PRIORITIZATION OF PROMINENT ROAD-RAIL CONFLICTS

Joint Transportation Committee Meeting

December 15, 2016

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PRESENTATION OUTLINE

- Project Overview
- Prioritization Process
- Prioritization Results
- Findings and Recommendations
- Major Feedback Received

LEGISLATIVE DIRECTION FOR THE STUDY

2ESHB 1299, Section 204(3)

(3) $250,000 of the motor vehicle account—state appropriation, from the cities' statewide fuel tax distributions under RCW 46.68.110(2), is for a study to be conducted in 2016 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 movement to the Washington economy and the state's competitiveness in world trade.

STUDY OBJECTIVES

- Understand current and future mobility issues, community impacts, and safety problems
- Understand state, local, and private policy interests
- Develop a criteria-based process for prioritizing statewide investments to at-grade crossings
- Consider how the crossing analysis can be used in a corridor-based prioritization process

PARTICIPATION

ADVISORY PANEL MEMBERS

1. Paul Roberts, City of Everett, AWC
2. Sean Guard, City of Washougal, AWC
3. Lisa Janicki, Skagit County, WSAC
4. Al French, Spokane County, WSAC
5. Kevin Murphy, Skagit COG
6. Ashley Probart, FMSIB
7. Dave Danner, UTC
8. James Thompson, WPPA
9. Ron Pate, WSDOT
10. Johan Hellman, BNSF
11. Sheri Call, Washington Trucking Association

Project included a Staff Work Group

SCHEDULE


Prioritization of Prominent Road-Rail Conflicts in Washington State Project Schedule
Month
Apr
May
Jun
July
Aug
Sep
Oct
Nov
Dec
Jan
Task 1: Database Development
Assemble and Screen Available Data
Establish Prioritization Criteria
Online Database Tool
Task 2: Prioritization Process
Context / Impact of Road-Rail COnflicts
Define Potential Prioritization Options
Test and Present Options
Task 3: Organizational Structure
Potential Structures
Trade-Offs and Evaluation
Task 4: Advisory Panel and Staff Work Groups
Advisory Panel Interviews
Advisory Panel Meetings
Staff Workgroup Facilitation
Task 5: Draft and Final Reports
Draft Report
Final Report
Task 6: Presentations
Presentations
Advisory Panel Meeting
Staff Workgroup
Presentation
Presentation During 2017 Legislative Session
WE ARE HERE

PRIORITIZATION RESULTS

- Overview of the Prioritization Process
- Summary of Results

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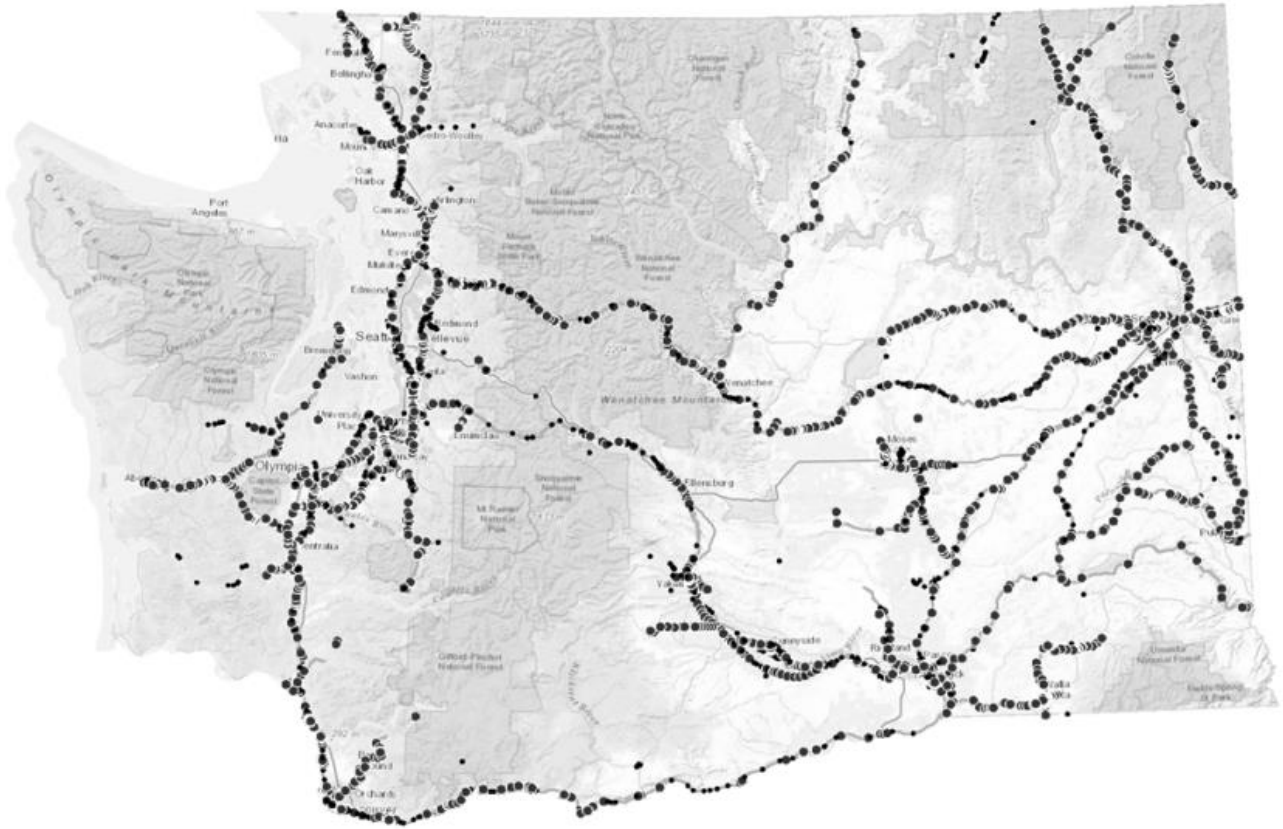
OVERVIEW OF THE PRIORITIZATION PROCESS

Approximately 4,171 crossings throughout the state

- **Active** and **Inactive** Crossings
- **Public** and **Private** Crossings
- **At-Grade** and **Grade Separated** Crossings



** 76% of active crossings are at-grade*

OVERVIEW OF THE PRIORITIZATION PROCESS

ALL

STEP 1

STEP 2

PRIORITIZED LIST OF CROSSINGS

Active Rail Line
Publicly Accessible
At-Grade Crossing

STEP 1
Filtering

STEP 2
Sorting

STEP 2 EVALUATION CRITERIA

- Increase Risks
  1. Number of Alternate Grade-Separated Crossings
  2. Number of Mainline Tracks
  3. Proximity to Emergency Services
- Safety Record
  4. Incident History: Total
  5. Incident History: Severity
- Infrastructure Status
  6. Level of Protection

- Freight Demand
  7. Roadway Freight Classification
- People Demand
  8. Existing Vehicle Volumes
  9. Future Vehicle Volumes
- Mobility Barrier
  10. Network Sensitivity
  11. Crossing Density
  12. Gate Down Time

- Economic
  13. Employment Density
  14. First/Last Mile Freight Facilities
- Human Health
  15. Population Density
  16. Daily Emissions
  17. Noise: Quiet Zones
  18. Percent Minority
  19. Percent Low-Income

Scoring and weighting are described in detail on pages 19 to 24 in the report.

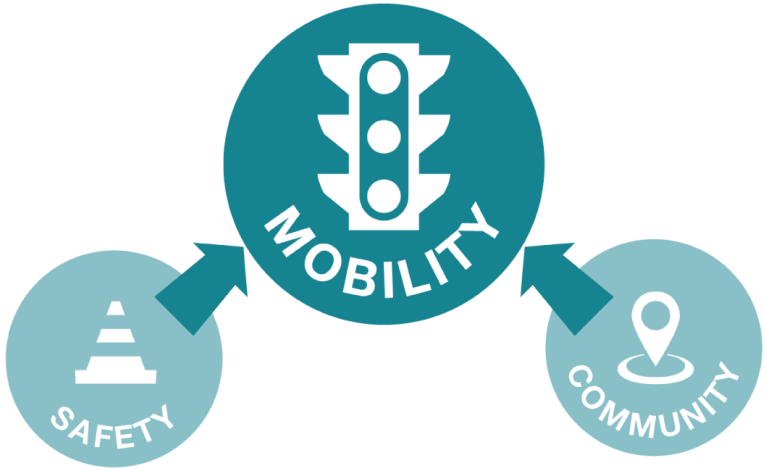
WEIGHTING OF THE CRITERIA

Considered Several Weighting Options

- **Option 1: Equal Weighting**
  (Mobility 33.3%, Safety 33.3%, Community 33.3%)

- **Option 2: Mobility Only**
  (Mobility 100%)

- **Option 3: Emphasis on Mobility**
  (Mobility 50%, Safety 25%, Community 25%)



Selected after careful evaluation and feedback from the Advisory Panel

Scoring and weighting are described in detail on pages 19 to 24 in the report.

