U.M. DESIGN NUMBER	"A" ROUND STEEL SHAFT	ARM TUBE SIZE	"L" SPAN	MAX. ALLOWABLE XYZ VALUES
71026-B95-Y1	7E-14.0x10.92x22'-0"	7E-6.0x3.90x15'-0"	15'-0"	269 CU. FT.
71026-B95-Y2		7E-6.0x3.20x20'-0"	20'-0"	409 CU. FT.
71026-B95-Y3	3E-14.0x10.92x22'-0"	7E-7.5x4.00x25'-0"	25'-0"	655 CU. FT.
71026-B95-Y4		7E-8.5x4.30x30'-0"	30'-0"	865 CU. FT.
71026-B95-Y5		7E-10.0x5.10x35'-0"	35'-0"	1075 CU. FT.
71026-B95-Y6	0E-14.0x10.92x22'-0"	7E-11.0x5.40x40'-0"	40'-0"	1285 CU. FT.
71026-B95-Y7		7E-11.0x6.80x30'-0" 11E-7.29x4.98x16'-6"	45'-0"	1495 CU. FT.
71026-B95-Y8	3E-17.0x13.92x22'-0"	7E-12.0x7.80x30'-0" 11E-8.29x5.28x21'-6"	50'-0"	1705 CU. FT.
71026-B95-Y9		7E-12.5x8.30x30'-0" 11E-8.83x5.09x26'-9"	55'-0"	1915 CU. FT.
71026-B95-Y10	0E-17.5x14.42x22'-0"	3E-12.5x7.60x35'-0" 11E-8.09x4.38x26'-6"	60'-0"	2609 CU. FT.
71026-B95-Y11		3E-13.0x7.68x38'-0" 7E-8.29x4.30x28'-6"	65'-0"	2889 CU. FT.

LUMINAIRE ARM DATA

TYPE	SPAN "S"	L	TENON	MTG.HT. "Q"	EXTENSION SHAFT "EX"
M6	6'-0"	54"	REQ.	35'-0"	NONE, L=96" *SEE NOTE
				40'-0"	11E-4.70x3.72x7'-0"
				50'-0"	11E-6.10x3.72x17'-0"
M8	8'-0"	39"	REQ.	35'-0"	NONE, L=81" *SEE NOTE
				40'-0"	11E-4.70x3.72x7'-0"
				50'-0"	11E-6.10x3.72x17'-0"
M10	10'-0"	24"	REQ.	35'-0"	NONE, L=66" *SEE NOTE
				40'-0"	11E-4.70x3.72x7'-0"
				50'-0"	11E-6.10x3.72x17'-0"
M12	12'-0"	24"	REQ.	35'-0"	NONE, L=66" *SEE NOTE
				40'-0"	11E-4.70x3.72x7'-0"
				50'-0"	11E-6.10x3.72x17'-0"
M14	14'-0"	24"	REQ.	35'-0"	NONE, L=66" *SEE NOTE
				40'-0"	11E-4.70x3.72x7'-0"
				50'-0"	11E-6.10x3.72x17'-0"
M16	16'-0"	24"	REQ.	35'-0"	NONE, L=66" *SEE NOTE
				40'-0"	11E-4.70x3.72x7'-0"
				50'-0"	11E-6.10x3.72x17'-0"

*** NOTE**
NO EXTENSION SHAFT, USE BOLT ON LUMINAIRE ARM CONNECTION

FORMULA: *MAX ALLOW=∑(P.A.)x(MOM ARM)*

SAMPLE DESIGN = 35'-0" @ 17' SIGNAL ARM END MOUNTED AND SPACED 10'-0" & 22'-0" FROM OUTBOARD END; PLUS (1) LUMINAIRE ARM 16'-0" SPREAD & 40'-0" MTG. HGT.

