

# Bike & Walk Salem

Bicycle, Pedestrian, and Safe Routes to School  
Needs Assessment



**Stakeholder Advisory Committee**

**Meeting #2**

January 20, 2011

# Bike/Ped Needs Assessment



Needs assessment based on:

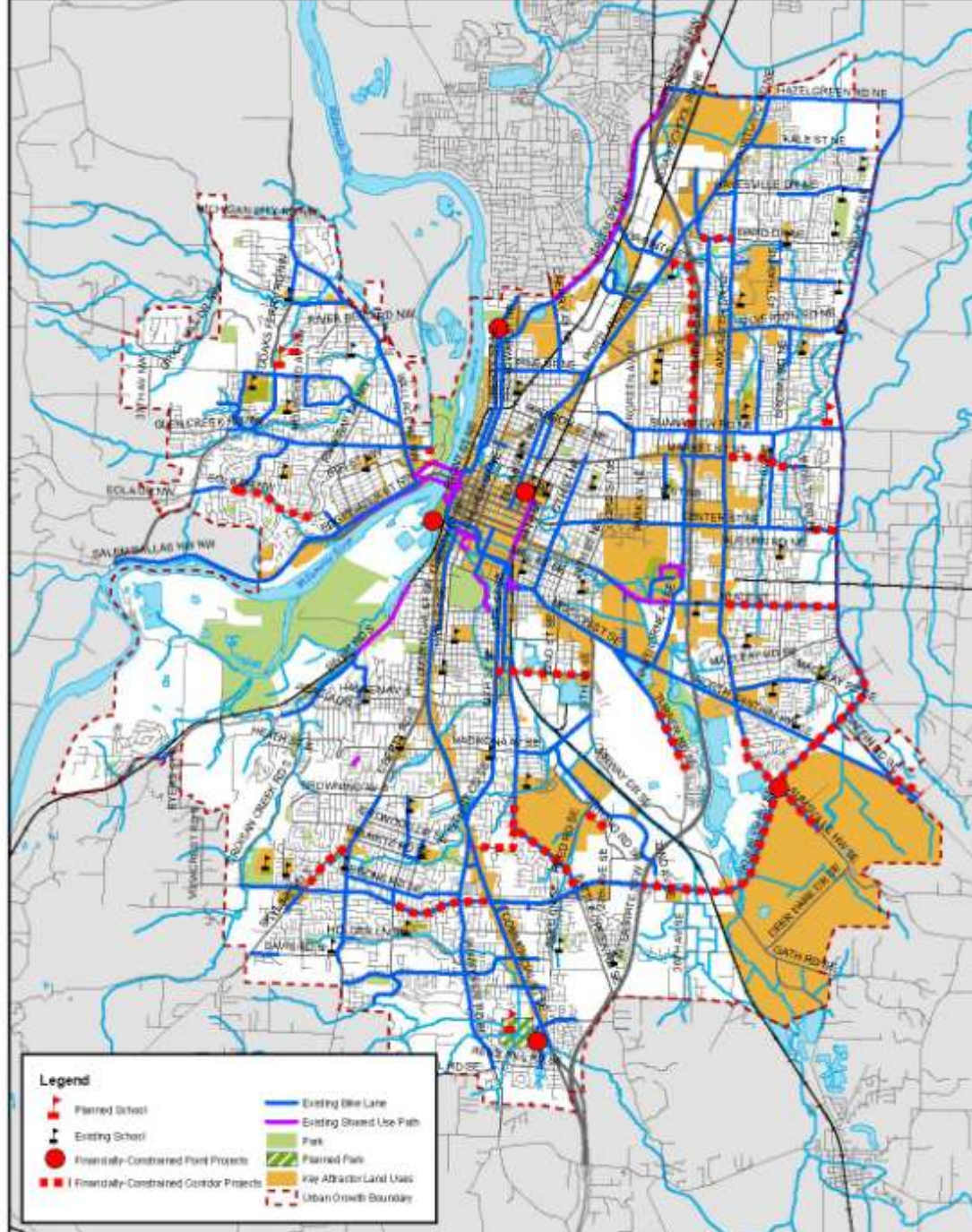
- Data provided by City, MPO, ODOT, Cherriots, School District
- Background documents, studies, plans
- School site walkabouts
- Field work (on foot and bicycle)
  - Over 200 miles of walking and riding so far!

