

FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	54-87 K-6657-01	2002	228	1122

NOTE: See R.F.I. #033 (3-13-03)

**GENERAL NOTE**

Use either Class A Concrete (AE) or the mix used in the concrete pavement throughout.  
 Drainage slots shall be constructed where specified in the Plans, at inlet locations, or as directed by the Engineer.  
 Bars designated by number, e.g., #25 bars, are deformed reinforcing bars, intermediate grade.  
 Payment for all bars, joint material, median barrier filler material, reflectors and supporting materials, associated work, etc., shall be subsidiary.  
 The section furnished must generally comply with the dimensions shown. Requests for minor variations in section geometry may be submitted for review.  
 Permanent concrete barriers shall be cast in place or slip formed construction only. Precast barriers will not be permitted.

**EXPANSION JOINTS**

Expansion Joints shall be made of Expansion Joint Material (Nonextruding, Type B), 25 mm thick, and constructed where shown, to match expansion joints in concrete pavement; at structures; and at the end of each day's pour. Where pavement joints are greater than 38 mm in thickness, the joint may be left open with no joint material above the adjoining surface. Expansion joint material shall be recessed 6 mm from barrier surface.

**CONTRACTION JOINTS**

Contraction joints may be either formed or sawed on 6 m centers maximum. Where barrier is placed on or adjacent to concrete pavement, joints shall be spaced to match contraction joints and definite transverse cracks in the pavement, not to exceed 12 m centers. Match all pavement joints.

**BARRIER BASE**

Where the median is not paved full width, barrier shall be placed on a 250 mm x 600 mm bed of Class A Concrete or the mix used in the concrete pavement, or bituminous base course, at the contractor's option with approval of Engineer, to assure proper alignment.

**100 mm PRESSURE RELIEF JOINT**

Joint material shall be preformed urethane foam. Joint material installed with lubricant adhesive, cut to the shape shown. The joint shall be constructed to match the 100 mm pressure relief joint of the concrete pavement approach slabs.

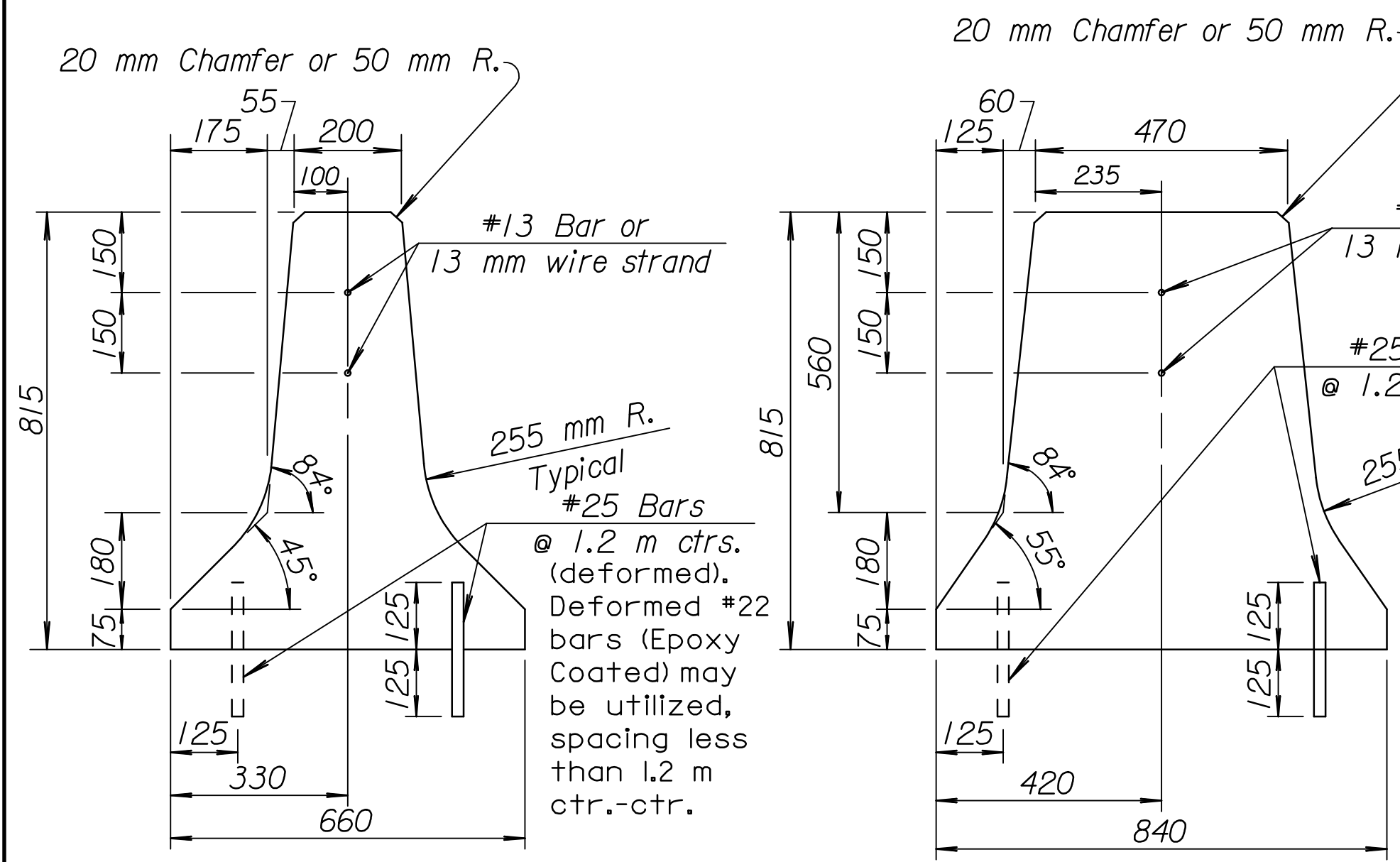
Approximately three-fifths of the length of each dowel bar shall be coated with a hard grease prior to installation.  
 The cutting to length of the dowel bars shall be done in such a manner to result in no appreciable deformation of the ends.

