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4	Shaft Foundation Option with Light Pole & Base Details
5	Spread Footing Foundation Option
6	Base Plate Details for Median Barrier Mounted Aluminum Light Pole
7	Spread Footing Details for Median Barrier Mounted Aluminum Light Pole
8	Cylindrical Foundation Details for Median Barrier Mounted Aluminum Light Pole
9	Details for Traffic Railing (Median 36" Single-Slope) Mounted Aluminum Light Pole

GENERAL NOTES:

1. **LOADING:** Poles are designed to support the following:

a. Luminaire Effective Projected Area (EPA): 1.55 SF

b. Weight: 75 lb.
2. **SHOP DRAWINGS:** This Index is considered fully detailed; only submit shop drawings for minor modifications not included in the Plans. Additionally, shop drawings are required for frangible base options shown on the APL where required bolt circle diameters or embedment depths differ from this Index and are not detailed in the Plans.
3. **MATERIALS:**

a. Pole, Pole Connection Extrusions and Arm Extrusions: ASTM B221, Alloy 6063-T6 or Alloy 6061-T6

b. Bars, Plates, Stiffeners and Backer Ring: ASTM B221, Alloy 6063-T6
- c. Caps and Covers: ASTM B-26, Alloy 319-F

d. Steel Bearing Plate: ASTM A709 or ASTM A36 Grade 36

f. Transformer Base Materials: ASTM B26 or ASTM B108, Alloy 356-T6

g. Bolts, Nuts and Washers:

i. Shoe Base Bolts: ASTM F3125, Grade A325, Type 1

ii. Nuts: ASTM A563 Grade DH Heavy-Hexh. Anchor Bolts, Nuts, and Washers:

i. Anchor Bolts: ASTM F1554 Grade 55

ii. Nuts: ASTM A563 Grade A Heavy-Hex

i. Stainless Steel Fasteners: ASTM F593 Alloy Group 2, Condition A, CW1 or SH1

k. Concrete: Class II

l. Reinforcing Steel: Specification 415

4. **FABRICATION:**

a. Weld Arm and Pole (Alloy 6063) in the T4 temper using 4043 filler. Age the Arm and Pole artificially to the T6 temper after welding

b. Transverse welds are only allowed at the base.

c. Roadway Light Pole Taper: Taper as required to provide a round top O.D. of 6" and a base O.D. of 8" for 20' and 25' mounting heights and 10" O.D. for poles with 30' to 50' mounting heights. Portions of the pole near the base shoe and at the arm connections may be held to simplify fabrication.

d. Median Barrier Mounted Light Pole Taper: Taper as required to provide a 6" O.D. round top with an 11" x 7" O.D. oblong base. Portions of the pole near the base and at the arm connections may be held constant at 11"x 7" oblong and 6" round respectively to simplify fabrication.

f. Equip poles located on bridges, walls and concrete median barriers/Traffic Railings with a vibration damper.

g. Perform all welding in accordance with AWS D1.2.

h. Embedded Junction Box (EJB):

i. Weld all seams continuously and grind smooth.

ii. Hot Dip Galvanize after Fabrication.

GENERAL NOTES (CONTINUED):

5. **POLE CAPACITY:** For Median Barrier Mounted Aluminum Light Poles, the fabricator must demonstrate the ability to produce a crack free pole.

The fabricator's Department-approved QC Plan must contain the following information prior to fabrication:

- a. Tests demonstrating a pole with a ¼" wall thickness achieves and ultimate moment capacity of 36 kip*ft in the strong axis and 30 kip*ft in the weak axis.
- b. Tests demonstrating a pole with a ⅝" wall thickness achieves an ultimate moment capacity of 44 kip*ft in the strong axis and 37 kip*ft in the weak axis.

c. Test results showing the pole does not buckle at the shape transition area under the ultimate moment capacity loads.

6. **IDENTIFICATION TAG:** (Submit details for approval.)

a. 2" x 4" (Max.) aluminum identification tag.

b. Locate on the inside of the transformer base and visible from the door opening.
- c. Secure to transformer base with ⅛" diameter stainless steel rivets or screws.

d. Include the following information on the ID Tag:

i. Financial Project ID

ii. Pole Height

7. **COATINGS/FINISH:**

a. Pole and Arm Finish: 50 grit satin rubbed.

b. Galvanize Steel Bolts, Screws, Nuts and Washers: ASTM F2329
- c. Hot Dip Galvanize EJB and other steel items including poles and plate washers: ASTM A123

8. **CONSTRUCTION:**

a. Foundation: Specification 455, except payment for the foundation is included in the cost of the pole.

b. Frangible Base, Base Shoe, and Clamp:

i. Certify that the Clamp, Frangible Base, and Base Shoe Design are capable of providing the required capacity.

ii. Use a frangible base connection as listed on the APL. The base must be recognized by FHWA as being successfully crash tested under NCHRP Report 350 or MASH Guidelines (Task Force 13, LBT08 Transformer Base shown, others similar).
- iii. Do not erect pole without Luminaire attached.

9. **EMBEDDED JUNCTION BOX (EJB):** Install EJBs per Note 4 and in accordance with Specification 635, as shown on the following Sheets.

10. WIND SPEED BY COUNTY:

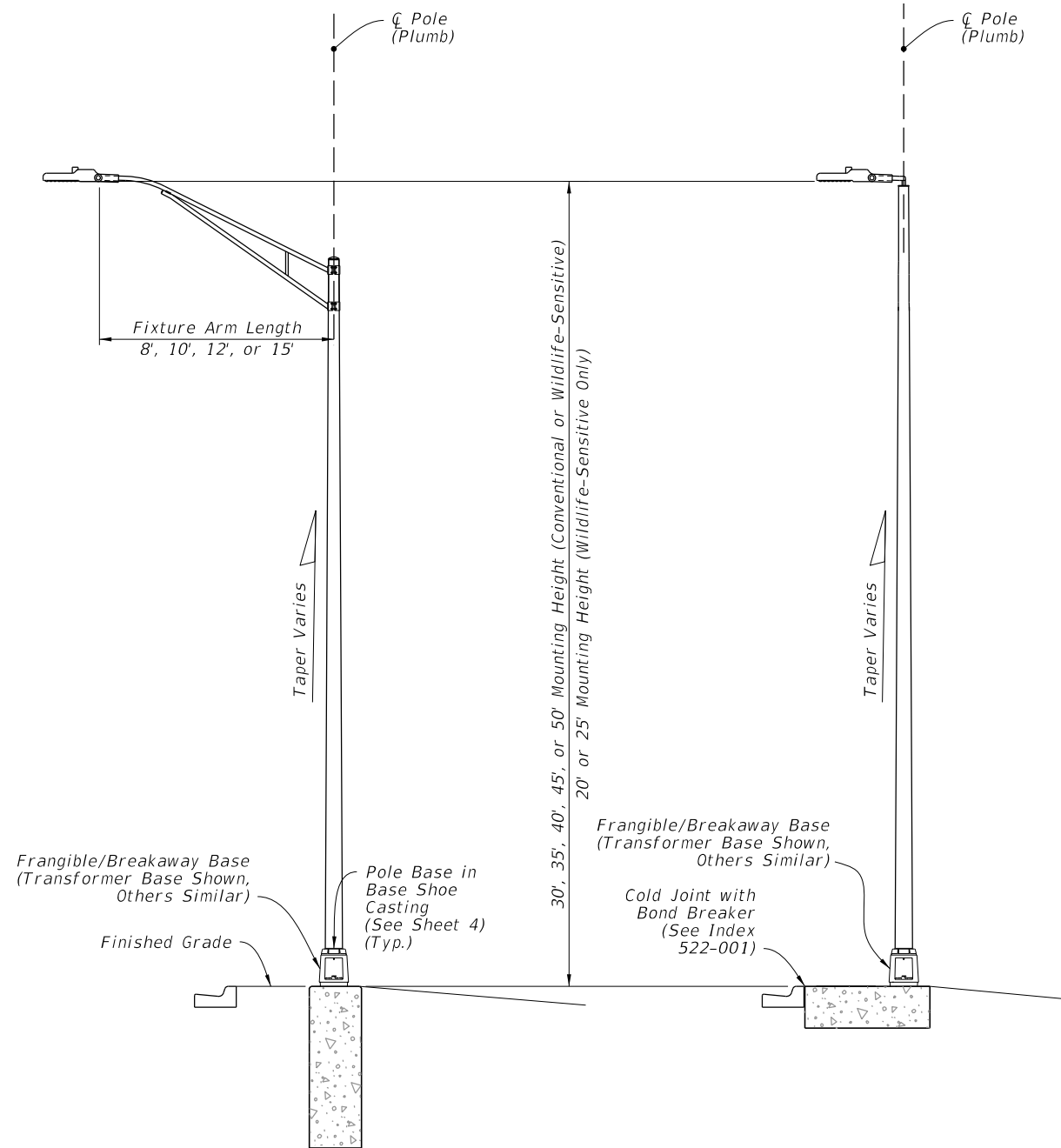
120 MPH
Alachua, Baker, Bradford, Calhoun, Clay, Columbia, Dixie, Duval, Gadsden, Gilchrist, Hamilton, Jackson, Jefferson, Lafayette, Leon, Liberty, Nassau, Madison, Putnam, Suwannee, Taylor, Union and Wakulla Counties.

140 MPH
Bay, Citrus, De Soto, Flagler, Franklin, Glades, Gulf, Hardee, Hendry, Hernando, Highlands, Hillsborough, Holmes, Lake, Levy, Manatee, Marion, Okaloosa, Okeechobee, Orange, Osceola, Pasco, Pinellas, Polk, Santa Rosa, Seminole, St. Johns, Sumter, Volusia, Walton and Washington Counties.

160 MPH
Brevard, Broward, Charlotte, Collier, Escambia, Indian River, Lee, Martin, Miami-Dade, Monroe, Palm Beach, Sarasota and St. Lucie Counties.

