



Bellevue Pedestrian & Bicycle Implementation Initiative

Parks & Community Services Board
January 12, 2016

Franz Loewenherz, Senior Planner
Transportation Department
City of Bellevue



- 1) PBII Overview**
- 2) PBII Task 2**
- 3) Public Feedback**
- 4) “CPR” Emphasis**
- 5) “RIP” Deliverable/Timeline**
- 6) Next Steps**





Parks & Community Services Board invited to review & discuss the:

- **Draft Map of RIP Candidate Projects and the**
- **Draft Description of RIP Candidate Project Categories**



2009

city of bellevue
pedestrian & bicycle
transportation plan report



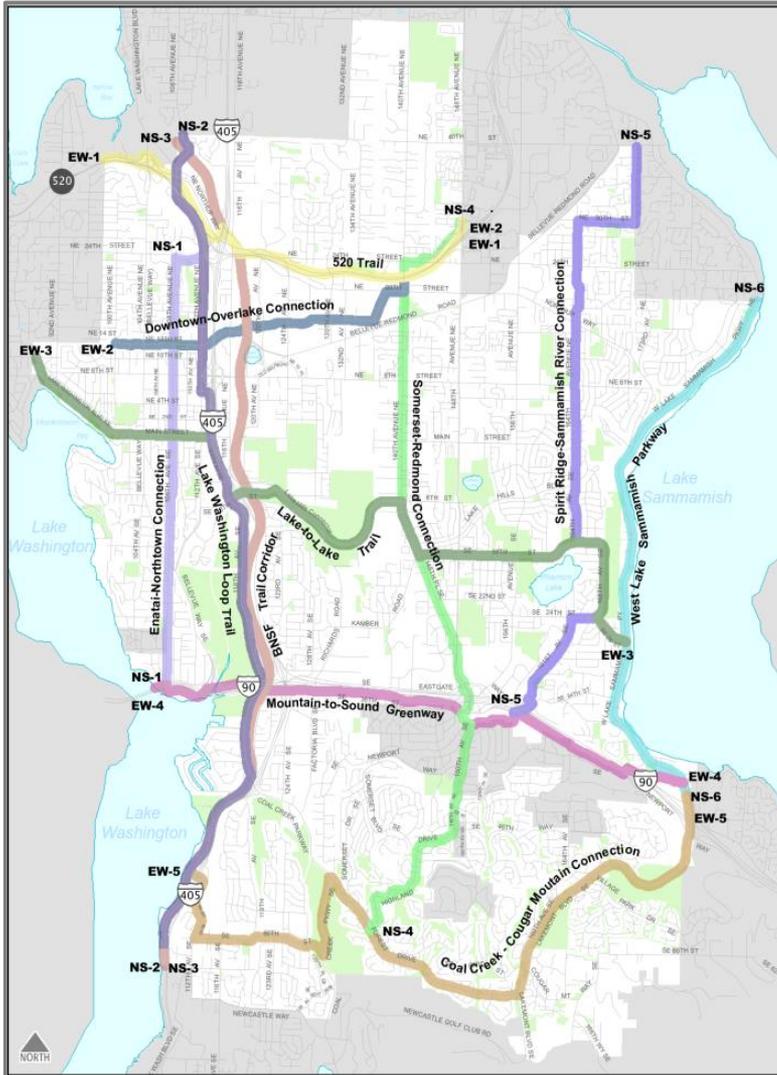
- Formulated vision, goals, objectives.
- Assessed gaps in the non-motorized network.
- Established performance targets.

Ordinance No. 5861 (2/17/2009)



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2009 Pedestrian & Bicycle Plan



2014 Performance Target:

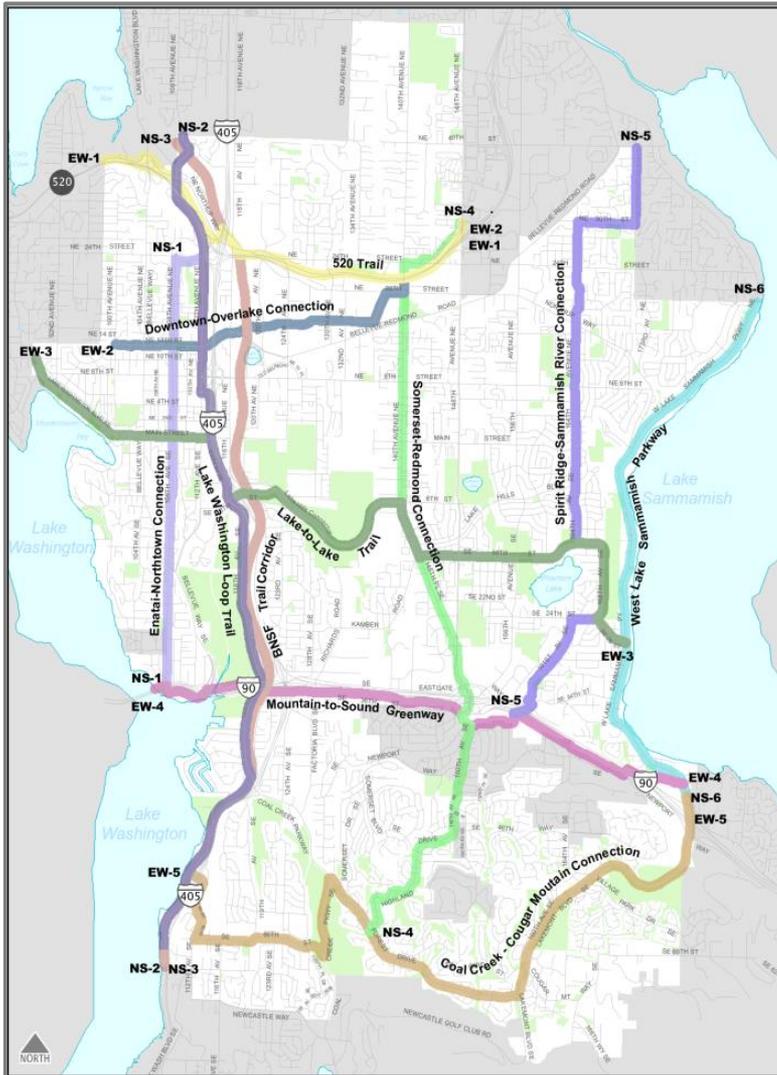
“Within 5 years, implement at least one completed and connected east-west and north-south bicycle route through Downtown Bellevue.”

- 2009 Pedestrian & Bicycle Transportation Plan



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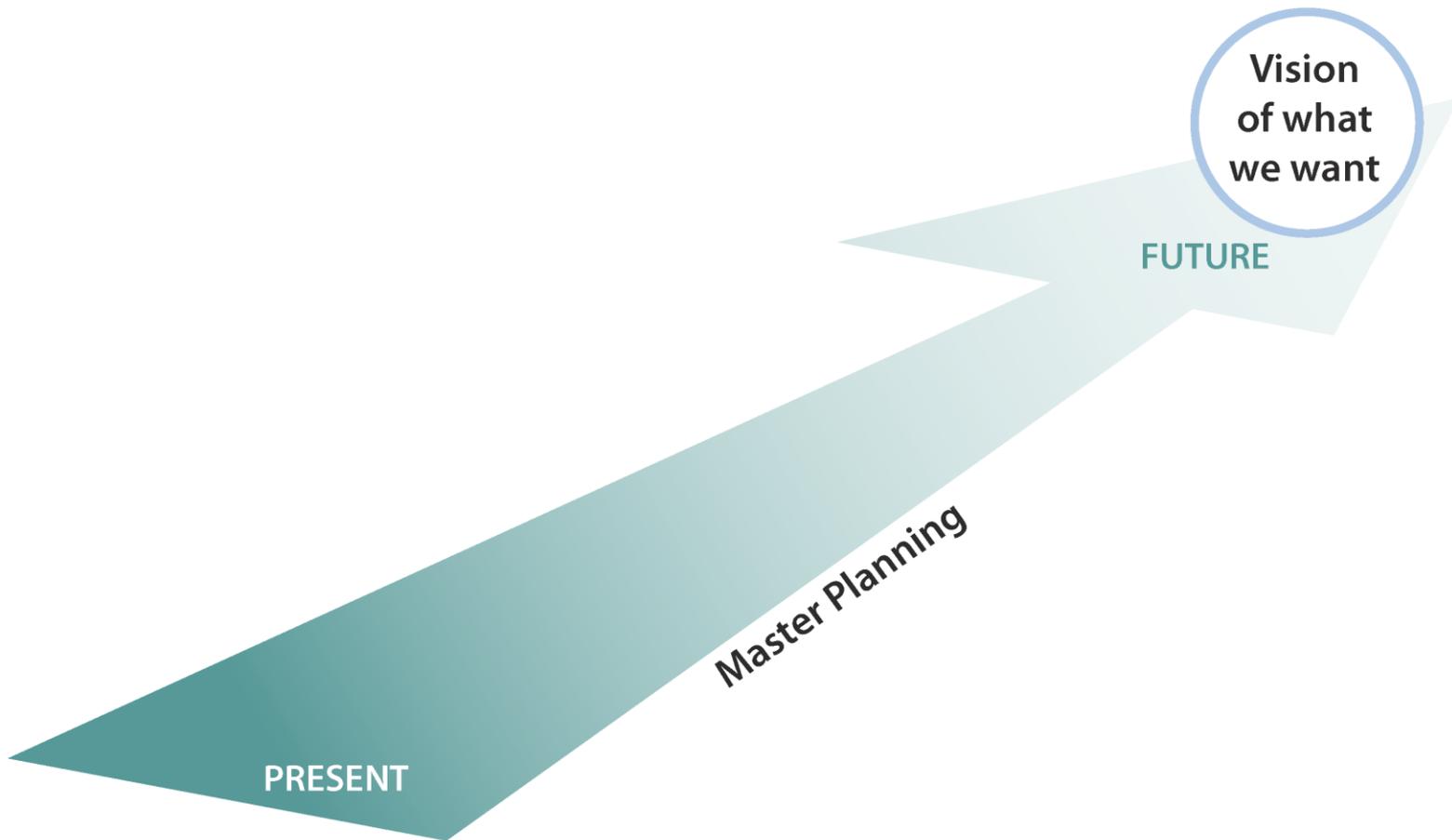
Priority Bicycle Corridors

