

Joint Policy Advisory Committee on Transportation (JPACT) agenda

Thursday, April 19, 2018

7:30 AM

Metro Regional Center, Council chamber

1. Call to Order, Introductions, Declaration of a Quorum (7:30 AM)
2. Public Communication on JPACT (7:35 AM)
3. Update from the Chair and Committee Members (7:40 AM)
4. Consent Agenda (7:50 AM)

- 4.1 Resolution No. 18-4877, For the Purpose of Adopting the
Fiscal Year 2018-19 Unified Planning Work Program

[COM](#)
[18-0115](#)

Attachments: [Draft Resolution No. 18-4877](#)
[Exhibit A to Resolution No. 18-4877](#)
[Staff Report](#)

- 4.2 Resolution No. 18-4876, For the Purpose of Adding or
Amending Existing Projects to the 2018-21 Metropolitan
Transportation Improvement Program Involving Five
Projects Requiring Programming Additions, Corrections,
or Cancellations Impacting Metro, Multnomah County,
ODOT, and Portland (MA18-07-MAR)

[COM](#)
[18-0119](#)

Attachments: [Draft Resolution No. 18-4876](#)
[Exhibit A to Resolution No. 18-4876](#)
[Staff Report](#)
[Attachment 1 to Staff Report](#)

- 4.3 Resolution No. 18-4883, For the Purpose of Adding or Amending Existing Projects to the 2018-21 Metropolitan Transportation Improvement Program Involving Six Projects Requiring Programming Additions, Corrections, or Cancellations Impacting Metro, ODOT, and TriMet (AP18-08-APR) [COM](#)
[18-0120](#)

Attachments: [Draft Resolution No. 18-4883](#)
[Exhibit A to Resolution No. 18-4883](#)
[Staff Report](#)
[Attachment 1 to Staff Report](#)

- 4.4 Consideration of the March 15, 2018 Minutes [18-5005](#)

Attachments: [March 15, 2018 Minutes](#)

5. Action Items

- 5.1 Resolution No. 18-4886, For the Purpose of Adopting the 2018 Regional Travel Options Strategy - Recommendation to the Metro Council (7:55 AM) [COM](#)
[18-0116](#)

Presenter(s): Dan Kaempff, Metro

Attachments: [Draft Resolution No. 18-4886](#)
[Memo](#)
[Staff Report](#)

6. Information/Discussion Items

- 6.1 2018 RTP: Draft Regional Transportation Safety Strategy (8:25 AM) [COM](#)
[18-0117](#)

Presenter(s): Lake McTighe, Metro

Attachments: [Memo](#)
[Draft Regional Transportation Safety Strategy](#)
[2018 Metro State of Safety Report](#)

- 6.2 2021-2024 STIP Update (8:45 AM) [COM](#)
[18-0118](#)

Presenter(s): Jon Makler, ODOT

7. Adjourn (9:00 AM)

Upcoming JPACT Meetings:

- *Thursday, May 17, 2018*
- *Thursday, June 21, 2018*
- *Thursday, July 19, 2018*

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ការគោរពសិទ្ធិពលរដ្ឋរបស់ ១ សំរាប់ព័ត៌មានអំពីកម្មវិធីសិទ្ធិពលរដ្ឋរបស់ Metro ឬដើម្បីទទួលបានកម្មប័ណ្ណរើសអើងសូមចូលមកទាក់ទងនៅ www.oregonmetro.gov/civilrights។
បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1700 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក។

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600 NE Grand Ave.
Portland, OR 97232-2736
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2018 JPACT Work Program

As of 4/10/18

Items in italics are tentative

April 19, 2018

- Chair comments TBD (5+ min)
- **Resolution No. 18-4876**, For the Purpose of Adding or Amending Existing Projects to the 2018-21 Metropolitan Transportation Improvement Program Involving Four Projects Requiring Programming Additions, Corrections, or Cancellations Impacting Metro, Multnomah County, and Portland (MA18-07-MAR) (**consent**)
- **Resolution No. 18-4883**, For the Purpose of Adding or Amending Existing Projects to the 2018-21 Metropolitan Transportation Improvement Program Involving Six Projects Requiring Programming Additions, Corrections, or Cancellations Impacting Metro, ODOT, and TriMet (AP18-08-APR) (**consent**)
- **Resolution No. 18-4877**, For the Purpose of Adopting the 2018-19 Unified Planning Work Program – Recommendation to Metro Council (John Mermin, 5 min)
- **Resolution No. 18-4886**, For the Purpose of Adopting the 2018 Regional Travel Options Strategy – Recommendation to Metro Council (Dan Kaempff, Metro; 30 min)
- 2018 RTP: Draft Regional Transportation Safety Strategy – Information/Discussion (Lake McTighe, Metro; 20 min)
- 2021-2024 STIP Update – Information/Discussion (Jon Makler, ODOT; 15 min)

May 17, 2018

- Chair comments TBD (5+ min)
- MPO-State-Transit Financial Forecasts for FY2021-2024 – Recommendation to Metro Council (TBD; 5 min)
- Draft RTP (Focus on Policies and Implementation) – Information/Discussion (Ellis, Metro; 20 min)
- Regional Transit Strategy – Information/Discussion (Snook, Metro; 20 min)
- Draft RTX Strategies and Policies – Information/Discussion (Eliot Rose, Metro; 20 min)
- Draft Freight Strategy – Information/Discussion (Collins, Metro; 20 min)

<p><u>June 21, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) • Burnside Project Information – Information/Discussion (TBD; 15 min) • RFFA Active Transportation Project Development Funds Allocation (Ted Leybold/Lake McTighe, Metro; 15 min) • HB 2017 Projects of Regional Significance (TBD) • SW Corridor Draft Environmental Impact Study – Information/Discussion (Chris Ford, Metro; 30 min) 	<p><u>July 19, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) • 2021-2024 STIP – MPO Comment Letter on 150% Fix-It Lists and Leverage Considerations – Recommendation to the Metro Council (25 min)
<p><u>August 16, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) 	<p><u>September 20, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) • 2021-2024 STIP – MPO Comment Letter on 150% ARTS List and Leverage Considerations – Recommendation to the Metro Council • Introduce and Discuss TPAC Recommendation on 2018 RTP and Strategies for Freight, Transit, and Safety (Ellis; 60 min) <p><u>September 27-29:</u> League of Oregon Cities Annual Conference, Eugene, OR</p>
<p><u>October 18, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) • JPACT Recommendation to Metro Council on Adoption of 2018 RTP and Strategies for Freight, Transit, and Safety (Ellis; 45 min) • Southwest Corridor LPA – Recommendation to Metro Council (TBD; 30 min) 	<p><u>November 15, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) • Economic Value Atlas – Information/Discussion (Jeff Frkonja/Malu Wilkinson, Metro; 30 min) <p><u>November 13-15:</u> Association of Oregon Counties Annual Conference, Eugene, OR</p>
<p><u>December 20, 2018</u></p> <ul style="list-style-type: none"> • Chair comments TBD (5+ min) 	

Parking Lot:

- Southwest Corridor Plan
- Prioritization of projects/programs
- Westside Freight Study/ITS improvements
- All Roads Safety Program (ODOT)
- Washington County Transportation Futures Study (TBD)
- Transportation Resiliency

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE	)	RESOLUTION NO. 18-4877
FISCAL YEAR 2018-19 UNIFIED PLANNING	)	Introduced by Chief Operating Officer
WORK PROGRAM	)	Martha Bennett with the concurrence of
	)	Council President Tom Hughes

WHEREAS, the Unified Planning Work Program (UPWP) update as shown in Exhibit A attached hereto, describes all Federally-funded transportation planning activities for the Portland-Vancouver metropolitan area to be conducted in Fiscal Year (FY) 2018-19; and

WHEREAS, the UPWP is developed in consultation with federal and state agencies, local governments, and transit operators; and

WHEREAS, the FY 2018-19 UPWP indicates federal funding sources for transportation planning activities carried out by Metro, Southwest Washington Regional Transportation Council, Clackamas County and its cities, Multnomah County and its cities, Washington County and its cities, TriMet, South Metro Area Regional Transit, the Port of Portland, and the Oregon Department of Transportation; and

WHEREAS, approval of the FY 2018-19 UPWP is required to receive federal transportation planning funds; and

WHEREAS, the FY 2018-19 UPWP is consistent with the proposed Metro Budget submitted to the Metro Council; now therefore

BE IT RESOLVED that:

1. The FY 2018-19 UPWP attached hereto as Exhibit A is hereby adopted.
2. The FY 2018-19 UPWP is consistent with the continuing, cooperative, and comprehensive planning process and has been reviewed through formal consultation with state and federal partners.
3. Metro's Chief Operating Officer is authorized to apply for, accept, and execute grants and agreements specified in the UPWP.
4. Staff shall update the UPWP budget figures, as necessary, to reflect the final Metro budget.
5. Staff shall submit the final UPWP to the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).

ADOPTED by the Metro Council this 3rd day of May 2018.

Tom Hughes, Council President

Craig Dirksen, Chair of JPACT

Approved as to Form:

Alsion R. Kean, Metro Attorney



2018-2019 Unified Planning Work Program

**Transportation Planning in the
Portland/Vancouver Metropolitan Area**

April 2018

Public service

*We are here to serve the public
with the highest level of
integrity.*

Excellence

*We aspire to achieve exceptional
results*

Teamwork

*We engage others in ways that foster
respect and trust.*

Respect

*We encourage and appreciate
diversity in people and ideas.*

Innovation

*We take pride in coming up with
innovative solutions.*

Sustainability

*We are leaders in demonstrating
resource use and protection.*

Metro's values and purpose

We inspire, engage, teach and invite people to
preserve and enhance the quality of life and the
environment for current and future generations.

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Metro is the federally mandated metropolitan planning organization

designated by the Governor to develop an overall transportation plan and to allocate federal funds for the region. The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

Project web site: <http://www.oregonmetro.gov/unified-planning-work-program>

The preparation of this report was financed in part by the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The opinions, findings and conclusions expressed in this report are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration.

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Portland Metropolitan Area Unified Planning Work Program (UPWP) Overview

INTRODUCTION:

The Unified Planning Work Program (UPWP) is developed annually and documents metropolitan transportation planning activities performed with federal transportation funds. The UPWP is developed by Metropolitan Planning Organizations (MPOs) in cooperation with Federal and State agencies, local governments and transit operators.

This UPWP documents the metropolitan planning requirements, planning priorities facing the Portland metropolitan area and transportation planning activities and related tasks to be accomplished during FY 2018-2019 (from July 1, 2018 to June 30, 2019).

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, covering 24 cities and three counties. It is Metro's responsibility to meet the requirements of The Fixing America's Surface Transportation FAST Act, the Oregon Transportation Planning Rule (which implements Statewide Planning Goal 12), and the Metro Charter for this MPO area. In combination, these requirements call for development of a multi-modal transportation system plan that is integrated with the region's land use plans, and meets Federal and state planning requirements.

The UPWP is developed by Metro, as the MPO for the Portland metropolitan area. It is a federally-required document that serves as a tool for coordinating federally-funded transportation planning activities to be conducted over the course of each fiscal year, beginning on July 1. Included in the UPWP are detailed descriptions of the transportation planning projects and programs, listings of draft activities for each project, and a summary of the amount and source of state and federal funds to be used for planning activities. Estimated costs for project staff (expressed in full-time equivalent, or FTE) include budget salary and benefits as well as overhead costs per FTE for project administrative and technical support.

The UPWP is organized into three sections: the UPWP Overview, a listing of planning activities by category, and other planning related information including the UPWP for the Southwest Washington Regional Transportation Council.

Planning activities for the Portland metropolitan area are listed in the UPWP by categories to reflect how the activities are administered through planning agreements and the Metropolitan Transportation Improvement Program (MTIP). These categories include: General MPO planning for planning activities that occur on continuous cycles and are administered in the annual Metro-ODOT plan funding agreement, MPO planning projects that are discrete activities with an end date and may have an individual agreement between ODOT and Metro and unique entry in the TIP, other regional planning projects led by agencies other than Metro, and project development planning activities to increase project readiness and prepare project concepts to begin the NEPA and Preliminary Engineering phase of development. Organizing planning activities in this manner facilitates transparent administration of the planning activities by the agreements that provide for their scope and budget and by the MTIP which programs the funding for these activities and ensures funding is constrained (limited) to funds actually available.

The UPWP is developed by Metro with input from local governments, TriMet, SMART, ODOT, FHWA and FTA. Additionally, Metro must annually undergo a process known as self-certification to demonstrate that the Portland metropolitan region's planning process is being conducted in accordance with all applicable federal transportation planning requirements. Self-certification is conducted in conjunction with annual adoption of the UPWP.

This Unified Planning Work Program (UPWP) includes the transportation planning activities of Metro and other area governments using Federal funds for transportation planning activities for the fiscal year of July 1, 2018 through June 30, 2019. During the consultation, public review and adoption process for the 2018-19 UPWP, draft versions of the document were made available to the public through Metro's website, and distributed to Metro's advisory committees and the Metro Council.

When developing the annual UPWP, Metro follows protocols established by ODOT in cooperation with USDOT in 2016. These protocols govern the general timeline for initiating the UPWP process, consultation with state and federal agencies and adoption by JPACT and the Metro Council.

FEDERAL REQUIREMENTS FOR TRANSPORTATION PLANNING

The current federal transportation ACT, Fixing America's Surface Transportation (FAST) Act provides direction for regional transportation planning activities. The FAST Act was signed into law by President Obama on December 4, 2015. It sets the policy and programmatic framework for transportation investments. Fast Act stabilizes federal funding to state and metropolitan regions for transportation planning and project improvements and funding levels for the federal aid transportation program, and among key initiatives adds new competitive grants which promote investments in the nation's strategic freight corridors. In addition, FAST Act retains the multi-modal emphasis of the federal program by ensuring funding of transit programs as well as the Transportation Alternatives Program. FAST Act builds in the program structure and reforms of the prior federal Transportation Act, MAP-21, which created streamlined and performance-based surface transportation program.

Regulations implementing FAST Act require state DOTs and MPOs to establish performance measures and set performance targets for each of the seven national goal areas to provide a means to ensure efficient investment of federal transportation funds, increase accountability and transparency, and improve investment decision-making. The national goal areas are:

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduce project delivery delays

A. Planning Emphasis Areas (PEAs)

The metropolitan transportation planning process must also incorporate Federal Highway Administration/Federal Transit Administration planning emphasis areas (PEAs). (Accessed

at www.fhwa.dot.gov/planning/processes/metropolitan/mpo/fy_2015/index.cfm on February 20, 2015) For FY 2018-2019, these include:

- **Models of Regional Planning Cooperation:** Promote cooperation and coordination across MPO boundaries and across State boundaries to ensure a regional approach to transportation planning. Cooperation could occur through the metropolitan planning agreements that identify how the planning process and planning products will be coordinated, through the development of joint planning products, and/or by other locally determined means. Coordination includes the linkages between the transportation plans and programs, corridor studies, projects, data, and system performance measures and targets across MPO and State boundaries. It also includes collaboration between State DOT(s), MPOs, and operators of public transportation on activities such as: data collection, data storage and analysis, analytical tools, target setting, and system performance reporting in support of performance based planning.
- **Access to Essential Services:** As part of the transportation planning process, identify social determination of transportation connectivity gaps in access to essential services. Essential services include housing, employment, health care, schools/education, and recreation. This emphasis area could include identification of performance measures and analytical methods to measure the transportation system's connectivity to essential services and the use of this information to identify gaps in transportation system connectivity that preclude access of the public, including traditionally underserved populations, to essential services. It could also involve the identification of solutions to address those gaps.
- **MAP-21 and FAST Act Implementation: Transition to Performance Based Planning and Programming to be used in Transportation Decision-making:** The development and implementation of a performance management approach to metropolitan transportation planning and programming includes the development and use of transportation performance measures, target setting, performance reporting, and selection of transportation investments that support the achievement of performance targets. These components will ensure the achievement of transportation system performance outcomes.

B. Public Involvement

Federal regulations place significant emphasis on broadening participation in transportation planning to include key stakeholders who have not traditionally been involved in the planning process, including the business community, members of the public, community groups, and other governmental agencies. Effective public involvement will result in meaningful opportunities for public participation in the planning process.

C. Regional Transportation Plan

The long-range transportation plan must include the following:

- Identification of transportation facilities (including major roadways, transit, bike, pedestrian

and intermodal facilities and intermodal connectors) that function as an integrated metropolitan transportation system.

- A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities.
- A financial plan that demonstrates how the adopted transportation plan can be implemented.
- Operational and management strategies to improve the performance of existing transportation facilities to manage vehicular congestion and maximize the safety and mobility of people and goods.
- Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs.
- Proposed transportation and transit enhancement activities.
- Recognition of the 2016 Coordinated Transportation Plan for Seniors and People with Disabilities
- Addressing required federal planning factors: improving safety, supporting economic vitality, increasing security, increasing accessibility and mobility, protecting the environment and promoting consistency between transportation investments and state and local growth plans, enhancing connectivity for people and goods movement, promoting efficient system management and operations, and emphasizing preservation of existing transportation infrastructure.

D. Metropolitan Transportation Improvement Program (MTIP)

The short-range metropolitan TIP must include the following:

- A priority list of proposed federally supported projects and strategies to be carried out within the MTIP period.
- A financial plan that demonstrates how the MTIP can be implemented.
- Descriptions of each project in the MTIP.

E. Transportation Management Area (TMA)

Metropolitan areas designated TMAs (urbanized areas with a population of over 200,000) such as the Metro must also address the following requirements:

- Transportation plans must be based on a continuing and comprehensive transportation planning process carried out by the MPO in cooperation with the State and public transportation operators.
- A Congestion Management Process (CMP) must be developed and implemented that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy of new and existing transportation facilities, through use of travel demand reduction and operational management strategies.
- A federal certification of the metropolitan planning process must be conducted at least every 4 years. At least every 4 years, the MPO must also self-certify concurrent with submittal of an adopted TIP.

F. Air Quality Conformity Process

Areas in attainment, but with maintenance plan requirements must demonstrate the region will continue to meet federal standards for air quality and with the transportation provisions of the state's air quality plan (the State Implementation Plan or SIP). The Portland metropolitan region will continue to demonstrate its transportation plans and programs are in conformance until October 2017, when the Portland metropolitan region's maintenance plan will be completed. After October 2017, the region will no longer have maintenance plan requirements and will be in attainment status and therefore will no longer be subject to demonstrating transportation plans and programs are in conformance, but will continue to be subject to meeting federal air quality standard and provisions within the State's air quality plan.

STATUS OF METRO'S FEDERALLY REQUIRED PLANNING DOCUMENTS

Plan Name	Last Update	Next Update
Unified Planning Work Program (UPWP)	Adopted in May 2017	Scheduled for adoption in May 2018
Regional Transportation Plan (RTP)	Adopted June 2014	Scheduled for adoption in December 2018
Metropolitan Transportation Improvement Program (MTIP)	Adopted August 2017	Scheduled for adoption in July, 2020
Annual Listing of Obligated Projects Report	Completed at the end of each calendar year – 2017 is still in progress (as of 1/4/18)	Scheduled for December 31, 2018
Title VI/ Environmental Justice Plan	Approved July 2017	Scheduled for July 2020
Public Participation Plan	Adopted November 2017	March 2018
ADA Self-Evaluation & Facilities Update Plan		Underway – scheduled for completion in July 2018

II. METRO OVERVIEW

Metro was established in 1979 as the MPO for the Portland metropolitan area. Under the requirements of FAST Act, Metro serves as the regional forum for cooperative transportation decision-making as the federally designated Metropolitan Planning Organization (MPO) for Oregon portion of the Portland-Vancouver urbanized area.

Federal and state law requires several metropolitan planning boundaries be defined in the region for different purposes. The multiple boundaries for which Metro has a transportation and growth management planning role are: MPO Planning Area Boundary, Urban Growth Boundary (UGB), Urbanized Area Boundary (UAB), Metropolitan Planning Area Boundary (MPA), and Air Quality maintenance Area Boundary (AQMA). A map displaying these boundaries can be found on page xiii.

First, Metro’s jurisdictional boundary encompasses the urban portions of Multnomah, Washington and Clackamas counties.

Second, under Oregon law, each city or metropolitan area in the state has an urban growth boundary that separates urban land from rural land. Metro is responsible for managing the Portland metropolitan region's urban growth boundary.

Third, the Urbanized Area Boundary (UAB) is defined to delineate areas that are urban in nature distinct from those that are largely rural in nature. The Portland-Vancouver metropolitan region is somewhat unique in that it is a single urbanized area that is located in two states and served by two MPOs. The federal UAB for the Oregon-portion of the Portland-Vancouver metropolitan region is distinct from the Metro Urban Growth Boundary (UGB).

Fourth, MPO’s are required to establish a Metropolitan Planning Area (MPA) Boundary, which marks the geographic area to be covered by MPO transportation planning activities, including development of the UPWP, updates to the Regional Transportation Plan (RTP), Metropolitan Transportation Improvement Program (MTIP), and allocation of federal transportation funding through the Regional Flexible Fund Allocation (RFFA) process. At a minimum, the MPA boundary must include the urbanized area, areas expected to be urbanized within the next twenty years and areas within the Air Quality Maintenance Area Boundary (AQMA) – a fifth boundary.

The federally-designated AQMA boundary includes former non-attainment areas in the metropolitan region that are subject to federal air quality regulations. As a former carbon monoxide and ozone non-attainment region, the Portland metropolitan region had been subject to a number of transportation conformity requirements. As of October 2017, the region has completed and is not longer required to perform transportation conformity requirements for carbon monoxide. Transportation conformity requirements related to ozone were lifted in the late 2000’s due to the revocation of the 1-hour ozone standard, which was the standard the region had been in non-attainment.

REGIONAL TRANSPORTATION DECISION-MAKING PROCESS

Metro is governed by an elected regional Council, in accordance with a voter-approved charter. The Metro Council is comprised of representatives from six districts and a Council President elected region-wide. The Chief Operating Officer is appointed by the Metro Council and leads the day-to-day operations of Metro. Metro uses a decision-making structure that provides state, regional and local governments the opportunity to participate in the transportation and land use decisions of the organization. Two key committees are the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Policy Advisory Committee (MPAC). These committees are comprised of elected and appointed officials and receive technical advice from the Transportation Policy Alternatives Committee (TPAC) and the Metro Technical Advisory Committee (MTAC).

JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION (JPACT)

JPACT is a 17-member policy committee chaired by a Metro Councilor and includes two additional Metro Councilors, seven locally elected officials representing cities and counties, and appointed officials from the Oregon Department of Transportation (ODOT), TriMet, the Port of Portland, and the Department of Environmental Quality (DEQ). The State of Washington is also represented with

three seats that are traditionally filled by two locally elected officials and an appointed official from the Washington Department of Transportation, (WSDOT). All transportation-related actions (including Federal MPO actions) are recommended by JPACT to the Metro Council. The Metro Council can ratify the JPACT recommendations or refer them back to JPACT with a specific concern for reconsideration.

Final approval of each action requires the concurrence of both JPACT and the Metro Council. JPACT is primarily involved in periodic updates to the Regional Transportation Plan (RTP), Metropolitan Transportation Improvement Program (MTIP), and review of ongoing studies and financial issues affecting transportation planning in the region.

METRO POLICY ADVISORY COMMITTEE (MPAC)

MPAC was established by Metro Charter to provide a vehicle for local government involvement in Metro's growth management planning activities. It includes eleven locally-elected officials, three appointed officials representing special districts, TriMet, a representative of school districts, three citizens, two Metro Councilors (with non-voting status), two officials from Clark County, Washington and an appointed official from the State of Oregon (with non-voting status). Under Metro Charter, this committee has responsibility for recommending to the Metro Council adoption of, or amendment to, any element of the Charter-required Regional Framework Plan.

The Regional Framework Plan was first adopted in December 1997 and addresses the following topics:

- Transportation
- Land Use (including the Metro Urban Growth Boundary (UGB))
- Open Space and Parks
- Water Supply and Watershed Management
- Natural Hazards
- Coordination with Clark County, Washington
- Management and Implementation

In accordance with these requirements, the transportation plan is developed to meet not only FAST Act, but also the Oregon Transportation Planning Rule and Metro Charter requirements, with input from both MPAC and JPACT. This ensures proper integration of transportation with land use and environmental concerns.

TRANSPORTATION POLICY ALTERNATIVES COMMITTEE (TPAC)

TPAC is comprised of technical staff from the same jurisdictions as JPACT, plus a representative from the Southwest Washington Regional Transportation Council, and six community members. In addition, the Federal Highway Administration and C-TRAN have each appointed an associate non-voting member to the committee. TPAC makes recommendations to JPACT.

METRO TECHNICAL ADVISORY COMMITTEE (MTAC)

MTAC is comprised of technical staff from the same jurisdictions as MPAC plus community and business members representing different interests, including public utilities, school districts, economic development, parks providers, housing affordability, environmental protection, urban design and development. MTAC makes recommendations to MPAC on land use related matters.

PLANNING PRIORITIES FACING THE PORTLAND REGION

FAST Act, the Clean Air Act Amendments of 1990 (CAAA), the Oregon Transportation Planning Rule, the Oregon Transportation Plan and modal/topic plans, the Metro Charter, the Regional 2040 Growth Concept and Regional Framework Plan together have created a comprehensive policy direction for the region to update land use and transportation plans on an integrated basis and to define, adopt, and implement a multi-modal transportation system.

These Federal, state and regional policy directives also emphasize development of a multi-modal transportation system. Major efforts in this area include:

- Update of the Regional Transportation Plan (RTP);
- Update to the Metropolitan Transportation Improvement Program (MTIP)
- Implementation of projects selected through the STIP/MTIP updates; and
- Completing multi-modal refinement studies in the Southwest Corridor Plan and the Powell/Division Transit Corridor Plan.

These policy directives point toward efforts to reduce vehicle travel and vehicle emissions, in particular:

- The Oregon state goal to reduce vehicle miles traveled (VMT) per capita;
- Targeting transportation investments to leverage the mixed-use, land use areas identified within the Regional 2040 Growth Concept;
- Adopted maintenance plans for ozone and carbon monoxide with establishment of emissions budgets to ensure future air-quality violations do not develop;
- Adoption of targets for non-single occupant vehicle travel in RTP and local plans;
- An updated five-year strategic plan for the Regional Travel Options Program; and
- Continued implementation of the five-year Transportation and System Management and Operations (TSMO) strategic plan for the Regional Mobility Program.

The current status of these activities is that many of the transportation planning programs – including the Regional Transportation Plan, Freight Plan, TSMO Plan, Regional Transit Plan and supporting updates to our Public Involvement Policy and Title VI Plan – are being updated. Implementation of these updated plans, policies and public involvement procedures will continue in FY 2018-19 and is reflected in the respective work programs for these ongoing projects.

Metro's regional priorities not only meet the most critical planning needs identified within our region, but also closely match federal planning priorities, as well:

- Our update to the Regional Freight Strategy will address rapidly changing port conditions in our region, including a gap in container cargo service, while also addressing FAST Act goals for implementing a national freight system.
- Our update to the Regional Safety Strategy responds to strong public demand for immediate action to improve multimodal safety on our major streets while also helping establish measures to help track safety to meet state and federal performance monitoring.
- Our Regional Transit Strategy will not only expand on our vision for strong transit system to help shape growth in our region, but will also help ensure that we continue to meet state and federal clean air requirements.

- The 2018 RTP update will continue to refine our outcomes-based policy framework that not only allows our decision makers that base regulatory and investment decisions on desired outcomes, but will also allow us to meet new federal requirements for performance base planning.

A Climate Smart Strategy was adopted in December 2014, and is currently being implemented through the 2018 RTP. The Congestion Management Process (CMP) was adopted as part of 2014 RTP in July 2014 (see Chapter 5). Many of the elements of the CMP are included as part of the Transportation System Management and Operations (TSMO) program, consisting of both the Regional Mobility and Regional Travel Options work programs. Metro staff revised the Regional Mobility Atlas as part of the 2014 RTP update.

Metro's annual development of the UPWP and self-certification of compliance with federal transportation planning regulations are part of the core MPO function. The core MPO functions are contained within the MPO Management and Services section of the work program. Other MPO activities that fall under this work program are air quality conformity analysis, quarterly reports for FHWA, FTA and other funding agencies, management of Metro's advisory committees, management of grants, contracts and agreements and development of the Metro budget. Quadrennial certification review took place in February 2017 and is covered under this work program.

Resolution place holder

Page 2 Resolution

GLOSSARY OF RESOURCE FUNDING TYPES

- PL – Federal FHWA transportation planning funds allocated to Metropolitan Planning Organizations (MPO's).
- STBG– Federal Surface Transportation Program transportation funds allocated to urban areas with populations larger than 200,000. Part of Metro's regional flexible fund allocation (RFFA) to Metro Planning, or to specific projects as noted.
- 5303 – Federal FTA transportation planning funds allocated to MPOs and transit agencies.
- ODOT Support – Funding from ODOT to support regional transportation planning activities (currently \$225,000 per year).
- TriMet Support - Funding from TriMet to support regional transportation planning activities (currently \$225,000 per year).
- Metro – Local match support from Metro general fund or solid waste revenues.
- Other – Anticipated revenues pending negotiations with partner agencies.

UPWP AMENDMENT PROCESS

The UPWP is a living document, and must be amended periodically to reflect significant changes in project scope or budget to ensure continued, effective coordination among our federally funded planning activities. This section describes the management process for amending the UPWP, identifying project changes that require an amendment to the UPWP, and which of these amendments can be accomplished as administrative actions by staff versus legislative action by JPACT and the Metro Council.

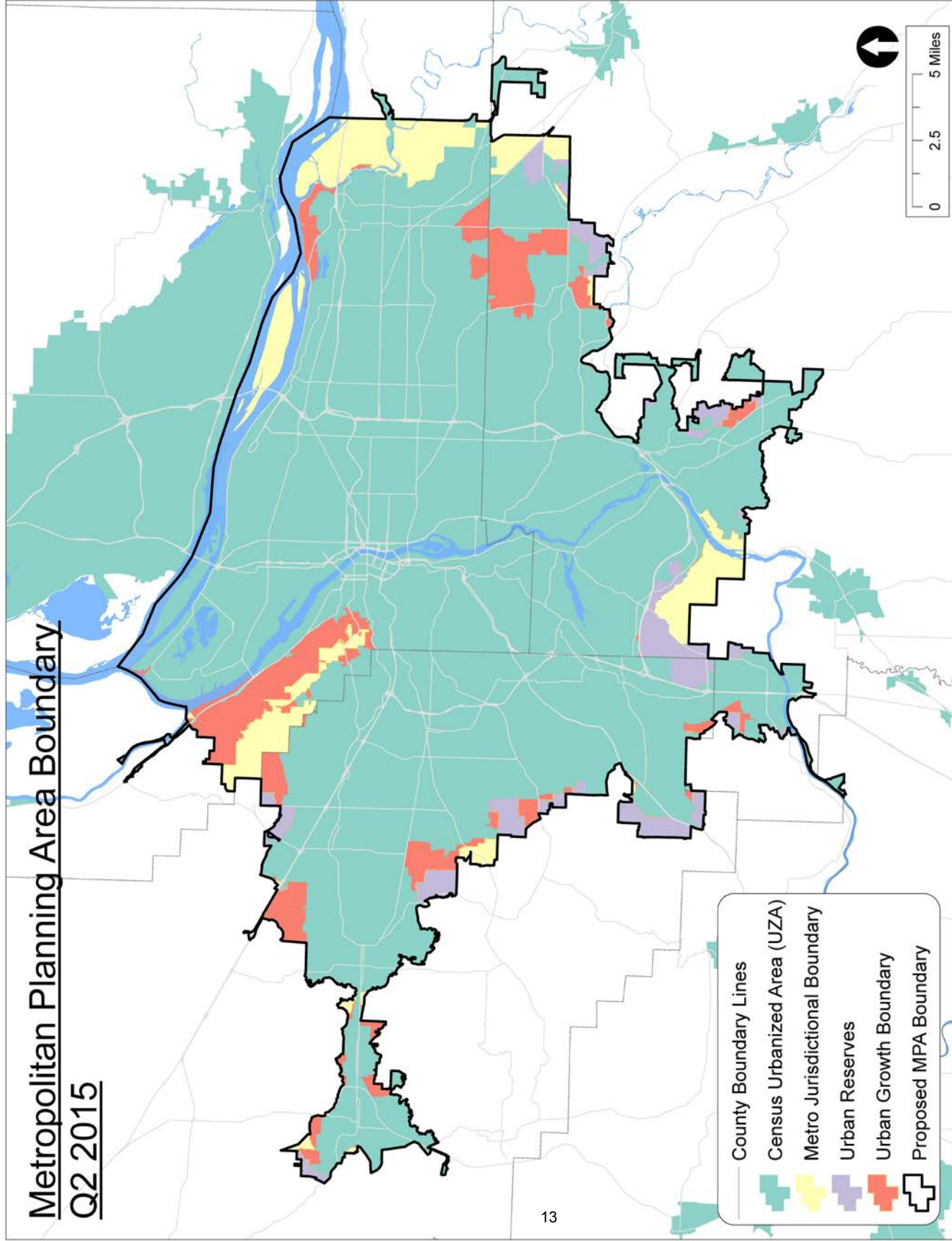
Legislative amendments to the UPWP are required when any of the following occur:

- A new planning study or project is identified.
- There is either a \$200,000 or 20 percent change, whichever is greater, in the total cost of an existing UPWP project. This does not cover carryover funds for a project/program extending multiple fiscal years that is determined upon fiscal year closeout.

Administrative changes to the UPWP can occur for the following:

- Changes to TOTAL UPWP project costs that do not exceed the thresholds for formal amendments above.
- Revisions to a UPWP narrative's scope of work, including objectives, tangible products expected in fiscal year, and methodology.
- Addition of carryover funds from previous fiscal year once closeout has been completed to projects/programs that extend into multiple fiscal years.

Metropolitan Planning Area Boundary Q2 2015



Description The Metropolitan Planning Area (MPA) boundary is a federal requirement for the metropolitan planning process. The boundary is established by the governor and individual Metropolitan Planning Organizations within the state, in accordance with federal metropolitan planning regulations. The MPA boundary must encompass the existing urbanized area and the contiguous areas expected to be urbanized within a 20-year forecast period. Other factors may also be considered to bring adjacent territory into the MPA boundary. The boundary may be expanded to encompass the entire metropolitan statistical area or combined as defined by the federal Office of Management and Budget.

Function The Metropolitan Planning Area boundary establishes the area in which the Metropolitan Planning Organization conducts federally mandated transportation planning work, including: a long-range Regional Transportation Plan, the Metropolitan Transportation Improvement Program for capital improvements identified for a four-year construction period, a Unified Planning Work Program, a congestion management process, and conformity to the state implementation plan for air quality for transportation related emissions.

Transportation Planning

Staff contact: Tom Kloster, Tom.Kloster@oregonmetro.gov

Description:

As the designated Metropolitan Planning Organization (MPO) for the Portland metropolitan region, Metro is responsible for meeting all federal planning mandates for MPOs. These include major mandates described elsewhere in this Unified Planning Work Program (UPWP), such as the Regional Transportation Plan (RTP) and Metropolitan Transportation Improvement Plan (MTIP) that follow this section. In addition to these major mandates, Metro also provides a series of ongoing transportation planning services and programs that support the major regional programs and other transportation planning in the region, including:

- Periodic amendments to the RTP that occur outside the regular RTP update cycles
- Periodic updates to the regional growth forecast
- Periodic updates to the regional revenue forecasts
- General support for regional safety planning
- General support for regional corridor planning
- Ongoing transportation model updates and enhancements
- Policy support for regional Mobility and CMP programs

Metro also brings supplementary federal funds and regional funds to this program in order to provide general planning support to the following regional and state-oriented transportation planning efforts:

- Policy and technical planning support for the Metro Council
- Administration of the regional framework & transportation functional plans
- Ongoing compliance with State greenhouse gas emission targets
- Periodic urban growth report support
- Ongoing support for Metro's local partnerships program
- Support for local Transportation System Planning
- Ongoing support for Metro's Transportation Snapshots
- Periodic support for other programs in the Planning & Development Department on transportation issues
- Participation in statewide transportation planning and rulemaking activities

Objectives:

Continued provision of regional transportation planning services and programs that support the major regional programs and other transportation planning in the region, as described above (ongoing)

Previous Work:

- Supported the Powell-Division Transit & Development Project adoption and amendment to the RTP.
- Participated in federal rulemaking process.
- Supported federal research projects on MPO operations and administration.
- Worked with ODOT and local partners to updates to the regional revenue forecast for

2040.

- Provided periodic safety and bicycle policy planning support for the Powell-Division and Southwest Corridor projects.
- Provided policy and technical support for freight enhancements to the regional travel demand model.
- Secured grant funding for the Regional Transit Strategy.
- Secured grant funding for the Designing Livable Streets project.

Metro also brings supplementary federal funds and regional funds to this program in order to provide general planning support to the following regional and state-oriented transportation planning efforts:

- Provided periodic transportation planning policy support for the Metro Council
- Produced annual transportation functional plan compliance report to the Metro Council
- Participated in rulemaking for updated greenhouse gas emission targets
- Supported the 2015 urban growth report
- Provided ongoing support for Metro's local partnerships program
- Provided support for local Transportation System Planning efforts
- Completed Transportation Snapshots in 2015 and 2016

Work Completed in 2017-18 included:

- Supported the Powell-Division Transit & Development Project adoption and amendment to the RTP.
- Drafted a major update to the Regional Freight Strategy as part of the 2018 RTP Update.
- Drafted a Regional Transit Strategy as part of the 2018 RTP Update.
- Drafted a major update to the Regional Safety Strategy as part of the 2018 RTP Update.
- Initiated a major update to the Designing Livable Streets program of best practice tools.
- Participated in federal rulemaking process with comments on the draft performance measure and MPO planning rules.
- Participated in state rulemaking amendments to the Oregon Transportation Planning Rule.
- Supported federal research projects on MPOs, including detailed surveys and phone interviews on Metro's operations and administration.
- Coordination with ODOT and local city and county partners to develop a regional revenue forecast for 2040.
- Provided policy and technical support for freight enhancements to the regional travel demand model funded through a national grant.
- Produced 2016 transportation functional plan compliance report to the Metro Council
- Provided ongoing support for Metro's local partnerships program, including monthly training meetings and individual support for staff liaisons.
- Provided support for local Transportation System Planning efforts in several local jurisdictions.

Methodology:

General transportation support is organized around two thematic teams within the planning program. A team of modal and topic experts provides expertise and support on freight, bicycle, pedestrian, motor vehicle and transit planning, and topic experts provide support on climate change, equity, safety, street design, resilience, transportation funding, state and federal regulation and performance

monitoring. These staff experts are generally available on short notice for periodic strategic consultation and support on Metro's major projects and programs.

A second cross-departmental team consists of local government liaisons, each with 1-2 local jurisdictions to support on land use and transportation planning topics. This team provides ongoing support, and meets monthly to stay abreast of key planning issues and trends, legal and regulatory issues affecting local planning and to share experiences and solutions in providing local planning support.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Continued provision of regional transportation planning services and programs, as needed, to support the major regional programs and other transportation planning in the region. In addition to ongoing support activities, major tangible products in 2018-19 include:

- Complete a final Regional Freight Strategy as part of the 2018 RTP adoption. (2nd Quarter)
- Complete a final Regional Transit Strategy. (2nd Quarter)
- Complete a final Regional Safety Strategy. (2nd Quarter)
- Complete the update to the Designing Livable Streets tools. (2nd Quarter)
- Support adoption of the Southwest Corridor LPA. (2nd Quarter)
- Complete an RTP Amendment for TriMet's Red Line Expansion Project. (2nd Quarter)
- Participate in the rulemaking advisory committee and formally comment on the Oregon Transportation Planning Rule amendments. (2nd Quarter)

Entity/ies Responsible for Activity:

- Metro – Product Owner/Lead Agency

Other Stakeholders:

- Local Cities and Counties
- Metro Council
- Metro Parks & Nature Department
- Metro Research Center
- Oregon Department of Transportation
- Oregon Department of Land Conservation and Development
- Oregon Department of Environmental Quality
- U.S. Department of Transportation

Schedule for Completing Activities:

Please refer to schedule information provided in the Major Project Deliverables/Milestones section.

Funding History:

No funding history (new program). This is the first year this narrative has been separated out from the RTP update narrative.

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	721,566
Interfund Transfers	\$	351,950
Materials and Services	\$	16,600

Resources:

PL	\$	353,372
STBG	\$	341,476
5303	\$	72,859
Metro	\$	331,246

TOTAL \$	1,090,116	TOTAL \$	1,090,116
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Full-Time Equivalent Staffing

Regular Full-Time FTE	5.782
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TOTAL	5.782
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FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	698,349
Interfund Transfers	\$	381,729
Materials and Services	\$	66,600

Resources:

PL	\$	665,787
STBG	\$	397,745
5303	\$	33,759
Metro	\$	49,388

TOTAL \$	1,146,678	TOTAL \$	1,146,678
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Full-Time Equivalent Staffing

Regular Full-Time FTE	5.334
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TOTAL	5.334
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Regional Transportation Plan Update (2018)

Staff contact: Kim Ellis, kim.ellis@oregonmetro.gov

Description of the Project:

The Regional Transportation Plan (RTP) guides local and regional transportation planning, funding and implementation activities in the Portland metropolitan region for all forms of travel – motor vehicle, transit, biking and walking – and the movement of goods and freight. In addition to meeting federal and state requirements, the plan also addresses a broad range of regional planning objectives, including implementing the 2014 Climate Smart Strategy and the 2040 Growth Concept – the region’s long-range growth management strategy – to create healthy, equitable communities and a strong economy.

Central to the RTP is an overall emphasis on outcomes, system completeness, and measurable performance targets to track progress toward the plan’s goals. The plan seeks to create an integrated regional transportation system that is safe, healthy, accessible, reliable, equitable, affordable and efficient for all users and supports how and where the region and communities have planned to grow. The plan identifies current and future regional transportation needs, near- and long-term investment priorities and actions to address those needs. The plan also accounts for local, regional, state and federal transportation funds the region expects to have available to build the region’s investment priorities.

The RTP is maintained and updated regularly to ensure continued compliance with State and Federal requirements and to address growth and changes in land use, demographic, financial, travel, technology and economic trends. Updates to the RTP are governed by a number of federal requirements that must be met in order for the plan to be certified by the U.S. Department of Transportation and for the region to remain eligible to receive federal transportation dollars. Updates to the RTP are also governed by a number of state requirements that must be met in order for the plan to be approved by the Land Conservation and Development Commission. The RTP is a Regional Transportation System Plan (TSP) under state law. TSPs for cities and counties located within an MPO area must be consistent with both the statewide Transportation Planning Rule and the RTP. Regional functional plans direct local government implementation of the RTP.

Objectives of the Project:

- Carry out work activities to maintain, implement, and update the RTP in cooperation and coordination with federal, state and local agencies and other transportation providers and comply with state and federal requirements, including the Oregon Transportation Planning Rule, and FAST Act. (ONGOING)
- Provide inclusive and meaningful opportunities for interested members of the public, transportation providers, historically marginalized communities (e.g., communities of color, low-income persons, and persons with limited ability to speak English, persons living with disabilities, youth and older adults) and other affected stakeholders to be involved, providing clear and concise information, timely public notices of opportunities to comment, and full public access to key decisions. (ONGOING)
- Continue transition to performance-based planning to identify innovative, cost-effective solutions to social, economic and environmental challenges facing the region and better

connect plan outcomes to the values and experiences of people living and working in the region. (ONGOING)

- Implement the 2014 Climate Smart Strategy and 2014 Regional Active Transportation Plan, develop and adopt a Regional Transit Strategy and Regional Emerging Technologies Strategy, and update the RTP vision, goals and performance targets, RTP Finance Plan, Regional Transportation Safety Strategy, Regional Freight Strategy, and transportation design policies. (ONGOING)
- Coordinate with other related UPWP planning activities, including the Title VI/Environmental Justice Program, Public Involvement, Regional Transit Strategy, , Regional Travel Options Program, Regional Freight Program and related studies, Regional Mobility Program, Economic Value Atlas, Designing Livable Streets, Southwest Corridor Project, Division Transit Project and relevant ODOT and local planning activities and studies. (ONGOING)
- Collaborate with the Metro Research Center to identify and address data needs, improve tools for evaluating and monitoring RTP performance outcomes and seek coordination and partnership opportunities with the Transportation Research and Education Center (TREC) and PORTAL at Portland State University, the Oregon Modeling Steering Committee (OMSC), ODOT, Washington DOT, TriMet, SMART and SW Regional Transportation Council to support on-going RTP monitoring, the region's Congestion Management Process (CMP), FAST Act implementation, Regional Mobility Program and regional GHG emissions analysis. (ONGOING)
- Promote cooperation and coordination across MPO boundaries and across State boundaries where appropriate to ensure a regional approach to transportation planning. (ONGOING)

Previous Work:

- Maintained web page to provide access to information about the current adopted plan, 2018 RTP update, opportunities to provide input and technical work group meetings. Materials can be downloaded at: www.oregonmetro.gov/rtp. (ONGOING)
- Draft updated RTP performance targets that address RTP goals, federal planning factors and MAP-21 goal areas and subsequent federal rulemaking to implement MAP-21 and the FAST Act. (FEBRUARY 2018)
- Technical review and public review drafts of the 2018 Regional Transit Strategy, 2018 Regional Freight Strategy, 2018 Regional Emerging Technologies Strategy and 2018 Regional Safety Strategy. (NOVEMBER-JANUARY 2017 AND JUNE 2018)
- Public review drafts of the 2018 Regional Transportation Plan. (JUNE 2018)
- Draft updated RTP project list reflecting two levels of investment – a financially constrained list of project priorities that meets federal requirements and a more ambitious list of additional unfunded regional transportation project priorities that reflects the level of investment the region agrees to work together to fund, reflecting policy direction from the Metro Council and JPACT. (SEPTEMBER 2017 AND MAY 2018)
- Four Regional Leadership Forums through which the Metro Council convenes joint meetings of JPACT and MPAC to provide policy direction to staff on updating the plan's policies, project priorities, and implementation actions. The first three forums were held in FY 16-17 and included state legislators and community and business leaders. The last forum was held in 2018. (APRIL 2016, SEPTEMBER 2016, DECEMBER 2016 AND MARCH 2018)
- Draft 2018 RTP Financial Forecast that estimates the amount of funding that is reasonably

anticipated to be available under federal law to implement regional transportation investment priorities, as well as operate and maintain the regional transportation system for the plan period. (JUNE 2017 AND MARCH 2018)

- Call for Projects/project solicitation materials that define a process for local coordinating committees, city of Portland, Port of Portland, ODOT, and transit providers to submit updated project lists for the financially constrained system as well as a more ambitious system that fit within revenue projections and demonstrate progress toward achieving the plan's goals and performance targets. (JUNE 2017 AND MARCH 2018)
- Draft updated RTP vision, goals and objectives that address the region's six desired outcomes, and federal planning factors and MAP-21 goal areas. (MAY 2017 AND DECEMBER 2018)
- Draft 2018 RTP Existing Conditions Chapter that documents key trends and current systems conditions for all modes of travel, including the movement of goods and freight. The information was reported through Regional Snapshots in support of the region's Congestion Management Process and identification of current and future regional transportation needs and potential solutions, and the project solicitation process for updating investment priorities in the RTP. (JANUARY 2017)
- Regional Snapshot No. 3 and No. 7 on Transportation to document experiences of residents and businesses using the regional transportation system, trends affecting travel in the region, and began documenting current system conditions and current plan performance. Information is posted at: www.oregonmetro.gov/regional-snapshots. (APRIL 2016 AND JUNE 2017)
- Regionally-coordinated and adopted population, household and job growth forecast for the years 2015 to 2040 to support RTP modeling and regional planning activities. (OCTOBER 2016)
- Provided elderly and disabled transportation planning support in partnership with the region's transit providers through most recent update to TriMet's Coordinated Transportation Plan for Seniors and People with Disabilities. (JUNE 2016)
- Adopted the work plan and public engagement plan for the 2018 RTP update. (DECEMBER 2015)
- Adopted the 2014 Climate Smart Strategy and supporting implementation actions. The strategy and supporting implementation actions will be further implemented through the 2018 RTP update. (DECEMBER 2014)
- Adopted the 2014 RTP. The update was limited in scope, focusing on maintaining compliance with federal law addressing two corrective actions identified in the 2012 Federal Certification Review, conducting an expanded environmental justice and Title VI assessment and incorporating system map and project list changes identified in local TSPs and regional plans developed or adopted since 2010, such as the Regional Active Transportation Plan and Regional Transportation Safety Plan. (JULY 2014)
Adopted the Environmental Justice and Title VI Assessment for the 2014 RTP and 2015-18 Metropolitan Transportation Improvement Program with recommendations for future refinements to be addressed in the 2018 RTP update and development of 2018-21 MTIP. The assessment included a demographic analysis and a regional-level disparate impacts and benefits and burdens analysis. The assessment also identified recommendations for future research and transportation equity analysis refinements that were further addressed through the 2018 RTP update. (JULY 2014)
- Developed and adopted the first Regional Active Transportation Plan (ATP). The 2014 ATP identified recommendations related to transportation safety and design that were further

- addressed in the 2018 RTP update. (JULY 2014)
- Developed the first Regional Transportation Safety Plan and coordinated efforts to identify and recommend short- and long-term actions related to planning, transportation design, data collection, and performance monitoring. The recommendations were further refined and addressed as part of updating the Regional Transportation Safety Plan through the 2018 RTP update. (MAY 2012)

Methodology for the Project:

Regional Transportation Plan (RTP): The focus of the current fiscal year will be continuing a major update to the RTP following the work plan and public engagement plan adopted by JPACT and the Metro Council in December 2015. The update began in May 2015. Partnership and engagement activities, planning work and policy discussions to support development of an updated plan will continue in 2018 with final adoption of the 2018 RTP scheduled for December 2018. The final plan will be effective for federal purpose upon adoption by JPACT and the Metro Council. The final plan will be sent to the LCDC to begin their approval process in the manner of periodic review in 2019.

Updates to the plan will address a number of regional, state and federal planning requirements, and, as a result, require special coordination with staff with state, regional, county and city agencies, as well as significant public engagement efforts, consistent with Metro's Public Engagement Guide. The update will also address actions and recommendations identified in relevant planning efforts, including the 2012 Regional Transportation Safety Plan, the 2013 Portland Region Westside Freight Access and Logistics Analysis, and subsequent 2016 Washington County Freight Study, the 2014 RTP update, the 2014 Regional Active Transportation Plan, the 2014 Climate Smart Strategy, the 2014 Economic Impacts of Congestion Study, Metro's Diversity Equity and Inclusion Strategy, TriMet's Service Enhancement Plans and 2016 Coordinated Transportation Plan for Seniors and People with Disabilities, the 2017 SMART Master Plan, and updates to the 2011 Oregon Freight Plan to meet FAST Act requirements.

The update will also address FHWA/FTA Planning Emphasis Areas (PEA) related to models of regional planning cooperation, access to essential services for underserved populations and MAP-21 and FAST Act implementation and related performance measurement requirements as well as recommendations or corrective actions identified in the 2017 Federal Certification Review to the extent practicable.

Several UPWP subarea and modal planning activities will be undertaken throughout FY 2018-19 that will be coordinated with and provide input to the 2018 RTP update. Related Metro-led UPWP activities include the Regional Transit Strategy, Regional Freight Program, Economic Value Atlas, Designing Livable Streets, Transportation System Management and Operations, Regional Travel Options and Regional Mobility programs, Division Transit Project and Southwest Corridor Plan. Related ODOT Region 1-led UPWP activities will also inform the 2018 RTP update.

Additional regional transportation planning tasks are anticipated to be identified through the 2018 RTP update to advance implementation of the plan. These tasks will be amended into the UPWP as appropriate.

The 2018 RTP update work plan will be accomplished using the following approach:

- **Document key regional trends and challenges, existing conditions and needs.** Update Chapter 1 of the RTP to document key trends and challenges affecting travel in the region as well as current and future regional transportation needs.
- **Update shared vision and outcomes-based policy goals and performance targets.** Refine

the region's vision for the transportation system and regional goals, objectives and performance targets that identify specific outcomes the region wants to achieve with investments in the transportation system. This work will include significant coordination and collaboration with TriMet, SMART and ODOT as the agencies also set performance measures and targets in response to federal MAP-21 and FAST Act rulemaking. This work will be completed in December 2018.

- **Update outcomes-based performance evaluation framework.** Continue to update data, methods and analytic tools as needed to address MAP-21 and FAST Act performance-based planning requirements and the federally-required congestion management process, and improve the region's ability to measure the benefits and impacts of investments across economic, social equity and environmental outcomes. This work will include convening two technical work groups of staff from local jurisdictions, transit providers, TREC at Portland State University, environmental justice leaders and other topical experts to refine and further advance the region's methodology for conducting a regional transportation system analysis and transportation equity analysis for the 2018 RTP. This work will also seek to develop and pilot the use of project-level criteria to provide additional information to stakeholders and decision-makers to help identify a pipeline of priority projects on the regional transportation system that are anticipated to seek regional, state and federal funding to advance them. This work will be completed in December 2018.
- **Update Congestion Management Process (CMP) Reporting.** This work will include a limited update to data used in the Regional Mobility Corridor Atlas to serve as a factual foundation for documenting current congestion, high crash locations, access to travel options and other information as part of the federally-required congestion management process. The information and findings will be reported in a regional snapshot focused on transportation and a separate existing conditions report that will inform identification regional transportation needs in advance of updating the RTP investment priorities. In addition, staff will work with local, regional and state partners to review and identify recommendations for refinements to the region's CMP data collection and reporting approach. The review will aim to more effectively address MAP-21 and FAST Act performance-based planning and target-setting requirements, identify data gaps and limitations, collaborate with TREC, ODOT, TriMet and SMART to bring relevant data into the atlas and better align the CMP reporting with the RTP's outcomes-based evaluation framework and performance measures and targets. This work will include convening a technical work group on performance measures to help identify recommendations for refinements to the atlas and the CMP reporting approach. This work will be completed in December 2018.
- **Update RTP Financial Plan:** Continue work to update estimates of funding reasonably expected to be available under federal law and identify potential new funding mechanisms in coordination with local jurisdictions, transit agencies, ODOT, and business and community leaders to address current and future transportation needs, including keeping the existing transportation system in a state of good repair. This includes accounting for anticipated revenues from federal, state, regional, local, and private sources, and user fees. This work will result in a new financially constrained revenue forecast that meets federal requirements as well as a more ambitious revenue forecast that reflects the level of investment the region agrees to work together to pursue to fund additional regional transportation project priorities. This work will be completed in December 2018.
- **Update regional policies and strategies.** Update policy elements of the RTP (Chapter 2) as

needed to address new federal and state requirements, 2012 Transportation Safety Plan recommendations, and recent regional policy actions, including adoption of the 2014 Climate Smart Strategy, the 2014 Regional Active Transportation Plan and the 2014 Regional Transportation Plan, and new policies and strategies recommended through this update and related Metro projects and programs. This work will be completed in December 2018.

- **Update shared investment strategy and action plan.** Update regional strategies for safety, transit, and freight, and related near- and long-term investment priorities, actions and partnerships to support implementation. This will include developing policy recommendations on emerging concepts related to emerging technologies, such as driverless vehicles and shared mobility services, and disaster resilience. Analysis of the two RTP investment strategies will also include demonstrating the region's priorities continue to meet the federal Clean Air Act and Title VI/Environmental Justice requirements, and the state-mandated greenhouse gas emissions reduction target for light-duty vehicles. This work will be completed in December 2018.
- **Implement Climate Smart Strategy.** Update the plan's policies, investment priorities and actions to address recommendations for increased investment in transit and transportation system management and operations programs and projects. This will also include background work to support the greenhouse gas emissions analysis that will be completed for the 2018 RTP update, and address anticipated amendments to the Metropolitan Area Greenhouse Gas Target Rules. This work will continue in FY 18-19.
- **Update Regional Transportation Safety Strategy.** Continue work to update the Regional Transportation Safety Plan. This work will include policy and data coordination and collaboration with ODOT as the agency sets statewide safety-related performance measures and targets to respond to MAP-21 and FAST Act. This work will be completed in December 2018.
- **Update Regional Freight Strategy.** Continue work to update the Regional Freight Plan in coordination with the Regional Freight Program with the following work products: updated economic figures and commodity flow data; new freight performance measures that inform near- and long-term investment priorities and FAST Act required freight performance targets and measures; updated Regional Freight Network map; and new sections on regional freight funding and the federal FAST Act and FASTLANE grant program. This work will be completed in December 2018 in coordination with an update to the 2011 Oregon Freight Plan, including identification of freight bottlenecks in the Portland region and other areas of the state to help ODOT direct funding to projects that alleviate critical freight bottlenecks.
- **Develop Regional Transit Strategy.** Continue work to develop a Regional Transit Strategy, including:
 - Collaborate and coordinate with TriMet and SMART and other transit providers to develop a regional transit vision and report on FAST Act required transit performance targets and measures.
 - Work with transit stakeholders to develop or adopt required performance targets and measures.
 - Improve data and methods for evaluating transit performance and expected benefits.
 - Update the regional transit network vision and transit system expansion policies to inform investment priorities.
 - Incorporate relevant service and infrastructure needs and priorities, strategies and

actions from TriMet's 2016 Coordinated Transportation Plan for Seniors and Persons with Disabilities.

- Provide oversight of contractor deliverables. This work will be completed in December 2018.
- **Develop Regional Emerging Technologies Strategy.** Continue work to develop a Regional Emerging Technologies Strategy in coordination with the 2018 RTP update. This work will include development of policies and strategies that will be incorporated in the 2018 RTP. The policies and strategies will focus on the key areas where public agencies need to act in the next decade to respond to the most pressing issues presented by emerging technologies and stay on track to meet regional goals for social equity, the environment, economic prosperity, land use and transportation over the long term. This work will be completed in December 2018.

Entities Responsible for the Project:

- Metro – Product Owner/Lead Agency
- Oregon Department of Transportation – Cooperate/Collaborate/Coordinate
- TriMet – Cooperate/Collaborate/Coordinate
- SMART – Cooperate/Collaborate/Coordinate

Other Project Stakeholders:

- Joint Policy Advisory Committee on Transportation (JPACT)
- Metro Policy Advisory Committee (MPAC)
- Transportation Policy Alternatives Committee (TPAC)
- Metro Technical Advisory Committee (MTAC)
- TransPORT Subcommittee to TPAC
- Cities and counties in the Metro region
- Bi-State Coordination Committee, Southwest Washington Regional Transportation Council (RTC), C-TRAN, and other Clark County governments
- Federal and State legislators and elected officials representing counties and cities in the region
- Northwest Region Area Commission on Transportation (NW ACT)
- Port of Portland
- Port of Vancouver
- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)
- Environmental Protection Agency (EPA)
- Oregon Transportation Commission (OTC)
- Land Conservation and Development Commission (LCDC)
- Department of Land Conservation and Development (DLCD)
- Oregon Department of Environmental Quality (DEQ)
- Oregon Health Authority
- Oregon MPOs
- Community groups and organizations involved in health, equity, environmental justice, economic development, business, climate change, land use and transportation issues and serving the needs of historically underrepresented communities (e.g., communities of color, low-income persons, and persons with limited English proficiency) as well as older adults, youth, people with disabilities

- Organizations and advisory committees serving regional bicycle, pedestrian, freight, motor vehicle and transit needs
- Transportation Research and Education Consortium (TREC) and Portland State University
- Interested public
- Special Transportation Funding Advisory Committee (STFAC)

Major Project Deliverables and Schedule for Completion in FY 2018-2019:

- Quarterly progress reports. (QUARTERLY)
- Public information and technical and policy meeting materials on the RTP via Metro's website. (ONGOING)
- RTP amendments, if necessary (ONGOING)
- MAP-21 and FAST Act implementation, including the implementation of the performance-based planning framework, goal areas, target setting, and performance reporting through the 2018 RTP update and coordination and collaboration with federal and state agencies and transit providers on statewide and regional target setting as directed by MAP-21. (ONGOING)
- Public engagement activities and reports documenting engagement activities, consistent with the adopted Public Engagement Plan for the 2018 RTP update. (ONGOING)
- Reports, memoranda, legislation and other materials documenting research, analysis, recommended refinements to the regional transportation vision, goals, performance targets and measures, visualizations of information, policies, financial assumptions, investment priorities, CMP reporting recommendations, and outreach activities conducted to support development and adoption of the 2018 RTP. (ONGOING)
- Implementation of the region's Coordinated Transportation Plan for Seniors and People with Disabilities (CTP). (ONGOING)
- Adoption drafts of the 2018 Regional Transportation Plan and updated components, including the 2018 Regional Transit Strategy, 2018 Regional Freight Strategy, 2018 Emerging Technologies Strategy and 2018 Regional Safety Strategy. (FIRST QUARTER)

Funding History:

Fiscal Year	Total Budget	FTE Comparison
^{1,2} 2011-12	\$2,110,058	11.965
^{1,2} 2012-13	\$1,497,674	9.099
^{1,2} 2013-14	\$698,555	3.980
^{1,2} 2014-15	\$1,105,379	3.130
² 2015-16	\$1,462,908	6.000
² 2016-17	\$1,696,646	8.555

¹The total budget and FTE comparison for FY 2011-12 and FY 2012-13 includes both the Regional Transportation Planning and Climate Smart Strategy work. The two projects were split into separate narratives for the 2013-15 UPWP.

²This program budget and FTE comparison was included Transportation Planning in these years.

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	523,320
Interfund Transfers	\$	234,312
Materials and Services	\$	15,600

Resources:

PL	\$	119,350
STBG	\$	314,574
5303	\$	133,845
5303 Pre-MAP21	\$	77,070
Supplemental Allocation		
Metro	\$	128,394

TOTAL \$	773,232	TOTAL \$	773,232
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Full-Time Equivalent Staffing

Regular Full-Time FTE	4.163
TOTAL	4.163

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	371,763
Interfund Transfers	\$	188,629
Materials and Services	\$	15,600

Resources:

PL	\$	253,272
STBG	\$	43,913
5303	\$	245,663
Metro	\$	33,143

TOTAL \$	575,992	TOTAL \$	575,992
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Full-Time Equivalent Staffing

Regular Full-Time FTE	2.944
TOTAL	2.944

Regional Transit Strategy

Staff contact: Jamie Snook, Jamie.Snook@oregonmetro.gov

Description:

Transit has a significant role in supporting the 2040 Growth Concept – the region’s long-range strategy for managing growth. The 2040 Growth Concept calls for focusing future growth in the Portland Central City, regional and town centers, station communities, main streets, 2040 corridors and employment areas, and includes policies to connect the Portland Central City and regional centers together with high capacity transit, which can include light rail, bus rapid transit, commuter rail, or streetcar. The Regional Transportation Plan (RTP) expands this vision to include a connected network of regional and local transit service that is complemented by transit-supportive land uses, safe and convenient bike and pedestrian connections to transit, and other facilities, programs and services designed to make transit more convenient, frequent, accessible and affordable.

The Regional Transit Strategy, formerly known as the Regional High Capacity Transit System Plan, will provide a coordinated vision of future transit for the region to support the 2040 Growth Concept, Climate Smart Strategy, and Regional Transportation Plan. The plan will include improvements to bus service as well as future investments in high capacity transit improvements. The Plan will also include an update to the System Expansion Policy that will provide local and regional partners with direction on how to move future projects forward. This work will be conducted as part of the 2018 Regional Transportation Plan update and will be closely coordinated with the Future of Transit vision being developed by TriMet through its Service Enhancement Plans and the update to Transit Master Plan by the South Metro Area Regional Transit (SMART) district. This strategy will also incorporate relevant service and infrastructure needs and priorities, strategies and actions from TriMet’s 2016 Coordinated Transportation Plan for Seniors and Persons with Disabilities.

Objectives:

- Implement the 2040 Growth Concept, Climate Smart Strategy and the RTP.
- Update RTP transit-related policies and performance measures to guide consideration of the effect of investments on transit performance and ability to support broader mobility, land use, urban form, environmental and social equity objectives.
- Update the current Regional Transit Network Map and High Capacity Transit Map in the RTP to reflect a coordinated vision for future transit service in the region that includes high capacity transit and regional, local and community-based transit services.
- Update the Transit System Expansion Policy to provide a clear and efficient implementation process for major transit investments.
- Recommend refinements and/or amendments to RTP transit-related policies, strategies and investments to support the coordinated vision for future transit service in the region.
- Recommend a coordinated strategy for future transit investments and identify potential partnerships, strategies and funding sources for implementation.
- Implementation of the Regional Enhanced Transit Concept Pilot Program.

Previous Work:

- The Regional High Capacity Transit System Plan and System Expansion Policy, adopted as a component of the RTP in 2010, identified the region’s HCT corridor priorities in support

- of the 2040 Growth Concept and RTP. (August 2010)
- Developed and adopted the first Regional Active Transportation Plan to support improved bike and pedestrian access to transit and other community destinations. (July 2014)
- The Climate Smart Strategy, adopted in December 2014, identified increased capital and operational transit investments and supporting infrastructure as a key component of the region's strategy for reducing greenhouse gas emissions from light-duty vehicles. (DECEMBER 2014)
- Trimet's adopted Coordinated Transportation Plan for Seniors and Persons with Disabilities identifies service and infrastructure needs and priorities, strategies and actions to improve travel options and services for older adults and persons living with disabilities. (July 2016)

Methodology:

The methodology includes stakeholder and public outreach, technical analysis and policy discussions that will be coordinated with other related UPWP planning activities, including the 2018 RTP update and SMART Transit Master Plan update, Metro's My Place in the Region and Regional Equity Strategy. Public outreach, including, but not limited to workshops, meetings in places where people gather (e.g., farmers markets), community meetings and web surveys will be conducted. An updated System Expansion Policy evaluation framework will be developed consistent with the RTP to guide how to move future projects forward. Approval of the Regional Transit Strategy is by the Metro Council after consideration of public comments and recommendations from JPACT and MPAC, Metro's regional policy advisory committees.

Schedule for Completing Activities:

- Update the Transit System Expansion Policy. (WINTER 2018)
- Integrate appropriate Regional Transit Plan investments and strategies in draft 2018 RTP. (2017-2018)
- Finalize the Regional Transit Strategy (WINTER 2018)
- Advance ETC projects to project development. (SUMMER/FALL 2018)

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Reports documenting technical analysis and outreach activities. (ONGOING)
- Draft Regional Transit Strategy (FIRST QUARTER)
- Updated System Expansion Policy (FIRST QUARTER)
- Public input on Regional Transit Strategy and transit related elements of the 2018 RTP (FIRST QUARTER)
- Final Regional Transit Strategy report (THIRD QUARTER)

Entity/ies Responsible for Activity:

Metro - Lead Agency

TriMet – Cooperate/Collaborate

SMART – Cooperate/Collaborate

Other stakeholders - Consider/Collaborate:

- Transportation Policy Alternatives Committee (TPAC)
- Joint Policy Advisory Committee on Transportation (JPACT)
- Metro Technical Advisory Committee (MTAC)
- Metro Policy Advisory Committee (MPAC)
- Federal Highway Administration (FHWA)

I. GENERAL MPO TRANSPORTATION PLANNING

- Federal Transit Administration (FTA)
- Cities within Metro's boundaries
- Clackamas, Multnomah, Washington, and Clark Counties
- Oregon Department of Transportation (ODOT)
- Other neighboring transit districts, including C-TRAN
- Community groups and organizations involved in equity, environmental justice, economic development, business, climate change, land use and transportation issues and serving the needs of communities of concern, including communities of color, low-income persons, older adults, youth, people with disabilities, and persons with limited English proficiency.
- Citizens of the region

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2015-16	\$61,379	0.275
2016-17	\$80,516	0.375

FY 2017-18 Cost and Funding Sources:

Requirements:

Personal Services	\$	59,145
Interfund Transfers	\$	24,153

Resources:

STBG	\$	74,251
5303	\$	493
Metro	\$	8,555

TOTAL \$	83,298	TOTAL \$	83,298
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Full-Time Equivalent Staffing

Regular Full-Time FTE 0.4

TOTAL 0.4

FY 2018-19 Cost and Funding Sources:

Requirements:

Personal Services	\$	69,623
Interfund Transfers	\$	29,566

Resources:

PL	\$	16,230
STBG	\$	70,302
5303	\$	4,137
Metro	\$	8,520

TOTAL \$	99,189	TOTAL \$	99,189
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Full-Time Equivalent Staffing

Regular Full-Time FTE 0.455

TOTAL 0.455

Metropolitan Transportation Improvement Program

Staff contact: Ted Leybold, Ted.Leybold@oregonmetro.gov

Description:

The Metropolitan Transportation Improvement Program (MTIP) is a critical tool for implementing and monitoring the progress of the Regional Transportation Plan (RTP) and 2040 Growth Concept. The MTIP programs and monitors funding for all regionally significant projects in the metropolitan area. The MTIP administers the allocation of urban Surface Transportation Block Grant (STBG) Program, Congestion Mitigation Air Quality (CMAQ) Improvement Program, and Transportation Alternatives (TA) funding awarded through the Metro Regional Flexible Fund process.

The MTIP reflects the approved RTP's first four year implementation program of funding goals and regional transportation strategies. The MTIP also is a project implementation financial document used to verify and obligate federal project transportation funding. It reflects how funding for projects and their specific phases will be expended to implement the project as part of the first four years of the RTP. The MTIP must be fiscally constrained and demonstrate the programming of project funding does not exceed the funding capacity in any single year of the MTIP. Finally, the MTIP through its major four-year update provides a reconfirmation of implementing the region's transportation control measures (TCMs) for air quality, ensuring federal transportation funds are being programmed, obligated, and expended correctly and in a timely fashion to meet transportation obligations to reduce vehicle emissions.

Development and management of the MTIP is governed under 23 CFR 450.300-336, Metropolitan Transportation Planning and Programming. Projects included in the MTIP are generally one of five types:

1. Projects on the State Highway System
2. Projects on the regional arterial system
3. Major transit investments in the region
4. Separated active transportation projects on the regional network
5. The project is a planning project as part of a regional major investment study, or will complete project development work (Planning through Preliminary Engineering).

As stated previously, the MTIP represents the first four-year implementation program of projects from the approved long range RTP. Before being added to the MTIP, the project must first be part of the fiscally constrained portion of the RTP. From there, adding projects into the MTIP will satisfy one or more of the following criteria:

- The transportation project is awarded federal funding.
- The project is located in the State Highway System and was awarded ODOT administered funding.
- The transportation project is locally funded, but requires any form of required federal approvals to be implemented.
- The transportation project helps the region meet its TCM requirements to reduce vehicle emissions.
- The transportation project is locally funded, but regionally significant and clearly meets the goals and strategies of the approved RTP.

Through its major update, the MTIP verifies the region's compliance with air quality and other federal requirements, demonstrates fiscal constraint over the MTIP's four-year period and informs the region on progress in implementation of the RTP. Between major MTIP updates, the MPO manages and amends the MTIP projects as required to ensure project funding can be obligated based on the project's implementation schedule. MTIP amendments are ongoing and generally fall within one of three categories:

Formal amendments:

- Result due to substantial funding, policy, or scope changes to the project.
- Require a detailed documentation narrative, a confirmation of consistency with the region's long-range plan and that the region's fiscal constraint findings have not been impacted or violated.
- Require formal approval by Metro's Joint Policy Advisory Committee on Transportation (JPACT) and Council approval.
- Requires approval by U.S. DOT.

Administrative amendments/modifications:

- Minor changes and funding adjustments that clearly do not impact fiscal constraint or RTP consistency.
- The range of possible administrative changes generally are negotiated and pre-approved between the MPO and U.S. DOT.
- Do not require formal Metro approval.
- Approval normally by ODOT with possible review by U.S. DOT

Technical corrections/modifications:

- Represent extremely minor corrections (e.g. spelling errors, or typos)
- No impact on anything as a result of the correction.
- Notification to ODOT required, but approval not necessary by ODOT or U.S. DOT.

As mentioned earlier, the MTIP is also subject to federal and state air quality requirements, and a determination is made during each MTIP update to ensure consistency with the State Implementation Plan for air quality and implementation of its TCMs. These activities require special coordination with staff from Oregon Department of Transportation (ODOT), TriMet, South Metro Area Regional Transit (SMART), and other regional, county and city agencies, as well as public-involvement efforts, consistent with Metro's public involvement plan.

Objectives:

Developing, updating, and managing the MTIP requires a cooperative, continuous, and comprehensive process to prioritize projects from the RTP for funding which includes (ONGOING):

MTIP Management: Effectively administer the existing MTIP and completing required federal responsibilities as outlined in the applicable CFRs and regulations that include:

- Collaborate with partner TIP administering agencies to document roles and responsibilities utilizing tools such as planning agreements, project charters, regular coordination meetings, and other resources.
- Programming transportation projects in the region consistent with Federal rules and

regulations. (ONGOING)

- Ensure funding in the first two years of the MTIP is available or committed and that costs are programmed in year-of-expenditure dollars. (ONGOING)
- Document the cooperative revenue estimation process that ensures adequate funding is available by year to operate and maintain the system, adequate revenue is available to deliver projects on the schedule proposed in the TIP, and all other financial planning and fiscal constraint requirements. (ONGOING)
- Consult with program stakeholders, including formal consultation with required entities in compliance with federal regulations. (ONGOING)
- Continue improvements to the on-time and on-budget delivery of the local program of projects selected for funding through the Transportation Priorities process. (ONGOING)
- Continue the MTIP public awareness program to include updated printed materials, web resources and other material to increase understanding of the MTIP process. (ONGOING)
- Work with the Oregon MPO consortium, ODOT and transit agencies to consider options to utilize better data management tools for managing the TIP and financial plan. In the interim, maintain Transtracker database with project programming, amendment, obligation information and revenue information. (ONGOING)
- Implement new performance measurement requirements (ONGOING).

MTIP Update: Coordinate with the ODOT, TriMet and SMART to begin creation of the 2021-24 MTIP and STIP, including:

- Monitor and update the financial forecast.
- Complete the policy update to provide MPO policy direction and input to the various funding allocation programs for allocating federal funds to ensure progress in implementing the goals and objectives of the RTP.
- Utilize the Congestion Management Process (CMP) in analyzing the existing transportation system and developing the priority projects for the 2021-24 MTIP process.
- Prepare for adoption of the 2021-24 MTIP through analysis and documentation of the funding allocation and programming processes relative to federal regulations.

Local Project Support: Provide administrative and technical support to local project development and construction. This includes support of initial project development tasks performed as a planning phase activity. The administrative responsibilities for Metro, ODOT and local agency staff performing these planning activities are described in Appendix A.

Previous Work:

Work completed in the 2017-18 fiscal year included:

- Adoption of the 2018-2021 MTIP and its Air Quality Conformity findings.
- Updated the MTIP amendment process to ensure consistency with federal regulations for formal amendments vs. administrative adjustments and with Metro's federally approved public notification and comment processes.
- Adoption of a project charter for the development of the 2021-24 MTIP and coordination with ODOT, TriMet and SMART in the allocation and programming of funding to projects administered by those agencies.
- Administration of the MTIP, including reviewing, evaluating, and processing of MTIP amendments, project selection, financial plan and scope/schedule adjustments.
- Participating and assisting ODOT Local Agency Liaisons (LAL) develop and execute RFFA

- project funded IGAs and obligate federal funding.
- Support in administering local project development plans (UPWP Regionally Significant projects)

Methodology:

The MTIP is updated and maintained through extensive cooperation and collaboration with partner agencies, a rigorous public involvement process, and administrative procedures such as the maintenance of a project and financial database.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Funding forecast through the FFY 2024 (ONGOING).
- Adoption of the 2021-24 MTIP and Regional Flexible Fund allocation (RFFA) policy report (SUMMER 2018)
- CMAQ, STBG, and TA project implementation monitoring report (QUARTERLY)
- MTIP Fiscal Constraint report. (ONGOING)
- Amendments to current 2018-21 MTIP (ONGOING).
- Completion of the FFY 2018 Obligation Report (DECEMBER 2018).
- Monitoring the obligation and implementation of several project development plans (UPWP Regionally Significant Projects) (ONGOING).
- Monitoring and review assistance in the development of RFFA funded CMAQ, STBG, and TA Scope of Work, Project Prospectus, and IGAs to ensure federal funds are obligated per their milestone schedule correctly and in a timely fashion. (ONGOING)

Entities Responsible for Activity:

- Metro – Product Owner/Lead Agency
- Oregon Department of Transportation – Cooperate/Collaborate
- TriMet – Cooperate/Collaborate
- South Metro Area Regional Transit – Cooperate/Collaborate

Other Stakeholders:

Local partner agencies and members of the public, including:

- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)
- Joint Policy Advisory Committee on Transportation (JPACT)
- Transportation Policy Alternatives Committee (TPAC)
- Oregon Transportation Commission (OTC)
- Oregon Department of Environmental Quality (DEQ)
- Oregon Metropolitan Planning Organization Consortium (OMPOC)
- US Environmental Protection Agency (EPA)
- Environmental Justice and Underserved work group and organizations involved with minority and non-English speaking residents

Schedule for Completing Activities:

- Adoption of the 2021-24 MTIP and Regional Flexible Fund allocation (RFFA) policy report (SUMMER 2018)
- Completion of the FFY 2018 Obligation Report (DECEMBER 2018).

Please refer to schedule information provided in the *Objectives* section for a list on-going activities without scheduled completion dates.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2013-14	\$560,466	3.26
2014-15	\$1,020,003	5.375
2015-16	1,086,933	5.6
2016-17	\$1,164,993	5.8

FY 2017-18 Cost and Funding Sources:

Requirements:

Personal Services	\$	669,545
Interfund Transfers	\$	283,387
Materials and Services	\$	74,500

Resources:

PL	\$	355,865
STBG	\$	233,439
5303	\$	369,158
Metro	\$	68,970

TOTAL \$	1,027,432	TOTAL \$	1,027,432
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Full-Time Equivalent Staffing

Regular Full-Time FTE	5.55
TOTAL	5.55

FY 2018-19 Cost and Funding Sources:

Requirements:

Personal Services	\$	757,814
Interfund Transfers	\$	339,979
Materials and Services	\$	115,841

Resources:

PL	\$	49,999
STBG	\$	674,970
5303	\$	369,158
Metro	\$	119,505

TOTAL \$	1,213,634	TOTAL \$	1,213,634
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Full-Time Equivalent Staffing

Regular Full-Time FTE	6.025
TOTAL	6.025

Note: Include as part of the Annual UPWP Master Agreement – Not a Regionally Significant Stand Alone Project. No consultants utilized. Staff salary funding.

Air Quality Program

Staff Contact: Grace Cho, grace.cho@oregonmetro.gov

Description:

The Air Quality Program ensures activities undertaken as part of the Metropolitan Planning Organization (MPO), such as the Regional Transportation Plan (RTP) and the Metropolitan Transportation Improvement Program (MTIP), for the Portland metropolitan area address state and federal regulations and coordinates with other air quality initiatives in the region.

As part of state and federal commitments, the Air Quality Program ensures the region's MPO activities are carrying out the commitments and rules set forth as part of the Portland Area State Implementation Plan (SIP) and state and federal regulations pertaining to air quality and air pollution. The SIP is overseen by the Oregon Department of Environmental Quality (DEQ) and approved by the U.S. Environmental Protection Agency (EPA). The following activities comprise of the Portland area SIPs:

- Monitor air pollution levels for criteria air pollutants, particularly ozone because of the region's history, and proactively work to address increasing ozone pollution levels to prevent a non-attainment designation
- Monitor vehicle miles traveled (VMT) per capita and if key thresholds are triggered (as identified in the SIP) then undertake the contingency provisions outlined in the SIP
- Facilitate interagency consultation with federal, state, regional, and local partners
- Continue to implement the Transportation Control Measures as outlined, unless a specific date or completion point has been identified in the SIP
- Work collaboratively with DEQ as issues emerge related to federal air quality standards, mobile source pollution, and transportation programs

Because the Portland metropolitan region has successfully completed two consecutive 10-year maintenance plans after receiving an attainment designation from U.S. EPA as required by the Clean Air Act, the region is no longer required to conduct Air Quality Conformity Determinations (AQCDs) specifically for carbon monoxide to assess the air quality impacts of MPO activities and determine if transportation investments are conducive to the area meeting federal and state air quality standards.

In addition to the state and federal components, the Air Quality Program includes participation and partnerships on other regional initiatives related to air quality.

Objectives:

- Continue to implement the provisions set forth by the Portland Area Second 10-Year Maintenance Plan SIP. (ONGOING)
- Monitor the region's vehicle miles traveled and air pollution levels to ensure a contingency action is not triggered. (ONGOING)
- Serve and continue to coordinate interagency consultation on air quality related issues in the Portland metropolitan region. (ONGOING)
- Continue to maintain and implement emissions modeling tools for air quality analyses purposes. (ONGOING)
- Ensure MPO activities are consistent with Federal air quality rules and regulations.

(ONGOING)

- Consult, participate, and partner on activities as it relates to the implementation of the Portland Area Second 10-Year Maintenance Plan SIP. (ONGOING)
- Carry out any other mutually agreed upon air quality related activities outlined in the Memorandum of Understanding between Metro and DEQ.
- Participate and partner on air quality related activities which are beyond the scope of federal regulations and transportation conformity. (ONGOING)

Previous Work:

Work completed in the 2016-17 fiscal year included:

- Metro staff participation in EPA Region 10 quarterly conformity information sharing sessions;
- Development and approval of the 2018-2021 MTIP Air Quality Conformity Determination;
- Continued on-going participation and partnerships with local, regional, and state agencies on various air pollution mitigation efforts. Efforts are not solely focused on transportation/mobile source emissions; and
- Continued partnership with Oregon Department of Environmental Quality (DEQ) to assist with modeling to support background and regulatory compliance efforts addressing the 2015 updated ozone national ambient air quality standards (NAAQS).

Methodology:

For compliance with the SIP, monitoring activities are undertaken with the development of each RTP and MTIP as part of the suite of technical analysis which takes place for the plan and programming. These activities involve collecting data from DEQ and the Oregon Department of Transportation (ODOT) looking at annual air pollution reports and vehicle miles traveled data. For other on-going activities, consultation is carried out with federal, state, regional, and local partners to gather information, direction, and feedback.

For other regional air quality initiatives, participation, partnership, and disseminating information are main activities.

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-2019

- Consult, coordinate, and collaborate on air quality and transportation conformity related items with Oregon DEQ, local, regional, state, and federal partners as well as interested community-based organizations. (ONGOING)
- Updated Metro-DEQ Memorandum of Understanding (MOU)

Entity/ies Responsible for Activity:

- Metro – Product Owner/Lead Agency
- Oregon State Department of Environmental Quality – Consult/Collaborate
- Transportation Policy Alternatives Committee (TPAC) – Consult/Collaborate
- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)

Other Stakeholders:

- Local partner agencies and members of the public
- Joint Policy Advisory Committee on Transportation (JPACT)
- US Environmental Protection Agency (EPA)
- Southwest Washington Regional Transportation Commission (SWRTC)

Schedule for Completing Activities

- State Implementation Plan monitoring (On-Going)

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2015-16	26,689	0.15
2016-17	\$28,334	0.155

FY 2017-18 Cost and Funding Sources:

Requirements:		Resources:	
Personal Services	\$ 31,172	PL	\$ 43,432
Interfund Transfers	\$ 12,730		
TOTAL	\$ 43,902	TOTAL	\$ 43,432

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.255
Total	.0255

FY 2018-19 Cost and Funding Sources:

Requirements:		Resources:	
Personal Services	\$ 30,656	PL	\$ 43,674
Interfund Transfers	\$ 13,018		
TOTAL \$	43,674	TOTAL \$	43,674

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.24
TOTAL	0.24

Civil Rights and Environmental Justice

Staff contact: Clifford Higgins, clifford.higgins@oregonmetro.gov

Description:

Metro's transportation-related planning policies and procedures respond to mandates in Title VI of the 1964 Civil Rights Act and related regulations; Section 504 of the 1973 Rehabilitation Act and Title II of the 1990 Americans with Disabilities Act; the federal Executive Order on Environmental Justice; the United States Department of Transportation (USDOT) Order; the Federal Highway Administration (FHWA) Order; Goal 1 of Oregon's Statewide Planning Goals and Guidelines and Metro's organizational values of Respect and Public Service.

Objectives:

- Identify communities and populations that are historically under-represented in decision-making processes using the most current federal census data, supplemented by more granular local information. Examples of supplemental information include Oregon Department of Education data on LEP populations and school lunch participation, HUD data on Section 8 housing voucher distribution, local real estate value data, job/income distribution data from the Bureau of Labor Statistics, Portland State University's Population Research Center analysis, and interviews with leaders of local immigrant groups and other community-based organizations. (ONGOING)
- Engage minority and low-income people in the decision-making processes through (1) relationships with community-based organizations and schools and minority business organizations; (2) promoting minority representation on advisory committees that have seats for community members; (3) development of outreach and engagement activities that minimize barriers to participation; and (4) improving communication techniques to increase the accessibility of information. (ONGOING)
- Assess – and improve methods to assess – the outcomes of regional transportation plans and programs on historically marginalized populations in order to improve decisions, inform communities and increase equity outcomes. (ONGOING)
- Implement strategies to achieve equity goals that were adopted as a goal and value of the RTP and as a criterion for evaluating projects to include in the Metropolitan Transportation Improvement Plan (MTIP). (ONGOING)

Previous Work:

- Continued updating and distributing internal language assistance guide to help staff take advantage of resources to provide access for English language learners; continued annual training for staff on how to use telephonic interpretation service to provide language assistance for incoming calls and at Metro outreach events.
- Continued the language hub on the Metro website to communicate services and civil rights in 13 non-English languages.
- Updated Metro's Title VI Plan and submitted to the Oregon Department of Transportation. The plan was approved in July, 2017 and will be updated by July, 2020.
- Submitted a Title VI Compliance Report covering 12 months of activity through June 30, 2017 to the Oregon Department of Transportation. (expected November 2017)

- Used email and Metro News posts to keep environmental justice stakeholders informed of Regional Transportation Plan update and Metropolitan Transportation Improvement Program comment opportunities and decision-making milestones.
- Coordinated with the development of the Metro equity strategy; began coordination on developing a Planning and Development departmental equity plan aligned with the Metro equity strategy.
- Conducted specific engagement to populations of color, limited English proficiency populations and low-income populations for the Southwest Corridor Plan draft Environmental Impact Statement process (NEPA). (DEIS expected completion Fourth Quarter 2017-18)
- Worked with local jurisdictions and environmental justice leaders on methodology for a Transportation Equity Analysis for future benefits, burdens and disparate impact analyses for Regional Transportation Plan updates and future Metropolitan Transportation Improvement Programs to inform decision-makers, inform communities and identify any need to avoid, minimize or mitigate impacts to historically marginalized communities prior to final adoption.
- Worked with environmental justice leaders and communities of concern to assess transportation needs that might be addressed through policy updates and project prioritization in the 2018 Regional Transportation Plan.
- Conducted Transportation Equity Analysis for future benefits, burdens and disparate impact analyses for the Metropolitan Transportation Improvement Program and 2018 Regional Transportation Plan. (Regional Transportation Plan analysis expected completion Fourth Quarter 2017-18)
- LEP Plan implementation: completed tasks identified in the LEP Plan through June 2018, which – for this fiscal year – consisted primarily of monitoring, assessing and improving internal processes for the program through efforts to engage English language learners.
- Developed Americans with Disabilities Act facility accessibility self-evaluation and action plan for Metro Regional Center. (Expected completion Fourth Quarter 2017-18.
- Updated web and report civil rights non-discrimination notice to specifically underscore compliance with Title II of the 1990 Americans with Disabilities Act.

Methodology

Metro's work to ensure compliance with Title VI, ADA and Environmental Justice regulations and statutes includes implementing: Metro's Title VI Plan for ODOT consistent with FHWA guidelines, its Title VI Program and LEP Plan for FTA, annual and quarterly UPWP reporting to both ODOT and FTA; implementing outreach strategies that help EJ 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 EJ 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.

Entities Responsible for Activity:

- Metro – Lead Agency
- Oregon Department of Transportation – Cooperate/Collaborate
- TriMet – Cooperate/Collaborate
- Local jurisdictions – Cooperate/Collaborate

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-2019

- Submit a Title VI Compliance Report covering 12 months of activity through June 30, 2018 to the Oregon Department of Transportation. (First Quarter 2018-19)
- Annually update staff language resource list to provide in-house translation services as needed for multiple languages. (Ongoing)
- Updated the Limited English Proficiency Factor One (of the Department of Justice Four Factor Analysis) data and analysis for a 2018-19 Limited English Proficiency Plan and Implementation Plan update. (Third Quarter 2018-19)
- LEP Plan implementation: complete all tasks identified in the LEP Plan through June 2018, which – for this fiscal year – consists primarily of monitoring, assessing and improving internal processes for the program through efforts to engage English language learners. (Ongoing)
- Planning and Development departmental equity plan: complete tasks identified in the equity plan through June 2019. (Ongoing)
- Planning and Development departmental equity plan: complete tasks identified in the equity plan through June 2019. (Ongoing once departmental equity plan completed)
- Research available datasets for mapping populations of people with disabilities. (Third Quarter 2018-19)
- Research spatial demographic trends for communities of color and communities with low income compared to 2010 decennial census to inform next MTIP cycle. (Third Quarter 2018-19)

- English language learner and communities with low income analysis at the local jurisdictional (municipal) level to provide to those jurisdictions without capacity for their own analysis. (Fourth Quarter 2018-19)

Schedule for Completing Activities:

Please refer to schedule information provided in the Major Project Deliverables/Milestones section.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$62,182	0.45
2012-13	\$53,940	0.45
2013-14	\$122,644	0.50
2014-15	\$50,191	0.41
2015-16	\$113,658	0.7
2016-17	\$124,561	0.7

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	103,952
Interfund Transfers	\$	42,451

Resources:

PL	\$	146,403
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TOTAL \$	146,403	TOTAL \$	146,403
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.75
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TOTAL	0.75
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FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	108,035
Interfund Transfers	\$	48,508

Resources:

PL	\$	156,544
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TOTAL \$	156,544	TOTAL \$	156,544
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.76
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TOTAL	0.76
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Public involvement

Staff contact: Clifford Higgins, clifford.higgins@oregonmetro.gov

Description:

Metro is committed to transparency and access to decisions, services and information for everyone throughout the region. Metro strives to be responsive to the people of the region, provide clear and concise informational materials and address the ideas and concerns raised by the community. Public engagement activities for decision-making processes are documented and given full consideration.

Objectives:

- Promote participation, based on public involvement opportunities, of individuals and of community, business and special interest groups. (ONGOING)
- Provide communications to encourage public participation in Metro processes that are understandable, timely and broadly distributed. (ONGOING)
- Provide the public with opportunities to be involved early in the process of policy development, planning and projects. (ONGOING)
- Comply with federal and state laws, regulations and guidance regarding public participation and notice of comment opportunities in transportation and land use decisions. (ONGOING)

Previous Work:

- Continued the Public Engagement Review Committee and public engagement review process to ensure that Metro's public involvement is effective, reaches diverse audiences and harnesses emerging best practices.
- Conducted public engagement for Southwest Corridor Plan Draft Environmental Impact Statement. (expected completion Fourth Quarter 2017-18)
- Conducted public engagement Powell-Division Transit and Development Project up to NEPA process.
- Continued outreach and public comment opportunities the 2018 Regional Transportation Plan update. (Ongoing)
- Produced the annual public involvement report for Metro, reviewing and evaluating public involvement processes across the agency. (expected completion Second Quarter 2017-18)
- Produced three Regional Snapshots in fiscal year 2017-18 to better communicate issues and opportunities for the region in the areas of transportation, jobs and housing. (expected completion Fourth Quarter 2017-18)
- Updated the agency's Public Engagement Guide. (expected completion Second Quarter 2017-18)

Methodology:

Metro's public involvement practices follow the agency's Public Engagement Guide (formerly the Public Involvement Policy for Transportation Planning). Metro's public involvement policies establish consistent procedures to ensure all people have reasonable opportunities to be engaged in planning and policy process. Procedures include outreach to communities underserved by transportation

projects, public notices and opportunities for comment, which are addressed more specifically in this report's Title VI and Environmental Justice section. The policies also include nondiscrimination standards that Metro, its subcontractors and all local governments must meet when developing or implementing projects that receive funding through Metro. When appropriate, Metro follows specific federal and state direction, such as those associated with the National Environmental Policy Act and Oregon Department of Land Conservation and Development rules, on engagement and notice and comment practices.

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. Other components of the public engagement review process which 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.

In 2015, Metro introduced its Regional Snapshot series, bringing new online communications tools to expressing the issues and opportunities for the region in the areas of transportation, jobs and housing. These snapshots combine data infographics, personal stories and reports of actions being taken within the region and around the country to better connect residents to planning issues and solutions that show promise at the local or regional level.

Entities Responsible for Activity:

- Metro – Lead Agency
- Oregon Department of Transportation – Cooperate/Collaborate
- TriMet – Cooperate/Collaborate
- Local jurisdictions—Cooperate/Collaborate

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Convene the annual community summit, seeking input from the public to help shape public involvement processes. (Annual event)
- Produce the annual public involvement report for Metro, reviewing and evaluating public involvement processes across the agency. (Annual activity)
- Continue outreach and public comment opportunities the 2018 Regional Transportation Plan update. (Through Second Quarter 2018-19)
- Conduct outreach and public comment opportunities for amendments to the Metropolitan Transportation Improvement Program (As needed)
- Produce three Regional Snapshots in fiscal year 2018-19 to better communicate issues and opportunities for the region in the areas of transportation, jobs and housing.

Schedule for Completing Activities:

Please refer to schedule information provided in the Major Project Deliverables/Milestones section.

Funding History:

Public Involvement is spread throughout other project budgets. Please refer to the MTIP, Corridor Planning, Title VI MPO Management & Services budget summaries.

Transportation System Management and Operations - Regional Mobility Program

Staff contact: Caleb Winter, caleb.winter@oregonmetro.gov

Description

Regional Mobility is one of two program areas under the broad policy heading of Transportation System Management and Operations (TSMO) – the other is the Regional Travel Options program. Together these two programs advance TSMO strategies by coordinating the development, implementation and performance monitoring of regional demand and system management strategies that relieve congestion, optimize infrastructure investments, promote travel options and reduce greenhouse gas emissions. Both the Regional Mobility Program and Regional Travel Options programs are key components of Metro’s Congestion Management Process (CMP). Many CMP activities related to performance measurement and monitoring are covered as part of the Regional Mobility Program. The TSMO Program works in collaboration with ODOT Region 1 Planning for Operations (see separate entry in UPWP).

Objectives:

- Coordinate Regional Mobility strategies and investments with the Regional Transportation Plan (RTP), corridor refinement plans, and local Transportation System Plans (TSP) to ensure consideration and integration of TSMO strategies as directed by the Regional Transportation Functional Plan.
- Implement the region’s Congestion Management Process (CMP) by enhancing performance data and reporting capabilities and by continuing to advance demand and system management solutions that address congested travel.
- Coordinate allocation of regional flexible funds for TSMO project priorities, as identified by the Regional TSMO Strategy.
- Coordinate and collaborate with ODOT Region 1 Planning for Operations activities (see separate UPWP entry)
- Guide investments in ITS communications infrastructure based on the Communications Master Plan, regional resources and regional partnerships.
- Update the region’s ITS Architecture Plan for consistency with the National and State ITS Architecture Plans, and with the Regional TSMO Strategy update (see separate UPWP entry).
- Continue to strengthen the Transportation Policy Alternatives Committee’s (TPAC) institutional capacity regarding TSMO especially in the area of joint demand and system management policy and funding decisions (e.g., Mobility on Demand and Smart City innovations).
- Support regional understanding of, and opportunities for connected and automated vehicles.
- Serve as a regional liaison to advance research, education and training on transportation management and operation issues relevant to the region.
- Maintain ongoing communication with counterparts at Federal Highway Administration (FHWA) and Oregon Department of Transportation (ODOT) regarding the CMP implementation as it relates to TSMO.

Previous Work:

In FY 2017-18, the Regional Mobility Program:

- Administered TSMO projects sub-allocated in the 2012-15 MTIP and 2016-2018 MTIP.
- Participated in project coordination meetings.
- Continued TSMO related work from the Congestion Management Process (CMP).
- Shared and began trained regional partners on the regional ITS Architecture.
- Coordinated with agency leads on fiber optic and data communications based on the regional Communications Master Plan.
- Coordinated and participated in monthly TransPort meetings.
- Coordinated TSMO-related professional development and training opportunities.
- Held connected and automated vehicle presentations and discussions at TransPort to begin developing a regional vision in advance of a TSMO Strategy update.
- Provided input to transit signal priority planning region-wide, for Powell/Division and Southwest Corridor high capacity transit projects.
- Participated in the Traffic Incident Management (TIM) Coalition for the Portland area.
- Participated at federal level: hosted FHWA Operations workshop on the lessons learned from Integrated Corridor Management deployments around the country; participated in an MPO peer exchange on regional TSMO.

Methodology:

With the intent of supporting TSMO investments and activities in the Portland metropolitan region, the Regional Mobility program encompasses three activity areas that include regional policy development and support, MTIP grant management and system performance management.

Development and Support

The Regional Mobility program serves as the liaison for TSMO policy development and implementation. It facilitates the sharing of best practices with and among partner agencies. The program provides leadership on the update of the Regional Intelligent Transportation System (ITS) Architecture in order to comply with the FHWA rule that requires federally funded transportation projects to be in compliance with the National ITS Architecture. It will also guide implementation of the region's ITS communications network under the Communications Master Plan. The program will work with the Regional Travel Options program to coordinate an ad hoc regional transportation management policy and funding subcommittee of TPAC as needed. It will continue to seek and support opportunities for research, education, and training on TSMO.

MTIP Grant Management

The Regional Mobility Program manages the sub-allocation of MTIP funding dedicated to TSMO. The TSMO program coordinates projects that were prioritized for a sub-allocation of federal funds for 2016-2018 and 2018-2021, consistent with the Regional TSMO program plan and strategy. The program will continue to coordinate and manage the allocation of TSMO-designated regional flexible funds to partner agencies. It will provide support for applying systems engineering to regionally-funded ITS projects.

Congestion Management Process

The Regional Mobility program supports the federal mandates to maintain a CMP and promote TSMO, including intelligent transportation systems (ITS). The program will implement 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 (e.g., Regional Mobility Corridor Atlas) in order to support development of the RTP, local TSPs and MTIP programming. The program will continue to enhance PORTAL, a regional archived data user service managed by Portland State University. PORTAL will continue to expand the collection, archiving, and uses of multimodal performance data in a way that will enhance the region's ability to diagnose and address congestion and support multimodal operations.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Manage projects funded with FY2016-2018 MTIP to advance priority projects as identified in the 2010-2020 Regional TSMO Plan (ONGOING)
- Conduct project selection process for FY 2018-2021 MTIP TSMO Program funds.
- Provide strategic and collaborative program management including coordination of activities for TransPort, ODOT Region 1 Planning for Operations (see separate UPWP entry), PORTAL Technical Advisory Committee, ITS Architecture, ITS Network Management Team, Traffic Incident Management (TIM) Coalition, Central Signal System Users Group, Cooperative Telecommunications Infrastructure Committee and other regional TSMO-related forums. (ONGOING)
- Support implementation of the Arterial Performance Measure Regional Concept of Operations (RCTO) to expand real-time, multimodal traffic surveillance and performance data collection capabilities including signal controller software enhancements. (ONGOING)
- Participate in the regional project led by City of Portland to upgrade or replace the Regional Central Signal System and form partnerships as well as next generation Transit Signal Systems. (ONGOING)
- Identify and pursue opportunities to implement the Emerging Technology Strategy, which includes policies to develop new regional data sources and management systems in preparation for automated and connected vehicles, through the TSMO program.
- Continue TSMO Strategy Update by exploring topics including equity, safety, resiliency, connected vehicles, automated vehicles, vehicle-to-X communications, transit signal priority, freight signal priority, mobility as a service/mobility on demand (e.g., public-private partnerships), performance measures, big data analytics and asset management (For more info, see separate UPWP entry on TSMO Strategy update).
- I-84 Multimodal Integrated Corridor Management (ICM) Deployment Plan (See separate UPWP entry)
- Support TSMO related elements of the Congestion Management Process (ONGOING)

Entities Responsible for TSMO Activity

Policymaking

- Metro Council
- Metro (Lead Agency)
- Joint Policy Advisory Committee on Transportation (JPACT)
- Transportation Policy Alternatives Committee (TPAC)

- TransPort (Subcommittee of TPAC)

Cooperation, Collaboration & Funding Recipients

- TransPort subcommittees (includes PORTAL Technical Advisory Committee, ITS Architecture Subcommittee, ITS Network Management Team, Traffic Incident Management Coalition.
- Transportation Research and Education Center (TREC)/ Portland State University Federal Highway Administration (FHWA) Federal Transit Administration (FTA), US DOT ITS Joint Program Office
- Oregon Department of Transportation (ODOT), TriMet, Port of Portland, Counties of Clackamas, Multnomah & Washington, Cities of Beaverton, Gresham, Hillsboro, Portland, Lake Oswego, Tigard, Wilsonville, SW Regional Transportation Council, C-Tran, Washington State Department of Transportation

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major project deliverables/milestones* section.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$192,225	1.13
2012-13	\$60,000	0.76
2013-14	\$69,963	1.49
2014-15	\$281,805	1.55
2015-16	\$193,735	0.9
2016-17	\$114,687	0.55

FY 2017-18 Cost and Funding Sources:

Requirements:

Personal Services	\$	46,501
Interfund Transfers	\$	18,989
Materials and Services	\$	2,500

Resources:

TSMO STBG	\$	60,769
Metro	\$	7,220

TOTAL \$	67,990	TOTAL \$	67,990
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.318
TOTAL	0.318

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	59,254
Interfund Transfers	\$	25,162
Materials and Services	\$	2,500
TOTAL	\$	86,916

Resources:

TSMO – STBG	\$	69,010
STBG	\$	8,979
Metro	\$	8,926
TOTAL	\$	86,916

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.418
TOTAL	0.418

Transportation System Management and Operations - Regional Travel Options (RTO)

Staff Contact: Dan Kaempff; daniel.kaempff@oregonmetro.gov

Description:

Regional Travel Options is one of two program areas under the broad policy heading of Transportation System Management and Operations (TSMO) – the other is the Regional Mobility program. Together these two programs advance TSMO strategies by coordinating the development, implementation and performance monitoring of regional demand and system management strategies that relieve congestion, optimize infrastructure investments, promote travel options, and reduce greenhouse gas emissions. Both the Regional Mobility Program and Regional Travel Options programs are key components of Metro's Congestion Management Process (CMP).

Objectives:

- Implement the 2018 RTO Strategy. (ONGOING)
- Support regional coordination and collaboration around travel options education and outreach. Convene working group of partners. Provide support for partner agency education and outreach activities. Lead development of regional education, outreach and awareness initiatives. Facilitate Portland-region implementation of ODOT transportation options education and outreach initiatives. (ONGOING)
- Develop and implement a funding allocation methodology that reflects and supports the goals and objectives of the 2018 RTO Strategy. Develop criteria that support the Regional Transportation Plan and other regional goals, focusing on achieving outcomes that improve equity, the environment, and the economy. Consider elderly, disabled, low income, minority and other underserved populations in the grant making process. Consider the impacts on public health in the grant making process. (ONGOING)
- Administer and monitor funding allocated or awarded to local governments and non-government organizations. Work with funding recipients to provide technical assistance in the areas of budget and fiscal management to ensure funds are spent in compliance with federal regulations.
- Continued implementation of an evaluation strategy that measures the outputs and outcomes of all projects and programs supported with RTO funds, to ensure alignment with federal and regional goals related to reducing vehicle miles traveled and improving air quality. (ONGOING)
- Continued implementation of the regional commuter program with a focus on new rail transit investments, multi-use trail investments and improved coordination of multi-agency efforts. (ONGOING)
- Continued administration of ride matching services to region, including participation in multi-state online ride matching system. (ONGOING)

Previous Work:

In FY 17-18 quarters 1 and 2, the Regional Travel Options Program:

- Managed 18 grant projects, totaling \$2.1 million awarded through the 2017-19 RTO grant solicitation process. Enhanced coordination between regional partners engaged in employer outreach activities. Provided technical assistance and materials to support partners work.

- Managed Drive Less Connect (DLC) for the Portland region. DLC is a multi-state ride matching system covering Idaho, Oregon and Washington
- Supported regional collaborative marketing initiatives to promote travel options and safety, including “Be Seen. Be Safe.”, “Transit Is,” “Bike More Challenge,” “Bike Month,” “Drive Less Challenge,” and others.
- Conducted the 2013-2016 RTO evaluation that will be broken into reports by key topics: Commuters, Neighborhoods, Traveler Information & Services, Health/Active Transportation and Administration. These reports provided findings to aid in the RTO Strategy update.

Methodology:

The RTO program implements regional policies 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 pollution by carrying out the TDM components of the TSMO strategy outlined in the 2014 Regional Transportation Plan (RTP). The program maximizes investments in the transportation system and relieves traffic congestion by managing travel demand, particularly during peak commute hours. Specific RTO strategies encompass promoting transit, ridesharing, cycling, walking, and telecommuting.

Policies at the Federal, state and regional level emphasize system management as a cost-effective solution to expanding the transportation system. The RTO program supports system management strategies that reduce demand on the transportation system. RTO strategies relieve congestion and support movement of freight by reducing drive-alone auto trips.

RTO and partners will measure projects along a triple-bottom line framework with performance indicated in terms of economic, social and environmental benefits. RTO developed a multiple account evaluation framework to better capture the range of outcomes delivered by RTO grant partners and to align projects with RTP performance measures. In keeping with the RTP mode share targets, a primary RTO performance measure is shifting mode share to approximately a 50% non-drive-alone trips by 2035.

Partners responsible for RTO program planning and delivery include:

- Metro Council – Policy making
- Joint Policy Advisory Committee on Transportation (JPACT) – Policy making
- Transportation Policy Alternatives Committee (TPAC) – Policy making
- Transportation Research and Education Center (TREC) – Cooperate/Collaborate
- Oregon Transportation Commission (OTC) – Cooperate/Collaborate
- Federal Highway Administration (FHWA) – Cooperate/Collaborate
- Federal Transit Administration (FTA) – Cooperate/Collaborate
- Oregon Department of Transportation (ODOT) – Cooperate/Collaborate
- SW Regional Transportation Council – Cooperate/Collaborate
- Washington State Department of Transportation – Cooperate/Collaborate
- Beaverton School District – Grant Recipient
- City of Gresham – Grant Recipient
- City of Lake Oswego – Grant Recipient
- City of Milwaukie – Grant Recipient
- City of Portland – Grant Recipient
- City of Tigard – Grant Recipient
- City of Vancouver – Cooperate/Collaborate
- City of Wilsonville/Wilsonville SMART – Grant Recipient

- Clackamas Community College – Grant Recipient
- Clackamas County – Grant Recipient
- Community Cycling Center – Grant Recipient
- C-TRAN – Cooperate/Collaborate
- Explore Washington Park – Grant Recipient
- Go Lloyd – Cooperate/Collaborate
- Gresham Area Chamber of Commerce – Grant Recipient
- Hillsboro Parks and Recreation – Grant Recipient
- Multnomah County – Grant Recipient
- National Safe Routes to School Alliance – Grant Recipient
- Oregon Walks – Grant Recipient
- Portland Community College – Grant Recipient
- Portland Public Schools – Grant Recipient
- Ride Connection – Grant Recipient
- The Street Trust – Grant Recipient
- TriMet – Grant Recipient, Cooperate/Collaborate
- Washington County – Grant Recipient, Cooperate/Collaborate
- West Columbia Gorge Chamber of Commerce – Grant Recipient
- Verde – Cooperate/Collaborate
- Westside Transportation Alliance TMA – Grant Recipient

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

Develop and update tools to support coordination of RTO partners' education and outreach activities including a marketing plan, calendar and shared marketing materials. (ONGOING)

- Manage the Regional Travel Options sponsorship program, which supports community and regional travel options partners through events and limited duration community outreach initiatives that promote and educate the public about travel options. (ONGOING)
- Distribute the Bike There! map through area retail outlets, distribute free copies of the flatmap to employment sites to encourage and assist employees in finding their route to work. (ONGOING)
- Manage and support Drive Less Connect ride matching database. (ONGOING)
- Monitor and report progress on programs and projects carried out by Metro, TriMet, SMART, and RTO grant recipients, including evaluations and surveys. (ONGOING)
- Coordinate with Mobility on Demand (MOD) partners, real-time traveler information partners to advance Active Transportation Demand Management (ATDM) strategies and increase use of travel options.
- Coordinate with City of Vancouver and C-TRAN on bi-state commute programs. (ONGOING)
- Implement and manage FY 17-19 Regional Travel Options grants and past grants that are still active. (ONGOING)
- Based on policy direction from the 2018 RTO Strategy, update and modify RTO funding allocation process, criteria, methodology.
- Begin preparations for 19-21 RTO funding allocation process.

Schedule for Completing Activities:

Ongoing – Grant projects awarded through 2017-19 funding allocation continue

Fall/Winter 2018 – Solicitation of 2019-21 grant proposals; award of grants

Spring 2019 – Refinement of grant project scopes of work; development of grant agreements between Metro and grant recipients for projects scheduled to begin July 1, 2019

June 30, 2019 – 2017-19 grant projects due to be completed. Final reports are due in July 2019

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$2,041,526	6.2
2012-13	\$1,791,267	6.46
2013-14	\$2,040,294	5.66
2014-15	\$2,286,261	5.35
2015-16	\$2,280,818	4.25
2016-17	\$2,255,371	3.75

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$ 534,858
Interfund Transfers	\$ 219,759
Materials and Services	\$ 1,544,070

Resources:

FTA - STBG	\$ 1,969,215
ODOT-FHWA-STBG	\$ 225,000
Metro	\$ 104,472

TOTAL	\$ 2,298,686	TOTAL	\$ 2,298,686
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Full-Time Equivalent Staffing

Regular Full-Time FTE	4.282
TOTAL	4.282

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	600,777
Interfund Transfers	\$	257,530
Materials and Services	\$	2,247,394
TOTAL \$		3,105,701

Resources:

FTA - STBG	\$	2,802,835
ODOT – FHWA - STBG	\$	172,219
Metro	\$	130,646
TOTAL \$		3,105,701

Full-Time Equivalent Staffing

Regular Full-Time FTE	4.932
TOTAL	4.932

Regional Freight Program

Contact: Tim Collins at tim.collins@oregonmetro.gov

Description:

The safe and efficient movement of freight is critical to the region's continued economic health. The Regional Freight Program manages updates to, and implementation of, multimodal freight elements in the Regional Transportation Plan (RTP) and provides guidance to affected municipalities in the accommodation of 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. It ensures that prioritized freight requests 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 planning program.

Metro's freight planning program also coordinates with the updates for the Oregon Freight Plan. Metro's coordination activities include participation in the Oregon Freight Advisory Committee (OFAC), and Portland Freight Committee (PFC). To facilitate USDOT requirements under the FAST Act, Metro helped provide information on the locations of freight intermodal connectors in the region, and the urban freight roadways and highways to add to the National Multimodal Freight Network.

