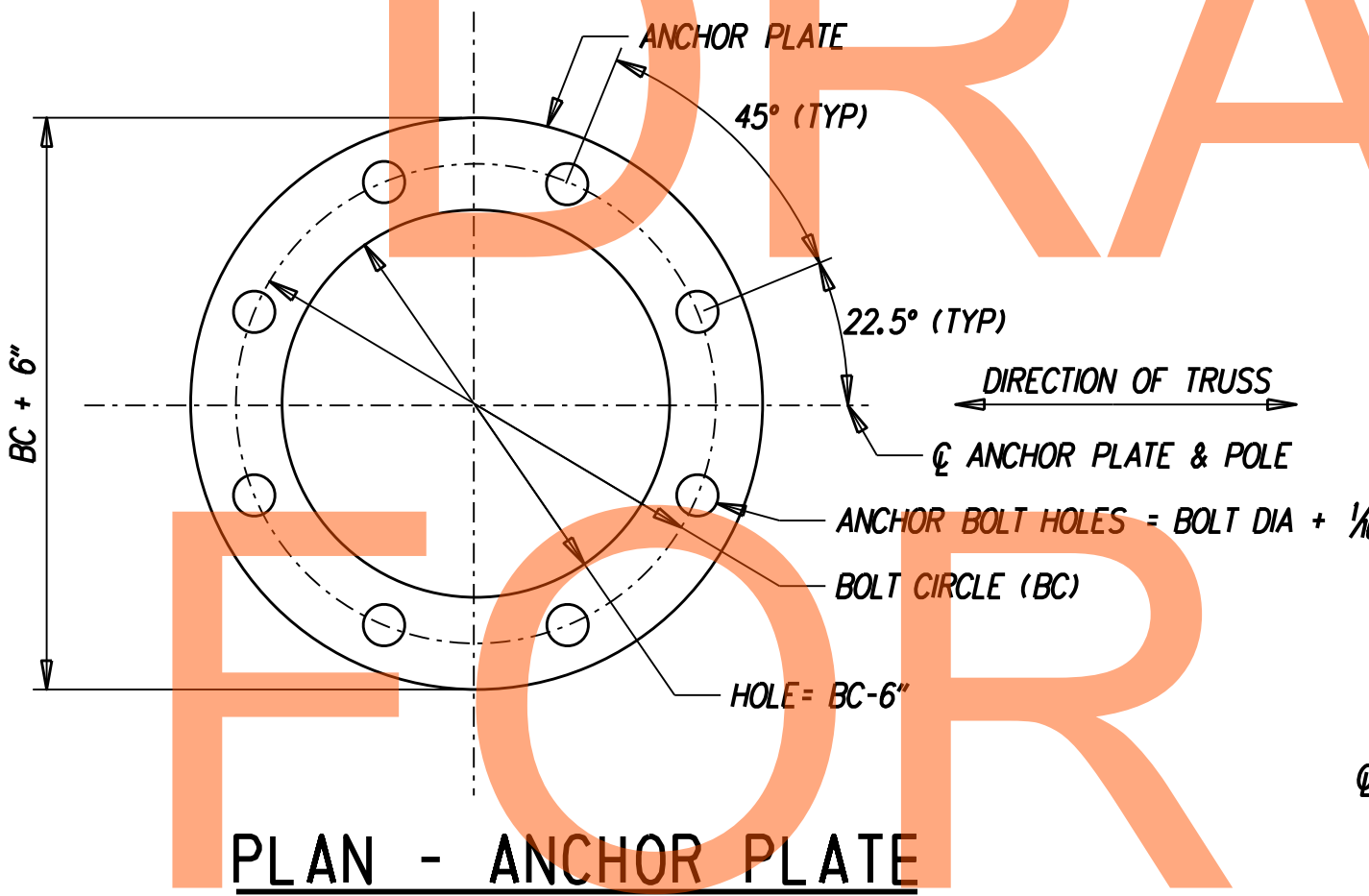


COPE HOLE DETAIL

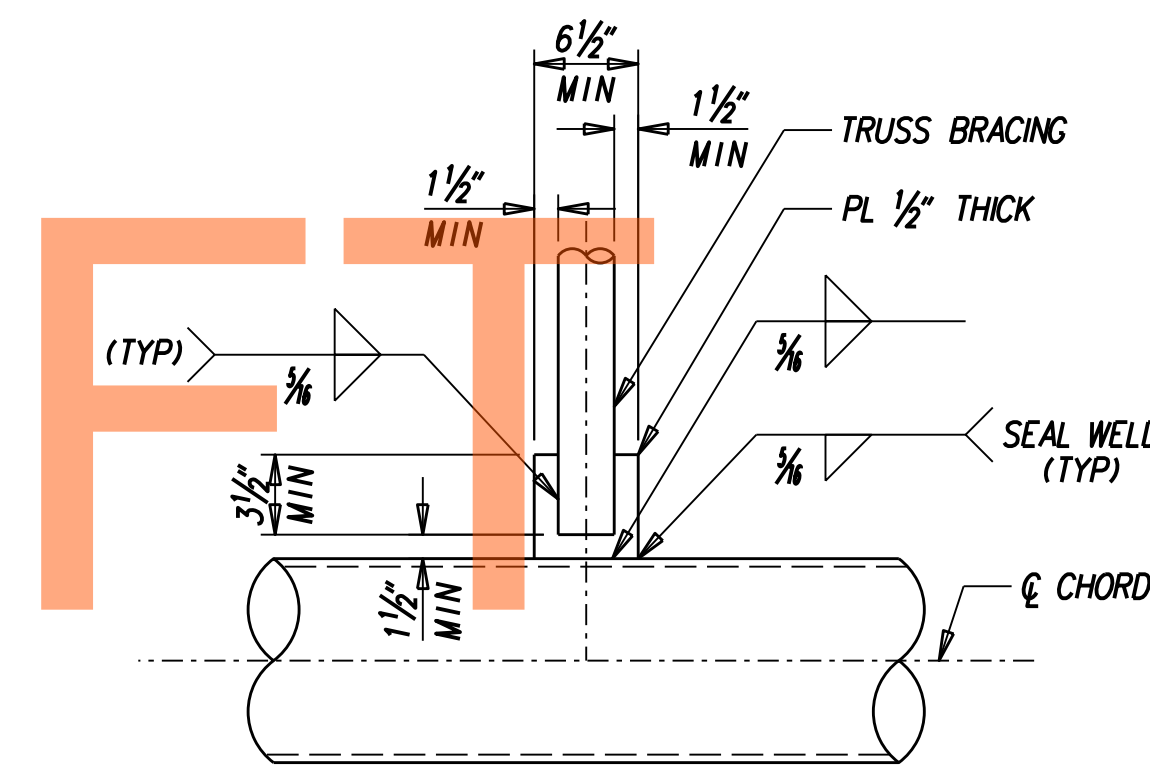
* TO PREVENT INTERSECTING FILLET WELDS ON OPPOSITE SIDES OF A COMMON PLANE, PROVIDE A WELD 'HOLDBACK' AT THE EDGE OF THE GUSSET PLATE IN THE BRACING MEMBERS EQUAL TO THE MINIMUM TOTAL WELD SIZE REQUIRED. ENSURE MINIMUM TOTAL WELD LENGTHS ARE ACHIEVED.