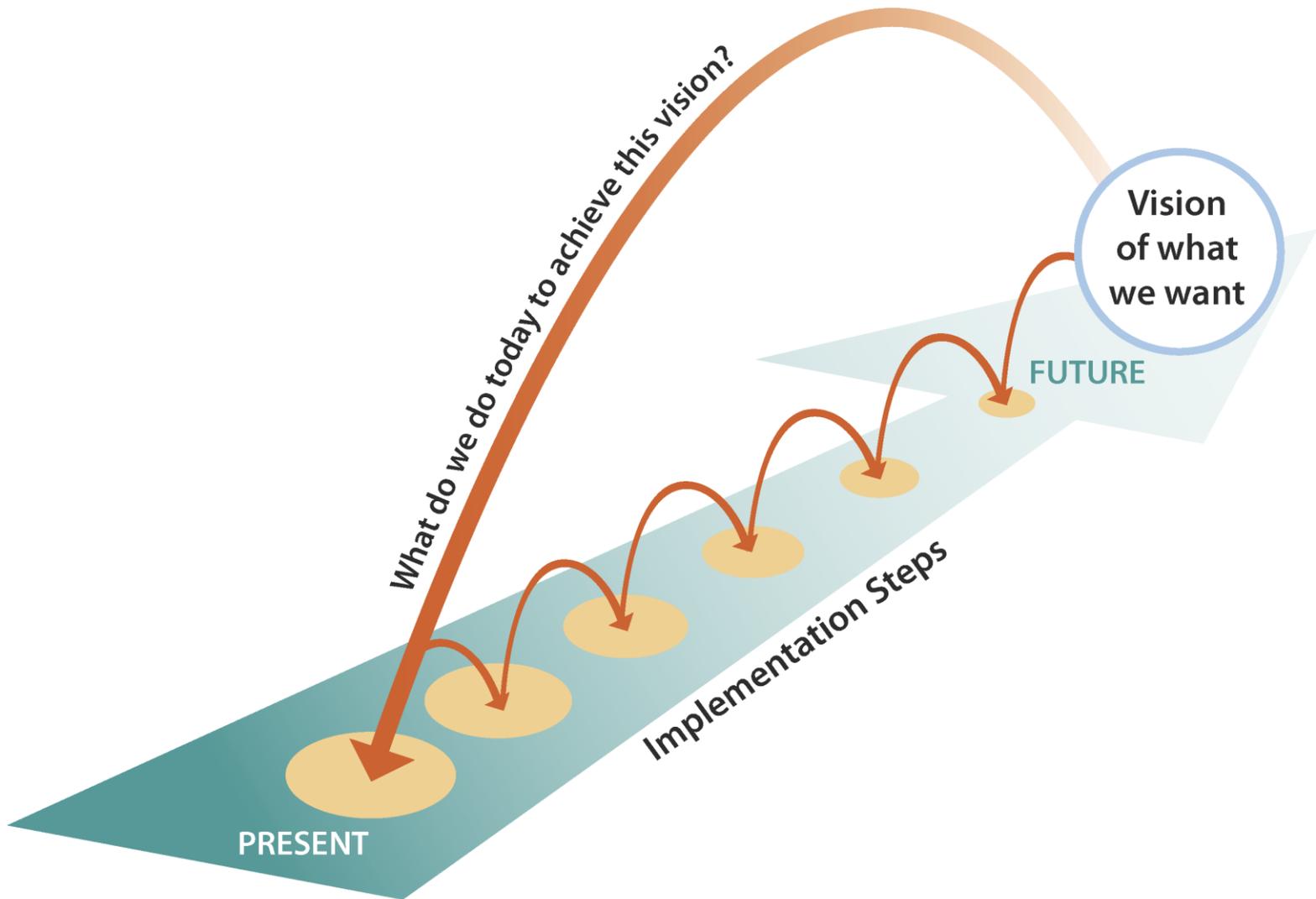


2019 Performance Target:

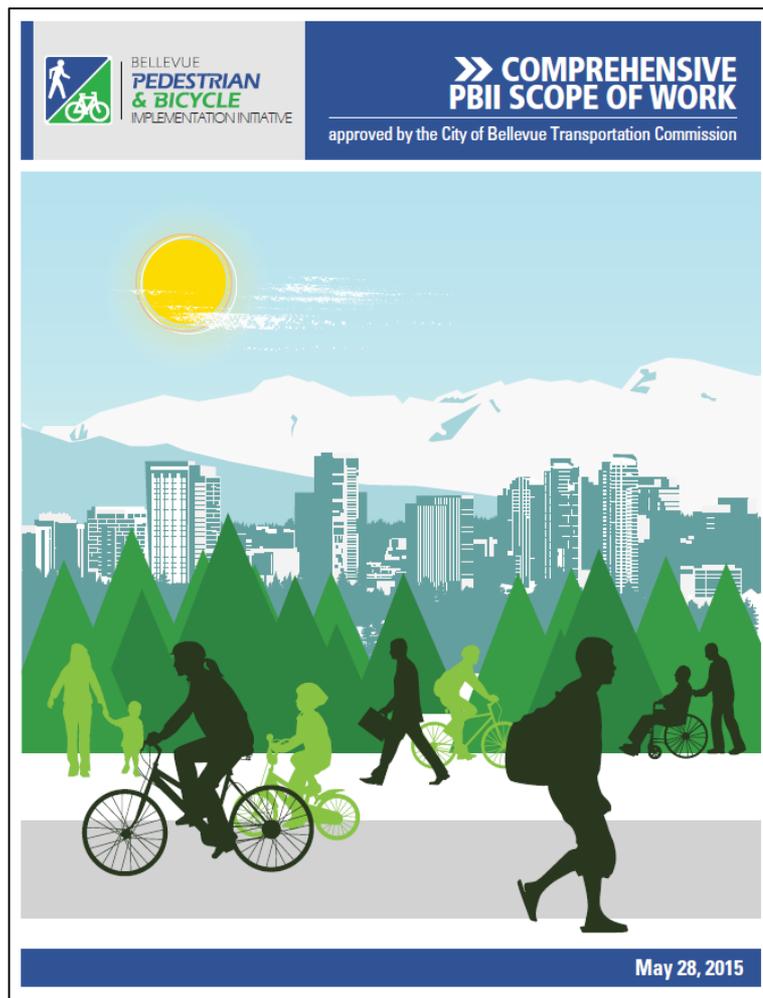
“Within 10 years, implement at least two completed, connected, and integrated north-south and at least two east-west bicycle routes that connects the boundaries of the city limits, and connects to the broader regional bicycle system.”

