

LPA and State Shop Drawing and Falsework Review Procedures

Version 9/14/2020

In order to make the review process more efficient, the Department will allow the Contractor to submit electronic copies of design calculations and shop drawings for approval in lieu of printed copies. Every submittal must include the contract number, contractor's name, and contact person with contact information. All drawings and calculations should be submitted in the units used for the contract.

A. LPA Contracts

For LPA contracts, review of all shop drawings and other items listed in Part C are the responsibility of the LPA or their designated representative. Contractors on LPA projects are to submit shop drawings and falsework plans as directed by the LPA. Once shop drawings for structural members have been approved by the LPA or LPA's representative, a copy should be forwarded to INDOT as indicated herein. Questions about LPA procedures should be directed to the District Local Projects Administrator.

Structural Members and Items

For LPA contracts, shop plans for structural members and items are to be submitted to the LPA or their designated representative for review and approval. Since INDOT is responsible for fabrication inspection of structural members, upon completion of the shop drawing review, the LPA or their representative should forward an electronic copy of the approved shop drawings to INDOT Office of Bridge Design, at BridgeDesignOffice@indot.IN.gov.

Approval of Pile Driving Equipment

The Contractor shall submit to the LPA or designated representative, a completed pile and driving equipment data form at least 15 calendar days prior to driving piles. A copy shall also be furnished to the Engineer. The EOR shall review for acceptance the pile and driving equipment data form. The pile and driving equipment data form is available on the Department's website. The Contractor will be notified by the LPA or designated representative, of the acceptance of the proposed pile driving system within 15 calendar days of the receipt of the pile and driving equipment data form. Acceptance of pile and driving equipment does not relieve the Contractor of the responsibility to provide equipment suitable for driving the specified piling to the required bearing without damage. INDOT Geotechnical Services Division at geotech@indot.in.gov and the Engineer will be notified by the LPA or designated representative, of the acceptance of the proposed pile driving system.

B. Design-Build Contracts

For design-build contracts, responsibilities and procedures for shop drawing review and approval is typically described in the design-build contract documents.

C. State Contracts

For state contracts, the following procedures have been implemented for submittal and review of shop plans, falsework drawings and related items as described below. Regardless

of the submittal process described below, it is the intent that contractors communicate directly with the PE/S to keep them informed of the status of submittals. If the District has any concerns about the structural integrity of any shop plans submitted with a P.E. stamp, they should contact their Division of Construction Management and District Support Field Engineer for further assistance.

1. Structural Members & Items

For State contracts, shop plans for the following items are to be submitted by the fabricator or supplier directly to Burgess & Niple, Inc. for review and approval. Shop plans must be in accordance with the applicable specifications. These items do not require a P.E. stamp for submittal.

- Structural steel & structural concrete members
- Modular expansion joints
- S-S joints
- Elastomeric bearings.

Shop plans are to be sent to Burgess & Niple at shopplanreview@burgessniple.com. Their office phone number is 317-237-2760. Burgess & Niple will send approved shop plans to the INDOT Division of Bridges at BridgeDesignOffice@indot.IN.gov for distribution to the District Construction office.

2. Mechanically Stabilized Earth (MSE) Retaining Walls

Shop plans and design calculations for MSE retaining walls are to be submitted by the contractor to the EOR for review and approval. MSE shop plans and design calculations must be stamped by a P.E. Upon receipt, the EOR should forward an electronic copy of the shop drawings and design calculations to the INDOT Geotechnical Services Division at MSEWallShopDrawings@indot.in.gov with the contract number as part of the subject line. The INDOT Geotechnical Services Division will review the design calculations and will provide comments back to the EOR for inclusion in the response back to the contractor. A copy of the completed MSE Wall Shop Drawing Review Checklist should be sent by the EOR to INDOT Geotechnical Services Division at MSEWallShopDrawings@indot.in.gov for all State projects at least two business days prior to releasing the shop drawings for construction for a final quality assurance check. The EOR will continue to provide the final approval of the MSE shop drawings and design calculations. The EOR will attach a cover letter and send a copy of approved shop plans to the submitter and to the District Construction office for further distribution.

3. Sound Barrier Systems

Shop plans and calculations for sound barrier systems are to be submitted by the contractor or fabricator directly to the EOR for review and approval. The plans and calculations must be stamped by a P.E. The designer will attach a cover letter and send a copy of approved plans and calculations to the submitter and to the District Construction office for further distribution.

