

January 9, 2017

TO: Members of the Senate and House Transportation Committees

SUBJECT: Joint Transportation Committee Activity Update

In 2016, the Joint Transportation Committee (JTC) completed three studies as directed by the Legislature, including the study begun in 2015 on WSDOT's implementation of the design-build project delivery, a study to prioritize road-rail conflicts across the state, and a review of best practices related to minority- and women-owned business contracting in the transportation sector.

Attached are summaries of the work accomplished in the 2016 studies:

- Review of WSDOT's implementation of design-build project delivery (p. 3)
- Prioritization of prominent road-rail conflicts (p. 6)
- Minority and women-owned business contracting in transportation (p. 8)

A fourth 2016 project was the biennial update of the Transportation Resource Manual (TRM), a nearly 500-page compendium of facts and data about Washington's statewide transportation system, its governance and its funding. This year's TRM includes a significant update on state taxes and fees, many of which were not described in previous editions. The biennial update is timed to be available at the beginning of each long session, the session in which the biennial transportation budget is written. It is also intended to be a resource to both veteran and new legislators and staff engaged in transportation issues in the Legislature and the Executive Branch.

The Joint Transportation Committee held four meetings in 2016:

- June 21st in Everett, at the Association of Washington Cities annual conference
- July 21st in Olympia
- November 10th in Olympia
- December 15th in Olympia

In addition, JTC staff organized a two-day rail-focused tour on September 22 and 23, 2016, where legislators and staff, members of the Transportation Commission, and staff from the Utilities and Transportation Commission were joined by WSDOT headquarters and regional staff, port staff, mayors, and city managers and administrators. The tour included stops in Tacoma, Lakewood, Centralia, the Port of Kalama and the Port of Vancouver, Bingen, Stevenson and Washougal. Participants were briefed on a variety of topics including state- and federally-funded projects, the FRIB and FRAP financial assistance programs, rail safety regulation, grade crossing improvements, quiet zones and other related topics.

The JTC moved offices at the end of 2016, after nearly 10 years of co-location with the Legislative Evaluation and Accountability Program (LEAP), which will move into the 1063 Building in 2017. The new JTC offices are located at 606 Columbia Street NW, Suite 105, near Percival Landing.

Thanks to the seventeen members of the House and Senate who have participated in one or more JTC meetings and tours this interim. Your participation is invaluable, and contributes to the richness of discussion and the thoroughness of our work.

The [JTC website](#) provides links to all current and past studies, including meeting presentations and reports.

If you have any questions, please contact the JTC staff:

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Representative Judy Clibborn
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Summary of 2016 Joint Transportation Committee Studies

January 9, 2017

Review of WSDOT's Implementation of Design-Build Project Delivery

In 2015, the Legislature directed the Joint Transportation Committee to study WSDOT's implementation of design-build project delivery, and to recommend improvements to maximize cost and schedule efficiencies and ensure that risk is borne by the appropriate party. A review panel of state and national experts was appointed to assist with the study.

The consulting team led by Hill International from Philadelphia began the 15-month study at the end of September, 2015, and their final report was delivered in December, 2016.

Background

Design-build (DB) is a method of project delivery in which an agency executes a single contract with one entity (the Design-Builder) for design and construction services to provide a finished product based on owner-specified performance requirements.

WSDOT has had the authority to use design-build since 1998, when the authority was limited to two pilot projects over \$10 million. That authority has been expanded over the years. Today WSDOT is strongly encouraged to use design-build on projects over \$2 million with highly specialized construction activities, where there is an opportunity for greater innovation and efficiency, or when it would significantly shorten the time it takes to deliver a project.

WSDOT has delivered or is in the process of delivering 29 projects using design-build, ranging in cost from \$3 million to \$1.09 billion.

The JTC study

The study was designed to accomplish the following:

- Examine WSDOT's implementation of design-build project delivery to-date
- Evaluate whether WSDOT's use of design-build can be improved to ensure better project delivery and more efficient expenditure of the taxpayer dollar, maximizing cost and schedule efficiencies, and ensuring that project risk is borne by the appropriate party
- Examine whether WSDOT's current design-build project selection criteria appropriately determines the optimal contractual delivery method
- Educate legislators and other stakeholders on the appropriate use of design-build to deliver high quality large, medium and/or small projects, while achieving excellent stewardship of the taxpayer dollar
- Develop strategies for WSDOT and the construction industry to successfully adapt to the changes in the scope or implementation of WSDOT design-build project delivery as recommended in the study.