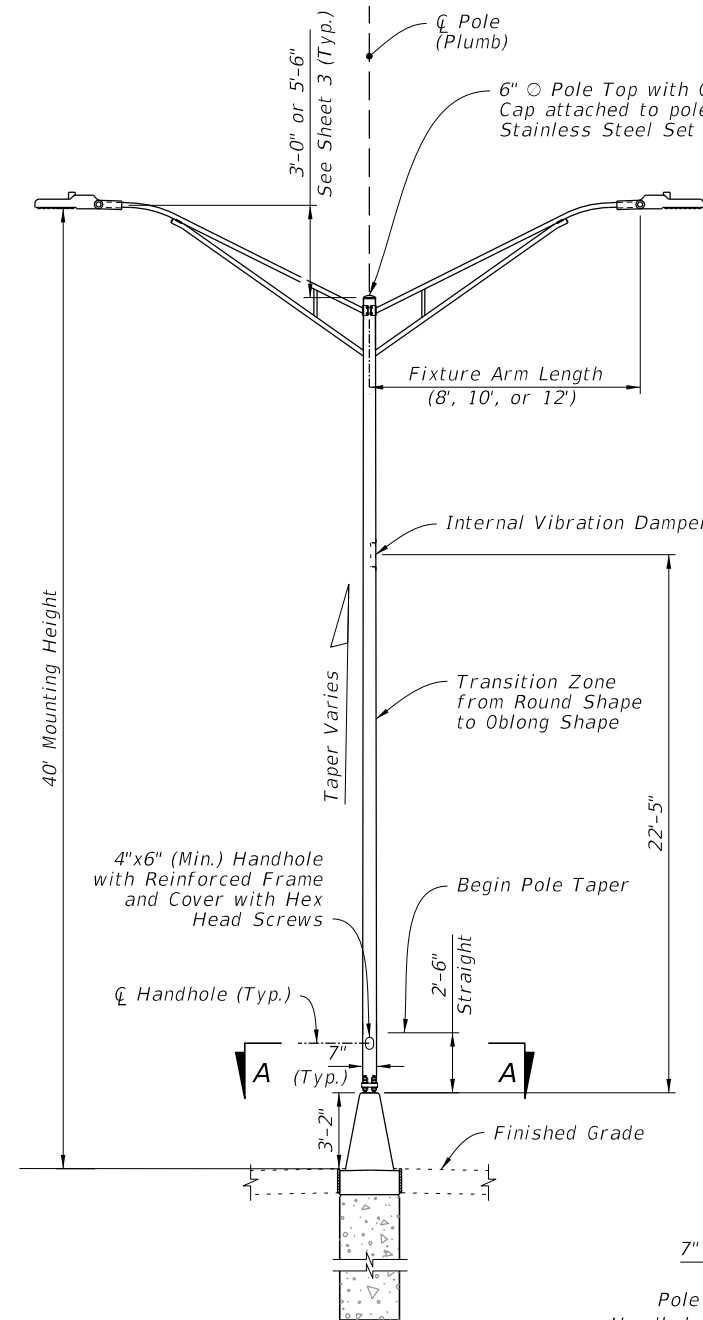
LAST REVISION 11/01/26	REVISION	DESCRIPTION:	 FY 2027-28 STANDARD PLANS	STANDARD ALUMINUM LIGHTING	INDEX 715-002	SHEET 1 of 9
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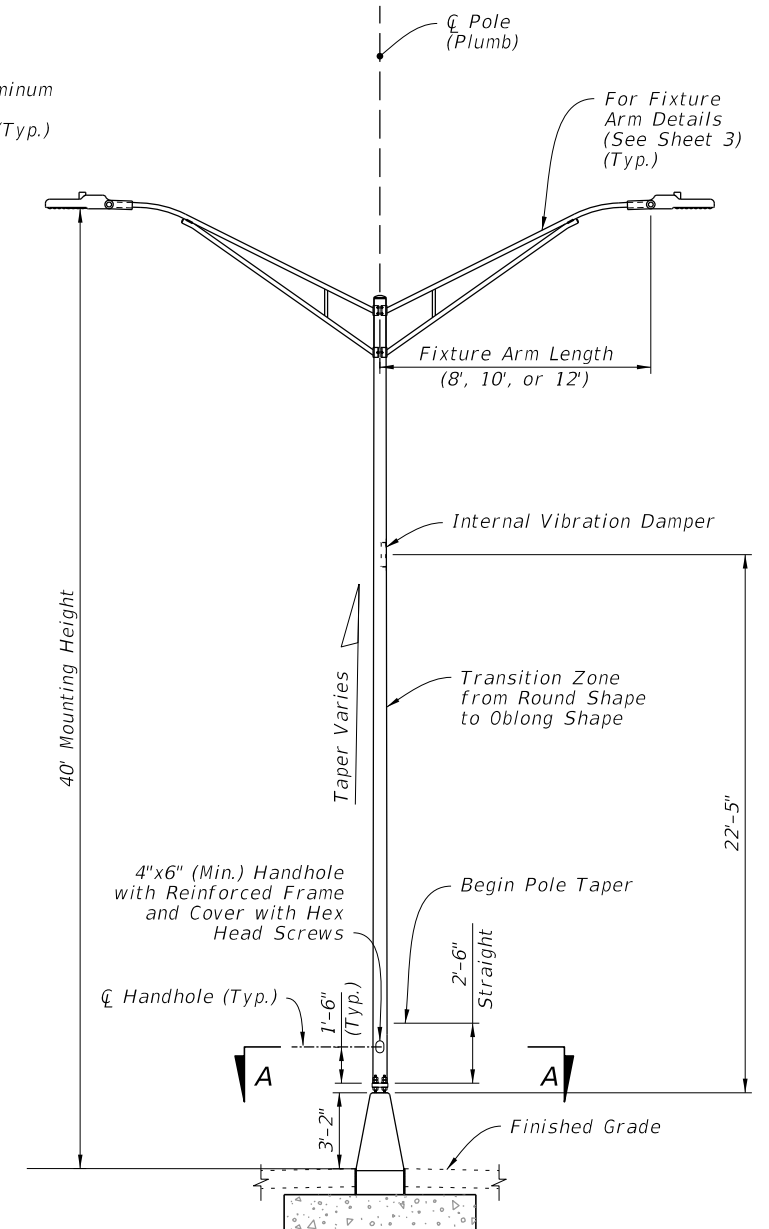
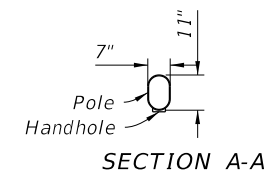


STANDARD ROADWAY ALUMINUM
LIGHT POLE WITH ARM
(Shaft Foundation Option Shown,
Spread Footing Option Similar)

STANDARD ROADWAY ALUMINUM
LIGHT POLE WITH TOP MOUNT
(Spread Footing Option Shown,
Shaft Footing Option Similar)



MEDIAN BARRIER MOUNTED
ALUMINUM LIGHT POLE
ON CYLINDRICAL FOUNDATION
(Double-Arm Shown, Single-Arm
and Top Mount Similar)



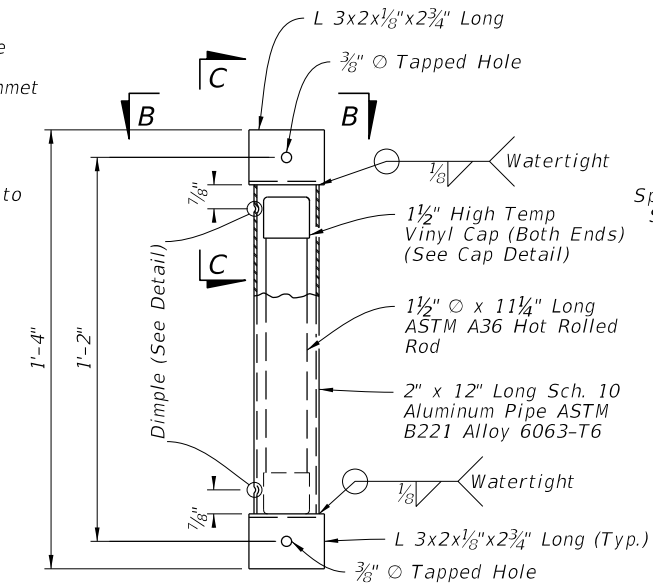
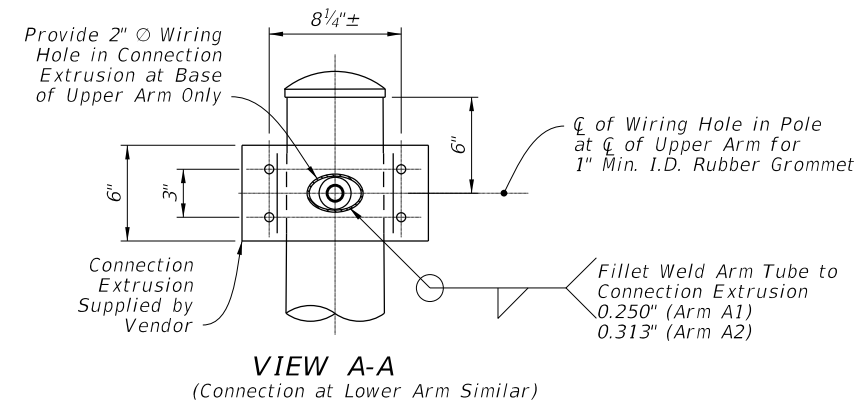
MEDIAN BARRIER MOUNTED
ALUMINUM LIGHT POLE
ON SPREAD FOOTING FOUNDATION
(Double-Arm Shown, Single-Arm
and Top Mount Similar)

ELEVATIONS

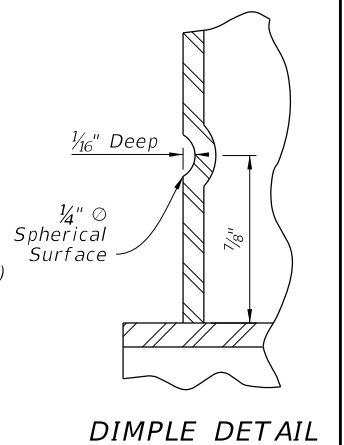
LAST REVISION 11/01/26	REVISION	DESCRIPTION:	FDOT FY 2027-28 STANDARD PLANS	STANDARD ALUMINUM LIGHTING	INDEX 715-002	SHEET 2 of 9
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ARM CONNECTION DETAIL