Objectives:

Policy

- Engage with the Oregon Transportation Plan, Regional Transportation Plan (RTP), corridor refinement plans, and local Transportation System Plans (TSP) to ensure consideration and integration of freight policies and strategies as directed by the Regional Transportation Functional Plan.
- Work with state, regional and local agencies and private interests to implement the Regional Freight Strategy, including the action items identified in Chapter 9, as well as advancement of key multimodal freight investment priorities, securing appropriate private matching funds, and ensuring regional investments are competitively considered under state freight funding programs.
- Update regional freight vision and policies for the 2018 Regional Transportation Plan.
- Track industrial land use planning efforts to ensure that current and future freight movement needs are addressed.
- Continue to work with Oregon Freight Advisory Committee to identify statewide freight project needs and seek support for funding of priorities.
- Participate in the Portland Freight Committee and the implementation of the Portland Freight Master Plan, meeting FAST Act provisions for coordination of freight movement.
- Maintain a Regional Freight Program outreach component including web page, presentations, and informational materials.

Projects

- Support and collaborate on enhancements to freight analysis tools including the update of the Commodity Flow Forecast, Metro's truck module of the travel forecast model, Metro's Behavior Based Freight Model, and the Portland Oregon Regional Transportation Archive Listing (PORTAL).
- Collaborate with the Port of Portland and other stakeholders, to support the region's export initiative and leverage it into a broader economic development initiative that maximizes returns in the region. Consider export strategies as a key driver for investments affecting the regional freight network, seek available funding and coordinate relevant initiatives or analysis.
- Track regional projects with significant implications for freight movement.

Previous Work:

In FY 2017-18, major freight program tasks completed included:

- Continued to participate in monthly Portland Freight Committee and quarterly State Oregon Freight Advisory Committee.
- Participated in the Oregon Freight Intermodal Connector System (OFICS) Study, Technical Advisory Committee.
- Under the FAST Act, provided recommendations to USDOT, and developed with ODOT an expanded Metro region-wide network for the Interim National Multimodal Freight Network.
- Provided advice and modeling expertise to the City of Portland and their consultant for the Regional Over-Dimensional Truck Route Study.
- Participated in and provided over-site to the Project Management Team (PMT), for completion of the Regional Over-Dimensional Truck Route Study in February of 2017.
- Participated in the proposals of the Regional Flexible Fund Allocations (RFFA) for current and future regional freight programs and studies.

Methodology:

The regional freight program is part of Metro's MPO function, and the Regional Freight Plan was adopted in June 2010 as part of the Regional Transportation Plan. The focus of the work program for FY 2018-19 will continue to be on coordination with freight stakeholders, local jurisdictions and partners; and enhancing data collection and analysis tools. Specific major activities will include finalizing the Regional Freight Strategy as part of the 2018 Regional Transportation Plan. With the input of the Regional Freight Work Group, and policy guidance from TPAC and JPACT, the plan will be updated as the Regional Freight Strategy. We will also continue to seek additional funding and partnership opportunities which will allow us to further implement the regional freight strategy and stimulate jobs and economic activity.

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

- Update Freight Element of 2018 RTP (December 2018)
- Finalize the Regional Freight Strategy (October 2018) with the following work products:
 1. Updated economic figures and commodity flow data
 2. New freight measures that inform near- and long-term investment priorities
 3. Updated regional Freight Network map
 4. New sections on regional freight funding and the federal FAST Act and FASTLANE grants
 5. New sections on the new freight model and technology in freight transportation
- Develop and model new RTP system performance measures and monitoring measures for freight (2018 - 2019).
- Collaborate with Port of Portland and other business entities on expanded export and related industrial economic development activities. (ON-GOING)
- Continue to participate in monthly Portland Freight Committee and other local projects (ON-GOING)
- Participate in quarterly State Oregon Freight Advisory Committee. (ON-GOING).

Entity/ties Responsible for Activity:

- Metro Council (Lead Agency)
- Joint Policy Advisory Committee on Transportation (JPACT)
- Transportation Policy Alternatives Committee (TPAC)
- Regional Freight Work Group (input and coordination of the 2018 Regional Transportation Plan and Regional Freight Strategy)
- Cities and counties within the region including Clark County, Washington
- Federal Highway Administration (FHWA)
- Oregon Department of Transportation (ODOT)
- Washington State Department of Transportation (WSDOT) (for certain coordination)
- Ports of Portland and Vancouver
- Businesses, including freight shippers and carriers, distribution companies, manufacturers, retailers and commercial firms
- Oregon Trucking Association and other business associations including the Westside Economic Alliance, East Metro Economic Alliance, the Columbia Corridor Association, and the Portland Business Alliance
- Metro area residents and neighborhood associations

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project deliverables/milestones* section.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$146,142	0.795
2012-13	229,341	1.32
2013-14	\$91,385	0.51
2014-15	\$192,713	0.95
2015-16	\$108,586	0.53
2016-17	\$123,532	0.55

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	69,015
Interfund Transfers	\$	28,183

Resources:

STBG	\$	87,216
Metro	\$	9,982

TOTAL	\$	97,198	TOTAL	\$	97,198
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.475
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TOTAL	0.475
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FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	38,520
Interfund Transfers	\$	16,358

Resources:

STBG	\$	49,242
Metro	\$	5,636

TOTAL	\$	54,878	TOTAL	\$	54,878
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.255
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TOTAL	0.255
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Data Management, Data Visualization, and Performance Measurement

Staff Contact: Karen Scott-Lowthian, karen.scott-lowthian@oregonmetro.gov

Description:

Metro's Research Center (RC) department includes the Data Resource Center (DRC) which provides Metro and the region with spatial and other data services including: data acquisition, aggregation, and standardization; data storage systems, software applications, and system analysis; and analytic products that visualize data to support decision-making, performance measurement, and other purposes. DRC performs the following primary activities in close cooperation with staff in Metro's Planning & Development (P&D) department:

- Data analysis and visualization. DRC computes transportation plan evaluation measures, performs land development trend analyses, and applies many other analytics that turn data into useful information.
- Data system and data-driven application development. DRC designs, implements, and maintains data systems and software applications that let end users acquire, store, analyze, and retrieve data for Metro's federal and other programs.
- Data development: DRC collates maintains a collection of more than 150 spatial and related datasets which form the foundation for providing services to the Research Center's partners. The data repository, known as the Regional Land Information System (RLIS), supports land use and transportation planning and almost every other Metro program.
- Performance Measurement: DRC uses its own and other data sources to produce visualizations for monitoring the performance of the regional transportation system, monitoring the region's land use, measuring transportation plan outcomes, assessing growth management planning outcomes, and measuring other Metro programs' progress toward regional goals. Key elements of performance measurement for the UPWP include:
 - Transportation System Monitoring: The DRC collects, manages, and analyzes a wide array of data regarding transportation performance. This work informs transport and land use planning, MTIP activity, and Metro policy development. Transport monitoring in turn has several dimensions, including but not limited to:
 - Roadway performance
 - Transit performance
 - Bicycle (and, eventually, pedestrian) system performance
 - Safety/Crashes
 - Performance of and data streams from emerging technologies including CV/AV, transport network companies, etc.
 - Performance measures required under MAP-21
 - Land Development Monitoring System (LDMS): similarly to transportation monitoring, DRC data and analytics inform Metro's growth management and housing programs.
- *Ensuring compliance with federal requirements:* DRC staff work together with P&D to craft

data and information products that comply with federal and state regulations.

- *Advanced analytic research:* DRC carries out, as part of overall RC efforts, innovative research to enhance data acquisition, data processing, and analytic methods in ways that improve Metro's ability to conduct its growth planning, transport planning, and other functions.

Objectives:

The primary DRC objective is to ***provide a data-driven and valid analytic foundation for decision support, planning support, and program management support*** to Metro and the region. This includes more-detailed objectives that augment and support P&D objectives:

- *Provide performance measurement data and easy access to it* via products and systems that visualize data as useful information supporting land use planning, transportation planning & programming, program management, and other Metro programs and policy goals.
- *Provide foundation data* upon which analytics and other processes can depend for performance measurement, planning, and operational support.
- *Provide land use and transportation data to support Metro's transport and land use forecasting models* (see separate sections describing land use and transport forecasting).
- *Provide decision-support, analytic, and operational-support software applications* by procurement or in-house development.
- *Innovate* to enhance Metro's ability to use data for planning, performance measurement, and decision-making.
- *Coordinate with local jurisdictions, state agencies, private entities, and other partners to ensure efficient data development and data management.*

Previous Work:

- Provided custom mapping and analysis to Metro Planning and Development Department
- Provided custom mapping and analysis to Metro Property and Environmental Services
- Provided custom mapping and analysis to Metro Parks and Nature Department
- Maintained RLIS datasets, providing quarterly updates to subscribers and partners
- Managed contract to acquire regional orthophotography for partners
- Developed and analyzed regional demographic data
- Conducted Limited English Proficiency and Environmental Justice analysis to comply with federal regulations and executive orders.
- Mapped regional employment sites
- Mapped regional vacant lands
- Updated the regional buildable lands analysis in support of the Urban Growth Management program.
- Acquired and combined rental market data from various sources to support the Land Development Monitoring Program and support affordable housing research
- Developed data and methodology to support analysis of redevelopment and infill potential. Prepared datasets of observed information to assist in the validation of Metro's land use forecast model (i.e., MetroScope)
- Updated regional bicycle network data
- Updated trail network and trail usage data
- Provided mapping and analysis to visualize crash incident data
- Updated the database and server infrastructure to more efficiently manage and deliver data
- Established a web site that summarizes Daily VMT and Daily VMT per capita, transit, and

population data for the Portland Federal-Aid Urban Area as well as the Metropolitan Statistical Area

- Compiled TriMet patronage and new fare structure information
- Collected parking cost information for key areas within the Portland Central Business District (CBD) and the Lloyd Area
- Researched gasoline prices per gallon for the Portland Area, Oregon, the West Coast, and the U.S., and prices per barrel of oil nationally
- Reviewed and commented on key documents that pertain to comparisons of national system performance (e.g., Texas Transportation Institute – Urban Mobility Report, FHWA – Federal Highway Statistics, FHWA – HPMS Summary Report – National Transit Database
- Provided information to those seeking system performance data (e.g., traffic counts, Daily VMT per capita, transit ridership comparisons of top 50 reporting agencies in U.S. – including Portland)
- Assembled transportation system performance data for inclusion into the next Metro Performance Measures document
- Consolidated and standardized historic traffic count data in centralized database for improved reporting, visualization, and distribution
- Began collecting and compiling traffic count data collection contract with input from local jurisdictions, working to see that cutlines and count locations were not duplicative of other agencies' traffic count collection efforts
- Provided RLIS and ad hoc data to members of the public and private entities through DRC public information support
- Deployed the first part of a web-based system to assist volunteers to collect detailed counts of bikes and pedestrians
- Began exploring the development of common, multi-jurisdictional data repositories to house new data

Methodology:

RC and DRC apply the following methods to achieve the *Data Management, Data Visualization, and Performance Measurement* work element objectives:

- Coordinate and cooperate closely with internal Metro and external partners, especially ODOT & data researchers at PSU, to ensure optimal data acquisition and utilization and to craft analytics that will serve Metro's growth planning, MTIP, and RTP activities
- Maintain robust data system infrastructure, application software "stack," and staff system analysis/coding capability within Metro
- Maintain state-of-the art software and staff capacity for data analysis and visualization
- Develop and maintain systems using best enterprise practices
- Develop analytic and visualization techniques that are valid, robust, and repeatable
- Integrate data management, visualization, and analysis with the forecasting elements of the UPWP (described elsewhere)
- Monitor developments of and suggest directions for data- and analytic-related policy at the regional, state, and national level
- Stay informed of national and local advanced research, and make contributions to it that could serve others

- Work with other regional jurisdictions and partners to identify common needs and develop common cost-saving solutions
- Design and deploy a web- and mobile-accessible information system providing access to a comprehensive, dynamic view of Metro's transport, land use, and other performance measures.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Data management & system development
- Supplying MAP-21 performance measures in coordination with Metro Planning & Development department and ODOT
- Develop a comprehensive "MPO data plan" as a part of RC's overall RLIS data management plan that guides Metro's acquisition, management, and use of data for growth planning, RTP, MTIP, and other federally-required planning functions. The plan will articulate roles and responsibilities for institutions, individuals, and the variety of data systems necessary for success.
- Create a workplan to procure or develop a project & financial tracking database system for the MTIP and RTP programs, preferably spatially-enabled and scalable to include regional partners. Resources permitting, begin implementation of the new database.
- Implement and maintain a single regional site for all regional bike and pedestrian counts, as developed with regional agency and academic partners.
- Support the needs of Metro Planning and Development Department, including analytic and cartographic products for the RTP, MTP, RTO, and other efforts described elsewhere in this document (ONGOING)
- Data acquisition: Update the RLIS data repository regularly with elements including but not limited to: (ONGOING)
- Updated regional demographic and socio-economic data (e.g., income, race, ethnicity, age, employment, education)
- Transportation facility location and characteristics for all modes, including street centerlines and attributes, transit, bicycle, and pedestrian infrastructure
- Land Development Monitoring System (LDMS), including taxlot, housing and employment space pricing, building permits, etc.
- Jurisdictional boundaries and annexations
- Coordinate with ODOT and regional partners to improve street centerline data and to ensure that streets data are current, consistent, standardized, and shared with ODOT and other state agencies
- Collect and compile regional system monitoring data (VMT, transit patronage, auto driving and operating costs, parking costs, gasoline costs per gallon, and oil per barrel) (ONGOING)
- Update regional aerial orthophoto and related (e.g. LiDAR) products for Metro and its partners (ONGOING)
- Storage, maintenance, and upkeep of a single site for all regional traffic counts, as developed with regional partners
- Coordination and cooperation
- Conduct standing coordination between RC and P&D on transportation technology topics and policies, and together bring such topics to Metro Council and committees
- Proactively work with academic partners, especially PSU's PORTAL and National Bike-Pedestrian programs, to enhance their ability to meet Metro's MPO and other needs
- Coordinate with local jurisdictional agencies to help provide updated regional demographic

data to them to allow for easier demographic analysis around current and planned transportation projects (ONGOING)

- Update strategic plan for data management and sharing to sustain centralized, consistent and cost- effective storage and maintenance of regional data. (ONGOING) should this be ongoing?
- New set of regional auto and vehicle classification count data as part of quarterly RLIS releases (ONGOING)
- Coordinate with other jurisdictions to help implement a federal standard classification for streets which will support ODOT's classifications in TransData/TransGIS. (ONGOING)
- (ONGOING)
- Coordinate regional emergency response entities to maintain a single street centerline data set that can be used by all (ONGOING)
- Collaborate and coordinate with ODOT to support the use of TransData datasets and to ensure that data development efforts are not duplicative. (ONGOING)
- Coordinate with the Active Transportation Program and regional partners to review existing bicycle and pedestrian count protocols and equipment. Develop a comprehensive program to collect and report these data to support multi-modal transportation modeling (ONGOING)
- Expand on web mapping portal and address services for public usage
- Analytic products
- Conduct regional Factor 1 limited English proficiency analysis for Metro's Title VI reporting
- Respond to transportation monitoring data requests (e.g., traffic counts, daily Vehicle Miles of Travel (VMT) per capita) (ONGOING)
- Continue providing ad hoc data, analysis, and visualization services to members of the public and private entities through DRC public information support (ONGOING)
- Creative analytic solutions to ad hoc transportation and land use planning data visualization and performance measurement needs from the Planning & Development and other Metro Departments through innovation activities (ONGOING)
- Provide data, analysis and technical expertise to the Southwest Corridor Equitable Development project
- Provide data and technical expertise to TriMet in the development of a multi-modal trip planning tool
- Provide data, analysis and technical support to the 2018 update of the Regional Transportation Plan
- Support the MTIP effort
- Title VI support:
 - Analyze demographics of citizens with disabilities
 - Trend analysis on status of communities of color and low income communities both for Metro and for local agencies through technical assistance
- Performance measurement
 - Scope and document the requirements and resource needs for a new (dynamic, web-delivered) version of the Mobility Corridors Atlas, Metro's implementation of the Congestion Management Process (CMP) measurement requirements.
 - Continue to support the development and implementation of the regional Economic Value Atlas within the context of the unified Metro performance

- measurement data system
 - Deploy first phase of a centralized, comprehensive web-accessible application providing access to performance measure information. First phase will be comprised of infrastructure build out, data and performance measure identification, and workflows needed for required reporting, and (resources permitting) prototype measures.
- Advanced analytic research
 - In close coordination with P&D, local jurisdictions, ODOT, and academic partners develop and being implementation of a technology strategy for CV/AV/TNCs and other emerging transport technologies to complement the P&D policy work on those topics (as part of the previously-mentioned “MPO data plan”
 - Scope a data and analytic method long-term strategy to ensure that RC data and analytics will be responsive to emerging planning topics for future RTP, MTIP, and RTO cycles

Entities Responsible for Activity:

- Metro planners and analysts
- Local governments
- Businesses
- Citizens

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project Deliverables/Milestones* section.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$1,600,932	9.74
2012-13	\$1,530,797	8.91
2014-15	\$1,821,176	9.48
2015-16	\$1,753,816	6.111
2016-17	\$1,615,517	6.13

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	723,570
Interfund Transfers	\$	514,416
Materials and Services	\$	143,600

TOTAL \$ 1,381,586

Resources:

PL	\$	158,370
ODOT Support	\$	112,784
TriMet Support	\$	122,638
Metro	\$	782,229
Other	\$	205,566

TOTAL \$ 1,381,586

Full-Time Equivalent Staffing

Regular Full-Time FTE	5.664
TOTAL	5.664

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	831,242
Interfund Transfers	\$	725,145
Materials and Services	\$	42,000

TOTAL \$ 1,598,387

Resources:

PL	\$	211,448
ODOT Support	\$	183,490
TriMet Support	\$	236,582
Metro	\$	911,868
Other Anticipated Funds	\$	55,000

TOTAL \$ 1,598,387

Full-Time Equivalent Staffing

Regular Full-Time FTE	6.259
TOTAL	6.259

Economic, Demographic and Land Use Data and Forecasting Maintenance

Staff Contact: Jeff Frkonja, jeff.frkonja@oregonmetro.gov

Description:

The land use analysis team (LUAT), formerly the socio- economic research center (LUAT), is a unit within Metro’s Research Center (RC). LUAT provides historical and forecast estimates of economic activity, population, and land use distribution to Metro’s transportation, land use, and solid waste management planners. Historic estimates offer benchmark information to help calibrate the travel demand and land use forecast models and provide performance metrics to help planners understand current conditions. LUAT provides forecasts of future economic, population, and land use conditions in various geographies ranging from regional (MSA) to transportation analysis zone (TAZ) level. Forecast periods range from 20 to 50 years into the future. Metro planners use the projections to manage solid waste policy, study transportation corridor needs, formulate regional transportation plans, analyze the economic impacts of potential climate change scenarios, to develop land use planning alternatives. The latter include performance-based growth management and urban / rural reserves studies. At times, local jurisdictions use the forecast products for their own comprehensive plan and system plan updates.

Objectives:

The primary objective of the LUAT unit is to ***provide robust employment, population, and land use projections to regional policy makers***. State regulations and federal guidance inform these activities, which use the best available tools to carry out forecasting efforts. LUAT sees that forecasts are peer reviewed and coordinated with local jurisdictions per state law.

To provide this information LUAT maintains sets of econometric models and supporting tools that produce regional growth projections for economic and demographic data series. RC maintains model inputs and software on an ongoing basis to ensure that the forecast products remain relevant and valid.

RC also makes major updates to land use forecasting tools on a periodic basis and applies tools to planning projects. See Section II chapter entitled “Economic, Demographic and Land Use Data and Forecasting Development Program” for a description of periodic work.

Previous Work:

Survey, Data Acquisition, and Research

- **Census Data**—Metro RC created for internal use a repository of key Census data and advised its local partners on Census activities such as the local update of community addresses (LUCA) process.

Model Maintenance

- **Regional macro-economic model** —RC staff completed modernization (in 2017) of the regional model to a new forecasting software platform supported by the vendor for U.S. macroeconomic forecast. Also during the project, tasks included re-estimating the model

equations with the most current regional population and employment estimates. Prepared additional forecast operation documents to be used with the new model developments. Validated the model and demonstrated good consistency between forecasts and history after revisions and re-benchmarking have been taken into account. Metro convened an independent expert panel of economists and demographers from the Portland region to review and confirm the model and forecast. Outcomes from the expert review panel are to be published as support documentation for the UGR analysis.

- **MetroScope viewer update**— In conjunction with validation and sensitivity, staff has produced and will continue to update and modernize the templates for displaying and explaining model results. Diagnostic and land use statistics are being standardized into common formats so that future validation and sensitivity exercises can be compared temporally and also provide feedback concerning the model’s performance for re-calibration as needed.
- **Land Development Monitoring Program** —in order to properly validate the recent updates to the land use model, staff prepared new data to independently evaluate the land use model’s forecasting performance. Independent and verifiable rental information, land consumption, infill, and redevelopment estimates are needed and being prepared by the DRC. This data is based on observed current information. Plans are underway to maintain the longitudinal analysis to maintain the land development monitoring program.

Methodology:

Survey, Data Acquisition, and Research

- **Market Research**—use consumer surveys to investigate the difference in actual market choices vs. stated preferences (similar to the use of revealed and stated preferences in travel demand forecasting), and establishment surveys to investigate how suppliers make decisions.
- **Performance Measures**—use observed data and market research to produce analytic findings that measure land market performance.

Model and Analytic Tool Improvements

- **Innovation**—Respond in creative ways to emerging requests for analytic improvements.

Model Maintenance

- **Validation**—Conduct appropriate validation exercises for forecast models.
- **Upkeep**—Maintain model software in sustainable software frameworks.
- **Update**—Review model, model structures, equations, and parameters in order to sustain “state of the practice” forecasting capabilities

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Survey, Data Acquisition, and Research (Model Improvements also listed here for clarity)

- Enhancing Metro’s use of Census and other federal data, defining and implementing optimal coordination activities between Metro and local agencies regarding the 2020 Census. [Ongoing]
- Continue acquiring new data for, publishing information products from, and enhancing the Land Development Monitoring System especially for residential rental price; supplier redevelopment location, type, and frequency; and commercial development. [Data plan

by June 2018]

- Develop a peer reviewed housing and transportation cost calculator for the current year and future year based on outputs derived from the MetroScope land use model (i.e., housing cost estimates) and Metro’s own travel demand model (i.e., travel costs based on auto ownership, value of time and other travel factors). [Prototype by June 2018]

Performance Measurement

- Ensure that LDMS data informs the build-out of Metro’s next-generation performance measurement information access system (see also the “Data and Performance Measurement” section of this UPWP). [June 2018]

Model Maintenance

- **Regional macro model** – Define and begin implementation of a long-term plan for the regional macro model’s evolution. [Plan by November 2018]
- **MetroScope model re-validation exercise** – Devise and begin implementation of a long-term land use allocation model and data improvement program. [Plan by November 2018]
- Creative analytic solutions to ad hoc transportation and land use planning data visualization and performance measurement needs from the Planning & Development and other Metro Departments through innovation activities [ONGOING]

Entities Responsible for Activity:

- Metro – Lead Agency
- Oregon Office of Economic Analysis and Portland State Population Research Center
– Population (and economic) coordination per State regulations
- Local Governments – coordination per State regulations
- Stakeholders (academics and non-governments) – collaboration and consensus building

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major project deliverables/milestones* sections.

Funding History:

Please note that due to modifications to the organizational chart and funding structure for the Research Center, the budget for Economic and Land Use Forecasting has increased and been split across two programs: Maintenance vs. Development & Application. This increase reflects primarily a change in funding source for existing staff rather than a net increase of staff or staff time.

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$517,340	3.415
2012-13	\$373,916	2.45
2013-14	\$425,151	2.6

I. GENERAL MPO TRANSPORTATION PLANNING

2014-15	\$576,019	2.4
2015-16	\$600,099	2.528
2016-17	\$429,699	1.553

FY 2017-18 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	197,163	PL	\$	84,295
Interfund Transfers	\$	140,172	STBG	\$	274,371
Materials and Services	\$	113,000	TriMet Support	\$	50,445
			Metro	\$	41,223
TOTAL			TOTAL		
	\$	450,335		\$	450,335

Full-Time Equivalent Staffing

Regular Full-Time FTE	1.483
TOTAL	1.483

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	129,813	PL	\$	162,105
Interfund Transfers	\$	113,244	STBG	\$	7,286
Materials and Services	\$	41,300	Metro	\$	114,966
TOTAL			TOTAL		
	\$	284,357		\$	284,357

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.8570
TOTAL	0.8570

Travel Forecast Maintenance Program

Staff Contact: Chris Johnson, chris.johnson@oregonmetro.gov

Description:

The Travel Forecast Maintenance Program includes work elements necessary to keep the travel demand model and various ancillary tools responsive to issues that emerge during the regional transportation planning process. The major work activities and projects within this program area include model maintenance innovation, and both statewide and national professional involvement.

The program area is critical because the travel demand model provides the analytical foundation for transportation policy and investment decisions

Objectives:

The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Environmental Protection Agency (EPA) require that project modeling be carried out using methods, techniques and tools that meet certain guidelines. Failure to meet the guidelines may result in analytical conclusions that do not meet Federal approval.

Thus, the primary objective for this program is to ***ensure the validity and utility of the modeling methods, techniques and tools***. This is achieved through the work elements listed under the Model Maintenance, Innovation, and Statewide and National Professional Involvement categories.

Previous Work (conducted under single Model Development program area):

Travel Behavior Surveys

- The last comprehensive travel behavior survey for this region was conducted in 2011. The data serves as a basis to understand the degree to which various stimuli (demographics, urban form, cost, travel time, lifestyle choices, etc.) affect traveler behavior and choices.

New Models

- Activity Based Model: A new dynamic activity based model has been developed for this region. Results from the 2011 travel behavior survey were used in the model estimation.
- Trip Based Model (current model): The trip-based models were re-estimated to better reflect behavior patterns and choice characteristics derived from the household travel behavior survey data. In addition, the model was updated to a 2015 base year.
- Freight Model: A SHRP2 C-20 IAP grant was awarded to Metro. A consultant team was contracted to assist with the project. A prototype model framework was implemented using national data. Additional data was collected from local data from establishments, logistic firms, and other sources. These data were used to refine the prototype model to ensure that it more closely reflects the conditions in Portland. To meet the match requirement, Metro performed various tasks

- throughout the project (e.g., national zonal definition and network coding).
- Bike Routing Algorithm: The routing algorithm is being reviewed and re-evaluated to potentially include a variety of simplifying features to ease the application of the tool by external partners such as the City of Portland.
- Multi-Criterion Evaluation (MCE) Toolkit: The MCE Toolkit consists of three tools: a benefits calculator to determine monetized benefits of transportation projects based on outputs from the regional travel demand model, a project costing tool, and a visualizer that calculates B/C ratios, and summarizes and visualizes results. Phase I of the MCE project was completed in FY2017.
- Housing+Transportation Cost Index: Modeling program staff collaborated with Land Use team staff to prototype a H+T cost “viewer” for both current and forecast states of the regional land markets and transport system.

Model Maintenance

- Modeling Network Attributes: Metro modeling staff reviewed and updated the modeling network assumptions (e.g., uncongested speeds, vehicle throughput capacities, transit line itineraries). These attributes were incorporated into a master network database system.
- Travel Demand Model Input Data: Model input data was reviewed and updated. Variables such as intersection densities, household and employment accessibility, and parking cost assumptions were adjusted to reflect 2015 conditions.
- Travel Demand Model Computer Code: Model application code was refined to address specific needs (e.g., model application interface, code changes required by the model re-estimation).

Statewide and National Professional Engagement

- Oregon Modeling Steering Committee: Staff participated on the OMSC Executive Committee and several affiliated subcommittees.
- Transportation Research Board Committees: Staff served on the TRB Transportation Planning Applications Committee. This committee is instrumental in providing a forum for advancing model application guidelines.

Methodology:

The following methods will be applied to achieve the objectives of the Model Development Program:

Innovation

- Ad hoc research and development: “Innovation” efforts respond during the year to emerging issues and needs (e.g. the Housing+Transportation cost index tool described in the *Economic, Demographic and Land Use Forecasting* section of this document is a multi-program innovation effort).
- Strategic visioning for long-range model enhancements: Metro RC continues to scope research and development of new tools and methods for analyzing and forecasting travel-related information.

Model Maintenance

- Modeling Network Attributes: Metro will continue to collaborate with the regional modeling partners to ensure the validity of the network assumptions found in the network. Additional staff resources will also be devoted to refining the zone system required to support the activity-based model platform
- Travel Demand Model Input Data: The model input data will be modified as warranted. Such things as intersection densities, household and employment accessibility, and parking cost assumptions will be refined. The activity-based model requires more extensive input data than the trip-based model and, as such, this effort will require additional staff resources.
- Travel Demand Model Computer Code: Model application code will be modified, as warranted.
- Software Expertise: As new versions of the network modeling software are released, staff will take steps to maintain and expand their expertise.

Statewide and National Professional Engagement

- Oregon Modeling Steering Committee: Staff will continue to participate on the OMSC (Metro now chairs the OMSC) and affiliated subcommittees.
- Transportation Research Board Committees: Staff will continue to serve on TRB committees that influence national planning guidelines.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Model Maintenance

- Modeling Network Attributes: Modified networks that reflect current assumption sets. (As warranted). Final zone system for activity-based model.
- Travel Demand Model Input Data: Modify model input data that reflect current assumption sets. (As warranted). Final input data set for activity-based model.
- Travel Demand Model Computer Code: Modify model application code. (As warranted)
- Coordinate with the performance measurement and data acquisition programs described in the Data Management, Data Visualization, and Performance Measurement section of this document to ensure that they both provide information necessary for the travel forecasting efforts and make good use of information from the travel forecast models.

Statewide and National Professional Development

- Oregon Modeling Steering Committee: Staff participation on OMSC. (Ongoing).
- Transportation Research Board Committees: Staff participation on TRB. (Ongoing).

Innovation

- Conduct research and development on emerging issues as needs and resources indicate

Entities Responsible for Activity:

Model Maintenance

- Metro – Product Owner/Lead Agency

Statewide and National Professional Development

- Metro in collaboration with other professionals

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project Deliverables/Planned Milestones* section.

Funding History:

The travel demand model must be kept current and robust to remain a viable tool for analyzing future travel condition. The confidence level of the model must be such that it can ensure the provision of sound information for policy and investment decisions. Thus, the Travel Forecast Maintenance program is funded each year to meet that need. Key areas within the program include the maintenance of the model input data (Model Maintenance), conducting research on state of the art methods (Innovation), and the staff participation on local and national research and model implementation committees (Statewide and Professional Involvement).

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$843,236	2.9
2012-13	\$860,307	4.837
2013-14	\$693,559	4.11
2014-15	\$875,764	3.56
2015-16	\$934,920	3.723
2016-17	\$1,136,273	4.082

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	780,435
Interfund Transfers	\$	554,844
Materials and Services	\$	34,016

Resources:

PL	\$	845,527
STBG	\$	141,765
ODOT Support	\$	88,891
TriMet Support	\$	63,463
Metro	\$	229,648

TOTAL \$	\$1,369,295	TOTAL \$	1,369,295
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I. GENERAL MPO TRANSPORTATION PLANNING

Full-Time Equivalent Staffing

Regular Full-Time FTE	5.744
TOTAL	5.744

FY 2018-19 Cost and Funding Sources:

Requirements:

Personal Services	\$	529,904
Interfund Transfers	\$	462,269
Materials and Services	\$	35,585

Resources:

PL	\$	659,383
ODOT Support	\$	19,196
TriMet Support	\$	98,527
Metro	\$	250,652

TOTAL \$	1,027,758	TOTAL \$	1,027,758
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Full-Time Equivalent Staffing

Regular Full-Time FTE	3.787
TOTAL	3.787

Technical Assistance Program

Staff Contact: Cindy Pederson, cindy.pederson@oregonmetro.gov

Description:

The purpose of the Technical Assistance program is to provide transportation data and modeling services for projects that are of interest to local entities. Clients of this program include regional cities and counties, TriMet, the Oregon Department of Transportation (ODOT), the Port of Portland, private sector businesses, and the general public. In addition, client agencies can use funds from this program to purchase and maintain copies of the transportation modeling software used by Metro. A budget allocation defines the amount of funds that is available to each regional jurisdiction for these services.

Objectives:

US Department of Transportation (USDOT) protocols require the preparation of future year travel forecasts to analyze project alternatives. Similarly, modeling is required by the Environmental Protection Agency (EPA) in project analysis to quantify emissions in air quality analysis.

Thus, the primary objective of this program is to ***provide travel modeling tools and services to clients for local project needs.***

Previous Work:

- Provided data and modeling services to regional jurisdictions and agencies (e.g., provided survey data tabulations to jurisdictions; provided modeling support to TriMet, Washington County, and the City of Portland).
- Provided data and modeling services to private consultants and other non-governmental clients (e.g., modeling support services to a jurisdiction in Clackamas County via private consultant).
- Purchased and maintained modeling software for seven governmental agencies (ODOT Region 1, City of Portland, City of Gresham, City of Hillsboro, Clackamas County, Multnomah County, and Washington County).

Methodology:

Provide Transportation Data and Modeling Services

- Data and modeling services are provided to jurisdictions, regional agencies, and the private sector upon request.

Modeling Software

- Upon request, transportation network modeling software is purchased and maintained for regional agencies. There are currently seven agencies that participate in this program.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Data and modeling services to jurisdictions and regional agencies (Upon request). This will likely include:

- Support to Oregon DOT on its Value Pricing analysis for the Metro region.

I. GENERAL MPO TRANSPORTATION PLANNING

- Support to local agencies for Title VI analyses.
- Data and modeling services to private consultants and other non-governmental clients. (Upon request)
- Funds to the local governmental agencies to purchase and pay maintenance on transportation modeling software. (Upon request)

Entities Responsible for Activity:

Metro – in collaboration with clients

Schedule for Completing Activities:

Data and modeling services are provided to jurisdictions and regional agencies upon request. Schedules are negotiated at the time of the requests.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2012-13	\$81,916	0.409
2013-14	\$77,658	0.370
2014-15	\$174,224	0.712
2015-16	\$118,744	0.407
2016-17	\$98,421	0.35

FY 2017-18 Cost and Funding Sources:

Requirements:

Personal Services	\$ 49,266
Interfund Transfers	\$ 35,035
Materials and Services	\$ 19,014

Resources:

STBG	\$ 65,046
ODOT Support	\$ 23,325
TriMet Support	\$ 7,489
Metro	\$ 7,445

TOTAL	\$ 103,305	TOTAL	\$ 103,305
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.35
TOTAL	0.35

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	48,510
Interfund Transfers	\$	42,318
Materials and Services	\$	19,176

Resources:

STBG	\$	67,979
ODOT Support	\$	25,828
TriMet Support	\$	8,417
Metro	\$	7,780

TOTAL \$	110,004	TOTAL \$	110,004
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.33
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TOTAL	0.33
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MPO Management & Services

Staff Contact: Tom Kloster, tom.kloster@oregonmetro.gov

Description:

Metropolitan Planning Organization (MPO) Management and Services provides overall management and administration of Metro's Metropolitan Planning Organization (MPO) role.

Overall department administration includes:

- preparation and administration of the Unified Planning Work Program (UPWP),
- procurement,
- contract administration,
- grants administration,
- internal and external reporting,
- human resource management,
- quadrennial review and annual self-certification of meeting MPO requirements,
- certifications and assurances filing to demonstrate capacity to fulfill MPO requirements,
- public participation in support of MPO activities,
- air quality modeling support for MPO programs, and
- staffing and services to meet required needs of the various standing MPO advisory committees, including:
 - Metro Council
 - Joint Policy Advisory Committee on Transportation (JPACT)
 - Transportation Policy Alternatives Committee (TPAC)
 - Project-specific working groups and advisory committees

As an MPO, Metro is regulated by Federal planning requirements and is a direct recipient of Federal transportation grants to help meet those requirements. Metro is also regulated by State of Oregon planning requirements that govern the Regional Transportation Plan (RTP) and other transportation planning activities. The purpose of the MPO is to ensure that Federal transportation planning programs and mandates are effectively implemented, including ongoing coordination and consultation with state and federal regulators.

As the MPO, Metro is responsible for preparing the annual Unified Planning Work Program (UPWP), a document that coordinates activities for all federally funded planning efforts in the Metro region. Metro follows recently adopted state protocols for developing the UPWP to ensure adequate opportunity for state and local partners to develop project narratives, for state and federal consultation on the draft UPWP and for adoption of the final plan by JPACT and the Council in a timely manner for submittal to ODOT and the USDOT. Once adopted, the UPWP is a living document, and Metro makes periodic amendments, as needed, under procedures established in the UPWP. Amendments to the UPWP are submitted to USDOT for approval.

JPACT serves as the MPO board for the region in a unique partnership that requires joint action with the Metro Council on MPO actions. TPAC serves as the technical body that works with Metro staff to develop policy alternatives and recommended actions for JPACT and the Metro Council.

As the MPO for the Portland region, for meeting recently adopted federal transportation performance measures. Metro is coordinating with ODOT and TriMet to determine roles and responsibilities for setting targets and collecting monitoring data needed to report our progress toward these measures. In related work (described separately in the UPWP), Metro and ODOT plan to follow the 2018 RTP adoption with an update to our regional mobility policy. Our goal is to continue linking our mobility policy to the 24 mobility corridors that make up our Regional Mobility Atlas, and we believe this approach strongly meets the intent of federal regulations for tailoring our performance-based planning and programming to conditions on the ground. As part of this work, we will likely fine-tune our performance targets and measures as they relate to federal requirements.

Metro also maintains intergovernmental agreements (IGAs) and memorandums of understanding (MOUs) with local on general planning coordination and special planning projects. These agreements include:

- South Metro Area Rapid Transit (SMART) MOU (*effective through June 30, 2020*)
- Southwest Washington Regional Transportation Council (RTC) MOU (*effective through June 30, 2018*)
- Oregon Department of Environmental Quality MOU (*effective through February 2023 (agreement still being finalized)*)
- 3-Way Planning IGA with ODOT and TriMet (*effective through June 19, 2018*)

Metro belongs to the Oregon MPO Consortium (OMPOC), a coordinating body made up of representatives of all eight Oregon MPO boards. OMPOC was founded in 2005 to build on common MPO experiences and to advance the practice of metropolitan transportation planning in Oregon. OMPOC meets four times each year and operates under its own bylaws. Metro staff also participates in the quarterly MPO & Transit District coordination meetings convened by ODOT, and attended by all eight MPOs, several transit districts, ODOT, FHWA and other state and federal agencies, as needed.

Objectives:

Provide consistent and ongoing administrative support for the regional transportation planning programs. (ONGOING)

- Maintain an updated Unified Planning Work Program (UPWP), including annual updates and periodic amendments, as needed to advance regional planning projects (ONGOING)
- Complete quarterly and year-end planning progress reports to be submitted to FTA and FHWA via ODOT (ONGOING)
- Complete an annual self-certification review of compliance with federal transportation planning requirements (ONGOING)
- Complete the 5-year federal certification review by FHWA, FTA and EPA (2021)
- Complete annual recruitment of community representatives for TPAC's six community member seats (three seats are filled annually for 2-year terms)
- Maintain planning intergovernmental agreements and memorandums of understanding with regional planning partners to ensure timeline delivery of planning program products and funding (ONGOING)

Previous Work:

Work completed in the 2016-17 fiscal year included:

- Adoption of the revised 2018-19 UPWP.
- Completion of quarterly and year-end planning progress reports in 2017-18 submitted to FTA and FHWA via ODOT.
- Coordination of the UPWP with the 2018-19 Metro budget.
- Completion of the 2017 Quadrennial Review.
- Completion of the 2017 annual self-certification.
- Update of the Metro Public Participation Plan.
- Organization of twelve JPACT meetings and twelve TPAC meetings in 2017-18, as well as coordination of agenda items on Metro Council, MPAC, MTAC meetings as needed.
- Recruitment of community representatives for the 2018-19 (calendar year) cycle.
- Participation in quarterly Oregon MPO and Transit staff meetings and quarterly OMPOC meetings.
- Complete scheduled updates to IGAs and MOUs.
- Provision of MPO staff support, as needed.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-19:

- Adoption of the 2019-20 UPWP.
- Completion of quarterly and year-end planning progress reports for 2018-19 submitted to FTA and FHWA via ODOT.
- Coordination of the UPWP with the 2019-20 Metro budget.
- Completion of the 2018 annual self-certification.
- Organization of twelve JPACT meetings and twelve TPAC meetings as well as coordination of agenda items on Metro Council, MPAC, MTAC meetings as needed.
- Complete recruitment of TPAC community representatives for the 2019-20 (calendar year) cycle.
- Participation in quarterly Oregon MPO and Transit staff meetings and quarterly OMPOC meetings.
- Complete scheduled updates to IGAs and MOUs.
- As part of updating the 3-way Metro, ODOT and TriMet IGA, create a new exhibit that describes roles and responsibilities for target setting and data sharing necessary to meet federal performance requirements.
- Provision of MPO staff support, as needed.

Entities Responsible for Activity:

- Metro – Product Owner/Lead Agency
- Oregon Department of Transportation – Cooperate/Collaborate
- TriMet – Cooperate/Collaborate
- South Metro Area Regional Transit (SMART) – Cooperate/Collaborate
- Oregon MPO Consortium (OMPOC) - Cooperate/Collaborate

Other Stakeholders:

- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)
- Joint Policy Advisory Committee on Transportation (JPACT)
- Transportation Policy Alternatives Committee (TPAC)
- Oregon Transportation Commission (OTC)
- Oregon Department of Environmental Quality (DEQ)
- US Environmental Protection Agency (EPA)

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major project deliverables/milestones* section.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2013-14	\$1,644,305	8.42
2014-15	\$321,436	1.52
2015-16	\$305,930	1.45
2016-17	\$281,194	1.2

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	123,518
Interfund Transfers	\$	50,441
Materials and Services	\$	46,100
Contingency	\$	72,318

Resources:

PL \$ 292,376

TOTAL	\$	292,376	TOTAL	\$ 292,376
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Full-Time Equivalent Staffing

Regular Full-Time FTE	.8
TOTAL	.8

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	155,881
Interfund Transfers	\$	66,195
Materials and Services	\$	54,922

Resources:

PL	\$	276,999
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TOTAL \$	276,999	TOTAL \$	276,999
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.97
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TOTAL	0.97
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Regional Safety Program

Staff contact: Lake McTighe, lake.mcTighe@oregonmetro.gov

Description

Metro is formalizing regional transportation safety activities in a Regional Safety Program to support Vision Zero and achieving national, state, regional and local safety performance targets. A two-year work plan will be developed to guide Metro activities related to transportation safety and coordinate with federal, state and local partners. The work plan will be based on the strategies and actions identified in the 2018 Regional Transportation Safety Strategy and the Regional Safe Routes to School Program.

Starting in 2009, in response to a Federal Highway Administration recommendation to better incorporate safety into the MPO planning process, Metro began working with local governments, ODOT, TriMet, practitioners and researchers to draft the region's first Regional Transportation Safety Plan. The plan built on the 2011 Oregon Transportation Safety Action Plan and the 2012 Clackamas County Transportation Safety Action Plan.

Since the completion of the 2012 Regional Transportation Safety Plan, governments and communities across the country have recognized the need for new strategies and approaches, such as Safe Systems, Vision Zero, Toward Zero Deaths and Road to Zero, in order to make streets safe. Cities and counties in the region have developed transportation safety action plans with targets for zero deaths and severe injuries, and the federal government has a stated goal of zero deaths and severe injury crashes in thirty years. Additionally, the region and state have increased funding and programs for Safe Routes to School. Increasing Safe Routes to School is a core element of the Regional Safety Program.

There is a recognition that funding and programs need to ramp up to address fatal and severe crashes for all modes of travel, especially for vulnerable users. The 2018 Regional Transportation Safety Strategy uses the Safe Systems and Vision Zero frameworks and identifies recommended strategies and actions for all partners. The Regional Safety Program work plan will describe steps Metro will take to implement Metro related actions identified in the 2018 Regional Transportation Safety Strategy and Regional Safe Routes to School Program.

Tasks in the Regional Safety Program work plan will include annual reports to the Metro Council and JPACT, schedules to update regional plans and the Regional Transportation Functional Plan to reflect current policy direction, activities to coordinate with partners and increase awareness of Vision Zero and Safe Routes to School, identifying legislative priorities, and refining regional funding criteria.

Objective

Adopt the 2018 Regional Transportation Safety Strategy. Develop and implement a two-year work plan to support implementation of the 2018 Regional Transportation Safety Strategy and Safe Routes to School Program.

Previous Work

- Establishment of ad-hoc Regional Safety Workgroup in 2009.
- Adoption of regional safety targets in 2010 Regional Transportation Plan.
- Completion of the 2011 State of Safety Report.
- Completion of the 2012 Regional Transportation Safety Plan.
- Adoption of the 2014 Climate Smart Strategy, which included recommended actions for safety.
- Update of safety targets and policy in the 2014 Regional Transportation Plan.
- Adoption of Portland's Vision Zero Plan and Transportation Safety Action Plans in Beaverton, Hillsboro, Clackamas County and Washington County.
- Adoption of the 2016 Oregon Transportation Safety Action Plan.

Work Completed in 2017-18 included

- Development of the 2018 Regional Transportation Safety Strategy, including updated Vision Zero safety target, annual safety targets to meet federal requirements, safety performance measures, strategies and actions, developed with guidance from technical safety work group, Metro technical and policy advisory committees, and Metro Council.
- Completion of the 2017 State of Safety Report.
- Identification Regional High Injury Corridors using replicable GIS based methodology.
- New safety policy section in the 2018 Regional Transportation Plan.
- Completion of the Regional Travel Options Strategy including a Safe Routes to School Program.

Methodology

Metro will manage the Regional Safety Program and the development of a two-year work plan. Metro will also consult with partners listed under Other Stakeholders in the development of the work plan and actions to implement safety actions.

Major Project Deliverables and Schedule for Completion in FY 2018-2019:

Two-year Regional Safety Program work plan and initial implementation activities.

Entity/ies Responsible for Activity

Metro – Product Owner/Lead Agency

Other Stakeholders

- Local Cities and Counties
- Police and Fire
- Oregon Department of Transportation
- Oregon Department of Land Conservation and Development
- Port of Portland
- TriMet, SMART and other transit operators in the region
- U.S. Department of Transportation/ Federal Highway Administration

(The 2018 Regional Safety Strategy includes an extensive list of partners that could play a role in the Regional Safety Program)

Funding History

This program is being described for the first time in this UPWP, and therefore does not include a discrete funding history.

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	19,380	STBG	\$	24,774
Interfund Transfers	\$	8,230	Metro	\$	2,835
TOTAL \$			TOTAL \$	27,609	

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.133
TOTAL	0.133

Mobility Policy Refinement Planning

Staff contact: Tom Kloster, Tom.Kloster@oregonmetro.gov

Description

As part of adopting the 2000 RTP, the first transportation plan to fully implement the Region 2040 Growth Concept, Metro developed a new approach to managing mobility. The new policy came from an extensive conversation with regional elected officials and policy makers over a two-year period, including an alternatives analysis to help officials better understand the tradeoffs in making mobility investments.

The new policy was adopted by the Oregon Transportation Commission in [2002] as an amendment to the recently completed 1999 Oregon Highway Plan (OHP), and has been in effect since then. This new emphasis on a tailored mobility policy and multi-modal solutions was also incorporated into the Oregon Transportation Plan (OTP) in 2006, the policy document that frames and organizes all of the state's modal plans for transportation.

The new mobility policy broke from the historic practice of "once size fits all" congestion standards for roads and freeways to a more tailored approach that centered the function of major streets on land use outcomes, and focused mobility expectations on the freeway system.

The new policy also recognized that historic expectations of "building your way out" of peak-hour highway congestion was not only fiscally and technically unattainable, but also had unintended impacts that were inconsistent with the larger 2040 vision, including encouraging sprawl and undermining the broader public and private investments being made in centers and transit corridors.

In the 2010 RTP, Metro expanded on the concept with the development of a series of regional mobility corridors that provide the geography for monitoring and reporting on mobility. Twenty-four mobility corridors were developed, with each corridor framed by Region 2040 land use outcomes, and bundling highways, transit, major streets and bikeway in each mobility corridor as a complementary parts of an integrated system. Metro publishes a periodic Regional Mobility Atlas to provide ongoing tracking of these corridors as a foundation for planning and project development work in the region.

In 2013, ODOT published the Corridor Bottleneck Operations Study (CBOS), another tool for understanding and responding to congestion bottlenecks on highways within the regional mobility corridors. This tool has since been used to prioritize system management investments across the metro region with an eye toward fine-tuning a mature highway system with strategic improvements.

Despite these efforts to keep pace with traffic growth in the region, in the region, congestion has continued to grow since the 2000 RTP mobility policy was adopted. During this time, the region has experienced significant population and employment growth, straining all parts of our transportation

system. During the same period, state investments in the region's freeway system continued to decline from historic levels due to slowing state and federal transportation funding. In recent years, ODOT has adapted to this new fiscal reality with an emphasis on fine-tuning the freeway system with improved operational management and strategic capacity improvements. The few major freeway projects envisioned for the system in the 2018 RTP are also focused on bottlenecks that are part of this shift toward maintaining a mature system.

More recently, the U.S. Department of Transportation issued new regulations (through MAP-21 / FAST Act) for states and MPOs that will require greater monitoring of mobility on our freeway system and setting targets for system performance. While these new requirements differ somewhat from the current mobility policy for the region, the approach is similar, with a focus on specific segments of the freeway system.

To meet the new federal mandate and the growing challenges on our freeway system, ODOT and Metro propose to work in partnership on a refinement to our regional mobility policy, upon completion of the 2018 RTP. This will allow the refinement work to build on a rich data set and updated policy framework from the RTP, with the goal of better informing system management and investments in the region.

This work would produce two major policy frameworks for consideration by JPACT, the Metro Council and the Oregon Transportation Commission. First, a corridor-specific mobility strategy would be developed for the National Highway System for the purpose of meeting federal requirements, and because the NHS generally corresponds to the interstate and statewide highway system defined in the Oregon Highway Plan (OHP).

Second, a mobility corridor-based strategy for managing congestion on regional arterial streets that support the interstate and statewide highways would be developed and incorporated into the Regional Transportation Plan (RTP).

Together, these new policy frameworks would guide system development as part of future RTP updates and the development of city and county Transportation System Plans (TSPs) and the regions ongoing Congestion Management Process (CMP).

Objective

Complete a 2-year refinement planning effort to modernize the regional mobility policy to better reflect current. The results of this effort would be amended into the RTP and Oregon Highway Plan.

Previous Work

- Adoption of the Oregon Highway Plan (OHP) in 1999.
- Adoption of the Interim Regional Mobility Policy for the Metro region in the 2000 RTP.
- Ongoing implementation of the region's Congestion Management Process (CMP) since adoption of the 2000 RTP.
- Adoption of the Interim Regional Mobility Policy in the Oregon Highway Plan in 2002.
- Adoption of Oregon Transportation Plan (OTP) in 2006.

- Creation of Regional Mobility Corridors in the 2010 RTP as a tool for framing mobility investments.
- Updates to the Oregon Transportation Planning Rule (TPR) and Oregon Highway Plan (OHP) in 2011 to address emerging statewide issues in congestion management.
- Completion of the Corridor Bottleneck Operations Study (CBOS) in 2013.
- Creation of ODOT Region 1 Active Traffic Management (ATM) strategy in 2014.
- Completion of ODOT's Portland Regional Traffic Management Report in 2016.
- Publication of the Regional Mobility Corridor Atlas in [year] and 2015.

Work Completed in 2017-18 included:

- Collaboration with ODOT in analysis and formal comment on new USDOT mobility regulations.
- Initial discussions with ODOT on a refinement planning partnership to address mobility policy in the region.

Methodology

Metro's partnership with ODOT on this work will include project scoping with county, city and special districts in the region, a steering or advisory committee that includes a broad cross section of stakeholders to create an inclusive work plan. Metro and ODOT will also consult with federal agencies during the scoping phase.

Metro and ODOT will formalize project management and funding through an intergovernmental agreement that spans the 2-year extent of the project.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019

Scoping is expected to begin in the third quarter and continue through the fiscal year, with a draft IGA and detailed work plan completed by the end of the fiscal year.

Entity/ies Responsible for Activity:

Metro and ODOT – Product Owner/Lead Agency

Other Stakeholders

- Local Cities and Counties
- Regional Transportation Council of Southwest Washington
- Ports of Portland and Vancouver
- TriMet, C-TRAN and other transit operators in the region
- Metro Parks & Nature Department
- Oregon Department of Transportation
- Oregon Department of Land Conservation and Development
- Oregon Department of Environmental Quality
- U.S. Department of Transportation

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project Deliverables/Milestones* section.

Funding History

This project is being described for the first time in this UPWP, and therefore does not include a discrete funding history.

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	41,409	STBG	\$	52,934
Interfund Transfers	\$	17,584	Metro	\$	6,059
TOTAL \$			TOTAL \$	58,993	

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.25
TOTAL	0.25

Complete Streets

Staff Contact: Lake McTighe, lake.mctighe@oregonmetro.gov

Description:

Metro's "Complete Streets" Program was established to provide transportation design guidelines and other tools to support local jurisdictions to design streets that implement the 2040 Growth Concept. The Program started with the release of the *Creating Livable Streets* guidelines in 1997. Since then the Program has grown to include a suite of guidelines: *Green Streets*, *Trees for Green Streets*, *Green Trails: Guidelines for Environmentally Friendly Trails*, and *Wildlife Crossings: Providing safe passage for urban wildlife*.

The Complete Streets Program implements Regional Transportation Plan (RTP) design policies for regional transportation facilities and includes ongoing involvement in local transportation project conception, funding, and design. Metro's Regional Transportation Functional Plan (RTFP), the implementing plan of the RTP, specifies that city and county street design regulations shall allow implementation of the recommended designs. This program also addresses Federal context-sensitive design solutions initiatives and requirements to develop mitigation strategies to address impacts of the transportation projects.

Other program elements include providing technical assistance to cities and counties as transportation projects are developed, and providing workshops, forums and tours to increase understanding and utilization of best practices in transportation design.

The Program guidelines were last updated in 2002 (with the exception of the *Wildlife Crossings*, which was completed in 2009) and content needs to be updated to reflect the state of the practice in transportation and incorporate missing topics, including designing for safety, age friendly communities, relationship of transportation design to public and environmental health, providing for effective freight and goods movements in multi-modal environments, trail design, cycle tracks and other protected bikeways and bicycle and transit interaction.

Objectives:

- Provide cities, counties and agencies with up-to-date, state of the practice, context sensitive and performance based guidance in street and trail transportation design through the update of the *Creating Livable Streets*, *Green Streets*, and *Trees for Green Streets* guidelines and development of new Regional Trail Design guidelines.
- Update and develop Program website with visual library, resources and other tools.
- Conduct forums, workshops and tours.
- Implement regional street-design policy and recommendations in the Regional Transportation Safety Plan by participating in local project development and design activities, including technical advisory committees, design workshops and seminars, as well as formal comment on proposed projects.
- Ensure that local plans and design codes adequately accommodate regional design objectives through the local Transportation System Plan (TSP) review process.
- Provide leadership in the professional engineering and planning community on innovative designs and the transportation/land use connection through the guidelines.

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- Develop shared strategies with partner agencies to increase awareness and use of the guidelines and result in on-the-ground projects that reflect innovative design that work for all users.
- Inspire and educate with imagery and visualizations, and represent the unique areas of the region and the different needs of communities. Create an understanding of beneficial outcomes that can occur with best practices.
- Draft updated policy language in Chapter 2 of the 2018 Regional Transportation Plan.
- Updated design classification map in Chapter 2 of the 2018 Regional Transportation Plan.

Previous Work:

- Completed Annotated Draft Table of Contents for updated guidelines.
- Completed Draft Chapter layout for updated guidelines.
- Completed Resource List for design guidelines.

Methodology:

Metro has traditionally participated in local project-development activities for regionally funded transportation projects. During FY 2018-19, the Complete Streets Program will continue to focus on projects that directly relate to implementation of Region 2040 land use components, including projects funded through the Metropolitan Transportation Improvement Program (MTIP).

Design is one of eight policy priority areas of the 2018 Regional Transportation Plan update; therefore, Program activities will be coordinated with the update of the Regional Transportation Plan to most effectively provide resources for implementing the RTP, the adopted *Climate Smart Communities Strategy* and recommendations in the 2007 *METRO Freight and Goods Movement Plan: Truck and Street Design Recommendations Technical Report*, 2012 *Regional Transportation Safety Plan*, and the 2014 *Regional Active Transportation Plan*. Opportunities to coordinate and collaborate with partner agencies, including ODOT, TriMet, SMART and DLCD, will be actively sought out in order to more effectively increase understanding, awareness and acceptance of Livable Streets and Trails.

Updates to the guidelines and additional activities in FY 2018-19 will be managed by Metro but guided by the Technical Work Group.

Periodic updates will be given to the Transportation Policy Alternatives Committee (TPAC), the Metro Technical Advisory Committee (MTAC), the Metro Policy Advisory Committee (MPAC), the Joint Policy Advisory Committee on Transportation (JPACT), and the Metro Council. Direction from the Metro Council and the technical and policy advisory committees will inform the project.

To update the *Creating Livable Streets, Green Streets, and Trees for Green Streets* guidelines and to develop a new handbook on Regional Trail Design, Metro staff will work with experts within Metro, with the Consultant team and with the Technical Work Group, to review and revise content for design guidance. The Technical Work Group will meet approximately six times over the course of the update to the guidelines.

The update will incorporate recommendations from the *Metro Freight and Goods Movement Plan: Truck and Street Design Recommendations Technical Report* (May 2007); incorporate recommendations from the update of the *Regional Transportation Safety Plan* (May 2012); and

incorporate design guidance recommendations from the *Regional Active Transportation Plan* (July 2014).

Updates to county and city transportation coordinating technical advisory committees and other stakeholder groups will be made to increase awareness of the project and receive input.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Workshop(s) and/or best practice tour(s).
- Updated Program webpage with resources including schematics, photo library, library of external resources, community and personal stories and case studies
- Update content of Creating Livable Streets, Green Streets, and Trees for Green Streets, and new regional trail design guidelines. Content will be combined into one comprehensive and holistic guide.
- Draft updated policy language in Chapter 2 of the 2018 Regional Transportation Plan.
- Updated design classification map in Chapter 2 of the 2018 Regional Transportation Plan.

Entities Responsible for Activity:

- Metro – Lead Agency
- Oregon Department of Transportation - Cooperate/Collaborate
- TriMet, SMART –Collaborate/Collaborate
- Cities, Counties, Special Districts, Agencies - Cooperate/Collaborate

Schedule for Completing Activities:

Update of the guidelines and related activities are planned to be completed by the end of FY 2018-19.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2014-15	\$234,581	1.1
2015-16	\$324,762	1.4
2016-17	\$248,401	1.0

FY 2017-18 Cost and Funding Sources:

Requirements:

Personal Services	\$	140,049
Interfund Transfers	\$	42,451
Materials and Services	\$	62,300
ODOT Consultant Contract	\$	200,000

Resources:

STPBG	\$	168,988
Creating Livable Streets STBG	\$	250,000
Metro	\$	40,551
	\$	

TOTAL \$	444,800	TOTAL \$	444,800
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II. MPO PLANNING PROJECTS

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.95
TOTAL	0.95

FY 2018-19 Cost and Funding Sources:

Requirements:

Personal Services	\$	121,224
Interfund Transfers	\$	51,478
Materials and Services	\$	62,300

Resources:

PL	\$	2,500
STBG	\$	160,645
Creating Livable Streets STBG	\$	50,000
Metro	\$	21,856

TOTAL \$	235,002	TOTAL \$	235,002
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.8
TOTAL	0.8

Transportation System Management and Operations – Strategy Update

Caleb Winter, caleb.winter@oregonmetro.gov

Description

The Transportation System Management and Operations (TSMO) program follows a 10-year plan that ends 2020. The plan update will be known as the TSMO Strategy, in support of the RTP. The TSMO Strategy will guide program investments using RFFA funding, state funding, additional federal grant funds and local funds, building on investments in transportation system efficiency and supporting innovations. The TSMO Strategy will include key components of Metro’s system monitoring, performance measurement and Congestion Management Process (CMP). Most of the required CMP activities are related to performance measurement and monitoring. While the current plan continues to serve the region, an update is needed to formalize new concepts among regional TSMO partners including connected and automated vehicles, shared-use mobility, integrated corridor management, decision support systems, cloud-based analytics and “Smart City” urban applications of the Internet-of-Things (IoT).

Objectives

- Lead process for updating and adoption of the TSMO Strategy. Strategy will provide direction for new regional funding investments aimed at reducing greenhouse gas emissions.
- The Strategy update process will review past TSMO investments and the state of ITS in the region to understand the safety, livability, multimodal and reliability outcomes achieved.
- The process will look at how advances in information technology have changed methods to manage and operate the transportation system.
- Refine the program structure and funding process.
- Review regional coordination and collaboration around TSMO including Traffic Incident Management (TIM), Central Signal System, data communications (ITS Network) and data archiving and tools (PORTAL).

Previous Work:

Planning activities that inform the TSMO Strategy update include:

- 2006-2007 – development of regional ITS strategies (federal grant).
- 2008-2011 - an ODOT TGM grant supported the region’s first TSMO Plan.
- 2014 – a final Concept of Operations was completed for a large area around the area where I-84 and I-205 meets to consider Active Corridor Management elements ODOT, City of Portland and other regional partners could implement to improve reliability.
- 2014 – 2018 US DOT awarded Metro funds to lead an Integrated Corridor Management planning grant for the I-84 multimodal corridor from downtown Portland to Troutdale.
- 2016 – FHWA supported a regional workshop around capability maturity for traffic management.
- 2016 – Update of the regional ITS Architecture and data Communications Plan
- 2017 – Regional concept for next-generation Transit Signal Priority completed by TriMet

Methodology:

Refine regional strategy to guide TSMO investments and activities in the Portland metropolitan region, identifying and recommending policy to leverage the strategy. Engage a broad range of stakeholders to understand issues and needs from operators and the traveling public. Analyze multimodal performance data to advance the region's ability to diagnose and address congestion, support multimodal operations, reduce climate and other impacts and incorporate safety connected to Vision Zero.

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-2019

- Stakeholder Participation Plan
- Refined Vision Goals and Objectives that are grounded in regional needs for people and goods movement. Topics to explore in refining vision goals and objectives include social equity, safety, resiliency, connected vehicles, automated vehicles, vehicle-to-X communications, transit signal priority, freight signal priority, mobility as a service/mobility on demand (e.g., public-private partnerships), performance measures, big data analytics and asset management.
- Updated TSMO Toolbox.
- Updated TSMO project list.
- Form agreements among operators supported by the region's ITS Architecture, relationships and procedures, decision support systems and other shared understanding and operations methods.
- Updated Capability Maturity Framework for the TSMO program.
- Produce a final TSMO Strategy to recommend for adoption.

Entities Responsible for TSMO Strategy Update

Lead Agency

- Metro

Policymaking

- Metro Council
- Joint Policy Advisory Committee on Transportation (JPACT)
- Transportation Policy Alternatives Committee (TPAC)

Operators

- TransPort and subcommittees (includes Portal Technical Advisory Committee, ITS Architecture, Central Signal System Users Group, ITS Network Management Team, Traffic Incident Management Coalition).
- Oregon Department of Transportation (ODOT) TriMet, Port of Portland, Counties of Clackamas, Multnomah & Washington, Cities of Beaverton, Gresham, Hillsboro, Portland, Lake Oswego, Tigard, Wilsonville and other cities

Cooperation and Collaboration

- Transportation Research and Education Center (TREC)/ Portland State University Federal Highway Administration (FHWA) Federal Transit Administration (FTA), US DOT ITS Joint Program Office
- Oregon State Police, County Sheriff Offices, Fire Bureaus, 911 Bureau of Emergency Communications, Washington County Consolidated Communications Agency and other incident responders and emergency managers.
- SW Regional Transportation Council, C-Tran
- Washington State Department of Transportation

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project Deliverables/Milestones* section.

Funding History:

This Strategy update is being described separately from other planning activities for the first time, therefore it does not include a discrete funding history.

FY 2017-18 Cost and Funding Sources:

Requirements:		Resources:	
Materials & Services – ODOT Consultant	\$ 302,828	TSMO STBG	\$271,728
		Metro	\$ 31,100
TOTAL	\$ 302,828	TOTAL	\$ 302,828

FY 2018-19 Cost and Funding Sources:

Requirements:		Resources:	
Personal Services	\$100,000	TSMO STBG	\$271,728
Materials and Services (ODOT Consultant)	\$202,828	Metro	\$ 31,100
TOTAL	\$302,828	TOTAL	\$302,828

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.6
TOTAL	0.6

Transportation System Management and Operations - Regional Travel Options (RTO) Strategy Update

Staff Contact: Dan Kaempff; daniel.kaempff@oregonmetro.gov

Description:

Regional Travel Options is one of two program areas under the broad policy heading of Transportation System Management and Operations (TSMO) – the other is the Regional Mobility program. Together these two programs advance TSMO strategies by coordinating the development, implementation and performance monitoring of regional demand and system management strategies that relieve congestion, optimize infrastructure investments, promote travel options, and reduce greenhouse gas emissions. Both the Regional Mobility Program and Regional Travel Options programs are key components of Metro's Congestion Management Process (CMP).

The RTO program goals and objectives are derived from the Regional Transportation Plan, and are further defined via a strategic plan. The current strategic plan covers the years 2012-2017 and is in the process of being updated.

Objectives:

- Lead process for updating and adoption of the new RTO Strategy. Plan will provide direction for new regional funding investments aimed at reducing greenhouse gas emissions and expanding funding opportunities for Safe Routes to School education and outreach.
- The plan update process will examine outcomes achieved through the 2012-2017 RTO Strategic Plan to ascertain those investments' success and contribution to achieving regional goals related to reducing single-occupant-vehicle trips and other key objectives.
- The process will look at how advances in information technology have changed people's travel choices and will define strategies on how to best position the program to leverage further advances in order to improve communication and engagement with the public.
- Defining the necessary program structure and funding mechanism for supporting and investing in Safe Routes to School education and outreach programs at the region's schools will be a component of the strategy update.
- Review regional coordination and collaboration around travel options education and outreach to determine key strategic investment areas and funding mechanisms to support partners' activities in those areas.
- Update ongoing evaluation strategy to measure outputs and outcomes of all projects and programs supported with RTO funds, to ensure alignment with federal and regional goals related the vehicle miles traveled and air quality.
- Subsequent to the 2018 RTO Strategy adoption by JPACT and Metro Council, staff will lead a process to update the program's funding allocation methodology so as to align with new policy direction, goals and objectives.

Previous Work:

This will be the fourth version of the RTO Strategy. The initial plan was drafted in 2003. This plan and the two subsequent plans have covered five-year time spans.

- The 2003 plan established the RTO program, building on the work done to implement the first two rounds of CMAQ funding in the Portland region. During the five-year span

covered by this plan, oversight of the regional program transferred from TriMet to Metro, and program evaluation activities commenced, to determine how well RTO investments were performing relative to the program's goals and objectives.

- The 2008 plan update refined roles and responsibilities for RTO partners, and laid out goals for program growth.
- The 2012 plan established a larger, more competitive funding strategy, and placed greater emphasis on program performance, measurement and evaluation.

Methodology:

The RTO strategic plan update will further define implementation of regional policies 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 pollution by carrying out the TDM components of the TSMO strategy outlined in the 2035 Regional Transportation Plan (RTP). The program maximizes investments in the transportation system and relieves traffic congestion by managing travel demand, particularly during peak commute hours. Specific RTO strategies encompass promoting transit, ridesharing, cycling, walking, and telecommuting.

The planning process will engage stakeholders from around the region, working in both the public and private sectors, to develop a plan focused on achieving greater performance from the program investments, and facilitating the growth of the program throughout the region.

The 2018 RTO Strategy will take a 10-year look into the future and define a process for supporting growth in the program's partners, as well as continuing the work of key, critical investments that have proven value in reducing drive-alone auto trips.

Entities Responsible for RTO Strategy Update:

- Metro Council – Policy making
- Joint Policy Advisory Committee on Transportation (JPACT) – Policy making
- Transportation Policy Alternatives Committee (TPAC) – Policy making
- Transportation Research and Education Center (TREC) – Cooperate/Collaborate
- Oregon Transportation Commission (OTC) – Cooperate/Collaborate
- Federal Highway Administration (FHWA) – Cooperate/Collaborate
- Federal Transit Administration (FTA) – Cooperate/Collaborate
- Oregon Department of Transportation (ODOT) – Cooperate/Collaborate
- Westside Transportation Alliance TMA – Grant Recipient
- Explore Washington Park – Grant Recipient
- Ride Connection – Grant Recipient
- Bicycle Transportation Alliance – Grant Recipient
- Gresham Area Chamber of Commerce – Grant Recipient
- Verde – Grant Recipient
- City of Portland – Grant Recipient
- City of Gresham – Grant Recipient
- City of Lake Oswego – Grant Recipient
- West Columbia Gorge Chamber of Commerce – Grant Recipient
- Portland Public Schools – Grant Recipient
- National Safe Routes to School Alliance – Grant Recipient
- City of Tigard – Grant Recipient

II. MPO PLANNING PROJECTS

- Beaverton School District – Grant Recipient
- Portland Community College – Grant Recipient
- Housing Authority of Washington County – Grant Recipient
- Clackamas Community College – Grant Recipient
- TriMet – Grant Recipient
- City of Wilsonville/Wilsonville SMART – Grant Recipient
- Go Lloyd – Cooperate/Collaborate
- Swan Island TMA – Cooperate/Collaborate
- Clackamas County – Cooperate/Collaborate
- Multnomah County – Cooperate/Collaborate
- Washington County – Grant Recipient, Cooperate/Collaborate
- C-TRAN – Cooperate/Collaborate
- City of Vancouver – Cooperate/Collaborate
- SW Regional Transportation Council – Cooperate/Collaborate
- Washington State Department of Transportation – Cooperate/Collaborate

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

Develop updated funding allocation methods, based on partner's capability, capacity, interest and potential for success. The Strategy is scheduled for adoption by JPACT and Metro Council in Spring 2018. Allocation process should be in place by Fall 2018 and be used in awarding funding available July 1, 2019 and beyond.

Entities Responsible for RTO Plan Update:

- Metro Council – Policy making
- Joint Policy Advisory Committee on Transportation (JPACT) – Policy making
- Transportation Policy Alternatives Committee (TPAC) – Policy making
- Transportation Research and Education Center (TREC) – Cooperate/Collaborate
- Oregon Transportation Commission (OTC) – Cooperate/Collaborate
- Federal Highway Administration (FHWA) – Cooperate/Collaborate
- Federal Transit Administration (FTA) – Cooperate/Collaborate
- Oregon Department of Transportation (ODOT) – Cooperate/Collaborate
- Westside Transportation Alliance TMA – Grant Recipient
- Explore Washington Park – Grant Recipient
- Ride Connection – Grant Recipient
- Bicycle Transportation Alliance – Grant Recipient
- Gresham Area Chamber of Commerce – Grant Recipient
- Verde – Grant Recipient
- City of Portland – Grant Recipient
- City of Gresham – Grant Recipient
- City of Lake Oswego – Grant Recipient
- West Columbia Gorge Chamber of Commerce – Grant Recipient
- Portland Public Schools – Grant Recipient
- National Safe Routes to School Alliance – Grant Recipient
- City of Tigard – Grant Recipient
- Beaverton School District – Grant Recipient
- Portland Community College – Grant Recipient

II. MPO PLANNING PROJECTS

- Housing Authority of Washington County – Grant Recipient
- Clackamas Community College – Grant Recipient
- TriMet – Grant Recipient
- City of Wilsonville/Wilsonville SMART – Grant Recipient
- Go Lloyd – Cooperate/Collaborate
- Swan Island TMA – Cooperate/Collaborate
- Clackamas County – Cooperate/Collaborate
- Multnomah County – Cooperate/Collaborate
- Washington County – Grant Recipient, Cooperate/Collaborate
- C-TRAN – Cooperate/Collaborate
- City of Vancouver – Cooperate/Collaborate
- SW Regional Transportation Council – Cooperate/Collaborate
- Washington State Department of Transportation – Cooperate/Collaborate

Schedule for Completing Activities:

Fall 2018 – Completion of funding allocation methodology

Funding History:

This program is being described separately from the Regional Travel Options program for the first time in this UPWP, therefore does not include a discrete funding history.

FY 2018-19 Cost and Funding Sources:

Please refer to the funding section of the Transportation System Management and Operations - Regional Travel Options (RTO) narrative.

Economic, Demographic and Land Use Forecasting Development & Application Program

Staff Contact: Jeff Frkonja, jeff.frkonja@oregonmetro.gov

Description:

This chapter complements the Section I chapter “Economic, Demographic and Land Use Data and Forecasting Maintenance.” The Land Use Analytics Team (LUAT) conducts, in addition to the land use data and forecast capacity sustenance work described in Section I, long-term forecast tool development activities and tool applications to Metro’s planning responsibilities. This chapter describes these elements.

LUAT regularly updates long- range economic and demographic projections in order to incorporate the latest observed changes in demographic, economic, and real estate development conditions. Given forecast uncertainty, LUAT produces “risk-ranges” that quantify the variability in baseline growth projections which in turn inform risk analysis that tests alternative growth scenarios to evaluate ranges of potential economic, demographic, and land use impacts.

Objectives:

The development and application program is purposed to:

- making significant additions to the capacity of land use forecasting models, data, and knowledge;
- applying land use forecasting tools and data to Metro planning projects such as the Urban Growth Management process and the Regional Transportation Plan.

Previous Work:

Stakeholder Involvement

- Metro created the Land Use Technical Advisory Group (LUTAG) to advise Metro staff on the data, local conditions, and forecast validity of Metro’s land use toolkit. LUTAG is scheduled to convene regularly throughout the technical part of the 2018 Urban Growth Management planning process. LUTAG briefs standing Metro policy committees such as the Metro Technical Advisory Committee (MTAC).

Survey, Data Acquisition, and Research

- **Residential Housing Preference Survey** — Using the household preference survey for the Metro region from 2013, a deeper examination of the survey data is being performed to potentially update and revise parameters for the MetroScope land use model. The stated preference survey was designed to determine if tastes and preferences for housing might shift in future years as regional demographics evolve. This project has been delayed (2017) because further research and analysis of the survey data has determined that there are inherent biases in the data collection methodology that cannot be reconciled or corrected using standard econometric techniques. The current scope of work is being re-examined to determine if funds can be redirected to refine other parts of the MetroScope land use sub-models that need further attention and update.
- **Validation and Sensitivity Research (MetroScope land use model)** – RC staff completed

(in August 2017) validation and sensitivity analysis of its long-range land use forecast model. The validation report compared the near term land use forecast results from the model against observed or actual growth estimates. RC staff convened (in October 2017) an independent expert review panel. The expert panel reviewed the model and analyzed the results from the validation and sensitivity report. The report and expert panel comments will be published as additional model documentation for the Urban Growth Report (UGR) statistics and to be used in the support of the 2018 Urban Growth Management (UGM) Decision. The expert panel found the land use model to be generally sound, but the model to be a bit outdated. They recommended that the model needed to be modernized to bring the land use model up to date with current state of the practice.

- **Buildable Land Inventory** — The equilibrium land use model—MetroScope—requires land supply estimates based on observed data that incorporate the regulatory framework, development constraints, and development incentives for the Metro region. An operational version of the Developer Supply Processor (DSP) has been delivered (June 2017) to Metro by the consultant. RC staff and the consultant reviewed the DSP methodology with an independent expert peer review panel in May 2017. Recommendations from the expert panel were incorporated in the delivery of the draft DSP model. The final task of the consultant is to calibrate the DSP model and produce a final version that will forecast land supply estimates for the MetroScope land use model. The DSP model is based on real estate development pro forma methods to refine the buildable land inventory so that it better reflects prevailing real estate development assumptions. A redevelopment sub-model is included in the DSP that incorporates back-cast information to predict the future likelihood that a parcel will redevelop. These refinements should provide greater accuracy of land supply estimates and therefore the MetroScope land use model should produce more realistic real estate development projections.
- **Redevelopment model** — Metro plans to review the growth capacity of its urban growth boundary (UGB). This planning effort requires a UGR analysis and an UGM decision by the Metro Council by the end of 2018. The new redevelopment method is based on a set of discrete choice (binary logit) equations, segmented into 3 distinct real estate sub-markets: urban city of Portland, inner suburbs and outer suburbs. The equations predict the redevelopment probability of a tax lot. The new redevelopment model replaces obsolete redevelopment filters in the old BLI methodology. The redevelopment model should provide greater accuracy in estimating the buildable land inventory and therefore better land supply information to the UGR analysis and results.
- **Housing and Transportation Cost Index** — As part of its “innovation” work RC staff are developing a housing and transportation (H+T) cost index for the 2018 Regional Transportation Plan. The H+T index is capable of estimating the number of cost burdened households in the current base year (2015) and forecast year (2040) projection. Thus, real (inflation adjusted) index values can be used as a growth performance indicator that compares the H+T costs across periods for different land use or transportation growth scenarios. H+T costs can be combined in the index or left disaggregated for more detailed cost analysis. The definition for which households are cost burdened can also be reset in the calculation of the index so that it is not always set to 45%, which is a typical threshold for combined housing and transportation costs. The index not only calculates the cost burdened condition of the median household, but expands the calculation of the cost burden estimates for above average, average and below average income bracket households. Delivery of the H+T cost index model is expected at the end of October 2017.

Methodology:

Survey, Data Acquisition, and Research

- **Stakeholder involvement** — local review of land use model inputs, assumptions, and outputs is a key quality assurance aspect of LUAT forecasting.
- **Buildable Land Inventory (BLI)** —Sustain existing and develop new sources of land market performance and firm decision-making to inform the BLI and related cyclical data products
- **Market Research**—use consumer surveys to investigate the difference in actual market choices vs. stated preferences (similar to the use of revealed and stated preferences in travel demand forecasting), and establishment surveys to investigate how suppliers make decisions.
- **Performance Measures**—use observed data and market research to produce analytic findings that measure land market performance.

Model and Analytic Tool Improvements

- **Model Development**—Use observed market data, surveys, and the best statistical methods to inform appropriate changes to model structure, model inputs, and model output interpretation.
- **Innovation**—Respond in creative ways to emerging requests for analytic improvements.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Stakeholder Involvement

- Metro will likely sustain LUTAG and/or form other standing groups to advise on the adoption of the Distributed Forecast (the TAZ-level land use product derived from the regional forecast used in the Urban Growth Management process) and, perhaps, data and model enhancements (such as buildable land inventory upgrades and a developer supply pre-processor), and model structural improvements (potentially improved accounting for differences in observed market share vs. stated preference and self selection bias in the consumer module). [Primary involvement ends December 2018]

Survey, Data Acquisition, and Research (Model Improvements also listed here for clarity)

- Enhancing Metro's use of Census and other federal data, defining and implementing optimal coordination activities between Metro and local agencies regarding the 2020 Census. [Ongoing]
- Continue acquiring new data for, publishing information products from, and enhancing the Land Development Monitoring System especially for residential rental price; supplier redevelopment location, type, and frequency; and commercial development. [Data plan by June 2018]
- **Conjoint market analysis** - use validated SP residential survey data to complete a market analysis assessing residential market share vs. stated preference, and if possible to re-scale MetroScope parameters in the residential demand equations based on the findings. (Task has been started but not expected to be completed until next FY). [June 2019]
- Develop a peer reviewed housing and transportation cost calculator for the current year and future year based on outputs derived from the MetroScope land use model (i.e., housing cost estimates) and Metro's own travel demand model (i.e., travel costs based on auto ownership, value of time and other travel factors). [Prototype by June 2018]

Model Improvements

- **Metroscope developer treatments** – continue work on the Developer Supply Preprocessor and other model features to upgrade or replace Metroscope. [December 2019]
- **Residential self-selection bias** –with consultant support staff will examine means of better addressing potential selection bias effects in Metroscope, perhaps through a neighborhood choice level in the residential (consumer) module or the application of household sorting submodels. [Task won't be initiated until after proper vetting of the research findings from the conjoint market analysis, but could be by December 2019]

Entities Responsible for Activity:

- Metro – Lead Agency
- Oregon Office of Economic Analysis and Portland State Population Research Center – Population (and economic) coordination per State regulations
- Local Governments – coordination per State regulations
- Stakeholders (academics and non-governments) – collaboration and consensus building

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major project deliverables/milestones* sections.

Funding History:

Please note that due to modifications to the organizational chart and funding structure for the Research Center, the budget for Economic and Land Use Forecasting has increased and been split across two programs: Maintenance vs. Development & Application. This increase reflects primarily a change in funding source for existing staff rather than a net increase of staff or staff time.

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	96,822	PL	\$	65,417
Interfund Transfers	\$	84,464	Metro	\$	115,869
TOTAL \$		181,286	TOTAL \$		181,286

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.668
TOTAL	0.668

Travel Forecast Development & Application Program

Staff Contact: Chris Johnson, chris.johnson@oregonmetro.gov

Description:

The Travel Forecast Development and Application Program includes work elements necessary to keep the travel demand model and various ancillary tools responsive to issues and trends that emerge during the regional transportation planning process. The major work activities and projects within this program area include travel behavior surveys, new models/tools, and significant one-time model application and/or enhancement efforts.

The program area is critical because the travel demand model provides the analytical foundation for transportation policy and investment decisions

Objectives:

The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Environmental Protection Agency (EPA) require that project modeling be carried out using methods, techniques and tools that meet certain guidelines. Failure to meet the guidelines may result in analytical conclusions that do not meet Federal approval.

Thus, the primary objective for this program is to ***ensure the validity and utility of the modeling methods, techniques and tools***. This is achieved through the work elements listed under the Travel Behavior Surveys, New Models, and significant one-time model application/enhancement categories.

Previous Work (conducted under single Model Development program area):

Travel Behavior Surveys

- The last comprehensive travel behavior survey for this region was conducted in 2011. The data serves as a basis to understand the degree to which various stimuli (demographics, urban form, cost, travel time, lifestyle choices, etc.) affect traveler behavior and choices.

New Models

- **Activity Based Model:** A new dynamic activity based model has been developed for this region. Results from the 2011 travel behavior survey were used in the model estimation.
- **Trip Based Model (current model):** The trip-based models was re-estimated to better reflect behavior patterns and choice characteristics derived from the household travel behavior survey data. In addition, the model was updated to a 2015 base year.
- **Freight Model:** A SHRP2 C-20 IAP grant was awarded to Metro. A consultant team was contracted to assist with the project. A prototype model framework was implemented using national data. Additional data was collected local data from establishments, logistic firms, and other sources. These data were used to refine the prototype model to ensure that it more closely reflects the conditions in Portland. To meet the match requirement, Metro performed various tasks throughout the project (e.g., national zonal definition and network coding).

- Bike Routing Algorithm: The routing algorithm is being reviewed and re-evaluated to potentially include a variety of simplifying features to ease the application of the tool by external partners such as the City of Portland.
- Multi-Criterion Evaluation (MCE) Toolkit: The MCE Toolkit consists of three tools: a benefits calculator to determine monetized benefits of transportation projects based on outputs from the regional travel demand model, a project costing tool, and a visualizer that calculates B/C ratios, and summarizes and visualizes results. Phase I of the MCE project was completed in FY2017.
- Housing+Transportation Cost Index: Modeling program staff collaborated with Land Use team staff to prototype a H+T cost “viewer” for both current and forecast states of the regional land markets and transport system.

Model Maintenance

- Modeling Network Attributes: Metro modeling staff reviewed and updated the modeling network assumptions (e.g., uncongested speeds, vehicle throughput capacities, transit line itineraries). These attributes were incorporated into a master network database system.
- Travel Demand Model Input Data: Model input data was reviewed and updated. Variables such as intersection densities, household and employment accessibility, and parking cost assumptions were adjusted to reflect 2015 conditions.
- Travel Demand Model Computer Code: Model application code was refined to address specific needs (e.g., model application interface, code changes required by the model re-estimation)

Statewide and National Professional Engagement

- Oregon Modeling Steering Committee: Staff participated on the OMSC Executive Committee and several affiliated subcommittees.
- Transportation Research Board Committees: Staff served on the TRB Transportation Planning Applications Committee. This committee is instrumental in providing a forum for advancing model application guidelines.

Methodology:

The following methods will be applied to achieve the objectives of the Travel Forecast Development Program:

Travel Behavior Surveys

- 2020 Travel Behavior Survey: Preliminary planning is underway for the next regional travel behavior survey. Additional research will be necessary to ensure that the survey will capture traditionally relevant as well as emerging behavior (e.g., extent of Uber/Lift substitution in place of other travel modes), and be conducted in a comprehensive and cost effective manner. New and emerging data collection methods (e.g., Sidewalk Labs Replica data, longitudinal or rolling 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 likely partner with other Oregon modeling agencies as well as the Southwest Regional Transportation Council to maximize the geographic span and cross agency utility of the data. It is critical that the work begin now to ensure

that proper budgetary considerations and coordination with Metro planning staff are conducted in a timely manner.

New Models

- Activity Based Model: Key efforts in FY2018 will include the development of staff expertise, model validation and sensitivity testing, and the derivation/implementation of a tool acceptance program. Given the rapidly changing personal travel landscape, it will be critical to ensure that the activity-based model framework is analytically positioned to overcome the methodological shortcomings of the current trip-based model and can be adapted to explicitly represent evolving travel behavior (e.g., travel via Uber/Lyft and connected/automated vehicles) or new near-horizon advances in technology (e.g., connected and automated vehicles). Modeling staff will coordinate closely with Metro planning to ensure that activity-based model frameworks is analytically aligned with anticipated policy questions.
- Freight Model: The SHRP2 C20 project was completed and the grant was closed out during the fall of 2017. Work will continue to integrate the model with the trip-based and activity-based passenger models. Modeling staff will continue to coordinate closely with Metro planning to ensure that new freight model is able to answer the analytical questions posed from the freight planning perspective (e.g., type and value of commodities by corridor and facility).
- Multi-Criterion Evaluation (MCE) Toolkit: Phase II is anticipated to conclude in the spring of 2018. Phase II scope will add travel demand model and MCE toolkit workflow enhancements; test each benefit and test a bundle of benefits together in one scenario; improve methods for measures such as safety, physical activity and auto ownership benefits; stakeholder outreach support; and upgrade the visualizer to be fully-featured and web-accessible. A key analytical feature of the MCE toolkit is its ability to identify potential benefits and/or disbenefits that have implications for equity considerations. Modeling staff will coordinate with Metro planning staff to ensure that the MCE continues to be fine-tuned and ready to address policy questions related to equity.

Model Application/Enhancements

- Trip Based Model (Kate): The *Kate* model was validated and finalized during FY2017. This model platform will serve as a basis to initiate further enhancements.
- Bike Routing Algorithm: Based upon information gathered in FY2016, the routing algorithm may be refined to facilitate its use. Staff will work with the City of Portland to test and evaluate the refined model.
- Reliability: Based upon federal research conducted in this region (SHRP2 L35, L04), methods to integrate the aspect of system reliability will be incorporated into the model
- One-time model applications may include:
 - Regional Transportation Plan
 - SW Corridor
 - Regional Mobility Atlas
 - MTIP
- One-time model enhancements may include:
 - Update school mode choice model
 - Park & ride adjustments, shadow pricing refinements

- Area specific peaking factors
- External model modifications
- Journey level transit
- Capacitated transit
- Conversion to Modeler
- Airport model

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Travel Behavior Surveys

- 2020 Travel Behavior Survey: A committee will be set up through the Oregon Modeling Steering Committee to identify key activities and initiate a survey work plan and schedule. Metro staff will chair the committee. The survey implementation plan will be documented. (Q 1-4)

New Models

- Activity Based Model: Functional CT-Ramp activity-based model. Documentation that summarizes the validation and sensitivity testing methodology and results. (Q4). Continued meetings with regional modelers to share the validation and sensitivity testing results. (Q 4).
- Freight Model: Final documentation and validation. Integration within passenger model frameworks (Q1)
- Multi-Criterion Evaluation (MCE) Toolkit: Completion of Phase II. Tested and functional MCE Toolkit (Q2)

Model Applications/Enhancement

- Trip Based Model: Final documentation that reflects the refinements made to the model. (Quarter 1). Implementation of additional improvements (e.g., 24-hour transit, journey-level transit assignment algorithm, etc.) on as-needed basis (Q4).
- Bike Routing Algorithm: Documentation that reflects the refinements (if any). (Q1)
- As part of the “MPO data plan” mentioned in the Data Management, Data Visualization, and Performance Measurement section of this document staff will work with planning staff to devise policies and work plans to promote acquisition and use of data from “transportation network companies” (e.g. Uber and Lyft) and the coming generation of connected/automated vehicles (CAVs).

Entities Responsible for Activity:

Survey and Research

- Metro- Product Owner/Lead Agency

New Models

Metro – Product Owner/Lead Agency

- Freight model work in collaboration with the Port of Portland and ODOT
- MCE Toolkit

Model Applications/Enhancements

- Metro – Product Owner/Lead Agency

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project Deliverables/Planned Milestones* section.

Funding History:

The travel demand model must be kept current and robust to remain a viable tool for analyzing future travel condition. The confidence level of the model must be such that it can ensure the provision of sound information for policy and investment decisions. Thus, the Travel Forecast Development & Application program is funded each year to meet that need. Key areas within the program include the collection and analysis of data (Survey and Research), the development of new modeling tools (New Models), and significant one-time model enhancements.

FY 2018-19 Cost and Funding Sources:**Requirements:**

Personal Services	\$	278,340
Interfund Transfers	\$	242,815
TOTAL	\$	521,155

Resources:

PL	\$	505,473
ODOT Support	\$	15,682
TOTAL	\$	521,155

Full-Time Equivalent Staffing

Regular Full-Time FTE	<u>2.111</u>
TOTAL	2.111

Corridor Refinement and Project Development (Investment Areas)

Staff contact: Malu Wilkinson, Malu.Wilkinson@oregonmetro.gov

Description:

The Investment Areas program works with partners to develop shared investment strategies that help communities build their downtowns, main streets and corridors and that leverage public and private investments that implement the region's 2040 Growth Concept. Projects include supporting compact, transit oriented development (TOD) in the region's mixed use areas, conducting multijurisdictional planning processes to evaluate high capacity transit and other transportation improvements, and integrating freight and active transportation projects into multimodal corridors.

The Investment Areas program completes system planning and develops multimodal projects in major transportation corridors identified in the Regional Transportation Plan (RTP) as well as developing shared investment strategies to align local, regional and state investments in economic investment 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 has traditionally participated in local project-development activities for regionally funded transportation projects. In recent years, the Project Development program has focused on projects directly related to completion of corridor refinement planning and project development activities in regional transportation corridors outlined in the RTP. Project Development funding is also required to fund work on major projects that occurs prior to a formal funding agreement between Metro and a jurisdiction, such as project scoping, preparation of purpose and need statements, development of evaluation criteria, and developing public involvement plans. This program coordinates with local and state planning efforts to ensure consistency with regional projects, plans, and policies. It will also support initiation of new corridor planning efforts to be led by Metro or others.

Objectives:

- Ensure consistency with regional plans and policies related to major transportation corridors by participating in local planning and project development activities, including technical advisory committees, workshops and charrettes, as well as provide formal comment on proposed projects. (ONGOING)
- Implement the Mobility Corridor Initiatives strategy outlined in the RTP through monitoring ongoing planning activities and working with other jurisdictions to initiate new corridor efforts. (ONGOING)
- Advance transit projects identified in the High Capacity Transit Plan as part of the RTP (ONGOING)
- Participate in the development of projects not yet funded by other grants or contracts. (ONGOING)

Previous Work:

This work program has included two regional corridor refinement work prioritization processes of the corridor refinement work plan (in 2005 and in 2009). It has also including scoping, grant application and other start up activities of many studies including the 2005 Highway 217 Corridor study, the Eastside Streetcar project, I-405 loop study, I-5/99W, Sunrise Corridor, Damascus TSP/Highway 212 and Sunrise Parkway refinement plans and the Columbia Crossing Project.

In FY 2013-14, the program provided support for the SW Corridor and East Metro Corridor Plans.

Accomplishments in FY 2013-2014 are:

- Advanced East Metro Connections Plan priority projects toward implementation. (August 2012 through present)
- Secured funding through a competitive process from the Strategic Highway Research Program (SHRP 2) to pilot decision support tool, Transportation for Communities - Advancing Projects through Partnerships. (August 2012 to January 2013)
- Partnered with community organizations, jurisdictions and agencies within the Powell-Division Transit and Development Project study area to lay the groundwork for the planning and policy decision phase. (January 2013 to January 2014)
- Advanced the Southwest Corridor Shared Investment Strategy towards implementation and initiated the Southwest Corridor Refinement Phase to narrow the transit options considered in the corridor (2013)
- Conducted public engagement in conjunction with the Southwest Corridor Shared Investment Strategy. (March 2013 to July 2013)

In FY 2014-15, the program provided support for the SW Corridor and Powell-Division Transit and Development Project Corridor Plans.

Accomplishments in FY 2014-2015 are:

- Advanced East Metro Connections Plan priority projects toward implementation. (August 2012 through present)
- Partnered with community organizations, jurisdictions and agencies within the Powell-Division Transit and Development Project study area to establish a Steering Committee. (February 2014 to present)
- Defined a shared investment strategy including definition of a bus rapid transit project to forward into FTA Project Development. (2014)
- Advanced the Southwest Corridor Shared Investment Strategy towards implementation and narrowed the range of options for a high capacity transit investment for further study (2014)
- Developed a collaborative funding strategy with contributions from nine project partners to define a Preferred Package by May 2016 that includes a prioritized set of roadway, bicycle and pedestrian improvements and a definition of a high capacity transit investment that includes mode, terminus and alignment options for further study (September 2014 to present)

II. MPO PLANNING PROJECTS

In FY 2015-16, the program provided support for the SW Corridor and Powell-Division Transit and Development Project Corridor Plans.

Accomplishments in FY 2015-2016 are:

- Partnered with community organizations, jurisdictions and agencies within the Powell-Division Transit and Development Project study area to continue a Steering Committee. (February 2014 to present)
- Entered into Project Development for Powell Division BRT with FTA as a Small Starts Project. (2015)
- Developed an approach for shared funding for the Powell-Division BRT project to move through FTA Project Development. (2015-2016)
- Further narrowed the range of alignment options for high capacity transit in the Southwest Corridor for further study (2015)
- Conducted public engagement in to further refine and implement the Southwest Corridor Shared Investment Strategy (January 2015 to present)

In FY 2016-17, the program provided support for the Division Transit Project and Southwest Corridor Light Rail Project and the Southwest Corridor Plan and Shared Investment Strategy.

Accomplishments in FY 2016-17 include:

- Worked with TriMet and ODOT to define and develop new projects in priority high capacity transit (HCT) or Mobility Corridors. These could include on-street bus rapid transit projects or urban circulators. (ONGOING)
- Worked with local jurisdictions in regional HCT priority corridors to develop land use plans that support the System Expansion Policy elements of the RTP. (ONGOING)
- Supported local project development efforts on mobility corridors. (ONGOING)
- Completed local and regional plan amendments (2016-2017)
- Continued to support the Division Transit project (ONGOING)
- Continued to support the SW Corridor Shared Investment Strategy and Transit project (ONGOING)
- Supported the Regional Transit Strategy (2016-2017)
- Launched a new economic investment area (2016-2017)

In FY 2017-18, the program provides support for the Division Transit Project and Southwest Corridor Light Rail Project and the Southwest Corridor Plan and Shared Investment Strategy and the study of an Enhanced Transit Corridor approach for the region.

Accomplishments in FY 2017-18 include:

- Worked with TriMet and ODOT to define and develop new projects in priority high capacity transit (HCT) or Mobility Corridors. These could include on-street bus rapid transit projects or urban circulators. (ONGOING)
- Worked with local jurisdictions in regional HCT priority corridors to develop land use plans that support the System Expansion Policy elements of the RTP. (ONGOING)
- Supported local project development efforts on mobility corridors, including supporting the study of an Enhanced Transit Corridor approach for the region. (ONGOING)
- Continued to support the Division Transit project (ONGOING)
- Continued to support the SW Corridor Shared Investment Strategy and Transit project

(ONGOING)

- Continued support for the Regional Transit Strategy as part of the 2018 RTP Update (2017-2018)
- Worked with jurisdictions and community partners in a new economic investment area along McLoughlin Boulevard (ONGOING)

Methodology:

Metro participates in local project-development activities for regionally funded transportation projects. In addition, as provided by the State Transportation Planning Rule (TPR), Metro is required to complete a regional Transportation System Plan that identifies the need for transportation facilities and their function, mode, and general location. The 2000 RTP called for completion of 18 specific corridor refinements and studies for areas where significant needs were identified but that required further analysis before a specific project can be developed. Section 660-012-0025 of the TPR requires prompt completion of corridor refinements and studies.

In winter 2005, Metro again consulted with regional jurisdictions to identify the next priority corridor(s) for commencement of planning work. Based on the consultation, in winter 2005-06, JPACT and Metro Council approved a corridor planning work plan update, which called for initiation of five new corridor plans in the next five years. In winter 2007-08, Metro commenced work on one of the corridor planning efforts identified in that work program, the Regional High Capacity Transit System Plan.

In fall 2009, Metro worked with technical committees and local jurisdictions to prioritize the five remaining corridors, and develop a phased approach to accomplish all remaining refinement plans by 2020. During that process, Mobility Corridor #15 (East Multnomah County connecting I-84 and US 26) and Mobility Corridors #2 and #20 (in the vicinity of I-5/Barbur Blvd, from Portland Central City southward to approximately the “Tigard Triangle”) have emerged as strong candidates for corridor refinement planning in terms of technical factors, as well as local urgency and readiness.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Work with TriMet and ODOT to define and develop new projects in priority high capacity transit (HCT) or Mobility Corridors. These could include on-street bus rapid transit projects or urban circulators. (ONGOING)
- Work with local jurisdictions in regional HCT priority corridors to develop land use plans that support the System Expansion Policy elements of the RTP. (ONGOING)
- Continue to support local project development efforts on mobility corridors and enhanced transit corridors. (ONGOING)
- Continue to support the Division Transit project (ONGOING)
- Continue to support the SW Corridor Shared Investment Strategy and Transit project (ONGOING)
- Work with jurisdictions and community partners in a new economic investment area in the Columbia Corridor (ONGOING)
- Continue support for the Regional Transit Strategy as part of the 2018 RTP Update (2017-2018)
- Work with jurisdictions and community partners in a new economic investment area along McLoughlin Boulevard (ONGOING)

Entities Responsible for Activity:

- Metro – Lead agency
- TriMet – cooperate/collaborate
- ODOT – cooperate/collaborate
- Multnomah, Clackamas and Washington Counties – cooperate/collaborate Other Local Cities – cooperate/collaborate

Schedule for Completing Activities:

These activities are ongoing and continue each year. The focus shifts depending on the major activities to be supported in the Investment Areas section and with updates to the Regional Transportation Plan.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2010-11	\$141,080	0.89
2011-12	\$155,681	0.865
2012-13	\$149,211	1.02
2013-14	\$343,290	1.745
2014-15	\$282,228	1.315
2016-17	\$112,589	0.5

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	64,893
Interfund Transfers	\$	26,500
Materials and Services	\$	3,350

Resources:

STBG	\$	85,013
Metro	\$	9,730

TOTAL	\$	94,743	TOTAL	\$	94,743
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.5
TOTAL	0.5

II. MPO PLANNING PROJECTS

FY 2018-19 Cost and Funding Sources:

Requirements:

Personal Services	\$	394,878
Interfund Transfers	\$	174,502
Materials and Services	\$	821,985

Resources:

Regional Corridor Planning STBG	\$	432,984
STBG	\$	136,563
Metro	\$	76,040
Other Anticipated Funds	\$	745,777

TOTAL \$	1,391,364	TOTAL \$	1,391,364
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Full-Time Equivalent Staffing

Regular Full-Time FTE	2.85
TOTAL	2.85

Division Transit Project (Powell/Division Transit and Development Project)

Staff contact: Elizabeth Mros-O'Hara, Elizabeth.Mros-OHara@oregonmetro.gov

Description:

The Powell/Division Corridor Transit Implementation Plan coordinates land use and transportation planning efforts for an investment strategy that defines a transit project for a Small Starts application (the Division Transit Project), develops supportive land use actions and identifies and prioritizes related projects to stimulate community and economic development. The transit project would connect several low income areas with major education and workforce training sites including Portland State University, Oregon Health & Science University, Portland Community College and Mount Hood Community College as well as Portland and Gresham job centers. This corridor extends from Central City Portland east to Gresham in the vicinity of Powell Boulevard and Division Street.

Based on a transit alternatives assessment and public input, the project steering committee recommended a Locally Preferred Alternative (LPA) for the transit project that includes the transit mode (bus rapid transit), the route (from downtown Portland on the transit mall to Southeast Division Street to the Gresham Transit Center, and the general stop locations (approximately 1/3 mile apart). In addition, the project partners identified land use actions and station area investments that would support livable communities in the corridor and included them in the City of Portland and City of Gresham Local Action Plans. Outcomes of these efforts will be implemented by local jurisdictions. The transit alternatives assessment is continuing into the conceptual design which is further defining the bus service and amenities, and other transit and associated pedestrian, bicycle and roadway improvements needed to provide high quality and high capacity transit service in this corridor. This process provided the foundation for TriMet's successful application to enter into Project Development with the Federal Transit Administration and sets the stage for a future Small Starts funding application and the initiation of environmental approvals under the National Environmental Policy Act (NEPA).

Based on outreach and analysis, the Steering Committee recommended a Locally Preferred Alternative (LPA) in November and the LPA was adopted by the local jurisdictions in December 2016. The project began the NEPA process by documenting potential impacts and benefits in accordance with federal requirements and began the NEPA process in earnest as the design is further refined in 2017 and 2018.

With local adoption of the LPA, TriMet is leading the design, traffic, and outreach with support from Metro and other project partners. Metro Council adopted the LPA at the same time they amended the Regional Transportation Plan in June 2017.

TriMet is leading the outreach with Metro collaboration to gather input on how to further refine the LPA. The project's conceptual design is being further developed, and Metro is leading the NEPA process by conducting a Documented Categorical Exclusion.

The land use investment strategy pieces are being led by the local jurisdictions which have adopted Local Action Plans outlining their vision for implementing land use and economic development that complements the transit investment of the Division Transit Project.

Objectives:

- Develop a transit solution that efficiently serves high demand corridor in the near term while recognizing the limited local capital and operational funding for near term implementation.
- Develop a Powell/Division Corridor community investment strategy that identifies and prioritizes needed projects to serve locally desired land uses and stimulate community and economic development centered on a transit line.
- Establish agreements on local, regional and state actions to support implementation of the community investment strategy.
- Develop multimodal solutions that distribute both benefits and burdens of growth, support active lifestyles and enhance the natural environment.
- Actively engage public in developing the criteria to prioritize transportation investments and land use changes.
- Conduct transit alternatives assessment to determine the best mode, alignment, associated service changes and capital improvements of a high capacity bus route.
- Initiate environmental approvals under the National Environmental Policy Act (NEPA).
- Incorporate refined transportation planning project into RTP.

Previous Work:

Multi-modal Corridor Refinement

The 2000 Regional Transportation Plan (RTP) identified a significant transportation need in 18 corridors but specified that additional work was needed before a specific project could be implemented. In FY 2000-01, the Corridor Initiatives Program prioritized completion of the corridor plans and refinements. Per that recommendation, Metro initiated and led corridor studies including the Powell/Foster corridor. The phase I Powell/Foster plan was completed and the findings were adopted by JPACT and the Metro Council in FY 2003/04.

In winter 2005, Metro again consulted with regional jurisdictions to identify the next priority corridor(s) for commencement of planning work. Based on the consultation, in winter 2005/06, JPACT and Metro Council approved a corridor planning work plan update, which called for initiation of five new corridor plans in the next five years. In winter 2007/08, Metro commenced work on one of the corridor planning efforts identified in that work program, the Regional High Capacity Transit System Plan.

As part of the regional Transportation Plan update, in 2009, Metro worked with technical committees and local jurisdictions to identify and prioritize remaining corridor needs. Five corridors were found to need refinements and a phased approach was established to accomplish all remaining refinement plans by 2020. Mobility Corridor #15 (East Multnomah County connecting I-84 and US 26) and Mobility Corridors #2 and #20 (in the vicinity of I-5/Barbur Blvd, from Portland Central City southward to approximately the "Tigard Triangle") were designated as the next priorities based on technical factors, as well as local urgency and readiness.

The East Metro Connections and Southwest Corridor Plans commenced shortly thereafter and were completed in June 2012 and commenced in December 2012, respectively. The East Metro Connections Plan includes a study of bus service issues, including bus rapid transit (BRT) route from central Portland to Mount Hood Community College within the Powell / Division corridor.

High Capacity Transit Corridors

In July 2009, the Metro Council adopted the Regional High Capacity Transit (HCT) System Plan. The HCT plan identifies and prioritizes corridors for implementation based on a set of evaluation criteria consistent with the goals of the RTP and the region's 2040 growth concept. The HCT plan was adopted by the region as part of the Regional Transportation Plan in June 2010. In July 2011, the Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council adopted the High Capacity Transit System Plan Expansion Policy guidelines to further describe the process for moving projects forward.

Both the HCT plan and the system expansion policy identify Portland Central City to Gresham in the vicinity of Powell Corridor as a Near-Term regional priority corridor. The rigorous HCT process included the application of 25 evaluation criteria approved by the Metro Council and Joint Policy Advisory Committee on Transportation. System Expansion policy targets were applied to both the Southwest and Powell corridors. While on many measures such as transit supportive land use and community support, regional network connectivity and integrated transportation system development, the corridors scored equally, Powell measured higher in Housing and Transportation Affordability Benefit and Region 2040 Connections. The Southwest corridor scored higher on TOTAL corridor ridership and funding potential. Both corridors are currently moving forward with collaborative efforts with local, state and regional partners.

East Metro Connections Plan

The East Metro Connections Plan (EMCP) included a recommendation for future study of HCT in the Powell/Division Corridor. A BRT in the Powell/Division corridor has strong regional and jurisdictional support. The recommendations from the EMCP study included detailed transit findings from the analysis and near term implementation plans.

Methodology:

This project builds on previous work including the Powell/Foster study (Metro, 2004), the Outer Powell Boulevard Conceptual Design Plan (City of Portland, 2011) and the East Metro Connections Plans work. In 2013-14 the project partners worked collaboratively to develop the land use and transportation scope(s) and budget(s).

The project scope will be to improve the land use and transportation conditions and mobility in the Powell/Division Corridor to support vibrant communities with transportation that helps to sustain economic prosperity, healthy ecosystems, and community assets; minimizes contributions to global warming; and enhances quality of life. This work program started with locally identified land use plans and priorities and economic development strategies. The transportation analyses will identify measures to support the land use strategies and improve mobility (particularly transit) in the corridor. Metro will be the local lead agency that will consider and compare various transit alternatives, including mode, alignment / routing, service and capital improvements, as well as a no build scenario. The work program is expected to take approximately 24-48 months to complete depending on funding and partner preferences.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Evaluation and refinement of promising options and related transportation improvements and land use investments (Summer 2014)
- Adoption of the Powell-Division Transit Action Plan by local jurisdictions and Metro Council (2015)

II. MPO PLANNING PROJECTS

- City of Gresham Local Action Plan outlining actions Gresham can take to promote desired change around future station areas complementary to the transit investment (November 2015)
- Conceptual design of transit alternative(s) (Summer 2016)
- Traffic and Transportation technical report (Summer 2016)
- Land use and development technical report (Summer 2016)
- Draft and Final Transit and Development Action Plan (Fall 2015)
- Environmental scan and initiation of NEPA class of action (Winter 2016)
- Adoption of Locally Preferred Alternative by the Local Jurisdictions (Winter 2016)
- Design refinement of Locally Preferred Alternative to 10% (Spring 2017)
- Metro adoption of the Locally Preferred Alternative and amendment to the Regional Transportation Plan (Spring 2017)
- TriMet Application for a rating to qualify for FTA Small Starts funding (Summer 2017)
- City of Portland Powell-Division Transit and Development Project Local Action Plan creating a 5-year work plan for the City to promote equity-focused community, workforce, and economic development to complement transit investment, promote affordable housing and support existing economic development activities. (Summer 2016)
- Complete Historic and Cultural Analysis (Spring 2018)
- Coordination with TriMet and partners to refine project design for analysis – 35% (Spring 2018)
- Continued coordination with TriMet and partners on project design refinement (Spring/Summer 2018)
- Coordination with local jurisdictions on land use and community development opportunities (2018-2019)
- Complete NEPA analysis (Winter 2018)

Entities Responsible for Activity:

Metro – Lead NEPA analysis/ Historic and cultural analysis and cooperate/collaborate

Oregon Department of Transportation – cooperate/collaborate

TriMet – Lead Agency after adoption of the Locally Preferred Alternative, leading design and outreach
Corridor Jurisdictions (including Cities of Portland and Gresham and Multnomah County) -
cooperate/collaborate

City of Portland- cooperate/ collaborate

City of Gresham- cooperate/collaborate

Multnomah County- cooperate/collaborate

Schedule for Completing Activities:

- Coordination with TriMet and partners to refine project design for NEPA analysis – 35% (Spring 2018)
- Complete NEPA analysis (Winter 2018)
- Complete Historic and Cultural Analysis (Spring 2018)
- Coordination with TriMet and partners to refine project design (Winter/Spring 2018)
- Coordination with local jurisdictions on land use and community development opportunities (2018-2019)

II. MPO PLANNING PROJECTS

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2012-13	\$221,775	0.96
2013-14	\$441,348	2.455
2014-15	\$771,226	2.58
2015-16	\$1,234,623	4.75
2016-17	\$2,533,045	5.85

FY 2017-18 Cost and Funding Sources:

Requirements:

Personal Services	\$	520,576
Interfund Transfers	\$	212,586
Materials and Services	\$	1,234,610

Resources:

Regional Corridor Planning STBG	\$	1,122,610
Metro	\$	89,364
Other	\$	755,798

TOTAL	\$	1,967,772	TOTAL	\$	1,967,772
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Full-Time Equivalent Staffing

Regular Full-Time FTE	4.125
TOTAL	4.125

FY 2018-19 Cost and Funding Sources:

Requirements:

Personal Services	\$	80,571
Interfund Transfers	\$	34,215
Materials and Services	\$	442,441

Resources:

Regional Corridor Planning STBG	\$	500,000
Metro	\$	57,227

TOTAL	\$	557,227	TOTAL	\$	557,227
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.6
TOTAL	0.6

Southwest Corridor Plan

Chris Ford, chris.ford@oregonmetro.gov

Description:

The Southwest Corridor Plan coordinates land use and transportation planning efforts to develop a shared investment strategy that identifies and prioritizes needed projects to serve locally desired land uses and stimulate community and economic development. This corridor extends from Central City Portland south to the City of Sherwood in the vicinity of Barbur Boulevard/Highway 99W. The plan is a partnership between Metro, Washington County, the Oregon Department of Transportation, TriMet and the cities of Portland, Sherwood, Tigard, Tualatin, Beaverton, Durham, and King City. A major feature of the Plan's shared investment strategy is a proposed light rail transit (LRT) system extending from the Portland transit mall to Bridgeport Village via downtown Tigard. In conjunction with the study of the LRT, Metro is working with project partners on the Southwest Corridor Equitable Development Strategy to support achieving regional and local goals related to inclusive development, affordable housing, workforce development, and access to education and other ladders of opportunity aligned with major regional investments in transit and other transportation improvements.

