



Seattle
Department of
Transportation

MAYOR HARRELL'S RECOMMENDED SEATTLE TRANSPORTATION PLAN

A Vision for the Future of
Transportation in Seattle

February 2024

Part II: Technical Report



TABLE OF CONTENTS

Chapter 1

INTRODUCTION

Vision	II-2
Planning an Integrated Transportation System	II-3

Chapter 2

NETWORK INTEGRATION: HOW THE 8 STP ELEMENTS WORK TOGETHER

Element Priority Functions	II-18
Network Integration Process	II-20
Advancing Our Complete Streets Process	II-23

Chapter 3

FUNCTIONAL ELEMENTS

Transit	T-1
Freight and Urban Goods Movement	F-1
Bicycle and E-Mobility	B-1
Pedestrian	P-1
People Streets and Public Spaces	PS-1
Vehicle	V-1
Curbside Management	CM-1
New and Emerging Mobility	NEM-1

APPENDIX A: STP LARGE CAPITAL PROJECT SUMMARY SHEETS

APPENDIX B: COMMUNITY ORGANIZATION REPORTS & COMMUNITY ENGAGEMENT SUMMARIES

COMMUNITY ORGANIZATION REPORTS

- Asian Pacific American Labor Alliance: Seattle Community Outreach Planning for the Future City of Seattle Policy Report
- Duwamish Valley Sustainability Association: South Park Youth Vision Project
- Estelita's Library Impact Report
- Khmer Community of Seattle King County in partnership with Noio Pathways and KIMYUNITY: Envisioning a city for our community
- sləp' iləbəxʷ (Rising Tides) Indigenous Planning Group: Native and Indigenous Community Input Report - Seattle Transportation Plan

COMMUNITY ENGAGEMENT SUMMARIES

- Phase I Engagement Summary Report
- Phase II Engagement Summary Report
- Phase III Engagement Summary Report

APPENDIX C: PERFORMANCE MEASURES

LIST OF TABLES

Table 1: Essential Functions of the Right-of-Way	14
Table 2: Each Element Contributes to an Integrated Whole	18
Table 3 Network Integration Process	19
Table 4 Examples of Crosscutting Strategies and Actions to Advance Element Networks	23

LIST OF FIGURES

Figure 1: STP Goals for Seattle.....	2
Figure 2: Street Capacity Gains with Trips Converted from Single-Occupancy Vehicles (SOVs) to Space-Efficient Modes	10
Figure 3: Street Right-of-Way Zones.....	15

[This page intentionally left blank]

CHAPTER 1

INTRODUCTION

The Seattle Transportation Plan (STP) is a 20-year blueprint to modernize and adapt Seattle's streets to meet our needs of today and tomorrow. It guides how we will provide mobility through the city, enable access to places and opportunities, create places to socialize in our plazas and other spaces within the public right-of-way, and more.

The STP is divided into two parts. Where the Part I document provides the vision and goals with a higher-level overview of how we will achieve them, this Part II document provides more of the details. The two documents are divided up as follows.

SEATTLE TRANSPORTATION PLAN PART I

- Chapter 1: Shares the STP community vision and goals
- Chapter 2: Provides an overview of community engagement and how it shaped the plan
- Chapter 3: Highlights the key moves that will help attain our goals
- Chapter 4: Introduces how the plan supports the growth strategy within the comprehensive plan and how the elements work together to create a holistic transportation system
- Chapter 5: Outlines our implementation strategy for how the plan will inform future program activities and capital investments

THIS PART II TECHNICAL REPORT

- Chapter 1: Introduces the Part II document and reiterates our vision and goals
- Chapter 2: Describes how the 8 functional elements work together and the network integration process
- Chapter 3: Contains the 8 functional elements
- Appendix A: Assembles one-page summaries for each of the large capital projects identified in the Implementation Strategy contained within Part I, Chapter 5
- Appendix B: Includes reports and recommendations from community-based organizations and summarizes the community co-creation process and results for each phase of community engagement
- Appendix C: Compiles the performance measures and targets from the Implementation Strategy (Part I, Chapter 5) and the 8 elements into a single resource

VISION

The STP vision statement and goals result from a yearlong conversation with people throughout Seattle (see Figure 1).

STP VISION

Seattle is an equitable, vibrant, and diverse city where moving around is safe, fair, and sustainable. All people and businesses can access their daily needs and feel connected to the community.

Figure 1: STP Goals for Seattle



PLANNING AN INTEGRATED TRANSPORTATION SYSTEM

Bringing Our Modal Master Plans Together

No one person relies on a single mode of transportation. People who take the bus also walk; people who ride bikes may also receive packages delivered by freight; and people who drive may walk or cycle for recreation. This plan considers a wide range of factors that shape how and when we travel.

The STP is an integrated, citywide transportation plan built on the input of people throughout Seattle and on our 4 foundational “modal master plans”—citywide plans for individual modes. For many years, SDOT has developed transportation plans for neighborhoods and created citywide plans for bicycle, freight, pedestrian, and transit. Although the neighborhood plans are multi-modal in nature, they cover only limited areas of the city. In contrast, the modal plans have citywide coverage but lack a holistic approach to balance the full needs and priorities of all travelers, consider the limitations created by finite street space, and address other uses of streets such as public plazas and street trees. This plan took a more holistic approach to our streets, while building on a robust and equity-centered community engagement process.

Moving Beyond Modal Master Plans

The STP provided the opportunity to think beyond our 4 modal master plans. In addition to chapters for Transit, Bicycle and E-Mobility, Freight and Urban Goods, and Pedestrian elements, we prepared 4 additional elements to focus on other important and emerging right-of-way priorities. Namely these are People Streets and Public Spaces, Curbside, New and Emerging Mobility, and Vehicle elements.

Bringing together 8 elements of our streets, the STP centers mobility, access, and livability in new and cross-cutting ways. And, through our community engagement process, we have focused on how the expanded slate of elements addresses people’s needs. The plan considers the types of trips people are likely to take or request and the conditions that may affect traveler behavior and experiences across a variety of travel modes and street uses.

How the STP Will Help Us Going Forward

Cities are complex places. We barely think about our travel experience when all goes well, yet behind the scenes there is a lot happening to make your trip smooth, safe, and enjoyable. An integrated transportation system is the result of careful long-term planning, investment, and day-to-day operations that keep people safe, signals on, systems moving, and goods arriving. The STP was developed to make all travel options safer, reliable, and effective. It is also intended to align the Seattle Department of Transportation’s (SDOT’s) priorities and the way we allocate our street space with our goals.

To meet our STP goals, we need to prioritize the allocation of street space to provide safe, comfortable, and accessible experiences for people using transit, walking, bicycling and micromobility—and to promote those as the most reliable and convenient modes of travel. As well, we need to create inviting public spaces where people can linger and connect, increase our tree canopy for shade and carbon reduction benefits, and enable freight and urban goods to reliably access their destinations.

The STP network integration approach and functional elements inform decisions about how we use our finite street space to best meet community goals. They also, along with community input, inform future transportation improvements, projects, and programs.

Each element includes performance measures which, when taken in combination with the system-wide measures in the Part I Implementation Strategy, help us evaluate how programs and projects support our shared vision and track our progress.

Importantly, the plan also informs future transportation funding, including local, state, and federal funding opportunities. The STP provides a menu of potential transportation system investments for the next 20+ years. We'll use it to create a long-term funding strategy to build the projects, implement the programs, and maintain the transportation assets Seattle needs.

FUNCTIONAL ELEMENTS OF OUR INTEGRATED TRANSPORTATION SYSTEM

The STP Part II report contains a dedicated chapter, or “element,” for 8 discrete mobility options—or “modes”—and essential functions of the street. The STP elements are long-term visions of what we aspire to achieve, and each one provides direction on the investments, programs, and strategies needed to support the plan’s overarching goals and key moves. The 8 functional elements address:

- Transit
- Freight and Urban Goods
- Bicycle and E-Mobility
- Pedestrian
- People Streets and Public Spaces
- Vehicle
- Curbside Management
- New and Emerging Mobility

The following provides a very brief description of the 8 elements, highlighting key ingredients of each; identifying existing plans, programs, and guidance the element builds on or supersedes (e.g., a previous citywide plan for an individual mode); and noting what in the element is new or innovative.

Transit Element: guides the development of a transit network that is frequent, accessible, understandable, and secure, and that provides reliable connections between other transit services and travel options, neighborhoods, major job concentrations, and key destinations around the city and region.

Includes	Builds on and supersedes	Enhances
A plan for capital investment in critical bus corridors, a vision for our frequent transit network, and programs to improve customer access and experience	2016 SDOT Transit Master Plan	Reliability, customer experience, and frequent service along with transit integration at new light rail stations and other community and mobility hubs

Freight and Urban Goods Element: guides the development of a full system of streets, waterways, and railroads that provides for the efficient movement of freight and urban goods delivery, supporting the city's economy and quality of life for its residents, workers, and visitors.

Includes	Builds on and supersedes	Enhances
The freight network map, first- and last-mile connectivity needs for major port, industrial, and intermodal facilities, and strategies for efficient movement of goods	2016 SDOT Freight Master Plan	Strategies, programs, and technologies to support freight movement of cargo, urban goods delivery, and expansion of our policy support for dedicated lanes for freight

Bicycle and E-Mobility Element: guides development of a network, programs and facilities that support people who ride bikes because it's a convenient, affordable, fun, safe, healthy choice.

Includes	Builds on and supersedes	Enhances
A 20-year vision for the bicycle network, recommended programs and strategies to improve safety and maintenance	2014 SDOT Bicycle Master Plan	Accommodations for e-bikes and electric small mobility devices

Pedestrian Element: guides development of a connected, age-friendly network of sidewalks, walkways, paths, staircases, and pedestrian crossings for people walking and rolling.

Includes	Builds on and supersedes	Enhances
All aspects of pedestrian mobility, network planning, programs, safety, and maintenance	2017 SDOT Pedestrian Master Plan	Our commitment to Vision Zero and includes a new focus on crossing busy arterials

People Streets and Public Spaces Element: an integrated strategy to recognize streets are more than just places for mobility; they are places for people to connect, enjoy a leisurely stroll, grab a coffee and people-watch, and utilize public space for relaxation or fitness.

Includes	Builds on and supersedes	Enhances
Locations for future people streets and public space investments, investments of varying scales, strategies for maintenance of prized public spaces	Is a new element that builds on SDOT urban design and public space management programming	Our streets as places for people and public gathering

Vehicle Element: guides the use of the vehicular system to ensure critical mobility and support a balanced transition to a more goal-driven and equitable use of right-of-way space for our integrated transportation system.

Includes	Builds on and supersedes	Enhances
Key functional classifications for the vehicular network, definition of the high-crash network and strategies for meeting Vision Zero goals, and policies for allocating street space	Is a new element that builds on our Vision Zero Strategic Plan and emergency response planning	Definition of critical vehicular mobility, emergency response, and role of managing vehicular travel to meet safety and climate goals

Curbside Management Element: guides how SDOT and its community partners manage limited curb space to provide a place for people to transfer between mobility options, load and unload goods, provide critical building services (such as waste pick-up), and to allow emergency responders to stage their vehicles.

Includes	Builds on and supersedes	Enhances
Strategies for managing curb access needs, pricing the curb, enforcement, use of data, and vehicle electrification	Is a new element that builds on SDOT policies and programs for curbside management	Strategies and programmatic recommendations for use of data and technology, urban goods delivery, and management of the role of vehicle electrification

New and Emerging Mobility Element: focuses on how SDOT can leverage new technologies—such as on-demand and shared passenger vehicles, e-bikes, and scooters of all sizes, as well as digital infrastructure and technology—to support passenger movement and goods delivery.

Includes	Builds on and supersedes	Enhances
Strategies for managing automation, urban freight, customer facing technologies, and shared mobility	Is a new element that builds on the SDOT 2017 New Mobility Playbook	Position on how to center equity in managing emerging technologies, particularly those operated by private companies

Appendix A: STP Large Capital Project Summary Sheets

The Part I document provides a table of potential large capital projects, compiled within Chapter 5: Implementation Strategy. Appendix A in Part II provides further information on each of these 80+ projects in the form of project-specific summary sheets. They provide information about scopes of work, conceptual cost estimates, and how the projects can help achieve STP goals.

Appendix B: Community Engagement Summaries

The Part I document includes highlights from our community engagement process to develop the STP. Appendix B includes our full community engagement reports from each phase of our engagement process, providing much more detail on what we heard from you.

The first phase of engagement occurred from May to August 2022. Community input during that period helped shape our vision, goals, and key moves. We also asked about your transportation challenges.

The second phase of engagement occurred from September 2022 to February 2023. During the second phase, we gathered feedback on the draft vision statement, goals, and key moves. We identified the actions that best help us achieve our goals, and we gathered feedback on the draft transportation network maps.

The third phase of engagement occurred from August 2023 to November 2023. We received community feedback on a draft version of the STP, which was considered and incorporated as we finalized the plan. We also presented the community with a range of large capital projects and supportive programs and activities for feedback, which will help inform implementation actions.

Appendix B also contains 5 additional documents that capture a range of community input on the STP provided by different community organizations and groups: the Asian Pacific American Labor Alliance; the Duwamish Valley Sustainability Association; Estelita's Library; the Khmer Community of Seattle King County; and members of Seattle's Indigenous and Native community.

Appendix C: Performance Measures

The STP includes overarching performance measures in the Implementation Strategy (Part I, Chapter 5), as well as element-specific measures in each of the elements. For ease of use, we have compiled all of the performance measures located throughout the plan into Appendix C.



CHAPTER 2

NETWORK INTEGRATION: HOW THE 8 STP ELEMENTS WORK TOGETHER

This chapter serves as a primer for how the 8 STP elements were shaped to inform an integrated, multimodal transportation system. The first section describes Seattle’s “complete streets” process and introduces key guidance and policy that inform that process. The second section describes the STP network integration process and the emergent guidance the STP team used to update and create the network maps and programmatic activities in each STP element. The final section highlights a few of the new complete streets guidelines and cross-cutting strategies that emerged from the planning process.

To realize the STP vision, all essential street functions and travel modes must work together—and do so in a manner that is safe, equitable, and climate-friendly. The STP network integration process considered the various needs of our streets to prioritize finite street space and focused on updating our networks, programmatic actions, and strategies. This work builds on the City’s existing Complete Streets policy and design guidance, previous plans and studies, and community engagement input and feedback.

The strategies and guidance developed as part of this process helped shape all aspects of the plan including:

- *Shaping the Key Moves* and actions presented in Chapter 3 of the Part I document
- Informing updates to the priority investment network maps within the elements
- Developing recommendations and program activities for the 8 STP elements
- Conceptualizing the STP large capital projects compiled within the appendix

After completion of the STP, SDOT will build on the network integration process and the STP by updating Streets Illustrated (SDOT’s Right-of-Way Improvements Manual); finalizing policy within the One Seattle Comprehensive Plan update; and advancing our complete streets process.

EXISTING POLICY FRAMEWORK RELATED TO NETWORK INTEGRATION

This section provides an overview of existing policy and guidance related to complete streets and network integration processes at the City of Seattle. The STP utilized this guidance to review, modernize, update, and, for the People Streets and Public Spaces Element, create the priority investment networks. This section provides a high-level overview of the relevant policies and guidance related to:

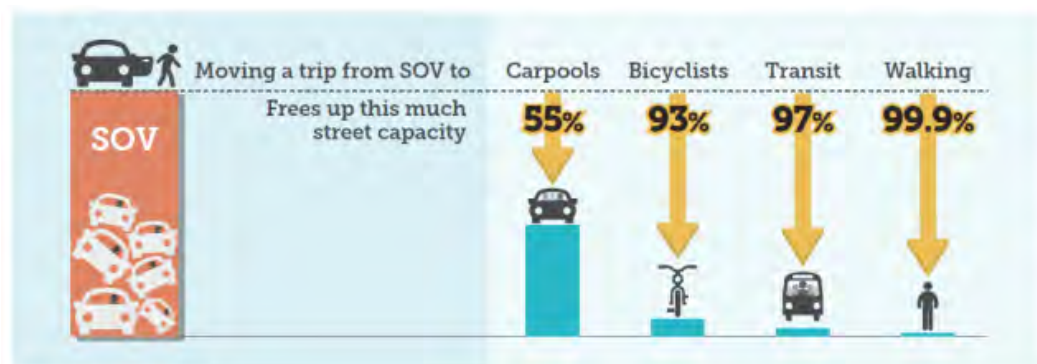
- The Comprehensive Plan
- Complete Streets Ordinance
- Our complete streets process and how we prioritize modes and uses
 - Essential functions of the right-of-way
 - Right-of-way zones
 - Land uses and development patterns
 - Intersections and Community and Mobility Hubs
- Streets Illustrated (Seattle Right-of-Way Improvements Manual)

The Comprehensive Plan

The Comprehensive Plan is Seattle's 20-year vision and roadmap to guide growth. The current Comprehensive Plan, Seattle 2035, was adopted in 2016. The City is actively working on a major update, the One Seattle Comprehensive Plan. Both Comprehensive Plan documents advance the goal of fostering a healthy and vibrant city for years to come.

To plan for future population and employment growth, the Comprehensive Plan establishes policies that prioritize space-efficient modes of transportation, which translate to discouraging our historical reliance on drive-alone vehicle use and focusing growth within designated commercial/mixed use areas (see **Figure 2**). As the City's long-range growth management plan, the Comprehensive Plan contains foundational policies related to complete streets and modal integration.

Figure 2: Street Capacity Gains with Trips Converted from Single-Occupancy Vehicles (SOVs) to Space-Efficient Modes



Source: Fehr & Peers, 2016

The Transportation section of the Comprehensive Plan lists several goals and associated policies that apply to modal plan integration, and in fact specifically recommends a policy framework for evaluating right-of-way allocation trade-offs. The second goal within the adopted plan states: “Allocate space on Seattle’s streets to safely and efficiently connect and move people and goods to their destinations while creating inviting spaces within the rights-of-way.”

Goal 2 includes two critically important policies:

- First, this goal establishes safety and modal plan implementation as our two top priorities. This aligns with the City’s Vision Zero goal of eliminating traffic deaths and serious injuries on city streets by 2030. Efficient movement is important, but not at the cost of safety (T2.5). While this goal underscores priority investment networks in right-of-way (ROW) allocation and design decisions, it does not suggest we ignore or discount how other functions of the ROW should also be accommodated in these decisions.
- Secondly, Goal 2 provides high-level policy guidance on how to resolve conflicts and weigh trade-offs. Policy T2.8 establishes Seattle’s “Compete Corridor” approach—if all functions cannot fit in a single street, we should allocate needed functions across a corridor composed of several streets or alleys. We tend to use the term “complete streets” interchangeably with “complete corridors,” although the latter is the intended outcome.

The following Comprehensive Plan transportation policies stem from the transportation goal related to safe and efficient movement on our streets. These policies played a key role in shaping our STP network integration process and will inform future project development decision making.

Where these policies reference modal master plans, they will be updated to reflect the Seattle Transportation Plan when the Comprehensive Plan is updated. Several policies reference the pedestrian realm, flex zone, and travelway. These are zones within the ROW and are described later in this chapter.

- T 2.1 Devote space in the street right-of-way to accommodate multiple functions of mobility, access for commerce and people, activation, landscaping, and storage of vehicles.
- T 2.2 Ensure that the street network accommodates multiple travel modes, including transit, freight movement, pedestrians, people with disabilities, bicycles, general purpose traffic, and shared transportation options.
- T 2.3 Consider safety concerns, modal master plans, and adjacent land uses when prioritizing functions in the pedestrian, travelway, and flex zones of the right-of-way.
- T 2.4 Use pedestrian design guidance in the Right-of-Way Improvements Manual and policy guidance from the modal master plans to determine adequacy of the pedestrian realm, before allocating space to the flex zone or travelway. Within

the pedestrian realm, prioritize space to address safety concerns, network connectivity, and activation.

- T 2.5 Prioritize mobility needs in the street travelway based on safety concerns and then on the recommended networks and facilities identified in the respective modal plans.
- T 2.6 Allocate space in the flex zone to accommodate access, activation, and greening functions, except when use of the flex zone for mobility is critical to address safety or to meet connectivity needs identified in modal master plans. When mobility is needed only part of the day, design the space to accommodate other functions at other times.
- T 2.7 Assign space in the flex zone to support nearby land uses, provide support for modal plan priorities, and accommodate multiple functions.
- T 2.8 Employ the following tactics to resolve potential conflicts for space in the right-of-way:
 - Implement transportation and parking-demand management strategies to encourage more efficient use of the existing right of way
 - Allocate needed functions across a corridor composed of several streets or alleys, if all functions cannot fit in a single street
 - Share space between travel modes and uses where safe and where possible over the course of the day
 - Prioritize assignment of space to shared and shorter duration uses
 - Encourage off-street accommodation for non-mobility uses, including parking and transit layover
- T 2.11 Design sidewalks in urban centers, urban villages, and areas designated as pedestrian zones ... to foster vibrant pedestrian environments in these areas.
- T 2.14 Maintain, preserve, and enhance the City's alleys as a valuable network for public spaces and access, loading and unloading for freight, and utility operations.
- T 2.15 Create vibrant public spaces in and near the right-of-way that foster social interaction, promote access to walking, bicycling, and transit options, and enhance the public realm.

Complete Streets Ordinance

Adopted in 2007, the City's Complete Street Ordinance (122386) directs SDOT to "design, operate, and maintain Seattle's streets to promote safe and convenient access and travel for all users." Users encompass people walking, riding bicycles, taking transit, and people of all abilities, as well as people driving freight and motor vehicles. Complete Streets is among our foundational policies: it is incorporated in our Comprehensive Plan and guided preparation the STP and the preceding 4 modal master plans.

Prioritizing Modes and Uses on Streets and at Intersections

Seattle streets vary greatly in dimension, design, and adjacent land use, and they play different roles in the city and regional transportation network. Building an integrated system requires us to look at the many components and roles of our streets and balance street design and operations to meet STP goals and individual user needs.

Within our complete streets process to evaluate the scope of work for capital projects, 4 key components of how we plan, design, and operate our streets are:

- **Essential functions of the right-of-way** frame the range of ways our streets are used.
- **Right-of-way zones** dictate appropriate uses and relationship to immediately adjacent uses, ensuring that our streets balance mobility, access, and other critical functions.
- **Land uses and development patterns** (e.g., industrial, residential, and commercial/mixed-use areas) influence the primary street users, the operating and design needs, and the street's role in the broader system (i.e., what types of places it connects, what travel modes it carries, and its roles in the regional network).
- **Intersections and Community and Mobility Hubs** are the places where our streets, paths and transit lines come together. How these points of connections are designed and managed has an outsized influence on the transportation system.

These 4 components are described in greater detail in **Table 1**.

6 ESSENTIAL FUNCTIONS OF THE RIGHT-OF-WAY

In the development of the 8 elements, we considered their role in providing essential street functions. Previously, Seattle’s Comprehensive Plan (Seattle 2035) defined 6 essential functions of the right-of-way as part of a 20-year growth strategy. These essential street functions continue to be defined in the One Seattle Comprehensive Plan update (2024) and are shown in **Table 1**. Through the STP, we aim to comprehensively consider all essential street functions when making decisions about transportation system investments and street uses.

Table 1: Essential Functions of the Right-of-Way

FUNCTION	DEFINITION	EXAMPLES
MOBILITY	Moves people and goods	<ul style="list-style-type: none"> • Sidewalks • Bus or streetcar lanes • Bike lanes • General purpose travel lanes (includes freight)
ACCESS FOR PEOPLE	People arrive at their destination, or transfer between different ways of getting around	<ul style="list-style-type: none"> • Bus or rail stops • Bike parking • Curb bulbs • Passenger load zones • Short-term parking
ACCESS FOR COMMERCE	Goods and services reach their customers and markets	<ul style="list-style-type: none"> • Commercial vehicle load zone • Truck load zone
ACTIVATION	Offers vibrant social spaces	<ul style="list-style-type: none"> • Food trucks • Parklets and outdoor dining • Public art • Street festivals
GREENING	Enhances aesthetics and environment health	<ul style="list-style-type: none"> • Plantings <ul style="list-style-type: none"> - Boulevards - Street trees - Planter boxes • Rain gardens and bio-swales
STORAGE	Provides storage for vehicles or equipment	<ul style="list-style-type: none"> • Bus layover • Long-term parking; overnight parking • Reserved spaces (e.g., for police) • Construction

STREET RIGHT-OF-WAY ZONES

Seattle's Complete Streets ordinance and project evaluation process help planners and project developers—in collaboration with the community—to identify a preferred allocation of street space in support of context-specific functions (e.g., mobility, access for people, loading and access for goods and commerce, activation).

As shown in **Figure 3**, certain functions are appropriate in specific right-of-way zones based on land use context and a street's overall role in the transportation system. Streets Illustrated describes these zones as:

- **Pedestrian Realm:** this is the space that serves people walking, rolling, or delivering goods. It includes the pedestrian clear zone, the frontage zone, and the landscape/furniture zone. The pedestrian realm houses fixed infrastructure such as street furniture, public seating, street trees, bus platforms and shelters, bike racks, scooter and new mobility parking, public art, and café seating or dining.
- **Flex Zone:** The space along the curb that is essential for people and goods to transition between the pedestrian realm to mobility functions in the travelway. This highly constrained and valuable space has the most competing uses since it can be used for all essential functions, including access, mobility, and public space uses. It's often the critical interface between how people travel and the places they are traveling to and from.
- **Travelway:** The space "in" the street that is dedicated for mobility that can include moving goods, or traveling by bus, bike, e-mobility device, or private vehicle.

Figure 3: Street Right-of-Way Zones



LAND USE CONTEXT

Seattle's growth strategy is a high-level framework, detailed within the Comprehensive Plan, for guiding how the city grows. Seattle's growth strategy directs most of our population and employment growth into urban centers and other commercial/mixed use areas. In general, these are the denser, more pedestrian-friendly, and transit-supported districts within the city. The Comprehensive Plan also identifies 2 manufacturing/industrial centers (the Duwamish MIC and Ballard-Interbay-Northend MIC)—job centers in their own right that are critically important centers for freight and urban goods movement.

The STP network integration process focuses on Seattle's arterial street network, where most local trips and many regional trips are made. Clear guidance for how we allocate street space in these corridors is critical. That guidance is influenced by the street's role in the network and its land use context. For example, destination rich streets in urban centers and urban villages must provide access and serve as great places for people on foot, rolling and cycling, while streets connecting urban centers, urban villages, and manufacturing and industrial centers play a crucial role as the connective fabric between bustling growth hubs and their associated activities, including employment and logistics.

Streets Illustrated identifies many potential street types based on the degree of movement through them and the sense of place they are intended to provide. The 3 categories listed below are a distillation to help center a street's role in the transportation system and land use context in right-of-way allocation decision guidance.

- **Connector** streets connect commercial/mixed use areas; often have lower density land uses; and play a key role in serving longer trips for people and goods moving between commercial/mixed use areas, manufacturing and industrial centers (MICs) and regional highways.
- **Main** streets are destination streets that serve retail and commercial uses in commercial/mixed use areas. These are destination rich streets where pedestrian quality and public realm is a high priority, as well as provide curb use functions that ensure access for people and goods.
- **Industrial Access** streets are adjacent to manufacturing and industrial land uses and make critical connections to regional and interstate highways. They are designed to accommodate significant volumes of large vehicles such as single unit trucks, tractor trailers, and other delivery vehicles.

INTERSECTIONS, CROSSINGS, AND COMMUNITY AND MOBILITY HUBS

Intersections are where people meet, connect between different modes of travel, socialize, and pause to exchange ideas. Cities more broadly are about stopping traffic. That is why businesses, merchants, hotels, warehouses, cultural institutions, and people live and grow there. Our intersections and community and mobility hubs are microcosms of the city, meant to stop traffic and provide access and exchange.

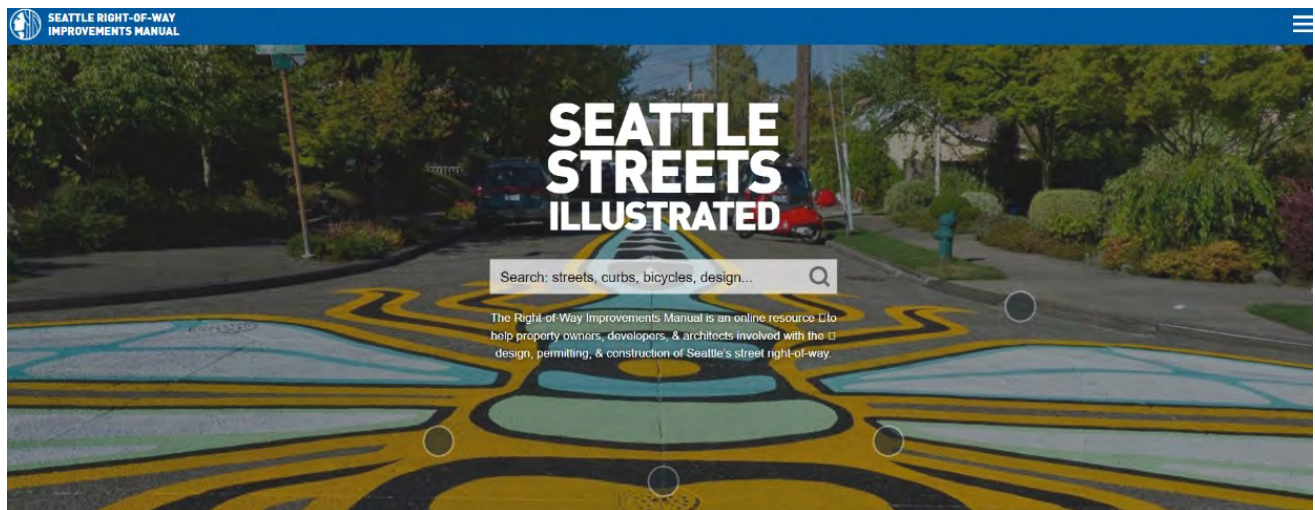
The STP network integration process considered several unique contexts where intersections of major arterials, crossings of highways, pinch points created by water crossings or other “exchange” conditions presented opportunity to:

- Improve safety for vulnerable street travelers
- Increase non-drive alone mode share by improving the safety and reliability of other travel options
- Enhance the quality of public spaces where people come together
- Develop community and mobility hubs that connect people using transit, walking, cycling, etc., to the next leg of their trip or their destination.

Streets Illustrated – The City of Seattle Right-of-Way Improvements Manual

Streets Illustrated, Seattle’s Right-of-Way Improvements Manual, provides design guidance, standards, and processes on how to design, build, and manage projects within the right-of-way.

Streets Illustrated attempts to balance the access, mobility, and placemaking needs of everyone who uses and travels in the right-of-way: people walking, biking, driving, riding transit, moving goods/freight, or seeking to enjoy the social and green spaces. Procedures and design standards were developed to prioritize safety and balance the preservation and maintenance of roadway infrastructure and utility services, provide for context sensitive design, and enhancement of our environment.



ELEMENT PRIORITY FUNCTIONS

Each of the 8 elements has a crucial role to play in meeting the needs of those who use city streets. Integrated transportation network guidance helps ensure all our priority networks function in balance, while advancing the network design and operational needs of each individual function of the transportation system.

As an integrated whole, each element in **Table 2** does its part to ensure all people and businesses can access their daily needs and feel connected to their community.

Table 2: Each Element Contributes to an Integrated Whole

Transit	Freight & Urban Goods	Bicycle & E-mobility	Pedestrian
<p>Reliable, affordable mobility for all</p> <p>Capacity for mode shift to meet our climate and safety goals</p>	<p>Reliable access to industrial land uses and regional freeways</p> <p>Operational space and efficient delivery of goods</p>	<p>Safe, connected system providing access to destinations for people of all ages and abilities</p>	<p>Safe, comfortable access and mobility for everyone walking and rolling in all Seattle neighborhoods</p>
People Streets & Public Spaces	Vehicle	Curbside Management	New & Emerging Mobility
<p>Great places for walking and community life</p>	<p>Vehicular access provided for necessary trips with a focus on improving safety and reducing impacts of vehicular travel</p>	<p>Efficient access for passenger loading, goods, and services, building services</p> <p>Flexible functions to provide greening, activation, and electrification</p>	<p>Data-enabled, digital mobility and new vehicle types are managed to help meet our goals</p>

NETWORK INTEGRATION PROCESS

The Seattle Transportation Plan is different than previous Seattle transportation plans in that it considers all functions of the right-of-way and the finite street space available to program them on a citywide scale. STP network integration used a data- and engagement-driven process to develop a multimodal network plan that tackles the hard decisions at a high level for how we program city right-of-way. Specific corridor design will continue to be conducted at the project level. **Table 3** illustrates the key steps in the network integration process.

Table 3 Network Integration Process

INPUTS	PROCESS	OUTPUTS
Step 1. Define Needs		
Technical Studies	<ul style="list-style-type: none">• Shape roles and priorities for 8 elements to achieve• Identify new network connections needed	Key Moves
Community Engagement		
Step 2. Identify Critical Networks & Functions		
Community Engagement	<ul style="list-style-type: none">• Draft network integration principles• Develop potential new integration guidance and strategies• Update maps to reflect current network completion	7 network integration principles
STP vision, goals, and key moves		
Comprehensive Plan alternatives		
Neighborhood and modal transportation plans		
Transportation Equity Framework		
Climate action plans		
Curbside Management policies		
Step 3. Overlay Networks		
Streets Illustrated design guidance and standards	<ul style="list-style-type: none">• Update maps to reflect current network completion	
Street dimensions, conditions, and functions		
Step 4. Refine Network Maps, Strategies, and Actions		
Community engagement	<ul style="list-style-type: none">• Craft set of recommended networks, strategies, and program activities	Priority network investment maps and guidance Actions to support key moves and element strategies Program activities Large capital project list
Potential new program activities		
Step 5. Identify Next Steps		
	<ul style="list-style-type: none">• Inform transportation funding plan• Finalize One Seattle Comprehensive Plan policies• Create STP Implementation Plan• Update Streets Illustrated• Update Complete Streets project evaluation process• Advance projects and programs	

The network integration process was informed by thousands of Seattleites who engaged in the STP development process by helping shape the vision and goals (summer 2022), reviewing preliminary draft network maps (winter 2022-2023), and reviewing recommended draft maps and elements (fall 2023). The process was also informed by Seattle's modal advisory boards (Transit, Bicycle, Pedestrian, and Freight Advisory Boards) the Transportation Equity Workgroup, the Seattle Planning Commission, and the School Traffic Safety Committee through 3 joint workshops conducted in 2022 and an open house in early 2023.

The results of our engagement process are introduced in Part I, Chapter 2—Shaped by Community. The appendix to this document provides a more detailed accounting of the thousands of points of input collected at over 150 meetings and engagement events and through the project's on-line engagement hub.

In the **Needs Definition** phase of the network integration process, we identified the role and priorities for what became the 8 functional elements. This step drew on early community engagement feedback, where we solicited input on current challenges with getting around Seattle. We also worked closely with technical experts across SDOT to identify opportunities and challenges.

Additionally, as part of the Needs Definition phase, we identified and analyzed available technical studies and filled several technical gaps with our own analysis. This work included a review of the Puget Sound Regional Council travel demand model output (which projects future travel patterns), an analysis using the private data tool Replica (which estimates current travel patterns), SDOT's preparation of the Climate Change Response Framework, and an analysis of transit demand and needs.

With the draft STP vision, goals, and preliminary Comprehensive Plan growth scenarios in hand, the team began the **Critical Networks & Functions** phase of the process. The project team prepared goals and outcomes for the networks and began developing each of the 8 functional elements and modernizing the priority network maps. This process is built upon the existing citywide mode-specific plans for pedestrian, bicycling, transit, and freight and other recent value-centered work around safety, equity, and climate action.

Upon this foundation, and drawing on recent community input and the Needs Definition work, the STP team developed the following 7 network integration principles:

- Put safety first on every street and at every intersection
- Prioritize space-efficient travel options for moving people (transit, bicycling, rolling, and walking) and moving goods (freight and urban goods)
- Support the critical access and community health functions streets provide, such as delivery of goods and services, curb access, people streets, and public spaces
- Accelerate implementation of critical network connections, especially for people walking and biking, and protect critical network connections for trucks to access port terminals and highways, as well as other related areas of the region

- Manage the transportation system's capacity and reliability to meet climate targets, encouraging more people to ride transit, walk, and bike
- Consider the unique needs of local communities when making decisions about streets
- Allocate needed functions across a corridor composed of several streets or alleys ("complete corridors")

Building off the 7 network integration principles, existing policy framework, engagement feedback, and prior steps in the process, the STP Team modernized the network maps, including:

- Updated the maps based on investments and decisions made since their original preparation and adoption as part of each modal plan
- Introduced new route and mapped priorities based on community input through the engagement processes and our internal subject matter experts
- Developed a new typology and maps for the People Streets and Public Spaces Element

Subsequently, within the [Network Overlay](#) phase, the networks and functions from the previous steps were overlaid and compared to actual street dimensions and constraints. The team identified synergies and tensions across the networks and utilized existing policy and guidance from the Comprehensive Plan and Streets Illustrated to update networks. This work led to updates and edits to our priority investment networks, guided the formation of the PSPS network, yielded several corridors and locations that need further study, as well as a more robust set of catalyst projects. This work also flagged opportunities for new guidance, strategies, and programmatic activities needed to create a fully integrated and holistic transportation system. In many locations, large capital projects were identified to address transformational change needs.

In the final phase, [Refined Network Maps, Strategies and Actions](#), the team advanced the overall set of recommendations aimed at creating an exceptional transportation system, where the various components work together to meet daily needs, support a growing city, and make more vigorous progress towards our most pressing goals for a safer, more equitable, and sustainable transportation system. This work is reflected at a high level within the STP key moves and in detail within the 8 elements strategies and program actions. The team continued to critique and refine the priority investment network maps and supplemental guidance to advance our complete streets process.

ADVANCING OUR COMPLETE STREETS PROCESS

An array of new network integration considerations and guidance were factored into the network integration process and advanced within the key moves and the 8 elements. These came from priorities and themes from our community engagement process, our technical analysis, and engagement across SDOT. These emerging considerations include the following:

(Further discussion and contextualization may be found in the element(s) noted by parenthetical reference.)

- On streets prioritized for transit and trucks, consider strategies to prioritize freight and transit travel time and reliability, such as freight and bus (FAB) lanes, transit-only lanes, and other right-of-way and operational strategies. (Transit; Freight and Urban Goods)
- On streets prioritized for trucks and bicycles, facilities for trucks and bicycles, aim to clearly separate and comply with width and materials standards, consistent with Streets Illustrated. (Bicycle and E-Mobility; Freight and Urban Goods)
- Update our level-of-service measures and standards to reflect our complete streets approach, performance measures, and goals. (Bicycle and E-Mobility; Freight and Urban Goods; Pedestrian; Transit)
- Within manufacturing and industrial centers (MICs), considering opportunities to prioritize truck movement, especially at freight bottlenecks, including operational strategies and truck-only lanes. (Freight and Urban Goods)
- Align the operations of our streets and traffic signals with our complete streets approach, performance measures, and goals. (Pedestrian; Freight and Urban Goods; Transit)
- Prioritize the needs of people walking, rolling, and biking within commercial/mixed use areas and near light rail stations. (Pedestrian; PSPS)
- Advance a network of Shared Streets, such as Healthy Streets, School Streets, and Event Streets, to prioritize active trips and the role of streets as part of our public realm, while also accommodating emergency vehicle access, utility access, and access consistent with the Americans with Disabilities Act. (PSPS; Vehicle)
- Advance low-emission/low-pollution neighborhood concepts as directed by Executive Order 2022-07 to improve air quality and livability by transitioning areas of the city away from fossil-fuel vehicles in favor of electric and human powered transportation modes. (PSPS)
- Elevate priority for critical access functions (e.g., load zones and waste pickup), working to meet those functions on side streets, off-street, using alleys, and along arterials, as needed. (Curbside)
- Employ the principle of the “physics of mobility” when determining where a new or emerging form of mobility belongs within the right-of-way. (NEM)
- Limit impacts to emergency response vehicles along Tier 1 (high volume response) routes as other modal priorities are implemented. (Vehicle)
- Assume a baseline of one general-purpose through travel lane per direction of travel on most arterials, where vehicular mobility will be maintained. (Vehicle)
- When conducting future year traffic analysis, the analysis should include an examination of travel volumes consistent with our vehicle-miles traveled target. (Vehicle)

Cross-cutting and Complete Streets Strategies within the STP Functional Elements

In addition to advancing and creating the priority investment network maps, we also explored cross-cutting strategies and actions to advance our element networks. These strategies are anchored to our goals and introduced within our discussion of goals and key moves, Part I, Chapter 3. Within the 8 elements, we provide greater detail and discussion on the strategies and programmatic activities needed to create a more holistic transportation system. The examples below illustrate a sample of the cross-cutting strategies advanced within the elements.

Table 4 Examples of Crosscutting Strategies and Actions to Advance Element Networks

Crosscutting Strategies and Actions	Primary References	Secondary References
Freight and bus lanes aim to improve travel time reliability by designating street space for transit and freight vehicles.	Transit	Freight and Urban Goods
The Bike+ Network is comprised of a range of All Ages and Abilities (AAA) bikeways. The updated network allows greater flexibility to create AAA bikeways that respond to street or context-specific situations, including where we have multiple priority modes. The updated network also focuses on meeting the needs of the myriad ways our bikeways are used, including bicycle types as well as new and emerging mobility devices.	Bicycle	NEM
Railroad crossing safety and maintenance activities, in collaboration with freight and transit rail operators, impact all roadway users and are discussed in three of the elements.	Freight and Urban Goods	Bicycle and E-Mobility, Vehicle
The plan expands our policy framework for new and more frequent enhanced crossings of arterials including treatments such as a marked crosswalk, all-way stop, flashing beacon, or traffic signal.	Pedestrian	Bicycle and E-Mobility, Transit
Safe Routes to Transit and Safe Routes to Parks programmatic activities would follow the Safe Routes to Schools model by combining engagement, encouragement, and education with multi-modal capital investments.	Pedestrian	Bicycle and E-Mobility, People Streets and Public Spaces (PSPS), Transit
The STP elevates the importance of our street trees, tree canopy, and greening within the right-of-way. Greening our streets provides multiple benefits to Seattle; they shade pavement, lower temperatures, intercept rainfall, absorb stormwater runoff, clean the air, provide habitat, and beautify neighborhoods. Landscape and tree planting strips adjacent to sidewalks calm traffic, soak up stormwater, and green neighborhoods.	Pedestrian	Freight and Urban Goods, PSPS

Crosscutting Strategies and Actions	Primary References	Secondary References
Shared Streets , a new street type within the People Streets and Public Spaces Element, create “people first” spaces either permanently or during certain times of the day or week. Shared Streets create great spaces for people walking, biking, and enjoying public space. Shared Streets include Healthy Streets, Café Streets, School Streets, Event Streets, and Special Alleys.	PSPS	Bicycle and E-Mobility, Pedestrian
Community and mobility hubs combine transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. These hubs cut across almost every dimension of the transportation system and are referenced in 6 of the 8 elements.	Transit	Bicycle and E-Mobility, Curbside, New and Emerging Mobility (NEM), PSPS, Pedestrian
Destination Streets , a new street type within the People Streets and Public Spaces Element, are typically located in the heart of a neighborhood with a high density of destinations—shops, restaurants, cultural centers, and more. Recommendations and strategies for Destination Streets serve people walking and bicycling, as well as optimize curb side uses.	PSPS	Bicycle and E-Mobility, Curbside, Pedestrian
Low-emission neighborhoods encourage sustainable travel options by prohibiting or restricting the types of or timing of vehicles allowed within the neighborhood while fostering other, zero- to low-emission travel choices.	PSPS	Bicycle and E-Mobility, Curbside, Pedestrian
A building's critical access needs can be defined as access to services needed to perform its core operating functions safely and successfully, including loading, deliveries, and passenger drop-off. This plan elevates the role of these important activities, which often happen at the curbside, and interact with priorities for urban goods, as well as bicycle and public space.	Curbside	Freight and Urban Goods, Vehicle
The STP highlights the need for low- and no-emission delivery vehicle programmatic actions related to loading, parking, and cargo bikes support other programs from across the City of Seattle, Port of Seattle, and our partners.	Curbside, Freight and Urban Goods	Bicycle and E-Mobility, NEM
The STP Large Capital Projects exemplify our integrated and complete streets approach to our streets by combining goal-centered priorities, such as safety and climate action, with multi-modal needs from across all of the element priority investment networks.	Appendix A	



CHAPTER 3

FUNCTIONAL ELEMENTS



[This page intentionally left blank]

FUNCTIONAL ELEMENTS

Transit..... *T-1*

Freight and Urban Goods Movement..... *F-1*

Bicycle and E-Mobility..... *B-1*

Pedestrian..... *P-1*

People Streets and Public Spaces..... *PS-1*

Vehicle..... *V-1*

Curbside Management..... *CM-1*

New and Emerging Mobility..... *NEM-1*

[This page intentionally left blank]



Transit Element



TABLE OF CONTENTS

Introduction.....	T-2
How Transit Advances the STP	T-2
Relationship to STP Goals	T-6
Delivering the Key Moves.....	T-7
Setting The Context.....	T-15
Opportunities, Emerging Trends and Challenges.....	T-15
Community Engagement.....	T-19
Transit In Seattle.....	T-23
SDOT's Role in Advancing Transit.....	T-23
Transit Network	T-25
Programmatic Activities.....	T-49
Access to Transit.....	T-55
Transportation Technology and Innovation.....	T-58
Transit Asset Maintenance.....	T-61
Defining Success.....	T-62
Measurable Outcomes	T-64
Relevant TEF Tactics.....	T-67
Appendix A: Frequent Transit Network Update Methodology	T-69
Appendix B: Transit Street Classification	T-71
Glossary	T-76

LIST OF FIGURES

Figure 1: 2030 Projected Service Impacts and Needs with Climate Analysis Mode Shifts	T-18
Figure 2: Transit-Specific Comments Provided for Locations throughout the City.....	T-20
Figure 3: Frequent Transit Network Target Frequencies.....	T-26
Figure 4: Frequent Transit Network Targets.....	T-29
Figure 5: Transit Capital Investment Corridors.....	T-36
Figure 6: Center City Transit Capital Projects	T-39
Figure 7: Link Light Rail Expansions and Planned RapidRide Corridors.....	T-44
Figure 8: Potential Link Light Rail and Sounder Commuter Rail Expansion Opportunities	T-45
Figure 9: Key Features and Functions of Seattle Community and Mobility Hubs	T-46
Figure 10: Community and Mobility Hubs Under Study and Future Study Priority	T-48
Figure 11: Transit Spot Improvement Process Flowchart	T-50
Figure 12: Proposed Transit Street Classification Process	T-74
Figure 13: Transit Classification Map.....	T-75

LIST OF TABLES

Table 1: Transit Element: Delivering the Key Moves.....	T-8
Table 2: Priority Transit Corridor Classifications	T-34
Table 3: Potential Light Rail Expansion Opportunities.....	T-42
Table 4: Sounder Infill Station Opportunities.....	T-42
Table 5: Seattle Community and Mobility Hub Types	T-47
Table 6: Innovative Transit Streets	T-53
Table 7: Transit Performance Measures.....	T-65
Table 8: Transit Street Classification Categories by Bus Volume	T-73

[This page intentionally left blank]

INTRODUCTION

Seattle's bright future is inextricably tied to the quality of the transit system. By 2050, Seattle is expected to be a city of nearly 1 million people, and the city has set an ambitious goal of more than doubling transit ridership from 2019 levels by 2030. To achieve our shared transportation vision and transit goals, we'll need to be strategic about how we move the growing number of people who live, work, play, and deliver goods on city streets—both locally and regionally.

Prioritizing transit investments is critical to reducing congestion and pollution, connecting people to opportunities, and providing affordable transportation options. Transit investments complement state and regional efforts to encourage denser housing options adjacent to transit centers and connect sustainable mobility options, like walking, biking, and other shared mobility options. Transit also makes it possible for people to access jobs and daily needs close to where they live and can foster livability and social cohesion through shared spaces where people connect and gather.

In collaboration with our transit agency partners, Seattle has helped to lead the nation in transit capital, service investments, and ridership growth by funding frequent and reliable service, building transit corridors, expanding bus, streetcar, and light rail options, coordinating schedules and operations, and supporting riders with real-time information, enhanced payment platforms, and reduced-fare programs. Over the next 20 years, transit—buses, streetcar, monorail, commuter and light rail, ferries, water taxis, paratransit, vanpool, on-demand shuttles and rideshare services—will sustain and grow Seattle's vitality by moving people where they need to go. As SDOT plans for the future of the transportation system, transit will be one of the best tools for advancing equity, mobility & economic vitality, and sustainability.



Union Station in the International District

HOW TRANSIT ADVANCES THE STP

The Transit Element provides a framework for continued improvement to Seattle's transit system. The STP and Transit Element build on and supersede the 2016 Transit Master Plan (TMP). The Seattle Department of Transportation's (SDOT's) role in transit delivery includes investing tens of millions of dollars annually in additional bus service through the Seattle Transit Measure (STM), building capital projects to make transit faster and more reliable, owning a streetcar system, supporting Seattle Center Monorail, improving transit access, and representing Seattle on regional transit boards and committees.

To support a high-quality network, we partner with multiple agencies, including King County Metro (Metro), Sound Transit (ST), the Washington State Department of Transportation (WSDOT) and Community Transit (CT) to establish priorities that guide future transit investments. The Transit Element articulates SDOT's priorities and considers how to leverage significant regional and local investment in ST's Link light rail system. This element includes updates to the Frequent Transit Network (FTN), originally defined by the 2016 TMP as a framework for equitable investment based on an aspirational network of frequent, reliable transit services designed to meet daily travel needs.

The transit element also introduces a series of new community and mobility hubs, enabling travelers to access a range of other mobility options, public spaces, and community amenities. Alongside equity and accessibility, the Transit Element also focuses on continual improvement to passengers' physical and digital experience, including the ways passengers use smart phones and computers to access information, plan trips, and pay fares.

Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here. No matter where people live or work, providing safe and equitable transportation will always be critical to connect people and goods where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate travel options and supportive infrastructure that fits the needs of our unique and varied communities— whether a dense downtown grid, a quiet residential neighborhood, or a bustling manufacturing and industrial center.

In denser neighborhoods and commercial centers, development typically occurs close together. Combined with safe and supportive transportation infrastructure, density can make it easier for people to walk, bike and use transit because they don't have to travel as far. People have more access in these places, enabling them to live car free if they choose to or can't afford it. In places where development is more spread out, people might still walk or bike for shorter trips or to connect to transit services, but it is often harder due to longer distances between places.

While some people choose to live or work in places that are more spread out, others do so because they have no choice and driving is their only viable option. For instance, people who live

outside of Seattle because housing is more affordable, or people who transport freight or cargo for a living may not have options for how they travel other than driving a vehicle.

Our transportation system can support anticipated growth in different places while continuing to advance our goals by making other travel options more viable and available in appropriate street contexts. For example, on-demand rideshare services could provide more convenient shared trips, or freight-and-bus only lanes may support reliable travel times for transit riders. Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality.

Our integrated approach to planning the transit network alongside lead transit agencies and partners will play a pivotal role in supporting future growth in our region and achieving the goals of the STP and One Seattle comprehensive plan by:

- Busses, trains and other forms of transit carry more people than vehicles, offering a highly efficient travel option that takes up less street space. Transit is and will continue to be key to reducing vehicle miles travelled (VMT) and associated emissions per passenger-mile, especially when replacing single occupancy vehicle trips.
- Optimizing transit systems and encouraging shared mobility can reduce the number of vehicles on the road and improve traffic flow and travel times, particularly as travel demand grows alongside jobs and population.
- Expanded access to public transportation can improve physical and mental health and health equity by increasing access to medical care, healthy food, vital services, employment, and social connections.¹
- High quality public transportation (convenient, comfortable, fast rail and bus transport) and transit oriented development (walkable, mixed-use communities located around transit stations) tend to affect travel activity in ways that provide large health benefits, including reduced traffic crashes and pollution emissions, increased physical fitness, improved mental health, improved basic access to medical care and healthy food and increased affordability, which reduces financial stress to lower-income households.²
 - Traffic casualty rates tend to decline as public transit travel increases in an area.
 - Most public transportation passengers achieve the CDC recommended amount of exercise from walking to and from transit stations and stops.
 - People who cannot afford a car often rely on public transportation to access medical services and obtain healthy, affordable food.

¹ Public Transportation In The US: A Driver Of Health And Equity | Health Affairs

² APTA_Health_Benefits_Litman.pdf

Economic Benefits of Transit

The STP supports economic vitality in a range of ways and each functional Element plays a role. Decades of research show that transit positively impacts the economic health of our region through a broad range of pathways. Investments in public transit infrastructure create jobs, boost local economies, and stimulate economic growth. Additionally, by reducing dependence on fossil fuels, sustainable transportation reduces fuel costs for individuals and businesses, freeing up financial resources for other purposes.

- Public transit improvements can improve health outcomes and reduce healthcare costs.
 - Among physically able adults, average annual medical expenditures are 32% lower for those who achieve physical activity targets (\$1,019 per year) than for those who are sedentary (\$1,349 per year).³
- As a highly space efficient travel option, transit benefits traffic flows and travel times for other travelers, including the mobility of freight, goods and services, as well as people accessing jobs and other opportunities that support our economy.
- Affordable and reliable transportation alternatives, particularly for vulnerable communities and individuals who do not own private vehicles. This helps promote social equity by ensuring everyone has access to essential services, education, employment, and recreational opportunities.
- Businesses gain access to larger labor markets with more diverse skills, enabled by larger public transit service areas and reduced traffic congestion. In a very dense urban area when highways are highly congested, residents can live in a wide variety of locations throughout the region and access well-paid jobs.⁴
- When people ride transit, their travel costs may be lowered, and funds could be freed for housing, entertainment and other living expenses.
- Investment in transit attracts more employers to the region. Companies that are looking to locate in world-class regions are increasingly seeking places with robust transit systems. Public transit is seen as a necessary urban amenity for places to compete for workers, conventions and other economic activities.⁵

³APTA_Health_Benefits_Litman.pdf

⁴Transit has a net economic benefit (metroplanning.org)

⁵Caseforbusiness.pdf (apta.com)



RELATIONSHIP TO STP GOALS

Transit plays an important role in meeting the Seattle Transportation Plan's goals for safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization.



Prioritize safety for travelers in Seattle with no serious injury or fatal crashes.

Transit is among the safest forms of travel. Implementing transit corridor improvements and community and mobility hubs can help provide safe, inviting public spaces where people access transit and while on board to support existing riders and increase transit ridership.



Co-create with community and implement restorative practices to address transportation-related inequities.

Affordable transit options enable people to live car-free, without costs to own, operate, and maintain a personal vehicle. Building out the transit network will provide high-quality, all-day travel options that increase access to jobs and opportunities, reduce barriers to using transit and make transit dignified and desirable for all. Transit also provides mobility and independence for those who don't drive, whether by choice or necessity.



Respond to climate change through innovation and a lens of climate justice.

Transit encourages more trips using shared modes, like buses or light rail. It's one of the lowest emission travel modes since it carries so many people on one vehicle, and many routes including trolleybus and Link light rail are already carbon-free. Transit supports denser, more sustainable development and reduces driving trips—our greatest source of GHG emissions, air and water pollution.



Provide reliable and affordable travel options that help people and goods get where they need to go. Transit connects people to community destinations and creates access to opportunities, whether it be jobs and education, nature, recreational, or cultural gatherings. Transit has a unique ability to move many people using less street space when compared to other travel options. Providing a high frequency and reliable transit network is key to unlocking greater efficiency with limited right-of-way and reducing traffic congestion.



Reimagine city streets as inviting places to linger and play. Transit contributes to economic and neighborhood vitality by reducing household transportation costs and encouraging local spending. Creating great streets and public spaces around transit improves experiences of transit riders as well as nearby residents. Transit also supports shared spaces and interactions, helping instill a sense of community and social cohesion.



Improve city transportation infrastructure and ready it for the future. Planning and budgeting for long-term maintenance of transit assets such as shelters, and wayfinding will ensure the system remains functional and attractive. Building partnerships and establishing clear agreements with partner transit agencies will ensure transit assets are well maintained.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **Transit Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.
[\(Supports Safety Key Move S2a\)](#)

Feature community voices in planning documents. [\(Supports Equity Key Move TJ1b\)](#)

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: Transit Element: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Transit Element: Delivering the Key Moves							
SAFETY KEY MOVES							
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
T1	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. [Supports Key Move S2a]	✓	✓	✓	✓	✓	
T2	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, including but not limited to leading pedestrian intervals (LPIs) at signals, arterial traffic calming, and road diets. [Supports Key Move S2c]	✓					✓
T3	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as curb bulbs, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. [Supports Key Move S2d]	✓					
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle (S3)							
T4	Harness funding and opportunities when private development occurs to build planned new transit network facilities and prioritize mobility for people walking, biking, and rolling when construction occurs. [Supports Key Move S3b]	✓	✓	✓	✓		✓
T5	Upgrade existing facilities for people walking, bicycling, and rolling to be safer and accessible for people of all ages and abilities. [Supports Key Move S3c and TEF 7.1]	✓		✓	✓		
T6	Enhance both real and perceived safety for riders at transit stops and station areas through investments in design features such as lighting and shelters, as well as frequent and reliable services that limit late-night wait times. Advocate for programs that support physical, mental, and emotional safety of transit riders. [Supports Key Move S3e]	✓				✓	
T7	Support programmatic activities and partnerships to reduce the size and weight of vehicles used for personal trips, transit, and urban goods movement. Heavier vehicles are a key factor in pedestrian fatalities. [Supports Key Move S3f]	✓		✓	✓		
Provide safer routes to schools, parks, transit, community gathering spaces, and other common destinations (S4)							
T8	Construct the networks for walking, biking, transit, People Streets and Public Spaces as outlined in this plan. [Supports Key Move S4a]	✓	✓	✓	✓	✓	✓
T9	Make investments near light rail stations and busy transit stops that make it safer to walk and bike to transit. [Supports Key Move S4b]	✓	✓	✓	✓		✓
T10	Develop station access plans for future light rail stations and enhance the experience and quality of existing facilities that connect people walking, bicycling, and rolling along and across major transit corridors. [Supports Key Move S4c and TEF 40.2]	✓	✓	✓	✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Transit Element: Delivering the Key Moves							
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making processes (TJ1)							
T11	Implement the Transportation Equity Framework (TEF) to grow transparency, accountability, and shared power when making transportation decisions with community members. [Supports Key Move TJ1a]		✓				
T12	Feature community voices in planning documents. [Supports Key Move TJ1b]		✓				
T13	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. [Supports Key Move TJ1c and TEF 29.1, 41.6]		✓				
T14	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. [Supports Key Move TJ1d and TEF 3.4]		✓				
T15	Normalize the practice of making decisions about policies and right-of-way (ROW) allocations with input from vulnerable communities. [Supports Key Move TJ1f and TEF 19.1, 25.4]		✓				
T16	Support the transportation-related needs of local businesses owned by vulnerable communities and their commuting employees. Provide accessible and culturally relevant information about SDOT services. [Supports Key Move TJ1h and TEF 17.1, 21.2, 16.1]		✓		✓		✓
T17	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiatives. [Supports Key Move TJ1i and TEF 1.1, 13.4, 31.4, 37.1]		✓				
T18	Include representation of our region's Coast Salish art, language, and culture in the Seattle transportation system. Support efforts to consult with federally recognized tribes to standardize policies for project and artist selection and a process to solicit feedback from the greater Native community. [Supports Key Move TJ1j]		✓		✓		✓
Address inequities in the transportation system by prioritizing investments for impacted communities (TJ2)							
T19	Prioritize transportation investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. [Supports Key Move TJ2a]		✓				✓
T20	Support safe, reliable access to and through employment centers and MICs for BIPOC, low-income and displaced workers, such as increased or late-night transit services or well-lit overnight parking for truck drivers. [Supports Key Move TJ2b]	✓	✓		✓		
T21	Collaborate with municipal, county, regional, and state transportation partners to consider the transportation needs of people displaced from Seattle. [Supports Key Move TJ2c]		✓				
T22	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around transportation project impacts and displacement, and co-create transportation, public space, and permitting solutions. [Supports Key Move TJ2d and TEF 14.3,15.2]		✓		✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Transit Element: Delivering the Key Moves							
T23	Develop policies to prevent and mitigate transportation projects, both past and present, from contributing to future displacement. [Supports Key Move TJ2g]		✓				
T24	Implement improvements to make traveling in Seattle more accessible for everyone, such as curb ramps, accessible pedestrian signals, accessible parking, and accessible transit stops. [Supports Key Move TJ2h]		✓		✓		✓
T25	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]		✓				
Remove cost as a barrier so everyone can take the trips they need to make [TJ3]							
T26	Construct the walking, biking, and transit networks outlined in this plan. Expanding access to these affordable mobility options makes it easier to get around without the expense of automobiles. These networks provide 24/7 access, benefitting people who need to travel outside the hours of 8 AM to 5 PM, especially those who are low-income people of color, and those who rely heavily on public transportation. [Supports Key Move TJ3a]	✓	✓	✓	✓	✓	✓
T27	When a capital project is underway in a community, incorporate supplemental programs to help community members transition to sustainable travel options like taking transit. For example, support communities with fare subsidies or free ORCA cards. [Supports Key Move TJ3b]		✓	✓			
T28	Enhance programs that provide free or reduced travel fares and fees for low-income households. [Supports Key Move TJ3c and TEF 32.1, 46.2]		✓		✓		
Support shifts toward non-punitive transportation enforcement approaches that reduce harm and enhance public safety on city streets [TJ4]							
T29	Prioritize street designs and infrastructure changes to create self-enforcing streets and curb regulations that encourage safe behaviors and reduce the need for enforcement. [Supports Key Move TJ4a]	✓	✓	✓			✓
T30	Continue to explore automated safety cameras on bus-only lanes to improve transit speed and reliability. [Supports Key Move TJ4f]		✓	✓			✓
T31	Improve enforcement of existing regulations that support reliable mobility and safety, including those that keep bike lanes and pedestrian zones clear, deter improper use of transit-only lanes, and discourage speeding, especially in school zones. [Supports Key Move TJ4g]	✓	✓	✓			
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options [CA1]							
T32	Expand beyond employer-based travel demand management programs to include residential and neighborhood-based strategies that encourage non-driving travel choices for all trips. [Supports Key Move CA1a]	✓	✓	✓	✓	✓	✓
T33	Develop and expand programs that incentivize sustainable alternatives to driving for large events, and as a primary congestion mitigation tool during major construction projects. [Supports Key Move CA1c]			✓	✓		
T34	Support increased transit service through co-investments with transit agency partners so the transit network takes people where they want to go. [Supports Key Move CA1d]		✓	✓	✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Transit Element: Delivering the Key Moves							
T35	Encourage transit-oriented development through alignment of land use policies with other City departments. [Supports Key Move CA1e]			✓	✓	✓	
T36	Operate the transportation system—signals, markings, signage, and right-of-way allocation—to encourage sustainable travel choices (walking, biking, taking transit, and for moving goods). [Supports Key Move CA1g]	✓	✓	✓	✓		
Green city streets with landscaping and street trees to better handle changing climate (CA2)							
T37	Encourage the maintenance and installation of green infrastructure—such as street trees, rain gardens, landscaping, natural drainage systems, bioswales, and pervious materials— as transit improvements occur in the right-of-way. [Supports Key Move CA2a and TEF 56.4]			✓		✓	
Support the transition from fossil fuel to electric vehicles for personal, commercial, and delivery trips (CA4)							
T38	Work with City departments to support the transition to electric vehicles (EVs) for all segments of transportation through equitable incentives, grant opportunities, partnerships, and pilot programming. [Supports Key Move CA4a and TEF 36.2]		✓	✓			
T39	Support city and transit agency partners as they pursue zero-emissions fleets, including through infrastructure that supports existing trolleybus, streetcar, and light rail fleet, and other vehicles, collaborative planning and streamlined permitting processes. [Supports Key Move CA4d]			✓			
Advance mobility management strategies to encourage walking, biking, and transit trips (CA5)							
T40	Explore equitable demand management tools that could influence travel choices and create revenues to invest in sustainable transportation options, freight movement, and innovation. [Supports Key Move CA5c]		✓	✓			✓
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Create seamless travel connections (PG1)							
T41	Prioritize efficient and sustainable movement of people within limited street space and reallocate street and curb space to maximize comfort, convenience, and directness for walking, biking, rolling, and transit. [Supports Key Move PG1a and TEF 19.6, TEF 43.4]		✓	✓	✓	✓	
T42	Improve the experience of making travel connections, especially between transit and travel options such as personal and shared bikes and scooters used for first- and last-mile trips. [Supports Key Move PG1b and TEF 35.2, 45.3]	✓			✓	✓	
T43	Improve east-west mobility between neighborhoods and destinations, especially as additional north-south oriented light rail service begins, and existing bus services are redeployed. [Supports Key Move PG1c]			✓	✓		
T44	Coordinate with regional transit partners to simplify trip planning, booking, and mobility payment options across public and private mobility services. [Supports Key Move PG1d]				✓		
T45	Provide equitable transportation access through direct subsidies and tailored mobility services for disadvantaged populations, including people with mobility impairment or low income. [Supports TEF 32.1 and 32.3]. [Supports Key Move PG1e]				✓		✓

Transit Element: Delivering the Key Moves		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
T46	Expand the pedestrian wayfinding program, including at transit stations and stops, in collaboration with community and regional partners. [Supports Key Move PG1f and TEF 48.1]				✓	✓	
T47	Work with transit agencies and private partners so that real-time data can help travelers make informed decisions. [Supports Key Move PG1g]				✓	✓	✓
Create world-class access to transit and support making service more frequent and reliable (PG3)							
T48	Partner with King County Metro to deliver SDOT's Frequent Transit Network target levels of bus service and service area coverage. [Supports Key Move PG3a]		✓		✓		✓
T49	Leverage planned light rail investments to serve more people traveling by transit through system expansions, redeployment of existing bus services to connect passengers to light rail, and expansion of bus services to new areas and markets to serve more riders, including those in underserved areas and travelers who would benefit from more east-west transit connections. [Supports Key Move PG3b]		✓	✓	✓		
T50	Partner with Sound Transit to support delivery of future Link light rail expansions and improvements to Sounder commuter rail, including improved service frequency, construction of infill stations, and station access improvements. [Supports Key Move PG3c]		✓		✓		
T51	Create a continuous streetcar connection by linking the First Hill and South Lake Union streetcar lines through Downtown. [Supports Key Move PG3d]		✓		✓	✓	
T52	Aggressively prioritize transit capital investments to create a connected, reliable network of transit priority lanes with service that operates 24/7, making connections to Link light rail and other regional services. [Supports Key Move PG3e]		✓	✓	✓		✓
T53	Apply a Transit Performance Policy to improve transit travel time and reliability through expanded use of transit lanes, queue jumps, transit signal priority, and other treatments to make transit a competitive travel choice for most trips. [Supports Key Move PG3f]				✓		✓
T54	Improve transit access to underserved neighborhoods and populations through expansion of existing transit services, programs that reduce transit fares, and new private sector partnerships, such as the Metro Flex service, to provide first- and last-mile services. [Supports Key Move PG3g and TEF 35.1]		✓		✓		
T55	Enhance existing and create new Community and Mobility Hubs, with connections to transit services and related travel options. [Supports Key Move PG3h]	✓	✓	✓	✓	✓	✓
T56	Prioritize low-carbon travel options through seamless, direct walking and rolling connections to Community and Mobility Hubs. [Supports Key Move PG3i]	✓		✓	✓	✓	
T57	Enhance transit stops and the experience of waiting at them in all types of weather and times of day through stop improvements implemented by transit partners and leveraged via private development. [Supports Key Move PG3j]	✓	✓		✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Transit Element: Delivering the Key Moves							
Support access to jobs, freight movement, and growth in deliveries (PG4)							
T58	Implement dedicated freight lanes and freight-and-bus lanes, pending successful results of a pilot project. [Supports Key Move PG4c]			✓	✓		✓
T59	Expand efforts to work with employers and property managers to provide sustainable transportation options, education, and incentives to promote sustainable travel options for shift workers, non-peak hour commuters, small business employees, and workers in MICs. [Supports Key Move PG4l]		✓	✓	✓	✓	
Manage curb space to reflect city goals and priorities (PG5)							
T60	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]				✓		✓
T61	Develop strategies and new tools to accommodate more types of curb uses, including transit layover space, employer shuttle service, and other curb uses that support low-emission travel options. [Supports Key Move PG5c]				✓		✓
LIVABILITY KEY MOVES							
Reallocate street space to prioritize people, creating enjoyable places that also facilitate goods delivery and mobility (PP1)							
T62	Update Seattle's Right-of-Way Improvements Manual (<i>Streets Illustrated</i>) to implement actions and strategies outlined in this Plan. [Supports Key Move PP1d]	✓	✓	✓	✓	✓	✓
Create welcoming community and mobility hubs (PP2)							
T63	Work with partners to create a vibrant and welcoming public realm at community and mobility hubs to support community-oriented programming, such as markets, vending, performances, and recurring events. [Supports Key Move PP2a]					✓	
T64	Improve walkability at every community and mobility hub by providing pedestrian infrastructure such as human-scale lighting, wayfinding, seating, and landscaping. [Supports Key Move PP2b]	✓			✓	✓	
T65	Provide a safe and comfortable experience moving in and around community and mobility hubs, including better crossings and intersections, slower speeds and right-sized travel lanes, decluttered sidewalks, universal access, and more. [Supports Key Move PP2c]	✓			✓	✓	
T66	Work to incorporate age-friendly public spaces at community and mobility hubs that work for older adults, children and their caregivers, including play-based learning activities that allow children to engage with the city and support their development. [Supports Key Move PP2d]		✓		✓	✓	✓
T67	Partner with communities, Tribes, other agencies, and organizations to design, construct, activate, and maintain community and mobility hubs. [Supports Key Move PP2e]				✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Transit Element: Delivering the Key Moves							
MAINTENANCE & MODERNIZATION KEY MOVES							
Maintain our streets, sidewalks, and bridges and incorporate planned safety and network improvements with maintenance work (MM1)							
T68	Maintain our transportation infrastructure, including streets, sidewalks, and bridges serving the most users and on the high-injury network. [Supports Key Move MM1a]	✓	✓	✓	✓	✓	✓
T69	Strategically manage the life cycle of our transportation assets in accordance with our Transportation Asset Management Plan to achieve the best performance results for the preservation, improvement, and operation of infrastructure assets. [Supports Key Move MM1b]						
T70	Reduce the maintenance backlog by being proactive, leveraging technology to monitor asset conditions, and using data and lifecycle analyses to help determine when it's time for upgrades. [Supports Key Move MM1c]						✓
T71	Conduct asset maintenance in accordance with the priority investment and emergency response route networks, especially when investment supports walking, biking, transit, and freight. [Supports Key Move MM1f]	✓	✓	✓	✓		✓
T72	Modernize city streets by incorporating planned safety and network improvements into maintenance and replacement activities to not only improve the condition of transportation infrastructure and equipment, but also reduce dependence on driving, promote sustainable travel options, and support economic vitality. [Supports Key Move MM1g and TEF 19.3]	✓	✓	✓	✓	✓	✓
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
T73	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. [Supports Key Move MM2a and TEF 19.3]	✓	✓				✓
T74	Equitably distribute resources for maintenance and improvements in neighborhoods that have been historically or are currently underserved. [Supports Key Move MM2b and TEF 19.4]		✓		✓		✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
T75	Collect, monitor, and use data to inform changes to the transportation system. [Supports Key Move MM3a]	✓	✓	✓	✓	✓	✓
T76	Proactively work with public, private, and academic sector partners to collaboratively develop transit and mobility solutions for the future. [Supports Key Move MM3c]		✓				✓

SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we will need to remain agile and able to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to transit. They were used to shape the actions we'll take to achieve our shared transportation vision. SDOT will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances evolve in the years to come.

OPPORTUNITIES, EMERGING TRENDS AND CHALLENGES

In 2019, Seattle was nationally recognized for its growing transit ridership, partnering with King County Metro (Metro) and Sound Transit (ST) as they built out the regional transit system, and achieving a 46% share of trips made by transit for workers commuting downtown. The 2019 Commute Trip Reduction (CTR) survey indicated only 26% of commute trips to the Center City were made by driving alone. Like many other cities, public transportation in Seattle faced unprecedented challenges in the early 2020s due to the COVID-19 pandemic. However, Seattle's transit system has proven resilient and essential despite lower numbers of downtown employees returning compared to peer cities. Our transit network remains an indispensable public service and continues to adapt, expand, and evolve as we invest in Seattle's future.

Opportunities and Emerging Trends

- **Climate Action.** The Mayor's Executive Order on Climate calls for an 82% reduction of transportation emissions by 2030 (from 2008 levels) and Net Zero emissions by 2050. Over 60% of Seattle's total emissions currently come from transportation, requiring significant mode shifts to reach this goal. Equitably designed pricing strategies, parking management, and expanded transportation demand management will also play a critical role in meeting our climate goals.
- **Equitable Access to Travel Options Including New Shared Mobility.** Public transportation plays a vital role in providing affordable travel options that can improve financial autonomy for low-income residents. To help reduce the cost burden of transportation, SDOT provides fare subsidy programs for Seattle's most under-resourced communities and partners with Metro on regional reduced fare programs, including

those that impact SDOT-owned transit systems, such as the Seattle streetcar (TEF 34.1). As new mobility options grow, such as electric scooters, bikes, and other emerging mobility innovations, enabling access to these and other transit services for under- or unbanked people and those without a mobile data package or a smartphone is essential to providing equitable access to transit and increasing mobility. Equitable access also means physical connections to transit stops and stations are safe and comfortable, including sidewalks and barrier-free paths.

- **Link Light Rail expansion.** ST's planned Link light rail extensions to Lynnwood, West Seattle, Ballard, Federal Way, and communities east of Lake Washington, along with the planned infill stations at NE 130th Street and Graham Street create the opportunity to grow the number of households within walking distance of high-capacity transit. Associated bus service restructures will provide opportunities to improve east-west connections and transit access from currently underserved areas. Together, these changes will increase regional mobility and decrease reliance on private vehicles.
- **RapidRide system expansion.** In partnership with Metro, several new RapidRide bus rapid transit (BRT) lines are under construction and in various stages of planning and design. RapidRide is effective at attracting more riders to existing bus corridors, and provides more frequent and reliable trips, upgraded stations and facilities, and intuitive, direct route design—reducing the need to plan exact trip departure ahead of time.
- **Changing travel patterns and customer needs.** As ridership has gradually rebounded from the pandemic, there are long-term changes in when and where ridership occurs throughout the city. Nearly half of all transit trips are now taken outside of morning and afternoon commute times on weekdays, up from 40% of rides pre-COVID. King County Metro bus routes that retained the highest ridership during the pandemic include those serving Southeast and Southwest Seattle. This trend demonstrates a need for more all-day frequency and late-night service connecting Urban Villages in addition to the downtown core to meet changing travel demand.
- **Transit electrification.** King County Metro is working to transition to a 100% zero-emissions fleet by 2035, a target that requires City partnership and significant infrastructure adaptation. This builds upon Metro's existing 70 miles of electric-powered trolleybus network on 15 routes, as well as electric Link light rail service. SDOT will partner with Metro on their evolving needs for vehicle charging, layover, and curbside uses so that the city's streets and curbs support Metro's zero emissions bus strategy.

Challenges

- **Ridership loss due to pandemic.** Metro bus service, ST Link light rail, and Seattle Streetcar experienced significant decreases during the pandemic because of shifted travel patterns, requiring new approaches and research to better align the transit network with changes in travel behaviors. Transit ridership continues to grow post-pandemic, but at a slower rate than before.

- **Labor shortages and supply chain disruptions.** Like transit agencies and many employers nationwide, King County Metro contends with ongoing labor shortages and supply chain disruptions during and after the pandemic. Supporting Metro's work to increase service is a critical challenge that will take resources and planning to resolve.
- **Change in office work and impacts on Center City ridership and service.** For a decade before the pandemic (2010-2020), there was unprecedented office growth in downtown Seattle, with transit mode shares almost doubling to nearly 50% during this period. The pandemic shifted this trend, making hybrid and remote work the new normal in many workplaces and industries. Seattle's high rate of tech jobs made return to office trends slower than many national peers. The 2022 Commute Seattle survey on commuter behavior found work from home is the dominant "mode of travel" in 2022 making up 46% of all "trips." Transit use to work was down from 49% in 2019 to 22% in 2022.
- **Customer safety and security.** Transit customers, particularly in Center City neighborhoods, have expressed a perception of decreased safety in recent years. There are many factors contributing to this change in perception, and SDOT understands perceptions of safety directly impact how often riders choose to access transit.
- **Rising housing costs.** As housing costs continue to rise, many low-income residents are moving further outside the city in search of affordable housing. More affordable transportation options, especially transit, is a key strategy for SDOT to support citywide efforts to tackle our housing affordability crisis.
- **Rise in serious and fatal collisions on Seattle's streets.** Traffic fatalities have been on the rise since before the Pandemic, and Seattle's most vulnerable road users are most at risk. Transit can play a key role in making our streets safer as it is among the safest ways to travel. Shifting trips from personal vehicles to transit could reduce vehicle traffic, which could reduce serious and fatal collisions. Vision Zero and travel safety is a core SDOT value and service goal.

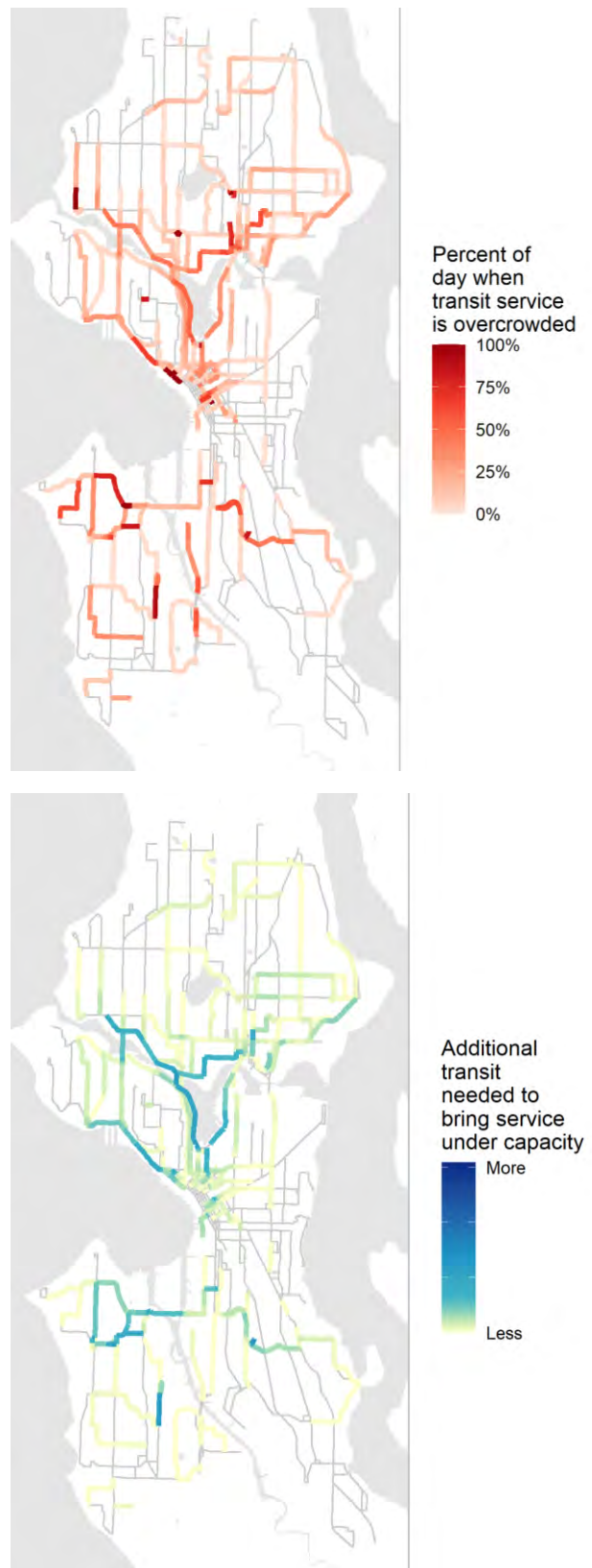
Transit's Role in Addressing the Climate Emergency

Transportation accounts for over 60% of the city's GHG emissions. Seattle has a goal to reduce transportation emissions by 82% from 2008 levels by 2030 and to net zero by 2050. Impacts of climate events are known to fall disproportionately on BIPOC communities, immigrants, refugees, people with limited English language proficiency, people with disabilities, and low-income residents—this is coupled with worsened health effects due to disproportionate exposure to pollution from fossil-fuel powered cars and trucks.

The Office of the Mayor issued a December 2022 Executive Order to prioritize actions that reduce GHG emissions. Coordinated actions include a transition to electric vehicles, but also rely heavily on mode shift to sustainable modes of travel (e.g., transit, walking, and biking). The city's Climate Change Response Framework, an analysis of various transportation and land use strategies to mitigate climate change impacts, estimated that transit will need to make up one out of every four trips to meet the City's 2030 climate goals. Translated into daily passengers, this analysis indicates our transit systems will need to carry an additional 750,000 passengers per day by the year 2030, as compared to the 450,000 passengers riding transit daily in 2019.

The STP team analyzed the ability for the current (2021) system to handle this additional capacity. Maps in **Figure 1** show where additional transit capacity would be needed to hit those targets. This analysis is used to support capital and service investment needs presented in the STP transit element.

Figure 1: 2030 Projected Service Impacts and Needs with Climate Analysis Mode Shifts



COMMUNITY ENGAGEMENT

Extensive public outreach and engagement occurred in the STP development process in three phases. We received almost 5,550 transit-specific comments through STP engagement, including through online surveys, the STP Engagement Hub, in-person meetings and events, a map-based comment portal, extensive work with community-based organizations (CBOs), and consultation with the Transportation Equity Workgroup (TEW). These comments were integral to the development of the Transit Element.

The STP engagement process collected approximately 2,000 location-specific public comments related to transit through online web maps (see Figure 2), including direct outreach to Black, Indigenous, and People of Color (BIPOC) communities, people with low incomes, immigrants, people with disabilities, and other populations who may not have easy access to government processes. In addition to being considered in the development of this Transit Element, these comments provide an ongoing resource for SDOT as we work in partnership with community to advance plan priorities.

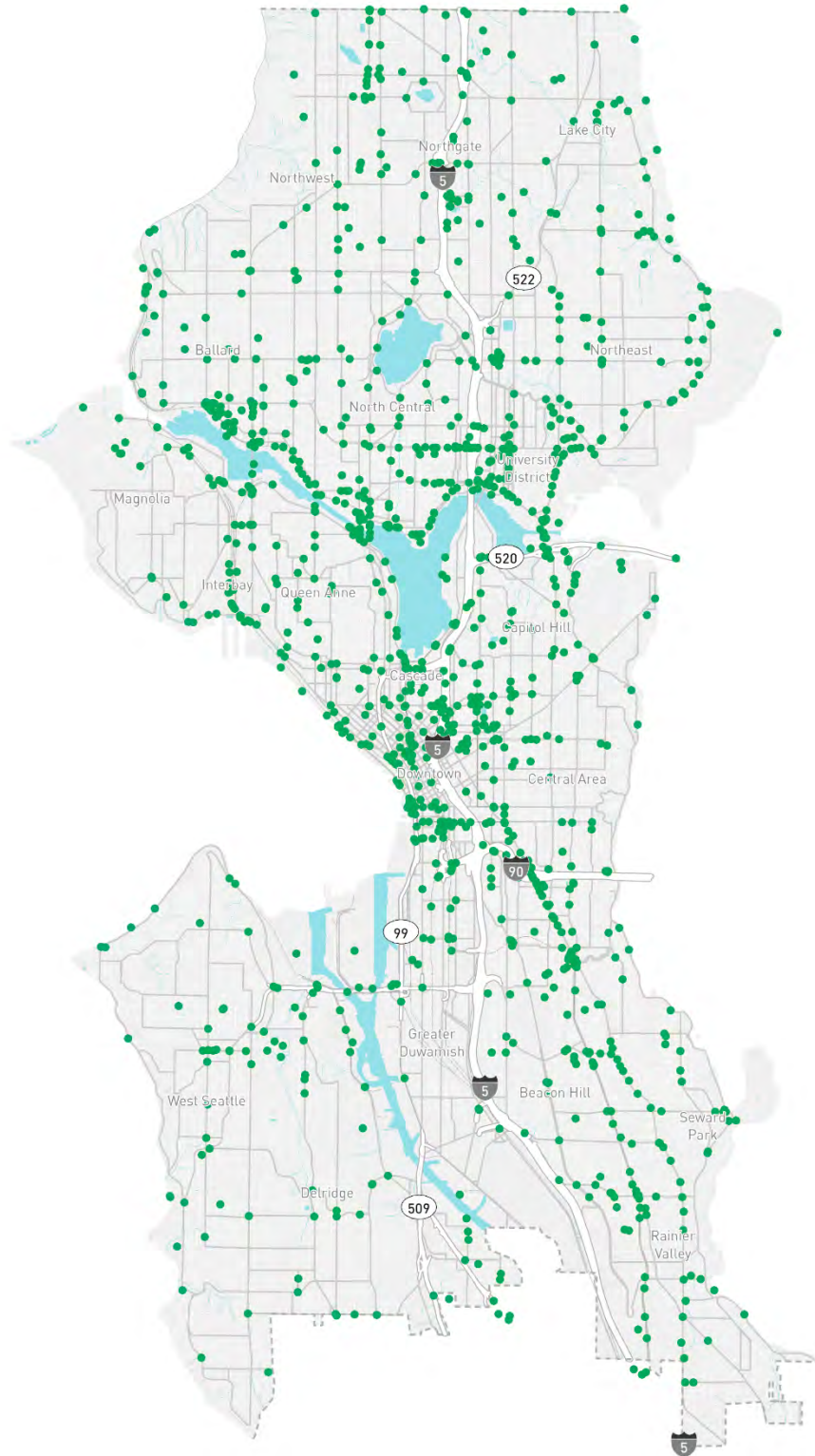
Key themes from community engagement include:

- Current transit is slow (trips take too long) and can be unreliable (long or unpredictable wait time).
- People want to see service levels (headways) restored to pre-pandemic levels or better.
- Improvements are needed to provide better access to transit, both to Link light rail and bus services throughout Seattle.
- Safety and personal security are significant and common concerns at transit hubs, stations, and bus stops.
- Transit doesn't work for all trips. Link light rail is being built primarily for people traveling north and south within Seattle, and for regional trips to other cities. There is a need to improve east-west transit services to connect neighborhoods as well as connect people to Link light rail.
- There is a desire to see more on-demand or shuttle type services for people living in or accessing low-density neighborhoods.
- Commenters support moving more people in less space to improve safety and climate outcomes, and they see high-quality transit as key to achieving these.

"More bus service late night; bus/transit service expanded for health care workers/hospitals; cameras on buses (if not there already)."

– Quote from Survey Respondent

Figure 2: Transit-Specific Comments Provided for Locations throughout the City



Key themes from BIPOC community members include:

- Transit should be safe, as people experience safety concerns in station areas.
- The city and its transit agency partners should invest in transit where people rely on it—most typically in historically underserved communities, such as in Central Seattle, Southeast Seattle, Delridge, and far North Seattle
- Provide safe and equitable options; South Seattle residents expressed greater concern regarding safety at Link light rail stations and reduced access to park-and-ride options when compared to North Seattle.

AMPLIFYING COMMUNITY VOICES

Indigenous people (American Indians and Native Alaskans) referenced transit at a much higher percentage than citywide comments (21% compared to 7% citywide).

Community-based organizations' input on accessibility is heavily weighted toward transit. Key themes received through CBO-led engagement include:

- Free public transportation would serve everyone.
- Bus transfer windows aren't long enough for folks to run errands. People prefer paper transfers because bus drivers usually allow a four-hour transfer window for elderly people, while ORCA cards are set at a fixed amount to only allow two hours.
- Transit navigators who speak different languages are requested to help riders know what buses to take, when buses are coming, etc.
- Digitized boards with bus schedules at transit stops or at businesses near transit stops and stations are very helpful, and there is a strong interest for more of these.
- There are gaps in neighborhood services as well as a lack of access to the outskirts of Seattle. Not many buses go into neighborhoods or areas without a main street.
- Buses don't run late enough—it is sometimes hard for people who do not work jobs with regular hours to choose to take the bus.
- There's not a lot of bus access to the outskirts of Seattle.
- It can be easy traveling in the Center City, but difficult to get out, and bus times are often delayed.



TRANSIT IN SEATTLE

Seattle has a wide variety of transit options, whether you're looking to travel on land or sea. While the City doesn't run the buses or light rail trains, we do work closely with other agencies to buy bus service, improve reliability, and make sure people can get where they need to go.

TRANSIT AGENCY PARTNER ACTIVITIES

King County Metro: RapidRide arterial bus rapid transit (BRT) project development and delivery; transit service planning within King County; station and stop improvements; transit operational improvements; access to transit improvements; Seattle Streetcar and Link light rail operations; trolleybus system planning and capital investments; development and implementation of Metro's long-range plan "Metro Connects"; coordination on discounted transit fares and subsidies; water taxi service between downtown and Vashon and West Seattle.

Sound Transit: Link light rail operations; Link light rail station area planning and project implementation; major capital project development, permitting, and construction management; Stride BRT program planning and construction; regional transit service planning; fare program development and management; coordination on regional fare structure, ORCA policy, and programs.

WSDOT: Regional freeway system operations and high-occupancy vehicle (HOV) network; planning of major transportation projects (SR-520 completion, I-5 major maintenance); planning and operations of state ferry network serving Seattle at Colman Dock and at Fauntleroy.



Bus

King County Metro
Sound Transit
Community Transit
Access Transportation
Downtown Circulator



Rail

Seattle Streetcar
Link Light Rail
Sounder
Seattle Center Monorail
Amtrak



Water

Washington State
Ferries
King County Water Taxi
Kitsap Fast Ferries

In addition to the wide array of partnership activities, SDOT plays a direct role in managing, providing, building, and supporting public transportation. These activities are detailed in the following section.

SDOT'S ROLE IN ADVANCING TRANSIT

Capital Project Funding: We provide direct funding and seek grants for transit capital improvements ranging from City-led RapidRide projects to smaller spot improvement projects, such as bus lane markings, traffic signal upgrades, and improvements to bus stops.

Capital Project Development: We lead development, design, and construction for transit corridors and passenger amenity improvements projects to make trips faster and more reliable.

Funding and Planning Service: The Seattle Transit Measure (STM), a voter-approved measure funded through Q1 2027, generates roughly \$50 million annually, the majority of which funds transit service. STM also funds capital projects, transportation access programs, and other transit service delivery programs like Metro Flex. We work with Metro to plan service investments using the Frequent Transit Network (FTN) and equity policies as key guidance.

Improving Transit Access: We promote physical access to transit by prioritizing access to transit stops for people walking, biking, and rolling. The STM supports access to transit by providing ORCA transit passes to low-income groups, such as Seattle Housing Authority residents, low-income workers, and Seattle Promise Scholar students, as well as opportunities for youth, seniors, and people with disabilities to learn to ride transit. We also advocates for improved regional fare policies and increased access to reduced or no-fare programs.

Transit System Connectivity and Integration: We lead various planning efforts and aligns multimodal investments to support safe, equitable, and high-quality access to multimodal hubs, light rail stations, RapidRide stations, Streetcar, and local bus stops. We manage curb uses to support access to transit, particularly where access and mobility functions are in high demand.

Transit Reliability: We manage transitway agreements with Sound Transit for ownership and operation of Link light rail high-capacity transit (HCT) facilities within the City of Seattle, and plans, designs, and implements bus priority treatments.

Station Area Planning and Permitting: We works with the Office of Planning and Community Development (OPCD) and the Department of Construction and Inspections (SDCI) on access and land use planning, development review, and permitting for Link light rail station areas.

Traveler Experience in the Digital Realm: We work with partner agencies and the private sector to enhance access to transit, information, and intuitive forms of fare payment for all travelers.

Regional Transit Coordination: The Puget Sound region has one of the nation's most effective collaborations among transit agencies. SDOT partners with King County Metro, Sound Transit, and other neighboring agencies to track that regional investments benefit Seattleites, and that local investments align with regional travel needs.

Seattle Streetcar: We own, fund, and manage the South Lake Union streetcar, providing frequent service between Westlake Hub and South Lake Union, and the First Hill Streetcar, which connects neighborhoods of Capitol Hill, First Hill, the Chinatown/International District and Pioneer Square. SDOT contracts with King County Metro for operations.

TRANSIT NETWORK

Frequent, reliable transit service is the foundation of a transportation system that empowers all travelers and makes Seattle a truly transit-friendly city. A robust transit network is essential if Seattle is to meet its climate goals and address transportation-related inequities. At its most fundamental level, a transit network is made up of transit infrastructure such as bus lanes, transit signals, and bus stops, often arranged in corridors.

The transit service that travels on this infrastructure can be described as a series of routes that connect different parts of a community for a number of hours per day at a certain frequency (the number of trips at a bus stop per hour). SDOT's vision for the service aspect of the transit network is followed by a vision for transit infrastructure in the sections below.

Public input and surveys consistently point to transit frequency as the most critical factor that influences ridership behavior. This fundamental concept directly informs SDOT's shared vision for a "Frequent Transit Network" (FTN), which builds from the 2016 Transit Master Plan (TMP) and establishes aspirational frequency targets for transit corridors throughout the city. A high-frequency transit network enables people to move through the city with confidence in a timely arrival—and without the need to consult a schedule—throughout the day and every single day of the week. Continual investment in improved transit frequency in Seattle is essential for many reasons:

- Post-pandemic transit is likely to remain less commuter-focused and oriented specifically to Downtown Seattle and must adapt to new travel behaviors and patterns.
- To support everyday trips by transit (not just commutes), people need reliable mobility at all times, such as early mornings, midday, evenings and at night all days of the week, not just at peak times on weekdays.
- Transit needs to accommodate work schedules of non-traditional and low-income workers including the times noted above.
- Transit should be attractive for all types of trips throughout the week, including education, shopping, and recreational trips, as well as cultural gatherings.
- An excellent transit network is necessary to accommodate the mode shift required to respond to the impacts of climate change in the next decade.
- Frequent transit reduces wait time, increases reliability, and values the time for existing and future riders.
- Frequent transit makes transfers more feasible and allows a network of routes to function as a system.

A connected network of frequent transit services is also critical to achieve STP climate goals, which require dramatic increases in transit ridership and VMT reduction to support broader efforts to reduce greenhouse gas (GHG) emissions from transportation.

High transit frequencies as part of a reliable, all-day service network can create a more equitable transportation system, making it possible for people of all ages, incomes, and abilities to get where they want to go regardless of when or where they need to travel. The Transit Element presents a vision for frequent transit service in Seattle that goes beyond the original Frequent Transit Network (FTN) presented in the 2016 Transit Master Plan.

The Frequent Transit Network

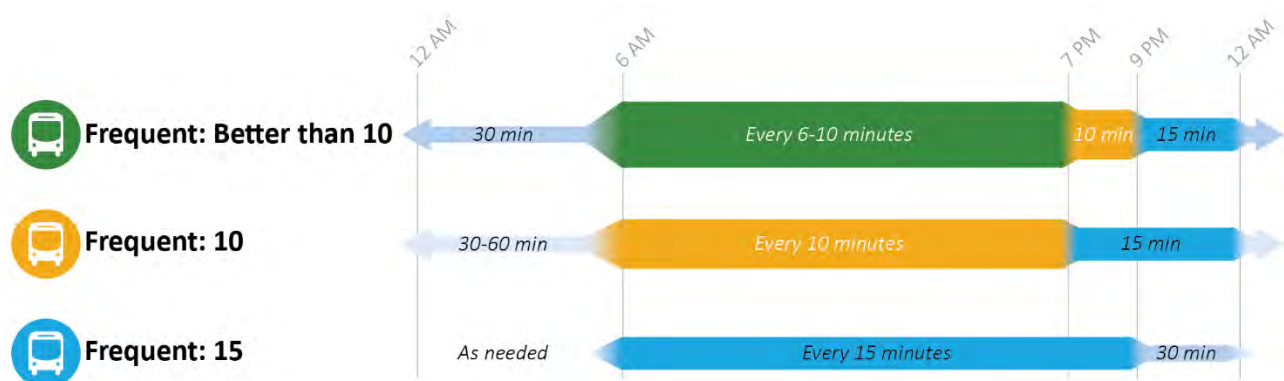
This section provides an overview of the Frequent Transit Network and key changes made from the 2016 Transit Master Plan FTN. The updated FTN has two primary components: it establishes aspirational frequency targets alongside a transit corridor map illustrating how frequency targets are proposed to be distributed throughout the city. Transit corridors that are part of the updated FTN are classified into three categories:

Frequent: Better than 10 minutes. 6-minute to 10-minute service from 6 AM–7 PM, 10-minute to 15-minute service from 7 PM to midnight, and 30-minute service from midnight to 6 AM, every day. This category captures a vision that the best transit service is even more frequent than 10-minutes and that SDOT is willing to invest in certain Metro RapidRide lines and other very high frequency routes.

Frequent 10 minutes. 10-minute service from 6 AM–7 PM, 15-minute service from 7 PM to midnight, and 30-minute to 60-minute service from midnight to 6 AM, every day. This is a high frequency category for main transit corridors, including some RapidRide corridors.

Frequent 15 minutes. 15-minute service from 6 AM–9 PM, 30-minute service from 9 PM to midnight, and service as needed between midnight and 6 AM, every day. This designation aligns with parking flexibility areas monitored by the Seattle Department of Construction and Inspections (SDCI), in which parking minimums for new housing development are reduced or removed near frequent transit operating at least every 15 minutes.

Figure 3: Frequent Transit Network Target Frequencies



Note: Corridors that don't require the "Frequent: 15" category are termed "Other Transit" and are determined by Metro's Service Guidelines.

The updated frequency targets presented in **Figure 3** include several significant changes from the FTN targets outlined in the 2016 TMP:

- Frequency targets are now the same on weekdays, Saturdays, and Sundays. This change reflects the fact that the weekday commute has less of an influence on travel patterns in the city, and that residents have travel needs throughout the week and for purposes beyond travel to and from work.
- A new evening travel period between 7 PM and 9 PM was added, calling for 15-minute minimum frequencies when many people are still moving throughout the city for a variety of trip purposes.
- Nighttime frequency targets, between midnight and 6AM, are higher. It is important that the transit network can support movement throughout the city 24/7.
- Service may be expected to ramp up to all-day levels as early as 5 AM to account for shift workers in service and medical fields arriving earlier than average workers—determined on a route-by-route basis depending on local demand and operational considerations.
- Future Link light rail frequencies are anticipated to be every 6 to 12 minutes throughout the day as the Link system builds out and more services are brought online. These frequencies are assumed to be included in targets for relevant corridors. Based on station locations and times of day, additional bus service may need to fill gaps along certain corridors to meet frequency targets, especially during Link’s maintenance window when no services are able to be run between 1 and 5 AM.
- The updated FTN eliminates a “Local” service category, as it isn’t frequent enough to be useful to Seattle riders for many of the reasons noted above. The city may still invest in local transit if a route serves an equity priority area or a key role in the larger network.

Updating and Measuring the Frequent Transit Network

The updated Frequent Transit Network (FTN) includes a network of transit corridors offering frequent, reliable service on designated corridors that connect urban villages, urban centers, and Link light rail stations throughout the day, every day. The FTN was developed using a data-driven approach to prioritize where SDOT should invest and advocate for improved transit frequency. Segments of the street network where Metro buses and Seattle Streetcars operate were assigned a Frequent Transit Network target based on various data inputs, including:

- Existing and future transit demand
- Future population and employment density
- Equity priority areas (areas with greater concentrations of BIPOC, low-income, foreign-born, disabled, or who have limited English proficiency)
- Access to link stations for regional connectivity
- Locations where a higher percentage of passengers pay with reduced fares

Higher intensity of service was warranted on portions of the network that scored higher for multiple factors. The FTN goal is to achieve target frequency along each network corridor identified. Since the FTN focuses on all-day service, seven days a week, many service

deficiencies occur on weekends and during midday, compared to peak-period times when frequencies are highest. This highlights the need for investment in off-peak bus service to move closer to the aspirational vision of frequent all-day service, seven days a week.

The FTN is supported by transit capital investments that protect these frequency service investments from traffic delay. Capital investments also align with pedestrian access, community and mobility hubs, and placemaking investments to elevate the overall travel experience. Additionally, they help protect investment in additional transit services by enabling transit to be more efficient, requiring fewer vehicles to meet target frequency goals. Continued expansion of ST Link light rail will continue to change how people travel via transit. Investing in east-west corridors that connect to generally north-south oriented Link light rail service is a focus of the STP, as is investment in high-frequency midday, evening, and weekend service.

The three categories defined **Figure 3** above are used to illustrate the updated Frequent Transit Network (FTN) in **Figure 4**.

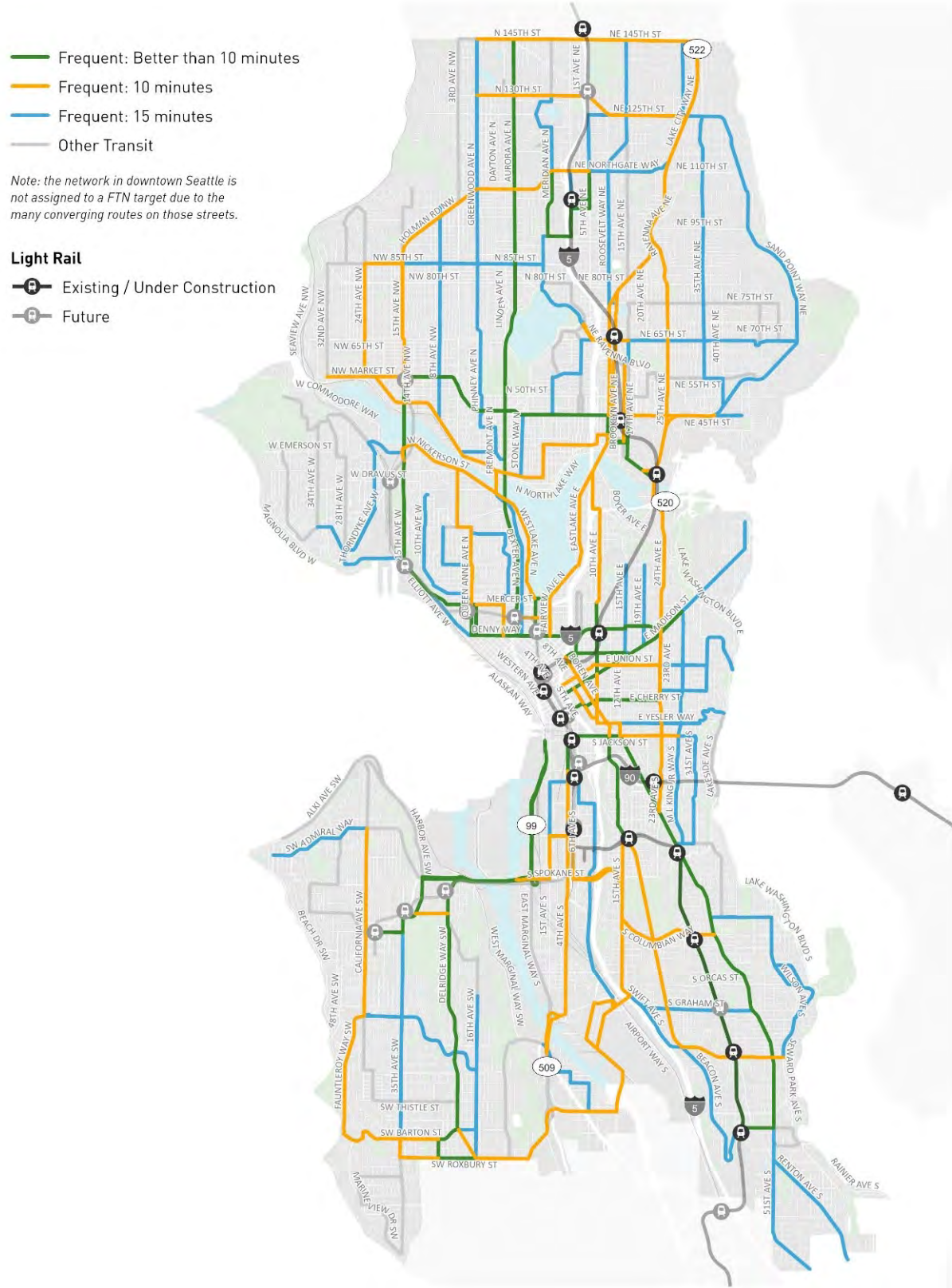
Portions of the network are not part of the FTN but are shown as “Other Transit.” The transit network in downtown Seattle is not assigned an FTN target because of the many converging routes on those streets. SDOT may update this vision over time as necessary. To realize the vision of the updated FTN, SDOT will measure progress towards the corridor-based frequency targets depicted in **Figure 4**.

Frequency targets will also be assigned to individual bus routes based on the FTN frequency targets to identify service gaps, per the investment methodology described in the Seattle Transit Measure (STM) (See Appendix A).



A Metro RapidRide bus

Figure 4: Frequent Transit Network Targets



The FTN map includes anticipated transportation and land use changes through 2031. Transit changes planned for implementation after 2031 will be incorporated into the FTN as part of future updates. Transit changes included within the FTN Map are grouped and bulleted below.

Lynnwood Link Light Rail Expansion

- Line 1 extension north to Lynnwood
- Bus restructures in North Seattle
- New service to the 130th St Station

Other Link Light Rail Expansion

- Judkins Park Station and surrounding bus service restructures
- S Graham St light rail infill station and surrounding bus service restructures
- Other bus routes that currently serve areas of Seattle that are restructured to new light rail stations outside of the city

New RapidRide and Stride Routes

- RapidRide G Line along E Madison St
- RapidRide J Line serving UW, Eastlake, and South Lake Union
- RapidRide R Line along Rainier Ave S
- Stride S3 BRT service along NE 145th St to Bothell

Seattle Transit Measure Investment

The 2020 voter-approved Seattle Transit Measure (STM) creates approximately \$50M annually through Q1 2027 to fund additional transit service, capital investments that improve transit service, and programs that improve access to transit. STM service investments are made throughout the city based on the Frequent Transit Network (FTN) and an equity-centered prioritization methodology.

This methodology prioritizes investments on routes that serve equity priority populations (BIPOC, low-income, foreign-born, disabled, or who have limited English proficiency), the times of day when reduced fare rides are most prevalent, and where there are larger gaps between current service levels and the FTN targets. SDOT also considers qualitative information such as the results of community outreach and engagement and operational considerations like the presence of layover and transit infrastructure. This methodology was co-created with the Transit Advisory Board (TAB) and future changes to the methodology would include TAB's involvement.

Transit Corridors and Major Projects

Many transit corridors in Seattle provide vital connections between local neighborhoods and regional employment and industrial centers. SDOT's 2016 Transit Master Plan directed capital project development into several critical bus corridors (e.g., RapidRide G, H, and J lines and several Transit-Plus Multimodal Corridors) and helped the City to partner with Sound Transit (ST) to determine Sound Transit 3 (ST3) Link light rail investments, which were funded by voters in 2016 and are now being planned and designed.

The Transit Element accounts for planned and completed system investments and the major transit network changes needed to optimize the 2008 voter-approved Sound Transit 2 (ST2) plan—Lynnwood Link, East Link, and Federal Way Link extensions—and ST3 investments including the Tacoma Dome, Everett, West Seattle and Ballard Link light rail extensions, and the NE 130th Street, Graham Street, and Boeing Access Road infill stations within Seattle.

ST Link light rail investments are predominantly oriented north and south towards regional destinations such as Tacoma and Everett, requiring complimentary investment in east-west bus services that enhance regional system connectivity and strengthen other north-south bus corridors in adjacent parts of the city where connections to Link light rail service are limited.

This section describes where transit corridor investments should be prioritized based on analysis of transit demand, travel patterns, tactics to meet Transportation Equity Framework (TEF) strategies, and coordination with King County Metro's "Metro Connects" Long Range Plan.

Factors considered in developing corridor categorizations include:

- Ridership
- Bus Delay
- Reliability
- Frequent Transit Network
- SDOT & KCM capital programming
- Durability of improvements to protect transit reliability
- Connections to regional light rail, commuter rail

Inputs for Project Development

Develop a standard to measure right-of-way tradeoffs for design along transit corridors to use during project development.

- Evaluate outcomes from existing measures and policies which could include travel time and reliability to establish right-of-way allocation measures and goals on the transit network.
- Integrate the operational measures and goals into the complete streets process for project development to streamline right-of-way tradeoff decision-making alongside other multi-modal operational measures and goals where designated corridors overlap.

Transit Corridor Planning

SDOT will partner to advance and implement priority transit corridors through multiple programmatic and agency coordination activities:

SDOT Major Projects. These are large scale projects that will or could be managed by SDOT, including:

- Aurora Ave N (RapidRide E Line): The highest bus ridership corridor in the Pacific Northwest, this corridor provides opportunity to upgrade the existing E Line facilities, increase transit priority, and enhance street safety and passenger experience outcomes (could be a Metro led project)
- 3rd Avenue Transit Spine (see detail in Center City section below)
- Culture Connector Streetcar (see detail in Center City section below)
- Most Tier 1 Premium Transit Corridors in Figure 4 are in this category

SDOT Transit Corridors Program. These are projects of varying scales focused on improving travel time and reliability, passenger facilities, safety, and multimodal access:

- Most Tier 2 High-Priority Corridors in Figure 4 fit in this category
- Corridors that improve east-west transit travel are a priority
- NE 130th St/NE 125th Corridor Improvements: Establish a multimodal corridor to connect light rail riders to the future NE 130th St light rail station by implementing transit reliability, safety, access, bus stop, pedestrian, and bicycle improvements

Partner led projects. These are projects for which King County Metro is leading project development or plans to design and fund the project. SDOT is a key partner for these projects.

As of 2023, Metro has one partially funded RapidRide Corridor project in Seattle:

- Rainier Ave S (Route 7, Future RapidRide R): King County Metro has partial funding for RapidRide R line as its next corridor capital investment priority for RapidRide within Seattle. SDOT will partner with Metro to meet transit performance, safety, and other modal priorities.

As of 2023, Metro is studying four additional corridors in the City of Seattle for future RapidRide conversion:

- NW Market St & N/NE 45th Street (Route 44): This critical crosstown corridor will eventually connect Link stations in Ballard and the U District and ties together three Urban Centers and Urban Villages. SDOT made early investments in the corridor from 2021-2023 as part of the Route 44 Transit-Plus Multimodal Corridor Project.
- Westlake Ave N, NW Leary Way, and 24th Ave NW (Route 40): This high ridership corridor provides a critical connection between South Lake Union and Fremont and Ballard. The

Route 40 Transit-Plus Multimodal Corridor will make early investments in the corridor as part of the Levy to Move Seattle.

- Beacon Ave S, Broadway Ave/E, 10th Ave E, Harvard Ave E, 15th Ave NE (Routes 36 & 49): This north-south corridor builds on a critical service concept presented in the 2012 Transit Master Plan and now included in the Metro Connects Plan. It would provide a north-south crosstown line (possibly combining portions of today's routes 36 and 49) from Southeast Seattle, through First Hill and Capitol Hill to the University District without running through Downtown.
- Downtown Seattle, SODO, Southcenter, Kent (Route 150): This north-south corridor included in the Metro Connects 2050 Plan and the RapidRide Expansion Plan connects the Downtown Seattle and SODO neighborhoods with two cities to the south, Tukwila and Kent, via Interstate 5.



Streetcar and Monorail operating in Downtown Seattle

Priority Transit Corridors

The Transit Element Chapter identifies priority transit corridors for SDOT and its partners to consider for capital investment. Corridors are tiered by investment level based on the extent of identified transit priority needs and importance of supporting transit performance, climate, and equity goals. These corridors were identified because they:

- Support access and integration with regional investment, such as Link light rail
- Function as the most critical to support climate targets
- Support access to opportunity goals of the TEF
- Improve transit reliability on key corridors included in the Frequent Transit Network
- Address needs identified in the draft Transit Performance Policy⁶
- Address needs heard from community in the STP engagement process

Unlike previous SDOT transit master plans, priority transit corridors are not organized under an implementing program (e.g., RapidRide, Transit-Plus Multimodal Corridor Program, etc.). Rather, they are grouped by the level of transit priority aspired to and accounted for in STP network integration policy and mapping. This is intended to provide SDOT with flexibility to determine an implementation approach—including working with transit agency partners—that best match funding and implementation priorities. The corridors are classified into 3 tiers, with each serving a different role in the transit network.

These tiers are listed in **Table 2**. **Figure 5** further below illustrates priority investment corridors per these classifications.

Table 2: Priority Transit Corridor Classifications

Designation	Description	Examples
Tier 1: Premium Transit Corridor	Highest-level arterial transit need, continuous transit priority, potential future light rail corridor	Third Ave, 15th Ave NE (U District), Rainier Ave S
Tier 2: High-Priority Bus Corridor	Merits corridor-level investment programming, significant transit priority need	NE 65th St, 23rd Ave, California Way SW
Tier 3: Priority Bus Corridor	Incremental or spot-location transit priority as per Transit Performance Policy	Sand Point Way NE, Boren Ave, 15th Ave S

The STP Capital Investment Corridors Map is based on an analysis of transit needs and the future benefit of transit capital investment. The analysis focuses on Seattle’s arterial street network, including streets that carry transit today and that might in the future⁷. The STP Capital Investment Corridors Map does not imply end-to-end corridor projects (e.g., converting the KCM

⁶ The SDOT Transit Performance Policy (TPP) is an approach to monitor transit performance on corridors included in the Frequent Transit Network (FTN) and determine locations where transit priority is needed to maintain service performance at the desired standard. The TPP is currently being drafted by SDOT.

⁷ To ensure pavement conditions are suitable for transit operations on street segments throughout Seattle, SDOT maintains a Transit Street Classification map (see Appendix B).

Routes 36 and 49 to a new RapidRide line), but rather recommends a level of investment for key segments of the current and future transit network.

The three designations (see map legend) indicate the importance of and opportunity for capital improvements, particularly transit priority treatments such as bus lanes, queue jumps, Transit Signal Priority (TSP) and improvements for passengers accessing and waiting for transit.

Phased Implementation

Many capital corridor investments will be made in response to light rail expansion or the introduction or upgrading of bus service to a RapidRide or Stride standard. These phasing considerations have a significant impact on the timing of future capital investments.

Transit changes anticipated as part of light rail or RapidRide/Stride expansion include:

Lynnwood Link Light Rail Expansion (2024)

- Bus restructures in North Seattle
- New bus service to the 130th St Station

Other Link Light Rail Expansion

- Judkins Park Station and surrounding bus service restructures
- S Graham St light rail infill station and surrounding bus service restructures
- Other bus routes that currently serve areas of Seattle that are restructured to new light rail stations outside of the city

West Seattle Link Light Rail Expansion (2032)

- Bus restructure in West Seattle and SODO

Ballard Link Light Rail Expansion to Smith Cove (2037)

- Bus restructure in Interbay and South Lake Union
- Bus restructure in West Seattle, including the potential revision of RapidRide C Line and H Line

Ballard Link Light Rail Expansion to Ballard (2039)

- Bus restructure in Ballard, including the revision of RapidRide D line

New RapidRide and Stride Routes

- RapidRide G Line along E Madison St
- RapidRide J Line serving UW, Eastlake, and South Lake Union
- RapidRide R Line along Rainier Ave S
- Stride S3 BRT service along NE 145th St to Bothell

Figure 5: Transit Capital Investment Corridors



Center City Connections

Seattle's ten Center City neighborhoods⁸ experienced exponential growth over the last decade, supported by the expansion of high-quality transit options for travel in and to Downtown employment sites and adjacent Center City neighborhoods. Transit is crucial to Downtown's economic success, delivering people and moving residents, workers, and visitors within the area.

The next two decades will see significant transit investment, better connecting Center City neighborhoods to one another, to other Seattle neighborhoods, and to the region. Opportunities and challenges for Center City transit include:

Dramatically improved transit access to and within Downtown, with the opening of new funded transit projects, including:

- **RapidRide lines**, including G Line (Madison, 2024), H Line (Delridge, 2023) and J Line (Eastlake, 2027)
- **ST2-funded light rail service**, providing regional connectivity in multiple directions from Downtown:
 - Lynnwood Link Extension of existing line from Northgate (2024)
 - East Link line connecting over I-90 by rail to communities east of Lake Washington (2025)
 - Federal Way Link Extension of existing line south from Angle Lake (mid-2020s)
- **ST3-funded Link light rail tunnel** that will support extensions to West Seattle (2032) and Ballard (2037-39) and support a new Link light rail regional service pattern with three distinct lines.
 - This will include new underground Center City Link stations.
 - Construction impacts from major capital and transit projects, particularly West Seattle and Ballard Link Extensions (WSBLE), may impact street operations, including bus and streetcar routing and service.

Opportunity to rethink street uses and bus pathways as Link light rail extensions replace regional bus routes, creating opportunities for new distribution of transit pathways across Downtown and opportunities to repurpose right-of-way for other critical needs, such as building access, bicycle movements, urban goods delivery, pedestrian realm, greening, etc.

⁸ Seattle Center City Neighborhoods include: Uptown, South Lake Union, Belltown, Denny Triangle, Commercial Core, Pioneer Square, International District/Chinatown, Central District, First Hill and Pike/Pine.

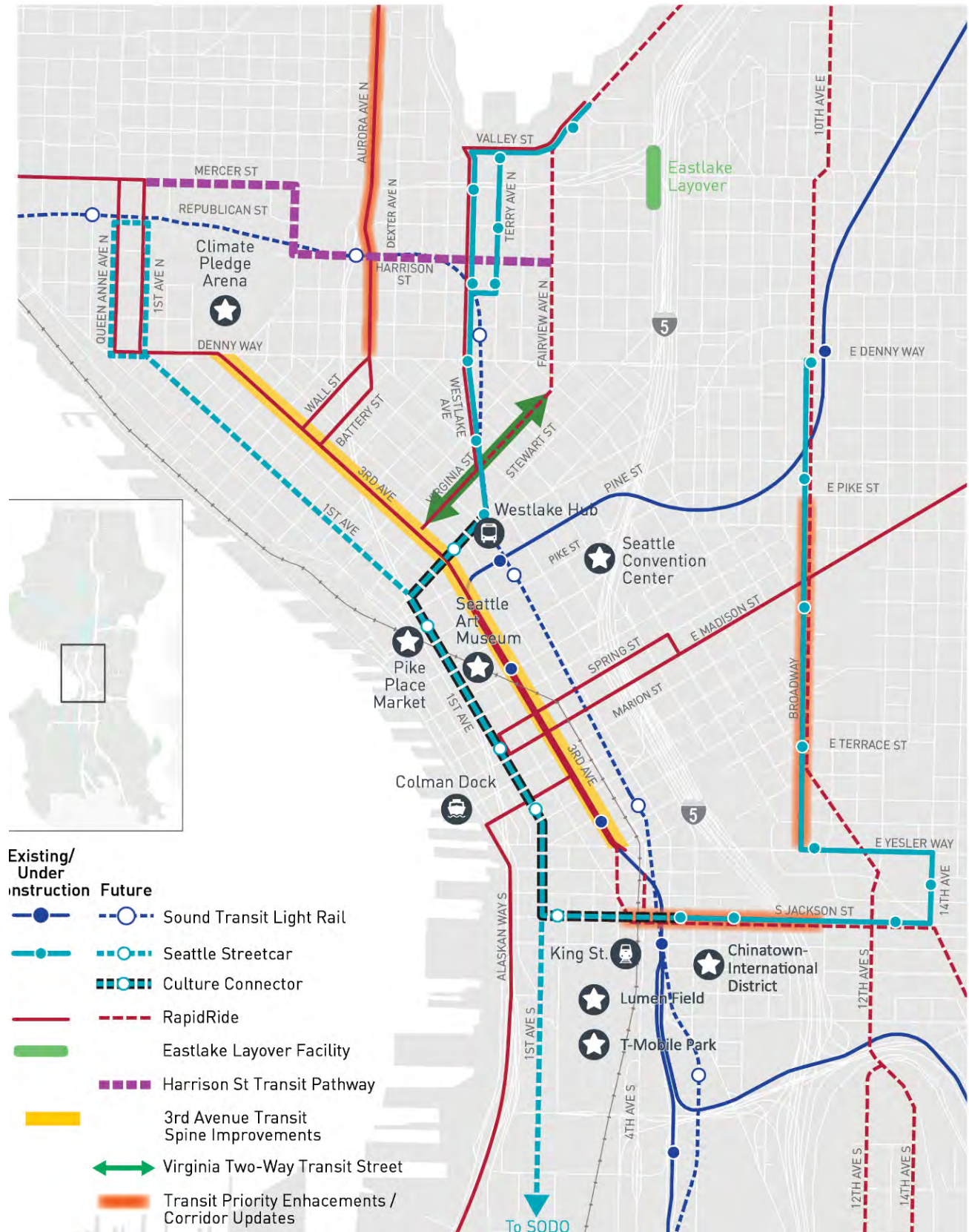
Economic development and activation. Seattle's Center City remains a center for tourist activity, culture and entertainment, sporting events, and dining. It also has a regional and international draw for conference activities. Easy-to-use transit circulation, including the Seattle Streetcar, can play a critical role in connecting destinations, including new Seattle Waterfront attractions and an expanded Convention Center.

Right-of-way (ROW) allocation and bus layover management. There is very limited ROW in Downtown. Evaluating and maintaining critical access for buildings needs to be a key part in evaluating potential changes for transit routes and transit layover spaces along the curbside. See more detail in the Curbside Management Element, which includes strategies related to layover and critical access needs.

Key proposed Center City transit improvement opportunities are shown in **Figure 6** and include:

- **3rd Avenue Transit Spine improvements.** As Seattle's busiest and most critical transit street, investing in bus reliability, passenger facilities, and placemaking are important to this corridor's success. SDOT will partner with King County Metro and downtown business interests to improve conditions on 3rd Avenue.
- **Broadway E transit priority improvements (Capitol Hill/First Hill)** to further increase the priority of people traveling on foot, by bike, or on transit.. The consideration of this as a new RapidRide route provides an opportunity for bolder thinking about enhanced bus-rail priority and will further improve service along the First Hill Streetcar line.
- **S Jackson Street transit priority improvements and bus-streetcar integration (between 12th Ave S and 2nd Ave Extension S).** SDOT will invest in S Jackson Street transit priority treatments as part of, or alongside, the RapidRide R Line project or other efforts to enhance streetcar priority.
- **Harrison and Mercer Transit Access Project** planning improvements to provide a new, reliable east-west bus pathway between Uptown and South Lake Union.
- **Virginia and Stewart Multimodal Improvements** that consolidates bus travel onto fewer streets in the Belltown-Denny Triangle area between 3rd Ave and transit pathways heading north (i.e., to Aurora, Dexter, Westlake, and Fairview Avenues N). Clear benefits of this would improve simplicity with two-way bus service on the same street and the opportunity to invest in fewer, better bus zone improvements and enhanced transit reliability measures. Virginia Street is a top-candidate corridor due to direct connectivity with Fairview Ave North, but other streets and pathway connections should be analyzed.

Figure 6: Center City Transit Capital Projects



Seattle Streetcar and the Culture Connector

The Seattle Streetcar plays a critical role in delivering Seattle's vision for the Frequent Transit Network. The South Lake Union and First Hill Streetcars are separate lines that make up the Seattle Streetcar system. Their operational programs provide funding to deploy service and maintain operational assets through an interlocal agreement with King County Metro. Once the Culture Connector is built, connecting the two existing lines, there's opportunity to fold these into a single program for the Streetcar system.

The Culture Connector (formerly the Center City Connector or C3) project is designed to link the South Lake Union and First Hill streetcar lines, creating a single Seattle Streetcar that has the potential to carry 25,000 daily riders by 2035. This project plans to provide dedicated lanes for 85% of the alignment, elevating the streetcar to a major urban circulation system. Construction of the Culture Connector project before 2030 could be timely to support the economic revitalization of Downtown, providing an easy-to-use, level boarding connection between key sporting, entertainment, hotel, and retail districts; cultural destinations; and the newly revitalized Seattle Waterfront.

Reliable, frequent, street-running rail will provide critical circulation for Center City, with more balance between residential and office uses; a regional draw for sports, culture, and entertainment; and world class destination for tourists. Further, the connection to existing Link light rail stations at Westlake/McGraw Square and at Jackson Hub could be an important circulation method for Downtown travelers during WSBL construction disruptions.

Seattle Streetcar capital project priorities include:

- **The Culture Connector Project.** The Culture Connector will build a streetcar line to connect the existing First Hill and South Lake Union Streetcars. This project includes tracks, stations, overhead trolley wires, an expanded operations and maintenance facility, and vehicles. This project will significantly expand the utility and benefit of the existing lines and provide an easy-to-use Center City circulation system for a wide variety of trips.
- **Future Extensions and Capital Facilities.** The Streetcar system could be expanded to advance Citywide Comprehensive Plan, STP, and climate goals. Potential extensions include:
 - North on 1st Ave/1st Ave N/Queen Anne Ave N to Seattle Center, Climate Pledge Arena
 - South into south of Downtown (SODO) at Stadium Station or SODO Station.
- **New Operations and Maintenance** facility site to allow for fleet expansion.
- **Development of a Streetcar Performance Program.** This is a capital investment program to improve streetcar operations consistent with Transit Performance Policy and the Transit Capital Priorities map. As increased vehicle volumes decrease streetcar reliability and increase travel time, SDOT makes targeted capital investments to improve streetcar performance and reliability. Future improvements will consider transit-priority and possible car-lite or car-free options.

- **Streetcar State of Good Repair.** As the Seattle Streetcar ages, a State of Good Repair program allows SDOT to monitor whether the existing assets meet or exceed their useful life and stay safe for operations. It also allows for limited modernization as technology evolves, such as improvements to real time information signs and lighting at stations.

Streetcar Safety Program

Federal regulations require SDOT to have a Streetcar Safety Program to guide safe operations of the streetcar system. At SDOT, the Streetcar Chief Safety Officer is responsible for complying with federal regulations and implementing SDOT's Public Transportation Agency Safety Plan (PTASP). Implementation includes both operational and capital improvements.

Streetcar Strategy

This program represents SDOT's coordination with internal and external partners on major Seattle capital projects, planning efforts, and grant funding that impact Seattle Streetcar. This program is also responsible for fare policy decisions, managing data, and reporting critical performance measures for the Seattle Streetcar.

King County Metro and Sound Transit Capital Programs

SDOT works with King County Metro and Sound Transit to support transit corridor capital programs. This section describes key investments that are planned, funded (or partially funded), or under construction. It also provides recommendations for long-term enhancements and expansions to RapidRide, Link light rail, and Sounder commuter rail. SDOT, King County Metro, and Sound Transit have several major transit projects planned, funded, and under construction. See Table 3.

Light Rail Expansion

As Seattle continues to grow, there will be opportunities for continued expansion of the regional Link light rail system. **Table 4** lists a mix of potential and aspirational opportunities for future Link light rail expansion. Potential expansion corridors are based on STP analysis as well as a review of previous Sound Transit and regional plans. These concepts reflect Seattle's interest in continued growth of the rail system and would require additional analysis and evaluation. No funding is identified for these conceptual expansion corridors; the committed ST3 program extends into the 2040s.

Regional growth and changing employment patterns are likely to increase demand for all-day service and improved off-peak direction travel on Sounder, the Puget Sound region's commuter rail service operated by Sound Transit. Future investments, such as midday service, higher frequencies all day, and electrification could be important investments to making Sounder a key part of the region's high-capacity rail network. Additional stations located in key growth centers should be considered to improve access and network connectivity. These potential locations are listed in Table 4.

Table 3: Potential Light Rail Expansion Opportunities

Potential Corridor	Justification or Plan Alignment
NW Market/N 45th Street Ballard – Wallingford – U District – Children’s Hospital	<ul style="list-style-type: none"> Included in ST2 planning studies Included in ST3 future investment studies
15th Ave/Holman Road NW Ballard – Greenwood – Northgate <i>Option to extend to Lake City and Kenmore</i>	<ul style="list-style-type: none"> Included in ST3 high-capacity transit planning studies
Aurora Avenue N Belltown – Fremont – Greenwood <i>Option to extend to Edmonds and Lynnwood</i>	<ul style="list-style-type: none"> Existing high transit frequency and ridership One of the highest bus ridership corridors in Seattle/King County/Metro Seattle
California Avenue SW West Seattle – Morgan Junction – White Center <i>Option to extend to Burien and Tukwila International Boulevard</i>	<ul style="list-style-type: none"> Included in ST2 planning studies Included in ST3 high-capacity transit planning studies
Duwamish Valley SODO – Georgetown – South Park <i>Option to extend to Tukwila International Boulevard</i>	<ul style="list-style-type: none"> Direct, faster access from south of the Rainier Valley to SODO and points further north
23rd Avenue Mount Baker – Madison Valley <i>Option to extend to U District</i>	<ul style="list-style-type: none"> Major north-south corridor east of Downtown High concentration of people and jobs, high transit ridership, connectivity to existing or planned Link lines
Denny Way/E Thomas Street South Lake Union – Capitol Hill – Madison Valley	<ul style="list-style-type: none"> Major east-west corridor north of Downtown High concentration of people and jobs, high transit ridership, and connectivity to existing/planned Link lines
Southeast to Southwest Seattle Corridor West Seattle – Duwamish Valley – Southeast Seattle <i>[Details to be determined]</i>	<ul style="list-style-type: none"> Major east-west corridor south of Downtown Connects equity priority areas without needing to transfer in SODO or Downtown

Table 4: Sounder Infill Station Opportunities

Potential infill station	Justification
Ballard	<ul style="list-style-type: none"> Included in Sound Transit 2 as a provisional station location⁹
Interbay	<ul style="list-style-type: none"> High concentration of jobs; adjacent to many dense residential neighborhoods Connectivity with Link light rail depending on station location chosen Serves Piers 90 and 91 and the cruise terminal
Broad Street	<ul style="list-style-type: none"> Included in Sound Transit 2 as a provisional station location⁹ Access to jobs and people in Belltown, South Lake Union, and Seattle Center Serves Pier 66 and the cruise terminal, along with connectivity with potential future passenger-only ferry dock
SODO	<ul style="list-style-type: none"> Concentration of high employment Connectivity with multiple Link light rail lines
Georgetown	<ul style="list-style-type: none"> Mixed-use node with nearby employment centers and residential neighborhoods
Boeing Access Road	<ul style="list-style-type: none"> Connectivity with Link light rail station, which is expected to open in 2031 Included in Sound Transit System Plan Located outside Seattle, but within walking distance of city neighborhoods

⁹ Sound Transit 2: A Mass Transit Guide. July 2008. Page 9 and Page 16.

Figure 7 shows planned expansions to the Link light rail system and planned RapidRide corridors in Seattle.

Figure 8 shows the potential high-capacity transit corridors and potential Sounder infill stations on a single map, overlaid on top of the existing and future Link network.

Figure 7: Link Light Rail Expansions and Planned RapidRide Corridors

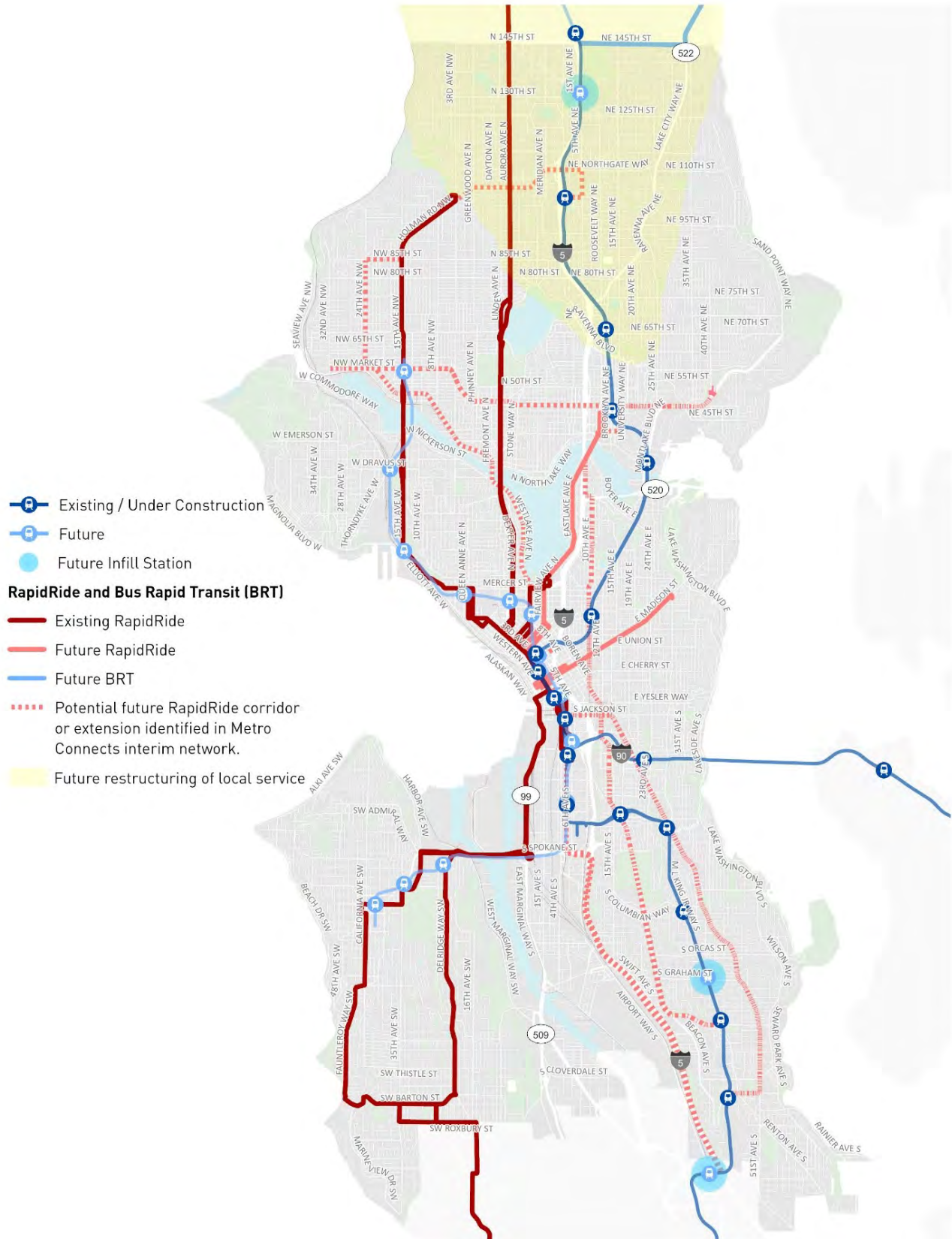


Figure 8: Potential Link Light Rail and Sounder Commuter Rail Expansion Opportunities



Community and Mobility Hubs Network

Community and mobility hubs combine transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located along major transit routes where frequent transit services intersect to improve connectivity and facilitate local neighborhood connections, especially in historically underserved areas. They may feature People Streets and Public Spaces elements and goods delivery elements.

As the regional Link light rail system expands in Seattle, we will continue to focus investment on multimodal access to station areas, making transit a safe, secure, pleasant, and reliable choice for travelers. Expansion of RapidRide and high-quality, high-frequency bus services offer opportunities for focused hub investments and other hub development at locations across Seattle away from the substantial improvements occurring at Link stations. As new mobility options are introduced into Seattle, community and mobility hubs can serve as important locations where these options are integrated into the larger transportation system.

Figure 9 describes many of the important components and functions that hubs can include, though this list is not exhaustive. Specific amenities included at a given location will be determined during project implementation.

Figure 9: Key Features and Functions of Seattle Community and Mobility Hubs

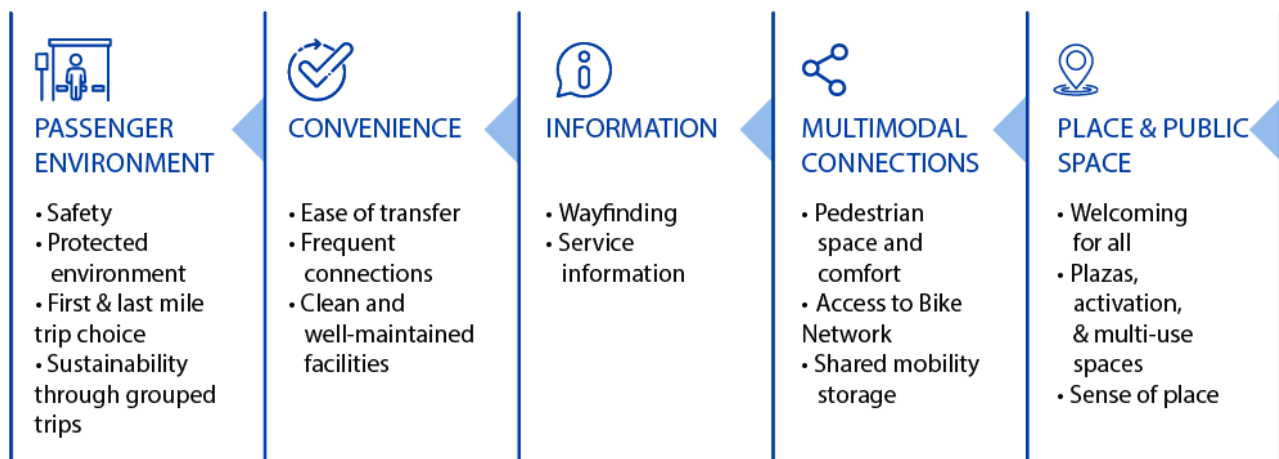


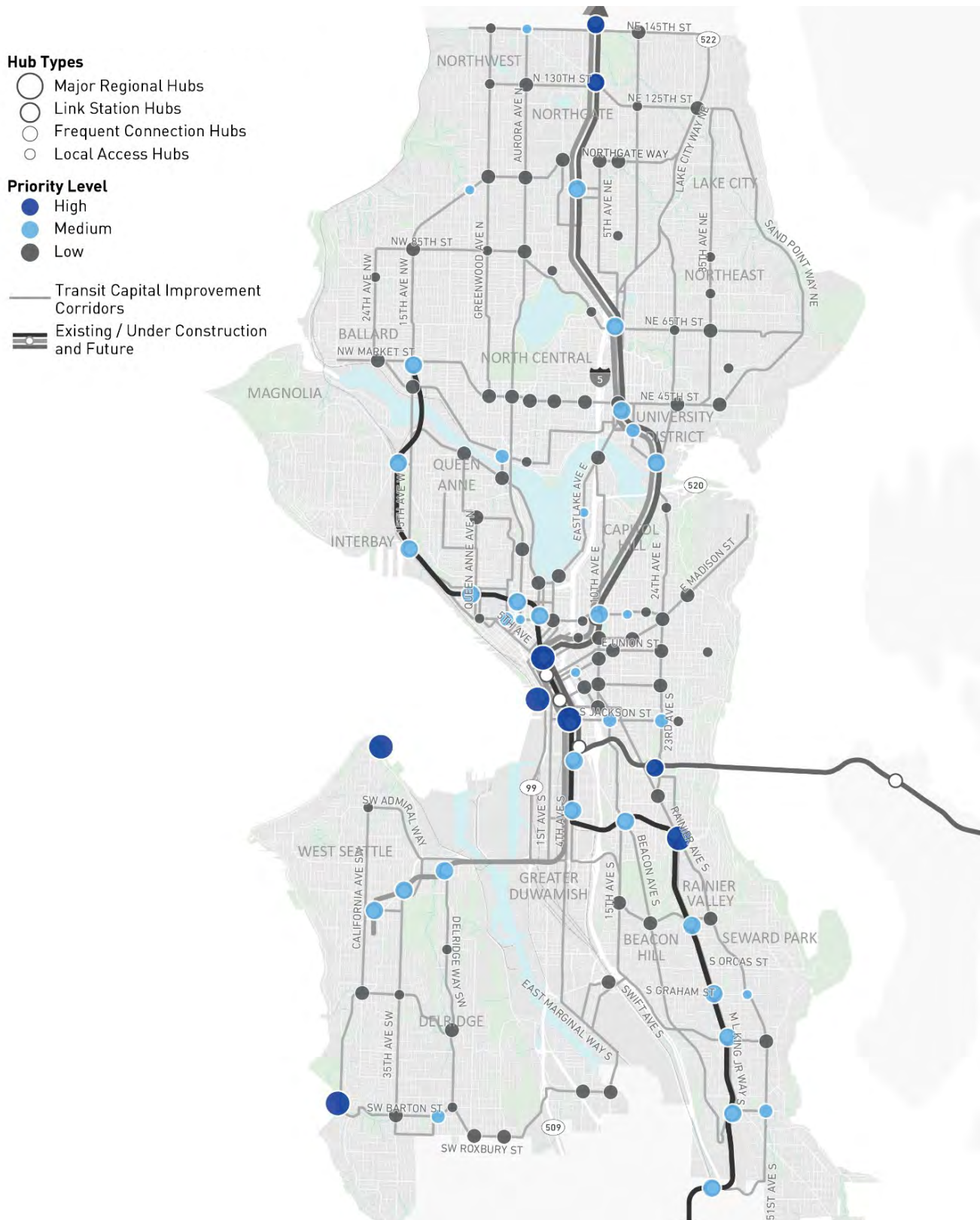
Table 5 describes different typologies for community and mobility hubs, the level of investment necessary to implement them, and possible characteristics. .

