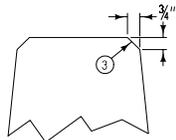
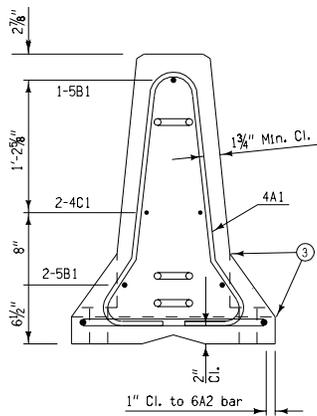


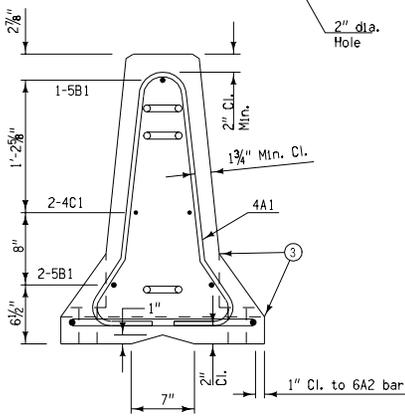
SECTION A-A
Lifting Slot



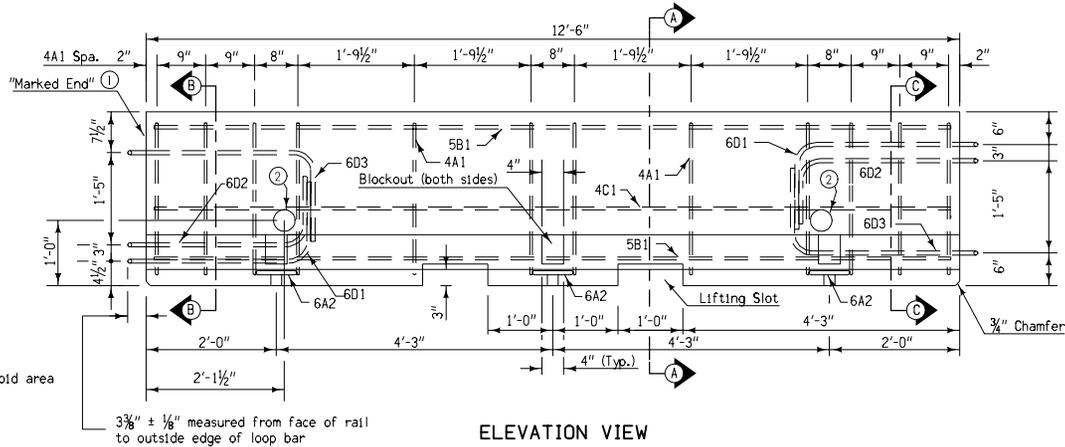
CHAMFER DETAIL



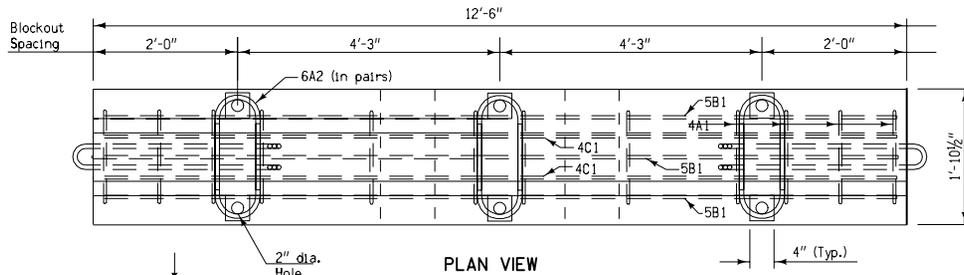
"Marked End" ①
SECTION B-B
Stirrup Placement



