

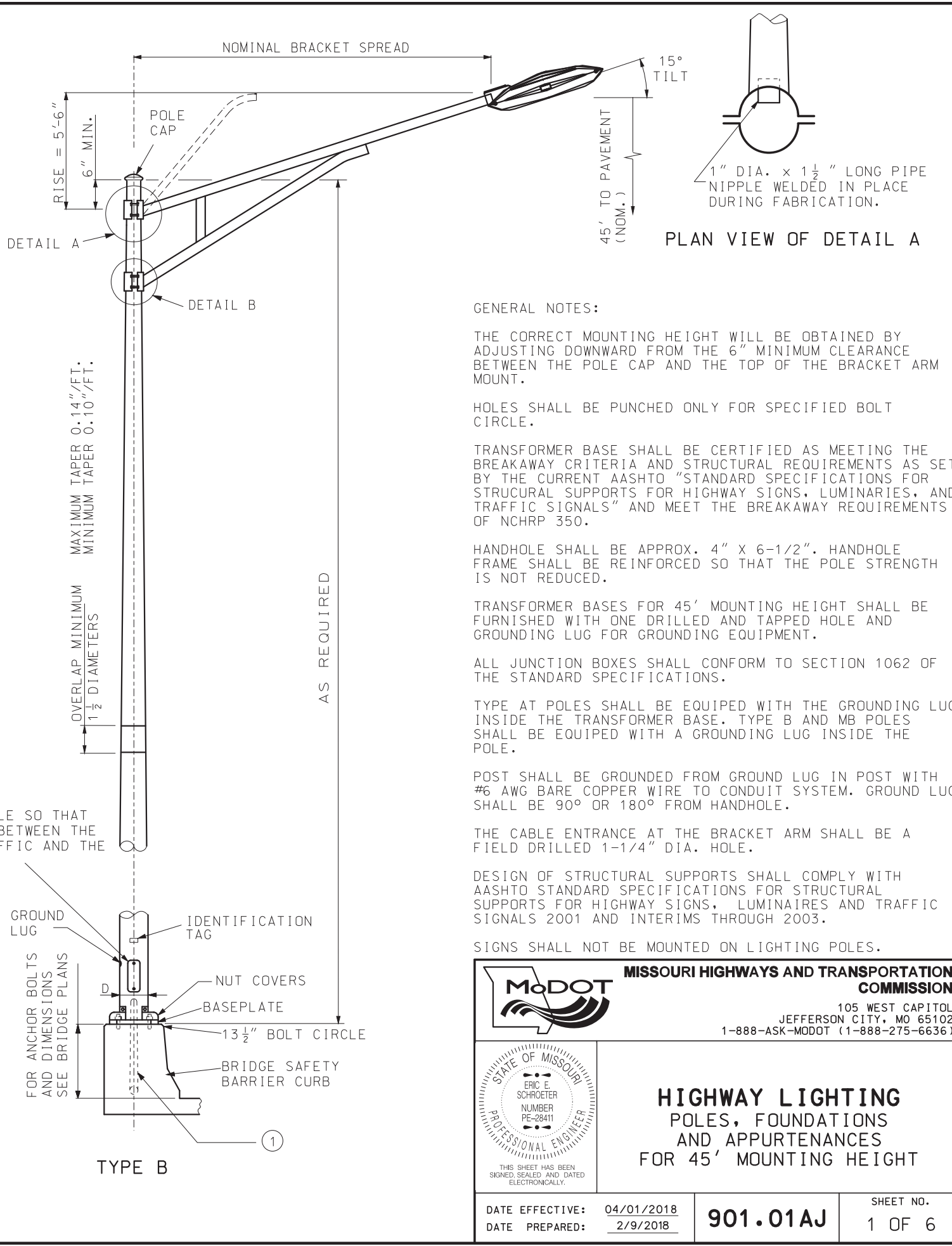
DETAIL A
SINGLE MOUNT AND UPPER MOUNT
FOR TRUSSED

DETAIL B
LOWER MOUNT FOR TRUSSED

**TYPICAL BRACKET
ARM MOUNTING**

ALIGN HANDHOLE SO THAT
THE POLE IS BETWEEN THE
ONCOMING TRAFFIC AND THE
HANDHOLE.

① RIGID CONDUIT SYSTEM. WIRES SHALL BE
SPliced AT FUSED CONNECTOR IN POLE BASE.
IF CABLE-CONDUIT IS SPECIFIED, CUT CONDUIT
AWAY FROM THE CABLES WHERE CABLE-CONDUIT
ENTERS THE RIGID CONDUIT SYSTEM. (SEE
DRAWING 901.02)



PLAN VIEW OF DETAIL A

GENERAL NOTES:

THE CORRECT MOUNTING HEIGHT WILL BE OBTAINED BY
ADJUSTING DOWNWARD FROM THE 6" MINIMUM CLEARANCE
BETWEEN THE POLE CAP AND THE TOP OF THE BRACKET ARM
MOUNT.

HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT
CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE
BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET
BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR
STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND
TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS
OF NCHRP 350.

HANDHOLE SHALL BE APPROX. 4" X 6-1/2". HANDHOLE
FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH
IS NOT REDUCED.

TRANSFORMER BASES FOR 45' MOUNTING HEIGHT SHALL BE
FURNISHED WITH ONE DRILLED AND TAPPED HOLE AND
GROUNDING LUG FOR GROUNDING EQUIPMENT.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF
THE STANDARD SPECIFICATIONS.

TYPE AT POLES SHALL BE EQUIPPED WITH THE GROUNDING LUG
INSIDE THE TRANSFORMER BASE. TYPE B AND MB POLES
SHALL BE EQUIPPED WITH A GROUNDING LUG INSIDE THE
POLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH
#6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG
SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A
FIELD DRILLED 1-1/4" DIA. HOLE.

