

QTY	LUM ARM	UMC DESIGN NUMBER	SPAN	MAST ARM TUBE SIZE	JOINT LENGTH (in)		MAST ARM RISE L	MAST ARM ORIENTATION	NO LUMINAIRE POLE TUBE SIZE	LOW RISE POLE		MEDIUM RISE POLE		HIGH RISE POLE	
					NOM	MIIN				LUM MTG HT	TUBE SIZE	LUM MTG HT	TUBE SIZE	LUM MTG HT	TUBE SIZE
		50915-B19-Y1	20'-0"	7E-8.00x5.20x20'-0"	-	-	2'		7E-12.00x9.34x19'-0"	7E-12.00x8.22x27'-0"	7E-12.00x7.52x32'-0"	7E-12.00x6.82x37'-0"			
		50915-B19-Y2	22'-0"	7E-9.00x5.92x22'-0"	-	-	2'		3E-12.50x9.84x19'-0"	3E-12.50x8.72x27'-0"	3E-12.50x8.02x32'-0"	3E-12.50x7.32x37'-0"			
		50915-B19-Y3	24'-0"	7E-9.00x5.64x24'-0"	-	-	2'								
		50915-B19-Y4	26'-0"	7E-9.00x5.36x26'-0"	-	-	2'		3E-13.00x10.34x19'-0"	3E-13.00x9.22x27'-0"	3E-13.00x8.52x32'-0"	3E-13.00x7.82x37'-0"			
		50915-B19-Y5	28'-0"	7E-9.00x5.08x28'-0"	-	-	2'								
		50915-B19-Y6	30'-0"	7E-10.00x5.80x30'-0"	-	-	3'		3E-16.00x13.27x19'-6"	3E-16.00x12.22x27'-0"	3E-16.00x11.52x32'-0"	3E-16.00x10.82x37'-0"			
		50915-B19-Y7	32'-0"	7E-10.50x6.02x32'-0"	-	-	3'								
		50915-B19-Y8	34'-0"	7E-11.00x6.24x34'-0"	-	-	3'		3E-17.00x14.27x19'-6"	3E-17.00x13.22x27'-0"	3E-17.00x12.52x32'-0"	3E-17.50x12.32x37'-0"			
		50915-B19-Y9	36'-0"	7E-11.00x5.96x36'-0"	-	-	3'								
		50915-B19-Y10	38'-0"	3E-13.00x7.68x38'-0"	-	-	3'	180°	3E-20.00x17.27x19'-6"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y11	40'-0"	3E-13.50x7.90x40'-0"	-	-	3'								
		50915-B19-Y12	42'-0"	0E-14.50x11.70x20'-0" 7E-12.38x9.02x24'-0"	24	18.03	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y13	44'-0"	0E-14.50x11.70x20'-0" 7E-12.38x8.74x26'-0"	24	18.03	3'								
		50915-B19-Y14	46'-0"	0E-14.50x11.70x20'-0" 7E-12.38x8.46x28'-0"	24	18.03	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y15	48'-0"	0E-14.50x11.70x20'-0" 7E-12.38x8.18x30'-0"	24	18.03	3'								
		50915-B19-Y16	50'-0"	0E-14.50x11.70x20'-0" 7E-12.38x7.90x32'-0"	24	18.03	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y17	52'-0"	0E-15.50x12.42x22'-0" 7E-13.13x8.62x32'-3"	27	19.16	3'								
		50915-B19-Y18	54'-0"	0E-15.50x12.42x22'-0" 7E-13.13x8.34x34'-3"	27	19.16	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y19	56'-0"	0E-15.50x12.42x22'-0" 7E-13.13x8.06x36'-3"	27	19.16	3'								
		50915-B19-Y20	58'-0"	0E-15.50x12.42x22'-0" 7E-13.13x7.78x38'-3"	27	19.16	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y21	60'-0"	0E-18.50x13.46x36'-0" 7E-14.17x10.50x26'-3"	27	20.72	3'								
		50915-B19-Y22	62'-0"	0E-18.50x13.46x36'-0" 7E-14.17x10.22x28'-3"	27	20.72	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y23	64'-0"	0E-18.50x13.46x36'-0" 7E-14.17x9.94x30'-3"	27	20.72	3'								
		50915-B19-Y24	66'-0"	0E-18.50x13.46x36'-0" 7E-14.17x9.66x32'-3"	27	20.72	3'		3E-20.00x16.22x27'-0"	3E-20.00x16.22x27'-0"	3E-20.00x15.52x32'-0"	3E-20.50x15.32x37'-0"			
		50915-B19-Y25	68'-0"	0E-18.50x13.46x36'-0" 7E-14.17x9.38x34'-3"	27	20.72	3'								
		50915-B19-Y26	70'-0"	0E-18.50x13.46x36'-0" 7E-14.17x9.10x36'-3"	27	20.72	3'								

**DESIGN CRITERIA:**

- DESIGNED IN ACCORDANCE WITH THE 2013 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS" FOR 90 M.P.H. WIND ZONE. THE DESIGN PARAMETERS INCLUDE:  
25 YEAR STRUCTURE DESIGN LIFE  
FATIGUE CATEGORY II CONSIDERATION FOR:  
NO GALLOPING  
NATURAL WIND GUST  
NO TRUCK-INDUCED GUST
- THE EXPOSED LENGTH OF THE ANCHOR BOLT BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT SHOULD NOT EXCEED ONE BOLT DIAMETER.
- PER AASHTO THE MINIMUM LENGTH OF ANY TELESCOPIC FIELD JOINT SHALL BE 1.5 TIMES THE INSIDE DIAMETER OF THE END OF THE FEMALE SECTION.
- VIBRATION IS MORE LIKELY TO OCCUR WHEN STRUCTURES ARE INSTALLED WITHOUT ATTACHING THE SIGNALS AND OR SIGNS. THEREFORE, THE INTENDED EQUIPMENT OR DAMPENING DEVICES MUST BE INSTALLED AT THE TIME OF ERECTION. BECAUSE VIBRATION IS GENERALLY UNPREDICTABLE, A MAINTENANCE PROGRAM SHOULD INCLUDE INSPECTION FOR INDICATIONS OF EXCESSIVE VIBRATION OR FATIGUE AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING.
- ALL COMPLETE PENETRATION WELDS SHALL RECEIVE VISUAL AND UT INSPECTION IN ACCORDANCE WITH AWS D1.1. ALL OTHER WELDS SHALL RECEIVE VISUAL INSPECTION ON 100% OF WELDS, AND MT INSPECTION ON MIN. 30% OF WELDS.
- CUSTOMER TO CONFIRM ALL DIMENSIONS & ORIENTATIONS BEFORE RELEASING ORDER FOR MANUFACTURING.