Objectives:

- The proposed LRT project entered the federal environmental review process in late 2016, and it will continue until mid 2019.
- The Southwest Corridor Steering Committee will select the final LRT alignment – the locally Preferred Alternative – during the environmental review process.

Previous Work :

- In 2015-16, the project steering committee substantially narrowed the alignment options still under consideration, and recommended light rail over bus rapid transit as the transit mode.
- The SW Equitable Development Strategy began in 2017, including formation of a project oversight committee that meets bimonthly.
- In spring 2018, the Draft Environmental Impact Statement (DEIS) was released for public review and comment.
- The Southwest Corridor Steering Committee selected a Preferred Alternative for local endorsement and adoption in June 2018.

Methodology and Entities responsible :

Technical and planning staff from partners meets several times every month to examine and evaluate new information in order to brief the project steering committee, which works to make project recommendations on a consensus model. Specific partner roles include:

- Metro: lead local agency on environmental review process; support TriMet with regional coordination, analysis and public engagement
- TriMet: planning and design lead after Metro Council adoption of locally preferred alternative

- Oregon Department of Transportation: cooperate/collaborate, including reviewing and commenting on draft NEPA materials and involvement in negotiating analysis methods and mitigation strategies
- Partner jurisdictions: same as ODOT

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19

- Adoption of the SW Corridor LRT Preferred Alternative into the Regional Transportation Plan update (October 2018)
- Metro Council considers adoption of a Land Use Final Order for the Southwest Corridor Light Rail Project (October 2018)
- TriMet submits to Federal Transit Administration for entry into Project Development phase of New Starts (December 2018)
- Begin funding commitments toward estimated capital costs by local agencies and jurisdictions (continues into 2020)
- Post-DEIS transit design advancement in support of Final Environmental Impact Statement (FEIS) (mid 2018 into early 2019)
- Preparation and release of FEIS (early to mid 2019)
- Continue to implement the work plan for the Equitable Transit Oriented Development (eTOD) grant received from the Federal Transit Administration (FTA) for corridor wide planning, culminating in identification of a comprehensive SW Corridor Equitable Development Strategy (mid 2019)
- Begin the station area planning process, examining access needs and land use and development opportunities (TBD)
- Continued ODOT and project partner staff meetings to review and discuss project planning and designs (ongoing)
- Continued public engagement process (ongoing)
- Continued collaboration with project partners to support local community land use visions (ongoing)
- Work toward identifying funding and implementation options for SW Corridor transportation improvements (roadway, bicycle and pedestrians) and parks, trails and habitat projects listed in the Southwest Shared Investment Strategy but not included in the LRT Preferred Alternative (ongoing)

Schedule for Completing Activities:

- Federal environmental review: mid 2019
- Completion of equitable development strategy: mid 2019
- Commitment of non-federal matching funds: late 2020
- Request for federal matching funds: mid 2021
- Signing full funding grant agreement with FTA: early 2022
- Start LRT construction: 2020
- Opening of LRT line: 2027

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-12	\$2,476,000	7.615
2012-13	\$2,450,844	11.4
2013-14	\$1,956,046	11.4
2014-15	\$2,208,202	5.485
2015-16	\$3,626,399	6.05
2016-17	\$3,776,791	6.6

FY 2017-18 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	908,067	Metro	\$	286,585
Interfund Transfers	\$	381,788	Other	\$	2,027,370
Materials and Services	\$	1,024,100			
TOTAL \$ 2,313,955			TOTAL \$ 2,313,955		

Full-Time Equivalent Staffing

Regular Full-Time FTE	7.435
TOTAL	7.435

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	889,282	FTA - SWEDS	\$	216,977
Interfund Transfers	\$	401,493	Metro	\$	342,486
Materials and Services	\$	1,428,500	Other Anticipated Funds	\$	2,159,811
TOTAL \$	2,719,275		TOTAL \$	2,719,275	

Full-Time Equivalent Staffing

Regular Full-Time FTE	7.15
TOTAL	7.15

II. MPO PLANNING PROJECTS

FY 2017-18 ODOT Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	150,000	SPR	\$	150,000
<hr/>			<hr/>		
TOTAL	\$	150,000	TOTAL	\$	150,000
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<u>Full-Time Equivalent Staffing</u>					
Regular Full-Time FTE		1.25			
<hr/>		1.25			
TOTAL					

Economic Value Atlas (EVA)

Staff contact: Jeffrey Raker, Jeffrey.Raker@oregonmetro.gov

Description:

The purpose of this work is to create a more robust data-based tool for estimating economic outcomes from public investments in transportation and other infrastructure investment scenarios. Metro, together with key partners and stakeholders, will develop an Economic Value Atlas (EVA) that serves as a spatial representation of existing economic and workforce conditions, opportunities for a productive and inclusive regional economy, and supply chain factors that impact the region's ability to export its products and services. The EVA will help translate stated economic goals for the region into a strategy that guides Metro's transportation (freight and passenger) and land use planning and investment decisions based on economic conditions and needs.

Objectives:

- Create a common understanding of the Portland–Vancouver region's economic conditions and economic and workforce development performance needs.
- Develop enhanced economic data, geospatial information, metrics for economic performance, and related decision-support tools.
- Engage key economic and workforce development organizations as well as other stakeholders in evaluating conditions and metrics for stated economic aspirations:
 - Infrastructure and land use assets/opportunities.
 - Efficient movement of goods, services, and people.
 - Traded-sector jobs and productivity.
 - Exports and supply chain conditions.
 - Broader economic performance.
 - Economic inclusion/opportunity.
- Use the EVA to inform Metro's planning and investment decisions and external strategies and actions to support economic and workforce development in the region.

Previous Work:

The Economic Value Atlas builds on and enhances current and previous work completed by Metro and its partners, including:

- Metro plans and initiatives:
 - Urban Growth Report and Metro Investment Areas Division projects
 - Regional Industrial Site Readiness project (2014)
 - Regional Transportation Plan (RTP), Regional Freight Plan, 2014 Cost of Congestion Report, and 2008 Regional Infrastructure Analysis.
- External Plans and Initiatives
 - Greater Portland Inc. (GPI) Comprehensive Economic Development Strategy, Greater Portland 2020 Action Plan, and Metropolitan Export Initiative + 2012 Export Plan
 - Prosper Portland Strategic Plan and cluster projects
 - Value of Jobs Coalition reports
 - Port of Portland plans and studies
 - State Business Oregon and Brownfields programs

Methodology:

Metro serves as project manager for this effort, with significant support from Greater Portland Inc., Port of Portland, City of Portland and Business Oregon. Phases of the project include:

- Phase 1 - Engagement + Partner Development
 - Economic Development Listening Tour
 - Establish Working Group
 - Expert Input on Cluster + Cross-Sector Challenges + Options
 - Staff Participation In Key economic and workforce development partner meetings and events
- Phase 2 - Regional Economic Analysis
 - Coalesce + Establish Economic Indicators
 - Visual/Spatial Mapping of Regional Economy + Clusters
 - Economic Value Atlas
- Phase 3 –Guidance on Metro Plans + Initiatives
 - Use EVA to ID Future Investment Areas
 - Integrate Findings Into RTP + MTIP
 - Integrate metrics/criteria into 2019-2020 RFFA
 - Integrate analyses/findings into future multi-criteria evaluation
- Prospective Future Phases – Guidance on external policy/actions, advance cluster- specific and cross-sector action plan(s), and build out ongoing Metro role in economic and workforce development.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Economic Value Atlas – Online Decision-Support Tool (SECOND QUARTER FY 2018-19)
- Implementation Plan – Guidance on Metro Plans + Initiatives (SECOND QUARTER FY 2018-2019)
- Stakeholder engagement (ONGOING)

Entities Responsible:

- Metro – Lead Agency
- ODOT – Contract Manager
- Greater Portland Inc – Collaborate/Cooperate
- Port of Portland – Collaborate/Cooperate
- City of Portland – Collaborate/Cooperate
- Business Oregon – Collaborate/Cooperate
- Joint Policy Advisory Committee (JPACT)
- Metro Policy Advisory Committee (MPAC)
- Transportation Policy Alternatives Committee (TPAC)

Metro Technical Advisory Committee (MTAC)

Schedule for Completing Activities:

- Listening Tour (Completed)
- Establish Working Groups – EVA Task Force + Technical Work Group (Completed)
- Site Tours (3 Completed + 2 scheduled)
- Market Scan (Completed)
- Final Economic Performance Indicators (THIRD QUARTER FY 2017-2018)
- Early Mapping (THIRD QUARTER FY 2017-2018)
- Economic Value Atlas – Online Decision-Support Tool (SECOND QUARTER FY 2018-2019)
- Implementation Plan – Guidance on Metro Plans + Initiatives (SECOND QUARTER FY 2018-2019)

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2015-16	\$325,000	0.5
2016-17	\$177,214	0.85

FY 2017-18 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	216,067	STBG – EVA	\$	53,860
Interfund Transfers	\$	95,058	Metro	\$	291,265
Materials and Services	\$	34,000		\$	
				\$	
TOTAL \$ 345,125			TOTAL \$ 345,125		

Full-Time Equivalent Staffing

Regular Full-Time FTE	1.89
TOTAL	1.89

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	209,236	STBG - EVA	\$	25,557
Interfund Transfers	\$	88,853	Metro	\$	308,781
Materials and Services	\$	36,250			
TOTAL \$ 334,339			TOTAL \$ 334,339		

Full-Time Equivalent Staffing

Regular Full-Time FTE	1.75
TOTAL	1.75

I-84 Multimodal Integrated Corridor Management

Staff Contact: Caleb Winter, caleb.winter@oregonmetro.gov

Description:

US DOT's Intelligent Transportation Systems (ITS) Joint Program Office (JPO) awarded Metro and agency partners an Integrated Corridor Management Deployment Planning Grant. Integrated Corridor Management (ICM) grants will help combine numerous information technologies and real-time travel information from highway, rail, transit and bike operations.

This work aligns with the Regional TSMO Plan, supporting the vision to “collaboratively and proactively manage [the region’s] multimodal transportation system.” The ICM study furthers the goals and objectives of the TSMO plan including reliability for travelers and goods movement; transportation safety and security; environment and quality of life; and, providing comprehensive multimodal traveler information to people and business.

As TSMO partners strive towards real-time information for operations and travelers, this study takes strategies a step forward. ICM is described as a “system of systems” which refers to both the technology and coordination protocols between agencies. ICMs in other regions identify a multitude of scenarios including crashes, weather hazards and major events. A real-time coordinated response will help provide safe and reliable transportation options.

Travelers can use real-time information to avoid congestion and find alternate routes or transportation systems, such as transit or bike. Shippers can receive information concerning the entire network, not just one route. Such tools can help engineers make better decisions about congestion management by recommending where traffic should flow and onto which systems commuters should be shifted based on up-to-the-second data.

Objectives

- Implement a systematic multimodal approach, complete with performance measures and evaluation approaches, in accordance with multimodal mobility corridor concepts.
- Balance mobility, safety and access considerations.
- Improve multimodal access for corridor users.
- Better manage freight mobility in the corridor.
- Leverage intelligent transportation system (ITS) technologies to become even more active and integrated.
- Balance state and local needs in transportation planning and operations.

Previous Work

Previous projects to this ICM study are those implemented under the TSMO Plan, coordinated by the TSMO Regional Mobility Program in the UPWP, and related projects by agency partners. ODOT manages and operates I-84 with a data communications network, signals, ramp meters, cameras, and

variable message signs. TriMet operates three MAX lines and bus service throughout the corridor, monitored with an updated CAD/AVL system and communications. Multnomah County manages six of the Willamette River bridges, including the Burnside, Broadway, Hawthorne and Morrison. City of Gresham shares fiber optics and will install arterial variable message signs. City of Portland operates approximately 382 signalized intersections within the proposed corridor, including 16 traffic cameras. The agencies in the corridor already cooperate to share equipment, share data and coordinate incidents from operations centers.

The TSMO Regional Travel Options (RTO) program supports transportation demand management in the corridor working with both residents and employees in Portland and Gresham to reduce drive-alone trips and increase trips by transit, biking and walking. ODOT and TriMet serve travel information at TripCheck.com and TriMet.org.

Portland State University houses and manages PORTAL, the region's database archive of traffic, transit, bike and walk data, plus operating conditions such as weather and incident data.

Methodology:

Metro will serve as project manager for this effort, with significant support from a project team from partner agencies and support through TransPort, the TSMO subcommittee to the Transportation Policy Alternatives Committee (TPAC). This project will follow the process for completing an Integrated Corridor Management Deployment Planning Grant, described in the US DOT ITS JPO guidance documents and their direction to grantees.

The project will complete the following components:

- Stakeholder Participation Plan – identifying the process to generate input and support from a cross section of stakeholders at key points in the concept development
- Project Management Plan (PMP) – preparing the ICM guiding document
- System Engineering Management Plan (SEMP) framework – preparing a structure for systems engineering as the ICM project progresses towards implementation
- Vision, Goals and Objectives - refining the desired vision, measurable goals and objectives for ICM in the I-84 corridor.
- ICM Operational Alternatives - developing an initial set of operational alternatives to achieve the desired vision, measurable goals and objectives
- Infrastructure Improvements – comparing existing/planned assets with ICM asset requirements to identify a set of improvements
- Relationships and Procedures – identifying issues and recommending actions for ICM operations
- Final Report – preparing a final document

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

Tangible products are primarily expected in FY 2017-2018; however, if additional work is desired by stakeholders to finalize the report, the date of completion will be extended.

- Final report (1ST Quarter FY2018-2019)

Entities Responsible for ICM Activity:

- Metro – Lead Agency ODOT – Contract Manager
- ODOT, TriMet, Multnomah County, City of Portland, City of Gresham, PSU, Port of Portland, TransPort – Cooperate/Collaborate
- FHWA – Cooperate/Collaborate
- US DOT ITS JPO – Cooperate/Collaborate

Schedule for Completing Activities:

Please refer to schedule information provided in the Major Project Deliverables/Milestones section.

FY 2017-18 Cost and Funding Sources:**Requirements:**

Personal Services	\$	63,137
Interfund Transfers	\$	25,663
Materials and Services	\$	150,800
TOTAL	\$	239,600

Resources:

ICM-DPG-2013/ICM Deployment	\$	191,680
Metro	\$	6,845
Local Partners	\$	41,075

TOTAL	\$	239,600
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Full-Time Equivalent Staffing

Regular Full-Time FTE	0.4
TOTAL	0.4

MAX Red Line Improvements Project

Staff contact: Elizabeth Mros-O'Hara, Elizabeth.Mros-OHara@oregonmetro.gov
Malu Wilkinson, Malu.Wilkinson@oregonmetro.gov

Description

The MAX light rail system provides high capacity transit connecting the major centers of our region. The MAX Red Line has connected the City of Beaverton, downtown Portland, Gateway Regional Center, and Portland International Airport since 2001. Since its opening, there has been substantial growth in the corridor and more demand for reliable transit connecting these important centers. Currently, the Red Line has two single track sections near Gateway/99th Ave and Portland International Airport, which result in inbound and outbound trains having to wait for each other. If a train is off schedule, these wait times can impact the entire Max System as trains rely on the same tracks to serve different parts of the region. Adding a second set of tracks in these areas will reduce delays for riders on all five lines. In addition, Max riders west of Beaverton Transit Center have been requesting Red Line service to better connect a growing part of the region.

The Red Line improvements west of the Beaverton Transit Center include improving track and switches and adding signals and a new operator break facility at the Fair complex/Hillsboro Airport Max Station allowing Red Line trains to serve ten more west side stations. These stations are currently served by the Blue Line which is often overcrowded. Improvements will allow TriMet to increase train frequency to better meet rider demand.

Improved transit will support anticipated redevelopment at the Port of Portland such as the expansion of the Portland International Airport and potential redevelopment at the Gateway Regional Center.

Objective

Complete a 2-year design process for the Max Red Line double tracking and other improvements to increase light rail reliability on all five Max lines and to improve carrying capacity to meet transit demand west of the Beaverton Transit Center. Construct improvements in the 2021-2022 timeframe with an opening targeted for 2023. This work will improve mobility and transit performance throughout the region.

Work Completed in 2017-18 included:

- Initiation of discussions with jurisdictions and stakeholders to coordinate design and better transit access.
- Initiation of the transit design and environmental analysis.

Methodology

TriMet and Metro will work with the local jurisdictions and the Port of Portland to scope the project to improve access to major transit origins and destinations, improve reliability of the entire MAX system, and support future redevelopment at the Gateway Regional Center, the Port of Portland properties, and within Beaverton and Hillsboro.

TriMet and Metro will also consult with the federal agencies during the scoping phase.

TriMet is coordinating with local jurisdictions to avoid and minimize any potential impacts associated with improving the Red Line.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019

- Partner agency engagement began summer 2017 and will continue through 2019.
- Public outreach process began fall 2017 and will continue through 2019
- JPACT and Metro Council will be asked to adopt the MAX Red Line improvements into the 2018 RTP.
- Enter Project Development for Small Starts Federal Transit Administration Small Starts Application for Rating 2019
- 30% design by end of 2018
- NEPA complete by 2019
- Begin construction 2020/2021
- Opening 2021/2022

Entity/ies Responsible for Activity:

TriMet and Metro

Other Stakeholders

- Local Cities and Counties
- Port of Portland
- City of Portland
- City of Beaverton
- City of Hillsboro
- Federal Transit Administration

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project Deliverables/Milestones* section.

Funding History

This project is being described for the first time in this UPWP, and therefore does not include a discrete funding history.

FY 2018-19 Cost and Funding Sources:

Requirements:			Resources:		
Personal Services	\$	90,456	Regional Corridor Planning STBG	\$	103,407
Interfund Transfers	\$	38,412	Metro	\$	25,461
		TOTAL \$	128,868		
			TOTAL	\$	128,868

Full-Time Equivalent Staffing

Regular Full-Time FTE	0.7
TOTAL	0.7

TriMet Employer Outreach Program

Staff Contact: Adriana Britton, brittona@trimet.org

Description:

The TriMet Employer Outreach Program delivers transportation demand management programs and services to employers through the Metro Regional Travel Options program. TriMet's work with employers contributes toward achieving Metro's Climate Smart strategies goals.

The TriMet program serves employers and colleges of all sizes in the Portland Metro region with non-SOV travel options resources, transportation program assistance, transit pass programs and transportation surveys for Oregon DEQ's Employer Commute Options program. The TriMet outreach program reduces vehicle miles traveled by educating employers, offering promotional campaigns, meeting with employees, producing online communications and supplying educational materials for using transportation options. TriMet supplies transportation survey data in aggregate to the Metro RTO program, plus assists partners with transit operations information and opportunities to participate in TriMet campaigns.

TriMet's RTO efforts contribute to achieving Metro's regional goals of reducing greenhouse gas emissions 10 percent below 1990 levels by 2020 and 75 percent below 1990 levels by 2050. The population is expected to increase by 44% between 2010 and 2040 while increasing housing costs are displacing a segment of riders to the outer rings of the region.

TriMet increased service from 2012-2016 and service is now above pre-recession levels. TriMet has continued adding service at regular intervals through TriMet's "Making Transit Better" initiative. A TriMet analysis released Q1 17-18 shows that overall ridership, primarily off-peak trips, was relatively flat from 2015. However, commute peak trips increased slightly from 2015 to 2016. To improve off-peak transit ridership TriMet proposes adding service to address shifts in housing, addressing travel times, integrating services and monitoring demographic shifts. Within this context, outreach messaging to employers will encourage travel options as a convenient lifestyle choice for off-peak as well as for commute trips.

Objectives:

- Increase participation among employers and colleges to reduce non-SOV trips
- Promote active travel options that improve health and economic benefits
- Coordinate with and support Metro RTO campaigns plus local partner efforts
- Provide transportation services and education to employers and colleges about the variety of travel opportunities available in suburban areas and urban centers

Previous Work:

Key work program accomplishments for fiscal 2016-17 included the following:

- Increased transportation program enrollment to 2,062 from 1,956 worksites a year ago, a 5% increase over the previous fiscal year.
- Employer worksites offering transit subsidies increased to 1,291 from 1,248, a 3% increase over the previous year.

- Increased worksites with TriMet pass programs to 1,250 from 1,207 in the previous year, a 4% increase from the last fiscal year.
- Enrolled 30 new TriMet employer pass program contracts compared with 45 in the previous fiscal year or a 33% decrease in the number of new program contracts.

Methodology:

The transportation options team works with employers to develop and maintain transportation programs to reduce SOV car trips. The programs also include transit pass programs for employers and colleges to encourage transit use. Following are key program components completed in fiscal 2016-17:

Employer and College Outreach:

- Completed 5,727 contacts with 771 employers and colleges of which 110 employers were first-time contacts. The number of contacts decreased by 4% but the number of employers/colleges contacted increased by 23%.
- Participated in 331 planning, informational meetings, with employers, colleges, business associations, community associations, citizens' advisory committees and RTO partner organizations.
- Promoted the 2016 statewide Drive Less Challenge at 14 employer events with 1,500 employee contacts and by email to over 200 employers with pass programs. Distributed over 900 postcards and 50 posters at employer events and meetings.
- Promoted service improvements to follow up on outreach from TriMet's Service Enhancement Plans initiative including the following:
 - Q2 FY16-17 North Hillsboro Link Shuttle. Contacted 51 employers along new service, of these sent 350 promotional flyers to 30 employers, staffed 3 events.
 - Q4 FY16-17 new bus route, Line 97. Mailed letter about new service to over 105 West district employers and conducted call downs; supplied over 1,000 bus schedules plus supplied 429 New Employee Kits.
- Continued a campaign to improve ridership on the MAX Orange Line and related bus service launched in Q1 FY15-16. Designed a new brochure promoting Orange Line service for employers and mailed to 600 businesses in Q3-Q4 FY16-17. Outreach and follow up will continue throughout FY17-18. The mailer follows an off-peak campaign conducted April – June 2016 to increase awareness of the service and destinations in the corridor. The off-peak campaign included bus ads, billboards and a website highlighting destinations near the MAX Orange Line stations.

Employee Communications:

- Promoted transportation options at 69 employer transportation fairs to 5,859 attendees.
- Redesigned the New Employee Kit into a single, streamlined brochure Q1 FY16-17. Distributed 3,354 of the revised New Employee Kits to 188 employers to promote non-SOV travel choices to new employees. The kits are branded with the regional Drive Less Save More campaign and may be accompanied with customized materials for an employer.

Employee Transportation Surveys:

- TriMet processed Employee Commute Option surveys for 241 worksites for 110 companies. Staff assists employers with surveys free of charge whether for Oregon's DEQ program, TriMet's Universal Annual Pass program, or to inform transportation program

choices. The staff supplies results in a report with recommendations for the employer's transportation program.

Employer Transportation Programs:

- TriMet offers a free, Emergency Ride Home, cab voucher program to incentivize employers to subsidize transit. Added 19 employers with ERH programs to 168 for FY16-17 and provided 52 cab rides for FY16-17. TriMet provided 47 rides in the previous year.

Other:

- Conducted outreach to employers by email and phone on three occasions during Q2 and Q3 alerting over 150 employers about protests disrupting multiple transportation modes in Portland's central business district. Advised employers of options for employees' safety.
- Outreach in Q3 by email to 784 employers advising of a 3-week light rail construction project and options to help employees travel through the disruption. Businesses were included in a mailer to over 28,500 addresses in the project area. Staff assisted with on-street outreach during commute hours.
- In Q4 FY16-17, TriMet hosted a public, rider engagement event to leverage APTA's National Dump the Pump Day campaign. The event was paired with social media promotions and included demonstrating TriMet's newest bus. Staff assisted with transportation options questions and transit information.

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19

For FY 2018-19, outreach projects will include engaging employers in a suite of service enhancements in planning for Q1 2018 through 2019. Outreach messages will encourage travel options for off-peak trips in addition to commute trips. Staff will promote Metro RTO, partners and TriMet campaigns to employers and colleges. A branding campaign is being developed for the Employer Outreach program and will be implemented beginning Q1 FY18-19. The work plan may be adjusted to incorporate new campaigns plus service additions and changes.

Employer and College Outreach:

- TriMet will continue a 10-year service expansion plan with service additions in Q1 and Q3 FY18-19 plus Q1 and Q3 FY19-20. Multiple outreach phases include engaging employers at the planning stages in FY17-18 plus following up to build awareness about the service changes with employer emails, mailings and events.
- Staff will promote RTO campaigns including national bike month and the bike commuting challenge in Q1 FY18-19 and the statewide Drive Less Challenge in Q2 FY18-19 through online channels and at employer events.
- Staff will promote new opportunities for combining bike and transit trips by leveraging the construction of three, new secure bike-storage facilities for Summer 2018. The Bike and Ride facilities will be located at major light rail transit centers.

Employee Communications:

- Promote transportation options, new bike/ped infrastructure and RTO campaigns at over 80 employer and college fairs/events with a minimum goal of 8,000 participants.
- Promote WES Commuter Rail to build ridership along corridor. Outreach will be

conducted to the 131 employers along the line from Q2 through Q4 FY17-18 to build awareness of the bike/transit connections. Outreach will include creating a mailer to zip codes ½ radius of the line, coordinating transportation fairs, Facebook ads targeting surrounding zip codes, and marketing materials to raise awareness of WES.

Employee Transportation Surveys:

- Complete an average annual goal of surveys for 230 employer worksites for FY18-19. Staff work closely with Oregon DEQ to assist employers who must survey for compliance. The survey is also used for TriMet's Universal Annual Pass program.

Employer Transportation Programs:

- Employers and colleges are aware of the Hop Fastpass™ electronic fare system through previous outreach efforts which began Q3 FY16-17. Staff will continue transitioning employers and colleges to the Hop Fastpass system in FY18-19. As of Q2 FY17-18, 89 employer programs have transitioned to the Hop system. Over 550 programs will be transitioned to the new fare system during a two-year period, plus information will be supplied to train employees to use the electronic fares for riding the system. Additional TriMet staff (non-RTO) will conduct training for employers and colleges.
- Staff will promote the Emergency Ride Home program with the goal of adding a minimum of 12 enrollments annually over the next five years.

Other:

- Staff will assist with a pilot project to encourage commute and off-peak transit trips at new multi-family housing developments with 50 or more units within .25 miles of frequent transit. A New Resident Kit was created that includes transit fares and transit tips. An initial set of 3,500 kits was mailed in Q1 FY16-17 to 60 buildings. Another 5,000 kits will be distributed in Q1-Q4, FY18-19. The second cohort will include the Hop Fastpass™ electronic card to allow reporting of card activations.

Entities Responsible for Activity:

The TriMet Employer Outreach program is staffed by 5.25 people within TriMet's Customer Information Services department. TriMet staff work in partnership with the following stakeholders and entities:

- Metro Regional Travel Options
- ODOT
- FTA
- Regional partner agencies including TMAs
- Employers and colleges in the Metro region
- Cities and counties in the Metro region
- Metro Transportation Policy Alternatives Committee (TPAC)
- Metro Joint Policy Advisory Committee on Transportation (JPACT)
- Metro Policy Advisory Committee (MPAC)
- Other area transit providers, including but not limited to South Metro Area Regional Transit, C-TRAN and Portland Streetcar.

Schedule for Completing Activities:

Please refer to the schedule information provided in the *Major Product Deliverables* sections.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2008-09	\$412,409	5.25
2009-10	\$424,781	5.25
2010-11	\$437,524	5.25
2011-12	\$450,649	5.25
2012-13	\$464,171	5.25
2013-14	\$469,118	5.25
2014-15	\$483,193	5.25
2015-16	\$497,688	5.25
2016-17	\$507,212	5.25
2017-18	\$546,270	5.25

FY 2017-18 Costs and Funding Sources:

Requirements:				Resources:		
Personal Services	\$	527,997		PL	\$	
Interfund Transfers	\$			STP	\$	473,772
Materials and Services	\$	18,273		ODOT Support	\$	
Computer	\$			Section 5303	\$	
CMAQ	\$			*TriMet Support (10.27% match)	\$	54,225
				Metro	\$	
				Other	\$	18,273
<i>TOTAL</i>	\$	546,270		<i>TOTAL</i>	\$	546,270

III. OTHER REGIONAL PLANNING PROJECTS

Full-Time Equivalent Staffing

Regular Full-Time FTE		5.25			
<i>TOTAL</i>		5.25			

**Updated M&S for FY17-18, actual as of 7/3/2017.

FY 2018-19 Costs and Funding Sources:

Requirements:				Resources:		
Personal Services	\$	538,101		PL	\$	
Interfund Transfers	\$			STP	\$	487,985
*Materials and Services	\$	14,000		ODOT Support	\$	
Computer	\$			Section 5303	\$	
CMAQ	\$			TriMet Support (10.27% match)	\$	50,116
				Metro	\$	
				Other	\$	14,000
<i>TOTAL</i>	\$	552,101		<i>TOTAL</i>	\$	552,101

Full-Time Equivalent Staffing

Regular Full-Time FTE		5.25			
<i>TOTAL</i>		5.25			

*Estimated M&S for FY18-19 to be updated with actual M&S in next UPWP.

South Metro Area Regional Transit (SMART) Options Program

Staff Contact: Elli Work [Primary] ,Grants and Programs Manager, work@ridesmart.com
Nicole Hendrix [Secondary], Transit Management Analyst, hendrix@ridesmart.com

Description

South Metro Area Regional Transit (SMART)'s Transportation Demand Management (TDM) program, SMART Options, promotes transportation alternatives to driving alone and assists local employers in establishing transportation worksite programs to comply with Department of Environmental Quality Employee Commute Options (DEQ – ECO) rules. The SMART Options program takes part in coordinated regional travel planning processes through Metro's Regional Travel Options (RTO) Program in addition to collaborating with neighboring area transit agencies and jurisdictions in planning outreach programs and promotions. Beginning in 2001 primarily as a large-employer commuter focused program, SMART Options continues to expand to include community members and visitors in an effort to reduce single occupancy vehicle trips in Wilsonville and the region.

Objectives

- Reduce drive alone trips and increase awareness of transportation options;
- Increase outreach to Limited English Proficiency (LEP) and older adult populations;
- Build transit ridership on SMART, TriMet, CAT, and Cherriots;
- Improve first and last mile connections to transit;
- Work with Wilsonville employers to coordinate commuter vanpools;
- Help achieve regional and state plan goals utilizing strategies in plans; and
- Support the City of Wilsonville's Transit Master Plan and Bicycle and Pedestrian Master Plan.

Previous Work

- In the Spring of 2017, SMART purchased and placed a new Dero bike repair station adjacent to the 48 bicycle lockers located at SMART Central at Wilsonville Station to allow for a more seamless first/last mile connection and build multi-modal transportation.
- Summer marketing interns assisted in vastly improving outreach on SMART social media sites. On Facebook, SMART followers grew from 300 to over 1,000 in two months.
- Coordinated with Ride Connection to promote the new RideWise Travel Trainer located at SMART offices beginning December 2016.
- Walk Smart's Walk at Lunch program occurred weekly from April through September 2017. Average participation each week was 35 people, partnering with 17 Wilsonville businesses.
- A Grants and Programs Manager was hired in June 2017 to bring funding and reports up to date.
- In August 2017, SMART conducted its first on-board demographic survey. 500 surveys were collected over the course of four days. The results of the survey are being used to better market services and adjust service-based customer trends.
- Assisted 11 employers to complete their ECO surveys and trip reduction plans when required by DEQ from July 2016 to June 2017.

Methodology and Entities Responsible

The SMART Options program will continue to work closely with and report to Metro's Regional Travel Options program and relevant working groups to coordinate travel options outreach and activities throughout the region.

- City of Wilsonville's South Metro Area Regional Transit – Product Owner / Lead Agency
- Metro – Collaborate/Facilitate
- RTO Program Partners and Stakeholders – Cooperate / Collaborate
- Neighboring transit providers (TriMet, CAT, Cherriots) – Collaborate
- Transportation Options Group of Oregon - Collaborate
- Federal Transit Administration (FTA) – TDM milestone and financial reports
- Oregon Department of Transportation (ODOT) - Coordinate/Report
- Wilsonville City Council - Approves annual budget
- Ride Connection - Collaborate
- Community groups and organizations involved in transportation issues
- Organizations serving people of color, older adults, disabled, and LEP speaking residents' needs
- Organizations and advisory committees serving regional bicycle, pedestrian, and transit needs
- General public – Provide input
- Wilsonville businesses
- Wilsonville public and higher education schools

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Hire a Bike and Pedestrian Coordinator (July 2018)
- Continued support and implementation of the Drive Less/Save More and Drive Less Connect collaborative marketing campaign through participation in the Drive Less Challenge workgroup and promotion of the program. (ONGOING)
- Prepare for Fall 2018 TMP implementation through extensive outreach process (July 2018)
- Work with large businesses to begin a vanpool program in Wilsonville (ONGOING)
- Assess and meet transit system demands of Oregon Institute of Technology main Portland area campus in Wilsonville (ONGOING)
- Coordinate and host Walk Smart's Walk at Lunch events (April 2019 – September)
- Staff outreach booths at local business fairs and community events (ONGOING)
- Work directly with employers to find the best travel options for their employees (ONGOING)
- Assist with DEQ ECO surveys and trip reduction plans (ONGOING)
- Collaborate with regional partners to promote WES as a viable transportation option (ONGOING)
- Collaborate with local schools to assist with walking and biking to school programs and Safe Routes to School plans and promotions (ONGOING)
- Focused outreach to low-income families and ESL learners (ONGOING)
- Social media campaigns to increase youth ridership and participation in transit options
- Conduct annual bicycle and pedestrian counts at key Wilsonville intersections and trails

to coincide with regional and national efforts (September 2018)

- Actively participate in Metro's Collaborative Marketing Group (ONGOING)

Schedule for Completing Activities

Please review the Major Project Milestones section for expected completion dates and timeline of SMART Options Program projects.

Budget

Funding is utilized for SMART Options Program staffing and services supplemented by TDM grants from Metro, the State of Oregon, and local funds. Local match is provided by the City of Wilsonville employer transit payroll tax, which is currently set at 0.5% per \$1,000. Staffing will fund a portion of the Programs Manager, Program Coordinator, (new) Bike and Pedestrian Coordinator and two program interns.

Please note: The funding amounts listed below are a result of SMART staff turnover and an unmet need for a grants manager. SMART is fully staffed as of June 2017 and has been made aware by Metro the funds that are available.

FY 2018-19 Costs and Funding Sources

Requirements:		Resources	Ratio	Actual
Staff	\$198,486	Federal Grant FY 12	89.73%	\$55,000
		Local Match	10.27%	\$5,648.5
		Federal Grant FY 13	89.73%	\$60,000
		Local Match	10.27%	\$6,162
		Federal Grant FY 17	89.73%	\$65,000
		Local Match	10.27%	\$6,675.5
TOTAL	\$198,486			\$198,486

Full-Time Equivalent Staffing:

Grants and Program Manager	.25
Program Coordinator	.50
(New) Bike/Ped Coordinator	1
Options Program Interns (two at .5)	1
TOTAL	2.75

ODOT Development Review

Staff contact: Jon Makler, jon.makler@odot.state.or.us

Description:

ODOT reviews local land use actions and participates in development review cases when those actions may have safety or operational impacts (for all modes of travel) on the state roadway system, or if they involve access (driveways) to state roadways. This includes work with jurisdiction partners and applicants, and products may include written responses and/or mitigation agreements. This work includes review of quasi-judicial plan amendments, code and ordinance text amendments, transportation system plan amendments, site plans, conditional uses, variances, land divisions, master plans/planned unit developments, annexations, urban growth boundary expansions and recommendations for industrial land site certifications. ODOT also works to ensure that long-range planning projects integrate development review considerations into the plan or implementing ordinances, so that long-range plans can be implemented incrementally over time.

Objectives:

- Make recommendations for mitigation of safety and operational impacts of development on the state roadway system as appropriate
- Work collaboratively with local jurisdictions and applicants to develop mitigation agreements
- Review land use actions for Transportation Planning Rule (TPR), Oregon Highway Plan, Access Management Rule and ODOT permit compliance and make recommendations as appropriate

Previous Work:

Work during the 2016-2017 fiscal year included review of over 2,000 land use actions, with approximately 150 written responses and 100 mitigation agreements.

Methodology:

General methodology steps include:

- Intake of local/regional jurisdiction notice of land use actions
- Review for impact on state roadway system; review of plan amendments and development site plan review for TPR (comprehensive plan amendment/zone change), Oregon Highway Plan, access and permit considerations as appropriate
- Work with partners and applicants as necessary to determine appropriate mitigation
- Recommend conditions of approval as appropriate regarding the proposed land use action for mitigation of safety and operational impacts of development and ODOT permit requirements

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-2019

- Products occur throughout the planning period, depending on development/land use proposals and timing of notices
- May include response letters and mitigation agreements

Entities Responsible for Activity:

ODOT – Product Owner/Lead Agency; Cooperate/Collaborate/Make Recommendations

Cities and Counties – Product Owner/Lead Agency for local land use process

Department of Land Conservation and Development (DLCD) – Cooperate/Collaborate

Schedule for Completing Activities:

Please refer to schedule information provided in the *Objectives* and *Tangible Products* sections of this planning activity description.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2011-2012	\$250,000	2.0
2012-2013	\$250,000	2.0
2013-2014	\$300,000	2.75
2014-2015	\$300,000	2.75
2015-2016	\$300,000	2.75
2016-2017	\$330,000	3.00
2017-2018	\$300,000	2.75

Estimated FY 2018-2019 Costs and Funding Sources:

Requirements:				Resources:		
Staff Time	\$	300,000		SPR	\$	300,000
<i>TOTAL</i>	\$	300,000		<i>TOTAL</i>	\$	300,000
Full-Time Equivalent Staffing						
Regular Full-Time FTE		2.75				
<i>TOTAL</i>		2.75				

ODOT – Transportation and Growth Management (TGM)

Staff contact: Jon Makler, jon.makler@odot.state.or.us

Description:

Oregon's Transportation and Growth Management (TGM) Program supports community efforts to expand transportation choices for people. By linking land use and transportation planning, TGM works in partnership with local governments to create vibrant, livable places in which people can walk, bike, take transit or drive where they want to go. The ODOT/DLCD TGM program provides grants to regional and local jurisdictions to conduct land use and transportation planning.

Objectives:

- Partner with DLCD and regional or local governments to conduct land use and transportation planning efforts receiving TGM grants
- Provide technical assistance with regard to best practices and consistency and compliance with the Oregon Transportation Plan, Oregon Highway Plan, Transportation Planning Rule, and other applicable state transportation plans, regulations and standards

Previous Work (grants ending in FY 2018):

- Beaverton – Active Transportation Plan (end date 11/30/17)
- Cornelius – TSP Update (end date 4/30/18)
- Gladstone – TSP Update (end date 1/31/18)
- Portland – Enhanced Transit Corridors Plan (end date 5/31/18)
- Metro – Transit System Expansion Policy (element of Regional Transit Strategy) (end date 10/31/17)
- Portland - Pedestrian Master Plan Update (tentative end date 6/30/18)
- Washington County - TV Hwy Transit Operations and Access Study (tentative end date 6/30/18)
- Molalla TSP Update (June 2018)

Current Work

- Washington County – First/Last Mile (June 2019)
- Portland – Columbia Corridor Plan (June 2019)
- Gresham – Clackamas-Columbia Corridor (June 2019)
- Multnomah County – Scenic Gorge Congestion Management (2018)
- South Clackamas Transit Master Plan (June 2019)

Methodology:

Methodology is dependent on work product, but generally includes standard planning steps (identifying the problem, existing conditions, policy framework, needs assessment, development of alternatives, evaluation of alternatives, recommendations, funding strategies) consistent with the Oregon Highway Plan, Transportation Planning Rule and the Regional Transportation Plan and Functional Plan.

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-2019

Interim and Final Deliverables for each of the following grant projects, as described in each individual grant Agreement:

III. OTHER REGIONAL PLANNING PROJECTS

- Portland: Columbia Corridor Refinement Plan
- Gresham: Concept Plan for Clackamas-Columbia Corridor
- South Clackamas Transit District: Transit Master Plan
- Multnomah County: Congestion Management Plan for Columbia River Historic Highway Corridor
- Washington County: TSP Amendment and Action Plan

Additional TGM applications will be solicited and grants will be awarded in 2018 for project completion by June 2020.

Entities Responsible for Activity (local Product Owner varies by grant):

Oregon Department of Transportation – Product Owner
 DLCD – Product Owner
 Cities and Counties – Product Owner
 Metro – Product Owner or Cooperate/Collaborate
 TriMet – Product Owner or Cooperate/Collaborate
 Community groups and organizations/stakeholders – Coordinate

Schedule for Completing Activities:

Please refer to schedule information provided in the *Current Work* sections of this planning activity description.

Funding History:

Biennium	Total Metro Area Grant Budget	FTE Comparison
2013-2015	\$ 870,125	2.0
2014-2016	\$ 813,250	2.0
2015-2017	\$ 716,705	2.0
2016-2018	\$910,280	2.0

Estimated FY 2018-2019 Costs and Funding Sources:

Requirements:				Resources:		
ODOT Staff Time	\$			TGM (STBG)	\$	
2018-2019 Grants	\$					
2018-2019 Grants estimate	\$					
TOTAL	\$			TOTAL	\$	
Full-Time Equivalent Staffing						
Regular Full-Time FTE		2.0				
TOTAL		2.0				

ODOT – Region 1 Active Transportation Strategy

Staff contact: Jon Makler, jon.makler@odot.state.or.us

Description:

Building on the recently completion of the Active Transportation Needs Inventory, this project will enable ODOT Region 1 to engage in the identification and conceptual planning of projects that increase biking, walking and access to transit. The Oregon Transportation Plan set a goal of completing the state biking and walking network by 2030. The 2016 Statewide Bicycle and Pedestrian Plan and accompanying Implementation Plan establish a framework for pursuing this.

Objectives:

- Identify priority active transportation investments
- Develop facility cross-sections and project plans (not to exceed 30% design)
- Support mobility corridor efforts throughout the region to ensure facilities for walking and biking

Previous Work:

- Region 1 Active Transportation Needs Inventory (FY 2013 - 2017)

Methodology:

- Develop region-specific implementation actions based on the Oregon Bicycle and Pedestrian Plan
- Select needs on state facilities and initiate project planning
- Collaborate with local agencies in identifying opportunities to link implementation actions with transportation system plan activity (development or implementation)

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

- Progress report presentations to TPAC and county coordinating committees (plus Portland)

Entities Responsible for Activity:

Oregon Department of Transportation – Lead
Cities and Counties in ODOT Region 1 – Collaborate
Metro – Coordinate
Tri-Met and rural transit providers – Coordinate

Schedule for Completing Activities:

Please refer to schedule information provided in the *Major Project deliverables/milestones* section of this planning activity description.

III. OTHER REGIONAL PLANNING PROJECTS

Funding History:

- Prior to FY18: Approximately \$270,000 was invested in the Active Transportation Needs Inventory work that provides a foundation for this effort.
- FY18: \$150,000

Estimated FY 2018-19 Costs and Funding Sources:

Requirements:				Resources:		
Consultant Services	\$	125,000		SPR	\$	150,000
Staff Time	\$	25,000				
<i>TOTAL</i>	\$	150,000		<i>TOTAL</i>	\$	150,000
<u>Full-Time Equivalent Staffing</u>						
Regular Full-Time FTE		0.5				
<i>TOTAL</i>						

ODOT – Region 1 Transportation Data, Tools and Reports

Staff contact: Jon Makler, jon.makler@odot.state.or.us

Description:

In recent years, ODOT has produced several atlas-style documents to support the planning, programming and development of transportation investments around the region. These include the Interchange Atlas, Active Transportation Needs Inventory Atlas, Corridor Bottleneck Operations Study Project Atlas and Active Traffic Management Study. Every year, the data underlying these studies requires management and upkeep. The purpose of this project is to ensure that ODOT and its partners always have up to date and useful data available.

Objectives:

- To support planning, programming and design of a safe and efficient transportation system.
- To ensure ready access to current and reliable data that supports decision making.

Previous Work:

As noted, previous UPWP efforts have led to initial and updated versions of several atlases.

Methodology:

- Continue to invest in data collection (ongoing)
- Identify needs for new data or new data representations (annual review)
- Update published documents (ATNI, e.g.) as appropriate
- Make as much of this data available online (TransGIS, e.g.) as possible
- Perform outreach to raise awareness of data availability and utility

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

- Annual “Corridor Performance Reports”
- Analysis of freeway off-ramp queuing
- Atlas “user guides” to support business case preparation and project delivery

Entities Responsible for Activity:

ODOT – Product Owner/Lead Agency

Metro – coordinate

TriMet, jurisdictional partners - inform

Schedule for Completing Activities:

Ongoing

III. OTHER REGIONAL PLANNING PROJECTS

Funding History:

FY18: \$100,000

Estimated FY 2018-2019 Costs and Funding Sources:

Requirements:			Resources:		
Consultant Services	\$	70,000	SPR	\$	100,00
Staff Time	\$	30,000			
TOTAL	\$	100,00	TOTAL	\$	100,00
Full-Time Equivalent Staffing					
Regular Full-Time FTE		0.25			
TOTAL		0.25			

ODOT – Region 1 Planning for Operations

Staff contact: Jon Makler, jon.makler@odot.state.or.us

Description:

ODOT seeks to leverage its recent work program investments in diagnosing bottlenecks and developing a strategy for active traffic management (ATM). This project will seek to identify and plan for project investments that support Transportation System Management and Operations (TSMO) on highways throughout the region. These investments are meant to improve safety and efficiency for all users of the transportation system.

Objectives:

- Identify and prioritize investment opportunities where TSMO can improve safety and efficiency
- Collaborate with local and regional agencies to find and implement cost-effective TSMO investments
- Enhance ODOT's ability to support local planning efforts with respect to planning for operations

Previous Work:

- Most recently, ODOT has developed the Corridor Bottleneck Operations Study (CBOS) and Active Traffic Management Study, both of which build on 30+ years of traffic management efforts in the region.

Methodology:

- Perform on-going diagnostic analysis of the transportation system, especially before/after studies as projects are built.
- Collaborate with local agencies on the development of transportation system plans, with emphasis on integrating ATM and other strategies to achieve safety and efficiency goals.
- Coordinate this effort with Metro and other partners on the upcoming TSMO Strategic Plan, including its updating and implementation.
- Identify and prioritize TSMO investment opportunities
- Early project planning (not to exceed 30% design)

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

- Progress report presentations to TPAC and county coordinating committees (including Portland)

Entities Responsible for Activity:

Oregon Department of Transportation – Lead

Metro, TriMet, Jurisdictional Partners – Cooperate/Collaborate

Schedule for Completing Activities:

Ongoing

Funding History (see FY17 UPWP under Before/after study and Facility Bottleneck and Solutions Feasibility Assessment):

Fiscal Year	Total Budget	FTE Comparison
2016-17	\$400,000	
2017-18	125,000	

Estimated FY 2018-2019 Costs and Funding Sources:

Requirements:				Resources:		
Staff Time	\$	25,000		SPR - Region	\$	125,000
Project Staff/Consultants	\$	100,000			\$	
TOTAL	\$	125,000		TOTAL	\$	125,000

Full-Time Equivalent Staffing

Regular Full-Time FTE		.25				
<i>TOTAL</i>		.25				

Value Pricing Feasibility Analysis

Contact: Mandey Putney, mandey.putney@odot.state.or.us

Description:

Growing congestion on Portland area highways is increasing travel delays and unpredictability. This congestion affects quality of life as travelers sit in cars or on the bus, and impacts the economy through delayed movement of merchandise.

Ongoing efforts to address congestion in the Portland area include investments in transit, bicycle, pedestrian and highway projects. But more is needed to address congestion. ODOT is conducting a feasibility analysis to explore the options available and determine how value pricing could help improve congestion in the Portland metro area.

Oregon's House Bill 2017, also known as Keep Oregon Moving, directs the Oregon Transportation Commission to develop a proposal for value pricing on I-5 and I-205 from the state line to the junction of the two freeways just south of Tualatin, to reduce congestion. The State Legislature directed the OTC to seek approval from the Federal Highway Administration no later than December 31, 2018. If FHWA approves, the OTC is required to implement value pricing.

The OTC formed a policy advisory committee in fall 2017 to provide a recommendation after considering technical findings, likely effects (traffic operations, diversion, equity, environmental and air quality, and others), mitigation opportunities and public input.

Objectives:

- Identify the location(s) best suited for congestion pricing on I-5 and I-205 in the Portland area.
- Engage stakeholders and the public in a robust and transparent discussion as the Oregon Transportation Commission develops its proposal for the Federal Highway Administration regarding the implementation of congestion pricing on I-5 and I-205 in the Portland region.
- Submit the proposal, per legislative direction, by Dec. 31, 2018.

Previous Work:

- Procured consultant services to provide technical analysis and conduct public engagement (fall 2017)
- Formed Policy Advisory Committee in fall 2017; conducted meetings between December 2017 and June 2018.
- Held community open house meetings in early 2018.
- Provided 2013-2015 data to document growing congestion and crash rates on Portland area freeways in the 2016 Transportation Performance Report.

Methodology:

ODOT is the lead agency and is responsible for conducting a transparent feasibility analysis, with input from the public and a 25-member policy advisory committee composed of Metro and local jurisdictions in Oregon and Washington, as well as diverse stakeholder interests. Metro, SW RTC and consultant experts will join ODOT to conduct and review model results. The Metro model and proprietary consultant toll optimization models will be used.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Obtain Oregon Transportation Commission direction on location(s) to include in congestion pricing proposal to Federal Highway Administration, FY19Q2
- Submit proposal to Federal Highway Administration, FY19Q2
- Begin environmental review under National Environmental Policy Act, FY19Q4

Entities responsible for activity:

- OTC and ODOT - Lead Agency
- Washington State Department of Transportation – Collaborate
- Metro – Collaborate, Conduct and review modeling
- SW Washington RTC – – Collaborate, Conduct and review modeling
- Multnomah County – Collaborate
- Washington County – Collaborate
- Clackamas County – Collaborate
- Clark County – Collaborate
- City of Portland – Collaborate
- City of Vancouver – Collaborate

Other Stakeholders:

- Verde
- Federal Highway Administration
- AAA Oregon
- Oregon Environmental Council
- Portland Business Alliance
- Fred Meyer and other large employers
- Community Alliance of Tenants
- Oregon Trucking Association
- The Street Trust
- TriMet and C-TRAN
- Port of Portland
- OPAL Environmental Justice Oregon
- Westside Economic Alliance
- Ride Connection
- I-5 and I-205 commuters and users
- Communities adjacent to I-5 and I-205
- General public

Funding History

This project is being described for the first time in this UPWP, and therefore does not include a discrete funding history.

Estimated FY 2018-19 Costs and Funding Sources:

Requirements:			Resources:		
Consultant Services	\$	2,800,000	State of Oregon	\$	2,800,000
Personal Services - ODOT	\$	750,000	State of Oregon	\$	750,000
Personal services - Metro	\$				
TOTAL	\$	3,550,000	TOTAL	\$	3,550,000
<u>Full-Time Equivalent Staffing</u>					
Regular Full-Time FTE		0.5			
TOTAL		0.5			

French Prairie Bridge Connectivity

Staff contact: Zach Weigel, weigel@ci.wilsonville.or.us

Description:

The Interstate 5 Boone Bridge, the only existing connection across the Willamette in the Wilsonville area, is considered unsafe for pedestrians and cyclists. The French Prairie Bridge will provide a critical missing link to restore a seamless, non-highway connection between Portland and Eugene. The bridge will connect the Portland region with the French Prairie area by linking the Ice Age Tonquin Trail with the Champoege Trail and the Willamette Valley Scenic Bikeway. The French Prairie Bridge would also serve as a needed rapid-incident, emergency response system allowing authorized vehicles a bypass when the Boone Bridge is blocked. The bridge will give ODOT and other responsible authorities the ability to clean-up faster; and police, fire, and other emergency vehicles will have better access to incidents. Currently, when traffic incidents occur near Boone Bridge, I-5 and the entire surrounding freeway system can shut-down for hours.

Objectives:

- Safe bicycle and pedestrian access
- Improved connectivity between the Willamette Valley Scenic Bikeway and new regional Ice Age Tonquin Trail.
- Emergency and post-disaster route for police, fire and response vehicles and equipment.
- Tourism development
- Practical, cost-effective transportation solution with multiple public benefits.

Previous Work:

A preliminary alternatives analysis and selection of preferred location occurred in previous City master planning efforts. The current work effort will revisit these previous studies to determine if the conclusions are still valid before initiating feasibility analysis for the proposed location and concept planning efforts.

Methodology:

The French Prairie Bridge will be the only bike-ped bridge over the Willamette River located within a 30- mile (48 km) stretch between Newberg and Oregon City. The lack of any river crossing other than Interstate-5 at Boone Bridge forces cyclists to take significant risks by traveling on a six-lane freeway with no separation from high-speed trucks and cars.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Bridge Type Selection Report summarizing final bridge selection process and decision making.
- Funding alternatives memorandum analyzing different funding options for design and construction completion of the final selected bridge type, size and location.
- Preliminary 30% Construction Plan, Specification & Estimate (PS&E) for final selected bridge type, size and location.

Entities Responsible for Activity:

- Lead Agency: City of Wilsonville
- Partners and Stakeholders: Metro – funding partner
- Oregon Department of Transportation – Cooperate/Collaborate
- Clackamas County - The City of Wilsonville and Clackamas County to determine ownership of the bridge and land commitment to the bridge on each shore of the Willamette.
- Federal Highway Administration (FHWA) Old Town Neighborhood Association Charbonneau Country Club
- Cycle Oregon, BTA, and other organizations and advisory committees serving regional bicycle and pedestrian needs
- Tualatin Valley Fire and Rescue District (TVFRD) Clackamas County Sheriff's Office
- Friends of French Prairie Travel Oregon

Schedule for Completing Activities:

- August 2018: Bridge Type Selection Report summarizing final bridge selection process and decision making.
- December 2018: Funding alternatives memorandum analyzing different funding options for design and construction completion of the final selected bridge type, size and location.
- March 2019: Preliminary 30% Construction Plan, Specification & Estimate (PS&E) for final selected bridge type, size and location
- Project is scheduled to conclude in FY 2018-19.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2013-14	\$16,437.00	
2014-15	\$39,498.00	
2015-16	\$49,997.00	
2016-17	\$500,613.00 (\$320,287 Metro)	

FY 2017-18 Costs and Funding Sources:**Requirements:**City Staff and Professional
Consultant Services

\$ 760,000

Resources:

Metro \$ 600,000

Other \$ 160,000

TOTAL

\$ 760,000

TOTAL

\$ 760,000

Full-Time Equivalent Staffing

Regular Full-Time FTE

FY 2018-19 Costs and Funding Sources:**Requirements:**

City Staff and Professional Consultant Services	\$ 430,000
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Resources:

Metro	\$ 300,000
Other	\$ 130,000

TOTAL	\$ 430,000
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TOTAL	\$ 430,000
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Full-Time Equivalent Staffing

Regular Full-Time FTE

TOTAL

Interstate 205: Stafford Road to OR99E

Staff contact: Michael Mason, Michael.w.MASON@odot.state.or.us

Description:

The Interstate 205: Stafford Road to OR99E project will plan and design for the addition of one auxiliary lane between I-205 and OR99E, as well as seismic and lane widening on the Abernethy Bridge connecting Oregon City to West Linn in Clackamas County. The crash rate in the project area is nearly three times the state average. By widening the freeway and bridge, improving the ramps, and implementing Active Traffic Management (ATM) strategies, the number of dangerous crashes is expected to decrease by up to 21%. The project area is a regional bottleneck because I-205 is reduced from three lanes in each direction to two lanes in each direction between Stafford Road and OR99E. The rest of I-205 to the north and south of this section is three lanes in each direction. This project will alleviate significant delays currently experienced by local, regional, national and international motorists and freight movers. The ODOT-led planning and design work has several elements, including:

- Project Management
- Public and Stakeholder Involvement Outreach and Communications
- Transportation Planning
- Design Engineering
- Traffic Analysis and Management
- Graphics and Visual Imaging

Objectives:

The objectives of the planning and design work are to:

- Refine the project design work that has been completed during the past 15 years
- Establish a clearer cost estimate and project scope
- Pursue completion of a design acceptance package through consultant work
- Better understand the environmental impacts (noise, in-water work, ROW, for example) of the project
- Determine a construction staging strategy
- Support efforts to secure funding for final design and construction phases

Previous Work:

The project is informed by several past technical and planning works, including the 2003 East Portland Freeway Stafford Road to OR99E Reconnaissance Report, the 2006 I-205 Storm Sewer Atlas and the 2006 I-205 Traffic Analysis Reconnaissance Report. In 2015, ODOT completed the Conceptual Widening and Seismic Retrofit Technical Memorandum. ODOT has submitted two applications for funding under the Federal FastLane Grant program (now known as Infrastructure for Rebuilding America (INFRA)).

Methodology:

- Determine the amount of funding available for planning and design work
- Develop scope of work for preliminary planning and design work based on funding
- Create a public involvement plan that includes outreach to neighborhoods, stakeholders and jurisdictional partners
- Establish a proof of concept report that confirms past assumptions and feasibility of project
- Conduct design verification
- Based on previous work and input from stakeholders, develop a draft design acceptance plan
- Finalize design acceptance plan based on feedback from draft

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

ODOT expects the project team to provide a final design acceptance package during this fiscal period.

Entities Responsible for Activity:

- Oregon Department of Transportation – Product owner
- Clackamas County, West Linn and Oregon City – Cooperate
- Stakeholders, Community Organizations – Cooperate

Schedule for Completing Activities:

- Proof of Concept – 9/28/2017
- Cost to Complete – 12/31/2017
- Design Verification – 1/10/2018
- Draft Design Acceptance Plans – 4/25/2018
- Final Design Acceptance Plans – 8/31/2018

Funding History:

2015-2018 STIP -- \$2,500,000 approved by OTC on 3/17/16 for planning phase.

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2016	\$2,500,000	4.0

FY 2018-19 Cost and Funding Sources:**Requirements:**

Consultant Services \$56,000
Staff Time \$24,000

Resources:

STBG \$80,000
\$
\$

TOTAL \$80,000

TOTAL \$80,000

Clackamas County – Trolley Trail Bridge: Gladstone to Oregon City

Staff Contact: Joel Howie, PE (Clackamas County) jhowie@clackamas.us, Jacque Betz (City of Gladstone), betz@ci.gladstone.or.us

Description:

The project will study the feasibility of replacing the recently demolished Union Pacific Railroad's Portland Avenue Historic Trolley Bridge for pedestrians and bicyclists. The project would provide a much-needed active transportation link across the Clackamas River and become the signature landmark for the popular new Trolley Trail.

Gladstone and Oregon City, designated as a town center and a regional center, respectively, in Metro's 2040 Growth Concept and 2035 Regional Transportation Plan, are separated by the Clackamas River. The Gladstone side of the river is home to many schools and community centers serving traditionally underserved populations, and the Oregon City side is the site of a high-density commercial and residential development. The most direct route connecting the two centers across the river is the 99E/McLoughlin Boulevard Bridge, but it lacks bicycle facilities and its sidewalks are substandard. Additionally, the Oregon Department of Transportation has stated that adding bicycle facilities to the bridge roadway would conflict with traffic and freight movement along McLoughlin Boulevard, a state highway.

Objectives:

The following are the objectives of the project related to FY 2018-19 with this UPWP:

- County will develop a Request for Qualifications document for engineering consultant services to conduct the feasibility study. County and City will review consultant qualifications submittals and rate the consultants. County will develop a draft scope of work and provide to the highest rated consultant. County will negotiate the final scope of work and fee estimate with the highest rated consultant. If reasonable, request a contract with the consultant. If unreasonable, repeat negotiation process with the second highest rated consultant and beyond until a reasonable fee estimate is reached.
- Upon completion of the consultant contract, the following are the expected tasks to be included in the feasibility study:
 - project management and project meetings;
 - public involvement;
 - geotechnical evaluation of foundation alternatives;
 - environmental scoping including wetland reconnaissance, permitting requirements such as Clean Water Act Section 404 (US Army Corps of Engineers), Oregon Removal-Fill Law (Oregon Department of State Lands), Endangered Species Act (U.S. Fish & Wildlife Service and National Marine Fisheries Service), and stormwater Management Guidelines (DEQ), rare plant survey, no effects documentation and cultural resources investigation; identification of local permitting requirements including floodplain regulations;
 - investigation of existing utility impacts and possible utilities to be carried on the new

- bridge;
- evaluation of river hydraulics and scour potential; determination of needed streambank restoration;
- evaluation of structural alternatives including new bridge types and possible re-use of existing surplus bridge structures; alternative bridge Type, Size and Location (TS&L) Plans based on evaluation and alternative cost estimates;
- maintenance plan and cost estimate;
- identification of needed agency agreements and maintenance plan requirements;
- and trail concept planning for connections to Gladstone and Oregon City trails.

Previous Work:

No previous work has been completed in the last couple of years related to the feasibility of a new bridge for the Trolley Trail to connect Gladstone and Oregon City.

Methodology:

Clackamas County is responsible for implementing the RFQ and being the holder of the consultant contract. Both Clackamas County and the City of Gladstone are responsible for reviewing and providing comments on the draft feasibility study and associated draft reports.

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19:

The project will result in a draft and final feasibility report. The draft report is expected to be included in FY 2018-19, but the final report is expected in FY 2019-20. It is anticipated that the feasibility study will have the following reports included in the appendices:

- Geotechnical evaluation of foundation alternatives;
- Environmental scoping document including wetland reconnaissance, permitting requirements such as Clean Water Act Section 404 (US Army Corps of Engineers), Oregon Removal-Fill Law (Oregon Department of State Lands), Endangered Species Act (U.S. Fish & Wildlife Service and National Marine Fisheries Service), and stormwater Management Guidelines (DEQ), rare plant survey, no effects documentation and cultural resources investigation; identification of local permitting requirements including floodplain regulations;
- Evaluation of river hydraulics and scour potential and determination of needed streambank restoration;
- Evaluation of structural alternatives including new bridge types and possible re-use of existing surplus bridge structures; alternative bridge Type, Size and Location (TS&L) Plans based on evaluation and alternative cost estimates; maintenance plan and cost estimate;
- Trail concept plans for connections to Gladstone and Oregon City trails.

Schedule for Completing Activities:

Draft feasibility study: January 2019

Final feasibility study: March 2019

Budget for Project:

The project budget is \$225,000 with a grant amount of \$201,892. The City of Gladstone will provide the remaining \$23,108 as the required 10.27% match of the grant. It is expected that \$150,000 of the \$225,000 will be expended in FY 2018-19.

Hillsboro Regional Center – Oak, Baseline, and SE 10th Avenue Study

Karla Antonini karla.antonini@hillsboro-oregon.gov

Description of Project:

In Hillsboro, the Baseline/Oak couplet (Oregon Highway 8, or OR8) is a critical transportation element connecting western Washington County through Hillsboro’s Downtown. While it serves as the primary route bringing freight and commuters into Hillsboro’s Downtown core, as well as carrying regional travel to and from western portions of the County, it has long imparted some negative impacts on the City’s residents and businesses. As the “front door” for many drivers, the two streets create a pass through, commercial strip presenting challenges for potential customers and pedestrians. The streets create a barrier between the low-income, ethnically diverse neighborhood to the south, and the City’s Downtown core (including important government and commercial functions) lying to the north. Both streets have existing sidewalks, yet are less than desirable to walk or bike along, and are difficult to walk or bike across due to safety issues. This also makes bus stops difficult for pedestrians to access. The couplet, while providing high visibility due to the annual daily traffic of 33,000, is not highly supportive to business investment along the corridor due to the poor condition of the sidewalk zone, the rapidly-moving traffic (30 mph through a Central Business District), and the lack of on-street parking (except on one side of Oak) to support storefront business access and better buffer the pedestrian zone from auto and freight traffic. Moreover, the couplet fails to direct drivers and pedestrians to the nearby Main Street business district, thus eliminating potential customers for the Main Street merchants.

This project seeks to support redevelopment along the Oak/Baseline couplet by providing a comfortable, human-scale environment for residents and business customers while at the same time accommodating auto and truck traffic along the State highway. It also seeks to increase accessibility by persons using all modes of transport to priority community service destinations such as City and County offices, the Health & Education District, the 10th Street commercial corridor as well as the Main Street district, with its restaurants, retailers and arts and entertainment venues. The project will also enhance access to the regional light rail system located in the heart of the Downtown, as well as bus access to the TriMet Line 57 Frequent Service route, and routes 46, 47, and 48, and the Yamhill County fixed-route bus service at MAX Central Station, located one block north of the Oak-Baseline couplet.

Objectives of the Project:

- To select a preferred design alternative that improves the conditions on Baseline, Oak and 10th Avenue to make it a more pleasant and inviting environment for all modes of travel, pedestrians and residents.
- To select a preferred design alternative that allows for easier access to the north and south of Oak and Baseline Streets for the low income, ethnically diverse neighboring residents to access services from the Health & Education District, the Downtown area, and the SW Industrial Area.
- To select a preferred design alternative that catalyzes private and public development in the Hillsboro regional center as envisioned in land use planning policies.
- The concept plans will include proposed plans, cross-sections, locations of pedestrian and bicyclist facilities and amenities, transit facilities and amenities, and concept-level traffic, bicycle, and pedestrian signal and related technology system modifications and enhancements.

- The final report will describe the preferred concept for improving the Baseline, Oak and 10th Avenue corridor and scope of work for implementation (Design Exceptions, Corridor Plan approvals, list of future permits, plan amendments, legal actions, etc.).
- Obtain Design Concurrence from ODOT Region 1 Roadway and State Traffic Engineer's office for preferred concept.

Previous Work in the program/project:

Scope of work submitted to ODOT for comment

Completed a Project Change Request form to expand the project limits on Oak and Baseline Streets to SW Adams Street and on SE 10th Avenue from SE Maple Street to E Main Street to better capture the streetscape impacts.

Working on amending the work scope for the project.

IGA submitted to ODOT for execution.

Bulleted report of progress in the past 1 or 2 years only.

Methodology and Entities responsible for the project

- City of Hillsboro – Lead Agency
- Metro – Cooperate/Collaborate
- Oregon Department of Transportation – Cooperate/Collaborate
- TriMet – Cooperate/Collaborate
- Greater Hillsboro Chamber of Commerce - Collaborate

Other stakeholders:

- Washington County
- Forest Grove
- Cornelius
- Metro Regional Freight Technical Advisory Committee
- Regional Transportation Council (RTC) of metropolitan Washington County
- Oregon Transportation Commission (OTC)
- Land Conservation and Development Commission (LCDC)
- Department of Land Conservation and Development (DLCD)
- Community groups and organizations involved in climate planning, equity, land use and transportation issues
- Organizations serving minority, elderly, disabled, and non-English speaking residents needs
- Organizations and advisory committees serving regional bicycle, pedestrian, and transit needs
- General public

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-19

Work scope finalized
Obligate funds for the project
RFP written, reviewed and finalized
ODOT/Metro Review of RFP
Contract with refined scope (includes one month for RFP release and interviews)
Consultant selected and work begins

Bulleted report of each part of the program/project that includes the timeline for completion (including coming years, if known).

Schedule for Completing Activities

November 2017: work scope finalized
December 2017: Obligate funds for the project
January 2018: RFP written, reviewed and finalized
February 2018: Contract with refined scope (includes one month for RFP release and interviews)
March 2018: Consultant selected
Schedule will require project carryover into FY 2018-19

Budget for Project

Federal: \$500,000
Local: \$57,227
Total: \$557,227

Lake Oswego to Portland Trail Plan: Tryon Cove Park Area

Staff contact: Mel Huie, Mel.Huie@oregonmetro.gov

Description:

The plan will determine a trail alignment from Tryon State Natural Area to Foothills Park in Lake Oswego, OR. The proposed trail would be multi-use (bike and pedestrian) and be one to two miles long. Trail alignment(s) would be on public owned properties and/or public Right-of-Ways, and include a future trail bridge over Tryon Creek. This trail segment would connect to the Willamette River Greenway and the rest of the regional trail system. Environmental studies and cost estimates for engineering and construction will be conducted. Roles and responsibilities for trail ownership and maintenance will be recommended. A Technical Advisory Committee of local jurisdictions and ODOT will work with Metro on the plan.

The Trail Study results shall not preclude future transit and/or streetcar options in this corridor. The ultimate goal is to have a transit and trail project built. Any interim trail shall not diminish transit or rail options in the Willamette Shore Line Corridor and maintain existing vintage trolley service.

Objectives:

- Identify a trail alignment to connect Tryon Creek State Natural Area on the west side of Hwy. 43 to the Willamette River and to Foothills Park.
- Identify an alignment and type of trail bridge over Tryon Creek connecting to the existing Foothill Park Trail.
- The proposed trail alignment shall not preclude future transit and/or streetcar options in this corridor and maintains the existing vintage trolley service.
- Coordinate with other partners/agencies on the future trail plan.
- Analyze environmental and constructability issues along the preferred alignment(s).
- Produce preliminary design documents identifying the trail alignment and cost estimates for any acquisitions of trail easements/fee simple, design P/E, construction and maintenance.
- Make recommendations as to ownership and maintenance responsibilities of future trail and define how trail, with transit, can be a viable future option.
- Coordinate the trail alignment so that it is compatible with the existing historic trolley service in the corridor and a potential future streetcar

Previous Work:

The Metro's Regional Trails plan and the RTP have incorporated this trail segment into their visions. This trail alignment is identified in the Transportation System Plan and Trails and Pathways Plan of the City of Lake Oswego and the Regional Transportation Plan (RTP). From 2005-2007 an Alternatives Analysis study of transit options in the corridor included an examination of trail alignments. In 2007, the Lake Oswego to Portland Transit Steering Committee adopted a Locally Preferred Alternative that directed the project to provide further refinement on the trail concept for the corridor. In 2009, Metro convened a trail refinement process with local partners. The

culmination of this work was a report that provides general strategy to develop a trail from Lake Oswego to Portland's South Waterfront District.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019

This will be refined when the project scope is finalized in early 2018. The Trail Plan may include the following:

- Planning background report summarizing planning activities, project need statement and project solution statement. Quarter 1
- Base map, profiles, typical sections and narrative describing field location data. Quarter 1
- Reconnaissance level report of flow and drainage conditions, regulatory requirements to be addressed, and preliminary drainage and water quality options. Quarter 2
- Report describing anticipated trail bridge structure and foundation needs. Quarter 3
- Description of future maintenance needs and the responsible agencies. Quarter 3
- Cost estimates for future project phases (engineering, right-of-way (ROW), construction).
- Identify coordination with regulatory agencies (Oregon Division of State Lands, NOAA Fisheries, etc.) and permit processes needed to complete project. List of regulatory agencies and contacts Quarters 1-2
- Coordinate with ODOT during planning process. Quarterly project status reports Quarters 1-3
- Environmental Baseline Report to address federal environmental requirements. Quarter 2
- Cost estimates for final design, preliminary engineering, and construction. Quarter 3
- Final trail plan in paper and digital versions Quarter 3

Entity/ies Responsible for Activity:

- Metro – Lead Agency
- Clackamas County – Cooperate / Collaborate
- City of Lake Oswego – Cooperate / Collaborate
- City of Portland – Cooperate/Collaborate
- State of Oregon Parks and ODOT – Cooperate/Collaborate

Schedule:

January/February 2018 to March 2019

Funding History:

Fiscal Year	Total Budget	FTE Comparison
2016-17	0	NA
2018-19	TBD	NA

FY 2018-19 Costs and Funding Sources:**Requirements:**

Personal Services

Interfund Transfers

Materials & Services

Consultant Services \$111,445

TOTAL **\$ \$111,445** **TOTAL** **\$ \$111,445**

Full-Time Equivalent Staffing N.A.

Regular Full-Time FTE N.A.

Resources:

Southwest in Motion Plan

Staff Contact: Denver Igarta, Denver.Igarta@portlandoregon.gov

Description:

Southwest In Motion (SWIM) will be a planning process that identifies a 5-year active transportation implementation strategy for all of Southwest Portland. It will incorporate several identified projects in the RTP, the Portland Bicycle Plan for 2030, Barbur Concept Plan, Southwest Corridor Plan, and community-led Platinum Bicycle Facility Strategy in Southwest.

Objectives:

- Create a five year active transportation implementation strategy for the Southwest district of Portland. The strategy will include a hierarchy of identified improvements to address pedestrian and bicycle safety and access issues.

Previous Work:

The process for developing the implementation strategy will be modeled after the successful East Portland in Motion (EPIM) project. The process for developing SWIM will also incorporate numerous previous planning projects.

Methodology:

- Assemble existing conditions information based on an inventory of transportation infrastructure and priority destinations within the project area.
- Assemble census data regarding area demographics.
- Solicit public comment to identify community priorities through a public meetings and open house events.
- Develop active transportation project candidate list with cost estimates
- Prioritize project list and develop implementation strategy.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

The following outlines the major tasks and deliverables anticipated for this project:

Task 1: Project Management

Provide status reports, cost reports and reimbursement requests. Review consultant invoices, completion reports, cost summaries and list of final products. Review and edit consultant deliverables. Prepare summaries of stakeholder meetings including agendas, information materials and comments. Prepare completion of project close-out.

Task 2: Stakeholder Involvement

Develop a review structure for local staff, stakeholder interests and partnering agencies to provide input on the identification of active transportation system needs and priorities. Provide adequate opportunity for

stakeholder participation and input throughout the project duration and respond to stakeholder values and issues.

Task 3: Background and Existing Conditions Analysis

Prepare a map of the existing conditions deficiencies.

Task 4: Identify Needs,

Identify existing pedestrian and bicycle system deficiencies within project area from existing planning projects, neighborhood priorities based on input from neighborhood association requests and individual requests received by PBOT.

Task 5: Develop Project List

Define potential capital transportation improvement projects and cost estimates based on identified needs and constraints.

Task 6: Recommended Implementation Strategy

Recommend both short and long-term capital transportation system improvements and/or other policy and operational strategies based on evaluation of project list priorities and cost feasibility analysis.

Entities Responsible for Activity:

The City of Portland will be the lead agency for this project. It is anticipated that the Bureau of Transportation will conduct the technical planning and engineering analysis and cost estimates and final report preparation, with the potential support of consultants for some tasks.

Lead agencies/partners:

Portland Bureau of Transportation - Lead Agency/Project Manager

Other stakeholders:

- Portland Pedestrian Committee
- Portland Bicycle Committee
- Tri-Met
- Community groups and organizations involved in climate planning, equity, land use and transportation issue

Schedule for Completing Activities:

The project started FY 16/17, but was delayed due to staffing changes. PBOT finalized new project manager assignment, and the project began in earnest in August 2017. The project duration is estimated to be 16 months. With finalization of the plan in early FY 18/19

Funding History:

NA

Budget for Project:

The project budget is \$303,132 with an Federal (STP) grant amount of \$272,000 and a local match from the City of Portland of \$31,132. It is expected that \$75,000 of the \$303,132 will be expended in FY 2018-19.

Portland Central City Multi-Modal Safety Improvements

Staff contact: Gabriel Graff, Gabriel.Graff@portlandoregon.gov

Description:

The purpose of this plan is to develop a strategy to address safety and access issues resulting from competing demands on transportation infrastructure in Portland's central city. Planning for and investing in active transportation modes along with freight, transit and vehicular access will help the region attain its economic, climate, and social equity targets by providing a truly multi-modal central city. Today, the City of Portland and its many stakeholders are faced with a multitude of modal plans and competing, sometimes overlapping policies. The result is a lack clarity on how to balance these competing demands with extremely limited space in the region's most important economic and social service hub. This project will result in a strategy that identifies a multi-modal transportation network that complements adjacent land uses, preserves capacity for important uses, and accommodates and encourages the already significant active transportation use in the central city today.

Objectives:

- Identify and prioritize pedestrian, transit priority, and bicycle safety improvements in the Central City while balancing the needs of other users of the right of way.
- Develop conceptual design for potential improvements to a level sufficient to identify trade-offs and meaningfully engage the public and stakeholders
- Produce a 5-10 year prioritized project list and related strategic implementation plan of protected bikeway, transit priority and pedestrian safety improvement projects

Previous Work:

This project will build on the Central City 2035 plan currently being completed by Bureau of Transportation and the Bureau of Planning and Sustainability. To date, the project team has begun existing conditions and best practice analysis, performed two field visits, and held our first Technical Advisory Committee meeting.

Methodology:

The project will begin with a thorough review of bicycle and pedestrian conditions in key locations throughout the Central City, including major roadways, bridgeheads and significant portals. The investigation will culminate in a complete analysis of current conditions for multimodal access in downtown. The project advisory committee will use the report to identify the major issues and needs. The project will include analysis of best practices throughout North America for bicycle and pedestrian infrastructure.

Following the completion of the needs report and the review of best practices the advisory committee will begin to develop a wide range of improvement scenarios that will be further refined into a tangible and discrete set of improvements that can be implemented in the next two years using federal funds. The project will also include an extensive outreach process that will

include a community discussion of the benefits to the businesses and the public from increased multimodal access and safety.

Major project deliverables/milestones planned for this reporting period of the UPWP, 2018-2019:

- Prioritized project list brought before Portland City Council
- Implementation plan finalized
- Final report on project's Planning and Development phase complete

Entities Responsible for Activity:

The City of Portland will be the lead agency for this project. The technical work is being performed by City of Portland staff and consultant team members.

Lead agencies/partners:

- Portland Bureau of Transportation - Lead Agency/Project Manager
- Metro - Partner agency
- Oregon Department of Transportation - Partner agency

Other stakeholders:

- Tri-Met
- Multnomah County

Schedule for Completing Activities:

The Planning and Development phase of this project is anticipated to be completed by September 2018.

Funding History:

NA

FY 2018-19 Costs and Funding Sources:

Requirements:		Resources:	
PBOT Staffing	\$ 885,379	CMAQ	\$1,046,03
Consultant Staffing	\$ 368,139	Local Match	\$208,480
TOTAL	\$ 1,235,518	TOTAL	\$ 1,253,51

Herman Road Active Transportation Project

Application lead staff: Zoe Monahan | (503) 691-3020 | zmonahan@ci.tualatin.or.us

Project Manager: Jeff Fuchs, PE | (503) 691-3034 | jfuchs@ci.tualatin.or.us

Project Engineer: Dominique Huffman, PE | (503) 691-3036 | dhuffman@ci.tualatin.or.us

Description:

This project will improve bike lanes, sidewalks, and transit stops along Herman Road between the employment district, neighborhoods, and downtown. These facilities will improve safety and mobility for all roadway users along Herman Road where currently, bicycles, pedestrians, automobiles, transit, and trucks share two 12-foot vehicle travel lanes because there are no bike lanes or sidewalks. The project will also add buffered bike lanes and other Active Transportation components where there are existing sidewalks and bike lanes along Herman Road.

Objectives:

- Identify and design safe bicycle and pedestrian improvements
- Use Public engagement to develop bicycle and pedestrian alternatives on Herman Road and select the preferred alternative
- Prepare preliminary design work to complete a gap in the active transportation corridor to provide a safe connection between residential and employment areas in northwest Tualatin.

Previous Work:

Improvements to Herman Road were identified in the City of Tualatin's Transportation System Plan (TSP), which was adopted in 2014.

Methodology and Entities responsible for the project:

Methodology:

- Develop public engagement plan
- Develop base map of the project area for design and visualization
- Identify right of way and environmental requirements
- Develop and refine alternative design solutions
- Select preferred alternative
- Develop design to 30% level

Entities Responsible for the Project:

- City of Tualatin – Lead agency
- Washington County – Funding Partner
- Metro – Funding Partner
- ODOT – Cooperate and Collaborate

Other Stakeholders:

- Tualatin Chamber of Commerce
- Tualatin Aging Task Force
- Commercial Citizen Involvement Organization
- Westside Economic Alliance
- Westside Transportation Alliance
- Washington County Coordinating Committee

IV. PROJECT DEVELOPMENT PLANNING

- TriMet
- Ride Connection
- Adjacent Property Owners

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY2018-29

Phase 1 – FY 2018 -2019 and FY 2019 -2020

- Public engagement (Q1 & Q2 2019)
- Develop alternate design solutions (Q3 & Q4 2019)
- Select preferred solution (Q1 & Q2 - 2020)
- 30% - Plan, specifications and project estimate (Q3 & Q4 2020)

Phase 2 – unfunded

- 30 -99% - Plan, specifications and project estimate
- Begin right of way, utility coordination and railroad coordination
- Assess and mitigate environmental impacts

Phase 3 – unfunded

- Construct active transportation improvements

Schedule for Completing Activities:

Refer to Phase I – FY 2018 -2019 in the Major Project deliverables/milestones section above.

Funding History:

Fiscal Year	Total Budget	FTE Comparison

FY 2017-18 Cost and Funding Sources:

Requirements:

\$
\$

Resources:

\$
\$
\$

TOTAL \$

TOTAL \$

Full-Time Equivalent Staffing

Regular Full-Time FTE	1.0-2.0
TOTAL	1.0-2.0

FY 2018-19 Cost and Funding Sources:**Requirements:**

Preliminary Planning	\$
	\$

Resources:

RFFA	\$625,000
MSTIP	\$70,000
City of Tualatin	\$30,000

			\$
TOTAL	\$	TOTAL	\$ 725,000

Beaverton Creek Trail: SW Hocken Avenue to Westside Trail

Staff Contact: Rene' Brucker, rbrucker@thprd.org

Description:

This project will design/engineer a 1.5-mile long multiuse off-street regional trail along the TriMet light rail corridor and Beaverton Creek between the Westside Regional Trail and SW Hocken Avenue in Beaverton. The trail will be a 12-foot wide hard surface (asphalt) and may include sections of permeable pavement if appropriate) and will include 2-foot wide gravel shoulders. Boardwalks, and possibly a bridge, may be needed in sections to cross wetlands and/or floodplain areas at the east end of the project. Fencing is anticipated where the trail will parallel the TriMet light rail line towards the west end of the project. Street crossings, four in total, are anticipated at SW 153rd and SW Hocken Avenue (collector streets) and at SW Shannon Place and Schottky Terrace (local streets). The crossing at SW 153rd will include upgrades to the light rail track crossing to accommodate the trail and the crossing at SW Hocken Avenue is anticipated to include a signalized mid-block crossing in order to connect to an existing on-street section of the Beaverton Creek Trail.

Objectives:

- Provide an off-street transportation option for bicycles and pedestrians where only on-street routes currently exist.
- Provide multi use trail connections to existing east/west and north/south trails, such as the Westside Trail, Beaverton Creek Trail and Waterhouse Trail, as well as to downtown Beaverton.
- Strengthen the project area's non-motorized active transportation system and improve user safety.
- Work collaboratively with local jurisdictions, stakeholders and the community.
- Improve connections to residential neighborhoods, underserved communities, commercial and employment center, transit services, schools, parks and recreation, natural areas and open space, other essential public facilities and off street trails throughout the region.

Previous Work:

Work completed in the 2016-2017 fiscal year included:

- Completed the project prospectus and developed the Scope of Work and RFP for the final review by ODOT, ODO and DOJ.
- Contacted adjacent property owners to provide information on the proposed trail corridor and gather information from them on their knowledge of the area.
- Contacted local jurisdictions informally to provide and gather information on the proposed trail corridor.

ODOT's DOJ finalized RFP for a design consultant is to be advertised prior to the end of 2017 (Qtr 2) with the phase I planning to be completed within 12 months (Qtr 2, 2018). The goals of the phase I planning are to determine the actual trail alignment, to develop the prospectus and complete a 30% design package to be advanced with an amendment into phase II preliminary engineering, ROW acquisition and final design (Qtr 2, 2018 thru Qtr 3, 2020). Construction administration/construction engineering and inspections phase III may be advanced with an amendment (Qtr 4, 2020 thru Qtr 4, 2021).

Methodology and Entities responsible for the project:

Tualatin Hills Park & Recreation District (THPRD) coordinates with and reports to ODOT and provides quarterly and yearly updates to Metro. THPRD provides project management and works collaboratively with ODOT in the project management role.

- Metro – program and update the Regional Transportation Plan
- Oregon Department of Transportation (ODOT) – oversight and management of project funding, contract negotiations and changes and provision of technical expertise and support services
- Federal Transit Administration (FTA) – coordination to minimize impacts to transit services
- TriMet – coordination to minimize impacts to transit services and ROW negotiations
- Tualatin Hills Park & Recreation District (THPRD) – oversight and management of day-to-day project activities, ROW negotiations and coordination with ODOT, local jurisdictions and stakeholders
- Community groups and organization involved in transportation issues – input and review of project development plans
- General Public – input and review of project development plans

Major Project deliverables/milestones planned for this reporting period of the UPWP, FY 2018-2019

- Continuing in phase I. Determine the preferred trail alignment.
- Complete a 30% PE package and develop a prospectus.
- Prepare amendment for phase II PE, ROW acquisition and final design.
- Quarterly progress reports to Metro.
- Begin phase II, preliminary engineering, ROW acquisition and final design

Schedule for Completing Activities:

Phase I planning - Qtr 2 2017-2018 thru Qtr 2, 2018 - 2019.

Phase II - Qtr 2, 2018-2019 thru Qtr 3, 2019-2020.

Phase II - Qtr 4, 2019-2020 thru Qtr 4, 2020-2021.

Entities Responsible for Activity:

- Metro
- Oregon Department of Transportation (ODOT)
- Federal Transit Administration (FTA)
- TriMet
- Tualatin Hills Park & Recreation District (THPRD)
- Community groups and organization involved in transportation issues
- General Public

Other Stakeholders:

- City of Beaverton
- Washington County
- Oregon Department of Transportation (ODOT)
- TriMet

- Metro Council
- Federal Highway Administration (FHWA)
- Interested Public

Budget for Project FY 2018-2019

- \$1,141,000 – Total Budget
 - \$800,000 – Federal Funds (for project development and preliminary engineering
 - \$91,000 – Local Funds for project development and preliminary engineering
 - \$250,000 – Local Funds for right-of-way

MEMORANDUM OF UNDERSTANDING
BETWEEN METRO AND
SOUTH METRO AREA REGIONAL TRANSIT
IMPLEMENTING
MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY ACT (MAP-21)

This MEMORANDUM OF UNDERSTANDING (MOU) is made and entered into by and between **METRO**, the Portland Urbanized Area Metropolitan Planning Organization (MPO), acting by and through its elected officials, hereinafter referred to as METRO, and the **SOUTH METRO AREA REGIONAL TRANSIT**, acting by and through its elected officials, hereinafter referred to as SMART, collectively referred to as the Parties.

WITNESSETH,

WHEREAS, by authority granted in ORS 190.110, units of local government or state agencies may enter into agreements for the performance of any or all functions and activities that parties to the agreement, or their officers or agents, have the authority to perform, and

WHEREAS, intergovernmental agreements defining roles and responsibilities for transportation planning between the MPO for an area and the public transit operator(s) for the area are required by MAP-21 and the Code of Federal Regulations (CFR), Chapter 23, Section 450.314; and

WHEREAS, METRO and SMART are mutually interested in the implementation of a multimodal transportation system and the Parties agree to consultation and coordination in the development of the Regional Transportation Plan (RTP), Metropolitan Transportation Improvement Program (MTIP), Regional Travel Options (RTO) program, multi-modal corridor studies, Transit Environmental Impact Statements/ Preliminary Engineering, Unified Planning Work Program (UPWP), and SMART's short-term Transit Investment Plan; and

WHEREAS, the Metropolitan Transportation Planning program is in the mutual interest of METRO and SMART and they mutually agree to appropriate funding shares to support the program; and

WHEREAS, METRO and SMART have responsibilities for complying with Federal, State, and Local regulations related to transportation and the provision of public transit; and

WHEREAS, METRO and SMART acknowledge that SMART is represented by the position for the "Cities of Clackamas County" on the Joint Policy Advisory Committee on Transportation (JPACT) and the Transportation Policy Alternatives Committee (TPAC).

NOW THEREFORE, the premises being in general as stated in the foregoing, it is agreed by and between the Parties hereto as follows:

TERMS OF AGREEMENT

1. Pursuant to the authority above, METRO and SMART agree to define roles and responsibilities in carrying out the metropolitan transportation planning process, as further described in this MOU.
2. The term of this MOU will begin on July 1, 2014 and will terminate on June 30, 2017.
3. This MOU may be revisited and modified as needed, when the Parties so determine.

METRO Agrees to:

1. Adopt and maintain the RTP and the MTIP as required by the Oregon Transportation Planning Rule and for coordination of METRO and SMART public involvement processes.
2. Provide for a coordinated, cooperative, and continuing transportation planning and programming process.
3. Manage the operation of JPACT and TPAC.
4. Develop the Congestion Management Process that is inclusive of transit, transportation demand management, and traffic operations strategies as required by federal regulations.
5. Coordinate with the Oregon Department of Transportation (ODOT) to develop and maintain regional Intelligent Transportation Systems (ITS) architecture for traffic and transit operations.
6. Conduct multimodal corridor alternative analyses, in cooperation with SMART and affected local governments, in corridors needing a major transportation investment, as called for in local or regional transportation plans.
7. Be the federally designated lead agency for transit New Starts planning as prescribed by the process administered by the Federal Transit Administration through the conduct of a multi-modal corridor alternatives analysis and selection of a locally preferred alternative (or similar designation) as adopted by the METRO Council and other participating agencies. This will apply to major transit projects that have been identified in local or regional transportation plans and are expected to seek federal funds.
8. Lead the preparation of National Environmental Policy Act (NEPA) documents, including draft and final environmental impact statements in cooperation with SMART and affected local governments, in those corridors where a transit project has been designated as the locally preferred alternative or other similar designation by the METRO Council following completion of a multimodal corridor alternatives analysis or where a locally developed transit project anticipates seeking federal funding.
9. Prepare data as necessary to fulfill the requirements of the Federal Transit Administration's New Starts Reporting requirements.
10. Prepare for METRO Council adoption any ordinances, resolutions, and reports required to meet appropriate federal, state, and regional requirements in the development and advancement of federally funded major transit projects.
11. Conduct air quality conformity determinations for transportation plans, programs, and projects as required by federal and state regulations.
12. Develop, maintain, and analyze transportation-related data and GIS information for use in transportation planning studies.
13. Maintain and update regional travel forecasting models for the Portland metropolitan area, that provide base year and future year travel estimates for person trips, transit trips, and walk/bike trips.
14. Consult with SMART on development of the annual UPWP and include work elements of interest to SMART to the extent feasible within funding constraints.
15. Coordinate with SMART on early, ongoing, and responsive public involvement activities, as required by federal, state, and locally mandated rules and regulations, in the transportation planning and programming process.

SMART Agrees to:


1. Coordinate and consult with METRO on development of transit plans and programs as they relate to performance of the regional transportation system. These include but are not limited to: a short-term Transit Investment Plan, Employee Commute Trip Reduction Plans, ADA Paratransit Service Plans, transit management system planning, development of appropriate ITS architecture, SMART annual service plan, High Capacity Transit (HCT) planning, access to jobs and reverse commute programs, other transit services planning, pedestrian access to transit planning, and park-and-ride facility planning. SMART shall also provide program and policy development guidance and technical

assistance in preparing transit elements of the RTP that relate to the SMART system and its interface with the Tri-County Metropolitan Transportation District of Oregon (TriMet) and other public and private transit providers. This includes development of proposed transit networks for regional travel forecasting models.

2. Coordinate closely with METRO regarding transit system projects requiring a major transportation investment such as a New Starts or Small Starts projects, and the development of related transit Environmental Impact Statements/Preliminary Engineering. Such efforts may include but are not limited to assistance in route and transit system planning, design, and estimating capital and operating costs.
3. Cooperate with METRO to continue to improve the cost-effective delivery of planning and preliminary engineering services where required and to ensure planning and engineering work for New Starts projects are adequately funded.
4. Coordinate with METRO in collection and analysis of transit related data utilized to complete National Transit Database (NTD) reports.
5. Submit the following for review and/or consideration of adoption by JPACT and the METRO Council:
 - a. The short-term Transit Investment Plan with documentation of its consistency with the RTP.
 - b. The annual Paratransit Service Plan with documentation of compliance with Federal regulations and the RTP.
 - c. Projects for inclusion in the MTIP/STIP.
6. Consult with METRO on development of the annual UPWP to include work elements of interest to SMART to the extent feasible within funding constraints.
7. Assist METRO with preparation of the annual Regional Travel Options Report.
8. Coordinate with SMART's JPACT and TPAC representatives to address policy issues that affect transit in the region.
9. Provide annual funding toward work elements of interest to SMART in METRO's transportation planning work program.
10. Coordinate public involvement activities with METRO in the transportation planning and programming process, as required by state and federal planning regulations,

IT IS MUTUALLY AGREED:

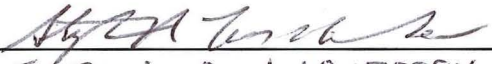
The undersigned agencies in the State of Oregon, in accordance with CFR, Chapter 23, Section 450.314 (MPO Agreements) do hereby mutually agree to consult and coordinate in carrying out transportation planning and programming the Portland Urbanized Area as required by this Subpart.



Martha Bennett
Chief Operating Officer
Metro

4/28/14

Date



STEPHAN A. LASHBROOK
TRANSIT DIRECTOR
SMART

4/18/14

Date

V. OTHER PLANNING RELATED INFORMATION

FY 2018-19 Unified Planning Work Program Funding Summary

3/13/2018

ODOT Key #	FFY 2018 PL	FFY 18	FY 17	STBG ²	STBG ²	TriMet	ODOT	Corridor &	Corridor &	RTO	TSMO	Creating	EVA	RTO	TSMO	SWEDS	Other	Metro/Loca	Total
	1	Sec	Sec	In Lieu of	FY 17	Support	Support	Systems	Systems	STBG/	STBG ²	Streets	STBG ²	ODOT ²	STBG ²	FTA	Anticipated	I Match	
	21271	21271	19801	21271	19281			20887	19294/1929	19290/1929	21041	19843	19902						
METRO																			
General MPO Transportation Planning																			
1 Transportation Planning	665,787	33,759	-	307,521	90,224	-	-	-	-	-	-	-	-	-	-	-	-	49,388	1,146,679
2 Regional Transportation Plan Update	253,272	168,253	77,410	43,913	-	-	-	-	-	-	-	-	-	-	-	-	-	33,143	575,991
3 Regional Transit Strategy	16,230	4,137	-	25,045	45,257	-	-	-	-	-	-	-	-	-	-	-	-	8,520	99,189
4 Metropolitan Transportation Improvement Program (MTIP)	49,999	369,158	-	630,434	44,536	-	-	-	-	-	-	-	-	-	-	-	-	119,505	1,213,632
5 Air Quality Program	43,674	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43,674
6 Civil Rights	156,544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	156,544
7 Transportation System Management& Operations (TSMO) - Regional Mobility Program	-	-	-	8,979	-	-	-	-	-	-	69,010	-	-	-	-	-	-	8,926	86,915
8 Transportation System Management& Operations (TSMO) - Regional Travel Options	-	-	-	-	-	-	-	-	-	2,802,835	-	-	-	172,219	-	-	-	130,646	3,105,700
9 Regional Freight Program	-	-	-	49,242	-	-	-	-	-	-	-	-	-	-	-	-	-	5,636	54,878
10 Data Management, Data Visualization and Performance Measurement	211,448	-	-	-	-	236,582	183,490	-	-	-	-	-	-	-	-	-	55,000	911,868	1,598,388
11 Economic Demographic and Land Use Forecasting Maintenance	162,105	-	-	7,286	-	-	-	-	-	-	-	-	-	-	-	-	-	114,966	284,357
12 Travel Forecast Maintenance	659,383	-	-	-	-	19,196	98,527	-	-	-	-	-	-	-	-	-	-	250,652	1,027,758
13 Technical Assistance Program	-	-	-	67,979	-	8,418	25,828	-	-	-	-	-	-	-	-	-	-	7,780	110,005
14 MPO Management and Services	276,999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	276,999
15 Regional Safety Program	-	-	-	24,774	-	-	-	-	-	-	-	-	-	-	-	-	-	2,835	27,609
MPO Planning Projects																			
1 Mobility Policy Refinement Planning	-	-	-	52,934	-	-	-	-	-	-	-	-	-	-	-	-	-	6,059	58,993
2 Complete Streets	2,500	-	-	26,374	134,271	-	-	-	-	-	-	50,000	-	-	-	-	-	21,856	235,001
3 Transportation System Management& Operations -- Plan Update	-	-	-	-	-	-	-	-	-	-	-	-	-	-	271,728	-	-	31,100	302,828
4 Economic Demographic and Land Use Forecasting Development & Application Program	65,417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	115,869	181,286
5 Travel Forecast Development & Application	505,473	-	-	-	-	-	15,682	-	-	-	-	-	-	-	-	-	-	-	521,155
6 Corridor Refinement and Project Development	-	-	-	-	136,563	-	-	432,984	-	-	-	-	-	-	-	-	745,777	76,040	1,391,364
7 Powell-Division Transit Corridor Project	-	-	-	-	-	-	-	-	500,000	-	-	-	-	-	-	-	-	57,227	557,227
8 Southwest Corridor Plan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	216,977	2,159,811	342,486	2,719,274
9 Economic Value Atlas (EVA)	-	-	-	-	-	-	-	-	-	-	-	-	25,557	-	-	-	-	308,781	334,338
10 Red Line Enhancement	-	-	-	-	-	-	-	103,407	-	-	-	-	-	-	-	-	-	25,461	128,868
Metro Subtotal	3,068,831	575,307	77,410	1,244,481	450,851	264,196	323,527	536,391	500,000	2,802,835	69,010	50,000	25,557	172,219	271,728	216,977	2,960,588	2,628,744	16,238,652
GRAND TOTAL																			
	3,068,831	575,307	77,410	1,244,481	450,851	264,196	323,527	536,391	500,000	2,802,835	69,010	50,000	25,557	172,219	271,728	216,977	2,960,588	2,628,744	16,238,652

¹ PL funds include \$1,016,912 carryover from FY 17 and ODOT match

² Federal funds only, no match included

³ Reflects Local Contributions to projects; sales; Regional Bonded Funding via TriMet

M:\plan\trp\projects\UPWP\2018-2019\Updated narratives for 2018-19 UPWP\Narratives ready for formatting\Formatted\FY19 UPWP Requested Summary 03132018.srb

Southwest Washington Regional Transportation Council
Unified Planning Work Program
Placeholder



If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we’ve already crossed paths.

So, hello. We’re Metro – nice to meet you.

In a metropolitan area as big as Portland, we can do a lot of things better together. Join us to help the region prepare for a happy, healthy future.

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Sam Chase, District 5

Bob Stacey, District 6

Auditor

Brian Evans

600 NE Grand Ave.

Portland, OR 97232-2736

503-797-1700

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO.18-4877, FOR THE PURPOSE OF ADOPTING THE FISCAL YEAR 2018-19 UNIFIED PLANNING WORK PROGRAM

Date: April 10, 2018

Prepared by: John Mermin
(503) 797-1747

BACKGROUND

The Unified Planning Work Program (UPWP) is developed annually by Metro as the Metropolitan Planning Organization (MPO) for the Portland Metropolitan Area. It is a federally-required document that serves as a guide for transportation planning activities to be conducted over the course of each fiscal year, beginning July 1.

The UPWP is developed by Metro with input from local governments, TriMet, ODOT, the Port of Portland, FHWA, and FTA. Included in the UPWP are detailed descriptions of the transportation planning tasks, listings of various activities, and a summary of the amount and source of state and federal funds to be used for planning activities.

ANALYSIS/INFORMATION

1. **Known Opposition** – No known opposition
2. **Legal Antecedents** – this resolution adopts a UPWP for the Portland metropolitan area, as defined in Title 23 of the Code of Federal Regulations, Parts 450 and 420, and title 49, of the Code of Federal Regulations, Part 613.
3. **Anticipated Effects** – Approval means that grants can be submitted and contracts executed so work can commence on July 1, 2018 in accordance with established Metro priorities.
4. **Budget Impacts** – Approval of this resolution is a companion to the UPWP. It is a prerequisite to receipt of Federal planning funds and is, therefore, critical to the Metro budget. The UPWP matches projects and studies reflected in the proposed Metro budget submitted by the Metro Chief Operating Officer to the Metro Council. The UPWP is subject to revision in the final adopted Metro budget.

RECOMMENDED ACTION

Approve Resolution No.18-4877 adopting a Unified Planning Work Program for the Fiscal Year 2018-19.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADDING OR AMENDING	)	RESOLUTION NO. 18-4876
EXISTING PROJECTS TO THE 2018-21)	
METROPOLITAN TRANSPORTATION	)	Introduced by: "Chief Operating Officer
IMPROVEMENT PROGRAM INVOLVING FIVE	)	Martha Bennett in concurrence with
PROJECTS REQUIRING PROGRAMMING	)	Council President Tom Hughes"
ADDITIONS, CORRECTIONS, OR)	
CANCELLATIONS IMPACTING METRO,)	
MULTNOMAH COUNTY, ODOT, AND)	
PORTLAND (MA18-07-MAR))	

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) prioritizes projects from the Regional Transportation Plan (RTP) to receive transportation related funding; and

WHEREAS, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council approved the 2018-21 MTIP via Resolution 17-4817 on July 27, 2017; and

WHEREAS, JPACT and the Metro Council must approve any subsequent amendments to add new projects or substantially modify existing projects in the MTIP; and

WHEREAS, the U.S. Department of Transportation (USDOT) has issued clarified MTIP amendment submission rules and definitions for MTIP formal amendments and administrative modifications that both ODOT and all Oregon MPOs must adhere to which includes that all new projects added to the MTIP must complete the formal amendment process; and

WHEREAS, two of the five projects are important safety protective fencing projects that need to be added to the 2018 MTIP and received their funding approval from the Oregon Transportation Commission (OTC) during their December 2017 meeting ; and

WHEREAS, Multnomah County's Burnside St – Burnside (Willamette River) Bridge East Approach fencing project and the city of Portland's NE 12th Ave Over I-84 Union Pacific RR Bridge fencing project will construct necessary protective safety/screening fencing providing traveling motorists additional safety, and reflects ODOT's compliance with Statute (ORS) 366.462 requiring all freeway overpasses constructed after November 4, 1994 to have fences designed to deter persons from throwing objects from the overpasses onto the freeways; and

WHEREAS, Metro's new SFY19 Planning funding project will provide the require planning funds to cover the identified costs in Metro's new draft 2018-2019 Unified Planning Work Program currently moving through Metro's approval process plus ensures the new planning funds allocation can be obligated by July 2018 allowing expenditures to start as of July 2018 as required; and

WHEREAS, the city of Portland's St Johns Truck Strategy – Phase II proposes a significant scope change to remove the intersection modification to North Portland Rd/Columbia Blvd as a noncritical scope element while keeping it on the side with a plan to potentially fund it later with local System Development Charge funds, and adds approximately \$1.3 million in city local funds keep the project within the revised budget limitations for the remaining scope elements to be able to deliver the project; and

WHEREAS, the funding split from Key 20414, ODOT's Road Safety Audit Implementation will shift \$775,000 to Key 21071, ODOT's SW Naito Pkwy – SW Huber St Phase 2 project, \$40,000 to Key 18789, ODOT's OR213 at S Union Mills Rd project, and \$500,000 to ODOT's project Key 21289 to assist in better fund leveraging of their All Roads Safety Transportation (ARTS) Program; and

WHEREAS, all amended projects were evaluated against six revised MTIP review factors to ensure all requested changes and additions can be accomplished legally through the MTIP amendment process; and

WHEREAS, the MTIP review factors included project eligibility/proof of funding, RTP consistency with the financially constrained element, consistency with RTP goals and strategies, determination of amendment type, inclusion in the Metro transportation regional models, determination of Regional Significance, fiscal constraint verification, and compliance with MPO MTIP federal management responsibilities; and

WHEREAS, the MTIP's financial constraint finding is maintained as all projects proof of funding has been verified; and

WHEREAS, no negative impacts to air conformity will exist as a result of the changes completed through the February 2018 Formal MTIP Amendment; and

WHEREAS, all projects included in the February 2018 Formal MTIP Amendment successfully completed a required 30-day public notification/opportunity to comment period without any significant issues raised; and

WHEREAS, TPAC received their notification and recommended approval on March 9, 2018 and approved the amendment recommendation to JPACT; now therefore

BE IT RESOLVED that the Metro Council hereby adopts the recommendation of JPACT on March 15, 2018 to formally amend the 2018-21 MTIP to include the March 2018 Formal Amendment bundle consisting of five projects.

ADOPTED by the Metro Council this ____ day of _____ 2018.

Tom Hughes, Council President

Approved as to Form:

Alison R. Kean, Metro Attorney

2018-2021 Metropolitan Transportation Improvement Program
Exhibit A to Resolution **18-4876**



Proposed March 2018 Formal Amendment Bundle
Amendment Type: **FORMAL, MA18-07-MAR**
Total Number of Projects: **5**

ODOT Key	Lead Agency	Project Name	Required Changes
Project #1 21284	Multnomah County	Burnside St: Burnside (Willamette River) Bridge East Approach	ADD NEW PROJECT: The project is being added to the 2018 MTIP and is being funded from the bridge overpass protective screening program. Constructing the fence on this freeway overpass will improve safety for motorists.
Project #2 21271	Metro	Portland Metro Planning SFY19	ADD NEW PROJECT: The project is being added to the 2018 MTIP and support required MPO transportation planning activities that USDOT mandates the MPO to complete
Project #3 21283	Portland	NE 12th Ave Over I-84 & Union Pacific RR Bridge (Portland)	ADD NEW PROJECT: The project is being added to the 2018 MTIP and is being funded from the bridge overpass protective screening program. Constructing the fence on this freeway overpass will improve safety for motorists.
Project #4 18819	Portland	St Johns Truck Strategy Phase II	SCOPE CHANGE: The amendment reflects a significant scope change to the project due to budget limitations. The North Portland Rd/Columbia Blvd intersection realignment is being removed from the project through the formal amendment
Project #5 20414	ODOT	Road Safety Audit Implementation	COST DECREASE/FUNDING SPLIT: This amendment reduces the overall programming amount of committed HSIP to the project. \$1,655,000 in committed funding is being split off this project and re-programmed to Keys 21071, 18789, and 21289.

Exhibit A to Resolution 18-4876

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #1 EXISTING MTIP PROGRAMMING - None **New Project**

PROJECT #1 PROPOSED AMENDED CHANGES

ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
21284	TBD	Multnomah County	Burnside St: Burnside (Willamette River) Bridge East Approach					Highway	\$ 650,000
Project Description:			On Burnside St at I-5, construct protective fencing for Burnside St Bridge east approach to provide safety to the traveling motorist						
Amended MTIP Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Other	Construction	Total
NHPP-FAST	Z001	Federal	2019		\$ 71,784				\$ 71,784
State	Match	State	2019		\$ 8,216				\$ 8,216
NHPP-FAST	Z001	Federal	2020					\$ 511,461	\$ 511,461
State	Match	State	2020					\$ 58,539	\$ 58,539
Total:			\$ -	\$ 80,000	\$ -	\$ -	\$ 570,000	\$ 650,000	
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. NHPP-FAST = Federal National Highways Performance Program (FAST Act) funds								
	3. State = General state funds provided by the lead agency in support of the required match to the federal funds.								

Amendment Summary

This is a new project being added to the 2018 MTIP. The project will provide protective safety fencing to traveling motorists. The approved funding for this project originates from the bridge overpass screening program. Approval from the Oregon Transportation Commission (OTC) was required for this project. OTC approval occurred during their December 2018 meeting.

Exhibit A to Resolution 18-4876

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #2 EXISTING MTIP PROGRAMMING - None New Project

PROJECT #2 PROPOSED AMENDED CHANGES

ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
21271	TBD	Metro	Portland Metro Planning SFY19					Other	\$ 4,079,989
Project Description:			For Metro, annual MPO planning funds for federal fiscal year 2019 in support of UPWP and other planning activities the MPO is required to complete.						
Amended MTIP Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Way	Other	Construction	Total
STP>200K	Z230	Federal	2018	\$ 1,244,481					\$ 1,244,481
Local	Match	Local	2018	\$ 142,436					\$ 142,436
PL	Z450	Federal	2018	\$ 1,841,187					\$ 1,841,187
State	Match	State	2018	\$ 210,732					\$ 210,732
5303	Z277D	Federal	2018	\$ 575,307					\$ 575,307
Local	Match	Local	2018	\$ 65,846					\$ 65,846
Total:				\$ 4,079,989	\$ -	\$ -	\$ -	\$ -	\$ 4,079,989
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. STP>200K = Federal Surface Transportation Program funds allocated to urban MPO areas with populations greater than 200,000								
	3. State = General state funds provided by the lead agency in support of the required match to the federal funds.								
	4. PL = Federal planning funds normally allocated to the MPO in support of required planning activities								
	5. 5303 = Federal transit planning funds allocated to support transit related planning activities								
	6. Local = General local funds the lead agency provides in support of the required match to the federal funds.								

Amendment Summary

This is a new project being added to the 2018 MTIP. Per agreement with USDOT, the planning funds are authorized to be programmed in FFY 2018 with a planned obligation at the beginning of the 2019 State Fiscal Year 2019 (July 2018). Funding is allocated to Metro to complete various required planning activities in support of the Regional Transportation Plan (RTP). Metropolitan Transportation Improvement Program (MTIP), and other regional transportation planning studies

Exhibit A to Resolution 18-4876

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #3 EXISTING MTIP PROGRAMMING - None **New Project**

PROJECT #3 PROPOSED AMENDED CHANGES

ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
21283	TBD	Portland	NE 12th Ave Over I-84 & Union Pacific RR Bridge (Portland)					Highway	\$ 250,000
Project Description:			On NE 12th Ave over I-84, construct protective fencing for the 12th Ave bridge to provide safety to the traveling motorist						
Amended MTIP Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Other	Construction	Total
NHPP-FAST	Z001	Federal	2019		\$ 40,378				\$ 40,378
State	Match	State	2019		\$ 4,622				\$ 4,622
NHPP-FAST	Z001	Federal	2020					\$ 183,946	\$ 183,946
State	Match	State	2020					\$ 21,054	\$ 21,054
Total:				\$ -	\$ 45,000	\$ -	\$ -	\$ 205,000	\$ 250,000
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. NHPP-FAST = Federal National Highways Performance Program (FAST Act) funds								
	3. State = General state funds provided by the lead agency in support of the required match to the federal funds.								

Amendment Summary

This is a new project being added to the 2018 MTIP. The project will provide protective safety fencing to traveling motorists. The approved funding for this project originates from the bridge overpass screening program. Approval from the Oregon Transportation Commission (OTC) was required for this project. OTC approval occurred during their December 2018 meeting.

