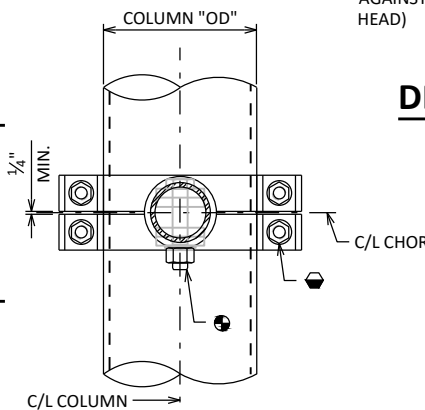


NLIT IS TURNED ELEMENT

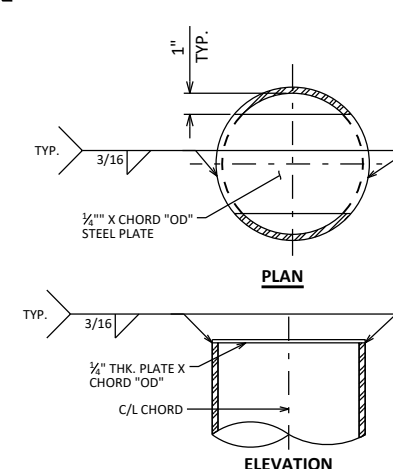


✱ PLACE TACK WELD EVERY OTHER FLAT TO SECURE NUT.  
ALTERNATE: USE 1/2" THK. PL. AND DRILL AND TAP HOLE FOR BOLT.

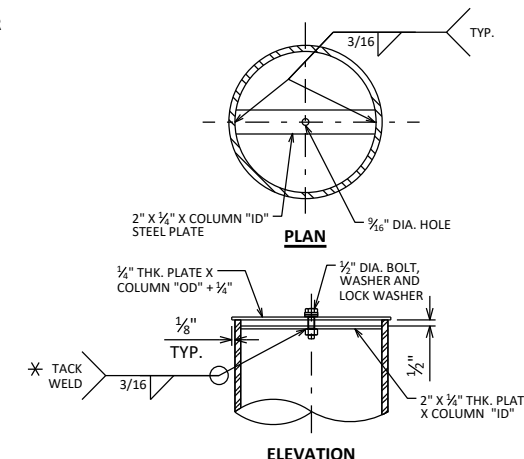
MINIMUM VALUES SHOWN. ALL CONNECTIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURAL LOADS.

|   |      |                  |               |
|---|------|------------------|---------------|
|   |      |                  |               |
| NO.   | DATE | REVISION         | BY            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION<br>STRUCTURES DESIGN SECTION |      |                  |               |
| <b>UPDATED:</b>   |      | <b>JAN. 2023</b> |               |
| DRAWN<br>BY   |      | BOS              | PLANS<br>CK'D |
| <b>MONOTUBE &amp;<br/>2-CHORD TRUSS<br/>CONNECTIONS 1</b>                       |      | SHEET I          |               |

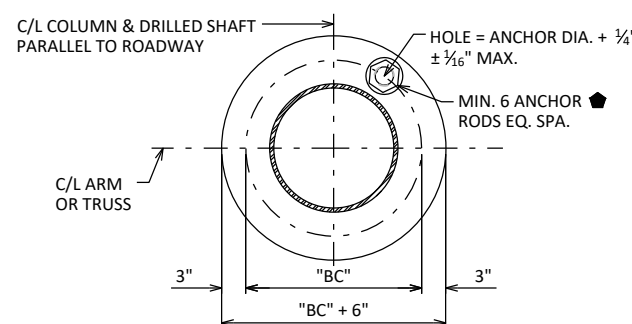
SCALE - 30



## CANTILEVERS ONLY

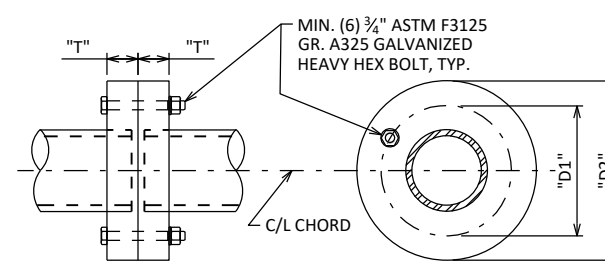


LOOKING AT F.F. OF STRUCTURE.  
ALTERNATE BASE PLATE DESIGNS ALLOWED.



"BC" = COLUMN "OD" + 6'

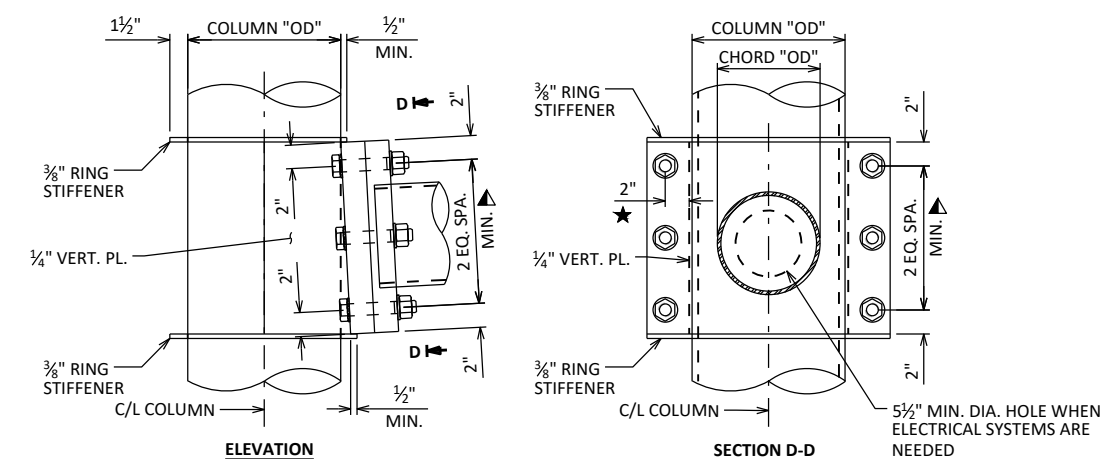
ANCHOR SIZE AND ORIENTATION TO BE VERIFIED WITH SHOP DRAWINGS.

