



***General FDOT Standards for Mast Arms***

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*Standard Plans, Index 649-030 & 649-031*

Arm ID Axx- D- H- D/H	Total Arm Length (ft)	Arm			Arm Extension			Base Plate		
		FA/SA (ft)	FC/SC (in)	FD/SD (in)	FE/SE (ft)	FG/SG (in)	FH/SH (in)	HT (in)	F-J/SJ (in)	FK/SK (in)
A30/S		11								
A30/S/H	30	12	11	0.25	--	--		22	25	3
A30/D		11								
A30/D/H		12						30	36	
A40/S		13								
A40/S/H	40	14	13	0.25	--	--		22	27	3
A40/D		13						30	36	
A40/D/H		14								
A50/S		12				14				
A50/S/H	50	13	12	0.25	20.5	15	0.313	22	29	3
A50/D		12				14				
A50/D/H		13				15		30	36	
A60/S		12				15				
A60/S/H	60	13	12	0.25	27.5	16	0.375	30	36	3
A60/D		12				15				
A60/D/H		13				16				
A70/S		13				17				
A70/S/H	70	14	13	0.25	35	18	0.375	30	36	3
A70/D		13				17				
A70/D/H		14				18				
A78/S		13				18				
A78/S/H	78	15	13	0.25	42	20	0.375	30	36	3
A78/D		13				18				
A78/D/H		15				20				

Pole ID Ex-Pole D-Double L-Luminaire	Upright				Base Plate										Arm-Upright Connection									
	UA (ft)	UD (in)	UE (in)	UG (ft)	No. Bolts	BA (in)	BB (in)	BC (in)	BF (in)	HT (in)	F/J/SJ (in)	F/L/SL (in)	FN/SN (in)	FO/SO (in)	FP/SP (in)	FR/SR (in)	FS/SS (in)	FT/ST (in)						
P1/S	25																							
P1/S/L	39	16	0.375	37.5	6	32	2.5	2	40	22	25	0.75	0.438	14	1.25	2	8.5	0.438						
P1/D	25																							
P1/D/L	39			37.5						30	36			23		2.75	12.5							
P2/S	25																							
P2/S/L	39	18	0.375	37.5	6	34	2.5	2	40	22	27	0.75	0.438	15	1.25	2	8.5	0.438						
P2/D	25																							
P2/D/L	39			37.5						30	36			23		2.75	12.5							
P3/S	25																							
P3/S/L	39	20	0.375	37.5	6	36	2.5	2	40	22	29	0.75	0.438	16	1.25	2	8.5	0.438						
P3/D	25																							
P3/D/L	39			37.5						30	36			23		2.75	12.5							
P4/S	25																							
P4/S/L	39	22	0.375	37.5	8	38	2.5	2	40	30	36	0.75	0.438	17	1.25	2.5	12.5	0.438						
P4/D	25																							
P4/D/L	39			37.5										23										
P5/S	25																							
P5/S/L	39	24	0.375	37.5	8	40	2.5	2	40	30	36	0.75	0.5	18	1.25	2.5	12.5	0.5						
P5/D	25													23										
P5/D/L	39			37.5																				
P6/S	25																							
P6/S/L	39	24	0.5	37.5	8	40	2.5	2	40	30	36	0.75	0.625	18	1.5	2.5	12	0.625						
P6/D	25													23										
P6/D/L	39			37.5																				
P7/S	25																							
P7/S/L	39	26	0.5	37.5	8	42	2.5	2	40	30	36	0.75	0.625	19	1.5	2.5	12	0.625						
P7/D	25													23										
P7/D/L	39			37.5																				

DRILLED SHAFT											
Drilled Shaft ID	DA (ft)	DB (ft)	RA	RB	RC	RD (in)	RE	RF (in)			
DS/12/4.0	12	4.0	11	14	8	12	--	--			
DS/12/4.5	12	4.5	11	16	8	12	--	--			
DS/14/4.5	14	4.5	11	16	10	8	--	--			
DS/14/5.0	14	5.0	11	18	10	8	--	--			
DS/16/4.5	16	4.5	11	16	10	8	--	--			
DS/16/5.0	16	5.0	11	18	10	8	--	--			
DS/18/5.0	18	5.0	11	18	10	8	--	--			
DS/20/5.0	20	5.0	11	18	10	6	10	9			
DS/25/5.0	25	5.0	11	18	10	6	10	9			

