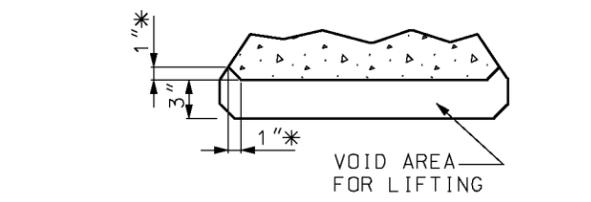
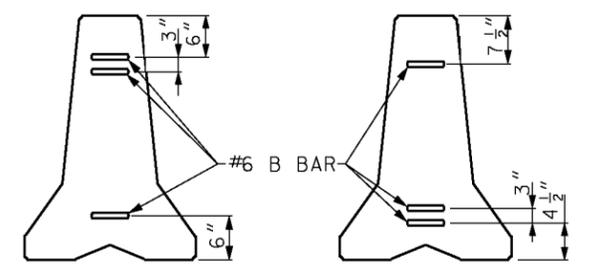


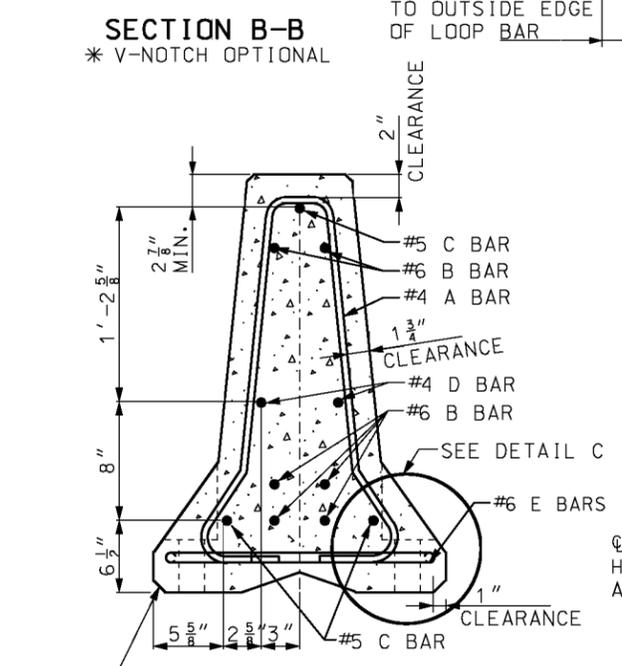
ELEVATION VIEW



PART SECTION C-C LIFTING SLOT DETAIL
* RADIUS EDGER TO PREVENT SPALLING

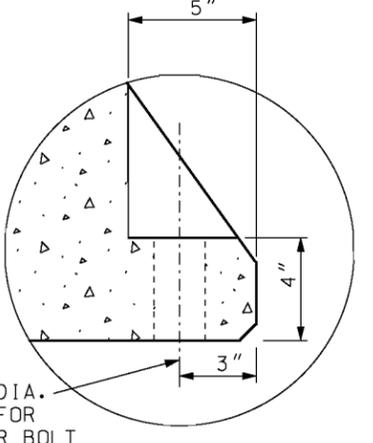


ALTERNATING END VIEWS FOR BARRIER LOOP CONNECTION

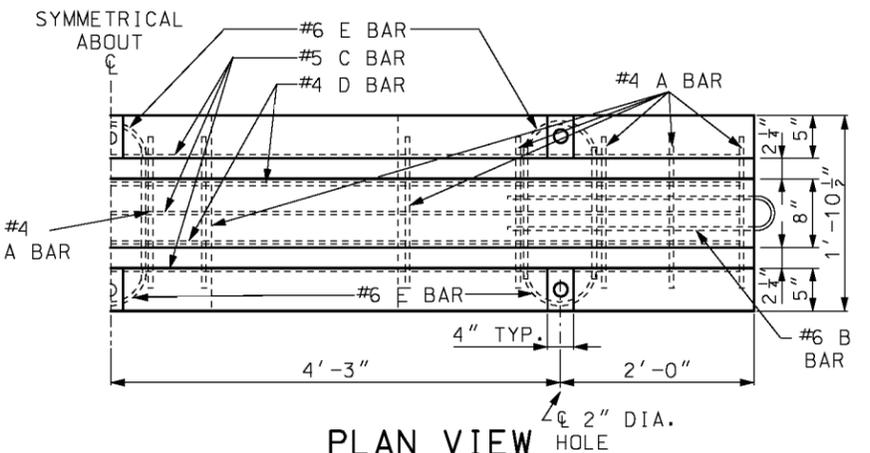


SECTION B-B
* V-NOTCH OPTIONAL

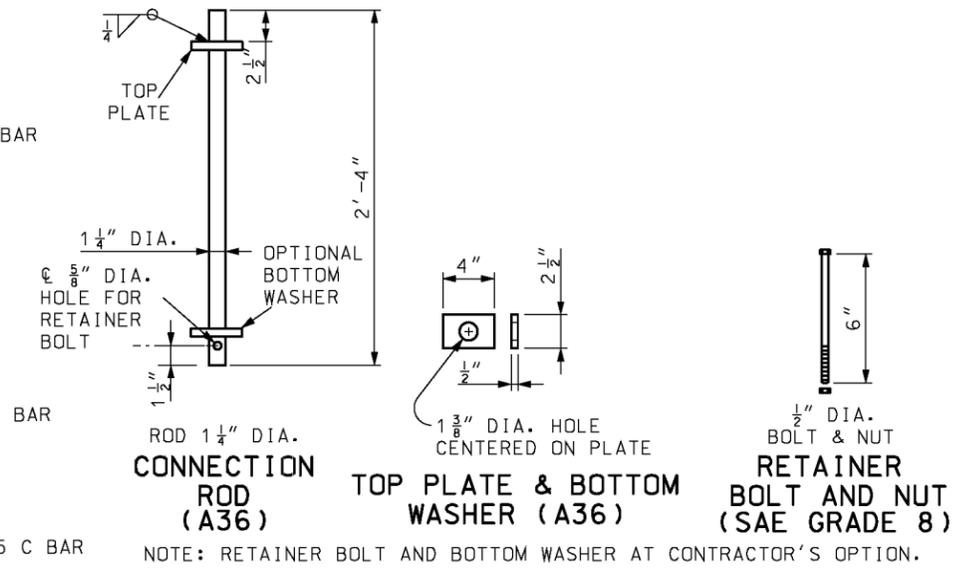
SECTION A-A
STIRRUP PLACEMENT WITH BAR REINFORCEMENT



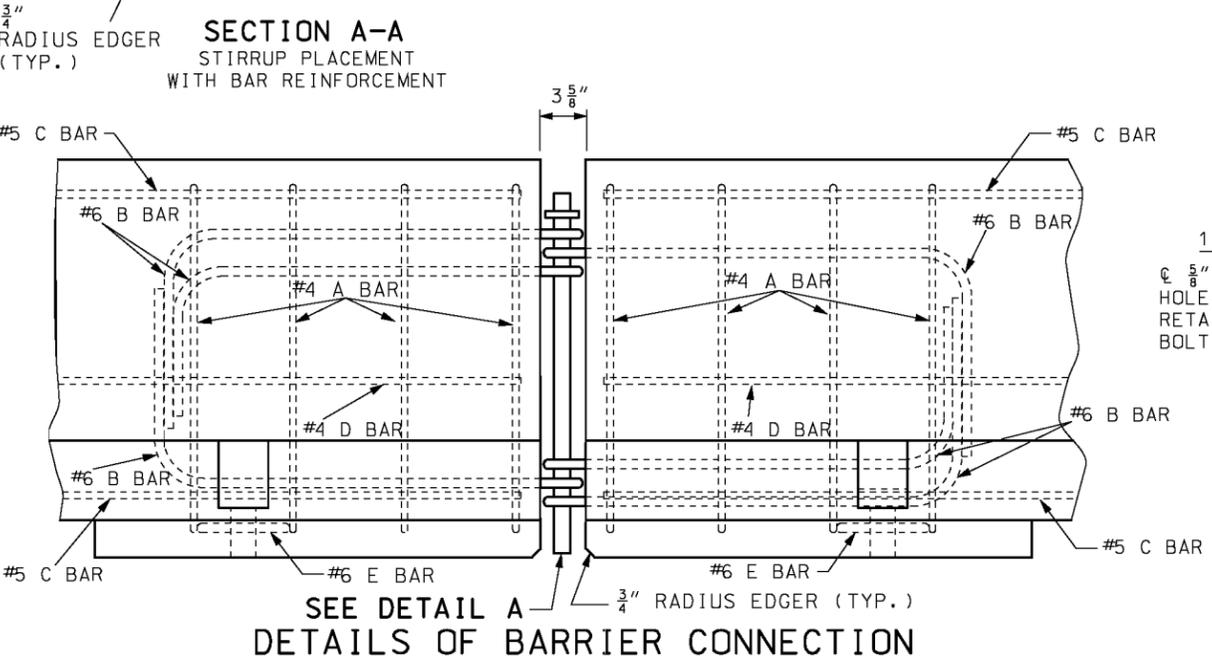
DETAIL C



PLAN VIEW



DETAIL A
CONNECTION ROD ASSEMBLY



SEE DETAIL A
DETAILS OF BARRIER CONNECTION

GENERAL NOTES:

- ALL REINFORCING SHALL MEET REQUIREMENTS OF CRSI EXCEPT WHERE SHOWN ON PLANS.
- REINFORCING STEEL CLEARANCE TO EDGE OF CONCRETE SHALL BE 1 3/4" UNLESS OTHERWISE SHOWN.
- AT NO TIME SHALL THE BARRIERS BE LIFTED OR MOVED BY USE OF THE LOOP BARS.
- THE SECTION FURNISHED SHALL COMPLY WITH DIMENSIONS SHOWN, AS APPROVED BY THE ENGINEER.
- SEE SHEET 3 FOR DELINEATOR DETAILS.

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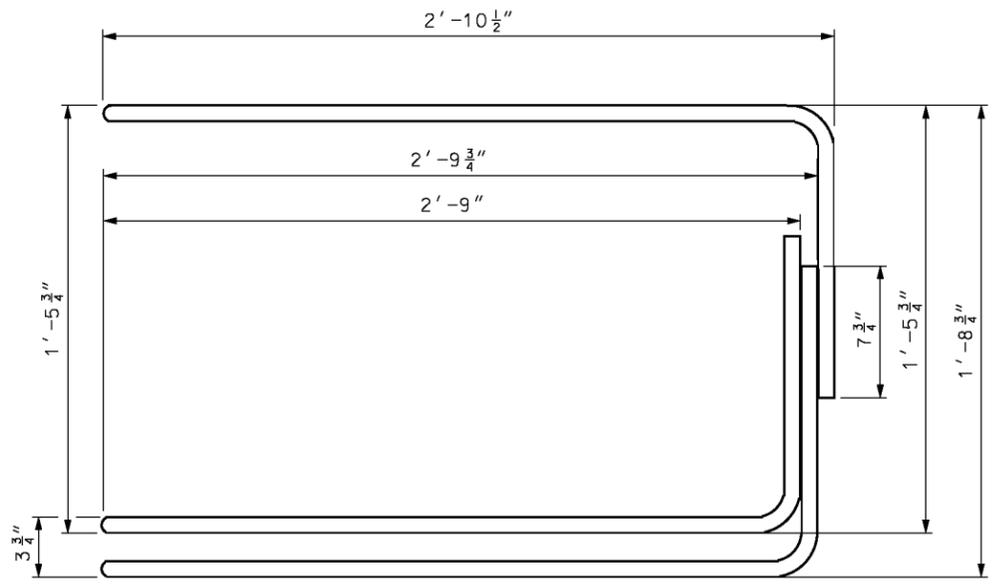
STATE OF MISSOURI
 ERIC E. SCHROETER
 NUMBER PE-28411
 PROFESSIONAL ENGINEER

TEMPORARY CONCRETE TRAFFIC BARRIER
TYPE F

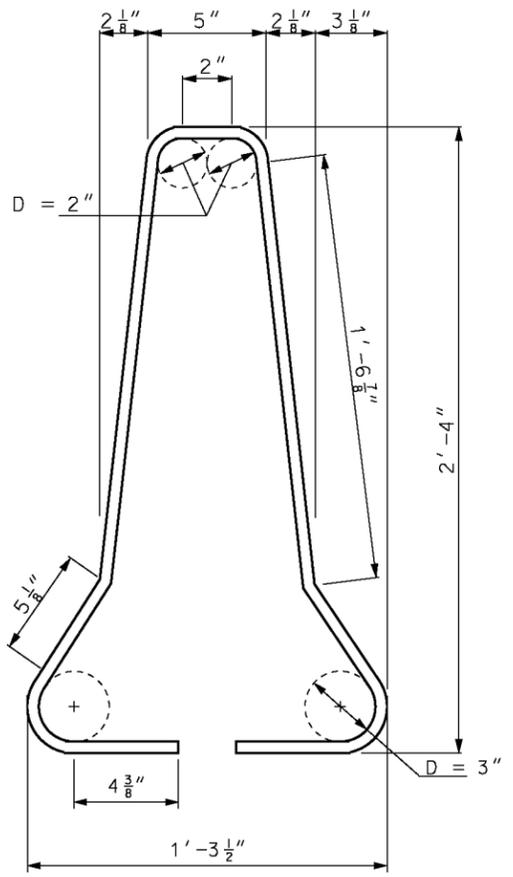
DATE EFFECTIVE: 10/01/2015	617.20D	SHEET NO. 1 OF 8
DATE PREPARED: 8/24/2015		

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

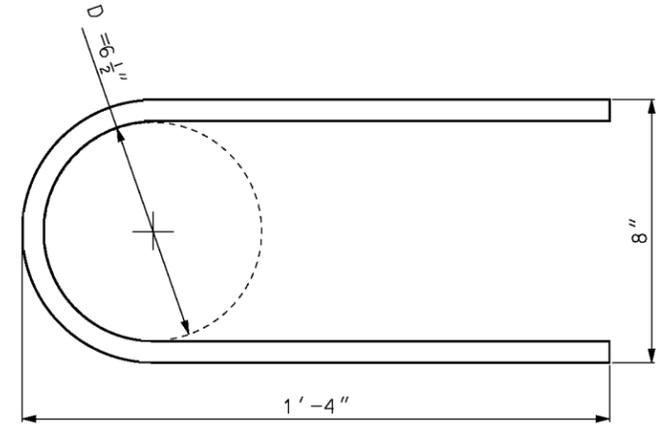
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