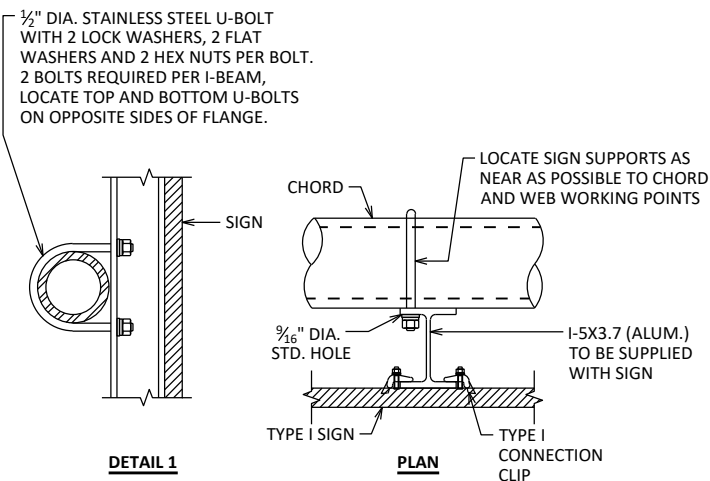


"D1" = COLUMN "OD" + (1.5 x DB)

"D1" = COLUMN "OD" + (1.5 x DB)  
 "D2" = COLUMN "OD" + (3 x DB)  
 "T" = (BY DESIGN)  
 DB = BOLT DIAMETER (BY DESIGN)

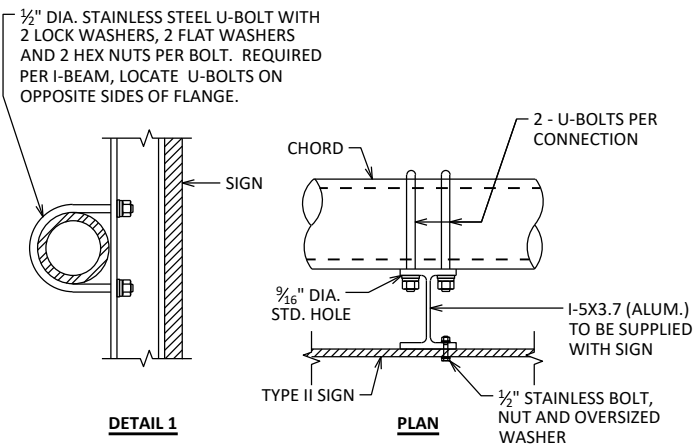
▲ MIN. (6) 1" GALVANIZED A325 HEAVY HEX BOLT, NUT, DTI WASHER AND WASHER  
★ MIN. DIMENSIONS MEASURED FROM EXT. FACE OF VERTICAL PLATE.





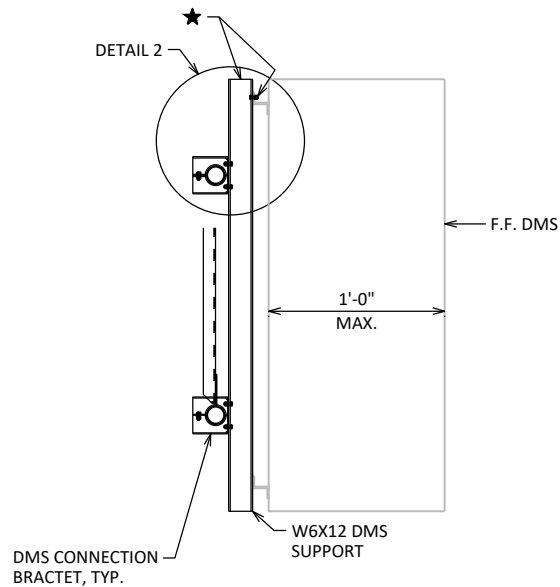
## 2-CHORD TRUSS SIGN CONNECTION

TYPE I SIGN PANEL SHOWN.  
SEE SIGN PLATE MANUAL A4-7A AND A4-7B FOR DETAILS.  
ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH SIGN PANEL, HARDWARE TO BE SUPPLIED BY THE CONTRACTOR.



## MONOTUBE SIGN CONNECTION

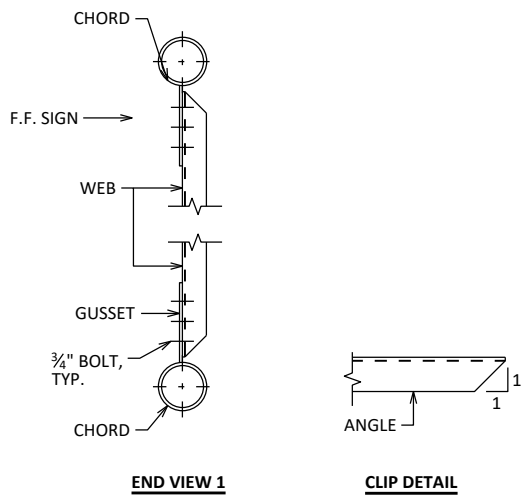
TYPE II SIGN PANEL SHOWN.  
SEE SIGN PLATE MANUAL A4-7A AND A4-7B FOR DETAILS.  
ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH SIGN PANEL, HARDWARE TO BE SUPPLIED BY THE CONTRACTOR.



