3. Details for Signal and Sign locations, Signal Head attachment, Sign attachment, Pedestrian Head attachment, and Foundation Conduit are not shown for simplicity.

4. Materials:

A. Poles, Mast Arms and Backing Rings:

a. Less than $\frac{3}{16}$ ": ASTM A1011 Grade 50, 55, 60 or 65

b. Greater than or equal to $\frac{3}{16}$ ": ASTM A572 Grade 50, 55, 60 or 65

c. ASTM A595 Grade A (55 ksi yield) or Grade B (60 ksi yield)

B. Steel Plates: ASTM A36

C. Weld Metal: E70XX

D. Bolts, Nuts and Washers:

a. High Strength Hex Head Bolts: ASTM F3125, Grade A325, Type 1

b. Nuts: ASTM A563 DH Heavy-Hex

c. Washers: ASTM F436 Type 1, one under turned element

E. Anchor Bolts, Nuts and Washers:

a. Anchor Bolts: ASTM F1554 Grade 55

b. Nuts: ASTM A563 Grade A Heavy-Hex (5 per anchor bolt)

c. Plate Washers: ASTM A36 (2 per bolt)

F. Threaded Bars/Studs: ASTM A36 or ASTM A307

G. Handhole Frame: ASTM A709 or ASTM A36, Grade 36

H. Handhole Cover: ASTM A1011 Grade 50, 55, 60 or 65 I. Pole Caps and Nut Covers: Fabricate from cast aluminum

or galvanized carbon steel.

J. Stainless Steel Screws: AISI Type 316

K. Concrete: Class IV (Drilled Shaft) for all environmental classifications.

L. Reinforcing Steel: Specification 415

5. <u>Fabrication:</u>

A. Welding:

a. Specification 460-6.4 and

b. AASHTO LRFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Section 14.4.4

B. Poles and Mast Arms:

a. Round or 12-sided (Min.)

b. Taper pole diameter at 0.14 inches per foot

c. Upright poles must be a single section. For arms and upright poles, circumferential welds and laminated sections are not permitted.

d. Arms may be either one or two sections. See Sheet 4 for telescopic splice detail

e. Fabricate longitudinal seam welds with 60 percent minimum penetration or fusion welds except:

1. Use a complete joint penetration weld within 6 inches of the circumferential tube-to-plate connection.

2. Use complete joint penetration welds on the female end section of telescopic (i.e., slip type) field splices for a minimum length of one and one-half times the inside diameter of the female section plus 6 inches.

f. Locate longitudinal seams weld along the:

1. Lower quadrant of the arms.

2. Same side of the pole as the arm connections

g. Face handhole perpendicular from arm on single arm poles, perpendicular from the first arm of double arms poles facing away from traffic or see special instructions on the Mast Arm Tabulation Sheet.

h. Provide a 'J' or 'C' hook at the top of the pole for signal wiring support (See Sheet 6)

i. First and Second arm camber angle = 2°

j. Bolt holes diameters as follows:

1. Bolts (except Anchor bolts): Bolt diameter plus $\frac{1}{16}$ " prior to galvanizing.

2. Anchor Bolts: Bolt diameter plus $\frac{1}{2}$ " (Max.).

A. All Nuts, Bolts, Washers and Threaded Bars/Studs: ASTM F2329

B. All other steel items including plate washers ASTM A123

7. Construction:

A. Foundation: Specification 455 Drilled Shaft, except that payment is included in the cost of the Mast Arm.

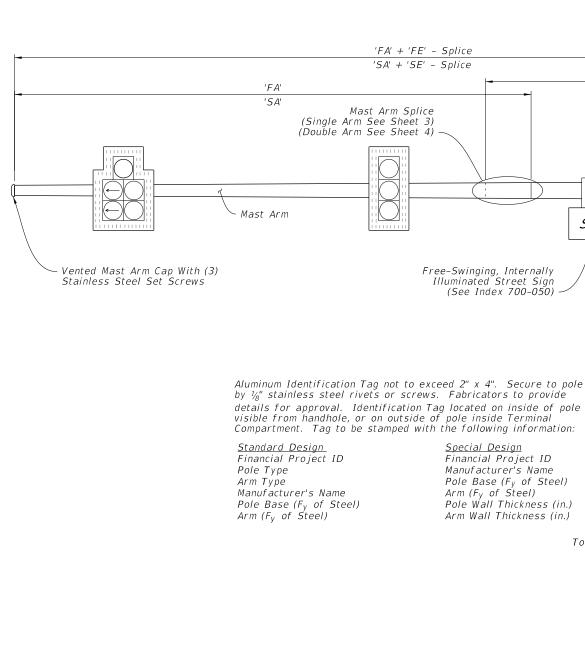
B. Install Pole vertically.

