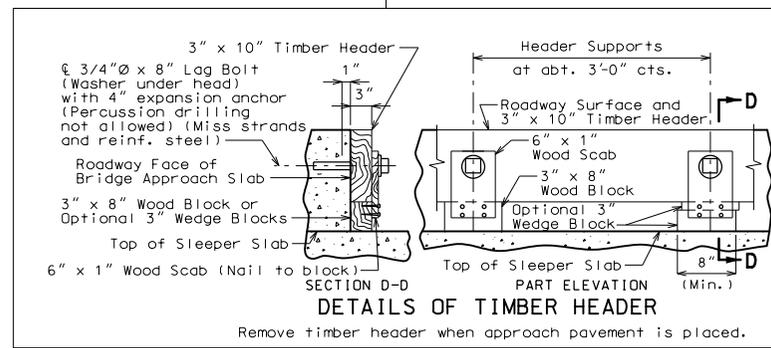


Standard Drawing Guidance (do not show on plans):

Standard bridge approach slab is to be used for approach slab replacement only.

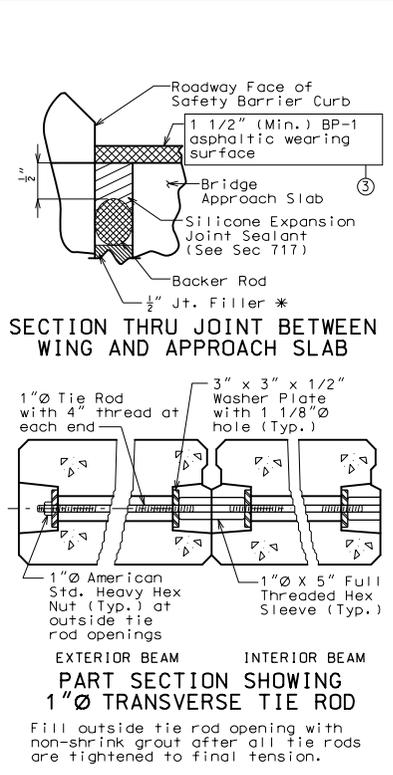
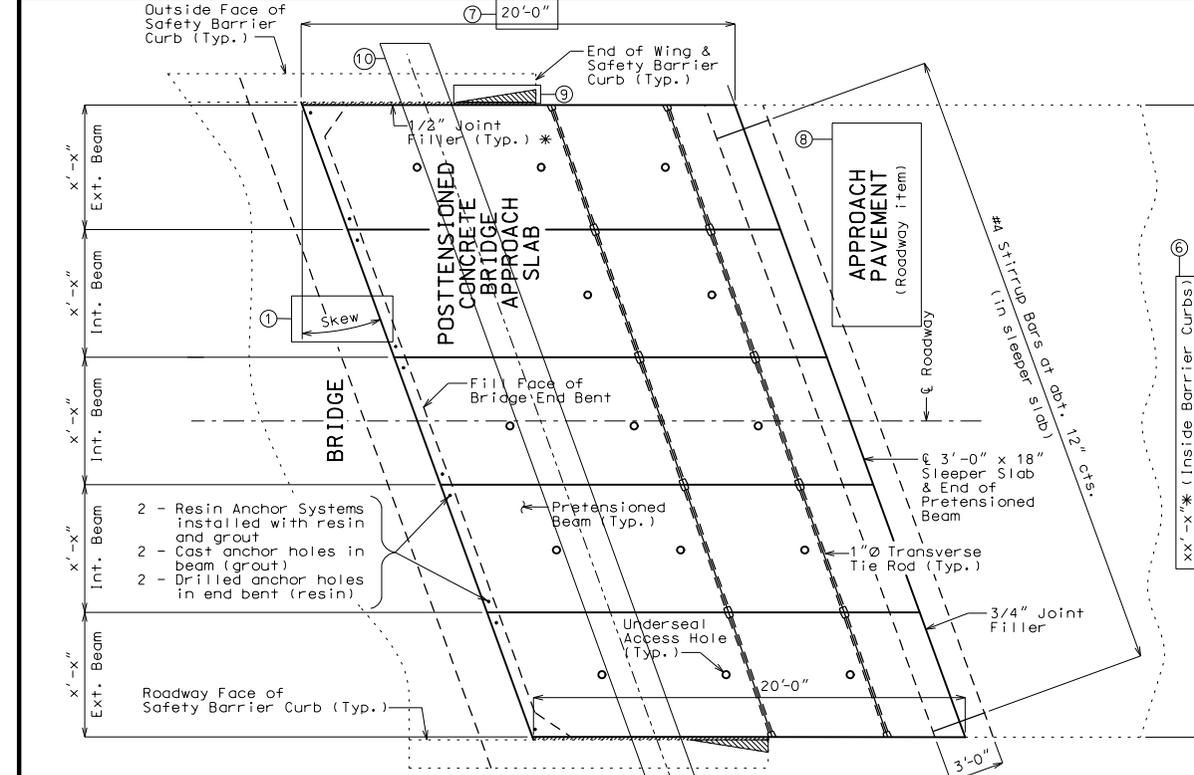
Roadway drainage should be addressed by the core team and the consensus noted on the Bridge Memorandum and the Standard Drawing. For roadway drainage options for Prestressed Bridge Approach Slab, see EPG 503 Bridge Approach Slab.