DESIGN OF STRUCTURAL SUPPORTS SHALL COMPLY WITH
AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL
SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC
SIGNALS 2001 AND INTERIMS THROUGH 2003.

SIGNS SHALL NOT BE MOUNTED ON LIGHTING POLES.

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105 WEST CAPITOL
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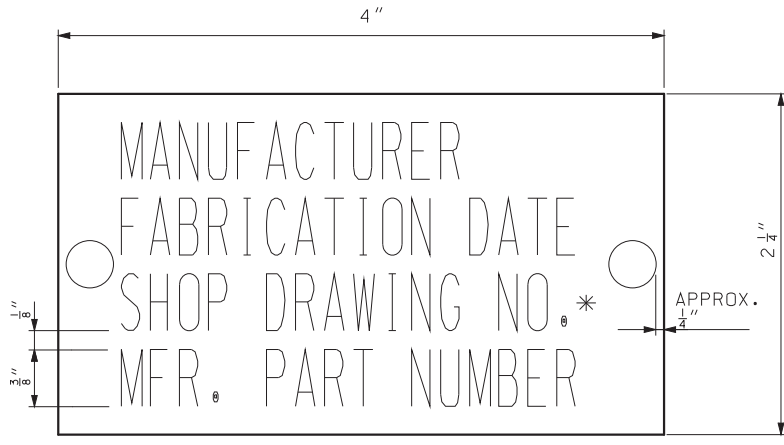
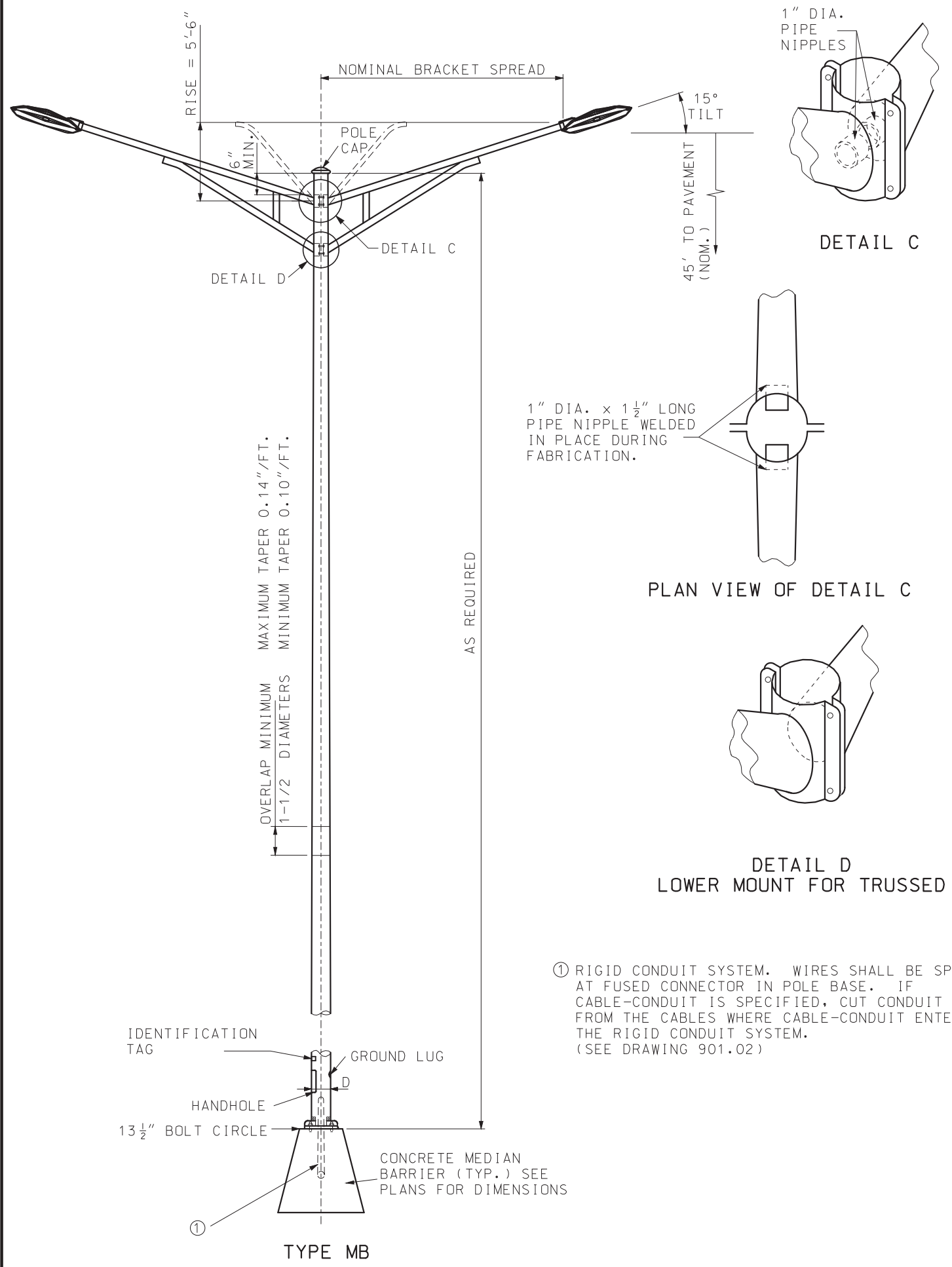
STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

**HIGHWAY LIGHTING
POLES, FOUNDATIONS
AND APPURTENANCES
FOR 45' MOUNTING HEIGHT**

| | | |
|----------------------------|-----------------|-----------|
| DATE EFFECTIVE: 04/01/2018 | 901.01AJ | SHEET NO. |
| DATE PREPARED: 2/9/2018 | | 1 OF 6 |

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

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IDENTIFICATION TAG

ID TAG NOTE:
TAG SHALL BE ALUMINUM OR STAINLESS STEEL AND ATTACHED TO POLE USING TWO RIVETS OR STAINLESS STEEL DRIVE SCREWS. ID TAG HOLES SHALL BE DRILLED PRIOR TO GALVANIZING.