**NOTES:**

- SEE SHEET 3 FOR BASE AND MAST ARM CONNECTION DATA & DETAILS
- SEE SHEET 3 FOR HANDHOLE DETAILS

7 GA = 0.179" WALL THICKNESS  
3 GA = 0.250" WALL THICKNESS  
0 GA = 0.313" WALL THICKNESS  
E = ROUND TAPERED STEEL TUBE @ 0.14 in/ft TAPER

**ORDERING NOTES:**  
50915-B19-Y1-6A-S-30

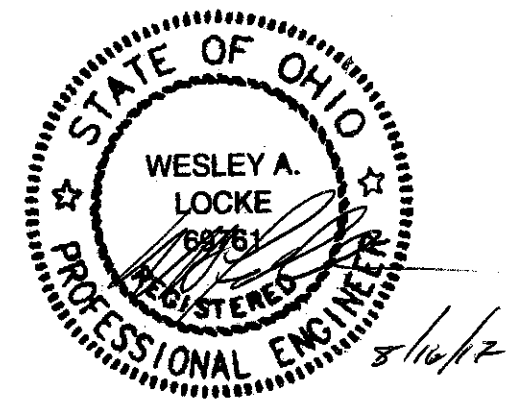
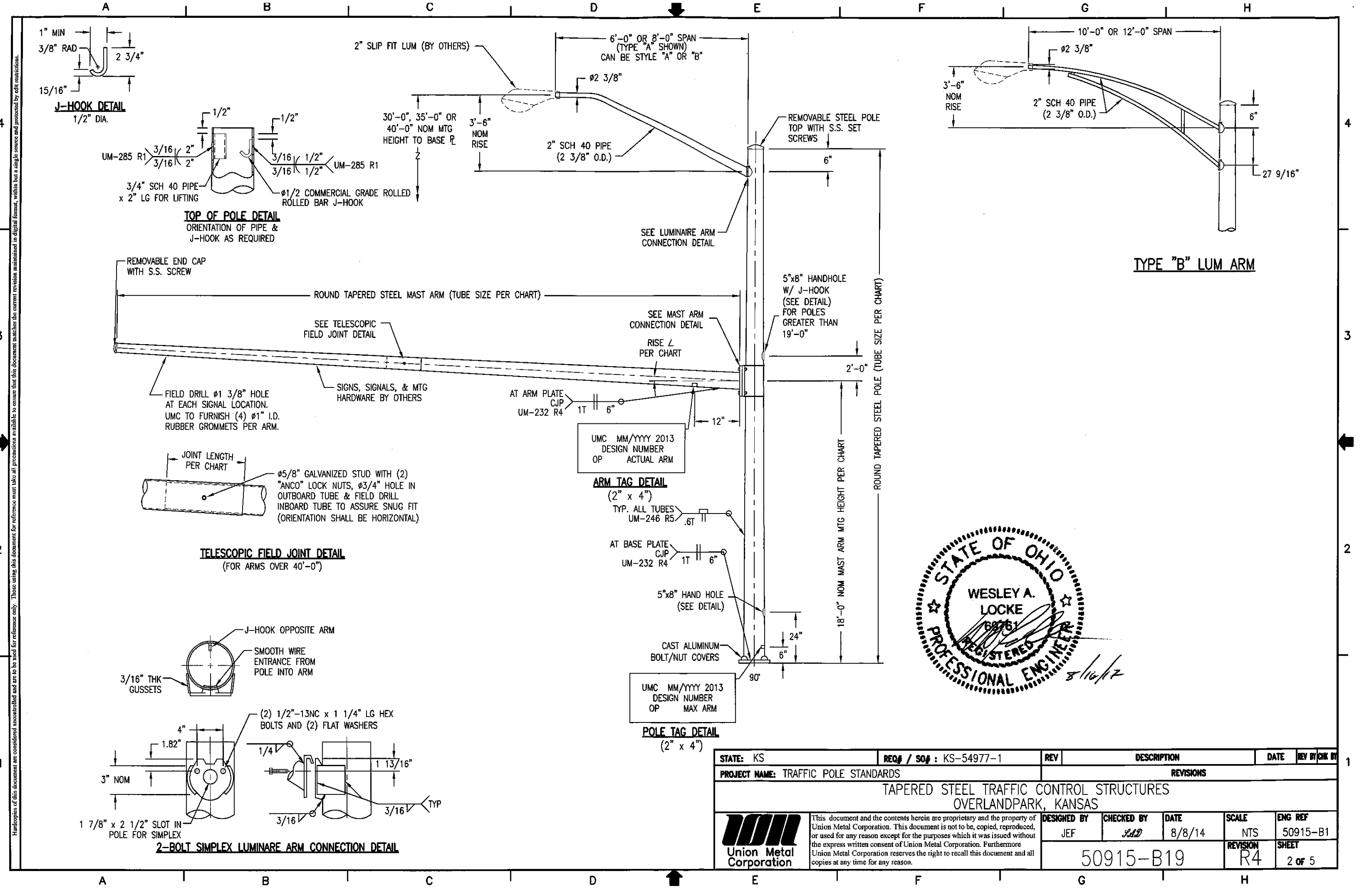
POLE DESIGN NUMBER →  
LUMINAIRE TYPE (TYPE A, TYPE B OR NONE)  
LUMINAIRE MOUNTING HEIGHT →  
"S" FOR SINGLE LUM ARM,  
"T" FOR TWIN LUM ARM  
(MUST SPECIFY ORIENTATION)  
  
