

Delivering high quality transportation
AND efficient and forward-looking
utility services to Seattle



CDWAC/WSAC Joint Meeting

1/11/2017

Objectives of presentation

Create a better understanding of:

- the nexus of transportation and public utilities
- why this is important to SPU now
- what are SDOT and SPU doing jointly to deliver their respective missions
- What specifically is SPU doing to meet the demands of transportation projects and continue to fulfill it's promise to it's customers and keep rates affordable

Utilities and transportation

- A lot of utility infrastructure is in the right of way
- Aging infrastructure
- Transportation facility construction may require relocation of utility infrastructure
- Construction may damage utility infrastructure



Regulatory requirements for utilities on transportation projects

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.*

Current and future challenges



SPU and SDOT key initiatives

- Move Seattle
- SPU 6-Year Strategic Business Plan
- Plan to Protect Seattle's Waterways
- Council Resolution 31549 to increase GSI

Move Seattle

Nine-year \$930M levy approved in November 2015 for:

- Safe routes
- Congestion relief
- Maintenance and preservation

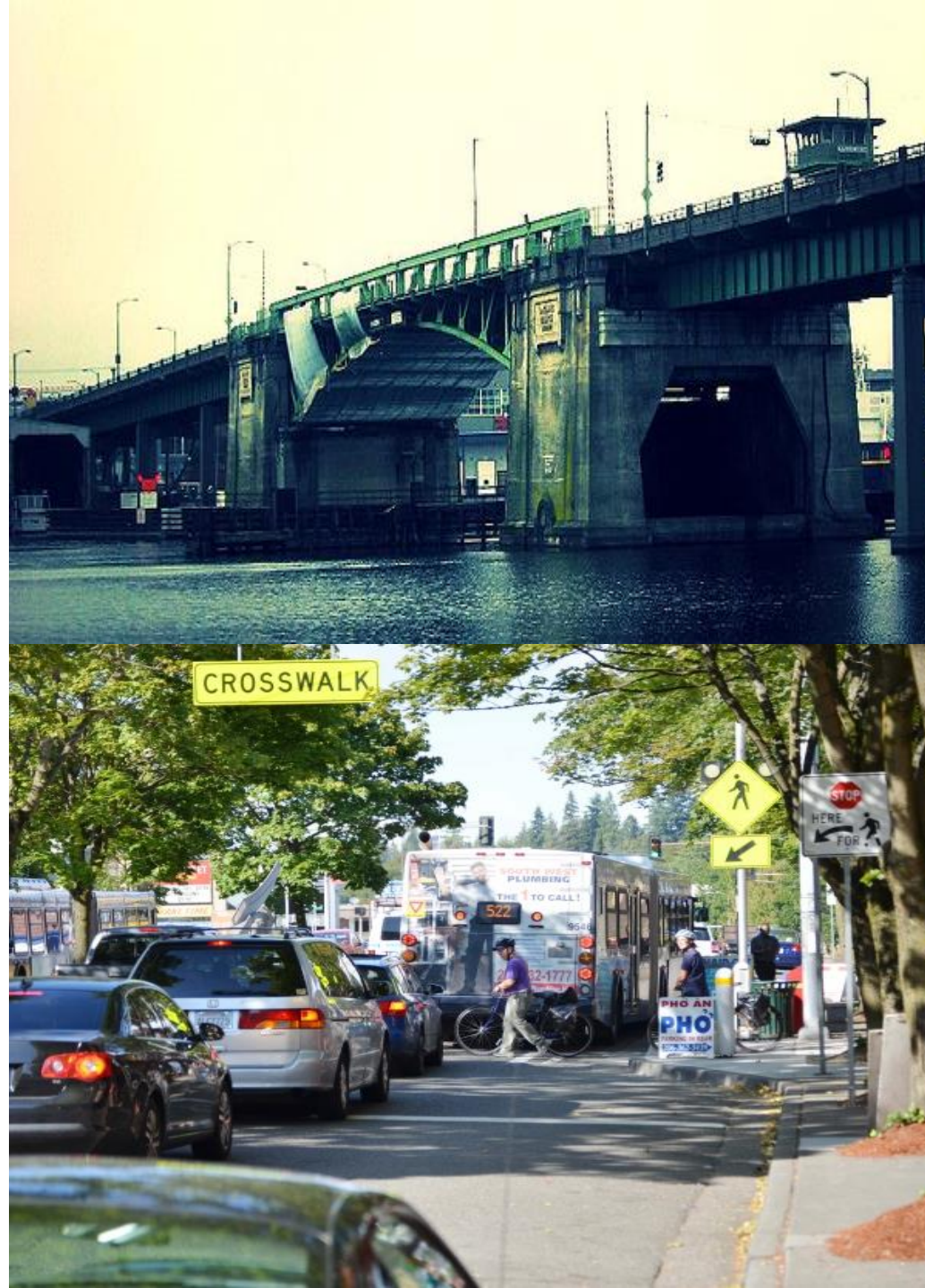
Levy provides about 30% of the City's transportation budget

