Multimodal Decision Frameworks: Seattle Bicycle Master Plan

NACTO Designing Cities Conference

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SDOT
Seattle Department of Transportation

SDOT's mission & vision

Mission: delivering a first-rate transportation system for Seattle.



Vision: a vibrant Seattle with connected people, places, and products.

SDOT's core principles

Seattle's Complete Streets policy

"SDOT will plan for, design and construct all new City transportation improvement projects to provide appropriate accommodation for pedestrians, bicyclists, transit riders, and persons of all abilities while promoting safe operation for all users" (ORD 122386, 2007)


S Columbian Way

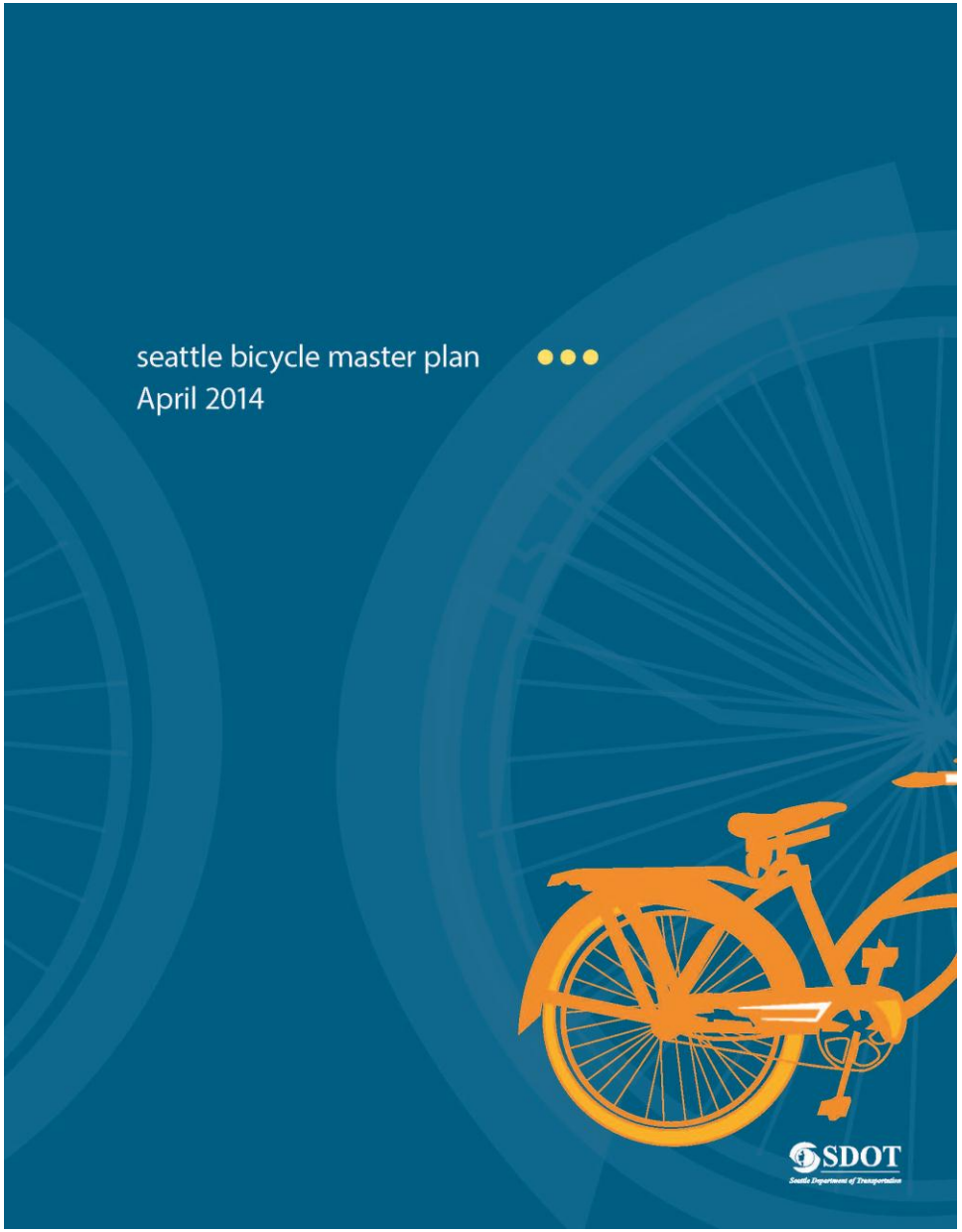

S Columbian Way


15th Ave. S

15th Ave. S

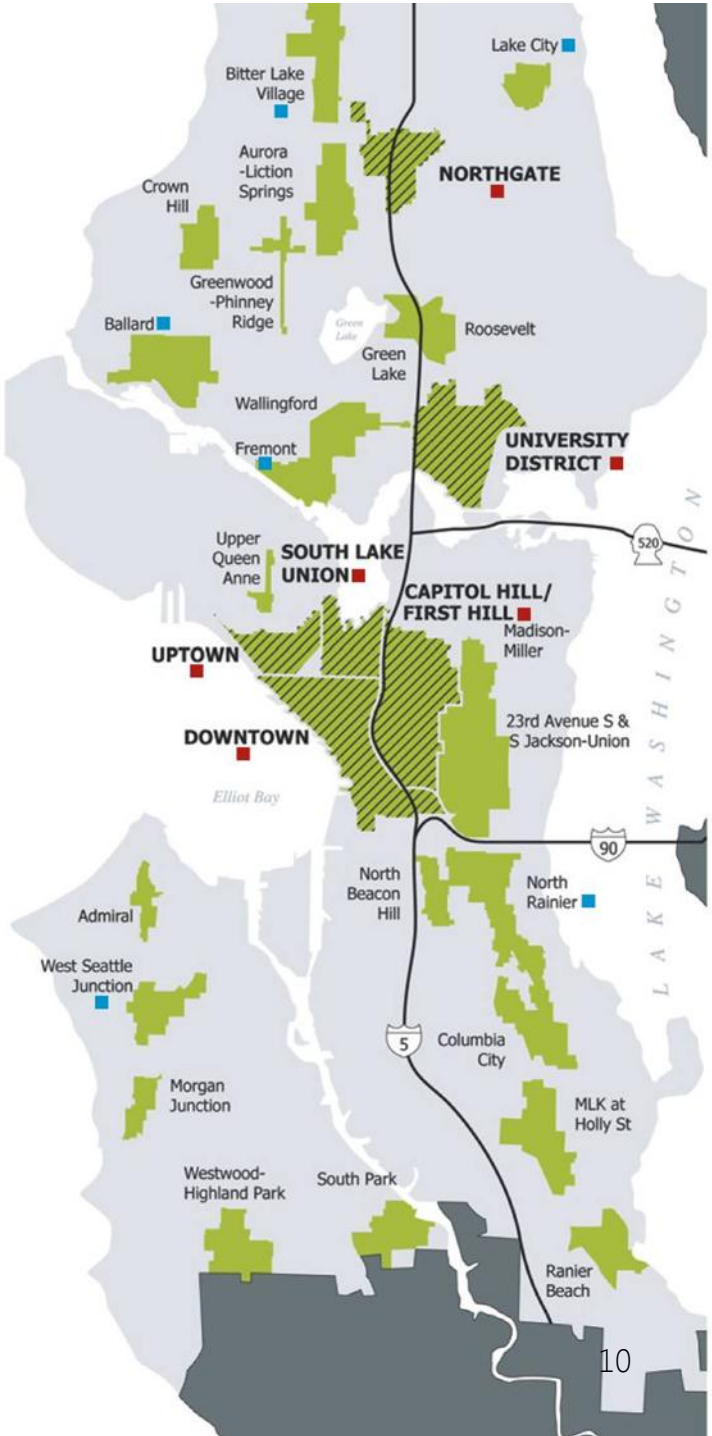
Bicycle Master Plan Key purposes:

- Plan, design, and build a bicycle network for people of "all ages and abilities"
- Focus network more on non-arterial streets (neighborhood greenways and off-street trails)
  - *However*, still strong interest in facilities on arterials (protected bike lanes)
- *Address competing needs among travel modes on arterials*
- Emphasize safety



Seattle's expected growth

120,000 new residents and 115,000 new jobs in Seattle over the next 20 years



Bicycle Master Plan

VISION: *Riding a bicycle is a comfortable and integral part of daily life in Seattle for people of all ages and abilities.*

BMP Policy framework

Plan Goals:

1. **Ridership –** Increase the amount and mode share of bicycle riding in Seattle for all trip purposes.

2. **Safety –** Improve safety for bicycle riders in Seattle.

3. **Connectivity –** Create a high-quality bicycle network that connects to places people want to go and provides a time-competitive travel option.