TYPE A:  
6'-0" = 6A  
8'-0" = 8A  
TYPE B:  
10'-0" = 10B  
12'-0" = 12B



MATERIAL SPECIFICATIONS		MIN YIELD STRENGTH
TAPERED TUBE	ASTM A595 GR A	55KSI
PLATE	ASTM A36	36 KSI
BASE PLATE	ASTM A572 GR 50	50 KSI
HANDHOLE FRAME	ASTM A572 GR 50	50 KSI
HANDHOLE COVER	ASTM A36	36 KSI
ANCHOR BOLTS	ASTM F1554 GR 55	55 KSI
ANCHOR BOLT NUTS	ASTM A563 GR A	55 KSI
FLAT WASHERS	ASTM F436	40 KSI
SIMPLEX	ASTM A576 FORGED STEEL	60 KSI
BOLT/NUT COVERS	ASTM B26 (356.0F)	-
ARM CONNECTION BOLTS	ASTM A325	92 KSI
ARM CONNECTION NUTS	ASTM A563 GR DH	105 KSI
ARM JOINT STUD	ASTM A36	36 KSI
"ANCO" LOCK NUTS	ASTM A563 GR DH	105 KSI
POLE TOP/ARM END CAP	ASTM A1011	-
PIPE	A53 GR B or A500 GR B	35 KSI
S.S. HARDWARE	AISI-300 SERIES (18-8)	-
STRUCTURE FINISH	HD GALV TO ASTM A123	-
HARDWARE FINISH	HD GALV TO ASTM A153	-

