

GENERAL NOTES:

1. RADAR SPEED FEEDBACK SIGN (RSFS) SHALL BE IN ACCORDANCE WITH SECTION 614 OF THE CDOT STANDARD SPECIFICATIONS.
2. A RADAR SPEED FEEDBACK SIGN (RSFS) CAN BE BE MOUNTED BELOW A SPEED LIMIT SIGN OR WITHIN 100 FEET DOWNSTREAM OF A SPEED LIMIT SIGN.
3. RADAR SPEED FEEDBACK SIGN MATERIALS SHALL CONFORM TO THE FOLLOWING:
 

A. ROUND HOLLOW STEEL SECTIONS (HSS)	ASTM A500 GRADE C
B. BASEPLATES	ASTM A572 GRADE 50
C. THREADED ANCHOR ROD	ASTM F1554 GRADE 55
D. ANCHOR ROD NUTS	ASTM A563
E. WASHERS	ASTM F436
4. INSTALLATION DESIGN CONFORMS WITH THE LATEST AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" AND SHALL BE FABRICATED IN ACCORDANCE WITH:
  - A. HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM-A325 AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
  - B. HOLES SHALL BE DRILLED AND CUTS SHALL PREFERABLY BE SAW CUTS; HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL SHALL NOT PROJECT BEYOND THE PLANE OF THE PLATE FACE ON BREAK-AWAY INSTALLATIONS.
  - C. ALL WELDING IS TO BE CONTINUOUS AND IN ACCORDANCE WITH CURRENT AWS SPECIFICATIONS.
  - D. POST LENGTH WILL BE AS SHOWN ON THE PLANS, OR AS DETERMINED BY CROSS-SECTION, OR AS DIRECTED BY THE ENGINEER FOR EACH LOCATION. POST LENGTHS EXCEEDING THE MAXIMUMS PRESENTED HEREIN REQUIRE A SPECIAL DESIGN.
5. ALL RSFS POST STEEL, INCLUDING BASEPLATES, SHALL BE HOT DIP GALVANIZED INSIDE AND OUTSIDE IN ACCORDANCE WITH ASTM A123.
6. MOUNTING HARDWARE FOR EACH SIGN SHALL BE FURNISHED BY THE MANUFACTURER.
7. ALL ELECTRICAL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NEC, NEMA, UL, OR EIA WHEREVER APPLICABLE; THE COLORADO PUC AND ANY LOCAL CODES OR ORDINANCES WHICH MAY APPLY.
8. TERMINATE RSFS CONNECTIONS PER MANUFACTURER'S RECOMMENDATION.
9. WHEN SPECIFIED IN THE PLANS, AC POWER SYSTEM MAY BE USED IN PLACE OF SOLAR POWERED SYSTEM.
10. R2-1 SIZE SHALL BE PER MUTCD REQUIREMENT. THE RSFS SIZE SHALL MATCH THE SIZE OF THE R2-1 IT IS SUPPLEMENTING.
11. THE RSFS SHALL INCLUDE "YOUR SPEED" LEGEND AND SHALL BE A BLACK LEGEND ON A YELLOW BACKGROUND. FOR SCHOOL ZONES THE RSFS SHALL INCLUDE THE "YOUR SPEED" LEGEND AND SHALL BE A BLACK LEGEND ON A FLUORESCENT YELLOW-GREEN BACKGROUND.
12. FOR VERTICAL AND LATERAL PLACEMENT OF SIGNS, SEE S-614-1.
13. POST SHALL BE INSTALLED PLUMB TO THE FOUNDATION. PLUMBING THE POST SHALL BE ACCOMPLISHED BY:
  - A. BASEPLATE TYPE 1: SHIMS POSITIONED BENEATH THE FRANGIBLE BASE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
  - B. BASEPLATE TYPE 2: ADJUSTING THE LEVELING NUTS BEFORE THE FOUNDATION IS FINISHED TO FINAL GRADE.

