2023 Regional Transportation Plan

Chapter 8

Moving Forward Together

2023 Regional Transportation Plan

July 10,2023 Public Review Draft

Metro

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8.0 PURPOSE

Learn more about the 2023 Regional Transportation Plan at **oregonmetro.gov/rtp**

Metro is the metropolitan planning organization (MPO) designated by Congress and the State of Oregon, for the Oregon portion of the Portland-Vancouver urbanized area, serving 1.7 million people living in the region's 24 cities and three counties. As the MPO, Metro formally updates the Regional Transportation Plan every five years in cooperation and coordination with the Oregon Department of Transportation and the region's cities, counties and transit agencies.

The Regional Transportation Plan is a blueprint that guides investments for all forms of travel throughout greater Portland – driving, taking transit, biking and walking – and the movement of goods and services. The plan identifies current and future transportation needs, investments needed to meet those needs, and what funds the region expects to have available over the next 22 years to make those investments a reality.

Updates to the plan and subsequent implementation must meet federal requirements and state policies and regulations contained in Oregon's Transportation Planning Rule (which implements Statewide Planning Goal 12), and Oregon's Metropolitan Greenhouse Gas Emissions Reduction Targets Rule. The plan also implements regional policies contained in Metro's Regional Framework Plan. In combination, these requirements call for development of a multimodal transportation system plan that is integrated with and supports implementation of adopted local and regional land use plans including the 2040 Growth Concept and Climate Smart Strategy.

Chapter organization

This chapter summarizes future work to implement the RTP, consistent with federal, state and regional requirements. The chapter is organized as follows:

8.1 **Introduction:** This section summarizes the purpose and content of the chapter.

8.2 **Planning and programs:** This section summarizes local, regional and state planning and programs that advance implementation of the plan.

8.3 **Projects:** This section summarizes major project development activities in the region and the allocation of federal transportation funds to implement projects in the RTP.

8.4 **Data and tools:** This section summarizes data and research activities to address existing and emerging planning and policy priorities and innovative practices in

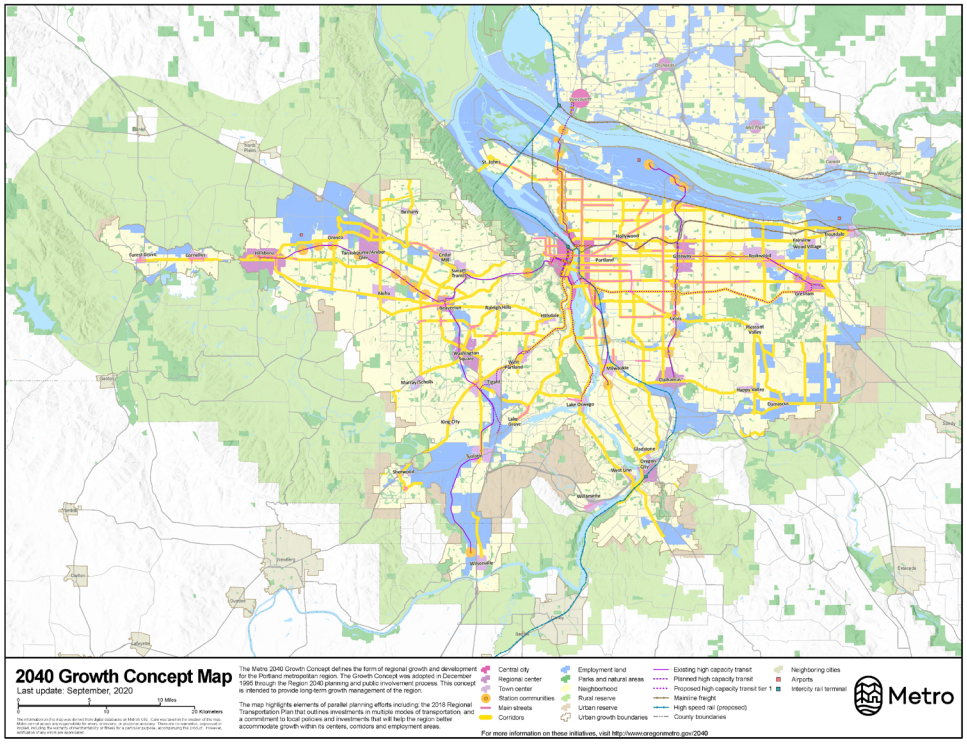
transportation planning and analysis and ensure that the region has the resources to fulfill its transportation performance measurement and reporting responsibilities.

8.1 INTRODUCTION

Connecting Our Shared Values and Vision for the Future: Setting a Course for Transportation

Metro worked with federal, state and local government partners, federally-recognized Tribal governments as well as community members, community-based organizations, and businesses to develop the 2023 Regional Transportation Plan. The result of that work is a set of regionally identified goals and policies that guide our transportation planning and investment decisions overall, strategies to help meet those goals and policies, a shared understanding about existing financial resources, and a recommended set of projects that make progress addressing the region's significant and growing transportation needs and challenges. The goals, policies, projects and strategies in this plan also address federal, state and regional planning requirements based on our shared values and the outcomes we are trying to achieve as a region, including implementation of the 2040 Growth Concept.

Figure 8.1 2040 Growth Concept (2020)

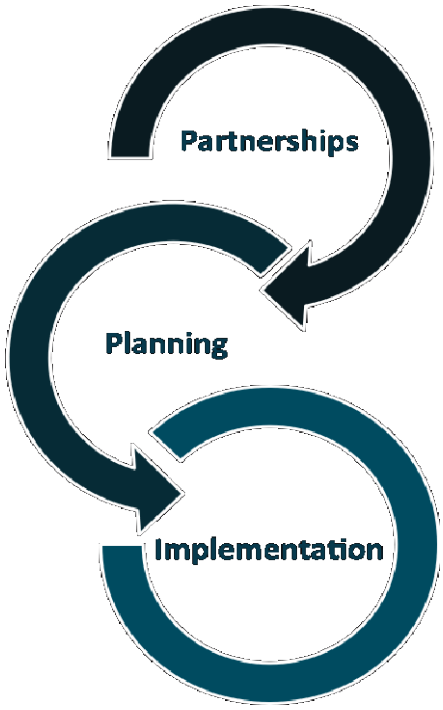


The 2023 Regional Transportation Plan is a key tool for implementing the 2040 Growth Concept and the Climate Smart Strategy– our region's foundation for climate action.

The plan sets an updated course for future transportation planning and investment decisions and continued implementation of the 2040 Growth Concept – the region's adopted land use and transportation strategy for managing growth and building climate-friendly and equitable communities and a strong economy.

Dramatic changes have unfolded since the RTP was last updated five years ago, many documented in the Emerging Transportation Trends Study[1]. As greater Portland continues to emerge from the disruptions of the pandemic and respond to other urgent trends and challenges, this update provides an opportunity for all levels of government to work together to deliver a better transportation future.

The plan takes into account the changing circumstances and challenges facing our growing region and addresses them directly, adopting new approaches for addressing mobility and prioritizing investments to advance transportation equity, climate, safety, mobility and economic goals. Central to this plan are innovative approaches to connect community land use aspirations and transportation investments and use of regional mobility corridor strategies to comprehensively address our growing transportation needs while protecting public and environmental health. Each mobility corridor strategy is uniquely tailored by optimizing operations on existing throughways, and arterial streets that also serve as transit and freight routes, completing gaps in biking and waking connections and strategically expanding the transit and roadway system.



The plan will be implemented through a variety of policies, projects, strategies and actions at the local, regional, state and

This RTP incorporates a new regional mobility policy focused on the policy outcomes of equity, options, safety, reliability, efficiency and access. It includes performance targets focused on reducing vehicle miles traveled per capita, building a complete and interconnected system, and reliability of throughways using travel speed.

Through its policies, projects and strategies, the RTP aims to attract jobs and diverse housing to our region's downtown centers, main streets and employment areas. It seeks

[1] https://www.oregonmetro.gov/public-projects/2023-regional-transportation-plan/research

to increase the use of public transit, bicycling and walking, and reduce the amount of miles that our region's residents, employers and visitors need to drive in order to get around. It also seeks to increase the safety, reliability and efficiency of the roadway and transit systems for all travelers. When we measure our performance, we find we have some successes, but overall the RTP falls short of meeting several performance targets set forth in Chapter 7.

To make more progress toward the goals and objectives of the plan, the region must take additional steps together and individually to address a wide range of planning, programmatic and project activities that will make it easier to implement adopted policies, projects and strategies. This chapter outlines those activities.

The plan will be implemented through a variety of strategies and actions at the local, regional, state and federal levels. The various jurisdictions in the region are expected to pursue policies, projects and strategies that contribute to meeting the agreed upon goals, objectives and policies of this RTP.

Implementation of this plan will require a cooperative effort by all jurisdictions responsible for transportation planning in the region, and will involve:

- Adoption of regional policies and strategies in local plans, including functional classifications for all modes and land use and transportation needs and agreed upon solutions identified in each mobility corridor strategy.
- A concerted regional effort to secure needed funding to build planned transportation investments needed to serve our growing and changing region.
- Focusing investments and system management strategies to support implementation of the 2040 Growth Concept and preserve the function of the region's mobility corridors in order to ensure that our land use and transportation policies are mutually supportive and make it easier for people to live and move around our region.
- Ongoing monitoring for consistency of changes to local transportation system plans (TSPs) and local Comprehensive Plans and land use designations with the RTP and other agency plans, including the Oregon Department of Transportation's new Oregon Transportation Plan, planned update to the Oregon Highway Plan and four-year State Transportation Improvement Program (STIP), the Oregon Department of Land Conservation and Development's Transportation Planning Rule (TPR), the Oregon Metropolitan Greenhouse Gas Emissions Reduction Rule, the Climate-Friendly and Equity Communities (CFEC) Program and TriMet's Transit Implementation Plan (TIP).

The Regional Transportation Plan is a living document and will continue to evolve and be updated on a regular basis to address existing and emerging issues. Metro will continue to

engage and collaborate with regional partners and stakeholders on all topics and provide support to ensure successful implementation of this plan.

8.2 PLANNING AND PROGRAMS

This section summarizes local, regional and state planning and programs that advance implementation of the plan and 2040 Growth Concept.

8.2.1 Local Implementation

Local planning efforts which help implement the Regional Transportation Plan, include updates to the local transportation system plans, concept plans for designated urban reserves and topical, modal or subarea plans needed for consistency with the RTP or to address specific local or subarea transportation needs or emerging issues.

Local plans and projects are developed and updated to meet local transportation needs consistent with local land use plans and to implement the RTP and Regional Transportation Functional Plan (RTFP) as well as local needs and priorities. The RTFP directs how city and county plans will implement the RTP through their respective comprehensive plans, local transportation system plans (TSPs) and land use regulations. All of the actions included in the RTFP will help the region proactively address climate change, improve access and mobility and support other desired outcomes.

The TPR includes provisions for local TSPs to be updated within one year of adoption of the updated RTP, but allows for the RTP to determine a schedule for local plan compliance. A schedule for local transportation system plan updates is available at www.oregonmetro.gov/tsp. The local plan updates are phased appropriately to support local desires for completing plan updates in a timely manner, in coordination with other planning efforts and to take advantage of state and regional funding opportunities. ODOT will be funding TSP updates around the region to implement the Climate Friendly and Equitable Communities Rule (CFEC).

In addition, the Portland metropolitan region has emerging communities- areas that have been brought into the urban growth boundary since 1998, that have 2040 land use designations, and that lack adequate transportation and transit infrastructure and financing mechanisms. Additional work is needed to define the needs of emerging communities and strategies needed to facilitate development in these areas, consistent with the 2040 Growth Concept.

8.2.2 Metro's Regional Programs

Metro is responsible for several on-going regional programs that provide a combination of grants, technical assistance and planning to support local jurisdictions in implementing the 2040 Growth Concept and RTP. Modal experts provide expertise and support on freight, bicycle, pedestrian, motor vehicle, transit, Intelligent Transportation Systems

(ITS) and operations planning, and topic experts provide support on climate change, equity, safety, street design, safe routes to school, resilience, transportation funding, brownfields, equitable housing and transit-oriented development. Metro's Regional Flexible Funds provide programmatic funding to help support that technical assistance, and capital funds to support implementation. The region's 2040 Grant Program supports planning processes to align land use and transportation goals, and the Equitable Housing grant program specifically focuses on supporting planning efforts to increase access to affordable housing across the region.

Regional programs identified in the Unified Planning Work Program, adopted annually by the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council, are described below.

8.2.2.1 Civil Rights and Environmental Justice program

Metro's transportation planning policies and programs ensure compliance with Title VI of the 1964 Civil Rights Act; the Executive Order on Environmental Justice; Section 504 of the 1973 Rehabilitation Act and Title II of the 1990 Americans with Disabilities Act; Goal 1 of Oregon's Statewide Planning Goals and Guidelines; and Metro's organizational values of Respect and Public Service. The program is advancing methods on identifying potentially affected populations, engaging those populations in the development of policy and program decisions, and analyzing the effects of policies and programs for historically marginalized communities.

Metro's work to ensure compliance includes implementing outreach strategies that help marginalized populations overcome barriers to participation; demographic data collection and mapping; assessing outcomes of plans and programs on historically marginalized communities; and trainings provided to staff on Title VI compliance requirements and environmental outreach best practices.

Program work on compliance is found across many areas of transportation planning: developing the Regional Transportation Plan (RTP), the Metropolitan Transportation Improvement Program (MTIP), corridor planning projects that follow NEPA regulations and in the Regional Travel Options program, which conducts federally-funded outreach that promotes non-automobile transportation options. In 2012, Metro created a new public engagement review process designed to ensure that Metro's public involvement is effective, reaches diverse audiences and harnesses emerging best practices. One of the three criteria for selection of members of the Public Engagement Review Committee, an advisory committee to the Metro Council, is ability to represent diverse communities in the region. Other components of the public engagement review process that will contribute to more inclusive engagement and accountability include an annual public survey, meetings of public involvement staff from around the region to address best

practices, an annual community summit to gather input on priorities and engagement techniques, and an annual report.

Metro addresses compliance agency-wide as well as within transportation planning functions and program-by-program. A key way that Metro complies across the agency is with implementation of its Diversity Action Plan, updated and adopted by the Metro Council in May 2017. The plan identifies goals, strategies and actions to increase diversity and cultural competence at Metro in four key areas: internal awareness and diversity sensitivity, employee recruitment and retention, committee membership and public involvement, and procurement. Metro's Strategic Plan to Advance Racial Equity, Diversity and Inclusion was adopted by the Metro Council in June 2016 and identifies goals and actions under five goals: Metro convenes and supports regional partners to advance racial equity; Metro meaningfully engages communities of color; Metro hires, trains and promotes a racially diverse workforce; Metro creates safe and welcoming services, programs and destinations; and Metro's resource allocation advances racial equity. Through the 2017-18 fiscal year, four departments are developing racial equity plans to reach the goals of the racial equity strategy: Planning and Development, Parks and Nature, Property and Environmental Services and the Oregon Zoo.

8.2.2.2 Regional Safe Streets for All Program

Metro's regional Safe Streets for All program activities support advancing the Safe System approach to achieve regional safety goals, policies and targets, including zero serious crashes by 2035. Program activities are consistent with strategies and actions in the 2018 Regional Transportation Safety Strategy, the Regional Safe Routes to School Program, and local and state safety plans. Following adoption of the 2023 RTP, Metro will coordinate with regional partners and communities to implement the regional Safe Streets for All Federal grant. The grant supports development of the regional safety program and local Transportation Safety Action Plans. Efforts will focus on managing speeds for safety, increasing pedestrian safety, and eliminating disparities for Black, Hispanic, Native American, people with low income, and other populations disproportionately impacted by serious traffic crashes.

Program activities include periodic updates on the state of safety to the Metro Council, Metro technical and policy advisory committees and other interested parties; technical assistance and coordination with local, regional, state, and federal partners in planning and project development; support for the development and updates to local and regional safety plans and policies; updates to safety data and analysis; updates to safety plans and policies; safety data collection, maintenance, analysis and interpretation; encouraging best practices in transportation safety and roadway design with funding and programmatic support identifying legislative priorities, and collaborating on efforts to

highlight safety in materials, messaging and campaigns. The program will be closely coordinated with other regional transportation programs and region-wide planning activities.

8.2.2.3 Regional Active Transportation Program

The Regional Active Transportation Program manages updates to and implementation of pedestrian, bicycle and access to transit in the Regional Transportation Plan (RTP) and the Regional Active Transportation Plan. The program provides guidance to jurisdictions in planning for safe, efficient and comfortable active transportation access and mobility on the regional transportation system (including regional trails and multi-use paths). The program is closely coordinated with other regional transportation programs and region-wide planning activities, and with Metro's Parks and Nature Department. Additionally, the program supports coordination with local, regional, state, and federal plans to ensure consistency in approach to active travel needs and issues across the region. The program ensures that prioritized regional bicycle and pedestrian projects are competitively considered within federal, state, and regional funding programs. Ongoing data collection, analysis, education, and stakeholder coordination are also key elements of Metro's active transportation program.

8.2.2.4 Regional Freight Program

The Regional Freight Program manages updates to and implementation of multimodal freight elements in the Regional Transportation Plan (RTP) and supporting Regional Freight Strategy. The program provides guidance to jurisdictions in planning for freight movement on the regional transportation system. The program supports coordination with local, regional, state, and federal plans to ensure consistency in approach to freight-related needs and issues across the region. Metro's coordination activities include ongoing participation in the Oregon Freight Advisory Committee (OFAC), and Portland Freight Committee (PFC). The program ensures that prioritized freight projects are competitively considered within federal, state, and regional funding programs. Ongoing freight data collection, analysis, education, and stakeholder coordination are also key elements of Metro's freight program. The program is closely coordinated with other regional transportation programs and region-wide planning activities.

8.2.2.5 Regional Transit Program

The Regional Transit Program conducts long-range transit planning for the Portland Metro region, managing updates to and implementation of the transit elements in the Regional Transportation Plan (RTP) and supporting Regional Transit Strategy and its components like the High-Capacity Transit Strategy. Together, these provide the roadmap for making transit investments over time in collaboration with our transit providers and

local government partners in the region and ensure that prioritized transit projects are competitively considered within federal, state, and regional funding programs. The Regional Transit Strategy will need to be amended to reflect the High Capacity Transit Strategy adopted in 2023 and the Connecting First and Last Mile Study anticipated to be complete in 2025 (see 8.2.3.3 below).

Program work includes ongoing coordination with transit providers, cities and counties to ensure implementation of these strategies through plans and capital projects, periodic support for major transit planning activities in the region and coordination with state transit planning officials. Ongoing data collection, analysis, education, and stakeholder coordination are also key elements of Metro's transit program. The program is closely coordinated with other regional transportation programs and region-wide planning activities.

Additionally, Metro and TriMet will be developing a Bus Rapid Transit (BRT) Strategic Plan as part of regional transit planning efforts. The Plan will further advance work in the High-Capacity Transit Plan and will outline a vision for how Frequent Express (FX) investments can enhance existing and future frequent bus service corridors to serve our region's goals. It will identify a network of BRT routes, prioritize routes for implementation, and identify potential regional funding strategies.

8.2.2.6 Transportation System Management and Operations (TSMO) Program

With the intent of supporting broad Transportation System Management and Operations (TSMO) investment and activity in the greater Portland metropolitan region, the TSMO program encompasses regional strategy development, implementation, grant management, project management and system performance monitoring (includes support to the region's Congestion Management Process). The program facilitates a variety of approaches to reliable, equitable, accessible, safe transportation related to TSMO. These include intelligent transportation systems (ITS), Mobility on Demand (MOD) and related mobility, freight technologies and operations.

The program maintains and periodically updates the regional TSMO Strategy. Strategy updates incorporate RTP policy and develops actions and work plans for implementation. Implementation involves convening operations leaders, engineers and technical experts to share procedures and protocols such as the regional Intelligent Transportation System (ITS) Architecture. ITS Architecture is needed to comply with the FHWA rule for federally funded transportation projects and their compliance with the National ITS Architecture. The program also guides implementation of the region's ITS data communications assets and networks, representing coordination of shared digital infrastructure. The regional role for program implementation supports opportunities for inclusion, research, education, and training on TSMO.

The program manages the sub-allocation of 2021-24 and 2025-27 Regional Flexible Funding for TSMO. These projects are prioritized through criteria that is consistent with the adopted Regional TSMO Strategy. The TSMO program will provide support for regional ITS projects by helping to apply systems engineering, ITS Architecture, standards and procedures.

The program supports system performance monitoring including the federal mandates to maintain a Congestion Management Process (CMP). The program implements actions identified in the Arterial Performance Management Regional Concept of Traffic Operations (RCTO) to advance the region's performance measurement capabilities on arterial streets. CMP performance monitoring will continue in order to support development of the RTP, local Transportation System Plans and MTIP programming. The program partners with PORTAL, a regional archived data user service managed by Portland State University. PORTAL will continue to expand the collection, visualization and uses of multimodal performance data in a way that will enhance the region's ability to diagnose and address mobility and support multimodal operations consistent with the region's CMP.

The TSMO program is closely coordinated with other regional transportation programs and region-wide planning activities.

8.2.2.7 Regional Travel Options (RTO) and Safe Routes to School Programs

The Regional Travel Options Program implements RTP policies and the Regional Travel Options Strategy to reduce drive-alone auto trips and personal vehicle miles of travel and to increase use of travel options. The program improves mobility and reduces greenhouse gas emissions and air pollution by carrying out the transportation demand management components of the RTP through three primary program areas: Commute trip reduction, Community-based travel options, and Safe Routes to School. Each RTO program area works to advance RTP goals through the following strategies:

- Regional policy development
    - The RTO program advances travel options policy through policies in the RTP and developing the Regional Travel Options Strategy; as well as supporting local and state policy development and implementation.
- Funding local program implementation
    - The RTO program provides ongoing funding to local programs and partners to deliver critical TDM services across the region and seeks out new partnerships to ensure the travel needs of all residents are prioritized.
- Technical assistance & regional program administration

- The RTO program provides technical assistance to program providers through trainings, resource development and peer networking and learning. In addition, the RTO program administers regional programming to advance the goals of the RTP and RTO strategy in collaboration with local partners.

The program maximizes investments in the transportation system and eases traffic congestion by managing travel demand, particularly during peak commute hours. Specific RTO activities include promoting transit, shared trips, bicycling, walking, telecommuting and the Regional Safe Routes to School Program. The program is closely coordinated with other regional transportation programs and region-wide planning activities.

8.2.2.8 Air Quality and Climate Change Monitoring Program

The Air Quality and Climate Change Monitoring Program ensures the RTP and the MTIP address state and federal regulations and are carrying out the commitments and rules set forth as part of the Portland Area State Implementation Plan (SIP), the Climate Smart Strategy, the Oregon Transportation Planning Rule and the Metropolitan Greenhouse Gas Emissions Reduction Target Rule. The program coordinates with other air quality and climate change initiatives in the region and statewide and monitors federal and state rulemaking that address air quality and greenhouse gas emission. Metro participates in a regional collaborative to develop and implement a clean air construction strategy and standards for clean diesel equipment and vehicles on select public improvement projects.

The program also conducts planning, research and tool development to support monitoring and implementation of the region's adopted Climate Smart Strategy and the Carbon Reduction Program established by the federal Bipartisan Infrastructure Law (BIL) and administered through the Federal Highway Administration.

8.2.2.9 Designing Livable Streets and Trails Program

The Infrastructure Investment and Jobs Act (IIJA) requires that MPOs must use 2.5 percent of their overall funding to develop and adopt complete streets policies, active transportation plans, transit access plans, transit-oriented development plans, or regional intercity rail plans. Metro complies with this requirement by funding a robust complete streets program. Metro's Designing Livable Streets and Trails Program provides regional street and design guidelines and policies, regional arterial and throughway design classifications and other tools to support local jurisdictions to design streets that implement context-sensitive design solutions to advance regional and local goals.

Program activities include providing technical assistance to cities and counties as transportation projects go through project development and design; convening workshops, forums and field tours to increase understanding and utilization of best

practices in transportation design. The program is closely coordinated with other regional transportation programs and region-wide planning activities, and with Metro's Parks and Nature Department.

