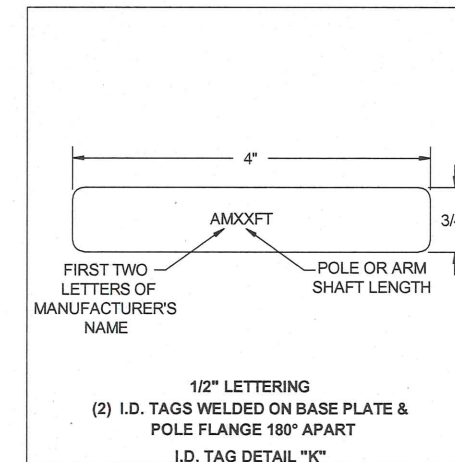
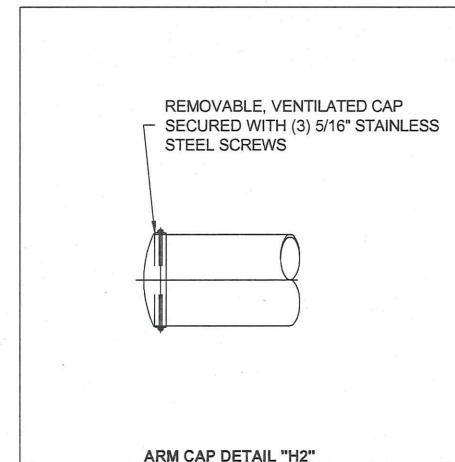
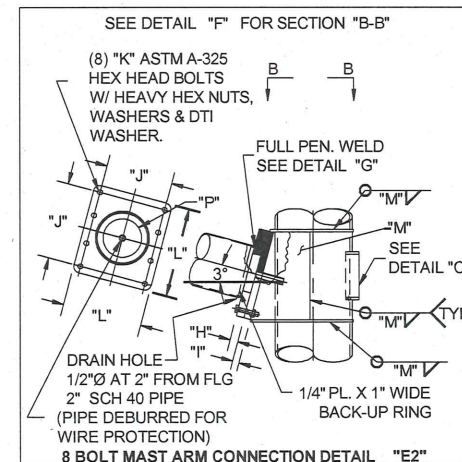
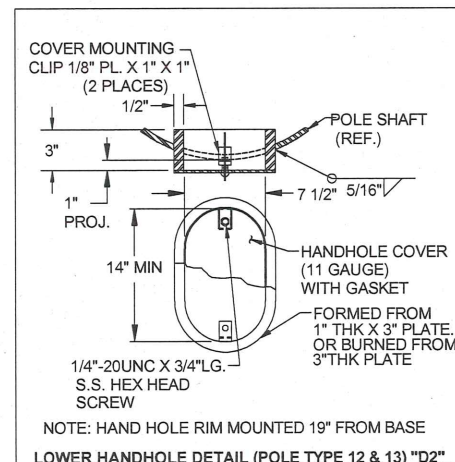
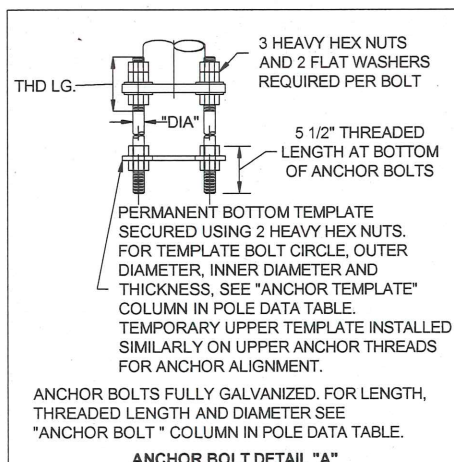
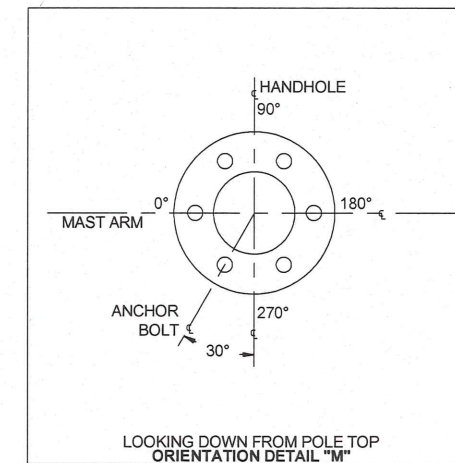
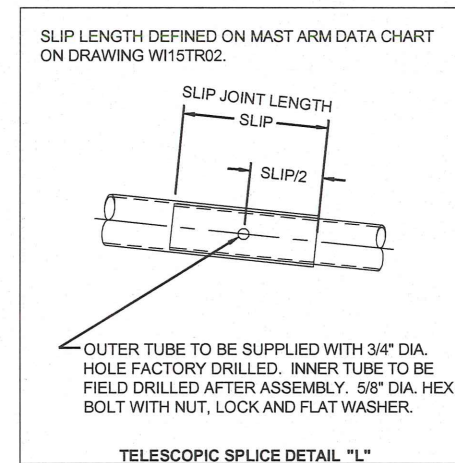
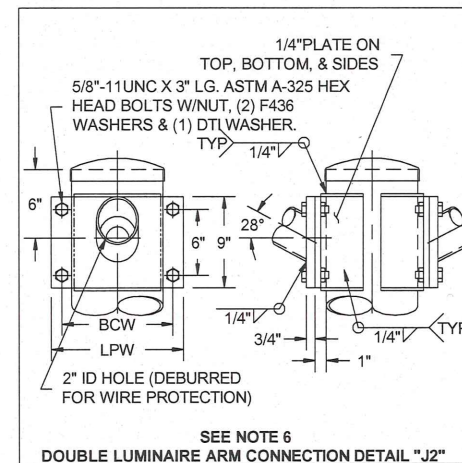
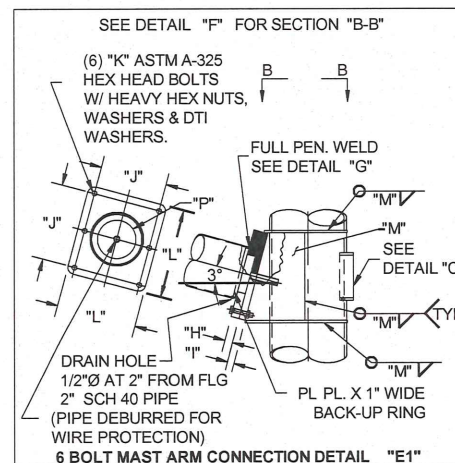