## SECTION THRU TRUSS - DMS

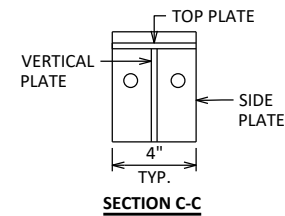
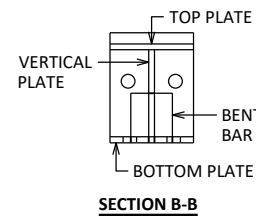
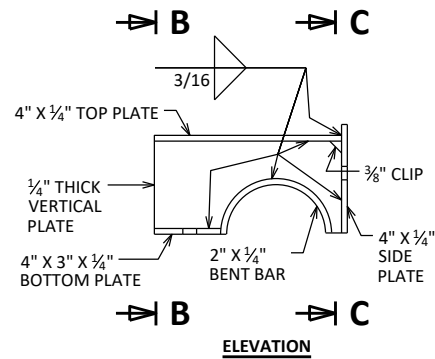
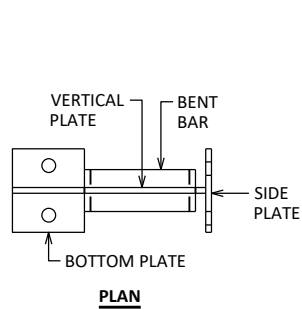
FOR DMS/CATWALK CONNECTIONS

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. 1/2" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12



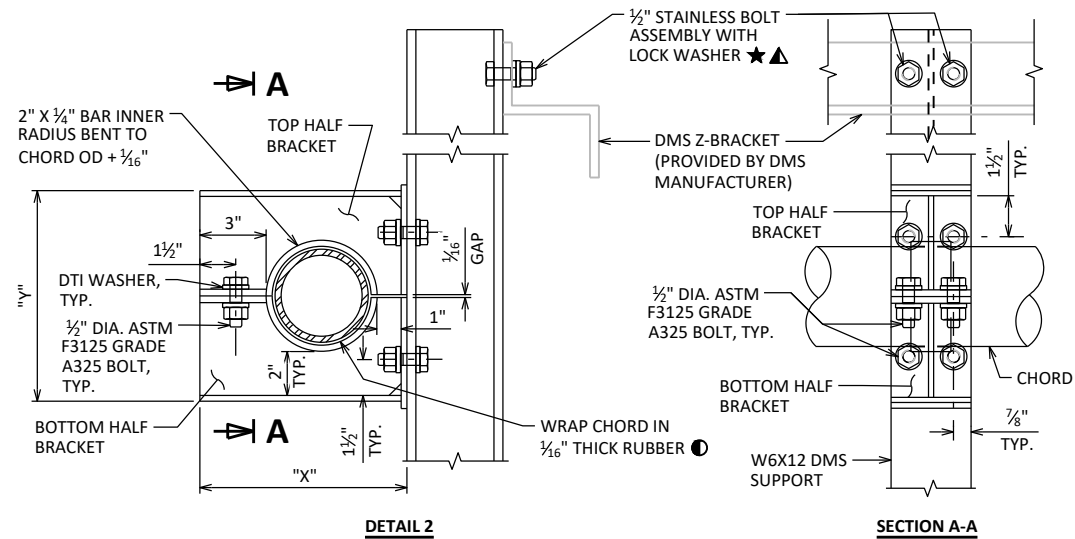
## TRUSS CONNECTION DETAILS

MEMBER ORIENTATION FOR BOLTED CONNECTIONS SHOWN, WELDED CONNECTIONS SIMILAR.  
ANGLES PREFERRED, OTHER WEB DESIGNS ALLOWED.



## DMS WELDED PLATE CONNECTION DETAILS

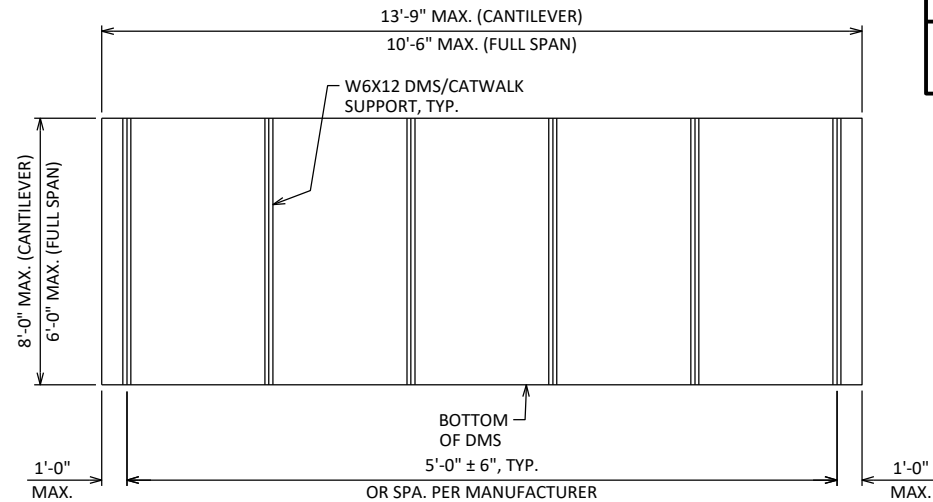
TOP HALF OF BRACKET SHOWN, BOTTOM HALF SIMILAR.



| CHORD "OD" | "X"            | "Y"            |
|------------|----------------|----------------|
| "OD"       | "OD" + 4 3/16" | "OD" + 5 1/16" |

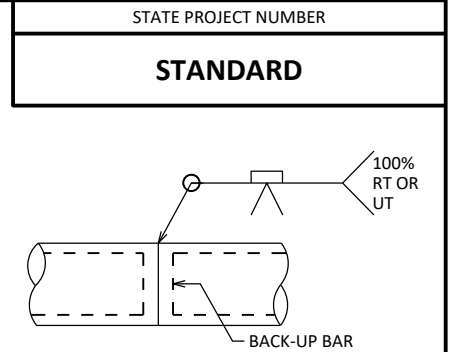
## TYPICAL DMS CONNECTION

- NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD. SPEC. 506.2.6.1
- ▲ IF DMS CONNECTION BRACKET IS USED WITH A TYPE II SIGN PANEL, THE BOLT HOLE MUST BE GALVANIZED AND A STAINLESS WASHER USED BETWEEN THE I-BEAM AND SIGN PANEL.