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PROJECT NAME: TRAFFIC POLE STANDARDS					
TAPERED STEEL TRAFFIC CONTROL STRUCTURES OVERLANDPARK, KANSAS					
DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF	
JEF	SAD	8/8/14	NTS	50915-B1	
50915-B19			REVISION	SHEET	
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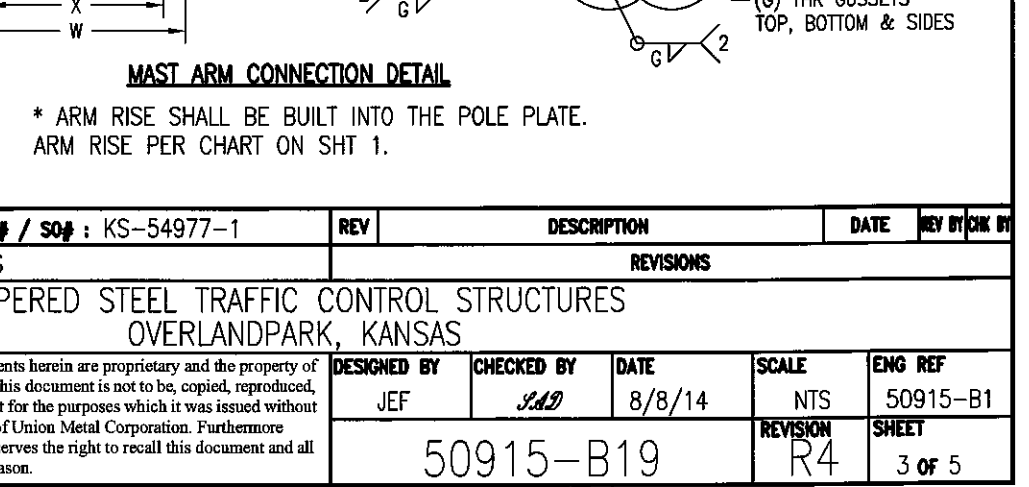
