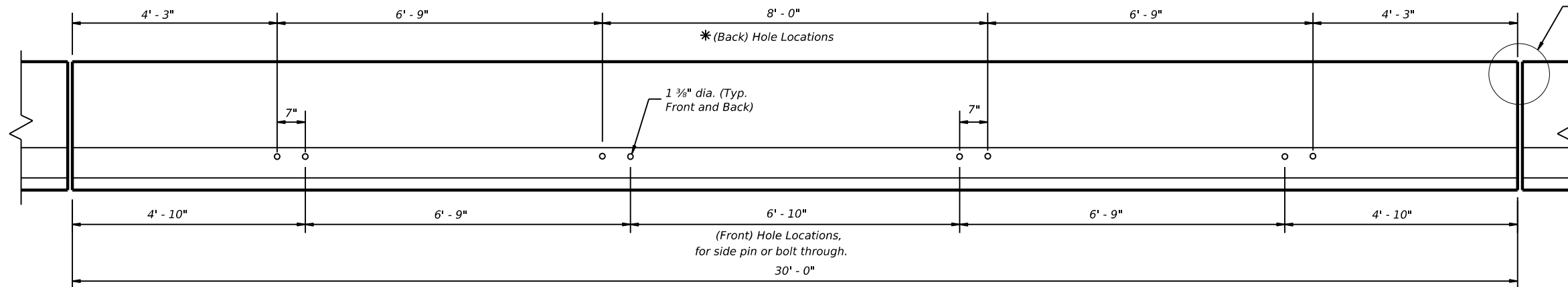
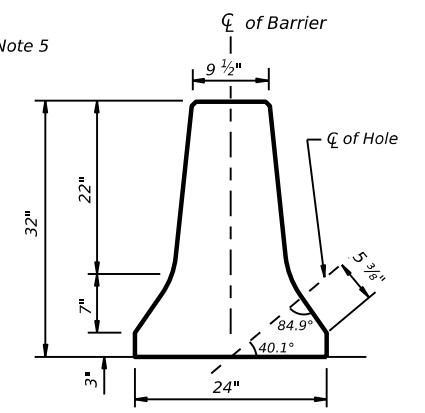


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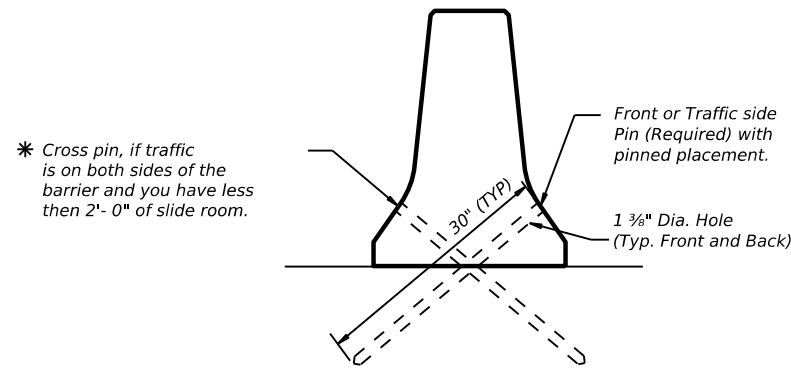
DETAIL 1



HOLE LOCATION DETAIL

GENERAL NOTES

1. These details provide a laterally restraining precast concrete barrier to limit deflections under normally expected passenger vehicle impacts. These details are intended for use in work zones, primarily on bridge decks, or pavement where temporary barrier must be placed less than 2 ft. from the longitudinal edge of the deck or dropoff and parallel to the direction of travel. These details may also be applied in instances where the temporary barrier is greater than 2 ft. from the dropoff condition in consideration of the site conditions, deflection characteristics of the temporary barrier type, and anticipated impact vehicle type. Other applications of these details are acceptable as directed by the Engineer.
2. Each precast concrete barrier section shall have a minimum of four or total of eight 1 3/8" ID, holes formed or cored through the barrier. The center lines of the holes are shown in the hole location detail. If rebar is encountered, the entry point may be shifted 2" plus or minus longitudinally along the barrier. The eight holes are spaced along the length of the barrier as shown in Detail 1.
3. The drilling of the travel surface is accomplished by placing the pre-drilled barrier section on the travel surface in the desired position. Then the hole is drilled with the bit passing through the hole in the barrier. The bit is to be inserted into the hole in the barrier so that the travel surface is drilled to a point which is slightly more than the pin length.
4. Note that steel washers have been welded to the top of the steel pins to aid in the removal of the pins, when the barrier is removed.
5. See CSB(1) standard sheets for reinforcement requirements and joint connection types.
6. The barrier and travel surface will be repaired as directed by the Engineer in accordance with Item 429, "Concrete Structure Repair."
7. Provide galvanized bolts, nuts, and plate washers. All steel pins shall be galvanized after fabrication in accordance with Item 445, "Galvanizing."
8. Weight of barrier is approx. 440 lbs per foot.