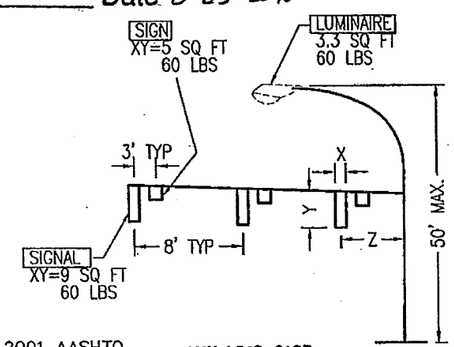
71026-B87-Y5-M16-EK10K12-40-35@17 — "E" SIGNIFIES END MOUNTED SIGNAL CONN; "L" (ARM) LENGTH; ARM CONN. MTG HGT

IF OUTBOARD SIGNAL IS SIDE MOUNTED USE,
71026-B87-Y5-M16-SK10K12-40-35@17 — "S" SIGNIFIES SIDE MOUNTED SIGNAL CONN

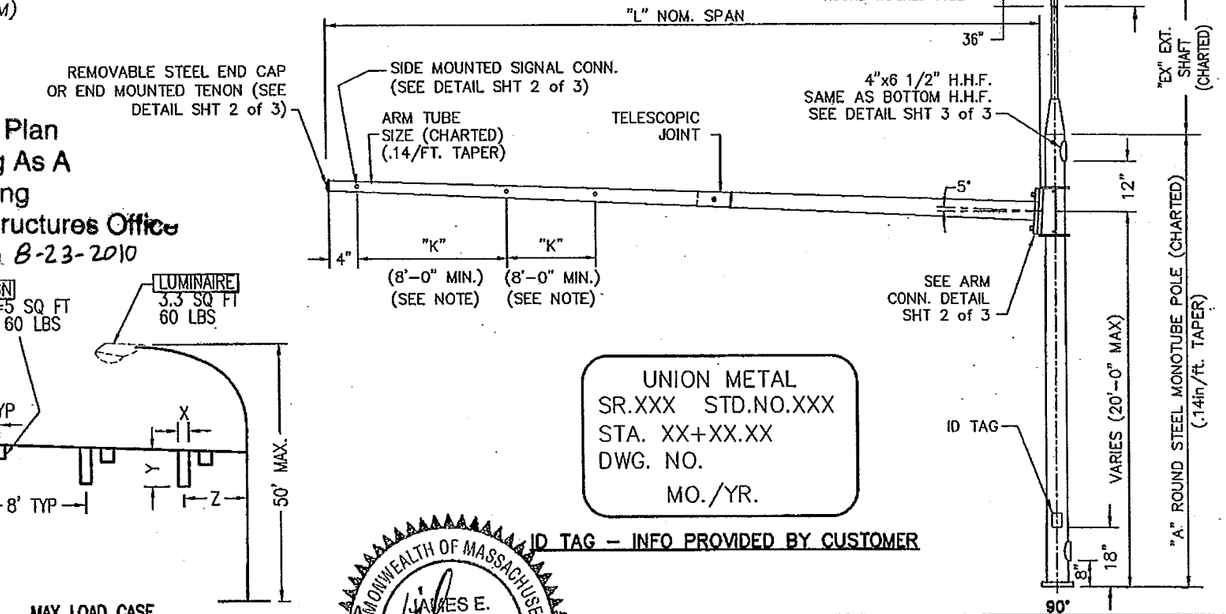
APPROVED
Manufacturer's Pole Plan
Approved For Listing As A
Pre-Approved Drawing
WSDOT Bridge & Structures Office
By GB Date 8-23-2010

U.M.DESIGN NUMBER	SPAN	K1	K2	K3

NOTE: ALL SIGNALS ON NEAR SIDE OF ARM



MAX LOAD CASE



UNION METAL
SR.XXX STD.NO.XXX
STA. XX+XX.XX
DWG. NO.
MO./YR.