- 2009 Pedestrian & Bicycle Transportation Plan



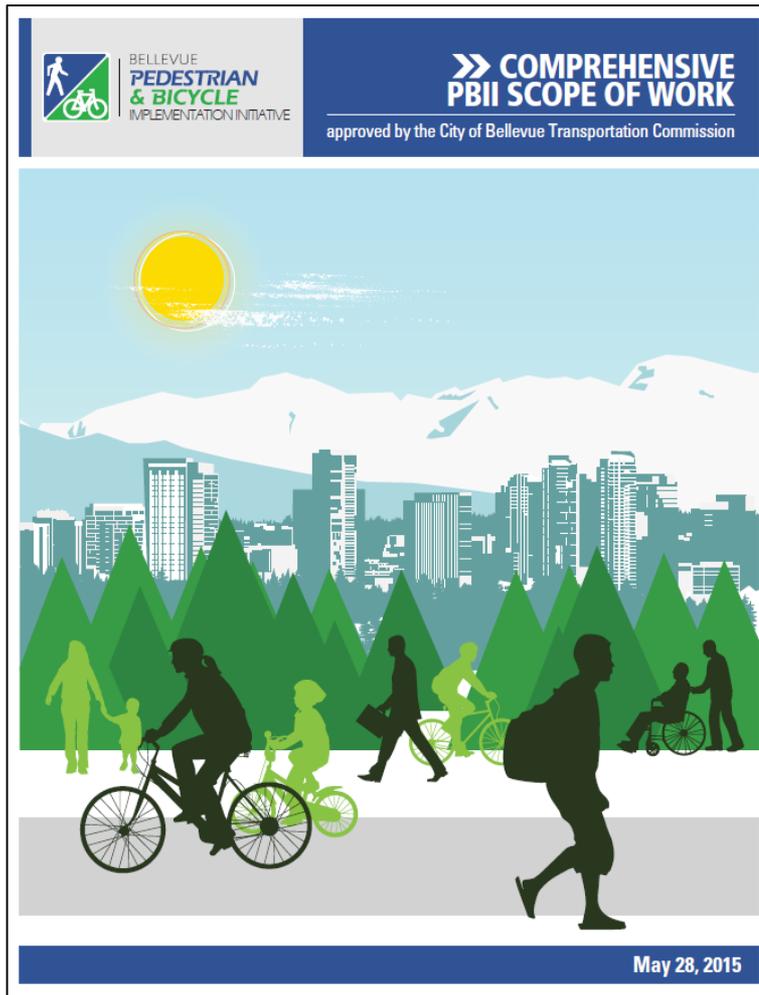


Council support for a unified and recognizable strategy that:



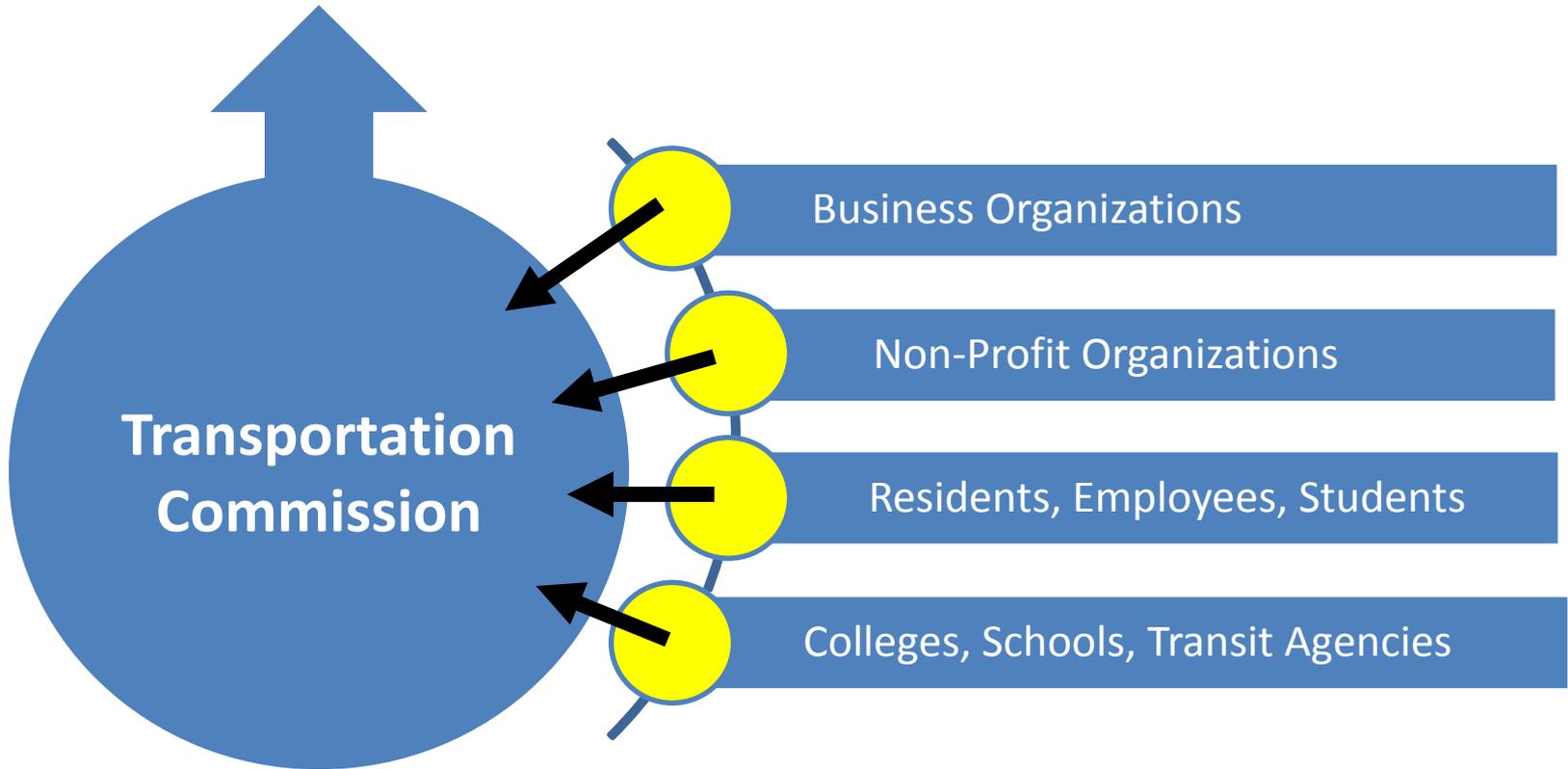
- Links planning with implementation
- Promotes coordinated solutions (5Es)
- Advances a “Complete Streets” philosophy
- Considers creative & affordable strategies
- Leverages best practices and innovative tools
- Investigates “Vision Zero” techniques
- Advances demonstration projects
- Identifies early-win opportunities
- Balances the needs of various roadway users
- Maximizes construction efficiencies
- Promotes physically separated facilities
- Prioritizes “filling the gaps”
- Engages stakeholders early

Council support for a unified and recognizable strategy that:



- Links planning with implementation
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Bellevue City Council



- 1. Ped-Bike Safety Assessment Report**
- 2. Bicycle Priority Corridor Design Report**
- 3. Transit Master Plan Integration Report**
- 4. Implementation/Funding Strategy Report**
- 5. Count Technology Report**
- 6. Bike-Share Implementation Report**
- 7. Performance Management Report**



1. Ped-Bike Safety Assessment Report
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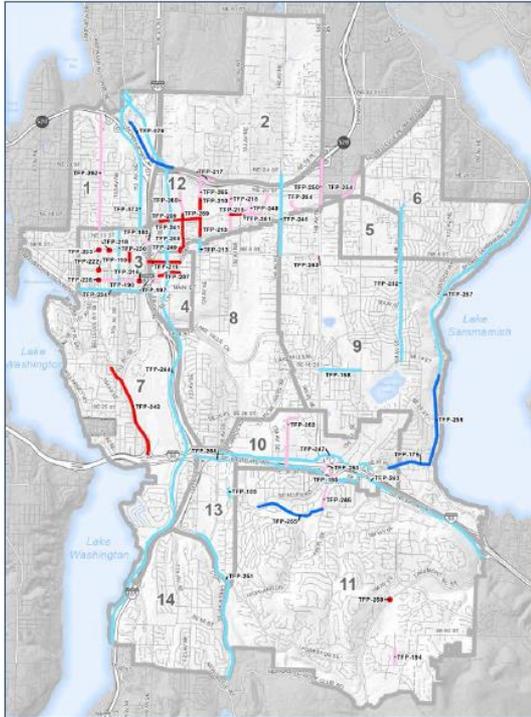


- 1. Assess the remaining gaps in Bellevue's Bicycle Priority Corridor Network.**
- 2. Assess range of bicycle facility types that could be applied along missing segments, including interim treatments as well as more permanent best practice facilities like protected bicycle lanes.**
- 3. Consider the pros and cons and the associated maintenance needs of each alternative treatment.**
- 4. Arrive at planning level cost estimates and priorities to inform the next round of updates to the City's Transportation Facilities Plan (TFP) and Capital Investment Program (CIP).**



2016-2027

TRANSPORTATION FACILITIES PLAN



Revised DRAFT October 2015

The proposed 2016-2027 TFP includes a Pedestrian-Bicycle Implementation (PBII) Reserve allocation of \$22.5M, with indication that the allocation to particular projects (not necessarily limited to the 11 listed in the TFP) will be determined via the ongoing PBII process.