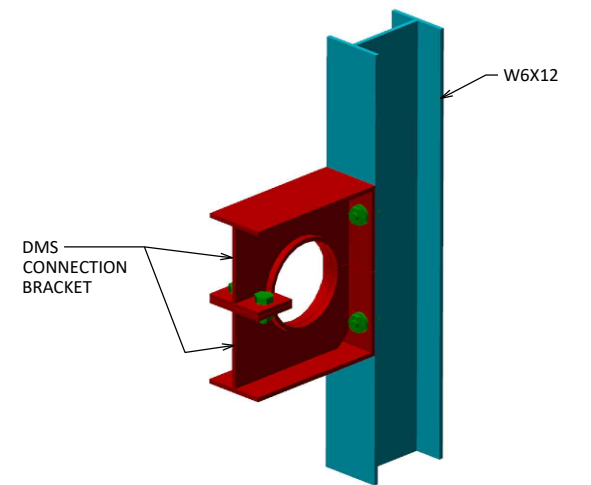
## DMS MOUNTING POST DETAIL

POST SPACING MAY BE ADJUSTED AS REQUIRED IF SPACING CONFLICTS WITH GUSSET PLATES OF TRUSS WITHIN TOLERANCES NOTED.



## CHORD SPLICE

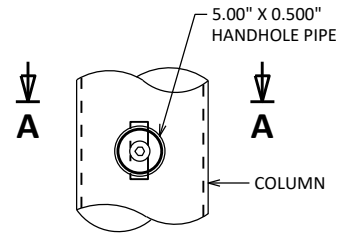
SEPARATE OPTIONAL SPLICE FROM GUSSET PLATES BY 6" MIN.



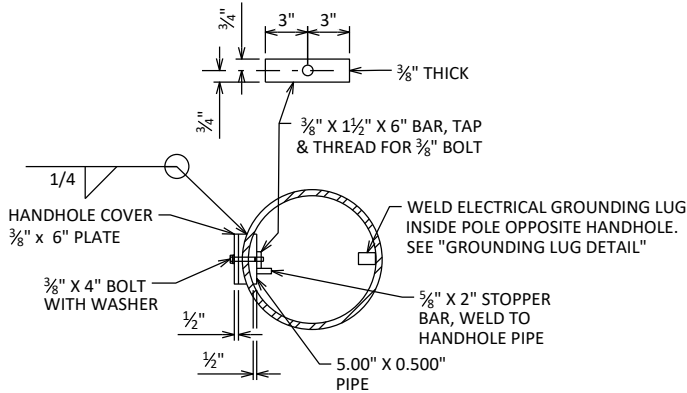
## 3-D VIEW OF DMS CONNECTION

CHORD NOT SHOW FOR CLARITY

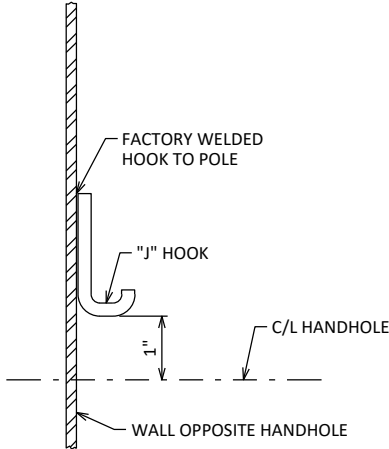
| NO.   | DATE | REVISION | BY             |
|---|------|----------|----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION<br>STRUCTURES DESIGN SECTION |      |          |                |
| UPDATED: OCT. 2023  |      |          |                |
| DRAWN BY  |      | BOS      | PLANS CK'D BOS |
| MONOTUBE & 2-CHORD TRUSS CONNECTIONS 2  |      | SHEET II |                |



ELEVATION

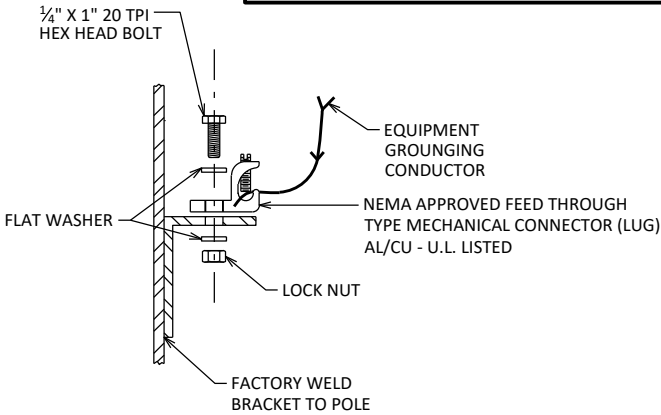


SECTION A-A



TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF THE COLUMN CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