Table 5: Seattle Community and Mobility Hub Types

Hub Type	Description	Investment Levels	Possible Characteristics
Group A: Major Regional Hubs	Major intermodal transfers between frequent bus, rail, ferry, or other major transit services	Highest for all Community and Mobility Hub features	<ul style="list-style-type: none"> • Intermodal connections prioritized. • High-capacity surface transit (bus/streetcar) operates efficiently to move people to and from the station. • Busiest locations of rider throughput (ferry and Sounder train services) • Convenient, pleasant, and safe to walk, bike, and spend time. • Destinations/places of interest for people to meet, shop, linger and enjoy spending time • Playful learning landscaping
Group B: Link Station Hubs	Link Stations with RapidRide or frequent services	High for all Use PSPS to guide Place and Public Space	<ul style="list-style-type: none"> • Prioritize transferring between Link and other high-capacity transit services. • Pedestrian crossing safety prioritized. • Destination-rich to allow people to conveniently fulfill their daily needs. • Playful learning landscaping
Group C: Frequent Connections Hubs	RapidRide or frequent route with another RapidRide or frequent route	Medium to High for all Use PSPS to guide Place and Public Space	<ul style="list-style-type: none"> • Prioritize transit-to-transit transfers. • Pedestrian crossing safety prioritized. High quality passenger amenities with improved wayfinding
Group D: Local Access Hubs	RapidRide or frequent route in urban village or neighborhood anchor	Medium for all Use PSPS to guide Place and Public Space	<ul style="list-style-type: none"> • Prioritize bus connections to local destinations and residences. • Pedestrian crossing safety prioritized. Connect people biking and walking to transit from lower density areas.

Figure 10 shows possible locations of community and mobility hubs that are currently being studied or will be in the near term. Not all locations on the map will receive hub treatments. Locations indicated as high priority will be studied for potential project implementation first, followed by medium and low priority areas.

Figure 10: Community and Mobility Hubs Under Study and Future Study Priority



PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than for specific projects) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change; however, the programmatic activities listed here provide helpful general information to describe the types of tools and methods SDOT will employ to manage the transportation system.

Transit Spot Improvements

Transit spot improvements build smaller-scale transit capital investments that improve the operating environment for transit, making trips faster, safer, and more reliable for transit riders. In addition to the transit spot improvement program, the Seattle Transit Measure (STM) has historically funded small- to mid-scale transit capital projects through a similar process. The goals of the Transit Spot Improvement Program are to:

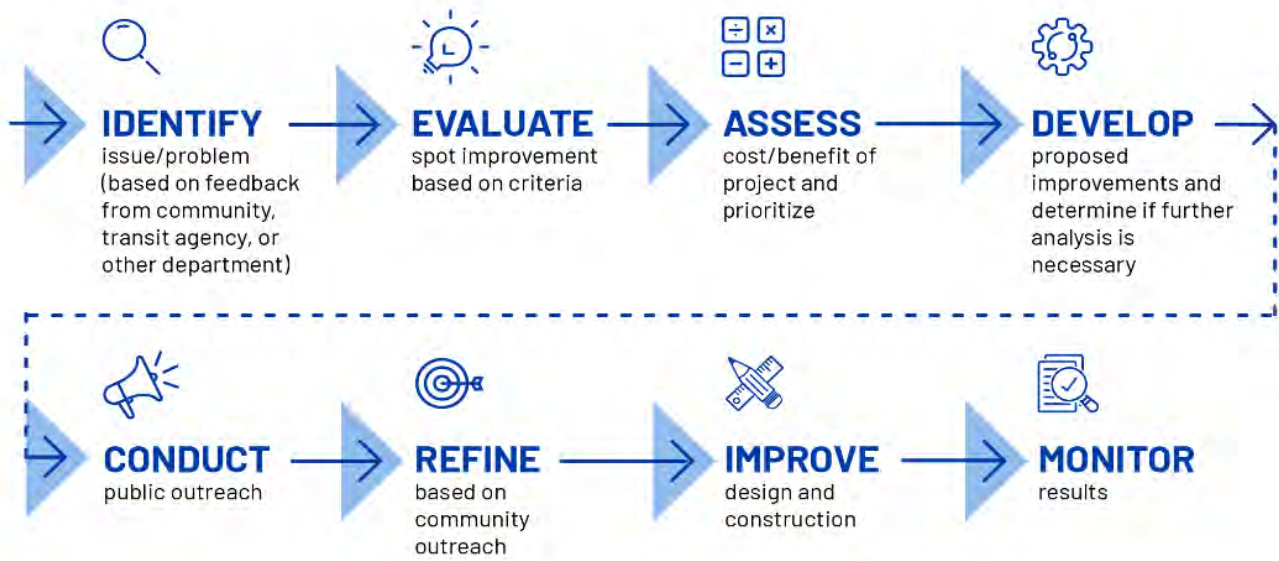
- Reduce travel delays and increase reliability for transit
- Improve safety for transit riders, bicyclists, pedestrians, and drivers
- Improve rider experience by enhancing passenger facilities.

The Transit Spot Improvement Program invests in various treatments to improve reliability and increase travel time. These include bus-only lanes, traffic signal upgrades, roadway improvements, and bus stop modifications. The program partners with King County Metro, Sound Transit, and other local efforts to fund, plan, design, and implement projects. The program addresses the transit capital needs of current bus service and routes. It also looks ahead to new needs that arise due to planned bus service restructuring to connect to new Link and RapidRide stations that are about to begin service.

The program is adaptable and tactical, focused on quick-build efforts and simple, cost-effective solutions to address operational and safety issues or improve passenger access and comfort. The program is also a way to modify existing transit infrastructure and develop innovative solutions. This includes a range of options, such as modifying signage and refreshing paint and markings as well as testing new products and designs to deter non-transit vehicles from using transit infrastructure.

Figure 11 illustrates the process SDOT uses to make transit spot improvements.

Figure 11: Transit Spot Improvement Process Flowchart



Transit Integration Planning and Implementation

Siting and design of new transit capital projects (like Link light rail, RapidRide, SDOT-led multi-modal corridor improvements, and Vision Zero safety improvements) can have enormous implications on what future transit service scenarios are possible, and how well or safely customers navigate the overall transit system. Our transit integration planning and implementation work enables us to coordinate and leverage the impact of new capital investments alongside ongoing transit operational adjustments to increase transit ridership in Seattle and meet the City's climate and equity goals.

To be successful, we must engage early and often with regional transit partners. For example, we coordinate major capital project review with Sound Transit to allow transit partners to leverage new and forthcoming Link light rail stations and related bus restructure efforts. This coordination considers how various alternatives support Seattle's overall mode shift, climate, safety, and equity goals.

Transit integration planning and implementation directly influences major transit service changes through collaboration with partner agencies Sound Transit and Metro to ensure the legibility and accessibility of proposed service patterns and pathways, route numbering, transfer locations, connections to other modes, directness of service pathways, identifying and delivering capital projects to support modified transit travel paths, coordinating the identification and delivery of new transit passenger amenities, and public outreach efforts to support transit passengers as they adjust to the changes to the transit system.

This work also tracks and responds to ongoing adjustments to transit operations beyond new Link and RapidRide stations by considering adjustments that may need to be made to the right-of-way in transit corridors. In addition, we also work with Metro to understand and coordinate

their new bus layover needs—an essential and often overlooked component of transit operations—which is outlined in the next section.

Bus Layover Coordination

Buses providing transit service need space to park where operators can take needed breaks, catch up to service schedules, and prepare for the next trip. This happens on city streets, in curb space designated by SDOT, or off-street facilities owned by transit agencies or local cities, such as transit centers. As the number of routes and route frequencies increase, the need for layover space will increase as well. However, because of the ongoing Link expansion, fewer regional transit services will directly serve Downtown, potentially freeing up space for local operations or other curbside uses in several locations north and south of Downtown. Bus layovers are a critical area of coordination with transit agency partners and part of SDOT's transit integration efforts.

Generally, King County Metro works with us to communicate where and when layover space is needed to support transit operations, and we work to identify whether on-street solutions are feasible. If curbspace is limited or changing future conditions impact on-street availability, partner agencies may identify and fund an appropriate solution.

For example, King County Metro designed the Eastlake Layover Facility that will accommodate 11 bus layover spaces and provide a place for bus operators to take breaks, access safe restroom facilities, and perform operations tasks. Layover space is particularly constrained in Downtown, where real estate costs are high, curb space is limited, and many different modes and stakeholders have unique curb needs.

Layover needs will continue to change in the future, as Link light rail expands through Puget Sound and local services change in response to planned and unplanned conditions. Potential major changes include:

- **Major transit capital investments**, such as Link light rail expansion or new RapidRide and Transit Corridor projects.
- **Significant changes to transit service patterns**. For example, services changes related to East Link and Lynnwood Link will decrease the number of buses traveling to and through Downtown, providing an opportunity to re-evaluate layover uses in the northern and southern ends of Downtown. The Northgate Link Extension, which opened in 2021, caused changes to regional service, dramatically decreasing the layover needs of Downtown, while creating new needs in places like Northgate and First Hill.
- **Large redevelopment or re-channelization efforts**. If a transit center is relocated or redeveloped or if a new employer or development spurs major land use changes.
- **Changes to fleet types and operational requirements**. Metro is planning to move to a zero-emissions fleet by 2035. Therefore, more electric buses will likely require access to charging facilities (either on- or off-street). In addition, the mix of standard versus articulated (or stretch) buses changes may change in the future.

Freight and Bus (FAB) Lanes

As the city continues to grow, so does the demand for freight transport. This includes urban goods delivery and services in a range of form factors, from heavy duty large commercial trucks to medium-duty delivery vans to light-duty trucks to personal vehicles delivering packages to even smaller electric cargo delivery cycles. With limited rights-of-way (ROW), we need to use available lane capacity more efficiently. In key corridors, proposed transit lane facilities with additional capacity could be good candidates for sharing dedicated space.

To help maintain reliable movement of freight—in particular, commercial trucks larger than 26,000 pounds—between key manufacturing and industrial centers, freight-and-bus (FAB) lanes may be piloted in these key corridors. Freight-and-bus lanes can improve freight mobility and may avoid negative impacts to transit service. At the same time, FAB lanes can improve safety for people walking, bicycling, and even driving personal vehicles along these routes.







Metro bus using a bus-only lane




Innovative Transit Streets

Urban streets evolve as a city's priorities change. As Seattle strives for more safe, equitable, and climate-friendly transportation systems, our streets will follow. We continue to plan and design streets that enhance transit performance and capacity while meeting these goals. Transit street investment can provide opportunity to realize STP outcomes described in the People Streets and Public Spaces element.

Table 6 highlights areas where we can continue to advance innovative transit street design. These examples represent the types of improvements SDOT might consider when advancing priority transit corridor projects. For more information on ROW design, see the Curbspace and People Streets and Public Spaces Elements.

Table 6: Innovative Transit Streets

Category	Opportunity	Potential Application in Seattle	Example
Downtown Transit and Destination Streets	<ul style="list-style-type: none"> • Create street space focused on people and public space (for more information see PSPS element) • Move high volumes of people with frequent bus or rail • Maintain or reduce transit travel times and improve connections to the urban core • Support street life and retail • Address critical building access needs (e.g., deliveries, solid waste management, street activation) 	<ul style="list-style-type: none"> • Third Ave Transit Corridor • Virginia Two-Way Transit Street • Broadway • 1st Ave 	 <p>Photo Credit: Downtown Denver Partnership</p> <p>Denver's 16th Street Mall is a pedestrian mall that spans Denver's Downtown, connecting two key transit hubs and providing very frequent electric bus service along the length of the mall.</p>
Transit on People Streets	<ul style="list-style-type: none"> • Support street life and retail • Prioritize transit while allowing certain priority vehicles access for delivery or parking garage access. • Move high volumes of people on foot, by bike, and with frequent bus. • See more information on People Streets in the PSPS element 	<ul style="list-style-type: none"> • Virginia Two-Way Transit Street • Broadway • S Jackson St • 15th Ave NE • NE 43rd St 	 <p>Credit: Photo by John Muggenborg ©2019</p> <p>Nicollet Mall is a transit and pedestrian street in downtown Minneapolis. The street is primarily used for bus travel and bicycles and allows limited vehicular access.</p>
Freight and Bus Shared Lanes	<ul style="list-style-type: none"> • Provide priority for multiple modes • Consider where: • Operational conflicts with bus stopping and turn movements can be resolved • Transit stops are widely spaced (or buses do not stop in lane), limiting delay for trucks • Transit and freight volumes are compatible • Separate parallel bike facility available 	<ul style="list-style-type: none"> • Westlake Ave N • 15th Ave NW 	 <p>14th Street in New York City has a busway element that allows trucks and buses to share a lane. The project has showed benefits for transit and trucks since opening in 2020.</p>
Bus and Bike Shared Lanes	<ul style="list-style-type: none"> • Provide priority for multiple modes • Consider: • Short segments with constrained street space • Where speeds are compatible • Where grades are appropriate (not on uphill segments) 	<ul style="list-style-type: none"> • Downtown Streets • Bridge approaches • Light rail station area approaches 	 <p>Southwest Madison Street in Portland allows bus and bikes to share a lane on a downhill approach to a key bridgehead.</p>

Category	Opportunity	Potential Application in Seattle	Example
Transit priority on Destination Streets	<ul style="list-style-type: none"> Where streets are a space for socializing Streets with high pedestrian traffic Retail streets with frequent transit See more about Destination Streets in the <i>People Streets and Public Spaces (PSPS) Element</i> 	<ul style="list-style-type: none"> Broadway S Jackson St NW Market St SW Alaska St Terry Ave N 	 <p>Toronto's King Street project used auto restrictions to enhance transit service (i.e., the street tram) and dedicated auto storage at the curb to activate pedestrian space and parklets.</p>
Streets with Surface Rail and Bus	<ul style="list-style-type: none"> Share street space dedicated to transit where high volume bus corridors and rail overlap Reduce priority for private vehicles, particularly for through movements where alternative routes exist Create high-quality pedestrian and waiting environments 	<ul style="list-style-type: none"> Westlake Ave N Broadway S Jackson St 1st Ave 	 <p>Kungsportsavenyn in Gothenburg, Sweden carries street trams (i.e., rail) and frequent bus service. The street changes character every two blocks, creating an interesting and vibrant passage for transit customers.</p>
Center Running Transit Ways	<ul style="list-style-type: none"> High ridership bus corridors Corridors where transit needs priority on a busy roadway Streets benefiting from narrowing, reduced pedestrian crossing distances Candidates for safety improvements from removal of unprotected left turns 	<ul style="list-style-type: none"> Madison St Aurora Ave N Lake City Way NE 	 <p>Photo Credit: SFMTA</p> <p>In 2022, San Francisco opened its first center-running busway on Van Ness Boulevard.</p>
Transit Priority on One-Way Streets	<ul style="list-style-type: none"> Effective at moving large volume of transit customers One-way streets can help improve bus throughput and reliability Allows for accommodation of other street and curb priorities such as loading, parking or bicycle facilities 	<ul style="list-style-type: none"> Downtown avenues such as 2nd or 4th Aves Pike/Pine St Spring/Madison St Belltown/Denny Triangle/Uptown One-Way Couplets Roosevelt and 11th/12th Ave NE in U District, Roosevelt 	 <p>Photo Credit: NYDOT</p> <p>1st Avenue in New York City has a single-direction bus lane, allowing a parking protected bicycle lane on the opposing curb (similar to 2nd Avenue in Seattle).</p>

ACCESS TO TRANSIT

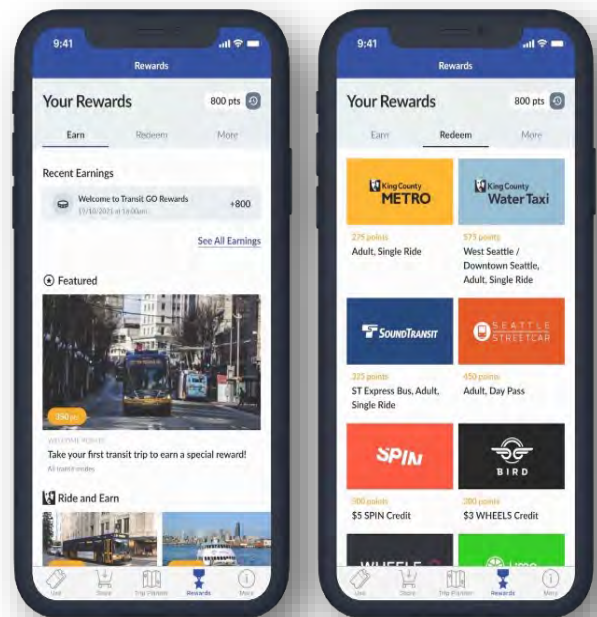
We aim to reduce barriers to transit use for everyone traveling in Seattle. Seattle Transit Measure (STM) funds support access for many people who may not otherwise be able to use transit consistently or reliably. Additionally, we provide transit subsidies to equity priority populations as well as engages in the development of regional fare payment and integration efforts, including participating in planning to update the ORCA regional fare payment system and funding the development of and Seattle rider incentives for the TransitGO mobile payment app.

The TransitGO platform (managed by King County Metro) offers an intermediate option for mobile payments until the next-Generation ORCA system is fully available. SDOT is working to provide fare payment options that meet our riders expectations and, increasingly, that means digital.

As technology evolves, we will increasingly leverage the private sector to stay at the forefront of innovation, while ensuring that riders of all digital competencies and with varying levels of digital access can pay for fares.

We've also been a regional collaborator and leader on innovative approaches to making transit easier to access and use. When the West Seattle Bridge was closed for maintenance in 2021, SDOT offered a rewards program to incentivize people to get around without driving alone.

TransitGO Rewards expanded to residents throughout the city in 2023 as well as the county in partnership with King County Metro.



Metro Transit GO Rewards App

Fare Programs and Integration

Seattle's fare subsidy programs, which range from fully subsidized annual fare programs funded by STM to more focused TDM subsidies and incentives have proven successful. SDOT provides fully funded regional transit passes to thousands of program participants, including residents of all 102 Seattle Housing Authority-owned and -managed properties, low-income workers at small businesses in equity priority neighborhoods, Seattle Promise Scholars, and other priority groups.

Supporting equity-centered fare policy is critical to SDOT's access programs. Aligned with SDOT's value and commitment to equity, we work to create a shared understanding that transportation access is a form of poverty intervention. Regionally, the cost of riding transit depends on each operating agency's policy, although several reduced-fare programs are coordinated across agencies. The regional ORCA fare collection system is currently being updated to offer enhanced customer benefits, but with the delay of critical customer-facing features, such as tap payments with a credit/debit card or mobile application/ credential, the importance of continued engagement and advocacy within regional fares policy and technology spheres remains integral to supporting improved transit access.

SDOT will seek to work with transit partners to enhance the trip planning, booking and payment experience, enabling riders to easily navigate trip-planning, booking, and payments across public and private mobility services, and where price incentives are set to encourage shared or active travel modes. When equitable pricing approaches are adapted, these policies can be powerful tools to address current financial inequities and the State of Washington's regressive tax system, but also encourage lower emissions travel.

Mobility Subsidies and Services

SDOT aims to support transit access and car-free or car-lite travel. For example, STM funds a fare free, ADA-accessible Downtown Circulator that connects low and no-income individuals with social and health services in the Downtown network. SDOT's STM-funded Transportation Access Programs also includes community focused engagement, education, and programming efforts, such as the Youth Ambassador Program and a Senior Transit Program. As resources allow, continuing to grow these efforts will help make the transit system more effective, equitable, affordable, and accessible.

Subsidies or other investments to support travel on transit-supportive modes, such as personal or shared bikes and scooters, also align with STP goals for climate and equity. SDOT should explore opportunities to build toward universal, or guaranteed, basic mobility - the democratization of transportation that calls for a minimum level of mobility for specified populations within an area. Mobility wallets are one tool that supports universal, or guaranteed, basic mobility.

Mobility wallet programs allow individuals or households to gain access to public transportation and shared mobility offerings at a discounted rate or no cost due to public subsidy. They have already been successfully deployed in cities across the U.S. such as Boise, Los Angeles, Oakland, Pittsburgh, and Portland. Immediate results of these programs have included

increased transit use by targeted populations, reduced single occupancy vehicle travel, and more effective and equitable travels between and within communities. To embrace the mobility wallet concept and support the implementation of this innovative programming, We'll work with city and state partners to implement TDM policies that focus on reducing drive alone trips that occur throughout the day as opposed to just reducing commute trips.

In addition to directly funding and managing such programs, SDOT should coordinate with King County Metro and other transit partners on expanding programs serving businesses and major institutions to offer bulk purchasing and pricing on mobility services. Continuing to develop and deploy regional fare systems and managing relationships with private mobility services will help integrate payment technologies and platforms across modes and providers.

Ultimately, SDOT should also consider policies to use travel subsidies for specific modes and user types and to align transportation fees, charges, fares, tolls, or other payments with mode shift and equity goals.

Rider Experience

The transit rider experience goes beyond the transit stop or riding a transit vehicle. The experience begins when someone decides to make a trip and ends when they reach their destination. Planning the trip and understanding transit options for that trip should be intuitive as the experience of travel between home and the transit stop is vital to people's decision making. This process includes everything from travelling to and waiting at a transit stop, riding transit, understanding at which stop you should exit, and travelling to your final destination; all of these components impact an individual's rider experience. SDOT's vision is that all riders have an intuitive, comfortable experience for all steps of the transit journey.

A high-quality transit experience requires clear language, wayfinding, frequent service, a safe and comfortable environment, access to restrooms and seating, and easy connections to other modes. As the mobility ecosystem becomes more complex, SDOT should continue building strong partnerships with regional partners and leading innovative approaches to the customer experience, like working to create a roadmap for integrated mobility payments across public and private mobility services.

To understand the current transit rider experience, it's important to capture rider feedback, including website or social media feedback, email feedback, phone calls, or tracking of experience on an app, among others. Welcoming feedback and making it easy to provide input will help improve the transit rider experience for all and improve transit agency's responsiveness to customer needs.

TRANSPORTATION TECHNOLOGY AND INNOVATION

In partnership with Metro, SDOT should continue evaluating new service ideas and assessing the performance of existing services. New technologies, such as automated and shared vehicle technology, could greatly expand the feasibility and usefulness of on-demand and first-/last-mile services. Many cities and agencies throughout the country are testing or operating such services, and they have become routine in other parts of the world. These technologies will also distinguish between public and private transportation and may require new criteria to evaluate new service concepts for public investment.



Photo: King County Metro Flex is an example of on-demand neighborhood transit service

Alternative Service Models

While fixed-route service typically receives most of SDOT's transit investments to date, the Seattle Transit Measure (STM) funds opportunities to test innovative transit service approaches that provide unique community value. In 2019, Seattle funded a new Via to Transit (now known as Metro Flex) service providing on-demand van service to four Sound Transit Link stations in Southeast Seattle, while Metro funded service to one station outside Seattle. This offered an opportunity to implement and evaluate these on-demand services and determine if they could be successful. Eventually, success of the service to two higher demand stations led Metro to invest its own funds in service operations.

Trailhead Direct is another innovative service pilot project initiated by SDOT and Metro and now led by Metro and King County Parks. The project is a seasonal service which started in 2017 and will continue operation in 2023. Trailhead Direct aims to ease traffic congestion and improve safety as well as provide more inclusive access to outdoor recreation along the I-90 corridor. It operates on a fixed route on weekends and holidays from May until Labor Day. In addition to

testing new approaches or technologies, we invest in community services that have value beyond transportation. The Downtown Circulator provides connections between local human service agencies and other Downtown Seattle destinations, acting as an extension of these agencies.

Fleet Electrification

Except for the Seattle Streetcar, transit vehicles in the Seattle region are owned and operated by local transit agencies. While most regional buses are diesel hybrid-electric buses, King County Metro (Metro) operates a large network of zero-emissions electric trolleybuses in Seattle that are powered largely by overhead wires along City streets. Metro is now investing in battery-electric buses and is targeting transitioning to a complete zero-emissions fleet by 2035. Transit fuel technologies worldwide continue to evolve rapidly, with vehicles powered by natural gas, hydrogen, biodiesel, and propane, among other fuels. SDOT should continue to support transit partners testing and operating low- and zero-emissions fleets.



An electric Metro bus

Transit Technology and Systems

Technology systems are critical to optimizing SDOT and transit agency partners service and capital investments. When deployed to meet our goals, technology systems allow buses to avoid and bypass traffic congestion, provide better information and access to transit riders, increase opportunity for first-/last-mile access, improve enforcement of transit-only lanes, and help operators stay on schedule.

Introducing and testing emerging technologies can improve transit service, planning, rider experience, travel option redundancy, and resiliency. When people have access to information about when their bus or train is coming, not only do they perceive wait times as shorter, but they may also ride more often.

This technology can also benefit customer service operations who will have access to real-time, up-to-date information to share with customers. Historically, providing this information to customers required costly hard-wired connections and displays that were subject to vandalism, weather, and other factors. Today, those with mobile phones can access information about bus arrival times, and in certain cases, even bus capacity at any stop in the system.

Delivering the best information requires that physical and virtual systems be in place, but also requires back-end systems to collect and process information in real time. There are several technologies that help transit operate efficiently, including tools that:

- Modify traffic signal patterns to give transit an early start through intersections
- Maintain green signals for passing buses and trains
- Cite cars that are illegally driving in transit-only lanes
- Help maintain schedules for bus service

The City's role in procuring, managing, and adapting these systems varies depending on where the tool is located (i.e., on a bus, or in the right-of-way) and on specific project elements (i.e., whether the technology is part of a citywide traffic management strategy or a transit agency-led project like RapidRide or Link light rail). Partnerships are important in deploying technology. For example, the City is currently piloting automated enforcement technology in bus lanes and at intersections with stationary cameras.

As an alternative, violations in the future could be monitored by bus-mounted cameras. This change would require not only state legislative action, but also coordination with transit agency partners. Key transit technology systems include:

- Intelligent Transportation Systems (ITS), including Transit Signal Priority (TSP)
- Transit agency data collection systems, such as Automatic Passenger Counters (APC), General Transit Feed Specification (GTFS), and Automated Vehicle Location (AVL) systems
- Automated enforcement systems for transit lanes and intersections, that help reduce private vehicle use of bus lanes
- Fare collection and payment systems
- Technology solutions provided as an incentive to decrease car ownership or solo vehicle travel
- Customer-facing information systems, including trip-planning and real-time arrival information
- The ability to monitor a trip in real time and alter recommended transfers, destination stops, and other aspects of a trip

- Operational technology, such as operator communication systems, scheduling, run-cutting, and dispatch programs; real-time service management; and operator communication systems
- Emerging technologies, such as autonomous and shared vehicle technology
- Microtransit service for low-volume routes with high frequency or customization
- Mobility options beyond traditional public transit, including electric scooter and bike share and other existing and emerging point-to-point mobility options
- Customer trip and trip-planning feedback systems

TRANSIT ASSET MAINTENANCE

SDOT, along with our transit partners, owns and maintains a variety of facilities and amenities which make up the fixed part of the transit system, such as shelters, wayfinding, real-time information signs, and even the sidewalks riders use to access transit—together these are generally referred as the physical “assets” of the transit network.

Maintaining assets and previous investments in a state of good repair is an important part of ensuring that transit continues to operate smoothly and without interruption. SDOT’s goals for asset management include sustainability, accountability, and transparency. Regular reporting on transit asset management is a requirement of the Federal Transit Administration (FTA); a Transit Asset Management Plan (TAMP) covers the period of 2023–2026. This document summarizes transit-related assets pertaining to the Seattle Streetcar and King Street Station, which are owned by the City of Seattle.

Many of the infrastructure assets most important to the overall transit system are not part of the TAMP, such as bridges and structures, arterial roadway pavement, pavement markings, and ITS. While many of these assets are critical to other travel modes, the nature of fixed-route transit means that asset maintenance issues—even on a single block or intersection—can negatively impact service operations along an entire route or set of routes. Collecting high-quality data on asset condition is important to understanding future and emerging issues. This includes information on SDOT’s ability to monitor and understand paving conditions, to systems that allow real-time reporting of maintenance issues and safety hazards—whether they are SDOT-owned assets or partner agency assets.

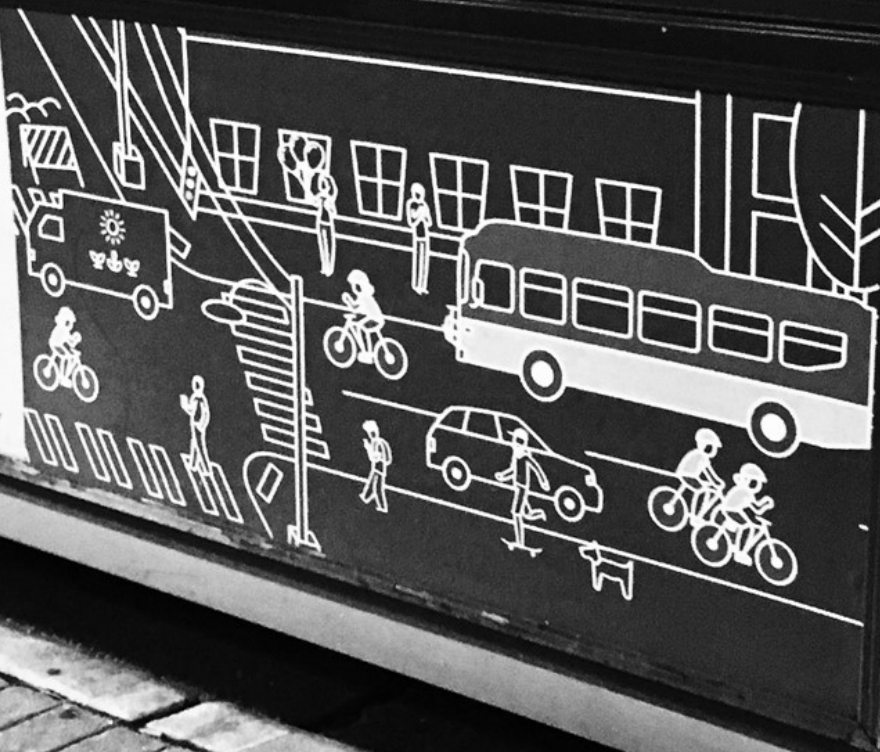
Transit is also a critical travel option if roads, bridges, or other facilities are closed for needed maintenance or repair. For example, during the West Seattle High Bridge closure from 2020–2022, local bus routes and the King County Water Taxi provided critical mobility to those traveling in, to and from West Seattle.



We are all traffic.
Please give 3 feet
to people biking.
Share the road
with care.

SAFETY

King County
METRO
Moving forward together



DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics that this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

A transit-friendly city provides our residents, workers, and visitors with a network of frequent, accessible, understandable, and secure transit services, providing reliable connections between neighborhoods, major job centers, and key destinations around the city and the region. Seattle can continue building on its strong transit history and network to evolve into an even more friendly place to ride transit and take trips easily for everyday needs. This looks like a transit system for Seattle that includes:

- **Frequent service** that allows people to use transit for most trips without consulting a schedule
- **Reliable service** that allows people to plan their trip with certainty
- **Competitive travel times** on transit should get people where they need to go in a similar or shorter amount of time than driving
- **All-day network** that focuses on meeting all travel needs, not just those traveling at peak times
- **Connected system** that provides a safe and seamless transfer between transit lines and delivers a wide range of mobility options for first- and last-mile connections
- **Seamlessly integrated and affordable system** including shared electric, micromobility services into multimodal transit trips at a cost proportionate to the share of the total trip, fostering accessibility and affordability (TEF 35.2)
- **Accessibility for all**, including fare programs that reduce or eliminate cost as a barrier to transit use, facilities that are fully accessible for people of all abilities, and facilities designed to safeguard customer safety
- **Passenger environment** where all riders feel safe accessing and using the system and where real time information is readily available
- **Clear and inviting spaces** for pedestrians to access transit stops and stations all hours of the day and night, including safe and barrier-free sidewalks (TEF 7.1)
- **Proactive maintenance** to provide a clean, secure waiting environment and making sure facilities are in good condition before major and expensive repairs are needed
- **Coordination with the One Seattle Comprehensive Plan growth strategy** to align land use planning, housing policies, parking and other transportation policies.

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommends performance measures to monitor the implementation of the STP Transit Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching, and sometimes aspirational, outcome-based measures are identified in the STP implementation strategy (see Part I document). Generally, they are tracked at a city-wide scale, and SDOT may not have primary control over their achievement. Examples include VMT reduction in support of the STP's safety, sustainability, mobility, livability, and maintenance and modernization goals and the percent of household income dedicated to transportation that informs progress on equity, mobility, and livability goals.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include increasing the share of trips made by people taking transit and improving the reliability of transit service.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples include the miles of bus spot improvements or miles of dedicated transit-only or freight and bus (FAB) lanes installed per year.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that SDOT can pivot as needed to meet our equity goals over the next 20 years. The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 7 on the following page includes the Tier 2 performance measures that will be tracked for the Transit Element.

Table 7: Transit Performance Measures

Desired Outcome	Performance Measure (source)	Baseline (year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goals
Increase walking, rolling, biking, and transit mode share	Increase percent of trips made by transit (SDOT)	11% (2019)	28% by 2044	No	Safety Equity Sustainability Mobility & Economic Vitality Livability
Increase access to frequent transit	Percent of households within a 10-minute walk of frequent transit ¹⁰ (SDOT, Census Bureau, KC Metro)	53% (2023)	77%	Yes	Equity Sustainability Mobility & Economic Vitality
Increase satisfaction waiting at bus stops during the day and at night	Percent of customers who report feeling safe while waiting for the bus or train (King County Metro's Rider and Non-Rider Survey; Sound Transit Passenger Experience Survey)	Users feel safe at bus stops at night: 29% (2022) Users feel safe at bus stops during the day: 78% (2022) Pedestrians and cyclists feel safe on train platform grade: A- (Summer 2022)	Increase	Yes	Safety Livability

¹⁰ Frequent transit defined as any transit service with 10-minute or better headways available every day.

Desired Outcome	Performance Measure (source)	Baseline (year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goals
Improve reliability of bus transit service	Percent of bus transit network operating reliably (KCM, SDOT)	73% (Fall 2022)	Increase percent of network operating at a TTI of 1.2 or better ("Travel Time Index" (TTI) – ratio of congested to free-flow travel time on a segment)	Yes	Equity Sustainability Mobility & Economic Vitality Maintenance & Modernization
Reduce cost barriers to transit	ORCA distribution to eligible participants of SDOT funded fare subsidy program (SDOT)	56% (2022)	Distribute ORCA cards to at least 65% of eligible participants of SDOT funded fare subsidy programs	No	Equity Sustainability Mobility & Economic Vitality Livability
Support a well-maintained transit network	Percent of Transit Streets with fair or better pavement condition (SDOT)	57% (2023)	Achieve and maintain a higher percent of Transit Street segments with fair or better pavement conditions than streets as a whole	Yes	Safety Mobility & Economic Vitality Maintenance & Modernization

RELEVANT TEF TACTICS

- TEF 7.1— Survey transit riders on board and at stops/stations about safety concerns; ask about specific locations where there are concerns about safety at waiting areas (align with tactic 11.1).
- TEF 19.6— Prioritize person-throughput, rather than vehicle throughput, as metric.
- TEF 40.1— Emphasize and incorporate pedestrian safety into the street character and design process; ensure staff are trained and educated on how to do this.
- TEF 46.2— Highlight findings/data on the transit access needs of growing middle class and collaborate with King County Metro, Sound Transit, and Puget Sound Regional Council (PSRC) on future programming opportunities.
- TEF 45.3— Identify spaces for equitable investment that can activate community, foster local economic development, and facilitate connections to transit.
- TEF 48.1— Work with transit partners to build on the Downtown Seamless Seattle pilot to expand the integrated transit-pedestrian wayfinding information system, implementing program principles of universal access, transit legibility, and community-vetted design.
- TEF 40.2— Identify locations for new or upgraded pedestrian crossing opportunities to support access to transit.
- TEF 38.4— Inform, empower, and create equitable access for urban neighborhoods to receive community grants to fund transportation projects.
- TEF 19.2— Identify opportunities to repurpose travel lanes for transit, biking, and smaller, lighter-weight vehicles and devices to create more travel options with the STP.
- TEF 43.4— Review SDOT policies, practices, standards, and funding allocation strategies to elevate access and use of right-of-way (ROW) for people of all ages and abilities—people recreating, shopping, walking, rolling, riding bikes and transit.
- TEF 19.1— Normalize decisions about ROW reallocations to be made in partnership with BIPOC communities. This should include investments in alternative modes and land use/housing and connecting with the neighborhood/comprehensive planning.
- TEF 19.7— Do pilots to test out repurposing street ideas and apply lessons learned to new policy approaches and broader citywide opportunities to carry out similar actions to make our streets safer and, first and foremost, for people.
- TEF 34.1— Ensure revenue is prioritized and directly invested in reliable, safe, affordable public transportation and other benefits for BIPOC community members so we can invest in low-income transportation options and prevent the need for enforcement.

- TEF 33.1— Continue to promote remote work and flexible work options at large employment sites citywide, and identifying opportunities where we can better support working-class populations.
- TEF 35.1— Invest in connections to transit that serve specific neighborhoods and priority populations, both new (e.g., inclusive mobility on demand pilot for older adults and people with disabilities) and existing (e.g., Via to Transit pilot, which has been running for 2 years) through grant opportunities and SDOT budget line items.
- TEF 35.2— Assess first-/last-mile connections as part of the transit system. This is part of access to transit and its costs should not be measured separately; it should be a part of the package for any transit access improvement.
- TEF 36.2— Support transition to electric vehicles for all segments of transportation, including personal mobility, goods movement, and services (skilled labor/repair, landscapers, home health care workers, trash collection, etc.) through targeted, equitable incentives and policy design. Implement related actions in the Transportation Electrification Blueprint.
- TEF 37.3— Develop an internal policy to address customer service requests that are near existing projects.
- TEF 38.3— Identify new and less regressive federal, state, and city funding and advocate to invest in pedestrian safety, including crosswalks, sidewalks, traffic calming, lighting, signal operations, etc. Include analysis from the Pedestrian Racial Equity Toolkit (RET) into this process.
- TEF 40.5— Collaborate with community-based organizations (CBOs) to map key target areas where there are higher populations of vulnerable communities and use this map to prioritize investments for improved crosswalk opportunities.
- TEF 40.6— Create a department-wide crosswalk policy that centers the safety needs of communities; this includes a guideline that takes policy, design, and implementation to address and improve crosswalks, pedestrian safety from a community-specific context.
- TEF 41.3— Develop SDOT standard guidance on how to engage and follow-up with community members when safety requests are reported and addressed (e.g., request for crosswalk installation or repairs).
- TEF 45.1— Revisit the Pedestrian Lighting Master plan from 2012; assess areas of current “pedestrian lighting deserts” with transit ridership routes, transfer opportunities, and higher emphasis on equity. Use the findings from this assessment to inform the development of the next transportation funding package.

APPENDIX A: FREQUENT TRANSIT NETWORK UPDATE METHODOLOGY

Major updates to the Frequent Transit Network (FTN) shown in **Figure 4** (see page T-28) will occur during modal or SDOT-wide long-term plan updates. Minor updates will occur between long-term planning efforts as Seattle's land use patterns change, local population increases, and as the region's transit operators grow and evolve their networks.

Process for Minor Frequent Transit Network Updates

In the case of Metro service restructuring or significant changes in demand and travel patterns, SDOT will make minor changes to the FTN so that the city's transit service investments continue to match needs. Changes to the classification of existing FTN transit corridors or the addition or deletion of transit corridors on the FTN map will be based on similar criteria used to create the updated FTN map for the STP (as detailed in the transit element):

- **Transit Demand.** Ridership from the corridor or corridor segment with proposed changes will be compared to ridership in comparable corridors of different frequency categories. If a new transit corridor or route is being proposed, SDOT staff will look at land use patterns, trip generators, and the importance of the corridor or segment in the larger transit network.
- **Equity.** As land use patterns change over time and new demographic or transportation data becomes available, indices such as the Equity Priority Area (EPA) Index Score (from the STM planning team) and the Displacement Risk Index (OPCD) are updated. This and other demographic data may be used to ensure that the FTN continues to meet the needs of vulnerable and historically disadvantaged populations.
- **Connectivity.** Changes in the classification of a transit corridor or corridor segment will be based on measures of how the corridor in question contributes to the connectivity of the transit system. Connections to Link light rail and Metro bus restructures will be drivers of changes to the FTN.

[This page intentionally left blank]

APPENDIX B: TRANSIT STREET CLASSIFICATION

Transit street classification is the categorization of highways, roads, and streets by the number, or volume, of buses transiting a street segment. At scale, bus volume is a measure of the importance of a transit street in the larger transit network. Street segments with high bus volumes require a higher level of transit performance measures such as bus lanes and may also lead to the degradation of pavement condition at a faster rate. Transit street classification is conceptually similar to Functional Classification, the “grouping of highways, roads and streets by the character of service they provide and was developed for transportation planning purposes.”¹ There are two main factors in determining the street types at the City of Seattle, namely the adjacent land use & Intensity and typical street classification.²

The Washington State Legislature in [RCW 47.05.021](#) and the Federal-Aid Highway Act direct the Washington State Department of Transportation (WSDOT) to analyze the entire state highway system to classify and sub-classify all designated state highways according to their function and importance. Seattle is required by state law to classify city streets into primary functional classifications, which are based on the American Association of State Highway and Transportation Officials (AASHTO) standards. Changes to the city’s transit street classification are not required to be approved by Seattle City Council, WSDOT, or FHWA.

To have confidence in the [Transit Street Classification Map](#) for existing utilization and for planning purposes, the map must be regularly updated and/or allow transit to operate on these roadways with the intent to monitor pavement conditions and schedule necessary maintenance. The last update of the Transit Street Classification Map was in 2017, after major changes to the City’s transit network in late 2016 including the extension of RapidRide C line into South Lake Union, and the University Link Extension which led to changes to many bus routes in central and north Seattle. Prior to 2016, major changes to the city’s transit network on the scale of a Link-related restructure have been relatively rare - the largest being bus network changes accompanying the launch of Central Link light rail in 2009.

The North Link Connections transit restructure in Fall 2021 – accompanying the extension of Link light rail to Northgate and which involved further changes to bus service across north Seattle from the 2017 classification update – resulted in other significant modifications to transit pathways and bus volumes but has yet to be updated in the Transit Street Classification system. As of this writing in 2024, the Transit Street Classification Map needs to be harmonized with these changes in King County Metro (and other regional transit service providers) service networks as the result of both long-lasting service level changes due to the COVID-19 pandemic and bus network modifications planned around Sound Transit (ST) Link extensions. SDOT has already been working with King County Metro and Sound Transit on both the Lynnwood Link

Connections and East Link Connections projects, which will also change transit service within Seattle each year from 2024 to 2026 due to further additions to the Link network. With these expansions of Link due to the 2008 voter approved ST2 plan, these major changes to transit pathways are proving far more complicated, regular, and onerous than the existing Transit Classification update process had envisioned.

To avoid the Transit Street Classification Map falling out of alignment with existing and planned transit corridors and service levels, this appendix describes an adjusted process for Transit Street Classification in the City of Seattle.

Transit Classification Categories

Transit Classification was last revised in 2017 and was based on two-way bus volume as detailed in **Table 8**. The original transit classification categories were based on peak number of buses per hour, with an implicit assumption that the travel of the bus itself along a segment – and the number of trips in any single hour – is the greatest impact to the surrounding area due to noise or vibration.

This document proposes a measure based on buses per day and focuses more on daily impacts to street paving due to heavy axle-weight of transit vehicles. The impact of bus volume on street condition should be based on the total number of buses moving through the corridor; which time of day buses travel on a corridor does not impact that corridor's pavement condition. Peak hour bus volumes do not translate consistently into buses per day because of factors such as the service span (the number of hours that a bus route is running) and frequency of each route (the number of trips per hour) that a vehicle transits a corridor over the course of a day.

In addition, post-COVID ridership patterns have changed, with ridership peaks during the “traditional” morning and afternoon commute period becoming less pronounced, and midday and nighttime ridership increasing in proportion to the overall total. The transit street classification measure needs to provide consistent results as bus schedules adjust to changing ridership throughout the day, and as King County Metro moves towards more of an all-day transit network and with more similar service levels between weekdays and weekends.

Also, this measure is based on weekday bus schedules. The threshold values for peak buses per hour were used to derive the values to the buses per day: we assumed 12-hour service spans and uniform frequencies over the 12-hour period. Many transit corridors will have longer service spans but lower frequency during midday service, so these two factors tend to balance out.

Table 8: Transit Street Classification Categories by Bus Volume

Transit Category	Original category thresholds (Peak Buses per Hour)	Updated category thresholds (Bus trips per day)
Principal	> 51	> 600
Major	16-50	181-600
Minor	1-15	1-180
Temporary	<10	< 120

Transit Classifications Legend Definitions

These definition categories were defined in previous transit classification policy considerations and are meant to accompany the Transit Street Classification Map. Slight modifications from previous methods were made to account for updated transit street classification measure (bus trips per day, as noted above) and to reference recent work on SDOT's draft Transit Performance Policy (TPP) that links bus volumes to transit priority tiers and recommended transit performance elements.

Principal Transit Street: *(Threshold: Greater than 600 buses bi-directionally on weekdays.)*

Provides high-volume transit service, often for regional or citywide trips. Provides frequent, moderate speed, high-capacity service to major private and public developments of regional significance and designated Urban Centers. Principal Transit Streets commonly have exclusive transit lanes or lanes shared with other High Occupancy Vehicles or Freight vehicles. Express and local transit services often share the same facilities.

Major Transit Street: *(Threshold: Between 181 and 600 buses bi-directionally on weekdays.)*

Provides concentrated transit service to connect and reinforce major activity centers and residential areas. Typically, adjacent to major private and public developments, commercial land uses and high-density residential areas such as Urban Centers and Urban Villages. Transit service can be mixed with general traffic or have dedicated bus lanes – see additional guidance for transit improvement projects in the TPP.

Minor Transit Street: *(Threshold: Between 1 and 180 buses bi-directionally on weekdays.)*

Provides local and neighborhood transit service. Adjacent land uses are compatible with the street's traffic classification including neighborhood activity centers such as schools, neighborhood businesses, and recreational facilities. Transit service is mixed with general traffic on Arterial Streets.

Minor Transit Street on Non-arterial Street: Consistent with the definition for Minor Transit street but applied to non-arterial streets. Transit service on non-arterial streets may be preferable to operation along arterials in order to access transit layover locations or where this

is the best path for routes to connect between arterial streets (due to issues such as turn restrictions, roadway geometry, or accessing local destinations).

Temporary Transit Street: *(Threshold: Between 1 and 120 buses bi-directionally on weekdays.)*

Provides local and neighborhood transit service on a temporary basis because the preferred arterial route has correctable physical constraints that preclude serving transit or because construction along the arterial has required the reroute of transit operations. Once physical improvements are made, transit service would move or return to the arterial street. Transit service mixes with general traffic on a temporary basis only by approval of SDOT.

Transit Classification Process

A Seattle Transit Street Classification process was originally outlined in the Seattle Transit Plan (TMP) from 2005. This document is almost 20 years out-of-date and has been supplanted by at least two updates to the TMP, and the involved nature of the process it prescribed has contributed to the infrequent update cadence of the Transit Street Classification Map.

The updated transit street classification process shown in **Figure 12: Proposed Transit Street Classification Process**, recognizes that the process does not have to follow the State or Federal rules that apply to Functional Classification. As a result, the SDOT Director has authority to approve updates to the Transit Street Classification Map that support improvements in transit service and pavement conditions without requiring legislative approval.

Figure 12: Proposed Transit Street Classification Process

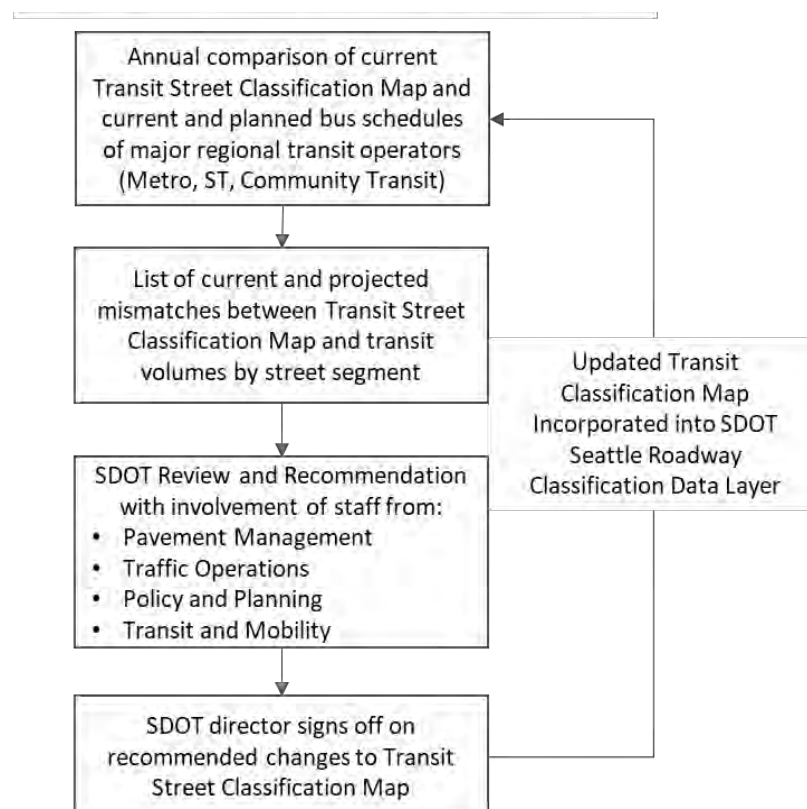
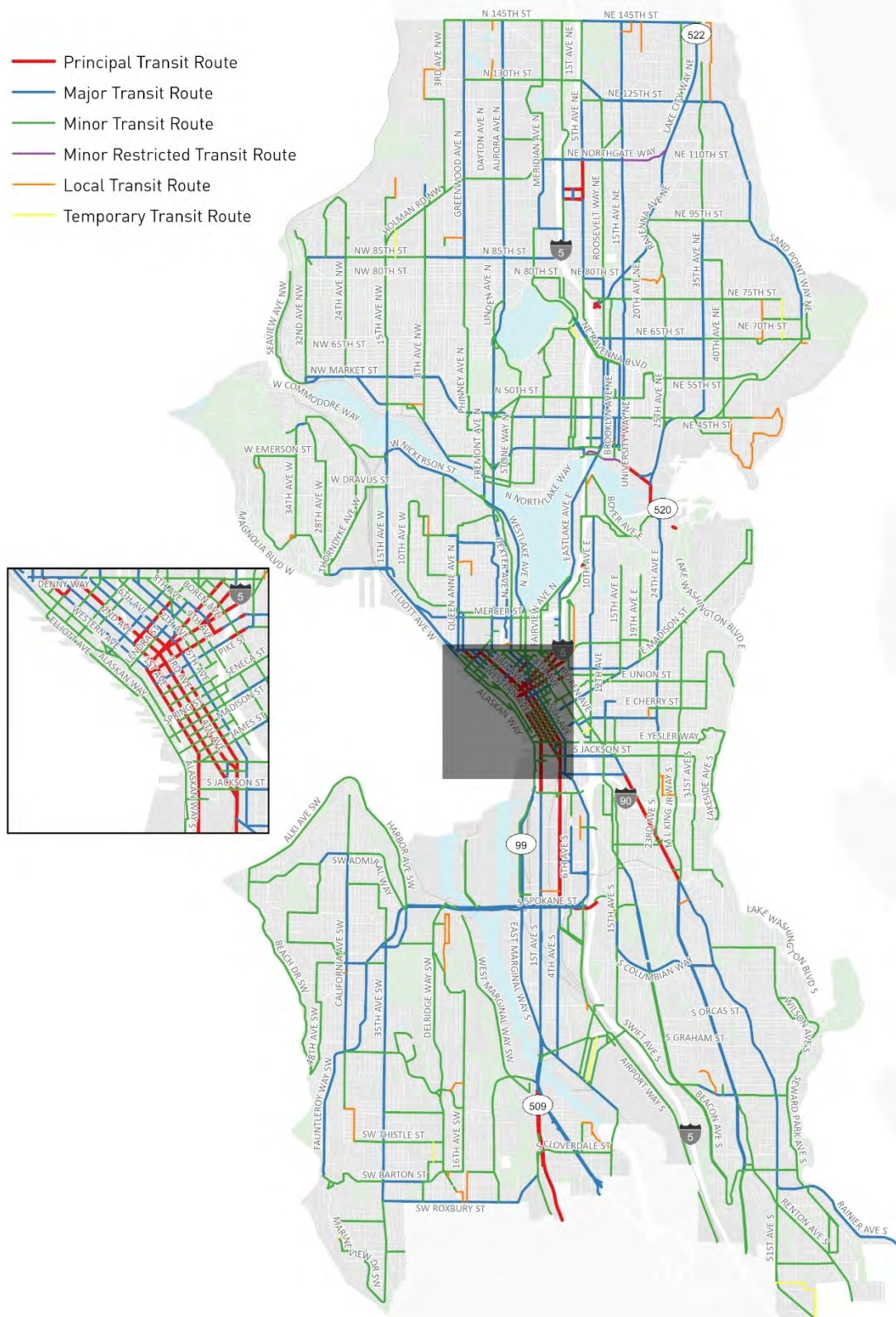


Figure 13: Transit Classification Map



GLOSSARY

Accessible Pedestrian Signal (APS): Signals installed at crossings to help pedestrians who are blind or have low vision. Auditory signals – such as voice instructions and chirping sounds – indicate when it is safe to cross the street.

Active transportation: Human-powered modes of travel such as walking, biking, and using a wheelchair.

ADA: Americans with Disabilities Act

All ages and abilities (AAA): Bicycle and e-mobility facilities that people of all ages and abilities feel comfortable using. They provide low-stress bicycling conditions and focus on safety.

Arterial street: The “backbone” of the roadway system and accommodates the most trips for all modes. Arterials provide the connections between freeways and access streets and vary in their speed and volume characteristics, design features, and degrees of local access.

Automated Vehicle Location (AVL): A computerized system that tracks the location of a transit vehicle in real time. It is helpful for riders to plan trips and gauge wait times.

Automatic Passenger Counters (APC): An electronic device on transit vehicles that records the number of people boarding and alighting. It is used to gauge transit ridership and analyze use patterns.

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bicycle crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

Bioswale: Vegetated ditches that capture and filter stormwater runoff.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

BRT: Bus rapid transit

Business improvement area (BIA): Districts where stakeholders control and fund the maintenance, improvement, and promotion of their commercial district. All stakeholders are required to pay a share that goes toward funding for the entire district.

Café Streets: Streets with high levels of foot traffic and lots of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians. They are a type of Shared Street.

Community and Mobility Hubs: Places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Community-based organizations (CBOs): These are trusted community builders and leader

Commute Trip Reduction (CTR) Program: A collaboration between governments and private employers to motivate and enable commuters to shift away from drive-alone commutes toward other modes of travel. The program is a result of the Washington State Commute Trip Reduction passed in 1991 to reduce traffic congestion and air pollution.

Comprehensive Plan: A 20-year vision and roadmap that guides City decisions on where to build new jobs and houses, how to improve the transportation system, and where to make capital investments such as utilities, sidewalks, and libraries.

Connected and autonomous vehicles (CAVs): Vehicles that can communicate with other vehicles (connected) and can drive without a human operator (autonomous).

E-mobility: Personal and shared electric-powered bicycles, scooters, and other electric-powered devices.

EV: Electric vehicles

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City's climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City's fleet zero-emission by 2030.

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

Frequent Transit Network (FTN): Frequent transit are buses and trains that arrive every 15 minutes or less. The FTN sets aspirational frequency targets alongside a transit corridor map illustrating how frequency targets are proposed to be distributed throughout the city. The FTN enables people to travel with confidence in a timely arrival every day of the week.

FTA: Federal Transit Administration

General Transit Feed Specification (GTFS): A common format for public transportation schedules and maps.

GHG: Greenhouse gas emissions

High-frequency transit: Transit service that arrives every 15 minutes or less.

High-injury Network (HIN): The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred to inform safety corridors of focus for the Vision Zero program and more. It prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes.

HOV: High-occupancy vehicle

Intelligent Transportation Systems (ITS): Technologies to manage transportation systems, such as coordinating traffic signals and traveler information systems that provide data such as travel times and road closures.

Key Moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Level of traffic stress (LTS): A measure of the amount of discomfort cyclists feel biking next to traffic.

Levy to Move Seattle: Approved by voters in 2015, the Levy provides \$930 million in funding – roughly 30% of the City's transportation budget – over 9 years to maintain and improve the transportation system.

Micromobility: Small, low-speed transportation devices. They are convenient for traveling short distances or the beginning or end of trips. They include bikes and scooters.

Multimodal: Refers to the various ways people use the transportation system, such as walking, riding a bicycle, taking transit, or driving a truck or personal automobile. It can also refer to a journey that employs more than one mode, such as walking to the bus stop and then taking a bus to a final destination. The vast majority of individual trips involve more than one mode.

Neighborhood Greenways: Neighborhood Greenways are safer, calmer neighborhood streets where people walking and biking are the priority. These streets work together with trails and protected bike lanes to provide connected routes to bring people to the places they want and need to go as part of Seattle's all ages and abilities bicycle network.

New mobility: New forms of transportation that use technology to improve efficiency, access, and experience. Examples of new mobility include shared bikes and scooters, rideshare apps like Uber and Lyft, and microtransit.

OPCD: Office of Planning and Community Development

PSRC: Puget Sound Regional Council

PSPS: People Streets and Public Spaces

Public Transportation Agency Safety Plan (PTASP): A Federal Transit Administration requirement that public transit agencies receiving federal funds must create a safety plan.

Race and Social Equity (RSE) Index: A tool produced by the Office of Planning and Community Development to aid in the identification of city planning and investment priorities.

Refuge islands: A paved median that protects pedestrians crossing a multi-lane street by providing a safe place to stop.

Revive I-5: A 10-year plan by the Washington State Department of Transportation for improvements along I-5 in King and Snohomish Counties. Projects include pavement repair and replacement, expansion joints, and updated to strengthen bridges against earthquakes.

Right-of-way (ROW): A strip of land legally established for the primary purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Goals are to create safer vehicles, speeds, roads, and people and provide post-crash care.

SDCI: Seattle Department of Construction and Inspections

SDOT: Seattle Department of Transportation

Seattle Promise Scholars: Seattle Promise provides up to 2 years of free tuition at any of the Seattle Colleges for eligible graduating seniors at Seattle public high schools.

Seattle Transit Measure (STM): A voter-approved measure that creates \$50 million annually of transit funding, which is used to fund additional service, service improvements, and improve access to service.

Shared micromobility: Shared bikes and scooters that offer low-cost options for a short distance trip. Riders locate and rent available devices with their phone, ride it where they want to go, and leave it responsibly parked for the next person.

STP: Seattle Transportation Plan

Streets Illustrated: Seattle's Right-of-Way Improvements Manual is an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle's street right-of-way.

Transit Advisory Board (TAB): Founded by City Council in 2015, the Transit Advisory Board consists of 12 members – 6 appointed by the Mayor, 5 appointed by City Council, and 1 additional member – that works with the City on plans, programs, and policies related to transit.

Transit Master Plan (TMP): A long-range plan developed by SDOT, adopted in 2012 and amended in 2016, that is used to guide the City’s transit planning through 2030. The TMP identifies strategies, programs, projects, and investments to achieve transit goals. The Transit Element builds on the TMP.

Transportation demand management (TDM): Programs that focus on shifting travel behaviors from single-occupancy vehicles toward more sustainable and efficient modes such as transit and walking.

Transportation Electrification Blueprint: Adopted in 2021, the Transportation Electrification Blueprint is a framework for Seattle to reduce its transportation-related greenhouse gas emissions, with a primary focus on electrification of personal trips, shared mobility, goods delivery, travel by the city fleet, and the installation of electrical charging infrastructure.

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses the disparities that exist within the transportation system due to institutional racism.

Transportation Equity Workgroup (TEW): Members of the Transportation Equity Workgroup represent vulnerable communities. They co-created the TEF Tactics and work with SDOT to implement the tactics. TEW members are active members within their respective communities and have a personal or professional background in transportation.

Urban Villages and Centers: Areas in Seattle identified in the Seattle 2035 Comprehensive Plan where the most future job and employment growth is targeted. This strategy promotes the most efficient use of public investments and encourages walking, bicycling, and transit use.

Vision Zero: City’s goal to eliminate traffic deaths and serious injuries on city streets by 2030.

Vulnerable Communities: Communities that have historically and currently been erased, intentionally excluded and/or underinvested in by government institutions. SDOT’s Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhoods

Wayfinding: Visual information that helps people to orient themselves spatially. Wayfinding is important to ensure people can travel easily, comfortably, and safely. Methods of wayfinding include signs and maps.

WSBLE: West Seattle and Ballard Link Extensions

[This page intentionally left blank]



Freight and Urban Goods Movement Element



TABLE OF CONTENTS

Introduction.....	F-1
How Freight and Urban Goods Advances the STP	F-2
Relationship to STP Goals	F-8
Delivering the Key Moves.....	F-9
Setting The Context.....	F-17
Opportunities, Emerging Trends and Challenges.....	F-18
Community Engagement.....	F-20
Freight And Urban Goods In Seattle	F-22
Partnerships.....	F-24
Manufacturing/Industrial Centers	F-24
Freight Network Assets	F-25
Spatial Requirements and Operational Considerations	F-34
The Freight Toolbox.....	F-38
Programmatic Activities.....	F-42
Maintenance and Modernization	F-47
Defining Success.....	F-49
Measurable Outcomes	F-50
Relevant TEF Tactics	F-52
Appendix A: Freight Projects	F-53
Glossary	F-59

LIST OF FIGURES

Figure 1: What is Freight?.....F-3

Figure 2: Seattle Supply Chain.....F-7

Figure 3: Freight Network DesignationsF-26

Figure 4: Freight Network Map.....F-27

Figure 5: Freight Network Overlayed with Heavy Haul Network and Over-Legal RoutesF-28

Figure 6: Seattle’s Maritime AssetsF-31

Figure 7: Seattle’s Rail, Intermodal, and Airport Facilities.....F-33

Figure 8: “Designing for” Versus “Accommodating” VehiclesF-39

Figure 9: Typical Vehicle DesignsF-40

LIST OF TABLES

Table 1: Busiest Ports in the United States by TEUs, 2022F-6

Table 2: Freight and Urban Goods Movement: Delivering the Key MovesF-10

Table 3. Spatial and Network Guidance for the Freight Network by Street Type.....F-37

Table 4: Freight and Urban Goods Movement Performance Measures.....F-51

Table 5: Freight ProjectsF-53

[This page intentionally left blank]

INTRODUCTION

Seattle's diverse economic and trade relations are important elements of the city's history and cultural identity. Washington is the most trade dependent state in the nation, with Seattle at the center of it all. From health services, construction, maritime, manufacturing, and logistics, to professional services, life science, technology, creative occupations, and the green economy—our local industries are interconnected beyond our region to the rest of Washington and to national and global economies.

Our city is also a major import and export hub for regionally and internationally focused industrial sectors that generate significant volumes of freight and goods movement, such as retail and consumer goods, agricultural products, and e-commerce. Across Seattle's industries, transportation has impacts well beyond city-lines. Goods may come from farms, through manufacturing and industrial centers (MICs), deep-water ports or regional logistics hubs.

Nearly every product made or purchased in Seattle reaches its final destination by some combination of truck, ship, plane, train, or pipeline. An extensive network of freight infrastructure and industry coordination connects cargo and urban goods to people, businesses and two manufacturing and industrial centers via an intricate framework of airports, seaports, railyards, distribution centers, local truck routes, regional pipelines, and highways and railways.

Seattle is home to the Port of Seattle, one of the Pacific Northwest's leading economic engines. From fishermen and longshore workers to hay growers, and from shops in Pike Place Market to corporate giants like Microsoft and Boeing, the Port touches nearly every aspect of our economy. Maritime, industrial, freight, shipping, supply chain and logistics sectors depend on reliable access to a safe and functional freight network to connect MICs to each other, and to our regional and state freeway systems.

Maintaining and improving the freight network keeps goods and services moving smoothly and also helps keep valuable industry jobs within our city limits. Planning for freight and urban goods movement drives our economy and local industries, and supports the people who work in these industries, whether providing access to employment, well-lit places for truck drivers to park overnight, or maintained streets that enhance work environments for people transporting cargo or urban goods.



A trucker waves from the cab of a semi-truck

HOW FREIGHT AND URBAN GOODS ADVANCES THE STP

The Seattle Transportation Plan (STP) presents a 20-year vision for transportation in Seattle. The Freight and Urban Goods Element provides information specific to the planning, design, construction, maintenance, and operation of the transportation network.

The STP and the Freight and Urban Goods Movement Element builds on and supersedes the 2016 Freight Master Plan (FMP). All transportation modes, vehicle types, and facilities used in goods movement are considered in the Freight Element, with a focus on truck transport and portions of the transportation network used to access maritime, manufacturing, and industrial centers (MICs) and connections to the regional freight system.

The Freight and Urban Goods Movement Element considers how goods and services are transported alongside various impacts freight movement can have on equity, community health, climate change, economy, traffic patterns, and public safety. It establishes a framework to help guide freight mobility investments that can help increase safety, including freight-related interactions with other travelers, and improve equitable access to resources, programs, and secure infrastructure for freight industry employees. Improving equity also requires addressing the known adverse impacts of freight industry outputs that continue to be detrimental to the adjacent Seattle neighborhoods.

An important consideration of the Freight and Urban Goods Movement Element includes the people employed by trade industries. This includes supporting the human element of freight and considering the relationship between our transportation infrastructure and the working conditions for service providers. This important work is aligned with our citywide goals to eliminate historical racial and socioeconomic disparities in and around industrial lands.

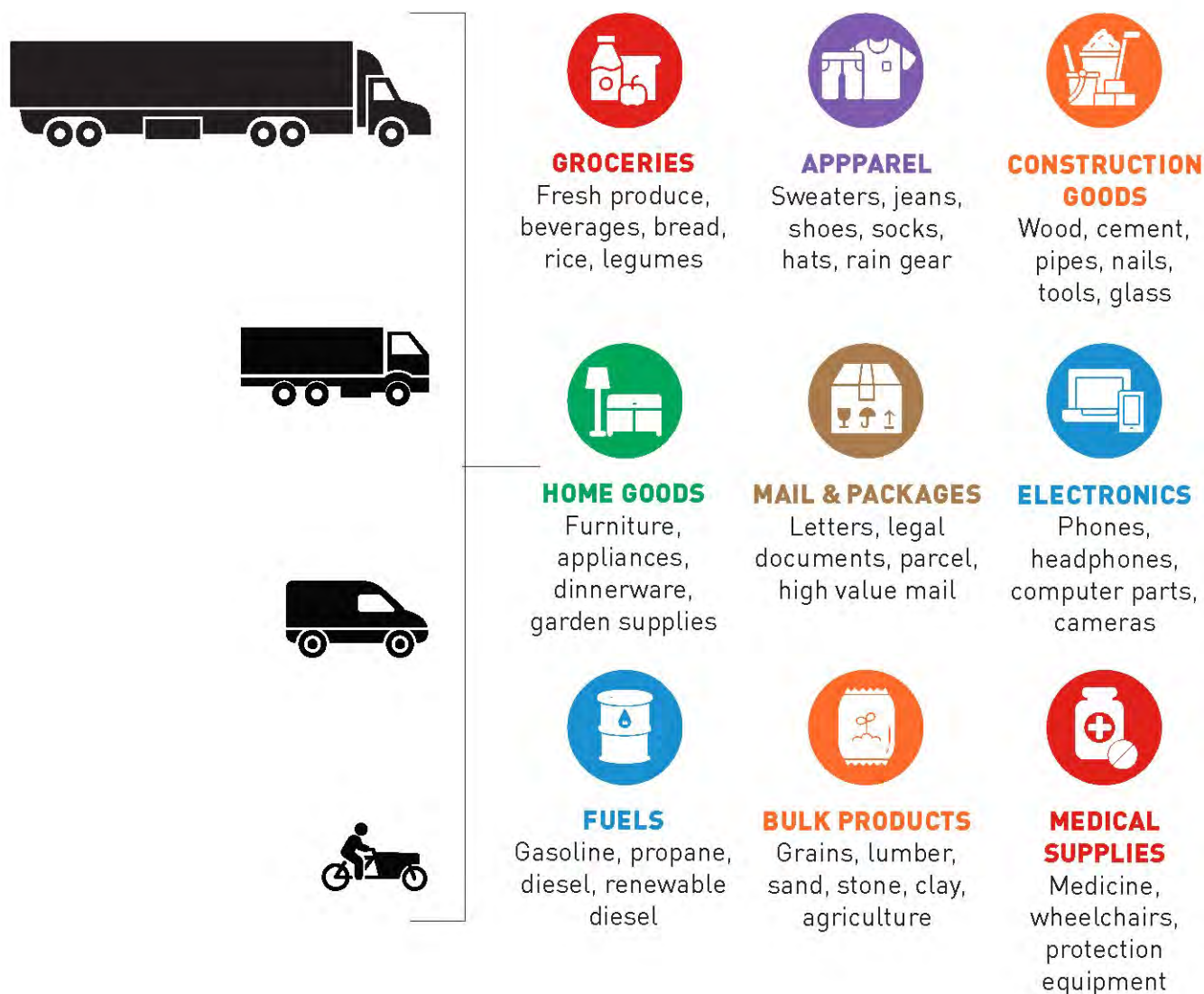


A truck at the port carries cargo

What is Freight?

Freight refers to a variety of commercial goods transported from one location to another. This includes bulk quantities of agricultural products or raw materials like grain or lumber, often moved in ships, barges, or cargo containers. Specialized container tanks carry fuels, from coal to diesel, propane to liquid hydrogen, and many other contents, even milk. Freight also encompasses consumer goods delivered to stores or homes, like groceries, apparel, electronics, home goods, and delivered meals. These items are typically transported in box trucks, delivery vans, and increasingly, personal vehicles. Individuals, government agencies, businesses, schools, manufacturers, and others rely on timely freight delivery, supporting the region's economic vitality and enhancing people's lives.

Figure 1: What is Freight?



Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Despite the pandemic, Seattle grew while many other big cities saw population decline. In 2022, Seattle was the fastest-growing big city in the United States according to the Census Bureau¹. Over the next two decades, Seattle's population is projected to grow to 1 million. Accommodating the daily needs of people living here today and over the next couple of decades will be critical to our quality of life. The city is also expected to add about 158,000 new jobs in the same time period.

More residents and more jobs will require the delivery of more goods and services. Freight movement in Washington is projected to grow by 42% by 2050², alongside significant growth in residential delivery trips due to post-pandemic consumer preferences and our growing regional population. Planning to support projected demand can help keep Seattle a thriving, prosperous, and resilient city well into the future. It's more critical than ever to support these vital trips that keep the cogs of our economy turning.

Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here. No matter where people live or work, providing safe and equitable transportation will always be critical to connect people and goods where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate transportation options and supportive infrastructure that fits the needs of our unique and varied communities— whether a dense downtown grid, a quiet residential neighborhood, or a bustling manufacturing and industrial center. By planning for Freight and Urban Goods Movement, we can support our growing city in a variety of ways.

Economic Benefits of Freight and Urban Goods Movement

Cargo and urban goods movement is inextricably linked to our maritime, trucking, rail, and manufacturing industries. Many businesses and other industries rely on freight to ship goods from their origin and deliver them to final destinations—solving the first-and-last mile challenges. At the broadest level, freight—the transport of cargo and urban goods—is what fuels our economy. With its strategic location in the Puget Sound, Seattle plays a key role in regional and global trade and transportation. The city's port terminals, railyards and drayage and maritime facilities serve as major intermodal gateways handling a diverse range of goods and commodities from around the world. Immense economic contributions of trade industries are demonstrated by:

- Number, quality, quantity and character of family-wage employment and training opportunities
- Regional, state, and local partnerships to improve goods movement and reduce the industry's carbon footprint
- Myriad business opportunities that create and support jobs and livelihoods for people, generate revenue, and activate the city

¹ [Growth in the Nation's Largest Counties Rebounds in 2022 \(census.gov\)](https://www.census.gov/newsroom/press-releases/2022/growth-in-the-nations-largest-counties-rebounds-in-2022.html)

² 2017 Baseline. [Regional Transportation Plan | Puget Sound Regional Council \(psrc.org\)](https://www.psrc.org/Regional-Transportation-Plan).

Our Interconnected Economy

Transportation doesn't stop where SDOT's assets end. Our public right of way and the network of streets that we manage in support of our trade industries connects to vast networks of transportation outside of SDOT's authority, including Port, maritime, state highway, and rail operations.

Seattle's maritime industry and related infrastructure connects to the Puget Sound region and international markets. This connectivity enhances trade opportunities, supports commercial business innovation, investment and development while driving the resilience, efficiency, and competitiveness of our maritime industry. The Port of Seattle, one of the busiest seaports on the West Coast, serves as a vital hub for containerized cargo, bulk commodities, and other freight, contributing significantly to the city's economic vitality.

Maritime and industrial-related operations, maintenance, security, and logistics industries generate significant employment opportunities, especially in the MICs, creating jobs and bolstering the local workforce, including but not limited to:

- Commercial fishing and seafood packaging and handling
- Vessel maintenance and shipbuilding
- Skilled trades and construction
- Clean energy research and development
- Passenger or cargo screening and handling
- Maritime and logistics technology
- Off-shore wind development
- Workforce development

For example, Seattle's industrial areas are home to Tutta Bella, an industrial kitchen; Glowforge, a laser printing company; First Mode, a clean-energy company working on decarbonizing heavy industry; and Maritime Blue, a non-profit supporting maritime industries and related activities that promote a sustainable future.

Maritime, Manufacturing, Transportation and Warehousing

Unfolding over several decades, the city's global identity as a Maritime and Manufacturing hub has shifted to a global tech innovator hosting two of the world's largest tech companies. Yet, the Maritime and Manufacturing industries continue to play a vital role in Seattle's economy and remain an integral part of its identity.

Today, the Maritime industry in Seattle continues to be characterized by shipbuilding, fishing, recreation, tourism, passenger transportation, domestic and international maritime logistics, and shipping. Manufacturing is characterized by food and beverage, textiles and apparel, wood product and paper, chemical and plastics, aerospace, machinery, and metal product, and other manufacturing. Transportation and Warehousing includes air transportation, truck transportation, transit, ground, scenic, and sightseeing transportation, pipeline transportation, postal service and couriers, support activities for transportation, and warehousing and storage.

In 2021, the Maritime, Manufacturing, and Transportation and Warehousing industries in Seattle directly supported a combined total of 46,800 jobs, \$6.2 billion in wages, and \$20 billion in estimated direct business revenues. In King County in 2022, these three industries directly supported a combined total of 189,500 jobs, \$21.9 billion in employee wages, and \$86.9 billion in estimated business revenues.³

In 2015, the ports of Seattle and Tacoma formed The Northwest Seaport Alliance (NWSA) to unify their marine cargo facilities and business. Together, they are among the busiest ports in the United States.

Table 1: Busiest Ports in the United States by TEUs, 2022

Rank	Port	TEUs
1	Port of Los Angeles	9,911,156
2	Port of New York and New Jersey	9,493,664
3	Port of Long Beach	9,133,657
4	Georgia Ports (Savannah)	5,892,131
5	Port Houston	3,974,901
6	Port of Virginia (Norfolk)	3,695,156
7	Northwest Seaport Alliance / Port of Seattle and Port of Tacoma	3,384,018
8	South Carolina Ports (Charleston)	2,792,313
9	Port of Oakland	2,337,607
10	Jaxport (Jacksonville)	1,298,132

The majority of container terminals are located within the Duwamish Manufacturing and Industrial Center (MIC), one of two MICs in the City of Seattle. About 100,000 jobs are located in these industrial areas—around 15% of total employment in the City and 4.6% of total employment the metropolitan area (Seattle-Tacoma-Bellevue metropolitan statistical area)⁴. A network of marine terminals, railroads, rail spurs, roadways and airports help to facilitate all the industrial activity in the MICs.

Notably, up to 4 out of 5 truck trips in metropolitan areas are generated by deliveries of goods and services in the regional and local distribution system. Regional businesses depend on efficient and reliable regional deliveries, and residents need products from retailers and service providers that originate from a truck. Truck transportation demand can be anticipated to increase with population and employment growth, as well as from changes in technology and consumer preferences.⁵

BNSF, the largest Class 1 railroad operating in the state of Washington, has 1,332 miles of track statewide. In 2016, the railroads handled 502,000 carloadings originating from and 890,000 carloadings terminating in the state.⁶

³ City of Seattle, Office of Economic Development, "Maritime, Manufacturing, and Transportation & Warehousing Strategic Analysis," November 2023

⁴ City of Seattle, Industrial Maritime Strategy Report, 2021; BLS, Seattle Economic Summary, Oct 2023

⁵ 2017 WSDOT Freight System Plan

⁶ BNSF Fact Sheet, Washington State, 2016

Supply Chains

A supply chain comprises a sophisticated network encompassing individuals and facilities engaged in the intricate processes of manufacturing, distribution, and retail. This complex interplay involves the seamless integration of people, information, and transportation, meticulously coordinating the journey of goods or services from production hubs to their final destinations. The critical variable of speed to market assumes paramount importance, influencing strategic decisions regarding the transportation mode—whether by truck, rail, ship, or air—at various stages of the supply chain. A deeper comprehension of supply chains can be gleaned by examining the multitude of steps and extensive distances involved in bringing food from the farm to the consumer's table.

Illustrated in **Figure 2**, this intricate graphic illustrates the nearly 2,000 miles covered in delivering the components that contribute to the creation of a pint of beer and a plate of fish and chips served at a local pub. The vulnerability of this intricate system becomes evident when disruptions occur within the supply chain. As delineated in **Figure 2**, such disruptions manifest in increased costs, affecting items like beer and fish and chips, as well as essential groceries such as milk, bread, and eggs at local stores. Whether caused by traffic hindering truck deliveries, businesses being unavailable to accept shipments, or truck drivers facing parking challenges due to limited curb space or loading docks—the resulting repercussions are inevitably transferred to the consumer. These bottlenecks can translate into heightened costs of living and conducting business within the city, driven by augmented expenses in gas and time that can reverberate through the supply chain, and ultimately impact the end consumer.

Figure 2: Seattle Supply Chain



RELATIONSHIP TO STP GOALS

Freight plays an important role in meeting STP goals for safety, equity, sustainability, mobility & economic vitality, livability, and maintenance and modernization.



SAFETY

Prioritize safety for travelers in Seattle, with no serious injury or fatal crashes. Major Truck Streets are primary routes to connect major freight traffic generators, including heavy haul routes. This designation informs roadway designs that support unique truck movement needs, like turning radii and lane widths, traffic management decisions, and pavement condition. Safety improvements where travelers intersect freight movement, personnel work in streets, and railroad crossings can reduce serious or fatal injuries.



EQUITY

Co-create with community and implement restorative practices to address transportation-related inequities. Equity in freight investments can improve the health of communities impacted by goods movement. Infrastructure that supports freight workers, many of whom are BIPOC, can also be way of investing in equity. Capital investments in areas adjacent to industrial lands have the potential to address historic and emergent environmental, public health, and shoreline access concerns. Reducing intermodal impacts on communities through industry partnership supports the needs of workers.



SUSTAINABILITY

Respond to climate change through innovation and a lens of climate justice. Green innovations in rail and port operations can support climate goals. This could include integrating coastal remediation policy and practice into industrial area maintenance and new freight facility construction, or grade separating rail facilities to reduce vehicle idling. Decarbonization of truck fleets will require alternative fuels and electrification. Funding and performing roadway maintenance can help maintain environmental compliance.



MOBILITY &
ECONOMIC VITALITY

Provide reliable and affordable travel options that help people and goods get where they need to go. Investments in MICs and along designated freight routes can support safe, efficient, and reliable movement of goods and services. Freight mobility is supported by wayfinding, commercial vehicle load zones, employee personal vehicle and truck parking, and more. Improved data enables better response to industry changes and consistency with state and regional freight plans. In partnership with the freight community, we'll endeavor to preserve, protect, and enhance critical truck routes



LIVABILITY

Reimagine our streets as inviting places to linger and play. Developing an urban goods delivery strategy that includes on- and off-street tactics and capital investment in the freight network can support economic growth. Updates to commercial vehicle load zone permit processes, hours, and enforcement will provide more reliable curb access. Addressing constraints in the freight network, including increased train traffic, bridges, potholes, drainage, and blocked grade crossings, can smooth flows.



MAINTENANCE &
MODERNIZATION

Improve city transportation infrastructure and ready it for the future. Integration of innovative policy and practices can improve maintenance and safe, efficient operation of the freight network, including heavy haul program projects and nonarterial roads in industrial and commercial areas. Asset management helps to strategically optimize maintenance investments, while coordination of freight and transit infrastructure investments can encourage safe coexistence of all modes. Transportation Systems Management and Operations (TSMO), intelligent transportation systems (ITS)/advanced traffic management systems (ATMS) can help improve traffic flow, especially for freight, and at the same time better manage the need for capital expenditures.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 2 is intended to illustrate which of the key moves the Freight and Urban Goods Movement Element will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.
[\(Supports Safety Key Move S2a\)](#)

Feature community voices in planning documents. [\(Supports Equity Key Move TJ1b\)](#)

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 2: Freight and Urban Goods Movement: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
SAFETY KEY MOVES							
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
F1	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. [Supports Key Move S2a]	✓	✓	✓	✓	✓	✓
F2	Prioritize safety improvements at locations that are on the high-injury network, have high levels of travel stress, or identified through the Seattle Bicycle Pedestrian Safety Analysis. [Supports Key Move S2b]	✓					✓
F3	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, including but not limited to leading pedestrian intervals (LPIs) at signals, arterial traffic calming, and road diets. Use SDOT truck and heavy vehicle design guidance and develop new designs for truck-compatible traffic calming measures that allow safe truck movements and integrate other travel options. [Supports Key Move S2c]	✓	✓				
F4	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as curb bulbs, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. [Supports Key Move S2d]	✓	✓				
F5	Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address identified issues. [Supports Key Move S2f]	✓					✓
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle (S3)							
F6	Provide dedicated places for people to walk, bike, or roll safely separated from vehicles by using context appropriate treatments such as protected bike lanes or “complete street” corridors, especially on major truck routes. Where a freight route shares a street with a bicycle route, facilities for trucks and bicycles should be clearly separated and comply with width and materials standards, consistent with Streets Illustrated. As we explore appropriate treatments, we’ll note the unique character of activities in MICs. [Supports Key Move S3b]	✓	✓	✓	✓	✓	
F7	Enhance both real and perceived safety for riders at transit stops and station areas through investments in design features such as lighting and shelters, as well as frequent and reliable services that limit late-night wait times, including in MICs and industrial employment centers. Advocate for programs that support physical, mental, and emotional safety of transit riders. [Supports Key Moves S3e]	✓	✓	✓	✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
F8	Support programmatic activities and partnerships to reduce the size and weight of vehicles used for personal trips, transit, and urban goods movement. Heavier vehicles are a key factor in pedestrian fatalities. [Supports Key Move S3f]	✓	✓	✓	✓		
F9	Coordinate with freight, passenger rail, and light rail partners on safety improvements at rail crossings. Fund and develop a rail program that outlines initiatives to improve safe interactions between various travel options and trains at rail crossings. [Supports Key Move S3g]	✓					
F10	Expand safety education for all travelers. Develop education programs for freight and rail that include information on at-grade rail-crossing safety from Operation Lifesaver and better educates pedestrians and bicyclists about safety considerations of trucks, like blind spots, turning paths, and longer stopping distances. [Supports Key Move S3h]	✓	✓	✓	✓		
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making process (TJ1)							
F11	Implement the Transportation Equity Framework (TEF) to grow transparency, accountability, and shared power when making transportation decisions with community members, including freight, rail, maritime business, and employee voices. [Supports Key Move TJ1a]		✓				
F12	Feature community voices in planning documents, including employees of the freight, rail, maritime industries and businesses. [Supports Key Move TJ1b]		✓				
F13	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. This may include employees of MICs and industrial employment centers, as well as communities impacted by freight and goods movement activities. [Supports Key Move TJ1c and TEF 29.1, 41.6]		✓				
F14	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. [Supports Key Move TJ1d and TEF 3.4]		✓				
F15	Normalize the practice of making decisions about policies and right-of-way allocations with input from vulnerable communities. [Supports Key Move TJ1f and TEF 19.1, 25.4]		✓				
F16	Support the transportation-related needs of local businesses owned by vulnerable communities and their commuting employees. Provide accessible and culturally relevant information about SDOT services. [Supports Key Move TJ1h and TEF 17.1, 21.2, 16.1]		✓		✓		✓
F17	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiatives. [Supports Key Move TJ1i and TEF 1.1, 13.4, 31.4, 37.1]		✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
Address inequities in the transportation system by prioritizing investments for impacted communities [TJ2]							
F18	Prioritize transportation investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. [Supports Key Move TJ2a]	✓	✓				✓
F19	Prioritize investments that will enhance safe, reliable access to employment centers and MICs for BIPOC, low-income and displaced workers, such as increased or late-night transit services or well-lit overnight parking for truck drivers. [Supports Key Move TJ2b]	✓	✓		✓	✓	
F20	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around transportation project impacts and displacement, and co-create transportation, public space, and permitting solutions. This should include the drayage truck driving community, many of whom are BIPOC and/or immigrants. [Supports Key Move TJ2d and TEF 14.3, 15.2]		✓			✓	✓
F21	Develop policies to prevent transportation projects, both past and present, from causing future displacement and mitigate impacts that can't be avoided. [Supports Key Move TJ2g]		✓				
F22	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]		✓				
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options [CA1]							
F23	Operate the transportation system (e.g., signals, markings, signage, and right-of-way allocation) to encourage sustainable travel choices (walking, biking, taking transit, and for moving goods). In MICs and on major truck streets, consider prioritizing goods movement on a case-by-case basis. [Supports Key Move CA1g]	✓	✓	✓	✓	✓	✓
Green city streets with landscaping and street trees to better handle changing climate [CA2]							
F24	Encourage the maintenance and installation of green infrastructure, including —such as street trees, rain gardens, landscaping, natural drainage systems, bioswales, and pervious materials—as other improvements occur in the right-of-way in MICS and industrial areas). [Supports Key Move CA2a and TEF 56.4]			✓		✓	✓
F25	Install green stormwater infrastructure on streets that already and will continue to flood frequently. [Supports Key Move CA2e]	✓		✓	✓		✓
Foster neighborhood vitality and improved community health [CA3]							
F26	Work with local businesses in future low-emission neighborhoods to address delivery and access needs. Develop a low- and zero-emission loading program that prioritizes climate friendly vehicles and incentivizes freight companies to transition to right-sized, electric vehicle alternatives. [Supports Key Move CA3b]			✓		✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
F27	Design for people-first streets to make sustainable travel choices the default and easy choice for neighborhood trips and to increase neighborhood business district activity. This can improve capacity and access to the curb to support businesses. [Supports Key Move CA3d]			✓	✓	✓	
F28	Incentivize use of non-fossil fuel-powered mobility options for transit, personal and urban goods delivery vehicles. Develop and launch a commercial cargo e-bike program and e-cargo bike lending libraries. [Supports Key Move CA3e]			✓	✓		
F29	Encourage neighborhood delivery hubs in partnership with local businesses to create central drop-off/pick-up locations for goods and services used by multiple providers, retailers, and consumers. [Supports Key Move CA3f]			✓			
Support the transition from fossil fuel to electric vehicles for personal, commercial, and delivery trips (CA4)							
F30	Support electrification of freight vehicles through programs that install charging infrastructure, offer focused incentives, and manage reliance on large vehicles. [Supports Key Move CA4f]			✓			
F31	Support comprehensive decarbonization strategies that include clean energy fuels and innovative technologies. Collaborate with the Port of Seattle and the Northwest Seaport Alliance on ways to support their goal of phasing out all emissions from all seaport activities, including drayage trucks. [Supports Key Move CA4g]		✓	✓			
Advance mobility management strategies to encourage walking, biking, and transit trips (CA5)							
F32	Explore equitable demand management tools that could influence travel choices and create revenues to invest in sustainable transportation options, freight movement, and innovation. [Supports Key Move CA5c]		✓	✓			✓
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Support access to jobs, freight movement, and growth in residential deliveries (PG4)							
F33	Develop an urban goods movement and delivery planning program.	✓	✓	✓	✓	✓	
F34	Design the street network for safe and predictable movement of trucks, such as tractor trailers or drayage trucks, garbage trucks, box trucks and cargo vans. Use SDOT truck and heavy vehicle design guidance and develop new designs for truck-compatible traffic calming measures that allow for safe truck movements and integrate with other travel options. [Supports Key Move PG4a]	✓	✓	✓	✓	✓	✓
F35	Provide for critical access needs (mail and goods deliveries, solid waste pick-up, etc.) on-street when they cannot be accommodated off-street. [Supports Key Move PG4b]				✓		
F36	Explore implementation of dedicated freight (truck-only) lanes and freight-and-bus (FAB) lanes, pending successful results of a pilot project, to improve freight mobility on Seattle streets with high truck volumes. [Supports Key Move PG4c]		✓	✓	✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
F37	Prioritize improvements in the freight network and safety improvements to freight vehicles to accommodate their interactions with other functions of the street and curb, particularly with people who are walking, biking, and rolling. Improvements should maintain truck mobility and support the needs of truck drivers to operate their trucks safely, accounting for blind spots and large turning paths. [Supports Key Move PG4d]	✓	✓	✓	✓	✓	
F38	In coordination with freight and rail partners, address the unique mobility and access needs of industrial freight in manufacturing and industrial centers through planning, design, infrastructure investments, and operations activities that support efficient and reliable goods movement. [Supports Key Move PG4e]	✓	✓	✓	✓	✓	✓
F39	Collaborate with private sector partners on pilots and programs that accelerate the shift of freight trips to more sustainable low- and zero emissions vehicles, such as electric cargo bikes, to replace a portion of last-mile deliveries made by larger vans and trucks in densely developed areas. [Supports Key Move PG4f]		✓	✓	✓		
F40	Pilot and expand use of technologies that can improve predictability and accessibility for vehicle loading/unloading activities. Digital curb management can make it easier for commercial vehicles to access the curb and eliminate inefficiencies, like circling the block looking for available loading zones, double-parking, or parking in a center-turn lane. [Supports Key Move PG4g]	✓			✓		✓
F41	Explore programs and incentives that encourage rightsizing of freight vehicles for an urban environment. [Supports Key Move PG4h]			✓	✓	✓	✓
F42	Work with other agencies and private partners to provide real-time information to minimize travel time and optimize access for commuters and freight and urban goods vehicles. [Supports Key Move PG4i]			✓	✓		✓
F43	Preserve and enhance access to employment and mobility for freight and goods movement —especially east-west connections—between MICs accessing ports, working waterfronts, intermodal facilities and other key destinations. [Supports Key Move PG4k]				✓		✓
Manage curbspace to reflect city goals and priorities (PG5)							
F44	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]				✓		✓
F45	Prioritize uses of the curb to address demands stemming from changes to more sustainable and efficient personal travel options and the evolving landscape of goods and service delivery over use as private car storage. [Supports Key Move PG5b]				✓		
F46	Increase the number of commercial vehicle loading zones to decrease the time freight and delivery drivers spend searching for parking. [Supports Key Move PG5g]		✓	✓	✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
LIVABILITY KEY MOVES							
Reallocate street space to prioritize, creating enjoyable places that also facilitate goods delivery and mobility (PP1)							
F47	Design streets and public spaces with consideration of goods, delivery and emergency access needs, while adjacent businesses prosper from an activated public realm. [Supports Key Move PP1c]	✓	✓		✓	✓	
F48	Update the City of Seattle Standard Plans for Municipal Construction to reflect freight network changes and updates to Streets Illustrated. [Supports Key Move PP1d]	✓	✓	✓	✓	✓	✓
MAINTENANCE & MODERNIZATION KEY MOVES							
Maintain our streets, sidewalks, and bridges and incorporate planned safety and network improvements with maintenance work (MM1)							
F49	Maintain our transportation infrastructure, including streets, sidewalks, and bridges serving the most users and on the high-injury network. [Supports Key Move MM1a]	✓	✓	✓	✓	✓	✓
F50	Strategically manage the life cycle of our transportation assets in accordance with our Transportation Asset Management Plan to achieve the best performance results for the preservation, improvement, and operation of infrastructure assets. [Supports Key Move MM1b]				✓		✓
F51	Reduce the maintenance backlog by being proactive, leveraging technology to monitor asset conditions, and using data and lifecycle analyses to help when it's time for upgrades. [Supports Key Move MM1c]				✓		✓
F52	Conduct proactive bridge and roadway structure maintenance, preservation, and replacement activities to increase the resiliency of vulnerable bridges and other vital connections. [Supports Key Move MM1d]	✓			✓		✓
F53	Collect feedback on asset conditions as part of community engagement on transportation system planning, design, and co-creation. [Supports Key Move MM1e]		✓				✓
F54	Conduct asset maintenance in accordance with the priority investment and emergency response route networks, especially when investment supports walking, biking, transit, and freight. [Supports Key Move MM1f and TEF 45.6]		✓				✓
F55	Modernize city streets by incorporating planned safety and network improvements into maintenance and replacement activities to not only improve the condition of transportation infrastructure and equipment, but also reduce dependence on driving, promote sustainable travel options, and support economic vitality. [Supports Key Move MM1g and TEF 19.3]	✓	✓	✓	✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Freight and Urban Goods Movement: Delivering the Key Moves							
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
F56	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. (Supports Key Move MM2a and TEF 19.3)	✓	✓				✓
F57	Equitably distribute resources for maintenance and improvements in neighborhoods and industrial areas that have been historically or are currently underserved. (Supports MM2b and TEF 19.4)		✓		✓		✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
F58	Collect, monitor, and use data to inform changes to the transportation system. (Supports Key Move MM3a)				✓		✓
F59	Proactively work with public, private, and academic sector partners, such as the University of Washington's Urban Freight Lab, to collaboratively develop freight and urban goods mobility solutions for the future. (Supports Key Move MM3c)				✓		✓
F60	Coordinate with relevant partner agencies on projects of regional and statewide significance within the City of Seattle, such as the I-5 Master Plan, Lid I-5, or high-speed rail corridors. (Supports Key Moves MM3d)				✓		✓
F61	Develop and maintain up-to-date asset data, including digital inventories of physical assets like heavy-haul pavement, truck parking (including overnight), rail crossing maintenance, curb returns, potholes, storm drainage, curb space, load zones, access to loading docks, and other commercial truck facilities. (Supports Key Move MM3f)		✓		✓		✓
F62	Research and develop policies to manage the evolution toward connected and autonomous vehicles (CAVs) and their potential applications for freight and urban goods movement, recognizing that government and industry must partner to deliver benefits safely. (Supports Key Move MM3h)	✓	✓		✓	✓	✓

SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we'll need to remain agile and continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how the Seattle Department of Transportation (SDOT) will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to freight and urban goods. They were used to shape the actions we'll take to achieve our shared transportation vision. SDOT will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances continue to evolve in the years to come.



Port of Seattle, terminals and cargo containers

OPPORTUNITIES, EMERGING TRENDS, AND CHALLENGES

Living in one of the nation's leading trade gateways, Seattle residents experience these opportunities and challenges firsthand. Freight and urban goods movements are a key component of our local, regional, national, and international supply chains. A single disruption can reverberate all the way to the Seattle consumer. The health and fitness of the freight system is important to Seattle's economic wellbeing. Moreover, advancing freight mobility goals is essential to improving traffic safety and curbing emissions.

Opportunities and Emerging Trends

Strong growth in freight demand and flows. The Environmental Protection Agency (EPA) noted that, in 2015 alone, the U.S. logistics industry moved more than 49.5 million tons of goods, worth nearly \$52.7 billion, every day, and more than 56 tons of freight per person per year. The agency projects that in 2025, the shipment of U.S. goods will grow another 23.5%; and a total of 45% by 2040.⁷

More recently, from 2020 to 2022, with the closure of the West Seattle High-Rise Bridge, the importance of freight was demonstrated by dedicating the low-bridge to freight, transit, and emergency vehicles. Keeping these modes moving is vital to the city and region.

Resilient freight operations during the COVID-19 pandemic. Despite the pandemic and the supply chain backup it caused, the MICs' activities did not slow down. Industrial workers could not work from home. In the BINMIC, the fishing seasons and maritime activities continued on in full force.

Shift in shopping trends during the COVID-19 pandemic. The pandemic accelerated the shift in consumer spending from brick-and-mortar to e-commerce, which resulted in significant growth in local parcel delivery and the construction of e-commerce warehouses.

Densification of warehousing. In places with less and less space, multi-level warehousing has played a role in helping freight movement. These opportunities have the potential to improve the use of the MICs.

Last-mile neighborhood delivery hubs. There is increasing interest and testing of last-mile neighborhood delivery hubs that serve as a delivery point for trucks, which offload parcels onto electric-assist cargo trikes for local delivery to residences or businesses or to short-term storage in parcel lockers. These solutions can reduce local truck trips and emissions in commercial and residential areas.

Focus on employee safety and wellbeing. The health and safety of the people working in the supply chain impacts the health, safety, and equity experienced by our communities. The impact of the goods and services movement on climate change is enormous, and there are many creative opportunities to mitigate impacts.

⁷ [Why Freight Matters to Supply Chain Sustainability | US EPA](#)

Challenges

Deferred Maintenance. The transportation network serving commercial and industrial land uses, especially non-arterial streets in MICs, have significant deferred maintenance needs. These streets serve as critical access to various manufacturing and commercial activities and see higher heavy vehicle use. Traditionally, these streets have not been prioritized for maintenance efforts and have some of the lowest pavement condition ratings in Seattle. Additionally, only a portion of the Port partnership funding for the Heavy Haul Network has been spent in the past 8 years.

COVID-19 pandemic impacts. The pandemic unveiled weaknesses in supply chains as demand shifted from services to consumer goods. Supply chain shocks resulted in long-term changes to how and where goods are produced. High-density distribution centers, now an aging concept, are being reimagined as micro-distribution hubs, in line with emerging trends. Federal and state public health restrictions caused significant changes in commuting patterns, which led to a steep drop in traffic congestion on city streets. Traffic volumes partially rebounded in 2022.

Supply chain instability. Ongoing workforce shortages, trade disruptions, changes in freight delivery patterns, and other shocks have roiled otherwise stable supply chains, placing pressure on Seattle's multimodal freight system. Respondents to a WSDOT Freight System Plan (FSP)⁸ survey indicated that supply chain disruptions were a critically important freight-related challenge being faced. Additionally, manufacturers consulted during the development of the FSP expressed ongoing concern about supply chain instability.

Limits on new technologies and infrastructure. Development and integration of new technologies, such as alternative fuels and drone delivery deployment, may be limited by legislative restriction and infrastructure requirements; inadequate and aging electrical distribution infrastructure; and the ability to fund, design and construct alternative fueling stations to meet demand.

Network impacts. Network access reductions are a concern for freight movement and supply chain resilience. For example, from March 23, 2020, to September 17, 2022, the West Seattle High-Rise Bridge was closed for repairs and comprehensive testing. To respond to the potential access constraints for critical Harbor Island maritime freight, freight supportive, and national defense industries, the City dedicated the Spokane Street Swing Bridge—the low bridge—to freight, transit, and emergency vehicles.

Additional challenges to the network include limited funding for bridge maintenance and replacement. These include but are not limited to 1st and 4th Ave S corridors, the bridge over Argo; and potential closure of S Holgate St.

Climate impacts on industrial and Port facilities. Much of Seattle's industrial lands rest upon real estate reclaimed from the Duwamish River wetlands. National Oceanic and Atmospheric

⁸ Freight System Plan | WSDOT [wa.gov]

Administration (NOAA) climate change models indicate that reclaimed lowlands are at greatest risk of climate change related weather impacts, such as rising sea levels and seismic events⁹.

Overnight parking for drayage trucks. Overnight parking in the MICs is limited. This results in drivers parking their cabs on local residential streets. Overnight truck parking opportunities in the MICs should be explored.

Freight generated air quality impacts on residents. Existing and projected goods movement volumes are direct contributors to poor air quality in and around MICs and adjacent mixed-use neighborhoods in Seattle. The negative impacts of the transportation sector in general, and freight movement in particular, are known to contribute over 50% of nitrogen oxides (NO_x) emissions, over 30% of volatile organic compound (VOC) emissions, and over 20% of particulate matter (PM) to the emissions inventory in the U.S.¹⁰



An electric delivery van and driver delivering goods to a resident

⁹ Climate Change: Global Sea Level | NOAA Climate.gov

¹⁰ Why Freight Matters to Supply Chain Sustainability | US EPA

COMMUNITY ENGAGEMENT

In 2022 and 2023, we conducted extensive public outreach as part of the STP development process. During the public comment period, we collected feedback specific to freight, urban goods movement, and freight infrastructure. Upon review of the comments, several general themes emerged:

- **Separate people walking and biking from freight vehicles.** Bike lanes, trails, and associated crossings need to be separated or clearly differentiated from freight to allow for safer and easier mobility around the city. Suggestions include grade separation, complete corridors, and treatments, such as landscaping or fencing.
- **Support electric vehicle (EV) transition.** There is general support for the transition to EVs. The shift should consider expanded use of smaller EV freight vehicles in dense urban areas for small scale deliveries.
- **Designate freight routes.** Freight route designations were supported to better accommodate truck movements and enhance safety. Ideas to clear lanes for the freight system to better serve the public were also mentioned.
- **Shared transit lanes.** Numerous comments supported the incorporation of freight and transit in the same lane. However, it is important to consider concerns raised, such as volume management, impact on transit performance, and time constraints—i.e., create time of day restrictions to ensure travel time benefits are achieved.

Other suggestions included:

- **Improve data collection and analysis.** This may help to remove biases and uncover causal relation behind crashes, serious injuries and near misses to inform safety enhancements in street design and traffic operations.
- **Mobility hubs.** Facilitate last-mile delivery trips with smaller vehicles.
- **Improved planning efforts and guidance.** Develop direction to address design treatments at intersections and at-grade rail crossings, truck congestion, truck and freight employee parking, delivery methods in residential and urban areas, and short-haul truck trips between intermodal facilities (port and drayage).
- **Address maintenance backlogs.** Advance the backlog of projects associated with pavement and rail grade crossing maintenance within the freight network.



FREIGHT AND URBAN GOODS IN SEATTLE

SDOT plays a role in the freight and goods movement network by operating city streets in a manner that supports safe, efficient, and reliable travel for freight vehicles and other travelers. We work with our partners to design and build capital improvements, maintain capital assets (pavements, signals, signs, markings, etc.), fund system investments, and collaborate with agency, business, and industry stakeholders. Freight includes goods that travel to or from railyards, seaports, airports, regional warehousing, and end-user destinations (e.g., businesses and residences). We also consider the land use context of freight movement—freight issues in MICs are dramatically different than in downtown, urban centers, and other parts of the city—to support the efficient movement of the different types of freight.

While our freight and goods movement network extends far beyond the streets that we manage, SDOT managed streets and curbspaces support connections to rail, air and Port networks, as well as intersections with other travelers that may be walking, rolling, biking, driving or taking transit. Primary modes in the freight network include:

- **Ground.** Often identified as truck transport, there are many types and sizes of ground freight encompassed in large bulk freight and last-mile freight. Increasingly, electric bicycles (e-bikes) are gaining in use for last-mile transport and delivery of smaller parcels.
- **Rail.** Freight rail moves goods regionally and nationally, while in-town industry rail service provides connections between local Seattle businesses and the larger, nationwide rail network.
- **Air.** Air freight carriers transport goods that are time-sensitive or have high value per unit.
- **Ports.** Typically, large cargo ships bring in a flow of national and regional imports.

To further define freight, it is important to also understand what it provides:

- **Services.** Includes waste collection; city, residential, and business utility installation and maintenance; emergency services; health providers; general construction; and more.
- **Delivery.** Includes business-to-business (B2B) goods related to manufacturing, construction, industrial supply, and warehousing typically delivered by rail or heavy trucks, as well as retail, office, food and grocery, and residential goods and parcels delivered by light trucks, parcel vans, and e-bikes.

The Freight and Urban Goods Element focuses primarily on urban truck movement to support Seattle's increasing demand for delivery of goods and services in a safe and reliable manner. While railroad, marine, air freight, and more play critical roles in our freight system, because the roadway network is within the city's purview, we focus on how trucks provide access to these other modes.

PARTNERSHIPS

Given the number of freight modes, the Seattle freight network has many interested parties. These include local business and industry and local, regional, state, and federal agencies. The Port of Seattle is the government agency that oversees the seaport and the airport (SEA). The Northwest Seaport Alliance is a marine cargo operating partnership between the Port of Seattle and the Port of Tacoma.

Other important agencies include the Federal Highway Administration (FHWA), the Federal Railroad Administration (FRA), the Washington State Department of Transportation (WSDOT), and the Puget Sound Regional Council (PSRC), all of whom fund investments (e.g., award grants) to improve the freight network. Due to their size and costs, many freight capital projects are delivered through agency and industry partnerships.

MANUFACTURING/INDUSTRIAL CENTERS

Seattle has two of the Puget Sound Regional Council's (PSRC) ¹⁰ designated regional manufacturing/ industrial centers (MICs): Ballard/Interbay Northend (BINMIC) and Duwamish MIC¹¹. Most industrial land in Seattle is located within the MICs and are identified in Seattle's Comprehensive Plan. MICs ensure adequate accessible industrial land is available to promote a diversified employment base and sustain Seattle's contribution to regional living-wage job growth. Maritime and manufacturing activities are supported by our industrial lands and have long contributed to the city's identity, supporting family-wage jobs, and economic diversity.

Activities on industrial lands make significant revenue contributions to the local and regional economy, due in large part to the volume of products manufactured or received in Seattle and exported domestically within the U.S. and worldwide. According to the Seattle Industrial Lands Mayor's Recommendation (2007), the industrial sector accounted for \$5 billion in taxable sales which translates to about a third of the City's total retail sales tax revenue. Industrial Businesses also generated 32% of the City's total B&O tax revenue. Around 116,000 people, or 15% of all jobs in Seattle, are employed in the maritime, transportation, and manufacturing sectors.

A network of marine terminals, railroads, roadways, and airports serve the MICs, creating a need to designate, protect, and plan for a variety of needs—oftentimes overlapping with other demands on city streets.

¹¹ <https://www.psrc.org/our-work/centers>

FREIGHT NETWORK ASSETS

Seattle's freight infrastructure is key to maintaining economic and locational competitive advantage. Keeping goods moving efficiently is not just a lynchpin of Seattle's economy, but also for the region, Washington state, and other parts of the country. Our waterway, rail, air, and roadway infrastructure supports freight logistics and shipping. As noted in the introduction, this element focuses on goods movement by truck, as that is the mode the city has the most ability to influence. However, our ability to provide reliable truck travel to and from the region's port facilities, airports, and intermodal terminals is critical to the city's livability and economic health. Key freight network assets are discussed in this section and include:

- Seattle's freight roadway network
- Waterways and the Port of Seattle
- Airports
- Railroads
- Intermodal and transload facilities

Seattle's Freight Roadway Network

Nearly all the streets under the city's jurisdiction are used by trucks, whether designated for freight or not. Specific freight network designations are based on truck volumes and connections to key freight traffic generators and other land uses. The city also operates moveable bridges that support efficient freight movement across our waterways.

Freight Street Classifications

Freight street classifications highlight key elements of the street network serving freight vehicles. They cover functional classification, truck volumes, street types, design guidance, spatial characteristics, and more and are considered when designing streets or determining how to operate the system. Seattle's Freight Master Plan (FMP; 2016) identified a Freight Network Classification that includes four designations based on truck volumes, land use connections, network connectivity, and roadway classifications.

The freight network designations indicate key routes that trucks use to access the Port, key freight designations, and the regional highway system. Limited access facilities are connected to major truck streets and, to a lesser degree, by minor truck streets.

First-/last-mile connectors are primarily accessed by major and minor truck streets and are located within the MICs. Trucks are permitted to operate on most streets in Seattle, whether or not they are designated as part of the freight network.

Figure 3 presents the freight network designations.

Figure 3: Freight Network Designations

<p>LIMITED ACCESS</p> <p>Purpose: Long distance trips Land use: Connections between the city and the rest of the region Roadway classification: Highway Truck volumes: All</p>	<p>MAJOR TRUCK STREET</p> <p>Purpose: Through trips Land use: Connections to MICs, intermodal facilities, Urban Centers, and the regional system Roadway classification: Minor arterial or higher Truck volumes: 500+ trucks per day</p>
<p>MINOR TRUCK STREET</p> <p>Purpose: To/from trips Land use: Connections to and from urban villages and commercial districts; provides secondary through routes for network resiliency Roadway classification: Collector arterial or higher Truck volumes: 500+ trucks per day</p>	<p>FIRST/LAST MILE CONNECTORS</p> <p>Purpose: Industrial trips Land use: Connections within the Manufacturing and Industrial Centers (MICs) Roadway classification: Minor arterial or lower, including non-arterial streets Truck volumes: 250+ trucks per day</p>

The Freight Network

The freight network map is depicted in **Figure 4**. In general, limited access facilities are accessed by major truck streets and, to a lesser degree, by minor truck streets. First-/last-mile connectors are primarily accessed by major and minor truck streets and are located in MICs.

Over-Legal and Heavy Haul Networks

Seattle has specific routes that provide for oversized and overweight trucks, referred to as “over-legal.” Permits are required to operate over-legal vehicles on designated streets. Over-legal routes accommodate trucks with larger loads that require a 20-foot by 20-foot envelope, though specific segments may not handle both excess width and height dimensions. The Heavy Haul Network (HHN) is located in the Duwamish MIC. The network is intended to provide key routes for commercial trucks moving heavy, divisible loads. These trucks usually make short trips from the Port to transload facilities. The HHN helps manage freight flow around the ports and improve movement of large commercial trucks hauling heavy divisible cargo. We do this to support freight businesses in carrying out their work and to help keep them competitive.

Figure 5 presents the Freight Network with the Heavy Haul Network and over-legal routes.

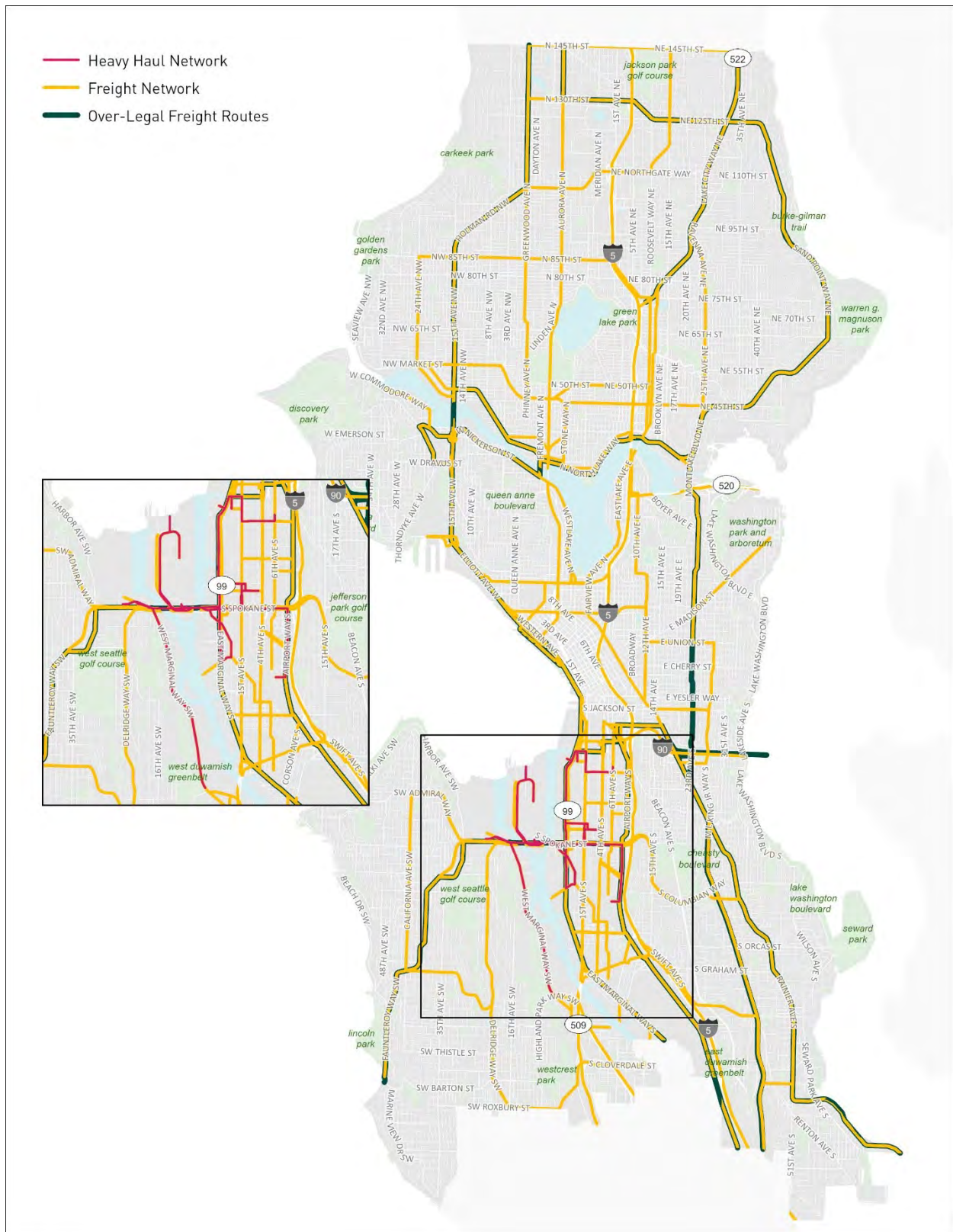
Downtown Traffic Control Zone

The movement of large trucks is restricted within the core of the city. Vehicles 30 feet or longer may operate by permit on weekdays between 9 AM and 3 PM, and without a permit from 7 PM to 6 AM. Curfews are in effect during weekday peak traffic periods.

Figure 4: Freight Network Map



Figure 5: Freight Network Overlaid with Heavy Haul Network and Over-Legal Routes





Waterways and the Port of Seattle

Water transport has continuously been the largest carrier of freight, as virtually any material can be moved by water. The Port of Seattle (Port) consists of numerous facilities throughout the city that are located on Puget Sound and other navigable waterways, such as the Lake Washington Ship Canal. Facilities include container terminals, general-purpose marine/cargo terminals, commercial and recreational moorage, industrial and commercial properties, a grain terminal, and cruise ship terminals.

The Northwest Seaport Alliance (NWSA) is a marine cargo operating partnership of the Port of Seattle and the Port of Tacoma and operates the container terminals in the city. The Port of Seattle also operates Fishermen's Terminal and the Maritime Industrial Center along the Lake Washington Ship Canal. The Port is responsible for ensuring that cargo efficiently moves through the network to its next destination.

The import and export of these goods create individual jobs and economic development for the region. Private maritime businesses also play a major role along our waterways.

Figure 6 depicts the locations of Seattle's maritime assets. These include numerous Port of Seattle facilities, Fisherman's Terminal, the Ballard Locks, and various shipyards.

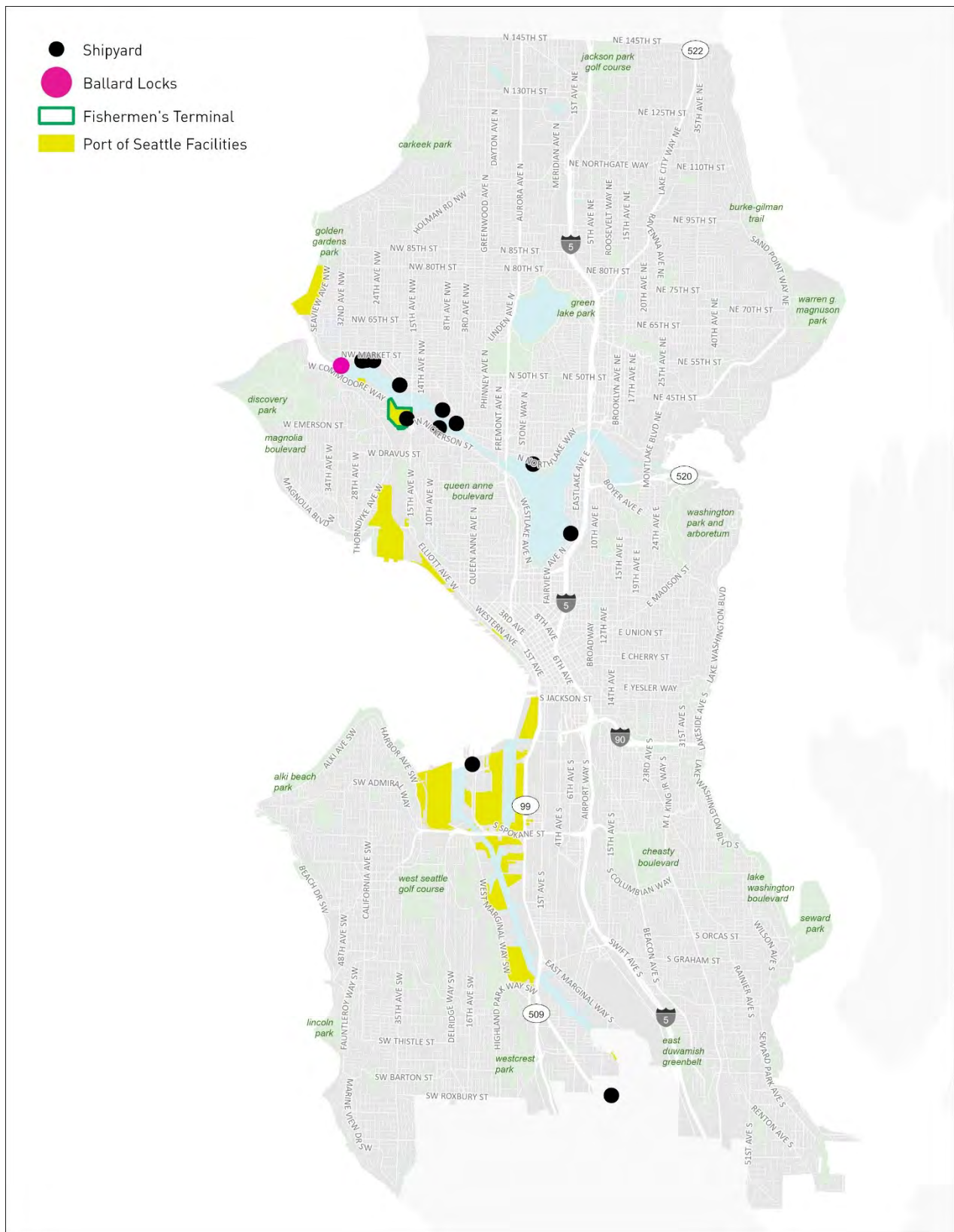
Railroads

Two Class I railroads (annual revenues of more than \$500 million) and a single Class III railroad (annual revenues less than \$40 million) operate in Seattle—BNSF Railway, Union Pacific Railroad (UPRR), and Ballard Terminal Railroad (BDTL). Ballard Terminal Railroad provides a handful of industry customers access to rail and connection with BNSF.

Union Pacific is the second-largest railroad in the U.S., and Seattle is the terminus of its west coast operations. UPRR Seattle rail traffic is primarily industrial service, focused on moving goods for local customers to the transcontinental rail system.

BNSF is the largest railroad in the U.S., running trains through Seattle north to British Columbia, south to San Diego and east to Minneapolis. BNSF leases track and time to Amtrak passenger rail and Sound Transit Sounder commuter trains here in Seattle. Rail transport is most competitive with long-distance trucking and barge transport.

Figure 6: Seattle's Maritime Assets



Intermodal and Transload Facilities

Intermodal freight transport involves the transportation of freight in an intermodal container or vehicle, transferring shipments from one transportation mode to another as the shipment moves from origin to destination, without any handling of the freight itself when changing modes. Freight moves from port to truck, port to rail, port to port, port to air, rail to rail, truck to rail, rail to truck, and every combination in between. Intermodal facilities work cooperatively in anticipation of freight arrivals and departures, as well as up- or downstream of supply chain issues, and to alleviate industry pinch-points.

Transload facilities repack goods between 40' standard ocean-going containers and 53' rail industry containers, which increases efficiency of goods movement between sea and rail modes. The type and capacity of an intermodal facility can vary depending on the nature and type of intermodal connector (e.g., rail, maritime, air, and highway).

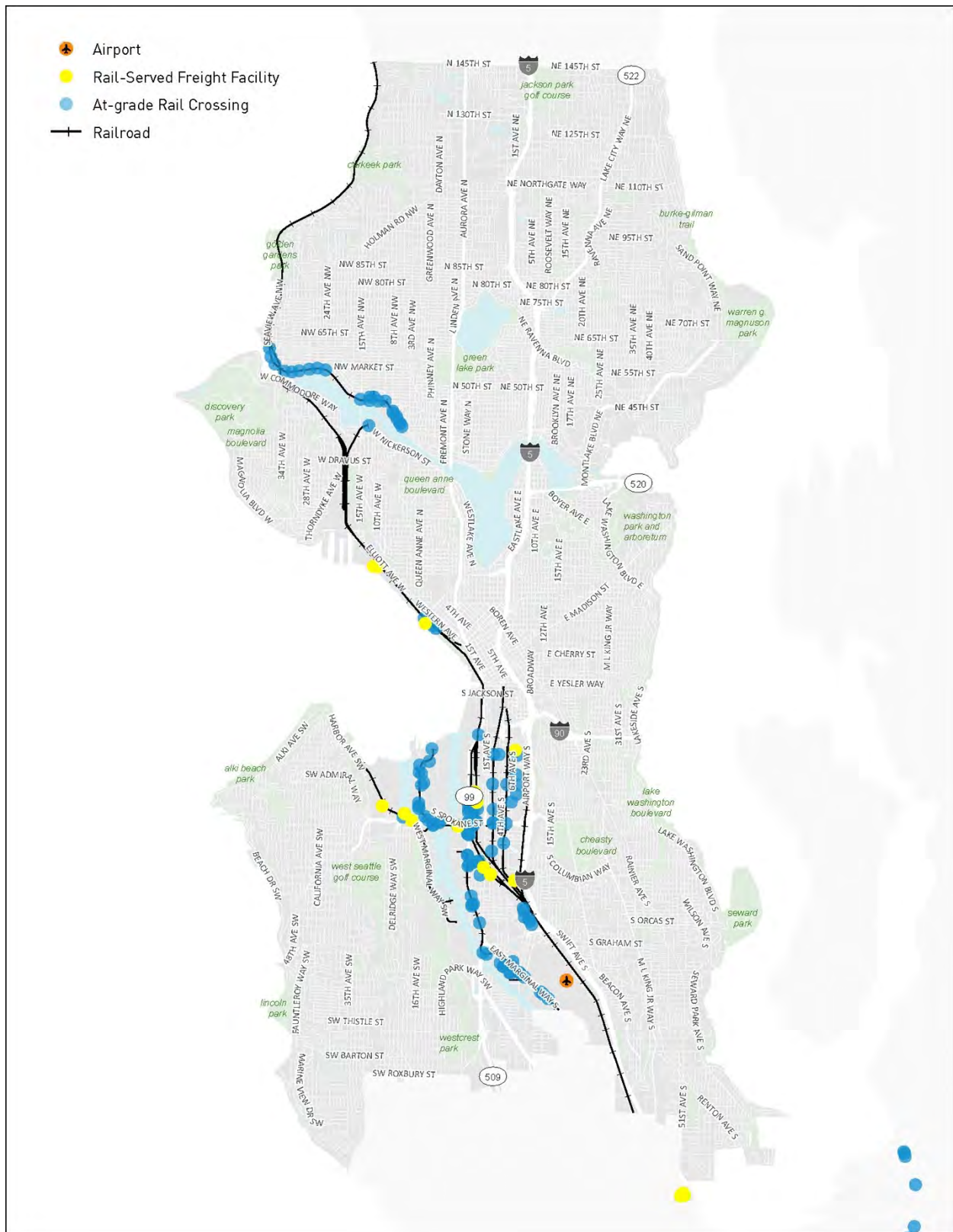
Intermodal facilities are key to railroad operations. It is here that trains are made and disassembled; cargo headed to and from the Port of Seattle and Port-affiliated facilities make their way north, south, and east from these yards. The Argo Yard is UPRR's sole hub in Seattle, while BNSF has numerous facilities—Stacy Yard, Balmer/Interbay Yard, and South Seattle—supporting freight movement.

Airports

The King County International Airport (KCIA, or Boeing Field) is the only airport within the city's boundary. The Boeing Company has been a central part of both KCIA's operations and the regional economy, and its presence attracts a significant number of auxiliary manufacturing businesses.

Figure 7 shows Seattle's rail, intermodal, and airport facilities. Most of these assets are located in the Ballard/Interbay and Duwamish manufacturing/industrial centers and along waterways.

Figure 7: Seattle's Rail, Intermodal, and Airport Facilities



SPATIAL REQUIREMENTS AND OPERATIONAL CONSIDERATIONS

When designing and operating the transportation system to support freight and goods movement, there are a number of spatial needs and operating conditions that must be considered. Our urban operating environment is complex and requires close coordination with industry partners, community, and other interested parties. To support the work outlined in this Element while balancing the spatial requirements and operational needs of freight and urban goods movement, alongside the needs of other travelers, SDOT will seek to:

Provide for the safe and predictable movement of goods. SDOT's work includes designing the network to support the safe and predictable movement of trucks and delivery and services vehicles. Our truck and heavy vehicle design guidance allows for safe truck movements and integrates with other travel options. Truck collisions are generally concentrated on freeways and arterials serving the BINMIC and Duwamish MIC, requiring extra focus. At a broader level, we should consider that MICs sit on environmentally sensitive land with greater exposure to various hazards—tsunami, subsidence, earthquake, sea level rise. We can prepare for our freight networks' resiliency in partnership with industry partners and our local, regional, and state agencies.

Provide for loading and access. Adequate on-street commercial vehicle loading zones, other curbside spaces, and alleys for loading and unloading of goods is a major consideration for freight. Since anyone with a business license can obtain a Commercial Vehicle Load Zone permit regardless of vehicle size, this increases competition for already limited parking spaces that can accommodate trucks. Most downtown buildings lack off-street loading bays, which increases pressure on streets and alleys. The ability to move goods the "final 50 feet" to their destination is a major challenge, requiring that we manage use of curbspace and alleys, while also influencing building design for off-street accommodations.

Advance at-grade rail crossing safety to align with safety goals. We can support improved safety by developing new designs for urban roundabouts to separate turning movements from pedestrians and bike facilities, alongside other truck-compatible traffic calming measures.

Develop and preserve a secure freight network that supports a thriving and diverse economy for Seattle and the region. We will continue to work with partners to educate stakeholders (including the public at-large) about the importance of freight mobility to the local and regional economies. A well-maintained freight network is necessary to support and grow freight dependent family-wage jobs.

Reliably connect manufacturing/industrial centers and business districts within Seattle and the region. Access between Seattle's MICs, port facilities, and the regional highway system is important to maintain and improve. Most interstate and state highways in the Seattle area are at or near capacity during peak periods. This delays not only local traffic and truck mobility, but longer-distance through-trips as well. I-5, and to a lesser degree, SR 99, are congested during peak periods. Working with the Port of Seattle, the Northwest Seaport Alliance, business and

industry organizations, and intermodal partners, we can support efficient access to core intermodal facilities. We'll also explore the use of truck-only lanes and freight and bus (FAB) lanes to improve freight mobility on streets with high truck volumes.

Support efforts to increase safety for freight operators and their employees. Many people are employed in the freight and logistics industries. We can work with industry partners to support health and safety to meet basic human needs for freight employees along the freight network, for example coordinating on truck parking areas (staging), access to restrooms, food, and fuel, or other provisions to support well-being of freight industry workers and their ability to meet federal hours-of-service (HOS) requirement or daily work limits.¹²

Involve interested parties in the planning and design process to help build an efficient and effective network. SDOT coordinates and supports the Seattle Freight Advisory Board and regularly engages freight operators and other interested parties. Many ethnicities and over 20 distinct languages are represented in the freight community. By engaging with and connecting to these diverse communities on a regular basis, we can improve the planning and design of freight-related investments and interventions that improve freight mobility and meet community needs.

Develop funding strategies across multiple partners. Freight network investments cannot be accomplished without strong partnerships and regional coordination. We will continue to coordinate funding strategies across industry stakeholders and partner agencies to raise investment for large and complex freight projects.

Identify and address communities and families specifically affected by freight and related industries. Engaging and co-creating solutions with communities, freight operators, and related industries—from logistics warehousing to the delivery of goods and services—can help mitigate negative impacts from freight and goods movement. By working with this diverse set of communities, we can work to resolve or reduce negative externalities of freight related to air quality, emissions, safety, and congestion. (Supports TEF 20.5) We will also explore effective policies for delivery to the home and small commercial areas. We'll partner with the freight community to continue supporting living wages for families dependent on freight jobs.

Reduce the environmental footprint of the freight fleet. SDOT advocates for the use of alternative fuel trucks and advancing electric options throughout the city (supports TEF 36.2), in the broader effort to reduce greenhouse gas (GHG) emissions produced by freight. Anti-idling policies and other best practices play an important role. We'll continue to support the development of clean delivery and localized goods production to minimize travel, alongside the "greening" of infrastructure on freight routes and in the MICs. (Supports TEF 56.4 and 56.5). Additionally, developing subarea plans can promote coordinated land use and transportation

¹² WA State Freight System Plan and Appendices 2022

decision-making for industrial areas and locations with heavy truck volumes. Subarea plans can enable better identification of specific solutions tailored to the local context.

To support this work, we will explore increasing the application for permitted uses and reduce unpermitted uses and seek to tie allowable uses to responsible partnership with existing environmental requirements for stormwater discharges, dust control, and other requirements. These actions aim to assist in managing industrial operating permits and reporting non-compliance in the MIC's and communities experiencing disproportionate exposure to pollution.

Eliminate maintenance backlog at public at-grade rail crossings. We can support this work by working to streamline the railroad applicant permit process, pursuing an "adverse abandonment" process for inactive rail removal, and completing triennial grade crossing inspection and reporting requirements. We will continue to actively pursue and maintain railroad partner relationship and work to apply safety modifications necessary at locations identified in the Washington State Rail Plan. We'll also seek to eliminate redundant rail crossings in residential communities, such as Georgetown.

Develop and advance an active planning cycle for freight project design and grant funding. SDOT routinely maintains awareness of Federal Railroad Administration (FRA), FHWA, Federal Transit Administration (FTA), and other federal grants available to address freight improvements. To support this work, we develop strategies to regularly pursue grants that align project delivery timelines with federal funding opportunities. We will seek to advance entire corridor improvements that can be constructed in partnership with public and private-sector stakeholders, and coordinate funding strategies across multiple stakeholders to raise investment for complex freight projects.

Inputs for Project Development

Develop a standard to measure right-of-way tradeoffs for design along freight corridors to use during project development.

- Evaluate outcomes from existing measures and policies, which could include travel time and reliability, to establish right-of-way allocation measures and goals on the freight network.
- Integrate the operational measures and goals into the complete streets process for project development to streamline right-of-way tradeoff decision-making alongside other multi-modal operational measures and goals where designated corridors overlap.

Table 3 presents how spatial and operating needs vary by freight network street type, street function, and several other major characteristics that require guidance to provide safe and efficient access for trucks. This table serves as a starting place for a more detailed toolbox for freight and truck facilities.

Table 3. Spatial and Network Guidance for the Freight Network by Street Type

		Factors				
		Land Use Context	Curbside Loading Needs & Parking Design	Time-of-Day Delivery Feasibility	Physical Roadway Design	Safety Treatments
Description		Business type and commercial activity	Parking and loading designs	Times when businesses can send/receive deliveries	Roadway design features	Types/application of road safety, traffic calming, or at-grade crossing improvements
Roadway Network Factors		Land use determines truck activity levels	Truck size and loading requirement affects space needs; service vehicle parking considerations	Impacts commercial loading or truck access hours	Appropriate lane widths, turn radii, driveway aprons	Truck streets require special consideration for safety measures
Roles & Responsibility		City of Seattle property owners	SDOT, private owners	Private entities, Port of Seattle	SDOT, WSDOT, FHWA	SDOT, WSDOT, FHWA, BNSF, UPRR, BDTL, FRA
Major Truck Streets	Through Connector	Primary connectors to and from MICs, intermodal facilities, regional freeways	Requires special considerations to accommodate truck loading given higher traffic, transit, and other activity on these corridors	N/A	Maintain standard travel lanes and turn radii. Consider Freight-only lanes and Freight-and-bus (FAB) lanes in key network segments	Provide truck-compatible traffic calming features
	Servicing Destinations	High-activity commercial generators, limited residential	Requires high number of commercial loading spaces that can accommodate large trucks	N/A	Provide standard turn radii	Minimize use of median barriers
Minor Truck Streets	Through Connector	Connecting to/from major truck streets, urban commercial districts	Requires assessment to determine appropriate parking	N/A	Maintain standard travel lanes and turn radii	Coordinate traffic calming and safety treatments on streets with higher truck volumes
	Servicing Destinations	Low-activity commercial generators, some residential neighborhoods	Requires minimum of commercial loading spaces that can accommodate smaller single-unit delivery vehicles	N/A	Provide designs that accommodate smaller trucks	Apply safety treatments that can accommodate smaller single-unit delivery
Limited Access	Industrial Trips	MICs	N/A	N/A	Maintain standard lane widths and highway design standards	Prioritize truck safety treatments
	Regional Trips	N/A	N/A	N/A	Maintain standard lane widths and highway design standards	Prioritize freeway truck safety treatments

THE FREIGHT TOOLBOX

The freight toolbox offers strategies to address freight mobility and safety needs, while also incorporating new tools as best practices evolve. The toolbox provides a menu of options that may be used alone or in combination with others to address freight system issues including:

Maintenance and Preservation

Maintenance and preservation include pavement and bridge investments, such as repaving roads and bridges in poor condition, paving unpaved roads and shoulders, and seismic upgrades of existing infrastructure. It also includes regular street cleaning and removal of overgrown shrubbery and foliage to maintain a clear pathway. These projects are especially important on routes with high truck volumes, including the Heavy Haul Network. Information from the city's pavement management database is used to determine paving needs, which helps preserve infrastructure investments and improve conditions for all roadway users.

Intelligent Transportation System (ITS) Applications

ITS provides for communications with the city's central Transportation Operations Center (TOC) and allows the TOC to provide real-time intervention to adapt signal timing to traffic conditions. This communication provides real-time traveler information on bottlenecks and current travel time to truck drivers and dispatchers. ITS projects offer decision-making tools for both system users and managers to improve mobility and operations.

ITS applications include a variety of technologies to improve travel across the city and address safety and mobility needs, including:

- Closed-circuit television (CCTV) traffic cameras
- Dynamic message signs
- Portable changeable message signs
- Traveler's information website and apps
- Traffic signals, including detection, signal priority, and pedestrian count-down signals
- Rail crossing closures and bridge openings
- New and emerging technologies

Implementation of ITS applications may require private and public collaboration to ensure that benefits are fully realized. Intersection signal operations also fall under ITS applications. They can include a range of signal timing improvements on truck corridors, such as signal priority or adjusting signal timing to facilitate heavy truck movements. These signal improvement strategies can significantly improve truck mobility and access.

Wayfinding

Something as simple as clear and legible wayfinding improves overall safety by indicating which streets are best suited for trucks. Wayfinding for trucks may include signs striping, roadway markings, physical barriers, and diverters on city streets, at intermodal facilities, and on state highways to improve route decisions and reduce illegal movements. These are quick, low-cost strategies to help truck drivers identify truck routes and avoid routes with height and weight restrictions. Signs and maps, such as the South Seattle Truck Routes map, must be clear, intuitive, and standardized.

Geometric Improvements

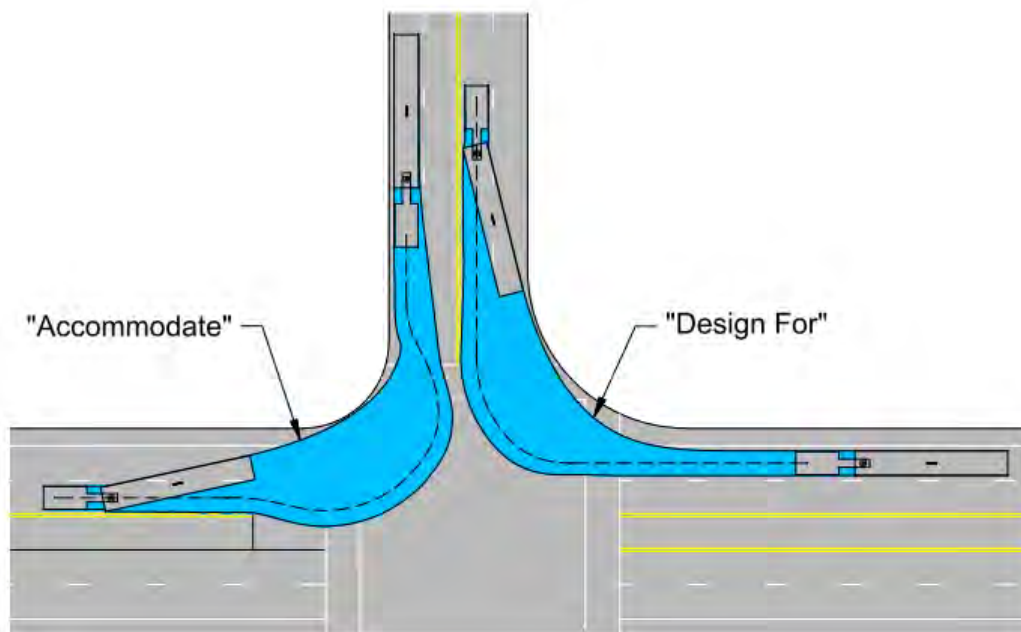
Improved constructed roadway geometry supports freight movement and allows truck traffic to blend in harmoniously and travel predictably with other roadway users. Small-scale geometric improvements for better truck mobility and access include:

- Adding left-turn lanes at critical intersections
- Adding truck-only lanes on highly used truck routes
- Repositioning utility poles
- Standardizing lane widths
- Modifying curbs and/or providing recessed stop bars to allow long trucks to easily turn corners
- Signals and/or modifications to buildings with alley access; address safety issues at alley entry points

A key concept in the design of a project is the “design for” versus “accommodate” trucks, especially as they make turns at an intersection. With the safety of all users in mind, the goal is to allow truck movements for specific truck types at specific locations (context-sensitive), while incorporating the smallest possible curb radius to limit pedestrian crossing distances at intersections and provide pedestrian safety. This is in line with the city’s Vision Zero goals to eliminate serious injury and fatal crashes.

Accommodating a vehicle allows for encroachment of other lanes, shoulders, or other elements to complete the required maneuver. Designing for a vehicle does not require encroachment onto those elements. *Streets Illustrated (Seattle Right-of-Way Improvements Manual)* defines when “designed for” versus “accommodate” should be employed for street designs, including for the freight network and transit networks that must address large vehicle movements. The concept of design for versus accommodate is depicted in **Figure 8**.

Figure 8: “Designing for” Versus “Accommodating” Vehicles



As shown in **Figure 9** there are various types of freight trucks traveling on city streets, each with their own unique design characteristics. These include weight, distribution over axles, dimensions (width and height), and turning radius. Providing adequate right-of-way for freight movements can support the ability of a range of truck types to operate in a safe and efficient way.

Typically, an intersection turn movement is considered “designed for” if the design vehicle is allowed to encroach on the lane adjacent to the typical receiving lane for the turn movement (right lane for right turns), provided that encroachment is not into opposing traffic.

When accommodating truck turning movements, over-steering of the truck into adjacent lanes is generally assumed to occur within the intersection. This may require a setback of the stop bar for opposing traffic.