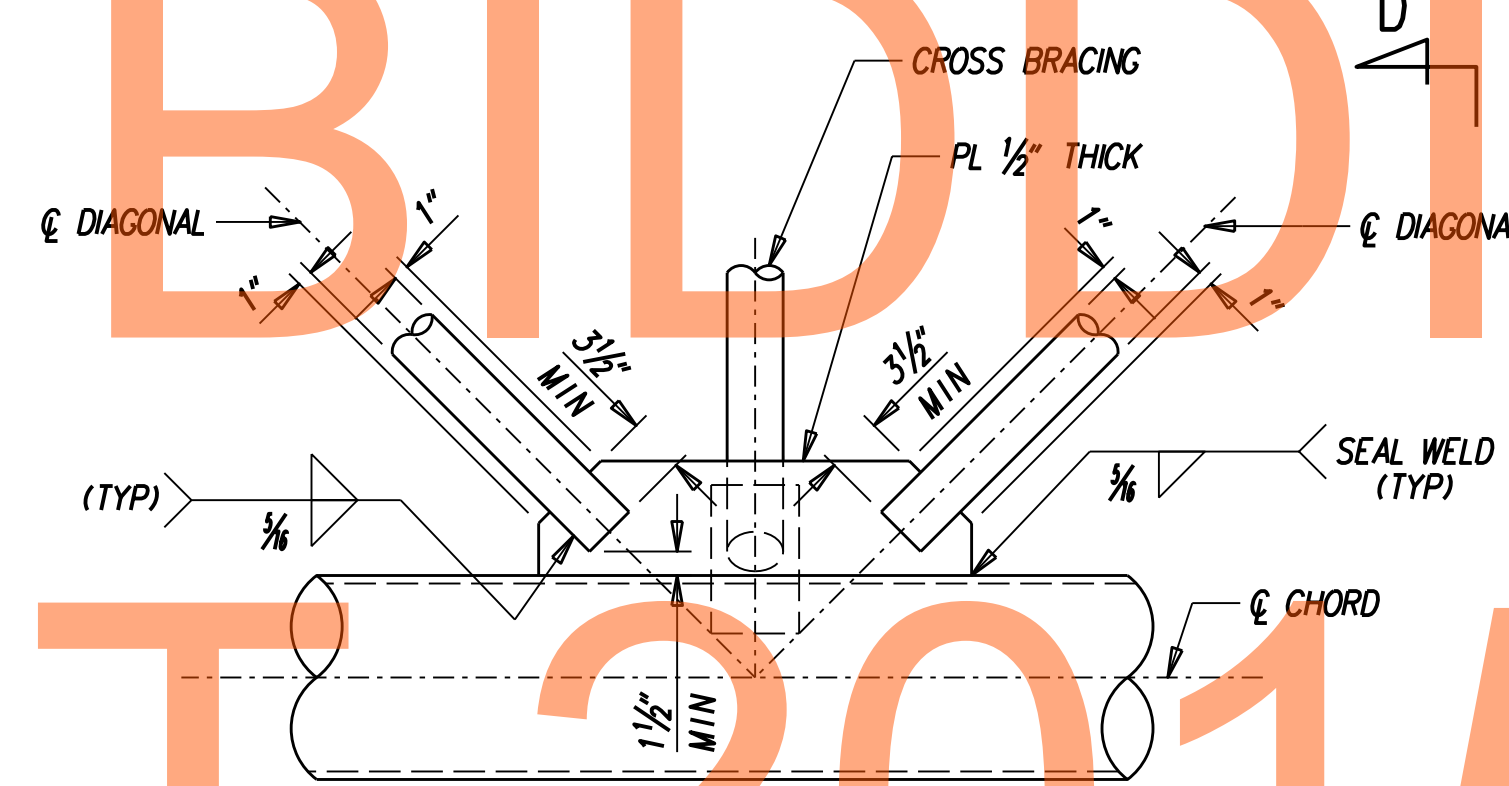
ANCHOR BOLT DETAIL



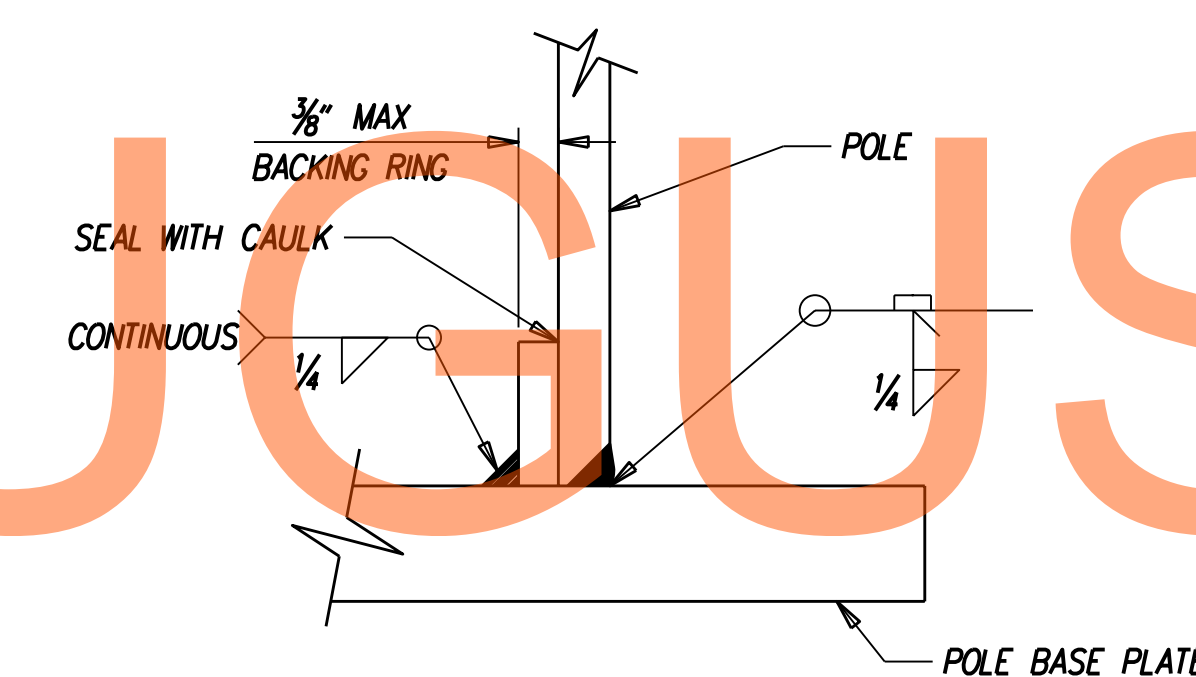
PLAN - ANCHOR PLATE



DETAIL 5



DETAIL 6



DETAIL 3

NOTE= BACKING RING MUST BE FITTED/SIZED TO THE POLE AND CONTINUOUSLY FILLET WELDED TO THE BASE PLATE BEFORE THE FULL PENETRATION GROOVE WELD IS MADE.