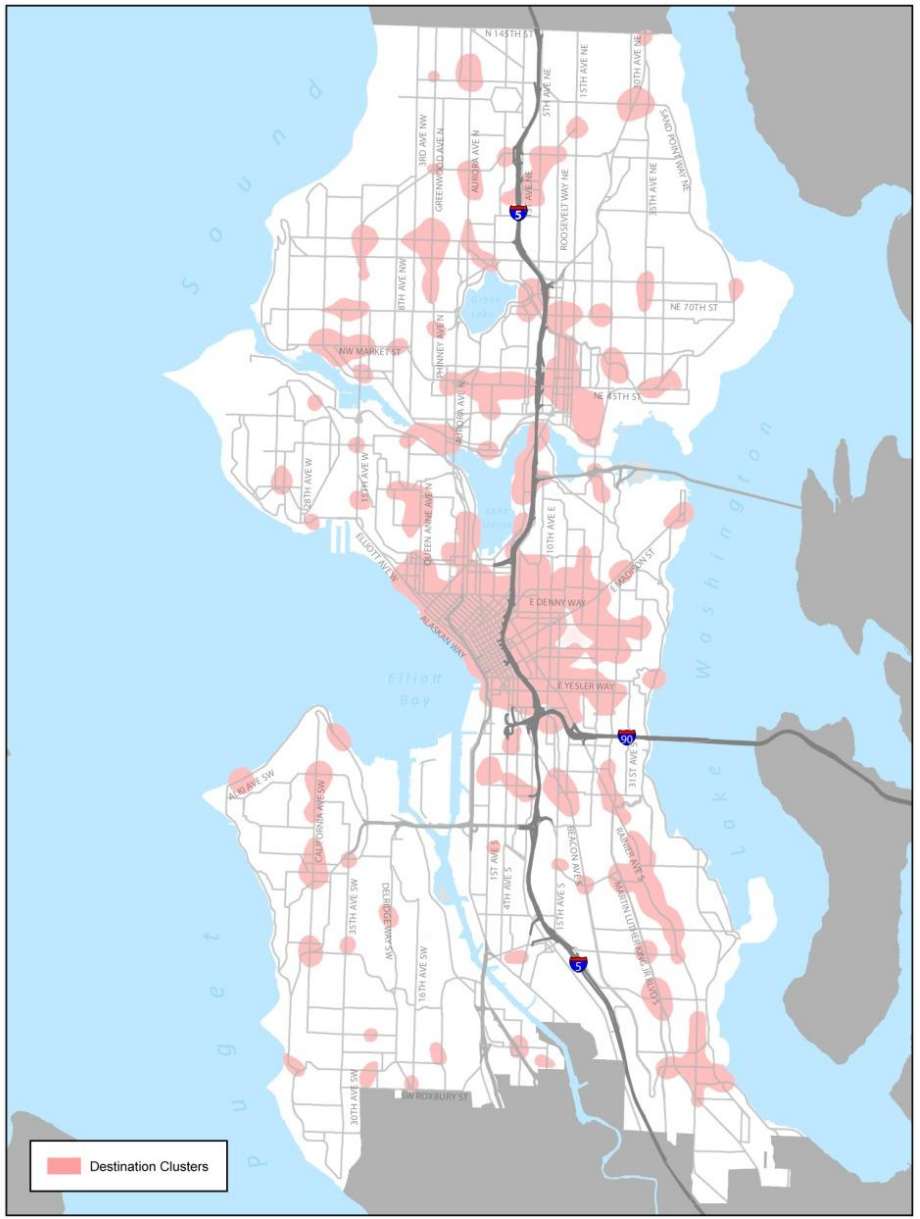
4. **Equity –** Improve bicycle riding for all through equity in public engagement, program delivery, and capital investments.

5. **Livability –** Build vibrant communities by creating a welcoming environment for bicycle riding.

Destination clusters

Connect people to the places they want to go = Destination Clusters

- Key land use categories:
  - Major employment sites
  - Universities and schools
  - Transit hubs
  - Neighborhood business districts
  - Parks, community facilities
  - Food providers
  - Other



Bicycle network map

Citywide Network:

"All ages and abilities" facilities connect to key destinations

- Multi-use trails
- Cycle tracks (protected bike lanes)
- Neighborhood greenways

Cycle tracks (Protected bicycle lanes)

Cycle tracks provide separation between bike riders and other vehicle traffic, and can be designed in a variety of ways


Cambridge, MA


Vancouver, BC


Chicago, IL

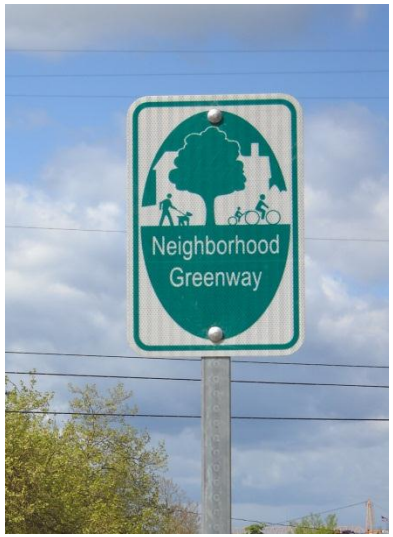

Missoula, MT


Seattle, WA – Broadway


Seattle, WA – Alki Ave

Neighborhood greenways

Residential streets optimized for pedestrians and bicycles—a major component of the plan



Treatments include:

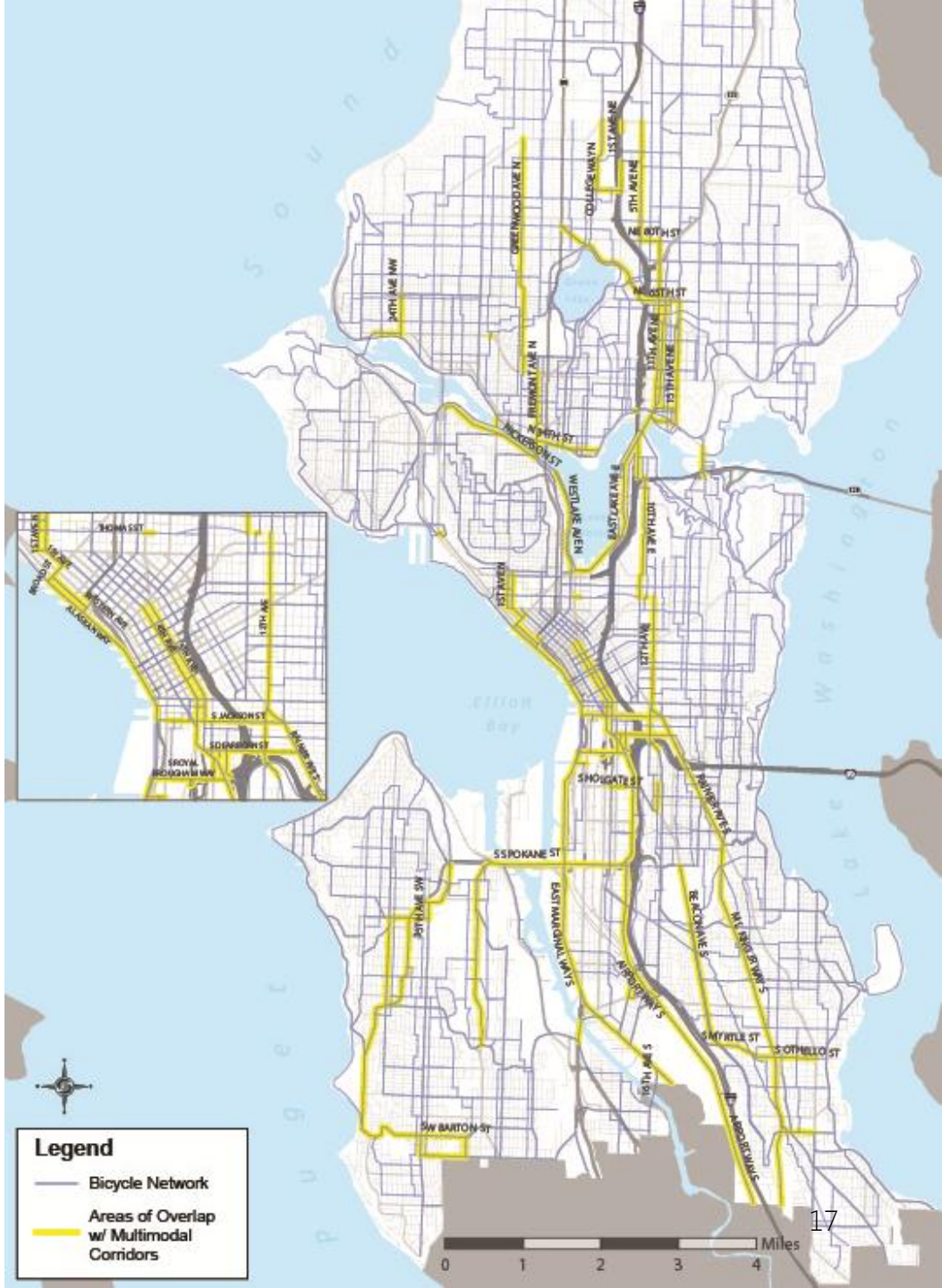
- Pavement markings and wayfinding signs
- Traffic calming elements – speed humps, traffic circles
- Safety improvements at crossings and intersections

Multimodal corridors

Identified where a proposed bicycle facility is on same street as:

- Priority transit corridor (Transit Master Plan)
- Major Truck Street (Freight Master Plan underway)

