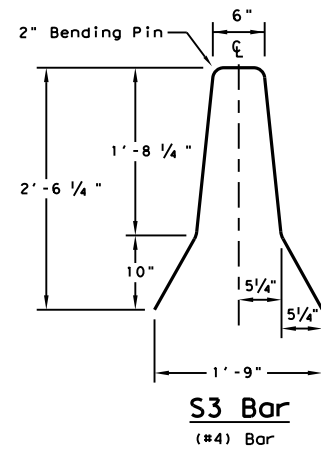
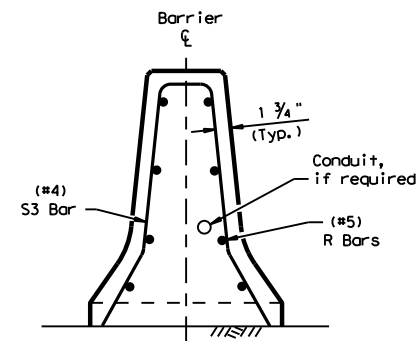


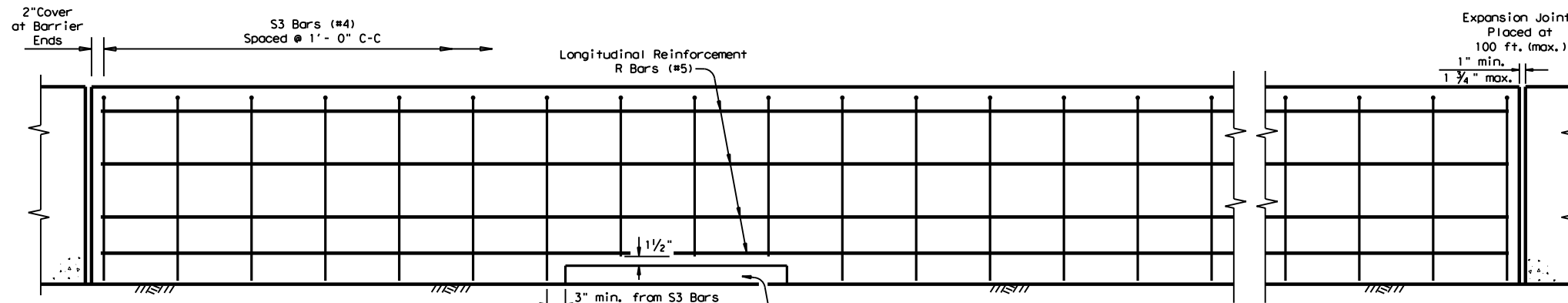
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S3 Bar
#4 Bar



END VIEW
Cast-in-Place (CIP) Barrier
Barrier is Symmetrical About the Center Line



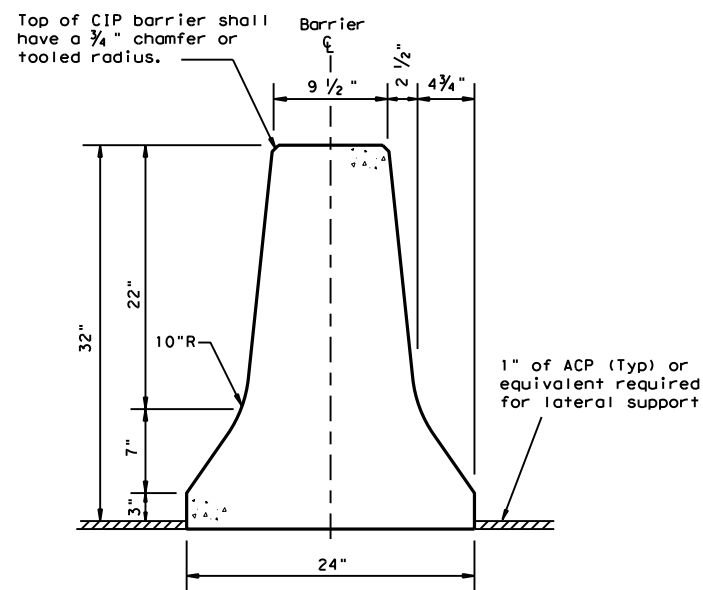
Note: Reinforcement cage may rest on top of the finished grade.

