Metro | *Agenda*

Meeting:	ATP Stakeholder Advisory Committee meeting
Date:	Thursday, Oct. 18, 2012
Time:	3-5 p.m.
Place:	Room 401, Metro, 600 NE Grand Ave., Portland, 97232
Purpose:	Reach agreement on a set of principles for the regional active transportation network and a set of criteria for evaluating alternative active transportation networks. Provide guidance on the proposed approaches for developing a set of alternative bicycle and pedestrian active transportation network concepts.

3:00   Meeting overview and objectives

3:10   Principles discussion
Refer to "Principles for Regional Active Transportation Network"
- Topic focus: Use of trails for transportation discussion

Trails are used for a variety purposes – getting to work, school, exercise, recreation. Trails can be a destination themselves. Many of the regional trails are also part of the regional transportation network. To be used as functional transportation facilities for utilitarian trips, trails need to be accessible for use during all times of day/weather and accommodate a variety of uses. Discuss including a principle on accessibility for all weather/time of day for AT facilities.

3:50   Criteria discussion
Refer to "Regional Active Transportation Network Concept Evaluation Criteria"

4:20   Introduction to Bicycle and Pedestrian Network Concepts
Refer to Bicycle and Pedestrian Network Concept memos

5:00   Adjourn

Next SAC meeting dates:
3:00-5:00, Thursday, Nov 15
3:00-5:00, Thursday Jan. 10

SAC Workgroups meeting dates:
First week of November, date TBD

Metro | *Memo*

Date:	Oct. 18, 2012
To:	ATP Stakeholder Advisory Committee (SAC)
From:	Lake McTighe, Metro
Subject:	ATP SAC meeting on network principles, evaluation criteria and concepts

The objective of the October 18 ATP Stakeholder Advisory Meeting is for the SAC to reach agreement on a set of principles for the regional active transportation network and a set of criteria for evaluating alternative active transportation networks, and to provide guidance on the proposed approaches for developing a set of alternative bicycle and pedestrian active transportation network concepts.

The following are attached to this memo:
1. Meeting agenda
2. Draft proposed principles and criteria
3. Regional bicycle network concepts memo
4. Regional pedestrian network concepts memo
5. Meeting notes from Sept. 27 Workgroup on principles and criteria

The draft **network concepts** will explore both a variety of network structures and approaches. The **principles** will apply to all of the network concepts. These are elements that any network concept should have, e.g. safety. In addition to this set of principles, each individual concept will provide a unique approach to the active transportation network. The **criteria** will be used to evaluate the different network concepts in order to compare them and better understand the benefits and tradeoffs of each concept.

Next steps
- Oct. 25- Active Transportation Workshop at Intertwine Summit (2 p.m., Oregon Zoo) – participants will provide feedback on principles and criteria (outcomes) as part of the workshop
- Early November, SAC Workgroup(s) to develop bicycle and pedestrian network concepts
- November or early December –Open house on network concepts
- December-January – evaluate concepts using criteria
- January – Feb –results of evaluation

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First week of November, date TBD

Principles for the Regional Active Transportation Network

- ✓ Create a network that makes walking and cycling easy for all types of trips.
- ✓ Create seamless connections between cycling, walking, transit and regional destinations.
- ✓ Create a network of routes that are direct, accessible, easy-to-use and intuitive.
- ✓ Create a network that is safe and comfortable for people of all ages and abilities to use.
- ✓ Provide buffers from traffic on high volume and speed on-street routes.
- ✓ Create routes that are attractive and where travel is enjoyable.
- ✓ Integrate routes with natural systems at all scales.
- ✓ Create a network that relieves strain on other transportation systems.
- ✓ Design routes sensitive to the land use and environmental context.
- ✓ Create a network that increases access for low income and minority populations.
- ✓ Network development is data driven.

Regional Active Transportation Network Evaluation Criteria

Criteria	What is measured
Access. Does the network improve access to destinations?	Using GIS, average distance for residential and employment populations to civic (e.g. schools, social services), transit, financial, food, healthcare, and retail destinations based on a ½ mile average walking distance for pedestrians and a 3 mile average bicycling distance for bicyclists. Improve access (or lack of access) is measured by removal of barriers (busy, wide streets) and gaps in the system (no sidewalks, no bridge).
Safety. Does the network make it safer to walk and ride a bike for all users, regardless of age and ability?	Increase in the number and miles of separated paths, sidewalks, bike lanes (buffered for high speed/volume roads), bike blvds and improved crossings added to roads with high traffic speeds and volumes and identified barriers.
Equity. Does the network increase access for low income and minority populations?	Improved access to destinations for social equity populations, using access measure described above and data from the 2014-15 RFFA process.
Increased activity. Does the network increase the number of people walking and bicycling and increase the length of walking and bicycling trips?	Using Metro transportation modeling tools, change in mode share for all modes and change in the number of bicycle and pedestrian miles traveled. Increased activity will be used to estimate increased health benefits, health care cost savings and GHG emission reductions.
Cost. What is the estimated cost of the network concept?	Planning level cost estimates made with generalized contingency percentages and general cost assumptions calculated by mile of new facilities.

