seattle bicycle master plan

Council Transportation Committee
December 10, 2013

SDOT
Seattle Department of Transportation

Purpose of Briefing

- Summarize the Mayor's recommended Bicycle Master Plan (BMP)
- Address major themes in public comments received on June public draft
- Focus on changes to the document made since June public review draft
- Council comments and questions

Context: Council Briefings

Several Council briefings on the BMP update; last was August 13, 2013:

- Summary of public comments on the draft BMP and how SDOT is responding
- Prioritization framework
- Cost estimating

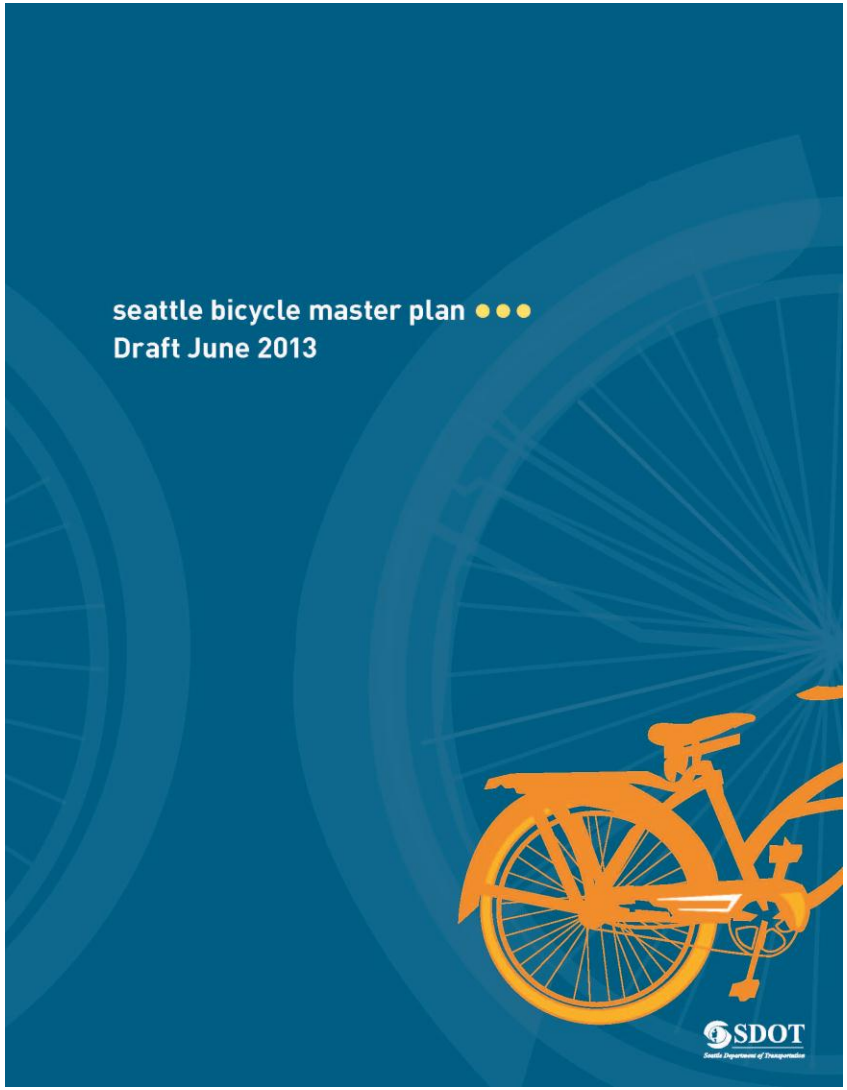
Work since last briefing has focused on developing the recommended plan

Recommended Plan: Key Purposes

- Plan, design and develop a safe bicycling network that works for all
  - Connected all ages and abilities network (Citywide Network) linking key destinations
  - Greater separation between people riding bikes and motor vehicles on arterials (e.g., cycle tracks)
- Change the nature of the bicycle network to focus more on non-arterials
  - Dense intra-neighborhood network (Local Connectors Network)
  - Neighborhood greenways on local streets prioritized for bicycle and pedestrian travel
- Address competing needs among travel modes on arterials
  - Multimodal considerations included in network development and project development processes

Public Review Draft BMP

- Draft Plan released for public review on June 5
- Extensive public outreach:
  - Community meetings
  - On-line “Lunch and Learn”
  - Briefings with advisory boards and commissions
  - Presentations at district and community councils and businesses
  - On-line survey



What SDOT Heard: Network Map

- **NE Seattle:**
  - Strong opposition and some support for NE 65th St cycle tracks (protected bicycle lanes)
  - Comments about other facilities in NE Seattle
- **Stone Way N:** Concerns about business and freight conflicts
  - Woodland Park Ave N recommended as substitute for citywide network (all ages & abilities)
- **West Seattle Cycle Tracks (protected bicycle lanes):** Support to add Fauntleroy and desire to remove Morgan St cycle track
- **Neighborhood Greenways:** Suggestions for minor tweaks to neighborhood routes
- **Burke-Gilman Trail Missing Link:** Show alternatives

What SDOT Heard: Other

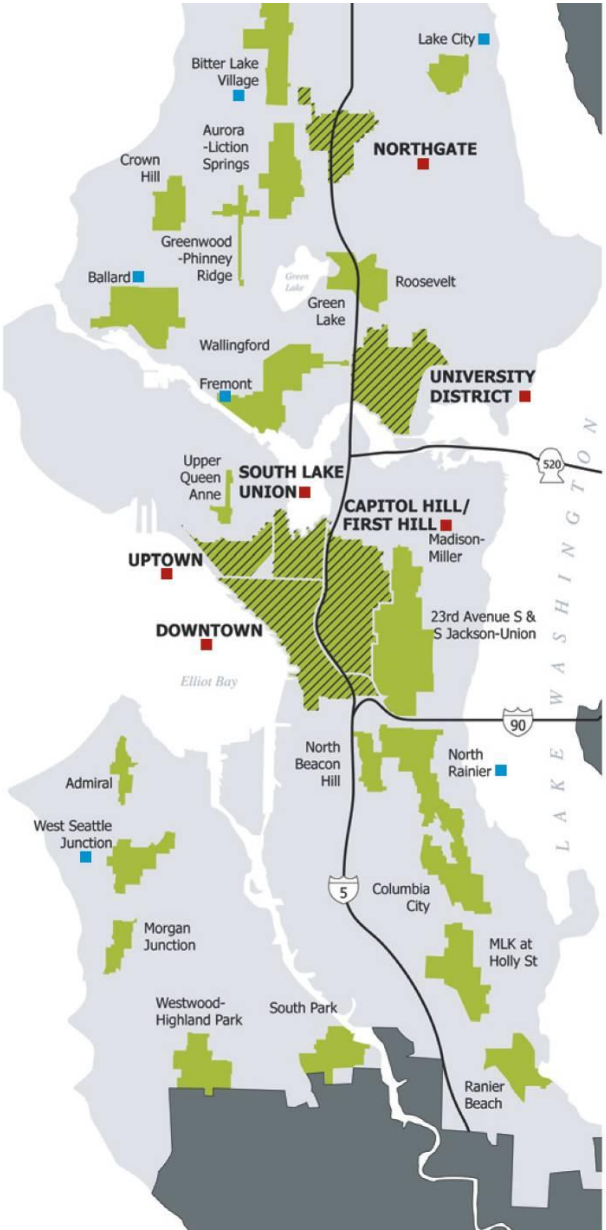
- More emphasis on safety and education needed
- Interest in implementation details and funding mechanisms
  - Desire to see short-term implementation plan
- More focus needed on how bicycle facilities will be maintained and upgraded
- Emphasize safety and connectivity in prioritizing projects and programs
- Additional staff and budget will be needed to implement the plan over time

Recommended Plan: Major Changes

- New Executive Summary
- Updated bicycle network map
  - Changes made to map in all sectors of the city; most changes in NE Seattle, including the NE 65th Street corridor
- More emphasis on safety throughout document
  - Safety given the highest weight for prioritizing projects and programs
- New consolidated implementation chapter
  - Implementation strategies and actions
  - Project development and delivery process
  - Prioritization framework
  - Maintenance and upgrades of existing facilities
  - Funding strategy and planning-level cost estimates
  - Updated performance measures

Biking: Part of a Growing Seattle

100,000 new residents and 100,000 new jobs in Seattle over the next 20 years



How Will The City Handle this Growth?