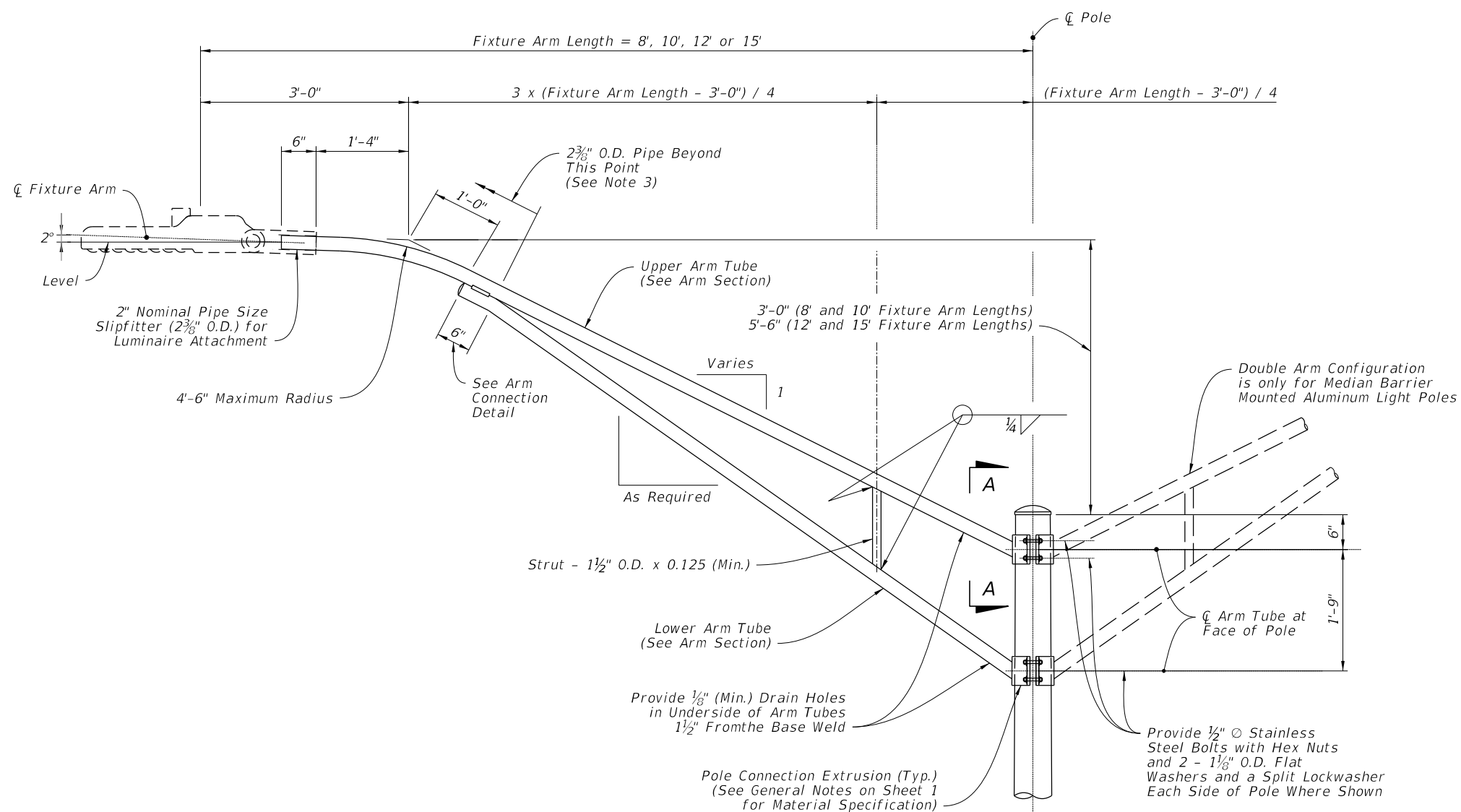
ARM SECTION



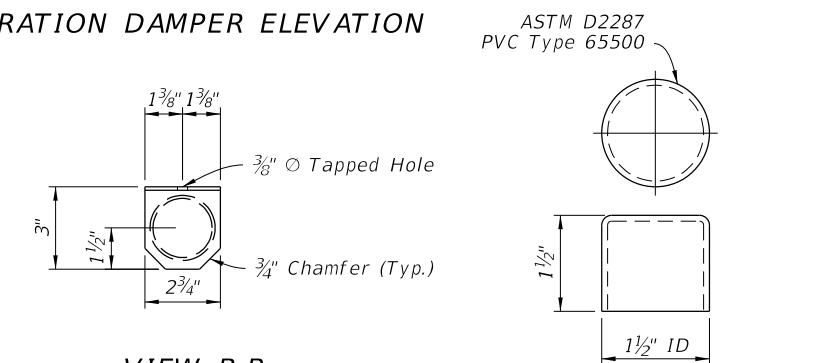
VIBRATION DAMPER ELEVATION



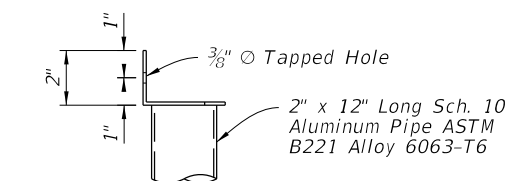
DIMPLE DETAIL



ARM ELEVATION



VIEW B-B



VIEW C-C

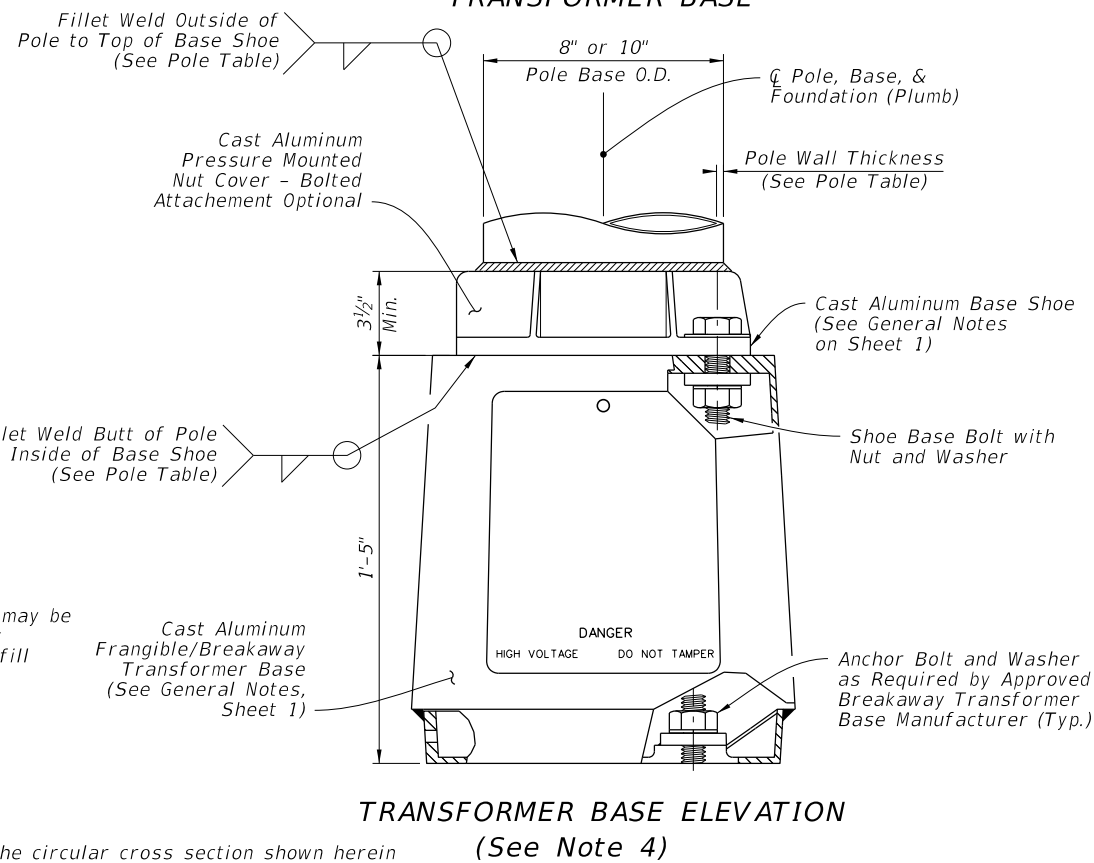
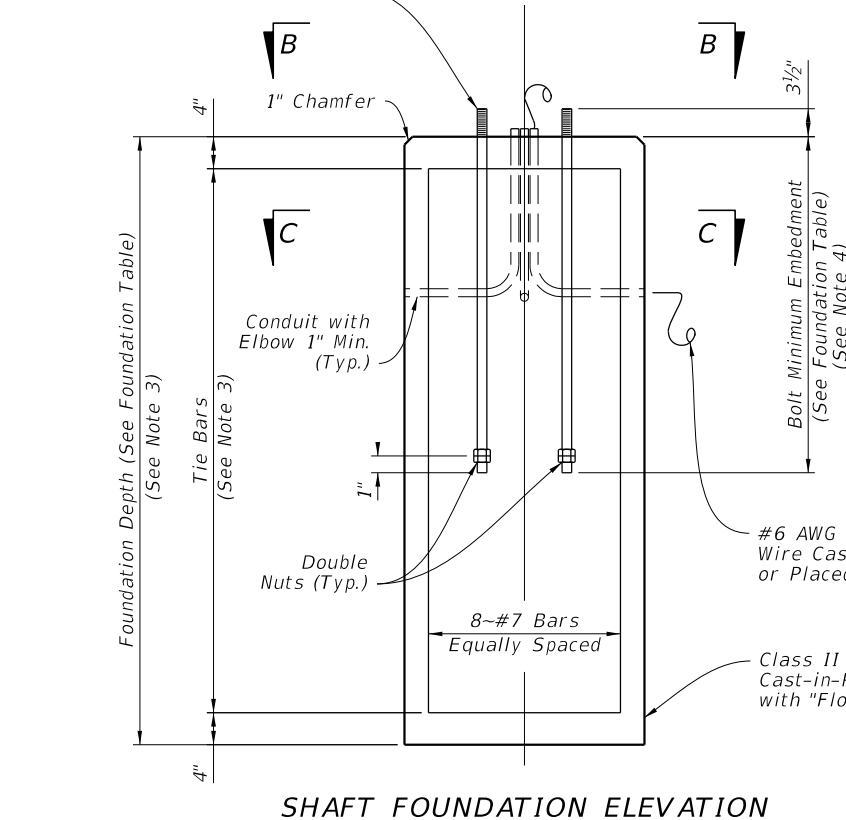
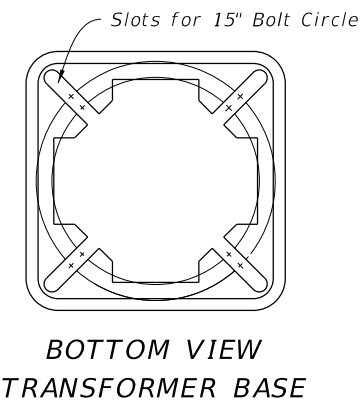
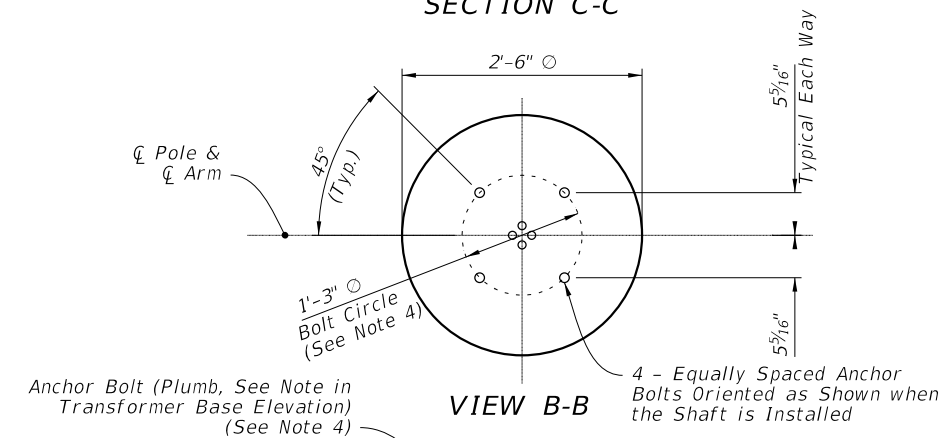
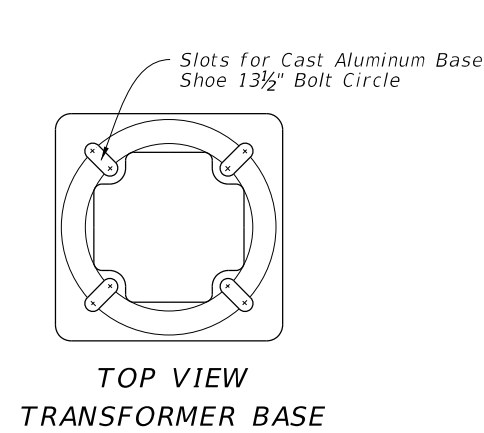
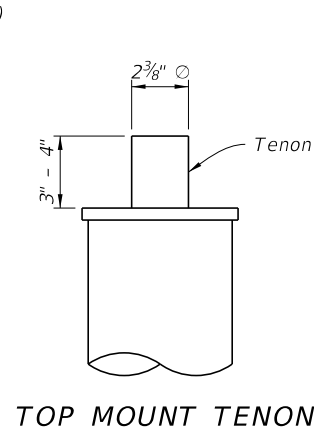
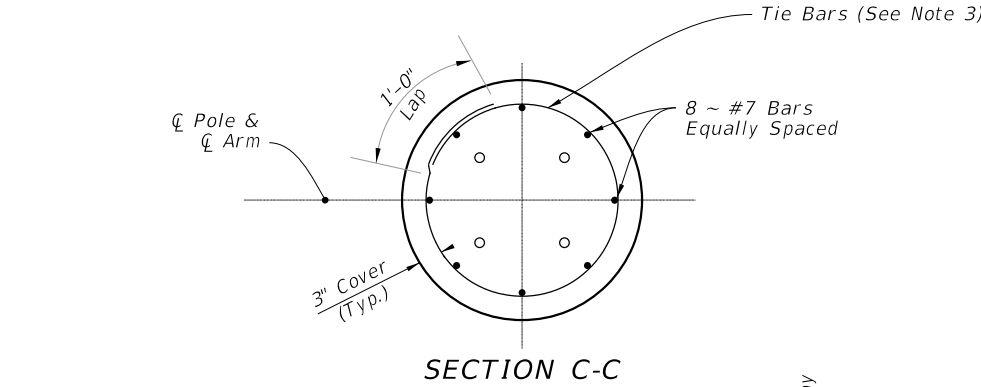
HIGH TEMP
VINYL CAP DETAIL

NOTES:

1. At the pole connections, provide arm tube extrusions with dimensions as shown. Uniformly transition elliptical section to a cylindrical section at the arm connection.
2. The fabricator may substitute elliptical cross sections other than those tabulated, provided the section properties about the vertical axis and the area of the section equal or exceed that of the required section, and provide minimum wall thickness of $\frac{1}{8}$ " nominal and within the Aluminum Association Tolerances.
3. The outside diameter about the minor axis should be held at $2\frac{3}{8}$ " at the upper and lower arms.

ARM & DAMPER DETAILS

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SHAFT FOUNDATION NOTES:

- Foundation Depths shown are for slopes equal to or flatter than 1:4. For slope steeper than 1:4 and equal to or flatter than 1:2 add 2'-6" to foundation depths shown.
- Foundation Tie Bars: #4 Tie Bars @ 12" centers (max.) or D10 (or W10) spiral @ 6" pitch, 3 flat turns top and 1 flat turn bottom.
- For precast foundations, the circular cross section shown herein may be substituted with an octagon shape. The out-to-out distance between parallel edges of the octagon must be $\geq$ 2'-6". Use the same reinforcing diameter and centered placement with a minimum 3" cover.
- The Transformer Base shown may be substituted by different frangible base options listed on the APL. Use Anchor Bolt Circle Diameter (BCD), embedment depths, and materials as required for proprietary designs.