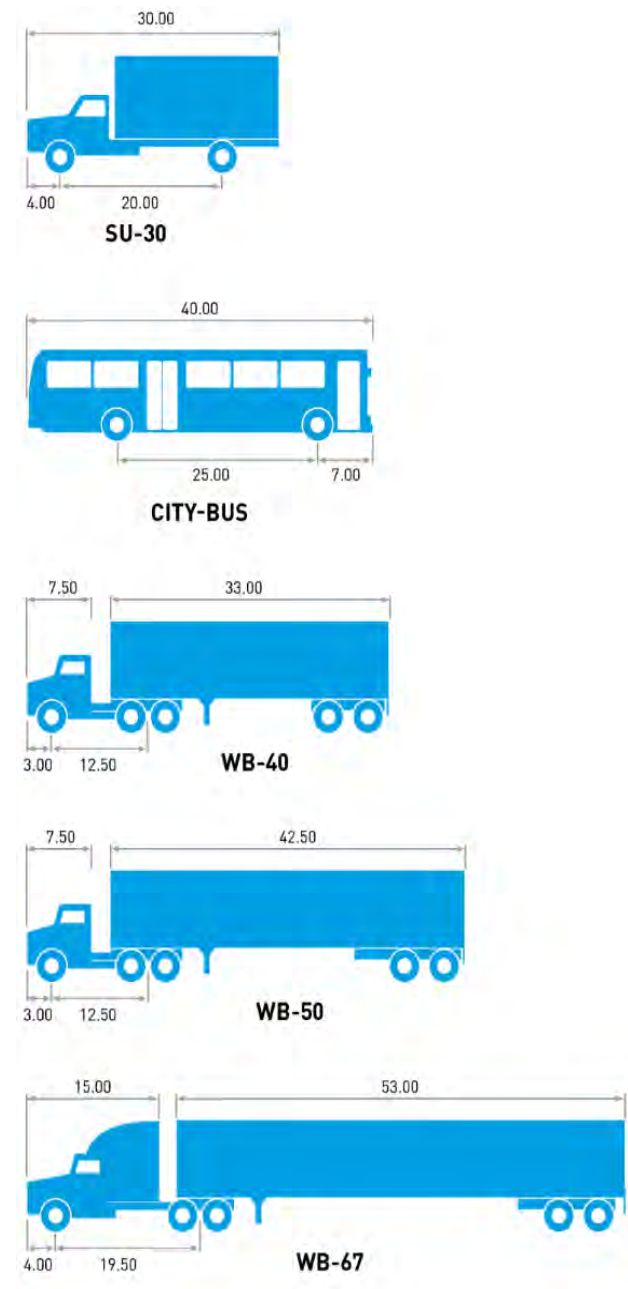
Providing updated information and education opportunities to drivers, pedestrians, and cyclists about accommodate for” and “designed for” turn movements can also help to increase safety at intersections.

Freight Operations Management

Freight operations management includes a range of treatments such as truck restrictions, time-of-day variations, idling control, and loading zone control. Options include management of traffic to prioritize freight movements during certain times of the day, areas, or street segments, such as establishing delivery windows and off-peak delivery.

These projects can reduce traffic congestion and improve parking conditions on congested urban streets with limited additional physical capacity or infrastructure.

Figure 9: Typical Vehicle Designs



Capital Investments

Capital investments can address a range of mobility and connectivity needs. They may be large investments (costing \$100M or more) or smaller-scale spot improvements (typically under \$500,000). These types of improvements include:

- Grade-separation of roadways
- Bridge replacement or retrofit
- New roadway connections
- Direct freeway access ramps
- Truck-only lanes
- Overnight parking for trucks and electric charging facilities

Large capital projects may consist of packages of smaller-scale projects that can be implemented in phases. We also make spot improvements—small-scale projects that improve truck mobility through key bottleneck locations. A dedicated spot improvement program allows the city to be more responsive to smaller, unforeseen needs as they arise.

Freight Mitigation

Freight projects can also include elements to mitigate the impacts that freight may have on the environment or surrounding neighborhoods. These projects may overlap with other toolbox items, like paving unpaved roads and shoulders, or incorporating stormwater management into a project. Additional strategies include increasing the tree canopy in the MICs, reducing truck idling, and promoting use of zero-emission trucks (electric or clean-energy powered trucks) to improve air quality in areas highly affected by freight.

Modal Conflict Resolution

Specific locations may require improvements to alleviate conflicts with other travel modes and increase safety. These conflicts may be with other freight modes, such as at-grade railroad crossings, or with transit and people walking or bicycling. Where freight routes share a street with a bicycle route, facilities for trucks and bicycles should be clearly separated and comply with width and materials standards, consistent with *Streets Illustrated*. Generally, improvements could include grade separations at railroad crossings or separated facilities (such as protected bike lanes where appropriate) to provide for the predictable movement of all users.

PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than specific to a project) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives we will seek to implement. Over time, it's not uncommon for program groupings and organization to change; however, the programmatic activities listed here provide helpful general information to describe the types of tools and methods SDOT will employ to manage the transportation system.

Urban Goods Movement and Delivery Planning

On-demand goods and service delivery has increased significantly as customers purchase and receive products online. Growth in e-commerce has increased pressure on limited curbside space in our urban neighborhoods and business districts, especially those locations with limited off-street parking and loading opportunities. We will seek to develop long-term strategies for promoting urban goods delivery. See the Curbside Management Element for more information.

Additional freight and urban goods strategies and actions may include:

- Establish minimum distances for loading opportunities from any business address, either in on-street, alley, or off-street locations; maintain or reassign loading locations when designing transportation and private development projects
- When alleys are vacated, address loading and circulation impacts to adjacent/nearby properties
- Improve enforcement of commercial vehicle load zones and other related zones.
- Expand commercial vehicle load zone and related zone hours to 24 hours a day, 7 days a week in select locations
- Review commercial vehicle load zone permit process and pricing to manage demand, access, and types of user
- Consider potential expansion of the Downtown Traffic Control Zone in a manner that improves daytime street network reliability but still provides sufficient urban good delivery access
- Recommend on-/off-street tactics for bicycle, non-truck, and small truck deliveries in dense areas
- Explore best off-street loading practices, including loading dock development and use standards
- Develop a pilot program for off-hours delivery in areas with a mix of residential and commercial land use to facilitate truck movement
- Explore freight demand management strategies to consolidate freight delivery trips and ensure vehicles are rightsized for an urban environment
- Identify and employ innovative uses of technology to guide urban good deliveries to destinations and manage access to loading locations

- Develop a data collection plan and seek funding to regularly monitor on-street and off-street commercial loading locations and gather user input.
- Reevaluate and update design requirements in new development.
- Collect and maintain citywide truck data.
- Gather data required for triennial grade crossing reporting through Federal Railroad Administration's (FRA) Grade Crossing Inventory System via Washington State Utilities and Transportation Commission, including annual average daily traffic (AADT), percentage of trucks, percentage of school buses, emergency vehicle routes, etc.



A bicyclist and vehicle wait at an at-grade rail crossing for a BNSF train to pass at Alaskan Way and Broad St in Downtown Seattle. Shared bikes and scooters are parked nearby. Image Source: SDOT

Critical Access Needs (CAN) Curbside Review

Critical access needs at the curbside include passenger and goods loading/unloading, waste staging/collection, building maintenance, and more. During project development processes, CAN reviews should consider safe and efficient access for freight and goods deliveries. Such reviews should be conducted when a project physically and/or programmatically alters curbside access for an adjacent property and limits or eliminates building critical access needs.

Neighborhood Delivery Hubs

Zero-emission neighborhood delivery hubs in key areas of the city can support growth in urban goods deliveries while advancing the STP goals. By partnering with off-street parking lot

operators, we can open and manage delivery hubs to provide additional support to freight partners in need of off-street delivery space for e-cargo bike coordination and to further improve last-mile delivery efficiency. We can look to other peer city partners that are launching similar programs, such as in New York City and Portland, OR. Activities to explore and develop neighborhood delivery hubs may include:

- Identify and fund program development and partnerships
- Examine land use code zoning for opportunities and barriers for neighborhood, micro-hub type developments
- Explore implementation of urban consolidation centers, joint distribution centers, or local building logistics centers in Seattle
- Work with other City departments and agencies to conduct a feasibility study to create urban consolidation centers, joint distribution centers, or local building logistics centers
- Assess real estate opportunities, site development needs, and partner options, including third-party logistics firms

Support for Low- and No-Emissions Vehicles

The curbside element plays an important role in meeting our ambitious climate goals, including support for the shift toward electric vehicles. Freight and commercial goods are an important part of our economy. However, almost all commercial deliveries to bring packages to residents and businesses are made by gas or diesel-powered vans and trucks, which contribute to poor air quality, congestion, and safety issues. We will work collaboratively with the private sector and our local business community to be a liaison for the zero-emission transition, including the use of rightsized personal delivery devices (PDDs) to support urban goods movement.

Commercial Cargo E-Bike Program

Development of a commercial e-cargo bike program is another way to reduce freight-related emissions. This includes design of e-cargo bike standards, rules of operation, and new curb space allowances in the ROW for parking and loading. Program development will include legislation, outreach, and monitoring for the duration of the program.

Other elements of a commercial cargo e-bike program could build upon the findings of two relevant study efforts. In 2020, the University of Washington's Urban Freight Lab (UFL) published a report on a test delivery pilot in Seattle for cargo e-bikes. The study evaluated the implementation of e-bikes with removable cargo containers to perform last-mile deliveries in downtown Seattle. The study compared truck versus e-bike metrics for time spent cruising for parking, delivery distance, and dwell time. The results also included evaluations for delivery area, number of delivery locations, number of packages delivered, and failed first delivery rate.

SDOT's 2023 Zero Emissions Freight report evaluated e-cargo bike program typologies across North America to determine the best approach for a Seattle commercial e-cargo bike program. The final report identifies a three-tiered program approach for cargo bikes to operate safely and efficiently on Seattle streets. Pursuit of zero emission freight curb management programs supports Mayor Harrel's 2022 Climate Executive Order.



Electric pallet used for goods delivery

E-Cargo Bike Lending Libraries

Due to the cost-prohibitive nature of many zero emission delivery vehicles, including e-cargo bikes, additional programmatic support is needed to ensure the city's small to medium business community is supported in the transition. One way to do this could be to launch e-cargo bike lending libraries at community hubs to provide bikes on a lease-to-own basis. Similar to ride-and-drive events for electric vehicles, these libraries would allow businesses to test e-cargo bikes and learn from community advisors how they may fit into their existing operations before making a purchase. Development and management of E-cargo Bike Lending Libraries may include:

- Identification of external funding and vendor selection process
- Incentive program development to pair equipment discounts with library launches
- Ongoing staff management and business outreach support

Low- and Zero-Emission Loading

Setting loading zone standards can help drivers better navigate traffic and achieve more efficient deliveries, reducing circling for parking and associated emissions. To further Seattle's climate goals and urban delivery improvements, climate-friendly loading facilitated through a low- and zero-emission loading program would provide priority access for climate-friendly vehicles and incentivize freight companies to transition to EV alternatives. Development of this program would build upon work with the C40 Zero-Emission Freight Project and the Green and Healthy Streets Accelerator signatory cities and partners, aiming to accelerate the uptake of zero-emission vehicles (ZEVs) and infrastructure for zero-emission urban goods and servicing transportation. See Curbside Management Element for more.

Green Infrastructure in Industrial Areas

To support climate and livability goals, we will seek to plan, design, and construct green infrastructure, such as tree canopy and bioswales, in the MICs. Complementary strategies and actions include:

- Assess landscaping in the right-of-way to reduce truck-specific sightline issues on the freight network
 - Regularly maintain landscape complexes
 - Integrate the freight network into landscape maintenance management plans
- Assess street trees in the right-of-way to reduce truck-specific sightline issues on the freight network
 - Evaluate overlap of the freight network with SDOT-maintained street trees and integrate the freight network into tree maintenance plans
 - Assess and enforce tree clearance issues along the freight network for trees that are privately owned and maintained

Freight and Bus (FAB) Lanes

Our efforts to pilot and evaluate the performance of FAB lanes in strategic street segments in the city will require close coordination with associated transit improvement projects and development of transit infrastructure. Learnings from the pilot can be used to formalize and update the freight lane policy and fine-tune evaluation and design criteria to ensure that freight and transit can coexist in, and benefit from, a shared lane. Implementation of a FAB lane is not intended to remove a road segment's freight network designation.

MAINTENANCE AND MODERNIZATION

Maintaining and improving the freight network is essential to preserving access and mobility for goods movement throughout the city, as well as advancing our safety, climate, and equity goals. Alongside maintenance, we seek to continually modernize supportive infrastructure, which includes updating our policies, processes, and procedures to align our work with our goals, and as new and emerging best practices become available. A summary of key actions related to maintenance and modernization is included below.

Transportation Asset Management Plan

Strategically manage the life cycle of our freight assets in accordance with our Transportation Asset Management Plan (TAMP) to achieve the best performance results for the preservation, improvement, and operation of infrastructure assets, given the resources available. This will include the monitoring of pavement quality for the freight network, including the heavy haul network, critical freight corridors, and first-and-last mile connections among other freight-related infrastructure assets.

Update Streets Illustrated (Seattle Right-of-Way Improvements Manual)

Based on the tools in the freight toolbox, update *Streets Illustrated* to reflect best practices in design guidance and standards. Additional strategies to increase safety between and among modes that should be considered when updating *Streets Illustrated* include:

- Integrate planning for freight with other modes. Use the multimodal right-of-way allocation process within the updated Comprehensive Plan to move people and goods as safely as possible.
- Assess conflicts between transit and freight mobility. Design transit waiting and boarding facilities to minimize conflicts with goods movement and deliveries.
- Assess conflicts between bicycle and freight mobility. Address freight delivery needs, including alley access and Commercial Vehicle Load Zone locations, when developing bicycle infrastructure projects to minimize conflicts with goods movement and deliveries.
- Design bicycle facilities to provide predictable movement of people on bicycles and to avoid conflicts with goods movement and deliveries. Assess conflicts between pedestrian and freight mobility.
- Design pedestrian facility treatments to provide predictable movement of people and to avoid conflicts with goods movement and deliveries.
- Review pedestrian crossing opportunities on streets in the freight network and provide controlled or pedestrian-activated crossings, where appropriate

Rail Safety and Maintenance

A range of initiatives to improve safe interactions between various travel options and trains at rail crossings could include:

- Staff for onsite inspections to field-verify conditions and needs and perform required triennial inspections for USDOT inventory updates
- Necessary enhancements to address any safety concerns
 - Duty to maintain crossings
- Railroad responsibility to maintain crossings per RCW 81.53.90
 - Traffic signal preemption and active warning devices
- Partnerships with railroad companies to evaluate and make improvements at at-grade rail crossings; upgrades should be coupled with multimodal, environmental, drainage, and greening improvements for freight and other modes
- Assess conflicts between pedestrians and freight, as well as between bicycles and freight
 - Out-of-service track removal and street surface repairs
- Track removal may require additional legal proceedings. In some cases, it may only require the railroad to “retire” the track. Full street rehabilitation will require a full capital program—it is not a spot improvement.
 - Surface light-rail and streetcar corridor safety enhancements
- Collaborate with transit partners to ensure safety in these corridors as they relate to freight mobility
- Assess conflicts between transit and freight mobility
- Increase security around railyards and rail corridors, including anti-trespassing measures (fencing, etc.) being forwarded by Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), and Washington State Utilities and Transportation Commission.

See the Bicycle and E-Mobility Element for more information about rail crossing improvements.

RAILROAD CROSSING SAFETY

Collisions between trains and vehicles at grade crossings are the second leading cause of rail-related fatalities across the U.S. Between 2012 and 2021, about 364 highway-rail grade crossing incidents occurred in Washington (including 53 incidents with Amtrak trains), leading to 54 deaths and 104 injuries. Nearly 80 percent of the incidents were at public highway-rail crossings.

Railroad crossings that are blocked by slowly moving, extremely long, or stopped trains are also a concern across the state, especially as freight and passenger traffic increases on both roadways and rail lines. Blocked rail crossings can create safety risks to local communities by temporarily increasing emergency response times.

An increase in train lengths following the implementation of precision scheduled railroading (PSR) operating practices on Class I railroads is a safety and mobility concern for communities living near at-grade crossings in Washington.

From WA State Freight System Plan & Appendices, 2022, page 35

DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

A freight-friendly city supports the efficient movement of goods to help strengthen the economy for the city and the region. It provides safe operating environments—separation of travel modes and predictable movements for all travelers on city streets. It also includes:

- **Reliable access to/from manufacturing/industrial centers and intermodal hubs**
- **Clear designation of truck streets/routes** to avoid trucks using alternate routes
- **Reduced freight-related impacts** on nearby historically underserved communities adjacent to the industrial lands
- **Reduced carbon emissions and noise pollution** by promoting the transition to low- or zero-emission truck fleets and incorporating consolidated delivery hubs with electric vehicles
- **Keep up well-maintained truck facilities** including loading zones, truck routes, wayfinding signs, truck parking, and other assets related to goods movement
- **Reduced impact to emergency response vehicles**
- **Critical freight and goods delivery access** to buildings
- **Responsiveness to changing trends** and increased demand for urban goods and e-commerce parcel deliveries
- **Proactive maintenance** of at-grade rail crossings and consistent railroad interactions
- **Safe, clean, and comfortable spaces** for employees and travelers in industrial areas to rest outside of work and vehicles

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommended performance measures to monitor the implementation of the STP Freight and Urban Goods Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching outcome-based measures are identified in the STP implementation strategy (see Chapter 4 of the Part I document). Generally, they are tracked at a citywide scale, and SDOT may not have primary control over their achievement. Examples include a reduction in vehicle-miles traveled and the percentage of household income dedicated to transportation.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include increasing the percentage of fleet vehicles that are zero emissions and increasing the percentage of Major Truck Streets with fair or better pavement condition.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples might include increasing the number of truck street segments with annual truck counts and the lane miles of heavy haul network reconstructed.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that SDOT can pivot as needed to meet our equity goals over the next 20 years.

The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.¹³

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 4 on the following page identifies the Tier 2 performance measures that will be tracked for the Freight Element.

¹³ <https://data.seattle.gov/dataset/Racial-and-Social-Equity-Composite-Index-Current/w3kz-xtmq>

Table 4: Freight and Urban Goods Movement Performance Measures

Desired Outcome	Performance Measure (source)	Baseline (year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goal
End traffic deaths and serious injuries on city streets	Number of fatal and serious injury crashes involving trucks or rail (SPD collision report data)	4 (2022)	Zero	Yes	Safety Equity Sustainability Livability
Improve reliability of freight corridors	Percent of Major Truck Street network operating reliably (TBD) ¹⁴	TBD	Increase percent of network operating at a TTI of 1.5 or better ("Travel Time Index" (TTI) – ratio of congested to free-flow travel time on a segment)	Yes	Mobility & Economic Vitality Maintenance & Modernization
Decrease the carbon footprint of in-City package delivery	Percentage of fleet vehicles that are zero emissions (TBD) ¹⁴	TBD	30% of goods delivery fleet is zero emissions by 2030	No	Sustainability Mobility & Economic Vitality Livability Maintenance & Modernization
Support a well-maintained freight network	Percentage of Major Truck Streets with fair or better pavement condition (SDOT)	58% (2023)	Achieve and maintain a higher percent of Truck Street segments with fair or better pavement conditions than streets as a whole	Yes	Safety Mobility & Economic Vitality Maintenance & Modernization

¹⁴ Seattle DOT working to identify an appropriate dataset to calculate this baseline.

RELEVANT TEF TACTICS

- TEF 17.3—Provide low-tech and language-accessible information to businesses about parking/loading and how communities can make requests for load zones or other curbside uses.
- TEF 20.5—Consider travel time and air quality impacts of changes to roadway configurations. Use this information to make equitable investment decisions that consider travel time and air quality impacts and benefits, and to communicate those benefits and impacts to community.
- TEF 22.1—Analyze how movement of goods were impacted during COVID-19 and whether there are specific ways we can maintain any benefits that were seen.
- TEF 36.2—Support transition to EVs for all segments of transportation, including personal mobility, goods movement, and services (e.g., skilled labor/repair, landscapers, home health care workers, trash collection) through targeted, equitable incentives and policy design. Implement related actions in the Transportation Electrification Blueprint.
- TEF 37.4—Identify and allocate funds to new or existing programs to address pedestrian safety concerns that are reflected from community data collection.
- TEF 40.1—Emphasize and incorporate pedestrian safety into the street character and design process; ensure staff are trained and educated on how to do this.
- TEF 40.3—Include individual and community's crossing needs and challenges into data storytelling and incorporate this qualitative data into SDOT decision-making processes.
- TEF 56.4—Improve, identify, and maximize current opportunities for street trees and greenscapes in SDOT activities ranging from routine maintenance to capital project delivery; ensure design guidance and functions of maintenance include this consideration for long-term sustainability.
- TEF 56.5—Increase open space for improved air and water quality, implement de-paving projects, and commit right-of-way (ROW) allocation in areas that are impacted by nearby industrial land uses.

APPENDIX A: FREIGHT PROJECTS

Table 5: Freight Projects below includes key freight projects building upon the 2016 Freight Master Plan (FMP) and the 2020 Freight Program Report.

The project number associated with each project in the FMP is included for reference.

Projects 1 through 5 are large catalyst projects that will require multiple funding partners to implement.

Omitted FMP project numbers represent projects completed since adoption of the Freight Master Plan.

Table 5: Freight Projects

FMP No.	Project Name	Project Description
1	Ballard Bridge Project	Replace structure to increase capacity and improve access.
3	SODO Rail Corridor Grade Separation	Improve access to manufacturing and industrial center and Port of Seattle facilities. May include non-motorized grade separation to increase safety and reduce modal conflicts.
4	4 th Ave S Viaduct Replacement (4 th Ave S grade crossing over Union Pacific Railroad Argo Yard)	Replace the viaduct structure spanning the Union Pacific Railroad (UPRR) yard at the conclusion of its service life, which is expected to occur within the 20-year planning timeframe (by 2035). The new structure will increase vertical clearance above the railroad tracks to improve safety and rail operations. Columns and pier walls will be removed to increase and optimize rail yard functionality and operations.
5	1 st Ave S Viaduct Replacement (Grade crossing over Union Pacific Railroad Argo Yard)	Replace the existing viaduct structure spanning the Union Pacific rail yard at the end of its useful life span
6	BINMIC Truck Route Improvements (Area bounded by W Dravus St, W Nickerson St, NW Market St, and Fremont Ave N)	<p>This project will evaluate truck freight movements to identify projects to address geometric and operating challenges for trucks. The projects will be focused on readily implementable improvements with primary consideration given to safety and freight connectivity. They may include signal timing adjustments, additional signage or wayfinding, larger intersection turn radii, lane width adjustments, and joint use of bus lanes.</p> <ul style="list-style-type: none"> • Phase I: Collect data on needs through a detailed assessment of truck volumes, truck sizes, and over-dimensional truck activity. Build from the forecasts developed in the Freight Access Project and work with stakeholders to identify and prioritize specific truck route projects. • Phase II: Implement top priority projects given funding availability and opportunities. Develop a long-term budget and funding strategy to implement remaining projects.
7	15 th Ave W Spot Improvements at W	This project addresses turn radii issues for trucks and enhanced multimodal operations through small-scale geometric and intersection operational improvements along 15 th Ave W.

FMP No.	Project Name	Project Description
	Dravus St and W Emerson St	<p>Trucks of all sizes experience challenges traveling on the elevated structures at W Emerson St and W Dravus St. 15th Ave W, W Emerson St, and W Dravus St are vital connections for freight traveling to and from the Ballard-Interbay-Northend Manufacturing/Industrial Center (BINMIC). This project includes two components to implement changes at these locations.</p> <ul style="list-style-type: none"> • The W Emerson St ramp over 15th Ave W serves trucks going to and from W Nickerson St. This component includes moving the centerline on the ramp to provide a greater turning radius for trucks and making adjustments to the stop bars channelization at the intersection on the west side of the ramp. • W Dravus St is used by trucks of all sizes, including over-legal vehicles unable to pass underneath the bridge on 15th Ave W. Northbound trucks have particular difficulty turning left onto W Dravus St from the off-ramp. This component of the project includes upgrading signal timing and hardware at the ramp terminals to ensure vehicle queues on the bridge clear to allow trucks adequate space to turn at the intersection. This project can be bundled with Ballard Bridge Access improvements.
8	15 th Ave NW/ NW Market St Intersection Improvement	Improve southeast corner curb radius, which would impact existing signal equipment.
9	15 th Ave W/ Elliot Ave	Reconstruct and make operational/ ITS improvements to 15th Ave W/Elliott Ave W.
10	Dynamic message signs along 15 th Ave NW corridor (Ship Canal to Holmon Rd NW)	Install dynamic message signs to provide travel conditions on major freight corridors prior to connecting to major truck streets.
11	NW Leary Way at NW 46th St or NW 45th St (NW 46th St to Shilshole Ave NW)	Intersection operations should be evaluated and treatments considered to improve access to/from NW 46th Street or NW 45th St. Type of improvements to be coordinated with outcomes of the BINMIC Truck Route Improvements.
12	W Emerson St/21st Ave W/W Commodore Way Corridor Improvements	Reconstruct the existing intersection at 21st Ave NW and W Commodore Way to improve truck safety and mobility and improve bike/ped/truck facilities on W Emerson Place and 21st Ave W.
13	NW Market St / Leary Way NW / N 36th St Improvements	Reconstruct and make operational/ITS improvements to Leary Way NW corridor to facilitate freight movement. This project would coordinate specific truck operational improvements with the BINMIC Truck Route Improvements.
14	Mobility improvements along NW Market St between 8th Ave NW and Stone Way N	Restrict left turns at non-critical intersections to improve east/west mobility for freight.
16	Intersection Improvements at 4th Ave N, Westlake Ave N, Dexter Ave N, and Nickerson St	Evaluate the intersection of 4th Ave N, Westlake Ave N, Dexter Ave N, and Nickerson St to improve freight mobility.

FMP No.	Project Name	Project Description
17	Intersection Improvements at 6th Ave NE and NE 40th St	Eliminate the height restriction and turning movement conflicts on 6th Ave NE at the Burke-Gilman Trail bridge.
18	3870 Montlake Blvd NE - Montlake Blvd NE height restriction	Eliminate the height restriction on Montlake Blvd NE at the pedestrian bridge connecting UW to the Alaska Airlines Arena.
19	Ballard Bridge Access and Seismic Improvements	Address capacity constraints for bikes and pedestrians and seismic improvements to the Ballard Bridge.
20	7th Ave NE/ NE 40th St Intersection improvements	Reconfigure intersection to facilitate turning and crossing movements at 5-leg intersection.
21	Integrated corridor management system on N 85th St between 15th Ave NW/Holman Rd NW and I-5	Implement Integrated Corridor Management (ICM) and provide the opportunity for freight to avoid congestion on a given facility when it is present. Consider dynamic message sign and/or push out data on I-5 conditions and back-ups. Implement additional permanent surface street data collection.
22	ITS Improvements N 85th St from Aurora Ave N to I-5	Install traffic signal control improvements (either traffic adaptive or responsive) to provide consistent travel times on freight corridor. Implement additional detection to provide congestion information.
23	Dynamic message signs along 25th Ave NE corridor (Ship Canal to Montlake Blvd NE / NE 75th St)	Install dynamic message signs to provide travel conditions on major freight corridors prior to connecting to Major Truck Streets
24	ITS improvements Aurora Ave N	Modify signal timing on northbound Aurora Ave N to improve freight traffic during the morning peak.
25	W Galer St Interchange Ramp	Construct ramp to improve access over BNSF mainline tracks and storage yard.
26	Nickerson St / W Nickerson St Reconstruction	Reconstruct Nickerson St and improve freight movement alternatives in the Ballard-Interbay-Northend Manufacturing/Industrial Center.
27	Denny Way ITS (Denny Way from I-5 to Western Ave)	Update signal timing, vehicle detection, CCTV cameras, dynamic message signs, and fiber communications to improve traffic flow and provide enhanced traveler information along Denny Way from I-5 to Western Ave.
29	I-5 Connector ITS (areas surrounding I-5)	Installation of CCTV cameras along streets that provide Center City access to I-5/I-90 to provide congestion monitoring of traffic interchanging with the freeway.
30	ITS upgrades on Boren Ave from Howell St to S Jackson St (Rainier Ave S to Denny Way)	Upgrade all signals in Major Truck Street corridor to current-standards and improve north-south mobility in center city.
31	East Marginal Way S Corridor Reconstruction and Safety Enhancements (S Spokane St to S Michigan St)	Reconstruct a core freight route to heavy haul vehicle standards, add safety and advanced management systems and incorporate separate bicycle and pedestrian facilities while maintaining freight efficiency. Central Segment: S Spokane St to Diagonal Ave S; South Segment: Diagonal Ave S to S Michigan St. (Project is projected may be completed in 2025.)

FMP No.	Project Name	Project Description
32	East Marginal Way S / 8th Ave S / S Myrtle St Intersection Improvements	Improve intersection geometry, revise signalization, upgrade drainage, rehabilitate pavement at railroad tracks, and install streetscaping. Project should be coordinated with Next Generation ITS.
33	East Marginal Way S / S Hanford St Intersection Improvements	Upgrade the signal, lengthen the northbound right-turn lane, improve the railroad crossing pavement, and evaluate the need for railroad crossing gates at the Whatcom track crossings. The project also includes rebuilding the intersection and its approaches to Heavy Haul route requirements. This project will also more clearly delineate parking on the southeast corner of the intersection. (Project is projected to be completed in 2024 with Project 31: East Marginal Way S Corridor Reconstruction and Safety Enhancements.)
35	Duwamish Local Freight Access Improvements (S Holden St/ 5 th Ave S/ S Kenyon St/ 8 th Ave S)	Reconstruct roadway with drainage, curb, sidewalks, and landscaping. Coincides with W Duwamish Trail construction and, Seattle Public Utilities drainage substation proposal.
36	S Spokane St Freight-only Lanes Pilot	Pilot project to design, implement, and evaluate freight-only lanes on the corridor. The first phase of the project would determine project limits and identify design options, and new infrastructure needed to implement the pilot. The second phase would implement modifications to roadway channelization for truck-only lanes, install signal and signage upgrades, and provide ITS equipment such as variable message signs and detection equipment. The project would evaluate time-of-day operations, while providing a contingency for allowing all traffic to use the lanes in the event of an incident on the upper bridge.
37	S Holgate St Rail Crossing Improvements (S Holgate St from Occidental Ave S to 4 th Ave S)	Reconstruct the pavement to Heavy Haul route requirements, and improve channelization, signage, and pedestrian and bicycle environment.
38	S Atlantic St Corridor Reconstruction (S Atlantic St - Alaskan Way to 1st Ave S)	Reconstruct and make operational ITS improvements.
39	S Spokane St ITS Upgrades (Chelan Ave SW to S Airport Way)	Install ITS equipment along the corridor to collect and provide real-time travel time information for trucks and the general public. Specific equipment would include Bluetooth readers and dynamic message signs installed along the corridor to collect and disseminate travel time information between S Airport Way and Chelan Ave SW, including access to Port Terminal 5. An additional project component, which has not yet been evaluated for cost, may be to improve the signal system at the intersection of Chelan Ave SW at the western terminus of the corridor.
40	SW Spokane Pl Reconstruction	Reconstruct and make operational/ITS improvements to SW Spokane Pl.
42	Railroad Crossing Delay Warning System (S Holgate St, S Spokane St, and S Horton St)	Install ITS equipment to monitor and inform the public of road closures due to train activity and provide alternative routing options via of dynamic message signs that display real-time information to drivers at key locations.

FMP No.	Project Name	Project Description
43	S Hanford Reconstruction	<p>Improve access to the Main Seattle International Gateway (SIG) Yard. Examine the feasibility of installing a traffic signal and other potential changes to facilitate traffic flow in the area. If or when warranted, a traffic signal at the Main SIG entrance could alleviate congestion and allow for improved truck access to the yard.</p> <p>This project also rebuilds the segment of Hanford St between the East Marginal Way S and 1st Ave S to Heavy Haul route standards, including new pavement at railroad crossings. It may include rail crossing gates or other devices, if needed.</p>
44	S Michigan St ITS Improvements (East Marginal Way S to Corson Ave S)	Update signal timing, vehicle detection, CCTV cameras, dynamic message signs and fiber communications to improve traffic flow and provide enhanced traveler information along S Michigan St
45	West Marginal Way SW/ Chelan St SW Intersection Improvement	Intersection signal operational improvements for freight. There is another study underway to improve access for cyclists. (Expected project completion in 2024)
46	W Marginal Way SW Reconstruction	Reconstruct and make operational/ITS improvements to West Marginal Way SW.
47	1st Ave S Bridge ITS	SDOT and Port of Seattle partnership to determine best mode to disseminate route information to area trucking industry. Provide information and advance warnings about bridge openings during peak travel times for freight based on historical statistics and real-time information.
48	Airport Way S / S Edmunds St intersection improvement	Monitor and evaluate for future signal warrants and address geometric issues.
49	S Bailey St Channelization and Operational Improvements (S Michigan St to Carleton Ave S)	Improvements for the eastbound left-turn movement to access the I-5 ramps, including a review of signal operations and channelization changes.
50	16th Ave S and East Marginal Way S Intersection Improvements	Improve northbound right-turn curb radius.
51	S Lucile St Reconstruction (S Airport Way to SR 99)	Reconstruction and make operational/ITS improvements.
52	S Massachusetts St Rebuild (access road - Colorado Ave S to 1st Ave S)	Reconstruct S Massachusetts St to improve safety and access to North SIG Yard, while maintaining two-way operations. Seek to provide separated travel lanes for general purpose and truck traffic. Provide improved truck access/operations at the 1st Ave S / S Massachusetts St intersection.
53	Diagonal Ave S / S Oregon St / Denver Ave S Reconstruction (East Marginal Way (SR 99) to Union Pacific Argo Yard)	Rebuild existing truck route facility.

FMP No.	Project Name	Project Description
54	S Dallas Ave / 14 th Ave S Intersection Improvement	Improve curb radius for northbound and westbound turning movements.
55	West Seattle Bridge access to Port Terminal 18 and Terminal 5	Provide access improvements from the West Seattle Bridge to Terminal 18 and/or Terminal 5 from West Seattle Bridge.
57	SODO Phase 1 ITS (SODO area)	Provide advanced warning for railroad closures to minimize queuing as well as improve traffic monitoring capabilities for major haul routes in the SODO area.
58	S Holden St Reconstruction	Reconstruct and make operational/ITS improvements to S Holden St.
59	1st Ave S Reconstruction	Reconstruct and make operational/ITS improvements to 1st Ave S.
60	6th Ave S Reconstruction	Reconstruct and make operational/ITS improvements to 6th Ave S.
61	Duwamish Ave S Reconstruction/East Marginal Way Grade Separation Reconstruction	Reconstruct and make operational/ITS improvements to Duwamish Avenue S, Duwamish Ave Bridge and S Spokane St.
62	Harbor Island Access Improvements	Reconstruct and make operational/ITS improvements to 11th Ave SW, SW Florida St, 16th Ave SW and Klickitat Ave SW. Project does not include non-City right of way (T18 access portions).
63	SW Klickitat Way Reconstruction	Reconstruct and make operational/ITS improvements to SW Klickitat Way.
65	4th Ave S Reconstruction and ITS Implementation	Reconstruct and make operational/ITS improvements to 4th Ave S.
66	S Industrial Way	Reconstruct and make operational/design improvements to S Industrial Way.
67	Citywide Small Spot Improvement Program	Freight spot improvement program to help trucks move more quickly at key bottlenecks.
68	Integrated Corridor management on WSDOT operated facilities <ul style="list-style-type: none"> • NB SR 99 at SW 103rd St • SB SR 99 at N 145 St • I-5 at NE 145th St • Northgate Way between SR 99 and SR 522 	Implement integrated corridor management (ICM) by establishing relationships with other jurisdictions to install dynamic message signs ahead of major connections between I-5, SR 99 and SR 522 that would provide the opportunity for freight to avoid congestion on a given facility when it is present. Install dynamic message sign and/or push out data on I-5 conditions and back-ups. Implement additional permanent surface street data collection.
New	Railroad Crossing Program	Maintain and update Rail crossings in coordination with railroads (Class I and Short line).
New	Railroad Removal Program	Remove identified unused rail to upgrade street pavement.
New	Freight Program (vs. Freight Spot Improvement Program)	Planning, design, research, and program management.

GLOSSARY

ADA: Americans with Disabilities Act

Annual Average Daily Traffic (AADT): The total volume of vehicle traffic on a roadway for a year divided by 365 days.

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bicycle crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

Bioswale: Vegetated ditches that capture and filter stormwater runoff.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Cargo: Cargo, for this document, typically refers to internationally shipped freight that is transported by large commercial trucks on city streets.

C40 Green and Healthy Streets Accelerator: An initiative by C40 in partnership with mayors of signatory cities to transform cities into greener, healthier, and more prosperous places to live. To achieve this, signatory cities commit to work with partners to procure zero-emission buses from 2025 onward; and to ensure a major area of the city is zero-emission by 2030. The City of Seattle committed to the actions of the initiative in 2017.

C40 Zero Emission Freight Project: A collaboration between C40 cities to accelerate the adoption of zero-emission vehicles and goods delivery.

Community and Mobility Hubs: Community and Mobility Hubs are places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Comprehensive Plan: A 20-year vision and roadmap that guides City decisions on where to build new jobs and houses, how to improve the transportation system, and where to make capital investments such as utilities, sidewalks, and libraries.

Connected and autonomous vehicles (CAVs): Vehicles that can communicate with other vehicles (connected) and can drive without a human operator (autonomous).

Critical access needs (CAN): The services necessary for a building to perform its core operating functions safely and successfully. These include goods delivery, designated parking and loading spaces, and building spaces.

E-cargo bikes: Human-driven bikes with battery-powered pedal assist that can transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

E-commerce: The buying and selling of goods online that are then delivered directly to a home or business. Examples include Amazon and eBay.

EV: Electric vehicles

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City's climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City's fleet zero-emission by 2030.

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

FHWA: Federal Highway Administration

FRA: Federal Railroad Administration

FRA Grade Crossing Inventory System: The FRA’s inventory on physical rail and road attributes, collision records, and unique coding for the over 200,000 railroad crossings in the US.

Freight Advisory Board: Founded by City Council in 2010, the Freight Advisory Board consists of 12 members – 6 appointed by the Mayor, 5 appointed by City Council, and 1 appointed by the Port of Seattle – that work with the City on matters related to urban freight to make Seattle’s freight network efficient and reliable.

Freight Master Plan (FMP): A long-range plan developed by SDOT, adopted in 2016, to ensure Seattle’s freight network can safely and reliably deliver freight and goods to meet City goals for social equity, economic productivity, sustainability, and livable neighborhoods. The Freight and Urban Goods Movement Element of the Seattle Transportation Plan (2024) builds on and supersedes the 2016 Freight Master Plan.

FTA: Federal Transit Administration

Grade crossing: An intersection where general purpose traffic and rail tracks cross at the same level.

High-injury Network (HIN): The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred to inform safety corridors of focus for the Vision Zero program. It prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes.

Hours of Service (HOS): The maximum amount of time drivers of commercial freight vehicles can drive in a day, set by the Federal Motor Carrier Safety Administration.

Intelligent Transportation Systems (ITS): Technologies to manage transportation systems, such as coordinating traffic signals and traveler information systems that provide data such as travel times and road closures.

Key Moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Low-emission neighborhood: Low-emission neighborhoods, sometimes called low-pollution neighborhoods, prohibit or restrict the types of vehicles allowed within an area and encourage zero- and low-emission travel options like walking, biking, electric vehicles, and deliveries by e-cargo bike. Implementation of these concepts will vary by neighborhood and are co-created with local communities.

Micro-hubs: Small-scale urban logistics facility located in between a major warehouse and the final delivery destination implemented to reduce vehicle emission trips by shifting to low or zero-emission modes (walking, biking). Goods are transferred from larger freight vehicles to smaller, lower emission modes for final delivery. Micro-hubs can be used by 1 or more carriers/operators based on the location to support consolidation efforts.

MICs: Manufacturing and Industrial Centers. These are areas of the city comprised of land used primarily for manufacturing and industrial activities, including regional manufacturing using warehousing and distribution land.

Multimodal: Refers to the various ways people use the transportation system, such as walking, riding a bicycle, taking transit, or driving a truck or personal automobile. It can also refer to a journey that employs more than one mode, such as walking to the bus stop and then taking a bus to a final destination. The vast majority of individual trips involve more than one mode.

Neighborhoods: Residential areas, typically, with some mix of commercial activity and distinctly different from the MICs (above).

Operation Lifesaver: Operation Lifesaver is a program dedicated to improving safety at railroad crossings and near trains.

Personal delivery devices (PDDs): Small automated or remotely piloted robots designed for short deliveries carrying food, packages, or other goods

PSRC: Puget Sound Regional Council

RCW: Revised Code of Washington

RCW 81.53.90: A section of the Revised Code of Washington (RCW) that specifically speaks to the railroad’s responsibility to maintain crossings.

Regional manufacturing using warehousing & distribution lands

Right-of-way (ROW): A strip of land legally established for the primary purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Goals are to create safer vehicles, speeds, roads, and people and provide post-crash care.

SDOT: Seattle Department of Transportation

Shared micromobility: Shared bikes and scooters that offer low-cost options for a short distance trip. Riders locate and rent available devices with their phone, ride it where they want to go, and leave it responsibly parked for the next person.

Standard Plans and Specifications: City standards that apply to any public or private construction in the right-of-way. The document standardizes terminology, abbreviations, and symbols to be used in construction plans.

STP: Seattle Transportation Plan

Streets Illustrated: Seattle’s Right-of-Way Improvements Manual is an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle’s street right-of-way.

TNC: Transportation network company (e.g., Uber and Lyft)

Traffic calming: Physical changes to street design that slow traffic and make the street safer for all travelers. Examples include traffic circles, speed humps, and narrow lanes.

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses disparities within the transportation system due to institutional racism.

Urban goods (delivery): This is a type of freight. These are products delivered to local businesses and residential neighborhoods in delivery vans or box trucks. This is distinct from “cargo.”

Urban Villages and Centers: Areas in Seattle identified in the Seattle 2035 Comprehensive Plan where the most future job and employment growth is targeted. This strategy promotes the most efficient use of public investments and encourages walking, bicycling, and transit use.

Vision Zero: The City’s goal to eliminate traffic deaths and serious injuries on city streets by 2030.

Vulnerable communities: Communities that have historically and currently been erased, intentionally excluded, and/or underinvested in by government institutions. SDOT’s Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhoods

Vulnerable traveler: As defined in City Code, “a pedestrian, a person riding an animal, or a person operating or riding any of the following on a public way: a farm tractor or implement of husbandry, without an enclosed shell, a bicycle, an electric-assisted bicycle, an electric personal assistive mobility device, a moped, a motor-driven cycle, a motorized foot scooter, or a motorcycle.” The STP intentionally uses the term “vulnerable traveler” instead of “vulnerable user” to better reflect that people are traveling in the public way.

Wayfinding: Visual information that helps people to orient themselves spatially. Wayfinding is important to ensure people can travel easily, comfortably, and safely. Methods of wayfinding include signs and maps.

Washington State Rail Plan: The state’s rail plan is an integrated plan for both passenger and freight rail and is the planning foundation for future actions. The plan addresses rail system challenges and identifies opportunities for improvement; the plan describes the rail system and the state’s interest in it. The plan identifies potential actions to improve the rail system and recommends strategies consistent with Washington’s’ transportation policy goals of economic vitality, preservation, safety, mobility, environment, and stewardship.

Workforce: In the industrial/freight context, workforce refers to the maritime, transportation, and manufacturing workers whose primary location of work is in MICs.

WSDOT: Washington State Department of Transportation

WSDOT Freight System Plan: The Washington Freight System Plan examines all modes of freight movement – including trucks, airplanes, rail, barges, and cargo ships. The efficient, safe, and reliable transportation of goods throughout Washington is critical to every aspect of economic and community vitality in the Pacific Northwest. The plan sets the vision for the state’s multimodal freight system and supports collaboration with public and private partners. WSDOT will update the plan every 4 years, with the most recent update in 2022.

Zero-emission travel: Modes of transportation that do not emit any greenhouse gases (GHGs).

[This page intentionally left blank]

[This page intentionally left blank]



Bicycle and E-Mobility Element



TABLE OF CONTENTS

Introduction..... B-1

 How Bicycles and E-Mobility Advance the STP B-1

 Relationship to STP Goals B-6

Delivering the Key Moves..... B-7

Setting the ContextB-15

 Opportunities, Emerging Trends and Challenges.....B-15

 Community Engagement.....B-19

Bicycling and E-Mobility in SeattleB-24

 Spatial Requirements and Operational ConsiderationsB-50

 Programmatic Activities.....B-52

 Public Outreach and Education.....B-65

 Partnerships.....B-66

 Transportation Data, Technology, and InnovationB-69

 Maintenance & ModernizationB-70

Defining Success.....B-73

 Measurable OutcomesB-74

 Relevant TEF Tactics.....B-76

GlossaryB-77

LIST OF FIGURES

Figure 1: Bike-related Public Comments on Webmap #1.....	B-22
Figure 2: Bike-related Public Comments on Webmap #2.....	B-23
Figure 3: Neighborhood Greenway Design Elements.....	B-31
Figure 4: Regional Trails of the Seattle Area	B-33
Figure 5: Existing Bicycle and E-Mobility Network	B-36
Figure 6: Existing and Proposed Bicycle and E-Mobility Network (Northwest)	B-37
Figure 7: Existing and Proposed Bicycle and E-Mobility Network (Northeast).....	B-38
Figure 8: Existing and Proposed Bicycle and E-Mobility Network (West).....	B-39
Figure 9: Existing and Proposed Bicycle and E-Mobility Network (East).....	B-40
Figure 10: Existing and Proposed Bicycle and E-Mobility Network (Southwest)	B-41
Figure 11: Existing and Proposed Bicycle and E-Mobility Network (Southeast).....	B-42
Figure 12: Future Bicycle and E-Mobility Network Vision.....	B-43
Figure 13: Bicycle and E-Mobility Catalyst Projects.....	B-45

LIST OF TABLES

Table 1: Bicycle and E-Mobility: Delivering the Key Moves	B-8
Table 2: Bicycle and E-Mobility Catalyst Projects	B-46
Table 3: Phased Implementation Corridors	B-49
Table 4: Contextual Guidance for Selecting All Ages and Abilities Bikeways	B-51
Table 5: Bicycle and E-Mobility Performance Measures	B-75

[This page intentionally left blank]

INTRODUCTION

By 2050, Seattle is expected to be a city of nearly 1 million people. To achieve the Seattle Transportation Plan's (STP) shared transportation vision and meet our goals, we'll need to be strategic about how we move the growing number of people who live, work, play, and deliver goods on city streets—both locally and regionally. We'll need to sustainably accommodate growth by investing in improvements that enable people to increasingly choose low-emission mobility options, like biking and using e-mobility. A bikeable city is one where people of all ages and abilities ride bikes and use e-mobility because it is a convenient, affordable, fun, safe, and healthy choice. We want to build on Seattle's existing bicycle network to make that a reality.

HOW BICYCLES AND E-MOBILITY ADVANCE THE STP

The Bicycle and E-Mobility Element of the STP will help create a safer, more bikeable Seattle. It provides a foundation for the City of Seattle to grow our investment in bicycling and e-mobility to achieve STP goals. The STP and the Bicycle and E-Mobility Element build on and supersede the 2014 Bicycle Master Plan (BMP). The bicycle and e-mobility network serves not only people riding traditional bicycles, but also people using adaptive bikes, cargo bicycles for both personal use and deliveries, trikes, scooters, skateboards, roller skates, wheelchairs or other wheeled mobility devices, and "e-mobility" devices, which refers to personal and shared electric-powered bicycles, scooters, and other electric-powered devices. It serves people bicycling and taking e-mobility to serve a variety of trip purposes, such as getting to work, school, transit, the gym or doctor's office, recreating, making urban goods deliveries, and more.

The Bicycle and E-Mobility Element outlines the actions that are needed to make bicycling and e-mobility for personal and commercial travel an integral part of our transportation future, fulfilling the STP Vision Statement where "moving around is just, sustainable, and safe." Investments in our bicycle and e-mobility network provide an affordable and environmentally friendly travel option that also improves Seattle's livability, public health, and economic vitality.

ALL AGES AND ABILITIES (AAA)

We are striving to create a network of bicycle and e-mobility facilities that people of all ages and abilities feel comfortable using—whether it's a child biking to school or an adult that is less confident bicycling on city streets. AAA facilities provide low-stress bicycling conditions and focus on safety. They may include off-street trails, protected bike lanes, conventional bike lanes that meet AAA guidelines, Healthy Streets, and Neighborhood Greenways. This is described more in Table 4.

This Bicycle and E-Mobility Element:

- Sets a vision for continued investment and improvements to Seattle's all ages and abilities (AAA) bicycle and e-mobility network. We are striving to have 100 percent of Seattle households within a quarter mile of a connected network of AAA facilities and to have all public schools served by an AAA facility.
- Identifies catalyst projects that overcome major connectivity barriers and expand access.
- Identifies programmatic investments that support and encourage bicycling among people of all ages, abilities, races, and economic backgrounds
- Focuses on policies and investments that improve safety for people bicycling and using e-mobility.
- Identifies policies and strategies for equitable investment in the bicycle and e-mobility network.
- Identifies and guides opportunities for coordination with other key modal and functional elements of Seattle's transportation system.

HOW THE BICYCLE MASTER PLAN HAS BENEFITED SEATTLE

Seattle has used citywide bicycle plans to guide investments since 1972, with the most recent edition published in 2014. These plans:

- Defined the vision for a connected bicycle network that serves all of Seattle
- Demonstrated an evolution in bicycle network planning, with the 2014 BMP emphasizing a network that serves people of all ages and abilities with protected bike lanes, Neighborhood Greenways, and multi-use trails
- Engaged the public and stakeholders in bicycle network planning and identifying other strategies for improving bicycling
- Identified programs and strategies to promote bicycling as a viable mode of transportation
- Informed funding and implementation priorities
- Resulted in 34-miles of protected bike lanes, 75-miles of bike lanes, 54-miles of neighborhood greenways, 68 bike signals, and 263 bike corrals.¹

¹ Bike infrastructure constructed from 2007-2022

Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work, and travel here. No matter where people live or work, providing safe and equitable transportation will always be critical to connect people and goods where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate travel options and supportive infrastructure that fit the needs of our unique and varied communities—whether a dense downtown grid, quiet residential neighborhood, or bustling manufacturing and industrial center.

In denser neighborhoods and commercial centers, development typically occurs close together. Combined with safe and supportive transportation infrastructure, density can make it easier for people to walk, bike, and use transit because they don't have to travel as far. People have more access in these places, enabling them to live car free if they choose to or can't afford it. In places where development is more spread out, people might still walk or bike for shorter trips or to connect to transit services, but it is often harder due to longer distances between places.

While some people choose to live or work in places that are more spread out, others do so because they have no choice, and driving is their only viable option. For instance, people who live outside of Seattle because housing is more affordable, or people who transport freight or cargo for a living may not have options for how they travel other than driving a vehicle.

Our transportation system can support anticipated growth in different places while continuing to advance our goals by making other travel options more viable and available in appropriate contexts. For example, freight-and-bus only lanes can support reliable travel times for industrial workers and transit riders, or on-demand rideshare services could provide more convenient shared trips. Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality.

Studies show the bicycle industry, bicycle tourism, and health benefits from bicycling create jobs, economic activity, and cost savings. By planning for bicycles and e-mobility, we can support our growing city in several ways:

- Shared micromobility devices, like bikes and scooters, can replace driving for short trips and make it easier for people to connect to or from transit services.
- Electric bikes and cargo bikes provide smaller and more sustainable urban goods delivery solutions that use less street space than motor vehicles.
- Bicycle and e-mobility trips are zero-emission and help keep our air clean.
- A more built-out bicycle and e-mobility network will provide more seamless connections, increased safety and comfort, and space for more riders, encouraging more people with a broader range of ages and abilities to choose biking.
- When biking and e-mobility are more viable travel options, it can reduce vehicle trips and related traffic and puts less demand and wear-and-tear on roads.

Economic Benefits of Bicycling and E-Mobility

The STP supports economic vitality in a range of ways, and each functional Element plays a role. Ample research has shown a positive correlation between economic benefits and the addition of transportation improvements that support people biking, using e-mobility, and walking.

- A study of greater Portland found that while customers who arrive at local businesses by automobile tend to spend more per visit, people bicycling tend to spend more over the course of a month, stay longer, and make more frequent visits.²
- Bike and e-mobility related businesses, such as retailers, repair shops, short-term bike rentals, micromobility operators, and other tourist industries benefit from increased sales when more people choose bikes and e-mobility.
- Evidence indicates that an increased presence of bikes and foot traffic can result in increased sales (up to 30%)³ and prosperity for commercial areas.
- Increased sales often support increased jobs. For example, a protected bike lane along Broadway in Seattle that was completed in 2014 was accompanied by a 30.78% increase in food service employment compared to 2.49% and 16.17% increases in control areas.⁴
- As biking and e-mobility use increases, demand for vehicle storage and parking may decrease, which is beneficial because parking can increase building construction and maintenance costs that are often passed on to residents.
- Employees who bicycle tend to have health benefits from physical activity that can save businesses (and society at large) money on health insurance costs and increased productivity.⁵
- Adding capacity for bicycle and e-mobility infrastructure and improvements is generally much less expensive than adding new road capacity for vehicles.

² Study shows biking customers spend more – BikePortland

³ Walkability Means Better Business (Issue 188, July 2019) – Community Economic Development (wisc.edu)

⁴ Study Finds Bike Lanes Can Provide Positive Economic Impact in Cities | Transportation Research and Education Center (pdx.edu)

⁵ <https://infrastructureusa.org/bicycling-means-business-the-economic-benefits-of-bicycle-infrastructure/#:~:text=With%20the%20money%20saved%20from%20lower%20travel%20costs%2C,save%20their%20companies%20money%20on%20health%20insurance%20costs.>



RELATIONSHIP TO STP GOALS

Bicycling plays an important role in meeting the STP's goals for safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization.



SAFETY

Prioritize safety for all travelers in Seattle, with no serious injury or fatal crashes.

Implementing the bicycle and e-mobility network increases separation from vehicles, implements predictable travel patterns in the roadway, and creates low-speed streets that increase safety for all people. As the number of people bicycling increases, the safer bicycling becomes.⁶ People bicycling and using e-mobility devices are unlikely to kill or seriously injure other road users in a collision, so increasing the number of people bicycling reduces the number of people that could cause grievous harm in a collision.



EQUITY

Co-create with community and implement restorative practices to address transportation-related inequities.

All ages and abilities facilities provide more affordable and accessible travel options. They improve access to transit, employment, education, and services, and they positively contribute to health outcomes and active living.



SUSTAINABILITY

Respond to climate change through innovation and a lens of climate justice.

Implementing the network encourages more trips by bicycle and e-mobility, which are one of our cleanest travel options since they are zero-emission. They reduce driving trips, which is our greatest source of greenhouse gas (GHG) emissions, air and water pollution, and harmful emissions that impact community health.



MOBILITY &
ECONOMIC VITALITY

Provide reliable and affordable travel options that help people and goods get where they need to go.

Provide a reliable and affordable travel option for personal and commercial travel, particularly for shorter trips. They support first-/last-mile connections to Seattle's transit system and provide independent mobility for younger and older Seattleites.



LIVABILITY

Reimagine city streets as inviting places to linger and play. Contribute to economic and neighborhood vitality by reducing household transportation costs and encouraging local spending. Create positive health outcomes for communities through physical activity, clean air, mental health, and social connection. Support the creation of inviting, people-oriented streets due to the quiet, zero-emission travel.



MAINTENANCE &
MODERNIZATION

Improve city transportation infrastructure and ready it for the future. A well-maintained bicycle and e-mobility network contributes to safety, comfort, and accessibility. People bicycling and using e-mobility have a lower impact on our streets compared to people driving. Use of durable materials with low life-cycle costs will reduce maintenance costs while enhancing safety and comfort of people riding bicycles.

⁶ Fyhri, A., Sundfør, H. B., Bjørnskau, T., & Laureshyn, A. (2017). Safety in numbers for cyclists-conclusions from a multidisciplinary study of seasonal change in interplay and conflicts. *Accident; analysis and prevention*, 105, 124–133. <https://doi.org/10.1016/j.aap.2016.04.039>

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **Bicycle and E-Mobility Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.

([Supports Safety Key Move S2a](#))

Feature community voices in planning documents. ([Supports Equity Key Move TJ1b](#))

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: Bicycle and E-Mobility: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
SAFETY KEY MOVES							
Reduce vehicle speeds to increase safety (S1)							
B1	Design all streets using context-appropriate traffic calming treatments that are proven to reduce speeds and encourage people driving to travel at the posted speed limit. This should include strategies to narrow the street, coordinate traffic signs and signals, and plant street trees. (Supports Key Move S1a)	✓			✗		✗
B2	Implement traffic calming strategies, such as traffic circles, chicanes, or speed humps, cushions, and tables. Pair strategies with programs that deliver educational campaigns to reduce speeding. (Supports Key Move S1b)	✓					
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
B3	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. (Supports Key Move S2a)	✓	✓	✓	✗	✗	
B4	Prioritize bicycle safety improvements that are on the high-injury network, have high levels of travel stress, or are identified through the Seattle Bicycle and Pedestrian Safety Analysis. (Supports Key Move S2b and TEF 19.2)	✓	✓		✗		
B5	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, including but not limited to leading pedestrian intervals at signals, arterial traffic calming, and road diets. (Supports Key Move S2c)	✓			✗		✗
B6	Make people biking and using e-mobility more visible by improving sight lines at intersections through treatments such as curb bulbs, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. (Supports Key Move S2d)	✓			✗		✗
B7	Expand opportunities to more safely cross busy arterials by installing enhanced crossings, improved lighting, and other treatments. (Supports Key Move S2e and TEF 40.6)	✓			✗		✗
B8	Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. (Supports Key Move S2f)	✓					
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle (S3)							
B9	Construct new sidewalks, enhanced crossings, bike lanes for all ages and abilities, and multi-use trails where there are gaps or opportunities for new connections, prioritizing places with the greatest safety concerns. (Supports Key Move S3a)	✓			✗		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
B10	Provide dedicated places for people to walk, bike, or roll safely separated from vehicles by using context appropriate treatments, such as protected bike lanes or “complete street” corridors, especially on major truck routes. Where a bicycle route shares a street with a freight route, facilities for bicycles and trucks should be clearly separated and comply with width and materials standards, consistent with <i>Streets Illustrated</i> . [Supports Key Move S3b]	✓	✓	✓	✓	✓	
B11	Harness funding and opportunities when private development occurs to build planned new network facilities and prioritize mobility for people biking and using e-mobility when construction occurs. [Supports Key Move S3c]	✓			✓		
B12	Upgrade existing facilities for people bicycling and using e-mobility to be safer and accessible for people of all ages and abilities. [Supports Key Move S3d and TEF 7.1, 43.4]	✓			✓		✓
B13	Support programmatic activities and partnerships to reduce the size and weight of vehicles used for personal trips, transit, and urban goods movement. Heavier vehicles are a key factor in pedestrian fatalities. [Supports Key Move S3f]	✓			✓		✓
B14	Coordinate with freight, passenger rail, and light rail partners on safety improvements at rail crossings. [Supports Key Move S3g]	✓					
B15	Expand safety education for all travelers. [Supports Key Move S3h]	✓					
Provide safer routes to schools, parks, transit, community gathering spaces, and other common destinations (S4)							
B16	Construct the bicycle and e-mobility network as outlined in this Plan. [Supports Key Move S4a]	✓	✓	✓	✓	✓	✓
B17	Make investments near light rail stations and busy transit stops that make it safer to bike to transit. Establish a Safe Routes to Transit program. [Supports Key Move S4b]	✓		✓	✓	✓	
B18	Develop station access plans for future light rail stations and enhance the experience and quality of existing facilities that connect people bicycling along and across major transit corridors. [Supports Key Move S4c, TEF 40.2]	✓		✓	✓	✓	✓
B19	Serve every public school with an all ages and abilities bicycle facility. [Supports Key Move S4d, TEF 43.4 and Executive Order 2022-07]	✓	✓	✓	✓	✓	
B20	Expand permanent Healthy Streets to all neighborhoods as a way of providing low stress connections to common destinations for people walking, biking, and rolling, regardless of age or and ability. [Supports Key Move S4e, TEF 43.4 and Executive Order 2022-07]	✓	✓	✓	✓	✓	
B21	Make investments that make it safer to bicycle to parks, community gathering spaces, and other common destinations. Establish a Safe Routes to Parks program. [Supports Key Move S4g]	✓	✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making processes (TJ1)							
B22	Implement the Transportation Equity Framework to grow transparency, accountability, and shared power when making transportation decisions with community members. [Supports Key Move TJ1a]		✓				
B23	Feature community voices in planning documents. [Supports Key Move TJ1b]		✓				
B24	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. [Supports Key Move TJ1c and TEF 29.1, 41.6]		✓				
B25	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. [Supports Key Move TJ1d and TEF 3.4]		✓		✓		
B26	Build trust and capacity within organizations that prioritize our vulnerable communities and advocate to improve conditions for people who walk, bike, and roll. Learn from leaders active in these spaces. [Supports Key Move TJ1e and TEF 31.4]	✓	✓	✓	✓		
B27	Normalize the practice of making decisions about policies and right-of-way allocations with input from vulnerable communities. Expand and build on our existing participatory budgeting programs, such as the Neighborhood Street Fund. [Supports Key Moves TJ1f and TEF 19.1, 25.4]	✓	✓	✓	✓	✓	✓
B28	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiatives. [Supports Key Move TJ1i and TEF 1.1, 13.4, 31.4, 37.1]		✓				
Address inequities in the transportation system by prioritizing investments for impacted communities (TJ2)							
B29	Prioritize transportation investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. [Supports Key Move TJ2a]		✓		✓	✓	
B30	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around transportation project impacts and displacement, and co-create transportation, public space, and permitting solutions. [Supports Key TJ2d and TEF 14.3, 15.2]	✓	✓		✓	✓	
B31	Identify actions to address inequities experienced by vulnerable community members who walk, bike, and roll, and provide capacity-building support to BIPOC-led organizations that focus on increasing active transportation. [Supports Key Move TJ2e and TEF 31.4]	✓	✓		✓		
B32	Develop policies to prevent and mitigate transportation projects, both past and present, from contributing to future displacement. [Supports Key Move TJ2g]		✓		✓		✓
B33	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]	✓	✓	✓	✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
Remove cost as a barrier so everyone can take the trips they need to make (TJ3)							
B34	Construct the bicycle and e-mobility network outlined in this plan. Expanding access to these affordable mobility options makes it easier to get around without the expense of automobiles. These networks provide 24/7 access, benefitting people who need to travel outside of 8 AM to 5 PM, especially those who are low-income people of color, and those who rely heavily on public transportation. [Supports Key Move TJ3a]		✓		✓	✓	
B35	When a capital project is underway in a community, incorporate supplemental programs to help community members transition to sustainable travel options like walking, biking, and taking transit. For example, when installing a bike lane, consider partnering with a local bike shop on helmet distribution. [Supports Key Move TJ3b]	✓	✓		✓		
B36	Enhance programs that provide free or reduced travel fares and fees for low-income households and develop programs that connect people with e-bikes and e-scooters, remove upfront costs and ongoing maintenance costs. [Supports Key Move TJ3c and TEF 32.1, 46.2, 46.3, and 52.4]		✓		✓		
Support shifts toward non-punitive transportation enforcement approaches that reduce harm and enhance public safety on city streets (TJ4)							
B37	Improve enforcement of existing regulations that support reliable mobility and safety, including those that keep bike lanes and pedestrian zones clear, deter improper use of transit-only lanes, and discourage speeding, especially in school zones. [Supports Key Move TJ4g]	✓	✓		✓		
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options (CA1)							
B38	Expand beyond employer-based travel demand management programs to include residential and neighborhood-based strategies that encourage non-driving travel choices for all trips. [Supports Key Move CA1a]		✓	✓			✓
B39	Expand public education campaigns to encourage bicycling, using e-mobility, walking, rolling, and taking transit. [Supports Key Move CA1b]		✓	✓	✓		
B40	Develop and expand programs that incentivize sustainable alternatives to driving for large events and as a primary congestion mitigation tool during major construction projects. [Supports Key Move CA1c]			✓	✓		
B41	Operate the transportation system—signals, markings, signage, and right-of-way allocation—to encourage sustainable travel choices (walking, biking, taking transit, and for moving goods). [Supports Key Move CA1g]			✓	✓		✓
Green city streets with landscaping and street trees to better handle changing climate (CA2)							
B42	Encourage the maintenance and installation of green infrastructure—such as street trees, rain gardens, landscaping, natural drainage systems, bioswales, and pervious materials—as other improvements occur in the right-of-way. [Supports Key Move CA2a and TEF 56.4]			✓			✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
Foster neighborhood vitality and improved community health (CA3)							
B43	Design for people-first streets to make sustainable travel choices the default and easy choice for neighborhood trips and to increase neighborhood business district activity. Reflect the wide range of bicycle and e-mobility devices that will use the Bike+ and multi-use trail networks in the future. (Supports Key Move CA3d)		✓	✓	✓		
B44	Incentivize mobility options that don't use fossil fuels for transit, personal and urban goods delivery vehicles, and shared mobility (such as e-bikes and scooters). (Supports Key Move CA3e)		✓	✓			
Support the transition from fossil fuel to electric vehicles for personal, commercial, and delivery trips (CA4)							
B45	Support electrification of shared mobility and freight vehicles through programs that install charging infrastructure, offer focused incentives, and reduce reliance on large vehicles. (Supports Key Move CA4f)			✓			✓
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Create seamless travel connections (PG1)							
B46	Prioritize efficient and sustainable movement of people within limited street space and reallocate street and curb space to maximize comfort, convenience, and directness for walking, biking, rolling, and transit. (Supports Key Move PG1a and TEF 19.6, 43.4)				✓		✓
B47	Improve the experience of making travel connections, especially between transit and travel options—such as personal and shared bikes and scooters—used for first-/last-mile trips. Provide helpful resources to help people plan their bicycle and e-mobility trips. (Supports Key Move PG1b and TEF 35.2, 45.3)		✓	✓	✓		✓
Make walking, biking, and rolling more convenient and enjoyable travel choices, especially for shorter trips (PG2)							
B48	Develop standards to measure right-of-way tradeoffs for bicycle design along designated bicycle routes and corridors to implement during project development. (Supports TEF 19.6 and 43.4)			✓	✓		
B49	Grow the bike network and employ designs that reflect the needs and comfort level of people of all ages and abilities. Expand the bicycling community. (Supports Key Move PG2d)	✓	✓	✓	✓		
B50	Launch a citywide parking program for bicycles, scooters, and e-mobility devices, with a focus on community and mobility hubs, curbspace, and other locations, including short-term and long-term secure bike parking. (Supports Key Move PG2e)		✓	✓	✓	✓	
B51	Update private development bike parking guidelines and code requirements (for charging and storage) to support and grow the use of e-bikes, larger cargo bikes, and scooters. (Supports Key Move PG2f)		✓	✓	✓		✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
Create world-class access to transit and make service more frequent and reliable (PG3)							
B52	Enhance existing and create new community and mobility hubs, with connections to high-capacity transit services. [Supports Key Move PG3h]			✓	✓		✓
B53	Prioritize low-carbon travel options through seamless, direct walking, biking, and rolling connections to community and mobility hubs. [Supports Key Move PG3i]			✓	✓		
Support access to jobs, freight movement, and growth in deliveries (PG4)							
B54	Collaborate with private sector partners on pilots and programs that accelerate the shift of freight trips to more sustainable low- and zero-emissions vehicles, such as electric cargo bikes to replace a portion of last-mile deliveries made by larger vans and trucks in densely developed areas. [Supports Key Move PG4f]			✓	✓		
B55	Expand efforts to work with employers and property managers to provide sustainable transportation options, education, and incentives to promote sustainable travel options for shift workers, non-peak hour commuters, small business employees, and workers in MICs. [Supports Key Move PG4l]		✓	✓	✓	✓	
Manage curbspace to reflect city goals and priorities (PG5)							
B56	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]		✓	✓	✓	✓	
B57	Develop strategies and new tools to accommodate more types of curb uses, including parking for bikes and other small devices, parking for shared micromobility, and other curb uses that support low-emission travel options. [Supports Key Move PG5c]		✓	✓	✓	✓	✓
LIVABILITY KEY MOVES							
Reallocate street space to prioritize people while preserving access for goods delivery and emergency response (PP1)							
B58	Reallocate street space currently used for vehicle storage (i.e., parking) and general purpose travel to support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations [Supports Key Move PP1a]	✓	✓	✓	✓	✓	✓
B59	Update Seattle's Right-of-Way Improvements Manual (<i>Streets Illustrated</i>) to implement actions and strategies outlined in this Plan. Develop a Bicycle Facility Design Guide to supplement <i>Streets Illustrated</i> and provide comprehensive guidance for project implementation. [Supports Key Move PP1d]	✓	✓	✓	✓	✓	✓
Transform community and mobility hubs into welcoming places (PP2)							
B60	Provide a safe and comfortable experience moving in and around community and mobility hubs. This includes better crossings and intersections, slower speeds and rightsized travel lanes, decluttered sidewalks, universal access, and more. [Supports Key Move PP2c]	✓	✓	✓	✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Bicycle and E-Mobility: Delivering the Key Moves							
MAINTENANCE & MODERNIZATION KEY MOVES							
Maintain our streets, sidewalks, and bridges and incorporate planned safety and network improvements with maintenance work (MM1)							
B61	Maintain our transportation infrastructure, including streets, bike facilities, sidewalks, and bridges serving the most users and on the high-injury network. [Supports Key Move MM1a]	✓	✓	✓	✓	✓	✓
B62	Reduce the maintenance backlog by being proactive, leveraging technology to monitor asset conditions, and using data and lifecycle analyses to help determine when it's time for upgrades. [Supports Key Move MM1c]						✓
B63	Collect feedback on asset conditions as part of community engagement on transportation system planning, design, and co-creation. [Supports Key Move MM1e]		✓				✓
B64	Conduct asset maintenance in accordance with the priority investment and emergency response route networks to guide asset maintenance, especially when investment supports walking, biking, transit, and freight. [Supports Key Move MM1f and TEF 45.6]		✓	✓	✓		✓
B65	Modernize city streets by incorporating planned safety and network improvements into maintenance and replacement activities to not only improve the condition of transportation infrastructure and equipment, but also reduce dependence on driving, promote sustainable travel options, and support economic vitality. [Supports Key Move MM1g and TEF 19.3]	✓	✓	✓	✓	✓	✓
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
B66	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. [Supports Key Move MM2a and TEF 19.3]		✓		✓		✓
B67	Focus resources for maintenance and improvements in neighborhoods that have been historically or are currently underserved. [Supports Key Move MM2b and TEF 19.4]	✓	✓	✓	✓	✓	✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
B68	Collect, monitor, and use data to inform changes to the transportation system. [Supports Key Move MM3a]	✓	✓	✓	✓		✓
B69	Adapt streets for new and evolving forms of mobility devices such as commercial or private cargo bikes, e-scooters, personal delivery devices, low-speed electric vehicles, and others to create more travel options. [Supports Key Move MM3e and TEF 19.2]	✓		✓	✓	✓	✓
B70	Develop and maintain up-to-date asset data, including digital inventories of physical assets like curb space, load zones, bike, and scooter parking locations. [Supports Key Move MM3e]		✓	✓	✓		✓

SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we will need to remain agile and able to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to bicycling and e-mobility. They were used to shape the actions we'll take to achieve our shared transportation vision. SDOT will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances continue to evolve in the years to come.

OPPORTUNITIES, EMERGING TRENDS AND CHALLENGES

This section discusses opportunities, challenges, and emerging trends that we need to understand and respond to in order to achieve our vision for bicycles and e-mobility. Support for bicycles and e-mobility includes not only infrastructure and safety improvements to make riding comfortable and enjoyable, but also requires strategic coordination with land use, transit and station area planning, policy development and considerations for how other new and emerging travel options may impact people riding bikes or other e-mobility devices in the future.

Opportunities and Emerging Trends

- **E-bikes and cargo bikes.** The increasing adoption of electric bikes, cargo bikes, and adaptive bikes has the potential to help people overcome network and personal barriers previously seen as limiting factors for bicycling in Seattle, such as hills or the need to transport family members and goods.
- **Complete communities.** These communities include access to adequate housing, essential needs and services, amenities, jobs, educational opportunities, and more within a short walk, bike ride, e-mobility ride, or transit ride. Updates to Seattle's land use vision as part of the One Seattle Comprehensive Plan will put more destinations within biking distance of peoples' homes. As a result of the 2018 land use code update, bicycle parking is required at all new developments, so residents and employees have a location to lock their bike.
- **Commercial bike use.** As we implement our bike and e-mobility network, there will be enhanced opportunities for business to reduce reliance on autos to make urban goods deliveries including business to consumer (B2C) and business to business (B2B) deliveries.

- **More cargo and e-mobility bikes** can be used to offer reliable, low-emission delivery options. The University of Washington’s Urban Freight Lab estimates a potential 30% reduction in CO2 emissions per package. The creation of a future Commercial Bike program could improve awareness, promote partnerships, and accelerate adoption of commercial cargo and e-mobility deliveries.
- **Light rail expansion.** West Seattle and Ballard, Lynnwood, and East Link extensions and infill stations will allow more opportunities to connect to the regional transportation network using a bicycle as a “first- and last-mile” travel option. Per Seattle’s land use code, new stations will have bike parking that to make biking to transit more secure.
- **Improved safety data.** Data and findings from SDOT’s Bicycle and Pedestrian Safety Analysis (BPSA), the 2023 Vision Zero “Top to Bottom” Review, and Vision Zero Action Plan will help guide strategic and equitable investments in safety for people bicycling.
- **Low-Emission Neighborhoods.** Executive Order 2022-07 on transportation emissions will further promote bicycling for transportation within proposed low-emission neighborhoods. Low-emission neighborhoods prohibit or restrict the types of vehicles allowed within the neighborhood and encourage other, zero- to low-emission modes like biking, walking, e-cargo deliveries, etc. (Supports TEF 19.7) See the STP People Streets and Public Spaces Element for more information.
- **Other elements from Executive Order 2022-07,** such as the Youth Transportation Summit, the commitment to 20 miles of permanent Healthy Streets, expansion of the School Streets program, and the commitment to have an all ages and abilities bike facility serve every public school, will also support bicycle and e-mobility element goals. See the STP People Streets and Public Spaces Element for more information.
- **Improved detection.** New technology has been developed that allows for better bicycle detection at signals, enabling a more seamless and convenient experience for riders.
- **Vehicle technology.** Active safety systems—such as autonomous emergency braking and intelligent speed assistance—could curb risky driving behavior and reduce crashes, including bicycle crashes. Fully autonomous vehicles, capable of operation without any human involvement, are not available today, but they have the potential to reduce the number and severity of collisions and improve road safety for everyone. That said, these technologies are also a potential safety challenge for people bicycling and using e-mobility devices until the technology advances.
- **Implementation of bicycle-related Transportation Equity Framework (TEF) tactics.** Tactics outlined in the Seattle [Transportation Equity Framework \(TEF\)](#) provide a roadmap to address historical disinvestment and the resulting disparities in mobility, including safe bicycling facilities, health, and travel affordability. Relevant TEF tactics are referenced throughout this element and are listed at the end of this document.

Challenges

- **Maintenance.** Investments in equipment, labor, and materials will be necessary to maintain safe, comfortable, and attractive bicycle facilities. This includes sweeping debris, filling potholes, restriping faded lines, maintaining signals, fixing broken bollards (posts that block vehicle access into restricted bike or pedestrian facilities), and more.
- **Lighting.** A 24/7 network requires us to address lighting deficiencies across the network and especially at intersections.
- **Bike parking.** More secure and ubiquitous bike parking is needed that accommodates adaptive bikes, e-bikes, and cargo bikes in both residential and commercial areas and at high-frequency transit/light rail stations and community and mobility hubs.
- **Geographic pinch points.** Seattle's steep topography, highway network, water bodies, and bridges create pinch points where freight, transit, bicycle, and pedestrian access needs compete for limited space on existing bridges and rights-of-way. The STP provides guidance on how to address these pinch points, and additional analysis will be needed as part of project implementation.
- **Cultural changes.** Changes in public opinion and behavior are needed to shift a portion of trips from driving in private vehicles to other modes, such as bicycling and e-mobility, in a meaningful way.
- **Interagency coordination.** We will need to work with agency partners to identify solutions to challenges that inhibit use of bicycling and e-mobility:
 - *King County Metro:* It is challenging to locate bike facilities under trolley lines where buses must maintain lateral clearance to attach overhead, and bike racks on buses do not accommodate a variety of e-bike and cargo bike sizes.
 - *WSDOT:* There are conflicts between bike facilities and highway entrance and exit ramps.
 - *U.S. Army Corps of Engineers, U.S. Coast Guard, Washington State Departments of Natural Resources and Fish & Wildlife, and Tribal Nations:* There is a desire to provide new and upgraded facilities with drawbridge operations.
 - *Seattle Public Utilities:* Common complaints include dumpsters located in bike lanes during pickup days and water on the roadway due to drainage system issues.
 - *Seattle City Light:* Overhead wires and "down guys" obstruct access for trail maintenance within Seattle City Light right-of-way.
 - *Railroad Companies:* There is potential for conflicts between bike facilities and train track crossings.
 - *Seattle Parks and Recreation:* There are some bicycling pinch points on streets adjacent to Parks.
- **Access through construction zones.** It is critical to provide safe and intuitive access through construction zones—whether roadway or building construction—so people bicycling are not suddenly forced to merge with traffic. Often, this comes down to enforcing approved traffic control plans.

- **Vehicles obstructing bike lanes.** Bike lanes often are obstructed by people driving delivery vehicles, Transportation Network Company (TNC) drivers, and others who need to access the curb, forcing people bicycling and using e-mobility devices to merge with traffic. Protected bike lanes reduce occurrences of obstructed bike lanes, as does more awareness-building messaging and enforcement.
- **Continuous improvement opportunities.** While the use of flexible delineators for protected bike lanes has allowed for relatively low-cost expansion of Seattle’s protected bike lane network, we recognize the need to upgrade these bikeways with more permanent, robust protection to truly make them comfortable for more people. We are always seeking to improve safety and update facilities to meet current standards.
- **Wayfinding.** While Seattle has an extensive bicycle wayfinding sign system, there is more work to be done to improve signage so people can confidently and comfortably find their way along the bicycle and e-mobility network. Increased coordination with other city wayfinding programs is needed to provide consistency in what destinations are called, graphics, and format for secondary languages.
- **Urban Heat Island Effect.** As climate change accelerates and extreme weather events continue to include longer periods of hotter, dryer weather, active transportation becomes more difficult. Areas lacking tree canopy are most impacted by urban heat island effects. Where trees provide shade to bike facilities, their natural debris and growing roots can increase maintenance needs.
- **Autonomous Delivery.** Autonomous delivery robots, if permitted, would potentially use bike lanes, resulting in increased demand and competition for space in bicycle lanes.
- **Need for Nimble Design Standards.** *Streets Illustrated* (Seattle Right-of-Way Improvements Manual)⁷ identifies a high-level design framework for bike lanes, multi-use trails, intersections, bike lanes with transit service, Neighborhood Greenways, and bike parking that are based on national best practices. However, best practices are evolving, and our design standards must reflect that.
 - A comprehensive design guide is needed to supplement *Streets Illustrated* and more nimbly reflect current best practices. As more people use cargo bikes, e-bikes, adaptive bikes, and e-mobility devices that vary in size and speed at which they travel, there needs to be adequate space for people traveling faster to safely pass those moving slower and to maneuver larger devices through pinch points.

⁷ <https://streetsillustrated.seattle.gov/>

COMMUNITY ENGAGEMENT

Bicycling is a form of transportation and recreation embraced by many people within Seattle, and there are still more people who would choose to bicycle if it were safer and more convenient. We conducted extensive public outreach as part of the Seattle Transportation Plan (STP) development process through a variety of tools, such as two interactive maps, open ended surveys, in-person events, festivals, listening sessions, and open houses.

Public engagement for the STP occurred from March 2022 to November 2023. Please see Chapter 2 in Part I of the STP for more details on the public engagement process and feedback received. As part of this engagement, we used two interactive web maps. In the first interactive map (May to August 2022), people could drop pins, trace routes, and draw areas where they want to see improvement in Seattle's transportation system.

We received over 4,750 bicycle-related comments on challenges and opportunities for bicycling and e-mobility. In the second interactive map (December 2022 to February 2023), people could drop pins and leave comments in response to the draft STP bicycle and e-mobility network. We received nearly 900 bicycle-related pins.

See **Figure 1** and **Figure 2** for aggregated bike-related comments. This feedback informed the draft bike maps in this chapter. Additional public comment received directly informed the policies, programs, and strategies found in this element. The third phase of engagement did not include interactive web maps, but participants still offered feedback on specific locations where they felt bike network improvements were needed.

Several themes emerged related to the bicycle and e-mobility network and policies, including:

- **Prioritize safety.** Frequently cited safety concerns include motorist speeding, distracted driving, delivery/freight drivers parking vehicles in bike lanes, and car doors opening into bike lanes. There is also concern that streets aren't safe for kids to walk and bike.
- **Provide permanent separation.** Physically separated bike lanes are strongly preferred. Durable, permanent materials are strongly preferred over temporary bollards. Maintaining protection through intersections both physically and temporally is needed to achieve an AAA facility designation.
- **Increase geographic equity.** Focus bike network improvements, bike facilities, and safety investments in areas that have historically seen less investment, such as South Seattle.
- **Close gaps in the network.** Focus on completing the bicycle and e-mobility network so there are no gaps.
- **Improve bike parking options to deter bicycle theft.** Community members frequently requested more secure short-term and long-term bike parking options citywide for a variety of bicycle sizes and types. This is particularly essential at community and mobility hubs, including light rail stations.
- **Use universal design.** Consider the needs of people with limited mobility when designing the bicycle and e-mobility network and parking areas (such as accessible vehicle parking at

the curb, bicycle-pedestrian conflict points, and maintaining a clear pedestrian zone on sidewalks and at crossings).

- **Enhance safety and comfort through better maintenance.** Better maintained surface conditions in bike lanes and paths would make it safer and more comfortable for people biking and using scooters and other smaller-wheeled devices.
- **Provide more enforcement and education.** Drivers need to be held accountable for aggressive driving and breaking the law. All travelers need to practice better etiquette.
- **Deter parking and loading in bike lanes.** When cars are parked in bike lanes, people bicycling must merge into vehicular traffic to get around the parked car, putting them at risk of being hit. Enforcing no parking mandates within bike facilities will be an important part of keeping people bicycling and using e-mobility devices safe.
- **Be more consistent.** More consistency in bikeway design and maintenance would create a more predictable and safe bicycling experience, both for bicyclists and drivers.

“There are no good, safe, flat ways to get to central [Seattle] from this far south...Add protected bike bus priority infrastructure all the way from Othello to downtown to increase equity in the south end.”

– Quote from Survey Respondent

We also had a series of listening sessions with Black, Indigenous, and People of Color (BIPOC) bicycle leaders, which offered key takeaways for the STP:

- **Prioritize investment in the South End.** This is necessary to rebuild and regain trust from the community. Co-create with the community so that investments enhance lives of Black and Brown people living in the South End and do not facilitate displacement.
- **Reduce Speeds.** Need safer street design, traffic calming in underserved neighborhoods.
- **Promote protected bike facilities.** There is a desire to see more permanent protected bike lanes and other bike safety investments—as opposed to lanes distinguished by paint and plastic bollards, particularly in areas with lower vehicle ownership rates.
- **Emphasize safety in growing neighborhoods.** As neighborhoods densify, there is a need to reevaluate safety needs for people bicycling.
- **Accelerate the build-out of a complete and connected cycling network.** Bicycling infrastructure needs to connect riders as directly as possible to the places they want to go. Bicycle lanes should not just end and merge into a vehicle lane. Work to methodically complete a connected and safe cycling network.
- **Continue to build a meaningful relationship with these groups.** Meet and communicate regularly and make progress on action items discussed.
- **Make the rules of the road clearer.** Many people do not have a clear understanding of who can use bike lanes and multi-use paths and associated rules of the road.

“Until we actually add safe infrastructure to the Ballard Bridge, we should absolutely not consider it part of our bike network or a safe bike route.”

– Quote from Survey Respondent

Locations in Seattle where the most public comments were received included Capitol Hill, Rainer Valley, Ravenna/Roosevelt, Burke-Gilman Trail, Beacon Hill, Aurora Ave, I-5 (multiple locations crossing I-5 and at ramps), Ballard Bridge, Fremont, and the University District.

Figure 1 and **Figure 2** show aggregated bike-related comments.

In **Figure 1**, the map on the left shows clusters of bicycle-related comments received on the first web map, and the map on the right shows the location of each individual bicycle-related pin.

Figure 2 shows the location of each individual bicycle-related pin received on the second web map.

Some neighborhoods provided more comments than others on the web maps. In response, the STP outreach process pivoted over the course of the project based on who we were hearing from—or not hearing from—to try to hear from as many different voices as possible.

This included meeting people where they were through grocery store and library pop-ups, focus groups, and more. While these conversations are not reflected in the web maps, input we heard was considered in creating the Elements and are highlighted in the Community Engagement Reports (see Appendix B).

Figure 1: Bike-related Public Comments on Webmap #1

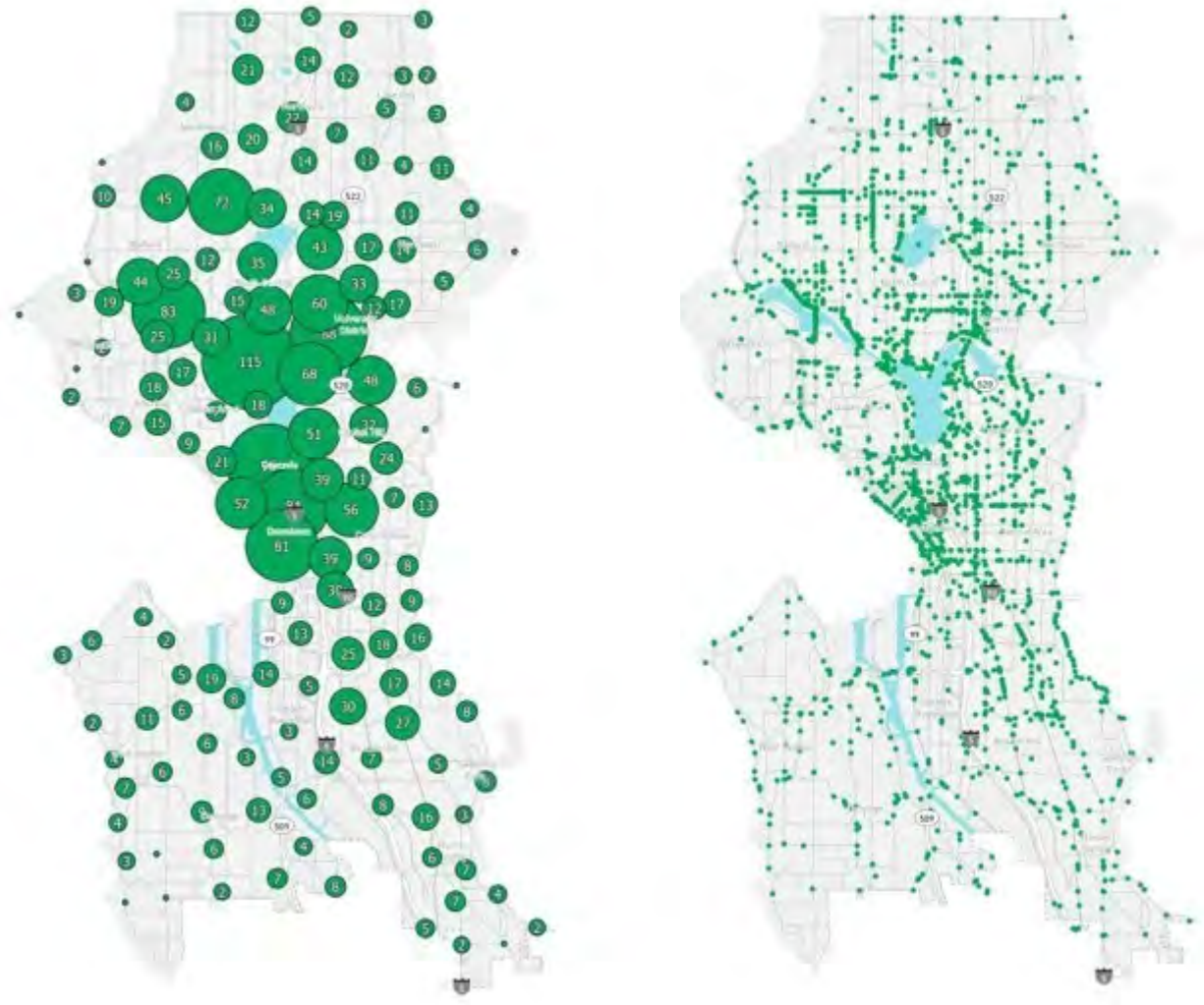
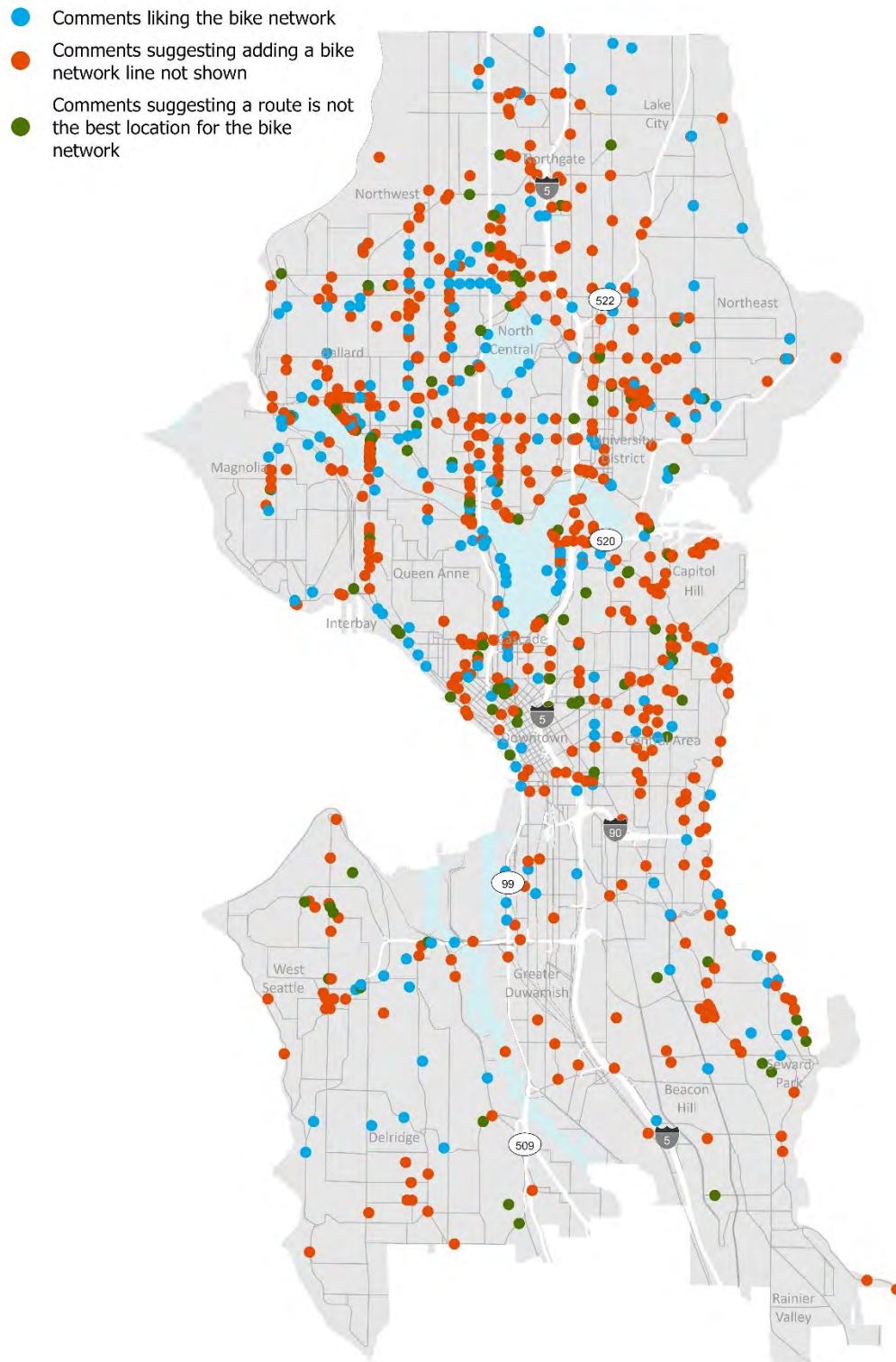


Figure 2: Bike-related Public Comments on Webmap #2





BICYCLING AND E-MOBILITY IN SEATTLE

To make bicycling a viable and attractive mode of transportation for a greater number of Seattleites and visitors, the bicycle and e-mobility network must feel safe, intuitive, and provide convenient access to the places people want to go. This means the bicycle and e-mobility network must be connected, provide a consistent level of comfort, be well-maintained, and offer competitive travel times. This section describes the bicycle and e-mobility network and the key spatial and operational considerations necessary to achieve this vision.

We are responsible for constructing and maintaining bicycle and other e-mobility facilities in the right-of-way. These facilities include trails, protected bike lanes (cycle tracks), painted bike lanes, and other SDOT assets that help these facilities function, such as bicycle signals, bike racks, and markings. We regularly updates bicycle transportation planning documents to add new routes and desired upgrades to existing routes.

The bicycle and e-mobility network continues to grow each year, both in terms of overall miles and quality of design and materials used. Our projects are prioritized annually to fill in network gaps, achieve safety outcomes, and address equity opportunities to make biking a vibrant part of life for everyone in Seattle.

BICYCLING ETIQUETTE

The Bike+ network and multi-use trails will be used by a wide variety of people. This includes but is not limited to children; people in wheelchairs; both avid, long-time bicyclists and those new to bicycling; people using conventional bikes, cargo bikes, adaptive bikes, e-bikes, e-trikes, and e-scooters; and more. It is inevitable that people will travel at a range of speeds. We expect:

- People bicycling and using e-mobility devices to travel in a safe and prudent manner with reasonable speeds not to exceed 15-20 miles per hour, considering weather and site conditions.
- Courteous behavior that prioritizes the comfort and safety of people using the network more slowly.
- Slower travelers keep right to enable passing on the left.
- Give audible warning when passing.
- Signage may be installed to remind riders to slow down.
- If a person bicycling wants to travel at the speed of people driving, then they may want to take the travel lane.

BICYCLE AND E-MOBILITY NETWORK

The Seattle bicycle and e-mobility network will be safe, comfortable, and provide convenient access to destinations for people of all ages and abilities. It will support complete communities where everyday destinations like parks, schools, transit, and shopping are easily accessible by biking or walking. It will also enable time-competitive longer trips between priority destinations, such as Urban Villages, Urban Centers, and regional destinations, particularly for a growing number of people using e-bikes.

The bicycle and e-mobility network consists of the Bike+ network (defined below) and multi-use trail network, which will accommodate a greater volume and variety of people over time. This will involve ongoing coordination with e-mobility providers and freight delivery services utilizing e-trikes or similar vehicles for local deliveries. The network will be well-integrated with multi-use trails regardless of whether they are managed by SDOT or other agencies like WSDOT and Seattle Parks and Recreation. Finally, the network will be integrated with Seattle's network of historic Olmsted Boulevards.

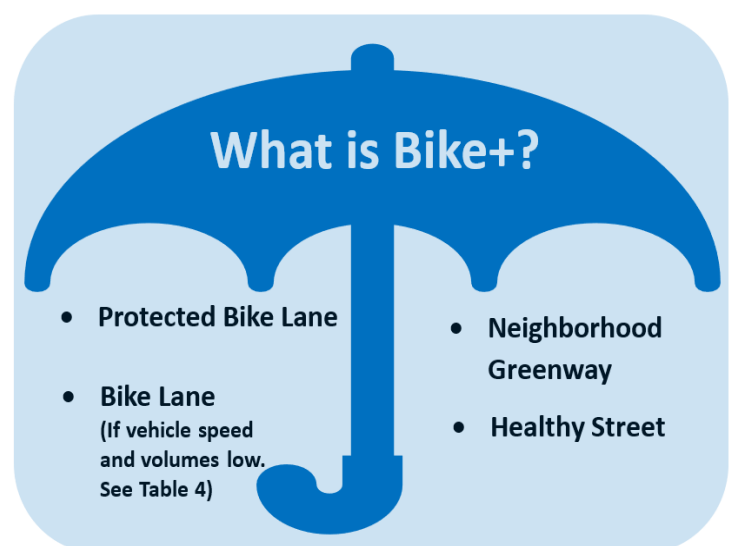
Bike+ Network

The Bike+ network consists of bikeways suitable for people of all ages and abilities (AAA), including protected bike lanes, Neighborhood Greenways, Healthy Streets, and bike lanes where vehicle speeds and volumes are sufficiently low.

The Bike+ network is envisioned to seamlessly integrate with the multi-use trail network, which provides connections through or on the edges of parks and opens spaces, where an off-street connection is preferred, or is more feasible than an on-street connection.

Many planned projects from the 2014 BMP have been implemented and are shown on the existing bicycle and e-mobility network map. The Bike+ network shows existing and proposed AAA bikeways on Seattle's arterial and non-arterial (i.e., neighborhood streets) networks.

The proposed Bike+ network comprises planned bikeways carried over from the 2014 BMP, new bikeway connections, and existing bikeways that are proposed to be upgraded to meet National Association of City Transportation Officials (NACTO) AAA guidelines.



The proposed Bike+ network includes new connections to better serve new and planned light rail stations and other key destinations. In some locations, such as on Delridge Way and Airport Way, planned connections identified in the 2014 BMP were removed because alternative parallel routes were deemed more feasible and in alignment with other modal priorities.

Through the STP process, we conducted preliminary, planning-level analysis to identify locations where Bike+ improvements would not fit – either because of limited right-of-way or conflicts with other proposed priority networks – to put forward a future network that is as realistic as possible.

See Chapter 2 for an overview of this analysis.

However, in the future when a corridor is being designed, there is the possibility that some locations shown as Bike+ in the maps in this element will be deemed infeasible, and per the Comprehensive Plan's Complete Corridor policy, alternative parallel routes may be explored instead. Conversely, there is also the possibility that bicycle and e-mobility facilities could be built in locations even if they are not shown on the maps in this element.



ONE SEATTLE “COMPLETE CORRIDOR” POLICY

Collectively two or more streets can combine to serve as a “complete corridor,” since not every street can accommodate every need.

Bikeway Typologies

The bicycle and e-mobility network consists of the following types of bikeways:

Protected Bike Lanes

Protected bike lanes are physically separated from traffic and the sidewalk. Like a trail, protected bike lanes are often more comfortable for people who prefer not to ride with traffic. They may be one-way (both sides of street) or two-way (on one side of the street). Input from Seattle residents indicates a clear preference for these types of bike lanes, and numerous studies from across North America have shown that such bikeways generally encourage more people to bicycle. Protected bike lanes built with flexible delineators are intended to be temporary, and over time we will upgrade these bike lanes with more permanent design elements, such as Toronto-Style barriers or planters.



One-way protected bike lane with Toronto-style permanent barrier



Two-way protected bike lane with planters

Bike Lanes

Seattle's current built bike network consists of many miles of painted bike lanes and bike lanes that are buffered through additional hatched pavement marking to create greater distance between moving cars and people bicycling. These types of lanes offer dedicated space for bicycling but lack any physical separation from moving vehicles. This lack of separation can result in "door zone" conflicts and collisions, which is when drivers open their car doors before looking for bicyclists in the roadway, as well as motor vehicles parking in bike lanes.

Over time, bike lanes may be upgraded to protected bike lanes, particularly in locations with identified safety issues. Where vehicle volumes and speeds are low (i.e., 20 mph or less), bike lanes may meet NACTO AAA guidelines. In such cases, the bike lane may be maintained as is, or upgraded, if feasible. In cases where an AAA facility within a quarter mile of an existing bike lane does not meet NACTO AAA guidelines and there isn't room to upgrade, the existing bike lane may be preserved because it could still have an important network role even if it's not AAA.



Bike lane



Buffered bike lane

Neighborhood Greenways

Neighborhood Greenways are routes that prioritize people walking, biking, and rolling comfortably on non-arterial streets with low vehicle volumes and speeds. Defined by their enhanced crossings of busy streets, Neighborhood Greenways provide a seamless connection between many protected bike lanes, trails, and community destinations such as schools, parks, libraries, and neighborhood commercial areas.

Figure 3 shows the design elements of a Neighborhood Greenway.



Bike train to school on a Neighborhood Greenway

Heathy Streets

Healthy Streets are open for people walking, rolling, biking, and playing and closed to pass-through vehicular traffic. They frequently overlap with the Neighborhood Greenway network. Because Healthy Streets are closed, people walking, rolling, and biking are permitted full use of the public right-of-way and function as Shared Streets. People driving who need to access homes and destinations along Healthy Streets are intended to move at the speed of play and share the space with people outside of vehicles.

For additional details, see the People Streets and Public Spaces Element.



People bicycling on a Healthy Street in Seattle

Figure 3: Neighborhood Greenway Design Elements

Safer Crossings

- Easier for seniors and kids to cross busy streets
- Make drivers more aware of people walking and biking



Walking and Biking Priority

- Speed humps and diverters to calm traffic
- Stop signs for side streets crossing Neighborhood Greenways



Wayfinding

- Identify the street as a Neighborhood Greenway so people know what to expect
- Help people walking and biking find their way



Multi-Use Trails

Multi-use trails are off-street facilities that accommodate people walking, biking, and using a wide range of other non-motorized and e-mobility devices. Multi-use trails are for two-way travel and may be adjacent to a street or found in parks, along rivers, beaches, greenbelts, or utility corridors.

Seattle has many multi-use trails that offer recreational opportunities and are an essential part of the city's transportation network. Because these facilities are shared by a wide variety of people traveling at varying speeds for a variety of purposes, they require both courteous behavior and adequate space for travelers to coexist safely and comfortably.

Several multi-use trails in Seattle connect to the greater regional trail network, including the Burke-Gilman Trail, Interurban Trail, and trails on State Routes 520 and I-90, as shown in **Figure 4**.

These multi-use trails facilitate travel between Seattle and neighboring communities and connect Seattleites to recreational opportunities in the greater Puget Sound region and beyond, especially those designated as part of the regional Leafline trail network.

Portions of the Burke-Gilman Trail, Elliott Bay Trail, and waterfront trail are part of the Great American Trail, a cross-country route connecting La Push, WA to Washington, D.C. Ensuring Seattle's multi-use trails are safe, comfortable, and easy to navigate can encourage more visitors and yield economic benefits.

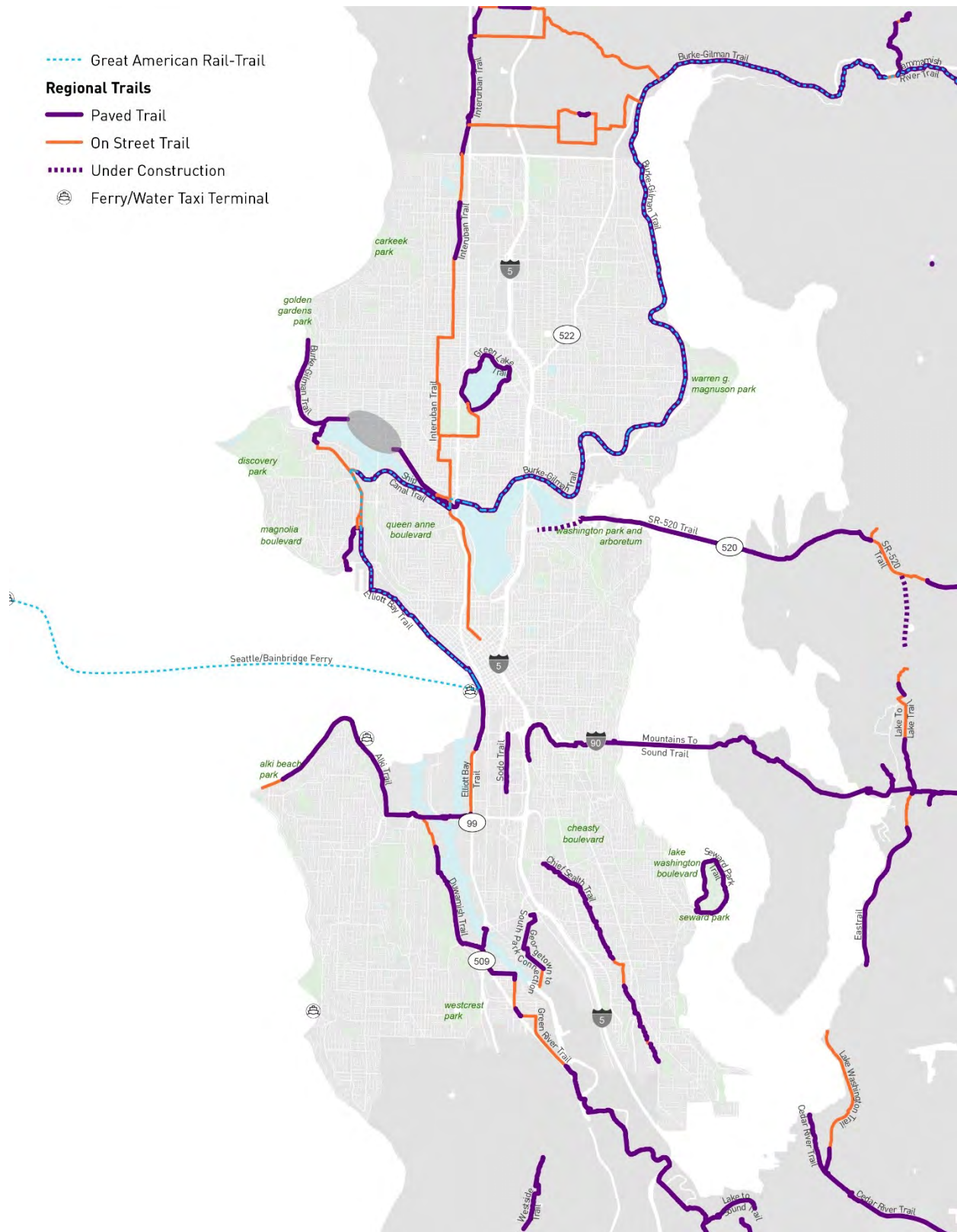


Ship Canal Trail



Burke-Gilman Trail

Figure 4: Regional Trails of the Seattle Area





Magnolia Blvd



Lake Washington Blvd during a temporary street closure

Olmsted Boulevards

While not technically multi-use paths, Seattle's Olmsted Boulevards similarly create recreational opportunities for people biking, walking, rolling, and engaging in other activities.

In the early 1900s, Seattle hired the Olmsted Brothers landscape architecture firm to design a system of interconnected parks and boulevards that provided open space for all people.⁸ The Seattle City Council approved the Olmsted Brothers' plan "A Comprehensive System of Parks and Parkways" in 1903.

Olmsted Boulevards include:

- Cheasty Boulevard
- Green Lake Boulevard
- Hunter Boulevard
- Interlaken Boulevard
- Lake Park Drive
- Lake Washington Boulevard
- Magnolia Boulevard
- Montlake Boulevard
- Mount Baker Boulevard
- Queen Anne Boulevard
- Ravenna Boulevard
- Schmitz Boulevard
- University Boulevard

Today, Olmsted Boulevards are managed jointly by Seattle Parks and Recreation and SDOT. While these boulevards have been more vehicle-centric in the past, SDOT has heard requests from people who want more people-oriented streets in the city. There are opportunities to open more street space for walking, strolling, and bicycling along our Olmsted Boulevards by introducing car-lite strategies.

This would enable recreational opportunities year-round instead of only summer weekends and, in some cases, provide high-comfort bike network connections. (Supports TEF 43.4) The city would engage with communities and Friends of Seattle's Olmsted Parks in any such decision-making processes.

⁸ Friends of Seattle's Olmsted Parks. "A Brief History." <https://seattleolmsted.org/history/>

Complementary Facilities

Complementary facilities are places where traffic volumes are exceptionally low, slow, or closed to traffic. These are located one to two blocks away from busy arterial streets. Slow Lanes and Shared Streets are both places where bicycles can enjoy low-stress riding combined with reduced conflicts and vibrant neighborhood community interaction.

More about Slow Lanes can be found in the New and Emerging Mobility Element and Shared Streets in the People Streets and Public Spaces Element.

Non-Bike+, Existing/Proposed

Some roadways are important connections for people bicycling and using e-mobility devices, but right-of-way is so constrained that an AAA bike facility is not feasible. This includes painted bike lanes that do not meet NACTO's AAA guidelines (based on vehicle volumes and speeds), protected bike lanes on only one side of the street when the street has two-way travel, and sharrows. While not ideal, SDOT will either seek to maintain the bike infrastructure that exists today or make future improvements that support bicycling even though it is not feasible to design them for all ages and abilities.

Should it become feasible to build Bike+ facilities in the future, these roadways are not precluded from receiving AAA facilities. For instance, if right-of-way is acquired or if a roadway is deemed suitable for conversion to one-way motor vehicle travel, a roadway categorized as Non-Bike+ in this plan may become suitable for Bike+.

Bicycle and E-Mobility Maps

Many planned projects from the 2014 BMP have been implemented and are shown in **Figure 5**, which shows our existing bicycle and e-mobility network.

Figure 6 through **Figure 11** show existing and proposed AAA bikeways on Seattle's arterial and non-arterial (i.e., neighborhood) streets. This map is printed in six sections by geography: northwest, northeast, west, east, southwest, and southeast.

Figure 12 shows the future bicycle and e-mobility network—this is the ultimate vision for a connected AAA network that would put 100 percent of Seattle households within a quarter mile of a AAA bikeway or multi-use trail.

Figure 5: Existing Bicycle and E-Mobility Network

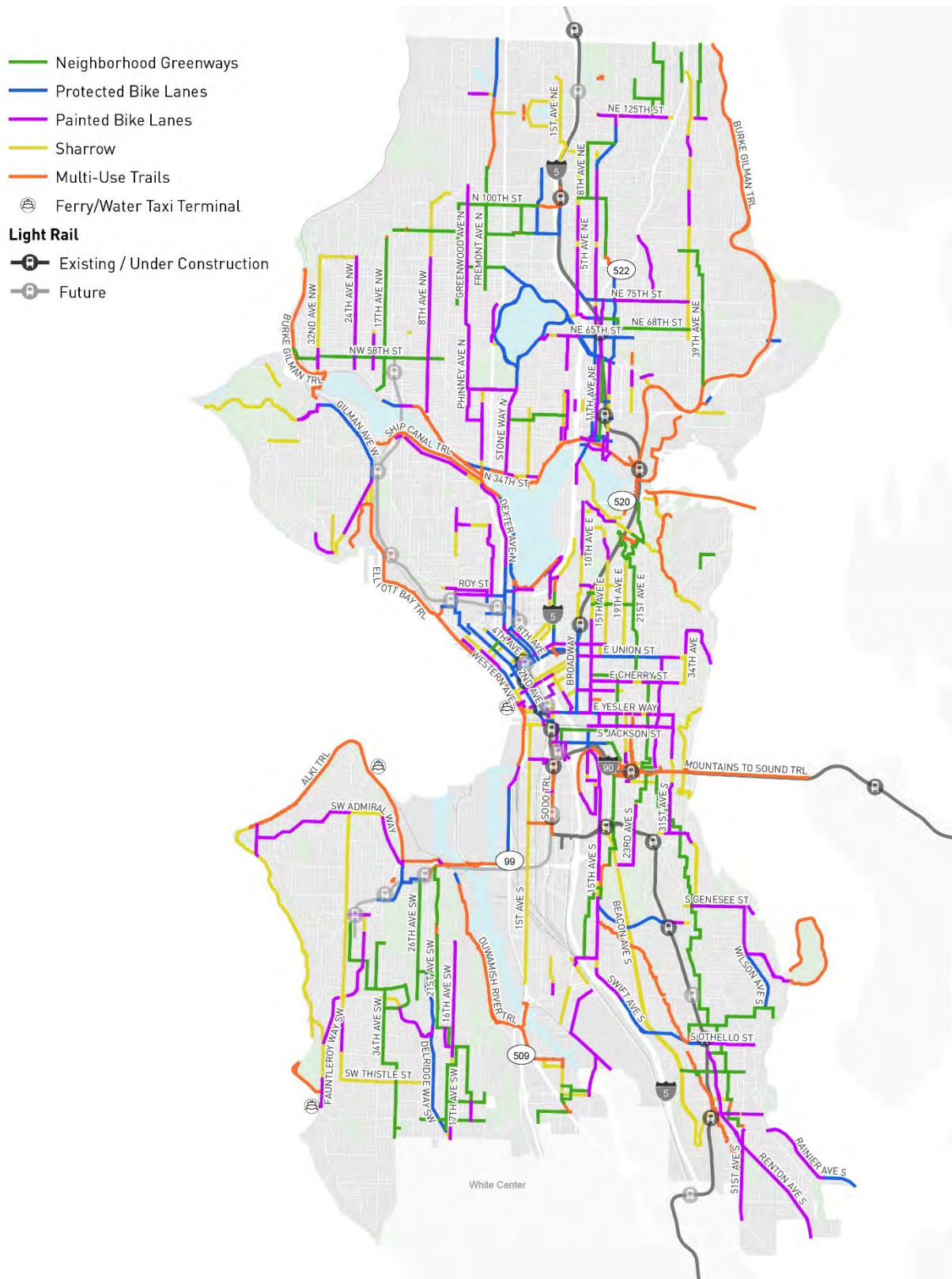


Figure 6: Existing and Proposed Bicycle and E-Mobility Network (Northwest)

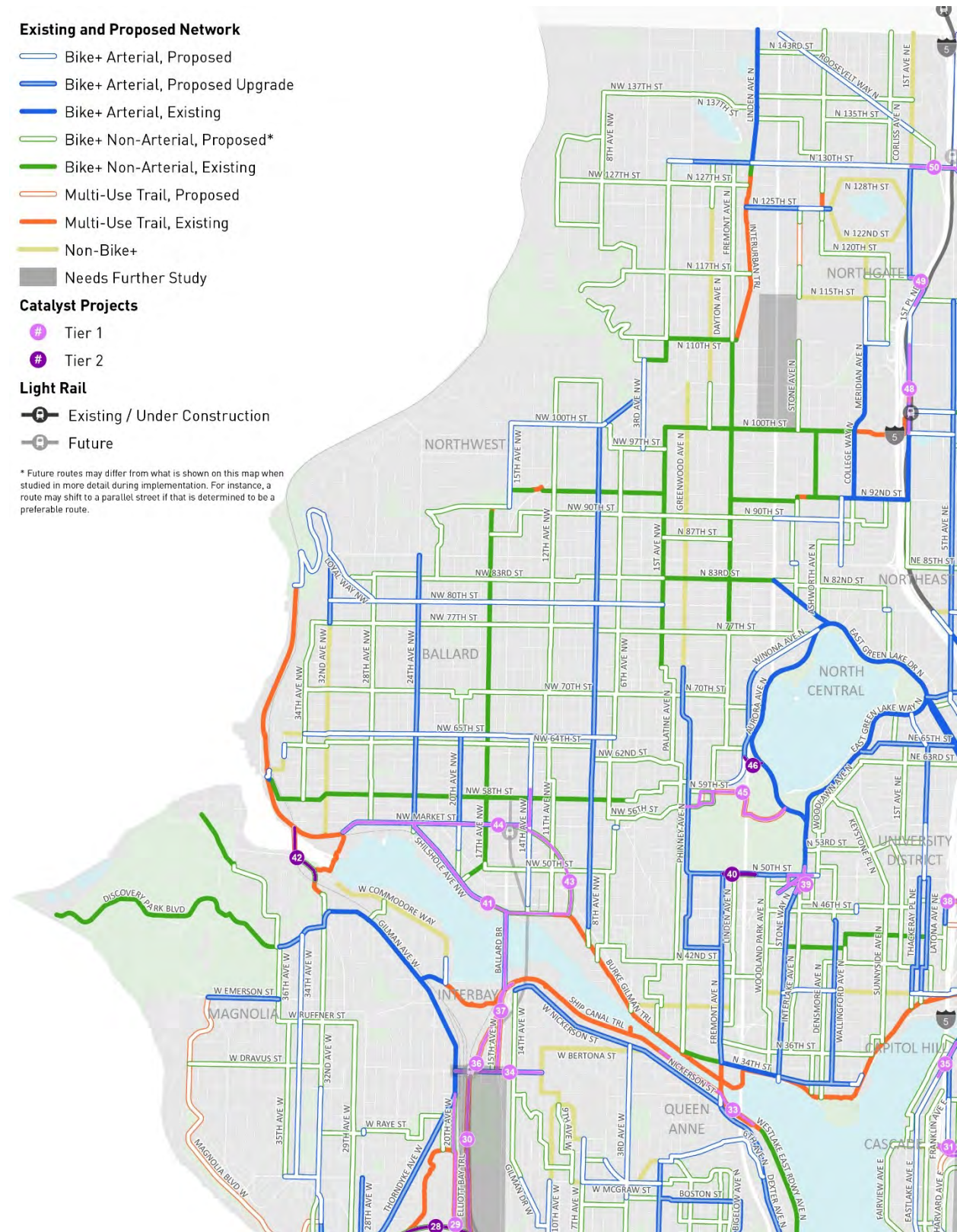


Figure 7: Existing and Proposed Bicycle and E-Mobility Network (Northeast)

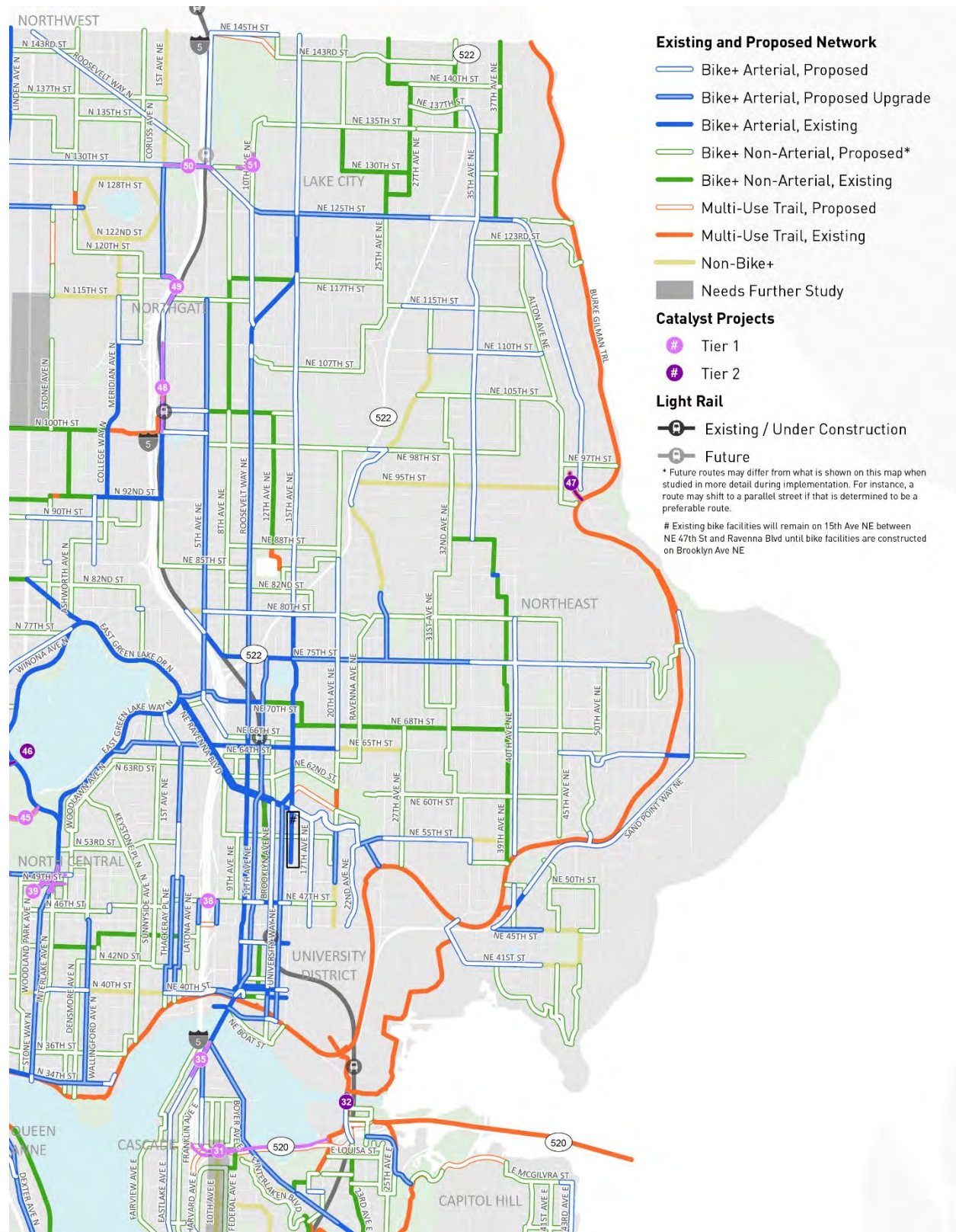


Figure 8: Existing and Proposed Bicycle and E-Mobility Network (West)

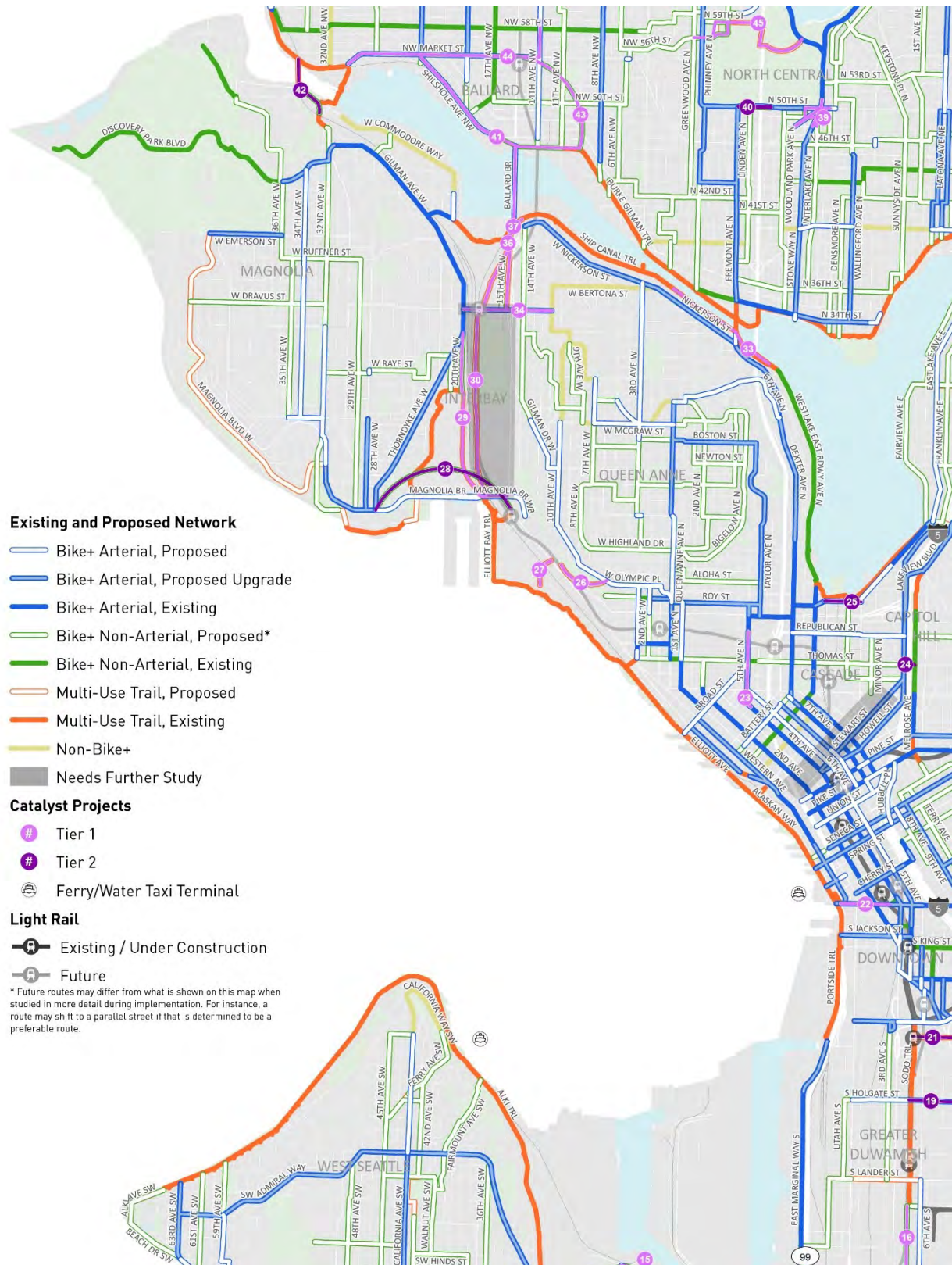


Figure 9: Existing and Proposed Bicycle and E-Mobility Network (East)



Figure 10: Existing and Proposed Bicycle and E-Mobility Network (Southwest)

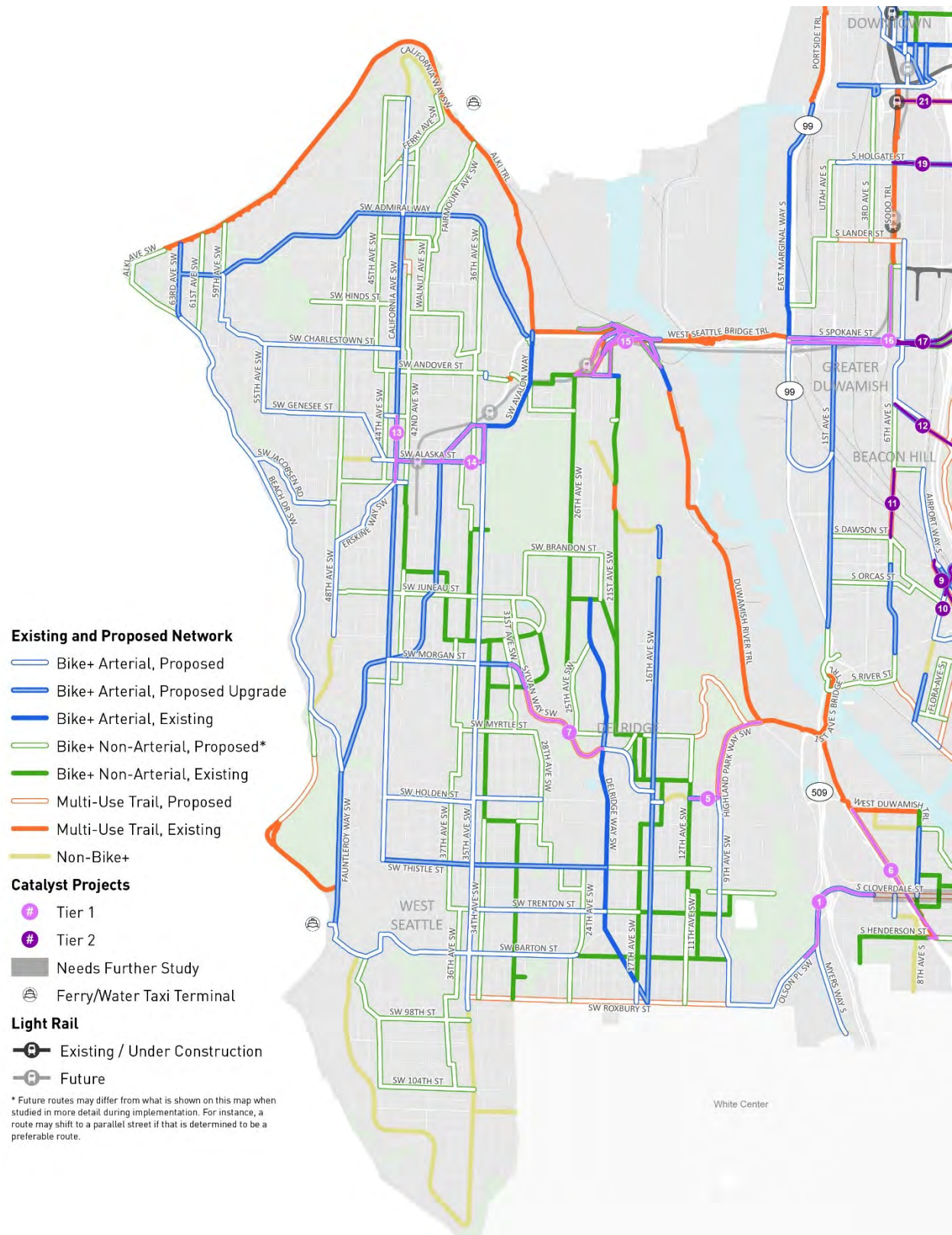


Figure 11: Existing and Proposed Bicycle and E-Mobility Network (Southeast)

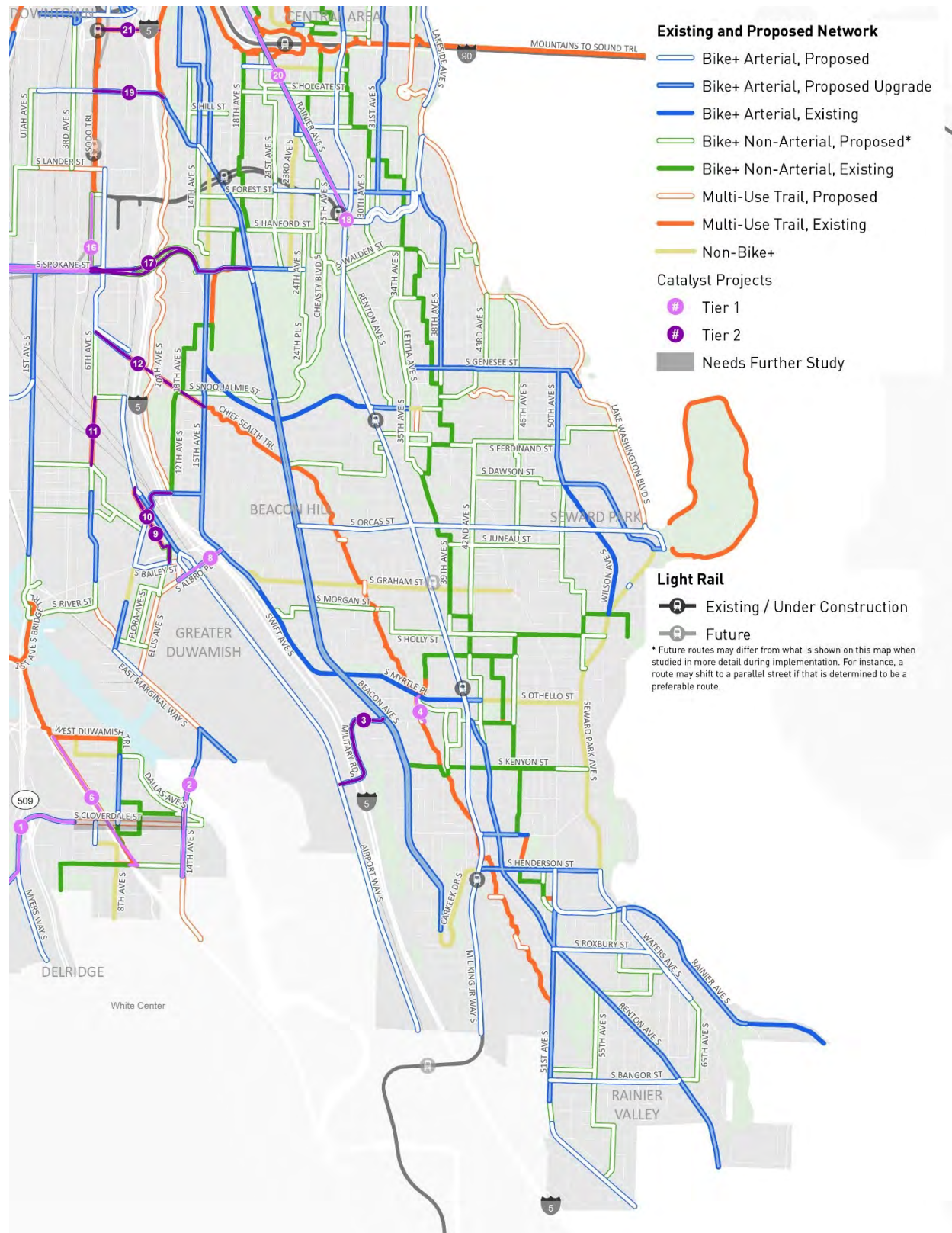
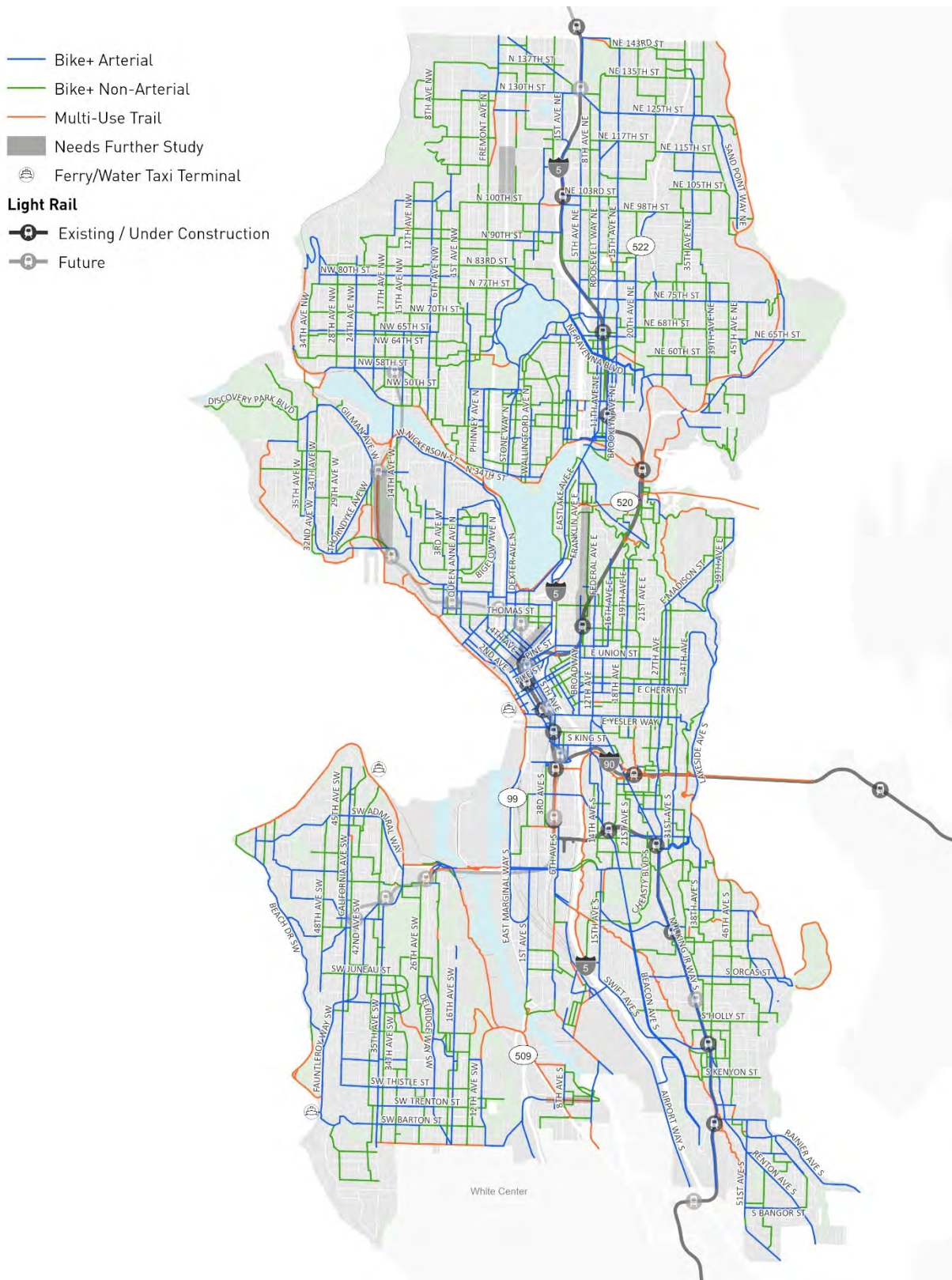


Figure 12: Future Bicycle and E-Mobility Network Vision



Bicycle and E-Mobility Catalyst Projects

Catalyst projects overcome major connectivity barriers and are often complex projects requiring creative solutions, large capital investments, and in some cases, coordination among multiple stakeholders both internal and external to the city. Catalyst projects pertaining to bicycles and e-mobility are identified in **Table 2** and presented in **Figure 13**.

The 2014 BMP identified 27 bike network catalyst projects, several of which have been completed, such as the John Lewis Memorial Bridge (also known as the Northgate pedestrian and bicycle bridge) and N 34th St and Fremont Ave intersection improvements. Many projects have not been completed due to their complexity and cost, while others, such as the SR 520 connection across Portage Bay, have been designed and will soon be constructed. Where catalyst projects have not been completed, other investments have been made at several locations in the interim to improve safety for people walking and bicycling. For example, for Project 18 at S Holgate Street, we have widened the sidewalk to 12 feet and replaced the staircase with a ramp. Uncompleted catalyst projects, for the most part, remain on the list and additional catalyst projects have been identified.

A total of 51 bicycle and e-mobility catalyst projects have been identified. Many of these catalyst projects directly benefit the Bike+ network, while others also remove barriers to the pedestrian network. Examples of catalyst projects include:



- **Reconnecting communities divided by highway construction** (e.g., S Cloverdale St over SR 509 (Project 1), S Henderson St over W Marginal Way S (Project 6), S Albro St over I-5 (Project 8), and NE 47th St over I-5 (Project 38))
- **Providing new multi-use trail connections to fill gaps in the Bike+ network** (e.g., Duwamish Trail connection to Highland Park (Project 5), a new multi-use trail on Sylvan Way to connect Delridge Way and the High Point neighborhood (Project 7), and a multi-use trail connection across SR 99 through Woodland Park (Project 45))
- **Providing safer and more comfortable bicycle facilities on arterial streets to minimize conflicts** with cars, transit, and freight (e.g. S Spokane St connecting West Seattle to SODO and Downtown (Project 16), Rainier Ave S from MLK Way S to S King St (Project 20), 5th Ave N between Belltown and Seattle Center (Project 23), and NE 130th St connecting the neighborhoods east and west of I-5 (Project 50)) (Supports TEF 19.2)
- **Addressing pinch points that constrict our Bike+ network** (e.g., SR 520 trail connection to Capitol Hill and Eastlake (Project 31), W Dravus St to connect to the future Interbay light rail station (Project 34), and University Bridge improvements (Project 35))

Catalyst projects are categorized into two tiers. Tier 1 catalyst projects are our highest priorities because they address critical access, equity, and safety needs. Tier 2 catalyst projects also address important connections, but due to their complexity and cost, may have longer implementation timeframes.



Figure 13 shows catalyst projects, which are described in greater detail in **Table 2**.