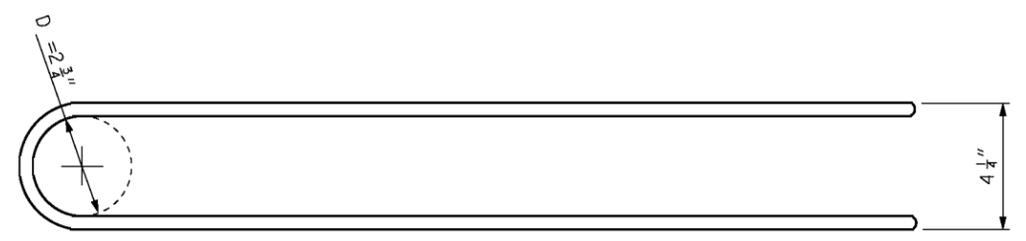
#6 B BAR ELEVATION



#4 A BARS



#6 E BAR



#6 B BAR PLAN

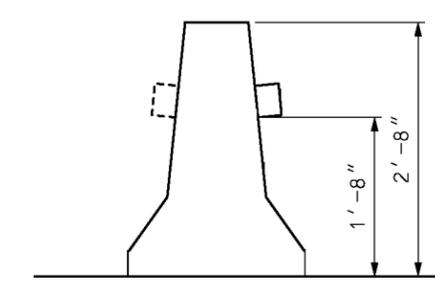
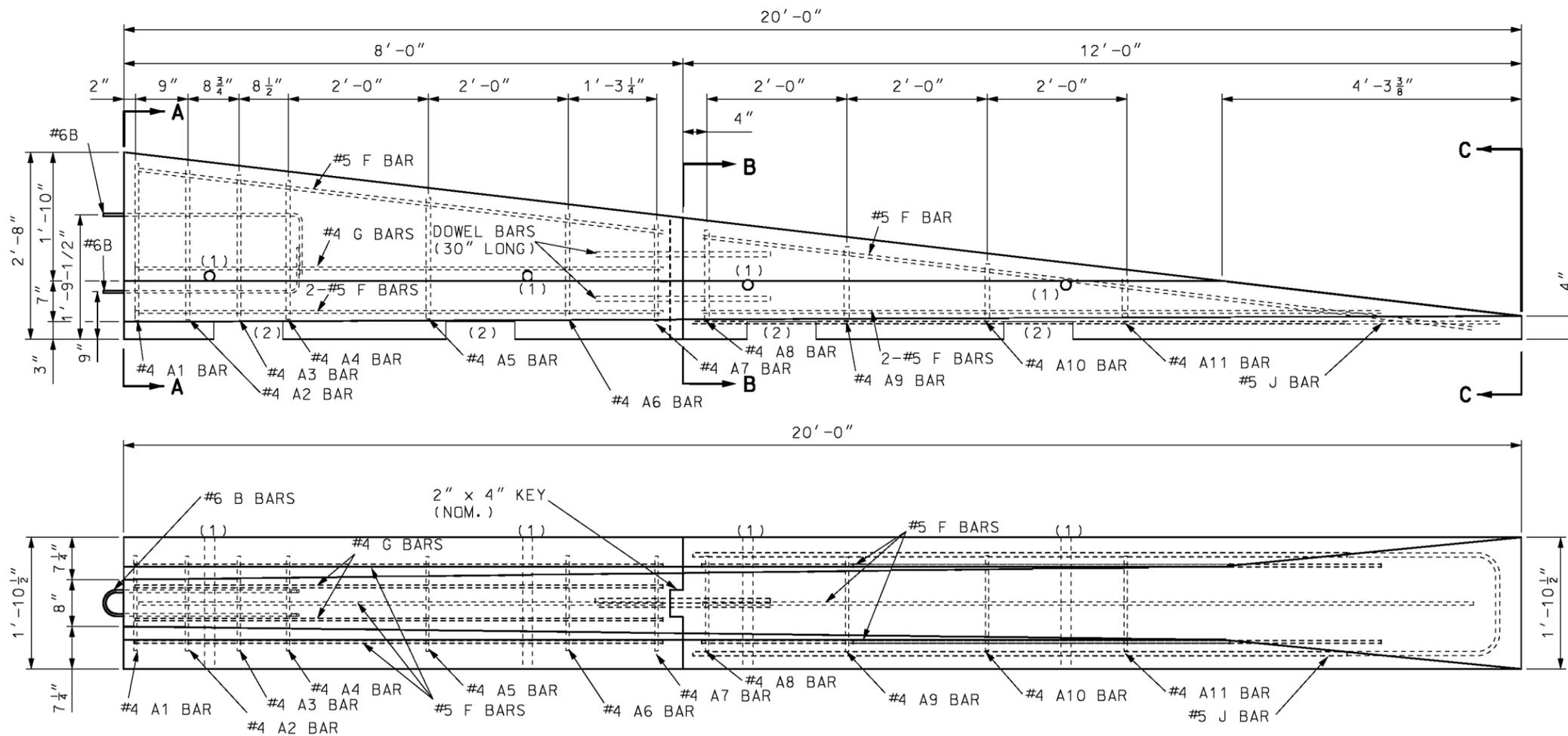
REINFORCING BARS					
PER 12'-6" BARRIER SECTION					
MARK	BAR SIZE	NO. OF BARS	SHAPE OF EACH	LENGTH EACH (NOM.)	WEIGHT
A	4	14		6'-5"	60.8 lbs
C	5	3		12'-2"	38.1 lbs
D	4	2		12'-2"	16.3 lbs
E	6	6		2'-11"	26.3 lbs
LOOP ASSEMBLY					
B	6	6		7'-10"	70.5 lbs

CONCRETE VOLUME 1.3 CU YDS APPROXIMATE WEIGHT 5601 LBS.

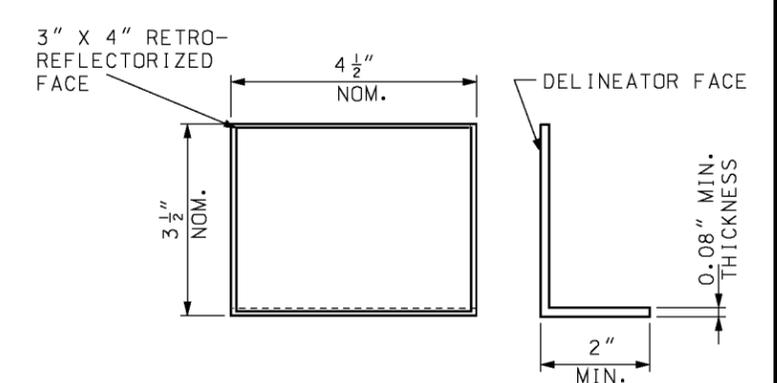
GENERAL NOTE:

DIMENSIONS ARE OUT TO OUT OF BARS UNLESS OTHERWISE NOTED.

	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<p style="text-align: center;">TEMPORARY CONCRETE TRAFFIC BARRIER TYPE F</p>
DATE EFFECTIVE: 10/01/2015 DATE PREPARED: 8/24/2015	<p style="text-align: center; font-size: 1.2em;">617.20D</p>	SHEET NO. 2 OF 8



TRAFFIC BARRIER DELINEATORS



DELINEATOR

**PRECAST BARRIER HEIGHT TRANSITION
(TEMPORARY INSTALLATIONS ONLY)**

- (1) OPTIONAL 4 INCH DIAMETER, 11 GAUGE STEEL ROUND MECHANICAL TUBING SLEEVE FOR LIFT HOLE ALLOWED. THE LOCATION OF THE HOLE MAY VARY TO ACCOMMODATE THE DIFFERING WEIGHT DISTRIBUTIONS OF TRANSITION SECTIONS.
- (2) 3" X 1'-0" SLOTS FOR LIFTING - TWO PER SECTION. LOCATION TO BE DETERMINED BY CONTRACTOR.

GENERAL NOTES:

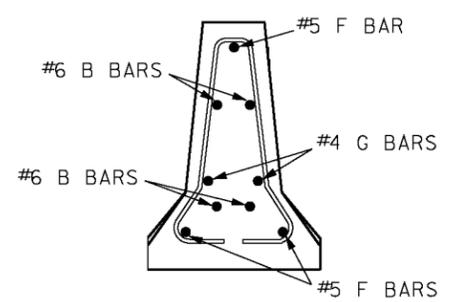
REINFORCING STEEL CLEARANCE TO EDGE OF CONCRETE SHALL BE 1 3/4" UNLESS OTHERWISE SHOWN.

HEIGHT TRANSITIONS SHALL NOT BE USED ON INTERSTATE ROUTES OR IN LOCATIONS WHERE THE POSTED SPEED PRIOR TO CONSTRUCTION IS GREATER THAN 35 MPH.

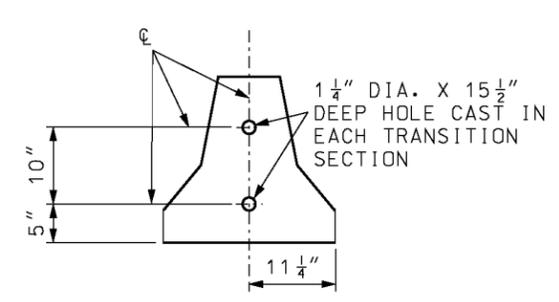
AT NO TIME SHALL THE BARRIERS BE LIFTED OR MOVED BY USE OF THE LOOP BARS.

RETAINER BOLT AND NUT MUST BE USED WITH TRANSITION BARRIER.

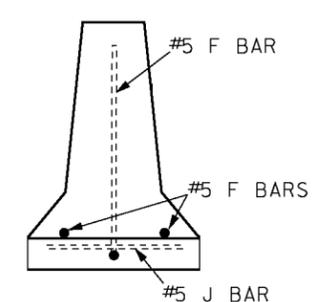
AT THE OPTION OF THE CONTRACTOR, HEIGHT TRANSITIONS MAY BE MANUFACTURED IN ONE SECTION. THE PLANS FOR REINFORCEMENT ACROSS JOINT SHALL BE APPROVED BY THE ENGINEER PRIOR TO MANUFACTURE.