DESCRIPTION:

C. Place structural grout pad with drain between top of foundation and bottom of baseplate in accordance with Specification 649-7.

D. Attach Sign Panels and Signals centered on the elevation of the Mast Arm.

E. Wire Access holes are $1\frac{1}{2}$ " or less in diameter.



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| SHEET | SUBJECT |
| 1 | Elevation and Notes |
| 2 | Foundation and Base Plate Details |
| 3 | Single Arm Connection and Splice Details |
| 4 | Double Arm Connection and Splice Details |
| 5 | Luminaire Arm and Connection Details |

Handhole and Pole Top Details

'FA' + 'FE' - Splice

'SA' + 'SE' - Splice

Free-Swinging, Internally

Special Design

Financial Project ID

Manufacturer's Name

 $Arm (F_V of Steel)$

Illuminated Street Sign

(See Index 700-050)

Mast Arm Splice

(Single Arm See Sheet 3)

(Double Arm See Sheet 4)

'FA'

'SA'

(See Pole UB' Handhole (See Sheet 6) Pole Base $(F_V \text{ of Steel})$ Pole Wall Thickness (in.) Base Plate Connection Arm Wall Thickness (in.) (See Sheet 2) Bottom Top of Finished Grade Of Plate 0" With Sidewalk 6" Otherwise Signal Conduit 1~2" Conduit Per Assembly (For No. & Size 1~1" Additional Conduit in See Signal Plans) Quadrant With Controller Foundation (Drilled Shaft) (See Sheet 2)

Single Arm Shown, Double Arm Similar

(Luminaire Arm Not Shown)

= MAST ARM ASSEMBLY ===

ELEVATION AND NOTES

- @ Pole

Pole Top

Mast Arm

Handhole

Note

Plans) (See

(See Sheet 6)

(See Sheet 6)

'F0'

'50'

Face Of Arm Base Plate At G Arm -

Pole Connection

0.14 in/ft Taper (Typ.)

Mast Arm

Extension

(Single Arm See Sheet 3)

(Double Arm See Sheet 4)

Provide 3/4" Ø Weep Hole

Located At Bottom Of Arm

6" From Arm Base Plate.

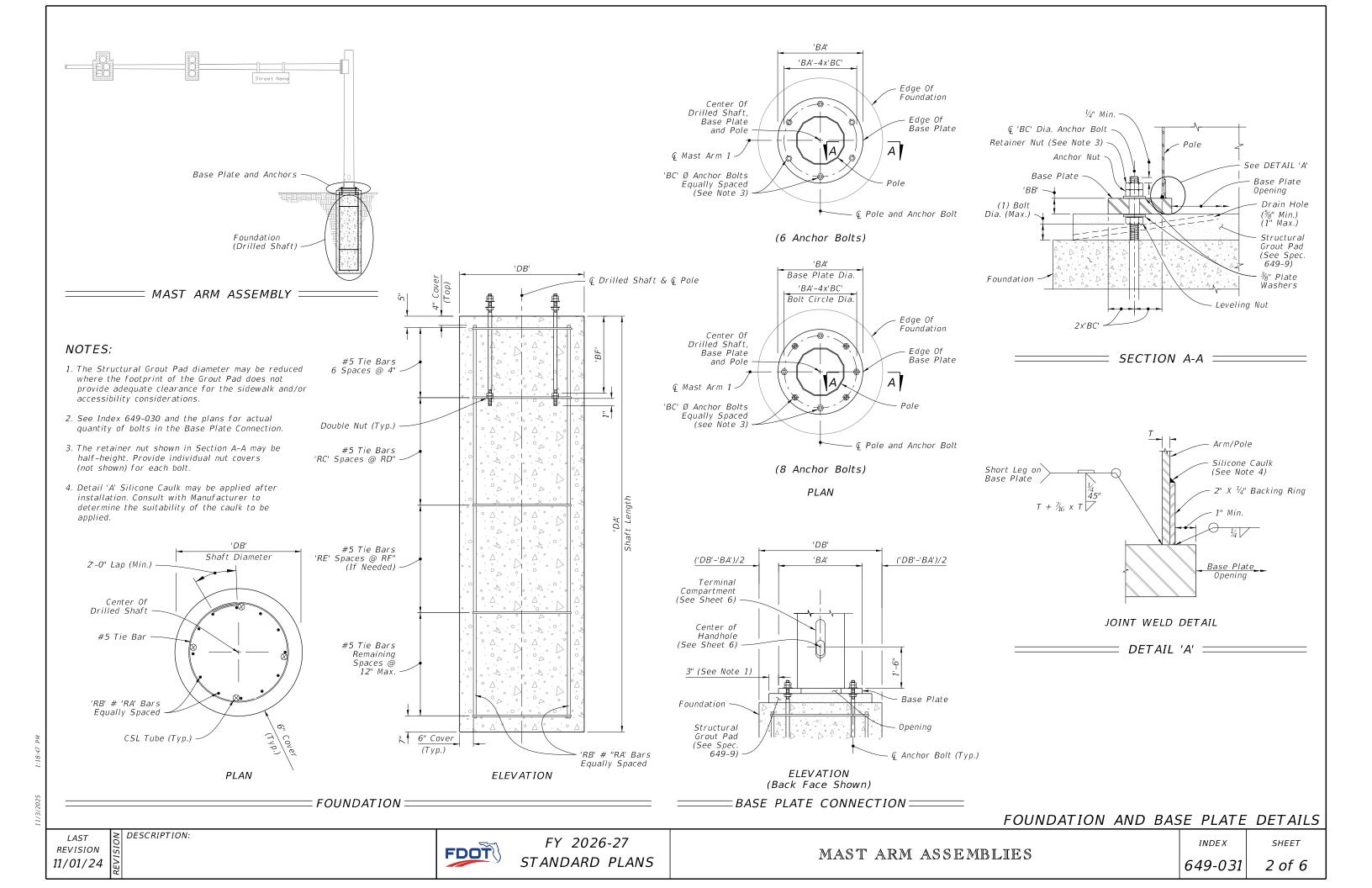
'FF'

