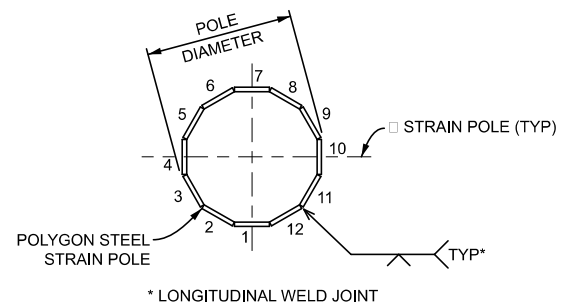


SCH 80 PIPE ORIENTED 180° TO POLE HAND HOLE

**A** SECTION - ROUND POLE



\* LONGITUDINAL WELD JOINT

**A'** SECTION - 12-SIDED POLYGON (OPTIONAL)

**1** DETAIL - STEEL STRAIN POLE

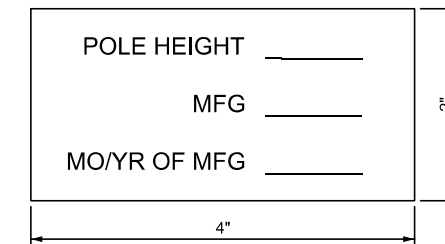
STRAIN POLE REQUIREMENTS							
MARK	DESCRIPTION	UNIT	NOT CONNECTED TO TIE-OFF SPANS			CONNECTED TO TIE-OFF SPANS	
			SIZE 1	SIZE 2	SIZE 3	SIZE 4	SIZE 5
A	POLE LENGTH	FT	30	36	40	36	40
W	MIN POLE WALL THICKNESS	GR 50 STEEL	IN	5/8	5/8	5/8	5/8
		GR 65 STEEL	IN	1/2	1/2	1/2	1/2
B'	POLE DIAMETER - TOP *	IN	12.3 (MIN) ± 1/2	13.96 (MIN) ± 1/2	14.4 (MIN) ± 1/2	14.96 (MIN) ± 1/2	15.4 (MIN) ± 1/2
B	POLE DIAMETER - BOTTOM *	IN	16.5 ± 1/2	19 ± 1/2	20 ± 1/2	20 ± 1/2	21 ± 1/2
-	FULL LENGTH TAPER	IN / FT	+0.002	+0.002	+0.002	+0.002	+0.002
			-0.000	0.14	0.14	0.14	0.14
E	POLE BASE FILLET WELD	GR 50 STEEL	IN	7/16	7/16	1/2	7/16
		GR 65 STEEL	IN	7/16	7/16	7/16	7/16
F	POLE BASE LANDING	IN	1/2	5/8	5/8	5/8	5/8
-	ANCHOR BOLT DIAMETER	IN	1 3/4	2	2	2	2
-	ANCHOR BOLT HOLE DIAMETER	IN	2 1/6	2 5/6	2 5/6	2 5/6	2 5/6
-	ANCHOR BOLT CIRCLE DIAMETER	IN	24	27	27	29	29
C	ANCHOR BOLT CHORD	IN	12	13 1/2	13 1/2	14 1/2	14 1/2
D	BASE PLATE EDGE	IN	15 1/4	17 1/2	17 1/2	20 1/4	20 1/4
T	BASE PLATE THICKNESS	IN	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
P.O.C.H.	12 1/2" POLE BAND CLAMP	FT-IN	21'-6" TO 28'-6"	-	-	-	-
P.O.C.H.	13 1/2" POLE BAND CLAMP	FT-IN	17'-0" TO 21'-0"	32'-6" TO 34'-6"	-	-	-
P.O.C.H.	14 1/2" POLE BAND CLAMP	FT-IN	-	25'-6" TO 32'-0"	32'-6" TO 38'-6"	32'-6" TO 34'-6"	-
P.O.C.H.	15 1/2" POLE BAND CLAMP	FT-IN	-	18'-0" TO 25'-0"	25'-6" TO 32'-0"	25'-6" TO 32'-0"	32'-6" TO 38'-6"
P.O.C.H.	16 1/2" POLE BAND CLAMP	FT-IN	-	17'-0" TO 17'-6"	18'-0" TO 25'-0"	18'-0" TO 25'-0"	25'-6" TO 32'-0"
P.O.C.H.	17 1/2" POLE BAND CLAMP	FT-IN	-	-	17'-0" TO 17'-6"	17'-0" TO 17'-6"	18'-0" TO 25'-0"
P.O.C.H.	18 1/2" POLE BAND CLAMP	FT-IN	-	-	-	-	17'-0" TO 17'-6"

