



Mobility  
Implementation  
Plan

City of Bellevue, WA  
Adopted April 18, 2022  
Resolution No. 10085

# Bellevue Mobility Implementation Plan

October 12, 2022

**Ariel Davis, AICP**

Fehr & Peers

**Loreana Marciante**

Bellevue Transportation Commission

**Kevin McDonald, AICP**

Bellevue Transportation Department



**2022 APAWA Annual Conference**

October 11-13  
Vancouver, Washington

# Mobility Implementation Plan (MIP)

## Speaker Introductions



**Ariel Davis,  
Fehr & Peers**



**Loreana Marciante,  
Bellevue Transportation Commission**



**Kevin McDonald,  
Bellevue Transportation Department**

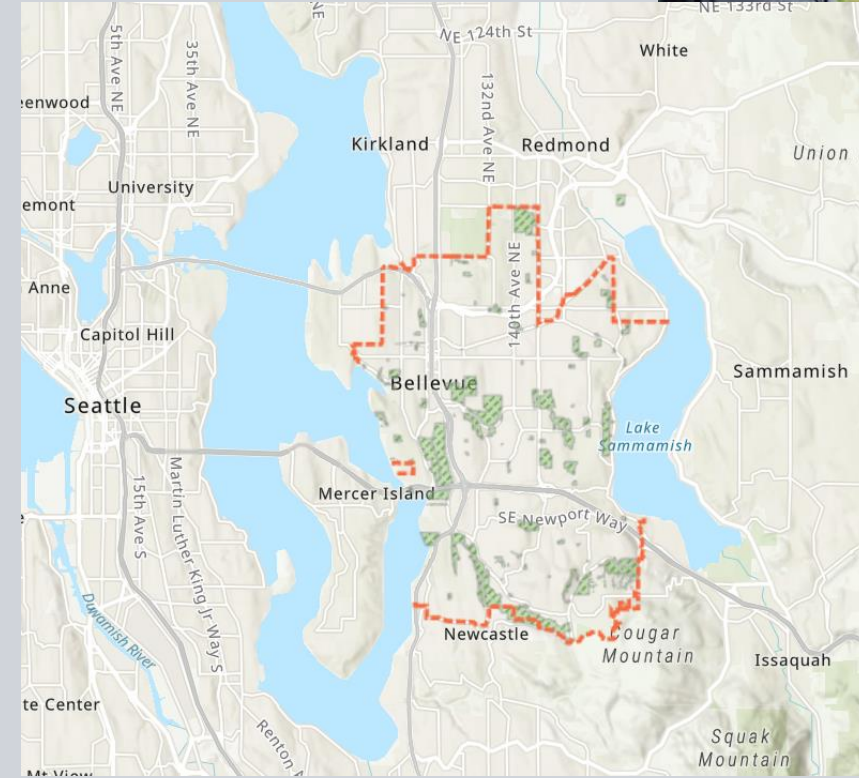


# Presentation Overview



## About Bellevue Toward a Multimodal Approach for Bellevue

- A Policy Evolution
- Content of the MIP
- Multimodal Concurrency



MOBILITY IMPLEMENTATION PLAN





# About Bellevue



**Incorporated 1953**  
**Population: 5,500**  
**Growth: 147 annexations + infill**  
**Statistics 2022**  
**Population: ~150,000**  
**Jobs: ~150,000**  
**Comprehensive Plan Update (2044)**  
**+ / > 35,000 Housing Units**  
**+ / > 70,000 Jobs**



# Mobility Policy Evolution

## Comprehensive Plan 1989

Traveling on arterials should not be too inconvenient, time consuming, or unsafe

## Comprehensive Plan 1993

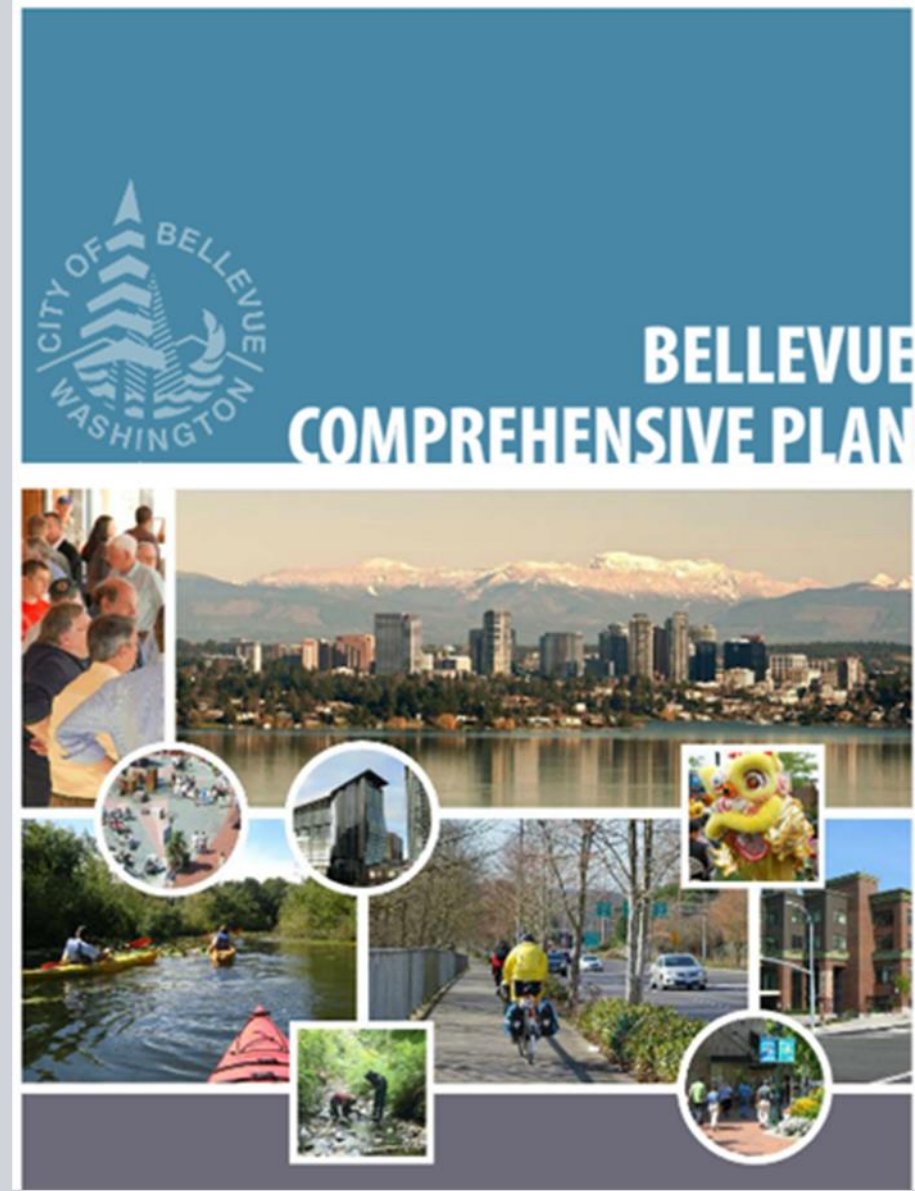
Establish (vehicle) level of service standards in each area of the city in light of growth management objectives

## Comprehensive Plan 2015

Establish Multimodal Level of Service measures, standards and targets

## Comprehensive Plan 2021

Adopt and implement multimodal concurrency





# Toward a Multimodal Approach for Bellevue

PSRC

06/30/09

MMLOS

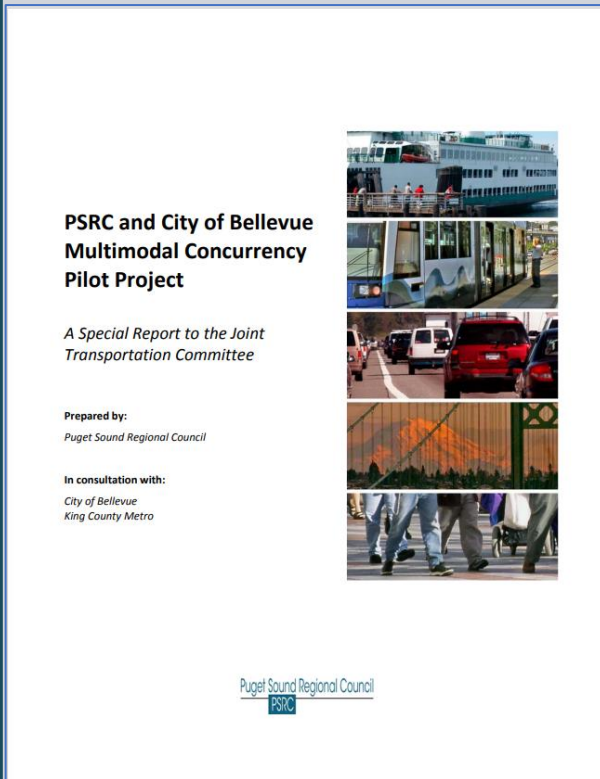
04/13/17

MIP

03/10/22

MMC

09/17/22




**PSRC and City of Bellevue Multimodal Concurrency Pilot Project**

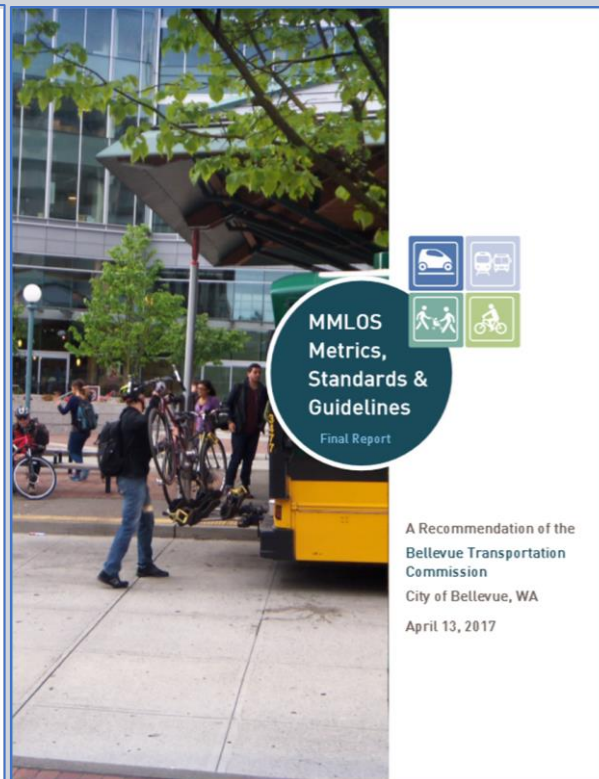
*A Special Report to the Joint Transportation Committee*

Prepared by:  
Puget Sound Regional Council

In consultation with:  
City of Bellevue  
King County Metro



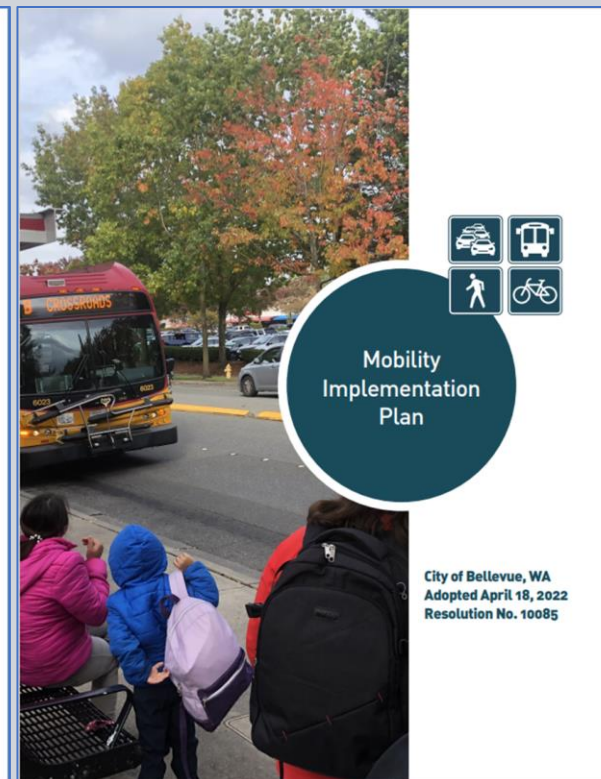

Puget Sound Regional Council  
PSRC



**MMLoS Metrics, Standards & Guidelines**

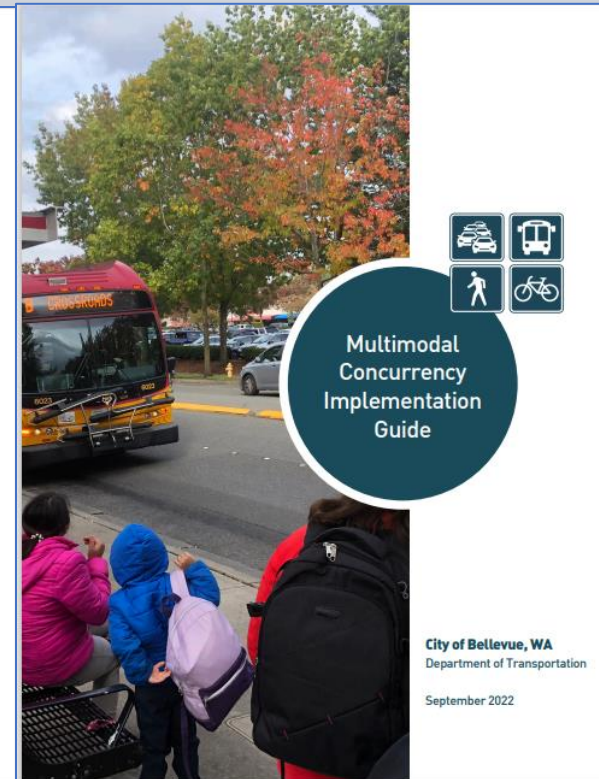

Final Report

A Recommendation of the Bellevue Transportation Commission  
City of Bellevue, WA  
April 13, 2017