Replaces the previous \$365M levy



Move Seattle overview

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



Other major transportation projects

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

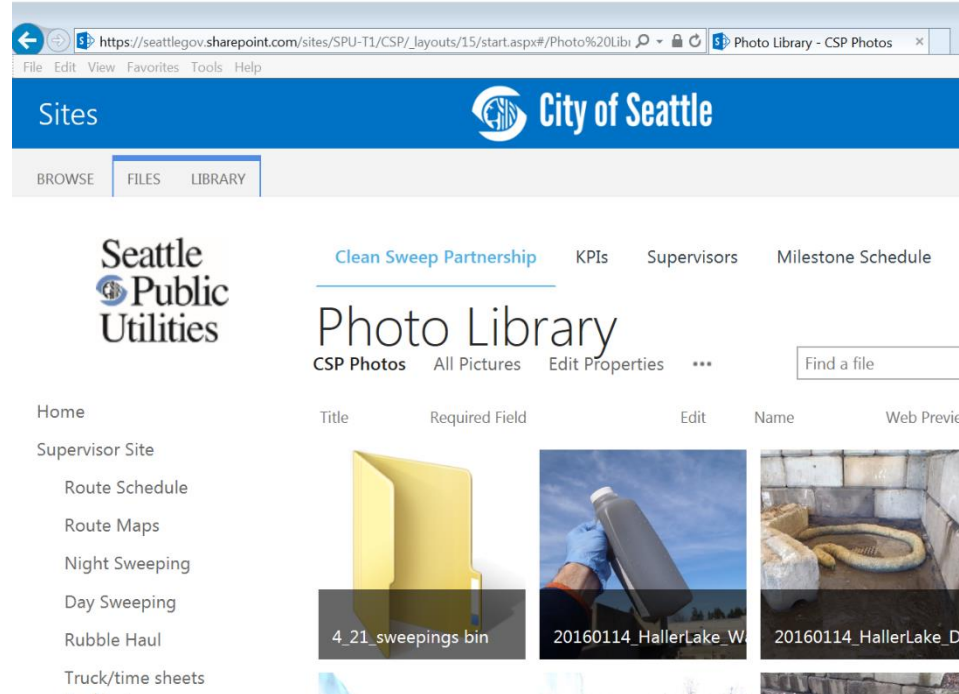


SPU and SDOT collaboration

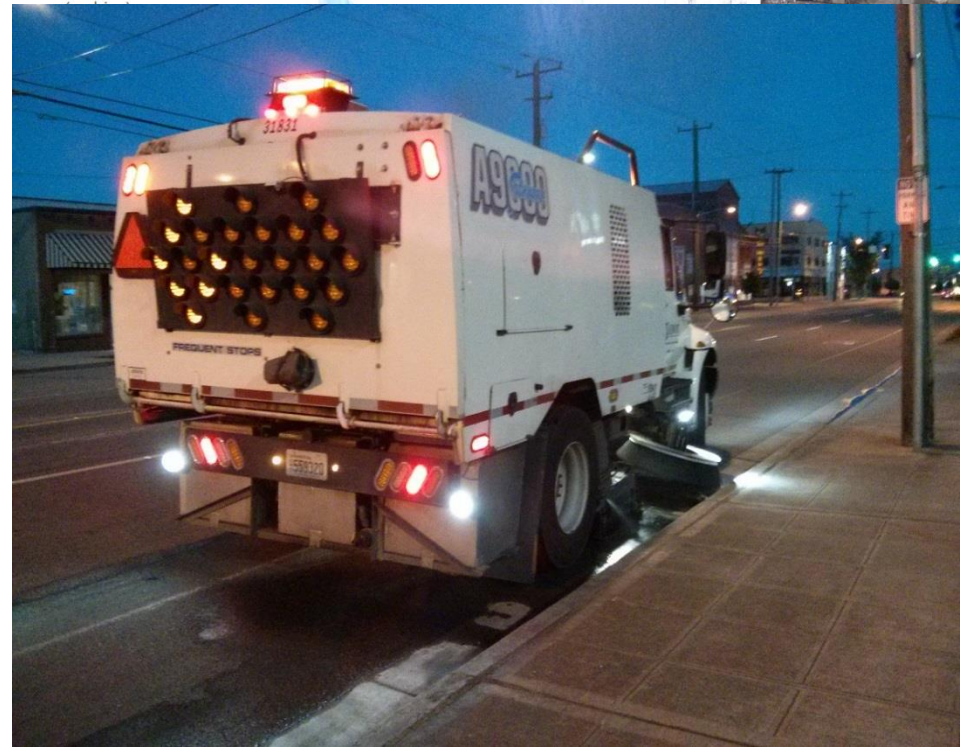
- Created interdepartmental coordination lead position
- Shared information on Move Seattle projects before the levy passage
- Established One City Principles
- Created a Public Asset Protection and Cost Sharing Agreement
- Identified and started joint/partnership projects
- Engaged in problem solving on specific cross department issues.