**NOTES:**

1. ROUND OR 12-SIDED SECTIONS ARE ALLOWED.
2. MULTI-PLY SECTIONS ARE NOT ALLOWED.
3. STRAIN POLES USED IN APPLICATIONS OTHER THAN TRAFFIC SIGNALS REQUIRE UNIQUE DESIGN CALCULATIONS FOR THE SPECIFIC LOADING CASE.
4. E70 ELECTRODE REQUIRED FOR GR 50 STEEL. E80 ELECTRODE REQUIRED FOR GR 65 STEEL.

**ABBREVIATIONS:**

- S.S. = STAINLESS STEEL
- GA. = GAUGE
- GR = GRADE
- O.D. = OUTSIDE DIAMETER
- I.D. = INSIDE DIAMETER
- H.S. = HIGH STRENGTH
- SCH. = SCHEDULE
- P.O.C.H. = POINT OF CONTACT HEIGHT OF THE POLE BAND CLAMP, MEASURED FROM THE BOTTOM OF THE STRAIN POLE



**NOTES:**

1. ATTACH ID TAG TO STRAIN POLE AT LOCATIONS SHOWN 4" ABOVE BASE OF TUBE, BELOW HANDHOLE, WITH (4) #8 x 3/8" S.S. TYPE U DRIVE SCREWS.
2. STAMP IN LETTERS WITH 3/8" CHARACTERS.

