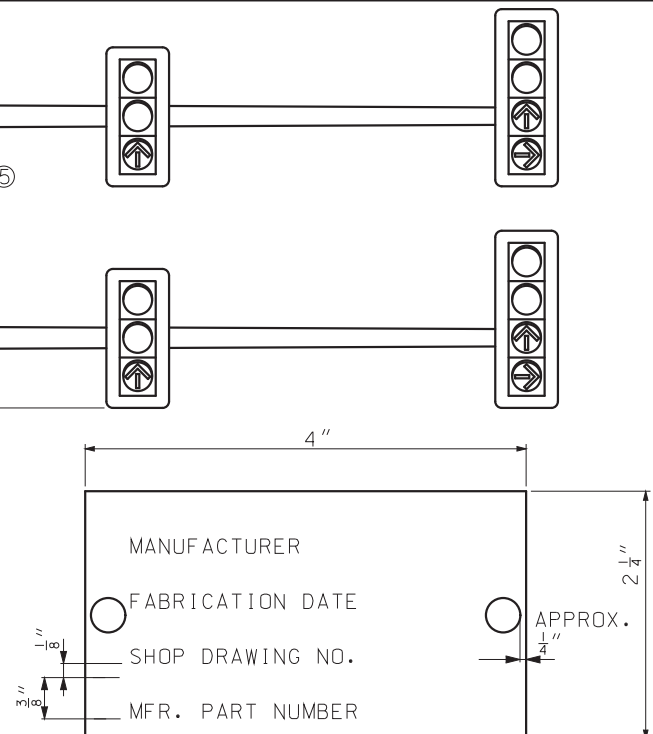
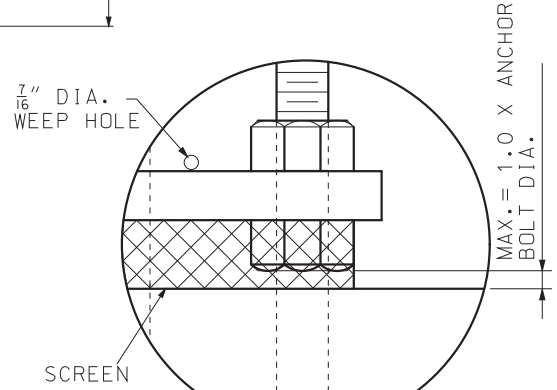


TYPE BL AND CL POSTS

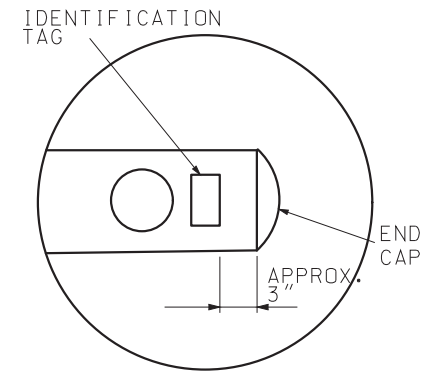


IDENTIFICATION TAG

ID TAG NOTE:
TAG SHALL BE ALUMINUM OR STAINLESS STEEL AND ATTACHED TO POLE OR MAST ARM USING TWO RIVETS OR STAINLESS STEEL DRIVE SCREWS. ID TAG HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.



DETAIL A



DETAIL B

GENERAL NOTES:

ARMS SHALL BE RAKED UP 0.25" PER FOOT MINIMUM. ARMS SHALL BE PROVIDED WITH A PERMANENT MARKING INDICATING PROPER ORIENTATION FOR INSTALLATION.