Figure 13: Bicycle and E-Mobility Catalyst Projects

Catalyst Projects

-  Tier 1
-  Tier 2

Light Rail

-  Existing / Under Construction
-  Future

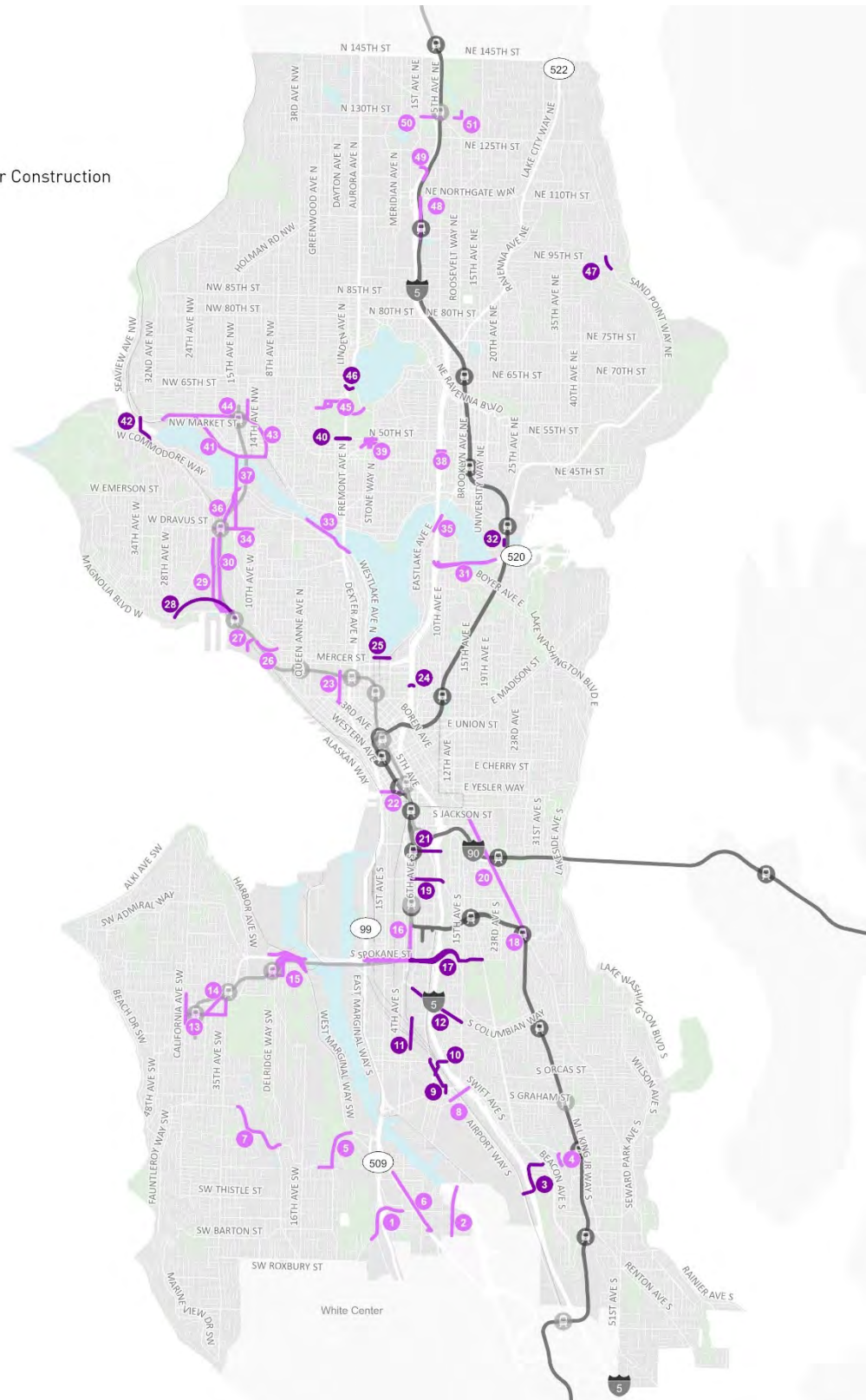


Table 2: Bicycle and E-Mobility Catalyst Projects

ID	PROJECT	TIER	OPPORTUNITY STATEMENT
1	Cloverdale multimodal connection over SR 509	Tier 1	Provide an all ages and abilities bicycle connection between South Park and White Center
2	14th Ave S Trail Connection to Green River Trail	Tier 1	Connect the 'Georgetown to South Park Trail' with the 'Green River Trail' extension
3	Military Road S to Airport Way S connection across railroad tracks	Tier 2	Connect Beacon Hill to Airport Way S/Boeing Field
4	Chief Sealth Trail connection Myrtle to Webster	Tier 1	Fill the missing gap in the Chief Sealth Trail between Myrtle/Othello and Webster to connect schools and housing to the urban village.
5	Duwamish Trail connection to West Seattle	Tier 1	Connect Duwamish Trail to Highland Park neighborhood and greater West Seattle through a multi-use trail on the west side of Highland Park Way and protected bike lanes on SW Holden St
6	Duwamish Trail connection to South Park	Tier 1	Fill the missing gap in the Duwamish Trail on W Marginal Way and improve the connection on S Henderson St over W Marginal Way S per Reconnect South Park
7	Sylvan Way Multi-use Path	Tier 1	Build an all ages and abilities connection between Delridge Way SW and the High Point neighborhood
8	S Albro Pl bike connection over I-5	Tier 1	Provide an all ages and abilities bike connection between the Georgetown to South Park Trail and Swift Ave S along S Albro Pl
9	Central Georgetown Connection	Tier 2	Fill future missing link between Georgetown to Downtown and Georgetown to South Park projects through the commercial core of Georgetown; preferred route is a rail with trail along the Union Pacific spur
10	S Lucile St under I-5	Tier 2	Provide an all ages and abilities bike connection between the Central Georgetown Connection and Beacon Hill
11	6th Ave S Bridge over railroad tracks	Tier 2	New bicycle and pedestrian bridge across railroad tracks to connect SODO to Georgetown
12	Chief Sealth Trail Extension	Tier 2	Provide an all ages and abilities connection between the Chief Sealth Trail and Airport Way S
13	SW Alaska St from Fauntleroy Way to California Ave and California Ave from Edmunds to Genesee	Tier 1	Provide an all ages and abilities connection along SW Alaska St to connect to the Alaska Junction light rail station
14	West Seattle Bridge Triangle area improvements	Tier 1	Provide bicycle connections along SW Alaska St, Fauntleroy Way SW, and 35th Ave SW
15	Chelan Ave SW / W Marginal Way / Alki Trail / SW Marginal Way / Delridge Way SW / SR 99 intersection enhancements	Tier 1	Improve the trail network between the Alki Trail, West Seattle Bridge Trail, Duwamish Trail, and Delridge Station; enhance the crossing
16	SODO Trail Extension and Spokane Street Connection	Tier 1	Expand existing SODO Trail south to Spokane Street, connecting West Seattle to SODO and Downtown
17	S Spokane St viaduct at-grade to Beacon Hill	Tier 2	Connect the SODO Trail to Beacon Hill
18	Rainier Ave S/Martin Luther King Jr Way S intersection improvements	Tier 1	Provide access to Mount Baker light rail station and reconnect Mount Baker Boulevard to Cheasty Boulevard S
19	S Holgate St across I-5	Tier 2	Connect the Mountains to Sound Trail with the SODO Trail by widening the Holgate I-5 overpass. This would provide a walking and biking connection (Since the 2014 BMP, we have widened the sidewalk to 12 feet and replaced the staircase with a ramp)

ID	PROJECT	TIER	OPPORTUNITY STATEMENT
20	Rainier Ave S (Martin Luther King Way S to S King St) multimodal improvements	Tier 1	Provide an all ages and abilities bicycle connection between the Judkins Park light rail station, Chinatown International District, and Mount Baker
21	Mountains to Sound Trail Crossing over I-5	Tier 2	Build a bridge that connects Stadium Station to the Mountains to Sound Trail
22	Yesler Way Between Alaskan Way and 3rd Ave bike connection	Tier 1	Connect the Waterfront Trail to existing protected bike lanes on Yesler Way
23	5th Ave N connection (Republican St to 4th Ave)	Tier 1	Provide an all ages and abilities bicycle connection between Belltown (4th Ave/Vine St) and the east side of Seattle Center (5th Ave N/N Republican St)
24	South Lake Union to Capitol Hill I-5 Crossing	Tier 2	New bicycle and pedestrian bridge across I-5 at Thomas St connecting Capitol Hill to South Lake Union
25	Valley St multi-use path north side (Westlake PBL to Fairview)	Tier 2	Connect the Westlake PBL to the future Eastlake PBLs and clarify the Cheshiahud Lake Union Loop wayfinding route
26	Kinnear Park Trail connection	Tier 1	Provide a connection from Queen Anne to the future Ship Canal light rail station and Elliott Ave W
27	Helix Bridge Retrofit	Tier 1	Retrofit the helix bridge by adding ramps to make it more accessible for bicyclists of all ages and abilities; it currently has stairway runnels and an elevator
28	Magnolia connection	Tier 2	Build an all ages and abilities connection from the Elliott Bay Trail to Magnolia for people bicycling
29	Elliott Bay Trail to Thorndyke Ave W	Tier 1	Improved and widened trail connection between the existing end of the protected bike lane on 20th Ave W at Thorndyke Ave W to the end of the Elliott Bay Trail under the Magnolia Bridge
30	Elliott Bay Trail Extension	Tier 1	New trail from existing Elliott Bay Trail end below the Magnolia Bridge to the Interbay light rail station, located on the east side of the railroad tracks, west of 15th Avenue W
31	SR 520 connection across Portage Bay (under construction)	Tier 1	Connect the SR 520 Trail to Capitol Hill and Eastlake
32	Improved crossing of Montlake Bridge	Tier 2	When the bridge is replaced, add all ages and abilities bicycle facilities
33	Ship Canal Trail and Dexter Ave to Fremont Bridge connection	Tier 1	Complete a multi-use trail connection between the Ship Canal Trail and Westlake multi-use trail
34	Interbay Station Connection on Dravus	Tier 1	W Dravus St connections from 20th Ave W to 11th Ave W, including the W Dravus St bridge, to provide a bicycle connection to the Interbay light rail station
35	University Bridge - South leg to Eastlake Ave E/Harvard Ave E	Tier 1	Improved connection on Eastlake Avenue E between the University Bridge and Harvard Avenue E for both north bound and south bound bicyclists.
36	Interbay Station Connection from Ship Canal Trail	Tier 1	New connection from Ship Canal Trail crossing under the Ballard Bridge to the Interbay light rail station
37	Connect Trails via Ballard Bridge	Tier 1	<p>If it is determined that the Ballard Bridge will be replaced, provide an all ages and abilities bicycle connection on the Ballard Bridge between the Ship Canal Trail and Burke Gilman Trail, and along 15th Ave W (grade separated multi-use trail) between the Ballard Bridge and W Dravus St, in concert with the bridge replacement.</p> <p>If it is determined that the existing Ballard Bridge will be maintained, build a new bicycle and pedestrian bridge in the vicinity of the Ballard Bridge.</p>

ID	PROJECT	TIER	OPPORTUNITY STATEMENT
38	NE 47th St overpass over I-5	Tier 1	Build a new bicycle and pedestrian bridge over I-5 to connect the University District and Wallingford
39	Green Lake Way N / N 50th St / Stone Way N intersection multimodal improvements	Tier 1	Provide an all ages and abilities bike connection between Green Lake PBLs and Fremont/Wallingford neighborhoods using both physical and temporal separation through this busy intersection
40	50th St under Aurora	Tier 2	Provide a an all ages and abilities connection along the southern edge of Woodland Park, addressing the pinch point under Aurora Ave N
41	Burke-Gilman Trail "Missing Link" completion	Tier 1	Multi-use trail connecting the two existing sections of the Burke-Gilman Trail in Ballard
42	Salmon Bay Bridge	Tier 2	In coordination with BNSF Railroad, connect 33rd Ave W Bridge in Magnolia to the Burke-Gilman Trail
43	14 th Ave NW from NW 58 th St Neighborhood Greenway to Ballard Station and from NW 45 th St / 11 th Ave NW	Tier 1	Provide an all ages and abilities connection along 14th Ave NW from the NW 58th St Neighborhood Greenway to the Ballard light rail station and a connection from the light rail station to NW 45th St / 11 th Ave NW
44	NW Market St from 24th Ave NW to 14th Ave NW	Tier 1	Provide an all ages and abilities connection along NW Market Street between downtown Ballard and the light rail station. Freight and transit will also operate on this corridor, so the corridor design will have to plan curb space accordingly.
45	Woodland Park Connection across Aurora Ave N	Tier 1	In coordination with the Parks Department, build a multi-use trail connection between West Green Lake Way N and the N 57th St underpass of Phinney Ave N.
46	Green Lake Way to N 63rd St underpass of Aurora Ave N (SR 99)	Tier 2	Widen the SR 99 underpass to provide improved walking and biking connections between the Green Lake Loop and the Phinney/Greenwood neighborhoods
47	Thorton Creek Trail to Matthews Beach	Tier 2	Provide a new bridge and trail connection between the street end of 46th Ave NE and the Burke-Gilman Trail along the Thornton Creek natural space
48	1st Ave NE crossing of Northgate Way	Tier 1	Provide an all ages and abilities bicycle connection along 1st Ave NE across Northgate Way and connecting to the John Lewis Memorial Bridge (Northgate pedestrian and bicycle bridge)
49	1st Ave NE over I-5 multimodal improvements (widening)	Tier 1	Provide a widened connection over I-5 reconnecting the Northgate neighborhood
50	NE 130 th St multimodal improvements over I-5	Tier 1	Provide a seamless bike connection between the protected bike lanes on NE 130th St and Roosevelt Way NE connecting the light rail station with the Bike+ network and neighborhoods east and west of I-5
51	Trail connection between 15 th Ave NE and 5 th Ave NE (NE 135 th St/Jackson Park Trail replacement)	Tier 1	Provide an improved trail connection between 15 th Ave NE and the light rail station via unopened NE 130th St ROW and improved crossing of Thorton Creek on 10th Ave NE

Phased Implementation

There are various segments in the bicycle and e-mobility network that will require phased implementation. Several of these corridors are dependent on other changes occurring throughout the transportation system, such as the West Seattle to Ballard Link Extension stations opening. Other corridors require changes that will be challenging to implement; in these locations, near-term improvements could be implemented as an interim step until the long-term vision can be realized.

Table 3: Phased Implementation Corridors

ID	Location	Considerations
1	SW Admiral Way	In the near term, consider interim Bike+ Arterial improvements on SW Admiral Way from 45 th Ave SW to SW Olga St. RapidRide service is planned to be added to this corridor in concert with light rail expansion. A long-term AAA bikeway route will be determined closer to the introduction of RapidRide service.
2	35 th Ave SW	In concert with light rail service expansion, RapidRide is planned to be removed from 35 th Ave SW between Alaska and Avalon. After that time, Bike+ Arterial improvements will be considered from SW Dawson St to Fauntleroy Way SW.
3	SW Alaska St	Bike+ Arterial improvements will be considered in the vicinity of the Alaska Junction light rail station in concert with station construction.
4	Martin Luther King Jr Way S	In the near-term, pursue a range of strategies to slow vehicle traffic and create a safer, more comfortable travel experience on Martin Luther King Jr Way S. In the long-term, consider Bike+ Arterial improvements south of Rainier.
5	S Graham St	Bike improvements on S Graham St will be considered for construction in conjunction with the opening of the South Graham Street infill light rail station.
6	W Dravus St	Bike+ Arterial improvements will be considered in concert with opening of the Interbay light rail station and/or in concert with the replacement of the Dravus St bridges.
7	Ship Canal Trail connection to Thorndyke Ave W	Bike+ Arterial improvements will be considered in concert with the opening/construction of the Interbay light rail station.
8	NW Market St	Bike+ Arterial improvements will be considered in concert with the opening/construction of the Ballard light rail station.
9	14 th Ave NW	Bike+ Arterial improvements will be considered in concert with the opening/construction of the Ballard light rail station.

SPATIAL REQUIREMENTS AND OPERATIONAL CONSIDERATIONS

There are many design and operational considerations to advance the vision for bicycle and e-mobility use in Seattle and meet the STP vision to help people biking and using e-mobility be able to move around in ways that are “just, sustainable, and safe.” Most critical is that the bicycle and e-mobility network provide a safe, comfortable, and convenient experience for people of all ages and abilities, which will help maximize use of the network.

Bikeway design should be informed by the NACTO *Designing for All Ages and Abilities* contextual guidance and design standards from *Streets Illustrated*, our Right-of-Way Improvements Manual that identifies guidance for bike lanes, multi-use trails, intersections, bike lanes with transit service, Neighborhood Greenways, and bike parking based on national best practices.

These resources help SDOT staff determine what type of AAA facility is most appropriate on a given street based on factors like vehicular speeds and volumes and the number of travel lanes.

Table 4 shows the appropriate AAA bicycle facility and key operational considerations for given roadway contexts.

In addition to the factors presented in **Table 4**, it is important that bicycle facility design is closely coordinated with the Seattle Fire Department for emergency access and with our transit agency partners, such as King County Metro, Sound Transit, and Community Transit, to minimize impact on transit operations.

Streets Illustrated will be updated after adoption of the Seattle Transportation Plan to account for evolving best practices, which is described in more detail below under “Maintenance & Modernization.”

Inputs for Project Development

Develop a standard to measure right-of-way tradeoffs for bicycle design along designated bicycle corridors to use during project development.

- Evaluate outcomes from existing measures which could include instructions to establish right-of-way allocation measures and goals on the Bike+ network.
- Integrate the operational measures and goals into the complete streets process for project development to streamline right-of-way tradeoff decision-making process alongside other multi-modal operational measures and goals where designated corridors overlap.

Table 4: Contextual Guidance for Selecting All Ages and Abilities Bikeways⁹

Roadway Context				Key Operational Considerations
Target Motor Vehicle Speed ¹⁰	Volume (AWDT) ¹¹	Vehicle Lanes	AAA Bike Facility	
< 10 mph	<400	No Centerline or Single Lane 1-way	Healthy Street	Pedestrians share the roadway
< 20 mph	<800	No Centerline 11' Single lane; 2-way traffic	Neighborhood Greenway	<p>Neighborhood Greenways may not be appropriate when there are high peak hour volumes, lots of curbside activity, and/or frequent use by transit and/or freight vehicles, even if speeds or volumes are low. Protected bike lanes may be more appropriate in these contexts.</p> <p>Passing opportunities (such as those provided by residential driveways) must be considered in context of topography and vehicle volumes</p> <p>Lower volume Neighborhood Greenways are the most comfortable; however, in urban village contexts, higher volumes may be considered where there are low operating speeds, ample passing opportunities and sidewalks/pathways are present.</p>
	<1,000	No Centerline 18' Single lane; 2-way traffic		
	< 400	Single lane; 1-way traffic	Neighborhood Greenway w/ contraflow bike lane	
< 25 mph	< 1,000 – 3,000	Single lane each direction or single lane one-way	Conventional Bike Lane Buffered Bike Lane Protected Bike Lane	Low curbside activity Low congestion pressure
	< 3,000 – 6,000		Buffered Bike Lane Protected Bike Lane	
	> 6,000		Protected Bike Lane	
	Any	Multiple Lanes in each direction	Protected Bike Lane	
> 26 mph	Any	Any	Protected Bike Lane Or Separated Pathway	Arterial Traffic Calming

⁹ Adapted from NACTO guidance to be specific to Seattle

¹⁰ This refers to the speed at which we want drivers to travel, which may be different than the posted speed limit. We design streets to achieve the target speed. To determine these values, SDOT collects data on how fast motor vehicles are traveling in real life and then uses 85th percentile or 95th percentile motor vehicle speed. 95th percentile speed captures high-end speeding, which causes greater stress to bicyclists and more frequent passing events. Setting target speed based on this threshold results in a higher level of bicycling comfort for the full range of riders.

¹¹ Some locations see high volumes over a short period of time due to adjacent land use (e.g. stadiums). It may be appropriate to design to a higher standard in these locations, and these are considered on a case-by-case basis.

PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than specific to a project) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change; however, the programmatic activities listed here provide helpful general information to describe the types of tools and methods SDOT will seek to employ to manage the transportation system.

Bicycle and E-Mobility Network Implementation

SDOT will aim to construct the bicycle and e-mobility network outlined in this Plan to provide a more comprehensive network of AAA routes in the city. SDOT will seek to:

- Continue to include complex and expensive bicycle facilities and large catalyst projects as stand-alone projects within the City's 6-year Capital Improvement Program, as appropriate, so annual program budgets are not fully consumed by one or two large projects.
- Leverage grants to supplement public and private ROW investments and fill network gaps.
- Consider additional connections. Bike connections not included on the maps in this element are not precluded from bike infrastructure in the future. Bicycles are a flexible mode of travel and, as network demands change and our transportation network evolves, we should remain open to opportunities and exploration of additional connections in the future.
- Refine future Neighborhood Greenway and Healthy Street routes. As indicated in **Figure 6** through **Figure 11**, routes may be changed, consolidated, or differ slightly from what is shown on these maps when studied in more detail during implementation. For instance, a route may shift to a parallel street if determined to be a preferable route.
- Conduct studies to evaluate trail expansion needs. If a trail cannot be widened (e.g., adjacency to an environmentally sensitive area), assess if a parallel street may help serve people riding bicycles. Install alternate route wayfinding signage along the trail when a parallel street bicycle facility is installed.
- Prioritize building new bike projects in neighborhoods that have historically seen underinvestment by the city, employing the city's Race and Social Equity Index. Use data sets such as educational attainment level, household car ownership, multigenerational households, and income to analyze neighborhood characteristics.
- Use TEF to prioritize gap construction projects, specifically Districts 1, 2, parts of 3, and 5.
- Early in project planning, identify partnerships with other programs, funding, and potential challenges to construction.
- Create work plans that use cost-efficient SDOT crew capacity to deliver projects, as much as possible.
- Harness funding and opportunities when private development occurs to build planned new network facilities.

- Be prepared to work with developers during the Street Improvement Permit process to build new street elements within the right-of-way.
- Use the street vacation process to implement new bike facilities during the public benefits package scoring.
- While conducting outreach for new capital projects, ask the community if there are any safety concerns that crews can try to address during project implementation.
- When a capital project is underway in a community, incorporate and market supplemental programs to help community members transition to sustainable travel options like biking, walking, and taking transit.
- For example, when installing a bike lane, consider partnering with a local bike shop on helmet distribution.
- Help community members sign up for e-bike and e-scooter incentives, which are discussed below.
- Host events in communities where local shops can interact with individuals and SDOT can offer giveaways for sustainable travel options.
- Where a bicycle route shares a street with a freight route, design the street to minimize conflicts, increase predictable movements, and increase safety. Facilities for trucks and bicycles should be clearly separated and comply with width and materials standards, consistent with *Streets Illustrated*. Generally, treatments could include grade separations or physically separated facilities, such as Toronto-style barriers, to help all roadway users move predictably.



Toronto-style barrier being installed in Seattle

To achieve the bicycle and e-mobility network, some existing facilities will need to be upgraded to be safer and accessible for people of all ages and abilities.

Bike facilities are implemented using the materials and design standards that are current at the time of their construction. However, we are always seeking to improve safety, and updating facilities to meet current standards is an ongoing process. SDOT will seek to:

- Upgrade flexible delineators on bikeways to more permanent, robust protection like Toronto-style barriers to make them comfortable for more people.
- Evaluate current facilities that do not meet the National Association of City Transportation Officials (NACTO) AAA guidelines to determine the best solution for either upgrading the facility or developing a parallel AAA facility nearby. (Supports TEF 43.4)
- Proactively adjust existing bike lanes and trails to widen to new standards that accommodate larger bike footprints.
- Conduct a pilot study on glow-in-the-dark multi-use paths and determine if they are suitable for broader use in Seattle. Considerations will include environmental impacts, availability of the materials, and maintenance.

Bicycle Facility Prioritization

Full implementation of the ambitious vision proposed for our future bicycle and e-mobility network (including new facilities, catalyst projects, and upgrades to existing facilities) will take many years and will likely extend beyond the horizon of the STP, dependent upon available resources.

In order to make progress on our vision in a resource-constrained environment, we use prioritization processes to help focus our work on projects that can provide transformative impact toward meeting the STP's goals. This helps stretch our dollars to support an equitable and implementable set of prioritized projects.

The STP establishes a broad prioritization framework that helps align SDOT's work to our overarching goals. As we proceed with STP implementation, a tailored process to prioritize bicycle and e-mobility projects will be developed. It will directly build on the STP framework with specific criteria and datasets to identify bike infrastructure investments that best advance the STP goals and respond to current challenges and opportunities.

Reallocate Street Space

Reallocate street space currently used for vehicle storage and general-purpose travel to support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations. SDOT will seek to:

- Use reallocated street space to implement the bicycle and e-mobility network.
- Allocate curbspace for bicycle, micromobility, and shared mobility uses, with priority given to programs that provide an all-electric or transitioning-to-electric vehicle fleet. *See the Curbside Management Element for more details.*
- Expand parking management strategies in more places, including more regulated curbspace for short-term parking with payment requirements that could help encourage some people to try biking for shopping, school, or work trips. *See the Curbside Management Element for more details.*
- Implement shared, car-light streets, such as Café Streets and Neighborhood Greenways, and car-free streets to support the transition to a low-carbon transportation system. *See the People Streets and Public Spaces Element for more details.*
- Partner with Seattle Parks and Recreation to identify on which Olmsted Boulevards we will change policy and operation to allow more flexibility to create better walking, strolling, and bicycling experiences. These changes will enable more opportunities for healthy recreation opportunities year-round instead of summer weekends, and in some cases, provide high-comfort bike network connections. (Supports TEF 43.4) We will evaluate each location individually, as there are different property, design, and social conditions at each location. Any design changes will provide equitable access to these boulevards.
- As part of the STP engagement process, we heard broad support for increased recreational opportunities along Olmsted Boulevards, along with more people-oriented streets throughout the city. The city would engage with communities and Friends of Seattle's Olmsted Parks in any such decision-making processes.
- Work with Seattle Parks and Recreation and other partners to improve and expand temporary open streets events.
- For large capital bike projects, look for opportunities to add planted medians when reconstructing street curb.

Intersection Improvements

- Safety improvements are critical at intersections along the bicycle and e-mobility network so that a person's entire trip will be comfortable. SDOT will seek to:
- Expand opportunities to more safely cross busy arterials by installing enhanced crossings. (Supports TEF 40.6)
- Standardize crossing treatments for bikeways and multi-use trails at arterial streets, streetcar, light rail, and railroads, and clarify who should yield right-of-way for trail crossings with clear signs and markings.
- Make people biking and using e-mobility more visible at intersections by installing treatments such as curb bulbs, No Parking signs, and refuge islands. When vehicles park within 20 feet of an intersection, it makes people crossing the street less visible to people driving, thereby giving drivers less time to react and safely stop.
- When designing an intersection, evaluate if a protected intersection is merited, and expand their use over time.

Freight and Urban Goods Movement Considerations

- Freight and urban goods access will be carefully considered when designing and constructing the bicycle and e-mobility network. SDOT will seek to:
- Design bike facilities and parking to support efficient, time-competitive e-cargo bike freight delivery programs for food and goods delivery (see Executive Order 2022-07). *See the Freight Element for more details on a commercial e-cargo bike program and e-cargo bike lending libraries.*
- Use sufficient freight turning movement templates when designing bike lanes to increase visibility of vulnerable users and protect buffer materials from future maintenance needs.
- Allocate clear and sufficient loading zones for freight, and work with parking enforcement to discourage parking in bike lanes.

Bike Parking

Secure and convenient bike parking is a critical component of a bicycle and e-mobility network. It helps encourage people to bicycle for their everyday needs. To meet anticipated growing demand for convenient and secure bike parking, it will be necessary to dedicate more right-of-way to bike parking facilities. Shopping districts, community and mobility hubs, and multi-family residential areas where residents may not have the space or ability to securely park or store their bikes, are especially important areas for providing secure bike parking options. People also need spots to lock their bikes and other mobility devices for quick trips to shops and other destinations. SDOT will seek to:

- Consolidate bike parking work at SDOT into a permanent, staffed program responsible for implementing the following tactics in partnership with other agencies and the community.
- Utilize the public right-of-way to install bike parking to meet the level of bicycle use needed to achieve Seattle’s climate action goals.
- Provide a variety of types of bike parking to accommodate a wide variety of needs:
 - Short- and long-term parking
 - Covered outdoor and secure parking
 - Parking for larger and differently sized bikes and mobility devices including cargo bikes, long family bikes, adaptive bikes, bikes with trailers, e-scooters, etc.
 - E-bike and e-mobility device charging
- Prioritize areas with older multi-family buildings that do not have secure on-site parking and commercial areas where people’s everyday needs can be met. (Supports TEF 43.4)
 - *See “Community and Mobility Hubs” section for detail on bike parking at light rail stations and community and mobility hubs.*
- Consider partnerships, updates to *Streets Illustrated* or City Code to change development requirements and property manager incentives as mechanisms for meeting parking demand.
- Resume meeting community-based requests for bike racks and other micromobility parking infrastructure, and proactively install bicycle parking based on the Seattle Displacement Risk Index to fairly allocate bike and other micromobility parking spaces.
- Continue requiring Seattle Public Schools to install long-term and short-term bike parking at redeveloping schools and partner with Seattle Public Schools to install short-term bike racks on other school sites.
- Develop a strategy for deploying secure parking in the public right-of-way, which may include defining residential and commercial bicycle parking zones and estimating parking

demand within each zone based on adjacent land uses and availability of publicly accessible, convenient, and secure parking on private property.

- Adopt specifications, graphic identify, and wayfinding for secure parking pods/kiosks in the public right-of-way, then identify vendors to partner in delivering secure parking kiosks or pods.
- Implement “intersection daylighting,” which is an easy-to-implement safety treatment that converts the parking spaces and no-parking zones immediately before an intersection into bike parking areas, thereby increasing the visibility of people walking, biking, and rolling across the street.
- Implement loading zones to support increased delivery trips made by people riding bicycles and using e-mobility devices.

While all residential, commercial, and institutional development should provide secure bike parking (a requirement for new development), older buildings may not be well set up to do so, and bicycle parking code requirements and guidelines do not adequately address the needs stemming from a growing number of e-bikes, cargo bikes, and other types of devices, which often do not fit in traditional bike parking areas. It is also important to provide infrastructure for charging e-bikes and other e-mobility devices.

SDOT will seek to:

- Consider the diversity of bikes (e.g., cargo, trike, adaptive), bike design vehicles (e.g. bikes with trailers), and other mobility devices (e.g. scooters) when designing future bike parking at private developments.

PEER EXAMPLE: OONEEPOD

The Ooneepod is one example of secure parking kiosk that can be placed in the right-of-way. With a variety of modular designs and capacities, Ooneepods offer adaptable, secure parking for a monthly fee. Ooneepods are in use in several cities, including New York and Jersey City.



Safe Routes to School

The Safe Routes to School (SRTS) program is designed to improve safety in areas around schools and encourage more kids to walk and bike. SDOT will seek to:

- Expand the School Streets program.
- Serve every public school with an all ages and abilities bicycle facility. (Supports TEF 43.4 and Executive Order 2022-07)
- Continue partnering with Seattle Public Schools on walking and biking safety education for students, including students with disabilities.
- Partner with Seattle Public Schools on bike buses.
- Work with our partners to provide free bicycles to low-income children and their parents/guardians so they may use the skills they learn and ride to school on the bicycle facilities we construct that serve their schools.
- Continue supporting the Safe Routes to School Coordinator position at Seattle Public Schools who works to ignite a culture of active transportation to school.
- Continue providing walking and biking maps to school, free bicycling incentives and prizes for bike to school campaigns, and free packages with bike train supplies.
- Continue engaging with students in designing and installing artwork along routes to school and other community destinations like parks and libraries.

See the Pedestrian Element and People Streets and Public Spaces Element for more information about Safe Routes to School.



Seattle Bike Bus event

Safe Routes to Parks

Park properties offer opportunities to create all ages and abilities bikeways that would greatly enhance network connectivity and create a sense of park expansion. Such connections require close coordination with the Seattle Parks and Recreation Department and thoughtful design to minimize environmental impacts and enhance enjoyment for park users. SDOT will seek to:

- Make investments that make it safer to bicycle to parks. This includes expanding bike connections within and adjacent to parks.
- Build on our existing partnership with Seattle Parks and Recreation and efforts to create these kinds of connections.
- Collaborate with other departments to explore these types of connections.

Neighborhood Greenways and Healthy Streets

Neighborhood Greenways and Healthy Streets are an integral component of the Bike+ network because quieter local streets are often preferred by people riding bikes over busier arterial streets, even if the arterials are AAA. While they are intended for all active modes, they provide important bicycle and e-mobility network connections and neighborhood bicycle recreation opportunities (Supports TEF 43.4). SDOT will seek to:

- Implement Bike+ network to provide a more comprehensive network of AAA routes. Neighborhood Greenways and Healthy Streets will be implemented on non-arterial streets.
- Expand permanent Healthy Streets to all neighborhoods as a way of providing low stress connections to common destinations for people walking, biking, and rolling, regardless of age or and ability. (Supports TEF 43.4 and Executive Order 2022-07) (S4e)
- Enhance Neighborhood Greenways. Bike facilities are implemented using the materials and design standards that are current at the time of their construction. We are always seeking to improve safety and update facilities to meet current standards.
- Improve the legibility and visibility of Neighborhood Greenways and Healthy Streets. Implement cohesive wayfinding between Neighborhood Greenways and the rest of the bike network to help people travel where they need to go. This will make Neighborhood Greenways more visible and navigable for new users and visitors.
- Explore opportunities for expanding neighborhood-based events, play streets, and block parties on Neighborhood Greenways and Healthy Streets.
- Educate people so they are aware of new Greenways in their neighborhood.

See the People Streets and Public Spaces Element for more details on Healthy Streets.

Vision Zero

We are committed to Vision Zero, a goal to eliminate fatal and serious crashes on our streets, and safety is a priority goal for the STP. Achieving the Vision Zero goal requires making changes to our streets to reduce vehicle speeds, minimize conflicts between people driving and people bicycling, and separate people bicycling from those driving. SDOT will seek to:

- Incorporate Vision Zero and Safe System approaches into every project and program.
- Prioritize bicycle safety improvements that are on the high-injury network (HIN), have high levels of travel stress, or are identified through the Seattle Bicycle and Pedestrian Safety Analysis (BPSA) (Supports TEF 19.2)
- Take a comprehensive, data-driven, Safe System approach to address bicyclist fatalities and serious injuries.
- Implement proven techniques systemwide that help further Seattle's goal.
- Create regular opportunities that are not tied to specific projects which enable community conversations on safety with leadership. (Supports TEF 41.6)
- Employ design strategies to maximize comfort and safety for people bicycling, such as those described below under "Update Streets Illustrated" and "Develop a Bicycle Facility Design Guide," through right-of-way reallocation and traffic calming.
- Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, such as protected intersections for bicycles. Protected intersections may include elements such as color, signage, medians, signal detection, and pavement markings. The level of treatment required for bicyclists at an intersection depends on bicycle facility type used, adjacent street function, and surrounding land use.
- Encourage helmet use and bike safety through helmet giveaways.
- Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. In some locations, data shows repeated collision patterns involving people bicycling and addressing issues can be challenging due to limited ROW or competing needs for space.
- Test new materials and solutions that would require less width in locations with limited right-of-way and current design standard widths for bike facilities cannot be met. Work to approve deviations for these new design treatments efficiently, and partner across divisions to implement new solutions.

See the Pedestrian Element and the SDOT Vision Zero Top to Bottom Report (2023) for more information about Vision Zero.

E-Bike and E-Scooter Incentives

Seattle's steep topography is a deterrent to biking, and while e-bikes and e-scooters help make bicycling and using e-mobility a more feasible travel option because they make the hills easier to navigate, their high upfront cost makes them unattainable for many. SDOT will seek to:

- Develop programs to directly connect people with e-bikes and e-scooters, remove barriers such as up-front costs, and increase access to free and low cost maintenance programs.
- Develop e-bike and e-scooter incentives to increase purchases of e-bikes and e-scooters and broaden public awareness of these options and their potential for everyday use as a clean, convenient, and inexpensive mode of personal transportation. This can be achieved through promotional activities and incentives, such as rebates or stipends.
- Prioritize low-income individuals and households for incentives to increase equitable access to e-bikes and e-scooters.

See the New and Emerging Mobility Element for information about subsidies that could be provided to people renting shared micromobility devices like shared bicycles and scooters.

PEER EXAMPLE: DENVER E-BIKE AND E-CARGO BIKE INSTANT REBATES

The City of Denver established a rebate program to incentivize more people to purchase e-bikes as a sustainable transportation solution. The program offers tiered rebates based on income and physical ability. Income-qualified applicants can receive up to \$1,400 for an e-cargo bike and people with disabilities can receive up to \$1,400 for an adaptive e-bike. The program releases a limited number of vouchers each month. In its first year, the program has had nearly 5,000 vouchers redeemed.

Participatory Budgeting

Participatory budgeting allows community members to help decide how we spend part of SDOT's budget. The Neighborhood Street Fund is a city program, running on 3-year cycles, that enables the community to propose and help prioritize transportation-related projects that are then built by the Seattle Department of Transportation. Projects fall into various categories such as: art, community placemaking, and safety improvements. (Supports TEF 19.4 and TEF 45.3)

SDOT will seek to:

- Expand and build on our existing participatory budgeting programs, including the Neighborhood Street Fund, to advance equity and transportation justice, and ensure programs serve communities with highest need.
- Expanded programs may also enable an increase in the number of projects selected each cycle.

- Due to project idea collection, community prioritization, and additional outreach efforts, upfront unit costs for projects identified through this process are typically higher than through normal programming.
- However, expanding these programs would allow SDOT to do more meaningful and equitable outreach including funding neighborhood groups, community organizations, informal groups, and business groups who want to do a project, which will help build stronger community connections.

Safe Routes to Transit

Bicycling and e-mobility are ideal first-/last-mile solutions and greatly expand the reach of those who can access our transit system and the region it serves.

SDOT will seek to:

- Make bicycle and pedestrian investments near light rail stations and busy transit stops that make it safer to bike to transit.
- Improve bicycle and e-mobility connections to current and future light rail stations and the frequent transit network.
- Minimize conflicts with transit and impacts on transit performance. (Supports TEF 43.4)
- Advocate for bike supportive policies to transit agency partners, such as continuing the ability to bring bikes onto transit and improving bicycle parking at transit stations.

Community and Mobility Hubs

Community and mobility hubs combine transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located along major transit routes where frequent transit services intersect to improve connectivity and facilitate local neighborhood connections, especially in historically underserved areas. Bike parking will be an important component of the design. They may feature People Streets and Public Spaces elements and goods delivery elements.

SDOT will seek to:

- Partner with Sound Transit and King County Metro to provide sufficient and secure bicycle parking at existing and future Link light rail stations and community and mobility hubs. Light rail stations need ADA accessible kiosks for cargo bikes and adaptable bikes, and they would benefit from high-capacity storage for more traditional bikes.

See the Transit Element and the Curbside Management Element for more detail.

Biking for Congestion Mitigation

Large events, such as sporting events and concerts at the stadiums and arena, and major construction projects can result in traffic congestion on our streets. Biking and using e-mobility are great alternatives in these scenarios and serve as a congestion mitigation strategy.

SDOT will seek to:

- Develop and expand programs that incentivize sustainable alternatives to driving for large events and as a primary congestion mitigation tool during major construction.
- Partner with hosting agencies to accommodate temporary event parking for bikes and e-mobility devices.
- Work with temporary traffic control plans to ensure bike lanes and trails have sufficient detour routes and connections during events.



Adults with two young children riding their bikes while wearing helmets in Seattle

PUBLIC OUTREACH AND EDUCATION

Safety Education

SDOT currently leads safety education campaigns, such as Vision Zero yard signs, that educate people on the importance of driving more slowly and engaging in safer behaviors on our streets. SDOT will seek to:

- Expand safety education campaigns to increase safety for all travelers.
- Make materials accessible to non-English speakers.
- Create regular opportunities that are not tied to specific projects that enable community conversations on safety with City leadership. (Supports TEF 41.6)

Public Education Campaigns on Bicycling and E-Mobility

We are working to make it safe, easy, and affordable for people to get where they need to go without relying on a car. Public education campaigns will be needed to help mainstream bicycling and make it an integral part of daily life for more people. SDOT will seek to:

- Expand public education campaigns to encourage bicycling and using e-mobility.
- Develop focused, continuous outreach to mainstream bicycling and build a diverse bike culture. Emphasize diversity-focused storytelling. Connect bicycling to urban wellbeing.
- Partner with community groups to organize events to promote bicycling (e.g., Ciclovía/Bicycle Weekends, bike swaps, bike festivals) and safety.
- Collaborate with community partners to ignite a culture of bicycling that gives all people the comfort and confidence they need to start bicycling, including to overcome barriers related to skill, knowledge, and cost.
- Incorporate educational messaging around “rules of the road”, and “bicycling etiquette”, or being courteous, particularly when interacting with pedestrians, and how people are intended to use bicycle facilities. (Supports TEF 43.2)

Public Resources

It is important that people have the resources they need to confidently plan their bicycle and e-mobility trips and identify the route that will work best for their needs and comfort level. In order to make that possible, SDOT will seek to:

- Update and enhance online bike map (i.e., improve compatibility with mobile devices).
- Work with mapping and navigation providers to confirm information is accurate.
- Explore web or app-based bike maps that include access routes and any detours planned to help bikers navigate development activities and plan routes efficiently.
- Create an online walking and bicycling route planner that allows users to tailor routing to their needs, such most direct route, most comfortable route that uses only specific facility types, or least steep route.

PARTNERSHIPS

Address Inequities and Past Harm

To rebuild and regain community trust, we must continue to partner with BIPOC-led organizations and co-create with community so investments enhance lives of Black and Brown people living in the South End and do not facilitate displacement, SDOT will seek to:

- Build and maintain relationships with vulnerable communities, including those focused on increasing biking, and learn from the leaders active in these spaces about how SDOT can work and co-create with community members to improve their community.
- Identify actions to address inequities experienced by vulnerable community members who walk, bike, and roll, and provide capacity-building support to BIPOC-led organizations that focus on increasing active transportation. (Supports TEF 31.4)
- Prioritize investment in the South End.
- Implement safer street designs to reduce vehicle speeds and calm traffic in underserved neighborhoods. Re-evaluate and study bike safety needs as neighborhoods densify.
- Promote concrete protected bike facilities, especially in low car ownership areas.
- Accelerate the build out of a complete and connected bicycling network, which includes improvements at intersections and supporting bike infrastructure (e.g., bike racks).

Bicycling Organizations

There are a number of groups already doing meaningful work to expand the bicycling community, and we seek to establish or expand our partnerships with them to support their efforts. SDOT will seek to:

- Support and partner with organizations, such as Black Girls Do Bike, Bike Works, Outdoors for All, Peace Peloton, and Northstar Bicycling Club, to encourage bicycling by women and caregivers, people of color, people with disabilities, non-English speakers, low-income populations, seniors, and youth.
- Partnership may come in the form of micro-grants, providing material support for events, and/or dedicated staff time.
- Continue to build meaningful relationships with groups through regular meetings, ongoing communication, and progress on action items. Coordinate across City departments to stay apprised of other conversations taking place.



West Seattle bike experience with organizations 'Black Girls Do Bike' and 'Rainier Riders'

Improve Rail Crossings

There are many opportunities to coordinate with freight, passenger rail, light rail, and streetcar partners on safety improvements at rail crossings.

SDOT will seek to:

- Negotiate who is responsible for ongoing maintenance and design of train track crossing signage.
- Evaluate and update operating agreements for access control for train track use and determine what abandoned tracks can be removed.
- Prioritize locations with greatest needs to update crossing design.
- Research and pilot new materials for track crossing flange treatments to address bike tires becoming stuck.

Coordinate with Partner Agencies

Many agencies play a role in supporting actions to enhance Seattle's bicycle network infrastructure and operations.

SDOT will seek to partner with:

- **King County Metro:** Explore ways to safely locate bike facilities under trolley lines where buses must maintain lateral clearance to attach overhead and make modifications to bike racks on buses to accommodate a variety of e-bike and cargo bike sizes.
- **WSDOT:** Coordinate on design solutions to minimize conflicts at highway entrance and exit ramps.
- **U.S. Army Corps of Engineers, U.S. Coast Guard, Washington State Departments of Natural Resources and Fish & Wildlife, and Tribal Nations:** Coordinate on new and upgraded facilities with drawbridge operations.
- **Seattle Public Utilities:** Coordinate on how to minimize dumpsters blocking bike lanes during pickup days.
- **Seattle City Light:** Coordinate on how to improve access for trail maintenance within Seattle City Light right-of-way.
- **Seattle Parks and Recreation:** As discussed above, coordinate on opportunities for improving bicycling adjacent to and/or through parks, improving and expanding temporary open streets events, and changing policy and operation on select Olmsted Boulevards.



A bike on the front rack of a Metro bus.

Advocate for Changes to State and Federal Legislation and Programs

There are policies that impact bicycle use and safety that are outside of the City of Seattle's control. As a city focused on providing a safe, equitable, and sustainable transportation system, we can advocate for changes to state and federal legislation and programs.

SDOT and the city will seek to:

- Revise driver education policies to require driver education for anyone seeking a Washington driver's license, including people moving to Washington from another state. Put more focus on safety for people walking, biking, and rolling, as well as young driver safety. Many regions of the country do not teach new drivers how to interact with people bicycling and using e-mobility devices, so additional driver education is critical. (Supports TEF 44.4)
- Require drivers aged 72 and older to renew their license every two years and authorize license restrictions to be imposed in the interest of keeping drivers and roadways safe.
- HB 1319 passed in 2023, requiring drivers who are responsible for a fatal crash or one causing "substantial bodily harm" to have their driver's license reexamined. Monitor how HB 1319 is implemented and evaluate if additional legislative action is needed.
- Revise state legislation (RCW 46.61.250) that precludes pedestrians from having priority use of the roadway.
- Continue to engage communities to address equity concerns around automated traffic safety cameras and potentially expand its use in areas with many fatalities and serious injuries.
- Expand e-bike incentives and increase rebates at the state level.

TRANSPORTATION DATA, TECHNOLOGY, AND INNOVATION

Maintain Our Datasets

Data on bicycle facilities is useful to track asset locations and their condition, as well as to provide information to others.

SDOT will seek to:

- Maintain the dataset for existing bicycle facilities and the digital inventory of public bicycle parking locations, and continually update them on the city website.

Use Data to Inform Changes to the Transportation System

To make informed decisions typically requires good data.

SDOT will seek to:

- Create a more robust bike count and annual reporting program that captures bike activity at specific locations, such as within Link light rail station areas, along key bicycle corridors between urban villages and centers, and along Neighborhood Greenways, and trips made using shared micromobility.
- Collect data on non-commute trips made by personal and shared bicycle and e-mobility devices, such as through trip surveys, big data, and more.
- Collect data on the demographics of people bicycling and using e-mobility at a regular interval to track progress toward increasing the diversity of who is bicycling and using e-mobility devices. SDOT strives to expand the bicycling community and include more women, caregivers, people of all ages and abilities, and people of color. Determine the best format for collecting this data.
- To better estimate network-wide bicycle and e-mobility volumes, develop factor groups based on permanent count data and extrapolate short-duration counts that can be used in planning and performance tracking.
- Purchase updated bike counters and maintain existing equipment quickly to provide accurate reporting.
- Explore use of cellular data to augment and validate bicycle volume estimations.
- Make bike count data easily accessible to City staff, partner agencies, and the public.
- Evaluate existing multi-use trail conditions and develop recommendations to improve the multi-use trail environment. This includes pavement and shoulder condition, vegetation control, adjacent buffers and/or barrier treatments, intersection and/or railroad crossings, etiquette signage, and wayfinding signage.
- Continue to partner with third party mapping companies to confirm their maps include up-to-date information and do not route people onto dangerous streets.

MAINTENANCE & MODERNIZATION

Update Streets Illustrated

Streets Illustrated (Seattle's Right-of-Way Improvements Manual) identifies comprehensive design standards and guidance for bike lanes, multi-use trails, intersections, bike lanes with transit service, Neighborhood Greenways, and bike parking based on national best practices. As best practices continue to evolve, our design standards need to reflect that. As more people use cargo bikes, e-bikes, adaptive bikes, and e-mobility devices that vary in size and speed at which they travel, we'll need to provide adequate space for people traveling faster to safely pass those moving more slowly.

Streets Illustrated needs to reflect the wide range of bicycle and e-mobility devices that use, and will use, the Bike+ and multi-use trail networks in the future. This section highlights considerations to account for when updating *Streets Illustrated*.

SDOT will seek to:

- **Include the Bike+ network** in *Streets Illustrated* to minimize conflict points between people bicycling and driveways to new developments.
- **Bikeway Width.** Increase the width of bikeways to accommodate the volumes of people bicycling that are needed to meet Seattle's climate action goals and an increasing number of cargo bikes, e-bikes, adaptive bikes, and e-mobility devices that vary in size and speed at which they travel. In areas with higher anticipated bicycle and e-mobility activity, such as light rail station areas and within urban villages and centers, it is especially important to size our protected bike lanes and their associated buffers to meet growing demand, encourage usage, and help people feel comfortable.
- **Standard Bicycle Design Vehicle.** Adopt a standard bike with a trailer as the "design vehicle" for new and upgraded bikeways. Using this footprint in bikeway design will help make sure new bikeways provide enough space for proper turning movements, intersection cut throughs, and spaces for waiting.
- **Physical Separation.** Physical separation of bike lanes and other measures, such as clear signage and enforcement, should be used to prevent drivers parking or traveling in bike lanes. *Streets Illustrated* identifies a variety of permanent and interim buffer treatments, but interim treatments should be used sparingly and phased out over time for more durable, permanent treatments that meet or exceed the full buffer width per *Streets Illustrated*. We will continue to advance our separation standards to best accommodate emergency vehicles, encourage people driving to obey traffic laws, minimize maintenance and replacement costs, and consider constructability and supply chain issues. Physical separation also increases feelings of and actual safety for people bicycling and using e-mobility devices, making them more likely to use facilities.
- **Multi-Use Trail Width.** Multi-use trails typically should be designed to standard widths, with additional soft surface shoulder space on both sides. In high demand areas with large volumes of pedestrians, wider trails should be provided to enable more operating space, and in some cases, separation between people bicycling and walking.

- **Neighborhood Circulation and Traffic Calming.** As we continue to build out an extensive Neighborhood Greenways network, broader neighborhood circulation strategies should be used to achieve vehicle volumes and speeds at or below NACTO thresholds. Diverters are one strategy that could be implemented on Neighborhood Greenways, Healthy Streets, and School Streets, though not appropriate in every location. Adding stop signs for side streets crossing the Greenway is another strategy and has improved compliance of drivers stopping for bicyclists and people walking.
- **Safe Intersections and Signal Strategies.** At busy street crossings, prioritize people walking, bicycling, rolling, and using e-mobility devices on Neighborhood Greenways and multi-use trails. To reduce crashes and conflicts at major intersections, bicyclists and motor vehicle drivers should be separated physically (e.g., a protected intersection) and/or temporally (e.g., a dedicated signal phase). Eliminate vehicle turn movements that conflict with movements of people walking, rolling, and biking. Bicycle detection should continue to be implemented using an appropriate technology for the specific location context (e.g., push buttons, loops, infrared, etc.), and signal delay for people bicycling should be minimized. This may include retiming signals to provide “green waves” that optimize travel at 10-15 mph for people bicycling on arterial streets.
- **Network Legibility and Predictability.** To make bicycling and e-mobility attractive to a broader group of Seattleites and visitors, the network needs to be legible and intuitive. This includes uniform design and clear connections between on-street bicycle lanes, off-street trails, and Neighborhood Greenways as well as to and from transit stations and major destinations. Designing bicycle facilities to provide predictable movement of people on bicycles also helps minimize conflicts with motor vehicles and freight goods movement. Increased coordination with other city wayfinding programs is needed to provide consistency in what destinations are called, graphics, and format for secondary languages. Our extensive wayfinding system is important to network legibility.
- **Permanent Bike Barriers and Curb Space.** Identify design standards and guidance for how permanent bike barriers interface with the curb. For example, *Streets Illustrated* will include how motor vehicles should access private development curb cuts and how cargo bikes making deliveries should enter/exit the bike lane.
- **Bike Parking at Developments.** As discussed above under “Bike Parking,” look at updating *Streets Illustrated* or City Code to change bike parking requirements for development projects as a mechanism for meeting parking demand.
- **Increase pedestrian-scale lighting.** Expand the requirements for pedestrian-scale lighting downtown to all Urban Villages and multi-use trails. Many trails and off-street connections are dark and challenging to navigate at night and better lighting would make them more useful. These locations will be inventoried and prioritized, and we will work with Seattle City Light to develop a plan and funding mechanism for installing additional lighting. (Supports TEF 45.3)

See the People Streets and Public Spaces Element for more information about implementing pedestrian-scale lighting improvements.

Develop a Bicycle Facility Design Guide

Streets Illustrated provides a high-level framework for bicycle facility design, but a more comprehensive *Bicycle Facility Design Guide* is needed to supplement it. This will allow SDOT to better reflect current best practices. SDOT will seek to:

- Create a *Bicycle Facility Design Guide* to supplement *Streets Illustrated* that will be referenced when designing and implementing bike projects.

Maintain the Bicycle and E-Mobility Network

To provide a safe and comfortable bicycling and e-mobility experience, SDOT will seek to:

- Periodically review and adjust resources for maintenance equipment, labor, and program management to be proportionate to a growing bicycle and e-mobility network.
- Improve and promote the Find It, Fix It app to make it easier for community members to report maintenance issues, including bike facility specific issues.
- Address maintenance concerns efficiently and promptly.
- Address annual maintenance needs in an organized manner for seasonal issues, such as vegetation trimming, blackberry bush removal, bike lane sweeping, and clearing drainage problems.
- Promote use of sustainable materials in construction of bike facilities that are durable and have lower lifecycle costs to replace and maintain, such as permanent barriers.
- Negotiate maintenance agreements with partners.
- Work with public and private partners to identify and enforce bike lane detour routes in construction zones so that bicyclists and e-mobility users have a safe alternative route.
- Anticipate signal equipment upgrades, including needed signal heads or phasing changes to make bicycling connections easier.
- Develop a schedule for routine maintenance checks, such as bike lane sweeping, lane striping, and protective barrier materials replacement, that prioritizes locations for investment.

DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

A bikeable city is one where people of all ages and abilities ride bikes because it is a convenient, affordable, fun, safe, and healthy choice. (Supports TEF 43.4)¹²

A bikeable city includes:

- Connected and well-maintained bicycle facilities between where people live and the places they need to go to meet their everyday needs, including school, shopping, services, work, parks, and connecting to transit for longer trips (Supports TEF 45.3, 19.4)
- Enjoyable and safe places to ride a bicycle or e-mobility device—whether on a residential street, multi-use trail, or protected bike lane (Supports TEF 45.3)
- Places to securely park bicycles and e-mobility devices of all sizes at destinations (Supports TEF 45.3)
- Intuitive and inviting design and wayfinding that makes people feel comfortable and confident navigating the network
- Increased access to bicycles and e-mobility devices
- Well-lit streets and multi-use trails
- Broad community acceptance and support for bicycling as a viable and attractive mode of travel, including from businesses, schools, and government (Supports TEF 29.1). Bicycling is mainstream
- Biking is more convenient and time competitive than driving for short- and medium-length trips
- A traveling public that is educated on how to share the road safely, respectfully, and predictably
- These components are particularly important to make bicycling more accessible and attractive for populations historically underrepresented in bicycling, such as women, people with lower incomes, and people of color.

¹² TEF refers to SDOT's Transportation Equity Framework. You can learn more about the TEF at <https://www.seattle.gov/transportation/projects-and-programs/programs/transportation-equity-program/equityworkgroup>. A complete list of the TEF tactics referenced is located at the end of the element.

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommends performance measures to monitor the implementation of the STP Bicycle and E-Mobility Element. They are part of a 3-tiered system of measures that includes:

- Tier 1: Overarching outcome-based measures are identified in the STP implementation strategy (see Chapter 4 of the Part I document). Generally, they are tracked at a citywide scale, and SDOT may not have primary control over their achievement. Examples include a reduction in vehicle-miles traveled and the percentage of household income dedicated to transportation.
- Tier 2: These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include a target to increase the share of people taking active trips and the percentage of households living within a quarter mile of an all ages and abilities bikeway.
- Tier 3: Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples may include the number of secure bike parking spaces installed each year in public right-of-way (both citywide and in equity priority areas); number of miles of multi-use trails, protected bicycle lanes, and Healthy Streets created each year; percent of bicycle and e-mobility catalyst projects completed (both citywide and in equity priority areas); and more.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that SDOT can pivot as needed to meet our equity goals over the next 20 years. The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.¹³

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 5 identifies the Tier 2 performance measures that will be tracked for the Bicycle and E-Mobility Element.

¹³ <https://data.seattle.gov/dataset/Racial-and-Social-Equity-Composite-Index-Current/w3kz-xtmq>

Table 5: Bicycle and E-Mobility Performance Measures

Desired Outcome	Performance Measure (Source)	Baseline (year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goals
End traffic deaths and serious injuries on city streets	Number of fatal and serious injury crashes involving people biking and rolling (Seattle Police Department (SPD) Collision reports)	33 (2022)	Zero Sub-measure: track by age, gender, and housing status as data is available.	Yes	Safety Equity Sustainability Livability
Increase walking, rolling, biking, and transit mode share	Increase percent of bicycle and micromobility trips (SDOT)	3% (2019)	8% by 2044 Sub-measure: Track bike ridership by race, gender, and age	Yes	Safety Equity Sustainability Mobility & Economic Vitality Livability
Increase access to All Ages and Abilities network	Percent of households within ¼ mile to the Bike+ or multi-use trail networks (Census Bureau, SDOT)	64% of households 42% of schools (2023)	100% by 2044 Sub-measure: Percent of public schools directly served by a Bike+ route or multi-use trail. 100% by 2044	Yes	Safety Equity Sustainability Mobility & Economic Vitality
Support a well-maintained bike network	Percent of bikeways with fair or better pavement condition (SDOT)	63% (2023)	Achieve and maintain a higher percent of bike segments with fair or better pavement conditions than streets as a whole	Yes	Safety Mobility & Economic Vitality Maintenance & Modernization

RELEVANT TEF TACTICS

- TEF 19.2—Identify opportunities to repurpose travel lanes for transit, biking, and smaller, lighter-weight vehicles and devices to create more travel options with the STP.
- TEF 19.4—Focus maintenance resources in communities and neighborhoods currently underserved by government that have significant maintenance needs; use findings from the racial equity assessment.
- TEF 19.6—Prioritize person-throughput as metric rather than vehicle throughput.
- TEF 29.1—Create publicly accessible, community-oriented visuals and neighborhood-specific snapshots to capture where SDOT has built infrastructure, dedicated investments, and collected community feedback; this should be utilized by SDOT, other City departments, and transportation partners to inform future investment needs and planning and programmatic efforts.
- TEF 41.6—Create regular opportunities that are not project specific for community conversations on safety with leadership.
- TEF 43.2—Coordinate with community-based organizations (CBOs) and legislators to revise or remove pedestrian crossing (jaywalking, etc.) and helmet laws that result in harm to BIPOC communities; replace with educational outreach that promotes safe walking, rolling, and bicycling behaviors.
- TEF 43.4—Review SDOT policies, practices, standards, and funding allocation strategies to elevate/give priority to access and use of right-of-way (ROW) for people of all ages and abilities—people recreating, shopping, walking, rolling, riding bikes and transit.
- TEF 44.4—Advocate for bicycle and pedestrian safety to be a part of driver education and license renewal process; ensuring that safety is a continuing education component for drivers related to this safety topic.
- TEF 45.3—Identify spaces for equitable investment that can activate community, foster local economic development, and facilitate connections to transit.
- TEF 56.4—Improve, identify, and maximize current opportunities for street trees and greenscapes in SDOT activities, ranging from routine maintenance to capital project delivery; ensure design guidance and functions of maintenance include this consideration for long-term sustainability.

GLOSSARY

Active transportation: Human-powered modes of travel such as walking, biking, and using a wheelchair.

ADA: Americans with Disabilities Act

Adaptive bikes: Bicycles that are designed for people with disabilities or who cannot ride a traditional two-wheeled bicycle. Examples include trikes and hand cycles.

All ages and abilities (AAA): Bicycle and e-mobility facilities that people of all ages and abilities feel comfortable using. They provide low-stress bicycling conditions and focus on safety.

Arterial street: The “backbone” of the roadway system and accommodates the most trips for all modes. Arterials provide the connections between freeways and access streets and vary in their speed and volume characteristics, design features, and degrees of local access.

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bicycle crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

Bicycle Master Plan (BMP): A long-range plan developed by SDOT in 2014 that identifies projects, programs, and investments for a citywide bike network to make riding a bicycle a comfortable and integral part of daily life in Seattle. The Bicycle and E-mobility Element builds on the BMP.

Bike+ Network: Bikeways suitable for all ages and abilities (AAA) that allow for safe, comfortable, and accessible bicycle travel such as protected bike lanes and Neighborhood Greenways. The Bike+ Network will be seamlessly integrated with the multi-use trail network.

Bike buses/trains: Organized group bike rides for kids to travel safely to and from schools.

Bioswale: Vegetated ditches that capture and filter stormwater runoff.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Café Streets: Streets with high levels of foot traffic and lots of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians. They are a type of Shared Street.

Capital Improvement Program (CIP): A planning tool that identifies future capital investments and funding strategies over 6 years.

Cellular vehicle-to-everything (C-V2X): Technology that enables vehicles to wirelessly connect and interact with their surroundings, such as other vehicles and 5G service. C-V2X has the potential to make travel safer by reducing crashes and conflicts between road users.

Community and Mobility Hubs: Places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Community-based organizations (CBOs): These are trusted community builders and leaders.

Complete communities: Neighborhoods where residents can access all daily needs within walking distance.

Comprehensive Plan: A 20-year vision and roadmap that guides City decisions on where to build new jobs and houses, how to improve the transportation system, and where to make capital investments such as utilities, sidewalks, and libraries.

E-cargo bikes: Human-driven bikes with battery-powered pedal assist that can transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

E-commerce: The buying and selling of goods online that are then delivered directly to a home or business. Examples include Amazon and eBay.

E-mobility: Personal and shared electric-powered bicycles, scooters, and other electric-powered devices.

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City's climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City's fleet zero-emission by 2030.

Find It, Fix It app: A smartphone app offering mobile users a way to report selected issues to the City by submitting a photo and written description.

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

GHG: Greenhouse gas emissions.

Healthy Streets: Streets for people walking, rolling, biking, and playing. They are closed 24/7 to pass-through traffic. People driving who need to get to homes and destinations along Healthy Streets retain access and can still drive on these streets.

High-injury Network (HIN): The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred to inform safety corridors of focus for the Vision Zero program and more. It prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes.

Key Moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Level of traffic stress (LTS): A measure of the amount of discomfort cyclists feel biking next to traffic.

Low-emission neighborhood: Low-emission neighborhoods, sometimes called low-pollution neighborhoods, prohibit or restrict the types of vehicles allowed within an area and encourage zero- and low-emission travel options like walking, biking, electric vehicles, and deliveries by e-cargo bike. Implementation of these concepts will vary by neighborhood and are co-created with local communities.

Micromobility: Small, low-speed transportation devices. They are convenient for traveling short distances or the beginning or end of trips. They include bikes and scooters.

Multimodal: Refers to the various ways people use the transportation system, such as walking, riding a bicycle, taking transit, or driving a truck or personal automobile. It can also refer to a journey that employs more than one mode, such as walking to the bus stop and then taking a bus to a final destination. The vast majority of individual trips involve more than one mode.

Multi-use trails: Off-street paths for people walking, biking, rolling, or using other non-motorized/e-mobility devices.

NACTO: National Association of City Transportation Officials

Neighborhood Greenways: Neighborhood Greenways are safer, calmer neighborhood streets where people walking and biking are the priority. These streets work together with trails and protected bike lanes to provide connected routes to bring people to the places they want and need to go as part of Seattle's all ages and abilities bicycle network.

Neighborhood Street Fund: A City program, running on 3-year cycles, that enables the community to propose and help prioritize transportation-related projects that are then built by SDOT.

Personal delivery devices (PDDs): Small automated or remotely piloted robots designed for short deliveries carrying food, packages, or other goods

Protected bike lanes: Bike lanes that are physically separated from traffic and the sidewalk, offering a greater level of comfort and safety for cyclists.

PSRC: Puget Sound Regional Council

PSRC Household Travel Survey: Collection of data on travel behavior – who, what, when, where, why, and how people travel – from households throughout the Puget Sound Region.

Public Spaces: Plazas and Shoreline Street Ends that come in many shapes and forms. They are pedestrianized spaces that invite people to gather, play, and connect with one another. These spaces may be focal points in neighborhoods that support local businesses, venues for community gatherings, or more subtle spaces that are loved by locals and stumbled upon by visitors who delight in their discovery. They may incorporate public art, seating, games, trees and green infrastructure, and flexible space for vendors and gatherings. Public Spaces are born of inclusive, community-driven processes that inform design, programming, and long-term stewardship.

Race and Social Equity (RSE) Index: A tool produced by the Office of Planning and Community Development to aid in the identification of city planning and investment priorities.

RCW 46.61.250: This is the state code regarding pedestrians on roadways. It describes the nuances of allowed pedestrian behavior when sidewalks are available and accessible and when they are not. You can find exact language of the code here: <https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.250>

Refuge islands: Paved median that protects pedestrians crossing a multi-lane street by providing a safe place to stop.

Right-of-way (ROW): Strip of land legally established for primary purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: Includes low-speed, wheeled mobility devices that use pedestrian network, like wheelchairs and strollers.

Safe Routes to School: A national movement to make it easier and safer for students to walk and bike to school. The program is designed to improve safety in areas around schools and to encourage more kids to walk and bike.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Goals are to create safer vehicles, speeds, roads, and people and provide post-crash care.

Seattle Displacement Risk Index: Areas in Seattle identified where displacement of people of color, low-income people, renters, and other populations susceptible to displacement may be more likely.

Shared micromobility: Shared bikes and scooters offer low-cost options for a short distance trip. Riders locate and rent available devices with a phone, ride it where they want to go, and leave it responsibly parked for the next person.

Shared Streets: Streets that are “people first” spaces either permanently or during certain times of the day or week. They are typically identified in partnership with the surrounding community. Shared Streets include Healthy Streets, Café Streets, School Streets, Event Streets, Special Alleys, and Pedestrianized Streets.

Slow Lanes: Dedicated lanes that allow human-powered or small motorized devices to travel safely separated from larger vehicles.

Speed cushion: Multiple low-rise speed humps placed together that slow vehicle speeds while still allowing emergency vehicles to pass through normally. They are used on low volume and non-arterial streets.

STP: Seattle Transportation Plan

Streets Illustrated: Seattle’s Right-of-Way Improvements Manual is an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle’s street right-of-way.

Traffic calming: Physical changes to street design that slow traffic and make the street safer for all travelers. Examples include traffic circles, speed humps, and narrow lanes.

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses the disparities that exist within the transportation system due to institutional racism.

Urban Villages and Centers: Areas in Seattle identified in the Seattle 2035 Comprehensive Plan where the most future job and employment growth is targeted. This strategy promotes the most efficient use of public investments and encourages walking, bicycling, and transit use.

Vision Zero: City’s goal to eliminate traffic deaths and serious injuries on city streets by 2030.

Vision Zero Top to Bottom Review: A review of the Vision Zero program and actions. It was conducted to help the department better understand the causes of the rise in number of traffic deaths and to identify opportunities to reduce harm while creating a culture of care and dignity for all travelers.

Vulnerable Communities: Communities that have historically and currently been erased, intentionally excluded and/or underinvested in by government institutions. SDOT’s Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhood

Vulnerable traveler: As defined in City Code, a pedestrian, a person riding an animal, or a person operating or riding any of the following on a public way: a farm tractor or implement of husbandry, without an enclosed shell, a bicycle, an electric-assisted bicycle, an electric personal assistive mobility device, a moped, a motor-driven cycle, a motorized foot scooter, or a motorcycle.” The STP intentionally uses the term “vulnerable traveler” instead of “vulnerable user” to better reflect that people are traveling in the public way.

Wayfinding: Visual information that helps people to orient themselves spatially. Wayfinding is important to ensure people can travel easily, comfortably, and safely. Methods of wayfinding include signs and maps.

WSDOT: Washington State Department of Transportation

Zero-emission travel: Modes of transportation that do not emit any greenhouse gases (GHGs)

[This page intentionally left blank]

[This page intentionally left blank]



Pedestrian Element

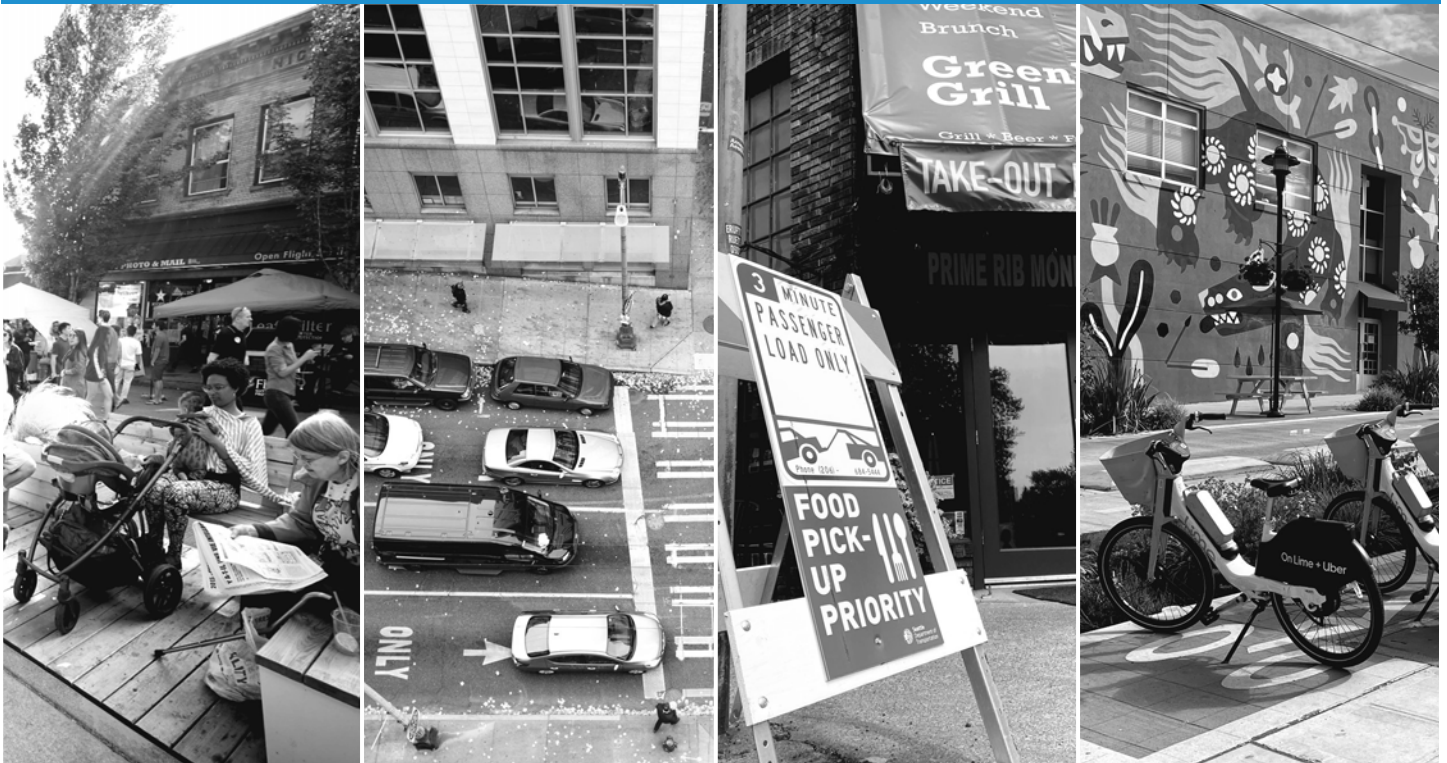


TABLE OF CONTENTS

Introduction.....	P-1
How the Pedestrian Element Advances the STP	P-1
Relationship to STP Goals	P-4
Implementing the Key Moves.....	P-5
Setting the Context	P-13
Opportunities and Emerging Trends.....	P-13
Challenges.....	P-16
Community Engagement.....	P-17
Walking and Rolling in Seattle.....	P-20
The Pedestrian Network	P-24
Catalyst Projects	P-45
Key Considerations and Programmatic Activities.....	P-53
Defining Success.....	P-71
Measurable Outcomes	P-72
Relevant TEF Tactics.....	P-74
Glossary	P-82
Appendix A: Pedestrian Map Methodology	P-76
Missing and Substandard Sidewalk Map Methodology.....	P-78
Enhanced Street Crossings Map Methodology	P-80

LIST OF FIGURES

Figure 1: Pedestrian-related Comments on Webmap #1	P-18
Figure 2: Pedestrian-related Public Comments on Webmap #2	P-19
Figure 3: Sidewalk Zones.....	P-22
Figure 4: Missing Sidewalks Priority Investment Network (Northwest).....	P-27
Figure 5: Missing Sidewalks Priority Investment Network (Northeast).....	P-28
Figure 6: Missing Sidewalks Priority Investment Network (West).....	P-29
Figure 7: Missing Sidewalks Priority Investment Network (East).....	P-30
Figure 8: Missing Sidewalks Priority Investment Network (Southwest).....	P-31
Figure 9: Missing Sidewalks Priority Investment Network (Southeast).....	P-32
Figure 10: Substandard Sidewalks Priority Investment Network (Northwest).....	P-33
Figure 11: Substandard Sidewalks Priority Investment Network (Northeast).....	P-34
Figure 12: Substandard Sidewalks Priority Investment Network (West).....	P-35
Figure 13: Substandard Sidewalks Priority Investment Network (East).....	P-36
Figure 14: Substandard Sidewalks Priority Investment Network (Southwest).....	P-37
Figure 15: Substandard Sidewalks Priority Investment Network (Southeast).....	P-38
Figure 16: Enhanced Street Crossings Priority Investment Network (Northwest).....	P-39
Figure 17: Enhanced Street Crossings Priority Investment Network (Northeast).....	P-40
Figure 18: Enhanced Street Crossings Priority Investment Network (West).....	P-41
Figure 19: Enhanced Street Crossings Priority Investment Network (East).....	P-42
Figure 20: Enhanced Street Crossings Priority Investment Network (Southwest).....	P-43
Figure 21: Enhanced Street Crossings Priority Investment Network (Southeast).....	P-44
Figure 22: Transit Connection Corridors	P-46

LIST OF TABLES

Table 1: Pedestrian Element: Delivering the Key Moves Actions.....	P-6
Table 2: Pedestrian Performance Measures.....	P-73
Table 3: Missing and Substandard Sidewalk Prioritization Methodology	P-79
Table 4: Enhanced Street Crossings Prioritization Methodology.....	P-81

[This page intentionally left blank]

INTRODUCTION

Walking or rolling in Seattle is a basic activity and way of getting around that should be safe and accessible for people of all ages and abilities—whether you are 8 years old or 80, and whether riding in a stroller or navigating streets in a wheelchair. (Supports TEF 43.4)¹

A quality pedestrian network is at the core of an equitable and accessible transportation system, providing a travel option that requires no monetary cost or ability to operate equipment and has no age limit.

OUR DEFINITION OF WALKING INCLUDES MOBILITY FOR ALL— PEOPLE OF ANY AGE, PEOPLE WHO USE WHEELCHAIRS OR MOBILITY DEVICES, AND PEOPLE WITH VISUAL, HEARING, OR OTHER IMPAIRMENTS.

Walking is essential for seniors, children and young adults, people with limited mobility, and people in places with fewer transportation choices. A well-connected, safe, and comfortable pedestrian network also promotes physical activity, with broad co-benefits for community health. Walking also leaves less wear on existing infrastructure, especially compared to large vehicles. When people choose to walk instead of drive, it reduces vehicle trips and transportation emissions, making our streets safer and more comfortable. This makes walking an important component of fighting climate change and achieving Seattle’s Vision Zero safety goal of ending traffic deaths and serious injuries on city streets.

HOW THE PEDESTRIAN ELEMENT ADVANCES THE STP

The Pedestrian Element of the Seattle Transportation Plan (STP) is a blueprint to create a more walkable Seattle. It highlights the needs of people walking and rolling and guides future investments to achieve STP goals. Already one of the most walkable cities in the US, and one of only five cities across the country to have earned the Platinum level Walk-Friendly City designation,² we continue to improve the walkability of Seattle through a variety of existing and emerging programmatic activities and initiatives.

Seattle adopted its first Pedestrian Master Plan (PMP) in 2009 and completed a substantial update in 2017. The STP and Pedestrian Element build on and supersede the 2017 Pedestrian Master Plan (PMP), which:

- Adopted a strong vision for a pedestrian-friendly environment in the City of Seattle.
- Committed to the development of a safe and connected pedestrian network that helps provide a high quality of life for residents.
- Produced a data-based framework for evaluating needs and priorities across the city.
- Identified a Priority Investment Network (PIN) for safe access to schools and transit.

¹ TEF is SDOT’s Transportation Equity Framework. More at [Seattle’s Transportation Equity Framework - seattle.gov](https://seattle.gov/transportation/equity-framework)

² [Walk Friendly Communities](https://www.walkfriendly.org/communities/). <https://www.walkfriendly.org/communities/>

- Directed capital investments and programs throughout the city.
- Between 2016-2023, we built 235 blocks of new sidewalks and implemented 189 crossing improvements. To further improve walkability, the Seattle Transportation Plan (STP) envisions comfortable pedestrian accommodations on all Seattle streets.

Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here. No matter where people live or work in Seattle, providing safe and equitable transportation will always be critical to connect people and goods where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate travel options and supportive infrastructure that fits the needs of our unique and varied communities— whether a dense downtown grid, a quiet residential neighborhood, or a bustling manufacturing and industrial center.

In denser neighborhoods and commercial centers, development typically occurs close together. Combined with safe and supportive transportation infrastructure, density can make it easier for people to walk, bike and use transit because they don't have to travel as far. People have more access in these places, enabling them to live car free if they choose to or can't afford one. In places where development is more spread out, people might still walk or bike for short trips or to connect to transit, but it is often harder due to longer distances between destinations.

While some people choose to live or work in places that are more spread out, others do so because they have no choice and driving is their only viable option. For instance, people who live outside of Seattle because housing is more affordable, or people who transport freight or cargo for a living, may not have options for how they travel other than driving a vehicle.

Our transportation system can support anticipated growth in different places while continuing to advance our goals by making other travel options more viable and available in appropriate contexts. For example, freight-and-bus only lanes can support reliable travel times for industrial workers and transit riders, or on-demand rideshare services could provide more convenient shared trips. Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality.

By planning for people walking and rolling, there are several ways we support growth:

- Supportive infrastructure, like sidewalks and enhanced crossings, combined with denser development patterns that provide complete communities, can enable more people to walk for short trips, like groceries and appointments, or connecting to transit.
- Walking is zero-emission; when more people replace driving trips with a walk instead, we will reduce emissions and traffic from motorized transportation.
- When there are more people walking and rolling, it helps create a sense of place and activates our streets and public spaces, providing a greater sense of safety and security.

Economic Benefits from Pedestrian Activities

The STP supports economic vitality in a range of ways and each functional Element plays a role. Ample research has shown a positive correlation between economic benefits and the addition of transportation improvements that support people walking and rolling.

- Walking and rolling has no monetary cost associated with it; if people are provided land use and housing options that enable them to walk for more trips, they may not need to own a car and can save money that would otherwise be spent on auto ownership and storage.
- Studies have found new street improvements for pedestrians and cyclists increase sales at nearby business by up to 30 percent.³
- Food service industries especially benefit from the addition of active transportation infrastructure; even in cases where a motor vehicle travel lane or parking was removed to make room for a bike lane, food sales and employment tended to go up after pedestrian (or bike) improvements were installed.⁴
- Walking is healthy, and healthy people provide savings to individuals, employers, and society; residents of the most pedestrian-friendly areas of King County were more physically active and less overweight than those in areas with fewer pedestrian-friendly amenities.⁵
- A dense and walkable urban network may facilitate the spread of small local shops and street markets, thus increasing the variety of goods and services, independent retailing, local employment, and start-up business opportunities.⁶
- An increase in walking is correlated with higher levels of productivity and creative thinking; the most walkable urban metro areas have substantially higher GDPs per capita and percentages of college graduates over 25 years of age in the population.⁷
- Walkable places promote tourism, and tourists on foot tend to spend more money.
- Walkable urban centers attract investment from developers and individuals due to the competitive advantages of locating in a place where employees and clients want to be.

³ Walkability Means Better Business (Issue 188, July 2019) – Community Economic Development (wisc.edu)

⁴ Understanding Economic and Business Impacts of Street Improvements for Bicycle and Pedestrian Mobility - A Multi-City Multi-Approach Exploration [Phase 2] | National Institute for Transportation and Communities (pdx.edu)

⁵ https://www.cdc.gov/nceh/ehs/docs/jeh/2008/july-aug_w_case_studies/jeh_jul-aug_08_seattle.pdf

⁶ [PDF] Walkability and built environment (researchgate.net)

⁷ Foot_Traffic_Ahead_FINAL-compressed.pdf (smartgrowthamerica.org)

RELATIONSHIP TO STP GOALS

Walking plays an important role in meeting the STP's goals for safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization.



Prioritize safety for travelers in Seattle, with no serious injury or fatal crashes. Because people walking are the most vulnerable road travelers and nearly all trips include walking, improved safety for people walking effectively makes streets safer for all road travelers.



Co-create with community and implement restorative practices to address transportation-related inequities. The pedestrian network connects people of all ages and abilities, especially people with disabilities or physical limitations. It increases access to jobs and other opportunities, especially those located near transit stops and stations and where people live.



Respond to climate change through innovation and a lens of climate justice. High-quality, attractive pedestrian, bike, and transit networks provide the backbone for a low-carbon transportation system. Walking is emission-free, and most transit, car, and bike trips also include some walking or rolling. Street trees sequester carbon and provide shade and other environmental benefits.



Provide reliable and affordable travel options that help people and goods get where they need to go. A quality pedestrian experience in every neighborhood promotes walking for short trips, such as running errands. For long trips, walking is how most people access transit stops and stations, and pedestrian improvements can increase the number of households who can safely and comfortably walk to transit stops and stations.



Reimagine our streets as inviting places to linger and play. Walkability contributes to community and economic health, independence, and social cohesion. Increased walking and physical activity are linked to reduced obesity, improved mental health, and decreased likelihood of several chronic diseases. Walking provides independent mobility for kids and for older adults, enabling seniors to age in place. It also facilitates casual social interactions that nurture a sense of community. Trees in the pedestrian realm provide shade, reduces urban heat islands, improves air quality, and enhances neighborhood livability.



Improve city transportation infrastructure and ready it for the future. Increased walkability could lower maintenance burdens on city streets by encouraging less reliance on vehicles, which contribute significant routine wear and damage to city streets. Implementing “upstream improvements,” such as reducing the number of vehicle lanes, can reduce upfront and lifecycle costs of pedestrian crossings. Taking a holistic life-cycle cost analysis of quick-build pedestrian treatments as compared to standard treatments helps better understand total cost and material use differences.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **Pedestrian Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.

([Supports Safety Key Move S2a](#))

Feature community voices in planning documents. ([Supports Equity Key Move TJ1b](#))

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: Pedestrian Element: Delivering the Key Moves Actions

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
SAFETY KEY MOVES							
Reduce vehicle speeding to increase safety (S1)							
P1	Design all streets using context-appropriate traffic calming treatments that are proven to reduce speeds and encourage people driving to travel at the posted speed limit. This should include strategies to narrow the street, coordinate traffic signs and signals, and plant street trees. [Supports Key Move S1a]	✓					
P2	Implement traffic calming strategies, such as traffic circles, chicanes, or speed humps, cushions, and tables. Pair strategies with programs that deliver educational campaigns to reduce speeding. [Supports Key Move S1b]	✓					
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
P3	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. [Supports Key Move S2a]	✓					
P4	Prioritize pedestrian safety improvements that are on the high-injury network, have high levels of travel stress, or are identified through the Seattle Bicycle and Pedestrian Safety Analysis. [Supports Key Move S2b and TEF 19.2]	✓			✓		
P5	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, including but not limited to leading pedestrian intervals (LPIs) at signals, arterial traffic calming, and road diets. [Supports Key Moves S2c]	✓			✓		
P6	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as curb bulbs, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. [Supports Key Moves S2d]	✓			✓		
P7	Expand opportunities to more safely cross busy arterials by installing enhanced crossings, improved lighting, and other treatments. [Supports Key Moves S2e and TEF 40.6]	✓			✓		
P8	Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. [Supports Key Move S2f]	✓					
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle (S3)							
P9	Develop a standard to measure right-of-way tradeoffs for pedestrian design to use during project development along multi-modal corridors, including consideration of standard maximum crossing distances.	✓					
P10	Construct new sidewalks, enhanced crossings, bike lanes for all ages and abilities, and multi-use trails where there are gaps or opportunities for new connections, prioritizing places with the greatest safety concerns. [Supports Key Move S3a]	✓			✓		
P11	Provide dedicated places for people to walk, bike, or roll safely separated from vehicles by using context appropriate treatments. [Supports Key Move S3b]	✓	✓	✓	✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
P12	Harness funding and opportunities when private development occurs to build planned new network facilities and prioritize mobility for people walking and rolling when construction occurs. [Supports Key Move S3c]	✓			✓		✓
P13	Upgrade existing facilities for people walking and rolling to be safer and accessible for people of all ages and abilities. [Supports Key Move S3d and TEF 7.1, 43.4]	✓			✓		
P14	Support programmatic activities and partnerships to reduce the size and weight of vehicles used for personal trips, transit, and urban goods movement. Heavier vehicles are a key factor in pedestrian fatalities. [Supports Key Move S3f]	✓					
P15	Expand safety education for all travelers. [Supports Key Move S3g]	✓					
Provide safer routes to schools, parks, transit, community gathering spaces, and other common destinations (S4)							
P16	Construct the networks for walking, rolling, and People Streets and Public Spaces as outlined in this Plan. [Supports Key Move S4a]	✓	✓	✓	✓	✓	✓
P17	Make investments near light rail stations and busy transit stops that make it safer to walk and roll to transit. Establish a Safe Routes to Transit program. [Supports Key Move S4b]	✓		✓	✓	✓	
P18	Develop station access plans for future light rail stations and enhance the experience and quality of existing facilities that connect people walking and rolling along and across major transit corridors. [Supports Key Move S4c and TEF 40.2]	✓		✓	✓	✓	
P19	Serve every public school with all ages and abilities pedestrian facilities. [Supports Key Move S4d and TEF 43.4]	✓	✓	✓	✓	✓	
P20	Expand low-stress neighborhood connections to common destinations (local businesses, parks, schools, transit stops, community centers, etc.) for people walking, biking, and rolling through programs like permanent Healthy Streets. [Supports Key Move S4e, TEF 43.4 and Executive Order 2022-07]	✓	✓	✓	✓	✓	
P21	Provide pedestrian-scale lighting to make people walking more visible to people driving vehicles and to increase personal safety. [Supports Key Move S4f]	✓				✓	
P22	Make investments that make it safer to walk and roll to parks, community gathering spaces, and other common destinations. Establish a Safe Routes to Parks and Shorelines program. [Supports Key Move S4g]	✓					
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making process (TJ1)							
P23	Implement the Transportation Equity Framework (TEF) to grow transparency, accountability, and shared power when making transportation decisions with community members. [Supports Key Move TJ1a]		✓				
P24	Feature community voices in planning documents. [Supports Key Move TJ1b]		✓				
P25	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. [Supports Key Move TJ1c and TEF 29.1, 41.6]		✓				
P26	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. [Supports Key Move TJ1d, TEF 3.4]		✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
P27	Build trust and capacity within organizations that prioritize our vulnerable communities and advocate to improve conditions for people who walk, bike, and roll. Learn from leaders active in these spaces. [Supports Key Move TJ1e and TEF 31.4]		✓				
P28	Normalize the practice of making decisions about policies and right-of-way (ROW) allocations with input from vulnerable communities. Build on existing participatory budgeting programs, such as the Neighborhood Street Fund, and include more communities in project generation and selection processes. [Supports Key Move TJ1f and TEF 19.1, 25.4]		✓				
P29	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiative. [Supports Key Move TJ1i]		✓				
Address inequities in the transportation system by prioritizing investments for impacted communities (TJ2)							
P30	Prioritize walking and rolling investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. [Supports Key Move TJ2a]		✓		✓	✓	
P31	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around transportation project impacts and displacement, and co-create transportation, public space, and permitting solutions. [Supports Key Move TJ2d and TEF 14.3, 15.2]		✓		✓	✓	
P32	Identify actions to address inequities experienced by vulnerable community members who walk, bike, and roll, and provide capacity-building support to BIPOC-led organizations that focus on increasing active transportation. [Supports Key Move TJ2e and TEF 31.4]		✓		✓		
P33	Implement improvements to make traveling in Seattle more accessible for everyone, such as curb ramps, accessible pedestrian signals, accessible parking, and accessible transit stops. [Supports Key Move TJ2h]	✓	✓		✓		
P34	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]		✓				
Remove cost as a barrier so everyone can take the trips they need to make (TJ3)							
P35	Construct the walking and rolling network outlined in this plan. Expanding access to this affordable mobility option makes it easier to get around without the expense of automobiles. These networks provide 24/7 access, benefitting people who need to travel outside of 8 AM to 5 PM, especially those who are low-income people of color, and those who rely heavily on public transportation. [Supports Key Move TJ3a]		✓		✓	✓	
Support shifts toward non-punitive transportation enforcement approaches that reduce harm and enhance public safety on city streets (TJ4)							
P36	Prioritize street designs and infrastructure changes to create self-enforcing streets and curb regulations that encourage safe behaviors and reduce the need for enforcement. [Supports Key Move TJ4a]		✓		✓	✓	
P37	Support community-based organizations and legislators to revise or remove punitive pedestrian crossing laws (i.e., jaywalking) that result in harm to BIPOC communities. [Supports Key Move TJ4c and TEF 42.2]	✓	✓		✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
P38	Develop a policy for automated traffic safety cameras and potential expansions informed by recommendations from the racial equity analysis conducted in partnership with community to address concerns and mitigate harms, while continuing to soliciting feedback from community and other stakeholders. [Supports Key Move TJ4e]	✓	✓		✓		
P39	Improve enforcement of existing regulations that support reliable mobility and safety, including those that keep bike lanes and pedestrian zones clear, deter improper use of transit-only lanes, and discourage speeding, especially in school zones. [Supports Key Move TJ4g]	✓	✓		✓		
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options (CA1)							
P40	Expand beyond employer-based travel demand management programs to include residential and neighborhood-based strategies as well as lifecycle-based strategies (for example after a move or the birth of a first child) that encourage non-driving travel choices for all trips. [Supports Key Move CA1a]				✓		
P41	Expand public education campaigns to encourage bicycling, using e-mobility, walking, rolling, and taking transit. [Supports Key Move CA1b]				✓		
P42	Develop and expand programs that incentivize sustainable alternatives to driving for large events, and as a primary congestion mitigation tool during major construction projects. [Supports Key Move CA1c]				✓		
P43	Operate the transportation system—signals, markings, signage, and right-of-way allocation—to encourage sustainable travel choices (walking, biking, taking transit, and for moving goods). [Supports Key Move CA1g]	✓			✓	✓	
Green city streets through landscaping and street trees to better handle changing climate (CA2)							
P44	Encourage the maintenance and installation of green infrastructure—such as street trees, rain gardens, landscaping, natural drainage systems, bioswales, and pervious materials—as other improvements occur in the right-of-way. [Supports Key Move CA2a and TEF 56.4]				✓		
P45	Prioritize tree planting and maintenance in historically under-invested communities, as we continue to increase tree canopy coverage citywide. [Supports Key Move CA2c and TEF 56.6]				✓		
P46	Partner with local communities, including Tribal and urban Native communities, to co-create green landscape and urban forest improvements that increase resilience to climate impacts and protect cultural resources. [Supports Key Move CA2d and TEF 24.2, 56.4]		✓		✓		
P47	Install green stormwater infrastructure to address streets that already and will continue to flood frequently. Consider locations for de-paving projects that will expand green spaces and improve climate resiliency. Explore opportunities to implement joint sidewalk and green stormwater infrastructure projects. [Supports Key Move CA2e]				✓		
P48	Conduct Tribal consultation on shoreline street ends to address Tribal trust and treaty rights, habitat restoration, and cultural placemaking opportunities. [Supports Key Move CA2g]		✓		✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
Foster neighborhood vitality and improved community health (CA3)							
P49	Co-create low-emission neighborhoods with communities so the benefits of cleaner air and safer streets are shared equitably. [Supports Key Move CA3a]			✓			
P50	Design for people-first streets to make sustainable travel choices the default and easy choice for neighborhood trips and to increase neighborhood business district activity. [Supports Key Move CA3d]			✓	✓		
P51	Create pedestrianized streets or zones at the heart of neighborhoods throughout Seattle. [Supports Key Move CA3g]			✓	✓		
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Create seamless travel connections (PG1)							
P52	Prioritize efficient and sustainable movement of people within limited street space and reallocate street and curb space to maximize comfort, convenience, and directness for walking and rolling. [Supports Key Move PG1a and TEF 19.6, 43.4]				✓		
P53	Expand the pedestrian wayfinding program, including at transit stations and stops, in collaboration with community and regional partners. [Supports Key Move PG1f and TEF 48.1]				✓		
Make walking, biking, and rolling more convenient and enjoyable travel choices, especially for short trips (PG2)							
P54	Add, enhance, and maintain dedicated pedestrian spaces in the form of sidewalks, walkways, and shared streets with appropriate traffic calming to provide a safe and accessible pedestrian environment. [Supports Key Move PG2a]				✓		
P55	Create new street crossing opportunities and enhance existing crossings to improve safety and access for people walking and rolling. [Supports Key Move PG2b]				✓		
P56	Improve pedestrian lighting, especially along transit routes and where connections between different travel options are made. [Supports Key Move PG2c and TEF 45.1]				✓		
Manage curbspace to reflect city goals and priorities (PG5)							
P57	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]			✓	✓	✓	
LIVABILITY KEY MOVES							
Reallocate street space to prioritize people, creating enjoyable places that also facilitate goods delivery and mobility (PP1)							
P58	Reallocate street space currently used for vehicle storage and general-purpose travel to support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations. [Supports Key Move PP1a]	✓	✓	✓	✓	✓	
P59	Implement car-free and car-light streets, such as Café Streets and Healthy Streets, to reclaim public space for communities. [Supports Key Move PP1b]	✓				✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
P60	Update Seattle's Right-of-Way Improvements Manual (Streets Illustrated) to implement actions and strategies outlined in this Plan. [Supports Key Move PP1d]	✓		✓	✓	✓	
Create welcoming community and mobility hubs (PP2)							
P61	Improve walkability at every community and mobility hub by providing pedestrian infrastructure such as lighting, wayfinding, seating, and landscaping. [Supports Key Move PP2b]	✓			✓	✓	
P62	Provide a safe and comfortable experience moving in and around community and mobility hubs. This includes better crossings and intersections, slower speeds and rightsized travel lanes, decluttered sidewalks, universal access, and more. [Supports Key Move PP2c]	✓			✓	✓	
Activate and maintain public spaces to create a welcoming and age-friendly public realm (PP4)							
P63	Implement seasonal street closures (e.g., summer streets), recurring closures (e.g., every Saturday), night-time closures, or limited-time closures to vehicles. [Supports Key Move PP4c]	✓				✓	
MAINTENANCE & MODERNIZATION KEY MOVES							
Maintain our streets, sidewalks, and bridges and incorporate planned safety and network improvements with maintenance work (MM1)							
P64	Maintain our transportation infrastructure, including streets, sidewalks, and bridges serving the most users and on the high-injury network. [Supports Key Move MM1a]	✓	✓	✓	✓	✓	✓
P65	Strategically manage the life cycle of our transportation assets in accordance with our Transportation Asset Management Plan to achieve the best performance results for the preservation, improvement, and operation of infrastructure assets. [Supports Key Move MM1b]				✓		✓
P66	Reduce the maintenance backlog by being proactive, leveraging technology to monitor asset conditions, and using data and lifecycle analyses to help determine when it's time for upgrades. [Supports Key Move MM1c]				✓		✓
P67	Collect feedback on asset conditions as part of community engagement on transportation system planning, design, and co-creation. [Supports Key Move MM1e]		✓				✓
P68	Conduct asset maintenance in accordance with the priority investment and emergency response route networks to guide asset maintenance, especially when investment supports walking, biking, transit, and freight. [Supports Key Move MM1f]		✓				✓
P69	Modernize city streets by incorporating planned safety and network improvements into maintenance and replacement activities to not only improve the condition of transportation infrastructure and equipment, but also reduce dependence on driving, promote sustainable travel options, and support economic vitality. [Supports Key Move MM1g and TEF 19.3]	✓	✓	✓	✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Pedestrian Element: Delivering the Key Moves							
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
P70	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. [Supports Key Move MM2a and TEF 19.3]		✓				✓
P71	Focus resources for maintenance and improvements in neighborhoods that have been historically or are currently underserved. [Supports Key Move MM2b and TEF 19.4]		✓		✓		✓
P72	Study the potential for an income-based, cost-sharing, sidewalk repair program for low-income property owners. [Supports Key Move MM2d and TEF 38.2, 38.6]						✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
P73	Collect, monitor, and use data to inform changes to the transportation system. [Supports Key Move MM3a]	✓	✓	✓	✓	✓	✓
P74	Develop and maintain up-to-date asset data, including digital inventories of physical assets. [Supports Key Move MM3e]	✓			✓		✓

SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the roles streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we will need to remain agile and able to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to walking and rolling. These themes were used to shape the actions we'll take to achieve our shared transportation vision. SDOT will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances continue to evolve in the years to come.



People walking and biking at an intersection on Madison Street in Seattle

OPPORTUNITIES, EMERGING TRENDS AND CHALLENGES

Supporting a walkable city that is safe, vibrant, equitable, and healthy is key to our collective quality of life. There are exciting opportunities and emerging trends (and several challenges) as we build a city that is safer and more accessible for people walking.

Opportunities and Emerging Trends

- **Improved safety data.** Data and findings from the Bicycle and Pedestrian Safety Analysis (BPSA)⁸ and 2023 Vision Zero “Top to Bottom Review”⁹ will help guide strategic and equitable investments in safety for people walking and biking.
- **Low Pollution Neighborhoods Pilot.** The City of Seattle Executive Order 2022-07 on transportation emissions will further promote walking and bicycling for transportation within proposed low-pollution neighborhoods. Low-pollution (low-emission) neighborhoods may restrict or prohibit the types of vehicles allowed within the neighborhood and encourage other, zero- to low-emission modes like biking, walking, e-cargo deliveries, etc. (Supports TEF 19.7)
 - Other elements from Executive Order 2022-07, such as the Youth Transportation Summit, the commitment to 20 miles of permanent Healthy Streets, the expansion of the School Streets program, and the commitment to an all ages and abilities bike facility that serves every public school will also support pedestrian element goals. *See the STP People Streets and Public Spaces Element and the Bicycle and E-Mobility Element for more information.*
- **Expanded approaches.** In recent years, Seattle has expanded our approach to treatments and programs that address walkability and safety (e.g., Home Zones, Healthy Streets, School Streets, Shared Streets, and Alternative Walkways). These approaches provide additional tools and treatments that we can use to create pedestrian-oriented streets. *See the STP People Streets and Public Spaces Element for more information on Healthy Streets, School Streets, and Shared Streets.*
- **Light rail and high-frequency transit expansion.** The West Seattle, Ballard, East Link, and Lynwood Link light rail extensions and the revised bus networks to connect to them will put more households within walking distance of high-frequency transit stops, increasing walking trips and decreasing reliance on private vehicles.
- **Partnerships with Seattle Public Utilities.** The City has expanded and improved partnership projects between SDOT and Seattle Public Utilities that construct new sidewalks and walkways with natural drainage elements. Continuing to pursue these partnership projects will allow us to further develop the sidewalk network while advancing the city’s goals of capturing and naturally filtering stormwater runoff.
- **Participatory budgeting.** There is an opportunity to build on the success of the Neighborhood Street Fund and Your Voice, Your Choice programs. SDOT pedestrian

⁸ www.seattle.gov/documents/departments/besupersafe/bicyclepedestriansafetyanalysis.pdf

⁹ <https://www.seattle.gov/documents/Departments/SDOT/VisionZero/SDOT-Vision-Zero-TopToBottomReview-FullReport.pdf>

programs can incorporate community-driven opt-in planning approaches to improve walkability and pedestrian safety.

- **Policy changes.** Seattle recently revised its policies to allow for a more proactive and predictable network of enhanced pedestrian crossings, more automatic walk signals at signalized intersections, and longer crossing clearance time for people who walk. We have the opportunity to continue to update these policies over the next 20 years.
- **Complete neighborhoods.** The One Seattle Comprehensive Plan will update Seattle's growth strategy, planning for more destinations within walking distance of peoples' homes.
- **Working from home.** More people are working from home, which has led to more neighborhood-based trips that can be made by walking and rolling.
- **Vehicle technology.** Active safety systems—such as autonomous emergency braking, cellular vehicle-to-everything (C-V2X) technology, and intelligent speed assistance—could curb risky driving behavior and reduce crashes, including pedestrian crashes. That said, these technologies are also a potential safety challenge until technology advances.
- **Implementation of pedestrian related TEF Tactics.** Tactics outlined in the Seattle Transportation Equity Framework (TEF) provide a roadmap to address historical disinvestment and the resulting disparities in mobility, including safe pedestrian facilities and walkability. Relevant TEF tactics are referenced throughout this element and are listed at the end of this document.



People walking across the street at a marked crosswalk on Ranier Ave S in Columbia City

Challenges

- **Pedestrian safety.** The recent increase in crashes and fatalities involving people walking challenges Seattle to do more to improve pedestrian safety. Concerns about personal safety also make people feel unsafe walking.
- **Costs.** About 26% of city streets are missing sidewalks, and there is a significant need for enhancements that make it safer and more convenient for people to cross busy streets. Seattle faces increasing costs to implement these missing sidewalks and other infrastructure.
- **Environmental and drainage constraints.** Many areas that do not have sidewalks or have substandard sidewalks face complex and costly constraints with respect to environmentally sensitive areas, narrow rights-of-way, and drainage. Other location constraints include existing utility equipment or areaways within the right-of-way, which make upgrading existing or installing new infrastructure costly and complex.
- **Geographic pinch points.** Seattle's steep topography and water bodies create pinch points where freight, transit, bicycle, and pedestrian access needs compete for limited space on existing bridges and street rights-of-way.
- **Cultural changes.** Modern American culture has, for the most part, prioritized and designed the built environment in a way that increases reliance on private motor vehicles. Changing this culture and the built environment takes significant public support and time.
- **Urban heat island effect.** As climate change accelerates and extreme weather events continue to include longer periods of hotter, dryer weather, active transportation is made more difficult. Areas lacking tree canopy are most impacted by these weather conditions.
- **Accessibility barriers.** The city's pedestrian network still presents significant barriers for people walking, particularly for those with mobility limitations or disabilities and people using strollers. These barriers include approximately tens of thousands of sidewalk uplifts, obstructions, cross slope issues, and curb ramps needing remediation or construction. In addition, only a small fraction of Seattle's pedestrian signals include accessible pushbutton equipment.¹⁰ Sidewalk clutter from improperly parked shared micromobility devices also poses a challenge to pedestrian accessibility.

¹⁰Seattle Department of Transportation. (2020). The Americans with Disabilities Act (ADA) Transition Plan for the Seattle Public Right of Way.

COMMUNITY ENGAGEMENT

From May 2022 through November 2023, SDOT conducted citywide public engagement as part of the Seattle Transportation Plan development process, using a variety of tools. Frequently cited locations for pedestrian improvements include Columbia City, Rainier Ave, the Mt. Baker Light Rail station, Bitter Lake, and South Seattle.

As part of this engagement process, we used two iterations of an online webmap. The first webmap allowed people to drop pins, trace routes, and draw areas where they wanted to see improvement in Seattle's transportation system. We heard the need for actions that improve safety, transportation choice, equity, and maintenance. We received over 2,940 pedestrian-related comments on this first interactive map (May to August 2022). See **Figure 1**.

In the second interactive map (December 2022 to February 2023), people could drop pre-set pins and leave comments that helped shape our pedestrian networks. We received over 520 pedestrian-related pins that showed where people wanted to see new pedestrian connections or that identified an important destination to walk to. See **Figure 2** for pedestrian-related comments.

The third phase of engagement did not include interactive webmaps, but sought participant feedback on draft pedestrian actions, programmatic activities, and Priority Investment Network maps. Participants also offered feedback on specific locations where they felt pedestrian network improvements were needed and on the STP project list which includes projects with key transformation pedestrian improvements.

Key themes heard during engagement related to the pedestrian network and policies include:

- **Sidewalk gaps:** the city should work to quickly fill in gaps to create a complete sidewalk network.
- **Maintenance and widening:** maintaining sidewalks and staircases should be prioritized as well as upgrading existing sidewalks that are too narrow—reclaiming space from vehicle parking or travel lanes as needed.
- **Safe and frequent crossings:** marked crosswalks, median islands, curb bulbs, signal priority, and other safety features should be used to improve safety at crossings.

“Lack of sidewalks in many neighborhoods make it less safe and even dangerous for people to walk since they have to use the street. Elderly residents and people with disabilities are disproportionately impacted. The lack of safety and comfort on the streets in their neighborhoods impacts their health and wellbeing.”

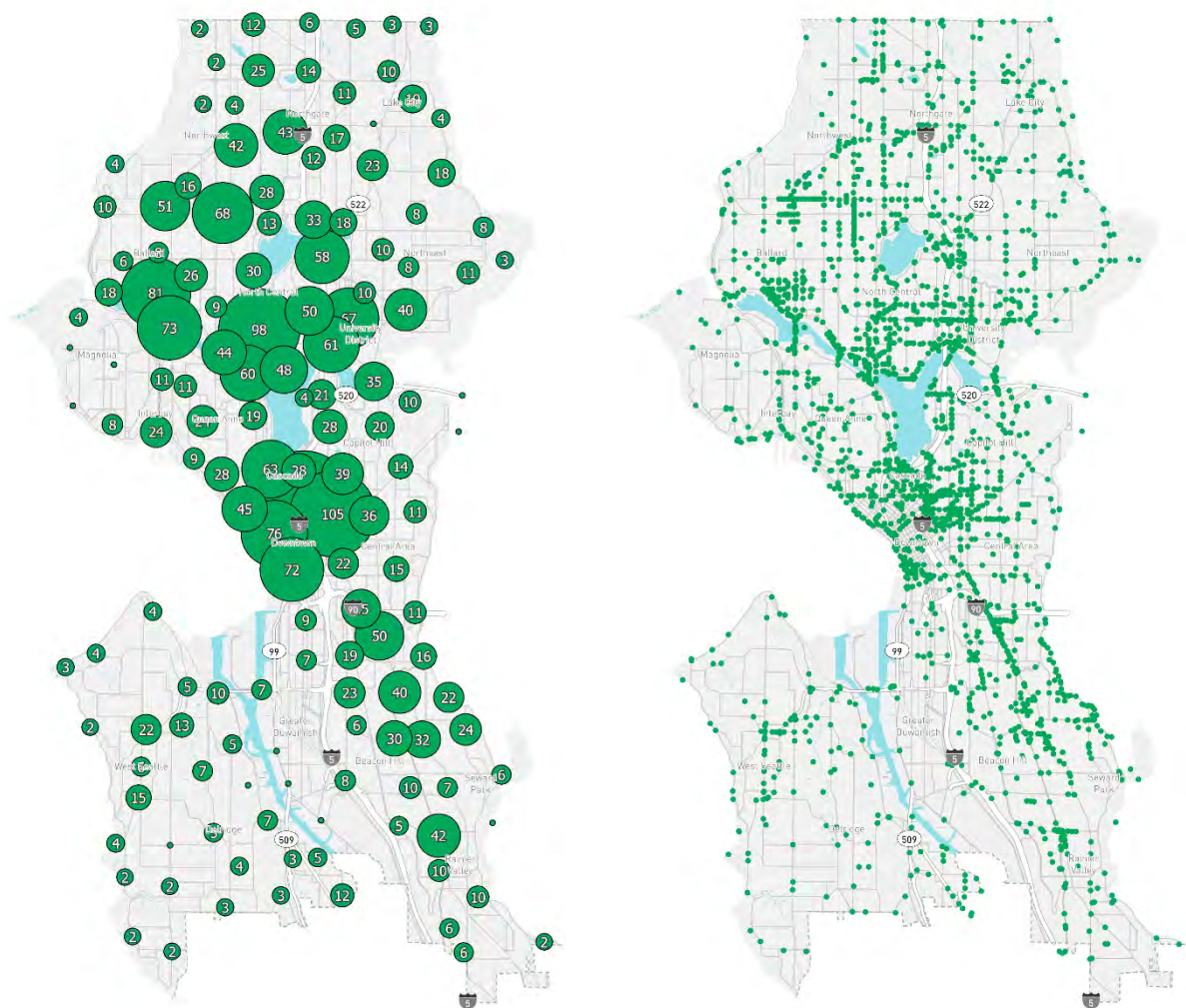
– Quote from Survey Respondent

Feedback from Black, Indigenous and People of Color (BIPOC) communities focused on:

- **Underserved areas:** no neighborhood should be without sidewalks. Seattle needs to focus on providing sidewalks and safe crossings in underserved areas.
- **Traffic calming:** driver speeds should be reduced citywide to keep people walking and rolling safely, especially in residential areas lacking dedicated sidewalks or walkways for people walking.
- **Personal safety:** people feel uncomfortable or unsafe walking or rolling in certain areas, such as Downtown Seattle. Many asked for better lighting, particularly on trails, parks, and at bus stops.

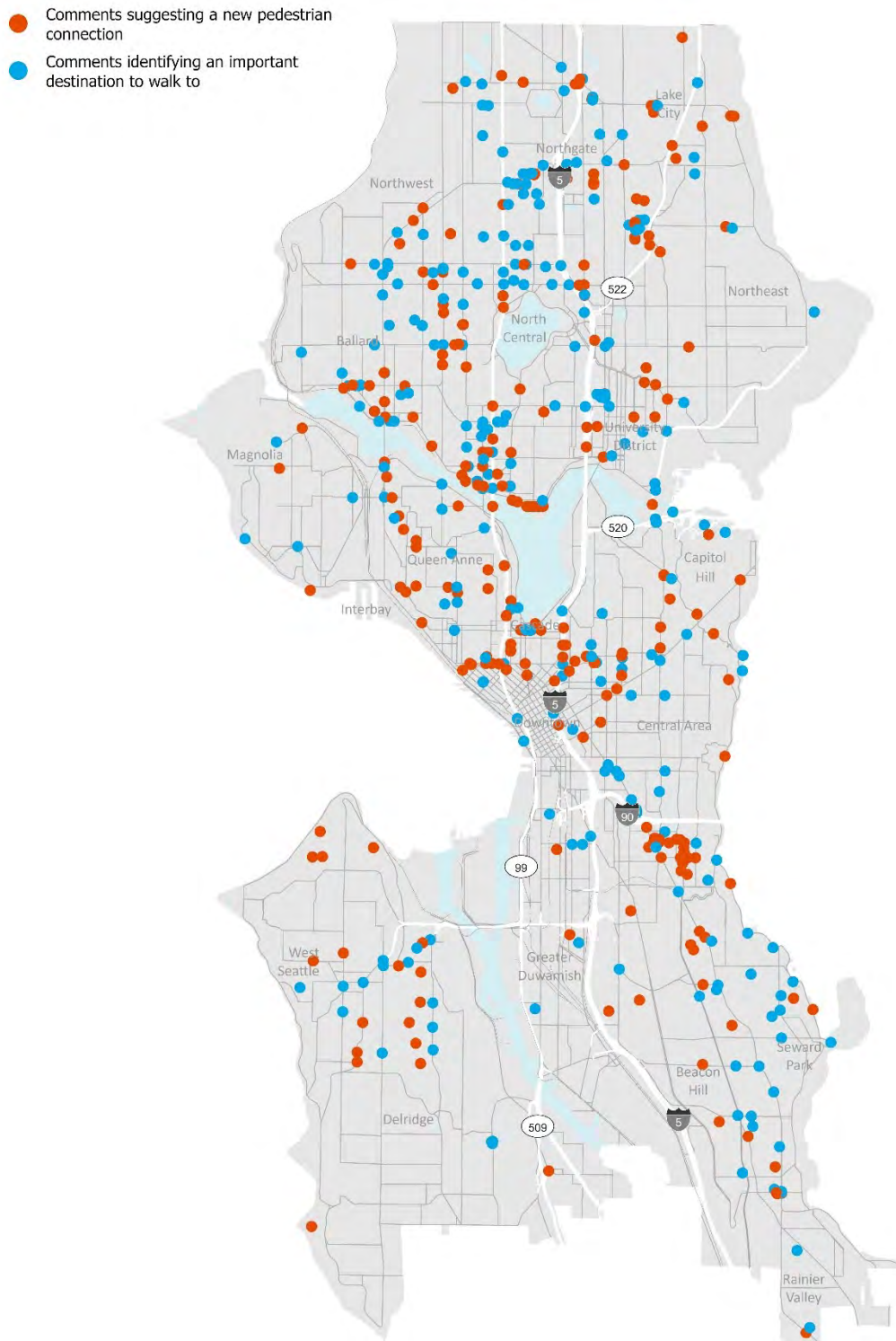
Feedback from the community is reflected in proposed actions and programmatic activities that provide safe access to transit stops and stations. Public feedback also shaped the network development strategy, which emphasizes filling sidewalks gaps, upgrading deficient sidewalks, and providing safe crossings at regular intervals.

Figure 1: Pedestrian-related Comments on Webmap #1



The map on the left shows clusters of pedestrian-related comments received on the first webmap. The map on the right shows the location of each individual pedestrian-related pin on the first webmap.

Figure 2: Pedestrian-related Public Comments on Webmap #2





WALKING AND ROLLING IN SEATTLE

To make walking a viable and attractive mode of transportation for a greater number of Seattleites and visitors, all streets in Seattle should be designed to accommodate people walking safely and comfortably. This means the pedestrian network must be accessible, well-connected, comfortable, safe, and provide an intuitive network of sidewalks, crossings, paths, plazas, and staircases for all users.

Street Crossings

Seattle's pedestrian network requires safe, frequent, and timely street crossings. Street crossing improvements include enhancements to existing infrastructure or the provision of missing infrastructure. Improvements to the pedestrian crossing network can also include modifications to signal phasing and timing and improved lighting conditions.



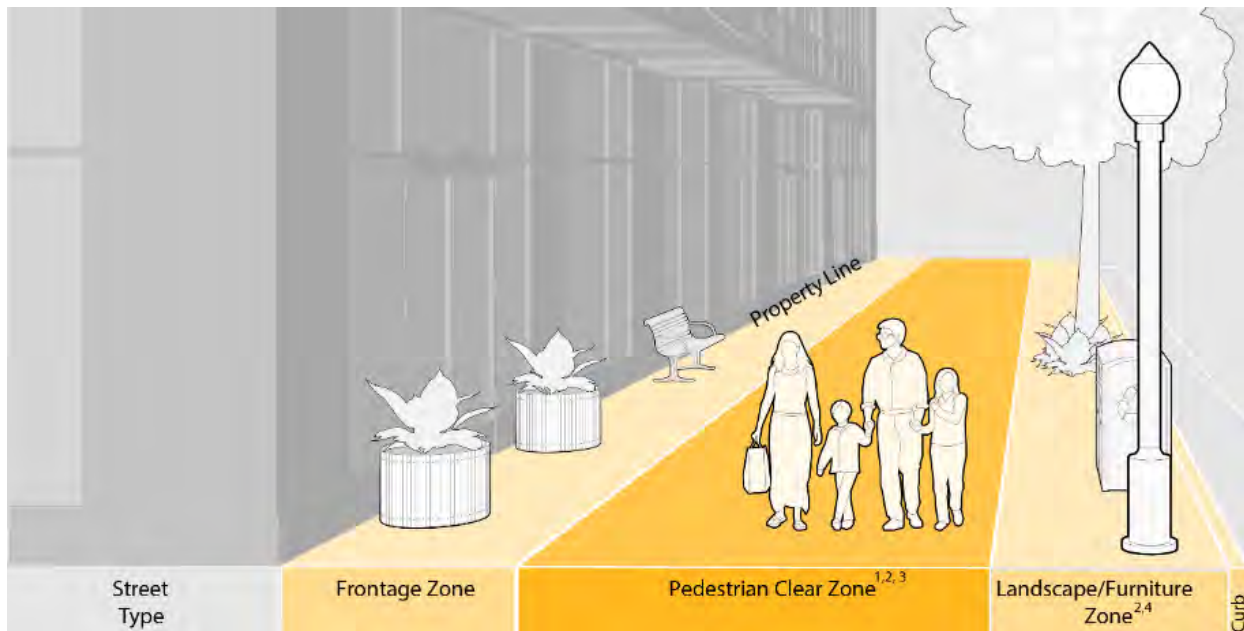
Person crossing the street in a marked crosswalk with a rectangular rapid flashing beacon (RRFB)

Sidewalks

The city's pedestrian network aims to provide an accessible space for walking and rolling, with adequate width and protection from vehicles in the form of a sidewalk, an alternative walkway, a shared street, or a dedicated pedestrian space. The appropriate type of pedestrian space depends on the roadway type, average number of vehicles on the road, and expected pedestrian volumes, which are likely to be higher adjacent to transit stops and stations, near schools, and within Urban Centers and Urban Villages. Of the roughly 45,000 block faces in Seattle, about 11,000 are missing sidewalks.

Sidewalks contribute to a safe, accessible, and vibrant pedestrian environment in multiple ways, which can be better understood by breaking them up into three parts: the **Frontage Zone**, the **Pedestrian Clear Zone**, and the **Landscape/Furniture Zone**. These zones are defined in *Streets Illustrated*, Seattle's Right-of-Way Improvements Manual¹¹, and are shown in Figure 3 below.

Figure 3: Sidewalk Zones (Source, *Streets Illustrated*)



The **Frontage Zone** is defined as the area between the property line and pedestrian clear zone. Depending on the size of the frontage zone, it may accommodate sidewalk cafes, store entrances, retail display, landscaping, transit stop amenities, or other features that activate and enhance the pedestrian environment. Wider frontage zones provide more room for future tenants and residents to activate the public right-of-way in a manner compatible with street trees and other required features between the frontage zone and curb.

The **Pedestrian Clear Zone** is the area of the sidewalk corridor that is specifically reserved for pedestrian travel. Street furniture, street trees, planters, and other vertical elements, such as poles, fire hydrants, and street furniture—as well as temporary signs and other items—should not protrude into the pedestrian clear zone.

The **Landscape/Furniture Zone** (including the curb) is defined as the area between the roadway curb face and the front edge of the pedestrian clear zone. In certain locations, this zone does not exist due to limited right-of-way widths. This zone buffers people walking from the adjacent roadway and is the appropriate location for bioretention cells, rain gardens, street furniture, art, street trees, and vegetation. It is also the preferred location for other elements, such as signage, pedestrian lighting, hydrants, and above- and below-grade utilities.

¹¹ Seattle's Right-of-Way Improvements Manual that is an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle's street right-of-way.
<https://streetsillustrated.seattle.gov/design-standards/sidewalks/>

Traffic Calming

The speed and volume of vehicular traffic is a major factor in the safety and comfort of people walking. Traffic calming to reduce driving speeds is particularly important on shared streets, which are intended to be accessible for all people and designed to slow vehicles to the walking speed of people on foot. Traffic calming measures can also be used to reduce vehicle volumes, particularly on shared streets.

Lighting

Pedestrian-scale lighting is essential for creating pedestrian spaces and streets that feel welcoming and safe. It improves accessibility by illuminating sidewalks, crosswalks, curbs, curb lamps, and signs as well as barriers and potential hazards. Lighting is especially important along People Streets and Public Spaces, high ridership transit routes and transfer points, and areas that lack other pedestrian improvements.

Street Trees and Greening

Trees and green spaces provide multiple benefits to Seattle. They shade pavement, lower temperatures, intercept rainfall, absorb stormwater runoff, clean the air, provide habitat, and beautify neighborhoods. Landscaped planting strips adjacent to sidewalks calm traffic, soak up stormwater, and green neighborhoods.

Investing in the care of new and established trees can preserve and promote tree canopy. Large street trees are especially important in environmental justice priority communities lacking in tree canopy. As new street trees are planted, they should have adequate soil volume to support large, healthy tree canopies and eliminate or minimize conflicts with sidewalks and utilities, especially along transit corridors and in dense urban areas. On space-constrained sidewalks without landscape/furniture zones, street trees could be considered in the adjacent parking or flex lanes.

Wayfinding

Pedestrian wayfinding helps people confidently and comfortably find their way along the pedestrian network. Seattle's wayfinding program, Seamless Seattle, encompasses modal integration by providing:

- Walking information at transit stations, stops, and community and mobility hubs.
- Local distinctiveness with a city-wide standard that allows for local content and design.
- Design for all through prioritization of safe and accessible walking routes and inclusive design principles.
- Systemization through common design standards and a back-of-house content management system to provide system integrity.

THE PEDESTRIAN NETWORK

Every street within Seattle is part of the pedestrian network and should be walkable. However, full implementation of all needed pedestrian facilities across the city will require extensive funding. Network completion is likely to take many years, extending beyond the 20-year horizon of the Seattle Transportation Plan. A prioritization framework is needed to narrow the focus of the City's investments in pedestrian facilities to a limited and equitable set of streets and projects.

The prioritized pedestrian network is detailed in 4 sets of maps. Three of these maps are Priority Investment Network (PIN) maps that identify and categorize locations into priority tiers for pedestrian improvements.

The fourth map shows a network of prioritized streets for improvements along key transit networks and can be found in the 'Corridor Network Project' section.

Priority Investment Network (PIN) Maps

These maps are a blueprint for providing a suite of pedestrian improvements across the city. The intent is to focus resources on access to public schools, parks, and light rail, streetcar, and frequent transit networks¹², in areas where walking conditions are difficult, and where people most need to be able to walk.

The process is based on an analysis of factors related to the STP's goals of safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization. This data-driven prioritization framework helps the city provide targeted improvements that reflect community priorities, City policy objectives, and current data.

Throughout the life of the STP, there will be opportunities to evaluate what has been implemented and what can be prioritized in future funding cycles, within the context of the STP's goals, funding availability and project readiness, and other emergent needs. Decisions made as we craft regular STP Implementation Plans will determine the pace of STP Pedestrian Priority Investment Network implementation.

To narrow city-wide pedestrian needs, each of the three Priority Investment Network (PIN) maps uses a deficiency analysis¹³ as a starting point for network prioritization. They then consider proximity to high pedestrian trip areas, safety, and equity to categorize each street or intersection on the map into one of five tiers.

¹² See the Transit Element for additional details on the Frequent Transit Network.

¹³ Identifying where our sidewalk network is missing sidewalk or has substandard sidewalks, or where there are gaps in our enhanced crossing network.

- **Proximity to High Pedestrian Trip Areas.** Pedestrian improvements are prioritized in locations where adjacent land use generates higher pedestrian volumes. This includes K-12 public schools, parks, transit stops and routes, and Comprehensive Plan land use areas, such as Pedestrian Zones, Urban Centers, and Urban Villages.¹⁴
- **Safety.** Pedestrian improvements are prioritized at locations with a demonstrated safety need. For the crossing maps, the safety score inputs include Priority Pedestrian Locations in the Bicycle and Pedestrian Safety Analysis (BPSA), locations with 3+ pedestrian crashes, and locations with 3+ lanes. The BPSA analysis uses a model that identifies design and behavioral factors that may be correlated with collisions involving people walking. These factors include arterial classification, roadway width, driver (vehicle) speeds, and controlled crossing spacing (supports TEF 40.1). For the sidewalk maps, 85th percentile vehicle speeds are used to determine the safety scoring.
- **Equity.** Pedestrian improvements are prioritized using the city's Race and Social Equity Index.¹⁵ Based on guidance from the Pedestrian Racial Equity Analysis,¹⁶ specific improvements in future implementation plans will be chosen using an inclusive community engagement process in equity-priority communities, with a particular emphasis on creating safe connections between transit stops and key community assets. (Supports TEF 45.6)

More information on the Pedestrian Map Methodology is included in Appendix A (page P-79).

¹⁴These land use areas include important pedestrian trip generators, such as: grocery stores, libraries, medical centers, assisted living centers etc. For example, over 90% of all grocery stores are included in the land use zones that are used in the prioritization land uses (Urban Centers, Urban Villages, Pedestrian-Zones) or within the buffer distances around them.

¹⁵The Race and Social Equity Index is a tool produced by the Office of Planning and Community Development to aid in the identification of city planning and investment priorities. It combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify where priority populations make up relatively large proportions of neighborhood residents.

¹⁶<https://www.seattle.gov/transportation/projects-and-programs/programs/pedestrian-program/pedestrian-program-racial-equity-analysis>

Missing Sidewalks Priority Investment Network

Figure 4: Missing Sidewalks Priority Investment Network (Northwest) through **Figure 9** show all street segments that currently lack sidewalks.

Each identified street segment is given a prioritization score based on three factors: 1) proximity to high pedestrian trip areas, 2) safety, and 3) equity. Tier 1 segments are the highest priority. This PIN helps identify locations where there may be opportunities to improve conditions for people moving along the street by installing conventional sidewalks, alternative walkways, or traffic calming features that create a safe and comfortable shared street environment.

Substandard Sidewalks Priority Investment Network

Figure 10 through **Figure 15** identify all streets with sidewalk zones that are significantly narrower than current standards¹⁷, as identified in Seattle's *Streets Illustrated*.

The sidewalk zone includes the three pedestrian zones, comprised of the Frontage Zone, the Pedestrian Clear Zone, and the Landscape/Furniture Zone. Each identified street segment is given a prioritization score based on three factors: 1) proximity to high pedestrian trip areas, 2) safety, and 3) equity. Tier 1 segments are the highest priority. This PIN identifies locations of possible opportunities to improve conditions for people walking or moving along the street.

Enhanced Street Crossings Priority Investment Network

Figure 16 through **Figure 21** depict intersections that are not currently enhanced and are 600 feet or more away from the closest enhanced crossing.

Enhancements include treatments such as a marked crosswalk, all-way stop, or a signal. This Priority Investment Network map shows areas prioritized for creating a higher density of enhanced crossings (Supports TEF 40.2 and TEF 40.5). The PIN will be used to:

- Identify future corridor studies to determine the appropriate improvement and location for new enhanced crossings.
- Identify opportunities for new and enhanced crossing within SDOT Project Development and other complete streets development processes.
- Identify opportunities for new and enhanced crossings installed or funded by others, including private development and agency partners.
- Each intersection is given a prioritization score based on three factors: 1) proximity to high pedestrian trip areas, 2) safety, and 3) equity.
- It is important to note that this PIN does *not* propose a set distance between enhanced crossings. Furthermore, as we design and implement projects that impact street intersections, we will evaluate opportunities to upgrade intersections within the project area to current design standards and employ safety countermeasures, as funding allows.