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2016-2017 TFP

PEDESTRIAN - BICYCLE IMPLEMENTATION INITIATIVE (PBII) RESERVE PROJECTS

N/A	Ped/Bike Implementation Reserve			This line does not represent a facility project. It represents a recommended funding "reserve" for the implementation of priority pedestrian and bicycle projects to be determined by the City's ongoing <i>Pedestrian & Bicycle Implementation Initiative</i> . Candidate projects for the allocation of a portion of this reserve include the Ped/Bike TFP projects listed below and notated with "PBII" in the "Total TFP Funding Allocation" column.			22,500		
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1. TFP-158: SE 16th Street/148th Avenue SE to 156th Avenue SE
2. TFP-173: 108th/112th Avenue NE/ north city limit to NE 12th Street
3. TFP-230: 108th Avenue NE/NE 12th Street to Main Street
4. TFP-232: 164th Avenue NE/SE-NE 18th Street to SE 14th Street
5. TFP-234: Main Street/100th Avenue to 116th Avenue
6. TFP-243: Mountains to Sound Greenway/ Factoria Boulevard to Lakemont Boulevard
7. TFP-244: Eastside Rail Corridor multi-use path/southern city limits to northern city limits
8. TFP-245: 140th Avenue NE/NE 24th Street to NE 8th Street
9. TFP-247: Eastgate Way/Richards Road to SE 35th Place
10. TFP-249: Hospital/NE 8th Street Station Access Improvements
11. TFP-251: Coal Creek Parkway/124th Avenue SE to the southern city limits



TFP Candidate Reserve Projects



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Making Bellevue a great place
to walk and bike.



HOW YOU CAN HELP:

- 1 Click on "Add Point"
- 2 Select the type of issue
- 3 Place your point on the map
- 4 Answer a few questions, submit comments

Refer to the "Instructions" for more help

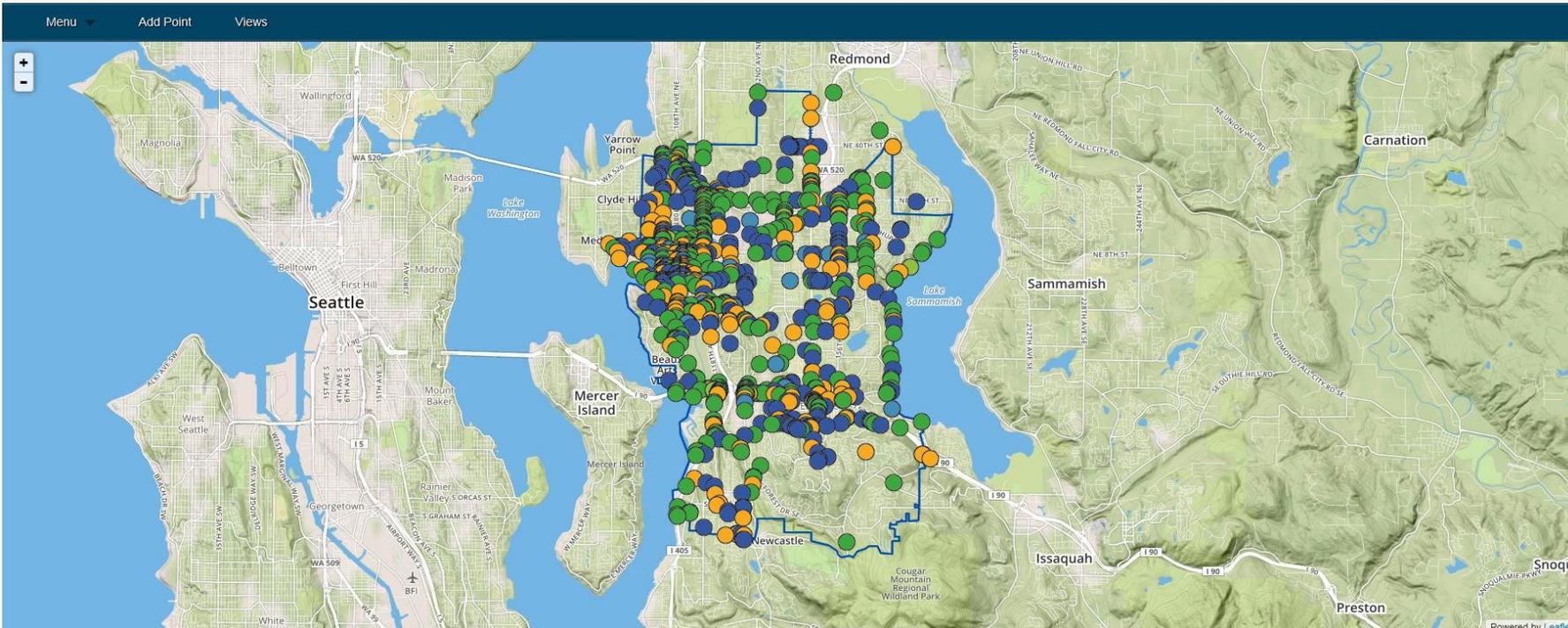
MAP LEGEND

Unsafe
Accommodations
for People...

- Walking
- Bicycling

Unsafe **Behaviors** by...

- People Walking
- People Bicycling
- People Driving



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Public Feedback



“Downtown Bellevue is not an area where the faint of heart would choose to ride; that said, it is prime for investment to attract additional riders. What’s needed are safe and inviting bicycle facilities that are separated from the auto.”

- Karen Doherty, Vice President, Puget Sound Area Manager of HDR



“The separated lane is very attractive for safety reasons. My greatest concern is the taking of scarce roadway space for a limited user base.” – Lampe



“Separating the biker from traffic is a given... We provide it for cars to prevent accidents. We should provide it for bikers given the imbalance in protection.” – Barksdale



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Board & Commission Feedback

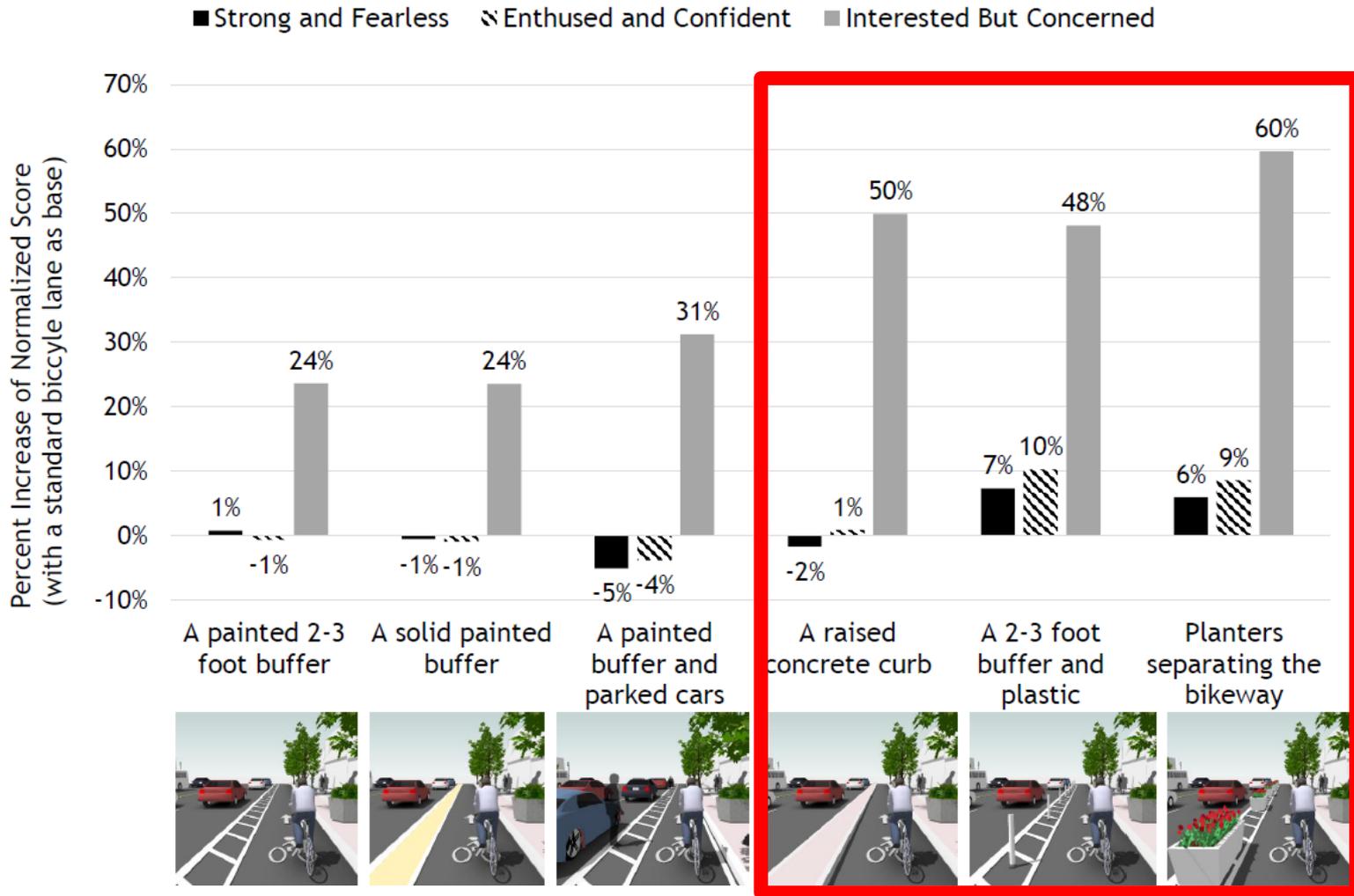


“I was impressed at how quickly Seattle is moving forward I’ve been out walking and riding my bike so I can understand the impact that having some of those dedicated spaces would make for people.”