Exhibit A to Resolution 18-4876

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #4 EXISTING MTIP PROGRAMMING									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
18819	70773	Portland	St Johns Truck Strategy Phase II					Highway	\$ 3,345,990
Project Description:		Freight mobility - bicycle and pedestrian safety improvements							
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
State STP-FLX	M240	Federal	2016		\$ 733,764				\$ 733,764
Local	Match	Local	2016		\$ 83,983				\$ 83,983
State STP-FLX	M240	Federal	2017			\$ 78,334			\$ 78,334
Local	Match	Local	2017			\$ 8,966			\$ 8,966
State STP-FLX	M240	Federal	2018				\$ 2,190,258		\$ 2,190,258
Local	Match	Local	2018				\$ 250,685		\$ 250,685
Total:			\$ -	\$ 817,747	\$ 87,300	\$ 2,440,943	\$ -	\$ 3,345,990	
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. Funding programmed in years before 2018 are considered prior obligated and will be shown in the prior obligated total for the project in the 2018 MTIP. They are shown above in their programming years in the shaded fields. The funding is still committed to the project, but is now obligated in a prior year outside of the current 2018 MTIP. The funding in that year is referred to as "prior obligated".								
	3. State STP-FLX = Federal Surface Transportation Program (Flex) allocated and managed by ODOT								
	4. Local = local funds the lead agency commits to the project as part of the required match to the awarded federal funds.								

Amendment Summary

Above reflects current pre-amendment project programming. Proposed amended changes are stated on the next page

PROJECT #4 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
18819	70773	Portland	St Johns Truck Strategy Phase II					Highway	\$ 4,519,092
Project Description:		Freight mobility—bicycle and pedestrian safety improvements— Construct roadway safety improvements to N Lombard, N Fessenden/St Louis, and N Columbia Way corridors.							
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other	Total
TIFIA	M040	Federal	2016		\$ 733,764				\$ 733,764
Local	Match	Local	2016		\$ 83,983				\$ 83,983
OTHER	OTH0	Local	2018			\$ 138,045			\$ 138,045
State STP-FLX	M240	Federal	2018				\$ 2,268,592		\$ 2,268,592
Local	Match	Local	2018				\$ 259,651		\$ 259,651
OTHER	OTH0	Local	2018				\$ 1,035,057		\$ 1,035,057
									\$ -
Total:				\$ -	\$ 817,747	\$ 138,045	\$ 3,563,300	\$ -	\$ 4,519,092
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. Funding programmed in years before 2018 are considered prior obligated and will be shown in the prior obligated total for the project in the 2018 MTIP. They are shown above in their programming years in the shaded fields.								
	3. TIFIA = Federal funds that were re-distributed back to the States during 2015 for additional programming needs.								
	4. OTHER = Local funds contributing to the project that are not local matching funds, but are to cover the phase costs or used as local overmatch.								
	5. State STP-FLX = Federal Surface Transportation Program (Flex) allocated and managed by ODOT								
	6. Local = local funds the lead agency commits to the project as part of the required match to the awarded federal funds.								
<p style="text-align: center;"><u>Amendment Summary</u></p> <p>The amendment reflects a major scope change to the project due to budget limitations. The initial North Portland Rd/ Columbia Blvd intersection planned scope improvement is being removed from the project. The updated cost estimate for all three scope elements exceeded the available project funding. The updated cost estimate with all three scope activities totals \$7.4 million. The North Portland RD/Columbia Blvd intersection improvement costs have been estimate now at \$3.04 million. The removal of the North Portland Rd/Columbia Blvd intersection enables the other two scope elements for traffic calming to N St Louis/Fessenden, and safety improvements to North Lombard can continue as part of the project and are considered higher priorities. Removing the North Portland Rd/Columbia Blvd scope eliminates a planned re-alignment of the intersection geometry and replacement of a traffic signal. The City is considering completing these improvements at a later date. The project also adds storm water mitigation management to the scope for the North St Johns/Lombard intersection.</p>									

Exhibit A to Resolution 18-4876

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #5 EXISTING MTIP PROGRAMMING									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
20414	70970	ODOT	Road Safety Audit Implementation					Local Road	\$ 3,034,244
Project Description:			Address unanticipated safety improvements as identified						
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
HSIP-FAST	ZS30	Federal	2019					\$ 3,034,244	\$ 3,034,244
									\$ -
Total:			\$ -	\$ -	\$ -	\$ -	\$ 3,034,244	\$ 3,034,244	

PROJECT #5 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
20414	70970	ODOT	Road Safety Audit Implementation					Local Road	\$ 1,719,244
Project Description:			Address unanticipated safety improvements as identified						
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
HSIP-FAST	ZS30	Federal	2019					\$ 1,719,244	\$ 1,719,244
									\$ -
Total:				\$ -	\$ -	\$ -	\$ -	\$ 1,719,244	\$ 1,719,244

- Notes:
1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.
 2. Funding programmed in years before 2018 are considered prior obligated and will be shown in the prior obligated total for the project in the 2018 MTIP. They
 3. HSIP-FAST = Federal Highway Safety Improvement Program funding (from the FAST Act) allocated to and managed by ODOT. This HSIP fund category = 100% federal funds with no required matching funds.

Amendment Summary

This amendment reduces the authorized funding to the project which was split off and planned to be committed to other projects. \$775k is split to Key 21071 OR99OR99W: SW Naito Pkwy - SW Huber St Phase 2 as approved by OTC on 5/18/17 and \$40,000 to K18789 OR213 at S Union Mills Rd and \$500,000 to K21289 as approved by OTC on 1/18/18

Memo

Date: Thursday, March 15, 2018
To: JPACT and Interested Parties
From: Ken Lobeck, Funding Programs Lead, 503-797-1785
Subject: March 2018 MTIP Formal Amendment plus Approval Request of Resolution 18-4876

STAFF REPORT

FOR THE PURPOSE OF ADDING OR AMENDING EXISTING PROJECTS TO THE 2018-21 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM INVOLVING FIVE PROJECTS REQUIRING PROGRAMMING ADDITIONS, CORRECTIONS, OR CANCELLATIONS IMPACTING METRO, MULTNOMAH COUNTY, ODOT AND PORTLAND (MA18-07-MAR)

BACKGROUND

What this is:

The March 2018 Formal Metropolitan Transportation Improvement Program (MTIP) Amendment bundle contains required changes and updates impacting Metro, Multnomah County, ODOT and Portland. Five projects are included in the amendment bundle. Three of the five projects in the March 2018 bundle are new projects being added to the 2018 MTIP. They are summarized in the below table:

2018-2021 Metropolitan Transportation Improvement Program Exhibit A to Resolution 18-4876			
Proposed March 2018 Formal Amendment Bundle Amendment Type: FORMAL, MA18-07-MAR Total Number of Projects: 5			
ODOT Key	Lead Agency	Project Name	Required Changes
Project #1 21284	Multnomah County	Burnside St: Burnside (Willamette River) Bridge East Approach	ADD NEW PROJECT: The project is being added to the 2018 MTIP and is being funded from the bridge overpass protective screening program. Constructing the fence on this freeway overpass will improve safety for motorists.
Project #2 21271	Metro	Portland Metro Planning SFY19	ADD NEW PROJECT: The project is being added to the 2018 MTIP and support required MPO transportation planning activities that USDOT mandates the MPO to complete
Project #3 21283	Portland	NE 12th Ave Over I-84 & Union Pacific RR Bridge (Portland)	ADD NEW PROJECT: The project is being added to the 2018 MTIP and is being funded from the bridge overpass protective screening program. Constructing the fence on this freeway overpass will improve safety for motorists.
Project #4 18819	Portland	St Johns Truck Strategy Phase II	SCOPE CHANGE: The amendment reflects a significant scope change to the project due to budget limitations. The North Portland Rd/Columbia Blvd intersection realignment is being removed from the project through the formal amendment
Project #5 20414	ODOT	Road Safety Audit Implementation	COST DECREASE/FUNDING SPLIT: This amendment reduces the overall programming amount of committed HSIP to the project. \$1,655,000 in committed funding is being split off this project and re-programmed to Keys 21071, 18789, and 21289.

What is the requested action?

TPAC requests JPACT's approval recommendation to Metro Council for resolution 18-4876 enabling the five identified projects to be amended correctly into the 2018 MTIP, with final approval to occur from USDOT.

A detailed summary of the five projects being amended is provided in the below tables:

1. Project: Burnside St: Burnside (Willamette River) Bridge East Approach	
Lead Agency:	Multnomah County
ODOT Key Number:	21284 MTIP ID Number: TBD
Project Description:	On Burnside St at I-5, construct protective fencing for Burnside St Bridge east approach to provide safety to the traveling motorist
What is changing?	Through this formal amendment, the new project is being added to the 2018 MTIP.
Additional Details:	<p><u>From the December 2017 OTC Staff Report:</u></p> <p>Oregon Revised Statute (ORS) 366.462 requires that all freeway overpasses constructed after November 4, 1993 have fences that are designed to deter persons from throwing objects from the overpasses onto the freeways. This statute also requires that the Oregon Department of Transportation (ODOT) develop a prioritization system to construct fences first on those overpasses that involve the greatest risks, and to construct at least 15 fences per year on existing freeway overpasses.</p> <p>Currently 12 freeway overpasses in Region 1 do not have fences. The intent is to complete the fences on these remaining freeway overpasses as part of the 2018-2021 STIP.</p> <p>The Burnside Bridge (bridge 00511) is owned by Multnomah County. The eastern approaches (bridge 00511B) cross over Interstate 5, three Interstate 5 connections, and several rail lines. Constructing the fence on this freeway overpass will improve safety for motorists and move ODOT closer to completion of this program. Since this local agency bridge crosses a freeway, the state will provide the funding to install the fencing. ODOT prioritized this location because this bridge has sidewalks and is in an urban area. Funding for this project will come from the bridge overpass protective screening program. The budget for this program is \$1.5 million per year.</p>
Why a Formal amendment is required?	Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized requires a formal amendment.
Total Programmed Amount:	\$80,000 of National Highway Performance Program (NHPP) + match for Preliminary Engineering plus \$570,000 of NHPP + match for the Construction phase for a total programmed amount of \$650,000
Added Notes:	OTC approval required and occurred during their December 2017 meeting.

2. Project: Portland Metro Planning SFY2019	
Lead Agency:	Metro
ODOT Key Number:	21271 MTIP ID Number: TBD
Project Description:	For Metro, annual MPO planning funds for federal fiscal year 2019 in support of UPWP and other planning activities the MPO is required to complete.
What is changing?	This is a new project being added to the 2018 MTIP. Per agreement with USDOT, the planning funds are authorized to be programmed in FFY 2018 with a planned obligation at the beginning of the 2019 State Fiscal Year (July 2018).
Additional Details:	<p>The STP/STBG, PL, and 5303 Planning funds are allocated to Metro on an annual basis directly from ODOT-Salem and are used to fund the required activities within the Unified Planning Work Program (UPWP). These activities are required planning activities approved by USDOT and are in compliance with 23 CFR 450.308 and 23 450.420</p> <p>Funding is allocated to Metro to complete various required planning activities identified in the annual UPWP that support the RTP and other regionally significant transportation studies and activities. A few examples of transportation planning</p>

	<p>areas the UPWP funds support include the following:</p> <ul style="list-style-type: none"> - RTP development and management activities - MTIP development, management, and amendment - Regional Transit Strategies - Air Quality program - Designing Livable Streets - Public involvement - Title VI – Environmental Justice - Transportation Systems Management and Operations (TSMO) – Regional Mobility Program - TSMO – Regional Travel Options - Regional Freight Program <p>The Planning funds also support technical areas the MPO must complete including:</p> <ul style="list-style-type: none"> - Geographic Information Systems – Mapping and Land Formation - Economic Demographic and Land Use Forecasting - Model Development Program - Behavior Based Freight Model <p>Finally, the Planning funds support areas within the MPO to complete required administrative services and special corridor planning studies and project of regional significance.</p> <p>The complete list of planning and administrative activities, their scope of work and estimated costs the annual Planning funds support can be seen in the UPWP Metro produces each year.</p>
Why a Formal amendment is required?	Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized requires a formal amendment.
Total Programmed Amount:	Includes \$1,244,481 of STP>200k + match, and \$1,841,187 of PL + match and \$575,307 of 5303 + local match = a total programming amount of \$4,079,989
Added Notes:	UPWP planning fund allocations occur around the same time as the new draft UPWP is moving forward through the approval process.

3. Project:	NE 12th Ave Over I-84 & Union Pacific RR Bridge (Portland)		
Lead Agency:	Portland		
ODOT Key Number:	21283	MTIP ID Number:	TBD
Project Description:	On NE 12th Ave over I-84, construct protective fencing for the 12th Ave bridge to provide safety to the traveling motorist		
What is changing?	The amendment adds a new project to the 2018 MTIP.		
Additional Details:	<p><u>From the December 2017 OTC Staff Report:</u></p> <p>The project will provide protective safety fencing to traveling motorists. The approved funding for this project originates from the bridge overpass screening program. Funding for this project will come from the bridge overpass protective screening program. The budget for this program is \$1.5 million per year.</p> <p>Oregon Revised Statute (ORS) 366.462 requires that all freeway overpasses constructed after November 4, 1993 have fences that are designed to deter persons from throwing objects from the overpasses onto the freeways. This statute also requires that the Oregon Department of Transportation (ODOT) develop a prioritization system to construct fences first on those overpasses that involve the greatest risks, and to construct at least 15 fences per year on existing freeway overpasses.</p>		

	<p>Currently 12 freeway overpasses in Region 1 do not have fences. The intent is to complete the fences on these remaining freeway overpasses as part of the 2018-2021 STIP.</p> <p>The Northeast 12th Avenue over Interstate 84 and Union Pacific Railroad Bridge (bridge 07039) is owned by the City of Portland. Constructing the fence on this freeway overpass will improve safety for motorists and move ODOT closer to completion of this program. Since this local agency bridge crosses a freeway, the state will provide the funding to install the fencing. This location was prioritized because this bridge has sidewalks, and is located within one block of Benson High School</p>
Why a Formal amendment is required?	Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized requires a formal MTIP amendment
Total Programmed Amount:	The project is programmed with \$45,000 of federal National Highway Performance Program (NHPP) + match for Preliminary Engineering plus \$205,000 of NHPP + match for construction for a total programming amount of \$250,000
Added Notes:	Approval from the Oregon Transportation Commission (OTC) was required for this project. OTC approval occurred during their December 2017 meeting.

4. Project: St Johns Truck Strategy II	
Lead Agency:	Portland
ODOT Key Number:	18819
MTIP ID Number:	70773
Project Description:	<p>Freight mobility—bicycle and pedestrian safety improvements</p> <p>Construct roadway safety improvements to N Lombard, N Fessenden/St Louis, and N Columbia Way corridors.</p>
What is changing?	<p>The primary project initially included three main safety improvement design elements to construct which included (1) traffic calming on N St Louis/ Fessenden, (2) safety Improvements to N Lombard, and (3) Intersection modifications to N Portland Rd/ Columbia Blvd. However, updated cost estimates revealed the three scope elements would significantly exceed the amount of grant funding for the project.</p> <p>The amendment reflects a major scope change to the project due to budget limitations. The initial North Portland Rd/ Columbia Blvd intersection planned scope improvement is being removed from the project. The updated cost estimate with all three scope activities totals \$7.4 million. The North Portland Rd/Columbia Blvd intersection improvement costs have been estimated now at \$3.04 million.</p> <p>The change does not significantly affect the original Intent of the project. The primary design objective is to reduce the attractiveness of using N St Louis/ Fessenden as an alternative route for freight traffic through the St Johns neighborhood, and instead use the designated freight route around the neighborhood.</p> <p>The earlier Implementation phase of the truck strategy constructed most of significant improvements to encourage freight to use the designated freight route within the strategy. The remaining freight route Improvements will be constructed via the current phase (on N Lombard west of St Louis Ave). The current phase also plans to construct the most significant disincentive element of the strategy, which is traffic calming and pedestrian crossing safety Improvements on N St Louis and Fessenden.</p> <p>The final disincentive element is the intersection improvements at N Portland Rd/ Columbia Blvd Intersection, but are not considered as effective as the traffic calming, and may not even be necessary If the traffic calming element performs well. PBOT</p>

	<p>plans to evaluate the effectiveness of traffic calming Improvements upon completion in terms of reducing cut-through freight traffic. The evaluation will be based primarily on an assessment of how much cut-through truck traffic is still using N St Louis/Fessenden. If more disincentives are needed, and final phase that constructs the N Portland Rd/ Columbia Blvd improvements will be initiated with planned System Development Charge funds allocated to the St Johns Truck Strategy.</p> <p>The removal of the North Portland Rd/Columbia Blvd intersection enables the other two scope elements for traffic calming to N St Louis/Fessenden, and safety improvements to North Lombard can continue as part of the project, and are considered higher priorities. Removing the North Portland Rd/Columbia Blvd scope eliminates a planned re-alignment of the intersection geometry and replacement of a traffic signal.</p> <p>The federal funding for the project originates from ODOT. As a result, ODOT has participated in the reviews and final recommendations for the project's revised scope of work.</p>
Additional Details:	The City is considering completing the removed improvements at a later date. The revised project scope also adds storm water mitigation management to the scope for the North St Johns/Lombard intersection as a result of the reviews.
Why a Formal amendment is required?	The change to the project reflects a significant scope change which requires a formal MTIP Amendment per the FHWA/FTA MTIP STIP Amendment Matrix
Total Programmed Amount:	The total project programmed amount increases from \$3,345,990 to \$4,519,092. The city of Portland is providing an additional \$1,035,057 in local funds for the construction phase to cover the remaining major scope elements.
Added Notes:	OTC approval is also required. The item will go before OTC during their March 2018 meeting. The Metro formal amendment process and OTC approval step is occurring in a concurrent fashion. If OTC does not approve the item, it will be pulled from the March 2018 Formal Amendment bundle and re-submitted at a later date.

5. Project:	Road Safety Audit Implementation		
Lead Agency:	ODOT		
ODOT Key Number:	20414	MTIP ID Number:	70980
Project Description:	Address unanticipated safety improvements as identified		
What is changing?	The amendment reduces the current HSIP funding amount of \$3,034,244 to \$1,719,244 by splitting off existing funding and committing it to other existing ARTS projects		
Additional Details:	<p><u>From the 10/18/2018 OTC Staff Letter:</u></p> <p>The Oregon Department of Transportation (ODOT) conducted a Road Safety Audit (RSA) in July 2015 on Oregon 99 West (Barbur Boulevard) to identify system-wide and location-specific safety issues including short, intermediate, and long term recommendations for improving safety on Oregon 99 West between Southwest Naito Parkway to Southwest Huber Street in the City of Portland. ODOT has since committed to using the recommendations from the RSA to select and fund projects that support goals for short and intermediate term improvements that will improve safety on the corridor.</p> <p>The Barbur RSA report identified inconsistent signage as one of the key safety issues of Southwest Barbur corridor between Naito Parkway and Capitol Highway and suggested overhead signing to increase sign visibility and improve way finding. ODOT evaluated and prioritized recommendations provided by the Barbur RSA team and identified two overhead signs for priority implementation to improve safety in the corridor:</p> <p>Northbound Oregon 99 West :</p> <ul style="list-style-type: none"> • MP 2.01 – south of Southwest Barbur at Southwest Naito Parkway Split, and • MP 2.2 – north of Southwest Bancroft Street. 		

	<p>If the signs are not constructed at these locations, it is possible that ODOT will not fulfill all the safety improvement recommendations in the Barbur Road Safety Audit which could result in more crashes on the corridor.</p> <p>The total cost for the project is approximately \$775,000 and will come from funds set aside in the 2018-2021 Draft STIP from the All Roads Transportation Safety (ARTS) Program to implement the RSA findings.</p>
Why a Formal amendment is required?	Cost changes above 20% to projects with than exiting cost of \$1 million or more require a formal MTIP Amendment
Total Programmed Amount:	The project is programmed 100% federal HSIP (no local or state matching funds required) currently at \$3,034,244. The three funding splits reduce the HSIP programming to \$1,719,244.
Added Notes:	OTC approval was required and occurred during their 1/18/2018 meeting

Note: The Amendment Matrix at right is included as a reference the rules and justification for Formal Amendment and Administrative Modifications that the MPOs and ODOT must follow

METRO REQUIRED PROJECT AMENDMENT REVIEWS

In accordance with 23 CFR 450.316-328, Metro is responsible for reviewing and ensuring MTIP amendments comply with all federal programming requirements. Each project and their requested changes are evaluated against multiple MTIP programming review factors that originate from 23 CFR 450.316-328. The programming factors include:

- Verification as required to programmed in the MTIP:
 - Awarded federal funds and is considered a transportation project
 - Identified as a regionally significant project.
 - Identified on and impacts Metro transportation modeling networks.
 - Requires any sort of federal approvals which the MTIP is involved.
- Passes fiscal constraint verification:
 - Project eligibility for the use of the funds
 - Proof and verification of funding commitment
 - Requires the MPO to establish a documented process proving MTIP programming does not exceed the allocated funding for each year of the four year MTIP and for all funds identified in the MTIP.
- Passes the RTP consistency review:
 - Identified in the current approved constrained RTP either as a stand- alone project or in an approved project grouping bucket
 - RTP project cost consistent with requested programming amount in the MTIP

ODOT-FTA-FHWA Amendment Matrix	
Type of Change	
FULL AMENDMENTS	
1. Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized	
2. Major change in project scope. Major scope change includes: <ul style="list-style-type: none"> • Change in project termini - greater than .25 mile in any direction • Changes to the approved environmental footprint • Impacts to AQ conformity • Adding capacity per FHWA Standards • Adding or deleting worktype 	
3. Changes in Fiscal Constraint by the following criteria: <ul style="list-style-type: none"> • FHWA project cost increase/decrease: <ul style="list-style-type: none"> • Projects under \$500K – increase/decrease over 50% • Projects \$500K to \$1M – increase/decrease over 30% • Projects \$1M and over – increase/decrease over 20% • All FTA project changes – increase/decrease over 30% 	
4. Adding an emergency relief permanent repair project that involves substantial change in function and location.	
ADMINISTRATIVE/TECHNICAL ADJUSTMENTS	
1. Advancing or Slipping an approved project/phase within the current STIP (If slipping outside current STIP, see Full Amendments #2)	
2. Adding or deleting any phase (except CN) of an approved project below Full Amendment #3	
3. Combining two or more approved projects into one or splitting an approved project into two or more, or splitting part of an approved project to a new one.	
4. Splitting a new project out of an approved program-specific pool of funds (but not reserves for future projects) or adding funds to an existing project from a bucket or reserve if the project was selected through a specific process (i.e. ARTS, Local Bridge...)	
5. Minor technical corrections to make the printed STIP consistent with prior approvals, such as typos or missing data.	
6. Changing name of project due to change in scope, combining or splitting of projects, or to better conform to naming convention. (For major change in scope, see Full Amendments #2)	
7. Adding a temporary emergency repair and relief project that does not involve substantial change in function and location.	

- If a capacity enhancing project – is identified in the approved Metro modeling network
- Satisfies RTP goals and strategies consistency: Meets one or more goals or strategies identified in the current RTP
- Determined the project is eligible to be added to the MTIP, or can be legally amended as required without violating provisions of 23 CFR450.300-338 either as a formal Amendment or administrative modification:
 - Does not violate supplemental directive guidance from FHWA/FTA's approved Amendment Matrix.
 - Adheres to conditions and limitation for completing technical corrections, administrative modifications, or formal amendments in the MTIP.
 - Is eligible for special programming exceptions periodically negotiated with USDOT as well.
 - Programming determined to be reasonable of phase obligation timing and is consistent with project delivery schedule timing.
- MPO responsibilities completion:
 - Completion of the required 30 day Public Notification period:
 - Project monitoring, fund obligations, and expenditure of allocated funds in a timely fashion.
 - Acting on behalf of USDOT to provide the required forum and complete necessary discussions of proposed transportation improvements/strategies throughout the MPO.

APPROVAL STEPS AND TIMING

Metro's approval process for formal amendment includes multiple steps. The required approvals for the March 2018 Formal MTIP amendment will include the following:

<u>Action</u>	<u>Target Date</u>
• Initiate the required 30-day public notification process.....	February 26, 2018
• TPAC notification and approval recommendation.....	March 9, 2018
• JPACT approval and recommendation to Council.....	March 15, 2018
• Completion of public notification process.....	March 27, 2018
• Metro Council approval.....	April 5, 2018*

*Note: If any significant public comments are received that are deemed necessary for review by JPACT, the impacted projects or complete amendment will be pulled from the Metro Council agenda and returned to JPACT for their review and direction.

USDOT Approval Steps:

<u>Action</u>	<u>Target Date</u>
• Metro development of amendment narrative package	April 9, 2018
• Amendment bundle submission to ODOT for review.....	April 10, 2018
• Submission of the final amendment package to USDOT.....	April 16, 2018
• ODOT clarification and approval.....	Mid April, 2018
• USDOT clarification and final amendment approval.....	Late April 2018

ANALYSIS/INFORMATION

1. **Known Opposition:** None known at this time.
2. **Legal Antecedents:** Amends the 2018-2021 Metropolitan Transportation Improvement Program adopted by Metro Council Resolution 17-4817 on July 27, 2017 (For The Purpose of Adopting the Metropolitan Transportation Improvement Program for the Portland Metropolitan Area).

3. **Anticipated Effects:** Enables the projects to obligate and expend awarded federal funds.
4. **Metro Budget Impacts:** None to Metro

RECOMMENDED ACTION:

TPAC recommends the approval of Resolution 18-4876. (*TPAC approval 3/9/2018*)

Attachment: Project Location Maps and OTC Staff Report copies

Date: Monday, February 26, 2018
From: Ken Lobeck, Funding Programs Lead, 503-797-1785
Subject: Attachment 1 to the March 2018 MTIP Formal Amendment Staff Report – Project Location Maps & OTC letters as applicable

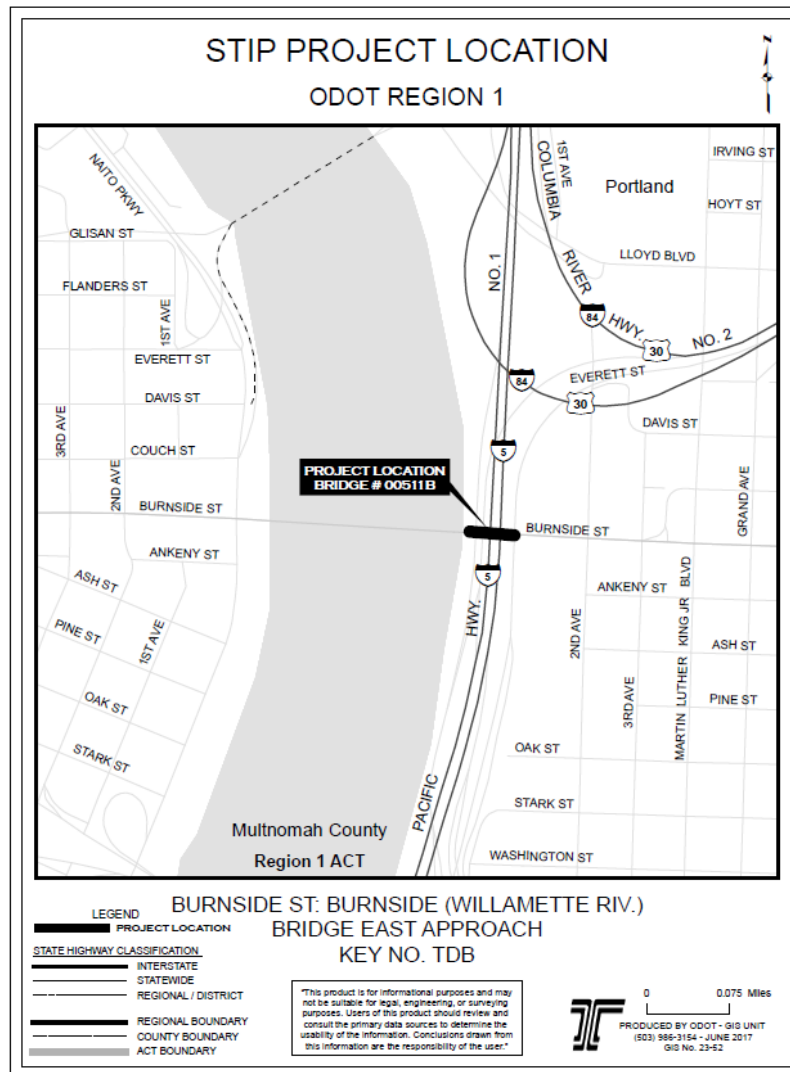
BACKGROUND

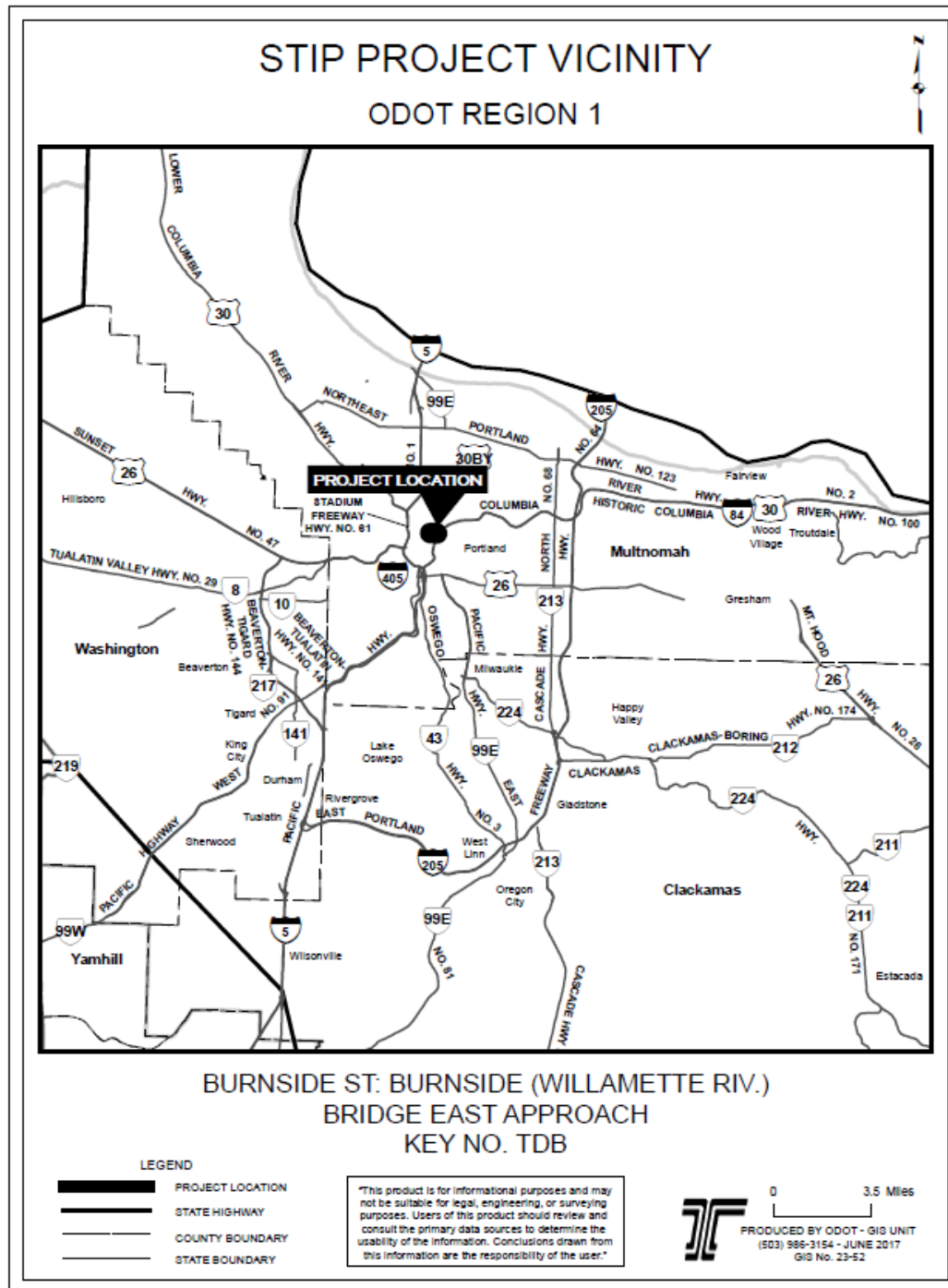
Available project location maps and OTC request letters are included in this attachment to the staff report for reference for their applicable projects. Maps and/or OTC letters are included for:

- Key 21284 – Burnside St: Burnside (Willamette River) Bridge East Approach
- Key 21283 – NE 12th Ave Over I-84 & Union Pacific RR Bridge (Portland)
- Key 18819 – St Johns Truck Strategy Phase II
- Key 20414 – Road Safety Audit Implementation

Key 21284

Burnside St: Burnside (Willamette River) Bridge East Approach





OTC Letter for Key 21284



Oregon

Kate Brown, Governor

Oregon Transportation Commission
Office of the Director, MS 11
355 Capitol St NE
Salem, OR 97301-3871

DATE: December 4, 2017

TO: Oregon Transportation Commission

[Original signature on file]

From: Matthew L. Garrett
Director

SUBJECT: Consent 12 - Amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to add one new project, Burnside Street: Burnside (Willamette River) Bridge east approach.

Requested Action:

Request approval to amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to add one new project, protective fencing for Burnside Street: Burnside (Willamette River) Bridge east approach, located in Region 1, Multnomah County. The total estimated cost for this project is \$650,000.

Funding for this project will come from the bridge overpass protective screening program. The budget for this program is \$1.5 million per year.

STIP Amendment Funding Sources

Project	Proposed Funding
Bridge Overpass Protective Screening FFY 2019 (KN 20082)	\$199,598
Bridge Overpass Protective Screening FFY 2020 (KN 20083)	\$450,402
TOTAL	\$650,000

Project to be added

Burnside Street: Burnside (Willamette River) Bridge east approach (KN TBD)			
PHASE	YEAR	COST	
		Current	Proposed
Preliminary Engineering	2019	\$0	\$80,000
Right of Way	N/A	N/A	N/A
Utility Relocation	N/A	N/A	N/A
Construction	2020	\$0	\$570,000
TOTAL		N/A	\$650,000

Oregon Transportation Commission
December 4, 2017
Page 2

Background:

Oregon Revised Statute [\(ORS\) 366.462](#) requires that all freeway overpasses constructed after November 4, 1993 have fences that are designed to deter persons from throwing objects from the overpasses onto the freeways. This statute also requires that the Oregon Department of Transportation (ODOT) develop a prioritization system to construct fences first on those overpasses that involve the greatest risks, and to construct at least 15 fences per year on existing freeway overpasses.

Currently 12 freeway overpasses in Region 1 do not have fences. The intent is to complete the fences on these remaining freeway overpasses as part of the 2018-2021 STIP.

The Burnside Bridge (bridge 00511) is owned by Multnomah County. The eastern approaches (bridge 00511B) cross over Interstate 5, three Interstate 5 connections, and several rail lines. Constructing the fence on this freeway overpass will improve safety for motorists and move ODOT closer to completion of this program. Since this local agency bridge crosses a freeway, the state will provide the funding to install the fencing. ODOT prioritized this location because this bridge has sidewalks and is in an urban area.

With Commission approval, this screening project can proceed to provide safety to the traveling motorists by designing and installing the protective screening and deter individuals from throwing objects onto the freeway. Without approval, this location will continue to provide opportunities for individuals to throw objects onto the freeway.

Attachments:

- Attachment 1 - Location and Vicinity Maps

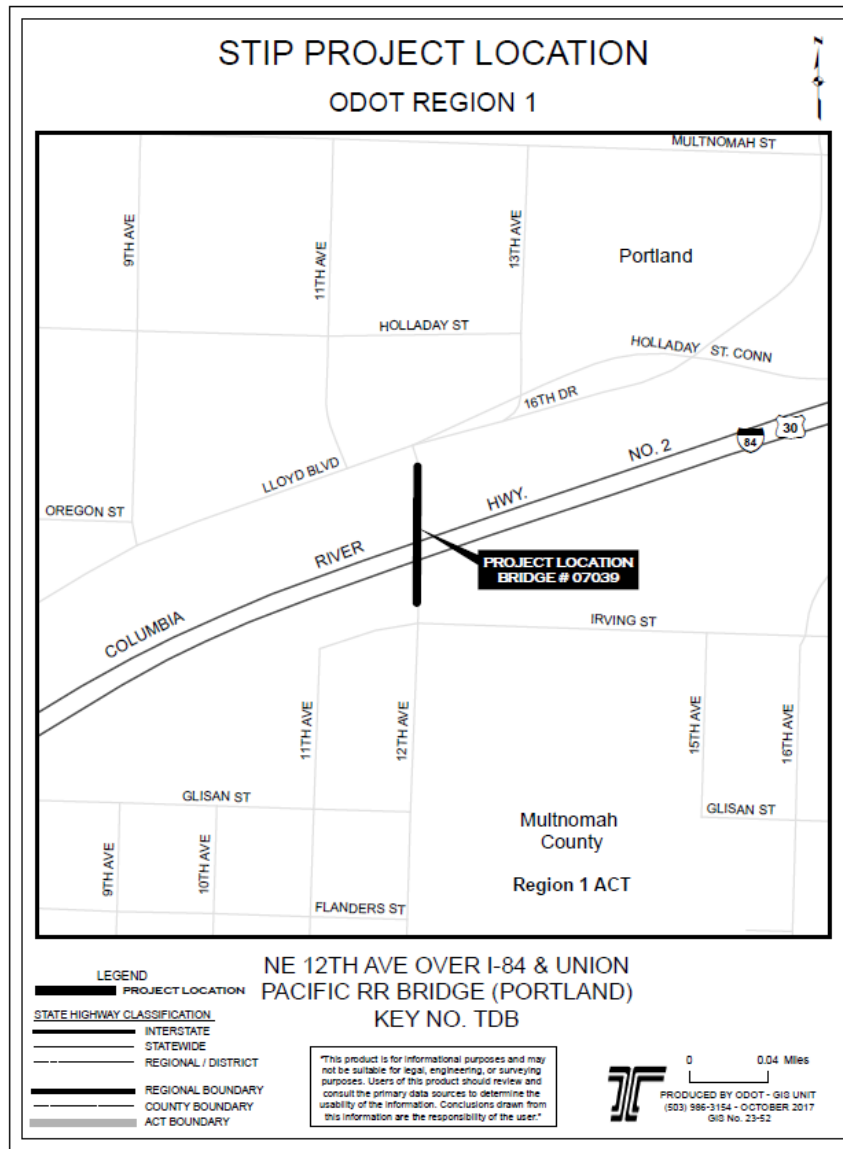
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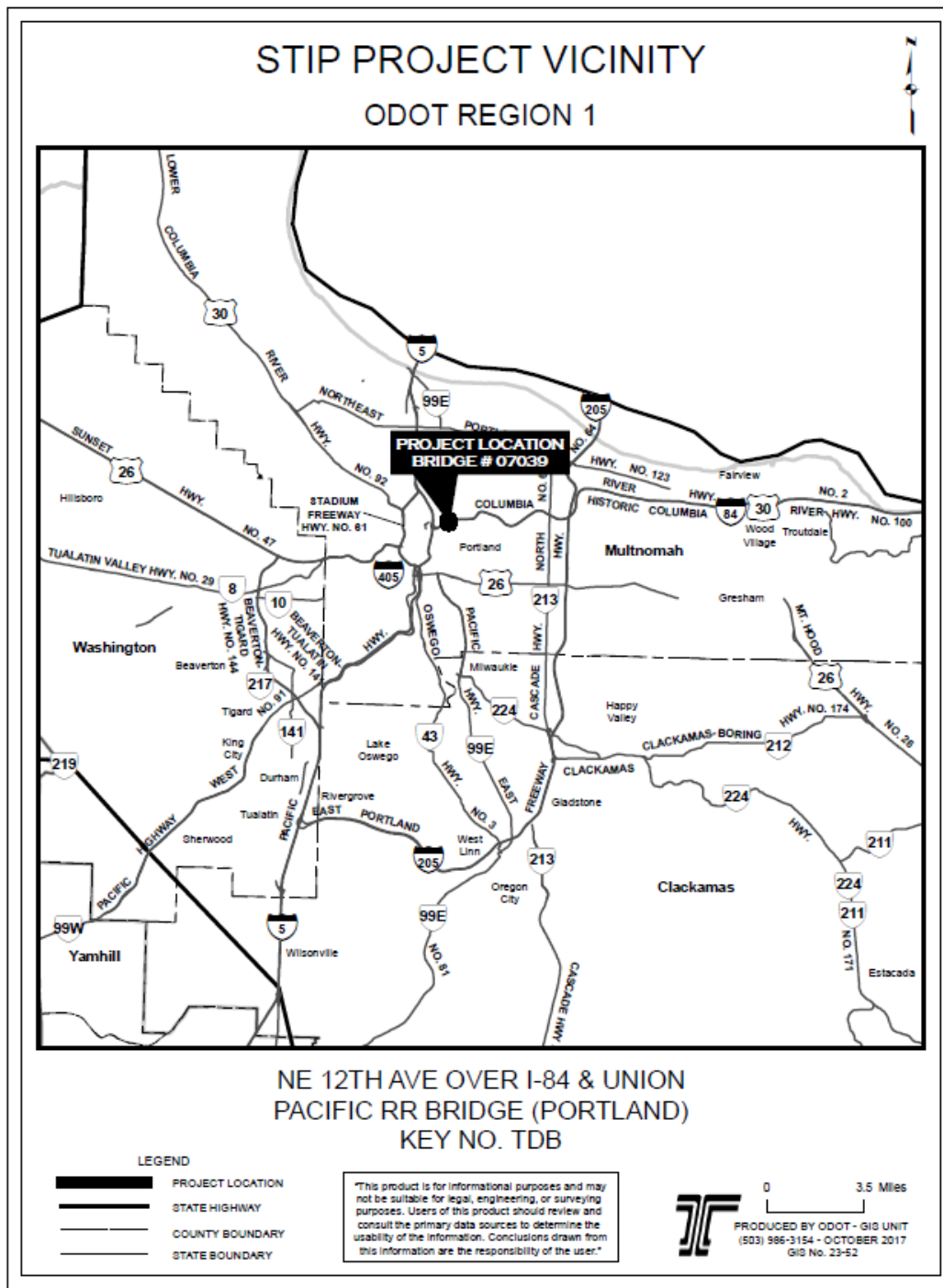
Jerri Bohard	Travis Brouwer	Tom Fuller	Bob Gebhardt
Paul Mather	McGregor Lynde	Rian Windsheimer	Vaughan Rademeyer
Arlene Santana	Amanda Sandvig	Jeff Flowers	Lynn Averbek
Rachelle Nelson			

Key 21283

NE 12th Ave Over I-84 & Union Pacific RR Bridge (Portland)

Attachment 1





OTC Letter for Key 21283



Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

355 Capitol St NE

Salem, OR 97301-3871

DATE: December 4, 2017

TO: Oregon Transportation Commission

[Original signature on file]

From: Matthew L. Garrett
Director

SUBJECT: Consent 11 – Amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to add one new project, Northeast 12th Avenue over Interstate 84 and Union Pacific Railroad Bridge (Portland)

Requested Action:

Request approval to amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to add one new project, protective fencing for Northeast 12th Avenue over Interstate 84 and Union Pacific Railroad (UPRR) Bridge (Portland), located in Region 1, Multnomah County. The total estimated cost for this project is \$250,000.

Funding for this project will come from the bridge overpass protective screening program. The budget for this program is \$1.5 million per year.

STIP Amendment Funding Sources

Project	Proposed Funding
NE 12 th Ave over Interstate 84 and Union Pacific Railroad Bridge (Portland)	\$250,000
Bridge Overpass Protective Screening FFY2019	\$199,598
TOTAL	\$449,598

Project to be added

NE 12 th Ave over Interstate 84 and Union Pacific Railroad Bridge (Portland) (KN TBD)			
PHASE	YEAR	COST	
		Current	Proposed
Preliminary Engineering	2019	\$0	\$45,000
Right of Way	N/A	N/A	N/A
Utility Relocation	N/A	N/A	N/A
Construction	2020	\$0	\$205,000
TOTAL		\$0	\$250,000

Oregon Transportation Commission
December 4, 2017
Page 2

Background:

Oregon Revised Statute ([ORS](#)) 366.462 requires that all freeway overpasses constructed after November 4, 1993 have fences that are designed to deter persons from throwing objects from the overpasses onto the freeways. This statute also requires that the Oregon Department of Transportation (ODOT) develop a prioritization system to construct fences first on those overpasses that involve the greatest risks, and to construct at least 15 fences per year on existing freeway overpasses.

Currently 12 freeway overpasses in Region 1 do not have fences. The intent is to complete the fences on these remaining freeway overpasses as part of the 2018-2021 STIP.

The Northeast 12th Avenue over Interstate 84 and Union Pacific Railroad Bridge (bridge 07039) is owned by the City of Portland. Constructing the fence on this freeway overpass will improve safety for motorists and move ODOT closer to completion of this program. Since this local agency bridge crosses a freeway, the state will provide the funding to install the fencing. This location was prioritized because this bridge has sidewalks, and is located within one block of Benson High School.

With Commission approval, this screening project can proceed to provide safety to the traveling motorists by designing and installing the protective screening and deter individuals from throwing objects onto the freeway. Without approval, this location will continue to provide opportunities for individuals to continue to throw objects onto the freeway.

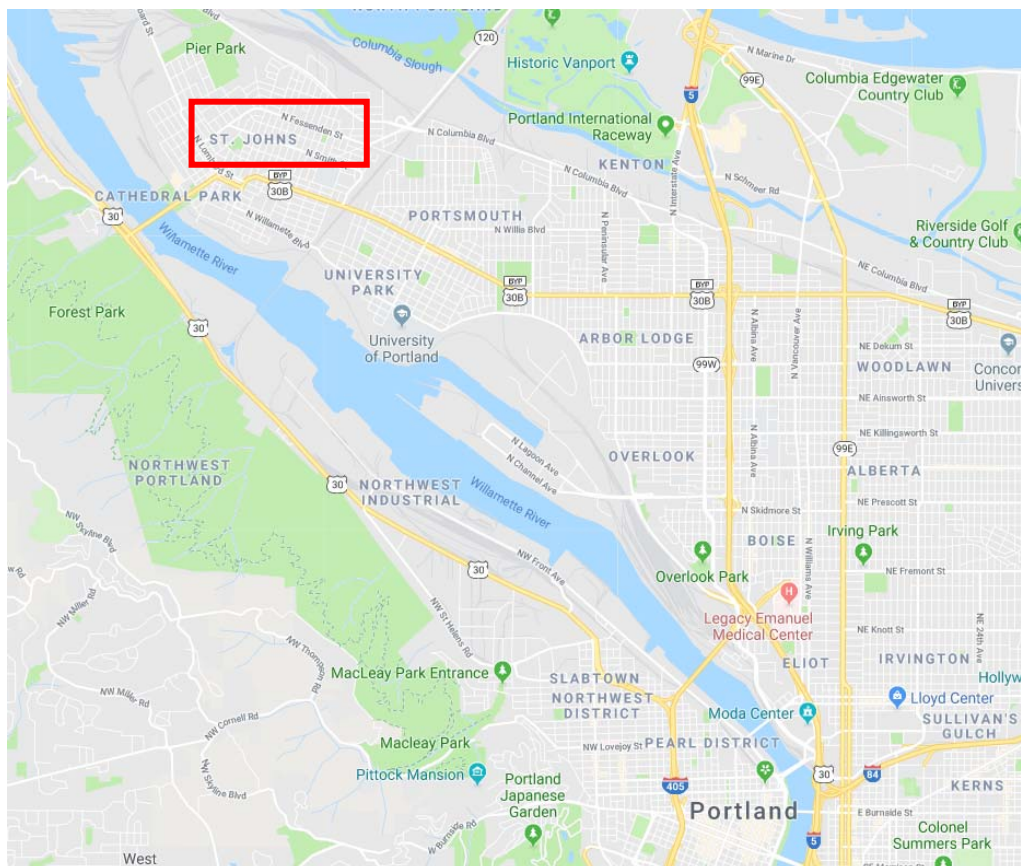
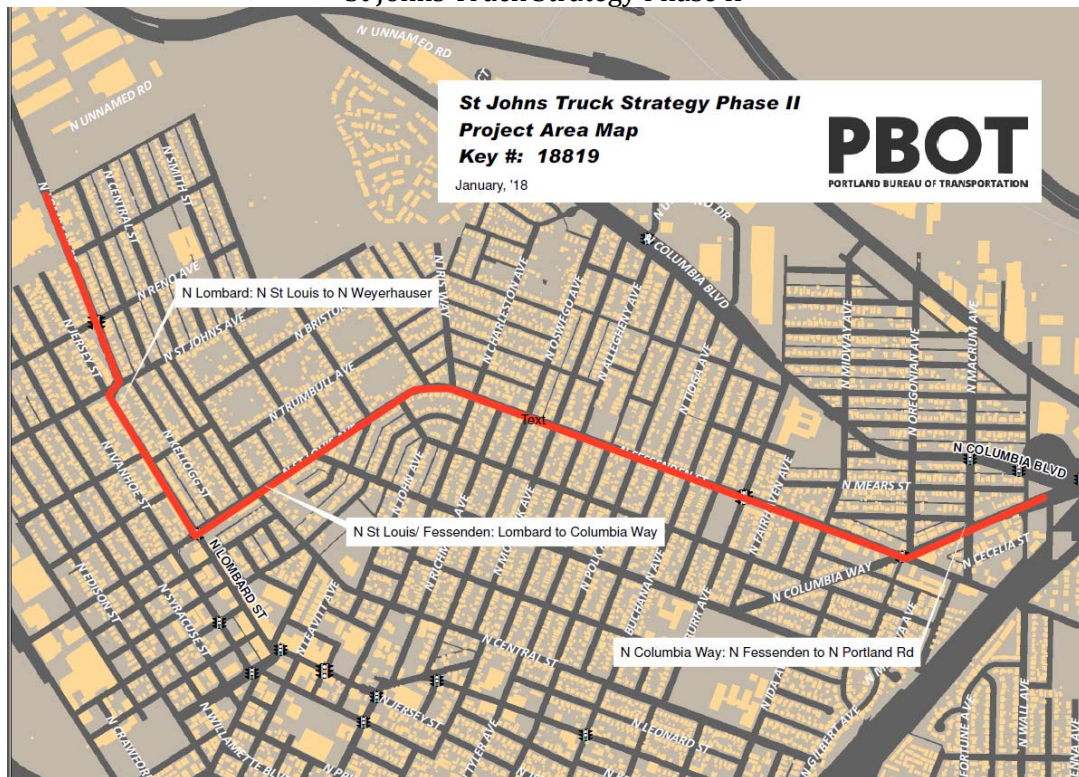
Attachments:

- Attachment 1 - Location and Vicinity Maps

Copies (w/attachment) to:

Jerri Bohard	Travis Brouwer	Tom Fuller	Bob Gebhardt
Paul Mather	McGregor Lynde	Rian Windsheimer	Vaughan Rademeyer
Arlene Santana	Amanda Sandvig	Jeff Flowers	Lynn Averbeck
Rachelle Nelson			

Key 18819
St Johns Truck Strategy Phase II



Key 20414

\$775k shifted from Key 20414 to 21071

From the May 5, 2017 OTC agenda Item that allowed Key 21071 to be added into the MTIP and STIP



Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

355 Capitol St NE

Salem, OR 97301-3871

DATE: May 5, 2017

TO: Oregon Transportation Commission

[Original signature on file]

FROM: Matthew L. Garrett
Director

SUBJECT: Consent 11 – Amend the 2015-2018 Statewide Transportation Improvement Program (STIP) to add Oregon 99 West: Southwest Naito Parkway to Southwest Huber Street – Phase 2 project.

Requested Action:

Request approval to amend the 2015-2018 Statewide Transportation Improvement Program (STIP) to add the Oregon 99 West: Southwest Naito Parkway to Southwest Huber Street – Phase 2 project which supports the Barbur Road Safety Audit (Barbur RSA) implementation. The project is located on Barbur Boulevard (Oregon 99 West) between Southwest Huber Street and Southwest Naito Parkway in Multnomah County. The total cost for the project is approximately \$775,000 and will be funded by the Oregon Department of Transportation (ODOT) Region 1 All Roads Transportation Safety (ARTS) Program via the Road Safety Audit Implementation project in the 2018-2021 Draft STIP.

STIP Amendment Funding Summary

Project	Current Funding	Proposed Funding
Road Safety Audit Implementation	\$3,034,244	\$2,259,244
Oregon 99 West: Southwest Naito Parkway to Southwest Huber Street – Phase 2	\$0	\$775,000
TOTAL	\$3,034,244	\$3,034,244

Projects to add:

Oregon 99 West: Southwest Naito Parkway to Southwest Huber Street – Phase 2 (KN TBD)			
PHASE	YEAR	COST	
		Current	Proposed
Preliminary Engineering	2017	\$0	\$162,000
Right of Way	2018	\$0	\$50,000
Utility Relocation	2018	\$0	\$20,000
Construction	2018	\$0	\$543,000
Other	N/A	\$0	\$0
TOTAL		\$0	\$775,000

Consent_11_OR99W_Naito-SW_Huber.docx
5/9/2017

Oregon Transportation Commission
May 5, 2017
Page 2

Projects to reduce funding:

Road Safety Audit Implementation (KN 20414)			
PHASE	YEAR	COST	
		Current	Proposed
Preliminary Engineering	N/A	\$0	\$0
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	N/A	\$0	\$0
Other	2019	\$3,034,244	\$2,259,244
TOTAL		\$3,034,244	\$2,259,244

Background:

The Oregon Department of Transportation (ODOT) conducted a Road Safety Audit (RSA) in July 2015 on Oregon 99 West (Barbur Boulevard) to identify system-wide and location-specific safety issues including short, intermediate, and long term recommendations for improving safety on Oregon 99 West between Southwest Naito Parkway to Southwest Huber Street in the City of Portland. ODOT has since committed to using the recommendations from the RSA to select and fund projects that support goals for short and intermediate term improvements that will improve safety on the corridor.

The Barbur RSA report identified inconsistent signage as one of the key safety issues of Southwest Barbur corridor between Naito Parkway and Capitol Highway and suggested overhead signing to increase sign visibility and improve way finding. ODOT evaluated and prioritized recommendations provided by the Barbur RSA team and identified two overhead signs for priority implementation to improve safety in the corridor:

Northbound Oregon 99 West :

- MP 2.01 – south of Southwest Barbur at Southwest Naito Parkway Split, and
- MP 2.2 – north of Southwest Bancroft Street.

If the signs are not constructed at these locations, it is possible that ODOT will not fulfill all the safety improvement recommendations in the Barbur Road Safety Audit which could result in more crashes on the corridor.

The total cost for the project is approximately \$775,000 and will come from funds set aside in the 2018-2021 Draft STIP from the All Roads Transportation Safety (ARTS) Program to implement the RSA findings.

Attachments:

- Attachment 1 – Location and Vicinity Maps
- Attachment 2 – Project Schedule

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADDING OR AMENDING	)	RESOLUTION NO. 18-4883
EXISTING PROJECTS TO THE 2018-21)	
METROPOLITAN TRANSPORTATION	)	Introduced by: "Chief Operating Officer
IMPROVEMENT PROGRAM INVOLVING SIX	)	Martha Bennett in concurrence with
PROJECTS REQUIRING PROGRAMMING	)	Council President Tom Hughes"
ADDITIONS, CORRECTIONS, OR)	
CANCELLATIONS IMPACTING METRO, ODOT,)	
AND TRIMET (AP18-08-APR))	

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) prioritizes projects from the Regional Transportation Plan (RTP) to receive transportation related funding; and

WHEREAS, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council approved the 2018-21 MTIP via Resolution 17-4817 on July 27, 2017; and

WHEREAS, JPACT and the Metro Council must approve any subsequent amendments to add new projects or substantially modify existing projects in the MTIP; and

WHEREAS, the U.S. Department of Transportation (USDOT) has issued clarified MTIP amendment submission rules and definitions for MTIP formal amendments and administrative modifications that both ODOT and all Oregon MPOs must adhere to which includes that all new projects added to the MTIP must complete the formal amendment process; and

WHEREAS, Metro is receiving a supplemental \$590,720 funding allocation of federal Surface Transportation Block Grant funds from ODOT via formula allocation from ODOT's federal fiscal Year 2018-20 Transportation Options program in support of Metro's Regional Transportation Options (RTO) program which is the region's transportation demand management program to manage congestion and reduce air pollution through the reduction of single-occupant vehicle travel; and

WHEREAS, ODOT has completed the revised the scope for the US30 Sandy River (Troutdale) Bridge project consisting of sidewalk replacement and foundation repairs resulting in a decrease of funding needed for Preliminary Engineering and now is committing construction phase funding of \$1,465,000 planned for 2019 for a total project cost of \$1,735,000; and

WHEREAS, TriMet, in support of JPACT's decision to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment, is committing \$10 million of local funds for project development work to three ODOT projects including \$2.5 million for Preliminary Engineering (PE) work for the OR217 – SW 72nd Ave to OR10 (SW Scholl's Ferry Rd) project, \$5 million for PE activities for the I-5 Rose Quarter Improvement project, plus \$2.5 million supporting pre-NEPA project development Planning phase activities for the I-205 - Stafford Rd to OR99E project; and

WHEREAS, TriMet has received a revised 5309 grant allocation in 2019 for the Portland to Milwaukie Light Rail project based on the Federal Transit Agency's Annual Report on Funding Recommendations Capital Investment Grant program for FY 2019 increasing the FY 2019 allocation from \$38 million to \$65.6 million along with required match raises the total FY 2019 commitment to the Portland to Milwaukie Light Rail project to \$117,515,849; and

WHEREAS, all amended projects were evaluated against six revised MTIP review factors to ensure all requested changes and additions can be accomplished legally through the MTIP amendment process; and

WHEREAS, the MTIP review factors included project eligibility/proof of funding, RTP consistency with the financially constrained element, consistency with RTP goals and strategies, determination of amendment type, inclusion in the Metro transportation regional models, determination of Regional Significance, fiscal constraint verification, and compliance with MPO MTIP federal management responsibilities; and

WHEREAS, the MTIP's financial constraint finding is maintained as all projects proof of funding has been verified; and

WHEREAS, no negative impacts to air conformity will exist as a result of the changes completed through the February 2018 Formal MTIP Amendment; and

WHEREAS, all projects included in the April 2018 Formal MTIP Amendment successfully completed a required 30-day public notification/opportunity to comment period without any significant issues raised; and

WHEREAS, TPAC received their notification and recommended approval on April 6, 2018 and approved the amendment recommendation to JPACT; now therefore

BE IT RESOLVED that the Metro Council hereby adopts the recommendation of JPACT on April 19, 2018 to formally amend the 2018-21 MTIP to include the April 2018 Formal Amendment bundle consisting of six projects.

ADOPTED by the Metro Council this _____ day of _____ 2018.

Approved as to Form:

Tom Hughes, Council President

Alison R. Kean, Metro Attorney

2018-2021 Metropolitan Transportation Improvement Program
Exhibit A to Resolution 18-4883



Proposed April 2018 Formal Amendment Bundle
Amendment Type: **FORMAL, AP18-08-APR**
Total Number of Projects: **6**

ODOT Key	Lead Agency	Project Name	Required Changes
Project #1 21312 New	Metro	Metro Transportation Options (FFY 18-20)	Add New Project: The amendment adds approved funding for Metro's Regional Transportation Options Program for the federal fiscal Year period of 2018-2020). Funding is in addition to identified funding in project ID 19292
Project #2 20703 New	ODOT	US30: Sandy River (Troutdale) Bridge	<p>Add New Project: The construction phase is added to the project which adds the project to the active 2018-21 MTIP.</p> <p>The project is an HB2017 awarded project with a total of \$6,315,000 allocation of HB2017 funding. The scope of work includes sidewalk replacement, foundation repair, and bridge painting. Subsequent to the HB2017 award, a bridge inspection revealed that it did not require painting. Consequently, a savings of \$4,580,000 was realized and transferred to another Bridge program project.</p> <p>The revised total project cost estimate to complete the revised scoped project consisting of sidewalk replacement and foundation repair totals \$1,735,000.</p>

Project #3 21179	ODOT	OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)	<p>Add Funding: \$2.5 million is being added to the PE phase.</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet will provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region. This one of three projects receiving a portion of the \$10 million from TriMet.</p>
Project #4 19071	ODOT	I-5 Rose Quarter Improvement Project	<p>Add Funding: \$5 million is being added to the PE phase.</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet will provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region. This one of three projects receiving a portion of the \$10 million from TriMet.</p>

Project #5 19786	ODOT	I-205: Stafford Rd - OR99E	<p>Add Funding: This amendment adds 2.5 million of local funds contributed from TriMet to support the pre-NEPA project development Planning phase per the approved ODOT-TriMet Intergovernmental Agreement Funding Contribution Agreement: I-205, OR217, and Rose Quarter Improvement project.</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet will provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region. This one of three projects receiving a portion of the \$10 million from TriMet.</p>
Project #6 20843	TriMet	Portland to Milwaukie Light Rail (2019)	<p>Add Funding: This amendment increases the authorized Section 5309 Capital Investment Grant (CIG) allocation to the Portland to Milwaukie Light Rail in 2019. The increase is based on the FTA CIG recommendations for Federal Fiscal Year 2019.</p>

Exhibit A to Resolution 18-4883

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #1 EXISTING MTIP PROGRAMMING - None **New Project**

PROJECT #1 PROPOSED AMENDED CHANGES

ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
21312	TBD	Metro	Metro Transportation Options (FFY 18-20)					Other	\$ 622,695
Project Description:									
Amended MTIP Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other (RTO Implement)	Total
State STBG FLX	Z240	Federal	2018					\$ 590,720	\$ 590,720
Local	Match	Local	2018					\$ 31,975	\$ 31,975
									\$ -
Total:				\$ -	\$ -	\$ -	\$ -	\$ 622,695	\$ 622,695
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. State STBG FLX = Fedeal Surface Transportation Program Block Grant funds allocated to ODOT								
	3. Local = General local agency funds used to provide the minimum match requirement to the federal funds.								

Amendment Summary

The formal amendment creates a new project with supplemental funding from ODOT in support of Metro's Regional Travel Options (RTO) FY 2018 program in Key 19292. The RTO program implements strategies to help diversify trip choices, reduce pollution and improve mobility. RTO includes all of the alternatives to driving alone, such as carpooling, vanpooling, riding transit, bicycling, walking and telecommuting. Source funding split off from ODOT project grouping buckets 20582, 20583, & 20584)

Exhibit A to Resolution 18-4883

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #2 EXISTING MTIP PROGRAMMING (from the 2015 MTIP)									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
20703	71007	ODOT	US30: Sandy River (Troutdale) Bridge					Highway	\$ 565,001
Project Description:			Design shelf ready plans to paint bridge; replace sidewalk, and repair foundation.						
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other	Total
NHPP-FAST	Z001	Federal	2017		\$ 506,975				\$ 506,975
State	Match	State	2017		\$ 58,026				\$ 58,026
Total:				\$ -	\$ 565,001	\$ -	\$ -	\$ -	\$ 565,001

PROJECT #2 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
20703	71007	ODOT	US30: Sandy River (Troutdale) Bridge					Highway	\$ 1,735,000
Project Description:		Design shelf ready plans to paint bridge; replace sidewalk, and repair foundation. Replace sidewalk and repair foundation							
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
STBG 5-200K FASTG	Z231	Federal	2017		\$ 242,271				\$ 242,271
State	Match	State	2017		\$ 27,729				\$ 27,729
ADVCON	ACPO	Federal	2019				\$ 1,314,545		\$ 1,314,545
State	Match	State	2019				\$ 150,455		\$ 150,455
Total:			\$ -	\$ 270,000	\$ -	\$ 1,465,000	\$ -	\$ 1,735,000	
Notes:	<div>1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.</div> <div>2. Funding programmed in years before 2018 are considered prior obligated and will be shown in the prior obligated total for the project in the MTIP. They are shown above in their programming years in the shaded fields. The funding is still committed to the project, but is now obligated in a prior year outside of the current 2018 MTIP. The funding in that year is referred to as "prior obligated".</div> <div>3. NHPP-FAST = Federal National Highway Performance Program funds allocated from the FAST Act</div> <div>4. STBG 5-200K FASTG = Federal Surface Transportation Block Grant funds allocated to areas with populations between 5,000-200,000 from the FAST Act</div>								

	5. ADVCON = Federal Advance Construction fund type code. Used as a federal place holder until the specific federal fund type code is determined and committed to the project.
	6. State = General state funds generally used as the required local match requirement against the federal funds.

Amendment Summary

The project was awarded a total of \$6,315,000 of HB2017 funding. The PE phase for this project was added to the 2015 MTIP back last July allowing the PE phase to obligate the federal funds before the end of FFY 2017. STBG funds were obligated in place of the NHPP funds on July 6, 2017. Subsequent to that action, a review of the bridge determined it did not require painting. The revised primary scope element now consisted of actions to replace the sidewalk and repair the bridge foundation. The change in scope of eliminating the painting component reduced the total project cost to \$1,735,000. The PE phase was reduced to \$270K and the Construction phase estimated at \$1,465,000 for a total project cost estimate now of \$1,735,0000.

Exhibit A to Resolution 18-4883

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #3 EXISTING MTIP PROGRAMMING (from the 2015 MTIP)									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
21179	71034	ODOT	OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)					Highway	\$ 9,400,000
Project Description:			On OR217 from about 72nd Ave to SW Scholl's Ferry Road (OR210) construct New NB auxiliary lane segments (HB2017 awarded Project, \$54,000,000 original award)						
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
ADVCON	ACPO	Federal	2018		\$ 8,434,620				\$ 8,434,620
State	Match	State	2018		\$ 965,380				\$ 965,380
Total:				\$ -	\$ 9,400,000	\$ -	\$ -	\$ -	\$ 9,400,000

PROJECT #3 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
21179	71034	ODOT	OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)					Highway	\$ 11,900,000
Project Description:			On OR217 from about 72nd Ave to SW Scholl's Ferry Road (OR210) construct New NB auxiliary lane segments (HB2017 awarded Project, \$54,000,000 original award)						
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
ADVCON	ACPO	Federal	2018		\$ 8,434,620				\$ 8,434,620
State	Match	State	2018		\$ 965,380				\$ 965,380
TriMet GF	Overmatch	Local	2018		\$ 2,500,000				\$ 2,500,000
Total:				\$ -	\$ 11,900,000	\$ -	\$ -	\$ -	\$ 11,900,000

- Notes:
1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.
 2. ADVCON = Federal Advance Construction fund type code. Used as a federal place holder until the specific federal fund type code is determined and committed to the project.
 3. State = General state funds generally used as the required local match requirement against the federal funds.
 4. TriMet GF = Local other funds (specifically TriMet general funds) committed to the project

Amendment Summary

By agreement between ODOT and TriMet, TriMet is providing \$2,500,000 of their local funds in support of the OR217 NB Aux Lane project

Exhibit A to Resolution 18-4883

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #4 EXISTING MTIP PROGRAMMING (from the 2015 MTIP)									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
19071	70784	ODOT	I-5 Rose Quarter Improvement Project					Highway	\$ 20,391,997
Project Description:			Planning and project development efforts of the Broadway-Weidler facility plan and the N/NE Quadrant , which identified transportation investments that would result in improved safety and operations as well as supporting economic growth. Proposed multi-modal improvements include: ramp-to-ramp (auxiliary) lanes, highway shoulders, highway covers, new overcrossing, I-5 southbound ramp relocation, new bike and pedestrian crossing, and improved bike and pedestrian facilities. (HB2017 Named & Conditioned project to add \$16,265,452 of NHFP funds)						
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
NHPP-Exempt	M002	Federal	2016		\$ 1,474,354				\$ 1,474,354
State	Match	State	2016		\$ 124,382				\$ 124,382
NHPP-Exempt	MOE2	Federal	2016		\$ 2,331,145				\$ 2,331,145
State	Match	State	2016		\$ 196,664				\$ 196,664
NHFP	Z460	Federal	2018		\$ 15,000,000				\$ 15,000,000
State	Match	State	2018		\$ 1,265,452				\$ 1,265,452
Total:				\$ -	\$ 20,391,997	\$ -	\$ -	\$ -	\$ 20,391,997
Notes:	<div>1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.</div> <div>2. Funding programmed in years before 2018 are considered prior obligated and will be shown in the prior obligated total for the project in the MTIP. They are shown above in their programming years in the shaded fields. The funding is still committed to the project, but is now obligated in a prior year outside of the current 2018 MTIP. The funding in that year is referred to as "prior obligated".</div> <div>3. NHPP-Exempt = Federal National Highway Performance Program funding</div> <div>4. State = General state funds normally committed as the required matching funds to the federal funds</div> <div>5. NHFP = Federal National Highway Freight Program funds allocated to Oregon (ODOT) annual through a formula methodology</div>								

Amendment Summary

Project changes are shown on the next page

PROJECT #4 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
19071	70784	ODOT	I-5 Rose Quarter Improvement Project					Highway	\$ 25,391,997
Project Description:			Planning and project development efforts of the Broadway-Weidler facility plan and the N/NE Quadrant , which identified transportation investments that would result in improved safety and operations as well as supporting economic growth. Proposed multi-modal improvements include: ramp-to-ramp (auxiliary) lanes, highway shoulders, highway covers, new overcrossing, I-5 southbound ramp relocation, new bike and pedestrian crossing, and improved bike and pedestrian facilities. (HB2017 Named & Conditioned project to add \$16,265,452 of NHFP funds)						
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other	Total
NHPP-Exempt	M002	Federal	2016		\$ 1,474,354				\$ 1,474,354
State	Match	State	2016		\$ 124,382				\$ 124,382
NHPP-Exempt	MOE2	Federal	2016		\$ 2,331,145				\$ 2,331,145
State	Match	State	2016		\$ 196,664				\$ 196,664
NHFP	Z460	Federal	2018		\$ 15,000,000				\$ 15,000,000
State	Match	State	2018		\$ 1,265,452				\$ 1,265,452
Other TriMet GF	OTH0	Local	2018		\$ 5,000,000				\$ 5,000,000
Total:				\$ -	\$ 25,391,997	\$ -	\$ -	\$ -	\$ 25,391,997
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. NHPP-Exempt = Federal National Highway Performance Program funding								
	3. State = General state funds normally committed as the required matching funds to the federal funds								
	4. NHFP = Federal National Highway Freight Program funds allocated to Oregon (ODOT) annual through a formula methodology								

Amendment Summary	
This amendment adds \$5 million of local funds contributed from TriMet to support the PE phase per the approved ODOT-TriMet Intergovernmental Agreement Funding Contribution Agreement: I-205, OR217, and Rose Quarter	

Exhibit A to Resolution 18-4883

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #5 EXISTING MTIP PROGRAMMING (from the 2015 MTIP)									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
19786	70859	ODOT	I-205: Stafford Rd - OR99E					Highway	\$ 12,500,000
Project Description:			Complete pre-NEPA project development planning activities to add a 3rd through-lane on I-205 in each direction and a 4th lane on the Abernethy Bridge to separate through traffic and complete required seismic upgrades.						
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
NHFP	Z460	Federal	2016	\$ 2,305,500					\$ 2,305,500
State	Match	State	2016	\$ 194,500					\$ 194,500
NHFP	Z460	Federal	2018	\$ 9,222,000					\$ 9,222,000
State	Match	State	2018	\$ 778,000					\$ 778,000
Total:				\$ 12,500,000	\$ -	\$ -	\$ -	\$ -	\$ 12,500,000
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. Funding programmed in years before 2018 are considered prior obligated and will be shown in the prior obligated total for the project in the MTIP. They are shown above in their programming years in the shaded fields. The funding is still committed to the project, but is now obligated in a prior year outside of the current 2018 MTIP. The funding in that year is referred to as "prior obligated".								
	3. NHFP								
	3. State = General state funds normally committed as the required matching funds to the federal funds								
	4. NHFP = Federal National Highway Freight Program funds allocated to Oregon (ODOT) annual through a formula methodology								

Amendment Summary

Project changes are stated on the next page

PROJECT #5 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
19786	70859	Federal	I-205: Stafford Rd - OR99E					Highway	\$ 15,000,000
Project Description:			Complete pre-NEPA project development planning activities to add a 3rd through-lane on I-205 in each direction and a 4th lane on the Abernethy Bridge to separate through traffic and complete required seismic upgrades.						
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Wav	Construction	Other	Total
NHFP	Z460	Federal	2016	\$ 2,305,500					\$ 2,305,500
State	Match	State	2016	\$ 194,500					\$ 194,500
NHFP	Z460	Federal	2018	\$ 9,222,000					\$ 9,222,000
State	Match	State	2018	\$ 778,000					\$ 778,000
Local (TriMet GF)	Overmatch	Local	2018	\$ 2,500,000					\$ 2,500,000
Total:				\$ 15,000,000	\$ -	\$ -	\$ -	\$ -	\$ 15,000,000
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. NHPP-Exempt = Federal National Highway Performance Program funding								
	3. State = General state funds normally committed as the required matching funds to the federal funds								
	4. NHFP = Federal National Highway Freight Program funds allocated to Oregon (ODOT) annual through a formula methodology								

Amendment Summary	
This amendment adds 2.5 million of local funds contributed from TriMet to support the pre-NEPA project development Planning phase per the approved ODOT-TriMet Intergovernmental Agreement Funding Contribution Agreement: I-205, OR217, and Rose Quarter	

Exhibit A to Resolution 18-4883

2018-2021 Metropolitan Transportation Improvement Program Chapter 5 Tables Amendment

Action: Amend the MTIP to increase or adjust required funding and scope, or add new projects



PROJECT #6 EXISTING MTIP PROGRAMMING									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
20843	70929	TriMet	Portland to Milwaukie Light Rail (2019)					Transit	\$ 68,006,708
Project Description:			This project extends light rail from PSU in downtown Portland to Milwaukie and north Clackamas County. It includes a multi-modal bridge carrying light rail, streetcar, buses, bicycles and pedestrians.						
Existing MTIP Project Fund Programming by Phase									
Fund Type Code	Fund Code	Type	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other (Transit)	Total
5309	FF30	Federal	2019					\$ 38,000,000	\$ 38,000,000
Local	Match	Local	2019					\$ 25,333,333	\$ 25,333,333
Other	Overmatch	Local	2019					\$ 4,673,375	\$ 4,673,375
Total:				\$ -	\$ -	\$ -	\$ -	\$ 68,006,708	\$ 68,006,708

PROJECT #6 PROPOSED AMENDED CHANGES									
ODOT Key	MTIP ID	Lead Agency	Project Name					Project Type	Project Cost
20843	70929	TriMet	Portland to Milwaukie Light Rail (2019)					Transit	\$ 117,515,849
Project Description:			This project extends light rail from PSU in downtown Portland to Milwaukie and north Clackamas County. It includes a multi-modal bridge carrying light rail, streetcar, buses, bicycles and pedestrians.						
Amended MTIP Fund Programming by Phase									
Fund Code	Note	Type	Year	Planning	Preliminary Engineering	Right of Way	Construction	Other	Total
5309	FF30	Federal	2019					\$ 65,664,144	\$ 65,664,144
Local	Match	Local	2019					\$ 51,851,705	\$ 51,851,705
Total:			\$ -	\$ -	\$ -	\$ -	\$ 117,515,849	\$ 117,515,849	
Notes:	1. Red Font = Funding reductions made to the project phase. Blue font = Additions made to the project as part of the amendment.								
	2. 5309 = Federal FTA Section 5309 Capital Investment Grants. Awards are nationwide competitive.								
	3. Local = Local agency funds normally used as matching funds to satisfy the federal match requirement and/or to cover remaining project costs.								
	4. Other = Local agency funds used beyond the required match to the federal funds when needed to separate local matching funds and other local funds.								
Amendment Summary									
This amendment increases the authorized Section 5309 Capital Investment Grant (CIG) allocation to the Portland to Milwaukie Light Rail in 2019. The increase is based on the CIG recommendations for Federal Fiscal Year 2019									

Memo

Date: Tuesday April 10, 2018
To: JPACT and Interested Parties
From: Ken Lobeck, Funding Programs Lead, 503-797-1785
Subject: April 2018 MTIP Formal Amendment plus Approval Request of Resolution 18-4883

STAFF REPORT

FOR THE PURPOSE OF ADDING OR AMENDING EXISTING PROJECTS TO THE 2018-21 METROPOLITAN TRANSPORTATION IMPROVEMENT PROGRAM INVOLVING SIX PROJECTS REQUIRING PROGRAMMING ADDITIONS, CORRECTIONS, OR CANCELLATIONS IMPACTING METRO, ODOT AND TRIMET (AP18-08-APR)

BACKGROUND

What this is:

The April 2018 Formal Metropolitan Transportation Improvement Program (MTIP) Amendment bundle contains required changes and updates impacting Metro, ODOT and TriMet. Six projects are included in the amendment bundle. They are summarized in the below table:

Proposed April 2018 Formal Amendment Bundle Amendment Type: FORMAL, AP18-08-APR Total Number of Projects: 6			
ODOT Key	Lead Agency	Project Name	Required Changes
Project #1 21312 New	Metro	Metro Transportation Options (FFY 18-20)	Add New Project: The amendment adds approved funding for Metro's Regional Transportation Options Program for the federal fiscal Year period of 2018-2020). Funding is in addition to identified funding in project ID 19292
Project #2 20703 New	ODOT	US30: Sandy River (Troutdale) Bridge	<p>Add New Project: The construction phase is added to the project which adds the project to the active 2018-21 MTIP.</p> <p>The project is an HB2017 awarded project with a total of \$6,315,000 allocation of HB2017 funding. The scope of work includes sidewalk replacement, foundation repair, and bridge painting. Subsequent to the HB2017 award, a bridge inspection revealed that it did not require painting. Consequently, a savings of \$4,580,000 was realized and transferred to another Bridge program project.</p> <p>The revised total project cost estimate to complete the revised scoped project consisting of sidewalk replacement and foundation repair totals \$1,735,000.</p> <p>Add Funding: \$2.5 million is being added to the PE phase.</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet will provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region. This one of three projects receiving a portion of the \$10 million from TriMet.</p>
Project #3 21179	ODOT	OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)	

Project #4 19071	ODOT	I-5 Rose Quarter Improvement Project	<p>Add Funding: \$5 million is being added to the PE phase.</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet will provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region. This one of three projects receiving a portion of the \$10 million from TriMet.</p>
Project #5 19786	ODOT	I-205: Stafford Rd - OR99E	<p>Add Funding: This amendment adds 2.5 million of local funds contributed from TriMet to support the pre-NEPA project development Planning phase per the approved ODOT-TriMet Intergovernmental Agreement Funding Contribution Agreement: I-205, OR217, and Rose Quarter Improvement project.</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet will provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region. This one of three projects receiving a portion of the \$10 million from TriMet.</p>
Project #6 20843	TriMet	Portland to Milwaukie Light Rail (2019)	<p>Add Funding: This amendment increases the authorized Section 5309 Capital Investment Grant (CIG) allocation to the Portland to Milwaukie Light Rail in 2019. The increase is based on the FTA CIG recommendations for Federal Fiscal Year 2019.</p>

What is the requested action?

TPAC is requesting JPACTs approval of the April 2018 formal MTIP amendment as stated in Resolution 18-4883 with several modifications to the required amendment support material for this and future amendments, and then on to the Metro Council enabling the five identified projects to be amended correctly into the 2018 MTIP, with final approval to occur from USDOT.

TPAC DISCUSSION

The amendment discussion at TPAC was far more detailed than past formal amendment notifications. TPAC members are demonstrating an increased hunger for the logic and rationale driving the MTIP amendments. TPAC members also provided staff with a request to expand the level of details about the project amendments especially for Exhibit A and the Public Notification tables. Their questions are similar to the questions USDOT asks about the project amendment. Understanding the specific changes to the project is important as a result of the proposed amendment, but also why the change is occurring.

A specific area TPAC members asked for expanded amendment details are in the preview summary tables in the change field in Exhibit A and the Public Notification Tables. This field was used to provide a simple one line tickler about the amendment change. TPAC members asked staff to provide expanded details to help understand the need for the amendment.

TPAC members also requested specific details about the JPACT bonding decision to be included for three affected projects: Keys 21179, 19071, and 19786. As noted in the preview table on the previous pages, the bond information has been added to the project change field for the three impacted projects.

A final discussion area included the ability of staff to develop and provide TPAC members with a construction phase equity report summary. The purpose of such a report would provide a perspective of projects with construction phases and how they support RTP equity goals. MTIP amendments occur to position phase funding in the correct timing and amount for obligation purposes enabling the lead agency then to expend the funds. When construction phase funding is obligated, the lead agency solicits bids for construction and construction management as required. The selection of the construction contractor and the relationship towards RTP equity goals is at the heart of the TPAC request. Developing such a report appears feasible and there is interest behind it. However, developing a construction equity report will require voluntary effort from local agencies and ODOT to submit the required construction contractor data to Metro. The advantage of developing a construction equity report would help address Metro equity performance measurement requirements.

In a somewhat parallel effort, Metro staff are working on Construction Career Pathways project that is examining equity issues in the hiring and career progression of construction personnel. MTIP/RTP staff will coordinate with the project manager to determine what they have learned and incorporate any recommendations into the TPAC request. Staff will return with a progress report to TPAC at a future date.

The TPAC discussion resulted in a modified approval recommendation of draft resolution 18-4883 and the April 2018 Formal MTIP amendment as follows:

- Provide a few necessary corrections to Exhibit A and the Public Notification tables as noted (e.g. Two projects were missing required funding years in the table. Correction have been made).
- Expand the amendment change details in Exhibit A and the Public Notification tables to provide additional details about the project amendment.
- Expand the project change details for Keys 21179, 19701, and 19786 in this amendment for improve clarity to include remarks about the JPACT vote to bond a subset of the RFFA funds and TriMet's involvement.
- Explore the feasibility of and develop a construction phase equity compliance report which TPAC members could review on a periodic basis.

Note: MTIP staff concurs with the above TPAC recommendations.

A detailed summary of the six projects being amended is provided in the below tables:

1. Project: Metro Transportation Options (FFY 18-20)			
Lead Agency:	Metro		
ODOT Key Number:	20703	MTIP ID Number:	TBD
Project Description:	Supplemental funding from ODOT supporting Key 19292 - FY 2018 Metro RTO program (from ODOT Keys 20582, 20583, & 20584)		
What is changing?	Through this formal amendment, the new project is being added to the 2018 MTIP. ODOT is contributing funding towards Metro Regional Transportation Options (RTO) program for FY 2018-2020. Metro's RTO program is the region's transportation demand management program to manage congestion and reduce air pollution through the reduction of single-occupant vehicle travel. RTO supports the work of regional public and private partners who help people become more aware of the		

	various travel options available to them and encourage the use of those options. A variety of strategies are implemented to address trips for all purposes, including commuting, shopping, activities, and more. As the region's population and economy grows, the RTO program will gain efficiencies moving people and goods on built-out transportation infrastructure. RTO funding is sourced from RFFA Step 1 allocation and is programmed in Keys 19292 for FY 2018.
Additional Details:	RTO funding is sourced from RFFA Step 1 allocation and is programmed in Keys 19292 for FY 2018. The supplemental STBG funding from ODOT is split off of three existing project grouping buckets in Keys 20582, 20583, and 20584. The supplemental funding is available to be obligated as of July 2018.
Why a Formal amendment is required?	Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized requires a formal amendment.
Total Programmed Amount:	All funds are programmed in the MTIP's Other phase. The ODOT total STBG contribution is \$590,720 with Metro providing \$31,975 of required local matching funds. The total programmed amount is \$622,695
Added Notes:	

2. Project: US30: Sandy River (Troutdale) Bridge	
Lead Agency:	ODOT
ODOT Key Number:	20703
MTIP ID Number:	71007
Project Description:	Replace sidewalk and repair foundation
What is changing?	Through this formal amendment, the new project is being added to the 2018 MTIP.
Additional Details:	<p>The project is an HB2017 awarded project with a total of \$6,315,000 allocation of HB2017 funding. The scope of work includes sidewalk replacement, foundation repair, and bridge painting. Subsequent to the HB2017 award, a bridge inspection revealed that it did not require painting. At the December 2017 OTC meeting, the OTC agreed to change the project scope and removed the painting component to the project. ODOT estimated a savings of \$4,580,000 of which \$1,246,615 was transferred to the I-5 Crowson Rd project (in Jackson County, OR). The remaining savings was returned to the State Bridge Program (and for later re-allocation back to this project as needed).</p> <p>The revised total project cost estimate to complete the revised scoped project consisting of sidewalk replacement and foundation repair totals \$1,735,000. The PE phase is now estimated at \$270,000 with the Construction phase estimated at \$1,465,000. Unexpended obligated funds from the PE phase are being transferred to the Construction phase with the remaining balance coming from the State Bridge Program and HB2017 authorized allocation.</p> <p>The Construction phase is schedule to begin during federal fiscal year 2019.</p> <p>The amendment adds the full project to the 2018 MTIP which includes adjusting the project scope, corrects the PE phase programming, and adds the construction phase.</p>

Project Name	US30: SANDY RIVER (TROUTDALE) BRIDGE	
	K20703	
PHASE	YEAR	COST
Planning		\$ -
Preliminary Engineering	2017	\$ 565,000
Right of Way		\$ -
Utility Relocation		\$ -
Construction	2019	\$ 5,750,000
Other		\$ -
TOTAL		\$ 6,315,000



Why a Formal amendment is required?	Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized requires a formal amendment.
Total Programmed Amount:	The PE phase is decreased to a total of \$270,000. The Construction phase programming is \$1,465,000 for a total programmed amount of \$1,735,000
Added Notes:	OTC approval based on the HB2017 award first occurred during their September 2017 meeting. The re-scoping and funding re-programming action occurred during their December 2017 meeting.

3. Project: OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)																	
Lead Agency:	ODOT																
ODOT Key Number:	21179	MTIP ID Number:	71034														
Project Description:	On OR217 from about 72nd Ave to SW Scholl's Ferry Road (OR210) construct New NB auxiliary lane segments (HB2017 awarded Project, \$54,000,000 original award)																
What is changing?	In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.																
	TriMet desires to provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region.																
	ODOT has begun development of the following three projects:																
	<div><div>1. Construction of a northbound auxiliary lane along OR217 between SW 72nd Avenue and SW Scholl's Ferry Rd (the "NB OR217 Project")</div><div>2. Widening of I-205 between Abernethy Bridge and Stafford Road (the "I-205 Project")</div><div>3. Construction of an auxiliary lane and shoulders on I-5 near the Broadway/Weidler interchange, and replacing existing overpasses with a land bridge (the "Rose Quarter Project").</div></div>																
	As a result of the agreement between ODOT and TriMet:																
	<div><div>• \$2,500,000 will be added to the planning phase of the Interstate 205: Stafford Road to Oregon Highway 99 East project (ODOT Project Key 19786)</div><div>• \$2,500,000 will be added to the preliminary engineering phase of the Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) project (ODOT Project Key 21179).</div><div>• \$5,000,000 will be added to the preliminary engineering phase of the Interstate 5 Rose Quarter Improvement Project (ODOT Project Key 19071).</div></div>																
	STIP amendment funding summary																
	<table><tr><th>Project</th><th>Current Funding</th><th>Proposed Funding</th></tr><tr><td>Interstate 205: Stafford Road to Oregon 99 East</td><td>\$12,500,000</td><td>\$15,000,000</td></tr><tr><td>Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) (not including HB 2017 funding)</td><td>\$9,400,000</td><td>\$11,900,000</td></tr><tr><td>Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)</td><td>\$20,391,997</td><td>\$25,391,997</td></tr><tr><td>TOTAL</td><td>\$42,291,997</td><td>\$52,291,997</td></tr></table>			Project	Current Funding	Proposed Funding	Interstate 205: Stafford Road to Oregon 99 East	\$12,500,000	\$15,000,000	Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) (not including HB 2017 funding)	\$9,400,000	\$11,900,000	Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)	\$20,391,997	\$25,391,997	TOTAL	\$42,291,997
Project	Current Funding	Proposed Funding															
Interstate 205: Stafford Road to Oregon 99 East	\$12,500,000	\$15,000,000															
Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) (not including HB 2017 funding)	\$9,400,000	\$11,900,000															
Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)	\$20,391,997	\$25,391,997															
TOTAL	\$42,291,997	\$52,291,997															
Additional Details:	The IGA is the "Funding Contribution Agreement: I-205, OR217, and Rose Quarter" and was approved on February 6, 2018.																

Why a Formal amendment is required?	Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized requires a formal amendment.
Total Programmed Amount:	All current funding programmed in Key 21179 is in the PE phase. As a result of the funding addition, the PE phase to Key 21179 will increase from \$9,400,000 to \$11,900,000
Added Notes:	OTC approval was required and occurred during their March 2018 meeting

4. Project: I-5 Rose Quarter Improvement Project	
Lead Agency:	ODOT
ODOT Key Number:	19071 MTIP ID Number: 19071
Project Description:	Planning and project development efforts of the Broadway-Weidler facility plan and the N/NE Quadrant, which identified transportation investments that would result in improved safety and operations as well as supporting economic growth. Proposed multi-modal improvements include: ramp-to-ramp (auxiliary) lanes, highway shoulders, highway covers, new overcrossing, I-5 southbound ramp relocation, new bike and pedestrian crossing, and improved bike and pedestrian facilities. (HB2017 Named & Conditioned project to add \$16,265,452 of NHFP funds)
What is changing?	<p>The amendment adds \$5 million of local TriMet funds to support the PE phase</p> <p>In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.</p> <p>TriMet desires to provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region.</p> <p>ODOT has begun development of the following three projects:</p> <ol style="list-style-type: none"> 4. Construction of a northbound auxiliary lane along OR217 between SW 72nd Avenue and SW Scholl's Ferry Rd (the "NB OR217 Project") 5. Widening of I-205 between Abernethy Bridge and Stafford Road (the "I-205 Project") 6. Construction of an auxiliary lane and shoulders on I-5 near the Broadway/Weidler interchange, and replacing existing overpasses with a land bridge (the "Rose Quarter Project"). <p>As a result of the agreement between ODOT and TriMet:</p> <ul style="list-style-type: none"> • \$2,500,000 will be added to the planning phase of the Interstate 205: Stafford Road to Oregon Highway 99 East project (ODOT Project Key 19786) • \$2,500,000 will be added to the preliminary engineering phase of the Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) project (ODOT Project Key 21179). • \$5,000,000 will be added to the preliminary engineering phase of the Interstate 5 Rose Quarter Improvement Project (ODOT Project Key 19071).

	STIP amendment funding summary		
	Project	Current Funding	Proposed Funding
	Interstate 205: Stafford Road to Oregon 99 East	\$12,500,000	\$15,000,000
	Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) (not including HB 2017 funding)	\$9,400,000	\$11,900,000
	Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)	\$20,391,997	\$25,391,997
	TOTAL	\$42,291,997	\$52,291,997
Additional Details:	The IGA is the "Funding Contribution Agreement: I-205, OR217, and Rose Quarter" and was approved on February 6, 2018.		
Why a Formal amendment is required?	Cost increases at or greater than 20% for \$1 million or higher programmed projects require a formal amendment per the Amendment Matrix. The additional \$5 million equals a 24.5% increase to the project		
Total Programmed Amount:	The programming for the project (all in the PE phase) increase from \$20,391,997 to \$25,391,997		
Added Notes:	Approval from the Oregon Transportation Commission (OTC) was required for this project. OTC approval occurred during their March 2017 meeting.		

5. Project: I-205: Stafford Rd to Oregon 99 East			
Lead Agency:	ODOT		
ODOT Key Number:	19786	MTIP ID Number:	70859
Project Description:	Complete pre-NEPA project development planning activities to add a 3rd through-lane on I-205 in each direction and a 4th lane on the Abernethy Bridge to separate through traffic and complete required seismic upgrades.		
What is changing?	\$2.5 million of local funds from TriMet are being added to support the project's the pre-NEPA project development planning phase.		
	In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to develop high capacity transit, highway bottleneck, and active transportation projects in preparation for potential state and regional investment. Metro has agreed to provide these funds to TriMet, and TriMet will then sell the bonds.		
	TriMet desires to provide \$10,000,000 to State upon the completion of the bond sale to assist in developing the projects set forth in this Agreement as part of a multiagency approach to address multiple transportation, safety, and freight issues in the region.		
	<p>ODOT has begun development of the following three projects:</p> <ol style="list-style-type: none"> 7. Construction of a northbound auxiliary lane along OR217 between SW 72nd Avenue and SW Scholl's Ferry Rd (the "NB OR217 Project") 8. Widening of I-205 between Abernethy Bridge and Stafford Road (the "I-205 Project") 9. Construction of an auxiliary lane and shoulders on I-5 near the Broadway/Weidler interchange, and replacing existing overpasses with a land bridge (the "Rose Quarter Project"). <p>As a result of the agreement between ODOT and TriMet:</p> <ul style="list-style-type: none"> • \$2,500,000 will be added to the planning phase of the Interstate 205: Stafford Road to Oregon Highway 99 East project (ODOT Project Key 19786) • \$2,500,000 will be added to the preliminary engineering phase of the Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) project (ODOT Project Key 21179). 		

	<ul style="list-style-type: none">\$5,000,000 will be added to the preliminary engineering phase of the Interstate 5 Rose Quarter Improvement Project (ODOT Project Key 19071). <p>STIP amendment funding summary</p> <table><tr><th>Project</th><th>Current Funding</th><th>Proposed Funding</th></tr><tr><td>Interstate 205: Stafford Road to Oregon 99 East</td><td>\$12,500,000</td><td>\$15,000,000</td></tr><tr><td>Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl’s Ferry Road) (not including HB 2017 funding)</td><td>\$9,400,000</td><td>\$11,900,000</td></tr><tr><td>Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)</td><td>\$20,391,997</td><td>\$25,391,997</td></tr><tr><td>TOTAL</td><td>\$42,291,997</td><td>\$52,291,997</td></tr></table>	Project	Current Funding	Proposed Funding	Interstate 205: Stafford Road to Oregon 99 East	\$12,500,000	\$15,000,000	Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl’s Ferry Road) (not including HB 2017 funding)	\$9,400,000	\$11,900,000	Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)	\$20,391,997	\$25,391,997	TOTAL	\$42,291,997	\$52,291,997
Project	Current Funding	Proposed Funding														
Interstate 205: Stafford Road to Oregon 99 East	\$12,500,000	\$15,000,000														
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Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)	\$20,391,997	\$25,391,997														
TOTAL	\$42,291,997	\$52,291,997														
Additional Details:	The IGA is the “Funding Contribution Agreement: I-205, OR217, and Rose Quarter” and was approved on February 6, 2018.															
Why a Formal amendment is required?	Cost increases at or greater than 20% for \$1 million or higher programmed projects require a formal amendment per the Amendment Matrix. The additional \$2.5 million equals a 20% increase to the project															
Total Programmed Amount:	The total project programmed amount increases from \$12,500,000 to \$15,000,000.															
Added Notes:	Approval from the Oregon Transportation Commission (OTC) was required for this project. OTC approval occurred during their March 2017 meeting.															

6. Project:	Portland to Milwaukie Light Rail (2019)		
Lead Agency:	TriMet		
ODOT Key Number:	20843	MTIP ID Number:	70929
Project Description:	This project extends light rail from PSU in downtown Portland to Milwaukie and north Clackamas County. It includes a multi-modal bridge carrying light rail, streetcar, buses, bicycles and pedestrians.		
What is changing?	<p>The amendment increases the estimated FFY 2019 5309 grant allocation based on the Annual Report on Funding Recommendations for FY 2019 – FTA 5309 Capital Investment Grants Program.</p> <p>The approved 5309 grant allocation to the Portland – Milwaukie Light Rail project increases from \$38,000,000 to \$65,664,144.</p> <p>The <i>Annual Report on Funding Recommendations</i> is issued by the United States Secretary of Transportation to help inform the appropriations process for the upcoming fiscal year (FY) by providing information on projects that have been submitted to the Federal Transit Administration's (FTA) discretionary Capital Investment Grants Program.</p> <p>Since 1964, Congress has provided Federal funds to supplement certain local transit projects. In FY 2017, Congress provided \$9.1 billion in formula funds distributed to state and local governments for local transit projects. The CIG Program supplements those expenditures with additional financial resources for transit capital projects that are locally planned, implemented, and operated. It provides discretionary funding for fixed guideway investments such as new and expanded heavy rail, commuter rail, light rail, streetcars, bus rapid transit, and ferries as well as corridor-based bus rapid transit investments that emulate the features of rail.</p> <p>There are three categories of eligible projects under the CIG program: New Starts, Small Starts, and Core Capacity. New Starts and Core Capacity projects are required by law to go through a three phase process - Project Development, Engineering, and Construction. Small Starts projects are required by law to go through a two phase</p>		

Annual Report on Funding Recommendations

Fiscal Year 2019
Capital Investment Grants Program

Report of the Secretary of Transportation
to the United States Congress
Pursuant to 49 USC 5309(o)(1) and
Section 3005(b)(11) of the Fixing America's Surface Transportation Act

February 2018

Prepared by:
Federal Transit Administration

Available from:
Federal Transit Administration
Office of Planning and Environment
1200 New Jersey Avenue, SE
Washington, DC 20590

	<p>process - Project Development and Construction. As defined in law, New Starts projects are those whose sponsors request \$100 million or more in Capital Investment Grants Program funds <u>or</u> have an anticipated total capital cost of \$300 million or more. Core Capacity projects are substantial investments in existing fixed-guideway corridors that are at capacity today or will be in five years, where the proposed project will increase capacity by not less than 10 percent. Small Starts projects are those whose sponsors request less than \$100 million in Capital Investment Grants Program funds <u>and</u> have an anticipated total capital cost of less than \$300 million.</p> <p>Section 5309 CIG funding is provided for a portion of the total project cost, including design and construction. By law, New Starts projects are limited to a maximum Section 5309 CIG program share of 60 percent, and Core Capacity and Small Starts projects are limited to a maximum Section 5309 CIG program share of 80 percent.</p> <p>Previous programming for the project was based on early estimates in 2019 for eligible projects. The FTA <i>Annual Report on Funding Recommendations</i> provides the approved updates for 2019.</p>
Additional Details:	The specific funding recommendations are stated on page 5 of the document in Table 1, "FY 2019 Funding Recommendations for the Section 5309 Capital Investment Grants (CIG) Program"
Why a Formal amendment is required?	Cost changes above 20% to projects with than exiting cost of \$1 million or more require a formal MTIP Amendment
Total Programmed Amount:	The project 5309 amount increases to \$65,664,144. The local funding contribution increases to \$51,851,705. The revised total project programming amount is now \$117,515,849.
Added Notes:	

Note: The Amendment Matrix at right is included as a reference the rules and justification for Formal Amendment and Administrative Modifications that the MPOs and ODOT must follow

METRO REQUIRED PROJECT AMENDMENT REVIEWS

In accordance with 23 CFR 450.316-328, Metro is responsible for reviewing and ensuring MTIP amendments comply with all federal programming requirements. Each project and their requested changes are evaluated against multiple MTIP programming review factors that originate from 23 CFR 450.316-328. The programming factors include:

- Verification as required to programmed in the MTIP:
 - Awarded federal funds and is considered a transportation project
 - Identified as a regionally significant project.
 - Identified on and impacts Metro transportation modeling networks.
 - Requires any sort of federal approvals which the MTIP is involved.
- Passes fiscal constraint verification:
 - Project eligibility for the use of the funds
 - Proof and verification of funding commitment

ODOT-FTA-FHWA Amendment Matrix	
Type of Change	
FULL AMENDMENTS	
1. Adding or cancelling a federally funded, and regionally significant project to the STIP and state funded projects which will potentially be federalized.	
2. Major change in project scope. Major scope change includes:	
• Change in project termini - greater than 25 mile in any direction	
• Changes to the approved environmental footprint	
• Impacts to AQ conformity	
• Adding capacity per FHWA Standards	
• Adding or deleting worktype	
3. Changes in Fiscal Constraint by the following criteria:	
• FHWA project cost increase/decrease:	
• Projects under \$500K - increase/decrease over 50%	
• Projects \$500K to \$1M - increase/decrease over 30%	
• Projects \$1M and over - increase/decrease over 20%	
• All FTA project changes - increase/decrease over 30%	
4. Adding an emergency relief permanent repair project that involves substantial change in function and location.	
ADMINISTRATIVE/TECHNICAL ADJUSTMENTS	
1. Advancing or Slipping an approved project/phase within the current STIP (if slipping outside current STIP, see Full Amendments #2)	
2. Adding or deleting any phase (except CN) of an approved project below Full Amendment #3	
3. Combining two or more approved projects into one or splitting an approved project into two or more, or splitting part of an approved project to a new one.	
4. Splitting a new project out of an approved program-specific pool of funds (but not reserves for future projects) or adding funds to an existing project from a bucket or reserve if the project was selected through a specific process (i.e. ARTS, Local Bridge...)	
5. Minor technical corrections to make the printed STIP consistent with prior approvals, such as typos or missing data.	
6. Changing name of project due to change in scope, combining or splitting of projects, or to better conform to naming convention. (For major change in scope, see Full Amendments #2)	
7. Adding a temporary emergency repair and relief project that does not involve substantial change in function and location.	

- Requires the MPO to establish a documented process proving MTIP programming does not exceed the allocated funding for each year of the four year MTIP and for all funds identified in the MTIP.
- Passes the RTP consistency review:
 - Identified in the current approved constrained RTP either as a stand- alone project or in an approved project grouping bucket
 - RTP project cost consistent with requested programming amount in the MTIP
 - If a capacity enhancing project – is identified in the approved Metro modeling network
- Satisfies RTP goals and strategies consistency: Meets one or more goals or strategies identified in the current RTP
- Determined the project is eligible to be added to the MTIP, or can be legally amended as required without violating provisions of 23 CFR450.300-338 either as a formal Amendment or administrative modification:
 - Does not violate supplemental directive guidance from FHWA/FTA's approved Amendment Matrix.
 - Adheres to conditions and limitation for completing technical corrections, administrative modifications, or formal amendments in the MTIP.
 - Is eligible for special programming exceptions periodically negotiated with USDOT as well.
 - Programming determined to be reasonable of phase obligation timing and is consistent with project delivery schedule timing.
- MPO responsibilities completion:
 - Completion of the required 30 day Public Notification period:
 - Project monitoring, fund obligations, and expenditure of allocated funds in a timely fashion.
 - Acting on behalf of USDOT to provide the required forum and complete necessary discussions of proposed transportation improvements/strategies throughout the MPO.

APPROVAL STEPS AND TIMING

Metro's approval process for formal amendment includes multiple steps. The required approvals for the March 2018 Formal MTIP amendment will include the following:

<u>Action</u>	<u>Target Date</u>
● Initiate the required 30-day public notification process.....	March 28, 2018
● TPAC notification and approval recommendation.....	April 6, 2018
● JPACT approval and recommendation to Council.....	April 19, 2018
● Completion of public notification process.....	April 26, 2018
● Metro Council approval.....	May 3, 2018*

*Note: If any significant public comments are received that are deemed necessary for review by JPACT, the impacted projects or complete amendment will be pulled from the Metro Council agenda and returned to JPACT for their review and direction.

USDOT Approval Steps:

<u>Action</u>	<u>Target Date</u>
● Metro development of amendment narrative package	May 4, 2018
● Amendment bundle submission to ODOT for review.....	May 7, 2018
● Submission of the final amendment package to USDOT.....	May 11, 2018
● ODOT clarification and approval.....	Mid May , 2018
● USDOT clarification and final amendment approval.....	Late May/Early June 2018

ANALYSIS/INFORMATION

1. **Known Opposition:** None known at this time.
2. **Legal Antecedents:** Amends the 2018-2021 Metropolitan Transportation Improvement Program adopted by Metro Council Resolution 17-4817 on July 27, 2017 (For The Purpose of Adopting the Metropolitan Transportation Improvement Program for the Portland Metropolitan Area).
3. **Anticipated Effects:** Enables the projects to obligate and expend awarded federal funds.
4. **Metro Budget Impacts:** None to Metro

RECOMMENDED ACTIONS:

TPAC recommends the approval of Resolution 18-4883 with the following modifications to the supporting materials and amendment processes:

1. Update the Public Notification and Exhibit A tables with the required years for two projects and minor corrections needed in the Preview Summary tables in Exhibit A and the Public Notification tables.
2. Expand the summary information in the preview tables to provide additional details about each project amendment as needed.
3. Expand the preview summary in the Public Notification and Exhibit A tables to include applicable references and information about the 2016 JPACT action to bond a subset of RFFA funds to develop the high capacity transit, highway bottleneck and active transportation projects in preparation for potential state and regional investments for the three impacted project in this formal amendment.
4. Explore and develop follow-on reporting processes concerning how the MTIP amendment programming actions result in the final construction phase contracting decisions, bid awards, etc. from an equity perspective and report back to TPAC on a periodic basis as a way to close the circle from the initial MTIP programming and amendment process to the final contractor selection for the construction phase.

Staff comments to the above four TPAC modified approval recommendations: Staff concurs with all four approval recommendations in support of Resolution 18-4883 as follows:

- a. Required corrections have been made to Exhibit A and to the Public Notification tables.
- b. The "Required Changes" field preview summary tables in Exhibit A and the Public Notification tables include additional change details about the project amendment.
- c. The three bond related projects (in Key - 21179, OR217 SW 72nd Ave to OR10-Scholl's Ferry Rd, Key 19071 - Rose Quarter Improvement Project, and Key 19786 - I-205 Stafford Rd to OR99E) had additional bond related details added to the preview summary tables for both Exhibit A and the Public Notification Tables
- d. The request to develop a summary report concerning the final construction phase contractor selection and its impact upon equity is an endeavor that has an existing desire for additional discussion. Staff will coordinate with a parallel effort, the Construction Career Pathways project to help refine and determine the requirements TPAC has requested. Staff

will bring progress report back to TPAC in the near future concerning the contracting equity reporting item request.

Attachment: Project Location Maps and OTC Staff Report copies

Date: Tuesday, April 10, 2018
From: Ken Lobeck, Funding Programs Lead, 503-797-1785
Subject: Attachment 1 to the April 2018 MTIP Formal Amendment Staff Report – Project Location Maps & OTC letters as applicable

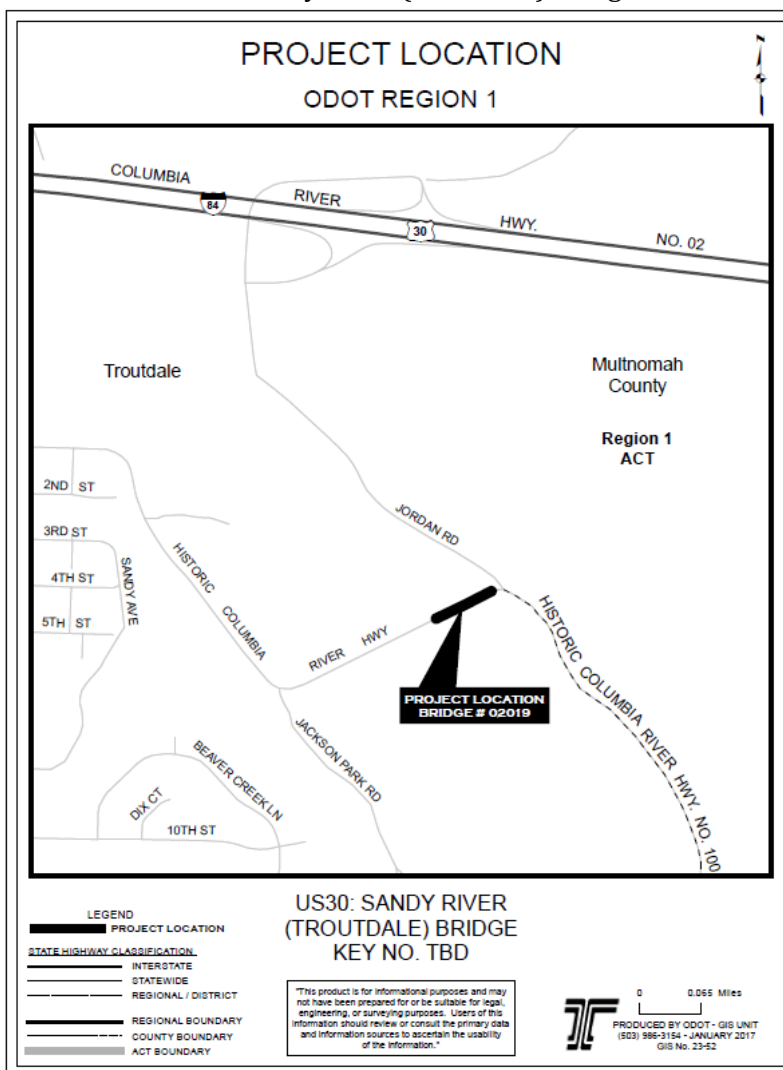
BACKGROUND

Available project location maps and OTC request letters are included in this attachment to the staff report for reference for their applicable projects. Maps and/or OTC letters are included for:

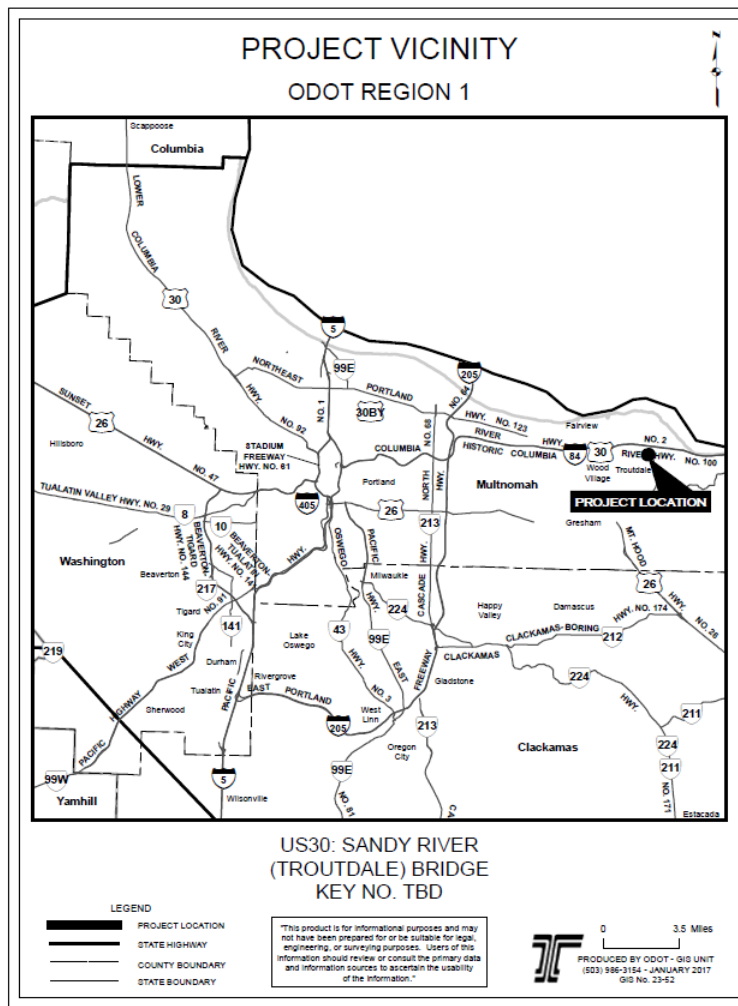
- Key 20703 – US30: Sandy River (Troutdale) Bridge
- Key 21179 – OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)
- Key 19701 – I-5 Rose Quarter Improvement Project
- Key 19786 – I-205: Stafford Rd to OR99E
- Key 20414 – Portland to Milwaukie Light Rail (2019)

Key 20703

US30: Sandy River (Troutdale) Bridge



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Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

355 Capitol St NE

Salem, OR 97301-3871

DATE: December 4, 2017

TO: Oregon Transportation Commission

[Original signature on file]

FROM: Matthew L. Garrett
Director

SUBJECT: **Consent 9** – Amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to split one new bridge project (Interstate 5 over Crowson Road Northbound and Southbound Bridges) from an existing project (Interstate 5: California State Line – Ashland Paving) and to remove painting from another current project (U.S. 30: Sandy River Bridge).