The City's Comprehensive Plan provides the overarching policy framework, guided by four core values:

- Community
- Environmental Stewardship
- Economic Opportunity and Security
- Social Equity

Within the Comp Plan, the Transportation element **directs SDOT to provide more opportunities for people to walk, bike, and use transit**

The City's Complete Streets Policy and Climate Action Plan also support this work

Why Bike?

Plan's Introduction Chapter addresses benefits of riding a bicycle. Biking is:

- Affordable
- Healthy
- Time competitive (particularly in urban core)
- Economically beneficial
- Environmentally friendly
- Space efficient
- Supports an equitable transportation system

More Bicyclists = Safer Streets for Everyone

Safety is SDOT's top priority:

- Major reason for the introduction of new bicycle facility types in the plan
- Safety is the highest scored criteria in project and program prioritization

Research shows:

- Policies that increase the number of people walking and biking are effective in improving safety for all roadway users
- Presence of large number of bicyclists changes the dynamics of the street enough to lower the speed of motorists
- Slower motor vehicle speeds increase survival rates for both pedestrians and bicyclists involved in collisions

Policy Framework

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

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.*

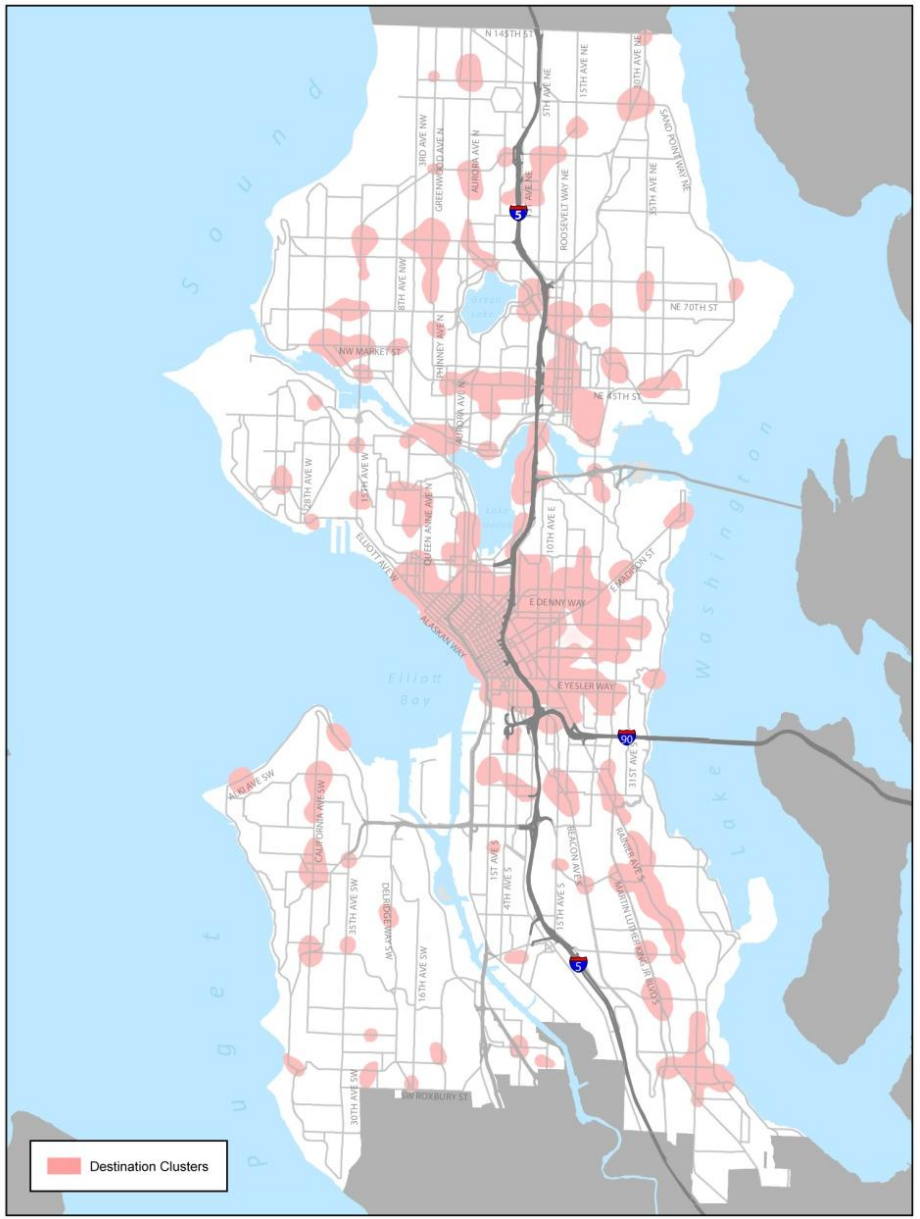
4. ***Equity –*** *Improve bicycle riding for all through equity in public engagement, program delivery, and capital investments.*