- Debra Kumar, Bellevue Parks & Community Services Board



Change in Stated Comfort (from a bike lane), by bicyclist type

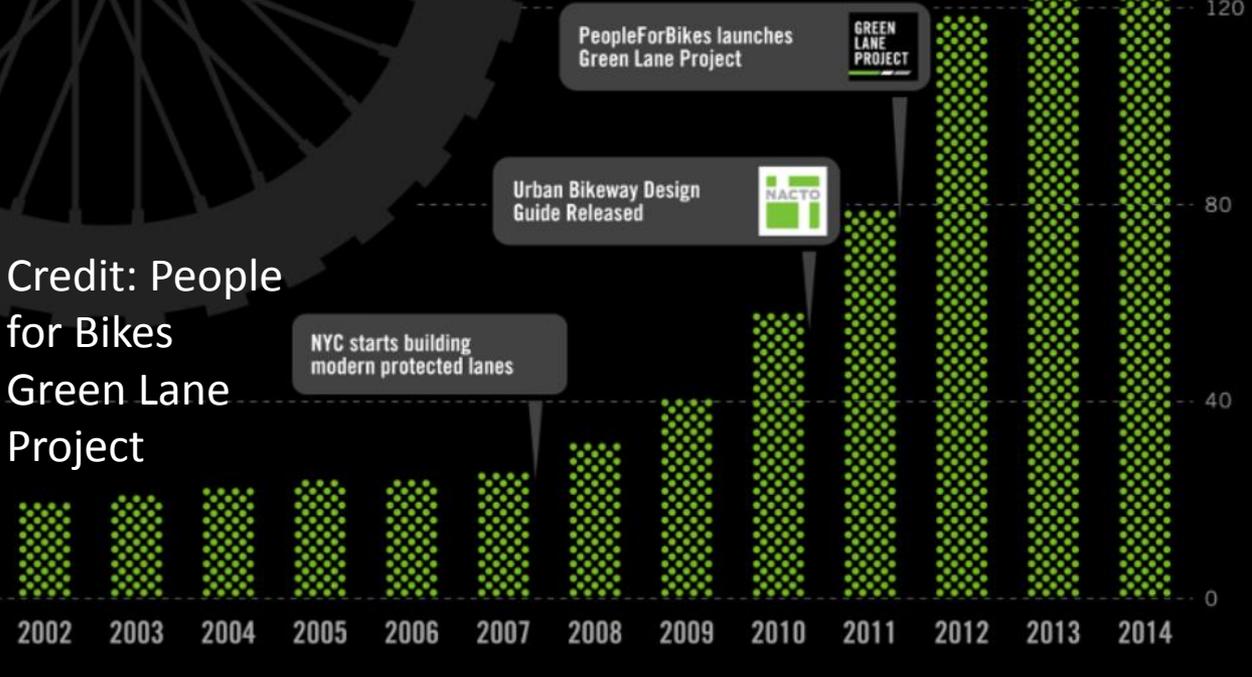


Source: Portland State University, *Lessons from the Green Lanes: Evaluating Protected Bike Lanes, 2014.*

Number of U.S protected bike lanes:

The number of protected bike lanes has nearly
QUADRUPLED
in the U.S. since 2010

210 Predicted count
by the end of 2014



Credit: People
for Bikes
Green Lane
Project



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Protected Bicycle Lanes in USA

DENVER'S TWO NEWEST PROTECTED BIKE LANES: FROM ZERO TO FINISHED IN ONE YEAR

December 04, 2015

Michael Andersen, Green Lane Project staff writer



THE RISE OF CURBS: PROTECTED BIKING'S SECOND ACT BEGINS

January 03, 2014

Michael Andersen, Green Lane Project staff writer

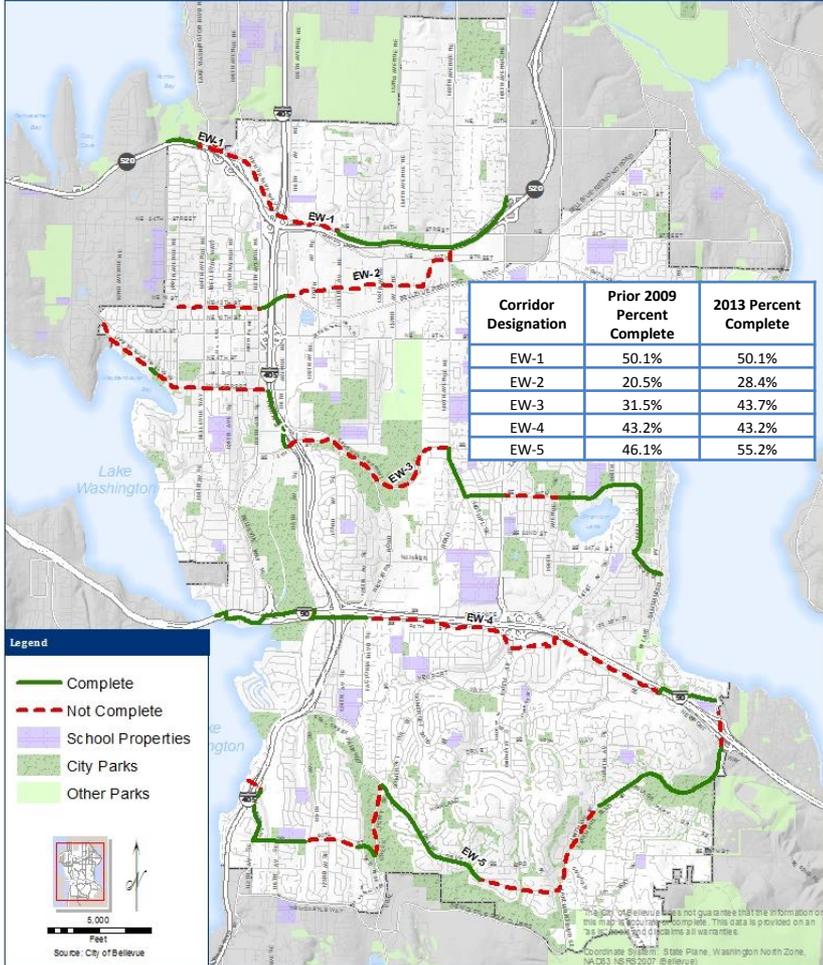


Austin workers set modular precast curbs in place on Third Street downtown.

“Advance the implementation of Bellevue’s planned Bicycle Priority Corridors to facilitate continuous bicycle travel along a connected grid of safe facilities throughout the city and the region.”

- PBII Program Principles (2/17/15)