LUMINAIRE AND CONNECTION										
LA (ft)	LB (ft)	LC (in)	LD (in)	LE	LF (ft)	LG (in)	LH (in)	LJ (in)	LL (deg)	LG (ft)
40	10	3	0.125	0.5	8	0.5	0.75	0.25	0.25	0
										37.5

**NOTE:**  
1. Work this Index with Index 649-031.

LAST REVISION  
11/01/22



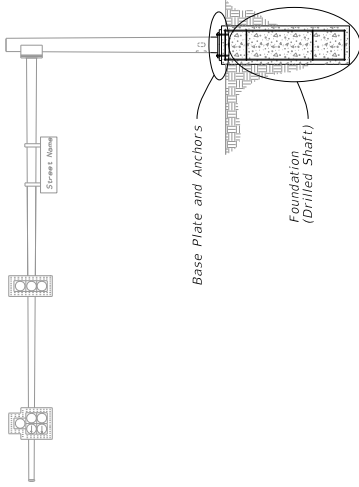
FY 2025-26  
STANDARD PLANS

STANDARD MAST ARM ASSEMBLIES

INDEX  
649-030

SHEET  
1 of 1

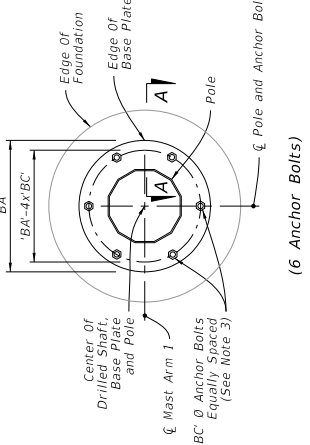




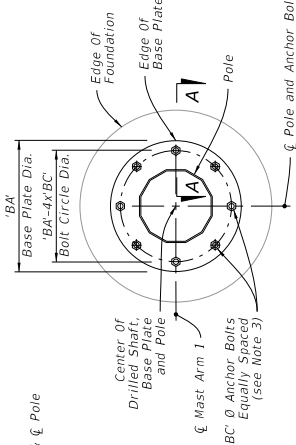
**MAST ARM ASSEMBLY**

**NOTES:**

- 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.
- See Index 649-030 and the plans for actual quantity of bolts in the Base Plate Connection.
- The retainer nut shown in Section A-A may be half-height. Provide individual nut covers (not shown) for each bolt.
- Detail 'A' Silicone Caulk may be applied after installation. Consult with Manufacturer to determine the suitability of the caulk to be applied.

