

714-B-299 REINFORCED CONCRETE BOX STRUCTURES

(Adopted 08-20-15)

The Standard Specifications are revised as follows:

SECTION 714, BEGIN LINE 137, INSERT AS FOLLOWS:

(c) Working Drawings

Working drawings shall be submitted in accordance with 105.02 for fabrication of a precast reinforced concrete box structure greater than 12 ft span, a box structure of a size not described in ASTM C 1577, headwalls, wingwalls, and footings. Design calculations shall be submitted with the working drawings. Detailed plans for falsework and centering will not be required. Working drawings shall include all details, dimensions, and quantities necessary to construct the structure, headwalls, wingwalls, or footings and shall include, but not be limited to, the following information.

1. Structure span and rise.
2. Structure section details showing all concrete dimensions and reinforcement requirements.
3. Headwall details, showing all concrete dimensions, elevations, reinforcing bar sizes, reinforcing bar bending diagrams, lengths, spacings, and anchorage details. Headwall elevation and section views shall be provided.
4. Wingwall design calculations and details showing all concrete dimensions, elevations, reinforcement sizes, bending diagrams, lengths, spacings, and anchorage details. Wingwall plan, elevation, and section views shall be provided.
5. Wingwall backfill type and limits.
6. Footing details showing all concrete dimensions, elevations, reinforcing bar sizes, reinforcing bar bending diagrams, lengths, and spacings indicated. Footing plan and section views shall be provided. The actual soil bearing pressure shall be shown on the footing detail sheets.
7. Structure backfill type and limits for the structure and wingwalls.
8. Minimum concrete strength for all concrete portions of the structure.
9. *Bridge load rating calculations and load rating summary shall be submitted with the working drawings where the structure span length measured along the roadway centerline is greater than 20 ft, except where the height of cover is greater than 8 ft and exceeds the perpendicular span length. The structure shall load rate greater than 1.0 for the loading described herein or as shown on plans. The load rating methodology shall be in accordance with the AASHTO Manual of Bridge Evaluation using the LRF method.*