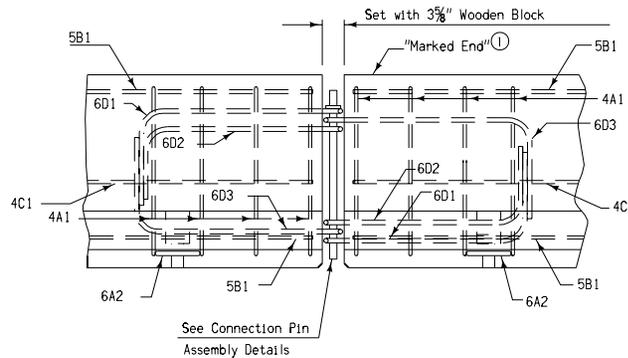
SECTION C-C
Stirrup Placement



ELEVATION VIEW



PLAN VIEW



See Connection Pin
Assembly Details

DETAILS OF BARRIER CONNECTION

All reinforcement is Grade 60, ASTM A615, except the loop bars 6D1, 6D2 and 6D3. The loop bars shall be 3/4" smooth steel bars with a minimum yield of 60 ksi, a tensile strength of not less than 1.25 times the yield strength but a minimum of 80 ksi, a minimum 14% elongation in 8 inches, and passing a 180 degree bend test using a 3.50 inches pin bend diameter. The loops shall be installed within 1/8" of the plan dimensions.

The Contractor shall provide for an approved monitoring schedule with a person on call and available 24 hours a day, each day of the week, to realign barrier which has been struck. Initiation of service shall be within one hour of notification of need.

Unless stated otherwise In the plans, the barrier rail sections shall remain the property of the Contractor and at the completion of the work shall be removed from the site by the Contractor.

At no time shall the barriers be lifted or moved by the use of loop bars 6D1, 6D2 or 6D3.

Contract Item:

Temporary Barrier Rail, Concrete

Tabulation: 108-33

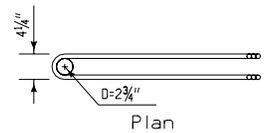
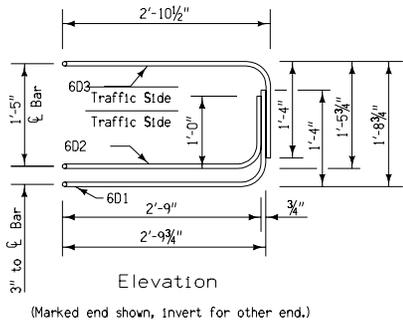
① Per Materials I. M. 571, one end of each rail section shall be permanently marked with manufacturing information. The "marked end" shall be that end of the barrier having one loop bar at the top and two loop bars at the bottom. The markings shall include:

- Manufacturer Identification
- Date Manufactured (Month and Year)
- RE-88

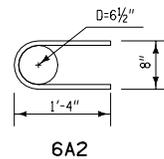
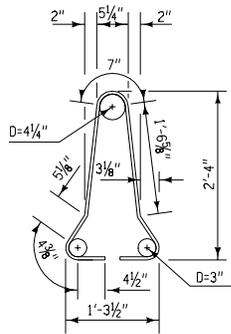
② Lifting hole, 4" diameter PVC Pipe.

③ 1 inch radius allowed.

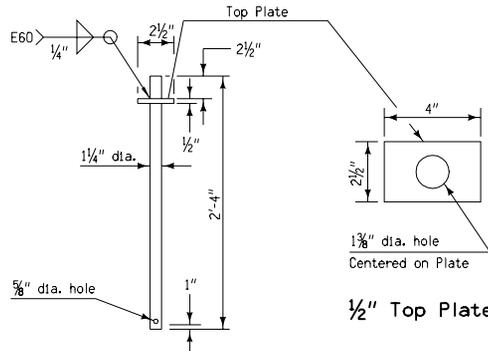
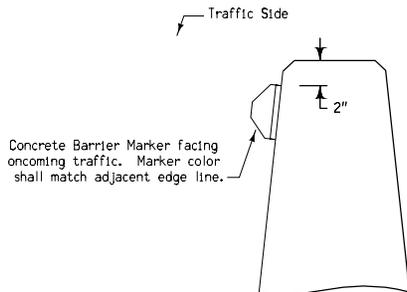
 Iowa Department of Transportation	REVISION
	3 10-17-06
STANDARD ROAD PLAN	RE-71
REVISIONS: Replaces paren-number standards (RE-71) with one multi-page standard.	SHEET 1 of 4
<i>Deanna Mayfield</i> APPROVED BY DESIGN METHODS ENGINEER	
TEMPORARY BARRIER RAIL (PRECAST CONCRETE)	



BENT BAR DETAILS
(Dimensions are out to out of bars unless otherwise noted.)