ARM-POLE TABLE

FOR STANDARD ALUMINUM LIGHT POLES WITH ARM

Mounting Height (Ft.)	Wind Speed and Arm Lengths (Ft.)				
	120 mph	140 mph	160 mph		
	8, 10, 12, 15	8, 10, 12	15	8, 10	12, 15
30	A1-P1	A1-P1	A2-P1	A1-P1	A2-P1
35				A1-P2	A2-P2
40					
45	A1-P2	A1-P2	A2-P2	A1-P3	A2-P3
50					

ARM POLE NOTES:

- See ARM SECTION detail on Sheet 3 for all A1 and A2 Values.
- See Pole Table for all P1, P2, and P3 values.
- For Median Barrier Mounted Pole, Use Arm A1.
- For 20' and 25' assembly heights use only 8' or 10' arm A1 with P0.

POLE TABLE

Pole	Pole Wall Thickness	Top of Base Shoe Weld	Inside of Base Shoe Weld
P0	0.156	3/16"	5/32"
P1	0.156	3/16"	5/32"
P2	0.250	1/4"	1/4"
P3	0.313	5/16"	5/16"

POLE NOTES:

- Pole wall thicknesses shown are nominal and must be within the Aluminum Association tolerances.
- Thicker walls are permitted and tapered walls may be used in accordance with the minimum Aluminum Association thicknesses.

TOP MOUNT POLE TABLE
FOR STANDARD ALUMINUM LIGHT POLES
WITH TOP MOUNT

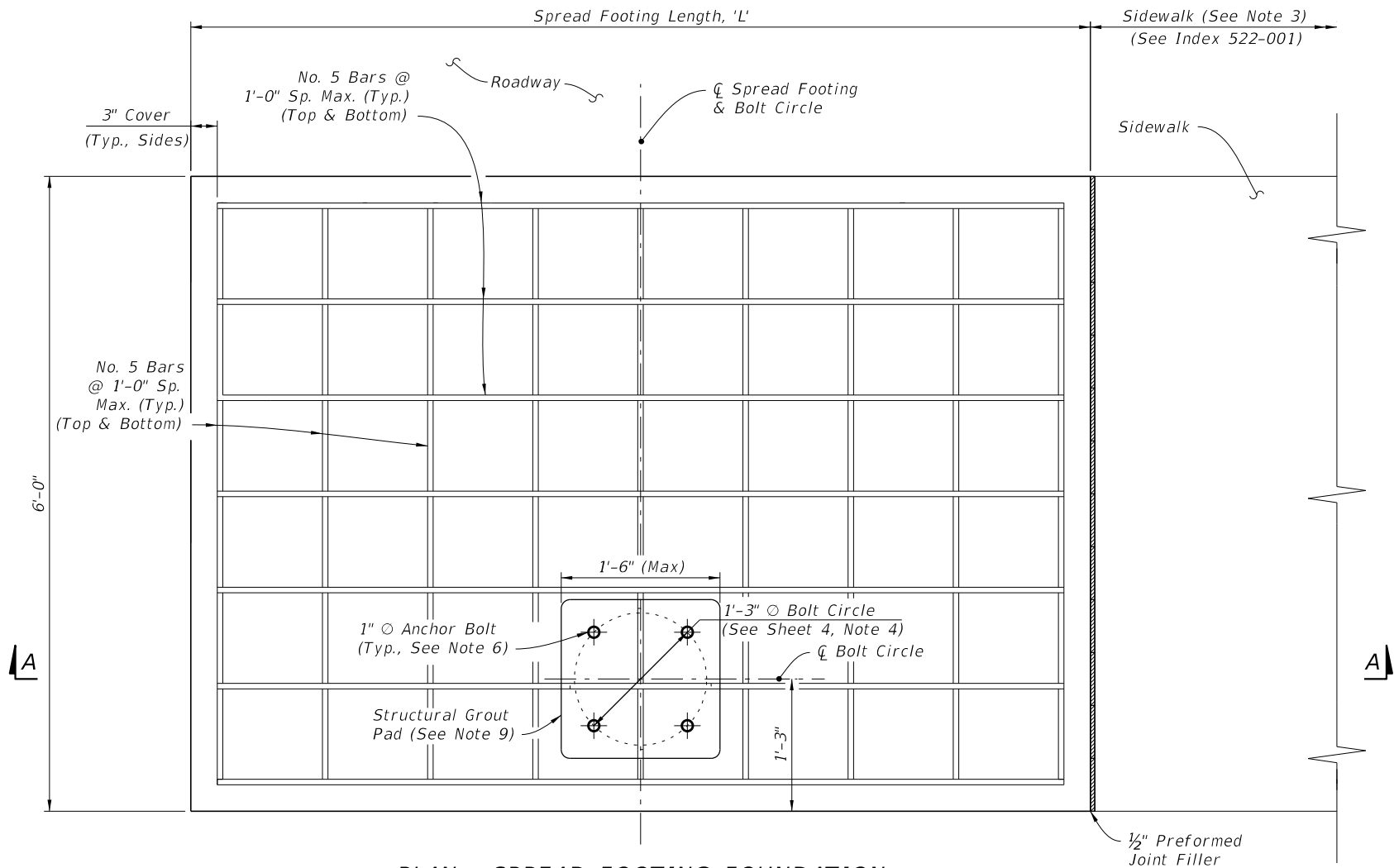
Mounting Height (Ft.)	Wind Speed		
	120 mph	140 mph	160 mph
20	Pole P0	Pole P0	Pole P0
25			
30			
35	Pole P1	Pole P1	Pole P1
40			
45	Pole P2	Pole P2	Pole P2
50			

SHAFT FOUNDATION TABLE

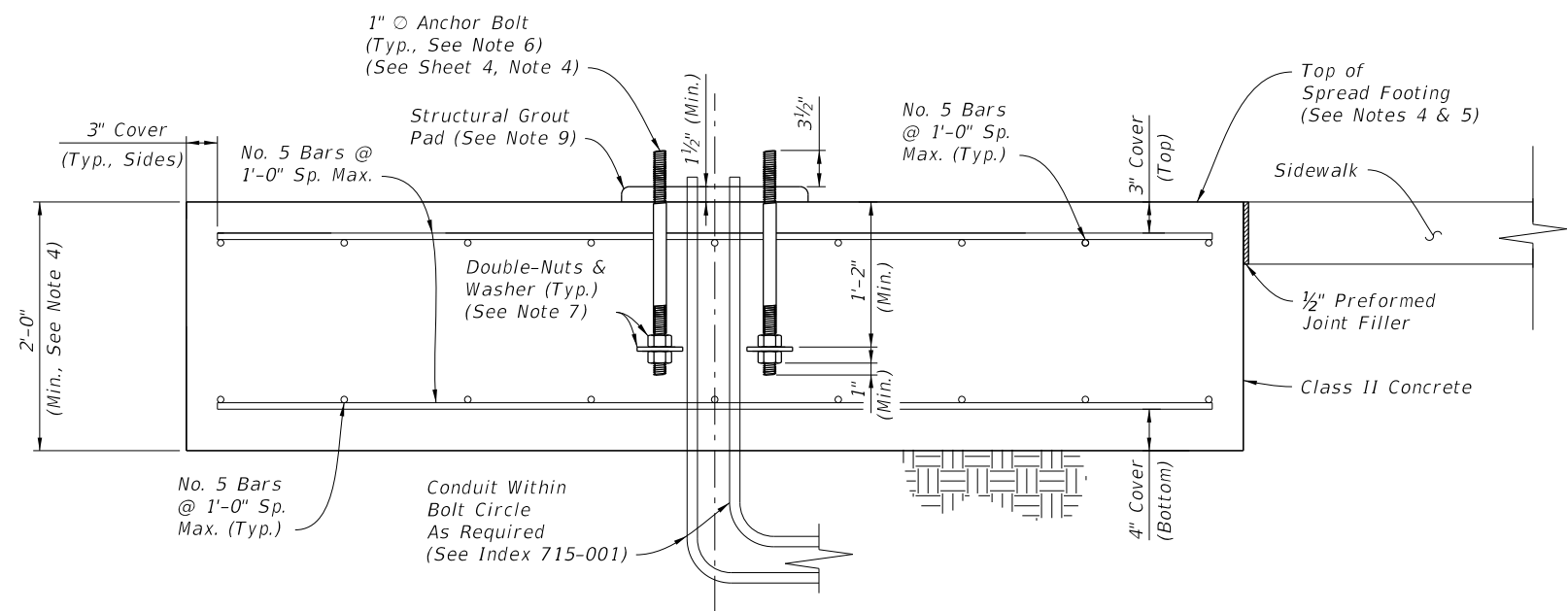
Pole	P0	P1	P2	P3
Depth	6'-0"	7'-0"	8'-0"	8'-0"
Bolt Min. Embedment (See Note 4)	2'-6"	3'-6"	3'-6"	3'-6"

SHAFT FOUNDATION OPTION
WITH LIGHT POLE & BASE DETAILS

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PLAN - SPREAD FOOTING FOUNDATION



SECTION A-A - SPREAD FOOTING FOUNDATION ELEVATION

SPREAD FOOTING LENGTH, 'L'			
Mounting Height (Ft.)	Wind Speed (All Arm Lengths)		
	120 mph	140 mph	160 mph
20	4'-6"	5'-0"	6'-0"
25	4'-6"	5'-0"	6'-0"
30	7'-0"	7'-0"	7'-0"
35	7'-0"	7'-0"	7'-0"
40	7'-0"	7'-0"	10'-0"
45	8'-6"	10'-0"	10'-0"
50	8'-6"	10'-0"	11'-6"

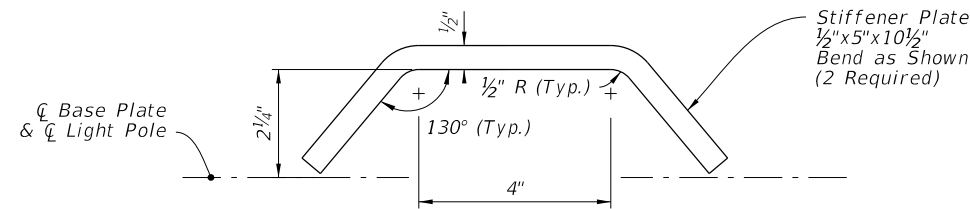
NOTES:

1. Install the Spread Footing Foundation Option only where called for in the Plans.
2. The Spread Footing Foundation Option is only permitted for use with single arm or top mount light poles. Where applicable, the pole arm must be oriented towards the roadway side of the footing as shown. Double arm configurations are not permitted.
3. Sidewalk placed on the other side or both sides of the spread footing is permitted where shown in the Plans. The sidewalk connection to spread footing requires the 1/2" expansion joint shown regardless of the side.
4. The top of the spread footing must match the cross slope of the adjacent sidewalk where applicable per the Plans. The nominal bottom of the spread footing must remain level.
5. Apply concrete surface finish to the top of the spread footing in accordance with Specification 522-7.
6. Mount the anchor bolts plumb. For the corresponding pole base details, see Sheet 4.
7. Place galvanized or zinc-plated steel washers with a minimum thickness of 1/4". Use washers with a minimum size of 3 1/2" O round or 3"x3" square.
8. Where raised curb is called for in the Plans, provide a tooled cold joint with bond breaker between the foundation and back of raised curb. See Sheet 2 and the connection between concrete sidewalk and raised curb per Index 522-001.
9. Place a structural grout pad in accordance with Specification 934. The grout pad is square and centered on the bolt circle centerlines. Level the top of the grout pad and smooth the edges and corners per the approval of the Engineer. Install the transformer base in accordance with Sheet 4 and the manufacturer's specifications.