E-W Priority Bicycle Corridors Completion Status 2013

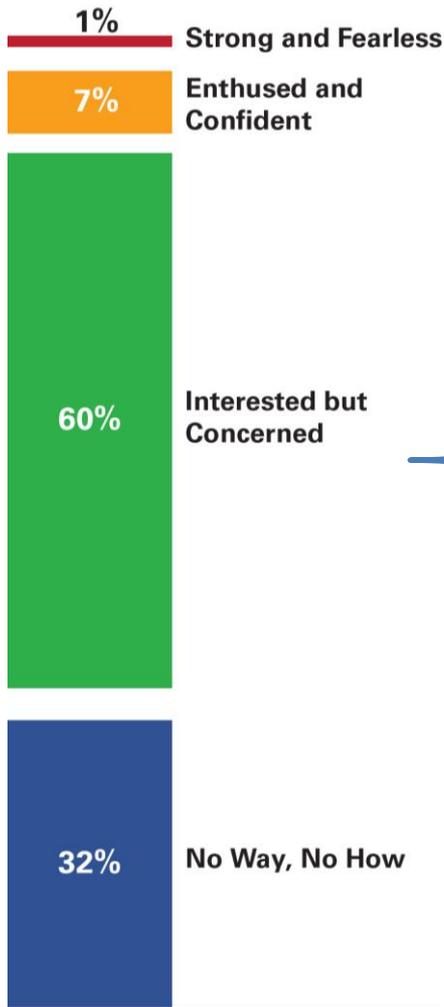


N-S Priority Bicycle Corridors Completion Status 2013



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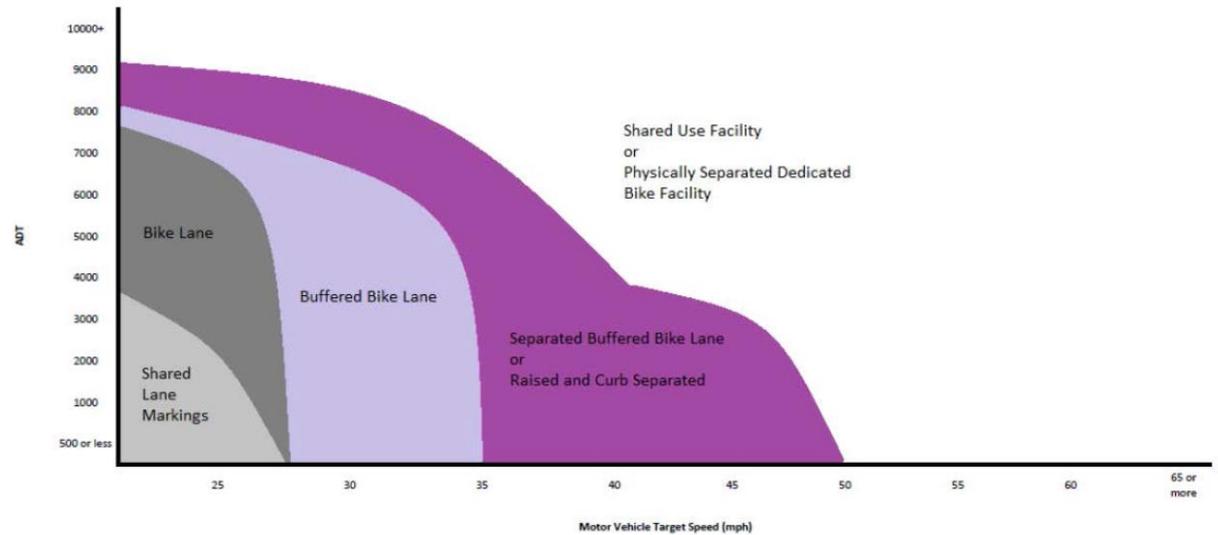
Connected Solutions



Roadway Bicycle Facilities

Chapter 1520

Exhibit 1520-6a Bicycle Facility Selection Chart – Interested, but Concerned Cyclists



Source: WSDOT Design Manual M 22-01.12 (November 2015)



2013 Conditions



2013 PARK(ing) Day



2014 Demonstration Project



2016 Upgrades



CITY OF BELLEVUE
TRANSPORTATION DEPARTMENT

2016 OVERLAY PROGRAM

CITY MANAGER
BRAD MIYAKE

MAYOR
CLAUDIA BALDUCCI

DIRECTOR OF TRANSPORTATION
DAVID BERG

DEPUTY MAYOR
KEVIN WALLACE

CITY COUNCIL
JOHN CHELMIŃIAK
CONRAD LEE
JENNIFER ROBERTSON
LYNNE ROBINSON
JOHN STOKES

SCHEDULE OF DRAWINGS

SHEET	DRAWINGS
1	COVER SHEET
2-43	ADA UPGRADES
44-47	LAKE HILLS CORRECTOR INTERM IMPROVEMENTS AT RICHARDS ROAD
48	TRANSPORTATION DEPT. VICINITY MAP AND PROJECT LEGEND
49-55	DETAILS
56-103	SCHEDULE A, TRANSPORTATION DEPARTMENT OVERLAY PLANS
104	UTILITIES DEPARTMENT OVERLAYS VICINITY MAP
105-113	SCHEDULE B, UTILITIES DEPARTMENT OVERLAY PLANS



APPROVED FOR CONSTRUCTION
 _____ DATE _____
 _____ DATE _____

C.I.P. NUMBER PW-M-1, W-16
 BID NUMBER 15145

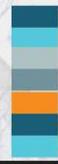


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Overlay = Connected + Rapid

Federal Highway Administration

SEPARATED BIKE LANE PLANNING AND DESIGN GUIDE



U.S. Department of Transportation
Federal Highway Administration

MAY 2015

Least
Separation



Signed Routes (No Pavement Marking)

A roadway designated as a preferred route for bicycles.



Shared Lane Markings

A shared roadway with pavement markings providing wayfinding guidance to bicyclists and alerting drivers that bicyclists are likely to be operating in mixed traffic.



On-Street Bike Lanes

An on-road bicycle facility designated by striping, signing, and pavement markings.



On-Street Buffered Bike Lanes

Bike lanes with a painted buffer increase lateral separation between bicyclists and motor vehicles.



Separated Bike Lanes

A separated bike lane is an exclusive facility for bicyclists that is located within or directly adjacent to the roadway and that is physically separated from motor vehicle traffic with a vertical element.



Off Street Trails / Sidepaths

Bicycle facilities physically separated from traffic, but intended for shared use by a variety of groups, including pedestrians, bicyclists, and joggers.

Most
Separation



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National Guidance

Striped Buffer & Delineator Post



Paint & Delineator Posts



Turtle Bumps



Large Bumps



Oblong Low Bumps



Linear Barrier



Precast Barrier Curb



Parked Cars



Jersey Barriers



Planters



Rigid Bollards



Cast in Place Barrier Curb





Indianapolis, IN



Seattle, WA



Temple City, CA



Cambridge, MA



San Francisco, CA



New York, NY



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“Construction” Projects

The Rapid Implementation Program (RIP) strives to fill gaps **[Connected]** along the Priority Bicycle Corridor (PBC) network, and planned bicycle network, with facilities that appeal to “interested but concerned” bicyclists **[Protected]**. The RIP approach emphasizes implementation of low cost/short timeframe **[Rapid]** projects.



Effectiveness: 2009 Plan targets

- Connected-Protected-Rapid (CPR) Emphasis
- Bicycle Friendly Community “Silver Level”
- Practical Design: “Right Project, Right Time for the Right Cost, in the Right Way”



TFP Allocation: \$22M

- Engineering - “Paint/Post Ready” emphasis
- Education, Encouragement, Enforcement, Evaluation



Timeframe: Years 1-3

- Start with quickest and most inexpensive improvements (low cost/high impact)

Most Separation

Least Separation

Separated Buffered Bike Lane
(aka Protected Bike Lane)



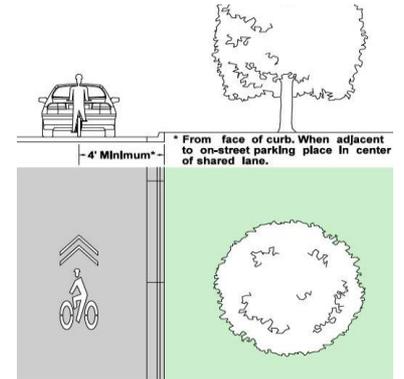
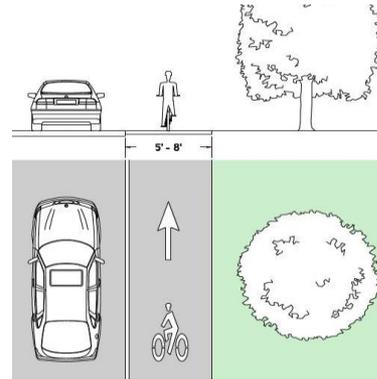
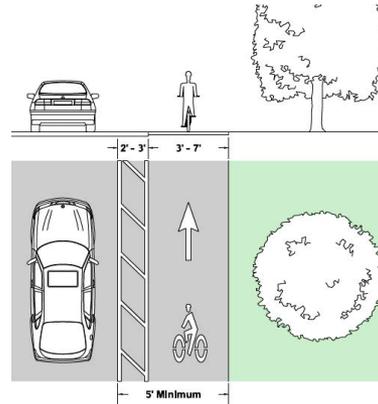
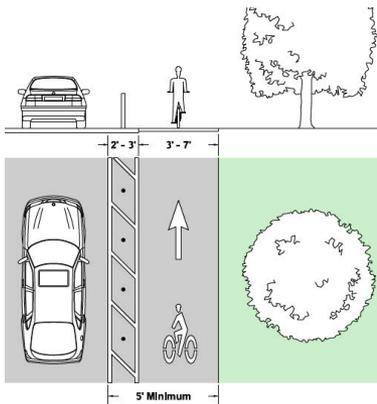
On-Street Buffered
Bike Lane



Conventional On-Street
Bike Lane



Shared Lane Marking
(aka Sharrows)



Source: WSDOT Design Manual. [Chapter 1520 – Roadway Bicycle Facilities](#). November 2015.