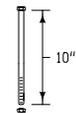


CONCRETE BARRIER MARKER PLACEMENT

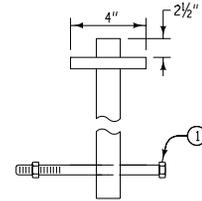


CONNECTION PIN

(A36 Steel) 10.9 lbs. each



RETAINER BOLT & NUT ①
1/2" dia. bolt & nut
(ASTM A490, Grade 8)



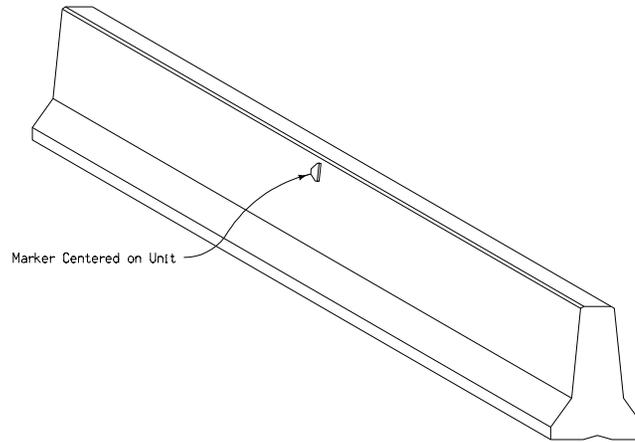
CONNECTION PIN ASSEMBLY

Per 12'-6" Barrier Section

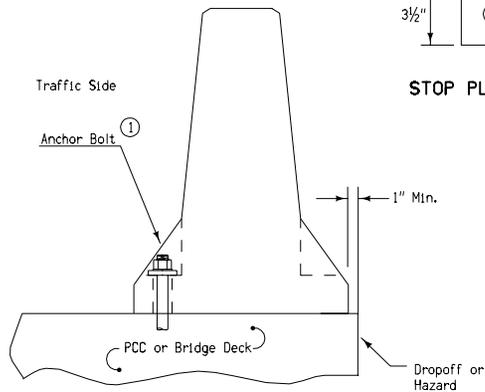
REINFORCING A615 Gr. 60					
Bar	Bar Size	Shape	No. of Bars	Length Ft.	Weight Lbs.
4A1	4	⌒	12	6'-0"	48.1
6A2	6	⌒	6	2'-11"	26.3
5B1	5	—	3	12'-2"	38.1
4C1	4	—	2	12'-2"	16.3
LOOP ASSEMBLY					
6D1	6	⌒	2	8'-5"	25.3
6D2	6	⌒	2	7'-7"	22.8
6D3	6	⌒	2	8'-6"	25.5

① Retainer bolt & nut are required for connections with 2-loop barriers (previous designs) or in conjunction with the 'Type 2' Anchorage Straps.

Concrete barrier markers shall be furnished and installed by the Contractor. Markers shall be placed on the barrier as recommended by the manufacturer and as shown on this sheet. The Contractor shall maintain the markers and promptly repair or replace any damaged or missing units. All costs for furnishing, installing and maintaining markers shall be included in the price bid for Temporary Barrier Rail.

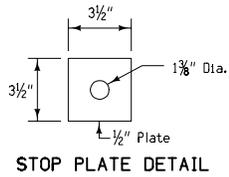


	REVISION
	3 10-17-06
STANDARD ROAD PLAN	RE-71
SHEET 2 of 4	
REVISIONS: Replaces paren-number standards (RE-71) with one multi-page standard.	
 APPROVED BY DESIGN METHODS ENGINEER	
TEMPORARY BARRIER RAIL (PRECAST CONCRETE)	