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Metro | Memo

DRAFT

Date: Thursday, October 10, 2012

To: Regional Active Transportation Plan - Stakeholder Advisory Committee

From: John Mermin, Senior Transportation Planner

Subject: Active Transportation Plan – Bicycle network concepts

Purpose

The intent of this memo is to provide a snapshot of different regional bicycle network concepts to help guide the Regional Active Transportation Plan (ATP). The ATP provides the Principal Regional Active Transportation System, comprised of overlapping and interconnected principal pedestrian, bicycle and transit networks.

Background

The 2035 Regional Transportation plan (RTP) included a new policy concept for the regional bicycle network, the "Regional Bicycle Parkway." These routes are intended to form the backbone of the regional bicycle network, providing for direct and efficient travel with minimal delays in different urban environments and to destinations outside the region. The RTP introduced the concept but did not designate specific routes. It deferred to a future Active Transportation Plan to further develop the concept, including desired spacing, designation of routes and prioritization for implementation. Key experiential aspects that the bicycle parkways should embody:

- Comfort and safety provided by protection from motorized traffic
- Large volumes of cyclists traveling efficiently with minimal delays
- A green environment (some will already be green, while others will be made greener as part of bicycle parkway development, e.g. adding street trees, plantings or bioswales along the route)

The experience of the cyclist will be optimized to such a high level that people will clearly know when they are riding on a Regional Bicycle Parkway. The specific design of a bicycle parkway will vary depending on the land use context within which it passes through. The facility could be designed as an off-street trail along a stream or rail corridor, a cycle track along a main street or town center, or a bicycle boulevard through a residential neighborhood. Priority treatments will be given to cyclists (e.g. signal timing/priority) using the bicycle parkway when they intersect other transportation facilities, and connections to/from other types of bicycle routes will be intuitive.

The bicycle parkway concept is consistent with other approaches around the world to develop "bicycle highway / superhighway networks". Assuming that the Stakeholder Advisory Committee believes that this concept is worthwhile and should be developed further, this memo provides examples of three ways to structure a network of bicycle parkways: radial, grid, and spiderweb. Each structure can be modified by applying different thematic approaches – e.g. a focus on connecting to transit, serving every 2040 town center, serving commercial corridors, etc.

Radial Network

Also known as a "hub & spoke" network, this describes a network primarily oriented toward serving the central area within a city or region. This works best in a region with very strong downtown / central city. The examples provided below are from Copenhagen, Denmark and London, England. The City of Portland's original streetcar and interurban rail network was based on this concept, focusing on getting

workers to and from downtown Portland. Today, many of TriMet's frequent service bus routes follow the historic streetcar network and many of Portland's most vital neighborhood centers and main streets are on former streetcar corridors.

Radial example #1 – Copenhagen region - Bicycle superhighways
- Bicycle superhighways: 26 extra-wide (sufficient to overtake other cyclists), segregated bike routes connecting suburbs to center of city quickly and safely
- 20 municipalities involved in planning/funding
- Designed to utilize synchronized traffic lights prioritizing bikes ("green waves") – 12mph and you hit green lights the whole way
- Smooth even surfaces free of leaves, ice, snow
- Dotted with pit stops to pump tires, fix chain, drink water and will include footrests and rails to lean on at traffic lights
- They first made sure the center city was very bike friendly, and are now building the bike highways to get to it, rather than building the highways first and "leaving you in the desert" once you arrive at central city. "In Copenhagen we have first irrigated the desert then built the highway"
- Their first bike highway opened in the Spring of 2012 (10 mile long connection to Albertslund)
- Other Danish cities (Aarhus, Odense, Aalborg) are contemplating similar bike highways
- *Note – the proposed network has recently been expanded to include connecting circulator routes, making it more of a "spiderweb" See bottom image*

Barclays Cycle Superhighways

Indicative Routes Map
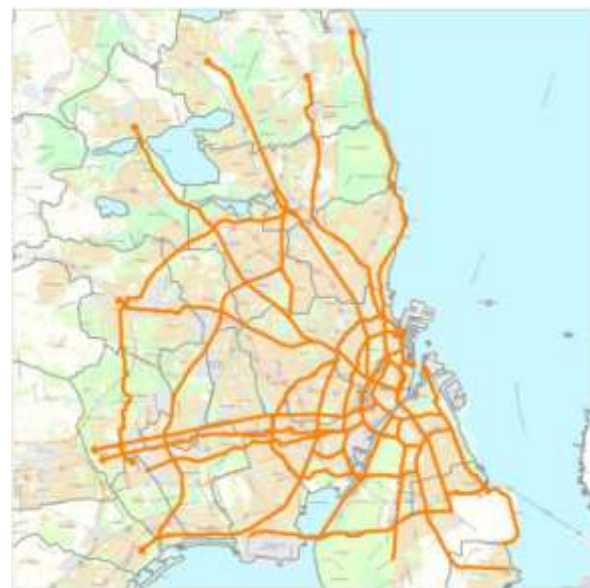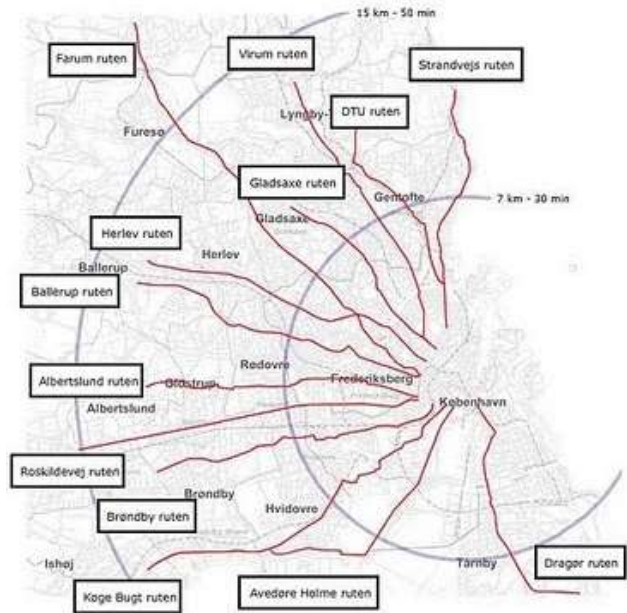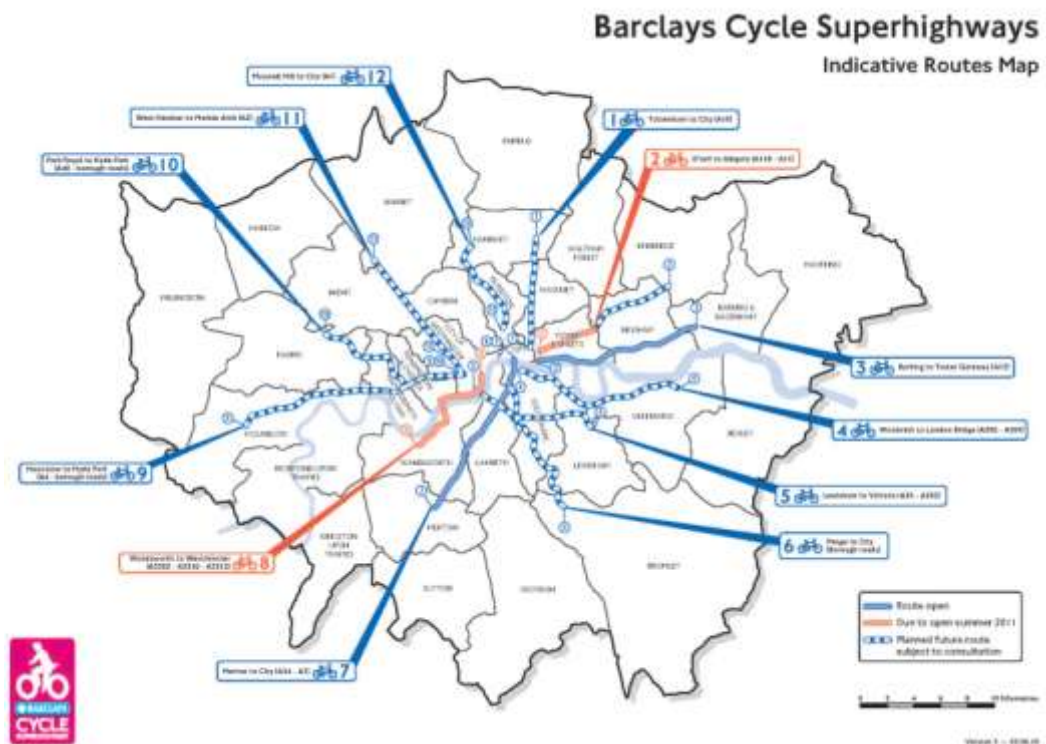
Radial example #2 - London - Barclay Cycle Superhighways

- Connects London's outer boroughs (mini cities/villages that provide most local services) to central London.
- Routes are up to 9-10 miles long, safe, fast, clearly marked, easy to follow (painted blue). They'll include new signs, bike lanes, road markings, new smoother pavement, blind spot visibility mirrors for turning motorists, info about trip time and links to other cycle routes.
- The lanes will be at least 5 ft wide, won't drop at intersections. Advanced stop lines ("bike boxes") will be provided at signals. Auto and bus lanes to be realigned to create more space for bike lanes in some areas
- The City is working with businesses and burroughs to help provide bicycle parking along routes, and training sessions to improve cycling skills and confidence.
- Routes are located on public roads and on some short sections of private land where the landowner has granted permission.
- 12 superhighways are planned. 2 pilot routes were built in July 2010 (both about 8 miles long). 2 more launched in 2011. Remaining 10 routes to be built by end of 2015
- Key part of Mayor's plan to create a cycling revolution in London as outlined in the Mayor's Transport Strategy (2010)
- An evaluation of the two pilot projects found that overall satisfaction is high. The routes have increased cycling (both for existing and new users), decreased travel time, increased travel reliability, and improved the perception of safety. The routes are primarily (75%) used by people commuting to work. Concern was expressed regarding route obstructions (e.g. parked vehicles and pedestrians) and not enough width / separation from vehicle traffic.

Grid Network

A grid provides a logical network for a moderately dense region with many activity centers outside of the downtown. In an ideal grid network, everyone is within a short distance of one north-south line and one east-west line. One can get from anywhere to anywhere, with one connection, while following a reasonably direct path.

Grid example - Los Angeles – Backbone bikeway network

- 719 mile network connecting major destinations along arterial streets.
- "Rapid, safe intra/inter-city transit"
- Routes spaced 3 - 5 miles apart
- Complemented by 825-mile Neighborhood network (low-traffic, low speed streets) and 139-mile Green network (off-street bike and shared-use paths)

LA's Best Bike Plan - Backbone Bikeway Network

Spiderweb network

A spiderweb combines a radial with a grid network, similar to many of the ring-city highway plans developed in the 1960s. Serving the central city is the main function of this type of network with circular connections to other radial lines. Since the connections are not as direct, this is not as efficient for serving places outside of the CBD as a traditional grid network. You may be able to make a reasonably direct trip between non-downtown points by using one of the circle lines in combination with one of the radial lines. But it won't be as direct as it would be in a standard grid. Similar to a radial pattern, the spider web is only efficient if the downtown is predominant enough to justify the huge amount of routes converging there.
The spider web also has problems further out, because as the radial lines get further and further apart the grid effect gets weaker and weaker.
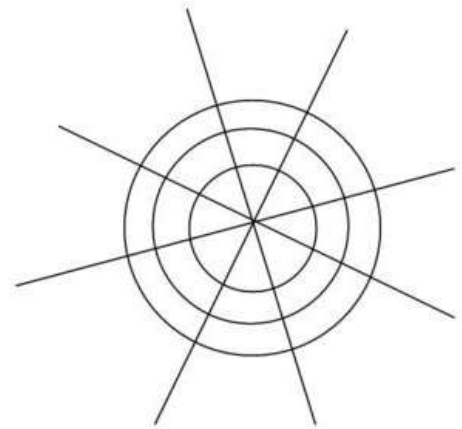
Spiderweb example #1 – Paris, France

- Large scale, accelerated increase in bikeways from 273 miles in 2010 to 435 miles in 2014.
- Two major axes — one east-west and one north-south will be designed for heavy bike traffic.
- One thousand new bike parking spaces will be added to the city's streets every year, and bike boxes, allowing cyclists to get priority treatment at intersections, will be painted in across the city.

Spiderweb example #2 – Cycling Superhighway
sision of Rachel Smith – Sustainable transport expert
in Western Australia.

- After she visited 21 'Cycling Cities' around
  the world she found that the common
  features in these cities were
    - 12 ft of usable cycling space in either
      direction to allow two cyclists to
      cycle side by side and providing
      enough space for a faster moving
      cyclist to overtake a slower moving
      cyclist.
    - Completely separated from parked
      and moving vehicles
    - Safe enough for everyone to use
      regardless of age, physical abilities
      or cycling skills

Issues for further Considerations
- Cycle Zone analysis finding, e.g. topography
- Structure of existing street network – grid like on eastside, radial on west side
- Existing travel patterns / strategic areas of high demand (e.g. where are the majority of short
  auto trips taking place)
- Priorities identified elsewhere – e.g. Portland Bicycle Master Plan – "Major City bikeways", RTP
  bicycle network map, Active transportation demonstration projects
- Existing routes with high usage
- Routes that serve as convergence points of several other routes, i.e. to cross barriers - rivers,
  freeways)
- Geographic Equity
- Land use - density and destinations
- Availability of railroad corridors
- Potential themes – nature access, commercial corridors/orphan highways, connecting centers
- Overall bike network density increases with increased population density

Density of overall bicycle network (includes all bikeways – not just bike highways)

City	Bikeway density (miles of bikeways / sq mile)	Population density	Population
Portland	2.38 miles of bikeways / sq mile	4,288 people / sq mile	593,820
Amsterdam	3.89 miles of bikeways / sq mile	9,080 people / sq mile	820,654
Copenhagen	6.75 miles of bikeways /sq mile	16,000 people/sq mile	551,900

Metro | *Memo*

Date: Thursday, October 10, 2012

To: Regional Active Transportation Plan - Stakeholder Advisory Committee

From: Lake McTighe, Senior Transportation Planner

Subject: Pedestrian Network Concept- Regional Active Transportation Plan

Purpose

The intent of this memo is to provide a suggested approach for further developing the regional pedestrian network concept of the Regional Active Transportation Plan (ATP). The final concept will amend the current concept in the 2035 Regional Transportation Plan. The ATP will develop the Principal Regional Active Transportation System which will be comprised of overlapping and interconnected principal pedestrian, bicycle and transit networks.

