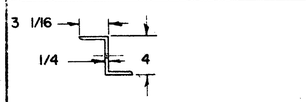
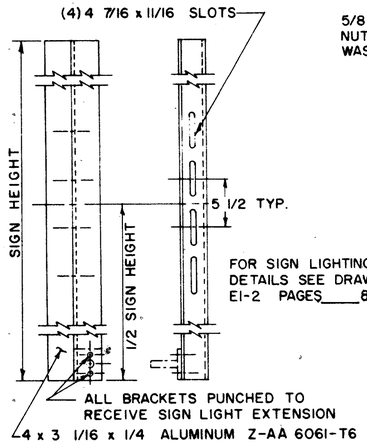
FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	~~T 4030 (13)~~	

34
38

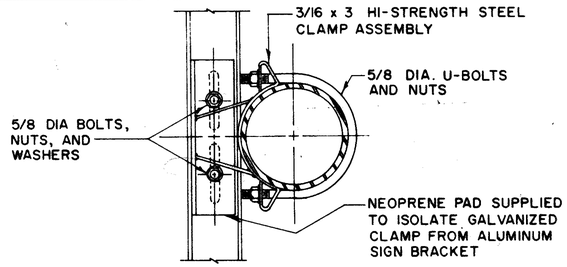
LAKE COUNTY
LAK.– 20–14.30
LAK.– 86– 0.25
AND WASHINGTON STREET
AND ST. CLAIR STREET