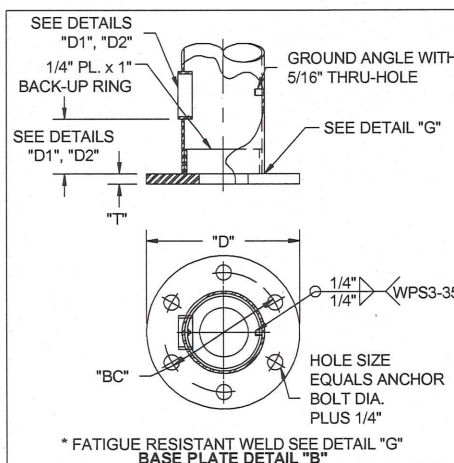
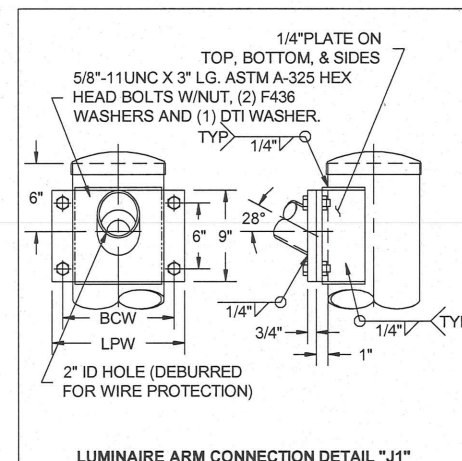
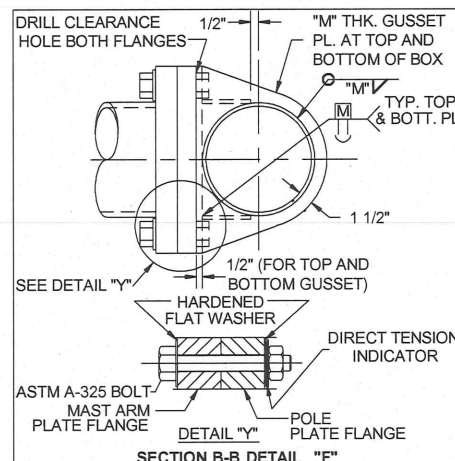
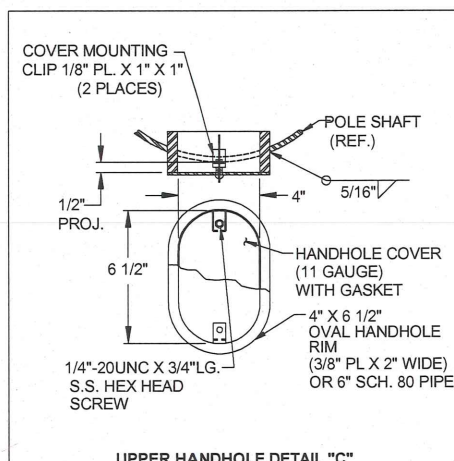
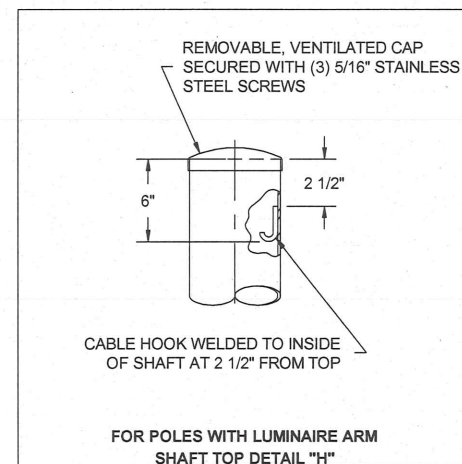
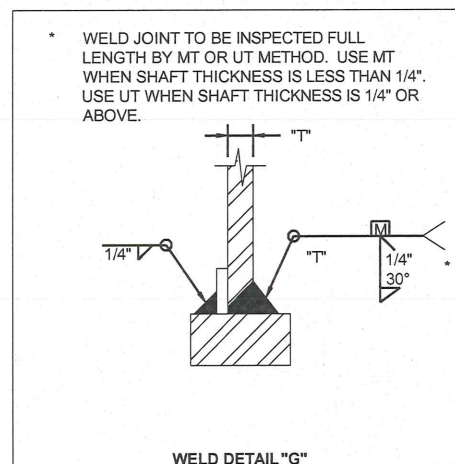
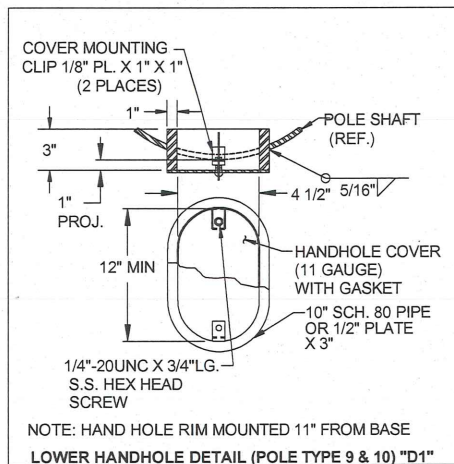
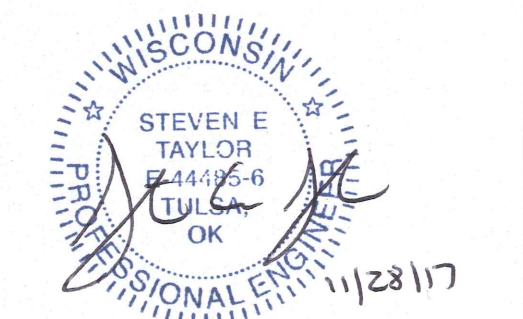