* INCLUDING REVISION

GENERAL NOTES:

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HOLES SHALL BE PUNCHED ONLY FOR SPECIFIED BOLT CIRCLE.

TRANSFORMER BASE SHALL BE CERTIFIED AS MEETING THE BREAKAWAY CRITERIA AND STRUCTURAL REQUIREMENTS AS SET BY THE CURRENT AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS" AND MEET THE BREAKAWAY REQUIREMENTS OF NCHRP 350.

HANDHOLE SHALL BE APPROX. 4" X 6-1/2". HANDHOLE FRAME SHALL BE REINFORCED SO THAT THE POLE STRENGTH IS NOT REDUCED.

TRANSFORMER BASES FOR 45' MOUNTING HEIGHT SHALL BE FURNISHED WITH ONE DRILLED AND TAPPED HOLE AND GROUNDING LUG FOR GROUNDING EQUIPMENT.

ALL JUNCTION BOXES SHALL CONFORM TO SECTION 1062 OF THE STANDARD SPECIFICATIONS.

TYPE AT POLES SHALL BE EQUIPPED WITH THE GROUNDING LUG INSIDE THE TRANSFORMER BASE. TYPE B AND MB POLES SHALL BE EQUIPPED WITH A GROUNDING LUG INSIDE THE POLE.

POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1-1/4" DIA. HOLE.

SIGNS SHALL NOT BE MOUNTED ON LIGHTING POLES.

MoDOT MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
ERIC E. SCHROETER
NUMBER PE-28411
PROFESSIONAL ENGINEER

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HIGHWAY LIGHTING POLES, FOUNDATIONS AND APPURTENANCES FOR 45' MOUNTING HEIGHT

| | | |
|----------------------------|-----------------|-----------|
| DATE EFFECTIVE: 04/01/2018 | 901.01AJ | SHEET NO. |
| DATE PREPARED: 2/9/2018 | | 2 OF 6 |

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

| TYPE AT POLE | | | | |
|-----------------------|-----|-------------|---------|--------------|
| BRACKET SPREAD | | 6' OR 15' | | |
| MAX. LUMINAIRE WEIGHT | | 60 LB | | |
| MAX. PROJECTED AREA | | 3.3 SQ. FT. | | |
| AT-45 DESIGN NO. | X | A | B | D* (NOMINAL) |
| 1 | 50' | VAR. | 6" MIN. | 10" |
| 2 | 45' | VAR. | 6" MIN. | 10" |
| 3 | 40' | VAR. | 6" MIN. | 10" |
| 4 | 35' | VAR. | 6" MIN. | 10" |
| 5 | 30' | VAR. | 6" MIN. | 10" |

* THE MINIMUM ALTERNATE DIAMETER SHALL BE 10" FOR A 50' POLE, 9-1/2" FOR A 45' POLE, 9" FOR A 40' POLE, 8-1/2" FOR A 35' POLE AND 8" FOR A 30' POLE.

| LED LUMINAIRES | | | | |
|--|-------------|-----------|-------------------|--------------------------------------|
| FUSE RATING | DESIGNATION | MAX. WATT | DISTRIBUTION TYPE | BACKLIGHT-UPLIGHT-GLARE (BUG) RATING |
| 3 A | LED-A | 103 | III | B2-U0-G2 |
| 5 A | LED-B | 170 | III | B3-U0-G3 |
| 7 A | LED-C | 275 | III | B3-U0-G3 |
| LUMINAIRE PER CHART UNLESS OTHERWISE SPECIFIED ON PLANS. | | | | |

GENERAL NOTES:

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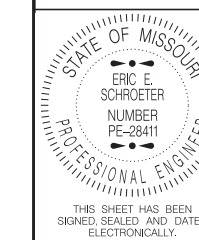
POST SHALL BE GROUNDED FROM GROUND LUG IN POST WITH #6 AWG BARE COPPER WIRE TO CONDUIT SYSTEM. GROUND LUG SHALL BE 90° OR 180° FROM HANDHOLE.

THE CABLE ENTRANCE AT THE BRACKET ARM SHALL BE A FIELD DRILLED 1 1/4" DIA. HOLE.

| TYPE B POLE | | | |
|----------------------------|----------------|-------------|------------------|
| BRACKET SPREAD | | 6' OR 15' | |
| MAX. LUMINAIRE WEIGHT | | 60 LB | |
| MAX. PROJECTED AREA | | 3.3 SQ. FT. | |
| SINGLE BRACKET ARM | | | |
| LOCATION | BRACKET SPREAD | D NOM. | ANCHOR BOLT DIA. |
| BRIDGE SAFETY BARRIER CURB | 6' | 10" | 1-1/4" |
| TRUSSED BRACKET ARM | | | |
| LOCATION | BRACKET SPREAD | D NOM. | ANCHOR BOLT DIA. |
| BRIDGE SAFETY BARRIER CURB | 15' | 10" | 1-1/4" |

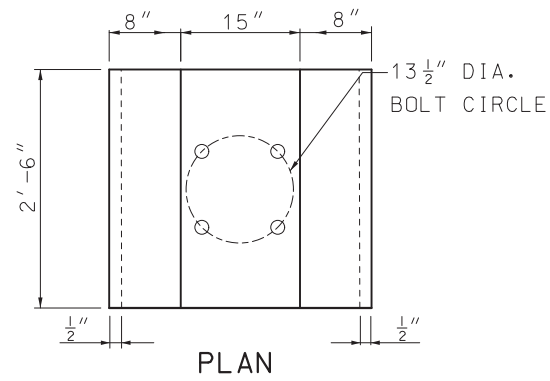
| TYPE MB POLE | | |
|----------------------------|----------------|-------------|
| BRACKET SPREAD | | 6' OR 15' |
| MAX. LUMINAIRE WEIGHT | | 60 LB |
| MAX. PROJECTED AREA | | 3.3 SQ. FT. |
| DOUBLE BRACKET ARM | | |
| LOCATION | BRACKET SPREAD | D NOM. |
| MEDIAN BARRIER CURB | 6' | 10" |
| DOUBLE TRUSSED BRACKET ARM | | |
| LOCATION | BRACKET SPREAD | D NOM. |
| MEDIAN BARRIER CURB | 15' | 10" |