**3** DETAIL - STRAIN POLE S.S. ID TAG

APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF FIELD SERVICES



APPROVED BY: \_\_\_\_\_  
DIRECTOR, BUREAU OF DEVELOPMENT

DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

(SPECIAL DETAIL)  
FHWA APPROVAL

07/27/23  
PLAN DATE

SIG-021-A

SHEET  
1 OF 7



DEPARTMENT DIRECTOR  
BRADLEY C. WIEFERICH, PE

(SPECIAL DETAIL)  
FHWA APPROVAL

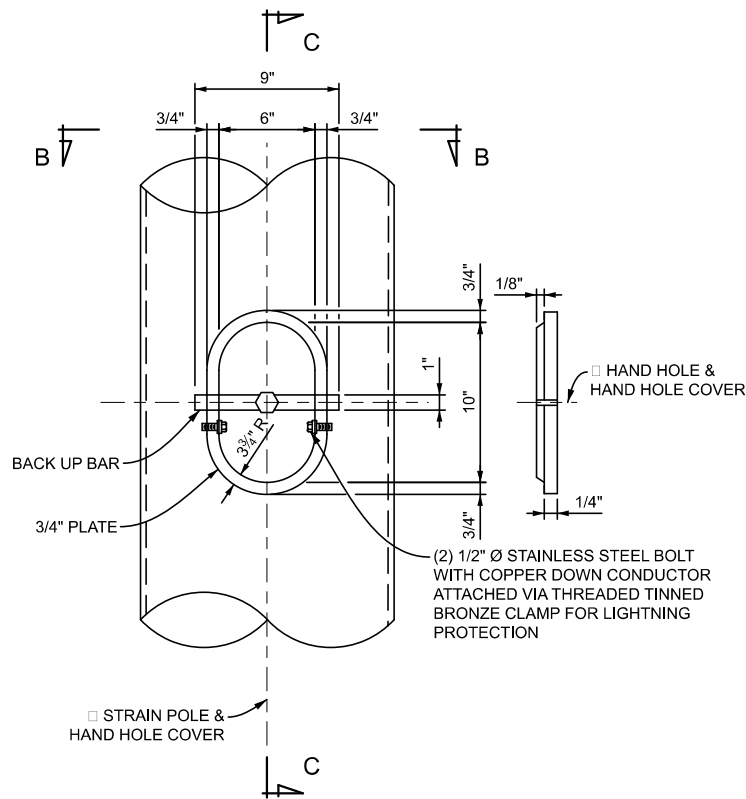
07/27/23  
PLAN DATE

STANDARD PLAN FOR  
STRAIN POLE REQUIREMENTS

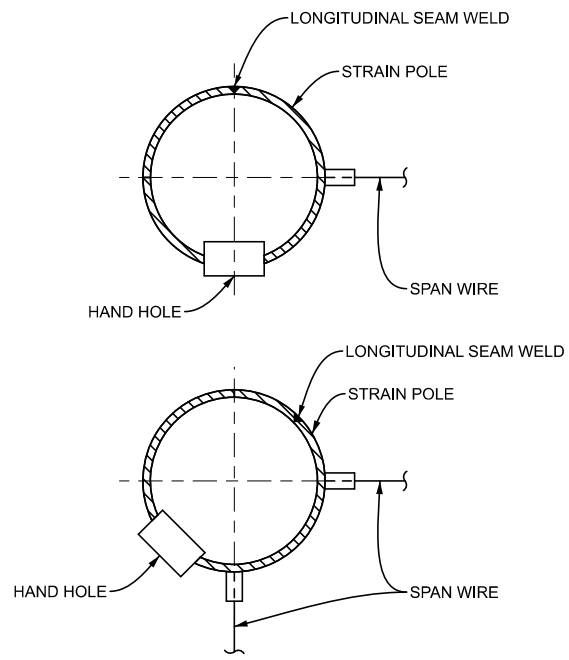