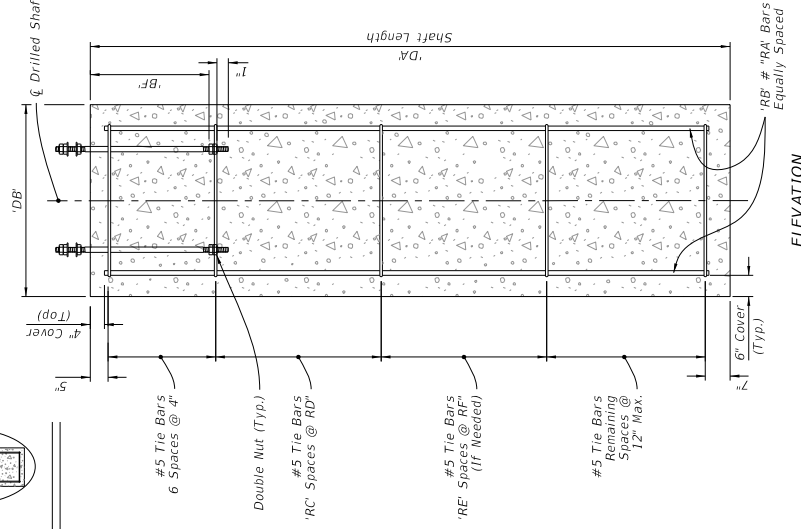


**(6 Anchor Bolts)**



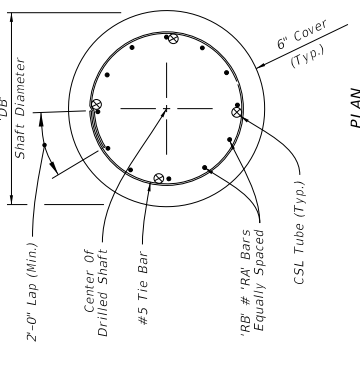
**(8 Anchor Bolts)**

**PLAN**

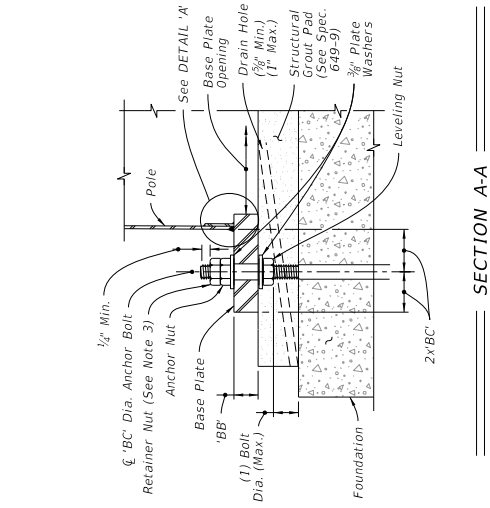


**ELEVATION**

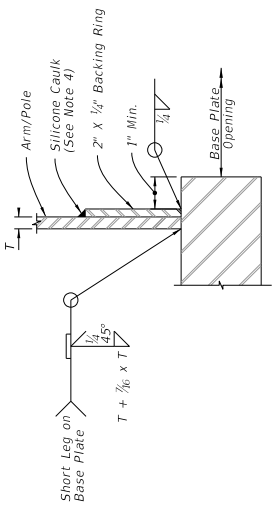
**ELEVATION (Back Face Shown)**



**PLAN**



**SECTION A-A**



**JOINT WELD DETAIL**

**DETAIL 'A'**

**FOUNDATION AND BASE PLATE DETAILS**

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**JOINT WELD DETAIL**

**ELEVATION**

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**PLAN**

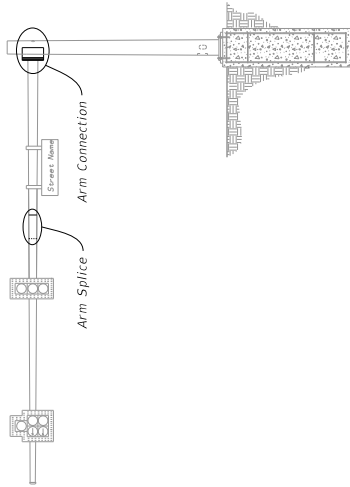
**SECTION A-A**

**DETAIL 'A'**

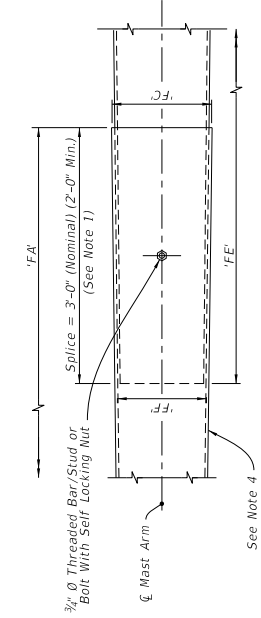