8.2.2.10 Regional Transit-Oriented Development Program

Since 2001, Metro's Transit-Oriented Development (TOD) program has had a unique and critical role in implementing the 2040 Growth Concept vision for vibrant, walkable centers and station areas linked by transit. The program invests in compact mixed-use projects near light rail stations, along frequent service bus corridors and in regional and town centers throughout the region increasing opportunities for people live, work and shop in neighborhoods with easy access to high-quality transit. The program provides financial incentives for TOD projects to increase transit ridership, stimulate private development of mixed-use buildings that would otherwise not proceed, and increase affordable housing opportunities near transit in high cost and gentrifying neighborhoods through land acquisition and project investments. With an increased focus on affordable housing, the program supports construction of housing near transit and services that is more affordable for older adults and lower- income households compared to what would otherwise be built on a property. Related program activities include opportunity site acquisition, investment in urban living infrastructure, and technical assistance to communities and developers.

8.2.2.11 Investment Areas Program

Metro's Investment Areas program helps communities build their downtowns, main streets and corridors and leverage public and private investments that implement the region's 2040 Growth Concept. Projects include supporting compact, transit oriented development in the region's mixed use areas, evaluating high capacity transit and other transportation improvements that cross city and county lines, and integrating freight and active transportation projects into multimodal corridors.

Major public infrastructure investments do not stop at city or county lines. Our transportation system connects the communities within greater Portland with the rest of the state and the rest of the world. When our region spends billions of dollars on expanding our road, transit and highway system to keep up with the continued population and employment growth, those public investments can both benefit and burden nearby communities. Over time, the region has become more strategic at linking together our transportation, housing, economic, racial equity and environmental goals, policies, and investments so that we can intentionally preserve and create great places that serve all people throughout the region, even as change and growth occurs.

The Investment Areas program completes system planning and develops multimodal projects in transportation corridor refinement plans identified in the Regional Transportation Plan. It also works on finance plans to align public investments in areas that support the region's growth economy. It includes ongoing involvement in local and regional transit and roadway project conception, funding, and design. Metro provides assistance to local jurisdictions for the development of specific projects as well as corridor-based programs identified in the RTP.

Metro's Investment Areas program has been connecting planning for major transportation projects with the community's broader goals and needs. While each area's conditions and needs are different, the approach of bringing together government, community, and business partners provides a framework to produce a shared plan of action to guide the investments and decisions of multiple agencies. Including a broader set of stakeholders in a collaborative decision making process allows for decisions that once seemed unclear or unfair to stakeholders to be more transparent. This approach improves our ability to involve and include those who are affected by these decisions and investments.

Investment areas can set the stage for a range of major capital investments beyond high capacity transit. Other Metro investment areas have focused on freight routes connecting major highways through small communities, redevelopment of brownfields in employment areas, and leveraging the opportunities of a regionally significant riverfront destination. The program is closely coordinated with other regional transportation programs and region-wide planning activities, including corridor refinement planning activities.

8.2.2.12 Better Bus Program

The Better Bus program is a joint Metro and TriMet endeavor that identifies transit priority and access treatments to improve the speed, reliability, and capacity of TriMet frequent service bus lines or streetcar lines, building on the previous Enhanced Transit Concepts (ETC) Program. Better Bus treatments are relatively low-cost to construct, context-sensitive, and can be implemented quickly to improve transit service in congested corridors. The program develops partnerships with local jurisdictions and transit agencies to design and implement Better Bus capital and operational investments.

8.2.2.13 Regional Congestion Pricing Program

The Regional Congestion Pricing Program ensures coordination and alignment between the RTP and state and federal pricing policies and regulations, including the Oregon Transportation Plan, the Oregon Highway Plan, the federal Value Pricing Pilot Program, Section 129 of Title 23 of the U.S. Code, and ODOT's future low-income tolling program.

The program includes application of the findings and recommendations from the 2021 Metro Regional Congestion Pricing Study in the RTP and the MTIP. The program also:

- Coordinates tolling with regional planning efforts and corridor development work, including ODOT's Regional Toll Advisory Committee, Statewide Toll Rulemaking Advisory Committee, and Equity and Mobility Advisory Committee
- Tracks, participates in, and/or advises on pricing programs and projects such as ODOT's Regional Mobility Pricing Project or City of Portland's Pricing Options for Equitable Mobility Task Force
- And monitors changes in federal and state rulemaking that may impact regional or local pricing policies or programs.

8.2.3 Region-wide Planning

This section summarizes near-term planning at the regional-scale to advance implementation of the plan. Each planning effort is needed to address regional transportation policy or planning issues that could not be resolved during the plan update.

Table 8.1 Overview of Region-wide Planning Activities

	Lead Agency	Proposed timing
Regional Mobility Policy Implementation Action Plan	Metro, ODOT	2024-25
Transit planning	TriMet, SMART	Annually
Cascadia Corridor Ultra-High-Speed Ground Transportation Project Planning	WSDOT	2023-28
Steel Bridge Transit Bottleneck Study	Metro, TriMet	2034-45
Equitable Development Strategies	Metro	2024-28
Workforce Diversification in Regional Transportation Infrastructure Projects	Metro	2024
Funding Strategy for Regional Bridges	Counties	2024-28
Emergency Transportation Routes Project Phase 2	Metro, RPDO	2024-26
Regional Freight Rail Study	Metro, Port	2024-26
Regional Transportation Functional Plan Update	Metro	2024-25
2040 Refresh Coordination	Metro	TBD
Columbia Connects	Metro	2023-24

These efforts will be completed consistent with the RTP goals, policies and strategies. A lead agency, project partners and proposed timing for completion is identified for each planning effort along with a description of the issues to be addressed and expected

outcomes from the work. This work will be completed by multiple partners as resources are available and pending future Metro Council and JPACT policy direction and will be coordinated through the development and approval of the annual Unified Planning Work Program (UPWP).

Table 8.2 Overview of Completed Region-wide Planning (from 2018 RTP Chapter 8)

Project Name	Lead Agency
Regional Mobility Policy Update	Metro and ODOT
Regional Congestion Pricing Study	Metro
Transportation System Management & Operations Strategy Update	Metro
Jurisdictional Transfer Assessment	Metro
Enhanced Transit Concept Pilot	Metro
Emergency Transportation Routes Project – Phase 1	Metro and RDPO
Regional Freight Delay & Commodities Movement Study	Metro
Central City Transit Capacity and Steel Bridge Analysis	Metro and TriMet
Frog Ferry Passenger River Taxi Service Study	Friends of Frog Ferry

8.2.3.1 Regional Mobility Policy Implementation Action Plan

Lead agency	Partners	Proposed timing
Metro and ODOT	ODOT, cities, counties, TriMet, SMART, FHWA, SW RTC	2024-25

Note – This section will be updated pending further testing of the draft mobility policy measures that is underway and coordination with ODOT and DLCD on statewide implementation of the Climate-Friendly and Equitable Communities Program.

The Regional Mobility Policy is a policy in the RTP as well as the Oregon Highway Plan (OHP). It applies to transportation system planning and comprehensive plan amendment processes within the Portland metropolitan area. The policy is used to identify transportation needs and solutions during updates to the RTP and local transportation system plans (TSPs), and to evaluate the potential impacts of local comprehensive plan amendments and zoning changes.

An update to the regional mobility policy has been underway since 2019, through a joint effort of Metro and the Oregon Department of Transportation (ODOT). In November and December 2022, JPACT and the Metro Council accepted the new draft policies and supported further development of the draft performance measures and targets during 2023 RTP system analysis in 2023. The draft regional mobility policy for the 2023 RTP identifies three mobility performance measures: vehicle miles traveled per capita, system completion for all modes (including TDM and TSMO) and throughway reliability using

travel speed. More information about the regional mobility policy update can be found at: www.oregonmetro.gov/mobility

8.2.3.2 Transit Planning

Lead agency	Partners	Timing
TriMet and SMART	Cities, counties, Ride Connection, other transit providers	Annually

TriMet conducts annual transit service planning as part of the agency's annual budgeting process, guided by the TriMet Board. Annual service planning identifies specific service changes to be implemented within the coming fiscal year. The annual service planning process includes two rounds of public outreach as well as a formal public hearing. Service improvements are funded both through TriMet's general fund as well as the Statewide Transportation Improvement Fund.

Each year, alongside the City's annual budget, SMART staff compiles potential projects that utilize federal funding for the upcoming fiscal year (July 1 – June 30). The list of projects and associated costs is known as the Program of Projects, or POP. Members of the public have opportunities to comment on these projects directly to staff in May, or at meetings in May (Budget Committee) and June (City Council) of each year. Any changes based on those public comments will be incorporated into a final version at the budget adoption in June.

SMART recently update its Transit Master Plan, which identifies transit improvement projects that could be implemented over the next 3 to 5 years. The plan identifies: where frequency will be improved, the times of day and days of week to add service, where and how connections between routes could be made, and new routes inside Wilsonville and connecting to other cities. Next steps include working to take the plan and translate it to service and projects.

8.2.3.3 Connecting First and Last Mile: Accessing Mobility through Transit Study

Lead agency	Partners	Timing
Metro	TriMet, SMART, Cities, counties, Ride Connection, other transit providers	2024-2025

Local transit service has long used smaller vehicles that range from vans and shuttles to small buses with fixed to flexible routes to fill the gap between traditional bus and rail services, as well as local destinations. An emerging trend in these types of services is

using ride-hailing and other new technologies to provide on-demand micro transit services. This study will identify service and coordination gaps specific to the Metro region, especially for suburban areas of the region and regional parks, document the range of potential solutions and explore innovative ways to improve transit access and convenience for users. This work will build upon local planning efforts (e.g., Transit Development Plans, Statewide Transportation Improvement Fund Plans) and be completed in close coordination with public transit service providers in the region. The project will make recommendations carried forward for consideration in the 2027 RTP update.

8.2.3.4 Steel Bridge Transit Bottleneck Study

Lead agency	Partners	Proposed timing
Metro and TriMet	ODOT, city of Portland, Portland Streetcar, Inc., FTA	2034-2045

This study would explore ways to alleviate transit operational issues caused by the Steel Bridge. The bridge is a critical link between downtown Portland and the east side of the greater Portland region for the Blue, Green, Red, and Yellow MAX Lines, as well as for several bus routes. The 106-year old bridge constrains light rail throughput, requires frequent maintenance that impacts system-wide light rail reliability and presents structural risks. The Steel Bridge with its current two-track configuration cannot reliably accommodate anticipated growth in service.

Metro and TriMet conducted a process to look at alternatives to improve speed, reliability and on time performance of the MAX lines crossing the Willamette River using the Steel Bridge. The study looked at a new bridge or a tunnel and concluded that the MAX tunnel was the most promising. In 2019, Metro and TriMet documented the feasibility and benefits of the tunnel in the MAX Tunnel Study, examining the feasibility of faster light rail. In 2019 they examined the feasibility of a new MAX tunnel connecting Lloyd Center to Goose Hollow stations. The study concluded a new light rail tunnel between Lloyd Center and Goose Hollow is promising.:

A new light rail tunnel would extend from the vicinity of the Lloyd Center Station to the Goose Hollow Station, with approximately four underground stations in between. TriMet would retain some service on the existing surface alignment to continue to serve all stations. The tunnel would increase system ridership by 7,500 to 15,200 riders and decrease travel time by approximately 15 minutes between Lloyd Center and Goose Hollow, while improving system resiliency and redundancy. Planning of a tunnel would need to evaluate the locations of portals and determine the optimal number and locations

of stations. Estimated cost is $3 billion to 4.5 billion dollars (construction cost range is comparable to similar tunnel project completed by Sound Transit and LA Metro, respectively).

A project of this magnitude could take a decade or more to plan, design and construct, including the steps necessary to comply with the National Environmental Policy Act (NEPA) and the Federal Transit Administration's Project Development process. As we continue to grow, we will need to look at short term investments to improve the speed, reliability and on time performance for the travel across the Willamette River.

Max Tunnel benefits Routing MAX through a tunnel under downtown Portland and the Willamette River would save people time and make MAX as fast as or faster than driving. This would lead to even greater benefits such as lower car ownership costs, less traffic, less constrained parking downtown, and reduced greenhouse gas emissions.

For the many people in the region who rely on public transit as their primary transportation, a light rail tunnel would sustain the MAX service they count on for access to school, jobs, recreation and other opportunities. Today, average on-time performance is 87%, higher than just a year ago, but still below the over 90% we can expect with a tunnel. Train delays average 2 ½ minutes, with one in eight delays lasting between 5 and 8 minutes.

Speed

The MAX tunnel can save over 12 minutes for a trip through the central city. Even people going to downtown Portland, to places like PSU or Pioneer Square, would save 5 to 6 minutes, depending on where they're coming from. While the MAX tunnel stations have yet to be determined, access to downtown destinations will be further enhanced by surface travel options like bus, streetcar, bikeshare, and a great walking environment.

Resiliency

A MAX tunnel would add a resource to the regional transportation network that would be resilient to natural disasters and other regional disruptions. A MAX tunnel would offer a critical link to help the region recover from possible future events.

Capacity

The MAX tunnel will help make sure light rail is there to accommodate growth and for people even at the busiest times of day. To fit people comfortably in trains over the next 15 years, we anticipate 60 trains crossing between the central city and Rose Quarter every day—a 50% increase in rail traffic. The MAX tunnel accommodates added service and maintains capacity on the Steel Bridge.

8.2.3.5 Cascadia Corridor Ultra-High-Speed Ground Transportation Project Planning

Lead agency	Partners	Proposed timing
WSDOT	Metro, ODOT, PSRC, BC Ministry of Transportation and Infrastructure, BC Intergovernmental Relations Secretariat, TransLink, Cascadia Innovation Corridor	2023-2028

The Cascadia Ultra-High-Speed Ground Transportation (UHSGT) Project is a proposed high-speed rail system that would connect the Portland, Seattle, and Vancouver, BC metropolitan areas with speeds up to 250 miles per hour, allowing for travel between each city in under an hour. Following planning activities (including three prior studies) conducted by Washington state and its jurisdictional partners over the past six years, the Governors of Oregon and Washington and the Premier of British Columbia signed a Memorandum of Understanding to initiate program to advance activities in 2021 to support forwarding the project. The agreement established the goal of laying the groundwork for the creation of a formal, legal entity to continue project development while seeking community engagement and input, gaining critical support from decision makers, and positioning the corridor for future funding opportunities and an efficient environmental process. WSDOT has applied for funding for this project under both the Federal-State Partnership for Intercity Passenger Rail Program and the FRA Corridor Identification and Development Program with matching funds of $150M. Funding would support required pre-NEPA technical and advisory study planning requirements to advance the project to feasibility-level planning decisions. Metro will continue to represent greater Portland, along with the Oregon Department of Transportation, on the technical and policy committees supporting planning activities, collaborating for a process and outcomes consistent with regional goals.

8.2.3.6 Equitable Development Strategies

Lead agency	Partners	Proposed timing
Metro	Cities, counties, ODOT, TriMet, SMART, FHWA, FTA, community organizations	Ongoing

As the Portland region has grown issues such as housing affordability, community and business displacement and inclusive growth have come to the forefront of the public's concern. Metro, in collaboration with local government and community partners, aims to address these concerns by working to create an Equitable Development Strategy (EDS)

for each major transit investment corridor where Metro is leading the planning process. The purpose of the EDS process is to leverage investments in transportation improvements to support the region's community development objectives, address existing inequities, and reduce associated impacts of displacement that can accompany major investments in public infrastructure.

Each community's EDS process will be unique, but they all strive to advance measures to mitigate displacement risks and establish intentional and sustained efforts to generate equitable development that responds to key challenges in the community. Through a coalition-building planning process that occurs concurrent to corridor planning efforts, major public transportation infrastructure investments are paired with community-identified policy measures and programs with the aim of increasing community and economic resilience for residents, small businesses and community groups. Research shows that resilient communities fare better in the face of displacement pressures.

Major public investments in infrastructure need to achieve more than just transportation goals – communities deserve an investment in high-capacity transit that maintains and enhances their quality of life, allowing them to thrive in the community they have chosen to live in. Equitable development helps strengthen and build resilience within underserved communities by creating more equitable outcomes through collaborative programs and initiatives.

8.2.3.7 Workforce Diversification in Regional Transportation Infrastructure Projects

Lead agency	Partners	Proposed timing
Metro	Cities, counties, ODOT, TriMet, SMART, FHWA, SW RTC, community organizations, construction industry	2024

As the Greater Portland Region plans for needed investment in transportation projects, the region faces a shortage of skilled construction workers which will drive up construction costs Addressing this challenge presents an opportunity to deliver shared economic prosperity and advance regional equity goals by expanding access to well-paying construction jobs for all residents—including women and Black, Indigenous, and People of Color (BIPOC) workers. A comprehensive regional workforce and contractor equity strategy would support the Regional Transportation Plan's infrastructure investments by growing regional workforce supply, managing costs, creating shared economic opportunity, and ultimately building a stronger regional economy.

The workforce shortages in the construction industry are driven by two key factors. First, one in six construction workers are approaching retirement age, meaning the pool of

workers will dramatically decrease over the next decade. Second, women and BIPOC workers face significant barriers in accessing jobs and building successful careers in the construction industry. Diversifying the workforce is a key strategy for addressing workforce shortages. Creating safer, more accessible job pathways will support all people in accessing the unique career and wealth building opportunities the construction industry offers.

The Construction Career Pathways Regional Framework provides a comprehensive strategy for creating career pathways for women and BIPOC workers in the construction industry. The framework aims to increase the available skilled workforce while reducing barriers to entry for historically excluded populations. Metro created the Construction Career Pathways through an inclusive process in collaboration with 16 public agencies and with buy-in from a range of stakeholders, workforce advocates, community-based organizations, contractors, labor partners, and training programs. This broad collaboration is continuing to support effective implementation across jurisdictions. The framework has been formally adopted and implemented as policy by nine government agencies including Metro, Clackamas County, Multnomah County, Washington County, TriMet, City of Portland, Prosper Portland, Portland Public Schools, and Portland Community College.[2] Construction Career Pathways paired with strategies to support the participation and growth of BIPOC, and women owned firms, will provide the skilled labor needed for transportation infrastructure projects, while advancing regional equity goals. Given the broad support and on-going collaboration in this effort, there is an opportunity to explore a more direct connection between Construction Career Pathways and how it can support the demand for a skilled workforce to support transportation investments.

Prior to the next Regional Transportation Plan update, Metro will work with local, regional, state partners, community organizations and the construction industry to explore a strategy for regional implementation of Construction Career Pathways in the transportation sector. Further analysis should identify the resources and capacity needs

[2] On October 24, 2019, Metro Council approved Resolution 19-5028 to approve the Construction Career Pathways Framework. On November 17, 2020, Clackamas County Board of Commissioners approved to adopt the Construction Career Pathways Framework. On December 19, 2019, the Multnomah County Board of Commissioners approved Resolution 219-106 to approve the Construction Career Pathways Framework. On November 30, 2021, the Washington County Board of Commissioners approved Resolution 21-131 to adopt the Construction Career Pathways Framework. On January 15, 2020, City Council approved Resolution 37474, authorizing the Chief Procurement Officer to sign the Construction Career Pathways Project Framework and committing the City to continue to support the regional workgroup led by Metro. On April 7, 2023, TriMet submitted a letter to Metro communicating their support and commitment to Construction Career Pathways Framework. On October 9, 2019, Prosper Portland adopted Resolution 7344 to approve the Construction Career Pathways Framework. On February 4, 2020, Portland Public Schools approved Resolution 6050 to adopt the Construction Career Pathways Framework. On August 31, 2021, Portland Community College submitted a letter to Metro outlining their commitment to adopt the Construction Career Pathways Framework.

of partner agencies and industry and assess the benefits of collaboration in this effort to facilitate implementation. If adopted regionally, Construction Career Pathways has the potential to increase shared economic prosperity, reduce workforce shortages and increased construction costs, ensure timely deliveries on community projects, and support job access for historically underrepresented workers in the region.

8.2.3.8 Funding Strategy for Regional Bridges

Lead agency	Partners	Proposed timing
Counties	Cities, Metro, ODOT, TriMet	2024-28

Given the declining purchasing power of the gas tax and the rise of electric vehicle use, the region continues to struggle with a long-term funding strategy for maintaining Willamette River bridges that serve regional travel. Currently, Multnomah County has primary responsibility for five of the eleven bridges within the Metropolitan Planning Area (see table 8.3 below) with insufficient funding to pay for all expected future maintenance of these structures.

Table 8.3 Willamette River Bridges in the Metropolitan Planning Area

Bridge Name	Bridge Owner
Broadway Bridge	Multnomah County
Burnside Bridge	Multnomah County
Morrison Bridge	Multnomah County
Hawthorne Bridge	Multnomah County
Sellwood Bridge	Multnomah County
St Johns Bridge	ODOT
Fremont Bridge	ODOT
Marquam Bridge	ODOT
Ross Island Bridge	ODOT
Tilikum Crossing Bridge	TriMet
Steel Bridge	Union Pacific Railroad

Within 20 years, four of Multnomah County's five Willamette River Bridges will be 100 years old. The Burnside Bridge is anticipated to be replaced by 2030. The county's capital program for the remaining three bridges (Broadway Bridge, Hawthorne Bridge, and Morrison Bridge) is estimated to cost $790 million, yet only $332 million in federal, state and county revenues has been identified in revenue forecasting through 2045. ODOT owns four of the bridges, including the Fremont and Marquam interstate bridges, as well as the St. Johns and Ross Island regional crossings. ODOT has identified [placeholder for estimated cost]. Union Pacific Railroad owns the Steel Bridge, which is also due for significant maintenance, with costs to be determined. TriMet owns the Tilikum Crossing

structure, and while it was recently constructed, it will eventually require maintenance, as well, as the region's bridges face maintenance challenges that come from age and use.

More collaboration and work is needed to develop a financial plan for ensuring ongoing operations and maintenance and other transportation needs of Willamette River bridges, given the importance to the regional economy, emergency response and climate resilience.

8.2.3.9 Emergency Transportation Routes Project Phase 2

Lead agency	Partners	Proposed timing
Metro and Regional Disaster Preparedness Organization (RPDO)	Cities, counties, TriMet, SMART, ODOT, DOGAMI, WASHDOT, SW RTC, REMTEC	2024-26

Natural disasters can happen anytime, and the transportation system needs to be prepared to withstand them and to facilitate life-saving and life-sustaining activities, including the transport of first responders (e.g., police, fire and emergency medical services), fuel, essential supplies, and patients.

The Emergency Transportation Routes Project is a collaborative effort between public, private and non-profit stakeholders, co-led by the five-county, bi-state Regional Disaster Preparedness Organization (RDPO) and Metro to improve the safety and resiliency of the region's transportation system to natural disasters, extreme weather events and climate change.

From 2019 - 2021 the RDPO and Metro partnered to complete phase 1 of the project - updating the designated Regional Emergency Transportation Routes (RETRs) for the five-county Portland-Vancouver metropolitan region, which includes Clackamas, Columbia, Multnomah and Washington counties in Oregon and Clark County in Washington. The routes had not been updated since 2006. The updated routes are shown within the Climate Action and Resilience section in Chapter 3 of the RTP.

A second phase of follow-on work is proposed for 2024-2026 to further prioritize/tier the updated routes and develop operational guidance for route owners/operators. For more information on RETRs, please visit https://rdpo.net/emergency-transportation-routes.

8.2.3.10 Regional Freight Rail Study

Lead agency	Partners	Proposed timing
Metro	Cities, counties, ODOT, WSDOT, Port of Vancouver and Port of Portland	2024-26

Identified in the Regional Freight Strategy, this study would seek to identify and produce increases in rail capacity, safety, land use compatibility and operational efficiencies to support freight and goods movement in the region which is important to our long-term economic and environmental sustainability, and will help to maintain the region's competitive advantage in a global marketplace. The RTP and Regional Freight Strategy also note freight rail bottlenecks impacting critical access the region's ports and intermodal facilities, as well as the need for rail to efficiently carry its full share of existing and future commodities.

