

## HIGHWAY PROGRAM DESIGN CHECK/REVIEW PROCESS

In order to achieve Quality Assurance in the development of projects, the Highway Program will follow the check/review process outlined in this document. This process will be followed by Consultant designers and Program designers. The Highway Program's project development process is centered on four major milestones:

- Horizontal/Vertical Alignment Complete (HVAC)
- Preliminary Design Report (PDR)
- Plan Impacts Complete (PIC)
- Plans, Specifications, & Engineer's Estimate (PS&E)

Projects will undergo a series of Design Checks and Design Reviews. At each milestone, a submittal form will be submitted by the designer along with supporting documentation, and a checklist will be completed by both the checker and the reviewer to ensure that checks and reviews are complete and consistent. All submittal forms and checklists can be found on the MaineDOT internet website. See the flowchart below for details.

**Design Check:** A detailed analysis of the design at each milestone, including appropriate calculation checks. The Design Check will be completed by a peer designer within the Highway Program or within the Consultant's firm, depending on who is leading the design effort. Components of the design supplied by other team members such as pavement, geotechnical, or drainage design should be checked as appropriate. The completed check will be submitted to a Highway Program Senior Designer.

For roundabout projects at the HVAC milestone, the peer designer must have roundabout design experience. Since roundabout design is so complex, it may be more efficient to complete a horizontal design check before proceeding with vertical design. For this reason, there are separate checklists for horizontal and vertical design. This decision should be made by the project team at the Initial Team Meeting. Roundabout experience is beneficial but less critical at the other milestones.

**Design Review:** An overview of the design at each milestone after the design has been checked. The focus will be on general compliance with design standards and the practicality and cost effectiveness of the design. The Design Review will be completed by a Highway Program Senior Designer, and will include a review of all aspects of the Design Check.

For roundabout projects at the HVAC milestone, a Highway Program Senior Designer with roundabout design experience will complete the review or will arrange Roundabout Peer Review services with a pre-qualified consultant peer reviewer. The horizontal design reviews should be completed before moving on to vertical design if the team has decided to separate horizontal and vertical design. Roundabout experience is beneficial but less critical at the other milestones.

The completed check/review checklists, including designer responses, will be placed in TEDOCS for future reference.

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## Check/Review Process Flowchart