Each dowel bar shall be coated with an epoxy coating with the average film thickness of not less than 0.25 mm, with individual determinations within a tolerance of +/- 0.08 mm of the average. The coating material shall be a powdered epoxy resin approved by the Engineer of Materials and shall be uniformly applied according to accepted practices and the resin manufacturer's recommendations.

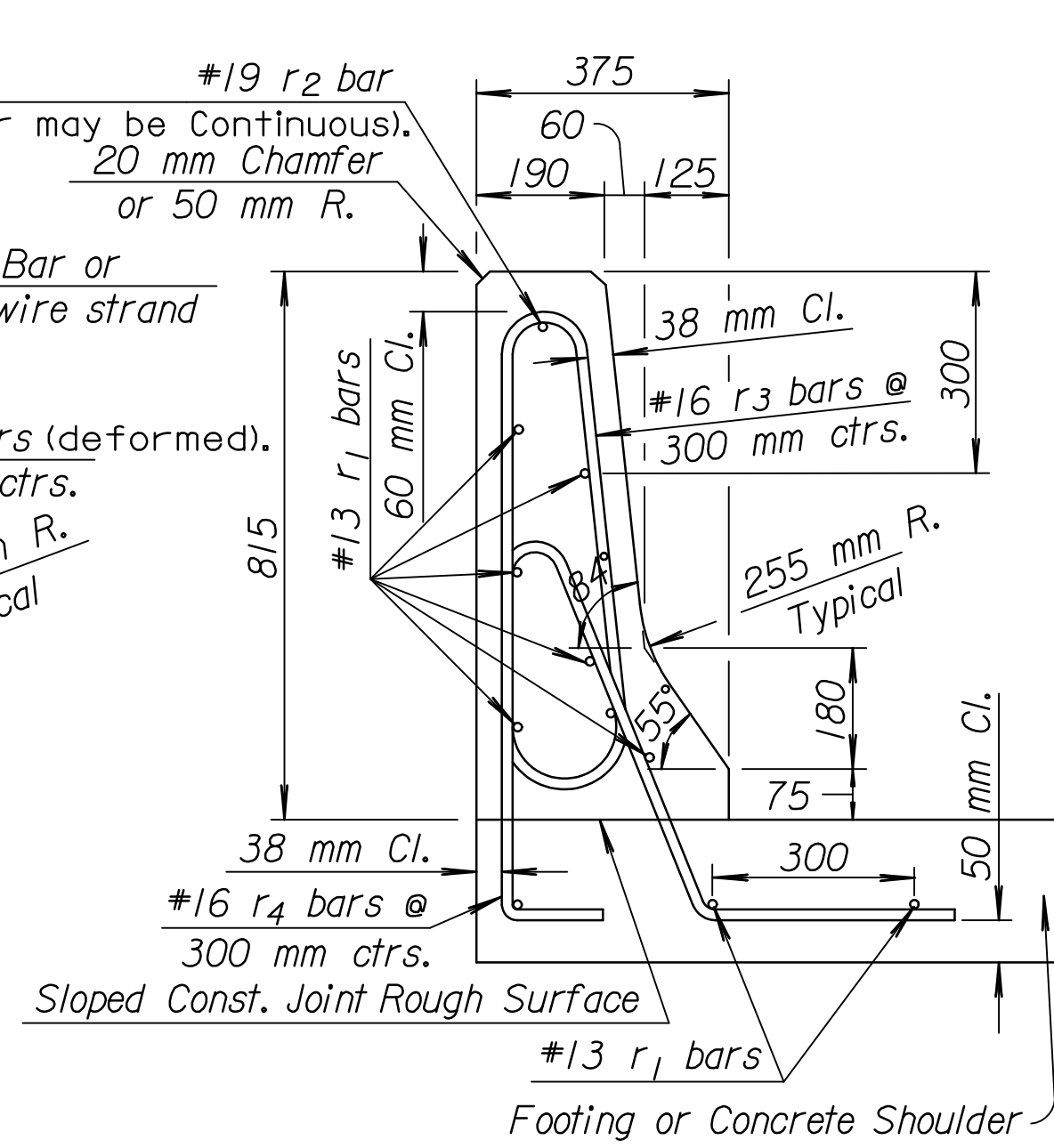
All work and materials required for installation of joint material shall be subsidiary to Concrete Safety Barrier and shall conform to the Standard Specifications.