ELEVATION VIEW

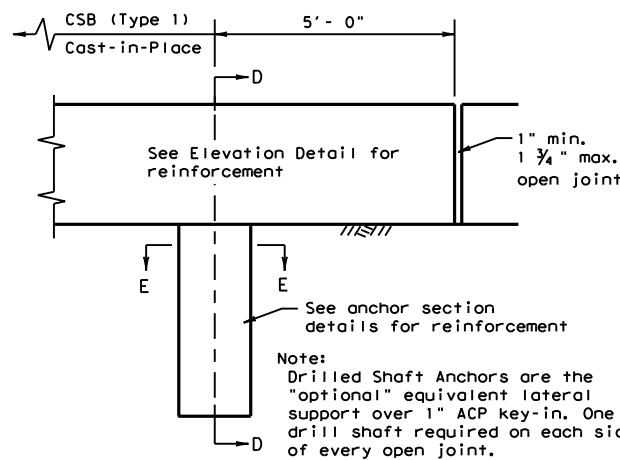
Cast-in-Place (CSB) on Flexible Pavement

GENERAL NOTES

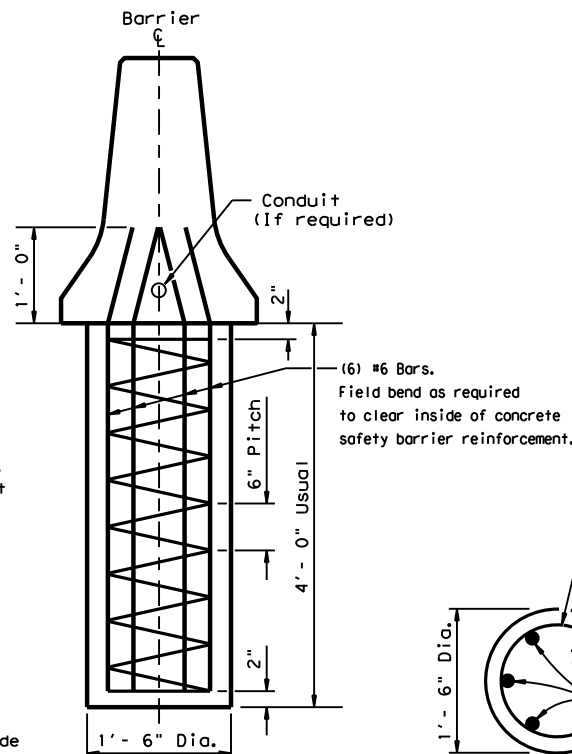
- Concrete shall be Class C, unless otherwise specified in the plans.
- Where used, rebar reinforcement shall be Grade 60 and conform to ASTM A615.
- Axis of cast-in-place barrier shall be vertical, except where roadway is superelevated, then axis is normal to roadway surface.
- Top edges of cast-in-place barrier shall have a 1/4 inch chamfer or tooling radius.
- Drainage slot depths may be increased 1 inch to accommodate ACP. Slot locations (12'-0", C-C Min. Spacing) are shown elsewhere, or as directed by the Engineer.
- Cast-in-place barrier may be slip formed. Bracing may be tied or tack welded to the reinforcement cage to provide cage stability. Do not weld to anchor bars. The reinforcement cage may rest on top of the finished grade.
- For locations where lighting is required, see the CSB(4) sheet for the proper reinforcement and anchorage.