# Bicyclist and Pedestrian Types

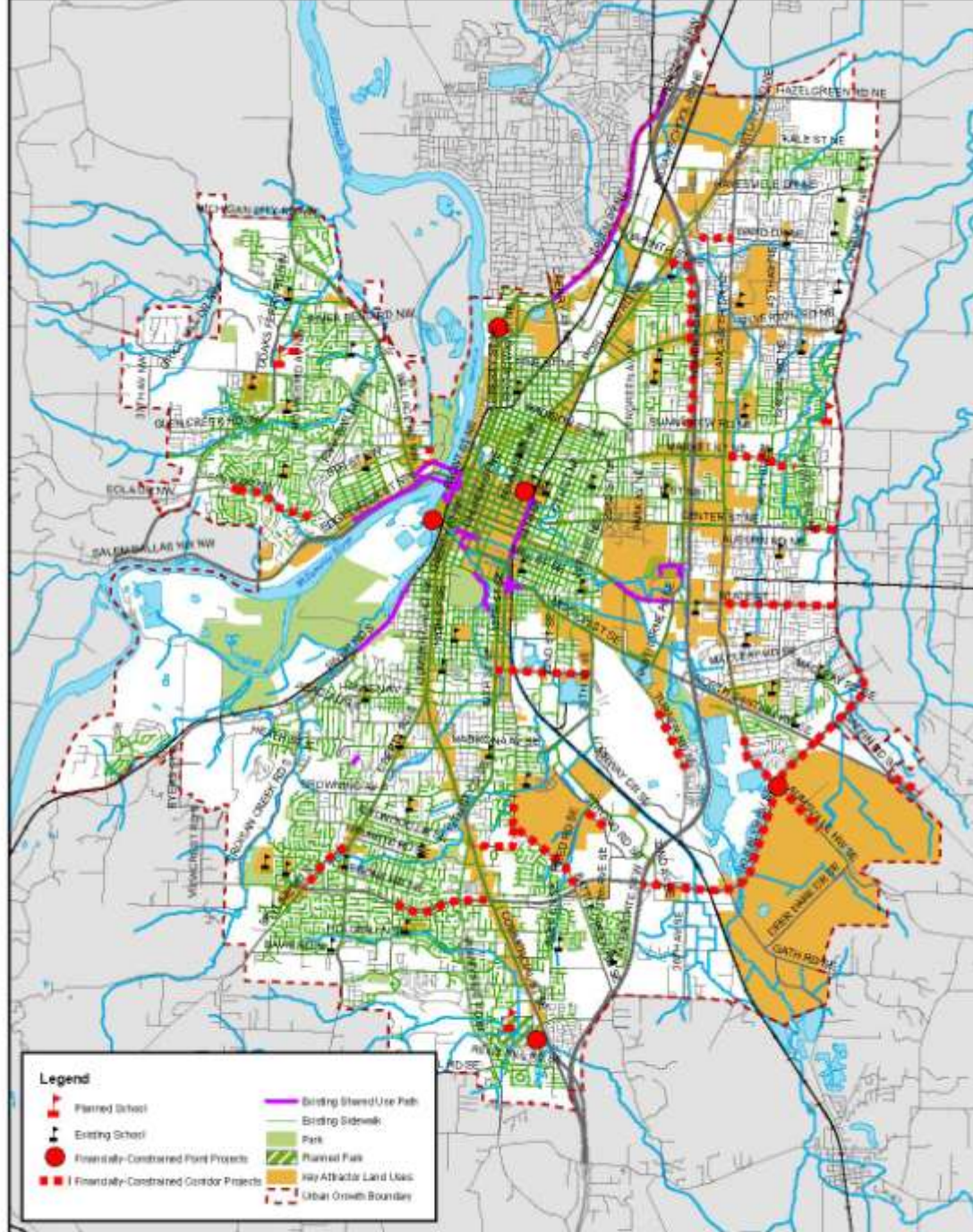


## Trip types:

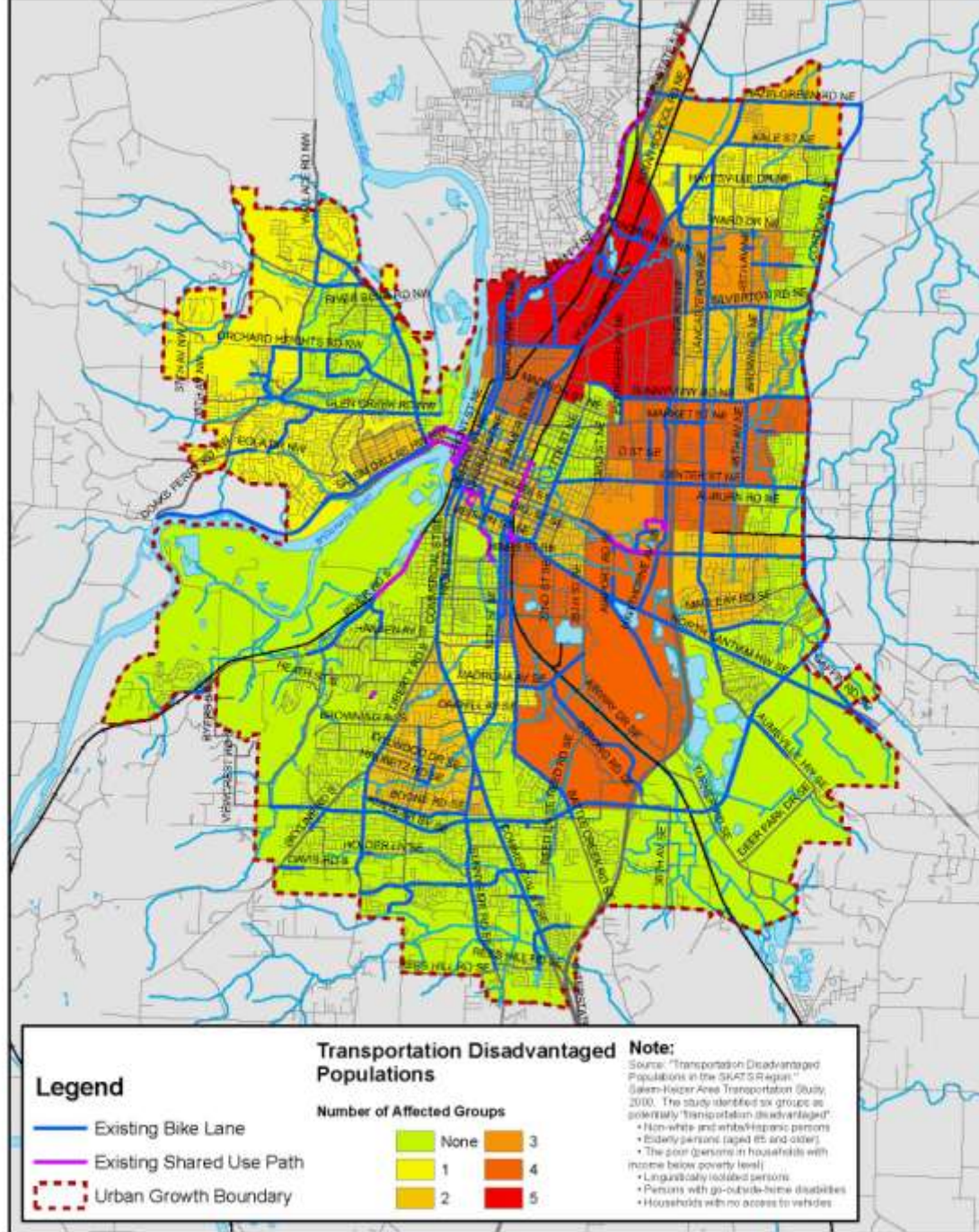
- Work
- School
- Shopping, errands
- Social
- Recreation
- Exercise



**Map 2: Bicycle Network Key Attractor Land Uses**



**Map 2: Pedestrian Network Key Attractor Land Uses**



**Map 3: Bicycle Network and Transportation Disadvantaged Populations**

# Crash Analysis



- Purpose:
  - Identify trends over time
  - Identify problem spots
  - Identify causes
- 2005 through 2009
- Reported crashes (doesn't include "close calls")

# Crash Analysis - Bicycle



- 292 bicycle-involved crashes
  - 1 fatal collision
  - # of crashes has fluctuated year-to-year (45-70 crashes per year)
  - Crash rate has actually declined
- Most common collision type: Turning movement

# Crash Analysis - Bicycle



## High-crash corridors:

- Commercial Street
- Wallace Road
- Lancaster Drive
- Center Street
- Liberty Street
- Market Street
- Mission Street

# Crash Analysis - Bicycle



## High-crash intersections:

- Wallace at Glen Creek
- Liberty at Superior
- Center at Hawthorne
- Lancaster at Market
- Commercial at Madrona
- Lancaster at Wolverine

# Crash Analysis - Pedestrian



- 225 pedestrian-involved crashes
  - 10 fatal collisions
  - # of crashes has fluctuated year-to-year (35-55 crashes per year)
  - Crash rate has slightly declined
- Most common collision types:
  - Motorist failed to yield to pedestrian
  - Pedestrian in roadway illegally (e.g., jaywalking)

# Crash Analysis - Pedestrian



## High-crash corridors:

- Lancaster Drive
- Center Street
- Commercial Street
- State Street
- Market Street
- “D” Street
- Broadway Street



↑  
0.5 MI.