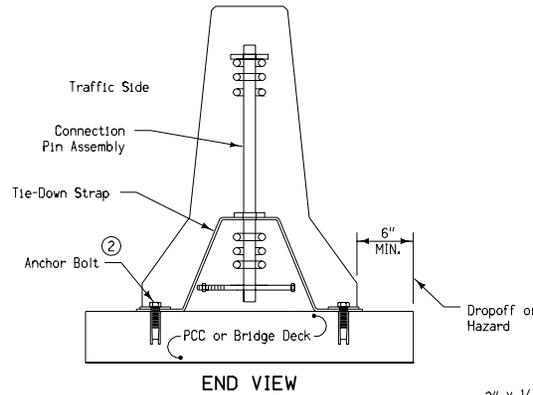


TYPICAL SECTION

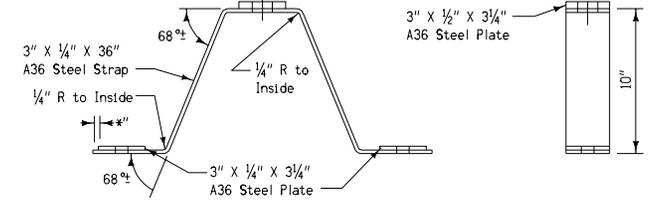
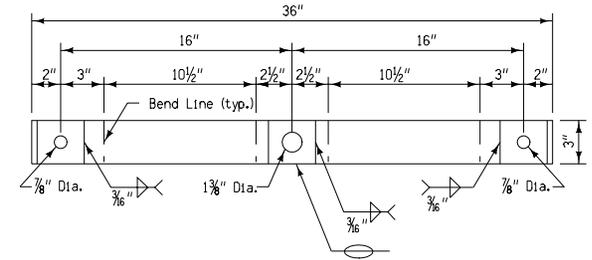
'TYPE 1' ANCHORAGE



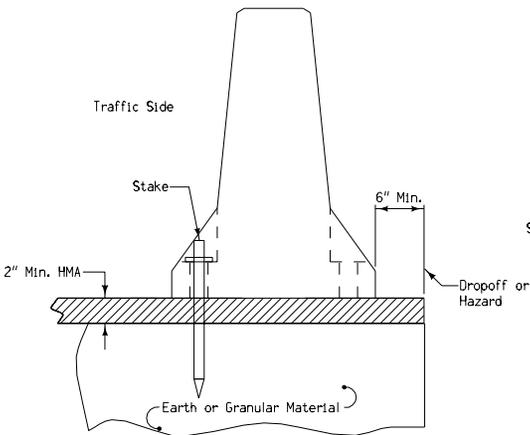
STOP PLATE DETAIL



END VIEW

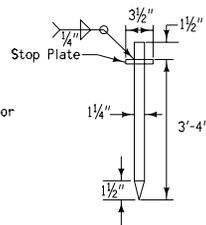


'TYPE 2' ANCHORAGE

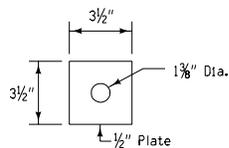


TYPICAL SECTION

'TYPE 3' ANCHORAGE



STAKE DETAIL



STOP PLATE DETAIL

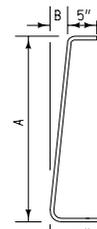
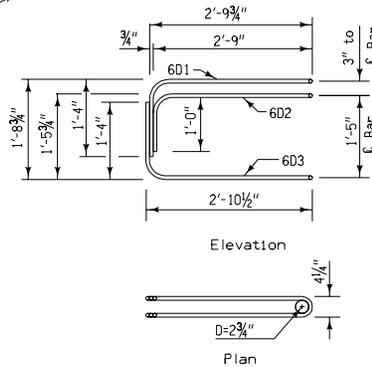
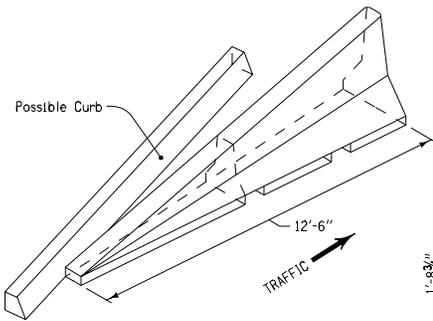
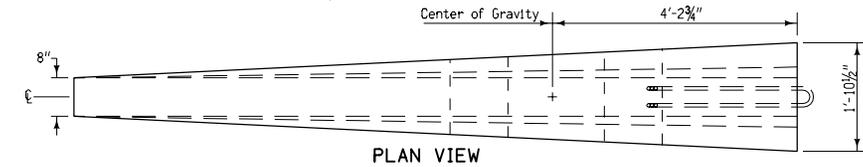
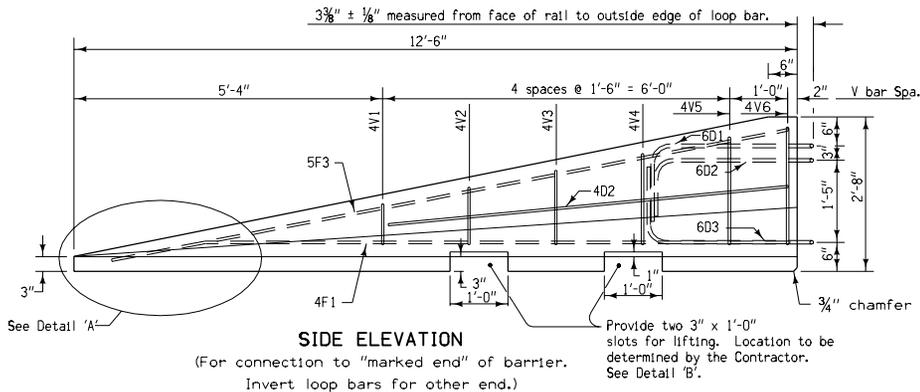
Following anchor removal, the holes shall be filled with an approved non-shrink grout.