Inter-departmental initiatives

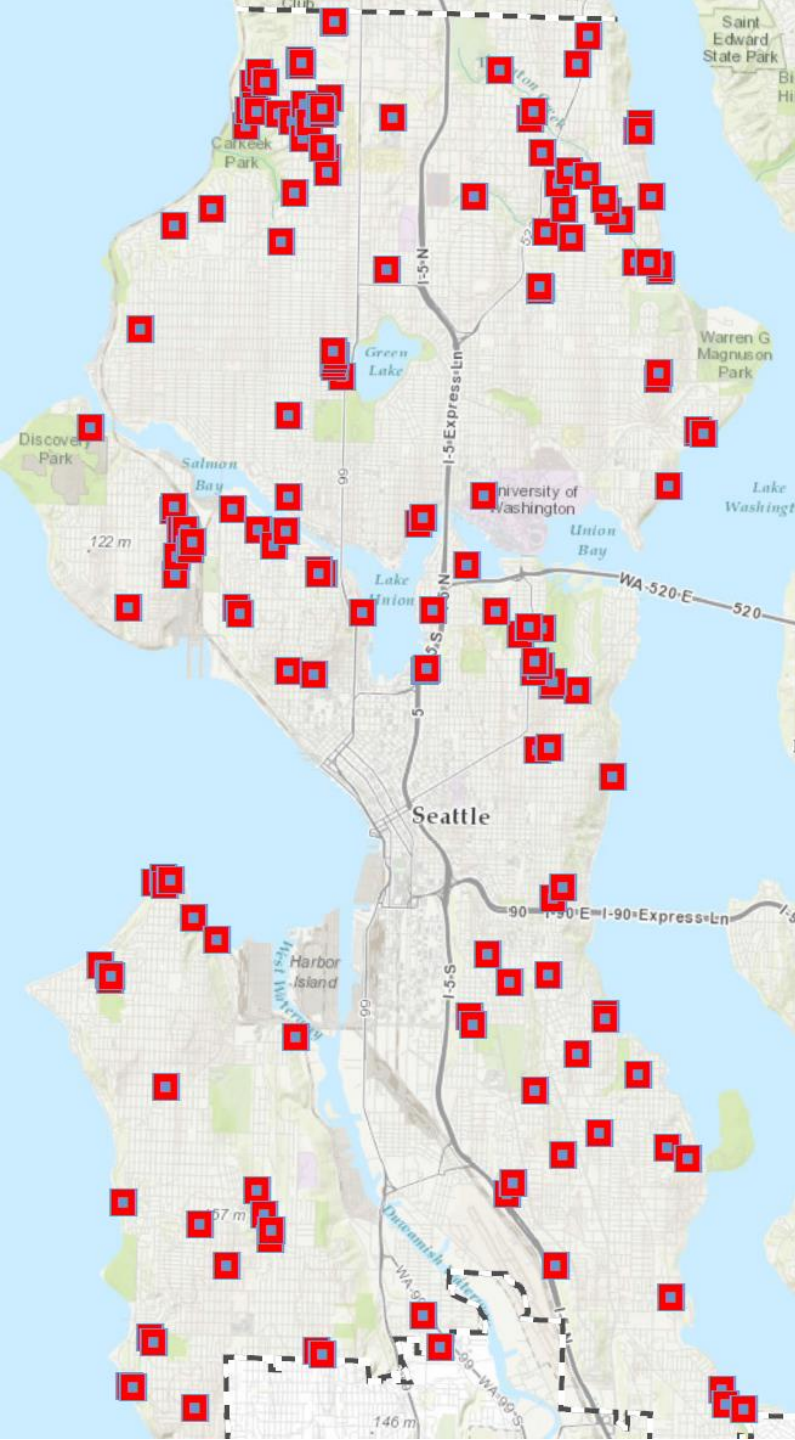
- Street sweeping program
- Surfacing groundwater project
- GSI greenway partnership projects
- Emphasis on GSI in Right of Way Improvement Manual



The screenshot shows a SharePoint site for Seattle Public Utilities. The page title is "Photo Library" under the "Clean Sweep Partnership" section. The site includes a navigation menu with "FILES" and "LIBRARY" tabs. A search bar is present with the text "Find a file". Below the search bar, there is a table with columns for "Title", "Required Field", "Edit", "Name", and "Web Preview". The table lists several items, including a folder named "4_21_sweepings bin" and two photos with titles "20160114_HallerLake_W" and "20160114_HallerLake_D". The Seattle Public Utilities logo is visible in the top left corner.