POST SELECTION TABLE				
CONFIGURATION	WIND REGION	POST SELECTION	MAX POST HEIGHT	DETAIL LOCATION
FREEWAYS & EXPRESSWAYS	SPECIAL WIND REGION	HSS 6.00x0.500	20'-1 1/2"	SHEET 1 OF 3
	ALL OTHER LOCATIONS	HSS 6.00x0.375	18'-8 1/2"	SHEET 2 OF 3
CONVENTIONAL HIGHWAYS	ALL REGIONS	HSS 5.00x0.375	14'-8 1/2"	SHEET 2 OF 3

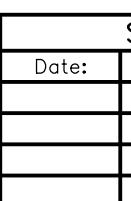
DESIGN: AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 1ST EDITION (2015) WITH 2022 INTERIMS.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 10TH EDITION (2025).

WIND LOADING: PER CDOT BRIDGE DESIGN MANUAL SECTION 32.3:  
165 MPH INSIDE SPECIAL WIND REGION (SWR)  
120 MPH BASE WIND SPEED (ALL OTHER LOCATIONS)

Computer File Information	
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Last Modified By:	Muller Engineering Company
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Sheet Revisions	
Date:	Comments



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Traffic Safety & Engineering

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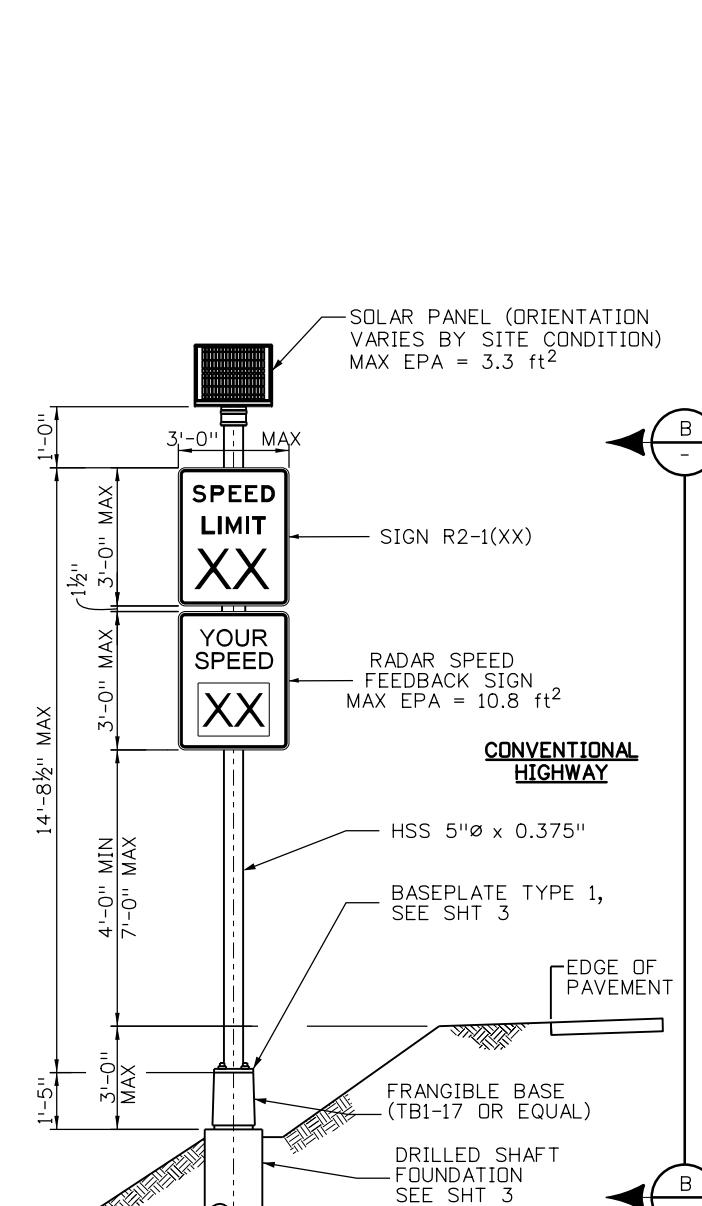
RADAR SPEED FEEDBACK SIGN (RSFS)