Decision framework developed for bicycle facilities on multimodal corridors

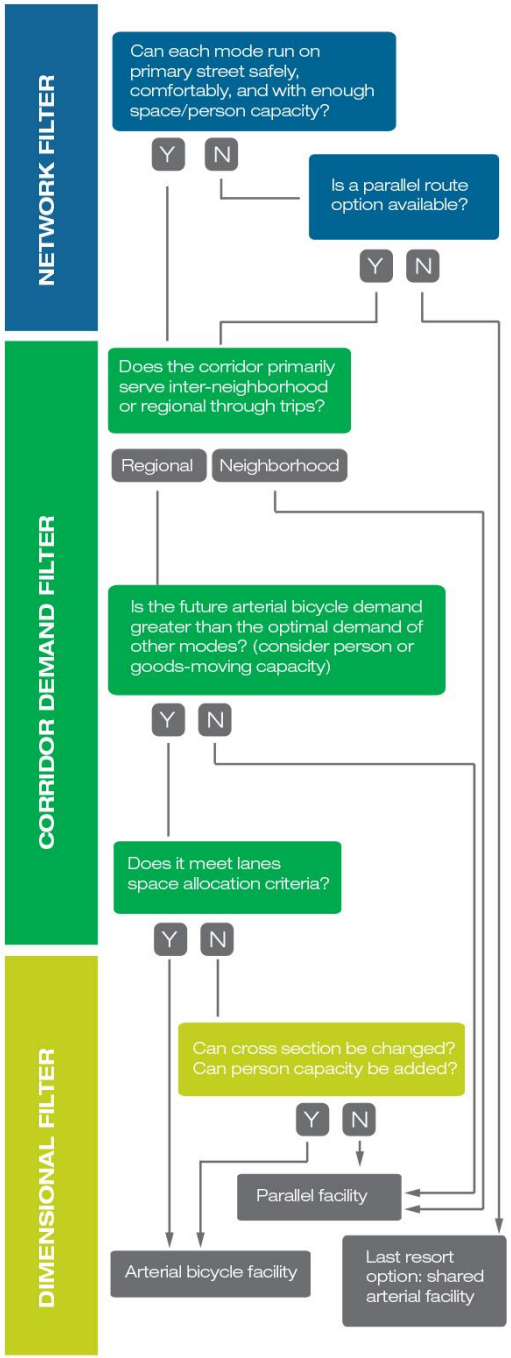


Multimodal corridors

Decision framework considers:

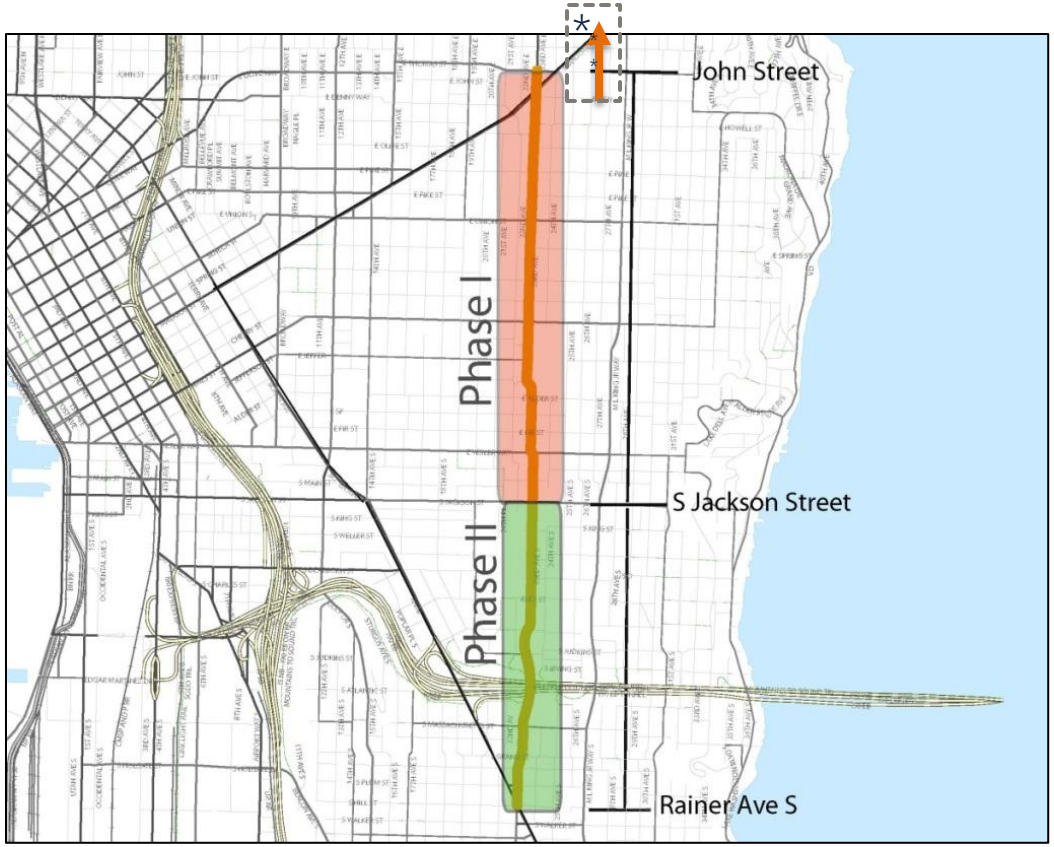
- Network function
- Corridor demand
- Dimensions

Used to determine if arterial bike facility can be developed or moved to a parallel corridor



23rd Avenue Project Case Study

- 23rd Ave a major north-south arterial through Seattle's Central District
- Project began as a major paving project and then grants were received to include a number of other improvements:
  - Transit
  - Signals
  - ITS
  - Trolley poles
  - Sidewalk repair/maintenance



