



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 17-20 Technical Advisory

September 5, 2017

TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/ Anne M. Rearick
Anne M. Rearick
Director, Bridges Division

SUBJECT: Complex Bridge Design Requirements

EFFECTIVE: Immediately

A complex bridge requires an additional level of design and review. Coordination and approval from the Office of Bridge Design is now required where a complex bridge is proposed.

For the purpose of this memo, a complex bridge is any one of the following:

1. cable-stayed, suspension, or movable bridge,
2. a bridge that contains post-tensioning or segmental construction,
3. a bridge that includes towers or piers with a height of 45 ft or more above ground elevation, or
4. a bridge that includes significant aesthetic features attached to the bridge.

When to Coordinate

LPA Projects

For an LPA project, where a complex bridge is known or anticipated, the Office of Bridge Design should be invited to participate in the Early Coordination Meeting as described in the LPA Guidance Document, section 3-2.0. This opportunity ensures that the owner is informed of complex and rigorous analysis required for the bridge as well as the potential for increased inspection and maintenance costs. It also ensures that the appropriate design consultant qualifications can be set.

State Projects

For a State project, the Office of Bridge Design should be contacted as soon as the complex bridge is proposed. Coordination during the scoping or engineering assessment phase is preferred to ensure that the appropriate design consultant qualifications can be set prior to consultant contracting.

Approval

The design consultant must submit a plan for checking structural design and detail computations to the Office of Bridge Design for approval prior to proceeding with the design. Approval of the plan will be contingent on the design team's expertise and experience with the proposed bridge type, the qualifications of the reviewing engineer, and verification that all necessary complex and rigorous analysis methods are included in the design proposal.

The design consultant must provide written certification that the approved plan has been followed with the Stage 3 submittal.

For questions and for projects containing a complex bridge that are beyond the coordination timeframes noted above, contact Jeremy Hunter at jhunter@indot.in.gov.

AMR:ewp