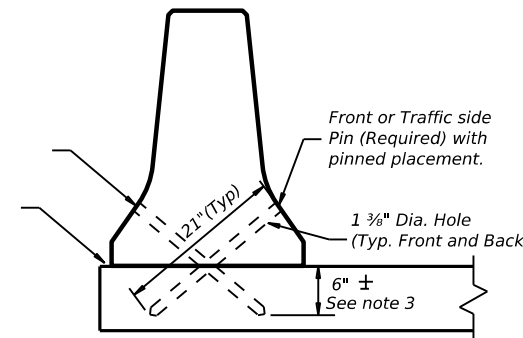


DETAIL 2

For placement on a minimum of 4" of ACP over a treated base material, a minimum 30" long pins are required.

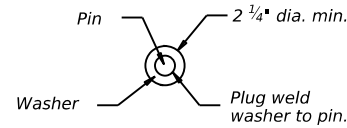
* Cross pin, if traffic is on both sides of the barrier and you have less than 2'-0" of slide room.

Cross pin recommended but not required if less than 2'-0" on Bridge Decks. (See General note 1)



DETAIL 3

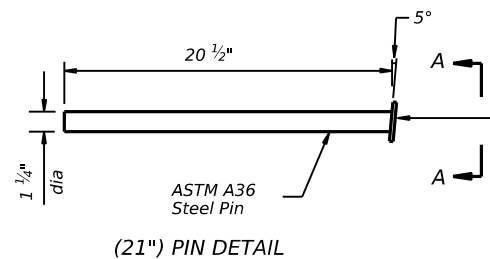
Bridge Deck or CRCP (21" pin required)



VIEW A-A

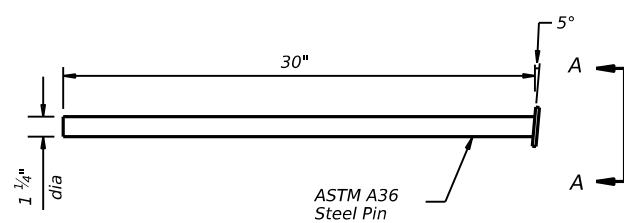
CORE DRILLING EXISTING BARRIER

Core drilling existing concrete barrier is permitted. Holes shall be drilled with coring or masonry drilling type equipment. Percussion (star) drilling shall not be used. A special drill bit (to cut through existing reinforcing) will likely be required. Spalls in the concrete exceeding 1/2" shall be patched.



(21") PIN DETAIL

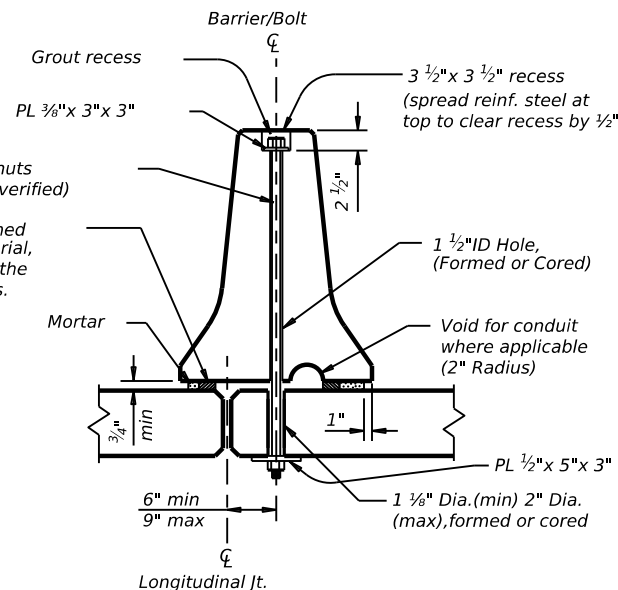
See Detail 3



(30") PIN DETAIL

See Detail 2

Note: The "Bolt Through" method of pinning precast barrier on a bridge deck, is primarily used in a permanent location that requires limited barrier deflection.



PRECAST CSB (BOLT THROUGH) PLACEMENT OVER LONGITUDINAL EXPANSION JOINT

For bolt through locations, use the (Front) hole locations shown on Detail 1.

		Design Division Standard	
CONCRETE SAFETY BARRIER (F-SHAPE) PRECAST BARRIER (TYPE 1) PINNED PLACEMENT CSB(7)-26			
FILE: csb726.dgn	DN: TxDOT	CK: KM	DW: CES
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REVISIONS		DIST:	COUNTY: SHEET NO.