ANCHOR BOLTS

Anchor Bolts are fabricated from carbon steel bar conforming to AASHTO M314 Grade-55 or ASTM F1554 Grade-55. Bolts have an "L" bend on one end and are galvanized a minimum of 12 inches on the threaded end. Four anchor bolts are provided per pole. Each anchor bolt is furnished with two hex nuts and two flat washers.

ANCHOR BASE

The anchor base (base plate) is fabricated from structural quality hot rolled carbon steel plate conforming to ASTM A36. The base plate telescopes the pole shaft and is circumferentially welded top and bottom. The base is provided with slotted bolt holes to accommodate a ± 0.5" variation in the nominal bolt circle.

POLE SHAFT

The pole shaft conforms to ASTM A595 Grade-A and is supplied in 11 gauge (0.1196") or 10 guage (0.1345") thickness. The pole is of one-piece construction with a full length longitudinal high frequency electric resistance weld and is round in cross-section having a uniform taper of approximately 0.14 inches per foot of length.

HANDHOLE

The reinforcing handhole rim consists of either a nominal 3" x 5" rectangular shaped tubing or 4" x 6.5" oval shaped pipe material. The 3" x 5" handhole is provided with a steel attachment bar, steel cover, and one round head machine screw. The 4" x 6.5" handhole includes two tabs for mounting a steel cover with hex head attachment screws. The handhole is welded into the pole shaft and is located 1'-6" above the base and 90° clockwise with respect to the luminaire arm when viewed from the top of the pole for one and two arm applications. For three arms (120-degree separation) the handhole is oriented directly under the arm which is perpendicular to a side of the base plate. In the four arm application the handhole is oriented directly under any arm, all of which are perpendicular to the sides of the base plate.

ELECTRICAL GROUND

A nut holder is provided near the handhole and includes a 0.5"-13UNC hex head bolt and nut.

UNDERGROUND WIRING ACCESS (EM30 SERIES ONLY)

A 1" diameter hole is provided in the pole shaft to facilitate wiring access. The hole is located at 1'-0" below the ground line and 90° clockwise with respect to the luminaire arm when viewed from the top of the pole.

NUT COVERS (STANDARD)

Nut covers for anchor bolts are zinc die cast. Each cover is fastened to the shaft by a 0.25" stainless steel, self-tapping, hex head screw. Nut covers are not available for the EM30 series.

FULL BASE COVER (OPTIONAL)

The optional full base cover is fabricated from ABS plastic. Valmont reserves the right to provide a steel assembly on some applications depending upon the finish requirement and/or pole shaft base diameter. Both steel and plastic covers are a two-piece assembly secured together with two fasteners.

LUMINAIRE ARM

DS30, DS50, DS60, DS70, EM30, AND DS250 luminaire arms are made from 2 inch schedule 40 pipe (2.38" O.D.) with a minimum yield strength of 36,000 psi. DS32 and DS90 luminaire arms are made from ASTM A595 Grade-A material and are supplied in 11 gauge (0.1196") thickness.

MULTIPLE ARMS

Twin luminaire arm applications are oriented at 180° with respect to each other. For applications of two arms which are oriented other than 180° please consult Valmont.

LUMINAIRE ARM ATTACHMENT

The DS30, EM30, DS50, and DS250 pole and mating arm simplex components are cast steel. They are welded to their respective members and will allow the luminaire arm to be erected and held in place by gravity while being secured with a single 0.5"-13 UNC high strength hex head hub bolt. The attachment provides an internal weather resistant wiring raceway.

The DS32 arm and pole simplex plates are fabricated from structural quality hot rolled carbon steel conforming with ASTM A36 material, each welded to its respective member. Three 0.75"-10 UNC high strength structural hex head bolts are used to connect the arm to the pole. The attachment provides an internal weather resistant wiring raceway.