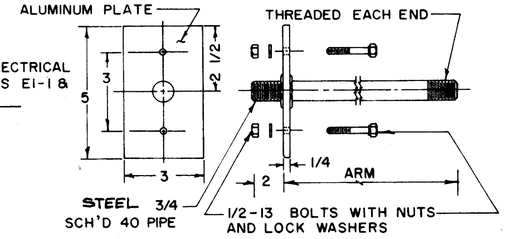


SIGN BRACKET

FOR SIGN LIGHTING ELECTRICAL DETAILS SEE DRAWINGS EI-1 & EI-2 PAGES ___ & ___

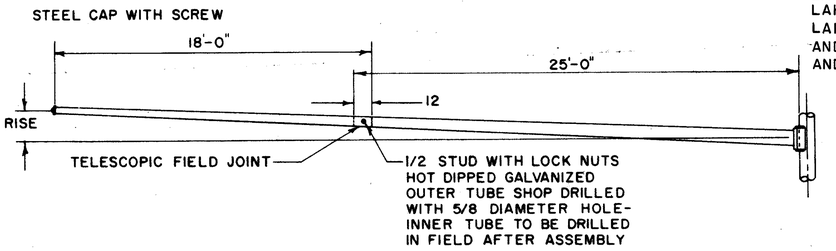


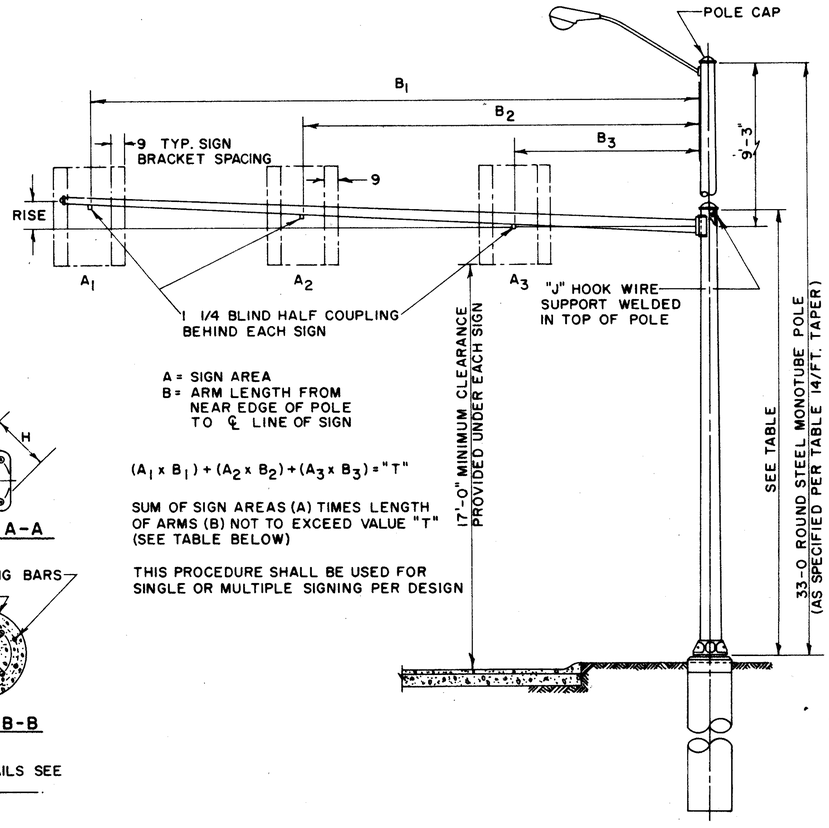
CLAMP ASSEMBLY



SIGN LIGHTING SUPPORT ARM

DES. NO.	ARM SIZE
3 4	2' – 9"
5 6	3' – 3"
7	4' – 3"





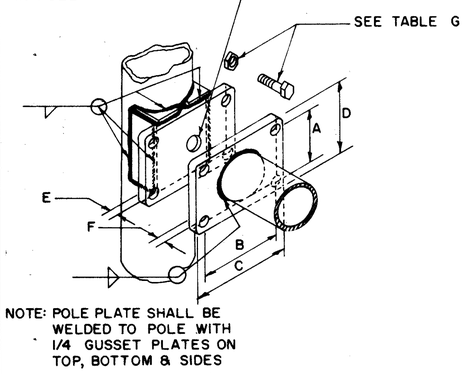
A = SIGN AREA
B = ARM LENGTH FROM NEAR EDGE OF POLE TO ℄ LINE OF SIGN

$(A_1 \times B_1) + (A_2 \times B_2) + (A_3 \times B_3) = "T"$

SUM OF SIGN AREAS (A) TIMES LENGTH OF ARMS (B) NOT TO EXCEED VALUE "T" (SEE TABLE BELOW)

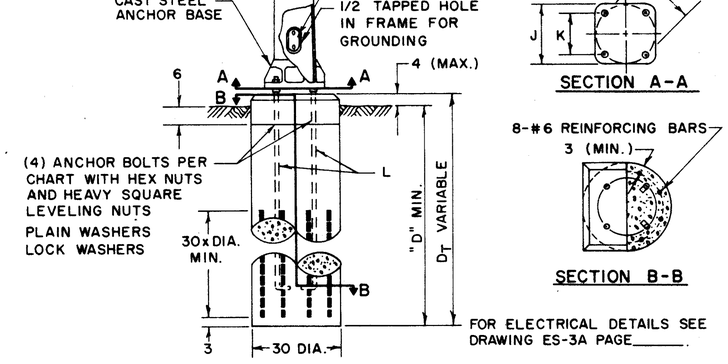
THIS PROCEDURE SHALL BE USED FOR SINGLE OR MULTIPLE SIGNING PER DESIGN

SIGN BRACKET & FIXTURE SUPPORT ARM DETAIL



NOTE: POLE PLATE SHALL BE WELDED TO POLE WITH 1/4 GUSSET PLATES ON TOP, BOTTOM & SIDES

ARM ATTACHMENT DETAIL



FOR ELECTRICAL DETAILS SEE DRAWING ES-3A PAGE ___.