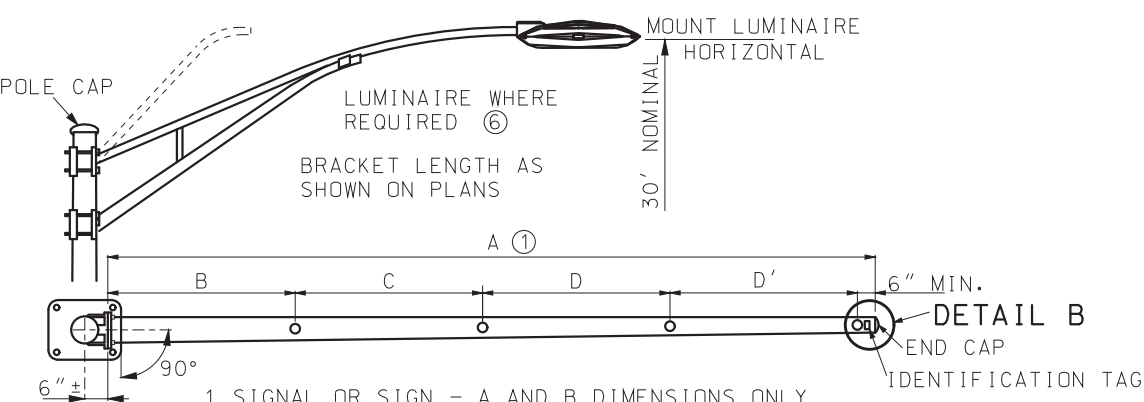
SIGNALS AND SIGNALS SHALL BE VERTICAL. SIGNAL HEADS ON MAST ARMS SHALL BE TILTED FORWARD FROM THE TOP 3 TO 7 DEGREES FROM VERTICAL.

IF A SIGN EXCEEDS 42" IN LENGTH, TWO STRAP SUPPORTS ARE REQUIRED; AND IF A SIGN EXCEEDS 96" IN LENGTH, THREE STRAP SUPPORTS ARE REQUIRED.

TO DETERMINE LEFT OR RIGHT ON TYPE B OR C SIGNAL POST, VIEWING POSITION SHALL BE FROM THE CENTER OF THE INTERSECTION BEING CONTROLLED AND FACING THE SIGNAL INVOLVED.

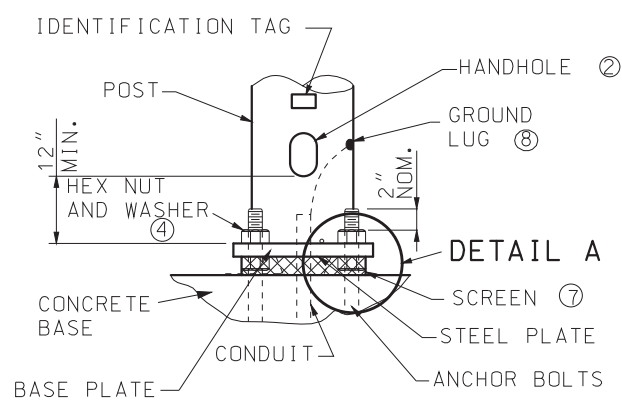
TRAFFIC SIGNALS MOUNTED ON MAST ARMS SHALL BE FURNISHED WITH MOUNTING BRACKETS UTILIZING CABLES.

SEE STANDARD 902.30 FOR FOUNDATION AND ANCHOR BOLT DETAILS.

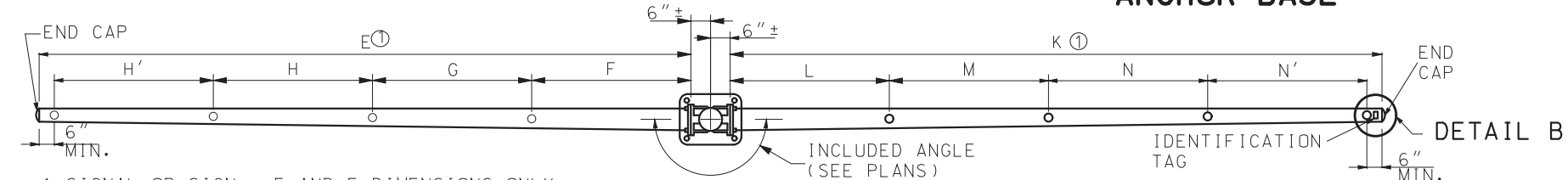


TYPE C AND TYPE CL (WITH LUMINAIRE)

- 1 SIGNAL OR SIGN - A AND B DIMENSIONS ONLY
 - 2 SIGNALS OR SIGNS - A, B, AND C DIMENSIONS ONLY
 - 3 SIGNALS OR SIGNS - A, B, C AND D DIMENSIONS ONLY
 - 4 SIGNALS OR SIGNS - A, B, C, D AND D' DIMENSIONS
- SEE TRAFFIC SIGNAL PLANS FOR DIMENSIONS.



