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Driving Indiana's Economic Growth

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Eric Holcomb, Governor
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August 7, 2017

CONSTRUCTION MEMORANDUM
17-13

TO: District Deputy Commissioners
District Construction Directors
District Technical Services Directors
District Area Engineers
District Project Management Director
Project Management Director
District Traffic Engineers
District Testing Engineers
District LPA Coordinators
Project Engineers/Supervisors
Field Engineers
Office of Material Management

FROM: John Leckie, Director
Division of Construction Management and District Support

SUBJECT: Permanent Deck Form Angles

Recurring Special Provision 702-B-304 Permanent Deck Form Angles became effective for contracts let on or after September 1, 2017. The revision to 702.13(e) includes the new requirement that:

> *"The vertical leg of angles used as form supports shall not extend higher than the top of the permanent metal form."*

Stay-in-place (SIP) forms for concrete bridge decks can cause bridge deck cracking when not installed properly. Deck cracking has become a concern at locations where the vertical leg of the support has been allowed to extend upwards, past the top of the SIP form line.

Corrective action by the contractor shall occur if the vertical leg of the support angle extends above the SIP deck line.

An attached copy of RSP 702-B-304 and the following two figures should be referenced to help clarify the issue.

It should be noted that SIP form details may be shown on the plans. Details shown on the plans regarding the orientation of the form angle and maximum projection above the top flange should not be followed. The special provision will govern. Details relative to welding the form angle in the tension or reversal zone for structure steel members continue to be applicable.

Questions should be directed to your Construction Management Field Engineer.

JL/GGP

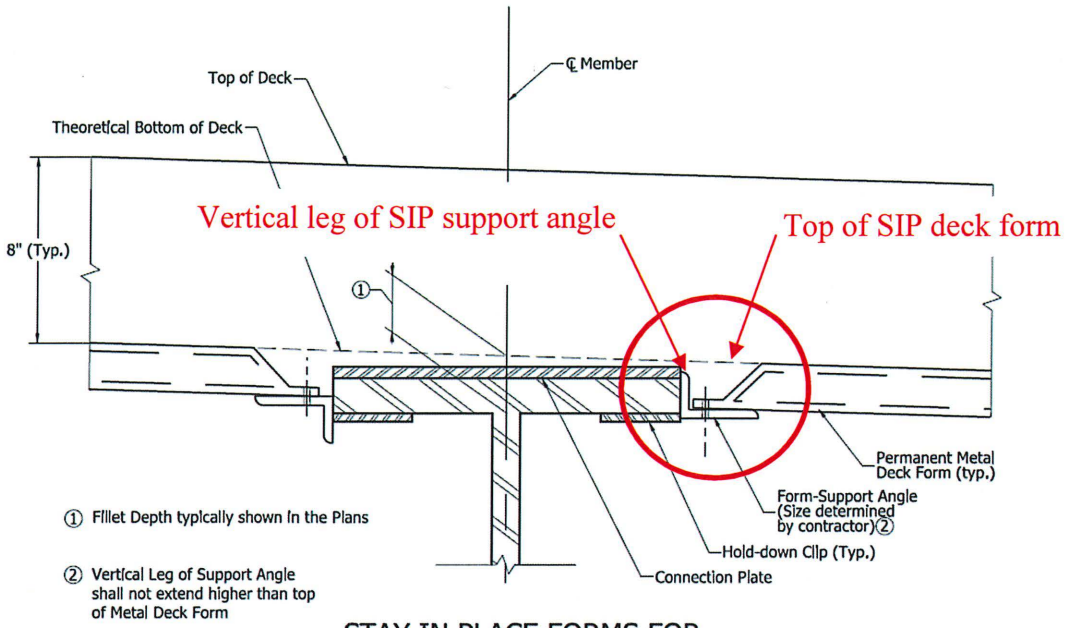
702-B-304 PERMANENT DECK FORM ANGLES

(Revised 05-25-17)

The Standard Specifications are revised as follows:

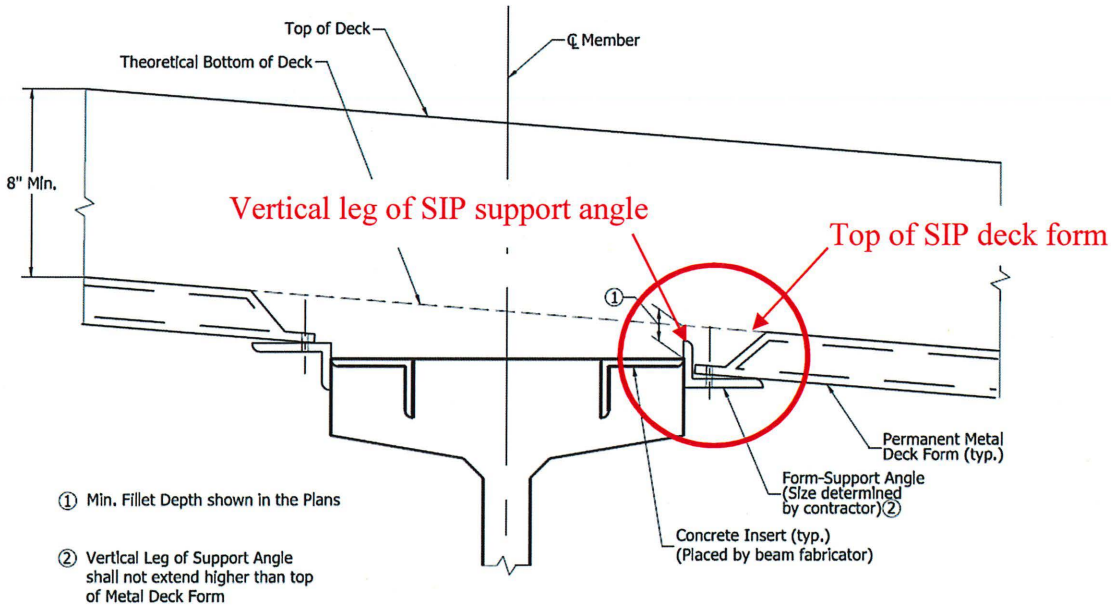
SECTION 702, BEGIN LINE 631, INSERT AS FOLLOWS:

Form sheets shall not rest directly on the top of the beam flanges. Sheets shall be securely fastened to *the* form supports and shall have a minimum bearing length of 1 in. at each end. All attachments shall be made by welds, bolts, clips, or other approved means. Except as amended by these specifications, welding and welds shall be in accordance with the requirements of 711.32 pertaining to fillet welds. However, 1/8 in. fillet welds will be allowed. *The vertical leg of angles used as form supports shall not extend higher than the top of the permanent metal form.*



STAY IN PLACE FORMS FOR
STRUCTURAL-STEEL MEMBER

Figure 1



STAY IN PLACE FORMS FOR
PRESTRESSED CONCRETE MEMBER

Figure 2

Both figures indicate correct SIP angle support placement in relation to the top of the SIP deck form line. The vertical leg of the support angle *does not* protrude above the SIP deck form line.