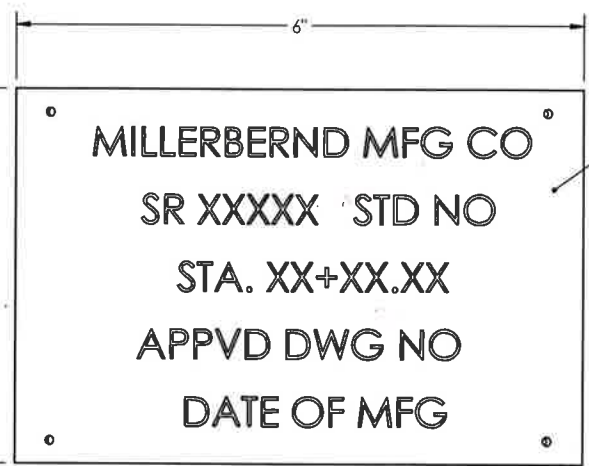


**STANDARD MASTARM SLIP JOINT - DETAIL**



ALUMINUM ID TAG

TEXT TO BE STAMPED AS SHOWN IN 5/16" HIGH LETTERS

SECURED TO POST WITH (4) 3/16" DIA RIVETS

- 2015 AASHTO DEVIATION NOTES:**
- SECTION 5.6.6 FOR HANDHOLE CLEAR DISTANCE AND 40% OF POLE WIDTH REQUIREMENT. STRESSES ARE REVIEWED AT EACH HANDHOLE FOR STRUCTURE ADEQUACY.
  - PER ASSHTO 2013 SECTION 5.17.4.3 - BEDING STRESSES IN INDIVIDUAL BOLT CAN BE IGNORED IF THE STANDOFF DISTANCE BETWEEN THE TOP OF THE FOUNDATION AND THE BOTTOM OF THE LEVELING NUT IS LESS THAN ONE BOLT DIAMETER.

**APPROVED**  
**Manufacturer's Pole Plan**  
**Approved For Listing As A**  
**Pre-Approved Drawing**  
**WSDOT Bridge & Structures Office**  
 By GB Date 10/2021



10-27-21 (EXPIRES 12-18-21)

REVISIONS			
REV.	DESCRIPTION	DATE	DRFT
L	MADE TENONS HAVE VERTICAL AND HORIZONTAL HOLES	10/27/21	TK
K	ADDED HH GRADE	4/22/21	TK
J	MADE POLE HEIGHT MOVE WITH MTG HT, MOVED HH BETWEEN GUSSETS, ADJUSTED S2 LENGTH TO 3" LESS, ADDED SHEET 4, MADE DAVIT MIN STRAIGHT TO 13" FOR ALL DAVITS	2/18/21	TK
H	UPDATED WPS SHT 1 FOR GALV HANG PIPE	7/27/2020	RK

NOTE: FOR NOTE AT WELD SYMBOL TAIL, SEE WELDING PROCEDURE SPECIFICATION

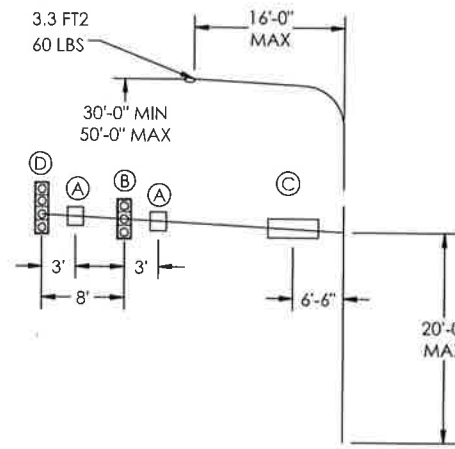
MATERIAL SPECIFICATIONS			
POST: ASTM A572 GR55 BASE PLATE: ASTM A709 GR50 MAST ARM: ASTM A572 GR55 MOUNTING PLATE: ASTM A709 GR50 HARDWARE FINISH: ASTM F2329 ANCHOR BOLTS: ASTM F1554 GR 105 ANCHOR BOLT NUTS: ASTM A563 GR DH ANCHOR BOLT WASHER: ASTM F436 SIGNAL ARM CONNECTION BOLT: ASTM F3125 GR 325 TYPE I PIPE: ASTM A53 GR B OR ASTM A500 GR B HH FRAME: ASTM A36			
DESIGN CRITERIA			
2015 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS ON HIGHWAY SIGNS, LUMINAIRES & TRAFFIC SIGNALS INCLUDING LATEST INTERIMS.			
WINDS: 115 MPH WITH A MEAN RECURRENCE INTERVAL OF 1700 YEARS VORTEX SHED: Y FATIGUE CAT: III NATURAL WIND GUST: Y GALLOPING: N/A LUMINAIRE: N/A LUMINAIRE WEIGHT: N/A SIGN: N/A SIGN WEIGHT: N/A TRUCK GUST: Y			
WELD SPECIFICATION			
THE POST AND MAST ARM TO BE ROUND TAPERED TUBE FABRICATION WITH ONE SUBMERGED ARC LONGITUDINAL SEAM WELD WITH 100% PENETRATION 6" FROM BASE PLATE, FLANGE AND BUTT WELDED SHAFTS. EXCEPT FOR TUBES LESS THAN 5 IN DIAMETERS; FOR FEMALE SECTION OF SLIP JOINTED TUBES 10" AND GREATER: 1.5 X FEMALE SECTION INSIDE DIAMETER + 6 INCHES. FOR FEMALE SECTION OF SLIP JOINTED TUBES LESS THAN 10" FEMALE SECTION NOMINAL DIAMETER AND 60% FOR REMAINDER. GAS METAL ARC WELDING PROCESS WITH 60% PENETRATION MAY BE USED FOR REMAINDER OF WELDED FABRICATION.			
WELD TESTING: 100% OF ALL WELDS VISUAL TESTED (VT) (MT), 100% OF ALL COMPLETE JOINT PENETRATION (CJP) WELDS ULTRASONIC TESTED (UT) BASED ON THE THINNEST MATING MATERIAL: (PER AASHTO 2013 5.15.5-WELD INSP) THICKNESS. < 6MM (0.25 IN) MT ≥ 6MM (0.25 IN) UT			
WELDING INSPECTION OF STRUCTURE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF WASHINGTON STATE DEPARTMENT OF TRANSPORTATIONS STANDARD SPECIFICATION SECTION 6-03.3(25) AND 2015 ASSHTO WELD INSPECTION SECTION 14.4.4.8			
STRUCTURE FINISH SPECIFICATION			
GALV. OR PRIME COAT: HOT DIPPED GALV. PER ASTM A123 FINISH COAT: - COLOR: - FEDERAL OR RAL SPEC.: - WEIGHT W/GALV.: - WEIGHT W/GALV. & PAINT: - SURFACE AREA: - GAL. OF PAINT: -			
		622 6TH ST. SO. WINSTED, MN 55395	
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SALES ORDER NO.:	QTY:	STATE:	SHEET
74516	-	WA	1 OF 5
DESCRIPTION:			
SUB TRAFFIC POLES TYPE III-J			
EST. WEIGHT:	DRAWING NO.:		
	74516-WA-TS-III-J		
PROJECT NAME:			
STATE OF WASHINGTON TRAFFIC POLES - TYPE III-J			
PROJECT LOCATION:			
WA			
DWN BY: REBEKAH	DATE: 2/14/17		
CHK BY:	DATE:		