Potential outcomes of the study include:

- Identification of economically viable opportunities to develop short line intermodal hubs or logistics parks or other cargo-oriented development.
- A strategy to identify, develop and position top projects for confirmed and potential future federal and state funding, as appropriate, including:
    - An updated list of regional freight rail project priorities focused on improving capacity constraints and targeting industrial access to the rail networks.
    - A strategy to fund regional freight/passenger rail bottlenecks.
    - A strategy to fund needed grade separations.
    - A strategy to fund critical modernization projects on the short rail lines.

The study will address the balance between passenger and freight rail goals, and a set of viable solutions and initiatives to meet these goals; including:

- Regional guidance for public/private investment partnerships to guide investment of regional and national funding sources in identifying and developing freight rail corridors of local, regional and national significance; and
- Specific guidance for local jurisdictions as they develop their transportation system plans (TSPs), in order to avoid or minimize conflicts between freight rail and other transportation modes and preserve or enhance the functionality of rail facilities and connected industrial land uses.

The Regional Freight Rail Study will work with Union Pacific (class 1 rail operator), ODOT, Port of Portland, Portland Bureau of Transportation (PBOT), and other local jurisdictions

to determine which at-grade railroad crossings of the Union Pacific Kenton line, and other at-grade rail crossings should be grade separated.

8.2.3.11 Regional Transportation Functional Plan Update

Lead agency	Partners	Proposed timing
Metro	Cities, counties, ODOT, DLCD, TriMet, SMART	2024-25

Since the adoption of the 2040 Growth Concept in 1995, cities and counties across the region have updated their comprehensive plans, development regulations and transportation system plans to implement the 2040 Growth Concept in locally tailored ways. The RTP provides a long-range blueprint for implementing the transportation element of the 2040 Growth Concept and presents the overarching vision, policies and goals, system concepts for all modes of travel and strategies for funding and local implementation for the region. Projects submitted to the RTP are from adopted local, regional or state planning efforts that provided opportunities for public input. Cities and counties are responsible for creating transportation system plans that are periodically updated to stay consistent with the RTP and reflect local transportation priorities and needs. Each city and county develops its own process for engaging the public in the development of the plans.

Most communities throughout the region have an adopted transportation system plan that serves as the transportation element of a comprehensive plan consistent with the Regional Transportation Functional Plan (RTFP). The functional plan implements the goals, objectives and the policies of the RTP and its constituent strategies, including the Climate Smart Strategy and strategies for safety, freight, transit, transportation system management and operations, regional travel options and emerging technology.

Under state law, the RTFP directs cities and counties within the metropolitan planning area boundary as to how to implement the RTP through local transportation system plans and associated land use regulations and transportation project development. Local implementation of the RTP will result in a more comprehensive approach for implementing the 2040 Growth Concept, help communities achieve their aspirations for growth and support current and future efforts to achieve the goals objectives and policies of the RTP.

The RTFP was last updated in 2012. A comprehensive review and update is needed to:

- modernize the functional plan language to be inclusive and in plain writing;
- make miscellaneous technical corrections and clarifications, such as outdated references to maps and figures;

- ensure the functional plan language and provisions are consistent with and adequately reflect new and updated goals, objectives and policies adopted in the RTP since 2014, including safety, equity, climate, pricing, mobility, freight transit, transportation system management and operations, and transportation options / transportation demand management;
- align the functional plan language and provisions with recent statewide rulemaking and policy development to implement the Climate-Friendly and Equitable Communities Program, including modal system planning, multimodal inventories, transportation performance, project prioritization, parking management, reporting; and
- update the timeline for local TSPs updates in collaboration with cities, counties and the ODOT Transportation System Plan Funding Program.

8.2.3.12 2040 Refresh Coordination

Lead agency	Partners	Proposed timing
Metro	Cities, counties, ODOT	TBD

Note: 2040 Refresh Coordination is awaiting further direction from Metro Council (anticipated in Fall 2023). The description below was carried over from the 2018 RTP.

In 2018, Metro's Chief Operating Officer recommended that Metro's Planning and Development staff return to the Metro Council in early 2019 with a proposed work program for updating the 2040 Growth Concept as part of the COO recommendation to the Metro Council on the 2018 Urban Growth Management Decision.

Green corridor implementation will be forwarded for consideration as part of this future planning effort. Green corridors were adopted as part of the 2040 Growth Concept in 1995. The purpose of green corridors is to prevent unintended urban development along these often heavily traveled routes, and maintain the sense of separation that exists between neighbor cities and the greater Portland region. The green corridor concept calls for a combination of access management and physical improvements to limit the effects of urban travel on the routes on adjacent rural activities. Following adoption of the 2040 Growth Concept, Metro worked with the cities of North Plains, Canby and Sandy from 1998-2000 to develop intergovernmental agreements (IGAs) but did not formalize these agreements. This remains as an outstanding issue in fully implementing the Growth Concept.

In 2010 and 2011, the elected governing bodies of Clackamas, Multnomah and Washington counties and Metro entered into agreements that determine the location and scale of urban development for the future. These agreements were the result of a two-

year region-wide planning effort that identified areas for future urban use and other areas that should remain rural for the next 40 to 50 years. The urban and rural reserve decision provided a more certain framework for transportation improvements along the urban edge. Metro will work with interested local jurisdictions to complete IGAs for green corridors that reflect updated plans for urban and rural reserves.

8.2.3.13 Columbia Connects

Lead agency	Partners	Proposed timing
Oregon Metro and Southwest Washington Regional Transportation Council	Greater Portland Inc, Columbia River Economic Development Council, City of Portland, City of Gresham, City of Vancouver, Port of Portland, Port of Vancouver	2023-24

Columbia Connects is a regional project intended to strengthen the bi-state partnership between Oregon and Washington. Centered around the ecosystem of industries and work-sheds that are interconnected by the Columbia River, the project seeks to develop a clear understanding of the conditions within this sub-district; the shared economic and community values of the region; and the strategies, projects, and programs needed to achieve desired outcomes. Columbia Connects provides a Shared Investment Strategy that outlines specific opportunities for investment based on feasibility, effectiveness, equity, and input from project champions. Convened by Metro and RTC, the partners will finalize and carry out actions included in a Shared Investment Strategy, continuing to partner across state boundaries to establish agreements and commitments for implementation and ongoing coordination on resource acquisition.

8.2.4 Corridor Refinement Planning

This section identifies areas in the region – called mobility corridors - that are recommended for more detailed refinement planning to identify multimodal investment strategies adequate to serve regional transportation needs in the corridor.

This RTP calls for an update to the region's mobility policy and related performance targets beginning in 2019 and is expected to affect corridor refinement planning identified in this section. Many of the areas identified for refinement planning in the RTP are identified because they do not meet the newly updated regional mobility policy. Individual corridor refinement planning descriptions have been updated to reflect work remaining and are being carried forward in this RTP.

Corridor Refinement Planning and the Transportation Planning Rule

Corridor refinement planning is a response to the Oregon Transportation Planning Rule (TPR). Section 660-012-0020 of the TPR requires that transportation system plans (TSPs) establish a coordinated network of planned transportation facilities adequate to serve regional transportation needs. The RTP is the region's TSP. Section 660-012-0025 of the TPR allows jurisdictions to defer decisions regarding mode, function, and general location of improvements to address identified needs as long as it can be demonstrated that the refinement effort will be completed in the near future.

A corridor refinement plan must identify the capital and operational improvements that a mobility corridor needs consistent with the region's congestion management process. This is particularly critical for planning efforts that may result in significant expansion of roadways beyond the planned system. A CMP analysis is required for capacity-increasing projects that go beyond the planned RTP system before federal funds may be applied. For such projects, the CMP looks at road expansions beyond the planned system as a last resort and, as appropriate, requires that they be coupled with complementary operational and travel demand management strategies.

In the Portland region, in order to stay consistent with our regional transportation and land use goals, our corridor refinement process includes a multimodal look at transportation needs, as well as a review of existing and planned land use and projected growth. See Section 8.5.4 and Appendix L for more information about the region's CMP.

A corridor refinement plan includes the following steps:

1. **Develop MOU or IGA** for refinement plan scope of work that includes identification of roles and responsibilities, methods of collaboration and consultation with Metro, if the refinement planning work is not led by Metro.
2. **Conduct analysis** that considers current and planned local land uses, regional and community goals for equity, housing, economic opportunity, environmental protection and stormwater management as well as safety, pedestrian, bike, system and demand management and operational strategies, freight, throughway, road and transit needs and previously identified solutions.
3. **Agree on corridor specific multimodal performance measures.**
4. **Evaluate multimodal performance** and potential impact on regional and community goals for equity, economic development and environmental protection and, if applicable, apply HCT system expansion assessment and readiness criteria.
5. **Develop alternative mobility or other performance standards**, if necessary.

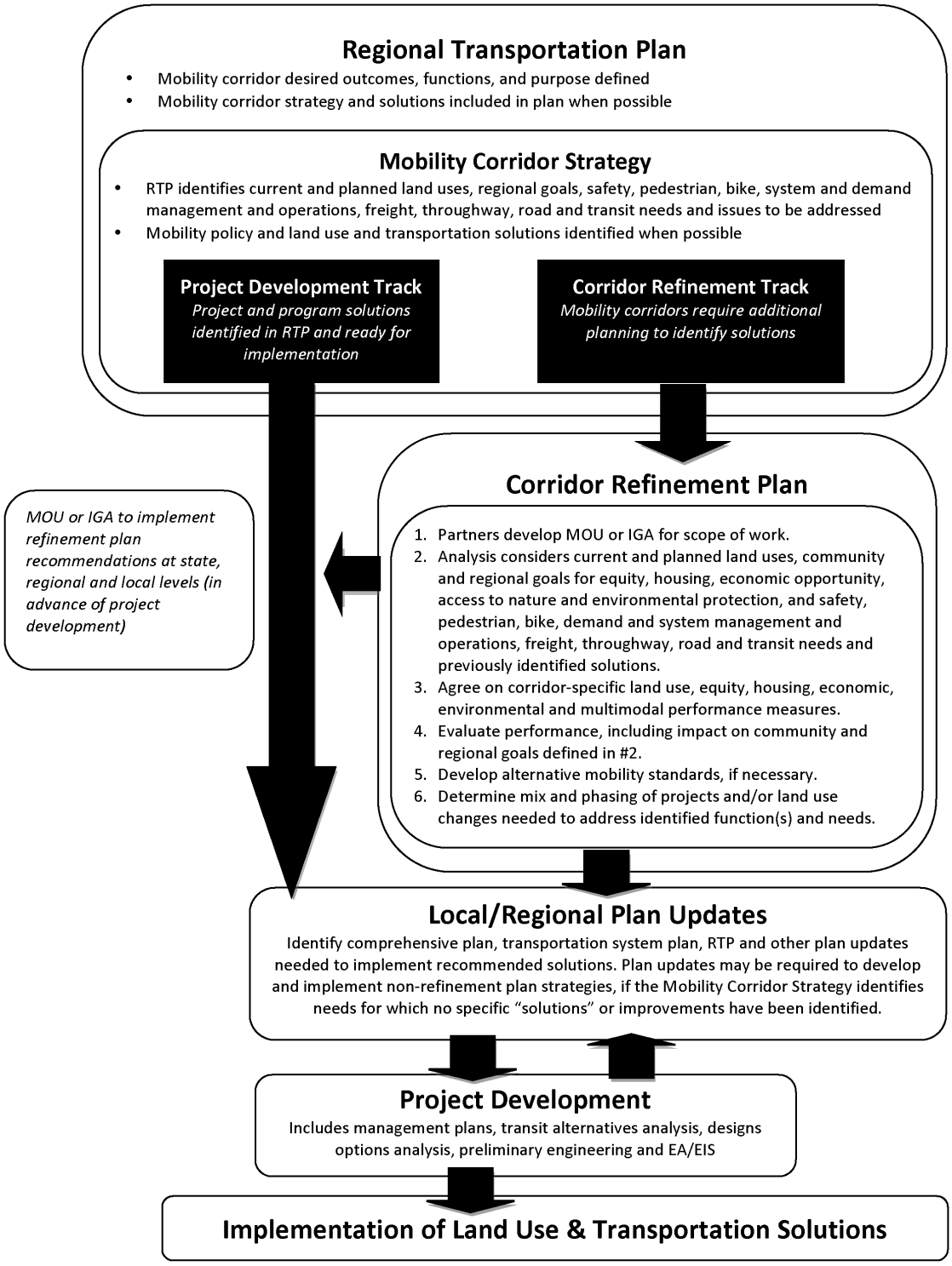
6. **Determine mix and phasing of projects and/or land use changes** needed to address identified needs.
7. **Prepare local, regional and/or state plan amendments and MOU or IGA to implement** refinement plan recommendations at state, regional and local levels.

Consistent with the region's congestion management process, corridor refinement plans will provide decision-makers with more comprehensive information regarding safety, accessibility, environmental impact, mobility, reliability and congestion as they relate to the movement of persons and goods in the mobility corridor. They should also consider land use, economic opportunity, equity, travel demand and system management, street connectivity, walking and biking solutions in addition to increasing transit and road capacity. The corridor refinement plan will recommend a wide range of strategies and projects to be implemented at the local, regional and/or state levels.

Individual project and program solutions identified in the RTP may move forward to project development at the discretion of the facility owner/operator. Planning and project development efforts should be conducted with an understanding of the corridor refinement planning anticipated in the RTP and not preclude any strategies or potential solutions identified for consideration in the corridor refinement plan. The MOU or IGA from a corridor refinement plan is intended to provide more accountability and to formalize agreements across implementing jurisdictions on moving forward to implement the corridor refinement plan recommendations. This is particularly important in mobility corridors with multiple jurisdictions.

Figure 8.2 shows the framework for how the mobility corridor strategy will be incorporated into the RTP or developed through a corridor refinement plan.

Figure 8.2 How A Mobility Corridor Strategy Is Developed and Implemented



Mobility Corridors Recommended for Future Corridor Refinement Plans

The main objective of the RTP mobility corridor framework is to organize information needed to help define the need, mode, function, performance standards, and general location of facilities within each mobility corridor consistent with the Transportation Planning Rule to ensure land use and transportation planning and decision-making are integrated. The needs assessment was developed based on the RTP policy framework and guided the identification of projects and programs during development of the RTP.

Under the mobility corridor framework, when determinations of need(s), mode(s), function(s), and general location(s) of solutions cannot be made, the mobility corridor needs a refinement plan. Corridor refinement plans are intended to be multimodal evaluations of possible land use and transportation solutions to address identified needs and develop a shared investment strategy, consistent with RTP goals, objectives and policies. This includes conducting an evaluation that considers the potential impact on regional and community goals for equity, housing, economic development, environmental protection and access to nature.

The RTP has identified a list of mobility corridors that do not meet the outcomes-based performance standards of the RTP and/or do not fully answer questions of mode, function and general location. These corridors need refinement planning and are listed in **Table 8.4**. The corridors are not listed in priority order. In addition, potential high capacity transit corridors identified in the Regional Transit Strategy are likely to require corridor refinement plans to develop shared land use and transportation investment strategies and determine transit mode, function, general location and any associated changes in road or freight rail functions and performance standards of existing transportation facilities.

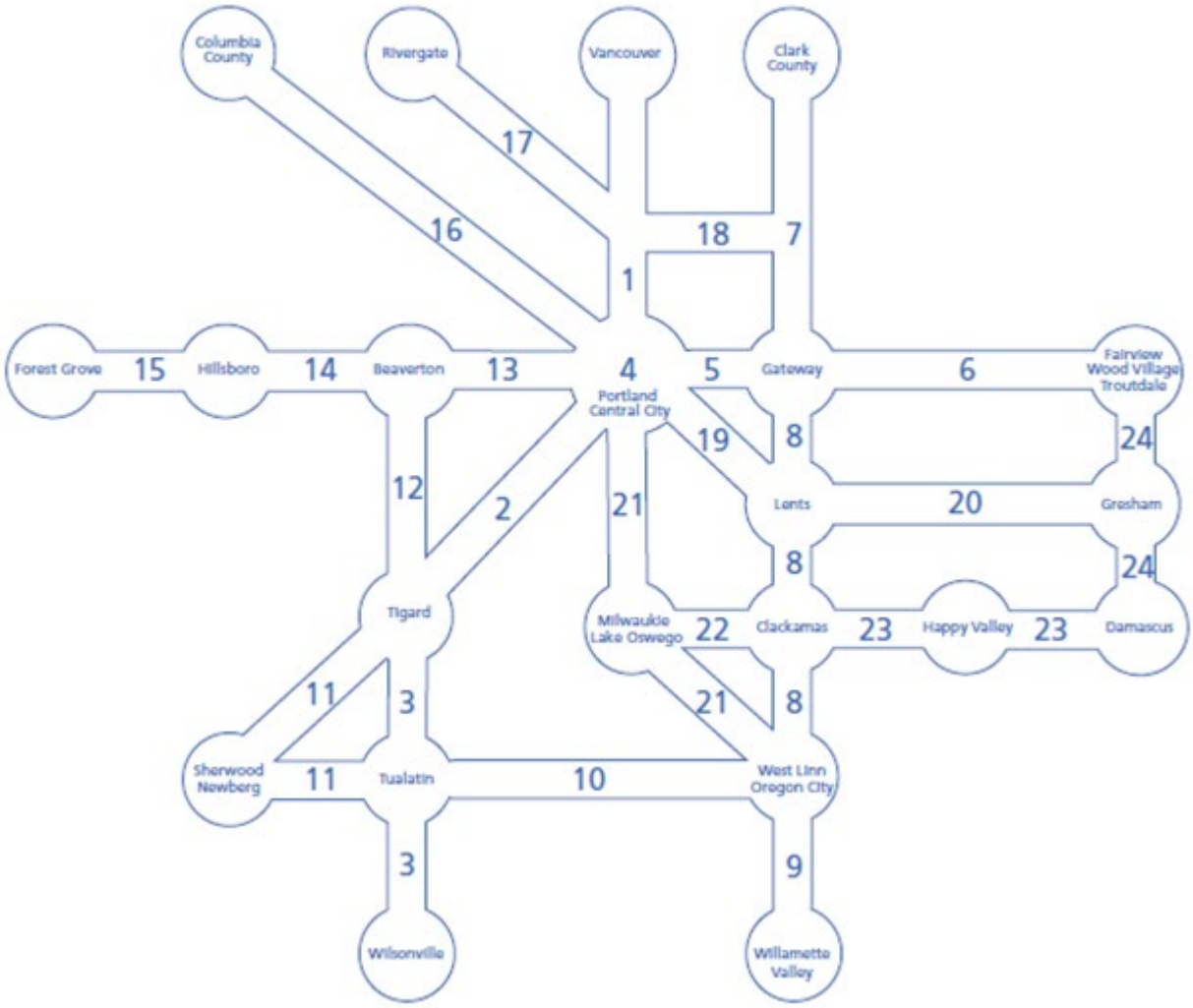
Table 8.4 Mobility Corridors Recommended for Future Corridor Refinement Planning

Regional Mobility Corridor	General Geographic Scope of Mobility Corridor
Mobility Corridors #3	Tigard to Wilsonville which includes I-5 South[3]
Mobility Corridor #4	Portland Central City Loop, which includes I-5/I-405 Loop
Mobility Corridors #7, #8 and #10	Clark County to I-5 via Gateway, Oregon City and Tualatin, which includes I-205
Mobility Corridor #14 and #15	Beaverton to Forest Grove, which includes Tualatin Valley Highway
Mobility Corridors #13, #14	Hillsboro to Portland, which includes US 26

[3] In coordination with project development activities for Mobility Corridor #10.

Mobility Corridors #19 and #20	Portland Central City to Lents and Lents to Gresham, which includes US 26/Powell Boulevard

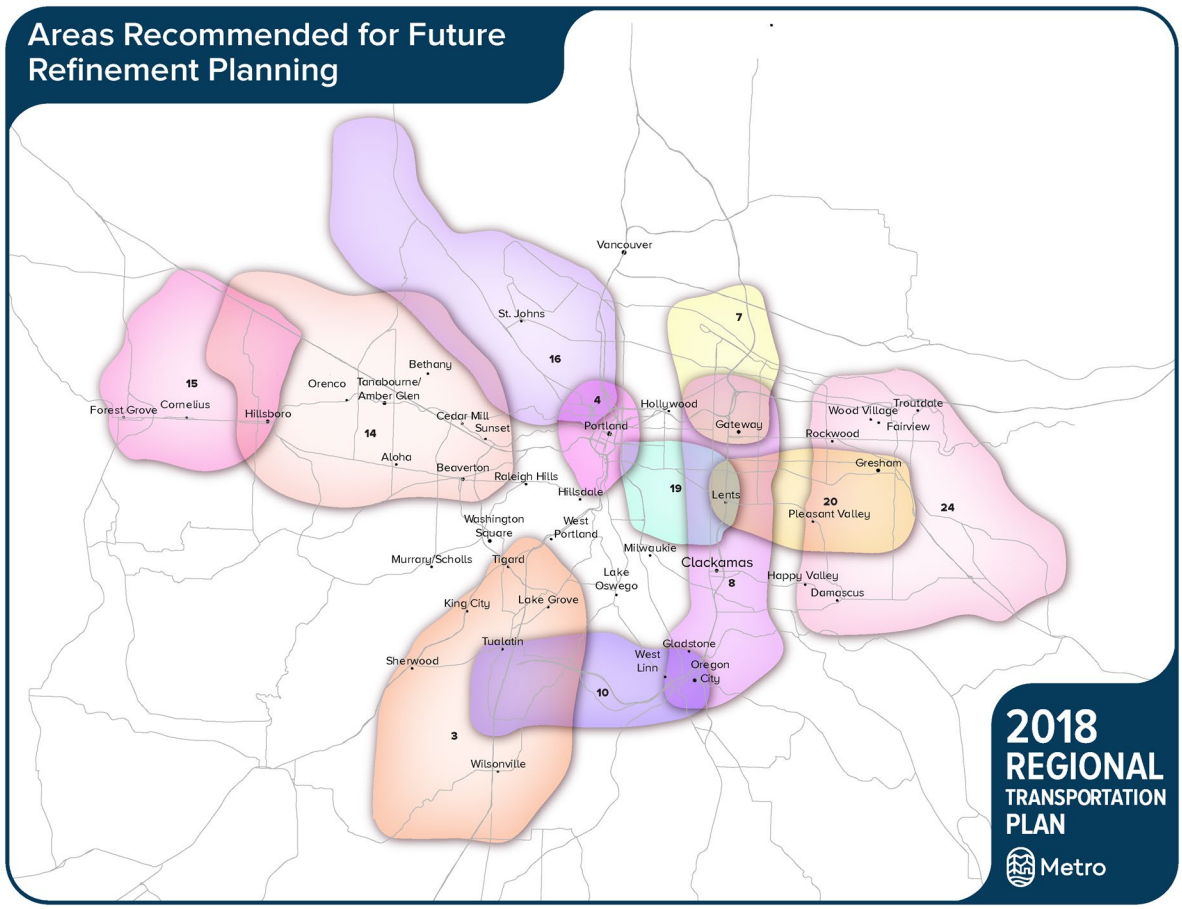
Figure 8.3 Illustrative Map of Mobility Corridors in the Portland Metropolitan Region



Corridor refinement plans that have been completed since 2018

- Clackamas to Columbia Corridor Plan (Gresham/Fairview/Wood Village/Troutdale to Damascus – Mobility Corridor #24)

Figure 8.4 Regional Mobility Corridors Recommended for Future Refinement Planning



8.2.4.1 Tigard to Wilsonville (Mobility Corridor 3)

This mobility corridor provides the major southern access to and from the central city. The corridor also provides important freight access, where Willamette Valley traffic enters the region at the Wilsonville "gateway," and provides access to Washington County via OR 217.

In 2002, a joint ODOT and Wilsonville study[4] concluded that in 2030 widening of I-5 to eight lanes would be required to meet Oregon Highway Plan and RTP mobility standards, and that freeway access capacity would not be adequate with an improved I-5/Wilsonville Road interchange. The appropriate improvements in this corridor are unclear at this time. However, I-5 serves as a critical gateway for regional travel and commerce, and an acceptable transportation strategy in this corridor has statewide significance. Projections for I-5 indicate that growth in traffic between the Metro region and the Willamette Valley will account for as much as 80 percent of the traffic volume along the southern portion of I-5, in the Tualatin and Wilsonville area.

