

BRIDGE DESIGN MEMORANDUM – DM0120

TO: RPG Structural Design Engineers
RPG Roadway Design Engineers
Structural Design Consultants
Roadway Design Consultants

DATE: February 21, 2020

RE: Roadway Widths and Geometric Layout of Prestressed Concrete Cored Slab Bridges

Apply these updated requirements to all projects where design has not advanced beyond the preliminary plan acceptance.

Due to prestressed concrete cored slab bridge unit widths being fixed at 3'-0", the roadway widths for bridges constructed of cored slabs do not exactly match the approach roadway widths detailed in the typical sections of the roadway plans.

The table below provides minimum allowable widths of cored slab bridges for common two-lane roadway sections on tangent alignment.

Approach Roadway Width	Bridge Roadway Width	Bridge Width Out-to-Out	Number of Cored Slab Units per Span	Approach Roadway Lane Width	Approach Roadway Shoulder Width	Bridge Shoulder Width
28'-0"	27'-10"	30'-0"	10	10'-0"	4'-0"	3'-11"
34'-0"	33'-10"	36'-0"	12	11'-0"	6'-0"	5'-11"
40'-0"	39'-10"	42'-0"	14	12'-0"	8'-0"	7'-11"
44'-0"	45'-10"	48'-0"	16	12'-0"	10'-0"	10'-11"

Cored slab bridges shall be constructed on tangent alignments. The use of skewed chorded spans to create horizontal curves on the bridge will not be allowed.

For other combinations of approach roadway widths when sidewalks are not present, the minimum shoulder bridge widths on cored slab bridges shall be no more than 1" narrower than the shoulder widths on the approach roadway, and shall not be less than 4'-0". Shoulder widths for cored slab bridges built on a tangent alignment, but, with a horizontal curve on the roadway



across the bridge, shall also be no more than 1" narrower than the shoulder widths on the approach roadway, and shall not be less than 4'-0".

For cored slab bridges where sidewalks are used, the bridge roadway width shall comply with the requirements of the SCDOT Roadway Design Manual.



Terry B. Koon, P.E.
Structural Design Support Engineer

TBK:hl

ec:

John Boylston, Director of Preconstruction
Robbie Isgett, Director of Construction
David Cook, Director of Maintenance
Robert Perry, Director of Traffic Engineering
Chris Gaskins, Design Build Engineer
Ladd Gibson, Director of Mega Projects
Rob Bedenbaugh, Preconstruction Support Engineer
File: PC/TBK/HL

Jennifer Necker, RP Engineer - Lowcountry
Leah Quattlebaum, RP Engineer - Pee Dee
Philip Sandel, RP Engineer - Midlands
Julie Barker, RP Engineer - Upstate
Tad Kitowicz, FHWA
Blake Gerken, FHWA