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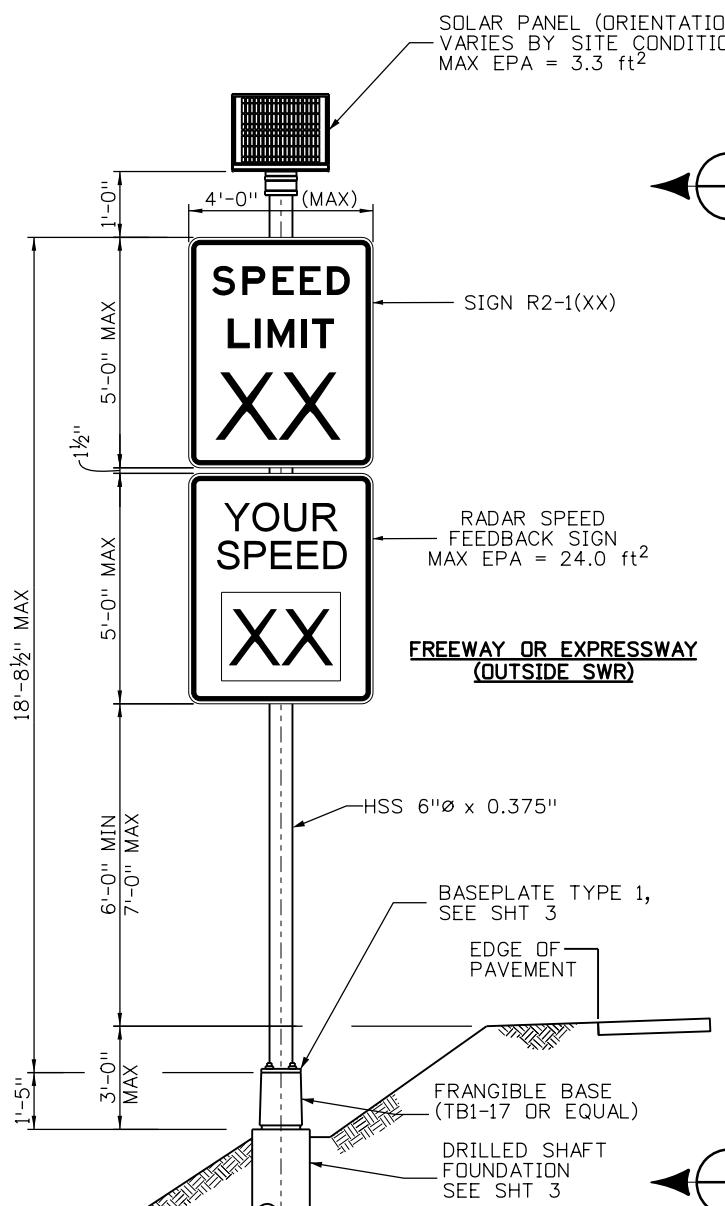
STANDARD PLAN NO.  
S-614-17  
Standard Sheet No. 1 of 3  
Project Sheet Number:

NOTES:

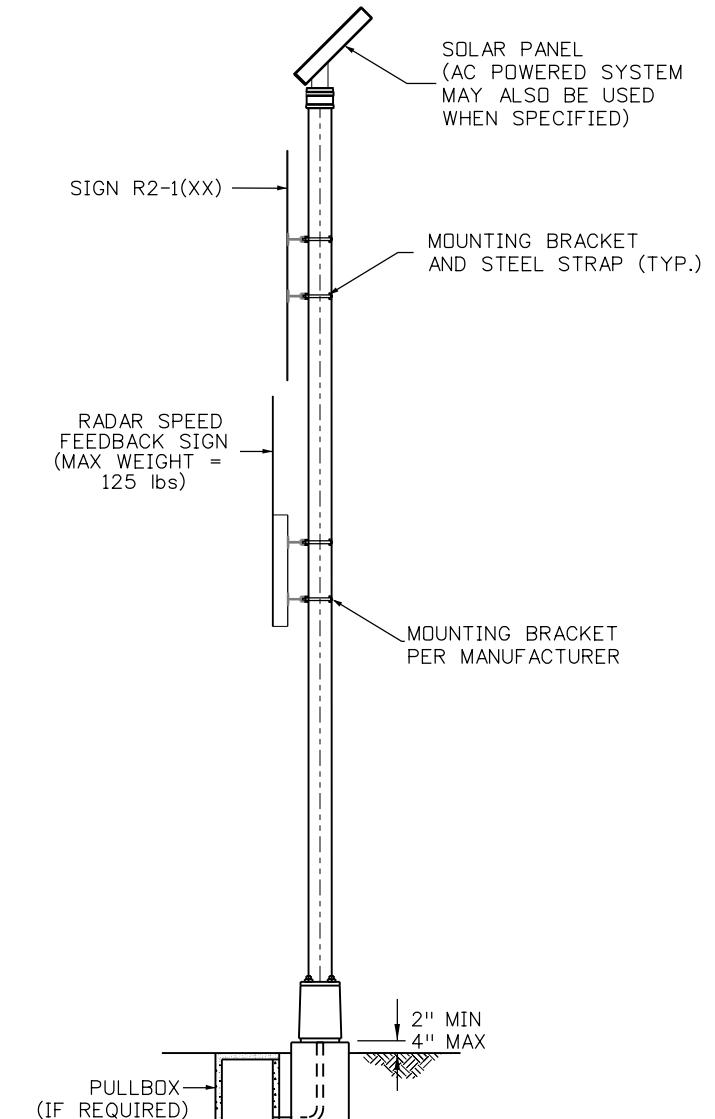
1. FRANGIBLE BASE SHALL BE TB1-17 OR APPROVED EQUAL.
2. ANCHOR BOLT SPACING, HARDWARE, AND TORQUE SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS. ALL COMPONENTS SHALL FIT AND ACCOMMODATE THE REQUIREMENTS OF THE RSFS ASSEMBLY AND FRANGIBLE BASE.
3. CONNECTING BOLTS, FLAT WASHERS, BEARING WASHERS, AND HEX NUTS SHALL BE PROVIDED BY FRANGIBLE BASE MANUFACTURER.



**RADAR SPEED FEEDBACK SIGN**  
(CONVENTIONAL HIGHWAY CONFIGURATION)



**RADAR SPEED FEEDBACK SIGN**  
(FREEWAYS AND EXPRESSWAYS OUTSIDE SWR)



**SECTION**

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Colorado Department of Transportation	STANDARD PLAN NO.
 CDOT	S-614-17
2829 W. Howard PI. Denver, CO 80204 Phone: 303-757-9654 FAX: 303-757-9219	Standard Sheet No. 2 of 3
Traffic Safety & Engineering	Project Sheet Number:
EB	

**RADAR SPEED FEEDBACK SIGN (RSFS)**

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FOUNDATION NOTES:

1. DRILLED SHAFT CONCRETE SHALL BE AIR ENTRAINED CLASS BZ IN ACCORDANCE WITH SECTION 503 OF THE STANDARD SPECIFICATIONS.
2. REINFORCING STEEL SHALL BE GRADE 60 IN ACCORDANCE WITH SECTION 602 OF THE STANDARD SPECIFICATIONS.
3. DRILLED SHAFT CONCRETE MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,200 PSI PRIOR TO INSTALLING THE PEDESTAL POLES.
4. DRILLED SHAFT SHALL BE PLACED AGAINST UNDISTURBED EARTH.
5. INTEGRITY TESTING PER 503 NOT REQUIRED.