**DELINEATION**

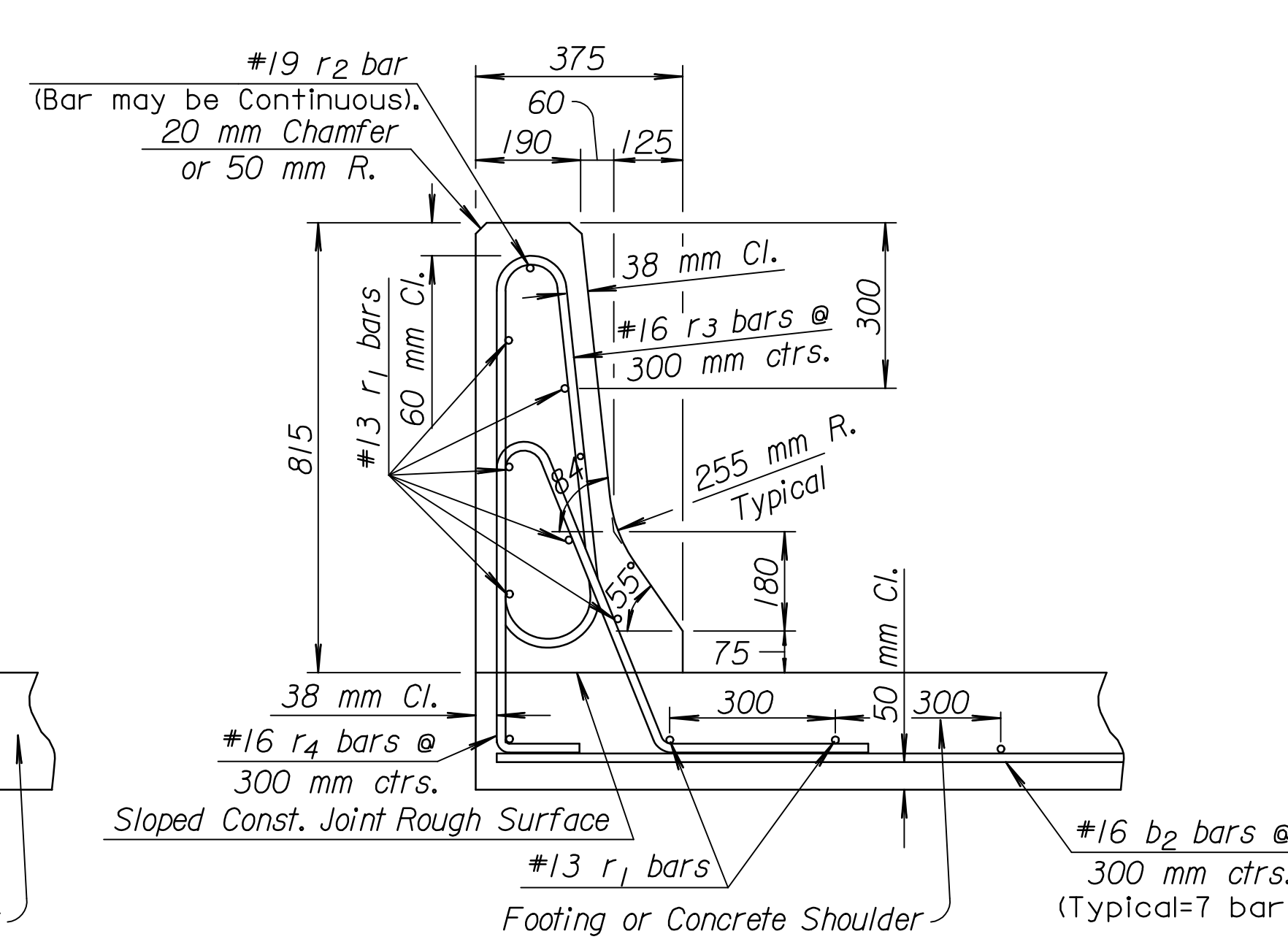
See Standard Drawing RD649 SI for details of barrier delineation. (Sh. No. 231)