Requested Action:

Request approval to amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to revise funding of three projects.

- Reduce funding for the Interstate 5: California State Line – Ashland Paving project by removing the Interstate 5 over Crowson Road northbound and southbound bridges in Ashland from the existing project. The total estimated cost for Interstate 5: California State Line – Ashland Paving will change from \$17,234,604 to \$16,724,604. The \$510,000 reduction will be transferred to the new project – Interstate 5 over Crowson Road Northbound and Southbound bridges.
- Change the scope of the U.S. 30: Sandy River (Troutdale) Bridge project located in Region 1. ODOT has determined the bridges do not need to be painted. Savings from this action total \$4,580,000, of which \$1,246,615 will be directed to a new Interstate 5 over Crowson Road project. The remaining savings of \$3,333,385 will be returned to the State Bridge Program.
- Create a new project named Interstate 5 over Crowson Road Northbound and Southbound Bridges. Funding for the new project will come from State Bridge Program funds that are currently associated with the bridges in the Interstate 5: California State Line – Ashland project and the U.S. 30: Sandy River (Troutdale) Bridge project. Total estimated cost of this project is \$1,756,615.

STIP Amendment Funding Summary

Project	Current Funding	Proposed Funding
Interstate 5 over Crowson Road NB and SB Bridges (Ashland) (new project)	\$0	\$1,756,615
U.S. 30: Sandy River (Troutdale) Bridge	\$6,315,000	\$1,735,000
State Bridge Program FFY 2018	\$1,175,105	\$4,508,490
Interstate 5: California State Line – Ashland Paving	\$17,234,604	\$16,724,604
TOTAL	\$24,724,709	\$24,724,709

Project to be added:

Interstate 5 over Crowson Road Northbound and Southbound Bridges (Ashland) (KN TBD)			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	N/A*	\$0	\$0
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	2018	\$0	\$1,756,615
TOTAL		\$0	\$1,756,615

* Preliminary engineering is in its final stages and will be completed under the Interstate 5: California State Line – Ashland Paving project.

Project to be reduced:

U.S. 30: Sandy River (Troutdale) Bridge (KN 20703)			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	2017	\$565,000	\$270,000
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	2019	\$5,750,000	\$1,465,000
TOTAL		\$6,315,000	\$1,735,000

Project to be increased:

State Bridge Program FFY 2018 (KN 20731)			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	N/A	\$0	\$0
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	N/A	\$0	\$0
Other	2018	\$1,175,105	\$4,508,490
TOTAL		\$1,175,105	\$4,508,490

Oregon Transportation Commission
December 4, 2017
Page 3

Project to be reduced:

Interstate 5: California State Line – Ashland Paving (KN 18873)			
Phase	Year	Cost	
		Current	Proposed
Preliminary Engineering	2015	\$996,000	\$996,000
Right of Way	2018	\$5,000	\$5,000
Utility Relocation	2018	\$5,000	\$5,000
Construction	2018	\$16,228,604	\$15,718,604
TOTAL		\$17,234,604	\$16,724,604

Background:

The U.S. 30: Sandy River Bridge project in Troutdale originally intended to replace the sidewalks, repair the foundation and paint the bridge. As the design team developed the project ODOT determined that the bridge painting is in good condition and it is not necessary to repaint the bridge at this time. The project will continue to include sidewalk replacements and foundation repair. Savings associated with not painting the bridge total \$4,580,000.

The Interstate 5 over Crowson Road northbound and southbound bridges in Ashland (08746N and 08746S at milepoint 13.29) were built in 1963. The deck on the northbound bridge was replaced as part of a widening project in 2000. A concrete overlay that was provided on the southbound bridge in 2002 is reaching the end of its service life. Both bridges were added in December 2015 to the Interstate 5: California State Line - Ashland Paving project for polymer concrete deck overlays. This overlay type is appropriate for decks that are in good structural condition and require a minimum of surface preparation. During project development, ODOT discovered that both concrete decks are contaminated with chlorides to a much greater extent than was originally thought. Thus, a polymer concrete deck overlay is not appropriate.

Due to the need to remove a significant portion of the existing decks, a structural overlay is needed. Since a structural overlay requires traffic control, construction duration, and crossovers that are beyond the scope of a polymer overlay project, these bridge repairs will require additional funding. In addition, the proximity of these bridges to the new Siskiyou Rest Area/Welcome Center, and the timing of its 2018 opening, necessitate the completion of the Crowson Road bridges in advance to eliminate the need to close the rest area/welcome center for several months just shortly after its opening. The design team investigated accelerating the Interstate 5: California State Line – Ashland project and determined it was not possible to do so. These circumstances require the Crowson Road bridges to be removed from the Interstate 5: California State Line - Ashland Paving project and addressed as a new separate project with an estimated construction cost of \$1,756,615.

With Commission approval, the State Bridge Program will be able to start work on the Crowson Road bridges on Interstate 5 with funding from the other two projects with minimal impact to the new Siskiyou Rest Area/Welcome Center. In addition, the additional funding back into the Bridge Program enables bringing future projects to the Commission for approval. Without approval, the Crowson Road

bridge structure will continue to deteriorate, ultimately requiring a minimum of a structural overlay, and perhaps a deck replacement, depending on when the work is programmed.

Attachments:

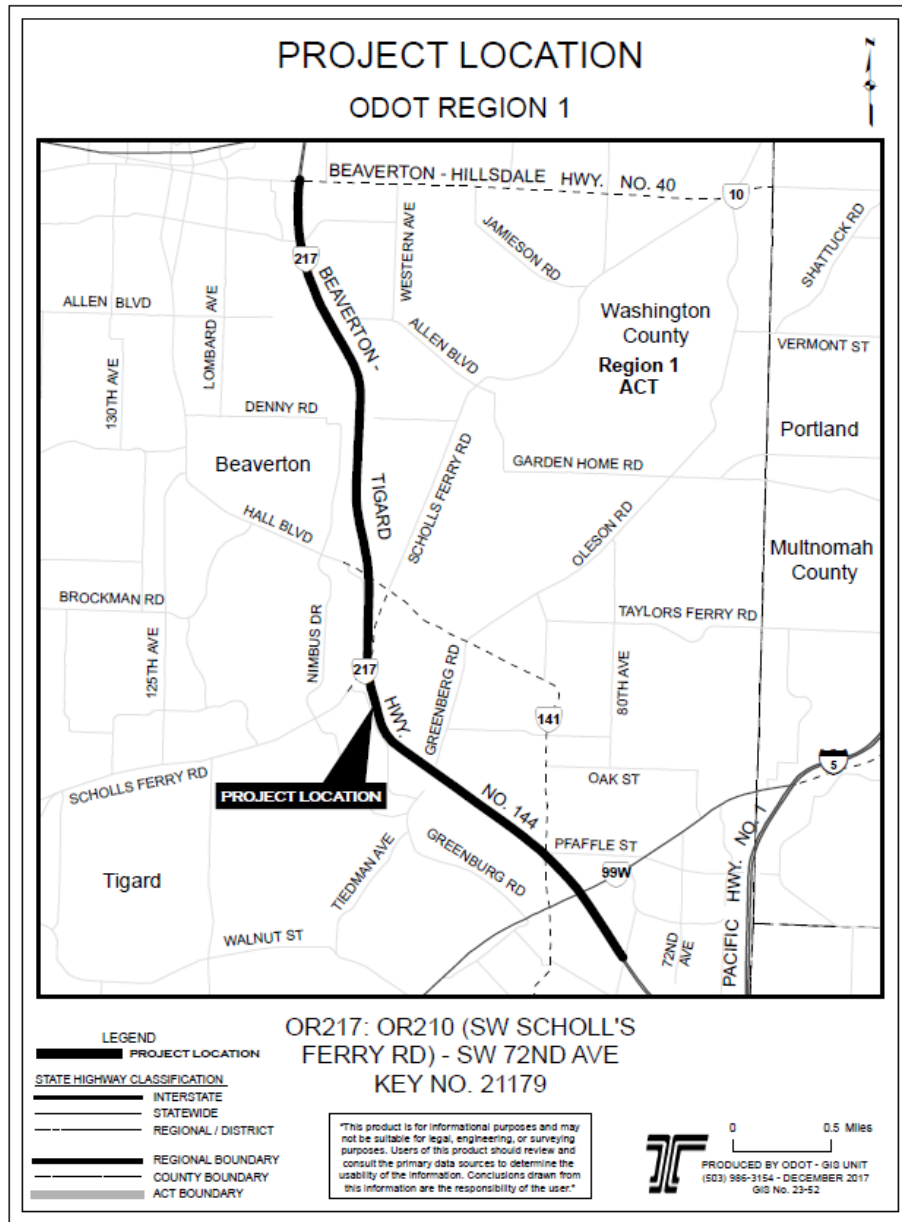
- Attachment 1 - Location and Vicinity Maps

Copies (w/attachment) to:

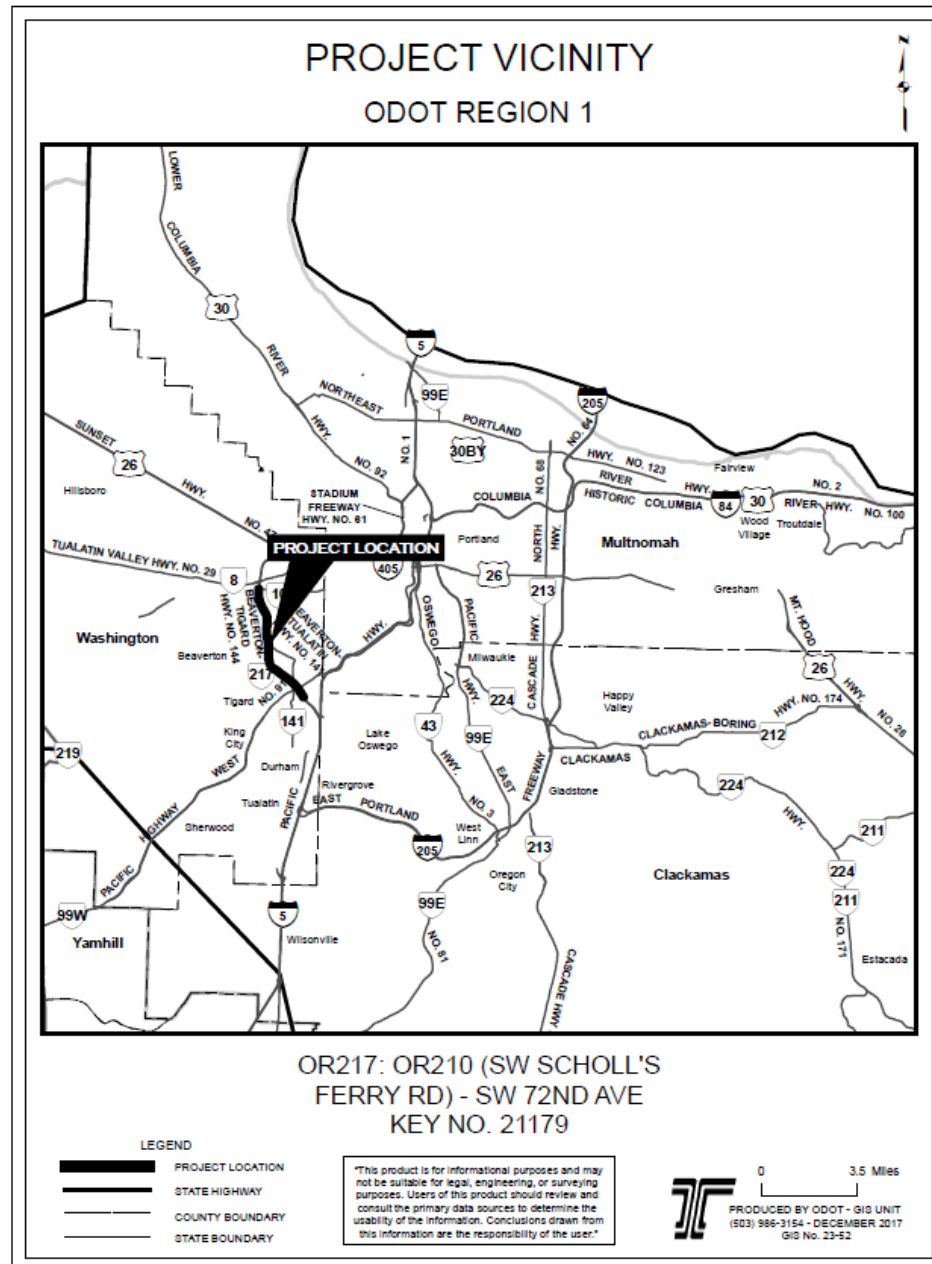
Jerri Bohard	Travis Brouwer	Tom Fuller	Bob Gebhardt
Paul Mather	McGregor Lynde	Fariborz Pakseresht	Jeff Flowers
Amanda Sandvig	Arlene Santana	Frank Reading	Naomi Birch
Rian Windsheimer	Vaughan Rademeyer	Rachelle Nelson	Lynn Averbek

Key 21179

OR217: SW 72nd Ave - OR10 (SW Scholl's Ferry Rd)



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Oregon

Kate Brown, Governor

Oregon Transportation Commission

Office of the Director, MS 11

355 Capitol St NE

Salem, OR 97301-3871

DATE: March 5, 2018

TO: Oregon Transportation Commission

[Original signature on file]

FROM: Matthew L. Garrett
Director

SUBJECT: Consent 14 - Amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to add funds to three projects in Region 1.

Requested Action:

Request approval to amend the 2018-2021 Statewide Transportation Improvement Program (STIP) to receive funding from TriMet for the following Region 1 projects by a total of \$10,000,000 with funds allocated per agreement.

- \$2,500,000 will be added to the planning phase of the Interstate 205: Stafford Road to Oregon Highway 99 East project;
- \$2,500,000 will be added to the preliminary engineering phase of the Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) project; and
- \$5,000,000 will be added to the preliminary engineering phase of the Interstate 5 Rose Quarter Improvement Project.

STIP amendment funding summary

Project	Current Funding	Proposed Funding
Interstate 205: Stafford Road to Oregon 99 East	\$12,500,000	\$15,000,000
Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road) (not including HB 2017 funding)	\$9,400,000	\$11,900,000
Interstate 5 Rose Quarter Improvement Project (not including HB 2017 funding)	\$20,391,997	\$25,391,997
TOTAL	\$42,291,997	\$52,291,997

Oregon Transportation Commission
 March 5, 2018
 Page 2

Project to be increased

Interstate 205: Stafford Road – Oregon 99E (KN:19786)			
		COST	
PHASE	YEAR	Current	Proposed
Planning	2016	\$12,500,000	\$15,000,000
Preliminary Engineering	N/A	\$0	\$0
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	N/A	\$0	\$0
Other	2019	\$0	\$0
TOTAL		\$12,500,000	\$15,000,000

Project to be increased

Oregon 217: SW 72nd Ave – Oregon 10 (SW Scholl's Ferry Road) (KN:21179)			
		COST	
PHASE	YEAR	Current	Proposed
Planning	N/A	\$0	\$0
Preliminary Engineering	2018	\$9,400,000	\$11,900,000
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	N/A	\$0	\$0
Other	N/A	\$0	\$0
TOTAL		\$9,400,000	\$11,900,000

Project to be increased

Interstate 5 Rose Quarter Improvement Project (KN:19071)			
		COST	
PHASE	YEAR	Current	Proposed
Planning	N/A	\$0	\$0
Preliminary Engineering	2016	\$20,391,997	\$25,391,997
Right of Way	N/A	\$0	\$0
Utility Relocation	N/A	\$0	\$0
Construction	N/A	\$0	\$0
Other	N/A	\$0	\$0
TOTAL		\$20,391,997	\$25,391,997

Background:

In 2016, the Metro Joint Policy Committee on Transportation (JPACT) voted to bond a subset of Regional Flexible Fund dollars to demonstrate their commitment to three key highway bottlenecks. TriMet will sell bonds to provide upfront funding for project development work on a total of four projects: the three highway bottleneck projects and the Southwest Corridor High Capacity Transit project.

Consent_14_TriMet_Fund_Ltr.docx
 2/21/2018

TriMet has agreed to provide \$10 million to ODOT in two installments, the first \$5 million within 30 days of written request by ODOT, and the second payment of \$5 million no earlier than 2020. The attached Intergovernmental Agreement (IGA) describes the complete set of terms, including ODOT's commitment to provide an annual report to the Joint Policy Advisory Committee on Transportation (JPACT) on the status of the projects (Attachment 2).

The three highway bottleneck projects receiving funding through this IGA are:

Interstate 5 Rose Quarter Improvement Project

This project addresses the one-mile section of Interstate 5 between the interchanges of Interstate 405 and Interstate 84, which includes the network of surface streets associated with the Broadway/Weidler interchange. This section of Interstate 5 has extremely high traffic volumes, closely spaced interchanges, and no shoulders, all of which contribute to it having one of the highest crash rates in Oregon. This section of highway also experiences chronic congestion resulting in significant costs to the economy and hindrance to the movement of goods and people.

This project will also add new auxiliary lanes and shoulders on Interstate 5 to improve safety and operations by providing more space for merging and weaving between Interstate 84 and Interstate 405. Rebuilding the overpasses as lids could provide new community connections and surface area to support enhanced bicycle and pedestrian facilities. A new bicycle and pedestrian bridge and upgrades to the bridges across Interstate 5 will provide safer and more convenient connections for all modes of travel.

Funding listed in the chart above and programmed in the STIP is for preliminary engineering. HB 2017 included funding for construction that will be programmed in the 2021-2024 STIP.

Interstate 205: Stafford Road to Oregon 99 East

Interstate 205 has six lanes for most of its 25-mile length but only four lanes between exit 3 (Stafford Road, Lake Oswego) and exit 9 (Oregon 99E, Oregon City). Between 80,000 and 100,000 vehicles travel this narrow section of the highway on an average day. Closely-spaced interchanges on either end of the Abernethy Bridge contribute to the safety, mobility and reliability issues in this area.

This project adds a third lane on Interstate 205 in each direction between Abernethy Bridge and Stafford Road to improve traffic operations, improve access to industrial lands in East Clackamas County and improve safety. It will also ensure the bridge remains functional after a catastrophic earthquake.

Funding listed in the chart above and programmed in the STIP is for preliminary engineering. Funding has not yet been identified for construction of this project.

Oregon 217: Southwest 72nd Avenue to Oregon 10 (Southwest Scholl's Ferry Road)

This project addresses mainline safety and operations improvements for 2.39 miles of Northbound Oregon 217 between SW 72nd Avenue and Southwest Scholls Ferry Road. Oregon 217 serves 120,000

trips per day, connects Interstate 5 and U.S. 26 and provides access to major regional destinations such as Washington Square Mall and Beaverton Regional Center. The primary safety and operational deficiencies on Oregon 217 include tight interchange spacing and short weaving sections resulting in an average of 200 accidents per year.

This project will add new auxiliary lanes between the northbound off-ramp at Oregon 99 West and the Scholls Ferry Road exit and will replace the Hall Boulevard overcrossing. The auxiliary lane are expected to reduce crashes by 30 to 70 percent and improve traffic reliability.

Funding listed in the chart above and programmed in the STIP is for preliminary engineering. HB 2017 included funding for construction that will be programmed in the 2021-2024 STIP.

Options:

With approval, the TriMet funds will be programmed for the respective project planning and design phases as currently scheduled.

Without approval, the TriMet funds will not be added to the STIP for these projects. The projects will move forward as currently funded likely resulting in delay and the eventual need to reduce project elements.

Attachments:

- Attachment 1 - Location and Vicinity Maps
- Attachment 2 – ODOT/TriMet Intergovernmental Agreement

Key 19071

I-5 Rose Quarter project

Note: OTC letter is the same as for Key 21179



Southern Section



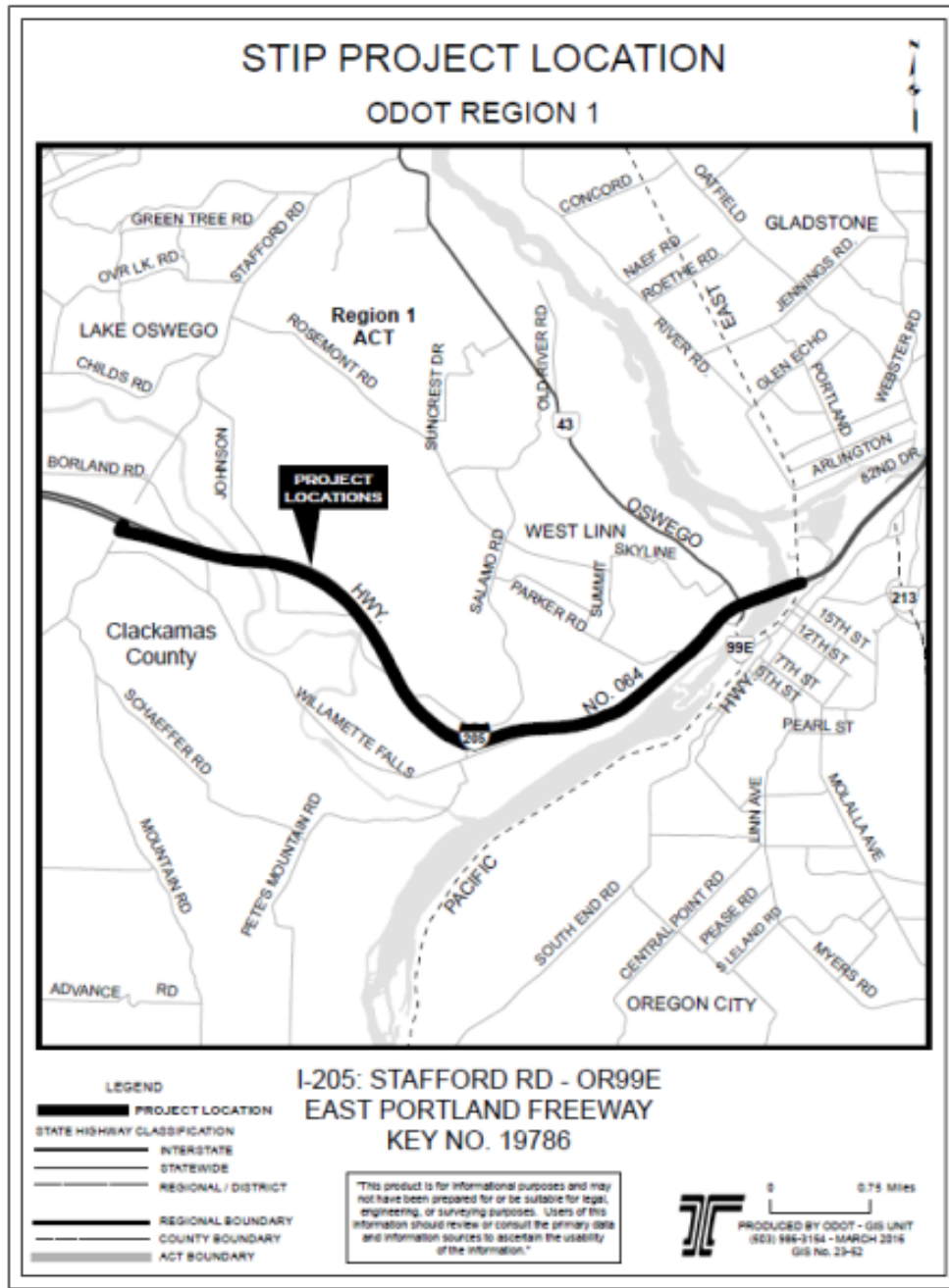
Northern Section

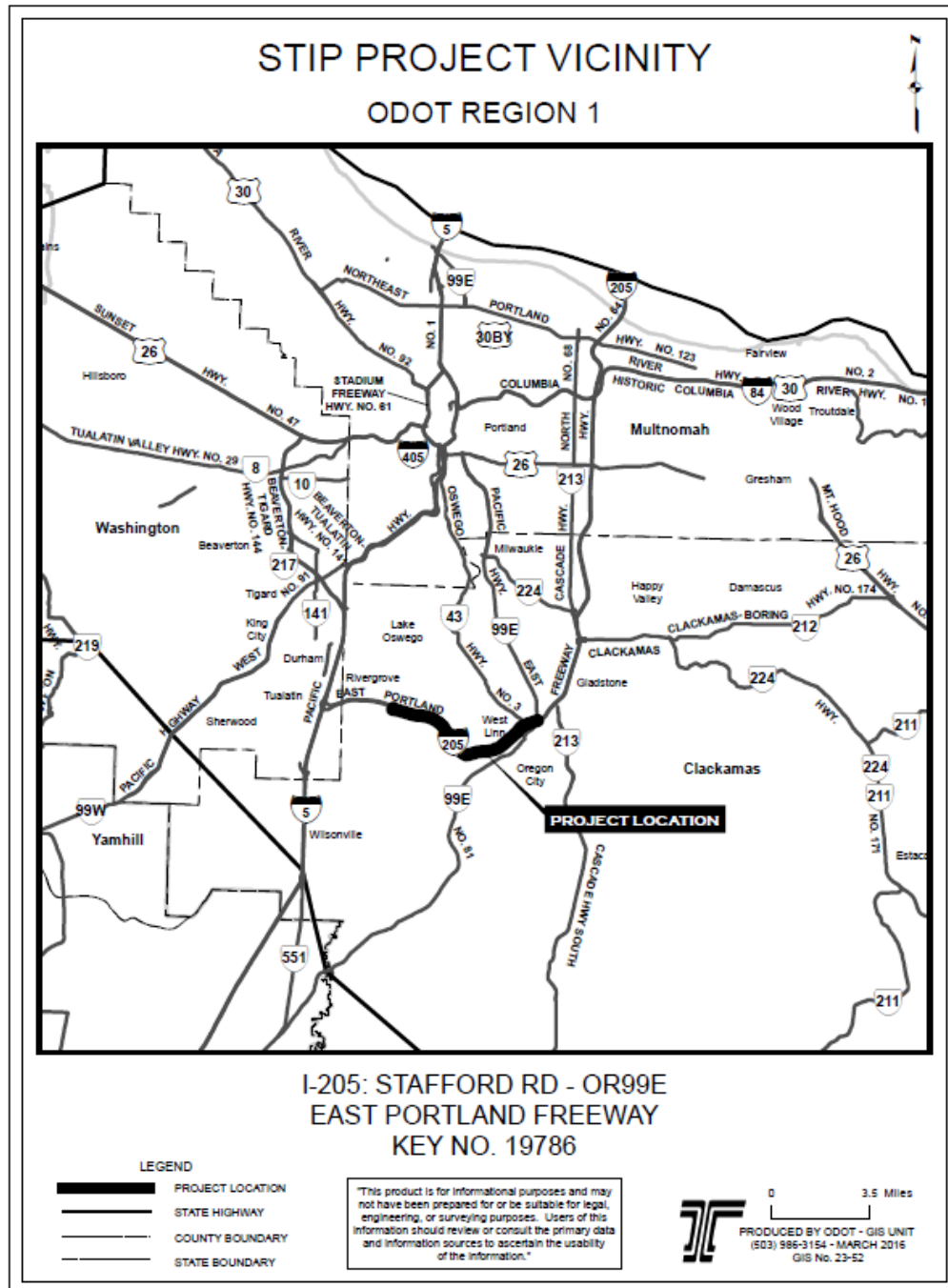


Key 19786

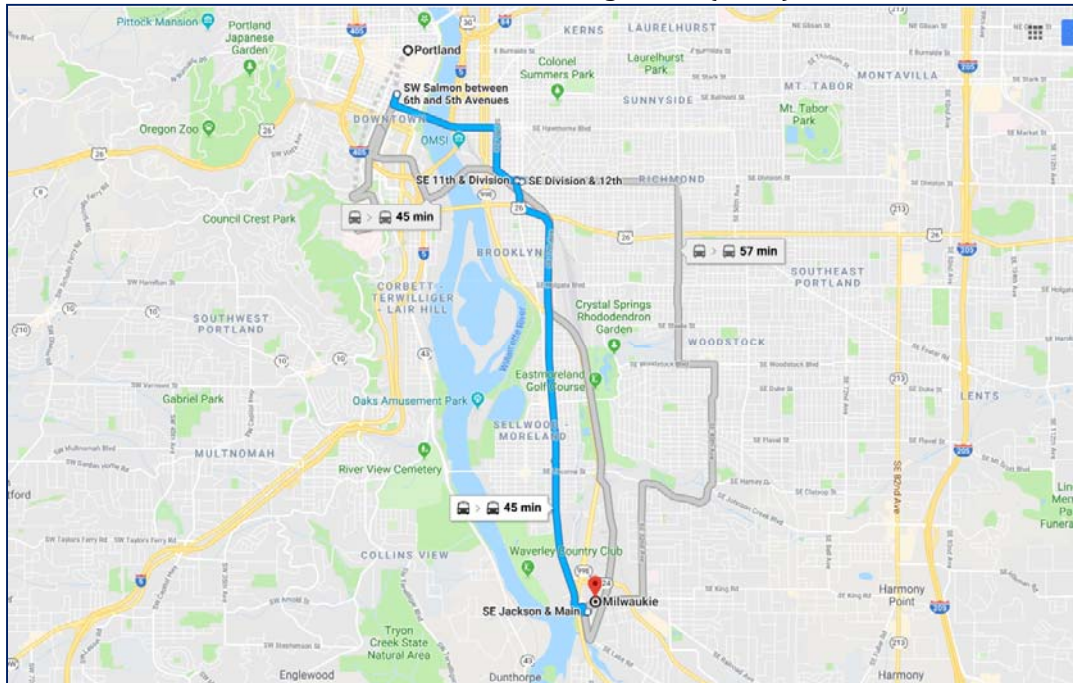
I-205: Stafford Rd to Oregon 99 East

Note: OTC letter is the same as for Key 21179





Key 20843
Portland to Milwaukie Light Rail (2019)



U.S. Department of Transportation
Federal Transit Administration



FACT SHEET:
FIXED GUIDEWAY CAPITAL INVESTMENT GRANTS
Chapter 53 Section 5309

	FY15 /MAP-21	FY16 (millions)	FY17 (millions)	FY18 (millions)	FY19 (millions)	FY20 (millions)
Section 5309	\$2,120.0	\$2,301.8	\$2,301.8	\$2,301.8	\$2,301.8	\$2,301.8

PROGRAM PURPOSE:

The discretionary Capital Investment Grant (CIG) program provides funding for fixed guideway investments such as new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit, and ferries, as well as corridor-based bus rapid transit investments that emulate the features of rail. There are four categories of eligible projects under the CIG program: New Starts, Small Starts, Core Capacity, and Programs of Interrelated Projects:

Table 1 - FY 2019 Funding Recommendations for the Section 5309 Capital Investment Grants (CIG) Program

	Mode	Total Project Cost	Section 5309 CIG Request	Section 5309 CIG Share	Section 5309 CIG Funds Appropriated/Allocated Through FY 2017	Remaining Section 5309 CIG Funding Needs After FY 2017	President's FY 2018 CIG Budget Proposal	FY 2019 Section 5309 CIG Funding Recommendations
Existing New Starts Full Funding Grant Agreements (FFGAs)								\$ 835,664,144
Existing Core Capacity Full Funding Grant Agreements								\$ 200,000,000
Oversight - 1% taken down by statute								\$ 10,461,254
Total								\$ 1,046,125,398
Existing New Starts FFGAs								
CA	Los Angeles, Regional Connector	LRT	\$ 1,402,932,490	\$ 669,900,000	47.7%	\$ 365,000,000	\$ 304,900,000	\$ 100,000,000
CA	Los Angeles, Westside Subway Section 1	HR	\$ 2,821,957,153	\$ 1,250,000,000	44.3%	\$ 365,000,000	\$ 885,000,000	\$ 100,000,000
CA	Los Angeles, Westside Subway Section 2	HR	\$ 2,499,239,536	\$ 1,187,000,000	47.5%	\$ 200,000,000	\$ 987,000,000	\$ 100,000,000
CA	San Diego, Mid-Coast Corridor Transit Project	LRT	\$ 2,171,200,545	\$ 1,043,380,000	48.1%	\$ 150,000,000	\$ 893,380,000	\$ 100,000,000
MA	Boston Green Line Extension	LRT	\$ 2,297,618,856	\$ 996,121,000	43.4%	\$ 400,000,000	\$ 596,121,000	\$ 150,000,000
MD	Maryland National Capital Purple Line	LRT	\$ 2,407,030,286	\$ 900,000,000	37.4%	\$ 328,000,000	\$ 572,000,000	\$ 120,000,000
OR	Portland, Portland-Milwaukee Light Rail Project	LRT	\$ 1,490,350,173	\$ 745,175,087	50.0%	\$ 379,510,943	\$ 165,664,144	\$ 65,664,144
TX	Fort Worth, TEX Rail	CR	\$ 1,034,411,952	\$ 499,390,221	48.3%	\$ 234,000,000	\$ 245,390,221	\$ 100,000,000
Subtotal			\$ 16,124,740,971	\$ 7,290,966,308		\$ 2,641,510,943	\$ 4,649,455,365	\$ 835,664,144
Existing Core Capacity FFGAs								
CA	San Carlos, Peninsula Corridor Electrification Project	CR	\$ 1,930,670,934	\$ 647,000,000	33.5%	\$ 172,956,593	\$ 474,043,407	\$ 100,000,000
IL	Chicago, Red and Purple Line Modernization Project Phase One	HR	\$ 2,066,702,783	\$ 956,607,772	46.3%	\$ 291,131,640	\$ 665,476,132	\$ 100,000,000
Subtotal			\$ 3,997,373,717	\$ 1,603,607,772		\$ 464,088,233	\$ 1,139,519,539	\$ 200,000,000
Other Projects That May Become Ready for Funding *							\$ 111,750,149	

The FY 2019 CIG budget request includes \$1 billion in new budget authority and \$46 million in anticipated prior year recoveries for a total of \$1.046 billion.

LRT = light rail transit, HR = heavy rail, CR = commuter rail

* The President's FY 2018 Budget Proposal included \$111,750,149 million for "Other projects that may become ready for funding" and noted, "The FFGA for the Caltrain Peninsula Corridor Electrification Project is planned to be signed shortly and the Maryland National Capital Purple Line FFGA remains under review due to pending litigation." Both FFGAs have since been signed.

JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION (JPACT)

Meeting Minutes

March 15, 2018

Metro Regional Center, Council Chamber

MEMBERS PRESENT

Shirley Craddick
Nina DeConcini
Craig Dirksen (*Chair*)
Doug Kelsey
Tim Knapp
Roy Rogers
Dan Saltzman
Paul Savas
Bob Stacey
Jeanne Stewart
Jessica Vega Pederson
Rian Windsheimer

AFFILIATION

Metro Council
Oregon Department of Environmental Quality
Metro Council
TriMet
City of Wilsonville, Cities of Clackamas County
Washington County
City of Portland
Clackamas County
Metro Council
Clark County
Multnomah County
Oregon Department of Transportation

MEMBERS EXCUSED

Denny Doyle

AFFILIATION

City of Beaverton, Cities of Washington County

ALTERNATES PRESENT

Emerald Bogue
Tim Clark
Jef Dalin
Mark Gamba

AFFILIATION

Port of Portland
City of Wood Village, Cities of Multnomah County
City of Cornelius, Cities of Washington County
City of Milwaukie, Cities of Clackamas County

OTHERS PRESENT: Jaimie Huff, Lisa Wilson, Mark Ottenad, Jeff Gudman, Mike M, Chris Deffebach, Eugene Fifield, Rebecca Kennedy, Brenda Perry

STAFF: Elissa Gertler, Alison Kean, Miranda Mishan, Nellie Papsdorf, Kim Ellis, Margi Bradway, Randy Tucker, Lisa Hunrichs, Ernest Hayes, John Mermin, Malu Wilkinson, Grace Cho, Chris Ford

1. CALL TO ORDER, DECLARATION OF A QUORUM & INTRODUCTIONS

JPACT Chair Craig Dirksen called the meeting to order at 7:32 AM. He asked members, alternates and meeting attendees to introduce themselves.

2. PUBLIC COMMUNICATION ON JPACT ITEMS

Councilor Brenda Perry, West Linn City Council – Councilor Perry expressed concern about value pricing in the region, and that the modeling for value pricing was done based on the assumption that the I-205 bottleneck was fixed when it was not. She noted that all of the options put forward by ODOT would have a negative impact on West Linn.

Randy Tucker, Metro Government Affairs and Policy Development: Mr. Tucker provided an update on JPACT's request to the technical committee on value pricing to extend the length and scope of the study. He shared that the request was not well received by the committee, and asked JPACT to communicate with the government affairs team before communicating with the legislature in the future.

Commissioner Paul Savas thanked Mr. Tucker and conveyed that the letter did not accurately convey what JPACT was asking for.

Commissioner Vega Pederson expressed that she had had reservations about sending the letter, and that it was important to use government relations staff in the future.

Mr. Rian Windsheimer suggested involving other groups next time, and to have the conversation at the appropriate venue.

Mayor Tim Knapp explained that the need for the letter showed that the parameters of the value pricing study were inadequate, and the nuances weren't being considered, which is why there was concern.

Chair Dirksen suggested that the letter still had value because it made the committee aware of JPACT's concerns.

3. UPDATES FROM THE CHAIR AND COMMITTEE MEMBERS

Chair Dirksen discussed the 2017 Compliance Report. He explained that per Metro Code Section 3.07.870, the chief Operating Office was required to annually submit to the Metro Council the status of compliance by cities and counties with the requirements of Metro Code Chapter 3.07, the Urban Growth Management Functional Plan, as well as Metro Code Chapter 3.08, the Regional Transportation Functional Plan.

Chair Dirksen recounted that the Chief Operating Office had submitted this report to the Metro Council on March 1. He shared that per the Metro Code, it needed to be submitted to MPAC and JPACT as an informal non-action item for review.

Chair Dirksen explained that compliance with the UGMFP included meeting requirements for maintaining housing capacity (Title 1); protecting water quality and flood management (Title 3); protecting industrial land (Title 4); planning for areas added to the Urban Growth Boundary (Title 11); and protecting and enhancing fish and wildlife habitat (Title 13). He added that all jurisdictions were in compliance with the UGMFP at that time.

Chair Dirksen conveyed that compliance with the RTFP included meeting requirements for the transportation system design (Title 1); development and update of transportation system plans (Title 2); transportation development (Title 3); regional parking management (Title 4); and amendment of comprehensive plans (Title 5). He noted that all jurisdictions were in compliance with the RTFP.

Chair Dirksen provided an update on the JPACT spring trip to Washington D.C. He shared that at last month's JPACT there was a request to plan a trip to Washington D.C. this year to lobby for

increased transportation investment and make clear JPACT's support for the Small Starts and New Starts program. Chair Dirksen announced that TriMet had proposed a trip the week of May 8th, with interested parties flying to D.C. on the 8th, participating in meetings and panels on the 9th and 10th and returning the evening of the 10th or 11th.

Chair Dirksen added that they would try to balance the trip between lobbying meetings with Congress and the administration, and educational opportunities to learn about the federal transportation climate. He noted that there would be more details forthcoming.

Chair Dirksen responded to letters from Clackamas and Washington Counties that outlined their priorities for the RTP update. He thanked Chair Bernard and Chair Duyck and their respective commissions for their continued engagement on the Regional Transportation Plan. Chair Dirksen recounted that the letters made the point that each jurisdiction had unique needs that must be addressed but that the region needed to work together to identify strategic investments that advanced common goals.

4. CONSENT AGENDA

Mr. Windsheimer and Commissioner Savas asked for amendments to be made to their comments in the minutes regarding the value pricing study.

MOTION: Commissioner Savas moved and Commissioner Vega Pederson seconded to adopt the consent agenda with amendments made to the minutes.

ACTION: With all in favor, the motion passed.

5. INFORMATION/DISCUSSION ITEMS

A. ODOT Value Pricing

Chair Dirksen recalled that there was a motion passed at the last JPACT meeting to direct legislative staff to amend HB 2017 regarding ODOT's Value Pricing Study. He introduced Ms. Mandy Putney from ODOT to give a presentation on the status of ODOT's Value Pricing effort.

Key elements of the presentation included:

Ms. Putney shared an overview of the purpose behind the work, and explained that they had been looking at other locations at which congestion pricing was being used. She discussed the feasibility analysis, which was being done to consider the best types of congestion pricing for the region. Ms. Putney shared the timeline for solidifying the value pricing proposal.

Ms. Putney highlighted the implementation timeline and the timeline for next steps depending on recommendations from FHWA. She explained regional engagement processes and shared the outreach that had been done and the feedback that had been received. Ms. Putney discussed the rounds of assessment and the screening process of the feasibility analysis.

Ms. Putney highlighted the equity considerations of the study, and noted that they were thinking about mitigating negative effects on marginalized communities. She shared the types

of value pricing that were applicable to freeways, and discussed the types of value pricing under consideration. Ms. Putney recounted key findings from the first round of analysis, and the challenges demonstrated by the analysis.

Ms. Putney highlighted the round 2 concepts, and how they would be moving forward with the analysis. She discussed the policy committee recommendation process and the timeline for the committee through June 2018. Ms. Putney suggested that JPACT members submit comments to the committee, and noted that these committee recommendations would be presented to the OTC on July 12.

Ms. Putney explained the spring engagement process, and highlighted the equity focused discussion groups. She provided information about spring open houses, and recounted the implementation timeline and where they were in the process.

Member discussion included:

- Councilor Shirley Craddick asked to clarify the purpose of revenue collection and what the revenue would be used for. Ms. Putney clarified that congestion pricing in theory as pricing a roadway in order to make people think about their trip, and shift their travel or take another mode. She added that there were different ways to implement, and some raised more revenue than others.
- Mr. Windsheimer shared that they had heard that jurisdictions would like to use the funds for more transit, and while ODOT currently could not do that, they were looking to explore that in the future.
- Mayor Tim Knapp raised concerns that there was a lack of lanes on I-205, making it difficult to toll and that this was not a part of the current conversation. He shared that there was a lack of surface streets southeast of the I-205, and north of Happy Valley. Mayor Knapp expressed that if the highway was to be tolled there would not be appropriate roadways to support people driving. He suggested that those without financial resources would bear the burden of being pushed off of the freeway because of financial constraints. Mayor Knapp emphasized the need to think about equity.
- Ms. Putney noted that these were appropriate concerns, and reflected the conversations that ODOT was having. She shared that they were looking at the year 2020 for the modeling assumption and were including all of the projects in the RTP and that included 205 and the Rose Quarter.
- Chair Dirksen emphasized that there wasn't a need to solve all of the problems posed by value pricing at the JPACT table, especially considering the limited meeting times.]
- Mr. Doug Kelsey explained that it was important to have other healthy modes of getting around. He expressed concerns that modeling value pricing through 2027 seemed like a short timeline. Ms. Putney conveyed that ODOT chose 2027 because they wanted a year that seemed valuable for value pricing. She added that they would look at a longer planning horizon in the future.
- Commissioner Savas remarked that there was a need to think long term and dealing with capacity needs. He asked if there was going to be any influence from JPACT, and what the role of JPACT would be going forward.
- Mr. Windsheimer explained that they were moving quickly through the timeline, and he was open to having a conversation about exploring other ideas, and that if JPACT members had other concerns to bring them to Ms. Putney.

- Councilor Craddick suggested a bus on shoulder program as a potential solution.

B. Investment Area Strategy

Chair Dirksen shared that JPACT's policy direction on the regional flexible dollars provided funding for a few "Step 1" programs to implement regional policy. He explained that investment areas was one of those programs and it used to be called "corridor planning", but the name was evolved along with the work to ensure that they were doing the most to align and leverage limited public resource in targeted investment areas. Chair Dirksen introduced Ms. Elissa Gertler and Ms. Malu Wilkinson, from Metro's Planning and Development department.

Key elements of the presentation included:

Ms. Gertler provided some background on the investment areas program. Ms. Wilkinson explained that they started out from a blueprint for the region, and emphasized that they were planning for people. She discussed the investment areas approach and the significance of moving from a concept plan to implementation.

Ms. Wilkinson reminded JPACT of the approach to investment areas and highlighted some of the recent investment areas. She noted that they could only focus on an area or two at a time. Ms. Wilkinson provided an overview of outcomes from the East Metro Plan, and the action plans that they came up with. She recounted an update on the SW Corridor, and some of the progress on other investment areas.

Ms. Gertler expressed that in order to make final decisions about investments; there were many decisions to be made. She explained the process and the elements of the investment areas, and the filters they went through to become investment areas. Ms. Gertler shared the two year work program, including red line enhancement and the Columbia Connections Strategy. She explained the current status of these projects and some of the next steps. Ms. Gertler conveyed that JPACT would be updated as the program moved forward.

Member discussion included:

- Councilor Jeanne Stewart asked about the Columbia Connection strategy, and how value pricing would work on highways. Ms. Gertler explained that since ODOT was focusing their scope on value pricing, they were looking at what was happening specifically on the I-5 and 205 areas. Councilor Stewart asked if there was a discussion about tolling on state highways. Ms. Gertler clarified that they were not looking at tolling. Ms. Putney shared that ODOT was looking at I-5 and 205 and the OTC was the tolling authority in Oregon and could move forward with other corridors if they chose in the future.
- Mr. Kelsey expressed support for the investment initiatives.
- Ms. Emerald Bogue conveyed that the Port of Portland was interested in looking at how this project would develop.
- Chair Dirksen raised concerns that there was not enough time to cover the agenda items, and asked to move on to the RTP item with direction from Ms. Gertler.

6. ACTION ITEMS

A. Regional Leadership Forum #4 Takeaways (Recommendation Requested)

Ms. Gertler requested approval from JPACT on the project refinement recommendations. She noted that there was not a need for a formal vote. JPACT members expressed support for the recommendation.

Member discussion included:

- Mayor Knapp expressed that the TPAC recommendations did not capture everything that needed to be considered. He raised concerns that the methodology jurisdiction projects was inherently locally focused, and that the broad regional strategy was the local project strategy that had been filtered. Mayor Knapp added that there was a need for more discussion on the long term vision of the transportation network and how it related to their overall goals, and that he and C4 was disappointed that these concerns were not included in the recommendation from TPAC.
- Commissioner Savas expressed agreement with Mayor Knapp, and suggested adding language to the takeaways from the leadership forum about addressing bottlenecks in the next ten years.

7. INFORMATION/DISCUSSION ITEMS

C. Review Draft 2018-19 Unified Planning Work Program (UPWP)

Chair Dirksen called on Mr. John Mermin, from Metro's Planning and Development department to provide a presentation on the UPWP.

Key elements of the presentation included:

Mr. Mermin explained what the UPWP was, and recounted the considerations from TPAC on action for the UPWP. He briefly discussed the next steps in the UPWP.

ADJOURN

JPACT Chair Dirksen adjourned the meeting at 9:00 A.M.

Respectfully Submitted,



Miranda Mishan
Recording Secretary

ATTACHMENTS TO THE PUBLIC RECORD FOR THE MEETING OF MARCH15, 2018

ITEM	DOCUMENT TYPE	DOC DATE	DOCUMENT DESCRIPTION	DOCUMENT NO.
3.0	Handout	3/1/18	2017 Compliance Report	031518j-01
5.1	Presentation	3/15/18	Portland Metro Area Value Pricing Feasibility Analysis PowerPoint	031518j-02
5.2	Presentation	3/15/18	Partnerships, planning and implementation around targeted investment areas PowerPoint	031518j-03
5.3	Handout	3/1/18	Draft 2018-19 Unified Planning Work Program	031518j-04
5.3	Presentation	3/15/18	2018-19 Unified Planning Work Program PowerPoint	031518j-05
6.1	Presentation	3/15/18	Refining RTP Investment Priorities PowerPoint	031518j-06
6.1	Letter	2/26/18	Comments on the RTP from Washington County	031518j-07
6.1	Letter	2/27/18	Comments on the RTP from Clackamas County	031518j-08
6.1	Letter	3/14/18	Comments on the RTP from Getting There Together Coalition	031518j-09

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING THE 2018)
REGIONAL TRAVEL OPTIONS STRATEGY)
)
) RESOLUTION NO. 18-4886
) Introduced by Chief Operating Officer Martha
) Bennett in concurrence with Council
) President Tom Hughes

WHEREAS, Metro adopted the 2014 federally required Regional Transportation Plan on July 11, 2014; and

WHEREAS, the Regional Transportation Plan calls for the region to adopt a transportation demand management strategy (known as Regional Travel Options), and make investments intended to encourage people to use transit, rideshare, bicycle, walk and other methods aimed at reducing drive-alone automobile trips; and

WHEREAS, the regional congestion management process (CMP) required by the Federal Highway Administration includes transportation demand management as one of the region's identified strategies for addressing congestion; and

WHEREAS, Action 1G.1 of the Oregon Highway Plan identifies protection of the existing system as the highest priority, using a variety of techniques, including transportation demand management, to preserve the functionality of the existing highway system; and

WHEREAS, JPACT and Metro Council has approved the allocation of Regional Flexible Funding to support a Regional Travel Options program to provide funding and coordination of partners engaged in these activities; and

WHEREAS, JPACT and Metro Council has approved the allocation of Regional Flexible Funding to expand the role of the Regional Travel Options program to provide funding and coordination of partners engaged in Safe Routes to School educational work; and

WHEREAS, Metro has engaged regional stakeholders through a strategic planning process and has developed the 2018 Regional Travel Options Strategy to support implementation of Regional Transportation Plan goals and objectives; and

WHEREAS, the 2018 Regional Travel Options Strategy describes the roles of Metro and program partners in carrying out program activities and identifies a funding framework to support those activities; now therefore

BE IT RESOLVED that the Metro Council hereby adopts the 2018 Regional Travel Options Strategy and approves the goals, objectives and actions in that plan.

ADOPTED by the Metro Council this [insert date] day of [insert month] 2018.

Tom Hughes, Council President

Approved as to Form:

Alison R. Kean, Metro Attorney

DRAFT

Date: Wednesday, April 11, 2018
To: JPACT and interested parties
From: Dan Kaempff, Principal Transportation Planner
Subject: 2018 Regional Travel Options Strategy

Purpose

This memo provides updated information regarding the 2018 Regional Travel Options (RTO) Strategy, following the comment period, held in February 2018. TPAC has reviewed and discussed this post-comment Strategy and has made a recommendation to JPACT for its adoption.

Action Requested

JPACT is requested to adopt the 2018 Regional Travel Options Strategy.

Background

For the past year, Metro staff, and the region's jurisdictions and non-government partners have worked together to update the policy document which provides direction to the RTO program. Metro conducted a series of well-attended workshops to discuss ways to improve the program to achieve federal, state and regional policy goals and objectives.

After this robust stakeholder engagement effort, followed by an opportunity for comment on the draft document, staff is presenting the 2018 Regional Travel Options Strategy for your consideration and adoption.

In January, Metro staff presented an initial draft of this policy guidance to TPAC and JPACT prior to releasing it for comment. Input received through the comment period indicated support for the updated policy direction and the recommendations for improving the program to better serve the residents of the region.

Following the comment period, TPAC discussed the updated Strategy at their March 9, 2018 meeting and recommended its adoption by JPACT.

As discussed at the JPACT meeting on January, 18, 2018, the Strategy identifies several changes to the RTO program, and defines the elements of the new Safe Routes to School program to fund outreach and education in the region's schools. The attached Staff Report for Resolution 18-XXXX provides additional details on these changes.

These changes are intended to provide better support and increased funding opportunities to the region's partners who create and deliver RTO programs in communities and throughout the region. In turn, this will result in more partners involved in the RTO program and an expansion of the amount of RTO outreach being conducted in the region, to increase the number of trips taken using travel options.

Upon adoption of the Strategy, staff will begin developing both the updated funding application processes for new funding categories defined in the Strategy, and the regional Safe Routes to School program. Funding will be available for program activities beginning on or after July 1, 2019.

STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 18-4886, FOR THE PURPOSE OF ADOPTING THE 2018 REGIONAL TRAVEL OPTIONS STRATEGY

Date: April 4, 2018

Prepared by: Dan Kaempff

BACKGROUND

Regional Travel Options (RTO) is the region's transportation demand management program and is a component of the Congestion Management Process. The RTO program supports the land use and transportation policy framework envisioned in the 2040 Growth Concept, and further defined through the Regional Transportation Plan (RTP). RTO works to increase people's awareness of non-single occupant automobile options and to make it easier to use those options. The RTO program maximizes the return on the region's investments in transit service, sidewalks and bicycle facilities by encouraging travel using these modes through education of their personal and economic benefits. It also helps to reduce demand on the region's streets and roads, thus mitigating auto congestion and reducing greenhouse gas emissions.

Metro coordinates and funds the work of cities, counties, transit agencies, non-profit community organizations and other partners that conduct a variety of efforts in support of the region's RTO policy, goals and objectives. Since 2003, the RTO program has been guided a strategic plan to guide the investment of Regional Flexible Funds (RFF) and ODOT funds that are allocated to this regional effort. The strategic direction is updated periodically to ensure the program is aligned with changes in regional policy and responds to the public's changing travel needs.

As part of the 2019-2021 RFF allocation process, JPACT and Metro Council made two policy decisions to increase the amount of funding invested in the RTO program in order to respond to state and regional initiatives.

1. To increase the region's ability to respond to the state mandate to reduce greenhouse gas emissions, as defined through the Climate Smart Strategies (CSS), the RFF allocation was increased by \$250,000.
2. Also, in response to input from a regional coalition of cities and community organizations, JPACT and Metro Council's RFF allocation decision included an additional \$1,500,000 for the implementation of a regional Safe Routes to School (SRTS) program to fund educational efforts at the region's public schools.

In response, the 2018 RTO Strategy updates the policy direction for the program and provides a framework for how funding can be allocated to better achieve outcomes that are aligned with regional goals and objectives.

In developing the 2018 RTO Strategy, Metro worked with Alta Planning + Design to lead a process with policymakers and stakeholders that affirmed the following five policy issues to be addressed:

1. Growing the program's reach in Suburban Communities
2. Envisioning the role Technology should play
3. Developing a regional Safe Routes to School program
4. Enhancing and refining the regional Collaborative Marketing effort
5. Reaching out to new Community Partners to build more diverse means of reaching the public

Throughout the spring and summer of 2017, Alta conducted a series of stakeholder workshops organized around these five policy issues. The feedback gathered at these workshops was used to develop a draft 2018 RTO Strategy document. Incorporating input from TPAC and JPACT, an updated draft Strategy was released for comment February 5-27.

The input received from stakeholders during the comment period has been incorporated into this version of the 2018 RTO Strategy, as documented in Exhibit A.

Changes from the 2012-17 RTO Strategic Plan

Based on input and feedback collected through the above means, the 2018 RTO Strategy recommends several changes or refinements to previous program direction as previously defined in the 2012-2017 RTO Strategic Plan.

1. Alignment with regional policy direction

The RTO program is a key strategy to implement the region's transportation and land use policy, and to respond to the state's mandate to reduce greenhouse gas emissions.

Goal 4, Objective 4.4 of the 2014 RTP directs the region to include investments in Demand Management as a means of more effectively and efficiently managing the transportation system. This goal specifically references telecommuting, walking, bicycling, transit, carpooling, and using techniques that encourage shifting automobile trips away from peak hours.

The Climate Smart Strategy, adopted by Metro Council in 2014, also includes investments in the RTO program among the actions Metro can take to reduce greenhouse gas emissions.

In June 2016 Metro adopted the Strategic Plan to Advance Racial Equity, Diversity and Inclusion. The strategic plan focuses on removing barriers for underserved communities and improving equity outcomes for these communities by improving how Metro works internally and with partners around the Portland region.

2. Expanding the program and creating new partnerships

Two of the policy themes discussed in the initial phases of the Strategy development centered on how to reach new audiences. One method for this is to create new partners and local programs in those portions of the region where little or no RTO activity has occurred, or expand existing efforts where there is identified potential. Another is to build new partnerships with community organizations and other groups which share goals and objectives with the RTO program.

The 2018 RTO Strategy lays out a series of objectives focused on building new partners and encouraging innovation in partners' work, to allow for new methods of reaching the public to emerge that are responsive to local needs and circumstances, and that prioritize serving communities of color, persons with low-English proficiency, low-income households, older adults, youth, and people with disabilities.

Further, the Strategy provides further guidance to partners through a 0-5 scale called the Travel Options Capability Index (see page 49 of the draft RTO Strategy). The Index illustrates how partners can begin and grow RTO local programs through a series of indicators that delineate the various components of successful efforts.

3. Regional Safe Routes to School program direction

Policy direction from the 2019-21 RFFA process allocated \$1,500,000 for the development and implementation of a Regional Safe Routes to School program. The intent behind this funding was to

support educational programs in the region's schools that teach and encourage children to walk, bicycle or skate to school.

Participants at policy workshop #3, which focused on SRTS, were largely stakeholders working directly with SRTS programs. They were asked to look at five different program scenarios and discuss which one(s) would best support their needs and vision for SRTS, or if there were other models for program delivery that should be considered. (The scenarios are attached to this staff report as Attachment 1.) Based on their insights, as well as experiences working with other regions on SRTS programs, Alta developed a framework for Metro's implementation and administration of the region's SRTS program.

The proposed SRTS implementation strategy is detailed within the draft 2018 RTO Strategy document, found on page 53. The implementation strategy defines Metro's role in coordinating and supporting partners' SRTS outreach programs. It recommends additional support staff at Metro as well as a third-party contractor to conduct coordination activities, develop implementation tools and templates, and provide technical assistance to local programs and practitioners.

4. Defined approach to using Technology

During the timespan of the 2011-17 RTO Strategic Plan, the number of Americans with smartphones more than doubled. Approximately 80 of US residents now use these devices, and combined with dwindling sales of desktop and laptop computers, it's clear that smart, mobile technology has forever changed the way we communicate and access information.

This development has had direct impacts on the RTO program. Technological developments have created new ways for people to access travel information, make travel choices, and accessing and paying for transportation. RTO partners have considered various means of using these tools to help reach additional people and further their work.

The Strategy outlines how the RTO program should support Metro's and partner's work with emerging technologies, and identifies the types of projects that best align with the program's mission and goals. It also creates opportunities to learn from and deploy new technologies, with the goals of gaining information and improving the overall program.

5. Implementation and funding methodology

The Strategy defines an updated direction for the RTO program that builds on its historical success while recommending changes that can result in a growth in participation and a positive impact in helping the Portland region's residents' use of travel options.

Since its inception, the RTO program has been anchored by a number of Core partners, committed to conducting programs aligned with the RTO mission. Over time, these partners have consistently engaged with the majority of residents served, delivered the bulk of the positive outcomes, and demonstrated innovation and excellence in their work.

The Strategy recommends changing the funding relationship with these Core partners. Currently, funding is allocated through a competitive grantmaking process, which means funding is uncertain from grant cycle to grant cycle. This means that overall program outcomes are also uncertain, and that partners spend time on raising funds that could be better spent on delivering programs. The Strategy recommends replacing the competitive method with a system where funding is certain provided performance metrics are being attained, and grant agreements are for three years, as opposed to the current two-year grant cycle.

Core partners funded through such means would be subject to agreeing to higher standards of reporting and outcomes, with future funding being conditioned on their performance. In addition, they must have attained Level 4 or better status on the RTO Partners Capability Index (see pages 49-50 of the Strategy). TPAC would take on an additional role to oversee the outcomes of these investments and make decisions on continuing partners' funding.

In addition to this funding allocation, a portion of RTO funds would remain in a competitive process, to create opportunities for new partners and innovative concepts to emerge. And sponsorship and marketing support for partners' efforts would continue as well. Also, to help Emerging partners grow in their aspirations to develop local RTO programs and attain Core partner status, a portion of funds are identified to support planning and initial program efforts.

Upon adoption of the 2018 RTO Strategy, Metro will work with TPAC work to refine and implement this proposed funding structure.

ANALYSIS/INFORMATION

1. **Known Opposition** None
2. **Legal Antecedents** 1991 Federal Clean Air Act Amendments. The need for a comprehensive regional TDM program was addressed in Metro Resolution No. 91 – 1474 in response to the Oregon Transportation Planning Rule and the Federal Clean Air Act Amendments of 1990.

TDM Relationship to DEQ's Ozone Maintenance Plan (Governor's Task Force on Motor Vehicle Emissions Reduction (HB 2214)). The task force recommended a base plan focused on specific strategies to maximize air quality benefits. The air quality strategies selected by the region formed the base for a 10-year air quality maintenance plan for the Portland area. The primary TDM transportation control measures (TCMs) in the maintenance plan are the employee commute options program (ECO) and the regional parking ratio program.

2000 Regional Transportation Plan. The RTP establishes regional TDM policy and objectives to help reduce vehicle trips and vehicle miles traveled. Chapter 1 (Ordinance 00 – 869A and Resolution 00 – 2969B) provides TDM policies and objectives that direct the region's planning and investment in the regional TDM program.

2035 Regional Transportation Plan. The federal component of the plan was approved by Metro Council Ordinance No. 10-1241B on June 10, 2010. The RTP establishes system management and trip reduction goals and objectives that are supported by the RTO program strategies.

Regional Travel Options Strategic Plan. The 2006 RTO Strategic Plan established a new vision for the region's transportation demand management programs and proposed a reorganized and renamed Regional Travel Options program that emphasized partner collaboration to implement an integrated program with measurable results. JPACT and the Metro Council adopted the plan through Resolution No. 04-3400, which also renamed the TDM Subcommittee the RTO Subcommittee, and was adopted in January 2004. Subsequent Strategic Plans (2008-2013) were adopted through Resolution No. 08-3919 on April 3, 2008, and (2012-2017), adopted through Resolution No. 12-4349 on May 24, 2012. The 2012-2017 Strategic Plan brought several changes to the program, including restructuring existing program funding categories and disbanding the RTO Subcommittee.

2014 Regional Transportation Plan. The plan was approved by Metro Council Ordinance No. 14-1340 on July 17, 2014. The RTO program is included in the strategies identified in the RTP Transportation

System Management and Operations vision, an integrated set of transportation solutions intended to improve the performance of transportation infrastructure.

2018-2021 MTIP. Programmed funding to the RTO program for FF years 2018-2021, and documents the authority to sub-allocate funds to the program components. JPACT and the Metro Council adopted the 2018-2021 MTIP through Resolution No. 16-4702.

3. **Anticipated Effects** Adoption of this resolution will provide the policy direction, program goals and objectives that will guide the RTO program over the next 10 years (2018-2028).
4. **Budget Impacts** There are no anticipated impacts for Metro's current budget. The Strategy provides policy for determining future program grant awards of program funds adopted in the 2018-2021 MTIP by Resolution 16-4702. The Strategy recommends consideration in future budget decisions of the addition of Metro staff positions to better provide technical support to regional partners and help achieve the program goals and objectives.

RECOMMENDED ACTION

Adopt the 2018 Regional Travel Options Strategy and approve the goals and objectives of the Strategy.

Metro Regional Travel Options Strategy Update

DRAFT SRTS Scenarios

November 28, 2017

With newly dedicated funding to support Safe Routes to School (SRTS), Metro is considering scenarios for establishing and implementing a regional SRTS program that supports local efforts.

The following scenarios were developed as part of Metro's Regional Travel Options (RTO) Strategic Plan update. Each of the five scenarios considers potential funding and investment strategies Metro may consider moving forward. The scenarios describe Metro's role, in terms of a full-time employee's salary, plus staffing costs. Each scenario is ranked by effectiveness for VMT reduction, equity support, regional SRTS programming, and how well it aligns with the RTO program-wide goals (1 asterisk = low effectiveness, 3 asterisks = high effectiveness). Each scenario also includes a detailed pros and cons list.

The scenarios were developed through best practices in regional SRTS programs, from stakeholder feedback at workshops and interviews, as well as by regional SRTS practitioners and key Metro RTO staff.

The Metro RTO Strategy Update project team recommends scenario 5, which includes both additional staff support at Metro as well as a third-party contractor that would conduct coordination activities, develop implementation tools and templates, and provide technical assistance to local programs and practitioners.

Description		Metro's Role	Reduce VMT via direct program delivery	Equity: Build Partners' capacity	Regional SRTS Program (coordination & support)	Evaluation toward RTO program- wide goals	Pros	Cons
Scenario 1	Third-party SRTS coordinator through a contractor	0.25 FTE Contract mgmt. & grant mgmt	**	** *	** *	** *	<ul style="list-style-type: none"> Brings technical expertise and (potentially) existing relationships Can connect districts/cities/schools across boundaries Dedicated person/group may result in more follow-through and ownership of program Lower overhead and administrative cost Provides added capacity at an organization 	<ul style="list-style-type: none"> Creates an added step of communicating with Metro, as they are outside of Metro Does not add capacity at Metro; outsources the work Potential for higher turnover and more time spent building relationships with partners Potentially less effective for forming local relationships between cities & districts
Scenario 2	Primary SRTS Coordinator housed at each County*	0.5 FTE Contract mgmt & grant mgmt	**	** *	**	**	<ul style="list-style-type: none"> Could spur inter-county coordination, build existing relationships County could leverage existing SRTS programs at cities Could scale up existing local programs in more context-sensitive ways Could leverage County HHS and other agencies 	<ul style="list-style-type: none"> Potentially less internal support & expertise for coordination position Challenging to coordinate between counties Less region-wide coordination & sharing best practices/lessons learned
Scenario 3	Metro SRTS staff person	1 FTE grant mgmt; technical assistance, coordination	**	**	** *	** *	<ul style="list-style-type: none"> More regional scalability of programming (i.e. campaigns, resources) Could leverage existing Metro materials, knowledge, working groups, communication support Metro employment opportunity may attract more experienced candidates Offers region-wide support, evening gaps in expertise between counties/cities 	<ul style="list-style-type: none"> Potentially expensive Significant amount of work for a single individual; limited ability for coordination and technical support Creation of useful, supportive relationships with practitioners around the region may take some time for staff to develop Potentially less effective for forming local relationships between cities & districts

Description		Metro's Role	Reduce VMT via direct program delivery	Equity: Build Partners' capacity	Regional SRTS Program (coordination & support)	Evaluation toward RTO program- wide goals	Pros	Cons
Scenario 4	Local Implementation	0.25 FTE grant mgmt	*	**	*	*	<ul style="list-style-type: none"> Grantees could collaborate via task force meeting or subcommittee of CMG Uses existing staffing & structure at Metro; no new programs More money available for sponsorship events and programs and pass through money Cities/districts/schools develop unique and context-sensitive programs based on their internal direction and interest 	<ul style="list-style-type: none"> Limited ability to manage and coordinate to ensure regional outcomes are met Would continue to be an ad hoc process as cities/districts/schools became interested in implementation Would limit development of region wide resources Most susceptible to high turnover of local implementers
Scenario 5	Third-party contractor with Metro staff person (hybrid of Scenarios 1+3)	0.5 FTE contract mgmt; grant mgmt	** *	** *	** *	** *	<ul style="list-style-type: none"> Good balance of regional knowledge & Metro support with technical assistance & local, practioner-level knowledge Flexible with program needs (i.e. early program development, later years primarily program delivery) Could hire new staff person ½ time on SRTS and ½ time on CMG and grantee technical assistance 	<ul style="list-style-type: none"> Potentially less effective for forming local relationships between cities & districts

* Note: All scenarios will involve some form of SRTS coordination at the County level, whether by supporting a County staff position, providing county-specific coordination and technical assistance based on the year-to-year needs at each County. Scenario 2 differs by housing the main SRTS coordinators at the Counties, rather than regionally.

Memo

Date: April 9, 2018
To: Joint Policy Advisory Committee on Transportation and interested parties
From: Lake McTighe, Senior Transportation Planner
Subject: 2018 RTP: Draft Regional Transportation Safety Strategy

Purpose

The purpose of this agenda item is to update and receive feedback from the Joint Policy Advisory Committee on Transportation (JPACT) on the Draft Regional Transportation Safety Strategy ("Draft Safety Strategy") before it is refined and released for public comment on June 29, 2018. JPACT will be asked to make a recommendation to the Metro Council on adoption, by Resolution, of the final Regional Transportation Safety Strategy on October 18, 2018.

Questions for JPACT

1. Has past policy direction been adequately addressed?
2. Does JPACT have further input or questions on the Draft Safety Strategy?

Background

Transportation safety is one of the policy areas for the update of the 2018 Regional Transportation Plan (RTP). Transportation safety, with a focus on serious crashes, is consistently a top concern and priority in public engagement and outreach, including at the 2018 RTP Regional Leadership Forums.

As part of the 2018 RTP, the 2012 Regional Transportation Safety Plan is being updated with the Draft Safety Strategy. The Draft Safety Strategy is a topical plan of the RTP. The Draft Safety Strategy sets regional policies related to transportation safety in the Regional Transportation Plan, analyzes crash data to identify the most common crash types and contributing factors in crashes, and identifies strategies and actions to reduce serious crashes.

The Draft Safety Strategy was developed with policy direction from the Metro Council, JPACT and the Metro Policy Advisory Committee (MPAC). Technical review and guidance is provided by the Transportation Safety Technical Work Group, the Metro Technical Advisory Committee (MTAC), and the Transportation Policy Alternatives Committee. (Refer to Chapter 1, Section 1.4 of the Draft Safety Strategy for a description of the planning process and public engagement.)

JPACT policy direction

JPACT last provided direction on the Draft Safety Strategy at the April 20, 2017 meeting. At that meeting, JPACT affirmed that the Draft Safety Strategy should:

1. **Use the Vision Zero framework and target with a goal of zero traffic related deaths and fatalities by 2035.** The Draft Safety Strategy commits to eliminating fatalities and life

changing injuries as a top priority and establishes a 2035 target of zero deaths and severe injury crashes; establishes annual targets to get to the 2035 target and fulfill federal performance measure requirements; and provides a Safe System Vision Zero framework for new safety policies, strategies and actions.

2. **Identify safety projects in the 2018 RTP as a way to measure how safety is being addressed.** A definition of a safety project is included in the Draft Safety Strategy, and projects that reduce crashes and reduce fatal and severe injury crashes have been identified in the draft Project List of the 2018 Regional Transportation Plan (the list is currently being refined).

The Draft Safety Strategy recommends continuing to track safety projects to better understand investments in safety and in race and income marginalized communities. However, the Share of Safety Projects but will not be identified as a system evaluation measure (since it does not measure effectiveness of safety outcomes). (Refer to Chapter 5, Section 5.4 of the Draft Safety Strategy for a summary of projects that address safety in the 2018 RTP.)

3. **Test use of an Exposure to Crash Risk measure.** This measure was tested, but the results were not meaningful and it will not be carried forward as a system evaluation measure in the 2018 RTP. Due to an increase in people and vehicle miles traveled it is assumed that the absolute number of crashes could increase without fully implementing state, regional and local safety plans and adopted transportation and land use plans. It is also assumed that due to lower vehicle miles traveled per person, serious crashes per capita and per vehicle miles traveled could go down (though that is currently not the trend), however it is unknown if crash risk for vulnerable users, including people walking and bicycling, people of color and people with low incomes, will decrease.

The Draft Safety Strategy includes a recommended future implementation task to work with regional partners, Oregon Department of Transportation and the Federal Highway Administration to developing a Crash Prediction Model for future RTP updates to better understand how investments can reduce (or increase) crashes.

4. **Use the Regional High Injury Corridors as a tool to help inform prioritizing investments in the 2018 RTP.** The Draft Safety Strategy prioritizes Regional High Injury Corridors and Intersections, especially in race and income marginalized communities, for regional investments to increase safety. (Refer to Chapter 2 in the Draft Safety Strategy.)

Policy direction from the Metro Council

Since JPACT last provided direction on the Draft Safety Strategy, the Metro Council provided policy direction on March 20, 2018 that has been incorporated into the Draft Safety Strategy:

1. **Use a racial and income equity lens in safety maps and analysis.** The Draft Safety Strategy uses a racial and income equity lens in maps and analysis. One of the top findings of the Draft Safety Strategy is the disproportionate impact of serious crashes on people of color, people with low incomes and people over age 65. Strategies and actions in the Draft Safety Strategy address this finding.

2. **Explicitly prioritize investments on Regional High Injury Corridors and Intersections, especially in race and income marginalized communities.** This policy direction has been incorporated into the Draft Safety Strategy, specifically in new Safety Policy 2 and Policy 3 [refer to Chapter 2 of the Draft Safety Strategy].

Federal safety performance measure requirements

State Departments of Transportation and Metropolitan Planning Organizations must now report on the federally required safety performance measures identified in the federal transportation reauthorization bills MAP-21 and the FAST Act. To meet federal performance measure requirements, Metro has established annual safety performance targets that move towards zero serious crashes by 2035 in the Draft Safety Strategy; the annual targets were identified using a methodology that is consistent with the Oregon Department of Transportation's 2016 Transportation Safety Action Plan. (Refer to Chapter 6 of the Draft Safety Strategy.)

Draft Safety Strategy overview

Below is an overview of the main elements of the Draft Safety Strategy.

- Policy framework, including Vision Zero Safe System approach, equity and public health (Chapter 1)
- New safety policies, updated goals and objectives and targets (Chapter 2)
- Data analysis on contributing factors and crash types (Chapter 3 and the 2018 Metro State of Safety Report)
- Top three safety findings from analysis of data (Executive Summary and Chapter 3)
- Data-driven strategies and actions (Chapter 4)
- Implementation activities (Chapter 5)
- Annual targets to measure progress and meet federal requirements (Chapter 6)

Next Steps

- April 10, 2018 – Present Draft Safety Strategy to Metro Council
- April 19, 2018 – Present Draft Safety Strategy to JPACT
- April 24, 2018 – Present Draft Safety Strategy to MPAC
- April 25-June 28, 2018 – Refine Draft Safety Strategy
- June 29, 2018 – Release Refined Draft Safety Strategy for 45-day public comment period
- August 14 – October 1, 2018 – Finalize Safety Strategy in response to public comment
- October 10, 2018 – Recommendation to Metro Council from MPAC on adoption of the Final Safety Strategy
- October 18, 2018 – Recommendation to Metro Council from JPACT on adoption of the Final Safety Strategy
- November 11, 2018 – Direction from Metro Council to staff on finalizing Safety Strategy for Council consideration
- December 6, 2018 – Metro Council considers adoption of Regional Transportation Safety Strategy, by Resolution

Materials attached

1. Draft Regional Transportation Safety Strategy (March 20, 2018)
2. 2018 Metro State of Safety Report



DISCUSSION DRAFT

2018 Regional Transportation Plan

Regional Transportation Safety Strategy

*A strategy to achieve Vision Zero in the
greater Portland region*

March 20, 2018

oregonmetro.gov/safety

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Metro is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

Regional Transportation Plan website: **oregonmetro.gov/rtp**

Regional Transportation Safety Strategy web site: **oregonmetro.gov/safety**

The preparation of this strategy was financed in part by the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The opinions, findings and conclusions expressed in this strategy are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration.

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Increasing pedestrian safety is a central focus of the Regional Transportation Safety Strategy
Source: Metro, Hwy 99W

FOREWORD

The 2018 Regional Transportation Safety Strategy (“Regional Safety Strategy”) updates the region’s first Regional Transportation Safety Plan, which was completed in 2012. The Regional Safety Strategy is a topical plan of the Regional Transportation Plan and updates regional safety goals, objectives, policies, targets and performance measures.

With the federal Transportation Equity Act for the 21st Century (TEA-21) in 1998, safety and security appeared as planning factors for metropolitan planning organizations to address in transportation planning. The Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU), adopted in 2005, placed a greater emphasis on addressing safety and established the Highway Safety Improvement Program (HSIP) as a core Federal-aid program. Signed into law 2012, the Moving Ahead for Progress in the 21st century Act (MAP-21) required States and metropolitan planning organizations to adopt safety performance measures and targets. This requirement was maintained in the most recent federal surface transportation legislation the Fixing America’s Surface Transportation Act (FAST Act), signed into law in 2015.

The Regional Safety Strategy was developed by a regional transportation safety technical work group as part of the update of the 2018 Regional Transportation Plan. The Joint Policy Advisory Committee on Transportation (JPACT), the Metro Policy Advisory Committee (MPAC), the Transportation Policy Alternatives Committee (TPAC) and the Metro Technical Advisory Committee (MTAC) provided policy and technical guidance. Development of the Regional Safety Strategy was informed by state, county and city transportation safety action plans.

The purpose of the Regional Safety Strategy is to provide a specifically urban-focused overarching data-driven framework for increasing traffic safety in the greater Portland region. The plan focuses on strategies and actions drawn from best-practices and proven to reduce traffic related deaths and serious injuries.

The Regional Safety Strategy does not mandate adoption or implementation of the safety strategies and actions described in the plan; transportation elements required to be included in local transportation system plans are listed in the Regional Transportation Functional Plan.

23 U.S. Code 409 states that crash and safety data, including reports, surveys, schedules, and lists, compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing federal-aid highway funds, shall not be subject to discovery or admitted into evidence in a federal or state court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.



Designing for safety supports equity, human and environmental health, air quality, and economic prosperity
Photo: Metro

EXECUTIVE SUMMARY

Traffic related deaths and severe injuries are a critical and preventable public health and social equity issue in the greater Portland region. Between 2011 and 2015, there were more than 116,000 traffic crashes resulting in 311 deaths and 2,102 people severely injured.¹

Traffic crashes are the leading cause of unintentional injury death for young people ages 5 to 24 in Multnomah, Washington and Clackamas County, and the second leading cause of unintentional injury death for people ages 25 to 84.²

On average, 62 people die each year on the region's roadways and 420 people experience a life changing injury. Nearly two people are either killed or severely injured every day in our region in a traffic crash; every 10 days a person riding a bike is killed or severely injured; every 5 days a person walking is killed or severely injured.

Sixty percent of these fatal and severe injury crashes occur on just 6 percent of the region's major streets. These roadways are identified in this document as Regional High Injury Corridors and Intersections. They are also where we tend to travel the most, where we run to catch the bus, cross the street to get to schools and shops, ride our bikes or drive.

Top three findings

The Regional Transportation Safety Strategy identifies three top findings to that must be addressed to make daily travel safer for all people, whether driving, walking, bicycling or taking transit.

Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65

- Serious crashes (fatal and severe injury crashes combined) have fluctuated since 2007, but more recently have been increasing. Initial data from 2016, 2017 and 2018 indicate that the trend is continuing. This is a trend that is also happening at the state and national levels.
- The regional annual fatality rate by population and vehicle miles traveled (for 2011-2015) has increased compared to the 2012 Metro State of Safety Report.³
- Your risk of dying in a motor-vehicle involved crash is higher if you are a person of color, are over 65 or have a lower income.⁴

¹ 2018 Metro State of Safety Report ~ unless otherwise noted, all crash data findings are from the 2018 Metro State of Safety Report

² Oregon Death Certificates: Center for Health Statistics, Center for Public Health Practice, Public Health Division, Oregon Health Authority. Accessed March 13, 2018. For 2012-2016. Unintentional injuries were the 4th leading cause of death (just about tied for third with cerebrovascular disease/stroke); within the category of unintentional injury deaths, transport injuries are the third leading cause behind falls and poisoning (poisoning includes drug overdoses).

³ Fatality rates for traffic related crashes are the proportion of all crashes, person deaths or severe injuries for every 1 million people or every 100 million vehicle miles traveled.

- A majority of Regional High Injury Corridors are in communities with higher densities of people of color, people with low incomes and English language learners.⁵
- A majority of pedestrian deaths are in are in communities with higher densities of people of color, people with low incomes and English language learners.
- Older drivers are twice as likely to die in a traffic crash. For male drivers age 70 to 79 and female drivers age 75 to 85 and older the share of serious crashes is double that of drivers in other age groups.
- In Oregon, American Indians/Alaska Natives have the highest average rate of vehicle related deaths (5.9 per 100,000) 1.8 times the rate among whites (3.3 per 100,000), and American Indians/Alaska Natives and Black or African American had the highest hospitalization rate -52.2 and 46.2 per 100,000, compared to 45.5 for whites and 20.8 Asian Pacific Islander for traffic related injuries.⁶ This data is not currently available at the regional level.

Traffic deaths are disproportionately impacting people walking

- Auto-only crashes comprise ninety-one percent of all crashes, and thirty-eight percent of all fatal crashes. Pedestrian crashes make up two percent of all crashes, and thirty-six percent of all fatal crashes.
- Pedestrian traffic deaths are steadily increasing, are the most common type of fatal crash, and have the highest severity of any crash type.
- Pedestrian fatalities have steadily increased to 2015 at the local, regional, state and national levels.
- In the region, a pedestrian crash is more than 26 times as likely to be fatal than a crash not involving a pedestrian, and more than 110 times as likely to be fatal as a rear end crash, the most common crash type.
- Roadway design is critical to pedestrian safety. Seventy-seven percent of serious pedestrian crashes occur on arterial roadways in the region. This pattern is seen at the state level as well.

⁴*Motor Vehicle Traffic-Related Pedestrian Deaths — United States, 2001–2010*, Centers for Disease Control and Prevention (2013); *Dangerous by Design*, National Complete Streets Coalition (2016); *Income Disparities in Street features that Encourage Walking*, Bridging the Gap (2012); *Pedestrians Dying at Disproportionate Rates in America's Poorer Neighborhoods*, Governing, August 2014; *America's Poorer Neighborhoods Plagued by Pedestrian Deaths*, Governing Research Report (August 2014)

⁵ The map at the end of this section shows the overlap of Regional High Injury Corridors and census tracts with both higher than regional average concentration and double the regional density of people of color, people with low income, and/or English language learners.

⁶ Oregon Public Health Authority, 2008-2014 crashes

A majority of traffic deaths are occurring on a subset of arterial roadways

- Arterial roadways are the location of the majority of the serious crashes in the region. Sixty-six percent of all serious crashes occur on a roadway designated as an arterial.
- In the region, seventy-three percent of non-freeway serious crashes occur on a roadway designated as an arterial; seventy-seven percent of serious pedestrian crashes occur on a roadway designated as an arterial; sixty-five percent of serious bicycle crashes occur on a roadway designated as an arterial.
- A majority of Regional High Injury Corridors are arterial roadways.
- A majority of the High Injury Corridors and Intersections – and a majority of pedestrian deaths and severe injuries – are in areas with race and income marginalized communities.

The Regional Safety Strategy uses a Safe System approach and identifies effective and proven strategies and actions to address these and other data-driven findings.

Traffic deaths and life changing injuries impact the lives of our families, friends, neighbors and community members. They also have a major economic cost – estimated at \$1 billion for our region.

Research sponsored by AAA found that in large urban areas, such as the greater Portland region, costs resulting from crashes are over three times more than congestion. –“Crashes vs. Congestion: What’s the Cost to Society?” Cambridge Systematics, 2011

Achieving Vision Zero with a Safe System approach

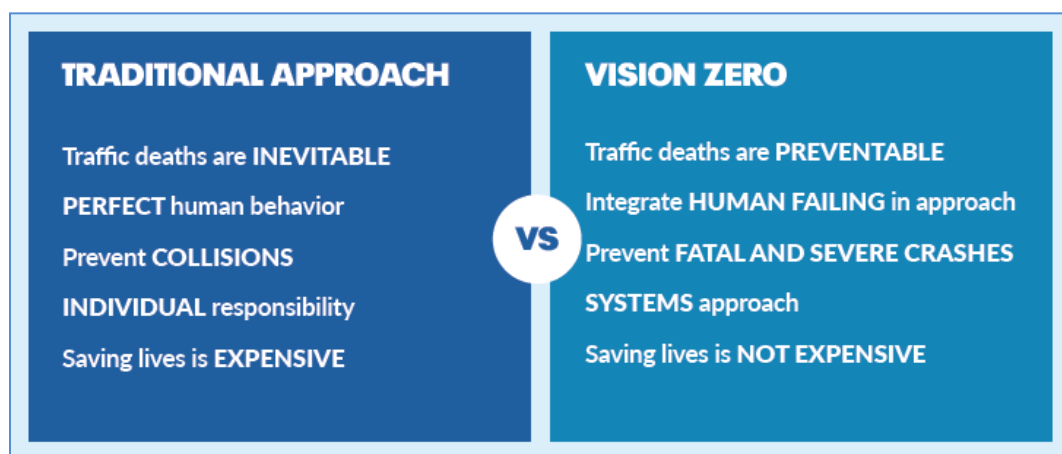
While the greater Portland region has one of the lowest crash rates in the country, our elected and community leaders acknowledge that the high number of tragedies on our roadways is largely predictable and preventable and that no loss of life from a traffic crash is acceptable. They are stepping up to declare that “enough is enough” and to devise plans and policies for a safe future on our roadways. Just as we expect the right to safe water to drink and clean air to breathe, so too should we expect the right to move about safely.

The region is employing a Vision Zero Safe System approach with an adopted goal to eliminate deaths and severe injuries for all users of the transportation system by 2035.

The Safe System approach has been developed and refined over many decades of application. Since it was first introduced, in Europe, it has been taken up at the country, state, and city levels around the world. The system is often branded under a public policy

identity, such as Vision Zero or Toward Zero Deaths, which aims to connect with the public and establish a direct link to the desired outcome.⁷

The Safe System approach involves a holistic view of the transportation system and the interactions among travel speeds, vehicles and road users. It is an inclusive approach that prioritizes safety for all user groups of the transportation system - drivers, motorcyclists, passengers, pedestrians, bicyclists, and commercial and heavy vehicle drivers. Consistent with the region's long-term safety vision, it recognizes that people will always make mistakes and may have road crashes—but the system should be designed so that those crashes should not result in death or serious injury. Design emphasizes separation – between people walking and bicycling and motor-vehicles, access management and median separation of traffic – and survivable speeds.



Vision Zero is a Safe System approach
Source: Vision Zero Network

The Safe System approach focuses on **key guiding principles** that shape how transportation safety is addressed.

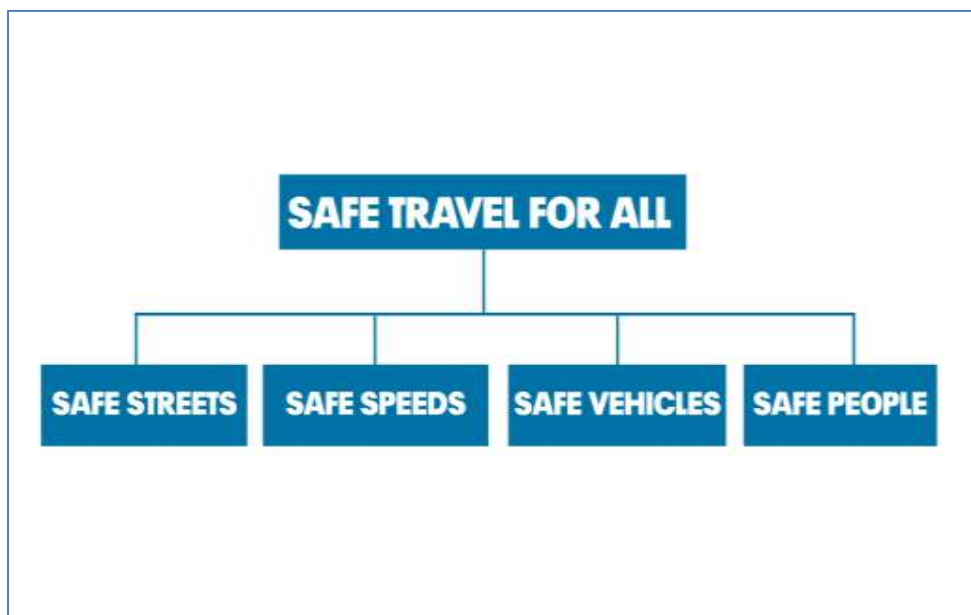
1. **No death or serious injury is acceptable** – lack of safety should not be a trade-off for faster mobility. Rather, the transportation system should be both safe and efficient.
2. **Traffic deaths and severe injuries are preventable** - the focus is on fatal and severe injury crashes, not all crashes. This is one of the most important shifts in how traffic safety is perceived and addressed, shifting the focus to how and where people are dying. It helps prioritize and focus efforts to lead to more immediate outcomes.
3. **People make mistakes that can lead to road crashes** – design roadways so that crashes do not result in a serious injury. Safety should focus on systems-level changes above influencing individual behavior.

⁷ Sustainable and Safe: A Vision and Guidance for Zero Road Deaths (2017) World Resources Institute and Global Road Safety Facility

4. **Humans are vulnerable to injury** – especially people walking, bicycling, riding motorcycles and working in the right-of- way, and we must operate our transportation system to avoid serious injury.
5. **Responsibility is shared** – the people that design, build, manage, and use roadways and vehicles and provide post-crash care have a shared responsibility to prevent severe injuries and deaths.
6. **Proactive versus reactive actions** – rather than waiting for events to occur and reacting, a proactive approach should be taken to make the transportation system safe, systemically addressing risk. All parts of the system must be strengthened so that if one part fails road users are still protected.
7. **Data driven decision making**- use data, research and evaluation to understand crashes and risks and to guide decision making.

The Safe System approach provides a framework for strategies and actions that starts with safe travel for all, including reducing disparities for people of color and people with low incomes and for people walking and bicycling. It focuses on proven and effective strategies that create safe streets, safe speeds, safe vehicle and safe people.

Governments are increasingly using the Safe System approach because it is proving to be effective in the countries where it has been in place for decades. Many countries, states, and cities that have adopted a Safe System approach have reduced road fatalities at a faster rate than others that followed the traditional approach.⁸



Vision Zero Safe System Approach
Source: Vision Zero Network

⁸ Sustainable and Safe: A Vision and Guidance for Zero Road Deaths (2017) World Resources Institute and Global Road Safety Facility

Six data-driven strategies

The Regional Transportation Safety Strategy identifies six strategies and fifty-three actions to address findings from analysis of 2011-2015 crash data. Strategies and actions with proven effectiveness were prioritized. Actions for each strategy can be found in Chapter 4.

1 Protect vulnerable users and reduce disparities⁹

Vulnerable users have higher fatality rates. Increasing safety for vulnerable users increases safety for all transportation users and reduces disparities.

2 Design roadways for safety

Arterial roadways have the highest serious crash rate per road mile and per vehicle mile traveled. Prioritizing and standardizing safety in street design for all modes can prevent dangerous behaviors and save lives.

3 Reduce speeds and speeding

Speed is a fundamental contributing factor in crash severity. Reducing speeds and speeding saves lives.

4 Address aggressive and distracted driving

Dangerous behaviors include those that arise from aggressive or distracted driving and can lead in an instant to injury or death. Policies and roadway design can reduce the likelihood of and minimize the impact of bad decisions.

5 Address impairment

Crashes involving alcohol and drugs have a much higher likelihood of being fatal than other crashes. Providing options to people using the roadways while drunk or intoxicated saves lives.

6 Ongoing engagement and coordination

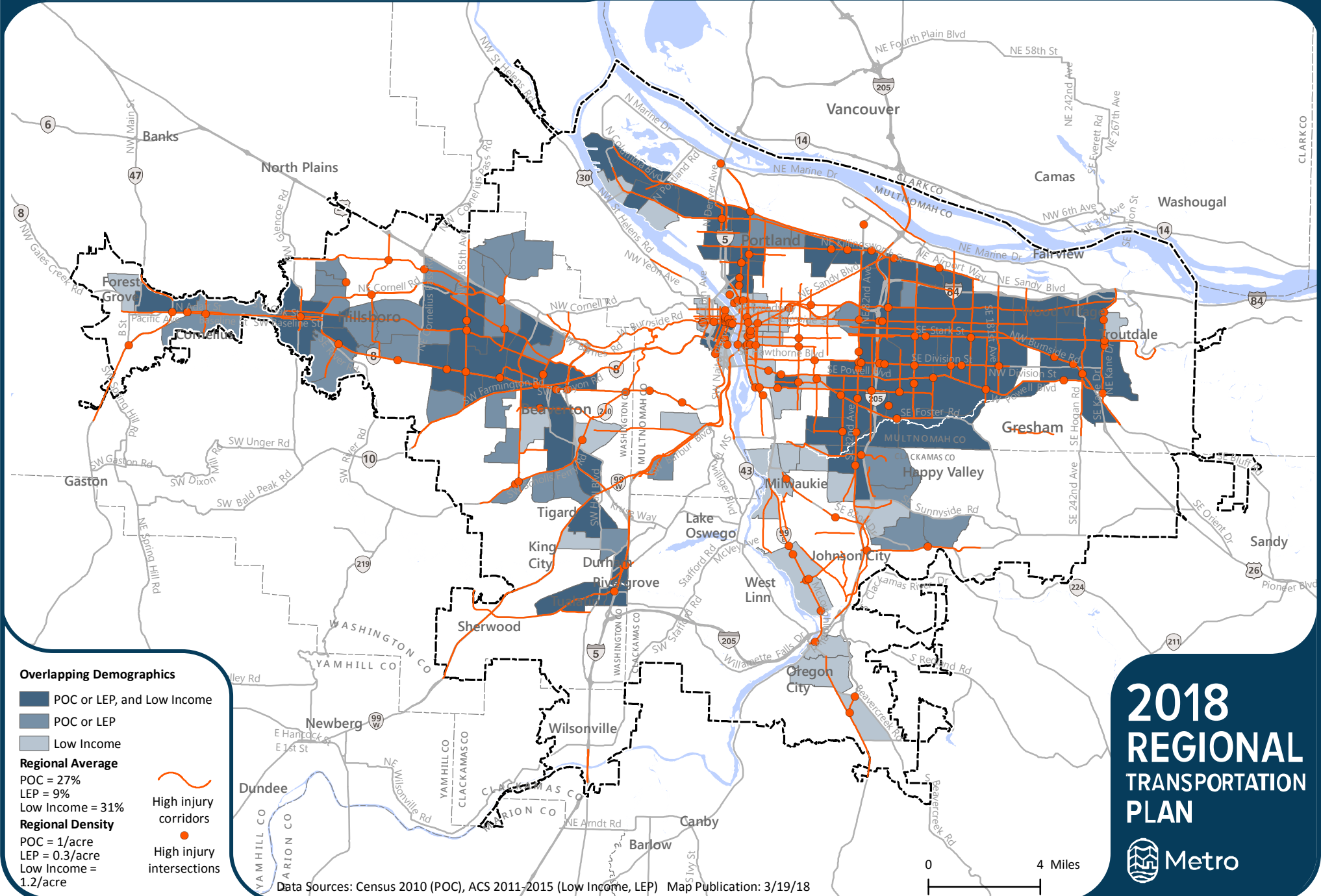
Many partners are needed to implement Vision Zero. Ongoing engagement and coordination among all partners is essential.

Reaching towards Vision Zero will be a challenge, but not impossible

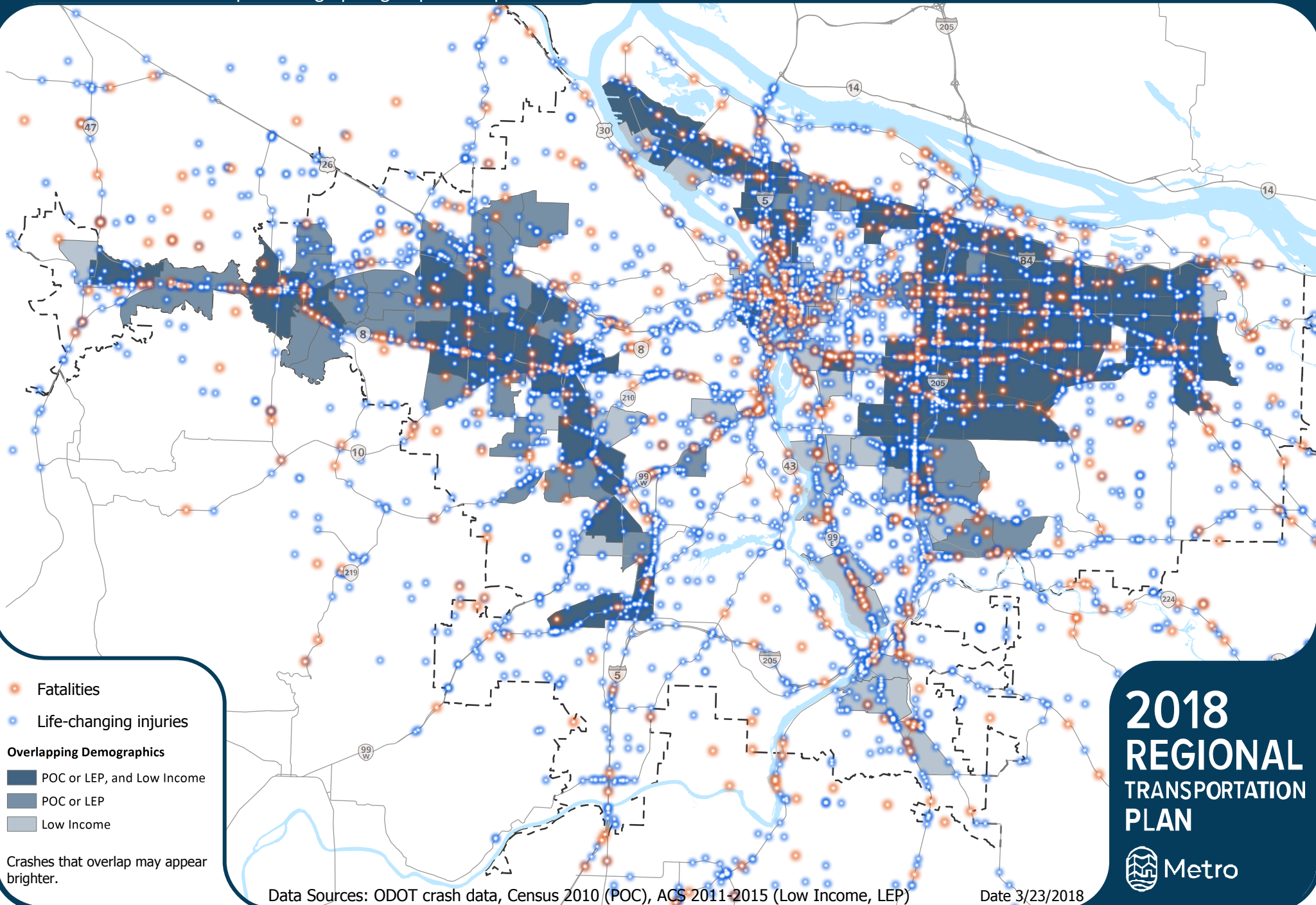
Vision Zero is an ambitious goal but one the region must strive for. With coordinated effort, proven strategies and focused investments the region can move towards Vision Zero. Safety projects in the 2018 Regional Transportation Plan and on the region's High Injury Corridors and Intersections will make it safer to walk, catch the bus, drive, and ride a bicycle or motorcycle. They will address streets with high risk characteristics and prevent crashes from happening. Programs will educate and inform people on safer behaviors and connect people with travel options that reduce driving, thereby reducing exposure to traffic crashes.

⁹ Vulnerable users are people that are more vulnerable to being killed or seriously injured in crashes. Vulnerable users are pedestrians, bicyclists, motorcycle operators, children, older adults, road construction workers, people with disabilities, people of color and people with low income

This map shows the overlap of regional high injury corridors and road intersections with census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color, people with low income, and English language learners. Census tracts where multiple demographic groups overlap are identified.



This map shows the overlap of fatal and life changing crashes involving people driving, biking and walking with census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color, people with low income, and English language learners. Census tracts where multiple demographic groups overlap are identified.



WE REMEMBER

Your stories inspire us to take serious action.

The Regional Transportation Safety Strategy is dedicated to the victims of traffic violence in the Portland region—the daughters, sons, mothers, fathers, wives, husbands, siblings, and friends who have been killed or severely injured on our streets.



Oregon and SW Washington Families for Safe Streets is comprised of victims of traffic violence and families whose loved ones have been killed or severely injured by aggressive or reckless driving and dangerous roadway conditions in Oregon and SW Washington. The group is modeled after the original Families for Safe Streets group banded together in New York City in 2014. With stories and advocacy, Oregon and SW Washington Families for Safe Streets seek cultural and physical changes on streets and the rapid implementation of Vision Zero. Oregon and SW

Washington Families for Safe Streets envision communities where pedestrians, bicyclists and vehicles safely co-exist, and children and adults can travel freely without risk of harm – where no loss of life in traffic is acceptable.

Community member story

Community member story

Community member story

Community member story

On December 28, 2005, my neighbor Peilian Wu was killed crossing NW Walker Road (at NW 180th Ave) to get to the bus stop that we both used. I felt great grief for her and her family, and astonished grief as a fellow pedestrian. Fei Fei and Dong Dung lost their grandmother who they lived live within a three generation household. Her fellow employees lost an infectious cheerful co-worker, I lost a dynamic good neighbor, and we lost a valued community member. It took me three years before I mustered the courage to cross the road to use that bus stop again or to walk to the local park and stores.

One death or fatal injury by vehicle crashes is one death too many. We can and must do better to make our communities safer for people of all ages to walk, whether to get to shops, schools or parks, for physical or mental health boosts, or just to enjoy some time and company out in our community. ~Kathryn Harrington, Metro Councilor



Public awareness campaigns can be an effective way to engage the public, such as ODOT's Oregonian Crossing campaign, spreading the message that every intersection is a crosswalk
Photo: Metro

CHAPTER 1 INTRODUCTION

The Regional Transportation Safety Strategy (“Regional Safety Strategy”) sets regional transportation safety policy for the Regional Transportation Plan and provides a framework for working towards zero traffic related deaths and severe injury crashes in the region by 2035.

The Regional Safety Strategy provides the transportation safety action plan for the greater Portland region, defined as the area within the Metropolitan Planning Area (MPA). The MPA is slightly larger than the region’s Urban Growth Boundary. The Regional Safety Strategy is a topical plan of the Regional Transportation Plan.

This Introduction provides context for the Regional Safety Strategy, including the role of Metro in transportation safety planning for the region, the policy framework that was used to guide the development of the Regional Safety Strategy, relationship to other plans, the planning process and public engagement, and the organization of the document.

Transportation safety is protection from death or bodily injury from a motor-vehicle crash through design, regulation, management, technology and operation of the transportation system.

Personal and public security is protection from intentional criminal or antisocial acts while engaged in trip making through design, regulation, management, technology and operation of the transportation system.

1.1 Metro’s role in transportation safety planning

As the region’s metropolitan planning organization (MPO), Metro has a variety of roles and requirements in transportation safety planning.

1. Safety policy and planning.
 - Setting and reporting on federally required safety performance targets.
 - Developing the Regional Transportation Safety Strategy and the Regional Transportation Plan (RTP), including safety goals, objectives, targets and performance measures, policies, strategies and actions, and investment strategies.
 - Reporting on performance outcomes measured against level of investment.
 - Allocating federal transportation funding through a project selection process informed by regional safety policies.

- Developing and reporting on the Metropolitan Transportation Improvement Plan (MTIP), including project consistency with regional plans and policies.
 - Reviewing local comprehensive and transportation plans for consistency with the Regional Transportation Plan.
 - Supporting and introducing safety legislation.
 - Convening jurisdictions and agencies to achieve better coordination.
2. Data collection, maintenance, analysis and interpretation.
 - Gathering and maintaining data such as roadway network, traffic volumes, and vehicle miles traveled.
 - Improving crash and risk data and analysis tools.
 - Coordinating with the Oregon Department of Transportation and other partners on crash data.
 - Analyzing, interpreting and sharing regional data.
 3. Encouraging best practices in transportation safety and roadway design with funding and programmatic support.
 - Developing regional street design guidelines.
 - Developing criteria for regional funding sources.
 - Supporting use of tools such as the Highway Safety Manual.
 4. Collaborating on efforts to highlight safety in materials, messaging and campaigns.

1.2 Policy framework for the Regional Safety Strategy

This section describes the policy framework that guided the development of the Regional Safety Strategy. A review of current federal, state, regional and local policies related to transportation safety reveal a continuing and growing emphasis on transportation safety for all modes.¹⁰ Five themes emerged from the policy review. The policy framework coupled with analysis of regional crash data guide the policies, strategies and actions in the Regional Safety Strategy.

1. Setting ambitious transportation safety goals for zero deaths and serious injuries.
2. Growing use of the Safe System approach, evident in policies such as Vision Zero, Towards Zero Deaths and Drive to Zero, to achieve better safety results.
3. Using data driven decision making, using data, performance measurement, and evaluation to develop data driven safety plans, strategies and actions and monitor progress towards goals.
4. Applying social equity (especially for race and income) and public health perspectives into safety plans and policy.

¹⁰ Metro Transportation Safety Policy Framework Report, July 2016

5. Recognition of vulnerable users and the need to take additional actions to protect them.

Each of the five policy themes is explained in more detail below.

① Setting ambitious goals

Setting a goal of zero or near zero deaths and severe injuries, with interim targets for reaching the goal, reflects the perspective that these deaths are not accepted as unpreventable deaths.¹¹ Setting ambitious transportation safety goals is increasingly used as a policy tool because ambitious goals are resulting in better outcomes, when those ambitious targets are supported by rigorous interventions and prioritization.¹² A recent report by the World Resources Institute found that many countries, states and cities that have adopted a Safe System approach have reduced road fatalities at a faster rate than others that followed a more traditional approach.¹³ These places have also set ambitious targets, but the key is that they are supported by specified interventions and a coordinated leadership implementing the actions. In the U.S. from the federal level down, setting ambitious goals is redefining how safety is addressed:

- In October 2016, the U.S. Department of Transportation and the National Safety Council launched the ‘Road to Zero’ Coalition to end roadway fatalities in the next thirty years. The Secretary of Transportation noted that “setting the bar for safety to the highest possible standard requires commitment from everyone to think differently about safety – from drivers to industry, safety organizations and government at all levels.”¹⁴
- In 2016, Oregon adopted its Transportation Safety Action Plan with a target of zero serious crashes by 2035.
- In the early 2000s, Washington and Minnesota were the first states to adopt the Toward Zero Deaths goal into their safety plans. Both states have had fewer fatalities and severe injury crashes, than did non-Toward Zero Deaths states and the rate of decline was faster.¹⁵
- Clackamas County has been a leader in setting aggressive safety targets. The county was the first local government in the state to develop a safety action plan. It uses the Toward Zero Deaths framework.

¹¹ Sustainable and Safe: A Vision and Guidance for Zero Road Deaths (2017) World Resources Institute and Global Road Safety Facility

¹² Towards Zero: Ambitious Road Safety Targets and Safe Systems Approach (2008) Transport Research Centre

¹³ Sustainable and Safe: A Vision and Guidance for Zero Road Deaths (2017) World Resources Institute and Global Road Safety Facility

¹⁴ Road to Zero Coalition, National Safety Council <http://www.nsc.org/learn/NSC-Initiatives/Pages/The-Road-to-Zero.aspx> and <https://www.nhtsa.gov/press-releases/us-dot-national-safety-council-launch-road-zero-coalition-end-roadway-fatalities>

¹⁵ Munnich, Lee W., Jr., F. Douma, X. Qin, J.D. Thorpe, and K. Wang. 2012. Evaluating the Effectiveness of State Toward Zero Deaths Programs. Technical Report. Minneapolis: Center for Excellence in Rural Safety, University of Minnesota.

- Over 40 cities in the U.S. have adopted Vision Zero plans and have identified themselves as Vision Zero cities, including the City of Portland. The City of Portland has adopted a Vision Zero target for 2025 and developed an ambitious Vision Zero Plan with an equity lens. In 2016, the City of Hillsboro adopted a safety action plan with a target of zero by 2035. Beaverton completed a Transportation Safety Action Plan in 2017 with a goal of zero fatalities and severe injuries by 2035. Washington County has completed a plan with a vision of moving towards zero deaths.

② Use a Safe System approach

The Safe System approach has been developed and refined over many decades of application. Since it was first introduced, in Europe, it has been taken up at the country, state, and city levels around the world. The U.S. Department of Transportation is taking initial steps towards applying the Safe System approach at the national level.¹⁶

The system is often branded under a public policy identity, such as Vision Zero or Toward Zero Deaths, which aims to connect with the public and establish a direct link to the desired outcome. The best-known brand may be Sweden’s Vision Zero. The name of this policy refers to the foundational principle that no loss of life should be acceptable on the roads. It also establishes an ambitious target to reach zero traffic fatalities.¹⁷

The Safe System approach involves a holistic view of the transportation system and the interactions among travel speeds, vehicles and road users. It is an inclusive approach that prioritizes safety for all user groups of the transportation system - drivers, motorcyclists, passengers, pedestrians, bicyclists, and commercial and heavy vehicle drivers. Consistent with the region’s long-term safety vision, it recognizes that people will always make mistakes and may have road crashes—but the system should be forgiving and those crashes should not result in death or serious injury.

Whether the approach is called Vision Zero, Toward Zero Deaths, or Road to Zero, the Safe System approach focuses on **key guiding principles** that shape how transportation safety is addressed.

1. **No death or serious injury is acceptable** – lack of safety should not be a trade-off for faster mobility. Rather, the transportation system should be both safe and efficient.

¹⁶ *New Safety UTC Envisions Safe Systems Approach for U.S. Roadways*. (October 2017) University Transportation Centers Program and U.S. DOT Office of the Assistant Secretary for Research and Technology.

<https://www.transportation.gov/sites/dot.gov/files/docs/utc/286546/utcnewsletter115october.pdf>

This national safety UTC is focused on implementing a collaborative, multidisciplinary, safe systems approach to reducing transportation-related injuries and fatalities, and to helping traffic safety become recognized as a public health priority in the United States.

¹⁷ *Sustainable and Safe: A Vision and Guidance for Zero Road Deaths* (2017) World Resources Institute and Global Road Safety Facility

2. **Traffic deaths and severe injuries are preventable** - the focus is on fatal and severe injury crashes, not all crashes. This is one of the most important shifts in how traffic safety is perceived and addressed, shifting the focus to how and where people are dying. It helps prioritize and focus efforts to lead to more immediate outcomes.
3. **People make mistakes that can lead to road crashes** – design roadways so that crashes do not result in a serious injury. Safety should focus on systems-level changes above influencing individual behavior.
4. **Humans are vulnerable to injury** – especially people walking, bicycling, riding motorcycles and working in the right-of- way, and we must operate our transportation system to avoid serious injury.
5. **Responsibility is shared** – the people that design, build, manage, and use roadways and vehicles and provide post-crash care have a shared responsibility to prevent severe injuries and deaths.
6. **Proactive versus reactive actions** – rather than waiting for events to occur and reacting, a proactive approach should be taken to make the transportation system safe, systemically addressing risk. All parts of the system must be strengthened so that if one part fails road users are still protected.
7. **Data driven decision making**- use data, research and evaluation to understand crashes and risks and to guide decision making.