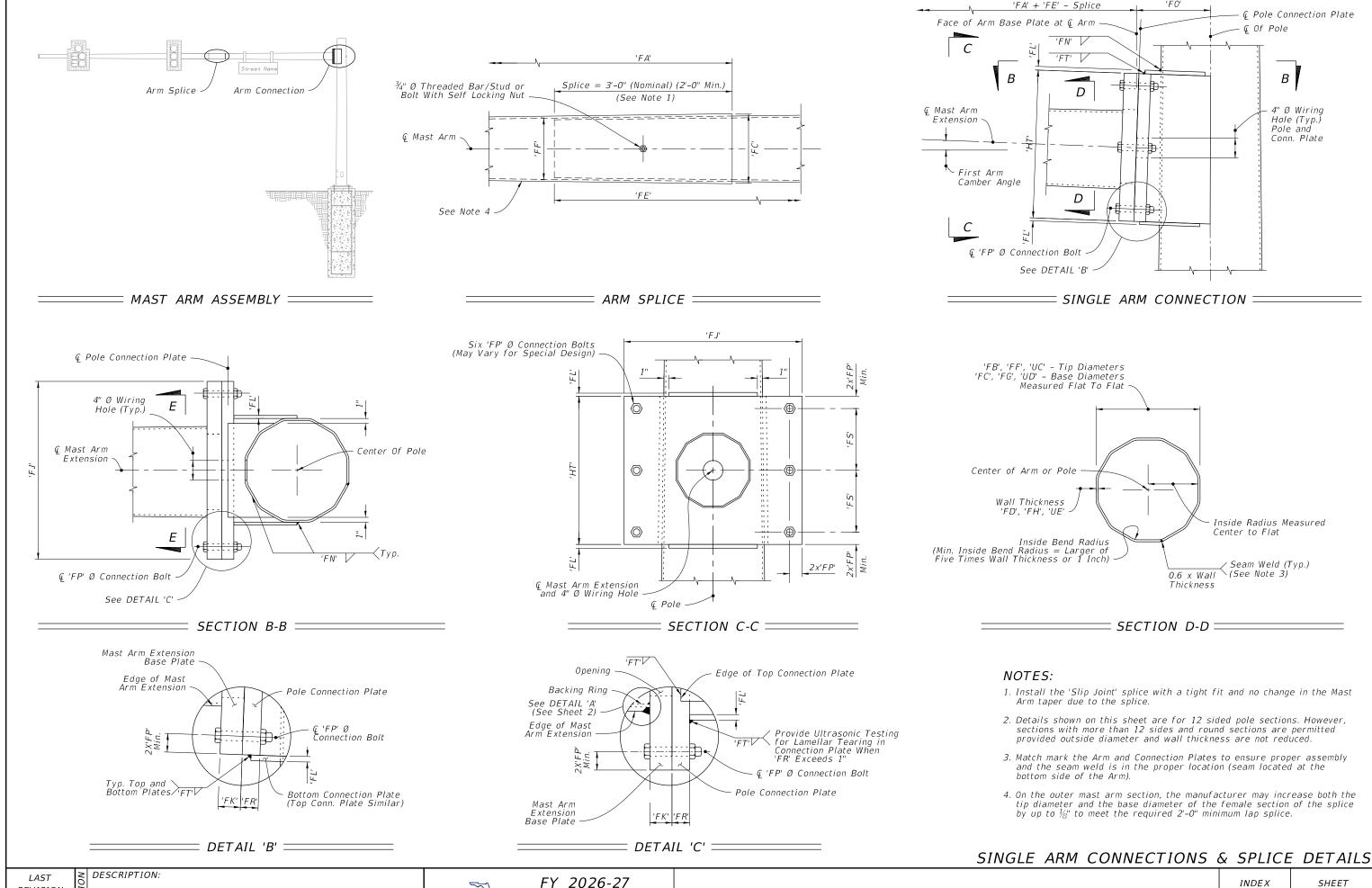
'SE'

