Major Program Highlights: Transportation Projects

Presentation to the Customer Review Panel

11/09/2016

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Objectives of Presentation

Provide information about transportation projects that affect SPU, in particular Move Seattle:

- Provide context for utility involvement on transportation projects
- Describe what SPU is doing to be strategic and forward-looking on Move Seattle
- Describe “must do” and “opportunistic” work on Move Seattle with preliminary cost estimates
- Preview the decisions ahead for SPU, which SPU will present and seek input from the CRP

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Regulatory Context

Seattle Municipal Code

15.04.035 - The paramount purpose of streets is for travel and transportation

15.32.120 - Displacement for public use. Anyone upon order of the authorizing official *shall upon ten (10) days' notice, at his, her or its own cost and expense, move any underground, surface or overhead facilities which interfere* with any local improvement district work or *with any construction for street or transportation purposes authorized or ordered by the City*.

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Transportation Projects for SPU

- SR 99 tunnel
- Seawall
- Waterfront
- Center City Connector Streetcar
- Broadway Streetcar Extension
- SR 520
- SR 99 paving
- Sound Transit North Link
- Move Seattle

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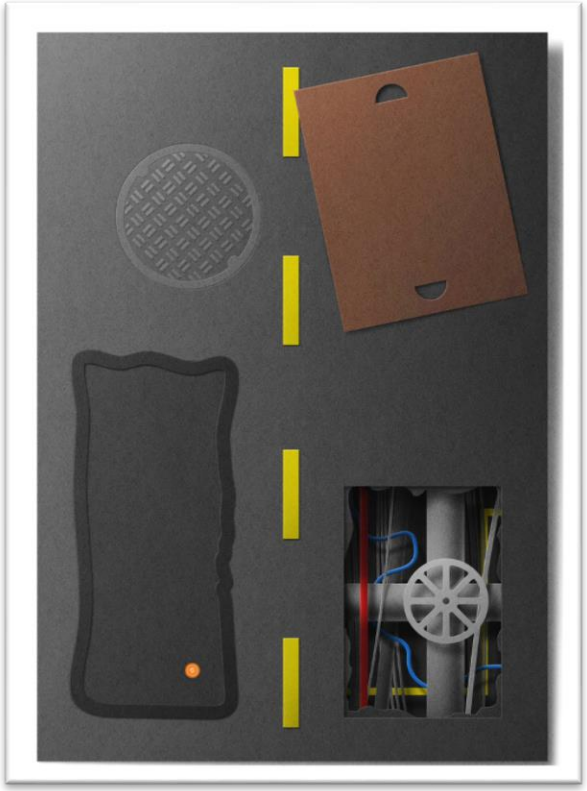
Utility Work on Transportation Projects

- Utility infrastructure needs to move
- Utility infrastructure is in poor condition
- Standards for infrastructure change
- Construction will damage utility infrastructure
- Insufficient capacity in the utility system
- Cost effective time to replace or upgrade utilities



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Drivers for Move Seattle

- Population growth and increasing density
- Climate change
- Fixed amount of right of way
- Aging infrastructure
- Vision Zero

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Move Seattle Background

Nine-year $930M levy, approved by voters in November 2015 that provides funding for:

- Safe routes
- Congestion relief
- Maintenance and preservation

Levy provides about 30% of the City's transportation budget

Replaces the $365M Bridging the Gap levy approved by voters in 2006

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Move Seattle Projects Overview

- 7 multimodal transit corridors
- 180 lane miles of paving
- 17 bridges (1 new, 16 seismic retrofits)
- 250 blocks of new sidewalks
- Improved bike facilities - greenways and protected bike lanes
- South Park and Broadview partnership projects with SPU

