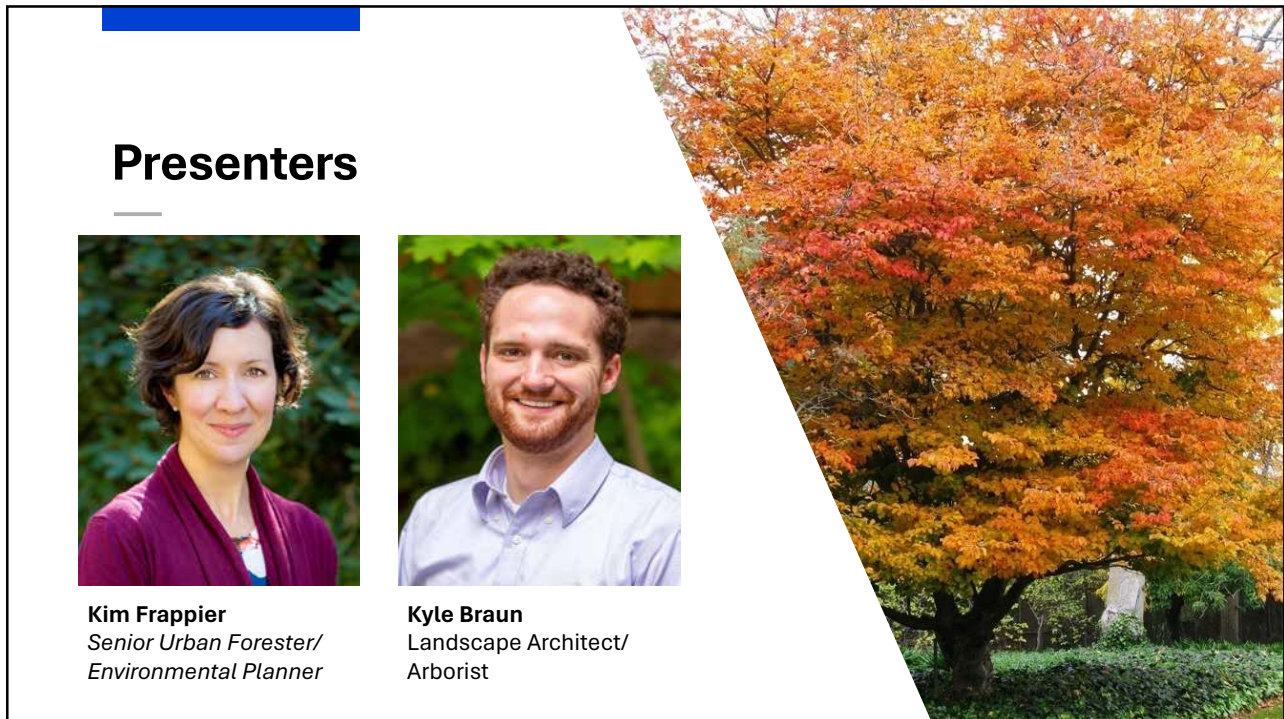




1



2

Today's Agenda

- The Intersection!
Urban Forestry & ROW Management
- Current streetscape construction workflow & practices
- Common infrastructure & tree health challenges
- Financial & ecological costs
- Solutions
- Case Studies