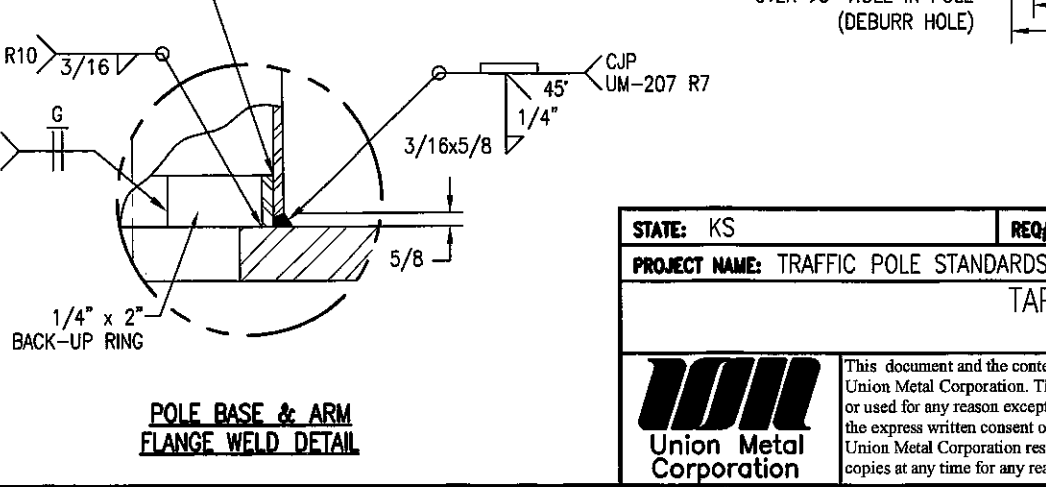
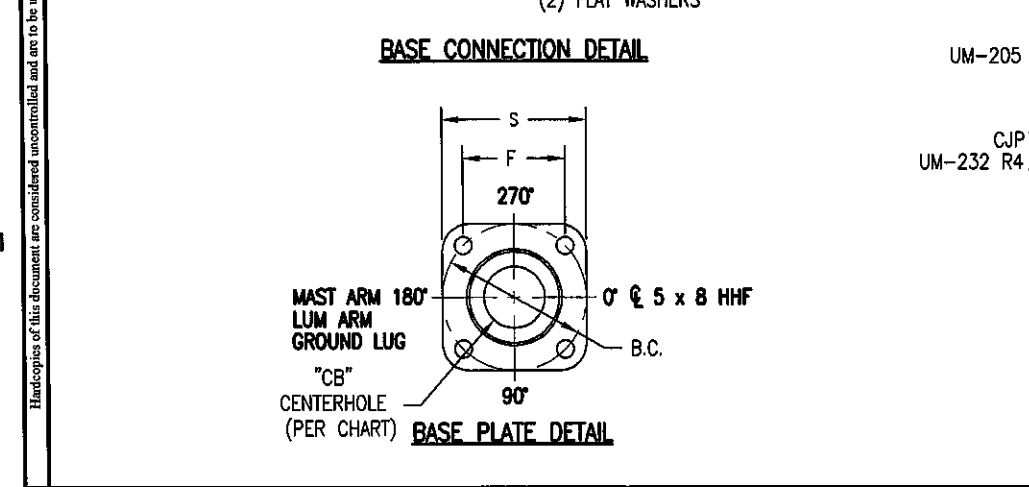
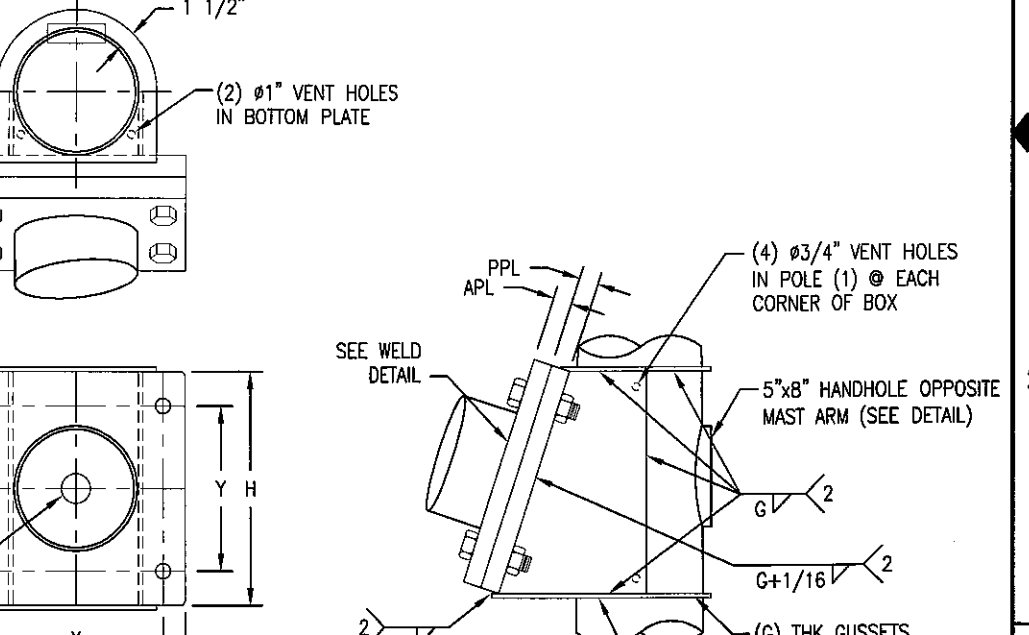
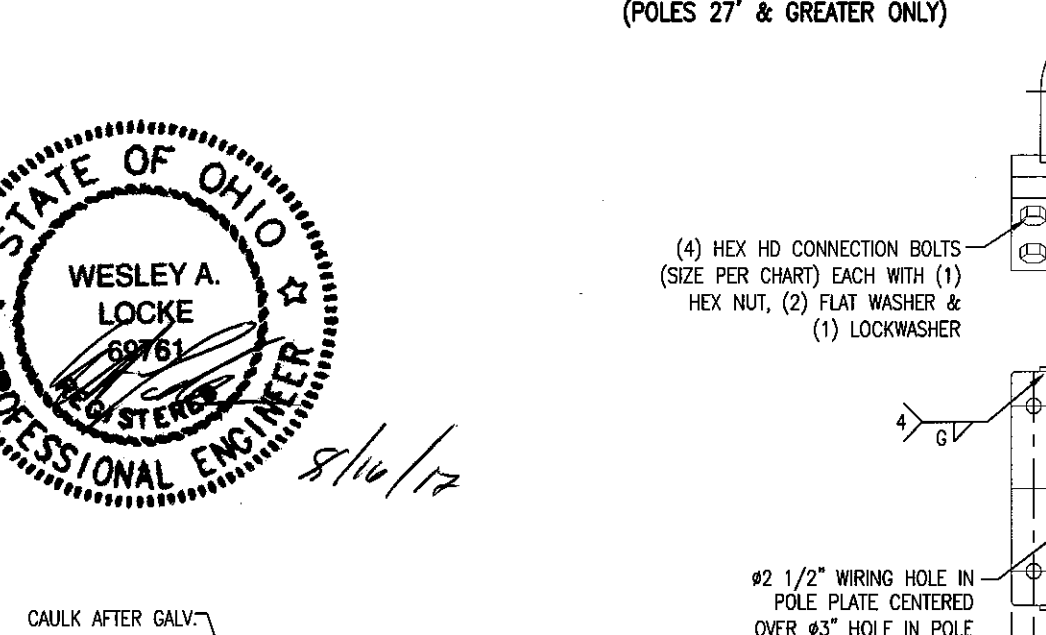
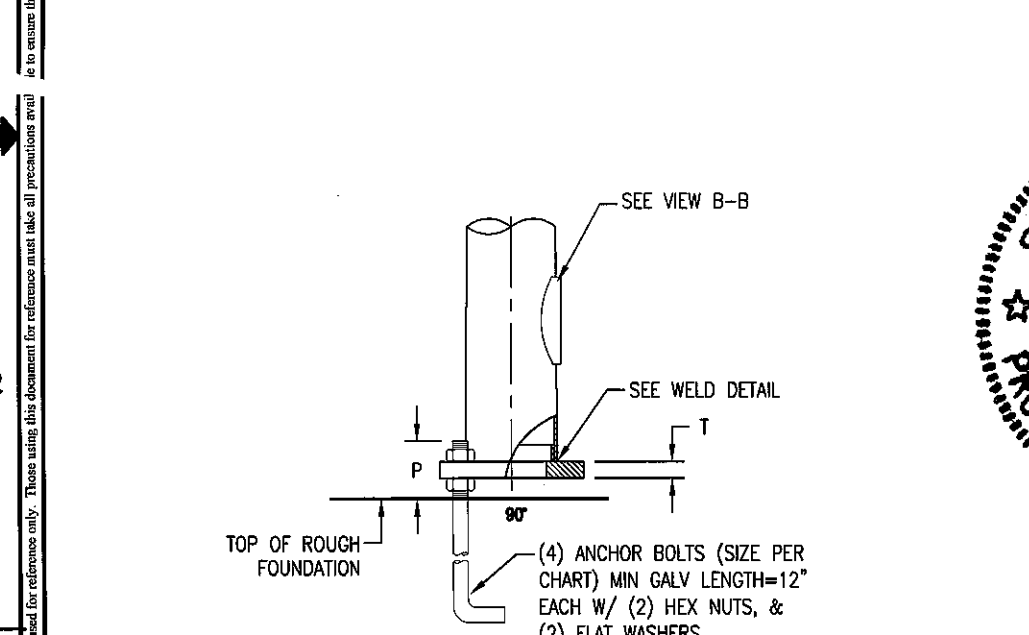
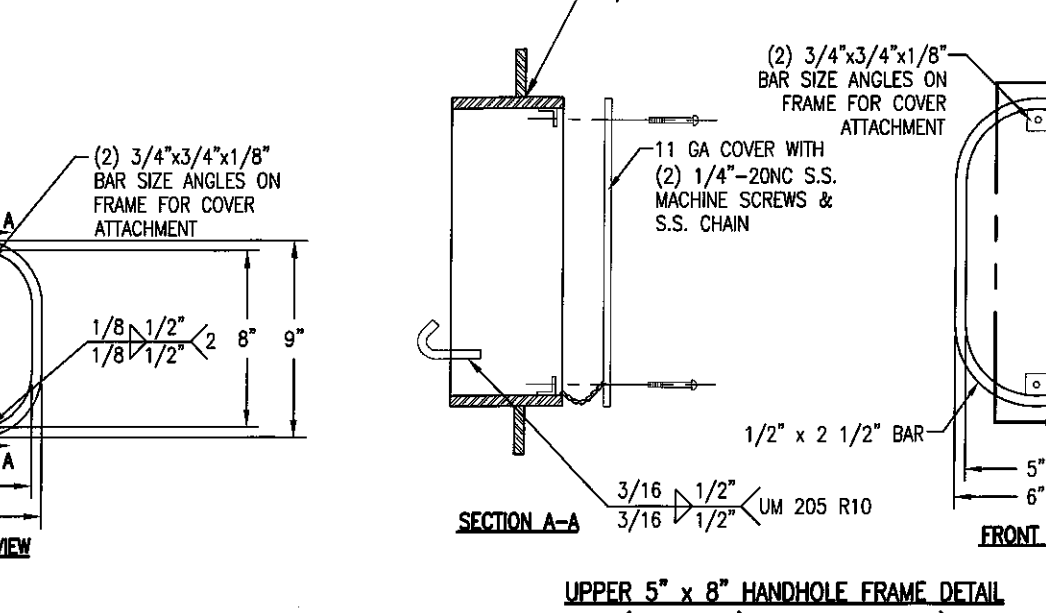
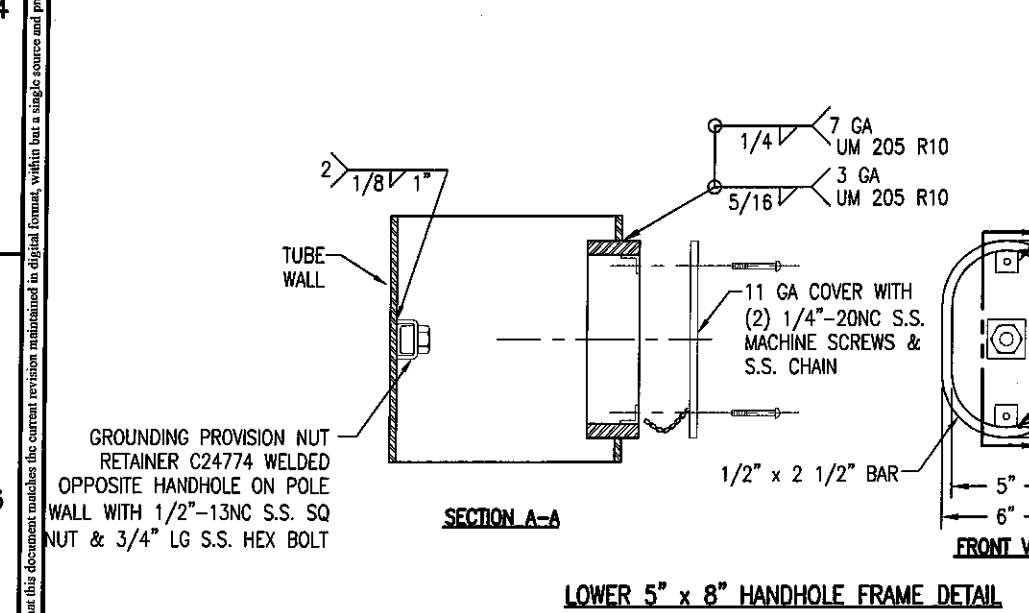


