

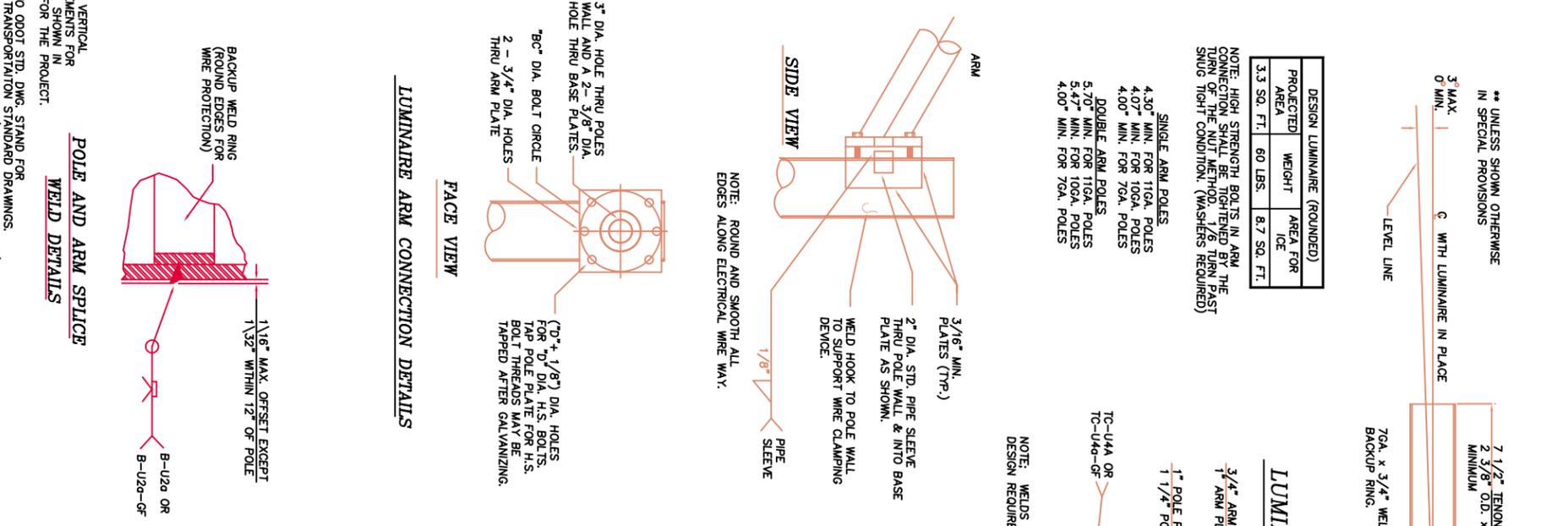
**LUMINAIRE ARM DESIGN DATA**

ARM LENGTH "LA"	ALLOWABLE DEAD LOAD DEFLECTION	BOLT CIRCLE DIA. "BC"	BOLT DIA. "D"	APPROX. RISE (ARM FULLY LOADED)
8'-0"	---	7"	5/8"	1'-6 1/2"
8'-0"	---	7"	5/8"	2'-5 1/2"
10'-0"	---	7"	5/8"	4'-5 1/2"
10'-0"	---	7"	5/8"	5'-10"
15'-0"	---	7"	5/8"	8'-10"
15'-0"	---	7"	5/8"	9'-5"
20'-0"	---	7"	5/8"	11'-5"
20'-0"	---	7"	5/8"	12'-10"
30'-0"	---	7"	5/8"	17'-5"
30'-0"	---	7"	5/8"	18'-10"
40'-0"	---	7"	5/8"	23'-5"
40'-0"	---	7"	5/8"	24'-10"

**NOTE:** DRAWING NOT TO SCALE  
 ALL EROBOLTS, BOLTS, NUTS AND WASHERS SHALL BE GALV. STEEL UNLESS NOTED OTHERWISE. ALL SET SCREWS SHALL BE MIN. DIA. 1/4" STAINLESS STEEL WITH SQUARE OR HEX HEADS. ALL SPANNING HANGERS AND FLUMBERZERS SHALL BE CAST BRONZE.