**JOINT WELD DETAIL**

**ELEVATION**

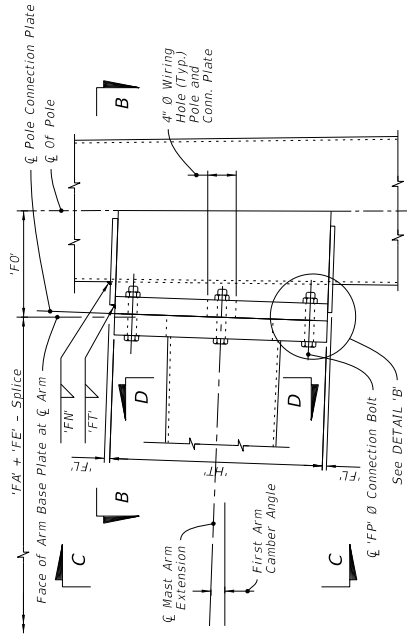
**PLAN**



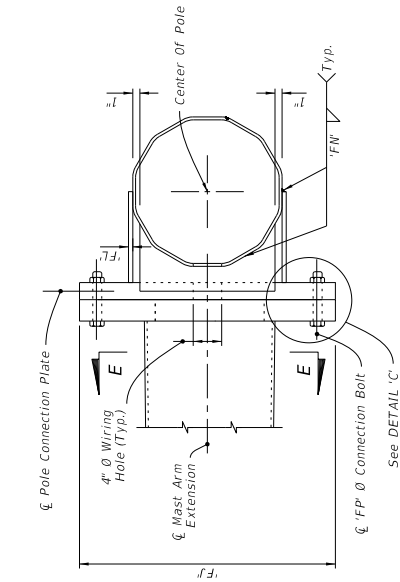
MAST ARM ASSEMBLY



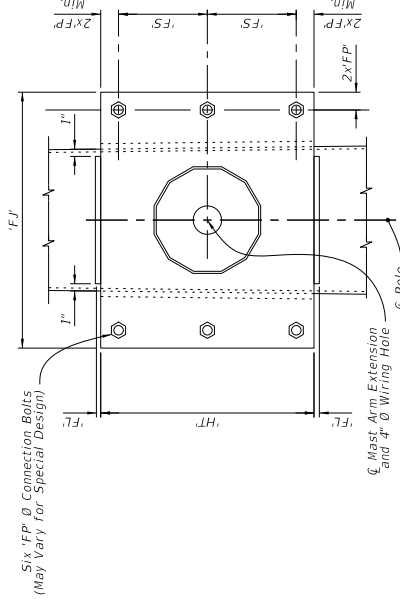
ARM SPLICE



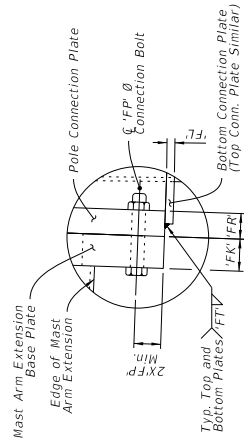
SINGLE ARM CONNECTION



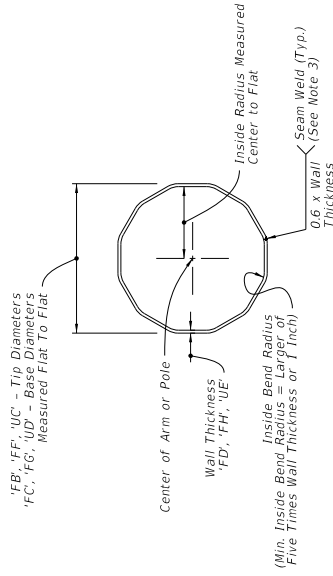
SECTION B-B



SECTION C-C



DETAIL B



SECTION D-D

NOTES:

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 is in the proper location (seam located at the bottom side of the Arm).
4. On the outer mast arm section, the manufacturer may increase both the tip diameter and the base diameter of the female section of the splice by up to 1/8" to meet the required 2'-0" minimum lap splice.