¹⁷ More than three feet narrower than Streets Illustrated standards

Figure 4: Missing Sidewalks Priority Investment Network (Northwest)

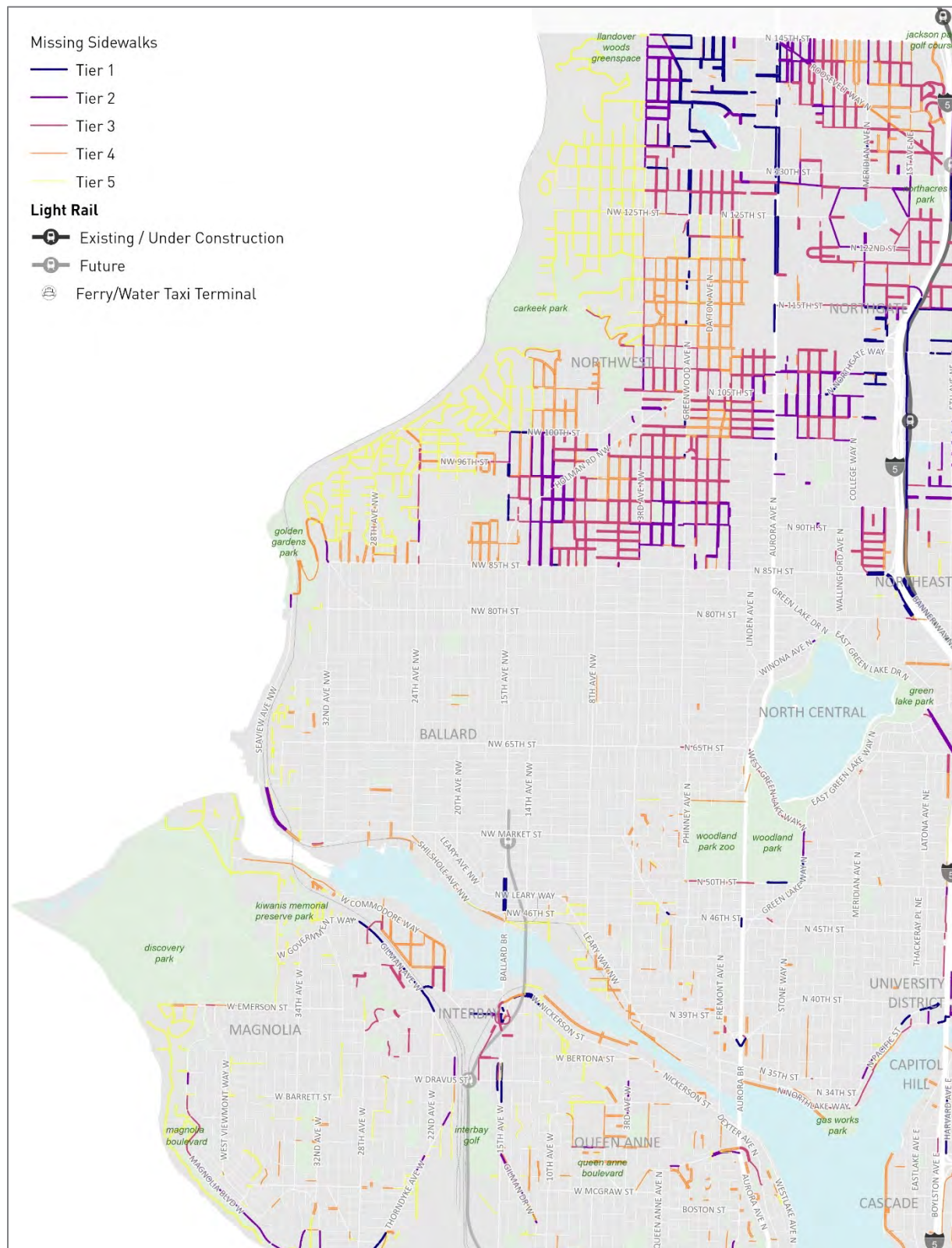


Figure 5: Missing Sidewalks Priority Investment Network (Northeast)

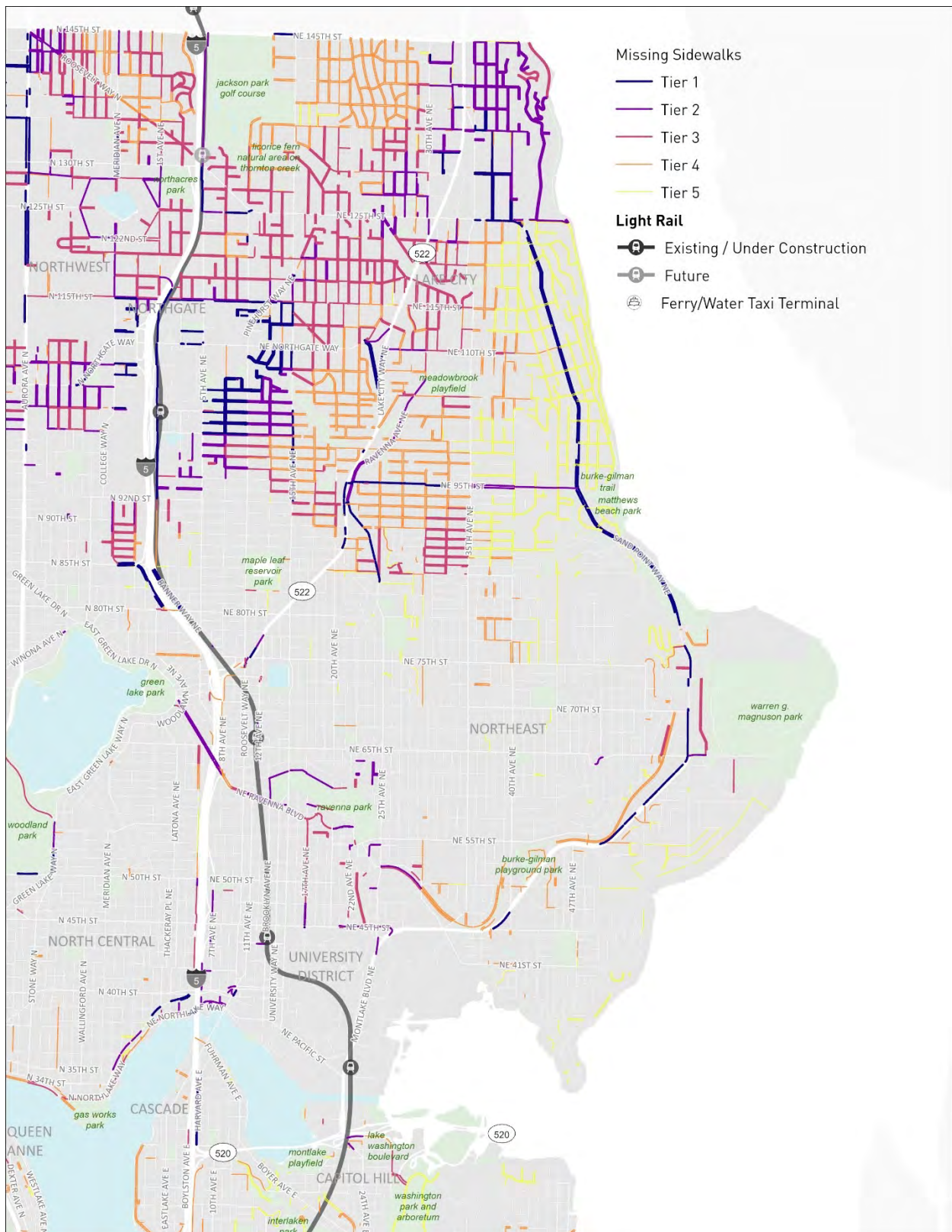


Figure 6: Missing Sidewalks Priority Investment Network (West)

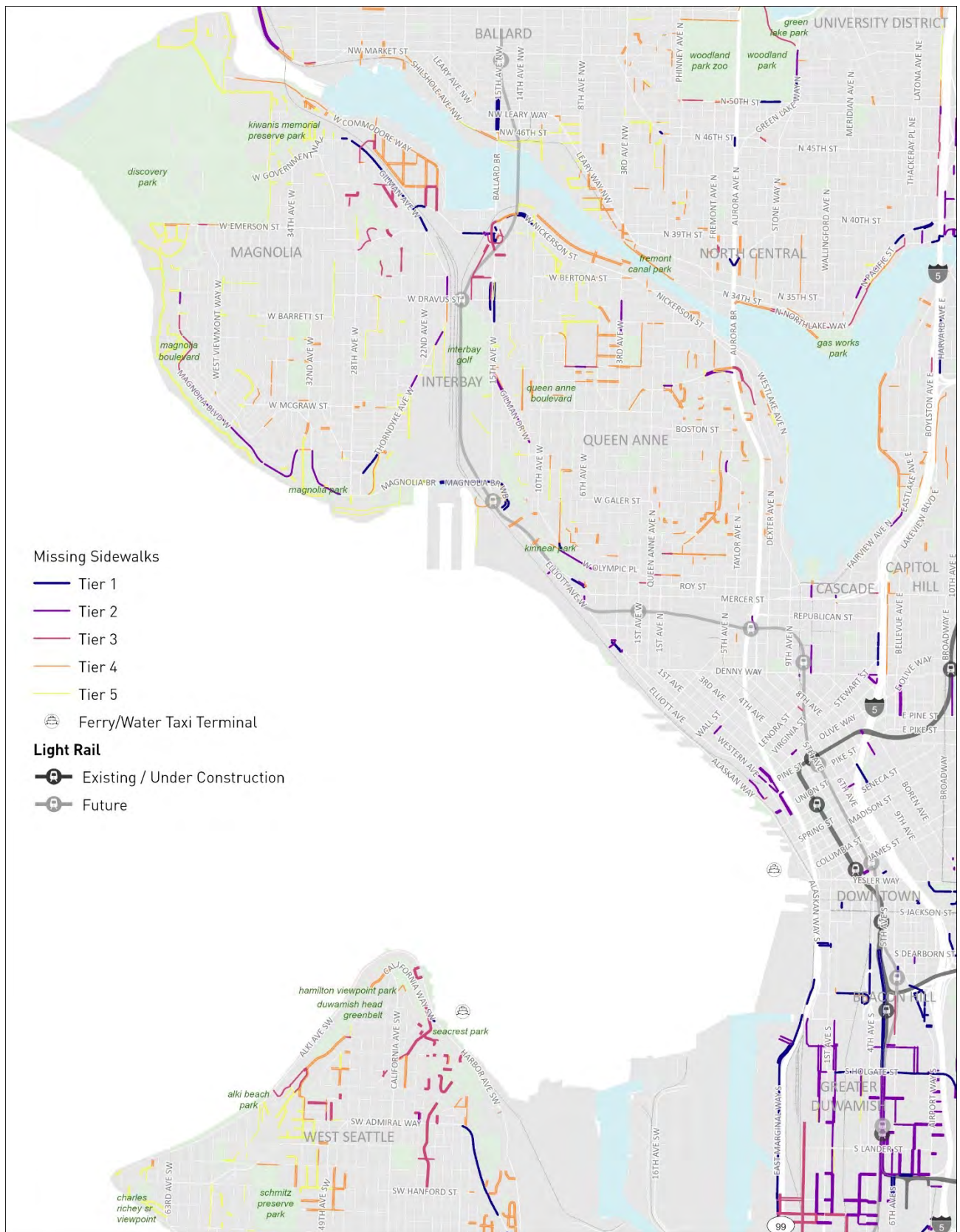


Figure 7: Missing Sidewalks Priority Investment Network (East)

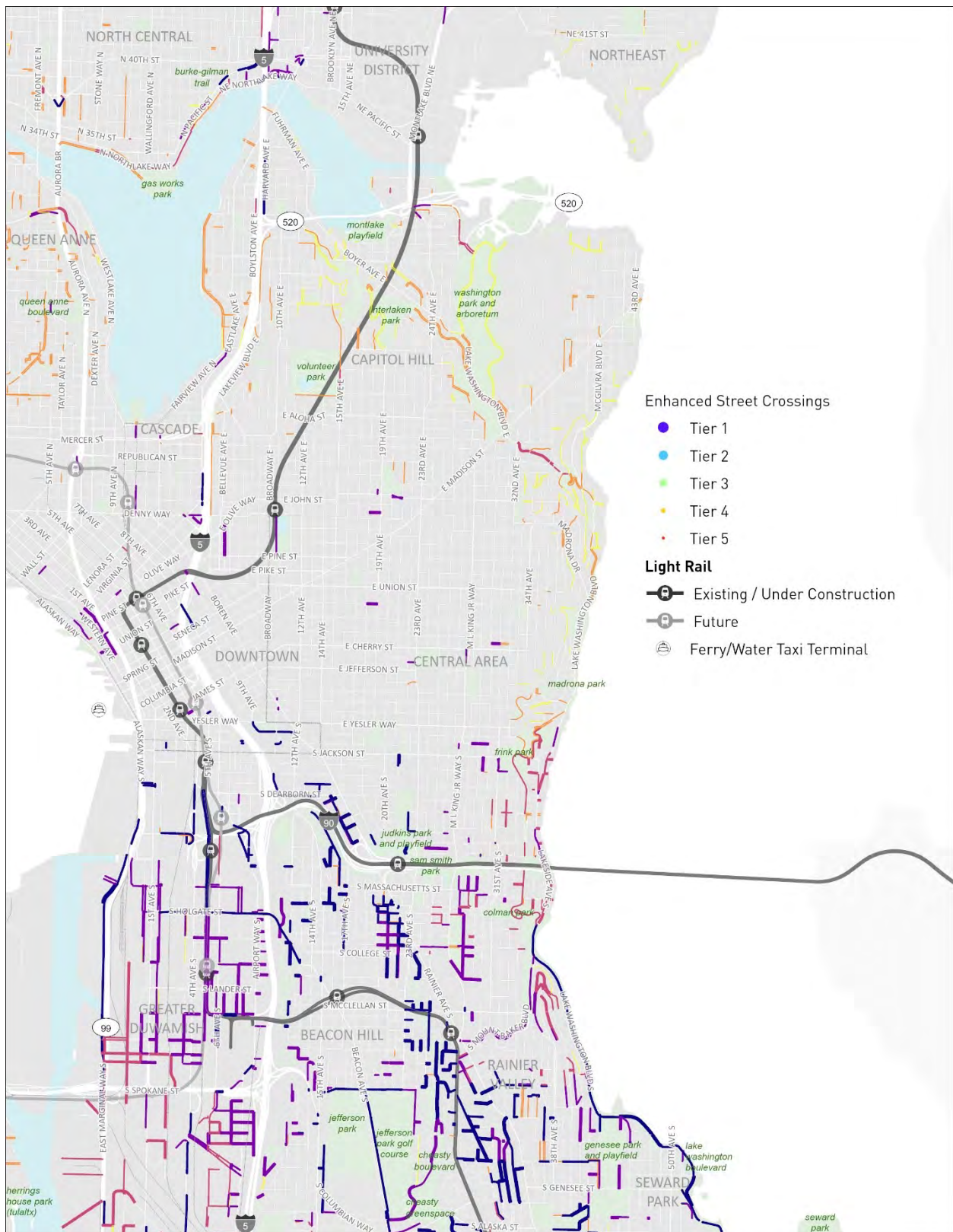


Figure 8: Missing Sidewalks Priority Investment Network (Southwest)

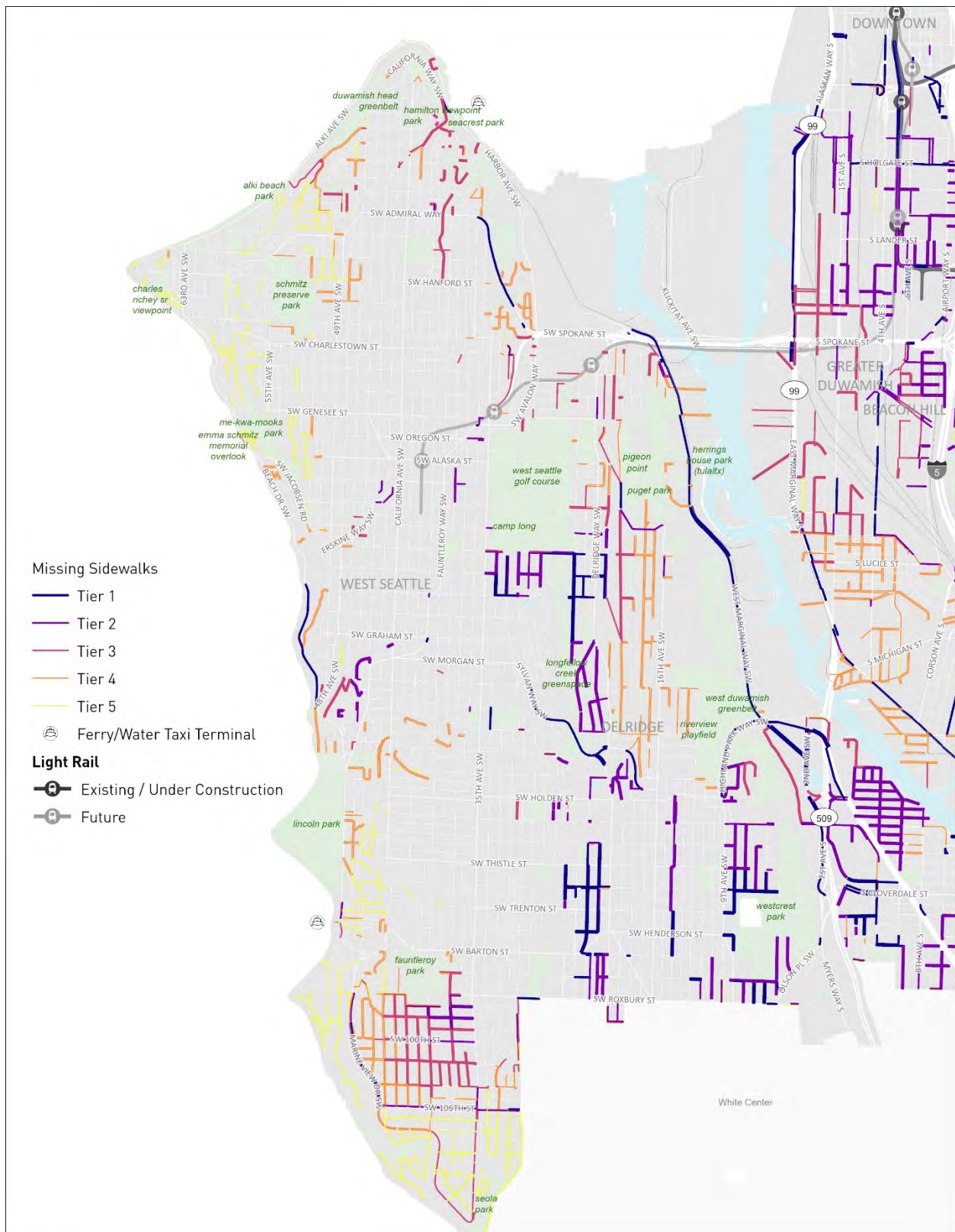


Figure 9: Missing Sidewalks Priority Investment Network (Southeast)

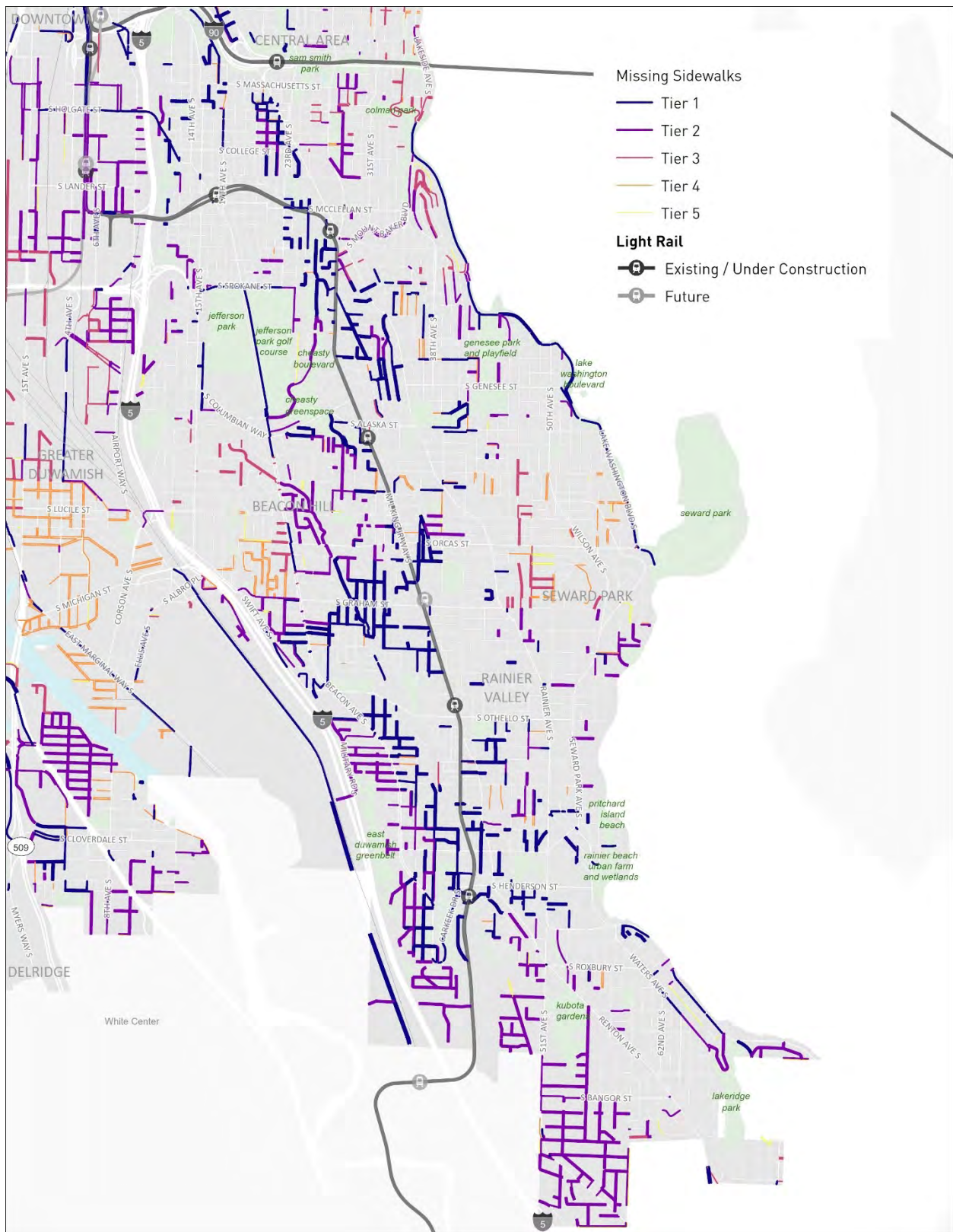


Figure 10: Substandard Sidewalks Priority Investment Network (Northwest)

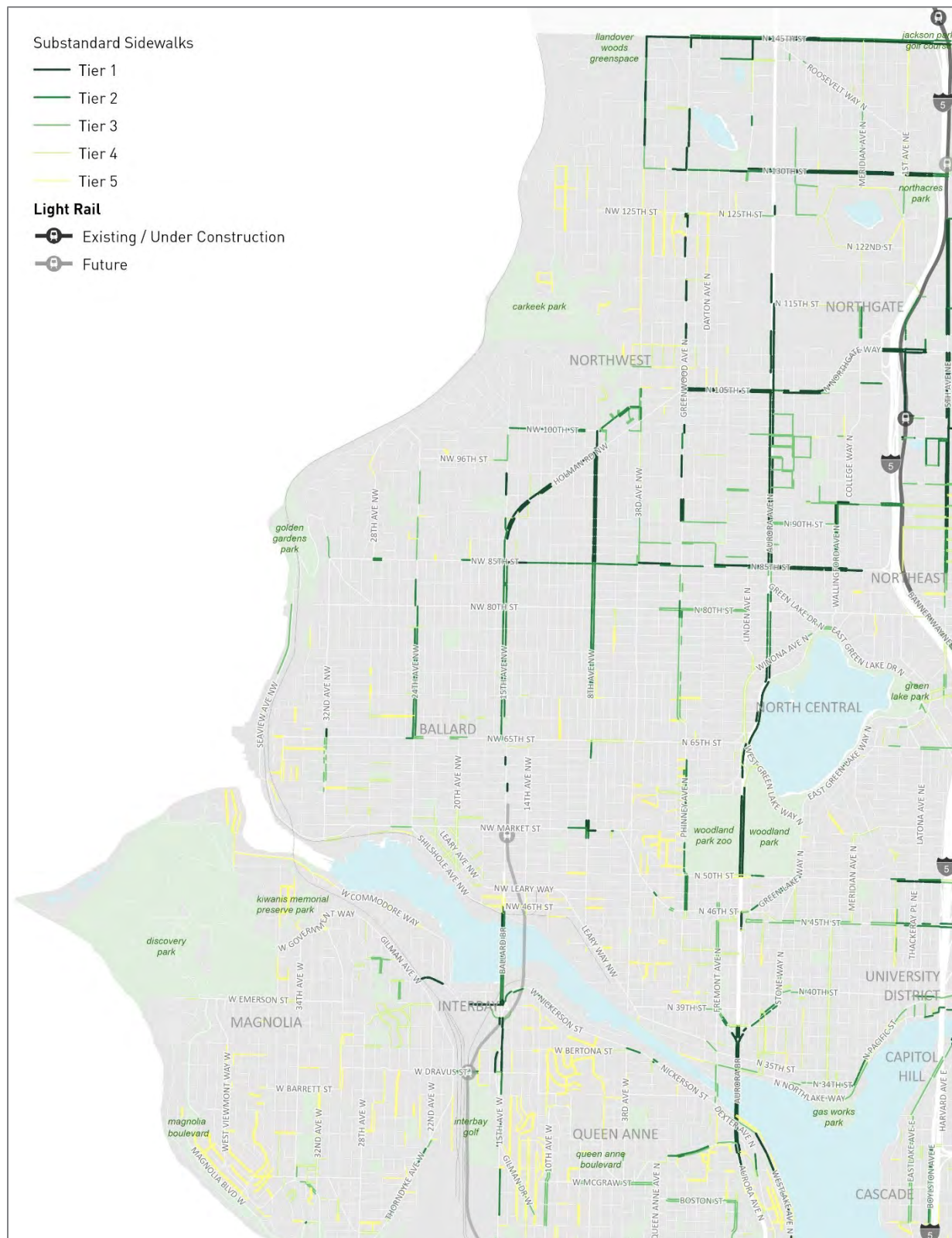


Figure 11: Substandard Sidewalks Priority Investment Network (Northeast)

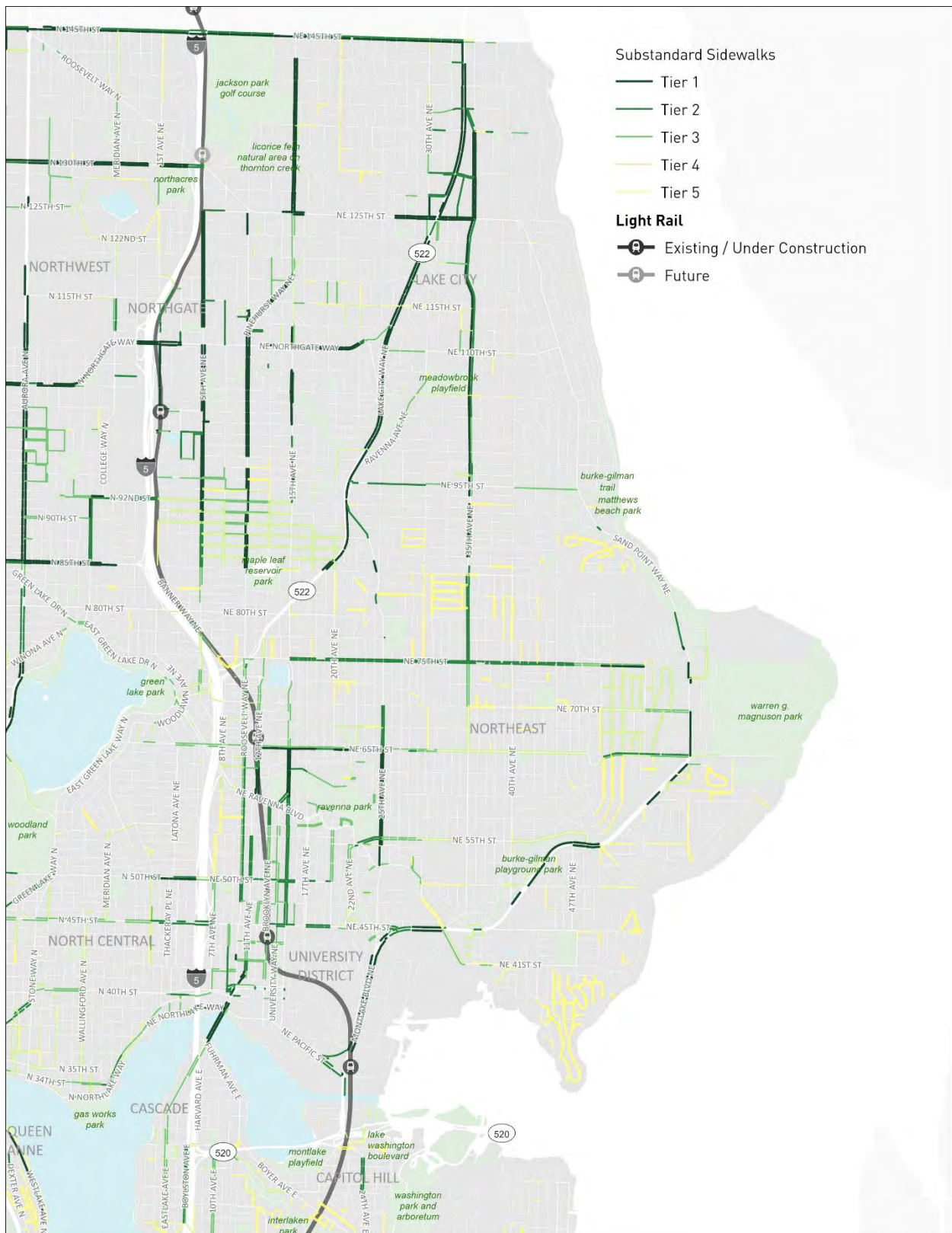


Figure 12: Substandard Sidewalks Priority Investment Network (West)

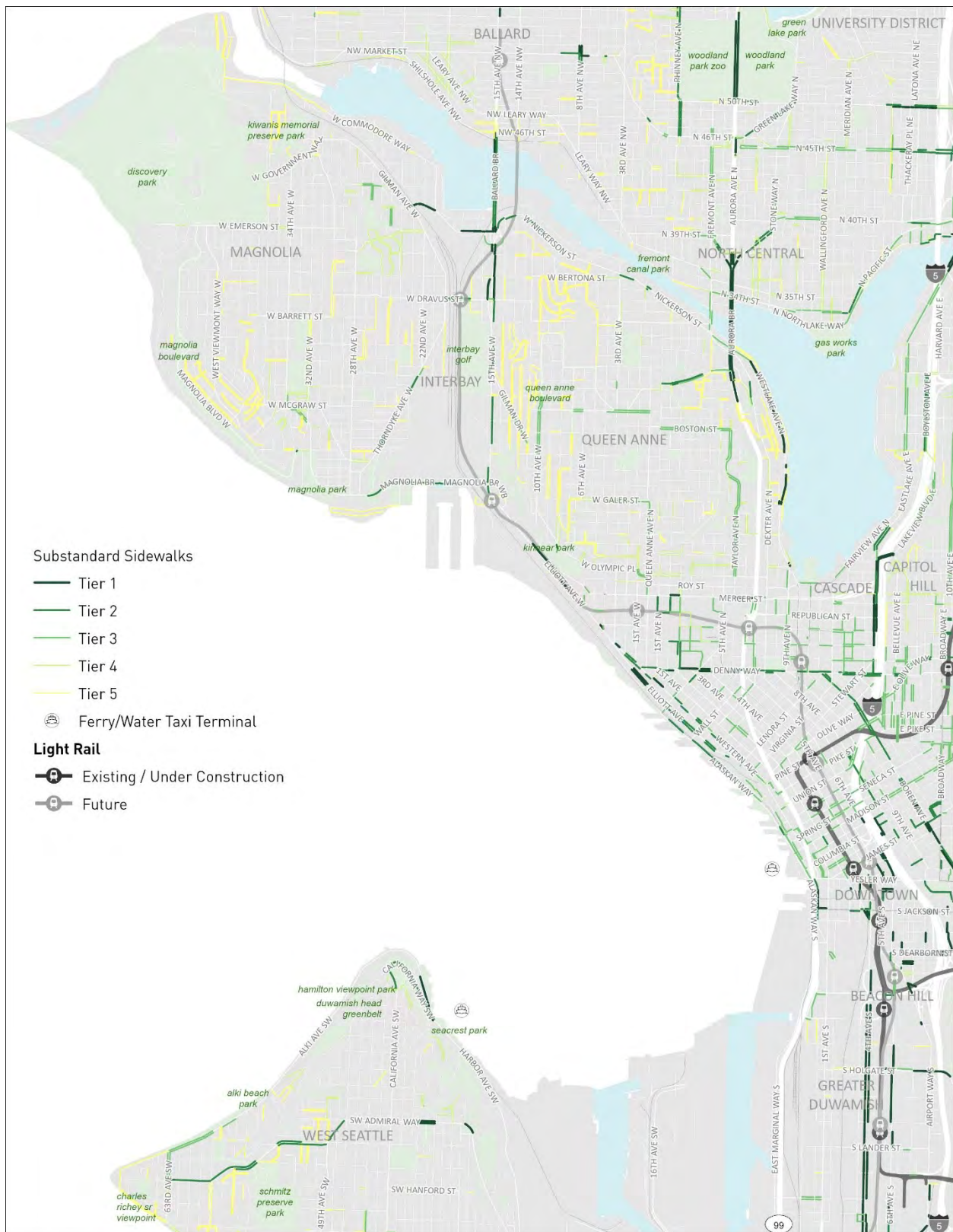


Figure 13: Substandard Sidewalks Priority Investment Network (East)

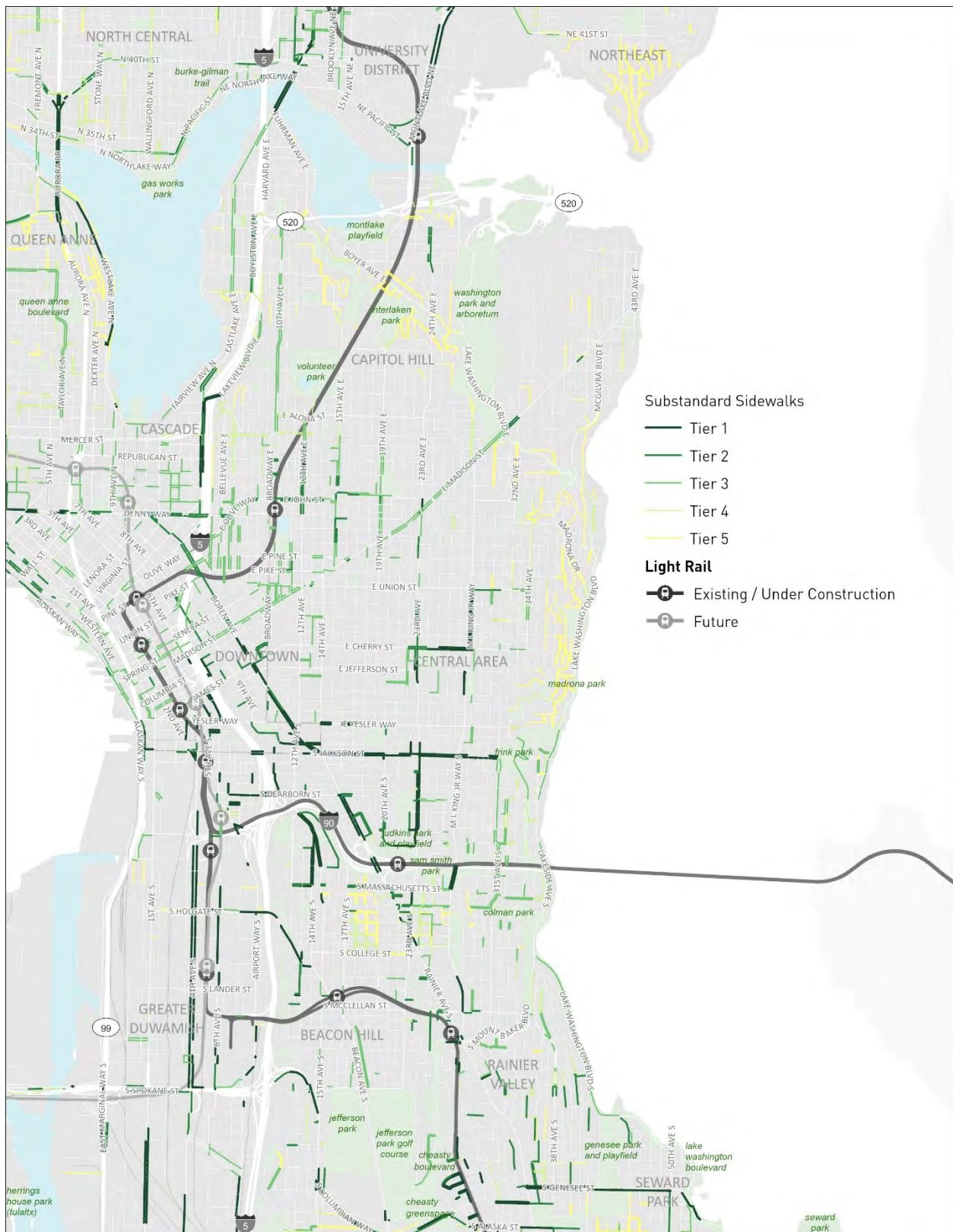


Figure 14: Substandard Sidewalks Priority Investment Network (Southwest)

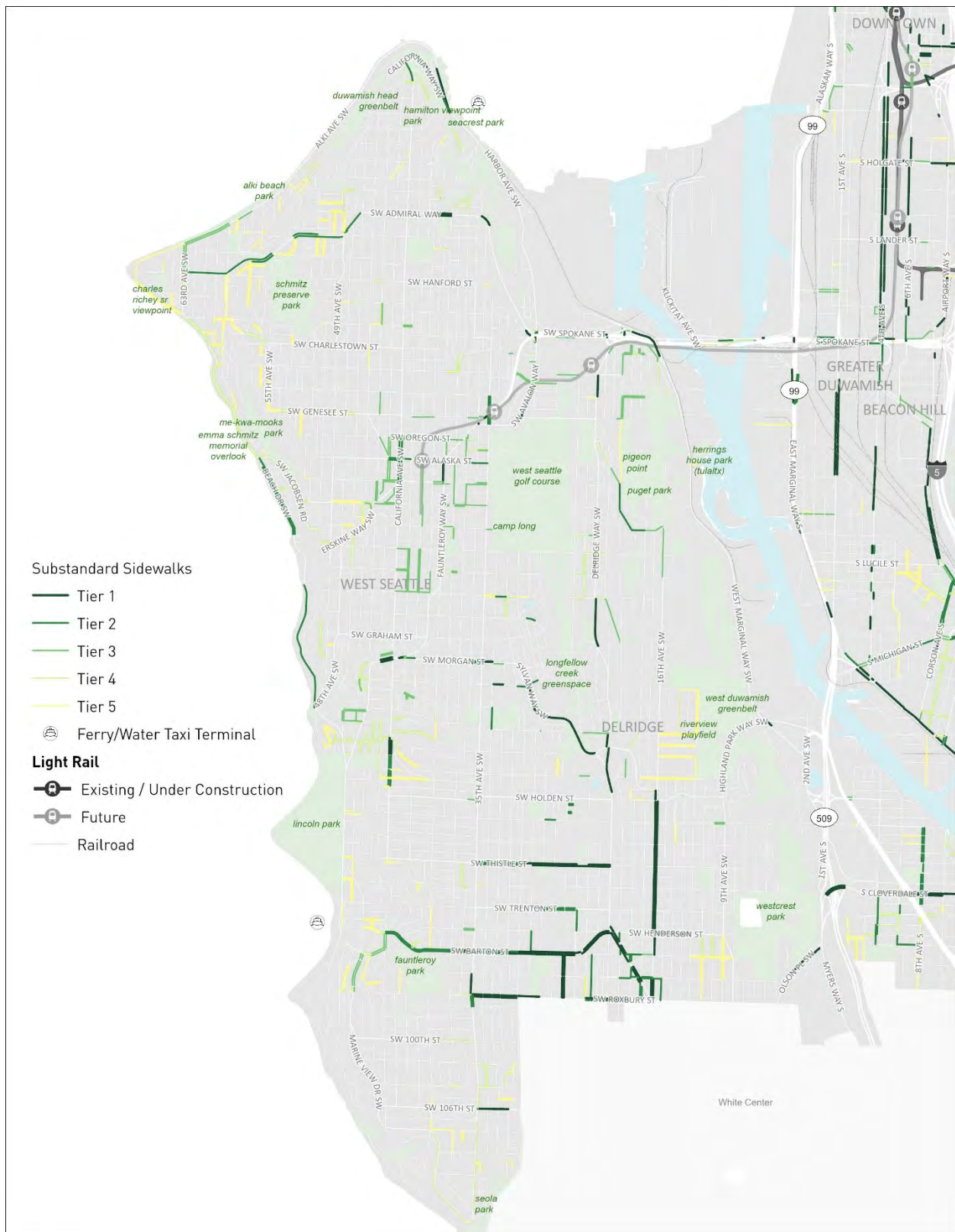


Figure 15: Substandard Sidewalks Priority Investment Network (Southeast)

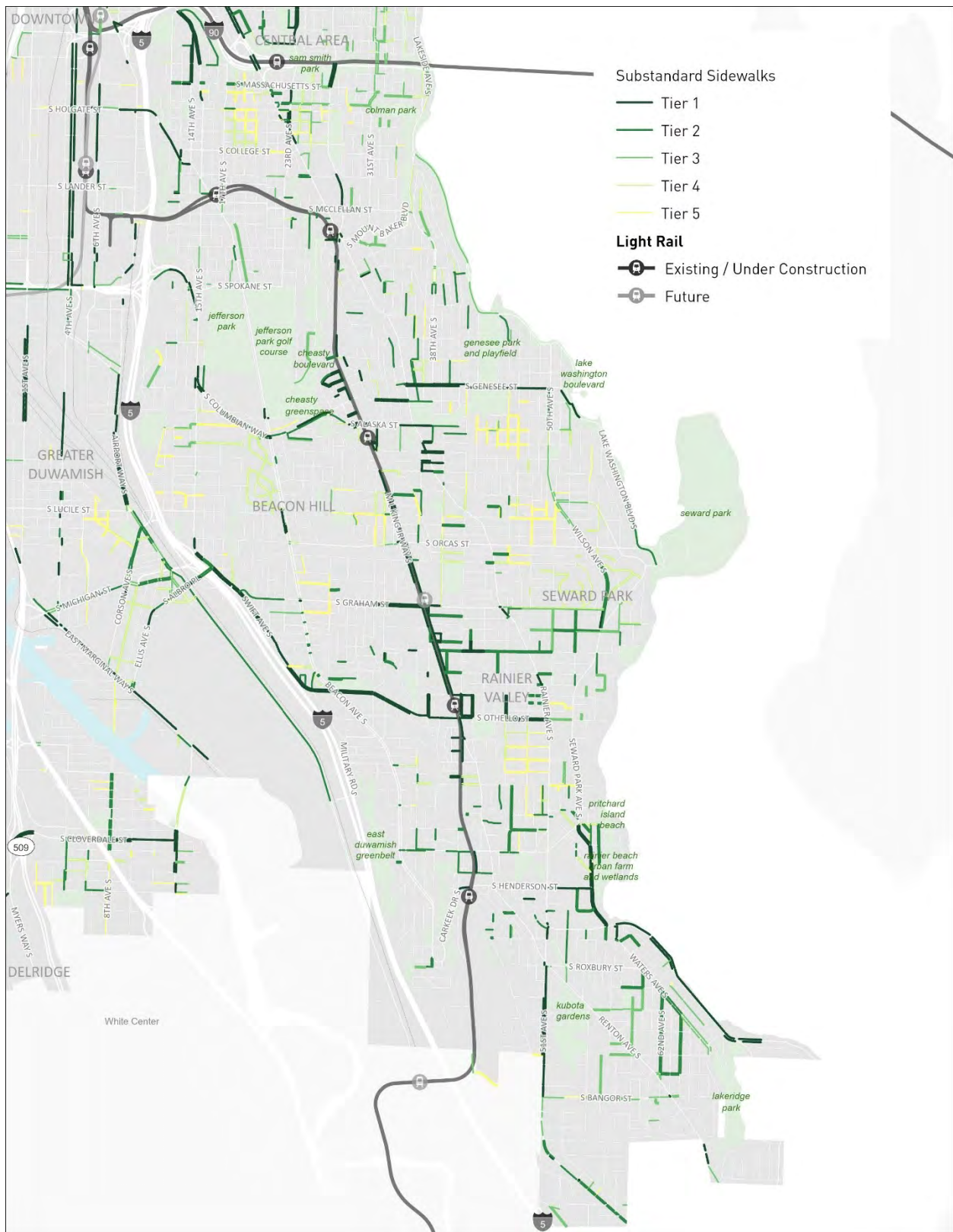


Figure 16: Enhanced Street Crossings Priority Investment Network (Northwest)

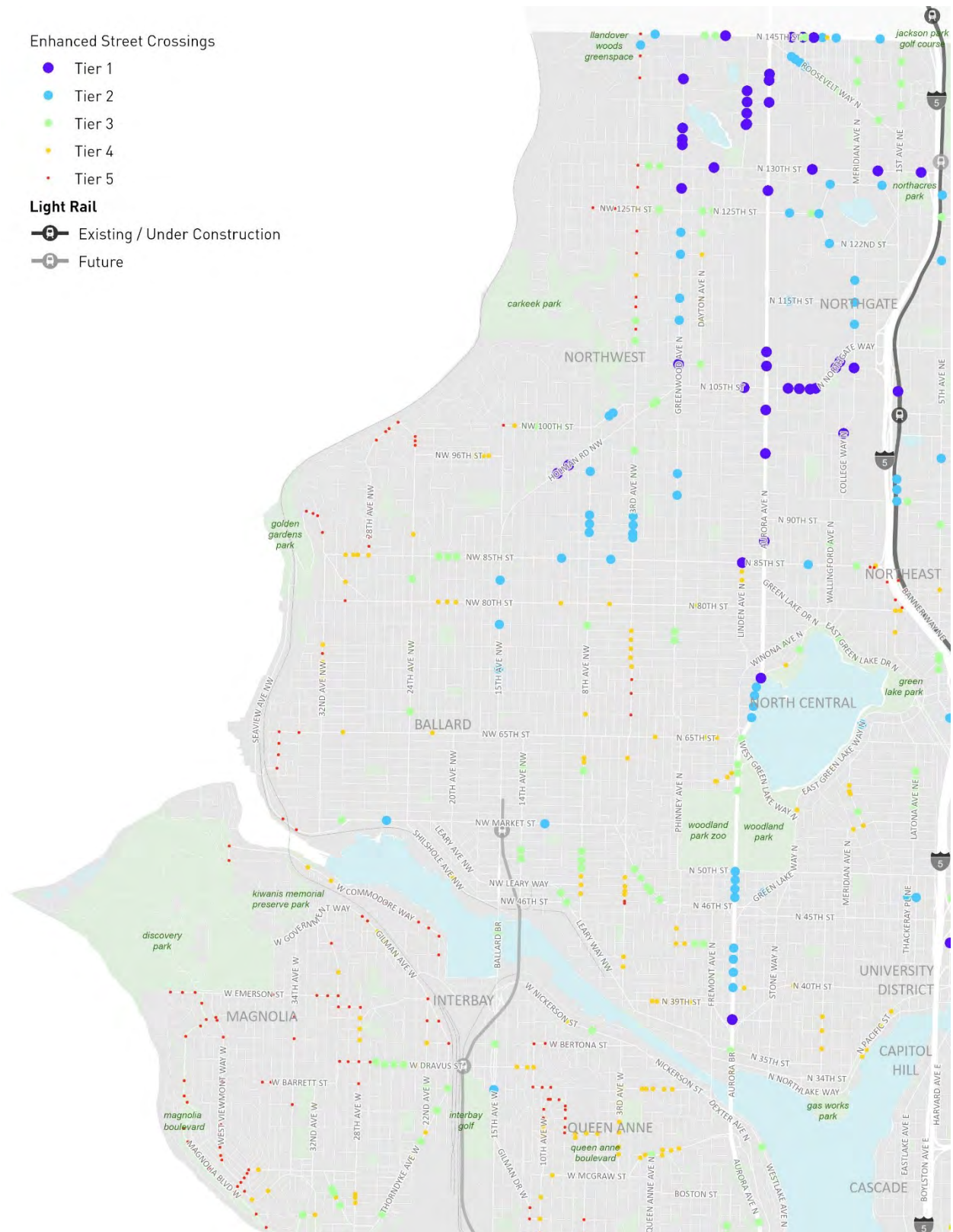


Figure 17: Enhanced Street Crossings Priority Investment Network (Northeast)

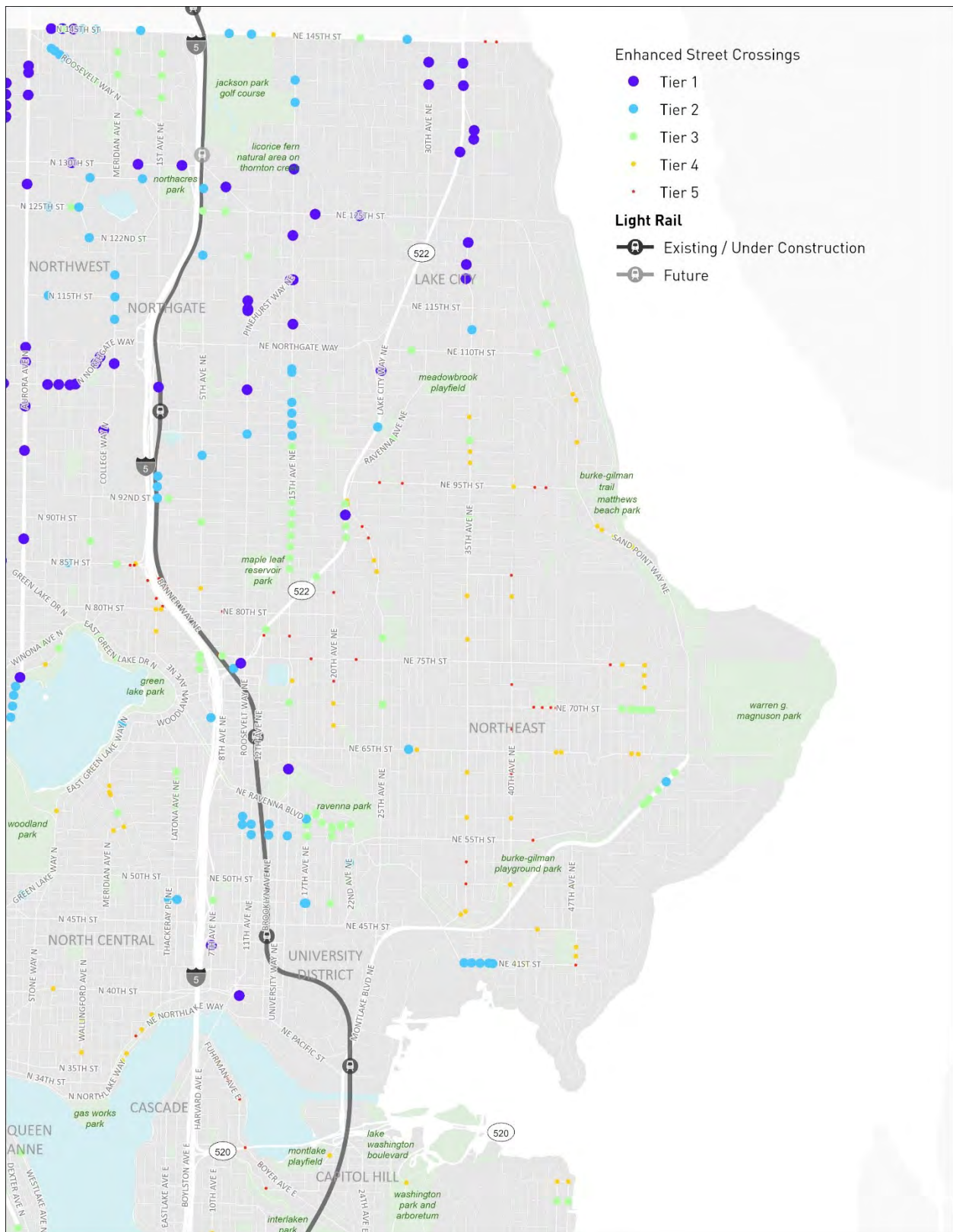


Figure 18: Enhanced Street Crossings Priority Investment Network (West)

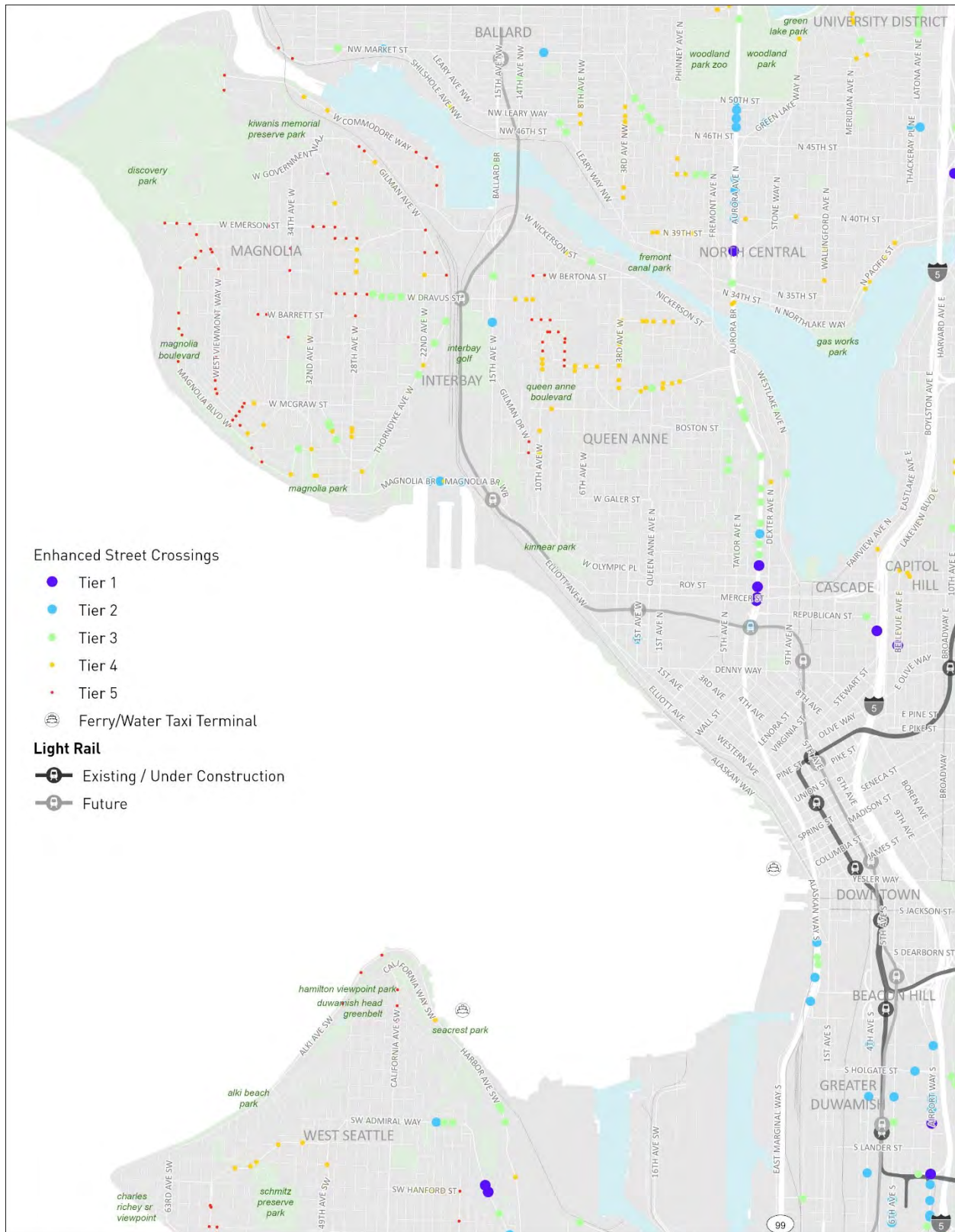


Figure 19: Enhanced Street Crossings Priority Investment Network (East)

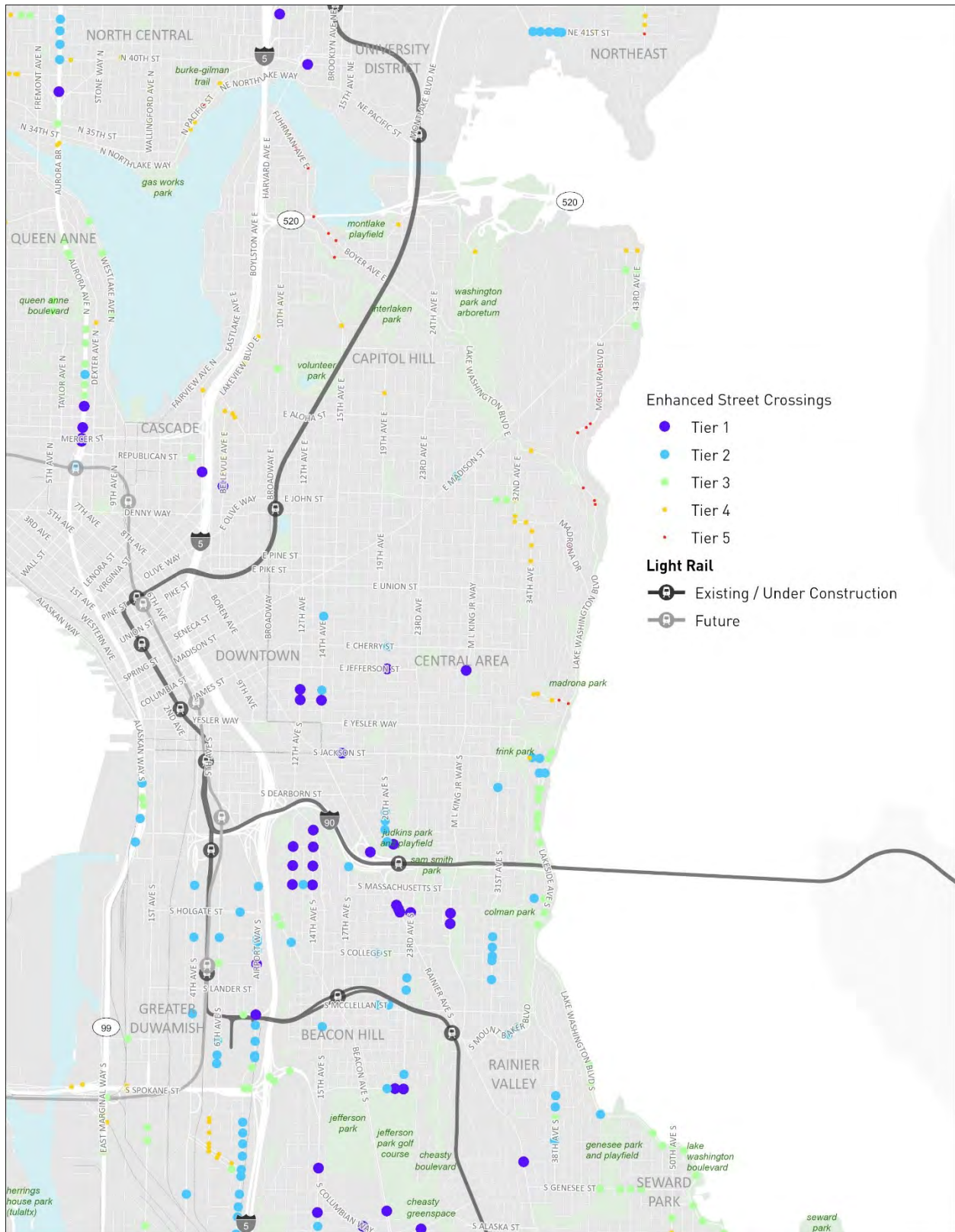


Figure 20: Enhanced Street Crossings Priority Investment Network (Southwest)

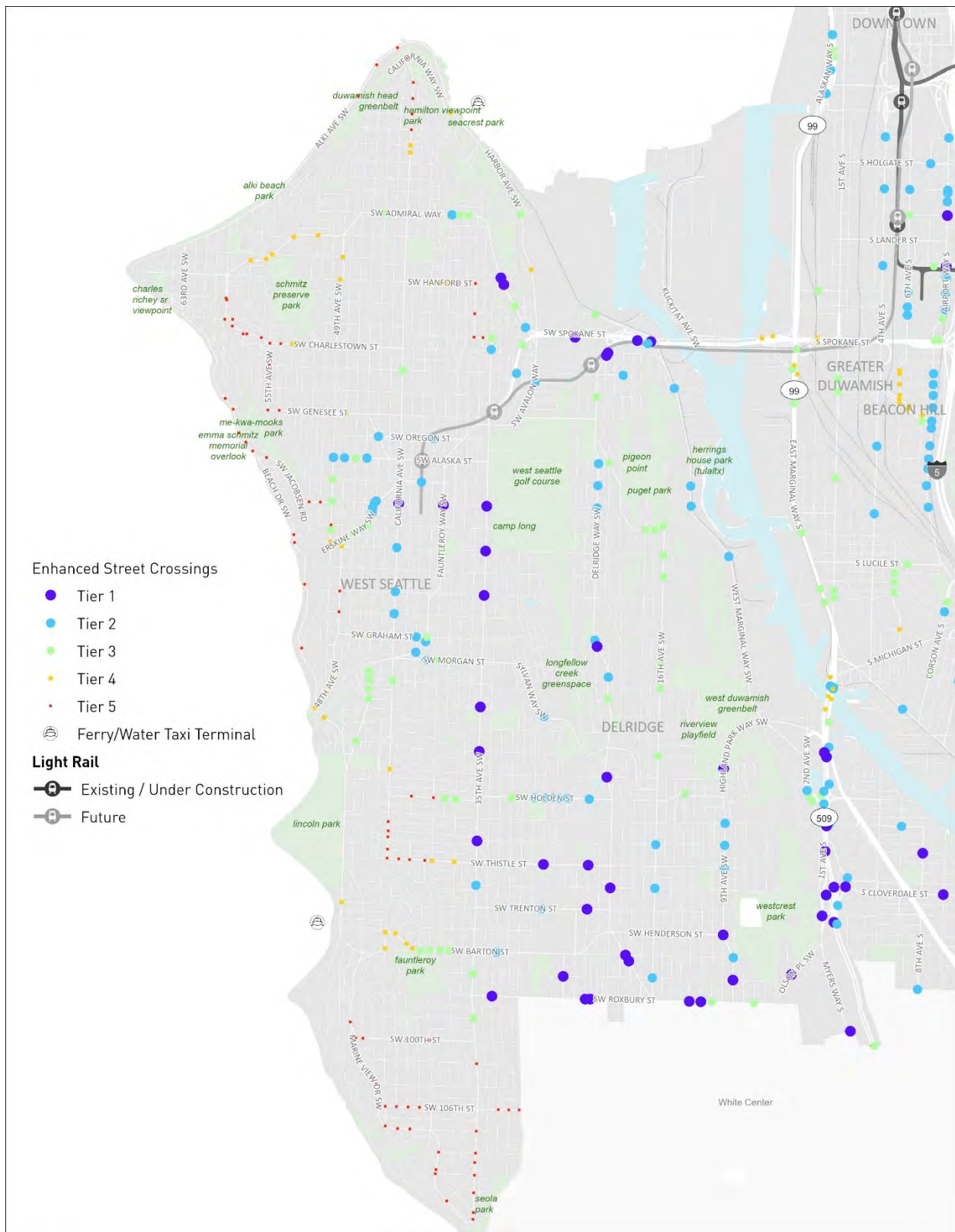
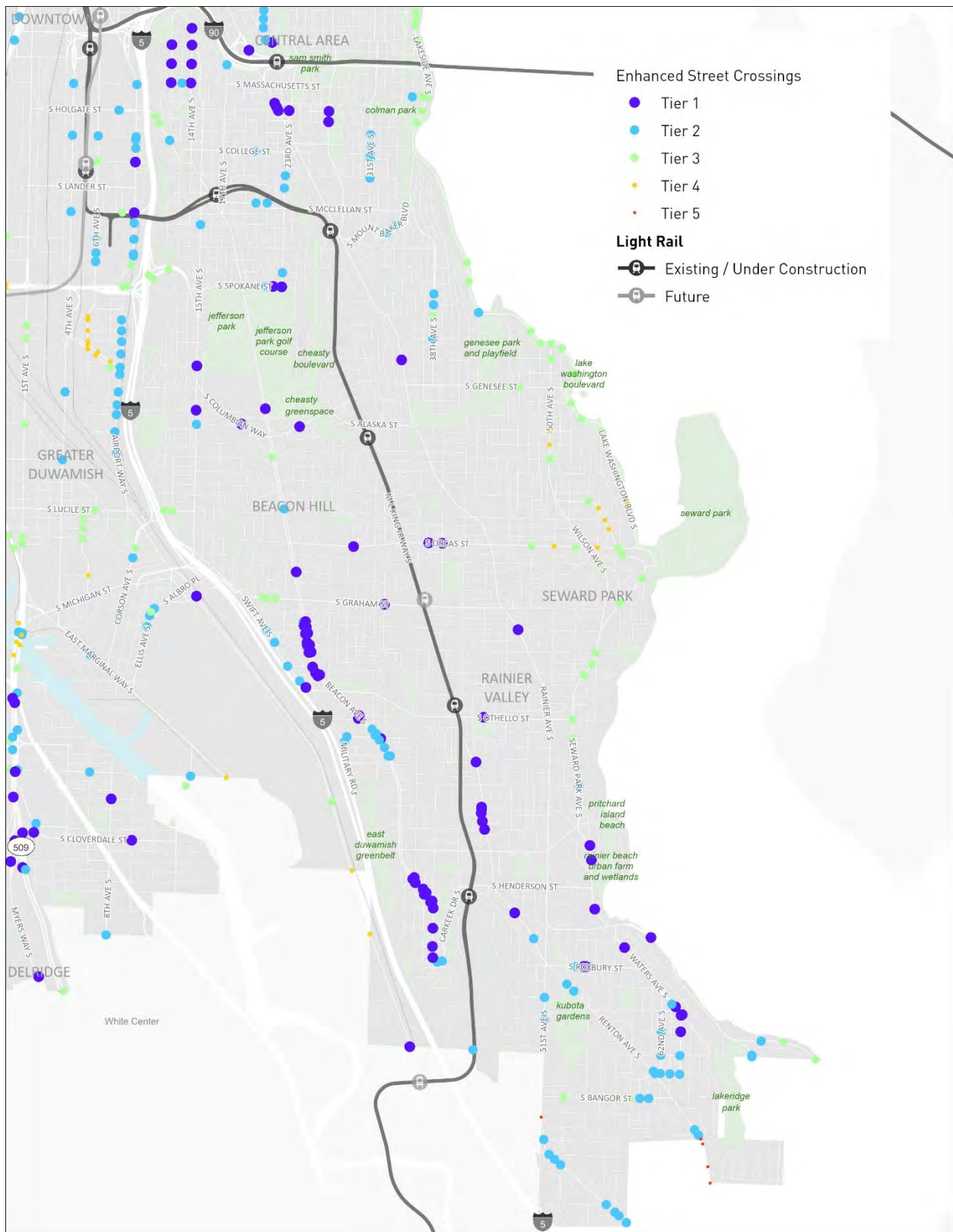


Figure 21: Enhanced Street Crossings Priority Investment Network (Southeast)



CORRIDOR NETWORK PROJECTS

Beyond the three Pedestrian Improvement Network maps there are also Corridor Network Projects identified within the pedestrian network. These include longer corridors that are on the Transit Connection Corridor map and several key pedestrian-related, large-scale catalyst projects.

Transit Connection Corridors

Figure 22: Transit Connection Corridors shows Transit Connection Corridors, which are streets along important transit routes.

This map is a prioritization map and will be used to identify corridor-based improvements, primarily in partnership with transit-related projects. Improvements include sidewalk installation or repair, upgraded crossing treatments, and pedestrian features, such as benches and lighting.

This map also shows a subset of People Streets and Public Spaces, which complement Transit Connection Corridors at locations in the heart of neighborhoods with a high density of destinations.

See the People Streets and Public Spaces Element for more information.

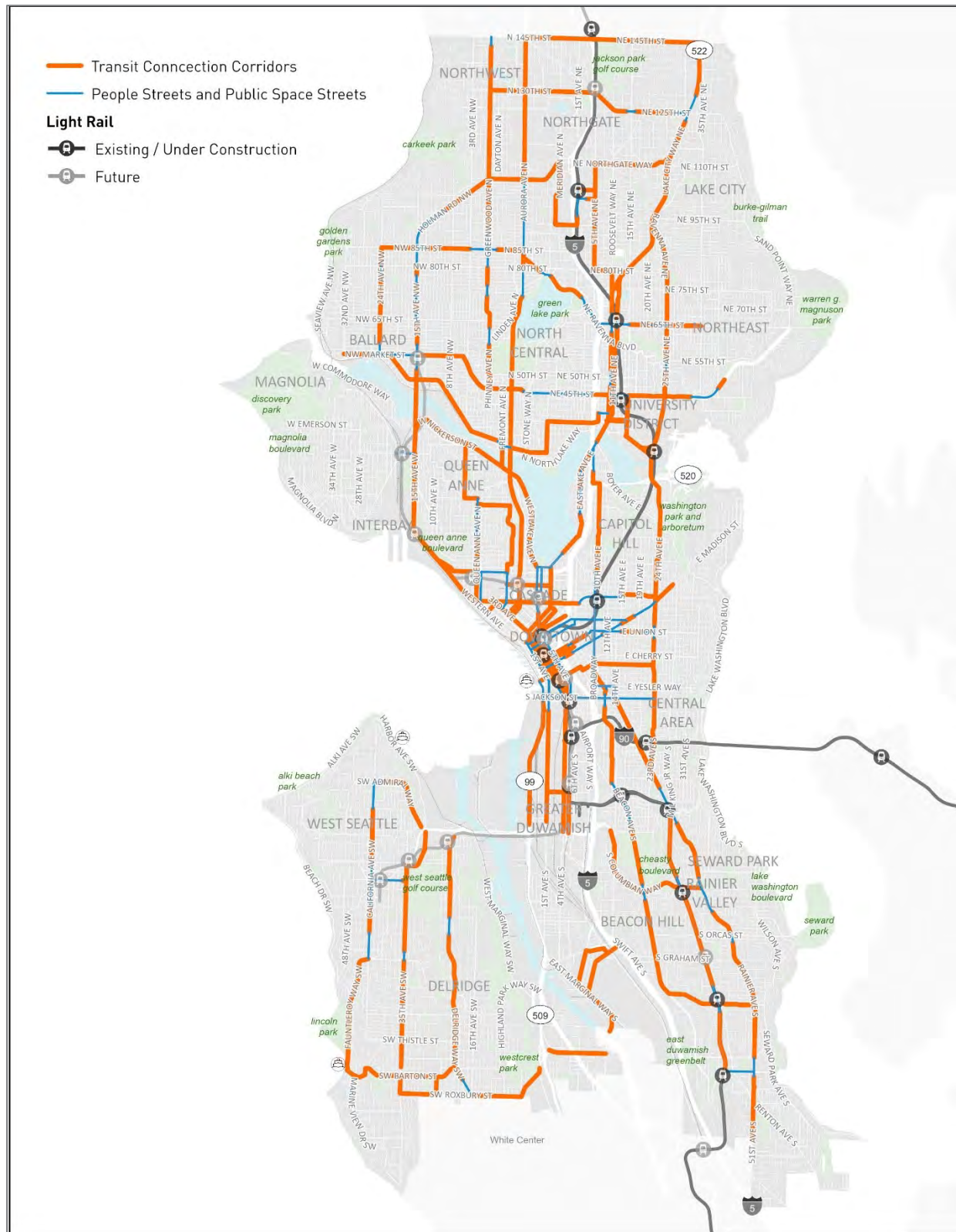
Catalyst Projects

Catalyst Projects are projects that overcome major connectivity barriers and are often complex projects requiring creative solutions, large capital investments, and in some cases, coordination among multiple stakeholders internal and external to the City.

Pedestrian Catalyst Projects include supporting Seattle City Council Resolution 32100 and the intent to Lid I-5 where feasible within the city limits. This could include coordinating with the Office of Planning and Community Development, WSDOT, the Federal Highway Administration, and Federal and State elected officials as planning, feasibility, and funding move forward. Additional pedestrian-focused Catalyst Projects networks include the Aurora Ave Corridor and the Lake City Way Corridor.

See the STP Part I Implementation Strategy for a complete list of large, transformative projects and the STP Bicycle Element for more information on key bicycle catalyst projects, many of which also improve pedestrian mobility.

Figure 22: Transit Connection Corridors



Note: See the People Streets and Public Spaces Element for more information on People Streets and Public Spaces

SPATIAL REQUIREMENTS AND OPERATIONAL CONSIDERATIONS

There are many design and operational considerations that can advance walking and rolling in Seattle and meet the STP vision to help people move around in ways that are safe and comfortable. Sidewalk and pedestrian zone design should be informed by design standards from *Streets Illustrated*, our Right-of-Way Improvements Manual that identifies guidance for sidewalk width, clearances, street trees, pedestrian-scale lighting, etc. *Streets Illustrated* will be updated after adoption of the Seattle Transportation Plan to account for evolving best practices, which is described in more detail below under “Maintenance & Modernization.”

Inputs for Project Development

Develop a standard to measure right-of-way tradeoffs for pedestrian design to use during project development along multi-modal corridors. SDOT will seek to:

- Evaluate outcomes from existing measures which could include comfort, land use context, and sidewalk upgrade opportunities to establish right-of-way allocation measures and goals for the pedestrian network.
- Integrate the right-of-way allocation measures and goals into the complete streets process for project development to streamline right-of-way tradeoff decision-making alongside other multi-modal operational measures and goals where designated corridors overlap.

Inputs for Operations at Intersections

Develop baseline measures and targets for pedestrian crossings at controlled intersections. SDOT will seek to:

- Evaluate outcomes from implementing pedestrian crossing improvements using existing measures including (but not limited to):
 - Our current standard for maximum wait time for pedestrians at controlled intersections.
 - Distance between controlled crossings or enhanced uncontrolled crossings (including multilane arterials).
- Continue supporting our policy for pedestrian priority at intersections in commercial/mixed use areas and update the policy based on place types established in the One Seattle Comprehensive Plan.

Improve Crossing Safety

Creating new crossing opportunities or upgrading existing enhanced crossings can improve pedestrian mobility to transit stops and stations and other destinations, respond to community requests, make crossing the roadway safer, improve the pedestrian experience, and leverage other capital investments.

SDOT will seek to:

- Improve pedestrian visibility at crossings.
 - Provide better sightlines at intersections through intersection daylighting (removing visual obstructions at intersection approaches to maximize a driver's field of vision). This could be achieved through treatments that reinforcing existing restricted parking at intersections through signs and pavement markings, or by building physical features, like curb bulbs.
 - Provide high visibility crossing treatments in the Priority Investment Network, including flashing crossing beacons and signage.
 - Provide intersection lighting to increase the visibility of people crossing the roadway.
 - Install and maintain crosswalks, where appropriate, to help clearly define where pedestrians are expected to cross the roadway.
 - Provide signage along the right-of-way and painted stop bars prior to intersections to help reinforce safe roadway use.
 - Square up skewed intersections to right angle intersections to increase visibility, decreases pedestrian crossing distances, and help prevent vehicles from turning at high rates of speed.
- Develop or update guidance for wait times and distances between controlled crossings based on our goals for the pedestrian network. Take land use context and universal design principles (e.g., longer crossing times and shorter distances between controlled crossings needed by young children and their caregivers, pregnant people, older adults, and people with disabilities) into account.
- To shorten pedestrian crossing distances, seek to minimize the number of travel lanes and provide curb bulbs, pedestrian crossing islands, pedestrian refuges, and other appropriate treatments when possible. Evaluate vehicle lane reduction for reallocation to other modes of travel.
- Explore locations to use raised crosswalks, which employ vertical deflection to force motorists to slow down upon approaching a crosswalk. Raised crosswalks are often used to create a safer and more comfortable pedestrian environment. They may be appropriate at trail crossings and at intersections of neighborhood streets with higher volume roadways. Raised crosswalks may not be appropriate on all streets.

- Reduce turning-movement conflicts at intersections between people walking and people driving in vehicles.
 - Implement pedestrian-only phasing (including scramble or all-way walk signal phases), where appropriate.
 - Implement Leading Pedestrian Intervals (LPIs), where appropriate.
 - Expand the use of protected left turns, where appropriate.
 - Review signal phasing for opportunities to eliminate shared phases that create conflicts between pedestrians and vehicles.
 - Eliminate permitted “turn on red,” where appropriate.
 - Phase out all dual-turning movements, except at points of ingress/egress to limited access highways.

As we design and implement projects that impact street intersections, we will evaluate opportunities to upgrade intersections to current design standards and employ safety countermeasures, as funding allows.

Maintain the Pedestrian Clear Zone

Maintaining a pedestrian clear zone is important to creating a connected, accessible pedestrian network. *Seattle Streets Illustrated* states that sidewalks shall be clear of all vertical obstructions for a width of at least 6 feet and a height of at least 8 feet. Depending on the street type, the clear zone width may be greater. While features like landscaping, signage, café seating, benches and art add visual interest to the public realm, these elements should be located outside of the required pedestrian clear zone.

SDOT will seek to:

- Work with public and private partners to better maintain a pedestrian clear zone.
- Work with public and private partners to clearly identify and enforce pedestrian detour routes in construction zones or during other sidewalk closures so that people walking have a safe alternative route.
- Explore partnerships with and encourage property owners to keep pedestrian paths clear from overgrown landscaping and other debris, and keep sidewalks clear during adverse weather events like snow.
- Partner with shared micromobility providers to expand rider etiquette education to deter sidewalk riding and improve compliance on properly parking shared micromobility devices outside of the pedestrian clear zone.
- Provide more dedicated, non-sidewalk parking spaces for bikes, scooters, and other e-mobility devices, along with our continued investment in infrastructure to encourage sustainable travel choices.

Achieve Standard Sidewalks

Areas located within our urban centers and urban villages are places to prioritize people walking, rolling, and other vulnerable users. These areas include our densest residential and commercial buildings and our busiest areas for people walking and rolling.

The arterials within our urban centers and urban villages have their own street type classifications within *Streets Illustrated*, which emphasize safe accommodations for shorter trips, transit priority, and access needs.

As described in the previous ‘Pedestrian Network’ section, some of our streets have pedestrian zones that do not meet our *Streets Illustrated* standard widths, included some within commercial/mixed use areas.

SDOT will seek to:

- Work with development applicants citywide to achieve compliant sidewalks and bring substandard sidewalks up to *Streets Illustrated* standards.
- Include in capital projects within a commercial/mixed use area, and where pedestrian zones are substandard,¹⁸ scope to expand sidewalks to meet applicable *Streets Illustrated* standards (which may result in expanding the sidewalk into the flex zone) or, at minimum, protect access and parking functions within the flex zone to ensure our future ability to expand the sidewalk to meet *Streets Illustrated* standards.
- Protect access and parking functions within the flex zone to ensure our future ability to expand the sidewalk to meet *Streets Illustrated* standards within a commercial/mixed use area, and where pedestrian zones are substandard.¹⁹
- Identify and address critical building access needs, including passenger and package delivery, goods services, and solid waste management, in conjunction with changes to the flex zone, where there are multi-family residential and commercial buildings.

¹⁸ More than three feet narrower than *Streets Illustrated* standards

¹⁹ More than three feet narrower than *Streets Illustrated* standards

Manage Vehicle Speeds

In order to advance our safety goals, we must be willing to reduce driver/vehicle speeds. Lowering vehicular speeds is a key piece of our Vision Zero efforts because speed is the critical factor in the frequency and severity of crashes.

When drivers slow down by just a few miles per hour, it has two main powerful impacts. First, it makes crashes less likely to occur in the first place. And second, a person who is hit by a driver traveling at lower speeds is much more likely to survive the incident.



Nine out of 10 people walking survive when hit by a vehicle traveling at 20 MPH, but only five do when hit at 30 MPH and only one when hit at 40 MPH. US DOT NHSTA (1999)

Developing holistic strategies for traffic calming and pedestrian-friendly street design is core to our work. This includes arterials, as well as local streets. Traffic calming measures can also be used to reduce vehicle volumes, particularly on shared streets. To the extent that this strategy considers automated traffic enforcement, we should adopt an equitable approach and explore non-punitive outcomes and income-based fines.

By creating safer streets with lower driver speeds, we can minimize or eliminate the need for speed enforcement. Revenues from citations for local safety improvements can be used to reduce or eliminate the need for enforcement.

SDOT will seek to:

- Continue to evaluate locations to reduce default and posted vehicle speeds on arterial and non-arterial streets.
- Continue to redesign streets to meet current and future needs, including implementing proven pedestrian safety countermeasures, particularly at locations with high vehicle speeds.
- Advocate for an update to State RCW 46.61.415 to allow speed limits lower than 20 mph. For example, shared streets, where pedestrians truly feel comfortable sharing space with cars, should be signed at 10 mph with engineering design to match.
- Pair speed limit reductions with education and public outreach.

PROVEN PEDESTRIAN SAFETY COUNTERMEASURES

The Federal Highway Administration's (FHWA) Proven Safety Countermeasures Initiative is a collection of 28 actions and strategies effective in reducing roadway fatalities and serious injuries. Countermeasures known to address fatal and severe pedestrian crashes include crosswalk visibility enhancements, leading pedestrian intervals, medians and pedestrian refuge islands, rectangular rapid flashing beacons (RRFB), road diets, and walkways.



Consider Automated Traffic Safety Cameras

SDOT will seek to develop a policy for automated traffic safety cameras and potential expansions informed by recommendations from the racial equity analysis conducted in partnership with community to address concerns and mitigate harms, while continuing to solicit feedback from community and other stakeholders. SDOT will prioritize street designs and infrastructure changes to create self-enforcing streets and curb regulations that encourage safe behaviors and reduce the need for enforcement.

Consolidate Driveways and Curb Cuts

Driveways and curb cuts create areas of conflict between people walking on the sidewalk and moving vehicles accessing private property. They can also be difficult to navigate for people with disabilities or limited mobility. Consolidating, minimizing, or eliminating driveways and curb cuts create a safer and more comfortable pedestrian environment by reducing potential conflicts between people walking and people driving. SDOT will seek to:

- Develop stronger code requirements or incentives to minimize the impact of curb cuts and driveway width on all street types, particularly along the Priority Investment Networks.
- Use the development review process to review access strategies for new developments early in the design process to minimize access impacts.

Use the Complete Streets Process

The Complete Streets ordinance²⁰ directs SDOT to design streets for people walking, biking, taking transit, and persons of all abilities, while promoting street trees, art, and safe operation for all users, including freight. SDOT uses a rigorous process to evaluate planned projects for consistency with the policy.

A Complete Streets checklist is used to collect data and information about the status of the street and surroundings, details of the project, and Seattle Transportation Plan Element recommendations, with a goal of identifying specific improvement that can be incorporated into the project to balance the needs of all users. SDOT will seek to:

- Continue to use the Complete Streets checklist tool to evaluate City transportation projects (except for maintenance projects) for opportunities to make pedestrian system investments.
- Apply Complete Streets principals to private development and other agency project reviews.
- Periodically review and enhance the City's Complete Streets process.



A crowd of people, some with mobility assistance devices and strollers, cross a busy street with large street trees

²⁰ The City Council passed Ordinance 122386, the Complete Streets policy, in 2007.

PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than specific to a project) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change; however, the programmatic activities listed here provide helpful general information to describe the types of tools and methods we will employ to manage the transportation system.

Implement the Pedestrian Investment Networks

Our programmatic activities should be centered on making bold and aggressive progress on building out our sidewalk and crossing networks identified in our Priority Investment Networks and our Corridor Network projects.

“Along the Roadway” Improvements

A quality pedestrian network is at the core of an equitable and accessible transportation system, and sidewalks are the building blocks of an effective pedestrian network. SDOT will seek to:

- Build and maintain the Sidewalk Priority Investment Networks, prioritizing safe and accessible connections to schools, transit stops and stations, parks, and other community destinations. Investments can include sidewalks, walkways, shared streets with appropriate traffic calming, and low-cost improvements on non-arterial streets.
- Emphasize locations along the Frequent Transit Network; areas around Link light rail and community and mobility hubs; and corridors that provide access to schools, parks, and community destinations.
- Implement the strategies identified in the ‘Spatial Requirements and Operational Considerations’ section of this chapter.

NACTO GUIDANCE ON SHARED STREETS

The National Association of City Transportation Officials (NACTO), of which SDOT is a member, convened a working group of major US cities to develop new robust guidance for setting speed limits on urban streets to provide an alternative to the highway-focused federal recommendations. The resulting guidance, *City Limits*, provides cities with clear technical and policy guidance on setting safe speed limits on city streets. All of NACTO’s Member Agencies (81 members at the time of final review) have approved this guidance. For streets where people are expected to share the roadway with motor vehicles, a speed limit of 10 mph is recommended.

Crossing the Roadway Improvements

Safe and accessible crossings are key to developing a connected pedestrian environment. SDOT will seek to:

- Build and maintain the Enhanced Street Crossings Priority Investment Network, prioritizing safe and accessible connections to schools, transit stops and stations, parks, and other community destinations. Investments can include treatments such as marked crosswalks, curb bulbs or pedestrian refuges, all-way stops, rectangular rapid flashing beacons (RRFBs), and signals.
- Emphasize locations along the Frequent Transit Network; areas around Link light rail and community and mobility hubs; and corridors that provide access to schools, parks, and community destinations.
- Implement the strategies identified in the 'Spatial Requirements and Operational Considerations' section of this chapter.

Safe Routes to School

The Safe Routes to School (SRTS) program is designed to improve safety in areas around schools and encourage more kids to walk and bike. SDOT will seek to:

- Implement the Safe Routes to School program to deliver engineering improvements that improve pedestrian safety within school walksheds as well as education and encouragement campaigns at public and private schools throughout Seattle.
- Expand the School Streets program. *See the People Streets and Public Spaces Element for more information on School Streets.*
- Continue partnering with Seattle Public Schools on walking and biking safety education for students, including students with disabilities.
- Partner with Seattle Public Schools on walking school buses.
- Continue supporting the Safe Routes to School Coordinator position at Seattle Public Schools who works to ignite a culture of active transportation to school.
- Continue providing walking and biking maps to school, free bicycling incentives and prizes for bike to school campaigns, and free packages with bike train supplies.
- Continue engaging with students in designing and installing artwork along routes to school and other community destinations like parks and libraries.

Safe Routes to Transit

Walking is an ideal first-/last-mile solution to expand the reach of those who can access our transit system and the region it serves. SDOT will seek to:

- Implement Safe Routes to Transit. Coordinate bicycle and pedestrian improvements around light rail, community and mobility hubs, and frequent transit network stops.
- Improve station access planning for future light rail stations.
- Implement pedestrian improvements along and across major transit spines to enhance transit access and experience. (Supports TEF 40.2)

Safe Routes to Parks and Shorelines

Park properties offer opportunities to create pedestrian facilities that would greatly enhance network connectivity and create a sense of park expansion. Such connections require close coordination with the Seattle Parks and Recreation Department and thoughtful design to minimize environmental impacts and enhance enjoyment for park users. SDOT will seek to:

- Implement Safe Routes to Parks and Shorelines to coordinate bicycle and pedestrian improvements to parks and shorelines.
- Make investments that make it safer to walk and roll to parks and shorelines. This includes improving sidewalks and crossings within and adjacent to parks as well as the addition of climate resilient landscapes, increased vegetation, street trees, and stormwater management features. Build on existing partnership with Seattle Parks and Recreation and efforts to create these kinds of connections.
- Collaborate with other departments to explore these types of connections.

Sidewalk Safety Repair

Cracked and uplifted sidewalks can make pedestrian paths difficult to navigate, particularly for people walking who have mobility limitations. SDOT will seek to:

- Provide safe and accessible sidewalks by proactively identifying issues, implementing temporary measures as needed, and conducting permanent repairs when it is determined to be the City's responsibility, with a focus on underinvested neighborhoods. (Supports TEF 38.2, 41.6)
- Make it easier for residents to report sidewalk repair needs.
- Educate property owners about private sidewalk maintenance obligations (for example, repairs and snow removal) and increase enforcement.
- Make it easier and more predictable for private property owners to complete required sidewalk repairs.
- Study the potential for an income-based cost-sharing sidewalk repair program for lower-income property owners. (Supports TEF 38.6)

Multi-Use Trails

Multi-use trails are off-street facilities that accommodate people walking, biking, and using a wide range of other non-motorized and e-mobility devices. We'll seek to leverage our work to expand and connect multi-use paths to improve pedestrian access, particularly in areas lacking adequate comfortable on-street connections.

Neighborhood Greenways

Neighborhood Greenways and Healthy Streets provide people opportunities to walk and roll on quieter local streets instead of busier arterial streets. Expanding and upgrading neighborhood greenways can help to prioritize people walking and people riding bikes along roadways with low traffic volumes, slower driver speeds, and gentle grades. SDOT will seek to:

- Explore opportunities for expanding neighborhood-based events, play streets, and block parties on Neighborhood Greenways and Healthy Streets.
- Educate people so they are aware of new Greenways in their neighborhood.

See the People Streets and Public Spaces Element and the Bicycle and E-Mobility Element for more information on Neighborhood Greenways and Healthy Streets.

Home Zones

SDOT will seek to strengthen the Home Zone program, which combines quantitative analysis with a community-centered development process to make residential streets safer and more comfortable for people walking and biking.

Community and Mobility Hubs

Community and mobility hubs are places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements. SDOT will seek to:

- Support community-oriented programming, such as markets, vending, performances, and recurring events.
- Improve walkability at every community and mobility hub by providing pedestrian infrastructure such as lighting, wayfinding, seating, and landscaping.
- Shared and car-free or car-light streets around current and future Link light rail stations create walkable and people-prioritized hubs for community and mobility.
- Provide a safe and comfortable experience moving in and around community and mobility hubs. This includes better crossings and intersections, slower speeds and rightsized travel lanes, decluttered sidewalks, universal access, and more.
- Create public spaces at community and mobility hubs that work for children and their caregivers, with educational activities to engage in and support child development.
- Partner with other departments and agencies, such as Sound Transit and King County Metro, and local neighborhood groups such as Business Improvement Areas

(BIAs) and other community organizations, to design, construct, and maintain community and mobility hubs.

Pedestrian Lighting

Lighting for pedestrians is an integral part of Seattle becoming the most walkable city in the nation. The 2012 Pedestrian Lighting Master Plan²¹ provided a snapshot of the City's approach to pedestrian lighting within the right-of-way and put in place a blueprint for outlining the needs and opportunities for pedestrian lighting citywide. SDOT will seek to:

- Revisit the 2012 Pedestrian Lighting Master Plan to assess current "pedestrian lighting deserts."
- Identify and prioritize critical locations on trails, off-street connections, and streets where it is dark and challenging to navigate at night.
- Identify opportunities for closer collaboration and cost sharing with Seattle City Light for pedestrian lighting. (supports TEF 45.1)
- Prioritize People Streets and Public Spaces, high ridership transit routes and transfer points, and equity needs.

Americans with Disabilities Act (ADA) Accessibility and Universal Design

SDOT will continue to implement existing accessibility improvements identified and prioritized in the *2020 Americans with Disabilities Act (ADA) Transition Plan for the Seattle Public Right-of-Way* and future updates to the plan. Future self-evaluations and *Transition Plan* updates will incorporate the latest standards and guidance, including new methods and technologies which impact accessibility in the public right-of-way.

Recognizing that the ADA provides basic accessibility requirements, SDOT will continue to advance universal design best practices and other guidance incorporating features and elements beyond ADA compliance, such as tactile wayfinding and assistive technologies, to enhance the public right-of-way for all users.

Accessibility improvements should be integrated with all new along-the-street and crossing-the-street projects while ADA Program projects will focus on accessibility-specific prioritization and feedback, in particular feedback from persons with disabilities who live and work in the City of Seattle. SDOT will seek to:

- Achieve accessibility and ADA compliance throughout Seattle's streets and within SDOT programs and projects.
- Expand SDOT's approach to encompass a more holistic view of ADA accessibility in the public right-of-way as a continuum for pedestrians, including transitions between pedestrian elements such as curb ramps, sidewalks, pedestrian crossings, accessible parking and passenger loading while working with permitted entities to assure accessible connections between public right-of-way and private property.

²¹<https://www.seattle.gov/Assets/Documents/Departments/SDOT/About/DocumentLibrary/PedMasterPlan/PedLightingFINAL.pdf>

- Coordinate with other City and SDOT programs, such as the Aging and Disability Services (ADS)²² and the Safe Routes to School (SRTS) program, to promote projects and infrastructure improvements that support inclusive design elements for all ages and abilities.
- Promote and enforce the importance of keeping the pedestrian clear zone free of objects or impediments, including propped doors, A-frame signs, landscaping, outdoor seating, displays, and shared micromobility devices.
- Expand SDOT's ADA Program Customer Service Request (CSR)²³ process for curb ramps and Accessible Pedestrian Signals (APS) to include other accessibility requests and continue to allocate annual funding to address requests.
- Promote awareness of SDOT's ADA Program Customer Service Request process to historically underserved areas.
- Update the "Age-Friendly Prioritization" to include a more universal, inclusive design perspective compared to needs identified in the *Transition Plan* and utilize a data-driven approach incorporating customer request data.
- Develop a strategic approach to accessible parking and passenger loading in Seattle's public right-of-way, accessible corridors, and improvements in communication and outreach to the disability community.
- Continue to educate SDOT staff on ADA requirements, accommodations, and effective communication, consistent with SDOT Title II requirements to provide a more inclusive environment and one that is not reactive based on requests alone.²⁴



A group of older adults— some using canes, walkers or wheelchairs—cross a marked crossing at a controlled intersection.

²² <https://www.seattle.gov/human-services/services-and-programs/aging-and-disability>

²³ <https://www.seattle.gov/transportation/permits-and-services/make-an-ada-request/request-a-curb-ramp>

²⁴ <https://streetsillustrated.seattle.gov/design-standards/access-criteria/>

People Streets and Public Spaces

The STP People Streets and Public Spaces Element identifies a suite of programmatic actions to enable equitable investments in People Streets and Public Spaces across Seattle, which will make neighborhoods more livable, climate resilient, and vibrant places for people to meet their daily needs.²⁵

See the People Streets and Public Spaces Element for more information.

Public Space Management

- SDOT will seek to continue public space management programs that work with residents, organizations, and businesses to enhance neighborhoods, strengthen communities, enliven public spaces, and promote economic vitality.

Pedestrian Wayfinding

Pedestrian wayfinding helps people confidently and comfortably find their way along the pedestrian network. Wayfinding is critical for older adults, persons with disabilities, and families traveling with children, some of whom may not have access to mobile devices with GPS capability.

SDOT will seek to:

- Expand the existing wayfinding program to convey directional awareness and proximity to destinations for people walking and rolling.
- Emphasize wayfinding to transportation services and transit to assist travelers with decisions about travel options and assist with travel connections.
- Increase coordination with other agencies to provide consistency in what destinations are called, iconography, and format for secondary languages.



Wayfinding installed in 2023 in Pioneer

Streets Trees and Green Infrastructure

Street trees, landscaping and other green infrastructure make walking more comfortable and enjoyable, while also providing important benefits for environmental and community health. Large street trees are especially important in environmental justice priority communities lacking in tree canopy. SDOT will seek to:

- Continue programmatic actions to provide new street trees with adequate soil volumes to support large, healthy canopy trees and landscaping within the right of

²⁵ See the Public Streets and Public Spaces Element for additional details on the expanded and new programs.

way and increase funding for street tree management and maintenance, especially in neighborhoods where tree canopy is insufficient,

- Preserve, restore, and enhance the tree canopy on public rights-of-way, with an emphasis on environmental justice by prioritizing communities with transportation equity disparities and urban heat islands. Partner with communities to help care for Seattle's urban forest.
- Identify and implement management actions that increase the urban forest's resilience to potential impacts, including climate change. *See the 2020 Urban Forest Management Plan for additional details.*²⁶ (Supports TEF 56.4)
- Strengthen partnerships with Seattle Public Utilities to expand the use of green stormwater infrastructure with sidewalk and walkway projects and encourage the installation of sidewalks on one or both sides of the street when new natural drainage elements are constructed in the public right-of-way. (Supports TEF 56.4)

Participatory Budgeting

Participatory budgeting allows community members to help decide how we spend part of SDOT's budget. The Neighborhood Street Fund is a City program, running on 3-year cycles, that enables the community to propose and help prioritize transportation-related projects that are then built by the Seattle Department of Transportation. (Supports TEF 43.4) Projects fall into various categories such as: art, community placemaking, and safety improvements. (Supports TEF 19.4 and TEF 45.3) SDOT will seek to:

- Expand and build on our existing participatory budgeting programs to advance equity and transportation justice, and ensure programs are serving areas of the city and communities with highest need.
- Expanded programs could also enable an increase in the number of projects selected each cycle. Due to project idea collection, community prioritization, and additional outreach efforts, upfront unit costs for projects identified through this process are typically higher than through normal programming. However, expanding these programs could allow SDOT to do more meaningful and equitable outreach including funding neighborhood groups, community organizations, informal groups, and business groups who want to do a project, which will help build stronger community connections.

²⁶ <https://www.seattle.gov/Documents/Departments/Trees/Mangement/UrbanForestManagementPlanFinal.pdf>

Vision Zero

The City of Seattle is committed to Vision Zero, a goal to eliminate fatal and serious crashes on our streets, and safety is a priority goal for the STP. Achieving the Vision Zero goal requires making changes to our streets to reduce vehicle speeds, minimizing conflicts between people driving and people walking, and separating people walking from those driving.

SDOT will seek to:

- Incorporate Vision Zero and Safe System approaches into every project and program, including maintenance and asset management programs.
- Prioritize pedestrian safety improvements that are on the high-injury network (HIN), have high levels of travel stress, or are identified through the Seattle Bicycle and Pedestrian Safety Analysis (BPSA) (Supports TEF 19.2)
- Take a comprehensive, data-driven, Safe System approach to address pedestrian fatalities and serious injuries.
- Implement proven techniques systemwide that help further Seattle's goal.
- Create regular opportunities that are not tied to specific projects which enable community conversations on safety with leadership. (Supports TEF 41.6)
- Employ design strategies to maximize comfort and safety for people walking, such as those described below under "Update *Streets Illustrated*," through right-of-way reallocation and traffic calming. This is important whenever redesigning our streets.
- Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, such as reducing vehicle speeds.
- Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. In some locations, data shows repeated collision patterns involving people walking, yet it is challenging to correct these patterns due to limited right-of-way or competing needs for space. Work to approve deviations for these new design treatments efficiently, and partner across divisions to implement new solutions.

See the SDOT Vision Zero Top to Bottom Report (2023) and the Bicycle and E-Mobility Element for more information about Vision Zero.

PUBLIC OUTREACH AND EDUCATION

Safety Education

SDOT currently leads safety education campaigns, such as Vision Zero yard signs, that educate people on the importance of driving more slowly and engaging in safer behaviors on our streets. SDOT will seek to:

- Expand safety education campaigns to increase safety for all travelers.
- Help employers develop walking programs for employees.
- Expand other programs that encourage and promote the benefits of walking.
- Make materials accessible to non-English speakers.
- Create regular opportunities that are not tied to specific projects that enable community conversations on safety with City leadership. (Supports TEF 41.6)
- Expand driver education courses for traffic citations within the City of Seattle and include an expanded pedestrian safety curriculum.
- Continue the use of the Safe Routes to School program to provide bicycle and pedestrian safety training and encouragement to all public elementary and middle schools.
- Create public outreach tools to communicate the top factors contributing to collisions in Seattle.
- Evaluate the effectiveness of education and outreach programs.

Community Requests

- SDOT will seek to improve SDOT's customer service response process, developing standard guidance on how to engage and follow-up with community members when safety requests are reported and addressed. (Supports TEF 41.3) *See the SDOT Vision Zero Top to Bottom Report for more information.*²⁷

²⁷ <https://www.seattle.gov/documents/Departments/SDOT/VisionZero/SDOT-Vision-Zero-TopToBottomReview-FullReport.pdf>

PARTNERSHIPS

Advocate for Changes to State and Local Legislation

There are policies that impact safety for people walking and rolling that are outside of the City of Seattle's control. For example, there is a need to advocate for state law updates to allow pedestrians on roadways for shared streets. Currently, we must use a "Street Closed" model to enable pedestrians to walk in the street on Shared Streets. There is also a need to advocate for state law updates to allow for speed limits lower than 20 mph. As a City focused on providing a safe, equitable, and sustainable transportation system, we can advocate for changes to state and local legislation and programs.

SDOT and the City will seek to:

- Replace punitive enforcement with education strategies. Coordinate with community-based organizations (CBOs) and legislators to revise or remove punitive pedestrian crossing laws (i.e., jaywalking) that result in harm to Black, Indigenous, and People of Color (BIPOC) communities. Replace these laws with educational outreach that promotes safe walking, rolling, and bicycling behaviors. (Supports TEF 43.2)
- Advocate for State law updates to allow pedestrians on roadways for shared streets. Work with state and local partners to update RCW 46.61.250 to allow pedestrians to walk on streets when sidewalks are available to enable Shared Streets without requirements to "close" the street.²⁸
- Advocate to update State RCW 46.61.415 to allow speed limits lower than 20 mph. Shared streets, where pedestrians truly feel comfortable sharing space with cars, should be signed at 10 mph with engineering design to match.

Coordinate with Partner Agencies and Organizations

Many agencies and City of Seattle departments play a role in supporting actions to create and maintain our pedestrian network and facilities.

SDOT will seek to:

- Explore opportunities to implement sidewalks or walkways with green stormwater infrastructure (GSI) projects completed by other City departments.
- Establish integrated interagency teams to collaboratively work with each other and the public when designing pedestrian infrastructure.
- Partner with Seattle Parks and Recreation, Seattle Fire Department, Seattle Department of Construction and Inspections, Seattle City Light, the Office of Economic Development, the Office of Planning and Community Development, Seattle Public Utilities, Office of Sustainability and Environment, business associations, neighborhood groups, and state and regional agencies.

²⁸ The Revised Code of Washington (RCW) 46.61.250 states: "Where sidewalks are provided and are accessible, it is unlawful for any pedestrian to walk or otherwise move along and upon an adjacent roadway. Where sidewalks are provided but wheelchair access is not available, persons with disabilities who require such access may walk or otherwise move along and upon an adjacent roadway until they reach an access point in the sidewalk."

Private Partnerships and Investments

- As new private development occurs, these projects should construct new and repair older sidewalks, curb ramps, and pedestrian features, bringing them in line with City standards. Installing and improving pedestrian facilities in tandem with new developments incrementally upgrades Seattle's pedestrian realm as the city grows and pedestrian demand increases. SDOT will seek to:
- Explore opportunities to incentivize pedestrian realm improvements above and beyond existing land use code requirements.
- Evaluate land use code revisions that result in the construction of more sidewalks and pedestrian walkway connections.
- Explore options for developers to provide alternative mitigation in addition to required sidewalk construction.
- Consider working with large sponsors to develop private partnerships to construct new sidewalks.
- Improve the ability to track construction of new sidewalk assets by the private sector, the City, and other agencies.

Olmsted Boulevards

While not technically multi-use paths, Seattle's Olmsted Boulevards²⁹ similarly create recreational opportunities for people biking, walking, rolling, and engaging in other activities.

SDOT will seek to:

- Partner with Seattle Parks and Recreation to identify on which Olmsted Boulevards we will change policy and operation to allow more flexibility to create better walking, strolling, and biking experiences. These changes will enable more opportunities for healthy recreation opportunities year-round instead of only on summer weekends. (Supports TEF 43.4)
- Evaluate each location individually, as there are different property, design, and social conditions at each location. Any design changes will provide equitable access to these boulevards.³⁰

²⁹ In the early 1900s, Seattle hired the Olmsted Brothers landscape architecture firm to design a system of interconnected parks and boulevards that provided open space for all people. The Seattle City Council approved the Olmsted Brothers' plan "A Comprehensive System of Parks and Parkways" in 1903. Friends of Seattle's Olmsted Parks. "A Brief History." <https://seattleolmsted.org/history/>

³⁰ As part of the STP engagement process, we heard broad support for increased recreational opportunities along Olmsted Boulevards, along with more people-oriented streets throughout the city. The city would engage with communities and Friends of Seattle's Olmsted Parks in any such decision-making processes.

TRANSPORTATION DATA, TECHNOLOGY, AND INNOVATION

New Technologies

Emerging technologies may improve safety and access for people walking. SDOT will seek to:

- Support research on emerging technologies that improve pedestrian safety, access, and system management.
- Identify and employ innovative uses of technology to improve pedestrian safety and access.

Maintain Our Datasets and Use Data to Inform Changes to the Transportation System

Data on pedestrian infrastructure and pedestrian counts are useful to track asset locations and their condition, identify where to install improvements, and to provide information to others. SDOT will seek to:

- Gather and maintain data on pedestrian infrastructure and use and provide them to partners as appropriate.
- Use data to guide the type and location of pedestrian network investments.



A vision zero campaign sign on a utility pole in a residential neighborhood.

MAINTENANCE AND MODERNIZATION CONSIDERATIONS

Maintain the Pedestrian Network

To provide a safe and comfortable walking and rolling experience, SDOT will seek to:

- Periodically review and adjust resources for maintenance equipment, labor, and program management to be proportionate to a growing pedestrian network.
- Promote the use of sustainable construction materials that are durable and have lower lifecycle costs to replace and maintain, such as permanent curbs for curb bulbs.
- Negotiate maintenance agreements with partners.
- Leverage opportunities to implement joint sidewalk and green stormwater infrastructure (GSI) projects.
- Improve and promote the Find It, Fix It app to make it easier for community members to report maintenance issues, including sidewalk specific issues.
- Address maintenance concerns efficiently and promptly.
- Address annual maintenance needs in an organized manner for seasonal issues, such as vegetation trimming, blackberry bush removal, and clearing drainage problems near curb ramps.
- Anticipate signal equipment upgrades, including needed signal heads or phasing changes to make walking connections easier.
- Anticipate sidewalk and crosswalk repair needs and proactively work make improvements.

Quick-build Solutions

In order to build out the pedestrian networks and stretch limited funding, we can explore cost-effective treatments and cost-sharing partnerships with other City departments and private entities, as appropriate. SDOT will seek to:

- Explore options for quick-build solutions where appropriate. Selection protocols should consider lifecycle costs.
- For crossings, where appropriate, use quick-build treatments (e.g., paint and post) as an interim solution to address safety and comfort until more permanent capital improvements can be made.
- For along-the-roadway treatments, explore options to implement alternatives to conventional curb and gutter sidewalks on both sides of neighborhood streets, including alternative walkways, constructing sidewalks on one side of the street, and traffic calming and other treatments to create safe and comfortable shared street environments.
- To manage long-term maintenance costs, quick-build, low-cost, and alternative solutions should be replaced, over time, with more permanent capital improvements.

Update Streets Illustrated

Streets Illustrated (Seattle Right-of-Way Improvements Manual) identifies comprehensive design standards and guidance for pedestrian infrastructure. However, best practices and evidence-based safety treatments are evolving, and our design standards need to reflect that.

This section highlights considerations that should be accounted for when *Streets Illustrated* is updated after adoption of the Seattle Transportation Plan.

SDOT will seek to:

- **Right of Way Priority.** Update Street Type maps to integrate STP elements and meet minimum right-of-way (ROW) requirements. Identify ROW where pedestrians have the right of way some or all hours.
- **Public Realm.** Incorporate new and revised design standards & guidance for the public realm, including adding streets included in the STP People Streets and Public Spaces Element.
- **Safety.** Incorporate new and revised design standards & guidance for enhancing pedestrian safety.
 - Update standards and/or identify appropriate use for pedestrian safety enhancement features, such as floating curb bulbs, horizontal deflection, shielding islands, raised intersections, turn calming such as hardened centerlines, no turn on red signage, speed cushions or humps, and slow turn wedges.
 - Include intersection daylighting as a standard feature for all marked crosswalks and controlled intersections where a flex zone is present.
 - List the criteria and applicable arterial streets where the speed limit is or is to be set at 20 miles per hour (adjacent to or within parks, parkways, high pedestrian areas, station areas, etc.).
- **ADA Accessibility.** Incorporate Americans with Disabilities Act (ADA) priority areas as identified in SDOT's ADA Transition Plan to maximize usability for people walking and rolling, and guidance for when to exceed the minimum standards.
 - Expand on stand-alone Americans with Disabilities Act (ADA) elements listed to incorporate a more holistic assessment of ADA accessibility and inclusive design for point-to-point travel. This includes missing or non-compliant curb ramps, missing or inaccessible sidewalks, inaccessible connections to transit and community services facilities, signalized intersections without APS, and/or the absence of accessible parking or passenger loading.
 - Expand on current minimum standards for public right-of-way accessibility guidelines (PROWAG) to include best practices and research to define spaces and support interaction between different modes, such as tactile separation and wayfinding at bicycle facilities adjacent to pedestrian access.

- Expand on pedestrian-related guidelines within the 'Sidewalks Adjacent to Transit Stations' section on additional improvements within 1/4 mile of transit station entrance³¹.
 - Include language to incorporate accessible elements when planning and designing pedestrian facilities such as pay stations or electric vehicle (EV) charging stations, or providing accessible options for new passenger loading zones, for both private vehicles as well as rideshare drop-off spaces.
- **Citywide Pedestrian Scale Lighting Plan.** Incorporate the Citywide Pedestrian Scale Lighting Plan. Once complete, the plan will provide guidance on where to incorporate pedestrian scale lighting in capital projects through the Complete Streets Checklist.

³¹ <https://streetsillustrated.seattle.gov/design-standards/transit/>



DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

A walkable city provides an accessible, well-connected, comfortable, safe, and intuitive network of sidewalks, crossings, paths, plazas, and staircases for all users. It includes:

- **Direct connections to key destinations**, including convenient and safe ways for people of all ages and abilities to cross the street.
- **Clear and inviting spaces** for people walking to move along every street at all hours of the day and night, including safe and barrier-free sidewalks or walkways on roads with low vehicle volumes and speeds at or below 25 mph.
- **Public right-of-way designed and operated at a human scale**, including putting the needs of the most vulnerable road users first. A walkable city has a right-of-way with fewer vehicles, both stationary or moving through it, to reduce air and noise pollution and traffic violence and to improve the traveler experience for those outside of vehicles.
- **Compact neighborhoods** with transit stops and stations, schools, jobs, and services within walking distance.
- **Streetscapes that include features for people**, including benches, sidewalk cafes, pedestrian lighting, trees, vegetation, restrooms, water fountains, culturally appropriate and in-language wayfinding, protection from rain and sun, and public art.
- **Places of respite** that invite conversation, encourage connection with nature, and provide places to play.
- **Proactive maintenance** to provide accessibility for all, including people using wheelchairs and other mobility devices.

AGE FRIENDLY SEATTLE

A safe, complete pedestrian network supports Seattle's Age Friendly efforts to make our communities great places to grow up and grow old. A quarter of Seattle residents are under age 25. For young people, walking affords a sense of independence. Seattleites over age 65 currently comprise around 15% of the City's population and are expected to grow to 25% of the population by 2040. For seniors, walking or rolling is an effective means to stay physically and socially active and is important to enable aging in place.

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommends performance measures to monitor the implementation of the STP Pedestrian Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching outcome-based measures that are identified in the STP implementation strategy (see Chapter 5 of the Part I document). Generally, they are tracked at a citywide scale, and SDOT may not have primary control over their achievement. Examples include a reduction in vehicle-miles traveled and the percentage of household income dedicated to transportation.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include a target to increase the city's tree canopy percentage and targets to increase the percentage of pedestrian mode share.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples may include the number of blocks of sidewalks or crossing improvements created each year or the number of new ADA-compliant curb ramps delivered each year.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that SDOT can pivot as needed to meet our equity goals over the next 20 years.

The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.³²

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 2 identifies the Tier 2 performance measures that will be tracked for the Pedestrian Element.

³² <https://data.seattle.gov/dataset/Racial-and-Social-Equity-Composite-Index-Current/w3kz-xtmq>

Table 2: Pedestrian Performance Measures

Desired Outcome	Performance Measure (source)	Baseline (year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goal
End traffic deaths and serious injuries on city streets	Number of fatal and serious injury crashes involving people walking and rolling (SPD collision report data)	101 (2022)	Zero Sub-measure: track by age, gender, and housing status as available.	Yes	Safety Equity Sustainability Livability
Increase walking, rolling, biking, and transit mode share	Increase percent of walking and rolling trips (SDOT)	20% (2019)	27% by 2044 Sub-measure: track pedestrian trips by age and gender	Yes	Safety Equity Sustainability Mobility & Economic Vitality Livability
Green our streets to support livability and climate targets	Tree canopy in the right-of-way (SDOT)	23% (2021)	Increase tree canopy in the ROW to 30% by 2044. Sub-measures: Utilize Urban Forestry citywide and subarea canopy goals	No	Equity Sustainability Livability Maintenance & Modernization
Increase access to a shared street or public space	Percent of households that live within a 10-minute walk of a shared street or public space (Census Bureau, SDOT)	1) 19% of households outside of Urban Centers and Villages 2) 72% of households within Urban Centers and Villages (2023)	1) 43% of households outside Urban Centers and Villages by 2044 2) 93% of households within Urban Centers and Villages by 2044	Yes	Safety Equity Mobility & Economic Vitality Livability
Support a well-maintained pedestrian network	Percent of sidewalks in good or better condition (SDOT)	53% (2023)	Increase the percent of sidewalks with a "good" or better condition rating (out of Excellent/Good/Fair/Poor/Very Poor)	Yes	Safety Mobility & Economic Vitality Maintenance & Modernization

RELEVANT TEF TACTICS

- TEF 19.6—Prioritize person-throughput as metric rather than vehicle throughput
- TEF 19.7—Do pilots to test out repurposing of streets ideas and apply learnings to new policy approaches and broader citywide opportunities to carry out similar actions to make our streets safer and, first and foremost, for people
- TEF 29.1—Create publicly accessible community-oriented visuals and neighborhood-specific snapshots to capture where SDOT has built infrastructure, dedicated investments, and collected community feedback; this should be utilized by SDOT, other City departments, and transportation partners to inform future investment needs as well as planning and programmatic efforts
- TEF 38.2—Explore including a dedicated funding pot in the next transportation funding package for sidewalk maintenance and repair in underinvested neighborhoods that has not been addressed by the \$20 vehicle license fee (VLF)
- TEF 38.6—Develop an income-based cost-sharing sidewalk repair program for lower-income property owners
- TEF 40.1—Emphasize and incorporate pedestrian safety into the street character and design process; ensure staff are trained and educated on how to do this
- TEF 40.2—Identify locations for new or upgraded pedestrian crossing opportunities to support access to transit
- TEF 40.5—Collaborate with community-based organizations (CBOs) to map key target areas where there are higher populations of vulnerable communities and use this map to prioritize investments for improved crosswalk opportunities
- TEF 40.6—Create a department-wide crosswalk policy that centers the safety needs of communities; this includes a guideline that takes policy, design, and implementation to address and improve crosswalk and pedestrian safety from a community-specific context
- TEF 41.3—Develop SDOT standard guidance across the Department on how to engage and follow-up with community members when safety requests are reported and addressed (e.g., request for crosswalk installation or repairs)
- TEF 41.6—Create regular opportunities that are not project-specific for community conversations on safety with leadership
- TEF 43.2—Coordinate with community-based organizations (CBOs) and legislators to revise or remove pedestrian crossing (e.g., jaywalking) and helmet laws that result in harm to BIPOC communities; replace with educational outreach that promotes safe walking, rolling, and bicycling behaviors

TEF 43.4—Review SDOT policies, practices, standards, and funding allocation strategies to elevate/give priority to access and use of right-of-way (ROW) for people of all ages and abilities, people recreating, shopping, walking, rolling, riding bikes, and taking transit.

TEF 45.1—Revisit the Pedestrian Lighting Master plan from 2012, assess areas of current "pedestrian lighting deserts" with transit ridership routes and transfer opportunities, and place a higher emphasis on equity. Use the findings from this assessment to inform the development of the next transportation funding package.

TEF 45.2—Identify opportunities for closer collaboration and cost sharing with Seattle City Light for pedestrian lighting

TEF 45.3—Identify spaces for equitable investment that can activate community, foster local economic development, and facilitate connections to transit

TEF 45.6—Utilize findings from the Pedestrian Racial Equity analysis and identify a plan to improve connections between transit stops and key community assets (e.g., parks, libraries, schools, employers) are safe for people walking

TEF 56.4—Improve, identify, and maximize current opportunities for street trees and greenscapes in SDOT activities ranging from routine maintenance to capital project delivery; ensure design guidance and functions of maintenance include this consideration for long-term sustainability

APPENDIX A: PEDESTRIAN MAP METHODOLOGY

This section provides additional details on the methodology used to create the prioritization of sidewalks and intersections for the pedestrian Priority Investment Network maps. Each map was organized into five tiers based on a quintile system, with each tier receiving the same number of sidewalk block faces or intersections.

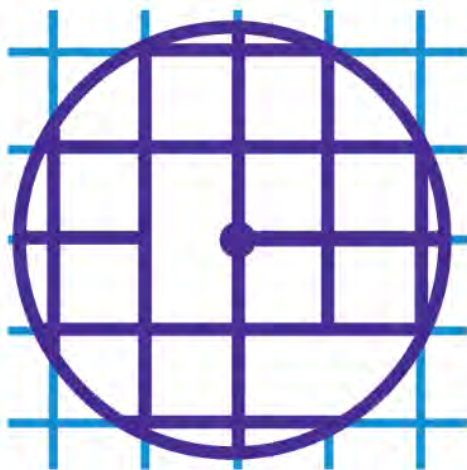
A key concept for the Pedestrian PIN maps is the “walkshed,” which includes those streets and paths that serve as important walking routes to each school, frequent transit stop, and park access point. A “walkshed” is the network of streets within a defined walking distance of a specific location, such as a transit stop. They are a more accurate way to identify actual walking routes and distances to destinations.

Unlike approaches that measure straight-line distances to a destination “as the crow flies,” walksheds attempt to consider gaps in the network where streets don’t connect and where there are physical barriers like water bodies.

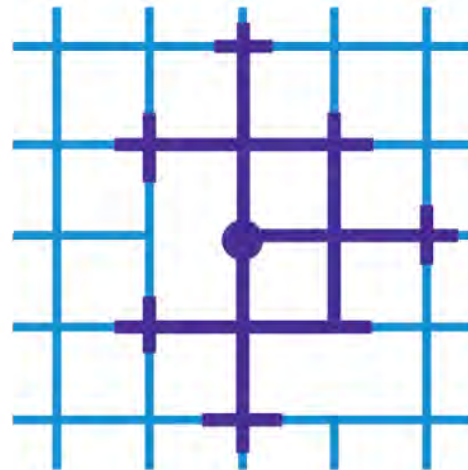
Mapping walksheds on the street network helps identify individual street segments that pedestrians are likely to take to a specified destination within a given walking time or distance.

Figure 23: Comparison of Methods for Measuring walkability: "Crow Flies" radius versus Walkshed Network

Crow Flies Radius Network



Walkshed Network



To narrow city-wide pedestrian needs, each of the three Priority Investment Network (PIN) maps uses a deficiency analysis³³ as a starting point for network prioritization. They then consider proximity to high pedestrian trip areas, safety, and equity to categorize each street or intersection on the map into one of five tiers.

- **Proximity to High Pedestrian Trip Areas.** Pedestrian improvements are prioritized in locations where adjacent land use generates higher pedestrian volumes. This includes K-12 public schools, parks, transit stops and routes, and Comprehensive Plan land use areas, such as Pedestrian Zones, Urban Centers, and Urban Villages.³⁴
- **Safety.** Pedestrian improvements are prioritized at locations with a demonstrated safety need. For the crossing maps, the safety score inputs include Priority Pedestrian Locations in the Bicycle and Pedestrian Safety Analysis (BPSA), locations with 3+ pedestrian crashes, and locations with 3+ lanes. The BPSA analysis uses a model that identifies design and behavioral factors that may be correlated with collisions involving people walking. These factors include arterial classification, roadway width, driver (vehicle) speeds, and controlled crossing spacing (supports TEF 40.1). For the sidewalk maps, 85th percentile vehicle speeds are used to determine the safety scoring.
- **Equity.** Pedestrian improvements are prioritized using the city's Race and Social Equity Index.³⁵ Based on guidance from the Pedestrian Racial Equity Analysis,³⁶ specific improvements in future implementation plans will be chosen using an inclusive community engagement process in equity-priority communities, with a particular emphasis on creating safe connections between transit stops and key community assets. (Supports TEF 45.6)

³³ Identifying where our sidewalk network is missing sidewalk or has substandard sidewalks, or where there are gaps in our enhanced crossing network.

³⁴ These land use areas include important pedestrian trip generators, such as: grocery stores, libraries, medical centers, assisted living centers etc. For example, over 90% of all grocery stores are included in the land use zones that are used in the prioritization land uses (Urban Centers, Urban Villages, Pedestrian-Zones) or within the buffer distances around them.

³⁵ The Race and Social Equity Index is a tool produced by the Office of Planning and Community Development to aid in the identification of city planning and investment priorities. It combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify where priority populations make up relatively large proportions of neighborhood residents.

³⁶ <https://www.seattle.gov/transportation/projects-and-programs/programs/pedestrian-program/pedestrian-program-racial-equity-analysis>

MISSING AND SUBSTANDARD SIDEWALK MAP METHODOLOGY

The **Missing Sidewalk Priority Investment Network** identifies all street segments that currently lack sidewalks. Each identified street segment is given a prioritization score based on three factors: 1) proximity to high pedestrian trip areas, 2) safety, and 3) equity.

Tier 1 segments are the highest priority. This PIN helps identify locations where there may be opportunities to improve conditions for people moving along the street by installing conventional sidewalks, alternative walkways, or traffic calming features that create a safe and comfortable shared street environment.

The **Substandard Sidewalk Priority Investment Network** identifies all streets with sidewalk zones that are significantly narrower than current standards³⁷, as identified in Seattle's *Streets Illustrated*. The sidewalk zone includes the three pedestrian zones, comprised of the Frontage Zone, the Pedestrian Clear Zone, and the Landscape/Furniture Zone.

Each identified street segment is given a prioritization score based on three factors: 1) proximity to high pedestrian trip areas, 2) safety, and 3) equity. Tier 1 segments are the highest priority. This PIN identifies locations where there may be opportunities to improve conditions for people walking or moving along the street.

Table 3 includes the metrics and weighting used to inform the PIN prioritization process for the missing and substandard sidewalk networks.

³⁷More than three feet narrower than Streets Illustrated standards

Table 3: Missing and Substandard Sidewalk Prioritization Methodology

Category	Weighting	Measure	Score	
Proximity to land use areas	30%	Public K-12 Schools	High	1/4-mile walkshed
			Medium	1/2-mile walkshed
			Low	1-mile walkshed
		Transit	High	Along Frequent Transit Network (FTN)
			High	1/2-mile walkshed of light rail stops
			Medium	1/4-mile walkshed of RapidRide or Streetcar stops
			Low	1/8-mile walkshed of FTN bus stops
		Parks (access points)	High	1/8-mile walkshed
			Medium	1/4-mile walkshed
			Low	1/2-mile walkshed
		Land Use	High	Inside of and within an 1/8-mile buffer of pedestrian P-zones, Urban Centers, Urban Villages
			Medium	Within an 1/4-mile buffer of pedestrian P-zones, Urban Centers, Urban Villages
			Low	Within an 1/2-mile buffer of pedestrian P-zones, Urban Centers, Urban Villages
Safety	40%	Speeds	High	85% Speeds >35MPH
			Medium	85% Speeds 30-35
			Low	85% Speeds 25-30
Equity	30%	Race and Social Equity Index	High	Highest quintile
			Med-High	Second highest quintile
			Medium	Middle quintile
			Zero	Lowest two quintiles

Note: Not all street segments identified as missing or with substandard sidewalks may be feasible or desirable locations for new sidewalks. Project feasibility will be determined through future implementation plans.

ENHANCED STREET CROSSINGS MAP METHODOLOGY

The **Enhanced Street Crossing Priority Investment Network (PIN)** depicts intersections that are not currently enhanced and are 600 feet or more away from the closest enhanced crossing.

Enhancements include treatments such as a marked crosswalk, all-way stop, or a signal. This PIN shows areas prioritized for creating a higher density of enhanced crossings (Supports TEF 40.2 and TEF 40.5). The PIN map will be used to:

- Identify future corridor studies to determine the appropriate improvement and location for new enhanced crossings.
- Identify opportunities for new and enhanced crossing within SDOT Project Development and other complete streets development processes.
- Identify opportunities for new and enhanced crossings installed or funded by others, including private development and agency partners.
- Each intersection is given a prioritization score based on three factors: 1) proximity to high pedestrian trip areas, 2) safety, and 3) equity.

It is important to note that this map does *not* propose a set distance between enhanced crossings.

Furthermore, as we design and implement projects that impact street intersections, we will evaluate opportunities to upgrade intersections within the project area to current design standards and employ safety countermeasures, as funding allows.

Table 4 includes the metrics and weighting used to inform the enhanced street crossings map.

Table 4: Enhanced Street Crossings Prioritization Methodology

Category	Weighting	Measure	Score	
Proximity to land use areas	30%	Public K-12 Schools	High	1/4-mile walkshed
			Medium	1/2-mile walkshed
			Low	1-mile walkshed
		Transit	High	1/2-mile walkshed of light rail stops
			Medium	1/4-mile walkshed of RapidRide or Streetcar stops
			Low	1/8-mile walkshed of FTN bus stops
		Parks (access points)	High	1/8-mile walkshed
			Medium	1/4-mile walkshed
			Low	1/2-mile walkshed
		Land Use	High	Inside of and within an 1/8-mile buffer of pedestrian P-zones, Urban Centers, Urban Villages
			Medium	Within an 1/4-mile buffer of pedestrian P-zones, Urban Centers, Urban Villages
			Low	Within an 1/2-mile buffer of pedestrian P-zones, Urban Centers, Urban Villages
Safety	40%		High	BPSA Ped location
			Medium	3+ ped collisions in past 5 years
			Low	3+ lanes for crossing
Equity	30%	Race and Social Equity Index	High	Highest quintile
			Med-High	Second highest quintile
			Medium	Middle quintile
			Zero	Lowest two quintiles

Note: The Enhanced Street Crossing Priority Investment Network shows areas prioritized for creating a higher density of enhanced crossings (Supports TEF 40.2 and TEF 40.5). SDOT projects will evaluate where to provide enhanced crossings and the appropriate type of treatments; some street intersections identified on this map may not be selected for enhanced crossings through a given project. Project feasibility will be determined as part of implementation plans. This PIN does *not* propose a set distance between enhanced crossings.

GLOSSARY

Accessible pedestrian signal (APS): Signals installed at crossings to help pedestrians who are blind or have low vision. Auditory signals – such as voice instructions and chirping sounds – indicate when it is safe to cross the street.

ADA: Americans with Disabilities Act

ADA Transition Plan: A federally required plan intended to identify and prioritize accessibility improvements where they may be needed for pedestrian use. The document lists potential barriers to access in the public right-of-way identified through self-assessment efforts that SDOT conducts. The plan includes methods, schedules, and reports of barrier removal in the Seattle public right-of-way.

All ages and abilities (AAA): Bicycle and e-mobility facilities that people of all ages and abilities feel comfortable using. They provide low-stress bicycling conditions and focus on safety.

Arterial street: The “backbone” of the roadway system and accommodates the most trips for all modes. Arterials provide the connections between freeways and access streets and vary in their speed and volume characteristics, design features, and degrees of local access.

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bike crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

Bike+ Network: Bikeways suitable for all ages and abilities (AAA) that allow for safe, comfortable, and accessible bicycle travel, such as protected bike lanes and Neighborhood Greenways. The Bike+ Network will be seamlessly integrated with the multi-use trail network.

Bioswale: Vegetated ditches that capture and filter stormwater runoff.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Café Streets: Streets with high levels of foot traffic and lots of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians. They are a type of Shared Street.

Cellular vehicle-to-everything (C-V2X): Technology that enables vehicles to wirelessly connect and interact with their surroundings, such as other vehicles and 5G service. C-V2X has the potential to make travel safer by reducing crashes and conflicts between road users.

Community and Mobility Hubs: Community and Mobility Hubs are places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Complete neighborhoods: Neighborhoods where residents can access all daily needs within walking distance.

Comprehensive Plan: A 20-year vision and roadmap that guides City decisions on where to build new jobs and houses, how to improve the transportation system, and where to make capital investments such as utilities, sidewalks, and libraries.

Curb bulbs: Extensions of the sidewalk into the street that give pedestrians a shorter distance to cross.

E-mobility: Personal and shared electric-powered bicycles, scooters, and other electric-powered devices.

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City's climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City's fleet zero-emission by 2030.

Find It, Fix It app: A smartphone app offering mobile users a way to report selected issues to the City by submitting a photo and written description.

Frequent Transit Network (FTN): Buses, trains, and other forms of transit that arrive every 15 minutes or less. The FTN sets aspirational frequency targets alongside a transit corridor map illustrating how frequency targets are proposed to be distributed throughout the city. The FTN enables people to travel with confidence in a timely arrival every day of the week.

General purpose (GP) lane: Space in the right-of-way where all vehicular traffic is allowed.

GHG: Greenhouse gas emissions

Healthy Streets: Streets for people walking, rolling, biking, and playing. They are closed 24/7 to pass-through traffic. People driving who need to get to homes and destinations along Healthy Streets retain access and can still drive on these streets.

High-injury Network (HIN): The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred to inform safety corridors of focus for the Vision Zero program and more. It prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes.

Home Zones: A home zone is a holistic and cost-effective approach to making residential streets more walkable within a neighborhood. Rooted in successful pedestrian-focused systems from around the world, The Home Zone Program provides an alternative to traditional sidewalks and traffic calming measures. The heart of the program is its community-centered development process.

Key Moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Low-emission neighborhood: Low-emission neighborhoods, sometimes called low-pollution neighborhoods, prohibit, or restrict the types of vehicles allowed within an area and encourage zero- and low-emission travel options like walking, biking, electric vehicles, and deliveries by e-cargo bike. Implementation of these concepts will vary by neighborhood and are co-created with local communities.

Micromobility: Small, low-speed transportation devices. They are convenient for traveling short distances or the beginning or end of trips. They include bikes and scooters.

Multi-use trails: Off-street paths for people walking, biking, rolling, and using other non-motorized and e-mobility devices.

NACTO: National Association of City Transportation Officials

Neighborhood Greenways: Neighborhood Greenways are safer, calmer neighborhood streets where people walking and biking are the priority. These streets work together with trails and protected bike lanes to provide connected routes to bring people to the places they want and need to go as part of Seattle's all ages and abilities bicycle network.

Neighborhood Street Fund: A City program, running on 3-year cycles, that enables the community to propose and help prioritize transportation-related projects that are then built by SDOT.

OPCD: Office of Planning and Community Development

Pedestrian Lighting Master Plan: The Pedestrian Lighting Master Plan guides how the city plans for, designs, and implements pedestrian lighting which fosters safety, security, economic development, active transportation, and access in the right-of-way.

Pedestrian Master Plan (PMP): Adopted in 2017, the Pedestrian Master Plan is a 20-year framework for making Seattle the most walkable and accessible city in the country. The Plan provides policies, programs, and projects for SDOT to achieve this goal. The Pedestrian Element builds on the PMP.

Pedestrian Racial Equity Analysis (PED REA): A study to identify racial disparities in pedestrian travel. SDOT works with community partners to understand barriers to travel, community needs, and identify community-led solutions to eliminate these barriers. The REA takes both a citywide approach and a neighborhood approach, starting with vulnerable communities in Chinatown-International District and Rainier Beach.

Priority Investment Network (PIN): Sets 5 tiers of importance of locations for investments in pedestrian infrastructure. Streets and intersections are ranked based on proximity to high pedestrian trip areas, safety, and equity. The network maps will be used to prioritize the order and type of investments.

PSPS: People Streets and Public Spaces

PSRC: Puget Sound Regional Council

Public Spaces: Plazas and Shoreline Street Ends that come in many shapes and forms. They are pedestrianized spaces that invite people to gather, play, and connect with one another. These spaces may be focal points in neighborhoods that support local businesses, venues for community gatherings, or more subtle spaces that are loved by locals and stumbled upon by visitors who delight in their discovery. They may incorporate public art, seating, games, trees and green infrastructure, and flexible space for vendors and gatherings. Public Spaces are born of inclusive, community-driven processes that inform design, programming, and long-term stewardship.

Race and Social Equity (RSE) Index: A tool produced by the Office of Planning and Community Development to aid in the identification of city planning and investment priorities.

Refuge islands: Paved median protects pedestrians crossing multi-lane streets by providing a safe place to stop.

Right-of-way (ROW): Strip of land legally established for the purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe Routes to School: A national movement to make it easier and safer for students to walk and bike to school. The program is designed to improve safety in areas around schools and to encourage more kids to walk and bike.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

The goals of the approach are to create safer vehicles, speeds, roads, and people and provide post-crash care.

School Streets: Streets for people walking, rolling, and biking to school and playing. They are closed to pass-through traffic, including parents and guardians. People driving to homes and destinations along School Streets, including school district transportation, retain access and can still drive on these streets. They are a type of Shared Street.

SDOT: Seattle Department of Transportation

Seattle Displacement Risk Index: Areas in Seattle identified where displacement of people of color, low-income people, renters, and other populations susceptible to displacement may be more likely.

Shared micromobility: Shared bikes and scooters that offer low-cost options for a short distance trip. Riders locate and rent available devices with a phone, ride where they want to go, and leave responsibly parked for the next person.

Speed cushion: Multiple low-rise speed humps placed together that slow vehicle speeds while still allowing emergency vehicles to pass through normally. They are used on low volume and non-arterial streets.

Streets Illustrated: Seattle's Right-of-Way Improvements Manual is an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle's street right-of-way.

Summer Streets: Streets that are closed to vehicular traffic during certain times of the year to provide open space for events and public life.

Traffic calming: Physical changes to street design that slow traffic and make the street safer for all travelers. Examples include traffic circles, speed humps, and narrow lanes.

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses the disparities that exist within the transportation system due to institutional racism.

Transportation demand management (TDM): Programs that focus on shifting travel behaviors from single-occupancy vehicles toward more sustainable and efficient modes such as transit and walking.

Urban Villages and Centers: Areas in Seattle identified in the Seattle 2035 Comprehensive Plan where the most future job and employment growth is targeted. This strategy promotes the most efficient use of public investments and encourages walking, bicycling, and transit use.

Vision Zero: The City's goal to eliminate traffic deaths and serious injuries on city streets by 2030.

Vision Zero Top to Bottom Review: A review of the Vision Zero program and actions. It was conducted to help the department better understand the causes of the rise in number of traffic deaths and to identify opportunities to reduce harm while creating a culture of care and dignity for all travelers.

Vulnerable Communities: Communities that have historically and currently been erased, intentionally excluded and/or underinvested in by government institutions. SDOT's Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhood

Wayfinding: Visual information that helps people to orient themselves spatially. Wayfinding is important to ensure people can travel easily, comfortably, and safely. Methods of wayfinding include signs and maps.

Your Voice, Your Choice (YVYC): A budget initiative that gives community members the power to decide how a portion of the City's transportation budget is allocated to park and street improvements.

[This page intentionally left blank]



People Streets and Public Spaces Element

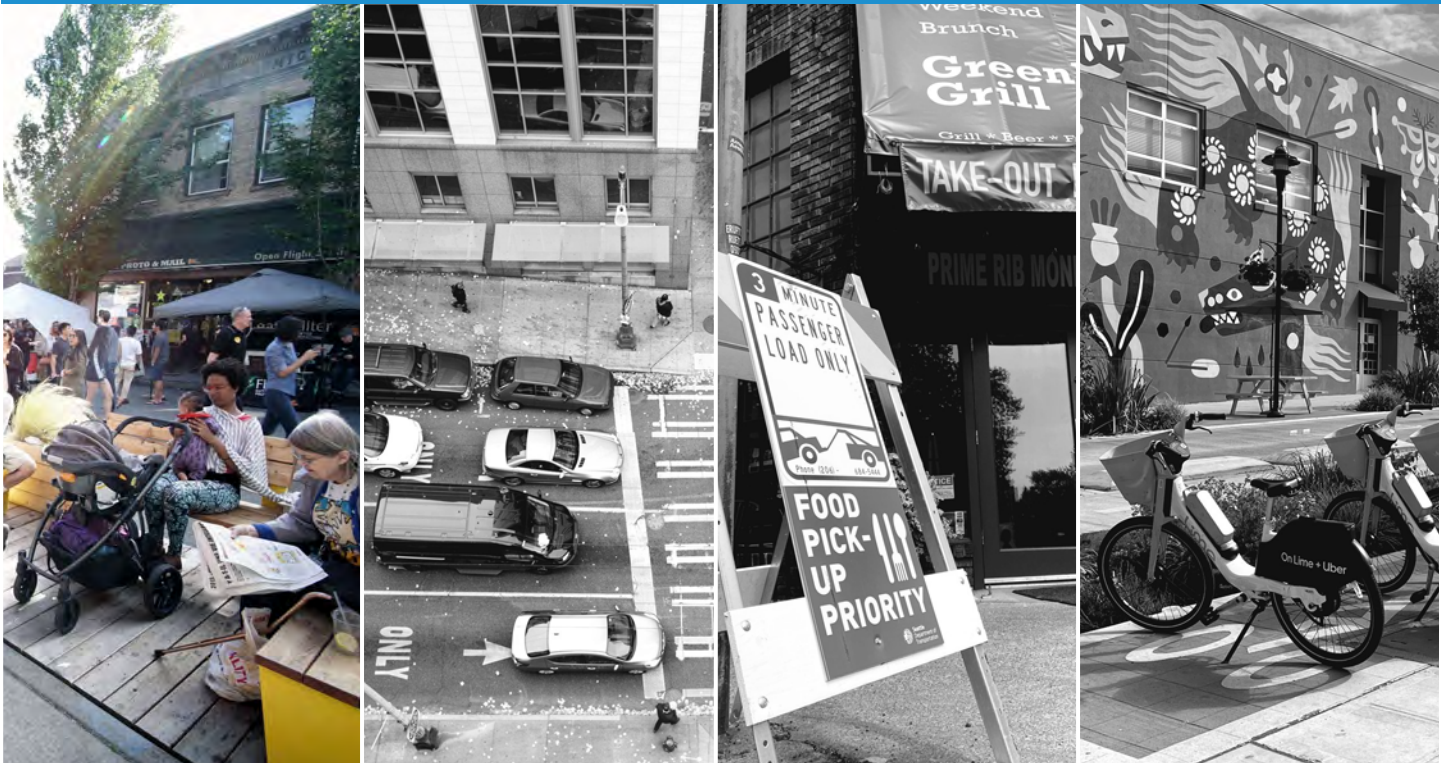


TABLE OF CONTENTS

Introduction.....	PS-1
How the PSPS Element Advances the STP	PS-1
Relationship to STP Goals	PS-8
Delivering the Key Moves.....	PS-9
Setting the Context	PS-18
Opportunities and Emerging Trends.....	PS-19
Challenges.....	PS-26
Community Engagement.....	PS-28
People Streets and Public Spaces in Seattle.....	PS-33
PSPS Categories Overview.....	PS-33
Scale of Intervention	PS-35
How People Streets and Public Spaces Are Identified	PS-37
PSPS Category Profiles.....	PS-37
PSPS Network Maps	PS-51
Programmatic Activities.....	PS-64
Partnerships.....	PS-74
Transportation Data, Technology, and Innovation	PS-75
Maintenance & Modernization	PS-76
Defining Success.....	PS-79
Measurable Outcomes	PS-79
Relevant Transportation Equity Framework (TEF) Tactics	PS-81
Glossary	PS-83

LIST OF FIGURES

Figure 1: Movement and Place	PS-1
Figure 2: Most Supported PSPS-Related Actions.....	PS-29
Figure 3: Frequency of PSPS-related Supportive Comments (Phase 1 Engagement)	PS-30
Figure 4: Heat Map of Where People Would Like to See a People Street or Public Space (Phase 2 Engagement)	PS-30
Figure 5: Range of People Street and Public Space Categories	PS-33
Figure 6: Existing People Streets and Public Spaces Inventory – Northwest.....	PS-52
Figure 7: Existing People Streets and Public Spaces Inventory - Northeast.....	PS-53
Figure 8: Existing People Streets and Public Spaces Inventory – West.....	PS-54
Figure 9: Existing People Streets and Public Spaces Inventory – East.....	PS-55
Figure 10: Existing People Streets and Public Spaces Inventory – Southwest.....	PS-56
Figure 11: Existing People Streets and Public Spaces Inventory – Southeast.....	PS-57
Figure 12: Future People Streets and Public Spaces – Northwest.....	PS-58
Figure 13: Future People Streets and Public Spaces – Northeast.....	PS-59
Figure 14: Future People Streets and Public Spaces – West.....	PS-60
Figure 15: Future People Streets and Public Spaces – East.....	PS-61
Figure 16: Future People Streets and Public Spaces – Southwest.....	PS-62
Figure 17: Future People Streets and Public Spaces – Southeast.....	PS-63

LIST OF TABLES

Table 1: People Streets and Public Spaces: Delivering the Key Moves	PS-10
Table 2: People Streets and Public Spaces Category Definitions	PS-34
Table 3: PSPS Scales of Intervention in Streets and Spaces.....	PS-36
Table 4: PSPS Desired Outcomes and Performance Measure.....	PS-80

[This page intentionally left blank]

INTRODUCTION

Seattle's streets are the lifeblood of the city and enable people to get to the places they need to go. Making up nearly 30% of Seattle's land area, streets also play a vital role as public spaces, and their quality impacts the physical, social, and economic health of communities and people across Seattle. The city's streets are owned by the public with the Seattle Department of Transportation (SDOT) as their steward. As such, they are spaces for everyone that can be accessed in perpetuity, especially by those walking, bicycling, and rolling.

Streets are places for people to enjoy a leisurely stroll, take a brisk walk to a local business or bus stop, connect with a friend or neighbor, or grab a coffee and people-watch. Streets are for children and older adults, for interacting with people from other walks of life, for watching birds and enjoying fresh air, or for voicing opinions and exercising first amendment rights. All streets connect destinations, and when implemented with an equity focus, people-oriented streets can build enduring community health and prosperity. They can mitigate impacts related to urban heat islands and air quality to improve community climate resiliency, and they can help reduce the persistent chronic health disparities between neighborhoods across Seattle. Better people-oriented streets can help make walking, biking and transit the preferred option for more trips.

This People Streets and Public Spaces (PSPS) element presents a vision for city streets that goes beyond moving from point A to point B and conveying essential services. It presents a case and a framework for how we can better and more equitably use public streets to strengthen places and communities.

HOW THE PSPS ELEMENT ADVANCES THE STP

The PSPS element promotes the Seattle Transportation Plan (STP) vision of an equitable, vibrant, and diverse city. It encourages equitable investment in streets as places that people can enjoy, contributing directly to a more walkable, bikeable, and transit-oriented city. This element introduces the concepts of People Streets and Public Spaces and outlines how we plan to create them in Seattle. **Figure 1** below illustrates how the street is both a movement conduit and a place.

Figure 1: Movement and Place¹



¹ <https://www.vicroads.vic.gov.au/traffic-and-road-use/traffic-management/movement-and-place>

People Streets

People Streets put people first. They offer safe, inclusive, and comfortable environments for people to walk and roll to transit, public spaces, and other destinations. They offer inviting spaces for people to linger, enjoy their surroundings, and connect with others. They support local business districts and business access. People Streets can also have generous tree cover and green infrastructure, such as rain gardens and curbside vegetation to collect and filter runoff, to make the city more climate resilient, improve air quality and health outcomes, provide shade, and bring a touch of nature into the urban environment.



Ballard Ave, with its recent investments, is an example of a People Street

Public Spaces

Public Spaces come in many shapes and forms. They are inclusive, pedestrianized spaces that invite people to gather, play, and connect with one another. These spaces may be focal points in neighborhoods that support local businesses, venues for community gatherings, or more subtle spaces that are loved by locals and stumbled upon by visitors who delight in their discovery. They may incorporate public art, seating, games, trees and green infrastructure, and flexible space for vendors and gatherings. Public Spaces are born of inclusive, community-driven processes that inform design, programming, and long-term stewardship.



Detective Cookie Chess Park is an example of a Public Space

Cities are often designed and retrofitted to accommodate cars, giving vehicles an outsized portion of urban space. This limits the areas where people can walk, sit at cafes, or enjoy recreational spaces with friends.

We'll rethink the design and use of streets to support a vibrant and rich public life and create better spaces for people to walk, bike, roll, recreate, and interact with one another— which are critically important for economic, environmental, physical, and mental health.

The PSPS network has several ambitions:

- **People First:** Put people at the center of decisions about how we design, manage, and use streets and public spaces
- **Equity:** Systematically fund capital projects to achieve more equitable distribution of high-quality streets and public spaces
- **Community Partnerships:** Form sustained relationships with communities to develop projects and programs that respond to community place priorities, working with communities throughout the entire process—from planning to implementation and monitoring
- **Sustainability and Climate Action:** Contribute to Seattle's climate goals by creating welcoming places that encourage more people to walk, bike, and ride transit and incorporate sustainable stormwater management, street trees, shade, greenery, and resilient landscaping
- **Urban Tree Canopy:** Fill gaps in the urban tree canopy, particularly along arterials and freeways, to mitigate urban heat island effects and improve air quality
- **Safety:** Support the Vision Zero goal by creating safer environments for people walking, rolling, and biking
- **Public Health:** Improve mental health by providing space to recreate and foster social connection
- **Neighborhood Economic Vitality:** Support the vitality of neighborhoods by encouraging more street-level activity, social interactions, and foot traffic for our local businesses

WHAT IS “PUBLIC LIFE”?

People create “public life” when they connect with each other in public places - streets, plazas, parks, and spaces between buildings. Public life is about everyday activities that people take part in when they spend time with each other outside of their homes, workplaces, and cars. Public life is a driver of:

- Physical and mental health
- Sustainable mobility
- Social benefits
- Culture, identity, and sense of place
- Safety
- Economic Development



Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here.

To achieve our shared goals as One Seattle, we must be transformational and strategically plan for a range of mobility and street design options and supportive infrastructure. This includes People Streets and Public Spaces that fit the needs of our unique and varied communities—whether a dense downtown grid, a quiet residential street, or a bustling neighborhood business district. No matter where people live or work, providing safe and equitable mobility options will always be critical to connect people and goods to where they need to go, just as investing in attractive public spaces is critical for the vitality of local business districts and national and international tourism destinations.

As the city grows, so does our need and desire for spaces people can use to gather, connect, access, and enjoy their city just beyond their doorstep. Investing in People Streets and Public Spaces makes our neighborhoods more livable, climate resilient, and economically vibrant places for people to conveniently meet their daily needs. Ensuring all groups and people can enjoy public life in our shared spaces is an important part of PSPS implementation and achieving an inclusive city.

Nearly triple the amount of public land in Seattle is dedicated to public right-of-way (i.e., streets and all the space between private property) compared to park land. Over time, much of the public right-of-way has been prioritized for cars, making less space for pedestrians. For many neighborhoods, this street space can become a vital part of the open space network. By rethinking how we use our streets and public spaces, we can keep pace with our growing city to equitably meet the needs for a range of people using the street, whether it be a community and mobility hub, a Café Street, a plaza, or closure for events.

Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality. Establishing and investing in a PSPS network will prepare us for the future and help implement the STP and the One Seattle comprehensive plan in a number of ways:

- Meet growing demand for a range of streets and spaces for people to connect, gather, linger, recreate, and traverse
- Re-envisioning the public right-of-way as limited and increasingly valuable public space and reprioritizing its use to address roadway violence, climate change impacts, and inequitable access to open space
- Reallocate more street space for people-centered uses, as an overabundance of space has historically been dedicated to vehicle mobility and storage
- Better align goals centered on geographic and equitable spread of investments, climate resilience, and the types and location of public realm enhancements
- Make connecting to and from transit stops and stations easier to navigate and make bus stops and station areas more comfortable and enjoyable

- Create low-pollution neighborhoods to support goals of reducing transportation emissions, while improving air and water quality, and community health outcomes
- Grow the city's tree canopy to provide equitable distribution of beautiful and well-shaded streets for people walking, biking and rolling, alongside climate mitigation benefits

Economic Benefits of People Streets and Public Spaces

The STP supports economic vitality in a range of ways and each functional Element plays a role. Identifying People Streets and Public Spaces for equitable investment can activate community, foster local economic development, and facilitate connections to transit (TEF 45.3). Examples of how the PSPS network can benefit our economy include, but are not limited to:

- Reallocating street space currently used for vehicle storage and general-purpose travel to support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations will support economic vibrancy, community vitality, and walkability in the heart of every neighborhood.
- Enhanced public spaces are places people want to be. They attract more local economic activity and draw in tourists, resulting in greater long-term investment, development, and employment opportunities, and can also increase nearby land and property values.²
- People Streets can provide space for businesses to “spill out into the street” creating interest and economic exchange opportunities; they encourage neighborhood vitality, with more street-level activity, social interactions, and economic exchange.
- Community and mobility hubs can make it easier for people to navigate to and access shops and services and can host delivery hubs that facilitate urban goods movement and other last mile delivery solutions.
- A dense and walkable urban network may facilitate the spread of small local shops and street markets, thus increasing the variety and density – of goods and services, independent retailing, local employment, and start-up business opportunities.³
- People Streets and Public Spaces support walkability, which contributes to economic development in local business districts.
 - Studies have found new street improvements for pedestrians and cyclists increase sales of nearby business by up to 30 percent.⁴
 - Food service industries especially benefit from the addition of active transportation infrastructure; even in cases where a motor vehicle travel lane or parking was removed to make room for a bike lane, food sales and

² The inclusive economic impacts of downtown public space investments | Brookings

³ [PDF] Walkability and built environment (researchgate.net)

⁴ Walkability Means Better Business (Issue 188, July 2019) – Community Economic Development (wisc.edu)

employment tended to go up after pedestrian (or bike) improvements were installed.⁵

- Walking is healthy, and healthy people provide savings to individuals, employers, and society; residents of the most pedestrian-friendly areas of King County were more physically active and less overweight than those in areas with fewer pedestrian-friendly amenities.⁶
- An increase in walking is correlated with higher levels of productivity and creative thinking; the most walkable urban metro areas have substantially higher GDPs per capita and percentages of college graduates over 25 years of age in the population.⁷
- Walkable places promote tourism, and tourists on foot tend to spend more money.



People Street on NE 43rd St in the University District with public seating, plants, lighting, bus-only traffic, and public art



People Street on Pike St near Pike Place Market

⁵ Understanding Economic and Business Impacts of Street Improvements for Bicycle and Pedestrian Mobility - A Multi-City Multi-Approach Exploration [Phase 2] | National Institute for Transportation and Communities (pdx.edu)

⁶ https://www.cdc.gov/nceh/ehs/docs/jeh/2008/july-aug_w_case_studies/jeh_jul-aug_08_seattle.pdf

⁷ Foot_Traffic_Ahead_FINAL-compressed.pdf (smartgrowthamerica.org)

RELATIONSHIP TO STP GOALS

The PSPS network plays a critical role in advancing the STP goals of safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization.



SAFETY

Prioritize safety for travelers in Seattle, with no serious injury or fatal crashes.

PSPS will increase safety by improving lighting, activating streets to have more eyes on the street, reallocating space for people, redesigning roads to reduce travel speeds, and increasing comfort along and across streets for people walking, rolling, biking, and using e-mobility. PSPS promotes public life⁸ activities in the public realm, particularly at Community and Mobility Hubs, to make hubs welcoming and safe for women, BIPOC, and people of all ages and abilities. (Supports TEF 24.1, 40.1)⁹



EQUITY

Co-create with community and implement restorative practices to address transportation-related inequities.

PSPS will co-create more free, high-quality places to gather through sustained community collaboration and capacity-building, particularly in higher-density neighborhoods in underinvested and equity-priority areas. An interdepartmental, anti-displacement centered approach will inform implementation. These places will improve air quality, mitigate noise pollution, and help address chronic health disparities while making the streets and public spaces more reflective of community identity. (Supports TEF 20.5, 45.3, 56.6)



SUSTAINABILITY

Respond to climate change through innovation and a lens of climate justice. Implementing PSPS reclaims excessive pavement and roadway space to support public uses. It builds climate resilient landscapes and ecosystems that increase greenery and shade to mitigate the urban heat island effect, air quality, and water treatment. PSPS will create low-pollution neighborhoods. And it promotes resilient and sustainable transportation design principles that encourage mode shift and reductions in GHG emissions and harmful particles small enough to be inhaled. (Supports TEF 45.3, 56.4, 56.5)



MOBILITY &
ECONOMIC VITALITY

Provide reliable and affordable travel options that help people and goods get where they need to go. PSPS prioritizes people in the design and operation of streets with a high density of destinations. It increases the comfort and experience for people of all ages and abilities walking, biking, rolling, and using transit. (Supports TEF 19.6, 40.1, 43.4)



LIVABILITY

Reimagine our streets as inviting places to linger and play. Implementing the PSPS network creates inviting spaces that entice people to linger, walk, and enjoy Seattle's neighborhoods. It creates centers of community in every neighborhood, with a specific focus on co-creating these centers in equity-priority neighborhoods to meet community vision and objectives. It advances an age-friendly city by creating spaces that are welcoming for all ages and abilities, reducing social isolation, and improving community cohesion and social capital. (Supports TEF 45.3)



MAINTENANCE &
MODERNIZATION

Improve city transportation infrastructure and ready it for the future. Plan and budget for long-term maintenance of PSPS, which will reduce the burden on community groups, particularly in equity priority areas. Strengthen the city's role as steward of the public right-of-way through more transparent, accountable, and responsive processes. Implement new design standards that lower the costs of implementation and maintenance of PSPS projects.

⁸ Public life is made through social connections between people in public spaces, such as streets, plazas, parks, and city spaces between buildings. Public life interactions occur outside of their homes, workplaces, and cars.

⁹ Learn more about the *Transportation Equity Framework* at <https://www.seattle.gov/transportation/projects-and-programs/programs/transportation-equity-program/equity-workgroup>. A complete list of the TEF tactics referenced is located at the end of the element.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the STP includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals: Safety (S), Equity (TJ), Sustainability (CA), Mobility (PG), Livability (PP), and Maintenance & Modernization (MM).