Wallace Park

3 MIN.

↑  
0.5 MI.

Wallace Rd. N.

3 MIN.

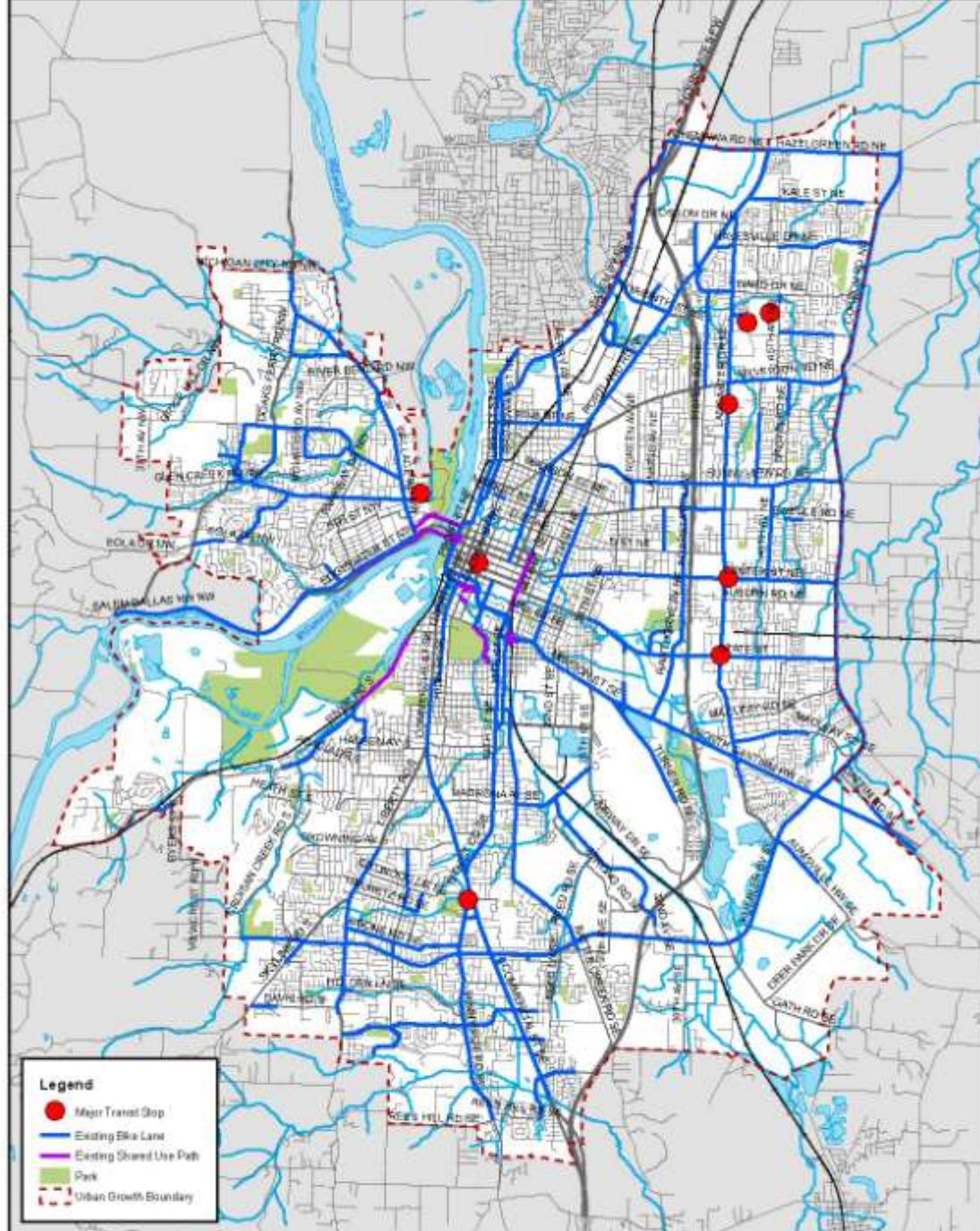


0.2 MI.

Riverfront Park

2 MIN.





**Map 5: Bicycle Network and Major Transit Stops**

# Transit Access



## Assessed:

- Transit stop accessibility (surrounding bike/ped network)
- Transit stop passenger infrastructure:
  - Shelter/covered waiting area
  - ADA-accessible boarding area
  - Lighting, trash receptacles
  - Rider information (e.g., map, schedule)
  - Bicycle parking

**TABLE 10**  
Existing Passenger Infrastructure at Major Transit Stops

Transit Stop Location	Shelter/ Covered Waiting Area	Bench(es)	Posted Route or System Map	Posted Route Schedule	Lighting	Trash Receptacle(s)	Bicycle Parking	Landing Pad for ADA Boarding/ Alighting
Courthouse Square Transit Mall	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Glen Creek Transit Station	Yes	Yes	Yes	Yes	Ambient from street	Yes	No (racks at adjacent businesses only)	Yes
Chemeketa CC (east)	Yes	Yes	Yes	No	Yes	Yes	No	Yes
Chemeketa CC (west)	No	Yes	No	No	Yes	Yes	No	Yes
Lancaster & Devonshire	Yes	Yes	Yes	Yes	Ambient from street	Yes	Yes	Yes
Center and Lancaster	Yes	Yes	Yes	No	Ambient from street	Yes	No	Yes
Lancaster & State	No	No	No	No	Ambient from street	No	No	Yes
Sunnyside & Hilfiker	Yes	Yes	No	Yes	Ambient from street	Yes	No	Yes

# Mobility-Impaired Pedestrians



- Mobility impairments
  - Wheelchairs, canes, crutches, prosthetic devices
- Sensory impairments
  - Vision, hearing, poor perceptions of balance
- Cognitive impairments
  - Difficulty thinking, learning, responding, performing coordinated motor skills
- Children and older adults
  - Difficulty judging speeds and distances, etc.