LAST REVISION	DESCRIPTION:
11/01/23	

FY 2025-26  
STANDARD PLANS



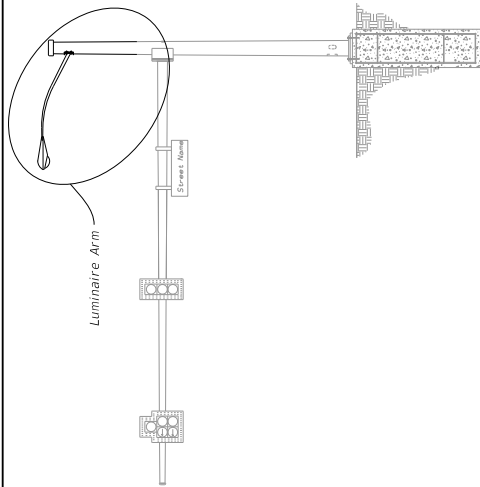
MAST ARM ASSEMBLIES

DETAIL C

SINGLE ARM CONNECTIONS & SPLICE DETAILS

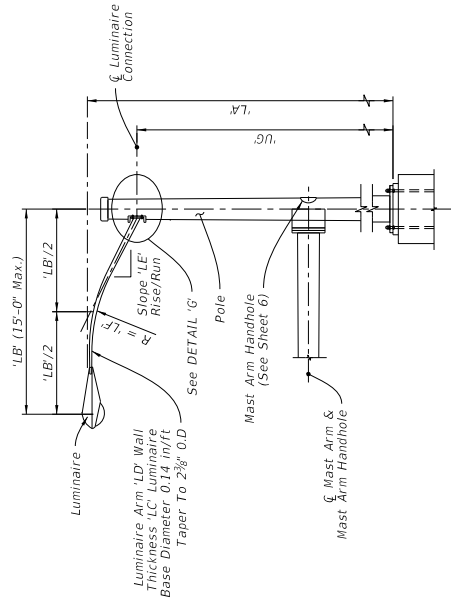
INDEX	SHEET
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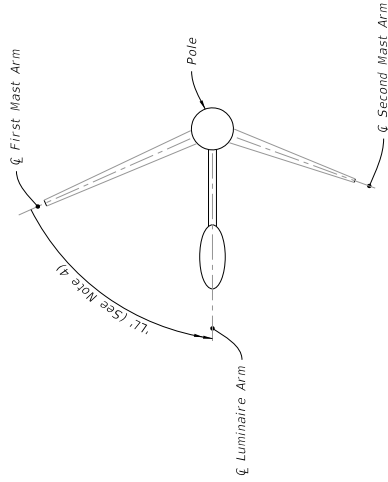


**MAST ARM ASSEMBLY**

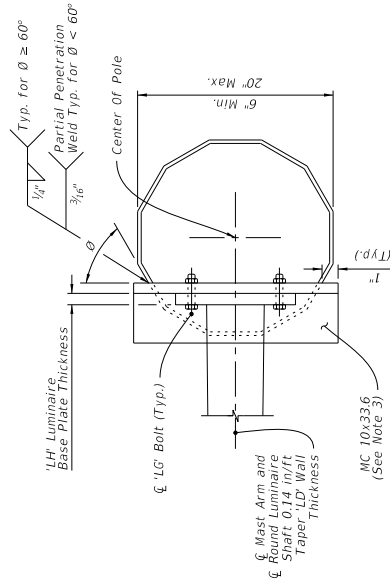
- NOTES:**
- Galvanized steel luminaire type and luminaire length may be found in the Lighting Plans.
  - Align Luminaire Arm with Single Mast Arm or First Arm of Double Mast Arm unless indicated otherwise in the plans.
  - The fabricator may substitute a 1/2" thick bent plate with the same flange width,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