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UMC DESIGN NUMBER	POLE BASE CONNECTION DATA						
	B.C.	S	F	P	T	"CB"	ANCHOR BOLT SIZE
Y1	16	17	11 5/16	6 3/4	2	10 1/2"	(4) 1 1/2 x 54 x 6
Y2-Y5	16 1/2	17 1/2	11 5/8	6 3/4	2	11"	(4) 1 1/2 x 54 x 6
Y6-Y9	17 1/2	18 1/2	12 3/8	7 1/2	2	11 1/2"	(4) 1 3/4 x 84 x 6
Y10-Y16	21	22	14 7/8	7 3/4	2 1/4	14"	(4) 1 3/4 x 84 x 6
Y17-Y20	22	23	15 9/16	8 1/2	2 1/4	14 3/4"	(4) 2 x 84 x 6
Y21-Y26	27	28	19 1/8	8 1/2	2 1/4	14 1/4"	(4) 2 x 84 x 6

UMC DESIGN NUMBER	MAST ARM FLANGE CONNECTION DATA								
	BOLT Ø	X	Y	W	H	APL	PPL	"CA"	G
Y1	1 1/4	14	14	17 1/4	17 1/4	2	2	7	3/8
Y2-Y5	1 1/4	14 1/2	14 1/2	17 3/4	17 3/4	2	2	7 1/2	3/8
Y6-Y9	1 1/4	15	15	18 1/4	18 1/4	2	2	8 1/2	3/8
Y10-Y16	1 1/4	18	18	21 1/4	21 1/4	2	2	11 3/4	3/8
Y17-Y20	1 1/2	19 1/2	19 1/2	23 1/4	23 1/4	2 1/2	2 1/2	13	3/8
Y21-Y26	1 1/2	23	23	26 3/4	26 3/4	2 1/2	2 1/2	10 1/2	3/8