| GENERAL NOTES                        |                                                                                                                                                                                                                                                              |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MATERIAL SPECIFICATIONS              |                                                                                                                                                                                                                                                              |
| SHAFT                                | STEEL OF 50 K.S.I. MINIMUM YIELD AFTER FABRICATION.                                                                                                                                                                                                          |
| BASEPLATE, FLANGES, AND MISC. PLATES | ASTM A-36 STEEL                                                                                                                                                                                                                                              |
| PIPE                                 | ASTM A-500 GR."B" OR A513                                                                                                                                                                                                                                    |
| ANCHOR BOLTS                         | ASTM F-1554 GR.55 ANCHOR BOLT MIN. ELONGATION TO BE 14% IN 2" OR 12% IN 8".                                                                                                                                                                                  |
| NUT COVERS                           | ASTM B-26, ALLOY SC-64, ATTACHED W/ T-410 S.S. #10 HWH X 3/4" SELF TAPPING SCREWS.                                                                                                                                                                           |
| H.H. BOLTS & NUTS                    | ASTM A-325 BOLTS & NUTS                                                                                                                                                                                                                                      |
| DTI WASHERS                          | ASTM F959 TYPE 325                                                                                                                                                                                                                                           |
| MANUFACTURING PROCESSES              |                                                                                                                                                                                                                                                              |
| LONGITUDINAL WELDS                   | BUTT WELDED BY ELECTRICAL RESISTANCE PROCESS                                                                                                                                                                                                                 |
| CIRCUMFERENTIAL LMA ONLY             | BUTT WELDED WITH PERMANENT BACKUP RING                                                                                                                                                                                                                       |
|                                      | FINISH COATING                                                                                                                                                                                                                                               |
| STRUCTURE                            | HOT DIP GALVANIZE PER ASTM A-123                                                                                                                                                                                                                             |
| HARDWARE                             | HOT DIP GALVANIZE PER ASTM A-153                                                                                                                                                                                                                             |
|                                      | DESIGN CRITERIA                                                                                                                                                                                                                                              |
| STRUCTURE AND HARDWARE               | IN ACCORDANCE TO 2013 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SUPPORTS. WITH WIND VELOCITY OF 90 MPH ISOTACH, AND 1.33 ALLOWABLE STRESS FACTOR FOR GROUP II AND III LOADS & FATIGUE CAT. II & III. |
| WELDING                              | IN ACCORDANCE WITH LATEST EDITION OF AWS D1.1 WELDING CODE OR AS SPECIFIED IN PROJECT PLANS                                                                                                                                                                  |