STEEL PLATE AND ANCHOR BASE



TYPE B AND TYPE BL (WITH LUMINAIRE)

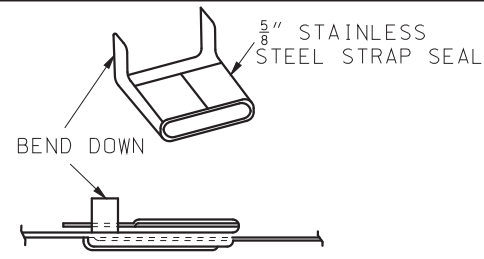
- 1 SIGNAL OR SIGN - E AND F DIMENSIONS ONLY
- 2 SIGNALS OR SIGNS - E, F, AND G DIMENSIONS ONLY
- 3 SIGNALS OR SIGNS - E, F, G, AND H DIMENSIONS ONLY
- 4 SIGNALS OR SIGNS - E, F, G, H AND H' DIMENSIONS

- 1 SIGNAL OR SIGN - K AND L DIMENSIONS ONLY
 - 2 SIGNALS OR SIGNS - K, L, AND M DIMENSIONS ONLY
 - 3 SIGNALS OR SIGNS - K, L, M, AND N DIMENSIONS ONLY
 - 4 SIGNALS OR SIGNS - K, L, M, N AND N' DIMENSIONS
- SEE TRAFFIC SIGNAL PLANS FOR DIMENSIONS