Each of the STP's functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **People Streets and Public Spaces Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I key move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.
[\(Supports Safety Key Move S2a\)](#)

Feature community voices in planning documents. [\(Supports Equity Key Move TJ1b\)](#)

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: People Streets and Public Spaces: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
SAFETY KEY MOVES							
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
PS1.	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. [Supports Key Move S2a]	✓	✓		✓		✓
PS2.	Prioritize safety improvements that are on the high-injury network, have high levels of travel stress, or are identified through the Seattle Bicycle and Pedestrian Safety Analysis. [Supports S2b and TEF 19.2]	✓	✓		✓		
PS3.	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, including but not limited to leading pedestrian intervals (LPIs) at signals, arterial traffic calming, and road diets. [Supports Key Move S2c]	✓			✓		✓
PS4.	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as curb bulbs, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. [Supports Key Move S2d]	✓			✓		✓
PS5.	Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. [Supports Key Move S2f]	✓			✓		✓
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle (S3)							
PS6.	Provide dedicated places for people to walk, bike, or roll safely separated from vehicles by using context appropriate treatments, such as protected bike lanes or “complete street” corridors, especially on major truck routes. [Supports Key Move S3b]	✓			✓		✓
PS7.	Harness funding and opportunities when private development occurs to build planned new network facilities and prioritize mobility for people walking, biking, and rolling when construction occurs. [Supports Key Move S3c]	✓	✓	✓	✓	✓	✓
PS8.	Enhance both real and perceived safety for riders at transit stops and station areas through investments in design features such as lighting and shelters, as well as frequent and reliable services that limit late-night wait times. Advocate for programs that support physical, mental, and emotional safety of transit riders. [Supports Key Move S3e]	✓	✓		✓	✓	
PS9.	Expand safety education for all travelers. [Supports Key Move S3h]	✓					

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
Provide safer routes to schools, parks, transit, community gathering spaces, and other common destinations (S4)							
PS10.	Construct the People Streets and Public Spaces network as outlined in this Plan. (Supports Key Move S4a)	✓	✓	✓	✓	✓	✓
PS11.	Develop station access plans for future light rail stations and enhance the experience and quality of existing facilities that connect people walking, bicycling, and rolling along and across major transit corridors. (Supports Key Move S4c and TEF 40.2)	✓	✓	✓	✓	✓	
PS12.	Serve every public school with an all ages and abilities bicycle facility. (Supports Key Move S4d, TEF 43.4, and Executive Order 2022-07)	✓	✓	✓	✓	✓	
PS13.	Expand low-stress neighborhood connections to common destinations (local businesses, parks, schools, transit, community centers) for people walking, biking, and rolling through programs like permanent Healthy Streets. (Supports Key Move S4e, TEF 43.4, and Executive Order 2022-07)	✓	✓	✓	✓	✓	
PS14.	Provide pedestrian-scale lighting to make people walking more visible to people driving vehicles and to increase personal safety. (Supports Key Move S4f)	✓	✓				
PS15.	Make investments that make it safer to walk and bicycle to parks, community gathering spaces, and other common destinations. Establish a Safe Routes to Parks program. (Supports Key Move S4g)	✓	✓				
Support public safety through maintenance of critical access routes and planning for a climate resilient network (S5)							
PS16.	Work with first responders on multi-modal street design and curb management strategies to understand access and incident response options. (Supports Key Move S5a)	✓				✓	
PS17.	Plan for and invest in infrastructure and culturally relevant landscaping to mitigate transportation disruptions from severe weather and climate impacts including snow and ice, heavy rainfall, sea level rise, and flooding from storm surges during high tides. Planning efforts should include consultation with federally recognized Tribes and community-based outreach with urban Native communities. (Supports Key Move S5f)	✓		✓	✓	✓	
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making processes (TJ1)							
PS18.	Implement the Transportation Equity Framework (TEF) to grow transparency, accountability, and shared power when making transportation decisions with community members. (Supports Key Move TJ1a)		✓				
PS19.	Feature community voices in planning documents. (Supports Key Move TJ1b)		✓				
PS20.	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. (Supports Key Move TJ1c and TEF 29.1, 41.6)		✓				
PS21.	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. (Supports Key Move TJ1d and TEF 3.4)		✓		✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
PS22.	Build trust and capacity within organizations that prioritize our vulnerable communities and advocate to improve conditions for people who walk, bike, and roll. Learn from leaders active in these spaces. [Supports Key Move TJ1e and TEF 31.4]		✓		✓		
PS23.	Normalize the practice of making decisions about policies and right-of-way (ROW) allocations with input from vulnerable communities. [Supports Key Move TJ1f and TEF 19.1, 25.4]		✓		✓	✓	✓
PS24.	Use a collaborative planning approach that uplifts community priorities to identify opportunities for People Streets and Public Spaces in their neighborhoods. [Supports Key Move TJ1g and TEF 17.4]		✓		✓	✓	
PS25.	Support the transportation-related needs of local businesses owned by vulnerable communities and their commuting employees. Provide accessible and culturally relevant information about SDOT services. [Supports Key Move TJ1h and TEF 17.1, 21.2, 16.1]		✓		✓		
PS26.	Compensate community partners for their valuable work to connect and communicate with their networks and uplift. [Supports Key Move TJ1i]		✓				
PS27.	Include representation of our region's Coast Salish art, language, and culture in the Seattle transportation system. Support efforts to consult with federally recognized tribes to standardize policies for project and artist selection and a process to solicit feedback from the greater Native community. [Supports Key Move TJ1j]		✓			✓	
Address inequities in the transportation system by prioritizing investments for impacted communities (TJ2)							
PS28.	Prioritize investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. Restructure policies so “public benefits” from new development projects can be applied off-site in equity priority areas. [Supports Key Move TJ2a]		✓	✓	✓	✓	
PS29.	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around transportation project impacts and displacement, and co-create transportation, public space, and permitting solutions. [Supports Key Move TJ2d and TEF 14.3, 15.2]		✓		✓	✓	
PS30.	Identify actions to address inequities experienced by vulnerable community members who walk, bike, and roll, and provide capacity-building support to BIPOC-led organizations that focus on increasing active transportation. [Supports Key Move TJ2e and TEF 31.4]		✓	✓	✓		
PS31.	Implement improvements to make traveling in Seattle more accessible for everyone, such as curb ramps, accessible pedestrian signals, accessible parking, and accessible transit stops. [Supports Key Move TJ2f]	✓	✓		✓	✓	✓
PS32.	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2h]		✓		✓		

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options (CA1)							
PS33.	Operate the transportation system—signals, markings, signage, and right-of-way allocation—to encourage sustainable travel choices (walking, biking, taking transit, and for moving goods). [Supports Key Move CA1g]			✓	✓		✓
Green city streets through landscaping and street trees to better handle changing climate (CA2)							
PS34.	Encourage the maintenance and installation of green infrastructure—such as street trees, rain gardens, landscaping, natural drainage systems, bioswales, and pervious materials—as other improvements occur in the right-of-way. [Supports Key Move CA2a and TEF 56.4]		✓	✓		✓	✓
PS35.	Seek opportunities to install green infrastructure in new public spaces and People Streets as streets are redesigned. [Supports Key Move CA2b]		✓	✓		✓	✓
PS36.	Prioritize tree planting and maintenance in historically under-invested communities, as we continue to increase tree canopy coverage citywide. [Supports Key Move CA2c and TEF 56.6]		✓	✓		✓	✓
PS37.	Partner with local communities, including Tribal and urban Native communities, to co-create green landscape and urban forest improvements that increase resilience to climate impacts and protect cultural resources. [Supports Key Move CA2d and TEF 24.2, 56.4]		✓	✓		✓	
PS38.	Conduct Tribal consultation on shoreline street ends to address Tribal trust and treaty rights, habitat restoration, and cultural placemaking opportunities. [Supports Key Move CA2g]		✓	✓		✓	
Foster neighborhood vitality and improved community health (CA3)							
PS39.	Co-create low-pollution neighborhoods with communities so the benefits of cleaner air and water, and safer streets are shared equitably. [Supports Key Move CA3a]		✓	✓		✓	
PS40.	Work with local businesses in future low-pollution neighborhoods to address delivery and access needs. [Supports Key Move CA3b]		✓	✓		✓	
PS41.	Update code requirements to support creation of low-pollution neighborhoods. [Supports Key Move CA3c]		✓	✓		✓	
PS42.	Design for people-first streets to make sustainable travel choices the default and easy choice for neighborhood trips and to increase neighborhood business district activity. [Supports Key Move CA3d]		✓	✓	✓	✓	✓
PS43.	Encourage neighborhood delivery hubs in partnership with local businesses to create central drop-off/pick-up locations for goods and services used by multiple delivery companies, retailers, and consumers. [Supports Key Move CA3f]			✓	✓	✓	
PS44.	Create welcoming people-focused streets and spaces connecting to local destinations at the heart of neighborhoods throughout Seattle. [Supports Key Move CA3g]	✓	✓	✓		✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Create seamless travel connections (PG1)							
PS45.	Prioritize efficient and sustainable movement of people within limited street space and reallocate street and curb space to maximize comfort, convenience, and directness for walking, biking, rolling, and transit. [Supports Key Move PG1a and TEF 19.6, 43.4]				✓	✓	✓
PS46.	Improve the experience of making travel connections, especially between transit and travel options – such as personal and shared bikes and scooters – used for first-/last-mile trips. [Supports Key Move PG1b and TEF 35.2, 45.3]		✓		✓		✓
PS47.	Expand the pedestrian wayfinding program, including at transit stations and stops, in collaboration with community and regional partners. [Supports Key Move PG1f and TEF 48.1]				✓	✓	
Make walking, biking, and rolling more convenient and enjoyable travel choices, especially for short trips (PG2)							
PS48.	Add, enhance, and maintain dedicated pedestrian spaces in the form of sidewalks, walkways, and shared streets with appropriate traffic calming to provide a safe and accessible pedestrian environment. [Supports Key Move PG2a]	✓			✓	✓	✓
PS49.	Create new street crossing opportunities and enhance existing crossings to improve safety and access for people walking and rolling, especially to transit. Minimize the amount of time people wait to cross. [Supports Key Move PG2b]	✓			✓		✓
PS50.	Improve pedestrian lighting, especially along transit routes and where connections between different travel options are made. [Supports Key Move PG2c and TEF 45.1]	✓			✓	✓	✓
Create world-class access to transit and support making service more frequent and reliable (PG3)							
PS51.	Enhance existing and create new community and mobility hubs, with connections to high-capacity transit services. [Supports Key Move PG3h]				✓	✓	
PS52.	Prioritize low-carbon travel options through seamless, direct walking and rolling connections to community and mobility hubs. [Supports Key Move PG3i]			✓	✓	✓	
PS53.	Enhance transit stops and the experience of waiting at them in all types of weather and at all times of day through stop improvements implemented by transit partners and leveraged via private development. [Supports Key Move PG3j]	✓			✓		
Manage curbspace to reflect city goals and priorities (PG5)							
PS54.	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]		✓	✓	✓	✓	
PS55.	Work with communities to expand activated curb uses, including food truck vending, street cafes and parklets, event space, and more. [Supports Key Move PG5d]		✓		✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
LIVABILITY KEY MOVES							
Reallocate street space to prioritize people, creating enjoyable places that also facilitate goods delivery and mobility (PP1)							
PS56.	Create a People Streets and Public Spaces program.	✓	✓	✓	✓	✓	✓
PS57.	Reallocate street space currently used for vehicle storage and general purpose travel to support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations. [Supports Key Move PP1a]	✓	✓	✓	✓	✓	✓
PS58.	Implement car-free and car-light streets, such as Café Streets and Neighborhood Greenways, to reclaim public space for communities. [Supports Key Move PP1b]		✓			✓	
PS59.	Design streets and public spaces with consideration of goods, delivery and emergency access needs, while adjacent businesses prosper from an activated public realm. [Supports Key Move PP1c]		✓		✓	✓	
PS60.	Update Seattle's Right-of-Way Improvements Manual (Streets Illustrated) to implement actions and strategies outlined in this Plan. [Supports Key Move PP1d]	✓		✓	✓	✓	
Create welcoming community and mobility hubs (PP2)							
PS61.	Work with partners to create a vibrant and welcoming public realm at community and mobility hubs to support community-oriented programming, such as markets, vending, performances, and recurring events. [Supports Key Move PP2a]		✓			✓	
PS62.	Improve walkability at every community and mobility hub by providing pedestrian infrastructure such as lighting, wayfinding, seating, and landscaping. [Supports Key Move PP2b]	✓		✓	✓	✓	
PS63.	Provide a safe and comfortable experience moving in and around community and mobility hubs. This includes better crossings and intersections, slower speeds and rightsized travel lanes, decluttered sidewalks, universal access, and more. [Supports Key Move PP2c]	✓		✓	✓	✓	✓
PS64.	Work to incorporate age-friendly public spaces at community and mobility hubs that work for older adults, children and their caregivers, including play-based learning activities that allow children to engage with the city and support their development. [Supports Key Move PP2d]		✓			✓	
PS65.	Partner with communities, Tribes, other agencies, and organizations to design, construct, activate, and maintain community and mobility hubs. [Supports Key Move PP2e]		✓		✓	✓	
Co-create and enhance public spaces for playing and gathering to improve community health (PP3)							
PS66.	Work with communities to create People Streets and Public Spaces plans that identify projects, prioritizing underinvested and equity focus areas. [Supports Key Move PP3a and TEF 17.4]		✓			✓	
PS67.	Create Destination Streets to support walkable local business districts and economic development. [Supports Key Move PP3b]				✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
PS68.	Develop a network of park-like Strolling Streets that serve as “lungs” to protect air quality in denser communities and support climate resiliency in vulnerable neighborhoods through strategies such as installing green stormwater infrastructure, removing paving, adding trees, installing climate resilient landscaping, and more. [Supports Key Move PP3c]			✓		✓	
PS69.	Implement shared, car-light streets, such as Café Streets and Healthy Streets, and car-free streets to support the transition to a low-carbon transportation system and reduce chronic health disparities. [Supports Key Move PP3d]	✓	✓	✓	✓	✓	
Activate and maintain public spaces to create a welcoming and age-friendly public realm (PP4)							
PS70.	Better maintain public spaces through dedicated resources and continued partnerships with local communities and businesses to reduce the burden of maintenance on historically underinvested communities. [Supports Key Move PP4a]		✓			✓	✓
PS71.	Activate public spaces with art in collaboration with community organizations. [Supports Key Move PP4b]		✓			✓	
PS72.	Implement seasonal street closures (e.g., summer streets), recurring closures (e.g., every Saturday), night-time closures, or limited-time closures to vehicles. [Supports Key Move PP4c]					✓	
PS73.	Reduce barriers to enable communities to program, activate, and manage their public spaces with uses that are authentic and meaningful to them. [Supports Key Move PP4d]		✓			✓	
PS74.	Partner with other City departments and agencies to better achieve public realm goals. [Supports Key Move PP4e]		✓			✓	
MAINTENANCE & MODERNIZATION KEY MOVES							
Maintain our streets, sidewalks, and bridges and incorporate planned safety and network improvements with maintenance work (MM1)							
PS75.	Collect feedback on asset conditions as part of community engagement on transportation system planning, design, and co-creation. [Supports Key Move MM1c]		✓				✓
PS76.	Reduce the maintenance backlog by being proactive, leveraging technology to monitor asset conditions, and using data and lifecycle analyses to help when it’s time for upgrades. [Supports Key Move MM1c]						✓
PS77.	Modernize city streets by incorporating planned safety and network improvements into maintenance and replacement activities to not only improve the condition of transportation infrastructure and equipment, but also reduce dependence on driving, promote sustainable travel options, and support economic vitality. (Supports TEF 19.3) [Supports Key Move MM1g]	✓	✓	✓	✓		✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
People Streets and Public Spaces: Delivering the Key Moves							
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
PS78.	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. [Supports Key Move MM2a and TEF 19.3]		✓				✓
PS79.	Focus resources for maintenance and improvements in neighborhoods that have been historically or are currently underserved. [Supports Key Move MM2b and TEF 19.4]		✓		✓		✓
PS80.	Identify, and permit where necessary, public spaces that can be activated, programmed, and maintained in collaboration with local communities. [Supports Key Move MM2c and TEF 24.1]		✓			✓	✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
PS81.	Collect, monitor, and use data to inform changes to the transportation system. [Supports Key Move MM3a]	✓	✓	✓	✓	✓	✓
PS82.	Proactively work with public, private, and academic sector partners to collaboratively develop transit and mobility solutions for the future. [Supports Key Move MM3c]			✓	✓		✓
PS83.	Coordinate with relevant partner agencies on projects of regional and statewide significance within the City of Seattle, such as the I-5 Master Plan, Lid I-5, or high-speed rail corridors. [Supports Key Move MM3d]				✓		✓
PS84.	Adapt streets for new and evolving forms of mobility devices such as commercial or private cargo bikes, e-scooters, personal delivery devices, low-speed electric vehicles, and others to create more travel options. [Supports Key Move MM3e and TEF 19.2]			✓	✓		✓
PS85.	Develop and maintain up-to-date asset data, including digital inventories of physical assets like curb space, load zones, bike, and scooter parking locations. [Supports Key Move MM3f]						✓



SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we will need to remain agile and able to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to People Streets and Public Spaces. They were used to shape the actions we'll take to achieve our shared transportation vision. We will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances continue to evolve in the years to come.

OPPORTUNITIES, EMERGING TRENDS AND CHALLENGES

Opportunities and Emerging Trends

- **Moving beyond the pandemic.** Seattle, like many cities across the nation and the world, responded to the COVID-19 pandemic by opening city streets to people. As travel patterns changed with the increase in people working from home, we developed several new programs in response to the increase in neighborhood-level activity. Outdoor dining permits brought restaurant patrons out into the public realm, and Healthy Streets prioritized people walking and biking in residential neighborhoods. These pandemic responses reaffirmed the importance of public spaces in enabling social interactions, reducing isolation, improving mental health, and growing the social capital of communities. We will build on that momentum to institutionalize these types of investments and continue to work with communities to create places in the public realm for people of all ages and abilities to enjoy.
- **Repurposing the Right-of-Way report.** The Seattle Planning Commission issued a briefing in November 2022 (Repurposing the Right-of-Way). It stated that “purely as a function of space, the city cannot accommodate expected growth in population and remain livable if the movement and storage of vehicles remain the overwhelming focus on our streets rights-of-way.” The report recommends we re-envision the public right-of-way “as limited and increasingly valuable public space and reprioritizing its use – [in response to roadway violence, climate change impacts, and black, indigenous, and people of color’s lack of access to open space] – will open myriad possibilities for improving city life.”

- **We have a strong foundation.** While the PSPS Element is new, the city has been a leader in creating places and spaces for people, but understand we have a ways to go. We will build on our experience and expand our existing programs that activate public rights-of-way, reclaim streets and space for people, and partner with the community to identify the types of improvements they would like to see.
- **Climate change is accelerating.** Seattle continues to experience extreme weather events, which are expected to have a greater impact on the most vulnerable social groups, low-income households, communities of color, immigrant populations, and those experiencing homelessness. The PSPS network provides an opportunity to build capacity for climate resiliency and combat future extreme weather events through projects that include street trees, landscape features, rain capture, and green stormwater management infrastructure. This work advances our desire to expand the urban tree canopy and builds on current partnerships with Seattle Public Utilities to deliver green stormwater infrastructure (GSI) projects.
- **Vehicle miles traveled (VMT) reduction.** Approximately 60% of Seattle’s greenhouse gas emissions are from road transportation,¹⁰ and nearly 50% of trips are under 3 miles.¹¹ The PSPS network increases access to new travel choices and the opportunity for people to meet their everyday needs through short walks, bike rides, or transit rides. This change in travel choice has the potential to reduce overall VMT and GHG emissions.
- **Public transit options are expanding.** Investments in public transit systems, like Link light rail extensions, RapidRide bus expansions, and ferry terminal improvements, will change how people move around Seattle. The PSPS network supports public realm investments to improve first and last mile non-motorized access around transit, particularly at Link light rail stations, major transit access points, and community and mobility hubs. Investments in the public realm include removal of sidewalk clutter and impedances, enhanced wayfinding, universal access improvements, and reconstruction of the public realm around light rail stations. *See the Transit Element for further information around Community and Mobility Hubs.*
- **Travel pattern changes and increased neighborhood-level activity.** The increased number of people that work from home (a result of the COVID-19 pandemic) has led to more neighborhood-based trips and activity and a need for neighborhood-scale public spaces that foster social interaction.
- **Interest in public realm improvements funded by off-site public benefits.** Development projects are required to provide public realm enhancements and benefits as part of “public benefits” from right-of-way vacations, term permits (e.g., skybridges), and Land Use Code tools. Frequently, these public benefits are localized to the development site. As a result, public realm enhancements through public benefits tend to be concentrated in areas of the city with high growth and high opportunity. In highly developed areas such as Downtown, it also often can be difficult to identify public benefits of an appropriate scale because redesign opportunities in the

¹⁰ https://www.seattle.gov/documents/Departments/OSE/ClimateDocs/GHG%20Inventory/2020_GHG_Inventory_Oct_2022.pdf

¹¹ <https://seattle.curbed.com/2019/9/18/20872184/seattle-micromobility-congestion>

COMMUNITY ENGAGEMENT

Extensive public outreach and engagement was integral to the STP development process. We used a variety of tools, such as two online interactive maps, open-ended surveys, in-person events, festivals, listening sessions, and open houses. Public engagement for the STP occurred from March 2022 to November 2023. Please see Chapter 2 in Part I of the STP for more details on the public engagement process and feedback received. (Supports TEF 29.1)

We heard a strong desire from the community for more People Streets and Public Spaces in Seattle.

In the first phase of public engagement (May to August 2022), we received over 3,700 PSPS-related comments that helped shape the element. In the second phase of engagement (December 2022 to February 2023), we requested feedback on draft PSPS network maps and received 327 map comments that were later used to refine the network maps. We also asked people to review a “menu of actions” and indicate which actions they would support, and three out of the five actions with the greatest number of “likes” were related to PSPS, shown in **Figure 2**. In the third phase of public engagement, we received strong support for the draft PSPS Element. The public comments we received directly inform the policies, programs, and strategies found in this element. (Supports TEF 29.1)

Figure 3 shows the frequency of PSPS-related comments from Phase 1 engagement, which closely mirrors **Figure 4**, which shows a heat map of where people specifically said they would like to see People Streets or Public Spaces when presented with the draft PSPS network during Phase 2 engagement.

international will be an ever-increasing focus for economic recovery. It will be more accessible to visitors as Link light rail continues to expand and the Seattle streetcar network is completed. Major opportunities and challenges for a greater Downtown (as envisioned in the Imagine Greater Downtown¹² initiative) include:

- Leverage private development for public benefit
- Use public space to create new parks and open spaces
- Increase connections to water (the lake and sound) and vegetation systems (natural habitats and urban green canopy)
- Connect across, over, and under I-5, and include lid opportunities in the Chinatown International District and Denny Triangle

Creating People Streets and Public Spaces

By establishing the People Streets and Public Spaces program, Seattle joins other world class cities focused on creating people streets and public spaces. The following section highlights examples from New York City, Los Angeles, and London.

New York City: Plaza Equity and Pilot to Permanent

The New York City Department of Transportation (NYC DOT) Plaza Program works with local organizations to create neighborhood plazas throughout the city, transforming underused streets into vibrant, social public spaces. It is a key part of the city's effort to ensure that all New Yorkers live within a 10-minute walk of quality open space. NYC DOT prioritizes locations in neighborhoods that lack open space, and partners with community groups that operate and maintain these spaces. The city also has a Plaza Equity program, which provides funding, active support, and capacity building to plaza partners in higher need areas.



Corona Plaza in Queens



Doyers St in Manhattan's Chinatown

Photo Source: NYC DOT

¹² https://www.seattle.gov/documents/Departments/SDOT/TransportationPlanning/IGD_FullPlan_FINAL_ADA.pdf

LOS ANGELES: COMMUNITY DRIVEN PUBLIC SPACES WITH A KIT OF PARTS

The LA People Street (St) Program facilitates community-driven partnerships to build, program, and steward small-scale public spaces. Community partners apply to install a Plaza or Parklet. Partners identify an appropriate site, conduct outreach, raise funds, and provide long-term management, maintenance, and operations of the project. LADOT supports with design development, plaza installation, and striping, planters, signage, and other expenses. To simplify the process, LADOT developed a Kit of Parts that includes standard, pre-approved materials, and furnishings, ranging from signage and roadbed graphics to ping-pong tables. This reduces the burden on partners and helps avoid lengthy project review. By converting underused or redundant street space into a people place, the People St Program creates venues for community gathering, supports local business, and facilitates future investment in more permanent, capital-intensive public space designs.

Leimert Park Village is the center of Leimert Park community, a historically Black neighborhood, and provides space for gathering and celebrating the area's rich cultural history.



Noho Plaza in NoHo Arts District



Leimert Park Village

Photo Sources: Project for Public Spaces; LADOT/Jim Simmons

LONDON: A RANGE OF STREET TYPES TO MEET LOCAL NEEDS

London's Better Street program, created in 2009, supports the street network and public spaces across the city. The program was created to balance place-specific needs with an efficient road network, delivering more than 80 public realm projects since the program began. The Better Streets approach emphasizes the importance of streets meeting several needs simultaneously, as hubs for travel, business, homes, and leisure. Projects build from the existing character and context, layering on simple, lasting measures to enhance public experience. Better Streets advocates a "staged approach" to different street functions, from completely redesigning a space to simple, light-touch measures to make a street more functional and attractive.

Decluttering and Tidying Up

Leyton High Road. Working with stakeholders, a package of improvements was implemented that de-cluttered the street and renewed shop fronts and facades. Street lighting was also upgraded and building facades were illuminated to draw attention to heritage architecture along the street. These improvements have encouraged increased consumer activity, civic pride, and business confidence in local stakeholders.



Leyton High Road, Before and After. Photo Source: Google Maps

Designing Streets to Support Mobility and Economic Health

Leicester Square, the “physical heart of London’s West End,” used a design competition and extensive community liaison activity to inform the redesign of the area into a coherent public realm of the gardens, public squares, and connector streets.



Piccadilly Two Way (P2W)



Leicester Square

Photo Source: The Architects' Journal; SAIC Construction
<https://www.architectsjournal.co.uk/archive/revealed-radical-piccadilly-circus-overhaul-by-atkins>

Intermittent Pedestrianization

The Venn Street shared surface scheme expanded the public realm and created vehicle restrictions from Friday to Sunday, prioritizing pedestrian activity and enhancing the quality of usable space for local business and markets. The project included a shared maintenance agreement with businesses on the street who contribute largely through the renting of outdoor space.



Venn Street. Photo Source: Urban Movement, <http://www.urbanmovement.co.uk/>

Challenges

- **The delivery of projects is concentrated in areas of opportunity.** Current place-based investments rely almost exclusively on ad hoc funds and private development, which is required to provide public benefit or a community-initiated project. The absence of a public space plan and investment strategy results in the concentration of public space and sidewalk investments in high-development opportunity neighborhoods. This results in unequal access to PSPS for historically underserved populations, low-income households, and BIPOC communities.
- **Program requirements can create equity barriers.** Public Space programs depend on private residents, businesses, and community groups to apply for permits, build the interventions, and maintain them. Even with reduced permit fees and other programmatic improvements, inequities will always exist in a system that relies on those with time and resources to lead the process. The creation of a city-wide PSPS program and network can help reduce or eliminate these inequities.
- **Program expansion is opportunistic and lacks long-term maintenance support.** Stewardship and long-term maintenance of existing PSPS features often falls to local communities, many of which do not have capacity or resources. The PSPS network would benefit from a coordinated investment strategy to achieve social, economic, and environmental goals.
- **The design and measurement of success.** Better models and methods are needed, both for collaborative design processes that reflect community values, aesthetics, and needs, and to monitor success through public life activities, economic development, and public health outcomes. A coordinated approach is needed to identify year-over-year impacts including expanded data collection and evaluation of progress against agreed upon metrics.
- **Accessibility barriers.** Many sidewalks are cluttered with objects that can present barriers to people with disabilities or pushing strollers. A lack of age-friendly seating, shade, and other attributes that contribute to a comfortable environment can also present barriers. Other significant accessibility barriers include tens of thousands of sidewalk uplifts, obstructions, cross slope issues, and curb ramps that require remediation or construction. *See Pedestrian Element for more.*
- **Pedestrian safety.** The recent increase in pedestrian crashes and fatalities challenges Seattle to do more to improve pedestrian safety. Concerns about personal safety also make people feel unsafe walking. *See Pedestrian Element for more.*
- **Loss of tree canopy.** The most recent measure of Seattle's tree canopy shows that the city lost 255 acres of tree canopy from 2016 to 2021 (from 28.6% to 28.1% of the city area, respectively). The biggest concern is the unequal distribution of the loss in tree canopy, with the highest decline in South Seattle,¹³. The result is a disproportionate impact on historically underserved populations.

¹³ <https://www.seattletimes.com/seattle-news/politics/seattle-has-lost-255-acres-of-tree-canopy-heres-why/>

- **Public Restrooms.** Lack of publicly accessible restroom facilities in the city, especially near frequent transit. Public restrooms are crucial to public health and livability. However, they are challenging to build, maintain, and keep safe.
- **Need for additional design standards for people-oriented streets, public spaces, and street furniture.** *Streets Illustrated*¹⁴, the Seattle Right-of-Way Improvements Manual, identifies several different street types and associated design standards and guidance. There is a need to develop additional design standards for shared and pedestrianized streets and public spaces, and a standard kit of street furniture (e.g. seating, trash cans, bollards, etc.), to improve consistency in the design of these investments and normalize them within SDOT's standard lines of business.



Pike People Street with flags and barricades

¹⁴ <https://streetsillustrated.seattle.gov/>

COMMUNITY ENGAGEMENT

Extensive public outreach and engagement was integral to the STP development process. We used a variety of tools, such as two online interactive maps, open-ended surveys, in-person events, festivals, listening sessions, and open houses. Public engagement for the STP occurred from March 2022 to November 2023. Please see Chapter 2 in Part I of the STP for more details on the public engagement process and feedback received. (Supports TEF 29.1)

We heard a strong desire from the community for more People Streets and Public Spaces in Seattle.

In the first phase of public engagement (May to August 2022), we received over 3,700 PSPS-related comments that helped shape the element. In the second phase of engagement (December 2022 to February 2023), we requested feedback on draft PSPS network maps and received 327 map comments that were later used to refine the network maps. We also asked people to review a “menu of actions” and indicate which actions they would support, and three out of the five actions with the greatest number of “likes” were related to PSPS, shown in Error! Reference source not found.. In the third phase of public engagement, we received strong support for the draft PSPS Element. The public comments we received directly inform the policies, programs, and strategies found in this element. (Supports TEF 29.1)

Figure 3 shows the frequency of PSPS-related comments from Phase 1 engagement, which closely mirrors **Figure 4**, which shows a heat map of where people specifically said they would like to see People Streets or Public Spaces when presented with the draft PSPS network during Phase 2 engagement.

Figure 2: Most Supported PSPS-Related Actions

Make more space for pedestrians

How can we make it easier for you to choose to walk or roll? *What we heard most often:*

- Small actions are powerful—fill sidewalk gaps, enforce existing rules, and improve intersections to make walking a safer and better option
- Make more neighborhood streets pedestrian-only—and provide more space for people walking on arterials
- Widen and improve sidewalks—they should be comfortable to use for people with wheelchairs or strollers



Increase people-friendly streets

How can we improve our streets and public spaces in urban villages and around transit hubs? *What we heard:*

- Need more human-scaled streets and intersections with walkable destinations along them
- Ensure that pedestrian- or transit-only spaces are clean and safe



Reallocate street space

What do you want to see on streets where space for cars is reduced? *What we heard:*

- Provide more safe, dedicated space for people walking and rolling and for transit
- People would like more street trees, Play Streets, parklets, benches/seating, outdoor dining, and other places to gather

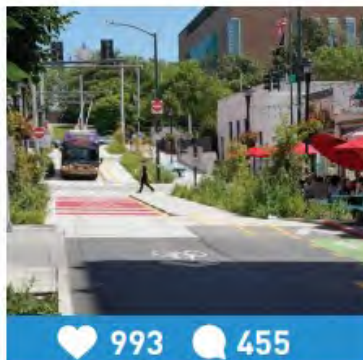


Figure 3: Frequency of PSPS-related Supportive Comments (Phase 1 Engagement)



Figure 4: Heat Map of Where People Would Like to See a People Street or Public Space (Phase 2 Engagement)



General Themes

Several general themes emerged related to the PSPS network and policies, including:

Theme	Quotes from Public Comments
Create more spaces for community gatherings. We need high-quality public spaces in every neighborhood, especially as Seattle grows.	"I think all neighborhoods can benefit from sidewalk seating and gathering spaces, weekend closures of more roads and streets for walkers and bikers."
Create places with fewer cars. Seattle needs a major shift toward pedestrianized, bike-friendly, transit-connected, car-free streets. Convert streets into car-free zones, and include iconic locations, such as Pike Place Market, Pike/Pine in Capitol Hill, and The Ave in the University District.	"I feel like we need more streets that are truly closed to car traffic. Urban cores like downtown, Old Ballard or the West Seattle Junction could benefit from Car free zones for pedestrian zones that also can accommodate bikes and rollers." "Pedestrianize commercial streets such as Pike Place, Ballard Ave, Melrose, etc. Streets should be for people not cars."
Provide more pedestrian-scale elements. Wayfinding, pedestrian-scale lighting, trash bins, and other elements were mentioned as strategies to make PSPS streetscapes more comfortable.	"I would love safe (good lighting) streets with access to trash bins (reduce street trash and dog poop) and greenery to walk around the neighborhood."
Improve the maintenance of public spaces. Well-maintained public spaces and facilities would encourage mode shift and improve quality of life.	"Better maintained facilities, especially for people riding bicycles and walking can improve their access to the city."
Add more trees. Increase the presence of street trees and maintain them. Trees make streetscapes more comfortable and reduce the urban heat island effect.	"Please don't forget SDOT's responsibilities for the tree canopy, given how much of the City's land is in SDOT ROW."
Repurpose the right-of-way. Repurpose space for vehicles to provide more space for people, such as public squares, parks, and sidewalk cafes.	"Remove parking; as much as possible. Use the space for sidewalk cafes, bike lanes, literally ANYTHING other than parking."
Create PSPS design standards. We need specific guidelines for how to create safe and attractive public spaces.	"Develop citywide standards for elements like bollards, seating, trash cans, etc., to reduce cost and enable easier design, implementation, and maintenance. Update Seattle's designs for streets to be made more pedestrian friendly and include street types that do not have cars."

Themes from BIPOC Communities and Equity-Priority Areas

Black, Indigenous, and People of Color (BIPOC) communities and equity-priority areas called out the following as particularly important themes for the Seattle Transportation Plan.

Theme	Quotes from Public Comments
Keep it green. Protect green space and trees and add more of them to increase shade and canopy, especially in underserved neighborhoods.	"Planting more trees, especially big ones where there are no power line issues along streets and sidewalks will reduce urban heat island impacts. This is especially needed in low canopy areas. SDOT needs to give priority to protecting existing trees and watering new trees to ensure their survival. Trees along busy streets will help slow traffic and help increase safety for pedestrians, cyclists, and drivers alike."
Prioritize outreach. Center development based on hubs and assets that have been identified by the community.	"Prioritize outreach to gather feedback from historically marginalized groups - meet with community advocates and leverage existing community hubs AND THEN take action based on that feedback."

PEOPLE STREETS AND PUBLIC SPACES IN SEATTLE

While the PSPS Element is new, the city has a long history of implementing projects and programs that meet the goals and objectives it outlines. The city, our residents, and private development all play a role in creating People Streets and Public Spaces. The city has a broad reach and implements improvements citywide, in close collaboration with community stakeholders. While development projects are required to provide public realm enhancements, they are typically localized to the development site.

Achievement of the PSPS network vision will require many types of investment with varying design and function. The types of People Streets and Public Spaces fall on a spectrum from streets that prioritize pedestrians and allow vehicle travel to spaces that are fully dedicated to people, as shown in **Figure 5**. This section describes the categories of People Streets and Public Spaces and how they collectively achieve the PSPS vision.

Figure 5: Range of People Street and Public Space Categories



PSPS CATEGORIES OVERVIEW

Table 2 provides a high-level definition of each PSPS category and more detailed profiles are included at the end of this section. The detailed profiles include a description, opportunities that category supports, selection criteria, design tools, and Seattle examples.

Table 2: People Streets and Public Spaces Category Definitions

PEOPLE STREETS	
Destination Streets	Streets in the heart of a neighborhood with a high density of destinations—shops, restaurants, cultural centers, and more—that will receive strategic investments to make them safer and more enjoyable for walking, rolling, and lingering as well as optimize their curb side uses.
Strolling Streets	Streets designed as linear park-like streets for recreation, exercise, connecting with nature or community, or traveling to specific destinations. These are typically along streets with lower vehicle volumes and speeds.
Shared Streets	Streets that create “people first” spaces either permanently or during certain times of the day or week. They inform access and curbside priorities along a street and are typically identified in partnership with the surrounding community. Shared Streets include Healthy Streets, Café Streets, School Streets, Event Streets, Special Alleys, and Pedestrianized Streets.
<i>Healthy Streets</i>	Streets designed for people walking, rolling, biking, and playing. They are closed 24/7 to pass-through traffic. People driving who need to get to homes and destinations along Healthy Streets retain access and can still drive on these streets.
<i>Café Streets</i>	Streets designed for high levels of foot traffic and lots of restaurants, street cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians.
<i>School Streets</i>	Streets designed for people walking, rolling, and biking to school and playing. They are closed to pass-through traffic, including parents and guardians. People driving to homes and destinations along School Streets, including school district transportation, retain access and can still drive on these streets.
<i>Event Streets</i>	Streets designed to host intermittent community events, such as farmers markets. These are street blocks where events may close movement of all vehicles, except emergency access, on a frequent or intermittent basis. No parking, loading activities, or business access is allowed during closures.
<i>Special Alleys</i>	Historic and special alleys with community destinations or retail density that generate human-scale spaces and accommodate essential service functions.
<i>Pedestrianized Streets</i>	Streets where people walking take priority that are permanently or intermittently closed to motorized vehicles. They are typically located along land uses that generate pedestrian activity, such as shops, restaurants, museums, and tourist attractions.
District Approach	An area-wide network of various categories of People Streets and Public Spaces that work together to create walkable neighborhoods and a sense of place. Depending on their location-specific goals, these districts may also be described by concepts such as low-pollution neighborhoods, resilience hubs, eco districts, low emissions zones, or home zones.
PUBLIC SPACES	
Plazas	Permanently pedestrianized spaces in the right-of-way that are designed to not allow vehicular access but could allow vending or food trucks for activation. They are typically found in active retail areas or at bus, streetcar, and light rail transit stops and stations.
Shoreline Street Ends	Designated areas for public access to the shoreline that occur where streets meet a shore.

SCALE OF INTERVENTION

Achieving the PSPS vision will require different scales of intervention given the diversity in neighborhoods. PSPS interventions will range in complexity and cost as some will be temporary improvements or pilots, and others will be permanent, capital-intensive commitments. In some cases, projects may initially be tactical, pilot projects to enable iteration and design refinements to inform more transformational projects.

In certain contexts, light-touch measures are all that is needed to make a street or place more functional and attractive. A context-sensitive approach that seeks to understand how the space is used and what the community desires and needs will ultimately inform the selection of the right type and scale of intervention.

Table 3 describes the range of possible actions we can take. It includes three different scales of intervention, description, application considerations, and a sense of how much each type of intervention would cost.

Table 3: PSPS Scales of Intervention in Streets and Spaces

Scale of Intervention	Description	Application Considerations
<div>\$</div>	Spot Improvements <p>Tidy Up & Declutter: Spot improvements such as removing unnecessary road markings or damaged street furniture, adding flexible porous surface treatment to tree pits, and making other similar upgrades that respond to the community's immediate needs. This would also include removal of clutter and/or consolidating street furniture and signs using strategic justification for every individual piece of infrastructure in the street.</p>	<p>Implemented in the near-term, serving as early wins. These types of improvements are often noted through community feedback for areas with high volumes of foot traffic and at Community and Mobility Hubs.</p>
	<p>Add Street Furniture: Spot improvements such as combining signage and lighting, eliminating unproductive furniture, relocating street furniture to better fulfill its intended use, and adding essential infrastructure that supports walkability such as benches, pedestrian wayfinding, bollards, and pedestrian lighting.</p>	<p>Consider adding discrete elements that do not require modification to the curb or street operations.</p>
<div></div>	Pilots & Tactical Redesign <p>Includes temporary improvements and interim public space enhancements such as tactical plazas and street pilot projects. Projects would typically consider changes to user priority; changes to travel lane widths or traffic signal removal; reallocation of right-of-way; and inclusion of delineator posts, planters, paint, and similar elements to create People Streets and Public Spaces. Pilots and tactical projects would typically be evaluated through public life and other studies and community engagement to refine the design and evaluate for advancement to permanent or transformational placemaking.</p>	<p>Pilots and Tactical Redesign are tools for quickly testing and deploying concepts and adjusting to user experience and feedback to inform more permanent and transformational investments. Projects could be at intersections, block faces, or span multiple blocks (e.g., Ballard Ave). Consider the construction of interim curb bulbs and widened sidewalks, the timing of signals, operational changes, elimination of slip lanes, use of traffic diverters, and closure of specific blocks using tactical delineator posts and planters.</p>
<div>\$\$\$</div>	Transformational Placemaking <p>Permanent redesign of the street. This may include creation of shared streets, new plazas, use higher quality materials to create signature areas, extensive green stormwater investments, integration of holistic corridor redesign projects from property line to property line, and intersection redesign.</p>	<p>Typical applications will include intersections, entire blocks, or series of blocks. In many instances, tactical and pilot projects may inform more permanent transformational investments. Projects may be on the sidewalks, between curb and curb, or span the whole street between property face and property face. These projects are opportunities to collaborate with OED, SPU, and SPR to implement green infrastructure, support business districts through multifaceted investments, and close gaps in access to open space.</p>

HOW PEOPLE STREETS AND PUBLIC SPACES ARE IDENTIFIED

The PSPS Inventory and Future PSPS Network maps presented in **Figure 6** to **Figure 17** below establish a foundation and vision for where PSPS opportunities exist. Specific People Streets and Public Spaces projects will be identified and implemented using different approaches, but no matter what approach is taken, communities will be at the center of decision-making. Below are four ways People Streets and Public Spaces projects may come to fruition:

- **PSPS Plans**—projects proactively developed in collaboration with communities.
- **Community Requests**—projects developed in response to community requests.
- **Through Permitting**—projects identified during the permitting of private development, as Public Benefits, or where there is concentrated public space activity programming.
- **Partnering Opportunities**—projects identified opportunistically through the SDOT project development process; through private development project reviews; through large capital projects led by others like future light rail investments; through program coordination such as with community and mobility hubs; or through partnerships with other agencies or City departments.

ACTIVATION AND PERMITTING

PSPS strategies incorporate public space programming, which brings free activities like arts, culture, fitness, and educational experiences to public spaces. At SDOT, we work with residents, organizations, and businesses to enhance neighborhoods, strengthen communities, enliven public spaces, and promote economic vitality. *Streets Illustrated* (Seattle's Right-of-Way Improvements Manual, Section 4.1. City of Seattle Permit Process) outlines programs for parklets, outdoor dining, vending, street closures by permit, and festival streets.

PSPS CATEGORY PROFILES

The following profiles provide detailed descriptions of each PSPS category. They include an overall description, opportunities, selection criteria, design tools, how projects are identified, possible scales of intervention, and examples found in Seattle.

Destination Streets



Retail Area on Lake City Way NE

Destination Streets focus on strategic sidewalk and intersection improvements in business areas that contain pedestrian-oriented retail and services. PSPS interventions along Destination Streets generate equitable public realm enhancements in business districts citywide and prioritize placemaking improvements in areas where there are people walking.

Opportunities

- Create street space focused on people and public space
- Prioritize pedestrians at street crossings and intersections
- Support economic development in business districts
- Manage critical access to the curb and loading needs of local businesses
- Make it safe and easy for people traveling to or from the destination street by transit, biking, or walking

Selection Criteria

- Typically located along street segments where there is a Pedestrian Zone¹⁵ or Neighborhood Commercial Zone designation and observed pedestrian retail areas at least 1 block in length.

Design Tools

Safety improvements, such as increasing the density of marked and signalized crosswalks, including all-way crossings (i.e., pedestrian scrambles) and mid-block crosswalks; re-channelization of vehicular lanes; installing medians, raised intersections, and raised crosswalks. Public space improvements, such as widening sidewalks, and incorporating pedestrian-scale lighting, landscaping and trees, wayfinding, seating, and public art.

How Projects Are Identified

PSPS Plans	✓
Community Request	✓
Through Permitting	
Partnering Opportunity	✓

Possible Scales of Intervention

Tidy Up	✓
Declutter	✓
Add Street Furniture	✓
Pilots & Tactical Redesign	✓
Transformational Placemaking	✓

Examples

King St (Chinatown International District), Rainier Ave (Columbia City), and Martin Luther King Jr. Way (Othello)

¹⁵ Pedestrian zones are a land use designation from the Seattle Municipal Code and Streets Illustrated that requires additional sidewalk widths.

Strolling Streets

Strolling Streets are where walking can be enjoyed, whether to access destinations, get exercise, or connect to nature and open space. They include streets that have low traffic volumes and slower speeds and offer a low stress environment for pedestrians and bicyclists. Strolling streets are linear park-like streets with abundant landscaping and street furniture.

Opportunities

- Encourage walking trips by making it a pleasant journey
- Provide a climate resilient landscape along streets
- Support placemaking and neighborhood livability
- Foster a people-centered street culture

Selection Criteria

- Typically supported by pedestrian-oriented retail and a mix of medium-to-high density multifamily residential and retail uses.
- Along streets with lower traffic volumes and speeds.
- In some instances, successful Strolling Streets or segments of Strolling Streets may become candidates for future Shared Streets, such as Pedestrianized Streets.



14th Ave NW in Ballard (top) and Pontius Ave N in South Lake Union (bottom)

Design Tools

Safety improvements, such as increased density of marked and signalized crosswalks, including all-way crossings (i.e., pedestrian scrambles) and mid-block crosswalks; re-channelizing vehicular lanes; installing medians, raised intersections or crosswalks, bollards, speed humps, or diverters. Public space improvements, such as widening sidewalks (reclaiming space from flex or vehicular lanes) or building raised/curbless streets, and incorporating pedestrian scale lighting, green stormwater infrastructure, landscaping, wayfinding, seating, and public art.

How Projects Are Identified

PSPS Plans	✓
Community Request	✓
Through Permitting	✓
Partnering Opportunity	✓

Possible Scales of Intervention

Tidy Up	✓
Declutter	✓
Add Street Furniture	✓
Pilots & Tactical Redesign	✓
Transformational Placemaking	✓

Examples

S Edmunds St (Columbia City), Melrose Promenade; NE 43rd St (U District), 8th Ave, Yale Ave, and Terry Ave (South Lake Union)

Shared Streets



Example of a Healthy Street

Shared Streets are people-first spaces either permanently or during certain times of the day or week. They incorporate design measures that allow pedestrians, bicyclists, and vehicles to co-mingle in the right-of-way, while still accommodating the critical access needs of businesses and emergency vehicles. The street is designed to keep speeds low.

We will partner with the community through future neighborhood studies to identify the specific type(s) of Shared Street treatments and conversions that are appropriate in that particular context. Shared Streets include a range of potential

design treatments, which will be determined through a participatory discussion with the community. Shared Streets may be implemented as pilots with tactical improvements. Once successful as proof of concept, they can be prioritized for large capital investments.

Shared Streets can take the form of **Healthy Streets, Café Streets, School Streets, Event Streets, Special Alleys, and Pedestrianized Streets** or could be used in combination. These are described in more detail on the following pages.

Opportunities

- Foster a culture of safe and low-stress spaces inside neighborhoods
- Provide more space for people to walk, bike and gather for community activities
- Promote safety through the reduced speed of vehicles that travel through PSPS locations

Selection Criteria

- Typically found on non-arterial streets with low vehicle traffic volumes and speeds and no bus service.
- Can also occur on arterial streets with high pedestrian volumes, where the land use immediately adjacent supports pedestrian activity (e.g., shops, restaurants, museums, tourist destinations).
- The access and loading needs of the properties along these streets is critical to understand their suitability as a shared street and should include consideration of whether these needs can be met on side streets, off street, or in alleys.

Design Tools

The design of Shared Streets should always prioritize pedestrians. Vehicular access may range from local access only, to business loading and unloading, to emergency access only.

Retrofitted Shared Streets may include elements, such as bollards, diverters, planters, curb bulbs, speed humps, murals, and special street signs. Fully rebuilt Shared Streets typically include integrated and textured paving from property line to property line to signal to vehicles that they are on a special street that prioritizes people and accommodates vehicular local access, but only at very slow speeds. Street furniture such as benches, lighting, trees, bollards, and landscaping are placed strategically to create narrow areas that further slow vehicular speeds down.

How Projects Are Identified

PSPS Plans	✓
Community Request	✓
Through Permitting	✓
Partnering Opportunity	✓

Possible Scales of Intervention

Tidy Up	✓
Declutter	✓
Add Street Furniture	✓
Pilots & Tactical Redesign	✓
Transformational Placemaking	✓

Shared Streets: Healthy Streets

Healthy Streets are always open to people walking, rolling, biking, and playing, but closed to pass-through traffic. This distinction makes them different than Neighborhood Greenways. The goal of Healthy Streets is to provide people walking, biking, and rolling access to the full width of public right-of-way. People driving who need to access homes and destinations along Healthy Streets are intended to move at the speed of play and share the space with people outside of vehicles. People who drive on the street to make deliveries, provide essential services (emergency access, public utilities), and visit homes and businesses expect people to be in the street and drive at slow speeds.



Example of a Healthy Street

Healthy Streets were originally introduced to provide space for social distancing in response to the COVID-19 pandemic and are now being made permanent and piloted in new locations as part of the PSPS, Bike+, and pedestrian networks.

Opportunities

- Provide safe spaces for people to walk, bike, roll, and gather in their neighborhoods
- Improve physical and mental health of individuals and communities through recreation, physical activity, and community connections
- Reduce barriers to hosting small community gatherings in the street; because Healthy Streets are closed, no permit is required for Play Streets, Trick-or-Streets, or similar events

Selection Criteria

Any non-arterial neighborhood street may be considered for a future Healthy Street. Existing or planned neighborhood greenways are common candidates for Healthy Streets. Future Healthy Street pilot locations will be selected through a needs assessment (increasing access to public open space, equity) and feasibility analysis. Pilot locations may be made into permanent Healthy Streets after an evaluation that considers quantitative traffic data and qualitative information gathered through public engagement.

Design Tools

Healthy Streets are identified through their gateway features that narrow the street entrance and prominently display Street Closed and Healthy Street signs alerting drivers to share this street with people outside of vehicles. Additional features can include improved crossings at busy streets, speed humps to slow down drivers, and sign and pavement markings to help people find their way. They can also include diverters to limit vehicle through traffic without inhibiting movement of people walking or biking, and street murals to discourage people from driving on Healthy Streets. Elements that allow street play activities, such as hopscotch and basketball, that would normally require a street closure permit and infrastructure to encourage gathering, such as benches and art can be included. Trees, plants, and green stormwater infrastructure may be included where appropriate. Additional design tools may be identified through the Healthy Street Toolkit.

Examples

Bell St (Belltown), 32nd Ave NE (Little Brook/Olympic Hills), 18th Ave S (Beacon Hill)

Shared Streets: School Streets



School Street
(Image Source: Seattle Public Schools)

School Streets prioritize people walking, rolling, and biking to school. They help encourage families to walk or bike to school, provide a safer school environment by eliminating through traffic, and improve air quality next to the school. They may include one or two street blocks directly adjacent to a school.

People driving to homes and destinations along School Streets, school district-provided and Americans with Disabilities Act (ADA) transportation, and emergency and service vehicles retain access and are

still able to drive on these streets. School staff can close School Streets to all traffic temporarily at school arrival and departure times or for school programming during the day.

Opportunities

- Provide a safer environment and improved air quality around schools
- Encourage families to walk or bike to school
- Provide additional space for recreation for the school community and neighborhood

Selection Criteria

Any non-arterial neighborhood street adjacent to a school. School Streets must be requested by school administration and cannot have a public bus route or layover.

Design Tools

Initial installation includes temporary “Street Closed” and branded signage. Permanent School Streets include student artwork on the street and permanent signage in painted curb bulbs with bollards to narrow the street entrance. Additional improvements such as planters, spaces that invite play, diverters to discourage vehicle through traffic, or de-paving can be included where appropriate and where funding allows.

Examples

14th Ave NW (Whittier Elementary), SW Dakota St (Genesee Hill Elementary)

Shared Streets: Café Streets

Café Streets have lots of foot traffic and a high density of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. The street is designed to keep speeds low and operates to give priority to pedestrians. Goods loading and business access is accommodated at the curb, and emergency and local access is maintained. Parking is not a priority on Café Streets. Café Streets may have intermittent full closures, ideally without requiring a permit.



Ballard Ave Café Street

Opportunities

- Bring Café Streets to more communities, reducing inequities
- Build relationships with small businesses and support their operation
- Encourage walking and use of public space by creating more vibrant and welcoming streets

Selection Criteria

Adjacent land uses are predominantly mixed use, with commercial or other pedestrian activity-generating uses at street level; there is interest from adjacent businesses or the community.

Design Tools

Café Streets can include design tools such as seating and tables, weather protection, public art, murals, plazas, street planting, bollards, higher quality pavement materials, or traffic calming, as well as programming and activation through buskers, performing artists, or vendors. Additional features can include improved crossings at busy streets, speed humps to slow down drivers, and sign and pavement markings to help people find their way. They can also include diverters to limit vehicle through traffic without inhibiting movement of people walking or biking, and street art to further slow vehicular traffic.

Examples

Ballard Ave

Shared Streets: Special Alleys

Special Alleys can break up the street grid or large blocks by creating a porous and interesting walking environment. They generate human-scale spaces that expand retail density and community assets, and they accommodate essential service and access functions for businesses or institutions. Special Alleys support community objectives for local placemaking. The PSPS program will identify future Special Alleys in collaboration with the community.



Canton Alley (Image Source: UW Urban Commons Lab / Nakano Associates)

Opportunities

- Articulate a more standardized approach to balancing people space with critical access and service functions of alleys
- Define criteria for future interventions as there is not a means to improve or channel investments to these spaces currently

Selection Criteria

Existing commercial alleys, historical alleys, alleys with approved concept plans, dense urban districts with substantial mixed-use development and pedestrian oriented retail, or alleys with active retail frontages along the alley

Design Tools

High quality pavements, pedestrian-scale lighting, green walls, and festival lighting. Partner with adjacent property owners and businesses to create active storefronts, café seating, and other active uses, and consolidate trash pickup.

Examples

Nord Alley (Pioneer Square), Canton Alley (Chinatown), and Nihonmachi Alley (Japantown)

Shared Streets: Event Streets



Summer Streets 2013 PhinneyWood

Event Streets are specific street blocks that are suitable for community events. These are blocks where events may prohibit vehicle access on a frequent or intermittent basis (emergency access is always maintained). Parking, loading, and business access is prohibited during closures. Event Street designations provide the opportunity to enable more frequent community activation of the right-of-way. Event Streets can include seasonal closures, such as Open Streets, Summer Streets, and similar programs that reimagine the use of the right-of-way.

Opportunities

- Support communities and local placemaking
- Enable more frequent activation of the right-of-way by communities

Selection Criteria

Typically implemented on non-arterials at the heart of neighborhoods, but in some cases on arterials

Design Tools

Event streets may be established on existing streets using movable barriers or removable bollards to exclude traffic or designed into new streets. May take the form of curb-less streets and include features such as power outlets and posts for banners and temporary festival lighting.

Examples

Farmers Market streets, designated Festival Streets, such as South Roberto Maestas (Beacon Hill) and other curbless blocks around Link light rail stations, and streets with community events, such as night markets, food truck nights, and craft shows

Shared Streets: Pedestrianized Streets



Occidental Avenue S in Pioneer Square

Pedestrianized Streets are streets that create great places for people to socialize, play, shop, linger, or just pass through. They are either permanently or intermittently closed to motorized vehicles. People walking take priority. Deliveries may still be permitted at certain times of day, and emergency access is maintained. Pedestrianized Streets create attractive public spaces which encourage walking and a sense of community.

Opportunities

- Provide more space in high pedestrian traffic areas
- Provide space for businesses to “spill out into the street” creating interest and economic exchange opportunities
- Grow the network of pedestrian-only areas and define a toolkit of approaches to enable critical business access needs and pedestrian priority
- Some School Streets and Special Alleys may be good candidates for pedestrianization.

Selection Criteria

Typically, non-arterial streets with adjacent land uses generating pedestrian activity, such as shops, restaurants, museums, tourist attractions, transit hubs, and residences.

Design Tools

Ranges from lower-cost treatments such as movable barriers to divert traffic to curb-less street. Other features may include bollards, pedestrian-scale lighting, landscaping, high-quality pavements, public art, street furniture, café seating.

Examples

Occidental Ave (Pioneer Square), Pike St between 1st Ave and 2nd Ave

Plazas

Plazas are fully and permanently pedestrianized spaces in the right-of-way. They are not designed for vehicular access except for activation purposes (e.g. food trucks). They are typically found in active retail areas, along active frontages, or at bus, streetcar, and light rail stations. Plazas provide access to transit and support community objectives for local placemaking. Future plazas will be identified in collaboration with the community.



First Hill Pocket Plaza at University St & Boylston Ave

Opportunities

- Offer spaces of respite from traffic and noise
- Generate public life
- Reclaim underutilized right-of-way for pedestrians (e.g., McGraw Square)
- Improve the transit experience when adjacent to transit stations and hubs

Selection Criteria

Plazas are typically identified where there is right-of-way that could be transformed into small, park-like open spaces. Plaza investments are especially prioritized where there are gaps in open space, as well as at community and mobility hubs. Plazas may also be identified through the design of other People Street projects. In certain instances, transfer of jurisdiction or maintenance partnerships with Seattle Parks may be possible (e.g., Little Brook Plaza, Delridge Triangle).

Design Tools

May be established using lower-cost more temporary treatments such as planters or designed as capital projects. May include seating, public art, lighting, landscaping and trees, shelter/canopies, small stages for events, among other features. Include elements that support various travel modes like bike racks, shared mobility parking, and transit furniture.

How Projects Are Identified

PSPS Plans	✓
Community Request	✓
Through Permitting	✓
Partnering Opportunity	✓

Possible Scales of Intervention

Tidy Up	✓
Declutter	✓
Add Street Furniture	✓
Pilots & Tactical Redesign	✓
Transformational Placemaking	✓

Examples

McGraw Square (Downtown), Fortson Square (Pioneer Square)

Shoreline Street Ends

Shoreline Street Ends are designated areas for public access that occur where streets meet a shore. The goals of the program are to equitably improve and maintain shoreline access and enjoyment across a broad spectrum of Seattle's neighborhoods and enhance the shoreline habitat through the inclusion of ecological benefits like native plants and green stormwater treatment.



E Allison St in Eastlake

Opportunities

- Raise neighborhood awareness of Shoreline Street Ends
- Explore new opportunities to leverage funding resources
- Encourage stewardship through an extensive network of community partners

Selection Criteria

The Shoreline Street Ends Work Plan of 2017 identified 149 locations for improvement. As of 2023, there are 96 Shoreline Street Ends improvements. The program identifies and works with community partners to maintain and improve Shoreline Street Ends for public use.

Design Tools

Shoreline Street End projects rely on a variety of partnerships for delivery, including partnering with Seattle Parks, Seattle Public Utilities, non-profit and neighborhood groups, and adjacent property owners. Permit fees are also used to fund projects, with a specific focus on increasing equitable access to Seattle's Shorelines. Design tools include:

- Native plantings
- Tables and benches
- Water access stairs or paths

How Projects Are Identified

PSPS Plans	✓
Community Request	✓
Through Permitting	✓
Partnering Opportunity	✓

Possible Scales of Intervention

Tidy Up	✓
Declutter	✓
Add Street Furniture	✓
Pilots & Tactical Redesign	✓
Transformational Placemaking	✓

Examples

W McGraw St (Magnolia), Allison St (Eastlake), South Park Pump Station

PSPS NETWORK MAPS

Current PSPS Inventory

Figure 6 through Figure 11 show the existing PSPS network of public spaces (Plazas and Shoreline Street Ends), and Shared Streets (Healthy Streets, Café Streets, School Streets, Special Alleys, and Event Streets). These exist through public space management permitting and design interventions in the streetscape.

Future PSPS Investments

Figure 12 through Figure 17 show the emerging vision for how the PSPS network will develop. The future investment opportunities identified on the following maps draw from existing neighborhood plans, streetscape concept plans, and known community initiatives.

Our focus will be on equitable distribution of People Streets and Public Spaces so that all communities benefit from the economic, social, and public health benefits of these investments. Therefore, various neighborhoods have been identified for future community-scale People Streets and Public Spaces Plans to identify local, community-prioritized People Streets and Public Space needs that are not captured in existing plans and projects.

In addition, all the People Street categories listed in **Table 2** are included.

The PSPS future network will be informed by these fundamental network considerations:

- Creating People Streets and Public Spaces in every neighborhood.
- Creating inclusive and welcoming Community and Mobility Hubs.
- Prioritizing communities disproportionately impacted by pollution.
- Reconnecting neighborhoods in communities that have been divided by major transportation infrastructure, freeways, state highways, bridges, and rail lines.
- Increasing access to parks and shorelines in communities with deficits in public open space.
- Continuing to transform Downtown into a people-oriented city center.

For more detail on future actions, see “Programmatic Activities” below.

Figure 6: Existing People Streets and Public Spaces Inventory – Northwest

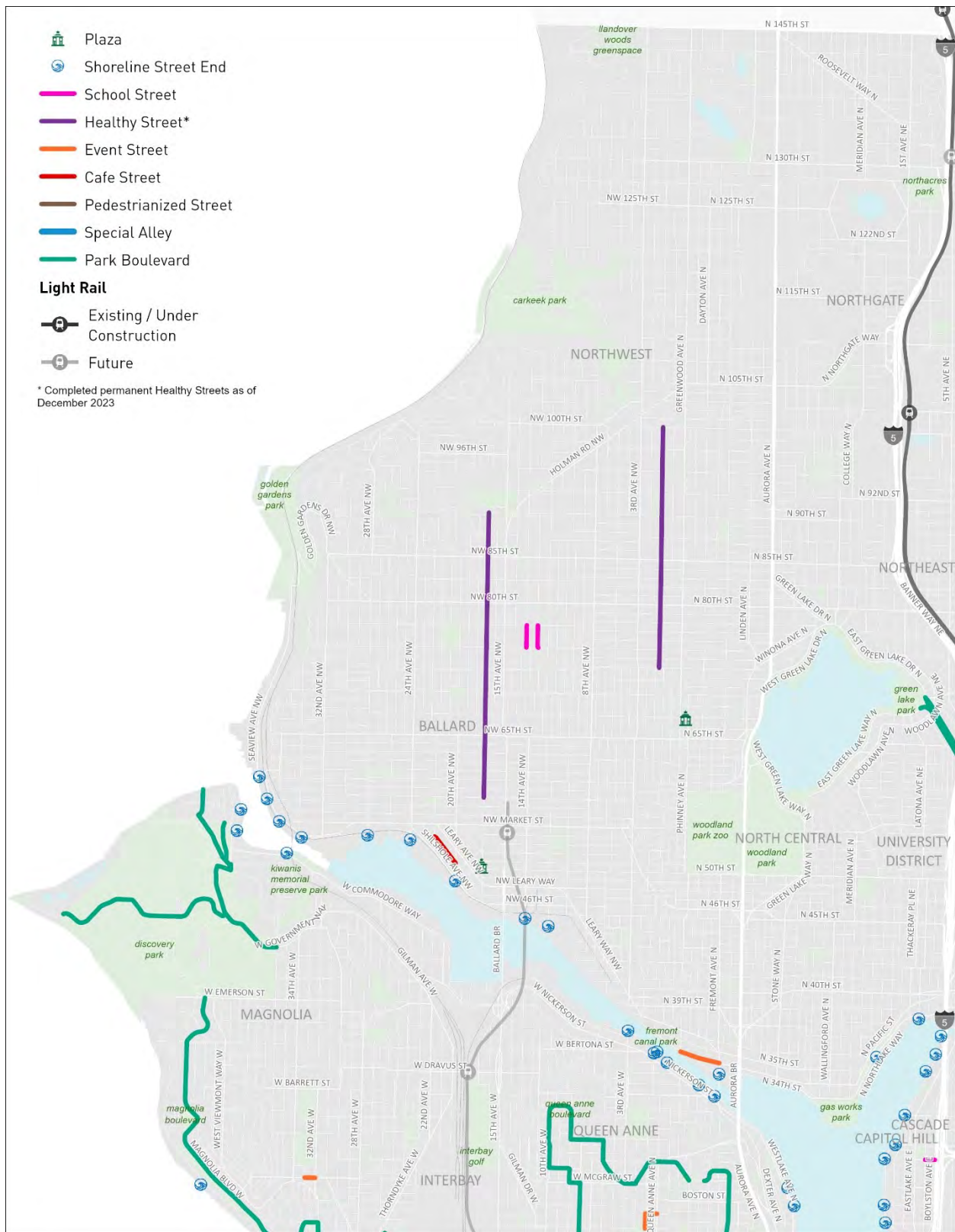


Figure 7: Existing People Streets and Public Spaces Inventory - Northeast

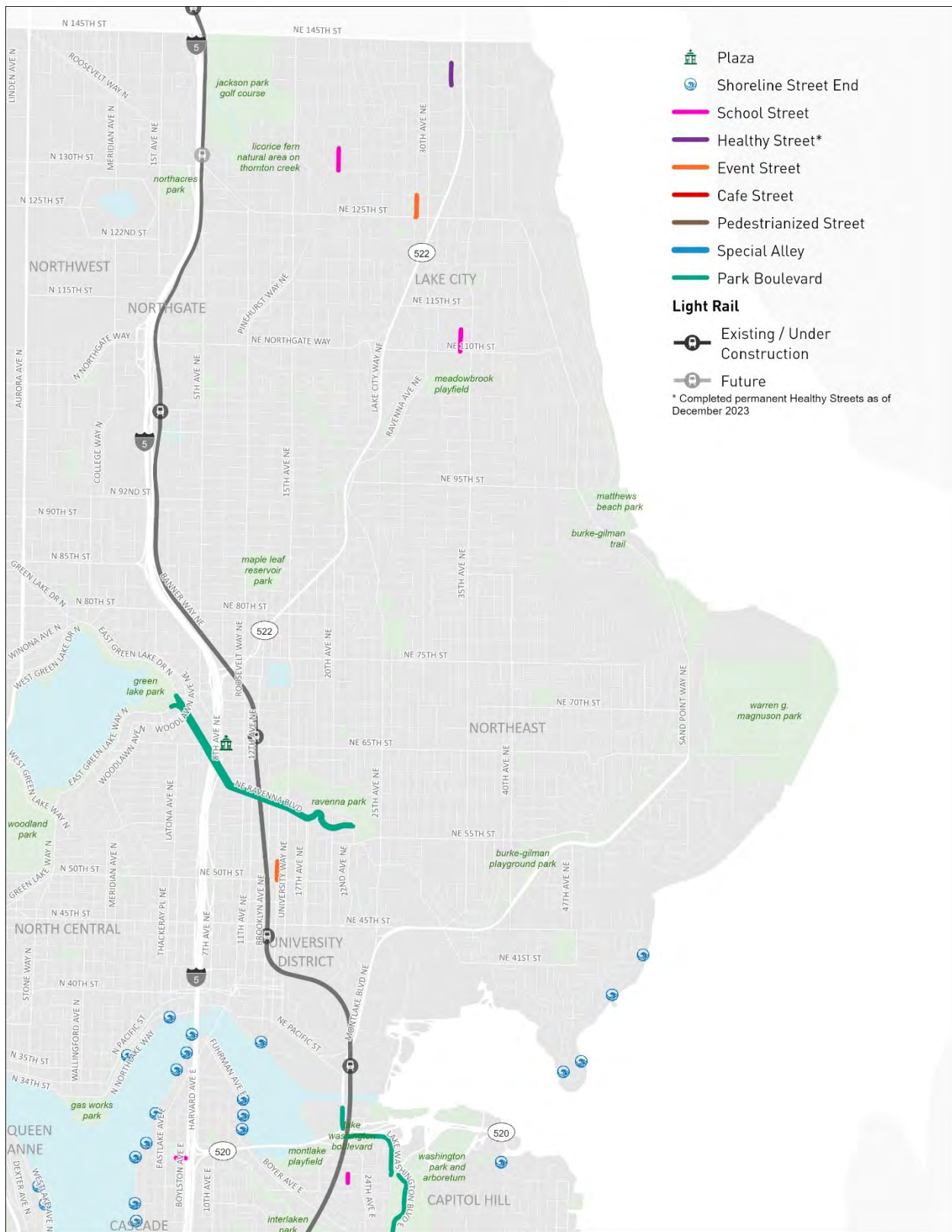


Figure 8: Existing People Streets and Public Spaces Inventory – West

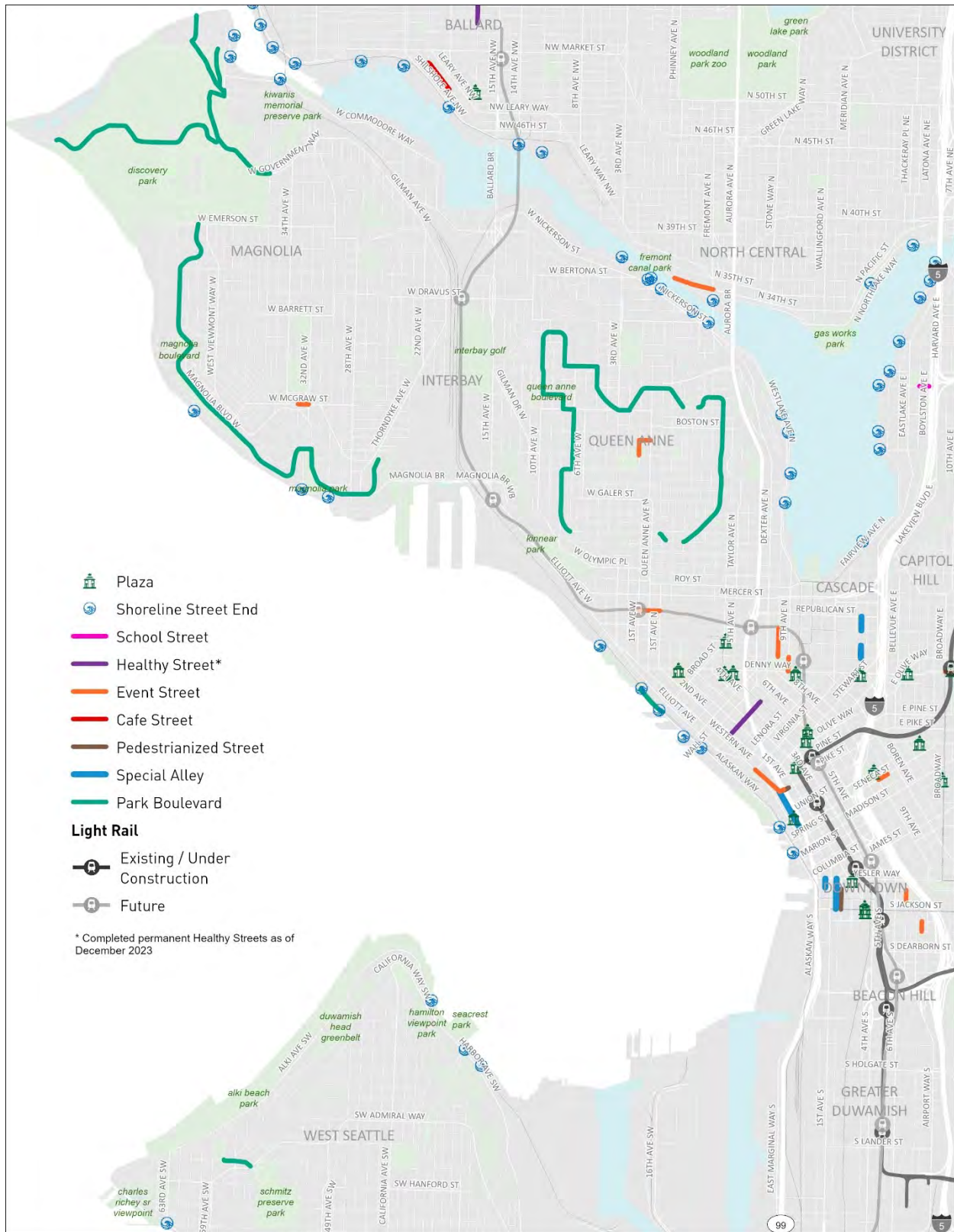


Figure 9: Existing People Streets and Public Spaces Inventory – East

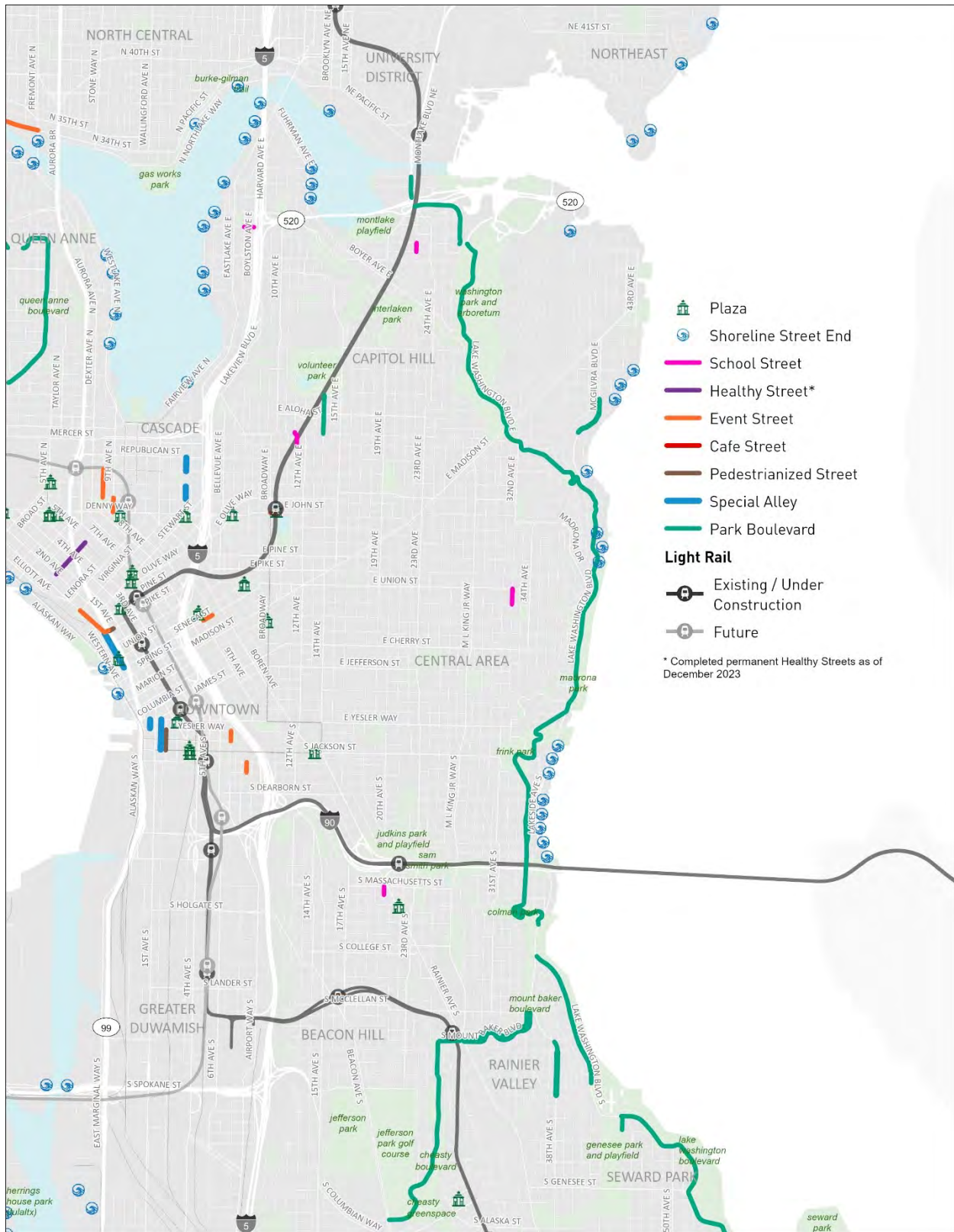


Figure 10: Existing People Streets and Public Spaces Inventory – Southwest

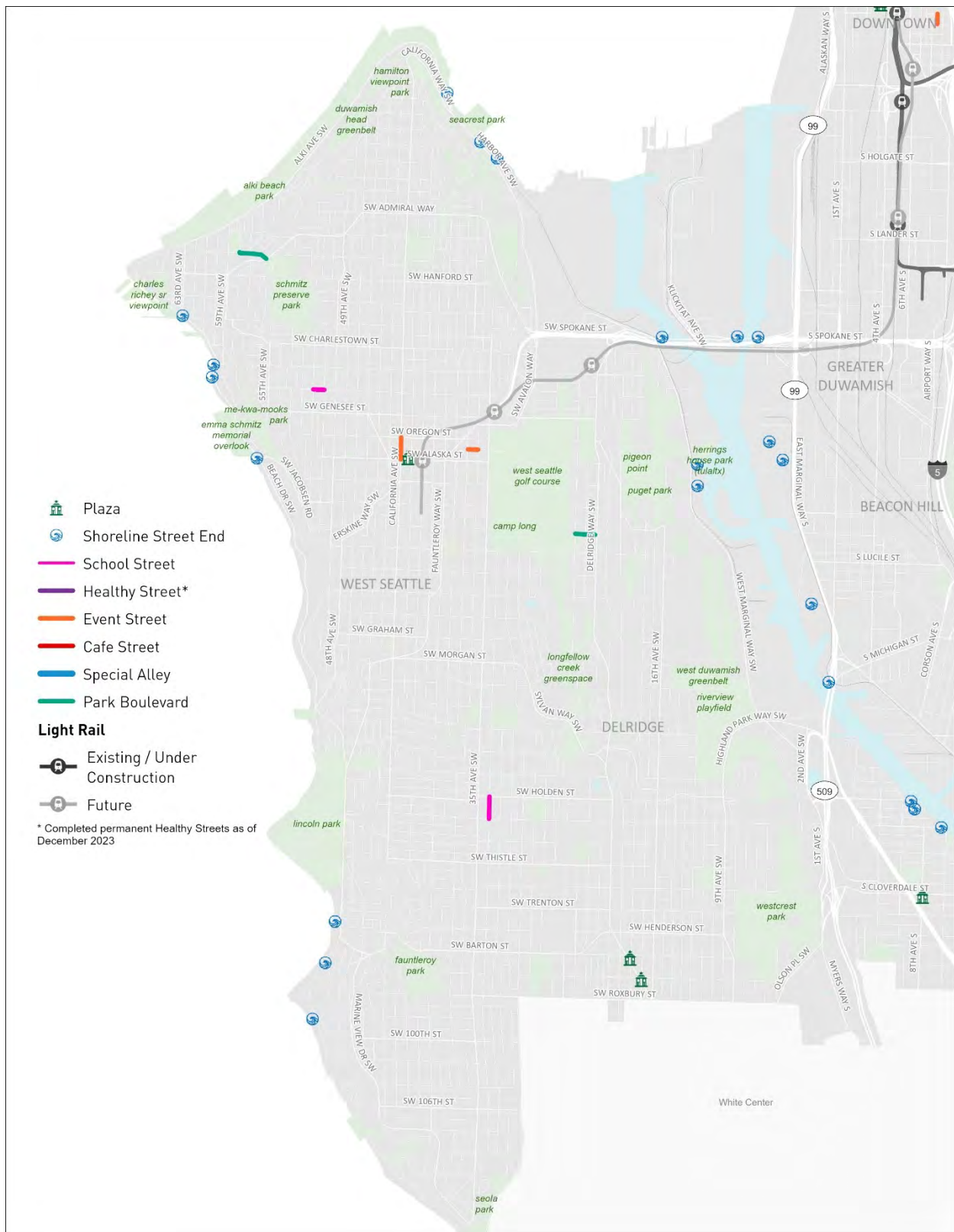


Figure 11: Existing People Streets and Public Spaces Inventory – Southeast



Figure 12: Future People Streets and Public Spaces – Northwest

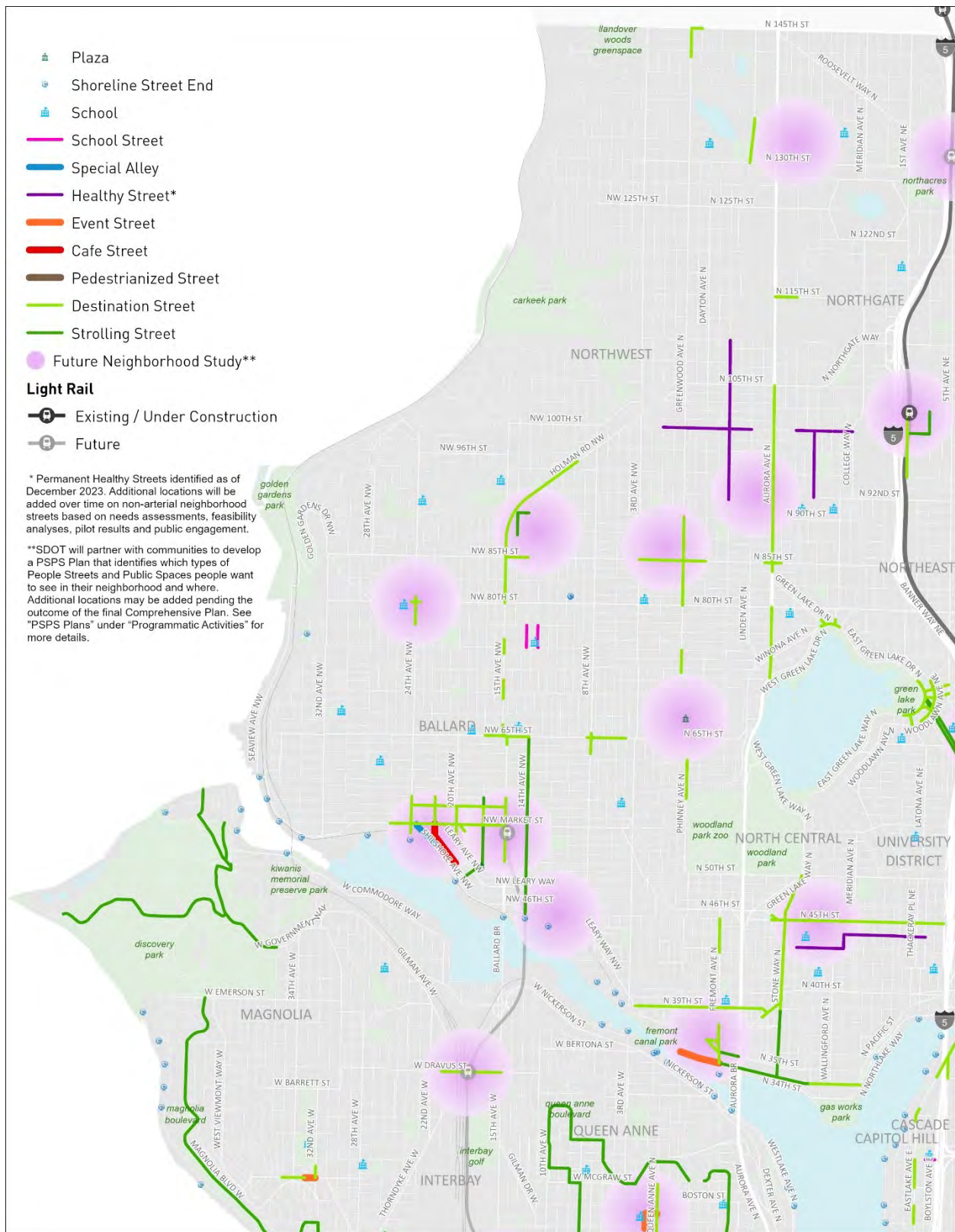


Figure 13: Future People Streets and Public Spaces – Northeast

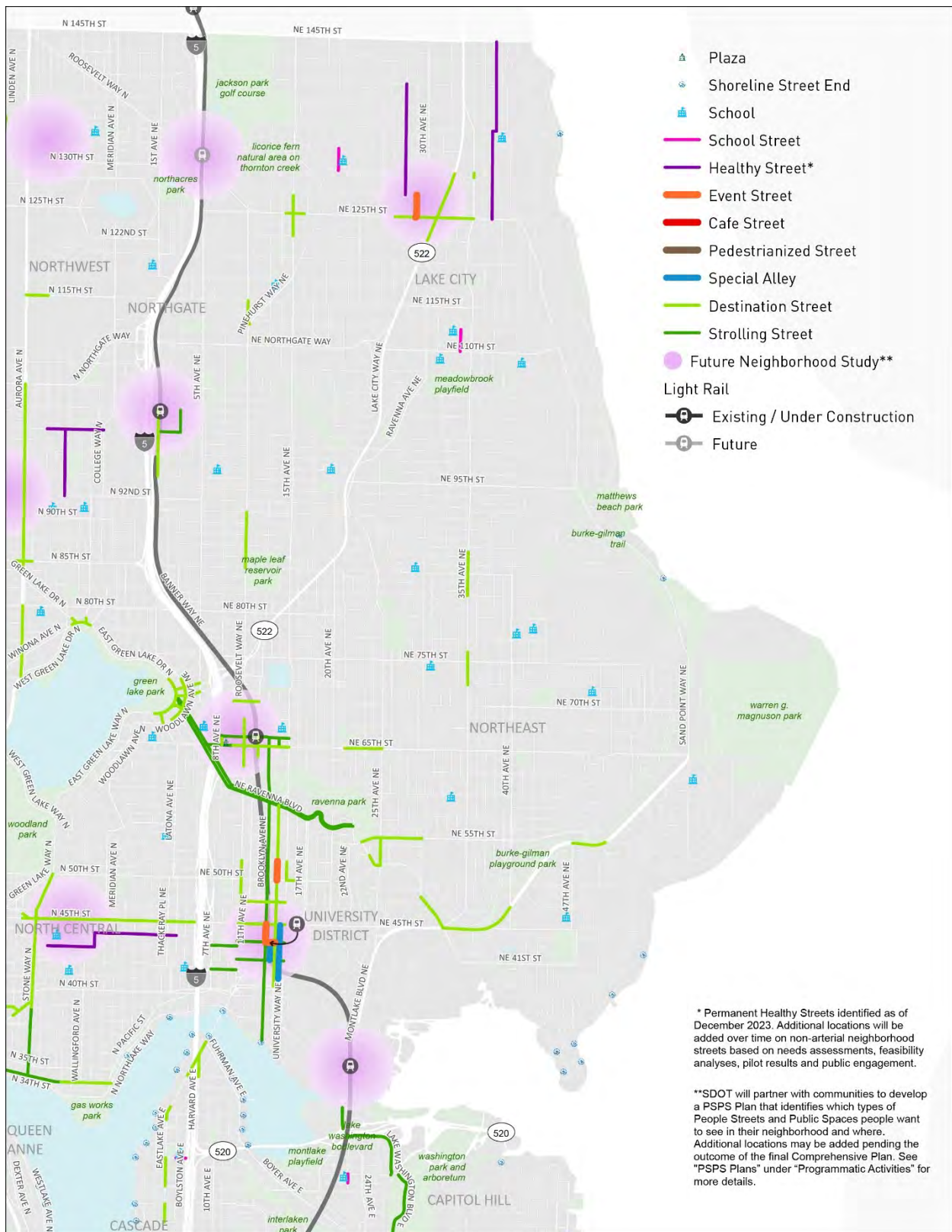


Figure 14: Future People Streets and Public Spaces – West

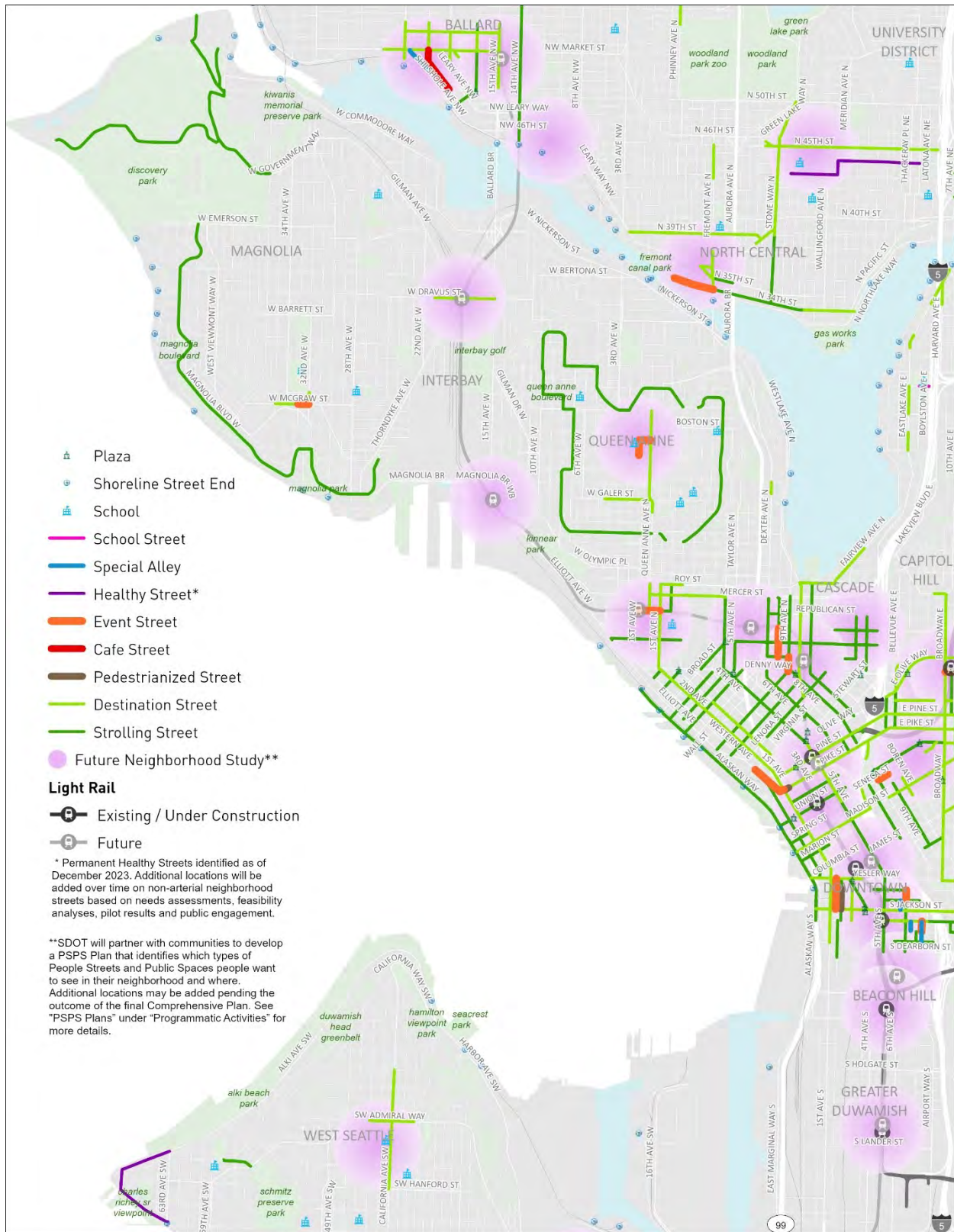


Figure 15: Future People Streets and Public Spaces – East

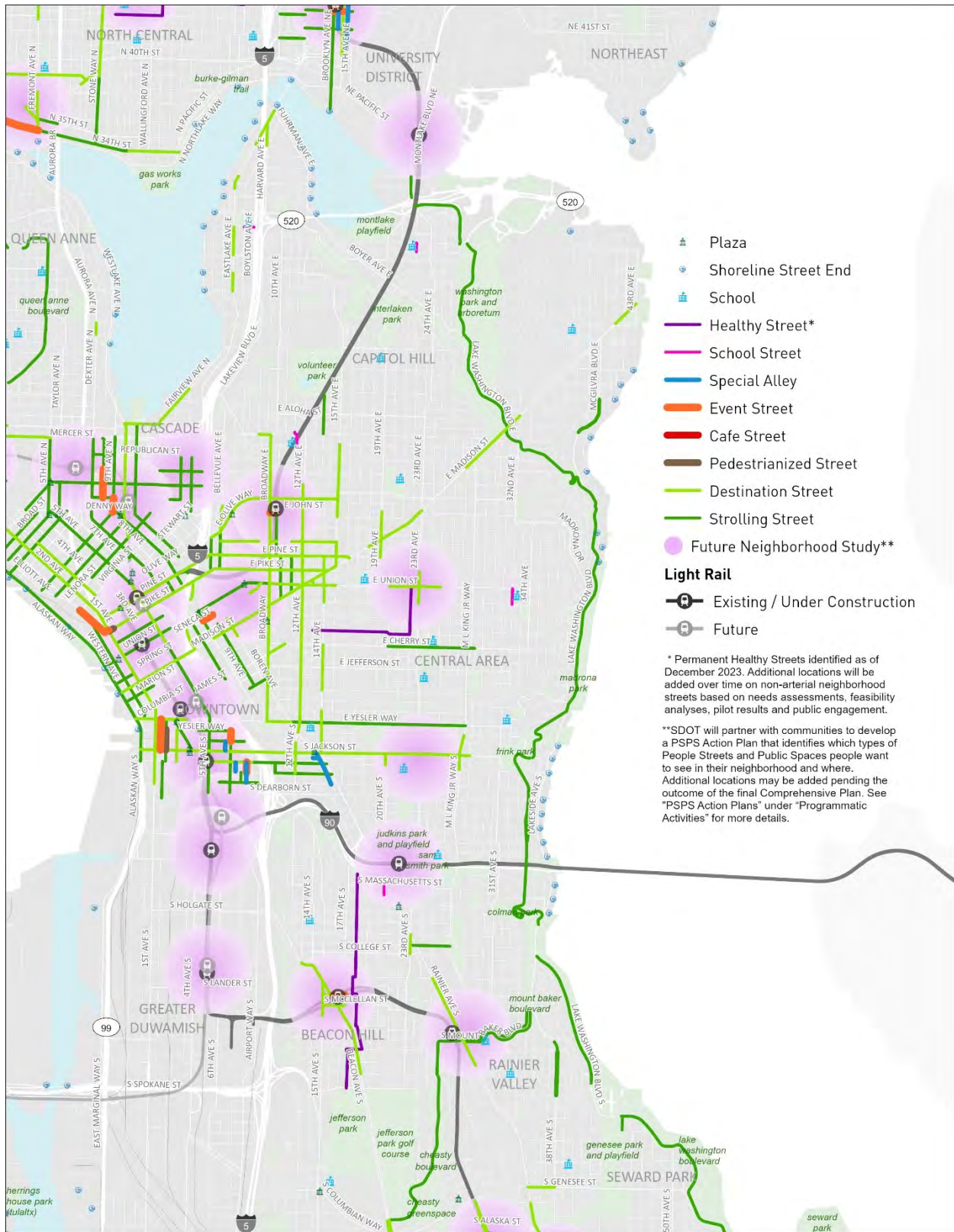


Figure 16: Future People Streets and Public Spaces – Southwest

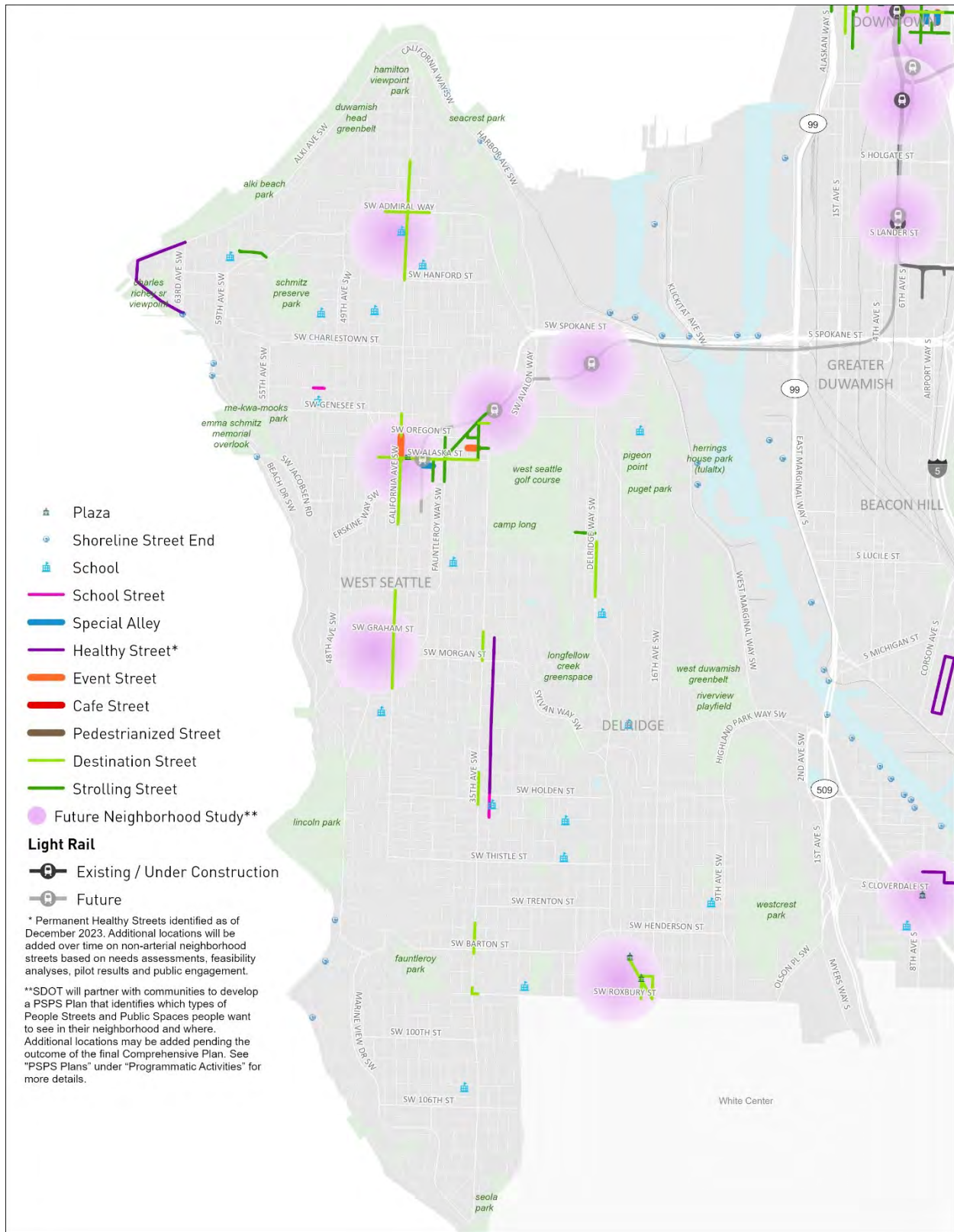
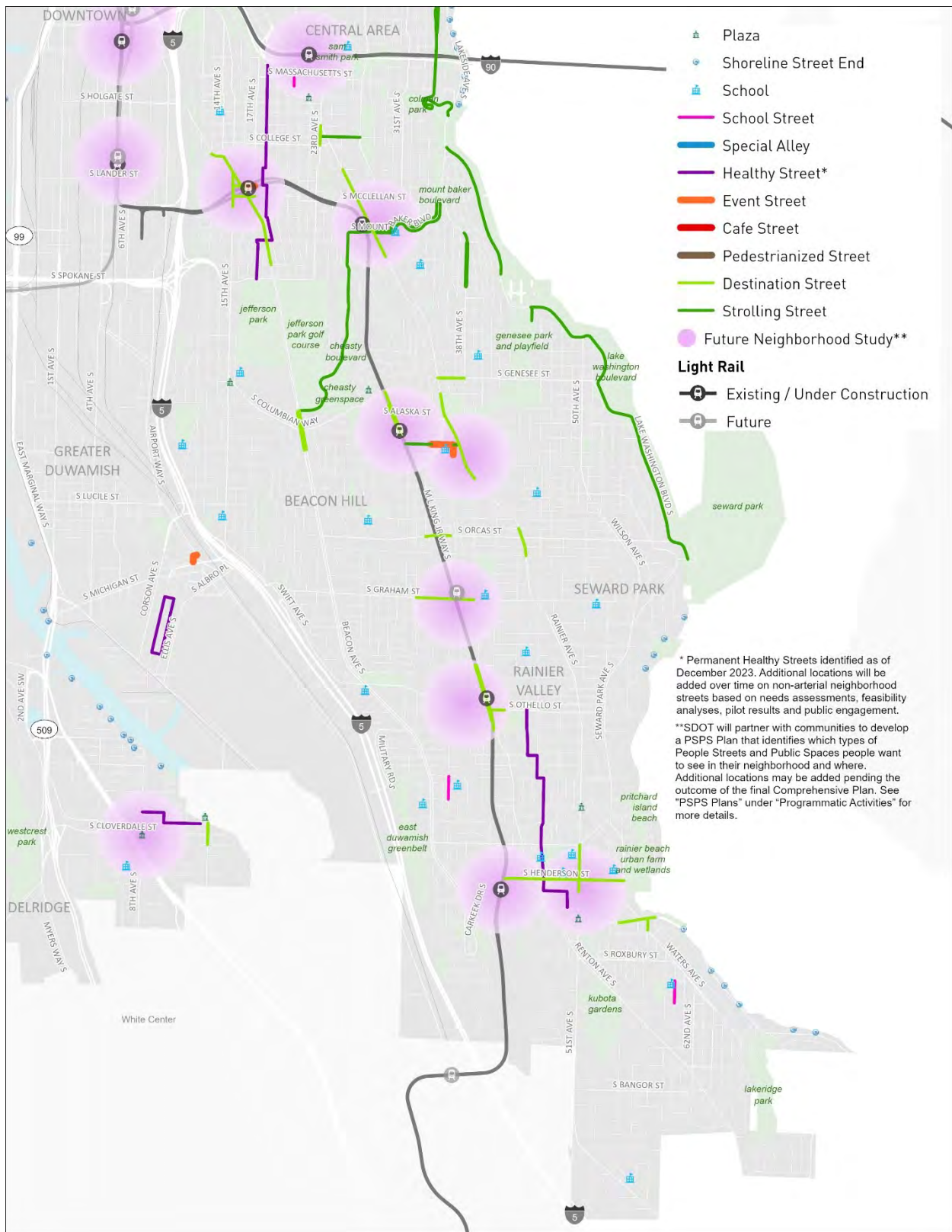


Figure 17: Future People Streets and Public Spaces – Southeast



PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than specific to a project) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change; however, the programs listed here provide helpful general information to describe the types of tools and methods we will employ to manage the transportation system.

People Streets and Public Spaces Program

The PSPS Element offers the opportunity to rethink many existing SDOT programs and activities and package them into a full life-cycle program that spans planning, design, construction, management, and evaluation. This approach fosters greater collaboration between existing programs, like SDOT Urban Design and SDOT Public Space Management, and new programmatic activities will strategically address the gaps and needs identified through public engagement and ongoing projects so we can better deliver on PSPS goals.

The PSPS program will formalize existing inter-program relationships, make it easier for residents and businesses to understand and access our programs, and enable us to better partner with residents, businesses, and community-based organizations to achieve equitable People Streets and Public Spaces across Seattle. Element goals would be achieved through regulated uses in the right-of-way, policy and planning efforts, capital project design and delivery, and grant-funded community projects. The proposed programmatic activities would capture and expand existing activities and identify new activities.

PSPS Network Implementation

Over time, we will seek to construct the PSPS network outlined in this Plan through a variety of SDOT programs, such as Healthy Streets, Safe Routes to School, Public Space Management, Urban Design, and People Streets and Public Spaces.

Implementation includes spot improvements, pilot and tactical redesign projects, and transformational placemaking projects. Smaller-scale projects are typically designed in-house and delivered through SDOT crews, while larger-scale projects may require design consultants outside contractors for project design and delivery. SDOT will seek to:

- Systematically design and invest in Destination Streets, Strolling Streets, Café Streets, Pedestrianized Streets, Event Streets, Special Alleys, Plazas identified through PSPS Plans, community requests, and partnership opportunities.
- Reallocate street space currently used for vehicle storage and general-purpose travel to support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations. Reallocating street space will support economic vibrancy, community vitality, and walkability in the heart of every neighborhood.

- Provide equitable access to People Streets and Public Spaces. Invest in historically underserved neighborhoods, to correct the imbalance of access to open space and great streets that improve the physical and mental health of communities.
- Prioritize PSPS investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement.
- Partner with other departments and agencies to deploy anti-displacement programs, investments, tools, and mitigation efforts.
- Create permanent Shared Streets, such as Healthy Streets, Café Streets, and School Streets, and expand them to neighborhoods throughout the city to provide important walking, rolling, and biking connections between neighborhoods, schools, and recreation opportunities and are age-friendly and kid-friendly. Include low maintenance design elements that invite young children to play, including boulders, logs, earthen mounds, trees, and winding pathways. (See Executive Order 2022-07)

Example: King's Crescent Play Street, London

King's Crescent Estate, a multifamily housing estate in east London, was redeveloped starting in 2015 by the Hackney Council. The main thoroughfare was pedestrianized and turned into a permanent Play Street that includes many non-formal invitations to play appropriate for very young children. The space includes natural materials such as boulders, wood logs, and planted areas with trees as well as benches and an accessible hammock swing. Since the space caters to both young and old, it works for everyone.



- Design streets and public spaces so that goods and emergency responders can still reliably get where they need to go, while adjacent businesses prosper from an activated public realm.
 - Coordinate with Seattle Fire during the design process to develop mutually agreeable street designs. SDOT and SFD will work together to develop a set of principles that empower SDOT to implement PSPS road designs consistent with agreed upon principles to minimize project level delay.

- Use curbside innovations to support pedestrianized streets and intermittent street closures. Systematize time-limited loading/unloading to meet critical business access needs and allow the implementation of pedestrianized streets and intermittent street closures that support the use of the public right-of-way as limited and increasingly valuable public space.
 - Continue engaging with schools and our communities to evaluate impacts of School Streets on safety as well as impacts to neighbors, businesses, and fire response routes.
- Deliver pilots and tactical projects, such as interim public spaces generated by using plastic delineator posts and planters, and street pilots implemented using murals, planters, and plastic delineator posts.
- Convert successful tactical and interim public space improvements into permanent improvements. Plastic delineator posts should be upgraded to permanent bollards.
- Make spot improvements, including tasks such as decluttering and tidying up efforts and discrete improvements such as adding street furniture.
- Implement PSPS through development review. Identify strategies to incentivize and remove barriers to PSPS implementation through private development-required street improvements. Update codes and standards to minimize conflict between current code and STP/PSPS street design and use recommendations.
 - Identify *Streets Illustrated* requirements to leverage private development opportunities to implement the PSPS vision for an area.
- Create transformational placemaking projects (typically projects with greater complexity and larger budgets) to tackle holistic and permanent redesign of the streets, ranging from single blocks to corridors.
 - These may include creating new shared streets and plazas, using higher quality materials to create signature areas, installing extensive green stormwater investments, planting trees, de-paving, integrating holistic corridor redesign projects from property line to property line, and implementing intersection redesign projects.
 - Projects can include spray parks, where appropriate, to provide families with places to cool off and mitigate the effects of increased temperatures due to climate change. Staff engaged in PSPS implementation would typically lead the conceptual design for these projects and then hand off this category of projects to project development and capital project delivery functions at SDOT for engineering design and delivery.
- Work with communities to expand activated curb uses, including food truck vending, street cafes and parklets, event space, and more.
 - Activate curbside zones with recreational, retail, or event and activity space and support local businesses, public health, and livability. Consider the needs of different ages, including babies and toddlers with their caregivers as well as older adults, in the design of recreational public spaces in the curbside zone.

- Collaborate internally and externally to identify areas within communities that would benefit from investment.
 - Design interventions to allow continued access for people and goods.
 - Leverage the expertise of existing SDOT teams to identify priority locations, implement active curb spaces, and support the expansion of active, non-mobility curb uses.
- See the Curbside Management Element for more details.
- Design for accessibility. Universal design best practices and other guidance beyond Americans with Disabilities Act (ADA) compliance enhance the public right-of-way for all users and are particularly important when designing Shared Streets and Pedestrianized Streets.
- Incorporate People Streets and Public Spaces into future lid projects, such as Lid I-5, if they are designed and constructed.

Urban Design

Our urban design work focuses on optimizing how people experience the public realm through project design and implementation, design standards, and plans and policies. SDOT will seek to:

- Manage design and policy functions, such as *Streets Illustrated* design guidance and standards updates, Street Concept Plans development, and Complete Streets review processes.
- Oversee implementation of the SDOT Public Art Plan and SDOT's street furniture efforts, such as Seamless Seattle Pedestrian Wayfinding, pedestrian lighting, and the Age-Friendly Bench Pilot.
- Plan, design, guide, and build a wide variety of public realm projects ranging from small public spaces (e.g., Portal Porch and McGraw Square), to pilots (e.g., Ballard Ave Café Street), and major capital projects (e.g., Thomas St Redefined).
- Expand SDOT's pedestrian wayfinding program (Seamless Seattle), including at transit stations and stops, in collaboration with community and regional partners. (Supports TEF 48.1)
 - Connect all Urban Centers and Urban Villages through a single and legible City map-based pedestrian wayfinding system.
 - Expand Seamless Seattle Wayfinding offerings to include digital wayfinding maps for integration into third party applications, including expanding multilingual and accessibility applications and tools.
 - Develop a digital wayfinding asset management platform to enable the program to update and maintain wayfinding signs and allow for more efficient program expansion and integration into third party implementation opportunities.
- Identify opportunities for closer collaboration and cost sharing with Seattle City Light for pedestrian lighting, per the 2023-24 Pedestrian Lighting Master Plan update.

- Create new street crossing opportunities and enhance existing pedestrian crossings to improve safety and access for people walking and rolling, especially to transit.
- Revisit the pedestrian crossing policy with the aim of streamlining the implementation process of pedestrian-priority intersection and operational strategies (e.g., for all-way crosswalks), especially within station areas, along Destination Streets, and within urban villages and urban centers.
- Integrate public art within the right-of-way to a greater degree to promote community identity and cultural expression and create a more enjoyable travel experience through both art enhancements and 1% for Art projects (part of a city program to include art elements in capital projects). Engage with children and teenagers in the development of public art.
- Develop criteria and a toolbox for “pedestrianizing” streets in high pedestrian activity areas, including a spectrum of measures from tactical to full reconstruction (e.g., curb-less streets). Coordinate with partners to update the Land Use Code to include spot improvements as code required improvements, prioritize driveway access off streets outside the PSPS network, and update the required street and sidewalk improvements.
- Explore the use of incentive zoning to additional parts of the city to implement PSPS components when floor area ratio (FAR) bonuses are provided. Seek to allow fees in lieu to contribute to a PSPS fund to enable implementation of larger and more holistic PSPS corridor improvements through the capital project route.
- Restructure the public benefit process to collect and apply public benefits from new developments that better align with city and community goals around equity and climate resilience. More specifically, SDOT will seek to:
 - Incentivize and encourage off-site public benefits in equity priority areas.
 - Allow for contributions into an SDOT public benefit fund geared toward developing People Streets and Public Spaces in equity priority areas, funding community-prioritized People Street and Public Space projects, funding maintenance of public benefits provided off-site, and other such tools.
- Partner with Seattle Parks and Recreation to identify on which Olmsted Boulevards we will change policy and operation to allow more flexibility to create better walking, strolling, and biking experiences. These changes will enable more opportunities for healthy recreation opportunities year-round instead of summer weekends, and in some cases, provide high-comfort bike network connections. (Supports TEF 43.4) (These are shown in **Figure 6** through **Figure 11** as Park Boulevards.)
 - As part of the STP engagement process, we heard broad support for increased recreational opportunities along Olmsted Boulevards, along with more people-oriented streets throughout the city. The city would engage with communities and Friends of Seattle’s Olmsted Parks in any such decision-making processes.

Healthy Streets

Originally implemented in response to the COVID-19 pandemic, Healthy Streets are being made permanent. SDOT will seek to expand permanent Healthy Streets to all neighborhoods as a way of providing low stress connections to common destinations for people walking, biking, and rolling, regardless of age or ability. We'll continue partnering with community to identify and co-create new Healthy Streets to meet and exceed the Executive Order 2022-07 goal of 20 miles.

School Streets

We will continue our efforts to provide safer school environments for children walking, rolling, and biking to school. SDOT will seek to provide every public school with pedestrian and bicycle facilities that serve people of all ages and abilities. We'll continue engaging with schools and our communities to evaluate impacts of School Streets on safety as well as impacts to businesses, fire response routes, and transit operations.

Public Space Management

The Public Space Management (PSM) program builds permitting programs that allow residents, organizations, and businesses to enhance their neighborhoods, strengthen communities, enliven public spaces, and promote economic vitality. These permitting programs enable community activation opportunities like temporary street closures for play streets, block parties, or small-scale events; business activation opportunities like sidewalk and curbside cafés; food trucks and carts; and retail merchandise display. Public Space Management also permits street furniture, public art, and neighborhood pole banners.

Through public space management activities, we aim to reduce barriers to enable communities to program, activate, and manage their public spaces with uses that are authentic and meaningful to them. SDOT will seek to:

- Streamline permitting for community-driven events, vendors, and performers, especially on SDOT designated Event Streets.
- Provide programming support for recurring events in public plazas and streets.
- Work with adjacent businesses to allow retail and service activity to “spill over” into People Streets and Public Spaces (e.g., Café Streets).
- Promote public art and performance in collaboration with community organizations.
- Expand seasonal street closures (e.g., summer streets), recurring closures (e.g., every Saturday), night-time closures, or limited-time closures to vehicles, especially on SDOT designated Event Streets.
- Enhance community engagement and work to directly connect with community and business organizations across Seattle to learn from community, particularly communities of color, about how to improve permits and programs.
- Increase equitable participation in PSM programs by reducing or fully eliminating the permitting process where it makes sense.

PSPS Plans

PSPS engagement at the community scale is essential to build sustaining community relationships and to develop a solid understanding of local needs and priorities. Future neighborhood studies will involve partnering with communities to develop PSPS Plans that identify which types of People Streets and Public Spaces people want to see in their neighborhood and where. (Potential locations are shown with purple dots in **Figure 12** through **Figure 17**. Additional locations may be added pending the outcome of the final Comprehensive Plan.) These plans will refine the methodology developed through past efforts like the First Hill Public Life Action Plan and the Yesler Crescent Public Life Action Plan. As resources are available, SDOT will seek to:

- Develop neighborhood-scale PSPS Plans in partnership with communities to identify People Street and Public Space priorities and needs, prioritizing historically underinvested neighborhoods and Community and Mobility Hub locations.
- Evaluate tactical improvements and prioritize those suited to be permanent improvements for transformational placemaking investments.
- Plans would typically be followed by immediate implementation of select quick win spot improvements and pilot and tactical projects (e.g., 3rd Ave and Yesler Way Safety Improvements).
- Tactical improvements would be evaluated, and those suited for permanent improvements would be prioritized for transformational placemaking investments.

Public Life Studies

Streets and public spaces full of social and commercial activity have the power to improve the city's health, prosperity, and happiness. Collecting data about these activities allows us to measure how the city is fulfilling its goal of having vibrant, active, and well-used public spaces. A specific type of research—called a public life study—does exactly this by measuring the number of people using public spaces and the types of activities they are engaged in. The results of a public life study provide us with people-centered data to make investment decisions, evaluate designs and interventions, and understand what makes a successful public space. As resources are available, SDOT will seek to:

- Partner with city departments and community-based organizations to conduct public life studies of community-scale PSPS projects. The public life program will be a model for collaboratively evaluating public life in the PSPS network.
- See “Transportation Data, Technology, and Innovation” below for more data-related actions we will take for public life studies.

Green Our Streets

Seattle cares about climate change impacts and equitable community health and livability outcomes. In recent years, the city has experienced dramatic climate impacts such as flooding in waterfront neighborhoods, hazardous air quality, and extreme heat. Many people cannot afford to buy an air conditioner, go to a movie, or even stay indoors during heat wave events. Urbanized areas in Seattle hold onto heat longer, putting residents in danger for greater periods of time, while higher income neighborhoods with more greenery experience better air quality and less risk from extreme heat. This example underscores the disproportionate ways climate change exacerbates existing inequalities.



Mature street trees in Seattle that offer shade

Greening our streets is one way that we will address climate change impacts. SDOT will seek to:

- Pursue opportunities to install green infrastructure in new public spaces and People Streets as streets are redesigned.
 - Look for opportunities to enlarge Seattle's tree canopy through People Streets and Public Spaces and work closely with Seattle's Urban Forestry Program and community partners to do so. See the 2020 Urban Forest Management Plan. (Supports TEF 56.4)
 - Strengthen partnerships with Seattle Public Utilities and private development to expand the use of green stormwater infrastructure (GSI) within People Streets and Public Spaces. (Supports TEF 56.4)
- Encourage the maintenance and installation of green infrastructure—such as street trees, rain gardens, landscaping, natural drainage systems, bioswales, and pervious materials—as other improvements occur in the right-of-way. (Supports TEF 56.4)
 - Invest in climate resilient landscapes. Climate resilient landscapes can reduce the urban heat island effect.
 - Preserve, restore, and increase the tree canopy on public rights-of-way, with an emphasis on environmental justice through investments in the most vulnerable communities.
 - Advance sustainable models for the management of urban stormwater and provide natural drainage systems.
- Prioritize tree planting and maintenance in historically under-invested communities, as we continue to increase tree canopy coverage citywide. (Supports TEF 56.6)

Community Plazas

We will work with community-based organizations to create neighborhood plazas throughout the city to transform underused streets into vibrant, social public spaces. Our aim is for all Seattleites to live within a 10-minute walk of a well-designed public space(s) that is reflective of community needs and priorities. SDOT will seek to:

- Work with eligible organizations that propose new plaza sites for their neighborhoods through a competitive application process. Prioritize sites that are in historically underinvested neighborhoods and neighborhoods that lack open space, and partner with community groups to design, operate, maintain, and manage these spaces so they are vibrant pedestrian plazas.
- Work in partnership with Seattle Parks and Recreation to explore transfer of jurisdiction opportunities and management partnerships (e.g., Bell Street, Gemenskap Park, and Delridge Triangle), where appropriate.
- Evaluate community-initiated projects not selected for funding for an enhanced permit option that creates low-barrier permitting pathways with intent to facilitate implementation of projects funded through private funding or grant opportunities.

Community and Mobility Hubs

Create a vibrant and welcoming public realm at existing and new transportation community and mobility hubs. SDOT will seek to:

- Support community-oriented programming, like markets or recurring events.
- Improve walkability at every community and mobility hub by providing pedestrian infrastructure such as lighting, wayfinding, seating, and landscaping.
- Create Destination, Strolling, and Shared Streets around Link light rail stations. Shared, and car-free or car-light streets around current and future Link light rail stations create walkable and people-prioritized hubs for community and mobility.
- Provide a safe and comfortable experience moving in and around community and mobility hubs. This includes better crossings and intersections, slower speeds and rightsized travel lanes, decluttered sidewalks, universal access, and more.
- Create public spaces at community and mobility hubs that work for children and their caregivers, with educational activities to engage in and that support child development.
- Partner with other departments and agencies, such as Sound Transit and King County Metro, and local neighborhood groups such as BIAs and other community organizations, to design, construct, and maintain Community and Mobility Hubs.
- Explore with other city departments and partners opportunities to provide safe and well-maintained public restrooms in support of People Streets and Public Spaces, particularly at community and mobility hubs.

See the Transit Element for more information on Community and Mobility Hubs.

Safe Routes to Parks and Shorelines

The PSPS network enhances public access to parks and our shorelines. SDOT will seek to:

- Create positive connections to parks and our shorelines through the addition of climate resilient landscapes, increased vegetation, street trees, and stormwater management features. PSPS interventions will benefit air and water quality, improve public health, and mitigate environmental hazards like flooding and the urban heat island effect.

Low-Pollution Neighborhoods

Low-pollution neighborhoods (like low-emissions zones, eco-districts, resilience districts, and super blocks) help the city achieve its ambitious climate goals to make Seattle a greener, healthier, more prosperous, and equitable place to live. They could be designated areas or streets where the City can deploy a variety of pilot, policy, programmatic, and physical improvements to improve air and water quality, mobility, and community health.

Low-pollution neighborhoods create welcoming places for communities that encourage more people to walk, bike, and roll for short trips, play, and ride transit. They include car-free, car-lite, low emissions, or emissions-free streets or areas. The aim is to reduce vehicle miles traveled (VMT), impacts of urban heat islands and greenhouse gas emissions, and improve air and water quality. Executive Order 2022-07 directed city departments to plan for and pilot three low-pollution neighborhoods by 2028.

Low-pollution neighborhoods are opportunities for strategic investments in People Streets and Public Spaces. People-oriented, shared, and pedestrianized streets contribute to creating low-emission neighborhoods. SDOT efforts to provide increased tree canopy, e-mobility and associated infrastructure, low-emission urban freight and goods delivery, and operation innovations to limit circulating vehicles are also integral to success. Code requirements and incentives may be necessary to encourage private development, businesses, and other entities to transition to lower emission options.

SDOT will seek to:

- Develop low-pollution neighborhoods in collaboration with communities and local businesses. Work with local businesses in future low-pollution neighborhoods to address delivery and access needs.
- Build on existing tools, programs, and initiatives across several departments (e.g., SDOT, SCL, OPCD, OSE, and SPU) that identify projects aimed at reducing air and water pollution, reliance on fossil fuels, and improving climate change preparedness.
- Establish a toolkit of citywide strategies to collaboratively plan and deliver the Mayor's Executive Order commitment to pilot three low-pollution neighborhoods by 2028.
- Advance other elements of Executive Order 2022-07 that support the development of low-pollution neighborhoods: work with other departments to explore expansion of "complete communities" where most daily needs are met through walk, bike, and

transit trips under 3 miles, build 20 miles of permanent Healthy Streets, and expand the School Streets program.

- Evaluate the need for code requirements and incentives to encourage private development, businesses, and other entities to transition to lower-emission options.

See Executive Order 2022-07 for more information.

PARTNERSHIPS

Advocate for Changes to State Legislation

- There is a need to advocate for state law updates to allow pedestrians on roadways for shared streets. Currently, we must use a “Street Closed” model to enable pedestrians to walk in the street on Shared Streets. There is also a need to advocate for state law updates to allow for speed limits lower than 20 mph. SDOT will seek to:
- In the near term, enable the “Street Closed” model used by Healthy Streets for any street that meets key Shared Streets criteria in the PSPS network, and expand application of this model to allow for time-limited pedestrianization.
- For the longer term, advocate for:
 - State law updates to allow pedestrians on roadways for shared streets. Work with state and local partners to update RCW 46.61.250 to allow pedestrians to walk on streets when sidewalks are available to enable Shared Streets without requirements to “close” the street.¹⁶
 - Update RCW 46.61.415 to allow speed limits lower than 20 mph. Shared streets, where pedestrians truly feel comfortable sharing space with cars, should be signed at 10 mph with engineering design to match.

Coordinate with Partner Agencies and Organizations

Many agencies and City of Seattle departments play a role in supporting actions to create and maintain People Streets and Public Spaces. SDOT will seek to:

- Establish integrated interagency teams to collaboratively work with each other and the public when designing People Streets and Public Spaces.
- Partner with Seattle Parks and Recreation, Seattle Fire Department, Seattle Department of Construction and Inspections, Seattle City Light, the Office of Economic Development, the Office of Planning and Community Development, Seattle Public Utilities, Office of Sustainability and Environment, business associations, neighborhood groups, and state and regional agencies.

¹⁶ The Revised Code of Washington [RCW] 46.61.250 states: “Where sidewalks are provided and are accessible, it is unlawful for any pedestrian to walk or otherwise move along and upon an adjacent roadway. Where sidewalks are provided but wheelchair access is not available, persons with disabilities who require such access may walk or otherwise move along and upon an adjacent roadway until they reach an access point in the sidewalk.”

TRANSPORTATION DATA, TECHNOLOGY, AND INNOVATION

Maintain Our Datasets

It is useful to track asset locations and their condition, as well as to provide information to others. SDOT will seek to:

- Create an inventory of furniture assets, including location, date installed, manufacturer, and maintenance schedule.
- Add key PSPS assets to SDOT's asset management system, including location, date installed, manufacturer, and maintenance schedule.

Use Data to Inform Changes to PSPS and the Transportation System

To make informed decisions typically requires good data. SDOT will seek to:

- Regularly update (e.g., biennially) the 2018 Citywide Public Life Data inventory to measure citywide progress on STP livability goals.
- Expand the data inventory to evaluate the current PSPS inventory (see **Figure 6** through **Figure 11**—Existing PSPS Inventory Maps) to establish a baseline for the PSPS performance measures identified in Table 4. Routinely evaluate progress (e.g., bi-annually) through quantitative data and qualitative data collection via public life studies and community surveys.
- Regularly conduct (e.g., bi-annually) a survey of community partners asking for feedback on maintenance, programming, success stories, and overall evaluation of PSPS projects and interventions.

MAINTENANCE & MODERNIZATION

Maintain People Streets and Public Spaces

Good stewardship and long-term maintenance of People Streets and Public Spaces is critically important. It is essential to proactively care for public spaces to make Seattle livable and maintain quality of life. Sometimes successful People Streets and Public Spaces will emerge from the community through a permit; however, the regulatory pathway can present significant barriers, especially in equity priority areas.

A PSPS objective is to enable SDOT to be more of an active co-creator and partner in stewardship. We want to reduce the burden of public space maintenance on historically underinvested communities and continue to partner with community and business organizations on maintenance. SDOT will seek to:

- Work with individual communities to identify maintenance needs and establish a maintenance plan, which can be implemented in different ways:
 - Better maintain public spaces through dedicated resources to reduce the burden of public space maintenance on historically underinvested communities and continue to partner with community and business organizations on maintenance.
 - Identify, develop, and foster community partnerships to help steward maintenance.
 - Focus SDOT resources to the maintenance of PSPS improvements in equity priority areas.

PSPS Asset Management

It is imperative that street furniture, pilot, tactical, and transformational People Street and Public Space projects are supported with PSPS asset management. This will enable the proactive maintenance and management that is critical to maintain livability and usability of public spaces. SDOT will seek to:

- Establish maintenance schedules for People Streets and Public Spaces and integrate with SDOT street maintenance activities wherever possible.
- Establish programmatic asset management relationships with SPU (Strolling Streets), Parks (Shared Streets and Public Spaces), and OED (Destination Streets) to enable sustainable and efficient management, maintenance, and activation of PSPS investments that benefit climate resiliency, local businesses, and areas with open space deficiencies.
- Identify local partners to conduct routine maintenance (e.g., litter pick-up, graffiti removal, etc.) Fund maintenance partnerships in equity priority areas.
- Create a programmatic relationship with the Office of Economic Development's Only in Seattle Initiative to help fund public realm maintenance in business districts.

- Establish a plaza management fund to enable proactive plaza routine care (e.g., trash pickup, graffiti removal, surface washing, landscape care).
- Establish a programmatic relationship with Seattle Conservation Corp to provide proactive, routine, and ongoing care to public spaces.

Update Streets Illustrated

Streets Illustrated is Seattle's Right-of-Way Improvements Manual. Updates are needed to better implement actions and strategies outlined in this Plan. SDOT will seek to:

- Incorporate new and revised design standards for the public realm, including Destination Streets, Strolling Streets, and Shared Streets (Healthy Streets, School Streets, Event Streets, Café Streets, Special Alleys, Pedestrianized Streets, Plazas).
- Update Street Type maps to integrate STP elements and meet minimum right-of-way requirements, including for PSPS street categories.
- Establish design standards and locational priorities for a family of street furniture meeting accessibility, maintenance, and quality needs, including standards for:
 - Specialty pedestrian lighting fixtures to include in city standard plans and specifications
 - SDOT specialty sidewalk materials
 - SDOT seating, such as benches and lean rails
 - Bollards
 - Rolling street closure elements
 - Planters
 - Shelters and canopies
 - Trash cans
 - Elements for children of different ages, including babies and toddlers as well as teenagers, and for older adults
 - Bike racks and shared mobility corrals
- Expand the downtown requirements for pedestrian-scale lighting to all Urban Villages, per the 2023-24 Pedestrian Lighting Master plan update.

DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommends performance measures to monitor the implementation of the STP PSPS Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching outcome-based measures are identified in the STP implementation strategy (see Chapter 4 of the Part I document). Generally, they are tracked at a citywide scale, and SDOT may not have primary control over their achievement. Examples include a reduction in vehicle miles traveled and the percentage of household income dedicated to transportation.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help us track progress towards our Tier 1 goals. Examples include a target to increase the city's tree canopy percentage and increase the percentage of households living near a shared street or public space.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples may include the number of People Streets blocks or segments, number of new Public Space projects, number of people visiting a given public space, increase the diversity of people using PSPS and how they use them, value of investments (total, per capita, and per mile/foot), number of people and neighborhoods involved in the creation and the programming of Public Spaces in their communities, and more.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that we can pivot as needed to meet our equity goals over the next 20 years. The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.¹⁷

¹⁷ <https://data.seattle.gov/dataset/Racial-and-Social-Equity-Composite-Index-Current/w3kz-xtmq>

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 4 identifies the Tier 2 performance measure that will be tracked for the PSPS Element.

Table 4: PSPS Desired Outcomes and Performance Measure

Desired Outcome	Performance Measure (Source)	Baseline (Year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goals
Increase access to a shared street or public space	Percent of households that live within a 10-minute walk of a shared street or public space (Census Bureau, SDOT)	1) 19% of households outside Urban Centers and Villages 2) 72% of households within Urban Centers and Villages (2023)	1) 43% of households outside Urban Centers and Villages by 2044 2) 93% of households within Urban Centers and Villages by 2044	Yes	Safety Equity Mobility & Economic Vitality Livability

RELEVANT TEF TACTICS

- TEF 15.1—Evaluate data from Public Space Management (PSM) Market Streets pilot to identify needed resources to transition this pilot to a program.
- TEF 15.2—Interview/survey BIPOC businesses about their transportation, public space, and permitting needs; publish the results SDOT-wide so other staff can consider ways to address identified needs through other projects and programs.
- TEF 17.4—Conduct community workshops to better understand the activities communities want and need in the right-of-way (ROW); use this to inform the PSPS effort, which will establish a vision and strategies for equitable public space investment.
- TEF 19.4—Focus maintenance resources in communities and neighborhoods currently underserved by government that have significant maintenance needs; use findings from the racial equity assessment.
- TEF 19.6—Prioritize person-throughput as metric rather than vehicle throughput.
- TEF 19.7—Do pilots to test out repurposing of streets ideas and apply learnings to new policy approaches and broader, citywide opportunities to carry out similar actions to make our streets safer and, first and foremost, for people.
- TEF 20.5—Consider travel time and air quality impacts of changes to roadway configurations. Use this information to make equitable investment decisions that consider travel time and air quality impacts and benefits and to communicate those benefits and impacts to the community.
- TEF 24.1—Identify available public spaces managed by the City that are close to transit that can be activated and programmed by the community and that SDOT can support.
- TEF 24.2—Convene City stakeholders across departments to better facilitate discussions on use of public spaces and shared green spaces to address competing department needs and overlapping ownership and explore developing internal cross-departmental policies to streamline processes with the community.
- TEF 29.1—Create publicly accessible, community-oriented visuals and neighborhood-specific snapshots to capture where SDOT has built infrastructure, dedicated investments, and collected community feedback. This should be utilized by SDOT, other City departments, and transportation partners to inform future investment needs as well as planning and programmatic efforts.
- TEF 38.3—Identify new and less regressive federal, state, and city funding and advocate to invest in pedestrian safety, including crosswalks, sidewalks, traffic calming, lighting, signal operations, etc. Include analysis from the Pedestrian Racial Equity Toolkit (RET) into this process.
- TEF 40.1—Emphasize and incorporate pedestrian safety into the street character and design process; ensure staff are trained and educated on how to do this.

- TEF 40.2—Identify locations for new or upgraded pedestrian crossing opportunities to support access to transit.
- TEF 43.4—SDOT policies, practices, standards, and funding allocation strategies to elevate/give priority to access and use of right-of-way (ROW) for people of all ages and abilities, people recreating, shopping, walking, rolling, riding bikes, and using transit.
- TEF 45.1—Revisit the Pedestrian Lighting Master plan from 2012 and assess areas of current "pedestrian lighting deserts" with transit ridership routes, transfer opportunities, and higher emphasis on equity. Use the findings from this assessment to inform the development of the next transportation funding package.
- TEF 45.3—Identify spaces for equitable investment that can activate community, foster local economic development, and facilitate connections to transit.
- TEF 45.6—Utilize findings from the Pedestrian Racial Equity Analysis and identify plan to improve connections between transit stops and key community assets (e.g., parks, libraries, schools, employers) are safe for pedestrians.
- TEF 50.1—Include policies in the transportation and/or land use elements as a part of the Comprehensive Plan update to mitigate the displacement of BIPOC and vulnerable communities; ensure that within the first 2-3 years of adoption that the policies are implemented through OPCD and SDOT work plans.
- TEF 54.1—Identify key lessons learned from El Centro de la Raza and/or other mitigating strategies from development displacement across Seattle and prioritize BIPOC community businesses and services as part of equitable transit-oriented development (ETOD).
- TEF 56.1—Map access to green and public spaces based on actual travel sheds using various modes to improve connectivity to healthy environments.
- TEF 56.4—Improve, identify, and maximize current opportunities for street trees and greenscapes in SDOT activities, ranging from routine maintenance to capital project delivery. Ensure design guidance and functions of maintenance include this consideration for long-term sustainability.
- TEF 56.5—Increase open space for improved air and water quality, implement de-paving projects, and commit right-of-way (ROW) allocation in areas that are impacted by nearby industrial land uses.
- TEF 56.6—Prioritize tree planting in BIPOC and underinvested communities while dedicating outreach and maintenance dollars to partner with communities to achieve this; include an opportunity for the community to take part in choosing culturally relevant trees and plants during this process.

GLOSSARY

Accessible pedestrian signal (APS): Signals installed at crossings to help pedestrians who are blind or have low vision. Auditory signals – such as voice instructions and chirping sounds – indicate when it is safe to cross the street.

Active transportation: Human-powered modes of travel such as walking, biking, and using a wheelchair.

ADA: Americans with Disabilities Act

Arterial street: Arterials provide the connections between freeways and access streets and vary in their speed and volume characteristics, design features, and degrees of local access.

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bicycle crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

Bioswale: Vegetated ditches that capture and filter stormwater runoff.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Business improvement area (BIA): Districts where stakeholders control and fund the maintenance, improvement, and promotion of their commercial district. All stakeholders are required to pay a share that goes toward funding for the entire district.

Café Streets: Streets with high levels of foot traffic and lots of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians. They are a type of Shared Street.

Community and Mobility Hubs: Places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Community-based organizations (CBOs): These are trusted community builders and leaders.

Curb bulbs: Extensions of the sidewalk into the street that give pedestrians a shorter distance to cross.

Destination Streets: Streets in the heart of a neighborhood with a high density of destinations—shops, restaurants, cultural centers, and more—that will receive strategic investments to make them safer and more enjoyable for walking, rolling, and lingering as well as optimize their curb side uses. They are a type of People Street.

E-cargo bikes: Human-driven bikes with battery-powered pedal assist that can transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

E-mobility: Personal and shared electric-powered bicycles, scooters, and other electric-powered devices.

EV: Electric vehicle

Event Streets: Streets that host intermittent community events, such as farmers markets. These are street blocks where events may close to movement of all vehicles, except emergency access, on a frequent or intermittent basis. No parking, loading activity, or business access is allowed during closures. They are a type of Shared Street.

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City's climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City's fleet zero-emission by 2030.

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

General purpose (GP) lane: Space in the right-of-way where all vehicular traffic is allowed.

GHG: Greenhouse gas emissions

Healthy Streets: Streets for people walking, rolling, biking, and playing. They are closed 24/7 to pass-through traffic. People driving who need to get to homes and destinations along Healthy Streets retain access and can still drive on these streets. They are a type of Shared Street.

High-injury Network (HIN): The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred to inform safety corridors of focus for the Vision Zero program and more. It prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes.

Home Zone: A Home Zone is a holistic and cost-effective approach to making residential streets safer and more comfortable for people walking and biking. Rooted in successful pedestrian-focused systems from around the world, the Home Zone program combines quantitative analysis with a community-centered development process to neighborhood traffic calming on shared streets.

Imagine Greater Downtown: A vision plan for the greater downtown area of Seattle. It is a shared vision and direction among partner agencies for how the downtown and surrounding area should evolve.

Key moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The key moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Level of traffic stress (LTS): A measure of the amount of discomfort cyclists feel biking next to traffic.

Lid I-5: A grassroots community effort in collaboration with the city that advocates for constructing a freeway lid over I-5 to reconnect First Hill and Capitol Hill with Downtown. A 2020 feasibility study found a lid to be a viable option that would have beneficial impacts on housing, the environment, community and open spaces, and business.

Local Streets: Streets that are less traveled are designed for slower speeds, and primarily provide local access.

Low-pollution neighborhood: Low-pollution neighborhoods (like low-emissions zones, eco-districts, resilience districts and super blocks) could be designated areas or streets where the City can deploy a variety of pilot, policy, programmatic, and physical improvements to improve air and water quality, mobility, and community health. Implementation will vary by neighborhood with an emphasis on equity and co-planning with communities.

OED: Office of Economic Development

Only in Seattle Initiative: An Office of Economic Development Initiative that works with local and small businesses, building owners, and residents to support local commerce. The Initiative provides grant funding and staff support to foster inclusive neighborhood business districts.

OPCD: Office of Planning and Community Development

Park Boulevard / Olmsted Boulevard: Streets designed by the Olmsted Brothers in the early 1900s as an interconnected system of parks and boulevards to provide open space for all people. They create recreational opportunities for people biking, walking, rolling, and engaging in other activities. They are jointly managed by Seattle Parks and Recreation and SDOT.

Parklet: A small public open space that replaces on-street parking spaces. They are owned and funded by private organizations or businesses but open for use to the public. They often include seating, tables, and greenery.

Pedestrian Lighting Master Plan: The Pedestrian Lighting Master Plan guides how the city plans for, designs, and implements pedestrian lighting which fosters safety, security, economic development, active transportation, and access in the right-of-way.

Pedestrian Zone: A land use designation from the Seattle Municipal Code and *Streets Illustrated* that requires additional sidewalk widths.

Pedestrianized Streets: Streets for exclusive or priority pedestrian access where vehicle access is limited (by time of day or type of vehicle). They are typically located on streets with land uses that generate pedestrian activity, such as shops, restaurants, museums, and tourist attractions. They are also located near bus, streetcar, and light rail transit stations and bicycle routes.

People Streets: Streets that put people first, including Destination Streets, Strolling Streets, and Shared Streets, including Pedestrianized Streets. They offer a safe and comfortable environment for people to walk and roll to transit, public spaces, and other destinations. They offer inviting spaces for people to linger, enjoy their surroundings, and connect with others. They support local business districts. People Streets also have generous tree cover and green infrastructure.

Personal delivery devices (PDDs): Small automated or remotely piloted robots designed for short deliveries carrying food, packages, or other goods.

Plazas: Permanently pedestrianized spaces in the right-of-way that are designed to not allow vehicular access but could allow for emergency access, vending, or food trucks. They are typically found in active retail areas or at bus, streetcar, and light rail transit stations.

PSPS: People Streets and Public Spaces

Public Life: People create “public life” when they connect with each other in public places – streets, plazas, parks, and spaces between buildings. Public life is about everyday activities that people take part in when they spend time with each other outside of their homes, workplaces, and cars.

Public Life Action Plan: Neighborhood-scale plans developed in partnership with communities to identify People Street and Public Spaces improvements. Historically underinvested neighborhoods and community and mobility hubs will be prioritized. They will typically be followed by immediate implementation of select quick win spot improvements and pilot and tactical projects. Tactical improvements would be evaluated, and those suited for permanent improvements would be prioritized for transformational placemaking investments.

Public Spaces: Plazas and Shoreline Street Ends that come in many shapes and forms. They are pedestrianized spaces that invite people to gather, play, and connect with one another. These spaces may be focal points in neighborhoods that support local businesses, venues for community gatherings, or more subtle spaces that are loved by locals and stumbled upon by visitors who delight in their discovery. They may incorporate public art, seating, games, trees and green infrastructure, and flexible space for vendors and gatherings. Public Spaces are born of inclusive, community-driven processes that inform design, programming, and long-term stewardship.