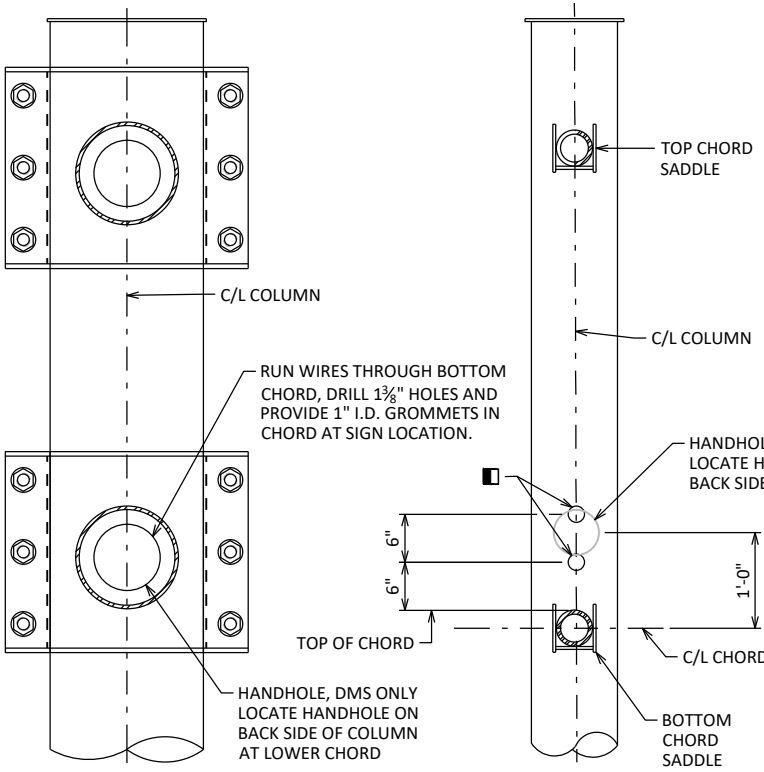
GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

**HANDHOLE DETAILS**

HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

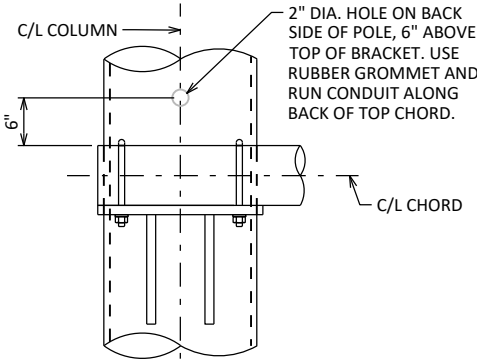
UNLESS OTHERWISE NOTED, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