The DS60 and DS70 pole and mating arm simplex components are cast steel. They are welded to their respective members and will allow the luminaire arm to be erected and held in place by gravity while being secured with four 0.5"-13 UNC high strength hex head bolts. The attachment provides an internal weather resistant wiring raceway.

POLE TOP CAP

Each pole assembly is provided with a removable pole top cap and three set screws.

FINISH COATINGS

Standard finishes available are galvanized, prime coat (powder), and finish coat (powder). For information regarding the scope and application of these coatings please refer to page 5.

FASTENING HARDWARE

All structural fasteners are galvanized high strength carbon steel. All other fasteners are galvanized or zinc plated carbon steel or stainless steel.

MOUNTING HEIGHT

Mounting height is a nominal vertical distance as measured from the base of the lighting standard to the center of the luminaire arm at the point of luminaire attachment.

DESIGN

The standards shown in this section are designed to withstand dead loads and theoretical dynamic loads developed by 100 mph winds with a 1.3 gust factor (also meets ice load criteria up to 0.5" thick) under the following conditions, unless noted otherwise in the tables.

The luminaire mounted on each arm shall not exceed an effective projected area of 2.0 square feet, including any external ballast, glare shield or other luminaire accessories. For purposes of design, effective projected area (EPA) is considered to be the product of the actual projected area and the drag coefficient. The drag coefficient used for luminaires is taken as 0.6 and the actual projected area of the luminaire as 3.3 square feet for the designs shown herein.

The luminaire center of gravity is assumed to be located 1'-0" beyond the nominal arm spread. Standards are designed for ground mounted applications. Standards mounted on structures, such as bridges and buildings, may necessitate special consideration requiring Valmont's recommendation.

Standards to be located in areas of known abnormal conditions also require special consideration. For example, coastal areas, airports, and areas of special winds such as the Chinook type along the eastern slope of the Rocky Mountains.

Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the standard.

Under single arm loading conditions, a relatively straight appearing standard is an important aesthetic consideration. To control the appearance of the standards under deadload conditions, a limiting slope criterion of 0.35 inches per foot of shaft length (1 degree 40 minutes of angular rotation) is applied at the point of attachment.

Single Pipe Luminaire Arm

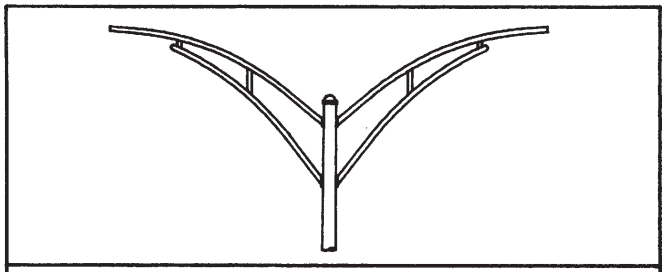
Nominal Mounting Height (Ft.)	Shaft				Arm	Pole Base			
	Designation Number	Base O.D. (in)	Top O.D. (in)	Struct. Weight (lbs)	Max. Lgth. (ft)	Bolt Circle Dia. (in)	Bolt Circle ± (in)	Square (in)	Thk. (in)
25	700A220	7.0	3.9	295	15	10.0	.5	10.88	0.88
30	750A270	7.5	3.7	345	12	10.5	.5	11.25	0.88
	800A270	8.0	4.2	370	15	11.0	.5	11.50	0.88
35	800A320	8.0	3.5	375	10	11.0	.5	11.50	0.88
	850A320	8.5	4.0	405	12	11.5	.5	12.00	1.00
	900A320	9.0	4.5	445	15	12.5	.5	12.38	1.00
40	900A370	9.0	3.8	450	12	12.5	.5	12.38	1.00
	950A370	9.5	4.3	510	15	13.0	.5	13.00	1.00