SECTION A-A



SECTION B-B



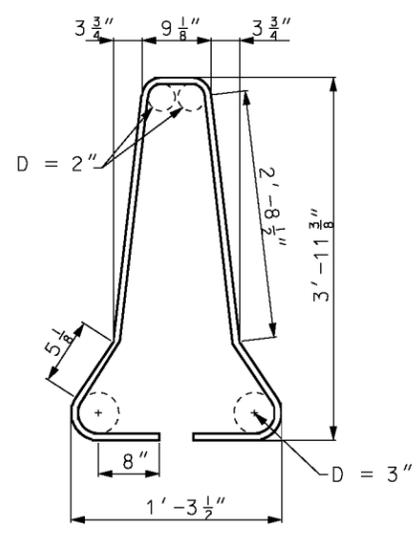
SECTION C-C

NOTE: SECTIONS TO BE CONNECTED WITH TWO- 1" DIA. BARS OR #8 REINFORCING BARS 30" LONG IN 1 1/4" DIA. HOLES AS SHOWN.

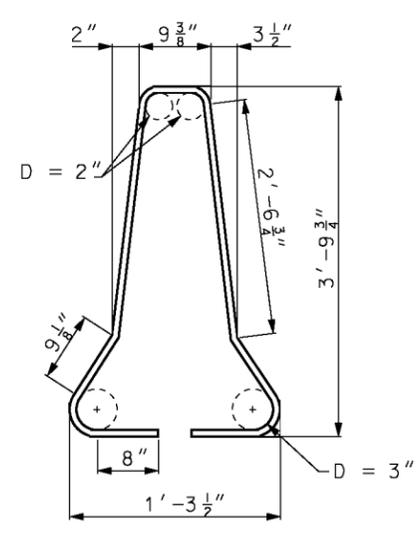
	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	TEMPORARY CONCRETE TRAFFIC BARRIER TYPE F HEIGHT TRANSITIONS	
	DATE EFFECTIVE: 10/01/2015 DATE PREPARED: 8/24/2015	617.20D

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

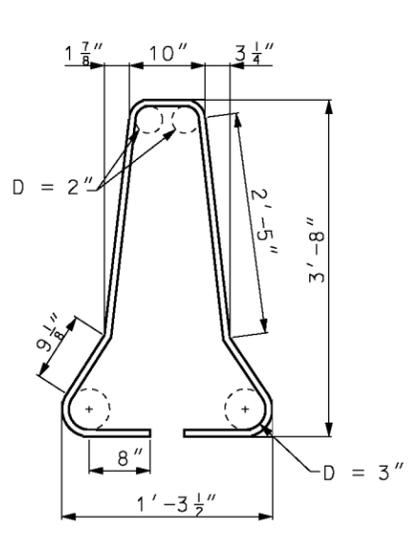
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