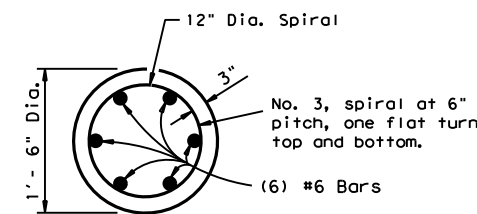
CONCRETE SAFETY BARRIER (CSB)



DRILLED SHAFT ANCHOR LOCATION DETAIL



SECTION D-D DRILLED SHAFT ANCHOR



SECTION E-E DRILLED SHAFT ANCHOR

See drilled shaft anchor location detail

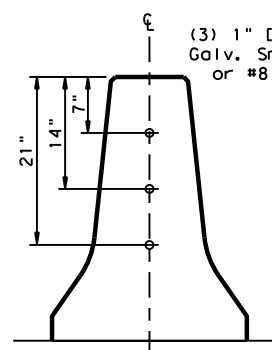
Cast-In-Place or Slip-Formed (CSB)

Cast-in-Place barrier may be connected to precast CSB. Joint connection "Types" may be used in Cast-in-Place barrier, to match the precast barrier connection. (See required connection "Type" elsewhere in the plans)

The weight of Cast-in-Place (CSB) (F-Shape) is approx. 440 lbs per ft.

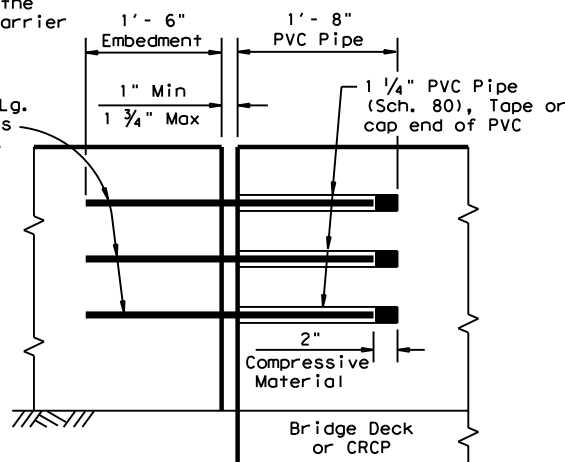
EXPANSION JOINT (Dowel Location)

Dowels may be used as directed by the Engineer, in locations where the barrier could be laterally displaced.



END VIEW

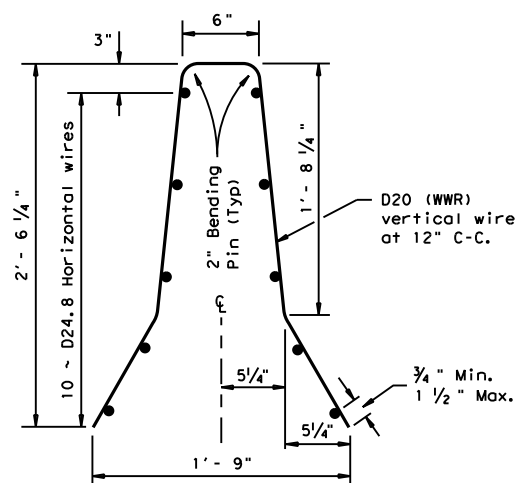
Dowel locations



WELDED WIRE REINFORCEMENT (WWR) OPTION FOR BARS S AND R

(WWR) General Notes

- Deformed Welded Wire Reinforcement (WWR) shall conform to ASTM A497.
- The welded wire cage at the drainage slots may be cut or bent to accommodate the edge and top clearances, as directed by the Engineer.
- The welded wire splice locations shall have a "minimum" splice lap length of 12".
- Combinations of reinforcing steel and WWR will be permitted, as directed by the Engineer. The dimension from the end of the barrier section to the first wire shall not exceed 3".



DATE:
FILE:

		Design Division Standard	
CONCRETE SAFETY BARRIER (F-SHAPE) CAST-IN-PLACE (TYPE 1) (FLEXIBLE PAVEMENT) CSB (2) - 13			
FILE: csb213.dgn	DN: TxDOT	CK: AM	DW: VP
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