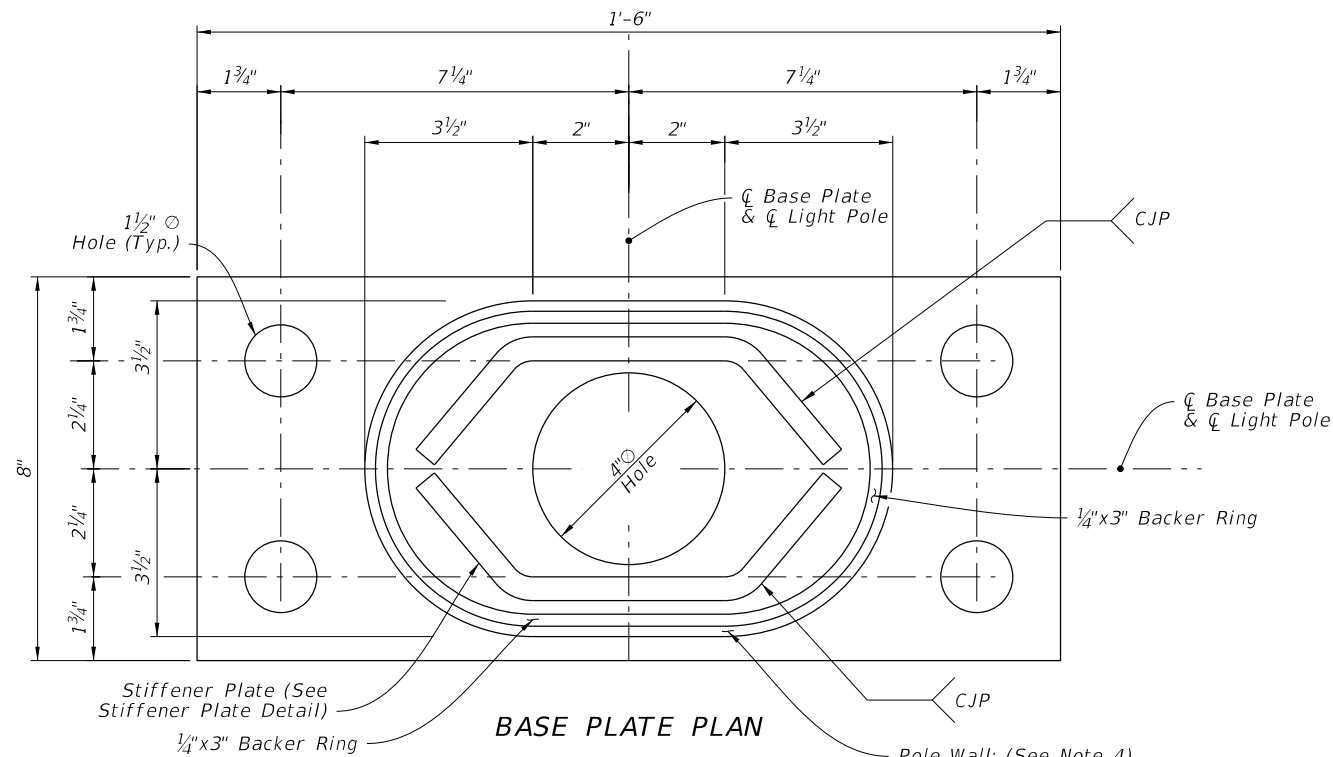
SPREAD FOOTING FOUNDATION OPTION

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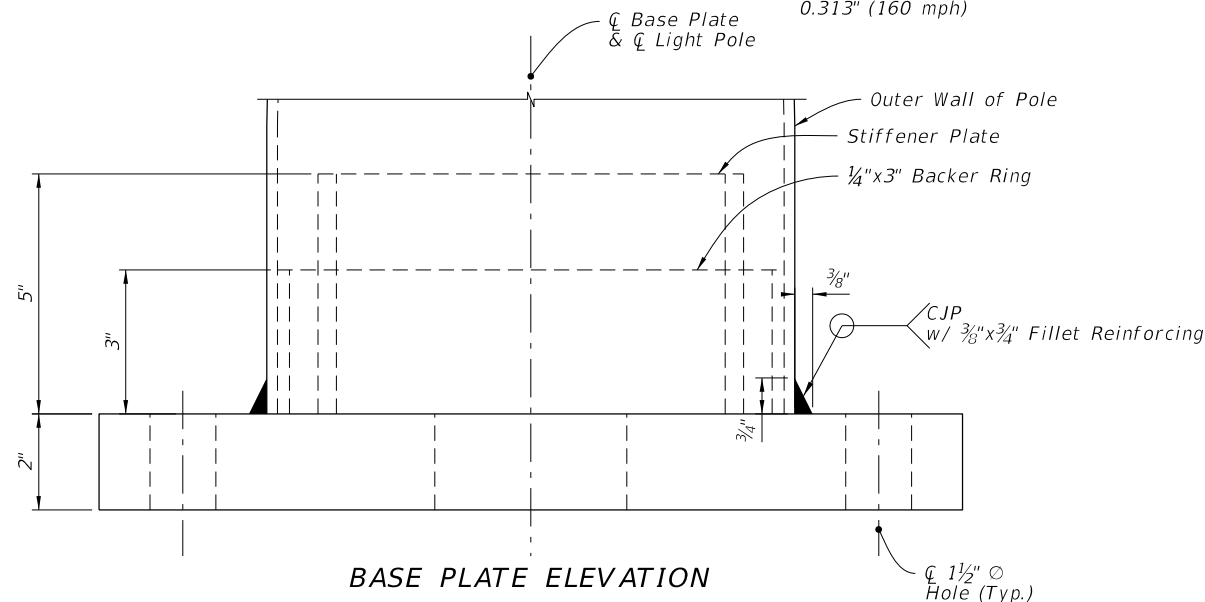
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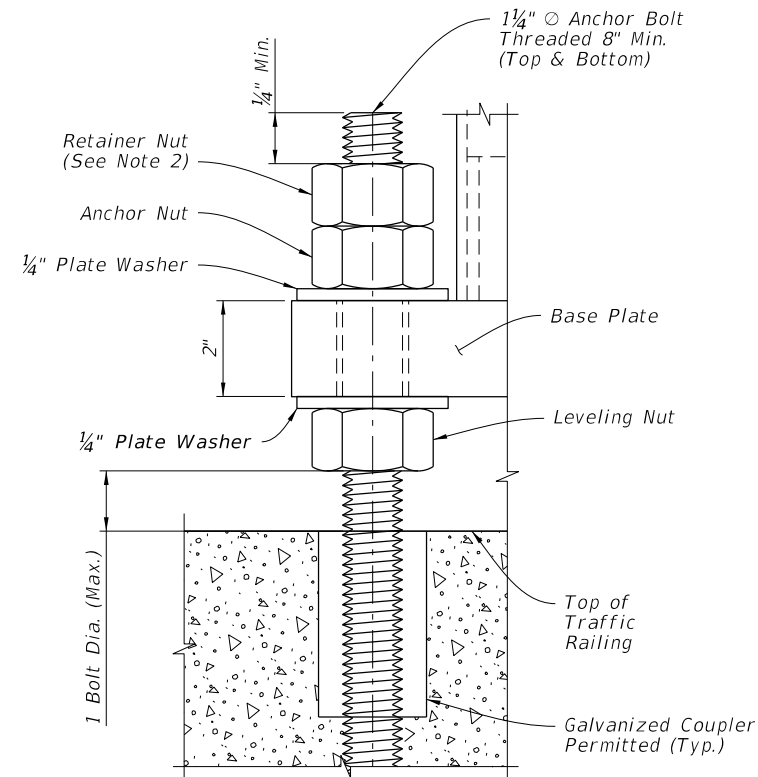
STIFFENER PLATE DETAIL



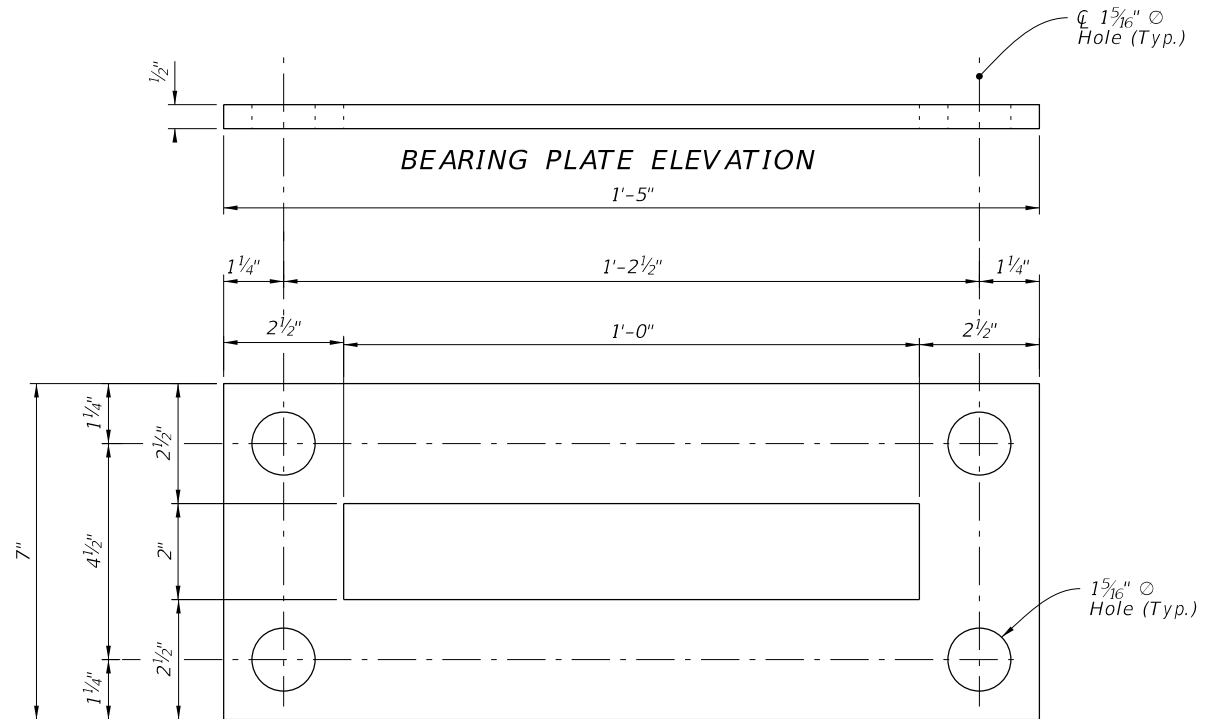
BASE PLATE PLAN



BASE PLATE ELEVATION



DETAIL 'A'