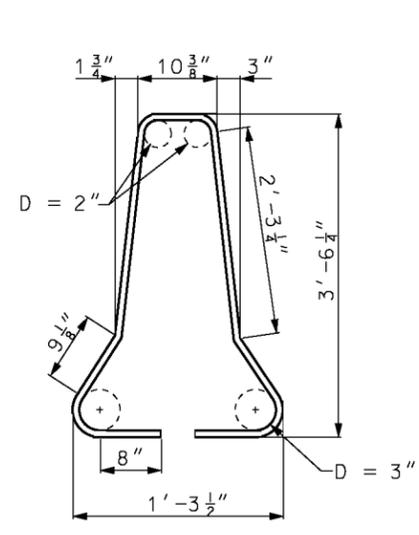
#4 A1 BAR



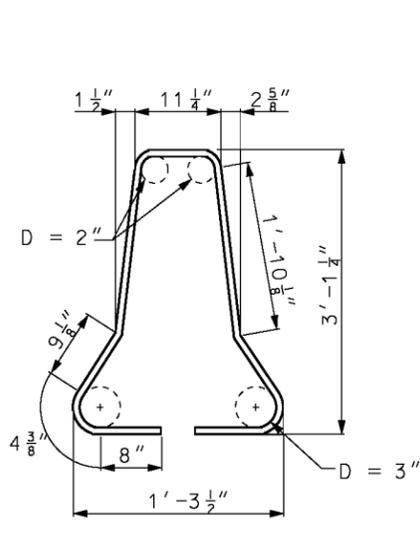
#4 A2 BAR



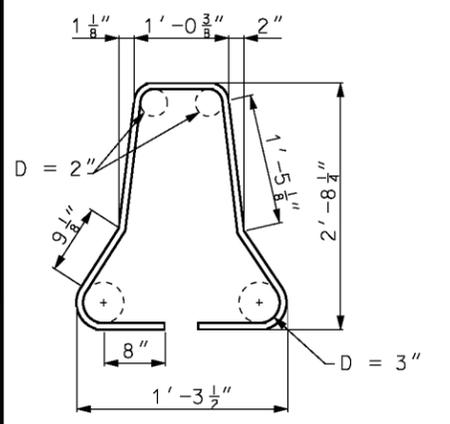
#4 A3 BAR



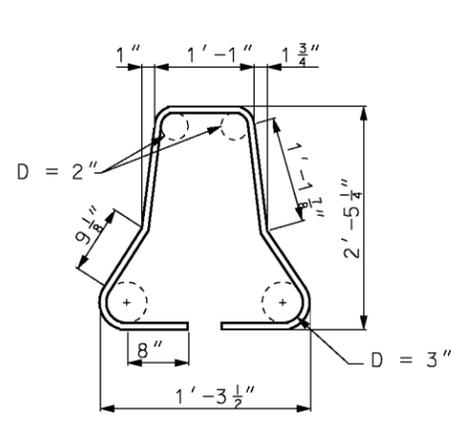
#4 A4 BAR



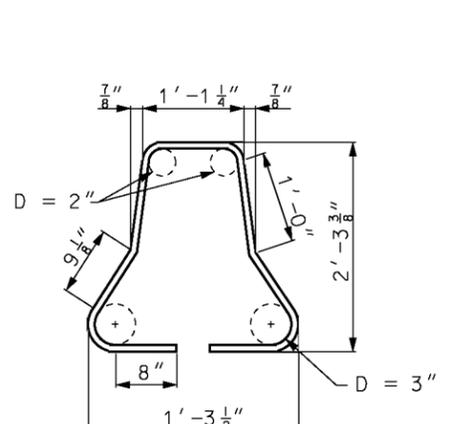
#4 A5 BAR



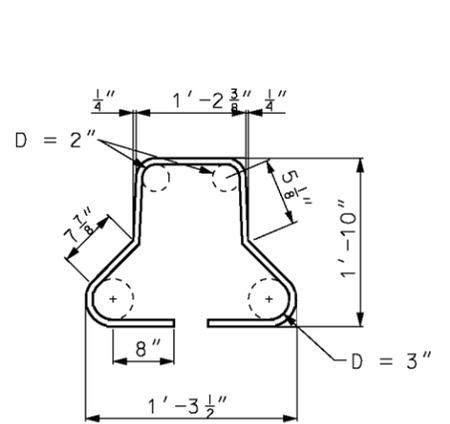
#4 A6 BAR



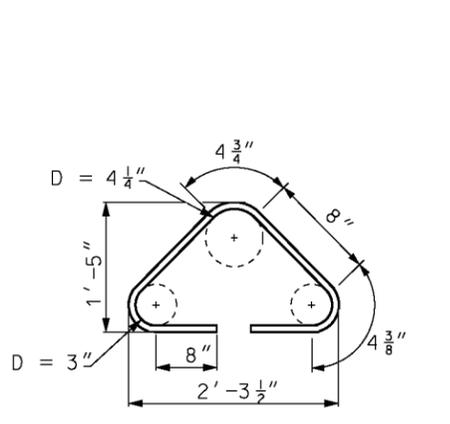
#4 A7 BAR



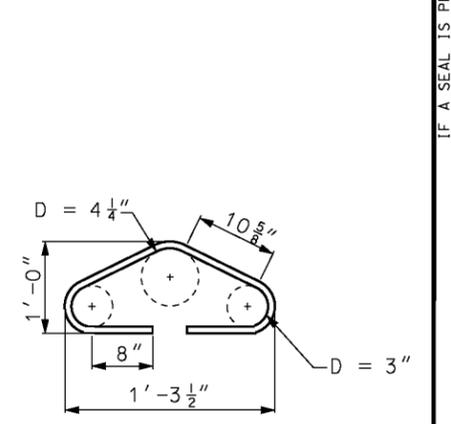
#4 A8 BAR



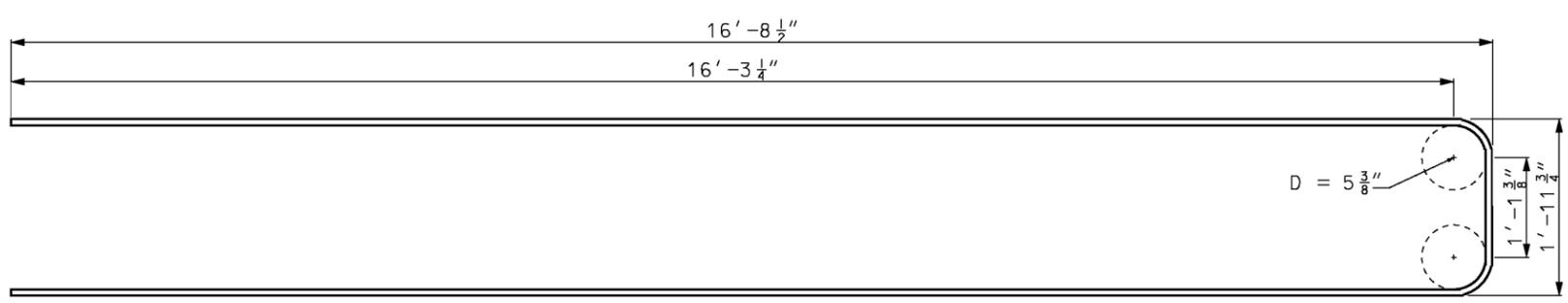
#4 A9 BAR



#4 A10 BAR



#4 A11 BAR



#5 J BAR

NOTE: FOR DETAILS OF B BARS, SEE SHEET 2 OF 6.

GENERAL NOTES:

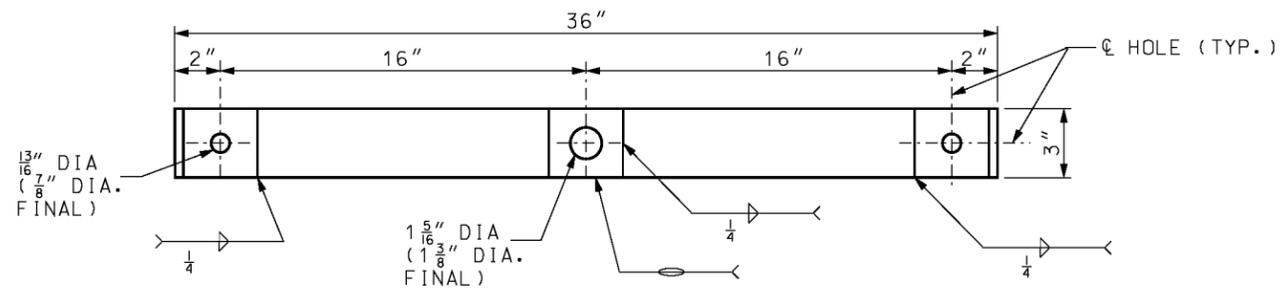
DIMENSIONS ARE OUT TO OUT OF BARS UNLESS OTHERWISE NOTED.

MoDOT MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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STATE OF MISSOURI
 ERIC E. SCHROETER
 NUMBER PE-28411
 PROFESSIONAL ENGINEER

TEMPORARY CONCRETE TRAFFIC BARRIER TYPE F HEIGHT TRANSITIONS

DATE EFFECTIVE: 10/01/2015	617.20D	SHEET NO. 4 OF 8
DATE PREPARED: 8/24/2015		



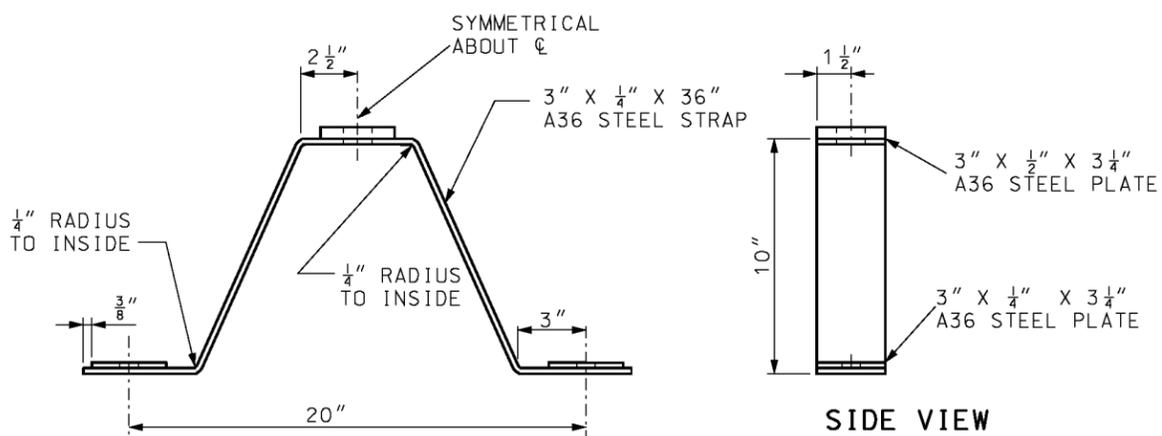
PLAN OF TIE-DOWN STRAP

(1) TIE-DOWN STRAP ANCHOR SHALL BE ONE OF THE FOLLOWING:

3/4" DROP IN ANCHOR WITH A 3 1/4" EMBEDMENT AND 3/4" DIA. X 1 3/4" LONG GRADE 5 BOLT.

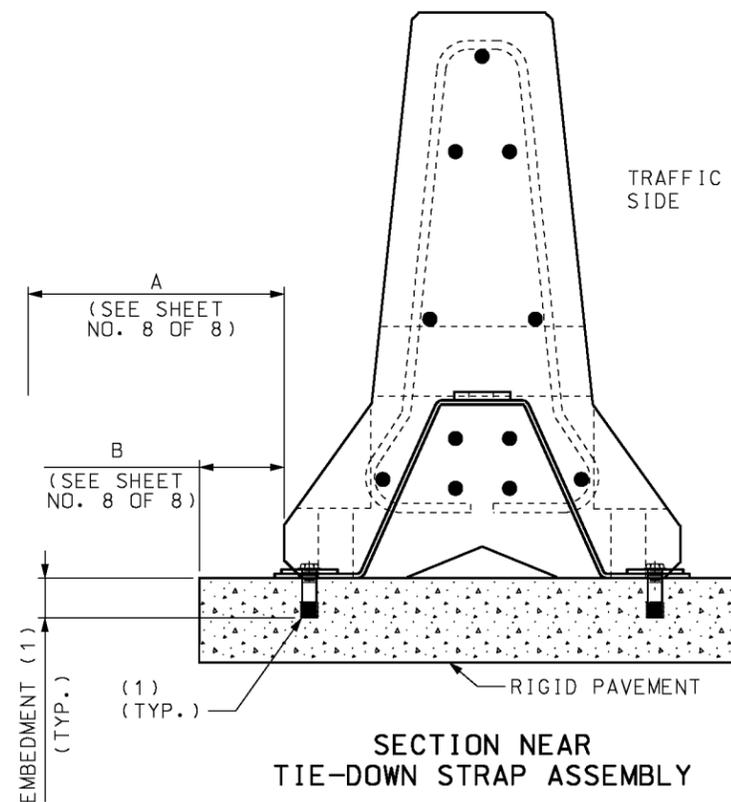
RED HEAD LARGE DIAMETER TAPCON (LDT) 3/4" X 4 1/2" LONG WITH A 4" EMBEDMENT.

SIMPSON TITEN HD 3/4" DIA. X 5" LONG WITH A 4 1/2" EMBEDMENT.

