**GENERAL NOTES:**

1. Shop Drawings. This index is considered fully detailed, only submit shop drawings for minor modifications not detailed in the Plans.

2. Prior to Fabrication: Verify the installed foundation elevation will result in the required signal elevation and adjust the Pole height as needed.

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:
   - **Poles** and Mast Arms and Backing Rings:
     - Less than 30"
     - ASTM A1011 Grade 50, 55, 60 or 65
     - Greater than or equal to 30"
     - ASTM A36
     - ASTM A500 Grade A (5 ksi yield) or Grade B (10 ksi yield)
   - **Steel Plates:** ASTM A36
   - **Weld Retal:** E70XX
   - **Bolts, Nuts and Washers:**
     - High Strength Hex Head Bolts: ASTM F1554 Grade 55
     - Nuts: ASTM A325
   - **Handhole Cover:** ASTM A1011 Grade 50, 55, 60 or 65
   - **Handhole Frame:** ASTM A709 or ASTM A36, Grade 36

5. Fabrication:
   - **Welding:**
     - Specification 460-6.4
     - AASHTO LRFD Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals Section 14.4
   - **Poles and Mast Arms:**
     - Round or 12-sided (Min.)
     - Taper pole diameter at 0.14 inches per foot
   - **Anchor Bolts:**
     - Bolt diameter plus ½" (Max.)
     - Greater than or equal to 30"

6. Coatings:
   - **Steel Plates:** ASTM A36
   - **Nuts:** ASTM A563 Grade A
   - **Bolts:** ASTM A325

7. Construction:
   - **Foundation:**
     - Specification 455 Drilled Shaft
     - Except that payment is included in the cost of the Mast Arm
     - Install Pole vertically
     - Include structural grade pad with drain between top of foundation and bottom of baseplate in accordance with Specification 649-7
     - Attach Sign Panels and Signals centered on the elevation of the Mast Arm
     - Wire Access holes are ½" in diameter
NOTES:
1. The Structural Grout Pad diameter may be reduced where the footprint of the Grout Pad does not provide adequate clearance for the sidewalk and/or accessibility considerations.
2. See Index 649-030 and the plans for actual quantity of bolts in the Base Plate Connection.
3. The bottom hex nut of the Double Nuts shown in Section A-A may be substituted by a half-height anchor 'jam' nut. Provide individual nut covers (not shown) for each bolt.

1. The Structural Grout Pad diameter may be reduced where the footprint of the Grout Pad does not provide adequate clearance for the sidewalk and/or accessibility considerations.
2. See Index 649-030 and the plans for actual quantity of bolts in the Base Plate Connection.
3. The bottom hex nut of the Double Nuts shown in Section A-A may be substituted by a half-height anchor 'jam' nut. Provide individual nut covers (not shown) for each bolt.
DESCRIPTION:

SINGLE ARM CONNECTION & SPLICE DETAILS

NOTE:
1. Install the 'Slip Joint' splice with a tight fit and no change in the Mast Arm taper due to the splice.
2. Details shown on this sheet are for 12 sided pole sections. However, sections with more than 12 sides and round sections are permitted provided outside diameter and wall thickness are not reduced.
3. Match mark the Arm and Connection Plates to ensure proper assembly and the seam weld is in the proper location (seam located at the bottom side of the Arm).
DOUBLE ARM CONNECTIONS & SPLICE DETAILS

NOTE:
1. Install the 'Slip Joint' splice with a tight fit and no change in the Mast Arm taper due to the splice.
2. Details shown on this sheet are for 12 sided pole sections. However, sections with more than 12 sides and round sections are permitted provided outside diameter and wall thickness are not reduced.
3. Match mark the Arm and Connection Plates to ensure proper assembly and the seam weld is in the proper location (seam located at the bottom side of the Arm).
4. "UF" measured counterclockwise from Ε First Mast Arm Extension.
5. Adjust width of top and bottom Connection Plates to maintain minimum clearance shown.
**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 1/8" thick bent plate with the same flange width, height, and length as the MC 10x33.6 Channel section.

4. 'LI' measure counter clockwise from First Mast Arm.

**DESCRIPTION:**

- **LUMINAIRE ELEVATION**
- **LUMINAIRE ORIENTATION**
- **SECTION H-H**
- **SECTION I-I**
- **DETAIL 'G'**

**MAST ARM ASSEMBLY**

- **LUMINAIRE ARM AND CONNECTION DETAILS**
  - **LUMINAIRE CONNECTION ELEVATION**
  - **LUMINAIRE ORIENTATION**
  - **SECTION H-H**
  - **SECTION I-I**
  - **DETAIL 'G'**

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NOTES:
1. Handhole covers may be omitted when Terminal Compartment is provided.
2. See Mast Arm Tabulation sheet to see if Terminal Compartment is required and for locations.
3. Terminal Compartment Frame Height 2'-0" minimum to 2'-6" maximum.
   Align bottom of Terminal Compartment a minimum of 1" below the bottom of the Handhole Frame.
4. Any combination of Option 'a' or 'b' may be used, provided both lifting and wiring is accommodated.

COVER

FRAME

SECTION J-J

11 Gage Handhole Cover

5/8" OD x 1/4" Wall Thick Std. Mast Arm Handhole Frame

Threaded Hole For 1/2" B Hex Head Screw (Typ.)

Mast Arm Handhole Frame

Tack Welded Cover Clip (Typ.)

Pole Wall

Partial Penetration Weld

Tack Weld Cover Clip

11 Gage Mast Arm Handhole Cover

1/2" Ø Stainless Steel Hex Head Screw (Typ.)

 SECTION K-K

HANDHOLE (Thru Handhole)

11 Gage Handhole Cover

5/8" Ø Hole (Typ.)

Mast Arm Handhole Frame

Tack Welded Cover Clip (Typ.)

Pole Wall

Partial Penetration Weld (Typ.)

Tack Weld Cover Clip

Handhole Frame

1/2" Ø Stainless Steel Hex Head Screw (Typ.)

POLE TOP

POLE TOP DETAILS

HANDHOLE AND POLE TOP

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**REVISI ON:**

**DESCRIPTION:**

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