Background

A pedestrian network vision and concept are described in the 2035 Regional Transportation Plan (RTP). The policies, vision and concepts for the regional pedestrian network did not receive substantial focus or revision during the update of the 2035 RTP; further development and refinement of the regional pedestrian network concept and vision will be accomplished in the ATP.

The current regional pedestrian network described in the 2035 RTP is comprised of:

- Mixed-use 2040 corridors (as identified on the 2040 Growth Concept map)
- Pedestrian districts (mixed-use centers, including urban centers and LRT station communities)
- Regional trails (those identified as having an RTP transportation function)

The 2035 RTP identifies a primary regional pedestrian network to help focus investments, while recognizing that every street (except limited access highways) is part of the pedestrian network and must work for pedestrian travel in order for the regional network to be fully functional.

The ATP existing conditions included an analysis of the regional pedestrian network as defined by the 2035 RTP, with the addition of existing high-frequency transit routes not currently identified as 2040 mixed-use corridors. The analysis of the current regional pedestrian network provides existing conditions by which to measure future regional pedestrian network concepts.

Regional Pedestrian Network Concepts

A cursory review of planning approaches for regional pedestrian networks in the U.S. found:

- No examples of plans were found that proposed and evaluated different network approaches (e.g. hub and spoke, radial) for pedestrian networks. Rather, the plans emphasized overall connectivity and;
- Many plans identified 'priority pedestrian areas' defined as 'destination rich areas' generating pedestrian activity, similar to the approach in the 2035 RTP. These areas are often town centers, university campuses and transit corridors.

- Plans also emphasized combining walking, transit, cycling, and other modes due to long distances involved with regional trips.

The following questions are proposed to help define a proposed regional pedestrian network concept. Analysis and evaluation can help determine what, if any, changes should be made to the current regional pedestrian network.

1. Should the pedestrian network include additional policies in addition the active transportation network principles, such as:
   - Pedestrian travel will be fully accommodated appropriate to the land use and context.
   - Pedestrian travel will be prioritized over all other forms of travel on the regional pedestrian network.
   - On facilities shared with or intersecting with bicycle travel, pedestrian travel will be prioritized.
   - Access points to regional trails will be provided to support pedestrian access.
   - Filling sidewalk gaps and correcting deficiencies will receive the highest priority for projects on the regional pedestrian network.

2. Should pedestrian only regional trails be added to the regional pedestrian network?
3. Should proposed major crossings of barriers, such as bridges, be highlighted on the network?
4. Should high-frequency transit routes not included in the current pedestrian network be added?
5. Are there other arterials that should be considered for inclusion?
6. Should street density levels be recommended for pedestrian districts?
7. Should spacing for improved crossings of indentified barriers (e.g. high traffic/speed roads) on the pedestrian network be recommended?

Workgroup participants
Brad Choi, Hillsboro
Katherine Kelly, Gresham
Rob Sadowsky, Bicycle Transportation Alliance
Lidwien Rahman, ODOT
Roger Geller, PBOT
Todd Borkowitz, Citizen Rep.
Lori Mastrantonio-Meuser, Clackamas County
Hal Bergsma, Tualatin Hills Parks and Recreation
Shelley Oylear, Washington County
Kate McQuillen, Multnomah County
Jeff Owen/Eric Hesse, TriMet
Heidi Guenin, Upstream Public Health
Lake McTighe, Metro
 Anthony Butzek, Metro
John Mermin, Metro
Robert Spurlock, Metro
Sumi Malik, CH2MHill)

The purpose of the meeting was to discuss and develop draft principles and criteria that will be presented to the full ATP SAC on October 18.

Lake provided an overview of the steps involved in developing principles, criteria, network concepts and evaluating the network concepts. The draft network concepts will explore both a variety of network structures (e.g. hub and spoke, spider web, grid) and approaches (e.g. serve all centers equally, access to transit, Safe Routes To Schools, filling gaps, etc). The *Principles* will apply to all of the network concepts. These are elements that any network concept should have, e.g. safety. In addition to this set of principles, each individual concept will provide a unique approach to the active transportation network (e.g. serves commercial corridors). The *Criteria* will be used to evaluate the different network concepts in order to compare them and better understand the benefits and tradeoffs of each concept.

First the workgroup discussed the set of **draft principles** provided at the meeting and provided the following comments and guidance:

- There is need to further discuss the use of trails for utilitarian and recreational trips. One of the identified themes that emerged from the Sept. 6 meeting was that the active transportation network should focus on serving utilitarian trips in order to replace reduce trips made by car. The need to further discuss the role of the network, especially trails was raised and will be addressed at the Oct. 18 meeting.

- A network that is good for all, ages 8-80
- Include a principle about network developed based on data (data driven)
- Should "relieves strain on other transportation systems" be replaced with a principle where the network does not create problems for other modes? Or helps maintain traffic flow?
- Design the network to make it easier to walk and bike.
- On street routes with high speeds and traffic volumes should provide buffers
- Simplify the principles.
- Like the details in the principles, they help explain them.
- Spacing of network should be addressed in the different concepts (eg. Dense spacing, wider spacing, different patterns). Other ideas introduced that can be explored in the network concepts: a concept around commercial corridors; bikes and peds have different needs, provide concepts that address unique needs; a concept that focuses on serving pop, employment and destination densities; a concept that provides a variety of route choices; concepts that explore access in different ways (e.g. access to nature, access to jobs).
- Add a principle that addresses need for context sensitive approach.
- Discussion on the term "seamless" – is there a better term, may not be clear. Perhaps interconnected and linking? Staff chose to leave as is for now.
- Add principle to address equity. Included in safety principle and principle that network will increase access for low income and minorities.
- Other sources: Rob Sadowsky provided BTA principles as an example, Shelly Oylear recommended CNU Sustainable Street Network Principles, Hal Bergsma mentioned the work on STARS and Roger Geller said he could provide information on principles for network spacing that was developed for the Portland bike plan.
- What about principles that the network will reduce trips by car, reduce GHG emissions? Addressed in making bicycling and walking easy for all types of trips and increasing the number of trips.

After the principles discussion, the workgroup discussed the draft criteria. To narrow the criteria workgroup members were asked to identify four top criteria, after adding any criteria they thought were missing. Staff noted that they wanted to identify a limited set of three to six criterion to evaluate the network concepts.

Criteria	Number of "votes"
Improve/increase access to destinations	15
Access to transit	0 (should be included in destinations above)
Safety	9
Improve/increase access for EJ communities	7
Add capacity/increase facilities	3 (will be covered by increase access)
Community support	2
Feasibility	4
Cost/funding available	2

Increase in people walking/biking	6
Proximity to nature/water	1
Closes gaps	4 (will be covered by access/safety criteria)
Increase access to network	0
Choice of routes	1

Using this narrowing process staff will develop a set of draft criteria.
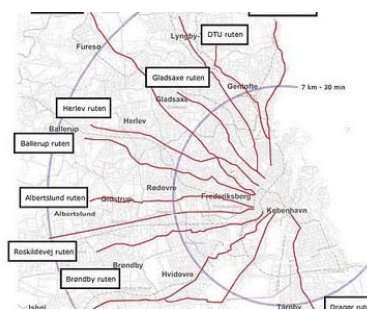
Slide 1

- **The Intertwine Alliance Fall Summit, October 25, 2012**
- Oregon Zoo, 4001 SW Canyon Road
- Workshops: 2 - 3:45pm
- Summit: 4 - 5:30pm
- Register at: theintertwine.org/alliance

Slide 2

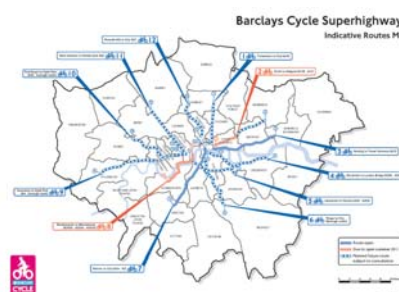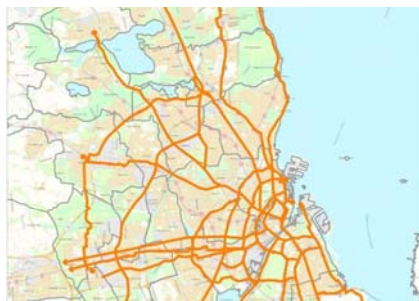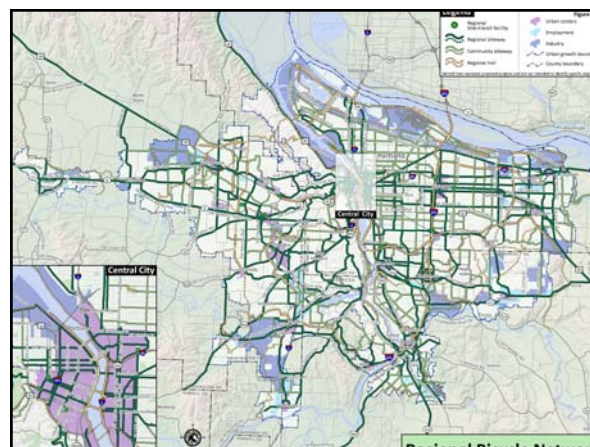| 2010 Serious Bicycle Crashes per 1 Million Residents and per 10,000 Bicycle Miles Traveled, Beaverton, Gresham, Hillsboro and Portland					
	Total population in 2010*	Total annual serious bicycle crashes, 2007-2010**	Total average daily bicycle miles traveled within city, 2010***	Serious bicycle crashes per 1 million residents, 2007-2010	Serious crashes per 10,000 daily bicycle miles traveled, 2010
Beaverton	90,203	1.75	40,232	19.4	0.4
Gresham	105,588	2.75	23,221	26.0	1.2
Hillsboro	91,507	1.75	24,924	19.1	0.7
Portland	583,627	23.25	260,372	39.8	0.9

Crash rate update

Slide 3

Regional Bicycle Network Concepts

Slide 4

Radial example #1 – Copenhagen region - Bicycle superhighways

Slide 5

Slide 6

Radial example #2 - London - Barclay Cycle Superhighways

Grid example - Los Angeles – Backbone bikeway network

Spiderweb example #1 – Paris, France

Spiderweb example #2 – Cycling Superhighway sision of Rachel Smith – Sustainable transport expert in Western Australia.