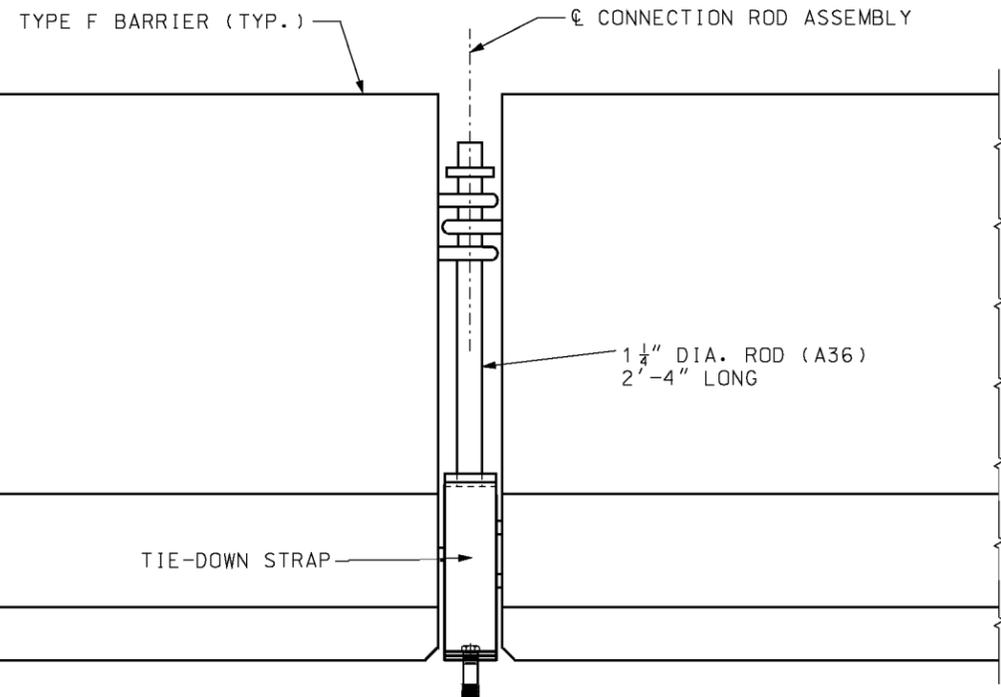


SIDE VIEW

DETAILS OF TYPE F TEMPORARY BARRIER TIE-DOWN STRAP

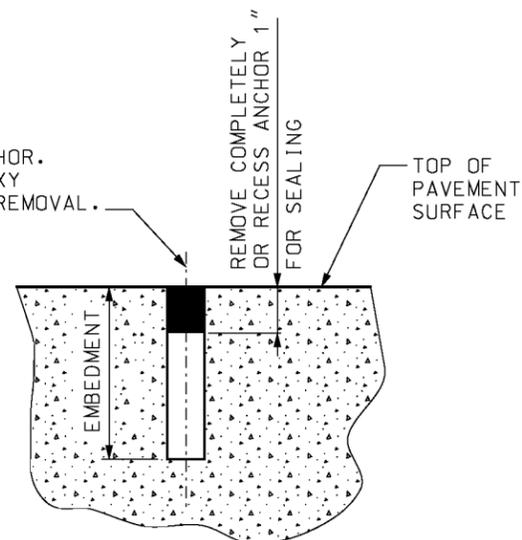


SECTION NEAR TIE-DOWN STRAP ASSEMBLY



PART ELEVATION OF BARRIER

3/4" DIA. ANCHOR. FILL WITH EPOXY MORTAR AFTER REMOVAL.



DETAIL SHOWING SEALING OF HOLES AFTER REMOVAL OF TIE-DOWN BOLTS

GENERAL NOTES:

TIE-DOWN STRAP SYSTEMS ARE ONLY APPLICABLE ON RIGID PAVEMENTS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIAL.

SEE OTHER SHEETS FOR DETAILS NOT SHOWN.

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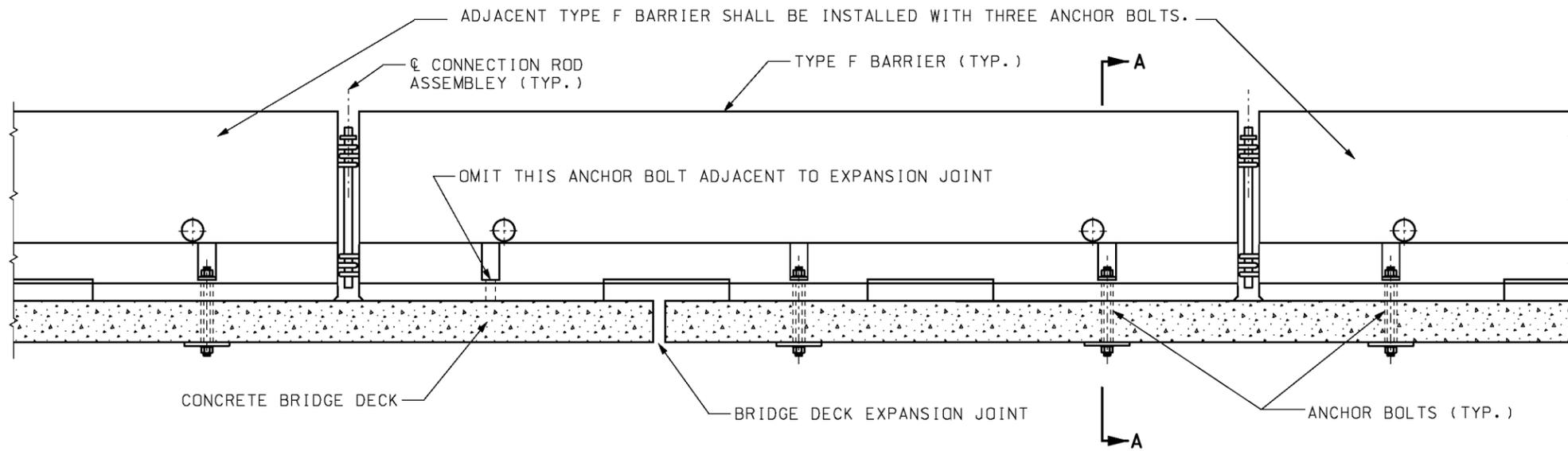
STATE OF MISSOURI
 ERIC E. SCHROETER
 NUMBER PE-28411
 PROFESSIONAL ENGINEER

TEMPORARY CONCRETE TRAFFIC BARRIER
 ANCHORED
 (TIE-DOWN STRAP SYSTEM)

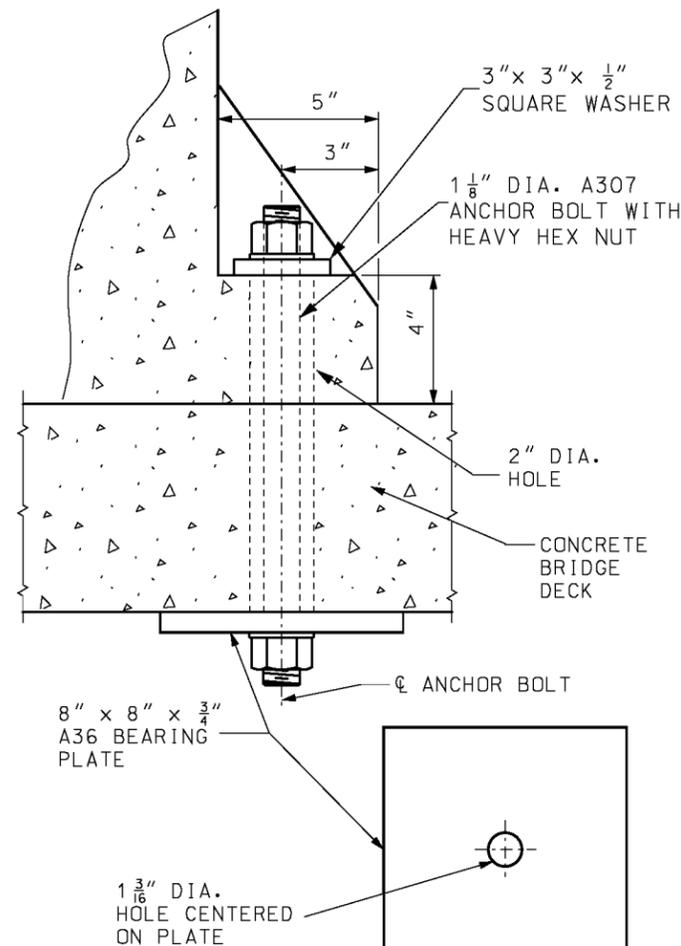
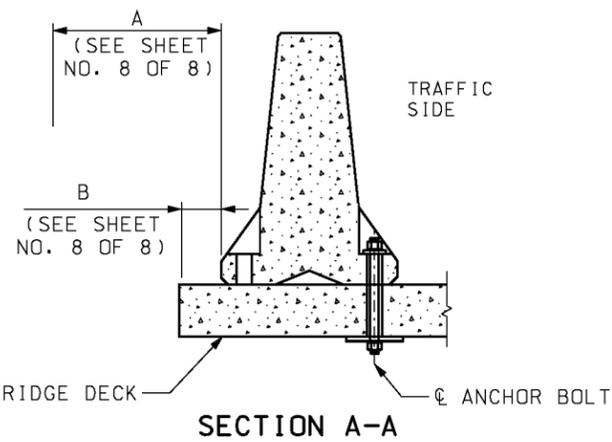
DATE EFFECTIVE: 10/01/2015
 DATE PREPARED: 9/3/2015

617.20D

SHEET NO.
 5 OF 8



BOLT THROUGH DECK AT THERMAL EXPANSION JOINTS



BOLT THROUGH DECK DETAIL

GENERAL NOTES:

ANCHOR BOLT SYSTEMS ARE ONLY APPLICABLE ON BRIDGE DECKS AND RIGID PAVEMENTS.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIAL.