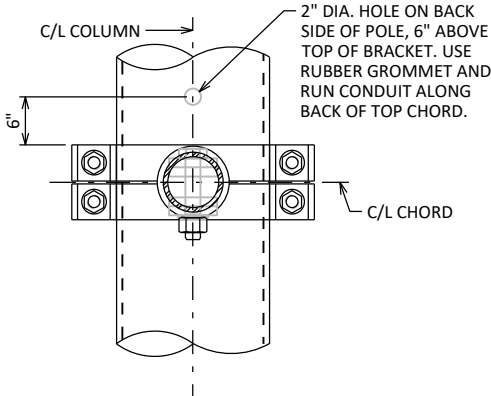
2-CHORD CANTILEVER

2-CHORD FULL SPAN

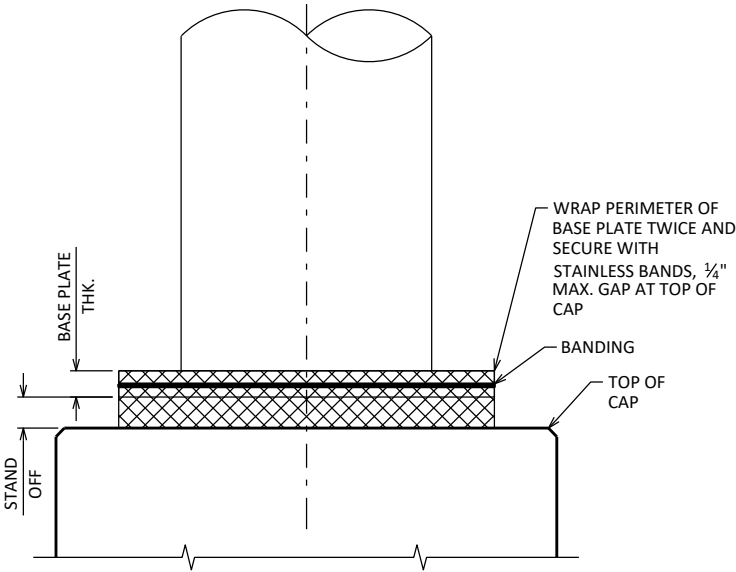
SADDLE CONNECTION SHOWN, OTHERS SIMILAR



FULL SPAN STIFFENED BEARING CONNECTION

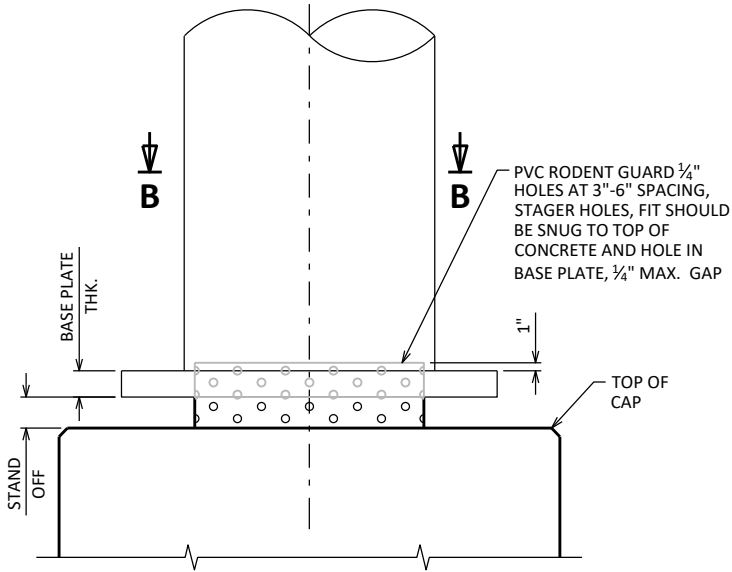


FULL SPAN CLAMP CONNECTION



RODENT SCREEN

ONLY REQ'D WHEN ELECTRICAL DEVICES ARE PRESENT  
ANCHOR RODS NOT SHOWN

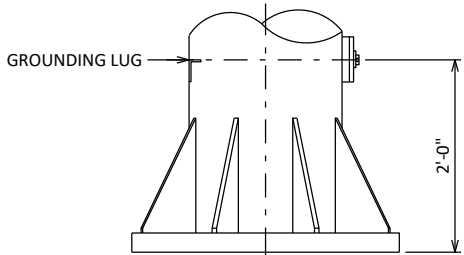


RODENT SCREEN - ALTERNATE

ONLY REQ'D WHEN ELECTRICAL DEVICES ARE PRESENT  
ANCHOR RODS NOT SHOWN

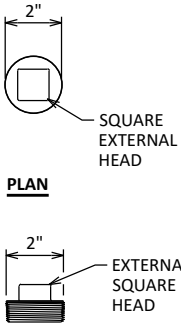
CONDUIT HOLE LOCATIONS

2" HOLE WITH STANDARD PIPE THREADS, USE  
THREADED CONDUIT PLUG FOR UNUSED HOLES



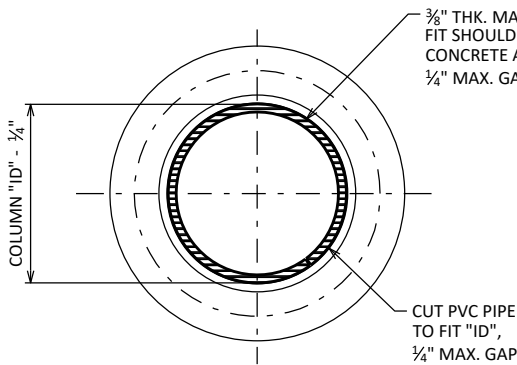
GROUNDING LUG LOCATION

LOOKING AT THE F.F. OF STRUCTURE



ELEVATION

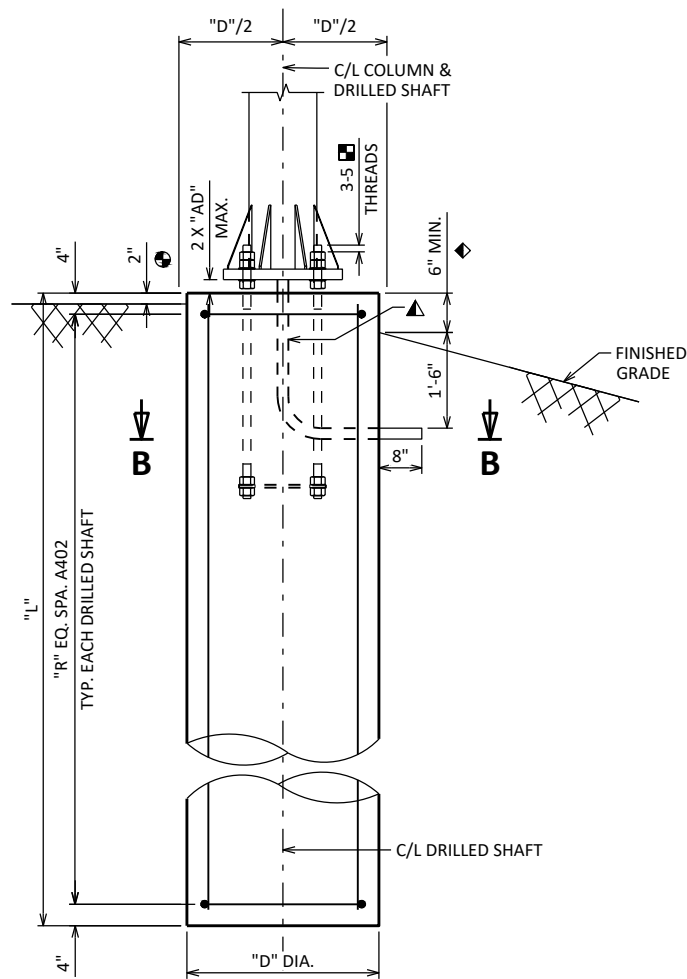
CONDUIT PLUG DETAILS



SECTION B-B

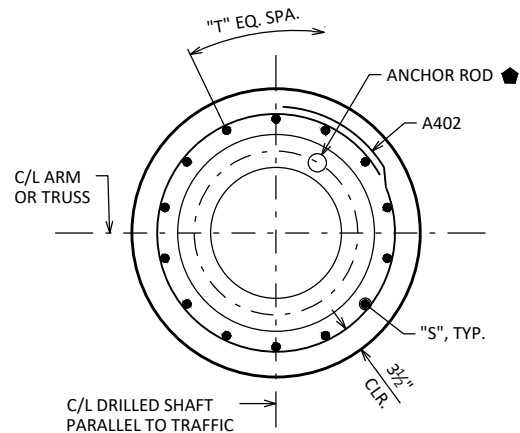
| NO.   | DATE | REVISION  | BY             |
|---|------|-----------|----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION<br>STRUCTURES DESIGN SECTION |      |           |                |
| UPDATED: OCT. 2024  |      |           |                |
| DRAWN BY  |      | BOS       | PLANS CK'D BOS |
| MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS                                     |      | SHEET III |                |