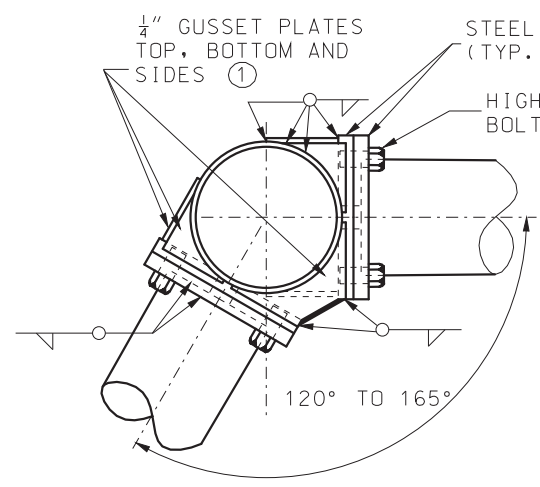
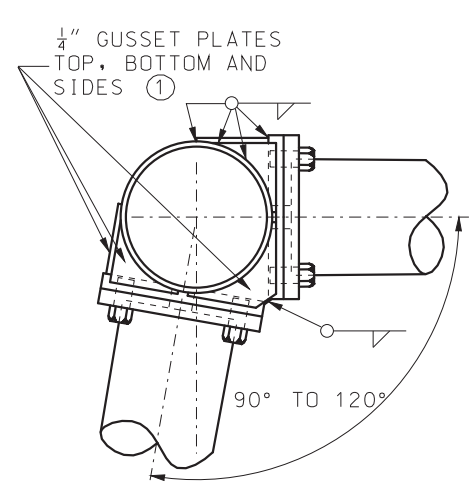
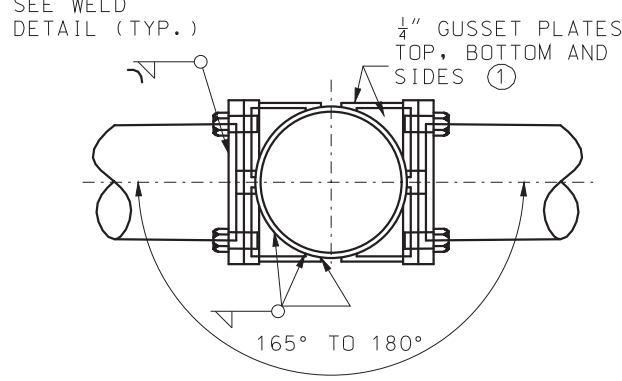
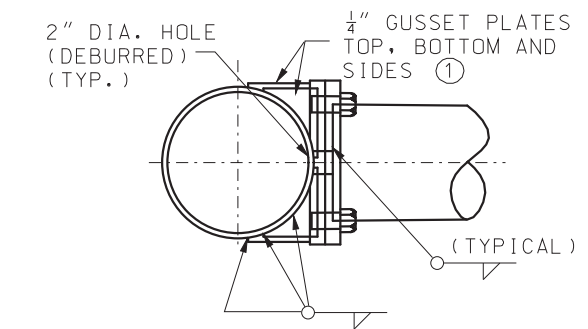
- ① ARM LENGTHS SHALL NOT EXCEED 55 FEET.
- ② HANDHOLES SHALL BE APPROXIMATELY 4" x 6 1/2". HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.
- ③ 0" TO 6" VARIATION IN BASE HEIGHT IS FOR OBTAINING 16'-0" CLEARANCE. 0.13 C.Y. CONCRETE AND 3 LBS. REINFORCING STEEL PER 6".
- ④ POSTS SHALL BE FURNISHED WITH INDIVIDUAL NUT COVERS.
- ⑤ NO SIGN IN EXCESS OF 15.0 SQUARE FEET SHALL BE INSTALLED ON POSTS OR MAST ARMS. SIGNS EXCEEDING 8.0 SQUARE FEET SHALL BE LOCATED SO THAT THE EDGE OF THE SIGN IS NO MORE THAN 12" FROM THE CENTERLINE OF THE POST. D3 SERIES SIGNS, AS WELL AS SIGNS INSTALLED ON THE POST, SHALL BE MOUNTED WITH A STRAP TYPE SIGN SUPPORT. R10 SERIES SIGNS INSTALLED ON THE MAST ARM SHALL BE MOUNTED WITH A SIGN BRACKET ASSEMBLY.
- ⑥ SEE DRAWING 901.00 FOR TYPICAL BRACKET ARM MOUNTING FOR TYPE BL AND TYPE CL POSTS.
- ⑦ A GALVANIZED SCREEN SHALL BE USED BETWEEN THE POST BASE PLATE AND CONCRETE BASE. SCREENS SHALL BE PRESS-FORMED OF 3 OR 4 MESH, 21 GAGE OR HEAVIER, STAINLESS STEEL OR HOT-DIPPED GALVANIZED WIRE SCREEN OR APPROVED EQUIVALENT, THAT WILL PROVIDE A FRICTION-TIGHT FIT WHEN INSTALLED.
- ⑧ POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH # 6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM THE HANDHOLE.

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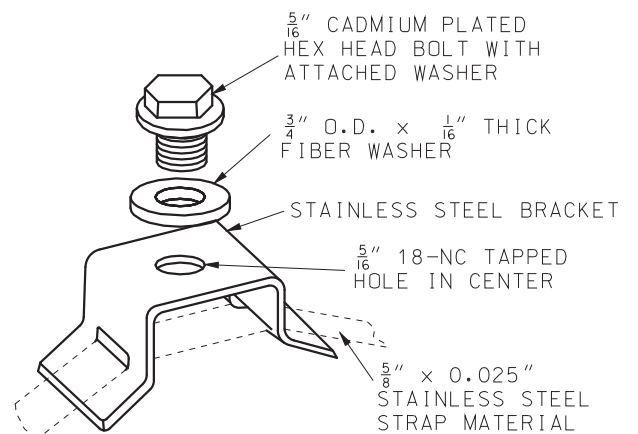
<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</p> <p>105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)</p>	
	<p>TRAFFIC SIGNALS</p> <p>TUBULAR STEEL POSTS</p>
<p>DATE EFFECTIVE: 04/01/2018</p> <p>DATE PREPARED: 2/9/2018</p>	<p>902.40R</p> <p>SHEET NO. 1 OF 3</p>



VIEW SHOWING
ENDS OF STRAP
CLAMPED IN SEAL

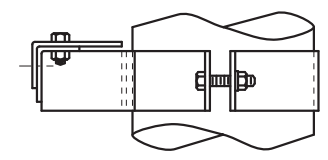


- ① ANY OPENINGS BETWEEN TOP AND SIDE GUSSET PLATES SHALL BE SEALED WITH LIFETIME CAULK AT TIME OF INSTALLATION.
- ② PLATE AND BOLT SIZES SHALL BE SHOWN ON FABRICATORS SHOP DRAWINGS AND SHALL BE SUBJECT TO APPROVAL.