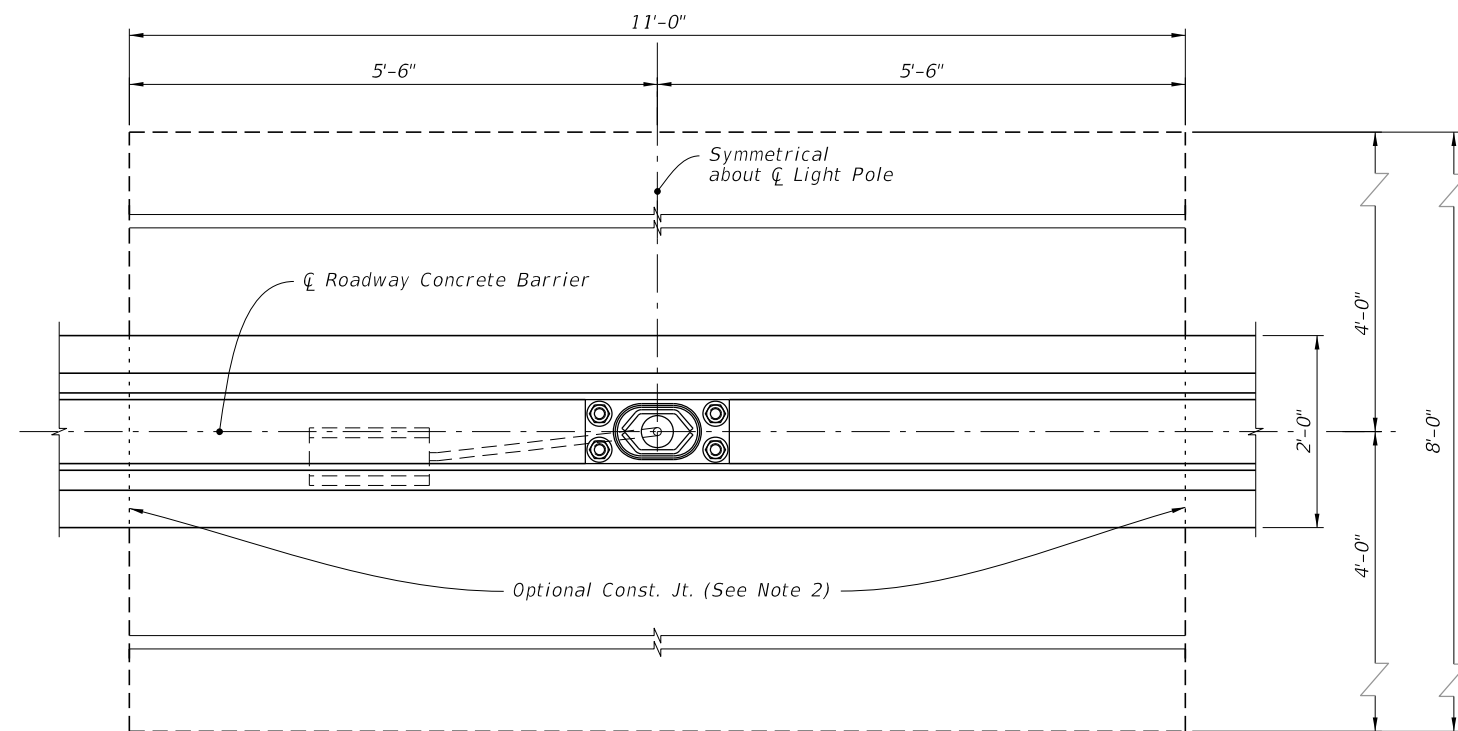
BEARING PLATE PLAN

BASE PLATE DETAILS FOR MEDIAN BARRIER MOUNTED ALUMINUM LIGHT POLE

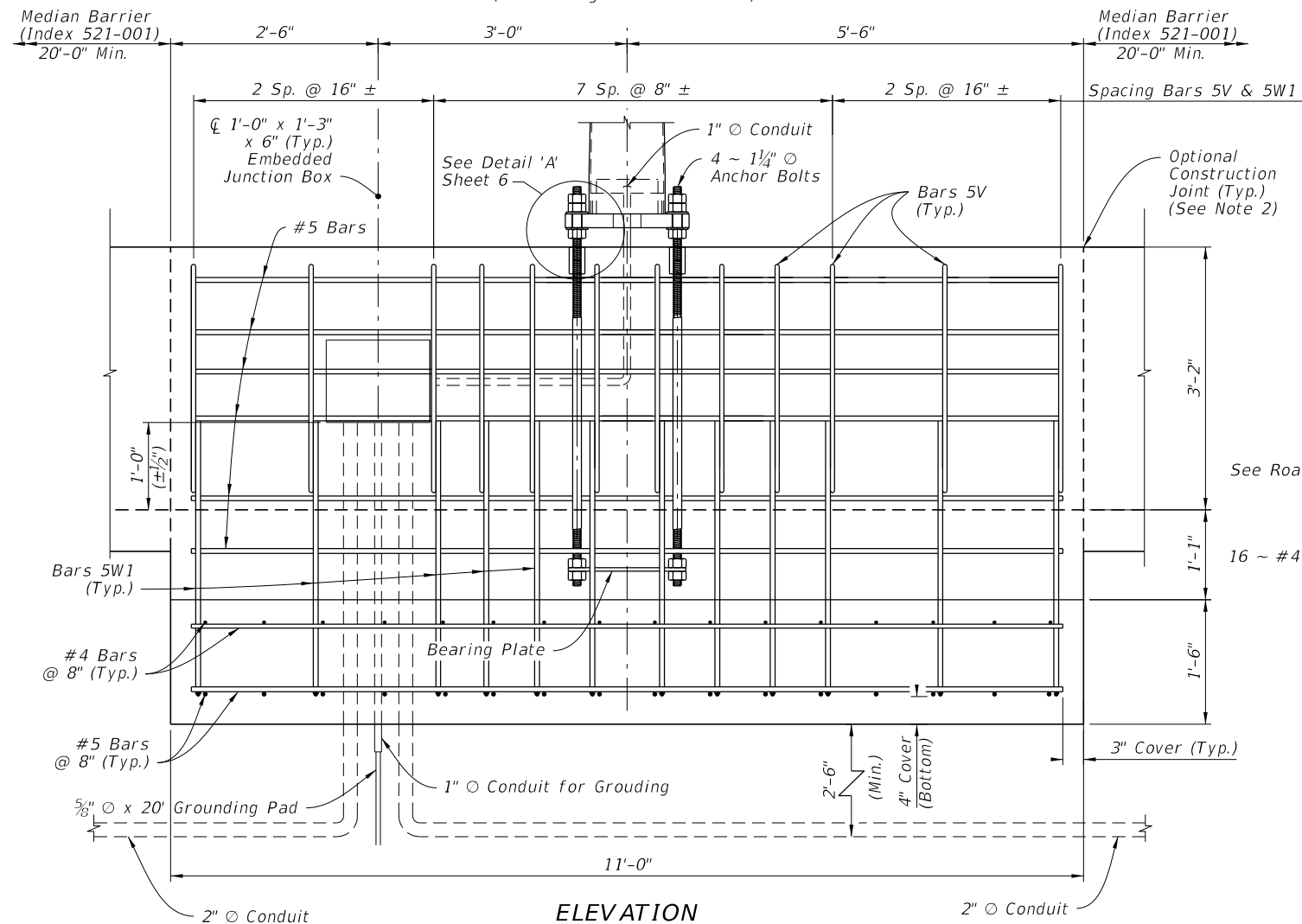
NOTES:

1. For locations of Bearing Plates, Base Plates and Detail 'A' see Sheets 7 thru 9.
2. The retainer nut may be substituted by a half-height nut.
3. Provide individual nut covers (not shown) for each bolt.
4. Pole wall thicknesses shown are nominal and shall be within the Aluminum Association Tolerances. Thicker walls are permitted and tapered walls may be used in accordance with the minimum Aluminum Association thicknesses.

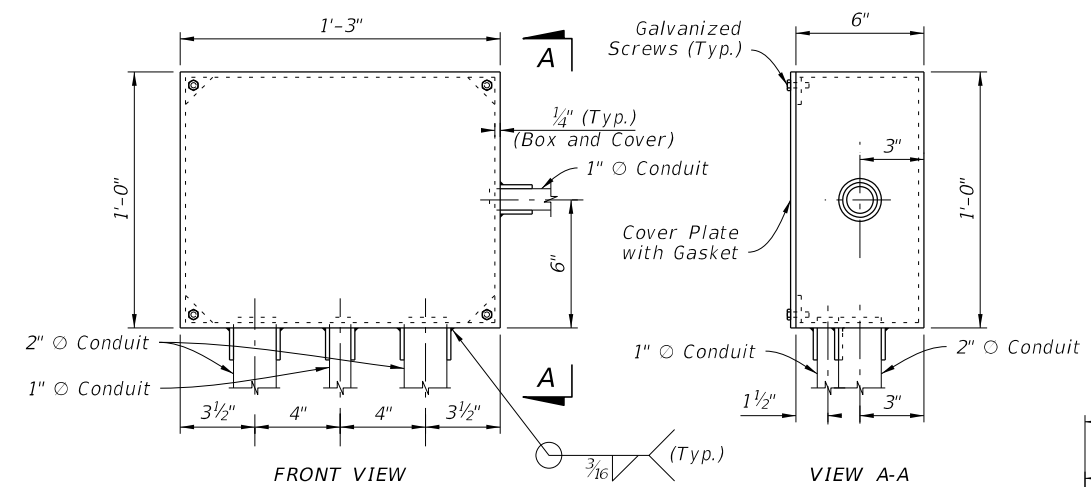
LAST REVISION	DESCRIPTION:	FY 2027-28 STANDARD PLANS	STANDARD ALUMINUM LIGHTING	INDEX	SHEET
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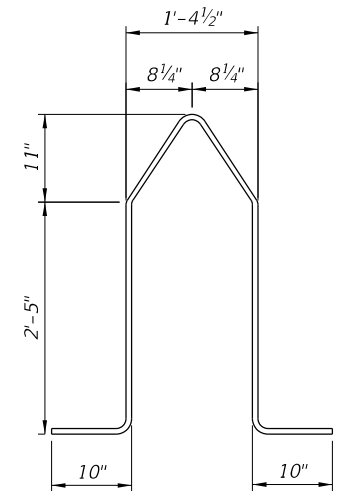
Plan
(Reinforcing Steel Not Shown)



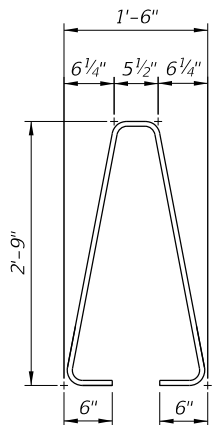
ELEVATION



EMBEDDED JUNCTION BOX DETAILS



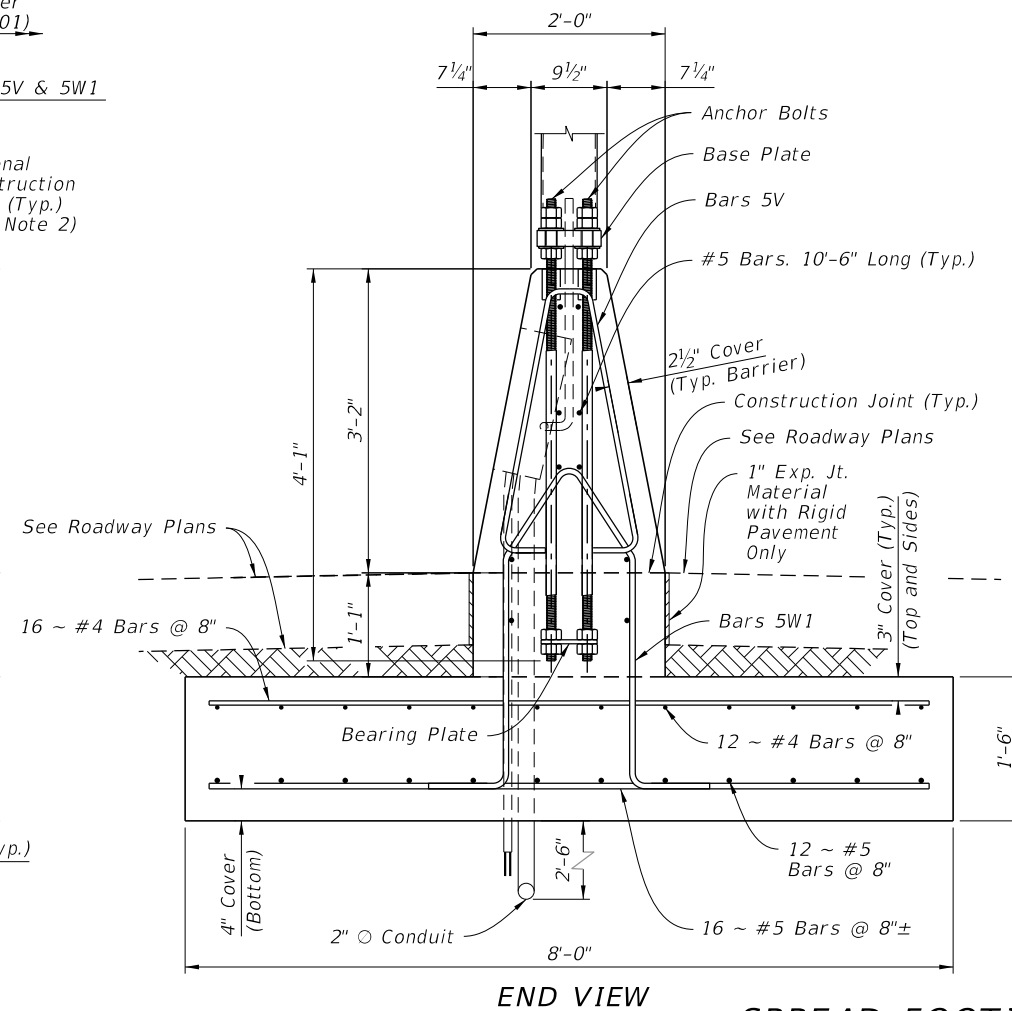
BAR 5W1



BAR 5V

NOTES:

1. For Bearing Plate and Base Plate Details, see Sheet 6.
2. For connections to adjacent Median Barrier, use the Doweled Joint detail per Index 521-001. Alternatively, a continuous concrete pour or a construction joint may be substituted; these alternatives require the Median Barrier's longitudinal steel to lap a minimum of 2'-0" with the longitudinal steel shown herein.