FOUNDATION DESIGN DATA:

BROM'S METHOD USING AASHTO LRFD LTS 1ST, WITH 2022 INTERIMS.

DRILLED SHAFT CONCRETE:

CLASS BZ CONCRETE:  $f'_c = 4,000$  psi  
REINFORCING STEEL:  $f_y = 60,000$  psi

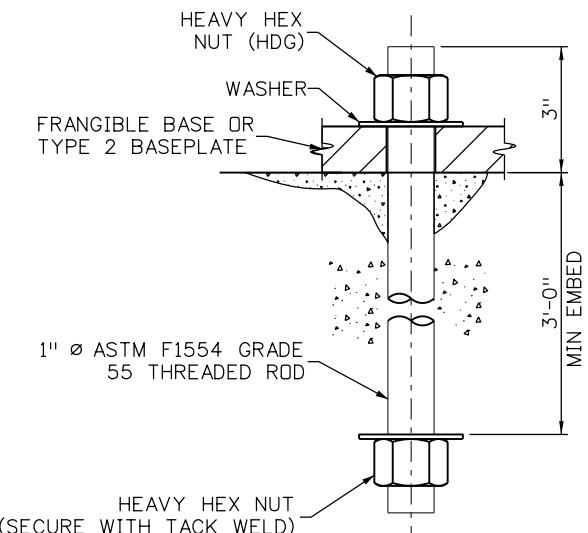
THE DESIGNS HEREIN ASSUME THAT THE RSFS IS INSTALLED ADJACENT TO THE ROADWAY PRISM WITH THE FOLLOWING PARAMETERS:

MEDIUM DENSE COHESIONLESS SOIL:  
SOIL DENSITY,  $\gamma = 110$ pcf  
SOIL ANGLE =  $30^\circ$   
SF = 2.5 FOR FLEXURAL RESISTANCE

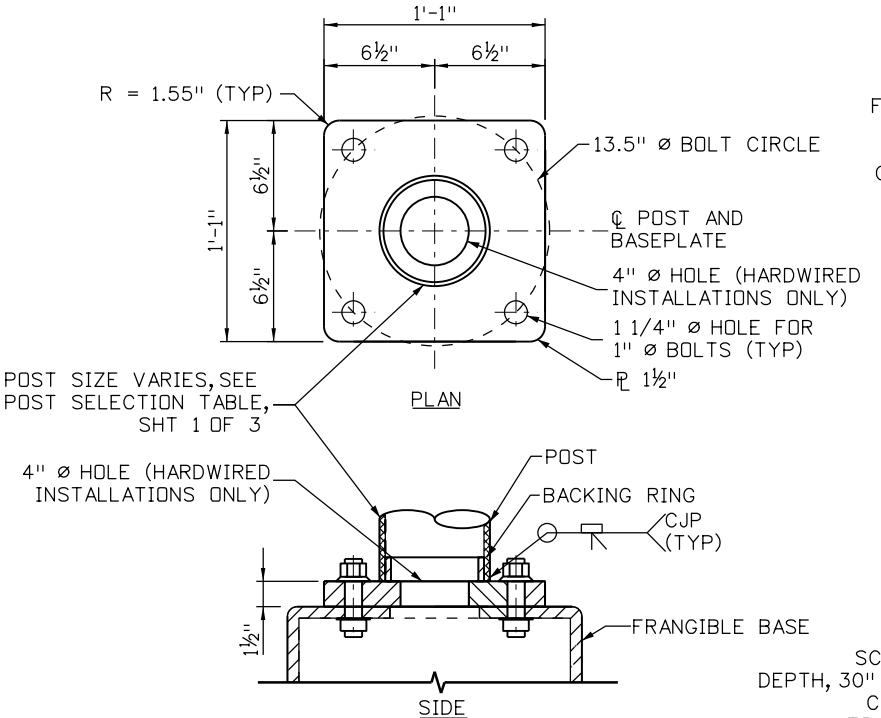
MEDIUM STIFF COHESIVE SOIL:  
SOIL DENSITY,  $\gamma = 110$ pcf  
SOIL COHESION = 750 psf  
SF = 2.5 FOR FLEXURAL RESISTANCE