POLE DATA - TRAFFIC SIGNAL - TYPE III - J

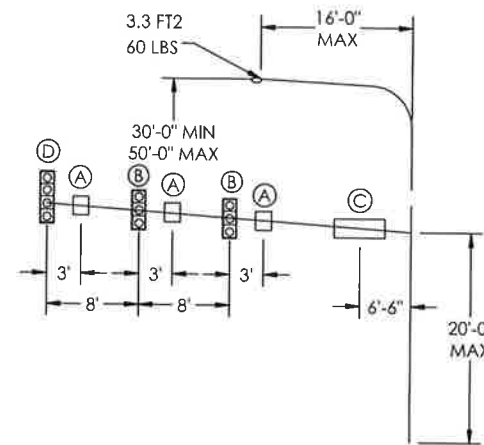
MMC # WA-TS-III-J-MA-LA-LH MA=MAST ARM LENGTH LA = LUM ARM LENGTH LH = LUM MTG HT	QTY	POLE TUBE				BASE DETAIL						ANCHOR BOLT				SIGNAL ARM DATA				SIGNAL ARM ATTACHMENT DATA						MAXIMUM SIGNAL MAST ARM XYZ (FT3)	LUMINAIRE ARM XYZ (FT3)	TOTAL STRUCTURE XYZ (FT3)
		THICK (IN) "A"	BASE O.D. (IN) "B"	TOP O.D. (IN) "C"	LENGTH (FT) "D"	SQUARE "E" (IN)	BOLT CIRCLE "F" (IN)	BOLT CENTERS "G" (IN)	THICKNESS "H" (IN)	BASE OPENING "J" (IN)	HOLE/SLOT "K" (IN)	DIA "L" (IN)	LENGTH "M" (IN)	ANCHOR PLATE O.D. "N" (IN)	THREAD LENGTH "P" (IN)	THICK (IN) "Q"	BASE O.D. (IN) "R"	TOP O.D. (IN) "S"	LENGTH (FT) "T"	"U" (IN)	"V" (IN)	"W" (IN)	"AA" (IN)	"BB" (IN)	ARM OPENING (IN) "CC"			
WA-TS-III-J-MA-LA-LH		5/16	13.5	10.49 MAX	21'-6" MAX	18 1/2	18	12 3/4	2"	11	1 3/4	1 1/2	60	18"	1/4	9	6.9 THRU 5.5	15' THRU 25'	19 1/2	19 1/2	15 1/2	15 1/2	2	5"	1 1/2-6NC X 6 1/2	807	53	860
WA-TS-III-J-MA-LA-LH	1/4														10	6.36 THRU 5.1	26' - 35'	1460								1513		
WA-TS-III-J-MA-LA-LH	1/4														11.5	6.46 THRU 5.2	36' - 45'	1985								2038		
WA-TS-III-J-MA-LA-LH		3/8	16	12.99 MAX	22 1/2	22	15 9/16	13 1/2	2 1/4	2	26	60	18"	1/4	13.5	7.06 THRU 6.5	46' - 50'	22 1/2	22 1/2	18 1/2	18 1/2	2	4 1/2"	1 1/2-6NC X 6 1/2	2659	53	2712	
WA-TS-III-J-MA-LA-LH	SEE SLIP TABLE													13.5	SEE SLIP TABLE	51' - 55'	3005								3058			
WA-TS-III-J-MA-LA-LH	SEE SLIP TABLE													15	SEE SLIP TABLE	56' - 65'	3697								3750			

\*\*\*MUST SPECIFY MASTARM LENGTH AT TIME OF ORDER\*\*\*  
 REPLACE "MA" IN PART NUMBER WITH MAST ARM LENGTH AS REQUIRED  
 \*\*\*MUST SPECIFY LUM ARM LENGTH AND MOUNTING HEIGHT AT TIME OF ORDER\*\*\*  
 REPLACE "LA" IN PART NUMBER WITH LUM ARM LENGTH AS REQUIRED  
 REPLACE "LH" IN PART NUMBER WITH LUM ARM MOUNTING HEIGHT AS REQUIRED  
 \*\*\*MUST SPECIFY TENON LOCATIONS AT TIME OF ORDER\*\*\*