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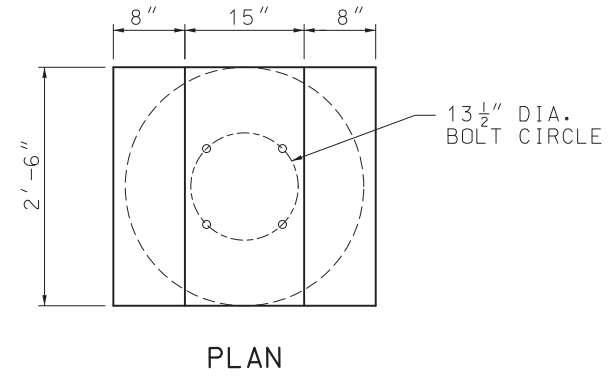


**HIGHWAY LIGHTING
 POLES, FOUNDATIONS
 AND APPURTENANCES
 FOR 45' MOUNTING HEIGHT**

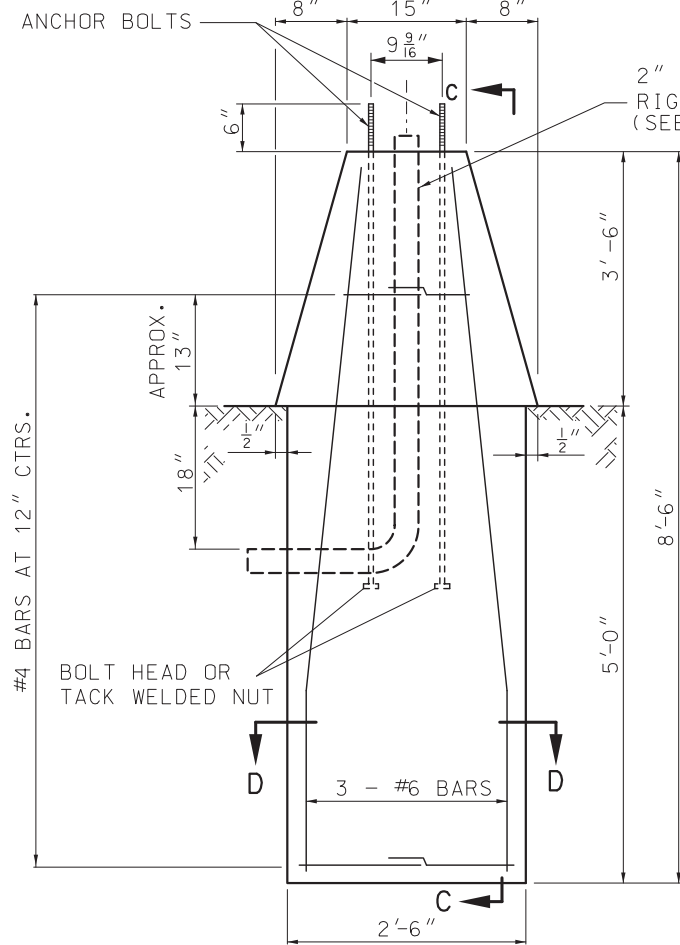
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| DATE EFFECTIVE: 04/01/2018 | 901.01AJ | SHEET NO. |
| DATE PREPARED: 2/9/2018 | | 3 OF 6 |



