

The background of the slide features a photograph of Vancouver City Hall on the left, with its curved facade and large windows. To the right, there are vibrant pink and purple flowers in the foreground, slightly out of focus. The text is overlaid on a semi-transparent dark grey banner.

City of Vancouver

Experience with Pavement Preservation Tools

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CITY OF
Vancouver
WASHINGTON

Presentation Overview

- Vancouver's pavement network and pavement management program
- Rehabilitation and preservation tools
- Costs and lessons learned

Vancouver's Pavement Network

- 580+ centerline miles (1,800 lane miles)
- Pavements segmented at intersections
- Over 7,000 segments in the system
 - Length, width, number of lanes, functional classification, surface type, etc.
- Multiple surface types

Pavement Management System

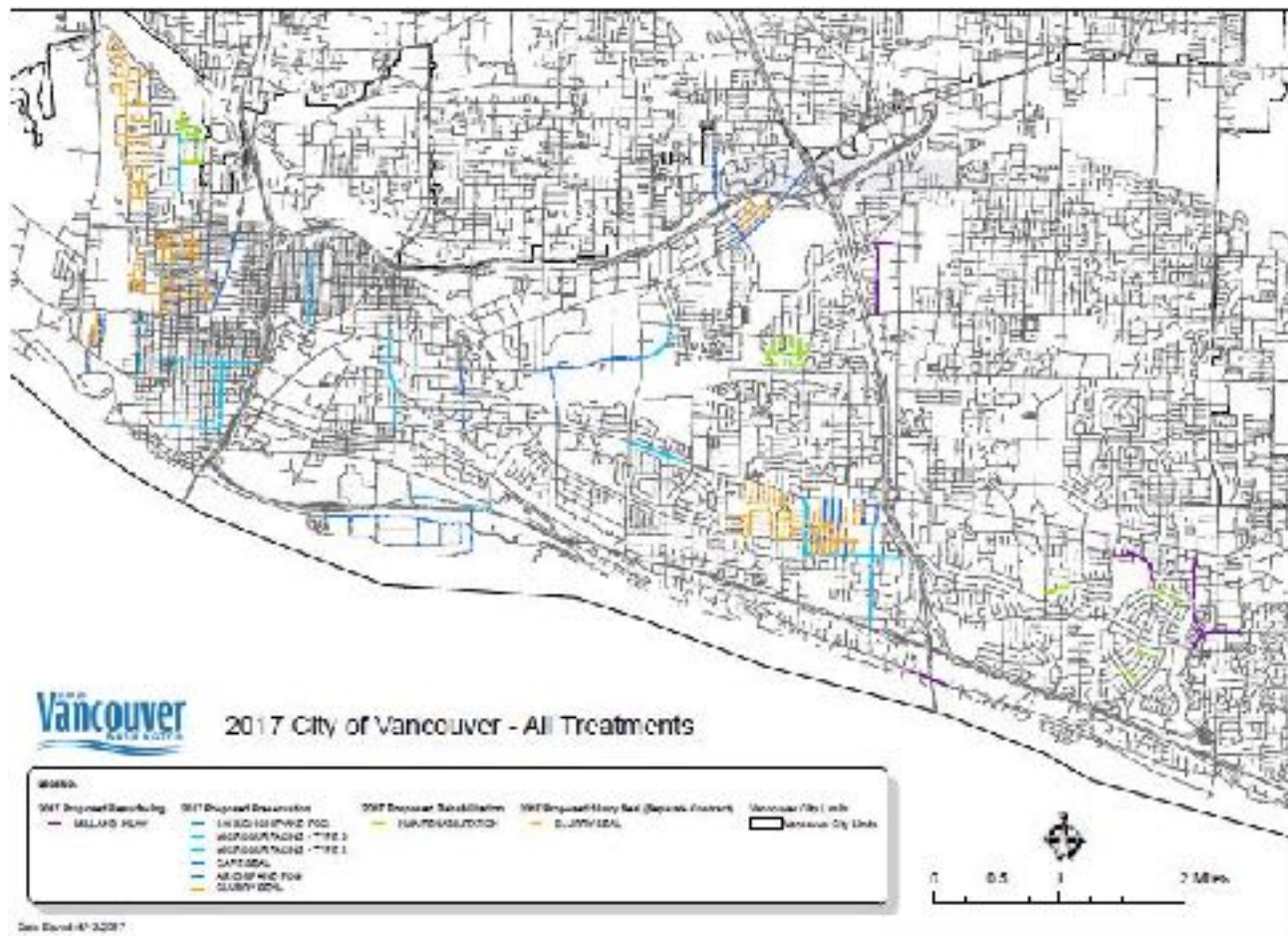
- Started using in the 1990's
- Historical condition data as far back as late 90's
- Have used multiple pavement management systems:
 - Centerline
 - Hansen/Infor
 - StreetSaver®

