

BRIDGE DESIGN BULLETIN 2025-1

TO: All Bridge Designers

FROM: David Benton, P.E.

State Bridge Engineer

DATE: January 28, 2025

RE: Updated Standard Drawings

Purpose

The purpose of this bulletin is to inform all engineers and designers that Standard Drawings have recently been updated on the ADOT Bridge Design Services Website located at:

<https://azdot.gov/business/engineering-and-construction/bridge/bridge-design-services/structure-detail-drawings>

Please find below a summary of the changes and updates made to the Standard Drawings.

1D- Structural Detail Drawings

- The Structural Detail Standard Drawings was revised to show the recent date that updates were made to the Standard Drawings.

SD 1.10- 38" Single Slope Bridge Concrete Barrier and Transition:

- The width of the footing for the barrier was decreased by 1" for the 38" Barrier to provide alignment with the roadway curb and gutter. The reinforcement details for the footing were modified accordingly.
- The minimum barrier length on footing for other applications was increased to 23 ft. based on revised design calculations for the now modified footing width.
- An additional detail showing the reinforcement at the expansion joint where the bottom # 4 bar remains continuous is shown to provide clarity of the difference between reinforcement at continuous piers and at expansion joints.
- The 1" x 2 ft steel dowel bars at expansion joints were removed as they were determined to be no longer necessary after verifying against the stirrup spacing.
- Reinforcement details were added to the Elevation view of the Details at Expansion Joints to further provide clarity.

SD 1.11- 42" Single Slope Bridge Concrete Barrier and Transition:

- The width of the footing for the barrier was increased by 1" for the 42" Barrier to provide alignment with the roadway curb and gutter. The reinforcement details for the footing were modified accordingly.
- The minimum barrier length on footing for other applications was increased to 23 ft. based on revised design calculations for the now modified footing width.
- An additional detail showing the reinforcement at the expansion joint where the bottom # 5 bar remains continuous is shown to provide clarity of the difference between reinforcement at continuous piers and at expansion joints.
- The 1" x 2 ft steel dowel bars at expansion joints were removed as they were determined to be no longer necessary after verifying against the stirrup spacing.
- Reinforcement details were added to the Elevation view of the Details at Expansion Joints to further provide clarity.
- A note clarifying the design of the continuous barrier on footing to be a Test Level 4 barrier system was added.

SD 6.20- Precast Box Culvert:

- The minimum cross sectional area for the As9 reinforcement was corrected to be 0.06 in²/ft.
- Notes clarifying the reference to SD 6.01 series were added.
- Minor typos referencing page numbers, drawing numbers and the gap between the precast boxes were corrected.
- Dimensions and details clarifying the cast in place section at the inlet and outlet were added.
- Patterning was revised to distinguish the leveling course from the cast in place footing of the culverts.

SD 7.01 Reinforced Concrete Cantilever:

- The minimum length of lap shown on the "Typical Wall Details" were modified to be in accordance with ADOT Bridge Design Guidelines.
- A note was added to the Wall Layout Line callout to reference the Wall Layout Line as shown in the project plans with respect to the surface treatment.
- The note to increase the wall thickness for the surface treatment was clarified to be the outside face of the wall.

For any questions or concerns, please contact:

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