- NOTES:**
1. SEE DRAWING W115TR02 FOR SIGNAL MAST ARM DATA
  2. PROJECTS TO BE PROVIDED WITH 6 ADDITIONAL BOLT ASSEMBLIES PER BOLT SIZE FOR TESTING.
  3. THE POLE/ARM MATERIAL SILICON CONTENT SHALL BE 0.04% MAXIMUM.
  4. SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH 3/4" S.S.BANDING AROUND THE LEVELING NUTS.
  5. AMERON RESERVES THE RIGHT TO INSTALL TOOLING LUGS OR HOLES TO FACILITATE IN THE GALVANIZING PROCESS. THESE LUGS/HOLES WILL NOT IMPEDE WITH FIT FORM OR FUNCTION OF THE FINISHED PRODUCT AND ARE TO BE USED SOLELY BY THE MANUFACTURER..
  6. FOR DOUBLE LUMINAIRE POLES WITH LUMINAIRE ARMS MOUNTED LESS THAN 180° APART, THE SECONDARY LUMINAIRE ARM WILL BE MOUNTED 10" BELOW THE PRIMARY LUMINAIRE ARM TO AVOID INTERFERENCE.
  7. ARM TUBES SEAM WELD TO BE ORIENTED POINTED DOWN



|      |       |                                 |    |       |
|------|-------|---------------------------------|----|-------|
| E    | 11/17 | PER CUSTOMER REVIEW COMMENTS    | JM | GM    |
| D    | 11/17 | PER CUSTOMER REVIEW COMMENTS    | JM | GM    |
| C    | 5/17  | PER CUSTOMER REVIEW COMMENTS    | JM | GM    |
| B    | 4/16  | CORRECTED HAND-LOLE THICKNESSES | JM | GM    |
| A    | 2/16  | PER CUSTOMER REVIEW COMMENTS    | JM | GM    |
| REV. | DATE  | DESCRIPTION                     | BY | APPRO |