**Mobility Implementation Plan**

City of Bellevue, WA  
Adopted April 18, 2022  
Resolution No. 10085



**Multimodal Concurrency Implementation Guide**

City of Bellevue, WA  
Department of Transportation  
September 2022



# Mobility Implementation Plan 2022 Awards

Bellevue wins VISION 2050 Award



Puget Sound Regional Council



STATE OF WASHINGTON

DEPARTMENT OF COMMERCE

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Congratulations 2022 Governor's Smart Communities Award Winner



# Mobility Implementation Plan

## Transportation Commission Role

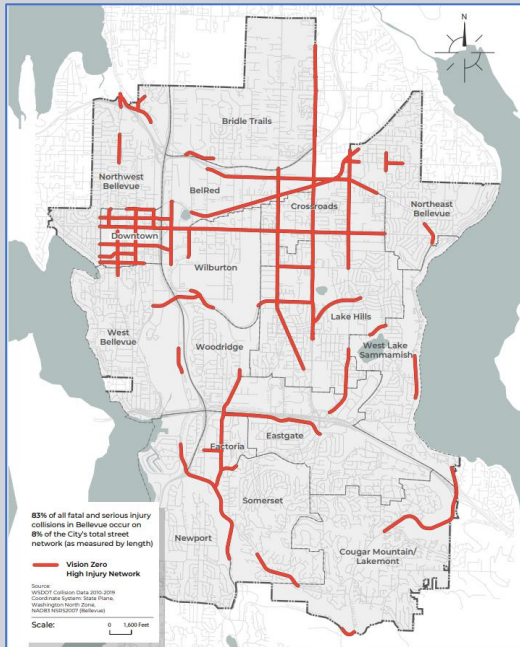
- Direction from Council
  - Prepare policy recommendations for multimodal concurrency
  - Prepare recommendation for Mobility Implementation Plan
- 22 Study Sessions: All Zoom Webinar
  - Information
  - Discussion
  - Direction
- Public Engagement
  - “Engaging Bellevue” Questionnaire
  - Briefings to stakeholders



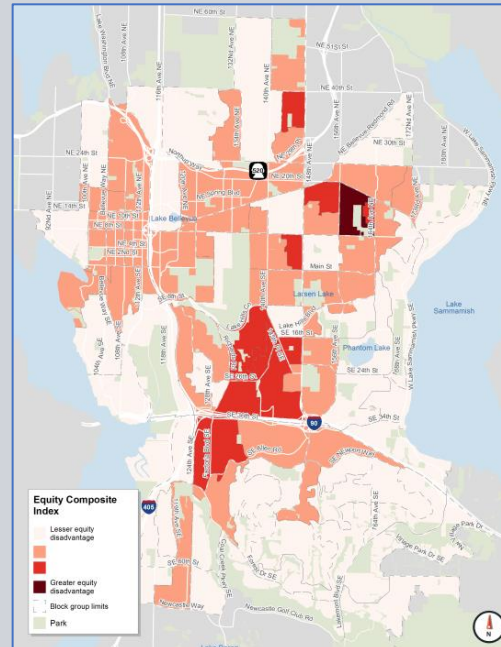
# Mobility Implementation Plan Goals

- **Safety:** Eliminate serious injuries and fatalities from crashes (Vision Zero)
- **Equity:** Design and prioritize projects to address equitable access
- **Growth:** Support growth and accommodate multimodal travel
- **Access/Mobility:** Complete the transportation system to provide mobility

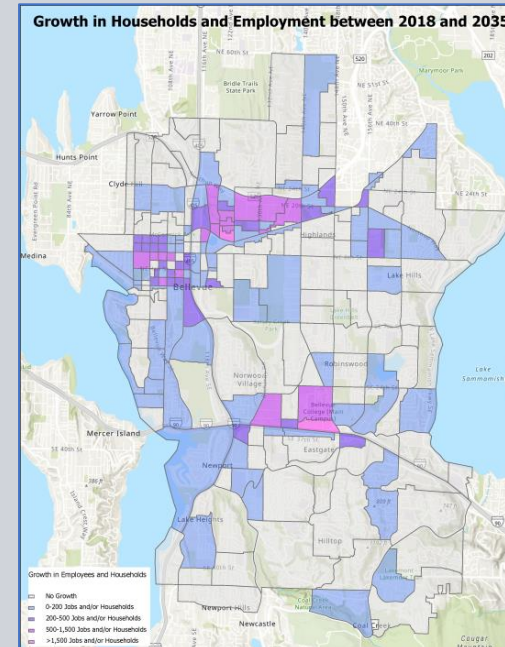
### Improve Safety



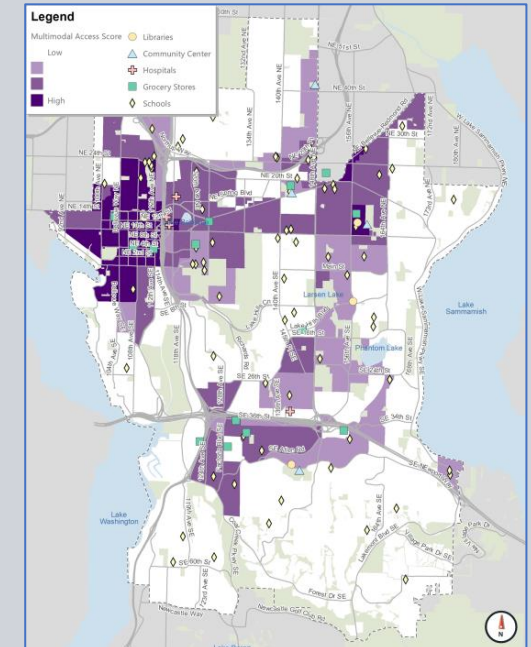
### Consider Equity



### Accommodate Growth



### Improve Access/Mobility



# The Layered Network

## Land Use

- Intensity and mix of uses

## Pedestrian

- Along arterials and across arterials

## Bicycle

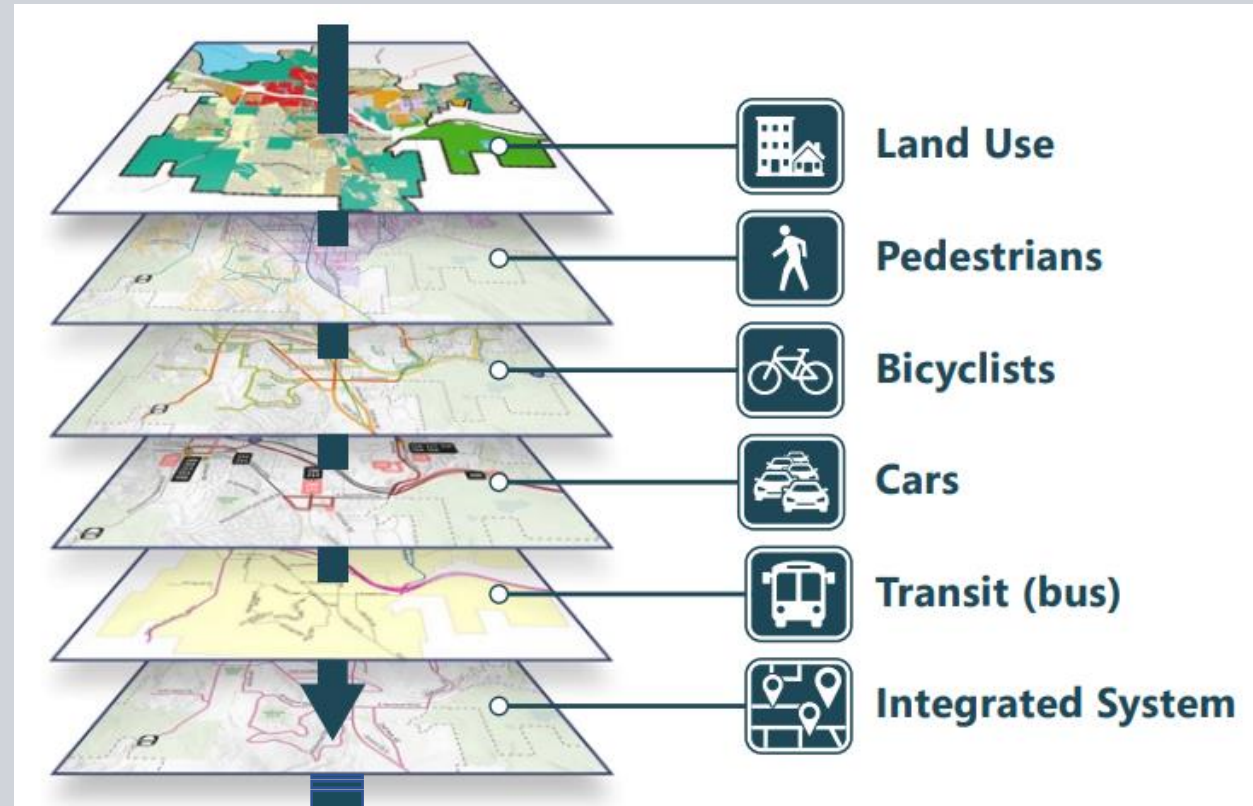
- Network defined in the Pedestrian and Bicycle Transportation Plan

## Vehicle

- Primary Vehicle Corridors and System Intersections

## Transit

- Frequent Transit Network and Transit Stops from Transit Master Plan



## Integrated System

- Reveals potential modal/land use compatibilities and conflicts



# Performance Management Areas

## Type 1 PMA

- High Growth/Urban Core
- Served by Light Rail

Downtown, BelRed, Wilburton/East Main

## Type 2 PMA

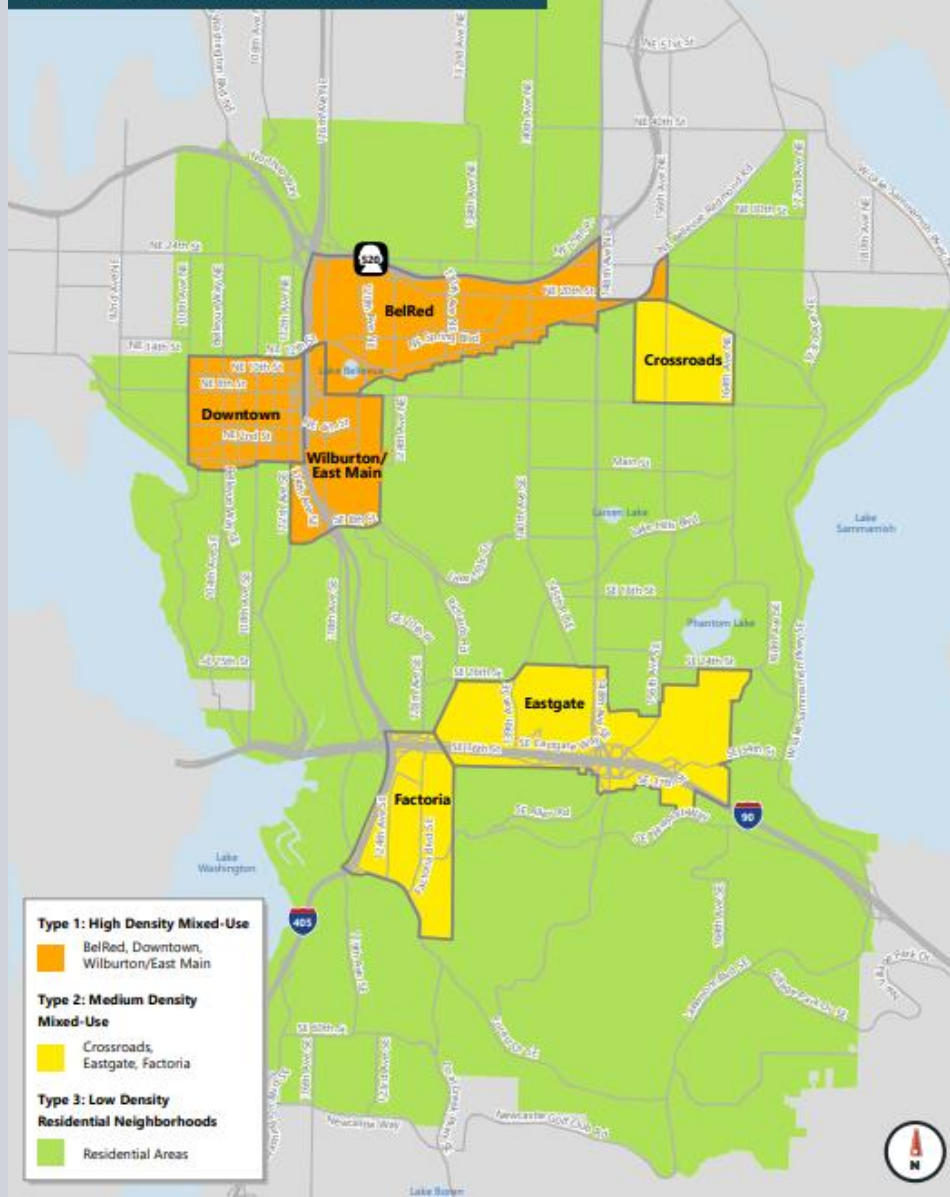
- Mixed-Use/Commercial Activity Centers
- Served by Frequent Transit Network