Bicycle Wayfinding



Curb Extension



Pavement Markings



School Zone Flashing Beacon

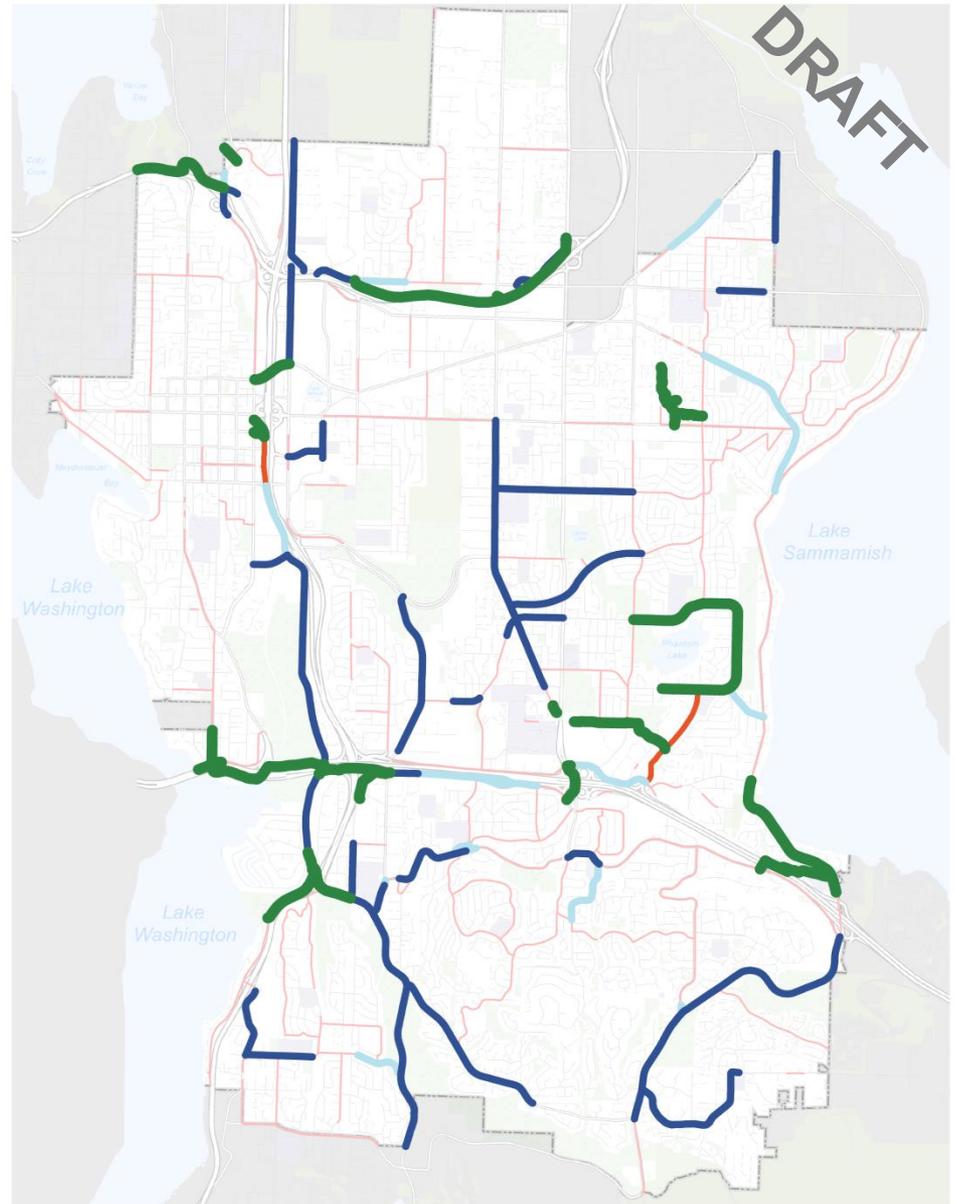


Traffic Diverter



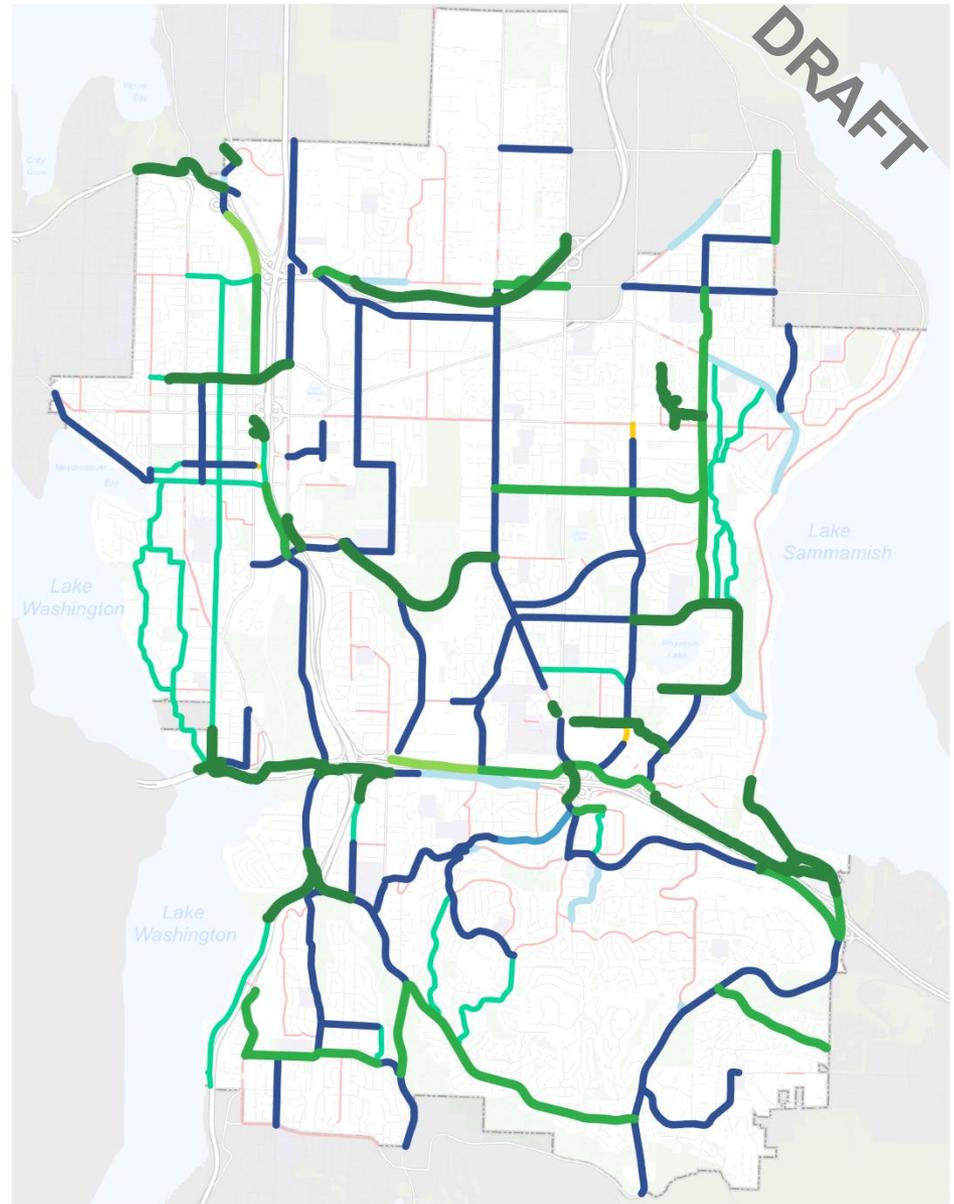
Speed Hump

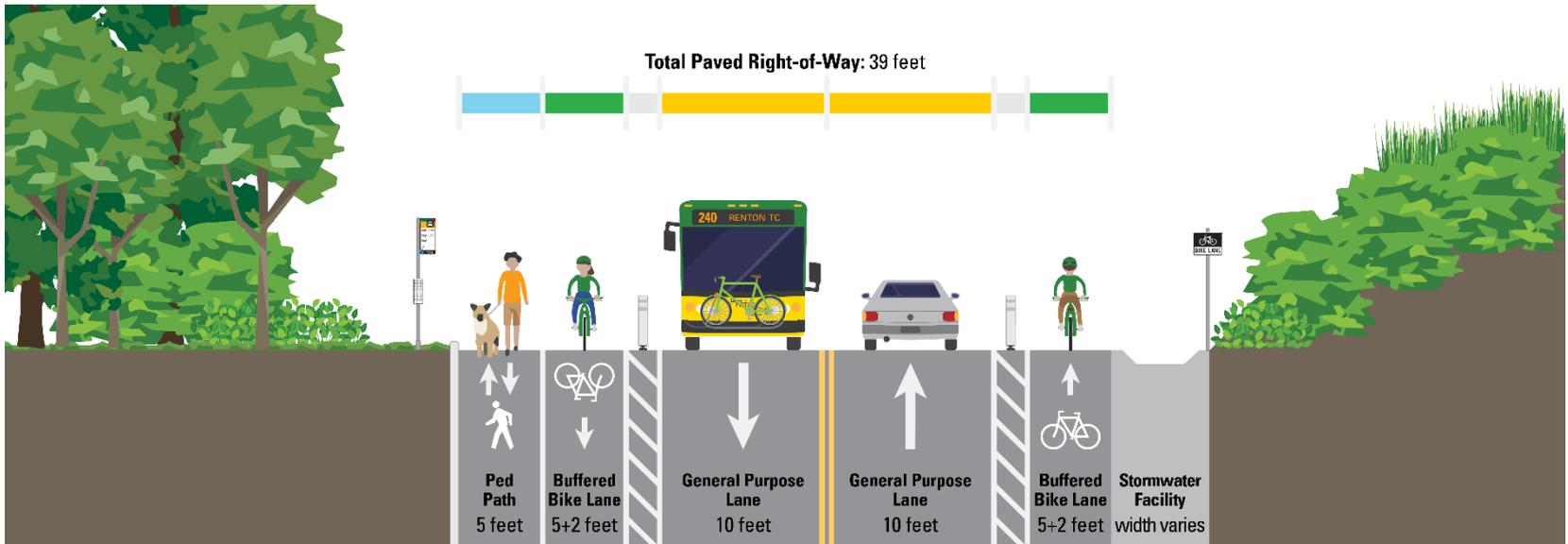
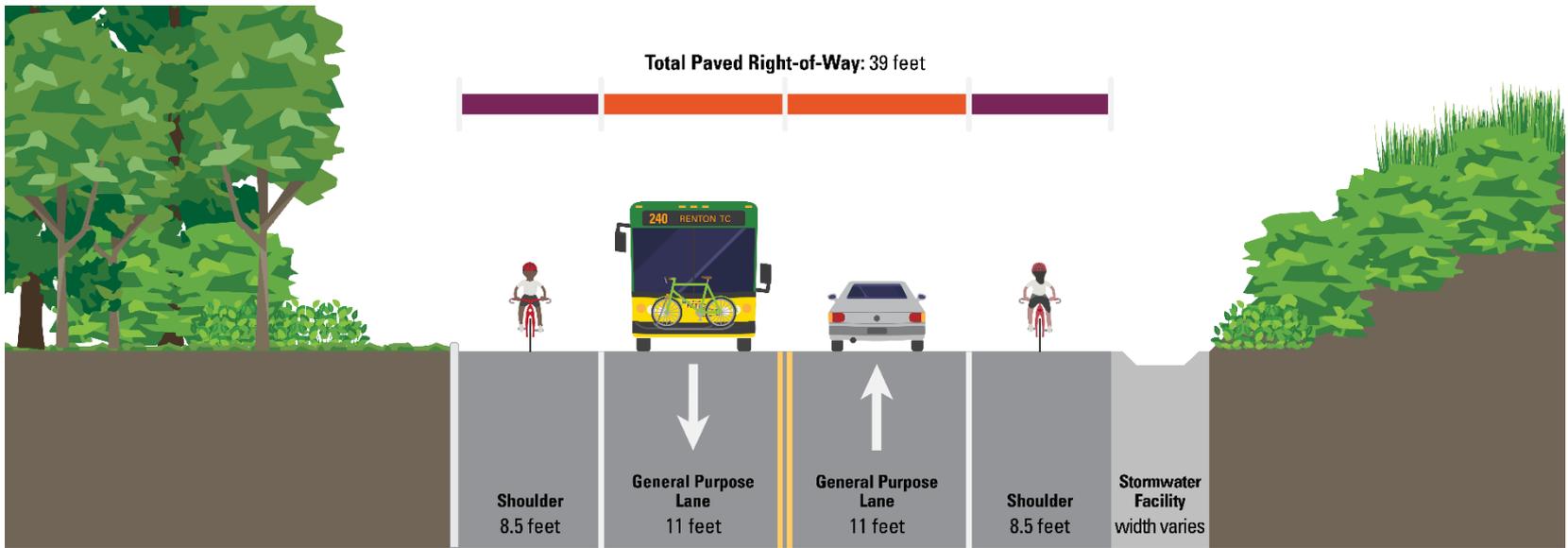
-  **Offstreet Paths**
-  **Conventional Bike Lanes, Both Sides**
-  **Conventional Bike Lane, One Side**
-  **Conventional Sharrows, Both Sides**
-  **Wide Shoulders/Shared Lanes, One or Both Sides**



Existing Bicycle Facilities

-  **Offstreet Paths**
-  **Protected Bike Lanes, Both Sides;**
-  **Protected Bike Lanes, Both Sides;**
Ped Path, One Side
-  **Conventional Bike Lanes, Both Sides**
-  **Conventional Bike Lane, One Side;**
Ped Path, One Side
-  **Conventional Bike Lane, One Side**
-  **Neighborhood Greenway**
-  **Green-Backed Sharrows, Both Sides**
-  **Wide Shoulders/Shared Lanes,**
One or Both Sides





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Representative CPR Project

Design Details & Cost Estimates



Maintenance Requirements & Cost Estimates





BELLEVUE, WA

TOTAL POPULATION

134,400

POPULATION DENSITY

4,010

TOTAL AREA (sq. miles)

33.3

OF LOCAL BICYCLE FRIENDLY BUSINESSES

0

OF LOCAL BICYCLE FRIENDLY UNIVERSITIES

0

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

	Average Silver	Bellevue
Arterial Streets with Bike Lanes	45%	34
Total Bicycle Network Mileage to Total Road Network Mileage	30%	16
Public Education Outreach	GOOD	SOME