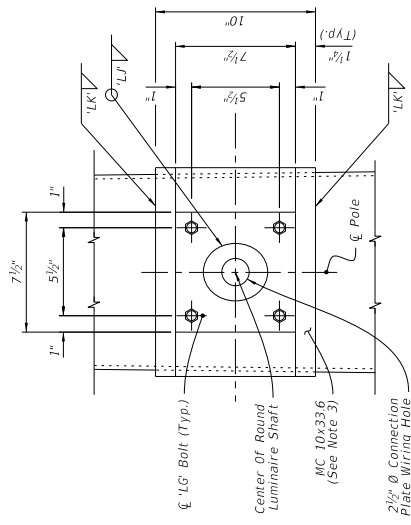
**LUMINAIRE ELEVATION**



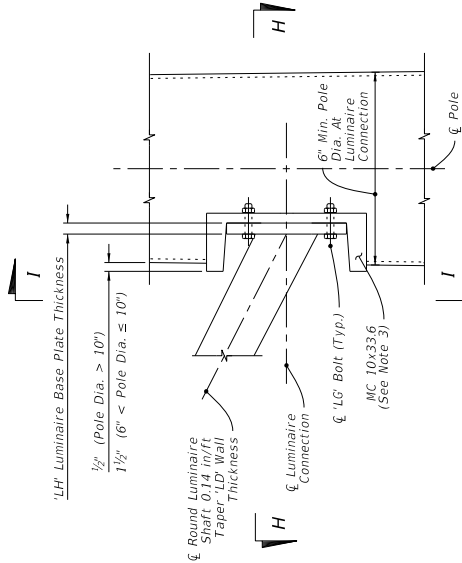
**LUMINAIRE ORIENTATION**



**SECTION H-H**



**SECTION I-I**



**LUMINAIRE CONNECTION ELEVATION**

**DETAIL 'G'**

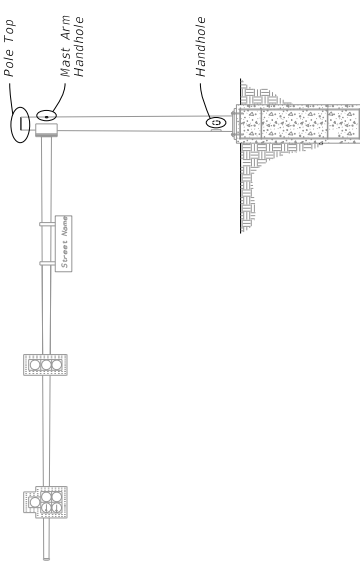
**LUMINAIRE ARM AND CONNECTION DETAILS**

LAST REVISION	DESCRIPTION:
11/01/19	

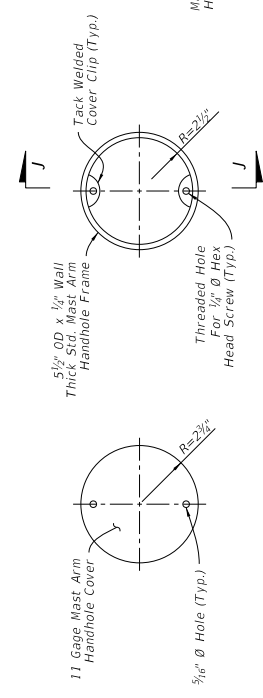
FDOT  
 FY 2025-26  
 STANDARD PLANS

**MAST ARM ASSEMBLIES**

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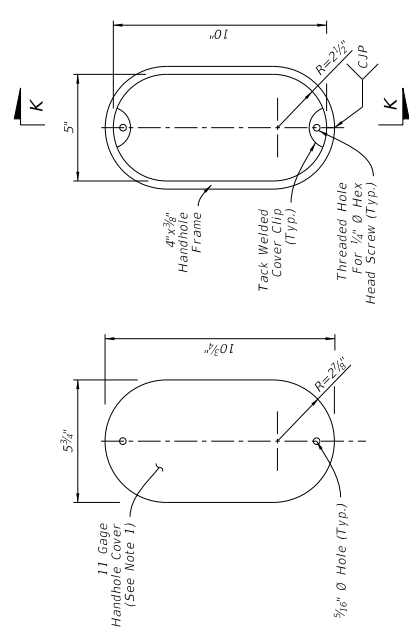