Crossroads, Eastgate and Factoria

## Type 3 PMA

- Largely residential areas/commercial nodes/pedestrian destinations
- Transit service on arterials

Figure 2: Performance Management Areas



# Performance Metrics

Metrics describe **what is measured** for each mode: Physical metrics & Functional metrics

## Pedestrian

- Sidewalk Width (including landscape strip)
- Arterial Crossing Spacing: Intersections, Mid-block

## Bicycle

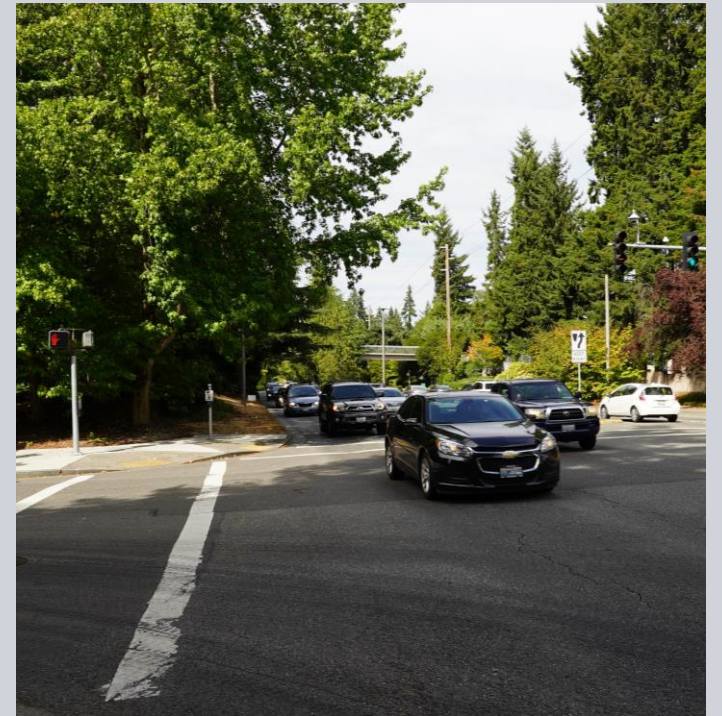
- Level of Traffic Stress (LTS) on Bike Network

## Transit

- Travel Time Ratio and Bus Stop Amenities

## Vehicle

- Travel Speed on Primary Vehicle Corridors
- V/C Ratio at System Intersections





# Performance Targets

- Performance Target relates to how the user experiences the transportation system
- Monitoring and forecasting performance reveals Performance Target Gaps
  - Meets Performance Target: good to go
  - Exists but does not meet Performance Target: facility deficient
  - Does not meet Performance Target: facility absent
- Performance Target Gap
  - Candidate location for project investment
  - Does not prescribe a specific project investment or ultimate performance outcome
  - Project Identification and Prioritization process will inform project candidates for the Transportation Facilities Plan

# Performance Metrics

## Pedestrian Mode

### Sidewalk Dimensions

Context	Downtown / BelRed	Activity Center	Neighborhood Shopping Center	Pedestrian Destination*	Elsewhere in the City
Component					
Sidewalk Width and Landscape Buffer Width	Downtown Land Use Code BelRed Land Use Code	16 ft. total	13 ft. total on frontage adjacent to shopping center	13 ft. total on frontage of pedestrian destination and within 100 ft. of a FTN stop	Bellevue Land Use Code Transportation Design Manual

### Arterial Crossing Spacing

Context	Downtown / BelRed	Activity Center	Neighborhood Shopping Center	Pedestrian Destination	Elsewhere in the City
Component					
Spacing Between Arterial Pedestrian Crossings	Downtown Transportation Plan (300 ft.)	≤ 800 ft.: Factoria ≤ 600 ft.: Elsewhere	One crossing every 600 ft. or less within shopping center area	Within 600 feet of primary entrance Within 300 ft. of bus stop pair on FTN	Applicable as needed





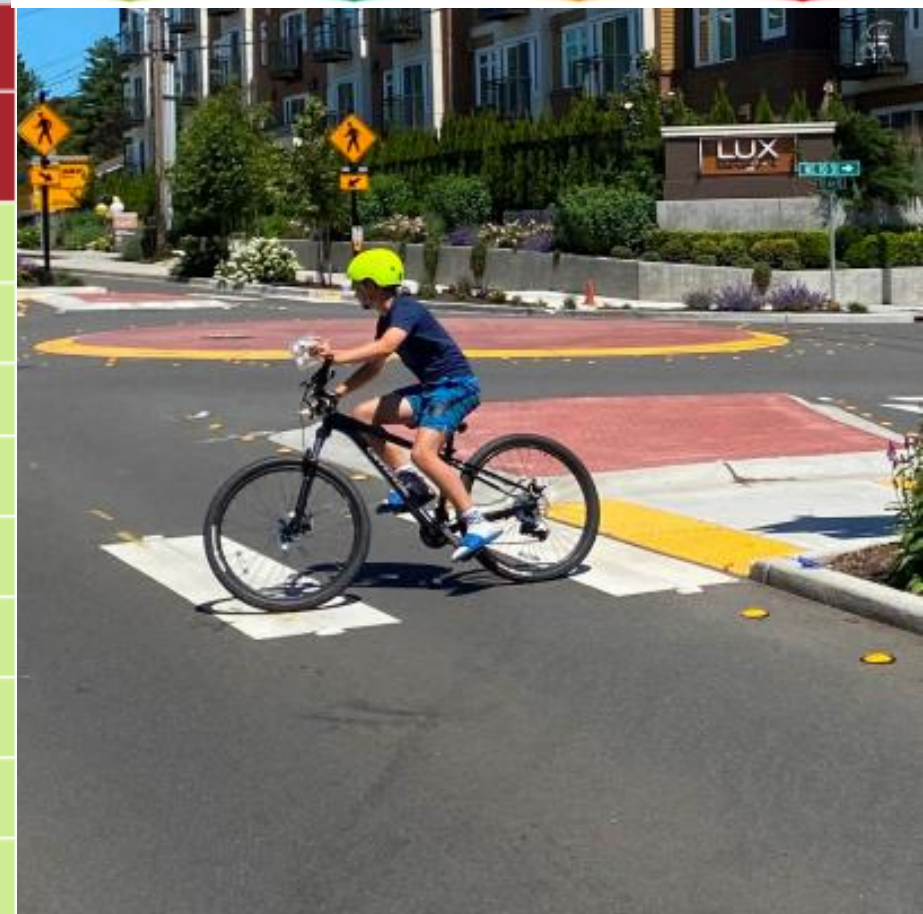
# Performance Metrics

## Bicycle Mode

- Level of Traffic Stress (LTS)
- Traffic volume and speed limit plus bicycle facility



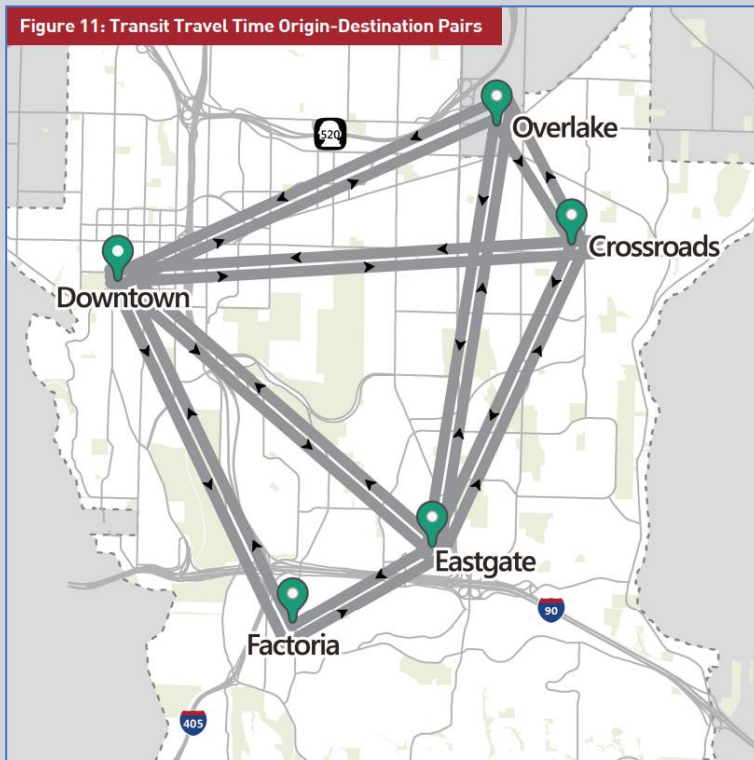
Roadway Characteristics		Bicycle Facility Components: Guideline to Achieve Intended Level of Service/Level of Traffic Stress					
Speed Limit	Arterial Traffic Volume	No Marking	Sharrow Lane Marking	Striped Bike Lane	Buffered Bike Lane (Horizontal)	Protected Bike Lane (Vertical)	Physically Separated Bikeway
</=25	<3k	1	1	1	1	1	1
	3-7k	3	3	2	1	1	1
	>/=7k	3	3	2	2	1	1
30	<10k	3	3	2	2	1	1
	10-25k	4	4	3	3	2	1
	>/=25k	4	4	3	3	3	1
35	<25k	4	4	3	3	3	1
	>/=25k	4	4	4	3	3	1
>35	Any	4	4	4	4	3	1



# Performance Metrics

## Transit Mode

- Transit Travel Time Ratio
  - Relative to auto travel time between Activity Centers on the Frequent Transit Network
- Amenities at Frequent Transit Network Stops