A design-build review panel of experts was appointed to assist the consultants with the study. It was composed of two nationally recognized experts in the field of design-build project delivery from the consultant team: Mike Loulakis, JD and Greg Henk, PE; and four Washington-state experts: Bob Adams representing the Association of

General Contractors, John Ferguson representing the American Council of Engineering Companies of Washington; Vince Oliveri representing the Professional and Technical Employees Local 17, and Linea Laird, WSDOT's chief engineer and Assistant Secretary for Engineering and Regional Operations.

Analysis approach

The study included the following key components:

1. A basic overview of Design-Build. The consultants wrote a white paper identifying the benefits and challenges of DB compared to the traditional design-bid-build project delivery.
2. Peer review – industry best practices. The consultants interviewed twelve DOTs with active and effective design-build programs, as well as private sector design-build practitioners, asking about program delivery, project development, procurement/delivery approaches, project execution and performance monitoring. They also reviewed best practices as determined by the nationally-respected Design-Build Institute of America (DBIA).
3. Evaluate WSDOT's current use of DB. A representative sample of six of WSDOT's 29 DB projects were analyzed to understand WSDOT's current DB project delivery.
4. Gap analysis. The consultants identified where WSDOT practices varied from current best practice, and assessed what WSDOT currently does well, what is improving, and where they need more work to bring practices into alignment with best practice.
5. Recommendations. Based on the gap analysis, recommendations were identified along with suggested strategies to adopt the recommendations.
6. Implementation. Implementation strategies were identified for each of the recommendations, and included consideration of whether legislative action was required, time, cost, difficulty and perceived benefits. An implementation timeline was then developed.

What does WSDOT currently do well?

The study showed there are many things WSDOT does well when implementing design-build, including industry outreach, the commitment of senior leadership, risk allocation, shortlisting proposers, engaging with confidential one-on-one meetings with proposers, offering reasonable stipends to shortlisted proposers, and encouraging the use of alternative technical concepts.

How has WSDOT's delivery improved over time?

WSDOT has learned from their 16 years of experience with design-build, improving their delivery in a number of ways. These include providing improved procedural guidance for all aspects of design-build delivery, working with the construction and design industry to develop design-build template documents, implementing a structured method to evaluate the appropriate delivery method for projects, using design-build on small projects, and using their growing internal design-build experience to develop a training program for other project staff within WSDOT.

What aspects of WSDOT's design-build program could be improved?

Based on a comparison of current WSDOT design-build practices with leading industry practices, and working with the review panel, the consultant team developed 27 recommendations to improve WSDOT's design-build program. The recommendations address distribution of design-build expertise across the agency, training, standardizing design-build processes, appropriately using consultants, increasing flexibility in procurement and delivery options, performing appropriate preliminary design and project development, creating appropriate proposal evaluation criteria, providing consistent proposal evaluation and contract administration, and

developing a usable database of lessons-learned.

WSDOT was an active participant throughout the study, and has already begun to implementing several of the recommendations.

Implementation timeline and strategies

As part of the study, the consultants developed strategies for WSDOT to implement each of the recommendations, along with a suggested timeline, providing WSDOT with a guidebook to use to enact the improvements. The final report also identifies the timing, cost, difficulty and benefits of implementing each of the 27 recommendations.

While many of the recommendations can be done without legislative action, the consultants determined that three are rather difficult and will involve more significant implementation costs. These include dispersing design-build skills and expertise across all the regions in the state through training, developing design-build credentials/experience as part of overall career development and compensation, and performance monitoring (developing and maintaining a database and lessons-learned to compare DB with other delivery methods).

Study materials can be found [here](#).

Study origin:	2ESSB 5997, Sec. 3; and 2ESSB 5988, Sec. 201
Report:	Delivered December, 2016
Appropriation:	\$450,000
Project Manager:	Mary Fleckenstein (360) 786-7312; Beth Redfield (360) 786-7327
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Prioritization of Road-Rail Conflicts

In 2015, the Legislature directed the Joint Transportation Committee to identify prominent road-rail conflicts, recommend a corridor-based prioritization process for addressing the impacts of projected increases in rail traffic, and identify areas of state public policy interest, such as the critical role of freight. An Advisory Panel of state and local stakeholders was convened to assist with the study.

The study was funded by the cities portion of the gas tax. To conduct the study, JTC staff partnered with the Association of Washington Cities.