In 2009, ODOT and the City collaborated to plan the reconstruction of the I-5: Wilsonville Road interchange, including infrastructure improvements and management strategies to better serve planned growth in the area. Since adoption of the interchange area management plan, ODOT completed the interchange reconstruction and implemented the bulk of the management plan's recommendations. More recent projects include the City's addition of a third lane to the Wilsonville Road southbound on-ramp and improvements at the Elligsen Road northbound on-ramp. In addition, ODOT constructed a single southbound auxiliary lane on I-5 from north of Lower Boones Ferry Road to Nyberg Road and from South of Nyberg Road to I-205 and a second lane at the northbound exit ramp for Lower Boones Ferry Road to relieve congestion and reduce crashes. The auxiliary lane work included on- and off-ramp lane modifications at Lower Boones Ferry Road and Nyberg Street.

The Washington County Transportation Futures Study, completed in 2017, recommended completion of this corridor refinement plan to address growing transportation needs in the corridor. The Washington County Freight Study, also completed in 2017, identified the I-5 corridor as a key area of freight operational delay and unreliability and underscored the importance of developing and funding improvements in this area.

In 2017-2018, ODOT and the City of Wilsonville partnered on a Southbound I-5 Boone Bridge Congestion Study. They evaluated and developed solutions for a southbound bottleneck in the bridge area, in order to manage congestion and reliability for private vehicles, freight, and transit in the evening peak. This geographically focused study was timed to identify operational improvements in advance of upcoming seismic replacement of the Boone Bridge, so that they could proceed as one project and allow the state to reduce total costs. The study led to the adoption of the I-5 Wilsonville Facility Plan, which documented a southbound auxiliary lane concept consistent with implementation recommendations for this corridor (see Project 11990 on the 2023 RTP Financially

[4] I-5/Wilsonville Freeway Access Study, DKS Associates, November 2002

Constrained List). It did not preclude a larger I-5 south corridor refinement plan, and many of the broader multimodal needs in this corridor still need to be addressed.

A corridor refinement plan is proposed to address the following in coordination with project development activities for Mobility Corridor #10:

- Effects of widening I-205 on the I-5 South corridor;
- Effects of the I-5 to 99W Connector study recommendations on I-5 and the N. Wilsonville interchange and the resultant need for increased freeway access to preserve local system performance and in-line capacity for I-5 mobility;
- Effects of peak period and mid-day congestion in this area and mitigation options for regional freight reliability, mobility and travel patterns;
- Ability of inter-city transit service, to/from neighboring cities in the Willamette Valley, including commuter rail, to slow traffic growth in the I-5 corridor;
- Ability to maintain off-peak freight mobility with capacity improvements;
- Potential for better coordination between the Metro region and Willamette Valley jurisdictions on land-use policies;
- Effects of a planned long-term strategy for managing increased travel along I-5 in the Willamette Valley;
- Effects of UGB expansion and Industrial Lands Evaluation studies on regional freight mobility;
- Effects on freight mobility and local circulation due to diminished freeway access capacity in the I-5/Wilsonville corridor;
- Identify and implement safety and modernization improvements to I-5 defined by the Tigard to Wilsonville Corridor Refinement Plan;
- I-5/OR217 Interchange Phase 2: SB OR217/Kruse Way Exit – Complete interchange reconstruction: Braid SB OR 217 exit to I-5 with Kruse Way exit;
- I-5/OR217 Interchange Phase 3: SB OR217 to I-5 NB Flyover Ramp – Complete interchange reconstruction with new SB OR217 to NB I-5 flyover ramp;
- Effects of the new and proposed auxiliary (ramp-to-ramp) lanes;
- Effects of future Southwest Corridor LRT;
- Identify and implement active transportation priorities that provide safe alternatives to vehicle travel; and

- Consideration of how land use interfaces with the transportation needs and impacts, local system enhancements and new connections, and improved transit network and service and potential outcomes.

In addition, the following design elements should be considered as part of the corridor refinement plan:

- Congestion pricing, including consideration of the Regional Mobility Pricing Project, and HOV lanes for expanded capacity;
- Operational bus on shoulder treatments
- Provide regional transit service, connecting Wilsonville and Tualatin to the central city;
- Increase WES service frequency and hours/days of operation;
- Provide additional freeway access improvements in the I-5/Wilsonville corridor to improve freight mobility and local circulation;
- Add capacity to parallel arterial routes, including 72nd Avenue, Boones Ferry, Lower Boones Ferry and Carman Drive;
- Add overcrossings in vicinity of Tigard Triangle, City of Tualatin and City of Wilsonville to improve local circulation;
- Extend commuter rail service from Salem to the Portland Central City, Tualatin transit center and Milwaukie, primarily along existing heavy rail tracks;
- Additional I-5 mainline capacity;
- Provision of auxiliary lanes between all I-5 freeway on- and off-ramps in Tualatin south of the I-5/I-205 split and in Wilsonville; and
- Complete gaps in the Fanno Creek and Ice Age Tonquin Regional Trails to provide a continuous off-street active transportation route through the length of the mobility corridor.

8.2.4.2 Portland Central City Loop (Mobility Corridor 4)

Context

In 2005, the I-5/405 Freeway Loop Advisory Group (FLAG) completed its review of the near- and long-term transportation, land use, and urban design issues regarding the I-5/405 Freeway Loop. Appointed by Mayor Vera Katz and the ODOT Director in 2003, the

24-member group developed and evaluated concepts to address identified transportation issues and needs. The concepts represented a range of options that included modest improvements within existing right-of-way, a One-Way Loop System, and a full tunnel that would connect the Freeway Loop to I-84 and Sunset Highway. The three concepts were evaluated against the region's proposed transportation system, along with projected employment and household growth, for the year 2030.

In completing its initial review, FLAG found that additional master planning work is needed to identify, prioritize and fund specific projects, and that short-term or interim investments should move forward while the master planning work is being completed. FLAG recommended that planning on I-84/I-5 interchange and the I-5 elements of South Portland Plan contemplated in the area of the interchange of I-405 and I-5 may proceed independent of the Master Plan with the understanding that the final plan for any such project would be consistent with the Master Plan. In addition, the study recommended advancing a corridor refinement plan to begin to identify short-term and long-term investments and a recommended scope, problem statement and set of principles:

Scope

- Develop an overall Freeway Loop Corridor Refinement Plan that will guide public investment for improvements to the I-5/405 Freeway Loop.
- Develop a phasing strategy for implementation of the Master Plan. Include the currently approved Regional Transportation Plan improvements as well as new elements.
- Identify and pursue a funding strategy.

As directed by the FLAG's recommendations, planning proceeded on the I-84/I-5 section of the Loop under the N/NE Quadrant and the I-5 Broadway-Weidler Interchange Improvement Planning process. The key recommendations from the adopted 2012 N/NE Quadrant Plan include:

- Preserving and enhancing Lower Albina by protecting the working harbor and increasing land use flexibility that promotes a mix of uses on historic Russell Street and greater employment densities;
- Protecting historic neighborhoods and cultural resources;
- Concentrating high density development in the Lloyd District, with a focus on new residential development that will add activity and vibrancy to the district;
- Providing amenities, such as parks, street improvements and green infrastructure to support and encourage new development;
- Improving regional access and local street safety and connectivity for all modes;

- Encouraging sustainable development that supports the Lloyd EcoDistrict and goals for improved environmental health;
- Future changes to zoning and building height regulations that implement the plan goals.

Key recommendations for the I-5 Broadway-Weidler Plan include:

- Adding auxiliary lanes and full-width shoulders to improve traffic weaves and allow disabled vehicles to move out of traffic lanes;
- Rebuilding structures at Broadway, Weidler, Vancouver and Williams and adding a lid over the freeway that will simplify construction, increase development potential and improve the urban environment;
- Moving the I-5 southbound on-ramp to Weidler to improve circulation and safety;
- Improving conditions for pedestrian and bicycle travel by adding new connections over the freeway and safer pedestrian and bicycle facilities in the interchange area.

The recommendations of the N/NE Quadrant Plan were incorporated in the recently adopted Central City 2035. In addition, as part of the plan, ODOT and the City worked to designate the Central City as a Multimodal Mixed-Use Area (MMA). MMAs are State acknowledged high density, mixed use areas that are well served by multimodal transportation. MMA areas are exempt from mobility standards as part of land use amendments (safety and other State mandated policies remain in effect). In development of the MMA, the City and ODOT worked to identify safety improvements for the Loop (including the I-5 Broadway/Weidler Project), which were subsequently added to the City's list of TSP projects and submitted to Metro as part of the 2018 RTP.

Proposed Mobility Corridor Purpose Statement

The purpose of the study is to develop alternative design concepts for Portland Central City Loop. Improvements to the I-5/4-5 Freeway Loop must address long-term transportation and land use needs in a system-wide context. Because the movement of people and goods is a vital economic function, changes must be considered in relation to local, regional, and statewide geographies. Freeway Loop improvements should enhance, not inhibit, high-quality urban development, and should function as seamless and integral parts of the community.

Proposed Principles

These objectives will guide the selection and evaluation of options in the next phase:

- Maintain or enhance transportation performance, including safe and reliable highway operations and enhanced transit performance.
- Support a multi-modal strategy for automobiles, transit, trucks, bicycles, and pedestrians.
- Support trade and freight movement to facilitate regional and state economic development.
- Support local, regional, and state land use plans.
- Ensure regional accessibility to and from the Central City to reinforce its significant statewide, regional, and national economic role.
- Support economic activities and new investments in the Central City and in adjacent industrial areas.
- Improve the quality of the built environment and multimodal connections across facilities.
- Avoid or minimize negative impacts on the natural and built environments.
- Evaluate facility improvement costs relative to the distribution of benefits and impacts.
- Develop strategies that can be implemented in phases, including consideration of congestion pricing such as that identified in the Regional Mobility Pricing Project.

8.2.4.3 Clark County to I-5 via Gateway, Oregon City and Tualatin (Mobility Corridors 7, 8 and 10)

Improvements are needed in this corridor to address existing deficiencies and expected growth in travel demand in Clark, Multnomah and Clackamas counties. Transportation solutions in this corridor should address the following needs and opportunities:

- Provide for some peak period and off-peak mobility and reliability for longer trips;
- Preserve freight mobility from I-5 to Clark County, with an emphasis on connections to Highway 213, Highway 224 and Sunrise Corridor;
- Maintain an acceptable level of access to the Oregon City, Clackamas and Gateway regional centers and Sunrise industrial area;
- Maintain acceptable levels of access to PDX, including air cargo access;
- Coordinate refinement planning activities with planning for the Stafford area;

- Adding general purpose lanes to I-205 should be considered to meet state and regional policies to bring the freeway up to three through lanes in each direction in the southern section from Oregon City to I-5 and to allow for potential of bus-on-shoulder operations for bypassing of traffic queues on I-205 during periods of congestion;
- Expanded transit service in the corridor including provision of I-205 express bus service between Clackamas regional center and Bridgeport in Tualatin, and frequent bus service between Clackamas regional center and Clackamas Community College via downtown Oregon City;
- Extend high capacity transit service from Milwaukie to Oregon City along McLoughlin Boulevard;
- Complete gaps in the I-205 Multi-use path - including southernmost segment from Oregon City to Tualatin - to provide a continuous off-street active transportation route through the length of the mobility corridor; and
- Interchange improvements, auxiliary lanes and other major operational improvements such as ramp improvements and other weaving area improvements in the corridor should also be considered. Specific projects to be considered to meet identified needs include:
    - Southbound truck climbing lanes from Willamette River to 10th St. interchange;
    - Interchange improvements at locations including: Division/Powell, Airport Way, OR213, OR 212/224, Sunrise, Johnson Creek Boulevard and others;
    - Auxiliary lanes, northbound and southbound in the following locations: Airport Way to Columbia Blvd., Columbia Blvd. to I-84, I-84 to Glisan, Glisan to Division/Powell, Division/Powell to Foster, Foster to Johnson Creek Boulevard, OR 212/224 to Gladstone, Gladstone to OR 99E;
    - Widen to 6 lanes from Stafford Interchange to Willamette River;
    - Widen Abernethy Bridge to 6 lanes plus auxiliary lanes;
    - Improvements needed on OR 213 (82nd Avenue) include bicycle/pedestrian and streetscape improvements.
    - Implement tolling on I-205 between Stafford Road and the Abernathy Bridge.

Potential transportation and land use solutions in this corridor should evaluate the potential of the following design concepts:

- Auxiliary lanes added from Airport Way to I-84 East;

- Consider express HOV lanes as a strategy for expanding capacity;
- Relative value of specific ramp, overcrossing and parallel route improvements;
- Evaluate crash history of arterials and throughways in study area, with a focus on fatal and serious injury crashes, to inform potential transportation solutions and phasing;
- Eastbound HOV lane from I-5 to the Oregon City Bridge;
- Truck climbing lane south of Oregon City;
- Potential for inter-city transit service, vanpool services and other travel options, to/from rural areas and neighboring cities in Clackamas County, to expand travel options and slow traffic growth in the I-205 corridor;
- Potential for rapid bus transit service or light rail from Oregon City to Gateway;
- Potential for extension of rapid bus service or light rail north from Gateway into Clark County;
- Potential for refinements to 2040 land-use assumptions in this area to expand potential employment in the sub-area and improve jobs/housing imbalance;
- Potential for re-evaluating the suitability of the Beavercreek area for urban growth boundary expansion, based on ability to serve the area with adequate regional transportation infrastructure;
- Explore opportunities to support economic and land use goals with the Columbia Connections Strategy;
- Provide recommendations to the Bi-State Coordination Committee prior to JPACT and Metro Council consideration of projects that have bi-state significance.

8.2.4.4 Beaverton to Forest Grove (Mobility Corridors 14 and 15)

A number of improvements are needed in this corridor to address existing deficiencies and serve increased travel demand. One primary function of this route is to provide access to and between the Beaverton and Hillsboro regional centers. Tualatin Valley Highway also serves as an access route to Highway 217 from points west along the Tualatin Valley Highway corridor. As such, the corridor is defined as extending from Highway 217 on the east to Forest Grove to the west, and from Farmington Road on the south to Baseline Road to the north.

The Tualatin Valley Highway Corridor Plan (TVCP) is a “mobility corridor refinement” plan completed in June 2013. The TVCP studied the Beaverton to Hillsboro portion of the

Beaverton to Forest Grove mobility corridor between Cedar Hills Boulevard (Beaverton Regional Center) and SE 10th Avenue/Maple Street (Hillsboro Regional Center). The northern boundary of the study area was Baseline Road/Jenkins road and the southern boundary was Farmington Road, Oak Street, Davis Street and Allen Boulevard. There are still two outstanding sections of the corridor left to be studied: within Beaverton (OR 217 to SW Cedar Hills Blvd) and from Hillsboro (west of SE 10th Avenue/Maple Street) to Forest Grove.

The TVCP was a joint effort between ODOT, Metro, the City of Hillsboro, the City of Beaverton and Washington County that focused an examination of the transportation system to identify needs and improvements for all modes of transportation. A number of improvements have been identified in this corridor to address existing deficiencies and safety concerns and serve increased travel demand.

The TV Trail Concept Plan, a TGM funded plan by Washington County describes the selection of the two preferred near- and long-term opportunities to serve local and regional trail connectivity between SW 160th Avenue and Cornelius Pass Road.

The East Forest Grove Safety Action Plan examined the portion of OR 8 between Forest Grove and Cornelius. The plan identified multi-modal improvements to address safety along this section of the corridor.

A long-term transit solution for Tualatin Valley Highway has yet to be identified. In advance of this transit study additional land area is to be preserved for Business Access Transit (BAT) / High Capacity Transit (HCT) uses. This land area is not intended to be used for general purpose through lanes. Development along Tualatin Valley Highway shall consider opportunities so as to not preclude a future Business Access and Transit lane in the westbound direction, and to not preclude Bus pullouts in the eastbound direction.

RTP Design and Functional Classifications.

Early in the project, the TVCP PG gave policy direction to maintain the design and function of TV Hwy as an urban arterial that will not exceed motorized vehicle capacity of two through travel lanes in each direction. Consistent with this decision, proposed actions along TV Hwy will be developed during subsequent refinement planning and design work to maximize the use of the typical 100 feet to 107 feet of existing right-of-way (ROW) to serve multimodal travel. Additionally, the RTP Arterial & Throughway map and System Design Classification maps are amended. TV Highway will be changed from “Principal arterial” to “Major Arterial” on the Arterial & Throughway map. It will be changed from “Throughway” to “Regional Street” on the System Design map.

The TVCP recommendations fall into 3 categories: 1) Near Term Actions, 2) Opportunistic Actions, and 3) Longer Term Refinement Planning Needs.

Near Term Actions

The proposed improvements described below will address existing needs, including multimodal system completeness and safety, and can reasonably be expected to be completed within the next 15 years with a strong commitment from one or more of the partner agencies that have jurisdiction over subject transportation facilities, including:

- Complete detailed multi-agency study to determine future potential for high capacity transit solutions within the Tualatin Valley Highway corridor;
- The Moving Forward TV Highway Plan will be developed as a multi-agency study that determine nature and feasibility of HCT in the Tualatin Valley Highway corridor between SW 160th Ave and Cornelius Pass Road;
- Multi-modal safety improvements from the East Forest Grove Safety Action Plan
- Improve bus stops along Tualatin Valley Highway;
- More frequent bus service;
- Add street lighting on Tualatin Valley Highway;
- Improve Tualatin Valley Highway pedestrian crossings;
- Complete Planning and Conceptual design for a Multi-use path;
- Fill gaps in sidewalks and add landscape buffers along Tualatin Valley Highway;
- Add directional way finding signs;
- Complete the (currently discontinuous and narrow) bike lanes on Tualatin Valley Highway;
- Improve bike crossings of Tualatin Valley Highway;
- Develop continuous east-west parallel bike routes north and south of Tualatin Valley Highway;
- Public community rail safety education;
- Support and promote employer incentive programs to reduce driving;
- Improve signal timing, transit prioritization and traffic operations monitoring;
- Signal prioritization for transit;
- Adaptive signal control ("smart signals" that adjust timing to congestion levels);
- Improve operations at signalized intersections along Tualatin Valley Highway;

- Intersection modification to address safety and mobility; and
- Left-turn signal improvements.

Opportunistic Actions

Understanding that funding opportunities (whether public funding or public funding in combination with private sources) may arise for transportation improvements within the TVCP Project Area to work towards to meet the goals and objectives of the TVCP, while attempting to:

- Encourage private contributions by developers to implement the near term improvements, including reserving ROW for future transportation improvements *(City of Hillsboro, City of Beaverton, Washington County).*
- Acquire the ROW to develop a westbound business access transit (BAT) lane as redevelopment opportunities arise on Tualatin Valley Hwy. The City of Hillsboro may also require all half-street improvements be constructed to include the setback curb, planter strip, and sidewalk improvement to create an amenable environment for future transit solutions on Tualatin Valley Highway. This redevelopment should be consistent with ODOT standards. The City of Hillsboro has determined that a BAT lane would not provide the anticipated benefit for transit service and therefore the city isn't acquiring ROW to develop the BAT lane as redevelopment opportunities occur on TV Hwy check with Gregg Snyder about this. The Moving Forward TV Highway Enhanced Transit and Access Plan will look at whether there are benefits of using a BAT lane in part of the corridor from 160th to Cornelius Pass Road.
- As projects arise from appropriate categories examine whether opportunities are available to use other funds to leverage this funding (e.g., safety) *(ODOT, consulting with partners).*
- As land use and transportation system conditions change and near term improvements are completed, consider the opportunity to update this adaptive corridor management strategy *(all partners).*
- Improve existing north-south routes for all modes to reduce travel demand on Tualatin Valley Highway and congestion at intersections. Improvements to roadways such as Brookwood Avenue, Century Boulevard, Cornelius Pass Road, 209th Avenue, 198th Avenue, 185th Avenue, and 170th Avenue would provide the greatest benefit to the overall transportation system. Five improvements on 198th Avenue south of Tualatin Valley Highway are scheduled in the next five years through Washington County's Major Streets Transportation Improvement Program. The other three corridors will require a more opportunistic approach, including working with

developers of South Hillsboro to help improve 209th Avenue *(City of Hillsboro, City of Beaverton, Washington County).*

- Improve east-west connectivity (such as those proposed in the upcoming South Hillsboro UGB development mitigation) in addition to the near term actions proposed in South Hillsboro such as the Kinnaman and Rosa Road extensions *(City of Hillsboro, City of Beaverton, Washington County).*
- Complete the bicycle and pedestrian system in the TVCP Project Area to increase connectivity and access.
- Implement improvements identified in the Tualatin Valley Trail Concept Plan
- Examine transit service for enhancements and improvements in the near term improvements list to leverage added service or other capital enhancements. TriMet has been awarded two Statewide Transportation Improvement Program (STIP) projects (Highway 8 Corridor Safety and Access to Transit) for improved safety, active transportation, access to transit and transit operations by improving bus stops, constructing landing pads, and enhancing crossings. ODOT will be enhancing two pedestrian crossings, infilling sidewalks, consolidating bus stops, providing transit queue jumps at one location and improving a bus stop For the second application (between 110th Avenue and SW 209th Avenue on TV Hwy), the project will enhance four pedestrian crossing locations, install buffered bike lanes between 153rd and 182nd Aves, consolidate bus stops, install illumination, ped actuation and signal interconnect at 141st/142nd and 174th, install physically separated walkways and bike lanes on bridge sections between 153rd and 160th Ave and the between 30th and 40th Aves.
- Reduce vehicle turn movements to/from driveways on TV Highway. This would improve safety and mobility of pedestrians, bicyclists, and motorists on TV Hwy. Further access consolidations are recommended in conjunction with other property redevelopment.

<u>Long Term Refinement Planning Needs</u>

The refinement plan was unable to adequately address some longer term planning aspirations for the corridor. The following should be addressed as part of a future corridor refinement plan:

- The preferred location (e.g. on or adjacent to Tualatin Valley Highway) and most viable transit mode (e.g., bus rapid transit, express bus service, light rail, streetcar, or commuter rail) and amount of right-of-way needed for a long-term HCT solution for Tualatin Valley Highway. This transit alternative analysis study may explore enhanced signal operations for transit and/or the viability of a Business Access Transit (BAT) lane in appropriate locations. The Moving Forward TV Highway Enhanced Transit and

Access Plan will determine the nature and feasibility of HCT in the corridor primarily between 160th and Cornelius Pass Rd.

- The location of a multi-use pathway parallel to Tualatin Valley Highway as per the Tualatin Valley Trail Concept Plan.
- The location of new local street connections, in concert with access management along Tualatin Valley Highway.
- While grade separated intersections are not included in the plan, it is recognized that in the long term, all tools should be considered to maintain acceptable intersection performance to serve future transportation and community needs.

8.2.4.5 Powell-Division Corridor: Portland Central City to Lents Town Center and Lents Town Center to Gresham Regional Center (Mobility Corridors 19 and 20)

The Powell-Division Corridor is included in Mobility Corridors #19 and #20. The Mobility Corridor Strategy identified in 2014 RTP Appendix 3.1 notes that both corridors are anticipated to experience high levels of growth in employment and population by the year 2040.

A number of investments are needed in these corridors to address existing deficiencies and serve increased travel demand.

The Powell-Division Transit and Development Plan alternative analysis identified a project – now called the Division Transit Project - that addresses some of the needs identified for the Powell-Division Corridor by improving transit and safety on Division Street with a bus rapid transit project. The Division Transit Project went into revenue service in September 2022. The Division Transit Project does not fully address the transit, safety, and mobility needs that remain on Powell Boulevard.

The Division Transit bus rapid transit project traverses from downtown Portland to downtown Gresham on Division Street through southeast Portland. Project partners recognized that Powell Boulevard improvements are still needed to address safety and mobility needs for all modes and supply essential transit connections in this corridor. Also, a number of steering committee members qualified their votes of support for the Locally Preferred Alternative as contingent upon a commitment to further study Powell Boulevard to address safety and mobility needs moving forward. Based on community feedback and analysis during the Powell-Division Transit and Development project, the City of Portland included language documenting this recommendation in their LPA adopting resolution, as follows:

BE IT FURTHER RESOLVED, that Metro advance Powell Boulevard for regional consideration and prioritization within the High Capacity Transit planning process, and amend the Regional Transportation Plan to assert continued need for Powell Boulevard transit improvements.