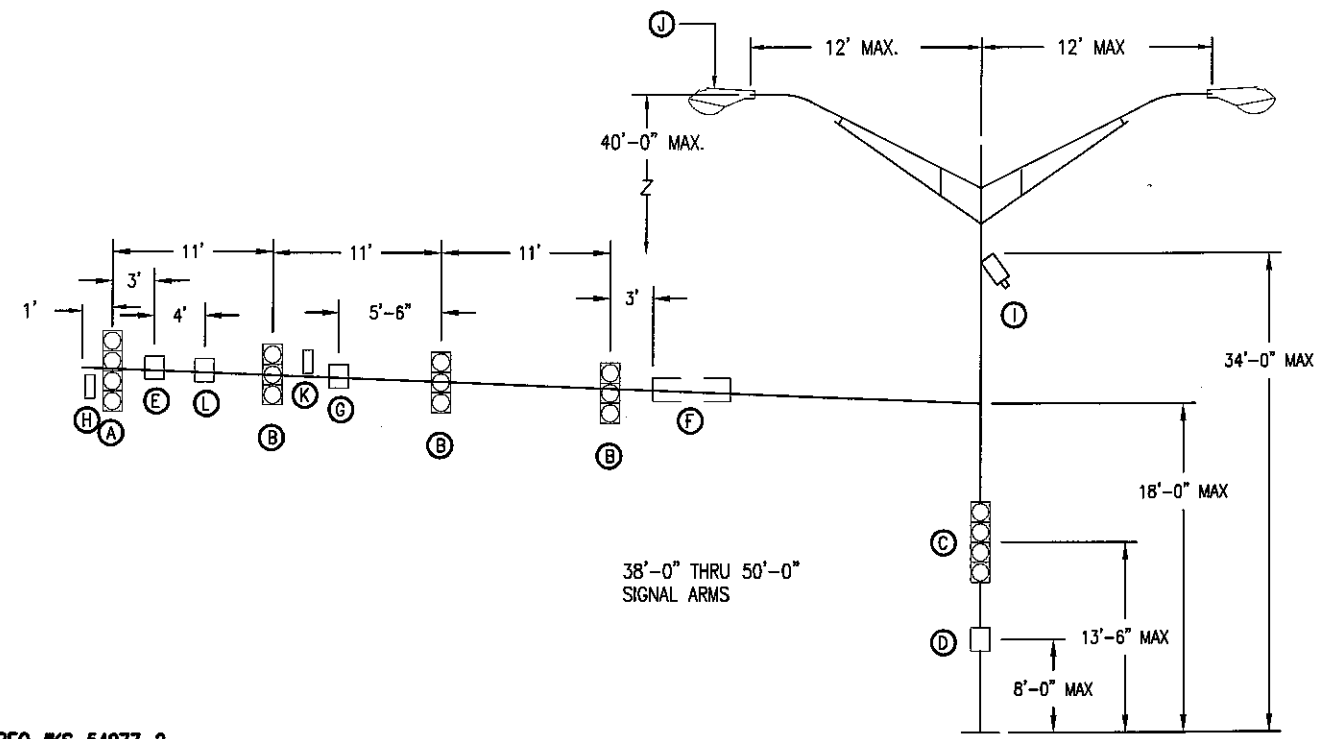
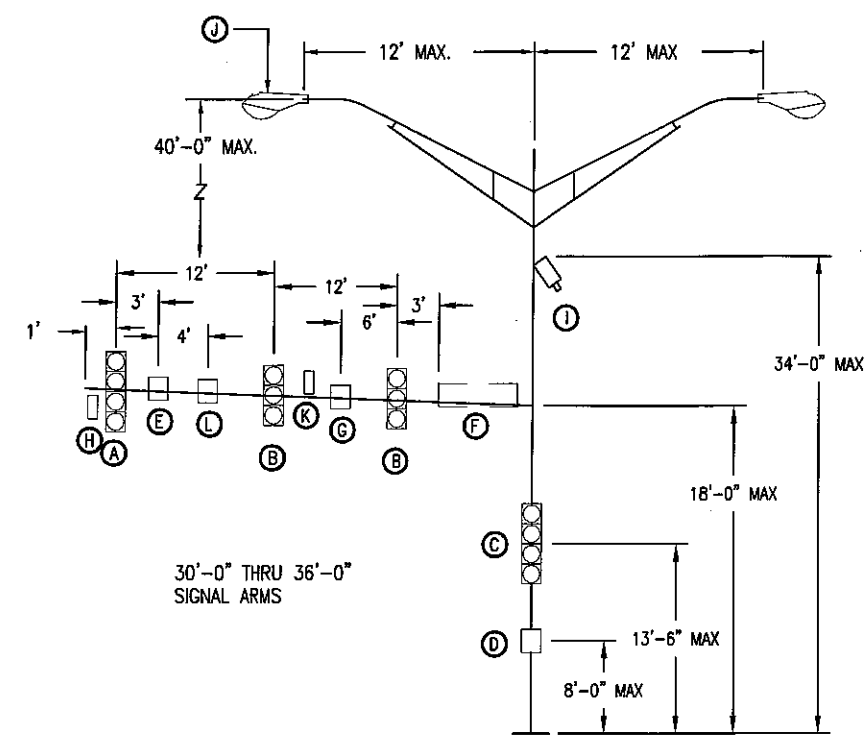
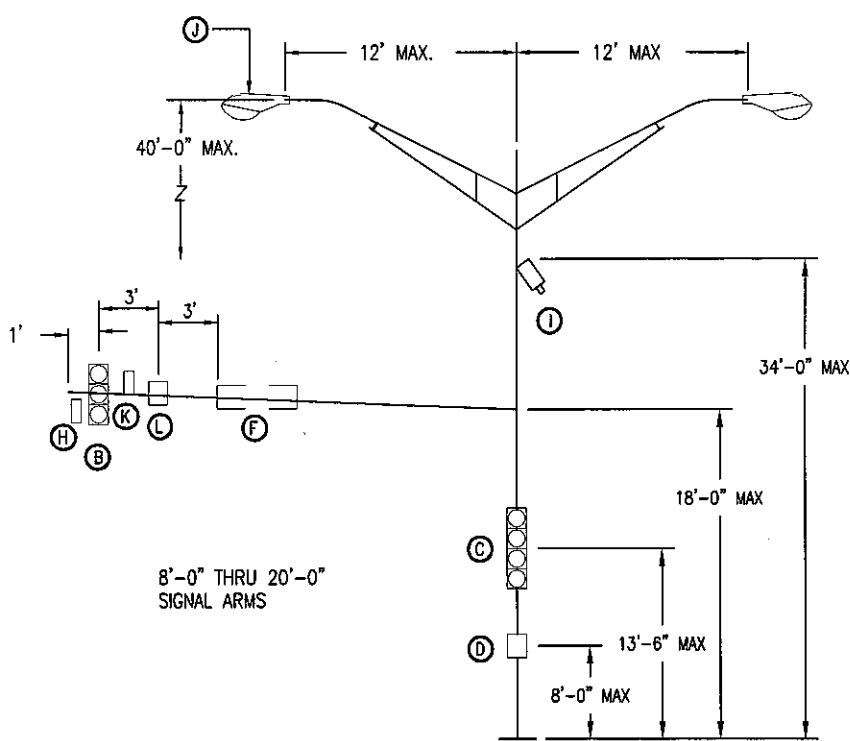
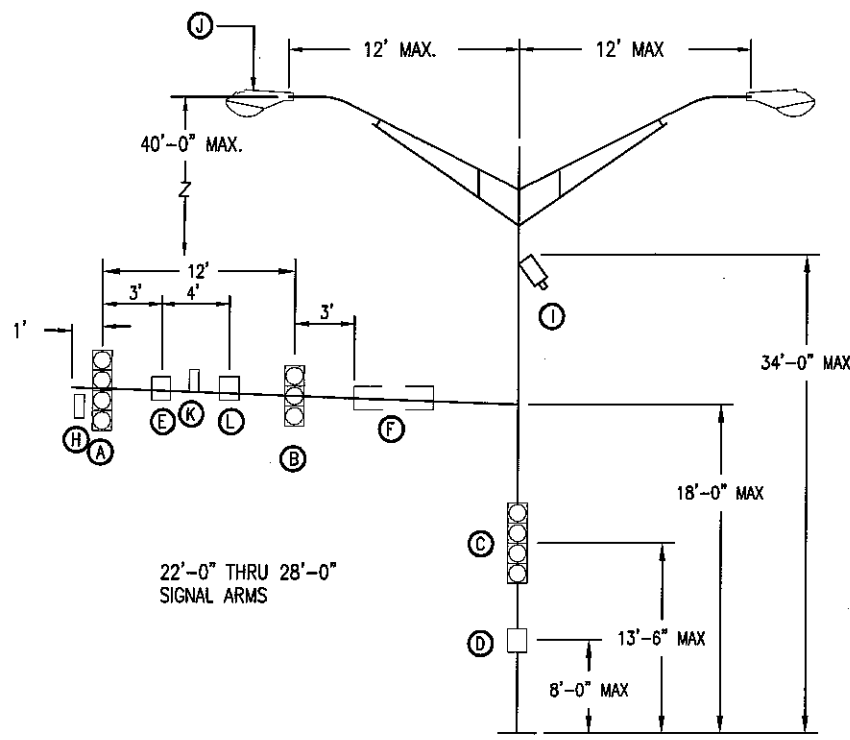