Public Space Management (PSM): A City program that works with residents, organizations, and businesses to enhance neighborhoods, strengthen communities, enliven public spaces, and promote economic vitality.

RCW: Revised Code of Washington

RCW 46.61.250: This is the state code regarding pedestrians on roadways. It describes the nuances of allowed pedestrian behavior when sidewalks are available and accessible and when they are not. You can find exact language of the code here: <https://app.leg.wa.gov/rcw/default.aspx?cite=46.61.250>

Reconnect South Park: A community-led coalition that aims to remove the segment of State Route 99 that cuts through the neighborhood. The coalition received \$1.6 million from the US Department of Transportation through the Reconnecting Communities Pilot (RCP) Grant to study the feasibility of removing the highway.

Refuge islands: A paved median that protects pedestrians crossing a multi-lane street by providing a safe place to stop.

Right-of-way (ROW): A strip of land legally established for the primary purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe Routes to School: A national movement to make it easier and safer for students to walk and bike to school. The program is designed to improve safety in areas around schools and to encourage more kids to walk and bike.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Goals of the approach are to create safer vehicles, speeds, roads, and people and provide post-crash care.

School Streets: Streets for people walking, rolling, and biking to school and playing. They are closed to pass-through traffic, including parents and guardians. People driving to homes and destinations along School Streets, including school district transportation, retain access and can still drive on these streets. They are a type of Shared Street.

SCL: Seattle City Light

SDOT: Seattle Department of Transportation

Seamless Seattle: Seamless Seattle is the City's program for pedestrian wayfinding to help travelers navigate the city easily and safely. Standards are set for design features to be consistent, legible, and distinctive and create a unique identity. Wayfinding technologies include audio, visual, and tactile elements. Examples are directional signs, digital kiosks, and printed maps.

Seattle Conservation Corps: A program run by Seattle Parks and Recreation that employs people experiencing homelessness on projects that benefit the community and the environment.

Shared Streets: Streets that are "people first" spaces either permanently or during certain times of the day or week. They are typically identified in partnership with the surrounding community. Shared Streets include Healthy Streets, Café Streets, School Streets, Event Streets, Special Alleys, and Pedestrianized Streets.

Shoreline Street Ends: Designated areas for public access to the shoreline that occur where streets meet a shore.

Special Alleys: Historic and special alleys with community destinations or retail density that generate human-scale spaces and accommodate essential service functions. They are a type of Shared Street.

SPR: Seattle Parks and Recreation

SPU: Seattle Public Utilities

STP: Seattle Transportation Plan

Streets Illustrated: Seattle’s Right-of-Way Improvements Manual is an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle’s street right-of-way.

Strolling Streets: Local streets used for recreation, exercise, connecting with nature or community, or traveling to specific destinations. These are typically along streets with lower vehicle volumes and speeds.

Summer Streets: Streets that are closed to vehicular traffic during certain times of the year to provide open space for events and public life.

TNC: Transportation network company (e.g., Uber and Lyft)

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses the disparities that exist within the transportation system due to institutional racism.

Urban Forest Management Plan (UFMP): The Urban Forest Management Plan provides a long-term vision for increasing tree canopy cover in the city. It also addresses the many environmental, social, and economic benefits associated with trees in urban areas.

Urban Villages and Centers: Areas in Seattle where the most future job and employment growth is targeted, as defined in the Seattle Comprehensive Plan. This strategy promotes the most efficient use of public investments and encourages walking, bicycling, and transit use.

Vision Zero: The City’s goal to eliminate traffic deaths and serious injuries on city streets by 2030.

VMT: Vehicle miles traveled

Vulnerable communities: Communities that have historically and currently been erased, intentionally excluded and/or underinvested in by government institutions. SDOT’s Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhoods

Wayfinding: Visual information that helps people to orient themselves spatially. Wayfinding is important to help people travel easily, comfortably, and safely. Methods of wayfinding include signs and maps.

[This page intentionally left blank]



Vehicle Element

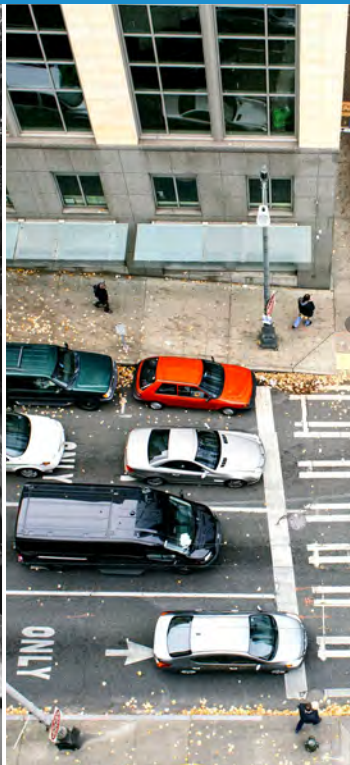


TABLE OF CONTENTS

Introduction.....	V-1
How the Vehicle Element Advances the STP	V-1
Relationship to STP Goals	V-3
Delivering the Key Moves.....	V-5
Setting the Context	V-14
Opportunities, Challenges, and Emerging Trends.....	V-16
Community Engagement.....	V-20
Driving in Seattle.....	V-22
Roadway Network and Operational Considerations	V-24
Programmatic Activities and strategies.....	V-36
Defining Success.....	V-44
Measurable Outcomes	V-45
Relevant TEF Tactics	V-47
Glossary	V-49

LIST OF FIGURES

Figure 1: Vehicle-related Public Comments on Webmap #1	V-21
Figure 2: National Highway System (NHS)	V-25
Figure 3: Functional Roadway Classification	V-26
Figure 4: Image of Streets Illustrated Webmap	V-27
Figure 5: Number of Travel Lanes.....	V-28
Figure 6: 2022 Traffic Volumes.....	V-29
Figure 7: High Injury Network (HIN) Street Segments.....	V-31
Figure 8: Arterials where 85 th Percentile Speed Exceeds 5 MPH over Posted Speed Limit	V-32
Figure 9: Tier 1 Emergency Response Routes	V-33
Figure 10: Seattle Snowplow Routes	V-34
Figure 11: Seismic Lifeline Routes.....	V-35

LIST OF TABLES

Table 1: Vehicle Element: Delivering the Key Moves.....	V-6
Table 2: Vehicular Performance Measures	V-46

[This page intentionally left blank]

INTRODUCTION

As the Seattle Department of Transportation (SDOT) continues to build out a multimodal system that offers diverse travel options, we are committed to maintaining a network of reliable streets for driving. Our work aims to provide safe and steady travel for people who need to drive including emergency responders, freight and urban goods delivery drivers, service providers, and people who rely on driving to make essential trips. Our work includes supporting people who rely on a vehicle, whether by choice or by necessity. While not everyone is in a position to choose alternatives to driving, it is important to provide choices for people who currently have no other travel options. Additionally, the use of private vehicles remains the least efficient use of street space, and it contributes heavily to climate impacts and safety outcomes. Balancing the share of street space will require us to prioritize travel options that meet our identified goals, including mobility for emergency response vehicles, utility functions, freight and goods delivery, transit, and personal vehicles.

HOW THE VEHICLE ELEMENT ADVANCES THE STP

The Seattle Transportation Plan (STP) presents a 20-year vision for transportation in Seattle. The Vehicle Element provides a framework for continued improvement to the design and operation of the city's street system. Planning for vehicular travel is critical to effectively rebalance Seattle's streets for improved safety and mobility and to initiate the system changes recommended in each of the STP's functional elements. Strong and clear policies around vehicular travel will help meet STP objectives to reduce the share of drive-alone trips, vehicle miles traveled (VMT), travel speeds, and greenhouse gas (GHG) emissions (Supports TEF 20.5)¹.

Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here. No matter where people live or work, providing safe and equitable transportation will always be critical to connect people and goods where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate travel options and supportive infrastructure that fits the needs of unique and varied communities— whether a dense downtown grid, quiet residential neighborhood, or bustling manufacturing and industrial center.

In denser neighborhoods and commercial centers, development typically occurs close together. Combined with safe and supportive transportation infrastructure, density can make it easier for people to walk, bike and use transit because they don't have to travel as far. People have more access in these places, enabling them to live car free if they choose to or can't afford it. In

¹TEF refers to SDOT's Transportation Equity Framework. You can learn more about the TEF at <https://www.seattle.gov/transportation/projects-and-programs/programs/transportation-equity-program/equity-workgroup>. A complete list of the TEF tactics referenced is located at the end of the element.

places where development is more spread out, people might still walk or bike for shorter trips or to connect to transit services, but it is often harder due to longer distances between places. While some people choose to live or work in places that are more spread out, others do so because they have no choice and driving is their only viable option. For instance, people who live outside of Seattle because housing is more affordable, or people who transport freight or cargo for a living may not have options for how they travel other than driving a vehicle.

Our transportation system can support anticipated growth in different places while continuing to advance our goals by making other travel options more viable and available in appropriate contexts. For example, freight-and-bus only lanes can support reliable travel times for industrial workers and transit riders, or on-demand rideshare services could provide more convenient shared trips. Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality.

By developing a coordinated vehicle strategy, we can support growth in several ways:

- Support effective regional travel and provide a reliable, well-connected roadway network to accommodate critical vehicular travel and essential personal trips
- Support a safe and steady transportation system for all users - particularly our most vulnerable travelers who are traveling outside of vehicles
- Rebalance street space to achieve sustainability and livability goals and address mobility and other essential street functions
- Reduce climate impacts through fewer vehicle miles traveled and vehicle electrification
- Consider and seek to limit impacts to emergency response mobility and building access as other modal priorities are implemented
- Reduce speeding through street design and operations to improve safety and the overall experience for vulnerable travelers

Economic Benefits of New and Emerging Mobility

The STP supports economic vitality in a range of ways and each functional Element plays a role. Maintenance and modernization of our transportation network enables efficient and reliable vehicle trips for the movement of people to jobs, education, markets, and other opportunities. The vehicular network also enables the movement of freight, goods, and services, which provide significant benefits for our economy and communities—especially when our values around safety, equity, and sustainability remain centered.

- Maintain connections to employment, medical services, and other regional centers
- Support the One Seattle Comprehensive Plan and projected jobs and population growth
- Promote effective movement of goods and transit that share general purpose space on streets



RELATIONSHIP TO STP GOALS

How we manage vehicular travel is essential to meeting the Seattle Transportation Plan's goals for safety, equity, sustainability, mobility and economic vitality, livability, and maintenance and modernization.



Prioritize safety for travelers in Seattle, with no serious or fatal crashes. Streets should be designed and operated to prioritize the safety of people, especially people outside the protection of a vehicle. Reducing vehicle travel speeds can reduce the frequency and severity of crashes. Separating facilities (physically) by travel option creates more predictable roadways for all travelers. Separating modes can also occur through signal timing or phasing to reduce conflicts at intersections.



Co-create with community and implement restorative practices to address transportation-related inequities. Many arterial streets run through Seattle's underserved communities. By managing vehicular flow, we can seek to improve noise and air quality impacts (TEF 20.5). We will work to equitably preserve and provide access to cultural centers and regional assets in collaboration with community members.



Respond to climate change through innovation and a lens of climate justice. Reductions in private auto travel will have the greatest impact on meeting transportation related emissions reduction goals. Providing more high-quality travel options, especially in underserved areas, for people to choose a mode for each trip will support Seattle's goals of reducing transportation emissions by 83% and ensuring 9 out of 10 personal trips are zero emissions.



Provide reliable and affordable travel options that help people and goods get where they need to go. A functioning and connected street network is essential to meet a variety of vehicular travel needs. These include vehicle access for essential needs, such as medical or emergency services, and mobility of goods and service providers.



Reimagine city streets as inviting places to linger and play. Slowing and reducing vehicular traffic can allow streets to become safer and more people friendly. Designing streets to promote quality places can add lasting community value. Streets are also places to promote green infrastructure design for improved environmental health.



Improve city transportation infrastructure and ready it for the future. Maintaining infrastructure, including critical corridors and bridges, is an important component of SDOT's work. When addressing maintenance needs, we seek to use these opportunities to modernize infrastructure, incorporate safety improvements, and invest in traditionally underinvested portions of the community.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **Vehicle Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.
[\(Supports Safety Key Move S2a\)](#)

Feature community voices in planning documents. [\(Supports Equity Key Move TJ1b\)](#)

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: Vehicle Element: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
SAFETY KEY MOVES							
Reduce vehicle speeding to increase safety (S1)							
V1.	Design all streets using context-appropriate traffic calming treatments that are proven to reduce speeds and encourage people driving to travel at the posted speed limit. This should include strategies to narrow the street, coordinate traffic signs and signals, and plant street trees. [Supports Key Move S1a]	✓	✓	✓	✓	✓	✓
V2.	Implement traffic calming strategies, such as traffic circles, chicanes, or speed humps, cushions, and tables. Pair strategies with programs that deliver educational campaigns to reduce speeding. [Supports Key Move S1b]	✓				✓	✓
V3.	Reduce posted speed limits where appropriate, consistent with national guidance and best practices. [Supports Key Move S1c]	✓					
V4.	Continue collecting travel speed data and use it to measure progress in reducing speeding. [Supports Key Move S1d]	✓					✓
V5.	Coordinate with the Washington State Department of Transportation to address safety challenges where their roadways impact the city street network. [Supports Key Move S1e]	✓	✓				
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
V6.	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. [Supports Key Move S2a]	✓	✓	✓	✓	✓	
V7.	Prioritize safety improvements at locations that are on the high-injury network, have high levels of travel stress, or are identified through the Seattle Bicycle and Pedestrian Safety Analysis. [Supports Key Move S2b]	✓	✓		✓		
V8.	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone, including but not limited to leading pedestrian intervals (LPIs) at signals, arterial traffic calming, and road diets. [Supports Key Move S2c]	✓			✓		✓
V9.	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as curb bulbs, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. [Supports Key Move S2d]	✓			✓		✓
V10.	Expand opportunities to more safely cross busy arterials by installing enhanced crossings, improved lighting, and other treatments. [Supports Key Move S2e and TEF 40.6]	✓			✓		✓
V11.	Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. [Supports Key Move S2f]	✓					

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle (S3)							
V12.	Provide dedicated places for people to walk, bike, or roll safely separated from vehicles by using context appropriate treatments, such as protected bike lanes or “complete street” corridors, especially on major truck routes. [Supports Key Move S3b]	✓			✓		✓
V13.	Support programmatic activities and partnerships to reduce the size and weight of vehicles used for personal trips, transit, and urban goods movement. Heavier vehicles are a key factor in pedestrian fatalities. [Supports Key Move S3f]	✓					
V14.	Expand safety education for all travelers. [Supports Key Move S3h]	✓					
Provide safer routes to schools, parks, transit, community gathering spaces, and other common destinations (S4)							
V15.	Provide pedestrian-scale lighting to make people walking more visible to people driving vehicles and to increase personal safety. [Supports Key Move S4f]	✓	✓		✓	✓	
Support public safety through maintenance of critical access routes and planning for a climate resilient network (S5)							
V16.	Work with first responders on multi-modal street design and curb management strategies to understand access and incident response options. [Supports Key Move S5a]	✓	✓			✓	✓
V17.	Continue to develop street designs and curb management strategies that reduce injury collisions and reduce the need for associated emergency response. [Supports Key Move S5b]	✓					✓
V18.	Continue to coordinate with King County and the State to identify key corridors and destinations for access during a catastrophic emergency. Support access to highway transportation routes including “seismic lifelines” and National Highway System (NHS) routes best suited to establish post-disaster emergency supply chains. [Supports Key Move S5c]	✓	✓		✓	✓	✓
V19.	Regularly update SDOT’s Continuity of Operations Plan (COOP) that identifies strategies for maintaining vital functions and services following a disaster including providing access to designated emergency routes and the National Highway System. [Supports Key Move S5d]	✓		✓	✓		✓
V20.	Continue to conduct emergency preparedness trainings and exercises for SDOT staff to comply with the National Incident Management System (NIMS) that supports effective communication and prompt multijurisdictional emergency response. [Supports Key Move S5e and TEF 39.1, 39.2, and 39.4]	✓					

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
V21.	Work with other City departments and federal regulators to support prompt incident response times through operational or land use strategies, such as use of smaller emergency response vehicles that better fit in urban environments and increased service coverage by adding fire stations or battalions. [Supports Key Move S5f]	✓					
V22.	Plan for and invest in infrastructure and culturally relevant landscaping to mitigate transportation from heavy precipitation events, sea level rise, and related flooding and inundation. Planning efforts should include consultation with federally recognized Tribes and community-based outreach with urban Native communities. [Supports Key Move S5g]	✓		✓	✓		✓
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making process (TJ1)							
V23.	Implement the Transportation Equity Framework to grow transparency, accountability, and shared power when making transportation decisions with community members. [Supports Key Move TJ1a]		✓				
V24.	Feature community voices in planning documents. [Supports Key Move TJ1b]		✓				
V25.	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. [Supports Key Move TJ1c and TEF 29.1, 41.6]		✓				
V26.	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. [Supports Key Move TJ1d and TEF 3.4]		✓				
V27.	Normalize the practice of making decisions about policies and right-of-way (ROW) allocations with input from vulnerable communities. [Supports Key Move TJ1f and TEF 19.1, 25.4]		✓				
V28.	Support the transportation-related needs of local businesses owned by vulnerable communities and their commuting employees. Provide accessible and culturally relevant information about SDOT services. [Supports Key Moves TJ1h and TEF 17.1, 21.2, 16.1]		✓		✓		✓
V29.	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiatives. [Supports Key Move TJ1i and TEF 1.1, 13.4, 31.4, 37.1]		✓				
V30.	Include representation of our region's Coast Salish art, language, and culture in the Seattle transportation system. Support efforts to consult with federally recognized Tribes to standardize policies for project and artist selection and a process to solicit feedback from the greater Native community. [Supports Key Move TJ1j]		✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
Address inequities in the transportation system by prioritizing investments for impacted communities (TJ2)							
V31.	Prioritize transportation investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. Reduce racial inequities in transportation related serious injuries and fatalities. [Supports Key Move TJ2a]		✓				✓
V32.	Support safe, reliable access to employment centers and MICs for BIPOC, low-income and displaced workers, such as increased or late-night transit services or well-lit overnight parking for truck drivers. [Supports Key Move TJ2b]	✓	✓		✓		
V33.	Collaborate with municipal, county, regional, and state transportation partners to consider the transportation needs of people displaced from Seattle. [Supports Key Move TJ2c]		✓				
V34.	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around transportation project impacts and displacement, and co-create transportation, public space, and permitting solutions. [Supports Key Move TJ2d and TEF 14.3,15.2]		✓		✓	✓	
V35.	Develop policies to prevent and mitigate transportation projects, both past and present, from contributing to future displacement. [Supports Key Move TJ2g]		✓				
V36.	Implement improvements to make traveling in Seattle more accessible for everyone, such as curb ramps, accessible pedestrian signals, accessible parking, and accessible transit stops. [Supports Key Move TJ2h]		✓		✓		✓
V37.	Partner with other departments and agencies to deploy anti-displacement programs, investments, tools, and mitigation efforts. [Supports Key Move TJ2i]		✓				
V38.	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]		✓				
Support shifts toward non-punitive transportation enforcement approaches that reduce harm and enhance public safety on city streets (TJ4)							
V39.	Prioritize street designs and infrastructure changes to create self-enforcing streets and curb regulations that encourage safe behaviors and reduce the need for enforcement. [Supports Key Move TJ4a]	✓	✓			✓	✓
V40.	Identify and support implementation of existing non-punitive alternatives to traffic violation fines and fees. Coordinate with community-based organizations to recommend new or revised enforcement alternatives, with accessible options for people of all abilities, such as restorative justice measures, community service, positive reinforcement, or online traffic safety classes. [Supports Key Move TJ4b and TEF 42.2]		✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
V41.	Avoid reliance on enforcement to fund transportation projects and programs. Revenue generated by punitive enforcement should be additive and should be prioritized for investment in transportation options and safety improvements that can reduce or prevent the need for enforcement. [Supports Key Move TJ4d and TEF 34.1]	✓	✓				
V42.	Develop a policy for automated traffic safety cameras and potential expansions informed by recommendations from the racial equity analysis conducted in partnership with community to address concerns and mitigate harms, while continuing to soliciting feedback from community and other stakeholders. [Supports Key Move TJ4e]	✓	✓				✓
V43.	Improve enforcement of existing regulations that support reliable mobility and safety, including those that keep bike lanes and pedestrian zones clear, deter improper use of transit-only lanes, and discourage speeding, especially in school zones. [Supports Key Move TJ4g]	✓	✓		✓	✓	
V44.	Collaborate with the Seattle Police Department on parking enforcement for compliance with curb and right-of-way regulations. [Supports Key Move TJ4h]		✓		✓		
V45.	Explore programs to deter Disabled Parking Permit abuse to provide predictable and reliable availability of parking spaces for people with disabilities. [Supports Key Move TJ4i]		✓		✓		
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options (CA1)							
V46.	Investigate and implement environmentally sustainable intersection controls like roundabouts.	✓	✓	✓	✓	✓	✓
V47.	Expand beyond employer-based travel demand management programs to include residential and neighborhood-based strategies that encourage non-driving travel choices for all trips. [Supports Key Move CA1a]			✓			
Green city streets with landscaping and street trees to better handle changing climate (CA2)							
V48.	Install green stormwater infrastructure on streets that already and will continue to flood frequently. Consider locations for de-paving projects that will expand green spaces and improve climate resiliency. [Supports Key Move CA2e]			✓		✓	✓
V49.	Explore use of different pavement types, including lighter colors, to reduce urban heat island effects. [Supports Key Move CA2f]			✓		✓	
Foster neighborhood vitality and improved community health (CA3)							
V50.	Co-create low-emission neighborhoods with communities so the benefits of cleaner air and safer streets are shared equitably. [Supports Key Move CA3a]		✓	✓		✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
Support the transition from fossil fuel to electric vehicles for personal, commercial, and delivery trips (CA4)							
V51.	Work with City departments to support the transition to electric vehicles for all segments of transportation through equitable incentives, grant opportunities, partnerships, and pilot programming. [Supports Key Move CA4a and TEF 36.2]		✓	✓			
V52.	Establish a comprehensive policy for EV charging in the right-of-way, outlining preferred locations, standards, and requirements. [Supports Key Move CA4b]			✓			✓
V53.	Lead by example and transition to a 100% zero-emissions City fleet by 2030. [Supports Key Move CA4c]			✓			
Advance mobility management strategies to encourage walking, biking, and transit trips (CA5)							
V54.	Explore equitable demand management tools that could influence travel choices and create revenues to invest in sustainable transportation options, freight movement, and innovation. [Supports Key Move CA5c]			✓			✓
V55.	Work with regional partners as they explore pricing options that are equitable and do not put the city at a competitive economic disadvantage. [Supports Key Move CA5d]		✓	✓			
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Support access to jobs, freight movement, and growth in deliveries (PG4)							
V56.	Work with other agencies and private partners to provide real-time information to minimize travel time and optimize access for commuters and freight and urban goods vehicles. [Supports Key Move PG4i]				✓		✓
V57.	Expand efforts to work with employers and property managers to provide sustainable transportation options, education, and incentives to promote sustainable travel options for shift workers, non-peak hour commuters, small business employees, and workers in MICs. [Supports Key Move PG4l]		✓	✓	✓	✓	
Manage curbspace to reflect city goals and priorities (PG5)							
V58.	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]	✓	✓	✓	✓	✓	✓
V59.	Continue to use pricing mechanisms to manage on-street parking demands and improve access to adjacent uses (by turning over spaces). [Supports Key Move PG5f and TEF 32.1]		✓		✓		✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
LIVABILITY KEY MOVES							
Reallocate street space to prioritize people, creating enjoyable places that also facilitate goods delivery and mobility (PP1)							
V60.	Prioritize person-throughput as metric rather than vehicle throughput. [Supports TEF 19.6]	✓	✓	✓		✓	
V61.	Update the complete streets project evaluation process around goals to reduce drive-alone rates, reduce vehicle-miles traveled, and grow trips made by healthy and sustainable travel options.	✓	✓	✓		✓	
V62.	Design streets and public spaces with consideration of goods and emergency access needs, while adjacent businesses prosper from an activated public realm. [Supports Key Move PP1c]	✓	✓		✓	✓	
V63.	Update Seattle's Right-of-Way Improvements Manual (Streets Illustrated) to reflect evolving best practices in safe street designs and emergency response mobility. [Supports Key Move PP1d]	✓	✓	✓	✓	✓	✓
Create welcoming community and mobility hubs (PP2)							
V64.	Provide a safe and comfortable experience moving in and around community and mobility hubs. This includes better crossings and intersections, slower speeds and rightsized travel lanes, decluttered sidewalks, universal access, and more. [Supports Key Move PP2c]	✓			✓	✓	
Co-create and enhance public spaces for playing and gathering to improve community health (PP3)							
V65.	Implement shared, car-light streets, such as Café Streets and Healthy Streets, and car-free streets to support the transition to a low-carbon transportation system and reduce chronic health disparities. [Supports Key Move PP3d]	✓	✓	✓	✓	✓	✓
MAINTENANCE & MODERNIZATION KEY MOVES							
Maintain our streets, sidewalks, and bridges and incorporate planned safety and network improvements with maintenance work (MM1)							
V66.	Maintain our transportation infrastructure, including streets, sidewalks, and bridges serving the most users and on the high-injury network. [Supports Key Move MM1a]	✓	✓	✓	✓	✓	✓
V67.	Strategically manage the life cycle of our transportation assets in accordance with our Transportation Asset Management Plan to achieve the best performance results for the preservation, improvement, and operation of infrastructure assets. [Supports Key Move MM1b]				✓		✓
V68.	Reduce the maintenance backlog by being proactive, leveraging technology to monitor asset conditions, and using data and lifecycle analyses to help when it's time for upgrades. [Supports Key Move MM1c]				✓		✓
V69.	Conduct proactive bridge and roadway structure maintenance, preservation, and replacement activities to increase the resiliency of vulnerable bridges and other vital connections. [Supports Key Move MM1d]	✓			✓		✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Vehicle Element: Delivering the Key Moves							
V70.	Collect feedback on asset conditions as part of community engagement on transportation system planning, design, and co-creation. [Supports Key Move MM1e]		✓				✓
V71.	Conduct asset maintenance in accordance with the priority investment and emergency response route networks, especially when investment supports walking, biking, transit, and freight. [Supports Key Move MM1f and TEF 45.6]		✓				✓
V72.	Modernize city streets by incorporating planned safety and network improvements into maintenance and replacement activities to not only improve the condition of transportation infrastructure and equipment, but also reduce dependence on driving, promote sustainable travel options, and support economic vitality. [Supports Key Move MM1c and TEF 19.3]	✓	✓	✓	✓	✓	✓
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
V73.	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. [Supports Key Move MM2a and TEF 19.3]	✓	✓				✓
V74.	Focus resources for maintenance and improvements in neighborhoods that have been historically or are currently underserved. [Supports Key Move MM2b and TEF 19.4]		✓		✓		✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
V75.	Collect, monitor, and use data to inform changes to the transportation system. [Supports Key Move MM3a]	✓	✓	✓	✓	✓	✓
V76.	Anticipate and leverage innovative transportation technologies so they are shaped to meet community values and goals, including safety, equity, and climate response. [Supports Key Move MM3b]				✓		✓
V77.	Coordinate with relevant partner agencies on projects of regional and statewide significance within the City of Seattle, such as the I-5 Master Plan, Lid I-5, or high-speed rail corridors. [Supports Key Move MM3d]						
V78.	Use information infrastructure (e.g., data from sensors and traffic control systems) to manage travel flows, inform the traveling public, monitor the conditions of streets and bridges, and promote use of more efficient and sustainable travel options. [Supports Key Move MM3g]						✓
V79.	Research and develop policies to manage the evolution toward connected and autonomous vehicles, recognizing that government and industry must partner to deliver their anticipated benefits safely. [Supports Key Move MM3h]	✓	✓	✓	✓	✓	✓



SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we will need to remain agile and able to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to vehicular travel, which were used to shape the actions we'll take to achieve our shared transportation vision. SDOT will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances continue to evolve in the years to come.

A reliable and well-connected roadway network is required to accommodate critical vehicular travel and essential personal trips. Critical vehicular travel includes emergency response vehicles, freight and goods movement, and utility functions. Essential vehicle trips include those not easily made by other travel options, such as work shifts not served by transit schedules or routes, trips with large families, or people with disabilities who may experience barriers for accessing and using other travel options.



A Metro bus and a fire truck travelling on 3rd Ave

OPPORTUNITIES, CHALLENGES, AND EMERGING TRENDS

Seattle's street system has many competing demands for finite available space by people using a variety of travel choices. From 2009 to 2019, the city had approximately 1 million average daily vehicle trips, according to SDOT's 2019 Traffic Report (pre-pandemic). This means the city accommodated extensive growth in jobs and population— without adding vehicle trips to the system, though many of Seattle's main arterials continued to experience varying levels of traffic congestion over this period.

The COVID-19 pandemic resulted in significant changes in commuting patterns, which led to a steep drop of over 35% in traffic volumes and congestion on Seattle streets. Traffic volumes rebounded in 2022 but are still below their pre-pandemic levels. This section discusses the opportunities, challenges, and emerging trends facing vehicular travel in Seattle.

- **Rise in serious injury and fatal crashes on Seattle streets.** Serious injury and fatal crashes remained high in 2021 and 2022, despite the lower traffic volumes that resulted from the pandemic. Opportunities exist to pair street redesigns and vehicle miles traveled (VMT) reductions to implement Seattle's Vision Zero action plan recommendations. Example strategies that have reduced the severity and frequency of vehicle collisions with pedestrians and bicycles include reducing vehicle speeds, implementing road diets², and other traffic calming measures.
 - Over the last several years, 93% percent of pedestrian deaths in Seattle occurred due to vehicle collisions on arterial streets³. Reducing driver speeds reduces the severity of collisions for people inside and outside of vehicles.
- **Population growth.** The 2024 Comprehensive Plan update, One Seattle, establishes a 20-year vision for how and where Seattle continues to grow and accommodate a projected 80,000 housing units and 159,000 jobs. As a regional growth and job center, Seattle doesn't have available roadway capacity for everyone to drive a personal vehicle. To support safe and steady travel options for existing and future residents,
 - The Vehicle Element recommends transportation demand management (TDM) strategies to support future growth and sustainable travel in Seattle. TDM programs promote shifts from private vehicles to other travel options. SDOT's existing Commute Trip Reduction and Transportation Management Programs help reduce drive-alone trips and commute trips at large employers and development sites, while other limited campaigns focus on all trips in particular neighborhoods.
- **Driving is an expensive travel default.** The costs of owning and maintaining a private vehicle can be extensive, even without considering externalized costs like pollution and

² A "road diet" is a reconfiguration of a roadway to reduce the number of travel lanes to free up space for other uses such as transit lanes, bike lanes, wider sidewalks, and landscaping. They have been shown to slow travel speeds, reduce collisions by 19%-47%, and provide space for people biking walking, taking transit or other uses of the right-of-way.

³ This number represents fatalities from personal vehicles. It does not include transit and rail fatalities for pedestrians.

carbon emissions. In Seattle, 16.1% of households do not have a vehicle that can be used by members of the household.⁴

- To create a more affordable transportation system, we'll need to provide other high quality options for travel that are accessible and reliable, while continuing to support essential vehicle trips.
- **Pandemic impacts.** The pandemic led to an increase in remote work that reduced traffic in many areas of the city. The 2022 Commute Seattle Mode Split Survey⁵ shows that 65% of workers teleworked at least one day a week. Although commuting by personal vehicle rebounded in 2021 and 2022, it is still below the 2019 peak. Long term impacts to travel behaviors are unknown. Fewer people driving and more flexible work schedules for portions of the workforce has reduced time traveling for many people.
 - In some cases, fewer people driving on less congested streets also resulted in people driving faster, which can result in more serious and fatal collisions. The pandemic impacts resulted in shift from transit and active transportation options (such as walking and biking) to personal vehicle use.
- **Driving continues to impact climate change.** Mayor Harrell's Executive Order on Climate (EO 2022-07) recognizes the challenges of reducing transportation emissions and achieving a carbon-free transportation system by 2050. Two out of three car trips within Seattle are less than 3 miles. A significant reduction in driving trips in favor of walking, biking, and transit, along with the electrification of as many remaining driving trips as possible, is needed to generate significant reductions in emissions. Such shifts would also result in improved health, safety, and economic outcomes.
- Road transportation accounted for 60% of greenhouse gas emissions in 2018⁶ in Seattle. The Vehicle Element provides a framework for how the roadway network and its operation in support of a range of vehicles and travelers aligns with Seattle's climate and safety goals. A balanced transportation system that provides opportunities for people to choose which mode they prefer tailored to their trip needs can curb environmental impacts of driving. Existing transportation goals that address climate include:
 - Reduce greenhouse gas (GHG) emissions and vehicle-miles traveled (VMT)⁷
 - Transition people away from gasoline-power vehicles to zero-emissions travel options
 - Increase investments that make it more convenient to walk, roll, bike, and take transit
 - Create climate resiliency for disproportionately impacted communities
 - Implement a more balanced transportation experience with a goal of 9 out of 10 trips being fossil fuel free, which creates space for those trips that need to be made by car

⁴ 2021 5-year American Community Survey estimates. Question: How many automobiles, vans, and trucks of one-ton capacity or less are kept at home for use by members of this household?

⁵ <https://www.commuteseattle.com/wp-content/uploads/2023/03/2022-Seattle-Commute-Survey-Report.pdf>

⁶ https://www.seattle.gov/documents/Departments/OSE/ClimateDocs/GHG%20Inventory/2018_GHG_Inventory_Dec2020.pdf

⁷ House Bill 1191 includes a requirement for local governments to reduce VMT <https://lawfilesexternal.wa.gov/biennium/2023-24/Pdf/Bills/House%20Passed%20Legislature/1181-S2.PL.pdf?q=20230509164411>

- **Emergency and incident response.** Changes to the street network that reduce vehicular capacity or slow travel speeds can create challenges for first responders to navigate through congestion and could potentially impact response times. Average travel response time for the first arriving fire department unit has increased 40 seconds in 2022 compared to 2012 in Seattle.
 - To support city efforts to reduce response times while serving a growing population, we'll continue to work with partners across city departments to design streets that consider the access and mobility needs of emergency responders, such as the ability to pass on the left. Longer-term strategies and opportunities to consider include adding response units, stations, and vehicles. Opportunities to employ a range of ITS strategies can also help move emergency or incident response vehicles through congested corridors, when necessary.
- **Vehicle design.** Personal vehicle and freight truck design has trended toward larger and heavier vehicles. Heavier vehicles create increased maintenance needs on streets and have a large impact on serious injury and fatal collisions with people outside of vehicles. As well, large freight vehicles can be hard to maneuver in dense urban environments with smaller turn radii and narrower streets than provided by traditional highway design.
 - City departments have an opportunity to lead by example in transitioning to vehicles right sized for dense environments.

- **Private EV adoption rates are increasing.** Transition to electric vehicles (EVs) is a tool to reduce GHG emissions. The first objective should be mode shift, as electric personal vehicles still have environmental, safety, and economic (congestion-causing) impacts. EVs are heavier than internal combustion engine (ICE) vehicles, which can result in more wear and tear on roads and more serious collisions. Charging infrastructure is limited due to existing real estate prioritized for gas powered vehicles (gas stations), the ability to have at-home charging infrastructure, and existing electrical transmission infrastructure.



Electric vehicle using an EV charging facility

- **Advances in intelligent transportation systems (ITS) and traffic management tools.** Intelligent transportation systems are technologies to manage transportation systems, such as coordinating traffic signals and traveler information systems that provide data such as travel times and road closures. Advances in ITS and other traffic management tools allow more vehicle capacity to be extracted per lane, which can allow reallocation of street space to other travel choices. We also utilize ITS to manage streets during disruptions and major events, and as a tool to prioritize emergency response mobility with enhanced signal preemption. SDOT's ITS Strategic Plan identifies investments on key arterial corridors to improve traveler information and multimodal operation of signals.

- **Transition to connected and automated vehicles (CAVs).** Connected vehicles are cars or trucks that can communicate with other vehicles. Automated vehicles are cars or trucks that can drive without a human operator. CAVs combine these connected and automated aspects. There are many different levels of CAV technologies and capabilities that likely will roll out over time, which could help improve traffic safety if properly managed and regulated.
 - CAVs could increase the capacity of the roadway system by using their sensors to allow vehicles to drive closer together, and it could mean additional vehicle-miles traveled and potentially more crashes as technology use expands. It is easier to operate CAVs on highways than on local streets in complex urban environments. See the New and Emerging Mobility Element for more information on EVs and CAVs.
- **Car share services and Transportation Network Companies (TNCs)** can provide the benefits of getting around by car without the need for private car ownership. These privately run services have been operating in Seattle and provide flexible options for people to get around with one-way or round trip services. See the New and Emerging Mobility Element for more information on car share and TNCs.



A carshare vehicle parked in a dedicated on-street parking space

COMMUNITY ENGAGEMENT

A variety of STP workshops and community engagement activities provided valuable input to the Vehicle Element. Through November 2023, the STP engagement process collected about 2,050 locationally specific vehicular related comments from the public. These comments will provide an ongoing resource for SDOT as we work in partnership with the community to advance STP priorities. Key themes from the engagement are summarized below.

- Reduce vehicle speeding to increase safety, while understanding that reducing speed limits is not enough and must be paired with changes to signal timing, physical changes to the roadway, and other strategies.
- Safety improvements for people walking and biking also makes driving safer and calmer.
- Not everyone in Seattle can ride a bike or walk to/from buses and light rail.
- Competing goals require repurposing vehicle lanes for other travel options. Transit goals require reducing vehicle capacity to support transit investment.
- Roads with separated bike lanes and bus lanes should thoughtfully account for people who are driving and aim to avoid creating more congestion.
- Vehicle size is a large component of safety for people walking and biking, so there should be considerations around discouraging oversized vehicles.
- Slow vehicles and implement traffic calming barriers to keep cars from hitting people/buildings interchanges and access points to freeways.
- Consider limiting vehicle access in front of light rail stations.
- Businesses, especially small businesses, need convenient access for all modes of transportation and also need to be accessible for customers consistent with the Americans with Disabilities Act (ADA). This includes convenient and accessible parking.
- Support transitions to electric vehicles (EVs). Electric cars need to be more sustainable due to current issues with manufacture, lifespan, and disposal of lithium batteries.
- Account for increased pavement wear rates from on heavier battery-electric vehicles.
- Enable high-quality and affordable travel options for everyone. Create affordable parking solutions for people who have no feasible alternative to driving, especially people who drive to employment centers in Seattle.
- Continue to emphasize prioritizing travel choices that reduce drive-alone vehicle trips.
- Support for reducing GHG (greenhouse gas) emissions and VMT (vehicle miles traveled).

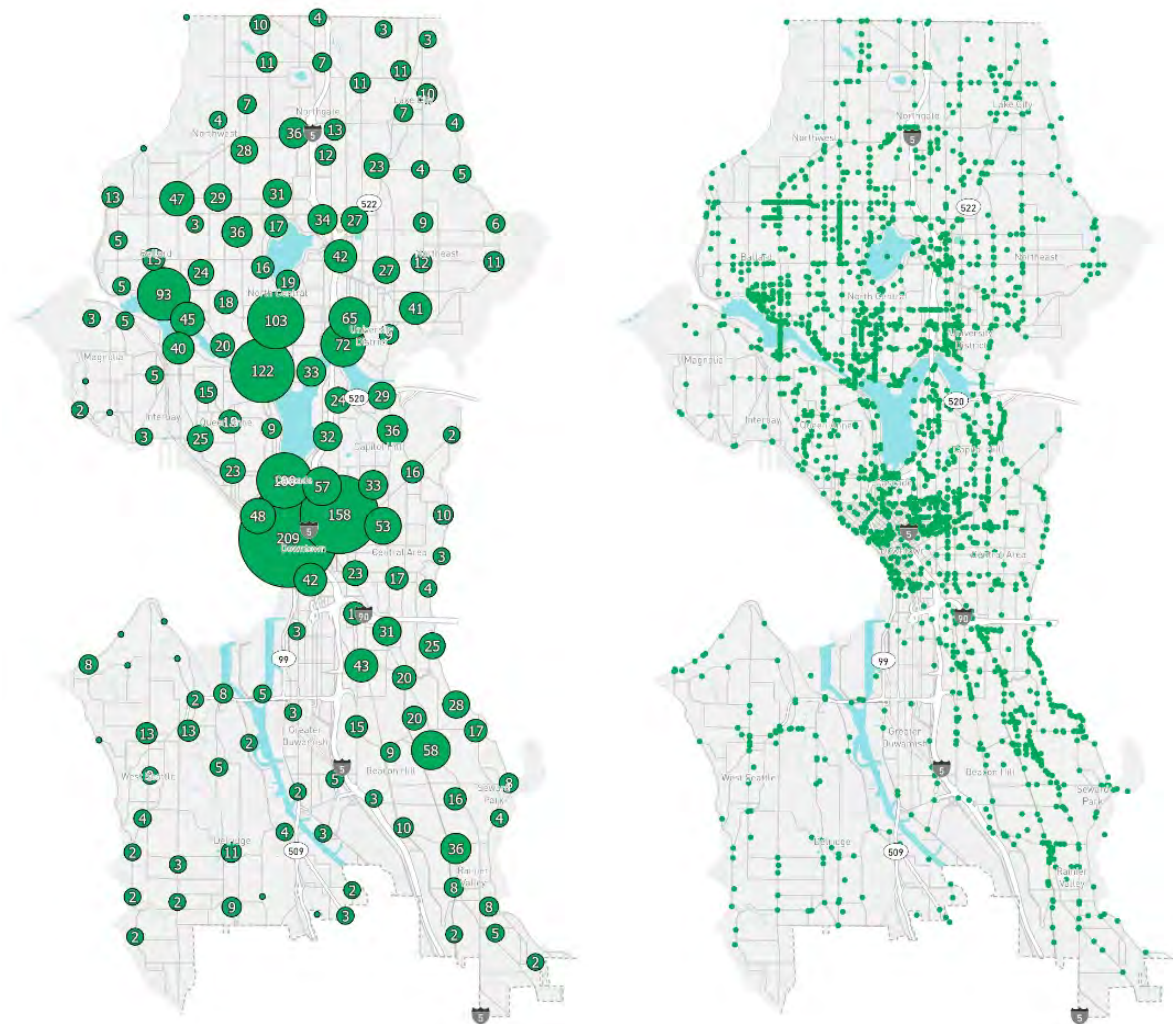
"I drive because cars are the most versatile way to get around. I only have enough money to invest in one mode and I don't live near transit."

– Quote from Survey Respondent

Among the locations and areas in Seattle where the most public comments were received related to vehicle travel were Downtown and Capitol Hill; areas near Fremont, Wallingford, and Ballard; and along Rainier Avenue and Martin Luther King Jr. Way. Over 6,300 pins were received from May-August 2022.

Figure 1 presents aggregated vehicle-related comments from the STP webmap. The figure on the left shows density of vehicular related comments and the figure on the right demonstrates individual points.

Figure 1: Vehicle-related Public Comments on Webmap #1 (May 2022-October 2022)





DRIVING IN SEATTLE

Within Seattle, SDOT is responsible for the planning, design, operations, and maintenance of the public right-of-way, which includes the roadway network used by vehicles. We maintain 1,550 lane-miles of arterial streets, 2,400 lane-miles of non-arterial streets, 124 bridges, and 1,118 signalized intersections. These streets, bridges, and signals serve people using many travel options, including driving personal cars, driving trucks, riding buses, people bicycling, people walking, and emergency responders in vehicles. Space for cars (general-purpose travel lanes and storage) currently takes up 66% of the right-of-way on arterials.

We also manage curbside uses and the on-street paid parking system, issue parking and traffic permits, and maintain additional transportation elements, including but not limited to street pavement, signs, crosswalks and lane markings, sidewalks, bicycle facilities, transit lanes, curb ramps and curb bulbs and many other street features. The general street network also provides space for transit stops and stations operated by local transit agencies.

The Washington State Department of Transportation (WSDOT) operates and maintains the regional freeway system and shares jurisdiction on state highways, such as State Route (SR) 99. Additionally, WSDOT operates the Washington State Ferry System, which transports people using vehicles, bicycles, and traveling on foot.

There are more than 150 at-grade rail crossings in Seattle. We coordinate with our railroad partner's work at these locations, including permitting and maintenance in coordination with SDOT crews and inspectors to complete approaches, restore signage, and make sure clean-up and standards are met prior to roadway reopening.

In the 20-year time horizon of this plan, many people will continue to drive a personal vehicle and cars will continue to be an integral part of Seattle's transportation system. There are approximately 1.4 vehicles per household in Seattle and more than a third of households own 2 or more vehicles⁸. There were 6.170 billion vehicle miles traveled in 2018⁹. Two out of every three car trips within Seattle are less than 3 miles. We need to provide affordable alternatives to driving so people do not have to depend solely on cars to get around.

⁸ American Community Survey 5-year estimates (2017-2021)

⁹ Includes VMT for all trips starting and ending in Seattle and one half VMT for all trips where origin or destination but not both is Seattle

ROADWAY NETWORK AND OPERATIONAL CONSIDERATIONS

The following sections highlight key aspects of the vehicular roadway network, including design guidance, functional classification, street types, street characteristics such as number of travel lanes, traffic volumes, crash information, and emergency response routes. Seattle's vehicular network should be a safe and steady option for people who need to drive, and conditions for people using other travel options should be comfortable and convenient, as well.

The following maps describe the network and influence the design, function, and investment of the city's streets.

Functional Classification and National Highway System

The City is required by the Federal Highway Administration (FHWA) to classify streets on the National Highway System (NHS) according to their primary mobility function, and these classifications are used to determine eligibility for federal funding. Functional classifications align with the vehicular mobility needs of people, the level of vehicular access and connectivity to other facilities, vehicular speed and volume, geometric design characteristics, and access to surrounding land uses.

Figure 2 presents the National Highway System routes in Seattle. These classifications include:

- **Interstate Freeways.** A freeway emphasizes vehicular traffic movement and is only accessible by vehicle; it is characterized by higher speeds and traffic volumes and restricts access to adjacent land.
- **State Routes and designated Non-State Routes.** These routes include intermodal facilities and intermodal connector routes where required for travel from the NHS routes to the intermodal facilities. They vary in their speed and volume characteristics, design features, and degree of local access.

Figure 3 presents the Functional Classifications. These classifications include:

- **Regional, Principal, Minor, and Collector Arterial Streets.** Arterials provide the connections between freeways and access streets and vary in their speed and volume characteristics, design features, and degree of local access.
- **Commercial and Residential Access Streets.** Commercial and residential access streets provide a high level of access to adjacent land uses.
- **Alleys.** Alleys are narrow passageways typically located between or behind buildings and provide important access for deliveries, loading and unloading of people and goods and can provide pedestrian access.

Figure 2: National Highway System (NHS)

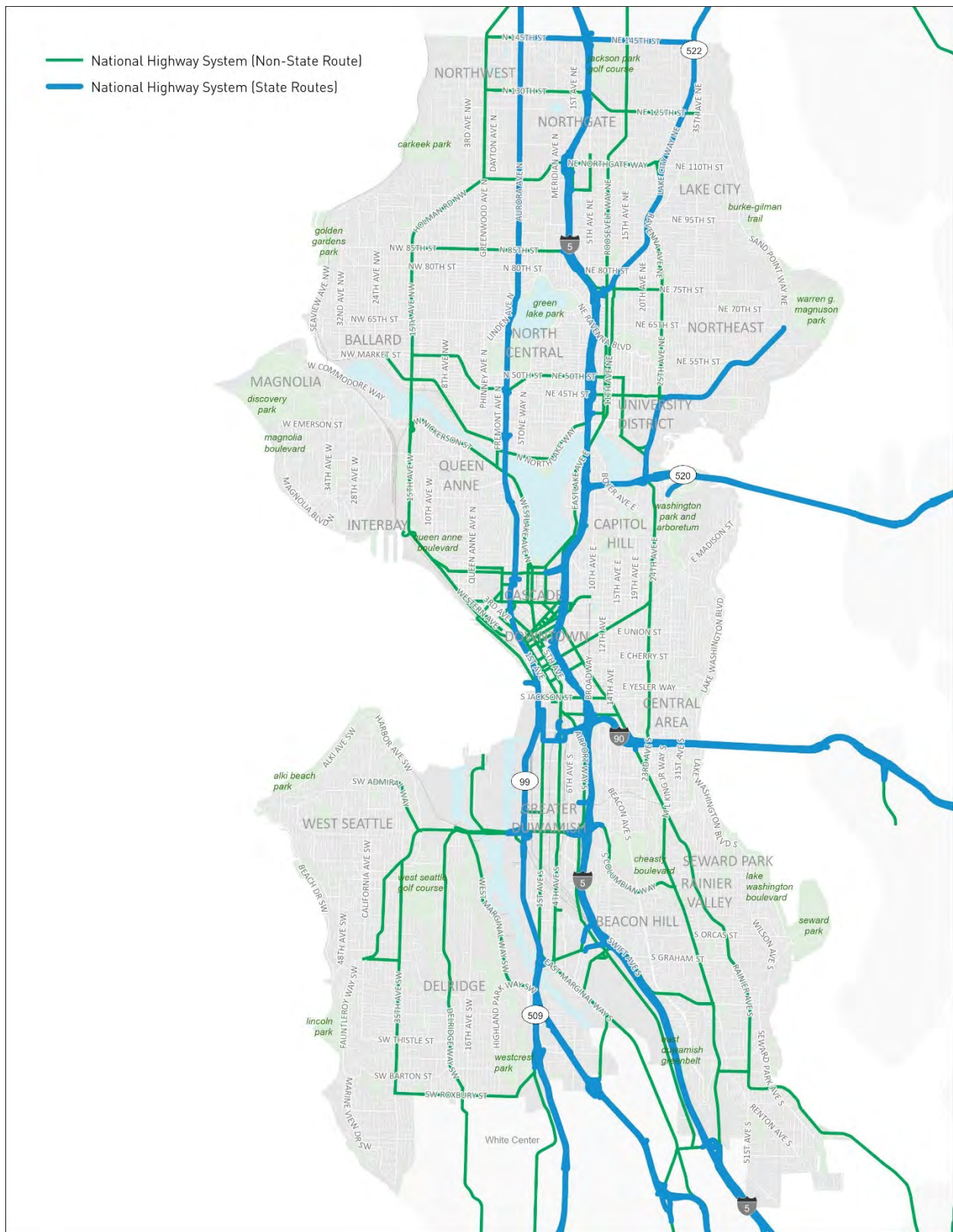
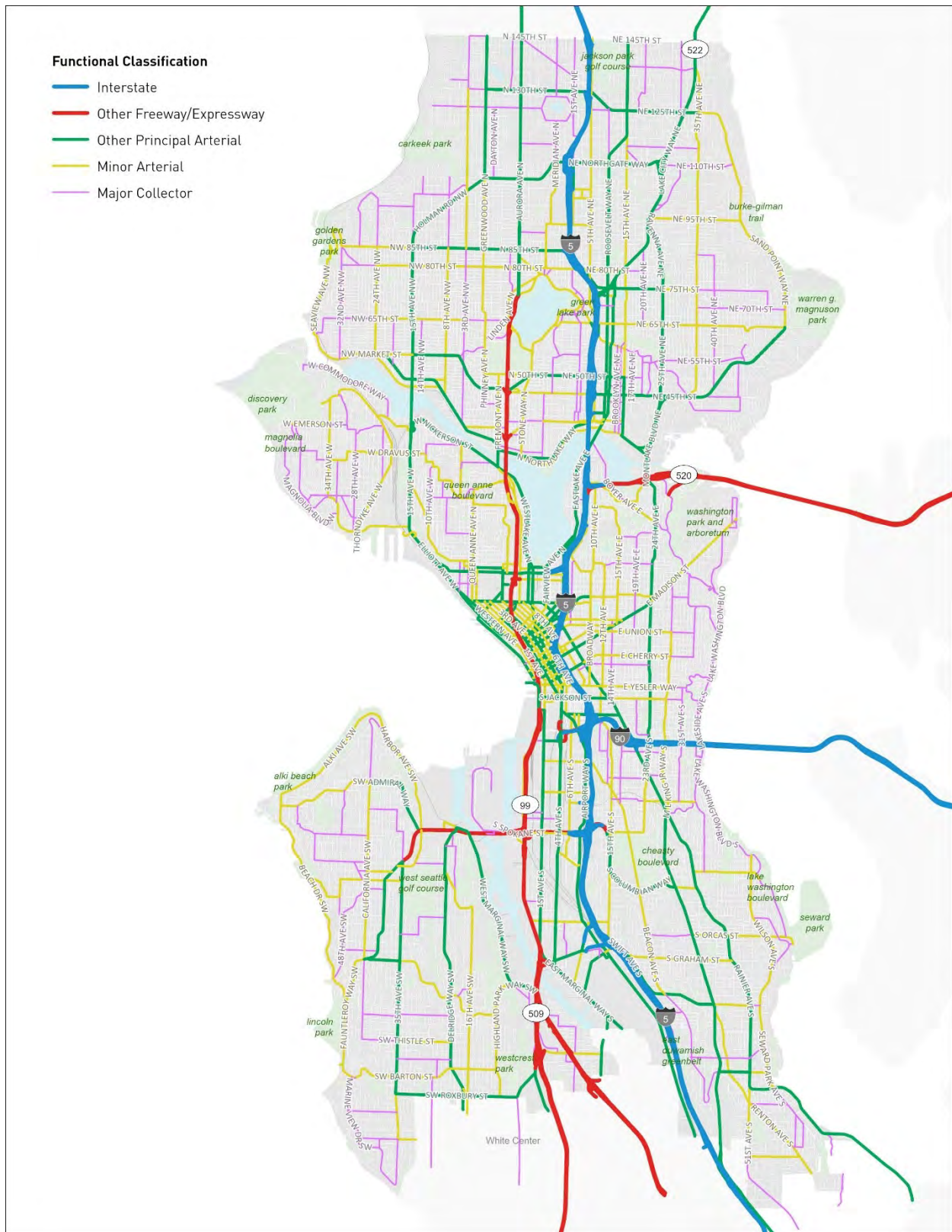


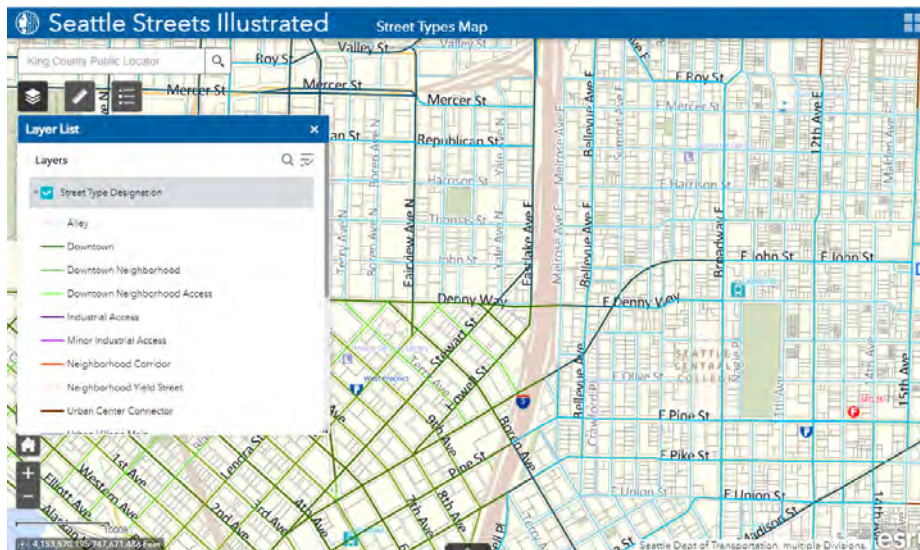
Figure 3: Functional Roadway Classification



Street Types

In addition to functional classification, we also designate street types in our *Right-of-Way Improvements Manual*. Known familiarly as *Streets Illustrated*¹⁰, this document provides specific street design guidance based on adjacent land uses, street functions, and the degree to which they support movement (vehicular speeds) and a sense of place. In this way, we can design streets to best serve both its purpose and to reflect a scale and character appropriate to its context (e.g., downtown, industrial access, neighborhood).

Figure 4: Image of Streets Illustrated Webmap



Streets Illustrated provides design guidance on the number of travel lanes and design treatments. The manual also establishes design standards for various street elements, including lane widths and curb radius, along with a process to approve design deviations. Lane widths and curb radii are designed to accommodate large trucks and transit vehicles where they are most prevalent. Consultation with the Seattle Fire Department (SFD) is required to address the needs of large fire trucks to access people and buildings throughout the city, and to maintain emergency response mobility on Tier 1 response routes.

Travel Lanes and Vehicle Volumes

Figure 5 presents the number of general-purpose travel lanes (two-way total) on city arterial streets. Many arterials with more than a single lane in each direction also support the movement of large freight vehicles and buses. A majority of arterials with 4+ lanes serve north/south travel.

Figure 6 shows average daily traffic (ADT) volumes for arterial streets are for 2022. SDOT routinely collects traffic volume data. Of note are the high vehicle volumes at bridge locations given limited crossing options across the Ship Canal and Duwamish Waterway.

¹⁰ Explore the Streets Illustrated street typologies at: <https://streetsillustrated.seattle.gov/>

Figure 5: Number of Travel Lanes

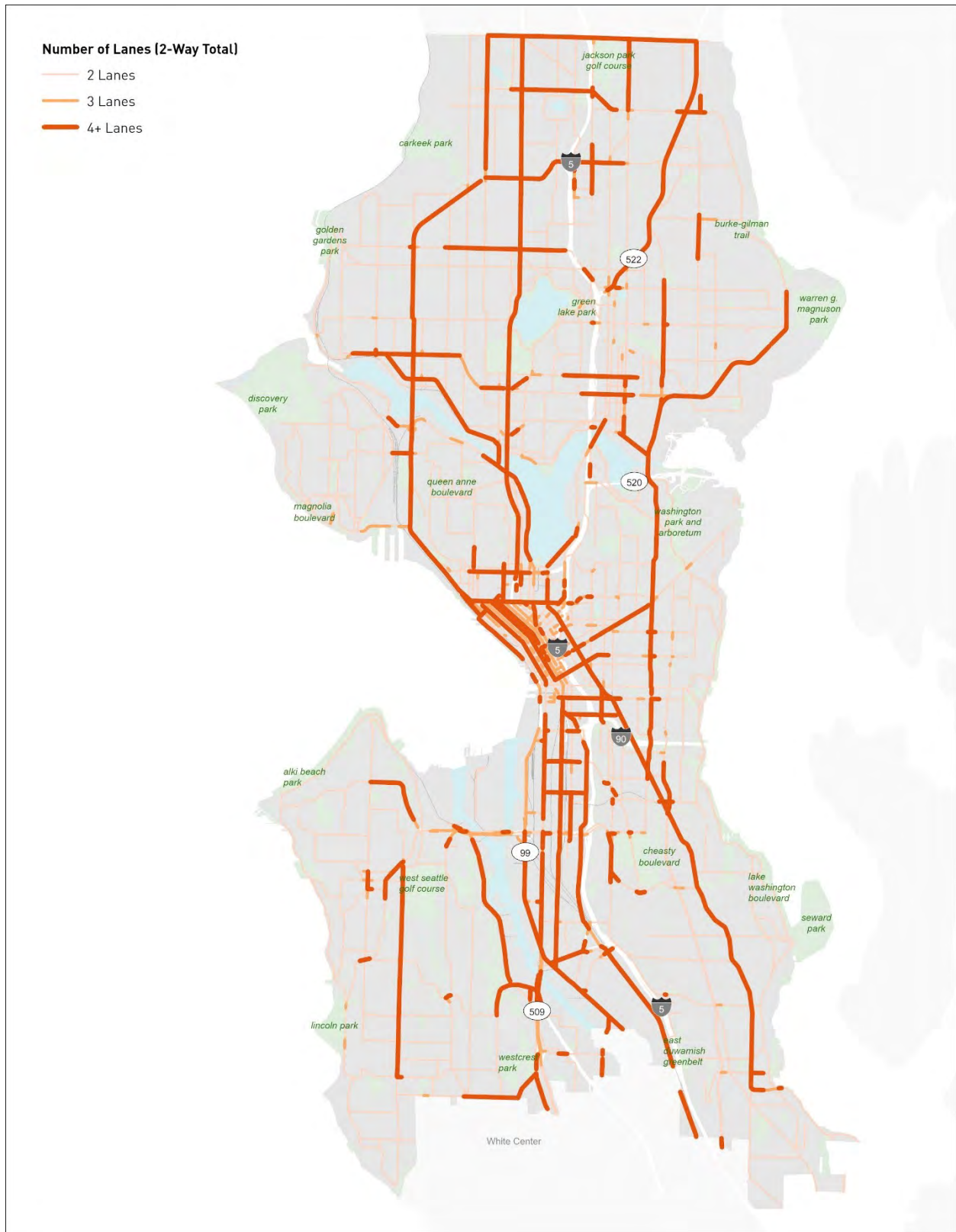
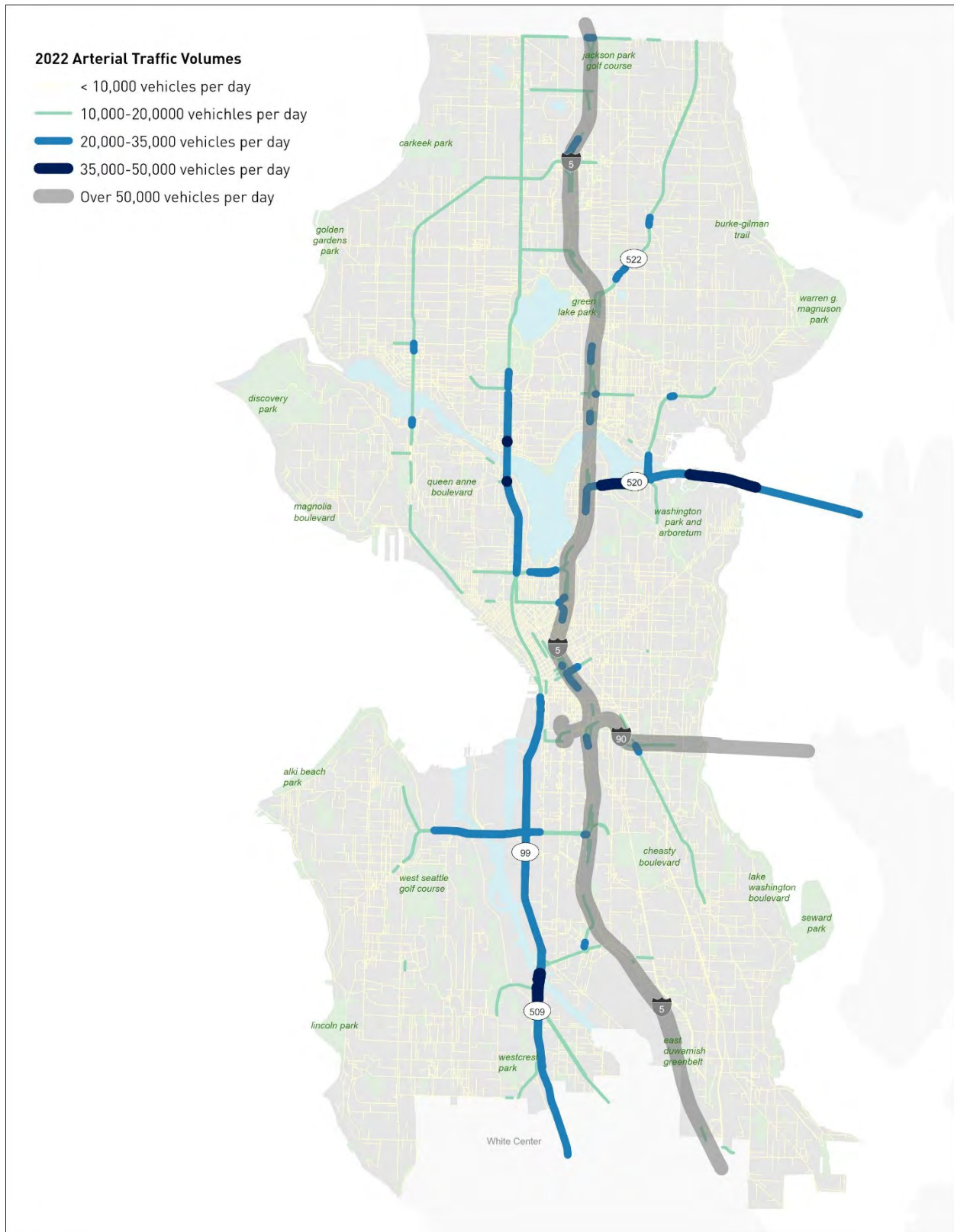


Figure 6: 2022 Traffic Volumes



High Injury Network and Vehicle Speed

Many SDOT safety analyses rely on crash and speed data to identify potential improvements. The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred. Its use is considered a reactive approach that informs safety corridors of focus for the Vision Zero program and more. Through a collisions analysis, the HIN prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes. People driving faster results in a higher number of serious injury and fatal collisions. **Figure 7** depicts the High Injury Network.

Figure 8 shows arterials where the 85th percentile vehicular speeds are at least 5 miles per hour over the posted speed limit (meaning at least 15% of vehicles are exceeding the speed limit by 5 miles per hour).

Emergency Response Routes

Analysis from SDOT and the Seattle Fire Department has identified Tier 1 streets—those used to reach more than 300 responses per year or that provide critical connectivity (**Figure 9**). Redesign of Tier 1 streets should consider impacts to emergency response times with designs that support the ability of emergency response vehicles to navigate around or through vehicular traffic

During winter snow events, SDOT prioritizes plowing key arterial streets. These are shown in **Figure 10**.

Seismic Lifelines (**Figure 11**) are established to prioritize highway transportation routes that will be able to reopen quickly following a major earthquake to establish post-disaster emergency supply chains between federally designated Incident Support Bases located in central and eastern Washington and Federal Staging Areas located in western Washington.

Figure 7: High Injury Network (HIN) Street Segments

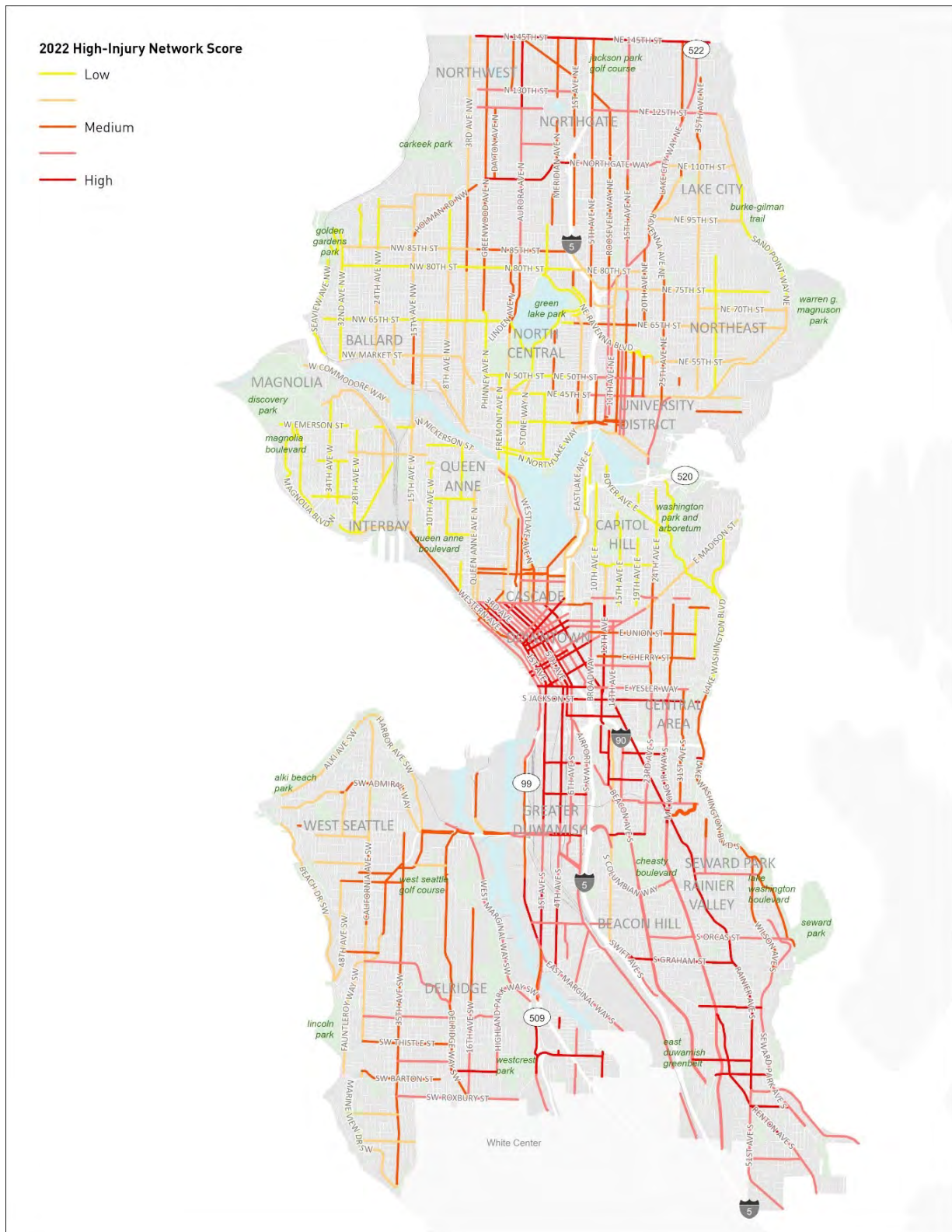


Figure 8: Arterials where the 85th Percentile Speed Exceeds 5 MPH over the Posted Speed Limit

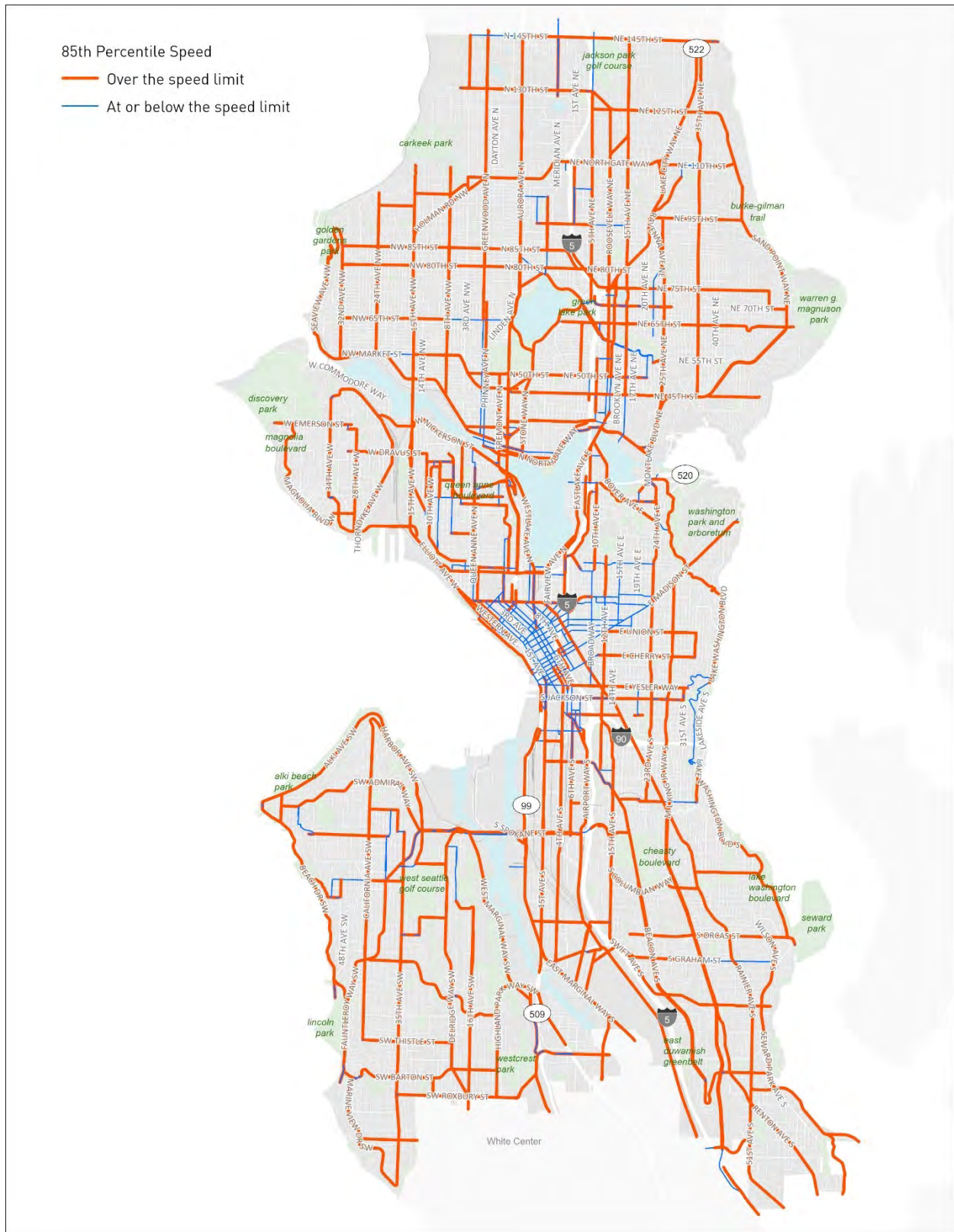


Figure 9: Tier 1 Emergency Response Routes

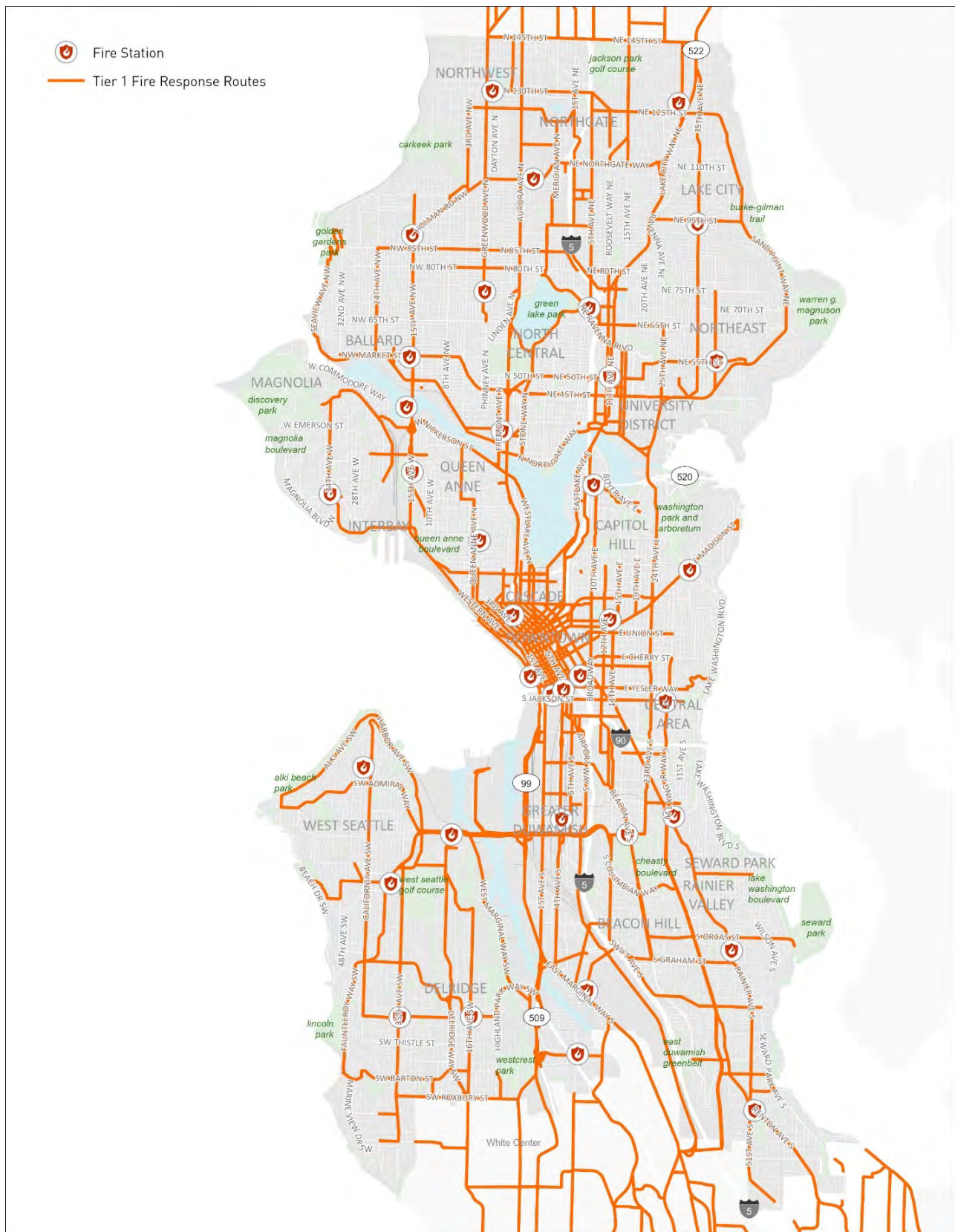


Figure 10: Seattle Snowplow Routes

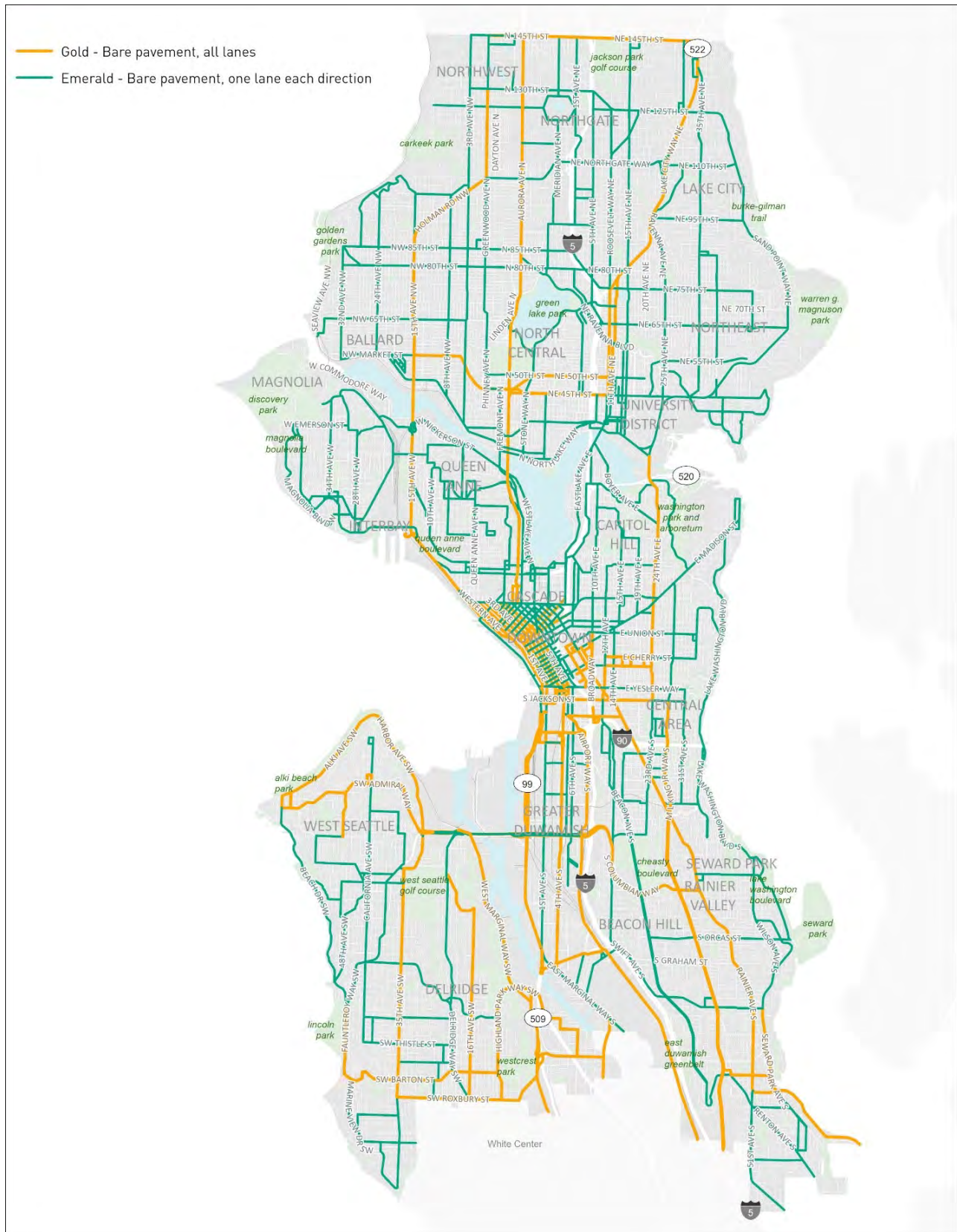
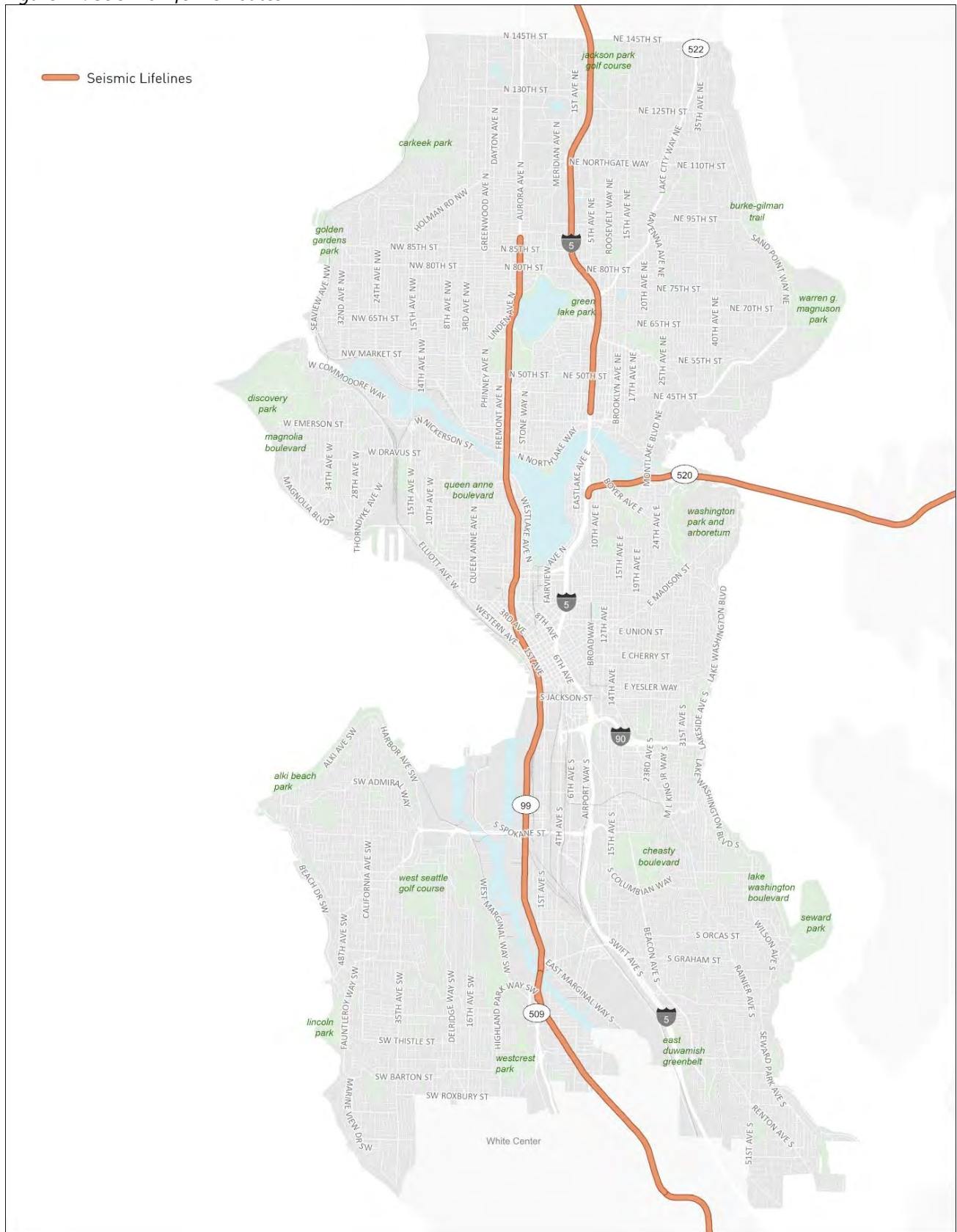


Figure 11: Seismic Lifeline Routes



PROGRAMMATIC ACTIVITIES AND STRATEGIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than specific to a project) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change; however, the programs listed here provide helpful general information to describe the types of tools and methods we will employ to manage the transportation system. Most of these programmatic activities help to tackle multiple goals including safety, sustainability, and equity through affordability.

A reliable and well-connected roadway network accommodates critical vehicular travel and essential personal trips.

Critical vehicular travel includes emergency vehicles, freight and goods movement, and utility functions. Essential vehicle trips include those not easily made by other travel options such as work shifts that are not served by transit schedules or routes, trips with large families, or people with disabilities who experience barriers for accessing and using other travel options. A drivable street network serves different trip purposes, vehicles and travel options.

Support a Safe and Steady Vehicle System

A transportation system that feels safe and supports personal vehicle trips will continue to be an important part of our transportation system. This includes roadway design that is safe, reliable, and predictable for people driving and encourages people to drive in compliance with the posted speed limit. Driving at or below the posted speed limit has safety benefits that support our Vision Zero safety goals to end traffic deaths and serious injuries for people inside and outside of vehicles.

To support a safe and steady transportation system, SDOT will seek to:

- Expand our design toolkit for physical separation between vehicles and other travel modes.
- Explore innovative ways to calm traffic including strategies from the People Streets and Public Spaces Element.
- Work with first responders on multi-modal street design and curb management strategies to understand access and incident response options.
- Slow vehicles when approaching areas of conflict with other travel options.
- Develop a threshold for implementing traffic calming on roads where speeding is a consistent issue in line with design implications for other STP elements.
- Continue to address equity in the use of automated traffic safety cameras while prioritizing streets design that is self-enforcing streets to help eliminate the need for traffic safety cameras.

- Regularly collect data and monitor traffic speeds, crashes, emergency response travel times, and air quality throughout Seattle.
- Incorporate Vision Zero and Safe System¹¹ approaches to every project and program, including proactive safety improvements for citywide implementation.
- Prioritize safety improvements at locations on the high-injury network, have high levels of travel stress, or identified through the Seattle Bicycle and Pedestrian Safety Analysis.
- Identify opportunities to enhance safety at intersections, including the phase out of dual-turning movements, except at points of ingress/egress to limited access highways.
- Leverage ITS to improve safety, reliable traffic flows, and curbspace management.
- Advocate for changes to state and federal legislation and programs to:
 - Revise driver education policies to require driver education for anyone seeking a Washington driver's license. Put more focus on safety for people walking, biking, and rolling, as well as young driver safety. Many regions of the country do not teach new drivers how to interact with people bicycling and using e-mobility devices, so additional driver education is critical.
 - Require drivers aged 72 and older renew their license every two years and allow authorities to restrict licenses in the interest of keeping drivers and roadways safe.
 - Require driver's license re-examination for drivers who are involved in a serious or fatal crash.

Sustainability and Livability Considerations

To create a transportation system that meets our future goals and vision, we need to intentionally choose which mode we take based on our trip. This means that SDOT will seek to provide convenient, sustainable, and affordable options that can be alternatives to driving and support livable neighborhoods.

To support our sustainability and livability goals in Seattle, SDOT will seek to:

- Close network gaps for people who walk, bike, roll and use transit. Where gaps can't be filled, maintain a safe, steady vehicular network for people who depend on vehicles.
- Invest in transit improvements (see Transit element) to move people more efficiently and allow for others who need to make a trip by personal vehicle to do so.
- Promote transportation options that are more affordable than car ownership which could include car sharing or bike and scooter share options, transit passes, or e-bike rebates.
- Pursue right-of-way allocation strategies to support a growing number of residents and people visiting Seattle. This can be done in a number of ways, including:

¹¹ <https://www.transportation.gov/NRSS/SafeSystem>

- Advance low-pollution neighborhood concepts per Executive Order 2022-07 to improve air quality and livability by transitioning areas of the city away from fossil-fuel vehicles in favor of electric and human powered transportation modes.
- Plan for vehicular access needs on car-free/car-lite streets, including consideration of access requirements for emergency vehicles, utility access, and designs that are consistent with the Americans with Disabilities Act.
- Assume a baseline of one general-purpose through-travel lane per direction of travel on most arterials where vehicular mobility will be maintained.
- When conducting future-year traffic analysis, evaluate travel volumes consistent with our VMT target.
- Coordinate transportation system investments with city and regional partners as they pursue land use changes to provide additional housing and services and to reflect the projected growth and characteristics of Seattle's population into the future.
- Work with partners to accelerate the equitable adoption of electric transportation technology as part of Seattle's Transportation Electrification Blueprint. More on electric vehicle (EV) adoption strategies can be found in the New and Emerging Mobility Element.
- Build upon design standards and implementation of Green Streets
- Install green stormwater infrastructure on streets that flood frequently.
- Consider locations for de-paving projects that can expand green spaces and improve climate resiliency.
- Leverage street re-allocations to include new and emerging design practices for green infrastructure.
 - Develop policies for decommissioning underperforming signalized intersections and installing all-way stops or roundabouts.

Pricing Strategies

Explore equitable demand management tools that could influence travel choices and create revenues to invest in transportation maintenance, sustainable transportation options, freight movement, and innovation. To support this work, SDOT will seek to:

- Continue to use parking pricing as a demand management tool that can encourage use of travel by modes other than people driving alone in vehicles.
- Employ parking regulatory reform to influence parking supply, duration, and time of day use (See Curbside Management Element for more parking strategies).
- Support the state and region in advancing mobility management strategies. We will work with regional partners as they explore pricing options that are equitable and do not put the city at a competitive economic disadvantage.

The transportation system must support Seattle's continued growth.

The 2024 Comprehensive Plan update, One Seattle, establishes a 20-year vision for how and where Seattle continues to grow and accommodate a projected 250,000 additional residents.

To provide safe and steady travel options for existing and future residents, the Vehicle Element recommends transportation demand management (TDM) strategies to help support future growth and sustainability of travel in Seattle. Our right-of-way is not getting any wider, so people will need to have options to use modes that take up less space on city streets.

TDM programs are critical for promoting shifts from private vehicles to other travel options and meeting STP goals. Seattle's existing Commute Trip Reduction and Transportation Management Programs help reduce drive-alone trips and commute trips at large employers and development sites, while other limited campaigns focus on all trips in particular neighborhoods.

Transportation Demand Management (TDM)

TDM strategies typically aim to shift travel to off-peak periods, consolidate trips, encourage travel by options other than driving alone, or avoid trips all together, such as by working from home. These strategies support SDOT's sustainability goals of reducing vehicle miles traveled (VMT) and greenhouse gas (GHG) in an equitable manner.

To support our TDM efforts, SDOT will seek to:

- Incorporate TDM strategies in various plans and planning activities during program and project development.
- Continue to develop partnerships to expand and strengthen TDM offerings with employers, community-based organizations, agencies, etc.
- Incentivize options to fill first-/last-mile gaps for people who live in areas with less transit connectivity, with a focus on those with low incomes or are living with disabilities.
- Coordinate with the Seattle Department of Construction and Inspections (SDCI) to further incorporate TDM opportunities in the development process.
- Coordinate and promote transit pass programs in partnership with agencies and micromobility offerings with vendors.
- Leverage capital transportation investments by introducing TDM strategies to community members (e.g., Free Orca cards when high-capacity transit opens or bike to work or school when a new bikeway is constructed).
- Align TDM programming to support and focus on short neighborhood trips to reduce reliance on car trips for nearby destinations.
- Coordinate with the Office of Economic Development (OED) to identify TDM opportunities in business districts and for Black, Indigenous, and People of Color (BIPOC) business owners. (Supports TEF tactic 16.1)

Emergency Response Considerations

Time-sensitive emergency and incident response is core to supporting public safety. First responders that use the transportation system to respond to incidents may include firefighters, police and police alternatives, emergency medical personnel, mental health service providers and more. The Seattle Fire Department responds to over 100,000 incidents a year, of which only 2% are related to traffic collisions on Seattle streets. Many incidents are time-critical to provide lifesaving measures, with 14% of overall responses requiring Medic 1 advance life support.

Efforts to improve travel safety by slowing speeds for general-purpose vehicles hold the potential to also slow emergency response in some contexts. As such, we'll need to continue to coordinate with city departments to consider the access and mobility needs of emergency vehicles in the design of roadways and intersections.

Various design strategies can be considered in appropriate contexts to support vehicle response times, such as maintaining ability of emergency responders to bypass vehicles on the left or preserving critical access during a crisis events, when feasible. In balancing and providing for many competing uses of city streets, design and operational changes may be made that could reduce vehicular capacity or reduce average travel speeds. Working with other city departments, SDOT will seek to:

- Work with relevant city departments on design criteria that considers access and mobility for emergency response vehicles:
- Explore a toolkit of standard design strategies that seek to mitigate potential impacts to emergency response mobility, including but not limited to:
 - using speed cushions rather than speed humps
 - providing space for vehicles to clear lanes in congested areas
 - limiting use of non-mountable center roadway hardscape
 - providing center turn lanes
 - providing parking/loading pull outs
 - transit lanes
 - enhancing signalization and ITS.
- Implement SFD vehicle-compatible traffic-calming treatments on Tier 1 Seattle Fire Department routes.
- Evaluate and monitor response time and street design performance on Tier 1 Routes.
- Develop metrics to assess and monitor implementation of intersection designs compatible with Tier 1 Seattle Fire Department routes.
- Monitor emergency response time impacts on Tier 1 emergency routes and find ways to assess and analyze the role of street designs on response time impacts, and explore possible street design alternatives and interdepartmental partnerships, where appropriate and warranted.
- Coordinate traffic signal operations to support emergency response vehicle needs.

- Maintain building access for emergency response on car-free/car-light streets.
- Consider impacts to emergency response and access when evaluating changes in circulation patterns (e.g., space on one-way streets for vehicles to pull over for passing; street redesigns, and installation of traffic calming devices, especially on Tier 1 emergency response routes.
- Support agency and city partners as they explore use of smaller emergency response vehicles that better fit into urban environments and add fire stations and battalions to support a growing population.

Support Public Safety Through Maintenance of Critical Access Routes and Planning for a Climate Resilient Network

In addition to enabling people to get around for everyday needs, our streets provide access in emergency events. SDOT's essential functions include maintaining mobility for key arterials and bridges and communicating critical transportation information. How we design our public streets and rights of way can also help in our adaptation to climate change, helping us be more resilient in the face of storms, water conditions and other changes. Evacuation routes, bridges, retaining walls, and other infrastructure (such as signals) are identified and maintained in coordination with emergency service providers, King County, and Washington state.

To support this work, SDOT will seek to:

- Continue to coordinate with King County and the State to identify key corridors and destinations for access during a catastrophic emergency. Support access to highway transportation routes including "seismic lifelines" and National Highway System (NHS) routes best suited to establish post-disaster emergency supply chains.
- Regularly update SDOT's Continuity of Operations Plan (COOP) that identifies strategies for maintaining vital functions and services following a disaster including providing access to designated emergency routes and the National Highway System.
- Plan for and invest in infrastructure and culturally relevant landscaping to mitigate transportation from heavy precipitation events, sea level rise, and related flooding and inundation. Planning efforts should include consultation with federally recognized Tribes and community-based outreach with urban Native communities.
- Continue to support snow and ice clearing on key arterials during winter weather events.

Balance the needs of all vehicles on city streets, including delivery trucks and transit

General purpose travel lanes serve more than single occupancy vehicles. They also serve vehicles that pick up waste, deliver packages and goods, trucks that support our international economy, and regional transit systems.

With continued growth in e-commerce, there is an increase in urban goods delivery vehicles on city streets. The STP's Curbside Management Element and Freight and Urban Goods Element identify actions to address this growth, including ways to reduce vehicle trips by consolidating trips or shifting to non-vehicular modes such as e-cargo bikes where possible.

To achieve our safety and climate goals, we need to rely on transit as the backbone of our transportation system for people to get around. With its ability to move many people in a single vehicle, transit is a very space-efficient mode that can maximize people throughput within our limited street capacity.

By investing in our transit network to make a system that works for many or most trips, we can make more room for people who must drive for specific trips. Many of the strategies to slow vehicles and reduce general purpose (GP) vehicular space may impact transit travel time if transit is operating in GP space. Impacts must be offset with investment in our transit system. The STP Transit Element identifies ways to support transit travel through street design, operations, and encouragement.

Update SDOT Tools and Processes

SDOT has a variety of internal tools that inform decision making processes and design guidance and standards. To support our STP goals, SDOT will seek to:

- Streamline internal decision pathways for street design and operation decisions.
- Update design direction in Streets Illustrated and the city's Standard Plans and Specifications, to align with traffic calming efforts and Vision Zero policies.
- Update the complete streets project evaluation process around goals to reduce drive-alone rates, reduce vehicle miles traveled, and grow trips made by healthy and sustainable travel options.
- Consider how right-of-way reallocations among travel modes and other essential functions may impact cut-through traffic in neighborhoods and provide infrastructure and programming to offset impacts.
- Use future-focused goals and metrics for mode share, safety, and climate, to rebalance street right-of-way allocations.

Coordinate with partners

SDOT shares responsibility for creating and maintaining a transportation system. To achieve our vision and goals we collaborate with partners to advance work together.

To continue to coordinate with agency partners, SDOT will seek to:

- Coordinate with the Washington State Department of Transportation (WSDOT) to address safety challenges where their roadways impact the city street network.
- Address safety challenges at free-flow freeway ramps that intersect with city streets in partnership with WSDOT.
- Partner on opportunities to add safety treatments on state routes in Seattle.
 - Where highways or state routes have bisected communities, partner on strategies to reduce harm and re-envision mobility priorities that serve community needs.
 - Support Seattle City Council resolution 32100 and the intent to Lid I-5 where feasible within city limits. Continue to coordinate with the Office of Planning and Community Development, WSDOT, Federal Highway Administration, and Federal and State elected officials as planning, feasibility, and funding move forward.
- Coordinate with railroads for grade crossing surface improvements for vehicles and pedestrians, on-going maintenance and upgrades to signalization, gates, and flashers, and pedestrian channelization through grade crossings.



DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

MEASURABLE OUTCOMES

This section outlines desired outcomes and performance measures to monitor implementation of the STP Vehicle Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching outcome-based measures are identified in the STP implementation strategy (see Chapter 4 of the Part I document). Generally, they are tracked at a citywide scale, and SDOT may not have primary control over their achievement. For example, VMT reductions or percentage of household income spent on transportation.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include reducing the drive-alone rate and reducing vehicular speeding.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples may include Seattle Fire Department response times on Tier 1 routes, and more.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that we can pivot as needed to meet our equity goals over the next 20 years. The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 2 identifies the Tier 2 performance measures that will be tracked for the Vehicle Element.

Table 2: Vehicular Performance Measures

Desired Outcome	Performance Measure (source)	Baseline (year)	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goal
End traffic deaths and serious injuries on city streets	Number of fatal and serious injury crashes involving people driving (Seattle Police Department (SPD) collision report data)	248 (2022)	Zero	Yes	Safety Equity Sustainability Livability
End traffic deaths and serious injuries on city streets due to high-speed collisions	Percent of arterial mileage where 85% of vehicles are traveling within 5 mph of the speed limit (SDOT)	49% (2022)	Increase	Yes	Safety Equity Sustainability Livability
Reduce vehicle mode share	Decrease percent of vehicle trips (SDOT)	66% (2019)	37% by 2044	No	Safety Equity Sustainability Mobility & Economic Vitality Livability
Reduce emissions and other impacts of driving	Reduction of vehicle-miles traveled (VMT) (Office of Sustainability and Environment (OSE))	6.17 billion (2018)	Reduce VMT by 37% by 2044	No	Safety Sustainability Mobility & Economic Vitality Livability Maintenance & Modernization
Reduce dependency on personal	Number of vehicles per household (Census Bureau)	ACS 5-year estimates (2017-2021): 1.4	Reduce the number of vehicles per household	No	Sustainability Livability
Support a well-maintained arterial network	Percent of arterial streets with fair or better pavement condition (SDOT)	61% (2023)	Increase the percent of arterial street segments with a "Fair" or better pavement condition rating (out of Good/Fair/Poor)	Yes	Safety Mobility & Economic Vitality Maintenance & Modernization

RELEVANT TEF TACTICS

- TEF 16.1—Engage with local BIPOC-owned businesses to determine how SDOT can support their employees' transit and transportation needs for commuting.
- TEF 19.1—Normalize decisions about right-of-way (ROW) reallocations to be made in partnership with BIPOC communities. This should include investments in alternative modes and land use/housing. Connect this back with the neighborhood/comprehensive planning piece.
- TEF 19.2—Identify opportunities to repurpose some travel lanes for transit, biking, and smaller, lighter-weight vehicles and devices to create more travel options with the STP.
- TEF 19.6—Prioritize person-throughput as metric rather than vehicle throughput.
- TEF 20.5—Consider travel time and air quality impacts of changes to roadway configurations. Use this information to make equitable investment decisions that consider travel time and air quality impacts and benefits, and to communicate those benefits and impacts to community.
- TEF 20.6—Create a similar "storymap" for decision-making and ongoing monitoring of outcomes for SDOT-related improvements and investments; use power of data and storytelling to help get better sense of where we need to improve our transportation system.
- TEF 31.1—Implement data storytelling on the comparative costs of cars, electric cars, other mobility options and transportation burdens and privileges. Connect this back to our climate, equity, and safety goals and investment.
- TEF 31.2—Review previous SDOT studies on non 9 to 5 commuters; identify where additional information needs to be gathered, develop targeted transportation options, and leverage existing programs to better support this community.
- TEF 31.3—Develop and continue to support targeted transportation options for older adults and people living with disabilities and identify stable funding source; include learnings and results from the Inclusive Mobility On-Demand grant.
- TEF 33.1—Continue to promote remote work and flexible work options at large employment sites citywide and identify opportunities where we can better support working-class populations.
- TEF 36.1—Explore an equitable approach to road pricing with BIPOC and vulnerable communities and, develop road pricing policy approaches generated from the conversations with BIPOC and vulnerable communities.
- TEF 36.3—Partner and fund BIPOC-led community-based organizations to create community-tailored mode shift solutions.

TEF 42.2—Identify existing non-punitive alternatives to traffic violation fines and fees; coordinate with community-based organizations (CBOs) to recommend new or revised non-punitive alternatives, such as restorative justice measures, community service options, or online traffic safety classes; review opportunities to reward positive safety-related behaviors.

TEF 43.4—Review SDOT policies, practices, standards, and funding allocation strategies to elevate/give priority to access and use of right-of-way (ROW) for people of all ages and abilities, people recreating, shopping, walking, rolling, riding bikes and transit.

TEF 47.1—Conduct annual community discussions with community-based organizations to assess ridership experience in BIPOC communities and include results in annual transit-related workplans and decisions.

TEF 52.2—Engage with the community to identify the underlying cultural narrative and values of driving alone and weave this into the STP engagement process; use these findings and information to address and resolve the conflict between SDOT values and priorities in reducing personal vehicle use.

TEF 52.3—Engage in an internal transparent conversation within SDOT on our values, approach, and messaging on cars and addressing BIPOC community needs; identify clear department goals and actions for where cars can fit within our transportation system and how we address BIPOC communities' need and reliance on personal vehicle use.

GLOSSARY

ADA: Americans with Disabilities Act

Arterial street: The “backbone” of the roadway system and accommodates the most trips for all modes. Arterials provide the connections between freeways and access streets and vary in their speed and volume characteristics, design features, and degrees of local access.

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bicycle crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Community and Mobility Hubs: Community and Mobility Hubs are places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience.

Commute Trip Reduction (CTR) Program: Collaboration between governments and private employers to motivate and enable workers to shift away from drive-alone commutes toward other modes of travel. The program is a result of the Washington State Commute Trip Reduction passed in 1991 to reduce traffic congestion and air pollution.

Comprehensive Plan: A 20-year vision and roadmap that guides City decisions on where to build new jobs and houses, how to improve the transportation system, and where to make capital investments such as utilities, sidewalks, and libraries.

Connected and autonomous vehicles (CAVs): Vehicles that can communicate with other vehicles (connected) and can drive without a human operator (autonomous).

Curb bulbs: Extensions of the sidewalk into the street that give pedestrians a shorter distance to cross.

E-cargo bikes: Human-driven bikes with battery-powered pedal assist that can transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

E-commerce: The buying and selling of goods online that are then delivered directly to a home or business. Examples include Amazon and eBay.

EV: Electric vehicles

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City’s climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City’s fleet zero-emission by 2030.

FHWA: Federal Highway Administration

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

General purpose (GP) lane: Space in the right-of-way where all vehicular traffic is allowed.

GHG: Greenhouse gas emissions

Grade crossing: An intersection where general purpose traffic and rail tracks cross at the same level.

High-injury Network (HIN): The High Injury Network (HIN) identifies where fatal and serious crashes have already occurred to inform safety corridors of focus for the Vision Zero program and more. It prioritizes corridors according to fatal and serious injury crash rates, as well as race and equity outcomes.

Intelligent Transportation Systems (ITS): Technologies to manage transportation systems, such as coordinating traffic signals and traveler information systems that provide data such as travel times and road closures.

Key Moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Low-emission/low-pollution neighborhood: Low-emission neighborhoods, sometimes called low-pollution neighborhoods, prohibit, or restrict the types of vehicles allowed within an area and encourage zero- and low-emission travel options like walking, biking, electric vehicles, and deliveries by e-cargo bike. Implementation of these concepts will vary by neighborhood and are co-created with local communities.

Micromobility: Small, low-speed transportation devices. They are convenient for traveling short distances or the beginning or end of trips. They include bikes and scooters.

Multimodal: Refers to the various ways people use the transportation system, such as walking, riding a bicycle, taking transit, or driving a truck or personal automobile. It can also refer to a journey that employs more than one mode, such as walking to the bus stop and then taking a bus to a final destination. The vast majority of individual trips involve more than one mode.

Neighborhood Greenways: Neighborhood Greenways are safer, calmer neighborhood streets where people walking and biking are the priority. These streets work together with trails and protected bike lanes to provide routes to bring people to the places they want and need to go as part of Seattle's all ages and abilities bicycle network.

NHS: National Highway System

OED: Office of Economic Development

Personal delivery devices (PDDs): Small automated or remotely piloted robots designed for short deliveries carrying food, packages, or other goods

PSRC: Puget Sound Regional Council

Refuge islands: Paved median protects pedestrians crossing a multi-lane street by providing a safe place to stop.

Right-of-way (ROW): Strip of land legally established for purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Goals are to create safer vehicles, speeds, roads, and people and provide post-crash care.

SDCI: Seattle Department of Construction and Inspections

SFD: Seattle Fire Department

Shared micromobility: Shared bikes and scooters that offer low-cost option for a short distance trip. Riders locate and rent available devices with their phone, ride it where they want to go, and leave it responsibly parked for the next person.

SPD: Seattle Police Department

Speed cushion: Multiple low-rise speed humps placed together that slow vehicle speeds while still allowing emergency vehicles to pass through normally. They are used on low volume and non-arterial streets.

Standard Plans and Specifications: City standards that apply to any public or private construction in the right-of-way. The document standardizes terminology, abbreviations, and symbols to be used in any construction plans.

STP: Seattle Transportation Plan

Streets Illustrated: Seattle's Right-of-Way Improvements Manual is an online resource for property owners, developers, and architects involved with the design, permitting, and construction in the street right-of-way.

Traffic calming: Physical changes to street design that slow traffic and make the street safer for all travelers. Examples include traffic circles, speed humps, and narrow lanes.

Transportation demand management (TDM): Programs that focus on shifting travel behaviors from single-occupancy vehicles toward more sustainable and efficient modes such as transit and walking.

Transportation Electrification Blueprint: Adopted in 2021, the Transportation Electrification Blueprint is a framework for Seattle to reduce its transportation-related greenhouse gas emissions, with a primary focus on electrification of personal trips, shared mobility, goods delivery, travel by the city fleet, and the installation of electrical charging infrastructure.

Transportation Equity Framework (TEF): A roadmap for decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses disparities that exist within the transportation system due to institutional racism.

Vision Zero: The City's goal to eliminate traffic deaths and serious injuries on city streets by 2030.

VMT: Vehicle-miles traveled

Vulnerable communities: Communities that have historically and currently been erased, intentionally excluded and/or underinvested in by government institutions. SDOT's Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhoods

WSDOT: Washington State Department of Transportation

[This page intentionally left blank]



Curbside Management Element



TABLE OF CONTENTS

Introduction.....	CM-1
How Curbside Management Advances the STP	CM-2
Relationship to STP Goals	CM-6
Delivering the Key Moves.....	CM-7
Setting the Context	CM-13
Opportunities, Emerging Trends and Challenges.....	CM-13
Community Engagement.....	CM-15
Curbside Management in Seattle	CM-16
Critical Access Needs	CM-18
Enforcement and Compliance.....	CM-19
Technology and Data Management.....	CM-19
Institutional Partnerships	CM-20
Programmatic Activities.....	CM-20
Defining Success.....	CM-40
Measurable Outcomes	CM-41
Relevant TEF Tactics	CM-44
Glossary	CM-46

LIST OF FIGURES

Figure 1: Uses of the Curb	1
Figure 2: 6 Essential Functions of City Right-of-Way	17
Figure 3: Location of Paid Parking Areas	25
Figure 4: Location of Restricted Parking Zones	29
Figure 5: Location of Loading Zones	36

LIST OF TABLES

Table 1: Curbside Management: Delivering the Key Moves	8
Table 2: Curbside Management Performance Measures	42
Table 3: Curbside Management by the Numbers (2022)	43

[This page intentionally left blank]

INTRODUCTION

Travelers regularly interact with the curbside in a variety of ways as part of their journey. These include where to get dropped off at school, parking for dinner, or delivering food/beverages at restaurants. Officially the curbside is the area alongside the street adjacent to the sidewalk, providing space for parking, load zones, and numerous other access needs. It also can provide space for permitted private development and construction, as well as people traveling by vehicle, transit, and bike. Historically, the curb was designated for a vehicle travel and parking primarily. Today, the curb has grown into versatile public space, accommodating many different uses while still serving traditional uses such as short-term paid parking (see **Figure 1**).

Since the City is not actively building new streets or widening streets, the curb remains a finite, valuable public resource that must be carefully managed—especially in the city’s areas of high demand. Curbside management is a wide-ranging effort to develop, implement, manage, and enforce policies, assets, and technology governing the many uses of the curb.¹

With growing demand for curbspace in Seattle, context-sensitive strategies can help minimize conflicts between uses, preserve the most critical access needs, and promote sustainable transportation options. As the city continues to grow, smart curbside management will help improve access to important destinations and promote quality of life for our communities.

Figure 1: Uses of the Curb



Source: Institute of Transportation Engineers

¹ International Parking and Mobility Institute

HOW CURBSIDE MANAGEMENT ADVANCES THE STP

The Seattle Transportation Plan (STP) presents a 20-year vision for transportation and our streets. SDOT has been a pioneer in innovative curbside management, evidenced by an award-winning² Curbside Management program often referenced as a best practice in municipal parking management.

The Curbside Management Element brings together multiple successful curbside programs and policies and offers a roadmap to tackle challenges and opportunities related to management of the curb in Seattle over the next 20 years. It also defines important actions we'll take to support a safe and equitable transportation system, help meet our climate goals, and make it easier for everyone to use our streets. This includes programmatic activities and strategies that we're already leveraging, alongside potential new initiatives that can help advance our goals.



A parking pay station at the curb with adjacent landscaping and an e-bike parked nearby

² SDOT received the International Parking and Mobility Institute (IPMI) Parking Professional of the Year award.

Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here. No matter where people live or work, providing safe and equitable transportation will always be critical to connect people and goods where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate travel options and supportive infrastructure that fits the needs of our unique and varied communities— whether a dense downtown grid, a quiet residential neighborhood, or a bustling manufacturing and industrial center.

In denser neighborhoods and commercial centers, development typically occurs close together. Combined with safe and supportive transportation infrastructure, density can make it easier for people to walk, bike and use transit because they don't have to travel as far. People tend to have more access in these places, enabling them to live car free if they choose to or can't afford it. In places where development is more spread out, people might still walk or bike for shorter trips or to connect to transit services, but it is often harder due to longer distances between places.

While some people choose to live or work in places that are more spread out, others do so because they have no choice and driving is their only viable option. For instance, people who live outside of Seattle because housing is more affordable, or people who transport freight or cargo for a living may not have options for how they travel other than driving a vehicle.

Our transportation system can support anticipated growth in different places while continuing to advance our goals by making other travel options more viable and available in appropriate contexts. Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality.

The One Seattle Transportation Element contains right-of-way allocation and curb priority policies that describe curb priorities by land use type. Curb management plays an important role in planning for growth in Seattle:

- Paid Parking – with appropriate rates and time limits, these curb regulations promote vehicle turnover and best ensure that the curb is used efficiently and available for customers going to nearby businesses.
- Load Zones – Representing critical access needs for passenger drop off, parcel/food/beverage delivery, and other goods and services distribution, load zones provide curb space for businesses and residential buildings to function successfully.
- Waste Access signs – These curb signs indicate when and where solid waste collection will occur along the curb during the week, used in denser residential areas to help solid waste vehicles get access to containers/dumpsters.
- Time Limit signs – Installed in smaller commercial areas, 1 or 2-hour time limit signs help provide vehicle parking turnover for customer access to nearby businesses

- **Restricted Parking Zones** - These parking regulations help make public, on-street parking easier in some residential areas by restricting curb access for long-term parking from nearby traffic generators like hospitals or universities
- **Disabled Zones** – Provided in both on residential streets and near businesses, designated disabled zones provide access to people with limited mobility so that they have easier access to their home or destinations, consistent with the federal Americans with Disabilities Act.
- **Transit Layover zones** – These designated spaces allow bus transit vehicles/drivers to rest mid-route for necessary breaks and to maintain schedule patterns. Layover spaces are critical to the functioning of the transit system and primarily provided on-street throughout Seattle near the ends of routes.

Economic Benefits of Curb Management

The STP supports economic vitality in a range of ways and each functional Element plays a role. Curb management directly and indirectly supports economic activity and job growth. Without these curb tools, streets in business districts would likely be clogged with parked cars and the travel lanes would be congested with cars looking for that last available space somewhere. We work directly with businesses to add the necessary curb management regulations to support their needs, in particular:

- Short-term parking that is appropriately priced using our performance-driven rate decisions provides available street parking for customers to nearby retail shops, restaurants, and nightclubs, especially in the evenings and weekends when transit services are not as frequent. While transit, walking and biking play a significant part of transportation to and from business districts, short-term paid parking serves an important function especially when areas are regional draws.
- Urban freight delivery is compulsory for businesses to be successful because without the regular deliveries of the goods and services the businesses sell or produce, they may have difficulty operating. Designated load zones for commercial trucks and for general vehicle use can reduce double-parking that impedes transit bus flow and can improve delivery efficiency for the companies making the deliveries (which may mean lower prices or better results for everyone).
- Passenger and food-pick up zones that give very short-term curb stays for people, meals or other quick pick up and drop off support access to restaurants, hotels, and residential buildings in commercial areas. Jobs also come with the very fact of the invention of new mobility industries like transportation network companies or shared micromobility in the form of more drivers, operations, and related technology service employment.
- The curb lane also provides for street cafes and food trucks where, especially with the latter are predominantly in Seattle owned and operated by people of color, so with the access to curb we can help support lift up and potentially lead to a “brick and mortar” business with success.



Weekend
Brunch

**Greenlake
Grill**

Grill * Beer * Family * Friends

TAKE-OUT BOX LUNCHE

PRIME RIB MONDAY'S

7200

FOOD SERVICE
Weekend Brunch
A
53 Minutes

**3 MINUTE
PASSENGER
LOAD ONLY**



Phone (206) - 684-5444

**FOOD
PICK-
UP
PRIORITY**



Seattle
Department of
Transportation

RELATIONSHIP TO STP GOALS

Curbside management plays an important role in meeting the STP's goals for safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization.



Prioritize safety for travelers in Seattle, with no serious injury or fatal crashes.

Strategic management of the curb incorporates design treatments and strategies that support SDOT's Vision Zero and Safe System approach. When urban goods deliveries happen at sufficiently sized and appropriately located load zones, then double parking and blocking of bike lanes can be avoided. Curb and intersection designs play an important role in providing accessibility for people with disabilities.



Co-create with community and implement restorative practices to address transportation-related inequities.

Implementing curb management strategies creates and preserves access for all users, including people with disabilities or mobility limitations. SDOT publishes a "Can I Park Here" brochure in multiple languages to provide instructions on city curb parking rules. The ability for businesses to thrive, including in historically underserved neighborhoods, often depends on reliable access at the curb for customers and goods.



Respond to climate change through innovation and a lens of climate justice. Effective curb management includes prioritizing curbspace for sustainable modes, reducing overall demand for street parking through pricing, and using loading zones to support reliable urban goods delivery and business access. Curbside electric vehicle charging may play a role in reducing emissions, alongside strategies to advance zero emissions vehicle use (including e-cargo bikes) for goods deliveries.



Provide reliable and affordable travel options that help people and goods get where they need to go.

Due to Seattle's constrained street widths, many projects to enhance transit, walking, and rolling impact the curb. Implementing mobility projects requires balancing improvements with critical access needs for buildings to best ensure passengers, solid waste, goods, and services delivery. Active curbspace management also considers transit layover spaces that are necessary for a well-functioning transit system.



Reimagine our streets as inviting places to linger and play.

Encouraging and managing curbside uses that activate streets while meeting critical access needs contributes to community health. Critical access needs include passenger and goods loading/unloading, waste staging/collection, goods and services delivery, and building maintenance. This supports economic vitality and viability of businesses.



Improve city transportation infrastructure and ready it for the future.

Using data improves active curbspace management, such as informing parking pricing to address demand and provide reliable curb access. Maintaining the robust on-street paid parking system is essential to be technically capable and equipped to address needs at the curb. Updating permitting programs as well as updating parking enforcement methods that transition to license plate-based technologies can address both access and equity needs.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **Curbside Management Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.

([Supports Safety Key Move S2a](#))

Feature community voices in planning documents. ([Supports Equity Key Move TJ1b](#))

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: Curbside Management: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Curbside Management: Delivering the Key Moves							
SAFETY KEY MOVES							
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring (S2)							
CM1	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. Install load zones to deter unsafe double parking. (Supports Key Move S2a)	✓	✓				✓
CM2	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as intersection daylighting and No Parking signs, with a focus on High Injury Corridors. (Supports Key Move S2d)	✓	✓		✓		
Support public safety through maintenance of critical access routes and planning for a climate resilient network (S5)							
CM3	Work with first responders on multi-modal street design and curb management strategies to understand access and incident response options. (Supports Key Move S5a)	✓			✓		
CM4	Continue to develop street designs and curb management strategies that reduce injury collisions and reduce the need for associated emergency response. (Supports Key Move S5b)	✓					
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making processes (TJ1)							
CM5	Implement the Transportation Equity Framework (TEF) to grow transparency, accountability, and shared power when making transportation decisions with community members. (Supports Key Move TJ1a)		✓				
CM6	Feature community voices in planning documents. (Supports Key Move TJ1b)		✓				
CM7	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. (Supports Key Move TJ1c and TEF 29.1, 41.6)		✓				
CM8	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. (Supports Key Move TJ1d and TEF 3.4)		✓		✓	✓	
CM9	Normalize the practice of making decisions about policies and right-of-way allocations with input from vulnerable communities. (Supports Key Move TJ1f and TEF 19.1, 25.4)		✓				
CM10	Support the transportation-related needs of local businesses owned by vulnerable communities and their commuting employees. Provide accessible and culturally relevant information about SDOT services. (Supports Key Move TJ1h and TEF 17.1, 21.2, 16.1)		✓		✓	✓	
CM11	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiatives. (Supports Key Move TJ1i and TEF 1.1, 13.4, 31.4, 37.1)		✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Curbside Management: Delivering the Key Moves							
Address inequities in the transportation system by prioritizing investments for impacted communities (TJ2)							
CM12	Prioritize transportation investments that benefit people and local businesses who currently and historically experience high transportation burdens and those at high risk of displacement. [Supports Key Move TJ2a]		✓			✓	
CM13	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around NEM impacts and co-create transportation, public space, and permitting solutions. [Supports Key Move TJ2d and TEF 14.3 and 15.2]		✓			✓	
CM14	Implement improvements to make traveling in Seattle more accessible for everyone, such as curb ramps, accessible pedestrian signals, accessible parking, and accessible transit stops. [Supports Key Move TJ2h]	✓	✓		✓	✓	
CM15	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]		✓				
Support shifts toward non-punitive transportation enforcement approaches that reduce harm and enhance public safety on city streets (TJ4)							
CM16	Prioritize street designs and infrastructure changes to create self-enforcing streets and curb regulations that encourage safe behaviors and reduce the need for enforcement. [Supports Key Move TJ4a]	✓	✓		✓	✓	
CM17	Improve enforcement of existing regulations that support reliable mobility and safety, including those that keep bike lanes and pedestrian zones clear, deter improper use of transit-only lanes, and discourage speeding, especially in school zones. [Supports Key Move TJ4g]	✓	✓		✓	✓	
CM18	Collaborate with the Seattle Police Department on parking enforcement for compliance with curb and right-of-way regulations. [Supports Key Move TJ4h]	✓	✓		✓		
CM19	Explore programs to deter Disabled Parking Permit abuse to provide predictable and reliable availability of parking spaces for people with disabilities. [Supports Key Move TJ4i]	✓	✓		✓		
SUSTAINABILITY KEY MOVES							
Foster neighborhood vitality and improved community health (CA3)							
CM20	Implement a shared parking program to increase parking supply in business districts and allow flexible use of the curb for critical access needs, multimodal facilities, and non-vehicular uses.			✓	✓		
CM21	Work with local businesses in future low-emission neighborhoods to address delivery and access needs. [Supports Key Move CA3b]			✓	✓		
CM22	Incentivize mobility options that don't use fossil fuels for transit, personal and urban goods delivery vehicles, and shared mobility (such as e-bikes or scooters). [Supports Key Move CA3e]			✓	✓		
CM23	Encourage neighborhood delivery hubs in partnership with local businesses to create central drop-off/pick-up locations for goods and services used by multiple delivery companies, retailers, and consumers. [Supports Key Move CA3f]			✓		✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Curbside Management: Delivering the Key Moves							
Support the transition from fossil fuel to electric vehicles for personal, commercial, and delivery trips (CA4)							
CM24	Work with City departments to support the transition to electric vehicles (EVs) for all segments of transportation through equitable incentives, grant opportunities, partnerships, and pilot programming. [Supports Key Move CA4a and TEF 36.2]		✓	✓			✓
CM25	Establish a comprehensive policy for EV charging in the right-of-way, outlining preferred locations, standards, and requirements. [Supports Key Move CA4b]			✓			
CM26	Locate EV supportive infrastructure and charging facilities so they are safe, well-sited, and do not interfere with mobility or access for people traveling outside of personal vehicles. [Supports Key Move CA4e]	✓			✓		
Advance mobility management strategies to encourage walking, biking, and transit trips (CA5)							
CM27	Expand the geography of and increase rates for paid on-street parking to encourage the use of less expensive and lower pollution travel options. [Supports Key Move CA5a]		✓	✓			✓
CM28	Continue to apply performance-based parking pricing rates and time limits to regulate on-Street parking demand. [Supports Key Move CA5b]			✓			
CM29	Explore equitable demand management tools that could influence travel choices and create revenues to invest in sustainable transportation options, freight movement, and innovation. [Supports Key Move CA5c]			✓			
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Create seamless travel connections (PG1)							
CM30	Prioritize efficient and sustainable movement of people within limited street space and reallocate street and curb space to maximize comfort, convenience, and directness for walking, biking, rolling and transit. [Supports Key Move PG1a and TEF 19.6, 43.4]	✓	✓	✓	✓	✓	✓
CM31	Support expansion of the pedestrian wayfinding program, including at transit stations and stops. [Supports Key Move PG1f]				✓	✓	
Support access to jobs, freight movement, and growth in deliveries (PG4)							
CM32	Provide for critical access needs (mail and goods deliveries, solid waste pick-up, etc.) on-street when they cannot be accommodated off-street. Further integrate curbside management policies in city plans and project review to safeguard critical access needs [Supports Key Move PG4b]				✓		
CM33	Collaborate with private sector partners on pilots and programs that accelerate the shift of freight trips to more sustainable low- and zero emissions vehicles, such as electric cargo bikes to replace a portion of last-mile deliveries made by larger vans and trucks in densely developed areas. [Supports Key Move PG4f]			✓	✓	✓	✓
CM34	Pilot and expand use of technologies that can improve predictability and accessibility for vehicle loading/unloading. [Supports Key Move PG4g]				✓		✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Curbside Management: Delivering the Key Moves							
CM35	Provide low-tech and language-accessible information to businesses and communities about curbspace uses and how to make requests for load zones, parking, or other uses to improve health of local neighborhood economies. [Supports Key Move PG4j and TEF 17.3]		✓		✓		✓
Manage curbspace to reflect city goals and priorities (PG5)							
CM36	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. [Supports Key Move PG5a]				✓		✓
CM37	Prioritize uses of the curb to address demands stemming from changes to more sustainable and efficient personal travel options and the evolving landscape of goods and service delivery over use as private car storage. [Supports Key Move PG5b]			✓	✓		✓
CM38	Develop strategies and new tools to accommodate more types of curb uses, including parking for bikes and other small devices, parking for shared micromobility, dedicated car share space, transit layover space, employer shuttle stops, and other curb uses that support low-emission travel options. [Supports Key Move PG5c]			✓	✓		✓
CM39	Work with communities to expand activated curb uses, including food truck vending, street cafes and parklets, event space, and more. [Supports Key Move PG5d]				✓	✓	
CM40	Support local businesses and cultural activities through designated curb access zones such as passenger load zones to support cultural centers, venues, and events and loading zones for unique needs such as musician loading. [Supports Key Move PG5e]				✓	✓	
CM41	Continue to use pricing mechanisms to manage on-street parking demands and improve access to adjacent uses (by turning over spaces). [Supports Key Move PG5f]			✓	✓		
CM42	Increase the number of commercial vehicle loading zones to decrease the time freight and delivery drivers spend searching for parking. [Supports Key Move PG5g]				✓		
LIVABILITY KEY MOVES							
Reallocate street space to prioritize people, creating enjoyable places that also facilitate goods delivery and mobility (PP1)							
CM43	Reallocate street space currently used for vehicle storage and general-purpose travel to prioritize access for people on our streets and support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations. [Supports Key Move PP1a]					✓	
CM44	Design streets and public spaces with consideration of goods, delivery and emergency access needs, while adjacent businesses prosper from an activated public realm. [Supports Key Move PP1c]	✓			✓	✓	
CM45	Update Seattle's Right-of-Way Improvements Manual (Streets Illustrated) to directly reference the critical access needs policy, where appropriate. [Supports Key Move PP1d]	✓	✓	✓	✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
Curbside Management: Delivering the Key Moves							
MAINTENANCE & MODERNIZATION KEY MOVES							
Ready city streets for new travel options and emerging trends and technologies (MM3)							
CM46	Collect, monitor, and use data to inform changes to the transportation system. This includes data from NEM services and operators. [Supports Key Move MM3a]						✓
CM47	Anticipate and leverage innovative transportation technologies so they are shaped to meet community values and goals, including safety, equity, affordability, and climate response. Work to guide engagement, develop policy, evaluate pilots, and collaborate with peer cities to respond to NEM technologies as they arise. [Supports Key Move MM3b]	✓	✓	✓	✓	✓	✓
CM48	Proactively work with public, private, and academic sector partners to collaboratively develop transit and mobility solutions for the future. Maintain partnerships alongside a fair and flexible regulatory environment to nurture NEM ideas, companies, jobs, and workforce training. [Supports Key Move MM3c]						✓
CM49	Adapt streets for new and evolving forms of mobility devices such as commercial or private cargo bikes, e-scooters, personal delivery devices, low-speed electric vehicles, and others to create more travel options. [Supports Key Move MM3e and TEF 19.2]			✓	✓		✓
CM50	Develop and maintain up-to-date asset data, including digital inventories of physical assets like curbspace, load zones, bike, and scooter parking locations. Inventory and manage curbside regulations using consistent and standardized data collection, storage, and analysis methods. [Supports Key Move MM3f and TEF 19.2]	✓	✓	✓			✓

SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. Many things are delivered to our homes and offices today that weren't just a few years ago. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions our public right-of-way serves. As such, we will need to remain agile and able to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the curbspace management context we're operating in today, including significant opportunities, emerging trends, and challenges. SDOT will continue to engage and co-create with community members as transportation and curb system needs, technology, and circumstances continue to evolve in the years to come.

OPPORTUNITIES, EMERGING TRENDS AND CHALLENGES

Demand for our curbspace has been changing increasing, including for mobile parking payment, more on-demand delivery, and outdoor curbside dining. These new patterns help us rethink curbspace, and this section discusses emerging trends, opportunities, and challenges that Seattle needs to embrace and respond to as part of our curbside management strategy.

Emerging Trends

- Dramatic growth in e-commerce package, meal/grocery deliveries, and app-based ride-hail, has caused higher demand by more people and vehicles for short curb stays
- Zoning code flexibility that let local conditions and market forces determine off-street parking for housing and commercial development, instead of minimum requirements
- Reallocation of curbspace for transit lanes, bike lanes, and street cafes
- New and rapidly changing technology to manage, measure, and charge for curb use
- Commitments to convert to zero-emission vehicles over time by many large auto companies and freight providers
- Development of electric cargo bikes and other zero-emission modes suitable for Seattle's topography and business/residential densities
- Electrification of various parts of the transportation system, with interests and funding to install charging equipment in the public right-of-way
- New technology and data analytics for more proactive, efficient parking enforcement
- Desire by vehicle manufacturers, freight providers, and others for more detailed curb asset and regulation data to facilitate transition to connected and autonomous vehicles

Opportunities

- Acknowledge growing demand to prioritize on-demand service and goods delivery uses to support people and businesses, and the ability and permission during COVID to move quickly with solutions
- More accurately understand evolving curb demand and use, and deploy updated technology to better assess and address modern needs
- Re-envision curbspace uses to prioritize critical building access needs and support goals to increase the use of walking, biking, and transit
- Work with private parking providers to re-purpose underutilized capacity for potential uses such as community and mobility hubs, as well as electric fleet vehicle charging
- Use curbspace to support mobility & economic vitality goals by providing mobility options such as transit and biking (Supports TEF 19.2)
- Advance Mayor Harrell's Climate Executive Order, specifically the "Ability to incentivize shift to mobility electrification in the public right-of-way" (Supports TEF 36.2)
- Determine the most effective use cases and processes to provide new curb amenities (such as on-demand services and non-vehicular uses) and allocate limited curbspace to more people
- Leverage existing, growing relationships with peer organizations and cities (e.g., Open Mobility Foundation cities cohort) to collaboratively address most pressing urban curb management challenges and build sustainable shared solutions (e.g., Curb Data Specification)

Challenges

- Provision of consistent, reliable curb access requires nimble regulatory and pricing mechanisms such as for protecting sufficient space for delivery activities to occur in areas of competing high-priority right-of-way uses
- Lack of adjacent or nearby space in the right-of-way to meet critical access needs for buildings, such as loading for people, goods, and services
- Absence of parking requirements may inadvertently affect amount of loading dock and bicycle parking spaces built with new development, further reliant on curb access
- Seattle's Surveillance Ordinance and the process to update its application can hinder adoption new technology that may support multiple city goals and priorities
- New technology can be cost prohibitive and challenging to budget and procure in a timely manner
- Extensive procurement processes can make nimble investments hard for cities
- Staff capacity and increasingly complex technology for enforcing curbside rules remains a challenge, especially as permitting and curb regulations evolve to be digital and license plate-based, instead of a sticker or decal on vehicle windshields

COMMUNITY ENGAGEMENT

We conducted extensive public outreach as part of the STP development process through tools such as online maps, surveys, and in-person events, festivals, listening sessions, and open houses. Detailed Phase 1, Phase 2, and Phase 3 engagement summary reports can be found via the STP Online Engagement Hub, and engagement efforts are also described in more detail in Chapter 1 of the STP. (Supports TEF 29.1) Over the public comment period, we received more than 1,300 comments about curbside management. When we reviewed the comments, we observed numerous general themes related to curbside management:

Curbside Activation

- Provide space at the curb for seating, outdoor dining, walking path lighting, and emergency call features
- Reduce on-street parking to make room for people to gather in our curbspace
- Identify car-free streets in places that can be closed to traffic regularly (e.g., on weekends, in summer months) (Supports TEF 17.4)
- Create space to plant more street trees (Supports TEF 56.4)

Safety

- Implement raised crosswalks and separated bike lanes citywide
- Make sure that additional street installations (such as outdoor dining, seating, and trees) do not reduce visibility at intersections

Curbside Management and Pricing

- Implement market-rate parking and manage parking supply
- Encourage free transit access and fund through increased parking fees and possible vehicle taxes/fees (Supports TEF 34.1)
- Reduce on-street parking and/or enact dynamic pricing to create space for non-parking curb uses and place a cost on parking to encourage short-term use
- Prioritize delivery vehicle loading/unloading and pick-up and drop-off activities in high impact areas

Many comments by Black, Indigenous, and People of Color (BIPOC) focused on these themes:

- Preserve parking where it matters—work to make sufficient parking in places where people rely on cars
- Keep the curb area clean and safe—make curb areas well-maintained, especially at bus stops
- Use the curb creatively—allow businesses to use curbspace for dining spaces



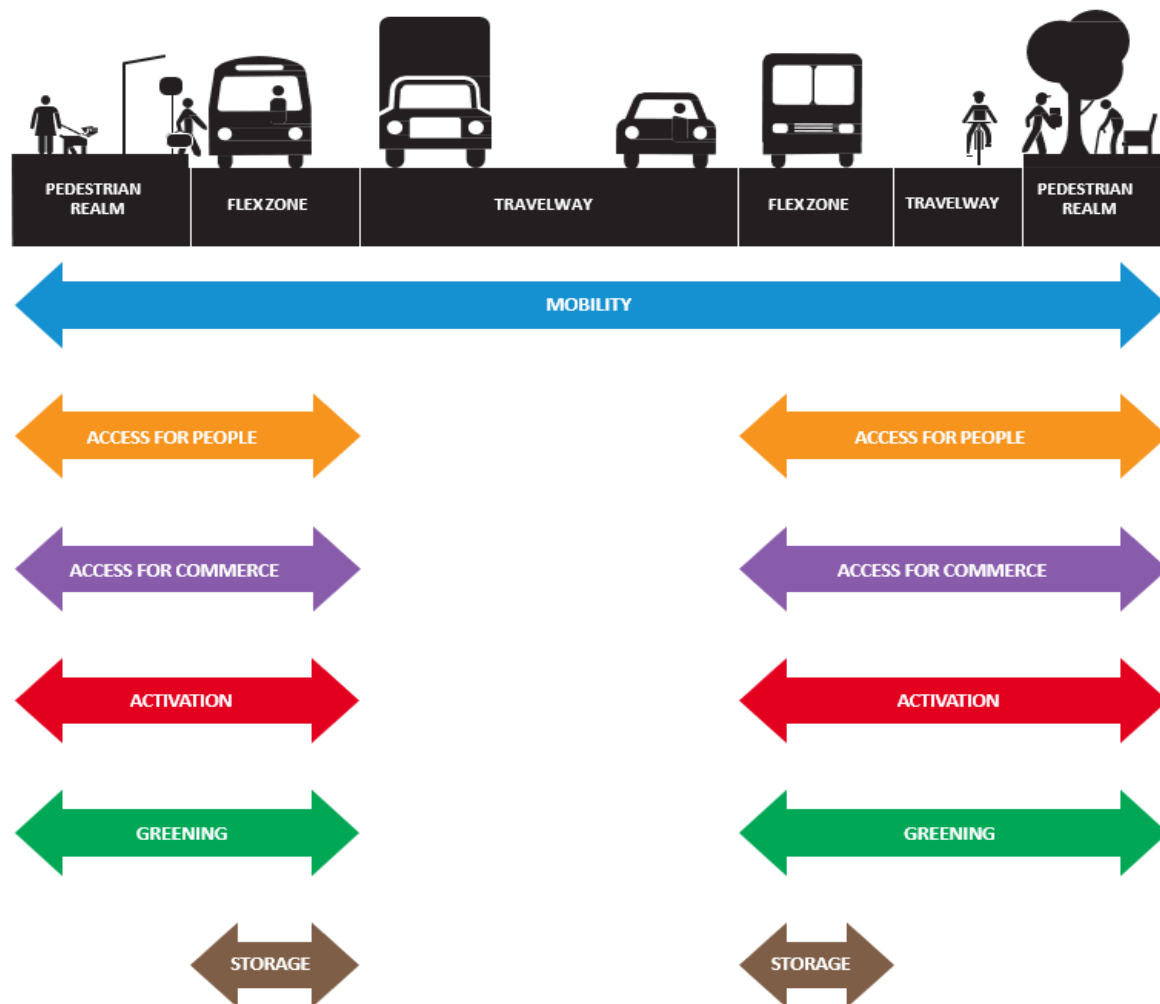
CURBSIDE MANAGEMENT IN SEATTLE

The curb is where vehicles—cars, trucks, buses, bikes with goods, people, services—interact with the urban built environment, along with many other activities. The *Seattle 2035 Comprehensive Plan* (2018) defined 6 essential functions of the public right of way (Figure 2):

- Mobility
- Access for people
- Access for commerce
- Activation
- Greening
- Storage

Uniquely, all essential functions can occur in curbspace, while the travel way is limited to mobility uses, and storage (vehicles and construction materials) typically does not occur in the pedestrian zone. As in many cities, this leads to challenges because our finite amount of curbspace is not sufficient to meet all the demands placed on it.

Figure 2: 6 Essential Functions of City Right-of-Way



SDOT plans, manages, operates, and maintains the city's curbspace. Enforcement of curbside regulations occurs through the Parking Enforcement unit within the Seattle Police Department. Adjudication of parking citations is conducted by the Seattle Municipal Court.

As a critical part of Seattle's transportation system, performance data coupled with policy guidance can create a more efficient, equitable, and sustainable use of curbspace. One of the best examples of data-driven decisions is Performance-Based Parking Pricing, which collects parking data that is used to adjust on-street parking rates on a routine basis. Having paid parking is key to addressing congestion, meeting sustainability goals, and supporting economic growth, jobs, and customer access to business districts.

Many streets throughout the residential areas, however, in Seattle have unrestricted or unmanaged curbspace. This often means vehicles park or load/unload without regard to time limits or in the travel lane. In other areas, such as within or between neighborhood business districts along arterial streets, the curb can be used for as protected bicycle lane, dedicated transit lane, or peak restricted vehicle travel lane. In denser high-demand areas like neighborhood business districts, the curbside is a highly sought after and valuable public resource that facilitates commerce, mobility, access, public services, and more.

CRITICAL ACCESS NEEDS

Because Seattle is a built-out city and with limited but highly valuable curbspace, in the last few years, SDOT staff started to evolve the Comprehensive Plan right-of-way functions to better ensure that urban goods delivery and related activities would be met. We call these needs Critical Access Needs (CAN) to state that adjacent buildings often have access needs that are met at the curb when the loading needs cannot be done on private property.

A building's **critical access needs** can be defined as access to services needed to perform its core operating functions safely and successfully, including:

- Designated parking and/or loading spaces for vulnerable users
- Mail and package delivery
- Commercial and urban goods delivery
- Building maintenance
- Solid waste servicing
- Passenger pick-up and drop-off
- On-demand delivery

SDOT evaluates critical access needs during the development of transportation capital projects, review of public and private capital projects, and during the ongoing management of projects and programs that consider use of the public right-of-way. Evaluating curbspace critical access needs is fundamental to project development. During the CAN review process, we assess whether we need to develop measures to preserve access to adjacent buildings. These measures should become part of the project plan when implementing changes to right-of-way that impact the curb. Programmatic activities highlighted in this section provide details on existing and proposed strategies that support SDOT's efforts to meet critical access need challenges when considering conflicting demands and priorities in the right-of-way.

ENFORCEMENT AND COMPLIANCE

Alongside critical access needs identification, we consider how enforcement impacts the use of curbspace. Enforcement is important for curbspace for vehicles and when the curb lane is used as a vehicle, transit, or protected bicycle lane. Failure to effectively enforce curbside regulations and maintain a high level of compliance among users can lead to unsafe conditions (e.g., a vehicle blocking a bike lane), system inefficiencies, and increased congestion.