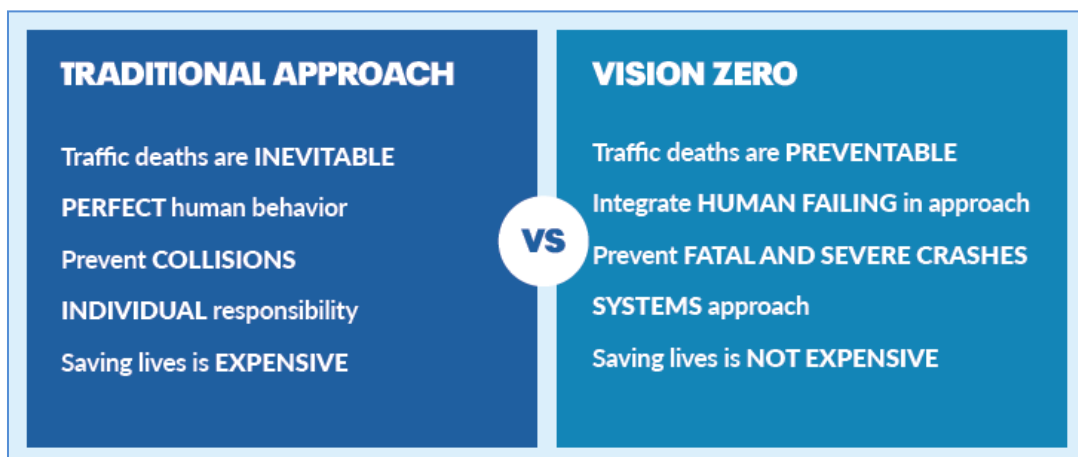


Figure 1: Vision Zero is a Safe System approach
Source: Vision Zero Network

The Safe System approach provides a framework for strategies and actions that starts with safe travel for all, including reducing disparities for people of color and people with low

incomes and for people walking and bicycling. Figure X illustrates the Safe System approach framework.¹⁸

Safe travel for all embraces the guiding principle that serious traffic crashes are preventable and that no death or severe injury is acceptable.

Safe streets encompasses roadway design that reduces the severity of crashes, education on how to navigate new roadway designs, information such as signage, and technology such as automated speed enforcement. Safety features are integrated into the road design from the outset, including segregating road users, segregating motor-vehicle traffic with medians and barriers, setting appropriate speeds to slow traffic, and designing roads that are “self-explaining” that is, they are designed so that the road user is aware of what is expected of them and behaves appropriately. There is also an emphasis on a proactive approach to road safety, with improvements made to improve both the actual and perceived risks of road safety.

Safe speeds encompasses reducing speeding, evaluating how posted speeds are set and establishing appropriate speed limits, enforcing existing speed limits, especially with automated speed enforcement, and educating road users. Speed is a primary factor in the severity of many crashes and reducing speeding and speeds is seen as a critical way to prevent serious crashes.¹⁹ Speed limits in safe systems are based on aiding crash avoidance and a human body’s limit for physical trauma.

Safe vehicles encompasses vehicle technology and licensing and registration, including increasing the frequency of license testing. Vehicles are designed, built and regulated to minimize the occurrence and consequences of crashes, with the emphasis on collision survivability. There are two main strands to safer vehicles – technology and road-worthiness. Vehicle technology, such as autonomous vehicles, holds great promise for improving safety, but policies and regulations will be needed to ensure that all road users benefit equally.

Safe people encompasses education and coordination focused on reducing traffic and road rule compliance. Programs such as Safe Routes to School provide foundational transportation behavior training. Campaigns, messaging, media and public perception all inform how people operate and travel within the public right-of-way.

¹⁸ The safe systems approach to road safety, Brake the road safety charity, UK (September 2015)
<http://www.brake.org.uk/facts-resources/15-facts/1484-safe-systems-facts-page>

¹⁹ Safety Study: Reducing Speeding-Related Crashes Involving Passenger Vehicles, National Transportation Safety Board (2017)

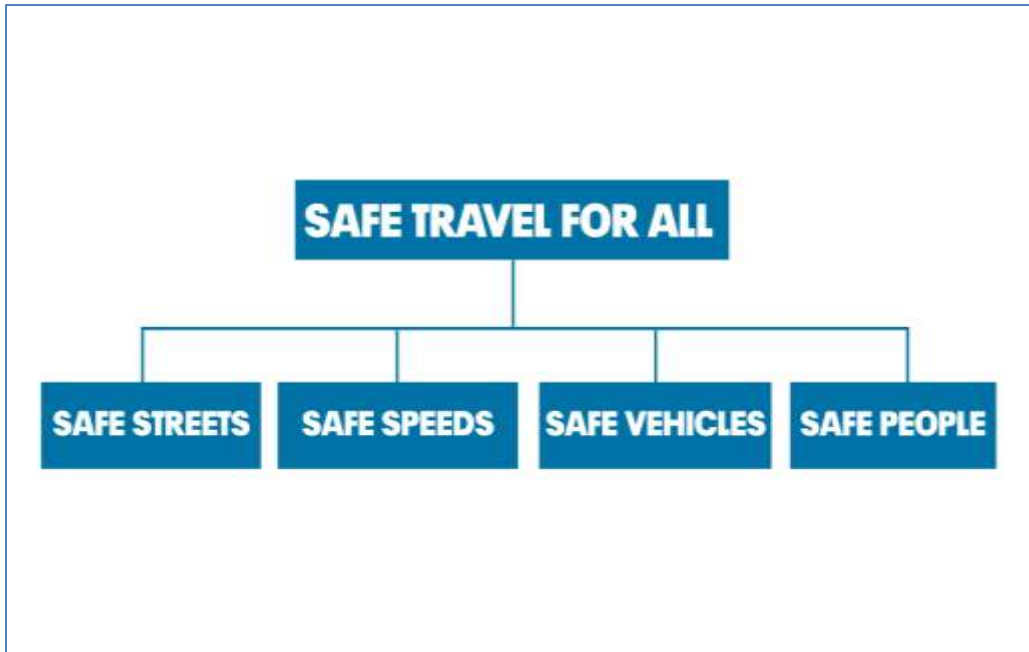


Figure 2: Vision Zero Safe System Approach
Source: Vision Zero Network

Governments are increasingly using the Safe System approach because it is proving to be effective in the countries where it has been in place for decades. Many countries, states, and cities that have adopted a Safe System approach have reduced road fatalities at a faster rate than others that followed the traditional approach.²⁰

③ Data driven decision making

A data driven approach to safety uses crash data, risk factors, and other supported methods to identify the best possible locations to achieve the greatest benefits. Within the Safe System approach the focus is on fatal and severe injury crashes, not all crashes, and systemic approaches to prevent serious crashes from occurring.

Policies at all levels of government emphasize collecting and tracking data on fatal and severe injury crashes, crash risks, contributing factors and countermeasures to crashes to inform plans and investments. Understanding why fatal and severe injury crashes occur and who is most vulnerable is used to direct limited investments and to develop policies and actions to reduce fatal and severe crashes.

Strategies to improve data collection and availability (timelines, accuracy, etc), types of data available (post-hospital data, demographics, etc) must be pursued to support data driven plans and policies. Also needing greater attention is how crash risk is defined and addressed. Crash risk must be carefully defined based on data.

²⁰ Sustainable and Safe: A Vision and Guidance for Zero Road Deaths (2017) World Resources Institute and Global Road Safety Facility



Figure 3: Data driven safety analysis
Source: Federal Highway Administration

The Federal **Highway Safety Improvement Program** (HSIP) requires a data driven, strategic approach to improving highway safety that focuses on performance. Beginning in 2016, the HSIP National Summary Report includes an evaluation of how states are using data-driven safety decision making to support their safety action plans.²¹

The Oregon Department of Transportation's **All Roads Transportation Safety** program (ARTS) uses federal funds from the Highway Safety Improvement Program, and uses a data driven approach that addresses safety for all public roads in the state of Oregon.²²

The **2018 Metro State of Safety Report** documents roadway crash data and patterns in the region. The Oregon Department of Transportation has assembled and distributed statewide crash data since 2007. The data includes numerous information fields for each geocoded crash and is complemented by Metro datasets of transportation infrastructure, transportation operations, and spatial data. The combination of these provides the opportunity of detailed analyses of the safety of the region's transportation system and land use patterns.

4 Applying a racial equity and public health lens

A review of current policies shows that there is a growing need to more explicitly link equity and public health with transportation safety planning.

- Recognizing that transportation related injuries and fatalities are a public health priority and applying public health principles to solve a population health issue is one way that a public health lens is being applied to transportation safety.
- Recognizing the disproportionate impact of serious traffic crashes on people of color, people with low incomes and older adults and taking equity driven actions to reduce the disproportionate impact on these populations is one way that an equity lens is being applied to transportation safety.

²¹ U.S. Department of Transportation, Federal Highway Administration, Highway Safety Improvement Program (HSIP) <https://safety.fhwa.dot.gov/hsip/> (April, 2017)

²² Oregon Department of Transportation, All Roads Transportation Safety, <http://www.oregon.gov/ODOT/Engineering/Pages/ARTS.aspx>

The Regional Safety Strategy applies a public health and race and income equity lens to the policies, strategies and actions. Additionally, it looks at the safety issues for other vulnerable groups such as children, older adults, and people walking, bicycling or riding motorcycles.

Equity

Numerous reports and studies, mostly at the national level, are providing data showing that your risk of dying in a motor-vehicle involved crash is higher if you are a person of color, are over 65 or have a lower income.²³ These disparities in public health and safety outcomes demonstrate the need and necessity to apply an equity and public health lens.

Title VI of the Civil Rights Act of 1964 prohibits discrimination of any person based on race, color, and national origin in programs and activities receiving federal financial assistance, including transportation. This important legislation is a cornerstone to providing an equitable transportation system, however it does not address the systemic effects of racism which continue to create inequitable outcomes for communities of color, including in transportation safety. Applying a racial equity lens in analysis and in the development of policies, strategies and actions begins to identify ways to address the systemic effects of racism.

In 2016, Metro adopted the Strategic Plan to Advance Racial Equity, Diversity and Inclusion.²⁴ The Racial Equity Strategy, as it is known, lays the foundation for the region's policy approach to reducing disparities and eliminating barriers for people of color. The Metro Council provided policy direction that the Regional Transportation Plan and its topical and modal plans to use a racial and income equity lens when developing policies, strategies and actions.

Racial equity, as defined in the Regional Transportation Plan, is when race can no longer be used to predict life outcomes and outcomes for all groups are improved.

²³ *Motor Vehicle Traffic-Related Pedestrian Deaths — United States, 2001–2010*, Centers for Disease Control and Prevention (2013); *Dangerous by Design*, National Complete Streets Coalition (2016); *Income Disparities in Street features that Encourage Walking*, Bridging the Gap (2012); *Pedestrians Dying at Disproportionate Rates in America's Poorer Neighborhoods*, Governing, August 2014; *America's Poorer Neighborhoods Plagued by Pedestrian Deaths*, Governing Research Report (August 2014)

²⁴ Racial Equity Strategy, Metro, June 2016 <https://www.oregonmetro.gov/strategic-plan-advance-racial-equity-diversity-and-inclusion>



Figure 4: Metro's Racial Equity Strategy

Public health

Public health and transportation have long been linked, and more recently traffic deaths and serious injuries are being seen as a public health crisis. As part of the built environment, where you live and travel (and your zip code) is one of the social determinants of health.

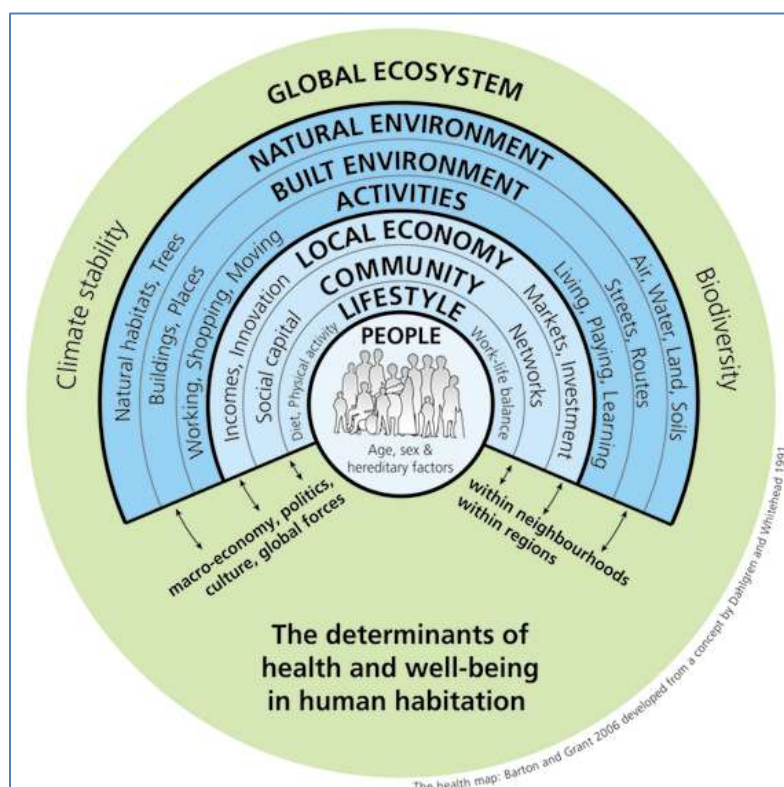


Figure 5: Health map showing streets and transportation routes are one of the determinants of health

Source: Barton and Grant, 2006

The Safe System approach to transportation safety recommends that all areas of government, including public health and transportation, must work together and coordinate to achieve zero serious crashes.

The Centers for Disease Control has identified reducing serious crashes as a “winnable battle” because of the large-scale impact to public health, because evidence-based interventions exist and can be broadly implemented and intensive focus and efforts could have a significant impact in a relatively short period of time.²⁵

Applying public health principles to transportation safety requires looking at safety from a different perspective. For example, public health principles focus on upstream interventions that have increasing population impact and decreased individual effort. Interventions that require high amounts of individual effort have a relatively small population impact, while interventions that require low individual effort have a high population impact.²⁶

The health of Oregonians is also directly connected to transportation safety.

-Oregon Transportation Options Plan, 2015

5 Prioritize vulnerable users

Vulnerable users are people that are more vulnerable to being killed or seriously injured in crashes. Vulnerable users are pedestrians, bicyclists, motorcycle operators, children, older adults, road construction workers, people with disabilities, people of color and people with low income.

Emphasizing this policy theme in the Regional Safety Strategy helps identify strategies and actions to reduce disparities for these populations and provide safe travel for all.

The most recent Dangerous by Design report identifies people of color, people with low incomes and older adults as the populations most vulnerable to traffic deaths. The report states that between 2005 and 2014, Americans were 7.2 times more likely to die as a pedestrian than from a natural disaster.²⁷

The U.S. Department of Transportation launched the **Safer People, Safer Streets Initiative** in early 2015, recognizing that bicyclist and pedestrian injuries and fatalities have steadily

²⁵ CDC Winnable Battles Final Report

Winnable battles are high burden, high priority public health work focused on aligning and accelerating intra- and inter-agency work and encouragement programs to think more broadly about partnerships beyond traditional public health partners.

²⁶ Health Impact Pyramid. Thomas Friedman.

²⁷ Dangerous by Design 2016 (January 2017) Smart Growth America, National Complete Streets Coalition

increased since 2009 while motor vehicle crash fatalities have declined.²⁸ The goal of the Initiative is to increase safety for people walking and bicycling, and states that supporting walking and bicycling “supports national goals.”

In order to reduce the risk of increased exposure to traffic injury and air pollution for all road users, PHD recommends that Metro prioritize the design and maintenance of non-automobile facilities by:

- ***Including safety features for pedestrians and bicyclists such as separation from motorized traffic when possible. Prioritize non-automobile users in design and maintenance of streets.***
- ***Providing a parallel bicycle route one block removed from high-volume roads when feasible to reduce exposure to localized pollution while still maintaining access to community destinations.***

- Oregon Health Authority, Community Climate Choices Health Impact Assessment

1.3 Relationship to other plans

Transportation safety is an element of all state, regional and local land use and transportation plans and is achieved through the implementation and update of these plans. This section describes plans that relate to the Regional Safety Strategy.

A safer transportation system is sustainable and can help meet broader environmental, social and health goals identified in our land use and comprehensive plans. Increasing and promoting public transportation, walking and bicycling can help mitigate climate change and improve air quality by reducing carbon dioxide emissions from motor vehicles. Increasing the safety and security of public transportation, walking and bicycling also increases people’s physical activity and enhances their quality of life and ability to access jobs and education. A transportation system that offers a variety of safe transportation options can better address the needs of a variety of demographic groups, including people of color, women, people with low incomes, people with limited mobility, youth and older adults.

²⁸ Safer People, Safer Streets: Summary of the U.S. Department of Transportation Action Plan to Increase Walking and Biking and Reduce Pedestrian and Bicyclist Fatalities (September 2014)

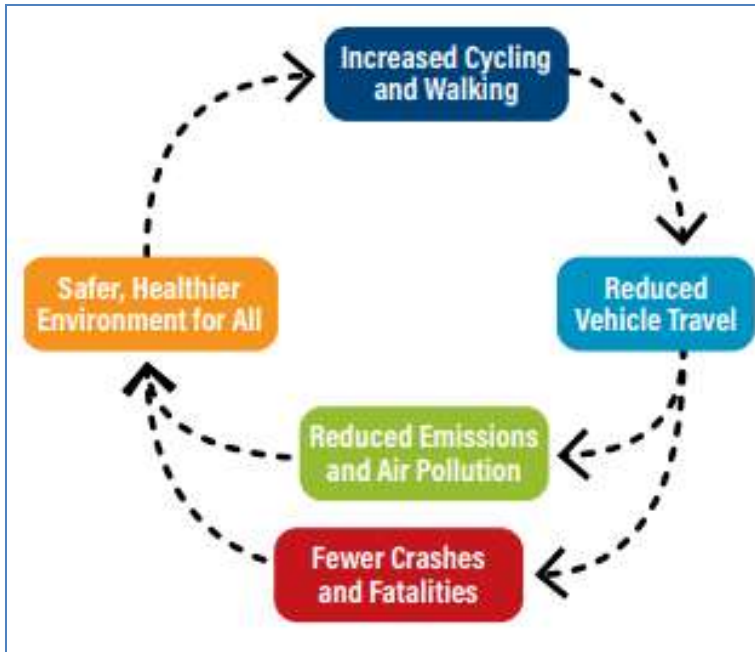


Figure 6: Environmental and Health Benefits of a Safe Transportation System
Source: Sustainable and Safe: A Vision and Guidance for Zero road Deaths (2017)

Transportation Planning Rule (TPR)

The Oregon Transportation Planning Rule (TPR) is located in Division 12, Chapter 660 of the Oregon Administrative Rules and implements Statewide Planning Goal 12 (Transportation) which “promotes the development of safe, convenient and economic transportation systems.” The rule emphasizes a reduction in vehicle miles traveled specifies what local governments and state agencies are responsible for with transportation planning to meet the broad objectives of Goal 12.

Specifically, the Transportation Planning Rule requires jurisdictions within a Metropolitan Planning Organization area to adopt a Transportation System Plan that contains specific elements including a public transportation plan, a bicycle and pedestrian plan, a parking plan and transportation financing program. While safety is a theme and element of the Transportation Planning Rule, there is currently no requirement that transportation safety plans be developed as part of the Transportation System Plan.

Action 6.14 of the Regional Safety Strategy recommends updating sections of OAR 660-012-0000 the Transportation Planning Rule to require Transportation System Plans to include a transportation safety plan and to identify safety as a need and to clarify that making a known safety problem worse constitutes a “significant effect.”

Oregon Transportation Safety Action Plan (TSAP)

The Federal Highway Administration requires every state to have a Strategic Highway Safety Plan, a statewide coordinated safety plan providing a comprehensive framework for reducing fatalities and severe injuries. The Oregon Transportation Safety Action Plan serves as the Oregon Strategic Highway Safety Plan and must be updated every five years.

In 2016, the Oregon Transportation Commission adopted an updated Oregon Transportation Safety Action Plan with a target of zero traffic deaths and severe injuries by 2035. The plan identifies Emphasis Areas for near term focus, goals, policies and strategies. It addresses all modes on all public roads in Oregon.

The Oregon Transportation Safety Action Plan shapes regional and local safety plans, including the Regional Safety Strategy, and is in turn shaped by and responsive to the needs identified in local, county, regional and Tribal safety plans.

2040 Growth Concept

The 2040 Growth Concept is the greater Portland area's long-range growth management plan and provides a concept of land-use and transportation policies. Among other things, it emphasizes providing transportation choices and safe neighborhoods.

The Urban Growth Management Functional Plan provides tools to meet goals of the 2040 Growth Concept and the Regional Transportation Functional Plan (see below) implements the transportation elements of the 2040 Growth Concept.

Both the 2040 Growth Concept and the Urban Growth Management Functional Plan provide the land use context to which transportation decisions, including actions to reduce crashes and increase transportation safety, are guided by.

Regional Transportation Plan (RTP)

The Regional Transportation Plan is the transportation system plan for the greater Portland area and lays out the region's transportation concepts and policies to support a complete and interconnected transportation system that supports all modes of travel and implementation of the 2040 Growth Concept.

For the 2018 update, safety was identified as a key policy area. The Regional Safety Strategy is a topical plan of the 2018 Regional Transportation Plan and updates the transportation safety elements.

Regional Transportation Functional Plan (RTFP)

The Regional Transportation Functional Plan is the implementing plan of the Regional Transportation Plan and specifies what local Transportation System Plans are required to include. It serves as the primary transportation policy implementation of the 2040 Growth Concept.

For safety, the Regional Transportation Functional Plan specifies that:

- New street construction and re-construction must be designed to improve safety (3.08.110 A);
- Cities and counties must consider safety improvements (along with TSMO strategies and operational and access management improvements) before other strategies to meet transportation needs and performance targets and standards (3.08.220);

- Each city and county shall include performance measures for safety (3.08.230 D);

The Regional Safety Strategy includes Action 6.13 which recommends updating the Regional Transportation Functional Plan to require Transportation System Plans to include a transportation safety action plan, with data analysis that addresses all modes and is based on a safety inventory based on both an analysis of crash rates and an analysis of crash risks; to require that Transportation System Plans identify safety as a need; and to require that transportation projects do not make a known safety problem worse, and to be consistent with the Regional Safety Strategy.

Topical and modal plans of the Regional Transportation Plan

Transportation safety is a component of other regional topical and modal plans of the Regional Transportation Plan, including the Climate Smart Strategy, Regional Freight Plan, Regional Transit Plan, Regional Travel Options Plan, Transportation System Management and Options Plan, RTX the Emerging Technologies Strategy and the Regional Active Transportation Plan. Implementing these plans helps achieve Vision Zero. Additionally, Metro's regional street and trail design guidelines emphasize engineering and design treatments to achieve Vision Zero streets.

Local Comprehensive Plans

Oregon's statewide planning goals are achieved through local comprehensive plans. Comprehensive plans are long-range plans which include the goals and policies to help jurisdictions prepare for and manage expected population and economic growth.

Local Transportation System Plans and Transportation Safety Action Plans are parts of the overall Comprehensive Plan; local Transportation System Plans must "conform with local and regional comprehensive land use plans." This planning hierarchy reinforces the approach that transportation decisions, including how to address safety, should respond to the context of the surrounding land use.

Local Transportation System Plans (TSP)

Local transportation system plans, or TSPs, developed by cities and counties in the region must be consistent with the Regional Transportation Plan and are required by the Oregon Transportation Planning Rule. Transportation System Plans are long-range plans that guide transportation investments to achieve desired goals and outcomes. The plans include policies, plans for different transportation modes, and a finance plan.

Typically, safety is a theme and goal in Transportation System Plans but there is not a separate plan or section with specific safety strategies, actions or projects. As more jurisdictions in the greater Portland area are developing Transportation Safety Action Plans and benefitting from them, the need for specific safety plans as part of Transportation System Plans is being recognized.

The Regional Safety Strategy includes Actions 6.13 and 6.14 which recommends updating the Regional Transportation Functional Plan and the Transportation Planning Rule to require Transportation System Plans to include a Transportation Safety Action Plan,

including analysis of crash data to identify common crash types and contributing factors, identification of high risk and high injury locations, and recommended actions and projects.

Local Transportation Safety Action Plans (TSAP)

Several cities and counties in the region have adopted or are in the process of developing local transportation safety action plans. Clackamas County was the first county in the state to adopt a Transportation Safety Action Plan in 2012. Portland adopted the first Vision Zero Plan in the region, Hillsboro adopted a Transportation Safety Action Plan in 2017 with a Vision Zero target, and Washington County completed a Transportation Safety Action Plan in 2017. Coordinating implementation of these plans is an important element of achieving Vision Zero.

1.4 Planning process and public engagement

The Regional Transportation Safety Strategy was updated in coordination with and as part of the update of the Regional Transportation Plan between May 2016 and December 2018. Throughout the planning process, transportation safety was repeatedly identified as a major issue for the region. In Metro quick polls and public opinion surveys safety was identified as a top concern. Elected and community leaders highlighted safety as one of eight policy focus areas for the 2018 Regional Transportation Plan and indicated early support for adoption of a Vision Zero framework and target. A technical work group provided technical review and expertise as the Safety Strategy was developed.

Regional leadership

The Metro Council, the Joint Policy Advisory Committee on Transportation (JPACT), Metro Policy Advisory Committee (MPAC), and community and business leaders provided policy direction for the Regional Safety Strategy. Early on in the process regional leaders provided direction to use a Vision Zero goal and framework. They supported the development of Regional High Injury Corridors and Intersections to help guide investments and supported identifying specific projects in the Regional Transportation Plan as safety projects.

Regional leaders provided policy direction at four Regional Leadership Forums and safety was consistently one of the top policy issues. Additionally, the Metro Council committed to supporting a Regional Safety Strategy with a Vision Zero target and framework with a racial and income equity lens.

“What’s your goal?” video

Metro interviewed people in the greater Portland area and asked them what the traffic fatality goal should be for their family – everyone said zero. They were all asked if that should be the goal for everyone – they all said yes.



Figure 7: What's your Goal? Video

Source: Metro, KidFestNW Portland Expo Center, February 18, 2017

Focus groups and stakeholder interviews

To develop the work plan for the update the Regional Transportation Plan, Metro conducted focus groups and stakeholder interviews. Input from these processes was used to shape the work program and policy focus areas for the update. Safety was confirmed as a priority focus area through the input.

In June 2015, Metro sought input from culturally-based and youth focus groups on questions related to equity, transportation, housing, parks and natural areas, and community engagement. Input related to safety included bicycle safety, personal safety on the MAX, and safety at bus shelters including lighting and presence of a shelter, lack of sidewalks and lack of safe routes to get to parks.²⁹



Figure 8: Participants in the Metro Discussion Groups, June 2015

In October 2015, Metro conducted stakeholder interviews for the update of the Regional Transportation Plan. Interviewees included elected officials, businesses, and community organizations from across the greater Portland area. Input related to safety that emerged from the interviews were: making safety the highest priority, allowing for mode separation of modes, such as separated bicycle facilities, to improve traffic flow and safety, improving safety around schools, and lack of sidewalks.³⁰

Online public comment opportunities

For the update of the Regional Transportation Plan Metro provided opportunities for the public to comment online about transportation priorities. Safety was consistently a top concern and need identified by the people that commented.

²⁹ Metro Discussion Groups (August 2015)
<https://www.oregonmetro.gov/sites/default/files/2016/01/29/RTP-2018-DiscussionGroupReport-20150805.pdf>

³⁰ 2018 RTP Update Stakeholder Interview Report (October 2015)
<https://www.oregonmetro.gov/sites/default/files/2015/10/30/RTP-2018-StakeholderInterviews-20151027.pdf>

Metro conducted an online quick poll in July and August 2015. After traffic, safety was identified as a top transportation issue, and it was identified as the top transportation issue in Multnomah County.³¹

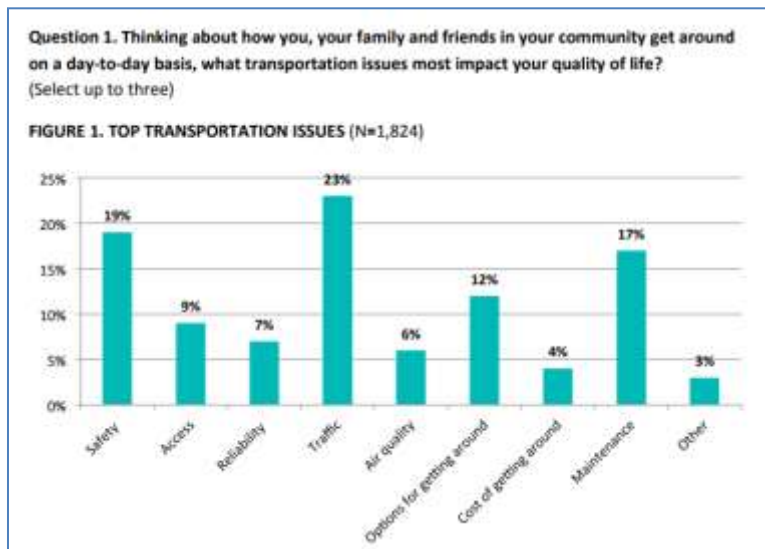


Figure 9: Metro Quick Poll, August 2015

In the online public comment period in March 2017, reducing fatal and severe injury crashes for people walking, bicycling and driving was identified as the highest need after maintaining the transportation system.³²

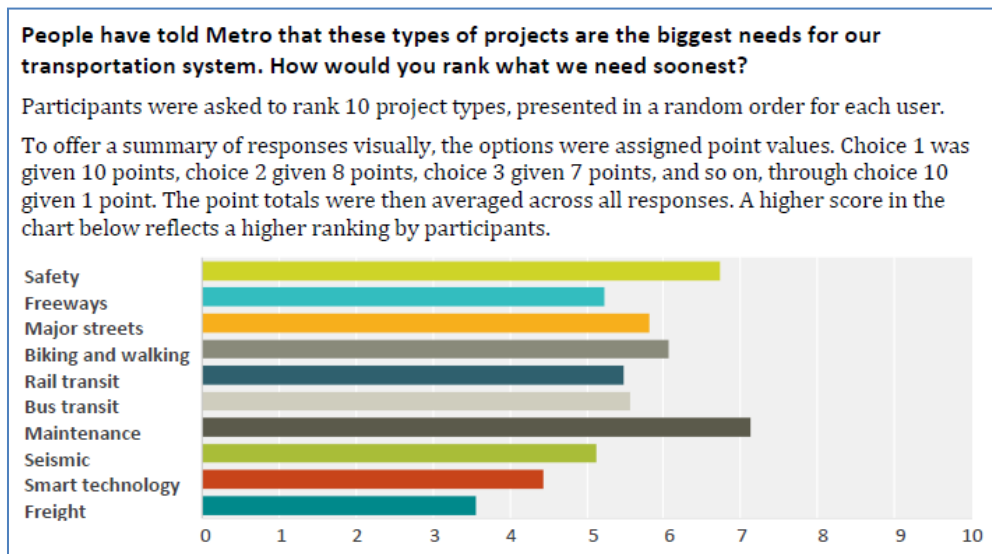


Figure 10: Metro On-line Survey, March 2017

³¹ 2018 RTP Update Online Quick Poll 1 report (October 2015)
<https://www.oregonmetro.gov/sites/default/files/2015/10/21/RTP-QuickPoll1-Results-20151021.pdf>

³² 2018 RTP Update Public Comment Report: Priorities for our transportation future (May 2017)
<https://www.oregonmetro.gov/sites/default/files/2017/05/12/RTP-winter-comment-report-051217.pdf>

Safety Technical Work Group

A Regional Transportation Safety Technical Work Group was formed in April 2016 and provided the primary technical work and guidance on the update of the Regional Safety Strategy. The work group developed the updated safety targets and support for the Vision Zero and Safe Systems framework.

The Regional Transportation Plan's Transportation Equity and Performance Measure Work Groups provided review and substantial input on the Safety Strategy throughout the process. The Transportation Equity Work Group supported adopting a Vision Zero target and proposed two safety system evaluation measures to better understand the impact of the 2018 Regional Transportation Plan investment strategies on areas with historically underserved communities. The Transportation Equity Work Group also recommended considering how racial equity and public health were impacted by the Safety Strategy.

The technical work group included representation from the following agencies and organizations. Families for Safe Streets, police and fire were not represented on the work group. This gap in representation needs to be rectified in future regional safety work groups.

- Federal Highway Administration
- Oregon Department of Transportation, Region 1
- Clackamas County
- Multnomah County Public Health
- Washington County
- City of Beaverton
- City of Gresham
- City of Hillsboro
- City of Lake Oswego
- City of Portland
- City of Wilsonville
- TriMet
- National Safe Routes to School Partnership
- Oregon Walks
- The Street Trust



Figure 11: First meeting of the safety work group in May 2016

Metro technical advisory committees

In addition to the Regional Transportation Plan technical work groups, Metro’s technical advisory committees, Transportation Policy Advisory Committee (TPAC) and Metro Technical Advisory Committee (MTAC), provided valuable review and input on the development of the Regional Safety Strategy.

1.5 Document organization

The Regional Safety Strategy is organized into six chapters, with a foreword, executive summary, and back matter such as a glossary and list of acronyms. Supporting documents are provided as stand-alone appendices. This section provides an overview of the different parts of the document.

[To be finalized when draft is finalized]

Foreword

Introduces the genesis, purpose, limitations, and scope of the plan.

Executive Summary

Provides a short summary and key elements of the plan.

We Remember

Describes why it is important to take serious action to end traffic violence through community stories.

Chapter 1: Introduction

Provides an introduction to and context for understanding the strategy.

Chapter 2: Regional Transportation Safety Policy

Describes regional safety goals, objectives, targets and policies, including regional high injury corridors and targets.

Chapter 3: Trends and Factors in Serious Crashes

Provides key findings from analysis of the crash data used to identify the strategies and actions. Identifies the top three findings.

Chapter 4: Strategies and Actions

Describes data-driven strategies and actions to help achieve Vision Zero.

Chapter 5: Implementation

Describes how the Regional Safety Strategy will be implemented in the next few years by Metro and partners.

Chapter 6: Measuring Progress

Describes performance measures to monitor progress towards achieving Vision Zero.

Acronyms

Defines acronyms used in the document.

List of Partners

Lists agencies, organizations, non-profits, private entities, industry and the public that could play a role in implementing the Regional Safety Strategy.

Resources

Provides a list of resources for further information.

Glossary

Defines terms used in the document.

Appendix

2018 Metro State of Safety Report

Describes the data used in the analysis, the attributes of the data, and any data limitations. Describes the process Metro used to analyze the data. The 2018 Metro State of Safety Report presents the findings, identifying trends and relationships of serious crashes with environmental factors including roadway and land use characteristics and serves as the foundation for the Regional Safety Strategy.

CHAPTER 2 REGIONAL TRANSPORTATION SAFETY POLICY

This chapter describes adopted regional policies related to transportation safety, including vision, goals, objectives, targets and performance measures. Chapters 4 and 5 describe the strategies and actions to take to achieve regional goals and targets.

The information in this chapter is included in the policy chapter of the 2018 Regional Transportation Plan. To move from vision to action the Regional Safety Strategy uses a strategic plan framework where strategies and actions are informed by and build off of a strong policy foundation. The Regional Transportation Plan and each regional modal and topical plan starts with the regional transportation vision, identifies desired goals, measureable objectives for each goal, specific policies that describe what must be done to achieve desired outcomes, and then specific actions to implement policies. Each strategy is a series of actions. Targets and performance measures track progress (see Chapter 6).

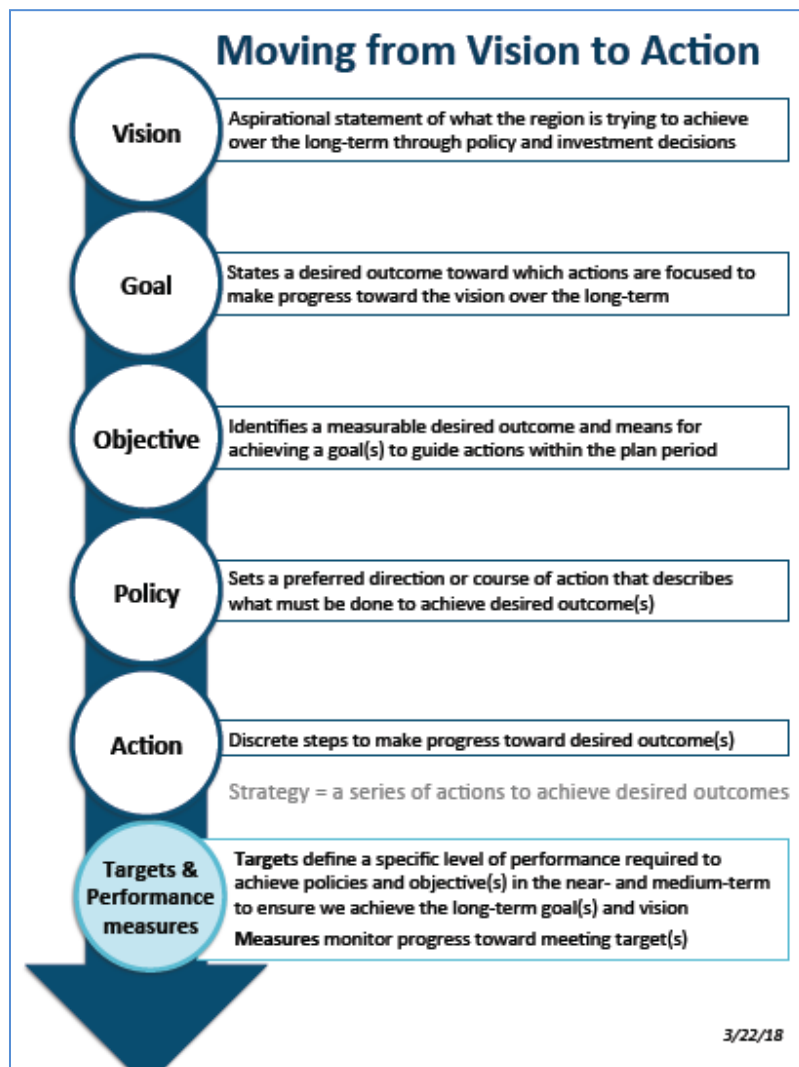


Figure 12: Components of the Regional Transportation Plan and topical and modal plans

2.1 Regional Transportation Plan vision

The 2018 Regional Transportation Plan provides a vision for the transportation system. Transportation safety is a crucial element of the vision.

In 2040, everyone in the Portland metropolitan region will share in a prosperous, equitable economy and exceptional quality of life sustained by a safe, reliable, healthy, and affordable transportation system with travel options.

2.2 Safety and security goal and objectives

The 2018 Regional Transportation Plan has ten goals for the regional transportation system. Goal 5 is the transportation safety and security goal.

Public and personal security has an important relationship to transportation safety, especially for people of color. Fear of harassment or being targeted can deter people of color from walking, bicycling or using transit.

Goal 5: Increase Safety and Security

People's lives are saved, crashes are avoided and people and goods are secure when traveling in the region.

Objective 5.1 Transportation Safety

Eliminate fatal and severe injury traffic crashes for all modes of travel.

Objective 5.2 Security

Reduce vulnerability of the public, goods movement and critical passenger and freight transportation infrastructure to crime and terrorism.

2.3 Vision Zero safety target

The Regional Safety Strategy updates the regional transportation safety target in the Regional Transportation Plan with a Vision Zero target.

By 2035 eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a sixteen percent reduction by 2020 (as compared to the 2015 five year rolling average), and a fifty percent reduction by 2025.

The target year of 2035 will not change in subsequent Regional Transportation Plan updates and progress towards meeting the target will be monitored each year. Refer to Chapter 6 for a description of how progress towards meeting the 2035 target, and the 2020 and 2025 interim targets, will be tracked.

The Vision Zero target is consistent with 2016 Oregon Transportation Safety Action Plan target of “no deaths or life changing injuries on Oregon’s transportation system by 2035.”

2.4 Regional safety policies

Policies in the Regional Transportation Plan guide investments in the region in support of meeting the regional transportation vision and goals.

Each of the regional network concepts in the Regional Transportation Plan - for transit, freight, arterials and throughways, bicycle and pedestrian – identifies supporting policies to develop and implement the regional transportation system. Policies are also identified for Racial and Social Equity, Emerging Technologies, Transportation System Management and Operations and Safety.

Transportation safety is mentioned in many of the Regional Transportation Plan policies. The 2018 Regional Transportation Plan is the first plan to include separate section dedicated to safety and security policies. See Chapter in this document 4 for strategies and actions.

- | | |
|-----------------|---|
| Policy 1 | Focus safety efforts on eliminating traffic deaths and severe injury crashes |
| Policy 2 | Prioritize safety investments on high injury and high risk corridors and intersections |
| Policy 3 | Prioritize vulnerable users with higher risk of being involved in a serious crash, including people of color, people with low incomes, people with disabilities, people walking, bicycling, and using motorcycles, people working in the right-of-way, youth and older adults |
| Policy 4 | Increase safety and security for all modes of travel and for all people through the planning, design, construction, operation and maintenance of the transportation system |
| Policy 5 | Make safety a key consideration in all transportation projects, and avoid replicating a known safety problem with any project or program |

- Policy 6** Employ a Safe System approach and use data and analysis tools to support data-driven decision making
- Policy 7** Utilize safety and engineering best practices to identify low-cost and effective treatments that can be implemented systematically in shorter timeframes than large capital projects

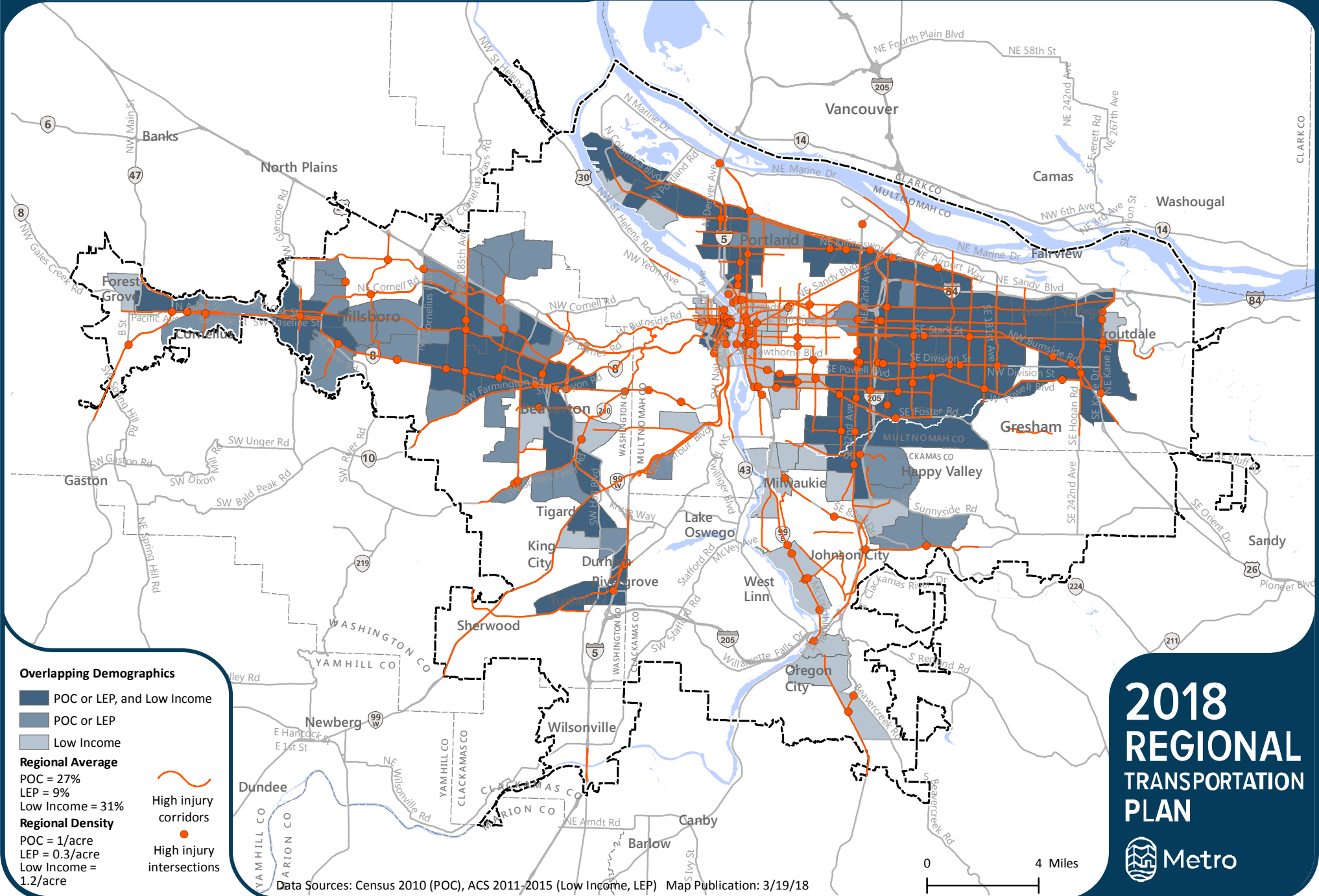
2.5 Regional High Injury Corridors and Intersections

Using 2010-2014 crash data, Regional High Injury Corridors and Intersections identifies regional roadways and intersections where a majority of fatal and severe injury crashes for all modes are occurring. Sixty percent of fatal and severe injury crashes for motor-vehicle occupants, pedestrians and bicyclists occur on just six percent of the roadway miles in the region.³³

The following map illustrates the High Injury Corridors and Intersections in the greater Portland region. A majority of high injury corridors are in communities with higher concentrations of people of color, people with low incomes and English language learners. The Regional High Injury Corridors and Intersections are identified to help prioritize safety investments.

³³ High injury corridors for serious crashes for all modes were identified, as were high injury corridors for auto only serious crashes, bicycle/auto only serious crashes, and pedestrian/auto only serious crashes. The map on the following page shows the combined corridors for all modes where 60 percent of all fatal and serious crashes occurred between 2010 and 2014, and were identified by using the following methodology: Fatal and Injury A (serious) crashes for all modes were assigned to the network; "Injury B", "Injury C", and "PDO (property damage only)" crashes involving bikes and pedestrians were also added to the network. Fatal and Injury A crashes are given a weight of 10; roadways are analyzed in mile segments; if a segment has only one Fatal or Injury A crash it must also have at least one B/C (minor injury) crash, for the same mode, to be included in the analysis. Roadway segments were then assigned an N-score (or "crash score") by calculating the weighted sum by mode and normalizing it by the roadway length. To reach 60 percent of Fatal and Severe Injury crashes, roadway segments had to have an N-score of 39 or higher; high injury Bicycle Corridors had to have an N-score of 6 or more, and high injury Pedestrian Corridors had to have an N-score of 15 or more. Intersections with the highest weighted crash scores were also identified; 5 percent of intersections had an N-score (or "crash score") higher than 80 and are also shown on the map, and 1 percent of intersections (the top 1%) had to have an N-score higher than 128.

This map shows the overlap of regional high injury corridors and road intersections with census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color, people with low income, and English language learners. Census tracts where multiple demographic groups overlap are identified.





There can be multiple factors that contribute to a crash
Source: Metro

CHAPTER 3 TRENDS AND FACTORS IN SERIOUS CRASHES

This chapter **highlights key findings** from the analysis of five years of Oregon Department of Transportation crash data, 2011-2015, documented in the **2018 Metro State of Safety Report**. Data and findings from other national and state data sources and studies are also referenced.

Refer to the 2018 Metro State of Safety Report for the comprehensive data analysis for the greater Portland region.

Using data to identify trends and understand the underlying contributing factors in fatal and severe injury crashes is the first step in identifying the **data-driven strategies and actions** in the next chapter, and is an element of a Safe Systems approach to transportation safety.

**“Serious crashes”
are Fatal and
Severe Injury
(Injury A) crashes
combined**

3.1 Top three findings

Three top findings emerged from the analysis of serious crashes in the region and highlight a need for urgent action and focused strategic direction.

- ① Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65.**
- ② Traffic deaths are disproportionately impacting people walking.**
- ③ A majority of traffic deaths are occurring on a subset of arterial roadways.**

Making headway on these three findings is central to the region advancing Vision Zero, and will require focusing safety efforts on the most serious crashes, focusing investments in High Injury Corridors and low-income and communities of color and prioritizing pedestrian safety.

Each of the top three findings is described in more detail below. The remainder of the chapter identifies other key findings from the data, including findings on vulnerable users, roadway design, speed and speeding, alcohol and drugs, and aggressive and distracted driving.



Roadway improvements make it safer for this older adult to walk across SE Division Street in Portland
Source: Metro

① Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65.

- Serious crashes (fatal and severe injury crashes combined) have fluctuated since 2007, but have more recently been increasing. Initial data from 2016, 2017 and 2018 indicate that the trend is continuing. This is a trend that is also happening at the state and national levels.
- The regional annual fatality rate by population and vehicle miles traveled (for 2011-2015) has increased compared to the 2012 Metro State of Safety Report.³⁴
- Your risk of dying in a motor-vehicle involved crash is higher if you are a person of color, are over 65 or have a lower income.³⁵

³⁴ Fatality rates for traffic related crashes are the proportion of all crashes, person deaths or severe injuries for every 1 million people or every 100 million vehicle miles traveled.

³⁵ *Motor Vehicle Traffic-Related Pedestrian Deaths — United States, 2001–2010*, Centers for Disease Control and Prevention (2013); *Dangerous by Design*, National Complete Streets Coalition (2016); *Income Disparities in Street features that Encourage Walking*, Bridging the Gap (2012); *Pedestrians Dying at Disproportionate Rates in America's Poorer Neighborhoods*, Governing, August 2014; *America's Poorer Neighborhoods Plagued by Pedestrian Deaths*, Governing Research Report (August 2014)

- A majority of Regional High Injury Corridors are in communities with higher densities of people of color, people with low incomes and English language learners.
- A majority of pedestrian deaths are in are in communities with higher densities of people of color, people with low incomes and English language learners.
- Older drivers are twice as likely to die in a traffic crash. For male drivers age 70 to 79 and female drivers age 75 to 85 and older the share of serious crashes is double that of drivers in other age groups.
- In Oregon, American Indians/Alaska Natives have the highest average rate of vehicle related deaths (5.9 per 100,000) 1.8 times the rate among whites (3.3 per 100,000), and American Indians/Alaska Natives and Black or African American had the highest hospitalization rate -52.2 and 46.2 per 100,000, compared to 45.5 for whites and 20.8 Asian Pacific Islander for traffic related injuries.³⁶ This data is not currently available at the regional level.

② Traffic deaths are disproportionately impacting people walking.

- Auto-only crashes comprise ninety-one percent of all crashes, and thirty-eight percent of all fatal crashes. Pedestrian crashes make up two percent of all crashes, and thirty-six percent of all fatal crashes.
- Pedestrian traffic deaths are steadily increasing, are the most common type of fatal crash, and have the highest severity of any crash type.
- Pedestrian fatalities have steadily increased to 2015.
- A pedestrian crash is more than 26 times as likely to be fatal than a crash not involving a pedestrian, and more than 110 times as likely to be fatal as a rear end crash, the most common crash type.
- Roadway design is critical to pedestrian safety. Seventy-seven percent of serious pedestrian crashes occur on arterial roadways.

③ A majority of traffic deaths are occurring on a subset of arterial roadways.

- Arterial roadways are the location of the majority of the serious crashes in the region. Sixty-six percent of all serious crashes occur on a roadway designated as an arterial.
- In the region, seventy-three percent of non-freeway serious crashes occur on a roadway designated as an arterial; seventy-seven percent of serious pedestrian crashes occur on a roadway designated as an arterial; sixty-five percent of serious bicycle crashes occur on a roadway designated as an arterial.
- Many of these arterial roadways are identified as Regional High Injury Corridors and Intersections.

³⁶ Oregon Public Health Authority, 2008-2014 crashes

3.2 All crashes

This section provides key findings for all crashes. Refer to the 2018 Metro State of Safety Report for additional information.

Serious crashes are increasing. Since 2007, the total reported crashes and all injury crashes have increased, region wide and in every city and county. Serious crashes (fatal and severe injury crashes combined) have fluctuated since 2007, but have more recently been increasing. Initial data from 2016, 2017 and 2018 indicate that the trend is continuing. This is a trend that is also happening at the state and national levels.

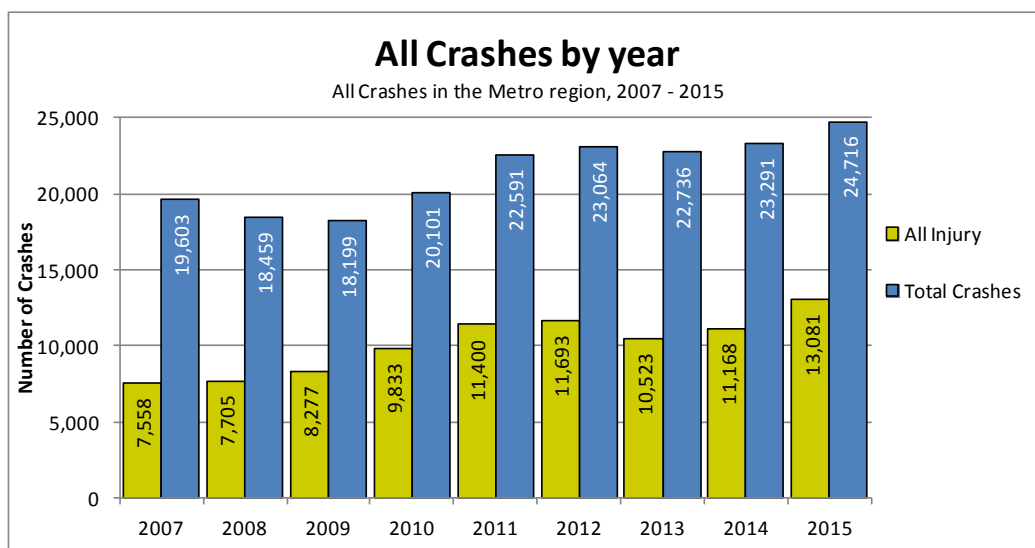


Figure 13: All crashes by year
Source: 2018 Metro State of Safety Report

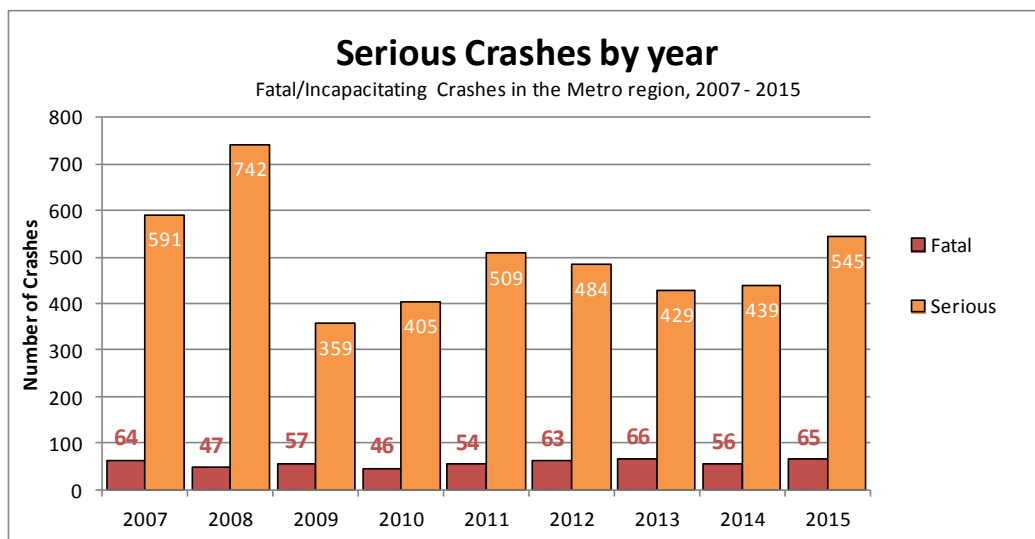


Figure 14: Fatal and Serious Crashes by year
Source: 2018 Metro State of Safety Report

Between 2011 and 2015, there were 304 fatal crashes killing 311 people, 2,102 crashes resulting in a life-changing injury, and 57,865 crashes resulting in some sort of injury.

On average, 62 people die each year on the region's roadways and 420 people experience a life changing injury. Nearly two people are either killed or severely injured every day in our region. Every 10 days a person riding a bike is killed or severely injured. Every 5 days a person walking is killed or severely injured.

Year	Total Crashes	Fatal Crashes (Fatalities)	Injury A Crashes	Injury B Crashes	Injury C Crashes	All Injury Crashes (Injuries)	Serious Crashes
2011	22,591	54 (54)	455	2,487	8,404	11,400	509
2012	23,064	63 (66)	421	2,654	8,555	11,693	484
2013	22,736	66 (68)	363	2,428	7,666	10,523	429
2014	23,291	56 (57)	383	2,512	8,217	11,168	439
2015	24,716	65 (66)	480	2,655	9,881	13,081	545
METRO	116,398	304 (311)	2,102	12,736	42,723	57,865 (81,718)	2,406

Figure 15: Crashes by year in the greater Portland area, 2011-2015
Source: Metro State of Safety Report, 2018

Traffic fatality rates are increasing. The regional annual fatality rate by population and vehicle miles traveled (for 2011-2015) has increased compared to the 2012 Metro State of Safety Report. The serious crash rate has decreased, and the all injury crash rate has increased.

2007-2009	Population (2010)	Annual VMT	All injury		Serious Crashes		Annual Fatal crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Metro	1,481,118	9,308,676,259	5,106	81.2	359	5.7	36	0.59

2011-2015	Population (2015)	Annual VMT (2015)	Annual Injury crashes		Annual Serious crashes		Annual Fatal crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Metro	1,603,229	10,437,000,000	7,219	111	300	4.6	39	0.60

Figure 16: Source 2012 and 2018 metro State of Safety Reports

Clackamas County has the lowest serious crash rate per population and vehicle miles traveled, compared to Portland, East Multnomah County, and Washington County. Clackamas County was the first local jurisdiction in Oregon to have an adopted safety plan. While annual fatality rates in the region have increased, annual serious crash rates by

population have slightly decreased in the region overall, Clackamas and Multnomah Counties and the City of Portland, and have increased in Washington County. Annual serious crash rates by vehicle miles decreased in the region as a whole, Clackamas, East Multnomah, and Washington Counties and increased in the City of Portland.

2007-2009 Annual Crashes						
Sub-Region	Population	Annual VMT	All injury		Serious Crashes (Fatal/Incapacitating)	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Clackamas	256,986	1,615,525,690	4,210	67	593	9.4
Portland	583,627	4,376,272,685	6,500	87	388	5.2
East Multnomah	136,130	654,385,044	4,856	101	333	6.9
Washington	499,259	2,669,124,479	4,030	75	210	3.9
METRO	1,481,118	9,308,676,259	5,106	81	359	5.7

Figure 17: 2007-2009 annual crashes by population and VMT, 2012 Metro State of Safety Report

2011-2015 Annual Crashes						
Sub-Region	Population (2015)	Annual VMT (2015)	Annual Injury crashes		Annual Serious crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Clackamas	290,630	2,102,000,000	6,269	87	226	3.1
Portland	620,540	4,303,000,000	8,918	129	387	5.6
Multnomah (excl. Portland)	152,611	744,000,000	6,664	137	296	6.1
Washington	539,448	3,287,000,000	5,932	97	242	4.0
METRO	1,603,229	10,437,000,000	7,219	111	300	4.6

Figure 18: 2011-2015 annual crashes by population and VMT, 2018 Metro State of Safety Report

With the highest population and vehicle miles traveled, Portland has the largest share of the region's serious crashes.

Sub-Region	2011-2015 Annual Crashes						
	All	Fatal (Fatalities)	Injury A	Injury B	Injury C	All Injury	Serious
Clackamas	3,482	10.2 (10.4)	55	395	1,362	1,822	66
Portland	11,475	31.2 (31.8)	209	1,216	4,078	5,534	240
Multnomah (excl. Portland)	1,870	6.2 (6.2)	39	245	727	1,017	45
Washington	6,452	13.2 (13.6)	117	692	2,378	3,200	130
METRO	23,280	60.8 (62.2)	420	2,547	8,545	11,573	481

Figure 19: 2011-2015 annual crashes by sub-region, 2018 Metro State of Safety Report

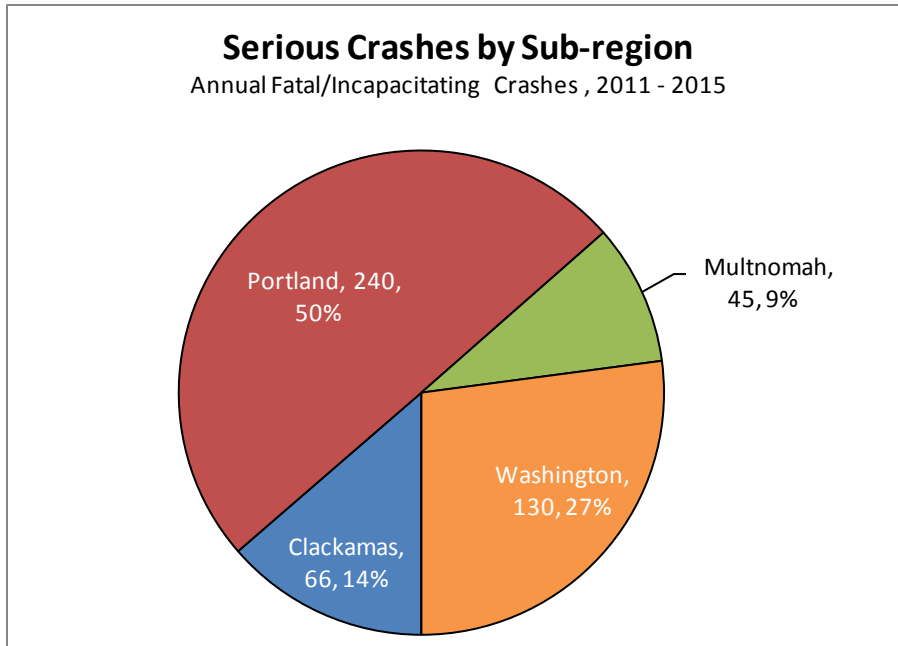


Figure 20: Serious crashes by sub-region, 2018 Metro State of Safety Report

Seatbelt use in the region exceeds ninety-nine percent. Serious crashes have a higher percentage of no seat belt use - nearly nine percent, compared to less than one percent for all crashes. Males were seventy-one percent more likely than females to be reported without a seat belt.

Seat Belt Use (All crashes, 2011-2015)					
Gender	Seat Belt Use	No Seat Belt	Unknown	% Seat Belt Use	% No Seat Belt
Males	81,267	769	47,229	99.1%	0.9%
Females	80,854	445	34,213	99.5%	0.5%
Unknown	245	2	6,261	99.2%	0.8%
METRO	162,366	1,216	87,703	99.3%	0.7%

Seat Belt Use (Serious crashes, 2011-2015)					
Gender	Seat Belt Use	No Seat Belt	Unknown	% Seat Belt Use	% No Seat Belt
Males	622	79	164	88.7%	11.3%
Females	768	51	100	93.8%	6.2%
Unknown	0	0	0	-	-
METRO	1,390	130	264	91.4%	8.6%

Figure 21: Seat belt use, 2011-2015

Source: 2018 Metro State of Safety Report

Not all communities have the same safety issues. Portland has the highest number of fatal and serious crashes, and Gladstone, Beaverton and Portland have the highest serious crash rate per capita. West Linn, Lake Oswego and Wilsonville have the lowest serious crash rate per capita.

City	2011-2015 Annual Crashes						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Beaverton	1,987	3.0	35	179	729	946	38
Cornelius	101	0.0	4	11	37	52	4
Durham	13	0.0	0	1	6	7	0
Fairview	88	0.2	1	13	35	49	1
Forest Grove	137	0.6	5	19	45	69	5
Gladstone	136	0.4	2	16	51	70	2
Gresham	1,356	3.4	27	170	546	747	30
Happy Valley	221	1.0	3	28	91	123	4
Hillsboro	1,413	3.6	26	177	545	751	29
Johnson City	0	0.0	0	0	0	0	0
King City	9	0.0	0	1	1	2	0
Lake Oswego	282	0.0	4	29	96	130	4
Maywood Park	27	0.0	1	2	12	15	1
Milwaukie	210	0.4	5	28	77	109	5
Oregon City	588	1.8	8	62	232	304	10
Portland	11,479	31.2	209	1,216	4,079	5,536	240
Rivergrove	1	0.0	0	0	0	0	0
Sherwood	160	0.2	2	18	58	79	3
Tigard	935	1.6	12	91	353	457	13
Troutdale	167	0.8	4	22	63	89	5
Tualatin	486	0.4	7	50	199	256	7
West Linn	213	0.6	2	23	78	104	3
Wilsonville	218	0.0	2	23	76	102	2
Wood Village	67	0.2	1	7	24	32	1
Unincorp Clack	1,651	6.0	30	187	670	893	36
Unincorp Mult	155	1.6	4	29	45	81	6
Unincorp Wash	1,180	3.8	26	144	397	571	30
METRO	23,280	60.8	420	2,547	8,545	11,573	481

Figure 22: 2011-2015 annual crashes, 2018 Metro State of Safety Report

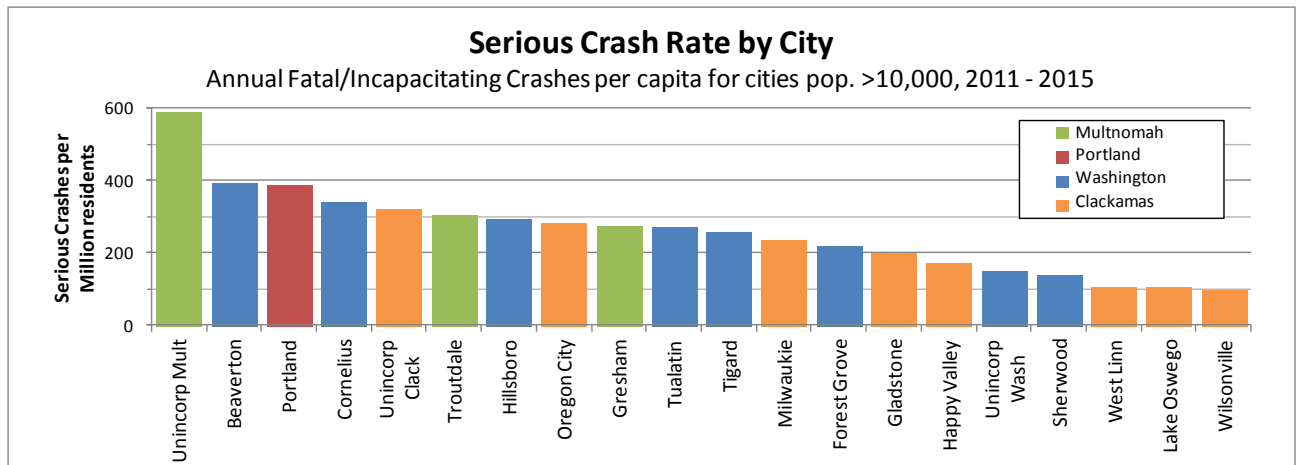


Figure 23: 2018 Metro State of Safety Report

The greater Portland region has one of the lowest roadway fatality rates of any urban metro area with a population greater than 1 million, most likely due to land use and transportation policies. The worst regions in the nation for overall fatality rates are concentrated in Florida and the Sun Belt, where driving is the completely dominant mode of travel. The safest regions in the nation for overall fatality rates are Boston, Minneapolis-St. Paul, Portland, New York, and Chicago. In general, the safest urban regions are those that exhibit dense urban environments and higher usage of non-auto travel modes. These findings indicate that regional and local land use and transportation plans, policies and investments are increasing transportation safety.

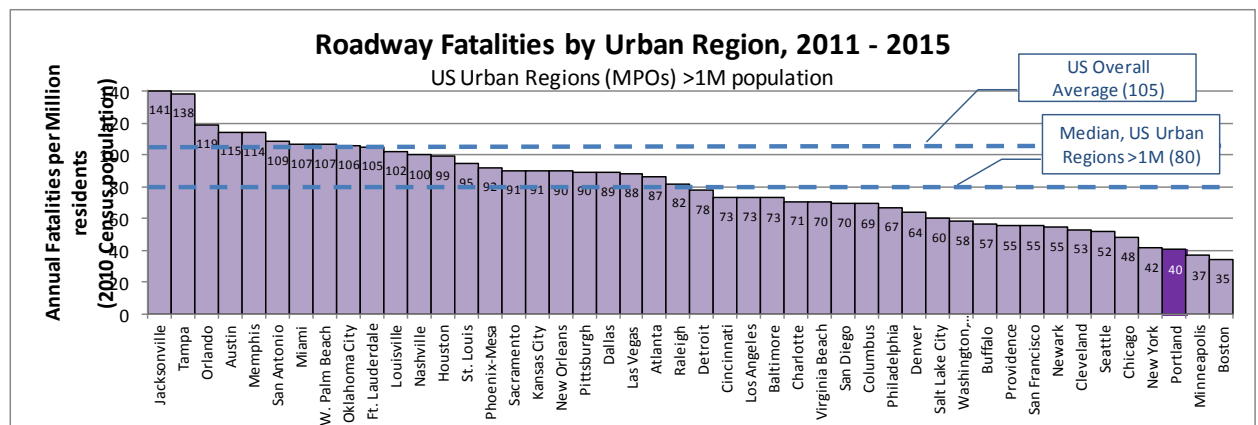


Figure 24: Roadway fatalities by urban region, 2011-2015

Source: Metro State of Safety Report, 2018

The City of Portland's fatality rates are higher than regional fatality rates, but both Portland and the region's fatality rates are lower than the State of Oregon (especially when the Portland region is excluded), and lower than the U.S. The greater Portland region has 39 fatalities per capita, Oregon has 88 fatalities per capita, and the U.S. has 109 fatalities per capita. The United Kingdom and European Union data are included for reference as international best practice.

2011 - 2015	Average Annual Fatalities	Population (2015)	Annual VMT (2015)	Annual Fatality rate per 1M residents	Fatality rate per 100M VMT
Metro	62.2	1,603,229	10,437,000,000	39	0.60
<i>Median, regions >1M pop.*</i>				78	n/a
City of Portland	31.8	620,540	4,303,000,000	51	0.74
<i>Median, cities >300,000 pop.*</i>				72	n/a
Oregon	356	4,028,977	36,000,000,000	88	0.99
Oregon excl. Metro region	294	2,425,748	25,562,000,000	121	1.15
US	35,092	321,418,820	3,095,373,000,000	109	1.13
UK**	2,123	64,128,226	520,600,000,000	33	0.41
EU – 28**	32,463	506,592,457	4,322,500,000,000	64	0.75

* All data for other regions and cities is 2010 - 2014

** All data for UK and EU is for year 2013

Figure 25: Metro crash rates per 100 million VMT and 1 million people, compared to other places, 2011-2015
Source: 2018 Metro State of Safety Report

There is a strong correlation between fatality rates and annual per capita vehicle miles traveled. States with higher vehicle miles traveled (VMT) typically also have higher per capita fatality rates, as the typical exposure to risk is increased. The District of Columbia has the lowest per capita VMT at 5,610, and exhibits one of the lowest annual fatality rates of 65 per million people – less than one-third of the national average. Wyoming, with the highest per capita VMT of 17,900, also has the highest annual fatality rate at 310 per million people– two-hundred thirty-five percent of the national average. The national average is 9,500 VMT per capita and 109 fatalities per million residents.

Oregon statistics are 8,650 VMT per capita (ninety-one percent of the national average) and 85 fatalities per million people (eighty-one percent of the national average). The greater Portland region statistics are 6,506 VMT per capita and 39 fatalities per million people. The City of Portland has a slightly higher VMT per capita at 6,934 and 51 fatalities per million people.

For all crashes, the most common fatal crash types were pedestrian and fixed object. The most common serious crash types were turning and rear end. For the purpose of establishing crash type, bicycles are considered vehicles, and so there is no separate bicycle crash type.

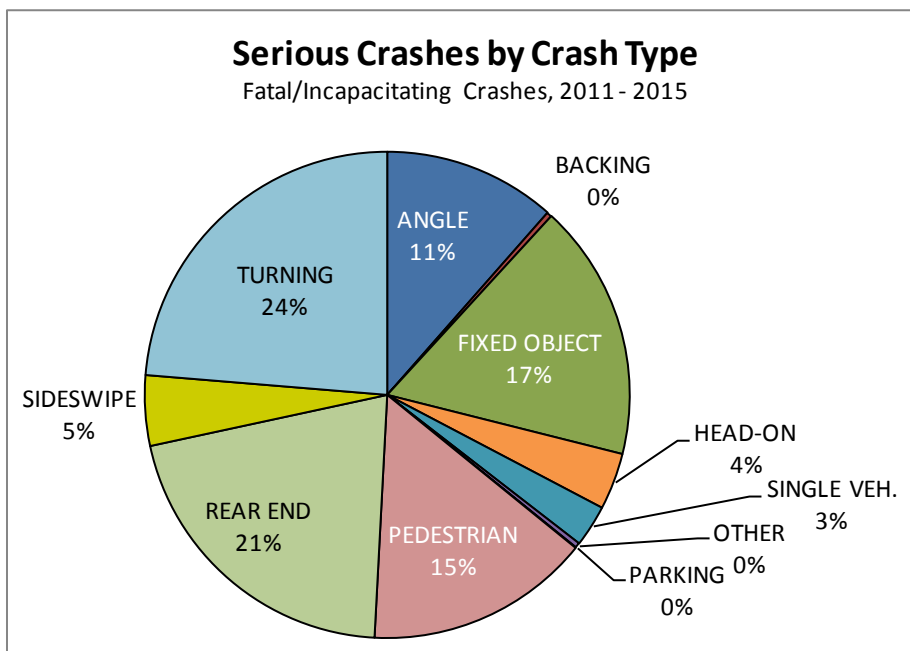
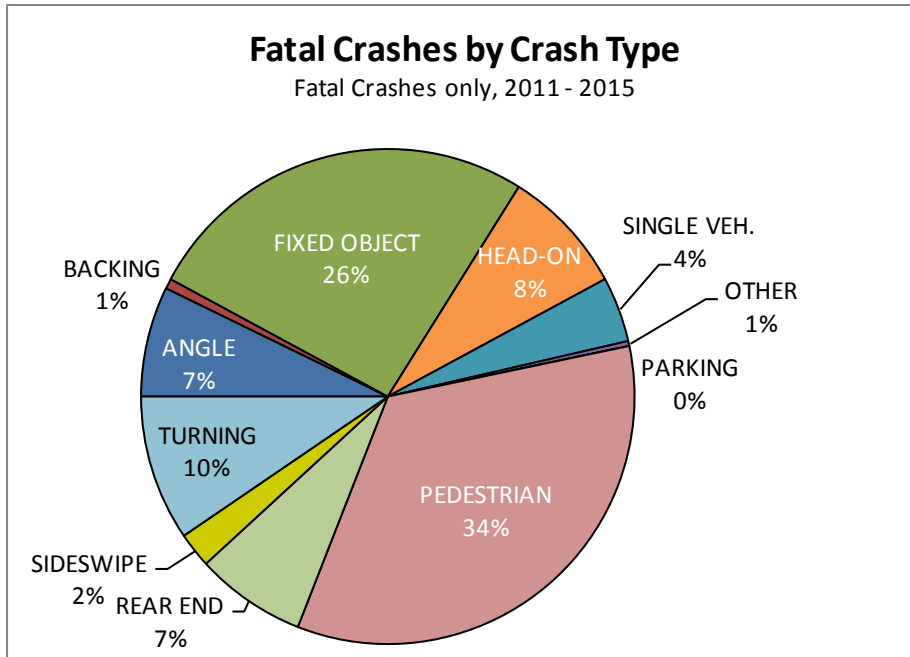


Figure 26: Serious and fatal crash types, 2011-2015
Source: 2018 Metro State of Safety report

A **pedestrian crash** results when the first harmful event is any impact between a motor vehicle in traffic and a pedestrian. It does not include any crash where a pedestrian is injured after the initial vehicle impact. Pedestrian is the most common fatal crash type in the region, and the most common crash type to be fatal. Pedestrian crashes constitute thirty-four percent of fatal crashes, fifteen percent of serious crashes, though only two

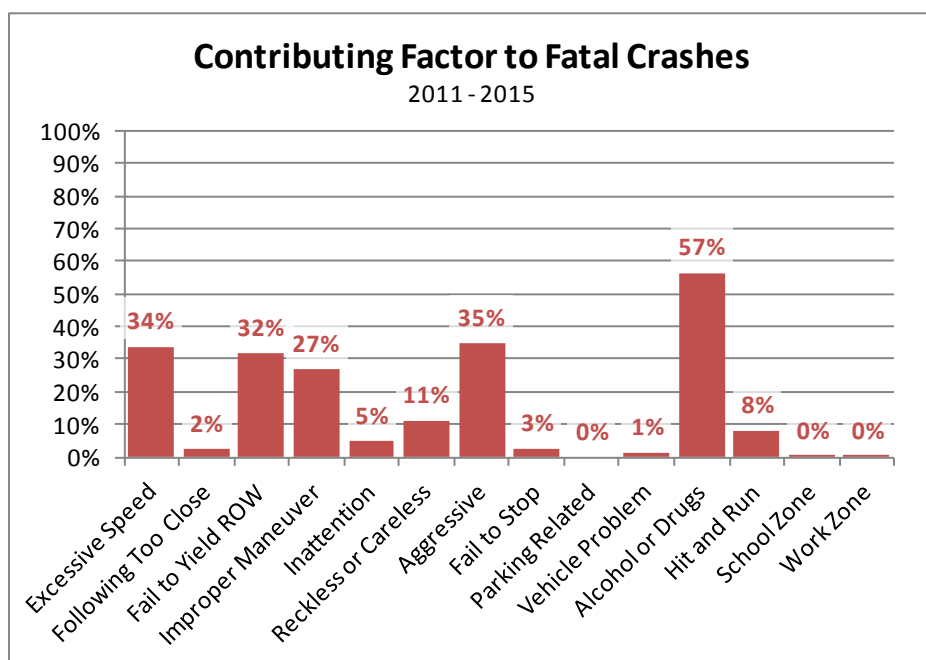
percent of all crashes in the region. Alcohol or drugs and failure to yield ROW are the most common contributing factors in serious pedestrian crashes.

A **fixed object crash** results when one vehicle strikes a fixed or other object on or off the roadway. Though not a common crash type, fixed object is the second most common fatal crash type in the region. Fixed object crashes constitute twenty-six percent of fatal crashes, seventeen percent of serious crashes, though only seven percent of all crashes in the region.

A **turning crash results** when one or more vehicles in the act of a turning maneuver is involved in a collision with another vehicle (including bicycles). Turning is the second most common crash type in the region, as well as the most common serious crash type. Turning crashes constitute ten percent of fatal crashes, twenty-four percent of serious crashes, and twenty-two percent of all crashes in the region.

Rear end crashes are the most common type of crash in the region. They are rarely fatal, but often serious. Rear end crashes constitute seven percent of fatal crashes, twenty-one percent of serious crashes, and forty-five percent of all crashes in the region. Aggressive driving, fail to stop, following too closely, and excessive speed are factors in a substantial proportion of serious and fatal rear end crashes.

Alcohol and drugs, excessive speed, fail to yield right-of-way, and aggressive driving (defined as excessive speed and/or following too close) are the most common factors in serious crashes. Each crash may have several contributing factors. Crashes involving alcohol and drugs have a much higher likelihood of being fatal than other crashes.



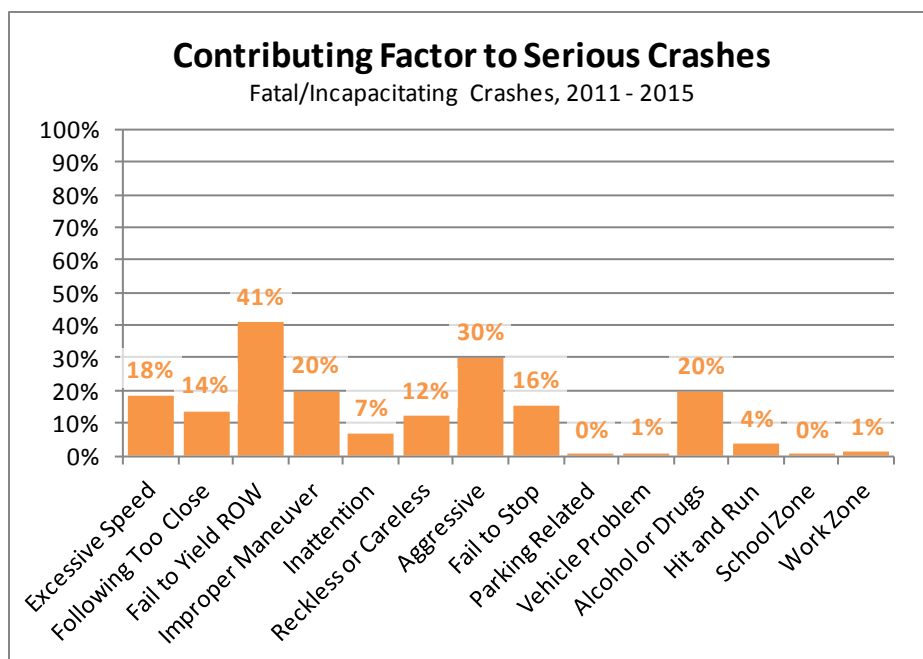


Figure 27: Serious and fatal crashes by contributing factor, 2011-2015
Source: 2018 Metro State of Safety Report

Traffic crashes contribute to congestion and cost the region more than congestion.

Traffic deaths and life changing injuries impact the lives of our families, friends, neighbors and community members. They also have a major economic cost – estimated at \$1 billion for our region. According to analysis conducted by Cambridge Systematics in a report for AAA of America, the total cost of crashes per person in the greater Portland-Vancouver region \$1,220. The report found that in urbanized areas the total cost of traffic crashes is over three times the cost of congestion. In large urban areas, such as the greater Portland region, costs resulting from crashes are over three times more than congestion.³⁷ According to FHWA, in 2009 dollars, the cost of a single motor vehicle fatality is \$6,000,000.³⁸

3.3 Vulnerable users are at a higher risk

This section provides key findings for vulnerable users. Refer to the 2018 Metro State of Safety Report for additional information.

Vulnerable users can have higher fatality rates and are at greater risk of death or severe injury in the event of a crash. Vulnerable users are pedestrians, bicyclists, motorcycle operators, children, older adults, and road construction workers, people with disabilities, people of color and people with low income. Increasing safety for vulnerable users increases safety for all transportation users.

³⁷ Crashes vs. Congestion: What's the Cost to Society (November 2011) AAA and Cambridge Systematics.

³⁸ The 11 comprehensive cost components include property damage; lost earnings; lost household production (non-market activities occurring in the home); medical costs; emergency services; travel delay; vocational rehabilitation; workplace costs; administrative costs; legal costs; and pain and lost quality of life.



Slower speeds and pedestrian oriented design create a safe and welcoming street in downtown Lake Oswego

Crashes involving people on motorcycles, people walking and people riding bicycles tend to be more serious compared to auto-only crashes. Auto-only crashes comprise ninety-one percent of all crashes, and thirty-eight percent of all fatal crashes. Pedestrian crashes make up two percent of all crashes, and thirty-six percent of all fatal crashes. Motorcycle crashes comprise two percent of all crashes, and eighteen percent of all fatal crashes, and bicycle crashes comprise two percent of all crashes and four percent of fatal crashes. Figure X shows all reported crashes and serious crashes by mode.

Year	Pedestrians		Bicyclists		Autos Only		Motorcycle		Truck Involved	
	All Injury	Serious	All Injury	Serious	All Injury	Serious	All Injury	Serious	All Injury	Serious
2011	418	65	481	32	10,502	412	312	72	250	20
2012	511	88	560	37	10,622	359	353	63	277	16
2013	428	67	485	33	9,607	327	356	76	238	11
2014	480	81	509	38	10,179	320	302	55	281	22
2015	474	81	477	35	12,129	429	339	86	320	19
METRO	2,311	382	2,512	175	53,039	1,847	1,662	352	1,366	88

Figure 28: All reported crashes, by mode and year
Source: 2018 Metro State of Safety Report

Pedestrian crashes are the most common type of fatal crash. There were an average of 62 traffic related deaths between 2011 and 2015. More than one third of those deaths were pedestrians.

Pedestrian crashes have the highest severity of any crash type. A pedestrian crash is more than twenty-six times as likely to be fatal than a crash not involving a pedestrian, and more than 110 times as likely to be fatal as a rear end crash, the most common crash type.

Pedestrian deaths are increasing. Serious pedestrian crashes increased somewhat over the 5-year period. Pedestrian fatalities have steadily increased to 2015. If the region continues in its trend of pedestrian deaths will continue to rise. **Figure x** below shows the linear trendline for pedestrian deaths and life changing injuries if changes are not made. Similar figures in Chapter 6 show a steep decline in motor-vehicle only serious crashes.

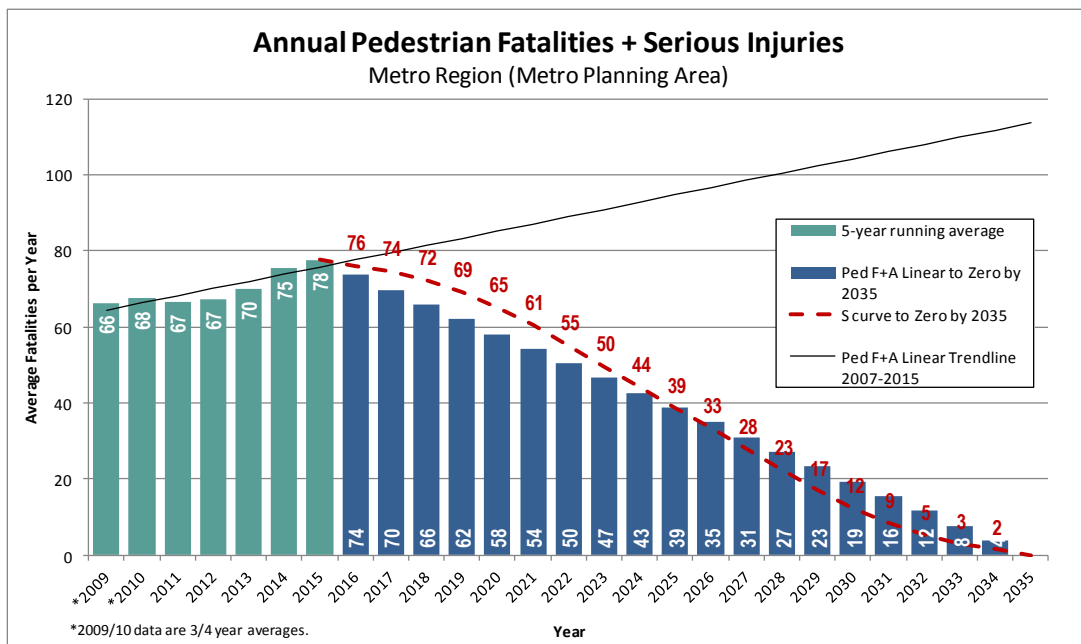


Figure 29: Trend of annual pedestrian fatalities and serious injuries, 2011-2015

Pedestrian safety is not the same across the region. The City of Portland has the highest number of annual pedestrian deaths, and Gladstone, Gresham and Portland have the highest serious pedestrian crash rate per capita. Happy Valley, West Linn and Tualatin have the lowest serious pedestrian crash rate per capita.

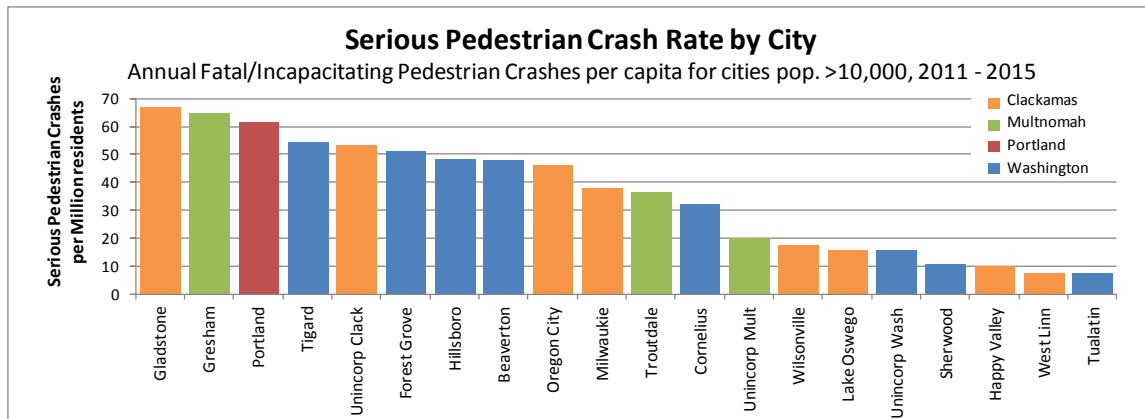


Figure 30: Serious pedestrian crash rate by city, per capita
Source: 2018 Metro State of Safety Report

A majority serious pedestrian crashes occur in areas with higher densities of people of color, people with low incomes and English language learners. Sixty-one percent of pedestrian deaths and sixty-six percent of severe injury pedestrian crashes occur in these areas, while only thirty-nine percent of the region’s population lives in these areas. Data is not available on the race and ethnicity or income of the people killed or severely injured.

Fatality rates for pedestrians are more than three times as high in neighborhoods where more than a quarter of the population lived in poverty. There were 12.8 pedestrian deaths per 100,000 residents, compared to 3.5 pedestrian deaths per 100,000 residents, in areas with poverty rates below the national rate of fifteen percent.³⁹

Your risk of dying in a motor-vehicle involved crash is higher if you are a person of color, are over 65 or have a lower income.⁴⁰ While no published national or Oregon data assesses the income or poverty status of those killed in traffic crashes, multiple analyses on the location of crashes confirms that in poorer areas and in communities of color risk of death from a traffic crash is higher. A report published in 2013 by the Centers for Disease Control and Prevention examined mortality data from 2001-2010 and found racial and ethnic minorities recorded higher annualized death rates. People 75 and older also had significantly higher death rates in the study.

The 2016 Dangerous by Design report found that African Americans and Latinos are twice as likely to be killed as a pedestrian in a traffic crash. Bridging the Gap, a program of the Robert Wood Johnson Foundation, conducted field research measuring the presence of sidewalks, lighting, crosswalks and traffic calming devices in 154 communities. The

³⁹ Governing, 2014

⁴⁰ *Motor Vehicle Traffic-Related Pedestrian Deaths — United States, 2001–2010*, Centers for Disease Control and Prevention (2013); *Dangerous by Design*, National Complete Streets Coalition (2016); *Income Disparities in Street features that Encourage Walking*, Bridging the Gap (2012); *Pedestrians Dying at Disproportionate Rates in America's Poorer Neighborhoods*, Governing, August 2014; *America's Poorer Neighborhoods Plagued by Pedestrian Deaths*, Governing Research Report (August 2014)

resulting study, “Income Disparities in Street Features that Encourage Walking,” found such infrastructure was more common in high-income communities.



Figure 31: National pedestrian traffic deaths, 2008-12, and race by census tract
Source: Dangerously by Design, 2011 and Safe Routes to School National Partnership



Figure 32: National pedestrian traffic deaths, 2008-12, and census tract per capita income
Source: Governing, 2014 and Safe Routes to School National Partnership

In Oregon, American Indians/Alaska Natives have the highest average rate of vehicle related deaths (5.9 per 100,000) 1.8 times the rate among whites (3.3 per 100,000), and American Indians/Alaska Natives and Black or African American had the highest hospitalization rate - 52.2 and 46.2 per 100,000, compared to 45.5 for whites and 20.8 Asian Pacific Islander for traffic related injuries.⁴¹ This data is not currently available at the regional level.

A majority of Regional High Injury Corridors are in communities with higher concentrations of people of color, people with low incomes and English language learners. In the greater Portland region a majority of high injury corridors and intersections are in communities of color and low-income communities, and forty percent are in communities that are both low-income and communities of color. Refer to the map of Regional High Injury Corridors and Intersections in Chapter 2 to see how they overlap with race and income marginalized communities.

⁴¹ Oregon Public Health Authority, 2008-2014 crashes

	% high injury corridors	Corridor miles	% high injury intersections	Number of intersections
Communities of color & English language learner	50%	250	51%	71
Low-income communities	54%	268	75%	104
Overlap of communities of color, English language learner and low-income	40%	198	46%	64
Region-wide	100%	499	100%	138

Figure 33: Overlap of regional high injury corridors & intersections, communities of color, English language learners, and low-income communities Source: Metro Equity Analysis, 2018

Older drivers are twice as likely to die in a traffic crash. For male drivers age 70 to 79 and female drivers age 75 to 85 and older, the share of serious crashes is double that of drivers in other age groups.

Age Group	Total Male Drivers (2011 – 2015)			Total Female Drivers (2011 – 2015)		
	All Crashes	Serious	Percent Serious	All Crashes	Serious	Percent Serious
14-17	3,076	17	0.6%	3,579	42	1.2%
18-21	9,572	99	1.0%	9,413	93	1.0%
22-24	7,518	91	1.2%	7,466	77	1.0%
25-29	12,431	96	0.8%	11,968	123	1.0%
30-34	11,897	114	1.0%	10,804	105	1.0%
35-39	10,343	122	1.2%	9,247	67	0.7%
40-44	10,421	63	0.6%	8,898	86	1.0%
45-49	9,218	87	0.9%	8,053	70	0.9%
50-54	9,114	77	0.8%	7,500	43	0.6%
55-59	8,248	115	1.4%	6,810	53	0.8%
60-64	6,734	66	1.0%	5,529	38	0.7%
65-69	4,589	41	0.9%	3,823	38	1.0%
70-74	2,408	48	2.0%	2,180	22	1.0%
75-79	1,428	33	2.3%	1,306	24	1.8%
80-84	820	4	0.5%	813	21	2.6%
85+	747	10	1.3%	777	15	1.9%
Unknown	15,669	16	0.1%	11,098	14	0.1%
METRO	124,233	1,099	0.9%	109,264	931	0.9%

Figure 34: Age and gender of drivers involved in crashes, regardless of fault
Source: Metro 2018 State of Safety Report

For young people below the age of 25, motor vehicle crashes are a leading cause of death and the leading cause of years of life lost. Traffic crashes are the leading cause of unintentional injury death for people ages 5 to 24 in Multnomah, Washington and Clackamas County, and the second leading cause of unintentional injury death for people ages 25 to 84.⁴²

Serious bicycle crashes are on a downward trend. Serious bicycle crashes have fluctuated over the 5-year period and fatal crashes have declined. **Figure x** below shows the linear trendline for bicyclist deaths and severe injuries. A better understanding of what has contributed to this positive direction should be developed to continue the investments, programs, or other elements that have made it safer to ride a bicycle in the region.

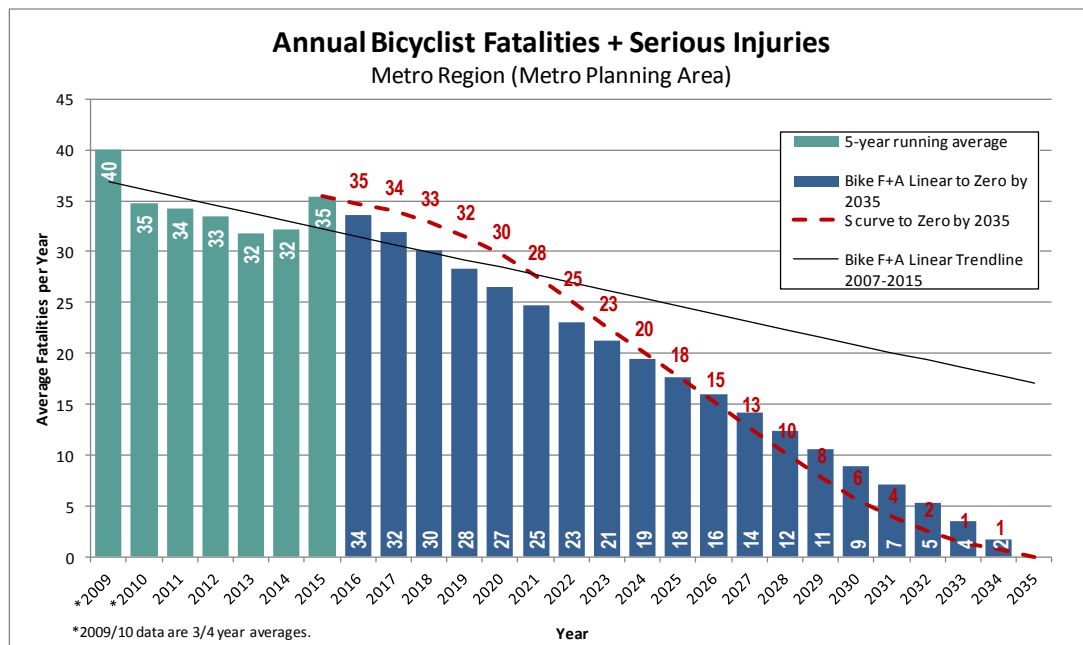


Figure 35: Annual Bicycle Fatalities and Serious Injuries

⁴² Oregon Death Certificates: Center for Health Statistics, Center for Public Health Practice, Public Health Division, Oregon Health Authority. Accessed March 13, 2018. For 2012-2016. Unintentional injuries were the 4th leading cause of death (just about tied for third with cerebrovascular disease/stroke); within the category of unintentional injury deaths, transport injuries are the third leading cause behind falls and poisoning (poisoning includes drug overdoses).

Motorcyclist fatalities and severe injuries are increasing. While all injury motorcycle crashes have remained relatively flat between 2011 and 2015, serious motorcycle crashes are trending upward. Motorcycle crashes tend to be severe. Motorcycle crashes comprise two percent of all crashes, and eighteen percent of all fatal crashes.

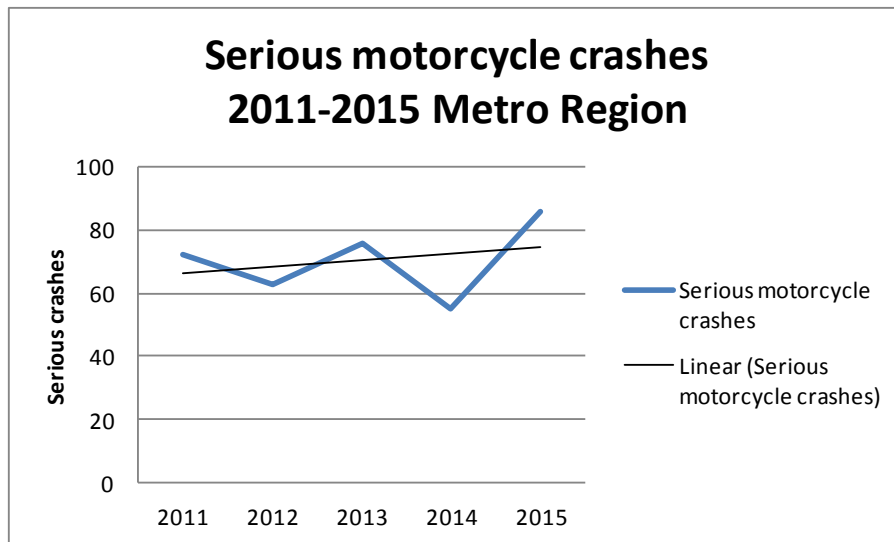


Figure 36: 2011-2015 ODOT crash data

3.4 Roadway design is a factor in serious crashes

This section provides key findings for the relationship between roadway design and serious crashes. Analysis of the regional roadway network included functional classification, number of lanes, and vehicle miles traveled by functional class. Other design elements of the roadways, such as presence of biking and walking facilities and degree of separation, on-street parking, access management, median separation, enhanced crossings, or presence or absence of street lighting were not included in the analysis. These types of design elements can enhance safety for all modes. Future analysis should include these elements to help illustrate that not all arterial roadways have the same safety issues. Additional analysis could also look at major roadways where no serious crashes are occurring to develop an understanding of what characteristics those roads have. Refer to the 2018 Metro State of Safety Report for additional information.

Arterial roadways have the highest serious crash rate per road mile and per vehicle mile traveled. Analysis of the crash data provides information on the type of roadways where most fatal and severe crashes are occurring. The analysis found that a majority of fatal and severe crashes are occurring on arterial roadways.

Roadway Classification	Total Road-Miles	Annual VMT (2015)	Annual Crashes per Road-Mile		Annual Crashes per 100M VMT	
			All Injury	Serious	All Injury	Serious
Freeway	304	4,455,000,000	5.9	0.16	40	1.1
Arterial	772	4,281,000,000	9.8	0.41	176	7.4
Collector	994	1,081,000,000	1.7	0.09	158	8.2
Local	4,565	620,000,000*	0.1	0.01	87	4.3
METRO	6,635	10,437,000,000	1.7	0.07	111	4.6

* VMT for local streets is a low-confidence estimate

Figure 37: Annual crashes per road mile and VMT by functional class, 2018 Metro State of Safety Report

Arterial roadways have the highest percentage of serious crashes. Seventy-three percent of the region's non-freeway serious crashes, sixty-six percent of all serious crashes (including freeways), seventy-seven percent of the serious pedestrian crashes, and sixty-five percent of the serious bike crashes occur on arterial roadways (arterial roadways comprise twelve-percent of the non-freeway roadway network).

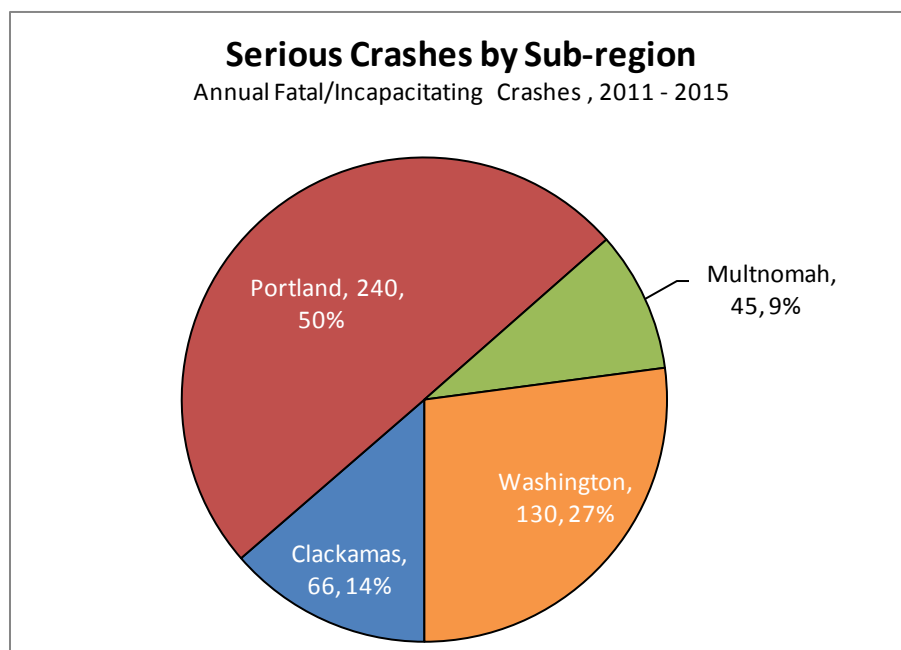


Figure 38: Serious crashes by roadway class
Source: 2018 Metro State of Safety Report

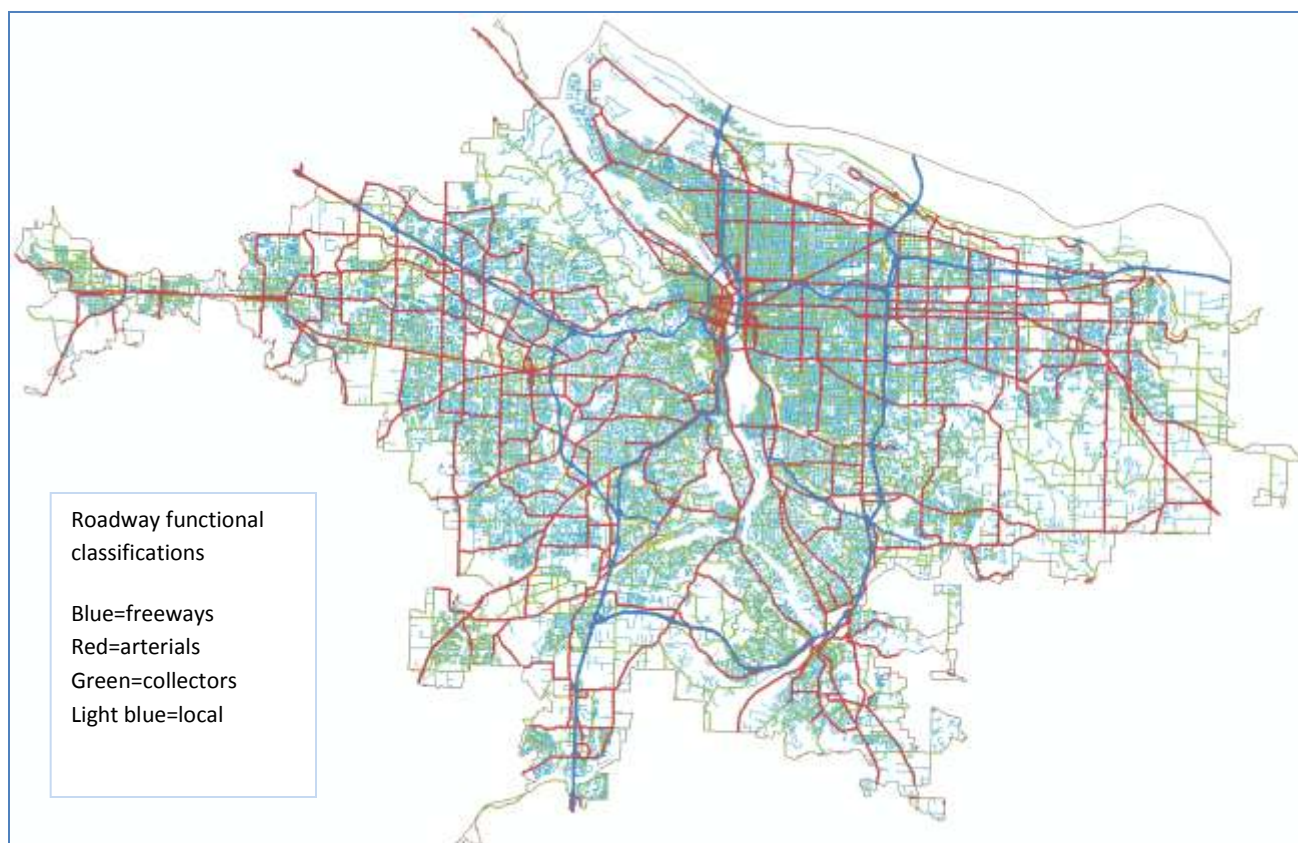


Figure 39: Roadway functional classifications in the greater Portland region

Most Regional High Injury Corridors are arterial roadways. Sixty percent of all fatal and severe injury crashes occur on just six percent of the region’s roadways. These roadways are identified as Regional High Injury Corridors and Intersections. Many of these roadways also have the characteristics of high risk corridors, and a majority of these roadways are frequent transit corridors.⁴³

Streets with more traffic lanes have higher fatal and severe injury crash rates per mile. Roadways with more traffic lanes have higher fatal and severe injury bicycle crash rates per mile. The serious bicycle crash rate per road mile increases dramatically for roadways with 4 or more lanes. When normalized by motor vehicle traffic volume, the serious bike crash rate on narrower roads is higher than on wider roads. While the reason for this is not clear from the data, it may be related to a higher use of narrower roads by cyclists relative to traffic volume as compared to multi-lane roadways.

Wider roadways are the location of a disproportionate number of serious crashes in relation to both their share of the overall system and the vehicle-miles travelled they

⁴³ Characteristics of high risk roads are identified by looking at crash history on an aggregate basis to identify particular severe crash types (e.g. pedestrian) and then use the roadway characteristics associated with particular crash types (e.g. arterial roadways with four-or more lanes, posted speed over 35 mph, unlit streets) to understand which roadways may have a higher risk of the same type of severe crash.

serve. Fifty-four percent of fatal and severe crashes occur on roadways with 4 or more traffic lanes. Roadways with 4 or more traffic lanes comprise nineteen percent of the regional roadway network. Wider roadways are particularly hazardous to pedestrians. The serious pedestrian crash rate increases dramatically for roadways with 4 or more lanes. Even when normalized by motor vehicle traffic volume, the serious pedestrian crash rate on wider roadways is still substantially higher than on narrower roads. This follows trends documented in AASHTO's Highway Safety Manual. Roads with more lanes have an especially high serious crash rate for pedestrians, producing higher crash rates per mile and per vehicle mile traveled as compared to other modes.

Intersection design is critical to bicycle safety. A majority of fatal and severe injury bicycle crashes occur at an intersection, and fail-to-yield right-of-way is the top contributing factor in serious bicycle crashes. Seventy-three percent of serious bicycle crashes occurred at an intersection, compared to forty-nine for all serious crashes for all modes. Fail to yield to right-of-way was a contributing factor in eighty-two percent of serious bicycle crashes and fifty percent of fatal bicycle crashes. The data do not specify whether the driver, the bicyclist, or both were under the influence of alcohol. Other factors, such as Fail to Yield ROW, Excessive Speed, and Aggressive Driving, are for the driver.

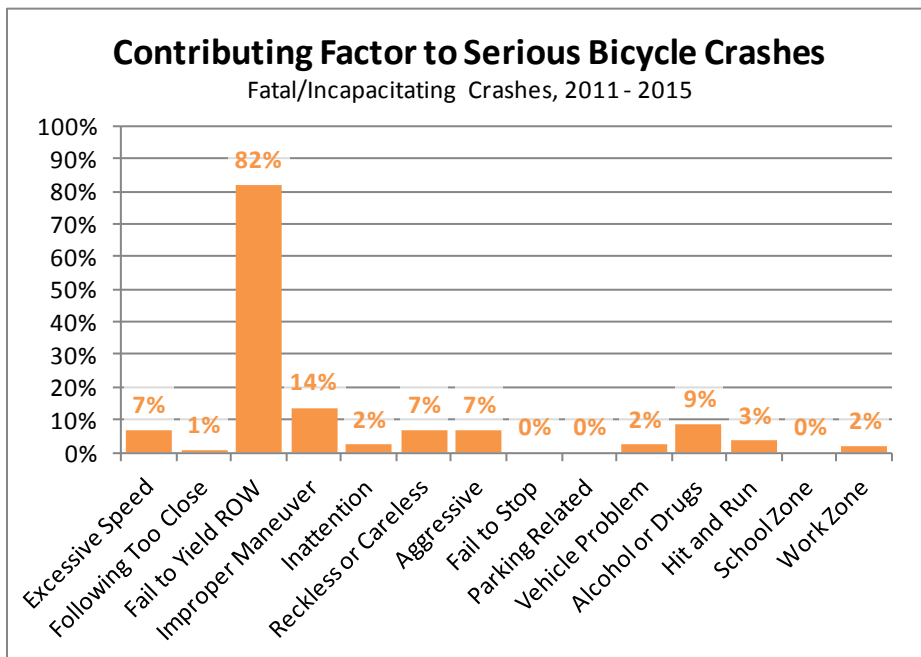


Figure 40: 2018 Metro State of Safety Report

Crash factors differ by roadway type. For freeway crashes, alcohol and drugs is the most common factor for fatal crashes and aggressive driving is the most common factor for serious crashes. For non-freeway crashes, alcohol or drugs is the most common factor for fatal crashes and fail to yield right-of-way is the most common factor for serious crashes.