SCALE = 2:0



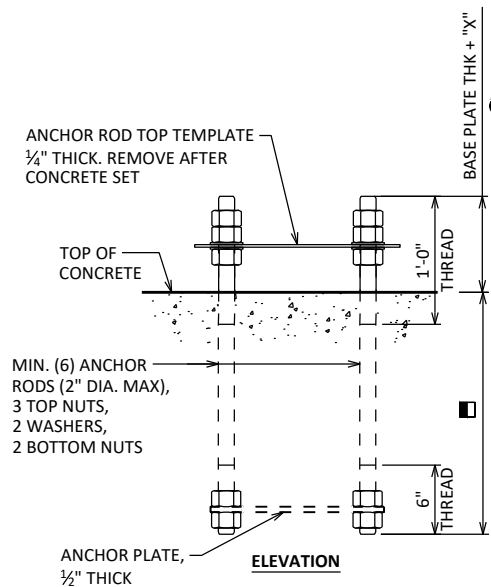
## ELEVATION

- TYPICAL FOR DRILLED SHAFT FOOTINGS INSTALLED ADJACENT TO SIDEWALKS OR BEHIND CURB AND GUTTER ON LOW SPEED ROADS. TOP OF SHAFT SHALL BE FLUSH IF SURROUNDED BY CONCRETE AND 2" ABOVE FINISHED GRADE FOR ALL OTHER SURFACES.
- ◆ TYPICAL FOR EACH DRILLED SHAFT FOOTING INSTALLED ADJACENT TO ROADWAY FACILITIES OR ON SIDE SLOPES WITHIN CLEAR ZONE. BARRIER OR BEAMGUARD MAY BE REQUIRED.



## SECTION B-B

TYPICAL FOR EACH DRILLED SHAFT FOOTING



## ANCHOR ROD ASSEMBLY DETAILS

- ANCHOR RODS PER ASSEMBLY TO BE DESIGNED BY CONTRACTOR AND SHOWN ON SHOP DRAWINGS. SHOW DIAMETER, NUMBER, ORIENTATION AND EMBEDMENT OF ANCHOR RODS.

CENTER ANCHOR ROD ASSEMBLY AND ENSURE ASSEMBLY IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE TOP OF CONCRETE AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHORS.


## FOUNDATION DIMENSION DATA

| STANDARD<br>DESIGN TYPE | FOUNDATION DIMENSIONS |       |        |     |       |     |           |
|-------------------------|-----------------------|-------|--------|-----|-------|-----|-----------|
|                         | "A"                   | "D"   | "L"    | "R" | "S"   | "T" | "BC" MAX. |
| MFI                     | 1'-11"                | 2'-6" | 12'-0" | 12  | A801  | 10  | 1'-5"     |
| MCI/MCII/TFI            | 1'-11"                | 2'-6" | 17'-0" | 17  | A801  | 10  | 1'-5"     |
| MFII                    | 2'-5"                 | 3'-0" | 13'-0" | 13  | A801  | 14  | 1'-10"    |
| TCI                     | 2'-5"                 | 3'-0" | 18'-0" | 18  | A801  | 14  | 1'-10"    |
| TFII                    | 2'-5"                 | 3'-0" | 20'-0" | 20  | A801  | 14  | 1'-10"    |
| MCII/TCII/TFIII         | 2'-11"                | 3'-6" | 18'-0" | 18  | A901  | 14  | 2'-4"     |
| MCIV/TFIV               | 2'-11"                | 3'-6" | 23'-0" | 23  | A901  | 14  | 2'-4"     |
| TCIII                   | 3'-5"                 | 4'-0" | 23'-0" | 23  | A1001 | 14  | 2'-10"    |
| TCIV                    | 3'-5"                 | 4'-0" | 28'-0" | 28  | A1001 | 14  | 2'-10"    |

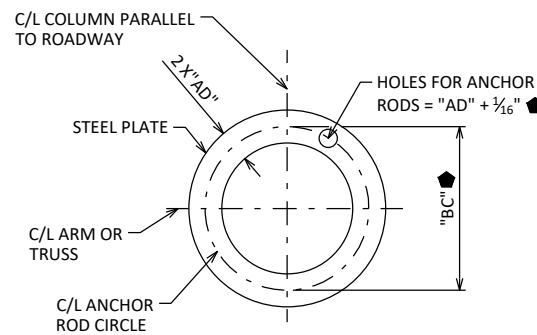
## ESTIMATED QUANTITIES - FOUNDATION

| STANDARD<br>DESIGN TYPE | CONCRETE<br>MASONRY | STEEL<br>REINFORCEMENT<br>H5 | FOUNDATION DRILLING<br>(DIA.) (LF) |     |     |     |
|-------------------------|---------------------|------------------------------|------------------------------------|-----|-----|-----|
|                         | (CY)                | (LBS)                        | 30"                                | 36" | 42" | 48" |
| MFI                     | 2.2                 | 380                          | 12                                 | --- | --- | --- |
| MCI/MCII/TFI            | 3.1                 | 540                          | 17                                 | --- | --- | --- |
| MFII                    | 3.4                 | 560                          | ---                                | 13  | --- | --- |
| TCI                     | 4.7                 | 780                          | ---                                | 18  | --- | --- |
| TFII                    | 5.2                 | 870                          | ---                                | 20  | --- | --- |
| MCII/TCII/TFIII         | 6.4                 | 980                          | ---                                | --- | 18  | --- |
| MCIV/TFIV               | 8.2                 | 1,250                        | ---                                | --- | 23  | --- |
| TCIII                   | 10.7                | 1,570                        | ---                                | --- | --- | 23  |
| TCIV                    | 13.0                | 1,910                        | ---                                | --- | --- | 28  |

※※ QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON A SINGLE ※※  
DRILLED SHAFT. MULTIPLY BY 2 FOR FULL SPAN STRUCTURES.