The cost of anchorage, when required, shall be incidental to "Temporary Barrier Rail, Concrete".

- ① 1 1/8" Grade 55, ASTM F-1554 Anchor Bolt with heavy hex nut and stop plate (ASTM A36).
- ② 3/4" Grade 55, ASTM F-1554 Anchor Bolt and Red Head 3/4" Drop-In Anchor (17,255 lbs. pull out strength) or approved equivalent.

	REVISION 3 10-17-06	
	RE-71 SHEET 3 of 4	
REVISIONS: Replaces paren-number standards (RE-71) with one multi-page standard.		
<i>Deanna Marfeldt</i> APPROVED BY DESIGN METHODS ENGINEER		
TEMPORARY BARRIER RAIL (PRECAST CONCRETE)		

TAPER SECTION DETAILS



2 at each size required for stirrup assembly

LOOP BAR ASSEMBLY
(Connection to "Marked End" shown, invert for other end)

Per 12'-6" Barrier Taper Section

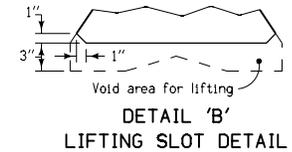
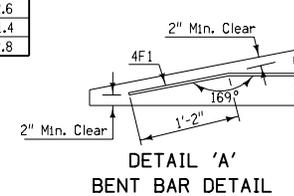
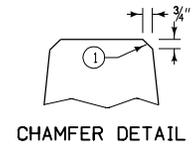
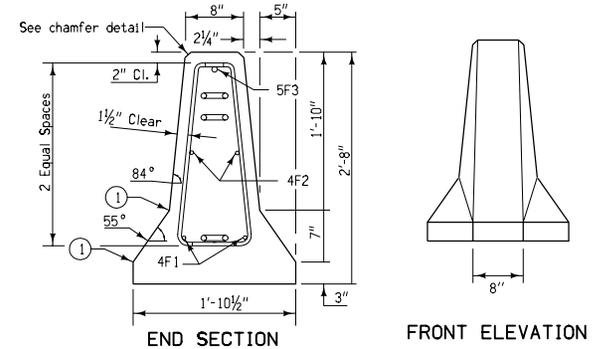
REINFORCING A615 Gr. 60					
Bar	Bar Size	Shape	No. of Bars	Length ft.	Weight lbs.
4V1	4	L	2	1'-11"	2.6
4V2	4	L	2	2'-2"	2.9
4V3	4	L	2	2'-6"	3.3
4V4	4	L	2	2'-9"	3.7
4V5	4	L	2	3'-2"	4.2
4V6	4	L	2	3'-4"	4.5
4F1	4	—	2	12'-0"	16.0
4F2	4	—	2	7'-6"	10.0
5F3	5	—	1	11'-9"	12.3

LOOP ASSEMBLY					
Bar	Bar Size	Shape	No. of Bars	Length ft.	Weight lbs.
6D1	6	—	1	8'-5"	12.6
6D2	6	—	1	7'-7"	11.4
6D3	6	—	1	8'-6"	12.8

Estimated quantity of concrete for one taper section is 0.6 cubic yards.

Taper section is not designed for use within the clear zone on high-speed facilities. Taper section is not needed if end of barrier rail is protected with crash cushion.

① 1" radius allowed.



Bar	A	B
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 3/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

<p>Iowa Department of Transportation</p>	REVISION
	3 10-17-06
<p>STANDARD ROAD PLAN</p>	<p>RE-71</p>
	<p>SHEET 4 of 4</p>
<p>REVISIONS: Replaces paren-number standards (RE-71) with one multi-page standard.</p>	
<p><i>Deanna Marfield</i></p> <p>APPROVED BY DESIGN METHODS ENGINEER</p>	
<p>TEMPORARY BARRIER RAIL (PRECAST CONCRETE)</p>	