**Ameron POLE PRODUCTS DIVISION**  
**STATE OF WISCONSIN**  
**TYPE 9, 10, 12 & 13 SERIES TRAFFIC**

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|                    |                      |                                |
|--------------------|----------------------|--------------------------------|
| DRAWN: <b>GL</b>   | DATE: <b>8/27/15</b> | DRAWING NUMBER: <b>W15TR01</b> |
| APPR: <b>JM/ST</b> | DATE: <b>9/02/15</b> | REV: <b>F</b>                  |

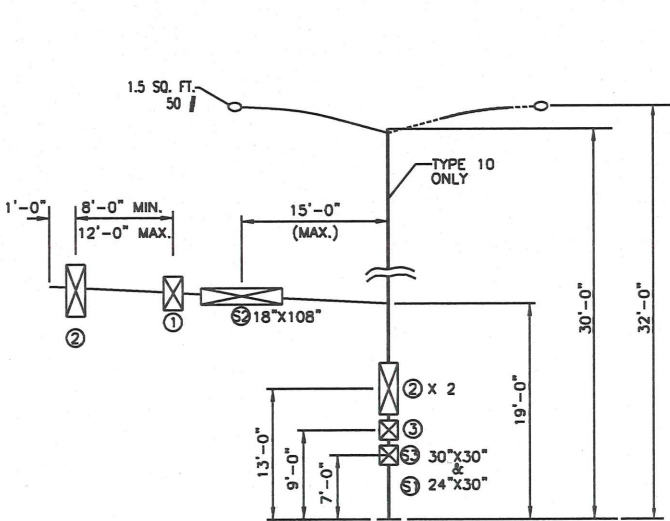
| POLE DATA             |                     |                                       |                  |        |        |        |        |       |     |          |           |              |                |     |                                |                                    |
|-----------------------|---------------------|---------------------------------------|------------------|--------|--------|--------|--------|-------|-----|----------|-----------|--------------|----------------|-----|--------------------------------|------------------------------------|
| POLE DESCRIPTION      | MAST ARM LENGTH "E" | SHAFT DIMENSIONS BASE O.D. X END O.D. | SHAFT LENGTH "A" | 0.1196 | 0.1793 | 0.2391 | 0.3125 | 0.375 | 0.5 | BASE "D" | BASE "BC" | BASE THK "T" | BASE I.D. "ID" | QTY | ANCHOR BOLT DIA X LEN X THD LG | ANCHOR TEMPLATE BC X OD X ID X THK |
| TYPE 9-21XX-WI15TR02  | 15'-0" THRU 30'0"   | 11 7/16" X 8 9/16"                    | 21'-0"           | -      | -      | 21'-0" | -      | -     | -   | 19"      | 15"       | 2"           | 9"             | 6   | 1 1/2" X 52" X 10"             | 15" X 18" X 12" X 1/2"             |
| TYPE 12-21XX-WI15TR02 | 35'-0" THRU 55'0"   | 19 1/2" X 16 5/8"                     | 21'-0"           | -      | -      | -      | 21'-0" | -     | -   | 29"      | 24"       | 2"           | 11 3/4"        | 6   | 1 3/4" X 86" X 11"             | 24" x 27 1/2" X 20 1/2" X 1/2"     |