Street Name

FDOT

REVISION 11/01/25





1000

LAST REVISION 11/01/23

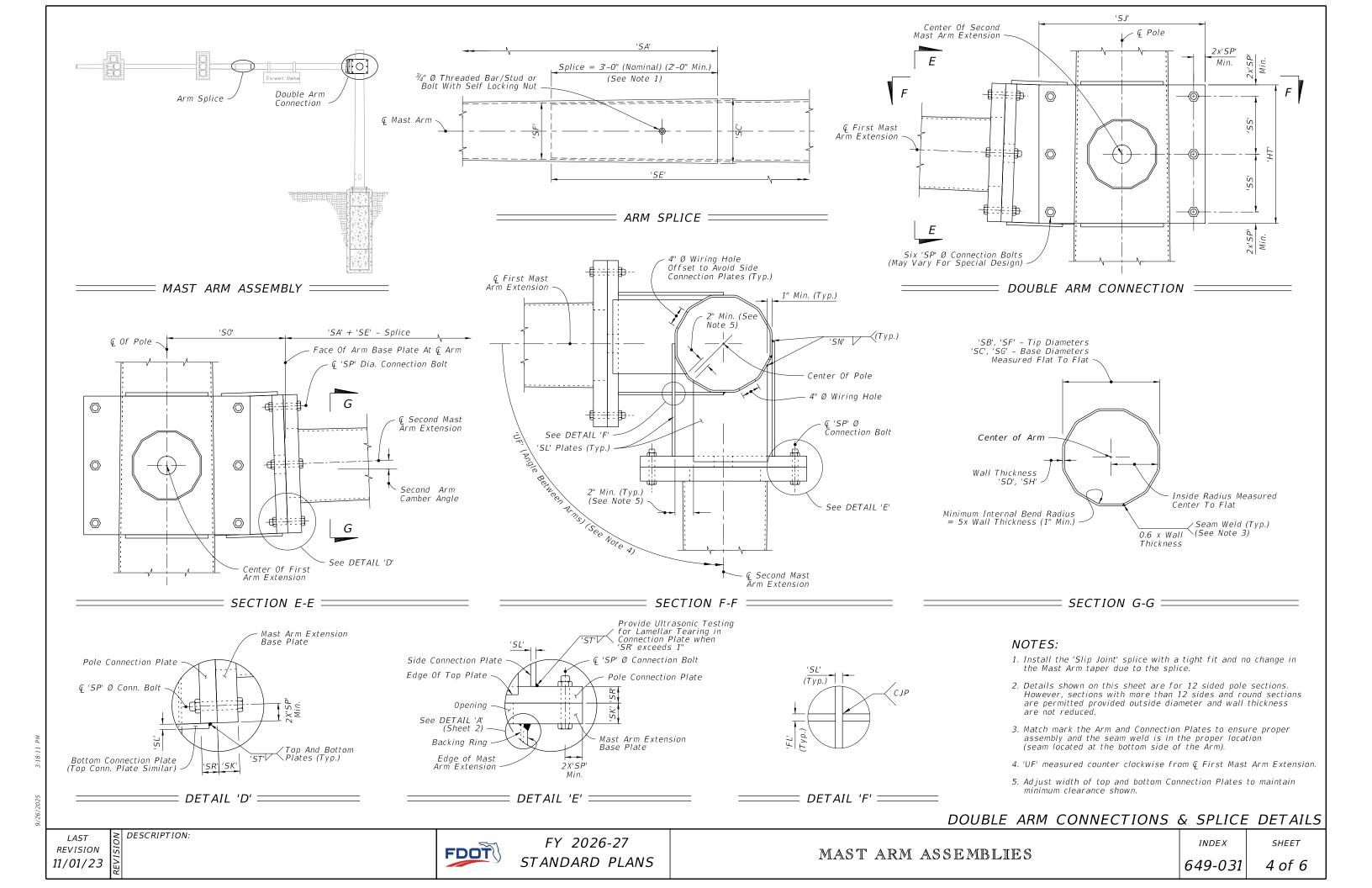
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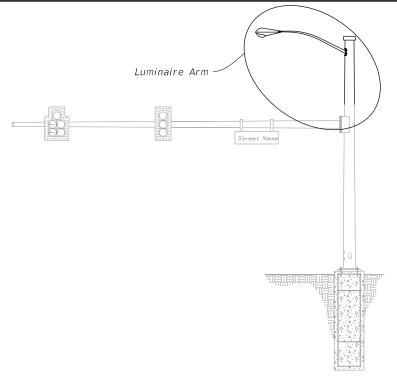
FY 2026-27 STANDARD PLANS