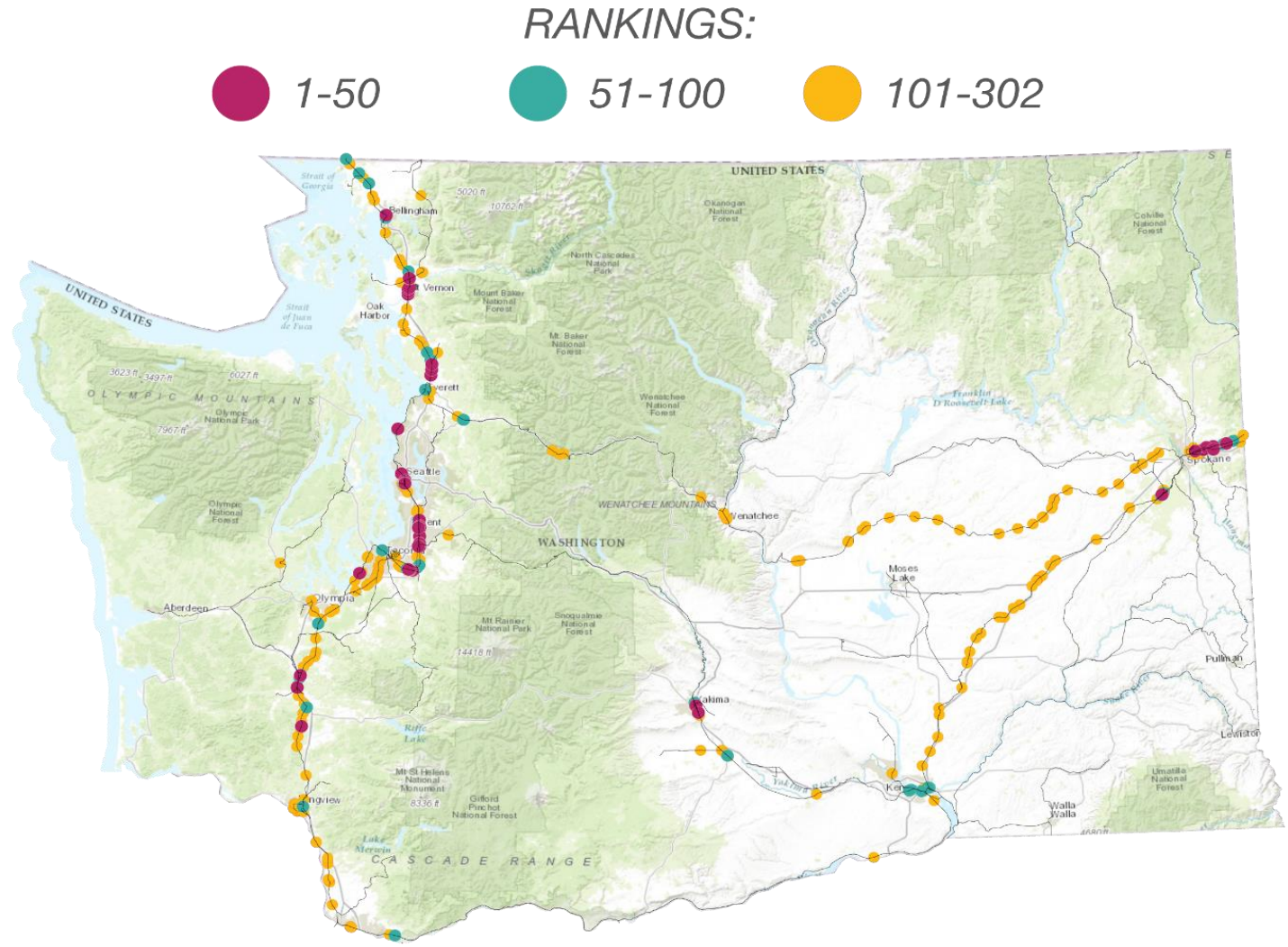
WEIGHTING OF THE CRITERIA

Reasons for choosing Option 3

- City and Port concerns about the mobility problems they experience were a prime motivator for the study
- Mobility problems have implications for safety, such as gate down times that lengthen emergency response times or cause frustrated drivers to take risks to beat safety gates at crossings
- Statewide safety data is not as thorough as information used by existing safety programs (site inspections, predictive analysis, and engineering assessments)
- The safety data can be an indicator of potential problems

Scoring and weighting are described in detail on pages 19 to 24 in the report.

CROSSINGS SUMMARIZED BY PRIORITY GROUP



More Details in the Report

- *Page 28 – List of Top 50 crossings*
- *Appendix B – Entire list of the 302 prioritized crossings*

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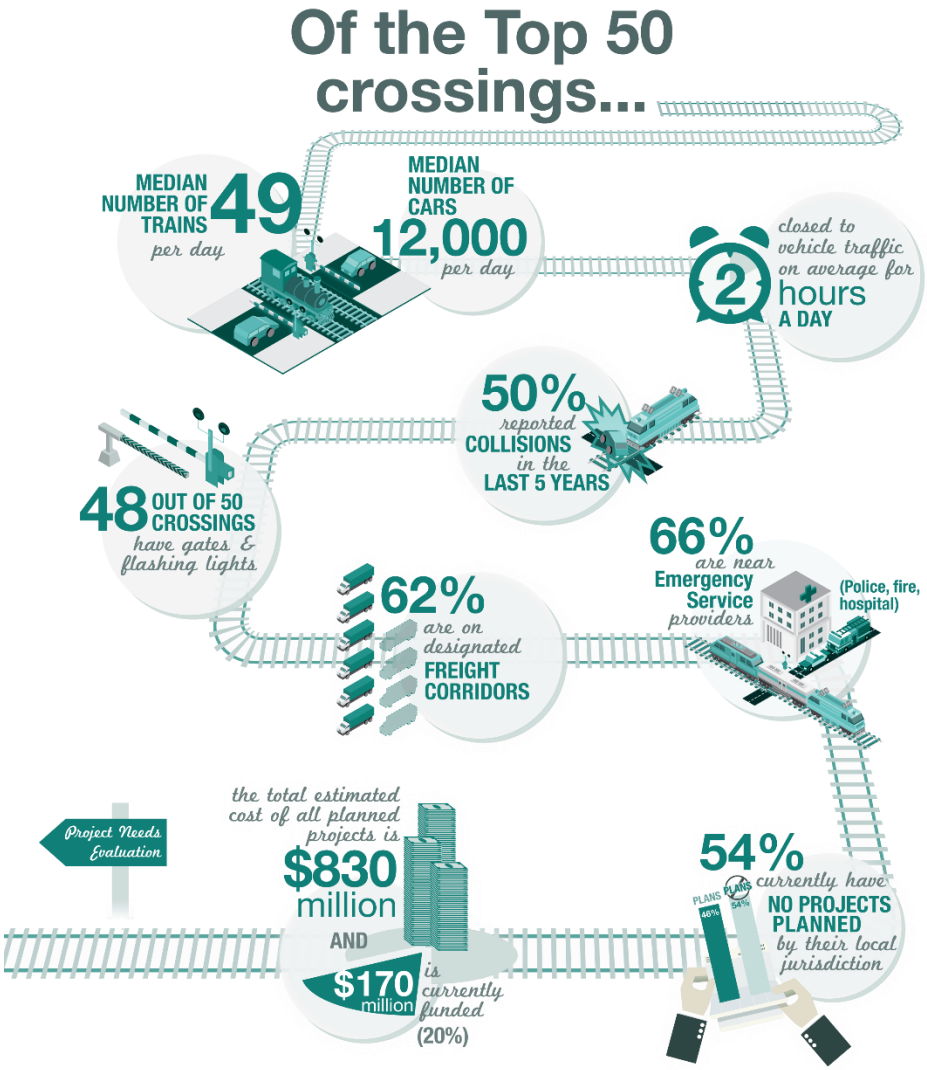
KEY FACTS FROM THE PRIORITIZATION RESULTS