The consulting team led by TranspoGroup, which included Parametrix and BERK, began the 8-month study in April 2016, and their draft final report was delivered in December 2016.

Background

At-grade railroad crossings, where roads cross railroad tracks at the same level, typically can function adequately while population and traffic levels remain low. In places where rail and road traffic are increasing, at-grade crossings are becoming more problematic. The impacts can include travel delays for general and freight traffic, collisions between trains and vehicles or pedestrians, and increases in emergency response times. Throughout the study, the phrase “road-rail conflict” is used to describe potentially problematic at-grade crossings.

The JTC study

The study was guided by the following objectives:

- An understanding of the current and future mobility, community impacts, and safety problems occurring at-grade crossings in the state;
- An understanding of state, local, and private entity policy interests in improving at-grade crossings;
- Consideration of how a data-driven analysis of crossing impacts can be used in a corridor-based project prioritization process, and
- A criteria-based decision-making process for prioritizing statewide investments in at-grade crossing solutions.

The principle products of the study are a database and online mapping tool containing information about the 2,180 active, public at-grade crossings in the state. The data collected includes both descriptive information about the crossing locations as well as data which measures impacts on users and local jurisdictions. The database is a flexible tool which can be modified to improve and enhance the data and refine the weighting of priorities. The resulting list of crossing priorities is not a definitive list of needs, and is meant as a first step to understanding crossing impacts, an important input to subsequent analysis of corridor-based solutions.

An Advisory Panel made up of representatives of cities, counties, ports, transportation planning organizations, WSDOT, WUTC, FMSIB, BNSF, and the Washington Trucking Association, provided input and expertise for the study, meeting four times over the course of summer and fall. A staff working group, including staff of the advisory panelists as well as legislative staff, also provided feedback and technical input.

Washington State’s prominent road-rail conflicts

Each of the 302 prominent crossings identified by the study have over 10 freight trains per day; do not have a nearby alternative route with a grade separated crossing; have long, slow unit trains present; and are on major

collectors, arterials, or state highways. In addition, a significant number of these prominent crossings have a regionally prioritized project identified, two or more mainline tracks for vehicle traffic to cross, and over 8,000 daily vehicle trips.

The Top 50 crossings identified by this study have substantial on-going conflicts due to daily usage by a median number of 49 trains and 12,000 vehicles. In addition, these crossings are closed to vehicle traffic for an average of two hours per day. Almost two-thirds (62%) of these crossings are on a designated freight corridor and 96% of them (all but two) have gates and flashing lights, yet there was at least one collision between pedestrians and/or vehicles and trains at half the crossings in the last five years. Almost two-thirds (66%) are in close proximity to emergency providers, leading to potential delays for emergency service providers.

Prioritization approach

The study used a two-step prioritization process. The purpose of the first step was to capture the prominent crossings for further, in-depth evaluation. The data used for this step was readily available for all of the 2,180 study crossings and sought to identify crossings with a high potential of road-rail conflict.

The second step prioritized the 302 crossings using more detailed evaluation criteria. For a majority of the final criteria used, additional calculations and GIS analyses were performed for the study. The criteria were grouped into three categories: mobility (relating to traffic congestion), safety, and community. After discussing different weighting strategies with the Advisory Panel, the final weighting recommended by the consultant team puts more focus on mobility, while recognizing the inter-related impacts of the three criteria. The final score for each crossing reflects weighting mobility at 50%, safety at 25% and community at 25%.

Findings and Recommendations

The study found that road-rail conflicts are substantial around the state and merit greater attention. The recommendations address both policy and implementation issues.

Policy recommendations relate to the need for:

- dedicated funding to address both mobility and safety impacts of road-rail conflicts; and
- specific policy guidance to address the tradeoffs between mobility and safety as well as geographic balance across the state.

Implementation recommendations include:

- Further analysis of the prominent crossings to identify solutions on a corridor-basis;
- Coordination with WSDOT and UTC safety programs to continue the focus on reducing collisions at crossings;
- Creation of a multi-stakeholder committee to promote consistent use of the database;
- Assignment of an agency to maintain the database and coordinate its use; and,
- Future enhancements to the data on the crossing locations.

Study materials can be found [here](#).

Study origin:	2ESHB 1299, Sec. 204(3) and ESHB 2524, Sec. 204(3)
Report:	January 9, 2017
Appropriation:	\$250,000
Project Manager:	Beth Redfield (360) 786-7327; Mary Fleckenstein (360) 786-7312
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Minority and Women-Owned Business Contracting in Transportation

In 2015 (2ESSB 5988) and 2016 (ESHB 2524), the Legislature directed the JTC to study minority- and women-owned business contracting in the transportation sector.