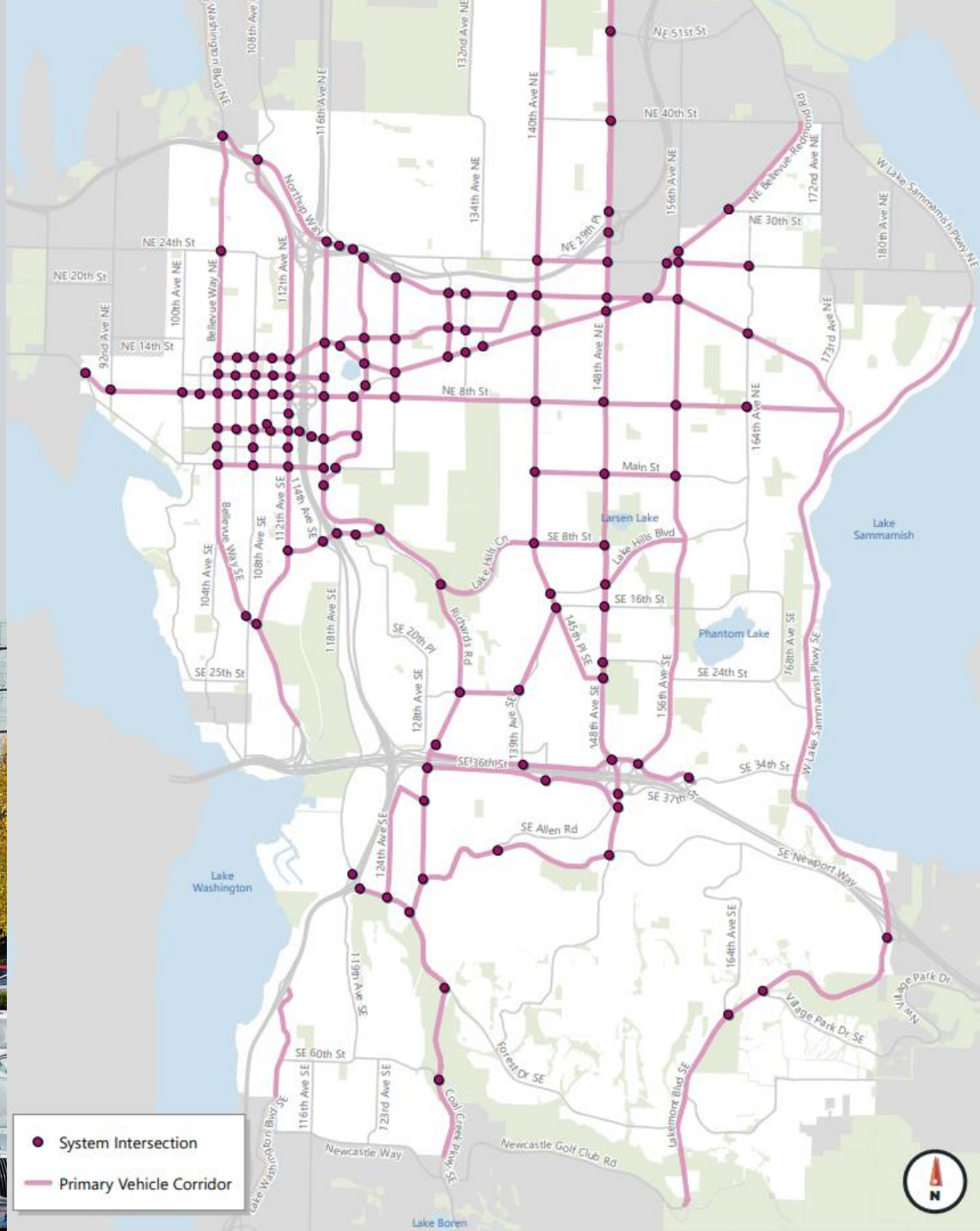
Context	Frequent Transit Network Stop/ RapidRide Stop
Component	
Weather Protection	Yes
Seating	Yes
Paved Bus Door Passenger Zone	Yes, Zone length 60 ft.
Wayfinding	Yes
Bicycle Parking	Yes



# Performance Metrics

## Vehicle Mode

- Corridor Travel Speed
  - On Primary Vehicle Corridors
- Volume/Capacity Ratio
  - At System Intersections



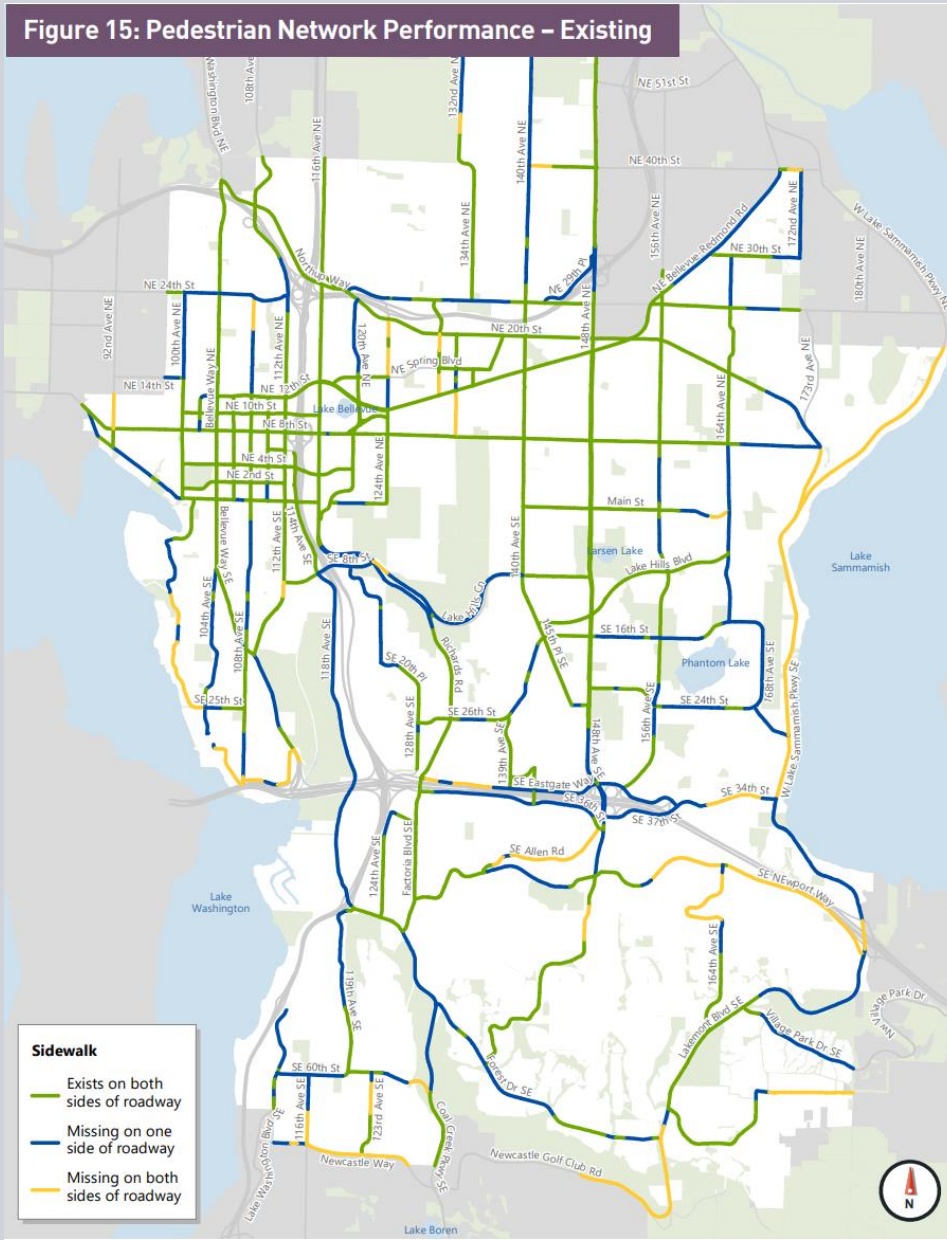
# Performance Targets for Each Mode

Mode	Performance Target		Monitoring and Reporting
Pedestrian	<ul style="list-style-type: none"> <li>• Sidewalk on both sides of the arterial; sidewalk dimensions vary</li> <li>• Arterial crossings at designated spacing near major trip-generating land uses; the spacing of arterial crossings varies by land use context</li> </ul>		Percentage of sidewalk network complete citywide and for locations within each PMA
Bicycle	Bicycle network facilities (corridors and intersections) meet the intended LTS		Percentage of bicycle network complete citywide and for locations by PMA
Transit	<ul style="list-style-type: none"> <li>• Transit travel time ratio of 2.0 or less</li> <li>• Stops on the Frequent Transit Network have passenger amenities</li> </ul>		List and map of activity center pairs that meet the travel time ratio Performance Target; Percent of bus stops on the FTN that include all five passenger amenities
Vehicle	Type 1 PMA High Density Mixed-Use	<ul style="list-style-type: none"> <li>• 1.0 V/C ratio at System Intersections</li> <li>• <math>\geq 0.5</math> Typical Urban Travel Speed for Primary Vehicle Corridors</li> </ul>	List and map of Primary Vehicle Corridors and System Intersections that meet the PMA Performance Target
	Type 2 PMA Medium Density Mixed-Use	<ul style="list-style-type: none"> <li>• 0.90 V/C ratio at System Intersections</li> <li>• <math>\geq 0.75</math> Typical Urban Travel Speed for Primary Vehicle Corridors</li> </ul>	
	Type 3 PMA Residential	<ul style="list-style-type: none"> <li>• 0.85 V/C ratio at System Intersections</li> <li>• <math>\geq 0.9</math> Typical Urban Travel Speed for Primary Vehicle Corridors</li> </ul>	



# Performance Targets

Figure 15: Pedestrian Network Performance – Existing

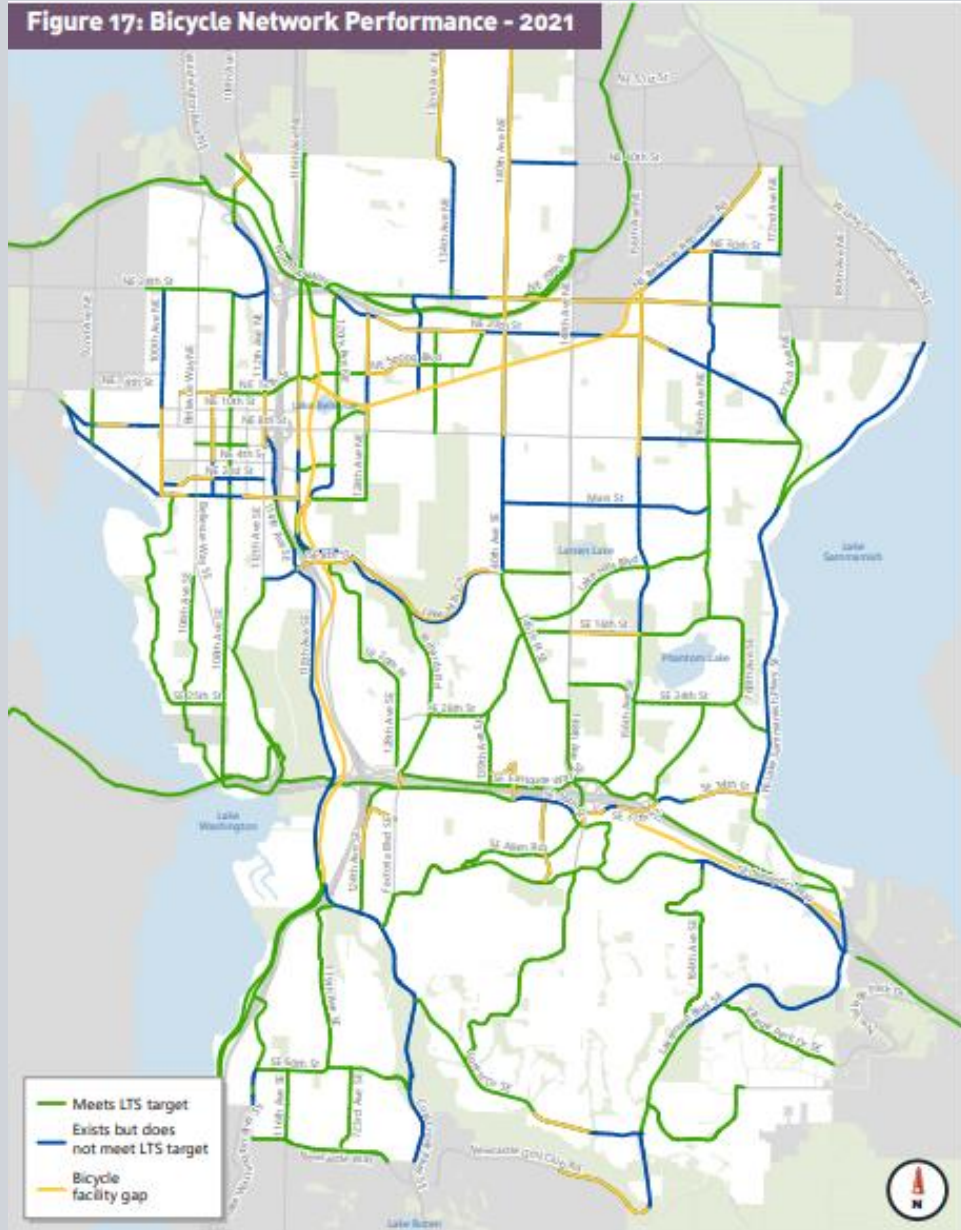


## Pedestrian Network

Citywide	Sidewalk on Both Sides	Sidewalks on One Side	Sidewalk Gaps
Miles	77	44	17
Proportion of Total	56%	32%	12%

Locations within the PMA		Sidewalk on Both Sides	Sidewalks on One Side	Sidewalk Gaps
Type 1 High Density Mixed-Use	Downtown	95%	5%	0%
	BelRed	86%	8%	6%
	Wilburton/ East Main	75%	25%	0%
Type 2 Medium Density Mixed-Use	Crossroads	100%	0%	0%
	Eastgate	29%	63%	8%
	Factoria	70%	28%	2%
Type 3 Residential		47%	37%	16%