4. Precast Concrete 3-Sided Structures and Box Culverts (Effective with January 2016 lettings)

Shop drawings and design calculations are to be submitted for all precast concrete 3-sided structures and for precast concrete box culverts that have a dimension or design earth cover not listed in Table 1 of ASTM C 1577. Shop drawings and design calculations must be stamped by a P.E. Shop drawings for 3-sided structures must include details to provide sufficient horizontal restraint (prior to backfill being placed) unless the design demonstrates such restraint is not required. Load rating calculations must be included for structures whose span measured along the centerline exceeds 20 ft, except where the height of cover is greater than 8 ft and exceeds the perpendicular span length.

Plans and calculations should be submitted by the contractor to the Project Engineer/Supervisor (PE/S). The PE/S should send the shop drawings directly to the EOR for review and approval and copy the Office of Roadway Review Coordinator at coordinator7@indot.in.gov. For structures requiring load rating, the EOR should forward an electronic copy of the shop drawings, design calculations, load rating calculations and load rating summary (RPD 700-B-301d) to the INDOT Load Rating Engineer at loadrating@indot.in.gov. Load Rating Engineer will provide comments/approval back to the designer.

5. Welded Wire Reinforcement

Shop plans and design calculations are to be submitted for locations where the contractor proposes to substitute welded wire reinforcement in lieu of the reinforcing bars shown on the plans. Shop plans must be stamped by a P.E.

Plans and calculations are to be submitted by the contractor to the PE/S. The PE/S should send the plans and calculations directly to the EOR for review and approval and copy the Office of Bridge Design Manager at BridgeDesignOffice@indot.IN.gov. The EOR will send approved shop plans to the PE/S for distribution to the contractor.

6. Traffic Items

Shop drawings for Signing, Signals, and Lighting will be reviewed and approved by the Office of Traffic Design and Review. These items typically include all overhead sign structures, signal strain poles and cantilevers, high mast lighting, luminaries, and light poles. Plans and calculations should be submitted by the contractor to the PE/S and forwarded to the INDOT Office of Traffic Design Manager at: TrafficDesignReview@indot.IN.gov for review and approval.

The Office will distribute approved shop plans to the PE/S for distribution to the contractor.

7. Falsework and Temporary Bridge Drawings

Falsework drawings for the following items are to be submitted to the PE/S. Each drawing must include the contract number, contractor's name and must be stamped by a P.E.

- Cofferdams
- Deck falsework – temporary
- Coping falsework
- Falsework for reinforced concrete slab superstructures
- Falsework for hammerhead pier caps
- Designs for temporary bridges for runarounds.

Temporary bridge design submittals must also include design calculations.

The PE/S will review drawings for compliance with the specifications and the specific job conditions only. Questions should be directed thru the Area Engineer and District Construction office.

8. Permanent Metal Deck Forms

Shop plans for permanent metal deck forms are to be submitted by the contractor to the District Construction office for review for compliance with the specifications and the specific job conditions only. Shop plans submitted by the contractor must be stamped by a P.E. The Division of Construction Management maintains a deck form calculation spreadsheet on the INDOT Y: drive under *Div.contracts&construction/metal deck form calc* that can assist in review of metal deck forms.

9. Foundation Seals and Deck Pour Sequences

Requests for use of foundation seals not shown in the plans are to be submitted to the INDOT Geotechnical Services Division at geotech@indot.in.gov for review and approval. The submittal must include the contract number, contractor's name and indicate the location and dimensions of the seal. The Office will distribute approved requests.

Requests to revise planned deck pour sequences are to be submitted by the contractor to the PE/S. The PE/S should send the deck pour sequence directly to the EOR for review and approval and copy the Office of Bridge Design at BridgeDesignOffice@indot.IN.gov.

The submittal must include the contract number, contractor's name, indicate the original and proposed alternate sequence and pour rate. The EOR will distribute approved requests.

10. Approval of Pile Driving Equipment

The Contractor shall submit to the INDOT Geotechnical Services Division, a completed pile and driving equipment data form at least 15 calendar days prior to driving piles. A copy shall also be furnished to the Engineer. The pile and driving equipment data form is available on the Department's website. The Contractor will be notified of the acceptance of the proposed pile driving system within 15 calendar days of the receipt of the pile and driving equipment data form. Acceptance of pile and driving equipment does not relieve the Contractor of the responsibility to provide

equipment suitable for driving the specified piling to the required bearing without damage.

11. Stream Crossings and Work Bridges

Proposals for stream crossings and work bridges for construction traffic are to be submitted to the District Construction office for review and approval. If the proposal varies from any of the contract's environmental permit conditions, the contractor must obtain approval for the change from the appropriate agency.

12. Miscellaneous

Shop plan submittals for miscellaneous items not covered by the above (post tensioning plans, non-standard manholes, etc.) should be submitted thru the PE/S. The PE/S should work thru the District Construction office and the Division of Construction Management and District Support to determine the approval process for these items.