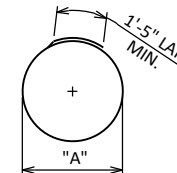
| ANCHOR<br>DIAMETER<br>"AD" | MAX. STICK<br>OUT  |
|----------------------------|---|
|                            | "X"   |
| 1"                         | 5"  |
| 1 1/4"                     | 6"  |
| 1 1/2"                     | 7"  |
| 1 3/4"                     | 8"  |
| 2"                         | 9"  |

- ADD BASE PLATE THICKNESS TO VALUE SHOWN FOR MAX. STICK OUT DIMENSION. CONTRACTOR TO COORDINATE WITH FABRICATOR FOR PROPER ANCHOR PLACEMENT.



## ANCHOR PLATE & TOP TEMPLATE

- ANCHOR SIZE, BOLT CIRCLE, AND POSITION  
TO BE VERIFIED WITH SHOP DRAWINGS.



**A402**

## LEGEND

- ANCHOR ROD STICK OUT IN FINAL CONDITION. EXCESSIVE STICK OUT BEYOND DIMENSION SHOWN TO BE CUT OFF AFTER PLACING STRUCTURE. ANCHORS TO BE ULTRASONIC TESTED TO DETERMINE EMBEDDED LENGTH MEETS REQUIREMENTS PRIOR TO CUTTING. NOTE REMAINING LENGTH ON AS-BUILT.**
- 2 - 2" DIA. NON-METALLIC CONDUITS. INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.**

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

STATE PROJECT NUMBER

## STANDARD

## BILL OF BARS

### STANDARD TYPE MFI

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                   |
|----------|------|------------|--------|------|------------|----------------------------|
| A801     |      | 10         | 11'-8" |      |            | DRILLED SHAFT - VERTICAL   |
| A402     |      | 13         | 7'-6"  | X    |            | DRILLED SHAFT - HORIZONTAL |

## STANDARD TYPES MCI/MCII/TFI

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                   |
|----------|------|------------|--------|------|------------|----------------------------|
| A801     |      | 10         | 16'-8" |      |            | DRILLED SHAFT - VERTICAL   |
| A402     |      | 18         | 7'-6"  | X    |            | DRILLED SHAFT - HORIZONTAL |

STANDARD TYPE MF1

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                   |
|----------|------|------------|--------|------|------------|----------------------------|
| A801     |      | 14         | 12'-8" |      |            | DRILLED SHAFT - VERTICAL   |
| A402     |      | 14         | 9'-1"  | X    |            | DRILLED SHAFT - HORIZONTAL |

### STANDARD TYPE TCI

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                   |
|----------|------|------------|--------|------|------------|----------------------------|
| A801     |      | 14         | 17'-8" |      |            | DRILLED SHAFT - VERTICAL   |
| A402     |      | 19         | 9'-1"  | X    |            | DRILLED SHAFT - HORIZONTAL |

### STANDARD TYPE TFI

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                   |
|----------|------|------------|--------|------|------------|----------------------------|
| A801     |      | 14         | 19'-8" |      |            | DRILLED SHAFT - VERTICAL   |
| A402     |      | 21         | 9'-1"  | X    |            | DRILLED SHAFT - HORIZONTAL |

### STANDARD TYPES MCIII/TCII/TFIII

| BAR MARK | COAT | NO. REQ'D. | LENGTH | BENT | BAR SERIES | LOCATION                   |
|----------|------|------------|--------|------|------------|----------------------------|
| A901     |      | 14         | 17'-8" |      |            | DRILLED SHAFT - VERTICAL   |
| A402     |      | 19         | 10'-7" | X    |            | DRILLED SHAFT - HORIZONTAL |

## STANDARD TYPES MCIV/TFIV

| BAR<br>MARK | COAT | NO.<br>REQ'D. | LENGTH | BENT | BAR<br>SERIES | LOCATION                   |
|-------------|------|---------------|--------|------|---------------|----------------------------|
| A901        |      | 14            | 22'-8" |      |               | DRILLED SHAFT - VERTICAL   |
| A402        |      | 24            | 10'-7" | X    |               | DRILLED SHAFT - HORIZONTAL |

### STANDARD TYPE TCII

| BAR<br>MARK | COAT | NO.<br>REQ'D. | LENGTH | BENT | BAR<br>SERIES | LOCATION                   |
|-------------|------|---------------|--------|------|---------------|----------------------------|
| A1001       |      | 14            | 22'-8" |      |               | DRILLED SHAFT - VERTICAL   |
| A402        |      | 24            | 12'-2" | X    |               | DRILLED SHAFT - HORIZONTAL |

### STANDARD TYPE TCIV

| BAR<br>MARK | COAT | NO.<br>REQ'D. | LENGTH | BENT | BAR<br>SERIES | LOCATION                   |
|-------------|------|---------------|--------|------|---------------|----------------------------|
| A1001       |      | 14            | 27'-8" |      |               | DRILLED SHAFT - VERTICAL   |
| A402        |      | 29            | 12'-2" | X    |               | DRILLED SHAFT - HORIZONTAL |

✱ ✱ VALUES IN BAR TABLES ARE FOR A SINGLE FOUNDATION ONLY. MULTIPLY BY 2 FOR FULL ✱ ✱  
SPAN STRUCTURES.

|   |      |             |               |
|---|------|-------------|---------------|
|   |      |             |               |
| NO.   | DATE | REVISION    | BY            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION<br>STRUCTURES DESIGN SECTION |      |             |               |
| <b>UPDATED:      OCT. 2024</b>  |      |             |               |
|   |      | DRAWN<br>BY | PLANS<br>CK'D |
|   |      | BOS         | BOS           |
| <b>MONOTUBE &amp;<br/>2-CHORD TRUSS<br/>FOUNDATIONS</b>                         |      | SHEET IV    |               |
|   |      |             |               |

SCALE = 3.0