% of Schools Offering Bicycling Education	43%	0
Bike Month and Bike to Work Events	GOOD	GOOD
Active Bicycle Advocacy Group	YES	YES
Active Bicycle Advisory Committee	YES	VERY
Bicycle-Friendly Laws & Ordinances	SOME	GOOD
Bike Plan is Current and is Being Implemented	YES	YES
Bike Program Staff to Population	PER 70K	33,600

CATEGORY SCORES

ENGINEERING <i>Bicycle network and connectivity</i>	5/10
EDUCATION <i>Motorist awareness and bicycling skills</i>	1/10
ENCOURAGEMENT <i>Mainstreaming bicycling culture</i>	4/10
ENFORCEMENT <i>Promoting safety and protecting bicyclists' rights</i>	2/10
EVALUATION & PLANNING <i>Setting targets and having a plan</i>	4/10

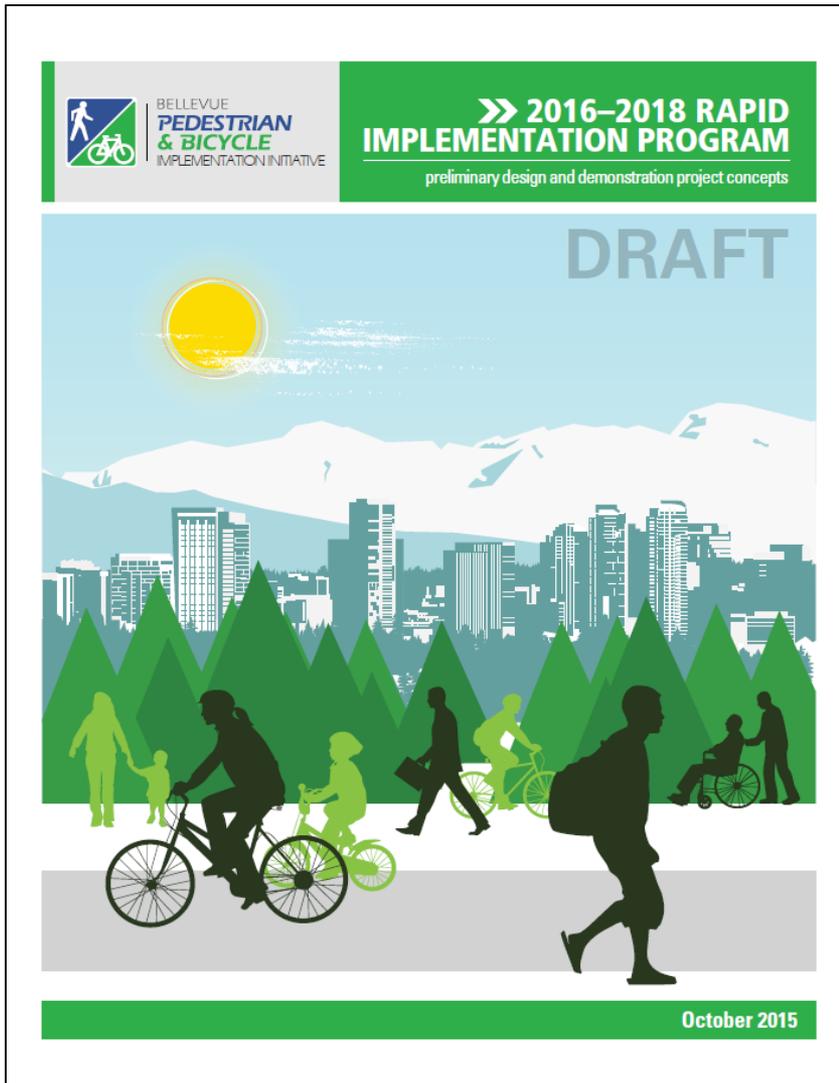
KEY OUTCOMES

	Average Silver	Bellevue
RIDERSHIP <i>Percentage of daily bicyclists</i>	3.5%	0.50
SAFETY MEASURES CRASHES <i>Crashes per 10k daily bicyclists</i>	180	438
SAFETY MEASURES FATALITIES <i>Fatalities per 10k daily bicyclists</i>	1.4	0



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Benchmarking



- **December 10, 2015:** TC Meeting
- **January 12, 2016:** P&CS Board
- **January 28, 2016:** TC Workshop #1
- **February 25, 2016:** TC Workshop #2
 - Remaining corridors
 - Cost estimates
 - Outreach Strategy
- **March 2016:** Budget Proposal
 - Engineering
 - Education
 - Encouragement
 - Enforcement
 - Evaluation
- **March – April 2016:** Outreach
- **May 2016:** Draft Report



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