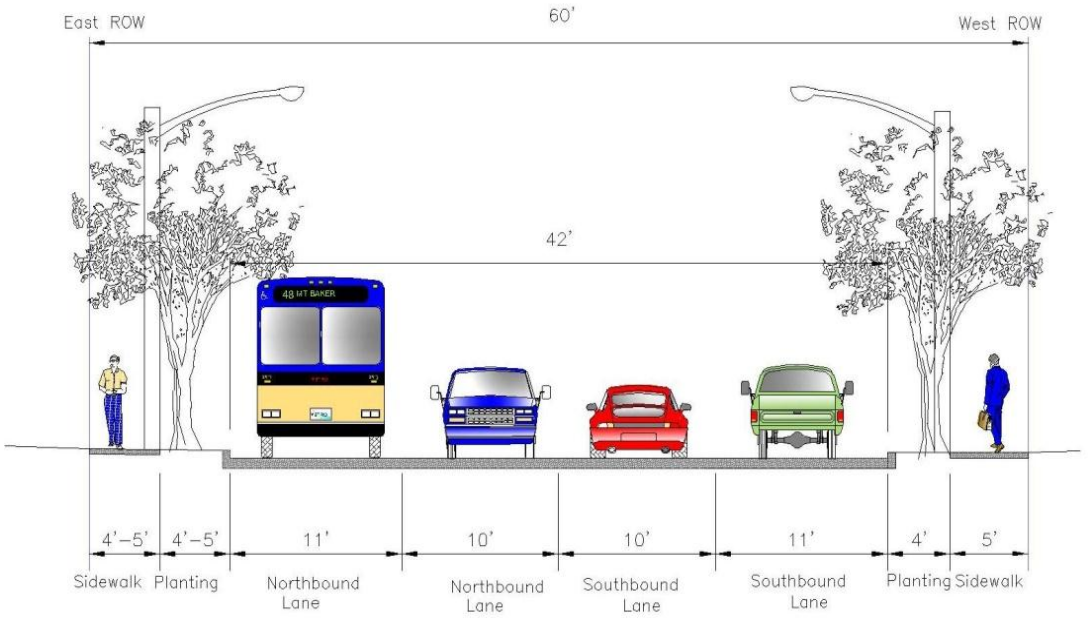
23rd Avenue Complete Streets Assessment

Pedestrian Master Plan

- High priority for crossings at numerous intersections along the corridor; poor condition of sidewalks and substandard widths

Transit Master Plan

- Priority bus corridor
- Approximately 5,800 daily transit riders,
- Bus speed/reliability issues



23rd Ave E Existing Cross Section

Bicycle Master Plan

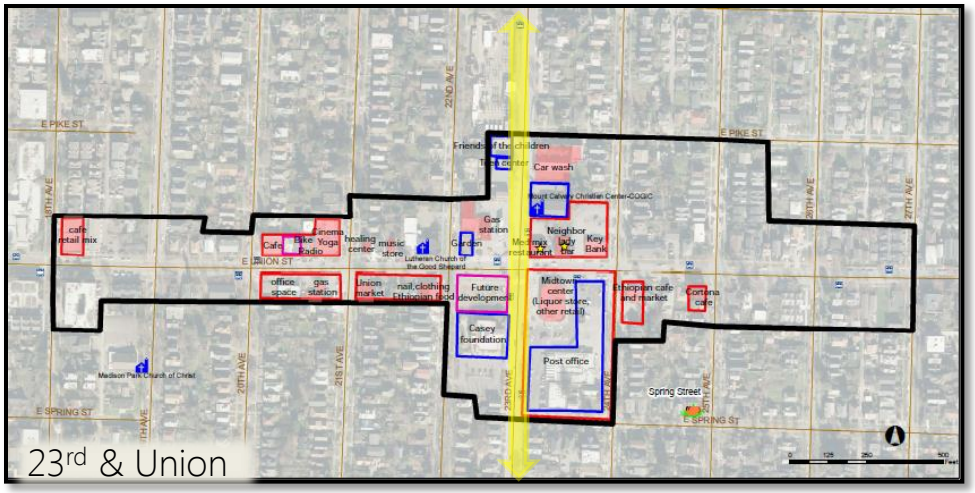
- Bicycle lane recommended in 2007 Bike Master Plan (BMP)
- 2014 BMP draft update process considered bike lanes on the corridor, or parallel greenway

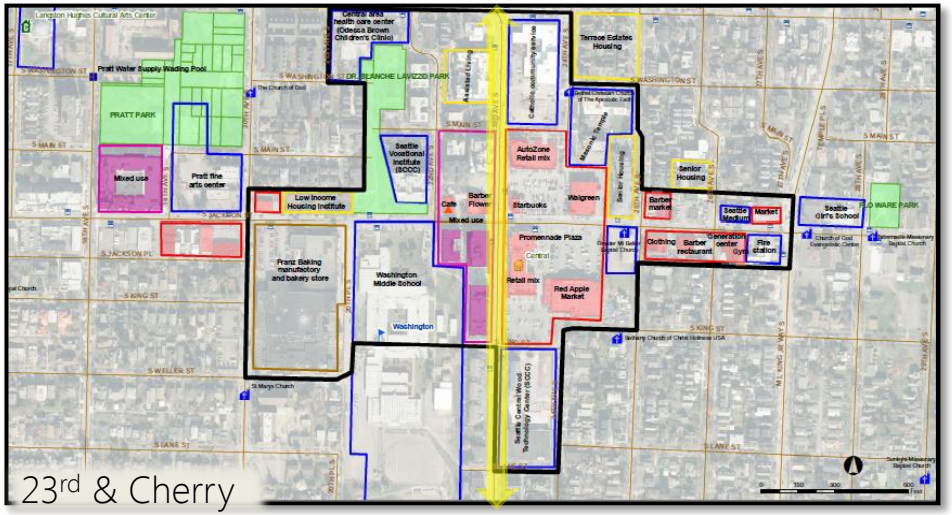
Re channelization

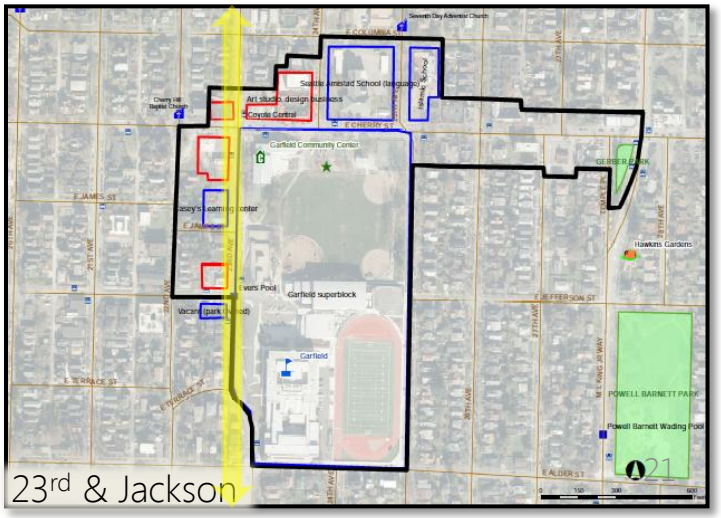
- ADT on 23rd ranges from 13,400-20,000 vehicles per day

Department of Planning & Development 23rd Avenue Action Plan

- City's Planning Department seeking to develop a shared vision and action plan for three community cores at Union, Cherry and Jackson



