Index 400-292 Standard Precast Concrete Box Culverts

Design Criteria

AASHTO LRFD Bridge Design Specifications, 4th Edition; ***Structures Design Guidelines (SDG)***

Design Assumptions and Limitations

Since these standards were designed based on the 4th Edition of the ***AASHTO LRFD Bridge Design Specifications***, the calculations yield a slightly more conservative design than the 6th Edition for some depth ranges due to the elimination of the Fatigue Limit State check.

At the contractor's option, these precast designs may be substituted for cast-in-place box culverts designed to ***AASHTO LRFD Bridge Design Specifications***. Designs are based on the design criteria shown in the ***SDG***.

Use this standard with Index 400-291.

This index may be used in lieu of Index 400-289 when a precast box culvert is determined to be more cost effective or more appropriate for the project. In such cases, the designer shall show the box culvert Span, Rise and Design Earth Cover in the plans. The designer shall also provide the headwall and wing wall design in the plans by completing the relevant data tables and notes for Index 400-289 (Box Culvert Data Tables).

Plan Content Requirements

Include references to and completed data tables for Index 400-289 Concrete Box Culvert Details in the plans. Use of Index 400-292 in lieu of Index 400-289 is at the contractor's option unless specifically excluded by plan note.

Show water-tight joints in the Contract Plans where required.

Payment

Item number	Item Description	Unit Measure
400-2-1	Concrete Class II, Culverts	CY
400-4-1	Concrete Class IV, Culverts	CY
415-1-1	Reinforcing Steel - Roadway	LB