

PLAN

* CONTRACTOR TO VERIFY DIMENSION CONFORMS TO DMS CABINET.

Rev.

NOT TO SCALE

File: External Partnerships/ITS Program Office/ITS Standard Details/DMS Structure/ITS-030-A LH master DMS Structure.dgn



PREPARED BY
DESIGN DIVISION

DRAWN BY:

CHECKED BY:

ENGINEER OF DELIVERY

ENGINEER OF DEVELOPMENT

(SPECIAL DETAIL)
FHWA APPROVAL DATE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

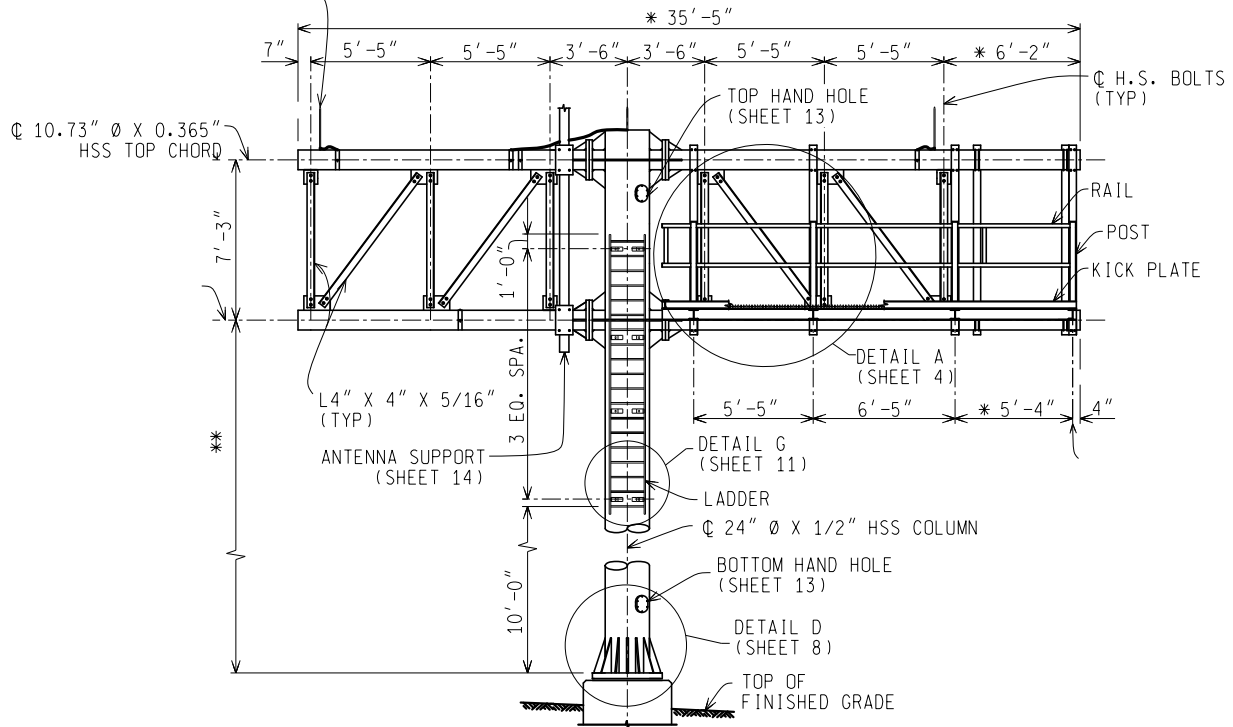
**LH MASTER
DMS STRUCTURE**

02/05/20
PLAN DATE

ITS-030-A

SHEET
1 of 16

1/2" Ø X 24" CLASS II AIR
TERMINAL (ALUMINUM) (TYP)



ELEVATION

OUTLINE OF DMS CABINET NOT SHOWN FOR CLARITY.
* CONTRACTOR TO VERIFY DIMENSION CONFORMS TO DMS CABINET.
** SEE CONTRACT PLANS FOR HEIGHT (32'-0" MAXIMUM).

NOTES:

1. THE DESIGN OF THIS STRUCTURE IS BASED ON THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS, 4TH EDITION 2001 WITH INTERIMS THROUGH 2003.
2. THE DESIGN OF THE CONNECTION OF THE DMS CABINET MOUNTING POSTS TO TRUSS CHORDS MUST BE SUBMITTED FOR APPROVAL.
3. MAXIMUM SIGN AREA IS 285 SQUARE FEET.
4. PROVIDE 15/16 DIAMETER HOLES FOR 7/8 DIAMETER HIGH STRENGTH (H.S.) BOLTS FOR ALL CONNECTIONS UNLESS OTHERWISE STATED.
5. CONTRACTOR TO ORIENT THE L4" X 4" X 5/16" DIAGONAL AND VERTICAL BRACING PER FABRICATORS RECOMMENDATION. ALL BRACING ON THE STRUCTURE TO BE AT THE SAME ORIENTATION.
6. IF ANTENNA SUPPORT POLE IS REQUIRED, PROVIDE AIR TERMINAL, DOWN CONDUCTOR, AND MOUNTING STRAPS IN ADDITION TO LIGHTNING PROTECTION (LP) EQUIPMENT TO BE SUPPLIED FOR THE DMS CASE. THE TOP OF THE ANTENNA SUPPORT MUST BE SEALED WITH A TENON. CONTRACTOR TO VERIFY WITH ENGINEER METHOD TO ROUTE THE WIRE TO THE INTERIOR OF THE ANTENNA SUPPORT SUCH THAT A WATER TIGHT SEAL IS MAINTAINED.
7. INSTALL FLEXIBLE CONDUITS IN THE DMS SUPPORT STRUCTURE CENTER COLUMN TO SEPARATE POWER AND COMMUNICATIONS CABLING.
8. INSTALL RODENT SCREEN BETWEEN THE BASE PLATE (P) AND TOP OF FOUNDATION.
9. S.S. DENOTES STAINLESS STEEL. EQ. DENOTES EQUAL. SPA. DENOTES SPACED. W/ DENOTES WITH.

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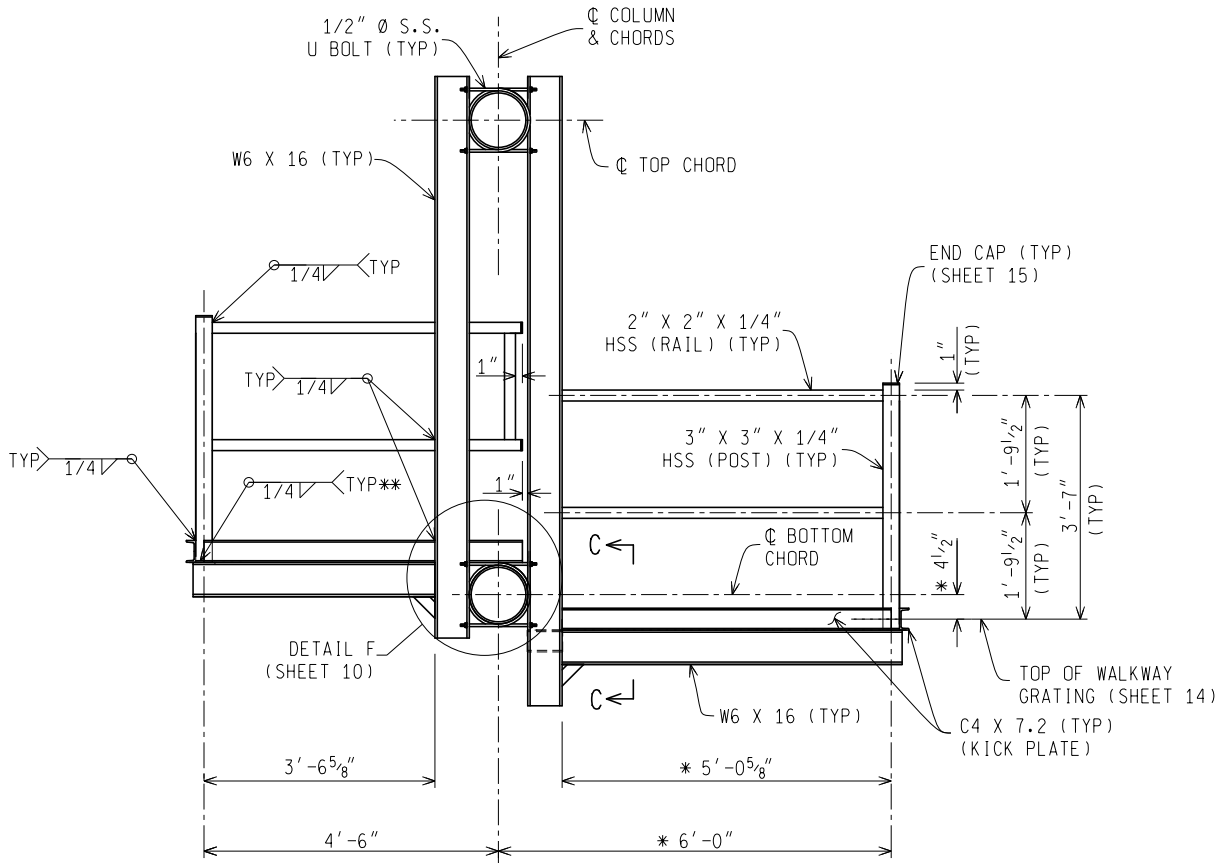
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02/05/20
PLAN DATE