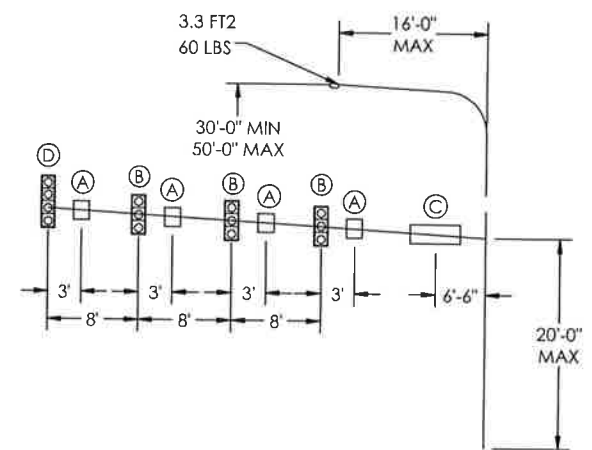
ITEM NO.	DESCRIPTION	QTY PER	ASSY	FINISH
1	BASE RD "N"	2		X
2	GROUND MTG PLATE	1	X	X
3	WLDMT ARM DAVIT RD	1		X
4	WLDMT POLE SIG RD "A"x"B"x"C"x"D"	1		X
5	WLDMT ARM SIG RD - 1ST SECT	1		X
6	WLDMT ARM SIG RD - 2ND SECT (51' - 65')	1		X
7	WLDMT CAP VENT 7"ID(6.25-6.75) 3 SET SCREW	1		X
8	COVER HH M16C 4 1/4X6 3/4 2 BOLT	2		X
9	BOLT HX HD 1-2-13NC X 1" F593C SS	2	X	
10	BOLT HX HD 1/4-20NC X 1/2 F593C SS	2		
11	BOLT HX HD 3-4-10NC X 12-1-2 A307GV	1		
12	BOLT HVYHXHD 1-1-2-6 X 6-1-2 F3125 A325 TYPE 1 GV	4		
13	BOLT HX HD FT 5/8-11NC A307GV	1		
14	NUT HVY HX 1-1-2-6NC A563 BR(.03)(DH) GV	4		
15	NUT HVY HX "L" ASTM A563 GR DH GV	24		
16	NUT HX 5-8-11NC G2 GV	1		
17	NUT HX 3-4-10NC G5 GV	1		
18	NUT SQ 1-2-13 SS	1		
19	SCRW ST SQ HD 3/8-16NC X 1" SS	3		
20	SCRW HX SK BT HD 1-4-20NC X 1 SS	4		
21	WASHINGTON ID TAG W/ RIVETS	3	X	
22	WASHER FLAT 1-1/2 SAE ASTM F436 GV	8		
23	WASH F.56 IDX1.375ODX.091 THK BRASS COMM. BRASS	4	X	
24	WASHER FLAT 5/8 GV	2		
25	WASHER FLAT"L" ASTM F436 GV	24		
26	WASHER LOCK 5/8 GV	1		
27	WASHER LOCK 3/4 ANSI B18.21.1 GV	1		
28	Ø"L" X "M" LG ANCHOR BOLT	4		
29	GASKET HH M16	2	X	



THRU 25' SIGNAL ARMS



26' THRU 45' SIGNAL ARMS



46' THRU 65' SIGNAL ARMS

**APPROVED**  
 Manufacturer's Pole Plan  
 Approved For Listing As A  
 Pre-Approved Drawing  
 WSDOT Bridge & Structures Office  
 By GB Date 10/2021

PROJ.	AREA FT2;	WEIGHT (LBS)	DEVICE DESCRIPTION
ⓓ	SIGNAL	12" - 4 SECTION SIGNAL W/BACKPLATE	11.6 86
Ⓒ	SIGN	24" x 48" STREET NAME SIGN	14 70
Ⓑ	SIGNAL	12" - 3 SECTION SIGNAL WITH BACKPLATES	9.2 60
Ⓐ	SIGN	30" x 24" DIRECTIONAL SIGN	5.0 60

MAXIMUM MAST ARM XYZ VALUES INCLUDE SIGNS AND SIGNALS.  
 LUMINAIRE ARM XYZ IS BASED ON A 16'-0" SPAN.  
 TOTAL STRUCTURE XYZ VALUE & LUMINAIRE ARM XYZ VALUE TOGETHER.

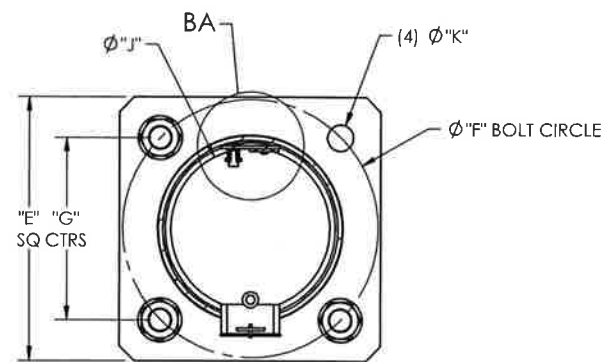
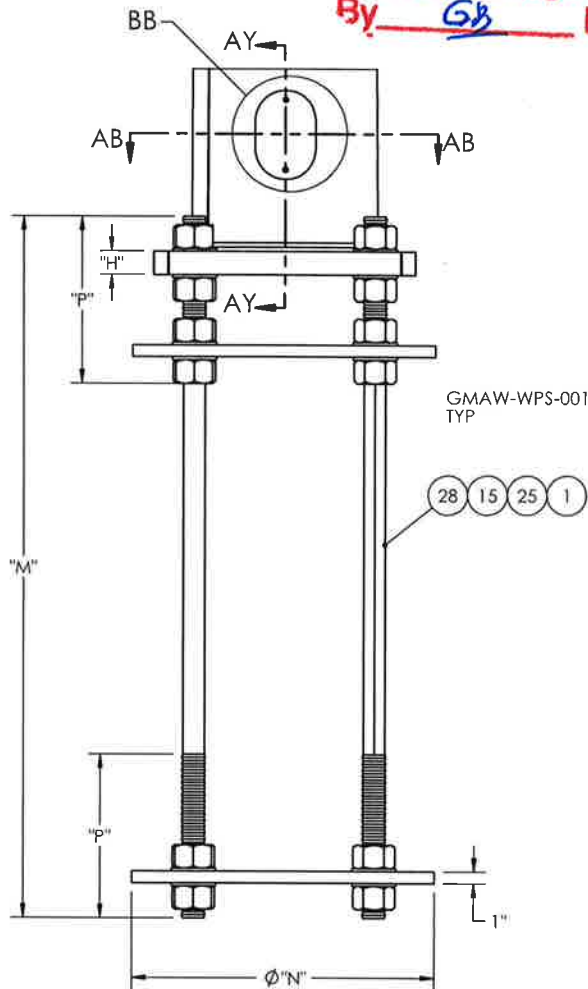
ARM SPAN "T"	MASTARM SLIP TABLE (ARMS OVER 50'-0")					
	BASE SECTION			END SECTION		
	THICK (IN) "Q"	TOP O.D. (IN) "TT"	SHAFT LENGTH "SS"	THICK (IN) "MM"	BASE O.D. (IN) "NN"	SHAFT LENGTH "PP"
51' THRU 55'	1/4	10.7	20'	3/16	11.64	33'-3" THRU 37'-3"
56' THRU 65'	1/4	10.8	30'	3/16	11.74	28'-3" THRU 37'-3"