| POLE DATA                 |                     |                                          |                  |        |        |        |        |       |     |          |           |              |                |     |                                   |                 |                 |                                       |
|---------------------------|---------------------|------------------------------------------|------------------|--------|--------|--------|--------|-------|-----|----------|-----------|--------------|----------------|-----|-----------------------------------|-----------------|-----------------|---------------------------------------|
| POLE DESCRIPTION          | MAST ARM LENGTH "E" | SHAFT DIMENSIONS<br>BASE O.D. X END O.D. | SHAFT LENGTH "A" | 0.1196 | 0.1793 | 0.2391 | 0.3125 | 0.375 | 0.5 | BASE "D" | BASE "BC" | BASE THK "T" | BASE I.D. "ID" | QTY | ANCHOR BOLT<br>DIA X LEN X THD LG | LUMINAIRE "BCW" | LUMINAIRE "LPW" | ANCHOR TEMPLATE<br>BC X OD X ID X THK |
| TYPE 10X-30XX-XX-WI15TR02 | 15'-0" THRU 30'0"   | 11 7/16" X 7 5/16"                       | 30'-0"           | -      | -      | -      | 30'-0" | -     | -   | 19"      | 15"       | 2"           | 9"             | 6   | 1 1/2" X 52" X 10"                | 11"             | 14"             | 15" X 18" X 12" X 1/2"                |
| TYPE 13X-30XX-XX-WI15TR02 | 35'-0" THRU 55'0"   | 19 1/2" X 15 3/8"                        | 30'-0"           | -      | -      | -      | 30'-0" | -     | -   | 29"      | 24"       | 2"           | 11 3/4"        | 6   | 1 3/4" X 86" X 11"                | 18 1/2"         | 21 1/2"         | 24" x 27 1/2" X 20 1/2" X 1/2"        |