ITS-030-A

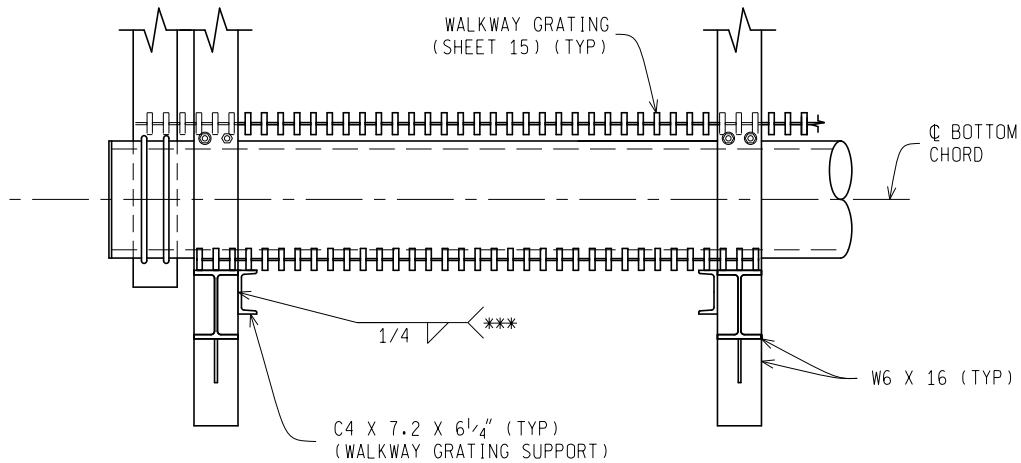
SHEET
2 of 16



SECTION A-A

OUTLINE OF DMS CABINET, WALKWAY GRATING, AND COLUMN NOT SHOWN FOR CLARITY.
DO NOT PLACE DMS CABINET ON PLATFORM.

- * CONTRACTOR TO VERIFY DIMENSION CONFORMS TO DMS CABINET.
- ** WELD 3" X 3" X 1/4" HSS (POST) TO W6 X 16



SECTION C-C

*** C4 X 7.2 X 6 1/4" WELDED TO VERTICAL W6 X 16 MEMBERS. (BOTH ENDS OF GRATING)

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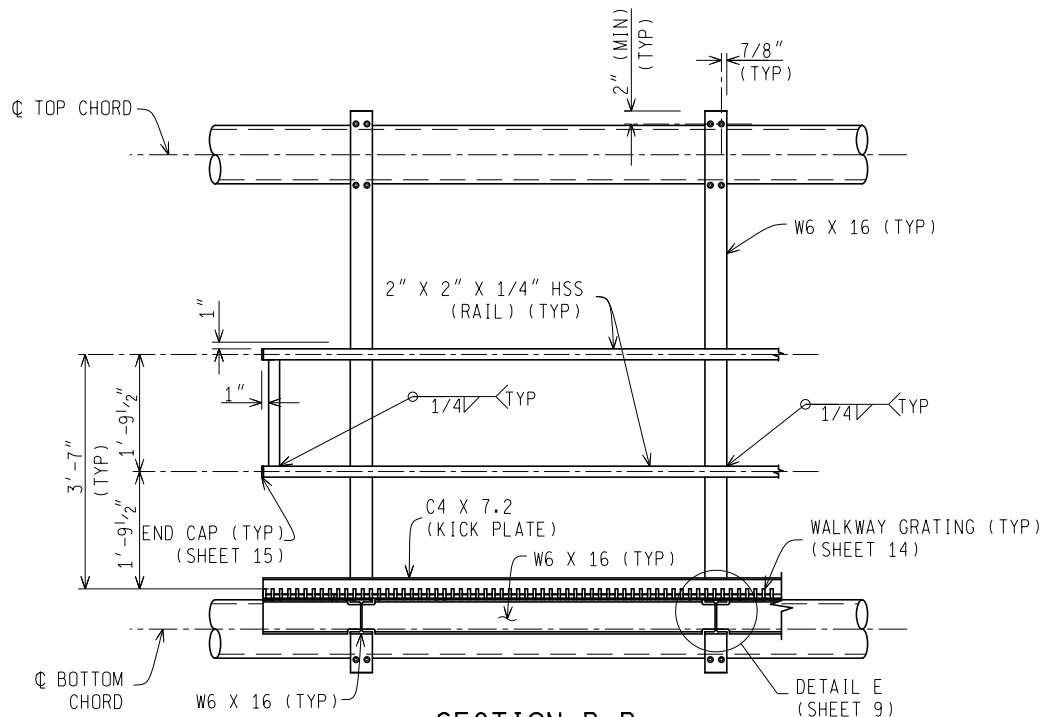
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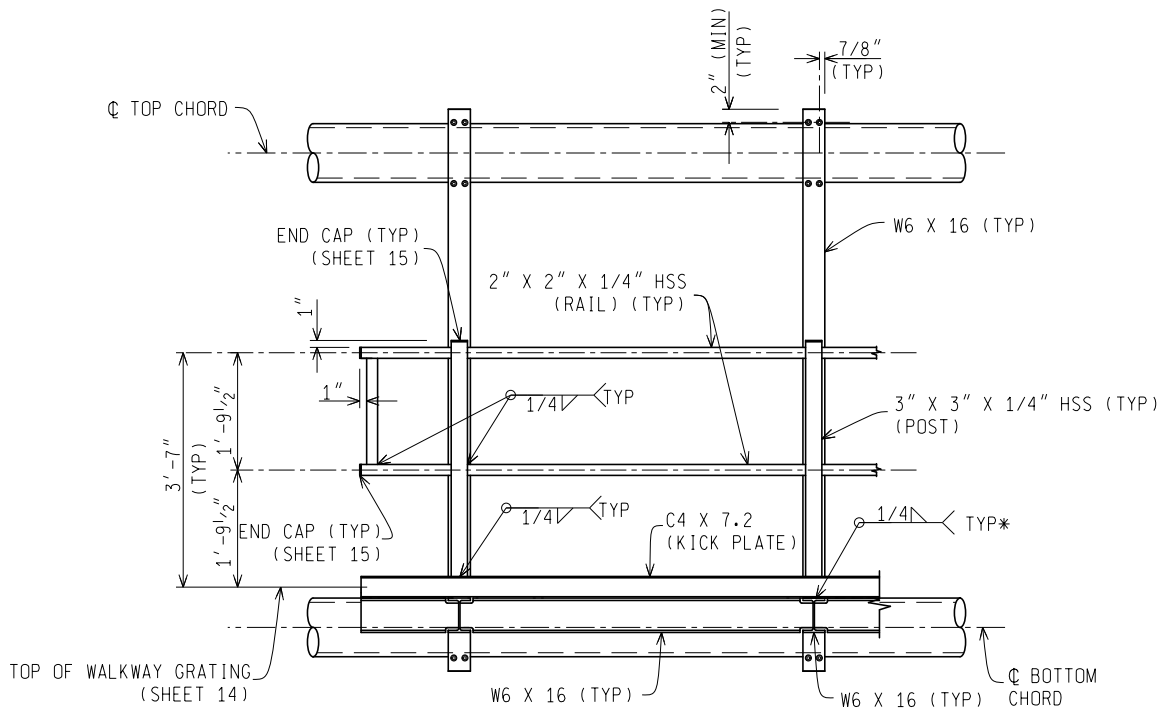
ITS-030-A

SHEET
3 of 16



SECTION B-B

COLUMN AND TRUSS WEB ANGLES NOT SHOWN FOR CLARITY.



DETAIL A

COLUMN, TRUSS WEB ANGLES, AND WALKWAY GRATING NOT SHOWN FOR CLARITY.

* WELD 3" X 3" X 1/4" HSS (POST) TO W6 X 16

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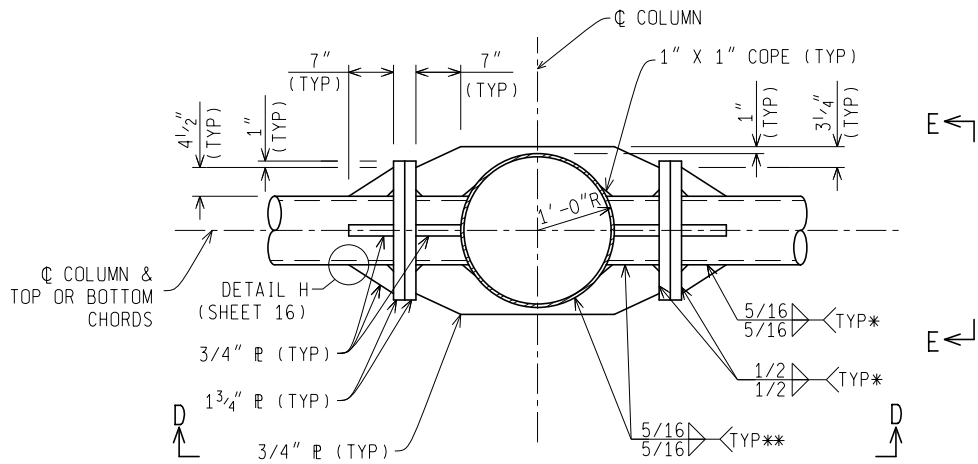
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02/05/20
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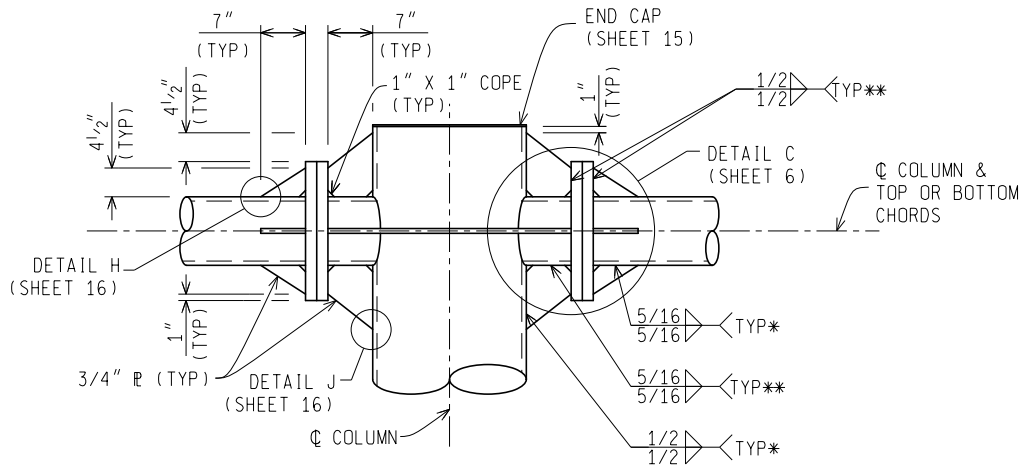
ITS-030-A

SHEET
4 of 16



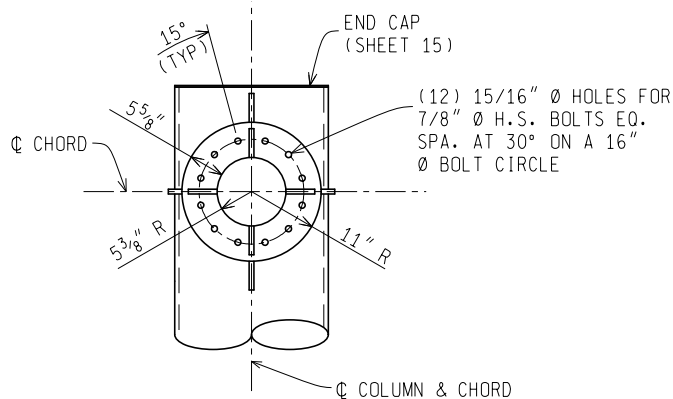
DETAIL B

VIEW ROTATED 90°
LADDER NOT SHOWN FOR CLARITY.
CONNECTION USED FOR TOP AND BOTTOM CHORDS.



SECTION D-D

CONNECTION USED FOR TOP AND BOTTOM CHORDS.
OMIT COLUMN END CAP FOR BOTTOM CHORD.



SECTION E-E

CONNECTION USED FOR TOP AND BOTTOM CHORDS.

* WRAP WELD AROUND OUTSIDE EDGE AND STOP 1/4" SHORT OF CLIP.
** STOP WELD 1/4" SHORT OF CLIP.

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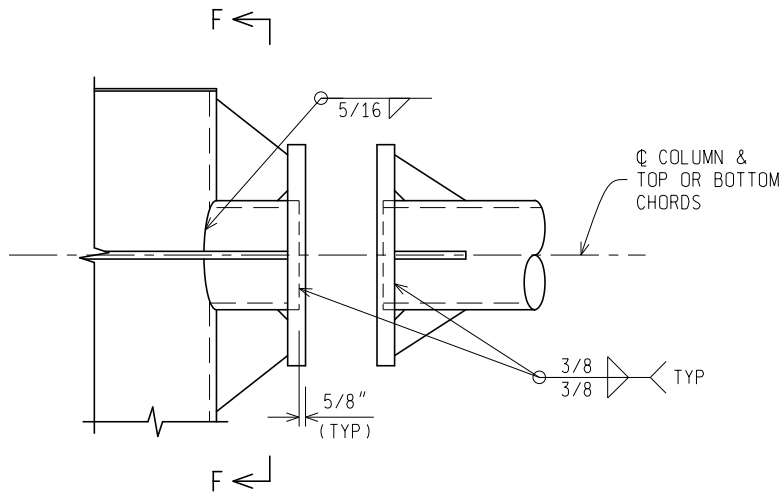
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02/05/20
PLAN DATE

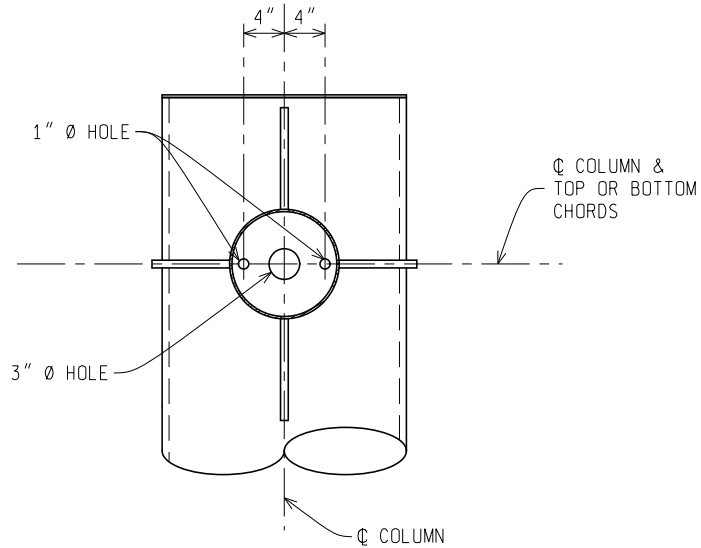
ITS-030-A

SHEET
5 of 16



DETAIL C

DETAIL USED FOR TOP AND BOTTOM CHORDS.



