

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

GENERAL NOTES:

Precast concrete alternate may be submitted in accordance with the TxDOT Bridge Design Manual – LRFD. Acceptance or denial of an alternate is at the sole discretion of the TxDOT. Impacts to the project schedule and any additional costs resulting from the use of alternates are the sole responsibility of the Contractor.

Develop alternates using the TxDOT Bridge Standards and working drawings for precast elements. For alternates not covered by the standards, develop these alternates based on the relevant concepts demonstrated within the standards and working drawings. Do not develop complex precast alternatives that will require additional research or investigation without prior approval from Bridge Division.

Do not develop entire bridge redesigns. Precast Alternates must adhere to the design requirements of the original plans and as amended by the requirements provided in these sheets. Notes included on this sheet shall be reproduced on the Precast Alternate Plans, and followed for design and construction purposes.

The proposer of Precast Alternates will be the new Engineer of Record for such portions of the bridge. The new Engineer of Record must be precertified by TxDOT and provide signed and sealed plans and calculations.

Design in accordance to AASHTO LRFD Bridge Design Specifications, 9th Edition (2020) and TxDOT Bridge Design Manual - LRFD (Aug 2024).

Provide alternate sheets that are detailed in accordance with the TxDOT Bridge Detailing Guide.

ALTERNATE SUBMISSION REQUIREMENTS:

Submit design concepts beyond the scope of TxDOT Bridge standards and here within, in accordance with the procedure outlined below.

1. Contractor is solely responsible for impacts to schedule and cost due to alternate proposals.
2. Contractor meets with the TxDOT District PM to discuss impacted elements and justification.
3. The TxDOT District PM meets with the Bridge Division for approval of the concepts.
4. If approved, contractor creates alternate design package(s) with signed plans and calculations signed and sealed by an Engineer precertified by TxDOT. Shop drawings are not acceptable as Alternate Plans.
5. The TxDOT District PM sends the alternate design to TxDOT Bridge Division for a 21 Calendar day review period, excluding State Holidays. If comments are generated, the Contractor must address these comments and resubmit the alternate. The review time restarts with each submission.
6. The TxDOT District PM informs the contractor to whom and where to send the shop drawing submittals for review. Contractor submits shop plans according to the Guide to Electronic Shop Drawing Submittal.
7. The TxDOT District PM ensures that approved Alternate Plans are filed with contract plans to ensure the as-built plans are accurate and notifies the district bridge inspection coordinator of the change.


SUBSTRUCTURE

For the interior bents and abutments, the Contractor has the option of furnishing either the as designed or an approved alternate design. All alternate design submittals must be signed, sealed and dated by a Professional Engineer registered in the State of Texas.

Submit revised substructure plan sheets that take into consideration connections to superstructure, columns, and foundation elements, as needed.

NOTE TO DESIGNER:

These sheets are to be used as a guide for preparing plans for precast substructure alternates. Included on these sheets are design and construction requirements for various substructure precast options. Include appropriate notes from this guide for the specific application. These sheets cannot be used without modification and in all cases notes not required must be removed. This note and the phrase "Not to be used as a standard" must be removed and the sheet must be signed and sealed by a Professional Engineer.

 Texas Department of Transportation				Bridge Division	
<h2 style="margin: 0;">PRECAST SUBSTRUCTURE ALTERNATES</h2> <p style="margin: 5px 0 0 0;">(Not to be used as a standard)</p> <h3 style="margin: 0;">PCA-SUB</h3>					
FILE: MS-PCA-SUB-24.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT	
©TxDOT October 2024	CONT	SECT	JOB	HIGHWAY	
REVISIONS					
	DIST	COUNTY		SHEET NO.	

DATE:
FILE: