



# Regional Active Transportation Plan Update

Portland Bicycle Advisory  
Committee

April 9, 2013



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Senior Transportation Planner

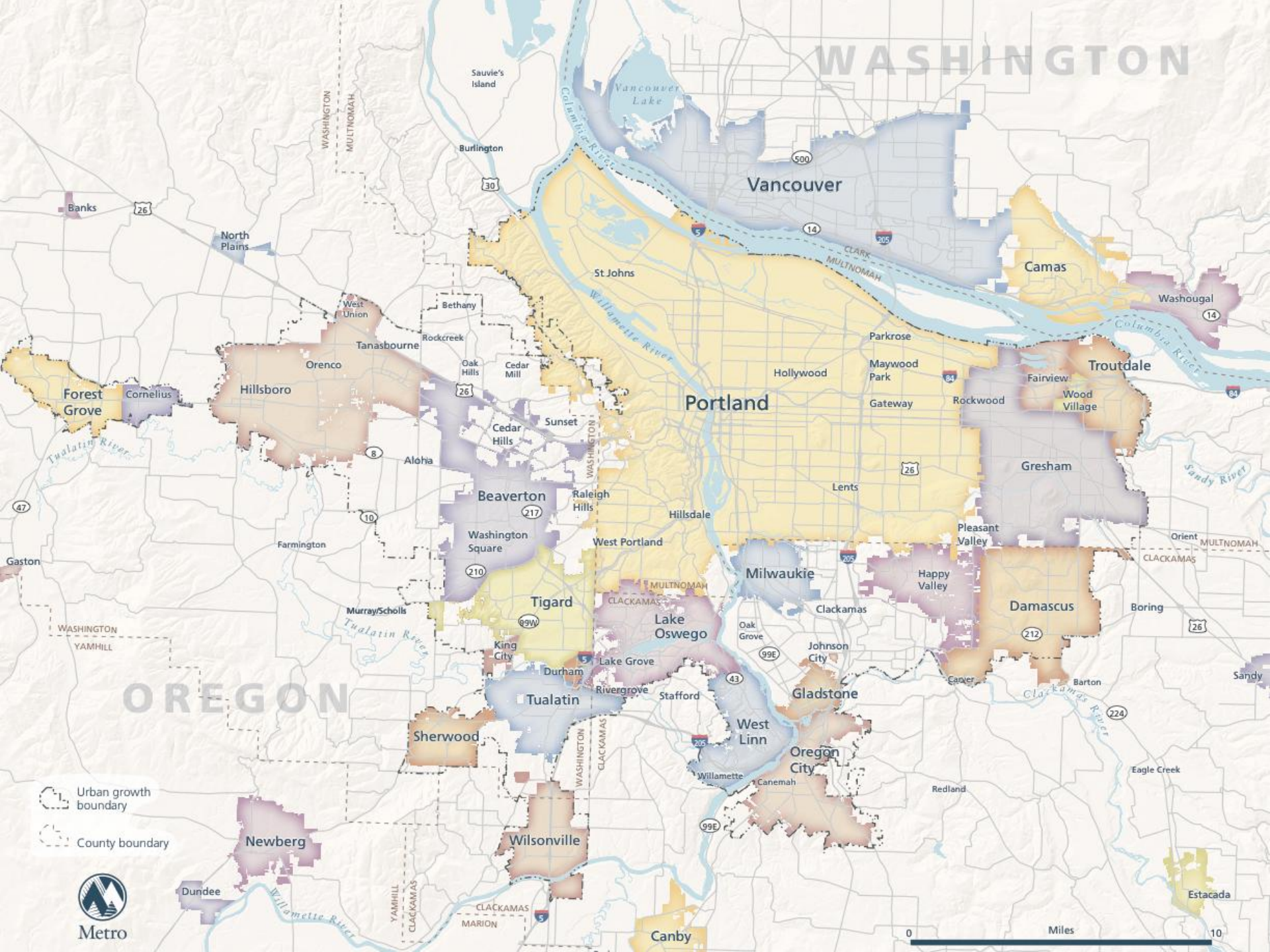
Regional Transportation Planning



Metro | *Making a great place*

# The ATP will...

- Update policies in the RTP and the RTFP
- Design guidelines for bicycle facilities
- Integrate bicycling, walking, transit networks
- Update pedestrian and bicycle networks/maps
- Identify network of Regional Bicycle Parkways
- Add/recommended projects to RTP
- Prioritize projects for investment
- Recommend strategies for implementation



WASHINGTON

OREGON

- Urban growth boundary
- County boundary



0 Miles 10

# Existing Conditions – Findings

2011 Oregon Household Activity Survey

## More people are riding bikes in Portland and the region.

- Regional bicycle mode share increased by nearly 191%, 1.1% to 3.2% between 1994 and 2011
- Portland's bicycle mode share increased by 268%, from 1.6% to 6% (highest growth of all modes)

# Existing Conditions – Findings

2011 Oregon Household Activity Survey

## Diversity in bicycling, but could do better.

- Of all bike trips made in the region...42% are made by people with incomes over \$75,000, 37% by people with incomes between \$35-75,000, and 21% by people making less than \$35,000.
- Non-white persons make 3.3% of their trips by bicycle, white persons 2.7%.
- Of all bike trips in the region, 75% are made by white persons, 25% by non-white.

# Existing Conditions – Findings

## 2011 Oregon Household Activity Survey

- Women make 35% of all bike trips in the region, men make 65%. Men make 4% of their trips by bike, women make 1.8% of their trips by bike.
- Over 66% of all bike trips in the region are made by people 25-54 yrs old.
- Children age 14 and younger make over 15% of all bike trips in the region.
- People with disabilities make 1.6% of their trips by bicycle.

# Existing Conditions – Findings

2011 Oregon Household Activity Survey

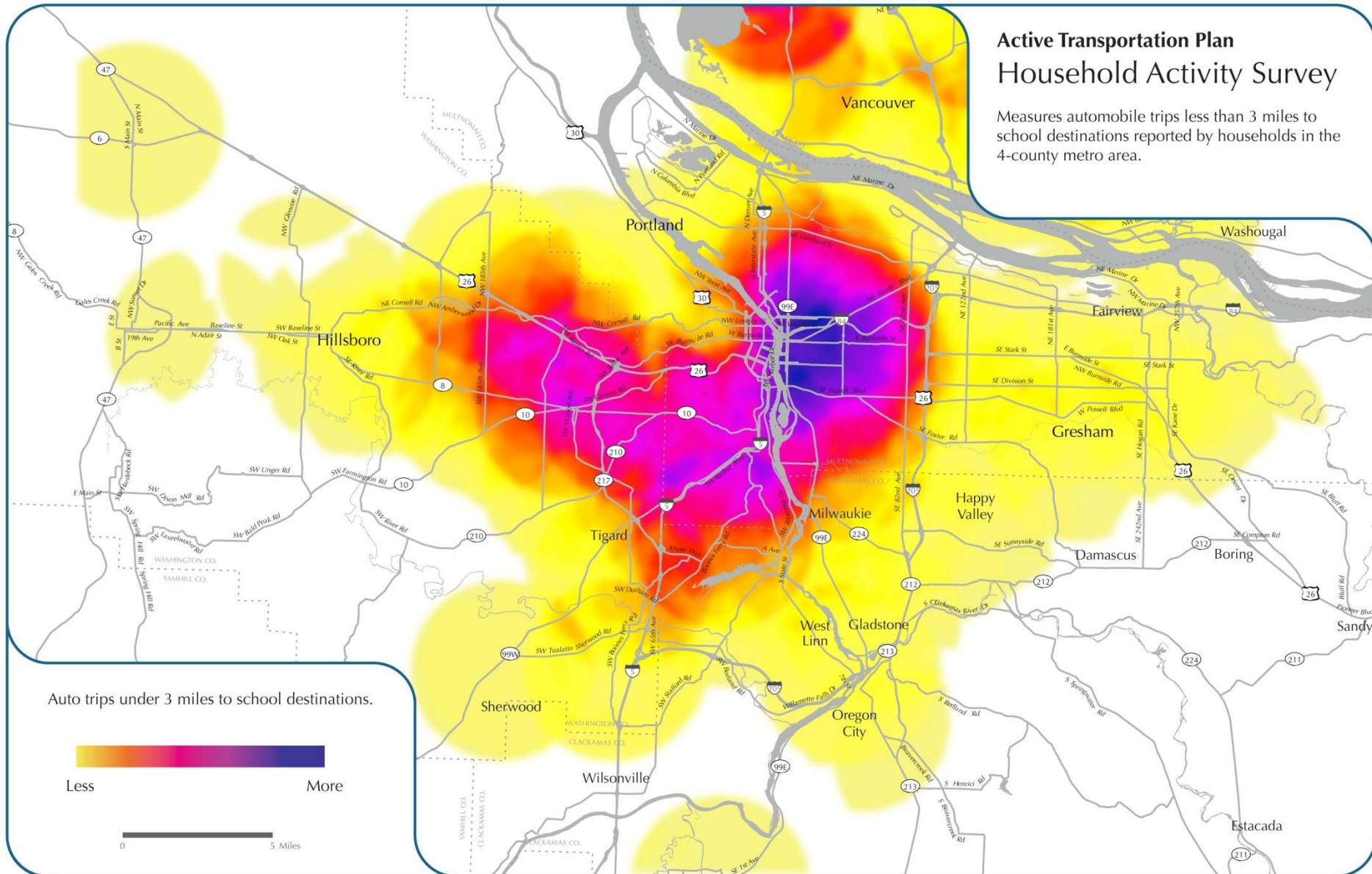
## Opportunity to replace short auto trips.

- Nearly 15% of all trips made by autos within the region are under 1 mile, nearly 44% are under three miles, and over 66% are under six miles.

# Existing Conditions

## Active Transportation Plan Household Activity Survey

Measures automobile trips less than 3 miles to school destinations reported by households in the 4-county metro area.

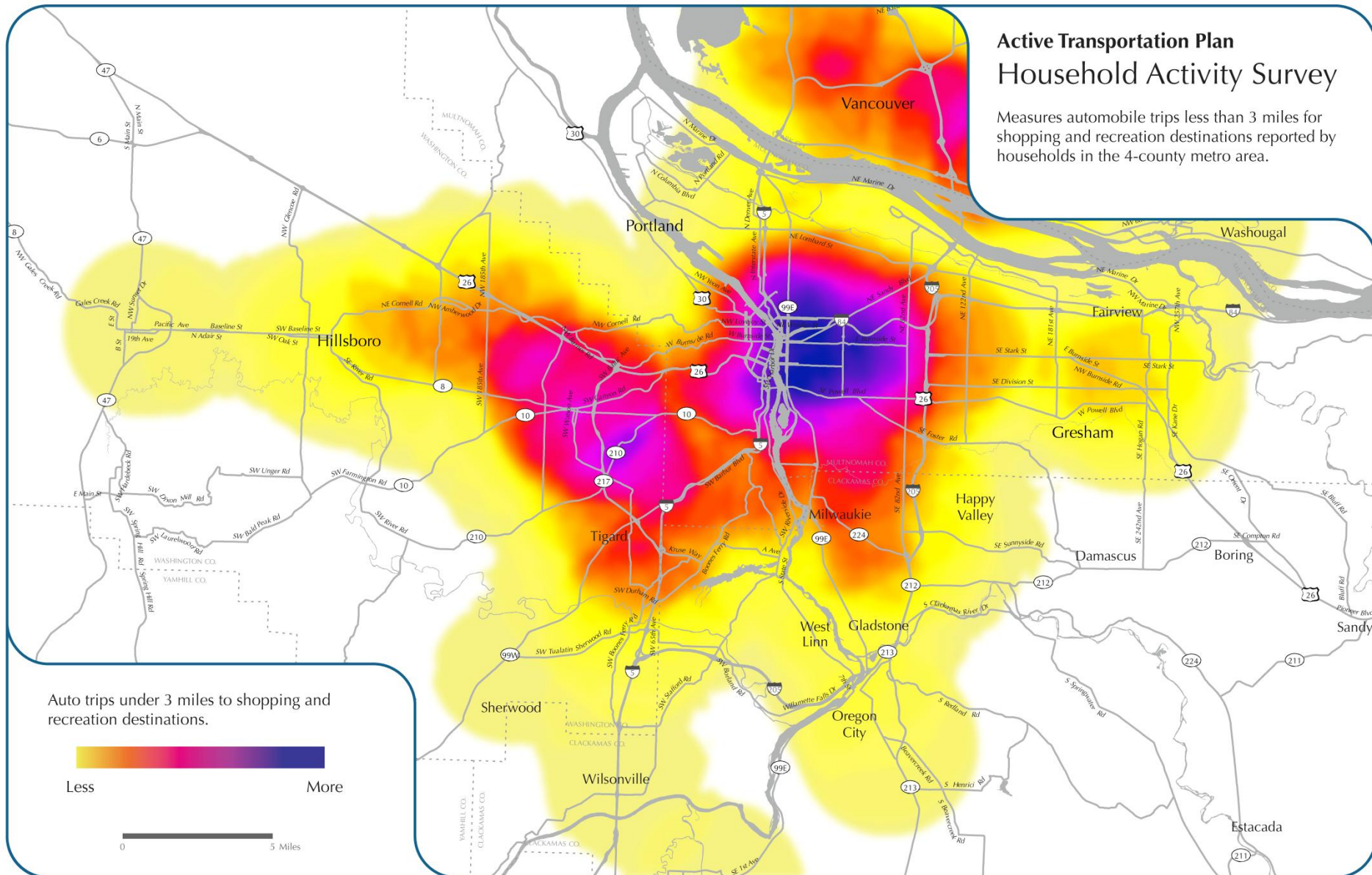




# Existing Conditions

## Active Transportation Plan Household Activity Survey

Measures automobile trips less than 3 miles for shopping and recreation destinations reported by households in the 4-county metro area.



Auto trips under 3 miles to shopping and recreation destinations.

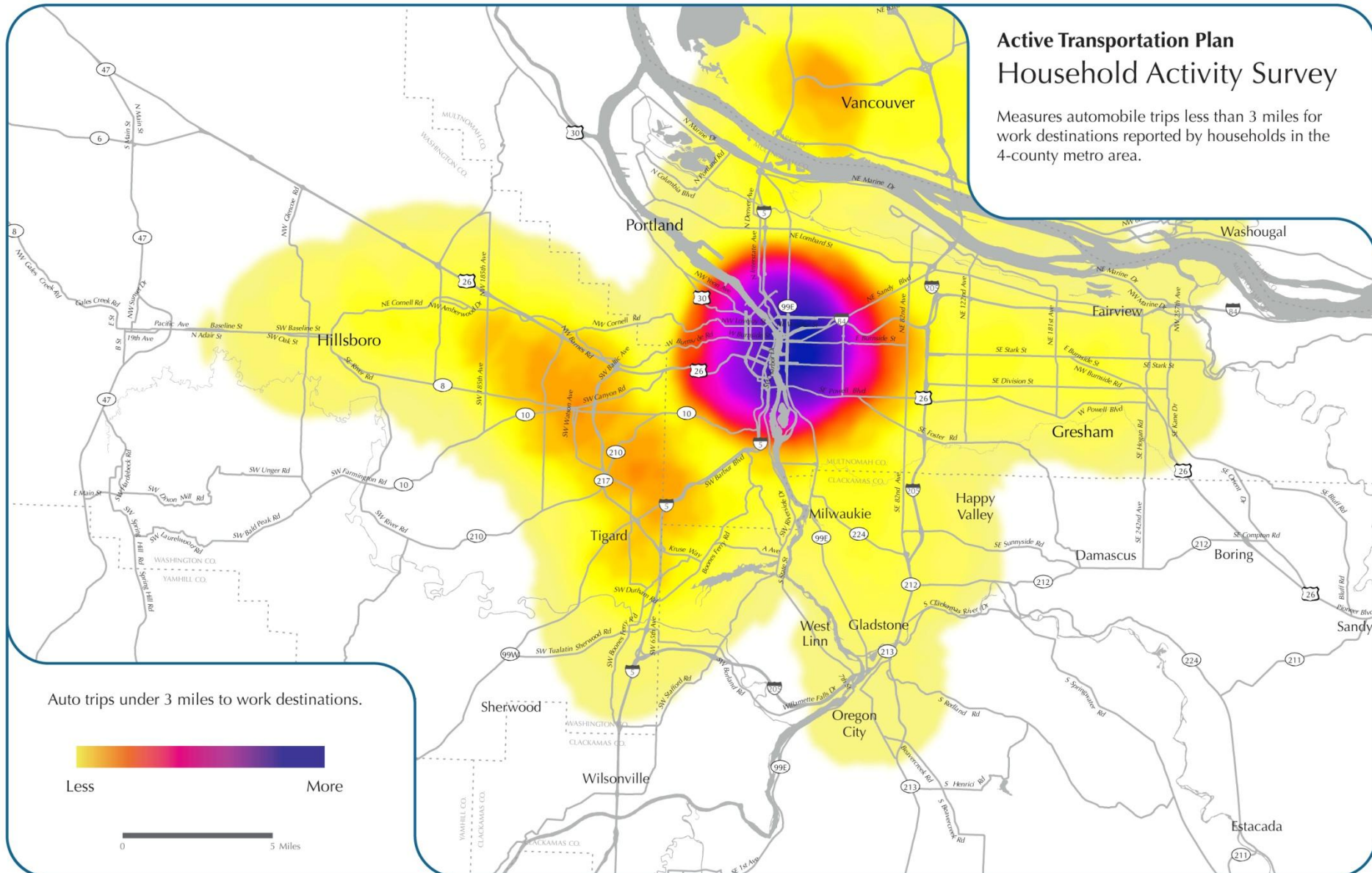


0 5 Miles

# Existing Conditions

## Active Transportation Plan Household Activity Survey

Measures automobile trips less than 3 miles for work destinations reported by households in the 4-county metro area.



# Existing Conditions – Findings

2011 Oregon Household Activity Survey

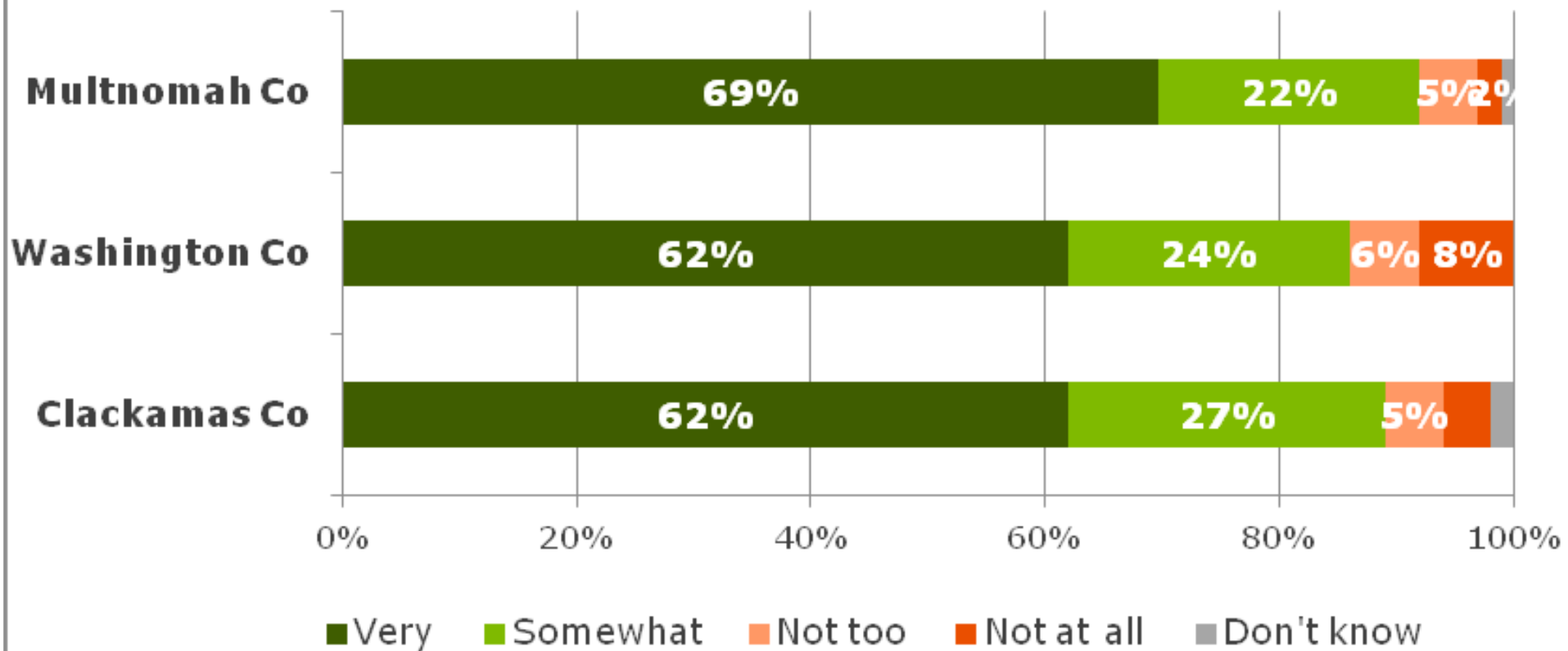
## People ride bikes for all types of trips.

- Regionally, 53.3% of all bike trips are for social events, for errands and recreation.
- 34.3% of all bike trips are for getting to work.
- 12.4% of all bike trips are for getting to school and college.

# Existing Conditions – Findings

Current levels of investment do not meet demand. Over 18% of all trips in the region are made by bicycling and walking – 3% of all capital transportation dollars go to biking and walking.

# LEVEL OF INTEREST IN BIKING MORE OFTEN FOR TRANSPORTATION



*Metro 2011 Opt-In Survey*

# Existing Conditions – Findings

Metro Safety Report, 2011

## Safety and health are impacted.

- In three counties, 3.2% of all trips (not counting trips to access transit) are bike trips, 8% of all serious and fatal crashes involve bicyclists.
- With the highest population, transit usage, VMT, and trips by bicycle, Portland has 68% of the region's serious bicycle crashes.

# Existing Conditions – Findings

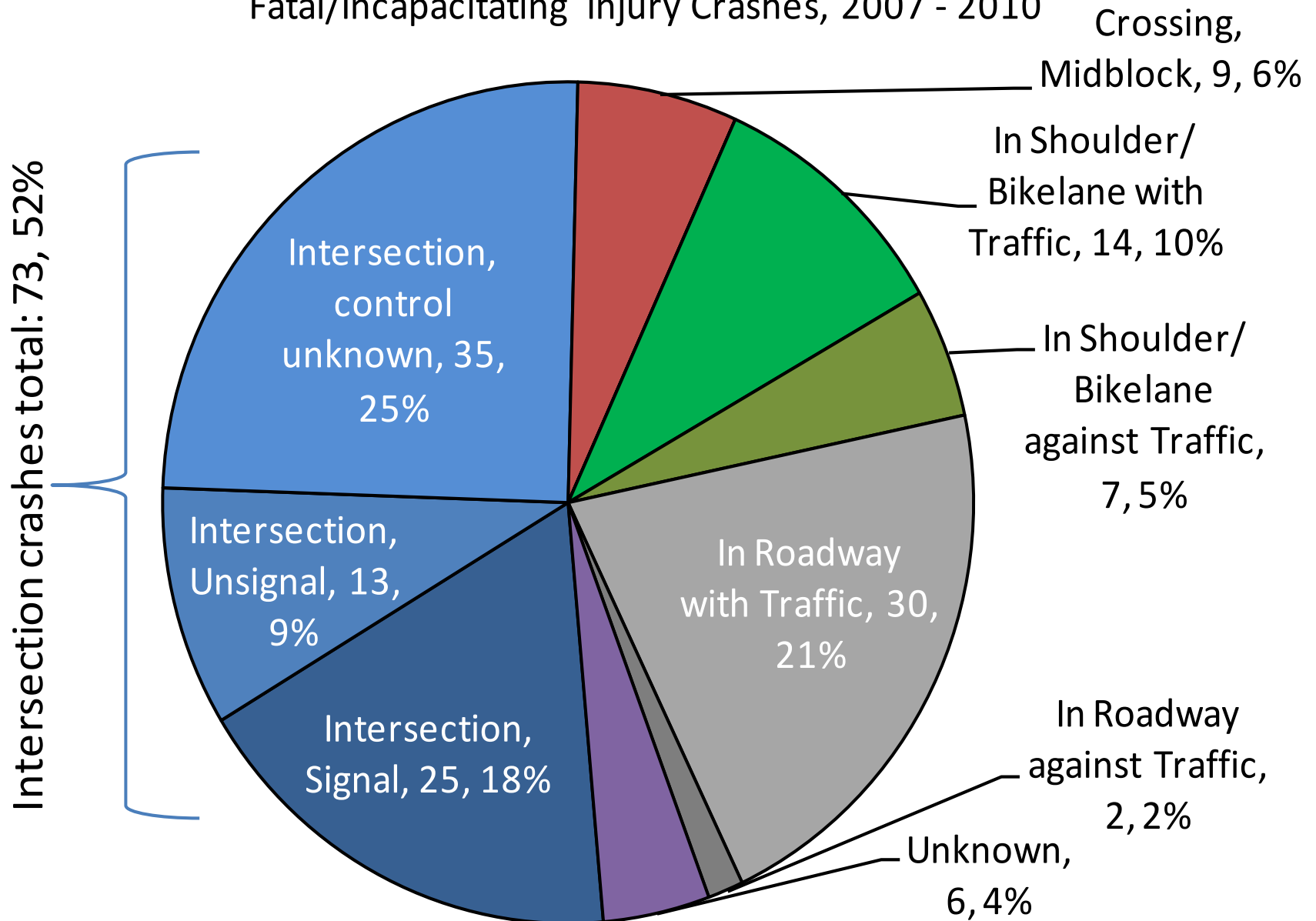
Metro Safety Report, 2011

## Safety and health are impacted.

- Streets with more lanes have higher serious crash rates per road mile and per VMT.
- Arterial roadways comprise 52% of the serious bike crashes. Arterials have the highest serious crash rate per road mile and per VMT.
- Over 52% of crashes bicycles occur at intersections.

# Serious Bicyclist Crash Location

Fatal/Incapacitating Injury Crashes, 2007 - 2010



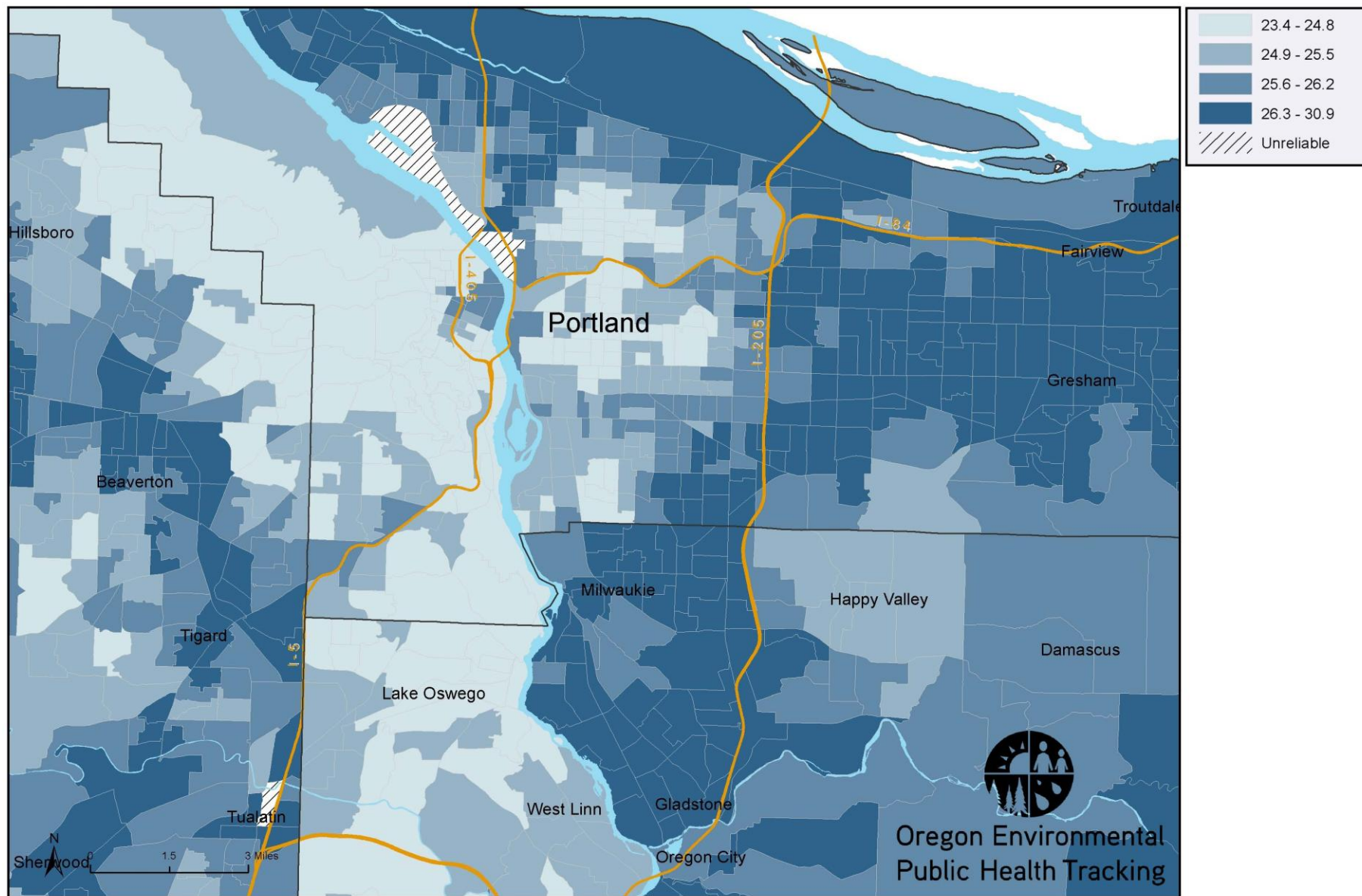


# Existing Conditions

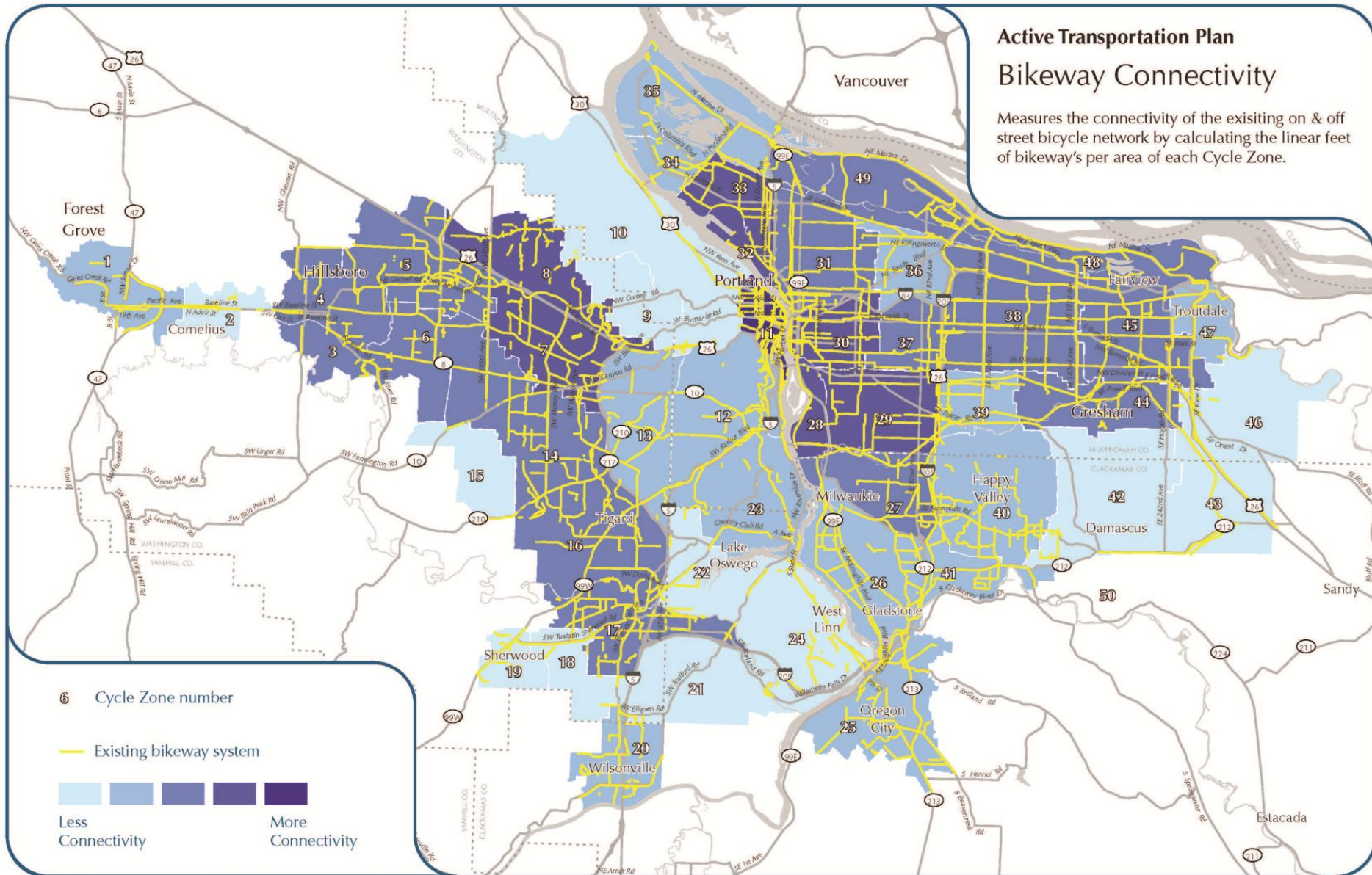
	Nationwide Median	Oregon	Portland – Vancouver-Beaverton MSA
Health Status – Reported as fair or poor	14.7%	15.8%	<b>13.6%</b>
Exercise – Reported no exercise or physical activity in the last 30 days	23.9%	17.5%	<b>15.8%</b>
Diabetes – Told by doctor they have diabetes	8.7%	7.2%	<b>6.5%</b>
Obesity – Reported BMI greater than or equal to 30.0	27.5%	27.6%	<b>26.0%</b>

*2010 Behavioral Risk Factor Surveillance System (BRFSS)*

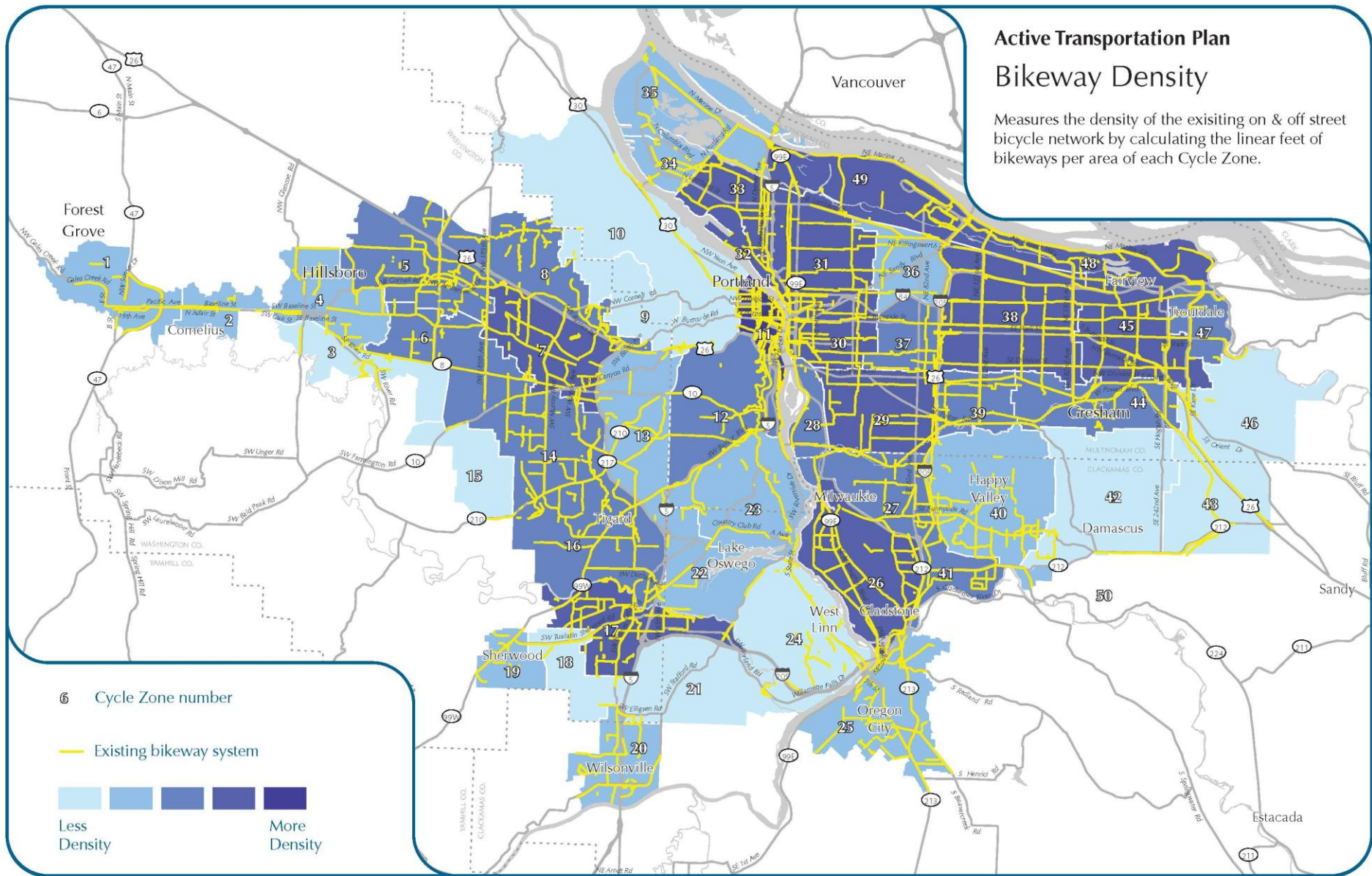
# Portland, Oregon: Age-adjusted mean BMI for block groups, Oregon DMV records, 2006-2010



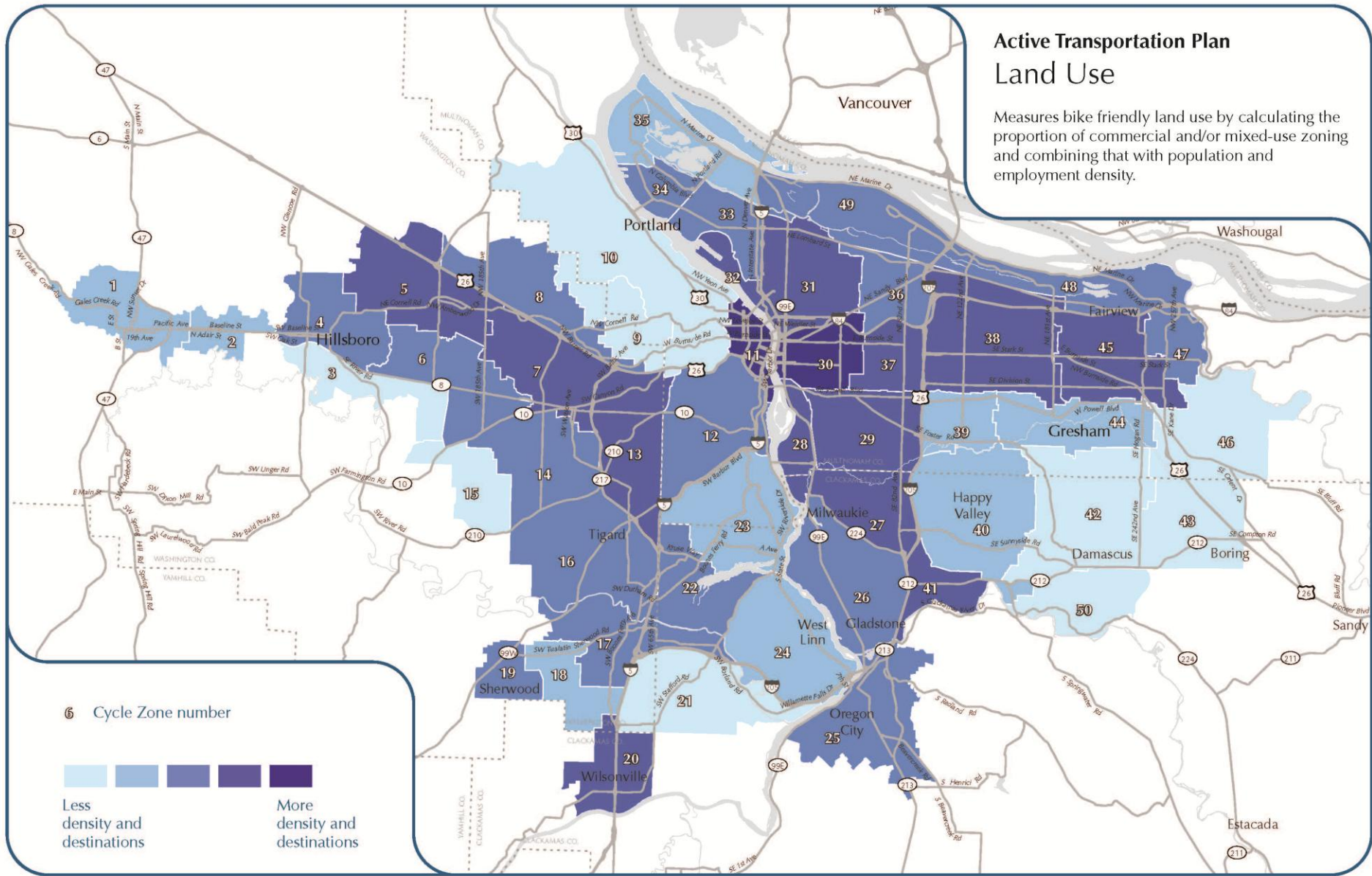
# Existing Conditions



# Existing Conditions



# Existing Conditions

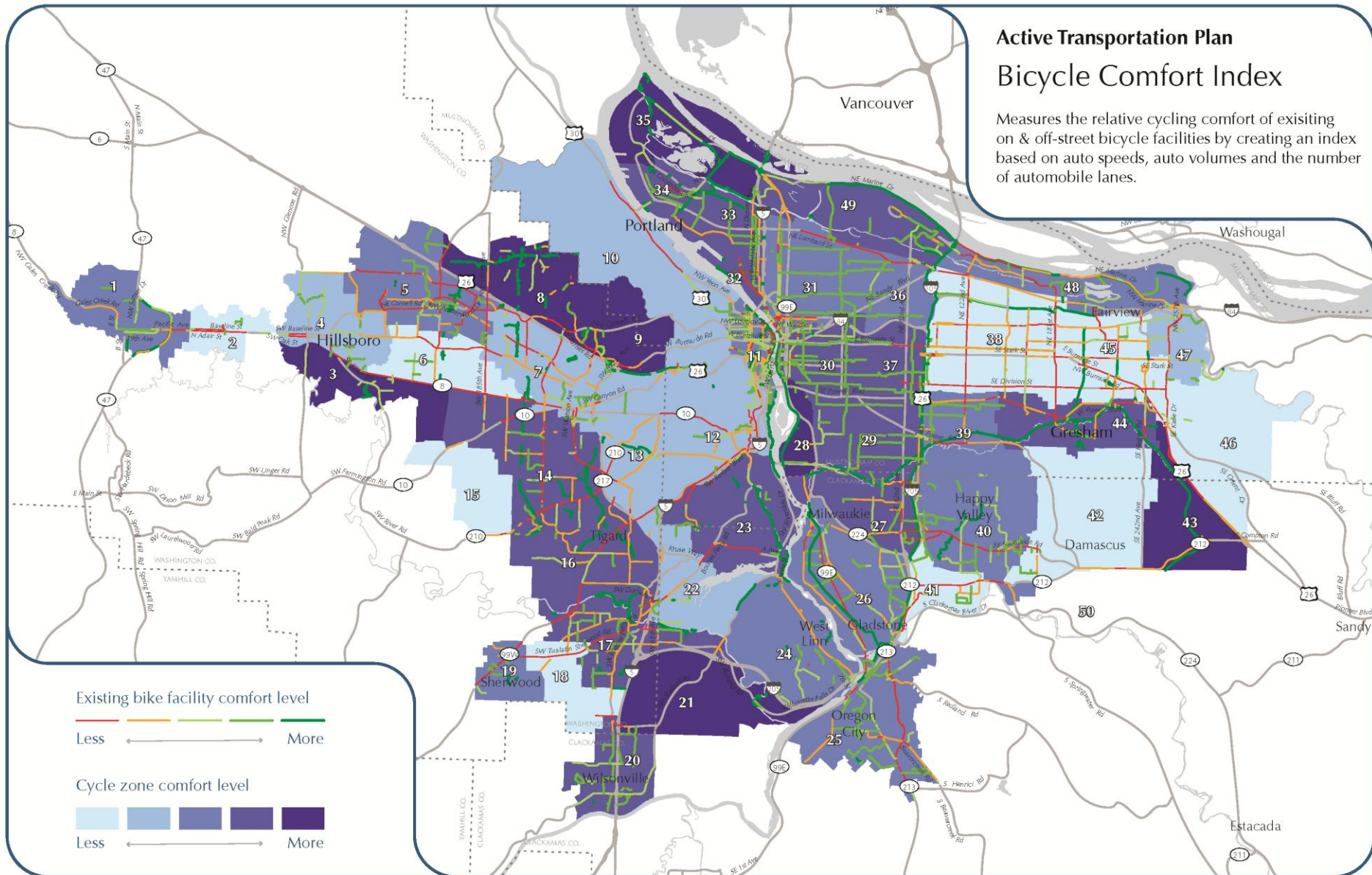


# Existing Conditions

## Active Transportation Plan

## Bicycle Comfort Index

Measures the relative cycling comfort of existing on & off-street bicycle facilities by creating an index based on auto speeds, auto volumes and the number of automobile lanes.



Existing bike facility comfort level

Less —————> More

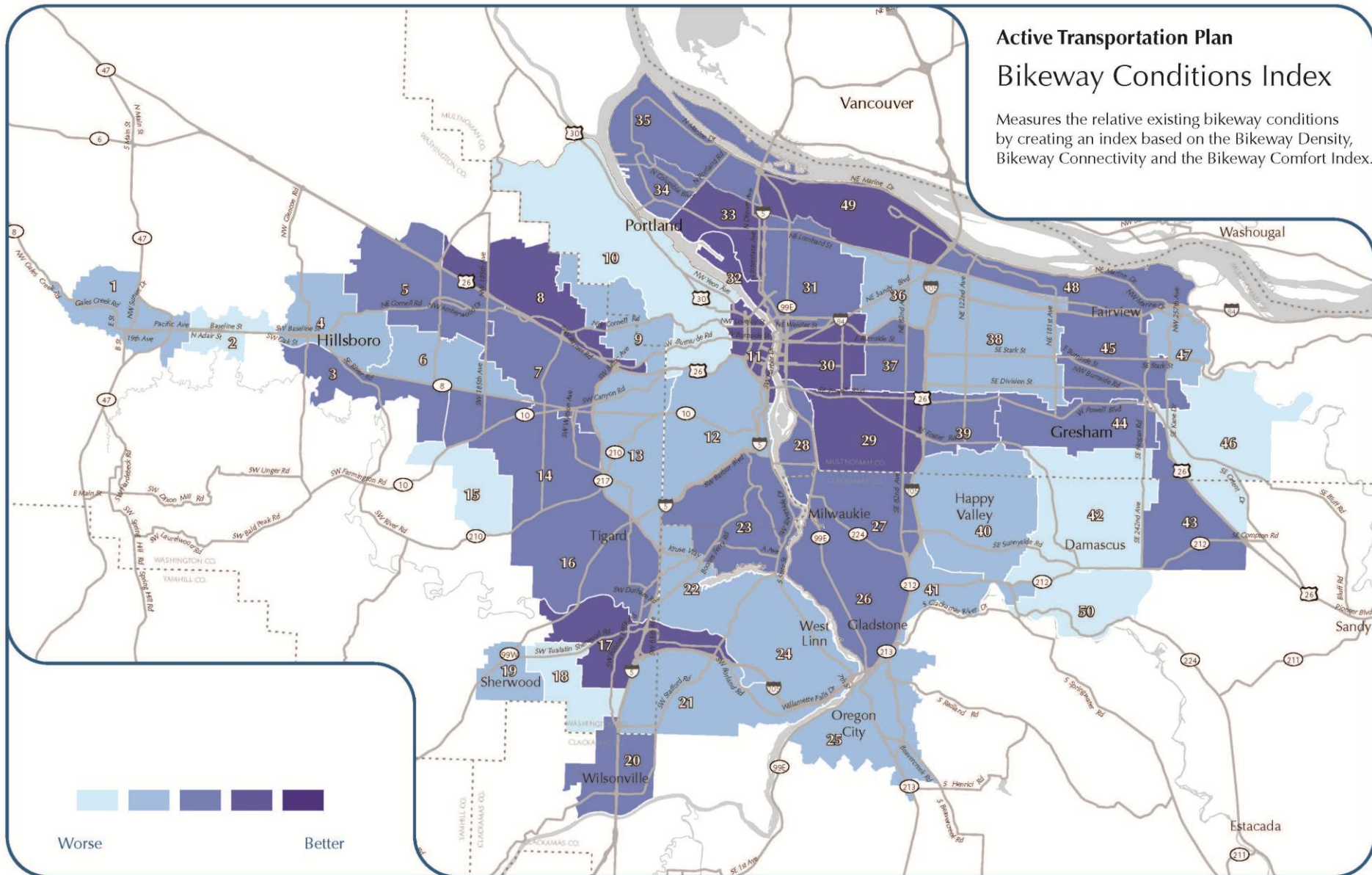
Cycle zone comfort level

Less —————> More

# Existing Conditions

## Active Transportation Plan Bikeway Conditions Index

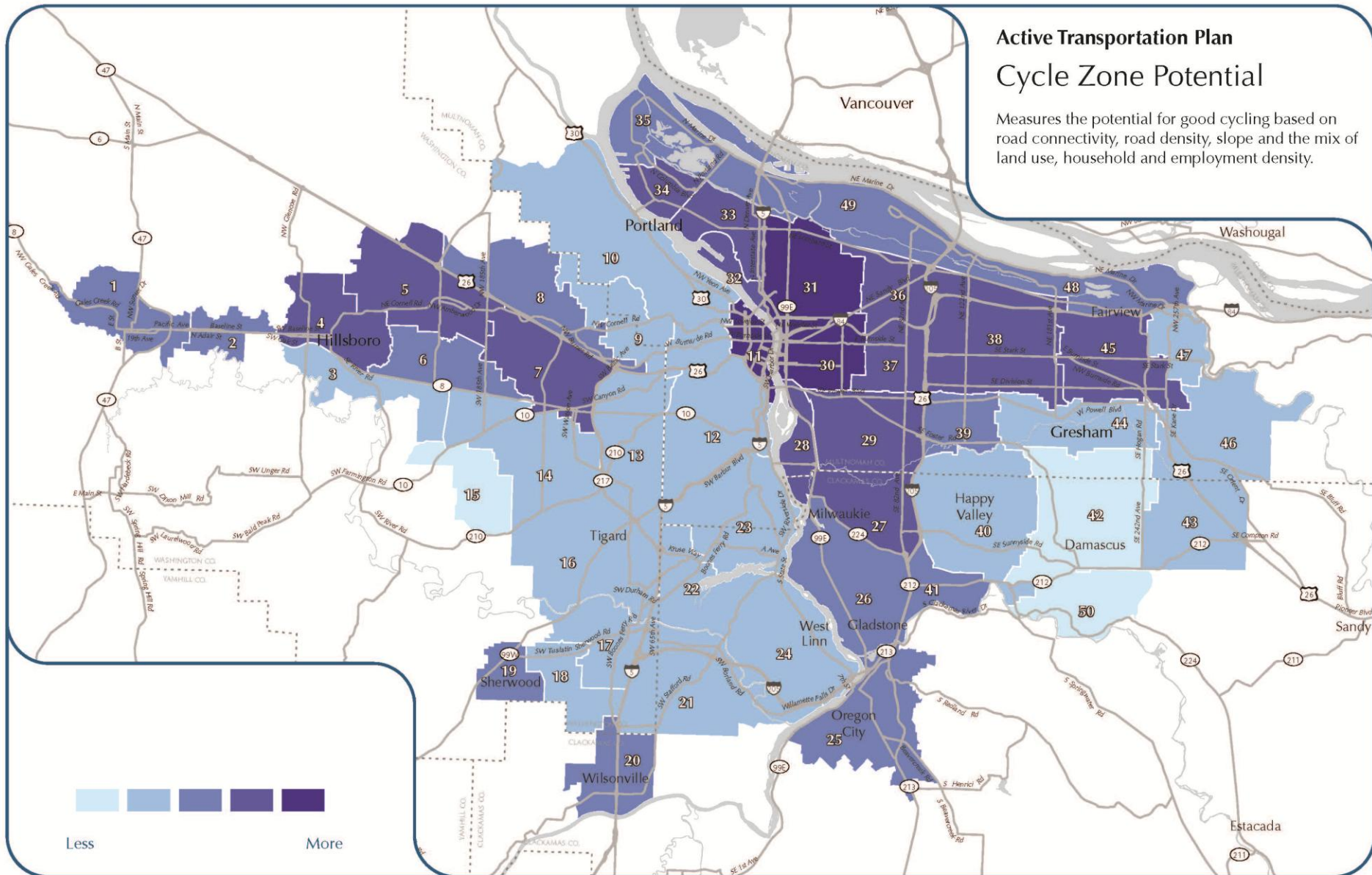
Measures the relative existing bikeway conditions by creating an index based on the Bikeway Density, Bikeway Connectivity and the Bikeway Comfort Index.



# Existing Conditions

## Active Transportation Plan Cycle Zone Potential

Measures the potential for good cycling based on road connectivity, road density, slope and the mix of land use, household and employment density.

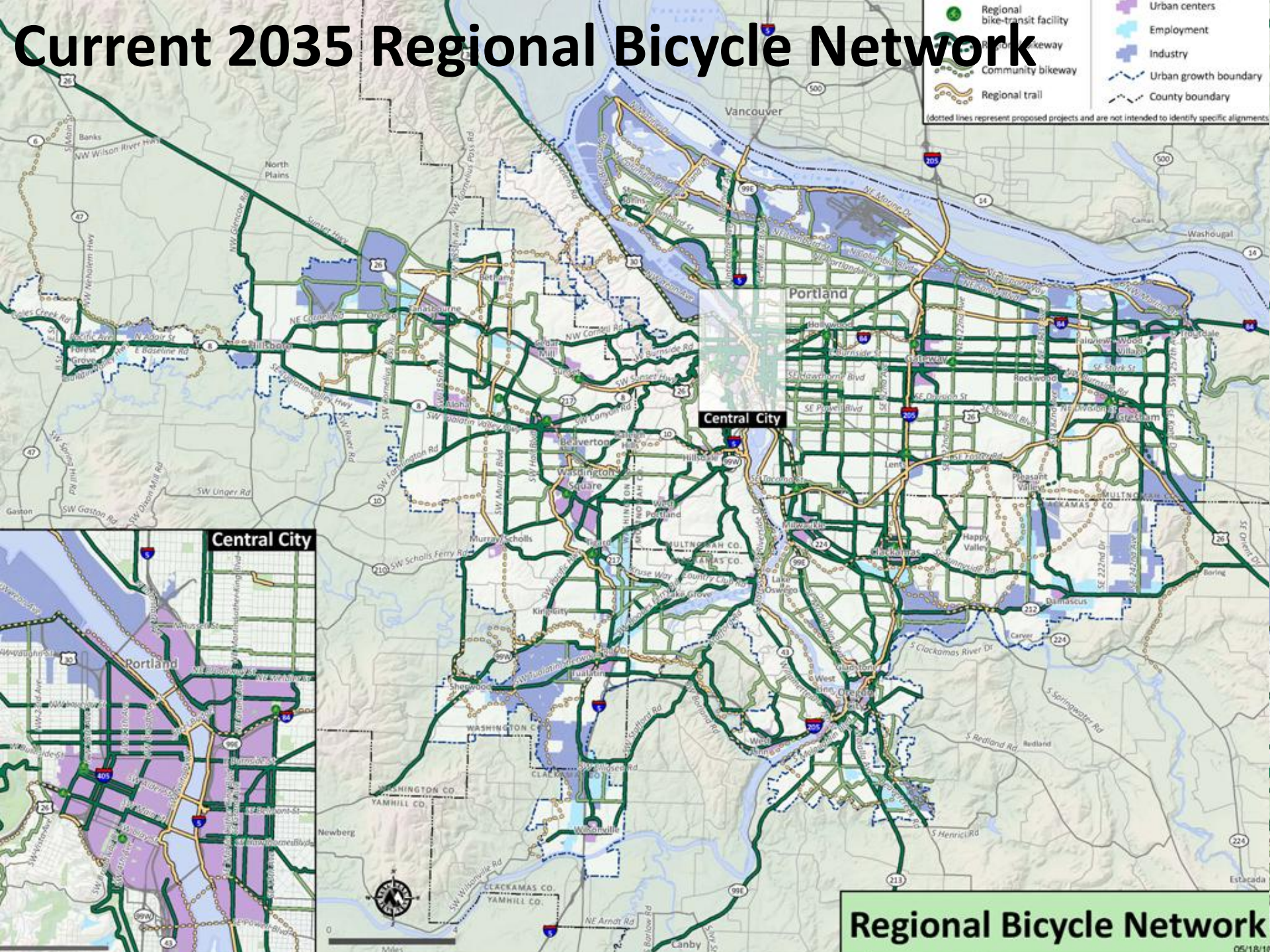




# Current 2035 Regional Bicycle Network

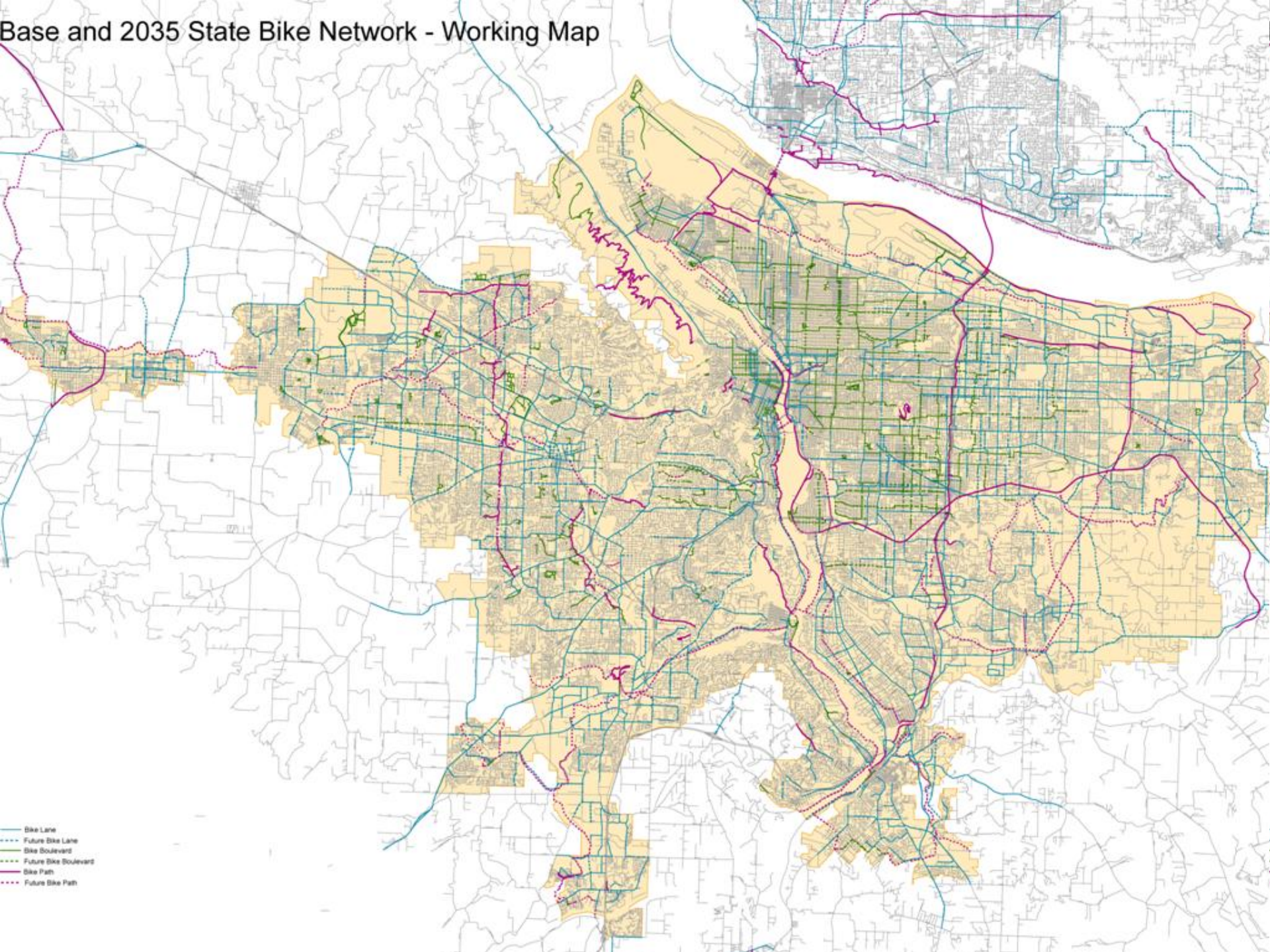
	Regional bike-transit facility		Urban centers
	Regional bikeway		Employment
	Community bikeway		Industry
	Regional trail		Urban growth boundary
			County boundary

(dotted lines represent proposed projects and are not intended to identify specific alignments)

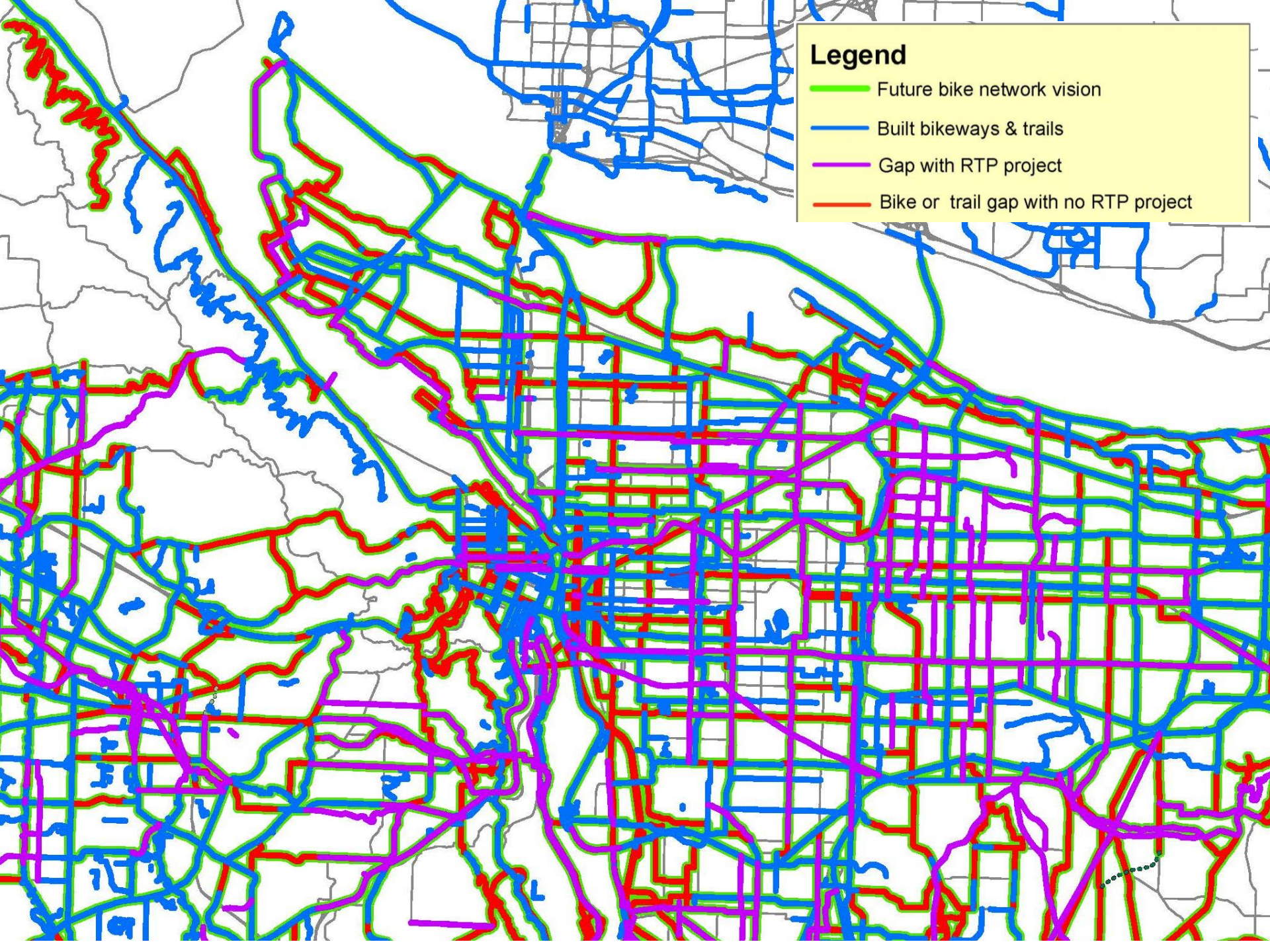


**Regional Bicycle Network**

# Base and 2035 State Bike Network - Working Map



- Bike Lane
- - - Future Bike Lane
- Bike Boulevard
- - - Future Bike Boulevard
- Bike Path
- - - Future Bike Path



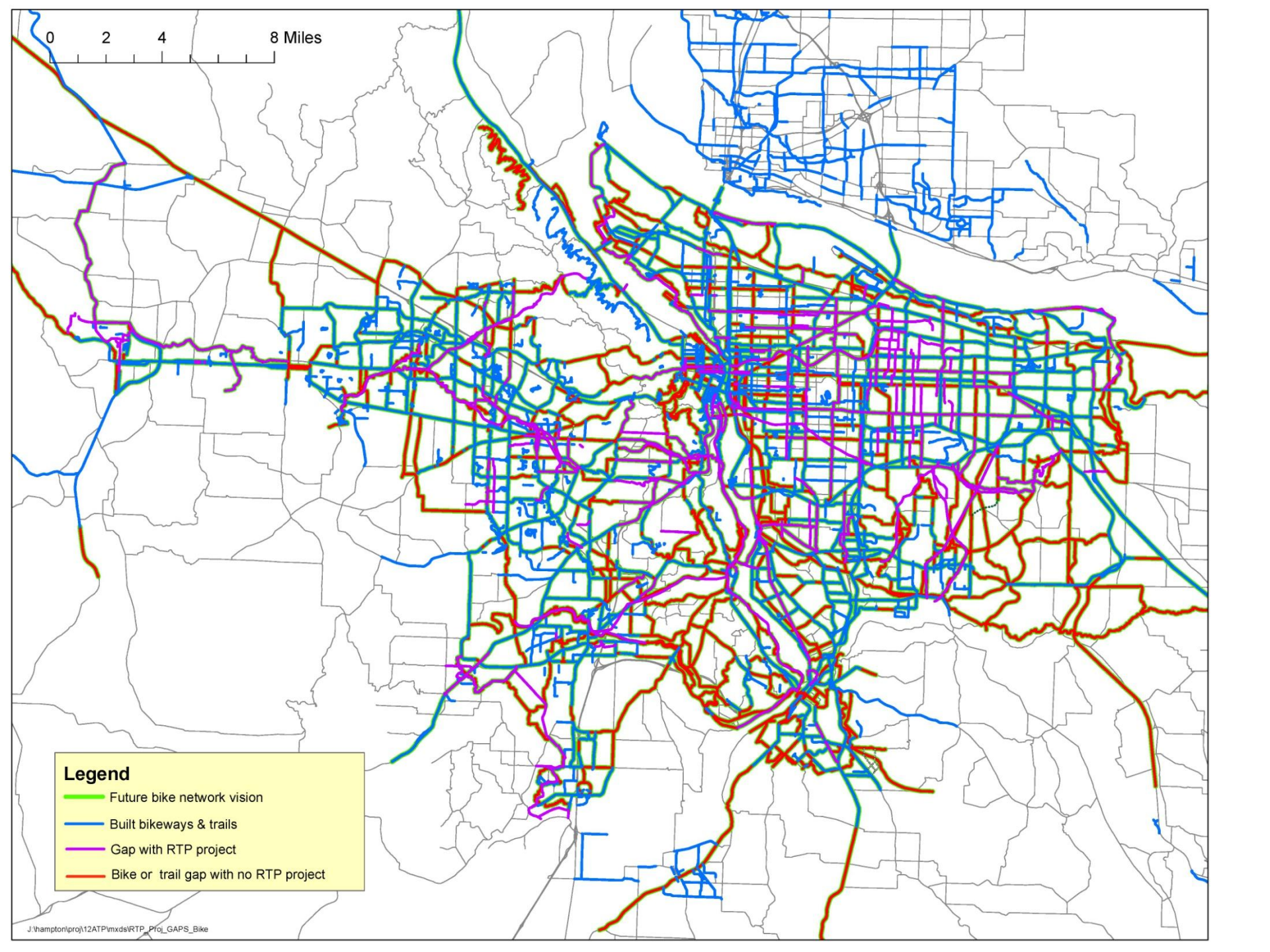
### Legend

- Future bike network vision
- Built bikeways & trails
- Gap with RTP project
- Bike or trail gap with no RTP project

0 2 4 8 Miles

**Legend**

- Future bike network vision
- Built bikeways & trails
- Gap with RTP project
- Bike or trail gap with no RTP project



# Regional Bicycle Network Concepts/Regional Bicycle Parkways



# Principles for the Regional AT Network

1. Integrated and connected.
2. Direct, complete, intuitive, easy-to-use accessible.
3. Safe and comfortable for people of all ages and abilities
4. Attractive and enjoyable.
5. Integrated with nature, context sensitive.
6. Relieves strain on other transportation systems.
7. Equitable access.
8. Data driven, high return on investment.
9. Implements goals, plans and targets.

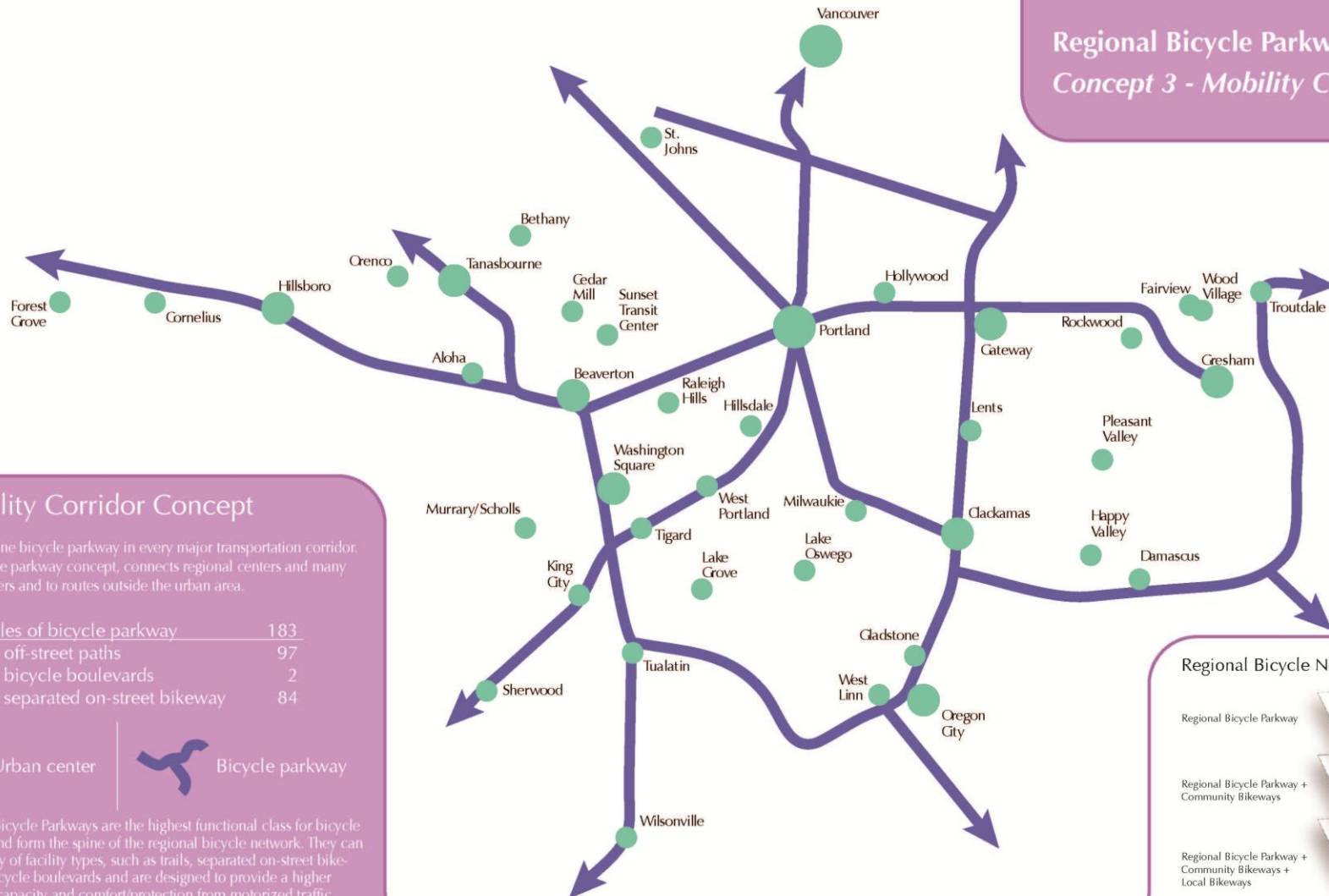
# Evaluation Criteria

1. **Access.** How well does the network improve access to destinations?
2. **Safety.** How well does the network make it safer to walk and ride a bike for all users, regardless of age and ability?
3. **Equity.** How well does the network increase access low income, minority, disabled, non-English speaking, youth and elderly populations?
4. **Increased activity.** By how much does the network increase the number of trips made by walking and bicycling?

# Network Concepts

## Active Transportation Plan

### Regional Bicycle Parkways Concept 3 - Mobility Corridors



### Mobility Corridor Concept

Provides one bicycle parkway in every major transportation corridor. Least dense parkway concept, connects regional centers and many town centers and to routes outside the urban area.

Total miles of bicycle parkway	183
miles of off-street paths	97
miles of bicycle boulevards	2
miles of separated on-street bikeway	84



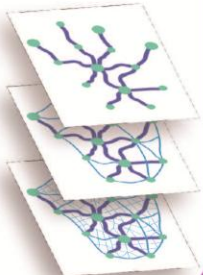
Regional Bicycle Parkways are the highest functional class for bicycle facilities and form the spine of the regional bicycle network. They can be a variety of facility types, such as trails, separated on-street bikeways or bicycle boulevards and are designed to provide a higher degree of capacity and comfort/protection from motorized traffic compared to an average bicycle lane, trail or boulevard.

### Regional Bicycle Network Concept

Regional Bicycle Parkway

Regional Bicycle Parkway +  
Community Bikeways

Regional Bicycle Parkway +  
Community Bikeways +  
Local Bikeways

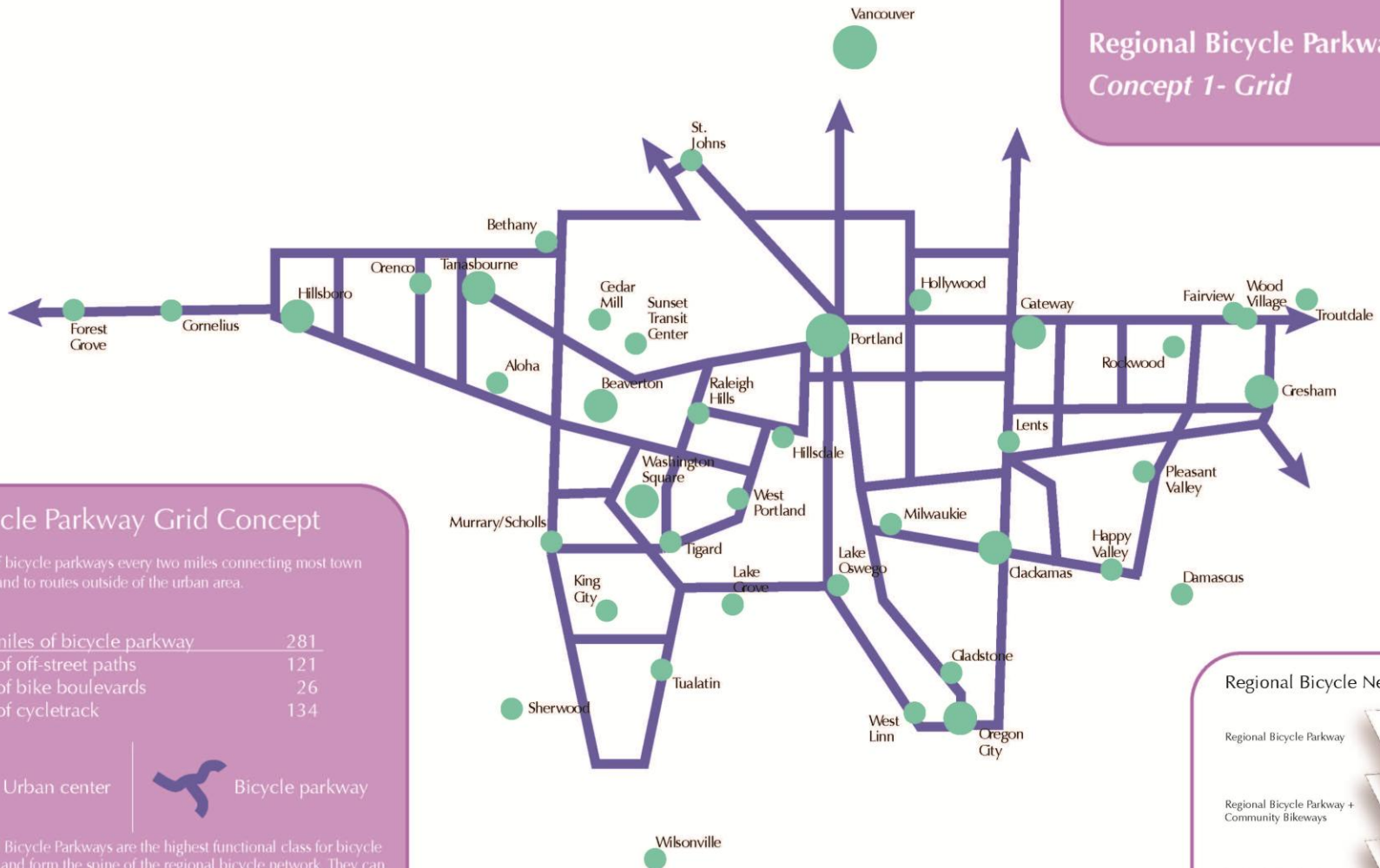




# Network Concepts

## Active Transportation Plan

### Regional Bicycle Parkways Concept 1- Grid



### Bicycle Parkway Grid Concept

A grid of bicycle parkways every two miles connecting most town centers and to routes outside of the urban area.

Total miles of bicycle parkway	281
miles of off-street paths	121
miles of bike boulevards	26
miles of cycletrack	134



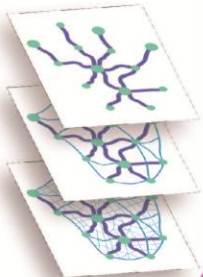
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### Regional Bicycle Network Concept

Regional Bicycle Parkway

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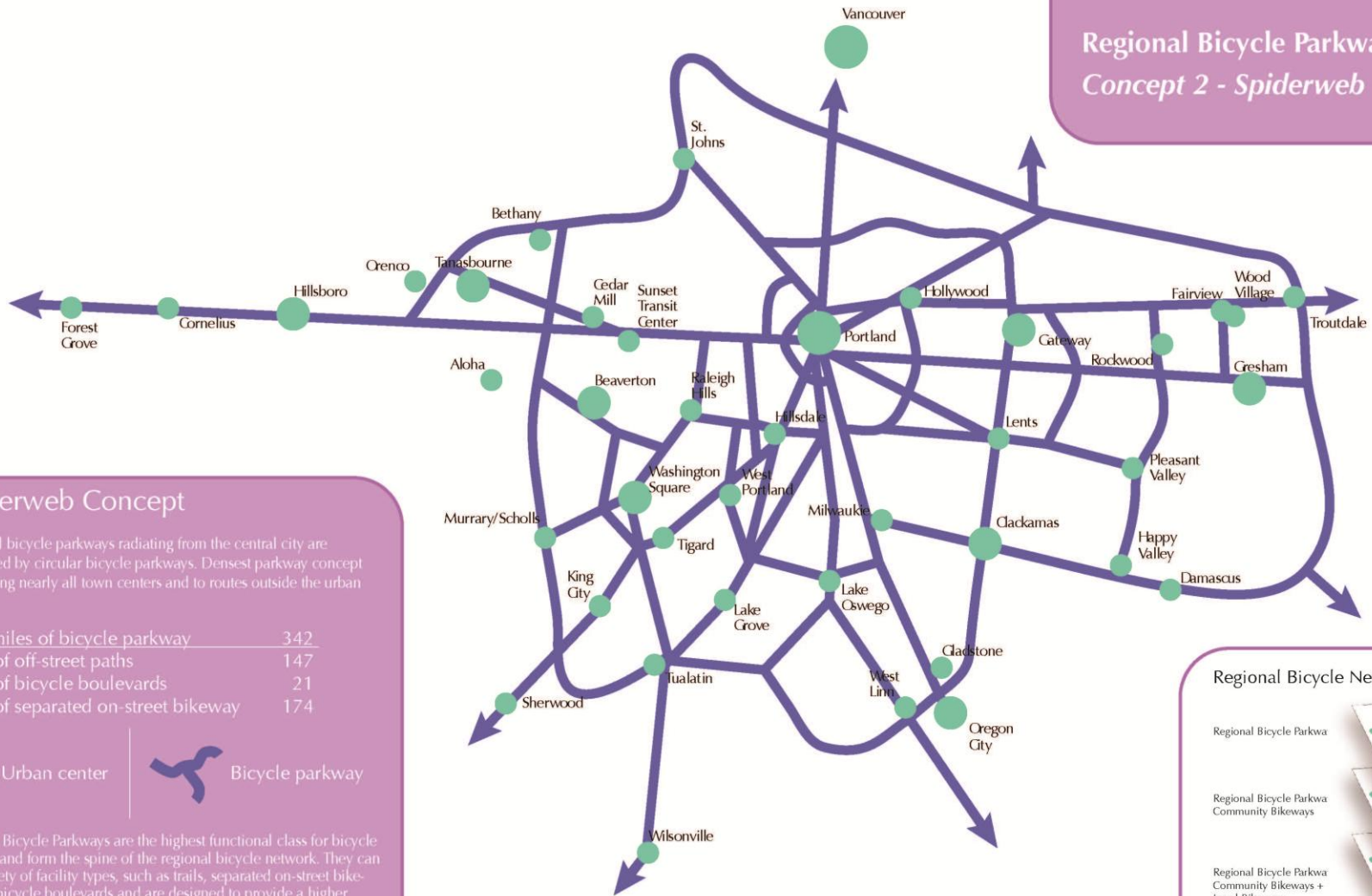
Regional Bicycle Parkway +  
Community Bikeways +  
Local Bikeways



# Network Concepts

Active Transportation Plan

Regional Bicycle Parkways  
*Concept 2 - Spiderweb*



## Spiderweb Concept

Diagonal bicycle parkways radiating from the central city are connected by circular bicycle parkways. Densest parkway concept connecting nearly all town centers and to routes outside the urban area.

Total miles of bicycle parkway	342
miles of off-street paths	147
miles of bicycle boulevards	21
miles of separated on-street bikeway	174



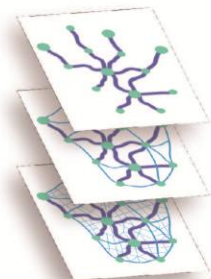
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## Regional Bicycle Network Concept

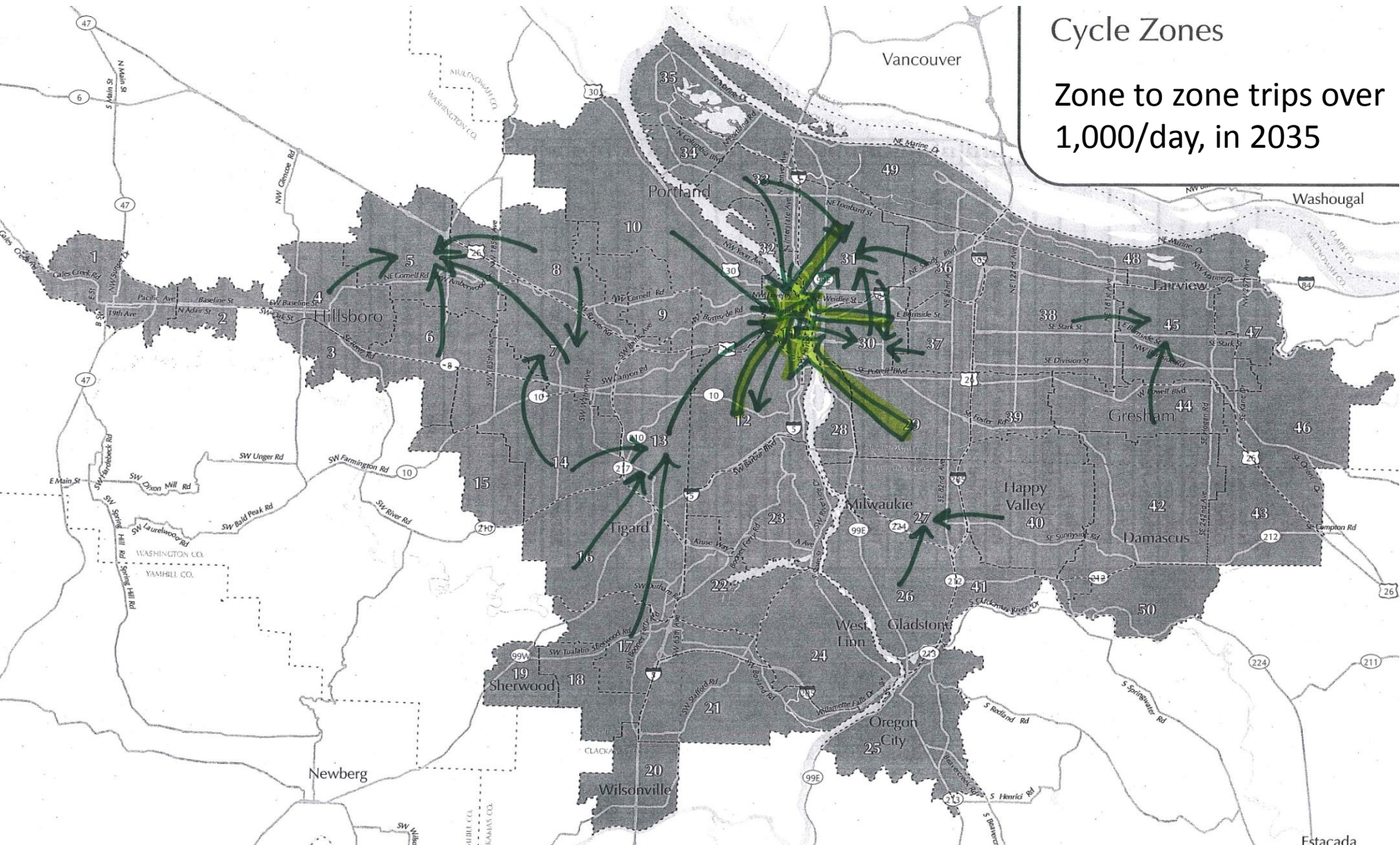
Regional Bicycle Parkway

Regional Bicycle Parkway  
 Community Bikeways

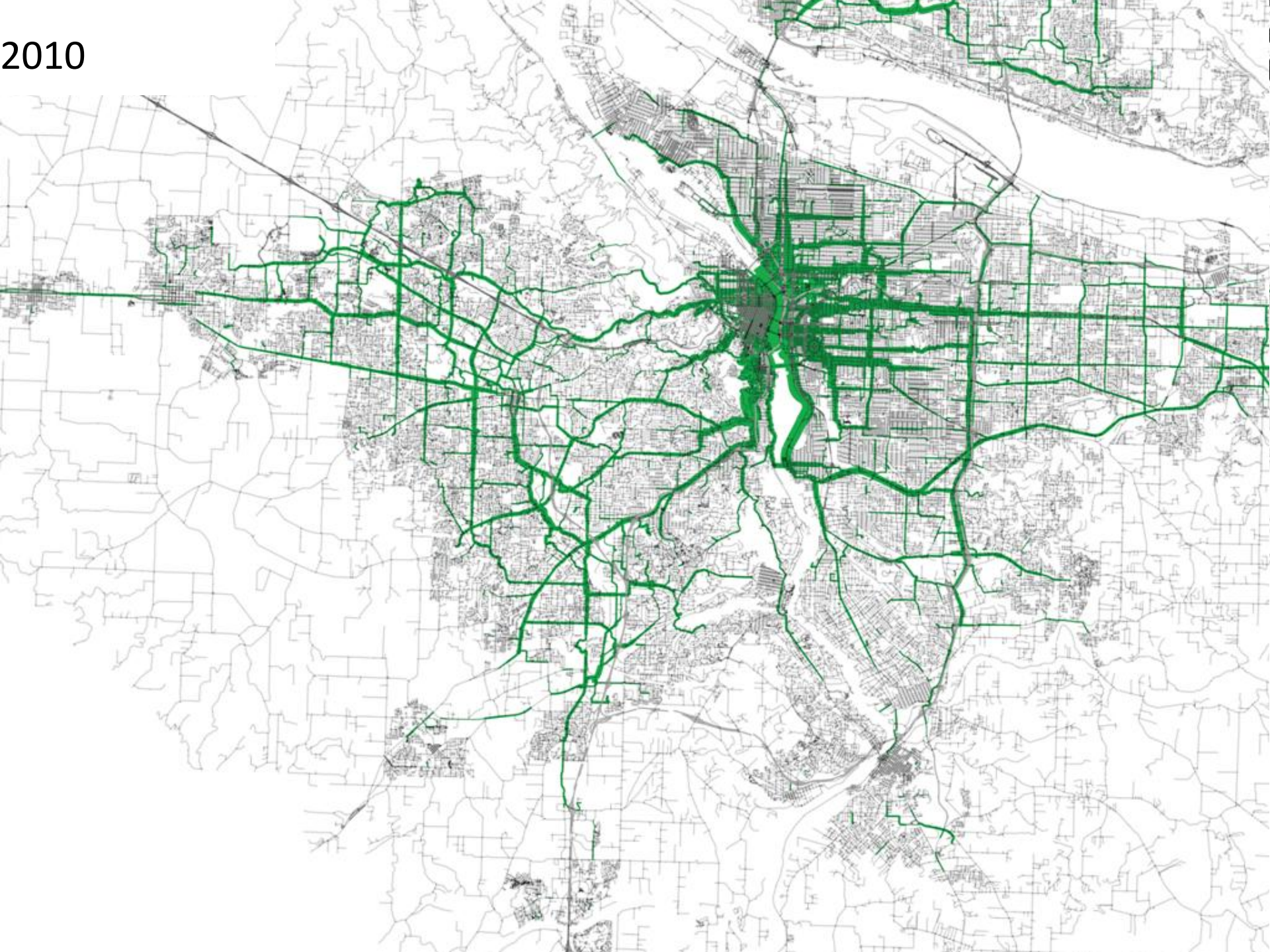
Regional Bicycle Parkway  
 Community Bikeways +  
 Local Bikeways



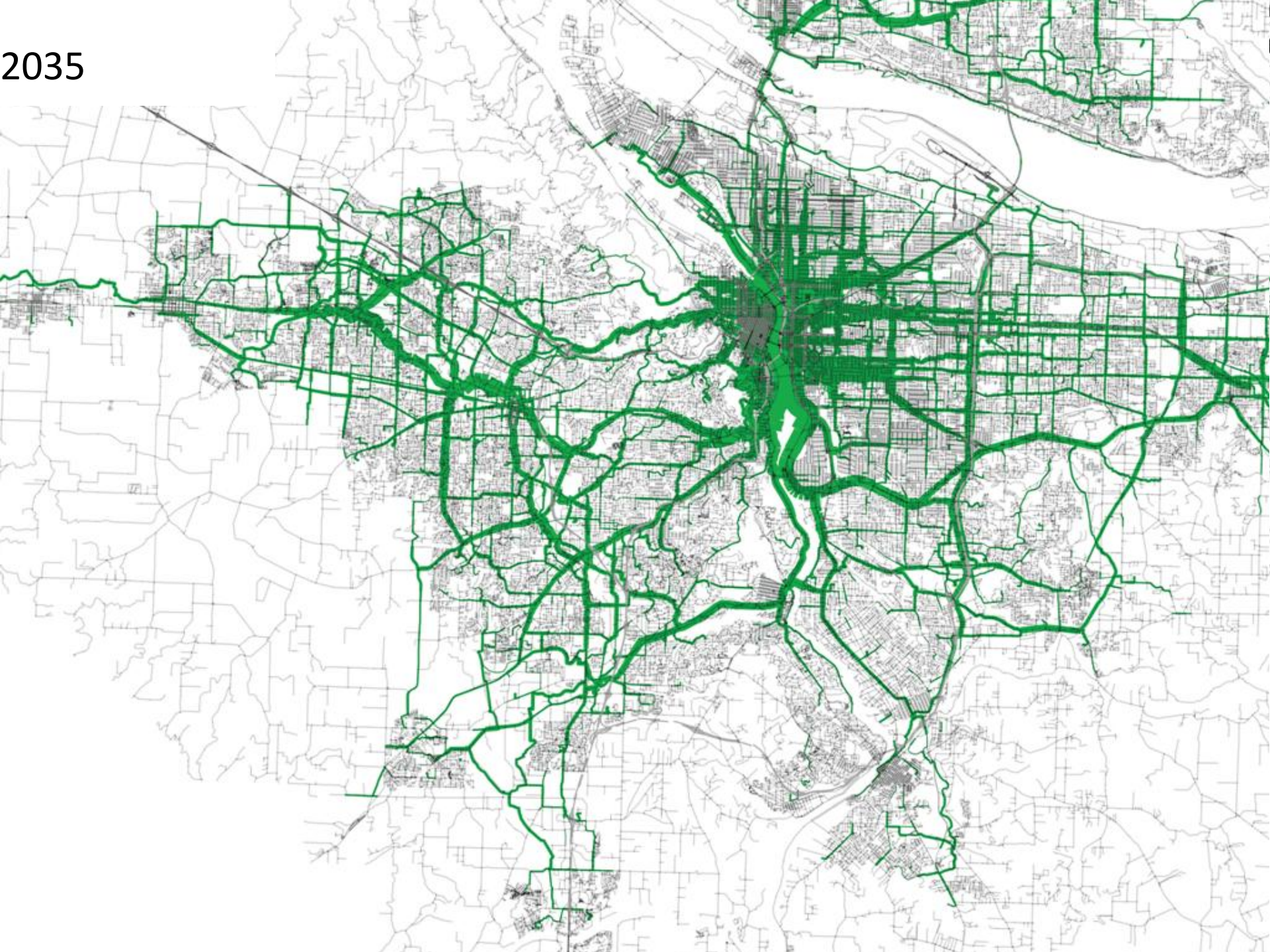
# Evaluation



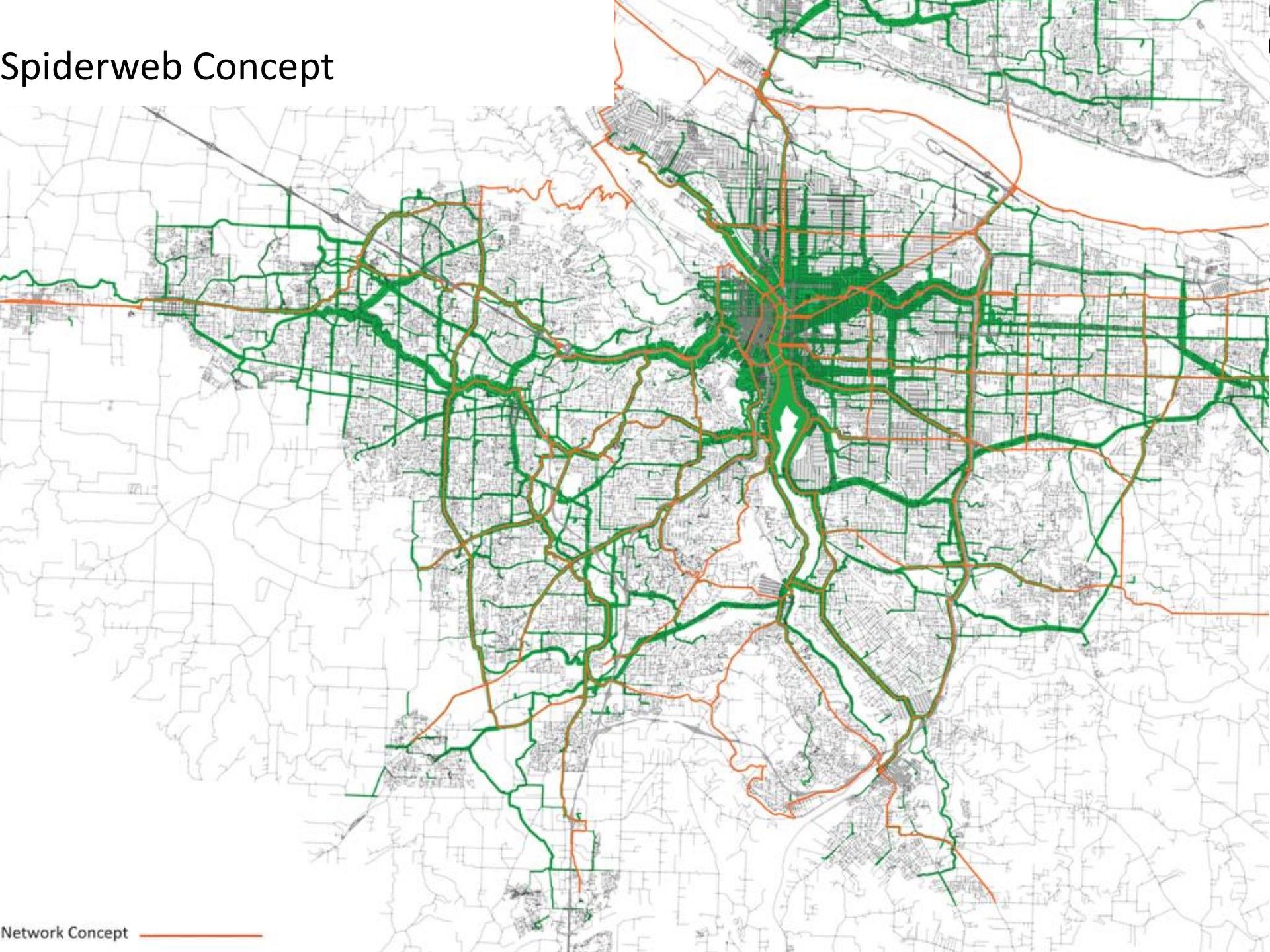
2010



2035

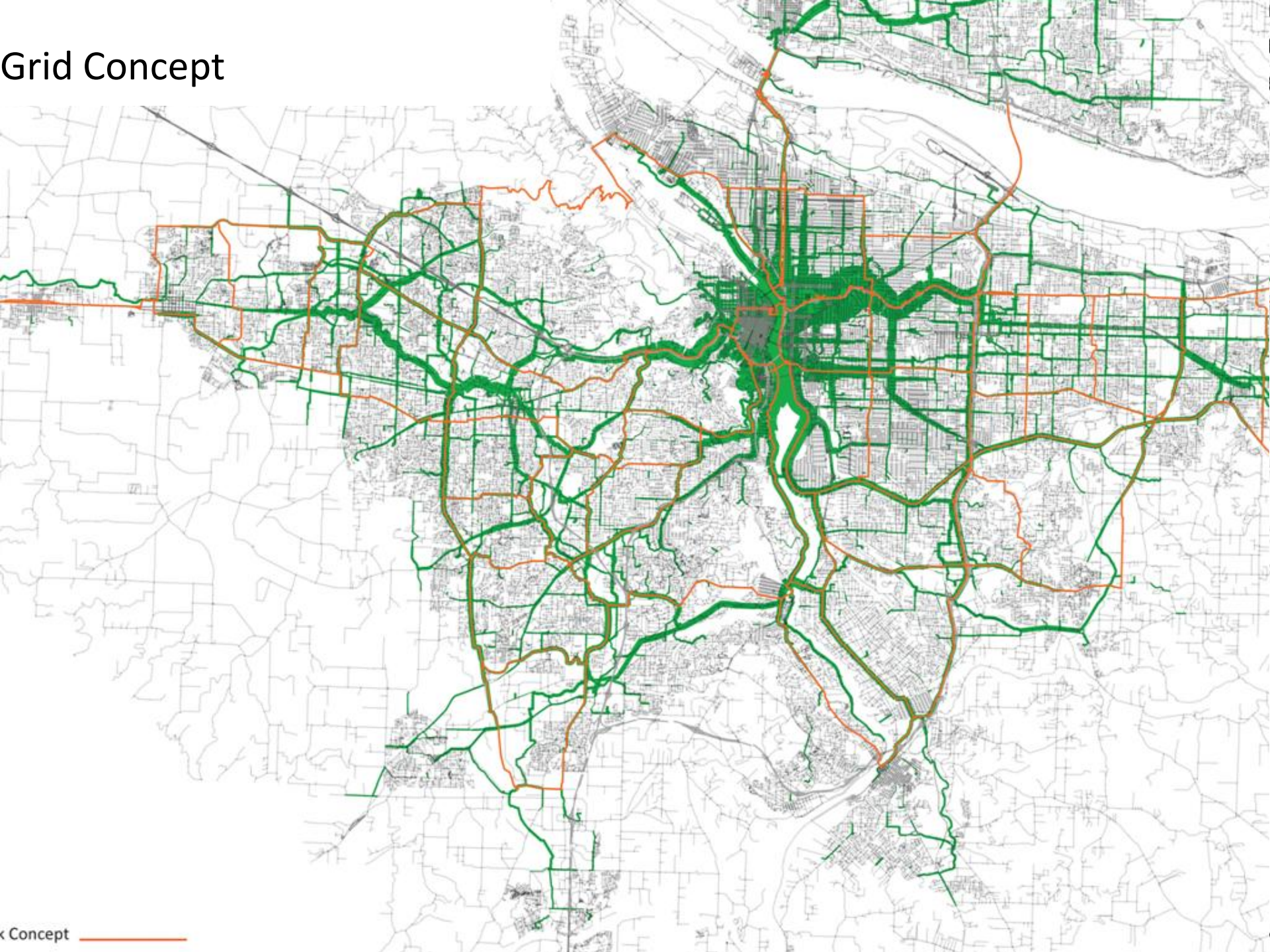


# Spiderweb Concept

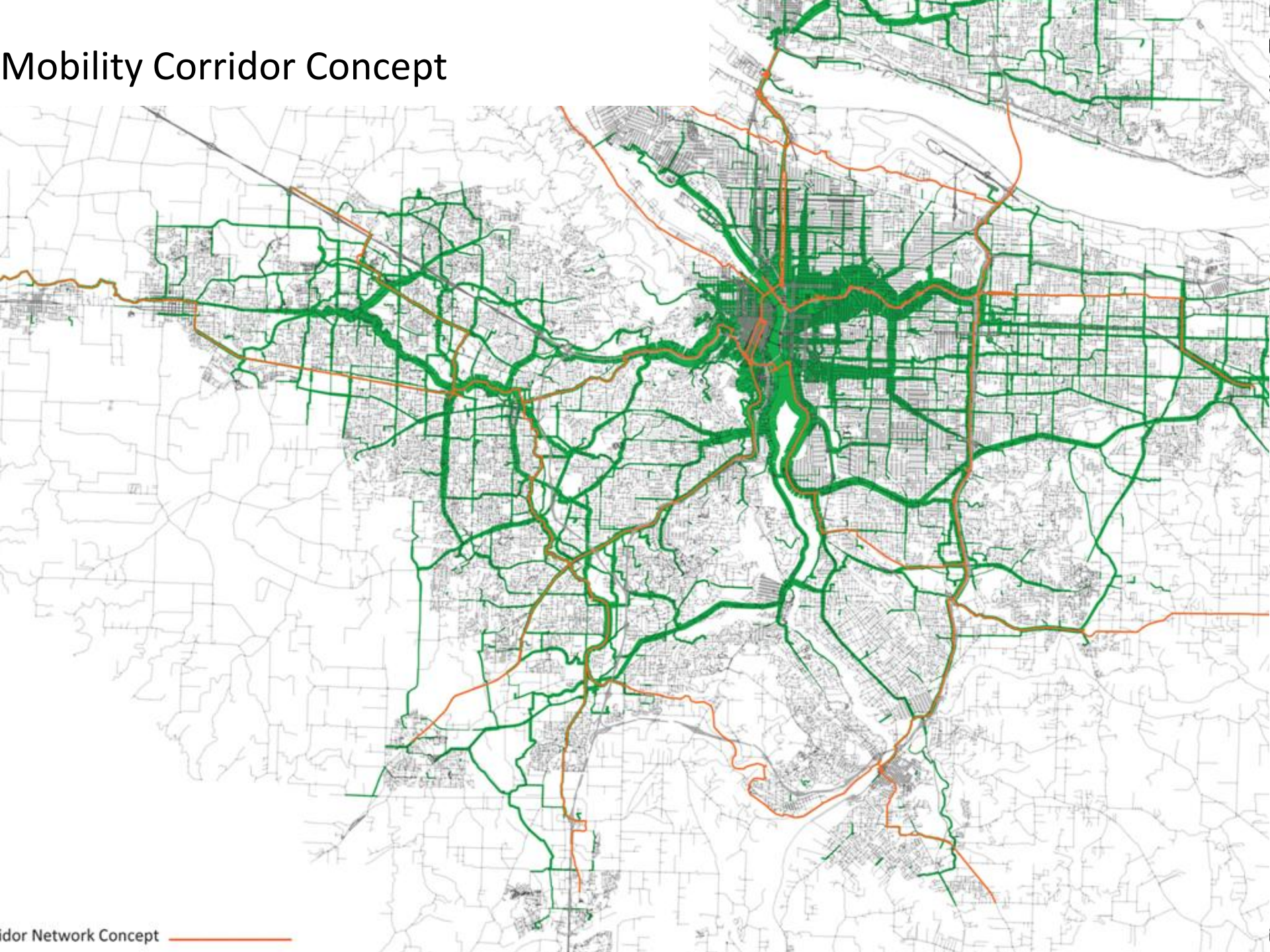


Network Concept 

# Grid Concept



# Mobility Corridor Concept





# Initial findings

- Of the three concepts, the Spiderweb concept shows the most growth in bicycle mode share/trips compared to the 2035 state scenario, for all areas.
- Mobility Corridor concept shows more growth in traditional biking areas of Portland, while the scenarios with more investments (Grid and Spiderweb) show more growth in the suburban areas, along with growth in Portland.

# Initial findings, cont

- Land use is important. Bike routes in dense areas with a lot of destinations show higher volumes of trips even without the addition of improvements other than bike lanes.
- Bicycle miles traveled on bike lanes decreases up to 39% from the 2035 network to the network concepts.
- The network concept facilities have about 2.5 times more bike traffic than the average bike facility.

# Initial findings, cont

- Diagonal routes show high demand for bicycle travel in all of the scenarios, even with no facilities or only bike lanes.
- Routes on the perimeter of the UGB have substantially lower volumes of bike travel.
- Overall, paths/trails attract trips from other facilities, especially parallel routes.

# Initial findings, cont

- The mobility corridor concept has the largest amount of trips per mile of bike parkway, suggesting that it provides the most bang per buck.
- Portland's central city area and parts of SW, inner SE, NE and North Portland have the highest bicycle mode share and number of bicycle trips in all of the scenarios.

# The ATP will...

- Update policies in the RTP and the RTFP
- Design guidelines for bicycle facilities
- Integrate bicycling, walking, transit networks
- Update pedestrian and bicycle networks/maps
- Identify network of Regional Bicycle Parkways
- Add/recommended projects to RTP
- Prioritize projects for investment
- Recommend strategies for implementation

# Upcoming milestones

May 9: Open house, 6-8 p.m. @ Metro

June: Overview of plan with Metro Policy Advisory Committees and Metro Council

July-June 2014: Update of RTP and project list