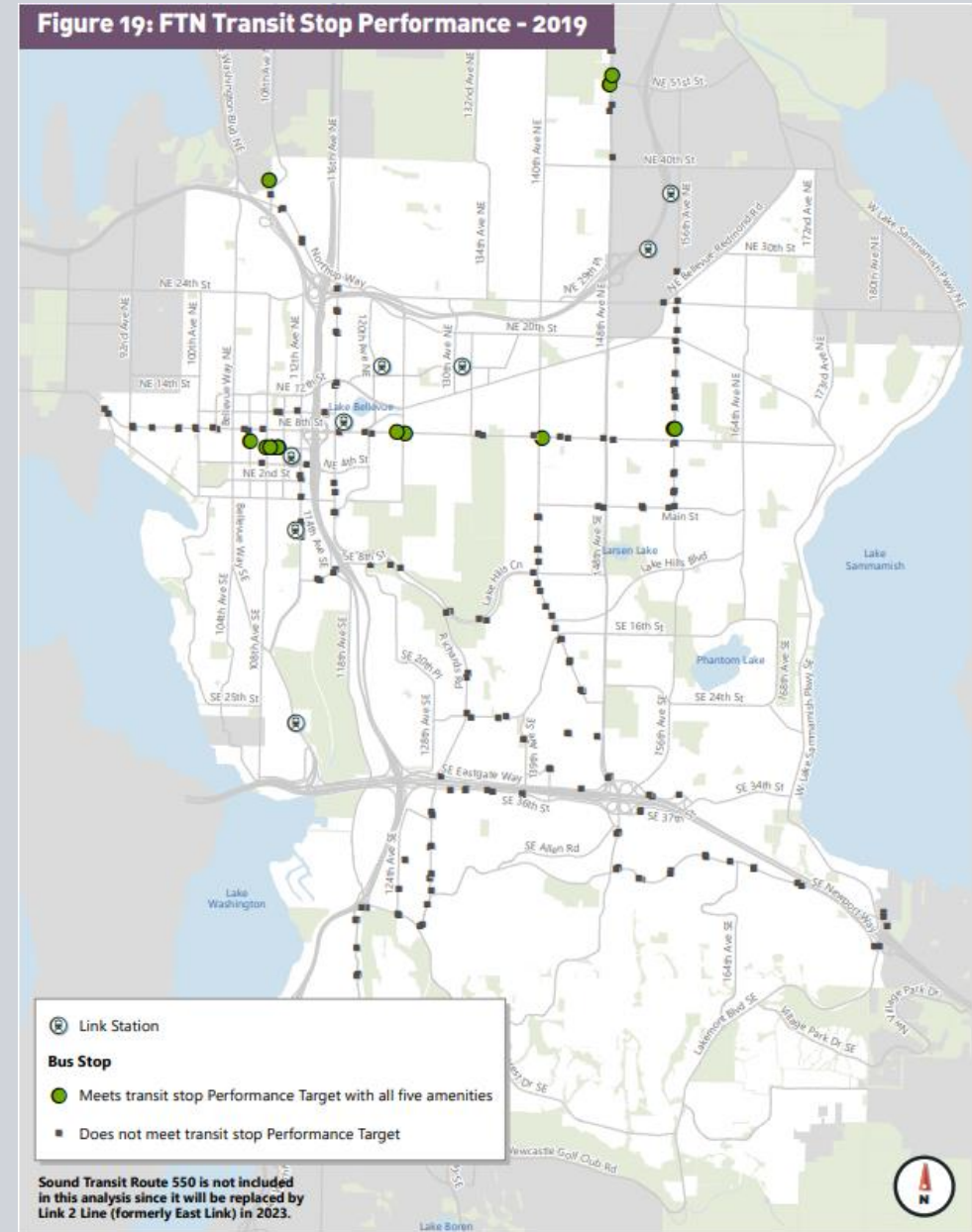
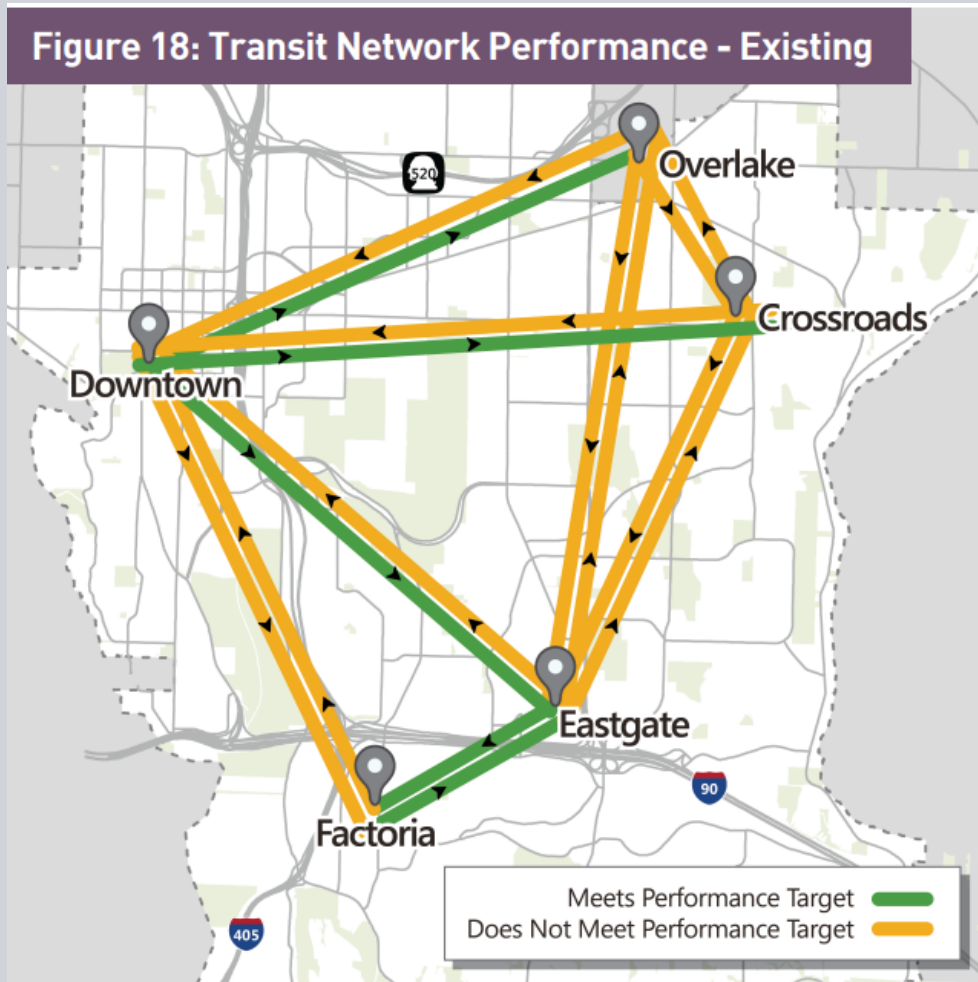
# Performance Targets – Bicycle Network



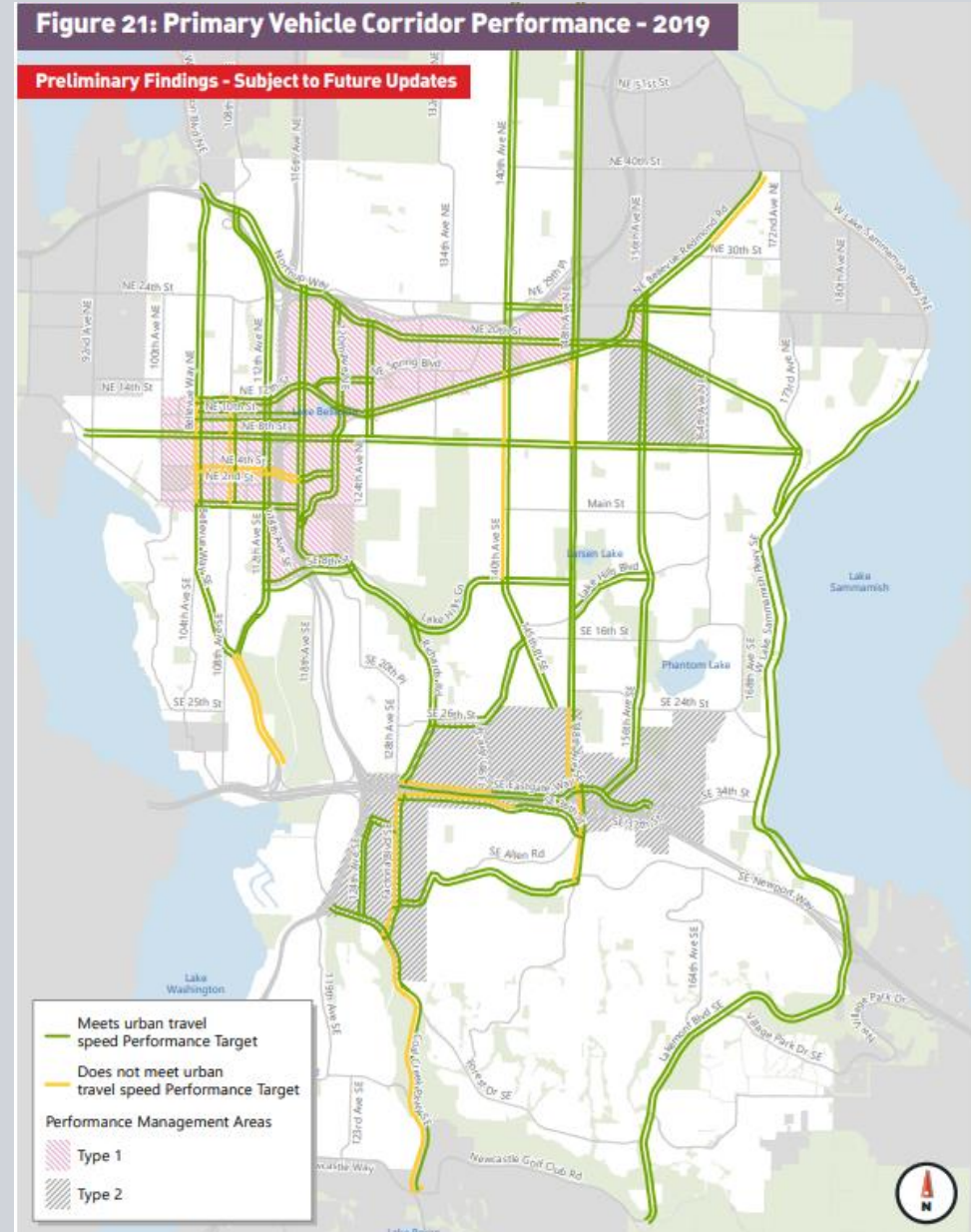
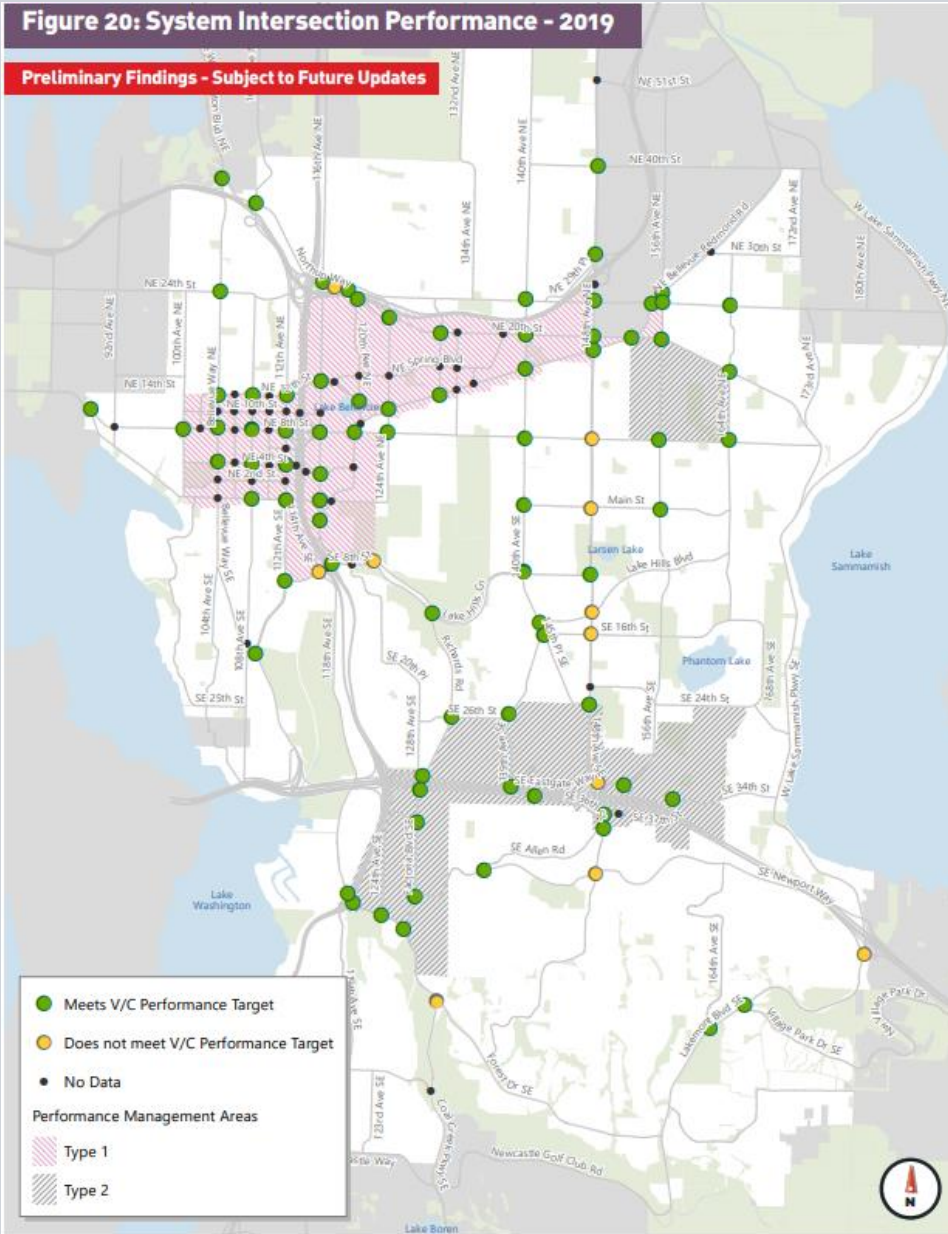
		Facilities that Meet LTS	Facilities Do Not Meet LTS	Facility Gaps	
Citywide	Miles	72	33	33	
	Proportion of Total	52%	24%	24%	
Performance Management Area	Type 1 High Density Mixed-Use	Downtown	27%	36%	37%
		BelRed	37%	8%	55%
		Wilburton/East Main	47%	14%	38%
	Type 2 Medium Density Mixed-Use	Crossroads	1%	59%	40%
		Eastgate	60%	24%	16%
		Factoria	58%	27%	15%
Type 3 Residential	57%	25%	18%		
Priority Bicycle Corridor	Enatai-Northtowne	93%	7%	0%	
	Lake Washington Loop	65%	25%	10%	
	Eastrail	23%	0%	77%	
	Somerset-Redmond	62%	17%	21%	
	Spiritridge-Sammamish	44%	56%	0%	
	West Lake Sammamish Pkwy	25%	75%	0%	
	SR 520 Trail	77%	23%	0%	
	Downtown-Overlake	41%	10%	49%	
	Lake-to-Lake Trail	41%	21%	38%	
	Mountains to Sound Greenway	32%	26%	42%	
	Coal Creek-Cougar Mountain	55%	39%	6%	
	Total	50%	28%	22%	