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

Bicycle Network Development

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



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 – Linden Ave

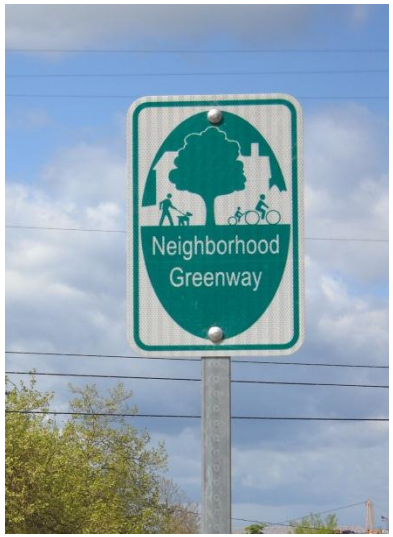
Seattle, WA – Alki Ave

Example: Broadway Cycle Track

- Added to First Hill Streetcar project at request of community
- Part of “all ages and abilities” bicycle network
- Helps bicyclists safety and access to streetcar stations and future light rail station at Broadway and Denny
- Connects to new cycle tracks, bike lanes and shared lanes coming to Yesler, 14th and Jackson

Neighborhood Greenways

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



Treatments include:

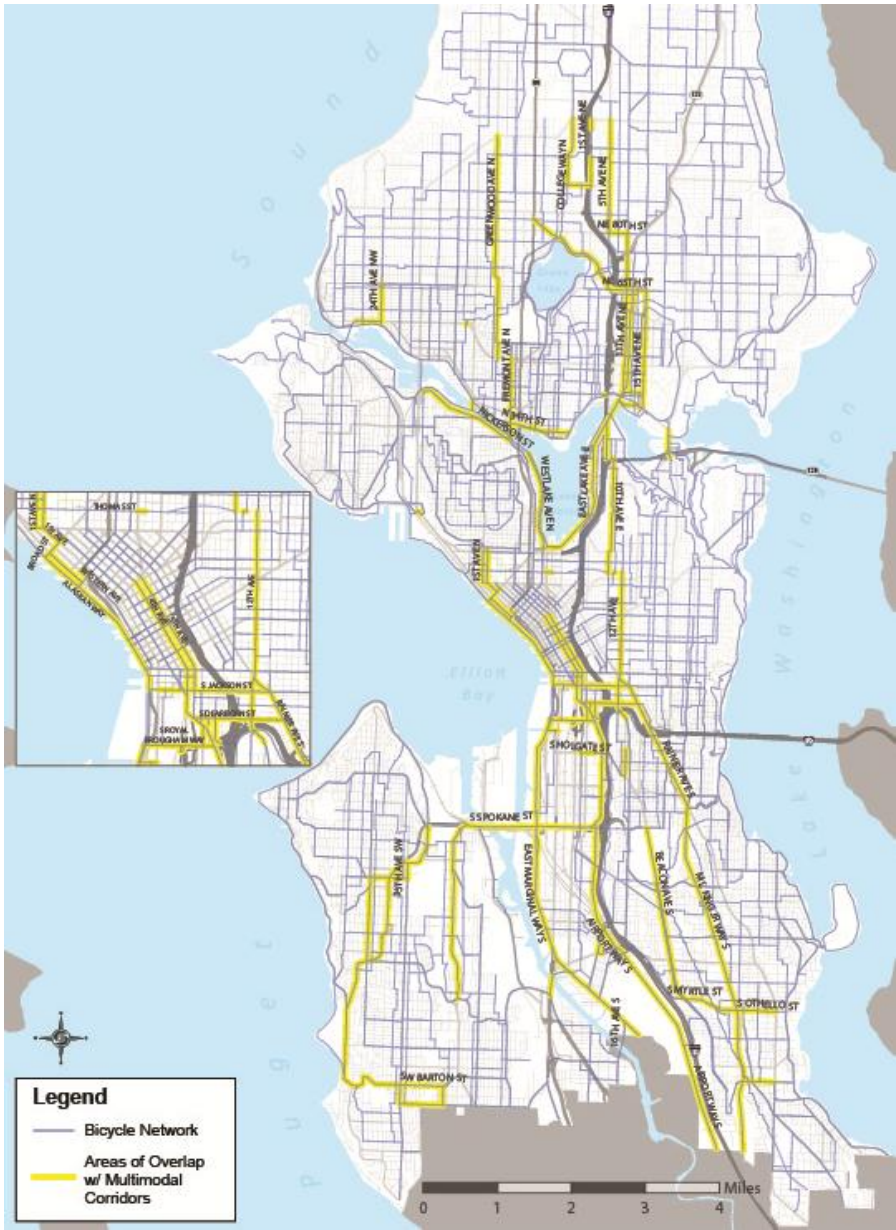
- Pavement markings and wayfinding signs
- Traffic calming elements – speed humps, traffic circles
- Safety improvements at crossings and intersections