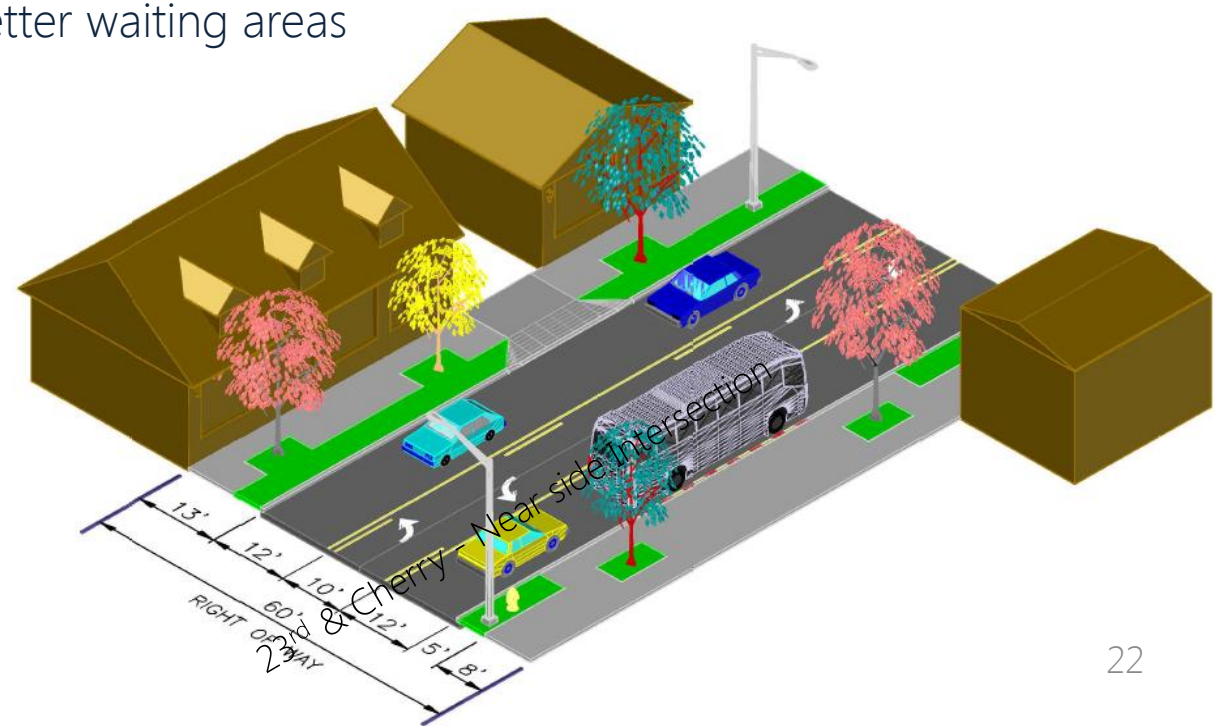




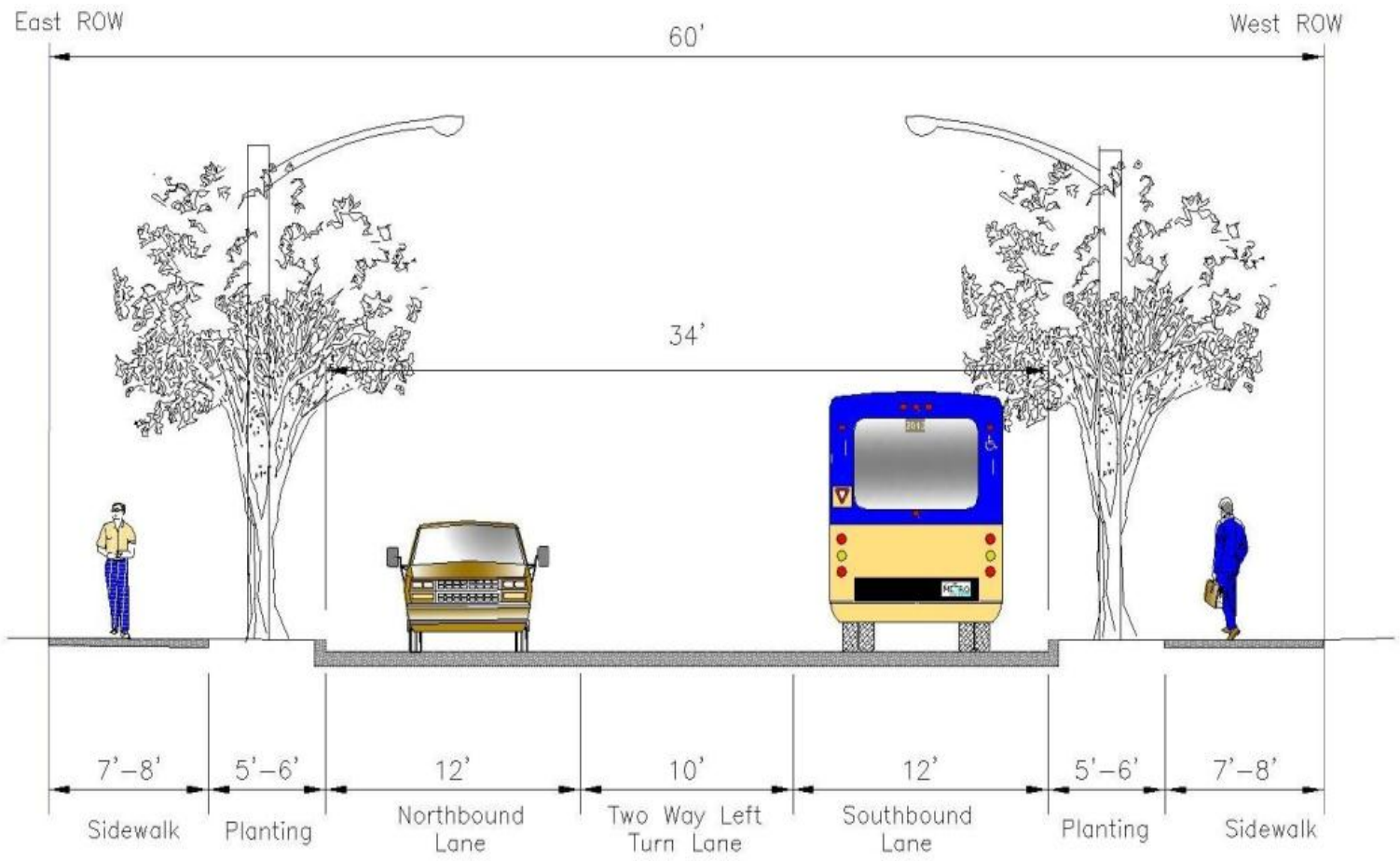
23rd Avenue Preferred Approach

Community feedback and Complete Streets assessment informed the preferred approach, which includes:

1. Re-channelization from 4 to 3-lane cross section
2. Curb realignment to enable sidewalk widening along the corridor
3. *Parallel greenway facility to facilitate N-S bicycle circulation*
4. Transit Speed and Reliability Improvements along corridor (TSP, ITS, Trolley Poles)
5. New bus stop facilities including lighting, shelters, electronic and standard signs, benches, and better waiting areas



Preferred 3 Lane Typical Cross Section



Parallel Neighborhood Greenway

- Project design and funding includes implementing a bicycle facility on a parallel residential street (neighborhood greenway)
- Identified the following two streets for potential greenway opportunities: 21st & 22nd Avenue.
- Included in updated Bicycle Master Plan

Next Steps

ROW Decision Framework

- Develop policy for update of the City's Comprehensive Plan for travel and curbspace allocation
- Could be embedded in an update to the City's Complete Streets ordinance

23rd Avenue

- Continue with design work and funding package for both the 23rd corridor and parallel neighborhood greenway

Questions?

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http://www.seattle.gov/transportation/bikemaster_materials.htm

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