



Luminaire supports shall be designed in accordance with AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (2015).

The design wind velocity shall be 145 mph.

The design Mean Recurrence Interval shall be 1,700-year.

The design Service wind velocity shall be 91 mph.

Use a K_d of 0.85 for round cross section luminaire supports with arms.

Fatigue design is not required.

All pole shafts shall be round.

Steel sheet for poles and arms shall conform to ASTM A595, Grades A or B, or approved equal.

All other steel sheet and plate shall conform to AASHTO M223 (ASTM A572), or approved equal.

Supplement S18 of ASTM A6 regarding maximum tensile strength shall apply.

Anchor rods for Slip Base Luminaire Supports shall be ASTM 449, Type 1. Anchor rods for Fixed Base Luminaire Supports shall be ASTM F1554, Grade 36.

Nuts for anchor rods and slip base bolts shall conform to ASTM A563, Grade DH.

High strength bolts shall conform to ASTM F3125, Grade A325.

All structural steel including fasteners shall be hot-dip galvanized after fabrication unless noted otherwise.

Galvanize—Control silicon, typical. Silicon content of the base metal shall be in the range of 0 to 0.06% or 0.13% to 0.25%.

Footing concrete shall be Commercial Grade Concrete. ($f'_c = 3000$ psi) .

Grout in grout pads shall be non-shrink high early strength grout (non-ferrous) with a minimum strength of 5000 psi.

Reinforcing steel shall conform to AASHTO M31 (ASTM A615), Grade 60. A minimum lap splice of 32 bar diameters shall be used unless shown otherwise.

Flat washers shall be hardened steel washers conforming to ASTM F436.

Longitudinal seam welds shall be complete penetration within 6" of a circumferential weld.

60 percent minimum penetration required for the remainder of the seam weld. Weld inspection shall comply with the special provisions.

The weight of the slip base pole and its attachments above the anchor plate shall be kept to a minimum and shall not exceed 1000 lbs.

Pole lengths shall be field verified before fabrication. Top of footing may be substantially above or below roadway surface. Design shall be adjusted as necessary for increase or decreased pole length.

The Service II slope at the top of vertical supports with moment load applications shall be limited to 0.35 in./ft (1.67°). Computed deflection (ignoring pole bending and/or rotation) of the luminaire arms shall not exceed that listed in the Luminaire Arm Design Data table.

Hubs shall be 3000# threaded forged carbon steel flat weld hubs by Anvil Products Inc., Phoenix Forging Co., Bonney Forge & Tool Works or approved equal. Grounding terminal shall be ½" UNC dia. x 1½" Type 308, 309 or 310 threaded stainless steel weld studs.

See dwg. TM635 for guidelines in locating slip base poles.

Luminaire pole foundation shall meet minimum embankment requirements shown on TM653.

Assemble support and tighten anchor bolts and arm connection bolts according to 00962.46(j)(2). See drawings TM630 and TM631 for charts and details not shown.

15'-0" maximum "LA" for slip base poles.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS
SLIP BASE AND FIXED BASE
LUMINAIRE SUPPORTS
GENERAL DETAILS AND
DESIGN CRITERIA
2024

DATE		REVISION DESCRIPTION	
07-2021		UPDATED TO LRFD DESIGN	
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