

# WSDOT: Practical Solutions



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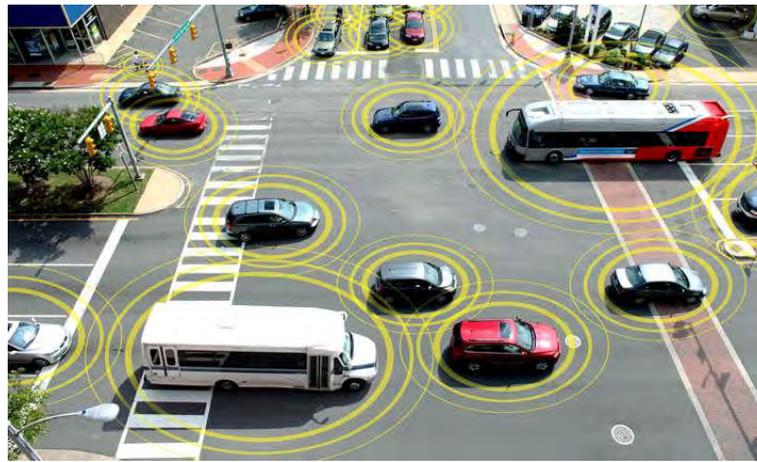
# We've (all) come a long way, baby

- The interstate system is, pretty much, done
- National design guidance has improved consistency
- Vastly improved safety
- At WSDOT, we are completing the largest capital delivery program in our history



# Themes/Trends

- Autonomous Vehicles
- Connected Vehicles
- Intelligent Transportation Systems
- Millennials



# What's next?

- Aging infrastructure
- More problems than \$\$ to fix



# What to do about it?

- Transforming our approach to finding practical transportation solutions
- The goal: fix more problems, system wide



# Implications

- Policy
- Guidance/direction
- Training
- FHWA's performance-based practical design initiative

# Implementation challenges/opportunities

- WSDOT Project Development Training program has been decimated
- New/emerging tools for design/safety analysis
- Planning/political process, habits
- Evolving environmental considerations
- Constant push for regulatory reform

# What have we done?

- Define practical solutions (how big?)
- Policy
- Guidance
- Training



# What we are doing

- Support decisions that will focus on the need for the project
- Move from a standards-based to performance-based designs
- Empower agency staff to make decisions
- Provide tools that support decision making
- Support our staff through training and development

# WSDOT's Practical Solutions

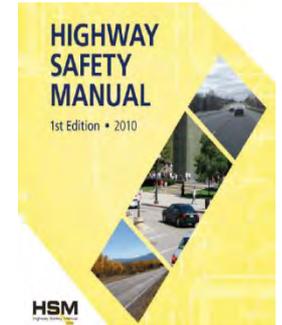


**Least Cost Planning**

**Practical Design**

# How WSDOT defines Practical Solutions

- **Performance Based** vs. Standards Based
- Focus on **need** and **least cost solution**
- Results geared to benefit the Transportation **System**
- Emphasis on **Community Engagement**
- **Interdisciplinary** and **collaborative** decision making
- Design based on **context** → **land use** and **transportation**
- **Data driven** strategies



# Key Elements of Least Cost Planning

**Set goals and performance targets** - *What do we want to accomplish?*

**Identify strengths and challenges** – *In what ways are we achieving our goals? What obstacles are keeping us from getting there?*

**Develop options** - *What action is needed to maintain what is working well? What strategies are available to address the problems?*

**Evaluate and prioritize** - *Which strategies will most effectively achieve our goals given our limitations and strengths?*



# Practical Solutions: What it is vs. What it is not

## What it is

- Focuses on project purpose and need
- Engages local stakeholders at the earliest stages of defining scope to ensure their input is included

## What it is not

- Does not compromise safety
- Is not a "new tool" or "new method"
- Not an excuse to usurp environmental process

# Focus areas

- Major WSDOT Design Manual changes
- Multimodal, demand management, operational, and off-system strategies
- Incremental solutions (as opposed to all-in-one projects)
- CSS, implemented more fully



*Road Diet Images Credit: League of American Bicyclists*

# Practical Solutions is integrated with Connecting Washington implementation efforts

## Practical Solutions Committee formed in September 2015

- Composed of WSDOT leadership team, programs, modes, regions; FHWA
  - Multidisciplinary review of every Connecting Washington Project
  - Identifying best practices for statewide implementation
- Forum for learning and sharing how we will deliver at the lowest cost
- Encourages innovation and creativity in design approach
- Savings achieved now will fund future preservation and capital projects

# Secretary's Practical Solutions Committee



# The Importance of Context in Roadway Design



# Land Use and Transportation Planning Linkage: The Seabrook Example



# Progression of Development



# Fixing more problems, sooner



Slater Road  
Compact Roundabouts

# Next Steps

- WSDOT Design Manual – big changes in 2015, 2016
- Priority training needs
  - Practical solutions/project development process training
  - Multimodal design training
  - Highway Safety Manual Implementation
  - Later... LCP and multi-strategy cost estimating

# Results

- Transportation new revenue package
- Allows for \$16 billion in new construction
- Improves port access
- Adds capacity
- Improves east/west trade corridors
- Helps reliability of ferry system
- Helps trucks and trains move safely and quickly through new freight grade-crossings



# Future: Savings are re-invested

- Practical design savings will be reported on annually.
- Savings will be set aside to fund emergent future transportation needs.
- Starting in 2024, money's from the savings may be appropriated equally to fund improvements or preservation projects.

# Lessons Learned

- Political support for practical solutions to transportation infrastructure.
- Cookie cutter approach to project design is obsolete.
- Collaboration improves the quality of project's effect on the multimodal transportation system.
- Small fixes can make big differences.
- Learning/sharing/trust



# Thank You

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## Practical Solutions

- Performance-Based designs
- Maximizing safety system-wide
- Encouraging innovation
- Cost-effective solutions

# Resources

- [WSDOT's Gray Notebook](#)
- [WSDOT Before and After Folio](#)
- [Performance Measurement Folio](#)
- [Moving Washington Forward: Practical Solutions](#)
- [WSDOT Design Policy Site](#)
- [WSDOT Community Design](#)
- [FHWA's Performance-Based Practical Design](#)
- [FHWA's Context Sensitive Solutions](#)
- [The Innovative DOT: A Handbook of Policy and Practice](#)
- [Highway Safety Manual](#)