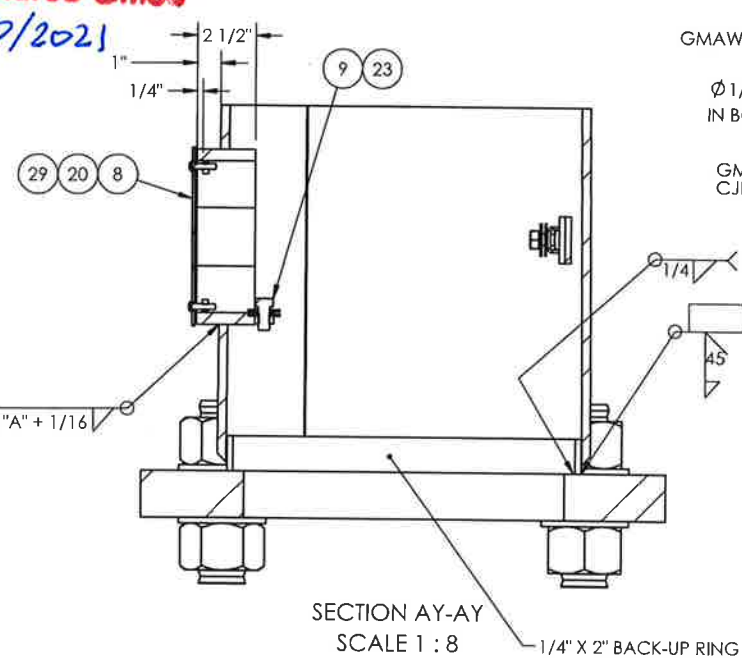
10-27-21 (EXPIRES 12-18-21)

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SALES ORDER NO.:	QTY:	STATE:	SHEET
74516	-	WA	2 OF 5
DESCRIPTION: SUB TRAFFIC POLES TYPE III-J			
EST. WEIGHT:	DRAWING NO: 74516-WA-TS-III-J		
PROJECT NAME: STATE OF WASHINGTON TRAFFIC POLES - TYPE III-J			
PROJECT LOCATION: WA			
DWN BY: REBEKAH	DATE: 2/14/17		
CHK BY:	DATE:		

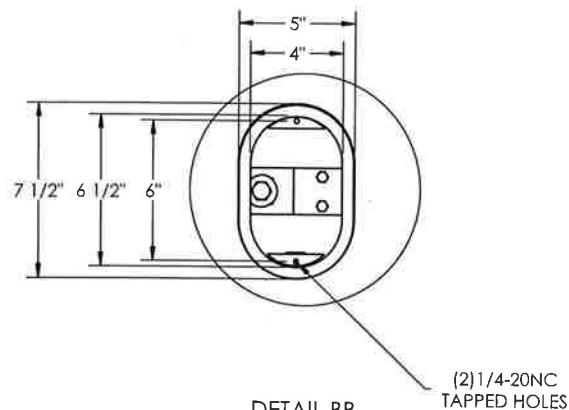
**APPROVED**  
 Manufacturer's Pole Plan  
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 Pre-Approved Drawing  
 WSDOT Bridge & Structures Office  
 By GB Date 10/2021