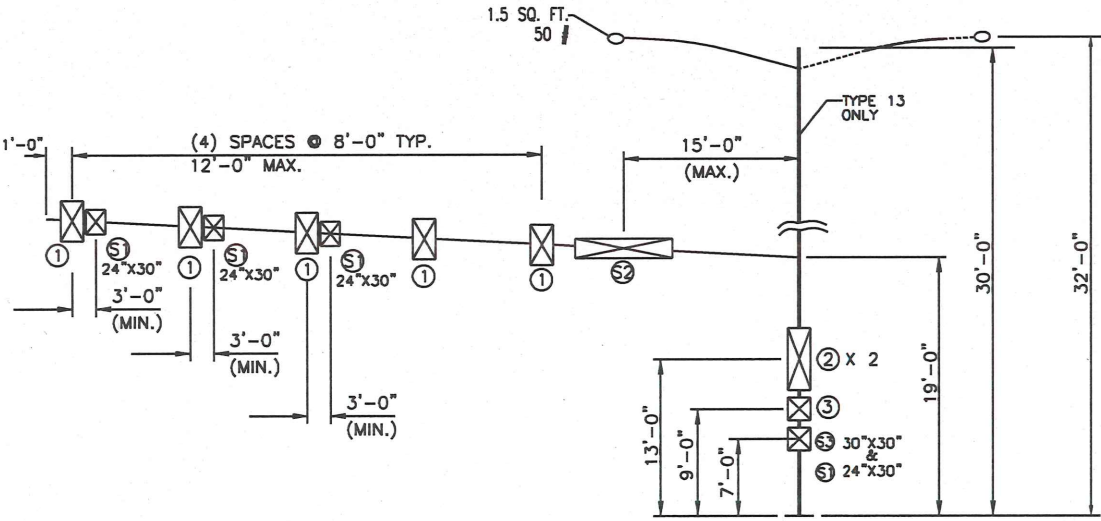
| MAST ARM DATA       |                  |                 |              |                 |      |                 |                |             |                |                       |            |            |                |               |                           |                |               |                   |                     |           |            |
|---------------------|------------------|-----------------|--------------|-----------------|------|-----------------|----------------|-------------|----------------|-----------------------|------------|------------|----------------|---------------|---------------------------|----------------|---------------|-------------------|---------------------|-----------|------------|
| MAST ARM LENGTH "E" | BASE SEC BASE OD | BASE SEC END OD | BASE SEC THK | BASE SEC LENGTH | SLIP | END SEC BASE OD | END SEC END OD | END SEC THK | END SEC LENGTH | SEE CONNECTION DETAIL | FLANGE "L" | FLANGE "J" | FLANGE THK."H" | FLANGE ID "P" | HHCS SIZE DIA. X LEN. "K" | FLANGE THK."I" | PLATE THK."M" | CONN LOCATION "G" | ARM MTG. HEIGHT "N" | ANGLE "Ø" | MAX CUBICS |
| 15'                 | 8"               | 5 15/16"        | 0.1793"      | 15'             | -    | -               | -              | -           | -              | E1                    | 16"        | 13 1/2"    | 2"             | 5 3/4"        | (6) 1" X 6"               | 2"             | 3/8"          | 19'-0"            | 19'-9"              | 3         | 441        |
| 20'                 | 8"               | 5 1/4"          | 0.1793"      | 20'             | -    | -               | -              | -           | -              | E1                    | 16"        | 13 1/2"    | 2"             | 5 3/4"        | (6) 1" X 6"               | 2"             | 3/8"          | 19'-0"            | 20'-1"              | 3         | 551        |
| 25'                 | 9 3/8"           | 5 15/16"        | 0.1793"      | 25'             | -    | -               | -              | -           | -              | E1                    | 16"        | 13 1/2"    | 2"             | 7 1/4"        | (6) 1" X 6"               | 2"             | 3/8"          | 19'-0"            | 20'-4"              | 3         | 660        |
| 30'                 | 9 3/8"           | 5 1/4"          | 0.1793"      | 30'             | -    | -               | -              | -           | -              | E1                    | 16"        | 13 1/2"    | 2"             | 7 1/4"        | (6) 1" X 6"               | 2"             | 3/8"          | 19'-0"            | 20'-7"              | 3         | 770        |
| 35'                 | 14 7/8"          | 10 1/16"        | 0.3125"      | 35'             | -    | -               | -              | -           | -              | E2                    | 26"        | 21 3/4"    | 2 1/4"         | 9 1/2"        | (8) 1 1/2" X 7 1/2"       | 2 1/4"         | 3/8"          | 19'-0"            | 20'-10"             | 3         | 1328       |
| 40'                 | 14 7/8"          | 9 3/8"          | 0.375"       | 40'             | -    | -               | -              | -           | -              | E2                    | 26"        | 21 3/4"    | 2 1/4"         | 9 1/2"        | (8) 1 1/2" X 7 1/2"       | 2 1/4"         | 3/8"          | 19'-0"            | 21'-1"              | 3         | 1620       |
| 45'                 | 16 1/4"          | 10 1/16"        | 0.375"       | 45'             | -    | -               | -              | -           | -              | E2                    | 26"        | 21 3/4"    | 2 1/4"         | 9 1/2"        | (8) 1 1/2" X 7 1/2"       | 2 1/4"         | 3/8"          | 19'-0"            | 21'-4"              | 3         | 1911       |
| 50'                 | 16 1/4"          | 13 1/2"         | 0.5"         | 20'-0"          | 23"  | 14 3/8"         | 10"            | 0.2391"     | 31'-11"        | E2                    | 26"        | 21 3/4"    | 2 1/4"         | 9 1/2"        | (8) 1 1/2" X 7 1/2"       | 2 1/4"         | 3/8"          | 19'-0"            | 21'-7"              | 3         | 2203       |
| 55'                 | 16 1/4"          | 13 1/2"         | 0.5"         | 20'-0"          | 23"  | 14 3/8"         | 9 5/16"        | 0.2391"     | 36'-11"        | E2                    | 26"        | 21 3/4"    | 2 1/4"         | 9 1/2"        | (8) 1 1/2" X 7 1/2"       | 2 1/4"         | 3/8"          | 19'-0"            | 21'-11"             | 3         | 2495       |

| LUMINAIRE ARM  |                                  |        |
|----------------|----------------------------------|--------|
| ARM LENGTH "E" | END O.D. X BASE O.D. X THICKNESS | RISE   |
| 6'-0"          | 2 3/8" X 3 5/16" X .120"         | 2'-6"± |
| 8'-0"          | 2 3/8" X 3 11/16" X .120"        | 2'-6"± |
| 10'-0"         | 2 3/8" X 3 7/8" X .120"          | 2'-6"± |
| 12'-0"         | 2 3/8" X 4 5/16" X .120"         | 2'-6"± |
| 15'-0"         | 2 3/8" X 4 5/16" X .120"         | 2'-6"± |

| APPURTENANCE LOADS |                      |                      |
|--------------------|----------------------|----------------------|
| NO.                | AREA FRONT (SQ. FT.) | WEIGHT 0" ICE (LBS.) |
| 1                  | 8.67                 | 60.0                 |
| 2                  | 13.33                | 105                  |
| 3                  | 3.23                 | 28                   |
| S1                 | 5.0                  | 15.0                 |
| S2                 | 13.5                 | 42.0                 |
| S3                 | 6.25                 | 19.0                 |



