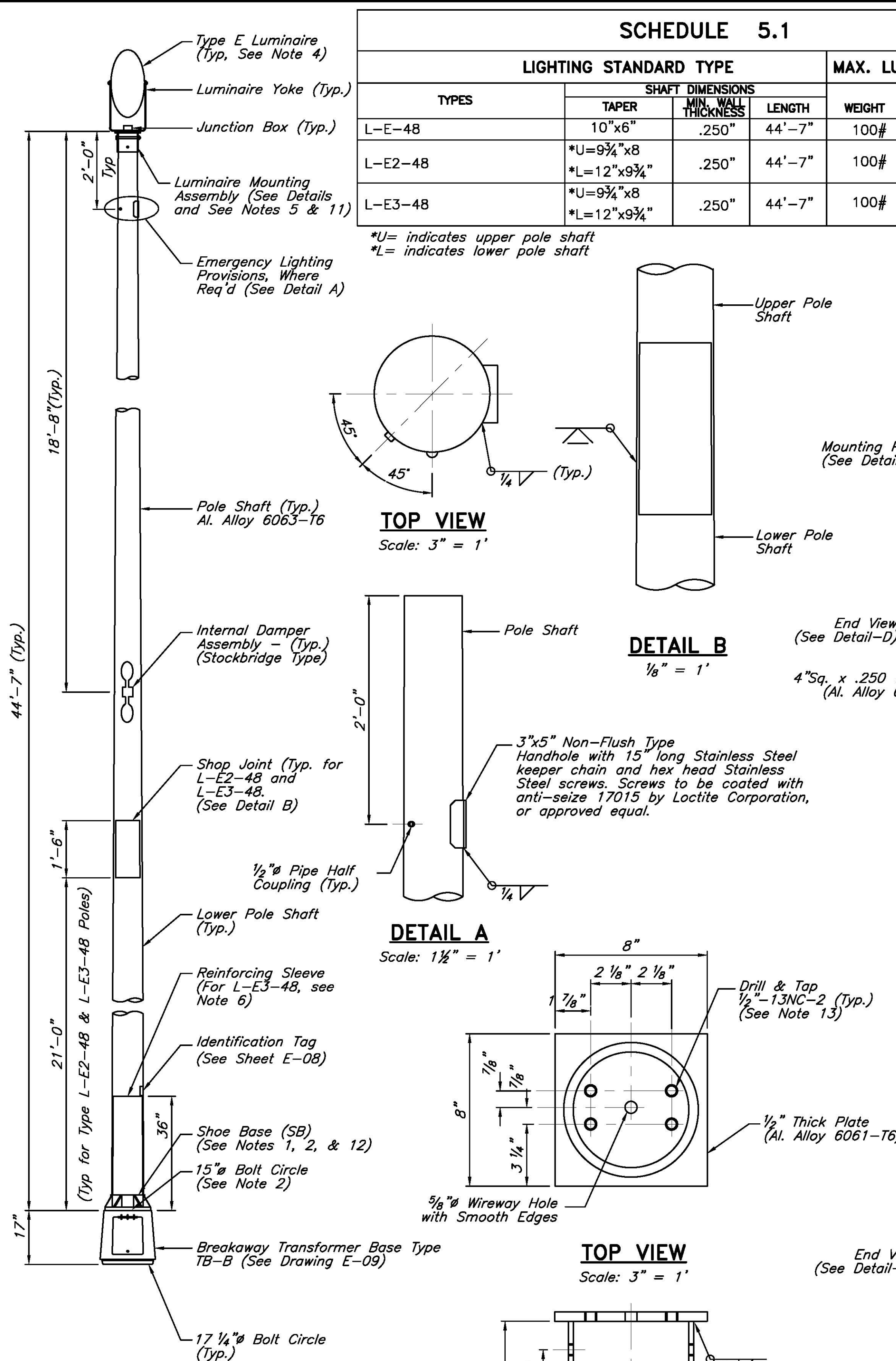


WATER FILE: "NJ TURNPIKE Authority" Drawing: 2009A-05, E-05.dwg  
CURRENT DATE: Apr 23, 2012 - 14:31 PM enghp  
LAST PLOTTED DATE: Apr 23, 2012 - 14:31 PM enghp

BY	DATE
EMG	05/2009
TRACED	MDC 05/2009
CHECKED	EMG 05/2009
SUPERVISED	ALB 05/2009

ACAD FILE NAME: NJTA-SD E-05.dwg Layout: E-05



### LIGHTING STANDARD ASSEMBLY

Scale: 1/2" = 1'

### LUMINAIRE MOUNTING ASSEMBLY TYPE E

Scale: 3" = 1'