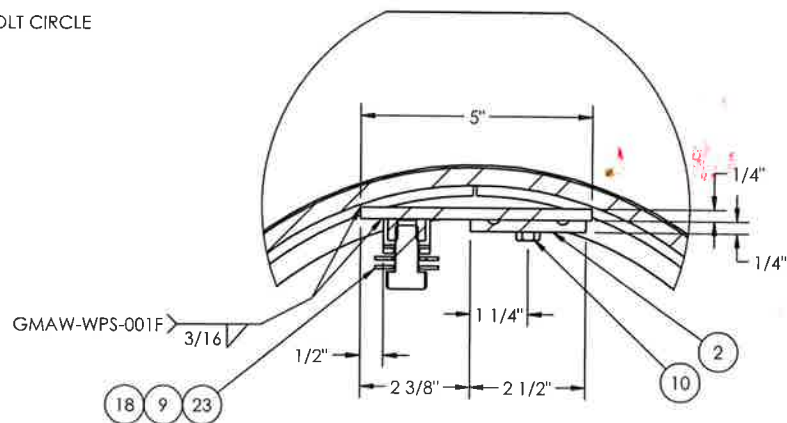
SECTION AB-AB  
SCALE 1 : 16



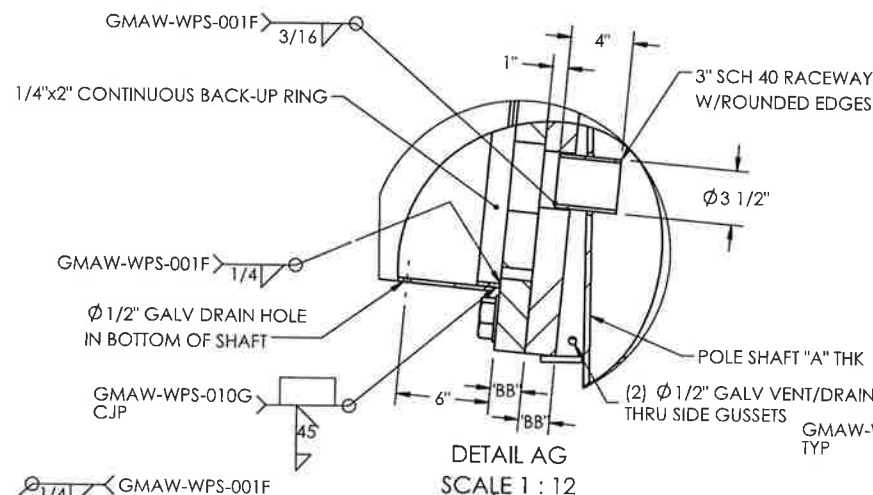
SECTION AY-AY  
SCALE 1 : 8



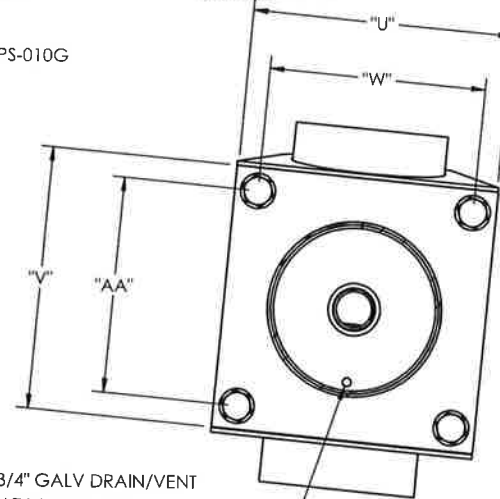
DETAIL BB  
SCALE 1 : 8



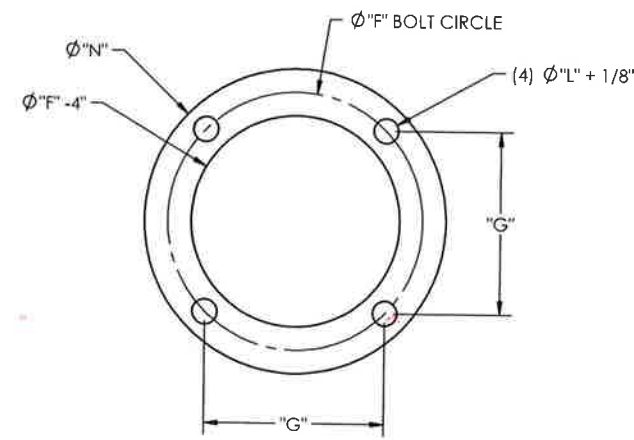
DETAIL BA  
SCALE 1 : 4



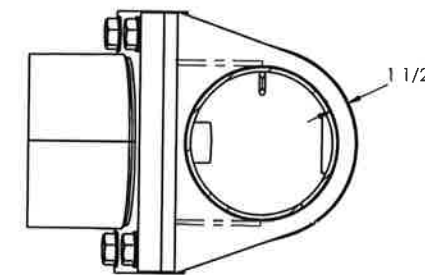
DETAIL AG  
SCALE 1 : 12



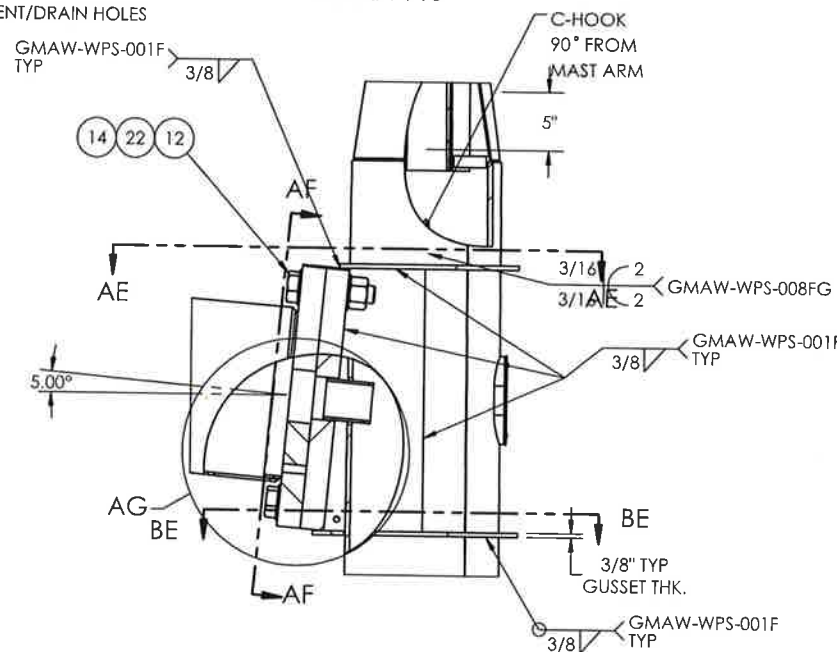
SECTION AF-AF  
SCALE 1 : 16



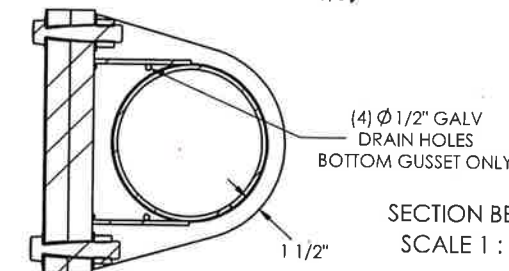
ANCHOR PLATE DETAIL



SECTION AE-AE  
SCALE 1 : 16



SECTION BE-BE  
SCALE 1 : 16



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SALES ORDER NO.: 74516 QTY: - STATE: WA SHEET 3 OF 5