Twin Pipe Luminaire Arms

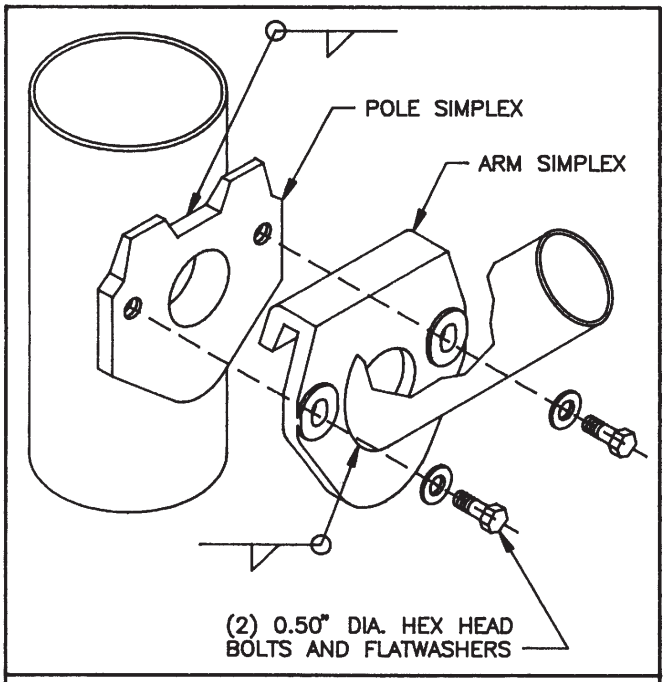
Nominal Mounting Height (Ft.)	Shaft				Arm	Pole Base			
	Designation Number	Base O.D. (in)	Top O.D. (in)	Struct. Weight (lbs)	Max. Lgth. (ft)	Bolt Circle Dia. (in)	Bolt Circle ± (in)	Square (in)	Thk. (in)
25	700A220	7.0	3.9	385	15	10.0	.5	10.88	0.88
30	750A270	7.5	3.7	445	12	10.5	.5	11.25	0.88
	800A270	8.0	4.2	490	15	11.0	.5	11.50	0.88
35	800A320	8.0	3.5	465	10	11.0	.5	11.50	0.88
	850A320	8.5	4.0	500	12	11.5	.5	12.00	1.00
	900A320	9.0	4.5	560	15	12.5	.5	12.38	1.00
40	900A370	9.0	3.8	565	10	12.5	.5	12.38	1.00
	950A370	9.5	4.3	630	12	13.0	.5	13.00	1.00
	T00A370	10.0	4.8	665	15	13.5	.5	14.00	1.00

DS70 NOTES:

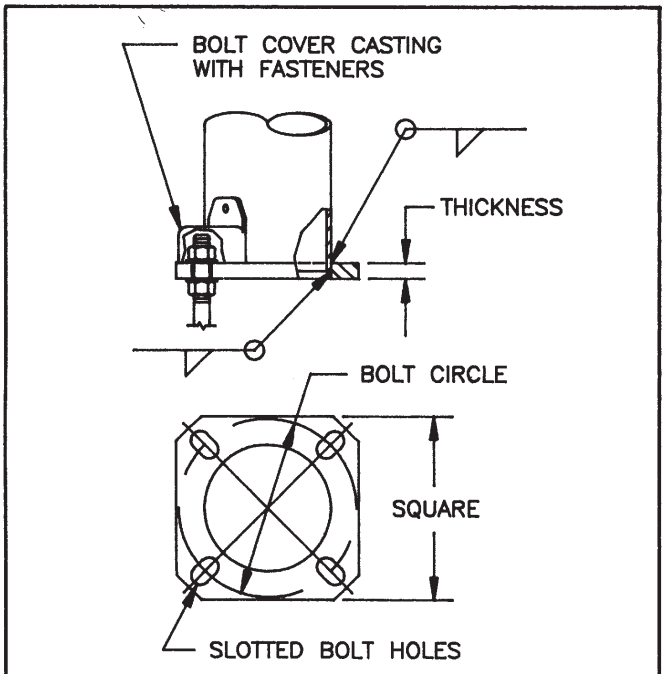
1. All designs utilize 1" x 36" x 4" anchor bolts.
2. All designs utilize 11 gauge material (.1196").
3. All designs provided with 4" x 6.50" nominal handhole.
4. Maximum luminaire weight is 75 lbs per arm.
5. All designs based on a 100 mph wind speed w/1.3 gust factor and maximum luminaire EPA of 2.0.
6. Structure weight is a nominal value which includes the pole shaft, base plate, and luminaire arm only.



