

Performance-Based Specifications Promote Innovation and Accelerate Project Delivery

This approach motivates contractors to come up with better ways to deliver projects

Many transportation agencies are using performance specifications, particularly on accelerated construction projects, to promote innovations and capture cost savings. Performance specifications focus on *outcomes*, rather than *methods*, to motivate contractors to find new and better ways to accelerate project delivery, minimize disruption, and build a better project. However, limited resources are available to support state and local departments of transportation in writing specifications for their projects and many have used trial and error to derive the best performance specification language to achieve the results they are looking for. This research captures the best practices, lessons-learned, and proven results to provide performance specifications that DOTs can use on their projects.

Performance Specifications for Rapid Renewal

The Solution

New implementation guidelines and model performance guide specifications help agencies get the quality and innovation they are seeking on pavement and structural construction projects. The new **specifications support faster construction and improved quality, and cover an array of project delivery methods** such as design-bid-build, design-build, design-build-warranty, and design-build-operate-maintain. By clearly defining how a product should perform in service, these **specifications promote innovation and reduce prescriptive method requirements**. They concentrate, instead, on measuring those factors that are critical to the performance of the final product.

Delivering innovative solutions that focus on end results

FOCUS AREA: Renewal (R07)

Model performance specifications; ranking grids; step-by-step instructions for developing performance specifications

Save Money

- Effective performance specifications result in delivery of desired product.
- Better use of oversight and inspection to achieve goals.



Save Time

- Performance specifications allow contractors to deliver the desired end product more efficiently.



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Performance guide specifications provide a template for developing project-specific performance specifications. The guide also addresses issues related to project selection, specification development, procurement, and the other cultural and organizational changes necessary to successfully deliver rapid renewal projects. Guidelines for ranking important project parameters (time, quality, cost, risk, and complexity) and specifications for different highway renewal scenarios (road, bridge, structures, traffic control) are provided. The **implementation guidelines** include a procedural manual to help managers understand risk and make better decisions with regard to their specifications. It also provides a flexible framework for assessing whether performance specifications are a viable option for a particular project and provide step-by-step instructions for developing performance specifications.

The Benefits

Clearly specifying the desired performance goals for accelerated road and bridge projects can encourage contractors to apply greater control and ingenuity, reduce costly construction oversight, and apply construction management resources more efficiently. This product provides the tools to owner agencies to reduce claims, reduce inspection costs, accelerate construction, and improve project quality.

Who is using these specifications?

- ▶ Missouri Department of Transportation tested geotechnical performance specifications on its Route 141 Roadway Improvement Project.
- ▶ Virginia Department of Transportation tested the use of performance specifications for a hydraulic cement concrete bridge deck using construction parameters related to performance on its Lake Anna Bridge Rehabilitation project.
- ▶ Louisiana Department of Transportation's US 90 Frontage Roads project will evaluate the use of non-destructive roller-integrated compaction monitoring technology and mechanistic-based in situ point measurements on a new pavement section.

How can you learn more?

For more information email Jennifer Balis at FHWA, Jennifer.Balis@dot.gov, or Evan Rothblatt at AASHTO, erothblatt@AASHTO.org. Updates on current implementation efforts can be found at www.fhwa.dot.gov/GoSHRP2 or <http://SHRP2.transportation.org>.



About SHRP2 Implementation

The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

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