DESCRIPTION: SUB TRAFFIC POLES TYPE III-J

EST. WEIGHT: DRAWING NO: 74516-WA-TS-III-J

PROJECT NAME: STATE OF WASHINGTON TRAFFIC POLES - TYPE III-J

PROJECT LOCATION: WA

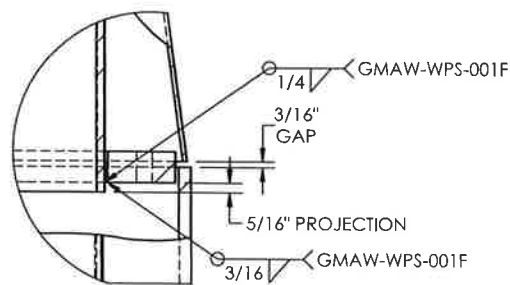
PROJECT NO.: CONTROL/CONTRACT NO.:

DWN BY: REBEKAH DATE: 2/14/17

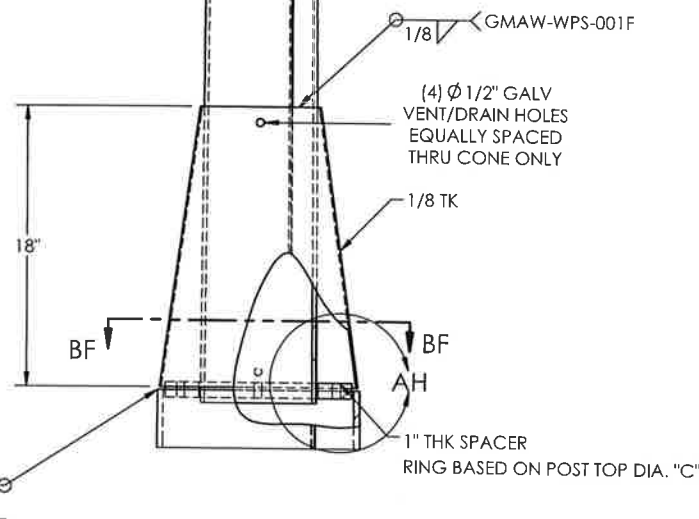
CHK BY: DATE:



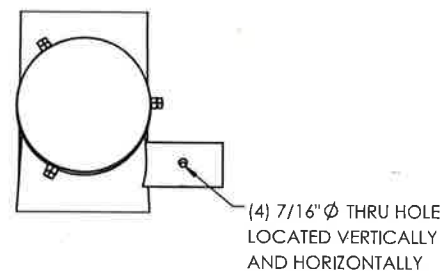
10-27-21 (EXPIRES 12-18-21)