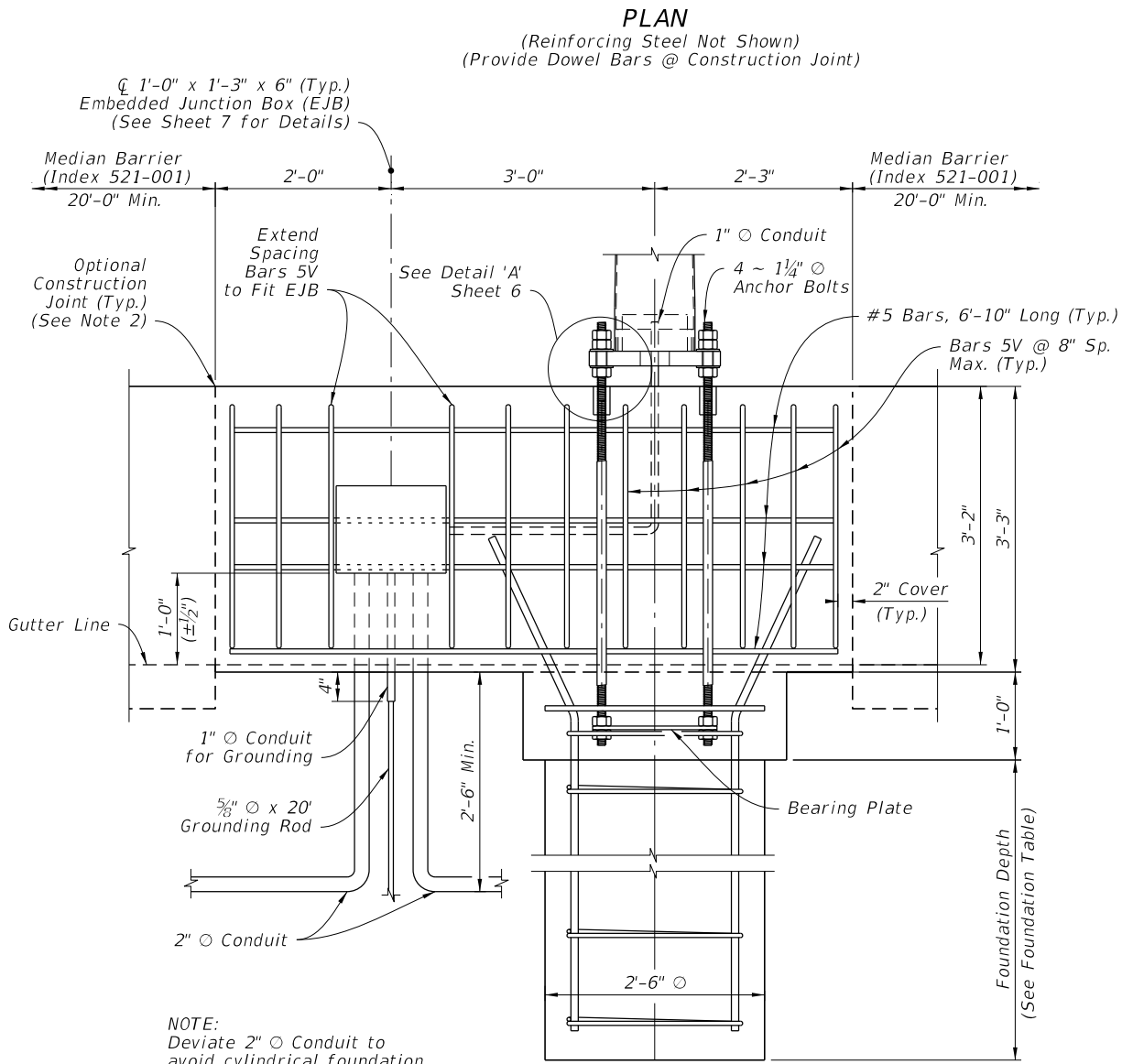
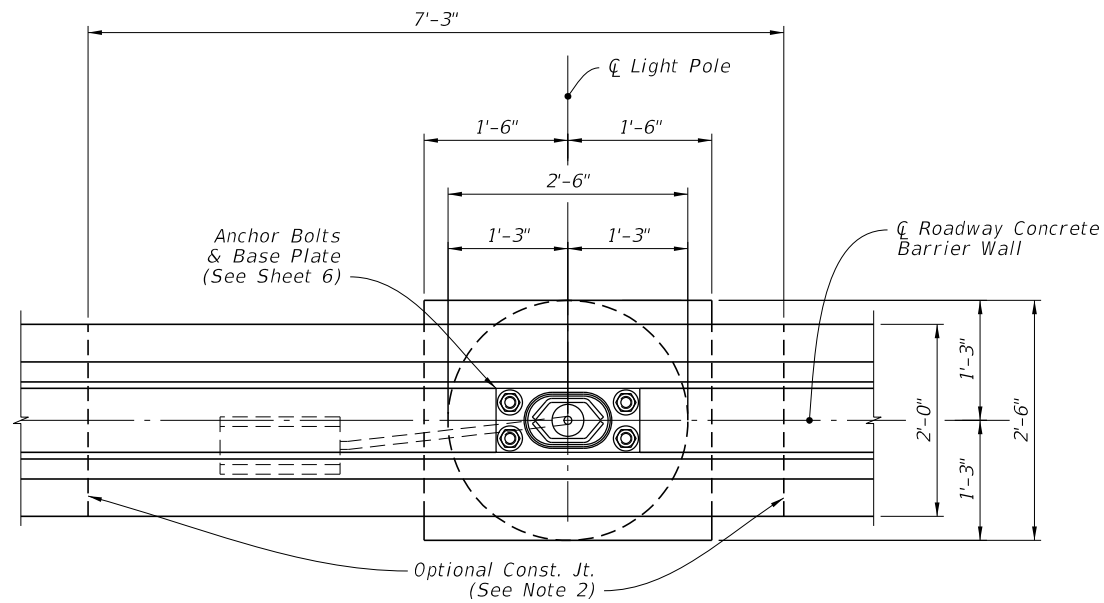


END VIEW

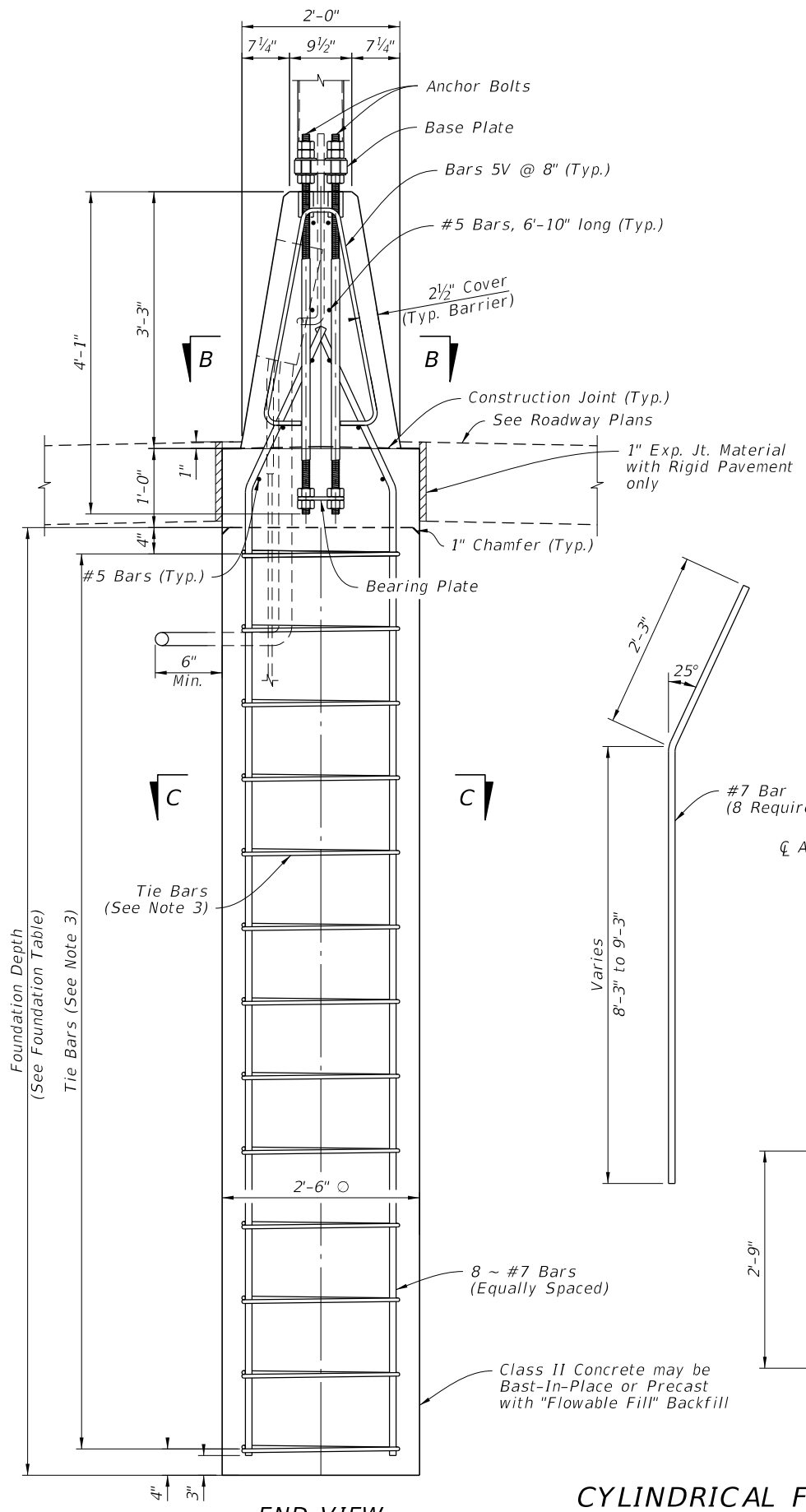
SPREAD FOOTING DETAILS FOR MEDIAN
BARRIER MOUNTED ALUMINUM LIGHT POLE

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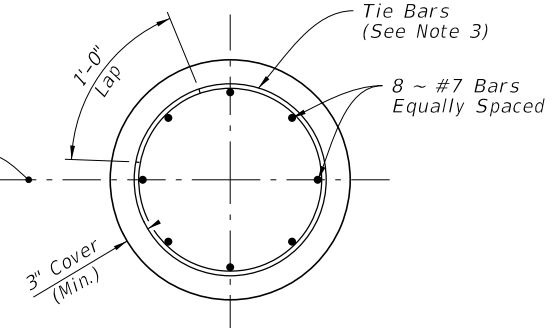
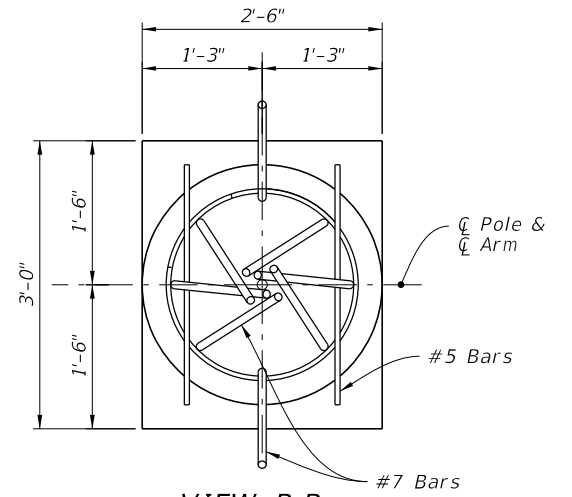
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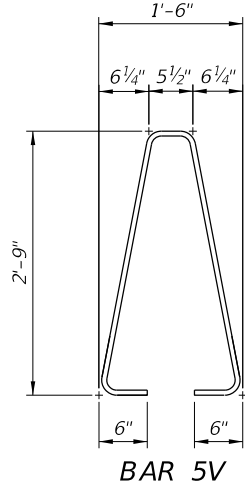
NOTE:
Deviate 2" O Conduit to
avoid cylindrical foundation.