2035 Regional Transportation Plan
Regional Bicycle Parkway Concept

Regional Pedestrian Network Concepts
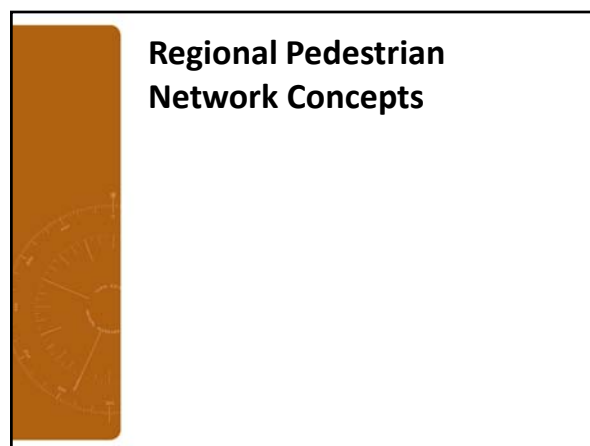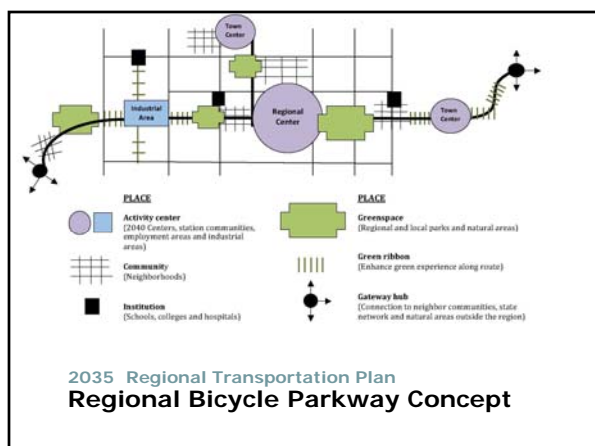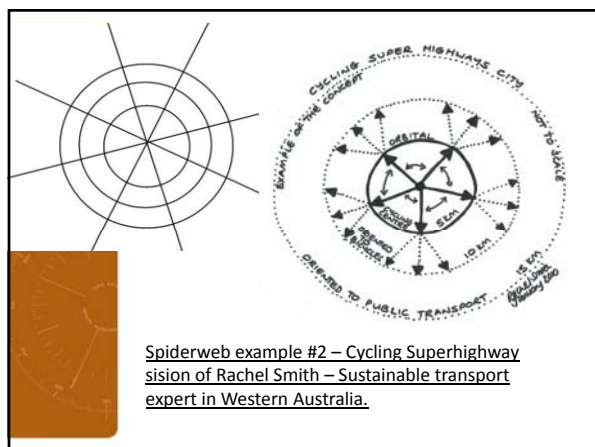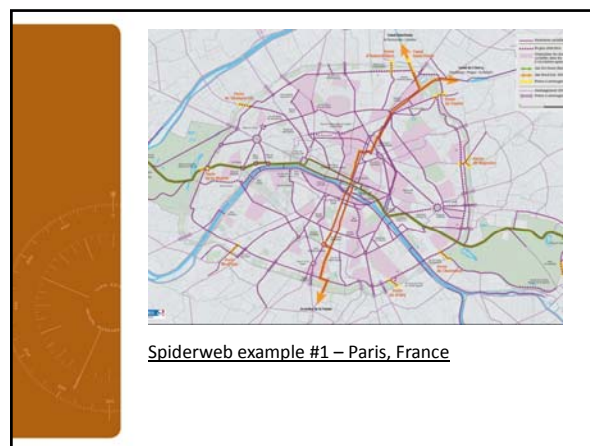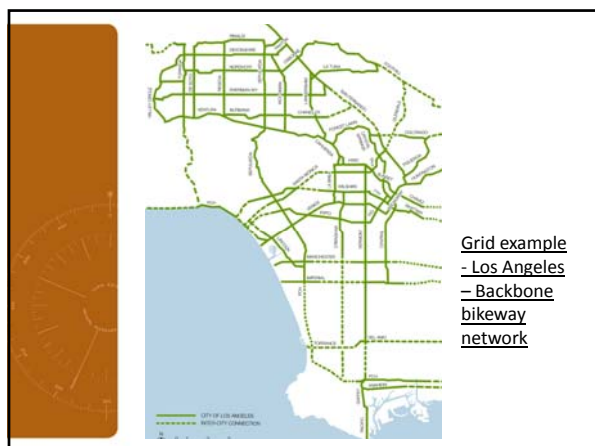
Starting place

1. Every person has personal pedestrian networks that extend out from 'pedestrian hubs'
2. Pedestrian hubs: home, transit stops, work/school, town centers
3. Focus on **access** to the places that people want to get to.
4. Create a network that makes it easy to walk
5. What part is the regional responsibility?