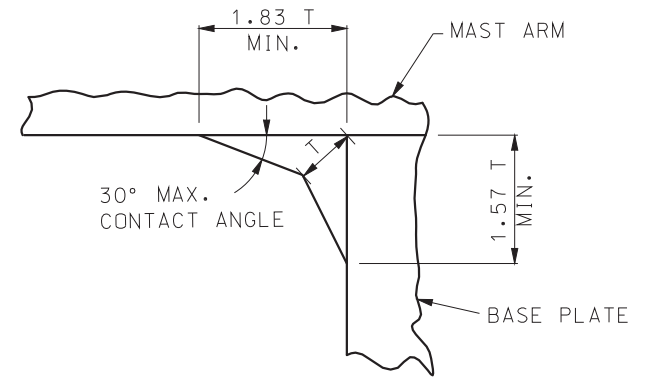


STRAP TYPE
SIGN SUPPORT

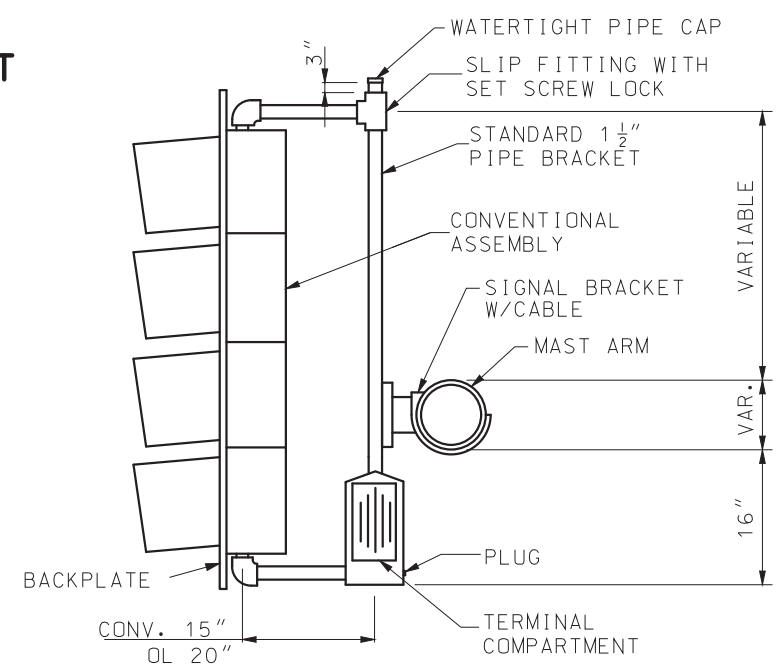
ARM ATTACHMENTS



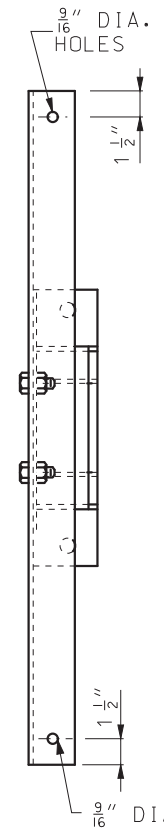
TOP VIEW



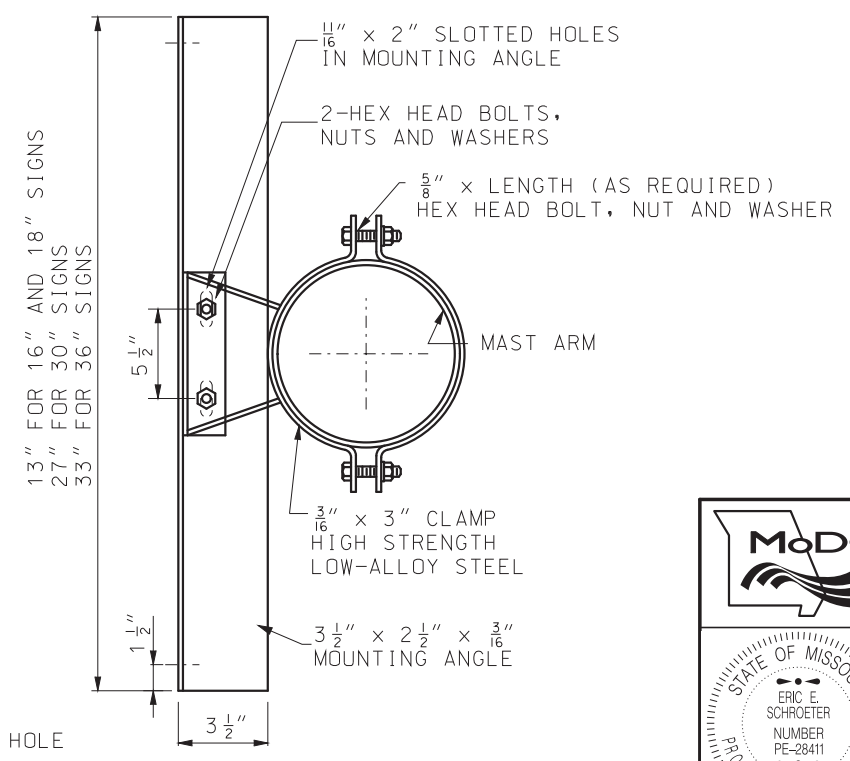
WELD DETAIL



MAST ARM MOUNTED
SIGNAL HEAD
(SEE STANDARD 902.00)



FRONT VIEW



SIDE VIEW

SIGN BRACKET ASSEMBLY