SECTION F-F

DETAIL USED FOR TOP AND BOTTOM CHORDS.

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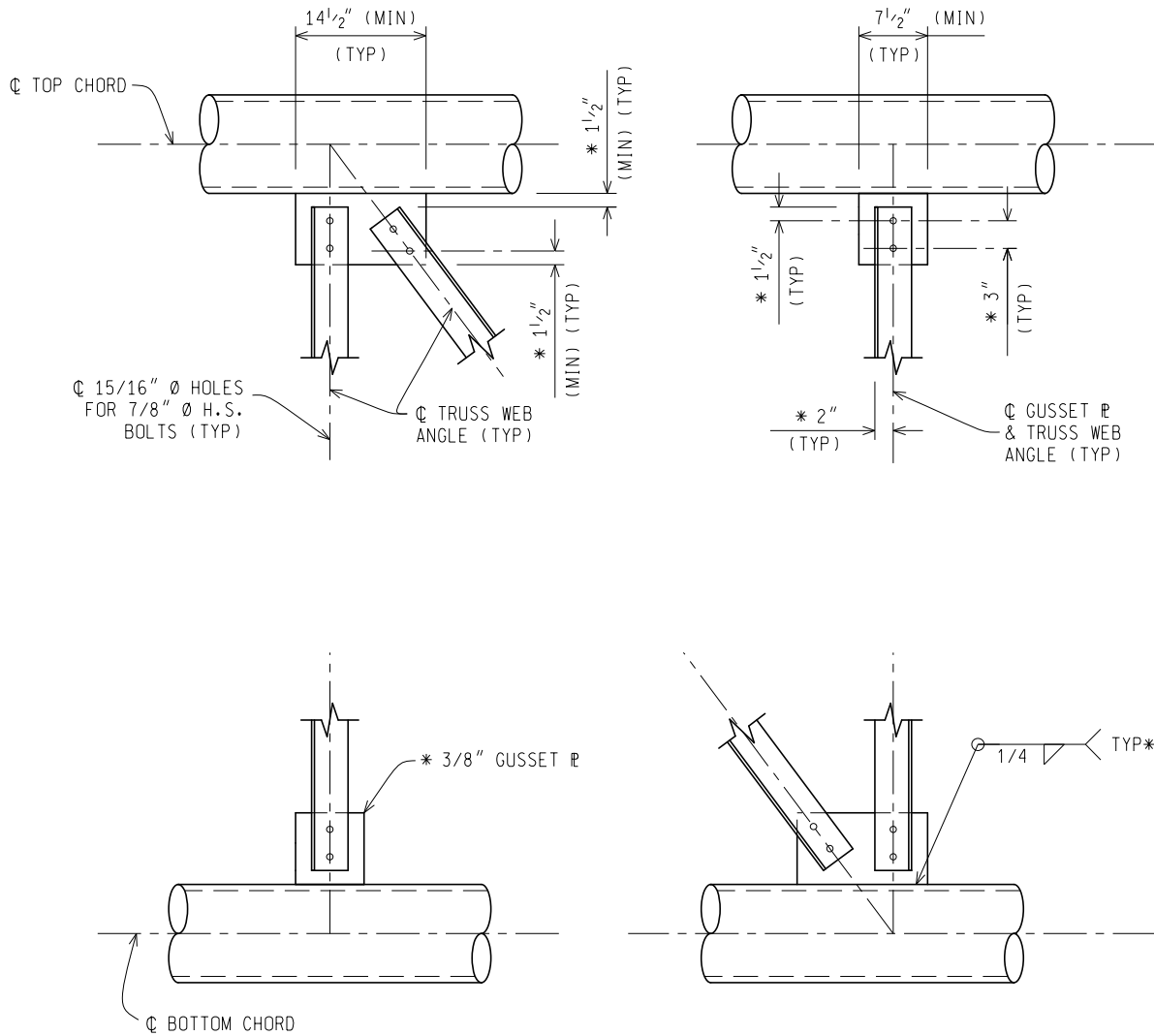
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(SPECIAL DETAIL)
FHWA APPROVAL DATE

02/05/20
PLAN DATE

ITS-030-A

SHEET
6 of 16



GUSSET PLATE CONNECTION DETAILS

* TYPICAL FOR ALL GUSSET PLATE CONNECTION DETAILS.

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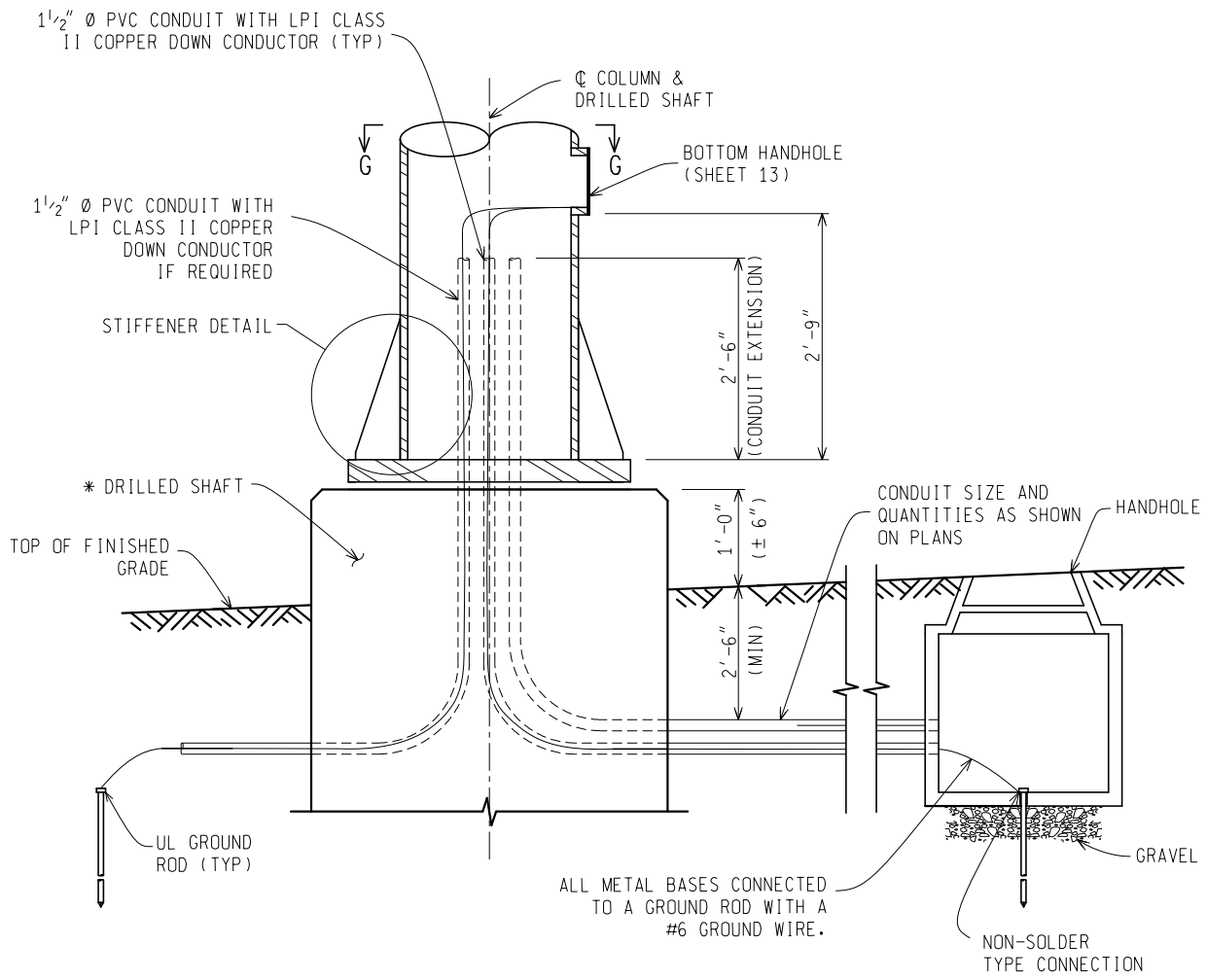
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BUREAU OF DEVELOPMENT STANDARD PLAN