# Performance Targets – Transit Network



# Performance Targets – Vehicle Network







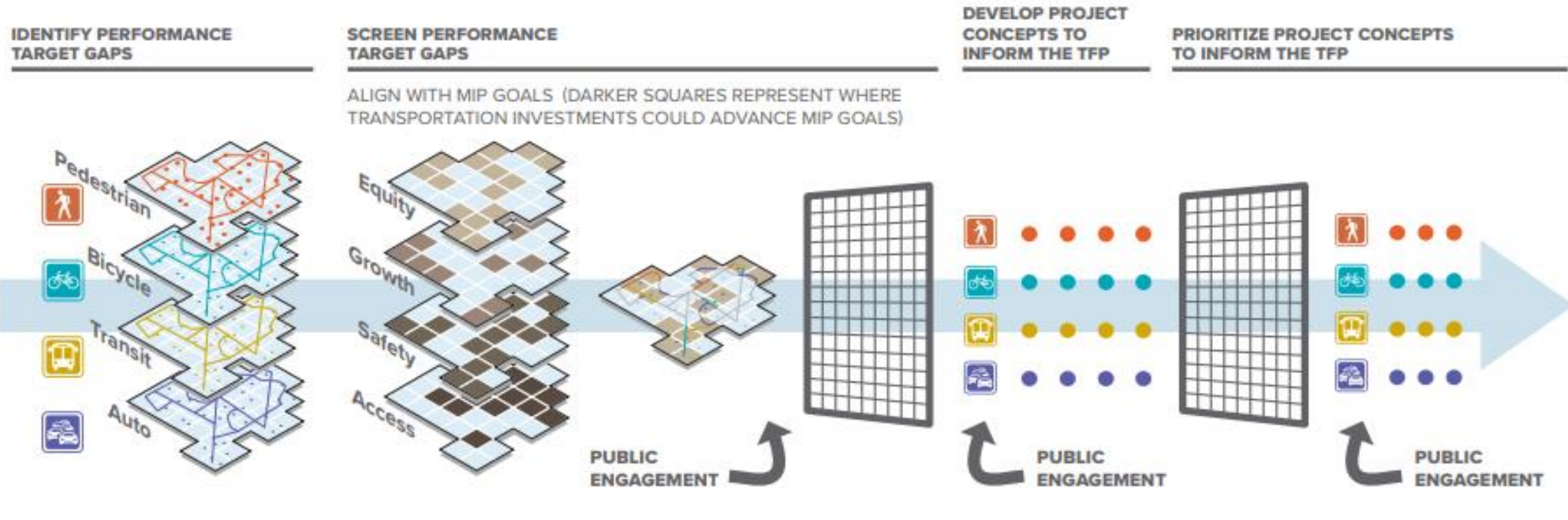
# Addressing a Performance Target Gap

- **The Need**
  - Many Performance Target Gaps
- **The Constraint**
  - Limited \$ and staff resources to address all the Performance Target Gaps
- **The Framework**
  - **Identify** Performance Target Gaps
  - Identify project concepts to address Gaps
  - Screen project concepts through MIP Goals
    - Equity, Safety, Growth, Access
  - Advance top candidates to project concept design
  - **Prioritize** project list by mode to inform Transportation Facilities Plan



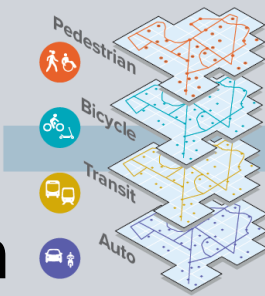
# Project Identification and Prioritization

## Framework to Identify and Address Performance Target Gaps





# Step 1. Identify Network Gaps



**Purpose:** Identify where the performance of the transportation system does not meet the defined Performance Targets.

**Outcome:** Map and list of network Performance Target Gaps by mode.

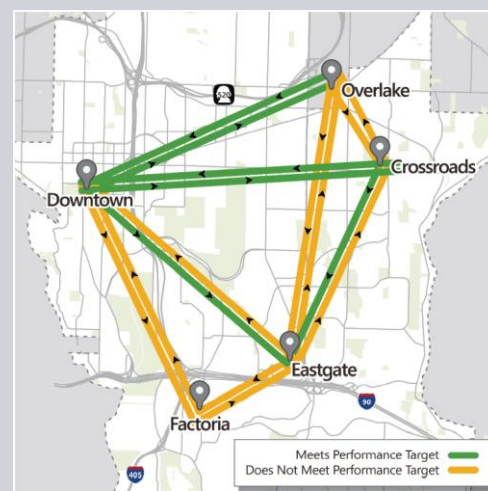
Sidewalk Gaps



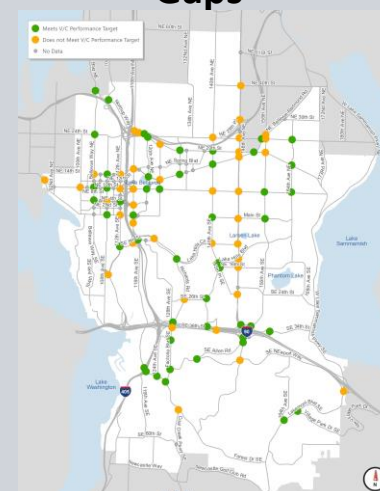
Bicycle Network Gaps



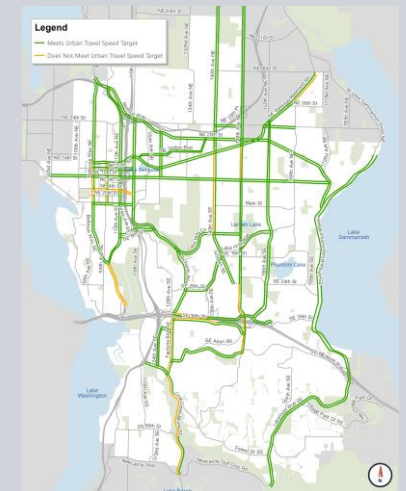
Transit Travel Time Gaps



System Intersection Gaps



Vehicle Corridor Speed Gaps



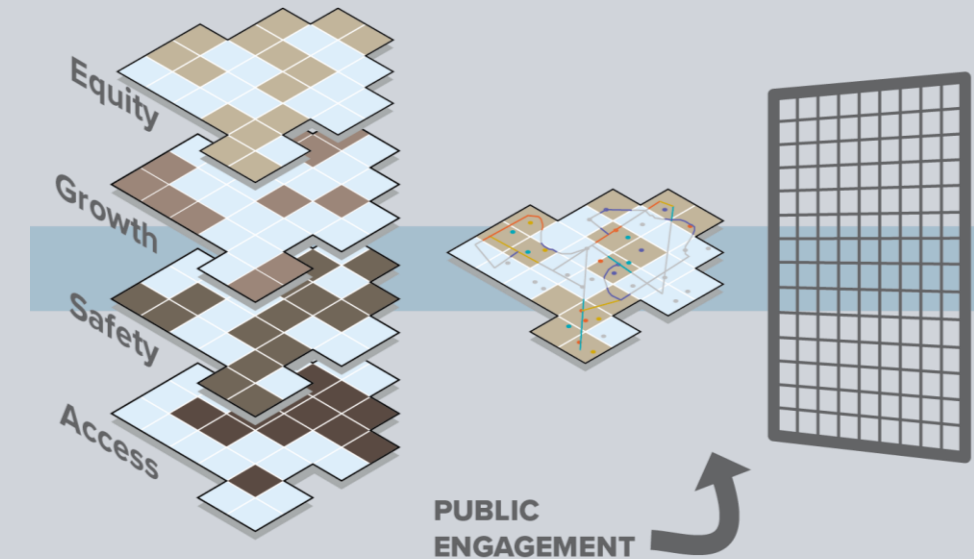
# Step 2. Screen Network Gaps

**Purpose:** Screen Performance Target Gaps for projects that align with MIP Goals and determine if the project should move forward with project concept development