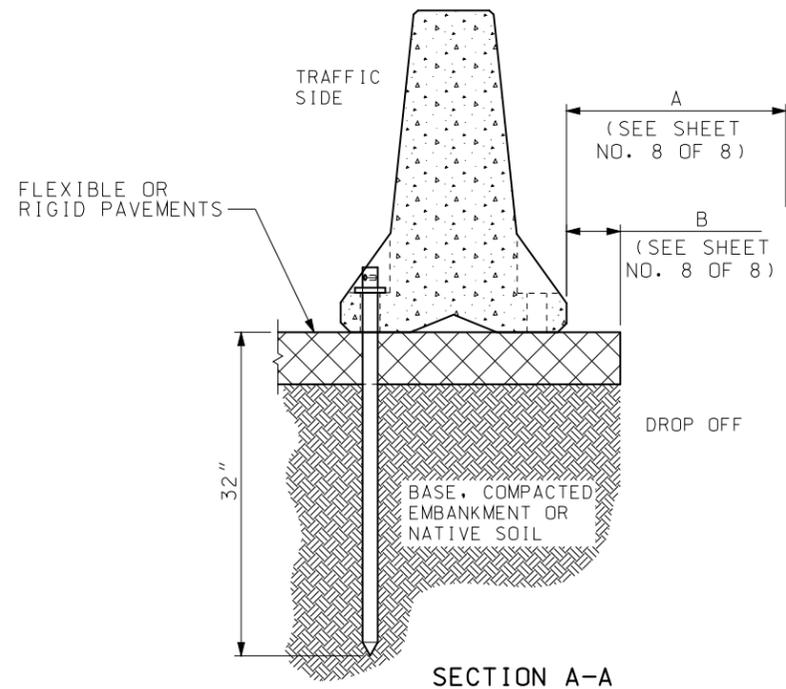
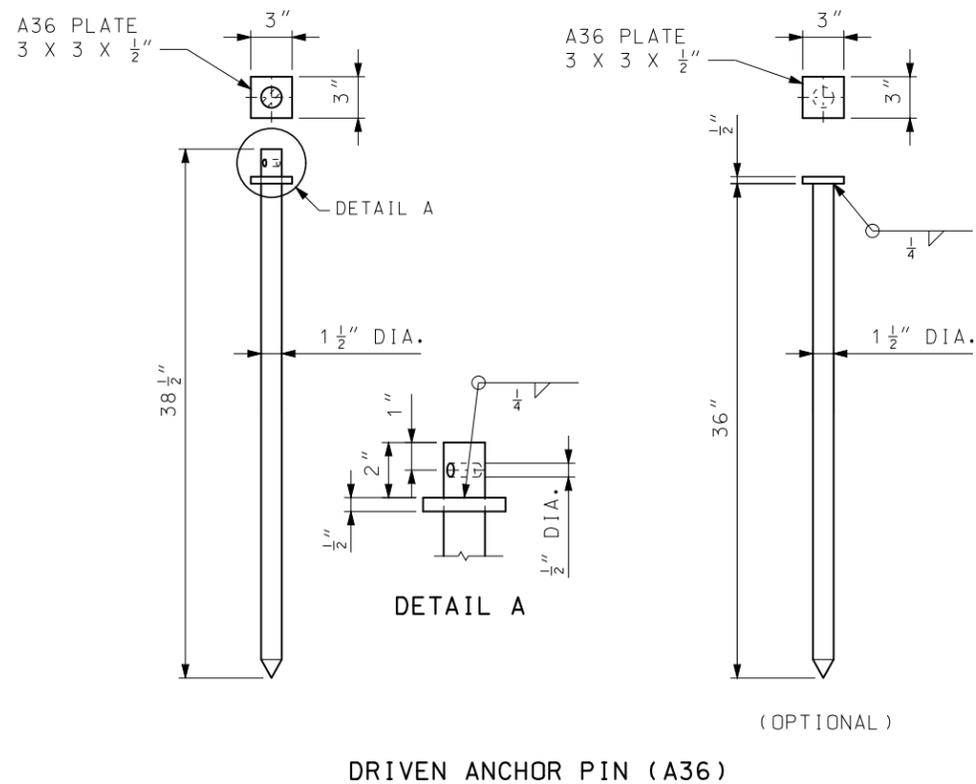
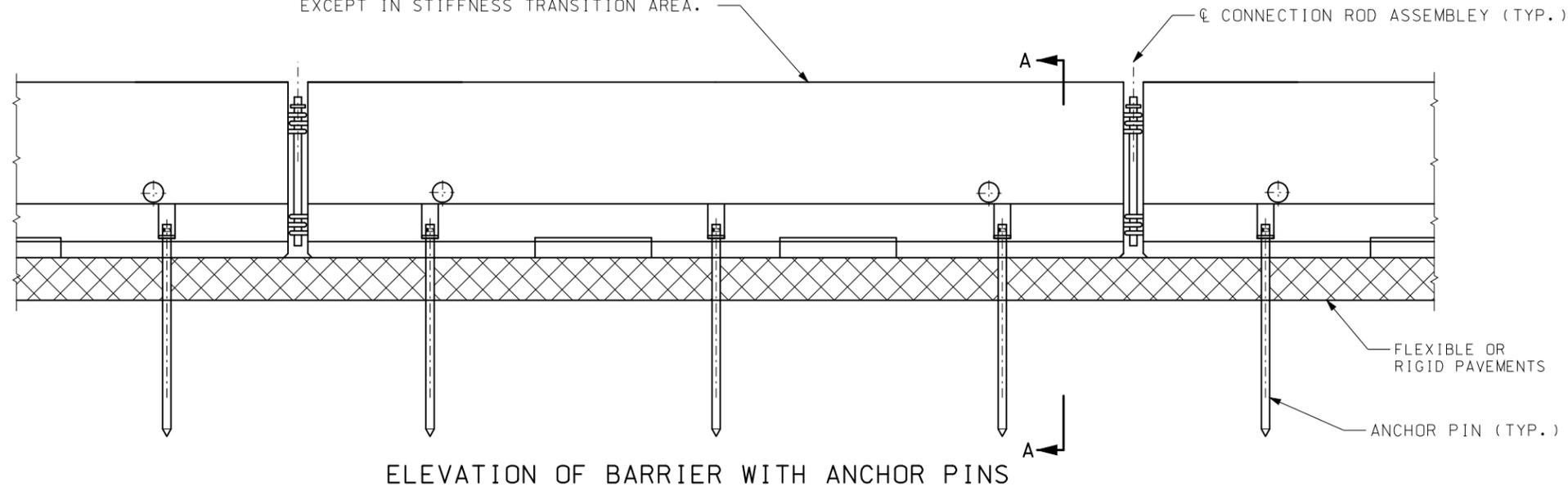
SEE OTHER SHEETS FOR DETAILS NOT SHOWN.

AFTER REMOVAL OF ANCHOR BOLTS HOLES SHALL BE FILLED WITH QUALIFIED SPECIAL MORTAR IN ACCORDANCE WITH SEC 704.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	TEMPORARY CONCRETE TRAFFIC BARRIER ANCHORED (BOLT SYSTEM)
DATE EFFECTIVE: 10/01/2015 DATE PREPARED: 9/3/2015	617.20D
SHEET NO. 6 OF 8	

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

TYPE F BARRIER SHALL BE INSTALLED WITH THREE DRIVEN ANCHOR PINS (TYP.), EXCEPT IN STIFFNESS TRANSITION AREA.



GENERAL NOTES:

CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIAL.

WHERE EXISTING FLEXIBLE PAVEMENT OR RIGID PAVEMENT IS NOT PRESENT A 2" THICK X 30" WIDE MINIMUM ASPHALT PAD SHALL BE CONSTRUCTED.