SIG-021-A

SHEET  
2 OF 7

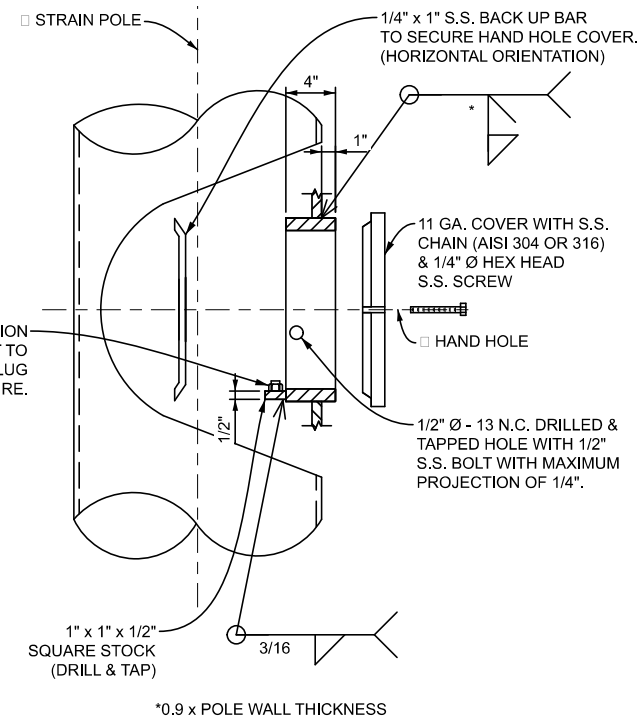
SECT



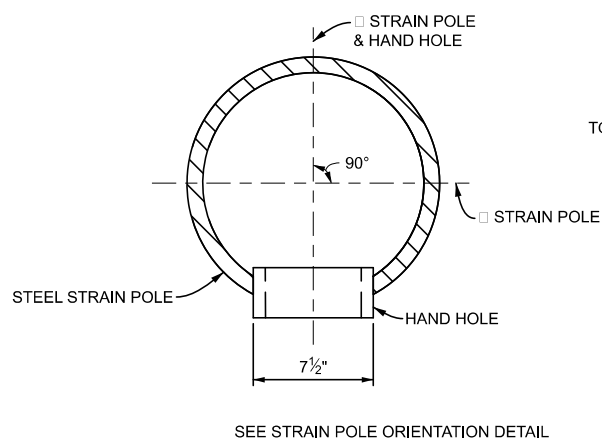
4 DETAIL - HAND HOLE



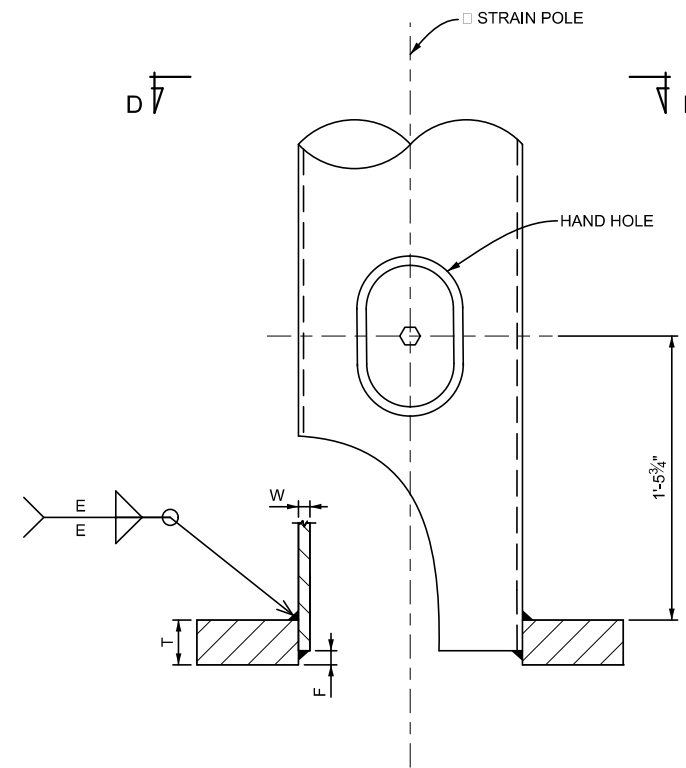
5 DETAIL - STRAIN POLE ORIENTATION



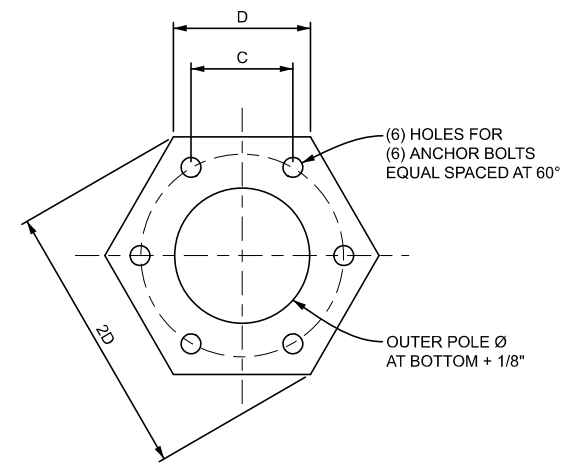
C SECTION - HAND HOLE



B SECTION - HAND HOLE

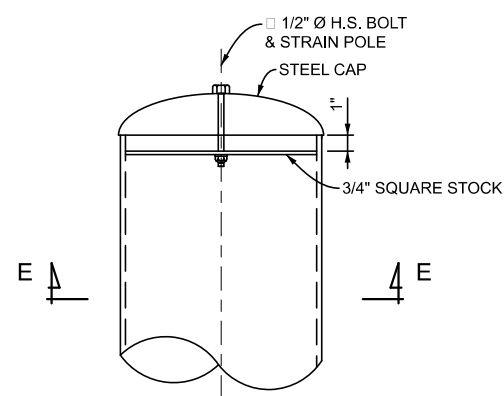


6 DETAIL - BASE PLATE

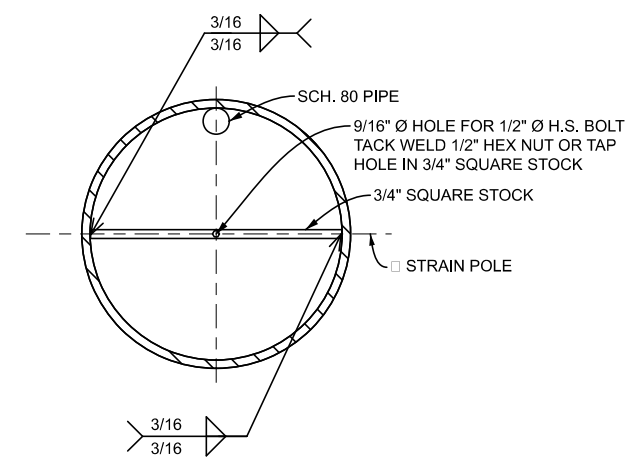


NOTES:  
 1. STRAIN POLE NOT SHOWN FOR CLARITY.  
 2. SEE STRAIN POLE REQUIREMENTS TABLE ON SHEET 2 FOR:  