CONTACT THE ENGINEER IF ANY OF THE FOLLOWING SOIL CONDITIONS ARE ENCOUNTERED DURING DRILLING:

- (A) THE SOIL HAS A HIGH ORGANIC CONTENT OR CONSISTS OF SATURATED SILT AND CLAY.
- (B) THE SITE WON'T SUPPORT THE WEIGHT OF THE DRILLING RIG.
- (C) THE FOUNDATION SOILS ARE NOT HOMOGENOUS.
- (D) FIRM BEDROCK IS ENCOUNTERED.

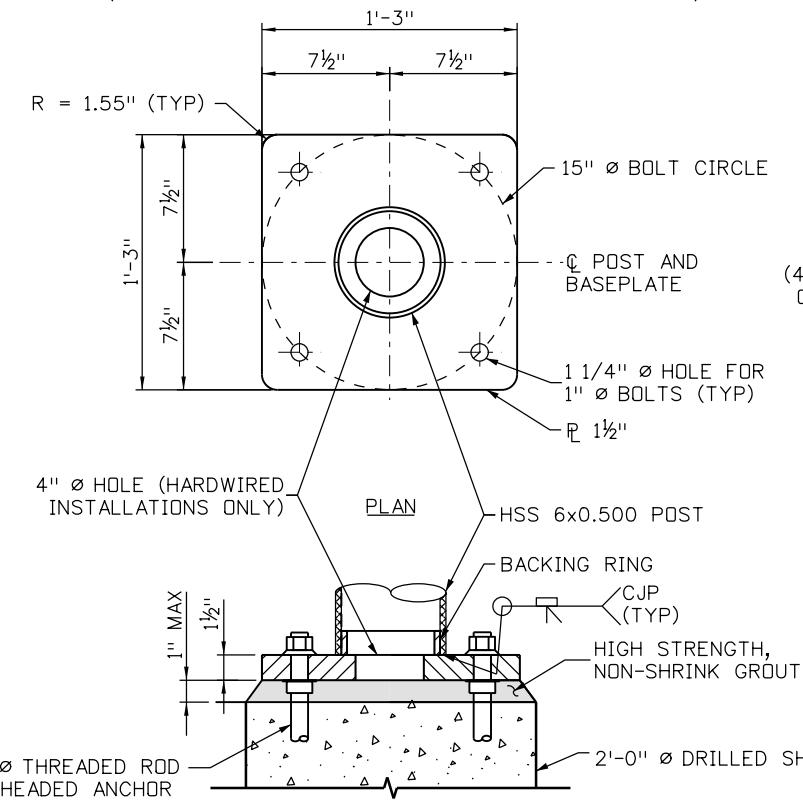


HEADED ANCHOR BOLT DETAIL



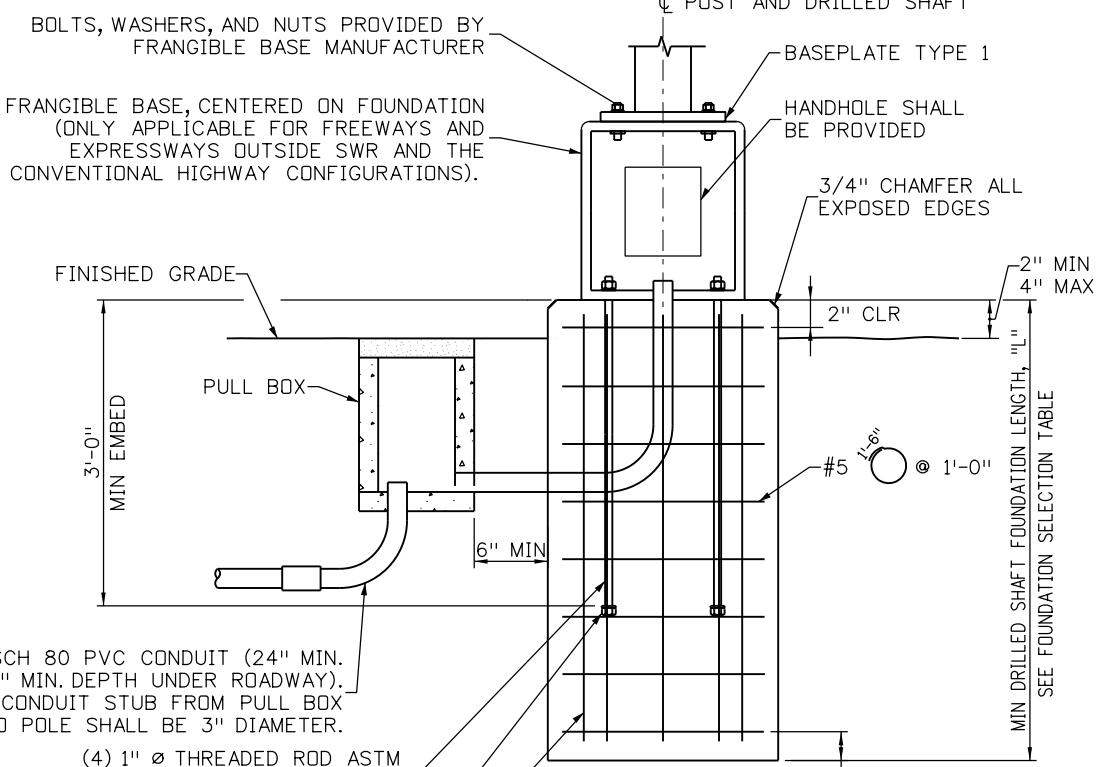
TYPICAL BASEPLATE TYPE 1 DETAILS

(ONLY APPLICABLE FOR FRANGIBLE BASE ASSEMBLIES)



TYPICAL BASEPLATE TYPE 2 DETAILS

(ONLY APPLICABLE FOR FREEWAYS & EXPRESSWAYS CONFIGURATION WITHIN SWR)