*Closure to **road** traffic; trains have the right-of-way and are not stopped*

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FINDINGS & RECOMMENDATIONS

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FINDINGS & RECOMMENDATIONS

1. **The road-rail conflicts at the Top 50 at-grade crossings are substantial and there are few funding sources to address them**

   - On average, the Top 50 crossings serve 49 trains and 12,000 cars per day. Other key findings:
     - Closed to **vehicle** traffic for an average of 2 hours per day
       no closure to **rail traffic; trains have the right-of-way*
     - 62% of the crossings are along designated freight corridors
     - Half of the crossings reported a collision in the last 5 years
     - 96% of the crossings have gates and flashing lights
     - 66% pf the crossings are near emergency service providers
   - Existing crossing safety programs for UTC and WSDOT receive more grant applications than they can fund
   - Few funding sources to address mobility issues at crossings

FINDINGS & RECOMMENDATIONS

2. The prioritization results point to a significant need for additional funding to address crossing improvements

- Half of the Top 50 crossings have identified solutions with estimated costs of $830 million
- Approximately $170 million in funding has been secured for the projects, or 20% of the total estimated costs
  ($100 million is for Seattle's Lander Street)*
- Not all crossings need improvements or have a solution that is supported by the community

Recommendations:

i. Establish a dedicated funding source to address mobility impacts not covered under the current crossing safety programs.

ii. Secure additional funds for the safety programs.

iii. Further analyze Top ranked crossings to identify potential solutions individually and at the corridor level

FINDINGS & RECOMMENDATIONS

3. The database and prioritization process provide a mechanism to compare and understand the magnitude of crossing improvement needs on a statewide basis

- The database created is the only unified, statewide resource for detailed information about crossings
- It is a flexible tool that can be used in a variety of ways by state, regional, and local jurisdictions or other organizations
- FMSIB and PSRC have already expressed interest in utilizing it
- The database and prioritization tool need to be maintained and updated to keep them current and useful

Recommendations:

iv. Establish a multi-stakeholder committee to create database and tool standards, make decisions about future data enhancement or other changes, and address the outstanding questions raised by this study.

v. Identify an agency to maintain the database and tool and serve as the coordinator for the multi-stakeholder committee.