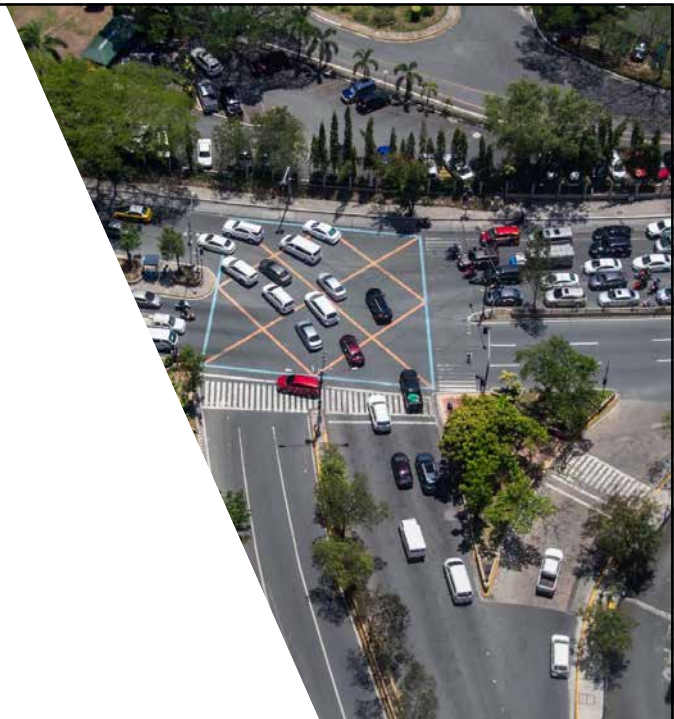
Photo credit: SDOT

3

The Intersection

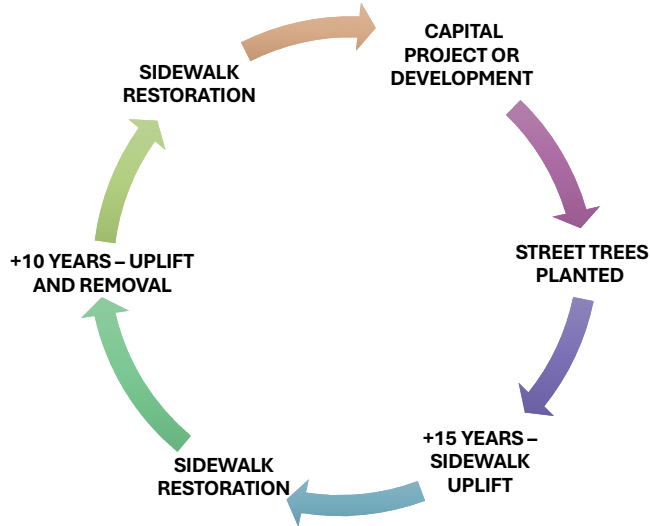
Meeting multiple benefits within Streetscapes and Rights-of-Way

- Mitigating Urban Heat Islands
- Stormwater Management
- Pollution Abatement
- Carbon Sequestration
- Transportation Corridor
- Pedestrian Access & Safety
- Livability

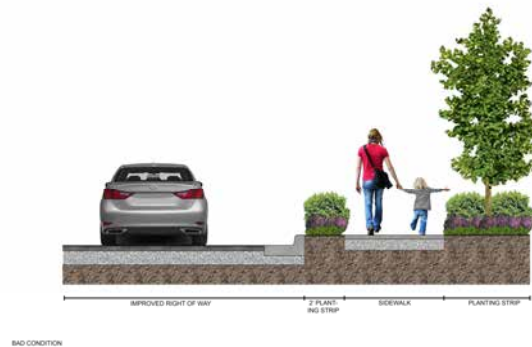


4

Current Management Workflow



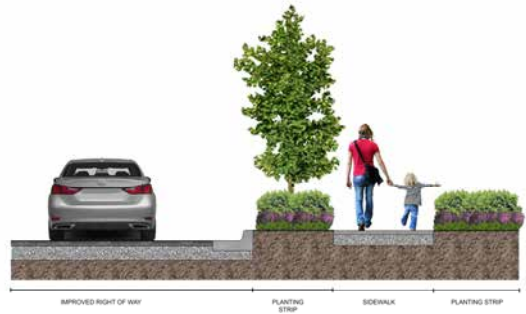
5



Common Infrastructure Conflicts & Tree Health Issues



6



BAD CONDITION

Common Infrastructure Conflicts & Tree Health Issues



7



BAD CONDITION

Common Infrastructure Conflicts & Tree Health Issues



8

Financial and Ecological Costs



9



Solutions

1. Update **Design and Construction Standards** to achieve co-benefits for trees and infrastructure
2. **Tree Species Selection**
3. **Management and Maintenance Plan**



10



11



12




13



14


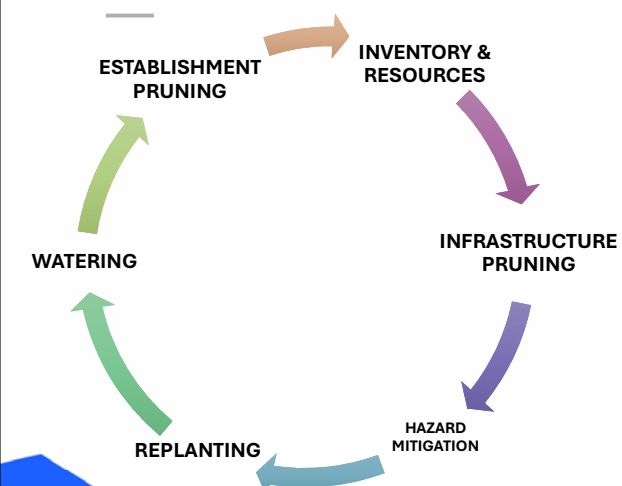
Street Tree Species Selection



- Growth habits
- Maintenance needs
- Climate Adapted
- Diversity
- Pest resistance
- Pollution Tolerance
- Urban Adaptability

15

Management & Maintenance Plan



ESTABLISHMENT PRUNING


INVENTORY & RESOURCES

INFRASTRUCTURE PRUNING

HAZARD MITIGATION

REPLANTING

WATERING



16

Inventory & Assessment in Mercer Island Town Center

- Tree species and condition
- Pruning and maintenance needs
- Infrastructure type
- Tree grate type
- Tree grate lifting
- Sidewalk lifting
- Root intrusion of the road