**MAST ARM ASSEMBLY**



**HANDHOLE FRAME**

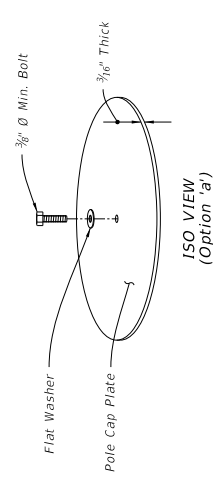
**MAST ARM HANDHOLE**



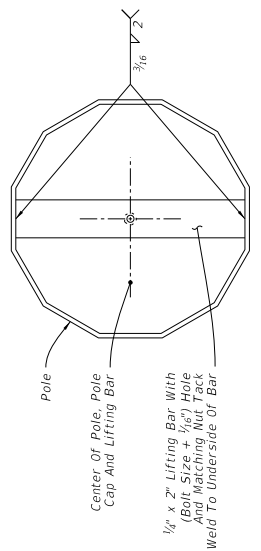
**HANDHOLE FRAME**

**HANDHOLE**

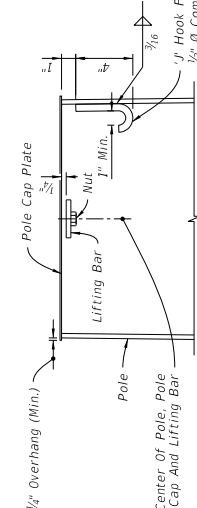
- NOTES:**
1. Handhole covers may be omitted when Terminal Compartment is provided.
  2. See Mast Arm Tabulation sheet to see if Terminal Compartment is required and for locations.
  3. Terminal Compartment Frame Height 2'-0" minimum to 2'-6" maximum. Align bottom of Terminal Compartment a minimum of 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. Cap may be flat plate or domed cap with set screws.
  5. An alternate terminal compartment frame detail is allowed where the compartment frame is of constant depth and cuts into the pole at the top and bottom. (a) 3/16" dia. with the pole on the inside. The frame is then welded to the pole using fillet welds all around the outside.