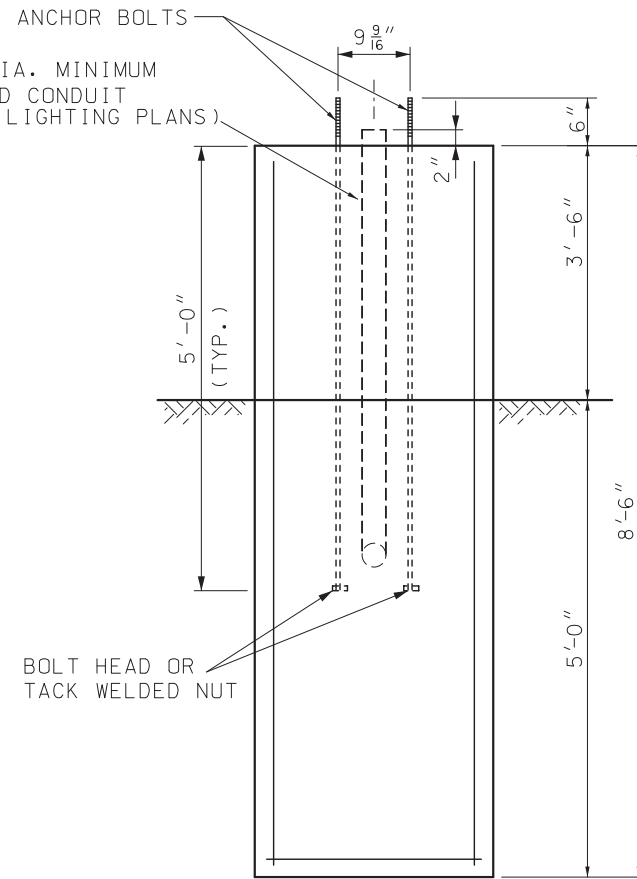
PLAN



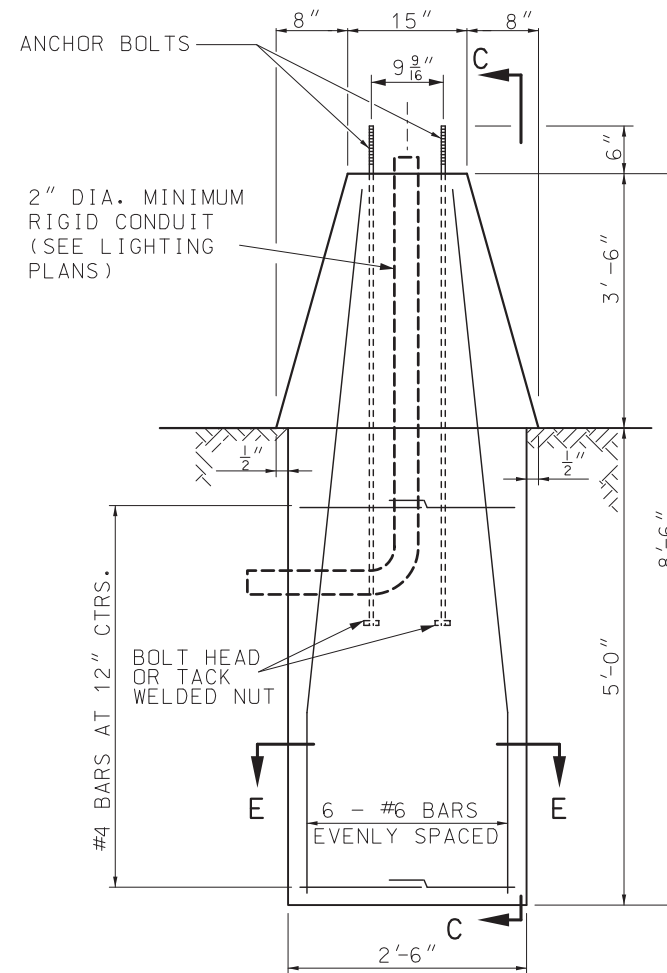
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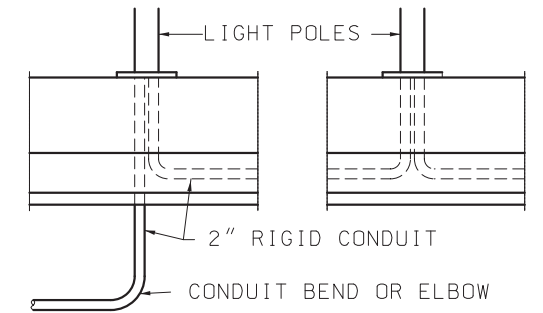
ELEVATION
ALTERNATE 1



SECTION C-C



ELEVATION
ALTERNATE 2



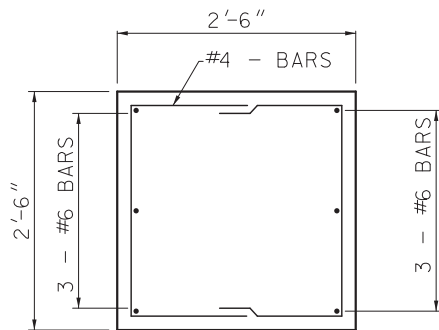
CONDUIT DETAIL FOR
ALTERNATE 1 & 2

GENERAL NOTES:

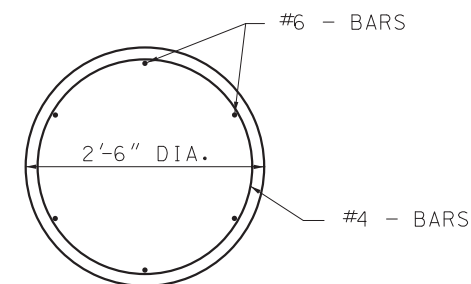
ALL FOUNDATIONS SHALL INCLUDE 4 ANCHOR BOLTS AND NUTS PLACED AS SHOWN.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1 1/4" DIAMETER HIGH STRENGTH ANCHOR BOLTS.

TONGUE AND GROOVE REQUIRED ON MEDIAN BARRIER SECTION FOR TYPE MB POLES WHEN ADJACENT MEDIAN BARRIER IS PRECAST, FOR DETAILS, SEE STANDARD PLANS.