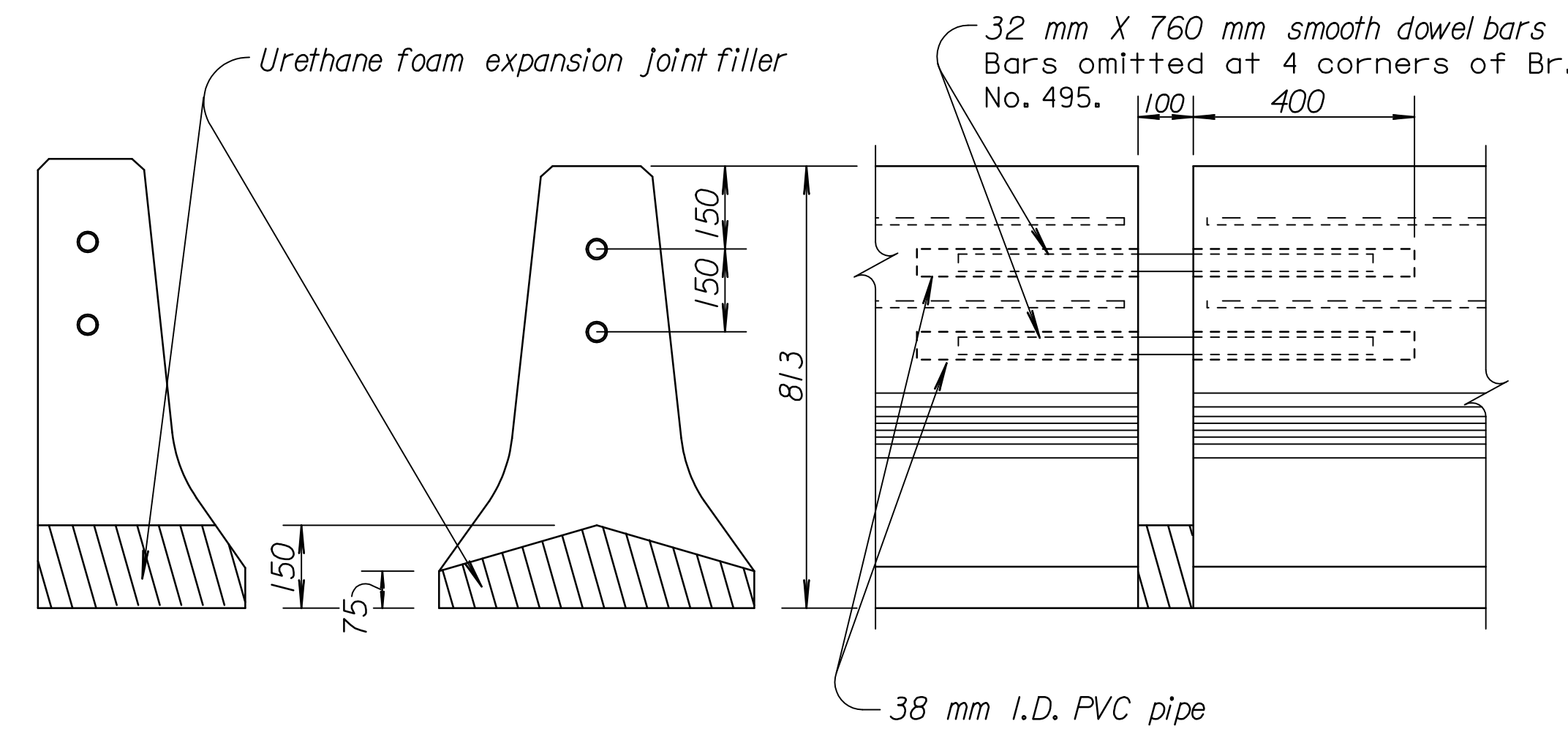
**NOTE:**  
 For Type I and Type I (Special):  
 Top #13 bars run continuous through contraction joints.