FINDINGS & RECOMMENDATIONS

4. In some cases, projects prioritized locally did not rank high when evaluated on a statewide basis

- Several crossing locations with planned projects did not make it into the Top 100 crossings statewide
- Low ranking locations with projects generally were at crossings with lower train activity and traffic volumes, and in non-urban areas
- Local priorities may be more focused on economic development opportunities or addressing localized congestion issues, which are difficult to account for on a statewide basis

Recommendation:

vi. Identify specific policy objectives to guide investments in crossings on a statewide basis. This may necessitate a separate program targeted at smaller communities similar to the Transportation Improvement Board's Small Cities Program to ensure their needs can be addressed and that state funding programs balance investments between Puget Sound, Western Washington, and Eastern Washington communities.

FINDINGS & RECOMMENDATIONS

5. Safety data serves as a contributor towards mobility impacts, but further analysis is needed to confirm specific safety needs

- Approximately half of the Top 50 crossings have had a reported collision in the last 5 years
- Evaluation of safety requires more specific data than a database can provide (site visits, predictive analysis, review of specific causes)
- Safety programs by WSDOT and UTC focus on evaluating collisions and funding crossing improvements
- Solutions to address mobility problems may be ineligible for funding under current safety programs

Recommendations:

vii. Coordinate efforts with the WSDOT and UTC safety programs to continue focusing on reducing collisions at crossings and ensure funding levels are adequate.

viii. Separately address mobility and safety impacts at crossings.

FINDINGS & RECOMMENDATIONS

6. The database and prioritization tool would benefit from future enhancements

- Determining its use will inform the specific enhancements and the necessary resources
- If funding is provided to address crossing improvements, local jurisdictions will have a strong incentive to improve the data and plan for projects
- Future enhancements should be considered by the multi-stakeholder committee to improve the results and usefulness of the prioritization process
- The Marine Cargo Forecast will provide projections of train traffic through 2035, but it was not completed in time to be considered

Recommendations:

ix. Provide the agency hosting the tool with additional resources to maintain, update and enhance the database and prioritization tool.

x. Incorporate data from the Marine Cargo Forecast once it is complete.

FINDINGS & RECOMMENDATIONS

7. Corridor evaluation and prioritization are most useful when defining projects to address crossing impacts

- A variety of corridors were considered, such as crossings along a rail corridor or within RTPO boundaries
- A finer geographic focus on the transportation system is necessary to maximize benefits of a corridor approach
- Corridor based prioritization requires more specific context about potential needs and solutions, such as type of crossing improvement or surrounding development patterns
- The database and mapping tool could serve as a major input into a corridor-based project prioritization strategy

Recommendation:

xi. Utilize a corridor-based prioritization strategy to assist in developing solutions and prioritizing investments

FINDINGS & RECOMMENDATIONS

8. Some jurisdictions have not yet identified and prioritized needed crossing improvements

- Lack of dedicated funding sources for crossing improvements creates a disincentive for smaller jurisdictions to plan for and implement crossing improvements
- Some communities may not be aware of the range of possible solutions for crossings
- When crossing improvements compete with other local funding priorities, they often rank lower
- Data on train activity and crossing impacts have not been easily accessible (until the development of this database)

Recommendation:

xii. Ensure that local jurisdictions, state agencies, and other organizations, including Regional Transportation Planning Organizations and Metropolitan Planning Organizations, are aware of the tool and the data it contains and how they might use it to assist with planning or funding decisions.

MAJOR FEEDBACK RECEIVED

- UTC and WSDOT: Concern that crossing safety was not adequately reflected in the resulting prioritization process.
- Continued misperception that the study recommends a ranked list of projects, instead of crossing locations.
- Concern that the prioritization process would be utilized "as-is" to make funding decisions on specific projects.
- Many comments throughout the process that the prioritization criteria can be improved to consider more factors necessary to identify crossing needs or solutions.

QUESTIONS

http://leg.wa.gov/JTC/Pages/Road-Rail-Study.aspx

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