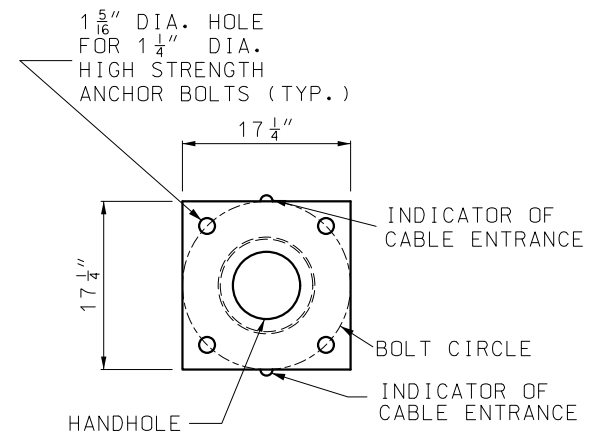
SECTION D-D



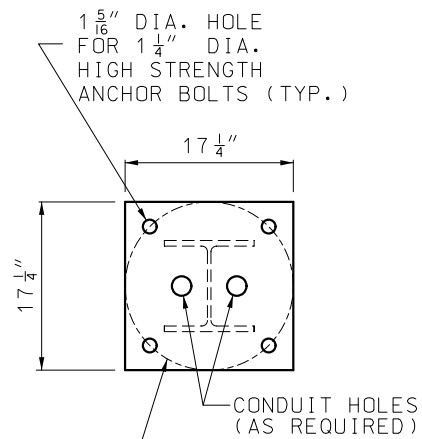
SECTION E-E

CONCRETE MEDIAN BARRIER
AND FOUNDATION DESIGN FOR
TYPE MB LIGHT POLE

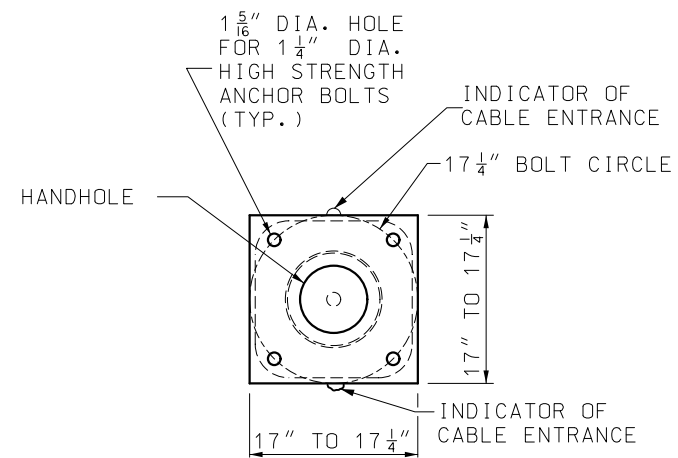
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|--|--|-----------------|
| | MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION | |
| | 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636) | |
| | HIGHWAY LIGHTING POLES, FOUNDATIONS AND APPURTENANCES FOR 45' MOUNTING HEIGHT | |
| | DATE EFFECTIVE: 04/01/2025 DATE PREPARED: 12/16/2024 | 901.01AJ |



PLAN

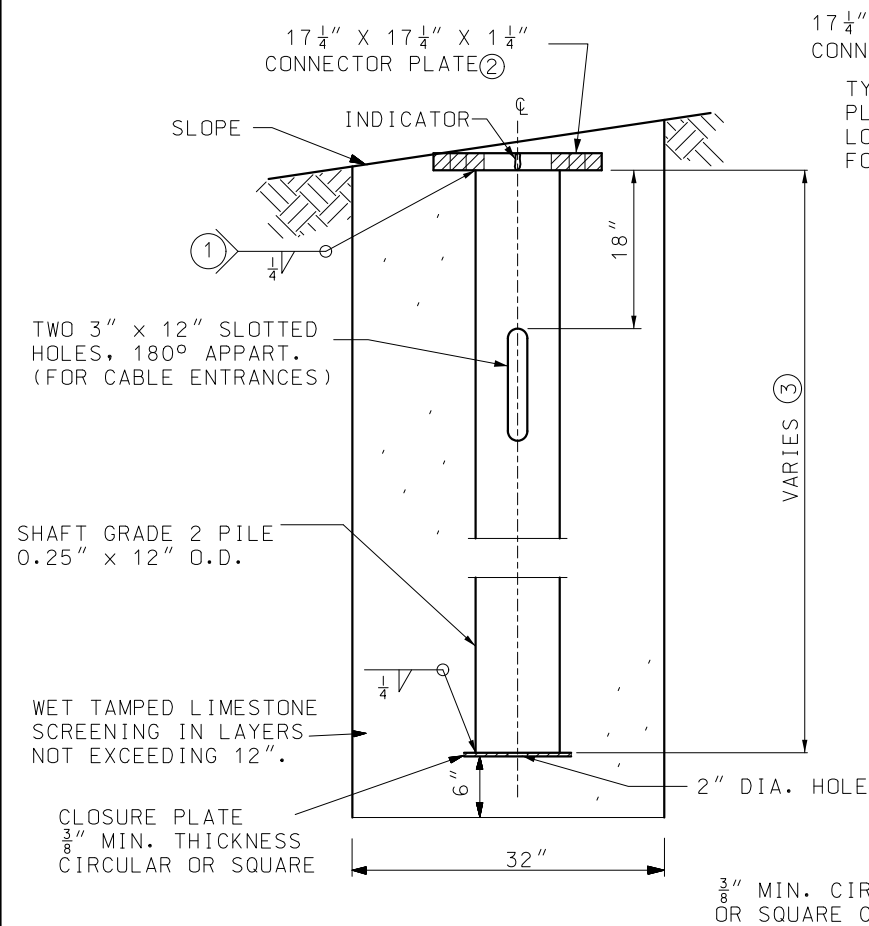


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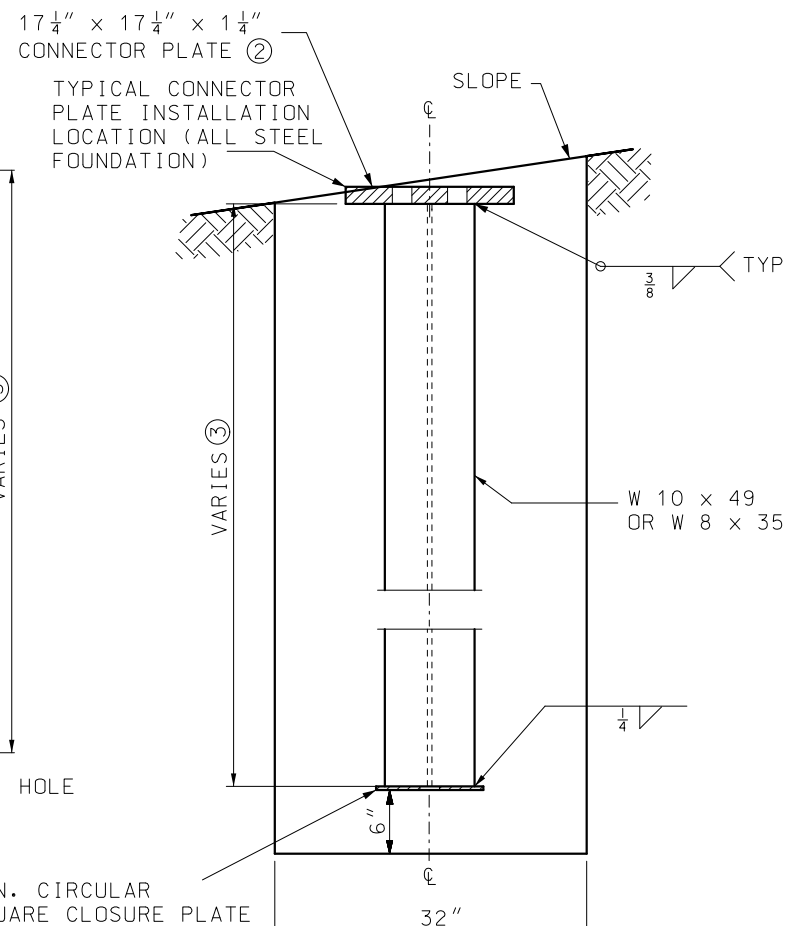