Serious pedestrian crashes are disproportionately represented after dark. While thirty-nine percent of all serious crashes happen at night, sixty-four percent of serious

pedestrian crashes happen at night, indicating that visibility of pedestrians is an important safety feature.

3.5 Speed and speeding are major factors in serious crashes

This section provides key findings related to speeding.⁴⁴ Refer to the 2018 Metro State of Safety Report for additional information.

Speed is a fundamental contributing factor in crash severity. Crashes involving higher speeds will tend to increase the severity of the crash and likelihood of death. Reducing speeds and preventing speeding saves lives. On average, 1,000 Americans are killed every month in speed-related crashes. In Oregon, speeding is the most common behavioral issue associated with fatal and serious injury crashes.

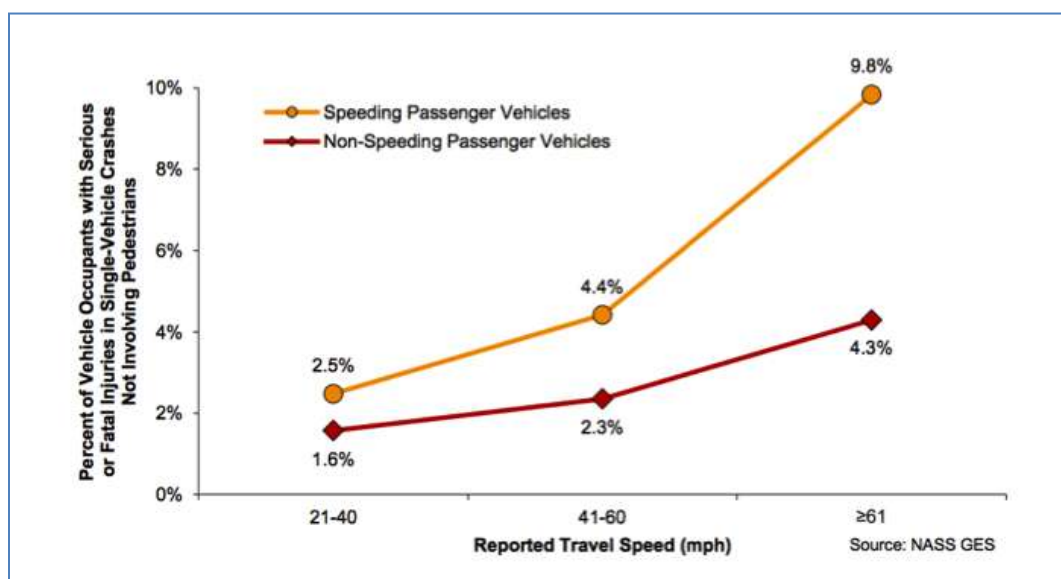


Figure 41: Percent of passenger vehicle occupants sustaining serious or fatal injuries in speeding-related and all crashes, by reported travel speed, 2014

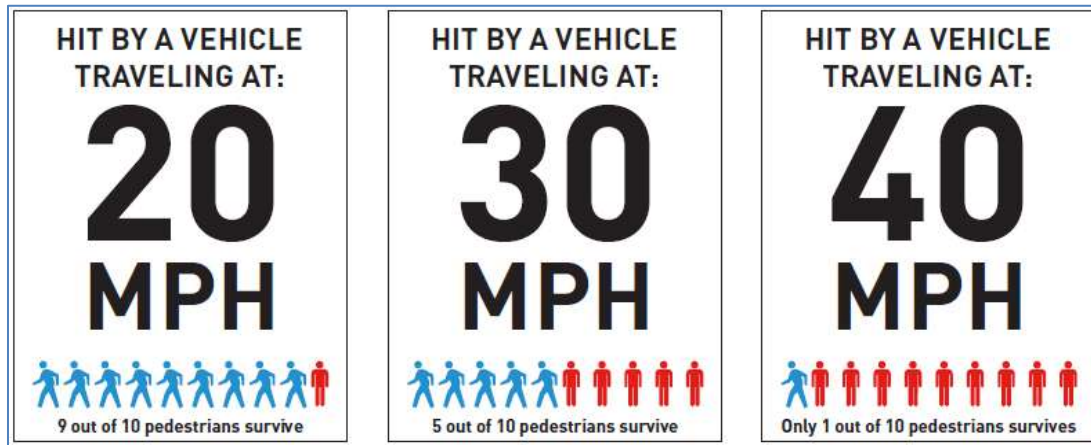
Source: National Automotive Sampling System (NASS) General Estimates System (GES)

Crash severity increases with the speed of the vehicle at impact. Inversely, the effectiveness of restraint devices like air bags and safety belts, and vehicular construction features such as crumple zones and side member beams decline as impact speed increases. The probability of death, disfigurement, or debilitating injury grows with higher speed at impact.

Pedestrians, bicyclists and motorcyclists are more vulnerable to dying or being seriously injured in a speed related crash. Nine out of ten pedestrians will survive being

⁴⁴ In the 2018 Metro State of Safety Report, Excessive speed is defined as speed too fast for conditions; driving in excess of posted speed; speed racing; failed to decrease speed for slower moving vehicle. Fatal and severe crashes occurring at higher speeds, but not fitting these definitions, are not counted as speed-related crashes.

hit by a vehicle traveling 20 mph, whereas only one out of ten pedestrians will survive being hit by a vehicle traveling 40 mph.



Source: Vision Zero Network

Alone or in combination with other factors, excessive speed is a major factor in fatal and severe injury crashes. While seven percent of all crashes involve speed as a factor, speed is a major factor in thirty-four percent of fatal and severe crashes. Ninety-seven percent of serious speed related crashes involved aggressive behavior, and thirty-eight percent involved alcohol. Forty-one percent of fatal freeway crashes involve excessive speed. Thirty-five percent of fatal crashes involved aggressive behavior, defined as either excessive speed or following too close.

A majority of excessive speed related serious crashes occur on arterial roadways. Fifty-five percent of serious excessive speed related crashes occurred on an arterial roadway, and seventy-one percent occurred at a non-intersection.

3.6 Aggressive and distracted driving are major factors in serious crashes

This section provides key findings aggressive and distracted driving related crashes. Refer to the 2018 Metro State of Safety Report for additional information.

Dangerous behaviors include those that arise from aggressive or distracted driving. Dangerous behaviors arising from aggressive and distracted driving include failing to yield the right of way, following too close, and excessive speed.

Distracted driving is any activity that diverts attention from driving, including talking or texting on the phone, eating and drinking, talking to people in the vehicle, fiddling with the stereo, entertainment or navigation system—anything that takes attention away from the task of safe driving. Texting is the most alarming distraction. Sending or reading a text takes your eyes off the road for 5 seconds. At 55 mph, that's like driving the length of an entire football field with your eyes closed.

Cell phone use while driving is a growing concern in transportation safety. Drivers use their cell phones 88 out of 100 trips (analysis of 570 million trips in US). On average, more than 8

people are killed and 1,161 more are injured in crashes involving a distracted driver each day in the U.S. In 2015, the number rose to 10 people every day.

Based on limited data, Oregon appears to have the lowest rate of driving and cell phone use in the country; states with hands free cell phone laws have lower rates of cell phone use while driving and it can be assumed lower distracted driving related crashes.

Distracted driving crashes occur frequently. On average, a crash involving a distracted driver occurs every 2.5 hours in Oregon.⁴⁵

A majority of drivers in Oregon drive distracted. In Oregon, seventy-five percent of drivers drive distracted when alone, and forty-four percent when driving with passengers.⁴⁶ A national study found that drivers sue their phones during eighty-eight out of 100 trips.⁴⁷

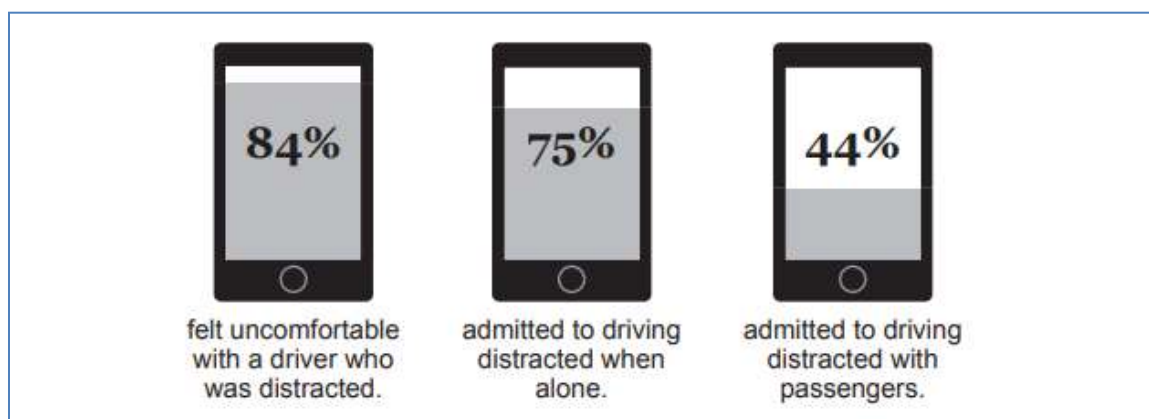


Figure 42: Distracted driving in Oregon
Source: Reducing Distracted Driving in Oregon, ODOT 2017

Dangerous behaviors are a major contributing factor in fatal and severe injury crashes. Aggressive driving is a factor in thirty-six percent of fatal crashes. Forty percent of serious crashes are fail to yield right of way involved.

Aggressive behavior is a major contributing factor in auto only crashes, compared to other modes. Forty-one percent of auto-only serious crashes involved aggressive behavior, compared to nine percent of pedestrian involved crashes and eight percent of bicycle involved crashes. Sixty-four percent of serious freeway crashes involved aggressive behavior.

⁴⁵

⁴⁶ Southern Oregon University. Distracted Driving: An Epidemic, A Study of Distracted Driving Attitudes, Behaviors and Barriers Preventing Change (2016). — [www.oregon.gov/ODOT/Documents/Distracted Driving](http://www.oregon.gov/ODOT/Documents/Distracted_Driving)

⁴⁷ Zendrive Research: Largest Distracted Driving Behavior Study. (April 2017)

<http://blog.zendrive.com/distracted-driving/> The research analyzed 5.6 billion miles, 570 million trips and 3 million drivers

Aggressive behavior is a major contributing factor in rear end crashes, the second most common type of serious crashes. Rear end crashes account for twenty-one percent of serious crashes, and seventy-three percent of those crashes involved aggressive behavior.

3.7 Alcohol and drugs are major factors in serious crashes

This section provides key findings for crashes involving drugs and alcohol. Refer to the 2018 Metro State of Safety Report for additional information.

Crashes involving alcohol and drugs have a much higher likelihood of being fatal than other crashes. Fifty-seven of fatal crashes involved alcohol or drugs, while five percent of all crashes involved alcohol and drugs.

Nationally, the percentage of fatally injured drivers who were drinking was highest for Native Americans (57%) and Hispanics or Latinos (47%). ⁴⁸

A majority of serious alcohol and drug involved crashes are auto only crashes. Fifty-six percent of serious alcohol involved, and fifty-seven of serious drug involved crashes are auto-only crashes.

Pedestrian crashes have a high likelihood of involving alcohol or drugs. Thirty-eight percent of serious pedestrian crashes are alcohol and/or drug involved. Twenty-seven percent of serious alcohol involved, and twenty-nine percent of serious drug involved crashes are pedestrian involved.

⁴⁸ This report looks at two primary figures – fatalities per VMT (by age and ethnic group) and CIR of male drivers by the same categories. Both figures point to higher numbers for people of color. The report offers some potential cultural explanations for the stark differences, none of which were numerically proven – the consensus though is that something needs to be done to address these differences but the proper route for creating change is unknown at this time. NHSTA, 2006

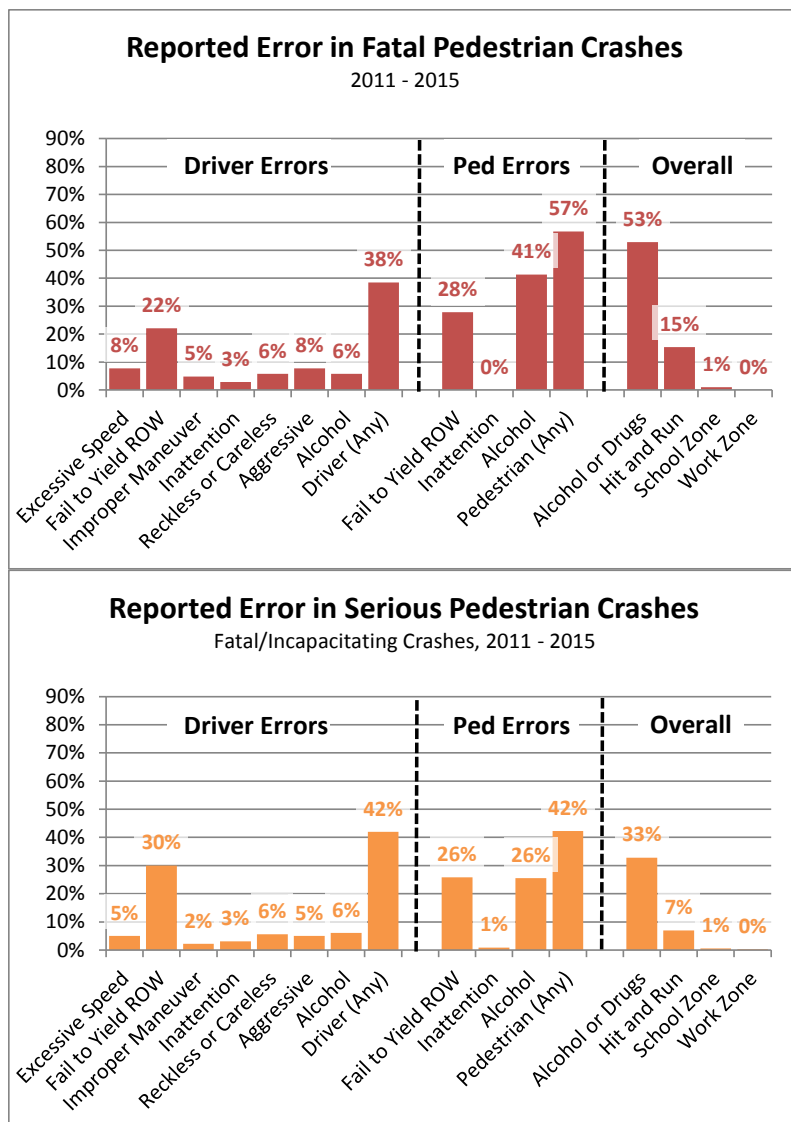


Figure 43: 2018 Metro State of Safety Report

The majority of serious alcohol and drug involved crashes occur at night. Seventy-seven percent of serious alcohol involved, and fifty-six percent of serious drug involved crashes occurred at night.

CHAPTER 4 STRATEGIES AND ACTIONS

The actions in the Regional Safety Strategy are based as much as possible on evidence-based counter measures. Data-driven transportation safety plans identify strategies and actions to address the most common causes and types of fatal and serious injury crashes identified through analysis of crash data.

Traffic safety problems are systemic. Addressing safety therefore requires a comprehensive systemic response that includes an array of evidence based actions. The Safe System approach provides a framework for strategies and actions that starts with safe travel for all, including reducing disparities for people of color and people with low incomes and for people walking and bicycling.

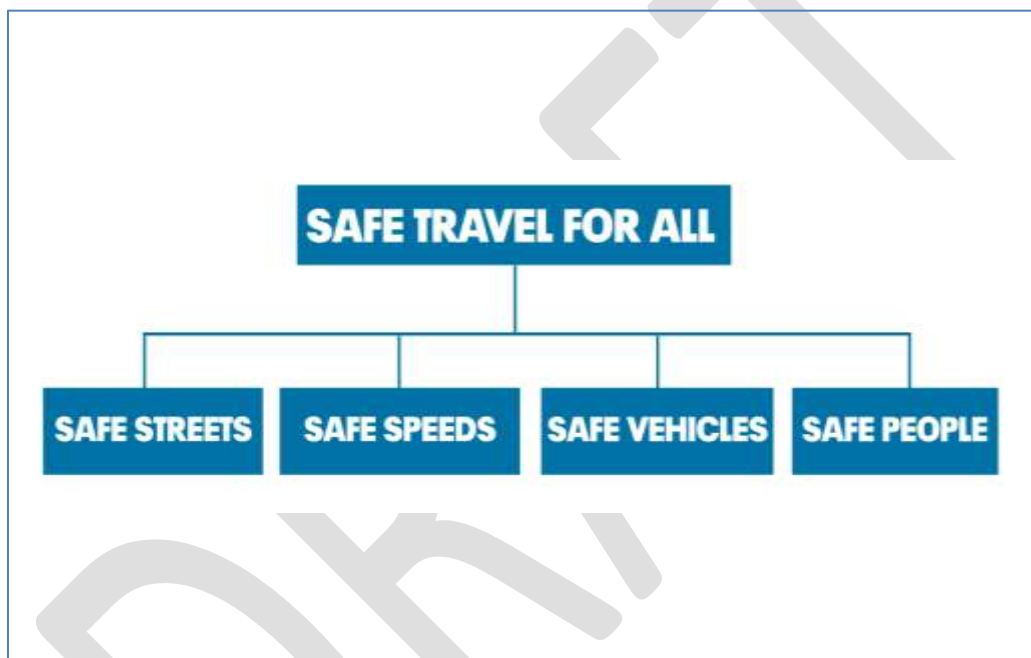


Figure 44: Vision Zero Safe System approach
Source: Vision Zero Network

The six strategies in the Regional Safety Strategy are of equal importance and represent a multi-pronged approach to reducing fatal and severe crashes in the region. Consistent with the Safe System approach the strategies and actions emphasize systemic solutions and de-emphasize individual behavior change, especially enforcement.

- **Enforcement related actions raise equity concerns** because of the potential disproportionate impact on people of color and people with low income.⁴⁹ While

⁴⁹ *A Billionaire and a Nurse Shouldn't Pay the Same Fine for Speeding*. New York Times (March 15, 2018)
The Constitutionality of Income-Based Fines. Alec Schierenbeck, University of Chicago Law Review, forthcoming (March 2, 2018)
The High Costs of Disparities for People of Color in Multnomah County, Lee Van Der Voo & Nick Budnick. (2017). <http://invw.org/2017/02/02/being-black-in-multnomah-county/> This review found that

high visibility enforcement of speeding, impaired and distracted driving have been proven to be effective at reducing those types of crashes, the potential equity impacts must be weighed against the benefits. The enforcement actions in the Regional Safety Strategy prioritize automated enforcement and education. Action 4.1 which does recommend targeted enforcement also recommends taking actions to reduce disproportionate impacts either from racial profiling or fines.

- **Increasing personal security**, such as protection from harassment and violence on the street, is recognized as an important element of transportation safety. However it is beyond the scope of the Regional Safety Strategy to identify specific actions to address personal security.

Strategies and actions for the Regional Safety Strategy were developed with the recognition of existing city, county and state transportation safety and transportation plans as the foundation for reaching regional safety targets, goals and objectives.

The Regional Safety Strategy strategies and actions are recommended best practices, but are not mandated.

Implementation is contingent on the availability of funding and political will.

Strategies are broad areas of action designed to achieve an overall aim. The strategies identified respond to the most common causes of fatal and severe crashes in the region and the most common crash types. Each of the six strategies identifies specific recommended actions.

Actions are specific steps that a variety of partners can take to address specific safety problems. Actions in the Regional Safety Strategy were identified from multiple sources, including state and local transportation safety action plans, research of current best practices to address the primary factors in fatal and serious crashes.

Leads and partners for each action leads are identified for each action. A full list of partners with a role in transportation safety is provided at the end of the document. Many of the actions require multiple partners and/or could be implemented in various ways depending upon the lead agency or agencies. Actions where Metro is identified a lead agency indicates that Metro has committed taking steps to implement that action.

The effectiveness of each action to reduce fatal and severe injury crashes, based on research and studies, is noted.

white residents charged in relatively minor cases in Multnomah County — those with a single count — paid a median fine of \$181, while African-American defendants paid \$261.

- Proven = proven to be effective based on several evaluations with consistent results
- Recommended = generally accepted to be effective based on evaluations or other sources
- Unknown = limited evaluation or evidence; experimental; outcomes inconsistent or inconclusive among studies

One recent study provided a Traffic Safety Best Practices Matrix that identifies strategies and actions that can best help implement Vision Zero and the Safe System approach that was especially useful.⁵⁰ Proven safety countermeasures included in the actions have been documented by the Federal Highway Administration and/or the Oregon Department of Transportation.⁵¹

Timing of implementing actions

Many of the actions are currently being implemented to varying degrees by some agencies and jurisdictions. Expanding the number of jurisdictions utilizing proven tools to reduce fatal and severe injury crashes is critical to implementing the Regional Safety Strategy.

While some of the actions, such as enacting safety legislation or updating plans are short term, many of the actions will require ongoing implementation and resources, such as convening safety work groups and education programs, to be successful. Early and aggressive implementation of the strategies and actions will result in more lives saved. When the Regional Safety Strategy is reviewed each time the Regional Transportation Plan is updated the timing and number of actions should be refreshed.

4.1 Protect vulnerable users and reduce disparities

Vulnerable users have higher fatality rates. Increasing safety for vulnerable users increases safety for all transportation users and will reduce disparities.

Vulnerable users are people that are more vulnerable to being killed or seriously injured in crashes. Vulnerable users are pedestrians, bicyclists, motorcycle operators, children, older adults, road construction workers, people with disabilities, people of color and people with low income.

This strategy is focused on protecting users of the transportation system who are more vulnerable to dying or being seriously injured. Research and practice has shown that

Actions for this strategy are focused on proven and recommended programs and education and data collection and monitoring that result in roadways that are safe for the youngest, oldest and most vulnerable users of the transportation system. These actions

⁵⁰ *A Vision for Transportation Safety: Framework for Identifying Best Practice Strategies to Advance Vision Zero*. Arielle Fleisher, Megan Wier, and Mari Hunter. Transportation Research Record: Journal of the Transportation Research Board, No. 2582. (2016)

⁵¹ <https://safety.fhwa.dot.gov/provencountermeasures> and www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/docs/pdf/CRF_Appendix.pdf

compliment the other strategies, especially the reduce speeds and speeding and designing roadways for safety strategies.

#	Strategy 1 Actions	Lead	Partners	Effectiveness
1.1	Implement Safe Routes to School programs and infrastructure projects, prioritizing schools in areas with higher concentration populations of people with lower incomes, people of color, and low English proficiency.	ODOT, Metro, cities and counties	Schools, public health, advocates	Recommended
1.2	Provide culturally and age appropriate on-going education of traffic laws and street designs.	ODOT, cities and counties, advocates, public health	Advocates, Metro	Recommended
1.3	Increase opportunities to provide education and products to increase visibility of people walking and bicycling (e.g. lights, reflective materials).	ODOT, cities and counties, schools	Public health, advocates	Recommended
1.4	Continue to improve data collection and reporting of vulnerable users, including: <ul style="list-style-type: none"> Collecting and making crash data on race and ethnicity of victims available; Supporting and developing programs to coordinate and collect bicycle and pedestrian count data. Evaluate motorcycle, pedestrian and bicycle crash locations and risk factors through analysis of existing data and development of new data sources. 	ODOT, Metro cities, counties, police, research institutions	Public health, advocates	Recommended
1.5	Promote and advocate for opportunities to increase large vehicle industry awareness and implement safety benefits including, but not limited to, rear wheel and side guards, sensors, front and side mirrors, and high visibility cabs. Explore opportunities to collaborate with the US DOT, ODOT, Port of Portland, City of Portland and other agencies to increase use of such safety features.	Metro, cities, counties, ODOT, Port of Portland, US DOT	Advocates, large vehicle industry	Proven
1.6	Evaluate pedestrian and bicycle crash locations and risk factors in Transportation System Plans through analysis of existing data and development of new data sources.	Cities, counties, ODOT	Metro, research institutions	Recommended
1.7	Complete the regional active transportation network, filling sidewalk gaps and bicycle gaps on the designated regional pedestrian and bicycle network including arterial roadways, by 2040.	Metro, cities and counties, ODOT, TriMet, SMART	Senior advocates, advocates, public health	Recommended

1.9	<p>Prioritize funding for projects that:</p> <ul style="list-style-type: none"> • Reduce fatal and severe injury crashes; • Increase safety for vulnerable users, including people walking, bicycling and accessing transit and schools (increasing safety for vulnerable users has been shown to increase safety for all users); and/or • Are on a high risk or injury location, with demonstrated crash history, safety concern or other risk factor; and/or • Increases safety in areas with high concentrations of people of color, people with low-incomes and people with low English proficiency. 	Metro, ODOT, counties and cities	Public health, advocates	Recommended
1.10	Pursue policies and tools to reduce vehicle miles traveled, including congestion pricing, multimodal facilities, transit and Transportation Demand Management programs. Reducing vehicle miles is a key element of the Safe System approach.	ODOT, Metro, cities and counties	Advocates, public health	Recommended

4.2 Design roadways for safety

Arterial roadways have the highest serious crash rate per road mile and per vehicle mile traveled. Prioritizing and standardizing safety in street design for all modes can prevent dangerous behaviors and save lives.

This strategy is focused on designing the transportation system, especially arterial roadways, to enable and encourage safe behaviors and reduce the severity of crashes when they do occur, primarily through greater separation and slower speeds. Designing roadways to be safe for children, older adults and people walking and bicycling makes the system safe for all users.

Arterial roadways have the highest serious crash rate for all modes, and should be the primary focus of regional safety efforts. Safety interventions that match solutions to the crash pattern and street and neighborhood context are needed. Many of the region's High Injury Corridors meet or largely meet adopted design standards so simply bringing roadways up to adopted standards does not fully address the needed safety improvements, especially for people walking and bicycling.

Actions for this strategy focus on designing for safe auto speeds on arterial roadways, providing greater separation and protection between people walking, bicycling and driving, adding medians, roundabouts, access management and other design solutions to prevent crashes. The safest arterial roadways are accessed managed, include street calming, provide separation between modes, provide safe crossing for vulnerable users, and provide intuitive visual cues that make it clear that people using different modes share the space. These roadways keep all people safer – even when they make mistakes.

#	Strategy 2 Actions	Lead	Partners	Effectiveness
2.1	<p>Implement/prioritize context sensitive and universal design and engineering solutions such as the Federal Highway Administration proven safety countermeasures, the Highway Safety Manual and other resources that have been shown to support safe speeds, protect vulnerable users and reduce fatal and severe crashes, focusing on arterial roadways and high injury corridors and intersections. Countermeasures with proven safety benefits include:</p> <ul style="list-style-type: none"> • medians and pedestrian crossing islands • protected left turn signals • separation of travel modes on streets with higher traffic speeds, volumes, and truck volumes with protected bikeways and walkways • bicycle boxes • bicycle intersection treatments • lead pedestrian intervals • pedestrian hybrid beacons • roundabouts • road diets • access management • driveway consolidation • backplates with retroreflective borders • freight aprons <p>Pedestrian design should account for the needs of all potential users, including those with physical or mental limitations. Design and engineering solutions should account for designated truck routes to safely move freight and agricultural equipment amid other modes.</p>	Cities, counties, ODOT, Metro	TriMet, SMART, public health, advocates	Proven and/or recommended
2.2	Develop and adopt Complete Streets policies and Complete Streets checklists.	ODOT, Metro, cities and counties	Public health, advocates	Unknown
2.3	Provide context sensitive best practices for Vision Zero street design in the Designing Livable Streets regional street design guidelines and tools.	Metro	ODOT, cities and counties, public health, advocates	Unknown
2.4	Review standards for auto travel lane widths and develop criteria to explore making 10' travel lanes preferred standard for arterial roadways in certain contexts, allowing more right-of-way for wider sidewalks, protected bikeways and other safety features.	Cities, counties, ODOT, TriMet	Metro, public health, advocates	Recommended (greater separation of modes)

2.5	Develop criteria and spacing standards and/or policies for enhanced pedestrian crossings in areas with pedestrian activity (such as transit access) and where enhanced crossings are greater than 530 feet apart.	Cities, counties, ODOT	Metro, public health, advocates	Recommended
2.6	Explore policies to make protected bike lanes the preferred design for arterial roadways with posted speeds of 30 mph or higher, and/or average daily traffic above 6,000 autos per day, and/or heavy truck volumes. Connections at intersections should be re-evaluated as protected bike lanes are installed.	Cities, counties, ODOT	Metro, NACTO, public health, advocates	Recommended
2.7	<p>Illuminate the transportation system appropriately by:</p> <ul style="list-style-type: none"> • Requiring new development and redevelopment in the urban area to install street and sidewalk lighting. • Integrating street and sidewalk lighting into major transportation improvement projects, where appropriate. • Exploring a variety of lighting options and identify the appropriate contexts to use them. <p>Considering street lighting designs and practices that limit impacts on neighborhoods, wildlife and agriculture.</p>	Cities, counties, ODOT	Metro	Recommended
2.8	Investigate and perform engineering reviews for crashes that result in fatalities and severe injuries to determine effective countermeasures for preventing future severe crashes. Conduct routine evaluation of effectiveness of traffic safety interventions.	Police, cities, counties, ODOT, academic institutions	Metro, advocates, public health	Recommended
2.9	Standardize Highway Safety Manual crash prediction project analysis to guide project development as part of the traffic analysis procedure.	ODOT, cities and counties	Metro, academic research institutions	Recommended



Figure 45: Example of a vision zero street (1)ADA accessibility, (2)public amenities, (3) protected bike lanes, (4) narrow vehicle lanes, (5) pedestrian islands, (6) wide sidewalks, (7) dedicated mass transit facilities, (8) signal protected pedestrian crossings, (9) dedicated unloading zone, (10) signal retiming

Source: Vision Zero Streets.org

4.3 Reduce speeds and speeding

Speed is a fundamental contributing factor in crash severity. Reducing speeds and preventing speeding saves lives.

The Vision Zero Network recommends recognizing and prioritizing speed as a fundamental factor in crash severity as a key principle to achieving zero deaths and severe injuries.

This strategy is focused on reducing the prevalence of speeding as well as reducing motor-vehicle speeds on arterial roadways to survivable speeds. A comprehensive approach to reducing speeds and speeding is necessary and typically involves multiple countermeasures. For example, the National Highway Traffic Safety Administration states that “no single strategy will be appropriate for all locations, and combinations of treatments may be needed to obtain speed limit compliance and achieve crash reduction goals.”

The National Transportation Safety Board’s landmark report and recommendations on speeding recommend a new approach to setting speeds.⁵² The report describes the Safe System approach to speed limits, which differs from the traditional view that drivers choose reasonable and safe speeds. In the Safe System approach, speed limits are set according to the likely crash types, the resulting impact forces, and the human body’s ability to withstand these forces. It allows for human errors (that is, accepting humans will make mistakes) and acknowledges that humans are physically vulnerable (that is, physical tolerance to impact is

⁵² National Transportation Safety Board, “Reducing Speeding-Related Crashes Involving Passenger Vehicles” (July 2017)

limited). Therefore, in this approach, speed limits are set to minimize death and severe injury as a consequence of a crash.

The National Transportation Safety Board includes 19 recommendations for decreasing the prevalence of speeding related injuries, including the following:

- increasing automated enforcement
- improving speeding related data collection
- increasing the availability of intelligent speed adaptation on new vehicles
- reconsidering the 85th percentile rule of thumb
- increasing the use of the Safe System approach to design in urban areas

Actions for this strategy are focused on proven countermeasures such as designing arterial roadways that result in slower speeds, lowering posted speeds, and increasing the use of automated speed enforcement. The focus is on the arterial roadways with higher serious crash rates and Regional High Injury Corridors.

#	Strategy ③ Actions	Lead	Partners	Effectiveness
3.1	Design arterial roadways to achieve appropriate safe target speeds, generally 35 mph or less, using design elements that have been shown to effectively result in lower speeds. A majority of excessive speed related serious crashes occur on arterial roadways.	Cities, counties, ODOT	Metro, TriMet, SMART, public health, advocates	Proven
3.2	Change state law to increase the number of jurisdictions eligible for fixed speed camera installation, especially at high injury locations. Utilize speed feedback cameras given the low cost and effectiveness and immediate information to drivers.	Cities, counties, ODOT	Metro, public health, advocates	Proven
3.3	Utilize authority provided through House Bill 2409 to issue speeding tickets through red light cameras. Change state law to increase the number of jurisdictions eligible to use this tool.	Cities, counties, ODOT, Metro	Public, health, advocates	Proven
3.4	Work with ODOT to modernize speed setting practices, including a multi-modal approach to set speed limits, incorporating factors such as land use, crash history and the presence of vulnerable road users.	Cities, counties, ODOT	ODOT, Metro, public health, advocates	Proven
3.5	Fund and install intelligent speed adaptation technologies that alert the vehicle traveling over the speed limit, prioritizing high risk and high injury corridors.	ODOT, cities, counties	Metro, public health, advocates	Proven

3.6	Utilize flexibility in setting posted speeds so that design speeds can be set at a target speed below the posted speed to increase safe operating speeds. Injury minimization or safe system approach: Speed limits are set according to the crash types that are likely to occur, the impact forces that result, and the human body's tolerance to withstand these forces.	ODOT, cities, counties	Public health, advocates, police, fire	Recommended
3.7	Change Oregon speed zone law from basic rule/limits to limits only statewide to reduce confusion and increase compliance with speed limit.	ODOT, cities, counties	Public health, advocates, police, fire	Unknown

4.4 Address distracted and aggressive driving

Aggressive or distracted driving can lead in an instant to injury or death. System design, education and policies can reduce and minimize the impact of bad decisions.

Dangerous behaviors arise from distracted or aggressive driving, including following too close, disregarding traffic signals or stop signs, failing to stop, failing to yield the right of way when turning, and excessive speeding. Aggressive driving is extremely common among U.S. drivers. A recent study by the AAA Foundation for Traffic Safety found that nearly eighty percent of drivers expressed significant anger, aggression or road rage behind the wheel at least once in the previous year. Distracted driving, especially the use of smart phones while driving is difficult to track though it is generally agreed that instances of 'texting while driving' are increasing.

This strategy is focused on reducing and minimizing the impact of dangerous behaviors. Dangerous behaviors often arise from larger social issues and norms that are difficult to address within the context of transportation alone. Seeking opportunities to partner and collaborate with partners working on these larger social issues and norms, including public health, schools and community and non-profit groups is important to address the root causes of aggressive and distracted driving.

Actions for this strategy focus on changing overall systems and using education and technology to reduce the prevalence of dangerous behaviors in the first place. Targeted high-visibility enforcement is included with an emphasis on taking actions to reduce the disproportionate impacts on and over policing of people of color and people with low incomes. Action 4.6 is a catch-all action to get at the larger social issues and norms that can lead to aggressive and distracted driving.

#	Strategy 4 Actions	Lead	Partners	Effectiveness
4.1	Focus high visibility enforcements on dangerous behaviors (speeding, failing to yield to pedestrians, signal violations, improper turns/illegal turns, texting while driving) and high injury corridors, taking actions to reduce the disproportionate impacts on people of color and people with low incomes, including fully implementing Oregon's anti-racial profiling bill (House Bill 2355). Research shows that high-visibility enforcement can reduce drunk driving fatalities by as much as 20%.	Police, cities, counties	Metro, ODOT, advocacy groups, public health	Recommended
4.2	Increase penalties for dangerous behaviors, identifying actions to reduce the disproportionate impacts from fines on people of color and people with low incomes, such as diversion classes and other non-monetary penalty options.	State, cities, counties, police	Metro, ODOT, advocacy groups, public health	Recommended
4.3	Support implementation of recommendations identified in Reducing Distracted Driving in Oregon report and House Bill 2597 "Distracted Driving Law."	ODOT, police, cities and counties, Metro	Public health, advocates, auto industry	Unknown
4.4	Support auto insurance companies to provide lower auto insurance costs to drivers that install technologies to turn off phone while driving.	ODOT, Metro, cities, counties, advocates	Public health, advocates	Unknown
4.5	Compile a comprehensive list and contacts of private sector companies that operate large numbers of vehicles in the region, and identify a process that supports state and local partners to engage in outreach regarding safe driving behaviors to members, workforces and customers – companies such as ride hailing services and trucking companies.	Metro, ODOT, cities and counties	ODOT, cities and counties, commercial vehicle companies	Unknown
4.6	Support legislation to increase frequency of driver education, testing, inclusion of urban transportation safety in test materials, and driver's license renewal.	Metro, ODOT, cities and counties	Advocates, public health	Recommended

4.5 Address impairment

Crashes involving alcohol and drugs have a much higher likelihood of being fatal than other crashes. Providing options to people using the roadways while drunk or intoxicated saves lives.

This strategy is focused on upstream solutions to reduce the prevalence of people using the roadways while impaired. Intoxication arises from larger social issues and norms that are difficult to address within the context of transportation alone. Seeking opportunities to partner and collaborate with partners working on these larger social issues and norms, including public health, schools and community and non-profit groups is important to address the root causes of aggressive and distracted driving.

Actions for this strategy focus on changing overall systems and using education and technology to prevent impaired driving from occurring. Targeted high-visibility enforcement is included with an emphasis on taking actions to reduce the disproportionate impacts on people of color and people with low incomes.

#	Strategy 5 Actions	Lead	Partners	Effectiveness
5.1	Identify funding to send law enforcement to Drug Recognition Experts (DRE) training, and training to prevent profiling.	Police, cities, counties	State, public health, advocates	Recommended
5.2	Adopt National Transportation Safety Board recommendation to reduce Blood Alcohol Concentration limit to 0.05.	State	Advocates, public health, Metro, cities and counties	Proven
5.3	Implement pre-paid morning parking programs in areas where appropriate (prevents towing/ticket for drivers who choose other way home).	Cities, counties	Public health, advocates	Recommended
5.4	Promote use of apps such as SaferRide developed by NHSTA, which provide people easy ways to find a safe ride home.	Cities, counties, ODOT, Metro	Public health, advocates	Recommended
5.5	Explore opportunities to support the U.S. DOT to work with industry groups and vehicle manufacturers to further the use of technology to reduce impaired driving.	ODOT, Metro, cities and counties	Public health, advocates	Recommended
5.6	Support culturally appropriate safety programs and educational messages, paired with outreach and investments, to curb the risk of impaired driving, using resources such as NHSTA's Impaired Driving Segmentation research (2017). Messaging is more effective when there	ODOT, Metro, cities and counties, advocates,	Public health, advocates	Recommended

	is an in-depth understanding of what messages work for different groups, and when paired with other investments. Coordinate with public health initiatives and partners.	public health		
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4.6 Ongoing engagement and coordination

Many partners will implement Vision Zero. Ongoing engagement and coordination among all partners is essential.

One of the most challenging elements of a Safe System approach is bringing together all of the people and organizations that contribute to the safety of the transportation system. For this reason, coordination and leadership are critical to success.

This strategy focuses on the need to increase and maintain coordination and engagement among partners. As the region's Metropolitan Planning Organization, Metro plays an important role in convening and facilitating regional discussions and efforts to ensure partnerships are successful in achieving the regional vision.

Actions for this strategy focus on convening partners, setting work programs, tracking progress, maintaining and improving data, introducing and supporting legislation and updating regulations and policies.

#	Strategy 6 Actions	Lead	Partners	Effectiveness
6.1	Develop Metro work program to implement actions where Metro is a lead or one of several leads. Include work program elements to support implementing actions where Metro is not the lead.	Metro	Cities, counties, ODOT, public health, advocates, police, fire, TriMet, SMART	Recommended
6.2	Convene, as needed, transportation safety meetings with local and state partners to implement 2018 RTSS. Determine frequency of meetings in work program developed in Action 6.1. Identify police and fire representatives to participate in regional coordination meetings.	Metro	Cities, counties, ODOT, FHWA, public health, advocates, police, fire, TriMet, SMART	Recommended
6.3	Provide an annual Vision Zero report back to Joint Policy Advisory Committee on Transportation (JPACT) and Metro Council, reporting on MAP-21 safety targets and regional safety plan implementation.	Metro	Cities and counties, ODOT, TriMet, SMART, public health, advocates	Recommended

6.4	Review the strategies and actions of the Safety Strategy prior to each update of the Regional Transportation Plan and update as needed.	Metro	Cities and counties, ODOT, TriMet, SMART, public health, advocates	Recommended
6.5	<p>Maintain and update Metro crash data.</p> <ul style="list-style-type: none"> Update Metro webpage annually with MAP-21 transportation safety performance measure data; include data on race and ethnicity as available. Update and maintain regional crash map tool and crash map. Develop a regional crash prediction modeling tool that utilizes and links social and environmental factors with injury data. 	Metro	FHWA, ODOT, public health, academic inst.	Recommended /Proven
6.6	Identify opportunities to engage and partner with community based organizations and advocates, especially to increase opportunities for proactive monitoring and feedback gathering from the community on their safety issues and concerns. Conduct targeted outreach/education to communities near high injury arterials and intersections, focusing on historically marginalized communities.	Metro, ODOT, cities and counties	Public health, advocates	Recommended
6.7	Support development of city and county Transportation Safety Action Plans and Vision Zero targets; include a transportation safety plan, with data analysis that addresses all modes and is based on a safety inventory based on both an analysis of crash rates and an analysis of crash risks in the updates of Transportation System Plans; participate in local, regional and state safety task forces, and develop and participate in state, regional and city safety summits.	Metro, ODOT, DLCD, cities and counties	Public health, advocates, TriMet, SMART	Recommended
6.8	Identify opportunities to develop safety workshops for state, regional, county and city staff on Vision Zero framework and priorities, including racial equity and public health.	Metro, ODOT, TriMet, cities and counties	FHWA	Recommended
6.9	Convene regular local safety meetings made up of state and local transportation and public health professionals, equity representatives, police and fire, and community and advocacy organizations, to review progress on implementing safety plans and collaborate on specific topics, such as impairment, distracted driving, street design, and enforcement.	Local agencies	ODOT, Metro, public health, advocates, police, fire, TriMet, SMART	Recommended

	Integrate Vision Zero/Toward Zero Deaths framework and priorities, including racial equity and public health.			
6.10	Identify funding for and develop at least one annual coordinated culturally appropriate and targeted mass media safety campaign in the region, utilizing campaign materials developed by NHSTA, Drive Toward Zero, Vision Zero, Toward Zero Deaths and other sources as appropriate. Strong, targeted advertising with high-visibility enforcement and publicity about that enforcement have proven to be most effective.	Metro, cities, counties, ODOT	Advocates, public health	Proven
6.11	Support safety legislation, regulations and funding at the state and federal level that implement Vision Zero and do not increase racial disparities.	Metro, ODOT, cities, counties, advocates	Advocates, public health	Recommended
6.12	Monitor federal and state autonomous vehicle policies and ensure that they do not place the burden of safety on vulnerable users (such as requiring them to carry a sensor or install a phone application to be picked up by an autonomous vehicle), and require rigorous safety testing of all autonomous vehicles prior to public deployment.	Metro, ODOT, cities and counties	Advocates, public health, AV industry	Unknown
6.13	Update the Regional Transportation Functional Plan to require Transportation System Plans to include a transportation safety plan, with data analysis that addresses all modes and is based on a safety inventory based on both an analysis of crash rates and an analysis of crash risks, to require that Transportation System Plans identify safety as a need, and to require that transportation projects do not make a known safety problem worse, and to be consistent with the Regional Safety Strategy.	Metro	Cities, counties, ODOT, TriMet, advocates, public health	Unknown
6.14	Update the following sections of OAR 660-012-0000, the Oregon Transportation Planning Rule: <ul style="list-style-type: none"> Section 0020 (2), requiring Transportation System Plans to include a transportation safety plan, with data analysis that addresses all modes and is based on a safety inventory based on both an analysis of crash rates and an analysis of crash risks. Section 0030 (1) and (2) identifying safety as a need. Section 0060 (1)(c) clarifying that making a known safety problem worse constitutes a 	DLCD, Metro, ODOT	Cities and counties, advocates	Recommended

	"significant effect".			
6.15	Best practices recommend that police periodically review, update and conduct trainings to reflect new traffic safety priorities.	Police, state, cities, counties,	Advocates, public health	Recommended

CHAPTER 5 IMPLEMENTATION

In the Safe System approach coordination across all areas of government and partners is necessary to fully implement strategies and actions. Engagement and coordination actions are outlined in Strategy 6. Implementation is always contingent on the availability of funding and the political will to take steps which may be politically challenging. Prioritization of safety in transportation funding and projects, prioritization of vulnerable users – especially people walking - slowing speeds, education and ongoing coordination are all needed for the region to work towards Vision Zero.

There are **many efforts underway** in the greater Portland region that are increasing safety and reducing crashes. These efforts will need to be **sustained and increased** to keep pace with an increase in vehicle miles traveled and a growing economy – both which could result to more Serious crashes if plans are not implemented. Efforts underway that impact safety include:

- Implementing of adopted land use plans
- Developing and implementing county and city transportation safety action plans
- Filling sidewalk gaps and adding enhanced pedestrian crossings
- Adding protected bikeways and protected intersections
- Increasing awareness of Vision Zero and role of speed in serious crashes
- Investigating fatal and serious injury crash sites
- Collecting data on race and ethnicity in traffic stops
- Improving coordination among partners
- Increasing use of speed cameras to reduce speeding
- Increasing Safe Routes to School programs and infrastructure
- Increasing public access to safety data and ability to report safety issues
- Increasing focus on preventative actions on high risk roads
- Supporting better technology in motor-vehicles to increase safety
- Continuing widespread seat belt use
- Increasing police training to identify drug and alcohol use
- Increasing access to ride options such as Uber and Lyft to reduce impaired driving ⁵³
- Creating innovative public awareness campaigns

⁵³ “Does Uber Really Prevent Drunk Driving? It Depends on the Study” New York Times, April 7, 2017. – initial research suggests that the increase in availability of ride-hailing services such as Lyft and Uber could help lower the incidents of drunk driving, supporting the overall approach of providing travel options and other programs to support not driving drunk.

5.1 Metro work program

Metro will develop a work program (Safety Strategy Action 6.1) describing tasks and a timeline to take direct action or support partners in implementing the Regional Safety Strategy. Steps to implement actions where Metro is the lead or co-lead will be identified.

Metro's work program will focus on actions to be taken in the next five years following adoption of the 2018 Regional Transportation Plan.

An annual progress report will be given to the Metro Council, JPACT and MPAC (Safety Strategy Action 6.3). The progress report will include progress made towards meeting federally required transportation safety targets and progress on actions by Metro and partners.

5.2 Engagement and coordination

Ongoing engagement and coordination among all partners is essential to reach regional federally required safety targets and move towards Vision Zero.

Chapter 4 identifies recommended strategies and actions for reducing fatalities and life-changing injuries in the greater Portland region. Using a data-driven approach, the strategies and actions were identified as the most effective ways to address the most frequent contributing factors and types of serious crashes in the region, and they are consistent with the Safe System approach. As indicated in the Strategies and Actions Table, most actions require multiple partners for implementation.

Transportation safety and achieving zero deaths and serious injuries is everybody's business. Government alone cannot achieve the broader changes needed to reach Vision Zero. In addition to national, state, regional and local agencies, multiple organizations, private entities and the public play a role in achieving Vision Zero. Engineers, emergency medical service providers, law enforcement, educators, public health professionals, community based organizations and non-profits, the media, industry and business, research and academic institutions, and users of the transportation system all have a role.

Safety Strategy Actions 6.2 and 6.9 recommend convening safety work groups at the regional and local level, or continuing to support those that are already meeting. Complementing state safety committees and work groups, regular regional and local safety work groups will support state, regional and local coordination.

As noted in Safety Strategy Action 6.2, police and fire representatives need to be involved at the regional level; their perspective has not been fully integrated at the regional level of planning.

5.3 Implementing and updating plans

Implementing adopted land use and transportation system plans, including the 2040 Growth Concept, will help achieve Vision Zero. Building walkable and bikeable communities, reducing travel distances, locating jobs and housing near each other, making transit more accessible all contribute to safer communities.

As described in Chapter 3, the Portland region has one of the lowest roadway fatality rates of any urban metro area with a population greater than 1 million, and a lower fatality rate than Oregon and the U.S. The safest regions in the nation for overall fatality rates are Boston, Minneapolis-St. Paul, Portland, New York, and Chicago. In general, the safest urban regions are those that exhibit dense urban environments and higher usage of non-auto travel modes. These findings indicate that regional and local land use and transportation plans, policies and investments are increasing transportation safety.

The Regional Transportation Plan is updated every five years. As part of the update safety policies, strategies and actions should be reviewed. Crash data analysis in the Metro State of Safety Report should be updated to reflect five years of crash data.

Local Transportation System Plans are updated every four years to be consistent with the Regional Transportation Plan. Safety Strategy Actions 6.13 and 6.14 recommends updating the Transportation Planning Rule and the Regional Transportation Functional Plan to require that safety plans be included in Transportation System Plans.

5.4 Regional Transportation Plan safety projects and programs

This section to be updated after the 2018 Regional Transportation Plan project list is refined and finalized by state and local partners.

The 2018 Regional Transportation Plan includes a list of projects and programs that should address the highest public priorities and most immediate regional transportation challenges. The project list identifies the projects that are planned to be built in the next 25 years. Safety is a priority in Regional High Injury Corridors and Intersections and in race and income marginalized communities.

Each time the Regional Transportation Plan is updated it provides opportunity to identify safety focused projects that will reduce serious crashes. Identifying safety projects in the Regional Transportation Plan helps regional leaders and the public better understand how, when and where safety problems are being addressed. It also provides an understanding of how much investment is being planned for safety projects. All projects located in a Regional High Injury Corridor should identify safety as a primary purpose or secondary objective in the Regional Transportation Plan.

Definition of a safety project

In the Regional Transportation Plan, safety projects are identified as projects that have the primary purpose of addressing a documented safety problem at a documented high injury or high risk location with one or more proven safety counter measures.

The definition of a safety project was developed to be consistent with Highway Safety Improvement Program criteria.

A critical element of the Regional Safety Strategy is completing projects that make the transportation system safer and more secure, especially in high risk and High Injury Corridors and Intersections and in racial and income marginalized communities.

The 2018 Regional Transportation Plan project list has over 1,000 projects planned for cities and counties in the region. Of those projects:

- Three-hundred eighty two of the projects identify reducing crashes or serious crashes as a primary or secondary objective.
- Fifty-three identify reducing crashes or serious crashes as a primary objective.
- One third of the projects directly address safety and identify reducing crashes or serious crashes as a primary or secondary objective. A majority of these projects are on High Injury Corridors and/or in race and income marginalized communities.
- A majority of all projects in the list are on high injury corridors, representing an opportunity to address safety even if the project is not identified as a safety project.
- Safe Routes to School, Transit Oriented Development and Transportation System Management and Operations programs address safety.

[insert graphic showing project breakdown]

[insert map showing safety projects overlayed with High Injury Corridors]

CHAPTER 6 MEASURING PROGRESS

Progress towards Vision Zero will be measured by the number of fatal and severe injury crashes reduced annually.

In addition to tracking observed crashes, Metro will work to develop tools such as crash prediction models that will allow for and support system evaluation measures for future scenarios and planning. Metro will work with regional partners, the Oregon Department of Transportation and the Federal Highway Administration to develop ways to measure safety performance in the future to support decision making.

6.1 Annual safety targets

State Departments of Transportation and Metropolitan Planning Organizations must report on the federally required safety performance measure identified in MAP-21 and the FAST Act. Metro will report on these measures in each update of the Regional Transportation Plan, and in the Metropolitan Service District report of performance measures that Metro is required to submit in accordance with ORS 197.301 to the Department of Land Conservation and Development (DLCD) every two years. Additionally, Metro will report out annually to the Metro Council and the Joint Policy Advisory Committee on Transportation (JPACT).

To satisfy federal requirements, Metro will report on the five-year rolling average of the number of people killed and seriously injured in traffic crashes in the region, per 100 million miles traveled (per VMT) and the number of non-motorized fatalities and serious injuries, as shown in Figure X. Metro is also tracking the fatal and serious injuries per capita.

Reporting Year (based on a 5-year rolling average)	FHWA Performance Measures						
	Fatalities (People)	Fatality Rate		Serious Injuries (People)	Serious Injury Rate		Non-Motorized Fatalities and Serious Injuries (People)
		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)	
2011 - 2015 (Base)	62	0.9	4.0	457	6.4	29.4	113
2014 - 2018	58	0.8	3.6	425	5.8	26.5	105
2015 - 2019	55	0.7	3.4	407	5.5	25.1	101
2016 - 2020	52	0.7	3.2	384	5.1	23.4	95
2017 - 2021	49	0.6	2.9	357	4.7	21.5	88

Note: Due to rounding, addition of numbers across modes may result in minor variation from totals.

Figure 46: Metro MPO Safety Performance Targets

Metro set the annual targets using the same methodology as the Oregon Department of Transportation in the 2016 Transportation Safety Action Plan. Targets are set using the “S-curve” as shown in Figures x and x.

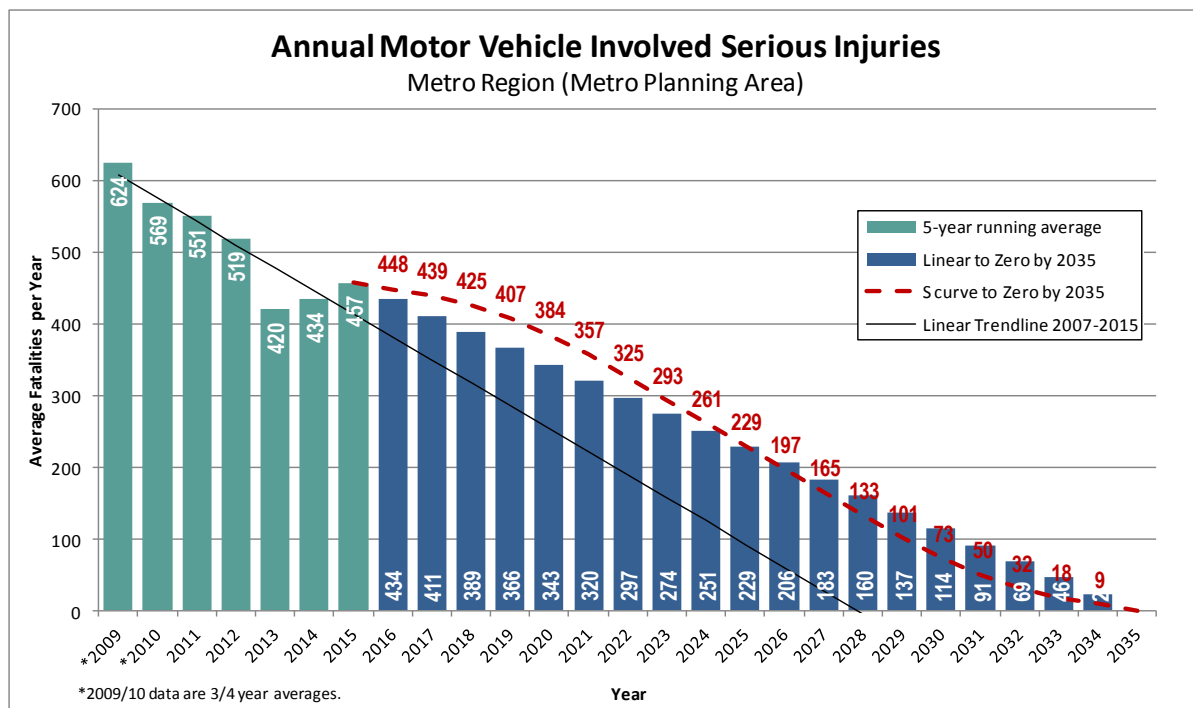


Figure 47: Annual Motor Vehicle Involved Serious Injuries

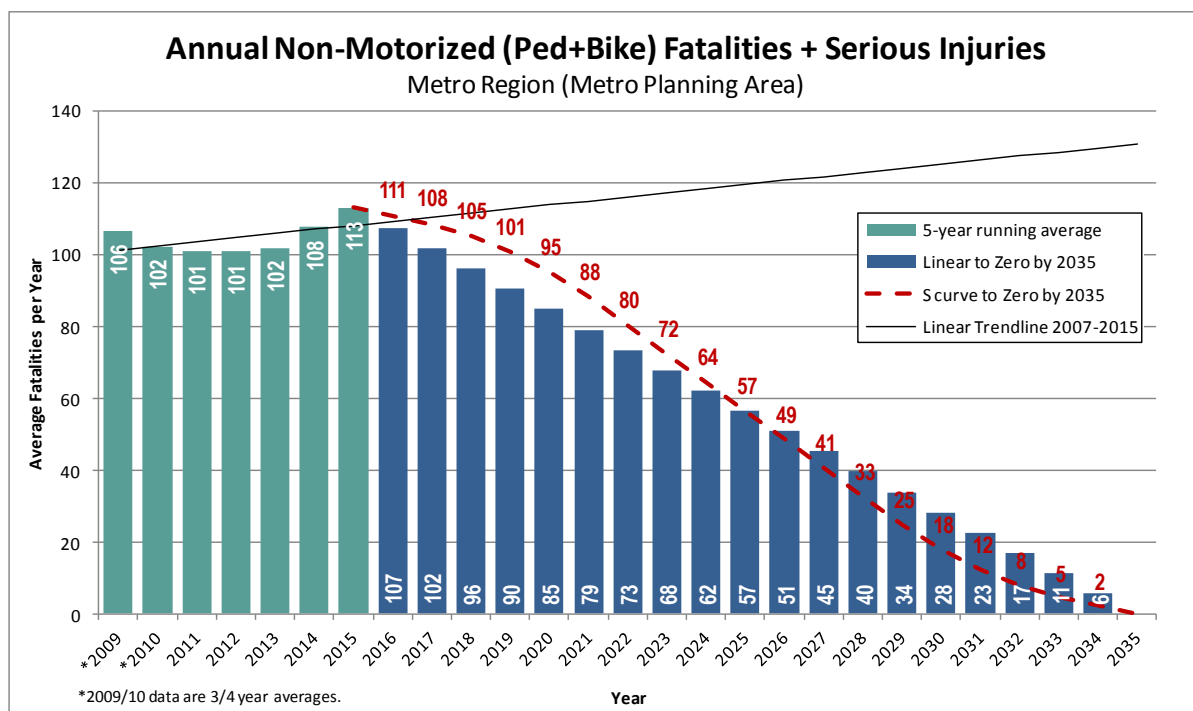


Figure 48: Annual Non-Motorized Fatalities and Serious Injuries

In addition to the required federal targets, Metro also set targets for the number of fatalities and serious injuries for each mode separately, as well as per VMT and per capita for each mode, as shown in Figures X-X.

Reporting Year (based on a 5-year rolling average)	Motor Vehicle Only					
	Fatalities (People)	Fatality Rate		Serious Injuries (People)	Serious Injury Rate	
		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)
2011 - 2015 (Base)	38	0.5	2.4	368	5.2	23.7
2014 - 2018	35	0.5	2.2	343	4.7	21.3
2015 - 2019	34	0.5	2.1	328	4.4	20.2
2016 - 2020	32	0.4	1.9	309	4.1	18.8
2017 - 2021	30	0.4	1.8	287	3.8	17.3

Note: Due to rounding, addition of numbers across modes may result in minor variation from totals.

Figure 49: Metro MPO Motor Vehicle Fatal and Serious Injury Safety Targets

Reporting Year (based on a 5-year rolling average)	Pedestrians					
	Fatalities (People)	Fatality Rate		Serious Injuries (People)	Serious Injury Rate	
		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)
2011 - 2015 (Base)	22	0.3	1.4	56	0.8	3.6
2014 - 2018	20	0.3	1.3	52	0.7	3.2
2015 - 2019	20	0.3	1.2	49	0.7	3.0
2016 - 2020	18	0.2	1.1	47	0.6	2.8
2017 - 2021	17	0.2	1.0	43	0.6	2.6

Note: Due to rounding, addition of numbers across modes may result in minor variation from totals.

Figure 50: Metro MPO Pedestrian Fatal and Serious Injury Safety Targets

Reporting Year (based on a 5-year rolling average)	Bicyclists					
	Fatalities (People)	Fatality Rate		Serious Injuries (People)	Serious Injury Rate	
		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)		Per VMT (People/ 100 MVT)	Per capita (People/ 100k pop)
2011 - 2015 (Base)	2.2	0.03	0.14	33	0.5	2.1
2014 - 2018	2.0	0.03	0.13	31	0.4	1.9
2015 - 2019	2.0	0.03	0.12	30	0.4	1.8
2016 - 2020	1.8	0.02	0.11	28	0.4	1.7
2017 - 2021	1.7	0.02	0.10	26	0.3	1.6

Note: Due to rounding, addition of numbers across modes may result in minor variation from totals.

Figure 51: Metro MPO Bicycle Fatal and Serious Injury Safety Targets

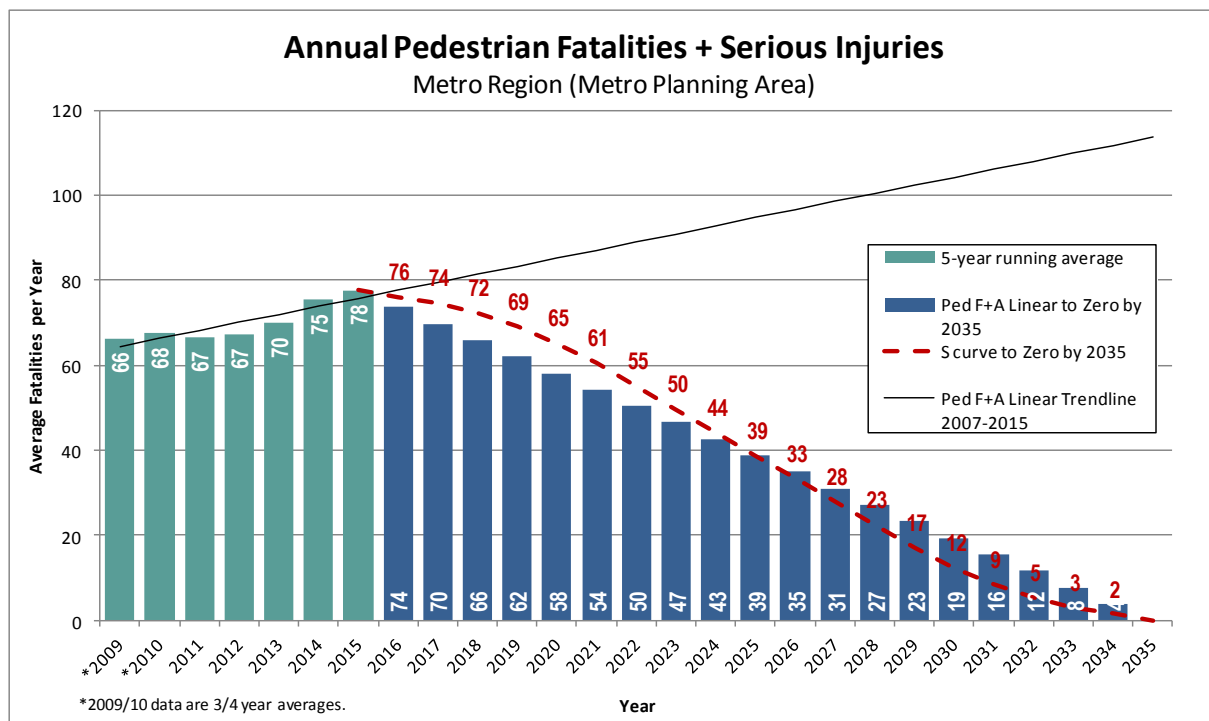


Figure 52: Annual Pedestrian Fatalities and Serious Injuries

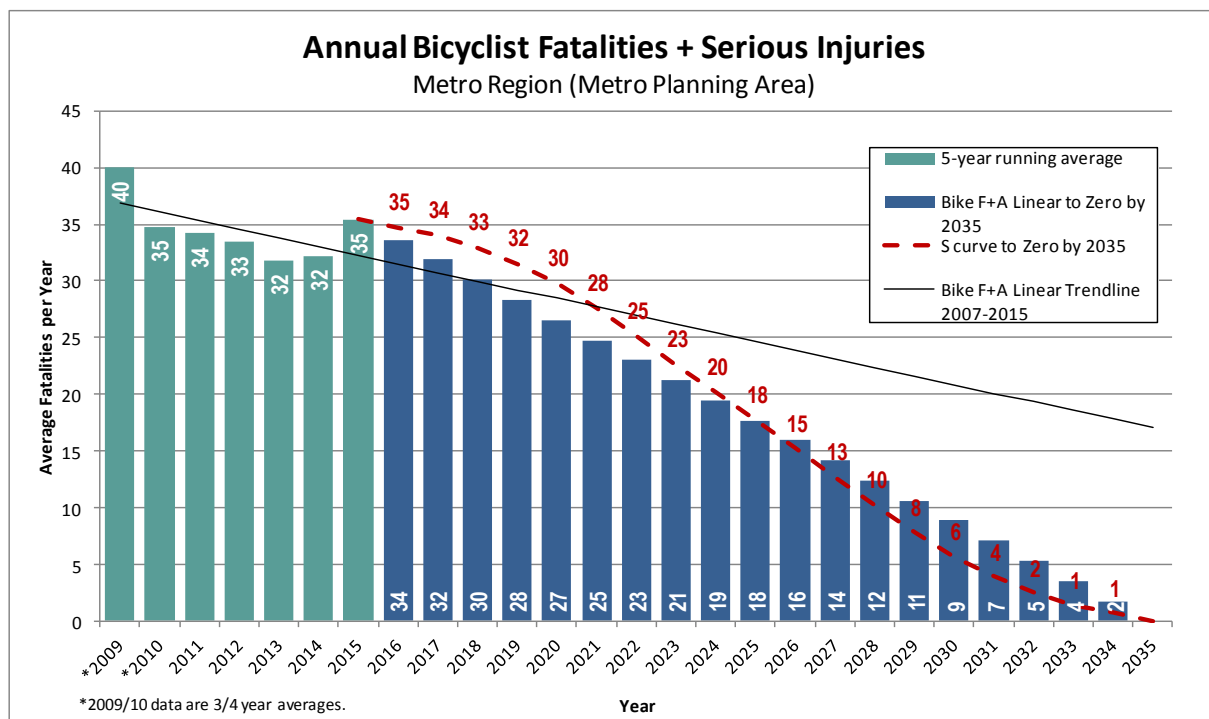


Figure 53: Annual Bicycle Fatalities and Serious Injuries

ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
DLCD	Department of Land Conservation and Development
FAST ACT	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HSM	Highway Safety Manual
HIC	High Injury Corridor
HSIP	Highway Safety Improvement Plan
JPACT	Joint Policy Advisory Committee on Transportation
MAP-21	Moving Ahead for Progress in the 21st Century Act
MMLOS	Multi Modal Level of Service
MPA	Metro Planning Area
MPAC	Metro Policy Advisory Committee
MTAC	Metro Technical Advisory Committee
NHSTA	National Highway Safety Traffic Administration
RATP	Regional Active Transportation Plan
RTFP	Regional Transportation Functional Plan
RTP	Regional Transportation Plan
	Regional Transportation Safety Strategy (Safety Strategy)
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
ODOT	Oregon Department of Transportation
OTP	Oregon Transportation Plan
UGMFP	Urban Growth Management Functional Plan
SHSP	State Highway Safety Plan
TPAC	Transportation Policy Alternatives Committee
TSAP	Transportation Safety Action Plan
TSP	Transportation System Plan
VMT	Vehicle Miles Traveled

LIST OF PARTNERS

Government alone cannot achieve the broader changes needed to end traffic fatalities. In addition to national, state, regional and local agencies, multiple organizations, private entities and the public play a role in achieving Vision Zero.

National agencies

U.S. Department of Transportation
Federal Highway Administration
National Highway Traffic Safety Administration
Centers for Disease Control

State agencies

Oregon Department of Transportation
Oregon Health Authority
Department of Motor Vehicles
Oregon State Police
Department of Land Conservation and Development
Oregon Liquor Control Commission

Regional Agencies and Districts

Metro
TriMet
SMART
Port of Portland

City and County transportation and land use agencies

Transportation and land use departments/staff for the three counties and twenty-five cities

County public health agencies

Clackamas County Public Health
Multnomah County Public Health
Washington County Public Health

Schools

Public and private, K-college

Elected officials

U.S. Representatives and Senators
State Representatives and Senators
Governor
Metro Council
Metro Joint Policy Advisory Committee on Transportation
City Mayors and Councils
County Commissioners

Appointed committees

Oregon Transportation Commission
Oregon Transportation Safety Committee

Oregon Bicycle and Pedestrian Advisory Committee
Oregon Freight Advisory Committee
Oregon Transit Advisory Committee
Portland pedestrian, bicycle and freight committees
City and county transportation committees

Emergency Service Providers and County and Local Police

Clackamas, Multnomah and Washington County Sheriff's Offices
City Police

County and City Fire & Rescue

Portland Fire and Rescue
Tualatin Valley Fire and Rescue
Clackamas Fire District #1
Multnomah County Fire District #14
Washington County Fires District #2
Gresham Fire
Hillsboro Fire
Cornelius Fire
Forest Grove Fire and Rescue
Gladstone Fire
Lake Oswego Fire

Advocacy and Community Organizations

Oregon Walks
Oregon and SW Washington Families for Safer Streets
Vision Zero Network
Toward Zero Deaths
Safe Routes to School National Partnership
AARP
Street Trust
Community Cycling Center

Commercial Vehicle Companies

Companies located and/or operating in the region

Industry Groups

Auto insurance companies
Auto manufacturers
AAA

Research and Academic Institutions

Portland State University
ODOT Research
Transportation Research Board (TRB)
Volpe Institute

RESOURCES

State and Local Transportation Safety Action Plans

- Beaverton Transportation Safety Action Plan (2017)
- Portland Vision Zero Action Plan (2016)
- Oregon Transportation Safety Action Plan (2016)
- Oregon Department of Transportation Pedestrian and Bicycle Safety Implementation Plan (2014)
- Hillsboro Transportation Safety Action Plan (2017)
- Washington County Transportation Safety Action Plan (2017 draft)
- Clackamas County Transportation Safety Action Plan (2013)

Vision Zero, Road to Zero and Toward Zero Deaths Resources

- *Sustainable and Safe: A Vision and Guidance for Zero Road Deaths*, World Resources Institute, Global Road Safety Facility (2017)
- *Moving from Vision to Action: Fundamental Principles, Policies and Practices to Advance*, Vision Zero Network
- *Vision Zero in the U.S.* (February 2017)
http://visionzeronetwork.org/wp-content/uploads/2017/01/MinimumElements_Final.pdf
- 9 Components of a Strong Vision Zero Commitment; Vision Zero Network (2015)
- Toward Zero Deaths: A National Strategy on Highway Safety (2014)
- *Safer People, Safer Streets: Summary of the U.S. Department of Transportation Action Plan to Increase Walking and Biking and Reduce Pedestrian and Bicyclist Fatalities* (September 2014)
https://www.transportation.gov/sites/dot.gov/files/docs/safer_people_safer_streets_summary_doc_acc_v1-11-9.pdf

Race and Ethnicity Safety Research

- *The High Costs of Disparities for People of Color in Multnomah County*, Lee Van Der Voo & Nick Budnick. (2017). <http://invw.org/2017/02/02/being-black-in-multnomah-county/>
- *Racial Bias in Drivers' Yielding Behavior at Crosswalks: Understanding the Effect*. Kimberly Kahn, Portland State University
- *Dangerous by Design*, National Complete Streets Coalition (2016)

- *Vision Zero, Equity& Law Enforcement*, Leah Shahum (2016)
<http://visionzeronetWORK.org/vision-zero-equity-law-enforcement/>
- *Motor Vehicle Traffic-Related Pedestrian Deaths — United States, 2001–2010*,” Centers for Disease Control (2013)
- *Income Disparities in Street features that Encourage Walking*, Bridging the Gap (2012)
http://www.bridgingthegapresearch.org/_asset/02fpi3/btg_street_walkability_FIN_AL_03-09-12.pdf
- *Pedestrians Dying at Disproportionate Rates in America's Poorer Neighborhoods*, Governing, (August 2014)
<http://www.governing.com/topics/public-justice-safety/gov-pedestrian-deaths-analysis.html>
- *Racial/Ethnic Differences in Fatality Rates from Motor Vehicle Crashes: An Analysis from a Behavioral and Cultural Perspective*, Huda Hamdan (2013)
<http://scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=3983&context=etd>
- *Alcohol and Highway Safety: A Special Report on Race/Ethnicity and Impaired Driving*, U.S Department of Transportation (2010)
<https://ntl.bts.gov/lib/61000/61600/61640/tt398.pdf>
- *NHSTA Traffic Safety Facts, Race and Ethnicity Equity* (2006)
<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810995>

Data and Research Resources

- *Safety Study: Reducing Speeding-Related Crashes Involving Passenger Vehicles*, National Transportation Safety Board (2017)
- *Safety for All Users Report: A Report Developed by the U.S. Department of Transportation Under Section 1442 of the Fixing America’s Surface Transportation (FAST) Act* (December 2017).
- *A Right to the Road: Understanding and Addressing Bicyclist Safety*, Governors Highway Safety Association (2017)
- *Everyone Walks: Understanding and Addressing Pedestrian Safety*, Governors Highway Safety Association (2017)
- *A Vision for Transportation Safety: Framework for Identifying Best Practice Strategies to Advance Vision Zero*. Arielle Fleisher, Megan Wier, and Mari Hunter. Transportation Research Record: Journal of the Transportation Research Board, No. 2582. (2016)
- *Countermeasures That Work: A Highway Safety Countermeasure Guide for State Highway Safety Offices*, Eighth Edition. DOT HS 812 202. Washington, DC: US Department of Transportation, NHTSA (2015)

- National Highway Traffic Safety Administration, State Traffic Safety Information <https://cdan.nhtsa.gov/STSI.htm#>
- Crash Modification Factors Clearinghouse <http://www.cmfclearinghouse.org/>
- Oregon Health Authority, Injury in Oregon: data report (2014) [http://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/INJURY/FATALITY/DOCUMENTS/Injury in Oregon v2.3.pdf](http://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/INJURY/FATALITY/DOCUMENTS/Injury_in_Oregon_v2.3.pdf)
- Traffic Safety Facts, 2015 Motor Vehicle Crashes: Overview, National Highway Traffic Safety Administration (2015) <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812318>
- National Highway Traffic Safety Administration, Impaired Driving Segmentation Research (2017)
- Speed Enforcement Camera Systems Operational Guidelines, FHWA & NHTSA (2008)
- *Reducing Distracted Driving in Oregon: An Interdisciplinary Approach to a Statewide Problem*, Oregon Department of Transportation Distracted Driving Task Force. (2017)
- Southern Oregon University. *Distracted Driving: An Epidemic, A Study of Distracted Driving Attitudes, Behaviors and Barriers Preventing Change* (2016). [www.oregon.gov/ODOT/Documents/Distracted Driving](http://www.oregon.gov/ODOT/Documents/Distracted_Driving)
- Zendrive Research: *Largest Distracted Driving Behavior Study*. (April 2017) <http://blog.zendrive.com/distracted-driving/>
- *Summary of Oregon Truck Safety and Guide to the 2017 Commercial Vehicle Safety Plan* (2017)

GLOSSARY

[Definitions are still being finalized]

Aggressive Driving One or more of driving too fast for conditions, following too closely, and/or driving in excess of posted speed was an attribute of the crash.

American Association of State Highway and Transportation Officials (AASHTO)
Represents all five transportation modes: air, highways, public transportation, rail, and water and has a primary goal of fostering the development, operation, and maintenance of an integrated national transportation system.

Arterial Street A functional classification for surface streets. AASHTO defines arterials from the motor vehicle perspective as providing a high degree of mobility for the longer trip lengths and high volumes of traffic, ideally providing a high operating speed and level of service and avoiding penetrating identifiable neighborhoods.

Autonomous Vehicle (AV) Also known as a driverless car, self-driving car, robotic car is and unpiloted ground vehicle is that is capable of sensing its environment and navigating without human input.

Basic Rule Speed A speed that is reasonable and prudent considering the conditions at the time. Speeds in excess of the posted speed are evidence of the violation. Basic rule violations can apply on any roadway.

Best Practices For purposes of this document, the term “best practices” is used as a general term of preferred practices accepted and supported by experience of the applicable professional discipline. It is not prescriptive to a particular set of standards or a particular discipline.

Collector A functional classification for surface streets. AASHTO defines collectors as providing both land access and traffic circulation within neighborhoods and commercial and industrial areas. The role of the collector system, from the motor vehicle perspective, is to distribute traffic to and from the arterial system.

Complete Streets A transportation policy and design approach that requires streets to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation.

Context Sensitive Design A model for transportation project development that requires proposed transportation projects to be planned not only for its physical aspects as a facility serving specific transportation objectives, but also for its effects on the aesthetic, social, economic and environmental values, needs, constraints and opportunities in a larger community setting. Projects designed using this model:

Countermeasure An activity, initiative or design element to prevent, neutralize, or correct a specific safety problem.

Crash A violent collision, typically of one vehicle with another (vehicles include bicyclists, motorcyclists, freight trucks, school buses, transit buses, etc), a pedestrian, or with a stationary objects such as a pole or guard rail.

Crash Reduction Factor (CRF) The percentage crashes reduced that might be expected after implementing a given countermeasure at a specific site. For example, the installation of centerline rumble strips on a two-lane roadway can expect a fourteen percent reduction in all crashes and a fifty-five percent reduction in head-on crashes.

Design Speed Speed for which roadway elements such as curves are designed.

Designated Speed As opposed to statutory speeds (e.g., 35 mph on city arterial), and must be established by a defined speed zoning process and investigation. Designated speeds are approved by the Oregon Department of Transportation.

Distracted Driving Engagement in any activity that could divert a person's attention away from the primary task of driving. Typical distractions include eating, dealing with passengers or pets, changing settings on vehicle devices, and, increasingly, using a cellular phone or other electronic device.

Emerging Technologies Are the technical innovations representing progressive developments within a field aim at providing competitive advantage.

Emergency Medical Services (EMS)

Equity See Racial Equity and Social Equity

Fatal Analysis Reporting System (FARS) A nationwide census providing NHTSA, Congress and the American public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes.

Fixing America's Surface Transportation Act (Fast Act) A funding and authorization bill to govern United States Federal surface transportation spending, signed by President Obama on December 4, 2015. It is subsequent to MAP-21, but does not replace all of the applicable requirements of that earlier law, so both must be referenced.

Fatal Crash Any motor-vehicle crash that results in one or more deaths within 30 days of the crash.

Fatality Rate The number of traffic fatalities per number of vehicle miles traveled or per population in a given year. The rate is usually expressed in terms of fatalities per one hundred million miles traveled and fatalities per one million or one hundred thousand people.

Federal Highway Administration (FHWA) An agency within the U.S. Department of Transportation that supports State and local governments in the design, construction, and maintenance of the Nation's highway system (Federal Aid Highway Program) and various federally and tribal owned lands (Federal Lands Highway Program).

Fixed Speed Camera A camera installed to detect traffic regulation violations.

Freeway Directional travel lanes usually separated by a physical barrier, and access and egress points are limited to on-and off-ramp locations or a very limited number of at-grade intersections.

Functional Classification The class or group of roads to which the road belongs. There are three main functional classes as defined by the United States Federal Highway Administration: arterial, collector, and local.

High Crash Location Highway or road segments that are susceptible to an inordinate number of crashes. Identification of high crash locations is part of the problem identification process.

High Injury Corridors and Intersections (regional) Roadways where the highest concentrations of fatal and severe injury crashes involving people in cars, biking and walking occur on the Regional Transportation Network. Corridors and intersections were analyzed to determine aggregate crash scores based on the frequency and severity of crashes, using the following methodology:

- Fatal and Injury A (serious) crashes for all modes are assigned to the network; "Injury B", "Injury C", and "PDO (property damage only)" crashes involving bikes and pedestrians are also assigned to the network.
- Fatal and Injury A crashes are given a weight of 10.
- Roadways are analyzed in mile segments; if a segment has only one Fatal or Injury A crash it must also have at least one B/C (minor injury) crash, for the same mode, to be included in the analysis.
- Roadway segments are assigned an N-score (or "crash score") by calculating the weighted sum by mode and normalizing it by the roadway length. To reach 60 percent of Fatal and Severe Injury crashes, roadway segments had to have an N-score of 39 or higher; high injury Bicycle Corridors had to have an N-score of 6 or more, and high injury Pedestrian Corridors had to have an N-score of 15 or more. Intersections with the highest weighted crash scores were also identified; 5 percent of intersections had an N-score (or "crash score") higher than 80 and are also shown on the map, and 1 percent of intersections (the top 1%) had to have an N-score higher than 128.

High Risk Roadways Characteristics if high risk roads are identified by looking at crash history on an aggregate basis to identify particular severe crash types (e.g. pedestrian) and then use the roadway characteristics associated with particular crash types (e.g. arterial

roadways with four-or more lanes, posted speed over 35 mph, unlit streets) to understand which roadways may have a higher risk of the same type of severe crash.

High Visibility Enforcement (HVE) Law enforcement efforts that are highly visible and well publicized through paid and earned media support.

Highway Safety Improvement Program (HSIP) Projects, activities, plans, and reports carried out under 23 USC section 148.

Highway Safety Improvement Project (23 USC section 148) In general, the term “highway safety improvement project” means strategies, activities, and projects on a public road that are consistent with a state strategic highway safety plan and correct or improve a hazardous road location or feature; or address a highway safety problem.

Historically Marginalized Communities Are communities of people that have been historically excluded from critical aspects of social participation including, voting, education, housing and more. Historical marginalization is often a result of systematic exclusion based on devaluation of any individual existing outside of the dominant culture.

Highway Safety Manual (HSM) The recognized source of information and methods for quantitatively evaluating traffic safety performance on existing or proposed roadways.

Highway Safety Plan (HSP) Grant application submitted for Federal section 402 and similar funds. Funds are provided by the National Highway Traffic Safety Administration and the Federal Highway Administration.

Impaired Driving Driving a vehicle while the driver’s reflexes have suffered from alcohol or other drugs to a point that is generally considered unsafe to operate a vehicle.

Injury A/ Incapacitating Injury/ Severe Injury Synonymous terms referring to an injury from a motor-vehicle crash that prevents the injured party from walking, driving, or normally continuing the activities they were capable of performing before the injury occurred. Examples include severed, broken or distorted limbs, skull or chest injuries, abdominal injuries, unconscious at or when taken from the crash scene, unable to leave crash scene without assistance, etc.

Injury B / Moderate injury/ Visible Injury Synonymous terms referring to injuries from a motor-vehicle crash which are evident to observers at the scene of the crash. Examples include a visible lump, abrasions, cuts, bruises, lacerations, etc.

Injury C/ Minor injury/ Complaint of Pain Synonymous terms referring to injuries indicated by the victim. Examples include momentary unconsciousness, complaint of pain, limping, nausea, etc.

Intelligent speed adaption technologies Are any system that ensures that vehicle speed does not exceed a safe or legally enforced speed. In case of potential speeding, a human driver can be alerted, or the speed reduced automatically.

KABCO Injury Scale An injury rating scale used to determine the severity of injuries ranging from Severe Injury (A) to Minor Injury (C), and property damage only (O).

Local Street A functional classification for surface streets that includes all public surface streets not defined as arterial or collector. Local streets are typically low-speed streets with low traffic volumes in residential areas, but also include similar streets in commercial and industrial areas.

Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141)

Reauthorization of Federal highway funding, signed into law by President Obama on July 6, 2012. Subsequent adoption of the FAST Act does not replace MAP-21 in all areas regulation of transportation safety planning and funding, so both must be referenced.

Metro Planning Area Boundary (MPA)

Minor Arterial Provides moderate-length trips and offers connectivity to the higher arterial system, providing intracommunity continuity.

Model Minimum Uniform Crash Criteria Guideline (MMUCC) A minimum, standardized data set for describing motor vehicle crashes and the vehicles, persons and environment involved. The Guideline is designed to generate the information necessary to improve highway safety within each state and nationally.

Monitoring Management and oversight of the day-to-day operations of grant and sub-grant supported activities to assure compliance with applicable Federal and state requirements and that performance goals are being achieved.

Motorcycle A motor vehicle with motive power having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground. The NHTSA defines “motorcycle” to include mopeds, two or three-wheeled motorcycles, off-road motorcycles, scooters, mini bikes and pocket bikes.

Metropolitan Planning Organization (MPO) Coordinates transportation planning in an urbanized area of the state.

Manual on Uniform Traffic Control Devices (MUTCD) A document issued by the Federal Highway Administration of the United States Department of Transportation to specify the standards by which traffic signs, road surface markings, and signals are designed, installed, and used.

National Highway Traffic Safety Administration (NHTSA) An agency of the Executive Branch of the U.S. government, part of the Department of Transportation. It describes its mission as "Save lives, prevent injuries, reduce vehicle-related crashes."

National Transportation Safety Board An independent U.S. government investigative agency responsible for civil transportation accident investigation. In this role, the NTSB

investigates and reports on aviation accidents and incidents, certain types of highway crashes, ship and marine accidents, pipeline incidents, and railroad accidents.

Older adults (vulnerable) The Moving Ahead for Progress in the 21st Century (MAP-21) Act created a new Special Rule for older drivers and pedestrians under 23 USC 148(g)(2), which was continued under the Fixing America's Surface Transportation (FAST) Act. If the rate per capita of traffic fatalities and serious injuries for drivers and pedestrians over the age of 65 in a State increases over the most recent 2-year period, this Special Rule requires a State to include strategies to address the increases in those rates in their State Strategic Highway Safety Plan (SHSP). FHWA issued the Section 148: Older Drivers and Pedestrians Special Rule Final Guidance in May 2016.⁵⁴

TriMet's Coordinated Transportation Plan for Seniors and Persons With Disabilities identifies several principles and actions related to addressing safety and security concerns getting to, at transit stops and on transit.

Oregon Department of Transportation (ODOT)

Operating Speed The speed at which motor vehicles generally operate on that road.

Per Capita Or, per person. Used to describe crash rate per population. Except where otherwise noted, crash rates are per million residents.

Per vehicle miles traveled (VMT): Is used to describe crash rate per motorized vehicle miles. Except where otherwise noted, crash rates are per 100-million motorized vehicle miles travelled.

Performance Measure A process of assessing progress toward achieving predetermined goals, including information on the efficiency with which resources are transformed into goods and services (outputs), the quality of those outputs (how well they are delivered to clients and the extent to which clients are satisfied) and outcomes (the results of a program activity compared to its intended purpose), and the effectiveness of government operations in terms of their specific contributions to program objectives.

Portland Metro Region Comprised of twenty-five cities and the urbanized area of Clackamas, Multnomah and Washington Counties. Is the geographic scope of this document, and is defined as area within the Metropolitan Planning Area boundary.

Posted Speed Violations In Oregon, posted speeds set the maximum speed that can be traveled, violations can be either speed limit or basic rule.

Posted Speed The speeds indicated on signs along the roadway. When speeds differ from statutory speeds there must be a posted sign indicating the different speed.

⁵⁴ U.S. Department of Transportation, Federal Highway Administration Older Drivers and Pedestrians Special Rule. <https://safety.fhwa.dot.gov/hsip/older/>

Protected Bike Lanes (separated bike lane, cycle track) A bike lane that is physically separated from auto traffic, typically they are created using planters, curbs, parked cars, or posts and are essential for creating a complete network of bike-friendly routes. For bicyclists, safety increases significantly when there is physical separation from motorists through infrastructure. Fully protected bikeways can reduce bicycle injury risk up to 90 percent.⁵⁵ Another report found that on-street bike lanes that use barriers to physically separate bicyclists from motor vehicles are 89 percent safer than streets with parked cars and without bicycling infrastructure. When physical separation is not possible, infrastructure such as striped bike lanes, bicycle boulevards, and bike boxes help reduce the risk of conflict with motor vehicles.⁵⁶

Public Health The health of the population as a whole, especially as monitored, regulated, and promoted by the state.

Racial Equity When race can no longer be used to predict life outcomes and outcomes for all groups are improved.

Road Safety Audit A formal safety performance examination of an existing or future road or intersection by an independent multidisciplinary audit team. (23 CFR § 924.3).

Road Users A motorist, passenger, public transportation operator or user, truck driver, bicyclist, motorcyclist, or pedestrian, including a person with disabilities. (23 USC section 148)

Roadway Departure Crash A type of crash. As used in this plan, note that the roadway or lane departure definition excludes intersections, pedestrian-related, and bicycle-related crashes.

Regional Transportation Plan for a Metropolitan Planning Organization

Safety (transportation) Protection from death or bodily injury from a motor-vehicle crash through design, regulation, management, technology and operation of the transportation system.

Safe Routes to School A comprehensive engineering/education program focused on youth school travel that aims to create safe, convenient, and fun opportunities for children to walk and roll (bike, scooter, etc.) to and from schools. City or school district based programs incorporate evaluation, education, encouragement, engineering, enforcement, and equity with the goal of increasing walking and rolling to school.

Safe System Approach (otherwise known as Vision Zero, Towards Zero Deaths, Road to Zero or Sustainable Safety) Views human life and health as paramount to all else and should be the first and foremost consideration when designing a road network.

⁵⁵ “Route Infrastructure and the Risk of Injuries to Bicyclists: a Case-Crossover Study,” Teschke, et al. American Journal of Public Health, Vol. 102, No. 12, December 2012.

⁵⁶ A Right to the Road, p.48, GHSA, 2017.

Safety Data Includes, but is not limited to, crash, roadway, and traffic data on all public roads. For railway- highway grade crossings, safety data also includes the characteristics of highway and train traffic, licensing, and vehicle data. (23 CFR § 924.3)

Security (public and personal) Protection from intentional criminal or antisocial acts while engaged in trip making through design, regulation, management, technology and operation of the transportation system.

Serious Crash In this document refers to the total number of Fatal and Severe Injury (Injury A) crashes combined.

Severity A measurement of the degree of seriousness concerning both vehicle impact (damage) and bodily injuries sustained by victims in a traffic crash.

Strategic Highway Safety Plan (SHSP) A comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Side Guard for Trucks Vehicle-based safety devices designed to keep pedestrians, bicyclists, and motorcyclists from being run over by a large truck's rear wheels in a side-impact collision.

Social Equity The idea that all members of a societal organization or community should have access to the benefits associated with civil society – the pursuit of an equitable society requires the recognition that there are a number of attributes that give members of a society more or less privilege and that in order to provide equitable situations the impacts of these privileges (or lack thereof) must be addressed. For transportation, equity refers to fair treatment or equal access to transportation services and options. In the context of safety, transportation equity relates to improving the travel choices, the safety of travel and not unfairly impacting one group or mode of transportation. More specifically it means improved safety for all transportation options and lessening the risks or hazards associated with different choices of transportation.

Speed Limit Speed limits are limited to specific roadways such as interstates, roadways within city limits, and school speed zones. In addition, speed limits apply to certain types of vehicles on any roadway – large trucks, school buses and vehicles transporting children or workers.

Speeding Driving too fast for conditions and/or driving in excess of posted speed.

Speed-Related Crashes Attributes of crash include driving too fast for conditions and/or driving in excess of posted speed (note that duplicate crashes are not counted more than once).

Safety Priority Indexing System (SPIS) A systemic scoring method that identifies potential safety problems on state highways.

Spot Safety Improvement An improvement or set of improvements that is implemented at a specific location on the basis of location-specific crash experience or other data-driven means.

State Strategic Highway Safety Plan A comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

State Highway Safety Improvement Program A program of highway safety improvement projects, activities, plans and reports carried out as part of the Statewide transportation improvement program under section 135(g). (23 USC section 148)

Statutory Speeds Are posted as defined in statute (e.g., 25 mph on a neighborhood street) and any road authority may post applicable statutory speeds within their jurisdiction.

Statewide Transportation Improvement Program (STIP) Oregon Department of Transportation's capital improvement program for state and federally-funded projects.

Strategic Highway Safety Plan (SHSP) A comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systemic Safety Improvement An improvement or set of improvements that is widely implemented based on high-risk roadway features that are correlated with particular severe crash types.

Toward Zero Deaths A term analogous to Vision Zero.

Transportation Demand Management (TDM) Application of strategies and policies to reduce travel demand.

Transportation Planning Rule (TPR) Oregon's statewide planning goals established state policies in 19 different areas. The TPR implements the Land Conservation and Development Commission's Planning Goal 12 (Transportation) which requires ODOT, MPOs, Counties and Cities, per OAR 660-012-0015 (2) and (3), to prepare a Transportation System Plan (TSP) to identify transportation facilities and services to meet state, regional and local needs, as well as the needs of the transportation disadvantaged and the needs for movement of goods and services to support planned industrial and commercial development, per OAR 660-012-0030(1).

Transportation Safety Action Plan (TSAP)

Vision Zero A system and approach to public policy developed by the Swedish government which stresses safe interaction between road, vehicle and users. Highlighted elements include a moral imperative to preserve life, and that the system conditions and vehicle be adapted to match the capabilities of the people that use them.

Vehicle miles traveled (VMT) The number of vehicle mile traveled within a given geography and time frame.

Vulnerable Users In this document, refers to groups of people that are more vulnerable to being killed or severely injured in traffic crashes. Vulnerable users are people that are more vulnerable to being killed or seriously injured in crashes. Vulnerable users are pedestrians, bicyclists, motorcycle operators, children, older adults, road construction workers, people with disabilities, people of color and people with low income.

APPENDIX

2018 Metro State of Safety Report

Describes the data used in the analysis, the attributes of the data, and any data limitations. Describes the process Metro used to analyze the data. The 2018 Metro State of Safety Report presents the findings, identifying trends and relationships of serious crashes with environmental factors including roadway and land use characteristics and serves as the foundation for the Regional Safety Strategy.

Access online at: [to be added]

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Metro State of Safety Report

A compilation of information on roadway-related crashes, injuries, and fatalities
in the greater Portland region and beyond, 2011-2015 crash data

January 2018

Executive Summary

No death or life changing injury from a traffic crash is acceptable on our region's roadways, which is why Metro and regional partners are adopting a Vision Zero target for 2035 and implementing a safe systems approach to transportation safety.

The information in this State of Safety Report was used to inform the development of the 2018 Regional Transportation Safety Strategy and to develop performance measures to meet federal requirements required in the federal transportation bill MAP-21.

Between 2011 and 2015, there were 304 Fatal crashes in the Portland Metro region, killing 311 people, and an additional 2,102 crashes resulting in incapacitating injury. Nationwide, crashes killed an average of 33,305 people per year between 2011 and 2015, and roadway safety remains one of the most pressing health issues nationwide. The 8% increase in traffic deaths in 2015 is the highest increase in fifty years, and it is expected that the number of Serious crashes in 2016 and 2017 will be even higher. For young people between the ages of 5 and 24, motor vehicle crashes are the leading cause of death.

It is the Portland Metro region's adopted goal to progressively reduce the number of people killed or seriously injured on the region's roadways to zero by 2035. The purpose of this report is to document roadway crash data, patterns, and trends in the Portland Metro area and beyond to inform the pursuit of this goal. The Oregon Department of Transportation (ODOT) has assembled and distributed statewide crash data since 2007. This is a rich dataset, including numerous information fields for each geocoded crash, and is complemented by Metro's rich datasets of transportation infrastructure, transportation operations, and spatial data. The combination of these provides the opportunity of detailed analyses of the safety of the region's transportation system and land use patterns. Further, a large amount of US and international data is available to document national and international patterns and trends. This information is important to provide context for local data.

In 2010-2011, Metro staff worked with staff from cities and counties of the Metro region, ODOT, TriMet, and other local safety experts to develop a strategy for analyzing and summarizing this data from 2007 to 2009. The 2012 State of Safety report was the result of this collaboration. This report updates these findings, using the most recent five years of crash data – through 2015. It identifies trends and relationships of Serious crashes with environmental factors including roadway characteristics. This report provides the data for the update of the 2018 Regional Transportation Safety Action Plan.

The findings include:

- Nationally and in Oregon, fatalities have stabilized for automobile occupants and motorcyclists, while fatalities have been increasing for pedestrians and bicyclists. (*Section 1*)
- Higher levels of vehicle miles travelled (VMT) correlate with more Fatal and Serious crashes due to increased exposure. (*Section 1*)
- The Portland Metro region has less than half the annual fatalities per million residents compared to Oregon's and the national average. (*Section 1*)

- Arterial roadways comprise 73% of the region's Serious crashes, 77% of the Serious Pedestrian crashes, and 65% of the Serious Bicyclist crashes, while accounting for 12% of road miles. *(Sections 2, 5, and 6)*
- Alcohol or drugs were a factor in 57% of Fatal crashes. *(Section 2)*
- Excessive speed is a contributing factor in 33% of Fatal crashes, and aggressive driving is a factor in 34% of Fatal crashes. *(Section 2)*
- Seat belt use in the region as reported exceeds 99%. *(Section 2)*
- The percent of Serious crashes for male drivers age 70-79 and female drivers age 80-84 is double the regional average. *(Section 2)*
- Streets with more lanes have higher Serious crash rates per road mile and per VMT. This follows trends documented in AASHTO's Highway Safety Manual. *(Section 3)*
- Streets with more lanes have an especially high Serious crash rate for pedestrians, producing higher crash rates per mile and per VMT as compared to other modes. *(Section 5)*
- The most common Serious crash types were Turning and Rear End. For Fatal crashes, the most common types were Pedestrian and Fixed Object. *(Section 3)*
- Serious Pedestrian crashes are disproportionately represented after dark. While 39% of all Serious crashes happen at night, 64% of Serious Pedestrian crashes happen at night. *(Section 5)*

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Introduction

It is the Portland Metro region's adopted goal to progressively reduce the number of people killed or seriously injured on the region's roadways to zero by 2035. Part of a safe systems approach to transportation safety is to use a 'data-driven' approach identify what causes crashes and strategies and actions to address those causes.

The purpose of this report is to document roadway crash data, patterns, and trends in the Portland Metro area and beyond to inform the pursuit of this goal. The Oregon Department of Transportation (ODOT) has assembled and distributed statewide crash data since 2007. This is a rich dataset, including numerous information fields for each geocoded crash, and is complemented by Metro's rich datasets of transportation infrastructure, transportation operations, and spatial data. The combination of these provides the opportunity of detailed analyses of the safety of the region's transportation system and land use patterns.

Further, a large amount of US and international data is available to document national and international patterns and trends. This information is important to provide context for local data.

Methodology

In this report, crashes are broken down by a number of factors contained in the dataset provided by ODOT.

- Injury Type: Each crash is identified by the worst injury incurred in the crash: Fatal, Injury A (incapacitating), Injury B (moderate), Injury C (minor) or Property Damage Only (PDO). This report largely focuses on Fatal/Incapacitating crashes (the sum of Fatal and Injury A), referred to as 'Serious Crashes' throughout this report. These are the types of crashes that the region is primarily focused on eliminating.
- Location
- Date and Time
- Weather and Pavement Conditions
- Roadway Location: the location on the roadway system allows data from Metro's mapping databases to be attributed to the crash.
- Contributing Factors: These include speeding, alcohol, drugs, school zone, work zone, and hit and run.

ODOT's crash data is reliant on crash information collected by police. Quality of crash data is dependent upon thoroughness of information collected at the crash scene. ODOT checks the data for quality and geo-codes the data to the street network. This process results in Metro acquiring the crash data one to one and half years later.

Metro's mapping database includes:

- Roadway data, such as speed, geometry, traffic volumes, traffic congestion, transit routes, bicycle routes, and sidewalk inventory
- Spatial data, such as land use, population, density, socioeconomic factors, and walkability

Note that many figures in this document are in color, and while colors are generally selected to be legible when printed in black and white, they are most readable in full color.

Definitions

Terms that are used throughout this report are defined as follows:

“Portland Metro region” is the scope of this study, and is defined as the area within the Metropolitan Planning Area (MPA) as of December 31, 2016. The MPA is slightly larger than the Urban Growth Boundary (UGB).

“Serious Crashes” in this report refers to the total number of Fatal and Injury A crashes. The words “Serious” and “Fatal” are capitalized throughout the report for emphasis.

“Injury A” and **“Incapacitating injury”** are used interchangeably. Incapacitating injuries typically are injuries that the victim is not able to walk away from. They are synonymous with the term **“Severe injury”**

“Injury B” and **“Moderate injury”** are used interchangeably.

“Injury C” and **“Minor injury”** are used interchangeably.

Per capita is used to describe crash rate per population. Except where otherwise noted, crash rates are per million residents.

Per VMT is used to describe crash rate per vehicle miles. Except where otherwise noted, crash rates are per 100-million vehicle miles travelled.

Arterial is a functional classification for surface streets. AASHTO defines arterials from the motor vehicle perspective as providing a high degree of mobility for the longer trip lengths and high volumes of traffic, ideally providing a high operating speed and level of service and avoiding penetrating identifiable neighborhoods.

Collector is a functional classification for surface streets. AASHTO defines collectors as providing both land access and traffic circulation within neighborhoods and commercial and industrial areas. The role of the collector system, from the motor vehicle perspective, is to distribute traffic to and from the arterial system.

Local is a functional classification for surface streets that includes all public surface streets not defined as arterial or collector. Local streets are typically low-speed streets with low traffic volumes in residential areas, but also include similar streets in commercial and industrial areas.

Section 1 – Regional, State, National, and International Trends

Data from the National Highway Traffic Safety Administration (NHTSA) were compiled and analyzed along with population data from the US Census to identify trends in national, state, regional and city crashes. NHTSA summarizes traffic fatality data by state and by major city, including number of fatalities, fatalities per capita and per vehicle-miles travelled (VMT), and by travel mode. Five years of data between 2011 and 2015 were generally considered for this analysis, while longer term trends were identified where additional earlier years of data were available.

Travel and Fatality Patterns: US and Oregon

Travel patterns in the US have changed in the last decade due to a variety of external factors. While the population has continued to increase, VMT per capita and absolute VMT have declined. Roadway fatality rates declined after 2005, but have increased significantly since 2010. In Oregon, these trends have been consistent with national patterns, although fatalities in Oregon increased more dramatically since 2013. This rapid increase does not appear to be a statistical outlier as the trend has continued in 2016 and 2017 (official data is not yet available for 2016-17). Figures 1-1 and 1-2 show the national and state trends of population, VMT, and crash-related fatalities.

Figure 1-1

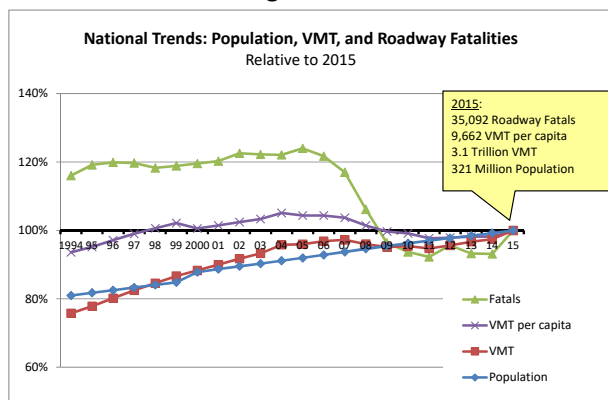
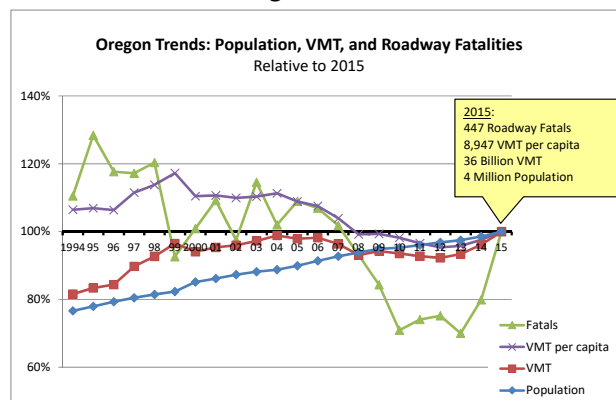


Figure 1-2



It is common practice to normalize roadway fatality rates by both population and traffic volumes.

Normalization by population is useful in measuring the overall safety of the roadway system.

Normalization by traffic volumes is useful in measuring the safety per distance travelled. Figures 1-3 and 1-4 show national and state trends for fatalities and fatality rates.

Figure 1-3

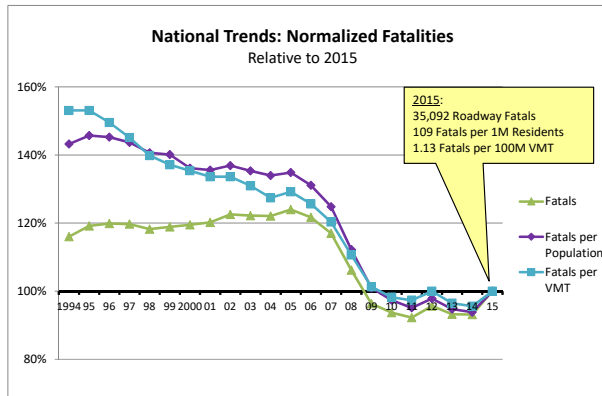
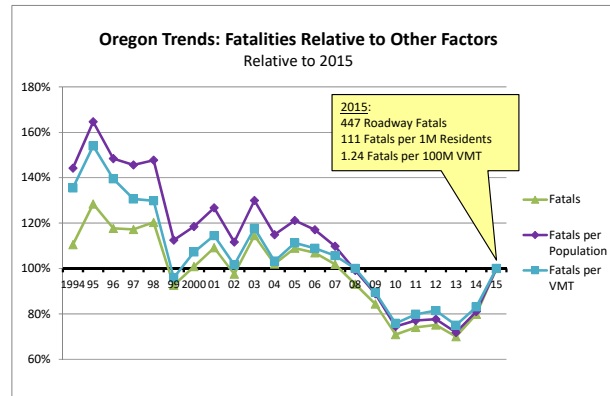


Figure 1-4



Total fatalities, fatalities per capita, and fatalities per VMT are all generally decreasing over time, although there has been a notable uptick since 2010. The increases in Oregon since 2013 are more pronounced than national trends.

Fatality Patterns by Mode: US and Oregon

The NHTSA data are broken out by mode: automobile occupants, motorcyclists, bicyclists, and pedestrians. Figures 1-5 and 1-6 show the recent national and state trends for each mode.

Figure 1-5

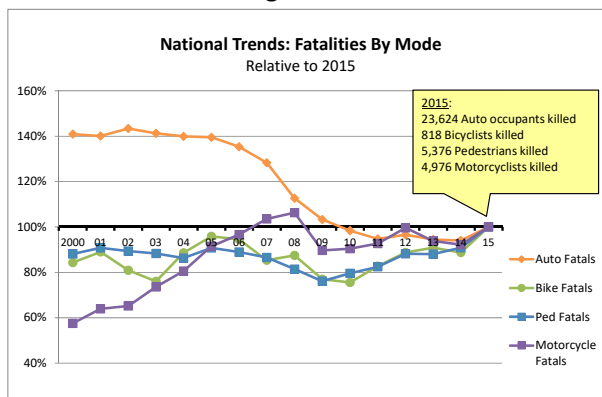
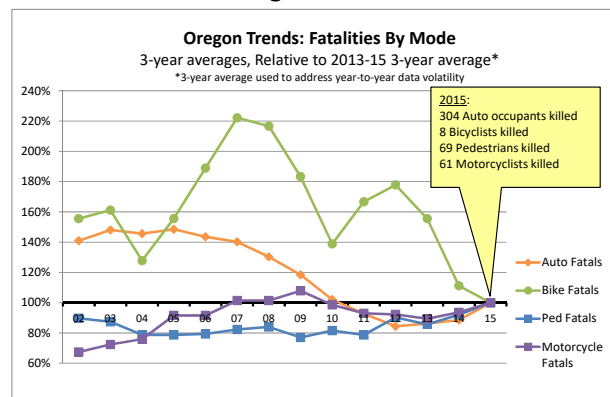


Figure 1-6



Fatalities have recently stabilized nationally for automobile occupants and motorcyclists, while fatalities have been increasing nationally for pedestrians and bicyclists. The decrease in fatalities for people in automobiles is likely due to advancements in vehicle technology, such as air bags.

Annual Vehicle-Miles Traveled (VMT)

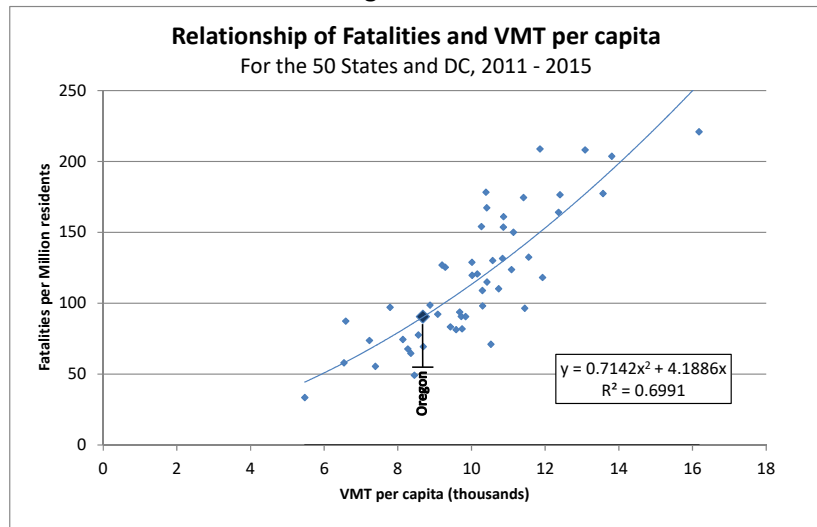
One of the clearest trends in crash data nationally and locally, is the correlation between fatality rates and annual per capita VMT. Figure 1-7 shows the relationship by US state for all fatalities, and Figure 1-8 shows the relationship for pedestrian or bicyclist fatalities.

States with higher per capita VMT typically also have higher per capita fatality rates, as the typical exposure to risk is increased. A polynomial equation with a good R-squared value can be fitted to the relationship between roadway fatalities and VMT, and is shown in Figure 1-7.

All Fatalities

It is apparent from the data that states with more auto travel typically exhibit higher fatality rates. The District of Columbia has the lowest per capita VMT at 5,480, and exhibits the lowest annual fatality rate of 33 per million residents – less than one-third of the national average. Of the states, Massachusetts has the lowest fatality rate, with the 7th lowest per capita VMT. Wyoming, with the highest per capita VMT of 16,200, also has the highest annual fatality rate at 221 per million residents – more than double the national average.

Figure 1-7



As with the 2012 State of Safety report, which looked at 2005 – 2009 data, a polynomial equation with a good R-squared value can be generated for the VMT-fatality relationship by setting the intercept to zero. While the equation is likely to vary slightly year-to-year, the relationship appears to be permanent. The relationship for 2011 – 2015 data is shown in Figure 1-7.

The national average is 9,500 VMT per capita and 105 fatalities per million residents.

Oregon statistics are 8,680 VMT per capita (91% of the national average) and 90 fatalities per million residents (86% of the national average).