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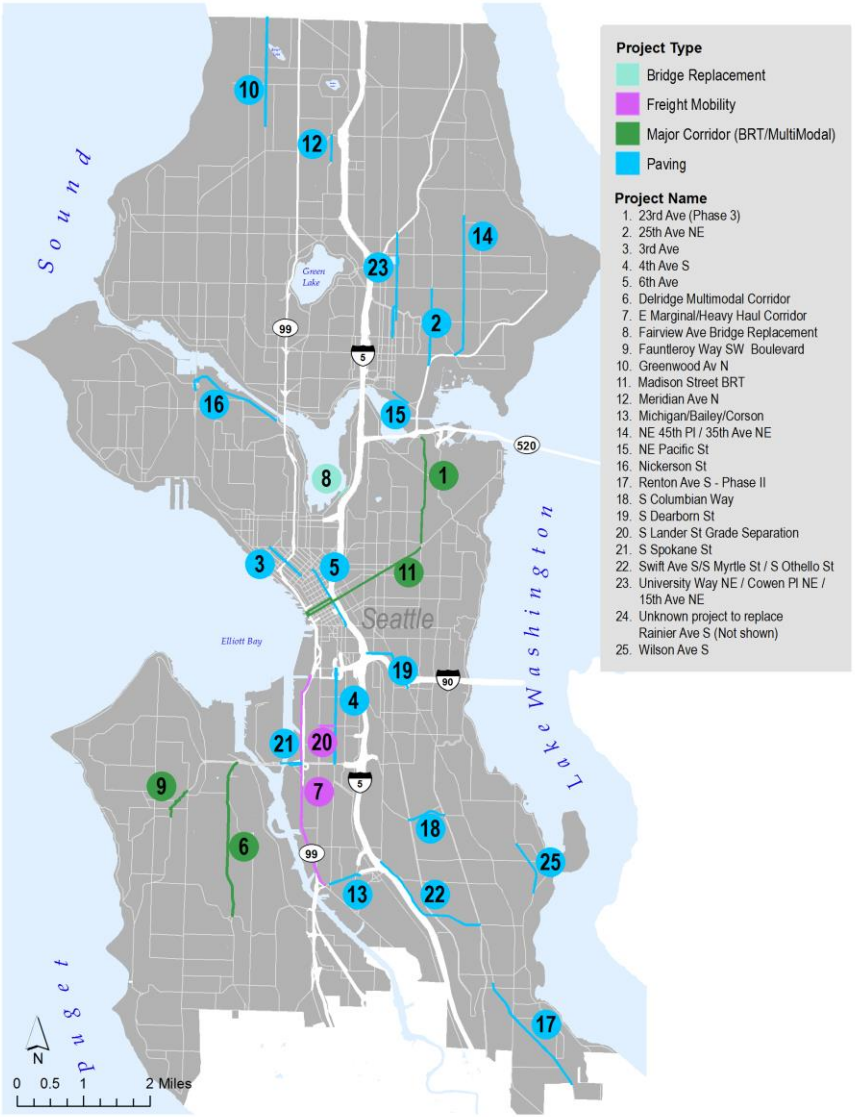
SPU Move Seattle Projects that Start in 2016-2018



- 25 Move Seattle projects
  - 1 bridge
  - 2 corridors
  - 20 paving
  - Madison BRT
  - Lander Grade Separation
- Significantly more projects than Bridging the Gap levy

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SPU's Objectives for Move Seattle

Be Efficient:

- Partner with SDOT to reduce customer impacts
- Create consistent and timely processes to complete projects

Be Forward Looking:

- Proactively maintain, repair, and replace assets

Keep Seattle the best place to live:

- Protect and improve our systems and identify opportunities to improve service
- Plan and budget in advance to inform potential rate path implications

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SPU's Current Activities

- Created interdepartmental coordination lead position in July 2015
- Started high level assessment of Move Seattle project impacts before the levy passed
- Established One City Principles for SPU and SDOT
- Created a Public Asset Protection and Cost Sharing Agreement with City Light, SDOT and SPU
- Work in progress on cross-departmental project information sharing

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Planning for Move Seattle

- Regularly communicate on Move Seattle planning, programming documents with SDOT
- Develop rolling 3- to 5-year cost estimates for SPU Move Seattle expenditures
- Develop a consistent process for early coordination with SDOT
- Coordinate design for both SPU and SDOT infrastructure

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Description of SPU's "Must do" and Opportunity Projects

Must Do:

- Utility needs to move
- Utility infrastructure is in poor condition
- Standards have changed
- Construction will damage utility infrastructure

Opportunity Projects:

- Improve service
- Rehabilitate or replace aging infrastructure

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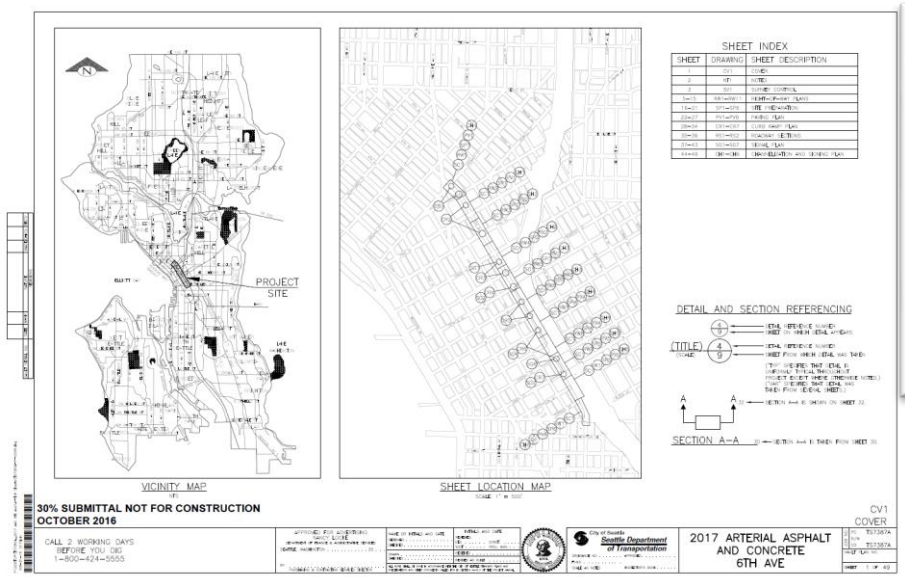
SPU's Must-Do Projects

Required for all Move Seattle projects:

- Review plans for code and design standard compliance
- Protect assets that might be damaged by construction
- Survey and replace worn or broken maintenance hole covers, water valve box covers.



Completed Must-Do Project Example - 23rd Avenue – Phase 1

- Existing 6” cast iron, lead-joint water main under old trolley ballast (thick concrete with old railroad ties)
- 6” water main not expected to survive ballast removal
- 6” water main replaced with 12” ductile iron water main

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DWW Must-Do Project Example
Madison Bus Rapid Transit (BRT)

- Upgrade inlet to standard size
- Replace pipes that have deteriorated beyond repair
- Pipe “spot repair”, i.e. dig up and replace a damaged section of pipe.

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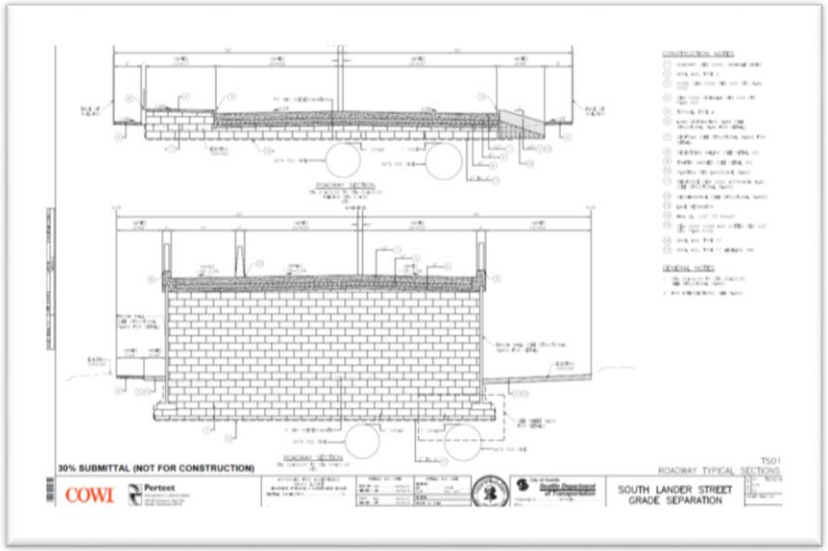
Water Must-Do Project Example
Madison BRT

- Concrete pavement removal
- Streetcar track removal
- Other example - bridge



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SPU Opportunity Projects

Criteria:

- Reduce project cost by combining with transportation project
- Reduce risk of failure
- Add capacity to provide adequate service
- Reduce impact of construction to public

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Completed Opportunity Project Example - 1st Ave S & S Spokane

- Reconstruction of S Spokane St (2010)
- Replaced seismically vulnerable 30” cast iron –lead joint water main with a 30” ductile iron water main

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Opportunity Project Example for Move Seattle – E Marginal Way

Drainage and Wastewater Opportunity

- Increase capacity
- Reduce sewer overflows and flooding

Water Opportunity

- Replace seismically vulnerable cast iron pipe with ductile iron
- Essential improvement to deliver water for firefighting post earthquake