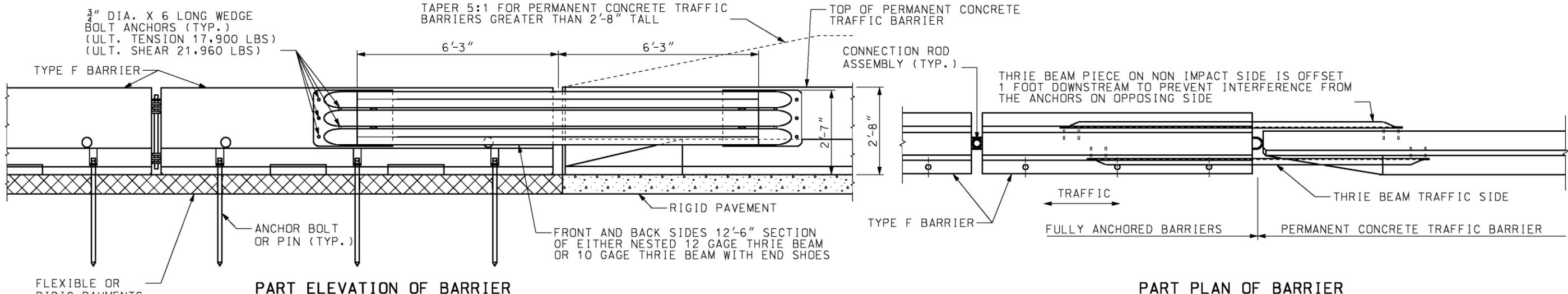
COST OF FURNISHING AND INSTALLING THE ASPHALT PAD COMPLETE-IN-PLACE WILL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.

SEE OTHER SHEETS FOR DETAILS NOT SHOWN.

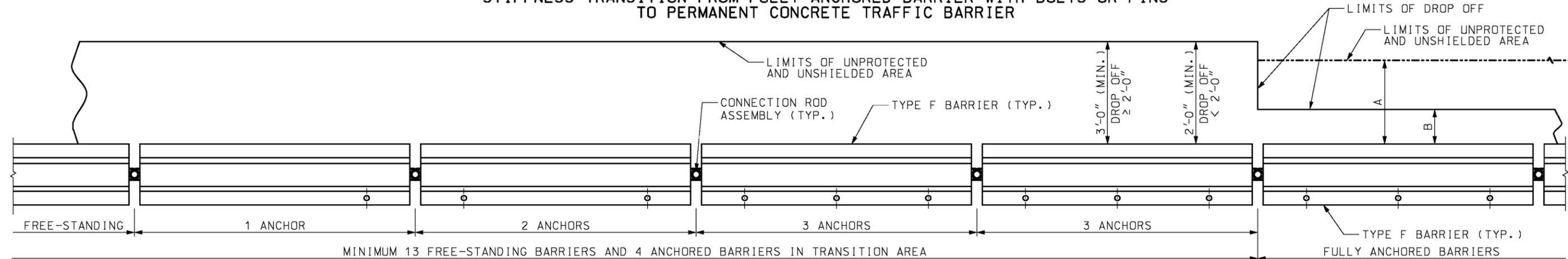
AFTER REMOVAL OF ANCHOR PINS HOLES SHALL BE FILLED WITH QUALIFIED SPECIAL MORTAR IN ACCORDANCE WITH SEC 704.

 MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<p>TEMPORARY CONCRETE TRAFFIC BARRIER</p> <p>ANCHORED (PIN SYSTEM)</p>
DATE EFFECTIVE: 10/01/2015 DATE PREPARED: 9/3/2015	<p>617.20D</p>
SHEET NO. 7 OF 8	

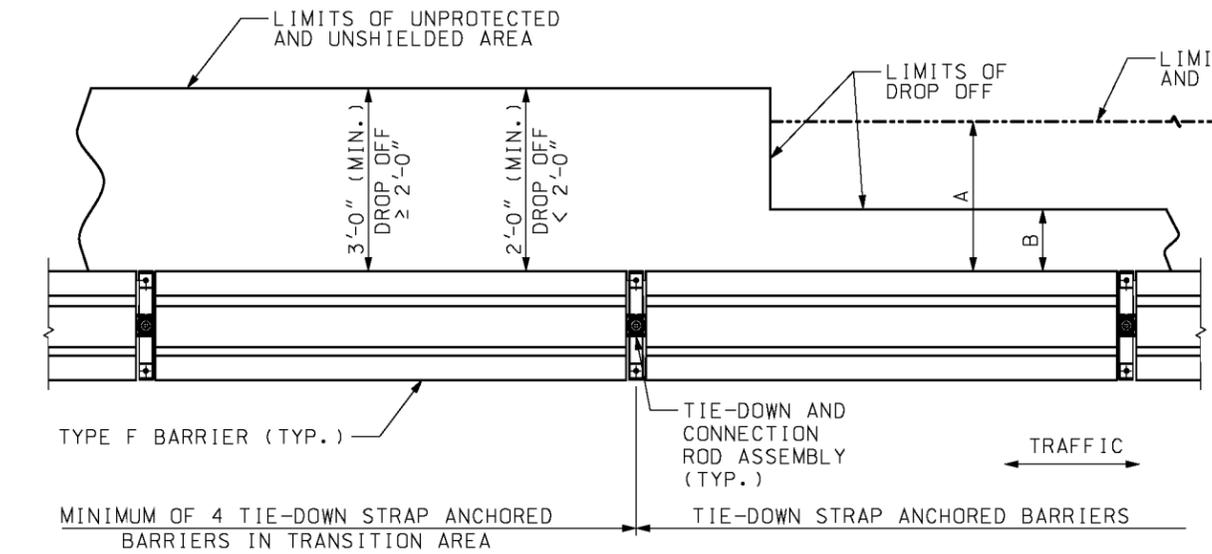
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



STIFFNESS TRANSITION FROM FULLY ANCHORED BARRIER WITH BOLTS OR PINS TO PERMANENT CONCRETE TRAFFIC BARRIER



PLAN OF STIFFNESS TRANSITION FROM FREE-STANDING BARRIERS TO FULLY ANCHORED BARRIER WITH BOLTS OR PINS



STIFFNESS TRANSITION FOR BARRIER ANCHORED WITH TIE-DOWN STRAPS
(13 FREE-STANDING BARRIERS NOT REQUIRED)

LIMITS OF UNPROTECTED AND UNSHIELDED AREA	
$6'' \leq A < 2'$	ANCHOR EACH BARRIER WITH 3 ANCHOR BOLTS OR PINS
$2' \leq A < 3'$	ANCHOR WITH TIE-DOWN STRAP
$A \geq 3'$	NO ANCHORAGE REQUIRED UNLESS SHOWN ON PLANS

EDGE OF DROP OFF	
$1'' \leq B < 6''$	ANCHOR EACH BARRIER WITH 3 ANCHOR BOLTS OR PINS
$6'' \leq B < 2'$	ANCHOR WITH TIE-DOWN STRAP
$B \geq 2'$	NO ANCHORAGE REQUIRED UNLESS SHOWN ON PLANS

NOTE: TEMPORARY CONCRETE TRAFFIC BARRIER MUST MEET BOTH A AND B DIMENSIONS, UNLESS OTHERWISE SHOWN ON PLANS.

GENERAL NOTES:
CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD BEFORE ORDERING NEW MATERIAL.

COST OF FURNISHING AND INSTALLING THE ANCHOR BOLT SYSTEM, ANCHOR PINS SYSTEM, TIE-DOWN STRAP SYSTEM AND THRIE BEAM COMPLETE-IN-PLACE WILL BE CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.

ALL TYPE F BARRIERS SHALL BE CONNECTED TO ADJACENT TYPE F BARRIERS WITH CONNECTION ROD ASSEMBLY. PULL TIGHT DURING INSTALLATION TO REMOVE SLACK TO PROVIDE LONGITUDINAL TENSION DURING IMPACT.

AFTER REMOVAL OF ANCHORS HOLES SHALL BE FILLED WITH QUALIFIED SPECIAL MORTAR IN ACCORDANCE WITH SEC 704.

SEE OTHER SHEETS FOR DETAILS NOT SHOWN.

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
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

TEMPORARY CONCRETE TRAFFIC BARRIER STIFFNESS TRANSITION

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