(SPECIAL DETAIL)
FHWA APPROVAL DATE

02/05/20
PLAN DATE

ITS-030-A

SHEET
7 of 16



DETAIL D

* TYPE A DRILLED SHAFT SHOWN, REFER TO TYPE B DRILLED SHAFT DETAILS FOR BARRIER WALL INSTALLATION.

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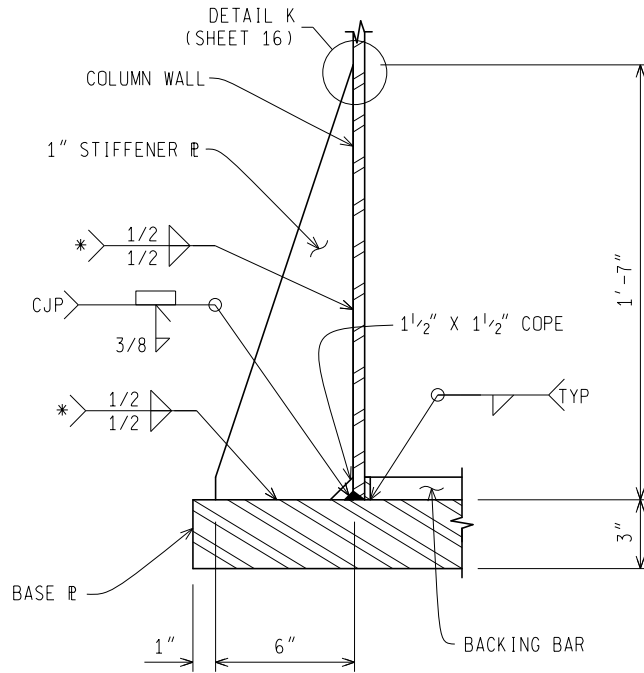
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(SPECIAL DETAIL)
FHWA APPROVAL DATE

02/05/20
PLAN DATE

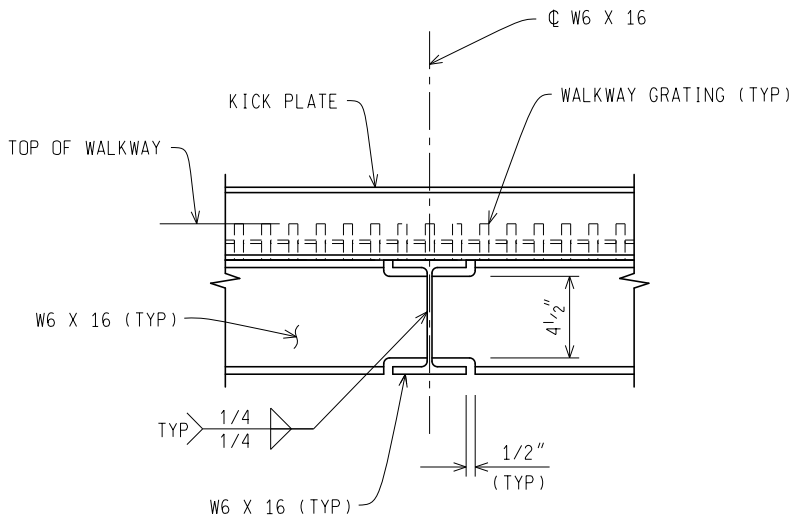
ITS-030-A

SHEET
8 of 16



STIFFENER DETAIL

* WRAP WELD AROUND OUTSIDE EDGE AND STOP 1/4" FROM CLIP.



DETAIL E

TYPICAL WALKWAY BRACE CONNECTION.

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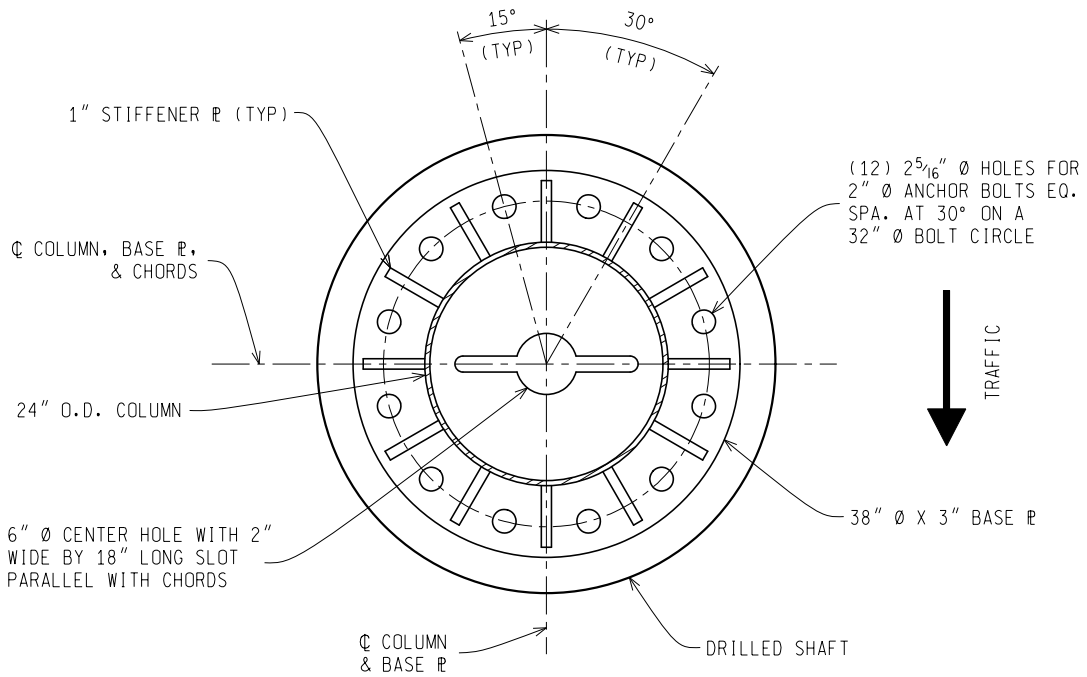
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BUREAU OF DEVELOPMENT STANDARD PLAN

(SPECIAL DETAIL)
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02/05/20
PLAN DATE