Example: Ballard Neighborhood Greenway

- Provides important east-west neighborhood connection
- Part of “all ages and abilities” bicycle network

Multimodal Corridors

- Multimodal corridors are where a proposed bicycle facility is on the same street as:
  - Priority transit corridors
  - Major Truck Streets
  - Pedestrian corridors
- Plan includes a multimodal corridor decision making process



Bicycle Network Map

Citywide Network:

- "All ages and abilities" bicycle facilities that connect to local destinations
  - Multi-use trails, cycle tracks (protected bicycle lanes), and neighborhood greenways

Local Connectors:

- Bicycle facilities that connect to the citywide network and serve local destinations
  - Multi-use trails, cycle tracks (protected bicycle lanes), neighborhood greenways, bike lanes, buffered bike lanes, shared lanes

Bicycle Network Map Snapshot

Legend

Citywide Network

Existing	Recommended	
		Off street
		Cycle track (protected bicycle lanes)
		Neighborhood greenway

Local Connectors

Existing	Recommended	
		Off street
		Cycle track (protected bicycle lanes)
		In street, minor separation
		Neighborhood greenway
		Shared street
		Existing light rail station
		Future light rail station
		Public school
		Stairway (along neighborhood greenway)
		⑥ Catalyst project location

Bicycle Network Facilities

Bicycle Facilities in the Recommended Bicycle Network (lengths in miles)

	Existing Network*	Proposed Network Improvements			Total Network	Percent of Total Network
		Upgraded to Existing Bicycle Facilities	*New Facilities*	*Total New or Upgraded Facilities to Build*		
Off Street	46.9	0	32.0	32.0	78.9	13%
Cycle Track (protected bicycle lane)	3.2	52.1	49.5	101.6	104.8	17%
Neighborhood Greenway	10.3	0	238.6	238.6	248.9	41%
In Street, Minor Separation	44.4	17.9	75.6	93.5	137.9	23%
Shared Street	30.0	0	7.8	7.8	37.8	6%
Total	**134.8**	**70.0**	**403.5**	**473.5**	**608.3**	**100%**

*Existing network totals include only existing facilities that meet the bicycle network facility designation guidelines or, in some cases, where right-of-way is limited and a higher-quality facility could not be implemented.