The Powell-Division Corridor is included in Mobility Corridors #19 and #20. The Mobility Corridor Strategy identified in 2014 RTP Appendix 3.1 notes that both corridors are anticipated to see high levels of growth in employment and population by the year 2040.

Mobility Corridor #19 provides an important connection between the Portland Central City and the Lents Town Center and provides important freight access to rail facilities at Brooklyn Yard and access from Powell Boulevard and McLoughlin Boulevard to the Central Eastside Industrial District. This corridor also serves statewide and regional travel on Powell Boulevard (US 26), which serves as a statewide and regional freight route between I-5 and I-205.

The corridor does not meet regional performance thresholds (does not perform as it should) for its throughways (Powell Boulevard) and arterials (Division and Holgate streets) as defined in the RTP due to high volume to capacity ratios.

Strategies adopted in 2014 RTP Appendix 3.1 to improve the corridor include:

Near term:

- System and demand management along Powell Boulevard and parallel facilities for all modes of travel.
- Improved, safe pedestrian and bicycle crossings of Powell Boulevard.
- Modify existing signals, coordinate and optimize signal timing to improve traffic operations on Powell Boulevard.
- Prioritize and construct safety and streetscape improvements from SE 50th to SE 84th Avenue.

Medium term:

- Improve safety by all modes and enhance opportunities for use of bicycles, walking and transit on Powell Boulevard.
- Identify and implement potential changes to the cross section of Foster Road based on the Foster Streetscape Plan.

The Oregon Department of Transportation (ODOT) is constructing improvements to help people get around busy Outer SE Powell Boulevard more safely. The Outer Powell Transportation Safety Project stretches between I-205 and Portland/Gresham city limits,

just east of SE 174th Avenue. These safety improvements will reduce the frequency and severity of crashes and help vehicles, pedestrians, transit and bicyclists share the road with fewer conflicts.

Roadway, bike and pedestrian safety improvements include:

- Sidewalks where there are none now
- Mix of separated and sidewalk level bike lanes
- Center turn lanes for cars, buses and trucks for safer turns and to reduce back-ups
- Storm drains to prevent water from pooling on the road
- Lighting for improved visibility
- New waterline in some areas
- New traffic signals
- Mid-block flashing light pedestrian crossing beacons (Rectangular Rapid Flashing Beacons) to alert drivers that people are crossing the street

ODOT expects completion of construction in 2024.

Additionally, for the segment of SE Powell Boulevard between the Ross Island Bridge and I-205, ODOT is working with the City of Portland to implement safety investments such as enhanced crossings and speed feedback signs, and studying roadway configuration options to increase safety for all users.

Mobility Corridor #20 provides an important connection between the Lents Town Center and the Gresham Regional Center. The corridor provides important freight access, connecting I-205 to Gresham and the Springwater Industrial Area. In addition, the corridor serves statewide travel, connecting to routes that lead to destinations outside the region such as the Mt Hood Recreational Area and Sandy Oregon.

Similar to Mobility Corridor #19, Mobility Corridor #20 is expected to experience high levels of employment and population growth by 2040 and does not meet regional performance thresholds for its throughways (Powell Boulevard) and arterials (Division and Foster streets) as defined in the Regional Transportation Plan due to high volume to capacity ratios.

Strategies adopted in 2014 RTP Appendix 3.1 to improve the corridor include:

- Near term: System and demand management along the Powell Boulevard and parallel facilities for all modes of travel.

- Medium term: Implement a three-lane cross-section on Powell Boulevard from I-205 to SE 174th Avenue with bicycle and pedestrian improvements.
- Long term: Implement additional capacity enhancements along Powell Boulevard from 162nd to 174th Avenue as needed. Additional enhancements may include intersecting north-south streets along Powell Boulevard.

8.2.4.6 Hillsboro to Portland (Mobility Corridors 13 and 14)

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Washington County is growing faster than its neighbors in the region, and with that growth comes an increased need to move more people and freight. The Sunset Highway (US 26) Corridor is a critical thoroughfare for residents, commuters, and the regional economy, but current conditions result in vehicle congestion, diversion, and unreliable travel times for people driving, riding transit, and moving freight. These transportation deficiencies adversely affect the safety, affordability, and livability of the area and can impede economic competitiveness.

Centered on the US 26 (Sunset Highway) from Hillsboro to Portland, the Westside Multimodal Improvements Study was recommended in the 2018 RTP and kicked off in January 2022. The study's purpose was to address transportation challenges that affect the movement of people and goods between Hillsboro's Silicon Forest, Northern Washington County's agricultural freight, and the Portland Central City, the international freight distribution hub of I-5 and I-84, the Port of Portland marine terminals, rail facilities, and the Portland International Airport.

ODOT and Metro co-managed the study in partnership with local agencies, business representatives, and community-based organizations. The study was guided by a Project Management Group, made up of technical staff from partner agencies, and a Steering Committee composed of decision-making representatives from each of the agencies that have jurisdiction or ownership of infrastructure or systems considered in the planning process. An analysis of existing conditions data helped to define the issues and needs within the corridor and are framed here in the context of five priority areas: mobility and reliability, safety, social equity, climate action, and economic vitality.

Mobility and Reliability

Corridor #13, which extends east to the Willamette River including the western portion of Portland's Central City and Corridor #14 extending west from Murray Boulevard to North

Plains will account for 22 percent of the region's households, 20 percent of the region's population, and 31 percent of the region's employment by 2040.

Since the Covid-19 pandemic, we've seen changes in travel patterns, including fewer people transit, fewer people commuting daily to workplaces, and more people working from home or on flexible schedules. Meanwhile, jobs that require in-person attendance such as manufacturing, agriculture, retail, hospitality and maintenance are often not centrally located and may have work shifts that cover 24 hours of the day. These changes have resulted in afternoon traffic congestion occurring earlier in the day and lasting longer than before the pandemic.

Corridor #13, which includes the Sunset Highway and its array of complementary parallel arterial roadways (Cornelius Pass Road, Germantown Road, Cornell Road, Barnes/Burnside Road, and Beaverton-Hillsdale Highway), carries approximately 229,150 vehicles per day comprising roughly 390,000 person-trips per day. Of the total vehicle trips, Sunset Highway carries 160,000 vehicles per day, including 6,000 trucks, and Cornelius Pass Road serves approximately 11,000 vehicles per day.

At present, transit carries approximately 18,710 person-trips per weekday on the MAX Blue Line, the MAX Red Line, and multiple bus lines serving the parallel arterials in the corridor. Of those total trips, approximately 11,500 occur on the MAX Blue and Red Lines. Bus lines serving the Sunset Highway corridor include Line 47 (720 weekday boardings), Line 48 (1200 average weekday boardings), Line 57 (5,240 average weekday boardings) and Line 59 (50 average weekday boardings). This is a decrease from pre-pandemic transit use. TriMet plans to open the western extension of the MAX Red Line to Hillsboro's Airport/Fair Complex Station in fall 2024.

The existing transit network in the westside of the Metro area has limited north-south bus routes, some routes have infrequent service, and may require multiple transfers to reach a destination. Efforts such as TriMet's Forward Together concept, the Washington County Transit Study, and Metro's High-Capacity Transit Strategy include plans for transit enhancements and future investments to meet existing transit needs and accommodate future growth in the Westside Corridor.

Economic Vitality

The Sunset Highway corridor is a major employment center in the region. Many of the region's top private employers call the area home including Intel, Nike, Tektronix, Reser's Fine Foods, Qorvo, and Salesforce, among others. Top public sector employers include local school districts, city and county governments, hospitals, and health care providers.

The semiconductor industry expansion presents Oregon with an opportunity to create the kind of jobs and investment the state needs for a strong economy, and this area is often referred to as Oregon's "Silicon Forest." In July 2022 Congress passed the $52 billion CHIPS Act to boost domestic semiconductor manufacturing and design. This creates an opportunity to solidify Oregon's position as a world leader in semiconductor innovation and expand semiconductor design and manufacturing development in Washington County. New industrial development will place additional demand on our transportation system and a greater need for freight mobility and reliability through the Sunset Highway corridor.

Outreach done during the Westside Multimodal Improvements Study reinforced freight-related concerned identified during the 2013 *Westside Freight Access and Logistics Analysis* Oregon's export economy relies heavily on the computer and electronics industry, which accounts for over 60% of state's exports, and valued $15 billion in 2021. This industry is primarily located in the region's Westside, and depends on a tightly managed supply chain to efficiently bring products to markets that are mostly outside of the greater Portland area. Addressing freight mobility challenges experienced by the Westside computer and electronics industry will likely also benefit the footwear, apparel, medical/dental, biopharma and agriculture industries in Washington County.

Freight movement between the Westside industries and the PDX freight consolidation area and the Portland International Airport depends on two routes:

- US 26 eastbound to I-405 northbound to I-5 Northbound to Columbia Boulevard; and
- Cornelius Pass Road northbound to US 30 southbound to Columbia Boulevard via the St. Johns Bridge.

US 26 eastbound between Highway 217 and I-405 ranks among the top bottlenecks in the region. Travel times can vary up to 20 minutes or more for a typical trip from Hillsboro's employment areas to PDX, due largely to traffic on US26. This lack of reliability means that freight haulers and commuters can't be certain how long a trip will take them, leading to lost productivity. US26 has the highest freight volume of all non-interstate highways in the region, but freight trips make up just five percent of total trips on US26. Meanwhile, freight trips account for sixteen percent of total trips on Cornelius Pass Road, indicating it is a preferred route for many freight haulers.

Work commute estimates based on Street Light Data indicate that a significant number of people commute into the area for work. Data shows that about 97,000 people per weekday commute to the Westside Multimodal Improvements Study area. About 27,000 both live and work in the study area and have local commute trips, while another 64,000 people live in the study area and commute to jobs elsewhere in the region.

Safety

Many of the key arterials in the Sunset Highway Corridor are identified among Metro's 2016-2020 High Injury Corridors. These are roadways in the greater Portland area where the highest concentrations of serious crashes involving a motor vehicle occur. The top five most dangerous corridors within the study area include: Tualatin Valley Highway, Baseline Rd, Cornell Rd, Cornelius Pass Rd, and Farmington Rd. A total of 15,000 crashes occurred between 2015-2019 in the study area, with 53% of crashes resulting in injury. Of these, 223 crashes involved pedestrians and 188 crashes involved bicyclists.

With congestion becoming more pervasive on US 26 in the area of the Vista Ridge Tunnels and the I-405 interchange, traffic crashes have continued to increase. Cumulatively, there are 10 discreet locations on US 26 between I-405 and Highway 217 that rank in the state's top 10 percent of crash high-priority locations statewide.

Sunset Highway at the Vista Ridge tunnels prohibits the hauling of hazardous materials. Petroleum products used to fuel vehicles in the Tualatin Valley and chemicals, including but not limited to industrial gases used in the manufacturing of silicon wafer products, commonly use Cornelius Pass Road with Highway 217 as the secondary route.

Both the Sunset Highway corridor and the secondary freight route of Cornelius Pass Road are susceptible to recurring incidents such as crashes, landslides, and trees blocking the roadways. In both cases, the regional transportation system lacks "redundancy" to accommodate any unforeseen impediments to travel. Similarly, both corridors (and their Willamette River bridges) are not likely to prove reliable and sustainable in the event of a Cascadia earthquake.

Social Equity

People living within the Sunset Highway corridor are more racially diverse than the region and state, with over 37% residents of color. Forty-five percent of households are renters, which is higher than the regional average.

Many areas throughout the corridor score high on TriMet's transit equity index, reflecting higher concentrations of people of color, low-income households, people with low English proficiency, people with disabilities, older adults, youth, households with poor vehicle access, access to affordable housing, access to low/medium wage jobs, access to services. Higher scores indicate a potential for higher need for increased transit service, particularly in areas south of US 26.

Climate

Land use patterns and past infrastructure investments in the study area prioritized auto vehicle travel, which contribute to continued reliance on personal vehicles to meet people's daily travel needs. This pattern results in high vehicle miles traveled (VMT) and contributes to greenhouse gas emissions from gasoline powered vehicles. Frequent congestion on US 26 and nearby facilities contributes to traffic diversion to other routes, increased vehicle miles traveled (VMT), inefficient vehicle operation, and vehicle idling, all of which contribute to greenhouse gas emissions in the region.

Recommended Transportation Investments

The Westside Multimodal Improvements Study produced a list of transportation investments that are intended to address the identified issues and needs in the Sunset Highway corridor. Investment options were evaluated based on how well they addressed mobility and reliability, safety, social equity, climate action, and economic vitality. The Westside Multimodal Improvements Study developed an Implementation Plan that outlines priority investments for the region to advance for future project development and funding, including project descriptions, lead agencies, cost ranges, benefits, issues, and dependent projects.

8.3 PROJECTS

8.3.1 Major Project Development

Transportation improvements where the need, mode, function and general location is identified in the RTP and local plans are expected to be further refined during detailed project development. For major projects, project development is generally completed jointly by affected or sponsoring agencies, in coordination and consultation with Metro. For purposes of the RTP, major projects are defined as large-scale, complex investments in the transportation system that typically cost $500 million or more regardless of the source of funding for the total project and is likely to receive state or federal financial assistance. Projects with total costs between $100 million and $500 million may also be considered major projects and are currently considered major projects for the purposes of the Metropolitan Transportation Improvement Program (MTIP). FHWA requires all projects with costs of $100 million or more to have financial plans updated annually. Major projects typically have a high level of public, legislative or congressional interest, may be constructed in multiple phases and are anticipated to go through one of the planning processes identified below.

The purpose of project development is to consider project design details and select a specific project alignment, as necessary, after evaluating engineering, management and design alternatives, potential environmental impacts and consistency with applicable comprehensive plans, the Oregon Transportation Plan and the RTP. The TPR defines project development as, "implementing the transportation system plan by determining the precise location, alignment and preliminary design of improvements included in the TSP based on site-specific engineering and environmental studies," (660-012-005 (36)). The project need, mode, function and general location do not need to be addressed again at the project level, since these decisions have been previously documented in the adopted corridor refinement plan or RTP project list.

For projects of regional significance with multiple jurisdictions, decisions may be documented through adoption of a Locally Preferred Alternative. Project development decisions for projects that qualify for a Categorical Exclusion under NEPA can be documented by other means in accordance with the responsible agency's procedures.

Once the RTP or corridor refinement plans have established mode, function, general location, and identified solutions, project development may also result in recommended phasing of improvements.

A summary of progress on major project development activities follows.

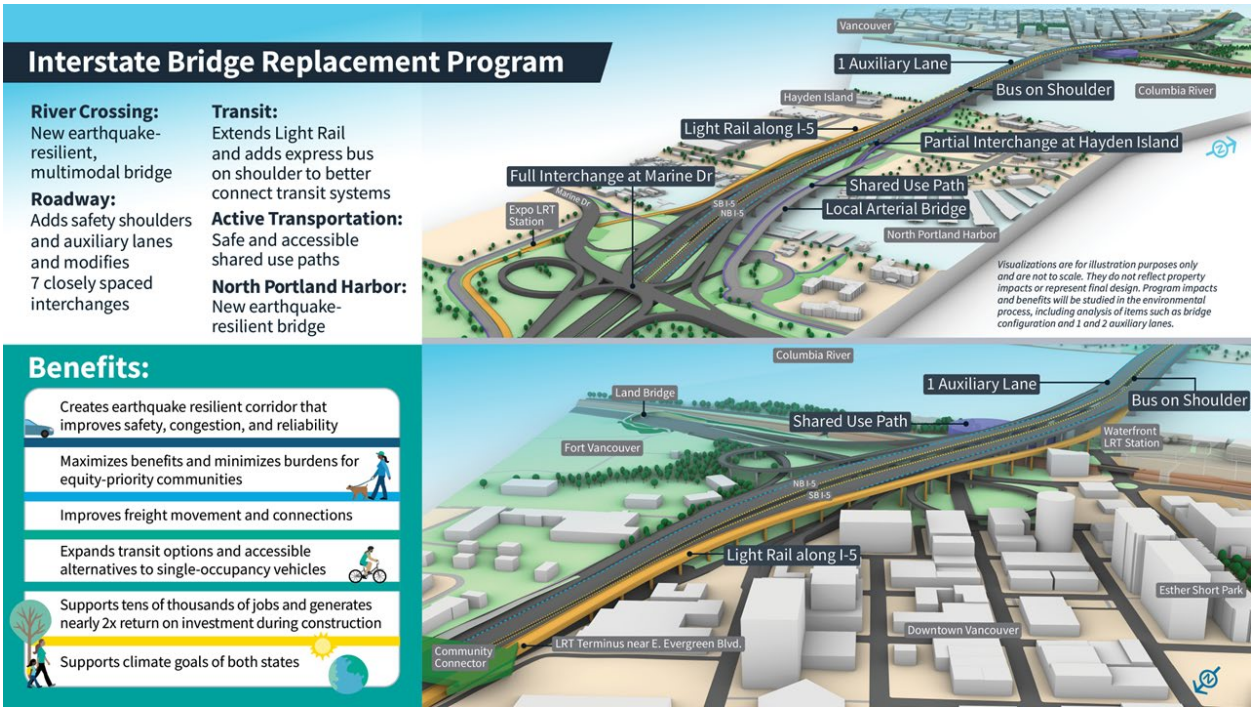
Table 8.5 Progress (as of 2023) on Major Project Development

Project	Status
Interstate 5 Bridge Replacement (IBR) Project	LPA approved in July 2008. Record of decision signed by FHWA in December 2011. Project development work discontinued in 2013 in Washington and 2014 in Oregon. Joint Washington and Oregon Legislative Action Committee discussions begin in 2017. Partner agencies confirmed support for Modified LPA Draft Supplemental Impact Statement in development, plan to publish Summer 2023
Sunrise Project and Sunrise Community Visioning Project	LPA approved in July 2009. Record of decision for Phase 1, Units 1, 2 and 3 signed by FHWA in February 2011. Sunrise Jobs and Transportation Act (JTA) Phase 1 related projects were completed in June 2016. Environmental approval received for improvements on OR 224 at Rusk Road. In May 2023, Clackamas County initiated the Sunrise Community Visioning Project to engage community in the development of improved safety and increased mobility in the corridor. This process will include an updated LPA for OR212 and OR224 from 205 to 172nd Ave (Phase 2 and Phase 3 of the original project). The visioning project will include PEL framework and will lead into the necessary NEPA updates to advance the LPA. The project will also include 10% design of the LPA.
Southwest Corridor Project	LPA approved in Nov. 2018. ROD received April 2022.
I-5 Rose Quarter Improvement Project	Supplemental Environmental Assessment published for public comment in 2022. Design phase in progress.
I-205 Abernethy Bridge and Phase 1A Construction	Construction is underway. Column work is underway and will lead to the construction of the crossbeams in late 2023. Major drilled shaft work is anticipated to be complete by Fall 2023. Mainline widening construction is anticipated to

	be complete by Fall 2025.
I-205 Toll Project	Environmental Assessment was published on Feb. 21, 2023. Environmental Assessment Public Comment Period ended April 21, 2023. Revised Environmental Assessment is anticipated as the next step.
I-5 & I-205 Regional Mobility Pricing Project	Planning and Environmental (PEL) phase was completed in Fall 2022. Environmental analysis process, under the National Environmental Policy Act (NEPA), was initiated in Nov. 2022. A scoping comment period was held from Nov. 18 to Jan. 6, 2023. Environmental Assessment publication is anticipated by the end of 2023, followed by a public comment period and then a Revised Environmental Assessment is expected in 2024.
I-5 Boone Bridge Replacement	The project is currently in the Planning and Environmental Linkages (PEL) phase. The National Environmental Policy Act (NEPA) class of action determination and preliminary planning activities are scheduled to be completed in late 2024 or early 2025.
Earthquake Ready Burnside Bridge	Preferred Alternative approved in March 2023. FHWA Record of Decision anticipated to be published in December 2023 Design Phase anticipated to start, July 1, 2023.
82nd Avenue Transit Project	Working towards an LPA in late 2023/early 2024. The NEPA process would begin in 2024 after early corridor design and FTA determination of class of action.
Tualatin Valley Highway Transit and Development Project	LPA anticipated late 2023

8.3.1.1 Interstate 5 Replacement (IBR) Program (previously Columbia River Crossing Project)

Figure 8.5 Interstate Bridge Replacement Program



The Interstate Bridge is a critical connection between Oregon and Washington, located on Interstate 5 where it crosses the Columbia River. Replacing the aging Interstate Bridge across the Columbia River with a modern, earthquake resilient, multimodal structure that provides improved mobility for people, goods, and services is a high priority for Oregon and Washington.

In July 2008, the Metro Council approved a Locally Preferred Alternative (LPA) for the Columbia River Crossing (CRC) project. In December 2011, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) approved the CRC LPA and issued a Record of Decision for the CRC project. The CRC project development work was discontinued in 2013 in Washington and in 2014 in Oregon. All six transportation problems identified during CRC remain unaddressed (congestion, earthquake vulnerability, safety, impaired freight movement, inadequate bike and pedestrian paths, and limited public transportation).

The Interstate Bridge Replacement (IBR) program (as depicted in Figure 8.5) is a renewed effort jointly led by the Oregon Department of Transportation and the Washington State Department of Transportation in collaboration with eight regional partner agencies: Oregon Metro, Southwest Washington Regional Transportation Council, TriMet, C-TRAN, City of Portland, City of Vancouver, Port of Portland, and Port of

Vancouver. These partners serve on an Executive Steering Group that provides regional leadership recommendations to the program. The IBR program continues to work with the program partner agencies, stakeholders, and public to identify the best possible multimodal solution.

In December 2021, FHWA and FTA provided their joint determination that a Supplemental Environmental Impact Statement (SEIS) is necessary to identify and disclose potential adverse impacts and mitigation that could result from changes that have happened since the 2011 CRC Record of Decision. The IBR program is leveraging work from previous planning efforts (CRC) where appropriate and updating prior studies to integrate new data, regional changes in transportation, land use, and demographic conditions, and public input to inform program development work.

Through planning work and community outreach, the IBR program confirmed the six transportation problems identified in CRC still exist, and also added equity and climate as priorities. To address the physical and contextual changes that have occurred in the program area since 2013, the IBR program developed design options, desired outcomes, and transit investments in coordination with program partners and input from the community.

The design options were analyzed and narrowed down to a recommended Modified Locally Preferred Alternative (LPA). The Modified LPA was approved by the boards, councils, and commissions of each of the eight local partner agencies in the summer of 2022. In July 2022, the Executive Steering Group reached a unanimous recommendation to move the program's recommended Modified LPA into the federal environmental review process for further study.

The Modified LPA refers to an agreed upon set of components that will be further evaluated through the federal environmental review process as required by NEPA to better understand the benefits and impacts. The Modified LPA is not the final design of the replacement bridge, but it is a key milestone, setting the direction for the program as we start to test and evaluate plans for a new multimodal river crossing system. In some instances, multiple design concepts are being studied (e.g., park and ride locations, bridge configuration and roadway alignment) to better understand the range of impacts and better optimize the design.

Elements of the Modified LPA currently being studied includes:

- Replacing the Interstate Bridge over the Columbia River
- Replacing the North Portland Harbor Bridge over the Columbia Slough connecting Hayden Island to North Portland

- Constructing three through-lanes northbound and southbound throughout the program corridor with safety shoulders and the addition of one auxiliary lane in each direction
- Connecting existing transit systems by extending light rail transit from Expo Center in Portland to Evergreen Boulevard in Vancouver in a dedicated guideway adjacent to I-5 , including new bus on shoulder facilities in the project area, and connecting to C-TRAN's current and future Bus Rapid Transit lines as described in adopted regional plans
- Improving seven interchange areas within the program area corridor:
    - Victory Blvd
    - Marine Drive
    - Hayden Island
    - SR 14
    - Mill Plain Blvd.
    - 4th Plain Blvd.
    - SR 500
- Active transportation and multimodal facilities that adhere to universal design principles and facilitate safety and comfort for all ages and abilities including local and cross-river connections
- Variable rate toll on motorists using the river crossing to manage demand and generate revenue for construction and facility operations and maintenance
- A commitment to establish a GHG reduction target relative to regional transportation impact, and to develop and evaluate design solutions that contribute to achieving program and state-wide climate goals.
- A commitment to evaluate program design options according to their impact on equity priority areas with screening criteria such as air quality, land use, travel reliability, safety, and improved access to all transportation modes and active transportation facilities. The Program also commits to measurable and actionable equity outcomes and to the development of a robust set of programs and improvements that will be defined in Community Benefits Agreement.