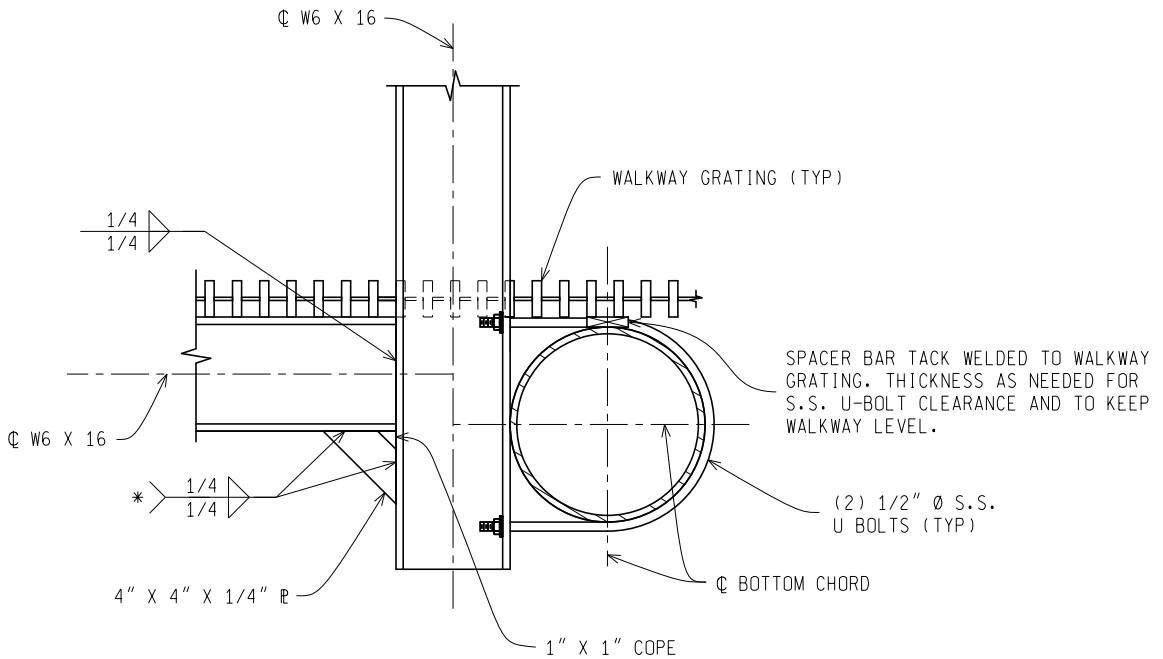
ITS-030-A

SHEET
9 of 16



SECTION G-G

ALIGN BASE PLATE AND ANCHOR BOLTS SO THAT THE DMS SIGN FACE IS POSITIONED TOWARDS TRAFFIC AT ANGLE SPECIFIED IN PLANS



DETAIL F

TYPICAL WALKWAY BRACE CONNECTION.

* WRAP WELD AROUND OUTSIDE EDGE AND STOP 1/4" FROM CLIP.

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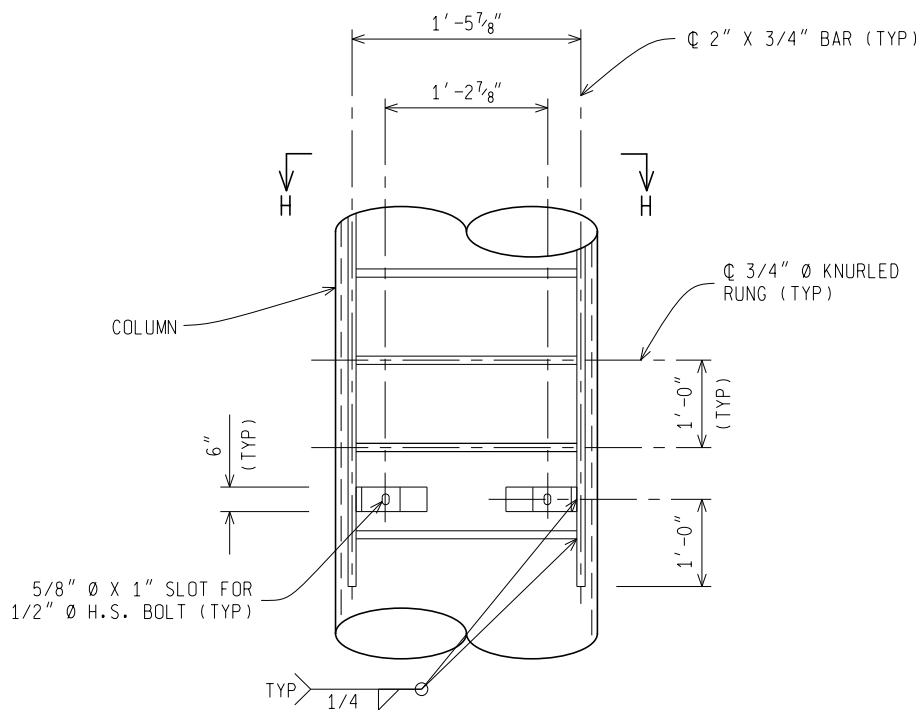
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(SPECIAL DETAIL)
FHWA APPROVAL DATE

