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Index 521-660 Light Pole Pedestal - Bridge

Design Criteria

AASHTO LRFD Bridge Design Specifications; ***Structures Design Guidelines (SDG)***

Design Assumptions and Limitations

Use this Index with Index 521-422, 521-423, 521-427, 521-428, 521-820, 515-021, 521-510 as appropriate.

Anchor Bolts were designed for Design Wind, Bridge Deck Height (above MLW), Luminaire Mounting Height, and Luminaire Arm Lengths of Standard Index 715-040 Light Poles.

For poles at or below elevations in the table, 4~1" diameter anchor bolts meet design criteria. Where elevations are 75 feet or less but greater than those shown in Table 1, 4~1 ¼" diameter anchor bolts are required.

Design of the additional bridge deck reinforcement is based on the minimum transverse top deck reinforcing required by the ***SDG*** for the following unfactored loads:

Axial Dead Load = 1.56 kip
Wind Load Moment about Transverse Axis = 40.6 kip-ft
Wind Load Moment about Longitudinal Axis = 28.3 kip-ft
Dead Load Moment about Longitudinal Axis = 1.69 kip-ft
Torsion about Pole Axis = 3.56 kip-ft
Maximum Shear = 1.38 kip

Locate pedestals near a substructure support to minimize vibration of the light poles due to traffic live loads. Locate the centerlines of pedestals a minimum 3'-10" away from centerlines of open joints in railings and ends of railings.

Plan Content Requirements

In the Structures Plans:

Show Light Pole Pedestals on Plan and Elevation, Superstructure and Approach Slab Supplemental Detail sheets. Use stations or longitudinal dimensions along bridge to define pedestal locations. Include anchor bolt diameters.

Payment

No separate payment is made for Light Pole Pedestals. See Payment Note on the ***Standard Plan***.