ALTERNATE DESIGN MAY BE PROVIDED
AS APPROVED BY ENGINEER

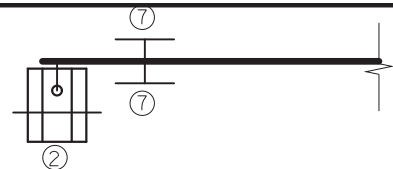
MoDOT MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY.

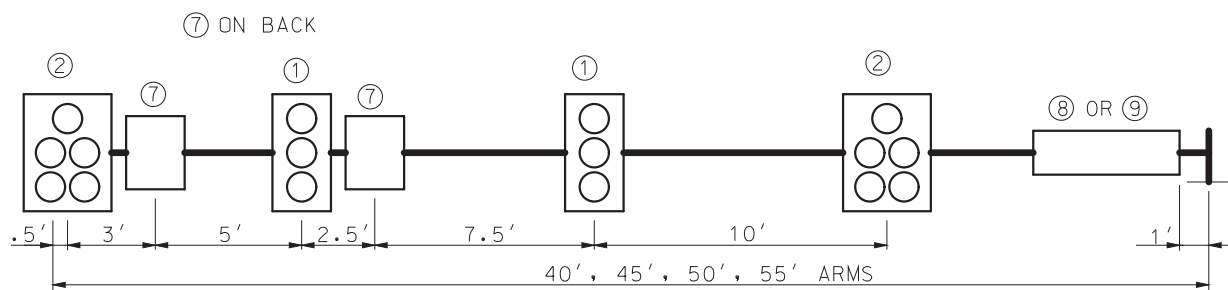
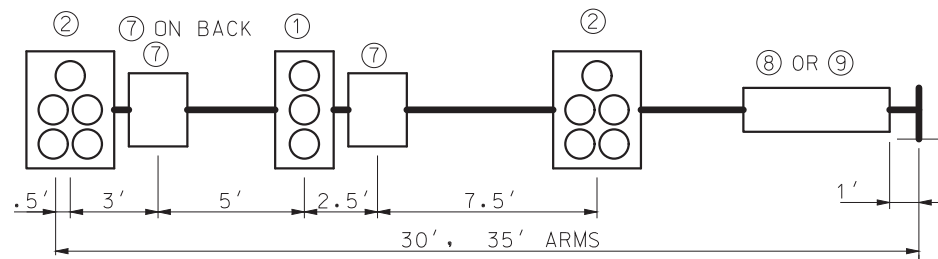
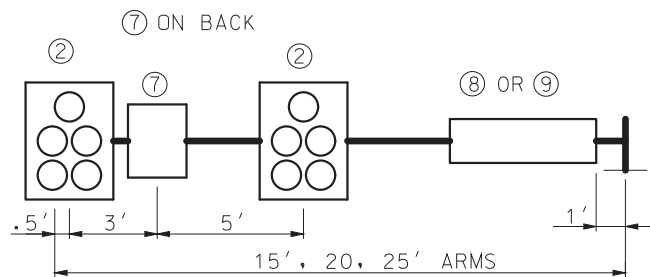
TRAFFIC SIGNALS
TUBULAR STEEL POSTS