ID TAG – INFO PROVIDED BY CUSTOMER

WELDING NOTE:
- "WELDING PER AWS D1.1 STRUCTURAL WELDING CODE, 2002 AND SECTION 1.4.2 OF THE SPECIFICATIONS FOR STRUCTURAL SUPPORTS OF HIGHWAY SIGNS,LUMINAIRES AND TRAFFIC SIGNALS,AASHTO 2001."
- LONGITUDINAL SEAM WELD IS 60% MINIMUM PENETRATION EXCEPT FOR 6 INCHES FROM END OF SECTION AT FLANGE, BASE PLATE AND SLIP JOINT ARE 100% PENETRATION

DESIGNED FOR MAX. ALLOW. XYZ VALUE AS CHARTED

MATERIAL SPECIFICATION	
MONOTUBES all t	ASTM-A595 GR.A OR A607-55
FOR 0.23<=t<=0.3125	ASTM-572 GR55 min. 21% EL.
OR t<0.23	ASTM-607 GR.55 CL. II /AKA/ ASTM-A1011 HSLAS GR.55 CL. II min. 22% EL.
PLATES	ASTM-A36
PIPE	ASTM-A53 GR.B OR A501
CONNECTION BOLTS	ASTM-A325
ANCHOR BOLTS	ASTM-F1554 GR 105
A. BOLT NUTS	ASTM-A563 GR. DH
STRUCTURE FINISH	H.D.GALV. ASTM-A123
HARDWARE FINISH	H.D.GALV. ASTM-A153

RATING NOTE:
DESIGNED PER 2001 AASHTO
BASIC WIND SPEED: 90MPH
DESIGN LIFE: 50 YEARS
FATIGUE CATEGORY: III
GALLOPING LOADS: YES (If=0.30)
TRUCK GUSTS: YES (If=0.68)
NATURAL WIND: YES (If=0.59)
CAFL AT CRITICAL CONNECTIONS:
POLE TO BASE PLATE CONNECTION
A. SOCKET DETAIL W/ FILLET WELD=E'
B. FULL PENETRATION WELD=D
ARM TO PLATE CONNECTION:
A. SOCKET DETAIL W/ FILLET WELD=E'
B. FULL PENETRATION WELD=D
FLANGE GUSSETS=E'
POLE WALL AT FLANGE GUSSETS=E'
POLE JUST BELOW FLANGE BOX=E
POLE SHAFT=B'
TELESCOPIC JOINT=B

COMMONWEALTH OF MASSACHUSETTS
JAMES E. WILD
CIVIL
NO. 37434
REGISTERED PROFESSIONAL ENGINEER
8/20/10

REV	DESCRIPTION	DATE	REV BY	CHK BY
R3	ADDED SEAM WELD NOTE; MODIFIED FILLET WELD ON BOLTED CONNECTION; ADDED SOCKET WELD DETAIL.	8/20/10	GCH	BJR
R2	DWA-14078-3: ADDED LUM ARM DATA FOR ALL SPANS AND MTG HGTS; UPDATED VIEWS TO MATCH 71026-B87 DWG.	8/19/10	GCH	BJR
R1	DWA-14698-1: MODIFIED POLE & ARM TUBE SIZES TO MATCH 71026-B87 DWG; M16 LUM WAS 11E-6.08x3.0x22'-0"; BASE WELD WAS TELESCOPIC; POLE PLATE TO GUSSET WELD WAS 5/16" FILLET.	7/14/10	GCH	SAD

REVISIONS

STATE: WASHINGTON | REQ# / SO# : 20273-2
PROJECT NAME:

TYPE III STEEL COMBINATION TRAFFIC & STREET LIGHTING POLES, TYPE 2 LUM. ARM
WASHINGTON DOT

Union Metal Corporation

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DESIGNED BY	CHECKED BY	DATE	SCALE	ENG REF
LRR		9/21/07	NTS	71026-B85, 87

71026-B95 | REVISION R3 | SHEET 1 OF 3

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