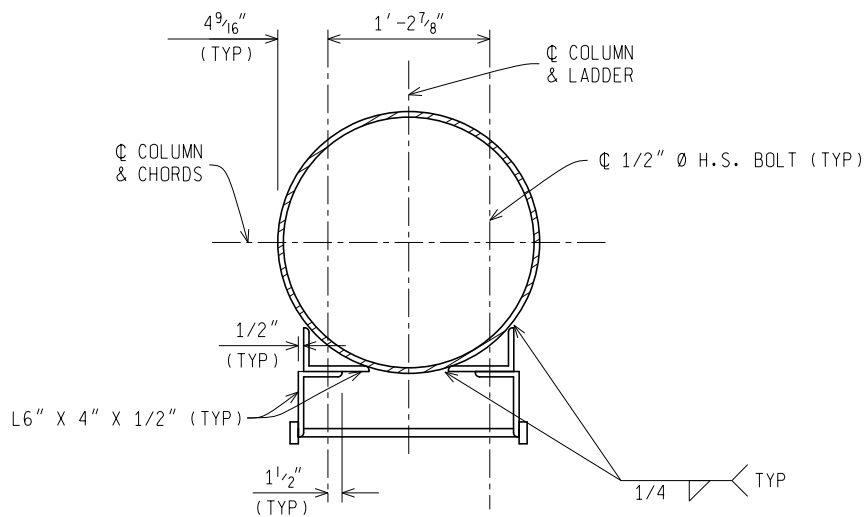
02/05/20
PLAN DATE

ITS-030-A

SHEET
10 of 16



DETAIL G

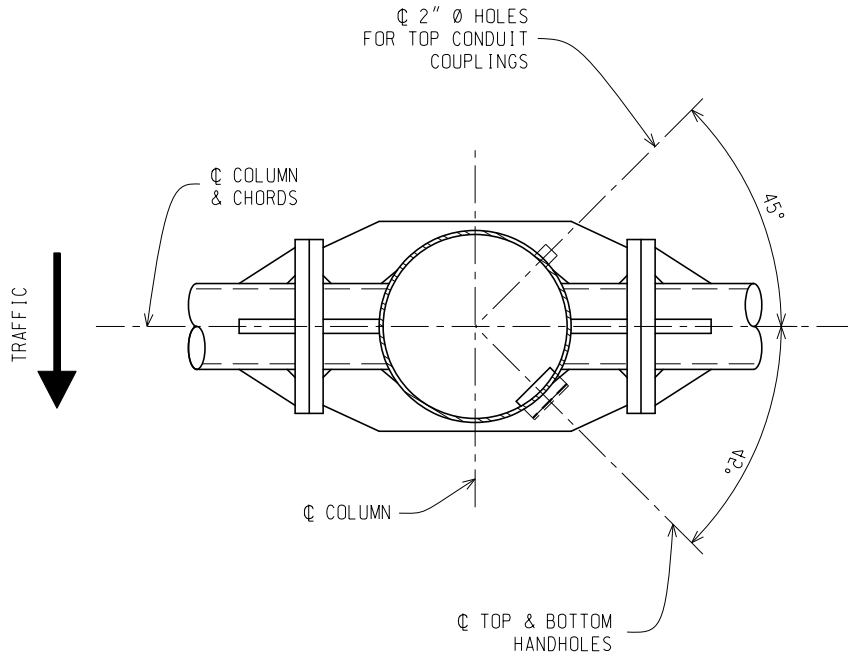


SECTION H-H

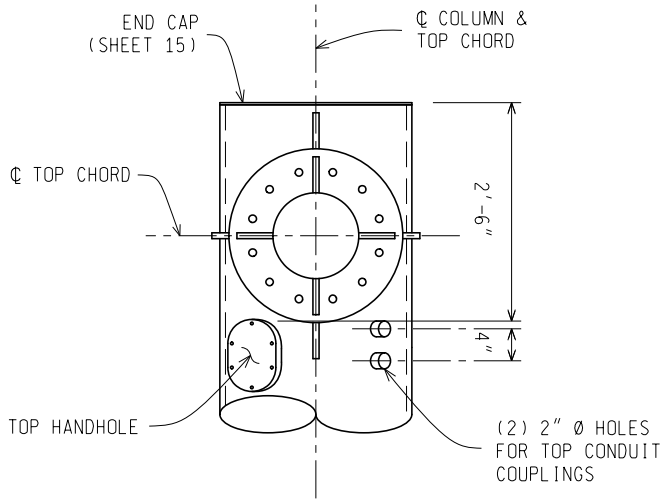
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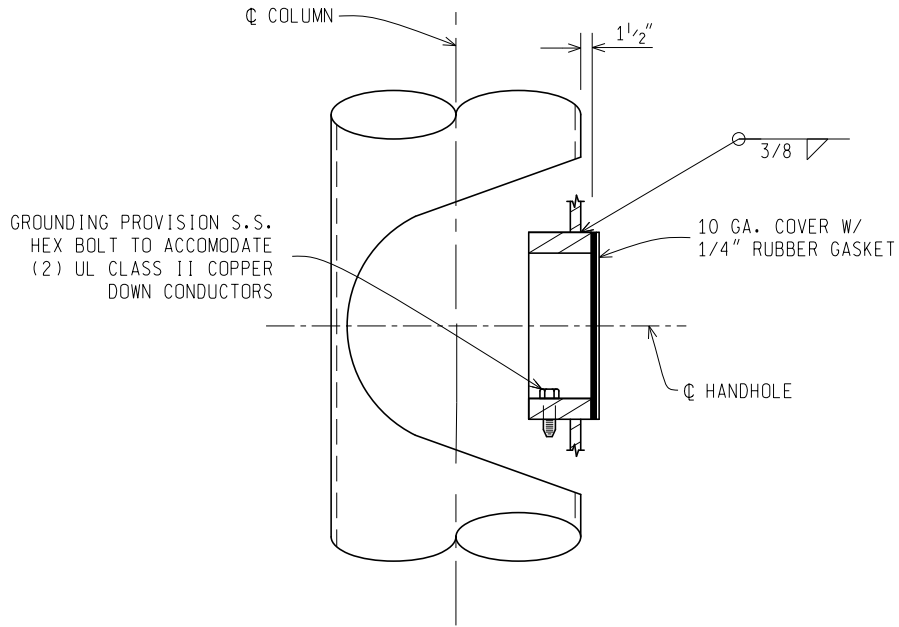
HANDHOLE AND COUPLING ORIENTATION



COUPLINGS

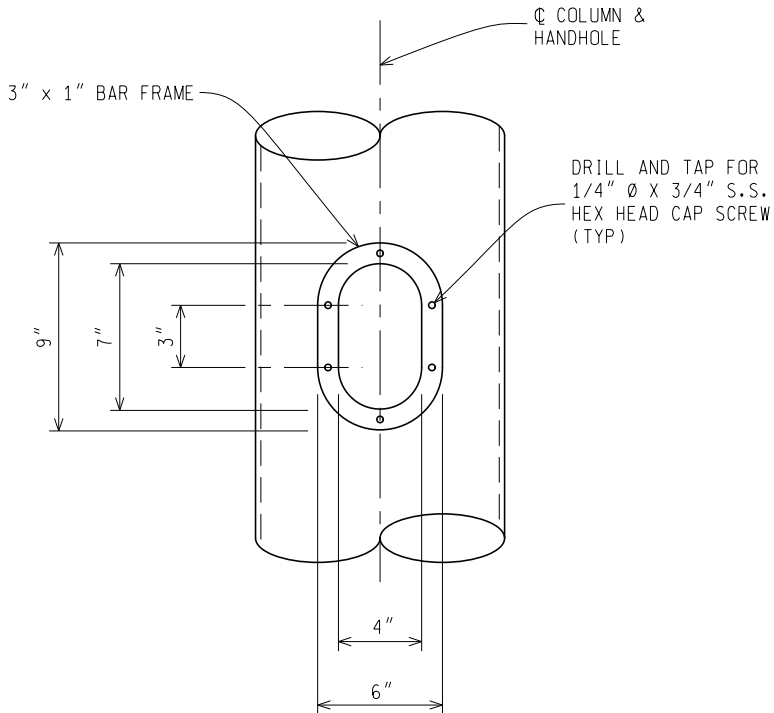
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**TOP AND BOTTOM HANDHOLE
DETAIL**

PLACE C OF TOP HANDHOLE 2'-10 $\frac{1}{2}$ " BELOW THE TOP OF COLUMN.
PLACE C OF BOTTOM HANDHOLE 3'-1 $\frac{1}{2}$ " ABOVE THE TOP OF BASE PLATE.