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Identifying "Must Do" and Opportunity Projects – Drainage & Wastewater

3. Drainage and Wastewater System Maintenance

3.1. Maintenance Strategies & Planning (Christine Baker & Deb Ma

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2. Planning & Program Management

2.1. Capital Portfolio Management (Tracy Tackett)

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- Service Equity: Is the pro racial or socioeconomic neighborhoods or acros

1.3.2. Systems Modeling (Tai Ovbiebo)

Wastewater and Combined systems:

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1. System Assessment, Operations, & Monitoring

1.1. GIS Research & Investigations (David Shin)

- Please provide map and spreadsheet with asset information.
- Utilizing the PACT database, identify if the project is within a CIP project drainage area or potential CIP site area.
- Identify if the project area is located in an NDS partnering area.

1.2. DWW Pipe Rehab (Jeff Williams/Hermie Ambion)

- Are there active rehab packets or other work orders in the project area? If so, what is the estimated time frame for completion?
- Please review CCTV and identify assets in the project area that need to be repaired or replaced.
- Is there any other relevant rehab information worth sharing?

1.3. Engineering, Investigations & Modeling

1.3.1. Drainage Investigation (Justin Twenter)

- Are there known flooding or drainage issues in the project area?
- Is there a history of flooding complaints in the project area or downstream?

Identifying "Must Do" and Opportunity Projects - Water

Type of Impact	Recommended SPU Action: Replace	Evaluate	Protect in Place[1]
Unavoidable Conflict			

Condition	Recommended SPU Action: Replace	Evaluate[1]	Protect in
Water Main Material			

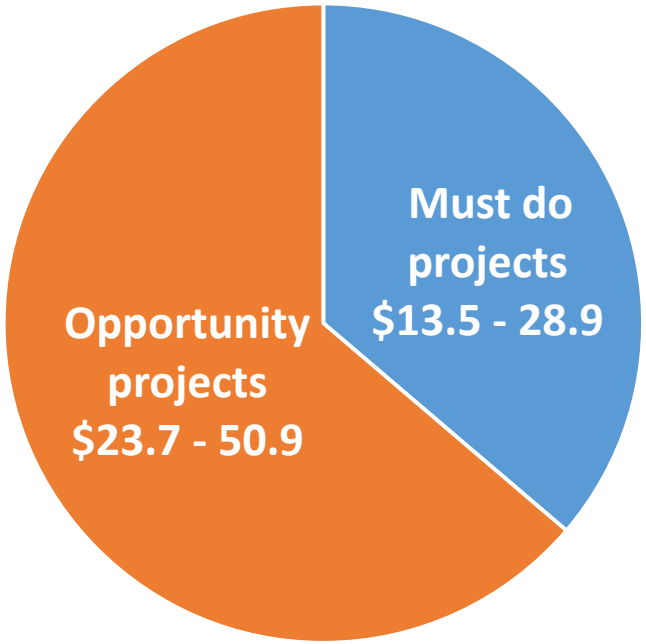
O&M Cost Impacts	Recommended SPU Action: Replace Main	Selective Upgrades	Joint Clamping	Protect in Place
Transportation Factors				

System Performance Improvements	Recommended: Replace Main	Selective Upgrades	Cl
System Flexibility Factors			
Excessive shutdown block size		✓	
Poor dewatering/refill conditions		✓	
Poor valve access		✓	
Grid junction configuration is OK now			
System Renewal Factors			
Undersized main in the intersection	✓		
Future grid connections at intersection	✓	✓	
Pressure zone boundary shift needed	✓	✓	

Typical joint leak potential				✓
Elevated joint leak potential – PSI/diameter/soils			✓	

Early Project and Cost Estimates Drainage & Wastewater

- 21 “must do” projects
- 4 opportunity projects



Total cost estimates for projects starting in 2016 - 2018

$37.2 M - $79.8 M

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Early Project and Cost Estimates Water

- 22 “must do” projects
- 2 opportunity projects

Total cost estimates for projects starting in 2016 – 2018

$46.7 M - $100.0 M

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Looking Forward

- SPU will continue to have a vital role in transportation projects to support a growing population.
- SPU will return to the CRP in early 2017 with more information on costs for “must do” and opportunity projects and their relative influence on rates.
- SPU and SDOT are committed to continuing to improve internal processes and coordination to streamline projects and make them more cost effective.

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