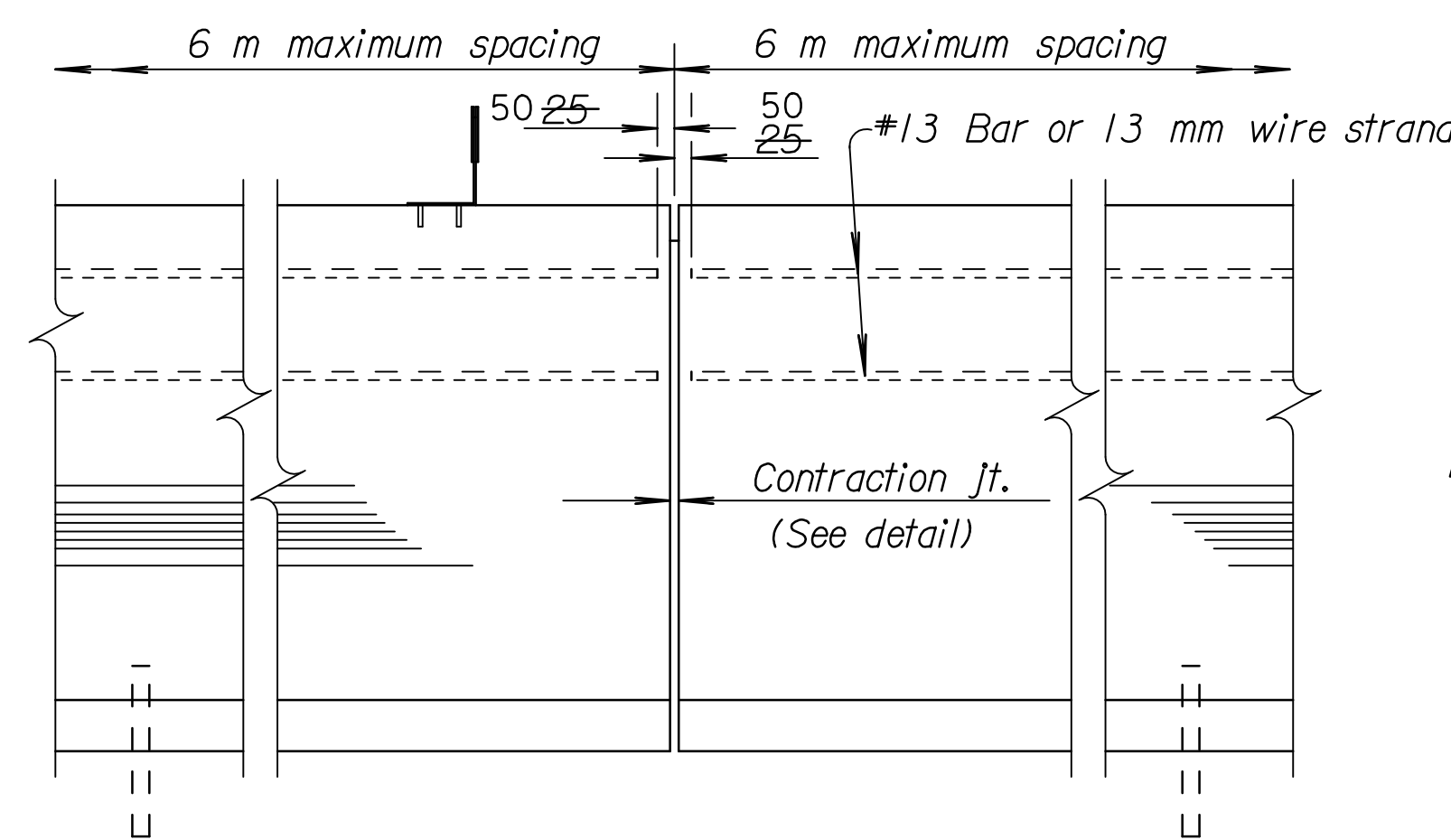
**NOTE:**  
 No need to raise shoulder slab steel above 50 mm cl., if shoulder PCCP thickness exceeds 260mm.