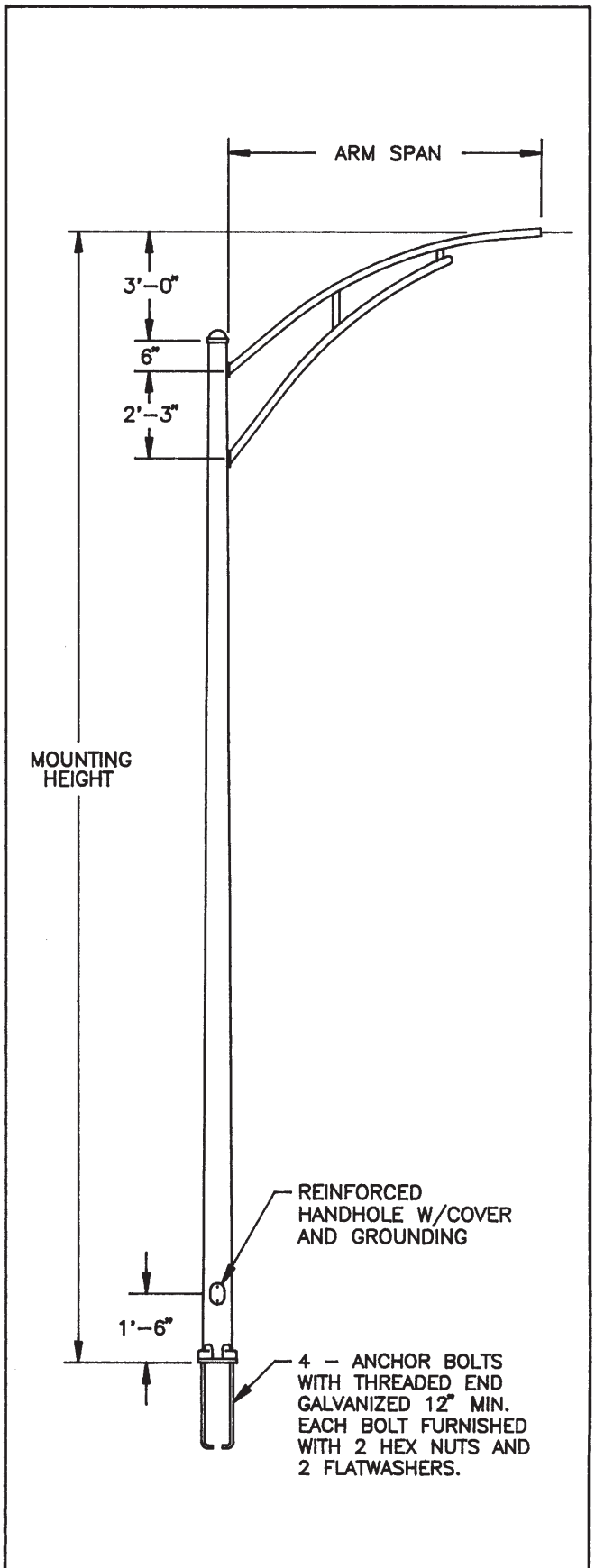
TWIN ARM ARRANGEMENT



ARM ATTACHMENT DETAIL



POLE BASE DETAIL



DS70 POLE DETAIL