Background

On December 17, 2015, the Joint Transportation Committee held a work session to explore minority- and women-owned business contracting in transportation. Included were presentations on how the state and federal process is designed to work; the minority communities' experience with the process; and Governor Inslee's two-pronged Business Diversity Initiative to address participation in state contracting by small, minority-, women- and veteran-owned businesses. Materials related to the work session can be found [here](#).

As a follow-up to this work session, a staff study was conducted in 2016 to identify best practices for state DOTs to encourage participation by minority- and women-owned businesses in transportation contracting.

The JTC Study

This study involved researching available print and online resources on minority- and women-owned business contracting, as well as interviewing professionals with expertise in this field to identify best practices. The best practices listed in the report were recommended by these sources and this report does not independently evaluate these practices.

The Legislature's directive was to identify best practices adopted in other states, so this report does not evaluate the DBE program in Washington State.

Study methodology

The information contained in this report was obtained through JTC staff interviews, staff participation in the AASHTO Subcommittee on Civil Rights biennial conference in June, 2016, and a review of online and print resources from various sources, including the following:

- USDOT's Office of Civil Rights
- FHWA's offices in Washington State and Washington, DC
- AASHTO's Subcommittee on Civil Rights, American Association of State Highway Transportation Officials
- USDOT's Northwest Small Business Transportation Resource Center (SBTRC), Office of Small and Disadvantaged Business Utilization (OSDBU)
- Procurement and Technical Assistance Center (PTAC) of Washington State, a federal Department of Defense small business program
- National Conference of State Legislatures (NCSL)

The report explores government contracting in the transportation sector related to the federal Disadvantaged Business Enterprise (DBE) program, a mandated program for all states that accept federal transportation monies. It lists state practices the DBE program administrators have found effective along with those the Federal Highway Administration (FHWA) has identified as recommended practices for complying with the federal DBE program.

Since 1983, the federal government has required states receiving federal transportation funds to ensure a portion of those funds are spent by Disadvantaged Business Enterprise (DBE) firms. Each state is required to have an approved DBE plan, with specified goals for DBE participation. Each state has its own program to

certify businesses as DBE, following guidelines established by USDOT. The report outlines the details of the DBE program and how businesses qualify to participate.

The report also explores the context for the Washington State DBE Program, Federal assistance programs for small businesses in government contracting and other states' minority business enterprise programs.

Findings

Neither the USDOT nor FHWA have established best practices for states to follow in implementing federal DBE requirements. A 2013 audit by the USDOT Inspector General recommended that USDOT establish best practices for states to follow, and other recommendations to improve federal administration of the program. In response to this recommendation, FHWA is currently in the process of identifying "promising practices" that are used successfully in at least one state to meet or exceed the goals of the DBE program. A list is currently being compiled by the FHWA Resource Center and is anticipated to be published in early 2017. The JTC report contains practices identified by FHWA in the mid-2000s that are still being used successfully by states today to comply with the DBE Program.

The American Association of State Highway Transportation Officials (AASHTO) Subcommittee on Civil Rights (Subcommittee) works to "research and evaluate the effectiveness of external civil rights programs including (the) Disadvantaged Business Enterprise" program in its member states. The Subcommittee is comprised of state DOT executives, DBE program administrators and USDOT liaisons. While the Subcommittee does not have a comprehensive list of best practices for each aspect of the DBE program, its biennial conference highlights essential and best practices for several program elements, and those practices are included in this report.

The Subcommittee on Civil Rights also identified three key elements to create a framework for DBE program success: leadership and culture; DBE program administration, and internal & external engagement, along with suggestions for how to implement this framework.

For purposes of clarity, the practices identified by FHWA and AASHTO's Subcommittee are grouped together in the report by topic category and are referred to collectively as "recommended practices". The report lists 50 recommended practices in ten broad categories, including

1. Bonding and other small business financial considerations
2. Business development and training
3. Internal state DOT actions and activities
4. Marketing
5. Mega-project strategies
6. Mentor/protégé program
7. Monitoring and enforcement
8. Outreach
9. Prompt payment
10. Public reporting

The final report can be found [here](#).

Study origin:	ESHB 2524, Sec. 204(7)
Report:	Delivered December, 2016
Project Manager:	Alyson Cummings (360) 786-7398
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