- ① Replace "Skew" with actual skew angle.
- ② Top of approach notch must be flat or uniformly sloped (no crown) and sleeper slab must be parallel in elevation to top of approach notch.
- ③ Identify asphalt overlay and thickness. Coordinate with district if better to make a roadway item and then note accordingly and revise pay item note.
- ④ Waterproof membrane is required when slab is overlaid with asphalt. Omit "Special Provisions" as needed.
- ⑤ Timber Header will not normally be needed, since prestressed beams will be used for replacements only. Use only if requested by District RE to protect ends of beams during construction.



- ⑥ Request field measurements between wings at end of slab and end of wings before dimensioning width of approach slab and determining beam widths to be used.
- ⑦ The 20'-0" slab dimension can be changed to 25'-0", the title can then be changed from (20 FEET) to (25 FEET).
- ⑧ Modify or remove based on actual conditions of the job.
- ⑨ Fill with asphalt or seal.
- ⑩ Number of tie rods: Ideally, install 3 tie rods at midpoint and quarter points; one will have to go through wing wall; drill hole in wing, install, grout and seal. Realistically, install 2 tie rods as shown. (Only 2 tie rods were used successfully with favorable results in the correlated research.)
- ⑪ For "Placement and Full Width Posttensioning Instructions", see Development Section. Partial width posttensioning is preferred.
- ⑪a Tie rods shall be placed along skew since shifting the beams longitudinally relative to each other during the tightening operation is prevented due to the anchorage of the beams to the end bent and the development of friction at the beam/aggregate interface.

PBAS01_20_precast1 Effective: Aug. 2014 Supercedes:

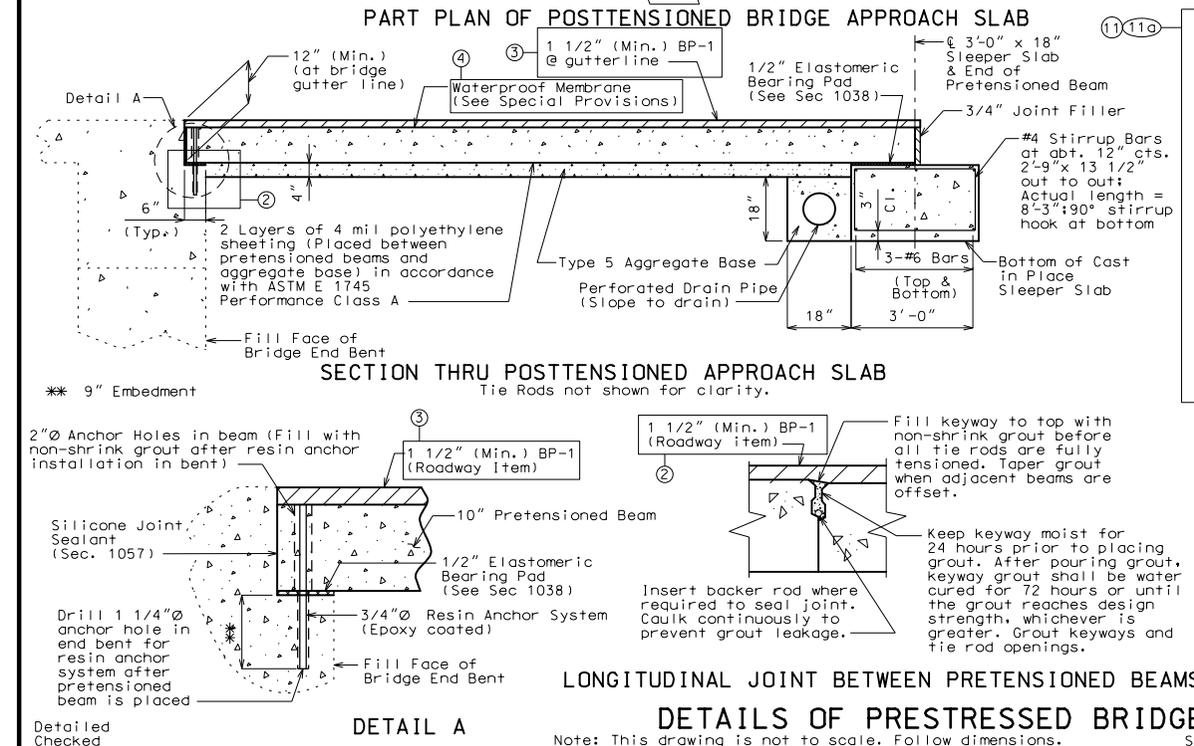


General Notes (Posttensioned Slab):
 Contractor shall verify all dimensions in field before ordering new material.
 Concrete for the sleeper slab shall be in accordance with Sec 503 (f'c = 4,000 psi).
 Reinforcing steel in the sleeper slab shall be epoxy coated Grade 60 with fy = 60,000 psi.
 Tie rod plates shall be ASTM A709 Grade 36.
 Sleeves, nuts and 1"Ø tie rods shall be A307.
 All tie rods, plates, sleeves, and nuts shall be galvanized in accordance with ASTM A153.
 Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.
 Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.
 All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler, except as noted.
 Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.
 Resin Anchor System: An epoxy coated #6 Grade 60 reinforcing bar 17" long shall be substituted for the 3/4"Ø threaded bar 17".
 When moving pretensioned beams, the roadway (top) face shall be kept face-up at all times. Beams shall be supported within 12 inches of the ends only.
 Use non-shrink grout for filling the keyways.
 For approach pavement details, see roadway plans.
 Payment for furnishing all materials, labor and excavation necessary to construct the prestressed approach slab, including the sleeper slab, underdrain, asphaltic wearing surface, joint filler and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Prestressed Bridge Approach Slab per square yard.
 * Contractor may adjust dimensions based on actual field measurements with approval of the engineer.

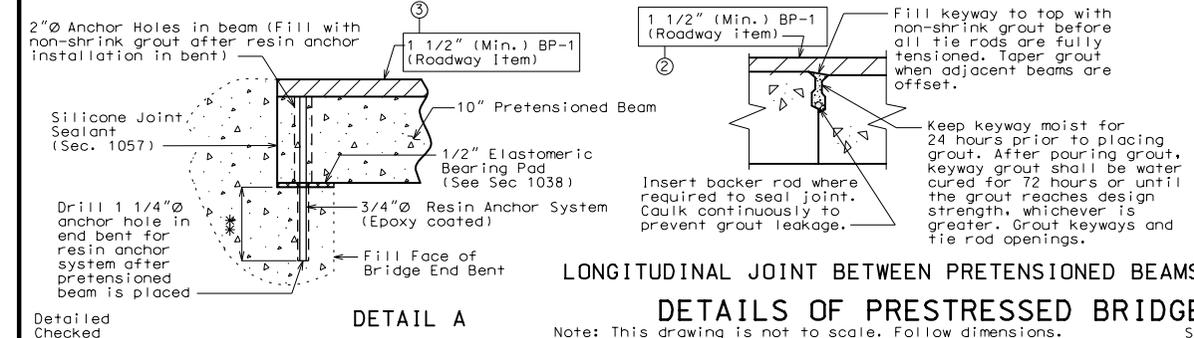
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED		12/13/2016	
ROUTE	STATE	DISTRICT	SHEET NO.
*	MO	BR	*
COUNTY			
*			
JOB NO.			
*			
CONTRACT ID.			
PROJECT NO.			
BRIDGE NO.			
PBAS01			
DESCRIPTION	DATE	DATE	DATE

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



Placement and Partial Width Posttensioning Instructions:
 Top of aggregate base shall be made flush with top of bridge approach notch and top of sleeper slab, and uniformly graded at all points in between.
 Place first exterior beam ***
 Place adjacent interior beam ***
 Place partial width tie rods through both beams and connect to hex sleeve.
 Tighten all tie rods in the beam to about one-half of the specified tension before proceeding with the final tensioning. Begin with most centered tie rod in span.
 Fill keyway with grout. See "Longitudinal Joint Between Pretensioned Beams". (Fill tie rod openings.)
 Tie rod nuts shall be tightened to provide a final tension of one-half that specified for A325 bolts in Section 712.7.3 of the Missouri Standard Specifications.
 Place the next adjacent beam and partial width tie rod and connect to hex sleeve, following same sequence, until last exterior beam is placed and tightened.
 Grout outside tie rod openings.
 *** Apply Silicone Joint Sealant to the entire beam end at bent and trowel uniformly for complete seal just before placing the beam.



Detailed Checked

DETAIL A

DETAILS OF PRESTRESSED BRIDGE APPROACH SLAB (20 FEET) ⑦

Note: This drawing is not to scale. Follow dimensions.

Sheet No. of