Districts analyzed for Existing Conditions

Corridors analyzed for Existing Conditions

2010 Serious Bicycle Crashes per 1 Million Residents and per 10,000 Bicycle Miles Traveled, Beaverton, Gresham, Hillsboro and Portland

	Total population in 2010*	Total annual serious bicycle crashes, 2007-2010**	Total average daily bicycle miles traveled within city, 2010***	Serious bicycle crashes per 1 million residents, 2007-2010	Serious crashes per 10,000 daily bicycle miles traveled, 2010
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Population: 2010 U.S. Census.
**Crash data: Metro 2012 State of Safety Report.
***Total average weekday bicycle miles traveled (BMT): Metro TRMS Bicycle Modeling Tools.

The serious crash rate for bicycle crashes per 10,000 daily bicycle miles traveled was determined by dividing annual serious crashes for bicyclists in each city by total BMT and multiplying by 10,000.

City	Total Mileage	Lane	Blvd	Path	AADT<10K	AADT 10K	AADT 20K	AADT 30K+	Total mileage on streets with no bike infrastructure	Total mileage on routes with bike infrastructure (Blvd,Lane,Path)
2010 AVERAGE WEEKDAY BIKE MILES TRAVELED										
Banks	13	1	0	0	1	0	0	11	11	1
Barlow	2	0	0	0	0	2	0	0	2	0
Battle Ground	2,114	679	0	0	1,021	162	252	0	1,435	679
Beaverton	40,232	22,847	22	3,932	8,870	3,129	843	589	13,430	26,801
Camas	2,914	240	0	240	1,210	642	568	15	2,434	480
Canby	734	254	0	121	320	0	31	8	359	375
Cornelius	1,614	969	0	0	448	197	0	0	645	969
Damascus	939	264	0	0	159	259	137	121	675	264
Durham	745	616	0	66	64	0	0	0	64	681
Estacada	68	0	0	0	34	21	0	13	68	0
Fairview	1,206	708	0	89	213	133	0	63	409	797
Forest Grove	3,010	985	0	276	1,498	172	22	58	1,749	1,261
Gaston	1	0	0	0	1	0	0	0	1	0
Gladstone	1,632	708	0	221	440	264	0	0	704	928
Gresham	23,221	13,665	0	3,543	4,949	840	185	39	6,013	17,208
Happy Valley	3,139	2,149	0	0	474	498	18	0	990	2,149
Hillsboro	24,924	15,393	0	492	7,387	962	592	97	9,039	15,885
King City	496	0	0	0	493	3	0	0	496	0
La Center	159	0	0	0	85	0	75	0	159	0
Lake Oswego	10,175	2,389	0	953	3,303	2,666	492	373	6,833	3,342
Maywood Park	406	0	0	361	45	0	0	0	45	361
Milwaukie	5,817	1,886	0	1,201	1,632	1,042	0	56	2,729	3,088
Molalla	68	5	0	0	19	37	0	6	63	5
none	118,593	38,625	0	13,271	39,658	15,201	9,694	2,143	66,697	51,896
North Plains	94	0	0	0	37	43	0	14	94	0
Oregon City	5,621	3,407	0	176	1,378	382	209	69	2,038	3,583
Portland	260,372	83,707	44,447	30,522	83,709	11,243	5,150	1,594	101,695	158,677
Ridgefield	395	0	0	0	144	104	146	0	395	0
Rivergrove	70	59	0	0	0	11	0	0	11	59

City	Total Mileage	Lane	Blvd	Path	AADT<10K	AADT 10K	AADT 20K	AADT 30K+	Total mileage on streets with no bike infrastructure	Total mileage on routes with bike infrastructure (Blvd,Lane,Path)
2010 AVERAGE WEEKDAY BIKE MILES TRAVELED										
Sandy	605	387	0	0	147	49	0	22	217	387
Sherwood	2,209	864	0	0	981	364	0	0	1,346	864
Tigard	19,134	10,668	0	2,209	5,056	976	226	0	6,257	12,877
Troutdale	1,887	1,000	0	16	662	139	70	0	871	1,016
Tualatin	7,366	5,020	0	0	2,172	103	72	0	2,346	5,020
Vancouver	47,615	19,738	0	5,852	12,821	2,703	6,501	1	22,025	25,590
Washougal	1,286	89	0	48	693	217	233	6	1,149	137
West Linn	2,328	791	0	102	773	661	0	0	1,434	893
Wilsonville	2,694	1,624	0	19	804	187	14	45	1,051	1,643
Wood Village	751	611	0	0	100	39	0	0	139	611
Yacolt	17	0	0	0	9	0	8	0	17	0
total	594,662	230,349	44,469	63,710	181,806	43,450	25,535	5,343	256,135	338,528