MAST ARM ASSEMBLIES

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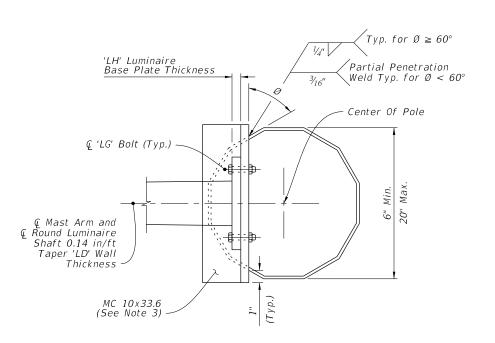


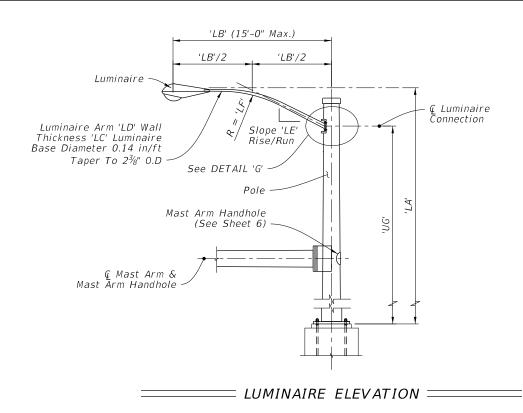


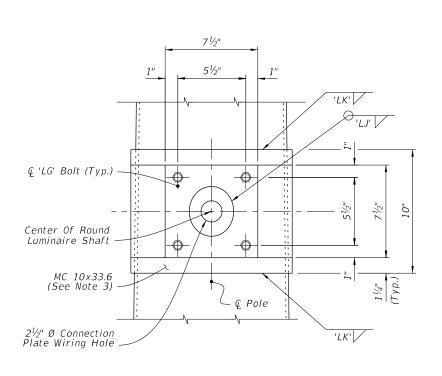


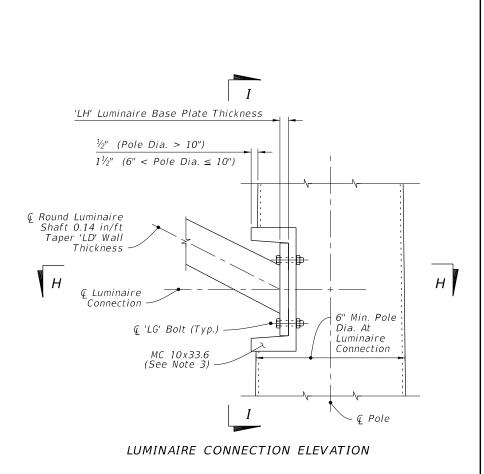
NOTES:

- 1. Galvanized steel luminaire type and luminaire length may be found in the Lighting Plans.
- 2. Align Luminaire Arm with Single Mast Arm or First Arm of Double Mast Arm unless indicated otherwise in the plans.
- 3. The fabricator may substitute a $\frac{1}{2}$ " thick bent plate with the same flange width, height, and length as the MC 10x33.6 Channel section.
- 4. 'LL' measure counter clockwise from First Mast Arm.









 \equiv LUMINAIRE ORIENTATION \equiv

€ First Mast Arm

SECTION H-H

SECTION I-I

LUMINAIRE ARM AND CONNECTION DETAILS

LAST REVISION WAS

DESCRIPTION:

FDOT

FY 2026-27 STANDARD PLANS

MAST ARM ASSEMBLIES

ℚ Luminaire Arm

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9/26/2025