17

Inventory & Assessment in Mercer Island Town Center



2018 Tree Inventory Findings

- Lack of species diversity
 - *Acer spp* 42%
 - *Pyrus calleryana* 20%
 - *Plantanus x acerifolia* 21%
 - *Quercus robur* 11%
- Majority need structural pruning
- Infrastructure impacts to tree grates, concrete sidewalks, and asphalt roads.
- Next Steps



18



Achieving Multiple Benefits: Streetscapes in Marysville

19



Streetscapes in Marysville - Before

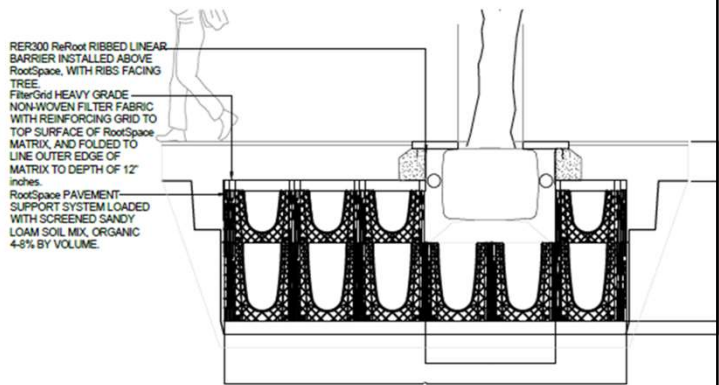
20



Streetscapes in Marysville - After

21

Structural Soil Cells – Seattle



ROOTSPACE DETAIL
SCALE: NTS

A
C02

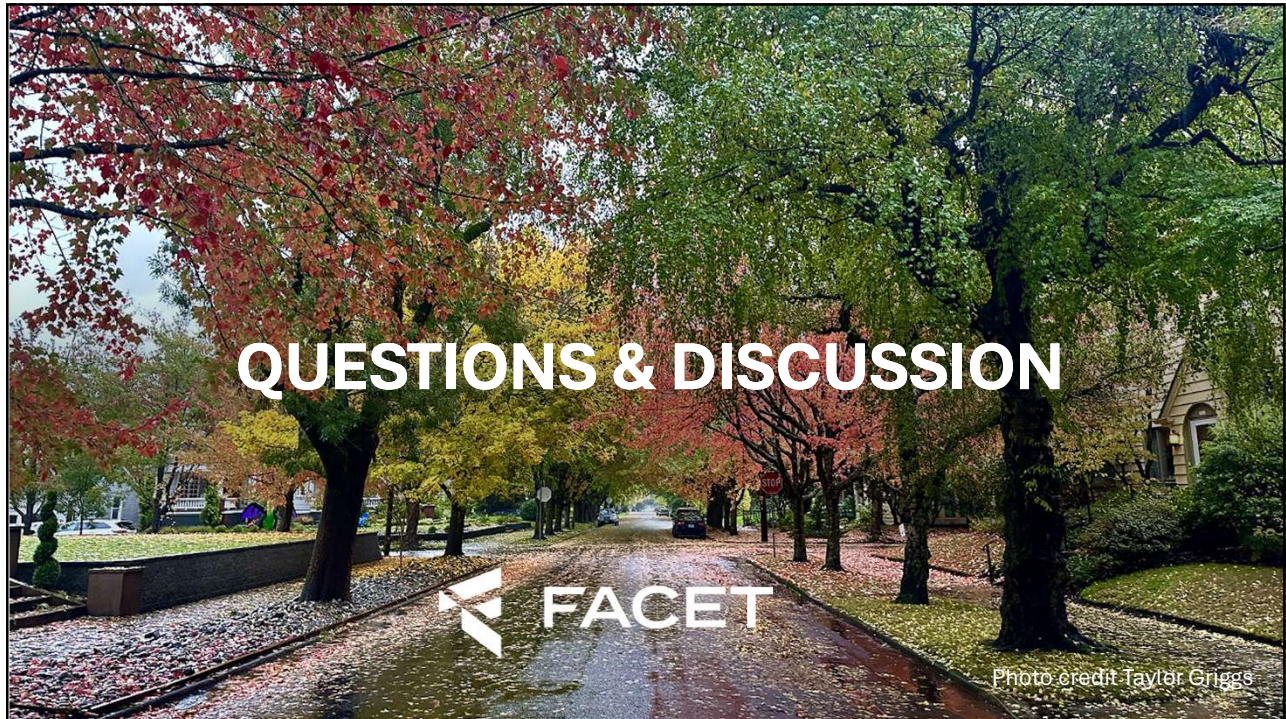


22

Modular Pavement Support Systems - Seattle



23



24