MAST ARM ASSEMBLIES GENERAL NOTES

1) Signal Structure Materials shall be as follows:
   - Poles & Mast Arms: ASTM A1011 Grade 50, 55, 60 or 65 (less than 1/2") or ASTM A32  Grade 55, 65, 70 or 80 (1/2" and over) or ASTM A578 Grade A (5 ksi yield) yield 60 ksi or ASTM A595 Grade B (60 ksi yield)
   - Steel Plates: ASTM A36
   - Weld Metal: ETFX
   - Bolts (except Anchor Bolts): ASTM A495 Type 1
   - Anchor Bolts: ASTM A355 Grade 55 ksi
   - Nuts for Anchor Bolts: ASTM A563 Grade A Heavy Hex
   - Handhole Frame: ASTM A709 Grade 36 ksi or ASTM A36
   - Handhole Cover: ASTM A501 Grade 50, 55, 60 or 65 ksi
   - Caps: ASTM A501 Grade 50, 55, 60 or 65 ksi or ASTM B209
   - Nut Covers: ASTM B66 (319-F)
   - Stainless Steel Screws: ASTM Type 316
   - Threaded Bars/Studs: ASTM A36 or ASTM A307

2) Reinforcing Steel shall be ASTM A615 Grade 60 ksi.

3) Concrete shall be Class IV (Drilled Shaft) with a minimum 28-day compressive strength greater than 4,000 psi for all environmental classifications.

4) Perform all welding in accordance with the American Welding Society Structural Welding Code (Swift) AWS/AISI 0.13 (current edition) for additional materials and welding requirements, refer to the FDOT Structures Manual for Highway Signs, Luminaries and Traffic Signals, Section 5.12, Welded Connections.

5) All steel items shall be galvanized as follows:
   - All Nuts, Bolts, Washers and Threaded Bars/Studs -> ASTM A32
   - All other steel items (including Pole & Mast Arm) -> ASTM A123

6) Locate handhole 180° from arm on single arm poles or 180° from first arm of double arm poles or see special instructions on Mast Arm Tabulation Sheet.

7) Except for Anchor Bolts, all bolt hole diameters shall be equal to the bolt diameter plus 0.02", prior to galvanizing. Hole diameters for Anchor Bolts shall not exceed the bolt diameter plus 0.02".

8) Sign Panels and Signals attached to the Mast Arm shall be centered in elevation on the arm. Wire access holes shall not exceed 1.5" in diameter.

9) Mast Arms and Poles shall be tapered with the diameter changing at a rate of 0.14 inch per foot.

10) The pole shall be installed vertically. Camber shall be accounted for in the Mast Arm connection as detailed.

11) If a Mast Arm damping device is required by the Engineer, it shall be installed within eight feet of the Mast Arm tip.


13) Provide "Y", or "C"-Hook at top of pole for signal cable support.

14) First and Second Arm Camber Angle = 2°.

15) Details for Signal and Sign Locations, Signal Head attachment, Sign Attachment, Pedestrian Head Attachment, and Foundation Conduct are not shown for clarity.

16) Use of split lock washer is not permitted.

17) This Design Standard is considered fully detailed and no shop modifications held in the plans.

18) Verify CSL access tubes will not interfere with anchor bolt locations, make the CSL access tube location +2" to two inches along the inner circumference of the reinforcing cage. Notify the Engineer before excavating the shaft if the CSL access tube locations cannot be moved out of conflict with anchor bolt locations.

TYPICAL ELEVATION AND NOTES

- **NOTE:** Contractor shall verify this dimension prior to fabrication of Pole.

- **SA** + **SE** - Splice
- **FA** + **FE** - Splice
- **UB** (See Plans)
- **UA** (Index 17743)
- **SA'** + **SE'** - Splice

- **1****'-0" From Arm Base Plate.
- **0.14 in/ft Taper, Typ.
- **Top of Finished Grade
- **Bottom of Plate
- **Drilled Shaft
- **0" with Sidewalk

- **Face Of Arm Base Plate At Arm
- **Pole Cap (See Pole Top Details Sheet 5)
- **Pole Connection See Sheet 3 (Single Arm) Or Sheet 4 (Double Arm)
- **Right Steel Index (FA)
TYPICAL SINGLE ARM CONNECTION DETAILS

MAST ARM ASSEMBLIES

NOTE:
1. 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.
2. Mast Arm and Connection Plates shall be match marked to ensure proper assembly.

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MAST ARM ASSEMBLIES

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SHEET NO. 3 of 5
1. 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.

2. Mast Arm and Connection Plates shall be match marked to ensure proper assembly.

NOTE: 1/2" measured counter clockwise from First Arm

Adjust width of top and bottom Connection Plates to maintain minimum clearance shown.

TYPICAL DOUBLE ARM CONNECTION DETAILS

SECTIONS M-M

SECTION L-L

ELEVATION

(Double Arm Connection)
NOTES:

1. Luminaire type and Luminaire to Arm Connection Details can be found elsewhere.
2. Align Luminaire Arm with single Mast Arm or first Arm of Double Mast Arm unless indicated otherwise in plans.

NOTE: The Fabricator may substitute a 1" thick bent plate with the same flange width, height, and length as the MC 10x33.6 Channel section.

The Pole shown on this sheet is a 12 sided section. However, sections with more than 12 sides and round sections are permitted provided outside diameter and wall thickness are not reduced.

TYPICAL LUMINAIRE ARM AND CONNECTION DETAILS

POLE TOP DETAILS

NOTE: Any combination of the above two options may be used, provided both lifting and wiring is accommodated.

POLE TOP DETAILS

NOTE: Any combination of the above two options may be used, provided both lifting and wiring is accommodated.

TYPICAL LUMINAIRE ARM AND CONNECTION DETAILS