 ANCHOR BOLT CIRCLE Ø  
 ANCHOR BOLT HOLE Ø  
 ANCHOR BOLT Ø

D SECTION - BASE PLATE



7 DETAIL - STRAIN POLE CAP

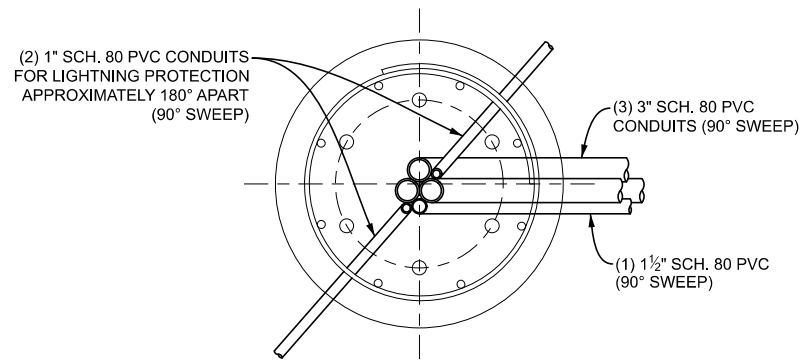


E SECTION - STRAIN POLE CAP

	STANDARD PLAN FOR HAND HOLE & STRAIN POLE ORIENTATION DETAILS			SHEET 3 OF 7
	(SPECIAL DETAIL) FHWA APPROVAL	07/27/23 PLAN DATE	SIG-021-A	

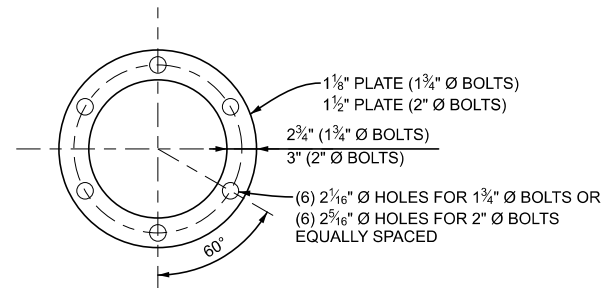
	STANDARD PLAN FOR BASE PLATE AND STRAIN POLE CAP DETAILS			SHEET 4 OF 7
	(SPECIAL DETAIL) FHWA APPROVAL	07/27/23 PLAN DATE	SIG-021-A	