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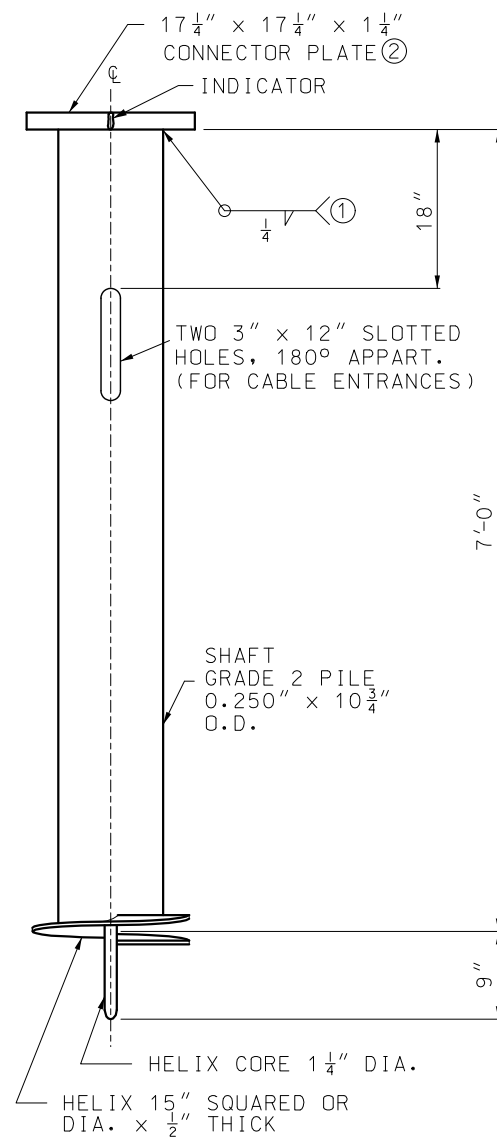
NOTE:
DRIVE HOLES WILL BE PERMITTED PROVIDED THEY DO NOT CONFLICT WITH OR COMPROMISE THE STRUCTURAL INTEGRITY OF THE PLATE, THE WELD BETWEEN THE PLATE AND SHAFT, OR THE BOLT HOLES.



ELEVATION
DETAILS OF CIRCULAR
STEEL PILE FOUNDATION



ELEVATION
DETAILS OF STEEL "H"
PILE FOUNDATION



ELEVATION
DETAILS OF
SCREW ANCHOR FOUNDATION

- ① GRIND WELD AS NECESSARY TO CLEAR BOLT HEAD.
- ② FOUNDATIONS SHALL BE INSTALLED SO THAT CONNECTOR PLATES ARE LEVEL PERPENDICULAR TO THE BRACKET ARM AND SLOPED FOR POLE RAKING PARALLEL TO THE BRACKET ARM.
- ③ PILE LENGTHS FOR STEEL PILE FOUNDATIONS:

| AT-45 DESIGN NO. | PILE LENGTH |
|------------------|-------------|
| 4 & 5 | 8'-0" |
| 2 & 3 | 9'-0" |
| 1 | 10'-0" |

GENERAL NOTES:

ALL CLASSIFICATIONS ARE ASTM UNLESS OTHERWISE NOTED. SEE STANDARD SPECIFICATIONS FOR CLASSIFICATIONS NOT SHOWN.

ALL BOLT CIRCLES FOR 45' MOUNTING HEIGHT SHALL BE 17 1/4".

ALL CONECTOR PLATE AND CLOSURE PLATE THICKNESSES SHOWN ARE MINIMUM DIMENSIONS.

ALL ANCHOR BOLTS SHALL BE FULLY GALVANIZED 1 1/4" DIAMETER HIGH STRENGTH ANCHOR BOLTS.

ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.

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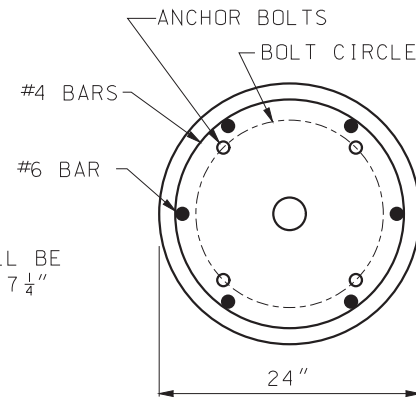
STATE OF MISSOURI
NICOLE A. KOLB HOOD
NUMBER PE-2001018754
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