The federal environmental review process, and corresponding environmental studies, will determine how the IBR program will move forward and what necessary work is needed to avoid, minimize, or mitigate negative effects to the physical and built environment. The IBR program will disclose the findings of the environmental evaluation in a Draft SEIS,

which is anticipated to be published in late 2023 for public review and comment. After the public comment period closes, the Modified LPA will be refined in response to public input and other design considerations. Refinements will result in a combined Final SEIS and Amended Record of Decision issued by FHWA and FTA, anticipated in late 2024. At this stage, the IBR program will be able to apply for permits, update cost estimates, and further design. Construction is anticipated to begin as early as late 2025.

In December 2022, the IBR program released a cost estimate that reflects the Modified LPA components and includes updated market assumptions and program specific risk potential and cost savings opportunities. The current cost estimate ranges from $5 - $7.5 billion, with a most likely cost of $6 billion. The IBR program assumes a combination of a variety of funding sources, including state, federal and toll revenue.

Anticipated IBR Program Funding Sources:

Source	Amount in Millions of Dollars
Existing State Funding	$100 M
Connecting WA Funding—Mill Plain Interchange	$98 M
Move Ahead WA Funding	$1,000 M
Anticipated Oregon Funding	$1,000 M
Toll Funding	$1,250 – 1,600 M[1]
Federal Grants	$860 – 1,600 M[2]
FTA New Starts CIG Funding	$900 – 1,100 M
Anticipated Total	**$5,208 – 6,498 M**

[1] *This range is consistent with CRC toll funding estimates. A Level 2 toll traffic and revenue study for IBR is underway and will be reviewed by both states. This range is a placeholder until spring 2023.*

[2] *Federal grant funding is unknown but being actively pursued. The top of this range is optimistic. The range will be refined as more information becomes available. Includes $1M FHWA BIP grant already received.*

8.3.1.2 Sunrise Project and Sunrise Community Visioning Project

The Sunrise Corridor is an essential freight route from I-5 and I-205 to U.S. 26 and central and eastern Oregon. It provides access to the Clackamas Industrial Area, home to one of the state's busiest and most critical freight distribution centers and the City of Happy Valley Rock Creek Employment Center with over 200 acres of employment and industrial land. The OR 212/224 corridor is currently failing and is not capable of handling the expected increase in traffic resulting from significant community development and industrial expansion in the corridor.

In July 2009, the project's Policy Review Committee (PRC) selected the Preferred Alternative for the Sunrise Project. The Preferred Alternative is Alternative 2 as studied in the Supplemental Draft Environmental Impact Statement with Design Options C-2 and D-

3 and a portion of Design Option A-2 (Tolbert Overcrossing). A detailed description and map of the Sunrise Project original Preferred Alternative is included in Appendix Q.

FHWA, ODOT and Clackamas County completed the Final Environmental Impact Statement (FEIS) for the Sunrise Project and on February 22, 2011, the FHWA signed a Record of Decision (ROD) that approves the Sunrise Corridor Preferred Alternative.

The Sunrise Jobs and Transportation Act (JTA) Project constructed a new 2.5 mile road from I-205 to 122nd Avenue (as part of the larger Sunrise Project). The Oregon Legislature approved $100 million in JTA funding for this project, which was built to address congestion and safety problems in the OR 212/224 corridor and improve local roadway connections to the Lawnfield Industrial District. Construction for the JTA phase of the Sunrise Project was completed in June 2016 and opened for use on July 1, 2016.

During development of Metro's 2020 Funding measure the Sunrise Project underwent extensive redesign based on public input and feedback from the taskforce. The effort culminated in a "right sized" cross section including 2 lanes in either direction and a suite of pedestrian and bicycle improvements on existing Highway 212.

In 2021 the Oregon State Legislature allocated $4 Million dollars for the Sunrise Gateway Community Corridor Visioning Project to create a vision for the corridor through meaningful partnerships with the people who live, work and own businesses in the area. This project will analyze transportation and land use scenarios that also consider economic opportunities, community health, equity, other infrastructure, open space, and housing for the Sunrise Gateway Corridor along Highway 212 from 122nd Avenue to 172nd Avenue. The Project will employ meaningful community engagement to create a vision that will identify challenges and opportunities to increase the safety and viability of the corridor for years to come.

One of the products of this visioning project will be an updated LPA for the Sunrise Corridor based upon the updated cross section developed during Metro's 2020 funding measure. The project will be guided by the PEL framework and will lead into the update to the NEPA approval from the 2011 FEIS.

Future phases of the Sunrise Project include the design and construction of improvements between SE 122nd Avenue and SE 172nd Avenue.

8.3.1.3 Southwest Corridor Transit Project

The Southwest Corridor Plan is a comprehensive effort focused on supporting community-based development and placemaking that targets, coordinates and leverages public investments to make efficient use of public and private resources. The work was guided by a Steering Committee comprised of representatives from the cities of

Beaverton, Durham, King City, Portland, Sherwood, Tigard and Tualatin; Washington County; and TriMet, ODOT and Metro. Steering Committee members agreed to use a collaborative approach to develop the Southwest Corridor Plan and a Shared Implementation Strategy to align local, regional, and state policies and investments in the corridor. In August 2011, the Metro Council adopted Resolution No. 11-4278 that appointed the Southwest Corridor Steering Committee, and a charter defining how the partners will work together was adopted by the Steering Committee in December 2011.

In October 2013, the Metro Council adopted Resolution No. 13-4468A, endorsing the Southwest Corridor Shared Investment Strategy and directing staff to coordinate and collaborate with project partners on refinement and analysis of high capacity transit (HCT) alternatives and local connections in the Southwest Corridor, along with associated roadway, active transportation and parks/natural resource projects that support the land use vision for the corridor. This resolution also directed staff to work with project partners to involve stakeholders at key points in the process and seek input from the public.

In June 2014, the Metro Council adopted Resolution No. 14-4540, which included direction to staff to study the Southwest Corridor Transit Design Options under NEPA in collaboration with the Southwest Corridor Plan project partners and with the involvement of stakeholders and public, pending Steering Committee direction on the results of the focused refinement analysis

The Southwest Corridor Light Rail Project emerged as the preferred high capacity transit investment of the Southwest Corridor Shared Investment Strategy. The project is a proposed 11-mile MAX light rail extension serving SW Portland, Tigard, Tualatin and the surrounding communities. The proposed project also includes bicycle, pedestrian and roadway projects to improve access to light rail stations. In compliance with NEPA, and at the direction of the Metro Council, an Environmental Impact Statement (EIS) was prepared by Metro, TriMet and FTA. The Draft EIS, released in summer 2018, assessed the project alternatives remaining from over three years of analysis refinement and suggested ways to avoid, minimize or mitigate significant adverse impacts. The information disclosed in the Draft EIS, and public and agency comments on the Draft EIS, informed the Southwest Corridor Steering Committee in its recommendation of a LPA. In November 2018, the Metro Council adopted Resolution No. 18-4915 approving the Southwest Corridor LPA. The LPA is included in the RTP.

The Final EIS was completed in January 2022 and the project received a Record of Decision in April 2022.

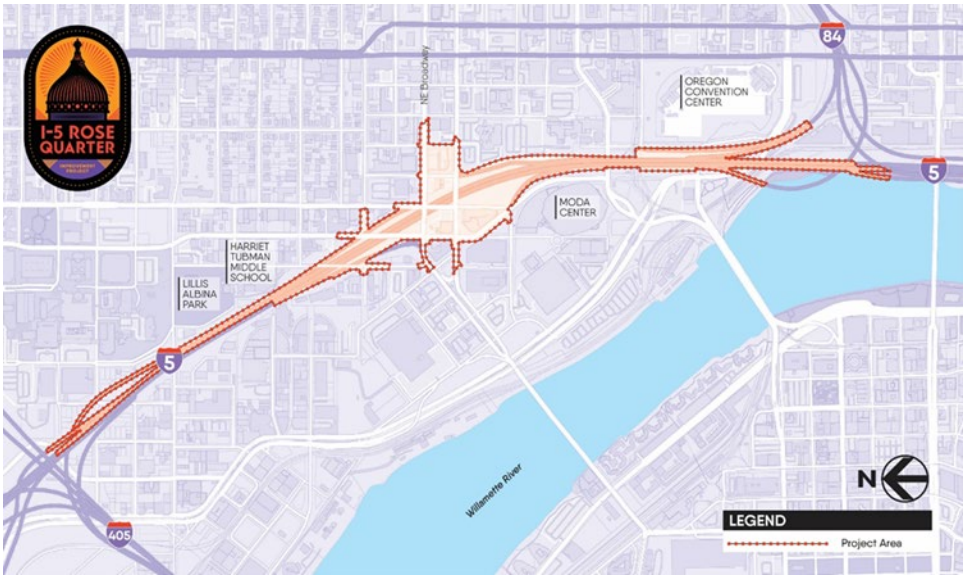
TriMet entered into FTA New Starts Project Development with in late 2018. Major Project Development activities took place in 2019 and 2020. Unfortunately, the project

development activities, except NEPA, were put on pause in late 2020 when the regional transportation funding measure did not pass. The project officially withdrew from New Starts project Development in July 2022.

Project leaders will reconvene in 2023 to discuss updated cost and ridership projections and begin conversations about possible paths forward for the project, which remains a regional priority.

8.3.1.4 I-5 Rose Quarter Improvement Project

Figure 8.6 I-5 Rose Quarter Improvement Project Location



The purpose of the I-5 Rose Quarter Improvement Project is to improve the safety and operations on I-5 between I-405 and I-84, at the Broadway/Weidler interchange, and on adjacent surface streets in the vicinity of the Broadway/Weidler interchange, and to enhance multimodal facilities in the Project Area. In achieving the purpose, the Project also would support improved local connectivity and multimodal access in the vicinity of the Broadway/Weidler interchange and improve multimodal connections between neighborhoods east and west of I-5. Additional project benefits include improving safety and mobility on local streets, creating new space and new infrastructure to support community development with the construction of a highway cover over a portion of I-5 and developing a diverse and skilled workforce.

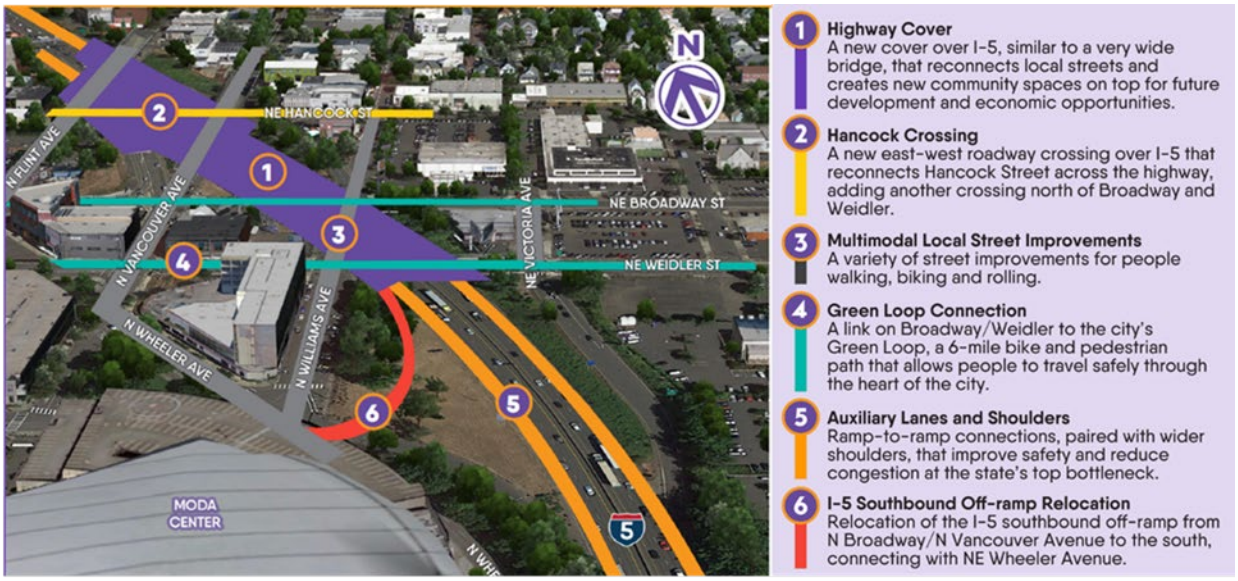
This 1.8-mile stretch of highway is the only two-lane section of I-5 in a major urban area between Canada and Mexico. It has the highest crash rate on any urban interstate in Oregon and is the state's top traffic bottleneck. The project addresses the critical need to keep Oregon's people and economy moving. Key elements of the project design include:

- New ramp-to-ramp connections (auxiliary lanes) in each direction of I-5 between I-84 and I-405 to reduce vehicle weaving, create safer merging and improve connections between interchanges.
- Wider shoulders in each direction of I-5 between I-84 and I-405, providing space for stalled vehicles to move out of traffic and for emergency vehicles to respond to emergencies more quickly (this includes adding 12-foot-wide outside shoulders SB from Broadway off-ramp to the I-84 off-ramp and NB from I-84 on-ramp to I-405 off-ramp and adding 8 foot-wide inside shoulders in both directions, except under the highway cover where shoulders would be 5 feet wide).
- A highway cover over I-5 that reconnects local streets and creates new community spaces on top for future development and economic opportunities.
- A new east-west roadway crossing over I-5 that reconnects Hancock Street across the highway, adding another crossing north of Broadway/Weidler.
- Enhanced bicycle and pedestrian facilities on Broadway and Weidler to facilitate the City of Portland's Green Loop, a planned 6-mile bike and pedestrian path that allows people to travel safely through the heart of the city.
- Multimodal local street improvements including wider paths, curb ramps that are accessible in accordance with the Americans with Disabilities Act (ADA) and better lighting for people walking, biking and rolling.
- Relocation of the I-5 southbound off-ramp to maximize space for new developable land on the highway cover.

Figure 8.6 shows the project location and **Figure 8.7** the project features.

More information is available at www.i5rosequarter.org.

Figure 8.7 I-5 Rose Quarter Improvement Project Features



Source: ODOT

In accordance with the National Environmental Policy Act, ODOT prepared and published an Environmental Assessment (EA) in 2019, and a Supplemental EA in 2022. Both times, the process included an opportunity for the public to review the findings and comment on the analysis. The Federal Highway Administration (FHWA) reviews all findings and public comments before making an environmental decision on a project. In response to public comment received on the 2022 Supplemental EA, project design refinements and updated technical analysis are underway and will be reflected in a Revised Supplemental EA that will accompany the environmental decision by the FHWA, expected by early 2024. Final design and construction will begin following completion of the environmental decision document.

The project team will continue refining the design based on community input, including based on the public comments received during the 2022 Supplemental Environmental Assessment phase, and working with the City of Portland on a Community Framework Agreement to define the future development scenarios for the new highway cover land.

8.3.1.5 I-205 Abernethy Bridge and Phase 1A Construction

Phase 1A of the I-205 Improvements project will upgrade the Abernethy Bridge to withstand a major earthquake and will be the first earthquake-ready interstate structure across the Willamette River in the Portland metropolitan area.

In addition to the seismic upgrades, the project will add auxiliary lanes across the Abernethy Bridge in each direction. This phase of the project will also include interchange improvements to the interchanges directly north and south of the Abernethy Bridge at OR 43 and OR 99E, respectively. The interchange improvements will make travel safer, resulting in fewer crashes and better travel-time predictability. These improvements include removal of the current I-205 northbound on-ramp from OR 43. This will be replaced with a roundabout to access I-205 northbound. This will reduce crashes and conflicts with movements to and from OR 43. The project will also realign and widen the OR 99E on and off ramps providing added capacity.

The project also includes construction of a sound wall near the southbound lanes of I-205 at Exit 9 and new pedestrian and bicycle facilities around OR 43 and OR 99E to increase comfort for people walking and biking in these areas. Construction began in June 2022 and is expected to end in fall 2025. Financing for this project was possible with financing tools authorized in HB3055 during the 2022 legislative session.

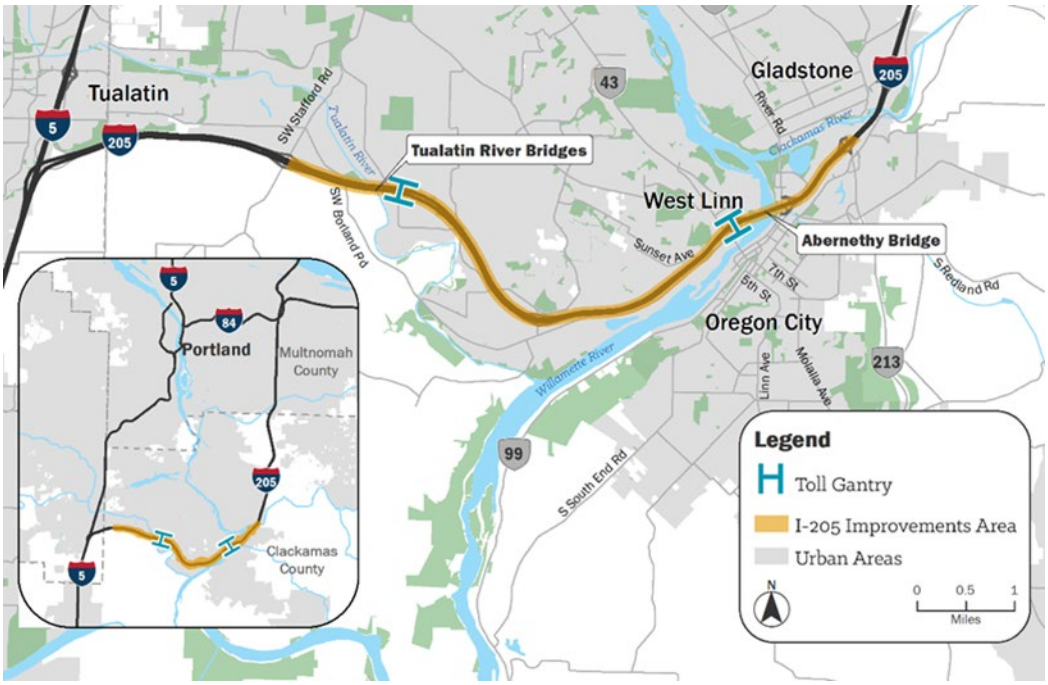
Figure 8.8 I-205 South Widening and Seismic Improvements Project Area Map

8.3.1.6 I-205 Toll Project (Includes Widening and Seismic Improvements)

The proposed I-205 Toll Project would implement variable-rate tolls on the Interstate-205 (I-205) Abernethy Bridge and Tualatin River Bridges to raise revenue for construction of planned improvements to I-205 and to manage congestion. Planned I-205 improvements that are part of the I-205 Toll Project include widening a seven-mile portion of I-205 to construct a third travel lane in each direction between the Stafford Road interchange and the OR 43 interchange; constructing a northbound auxiliary lane between OR 99E and OR 213; replacing or reconstructing eight bridges between Stafford Road and OR 213 to withstand a major seismic event, and installing Traveler Information

Signs (Active Traffic Management improvements). The I-205 Toll Project location is shown on Figure 8-9.

Figure 8.9 I-205 Toll Project Area Map



As directed by Oregon House Bill 2017 and the Oregon Transportation Commission, Oregon Department of Transportation (ODOT) prepared the Portland Metro Area Value Pricing Feasibility Analysis, which determined that congestion pricing could be used to help improve travel on I-5 and I-205 during peak times and raise revenue for congestion-relief projects. In December 2018, the Oregon Transportation Commission submitted a proposal to the Federal Highway Administration (FHWA) seeking approval to continue the process of implementing tolls on I-5 and I-205. The I-205 Toll Project is being evaluated under the National Environmental Policy Act (NEPA) process and is allowed under the federal tolling authorization program codified in 23 U.S. Code Section 129.

The planned I-205 improvements now included in the I-205 Toll Project were formally part of a different project, identified as the "I-205 South Corridor Widening and Seismic Improvements Project" in the 2018 Metro RTP (also referred to in environmental documentation and public information materials as the I-205: Stafford Road to OR 213 Improvements Project or, simply, the I-205 Improvements Project). In 2021, Oregon House Bill 3055 provided financing options that allowed the first phase of the I-205 Improvements Project to be constructed. This first phase, referred to as the I-205: Phase 1A Project (Phase 1A), includes reconstruction of the Abernethy Bridge with added auxiliary lanes and improvements to the adjacent interchanges at OR 43 and OR 99E. However, ODOT determined that toll revenue would be needed to complete the remaining

construction phases of the I-205 Improvements Project after Phase 1A. As such, the planned improvements (besides Phase 1A) were removed from the I-205 Improvements Project and accompanying 2018 NEPA Documented Categorical Exclusion and are now included in the I-205 Toll Project.

ODOT, in partnership with FHWA, has prepared an Environmental Assessment (EA) to evaluate the effects of the I-205 Toll Project on the human and natural environment in accordance with NEPA. The I-205 Toll Project responds to six key problems identified in the need statement: critical projects need construction funding; traffic congestion results in unreliable travel; traffic congestion affects freight movement; traffic congestion affects safety; traffic congestion contributes to climate change; and Oregon's highway system is not seismically resilient.

The EA was released for public and agency comment from February 21 to April 21, 2023. Following the comment period, ODOT may prepare a Revised EA that could include FHWA's and ODOT's responses to comments, additional environmental analysis as needed, and refinement and finalization of environmental commitments to avoid, minimize, and mitigate impacts. FHWA will issue a NEPA decision that could be a Finding of No significant Impact (FONSI). If a FONSI is issued, construction of the I-205 Project is expected to last approximately four years.

As Oregon's toll authority, the Oregon Transportation Commission will set toll rates, policies (including discounts and exemptions), and price escalation. As part of the Oregon Toll Program development, ODOT has committed to providing a low-income toll program when tolling begins. If tolling is approved, the Oregon Transportation Commission will ultimately set toll rates at levels sufficient to meet all financial commitments, fund Project construction and maintenance, and manage congestion. The Oregon Transportation Commission is expected to finalize toll rates about 6 months prior to toll implementation. ODOT could begin tolling in January 2026.

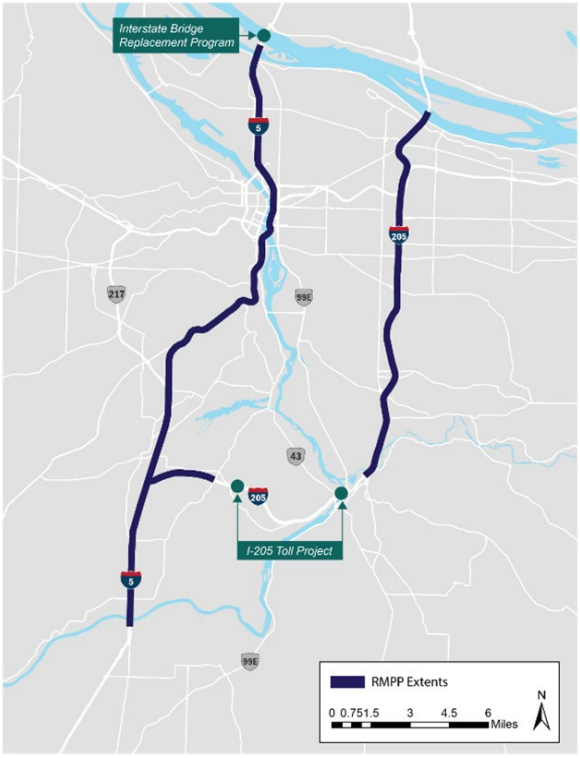
8.3.1.7 I-5 & I-205 Regional Mobility Pricing Project

The Regional Mobility Pricing Project (RMPP) will apply congestion pricing on all lanes of Interstate-5 (I-5) and Interstate-205 (I-205) to manage travel demand and traffic congestion on these facilities in the Portland, Oregon metropolitan area in a manner that will generate revenue for transportation system investments. The pricing varies by time of day according to a set schedule, which can be updated periodically by the Oregon Transportation Commission. Higher fees will be charged during peak travel periods (such as morning and evening peak hours) and lower fees during off-peak hours. Congestion pricing is intended to encourage motorists to plan travel in advance and allows traffic to flow more freely during peak times. The project is being developed with an all-electronic fee collection system.