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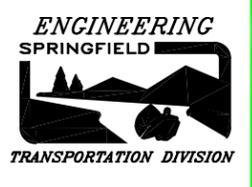


**GENERAL NOTES:**  
 Luminaire supports shall be designed in accordance with AASHTO standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. All material and workmanship shall conform to the City of Springfield Standard Specifications (Section 501) and the design criteria and details shown on these drawings except as approved by the Engineer.  
 The design wind velocity shall be 100mph unless shown otherwise in the Special Provisions for the project.  
 All pole shafts may be round or hexagonal. Octagonal pole shafts may be used for fixed base poles only. Luminaire arm shafts shall be the same shape as the pole shaft except that octagonal arms may be used with hexagonal poles if the arm tip diameter does not exceed 3" and the maximum weight limitations are not exceeded.  
 Pole slip plate and anchor plate shall conform to ASTM Specification A709 grade 50 or approved equal. All other steel sheet and plate shall conform to any of the following ASTM Specifications or an approved equal: A36; A283 grade D; A570 (S18) grades 33, 36, or 40; A572 (S18) grades 42 or 50; A611 (S18) grades D or C, type 1; A709, grades 36 or 50.  
 Anchor rods shall conform to ASTM Specification A449 for slip base and structure mounted fixed base poles. Anchor rods for all other poles shall conform to ASTM Specification A307 for all other poles. Anchor rods shall be galvanized steel and shall be hot-dipped in 1/8" zinc. Anchor rods shall be in good condition but do not exceed 850 ft-lbs. torque.  
 Nuts for ASTM A449 anchor rods and slip base bolts shall be well lubricated heavy hexagon nuts conforming to ASTM Specification A563, grade DH.  
 High strength bolts shall conform to ASTM Specification A325. All structural steel including fasteners shall be hot-dip galvanized after fabrication unless noted otherwise.  
 Galvanize-Control silicon means silicon content of the base metal shall be in the range 0.15 to 0.25% (preferably 0 to 0.04%) or 0.15 to 0.25% unless otherwise in the Special Provisions. Graft in graft unless shown otherwise in the Special Provisions. Graft in graft with a minimum strength of 5,000psi.  
 Reinforcing steel shall conform to ASTM Specification A615, grade 60. A minimum lap splice of 32 bar diameters shall be used unless shown otherwise.  
 Flat washers shall be field verified before fabrication. Top of footing may be substantially above or below roadway surface. Design shall be based on the actual height of the footing above or below roadway surface. Maximum yield strength used in computing allowable stresses shall be 58ksi; for shaft and base plate material.  
 For poles with luminaire arms in excess of 15 feet in length, and poles with 2 luminaire arms the computed deflection of the poles at full design loading shall be limited to 7% of the pole length. The computed dead load deflection of these poles shall be limited to 1% of the pole length. Computed deflection (ignoring pole bending due to dead load deflection) shall not exceed that listed in ODOT Std. Draw #47228 (Old #47228) and #47229 (Old #47229).  
 Grounding terminal shall be 1/2" UNC x 1/2" Type 308, 309 or 310 threaded stainless steel weld studs.

NO	REVISION	DATE	BY	APPR.
1	FORMALLY ODOT #47228			
2	STD. DWG. UPDATE	7/01	D.D.	B.B.
3	S.U.B. UPDATES	10/03	D.D.	B.B.

BY: DRB DATE: 10/93  
 DESIGNED: DRB  
 CHECKED:  
 APPROVED:  
 FILENAME: TSD5\_23

**STANDARD DRAWING**  
**METAL POLE LUMINAIRE DETAIL**  
**5-23**



**CITY OF SPRINGFIELD**  
**DEPT. OF PUBLIC WORKS**  
**TRANSPORTATION DIVISION**  
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