**Outcome:** Narrowed list of Performance Target Gap project concepts for public review.

## SCREEN NETWORK GAPS

ALIGN WITH MIP GOALS AND SCREEN FOR FATAL FLAWS

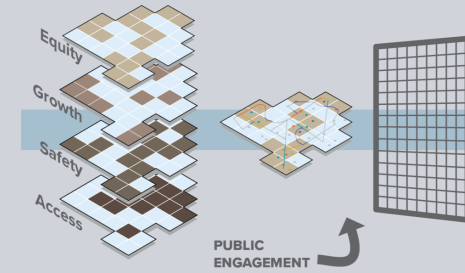




# Step 2.1 Screen Network Projects

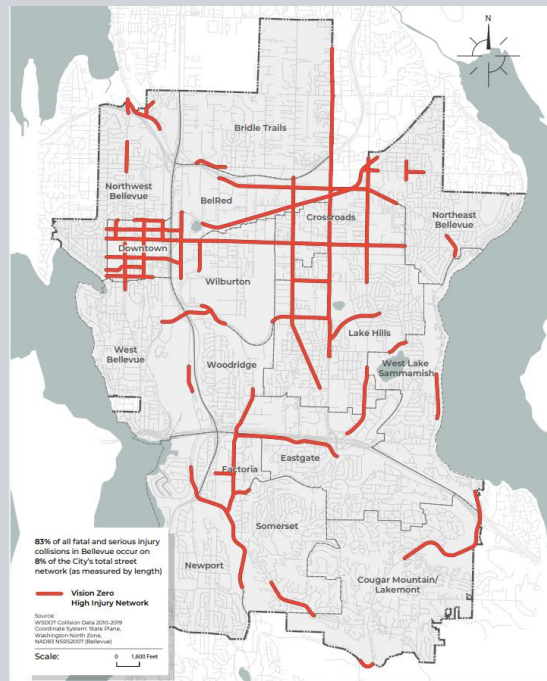
SCREEN NETWORK GAPS

ALIGN WITH MIP GOALS AND SCREEN FOR FATAL FLAWS

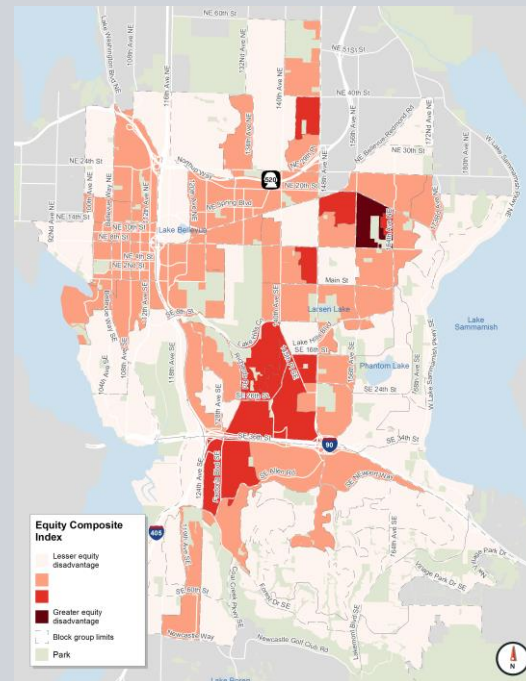


## Assess Network Performance Target Gap Projects against MIP Goals

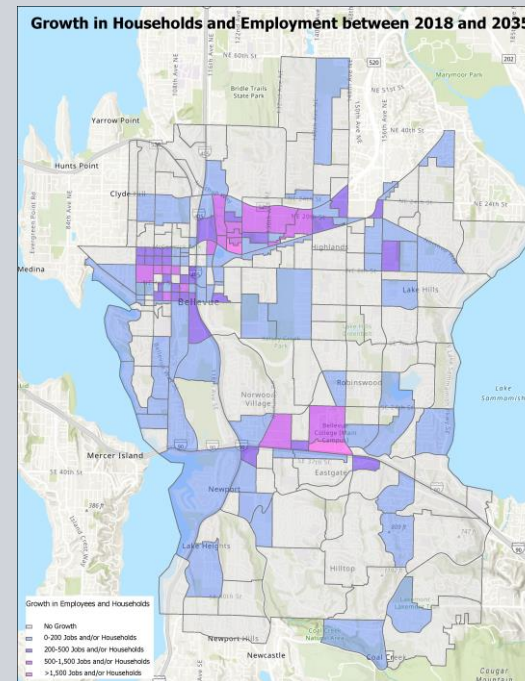
### Improve Safety



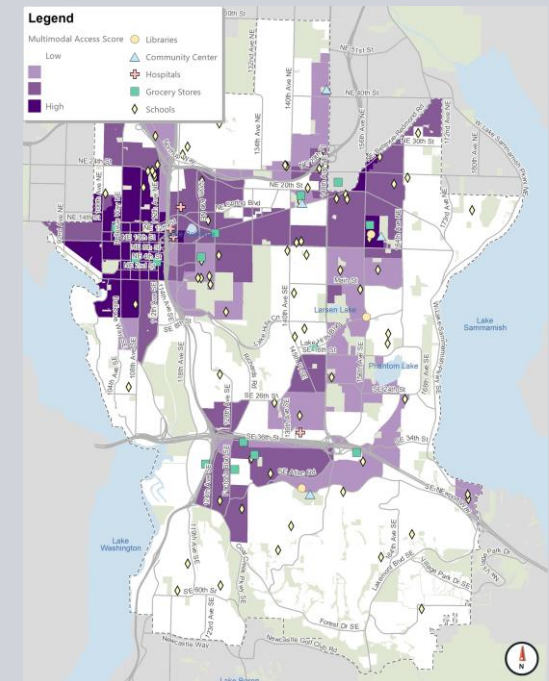
### Address Equity



### Accommodate Growth



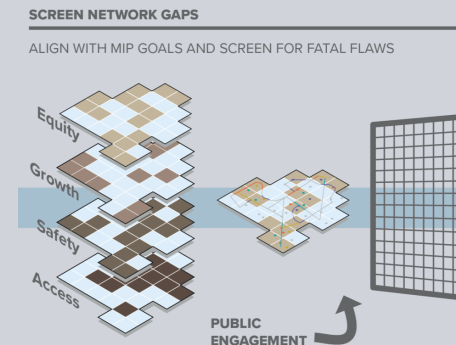
### Improve Access/Mobility



# Step 2.2 Screen Network Projects

## Engage the Public/Commission

- What Performance Target Gaps should the City invest in?
- Are there transportation needs other than the Goals of the MIP, that should be considered when Performance Target Gap projects are being screened?



**ENGAGING**Bellevue

Home » Mobility Implementation Plan Questionnaire

## Mobility Implementation Plan Questionnaire



**\*\*QUESTIONNAIRE CLOSED:** Thank to everyone who gave feedback to as we develop the Mobility Implementation Plan. This questionnaire is now closed. Results will be posted at [BellevueWA.gov/mobility-plan](http://BellevueWA.gov/mobility-plan).\*\*

Thank you for visiting the city of Bellevue Mobility Implementation Plan (MIP) community questionnaire. The MIP is a new long-range planning framework being developed to ensure that several Bellevue transportation plans are compatible with each other and with the city's land use plan.

The MIP will help the city make decisions on project investments based on what Bellevue's transportation system users of all ages and abilities need to reach their destinations, whether they are walking, biking, driving or taking transit. It will ensure that our transportation system keeps up with growth by providing equity and sustainability to bring a greater balance of investment and distribution for all modes to transportation. For more information, visit [BellevueWA.gov/mobility-plan](http://BellevueWA.gov/mobility-plan).

As someone who lives, works, studies and visits Bellevue, we'd appreciate your perspectives and priorities for Bellevue's transportation system, as it changes to accommodate projected rapid growth in both employment and population. Your input will be shared with the [Transportation Commission](#), which is developing the MIP.

Responding to this questionnaire should take approximately 7-10 minutes. Following questions about our transportation system, there are voluntary demographic questions. Look for future opportunities to give input on this [EngagingBellevue.com](http://EngagingBellevue.com) site. Should you need this questionnaire provided in another language, please contact the staff person listed to the right.

This questionnaire will be open through Friday, August 13, 2021.



# Step 2.3. Screen Network Projects

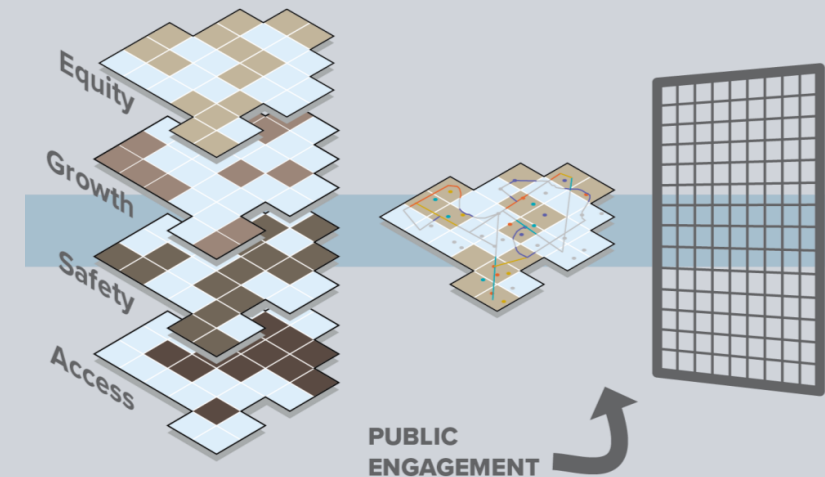
## Screen Performance Target Gap Projects

- The Performance Target Gap project advances MIP Goals?
- The Performance Target Gap project advances a mobility network priority
- If the Performance Target Gap project is not being advanced to the next step, why?
  - Coordinate with another infrastructure project
  - Coordinate with development review

**Outcome:** Narrowed list of projects to address Performance Target gaps to develop project concepts.

### SCREEN NETWORK GAPS

ALIGN WITH MIP GOALS AND SCREEN FOR FATAL FLAWS

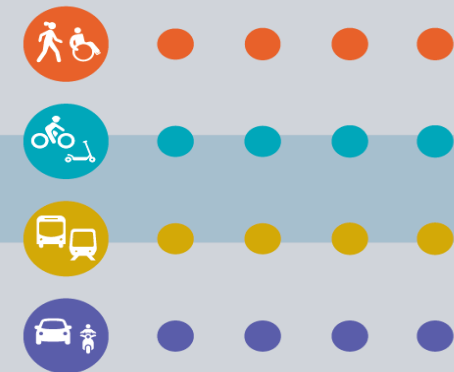


# Step 3. Develop Project Concepts

**Purpose:** Develop project concepts to address Performance Target Gaps that align with MIP goals and community input.

**Outcome:** Vetted project concepts that address Performance Target Gaps, achieve MIP Goals, meet public needs, are environmentally sustainable, are implementable, and can be incorporated into funding programs.

DEVELOP  
IMPROVEMENT  
CONCEPTS



PUBLIC  
ENGAGEMENT



# Step 4. Screen for Implementation

**Purpose:** Develop a prioritized project list that addresses Performance Target Gaps and supports planned growth.

**Outcome:** Prioritized project list for future planning/funding/implementation.

- Transportation Facilities Plan: Financial constraints are applied
- Other Programs: Neighborhood Sidewalks, Downtown Transportation Plan, Neighborhood Traffic Safety

## SCREEN FOR IMPLEMENTATION



# Mobility Implementation Plan - Equity

## Goal: Consider Equity

Identify and prioritize projects to address equitable access

- 10 Equity Components
- Each component is described and mapped
- Aggregate of all components is mapped
- Components are weighted equally (not weighted at all)

Equity Index Component	General Relationship to Transportation
Housing costs as percentage of income (renter-occupied)	People who are “housing cost burdened” tend to have less income to spend on transportation (even if they are not classified as low-income) and therefore tend to drive less and rely more on other modes.
Limited English proficiency households	Limited English proficiency households (even when controlling for income) tend to travel more by walking, biking, and transit.
Low-income households	Lower income households tend to drive less as the cost of operating a vehicle presents a substantial burden; this group tends to walk, bicycle, and use transit more than higher-income households.
Low-wage jobs (based on job location)	The location of low-wage jobs tends to indicate that employees rely more on walking, biking, and transit to reach their job since the cost of driving and parking can consume a substantial proportion of their wages.
People of color	Across the country, people of color (even when controlling for income), tend to travel more by walking, biking, and transit.
People over age 64	Older people may require additional accommodations (e.g., longer pedestrian phases at intersections) and tend to drive less than other populations.
People under age 18	16-18 year-olds tend to drive at a lower rate than other groups and use other modes more often.
People with a disability	People with a disability may require additional or specific accommodations (e.g., audible pedestrian signals or curbs) and tend to drive less than other populations.
Single-parent households	Single-parent households tend to have less income to spend on transportation and also tend to be more schedule constrained. These households may still own a car, but drive less to save money.
Zero-vehicle households	These households may not have regular access to a private vehicle and either by choice or other factors tend to drive less and use other modes more.