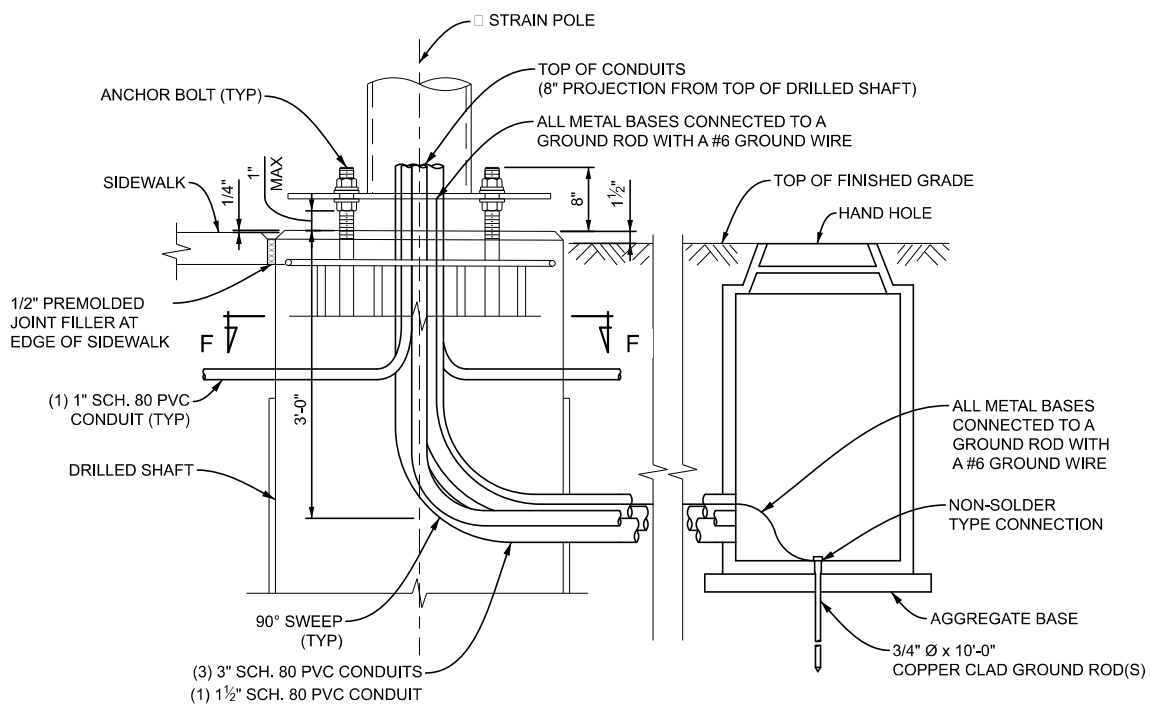
SECURE CONDUITS TOGETHER WITH SUITABLE BANDING TO ENSURE PLACEMENT TOGETHER PRIOR TO CONCRETE POUR.

**F** SECTION-CONDUIT LAYOUT



SEE STRAIN POLE FOUNDATION REQUIREMENTS TABLE ON SHEET 5 FOR:  
ANCHOR BOLT CIRCLE Ø  
ANCHOR BOLT HOLE Ø  
FOUNDATION Ø

**11** DETAIL - BOTT. ANCHOR BOLT STEEL TEMPLATE



**10** DETAIL - CONDUIT LAYOUT

<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR CONDUIT DETAILS			SHEET 7 OF 7
	(SPECIAL DETAIL) FHWA APPROVAL	07/27/23 PLAN DATE	SIG-021-A	

<p>DEPARTMENT DIRECTOR BRADLEY C. WIEFERICH, PE</p>	STANDARD PLAN FOR			SHEET OF SECT
	(SPECIAL DETAIL) FHWA APPROVAL	07/27/23 PLAN DATE		