DATE EFFECTIVE: 04/01/2018	902.40R	SHEET NO. 2 OF 3
DATE PREPARED: 2/9/2018		

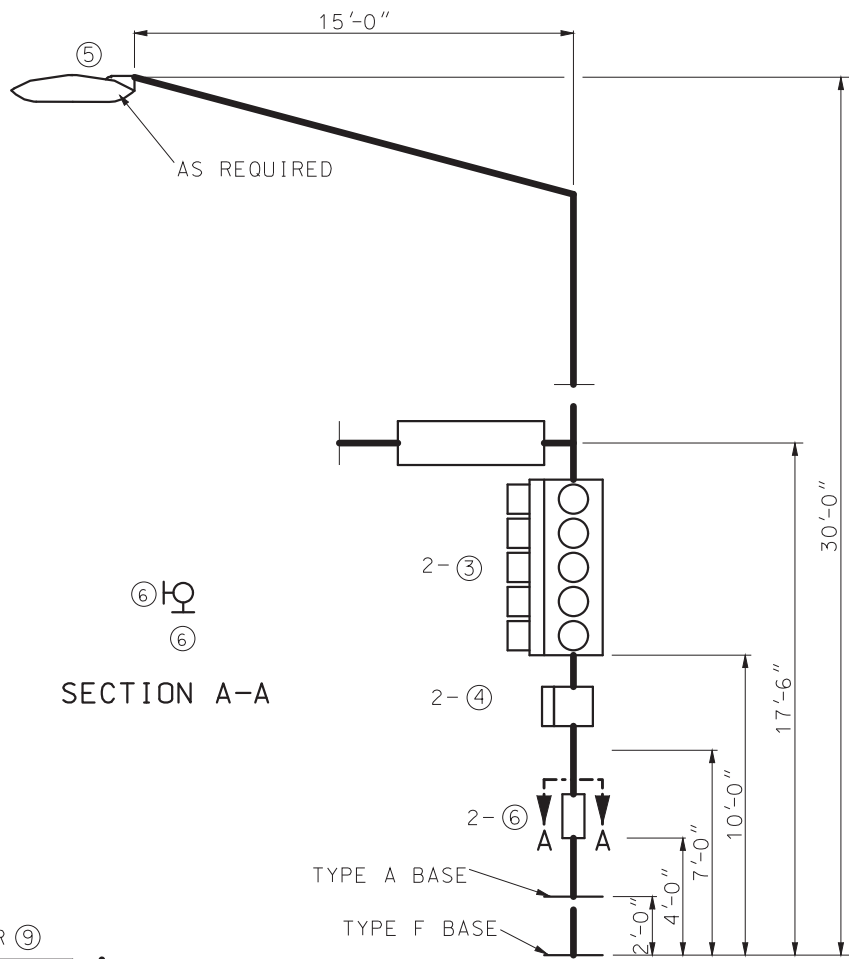
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TYPICAL TOP VIEW