**HIGHWAY LIGHTING
POLES, FOUNDATIONS
AND APPURTENANCES
FOR 45' MOUNTING HEIGHT**

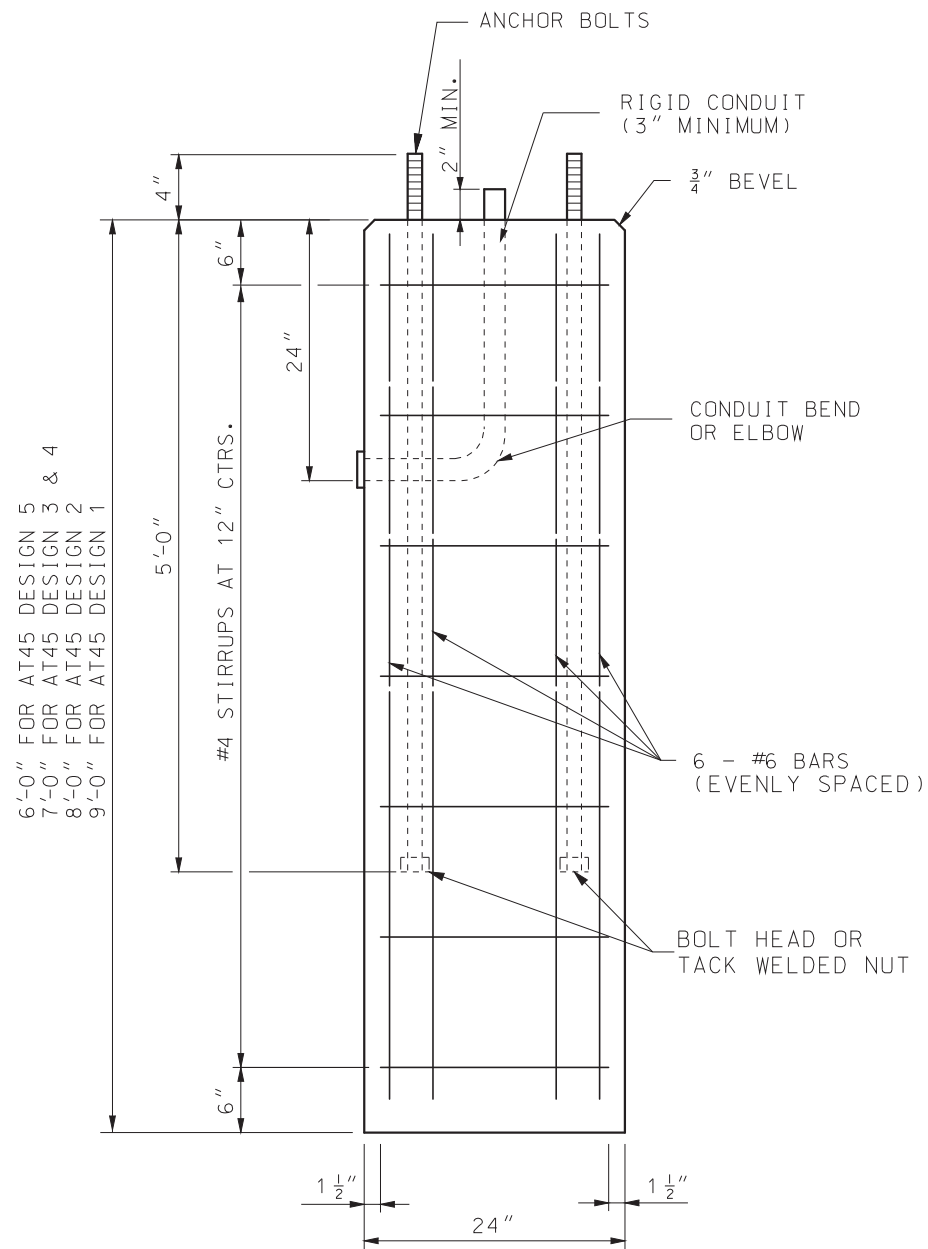
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| DATE EFFECTIVE: 01/01/2021 | 901.01AJ | SHEET NO. |
| DATE PREPARED: 10/14/2020 | | 5 OF 6 |

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

NOTE:
ANCHOR BOLTS SHALL BE
PLACED ONLY FOR 17 1/4"
BOLT CIRCLE



PLAN

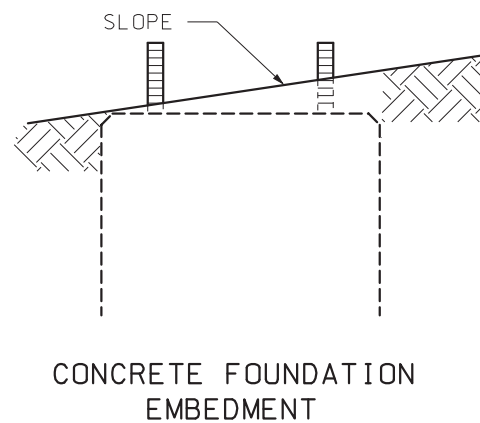


ELEVATION

DETAILS OF CONCRETE
FOUNDATION ④

④ AT THE OPTION OF THE CONTRACTOR THE CONCRETE FOUNDATIONS MAY BE PRECAST. IF PRECAST, THEY SHALL BE SET IN DRILLED HOLES 3 FEET IN DIAMETER AND 6 INCHES DEEPER THAN THE BOTTOM OF THE CONCRETE FOUNDATION. THE BOTTOM 6 INCHES OF THE HOLE AND THE REMAINING SPACE AROUND THE FOUNDATION SHALL BE BACKFILLED WITH WET TAMPED LIMESTONE SCREENINGS IN LAYERS NOT EXCEEDING 12 INCHES.

| HEIGHT | QUANTITIES | |
|---------|---------------|-------------|
| | CONC. CU. YD. | REINF. LBS. |
| 6' - 0" | .70 | 80 |
| 7' - 0" | .81 | 90 |
| 8' - 0" | .93 | 104 |
| 9' - 0" | 1.05 | 120 |



CONCRETE FOUNDATION
EMBEDMENT

GENERAL NOTES:

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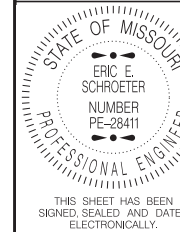
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ALL STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED.



MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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JEFFERSON CITY, MO 65102
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HIGHWAY LIGHTING
POLES, FOUNDATIONS
AND APPURTENANCES
FOR 45' MOUNTING HEIGHT

DATE EFFECTIVE: 12/01/2013
DATE PREPARED: 2/9/2018

901.01AJ

SHEET NO.
6 OF 6