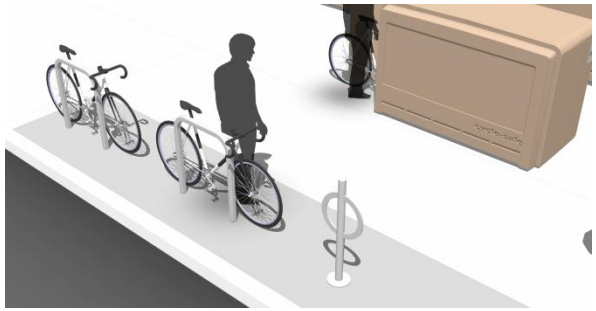
End-of-Trip Facilities

BMP includes strategies to improve bicycle parking:

- Seattle Municipal Code changes
- Parking demand in the public ROW
  - Bicycle racks
  - On-street bicycle corrals
- Showers/changing facilities
- Bicycle parking at transit stations
- Temporary (event) bicycle parking
- Abandoned bicycles and locks

On-street bicycle corral

Secure Bicycle Parking

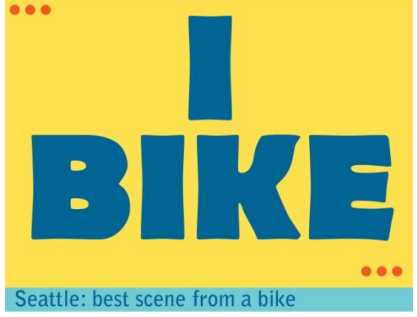


Bike Racks and Lockers

Programs

The BMP includes strategies to develop and improve:

- Bicycle safety
- Wayfinding and trip-planning
- Access to and encouragement for bicycling
- Economic and community development



Implementation Approach

The plan includes a new consolidated Implementation Chapter which identifies strategies and actions to implement the plan

- New SDOT implementation actions
  - Prioritization process
  - Bicycle project delivery process
- Coordination with other city departments and partners
- Maintenance of and improvements to bicycle facilities
- Funding strategy
- Performance measurements

Performance Measures - Targets

Goal	Performance Measure	Baseline Measurement	Performance Target
Ridership	Number of bicyclists counted at locations throughout Seattle	2014 citywide quarterly counts and daily counts at counter locations	Quadruple ridership between 2014 and 2030
Safety	Bicycle collision rate	2014 rate (based on updated 2014 counts)	Reduce bicycle collision rate by half (50%) between 2013 and 2030
	Number of serious injuries and fatalities	2013 number	Zero fatalities by 2030
Connectivity	Percentage of bicycle facility network completed	2013 percentage (calculate number based on final network map)	100 percent of bicycle system constructed by 2035
Equity	Areas lacking bicycle facilities	2012 Existing Conditions report	Zero areas of city lacking bicycle facilities by 2030
Livability	Percentage of households within ¼ mile of an all ages and abilities bicycle facility	2013 percentage (calculate based on latest built network)	100% of households in Seattle within ¼ mile of an all ages and abilities bicycle facility by 2035

Performance Measures - Trends

Goal	Performance Measure	Baseline Measurement	Desired Trend
Ridership	Commute mode share	2012 Census data (American Community Survey)	Increase
Safety	Percentage of Seattle residents who identify safety as a major impediment to bicycling	2013 SDOT phone survey percentage	Decrease
Connectivity	Key Travel Sheds Completed	2013 percentage of key travel sheds completed	Increase
Equity	Percentage of females, older adults, and people of color who ride regularly (a few times a month or more)	2013 SDOT phone survey percentage	Increase
Livability	Number of bicycle racks and on-street bicycle corrals	2013 number	Increase
	Self-reported physical activity	2006 King County Public Health report	Increase

Planning-Level Cost Estimates

- Broad cost estimates of recommended bicycle network ranges from $390,000,000 to $524,000,000
- Range of costs based on different assumptions about needed improvements, contingency costs, etc.

	Total Plan Miles	Facilities to Build (miles)	Approximate Cost per Mile (low end)	Facility Cost (low end)	Approximate Cost per Mile (high end)	Facility Cost (high end)
Off Street	78.9	32.0	$1,456,000	$46,590,000	$1,573,000	$50,340,000
Cycle Track	104.8	101.6	$1,546,000	$157,070,000	$1,894,000	$192,430,000
Neighborhood Greenway	248.9	238.6	$659,000	$156,240,000	$952,000	$226,150,000
In Street, Minor Separation	137.9	93.5	$321,000	$30,010,000	$574,000	$53,670,000
Shared Street	37.8	7.8	$48,000	$370,000	$48,000	$370,000
Total	608.3	473.5		$391,280,000		$523,960,000

Planning-Level Cost Estimates (cont.)