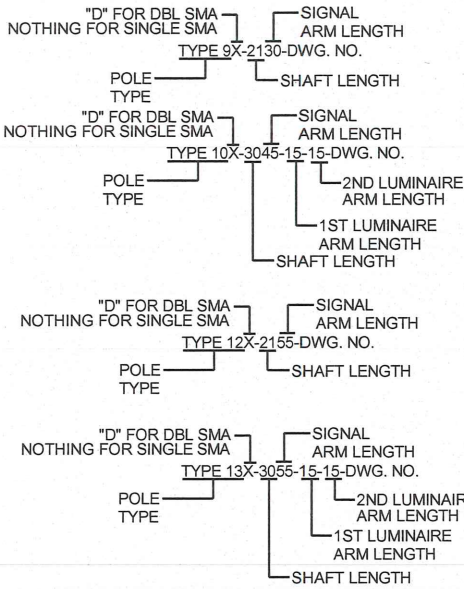
ARMS 15' THRU 30'  
TYPE 9 & 10



ARMS 35' THRU 55'  
TYPE 12 & 13

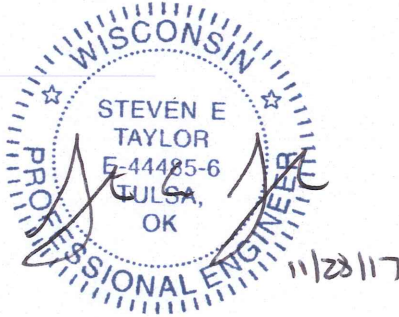
## GENERAL NOTES

- NOTES:**  
1. WORK THIS SHEET WITH DWG WI15TR01.  
2. FINISH COATING: HOT DIP GALVANIZE PER ASTM A-153.  
3. DESIGN NUMBER NOMENCLATURE:



4. CALCULATE CUBICS BASED UPON EXAMPLE BELOW AND COMPARE RESULTS WITH THOSE LISTED IN SIGNAL ARM DATA TABLE.

**EXAMPLE:**  
13.33 SQ.FT. X 29.5' = 393.2 CUBICS  
8.67 SQ.FT. X 21.5' = 186.4 CUBICS  
5 SQ.FT. X 26.5' = 132.5 CUBICS  
13.5 SQ.FT. X 15' = 202.5 CUBICS  
TOTAL = 915 CUBICS



|                                                                                                                                                                                    |                |                              |         |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------------|---------|--------------|
| D                                                                                                                                                                                  | 11/17          | PER CUSTOMER REVIEW COMMENTS | JM      | GM           |
| C                                                                                                                                                                                  | 11/17          | PER CUSTOMER REVIEW COMMENTS | JM      | GM           |
| B                                                                                                                                                                                  | 5/17           | PER CUSTOMER REVIEW COMMENTS | JM      | GM           |
| A                                                                                                                                                                                  | 2/16           | PER CUSTOMER REVIEW COMMENTS | JM      | GM           |
| REV.                                                                                                                                                                               | DATE           | DESCRIPTION                  | BY      | APPR         |
| <b>Amaron POLE PRODUCTS DIVISION</b>                                                                                                                                               |                |                              |         |              |
| <b>STATE OF WISCONSIN</b>                                                                                                                                                          |                |                              |         |              |
| <b>TYPE 9, 10, 11, 12</b>                                                                                                                                                          |                |                              |         |              |
| <b>DATA</b>                                                                                                                                                                        |                |                              |         |              |
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| DRAWN                                                                                                                                                                              | ST             | DATE 9/16/15                 | APPR JM | DATE 9/16/15 |
| DRAWING NUMBER                                                                                                                                                                     | REVISION SHEET |                              | SCALE   |              |
| WI15TR02                                                                                                                                                                           |                | D 1 OF 1                     | NTS     |              |