DETAIL AH  
SCALE 1 : 6

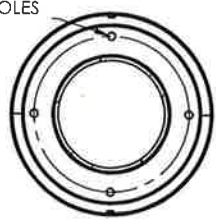


GMAW-WPS-007PG



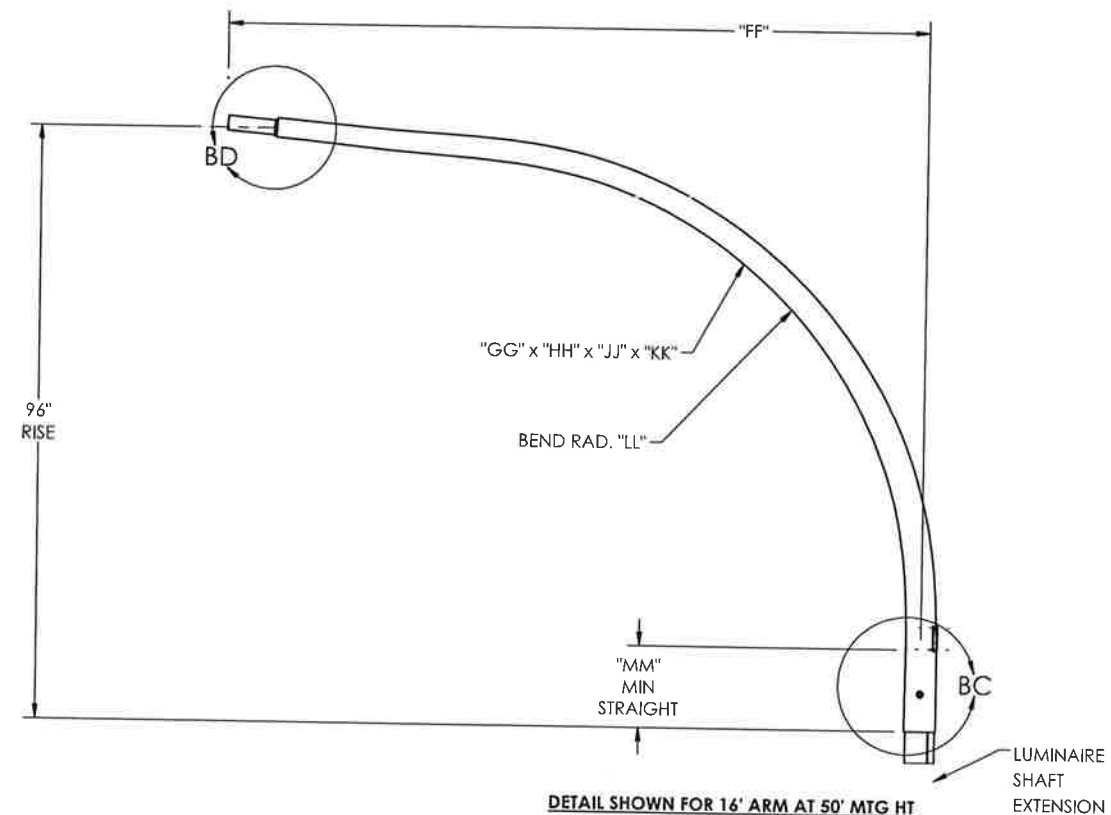
TENON VIEW FROM END OR ARM

(4)  $\phi$  1/2" GALV VENT/DRAIN HOLES IN TOP PLATE AS REQUIRED



SECTION BF-BF  
SCALE 1 : 12

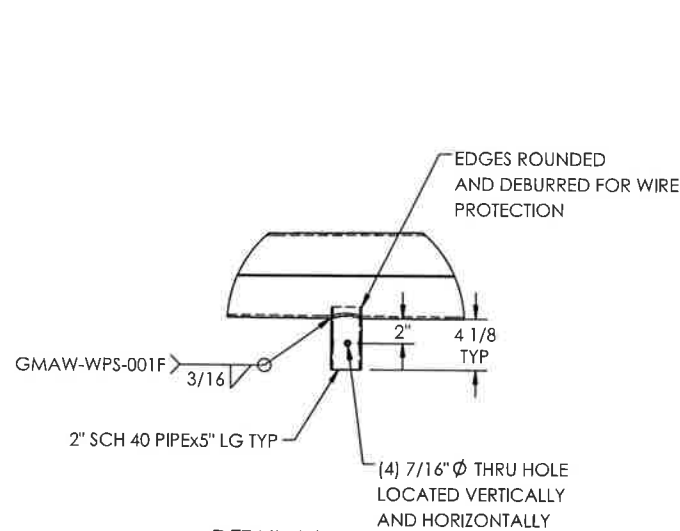
**APPROVED**  
**Manufacturer's Pole Plan**  
**Approved For Listing As A**  
**Pre-Approved Drawing**  
**WSDOT Bridge & Structures Office**  
 By GB Date 10/2021



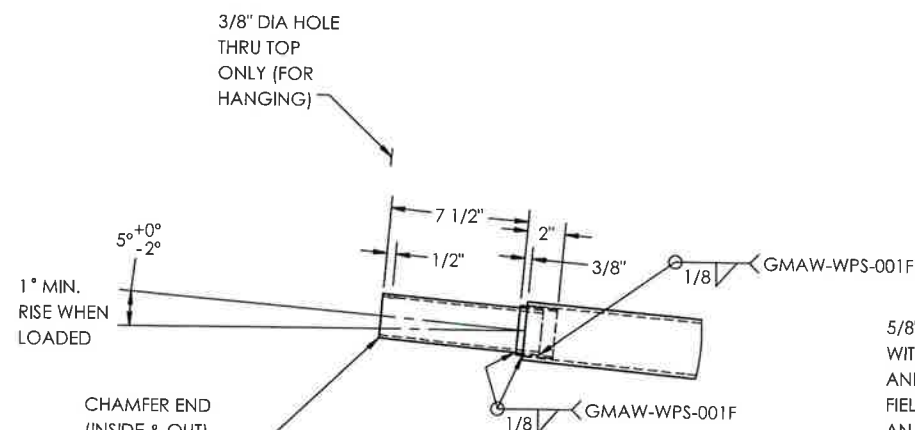
DETAIL SHOWN FOR 16' ARM AT 50' MTG HT

DAVIT LUMINAIRE DATA								
MMC #	QTY	SPAN (FT) "FF"	TK (IN) "GG"	BASE OD (IN) "HH"	END OD (IN) "JJ"	LENGTH (FT) "KK"	BEND RAD (FT) "LL"	MIN STRAIGHT (IN) "MM"
		6'	11 GA	6.0	4.41	11'-4"	6'-0"	13"
		8'	11 GA	6.0	4.23	12'-8"		13"
		10'	11 GA	6.0	3.95	14'-6"		13"
		12'	11 GA	6.0	3.66	16'-9"		13"
		14'	11 GA	6.0	4.69	18'-2"		13"
		16'	11 GA	6.0	3.2	20'-0"		13"

NOTE: 11GA = .1196"

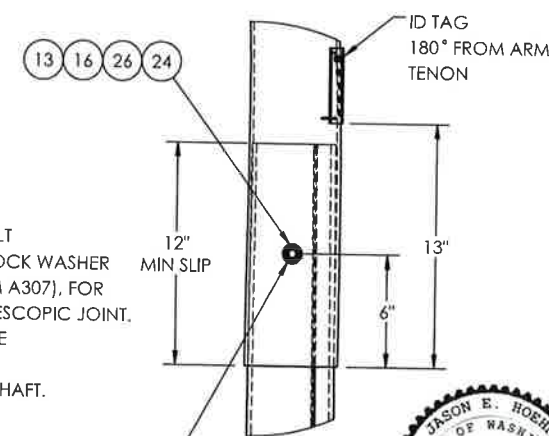


DETAIL AJ  
SCALE 1 : 15



DETAIL BD  
SCALE 1 : 10

5/8"  $\phi$  HEX HEAD BOLT WITH 2 WASHERS, 1 LOCK WASHER AND 1 HEX NUT (ASTM A307), FOR FIELD ASSEMBLED TELESCOPIC JOINT. AN  $\phi$  1 1/16 THRU HOLE WILL BE PROVIDED IN THE LUMINAIRE ARM SHAFT. THE EXTENSION TUBE WILL BE FIELD DRILLED IN FEMALE SHAFT AFTER POSITIONING OF THE ARM