Pavement Management Funding

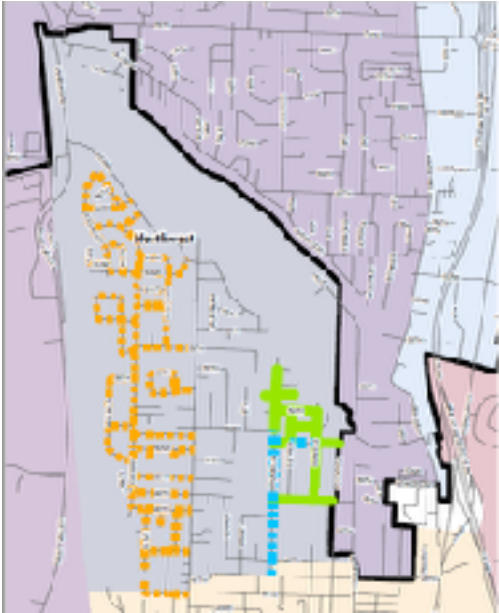
- Historic funding
 - Combination of funds - \$6.8M/year in 2017
 - System condition slowly declines
- New street funding
 - Combination of sources – additional \$3.6M in 2017
 - Maintain system condition and slowly improve over time
 - Additional funds for reconstruction start in 2019

2017 Pavement Management Program

- \$10.4M total program budget
- 169 curb ramp corners
- 23 lane miles of rehabilitation work
- 115 lane miles of preservation work
- Majority of additional work on residential streets



2017 Pavement Program



Rehabilitation Treatments

- Mill and inlay
- Traditional overlays
- Pulverize and pave
- No full reconstruction



Rehabilitation Treatments(cont'd)

- \$18-\$32/sy
- ADA curb ramps in advance
- Pavement repairs
- Deep mills in travel lanes



City Preservation Treatments

- Slurry Seals
- Microsurfacing
- Chip Seals
- Cape Seals
- Other Treatments

Slurry Seals

- Using since the late 90's
- Residential streets only
- Joint contracts with other county agencies
 - Clark County
 - City of Camas
 - City of Washougal



Slurry Seals (cont'd)

- \$2-\$3/sy
- 8 to 10 year life
- Work when school is out
- Slurry only contract



Slurry Seal Lessons

- PCI > 70
- Prep is important
- Traffic volumes
- Grouping of streets



Microsurfacing

- Using since 2009
- Type 2 and Type 3 Rock
- Arterials and collectors
- Continuous and truck mounted applications



Microsurfacing (cont'd)

- Type 2: \$3-\$5/sy
- Type 3: \$4-\$6/sy
- 7-8 year life (so far)
- Prep work done by City crews



Microsurfacing Lessons

- PCI > 70
- Striping removal
- Night work
- Application
 - Workmanship/Equipment
 - Application rate



Chip Seals

- Started using in 2011
- Traditional emulsion chip seal
- 3/8" Asphalt rubber chip seals
- 1/4" Chip seals (new in 2017)
- Fog seal all types



Chip Seals (cont'd)

- AR Chip: \$5.50 - \$6.50/sy
- 1/4" Chip: \$3-\$4/sy
- Emulsion chip: 6+ years
- AR Chips performing well to date
 - 4+ years
- 1/4" Chip seals: too soon to tell



Chip Seals (cont'd)



Chip Seals (cont'd)



Chip Seal Lessons

- PCI > 55
- Street prep
- Sweeping after placement
- Public perception



Cape Seals

- Started using in 2012
- 3/8" Asphalt rubber chip seal
- Either slurry (residential) or microsurfacing (arterials)



Cape Seals (cont'd)

- \$8 - \$12/sy
 - Slurry lower end
 - Micro higher end
- Good performance to date
 - 5+ years
- Minimal prep



Cape Seals (cont'd)



Cape Seal Lessons

- PCI > 50
 - Can go lower but streets need more prep
- One contractor to do both treatments
- Don't chip only next to cape seal in residential areas



Other Treatments

- Double chip seals
- Micro-chip-micro
- Bonded wearing course (future)

Other Treatments



Other Lessons

- Work with or partner with other agencies
- Public communications and outreach
- Try to keep work window open as long as possible
- Group work to keep daily quantities productive for contractors

Questions and Discussion

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