Surfacing groundwater

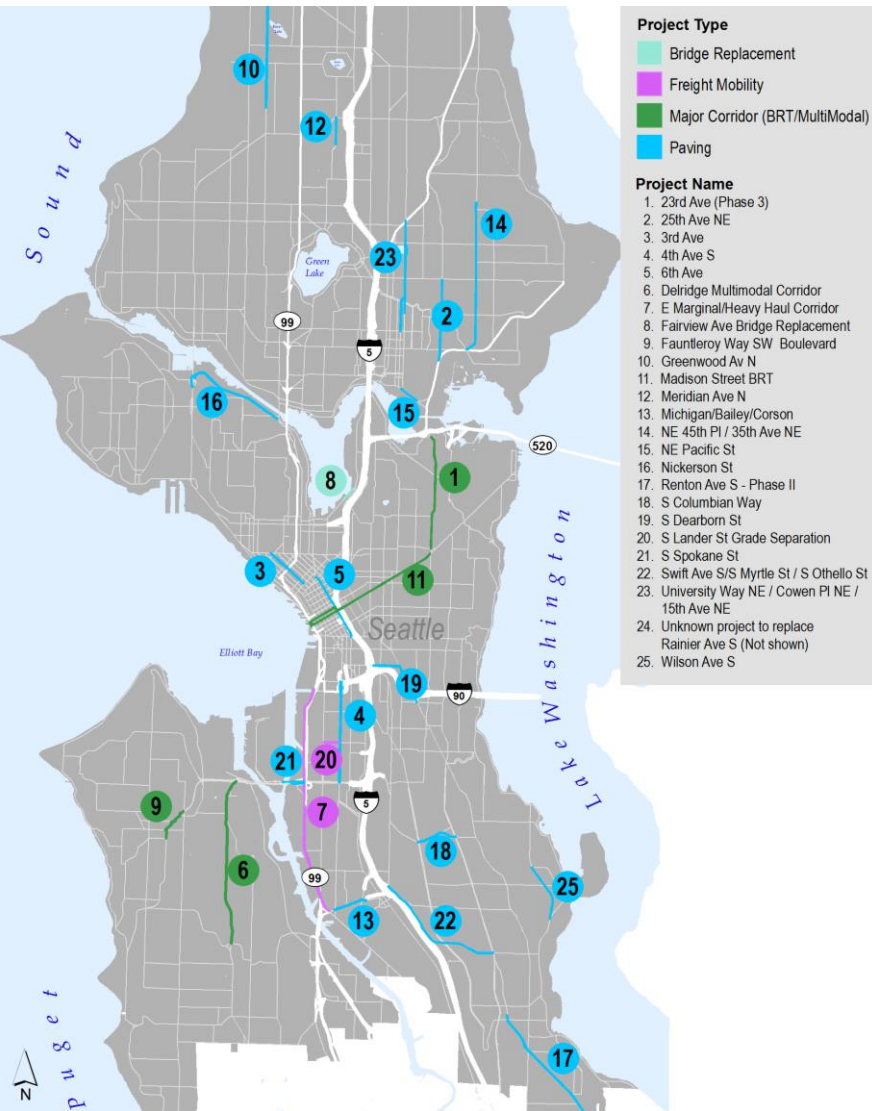


Interdepartmental work in progress

- South Park
- Broadview
- Consistent early project coordination
- Sidewalk/GSI cost sharing



SPU Move Seattle projects 2016-2018



- 25 Move Seattle projects
 - 1 bridge
 - 2 corridors
 - 20 paving
 - Madison BRT
 - Lander Grade Separation
- Many more projects than previous levy

SPU 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

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

What are “must-do” and opportunity projects

Must-do projects:

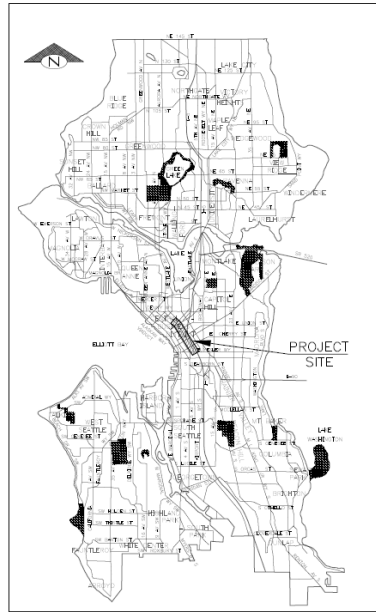
- Utility needs to move
- Utility infrastructure is in poor condition
- Standards have changed
- Construction will damage utility infrastructure

Opportunity projects:

- Improve service
- Rehabilitate or replace aging infrastructure

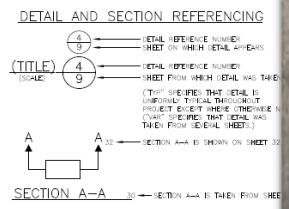
Must-do project requirements

- Review plans
- Protect assets
- Survey and replace worn or damaged infrastructure