USE THIS DRAWING ONLY  
WHEN APPROVED IN ADVANCE  
BY THE AUTHORITY

**SCHEDULE 5.1**

LIGHTING STANDARD TYPE			MAX. LUMINAIRE SIZE		
TYPES	SHAFT DIMENSIONS		WEIGHT	PROJ. AREA	SQ. FT.
L-E-48	TAPER 10"x6"	MIN. WALL THICKNESS .250"	44'-7"	100#	3.8
L-E2-48	*U=9 3/4"x8 *L=12"x9 3/4"	.250"	44'-7"	100#	3.8
L-E3-48	*U=9 3/4"x8 *L=12"x9 3/4"	.250"	44'-7"	100#	3.8

\*U= indicates upper pole shaft  
\*L= indicates lower pole shaft

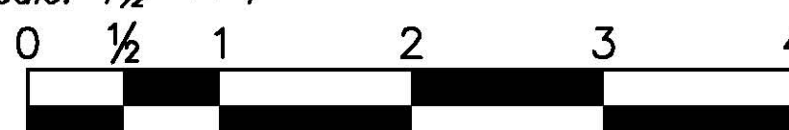
**Instruction To Designers for Product Inclusion on The List of Approved Bridge Light Standard Vendors:**  
Where lighting standards are to be placed on bridges or structures, a complete set of drawings and calculations signed and sealed by a professional engineer shall be submitted by the lighting standard vendor to the engineer of record for review and approval prior to inclusion into the contract specifications as approved bridge lighting standard supplier. Only those vendors who submit acceptable drawings and calculations shall be listed in the contract specifications. Light standard vendors must now examine fatigue issues related to bridge mounted structures prior to being permitted to bid fabrication of these items. Bridge mounted light standards will not be classified as common poles and therefore fatigue design in accordance with the current edition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals shall be performed for all bridge mounted light pole designs. Submitted calculations must include strength and fatigue designs for the cast shoe base and associated weldments. For the cast shoe base to pole weldment only, the Authority will permit the use of the Aluminum Association's 2010 Design Manual, figure 3.1 Detail Category F1, which provides for an allowable constant amplitude fatigue threshold (CAFL) of 3.2 ksi. In addition to these fatigue design provisions, all aluminum light standards shall be provided with vibration damping mechanisms capable of damping both first mode (cantilever sway) and second mode (S-shape) vibration behaviors.

### LUMINAIRE MOUNTING ASSEMBLY TYPE E2

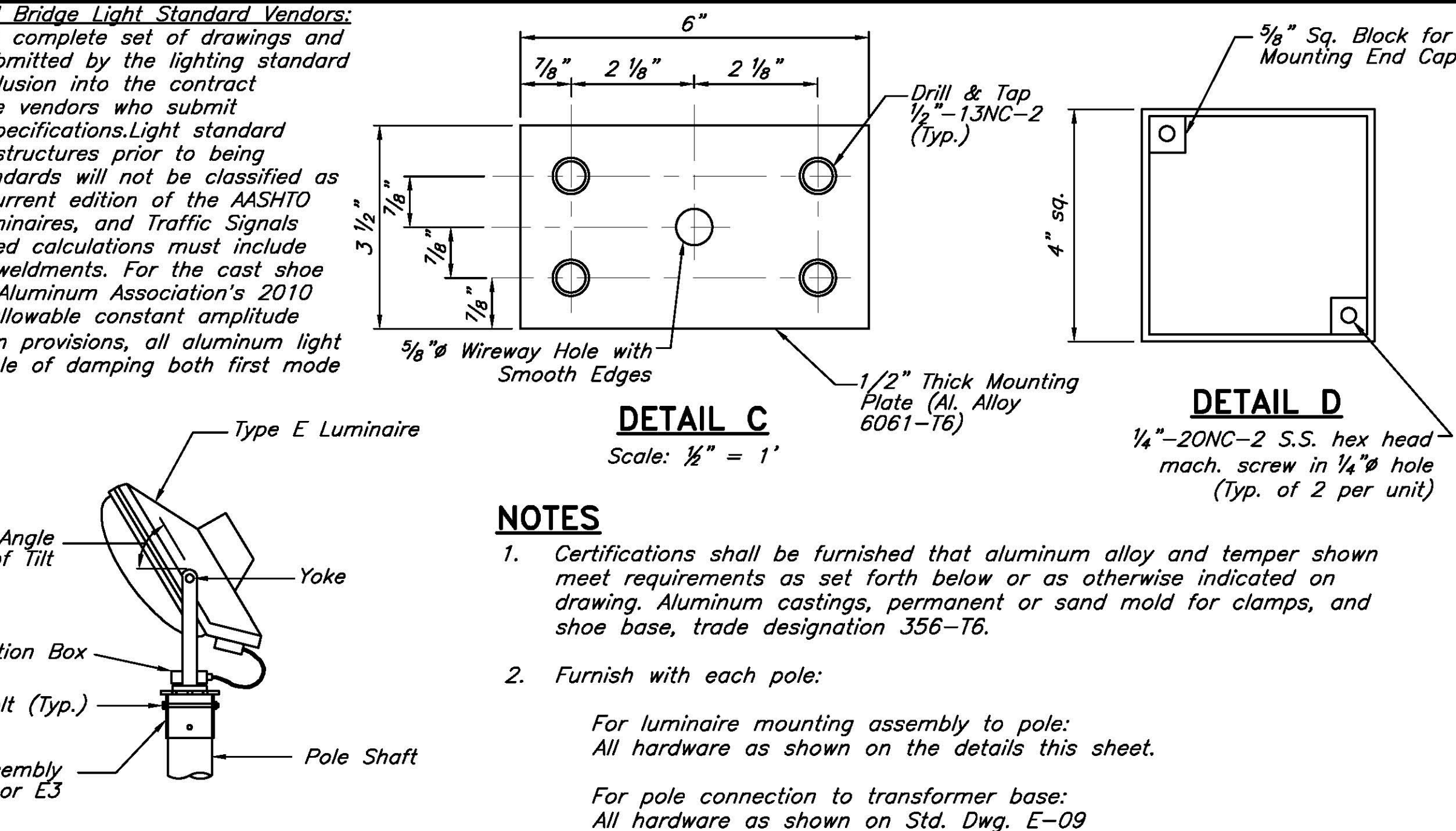
Scale: 1 1/2" = 1'