The Regional Mobility Pricing Project would apply congestion pricing within the following extents, as determined by legislation, with the exact locations to be determined during the federal NEPA process:

- I-5 from the Hayden Island Drive interchange to, and including, the Boone Bridge over the Willamette River in Wilsonville.
- I-205 from the Glenn Jackson Bridge to OR 213 in Oregon City and I-205 between Stafford Road and I-5.

Figure 8.10 Regional Mobility Pricing Project Extents



These extents are shown in Figure 8.10. The exact locations where congestion pricing will be applied within the project limits will be determined during the federal National Environmental Policy Act (NEPA) process.

Following Oregon House Bill 2017, the Oregon Transportation Commission, and the Oregon Department of Transportation (ODOT) prepared the Portland Metro Area Value Pricing Feasibility Analysis, which determined that congestion pricing could be used to help improve travel times on I-5 and I-205 during peak times and raise revenue for congestion-relief projects. In December 2018, the Oregon Transportation Commission submitted a proposal to the Federal Highway Administration (FHWA) seeking approval to continue the process of implementing tolls on I-5 and I-205.

The Regional Mobility Pricing Project Planning and Environmental Linkages phase concluded in September 2022 and ODOT, with FHWA, initiated the environmental review phase under NEPA in November 2022. ODOT, in partnership with FHWA, is currently preparing an Environmental Assessment (EA) to evaluate the effects of the project on the human and natural environment in accordance with NEPA. The Regional Mobility Pricing Project responds to six key problems identified in the draft need statement: daily traffic congestion is negatively affecting the quality of life in the growing Portland region; traffic congestion adversely affects the Portland metropolitan area economy; state and federal transportation revenue sources are increasingly insufficient to fund transportation system needs; our regional transportation system must reduce greenhouse gas emissions by managing travel demand and congestion; a lack of comprehensive multimodal travel options in the Portland metropolitan region contributes to congestion and limits mobility; and the Portland metropolitan area's transportation networks have resulted in inequitable outcomes for historically and currently excluded and underserved communities.

Once the EA is complete, the document will be released for public and agency comment. Following the comment period, ODOT may prepare a Revised EA that could include FHWA's and ODOT's responses to comments, additional environmental analysis as needed, and refinement and finalization of environmental commitments to avoid, minimize, and mitigate impacts. FHWA will issue a NEPA decision that could be a Finding of No significant Impact (FONSI). If a FONSI is issued, ODOT will need to complete a Cooperative Agreement with U.S. Department of Transportation/FHWA for congestion pricing implementation under the Value Pricing Pilot Program[5] or recently created Congestion Relief Program.

As Oregon's toll authority, the Oregon Transportation Commission will set toll rates, policies (including discounts and exemptions), and price escalation. As part of the Oregon Toll Program development, ODOT has committed to providing a low-income toll program when tolling begins. More details about the low-income program are expected in 2023, following recommendations from ODOT's Statewide Toll Rulemaking Advisory Committee. The Oregon Transportation Commission is expected to finalize toll rates about six months prior to toll implementation.

[5] The U.S. Department of Transportation Federal Highway Administration Value Pricing Pilot Program is intended to demonstrate whether and to what extent roadway congestion may be reduced through application of congestion pricing strategies, and the magnitude of the impact of such strategies on driver behavior, traffic volumes, transit ridership, air quality and availability of funds for transportation programs. The Program provides tolling authority to State, regional or local governments to implement congestion pricing applications and report on their effects.

8.3.1.8 I-5 Boone Bridge Replacement

The Boone Bridge on I-5 represents a crucial link on one of Oregon's critical seismic

lifeline routes that connects the Portland metro area to the Mid-Willamette Valley and areas to the north and south. The Boone Bridge, which is over 60 years old and has been widened and modified over time, will require significant upgrades to withstand a major Cascadia Subduction Zone quake and enable I-5 to continue to serve as a primary West Coast route for passenger and freight movement stretching from Canada to Mexico. Lifeline routes will play a critical role in getting supplies and services to the region in the event of a significant seismic event or other catastrophe.

It is the only crossing of the Willamette River within 15 miles of the Wilsonville town center. This section of I-5 also experiences significant bottlenecks leading to safety concerns and poor travel time reliability. Inefficient merging and weaving caused by short merging areas results in congestion and crashes that reduce travel speeds and travel-time reliability. Without improvement, this bottleneck will continue to deteriorate, leading to slower travel, more costly freight movement, and higher safety risks for those who use I-5 and the surrounding transportation network. The project area also includes two of the top 10% Safety Priority Index System (SPIS) locations (e.g.. 2019 location on I-5 south of the bridge and a 2019 location near the Wilsonville Road interchange. The 2018 I-5 Wilsonville Facility Plan and Regional Transportation Plan identified solutions to address these issues.

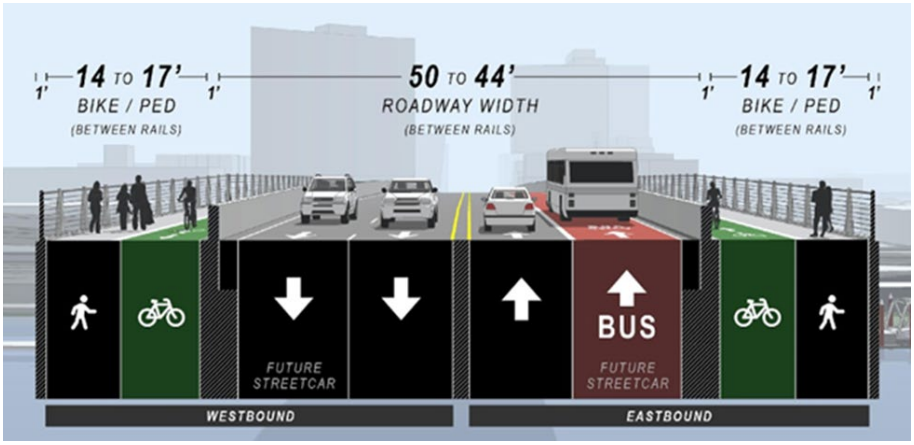
The 2023 RTP includes plans to replace Boone Bridge with a seismically resilient structure, preserve the current NB auxiliary lane and add an auxiliary lane on SB I-5 from Wilsonville Road to the Wilsonville-Hubbard Highway (OR 551). The auxiliary lanes address crashes due to short merging distances, closely spaced interchanges and frequently congested conditions both on and just south of the Boone Bridge. The project will also provide a standard 26 foot wide median and widen the outside shoulders to the current 12-foot standard width. The wider shoulders will provide opportunities for programs such as Bus on Shoulder. The Boone Bridge is at the edge of designated Urban Growth Boundary and small portion of the project falls outside the boundary at the south end of the project.

The first phase of the project is Planning and Environmental Linkages (PEL) which will include conceptual design, public involvement, transportation planning and analysis (i.e., travel patterns, demand), preliminary traffic engineering analysis, and land use analysis and other related consulting and technical advising services. It will conduct planning-level analysis and coordination that prepare materials to support the federally required National Environmental Policy Act (NEPA) process, anticipated to begin in 2025. Further analysis will be completed to refine project costs, advance project design, determine

bicycle, pedestrian, and public transportation access, conduct stakeholder engagement, develop and integrate an equity framework, evaluate land use impacts, coordinate with Regional Mobility Pricing Project analysis, determine the NEPA class of action, and prepare the purpose and need statement.

8.3.1.9 Earthquake Ready Burnside Bridge Project

Figure 8.11 Earthquake Ready Burnside Bridge Proposed Typical Cross Section



The Earthquake Ready Burnside Bridge Project will replace the existing 97-year old movable bridge in downtown Portland, Oregon with a new, seismically resilient bridge, providing Burnside Street, a regionally designated lifeline route, with a crossing of the Willamette River that would remain fully operational and accessible for vehicles and other modes of transportation immediately following a major earthquake. A seismically resilient Burnside Bridge will support the region's ability to provide rapid and reliable emergency response, rescue, and evacuation after a major earthquake, as well as enable post-earthquake economic recovery. The project is anticipated to infuse $545 million into the state and local economy and create a combination of short and long-term family-wage jobs, equivalent to approximately 6,200 job-years within Oregon.

Multnomah County initiated the federal environmental review process in 2019. The County, in partnership with the Federal Highway Administration (FHWA), issued a Draft Environmental Impact Statement (DEIS) in February 2021 that evaluated four build alternatives and identified one of those alternatives, the Long-span Replacement Alternative, as the project's recommended Preferred Alternative.

Following the issuance of the DEIS, additional cost and funding analysis identified a substantial risk that the construction costs would be too high to reasonably be able to fund, which led the County to evaluate ways to reduce construction costs while still meeting the Project's purpose and need. Cost reductions were proposed as refinements to the Preferred Alternative in a Supplemental Draft Environmental Impact Statement. They

included the reduction of vehicle lanes from five to four, selection of a girder style structure for west approach, selection of a bascule style movable span over the navigation channel, and a range of either a cable stay or tied arch option for east approach long span.

The County Board of Commissioners adopted the refined Preferred Alternative in March 2022 and the SDEIS was published in April 2022. In January and February of 2023, TPAC and JPACT, respectively, recommended the approval of the Preferred Alternative. In March 2023, Metro Council approved the Preferred Alternative. A combined Final Environmental Impact Statement and federal Record of Decision is anticipated in December 2023.

The Earthquake Ready Burnside Bridge, downtown Portland's first seismically resilient bridge, will include bike and pedestrian lanes separated from vehicular traffic by a crash-worthy barrier, an eastbound transit lane with the option to implement a westbound transit lane in the future, and the ability to accommodate a streetcar line identified in existing City of Portland planning documents.

The Project is estimated to cost $895M including design, right-of-way, and construction. Currently, $300M in local funds has been identified through the County's Vehicle Registration Fee. The Project is currently funded through the Design Phase. Once additional funding is secured, construction could start as early as 2025 and be completed by 2030.

Additional project information is available at: www.burnsidebridge.org

8.3.1.10 Tualatin Valley Highway Transit and Development Project

The Tualatin Valley (TV) Highway Transit and Development project is studying the feasibility of converting the existing TriMet Line 57 bus to a bus rapid transit (BRT) line through major federal investment. Metro is also supporting the creation of a community-led equitable development strategy (EDS) alongside the transit study to support community stability in the face of a major transportation investment in the corridor. The goal of the transit study is to identify a locally preferred alternative (LPA) that would enable partners to apply for federal funding of transit improvements. A BRT project would improve transit speed and reliability, making the bus more competitive with driving along this regional corridor. BRT investment would also improve corridor safety with station access infrastructure for pedestrians and provide a more dignified and attractive transit rider experience through improvements to stations such as shelters and lighting. The BRT project may be nested within or completed in tandem with a roadway project that more directly addresses the significant safety needs along this high-crash corridor, especially those of people walking, biking, and accessing transit.

The project Steering Committee, consisting of representatives from the cities of Forest Grove, Cornelius, Hillsboro, and Beaverton; Washington County; ODOT, TriMet and Metro; and four community representatives, is moving toward agreement on an LPA anticipated in late 2023. The LPA will cover the entire length of the corridor (Beaverton Transit Center to 19th and B Street in Forest Grove) and may include a minimum operable segment that defines an initial federal capital investment in a portion of the corridor.

The EDS was completed in June 2023 and approved by the TV Highway Equity Coalition (TEC), the body who guided its development. Strategies from this document are being advanced by government and nonprofit partners throughout the corridor and are independent of the implementation stage of the transit study.

8.3.1.11 82nd Avenue Transit Project

Metro, TriMet, the City of Portland, Clackamas County, ODOT, Multnomah County, and the Port of Portland as well as community members are collaborating to develop a rapid bus transit project in the 82nd Avenue corridor between Clackamas Town Center and a northern terminus yet-to-be-determined. In addition, Metro is working to support a community-led equitable development strategy (EDS) that will address community priorities outside of, but often-related to the transit project investment.

The 82nd Avenue corridor is a major route for the region connecting key destinations and communities in Clackamas County and Portland, Oregon and supporting the movement of people and goods in a diverse and growing area. The corridor serves many people who are part of BIPOC, limited English proficiency, and low-income communities, zero car households, or living with a disability. 82nd Avenue was once the primary north-south highway for the area before Interstate 205 was opened in 1983. Since then, the primary function of 82nd Avenue as a regional throughway has diminished, but its importance as a transit and pedestrian corridor has grown. The roadway continues to carry substantial amount of freight, auto, and bus traffic.

TriMet's Line 72 Killingsworth/82 serves the 82nd Avenue corridor and is the highest ridership bus line in TriMet's system , and exceeds ridership on the Orange and Yellow Max light rail lines. However, unlike light rail transit, the bus runs in mixed traffic and is often delayed. Line 72 is a frequent service route connecting riders to major destinations, high-capacity transit lines (the new Division FX2 and the MAX Green, Blue, and Red Lines), and over 20 bus routes just in the corridor. It is a workhorse with high ridership all day and weekends and saw relatively high retention of riders during the pandemic.

The need for a major transit improvement has been identified in multiple plans including the 2010 High Capacity Transit (HCT) System Plan, the 2018 Regional Transportation Plan (RTP), and the 2018 Regional Transit Strategy. In 2019, Metro's Transportation

Funding Task Force selected 82nd Avenue as a Tier 1 priority to include a bus rapid transit project investment. The steering committee has called for the project to address transit speed and reliability, safety, needs of transit-dependent communities in the corridor, and to reduce pollution and greenhouse gas emissions, while designing for a constrained physical environment.

The 82nd Avenue Transit Project would improve transit in the corridor by adding: new buses with greater capacity, improved pedestrian facilities and access, better lighting, transit signal priority and physical bus priority in the roadway to move the bus through congestion, and better stations with shelters, seating, lighting, and real time bus arrival information. The work will be integrated with the streetscape improvements both planned and underway.

The need is urgent with an unprecedented opportunity for an 82nd Avenue bus rapid transit project to leverage and complement a $185 million investment that the City of Portland, the State of Oregon, and regional partners are making as part of the 82nd Avenue jurisdictional transfer. These investments provide the opportunity to reimagine the corridor to improve safety and pedestrian facilities in conjunction with high-quality, frequent, reliable Bus Rapid Transit service. The City of Portland and ODOT are already making near-term safety, paving, and maintenance fixes that will improve access to transit. A second phase of that work is underway through the City's Building a Better 82nd Avenue program to identify additional improvements within Portland for the corridor. These improvements would complement/support the transit investment and could be delivered with the transit project.

The people who live along 82nd Avenue are more likely to rely on transit than the general population with a high number of equity communities in greater representation than the region as a whole. These include people that are low-income, BIPOC, have limited English proficiency, live with a disability, or live in zero car households or in affordable housing. In addition, 82nd Avenue is high injury corridor with inadequate pedestrian facilities, lighting, and limited signalized crosswalks and few transit shelters.

The project anticipates having an approved locally preferred alternative demonstrating regional consensus around the transit mode, general station locations, and alignment in winter of 2023/24. The NEPA phase of the project would begin post LPA and after early corridor design is underway. Metro, TriMet, the City of Portland, Clackamas County, ODOT, Multnomah County, and the Port of Portland as well as community members are collaborating to develop a rapid bus transit project in the 82nd Avenue corridor between Clackamas Town Center and a northern terminus yet-to-be-determined. In addition, Metro is working to support a community-led equitable development strategy (EDS) that

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[6] The Line 72 continues west of 82nd Avenue to Swan Island. However, the 82nd Avenue segment accounts for 77 percent of rides (2022) and 82 percent of the passenger delay (2019).

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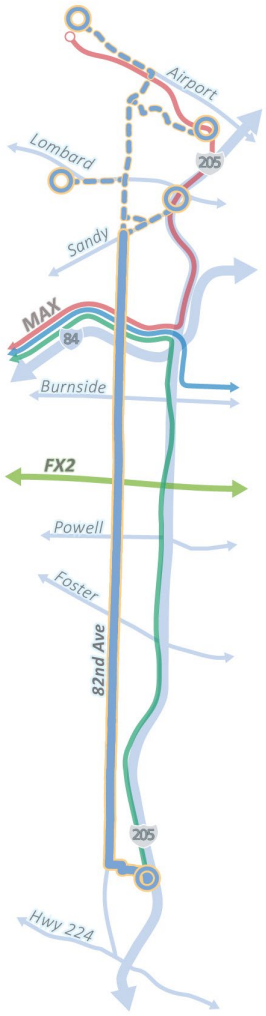

Figure 8.12 82nd Ave Transit Corridor

The project anticipates having an approved locally preferred alternative demonstrating regional consensus around the transit mode, general station locations, and alignment in winter of 2023/24. The NEPA phase of the project would begin post LPA and after early corridor design is underway.

8.3.2 Metropolitan Transportation Improvement Program

The Metropolitan Transportation Improvement Program (MTIP) documents how all federal transportation funding is spent in the greater Portland region for a four-year

period as well as state- and locally-funded projects that may significantly affect the region's transportation system performance. The MTIP serves multiple purposes – the document:

- lists all federally-funded transportation expenditures;
- identifies funding sources for transportation projects;
- provides project implementation details (e.g., in what year the preliminary engineering, right-of-way acquisition and construction phase is expected);
- demonstrates federal planning and fiscal requirements to expend federal funds have been met; and
- reports how adopted regional policies influenced the selection of these near-term investments as priorities to move forward.

This section describes the role of the MTIP as a key tool for implementing the RTP and provides an outline of expectations for demonstrating consistency with the RTP to be programmed in the MTIP for implementation. The MTIP document provides more specific description of how projects proposed to be included in the MTIP are expected to demonstrate consistency with the RTP

8.3.2.1 MTIP responsibilities and oversight

Metro has the responsibility to prepare the MTIP, but it is done in collaboration and coordination with ODOT, and transit agencies, TriMet and SMART, as the region's four entities responsible for administering federal transportation funding. Additionally, cities, counties, the Port of Portland, other local agencies, and the public participate in the development of the MTIP.

JPACT, the Metro Council and the Governor of the State of Oregon approve the MTIP. The MTIP is then incorporated, without change, into the State Transportation Improvement Program (STIP), which integrates regional and statewide improvement programs.

8.3.2.2 The role of the MTIP in regional planning

The RTP plays a significant guiding role for the MTIP as it sets the policy direction for what transportation investments are eligible for federal funding and the prioritization criteria for allocating federal funding. Through inter-regional coordination throughout the planning and programming process, the MTIP ensures that investments of federal funds are consistent with the RTP and makes progress in achieving performance targets established in the plan. The MTIP is updated every three years.

One of the primary purposes of the MTIP is to ensure scarce federal transportation funding and investments are making progress towards the regional vision set out for transportation system in the RTP. As a result, the greater Portland region's MTIP gives top priority to strategic transportation investments that leverage and reinforce the region's land use strategy envisioned in the 2040 Growth Concept and the supporting multimodal transportation investments in the RTP.

8.3.2.3 Demonstrating consistency prior to implementation

As the vehicle for implementing the RTP, the MTIP has two primary purposes:

1. ensure federal planning and fiscal requirements for expending federal transportation funds are being met; and
2. ensure the investments are making progress towards regional goals, objectives and implementing regional policies as part of performance-based programming.

Recognizing these two primary purposes of the MTIP, any investment requiring inclusion in the MTIP must demonstrate and justify how the investment implements the RTP and regional policy outcomes. This is necessary to meet federal eligibility and compliance purposes, provide the best transportation experience possible for the region's residents, businesses, employees, and visitors and for good stewardship of scarce transportation resources.

The determination and demonstration of consistency with the RTP, done through the MTIP process, comprises quantitative and qualitative evidence that the investment advances implementation of the RTP investment strategy, financial constraint, project performance towards regional and federal performance targets, and public involvement and consultation. In general, there are two main avenues to demonstrate consistency with the RTP whether as an individual transportation investment or an entire package of transportation investments may be included in the MTIP. The two avenues include the following:

1. During the prioritization process to allocate federal transportation dollars to various transportation projects, including the identification of the criteria and the consideration of multimodal tradeoffs (prior to the submission to the MTIP); and
2. The process for amending the MTIP.

As each four-year MTIP is developed, determination of consistency is also conducted and demonstrated programmatically to show how the MTIP package is consistent with and advances the implementation of the Plan. Additionally, the programmatic evaluation serves as a monitoring tool for assessing progress in implementing the RTP.

The following sections describe the core areas that MTIP investments (at individual scale and during the funding allocation process) are required to demonstrate consistency with federal requirements and adopted regional transportation policy as expressed in the RTP goals, objectives, and policies. Example questions are provided to illustrate what information is sought.

Regional significance

The adopted RTP represents the regional transportation system in the greater Portland region, which serve regional transportation needs and provides a specified level of seamless multimodal connectivity, accessibility, and management of people and goods traveling on the system. As a result, the limited amount of available federal funding must be allocated strategically to advance the operation or enhance the development of key facilities across the different modal systems (e.g., transit, bicycle and pedestrian active transportation, freight) to ensure an interconnectivity while supporting other desired regional outcomes (travel options, reduced greenhouse gas emission, etc.).

For the purposes of demonstrating consistency, the RTP has identified these key facilities, programs, and strategies in defining the regionally significant system. Additionally, other conditions and circumstances may qualify a transportation investment as regionally significant, as reflected in the RTP definition of regional significance and corresponding RTP network maps contained in Chapter 3.

Examples of questions asked for transportation investments to demonstrate Regional Significance:

- Is the transportation investment advancing a project on a facility designated in one or more of the RTP network maps?
- Does the transportation investment require permitting approval(s) from a federal agency or project level NEPA review?
- Does the transportation investment provide new motor vehicle capacity and would normally be included as an input to the regional travel demand model?

Regional goals and objectives

The adopted RTP demonstrates a significant need for investment in the transportation system to address many growing demands of the transportation system, including the growing backlog of maintenance, expansion of services, and increased connectivity and completeness of different modes. Recognizing the scarcity of funding while the need for investment is ever growing, each dollar invested in the regional transportation system must serve a regional purpose and advance the implementation of the region's transportation vision and supporting goals, objectives and policies.

To be included in the MTIP, investments must demonstrate how implementation will address one or more of the RTP's goals, objectives, and policies, listed in Chapters 2 and 3. Moreover, the Metro Council identified these key regional policy priorities – transportation equity with a focus on race and income, safety, travel options, Climate Smart Strategy implementation, economic development and managing congestion – to be the focus of this RTP. The RTP's goals serve as the broad direction and expectation of what each investment in the system should aim to achieve but additional focus and attention should be paid to the RTP policy priorities. These goals are consistent with the federal planning factors issued by U.S. DOT.

Examples of questions asked for investments to demonstrate consistency with Regional Goals and Objectives include:

- What regional goals and objectives are being addressed by this transportation investment?
- Is the project identified as part of the adopted RTP financially constrained project list?
- Is the project advancing one or more of the Climate Smart Strategy policies? If so, which policy(ies) and how?
- Is this project addressing and/or advancing a strategy or action within an adopted regional modal or topical strategy or plan, or shared strategy of the RTP? If so, which modal or topical strategy or plan? Which strategy (or strategies) and action(s)? How does it address or advance the modal or topical strategy or plan?

8.3.2.4 Demonstrating fiscal constraint

As a federal requirement, both the RTP and the MTIP are fiscally constrained. Project costs are not to exceed expected revenue sources. For the MTIP, transportation identified investments are only those projects for which resources are expected to be available, and funding identified for the first year must be committed by administering agencies to the project. The MTIP is not a comprehensive accounting of all transportation investments in the region; it only accounts for the funding of regionally significant projects and does not include projects on local streets and facilities. Projects that are 100 percent locally funded but of regional significance are included for informational and analysis purposes only.