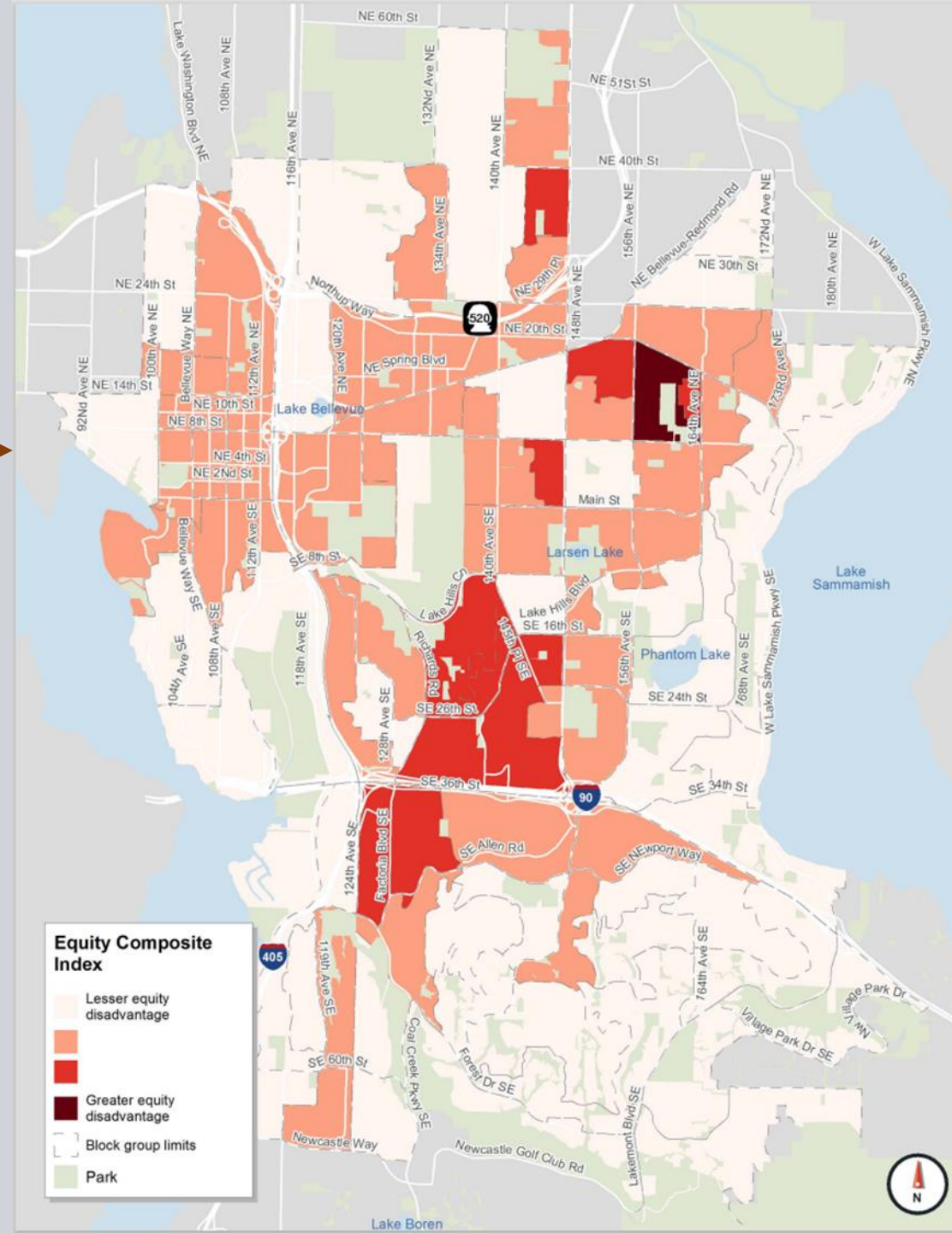


# MIP - Equity

All Equity Index components mapped separately and in composite



- Used for initial screening in Project Identification and Prioritization
- Screening for Equity, along with the other MIP Goals, will inform the project concepts recommended to be included in each update of the Transportation Facilities Plan



# Multimodal Concurrency

## Foundations

- GMA, Best Practices in Washington, Bellevue Policy

## Bellevue Transportation Concurrency Standard

- Mobility Units Supply > Mobility Units of Demand

## Mobility Units of Supply

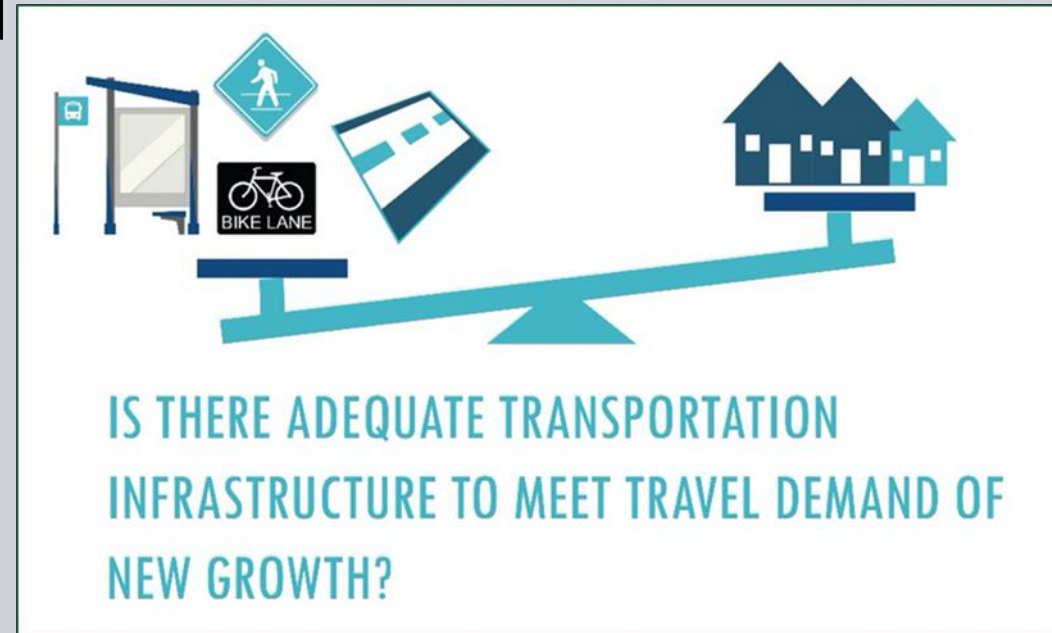
Supply is provided by projects of all modes

- Supply is **planned** (12-years) in the TFP
- Supply is **created** (6-years) in the CIP

## Mobility Units of Demand








Demand is expressed as person trips

- Demand is **forecast** in the Comprehensive Plan
- Demand is **generated** by land use permit applications





# Multimodal Concurrency

Supply	Demand	
<b>Transportation Projects</b>	<b>Development Projects</b>	
 4 miles sidewalk 5 midblock crossings		
 5 miles protected bike lane 2 bike signals		100-unit condominium
 2 bus stops with crossing improvements Transit signal priority at 3 intersections		1 million square foot office building
 4 turn lanes 4 new lane miles		250,000 square feet retail
 10,000 Mobility Units Transportation Projects that provide "Supply" to support "Demand" from Growth	 6,000 Mobility Units Growth that "Demands" transportation "Supply" of all modes	

Concurrency is achieved and the Level-of-Service Standard is met when

$$\text{Supply} \geq \text{Demand}$$

# Multimodal Concurrency Implementation Guide

## Multimodal Concurrency Code

Regulations establish the requirements and framework to allow the City to meet the Growth Management Act goal for the timely provision of transportation facilities needed to serve growth

## Implementation Guide

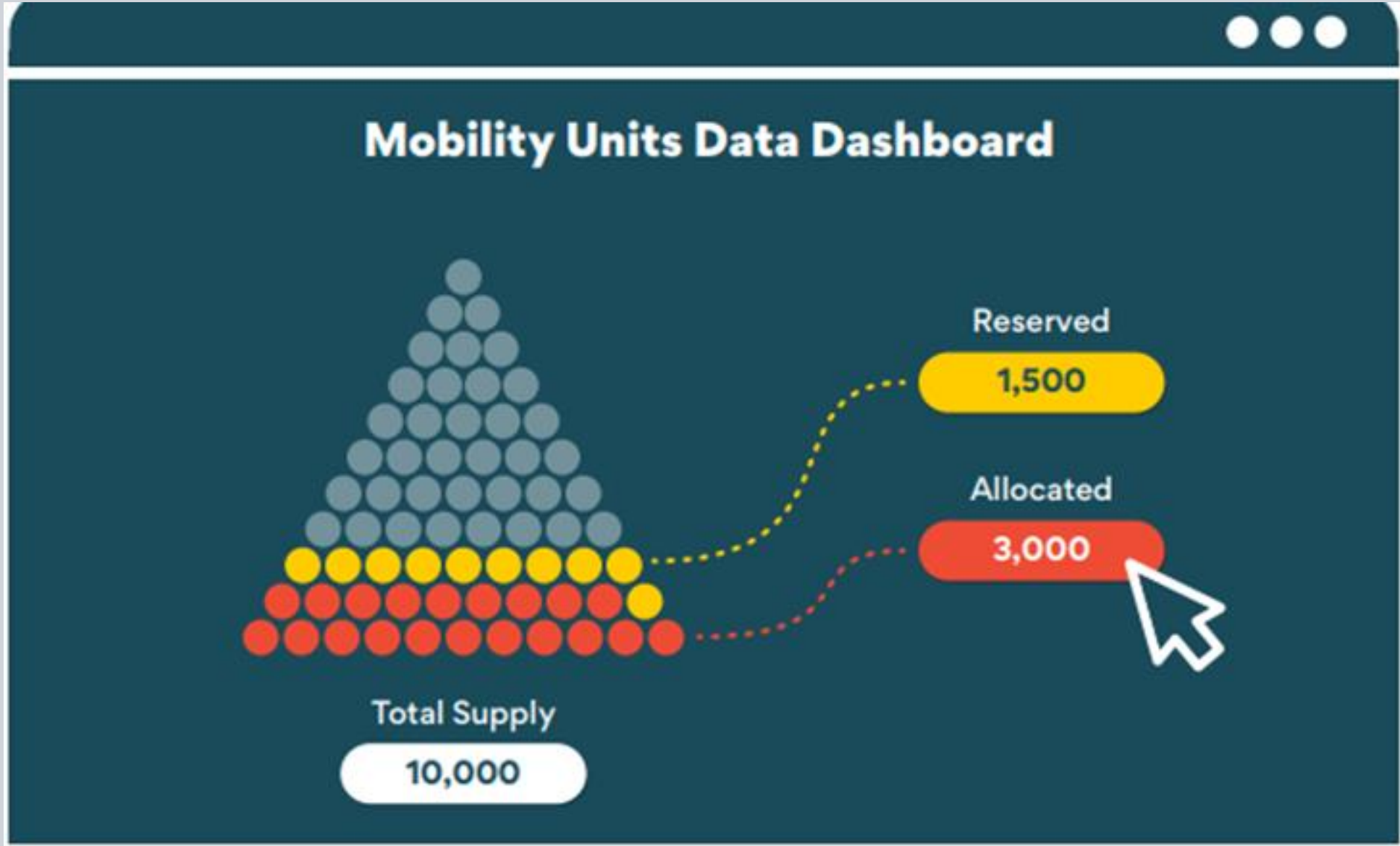
Allows the Transportation Director to administer the concurrency program

- Transparent
- Consistent



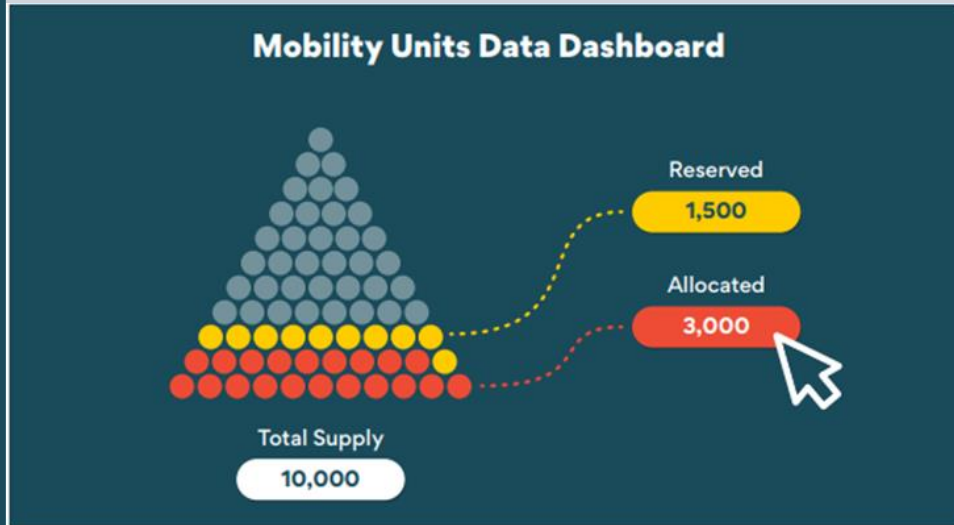


# Multimodal Concurrency Implementation Guide



# Multimodal Concurrency Implementation Guide

## Available Mitigation Options if Supply not Available



### Applicant may:

- Reduce the size of the proposed development project to reduce Demand.
- Delay the project until more Supply is available

### The Director may approve an applicant proposal to:

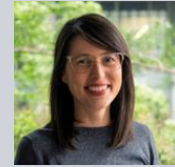
- Purchase Supply
- Construct a project approved to add Supply (from the TFP project list)
- Implement additional Transportation Demand Management strategies to reduce Demand





# Mobility Implementation Plan

Questions?



# Thank You!

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**Please visit the**

[Mobility Implementation Plan](#) web site