# Mobility-Impaired Pedestrians



## General issues:

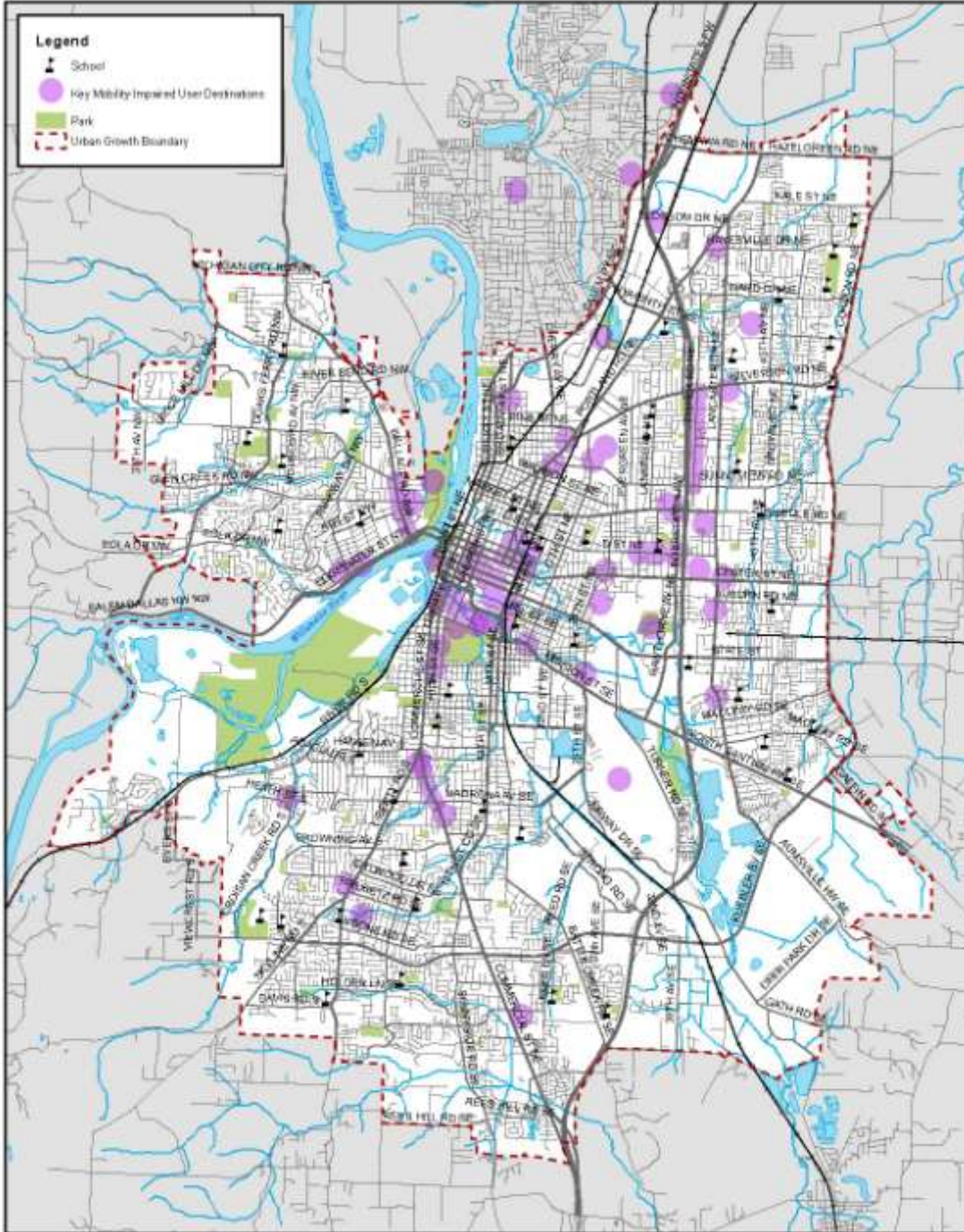
- Audible pedestrian signals needed
- Motorists' awareness, especially when making turning movements
- Steep driveway cross-slopes
- Diagonal curb ramps

# Mobility-Impaired Pedestrians



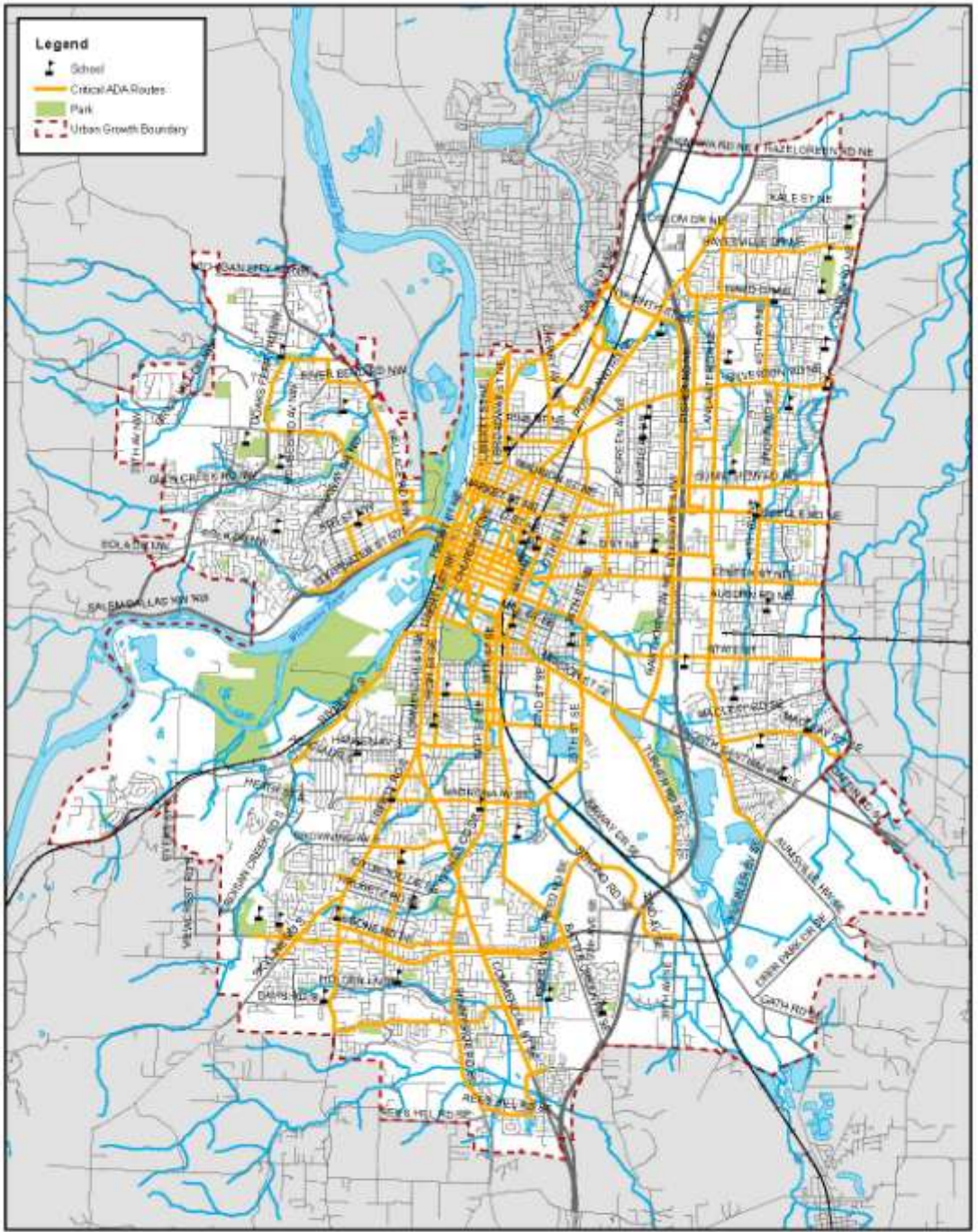
## General issues:

- Fragmented sidewalks
- Cracked or damaged sidewalks
- Sidewalk obstructions
- Steep topography



**Map 1: Key Mobility-Impaired User Destinations**

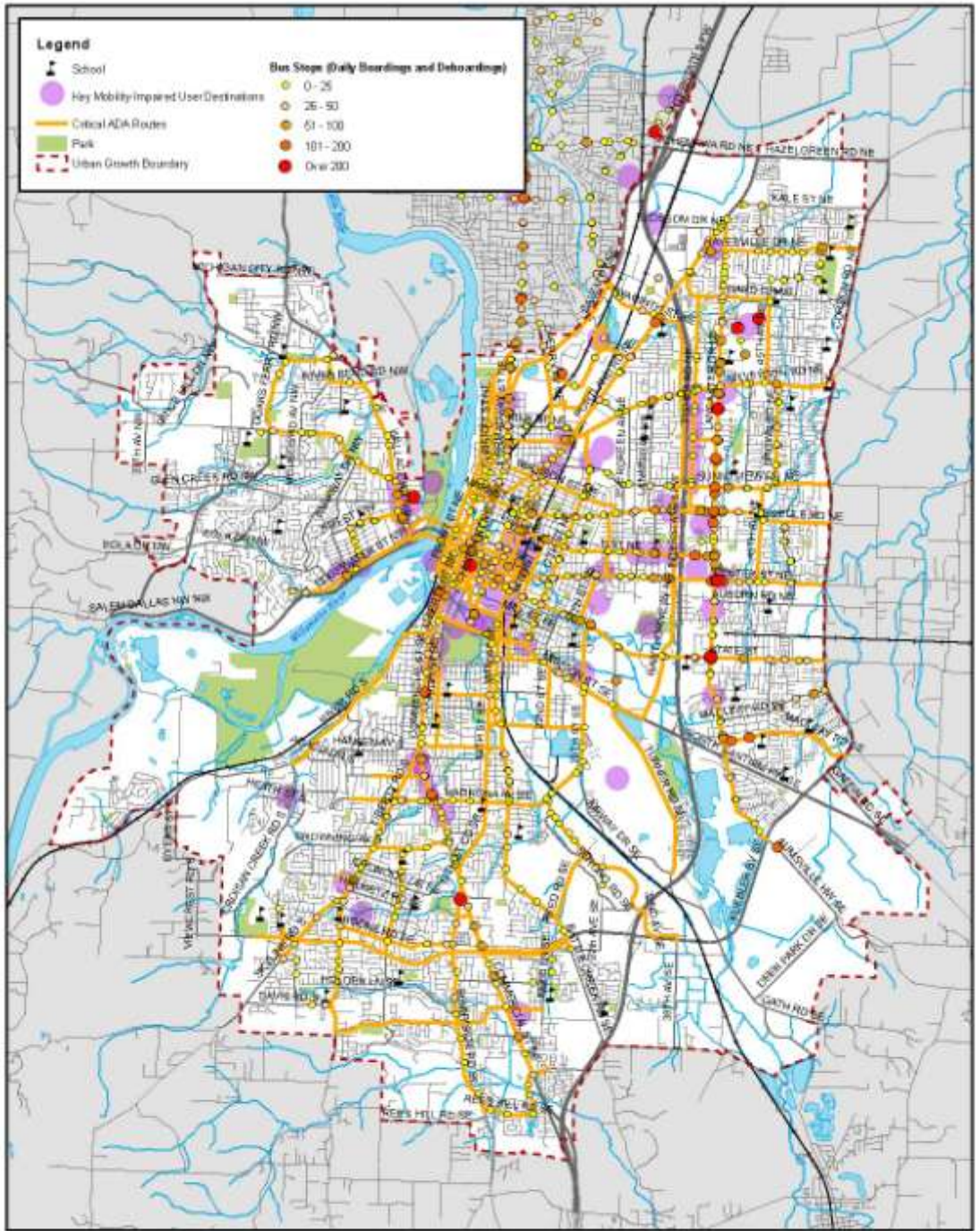




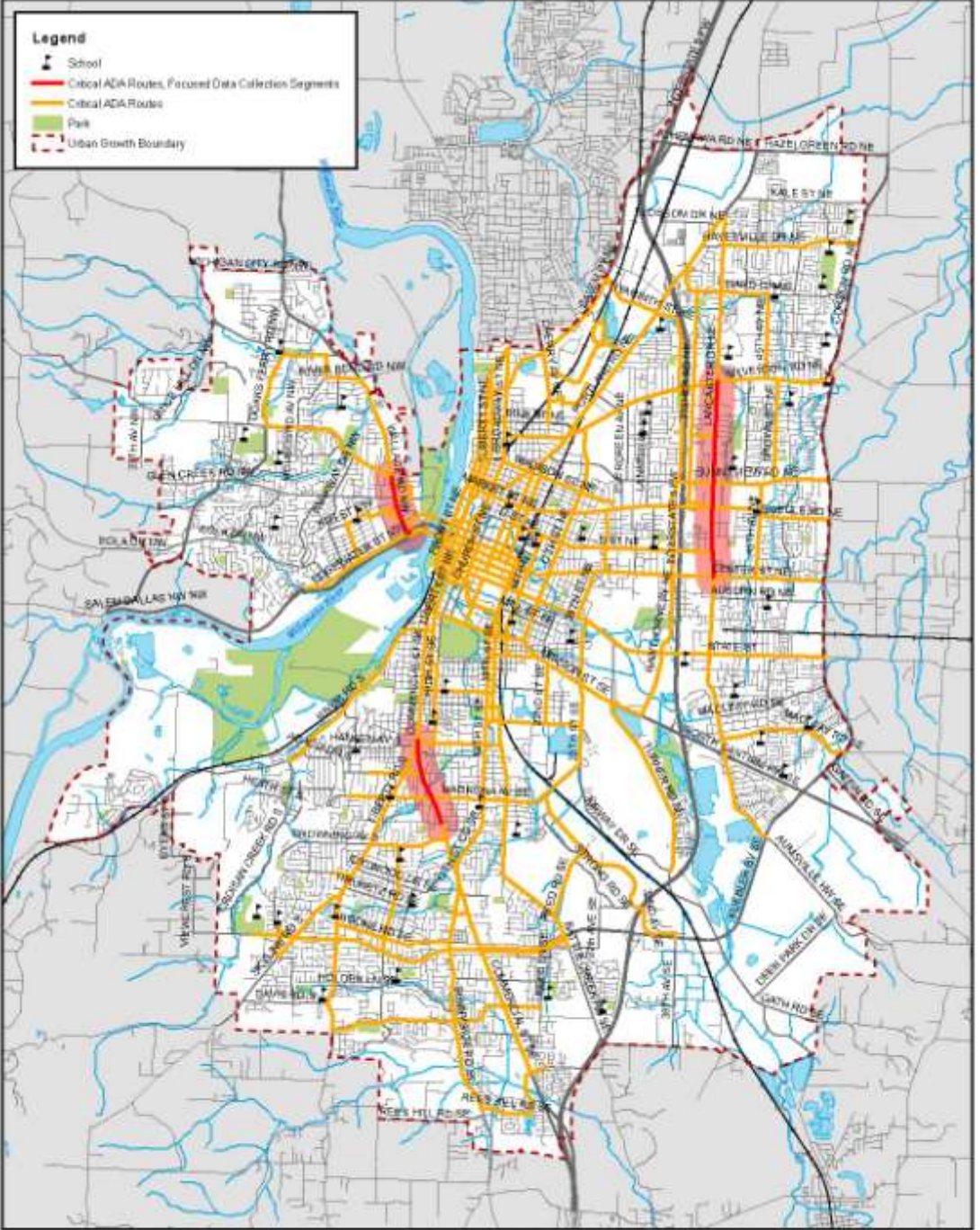
**Map 2: Critical ADA Routes**

City of Salem





**Map 3: Critical ADA Routes and Key Mobility-Impaired User Destinations**

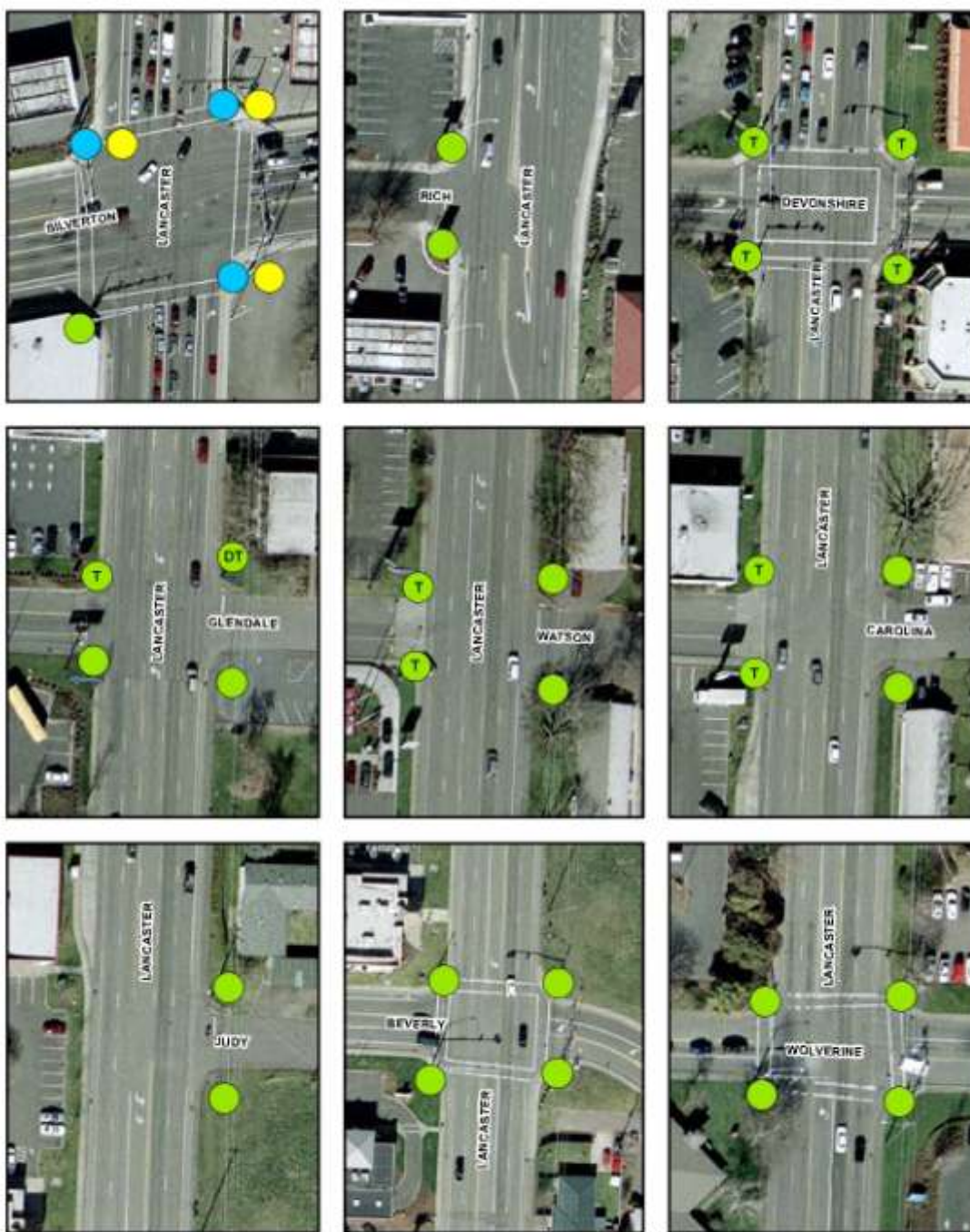


**Map 4: Critical ADA Routes, Focused Data Collection Segments**





**Map 9: Critical ADA Routes - Commercial Street**



Map 11: Critical ADA Routes - Lancaster Drive Intersection Details

# Mobility-Impaired Pedestrians



## Critical ADA Routes – Key Findings:

- Mostly-complete sidewalks, with some gaps
- Damaged sidewalk segments
- Some sidewalk obstructions
- Curb ramps at most intersections, and in generally good condition
- Numerous driveway crossings (including some with cross-slope issues)

