

Strategic Plan for the Committee on Design

As approved by the Strategic Management Committee, September 22, 2018

Goal 1: Improve the timely delivery of projects

1.1 Identify and share best practices for project delivery methodologies from across the country and around the world

Implementation Actions:

1. Develop web-based training for Practical Guide to Cost Estimating
2. Complete and publish the *Guide for Construction Manager/General Contractor (CM/GC) Procurement*
3. Develop web-based training to share best practices for project delivery during the various phases of a project
4. Develop risk management best practices and guidance, and provide training on the recommendations

1.2 Develop proposed policy statements and other proposals for streamlining project delivery processes and procedures

1.3 Identify and share best practices related to project management

Implementation Actions:

Develop guidance to states interested in developing internal project delivery performance measures
1.4 Provide technical input and guidance on proposed federal rules and policies

Goal 2: Develop design solutions that meet the purpose and need of a project, address its context, and protect the natural and human environment

2.1 Promote flexibility in design practices

Implementation Actions:

1. Finish work on NCHRP 20-07 Task 423 Planning for a Comprehensive Update and Restructuring of AASHTO's *A Policy on Geometric Design of Highways and Streets, 8th Edition* and evaluate the recommendations
2. Help practitioners understand and implement the performance-based, flexible approach to geometric design embodied in the 7th edition (2018) of the Green Book and the vision for the 8th edition

2.2 Research and share techniques and processes for involving communities and other stakeholders in the development of transportation facilities

2.3 Promote better integration of project delivery efforts from planning and environment, through design, to construction, maintenance, and operations

Implementation Actions:

1. Develop guidance on incorporation of as-built information into 3D models, and transferring that information to an asset management format
2. Collaborate with the Committee on Environment and Sustainability to streamline and improve working relationships with regulatory agencies

2.4 Participate in the development of guidance for communicating environmental commitments through design to construction

Implementation Actions:

1. Produce guidelines for developing a NEPA commitment tracking process for the life of a project (design, construction, maintenance) in coordination with the Committee on Environment and Sustainability

2.5 Play an active role in the development of guidance on climate change and energy efficiency efforts in the design of projects.

Implementation Actions:

1. Complete NCHRP 05-22 Guidelines for Solid State Roadway Lighting and publish LED roadway lighting guidelines
2. Develop and support research for design and policy guidance regarding alternative fuel vehicles

2.6 Provide guidance for mobility and accessibility of non-motorized users.

Implementation Actions:

1. Complete and publish *AASHTO Guide for the Development of Bicycle Facilities, 5th Edition*.
2. Complete and publish *AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2nd Edition*

Goal 3: Continually improve the quality and cost effectiveness of projects

3.1 Support state development of internal performance management objectives within the design phase of project delivery, including the identification and recommendation of appropriate performance measures for design activities.

3.2 Promote project management techniques to improve quality and cost effectiveness.

Implementation Actions:

1. Develop ways for states with robust performance-based practical design programs to share their experiences with states looking to develop similar processes

3.3 Provide guidance on constructability best practices for designers.

3.4 Develop cost-effective solutions for delivering projects that minimize the operational and maintenance resources needed to sustain system effectiveness and functionality.

Implementation Actions:

1. Complete work on NCHRP 24-47 Revised Clear-Water and Live-Bed Contraction Scour Analysis
2. Coordinate with AASHTO Committees on Environment & Sustainability and Transportation System Security & Resilience to understand their concurrent efforts, identify redundant (or inconsistent) activities and to create horizontal partnerships within the new Committee Structure
3. Inventory existing best practices to incorporate sustainability and resiliency into design
4. Review results of ongoing research into life cycle cost of project assets

3.5 Identify the need for and deliver technical and policy publications and other timely information on design-related topics.

Implementation Actions:

1. Update the AASHTO Drainage Manual
2. Develop draft regional storm water management (SWM) best management practices (BMP) guidance document in coordination with the Committee on Environment and Sustainability to assist DOTs, consultants and contractors
3. Support the understanding and use of the Green Book 7th Edition by developing and providing continuing education opportunities
4. Support the understanding and use of the Low Volume Roads Design Guide by developing and providing continuing education opportunities

Goal 4: Improve safety for the traveling public and the workforce

4.1 Develop and promote timely research into highway and transportation facility designs that improve safety for all modes.

Implementation Actions:

1. Begin development of a performance-based approach for the *Roadside Design Guide, 6th Edition*
2. Participate in the development of guidelines for implementation of in-service performance evaluations for safety hardware through ongoing research

4.2 Identify and share improvements made to enhance work zone safety.

4.3 Support efforts to enhance the involvement of construction, maintenance, and operations personnel in the design phase of project delivery.

4.4 Develop and implement guidance on safety issues.

Implementation Actions:

1. Update and publish *Roadside Design Guide, 5th Edition*
2. Finalize process for addressing MASH implementation questions and continued technical support

Goal 5: Advance the state of the practice

5.1 Develop, promote, and implement research on new technologies.

Implementation Actions:

1. Complete NCHRP 20-05/Topic 50-02 Highway Hydraulic Engineering State of Practice
2. Develop guidelines and recommendations regarding the use of electronic bid documents and automated machine guidance
3. Conduct research into current best practices for data collection, processing, and transfer between all phases of a project

5.2 Engage other AASHTO committees in the development and use of new technologies and processes throughout project delivery.

Implementation Actions:

1. Complete recommendations for changes to the *LRFD Bridge Design Specifications* for Committee on Bridges and Structures consideration
2. Develop recommendations for Level of Detail, Level of Development, and Level of Accuracy specifications for electronic deliverables and 3D modeling

5.3 Coordinate and set priorities for the inclusion of new technologies and processes into design guidance.

Implementation Actions:

1. Develop recommendations for the adoption of a standard data schema for interoperability in data sharing
2. Provide guidance on embedding element level design details, specifications, etc., into 3D models

5.4 Increase coordination with and provide feedback mechanisms to/from academia, consultants, and contractors.

5.5 Monitor vehicle modifications for highway design considerations.

Implementation Actions:

1. Monitor deployment of autonomous and connected vehicles and if necessary develop research to examine impacts on street design

Goal 6: Foster collaboration within AASHTO and with other organizations and disciplines

6.1 Promote implementation of the committee's strategic goals through active participation and involvement of the technical committees.

Implementation Actions:

1. Coordinate with Committee on Bridges & Structures' T-13, T-15 & Committee on Environment & Sustainability's Natural Resources Subcommittee

6.2 Coordinate and collaborate with the Council on Highways and Streets and other AASHTO committees and councils in the development of guidance, processes, and procedures.

Implementation Actions:

1. Hold a TCHH annual meeting at a Committee on Environment & Sustainability meeting
2. Coordinate the work of the Joint Technical Committees on Geometric Design and Non-Motorized Transportation with the Council on Active Transportation

6.3 Coordinate with external organizations and other stakeholders to meet industry needs.

Implementation Actions:

1. Continue to publish the HydroLink newsletter (1-2 editions per year)

6.4 Work with federal, state, and local agencies to promote greater intermodal integration.

6.5 Promote information sharing within and between member agencies.

Implementation Actions:

1. Organize Project Management Community of Practice and begin interaction with members