- Planning-level cost estimates include **elements that benefit all roadway users**, not just bicycle improvements
  - Traffic signal and other intersection improvements
  - Curb ramps
  - Traffic calming
- Off-street trails and neighborhood greenways are designed for pedestrians as well as bicyclists

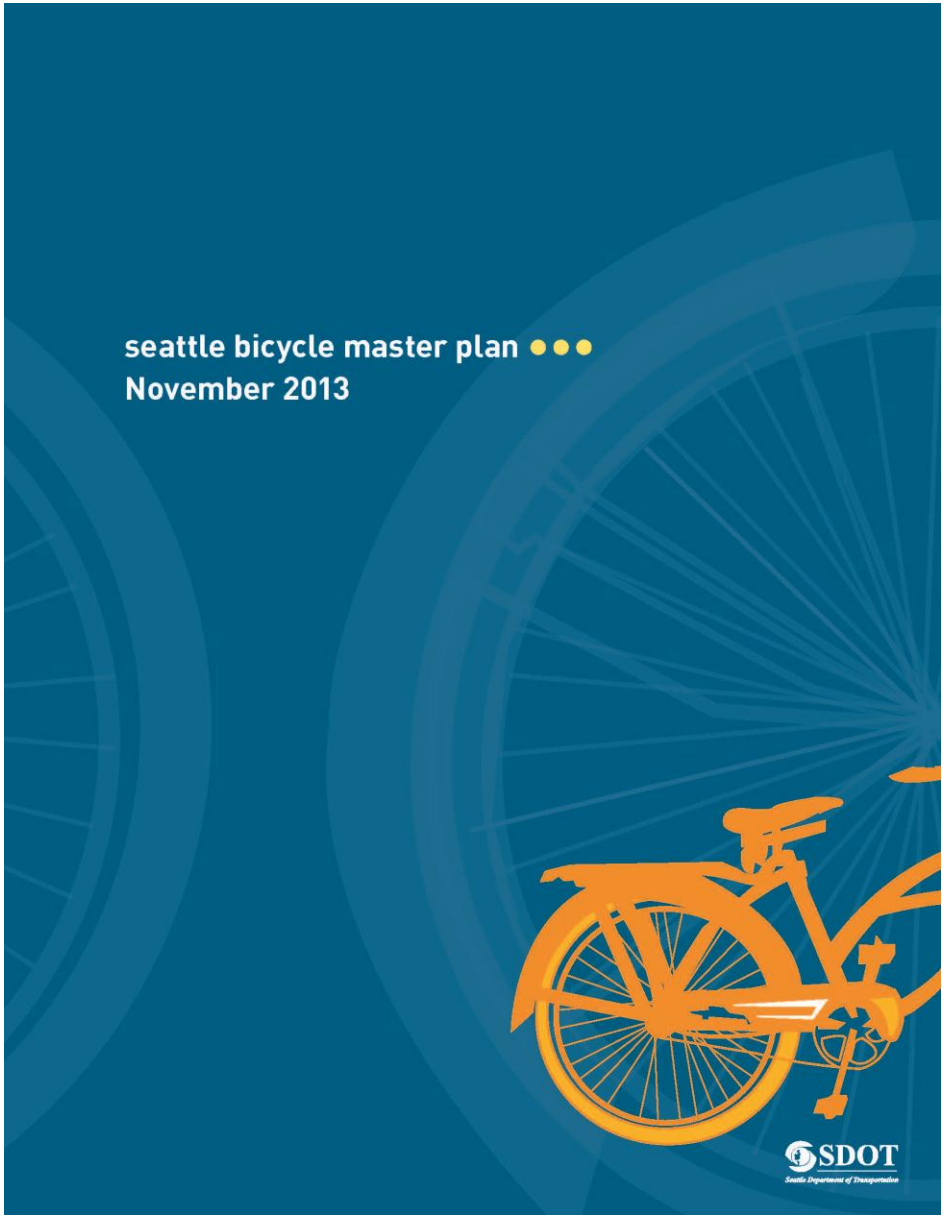
Prioritization Framework

Theme	Criteria Definition
Improve SAFETY	Addresses location with bicycle collision history and emphasis on vulnerable roadway users
	Enhances bicyclist safety by promoting travel on streets with low motorist speeds and low volumes
	Addresses locations or streets that are associated with greater bicyclist stress and more severe collision potential due to high motor vehicle volumes (ADT) and high speeds
Increase RIDERSHIP	Provides a connection to destination clusters
	Provides a connection to areas with high population density
Address EQUITY	Serves populations that are historically underserved, including areas with a higher percentage of minority populations, households below poverty, people under 18, people over 65, and households without access to an automobile
	Provides a health benefit for people in areas with the greatest reported health needs, represented by obesity rates, physical activity rates (self-reported), and diabetes rates
Enhance LIVABILITY	Reaches the greatest number of riders, but recognizes that all bicycle facilities provide a measurable benefit to at least some bicyclists
	Distribute bicycle facilities across the city so people riding bicycles can reach all destinations
Enhance CONNECTIVITY	Removes a barrier or closes a system gap in the bicycling network
	Makes a connection that will immediately extend the bicycle network

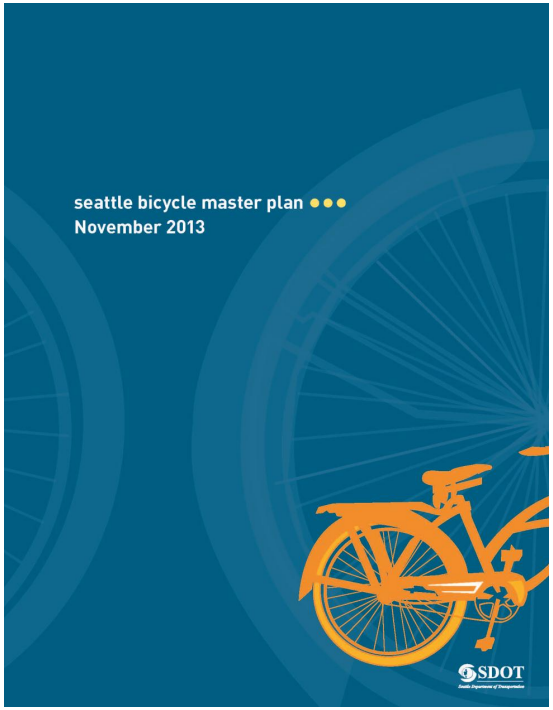
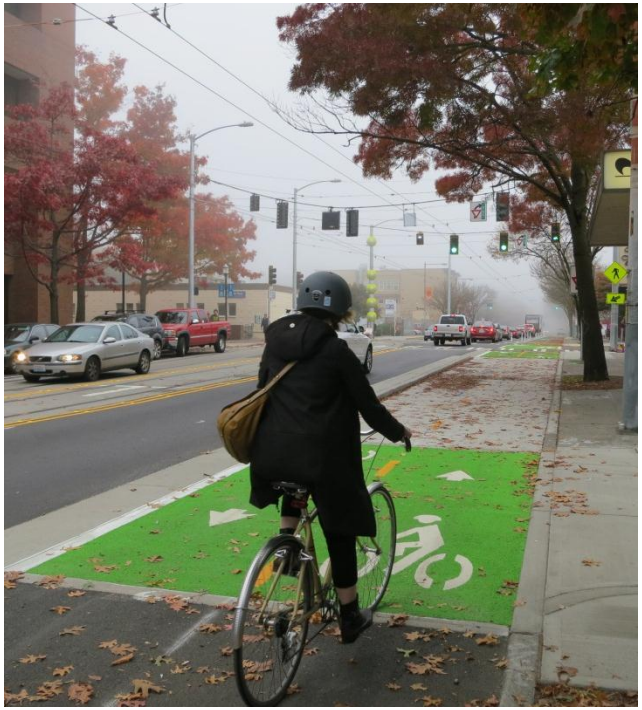
Recommended Plan

- Special meeting of the City Council Transportation Committee on December 11 to take public input on recommended plan

- Subsequent Council review and action in early 2014



Questions and Comments

Recommended plan is available at:

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