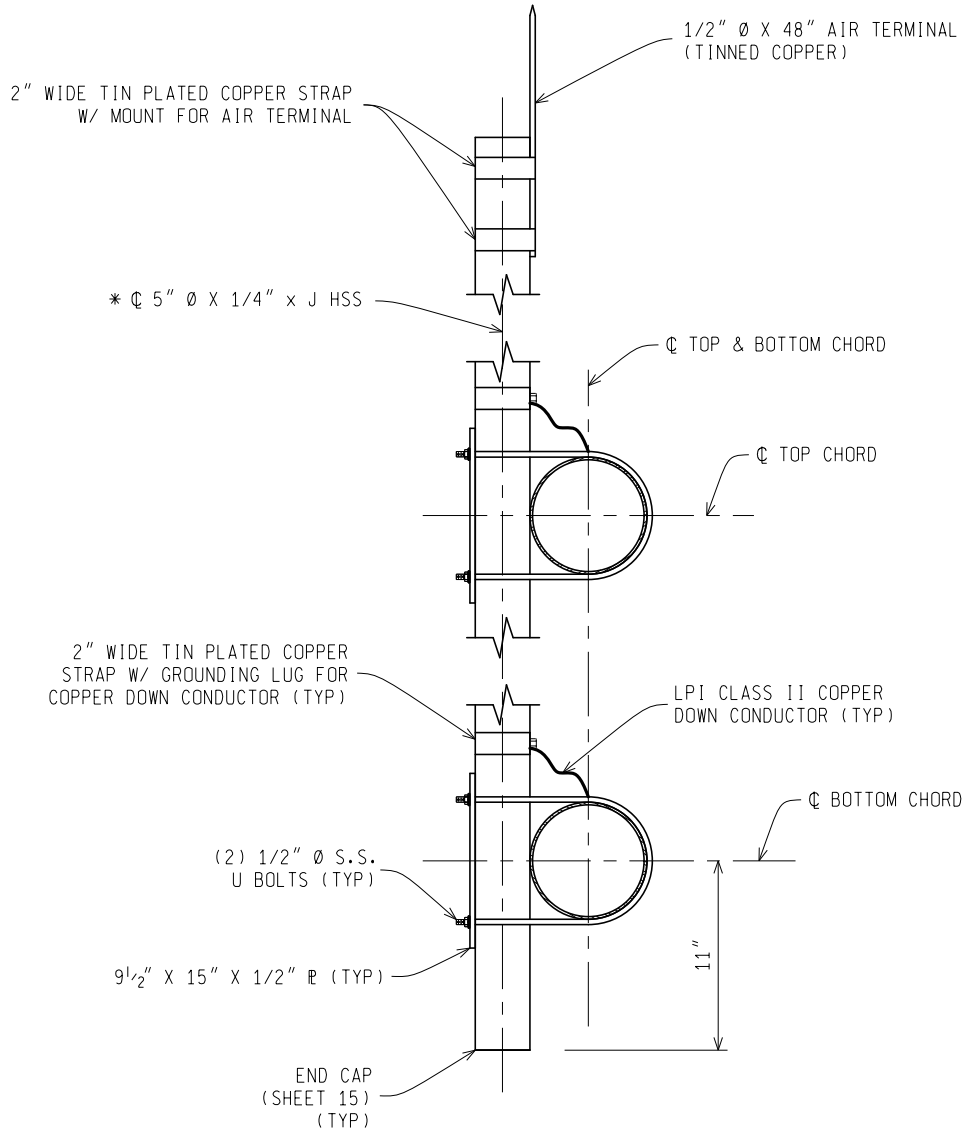
**TOP AND BOTTOM HANDHOLE
DETAIL**

(VIEW ROTATED 90 DEGREES)

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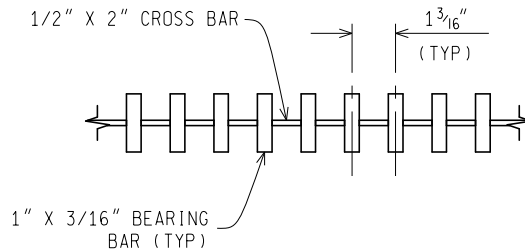
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ANTENNA SUPPORT DETAIL

* SEE CONTRACT PLANS FOR HEIGHT (21'-6" MAXIMUM).



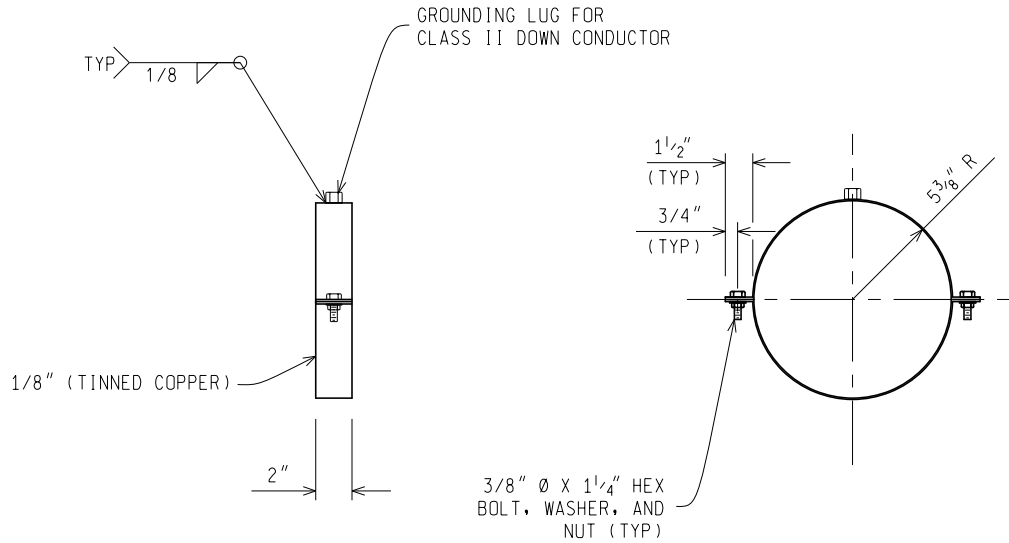
WALKWAY GRATING DETAIL

ATTACH WALKWAY GRATING TO W6 X 16 MEMBER WITH GALVANIZED FASTENERS APPROVED BY ENGINEER, 2 MIN. PER W6 X 16 MEMBER PER GRATING PIECE.

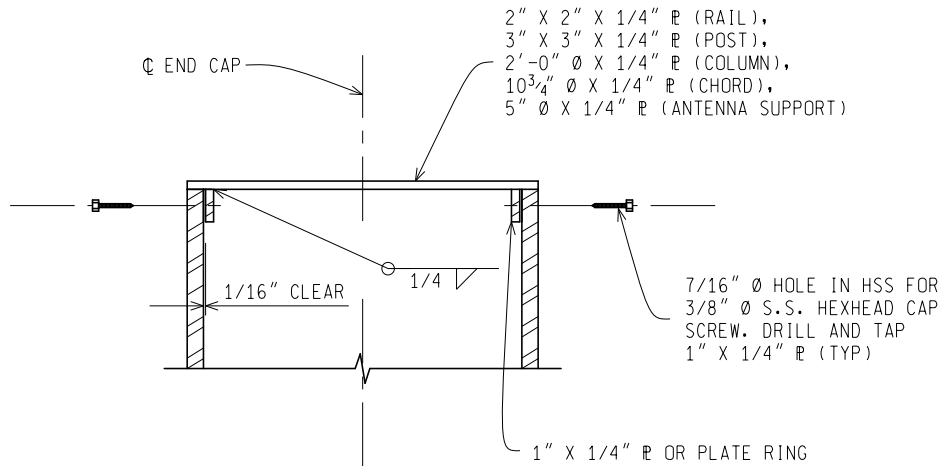
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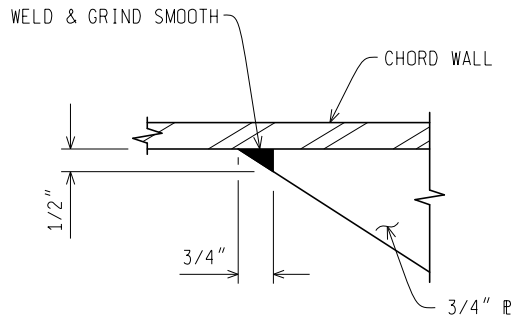
BONDING CLAMP DETAIL



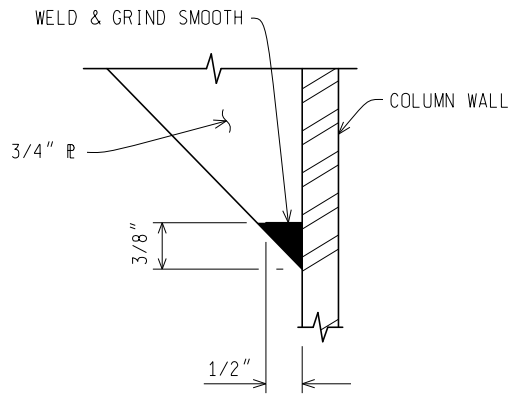
END CAP DETAIL

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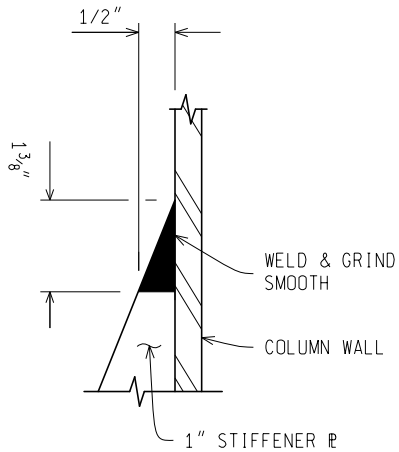
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DETAIL H



DETAIL J



DETAIL K

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ITS-030-A

SHEET
16 of 16