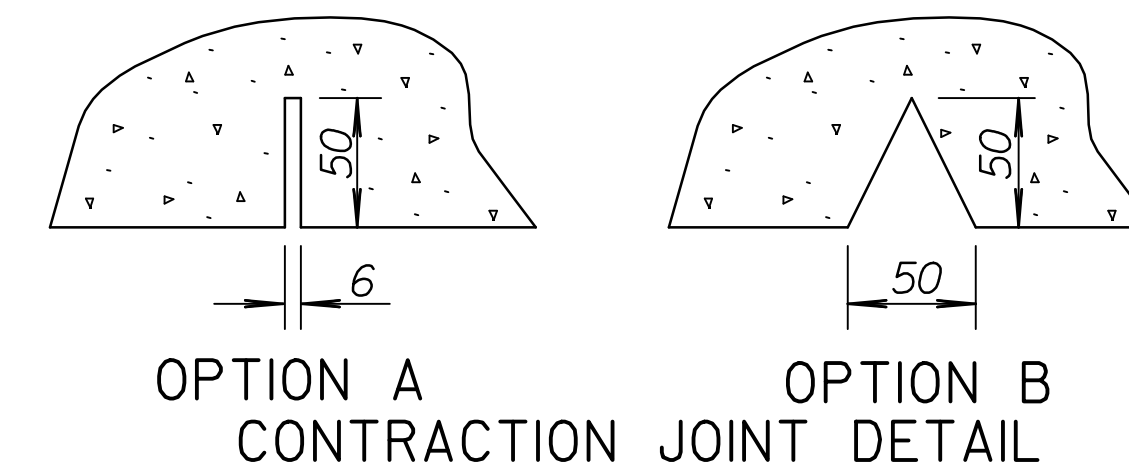
**NOTE:**  
 For Type II and Type II (Special):  
 Leave #13r1 longitudinal bars uncut at contraction joints in shoulder PCCP. Top CSB #19r2 bar may be left uncut at contraction joints to reduce racking of rebar steel during CSB placement.



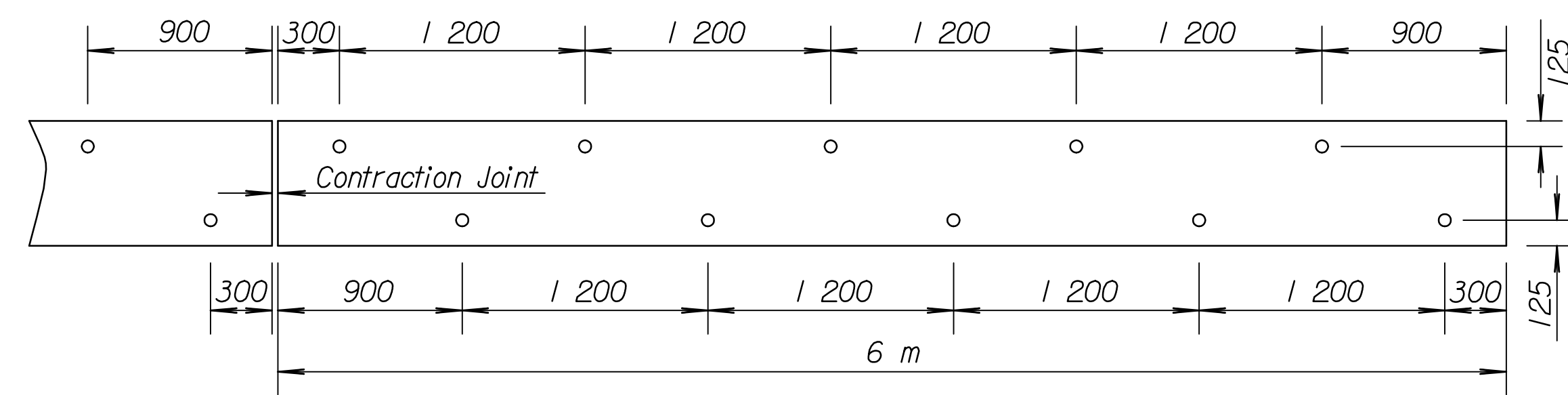
**PRESSURE RELIEF JOINT AND EXPANSION JOINTS**  
 Pressure relief & expansion joints will match relief joint in bridge approach slab.