FOUNDATION & POLE BASE DETAIL

FRONT ELEVATION & SIGN PLACEMENT DETAIL

DES. NO.	POLE SIZE	SIGN SIZE		MAX. SIGN AREA	VALUE "T"	RISE MIN	RISE MAX	ARM SIZE	ARM ATTACHMENT DATA A	B	C	D	E	F	G	ANCHOR BOLT DATA H	J	K	L	REINF. BAR TYPE	REINF. BAR NO. REQ'D	FOUNDATIONS "D" MIN.
1.	0ga 12" x 9.27" x 19'-6"	2'-6"	3'-0"	22.5	585	11	24	2-7ga-9.0" x 3.68" x 38'-0"	9	13 1/2	17 1/2	13	2	1 1/4	1 1/4	16	17	11 5/16	1 3/4 x 90	6	8	7'-0"
2.	7ga 11" x 8.27" x 19'-6"	2'-6"	3'-0"	22.5	315	9	18	7ga-8.0" x 4.08" x 28'-0"	8	12	16	12	1 1/4	1	1	15	15 5/8	10 5/8	1 1/2 x 60	6	8	5'-0"
3. A / B	0ga 14" x 10.54" x 24'-9" / 0ga 14" x 9.38" x 33'-0"	4'-0"	5'-6"	66.0	1485	11	23	2-7ga-9.0" x 3.96" x 36'-0"	9	13 1/2	17 1/2	13	2	1 1/4	1 1/4	20	20 1/2	14 1/8	2 x 96	6	8	8'-0"
4. A / B	0ga 14" x 10.54" x 24'-9" / 0ga 14" x 9.38" x 33'-0"	4'-0"	5'-6"	66.0	1881	12	28	2-7ga-10.0" x 6.50" x 25'-0" / 7ga-7.0" x 4.48" x 18'-0"	11	14 1/2	18 1/2	15	2	1 1/4	1 1/4	20	20 1/2	14 1/8	2 x 96	6	8	8'-0"
5.	3ga 14" x 11.06" x 21'-0"	4'-0"	6'-0"	72.0	1848	11	24	3ga-11" x 5.68" x 38'-0"	11	15 1/2	19 1/2	15	2	1 1/4	1 1/4	20	20 1/2	14 1/8	1 3/4 x 90	6	8	7'-6"
6.	3ga 11" x 8.06" x 21'-0"	4'-0"	6'-0"	72.0	984	9	18	3ga-8.0" x 4.08" x 28'-0"	8	12	16	12	1 1/2	1	1	15	15 5/8	10 5/8	1 3/4 x 90	6	8	7'-6"
7.	0ga 12" x 9.06" x 21'-0"	5'-0"	7'-0"	105.0	1435	9	18	2-7ga-8.0" x 4.08" x 28'-0"	8	13 1/2	17 1/2	12	2	1 1/4	1 1/4	16	17	11 5/16	1 3/4 x 90	6	8	7'-6"

NOTE:
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

NOTES

MATERIALS

STEEL	SAE 1020
POLES & ARMS PLATES ARM CAP & HANDHOLE COVER	A 36 AND A 441
ARM ATTACHMENT BOLT & NUTS	A 325
U-BOLTS ANCHOR BOLTS BOLT FOR ARM CAP & NUTS	A 307
CLAMP BODY	A 242 AND A 375
CAST BASE & HANDHOLE FRAME	A 27 GRADE 65-35
ALL OTHERS	300 SERIES, STAINLESS
CONCRETE	CLASS "C"
ALUMINUM ALLOY	ALUMINUN NO.
3/4 PIPE	6063-T6
4 ZEE (SIGN BRACKETS)	6061-T6
PLATES	6061-T6
POLE TOP	# 43
FINISH	ASTM
GALVANIZING, STRUCTURAL STEEL	A 123
GALVANIZING STEEL HARDWARE	A 153
STAINLESS STEEL	PASSIVATED
ALUMINUM ALLOY	NATURAL

AFTER FABRICATION TAPPERED POLES & ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 PSI.

ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO, CONSTRUCTIONS & MATERIALS SPECIFICATION, AND THE SUPPLEMENTAL SPECIFICATONS 816, OR AS OTHER-WISE SPECIFIED.

SOILS

THE FOUNDATION DETAIL SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY.)

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

FOUNDATIONS

THE TOP ELEVATION OF ALL FOUNDATIONS SHALL BE FORMED TO BE FLUSH WITH ADJOINING CONCRETE CONSTRUCTION, OR A MAXIMUM OF 4" ABOVE FINISHED GRADE.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORT

816-16.10

DATE 5-31-68

APPROVED ___
ENGINEER OF TRAFFIC