We regularly work with our partners in Seattle Police Parking Enforcement on compliance with curb and right-of-way regulations. We share draft concepts of changes to curb regulations for their input to note if changes might be more or less challenging to enforce.

Enforcement operations in right-of-way management decisions play an important role in meeting our mobility & economic vitality and climate action goals. Several programmatic activities to pursue with our partners are recommended in the sections that follow.

TECHNOLOGY AND DATA MANAGEMENT

Innovation in curbside management is occurring at a rapid pace. New technologies are being developed and deployed in urban areas to better manage congestion, increase safety and access, and better understand travel characteristics and trends. Data is generated 24/7 with these new technologies, presenting an opportunity to create a more efficient transportation system using data-driven decision-making.

Managing large amounts of complex data requires resources and process standardization to harness the greatest value from these tools. As we continue to embrace and leverage new technology, legislation, policies, and processes should be reviewed and modified as needed to create the greatest public value in these new technology and data tools.

Pilot programs with a technology component should be evaluated based on resource availability and a clear definition of how the public would benefit. This evaluation would also outline steps to scale a pilot to full implementation, if deemed successful.

These operational considerations can allow us to be responsive to emerging technologies to benefit the public, while maintaining a high level of service to support core curbside management. Several technology and data management activities are recommended in this section to support broader curbside management policies.

INSTITUTIONAL PARTNERSHIPS

The University of Washington Urban Freight Lab (UFL) provides SDOT with strategic expertise to understanding the urban goods logistics system. The UFL brings private industry together with several city transportation officials to study, design, and test solutions around urban freight management.

SDOT has funded multiple UFL research projects that have improved our understanding of urban goods and last-mile systems, including a report on the detailed ways commercial trucks make deliveries on Seattle streets and the resultant design standards recommended to support more efficient deliveries and reduce vehicles circling for a load zone.

Another study documented the location and size of loading docks in downtown Seattle area office buildings and found that 80% of downtown area office buildings rely on the curb or alley for deliveries.

SDOT is also a member of the Open Mobility Foundation (OMF), which is a group founded by many cities and private entities to provide data specifications for mobility and curb systems. One part of their work is to create a data standard for how cities can track curb inventory, transactions, events, and other related data.

If cities can create and use the curb specification, then national curb data may be more likely to be usable and valued by freight and transportation logistics companies to direct vehicles and general traffic (e.g., in mapping software).

PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change; however, the programmatic activities listed here provide helpful general information to describe the types of tools and methods we will employ to manage the transportation system.

Critical Access Needs for Businesses and Residential Properties

SDOT will continue to build on a broad-based, innovative curbside management program to enhance curb access in business and residential areas around the city. The Curbside Element lays out strategies with a new focus on urban goods delivery, access needs for businesses and ways we can transition vehicle trips to address climate, safety, and equity.

Existing buildings that lack off-street loading access, whether on-property or via an alley, will have critical access needs provided for at the curb. This means various services, goods, and people picked up or dropped off at buildings have safer access, especially when there's no access on the property or in a nearby alley. This includes working closely with the Seattle Public

Utilities Solid Waste Division, so that trash, compost, and recycling can be collected and staged appropriately as right-of-way changes.

Streets Illustrated

Streets Illustrated is the common name for Seattle's *Right-of-Way Improvements Manual*. The manual defines street typologies and design guidance for each that applies to streets throughout the city. Street types were initially developed in 2017. In the meantime, dramatic growth has happened in e-commerce, parcel and food delivery in residential areas, and goods and services deliveries/pick-ups on commercially oriented streets.

For example, a street type and related street designs that could be reviewed for critical access needs is the Urban Village Neighborhood Access Street. This type nears Urban Village Main Streets and only allows curb access on one side of the street. If the street in question has parking allowed on both sides, there is no effective way for the department to equitably decide how to apply the street design, especially when there is a single parcel on one side of the street proposed for development. Within this and other street types and design standards, there is not consideration of transit layover, load zones, and other access for solid waste style trucks.

Transportation Capital Project Review

Transportation capital projects take many forms of varying scope. As we look to build new transit lanes, protected bicycle lanes, and pedestrian improvements, the curb will be affected either programmatically or physically through new infrastructure. In cases where the curbspace is being altered, we will review capital projects to see how critical access needs will continue to be met. We will provide recommendations to minimize negative impacts, maintain access, and support the overall capital project where possible.

For example, SDOT staff applies our expertise and provides guidance for transportation projects on the placement of transit layover zones; assesses the impact of various modal priority lanes on existing critical curb access needs; and identifies effective ways to accommodate or shift those needs. SDOT also supports the permitting of outdoor dining and other public space management permits. The role of these efforts is to:

- Establish curbside management support
- Document existing regulations
- Identify critical access needs
- Determine project impacts
- Develop an implementation plan

Capital project budgets do need to help address the review process and project implementation needs. Similarly, as Seattle continues to experience urban infill development, it is important to ensure critical access needs for buildings are met during the construction of projects and upon their completion. Private development review activities should:

- Provide a checklist to the development applicant to review prior to site approval

- Engage SDOT subject matter experts and allow interdepartmental referrals to comment on service impacts for proposed changes to the curbspace (i.e., solid waste service)
- Review and recommend changes to private development's waiver of on-site parking and loading for vulnerable users as it relates to the adoption of the Federal Highway Administration's Public Right-of-Way Accessibility Guidelines (PROWAG)
- As part of final site approvals, require development applicants to address or incorporate recommended measures during construction or upon project completion

To support this work, we will seek to:

- Update CAN policies in the *One Seattle Comprehensive Plan* and *Streets Illustrated*
- Establish a curbside review process, including checklists and site approval requirements for transportation capital projects and private developments
- Identify optimal locations to install and re-allocate curb access for commerce, for solid waste collections, and for people purposes (e.g., outdoor dining) as part of transportation capital projects and private construction site reviews

Data-Driven Decision-Making

As the city grows with new businesses and residential buildings all around the city, travel behaviors will also continue to shift over time as we embrace a more sustainable, multimodal future. Keeping in mind existing curb demand and access needs, how we allocate the curb must reflect our goals for transit use, walking and rolling, the movement of urban freight, and the effort to manage passenger vehicle driving.

To support the work, we must complete a curb inventory, develop more robust data, and pursue curb allocations to meet STP needs, as well as to respond to business and residential property requests. New technology can aid us in prioritizing allocation of limited and valuable curbspace. Recommended programmatic activities summarized below can facilitate a shift in curb allocation over time to help prioritize the people who need it most.

Curb Data Inventory

A curbside inventory is needed to fully digitize Seattle's curbside regulations and assets data. We already track curb regulations and utilization in paid parking areas, as well as signage. Developing a comprehensive citywide database using a standardized curb data format, such as the OMF Curb Data Specification, enables changes in curb allocation to be easily monitored over time, with updates as new projects shift curb uses. Other transportation facilities in the curb lane can be added, such as designated transit lanes or protected bike facilities.

With APIs (computer data sharing), we can make curb data available as a research/educational tool, for cross-departmental planning, transportation mapping services for drivers, and for third-party logistics providers and other vendors. Making this data public will improve transparency as we make decisions about the curb and improve responses as needed for the State's Public Records Disclosure act.

Creating a comprehensive and continuously maintained curb inventory database is no simple task. It will require updating existing assets and signage data into the new OMF Curb Data Specification format and conducting data inventory in many parts of the city. SDOT's current asset management system focusses on the paid parking areas and tracking of signage equipment and does not meet digital data sharing needs. License plate recognition technology or different GIS systems could be helpful, especially when collecting curb inventory and utilization data for the database in residential areas.

Another opportunity for curb data is to merge with the department's Intelligent Transportation Systems (ITS) and transit facility data to help support a more integrated planning process. For transit, these data layers could be layover (as discussed) and transit lane and other facilities within the curb lane.

To support this work, we will seek to:

- Develop a comprehensive and consistently maintained citywide database and related maps of curb regulations and assets, including transportation facility allocations in the curb lane, such as transit lanes or protected bike lanes.
- Create a common data platform using the Curb Data Specification to ingest parking event data from multiple vendor databases.
- Consider connecting curb data with the department's Intelligent Transportation Systems (ITS), Public Space Management, and transit facility data to support more integrated planning.

Curb Data Utilization

SDOT collects and models parking utilization data to support performance-based paid parking. Parking payment transactions are reviewed daily, and field staff are regularly deployed for first-hand observational data.

Building upon our existing performance-based paid parking, we plan to develop similar approaches to monitor curbside usage to inform recommendations for curb allocation and installation efforts. This would measure performance of load zones, curbside electric vehicle charging equipment, carshare and related spaces, disabled parking and loading, and Restricted Parking Zones. A data dashboard could assist policy makers in determining how successful curbside management programs are at meeting broader mobility, safety, equity, and climate goals.

To support this work, we will seek to:

- Develop a load zone utilization data collection approach to measure commercial vehicle parking and loading (as event data).
- Continue to collect and model utilization data to support the existing performance-based paid parking program and expand paid parking area geographies and use cases.

- Collect and model utilization data to support performance-based monitoring for other use cases, such as load zones, curbside electric vehicle charging equipment, carshare, or Restricted Parking Zones.

Performance-Based Parking Pricing

We use a sophisticated set of data-driven decisions and applications to achieve performance-based outcomes in paid parking areas in our existing performance-based parking program. We set the parking rates to enable drivers to reliably find an open parking space and to advance the department's safety, equity, and climate goals. It should be noted that this does not necessarily mean low costs for parking in a high demand area, as SDOT sets parking rates based on demand data. This reduces how much time people spend circling for parking and provides other important benefits:

- Improve neighborhood commercial vitality and access—people can more reliably access commercial, retail areas
- Decrease greenhouse gas emissions— less circling means fewer emissions
- Save people time— time spent looking for parking is wasteful
- Improve safety for people walking and biking—people circling for parking are often distracted
- Reduce congestion—people circling for parking contribute to congestion; less congestion can result in faster, more reliable transit

Figure 3 shows the state of on-street paid parking supply around Seattle, as of February 2024.



Performance-based paid parking means using a data-driven approach to set pricing based on observed demand. Blocks of paid parking are typically considered efficiently used when almost all spaces are full, with one or two spaces available per block. Our data-driven approach allows pricing to be set area by area based on local demands. It also helps us evaluate new areas for expansion of paid parking.

Prior to the COVID-19 pandemic, paid parking rates were set between \$0.50 and \$5.00 per hour based on demand on any given block, per the Seattle Municipal Code. These rates were adjusted each fall in \$0.50 increments based on parking occupancy data collected in the spring. During the early months of the pandemic in 2020, paid parking areas were made free. As of July 2020, all areas were priced at \$0.50 per hour.

In the last few years since the pandemic, we have instituted a three-times-a-year rate adjustment process to price parking to manage demand and make efficient use of available spaces. Our database model for rate changes has sufficient capabilities to determine parking activity patterns throughout the year. Therefore, the rate adjustments support how parking demand changes with the seasons or for other reasons.

For each paid parking area, we currently use the following rules to adjust rates:

- If occupancy is over 85%, increase rate by \$0.50/hour
- If occupancy is between 70% and 85%, rates do not change
- If occupancy is below 70%, decrease rate by \$0.50/hour

We also have event rates set around the Climate Pledge Arena and could in the future explore event rates around the baseball/football stadiums. Further details regarding our most recent parking occupancy and rate changes can be found in SDOT's annual paid parking reports, published each year featuring data on parking occupancy and pricing.

Pricing the curb equitably is key to ensuring that Seattle's limited curb resources serves as many people as possible and helps achieve our STP goals. We'll seek to expand performance-based parking to new areas and apply a data-driven performance-based process to other curbside management activities, including Restricted Parking Zones. When paid parking areas and other priced curb zones are managed, we can help provide equitable access by increasing the likelihood that parking spaces will be available and allowing multiple payment options. Creating a transparent and data-driven process to price the curbside, starting with paid parking as a base, will increase access for people and businesses and meet our mobility & economic vitality and climate goals (Supports TEF 44.3).

Expansion of paid parking to new areas should be coordinated with future transit capital and service investments, such as light rail expansions, bus service, and future transit corridor projects that will improve and extend high frequency transit to more neighborhoods. Coupling transit improvements with expanded paid parking in commercial and mixed-use neighborhoods will advance sustainable alternatives to driving.

We should also consider further technology investments that will support the paid parking systems. These technologies can make the rate-setting and data collection processes more efficient and improve enforcement. This could mean investment in license-plate-reader technology, both vehicle-mounted and handheld, that could enforce parking while also collecting utilization data (see Curb Utilization for more details). This investment would be coordinated with the Seattle Police Department, which manages the parking and curb enforcement.

Paid Parking Equity and Expanding Payment Options

Alongside the performance-based paid parking program, SDOT could examine the role of equity in transportation system that includes paying for parking as one option. For over a decade, people in Seattle have had the option to pay for parking via a mobile device. In fact, nearly 75% of parking transactions were made by mobile payment as of the end of 2022. Parking pay stations accept credit/debit cards. As of mid-2023, only about 2-3% of transactions were made by coin (or about 1,000 transactions/month out of 30,000-40,000).

As more consumers use mobile payment as their primary method of paying to park, we can explore technology (e.g., PayPal) that allows people without a bank account or credit card to also enjoy the same easy payment experience.



Pay to Park sign posted on a pole

To support this work, we will seek to:

- Continue to set on-street parking rates based on Seattle Municipal Code direction
- Build upon the existing Performance-Based Parking Program and establish a process to create new paid parking districts and modify existing districts
- Coordinate expansions of paid parking areas with improved transit service investments and capital improvements
- Review rates, hours, and days of week paid parking is levied
- Consider changes to city law to adjust maximum and minimum paid parking rates to support a goal of 1 to 2 spaces being available on each block as parking demands increase over time.
- Explore tools and technologies to efficiently collect and analyze curb inventory and utilization data and supplement vendor data feeds, including GIS systems, license plate recognition, sensors, and other monitoring systems in consultation with the city's existing privacy policies.
- Consider developing or finding equitable payment options that allow people without a bank account or credit card to conveniently pay for on-street parking

Community Access and Parking Program

SDOT uses the existing Community Access and Parking Program (CAPP) to improve on-street curb management in Seattle's neighborhood business districts and nearby residential areas. In addition to planning and installation of load zones, paid parking, time limit signs and other curb regulations, the program offers education on employee commute information and micromobility infrastructure. We'll work to build upon the CAPP in additional areas based on a data-driven prioritization process, supporting neighborhood business districts that need curb management plans in future years.

As part of the CAPP prioritization process, we consider how to strategically pair curbside management with other capital improvement projects, especially transit and multimodal projects, to best support changes to these transportation options through enhanced curb management. Outcomes of CAPP plans can include expanded paid parking, adjustments to or a new restricted parking zone, and enhancements to loading and micromobility access.

In addition, we'll continue to provide easy to read and language-accessible information about how to park and use SDOT's curb management system. When people know how to read parking signs and follow payment rules on their phone or pay station, they can more easily avoid receiving parking citations. For many years, we've published the "Can I Park Here?" brochure in over a dozen languages that explains the rules of the curb, as well as how to request a load zone or other curb changes.

To support this work, SDOT will seek to:

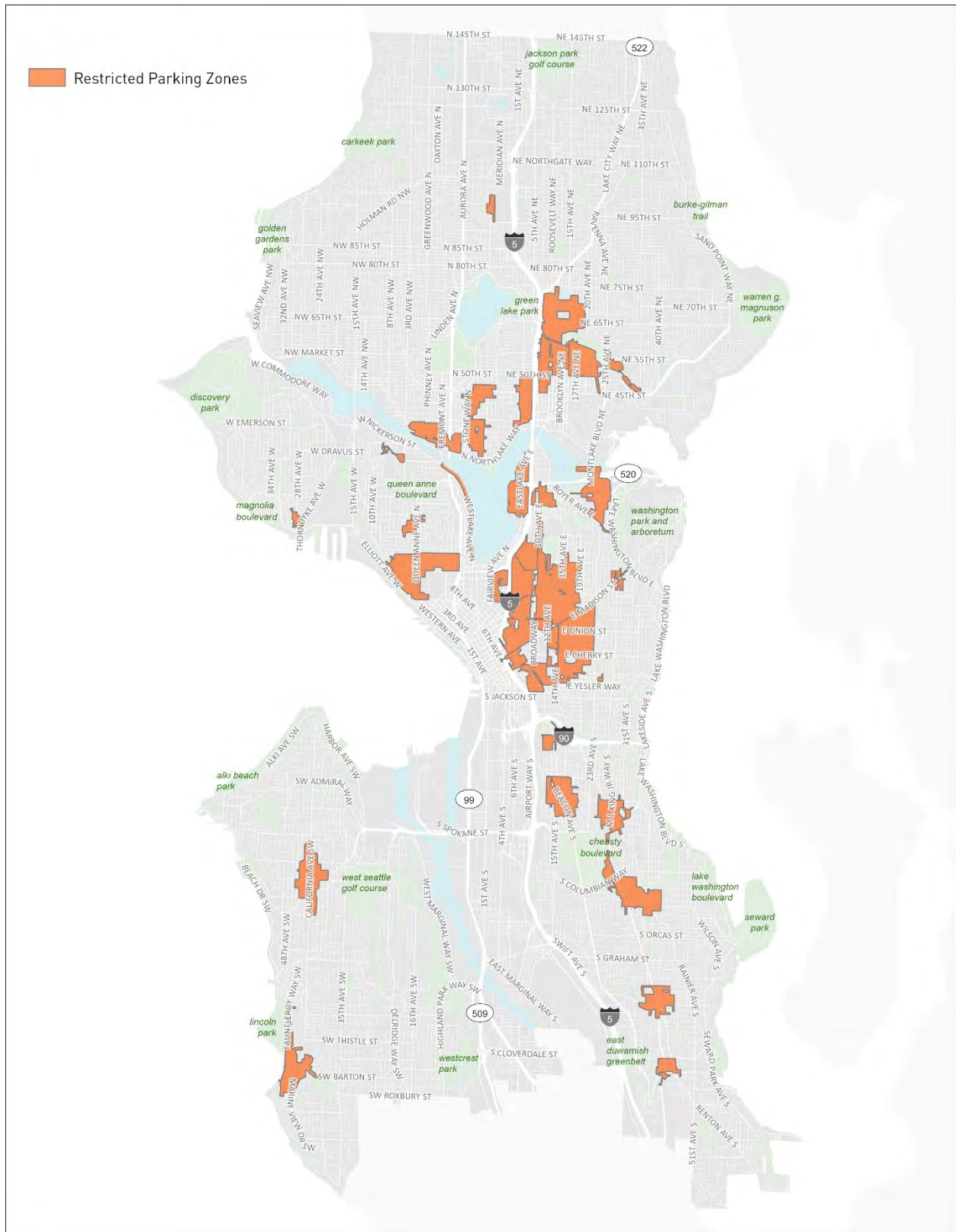
- Build on the Community Access and Parking Program (CAPP) to develop curb management plans in neighborhood business districts and nearby residential areas based on a data-driven prioritization process, with a focus on proactively working with businesses in historically underserved neighborhoods
- Consider ways to address needs for shared micromobility parking and public curbspaces such as street cafes within the CAPP outreach and planning
- Proactively educate businesses and residential building managers on curb allocation and signage installation efforts
- Build a broad-based, proactive curbside signage installation effort to enhance curb access in business and residential areas, with focus on historically underserved areas of Seattle.

Regulate Commuter Parking in Residential Areas with Restricted Parking Zones

SDOT has managed the Restricted Parking Zone (RPZ) program since the early 1990s as a strategy for reducing commuter parking in residential areas near commuter traffic generators, such as universities/colleges, hospitals, or the light rail stations. The RPZ program restricts long-term on-street parking, typically during weekdays, to permit holders in established zones.

Figure 4 shows the restricted parking zone areas around the city as of February 2024.

Figure 4: Location of Restricted Parking Zones



A common misconception is that RPZs manage parking for residents. RPZs work to manage commuter and other parking impacts from traffic generators and allow all residents with vehicles to park on signed streets (subject to permit limits).

Restricted Parking Zones are currently created, expanded, or reduced through a request process initiated by residents. Restricted Parking Zone permits are issued, and typically renewed every two years, at a current base rate of \$95 per permit (2023). In 2023, the physical residential permits were phased out and replaced with virtual, plate-based permits, which improves enforcement, reduces fraud, and lowers program costs. Discounted \$10 permits are available to residents who can provide documentation of participation in a variety of low-income benefit programs, including Supplemental Nutrition Assistance Program (SNAP), energy assistance from Seattle City Light or Puget Sound Energy, and more.

Households are currently limited to four permits, but with no limit per zone regardless of actual street parking supply. The RPZ program was introduced before Seattle removed off-street parking requirements for new developments in Urban Centers and Urban Villages. Because private off-street parking fees are typically more expensive than on-street permits, even residents who may have the option to purchase parking in their building are likely to opt for on-street permits. Issuing more permits than the number of available on-street parking spaces leads to congestion and illegal parking, as more residents search for street parking spaces.

To address these challenges, SDOT should explore ways to modernize the Restricted Parking Zone program in ways that help achieve our sustainability and mode shift goals. By effectively pricing and limiting resident on-street parking, we can encourage more people to consider travel options other than a personal vehicle.

Restricted Parking Zone District Modification or Removal

Because most Restricted Parking Zones were established many years ago and may not have aged well with changes around them in the area, we will set up a process to modify or remove zones as needed. Factors considered could include parking occupancy levels, how many permits are issued, new transit or mobility services, and land use. Before we make any changes, we'll engage with community to understand and address their thoughts and concerns.

Permit Pricing

SDOT should price parking permits to better align with mobility & economic vitality goals. For example:

- Consider the current number of permits issued relative to spaces and increase fees in areas that are oversubscribed and potentially reduce fees in areas where permit issuance is low (or consider removing the Restricted Parking Zone).
- Raise RPZ permit fee (currently \$95) to an amount more competitive with transit and or the costs of neighborhood off-street parking. The \$95 fee over two years amounts to \$0.13/day. Meanwhile, a fully loaded ORCA card amounts to a cost of \$3.55 per day.

- Offer a pay-per-use option for permit holders who do not utilize on-street parking on a regular basis to reflect the value of this permit product more accurately—this could be done using mobile payment.

Explore Eliminating Major Institution Fee Subsidies

Major institutions (some universities, colleges, and hospitals) currently subsidize RPZ permit fees in various amounts for area permit holders, as determined by the institutions' environmental permit process. About one-third of permits are currently subsidized, but residents with subsidized permits are often not those with the highest need. Subsidies also limit the effectiveness of using permit prices to manage demand.

To improve program equity and effectiveness of the recommended permit fee changes, we could work with other city departments to review options to eliminate future subsidies and convert existing subsidies to provide other area transportation improvements.

Parking and Curb Access in Mixed use and Residential Areas

While Restricted Parking Zones manage parking on residential streets around major traffic generators, there is also a far-reaching need to address critical access needs and street parking for the rest of Seattle residential streets.

A broad-scale residential parking and access project would allow us to tie on-street parking activity to other multimodal transportation benefits and see how we can encourage people to drive less, address the number of vehicles owned, and overall examine how they regularly use street parking near their residence.

Education

In conjunction with the 'Can I Park Here' education brochure and transportation demand management (see New Mobility Element), efforts should be made to further educate people about the costs and impacts of single occupancy, internal combustion engine vehicles. This work could also be connected with our Vision Zero initiative.

Resident Parking Fees

Several municipalities set a fee for residents who own and register a vehicle in a city, and that park on the street and use public right-of-way. One of the largest examples is in Chicago, where a City of Chicago Vehicle Sticker is required to be displayed on any resident vehicle within city limits, regardless of whether the vehicle is parked in a specific permit zone.

Seattle could consider implementing a general resident vehicle fee requiring all residents, regardless of whether they reside in a permit zone, to pay a fee to park on city streets.

A resident fee concept would need a tremendous amount of research on policy, legal, operations/ enforcement, and extensive community engagement and discussion. Any such effort would require city legislation.

To support this work, we will seek to:

- Continue to manage a Restricted Parking Zone program to reduce commuter parking in residential areas near commuter traffic generators.
- Establish a process to review, modify and potentially remove Restricted Parking Zones based on parking occupancy levels, permit issuance rates, introduction of new transit or mobility services, land use, and community input.
- Explore alternative pricing measures for Restricted Parking Zones in districts where demand is greatest, such as base permit rate increases or pay-per-use monthly or daily permits.
- Consider eliminating major institution fee subsidies and converting existing subsidies to support other multi-modal transportation improvements in partnership with Seattle Department of Construction and Inspections.
- Consider developing a proposal for a fee or other disincentives to using street parking in residential areas with the intent to discourage auto ownership and support zero-emission transportation options that work to encourage transit and shared use mobility options.
- Continue phasing out physical permits for virtual or plate-based permits to improve enforcement, reduce fraud, and lower costs.

Curbside Support for Low- and No-Emission Vehicles

The curbside plays an important role in meeting our ambitious climate goals, including support for the shift toward electric vehicles. Freight and commercial goods are an important part of our economy. However, almost all the commercial deliveries to bring packages to residents and businesses are made by gas or diesel-powered vans and trucks, which contribute to poor air quality, congestion, and safety issues. We want to work collaboratively with the private sector and our local business community to be a liaison for the zero-emission transition.

Curbside Level 2 Electric Vehicle Charging Pilot

In 2022, Seattle City Light launched a pilot to install Level 2 curbside electric vehicle (EV) chargers at 30 locations throughout Seattle. These Level 2 EV chargers provide 9.6 kilowatts of power per hour and will provide a typical EV with over 30 miles of range per hour of charge time. These chargers are ideal for vehicles parked at least 3 hours or longer. Pilot locations were selected from over 1,800 requests to provide on-street EV charging to people who do not have access to off-street parking at home.

The pilot addresses a critical need for EV adoption, as most people who drive EVs rely on at-home charging when they transition to an EV. Final locations were selected based on various factors, including but not limited to a lack of off-street parking access, the presence of affordable housing, and the need for minimal infrastructure upgrades in the right-of-way.

We'll continue to coordinate with Seattle City Light and the Office of Sustainability and Environment to determine use cases suitable for right-of-way charging, depending on the customers looking to install charging and the audiences they will serve. As we scale beyond the initial Seattle City Light pilot, we should include U.S. Access Board guidance related to Americans with Disabilities Act requirements for both electric vehicle charging equipment and parking spaces.

To support this work, we will seek to:

- Continue assisting Seattle City Light by evaluating and supporting implementation of Level 2 EV charging in street parking locations.
- Monitor Level 2 Electric Vehicle Charging pilot (curbside system) data to determine utilization and compliance and to inform expansion recommendations.
- Determine suitable use cases for electric vehicle charging equipment in the right-of-way in partnership with Seattle City Light and the Office of Sustainability and Environment.
- Establish full policy and compliance standards for current and future electric vehicle charging equipment in the right-of-way.
- Consider installing curbside electric vehicle charging equipment as part of microhubs in residential neighborhoods to support micromobility, electric freight activities, and shared mobility services. (Supports TEF 36.2)
- Allocate curbspace for micromobility and shared mobility uses, with priority given to programs that provide an all-electric or transitioning-to-electric vehicle fleet.

Commercial E-Cargo Bikes

In response to Mayor Harrell's Climate Executive Order and following recommendations from work with C40 Cities on a Zero-Emission Freight Grant Project, we are working to launch of an e-cargo bike initiative, integrating new permitting, loading zones, and supportive policies to facilitate business investment in Seattle.

Based on C40 project work, we are working to encourage freight partners and local businesses to consider transitioning to smaller, electric last-mile delivery options. This work would include a new permit and curbspace use allowances for commercial cargo bikes.

To provide additional support with off-street loading space, we plan to identify pathways to facilitate zero-emission microhubs. By partnering with off-street parking lot operators or other property owners, we want to connect delivery hubs to as close as possible to final package destinations, thereby improving last-mile delivery. and offering a much higher chance of e cargo bike use.



E-cargo Delivery Bike

We know that many electric freight solutions are still cost-prohibitive to our small-medium business community and that many barriers exist when determining what zero emission solutions are attainable operationally.

To support our local business community and the greater Seattle community, we are exploring an e-cargo bike lending library concept where bikes are available for use. This would allow businesses to test e-cargo bikes and learn from community advisors prior to making a permanent fleet purchase. This offering would be ideally supported with incentives to further assist with cost considerations for those interested in buying an e-cargo bike.

To support this work, we will seek to:

- Encourage freight partners and local businesses to transition to smaller, electric last-mile delivery options
- Launch an e-cargo bike initiative, integrating new permitting, loading zones, and policies
- Develop an e-cargo bike implementation plan, identifying needed staff and resources
- Create an external advisory group with freight leaders and community partners
- Develop design standards to inform efforts, which should consider legislation, policies, and procedures
- Implement a community outreach and engagement plan to engage freight stakeholders to ensure offerings meet their needs
- Establish use cases to demonstrate how to implement programs in different areas
- Investigate a policy, legal, and business case for pathways to incentivize and enable zero emission vehicle loading zone use
- Develop a low- and zero-emission loading approach that prioritizes climate-friendly vehicles and incentivizes freight companies to transition to right-sized, electric vehicle alternatives.
- Explore partnerships with off-street parking lot operators to establish and manage zero-emission microhubs.

Curb Signage

SDOT Curbside Management installs a wide variety of curb signage across the city every day. Historically, spot improvements have been based on requests or due to other agency needs (such as for bus stops/layovers). With additional resources, we would be able to expand this

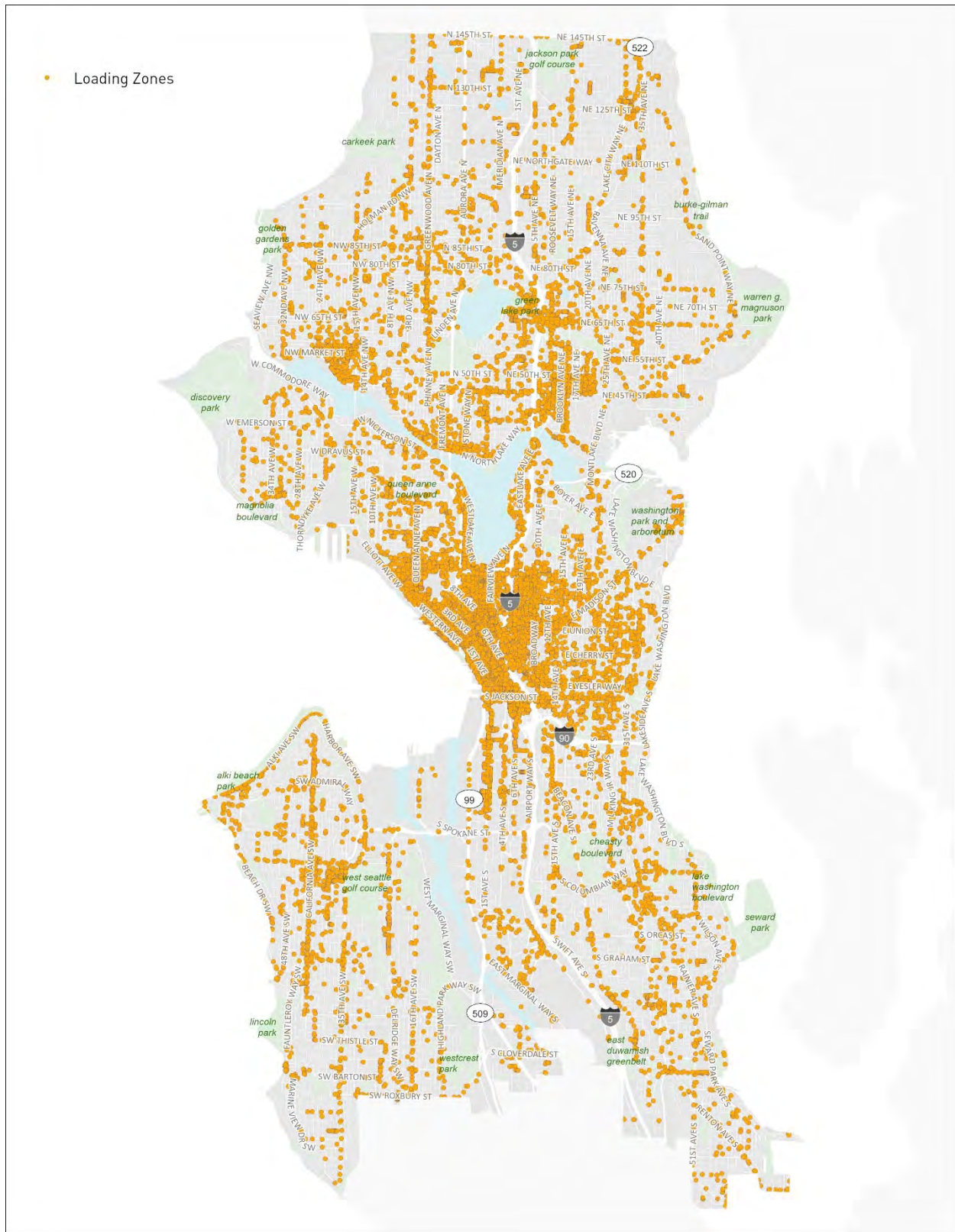
effort to be proactive in educating businesses and residential building managers, and to lead to installing additional curb signage to improve access for commerce and people. Examples include installing various load/unload zones and truck zones, in combination with other SDOT work, such as Public Space Management.

Short-Term Pick-Up, Load Zone or other Special Signs

In recent years, and especially since the COVID-19 pandemic, more people are buying goods and services online. This increase in e-commerce deliveries has led to increased pressure on curbspace in our neighborhoods and business districts, especially where there are limited off-street parking and loading spaces. Formalizing a low- or zero-emission urban goods delivery planning would help to educate businesses on how to potentially receive more efficient deliveries. This work would also help us meet our broader climate goals. To support this work, SDOT will continue to use and update curb signage to accommodate food app delivery, restaurant take out needs, car share, employer shuttles, bike parking corrals, and other new mobility endeavors.

Figure 5 shows the state of thousands of load zones designated across the city, primarily passenger load zones, commercial vehicle or truck load zones, or general load/unload zones.

Figure 5: Location of Loading Zones



Disabled Parking Accessible Zones

Designated Disabled Parking signed zones are installed on street by SDOT (and also approved for installation through private development projects that impact the right-of-way) throughout the city. Installation is done consistent with federal standards. Disabled zones use requires a state issued disabled parking permit, as well as display of a disabled license plate or placard. Installation locations include:

- Residential disabled access where residents do not have sufficient access for vehicle parking on their property.
- Customer parking access in business areas to provide designated spaces for customer short-term visits for people with limited mobility.

Another important aspect of managing disabled parking is preventing abuse of state-issued disabled parking permits in Seattle. Washington state law allows eligible residents to obtain a state-issued permit—either a license plate or two rearview mirror hanging placards.

Washington allows general street parking to be free for vehicles displaying a disabled permit.

In contrast, some states like Oregon have adopted a wheelchair-user placard separate from general disabled parking. With this approach, a wheelchair user permit grants free parking while a general disabled parking permit requires on-street parking payment. This two-tiered system is considered by the International Parking and Mobility Institute to be a best practice, as it prioritizes access for the most severely mobility impaired, while continuing to require payment by those who qualify for a general disabled permit. This system helps prevent disable placard abuse while preserving reliable disabled access for those who need it most.

Over the years, as part of our parking program's data collection efforts, we have documented significant abuse of disabled permits in paid parking areas because the state's non-payment requirement motivates many to abuse the system to acquire and use a disabled permit. This is especially the case in areas like Downtown and First Hill where off-street garage costs are high, and significant numbers of people use a disabled placard to park on-street regularly as commuters. This abuse limits the effectiveness of SDOT's rate adjustments and deprives legitimate placard holders from having reliable curb access.

To support this work, SDOT will seek to:

- Review curb management programs for Americans with Disabilities Act (ADA) signage and explore additional strategies to integrate accommodations for vulnerable users.
- Install ADA parking spaces in business districts and mixed-use areas per Public Right-of-Way Accessibility Guidelines (PROWAG) Section 214.
- Manage requests for residential on-street ADA spaces when criteria are met. Initiate audit effort to reaffirm residential ADA on-streets spaces as home ownership changes.
- Develop an ADA loading zone review of critical access needs for buildings.
- Explore methods to mitigate ADA placard abuse to provide predictable availability of ADA spaces, including installation of four-hour time limits as allowed by state law.

- Seek to adjust the statewide legislative rules for creating a two-tiered permit system or other reforms to reduce abuse in Seattle and other Washington cities.
- Include U.S. Access Board guidance related to ADA requirements for both electric vehicle charging equipment and parking spaces.

Bus Layover Coordination

SDOT installs designated spaces for transit to layover at the curb, time necessary for drivers to rest and for management of transit route schedules. As of 2023, there are almost 400 layover designated spaces to serve the transit system. This work to plan, install, and maintain transit layover spaces is a combined work effort of our Curbside and Transit Strategy and Services teams. See the STP Transit Element for more information.

To support this work, we will seek to:

- Coordinate transit layover planning and management.
- Maintain an interagency group to confirm transit layover policy goals and a layover review process.
- Develop a transit layover database to assist ROW management and track layover spaces.
- Coordinate across SDOT to meet other curb access needs or right-of-way functions when layover spaces are retired due to changes in transit services.



A RapidRide bus layover on 5th Ave

Compliance-Oriented Parking Enforcement

Leveraging new technology and data-driven operational decision-making processes, we should partner with the Seattle Police Department to support compliance-oriented parking enforcement. Historically, parking enforcement has been reactive, punitive, and often inequitable. This should include industry-led customer service training to align enforcement staff with a kinder, gentler approach to parking enforcement for the betterment of the community. To support this work, SDOT will seek to:

- Support implementation of license plate recognition technology across most of the Seattle Police Department's parking enforcement vehicle fleet.
- Work with the Seattle Police Department to integrate virtual permitting data and parking restriction digital mapping into license plate recognition systems for more efficient enforcement operations.
- Analyze license plate recognition data to identify areas where signage may need to change, or additional education is needed about posted regulations.
- Create a data dashboard by neighborhood tracking curbside compliance rates.
- Work with the Seattle Police Department to optimize enforcement beat routes and align enforcement operations with policy goals.

Shared Parking in Business Districts

Shared parking means that parking spaces are shared by more than one user group, which allows parking facilities to be used more efficiently. Shared parking takes advantage of the fact that most parking spaces are only used part of the time by a particular group and that many spaces go unused on a regular basis. While SDOT does not regulate parking garages or lots, it is important to consider off-street parking supply as part of broader curbside management strategies for business district parking and curbside access. New buildings typically have less parking provided onsite. This trend, coupled with increased demand for curbside access, creates an opportunity to maximize existing off-street parking for residents, employee, and business visitor parking. Implementing robust shared parking options would increase parking supply in business districts and allow more flexible use of the curb for critical access needs, multimodal facilities, and non-vehicular uses.

To support this work, we will seek to:

- Leverage existing off-street studies to explore formalizing shared parking.
- Coordinate and collaborate with internal and external partners to develop shared parking facilities.
- Revise codes and regulations, as necessary, to incentivize use of shared parking.
- Include shared parking strategies as part of the Restricted Parking Zone district modernization.



DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures identified as important indicators of progress, as well as relevant Transportation Equity Framework (TEF) tactics that this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommends performance measures to monitor the implementation of the STP Curbside Management Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching, and sometimes aspirational, outcome-based measures are identified in the STP implementation strategy (see Part I document). Generally, they are tracked at a city-wide scale, and SDOT may not have primary control over their achievement. Examples include a reduction in vehicle-miles traveled in support of the STP's safety, sustainability, mobility & economic vitality, livability, and maintenance & modernization goals and the percent of household income dedicated to transportation that informs progress on equity, mobility & economic vitality, and livability goals.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include vehicle occupancy by blockface and percentage of vehicles meeting sign and payment regulations.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples may include percentage of blocks where critical building access (load zones, solid waste, building services at businesses and residential properties) needs met; number of paid parking spaces and/or blockfaces; number of load zones and/or blockfaces with load zones; and more.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that we can pivot as needed to meet our equity goals over the next 20 years. The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 2 identifies the Tier 2 performance measures that will be tracked for the Curbside Management Element.

Table 2: Curbside Management Performance Measures

Desired Outcome	Performance Measure (source)	Baseline (year)	Target or Desired Trend	By RSEI or race	Related STP Goal(s)
Increase compliance with curb regulations	1 - Percent of vehicles meeting parking payment requirements (SDOT)	45% (2023)	75% payment compliance	No	Safety Livability
	2- Rate of compliance at commercial load zones (SDOT)	50% (2023)	65% compliance		
Parking priced and managed to provide reliable curbside access for users	% of parking area time periods within target range of 70-85% occupancy (SDOT)	39% (2023)	70% of area time periods within target range (Set by Municipal Code)	No	Mobility & Economic Vitality Livability Maintenance & Modernization

Table 3 lays out the citywide allocation of high-level curb regulations. Data sets are from SDOT's asset management system that tracks curb signage by type of regulation. It includes the many miles of residential streets in Seattle where parking is not restricted in any way except at intersections, fire hydrants, or driveways (whether by formal sign or simply by law). Noting that Seattle comprises 84 square miles of land area, the large number residential or non-arterial streets is why there is such a high percentage of unrestricted parking.

Citywide, a relatively small amount of curb is regulated as paid parking (with meters/mobile payment), or with time-limited signs that allow 1 or 2 hours of parking. Most business districts have either paid parking and/or time limit regulations, as well as load zones and a variety of other curb signage. Targets will be updated as curbsides are changed to meet our STP goals.

Table 3: Curbside Management by the Numbers (2022)

Curbside Space Allocation by Category	Percent of Blocks by Category
No Parking or Curbside Moving Lane	17%
Paid Parking	2%
Restricted Parking Zone	5%
Time Limited Parking	3%
Unrestricted	73%

RELEVANT TEF TACTICS

- TEF 16.1—Engage with local Black, Indigenous, and People of Color (BIPOC)-owned businesses to determine how SDOT can support their employees' transit and transportation needs for commuting.
- TEF 17.4—Conduct community workshops to better understand the activities communities want and need in the right-of-way; use this to inform the People Streets and Public Spaces effort, which will establish a vision and strategies for equitable public space investment.
- TEF 17.3—Provide low-tech and language-accessible information to businesses about parking/loading and how communities can make requests for load zones or other curbside uses.
- TEF 19.2—Identify opportunities to repurpose some travel lanes for transit, biking, and also smaller, lighter-weight vehicles and devices to create more travel options with the STP.
- TEF 20.5—Consider travel time and air quality impacts of changes to roadway configurations. Use this information to make equitable investment decisions that consider travel time and air quality impacts and benefits, and to communicate those benefits and impacts to community.
- TEF 21.2—Conduct community sessions with BIPOC owned businesses on right-of-way needs and ways which SDOT can support; start and continue to build a holistic relationship with small businesses.
- TEF 22.1—Analyze how movement of goods were impacted during COVID-19 and whether there are specific ways we can maintain any benefits that were seen.
- TEF 29.1—Create publicly accessible, community-oriented visuals and neighborhood-specific snapshots to capture where SDOT has built infrastructure, dedicated investments, and collected community feedback; this should be utilized by SDOT, other City departments, and transportation partners to inform future investment needs as well as planning and programmatic efforts.
- TEF 31.2—Review previous SDOT studies on non-9-to-5 commuters, identify where additional information needs to be gathered, develop targeted transportation options, and leverage existing programs to better support this community.
- TEF 32.1—Explore the feasibility of creating a "low income" account for use at paid curbside parking, such as through PayByPhone.
- TEF 34.1—Ensure revenue is prioritized and directly invested in reliable, safe, affordable public transportation and other benefits for BIPOC community members so we can invest in low-income transportation options and prevent the need for enforcement.

- TEF 36.2—Support transition to electric vehicles for all segments of transportation, including personal mobility, goods movement, and services (skilled labor/repair, landscapers, home health care workers, trash collection, etc.) through targeted, equitable incentives and policy design. Implement related actions in the Transportation Electrification Blueprint.
- TEF 43.4—Review SDOT policies, practices, standards, and funding allocation strategies to elevate/give priority to access and use of right-of-way for people of all ages and abilities, people recreating, shopping, walking, rolling, riding bikes and transit.
- TEF 46.3—Catalog the eligibility of City resources for low-income households across all City programs and identify where SDOT-funded reduced fare programming eligibility could be streamlined.
- TEF 56.7—Institute a practice of closer coordination with all City Departments who do utility work in the right-of-way to minimize environmental impacts when projects are occurring in neighborhood; this includes seeing if we could consolidate built environment projects at the same time.

GLOSSARY

Active transportation: Human-powered modes of travel such as walking, biking, and using a wheelchair.

ADA: Americans with Disabilities Act

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Café Streets: Streets with high levels of foot traffic and lots of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians. They are a type of Shared Street.

City of Seattle Privacy Program: A citywide program to ensure safe and ethical use of the public's personal information by City employees. It provides a framework for policies, standards, and practices that involve personal information.

Community Access and Parking Program (CAPP): A program through which SDOT works with community members to identify on-street parking challenges and opportunities, develop parking recommendations, and implement parking management changes.

Community and Mobility Hubs: Community and mobility hubs are places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Comprehensive Plan: A 20-year vision and roadmap that guides city decisions on where to build new jobs and houses, how to improve the transportation system, and where to make capital investments such as utilities, sidewalks, and libraries.

Critical access needs (CAN): The services necessary for a building to perform its core operating functions safely and successfully. These include goods delivery, designated parking and loading spaces, and building spaces.

Curbside Level 2 Electric Vehicle Charging pilot program: Seattle City Light, in partnership with SDOT, is installing and operating public Level 2 electric vehicle chargers at curbside locations throughout the city of Seattle. This program is focused on providing near-home EV charging for residents who cannot access off-street parking to charge their vehicles at home. The pilot will install EV chargers at 31 locations, informed by public input.

E-cargo bikes: Human-driven bikes with battery-powered pedal assist that can transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

E-commerce: The buying and selling of goods online that are then delivered directly to a home or business. Examples include Amazon and eBay.

Executive Order 2022-07: An executive order signed by Mayor Bruce Harrell to advance the City's climate goals. The order sets goals of establishing 3 low-pollution neighborhoods by 2028, making 20 miles of Healthy Streets permanent, hosting a Youth Transportation Summit, and making the City's fleet zero-emission by 2030.

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

Key Moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Level 2 EV chargers: Electric vehicle chargers that are compatible with most EVs and provide a faster charge than Level 1 chargers. They can be installed in private homes or public places.

Low-emission neighborhood: Low-emission neighborhoods, sometimes called low-pollution neighborhoods, prohibit or restrict the types of vehicles allowed within an area and encourage zero- and low-emission travel options like walking, biking, electric vehicles, and deliveries by e-cargo bike. Implementation of these concepts will vary by neighborhood and are co-created with local communities.

Micro-hubs: Small-scale urban logistics facility located in between a major warehouse and the final delivery destination implemented to reduce vehicle emission trips by shifting to low or zero-emission modes (walking, biking). Goods are transferred from larger freight vehicles to smaller, lower emission modes for final delivery. Micro-hubs can be used by 1 or more carriers/operators based on the location to support consolidation efforts.

Multimodal: Refers to the various ways people use the transportation system, such as walking, riding a bicycle, taking transit, or driving a truck or personal automobile. It can also refer to a journey that employs more than one mode, such as walking to the bus stop and then taking a bus to a final destination. The vast majority of individual trips involve more than one mode.

Personal delivery devices (PDDs): Small automated or remotely piloted robots designed for short deliveries carrying food, packages, or other goods.

PROWAG: The Federal Highway Administration's Public Right-of-Way Accessibility Guidelines

Public Spaces: Plazas and Shoreline Street Ends that come in many shapes and forms. They are pedestrianized spaces that invite people to gather, play, and connect with one another. These spaces may be focal points in neighborhoods that support local businesses, venues for community gatherings, or more subtle spaces that are loved by locals and stumbled upon by visitors who delight in their discovery. They may incorporate public art, seating, games, trees and green infrastructure, and flexible space for vendors and gatherings. Public spaces are born of inclusive, community-driven processes that inform design, programming, and long-term stewardship.

Right-of-way (ROW): A strip of land legally established for the primary purpose of public travel by pedestrians and vehicles.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Shared micromobility: Shared bikes and scooters that offer low-cost options for a short distance trip. Riders locate and rent available devices with their phone, ride it where they want to go, and leave it responsibly parked for the next person.

STP: Seattle Transportation Plan

Streets Illustrated: Seattle's *Right-of-Way Improvements Manual*, an online resource for property owners, developers, and architects involved with the design, permitting, and construction of Seattle's street right-of-way.

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses disparities that exist in the transportation system due to institutional racism.

Urban Villages and Centers: Areas in Seattle identified in the Seattle 2035 Comprehensive Plan where the most future job and employment growth is targeted. This strategy promotes the most efficient use of public investments and encourages walking, bicycling, and transit use.

[This page intentionally left blank]



New and Emerging Mobility Element

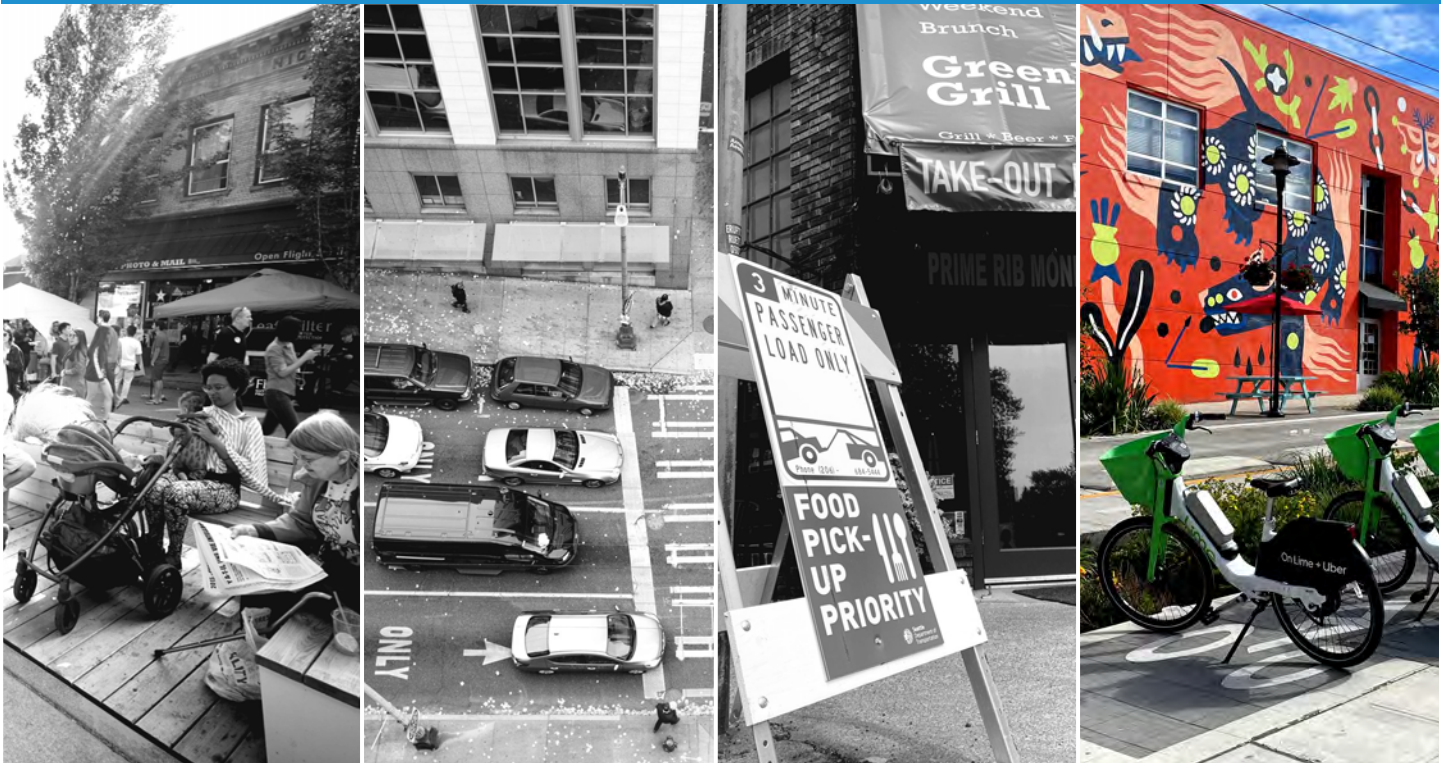


TABLE OF CONTENTS

Introduction.....	NEM-1
How New and Emerging Mobility Advances the STP	NEM-1
Relationship to STP Goals.....	NEM-4
Delivering the Key Moves.....	NEM-5
Setting the Context	NEM-12
What is New and Emerging Mobility?	NEM-14
Opportunities, Emerging Trends, and Challenges.....	NEM-19
Community Engagement.....	NEM-26
New and Emerging Mobility in Seattle.....	NEM-27
Spatial Requirements and Operational Considerations	NEM-34
Programmatic Activities.....	NEM-35
Defining Success.....	NEM-39
Measurable Outcomes	NEM-39
Relevant TEF Tactics.....	NEM-41
Glossary	NEM-42

LIST OF TABLES

Table 1. New and Emerging Mobility: Delivering the Key Moves 5

Table 2. New and Emerging Mobility Performance Measures.....40

[This page intentionally left blank]

INTRODUCTION

With each passing year, we see new forms of transportation emerge and gain momentum. People are adopting innovative technology to travel more quickly, efficiently, and sustainably, and using app-based systems to make smarter decisions about travel. As one of the first cities to regulate ridehailing operations like Uber and Lyft and to permit dockless bikeshare systems, Seattle has been on the forefront of new and emerging mobility adoption. In 2017, the Seattle Department of Transportation (SDOT) created the New Mobility Playbook,¹ a framework to ensure new transportation technology and emerging modes of mobility were deployed to support community goals.

New and emerging mobility (NEM) is a blanket term that describes forms of transportation that use technology to improve efficiency, access, and experience. NEM services increasingly offer seamless accessibility through digital platforms, enabling convenient payment and data-driven service adjustments. Emerging trends include electrification or automation of vehicles, services and devices, growth in the use of personal delivery devices (PDDs) for transporting urban goods, and urban air mobility for parcels and passengers. Well known examples include ride-hailing services like Uber and Lyft, car-sharing platforms such as ZipCar and Gig, and bike and scooter sharing programs like Lime and Super Pedestrian.

HOW NEW AND EMERGING MOBILITY ADVANCES THE STP

By replacing gas-powered trips with human or electric-powered trips on shared micromobility devices and increasing access to public transportation, NEM can contribute to our emissions reduction goals. Shared mobility can contribute to significant reductions in vehicle-miles traveled (VMT) by expanding travel options for people outside traditional transit networks and supporting first- and last-mile connections for transit and urban deliveries, particularly when operated in support of existing fixed-route transit services. Used responsibly, NEM can also create safer streets by integrating smart technology and safety innovations in vehicles and mobility devices. While we are committed to this work, SDOT relies on strong private sector partnerships to align new mobility options with our safety, sustainability, and equity goals.

Effective deployment of NEM must address the needs of Black, Indigenous, and People of Color (BIPOC) and vulnerable communities through inclusive planning and education. We'll need to consider how we can maximize the social benefits NEM provide to people while actively working with partners to limit negative or unintended outcomes. The NEM Element considers how we can incorporate technology, innovation, and partnerships into our transportation ecosystem to advance our goals— including the actions we'll need to take to support NEM deployments that are successful, sustainable, and beneficial to communities across Seattle.

¹https://www.seattle.gov/documents/departments/sdot/newmobilityprogram/newmobility_playbook_9.2017.pdf

Supporting Growth and Economic Vitality

As Seattle continues to grow, our transportation system must evolve in tandem with our changing landscape. Our comprehensive plan, One Seattle, guides how and where growth will occur to accommodate the growing number of people who live, work and travel here. No matter where people live or work, providing safe and equitable transportation will always be critical to connect people where they need to go. To achieve our shared goals as One Seattle, we must strategically plan for a range of appropriate travel options and supportive infrastructure that fits the needs of our unique and varied communities— whether a dense downtown grid, a quiet residential neighborhood, or a bustling manufacturing and industrial center.

In denser neighborhoods and commercial centers, development typically occurs close together. Combined with safe and supportive transportation infrastructure, density can make it easier for people to walk, bike and use transit because they don't have to travel as far. People have more access in these places, enabling them to live car free if they choose to or can't afford it. In places where development is more spread out, people might still walk or bike for shorter trips or to connect to transit services, but it is often harder due to longer distances between places.

While some people choose to live or work in places that are more spread out, others do so because they have no choice and driving is their only viable option. For instance, people who live outside of Seattle because housing is more affordable, or people who transport freight or cargo for a living may not have options for how they travel other than driving a vehicle.

Our transportation system can support anticipated growth in different places while continuing to advance our goals by making other travel options more viable and available in appropriate contexts. For example, freight-and-bus only lanes can support reliable travel times for industrial workers and transit riders, or on-demand rideshare services could provide more convenient shared trips. Each functional element of the STP plays a role in supporting Seattle's growth and economic vitality.

By planning for New and Emerging Mobility, several transportation technologies and mobility options can support our growing city:

- Shared micromobility devices, like bikes and scooters, can replace driving for short trips and make it easier for people to connect to transit services
- Carshare services can make living without owning a car more viable and affordable for people who occasionally need a vehicle
- Innovative transit services, such as on-demand rideshare, can make connecting to fixed-route buses faster and more convenient in lower density places— especially for older adults, people with disabilities, and other equity focus areas.
- Electric bikes and cargo-bike can provide smaller and more sustainable urban goods delivery solutions
- Digital platforms provide trip planning and payment tools that can make it easier for some people to use different services or travel options for different legs of a journey.

Economic Benefits of New and Emerging Mobility

The STP supports economic vitality in a range of ways and each functional Element plays a role. Maintenance and modernization of our transportation network enables efficient and reliable vehicle trips for the movement of freight, goods and services and provides significant benefits for our economy and communities—especially when our values around safety, equity, and sustainability remain centered.

- Rideshare and other gig-economy services can provide flexible jobs that can give people more choice in the hours they work
- NEM options like carshare, share micromobility or automation can make it easier for people to live without owning a car, which could free up funds to use on other things like housing, goods, and services
- Some NEM service providers and digital infrastructure providers provide local jobs, for example shared micromobility operators and on-demand rideshare services
- Urban freight and goods movement solutions like e-cargo bikes, personal delivery devices (PDDs) or urban area mobility devices could help companies keep pace with projected growth in e-commerce and retail deliveries
- Broadly, NEM provides space for innovation and entrepreneurship in transportation which creates economic opportunities for a NEM start-ups and service providers
- NEM options can help reduce VMT and related emissions which has positive impact on public health; improved community health outcomes are associated with a stronger workforce, productivity, and economy
- Automation and Connected Vehicles technology has the potential to increase the efficiency and reliability of long-distance (interstate) goods movement through caravanning
- Automation may help improve urban freight by reducing delivery operating costs and delivery times.

RELATIONSHIP TO STP GOALS

New and emerging mobility serves a cross-cutting role in supporting the Seattle Transportation Plan's goals for safety, equity, sustainability, mobility & economic vitality, livability, and maintenance & modernization.



Prioritize safety for travelers in Seattle, with no serious injury or fatal crashes. Safety is paramount, no matter how you get around Seattle. Our streets should be comfortable and intuitive for our most vulnerable travelers (people walking and biking). Shared, automated, and other new mobility models should advance our Vision Zero goals and maintain consumer protections.



Co-create with community and implement restorative practices to address transportation-related inequities. New mobility, whether shared, public, private, or automated, is a fundamental human need. New mobility models should promote clean transportation and roll back systemic racial and social injustices borne by the transportation system. SDOT can influence NEM in Seattle to support equitable outcomes through partnerships and thoughtful regulatory practices.



Respond to climate change through innovation and a lens of climate justice. New mobility options hold potential to support our transition towards an electrified and more multimodal transportation system by supporting the growth of existing and emerging clean mobility options that decrease greenhouse gas emissions.



Provide reliable and affordable travel options that help people and goods get where they need to go. New mobility can provide reliable and affordable travel options for personal and commercial travel, particularly for shorter trips. NEM supports first- and last-mile connections to Seattle's transit system, provides independence for younger and older people, and grows travel options for all.



Reimagine our streets as inviting places to linger and play. NEM devices can increase access to housing, employment, parks, and community assets by filling transit gaps and providing more accessible point-to-point options. The city can integrate and selectively subsidize NEM services with existing public transit systems, making it easier for users to combine multiple modes in a single trip.



Improve city transportation infrastructure and ready it for the future. SDOT promotes a diversity of transportation choices that leverage new and emerging mobility. Data infrastructure is foundational to understanding, operating, and planning in a constantly changing transportation system. Partnerships and a fair and flexible regulatory environment will nurture and expand new mobility ideas, companies, jobs, and workforce training.

DELIVERING THE KEY MOVES

Part I, Chapter 3 of the Seattle Transportation Plan (STP) includes a collection of key moves, or strategies that describe the priority actions we've identified as critical to achieve our STP goals:

- Safety (S)
- Equity (TJ)
- Sustainability (CA)
- Mobility & Economic Vitality (PG)
- Livability (PP)
- Maintenance & Modernization (MM)

Each of the functional elements serve a distinct and important role in making our key moves happen. This section highlights the most relevant key move actions for this element.

Table 1 is intended to illustrate which of the key moves the **New and Emerging Mobility Element** will help us to accomplish.

- Element actions with a reference, such as "[Supports Key Move TJ1](#)," link directly back to the corresponding Part I Key Move that it supports. See Chapter 3.
- Element actions with a reference, such as "[Supports TEF 32.1](#)," link directly back to the corresponding Transportation Equity Framework (TEF) tactic(s) the action advances. A comprehensive list of supported TEF tactics is included at the end of each element.

Several actions are repeated across all STP functional elements because they are important commitments that should be present in all of our work. For example, all elements include:

Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation.
[\(Supports Safety Key Move S2a\)](#)

Feature community voices in planning documents. [\(Supports Equity Key Move TJ1b\)](#)

Part I, Chapter 4 Implementation Strategy of the STP provides additional information on how we'll deliver our shared vision, goals, and key moves.

Table 1: New and Emerging Mobility: Delivering the Key Moves

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
New and Emerging Mobility: Delivering the Key Moves							
SAFETY KEY MOVES							
Concentrate safety investments where fatal and serious injury collisions occur most or are at a higher risk of occurring [S2]							
NEM1.	Incorporate Vision Zero and Safe System approaches into every project and program, including proactive safety improvements for citywide implementation. Work to align shared, autonomous, and other new and emerging mobility models with SDOT's Vision Zero goals and maintain consumer protections. [Supports Key Move S2a]	✓	✓				✓
NEM2.	Accelerate implementation of research-backed improvements that are proven to make streets safer for everyone such as parking corrals at daylighted intersections and protected lanes for bikes, scooters, and other small mobility devices. [Supports Key Move S2c]	✓					✓
NEM3.	Make people walking, biking, and rolling more visible by improving sight lines at intersections through treatments such as curb bulbs and, intersection daylighting, and refuge islands, with a focus on High Injury Corridors. [Supports Key Move S2d]	✓	✓		✓		
NEM4.	Pilot and evaluate new and emerging safety treatments in locations where proven interventions are infeasible or do not address the identified safety issues. [Supports Key Move S2f]	✓			✓		
Make all journeys safer from departure to destination, especially for people traveling outside the protection of a vehicle [S3]							
NEM5.	Provide dedicated places for people to walk, bike, or roll safely separated from vehicles by using context appropriate treatments, such as protected bike lanes or "complete street" corridors, especially on major truck routes. [Supports Key Move S3a]	✓			✓		
NEM6.	Support programmatic activities and partnerships to reduce the size and weight of vehicles used for personal trips, transit, and urban goods movement. Heavier vehicles are a key factor in pedestrian fatalities. [Supports Key Move S3f]	✓		✓			
NEM7.	Expand safety education for all travelers. Encourage safe driving near people walking, biking, and scooting as well as yielding to people walking by people riding a bike and or scooter. [Supports Key Move S3h]	✓					
EQUITY KEY MOVES							
Center the voices of communities of color and underrepresented groups in planning and decision-making processes [TJ1]							
NEM8.	Implement the Transportation Equity Framework (TEF) to grow transparency, accountability, and shared power when making transportation decisions with community members. [Supports Key Move TJ1a]		✓				
NEM9.	Feature community voices in planning documents. [Supports Key Move TJ1b]		✓				

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
New and Emerging Mobility: Delivering the Key Moves							
NEM10.	Continue to build and maintain relationships with vulnerable communities and underrepresented groups. [Supports Key Move TJ1c and TEF 29.1, 41.6]		✓				
NEM11.	Meet early and often to provide opportunities to influence projects during the initial phases of the development process. This includes efforts to co-create and consult with communities on new and emerging mobility policies or programs. [Supports Key Move TJ1d and TEF 3.4]		✓		✓	✓	
NEM12.	Build trust and capacity within organizations that prioritize our vulnerable communities and advocate to improve conditions for people who walk, bike, and roll. Learn from leaders active in these spaces. [Supports Key Move TJ1e and TEF 31.4]		✓				
NEM13.	Normalize the practice of making decisions about policies and right-of-way allocations with input from vulnerable communities. [Supports Key Move TJ1f and TEF 19.1, 25.4]		✓				
NEM14.	Support the transportation-related needs of local businesses owned by vulnerable communities and their commuting employees. Provide accessible and culturally relevant information about SDOT services. [Supports Key Move TJ1h and TEF 17.1, 21.2, 16.1]		✓		✓	✓	
NEM15.	Compensate community partners for their valuable work to connect and communicate with their networks and uplift community-driven initiatives. [Supports Key Move TJ1i and TEF 1.1, 13.4, 31.4, 37.1]		✓				
Address inequities in the transportation system by prioritizing investments for impacted communities [TJ2]							
NEM16.	Engage regularly with local businesses owned by our vulnerable communities to hear their concerns around NEM impacts and co-create transportation, public space, and permitting solutions. [Supports Key Move TJ2d and TEF 14.3 and 15.2]		✓			✓	
NEM17.	Identify actions to address inequities experienced by vulnerable community members who walk, bike, and roll, and provide capacity-building support to BIPOC-led organizations that focus on increasing active transportation. Enhance access to NEM options and establish safe, supportive infrastructure in neighborhoods historically underserved by the City, specifically areas with a high population of BIPOC. [Supports Key Moves TJ2e and TEF 31.4]		✓		✓	✓	
NEM18.	Implement improvements to make traveling in Seattle more accessible for everyone, such as curb ramps, accessible pedestrian signals, and guidelines to support accessible NEM technologies. [Supports Key Move TJ2h]	✓	✓		✓	✓	
NEM19.	Conduct and implement racial equity assessments at the program level. [Supports Key Move TJ2j]		✓				
Remove cost as a barrier so everyone can take the trips they need to make [TJ3]							
NEM20.	When a capital project is underway in a community, incorporate supplemental programs to help community members transition to sustainable travel options like walking, biking, and taking transit. For example, explore partnering with micromobility operators to offer discounts to encourage ridership. [Supports Key Move TJ3b]		✓	✓			

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
New and Emerging Mobility: Delivering the Key Moves							
NEM21.	Enhance programs that provide free or reduced shared mobility fees for low-income households. (Supports Key Move TJ3c and TEF 32.1, 46.2, 46.3, 52.4)		✓		✓		
Support shifts toward non-punitive transportation enforcement approaches that reduce harm and enhance public safety on city streets (TJ4)							
NEM22.	Prioritize street designs and infrastructure changes to create self-enforcing streets and curb regulations that encourage safe behaviors and reduce the need for enforcement. (Supports Key Move TJ4a)	✓	✓		✓	✓	
NEM23.	Improve enforcement of existing regulations that support reliable mobility and safety, including those that keep bike lanes and pedestrian zones clear, deter improper use of transit-only lanes, and discourage speeding, especially in school zones. (Supports Key Move TJ4g)	✓	✓		✓	✓	
SUSTAINABILITY KEY MOVES							
Improve neighborhood air quality and health outcomes by promoting clean, sustainable travel options (CA1)							
NEM24.	Expand beyond employer-based travel demand management programs to include residential and neighborhood-based strategies that encourage non-driving travel choices for all trips. (Supports Key Move CA1a)			✓			
NEM25.	Expand public education campaigns to encourage bicycling, using e-mobility, walking, rolling, and taking transit. (Supports Key Move CA1b)	✓		✓			
NEM26.	Develop and expand programs that incentivize sustainable alternatives to driving for large events and as a primary congestion mitigation tool during major construction projects. (Supports Key Move CA1c)			✓			
NEM27.	Operate the transportation system—signals, markings, signage, and right-of-way allocation—to encourage sustainable travel choices (walking, biking, taking transit, and for moving goods). (Supports Key Move CA1g)	✓	✓	✓	✓	✓	
Foster neighborhood vitality and improved community health (CA3)							
NEM28.	Design for people-first streets to make sustainable travel choices the default and easy choice for neighborhood trips and to increase neighborhood business district activity. (Supports Key Move CA3d)	✓	✓	✓	✓	✓	
NEM29.	Incentivize mobility options that don't use fossil fuels for transit, personal and urban goods delivery vehicles, and shared mobility (such as e-bikes or scooters). (Supports Key Move CA3e)			✓		✓	
Support the transition from fossil fuel to electric vehicles for personal, commercial, and delivery trips (CA4)							
NEM30.	Support the transition to electric vehicles for all segments of transportation, including personal mobility, goods movement and services, and fleets and transportation network companies, through equitable incentives, grant opportunities, partnerships, and pilot programming. (Supports Key Move CA4a and TEF 36.2)		✓	✓			✓
NEM31.	Establish a comprehensive policy for EV charging in the right-of-way, outlining preferred locations, standards, and requirements. (Supports Key Move CA4b)			✓			✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
New and Emerging Mobility: Delivering the Key Moves							
NEM32.	Locate EV supportive infrastructure and charging facilities so they are safe, well-sited, and do not interfere with mobility or access for people traveling outside of personal vehicles. [Supports Key Move CA4e]	✓		✓	✓		
NEM33.	Support electrification of shared mobility, ridehailing operations, and freight vehicles through programs that offer focused incentives, right-size vehicles, and install supportive infrastructure like chargers, parking, mobility lanes. [Supports Key Move CA4f]			✓			✓
MOBILITY & ECONOMIC VITALITY KEY MOVES							
Create seamless travel connections (PG1)							
NEM34.	Prioritize efficient and sustainable movement of people within limited street space and reallocate street and curb space to maximize comfort, convenience, and directness for walking, biking, rolling and transit. [Supports Key Move PG1a and TEF 19.6, 43.4]	✓	✓	✓	✓	✓	✓
NEM35.	Improve the experience of making travel connections, especially between transit and travel options—such as personal and shared bikes and scooters—used for first-/last-mile trips. [Supports Key Move PG1b]	✓	✓	✓	✓	✓	
NEM36.	Coordinate with regional partners to simplify trip planning, booking, and mobility payment options across public and private mobility services. [Supports Key Move PG1d]				✓		✓
NEM37.	Provide equitable transportation access through direct subsidies and tailored mobility services for disadvantaged populations, including people with mobility impairment or low income. [Supports Key Move PG1e and TEF 32.1, 32.3]		✓		✓		
NEM38.	Work with transit agencies and private partners so real-time data can help travelers make informed decisions. [Supports Key Move PG1h]				✓		✓
Make walking, biking, and rolling more convenient and enjoyable travel choices, especially for short trips (PG2)							
NEM39.	Launch a citywide parking program for bicycles, scooters, and e-mobility devices, with a focus on community and mobility hubs and curbspace, and other locations. [Supports Key Move PG2e]				✓	✓	
NEM40.	Update private development bike parking guidelines and code requirements (for charging and storage) to support and grow the use of e-bikes, larger cargo bikes, and scooters. [Supports Key Move PG2f]			✓	✓		✓
Create world-class access to transit and make service more frequent and reliable (PG3)							
NEM41.	Improve transit access to underserved neighborhoods and populations through expansion of existing transit services, programs that reduce transit fares. Leverage emerging mobility technology options to provide first-/last-mile service to existing and future buses, light rail, and ferries. [Supports Key Move PG3g and TEF 35.1]		✓		✓		
NEM42.	Enhance existing and create new community and mobility hubs with connections to high-capacity transit services. [Supports Key Move PG3h]		✓	✓	✓	✓	

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
New and Emerging Mobility: Delivering the Key Moves							
NEM43.	Prioritize low-carbon travel options through seamless, direct walking and rolling connections to community and mobility hubs. Support operations and infrastructure investments that provide a diversity of new and emerging mobility services at hub locations. (Supports Key Move PG3i)	✓	✓	✓	✓	✓	
Support access to jobs, freight movement, and growth in deliveries (PG4)							
NEM44.	Collaborate with private sector partners on pilots and programs that accelerate the shift of freight trips to more sustainable low- and zero emissions vehicles, such as electric cargo bikes to replace a portion of last-mile deliveries made by larger vans and trucks in densely developed areas. (Supports Key Move PG4f)			✓	✓	✓	✓
NEM45.	Pilot and expand use of technologies that can improve predictability and accessibility for vehicle loading/unloading. (Supports Key Move PG4g)				✓		✓
NEM46.	Explore programs and incentives that encourage rightsizing of freight vehicles for an urban environment. Work with impacted stakeholders to explore and pilot solutions such as small autonomous delivery robots or e-cargo bikes. (Supports Key Move PG4h)				✓		✓
NEM47.	Expand efforts to work with employers and property managers to provide sustainable transportation options, education, and incentives to promote sustainable travel options for shift workers, non-peak hour commuters, small business employees, and workers in MICs. (Supports Key Move PG4i)		✓	✓	✓	✓	
Manage curbspace to reflect city goals and priorities (PG5)							
NEM48.	Recognize that the curb supports all essential functions of the right-of-way (mobility, access for people, access for commerce, activation, greening, and storage) and develop decision frameworks to prioritize these functions based on local area and system needs. (Supports Key Move PG5a)				✓	✓	
NEM49.	Prioritize uses of the curb to address demands stemming from changes to more sustainable and efficient personal travel options and the evolving landscape of goods and service delivery over use as private car storage. (Supports Key Move PG5b)			✓	✓		
NEM50.	Develop strategies and new tools to accommodate more types of curb uses, including parking for bikes and other small devices, parking for shared micromobility, dedicated car share space, transit layover space, employer shuttle stops, and other curb uses that support low-emission travel options. (Supports Key Move PG5c)			✓	✓		
LIVABILITY KEY MOVES							
Boldly reallocate street space to prioritize people while preserving access for goods delivery and emergency response (PP1)							
NEM51.	Reallocate street space currently used for vehicle storage and general-purpose travel to prioritize access for people on our streets and support a variety of people-oriented uses, such as gathering, playing, walking, and biking in strategic locations. (Supports Key Move PP1a)					✓	
NEM52.	Update Seattle's Right-of-Way Improvements Manual (<i>Streets Illustrated</i>) to implement actions and strategies outlined in this Plan. (Supports Key Move PP1d)	✓	✓	✓	✓	✓	✓

		STP Goals Supported					
		Safety	Equity	Sustainability	Mobility & Economic Vitality	Livability	Maintenance & Modernization
New and Emerging Mobility: Delivering the Key Moves							
MAINTENANCE & MODERNIZATION KEY MOVES							
Reduce neighborhood disparities in the quality of streets, sidewalks, public spaces, and bridges (MM2)							
NEM53.	Conduct a racial equity assessment of the maintenance needs of existing assets in neighborhoods that score high on the city's Race and Social Equity Index. [Supports Key Move MM2a and TEF 19.3]		✓				✓
NEM54.	Focus resources for maintenance and improvements in neighborhoods that have been historically or are currently underserved. [Supports Key Move MM2b and TEF 19.4]		✓				✓
Ready city streets for new travel options and emerging trends and technologies (MM3)							
NEM55.	Collect, monitor, and use data to inform changes to the transportation system. This includes data from NEM services and operators. [Supports Key Move MM3a]						✓
NEM56.	Anticipate and leverage innovative transportation technologies so they are shaped to meet community values and goals, including safety, equity, affordability, and climate response. Work to guide engagement, develop policy, evaluate pilots, and collaborate with peer cities to respond to NEM technologies as they arise. [Supports Key Move MM3b]	✓	✓	✓	✓	✓	✓
NEM57.	Proactively work with public, private, and academic sector partners to collaboratively develop transit and mobility solutions for the future. Maintain partnerships alongside a fair and flexible regulatory environment to nurture ideas, companies, jobs, and workforce training. [Supports Key Move MM3c]						✓
NEM58.	Adapt streets for new and evolving forms of mobility devices such as commercial or private cargo bikes, e-scooters, personal delivery devices, low-speed electric vehicles, and others to create more travel options. [Supports Key Move MM3e and TEF 19.2]			✓	✓		✓
NEM59.	Develop and maintain up-to-date asset data, including digital inventories of physical assets like curb space, load zones, and bike and scooter parking locations. Establish regulatory frameworks that include strong and clear data-sharing and storage requirements for private operators to deploy. [Supports Key Move MM3f]	✓	✓				✓
NEM60.	Research and develop policies to manage the evolution toward connected and autonomous vehicles, recognizing that government and industry must partner to deliver their anticipated benefits safely. Work with legislators and regulators to foster a level playing field, positioning AV providers to offer transportation services that meet our safety, equity, and sustainability goals. [Supports Key Move MM3h]	✓	✓	✓			✓
NEM61.	Explore ways to build trust with BIPOC communities and improve the accuracy of demographic and other data that inform transportation investments and decision-making. For instance, this could include respect for data sovereignty and alternative data collection approaches, such as an Indigenous research methodology that empowers community members to lead research, data analysis and interpretation. [Supports Key Move MM3i]	✓	✓				✓



SETTING THE CONTEXT

Seattle is a dynamic and ever-evolving city. We've seen dramatic changes in the types of travel options available for people to choose from, as well as when and where people want to travel. Additionally, there are increasing demands on the role streets play to support social, environmental, and economic health. We can't fully predict changing conditions (such as a global pandemic) that could disrupt the transportation system and all the functions it serves. As such, we will need to remain agile and prepared to continually adapt and respond to the evolving transportation needs of the city's residents, businesses, and visitors.

The STP provides a framework for how SDOT will navigate a changing transportation landscape over the next 20 years. This section describes the context we're operating in today, including significant opportunities, emerging trends, and challenges. It also includes a summary of major community engagement themes we heard that relate to New and Emerging Mobility. They were used to shape the actions we'll take to achieve our shared transportation vision. SDOT will continue to engage and co-create with community members as transportation system needs, preferences, and circumstances continue to evolve in the years to come.

Both technology and our transportation needs have evolved since we published the New Mobility Playbook². The COVID-19 pandemic significantly impacted how and when people travel, with fewer workers making the daily commute during traditional rush hours and a dramatic increase in package and food delivery trips. Local, state, and national policy to combat climate change is becoming more proactive as the impacts of global warming become more common and more significant.

For more than a decade, Seattle has welcomed new technology into its transportation ecosystem in a systemic, regulated, and integrated manner, and encouraged innovation in transportation that supports its broader mobility goals. SDOT collaborates with service providers, such as Uber or Lime, on their programming and develops policies that empower and protect residents and visitors. However, there are limitations and continued ambiguity in regulatory authority with new and emerging mobility options.

We will continue to operate within a shifting legislative and regulatory environment. SDOT's goal is to understand, collaborate, and regulate new and emerging mobility to best serve the needs of communities while mitigating potential harm and prioritizing customer safety.

² Learn more about the history of NEM in Seattle at: [NewMobility_PlaybookFINAL.pdf \(seattle.gov\)](#)

WHAT IS NEW AND EMERGING MOBILITY?

Shared Micromobility, with the right policies, offers flexible, low-cost mobility options that allow people to rent an electric bicycle or scooter for a quick errand, a trip to light rail, or a commute trip. Riders locate (via app or sight) and rent the nearest available device with their phone, ride where they want to go, and are required to leave it responsibly parked for the next person to ride.

Car Share is a practice where people subscribe to become members in an organization that owns a fleet of cars, which members can then use under the terms of their membership. Car share permits are only available to approved companies. Car share services can offer either fixed-location cars or free-floating cars, meaning they don't have designated parking spots. Car share gives users the temporary benefit of a vehicle for moving items or traveling longer distances without the storage and maintenance costs of private vehicle ownership. Car share may operate point-to-point (one-way) or round-trip.



Person riding a shared scooter

Microtransit, sometimes called **ridesharing**, is a flexible, on-demand transit service that uses smaller vehicles, such as shuttle buses or vans, within specific zones rather than fixed routes and stops. Microtransit is generally requested through an app or by phone with a limited wait time (usually 30 minutes or less) and can be door-to-door or curb-to-curb. Through real-time software, microtransit can dynamically change routes and ensure the most time-efficient service for riders in the zone while also optimizing the number of passengers.

Transportation Network Companies (TNCs), also known as **ridehailing services**, allow people to request a driver for hire through a website or smartphone app. Common examples include Uber and Lyft. Unlike taxicabs and for-hire vehicles, passengers are connected to drivers through an online dispatch application using a smartphone or tablet. TNCs can supplement fixed-route transit service by offering flexible pick-up and drop-off locations and 24-hour service.

Autonomous Vehicles (AVs) are vehicles equipped with hardware and software systems providing the capacity to perform specific driving functions without any intervention or supervision by a human operator. If deployed responsibly, AVs have the potential to revolutionize mobility and safety by expanding travel options for seniors and people with disabilities, as well as greatly reducing incidents associated with human factors.

Urban Air Mobility (UAM) refers to a new class of vehicles that are typically electric or hybrid and designed to reduce emissions and noise pollution. These vehicles often have vertical takeoff and landing (VTOL) capabilities and can be used for both autonomous and piloted operations for the transportation of passengers and/or cargo. UAM includes efforts to deploy small, automated aircraft for the short-range transportation of goods or passengers within cities.



Urban freight delivery using cargo bikes

Urban Freight Innovation includes high-impact, low-cost solutions for businesses delivering goods in urban settings and cities trying to manage limited curb and parking space where delivery trucks, bikes, pedestrians, and cars all need to coexist³. As e-commerce continues to grow its share of the retail sector, cities across the country are looking for more efficient and climate friendly solutions for distributing urban freight such as grocery delivery, restaurant take-out, and parcel delivery.

Growth in e-commerce deliveries has led to increased pressure on curb space in our neighborhoods and business districts, especially where off-street parking and loading spaces are limited. Innovative solutions have emerged to address the changing delivery needs and demands curb space, including the use of smaller and more sustainable devices to transport urban goods and freight. One novel solution that is common overseas and gaining momentum in the U.S. is the use of e-cargo bikes.

E-cargo bikes are human operated devices with battery-powered pedal assist, with capacity to transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

Other solutions include the use of **Personal Delivery Devices (PDDs)**, which are automated or remotely piloted devices that contain storage space for packages, food, and other delivery items, including sidewalk robots, automated delivery shuttles, and delivery lockers.

Vehicle Electrification (EVs) refers to vehicles powered by batteries and electric motors and produce few or zero tailpipe emissions. Electric vehicles typically rely on charging infrastructure to keep them powered and operable. Most electric vehicles today are personal cars, and the widespread adoption of other type of electric vehicles, such as trucks, heavy equipment or delivery vans, are expected to continue to grow as market availability, costs and battery and charging technology continues to improve.

³ Urban Freight Lab | Supply Chain Transportation and Logistics Center at the University of Washington

Other New and Emerging Mobility Concepts

Connected vehicle (CV) technologies present transformative opportunities for transport modes, enhancing safety and efficiency. CV and cellular vehicle-to-everything (C-V2X) technologies allow individual vehicles to communicate with each other digitally, as well as with infrastructure such as intersection signals and roadways. CV technologies use C-V2X communications to interact with the surrounding environment, such as other vehicles, people on bikes, pedestrians, signals, and road and curb infrastructure. CVs have specific requirements, including advanced safety protocols, infrastructure adaptability, and support for autonomous vehicles. This technology has the potential to lead to fewer collisions between vehicles and other modes. CV and C-V2X technologies would also increase the complexity of our transportation system and present security and safety concerns.

CVs have specific requirements, including advanced safety protocols, infrastructure adaptability, and support for autonomous vehicles. The integration of CV and C-V2X technologies into existing traffic systems demands substantial infrastructure investment. Safety outcomes for non-vehicle road users should not depend on beacons or other personal equipment for these technologies to work.

Security and privacy become more critical in the face of increased connectivity. Additionally, interoperability among different technologies is necessary for global standardization.

Data Governance, Cybersecurity, and Data Privacy. Effective transportation management is becoming more data-dependent to create and sustain optimal, user-friendly solutions. As early users of the Open Mobility Foundation's (OMF) mobility data specification (MDS), SDOT is well-prepared to handle data from new mobility technologies. Uniform software interfaces aid in sharing public data on real-time device availability and mobility program metrics. As previously mentioned, these tools can help unite systems, boost fair access opportunities and programs like mobility wallets, and lead to better decision-making.

New and emerging mobility is unique in that most often the technology is owned and operated in public spaces by private companies. Finding the overlap in public and private interests, partnering with non-traditional mobility providers (such as tech companies), and navigating roles, responsibilities, and requirements can prove challenging.

There are also potential cybersecurity and data privacy risks. These require data governance to address cyber-attack threats, data usage agreements, and aggregation methods that protect user data. By setting well-developed guidelines for data from the outset, we can provide appropriate oversight of private mobility operations, protect people living in and traveling through Seattle, and develop data-informed policies and programs.

Technology and Data Integration. New technologies offer convenience and a streamlined user experience. They make using mobility platforms and devices easier, such as those used to purchase a transit pass, which could help attract new transit riders and replace existing car trips. Historically, trip planning and payment across different providers (i.e., King County Metro for buses and Sound Transit for Link Light Rail) could be challenging or confusing for people who had to find, understand, and use various systems for a trip. Integrated systems are now much more common and can help lower the barrier to entry for transportation modes by combining information and services into a single platform.

Mobility as a service, or MaaS, is a concept to unify transportation trip planning, simplify payment methods, and provide multi-modal transportation options citywide. Using a seamless, integrated mobility system, people can plan and pay for a trip across various operators (such as bike to bus to scooter), allowing more shared, zero emission trips.

Open data standards and integration can also help enable implementation of more equitable policies and programs such as universal basic mobility programs and mobility wallets. These programs provide access to disadvantaged populations with enhanced mobility choices through direct incentives into a virtual “wallet” or card. Users can then access various mobility options, such as transit and shared micromobility, by using that wallet as their pass.

Technology integration can also allow gamification of travel choices and create incentives for taking transit or shared mobility. An example of this concept in practice already exists on a limited scale through the Transit GO Rewards App.⁴ Developed through a partnership between Seattle and King County Metro Transit, the app allows people to pay for and earn points for transit and shared micromobility trips.

Spotlight: Metro TransitGO Rewards App

King County Metro offers riders the TransitGO Ticket mobile app, which enables people to purchase digital tickets for King County Metro Buses and Water Taxi, Sound Transit Light Rail and Sounder, Seattle Streetcar, and Kitsap Transit. The app offers a seamless and cashless method of transferring between transit services and includes a rewards program.

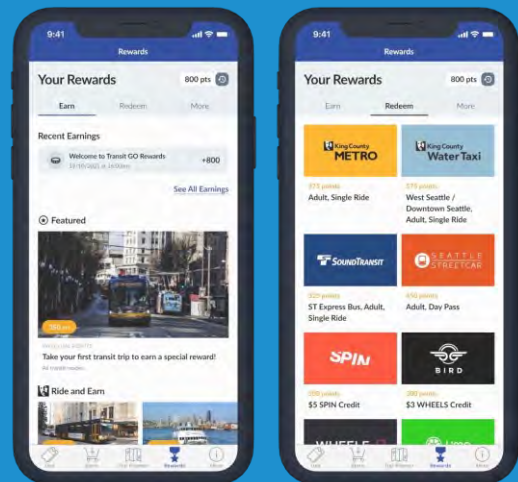


Image Source: King County Metro

⁴ <https://kingcounty.gov/depts/transportation/metro/fares-orca/transit-go-ticket/transit-go-rewards.aspx>

Creating requirements around data integration and access at the onset, as we have sought to do with the Open Mobility Foundation, can help address challenges as new modes and technologies appear. Equity considerations must also be incorporated into technology integration to ensure those with limited access to technology, data, and banking are not left out or further harmed by the changing technology landscape.



Metro bus kiosk with bus route information and a bus pass card reader to “tap on”

As we integrate technology into our transportation system, there is a growing challenge of how to make services and devices accessible for people who have limited or no access to personal phones and/or bank accounts. Enabling access to these services for under or unbanked people⁵ and those without a mobile data package or a smartphone is essential to improve access to transit and increased mobility.

This challenge can be addressed by providing low income and equity area micromobility programs while concurrently expanding and introducing programs to subsidize service and eliminate barriers such as security deposit holds, the need for electronic payment, or a smartphone. These considerations should address the need to create access solutions, such as through kiosks, call-centers, cash options, and mobility wallets.

⁵ An “unbanked” person is someone that does not have a checking or savings account with an insured (FDIC) institution. The term “underbanked” means that the household had a checking or savings account with FDIC insured institution, but regularly used alternative financial services (AFS). Source: Library of Congress.

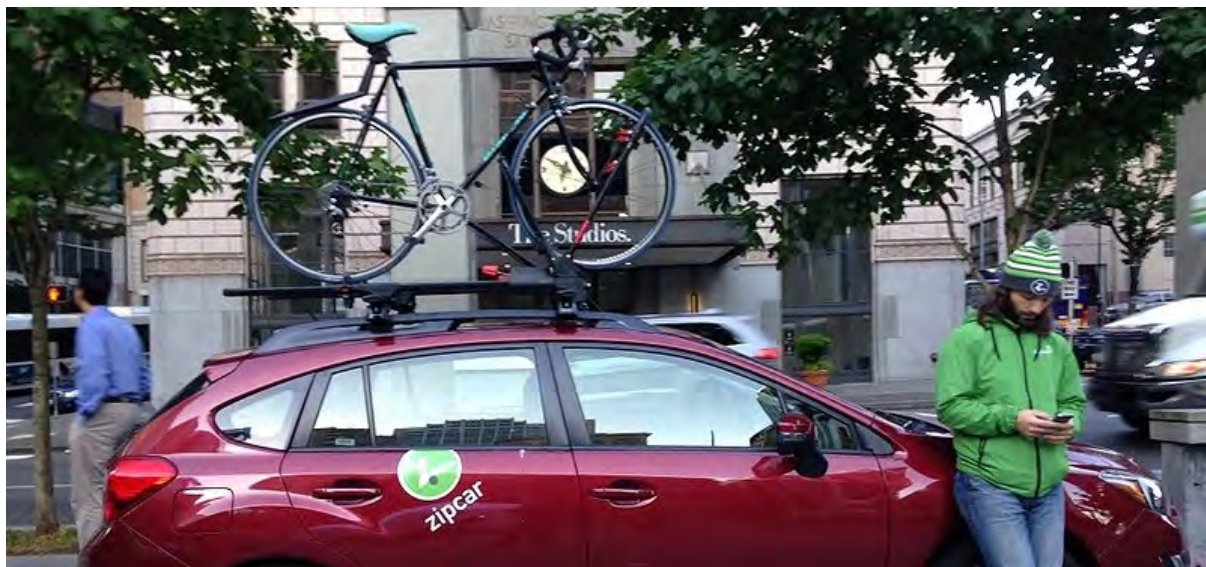
OPPORTUNITIES, EMERGING TRENDS, AND CHALLENGES

This section discusses opportunities, challenges, and emerging trends that we need to understand and respond to as part of the STP new and emerging mobility strategy. While new and emerging mobility has the potential to significantly improve mobility and access throughout the city, it also has the potential to exacerbate existing inequities. We must be informed and intentional about adopting and incorporating new technologies to ensure that we maximize benefits and mitigate negative externalities.

Seattle is an incubator of innovation, but we remain grounded in our collective values. Our commitment to equity, racial, and social justice remains steadfast. We recognize the misguided decisions and plans of the past, especially in transportation policy and infrastructure, that amplified challenges for our most vulnerable neighbors. As we integrate new transportation technologies, we endeavor to mold them to serve all our citizens more effectively. In the evolution of our transportation system, our guiding principle is to ensure that new and emerging mobilities prioritize people first.

New technology is transforming transportation systems in cities across the country. There are new vehicles on the streets, new services, and new ways to travel. These innovations could lead to safer, more vibrant cities, but they could also disrupt existing services, reduce options, increase prices, and upend current business models. They could supplement public transit or compete with our investments in buses, streetcars, and light rail.

We need to accommodate new technologies while also ensuring that innovations benefit the people living and working in our city. Cities will need new infrastructure and new policies and rules to manage the rapidly changing transportation system. Some jobs may change dramatically or go away altogether, but there are also new opportunities, new skills to learn, and new industries about to emerge.



A person booking a carshare service with a bike on top of the car

Opportunities and Emerging Trends

We can influence NEM deployments to align with climate, equity, safety, and affordability goals through intentional policies and regulatory frameworks.

Shared Micromobility and private e-micromobility is on the rise with an average of over 10,000 daily trips as more people adopt e-bikes and scooters as a quick and convenient travel mode.

- Offers convenient, flexible, and efficient travel options for short trips in urban areas
- Fills gaps in first-and-last-mile connectivity to transit hubs
- Can reduce traffic congestion and lower urban greenhouse gas emissions
- Usage data can inform city planning and development of bike-friendly infrastructure
- Provides a low-impact form of small goods delivery (i.e., food, groceries)

Carshare

- Can reduce personal car ownership, making transportation more accessible and practical in urban areas
- Electrification of car share fleets contributes to reducing emissions
- Reduces financial and space-related burdens of car ownership
- Car sharing could be implemented through partnerships with nonprofit organizations, such as cooperative or housing communities, to expand the reach and provide an additional transportation option, with sufficient funding and dedicated program staff

Microtransit/Ridesharing

- Potential to fill gap in traditional fixed route transit services and provide a more dynamic and efficient transit option
- Can be an effective solution in lower-density settings to connect people to main-line transit services
- Microtransit can operate on-demand or semi-fixed routes, offering more direct and efficient travel options compared to conventional public transit.

TNC/Ridehailing

- On-demand transportation for those without access to personal vehicles or adequate public transit
- Income opportunities for drivers
- Complement public transit systems

Autonomous Vehicles (AVs). Automation can be applied to several other NEM concepts that—when combined and implemented responsibly in alignment with our STP values—present a range of potential opportunities and emerging trends.

- Could improve traffic flow and reduce congestion, especially for freight and goods movement by reducing delivery operating costs and delivery times. Paired with electrification, could help reduce transportation emissions.
- May offer independence and supplemental mobility for people with disabilities, seniors, youth, and other non-drivers by eliminating the need for a driver.
- Potential to reduce number and severity of collisions. Deployed responsibly, automated safety features (i.e., pedestrian detection or emergency braking), or fully eliminating need for a human driver can reduce collisions associated with human driving behaviors.
- Potential to support and complement fixed-route transit service by providing cost effective automated microtransit or neighborhood circulator connections that can serve lower-density areas without existing transit networks, increase first-and-last-mile connections, or improve efficiency on high volume transit routes.
- If affordable for people with a range of incomes to access, AVs could reduce reliance on personal vehicle ownership and associated operating costs and storage needs.
- If industry claims are accurate, and if we can implement AVs with equity, climate, and mode share goals in mind, AVs hold the potential to improve traffic flow and reduce congestion, especially for freight and goods movement.

Urban Air Mobility (UAM) has become an emerging option to transport more people and goods within the city based on recent noise reduction and automation advances.

- Within low-altitude spaces, UAM could be a possible zero-emissions solution to reduce surface-level congestion or to improve access to goods for people living in hard-to-serve or isolated communities.
- Presents the opportunity to reduce roadway congestion and VMT.

E-Cargo Bikes and other Personal Delivery Devices (PDDs) offer an opportunity to introduce more sustainable and right-sized methods of **urban freight** transport and deliveries.

- Increasing cargo bike capacity within the city could significantly reduce VMT and greenhouse gas emissions (GHG), as well as traffic congestion caused by circling, double parking, and competition for load zone use.
- PDDs reduce demand for limited curbspace and reduce emissions by enabling a transition to electric alternatives.
- Personal delivery devices (PDDs) can also play a role in addressing competing curbside needs and making progress on our emission goals. PDDs do not require the same curbside space as traditional urban goods delivery vehicles and help reduce emission levels by replacing gas-powered methods for electric delivery methods.

Electric Vehicles (EV) play a vital role in making progress toward a zero-emissions transportation network, especially if balanced with goals to shift a greater share of trips to other sustainable options like walking, biking, and transit.

Connected Vehicle (CV) technologies present transformative opportunities for transport modes, enhancing safety and efficiency, but increase the cost and complexity of the transportation system, including security and safety concerns, alongside expensive supportive infrastructure in things like sensors and detection.

Data Governance offers opportunities to standardize data formats across NEM operators to support more integrated and user-friendly trip planning and real-time data sharing for the public, as well as performance monitoring for various NEM pilots and operations for SDOT.

Mobility-as-a-Service (MaaS) platforms seek to integrate various forms of transportation and related services into a single application and single payment system.

- Can support sustainable, multimodal linked trips between different options (like walking, biking, shared mobility, and transit) and create opportunities for encouraging mode shift through gamification.
- Various technologies could streamline trip planning, booking and payment platforms that can help reduce barriers to accessing transit, especially with MaaS and real-time travel information made more readily available to riders.

Challenges

Across the NEM industry, public and private entities often have divergent goals and priorities that must be reconciled through collaboration and intentional policy and regulation.

Shared Micromobility

- Ensuring safe integration into urban traffic mix and compliance with regulations
- Providing equitable access across different demographic groups and neighborhoods
- Sustainability of operations, including maintenance and resource utilization.
- Need for infrastructure adaptation to safely accommodate increased use

Carshare

- Ensuring that car share services are affordable and accessible for diverse populations.
- Adapting urban infrastructure to support car share services, including parking zones and EV charging stations.
- Sustainability of operations, including maintenance and resource utilization.

Microtransit/Ridesharing

- Balancing the cost of operation with affordable pricing for users is crucial to ensure the long-term financial sustainability of microtransit services.
- Equitable Service Distribution

TNC/Ridehailing

- Contracting pay structure can create a cycle of debt and exposure for drivers
- Inability for city to regulate and guide opportunities
- Managing competition within the industry and with traditional taxi services
- Addressing concerns about the impact on traffic and the environment, such as deadhead mile

Autonomous Vehicles (AVs)

Achieving successful AV integration necessitates thoughtful consideration of various challenges and the active engagement of stakeholders at all levels. Regulatory guidelines for autonomous vehicles are still developing and remain ambiguous in some cases.

- Seattle's complex transportation system poses limitations for safely testing new AV technologies.
- Traffic congestion, vehicle miles traveled increases, and emissions could result from 'deadheading', or zero-occupancy vehicle trips, especially from non-low- or no-emissions vehicles.
- Competition with transit could divert support, funding, and trust from public transportation.
- Privacy, cybersecurity, liability concerns, and other related policies and regulatory frameworks continue to evolve.
- Unintended equity impacts need to be further explored, such as access for people without mobile devices or payment methods, safety and access for pedestrians and people with disabilities, and job losses due to automation.
- City and private industry priorities are not always aligned.

Urban Air Mobility (UAM)

While we don't have sole authority to regulate urban air mobility, many concerns related to security, nuisance, safety, and privacy remain unresolved by regulating agencies. UAMs have a high cost to operate and introduce further concerns about equitable access to UAM services.

E-Cargo Bikes and PDDs

The most significant challenge to cargo bike and personal delivery device (PDD) deployment is incorporating them into the existing fabric of our existing transportation network.

- Bike lanes are currently not designed for bicycles with large trailers or cargo, and loading zones are reserved for use by traditional commercial vehicles. To support wide-spread adoption, we'll need to redesign existing bike facilities, loading zones and more to accommodate specific needs of delivery devices and bikes with cargo trailers.
- Enabling legislation and guidelines for safe and efficient e-cargo bike use in Seattle are also needed.
- PDDs are restricted in where they can operate and can introduce accessibility issues when they operate on a sidewalk.
- Size, use, storage, and locational of "hives" used by operators to store and deploy PDDs may present zoning challenges and conflicts with other curb use priorities. We'll need to carefully consider dispensers locations to best fit our communities and work with other departments to revise codes, as needed, to maximize accessibility and reduce impacts.

Vehicle Electrification (EVs)

To ensure that electric mobility maintains far reaching benefits to everyone, infrastructure and programs must address personal vehicles, goods delivery, city fleets, shared mobility, and the transition to zero-emissions transit. Obstacles to scaling electric mobility include:

- EVs can be cost-prohibitive, including the cost of charging infrastructure
- Trading gas-powered vehicles for electric ones isn't enough to achieve sustainability or safety goals
- Building out a reliable network of EV charging will require substantial investments in electrical infrastructure and right-of-way impacts to stay ahead of adoption
- As demand for electricity grows, the city must ensure the grid is reliable and built out to enable rapid adoption of emerging electric transportation technologies and vehicles
- EVs are often heavier and faster⁶ than internal-combustion equivalents, which may lead to increased pavement maintenance costs or safety risks, especially to vulnerable users
- Accommodating EV charging in the ROW may conflict with higher-priority curb uses for non-vehicle users, like bike lanes or bus stops, or commercial and passenger loading

Connected Vehicle (CV) and Cellular Vehicle-to-Everything (C-V2X)

While technologies can increase safety and system efficiencies, integration of CV and C-V2X technologies into existing traffic systems demands substantial infrastructure investment. AV industry developers haven't signaled a need for CV and C-V2X technologies for AV vehicles to operate; testing and deployments have proceeded in areas without these technologies available.

⁶NTSB head warns of risks posed by heavy electric vehicles. NPR.

Data governance

Data standards and protocols are broadly needed to address cyber-attack threats, data usage agreements, and aggregation methods that protect user data.

Mobility as a Service (MaaS)

MaaS platforms and standardized data requirements necessitates coordination across multiple public and private mobility operators, especially as emerging technologies are often owned and operated in public spaces by private companies. Technology could become a barrier to access for people who do not have or use a smartphone or may not have a bank account.

Transportation Equity

Due to private ownership and operation, SDOT is limited in influence for crucial aspects of NEM deployments, such as locations, payment options, and cost. If decisions are driven solely by market forces, without effective policies and management, new and emerging mobility has the potential to exacerbate existing equity problems.

COMMUNITY ENGAGEMENT

From May 2022 through November 2023, we conducted citywide public engagement as part of the Seattle Transportation Plan development process, using a variety of tools. During this process over 2,780 responses provided feedback specifically on topics related to new and emerging mobility. General themes related to new and emerging mobility include:

- **Encourage options.** Some respondents feel there is an overemphasis on electric vehicles (EVs); they question the ability of EVs to address safety, affordability, street and curb management, and other priorities; and they want to see the availability of and an emphasis on other options
- **Facilitate electrification.** Support for the installation of more charging stations throughout the city to support individuals transitioning to electric vehicles, keeping in mind the concerns mentioned above
- **Responsible environmental stewardship.** Concern for EV viability given waste (e.g., spent batteries and vehicle manufacturing)
- **Support small-scale mobility needs.** Support for more neighborhood circulators and on-demand transit, especially in low-income neighborhoods (see following page for an example of a neighborhood circulator)
- **Support mobility for vulnerable populations.** Desire for micro-shuttle services for seniors and those with limited mobility, especially in low-income neighborhoods and to light rail stations
- **Manage the pace of deployment to promote safe operations and protocols.** For example, concerns that safely testing of new AV technology without a test driver in Seattle's complex urban environment can pose a risk to public safety until fully developed
- **Anticipate and mitigate unintended consequences from Automated Vehicles (AVs).** Widespread use of AVs in the future could increase vehicle-miles traveled and congestion and result in job displacement, liability issues, and the need for workforce retraining. Cybersecurity concerns, nascent regulatory frameworks, and a disconnect between City and private industry operators could also further complicate AV and other NEM technologies.

Key themes among respondents from BIPOC communities included:

- **Focus on the essentials**—sidewalks, frequent and convenient bus service, and safe crossings—was identified as more important than investing in electric vehicle infrastructure
- **Prioritize safety** – keeping people safe was often cited as a top priority

NEW AND EMERGING MOBILITY IN SEATTLE

New and emerging mobility contributes to local mobility in many ways and across many geographies. It can provide first-/last-mile connections to transit, replace driving trips, make loading and unloading goods at a curbside shared with large freight vehicles easier, and integrate new travel options in spaces shared with people walking, biking, and rolling.

Data generated by new and emerging mobility companies and services can also be a powerful tool for planning and dynamic management of the transportation system, enabling SDOT and other agencies to analyze where additional transit service may be needed, or where community and mobility hubs should be located. This data can also help the city decide where to site EV charging stations in the public right-of-way and plan where bicycle and e-mobility lanes are needed. Layering new and emerging mobility data with demographic, community assets, and equity priority area data can highlight gaps and potential opportunities for enhancing equitable mobility (such as new micromobility transit routes) and access.

Because most new and emerging mobility services are operated through private companies (not owned and operated by SDOT), clear policy guidelines and boundaries for their deployment (i.e., what physical space they can use and operate in within our right-of-way) are needed along with education and engagement to ensure they are meeting community needs.

Shared Micromobility

In Seattle, SDOT permits private operators to deploy a fixed number of scooters and bikes in the public right-of-way. Permits are contingent on compliance with regulations, including equity, parking, and data-sharing requirements. To be inclusive of people of all ages and abilities, participating vendors are encouraged to offer different kinds of devices, such as seated and standing scooter options and e-bikes.

Car Share

SDOT issues two types of car share permits to allow car share services to operate in the ROW in Seattle. Each permit type comes with different terms and fees that apply to operators, primarily addressing parking needs.

- **Free floating car share** allows permitted vehicles to park at any legal paid parking space in the City without paying at a pay station, to park without regard to time limits in on-street time-limited spaces, and to park in any restricted parking zone (RPZ) without regard to time limits in the zone which members use through a reservation system. Providers are allowed to operate within the city under a conditional permit, which includes data sharing and service area distribution requirements.
- **Designated Space car share** allows permitted vehicles to park in designated on-street or private parking members access through a reservation system.

Microtransit or Specialized Transit (Rideshare)

Seattle has coordinated and previously funded microtransit service with agency partners as a solution to reduce barriers to transit and improve access for people who rely on public transportation. For example, through our partnership with King County Metro, the *Via to Transit* pilot service enabled travelers to request a ride to or from select transit stations. People who lived, worked, or went to school within the specified service areas used an app or called to book a ride on a Via microtransit vehicle to connect to buses and trains or a limited number of community hubs providing access to grocery stores, parks, libraries, healthcare, and more. Importantly, wheelchair-accessible vehicles were made available.

Due to the flexible and right-sized nature of microtransit services, on-demand transportation has become an increasingly promising solution to help close transit gaps in lower density areas, such as suburban and rural areas, where long distances and lower population densities can make the cost of operating fixed routes expensive or infeasible. Microtransit may also continue to provide a solution for people who can't drive, especially people with disabilities, older adults, and youth.

In Seattle and other cities across the country, microtransit services have been found to offer increased independence, access to essential needs and services, and reduced social isolation for these populations. As a complement to our main line transit system, microtransit can continue to play an important role in achieving an age-friendly transportation system that enables people to live without relying on a personal vehicle.

Transportation Network Companies (TNCs/(ridehailing)

In Washington, TNCs, or ridehailing services, are predominantly regulated at the state level. At the local level, the City of Seattle and King County collaborate in regulating TNCs—the county regulates drivers, and the city regulates vehicles. Seattle has established worker protections such as minimum compensation and driver deactivation rights and requires TNC operators to meet vehicle safety inspection standards. TNC companies are also required to submit quarterly electronic data reports for all requested trips in the city of Seattle. Seattle's Transportation Electrification Blueprint commits to create a path for TNC and car-share vehicles operating in Seattle to transition to zero-emission by 2030. The TNC permitting process is an important tool to support progress towards our electrification goal in the future.

Autonomous Vehicles (AVs)

Fully autonomous vehicles, capable of operation without any human involvement, will roll out as the technology is tested and improved, while highly automated vehicles currently operate around the region. Seattle's complex transportation system poses limitations for safely testing or deploying this technology without a test driver, as current autonomous systems struggle with the intricate conditions required for urban street operation. Regulatory frameworks also present challenges, with dissenting approaches and conflicting interests between private industry operators and long-term City needs and goals.

Our role in regulating AVs will be dependent on evolving state legislation. Today, most states have fully preempted cities from regulating AVs leaving all regulatory authority to state agencies. This approach has resulted in differing rules in each state and removes cities from creating policies to manage the AV transportation services in their jurisdiction.

In 2023, we partnered with the City of Bellevue on a collaborative Strategic Vision for Automated Vehicles⁷ which explored the potential for AVs to improve urban transportation for people and goods movement. These technologies include, but are not limited to:

- **Microtransit/Specialized Transit** – Automated vans or shuttles designed to serve local transit needs
- **Mass Transit** – Automated transit vehicles
- **Shared Fleet Vehicles** – Shared highly automated vehicles, made available through carshare-like or ride-hail programs
- **Personal Delivery Devices (PDDs)** – small automated or remote piloted robots designed for short deliveries carrying food, packages, or other goods
- **Commercial Freight Vehicles** – large freight trucks primarily used for long-haul goods transport

Urban Air Mobility (UAM)

In Seattle, major retailers like Amazon have invested significant funding in developing air parcel delivery devices and have begun to deploy them on a limited scale in 2022 in California. Future innovations in urban air mobility are likely to include passenger transport, as numerous companies have proposed quieter electric, helicopter-like vehicles for short haul passenger movement. Private mobility providers like Uber and Blade already offer urban passenger air travel, such as a helicopter option for travel between JFK Airport and Manhattan.

While aerial mobility may not have the same potential impacts on right-of-way (ROW) use and allocation as other forms of new and emerging mobility, it remains crucially important for us to monitor its impact on people and urban goods movement.

UAM for urban goods delivery will likely be focused in remote and rural areas for initial deployment. Aerial passenger vehicles will be predominantly regulated by the Federal Aviation Administration and the Seattle Department of Construction and Inspections as it is unlikely that transport design will seek to use SDOT-managed right of way.

This framework may resemble existing regulations around heliports. Our current policy focus is on ground-based last mile delivery strategies as well as freight mobility.

⁷ FR1_Bellevue_Seattle_AVStrategicPlan_Feb23.pdf

Urban Freight: E-Cargo Bikes and Personal Delivery Devices (PDDs)

Growth in e-commerce deliveries and demand for parking and curbspace has sparked the need to explore innovative methods to deliver goods and manage the ROW. SDOT leverages existing on-street Commercial Vehicle Loading Zones (CVLZs), alleyways, and loading zones to meet this demand and work with our community to improve and implement new dedicated loading space. We also play a role in advancing bike facilities that can accommodate e-cargo bikes and integrating e-cargo bike parking and loading connections at community and mobility hubs.

We collaborate with e-cargo bike and PDD services and manufacturers to understand the unique needs of devices and find appropriate ways to deploy them efficiently and equitably on our streets. To support this work SDOT will need enabling legislation and program guidelines for safe and efficient e-cargo bike use in Seattle.

To support wide-spread adoption of PDDs and E-Cargo Bikes, we'll need to redesign existing bike facilities, loading zones and other aspects of the transportation system to accommodate the specific needs of different delivery devices and bicycles with large trailers for cargo. We can also activate our curbspace to increase the efficiency of cargo bike deliveries and send clear market signals to our private partners that we are serious about moving towards zero emission solutions.

SDOT regularly partners with other public and private institutions on research and development. In 2021 SDOT ran a limited neighborhood delivery hub pilot led by the University of Washington's Urban Freight Lab⁸ that included urban freight delivery via cargo bike. The pilot found cargo bikes traveled up to 50% fewer miles per package than conventional delivery trucks. Similarly, we have and continue to work in partnership with the C40 Zero Emission Freight Project⁹ and the Green and Healthy Streets Accelerator signatory cities to accelerate the spread of zero-emission vehicles and supportive infrastructure.

Vehicle Electrification

Electrification of trips previously taken in fossil fuel powered modes is critical to reducing emissions. Electric propulsion is increasingly common for vehicles of all shapes, sizes, and uses. In January 2023, 17.2% of all newly registered vehicles in the Seattle area were battery electric or plug in hybrid.¹⁰ Additionally, King County Metro is committed to transitioning its fleet to zero-emissions by 2035 and purchased 40 new battery-electric buses in 2022 alone.

We are committed to supporting the installation of necessary EV infrastructure, working with public and private partners on programs to electrify commercial freight vehicles, supporting electrification of shared mobility and transit, and leading by example through an electrified and right-sized City fleet. We're also committed to working with our partners on programs that

⁸ The University of Washington's Urban Freight Lab (UFL), housed within the UW's Supply Chain Transportation and Logistics Center, brings together private industry with City transportation officials to study, design, and test solutions around urban freight management.

⁹ See the Curbside Management Element for additional information on the C40 Zero Emission Freight Project.

¹⁰ <https://www.axios.com/local/seattle/2023/04/20/electric-vehicles-seattle-registrations>

make ownership of electric mobility options beyond vehicles more affordable and accessible, especially to lower-income and historically underserved communities.

To support this work, we will need to continue working with the Office of Planning and Community Development (OPCD), the Office of Sustainability and the Environment (OSE), and Seattle City Light (SLC) to ensure coordinated land use and transportation policy that support the shift to electric vehicles. SDOT works closely with these departments to accelerate the shift to electric and zero-emission passenger and freight vehicles, across modes and throughout the city. These programs are guided by goals outlined in the Transportation Electrification Blueprint (2021).¹¹

For example, SDOT is currently working with OSE and SCL on a pilot program to install Level 2 (240 volts) electric vehicle chargers at curbside locations throughout Seattle for public use. The program aims to accelerate the adoption of electric vehicles, micromobility, and transit, and provide additional charging options for EV owners who do not have off-street parking or private charging availability.

We are working with our partners to install EV charging equipment in the public right-of-way (ROW) to understand how this installation type benefits EV owners while determining the impacts to other users of the ROW. This information will guide SDOT's future policies on EV charging in the ROW as we explore alternative pathways including current city incentives for installing EV charging in off-street parking locations.

We will need to balance the transition to electric mobility with other zero-emissions transportation strategies, such as walking and biking. Simply trading gas-powered vehicles out for electric vehicles alone will not be enough to achieve our sustainability and transportation goals. Nor does such a transition advance critical safety goals.

In fact, the projects, programs, and initiatives that deliver multimodal improvements (including right-of-way allocation, advancement of non-driving mobility options, and supportive pricing signals) can result in nearly a 10x return on investment, according to our analysis in SDOT's Climate Change Response Framework (CCRF)¹². When it comes to reducing emissions, the CCRF recognizes that vehicle electrification is just one piece of the puzzle, alongside strategies that make it easier to walk, bike and take transit.

¹¹ <https://www.seattle.gov/documents/Departments/OSE/ClimateDocs/TE/TE%20Blueprint%20-%20March%202021.pdf>

¹² SDOT's Climate Change Response Framework describes strategies needed to reduce emissions in a way that improves safety, leads to better health outcomes, promotes a thriving local economy, and delivers climate justice.

SEATTLE'S CLEAN TRANSPORTATION ELECTRIFICATION BLUEPRINT(2021)—2030 GOALS

100 Percent of Shared Mobility Is Zero Emissions

As shared mobility services like bikes, scooters, taxis, Uber, Lyft, carshare services and others continue to expand in Seattle, the city will ensure those options will be electric and emissions free.

90 Percent of All Personal Trips Are Zero Emission

By 2030, 9 out of 10 trips must be walking, biking, electric transit or in an electric vehicle (or avoided all together). This will require transformational infrastructure investments for expanded equitable transit service, comprehensive bike lanes, ADA-compliant sidewalks, and EV charging. It will also require city actions to facilitate large-scale behavior change and policies that lead to increased density for better connected neighborhoods. Supportive State and Federal level policies, funding, and road-pricing initiatives are required to encourage mode shift, grow EV adoption, and eventually phase out internal combustion engines completely.

30 Percent of Goods Delivery Is Zero Emissions

Goods movement is a growing cause of congestion and emissions on our roads, as more and more of the goods we buy and the food we eat are purchased online. This goal is aimed to spur the transition of private fleets to EVs and support market transformation in freight and goods delivery over the next 10 years.

100 Percent of City Fleet is Fossil-Fuel Free (Executive Order 2018-02)

Continuing to lead by example, Seattle will operate a large municipal fleet with zero fossil fuels by 2030. This includes rapid fleet electrification and use of biofuels like sustainable biodiesel and renewable diesel/gasoline for any vehicles that may not have commercialized electric options by that time, such as specialized medium and heavy-duty vehicles or emergency response equipment.

One or More 'Green & Healthy Streets' in Seattle

(C40 Fossil Fuel Free Streets declaration, 2017)

Seattle is a member of C40 Cities, a global network confronting climate change, and has signed a declaration that a major area of our city will have zero emissions from transportation including streets or blocks that restrict cars and promote walking, biking, electrified transit, and electric goods delivery and services.

Electrical Infrastructure Required to Stay Ahead of TE Adoption Is Installed and Operational

Infrastructure investments will enable a rapid transition to an electrified transportation system. Seattle City Light will work strategically to make sure the grid is reliable and built out in order to enable rapid adoption of emerging electric transportation technologies and vehicles.

Urban Air Mobility

While aerial mobility may not have the same potential impacts on right-of-way (ROW) use and allocation as other forms of new and emerging mobility, it remains crucially important to monitor its impact on people and urban goods movement. Major retailers like Amazon have invested significant funding in developing air parcel delivery devices and have begun to deploy them on a limited scale in 2022 in California. Urban air mobility presents the opportunity to reduce roadway congestion and VMT. It can also improve access to goods for people living in difficult to serve or isolated communities.

Future innovations in urban air mobility are likely to include passenger transport, as numerous companies have proposed quieter electric, helicopter-like vehicles for short haul passenger movement. Private mobility providers like Uber and Blade already offer urban passenger air travel, such as a helicopter option for travel between JFK Airport and Manhattan.

SDOT's current policy focus is on ground-based zero-emission last mile delivery strategies. SDOT does not have sole authority to regulate urban air mobility (UAM), and many concerns remain unresolved by regulating agencies related to security, nuisance, safety, and privacy in regard to right-of-way, airspace regulations, and drones—small, automated vehicles that hold small parcels or cameras. Aerial passenger vehicles will be predominantly regulated by the Federal Aviation Administration and the Seattle Department of Construction and Inspections as it is unlikely that transport design will seek to use SDOT-managed right of way. This framework may resemble existing regulations around heliports. UAM for urban goods delivery will likely be focused in remote and rural areas for initial deployment.

Transportation Equity

New and emerging mobility services have great potential to improve transportation equity, especially by providing mobility services in historically underinvested and underserved communities. New and emerging mobility technology like micromobility, shared fleet vehicles, and autonomous shuttles can connect new areas of the city into the larger public transit network and expand mobility options for people who do not own a personal vehicle or would like to save on transportation costs.

SDOT has a significant role and responsibility to make sure these new services and technologies to mitigate potential harm while maximizing benefits for people in Seattle, with a focus on addressing the needs of Black, Indigenous, and People of Color (BIPOC) and vulnerable communities through inclusive planning and education. This includes using the city's right-of-way, our permitting capabilities, and other services we control to ensure



A person sitting on a shared bike wearing a helmet with a basket of fresh vegetables, Image Source: SDOT

equitable roll-out of technology and services. This will require intentionally drafted policy and close collaboration with stakeholders and community.

Embracing emerging mobility will require intentional planning and open lines of communication with all stakeholders. Our Transportation Equity Framework (TEF) serves as a roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system.

The TEF highlights opportunities for advancing equity, many of which relate to new and emerging mobility. As a foundational principle, Seattle can rely on strategies outlined in the Transportation Equity Framework (TEF) to ensure that new and emerging mobility is serving people and aligns with city goals.

New and emerging mobility technologies can be especially challenging with transportation equity because they are usually owned and operated by private companies, and we are limited in how we can influence crucial aspects like deployment locations, payment options, and cost.

If decisions are driven solely by market forces, without effective policies and management, new and emerging mobility has the potential to exacerbate existing problems.

SPATIAL REQUIREMENTS AND OPERATIONAL CONSIDERATIONS

As we continue to adapt our street design to meet the changing needs of our community, we must also stay ahead of the constantly evolving mobility technologies and devices. We need to anticipate the requirements of shared, electrified, autonomous, and other innovative mobility options and evaluate the suitability of transportation modes in specific areas due to limited space. To ensure safe transportation, we should consider the "physics of mobility," such as direction, speed, and mass, when allocating lanes and sidewalks. These fundamental movement properties will help transportation modes operate safely and harmoniously, regardless of the mode typography. If a particular mode or technology is deemed unsuitable for a specific street or area, we can redirect it to alternative routes with similar movement characteristics on parallel streets to optimize mobility and safety. We will seek to develop and install infrastructure and maintain policies that are flexible and dynamic. Infrastructure considerations should include:

- Community and mobility hubs designed to accommodate and integrate new technologies (see the **STP Transit Element** for more information on community and mobility hubs)
- Bike lanes designed with large enough widths to accommodate commercial or private cargo bikes, e-scooters, and other active mobility devices (see the **STP Bicycle and E-Mobility Element** for more information)
- Slow lanes that allow human-powered or small motorized devices like bikes, scooters, e-bikes, PDDs, and more to travel in safe, dedicated right-of-way that is separated from larger and potentially more dangerous personal vehicles, transit, and freight (Supports TEF 19.2)

- Curb spaces designed and managed for loading and unloading of passengers and cargo by new and emerging urban goods delivery methods
- Parking areas for small devices such as personal and cargo delivery bikes, scooters, and PDDs
- Autonomous vehicle (AV) and TNC pickup and drop zones within digitized (with automated, real-time information) priority zones (i.e., near-transit hub) and parallel path drop zones
- Electric charging infrastructure for vehicles and mobility devices of all sizes, as well as other potential charging uses that create equity benefits such as allowing cell phone charging or internet access, where possible and needed (Supports TEF 36.2)

PROGRAMMATIC ACTIVITIES

SDOT engages in a variety of programmatic activities (that is, activities that relate to programs or are ongoing, rather than specific to a project) to complete the work outlined in this Element. This section highlights existing and new programs or initiatives. Over time, it's not uncommon for program groupings and organization to change. However, the program activities listed here provide helpful general information to describe the types of tools and methods SDOT will employ to manage the transportation system.

Affordable Shared Micromobility and Transit Integration

- Nurture the long-term sustainability of affordable integration of shared micromobility into multimodal transit trips at a cost proportional to the service's share of the total journey by actively allocating resources for programming through subsidies and funding of program management
- Collaborate with private sector mobility providers to establish economically viable subsidy programs (Supports TEF 35.2)
- Support the development of mobility hubs near high-traffic and transit-connected areas, with secure parking for micromobility, charging stations, and transit information, while considering the daylighting of intersections or placing hubs at high-risk intersections to reduce pedestrian and car conflict and maintaining clear sidewalks for those walking and rolling
- Continue collaborating with transit agencies in incentivizing and promoting 1st/last mile connection to transit
- Collaborating with vendors to support on-demand last-mile deliveries



Shared mobility devices parked near a bus stop, Image Source: SDOT

Permitting and Partnership

- Work with permitted vendors to improve equitable access, safety, and integration into the transit system

Subsidy Programs

- Develop subsidy programs or forge partnerships with private sector mobility providers to seamlessly integrate shared electric micromobility services into multimodal, transit trips at a cost proportionate to the share of the total trip, fostering accessibility and affordability (Supports TEF 35.2)

Community Outreach, Engagement and Education

- Build community feedback into permitting, regulations, guidance, partnerships, and solicitations for consultant services to reduce barriers to mobility access for those who need it most
- Increase engagement and education programs to familiarize people throughout the city with new and emerging mobility modes
- Set guidance and requirements for community engagement and education through partnerships with private companies and community groups. Employ best practices so that equity is integrated and considered in process and outcomes (Supports TEF 52.1)

Technology Integration for Trip Planning and Payment

- Continue to work with other regional mobility providers to ensure accessible and streamlined trip planning and fare payment systems
- Work with partners towards a Universal Basic Mobility solution
- Provide access to new and emerging mobility options through low and no cost programs, analog access for those with limited or no data or smart phone use, and cultural and multilingual options, etc.

Data Management

- Continue to modify how data is being collected, used, managed, and stored in alignment with the department's efforts to enable a more collaborative and inclusive data environment
- Develop and maintain up-to-date digital inventories of physical assets like curb space, load zones, bike and scooter parking locations, and traffic regulations that are compliant with uniform API standards like the Mobility Data Specification (MDS), Curb Data Specifications (CDS)
- , and the General Bikeshare Feed Specification (GBFS) Explore the utilization of Mobility Data Specifications (MDS) and real-time data to enhance the safety and efficiency of automated and shared mobility fleets, particularly in emergencies or construction zones

- Continue City participation in the Open Mobility Foundation (OMF) to ensure that data policies remain proactive and nimble in the face of constant change

Vehicle Electrification

- Maintain cross-department collaboration with the Office of Planning and Community Development, the Office of Sustainability and the Environment, and Seattle City Light to coordinate land use and transportation policy and programs that supports the shift to electric vehicles
- Support the goal to transition TNC and carshare in Seattle to zero-emission by 2030

Automation

- Coordinate with regional partners in implementing appropriate recommended strategies and actions from Seattle and Bellevue's joint report: [A Strategic Vision for Automated Vehicles](#)
- Conduct a community-inclusive planning process to inform an approach to inform a federal, state, and local partners study, test, and piloting of automated technology in various modes.
- Research and develop policies that address the trend of continued evolution toward connected and autonomous vehicles (CAV), recognizing that CAVs have the potential to reduce crashes and provide some throughput benefits, which could lead to further lane reallocations.

Urban Air Mobility (UAM)

- Evaluate existing programs in other cities to understand program parameters, regulations, and equity considerations.
- Proactively consider policies for aerial mobility management that considers permitted use areas, allowable takeoff and landing sites, and traffic management at landing sites.

Pilot Management

- Oversee the procurement, launch, performance, and analysis of pilot programs for new and emerging mobility technology.
- Manage pilot data and ensure pilot performance aligns with city goals to reduce drive-alone mode share and improving mobility options, especially in underserved communities.



DEFINING SUCCESS

To track progress toward the STP goals, it is important to define what success looks like and how we'll measure it. This section defines the performance measures that have been identified as important indicators of our progress, as well as relevant Transportation Equity Framework (TEF) tactics that this Element supports. Performance measurement is how SDOT is held accountable and provides transparency for community members and decision makers to understand the impacts of the plan as it is implemented over time.

MEASURABLE OUTCOMES

This section outlines desired outcomes and recommended performance measures to monitor the implementation of the STP New and Emerging Mobility Element. They are part of a 3-tiered system of measures that includes:

- **Tier 1:** Overarching, and sometimes aspirational, outcome-based measures are identified in the STP implementation strategy (see Part I document). Generally, they are tracked at a citywide scale, and SDOT may not have primary control over their achievement. Examples include a reduction in vehicle-miles traveled and the percentage of household income dedicated to transportation.
- **Tier 2:** These measures are tracked in individual elements, as they are not as overarching as the measures in Tier 1. Typically measures in Tier 2 are a combination of outcome and output measures over which SDOT has a relatively large degree of control. These measures help SDOT track progress towards our Tier 1 goals. Examples include the percentage of fleet vehicles that have zero emissions and eliminating fatal and serious injury crashes involving NEM devices.
- **Tier 3:** Measures in the Tier 3 category are typically tracked by individual programs. SDOT has a high degree of control over these measures. They are used to track productivity and to help allocate resources. Examples may include the number of publicly available EV charging stations.

While all metrics in the table below will be tracked at a citywide scale, it will be important to track several metrics by demographics and/or geography so that SDOT can pivot as needed to meet our equity goals over the next 20 years. The table indicates which metrics will be tracked using the city's Race and Social Equity Index (RSEI) and/or race. RSEI combines information on race, ethnicity, and related demographics with data on socioeconomic and health disadvantages to identify census tracts where priority populations make up relatively large proportions of neighborhood residents.

The ability to successfully track performance measures is dependent on city staff capacity to collect and analyze data, the availability of relevant data, and/or the availability of resources to acquire data.

Table 2 includes the Tier 2 performance measures that will be tracked for the NEM Element.

Table 2. New and Emerging Mobility Performance Measures

Desired Outcome	Performance Measure (source)	Baseline	Target or Desired Trend	Track measure by RSEI and/or race	Related STP Goal
End traffic deaths and serious injuries on city streets	Number of fatal and serious injury crashes involving NEM devices (SPD collision report data)	1 (2022)	Zero	Yes	Safety Equity Sustainability Livability
Decrease the carbon footprint of in-City package delivery	Percent of fleet vehicles that are zero emissions (TBD) ¹³	TBD	30% of goods delivery is zero emissions by 2030	No	Equity Sustainability Mobility & Economic Vitality Livability
Increase walking, rolling, biking, and transit mode share	Increase percent of bicycle and micromobility trips (SDOT)	3 % (2019)	8% by 2044	Yes	Safety Equity Sustainability Mobility & Economic Vitality Livability
Achieve the transition to electric vehicles	Percent of City fleet that is zero emissions (City of Seattle)	12.5% Zero Emissions (2023)	100% of City fleet is zero emissions by 2030	No	Equity Sustainability
Support the transition to electric vehicles	Percent of shared mobility that is zero emissions (SDOT)	All: 25% Micromobility: 100% Vehicles: 8% (2023)	100% of shared mobility is zero emissions by 2030	No	Equity Sustainability

¹³ Seattle DOT working to identify an appropriate dataset to calculate this baseline.

RELEVANT TEF TACTICS

- TEF 19.2—Identify opportunities to repurpose some travel lanes for transit, biking, and smaller, lighter-weight vehicles and devices to create more travel options with the Seattle Transportation Plan approach, focusing on starting with the community's perspectives and needs
- TEF 22.1—Analyze how movement of goods was impacted during COVID and whether there are specific ways we can maintain any benefits that were seen
- TEF 31.1—Data storytelling on the comparative costs of cars, electric cars, other mobility options and transportation burdens and privileges; connecting this back with our climate, equity and safety goals and investment
- TEF 33.2—Consider partnership opportunities with transportation network companies (TNCs) in providing transportation options for communities such as night-shift workers, university/college students and people living with disabilities
- TEF 35.1—Invest in connections to transit that serve specific neighborhoods and/or target populations, both new and existing through grant opportunities
- TEF 35.2—Assess first-/last-mile connections as part of the transit system; this is part of access to transit and its costs should not be measured separately; it should be a part of the package for any transit access improvement
- TEF 36.2—Support transition to electric vehicles for all segments of transportation including personal mobility, goods movement, and services through targeted, equitable incentives and policy design. Implement related actions in the Transportation Electrification Blueprint
- TEF 37.4—Identify and allocate funds to new or existing programs to address pedestrian safety concerns that are reflected from community data collection
- TEF 43.4—Review SDOT policies, practices, standards, and funding allocation strategies to elevate/give priority to access and use of right-of-way (ROW) for people of all ages and abilities - people recreating, shopping, walking, rolling, riding bikes and transit
- TEF 45.3—Identify spaces for equitable investment that can activate community, foster local economic development, and facilitate connections to transit
- TEF 52.1—Create and implement a community-centered engagement approach for the development of the citywide integrated modal plan; rather than a top-down approach, focusing on starting with the community's perspectives and need

GLOSSARY

ADA: Americans with Disabilities Act

Adaptive bikes: Bicycles that are designed for people with disabilities or who cannot ride a traditional two-wheeled bicycle. Examples include trikes and hand cycles.

AV: Autonomous vehicles

Bicycle and Pedestrian Safety Analysis (BPSA): A data-driven study conducted by SDOT to understand where, how, and why pedestrian and bicycle crashes happen. The study used data of where crashes happened and pedestrian, cyclist, and vehicle volumes. The results are used to identify locations and prioritize safety investments with the goal of preventing future crashes.

BIPOC: BIPOC stands for Black, Indigenous, and all People of Color (BIPOC). It is a term to make visible the unique and specific experiences of racism and resilience that the Black/African Diaspora and Indigenous communities have faced in the structure of race within the United States. BIPOC is a term that both honors all people of color and creates opportunity to lift up the voices of those communities.

Bioswale: Vegetated ditches that capture and filter stormwater runoff.

C40: A global network of 96 cities working toward mitigating climate change and limiting global temperature rise by 1.5 degrees Celsius. As a member city, Seattle has committed to creating a low-emission neighborhood and making its bus fleet entirely emission-free by 2030.

C40 Green and Healthy Streets Accelerator: An initiative by C40 in partnership with mayors of signatory cities to transform cities into greener, healthier, and more prosperous places to live. To achieve this, signatory cities commit to work with partners to procure zero-emission buses from 2025 onward; and to ensure a major area of the city is zero-emission by 2030. The City of Seattle committed to the actions of the initiative in 2017.

C40 Zero Emission Freight Project: A collaboration between C40 cities to accelerate the adoption of zero-emission vehicles and goods delivery.

Café Streets: Streets with high levels of foot traffic and lots of restaurants, cafes, shops, bars, markets, museums, and/or tourist destinations. Vehicles are still permitted to use the street for local access, goods loading, business access, and emergency access, although the street is designed to keep speeds low and to give priority to pedestrians. They are a type of Shared Street.

Cellular vehicle-to-everything (C-V2X): Technology that enables vehicles to wirelessly connect and interact with their surroundings, such as other vehicles and 5G service. C-V2X has the potential to make travel safer by reducing crashes and conflicts between road users.

Climate Change Response Framework (CCRF): Released in 2023, the CCRF is SDOT's approach toward addressing climate change through a lens of reducing emissions from vehicle tailpipes. The CCRF primarily focuses on strategies that make it easier to walk, roll, bike and take transit, while also acknowledging the need to electrify personal and commercial vehicle trips at scale.

Community and Mobility Hubs: Community and mobility hubs are places of connection that bring together transportation options, community spaces, and travel information into a seamless, understandable, and on-demand travel experience. They are located with major transit facilities and places and may feature People Streets and Public Spaces (PSPS) elements.

Connected and autonomous vehicles (CAVs): Vehicles that can communicate with other vehicles (connected) and can drive without a human operator (autonomous).

Curb bulbs: Extensions of the sidewalk into the street that give pedestrians a shorter distance to cross.

Deployment: The launch of a new service, system, or technology.

Digital infrastructure: Technology and data that makes the foundation of transportation systems. For example, the software system for Metro Flex, or the programming for streetlights.

E-cargo bikes: Human-driven bikes with battery-powered pedal assist that can transport packages or other small goods in a front-mounted wagon or rear-hitched trailer.

E-commerce: The buying and selling of items via mobile apps and desktop computers. E-commerce businesses generally do not have a traditional storefront or walk-in business model, and goods are delivered to homes or businesses. Examples include Amazon or eBay

EV: Electric vehicles

First-/last-mile: The distance traveled at the beginning or end of a trip from transit to a final destination.

Fixed-route transit service: Traditional transit services like buses, light rail, and streetcars, which follow fixed paths with designated stops and schedules.

GHG: Greenhouse gas emissions.

Innovation: New ways of solving problems, often with new technology or programs that are creative and different than traditional practice.

Integration: In the context of new and emerging mobility, integration means the ability to plan, book, and pay for a trip across multiple platforms or modes without having to access different maps, schedules, or payment sites

Key moves: A series of strategies across the 6 STP core values that explain how the goals of the STP can be achieved. The Key Moves represent an integrated view of our complex transportation system, touching multiple elements.

Leading pedestrian intervals (LPIs): Walk signals at intersections that give pedestrians an additional 3-7 seconds to cross the street before vehicles.

Mobility: The ability to move around freely, enabled by a variety of vehicles or modes (bus, train, car, bike, etc.)

Multimodal: Using multiple modes or methods of travel. For example, a trip that includes a bike ride to a ferry to a bus, is a multi-modal trip.

Neighborhood Greenways: Neighborhood Greenways are safer, calmer neighborhood streets where people walking and biking are the priority. These streets work together with trails and protected bike lanes to provide connected routes to bring people to the places they want and need to go as part of Seattle's all ages and abilities bicycle network.

New mobility: New forms of transportation that use technology to improve efficiency, access, and experience. Examples of new mobility include shared bikes and scooters, rideshare apps like Uber and Lyft, and microtransit.

New Mobility Playbook: A plan adopted by SDOT in 2017 that provides policies and strategies for the City to adopt new transportation technologies and forms of mobility while prioritizing safety, equity, affordability, and sustainability.

On-demand: Services that respond to real-time requests, usually via mobile phone apps. Examples include Uber, Lyft, King County Metro's Metro Flex on-demand transit service, and others

Open Mobility Foundation (OMF) mobility data specification (MDS): The Open Mobility Foundation (OMF) is an open-source foundation that creates a governance structure around open-source mobility tools, beginning with a focus on the Mobility Data Specification (MDS). The MDS standardizes communication and data-sharing between cities and private mobility providers, such as e-scooter and bike share companies. It is intended to help better manage transportation in the public right of way.

OSE: Office of Sustainability and Environment

Permitting: A common process required for private companies to do business in public spaces, usually through established regulations, rules, requirements, reporting, and fees.

Personal delivery devices (PDDs): Small automated or remotely piloted robots designed for short deliveries carrying food, packages, or other goods.

Racial Equity Toolkit (RET): The Racial Equity Toolkit lays out a process and a set of questions to guide the development, implementation and evaluation of policies, initiatives, programs, and budget issues to address the impacts on racial equity.

Refuge islands: A paved median that protects pedestrians crossing a multi-lane street by providing a safe place to stop.

Right-of-way (ROW): A strip of land legally established for the primary purpose of public travel by pedestrians and vehicles. This is the land that is used for transportation, including roads, curbs, and sidewalks.

Road diet: Physical changes to the right-of-way that decrease vehicle volumes and speeds and reallocate space toward non-motorized modes, such as walking and biking. Examples include curb bump-outs, pedestrian refuge islands, narrowed lanes, street cafes, and street trees and landscaping.

Rolling: A form of travel that includes low-speed, wheeled mobility devices that use the pedestrian network. Examples include wheelchairs and strollers.

Safe System Approach: A framework for transportation planning to move toward a transportation network that is safe for everyone. The approach differs from traditional approaches to traffic safety by recognizing that humans will make mistakes and layers of protection must be built elsewhere into the system to address that. The approach is based on 6 principles:

- Death and serious injuries are unacceptable
- Humans make mistakes
- Humans are vulnerable
- Responsibility is shared
- Safety is proactive
- Redundancy is crucial

Goals are to create safer vehicles, speeds, roads, and people and provide post-crash care.

SCL: Seattle City Light

SDOT: Seattle Department of Transportation

Shared micromobility: Shared bikes and scooters that offer low-cost options for a short distance trip. Riders locate and rent available devices with their phone, ride it where they want to go, and leave it responsibly parked for the next person.

STP: Seattle Transportation Plan

Streets Illustrated: Seattle’s Right-of-Way Improvements Manual; an online resource for property owners, developers, and architects involved with the design, permitting, and construction in the street right-of-way.

Transportation Electrification Blueprint: Adopted in 2021, the Transportation Electrification Blueprint is a framework for Seattle to reduce its transportation-related greenhouse gas emissions, with a primary focus on electrification of personal trips, shared mobility, goods delivery, travel by the city fleet, and the installation of electrical charging infrastructure.

Transportation Equity Framework (TEF): A roadmap for SDOT decision-makers, employees, stakeholders, partners, and the greater community to collaboratively create an equitable transportation system. The TEF addresses the disparities that exist within the transportation system due to institutional racism.

TNC: Transportation network company (e.g., Uber and Lyft)

Urban air mobility (UAM): Small, electric-powered, automated aircraft that are used to transport people or goods over short distances in cities.

Vision Zero: The City’s goal to eliminate traffic deaths and serious injuries on city streets by 2030.

VMT: Vehicle-miles traveled

Vulnerable communities: Communities that have historically and currently been erased, intentionally excluded, and/or underinvested in by government institutions. SDOT’s Transportation Equity Program and Transportation Equity Workgroup include:

- BIPOC communities
- Low-income communities
- Immigrant and refugee populations
- Native communities
- People living with disabilities
- LGBTQIA+ people
- People experiencing homelessness or housing insecurity
- Women and female-identifying populations
- Youth
- Aging adults
- Individuals who were formerly incarcerated
- Displaced and/or high-risk displacement neighborhoods

The Seattle Department of Transportation
700 5th Avenue, Suite 3800
PO Box 34996
Seattle, WA 98124-4996
(206) 684-ROAD (7623)
www.seattle.gov/transportation



Seattle
Department of
Transportation