### LUMINAIRE MOUNTING ASSEMBLY TYPE E3

Scale: 1 1/2" = 1'



ORIGINAL SIZE IN INCHES



### NOTES

- Certifications shall be furnished that aluminum alloy and temper shown meet requirements as set forth below or as otherwise indicated on drawing. Aluminum castings, permanent or sand mold for clamps, and shoe base, trade designation 356-T6.
- Furnish with each pole:  
For luminaire mounting assembly to pole:  
All hardware as shown on the details this sheet.  
For pole connection to transformer base:  
All hardware as shown on Std. Dwg. E-09
- Aluminum lighting standard assembly and all appurtenances shall be designed to support luminaire(s) of the weight and projected area as called for in Schedule 5.1 on this sheet, for tilt ranges of 45° to 60°.
- Type E luminaires have a max. projected area of 3.8 sq. ft. and a weight of 100#. Effective projected area with 60° tilt from horizontal is 3.56 sq. ft.
- Luminaire Mounting Assemblies shall be fastened to pole shaft with 2 sets of 1/2" thru bolts, flat washers, lock washers and nuts, all stainless steel.
- Tight fitted .250" thick reinforcing sleeve (Al. Alloy 6063-T6) shall be welded to pole shaft.
- Ground-mounted lighting standard assemblies shall be provided with transformer bases, and shall be certified by the FHWA as an approved breakaway roadside hardware device to the most current AASHTO standards.
- Lighting standards shall be designed and manufactured in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (latest edition). Features of design not shown but required for fabrication shall be designed in accordance with codes specified on this sheet.
- All dimensions of castings shall be +.032" and -0".
- Luminaire mounting assembly shall be installed on top of pole. The inner diameter (I.D.) of the luminaire mounting assembly base shall be equal or slightly greater than the outer diameter of the pole top as shown in the details.
- The manufacturer shall supply all hardware which is necessary to install the pole.
- All stainless steel hardware shall be Type 304 in accordance with ASTM A193 Grade B8.
- Transformer base not required for all SB (shoe base) lighting standards. Type SB lighting standards shall be mounted directly to bridge parapet blister. (See Std. Dwg. BR-15).
- Refer to the NJTA Design Manual Section 7 for information on where this drawing may be applicable.

If you use this Standard Drawing:	
You also need	E-08 & E-09
You may need	E-11, E-12 & BR-15

NEW JERSEY TURNPIKE AUTHORITY	
<b>NEW JERSEY TURNPIKE</b>	
<b>EXPRESSWAY LIGHTING STANDARD</b>	
<b>48 FOOT NOMINAL MOUNTING HEIGHT</b>	
<b>HNTB</b> 145 RT. 46 WEST, SUITE 400, WAYNE, NJ 07470 - COA# 246A28000700	<b>STANDARD DRAWING</b>
<b>ANTHONY L. BARTELLO</b>	<b>E-05</b>
New Jersey Professional Engineer License No. GE 40842	

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