# Safe Routes to School



## Assessment approach:

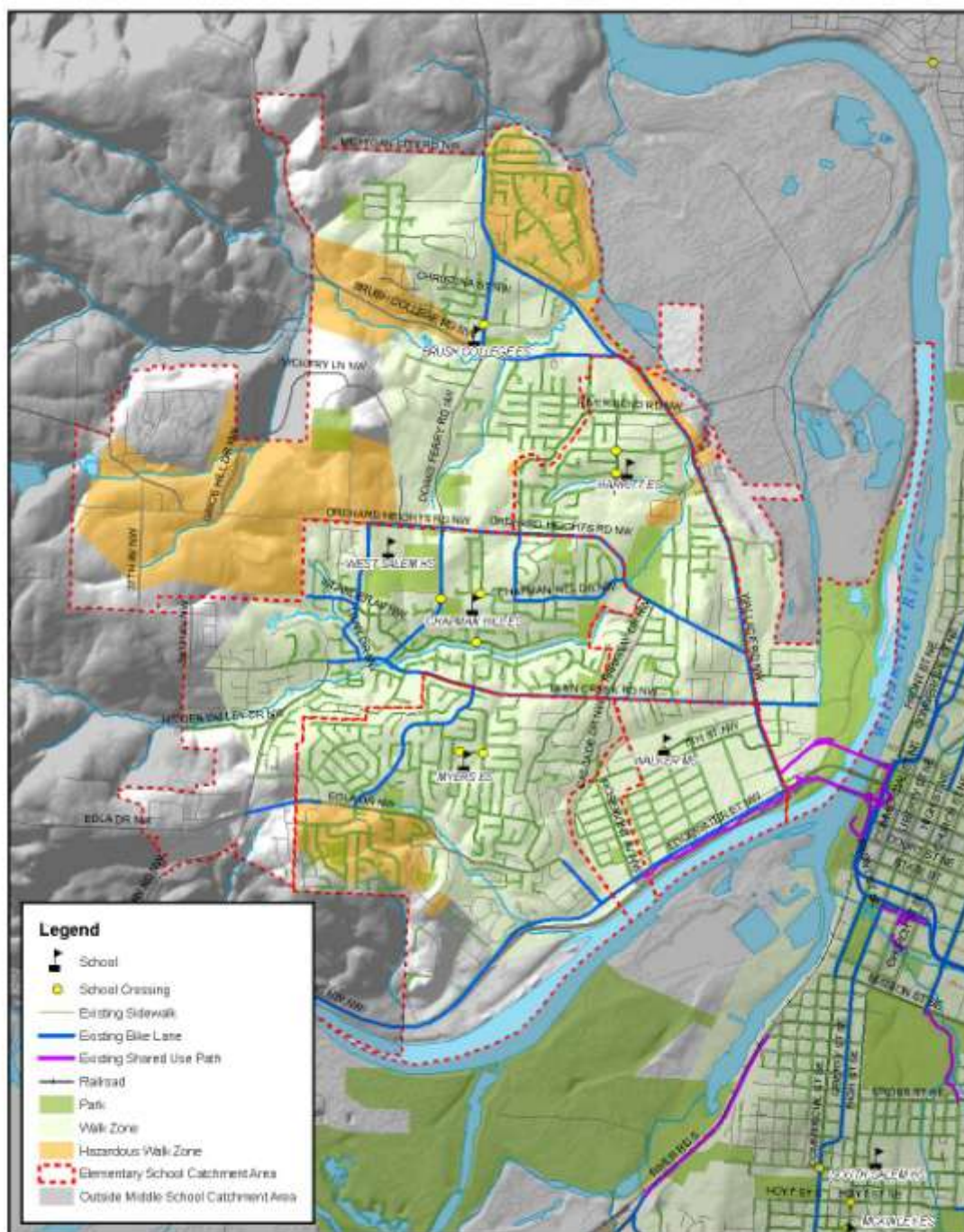
- Generalized citywide assessment
- Detailed assessment at 5 schools (selected by City staff)

# Safe Routes to School



## Citywide assessment:

- 33 elementary, 8 middle, 6 high schools
- Review current walking/bicycling conditions in each school's "walk zone"
  - Sidewalk and bicycle facility coverage
  - Topography
  - Street connectivity
  - Major barriers
  - Crossing guard locations



**Map 1: Walker Middle School Catchment Area**

City of Salem



# Citywide Schools Assessment



## Key Findings:

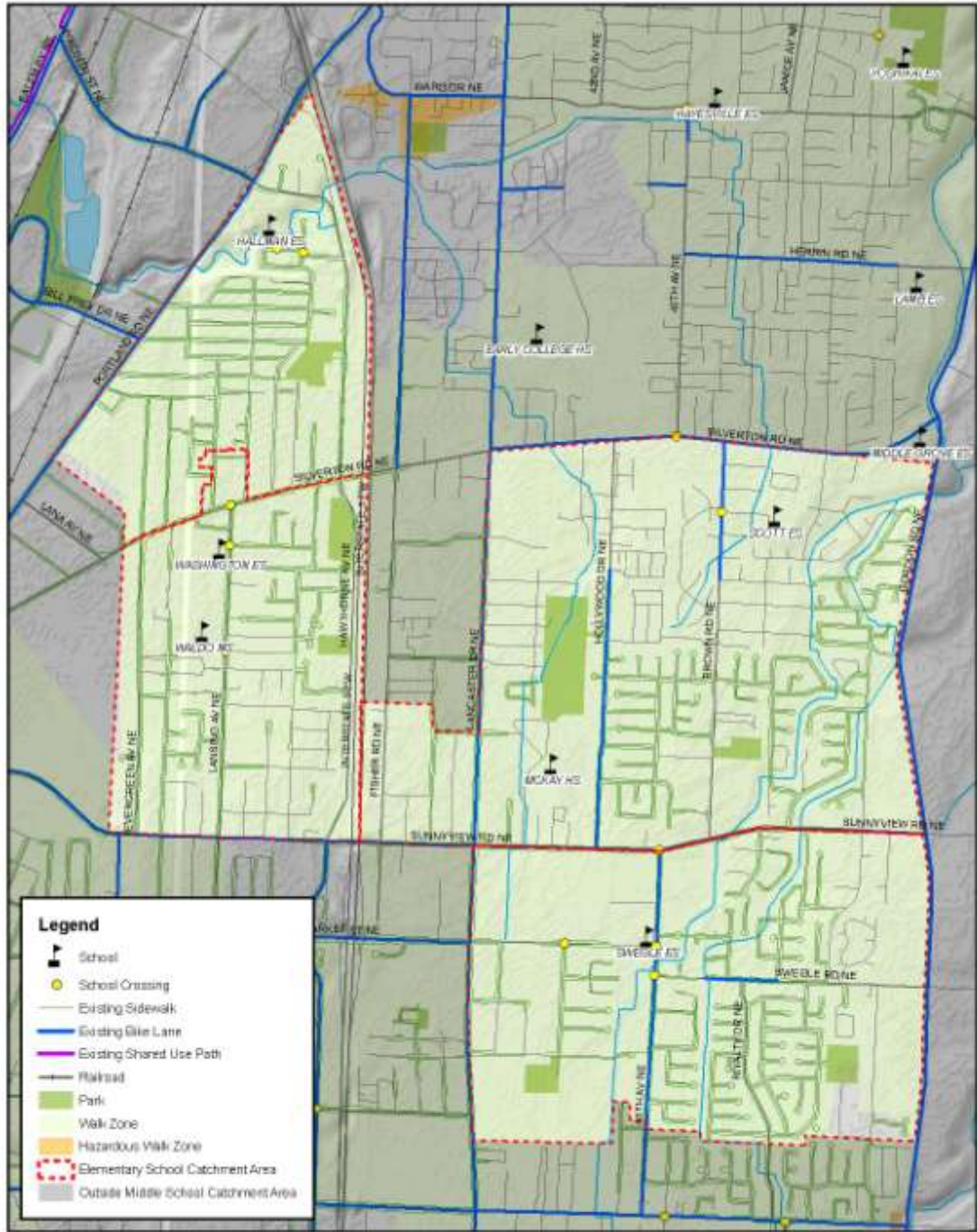
- Sidewalk coverage: Lower coverage near schools in far eastern Salem.
- Bicycle facility coverage: Lower coverage near schools in West Salem and far eastern Salem
- Topography: Most evident near schools in West Salem and South Salem
- Street connectivity: Best connectivity near schools in inner West Salem and in vicinity of Downtown