SHEET INDEX

| SHEET | DRAWING | SHEET DESCRIPTION |
|-------|---------|---------------------------|
| 1 | CV1 | COVER |
| 2 | INT | NOTES |
| 3 | SV1 | SURVEY CONTROL |
| 01-03 | WH-0011 | WENT-2-WAY PLANS |
| 15-21 | 01-0000 | SITE REVISIONS |
| 22-27 | PVI-000 | PAVING PLANS |
| 28-34 | CR-000 | CURB RAMP PLANS |
| 35-36 | RS-000 | ROADWAY SECTIONS |
| 37-43 | 02-000 | SEWER PLAN |
| 44-49 | 01-000 | STORMWATER AND SEWER PLAN |



% SUBMITTAL NOT FOR CONSTRUCTION
OCTOBER 2016

ALL 2 WORKING DAYS BEFORE YOU DIG

APPROVED FOR ADVERTISING: [Signature] DATE: [Date]
 DATE OF FINAL AND DATE: [Date] DATE: [Date]
 COUNTY OF KING: [Signature] DATE: [Date]
 SEATTLE: [Signature] DATE: [Date]

City of Seattle
 Seattle Department of Transportation

2017 ARTERIAL ASPHALT AND CONCRETE

CC

Completed must-do project 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



Move Seattle must-do project DWW Madison Bus Rapid Transit

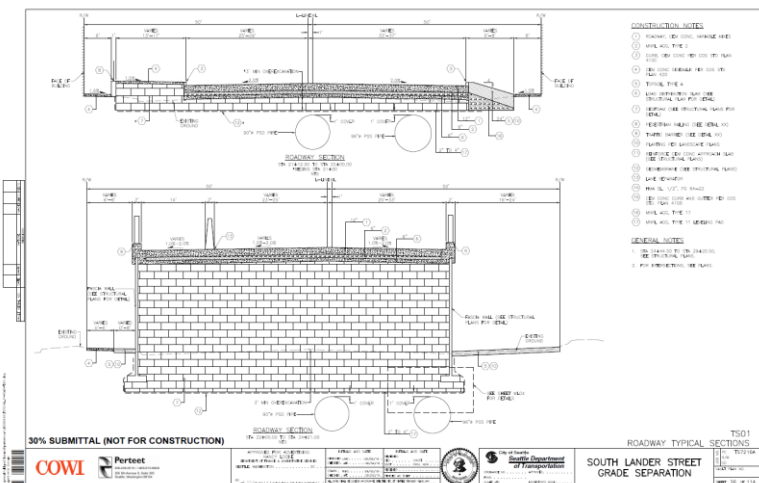
- Upgrade inlet to standard size
- Replace deteriorated pipes
- Pipe “spot repair”, replace damaged section of pipe.



Move Seattle must-do project Water Madison BRT



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



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

Completed opportunity project 1st Ave S & S Spokane

SDOT

- Reconstruction of S Spokane St (2010)

SPU

- Replaced seismically vulnerable water main



Opportunity project Move Seattle E Marginal Way

Drainage and Wastewater opportunity

- Increase capacity
- Reduce sewer overflows and flooding

Water opportunity

- Replace seismically vulnerable water main
- Improve system for firefighting post earthquake

Identifying “must do” and opportunity projects – DWW

3. Drainage and Wastewater System Maintenance

3.1. Maintenance Strategies & Planning (Christine Baker & Deb

2. Planning & Program Management

2.1. Capital Portfolio Management (Tracy Tackett)

- Do a
- so, v
- Do a
- it sig
- Hav
- Wha
- Is th

1.3.2. Systems Modeling (Tai Ovbiebo)

Wastewater

2.2.

Buck

• Altern

○

○

• Is the p

map h

2.3.