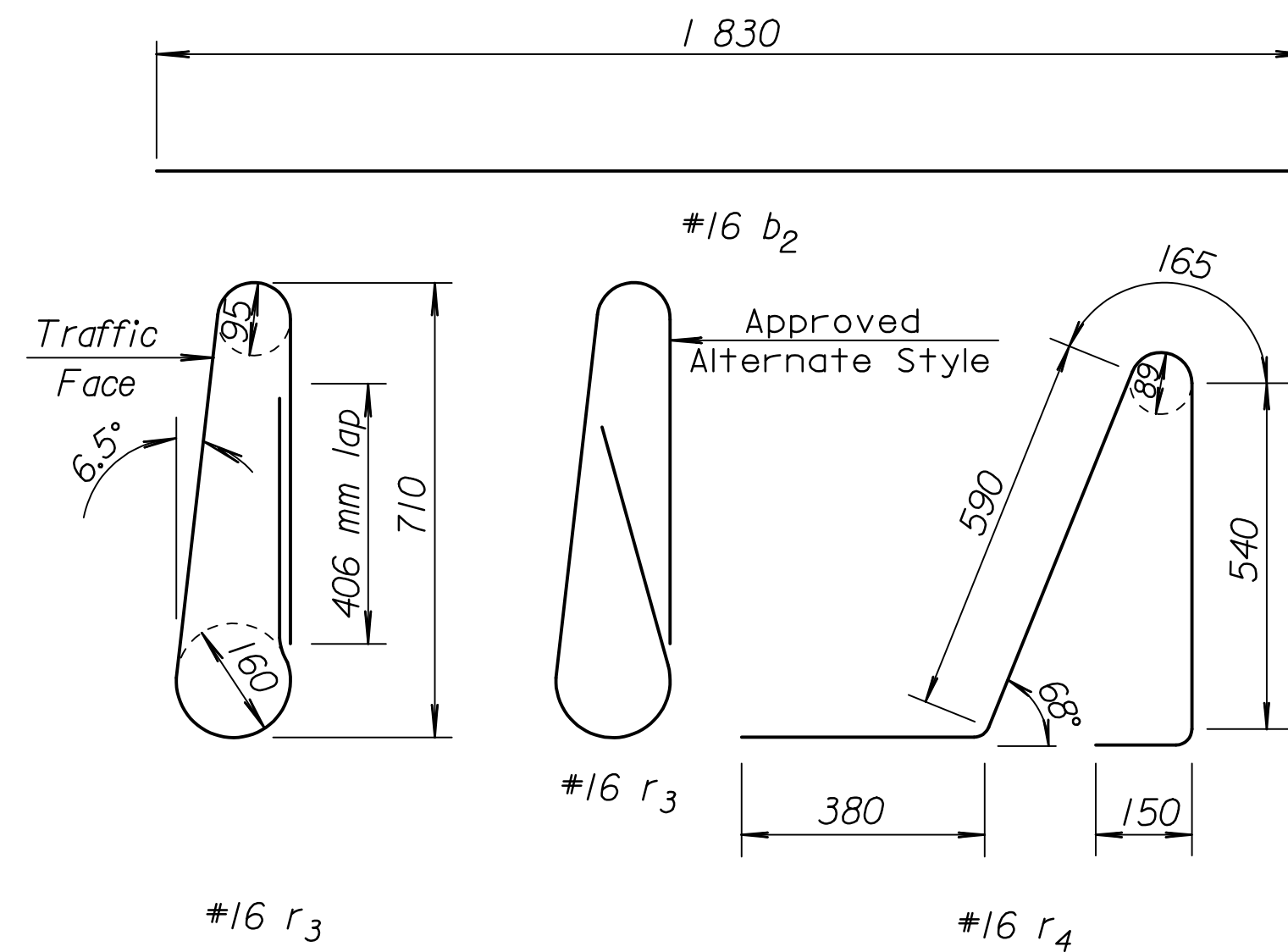
**ELEVATIONS**



#13 r1 bars - Longitudinal Bars (Min. Lap=380mm)  
 #19 r2 bars - Longitudinal Bars (Min. Lap=640mm)

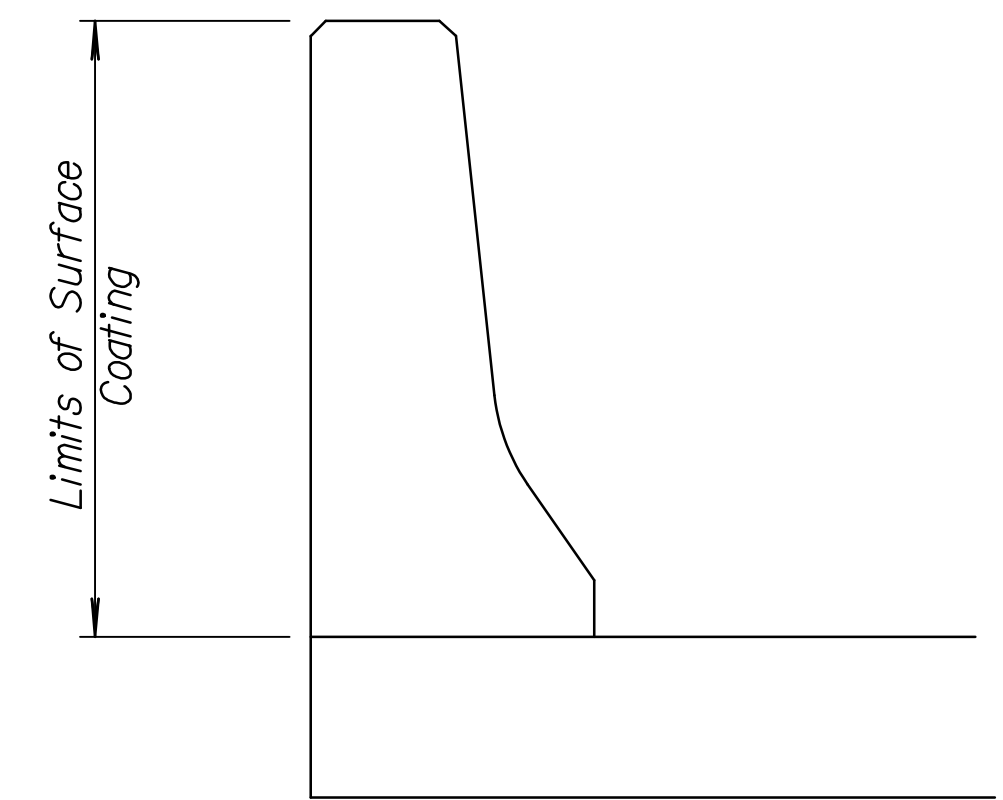


**DOWEL PLACEMENT DETAIL (TYPE I)**



**BENDING DIAGRAMS**  
 Note: All dimensions are out to out of bars.

**RECORD DRAWING**



**SURFACE COATING FINISH**

Surface coating finish shall be applied to exterior surface of Concrete Safety Barriers (Type II) (Type III) & (Type IV). Paid for as Surface Coating Finish per S.M. See special provision.

3					
2					
1	12-12-00	Revised bending diagram		R.J.S.	J.O.B.
NO.	DATE	REVISIONS		BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION  
**PERMANENT CONCRETE SAFETY BARRIER TYPE I & II (F-SHAPE)**  
 RD632-SI

FHWA APPROVAL	12-18-00	APP'D	James O. Brewer
DESIGNED	DETAILED	QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.

DSNR: WDH OPER: GDR SCALE: 1:100  
 12/1997/97362/As-Builts/dgr/s/Sh 228-KDOT\_S1d-RD632SI(Rev.dgn Last Rev: 8-20-07 By: gdr)