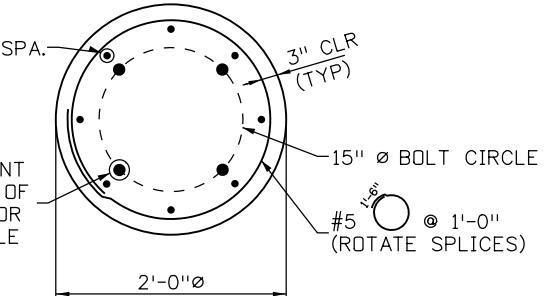


(4) 1" Ø THREADED ROD ASTM F1554 GR55. 15" Ø BOLT CIRCLE  
SEE HEADED ANCHOR BOLT DETAIL, THIS SHT  
HEAVY HEX NUT AND WASHER

(8) #7 VERTICAL BARS @ EQ. SPA.

(8) #7 VERTICAL BARS @ EQ. SPA.

(4) 1" Ø F1554 HEADED ANCHORS (TYP) PLACEMENT OF ANCHOR BOLTS SHALL MATCH ORIENTATION OF BOLT HOLES THROUGH FRANGIBLE BASE OR BASEPLATE (TYPE 2) AS APPLICABLE



DRILLED SHAFT FOUNDATION

FOUNDATION SELECTION TABLE		
CONFIGURATION	WIND REGION	"L"
FREEWAYS & EXPRESSWAYS	SPECIAL WIND REGION	11'-0"
	ALL OTHER LOCATIONS	9'-0"
CONVENTIONAL HIGHWAYS	ALL REGIONS	9'-0"

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