• Are th

• Are there any DWW p

• Service Equity: Is the

racial or socioeconomic

showin

• Please

• Please

• Please

• Please

• Please

• Please

• Please

• Please

• Please

• Please

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)

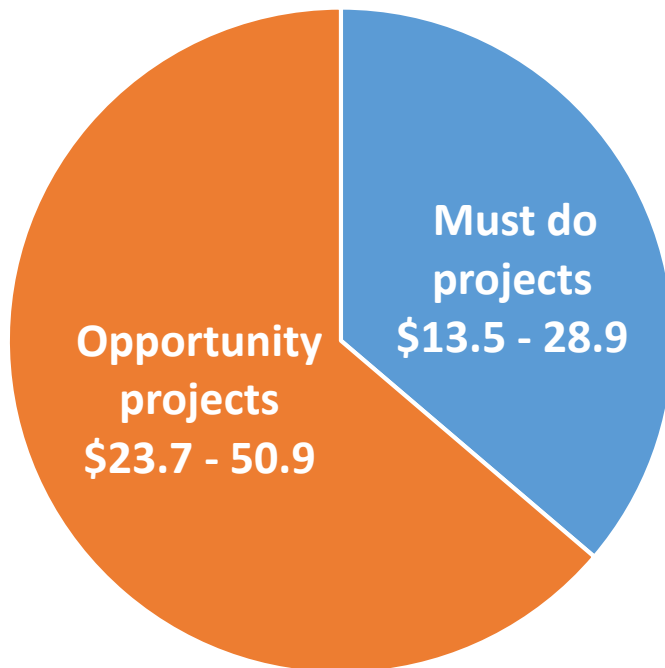
- Are there known flooding or drainage issues in the project area?
- Is there a history of flooding complaints in the project area or downstream?

Identifying “must do” and opportunity projects - Water

| Type of Impact | | | Recommended SPU Action | | | | |
|-----------------------------|---------------------|---------------------------------|---|-----------------------|-------------------------------|-------------|-----------|
| | | | Replace | Evaluate | Protect in Place ¹ | | |
| Unavoidable Conflict | | | | | | | |
| Unavoidable | Condition | | Recommended SPU Action | | | | |
| Pavement | | | Replace | Evaluate ¹ | Protect in | | |
| Concrete pa | Water Main Material | | | | | | |
| cover or les | Galvanized, I | O&M Cost Impacts | Recommended SPU Action | | | | |
| Concrete pa | CI (LJ or slip) | | Replace | Selective | Joint | Protect in | |
| Concrete pa | DI, welded st | | Main | Upgrades | Clamping | Place | |
| Other ma | Water Ma | Transportation Factors | | | | | |
| Excavatio | WM is 100+ | Very high tra | System Performance Improvements | | | Recommended | |
| Inside zone | WM has insu | Moderate tr | | | | Replace | Selective |
| Outside zon | WM is unline | streets | System Flexibility Factors | | | | |
| Type of P | Corrosive | Good street | | | | | |
| Complete st | protection | No traffic div | Excessive shutdown block size | | ✓ | | |
| curb | Mildly or nor | (during futur | Poor dewatering/refill conditions | | ✓ | | |
| Partial pane | Moderately c | Unique pave | Poor valve access | | ✓ | | |
| Mill & Over | Highly Corro | Intersection | Grid junction configuration is OK now | | | | |
| Reduced | Leak Histo | Future Le | System Renewal Factors | | | | |
| Less than 18 | Significant le | Past corrosio | Undersized main in the intersection | | ✓ | | |
| 18” – Stand | Some leaks | Past joint lea | Future grid connections at intersection | | ✓ | | |
| Anticipat | No leaks (CI) | Past joint lea | Pressure zone boundary shift needed | | ✓ | | |
| - Attach. | Seismic R | Typical joint leak potential | | | ✓ | | |
| Exceeds CIP | Liquefiable s | Elevated joint leak potential – | | | ✓ | | |
| 50-99% of C | Liquefiable s | PSI/diameter/soils | | | ✓ | | |
| 0-50% of CI | Soils resistan | | | | ✓ | | |

Early Move Seattle cost estimates DWW

- 21 “must do” projects
- 4 opportunity projects



Total cost estimates for
projects starting
in 2016 - 2018

\$37.2 M - \$79.8 M

Early Move Seattle 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

Looking forward

- SPU will continue to have a vital role in transportation projects to support a growing population.
- SPU and SDOT are committed to continuous improvement and coordination to deliver high quality transportation and forward-looking utility services.