# Citywide Schools Assessment



## Barriers:

- Typical barriers: Freeways, major roads, railroads, waterways, discontinuous local streets
- More of an issue for middle and high schools (barriers generally define the elementary school “walk zones”)



**Map 4: Waldo Middle School Catchment Area**

# Safe Routes to School



## 5 detailed schools assessment:

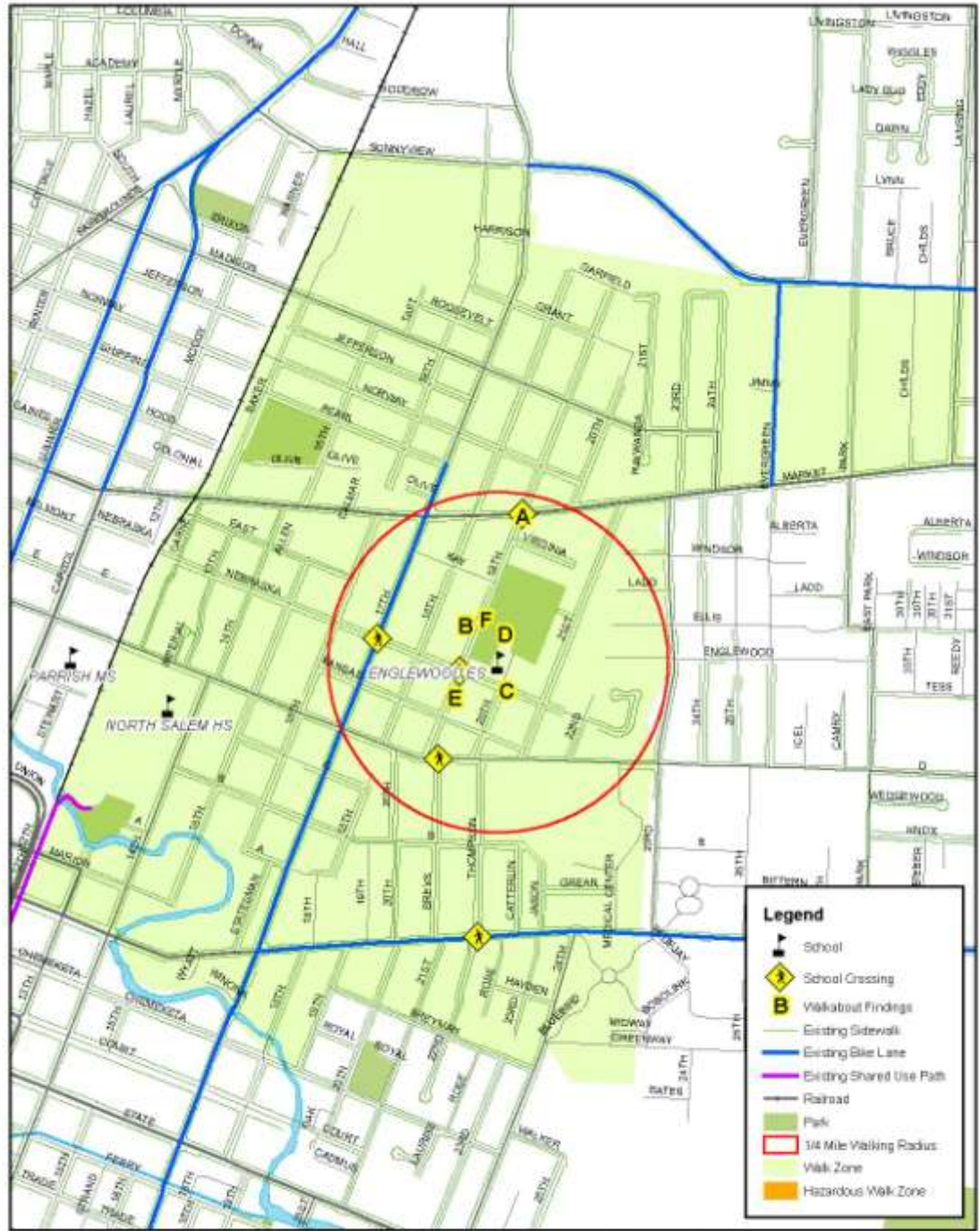
- Englewood Elementary
- Hoover Elementary
- Washington Elementary
- Faye Wright Elementary
- Walker Middle

# 5 Detailed Schools Assessment



## Assessment approach:

- School site walkabout
- Observe conditions during student arrival or dismissal
- Note locations of obstacles or challenges facing student pedestrians/bicyclists
- Staff from Project Team, City, School District, ODOT, Stakeholder Advisory Committee, individual schools



**Map 9: Englewood Elementary School Hazards and Obstacles**