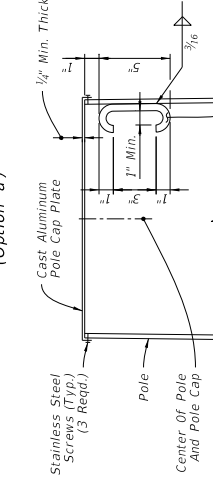
**ISO VIEW (Option 'a')**



**TOP VIEW (Option 'a')**

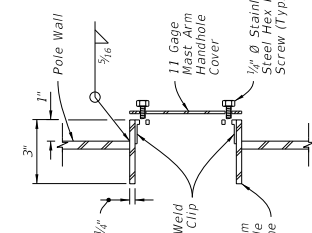


**CUT-AWAY (Option 'a')**

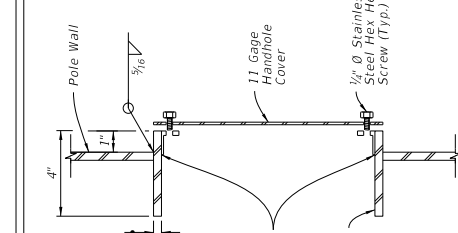


**CUT-AWAY (Option 'b')**

**POLE TOP**



**SECTION J-J**



**SECTION K-K (Thru Handhole)**

**SECTION K-K (Terminal Compartment)**

**HANDHOLE AND POLE TOP DETAILS**

LAST REVISION	DESCRIPTION:
11/01/23	

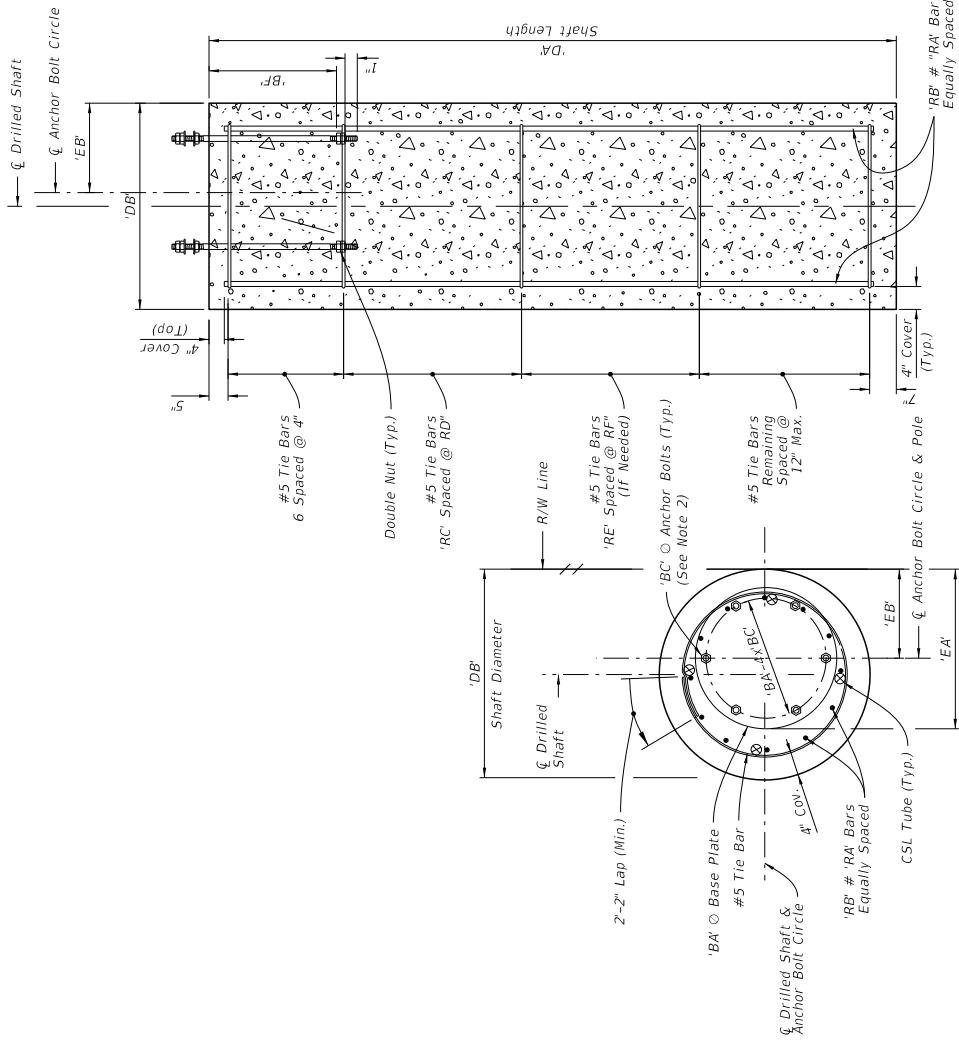
FY 2025-26  
STANDARD PLANS

MAST ARM ASSEMBLIES

SHEET INDEX  
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**TABLE OF VARIABLES**

Pole Type	Shaft Dia.	EA	EB
P1	4'-0" or 4'-6"	3'-0"	1'-8"
P2	4'-6" or 5'-0"	3'-2"	1'-9"
P3	4'-6" or 5'-0"	3'-4"	1'-10"
P4	4'-6" or 5'-0"	3'-6"	1'-11"
P5	5'-0"	3'-8"	2'-0"
P6	5'-0"	3'-8"	2'-0"
P7	5'-0"	3'-10"	2'-1"



**PLAN**  
ECCENTRIC MAST ARM POLE AND DRILLED SHAFT  
**ELEVATION**

**NOTES:**

1. Work this sheet with Index 649-031.
2. Six (6) anchor bolts shown. Eight (8) anchor bolts similar. See Index 649-030 for actual number of anchor bolts.

DATE		REVISIONS		DESCRIPTION	
DATE	DESCRIPTION	DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA	DEPARTMENT OF TRANSPORTATION	ROAD NO.	FINANCIAL PROJECT ID
COUNTY	COUNTY	COUNTY	COUNTY

<b>ECCENTRIC MAST ARM FOUNDATION</b>	<b>SHEET NO.</b>
<b>MODIFICATIONS TO INDEX 649-051</b>	