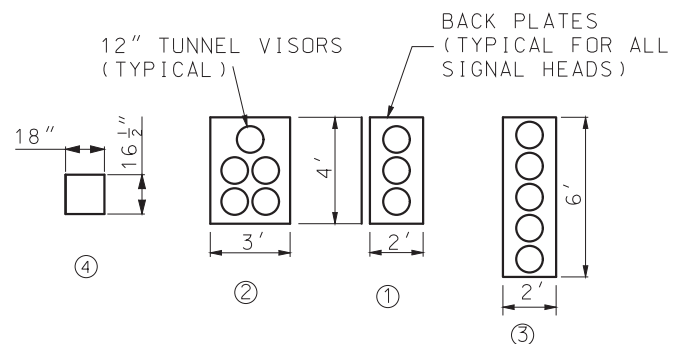


MAST ARM LOADING



SECTION A-A

TYPICAL POST LOADING



MINIMUM DESIGN LOADING FOR POST AND MAST ARM ATTACHMENTS

ITEM NO.	DESCRIPTION	WEIGHT (LBS.)*	PROJ. AREA (SQ.FT.)	SURFACE AREA (SQ.FT.)
①	3-SECTION OL HEAD	95.0	8.0	32.5
②	5-SECTION OL HEAD	173.0	12.0	47.5
③	VERT. 5-SECT. OL HEAD	100.0	12.0	50.5
④	1-SECTION PED HEAD	15.0	2.0	XX.X
⑤	LED-A LUMINAIRE	30.0	1.0	3.5
⑥	9" X 12" SIGN	2.0	0.8	N/A
⑦	30" X 36" SIGN	13.0	7.5	N/A
⑧	120" X 18" SIGN	25.0	15.0	N/A
⑨	96" X 16" SIGN	18.0	10.7	N/A
	96" X 18" SIGN	20.0	12.0	N/A

OL- OPTICALLY LIMITED
* MOUNTING HARDWARE INCLUDED

STRUCTURAL DESIGN REQUIREMENTS:

STRUCTURAL SUPPORTS SHALL BE DESIGNED AND FABRICATED TO WITHSTAND THEIR OWN LOADING AND THE ATTACHMENT LOADING SHOWN ON THIS DRAWING OR ON THE PLANS, WHICHEVER IS GREATER. STRUCTURAL MEMBERS INCLUDE POSTS, MAST ARMS AND LUMINAIRE BRACKET ARMS, AS REQUIRED.

DESIGN OF STRUCTURAL SUPPORTS SHALL BE BASED ON AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS, 1994 OR LATEST REVISION, WITH THESE EXCEPTIONS:

MINIMUM DESIGN WIND SPEED OF 90 MPH AT 30 FEET ABOVE GROUND.

GROUP LOADING: LOADS	PERCENT OF ALLOWABLE STRESS (ALL MATERIALS)
GROUP I - DL	100
GROUP II - DL + W	133
GROUP III - DL + ICE + 0.5(W**)	133

* NO LOAD REDUCTION FACTORS SHALL BE APPLIED IN CONJUNCTION WITH THESE INCREASED ALLOWABLE STRESSES.
** W TO BE COMPUTED ON THE BASIS OF THE WIND PRESSURE FORMULA, 25 PSF (1197 Pa) MINIMUM FOR W FOR GROUP III.

FOR TYPE B AND BL POSTS, ICE AND DEAD LOADING SHALL BE BASED ON THE COMBINED EFFECT OF DESIGN LOADING ON EACH ARM. WIND LOADING IS APPLIED AS DESCRIBED IN SECTION 1.2.5(5)(b) OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS, 1994 REVISION.

GENERAL NOTES:

ATTACHMENT LOCATIONS ARE FOR STRUCTURAL DESIGN PURPOSES ONLY. ACTUAL LOCATIONS ARE SHOWN ON THE PLANS.

LUMINAIRE PER MODOT'S STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
 ERIC E. SCHROETER
 NUMBER PE-28411
 PROFESSIONAL ENGINEER
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**TRAFFIC SIGNALS
 TUBULAR STEEL POSTS
 DESIGN LOADING REQUIREMENTS**

DATE EFFECTIVE: 04/01/2018
 DATE PREPARED: 2/9/2018

902.40R

SHEET NO.
 3 OF 3

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.