

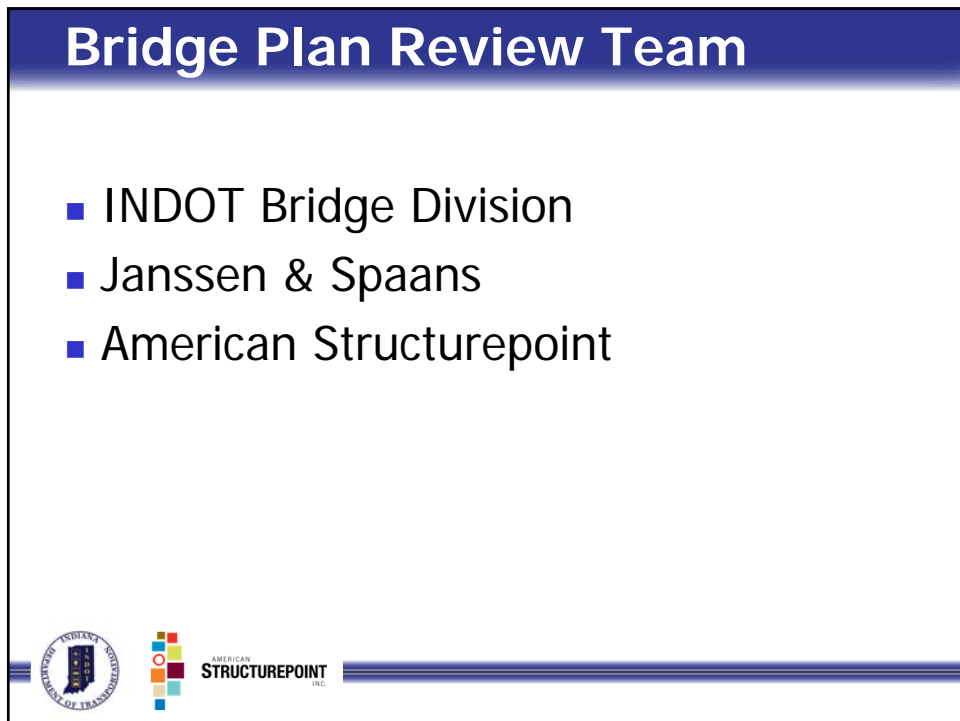


INDOT Bridge Plan Review

February 11, 2015



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This slide features a dark blue header with the title "INDOT Bridge Plan Review" in white. Below the header, the date "February 11, 2015" is centered. At the bottom, there are logos for the Indiana Department of Transportation and American Structurepoint Inc., followed by a decorative blue horizontal line.



Bridge Plan Review Team

- INDOT Bridge Division
- Janssen & Spaans
- American Structurepoint

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Bridge Reviews

Bridge Replacement (By INDOT or a Consultant)

- Stage 1 (SS&T)
- Stage 2
- Stage 3

Bridge Rehabilitation (By INDOT)

- Bridge Inspection Report
- Preliminary Plans
- Final Plans



Bridge Reviews

Final Tracings are reviewed by the INDOT Project Managers, not the design reviewers.



Scope of a Review

Typical Reviews

- Check for Levels 1, 2, and 3 compliance
- Check for IDM, AASHTO, design memos, and standard drawing compliance
- Review all required submission documents
- Perform overall top-check



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Scope of a Review

Typical Reviews

- Provide Open Roads suggestions/ cost saving ideas
- Check for INDOT CAD standards compliance
- Provide performance evaluation scores



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Scope of a Review

Special Reviews*

- All of the items of a typical review plus one of the following:
 - Element Review
 - Full Review
 - Cross Review

* Only when requested



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Element Review

A thorough review of one bridge element selected by INDOT

- Structural calculations
- Computer input is checked
- Reinforcement and structural details

Report non-compliance items to INDOT



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Full Review

A thorough review of **all** bridge elements:

- Structural calculations
- Computer input is checked
- reinforcement and structural details
- Quantity calculations and estimate

Report Non-compliance Items to INDOT



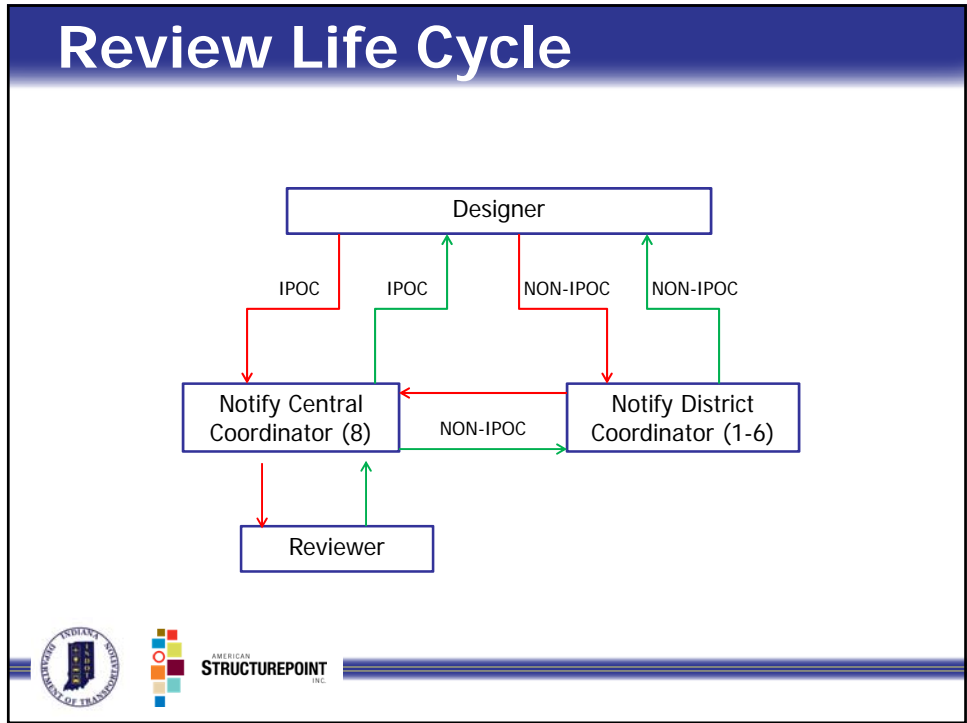
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Cross Review

An independent review of a random submission to assure consistency between reviewers.





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Coordinator Notification

Notification E-mail to Coordinator

- If Level-One Design Exception is included, request the coordinator to send it to the Bridge Division Manager for review.
 - Consultant reviewer reviews but does not sign Level-One design exceptions.
- Request expedited reviews in the email to the Coordinator, not just in the transmittal letter.

Coordinator Notification

Notification E-mail to Coordinator

- Submit the Load Rating Request Form and bridge plans to Coordinator 8 in an email.



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Documentation

Communicate clearly to your reviewer

- Include correspondences that support decisions
- Cite IDM and AASHTO sections where apparent conflicts may exist
- Notes to reviewers are a good thing
- Delineate missing documents from the submittal in the transmittal letter



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Documentation

- Consider including a brief memo to the reviewer that delineates non-standard aspects
- Clearly show the foundation loads in the design computations so the Foundation Review Form can be verified
- Submit the geotechnical report if available
- Submit the Hydraulic Approval Letter with your Stage 1 submission.



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Practice Pointers

Process

- Submit USP's to Scott Trammel as early as practical for review.
- Review the INDOT Practice Pointers Document (forthcoming...).
- Submit checked work with initials.
- Use the latest version of the RCBA standard drawings.



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Practice Pointers

Process

- The FHWA PS&E form will be completed by the INDOT Engineer at Stage 3/ Final Plans.
- The designer should use the PS&E form as a reference to assure all items are completed at Stage 3/ Final Plans.



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Practice Pointers

Policy

- Follow the latest memos
 - 14-02 Q500 Scour Policy
 - 14-03 Alterations Requiring ADA Curb Ramps
 - 14-09 Bridge Railing Offset
 - 14-10 Practical Design
 - 14-11 Design Exception for Interstate Vertical Clearance



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Practice Pointers

Policy

- Refer to IDM 203-2.05(03) for three-sided precast concrete structures layout and plan requirements.
- Refer to IDM 410-5.01(7) regarding plan requirements for MSE walls.



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Practice Pointers

Policy

For guardrail length of need calculations where the foreslope is steeper than 4:1, the clear zone needs to include a recoverable area or extend to the R/W line if there is no recoverable area.



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Practice Pointers

Policy

- Follow the INDOT CAD standards
- Use PROWAG for ADA best practices
- Utilize 3R criteria for 3R projects
 - Allows for designers to keep existing vertical and horizontal alignments that would be deficient using 4R criteria.



Practice Pointers

Maintenance of Traffic

- Level-1 computations for MOT
 - Utilize IDM Chapters 82 & 83
 - Interstate Highways Congestion Policy, **2014**
- Pedestrian MOT Design – Provide an access route for pedestrians where existing pedestrian access is impacted.



Open Roads

- Provide documentation for non-standard designs
 - Direction from INDOT PM
 - INDOT approval of original ideas
 - Designer's pursuit of approval of original ideas
- Utilize the AASHTO Manuals for Level-1 criteria
 - Green Book
 - Low Volume Local Roads
 - Interstate Design Standards



Open Roads

- Cannot use the AASHTO design guidelines to supersede State and Federal requirements for the National Truck Network and ADA Requirements.
- Utilize 2011 AASHTO *Roadside Design Guide* runout lengths for guardrail computations.



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Questions