BASE PLATE AND ANCHOR PLATE DATA						
TYPE	POLE DIA	D	BC	H	ANCHOR BOLT DIA	PROJECTION
2	18"	34"	26"	9 1/4"	2 1/2"	14 1/2"
4	18"	34"	26"	9 1/4"	2 1/2"	14 1/2"

NOTES:

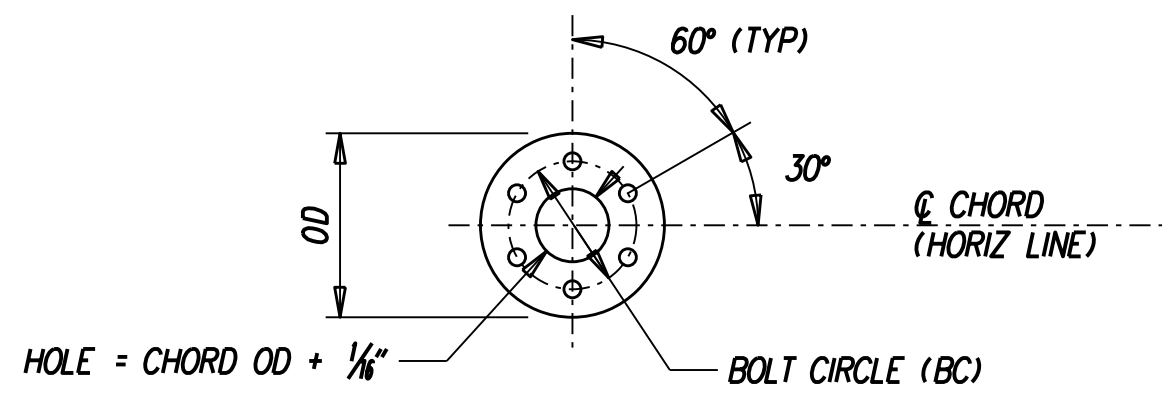
1. PROVIDE SLOT IN TRUSS CHORD BRACING MEMBERS FOR CONNECTION TO GUSSET PLATES.
2. ALL ANCHOR BOLTS SHALL BE PLUMB AFTER FOUNDATION INSTALLATION. STEEL TEMPLATE PLATE SHALL BE USED TO SET ANCHOR BOLTS.
3. POLE BASE PLATE SHALL BE IN FULL CONTACT WITH ALL FLAT WASHERS.
4. ALL ANCHOR BOLTS SHALL BE TIGHTENED USING TURN OF NUT METHOD (30° MIN TO 45° MAX TURN AFTER SNUG TIGHT).
5. THREADS OF BOLTS TO BE BURRED OFF AT FACE OF NUT AFTER COLUMN IS INSTALLED.
6. DO NOT USE GROUT BETWEEN BASE PLATE AND CONCRETE PEDESTAL. SEAL WITH GALVANIZED MESH SCREEN, 1/4" TO 3/8" OPENING, TO PREVENT ENTRY OF RODENTS. SCREEN IS TO BE REMOVABLE AND ATTACHED TO BASE PLATE WITH STAINLESS STEEL HARDWARE. SCREEN IS TO BE OF SUFFICIENT STIFFNESS TO PREVENT ENTRY BETWEEN SCREEN AND FOUNDATION WHILE PERMITTING DRAINAGE.
7. SLOPE TOP OF CONCRETE PEDESTAL 0.50% FROM CENTER TO NEAR EDGES FOR DRAINAGE.

REFERENCES:

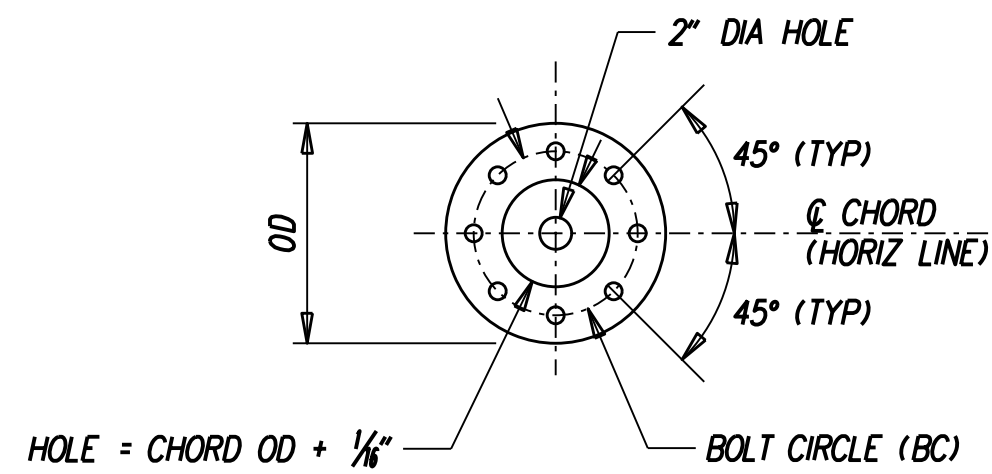
GENERAL NOTES OSS-01
TRUSS AND TOWER DETAILS OSS-04 AND OSS-05

SECTION D-D

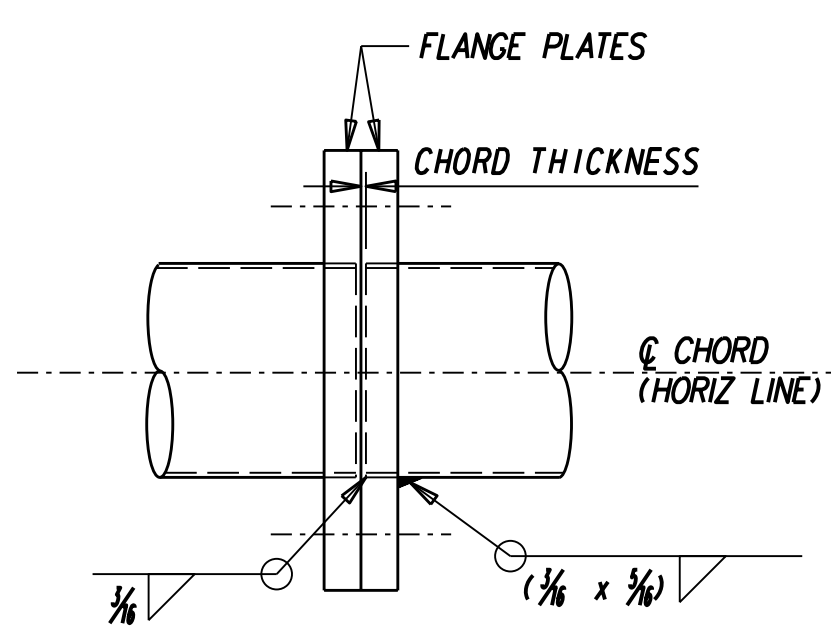
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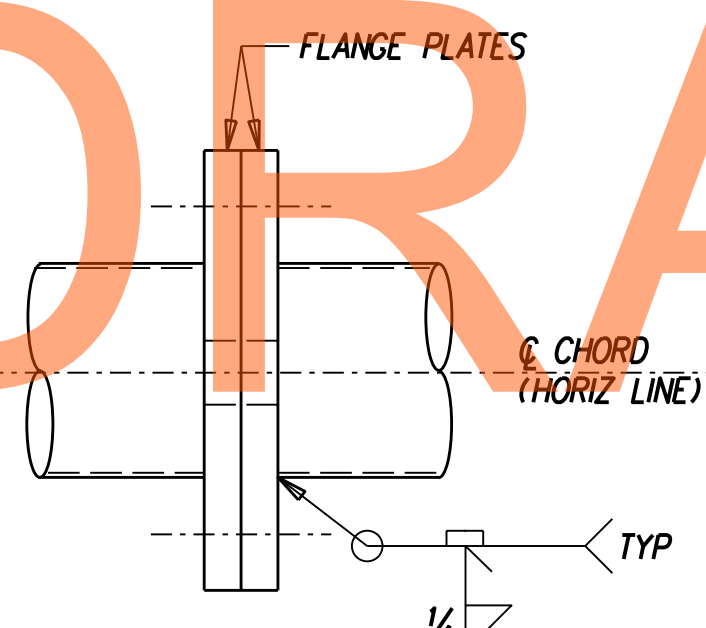
**CHORD SPLICE:
FLANGE PLATE TYPE 2**



**CHORD SPLICE:
FLANGE PLATE TYPE 4**



**FLANGE SPLICE DETAIL:
TYPE 2**



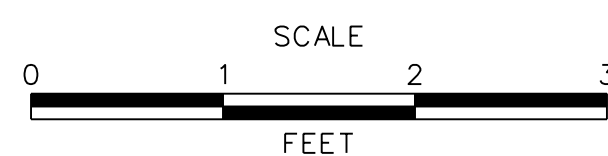
**FLANGE SPLICE DETAIL:
TYPE 4**

OVERHEAD SIGN CHORD SPLICE SCHEDULE					
TYPE	CHORD SIZE	OD	BC	NO & SIZE OF BOLTS	FLANGE PLATE THICKNESS
2	4.50" OD x .237" THK	11 1/2"	8"	6-1" DIA	2"
4	6.625" OD x .237" THK	13 3/4"	10 1/4"	8'-1" DIA	2"

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**DELAWARE
DEPARTMENT OF TRANSPORTATION**

ADDENDUMS / REVISIONS



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

CONTRACT	BRIDGE NO.	-
T200811301	DESIGNED BY:	ADL/SPM
COUNTY	CHECKED BY:	YY/DJP
NEW CASTLE		

CONNECTION DETAILS - 2

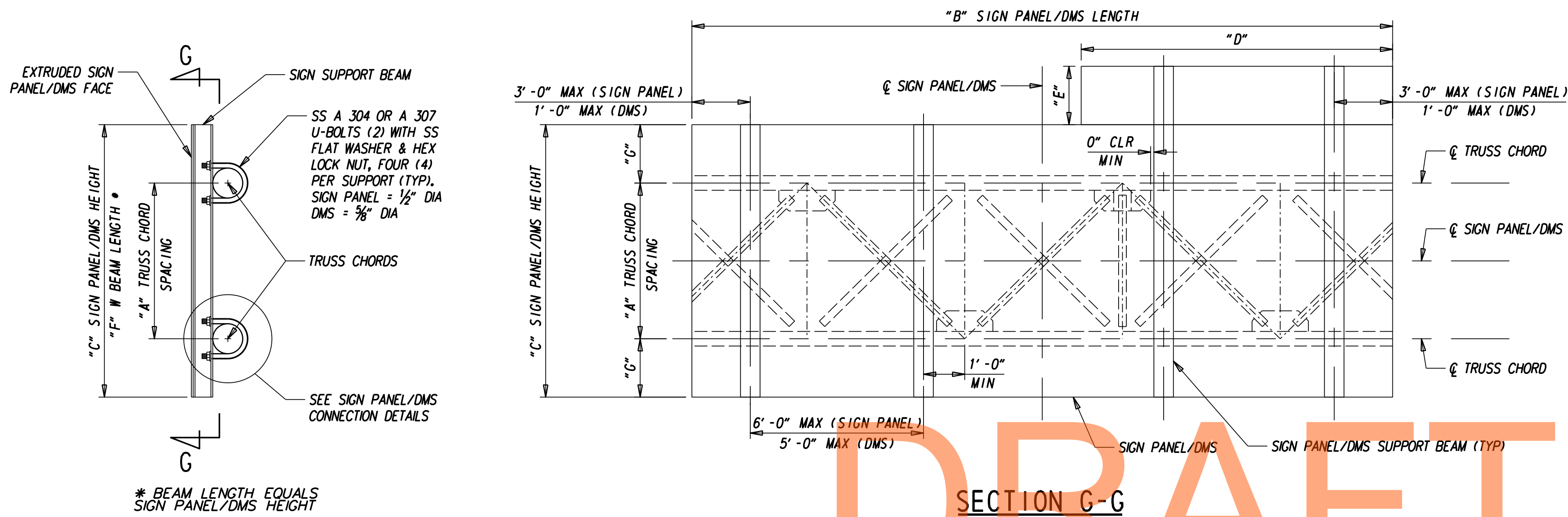
OSS-07

SHEET NO.	334
TOTAL SHTS.	850

REFERENCES:

GENERAL NOTES OSS-01
CONNECTION DETAILS OSS-06

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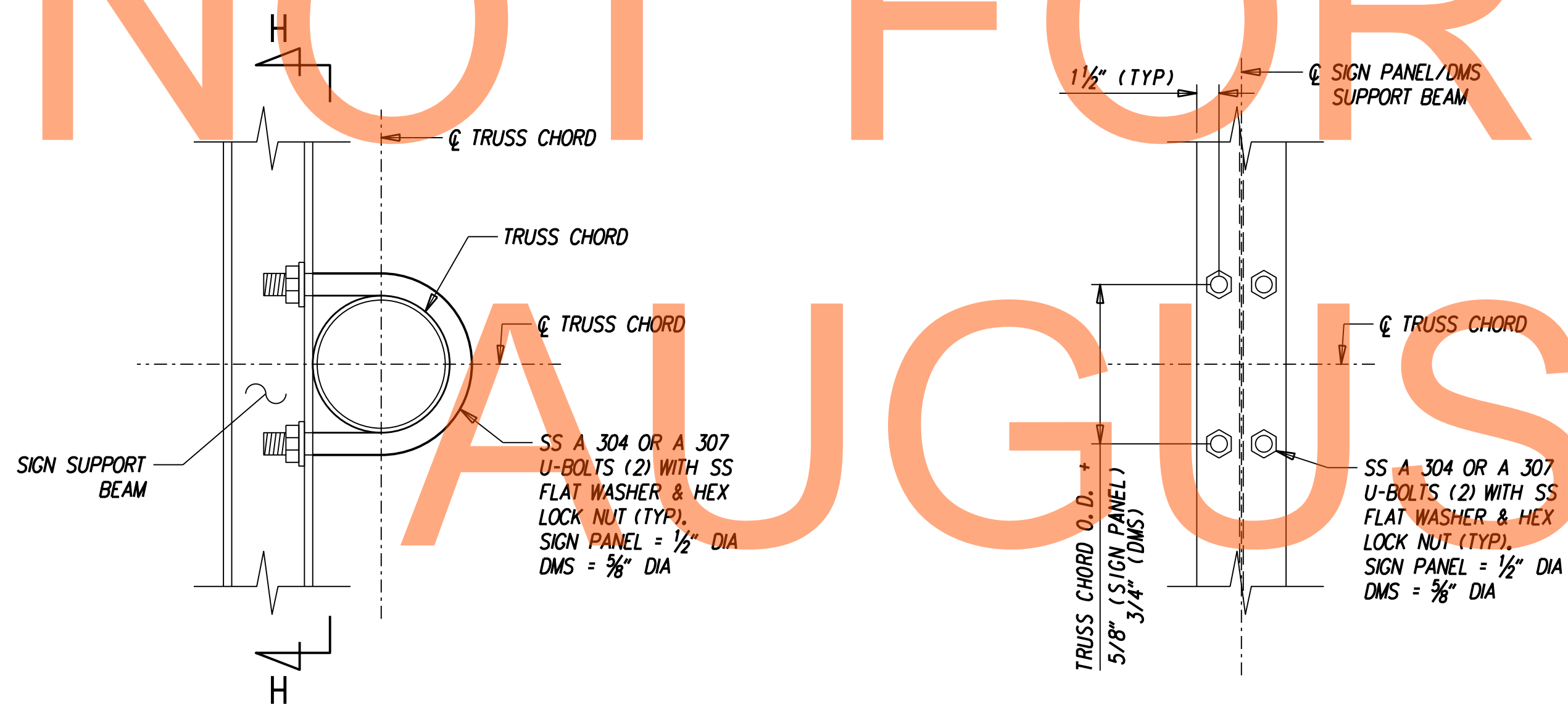
SIGN SUPPORT FOR OVERHEAD SIGN STRUCTURES

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SIGN SUPPORTS TABLE										
SIGN STRUCTURE	PANEL DESIGNATION	NUMBER OF SUPPORTS (MIN)	SUPPORT SIZE	A	B	C	D	E	F	G
SO1405	10	4	W6x25	4'-0"	23'-0"	13'-6"	9'-0"	2'-6"	13'-6" / 16'-0"	4'-9"
SO1410	DMS	8	W6x15	4'-0"	35'-0"	8'-0"			8'-0"	2'-0"



SIGN PANEL/DMS CONNECTION DETAIL

SECTION H-H

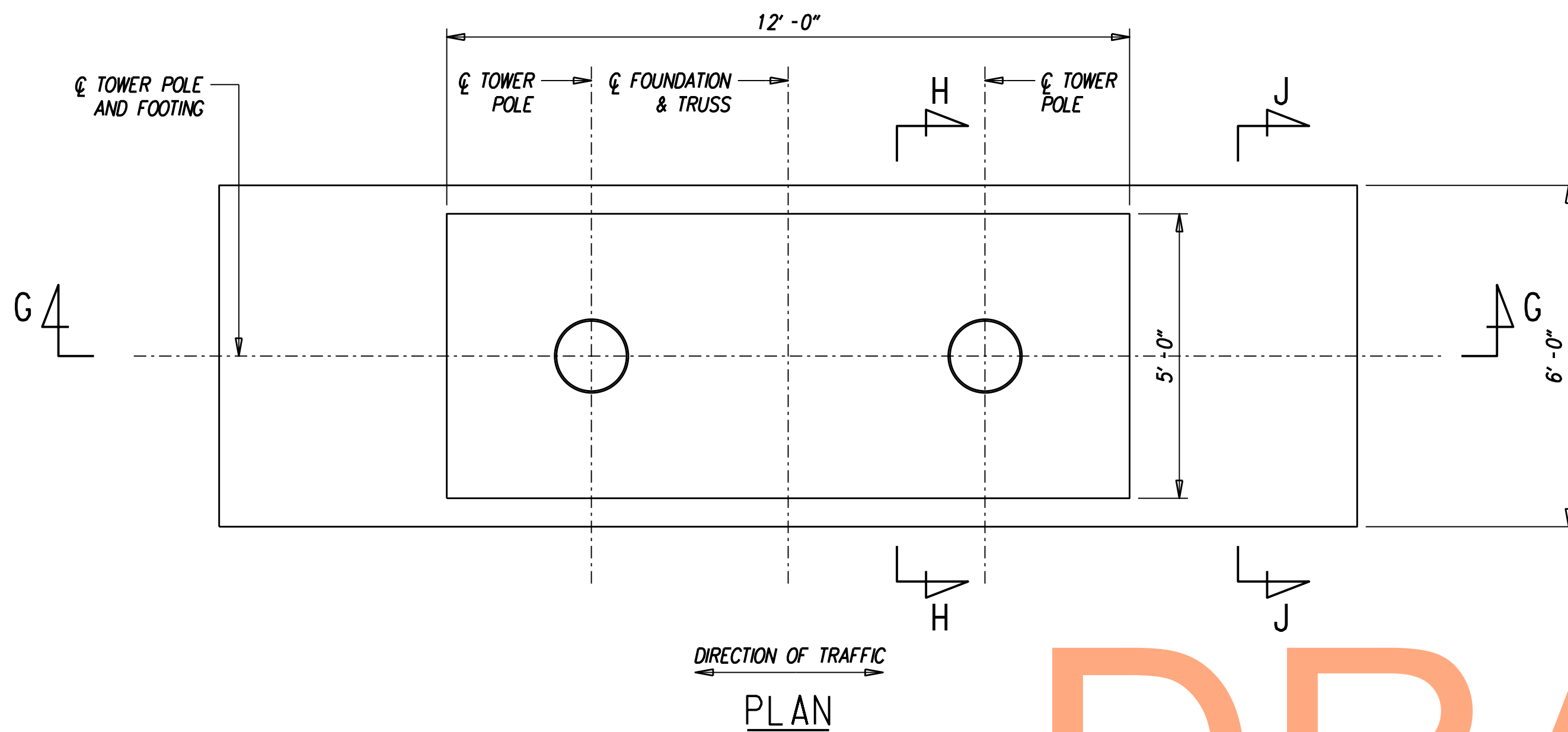
NOTES:

- ALL SIGN PANELS SHALL BE INSTALLED SO THAT THE PANEL IS CENTERED VERTICALLY ALONG THE CHORD TRUSS.

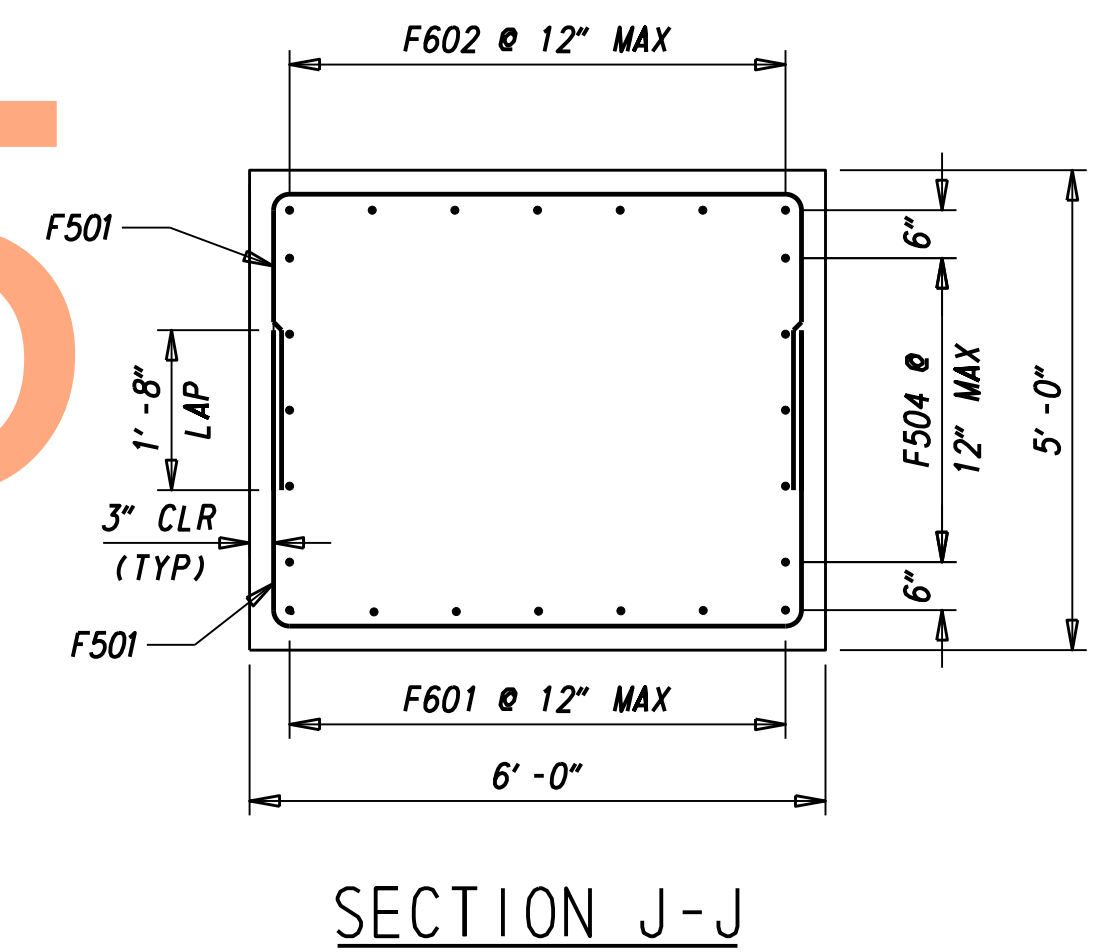
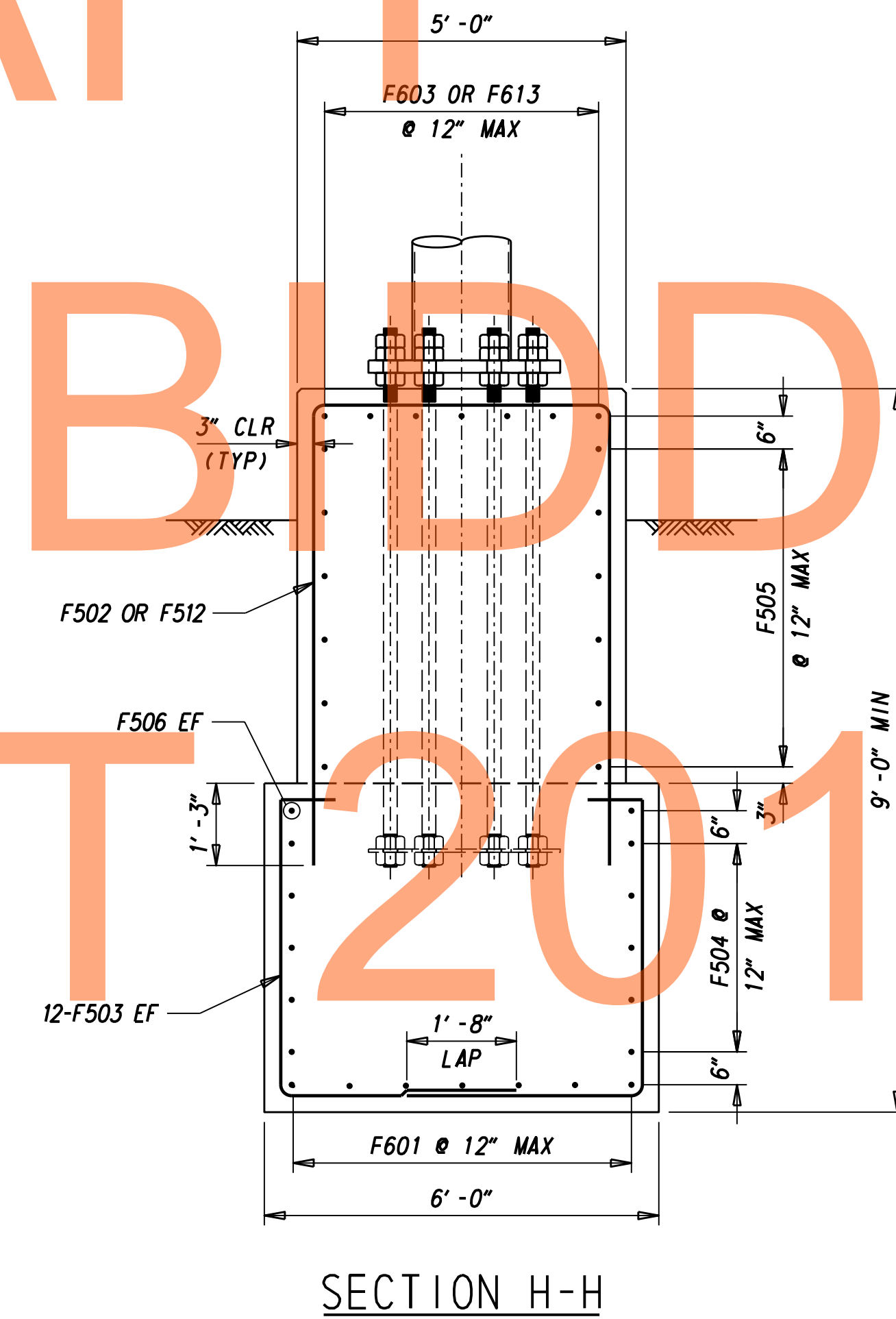
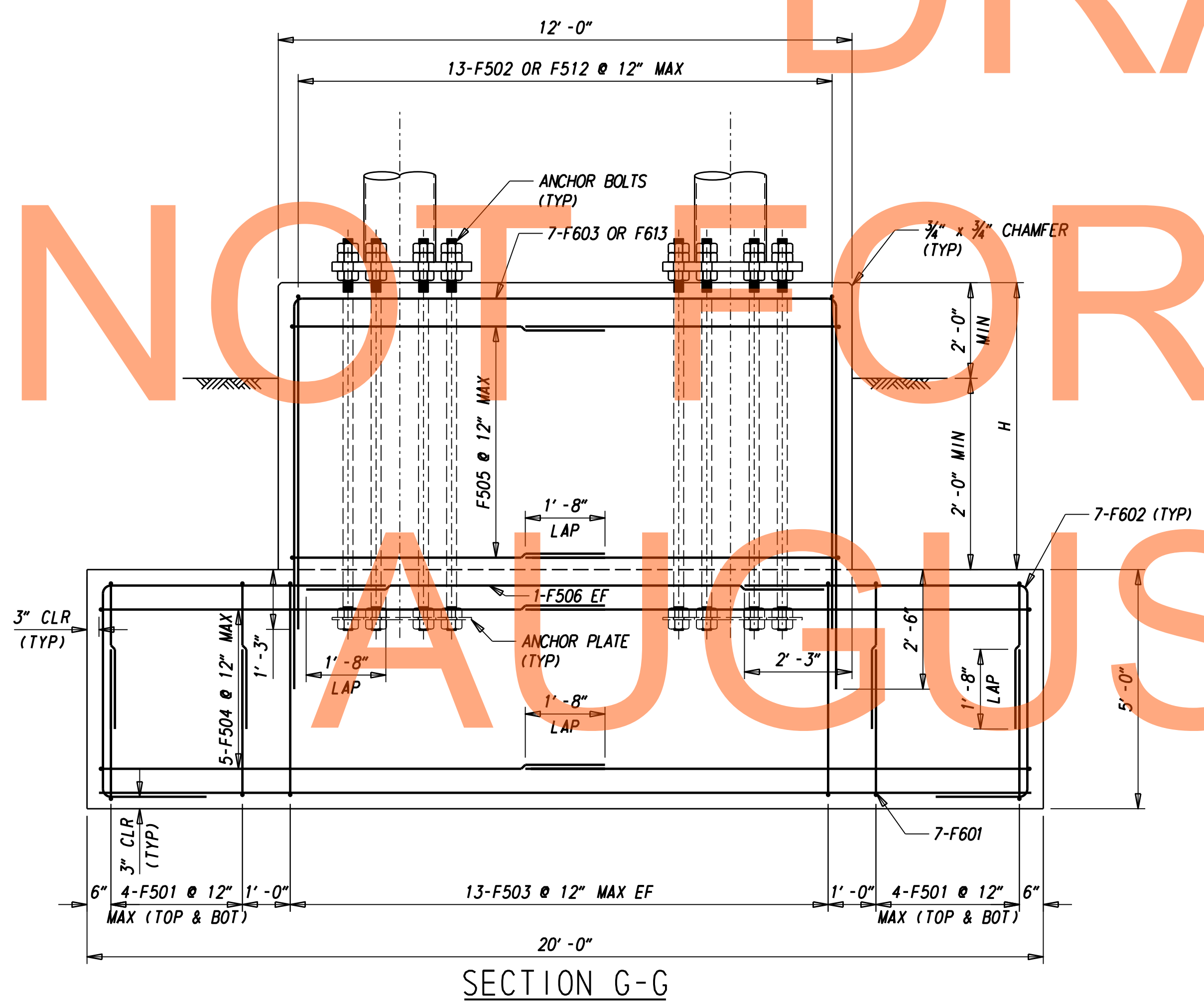
REFERENCES:

GENERAL NOTES 055-01

J:\2008 PROJECTS\E3X34801\700CADD\750AET\SIGN STRUCTURES\DT_301AET_SS_004.DGN



PEDESTAL HEIGHT - H			
SS#	TYPE	TOWER A	TOWER B
		S01405	2
S01410	4	6' - 0"	7' - 6"



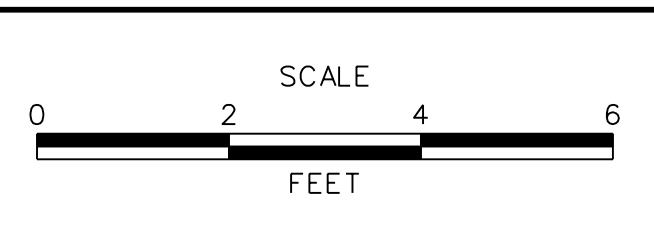
REFERENCES:

- GENERAL NOTES OSS-01
- REINFORCEMENT BAR SCHEDULE OSS-10

J:\2008 PROJECTS\E3X34801\700CADD\750AET\SIGN STRUCTURES\FT_301AET_SS_001.DGN



ADDENDUMS / REVISIONS	



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

CONTRACT T200811301	BRIDGE NO. -
COUNTY NEW CASTLE	DESIGNED BY: ADL/SPM
	CHECKED BY: YY/DJP

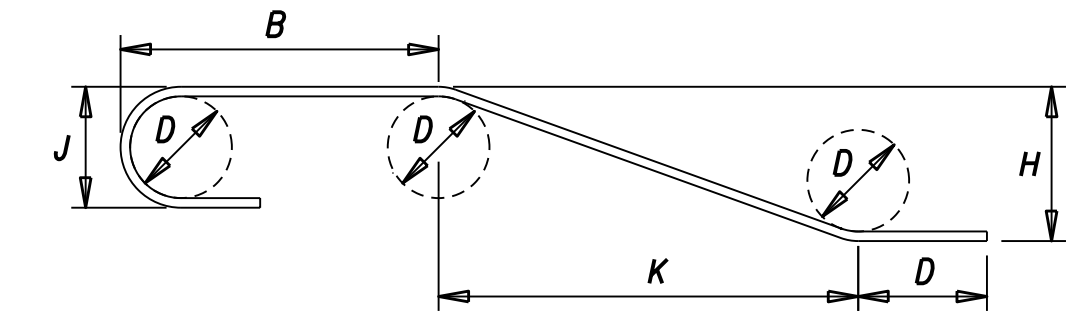
FOUNDATION DETAILS TYPES 2 & 4	SHEET NO. 336
	TOTAL SHTS. 850

OSS-09

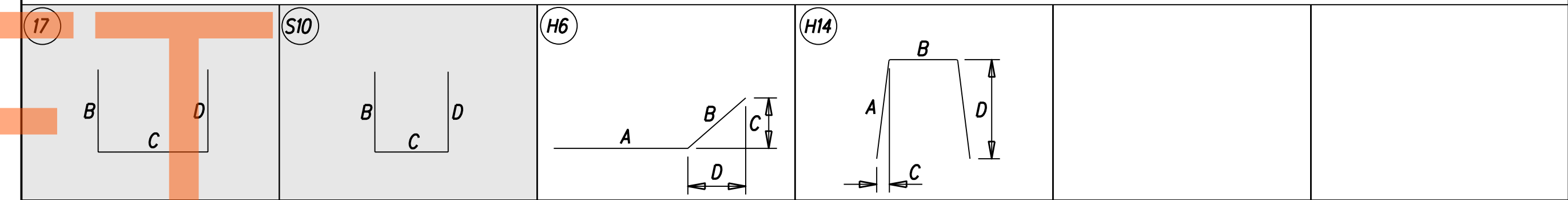
SPECIFICATIONS						BENDING DIMENSIONS			
QTY.		SIZE	LENGTH	MARK	TYPE	A	B	C	D
A	B								
S01405									
16	16	5	11'-8"	F501	S10	3'-1"	5'-6"	3'-1"	
13	-	5	16'-6"	F502	S10	6'-0"	4'-6"	6'-0"	
26	26	5	8'-11"	F503	S10	10"	4'-6"	3'-7"	
10	10	5	26'-6 3/4"	F504	17	10'-7"	5'-4 3/4"	10'-7"	
10	14	5	17'-6 3/4"	F505	17	6'-7"	4'-4 3/4"	6'-7"	
2	2	5	10'-11"	F506	STR				
-	13	5	19'-6"	F512	S10	7'-6"	4'-6"	7'-6"	
7	7	6	19'-6"	F601	STR				
14	14	6	12'-7 3/4"	F602	17	6'-0"	4'-4 3/4"	2'-3"	
7	-	6	25'-9 1/2"	F603	17	7'-2 3/8"	11'-4 3/4"	7'-2 3/8"	
-	7	6	28'-9 1/2"	F613	17	8'-8 3/8"	1'-4 3/4"	8'-8 3/8"	
S01410									
16	16	5	11'-8"	F501	S10	3'-1"	5'-6"	3'-1"	
13	-	5	18'-6"	F502	S10	7'-0"	4'-6"	7'-0"	
26	26	5	8'-11"	F503	S10	10"	4'-6"	3'-7"	
10	10	5	26'-6 3/4"	F504	17	10'-7"	5'-4 3/4"	10'-7"	
12	16	5	17'-6 3/4"	F505	17	6'-7"	4'-4 3/4"	6'-7"	
2	2	5	10'-11"	F506	STR				
-	13	5	21'-6"	F512	S10	8'-6"	4'-6"	8'-6"	
7	7	6	19'-6"	F601	STR				
14	14	6	12'-7 3/4"	F602	17	6'-0"	4'-4 3/4"	2'-3"	
7	-	6	27'-9 1/2"	F603	17	8'-2 3/8"	11'-4 3/4"	8'-2 3/8"	
-	7	6	30'-9 1/2"	F613	17	9'-8 3/8"	11'-4 3/4"	9'-8 3/8"	

NOTES:

- STANDARD BAR BENDS INCLUDE ONLY TYPES 1-32, S1-S12, AND T1-T16.
- ALL DIMENSIONS ARE OUT-TO-OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
- "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" ON TRUSS BARS. WHERE "J" CAN EXCEED "H", IT SHOULD BE SHOWN.
- "H" DIMENSIONS STIRRUPS TO BE SHOWN WHERE NECESSARY TO FIT WITHIN CONCRETE.
- UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.
- WHERE SLOPE DIFFERS FROM 45°, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS WHICH REQUIRE CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
- FIGURES IN CIRCLES SHOW TYPES.
- FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., SEE 'CRSF' OR 'ACY' TABLES.
- TYPE S1-S12, T1-T16 APPLY TO BAR SIZES #3 THROUGH #6.



STANDARD BAR BENDS



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NOTES:

- QUANTITIES A AND B REFER TO TOWER SIDES A AND B FOUNDATIONS.

OSS-10



ADDENDUMS / REVISIONS

US 301
MARYLAND STATE LINE
TO LEVELS ROAD

CONTRACT	BRIDGE NO.	-
T200811301	DESIGNED BY:	ADL/SPM
COUNTY	CHECKED BY:	YY/DJP
NEW CASTLE		

BAR SCHEDULE

SHEET NO.	337
TOTAL SHTS.	850