Per federal regulations, transportation projects using federal funds are expected to demonstrate that revenues needed to deliver the project are available and the revenues were accounted for in long-range transportation plan revenue projections. Therefore, projects included in the MTIP must be included in the RTP financially constrained project list either as an identified individual project or through a programmatic category. Additionally, projects in the MTIP must be consistent in scope and financial scale as to what was reflected in the financially constrained RTP project list. The revenue

assumptions used to develop the RTP financially constrained project are defined in Chapter 5. Projects included in the RTP financially constrained project list are identified in Appendix A (2023-2030 time period) and Appendix B (2031-2045 time period).

If a project is proposed for funding and inclusion in the MTIP and is not included in the RTP financially constrained project list, the RTP must be amended to include the project as a condition of being adopted in the MTIP.

To amend projects into the financially constrained project list fiscal constraint must be demonstrated by identifying additional revenues or removing other projects from the financially constrained project list. More information about the process and other requirements that must be met to amend the RTP will be provided in the Appendix.

Examples of questions asked for transportation investments to demonstrate Fiscal Constraint:

- Is the transportation investment/project identified in the adopted RTP financially constrained project list?
- Is the project consistent in scope and cost as to what was accounted for in the RTP financially constrained project list and regional travel model?
- How will the funding and implementation of this project impact the sponsoring agencies ability to adequately operate and maintain its transportation system in the future?

8.3.2.5 Demonstrating support toward achievement of performance targets

Signed into law in 2012, the previous federal transportation reauthorization, known as Moving Ahead for Progress in the 21st Century (MAP-21), created the most significant federal transportation policy shift since the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). A fundamental element of the legislation was its focus on performance-based planning and programming.

For the first time, MAP-21 established a federal performance management framework to improve transparency and hold state transportation departments, transit agencies and metropolitan planning organizations (MPOs) accountable for the effectiveness of their transportation planning and investment decisions. The objective of the performance management framework was to ensure states and MPOs invest federal resources in projects that collectively will make progress toward the achievement of the national goals. The required performance-based approach includes targets for measures specified by U.S. DOT and requirements to track and report progress toward meeting these targets. Twelve performance measures have been identified through MAP-21 and subsequent U.S. DOT rulemaking. These federal performance measures and targets address:

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability

Preceding the adoption of the MAP-21 performance-based planning requirements, the Metro Council and JPACT adoption of the 2010 RTP established an outcomes-focused performance-based planning process that continues today. The RTP performance-based process centers on measuring the performance of the adopted RTP investment strategy and monitoring progress towards transportation system performance targets identified in Chapter 2. The RTP performance targets address:

- Affordability
- Safety
- Vehicle miles traveled
- Mode share
- System Completion
- Mobility
- Climate change and greenhouse gas emissions reduction
- Clean air

The RTP performance measures and targets contained in Chapter 2 and Appendix L support and are consistent with federal and state performance-based planning requirements and measures and align to the federal planning factors required for MPOs to address and make progress towards. To be included in the MTIP, transportation investments planned for the region to meet growing demands, needs or deficiencies, must also demonstrate contribution to progress toward federal and RTP performance targets.

Examples of ways in which transportation investments can demonstrate consistency with performance targets include addressing:

- How does the transportation investment/project contribute one or more of the federal and/or regional performance targets for the transportation system?

- What evaluation was performed to compare candidate projects for making progress toward federal and regional performance targets? What results can be provided to demonstrate the investment is making progress towards the federal and/or regional performance targets?
- How did the funding allocation process consider federal and regional performance targets in its criteria in the selection of projects and allocation of funds?

8.3.2.6 Public involvement expectations and process for demonstrating consistency

As part of federal guidance on public involvement and on Civil Rights laws and the Executive Order on Environmental Justice, it is expected that all transportation investments identified in the MTIP have provided and will continue to provide opportunity for community input and comment until the investment is implemented and/or open for service. This means prior to an investment being identified in the MTIP, it must have emerged through planning process that was adopted or approved by a governing body and be included in the RTP investment strategy. The planning process, and that process's community engagement effort, indicates the investment addresses an identified transportation deficiency and need in the local community and the community has had opportunity to inform the plan. The adoption or approval of the plan must also provide an opportunity for public testimony.

Commonly recognized planning processes from which projects emerge include local transportation system plans (TSPs), but other planning processes include corridor studies, facility plans and sub-area plans. Additionally, through the development of the RTP project list, local jurisdictions are asked to self-certify transportation investments being proposed for the long-range transportation plan have undergone or are currently undergoing public involvement efforts through an approved planning process.

Examples of ways in which transportation investments can demonstrate consistency with Public Involvement include addressing the following:

- From which planning process does the transportation investment emerge from? What opportunities for public feedback were available as part of the process?
- How was feedback from the public incorporated into the development of the investment?
- What demographic assessment was done to identify communities of color, people with limited English proficiency, people with low income and other historically marginalized communities as stakeholders?
- Were all interested/affected stakeholders meaningfully engaged in the funding allocation prioritization and decision-making process?

- Were all interested/affected stakeholders meaningfully engaged prior to the request for programming a project into the MTIP? [7]

8.3.2.7 Developing the MTIP

The MTIP development process is initiated by Metro with an update to the MTIP program direction and an initial financial forecast of revenues expected to be available for programming. The program direction identifies how JPACT and the Metro Council intend to coordinate the funding allocation processes administered by Metro through the Regional Flexible Funds Allocation (RFFA) process and for funds administered by ODOT and public transit agencies – TriMet and SMART. The policy document also describes how the funding allocation processes address federal regulations for the allocation of federal transportation funds.

Projects seeking funding through any of the funding allocation processes must be included in the financially constrained Regional Transportation Plan project list. JPACT and the Metro Council consider the MTIP for final approval. Upon adoption by the Metro Council, the MTIP is submitted to the Governor of Oregon for inclusion in the STIP.

[7] Interested and affected stakeholders means those members of the public affected or interested in transportation investment (or package of investment), as well as formal entities, such as natural resource agencies, emergency management agencies, tribal entities, etc. which may have interests or be affected by the implementation of the proposed transportation investment.

8.4 DATA AND TOOLS

8.4.1 Performance-based planning and programming

Over the past two decades, Metro and other transportation agencies have increasingly been applying "performance management" – a strategic approach that uses performance data to support decisions to help achieve desired performance outcomes. Performance management is credited with improving project and program delivery, informing investment decision-making, focusing staff on leadership priorities and providing greater transparency and accountability to the public.

Performance-based planning and programming (PBPP) applies this strategic approach within the planning and programming processes of MPOs, like Metro, and other transportation agencies to achieve desired performance outcomes for the multimodal transportation system. This includes a range of activities and products undertaken by a MPO together with other agencies, stakeholders, and the public as part of a 3C (cooperative, continuing, and comprehensive) process. It includes development of: long-range regional transportation plans, the Congestion Management Process, other plans and processes developed by ODOT and transit providers, such as Strategic Highway Safety Plans, Asset Management Plans, Transit Agency Asset Management Plans and Transit Agency Safety Plans, and programming documents, including State and Metropolitan Transportation Improvement Programs (STIPs and MTIPs).

PBPP attempts to ensure that transportation investment decisions are made – both in long-term planning and short-term programming of projects – based on their ability to meet established goals.

This section summarizes data and research activities to address existing and emerging planning and policy priorities and innovative practices in transportation planning and analysis. These activities help ensure that the region has the resources to fulfill its state and federal transportation performance measurement, monitoring and reporting responsibilities.

8.4.2 Data Collection and Coordination

This section summarizes data collection and coordination to support regional transportation planning and analysis, including regional travel model calibration and validation, and federal congestion management process analysis and performance based planning target setting and monitoring. The majority of our data is maintained in Metro's Regional Land Information System (RLIS). This database is comprised of over 150 different (primarily geospatial) data sets, and most of the data sets identified in the sections below are elements. Metro publishes RLIS on a quarterly basis, but many data

sets are on different cycles and come from different sources. All data sets are available for review at http://rlisdiscovery.oregonmetro.gov, along with a date of last publication. The associated metadata should be consulted in advance to understand how the data were generated and to determine the appropriateness of its use.

8.4.2.1 Growth Data

Metro Research Center will continue to refine its recently developed Land Development Monitoring System (LDMS) as a component of RLIS. LDMS tracks the location cost and use-type of residential and employment land utilization to inform regional growth management and transport planning. Metro will work to enhance LDMS and RLIS with more equity-related data.

8.4.2.2 Travel Activity Data

Metro Research Center staff is leading coordination efforts for the next regional travel behavior survey (Oregon Travel Study, Spring 2023-Spring 2024). Additional research will be necessary to ensure that the survey captures traditionally relevant as well as emerging behavior (e.g., extent of Uber/Lyft utilization in place of other travel modes, working from home, and online shopping), and be conducted in a comprehensive and cost-effective manner. One outcome was a shift from traditional one-day travel diaries to smartphone-based weeklong surveys as the primary collection method. The new survey also includes revised sampling, recruitment, and outreach strategies to improve participation among hard to reach and historically marginalized groups.

New and emerging data collection methods (e.g. location-based services data, longitudinal or rolling surveys, emerging needs follow up surveys, mobile phone apps, personal GPS devices, etc.) will also be investigated to help ensure that the survey effort is well positioned to capture rapidly changing trends in personal travel behavior. Metro will partner with other Oregon modeling agencies (via the Oregon Modeling Statewide Collaborative, OMSC) as well as the Southwest Regional Transportation Council (SWRTC) to maximize the geographic span and cross agency utility of the data.

8.4.2.3 Transportation Safety Data

Metro staff will coordinate with federal, state, regional and local partners to acquire, collect and maintain the data currently used for transportation safety related analysis. This data includes, but is not limited to, crash data provided by ODOT and roadway network, traffic volume and vehicle mile traveled data. Additionally, new data required to provide more in-depth analysis will be pursued, including race and ethnicity of crash victims, posted speed and pedestrian crossing data to name a few.

8.4.2.4 Multi-Modal Network Data

Metro Research Center will continue to update multimodal data in RLIS. RLIS street centerlines, sidewalks, bike routes and off-street trails networks are updated quarterly and comprise the basis of the multimodal network.

Research staff will also continue to develop and maintain high-resolution multimodal modeling networks. The modeling networks support long-range planning, project evaluation, and system performance monitoring needs. Staff will coordinate with other state agencies via the OMSC as new modeling networks are developed (e.g. the statewide OpenStreetMap-based network and the statewide multimodal network).

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8.4.3 Analysis Tool Maintenance and Enhancement

This section summarizes planned maintenance and enhancement of the regional travel model and MOVES, and the development of a replacement land use model for the now defunct MetroScope model to address existing and emerging planning and policy priorities and innovative practices in regional transportation planning and analysis.

8.4.3.1 Growth Forecast

Metro Council has committed to making its next Urban Growth Boundary decision by the end of 2024. That decision will adopt a Regional Economic Forecast of total future jobs and employment. Upon adoption of those regional control totals Metro will work to create the next generation Distributed Forecast (the Traffic-Analysis-Zone-level growth forecasts used in transportation planning and forecasting). The distributed forecast (likely to be released in 2026) will be available to support future MTIP and RTP update cycles.

8.4.3.2 Growth Forecast Tools

A replacement land use model will not be in place for the 2026 Distributed Forecast. The Metro Planning, Development and Research Department will work closely with local jurisdictions to modify and prepare a revision to the most recent land use forecast with available methods and best available Regional Economic Forecast information. Metro Research Center is now working to scope and implement a replacement for the MetroScope land use allocation model but it will not be ready in time for the anticipated 2024 Urban Growth Management cycle. We will consider a wide variety of traditional and next-generation tool options to replace Metro Scope with the goal to have such a land use model operational by the subsequent growth management cycle in 2030. This work will directly improve the means of producing future distributed forecasts.

8.4.3.3 Regional Transportation Model Tools

Metro staff will continue to maintain and enhance the current trip-based travel model. Recent enhancements to the model include the transition from a 2015 to a (pre-COVID) 2020 base year; implementation of a new regional freight model that considers commodity flows associated with supply chains at the global, national, and regional scales; and improvements to the model's ability to represent the effects of roadway pricing across varying user segments. Future activities include incorporation of the results of an updated regional household travel survey and refinements to: the bicycle assignment algorithm. Metro staff will stay current with updated versions of the EPA's Motor Vehicle Emission Simulator (MOVES) for estimating emissions of criteria pollutants, greenhouse gases and air toxics.

8.4.4 Analysis Tool Development

This section summarizes development of new analysis tools to address existing and emerging planning and policy priorities and innovative practices in regional transportation planning and analysis. It includes visualization tools, housing and transportation cost tool, project-level evaluation, piloting the multi-criteria evaluation (MCE) tool, and crash prediction modeling tools.

8.4.4.1 Regional Activity-Based Model

The statewide estimation of the ActivitySim platform will begin in FY23-24, with scoping and design to begin in April 2023. Upon completion of the Oregon Household Survey in 2024, estimation of the activity-based model will begin (FY24-25). Key efforts during 2024-2025 will include the development of staff expertise and a common, statewide estimation of ActivitySim that will be the basis for local deployment of the toolset. FY25-26 will see the deployment of ActivitySim to local jurisdictions—including Metro—and

will require further estimation and calibration work to customize for the Portland region. Travel Forecasting staff will coordinate closely with Metro planning to ensure that the activity-based model framework is analytically aligned with anticipated policy questions, and will be ready for deployment for the 2028 Regional Transportation Plan.

8.4.4.2 Regional Freight Model

Development of the freight model is complete and the model is integrated with the trip-based travel demand model. The freight model will be integrated with the ActivitySim activity-based model as that model is implemented at Metro.

8.4.4.3 Housing and Transportation Expenditure Tool

During the 2018 RTP, the Metro Research Center began development of the framework for a Housing and Transportation Expenditure tool to assess out-of-pocket expenditure for housing and transportation and to project the effects of future transportation investments on housing and transportation costs. Both current and forecast states of the regional land markets and transportation system will be represented in a final tool after further development, testing and refinement. The tool will help to respond to various questions pertaining to gentrification and displacement when assessing transportation investment scenarios.

8.4.4.4 Economic Value Atlas Decision-Support Mapping Tool

Development of the Economic Value Atlas (EVA) established tools and analysis that align planning, infrastructure, and economic development to build agreement on investments to strengthen our economy.

This work:

- Provides mapping and insight into our regional economic landscape;
- Links investments to local and regional economic conditions and outcomes; and
- Informs policy and investment – providing a foundation for decision-makers to understand the impacts of investment choices to support growing industries and create access to family-wage jobs and opportunities for all.

The EVA provides a solid data foundation for key regional activities such as:

- outlining a path to pursue policy, actions and investment that help support growing industries and family-wage jobs;;
- defining potential areas for partners to collaborate and develop shared investment strategies;

- pinpointing areas of focus for regional investment to bridge local and regional economic development aspirations; and
- providing a data picture of the regional economy to align investments that achieve the coordinated vision of Greater Portland 2020, the 2040 Growth Concept and the Regional Transportation Plan.

This work supports regional transportation planning and investment decisions by:

- Highlighting key intersects between transportation + economic conditions that can guide project prioritization criteria incorporated into the next 3-year RFFA cycle.
- Building a granular understanding of relative economic strengths and challenges among communities in the region to inform local Transportation System Plans and area studies, regional investment areas and corridor refinement planning and planning studies, and advance more strategic transportation project prioritization and investment based on surrounding economic conditions.
- Supporting multiple applications by ongoing regional programs in Metro's Planning and Development Department.

8.4.4.5 Displacement Monitoring Tool

First Identified as a key priority for the RTP transportation equity evaluation in 2017, involuntary displacement continues to be of concern in the region.. Specifically, policymakers and marginalized communities desired to understand the potential displacement impacts to result in investment as well as what proactive mitigation strategies may be put into effect in advance to address the displacement risk. Through development of the 2018 RTP transportation equity system evaluation method, it was determined the RTP system analysis would not be able to look at displacement risk due to the limitations of the forecasting tool.

Nonetheless, in an effort to honor the input and recognize the concern about displacement risk from public investment in the transportation system, the 2018 RTP recommended development of a streamlined displacement risk tool, which can help inform plans, project designs, and other components of transportation investment. Since 2018, the Southwest Equitable Development Strategy (SWEDS) developed a displacement risk method that is informing development of a displacement risk monitoring tool in the future.

Metro's Data Resource Center (DRC) is currently researching methods of monitoring displacement risk in the region, which will likely include some of the demographic, housing, and business data that Metro already collects or compiles. Metro's displacement research is evolving alongside other analytical areas, including monitoring geographic

changes in land use and demographics in the region. A displacement monitoring tool will help policy makers understand where displacement risk is heightened in the region, as well as understand what indicators are increasing the risk. This information will in turn help policy makers work with stakeholders and constituents to identify policies that can help mitigate displacement, especially in areas where public investment is occurring

8.4.4.6 Crash Prediction Modeling Tool

Better understanding and evaluation of how projects, programs and strategies impact transportation safety system wide are key elements to effectively planning for safety and achieving safe system programs such as Vision Zero. Metro staff will coordinate with federal partners and other MPOs to develop and pilot the use of crash prediction modeling tools to assess safety performance system wide.

8.4.4.7 Social Vulnerability Explorer

Metro's Data Resource Center has developed a Social Vulnerability Explorer[8], which provides an introductory point of access to regional indices and indicators related to potential social vulnerability in the five-county Portland metropolitan region, including Clackamas, Columbia, Multnomah, and Washington counties in Oregon and Clark County in Washington. The application enables exploratory data analysis and visualization, as well as comparisons of user-specified areas to regional averages.

The online explorer was built as part of a larger Social Vulnerability Tools project[9], which sought to identify which communities in the region experience barriers to emergency services and programs before, during, and after disasters. Besides helping to craft a common understanding of social vulnerability in the region, the Social Vulnerability Tools project also helped to create a set of social vulnerability data, including input indicators and output indices.

The Social Vulnerability Explorer was specifically built for the purpose of allowing those that do not have access to or experience with mapping software to use an online internet browser to explore and visualize the geographic distribution of and relationship between indicators and indices in the Social Vulnerability Tools project.

Potential use cases of the Social Vulnerability Explorer include:

- Emergency management and human or health services professionals can understand the demographic composition of service territories or investment areas, as well as the

[8] https://gis.oregonmetro.gov/social-vulnerability-explorer/
[9] https://rdpo.net/social-vulnerability-tools-project

various types of vulnerabilities that may be reflected in their respective constituencies.

- GIS professionals can conduct exploratory visualization and analysis, specifically as it relates to the intersection of multiple indicators, which can be done more quickly and efficiently with the online tool than with traditional desktop-based mapping software.
- Community-based organizations can quantify the demographic composition of their service areas – perhaps for grant writing.
- Academics or researchers can compare demographics between neighborhoods and other areas of interest, such as transportation corridors, municipalities or the region.

8.4.4.8 VisionEval (VE-RSPM) Climate Monitoring Tool

The VisionEval framework is built on the "GreenSTEP family" of models developed by the Oregon Department of Transportation (ODOT) to assist in the development of plans to reduce greenhouse gas (GHG) emissions from light-duty vehicles in order to meet Oregon State statutory goals. The RSPM (Regional Strategic Planning Model) was developed by ODOT as an offshoot of the GreenSTEP model to support the preparation of metropolitan area scenario plans. The name reflects a broadening of the policies, beyond state statutory requirements. Metro and consulting staff are using and enhancing Metro's VE-RSPM to monitor our progress toward our climate goals achieved by RTP projects and policies.

8.4.5 Monitoring and Reporting Tools

This section summarizes information systems and data resource coordination efforts that Metro is doing or will do to ensure that the region has the resources to fulfill its transportation performance-based planning, programming and reporting responsibilities.

8.4.5.1 Monitoring Data and Information Systems

Metro Research Center staff will continue to investigate new and emerging data sources and data collection methods (e.g., location-based services data, longitudinal or rolling surveys, mobile phone apps, personal GPS devices, etc.) to help ensure that Metro is well Research Center staff will also continue to collect and process National Performance Management Research Data Set (NPMRDS) data for federally-required performance monitoring purposes. Staff will also continue to explore and support the ODOT-provided auto travel speed and volume data available via the Regional Integrated Transportation Information System (RITIS) platform

8.4.5.2 Congestion Management Process Data Collection and Monitoring

This section summarizes the region's approach to monitoring and reporting on the progress implementing the RTP through the regional Congestion Management Process (CMP).

The great challenge for establishing and maintaining a monitoring program has been the availability of data. Historically, collecting and managing data has been expensive and difficult. With advancements in Intelligent Transportation Systems (ITS) in the region, more and better data is available today and will continue to grow with implementation of data collection projects identified in the Regional Transportation System Management and Operations (TSMO) plan.

Starting in 2008, the region approved ongoing funding for implementation, including an annual allocation to fund Portal, the regional transportation data archived, housed and maintained by Portland State University. PSU, in partnership with ODOT, TriMet, Metro and other local agencies, provides data aggregation, maintenance and reporting on the region's roadways and transit systems. Metro will continue to work with ODOT and other regional partners to expand existing data collection and performance monitoring capabilities, in order to evaluate system performance for all modes of travel and support the region's CMP.

This work includes supporting a data management system to facilitate data collection, maintenance and reporting to support on-going RTP and MTIP monitoring. The performance monitoring will be reported biennially as part of the Regional Mobility Program, consistent with the region's federally approved congestion management process.

Table 8.6 lists where key elements of the region's CMP are addressed in the RTP and Appendices to show how the region's planning and investment activities implement the CMP.

Table 8.6 Key Elements of the Region's Congestion Management Process (CMP)

Regional Congestion Management Process	Associated RTP/MTIP Activities
Develop congestion management objectives and policies	RTP Goals and Objectives (Chapter 2), RTP Policies (Chapter 3)
Define geographic area and network of interest	RTP (Appendix L – Figures 3 and 4)
Establish multimodal performance measures	RTP Performance Measures and Targets (Chapter 2), RTP Federal Performance Measures and Targets (Appendix L)
Collect data and monitor system performance	RTP Existing Conditions (Chapter 4 Mobility Corridor Atlas (2015)
Analyze congestion problems and needs	RTP Existing Conditions (Chapter 4), RTC CMP Monitoring Report (2021), RTP Performance Evaluation (Chapter 7)
Identify and evaluate effectiveness of strategies	RTP (Chapter 6), RTP (Chapter 7), RTP (Appendix E - Transportation Equity Evaluation), RTP (Appendix F – Environmental Analysis and Potential Mitigation Strategies), RTP (Appendix J – Climate Smart Strategy Implementation and Monitoring), corridor refinement planning, area studies, local transportation system plans
Implement selected strategies and manage transportation system	MTIP, local jurisdictions, ODOT, TriMet, SMART, TransPort, Regional Transportation Functional Plan, RTP (Chapter 8)
Monitor strategy effectiveness[10]	Scheduled RTP updates, CMAQ Performance Plan, RTP (Appendix J – Climate Smart Strategy Implementation and Monitoring), RTC CMP Monitoring Report

More information about the region's Congestion Management Process is provided in Appendix L.

8.4.5.3 Performance monitoring measures and targets

Performance monitoring measures identified in Chapter 4, Appendix J and Appendix L are used to track changes in system performance and implementation progress over time and between scheduled updates to the RTP. Reporting these changes provides valuable information on trends and conditions using actual empirical or observed data to the

[10] USDOT, "Guidebook on the Congestion Management Process in Metropolitan Transportation Planning." Page 1-1 (April 2011).

extent possible in advance of RTP updates to assess how the transportation system is performing and identify possible policy or strategy adjustments that may be needed.

Appendix J contains a complementary set of performance measures and performance monitoring targets specific to tracking implementation of the Climate Smart Strategy adopted by JPACT and the Metro Council in 2014 and report on progress. The Climate Smart Strategy performance measures and targets are used to monitor and assess whether key elements or actions that make up the strategy are being implemented, and whether the strategy is achieving expected outcomes. The Climate Smart Strategy performance monitoring targets are not policy targets, but instead reflect a combination of the planning assumptions used to evaluate the Climate Smart Strategy and outputs from the evaluation of the adopted strategy.

Appendix L documents the region's approach to addressing the federal transportation performance-based planning and congestion management requirements contained in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act. The multimodal performance measures and near-term performance monitoring targets in Appendix L are used to monitor transportation system performance using empirical or observed data between scheduled updates.