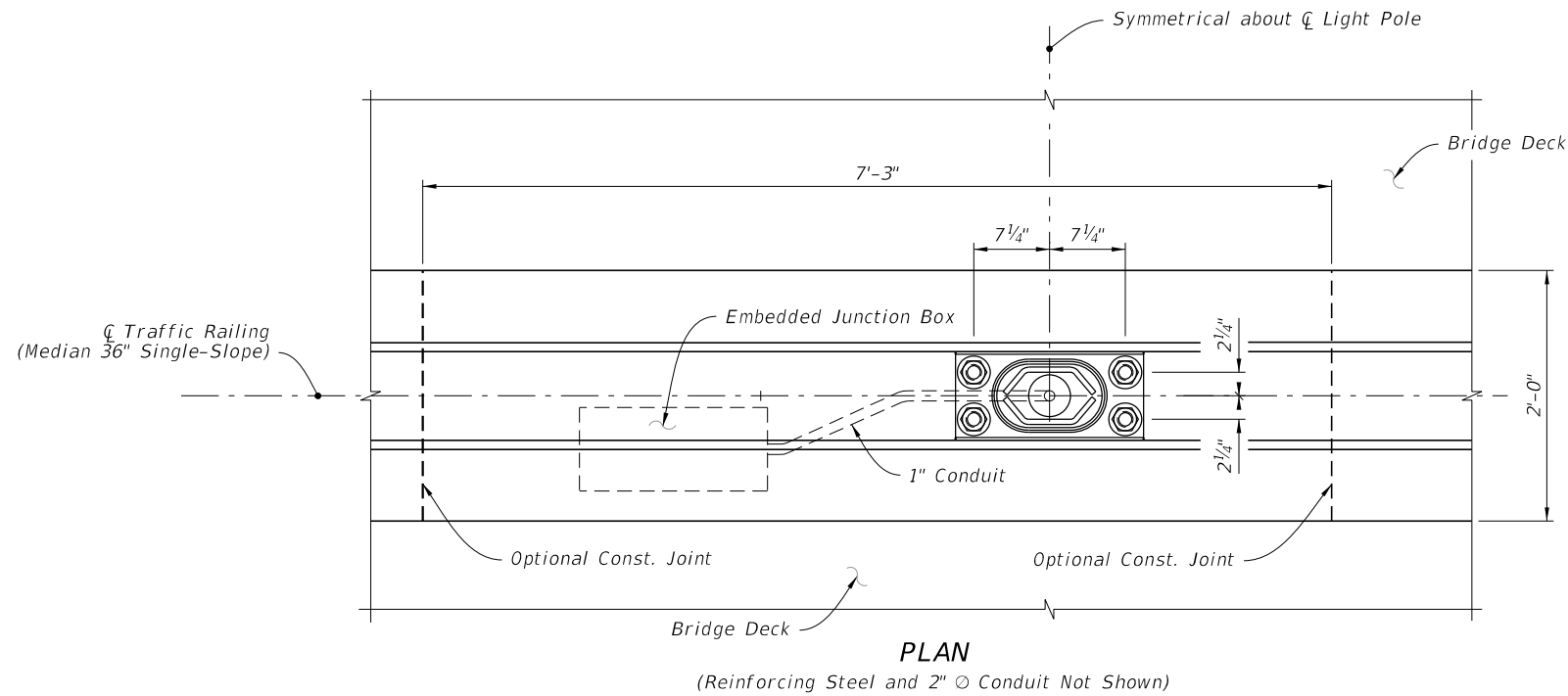
FOUNDATION TABLE		
WIND SPEED (MPH)	DESIGN MOUNTING HEIGHT (FT)	FOUNDATION DEPTH (FT)
120	40	8
140	40	9
160	40	9



- NOTES:
- For Bearing Plate and Base Plate Details, see Sheet 6.
 - For connections to adjacent Median Barrier, use the Doweled Joint detail per Index 521-001. Alternatively, a continuous concrete pour or a construction joint may be substituted; these alternatives require the Median Barrier's longitudinal steel to lap a minimum of 2'-0" with the longitudinal steel shown herein.
 - #4 Tie Bars @ 12" centers (max.) or D10 (or W10) spiral @ 6" pitch, 3 flat turns top and 1 flat turn bottom.

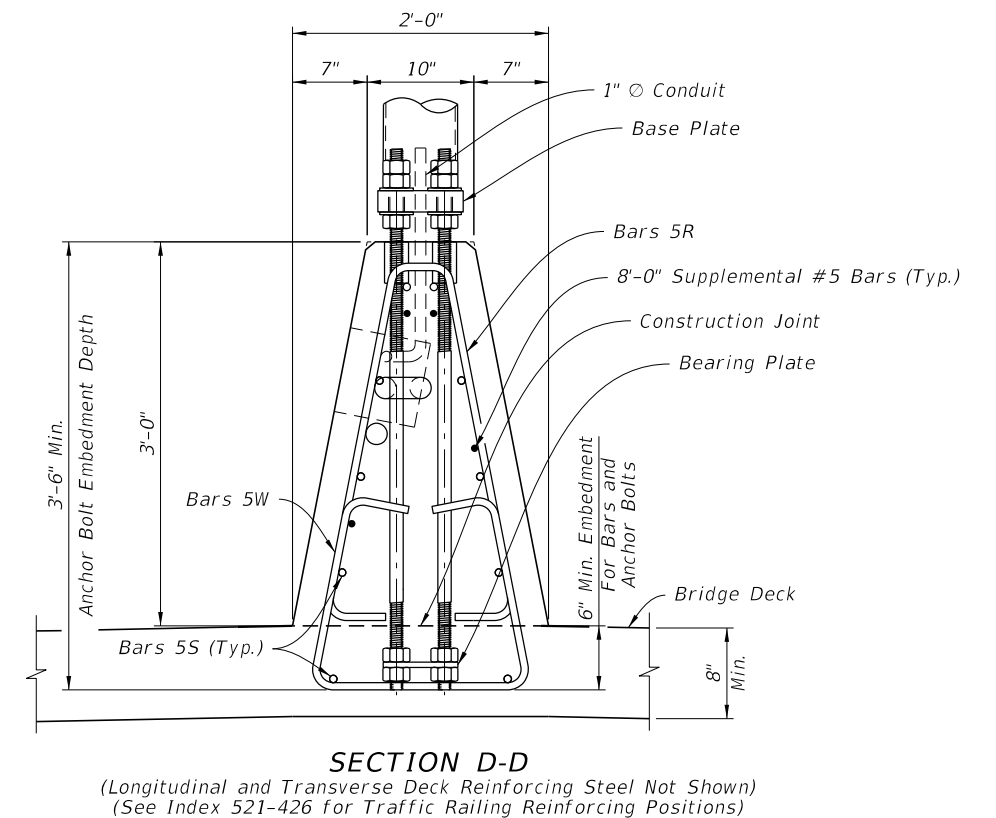
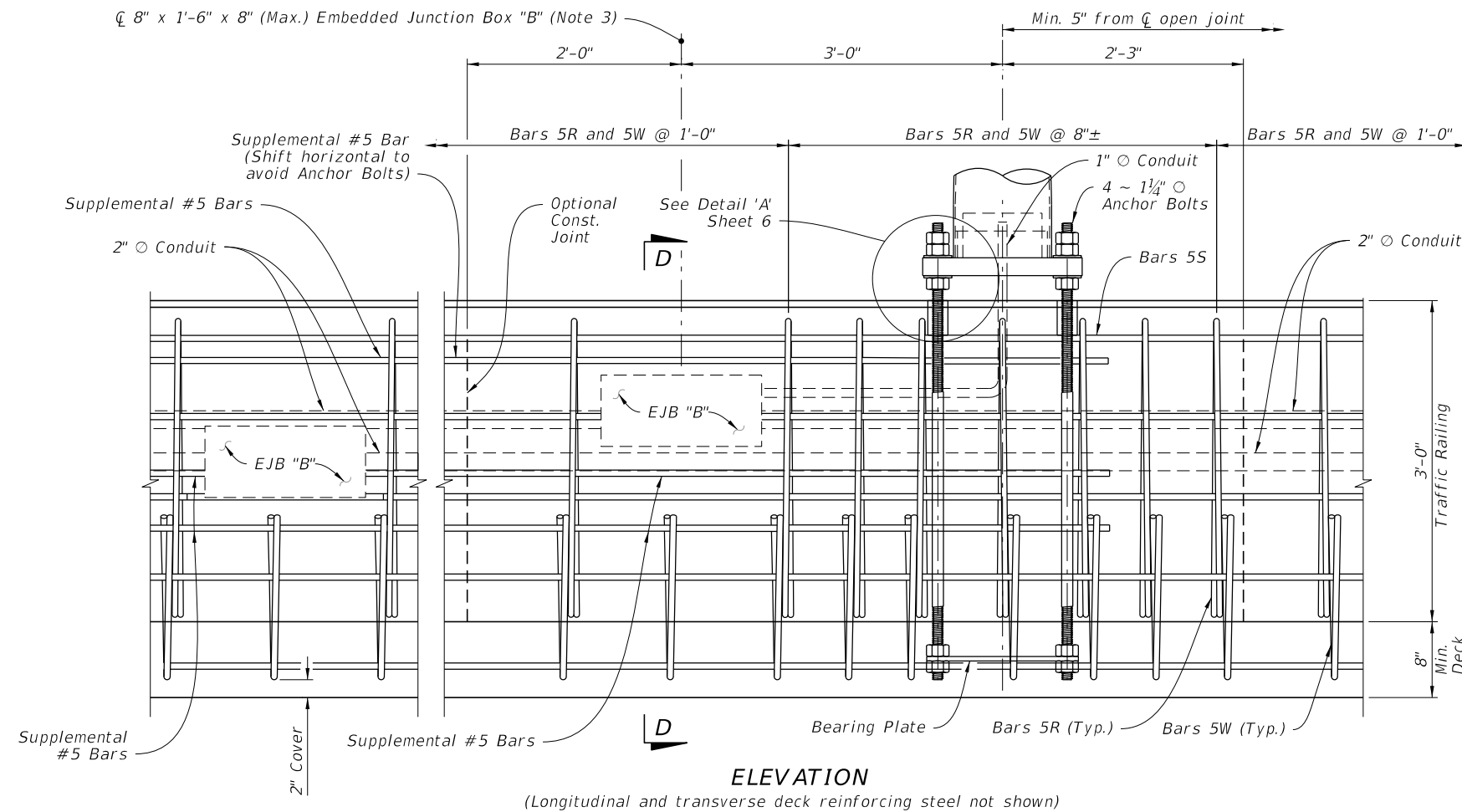
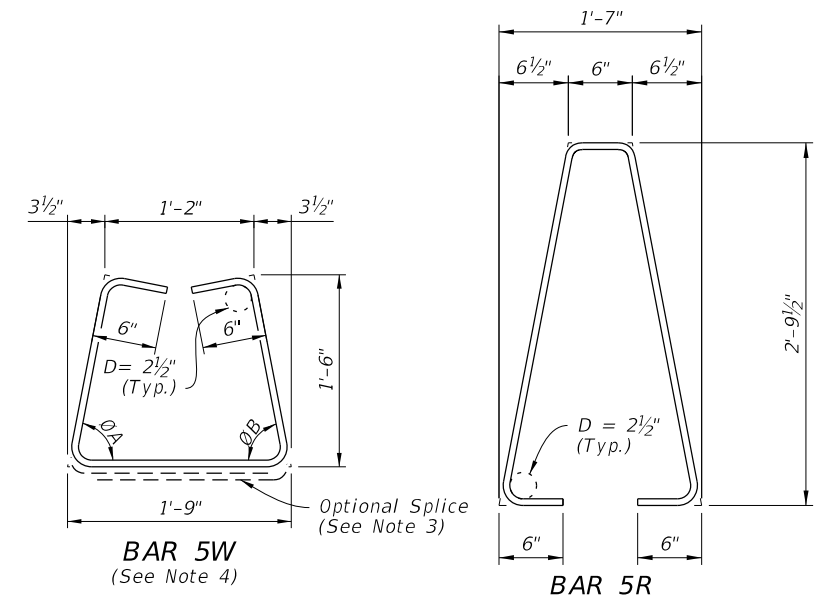


CYLINDRICAL FOUNDATION DETAILS FOR MEDIAN BARRIER MOUNTED ALUMINUM LIGHT POLE



NOTES:

1. For Base Plate Details, Bearing Plate Details, and Detail 'A', see Sheet 6.
2. See Index 521-426 for details of adjacent Traffic Railing (Median 36" Single-Slope) and for angles ØA and ØB.
3. See Index 630-010 for Conduit, EJB and supplemental reinforcing details.
4. At the Contractor's option, Bars 5W may be fabricated as a two piece bar with a 1'-2" lap splice at the bottom legs.



DETAILS FOR TRAFFIC RAILING (MEDIAN 36" SINGLE-SLOPE) MOUNTED ALUMINUM LIGHT POLE

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