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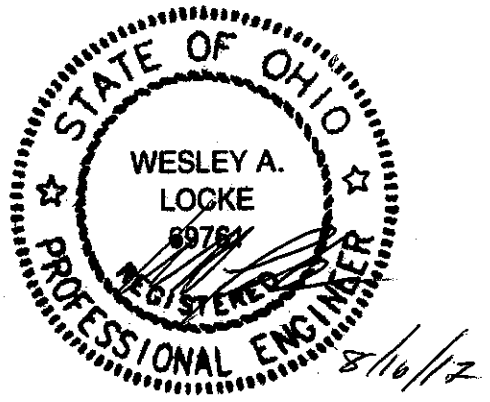
\* ARM RISE SHALL BE BUILT INTO THE POLE PLATE. ARM RISE PER CHART ON SHT 1.

STATE: KS	REQ# / SO#: KS-54977-1	REV	DESCRIPTION	DATE	REV BY / CHK BY
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TAPERED STEEL TRAFFIC CONTROL STRUCTURES OVERLANDPARK, KANSAS					
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			50915-B19	R4	3 OF 5

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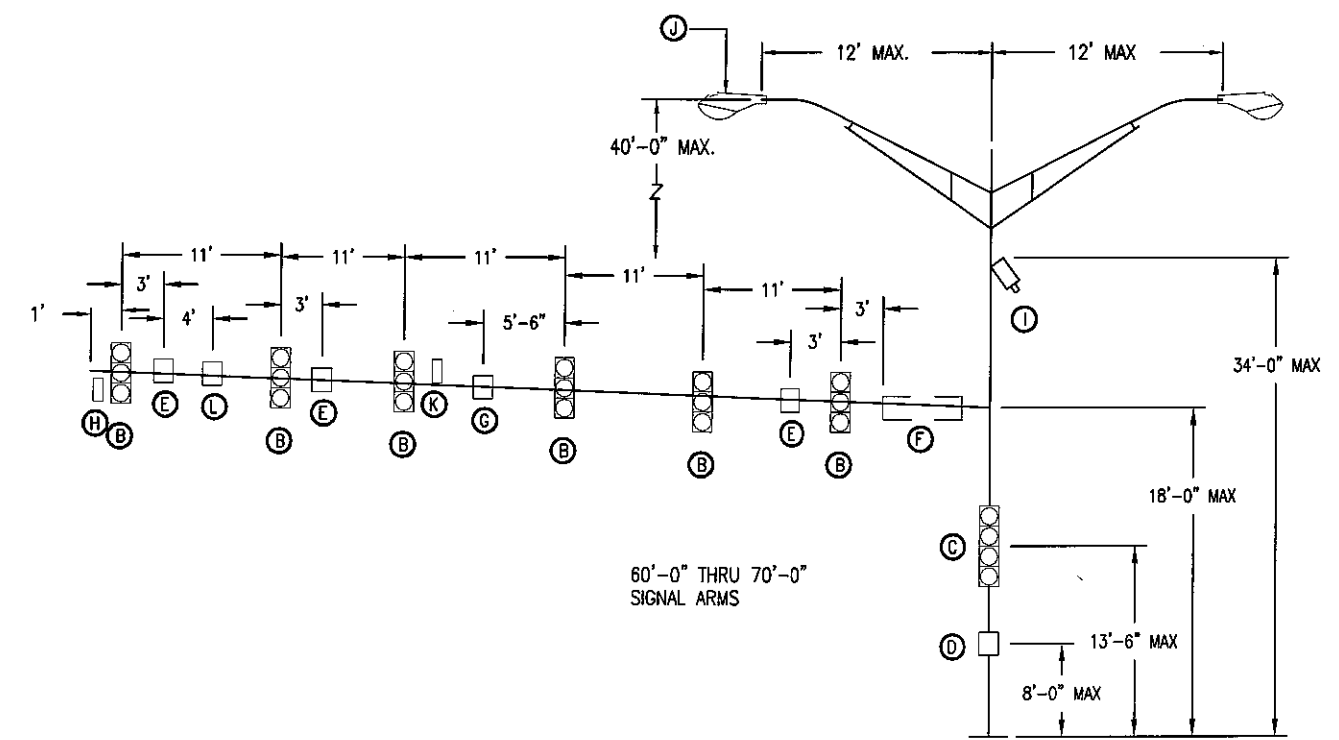
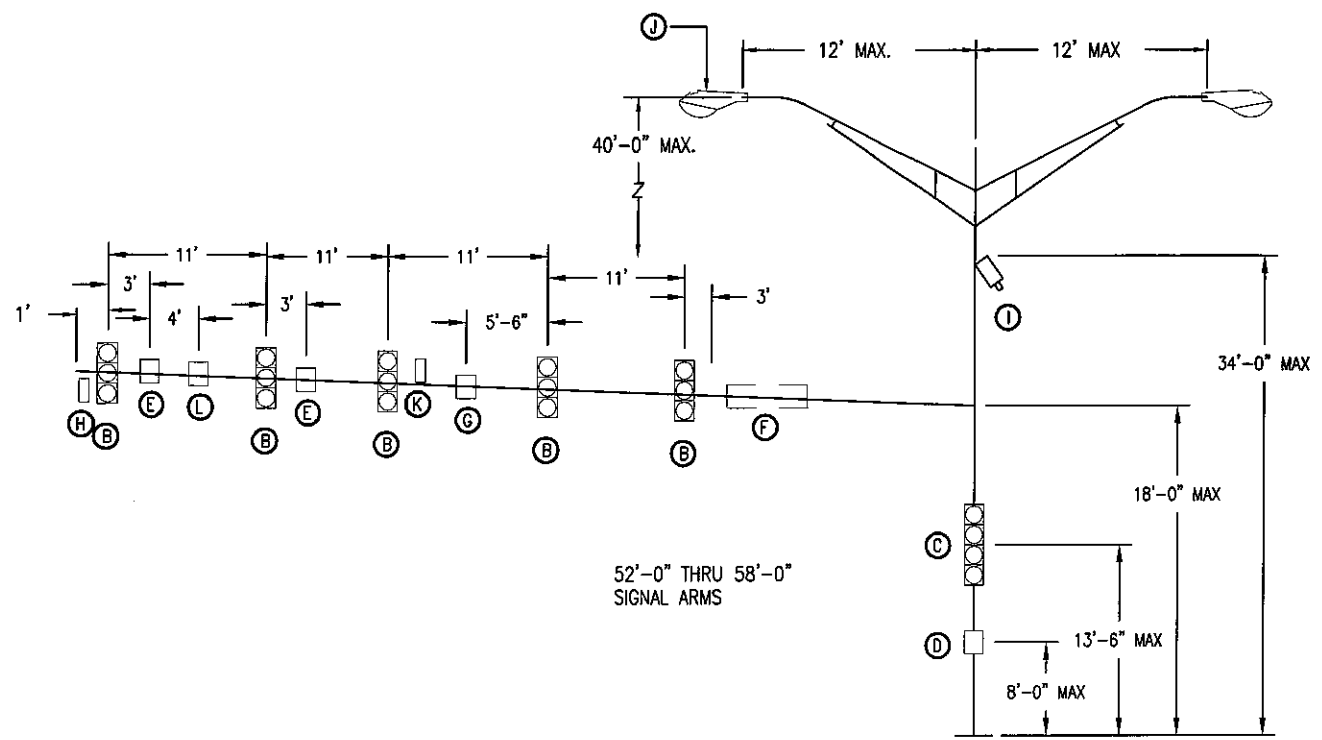
REQ #KS-54977-2

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DEVICE	DESCRIPTION	PROJ AREA (sq ft)	WEIGHT (lbs)
A	12"-4 SECTION SIGNAL WITH BACKPLATE	12.00	54
B	12"-3 SECTION SIGNAL WITH BACKPLATE	10.00	42
C	12"-4 SECTION SIGNAL WITH NO BACKPLATE	6.00	40
D	16"x18"-1 SECTION PEDESTRIAN SIGNAL	3.00	20
E	36"x36" FLATSHEET SIGN	9.00	20
F	24"x96" ILLUMINATED STREET NAME SIGN	16.00	120
G	ADVANCED RADAR DETECTOR	1.00	15
H	PRESENCE RADAR DETECTOR	1.00	15
I	CCTV CAMERA	1.00	15
J	LUMINAIRE	1.00	30
K	EMERGENCY VEHICLE PRE-EMPTION DETECTOR	0.50	5
L	36"x36" FLATSHEET SIGN	9.00	20

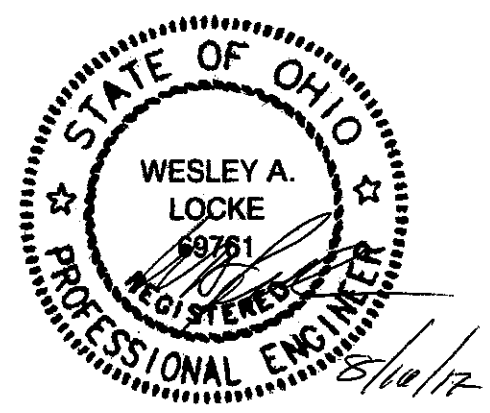
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TAPERED STEEL TRAFFIC CONTROL STRUCTURES OVERLANDPARK, KANSAS						
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G	ADVANCED RADAR DETECTOR	1.00	15
H	PRESENCE RADAR DETECTOR	1.00	15
I	CCTV CAMERA	1.00	15
J	LUMINAIRE	1.00	30
K	EMERGENCY VEHICLE PRE-EMPTION DETECTOR	0.50	5
L	36"x36" FLATSHEET SIGN	9.00	20



REQ #KS-54977-2		STATE: KS		REQ# / SO#: KS-54977-1		REV		DESCRIPTION		DATE		REV BY/CHK BY	
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		DESIGNED BY		CHECKED BY		DATE		SCALE		ENG REF			
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50915-B19								REVISION		SHEET			
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