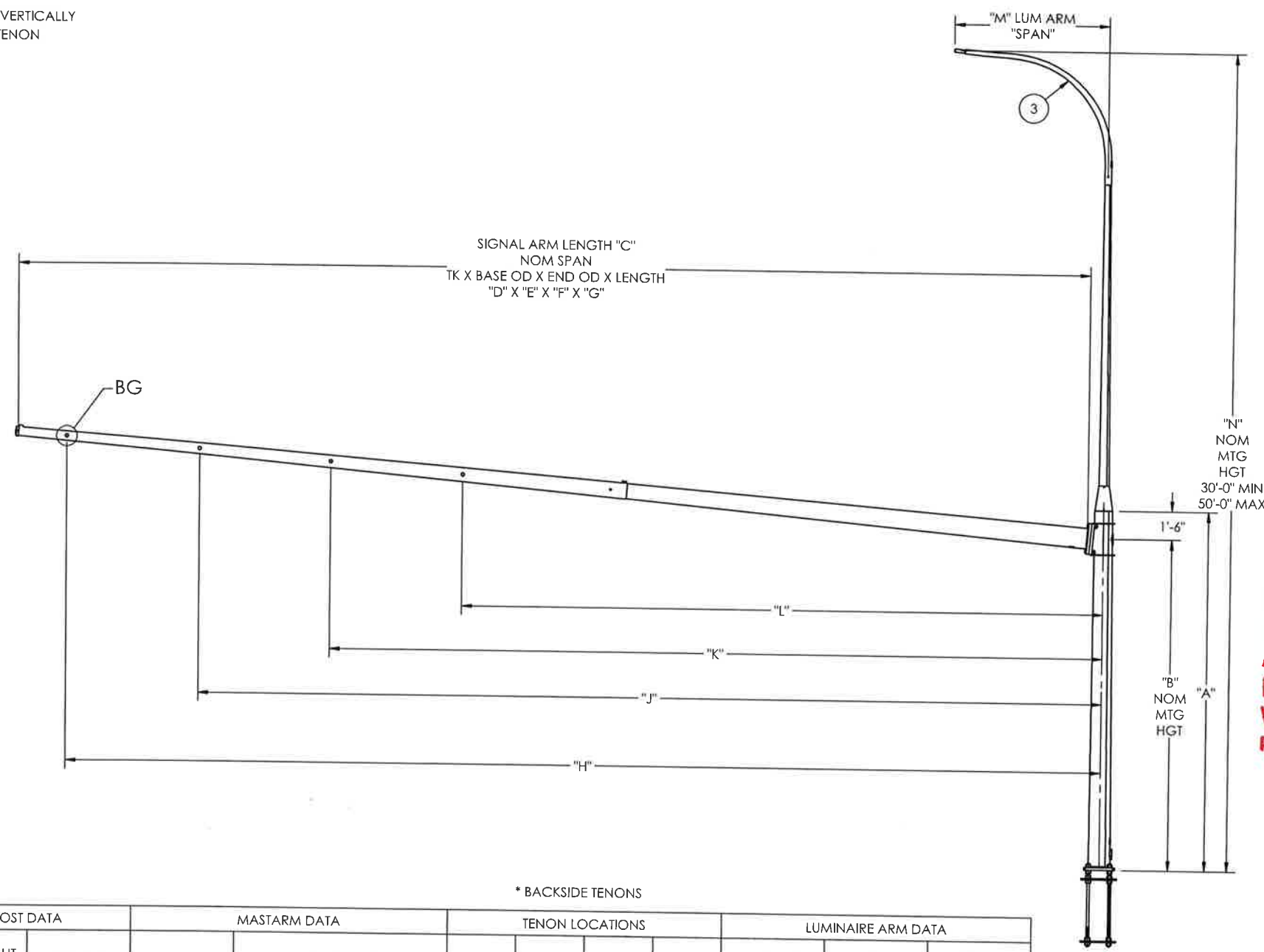
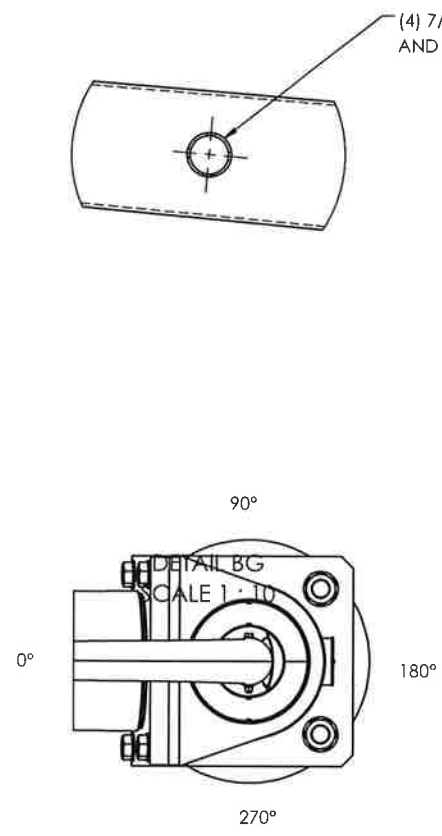


DETAIL BC  
SCALE 1 : 10



10-27-21 (EXPIRES 12-18-21)

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SALES ORDER NO.:	QTY:	STATE:	SHEET
74516	-	WA	4 OF 5
DESCRIPTION: SUB TRAFFIC POLES TYPE III-J			
EST. WEIGHT:	DRAWING NO: 74516-WA-TS-III-J		
PROJECT NAME: STATE OF WASHINGTON TRAFFIC POLES - TYPE III-J			
PROJECT LOCATION: WA			
DWN BY: REBEKAH	DATE: 2/14/17		
CHK BY:	DATE:		



**APPROVED**  
 Manufacturer's Pole Plan  
 Approved For Listing As A  
 Pre-Approved Drawing  
 WSDOT Bridge & Structures Office  
 By GB Date 10/2021

\* BACKSIDE TENONS

WA-TS-III-MA-LA-LH (REPLACE MA WITH ARM LENGTH, LA WITH LUM LENGTH AND LH FOR LUM HEIGHT)	LOCATION	POST DATA		MASTARM DATA		TENON LOCATIONS				LUMINAIRE ARM DATA		
	STATION	POLE HEIGHT 21'-6" MAX "A"	MTG HGT "B"	ARM LENGTH "C"	MAST ARM DIM. "D"X"E"X"F"X"G"	"H"	"J"	"K"	"L"	LUM ARM LENGTH "M"	LUM ARM MTG HGT "N"	LUM ORIENTATION FROM MASTARM



10-27-21 (EXPIRES  
12-18-21)

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SALES ORDER NO.:	QTY:	STATE:	SHEET
74516	-	WA	5 OF 5
DESCRIPTION: SUB TRAFFIC POLES TYPE III-J			
EST. WEIGHT:	DRAWING NO: 74516-WA-TS-III-J		
PROJECT NAME: STATE OF WASHINGTON TRAFFIC POLES - TYPE III-J			
PROJECT LOCATION: WA			
DWN BY: REBEKAH	DATE: 2/14/17		
CHK BY:	DATE:		