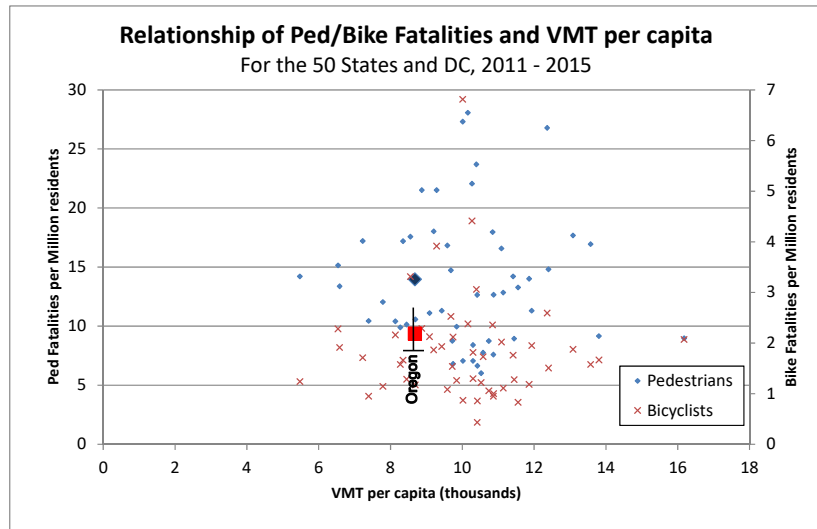
Pedestrian/Bicyclist Fatalities

The relationship between statewide VMT per capita and pedestrian/bicyclist fatalities is unclear. As can be seen in Figure 1-8, the data are scattered, and unlike the overall fatality data, no clear trend exists. This may be due to the complex relationships at play – higher VMTs can make pedestrian/bicyclist travel more dangerous, but discourage travel by these modes thereby reducing pedestrian/bicyclist exposure.

The national average (2011 – 2015) is 15.3 pedestrians killed in crashes per million residents and 2.3 bicyclists killed in crashes per million residents.

Oregon crash statistics are 14.0 pedestrians killed per million residents (91% of the national average) and 2.2 cyclists killed per million residents (94% of the national average).

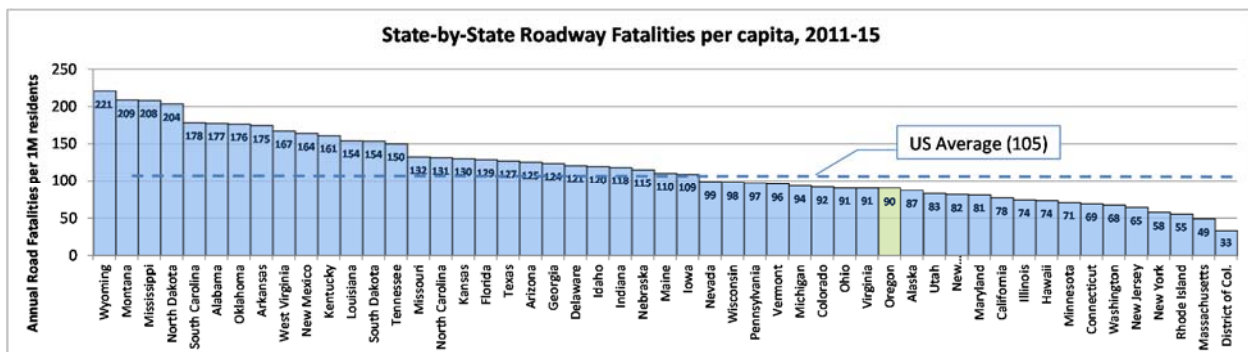
Figure 1-8



State-by-State Fatality Trends

Figure 1-9 shows the per capita fatality rate by state. Oregon is slightly better than the US average.

Figure 1-9



European Data

Data from the EU Road Federation's publication "European Road Statistics" were compiled in order to provide a comparison to US data. European practices are often considered as a best practice as their transportation systems are generally safer and more efficient than US systems.

Figures 1-10 and 1-11 present European roadway fatality rates per capita and per VMT.

Of the 28 EU countries, 22 of them exhibit lower rates of roadway fatality per capita than the US average. On a per-VMT basis, 19 of them exhibit lower fatality rates than the US average.

Figure 1-10

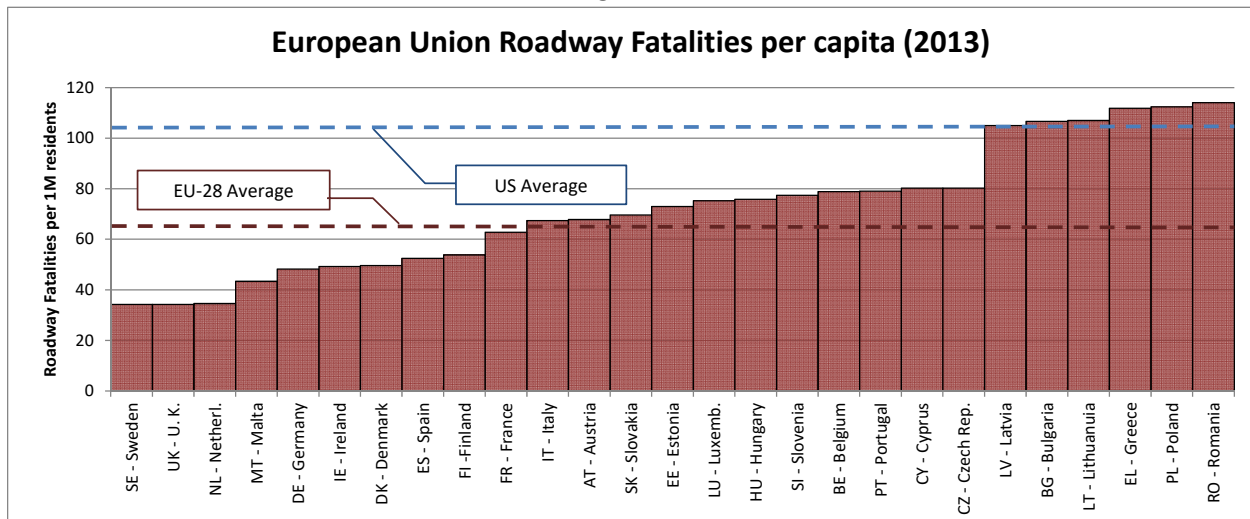
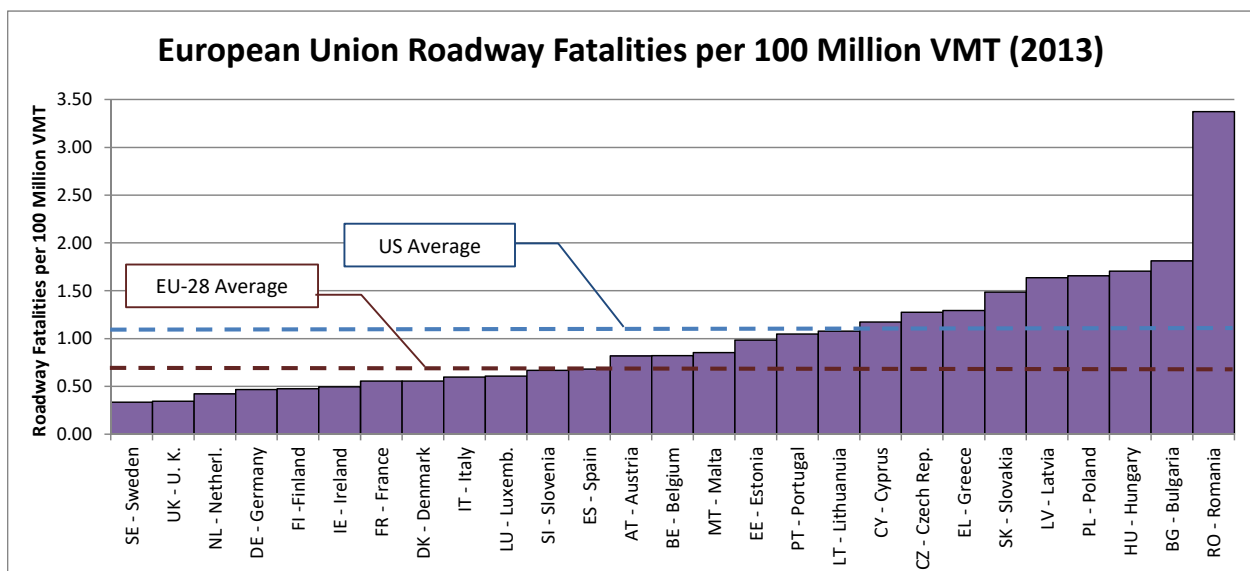


Figure 1-11

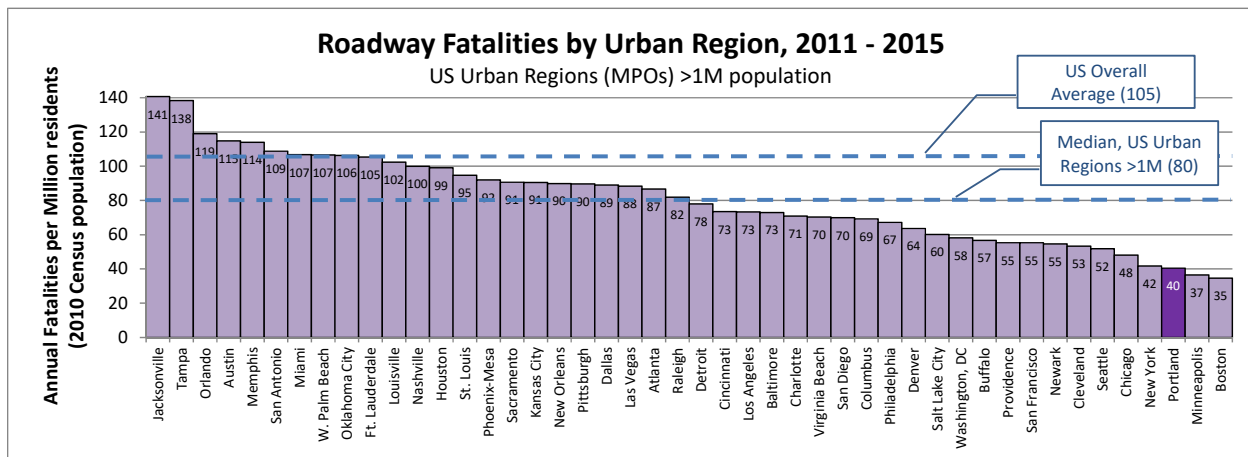


European countries appear to be limiting roadway fatalities both by managing safer roadways and developing transportation systems and development patterns which require less driving.

Urban Region Fatality Trends

Crash and population data was reviewed for the urban regions in the US (using Metropolitan Planning Organization boundaries), using FHWA's Roadway Safety Data Dashboards. A comparison was made of the large urban regions – those with populations of over 1 million people as of the 2010 Census. Figure 1-12 shows the per capita fatality rate by urbanized region. Note that the rate is slightly overstated since it is based on fatal crashes between 2011 and 2015 compared to a 2010 population due to the limited availability of regional population data. Roadway fatalities per capita in the Portland Metro region are less than 40% of the US average and less than half the State of Oregon's average.

Figure 1-12



Fatality rates

The worst regions in the nation for overall fatality rates are concentrated in Florida and the Sun Belt, where driving is the completely dominant mode of travel. The safest regions in the nation for overall fatality rates are Boston, Minneapolis-St. Paul, Portland, New York, and Chicago. In general, the safest urban regions are those that exhibit dense urban environments and higher usage of non-auto travel modes.

US City Data

NHTSA data include counts of all fatalities and pedestrian fatalities in US cities. This information is of special interest for this report given that the the Portland Metro region is highly urbanized and that the adopted growth concepts call for accomodating growth by increasing urbanization.

The figures below summarize overall fatality rates and pedestrian fatality rates for the best and worst 15 cities with population above 300,000. The figures are five-year averages (2011 – 2015). Asterisks (*) indicate that the city was also in the best or worst 15 for the 2012 State of Safety report, which looked at 2005 – 2009 data. There is a high degree of consistency between the best and worst cities between the two reports despite the differing analysis periods, indicating an established long-term relationship.

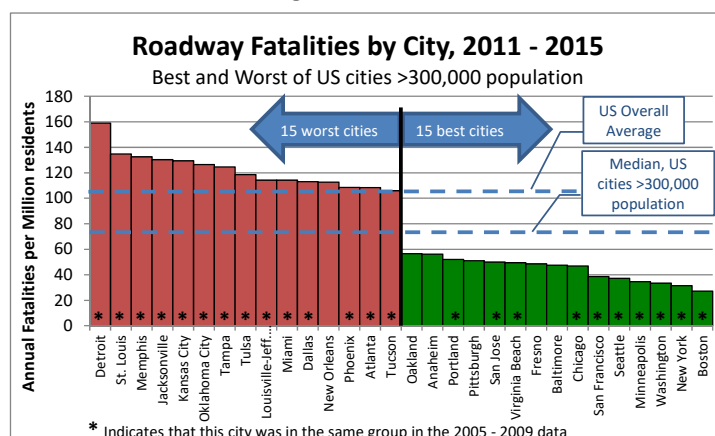
Overall fatality rates

The worst cities in the nation for overall fatality rates are Detroit, St. Louis, Memphis, Jacksonville, and Kansas City MO. In general, the worst cities are in states which have higher levels of VMT per capita, such as Michigan, Missouri, Florida, Texas, Oklahoma, and Arizona.

The safest cities in the nation in terms of roadway fatalities per capita are Boston, New York, Washington DC, Minneapolis, and Seattle. In general, the safest cities are those that exhibit dense urban environments and higher usage of non-auto travel modes.

As of 2014, the city of Portland ranks well in this list, at 13th best out of the 65 cities of population 300,000 or more. In the prior State of Safety report, Portland ranked 8th best.

Figure 1-17

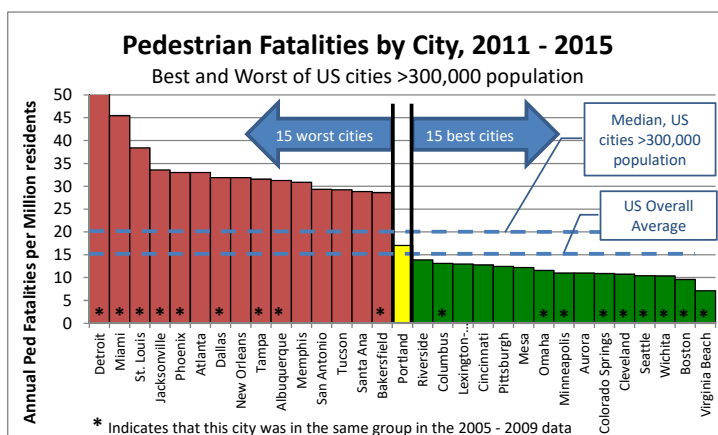


Pedestrian fatality rates

The worst cities in the nation for pedestrian crash fatality rates are Detroit, Miami, St. Louis, Jacksonville, and Phoenix. Many of the most dangerous cities for pedestrians are in states which have higher levels of VMT per capita.

The safest cities in the nation for pedestrians per capita in terms of crash fatalities are Virginia Beach, Boston, Wichita, Seattle, and Cleveland. The city of Portland ranks in the middle of the pack, at 43rd of the 65 cities of population 300,000 or more.

Figure 1-18



Discussion

In general, overall fatality rates per capita in cities are less than the national average for all areas. For example, the city of Portland's average annual fatality rate of 52 fatalities per million residents is much less than the national average of 105 and the Oregon statewide average of 90. Fifteen of the 65 cities exhibited crash fatality rates above the overall national average, with 50 exhibiting crash fatality rates below the national average.

This is likely due to a number of factors including fewer miles driven per capita due to the proximity of services, and the lower speeds of urban streets compared to rural highways, resulting in lower crash severity.

In general, cities which are more urban and which have lower levels of VMT per capita show substantially lower overall crash fatality rates. Those which have invested disproportionately in auto infrastructure, and therefore have higher VMT per capita, exhibit higher crash fatality rates.

Regarding pedestrian fatality rates, the relationships are complex, as cities with better pedestrian infrastructure encourage use by people walking, thereby increasing exposure. So while it may be safer to walk a given distance, the increased walking that results may increase pedestrian exposure and thus pedestrian crashes. Increasing walking may lead to more pedestrian fatalities because of the increased exposure but fewer overall fatalities because of the reduced VMT.

Cities which have managed to consistently demonstrate both low overall fatality rates and low pedestrian fatality rates include Boston, Seattle, Virginia Beach, and Minneapolis.

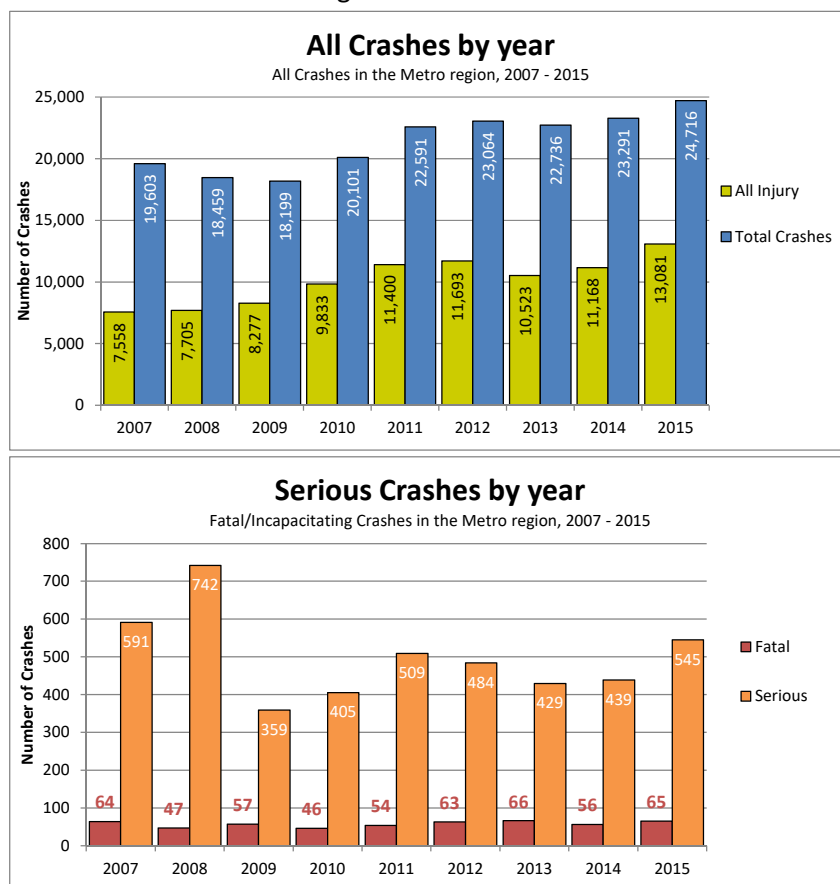
Section 2 – All Crashes

This section summarizes all crashes occurring in the Portland Metro region. The term “Serious crashes” refers to all Fatal or incapacitating injury (Injury A) crashes.

Crashes By Year

Year	Total Crashes	Fatal Crashes (Fatalities)	Injury A Crashes	Injury B Crashes	Injury C Crashes	All Injury Crashes (Injuries)	Serious Crashes
2011	22,591	54 (54)	455	2,487	8,404	11,400	509
2012	23,064	63 (66)	421	2,654	8,555	11,693	484
2013	22,736	66 (68)	363	2,428	7,666	10,523	429
2014	23,291	56 (57)	383	2,512	8,217	11,168	439
2015	24,716	65 (66)	480	2,655	9,881	13,081	545
METRO	116,398	304 (311)	2,102	12,736	42,723	57,865 (81,718)	2,406

Figures 2-1 and 2-2



Total reported crashes and injury crashes have increased since 2007 (Figure 2-1). Fatal and Serious crashes have fluctuated since 2007, but have more recently been increasing (Figure 2-2). Data prior to 2011 is included where available.

Metro crash rates compared to other places

2011-2015	Population (2015)	Annual VMT (2015)	Annual Injury crashes		Annual Serious crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Metro	1,603,229	10,437,000,000	7,219	111	300	4.6

2011 - 2015	Average Annual Fatalities	Population (2015)	Annual VMT (2015)	Annual Fatality rate per 1M residents	Fatality rate per 100M VMT
Metro	62.2	1,603,229	10,437,000,000	39	0.60
<i>Median, regions >1M pop*.</i>				78	n/a
City of Portland	31.8	620,540	4,303,000,000	51	0.74
<i>Median, cities >300,000 pop.*</i>				72	n/a
Oregon	356	4,028,977	36,000,000,000	88	0.99
Oregon excl. Metro region	294	2,425,748	25,562,000,000	121	1.15
<i>US</i>	<i>35,092</i>	<i>321,418,820</i>	<i>3,095,373,000,000</i>	<i>109</i>	<i>1.13</i>
UK**	2,123	64,128,226	520,600,000,000	33	0.41
EU – 28**	32,463	506,592,457	4,322,500,000,000	64	0.75

* All data for other regions and cities is 2010 - 2014

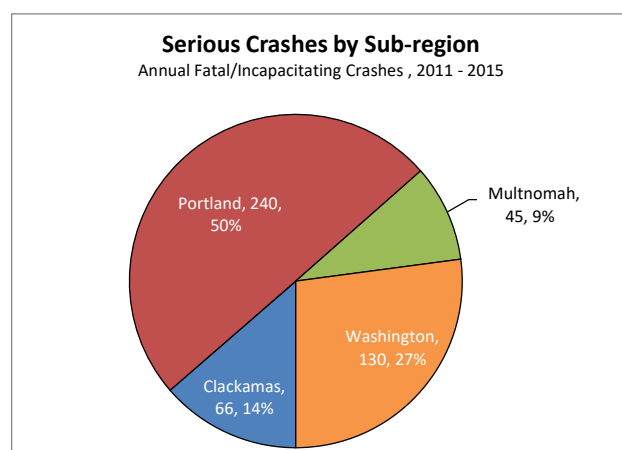
** All data for UK and EU is for year 2013

The City of Portland, the Portland Metro region, and the State of Oregon all have fatality rates below the national average. The fatality rates in the State of Oregon when the Metro region is excluded from consideration are higher than the national average. The United Kingdom and European Union data are included for reference as international best practice.

By Sub-Region

Sub-Region	2011-2015 Annual Crashes						
	All	Fatal (Fatalities)	Injury A	Injury B	Injury C	All Injury	Serious
Clackamas	3,482	10.2 (10.4)	55	395	1,362	1,822	66
Portland	11,475	31.2 (31.8)	209	1,216	4,078	5,534	240
Multnomah (excl. Portland)	1,870	6.2 (6.2)	39	245	727	1,017	45
Washington	6,452	13.2 (13.6)	117	692	2,378	3,200	130
METRO	23,280	60.8 (62.2)	420	2,547	8,545	11,573	481

Figures 2-3 and 2-4



Map of Metro Sub-regions

Sub-Region	Population (2015)	Annual VMT (2015)	Annual Injury crashes		Annual Serious crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Clackamas	290,630	2,102,000,000	6,269	87	226	3.1
Portland	620,540	4,303,000,000	8,918	129	387	5.6
Multnomah (excl. Portland)	152,611	744,000,000	6,664	137	296	6.1
Washington	539,448	3,287,000,000	5,932	97	242	4.0
METRO	1,603,229	10,437,000,000	7,219	111	300	4.6

With the highest population and VMT, Portland has the largest share of the region's Serious crashes (Figure 2-3). Portland has the highest rate of Serious crashes per capita, while Multnomah (excludes Portland) has the highest rate of Serious crashes per VMT. Clackamas County has the lowest rate of Serious crashes per capita and per VMT.

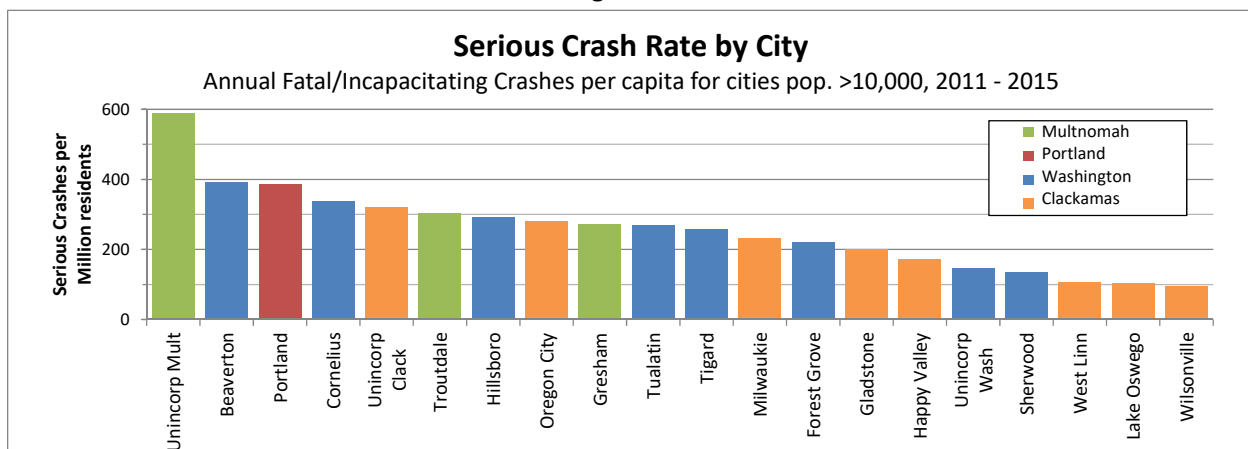
By City

City	2011-2015 Annual Crashes						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Beaverton	1,987	3.0	35	179	729	946	38
Cornelius	101	0.0	4	11	37	52	4
Durham	13	0.0	0	1	6	7	0
Fairview	88	0.2	1	13	35	49	1
Forest Grove	137	0.6	5	19	45	69	5
Gladstone	136	0.4	2	16	51	70	2
Gresham	1,356	3.4	27	170	546	747	30
Happy Valley	221	1.0	3	28	91	123	4
Hillsboro	1,413	3.6	26	177	545	751	29
Johnson City	0	0.0	0	0	0	0	0
King City	9	0.0	0	1	1	2	0
Lake Oswego	282	0.0	4	29	96	130	4
Maywood Park	27	0.0	1	2	12	15	1
Milwaukie	210	0.4	5	28	77	109	5
Oregon City	588	1.8	8	62	232	304	10
Portland	11,479	31.2	209	1,216	4,079	5,536	240
Rivergrove	1	0.0	0	0	0	0	0
Sherwood	160	0.2	2	18	58	79	3
Tigard	935	1.6	12	91	353	457	13
Troutdale	167	0.8	4	22	63	89	5
Tualatin	486	0.4	7	50	199	256	7
West Linn	213	0.6	2	23	78	104	3
Wilsonville	218	0.0	2	23	76	102	2
Wood Village	67	0.2	1	7	24	32	1
Unincorp Clack	1,651	6.0	30	187	670	893	36
Unincorp Mult	155	1.6	4	29	45	81	6
Unincorp Wash	1,180	3.8	26	144	397	571	30
METRO	23,280	60.8	420	2,547	8,545	11,573	481

These two tables and the accompanying Figure 2-5 summarize crash data within the region by City and for the unincorporated sections of each of the three counties. Crash rates were determined per capita but not per VMT, as the VMT estimates for the smaller cities are not considered reliable enough for such an analysis.

City	Population (2015)	2011-2015 Annual crashes	
		All Injury per 1M residents	Serious per 1M residents
Beaverton	96,704	9,782	393
Cornelius	12,389	4,230	339
Durham	1,430	4,895	0
Fairview	9,357	5,194	150
Forest Grove	23,630	2,903	220
Gladstone	11,990	5,805	200
Gresham	111,716	6,683	272
Happy Valley	20,835	5,894	173
Hillsboro	100,109	7,506	292
Johnson City	588	0	0
King City	3,817	576	52
Lake Oswego	38,156	3,397	105
Maywood Park	809	19,036	1,236
Milwaukie	21,365	5,121	234
Oregon City	35,004	8,673	280
Portland	620,540	8,921	387
Rivergrove	321	623	0
Sherwood	19,012	4,134	137
Tigard	51,642	8,849	259
Troutdale	16,486	5,411	303
Tualatin	26,617	9,625	271
West Linn	26,267	3,967	107
Wilsonville	22,932	4,448	96
Wood Village	4,056	7,988	247
Unincorp Clack	113,172	7,889	320
Unincorp Mult	10,187	7,932	589
Unincorp Wash	204,098	2,796	147
METRO	1,603,229	7,219	300

Figure 2-5



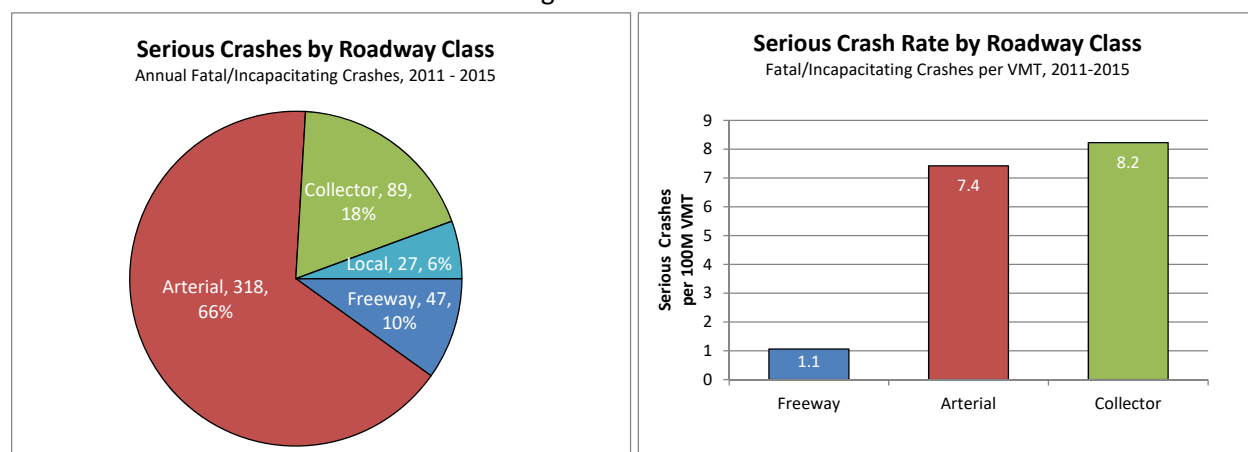
By Roadway Classification

Roadway Classification	2011-2015 Annual Crashes							Percent Serious
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious	
Freeway	3,688	4.4	43	301	1,454	1,802	47	1.3%
Arterial	14,463	41.8	276	1,606	5,605	7,529	318	2.2%
Collector	3,609	12.6	76	476	1,140	1,705	89	2.5%
Local	1,519	2.0	25	164	345	536	27	1.8%
METRO	23,280	60.8	420	2,547	8,545	11,573	481	2.1%

Roadway Classification	Total Road-Miles	Annual VMT (2015)	Annual Crashes per Road-Mile		Annual Crashes per 100M VMT	
			All Injury	Serious	All Injury	Serious
Freeway	304	4,455,000,000	5.9	0.16	40	1.1
Arterial	772	4,281,000,000	9.8	0.41	176	7.4
Collector	994	1,081,000,000	1.7	0.09	158	8.2
Local	4,565	620,000,000*	0.1	0.01	87	4.3
METRO	6,635	10,437,000,000	1.7	0.07	111	4.6

* VMT for local streets is a low-confidence estimate

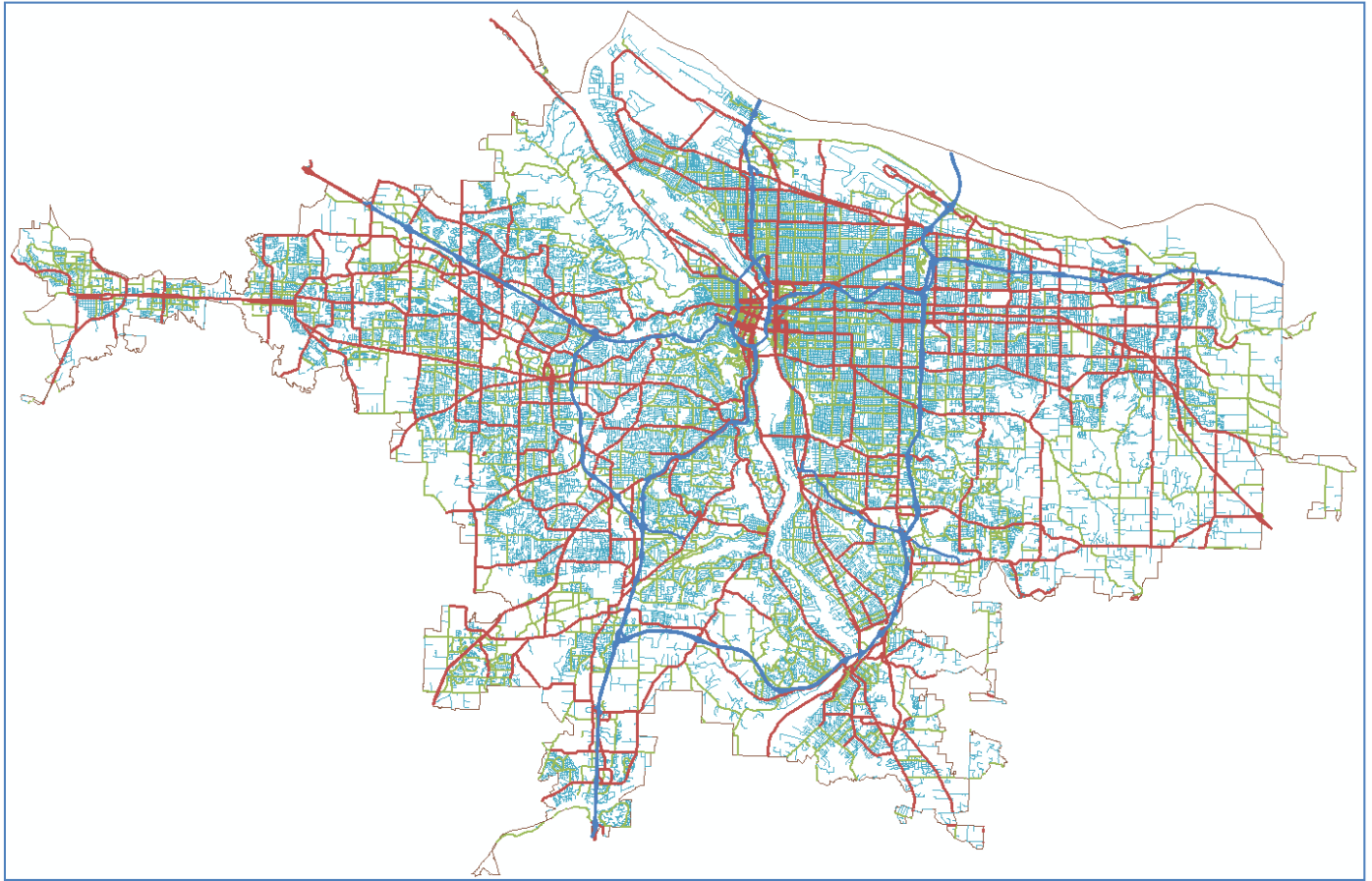
Figures 2-8 and 2-9



A review of the distribution of the region's Serious crashes by roadway classification reveals one of the most conclusive relationships in this study. Arterial roadways are the location of the majority of the Serious crashes in the region (Figure 2-8). A similar relationship is evident for pedestrians and cyclists, as detailed in Sections 5 and 6. Freeways and their ramps are relatively safe, per mile travelled, compared to arterial and collector roadways (Figure 2-9).

Figure 2-10 presents the functional classification of the region's roadways. Blue are freeways, red are arterial roadways, green are collectors roadways, and light blue are local.

Figure 2-10



Map of Roadway Functional Classifications

By Mode

Year	Pedestrians		Bicyclists		Autos Only		Motorcycle		Truck Involved	
	All Injury	Serious	All Injury	Serious	All Injury	Serious	All Injury	Serious	All Injury	Serious
2011	418	65	481	32	10,502	412	312	72	250	20
2012	511	88	560	37	10,622	359	353	63	277	16
2013	428	67	485	33	9,607	327	356	76	238	11
2014	480	81	509	38	10,179	320	302	55	281	22
2015	474	81	477	35	12,129	429	339	86	320	19
METRO	2,311	382	2,512	175	53,039	1,847	1,662	352	1,366	88

Figures 2-11 and 2-12

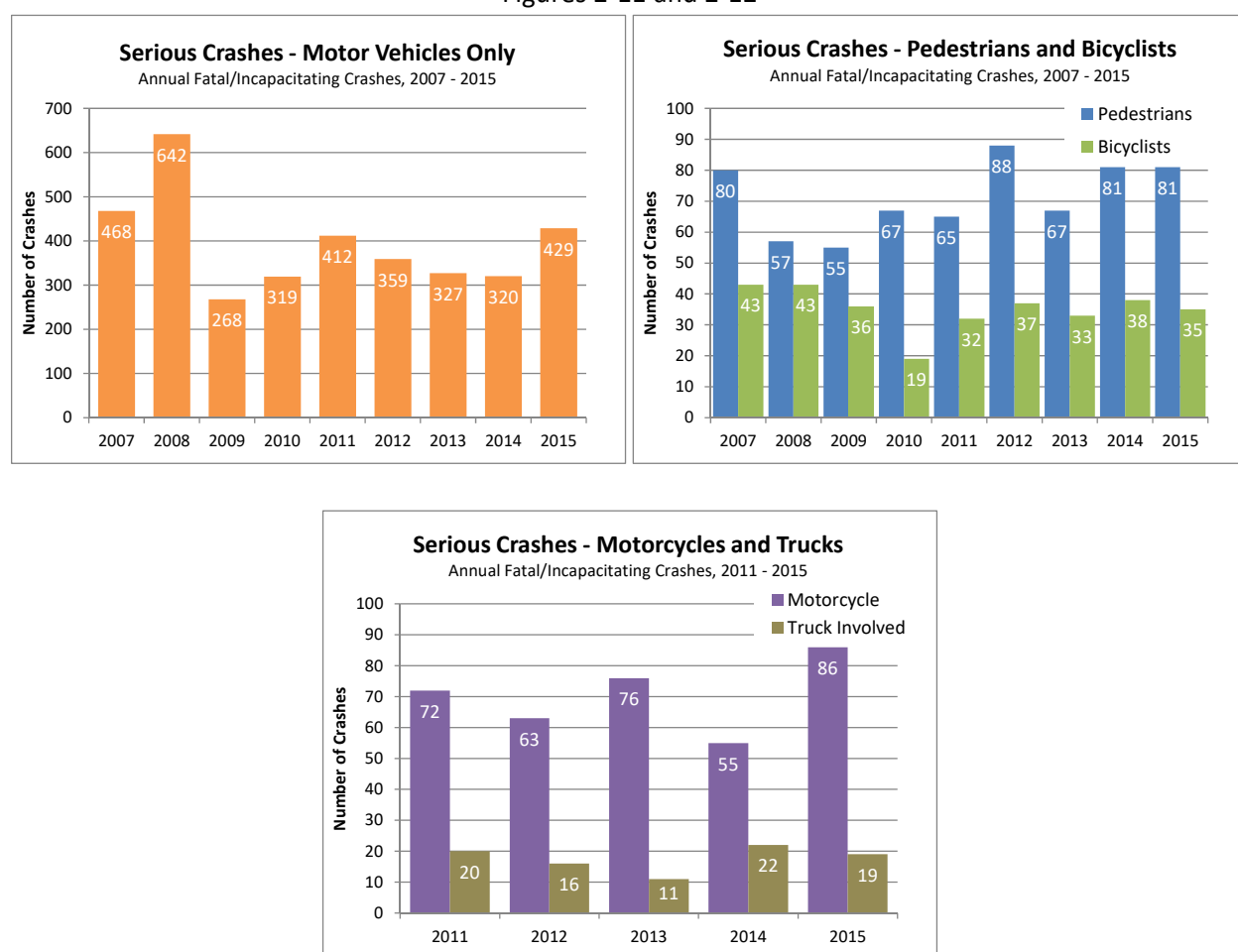


Figure 2-13

Figure 2-11 presents the annual number of Serious crashes involving only motor vehicles (no pedestrians or cyclists). Figure 2-12 presents the annual number of Serious crashes involving pedestrians and cyclists. Figure 2-13 presents the annual number of Serious crashes involving motorcycles and large trucks. Data prior to 2011 is included where available.

By Month

Month	2011-2015 Annual Crashes	
	All	Serious
January	1,787	39
February	1,679	36
March	1,788	36
April	1,859	33
May	1,881	38
June	1,922	43
July	1,922	44
August	1,971	47
September	1,995	45
October	2,200	39
November	2,102	41
December	2,173	41
12 MONTHS	23,280	481

Figure 2-14

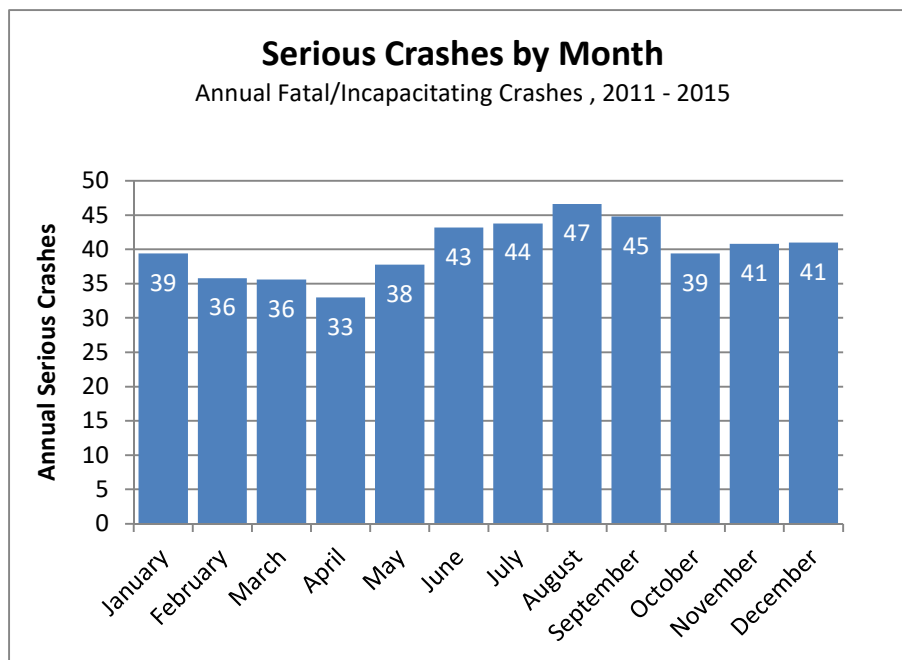


Figure 2-14 presents the annual average number of Serious crashes by month. No clear trend is evident.

By Time of Day

Figure 2-15

Serious Crashes by Day of Week and Hour Annual Fatal/Incapacitating Crashes, 2011 - 2015											
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Hour	Avg Wkday	Avg Wkend
12 AM	2.2	1.8	0.8	0.6	1.8	1.8	3.0		12 AM	1.4	2.6
1 AM	2.6	2.0	0.8	1.6	0.6	1.6	2.0		1 AM	1.3	2.3
2 AM	4.8	0.6	1.0	1.8	1.2	2.8	3.6		2 AM	1.5	4.2
3 AM	1.2	0.6	0.4	0.8	0.6	1.2	2.0		3 AM	0.7	1.6
4 AM	1.4	0.2	1.2	0.6	0.2	0.2	0.6		4 AM	0.5	1.0
5 AM	0.6	1.2	1.2	1.0	1.4	1.8	0.8		5 AM	1.3	0.7
6 AM	0.8	1.8	1.4	3.0	1.8	2.8	0.6		6 AM	2.2	0.7
7 AM	2.8	2.6	3.0	4.2	2.8	2.6	1.8		7 AM	3.0	2.3
8 AM	0.6	3.2	2.4	4.2	3.4	3.0	1.0		8 AM	3.2	0.8
9 AM	1.6	1.6	2.8	2.2	2.8	2.4	1.2		9 AM	2.4	1.4
10 AM	2.0	2.0	2.6	2.4	3.2	2.0	3.4		10 AM	2.4	2.7
11 AM	2.2	2.6	2.6	3.0	3.0	5.0	3.0		11 AM	3.2	2.6
12 PM	3.0	2.0	1.8	3.4	4.8	4.8	3.6		12 PM	3.4	3.3
1 PM	3.0	3.2	4.2	3.4	3.0	4.2	4.2		1 PM	3.6	3.6
2 PM	3.6	5.6	4.6	3.0	4.2	3.0	2.8		2 PM	4.1	3.2
3 PM	4.2	4.8	5.6	4.6	4.4	5.4	5.4		3 PM	5.0	4.8
4 PM	2.8	6.2	5.8	6.6	5.8	5.2	2.8		4 PM	5.9	2.8
5 PM	4.6	5.0	7.8	7.4	6.4	6.6	5.0		5 PM	6.6	4.8
6 PM	3.4	4.8	5.0	5.0	5.2	5.8	5.2		6 PM	5.2	4.3
7 PM	3.0	3.2	4.2	3.8	5.0	4.6	4.8		7 PM	4.2	3.9
8 PM	3.4	1.4	2.8	2.0	2.2	2.2	2.6		8 PM	2.1	3.0
9 PM	2.6	3.2	2.4	3.6	3.8	3.6	1.8		9 PM	3.3	2.2
10 PM	1.8	2.0	1.8	2.8	2.6	3.0	3.4		10 PM	2.4	2.6
11 PM	1.4	1.2	1.4	2.0	1.6	2.8	1.8		11 PM	1.8	1.6
	Sun	Mon	Tue	Wed	Thu	Fri	Sat			Avg Wkday	Avg Wkend
All Day	59.6	62.8	67.6	73.0	71.8	78.4	66.4		All Day	70.7	63.0

Figure 2-15 presents the rate of Serious crashes by day of the week and hour of the day using a “heat map” format. Dark cells indicate the highest relative crash time periods; light cells indicate the lowest relative crash time periods. The average weekday and weekend day are summarized on the right side of the figure, while each day is summarized and compared at the bottom of the figure.

The weekday evening peak hours produce the highest number of Serious crashes, with the 5:00 – 5:59 pm hour as the worst. Late Friday night/early Saturday morning and late Saturday night/early Sunday morning also stand out with high rates of Serious crashes.

By Weather

Weather	2011-2015 Annual Crashes	
	All	Serious
Cloudy/Clear	17,658	384
Rain/Fog	4,462	84
Sleet/Snow	189	3
Unknown	970	10
METRO	20,947	481

The majority (80%) of Serious crashes occurred in clear or cloudy conditions (Figure 2-16).

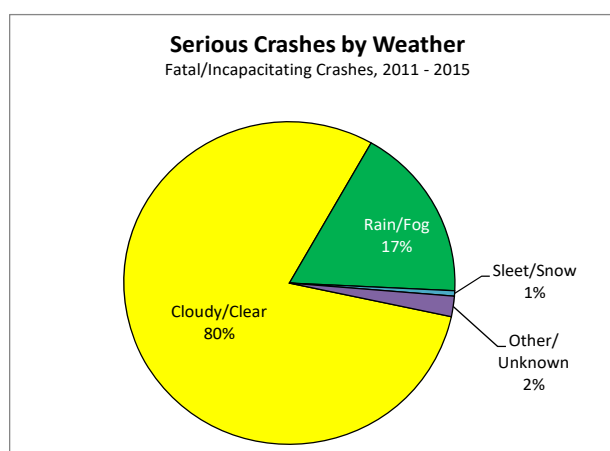


Figure 2-16

By Road Surface Condition

Road Condition	2011-2015 Annual Crashes	
	All	Serious
Dry	16,378	349
Ice/Snow	342	6
Wet	5,715	120
Unknown	844	6
METRO	20,947	481

The majority (73%) of Serious crashes occurred in dry conditions (Figure 2-17).

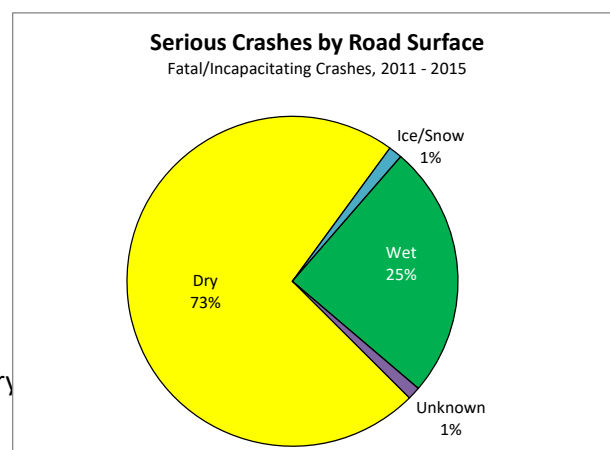


Figure 2-17

By Lighting

Lighting	2011-2015 Annual Crashes	
	All	Serious
Daylight	16,508	282
Dawn/Dusk	1,657	33
Night - Dark	892	40
Night - Lit	4,153	125
Unknown	70	1
METRO	20,947	481

The majority (59%) of Serious crashes occurred in daylight (Figure 2-18).

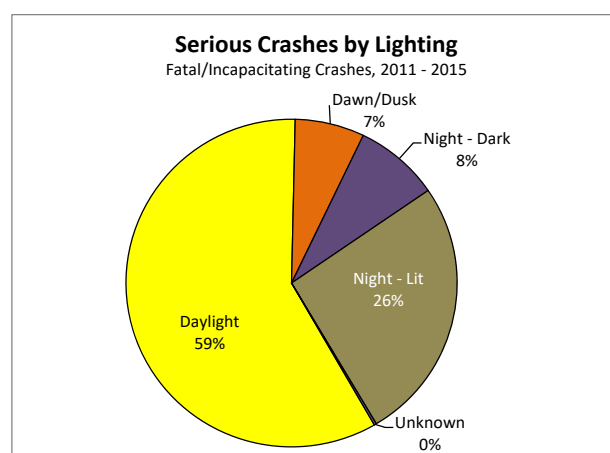
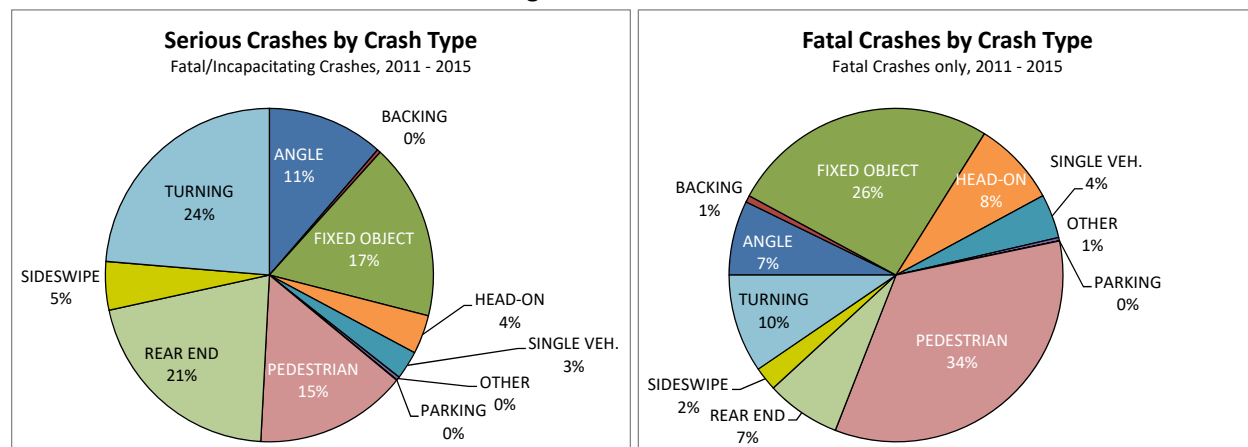


Figure 2-18

By Crash Type

Collision Type	2011-2015 Annual Crashes						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Angle	2,304	4	51	388	803	1,246	55
Backing	336	0	1	6	71	79	2
Fixed Object	1,734	16	67	289	341	712	82
Head-on	151	5	13	34	44	96	18
Single Vehicle	101	3	11	43	23	79	13
Other	78	0	1	10	10	21	2
Parking	201	0	0	8	30	38	0
Pedestrian	450	21	51	214	160	447	72
Rear End	10,573	4	96	661	4,948	5,710	100
Sideswipe	2,198	1	21	136	476	635	23
Turning	5,154	6	108	758	1,638	2,510	114
METRO	23,280	61	420	2,547	8,545	11,573	481

Figures 2-19 and 2-20



Figures 2-19 and 2-20 present Serious crash types and Fatal crash types. Fatal crashes are specifically broken out here because the distribution is substantially different. For the purpose of establishing crash type, bicycles are considered vehicles, and so there is no separate bicycle crash type.

The most common Serious crash types were Turning and Rear End.

The most common Fatal crash types were Pedestrian and Fixed Object.

By Contributing Factor

Collision Type	2011-2015 Annual Crashes (All Crashes)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	2,897	20.6	68	372	1,019	1,480	89
Following Too Close	7,806	1.4	65	486	3,660	4,212	66
Fail to Yield ROW	7,081	19.2	177	1,227	2,369	3,793	196
Improper Maneuver	4,636	16.4	79	400	1,137	1,633	96
Inattention	1,279	3.0	29	166	533	731	32
Reckless or Careless	1,086	6.8	52	234	375	668	59
Aggressive	9,663	21.2	123	771	4,198	5,114	144
Fail to Stop	8,979	1.6	73	514	4,228	4,817	75
Parking Related	136	0.0	0	4	18	22	0
Vehicle Problem	124	0.8	4	18	35	57	4
Alcohol or Drugs	1,056	34.4	60	215	265	575	94
Hit and Run	1,382	5.0	12	104	452	572	17
School Zone	66	0.2	1	13	26	39	1
Work Zone	177	0.2	5	25	69	99	5
METRO	23,280	60.8	420	2,547	8,545	11,573	481

Figures 2-21 and 2-22

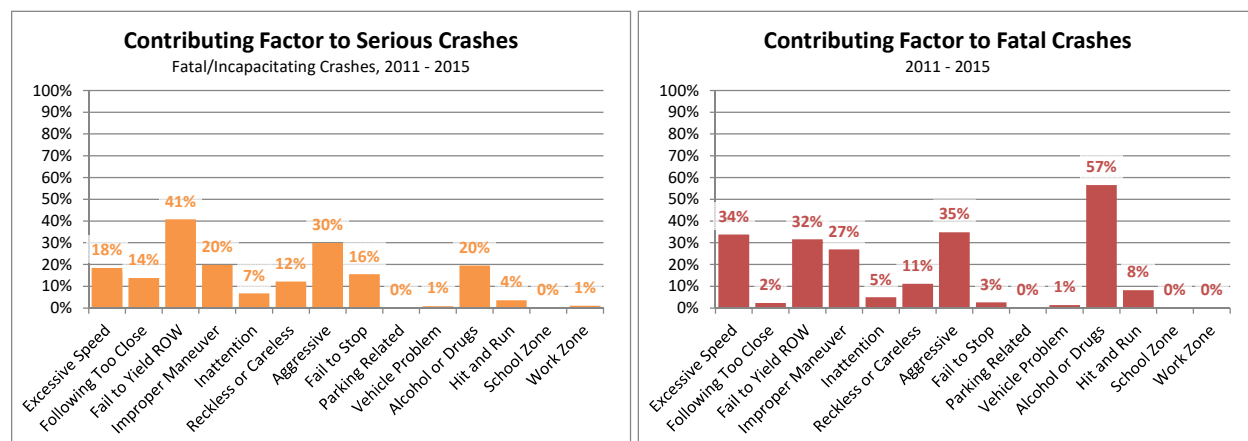


Figure 2-21 presents the the percentage of crashes of Serious severity (Fatal or Injury A) with each contributing factor. Figure 2-22 presents the the percentage of Fatal crashes with each contributing factor. Each crash may have several contributing factors. The determination of contributing factors is described in more detail in Section 7.

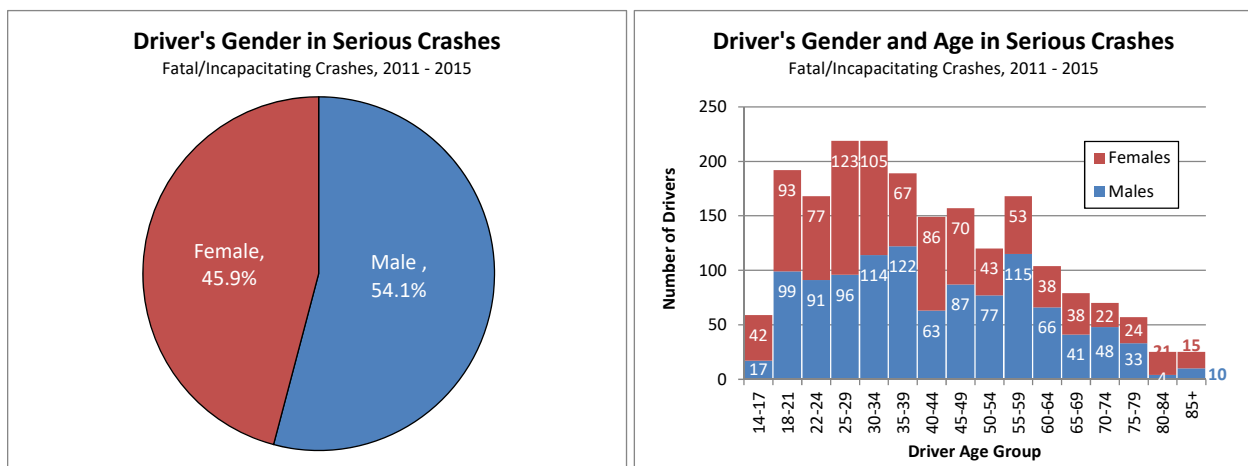
Alcohol and Drugs, Excessive Speed, Fail to Yield ROW, and Aggressive Driving are particularly common factors. Crashes involving Alcohol and Drugs have a much higher likelihood of being Fatal than other crashes.

By Driver's Age and Gender

The age and gender of drivers involved in crashes, regardless of fault, are presented in the following table and Figures 2-23 and 2-24.

Age Group	Total Male Drivers (2011 – 2015)			Total Female Drivers (2011 – 2015)		
	All Crashes	Serious	Percent Serious	All Crashes	Serious	Percent Serious
14-17	3,076	17	0.6%	3,579	42	1.2%
18-21	9,572	99	1.0%	9,413	93	1.0%
22-24	7,518	91	1.2%	7,466	77	1.0%
25-29	12,431	96	0.8%	11,968	123	1.0%
30-34	11,897	114	1.0%	10,804	105	1.0%
35-39	10,343	122	1.2%	9,247	67	0.7%
40-44	10,421	63	0.6%	8,898	86	1.0%
45-49	9,218	87	0.9%	8,053	70	0.9%
50-54	9,114	77	0.8%	7,500	43	0.6%
55-59	8,248	115	1.4%	6,810	53	0.8%
60-64	6,734	66	1.0%	5,529	38	0.7%
65-69	4,589	41	0.9%	3,823	38	1.0%
70-74	2,408	48	2.0%	2,180	22	1.0%
75-79	1,428	33	2.3%	1,306	24	1.8%
80-84	820	4	0.5%	813	21	2.6%
85+	747	10	1.3%	777	15	1.9%
Unknown	15,669	16	0.1%	11,098	14	0.1%
METRO	124,233	1,099	0.9%	109,264	931	0.9%

Figures 2-23 and 2-24



Seat Belt Use

The reported use of seat belts is shown in the following tables, for all crashes, for Serious crashes only, and for non-serious crashes.

Seat Belt Use (All crashes, 2011-2015)					
Gender	Seat Belt Use	No Seat Belt	Unknown	% Seat Belt Use	% No Seat Belt
Males	81,267	769	47,229	99.1%	0.9%
Females	80,854	445	34,213	99.5%	0.5%
Unknown	245	2	6,261	99.2%	0.8%
METRO	162,366	1,216	87,703	99.3%	0.7%

Seat Belt Use (Serious crashes, 2011-2015)					
Gender	Seat Belt Use	No Seat Belt	Unknown	% Seat Belt Use	% No Seat Belt
Males	622	79	164	88.7%	11.3%
Females	768	51	100	93.8%	6.2%
Unknown	0	0	0	-	-
METRO	1,390	130	264	91.4%	8.6%

Seat Belt Use (Injury B, C, and PDO crashes, 2011-2015)					
Gender	Seat Belt Use	No Seat Belt	Unknown	% Seat Belt Use	% No Seat Belt
Males	80,645	690	47,065	99.2%	0.8%
Females	80,086	394	34,113	99.5%	0.5%
Unknown	245	2	6,261	99.2%	0.8%
METRO	160,976	1,086	87,439	99.3%	0.7%

Seat belt use in the region as reported exceeds 99%.

Males were 71% more likely than females to be reported without a seat belt.

Occupants without seat belts were 12 times as likely to be seriously injured or killed as occupants wearing seat belts.

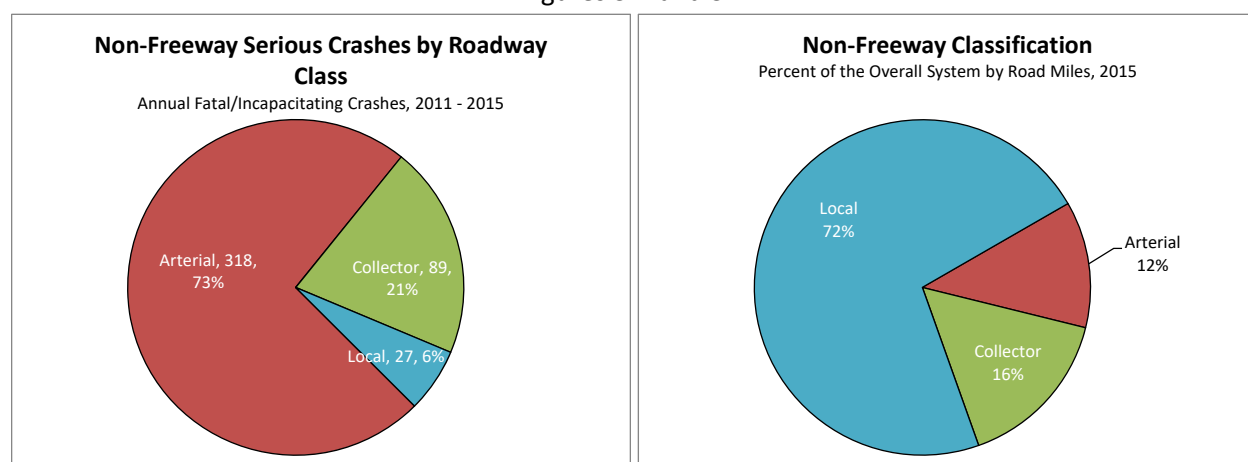
Section 3 – Roadway Characteristics of Non-Freeway Crashes

By Roadway Classification

Roadway Classification	Total Road-Miles	Annual VMT (2015)	2011-2015 Annual Crashes		
			All	All Injury	Serious
Arterial	772	4,281,000,000	14,463	7,529	318
Collector	994	1,081,000,000	3,609	1,705	89
Local	4,565	620,000,000*	1,519	536	27
METRO	6,331	5,982,000,000	19,591	9,771	434

* VMT for local streets is a low-confidence estimate

Figures 3-1 and 3-2



Roadway Classification	% crashes resulting in		Annual Crashes per Road-Mile		Annual Crashes per 100M VMT	
	All Injury	Serious	All Injury	Serious	All Injury	Serious
Arterial	52%	2.2%	9.8	0.41	176	7.4
Collector	47%	2.5%	1.7	0.09	158	8.2
Local	35%	1.8%	0.1	0.01	--	--
METRO	50%	2.2%	--	--	--	--

A review of the distribution of non-freeway Serious crashes by roadway classification reveals one of the most conclusive relationships in this report. Arterial roadways are the location of the majority of the Serious crashes in the region. Despite making up only 12% of the region's non-freeway road miles, they constitute 73% of the Serious crashes (Figures 3-1 and 3-2). A similar relationship is evident for pedestrians and cyclists, as detailed in Sections 5 and 6. In general, these roads have high traffic volumes, high travel speeds, and are challenging to pedestrians crossing.

As shown in Figure 3-3, collector streets have the highest crash rate per traffic volume, followed closely by arterial streets. Figure 3-4 presents the functional classification of the region's roadways. Red are arterial roadways and green are collector roadways.

Figure 3-3

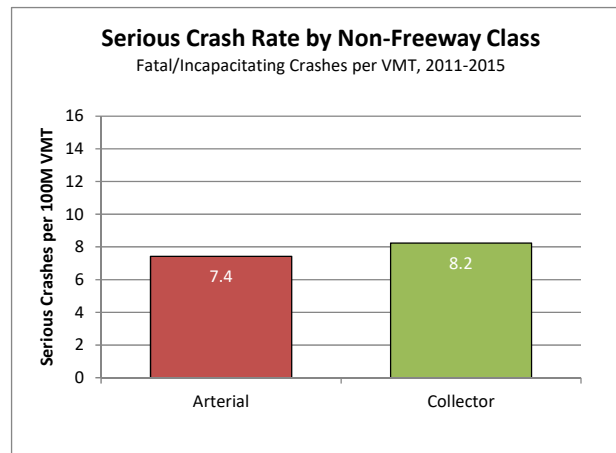
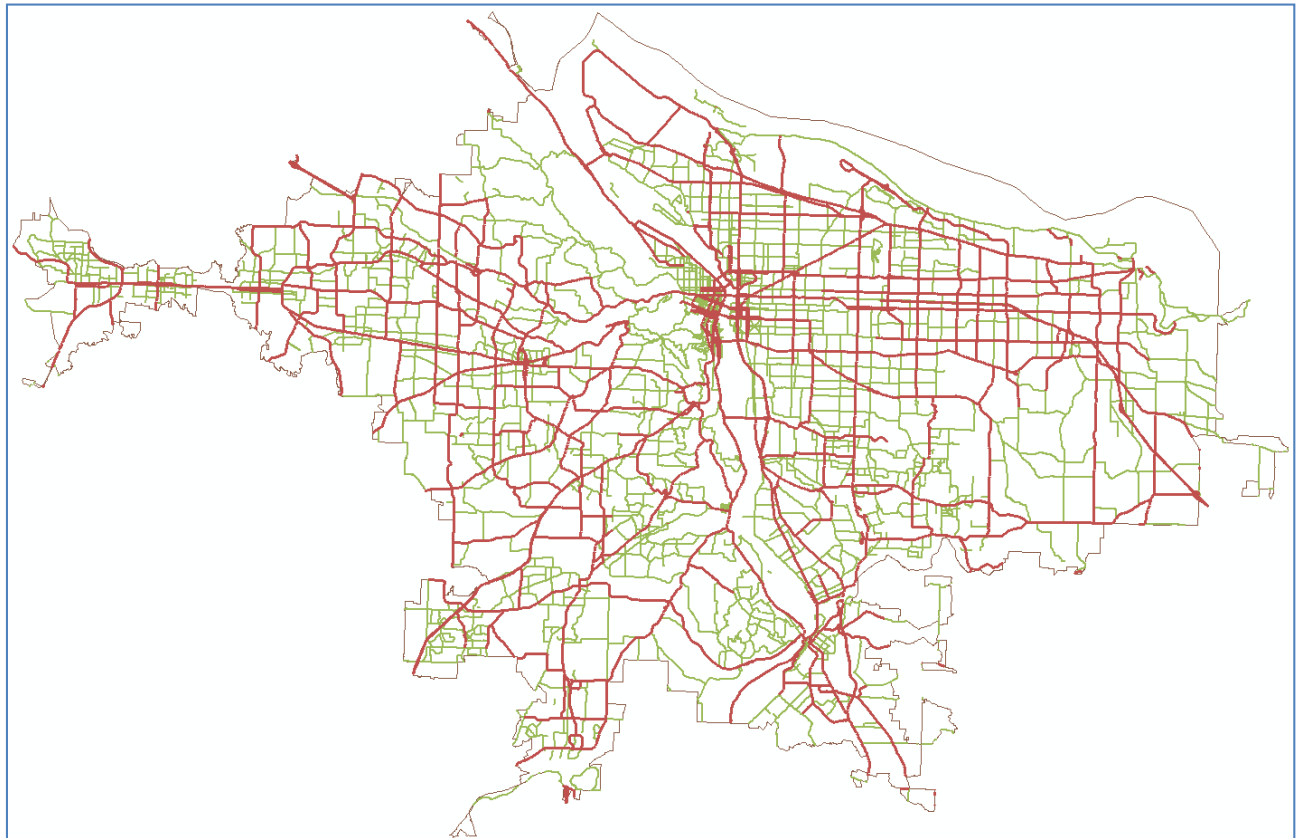


Figure 3-4



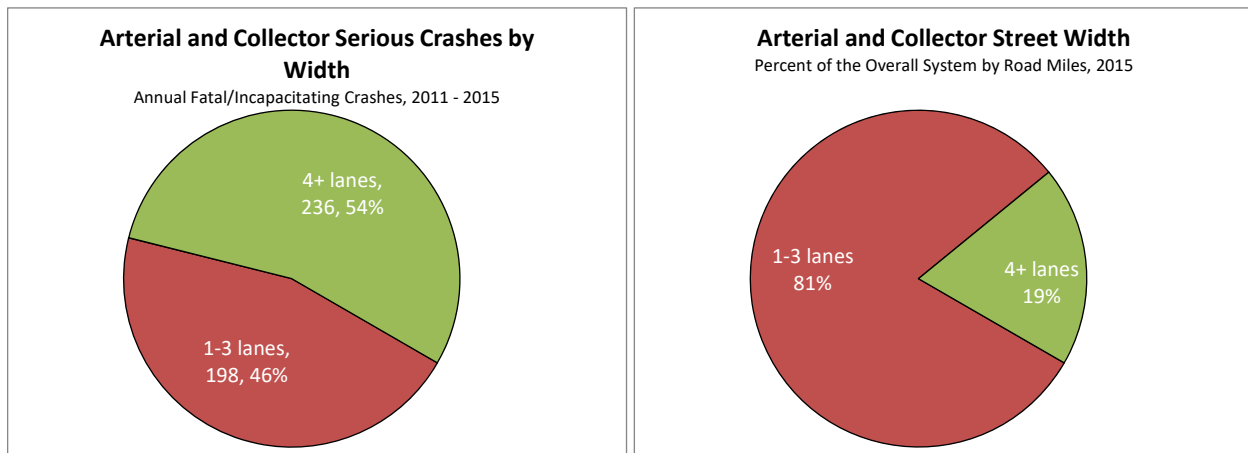
Map of Roadway Functional Classifications

By Number of Lanes

The following tables and Figures 3-5 and 3-6 summarize crashes by number of lanes for arterial and collector roadways.

Number of Arterial/Collector Lanes	Total Road-Miles	Annual VMT (2015)	2011-2015 Annual Crashes		
			All	All Injury	Serious
1 – 3 Lanes	1,427	2,972,000,000	8,932	4,217	198
4+ Lanes	340	2,738,000,000	10,597	5,532	236

Figures 3-5 and 3-6



Number of Arterial/Collector lanes	% crashes resulting in		Annual Crashes per Road-Mile		Annual Crashes per 100M VMT	
	All Injury	Serious	All Injury	Serious	All Injury	Serious
1-3 lanes	47%	2.2%	3.0	0.14	142	6.6
4+ lanes	52%	2.2%	16.3	0.69	202	8.6
ALL ARTERIALS AND COLLECTORS	50%	2.2%	5.5	0.25	171	7.6

Figure 3-7

Figure 3-7 presents the crash rate per traffic volume, and Figure 3-8 presents the number of lanes for arterials and collectors in the region. The influence of street width is consistent with the influence of roadway classification. Wider roadways are the location of a disproportionate number of Serious crashes in relation to both their share of the overall system (Figures 3-5 and 3-6) and the vehicle-miles travelled they serve (Figure 3-7). Similar patterns are documented in AASHTO's Highway Safety Manual (2010), Chapter 12.

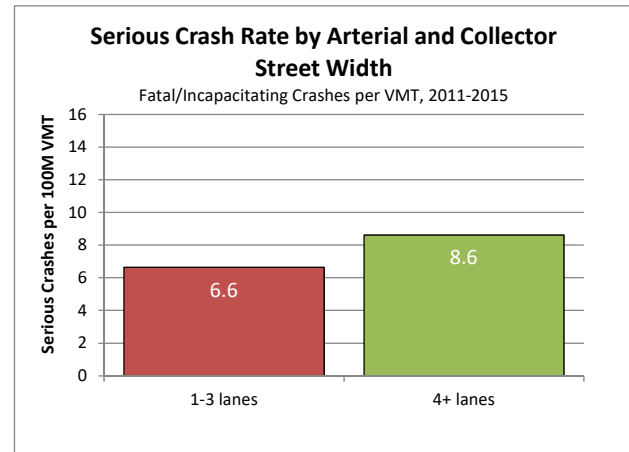
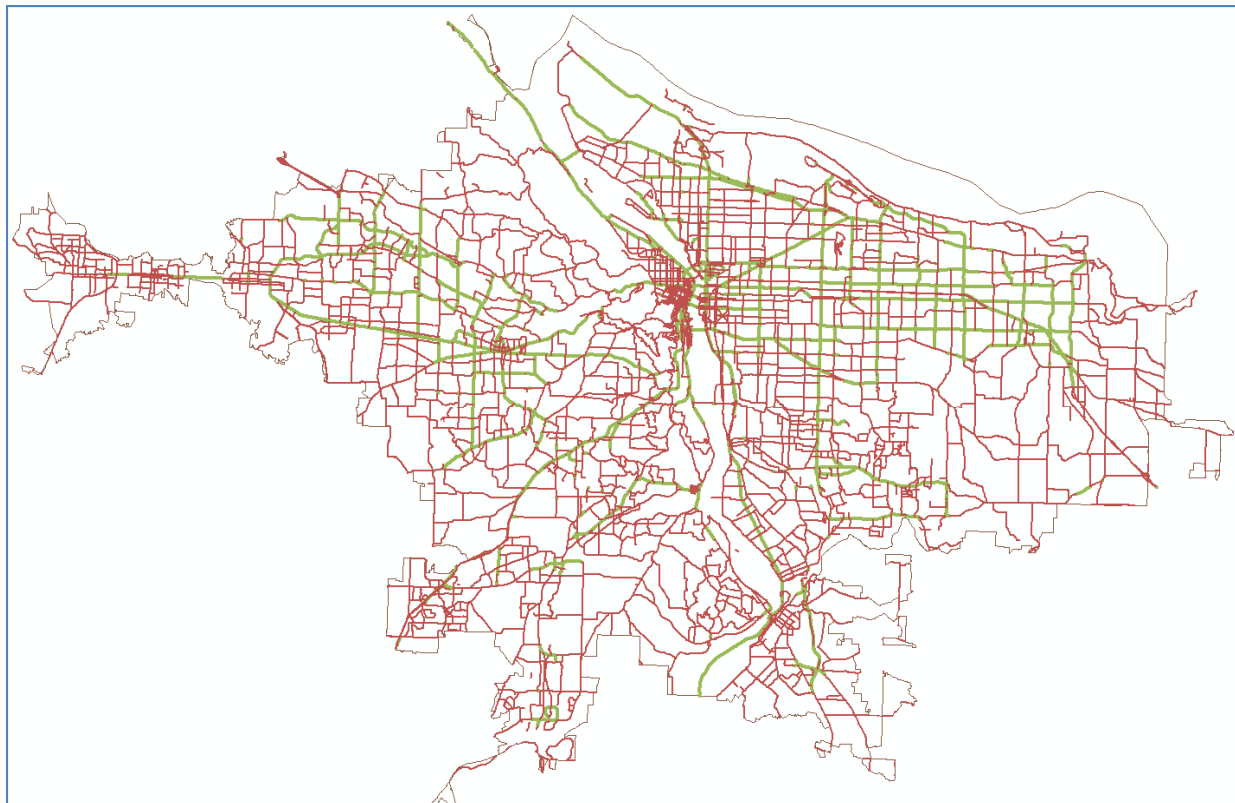


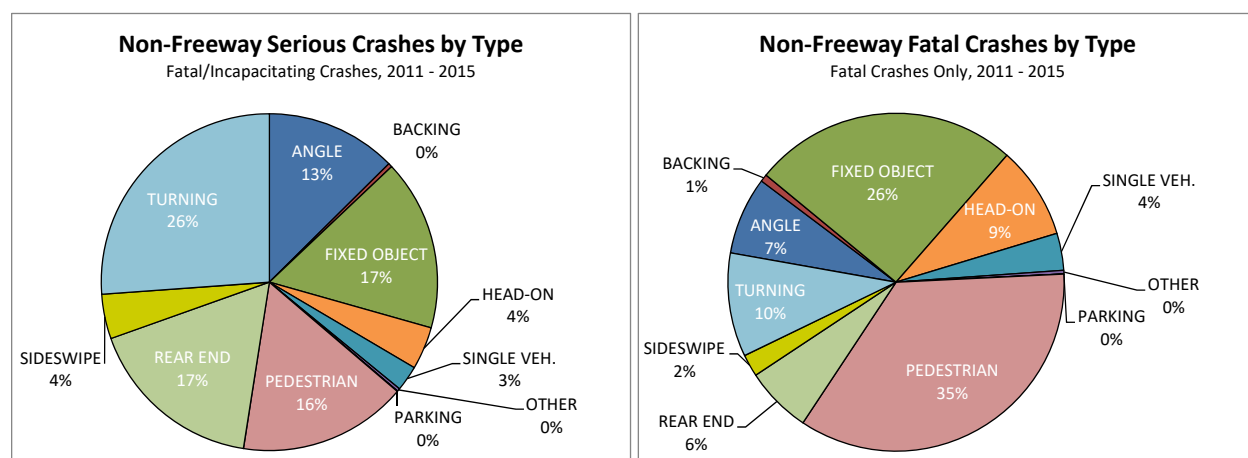
Figure 3-8 Map of Number of Lanes for Arterials and Collectors



By Crash Type

Collision Type	2011-2015 Annual Crashes						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Angle	2,296	4.2	50	386	801	1,241	55
Backing	329	0.4	1	6	70	78	2
Fixed Object	1,416	14.4	57	241	263	575	71
Head-on	145	5.0	13	33	41	93	18
Single Vehicle	79	2.0	9	35	18	64	11
Other	51	0.2	1	7	7	15	1
Parking	200	0.0	0	8	30	38	0
Pedestrian	446	19.8	51	212	160	442	70
Rear End	7,912	3.6	71	467	3,753	4,294	74
Sideswipe	1,608	1.2	17	100	324	442	19
Turning	5,108	5.6	108	754	1,623	2,490	113
METRO	19,591	56.4	377	2,247	7,090	9,771	434

Figure 3-9 and 3-10



Figures 3-9 and 3-10 present non-freeway Serious crash types and non-freeway Fatal crash types. Fatal crashes are specifically broken out here because the distribution is substantially different. For the purpose of establishing crash type, bicycles are considered vehicles, and so there is no separate bicycle crash type.

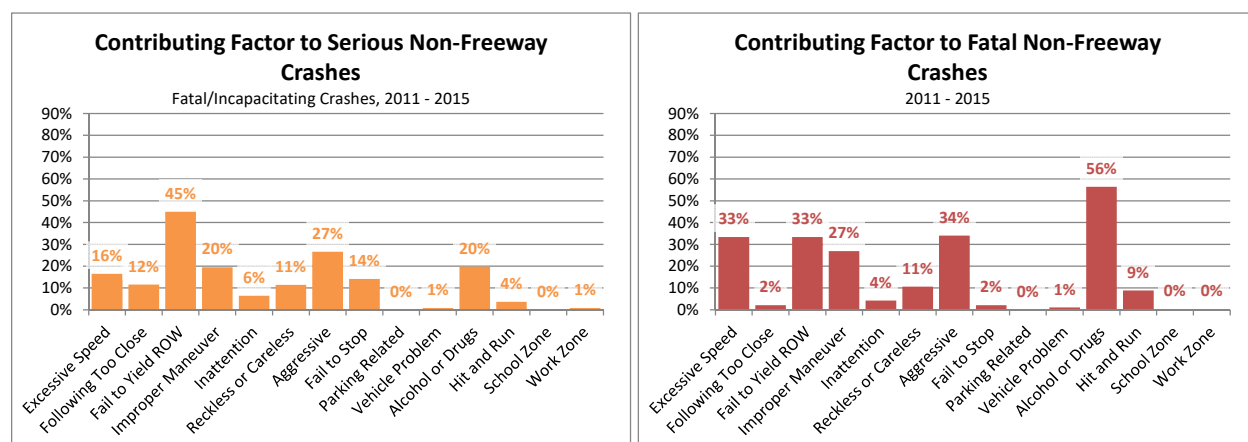
The most common Serious crash types were Turning and Rear End.

The most common Fatal crash types were Pedestrian and Fixed Object.

By Contributing Factor

Collision Type	2011-2015 Annual Crashes (Non-Freeway)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	1,982	18.8	53	276	644	991	71
Following Too Close	5,815	1.2	49	338	2,771	3,159	50
Fail to Yield ROW	7,000	18.8	176	1,219	2,344	3,758	195
Improper Maneuver	3,902	15.2	69	341	937	1,363	85
Inattention	1,071	2.4	25	144	445	617	28
Reckless or Careless	922	6.0	43	204	305	559	49
Aggressive	7,208	19.2	96	566	3,141	3,823	115
Fail to Stop	7,046	1.2	60	384	3,354	3,799	61
Parking Related	133	0.0	0	4	17	22	0
Vehicle Problem	90	0.6	3	15	28	46	3
Alcohol or Drugs	958	31.8	54	195	235	516	86
Hit and Run	1,161	5.0	11	92	374	482	16
School Zone	66	0.2	1	13	25	39	1
Work Zone	129	0.2	3	17	50	70	3
METRO	19,591	56.4	377	2,247	7,090	9,771	434

Figures 3-11 and 3-12



Figures 3-11 and 3-12 present the proportion of non-freeway crashes by contributing factor for Serious and Fatal crashes, respectively. Alcohol or Drugs, Fail to Yield ROW, Aggressive Driving, and Excessive Speed are the most common factors.

The determination of contributing factors is described in more detail in Section 7.

By Volume-to-Capacity Ratio

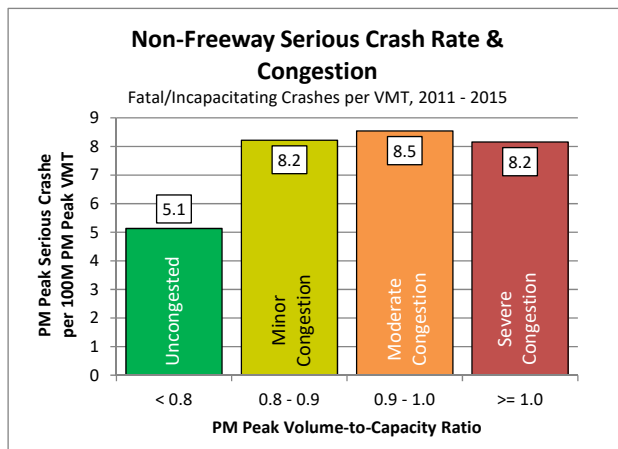
The combination of traffic data available from the region’s travel demand model and crash data allowed for a comparison of traffic congestion with safety.

An analysis of Serious crash rates compared to congestion levels for non-freeway roadways was performed. The analysis included all roadways in the regional travel demand model, including all arterials and collectors, as well as certain local streets serving a collector function. The intent was to establish the relationship between congestion and safety.

PM peak 3-hour Volume-to-Capacity ratios as determined by the travel demand model were compared to the same 3-hours of weekday crash data. The results are shown in the table and Figures 3-13. Figure 3-14 presents the Volume-to-Capacity ratios for the region’s non-freeway roadways.

PM Peak V/C Range	Total Road-Miles	Annual PM Peak VMT (2015)	2011-2015 Annual PM Peak Crashes (Non-Freeway)					
			Number of Crashes		Per Road-Mile		Per 100M VMT	
			All Injury	Serious	All Injury	Serious	All Injury	Serious
< 0.80	1,496	1,057,000,000	1,720	54	1.1	0.04	163	5.1
0.80 - 0.89	84	110,00,000	278	9	3.3	0.11	254	8.2
0.90 – 0.99	30	40,000,000	124	3	4.1	0.11	311	8.5
≥ 1.00	25	29,000,000	99	2	3.9	0.09	336	8.2

Figures 3-13 and 3-14



Map of V/C Ratios for Non-Freeway Roadways



The Serious crash rate per vehicle-mile travelled on arterials and collectors was highest with congestion.

The relationship is quite different from the analysis of 2007 – 2009 data, perhaps because of differences in travel demand model assignment procedures used and resulting Volume-to-Capacity ratio estimates. In order to provide a more conclusive analysis of this relationship, use of a more accurate tool for measuring real-world congestion, such as probe data, would be recommended.

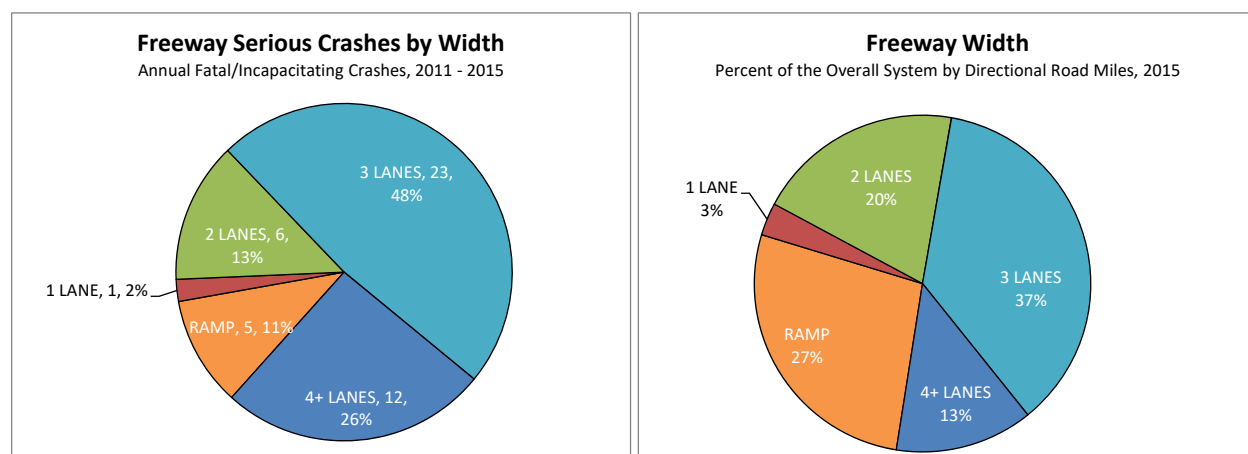
Section 4 – Roadway Characteristics of Freeway Crashes

By Number of Lanes

Number of Freeway lanes (in one direction)	Total Road-Miles	Annual VMT (2015)	2011-2015 Annual Crashes		
			All	All Injury	Serious
Freeway ramp	83	275,000,000	300	151	5
1 Lanes	10	48,000,000	68	33	1
2 Lanes	61	758,000,000	493	234	6
3 Lanes	111	2,386,000,000	1,906	923	23
4+ Lanes	40	979,000,000	909	456	12
ALL FREEWAYS	304	4,455,000,000	3,688	1,802	47

Figures 4-1 and 4-2 present the distribution of freeway crashes by number of lanes. They also present the proportion of freeway crashes that occur on ramps.

Figure 4-1 and 4-2



Number of Freeway lanes (in one direction)	% crashes resulting in		Per Road-Mile		Per 100M VMT	
	All Injury	Serious	All Injury	Serious	All Injury	Serious
Freeway ramp	50%	1.7%	1.8	0.06	55	1.8
1 Lanes	49%	1.5%	3.5	0.10	70	2.1
2 Lanes	48%	1.3%	3.9	0.11	31	0.8
3 Lanes	48%	1.2%	8.3	0.21	39	1.0
4+ Lanes	50%	1.3%	11.3	0.30	47	1.2
ALL FREEWAYS	49%	1.3%	5.9	0.16	41	1.1

The influence of freeway width is not as pronounced as for non-freeway roadways. Freeways with two directional lanes (including auxiliary lanes) exhibit the lowest crash rates, while the rate increases for freeways with more or fewer lanes (Figure 4-3). Figure 4-4 presents the number of lanes for the region's freeways. Ramps (off-ramps and on-ramps) exhibit a higher Serious crash rate per mile travelled, while still representing a relatively small proportion (11%) of all Serious freeway crashes (Figure 4-1). Single-lane segments are uninterrupted ramps connecting freeways.

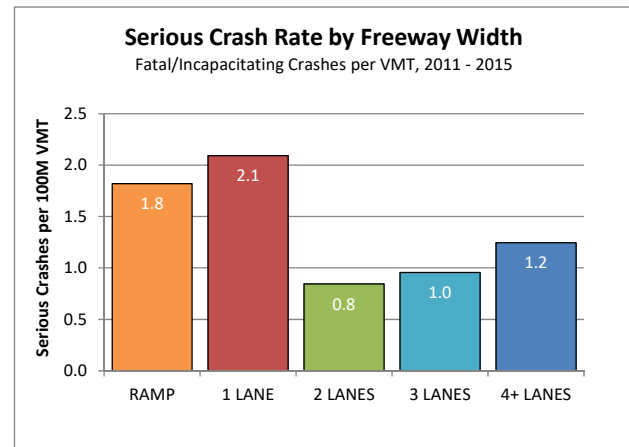
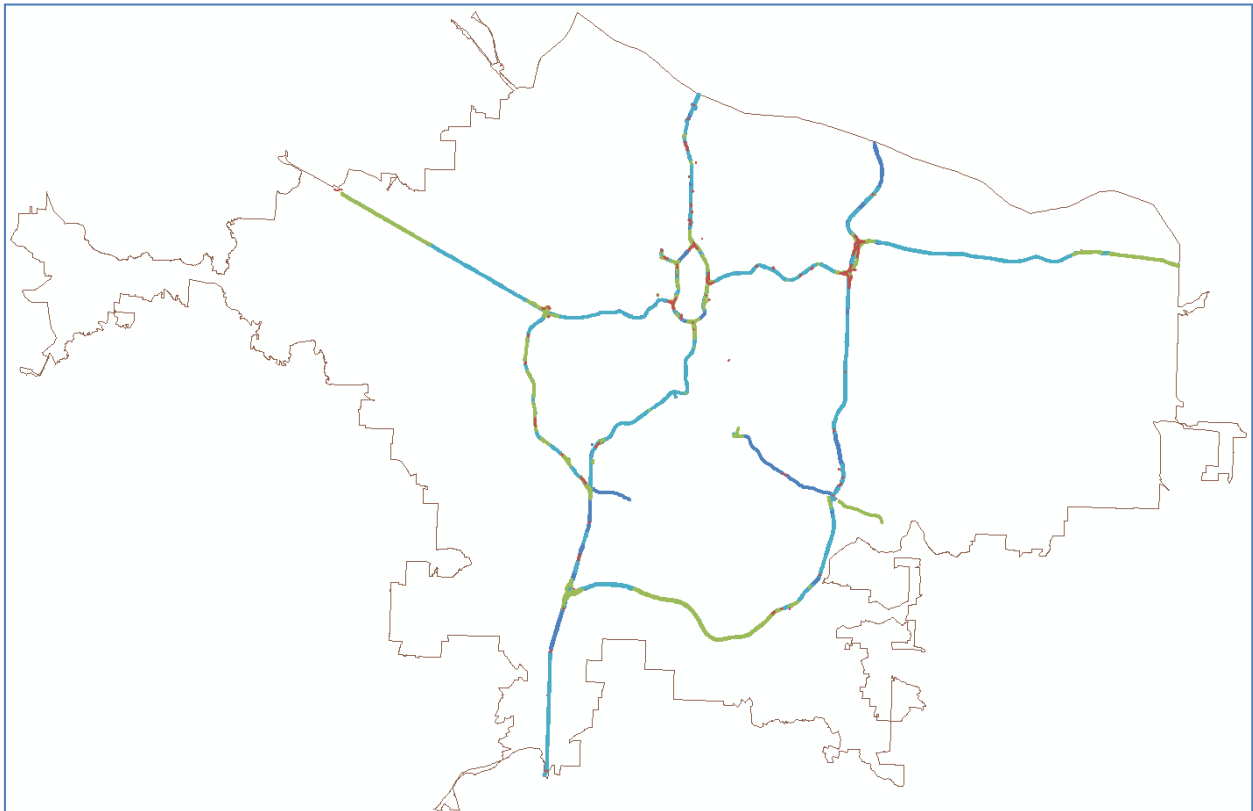


Figure 4-3

Figure 4-4

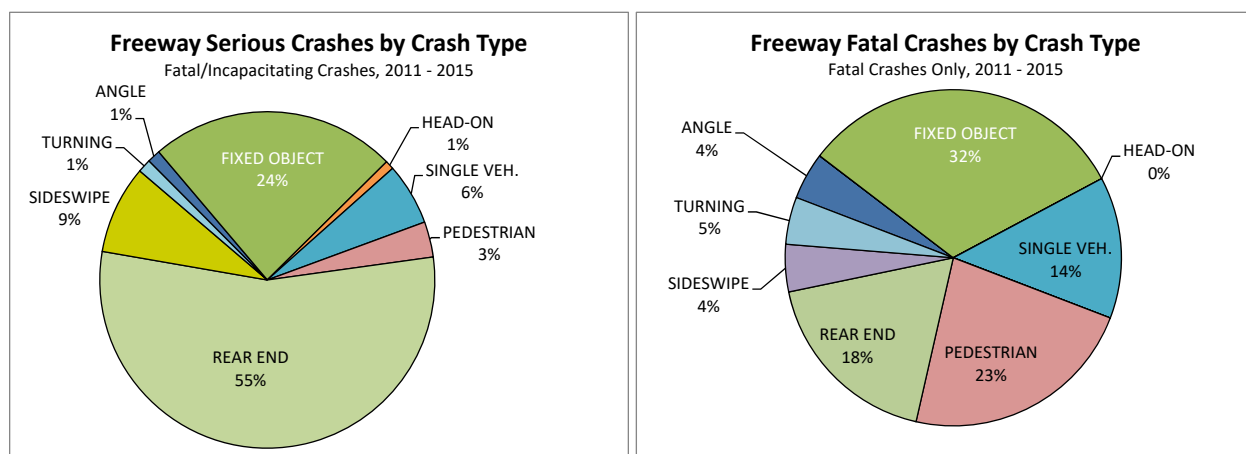


Map of Freeways by Number of Lanes

By Crash Type

Collision Type	2011-2015 Annual Crashes						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Angle	8	0.2	0	2	3	6	1
Backing	7	0.0	0	0	1	1	0
Fixed Object	318	1.4	10	48	77	136	11
Head-on	6	0.0	0	1	3	4	0
Single Vehicle	21	0.6	2	8	4	15	3
Parking	1	0.0	0	0	0	0	0
Pedestrian	4	1.0	1	2	0	4	2
Rear End	2,661	0.8	25	195	1,195	1,416	26
Sideswipe	589	0.2	4	36	152	192	4
Turning	46	0.2	0	5	15	21	1
Other	27	0	0	3	3	7	0
METRO	3,688	4.4	43	301	1,454	1,802	47
Total – Fwy Mainline	3,117	3.8	37	252	1,230	1,522	41
Total – Fwy Ramps	572	0.6	6	48	225	280	7

Figure 4-5 and 4-6



Figures 4-5 and 4-6 present freeway Serious crash types and freeway Fatal crash types. Fatal crashes are specifically broken out here because the distribution is substantially different.

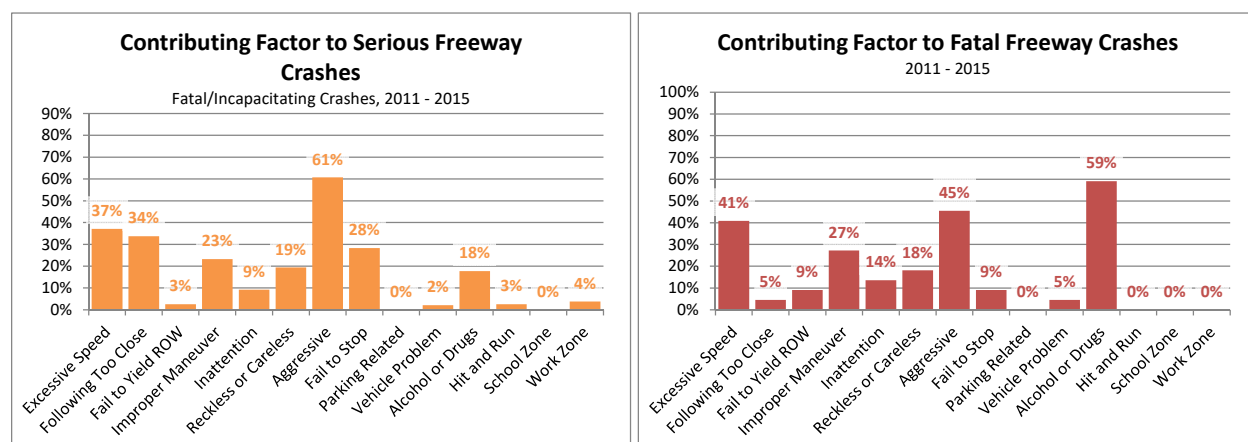
The most common Serious crash type was Rear End crashes.

The most common Fatal crash type was Fixed Object crashes.

By Contributing Factor

Collision Type	2011-2015 Annual Crashes (Freeway)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	915	1.8	16	96	375	488	18
Following Too Close	1,991	0.2	16	148	889	1,053	16
Fail to Yield ROW	81	0.4	1	9	25	35	1
Improper Maneuver	734	1.2	10	58	200	269	11
Inattention	208	0.6	4	21	88	114	4
Reckless or Careless	164	0.8	8	30	70	109	9
Aggressive	2,456	2.0	27	205	1,057	1,291	29
Fail to Stop	1,932	0.4	13	131	874	1,018	13
Parking Related	2	0.0	0	0	0	1	0
Vehicle Problem	34	0.2	1	3	7	11	1
Alcohol or Drugs	98	2.6	6	20	31	59	8
Hit and Run	221	0.0	1	12	78	91	1
School Zone	0	0.0	0	0	0	0	0
Work Zone	48	0	2	8	19	29	2
METRO	3,688	4.4	43	301	1,454	1,802	47

Figures 4-7 and 4-8



Figures 4-7 and 4-8 present the proportion of freeway crashes by contributing factor for Serious and Fatal crashes, respectively. Alcohol and Drugs, Aggressive Driving and Excessive Speed are the most common factors.

The determination of contributing factors is described in more detail in Section 7.

By Volume-to-Capacity Ratio

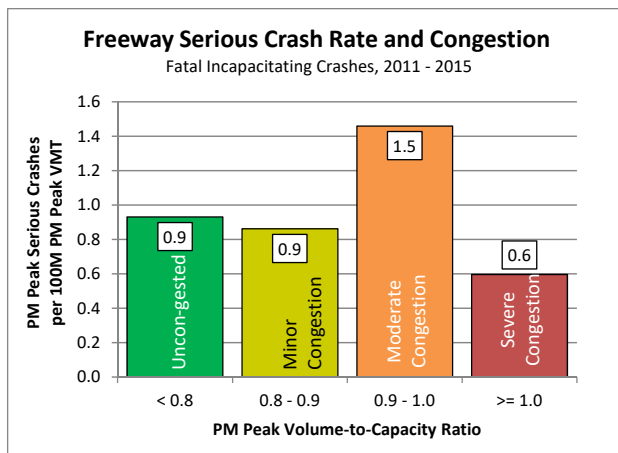
The combination of traffic data available from the region's travel demand model and crash data allowed for a comparison of traffic congestion with safety.

An analysis of Serious crash rates compared to congestion levels for freeways was performed. The intent was to establish the relationship between congestion and safety.

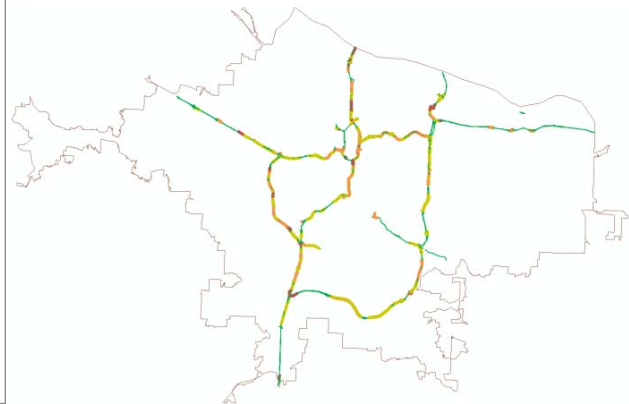
PM peak 3-hour Volume-to-Capacity ratios as determined by the travel demand model were compared to the same 3-hours of weekday crash data. The results are shown in the table and Figures 4-9. Figure 4-10 presents the Volume-to-Capacity ratios for the region's freeways, including ramps.

PM Peak V/C Range	Total Road-Miles	Annual PM Peak VMT (2015)	2011-2015 Annual PM Peak Crashes (Freeway)					
			Number of Crashes		Per Road-Mile		Per 100M VMT	
			All Injury	Serious	All Injury	Serious	All Injury	Serious
< 0.80	212	537,000,000	198	5.0	0.9	0.02	37	0.9
0.80 - 0.89	53	232,000,000	134	2.0	2.5	0.04	58	0.9
0.90 - 0.99	28	110,000,000	90	1.6	3.2	0.06	82	1.5
≥ 1.00	10	36,000,000	26	0.2	2.7	0.02	79	0.6

Figures 4-9 and 4-10



Map of V/C Ratios for Freeways



The Serious crash rate per vehicle-mile travelled on freeways increased with moderate congestion, but dropped and was lowest with severe congestion.

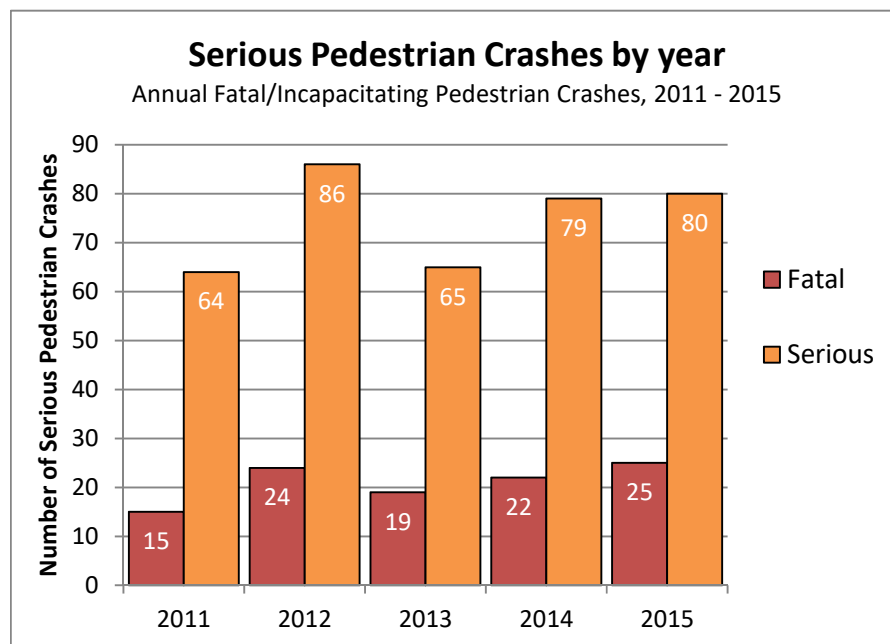
The relationship is consistent with the analysis of 2007 – 2009 data, and may result from traffic at free-flow speed encountering traffic stopped or slowed for congestion. In order to provide a more conclusive analysis of this relationship, use of a more accurate tool for measuring real-world congestion, such as probe data, would be recommended.

Section 5 – Pedestrians (Non-Freeway Crashes)

By Year

Year	Fatal Crashes (Fatalities)	Injury A Crashes	Injury B Crashes	Injury C Crashes	All Injury Crashes	Serious
2011	15 (15)	49	191	161	416	64
2012	24 (24)	62	238	184	508	86
2013	19 (20)	46	227	132	424	65
2014	22 (22)	57	238	154	471	79
2015	25 (25)	55	196	190	466	80
METRO	105 (106)	269	1,090	821	2,285	374

Figure 5-1



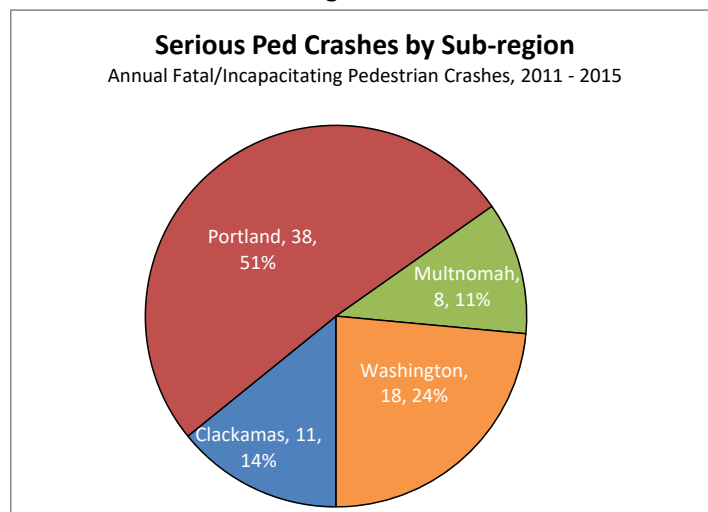
As presented in Figure 5-1, Serious and Fatal Pedestrian crashes increased somewhat over the 5-year period. Pedestrian fatalities have steadily increased to 2015.

By Sub-Region

Sub-Region	2011-2015 Annual Pedestrian Crashes					
	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Clackamas	3.0	8	25	19	54	11
Portland	10.4	28	119	86	243	38
Multnomah (excl. Portland)	1.8	7	27	18	54	8
Washington	5.8	12	47	42	106	18
METRO	21.0	54	218	164	457	75

Sub-Region	Population (2015)	Annual VMT (2015)	Annual Pedestrian Injury Crashes		Annual Serious Pedestrian Crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Clackamas	290,630	1,048,000,000	186	5.2	36	1.0
Portland	620,540	2,096,000,000	391	11.6	62	1.8
Multnomah (excl. Portland)	152,611	548,000,000	351	9.8	55	1.5
Washington	539,448	2,031,000,000	197	5.2	33	0.9
METRO	1,603,229	5,723,000,000	285	8.0	47	1.3

Figure 5-2



With the highest population, transit usage, VMT, and likely the largest number of pedestrians, Portland has 51% of the region's Serious Pedestrian crashes (Figure 5-2). Portland also has the highest rate of Serious Pedestrian crashes per capita and per VMT. Multnomah (excludes Portland) also has high rates of Serious Pedestrian crashes per capita and per VMT. Clackamas County and Washington County have relatively low rates of Serious Pedestrian crashes, which is likely largely due to fewer people walking.

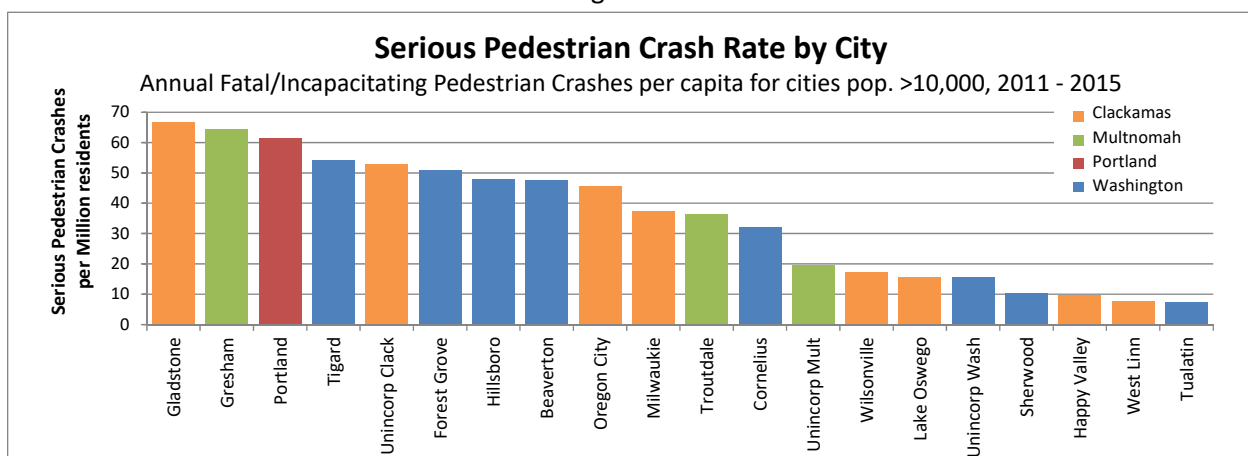
By City

City	2011-2015 Annual Pedestrian Crashes					
	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Beaverton	1.0	3.6	9.2	7.4	21.2	4.6
Cornelius	0.0	0.4	0.6	0.8	1.8	0.4
Durham	0.0	0.0	0.0	0.0	0.0	0.0
Fairview	0.0	0.0	1.4	0.4	1.8	0.0
Forest Grove	0.6	0.6	2.0	1.4	4.6	1.2
Gladstone	0.2	0.6	1.0	0.0	1.8	0.8
Gresham	1.6	5.6	22.6	14.4	44.2	7.2
Happy Valley	0.0	0.2	1.0	1.0	2.2	0.2
Hillsboro	2.0	2.8	13.0	13.0	30.8	4.8
Johnson City	0.0	0.0	0.0	0.0	0.0	0.0
King City	0.0	0.2	0.4	0.0	0.6	0.2
Lake Oswego	0.0	0.6	2.4	1.6	4.6	0.6
Maywood Park	0.0	0.2	0.0	0.0	0.2	0.2
Milwaukie	0.0	0.8	3.0	1.8	5.6	0.8
Oregon City	0.8	0.8	3.8	4.2	9.6	1.6
Portland	10.4	27.8	119.0	85.6	242.8	38.2
Rivergrove	0.0	0.0	0.0	0.0	0.0	0.0
Sherwood	0.2	0.0	2.0	0.8	3.0	0.2
Tigard	0.8	2.0	4.6	4.6	12.0	2.8
Troutdale	0.0	0.6	2.4	1.8	4.8	0.6
Tualatin	0.0	0.2	3.6	5.2	9.0	0.2
West Linn	0.0	0.2	1.4	0.4	2.0	0.2
Wilsonville	0.0	0.4	1.4	1.6	3.4	0.4
Wood Village	0.2	0.0	0.6	1.0	1.8	0.2
Uninc. Clackamas	2.0	4.0	11.0	8.2	25.2	6.0
Uninc. Multnomah	0.0	0.2	0.2	0.0	0.4	0.2
Uninc. Washington	1.2	2.0	11.4	9.0	23.6	3.2
METRO	21.0	53.8	218.0	164.2	457.0	74.8

While Portland has the largest number and rate of Serious Pedestrian crashes, it is apparent from Figure 5-3 that there are a number of other cities and areas with a high rate of Serious Pedestrian crashes per capita. Gladstone, Gresham, Tigard, unincorporated Clackamas County, Forest Grove, Hillsboro, Beaverton, and Oregon City all experience relatively high rates of Serious Pedestrian crashes.

City	Population (2015)	2011-2015 Annual Pedestrian Crashes	
		All Injury Per 1M residents	Serious per 1M residents
Beaverton	96,704	219	47.6
Cornelius	12,389	145	32.3
Durham	1,430	0	0.0
Fairview	9,357	192	0.0
Forest Grove	23,630	195	50.8
Gladstone	11,990	150	66.7
Gresham	111,716	396	64.4
Happy Valley	20,835	106	9.6
Hillsboro	100,109	308	47.9
Johnson City	588	0	0.0
King City	3,817	157	52.4
Lake Oswego	38,156	121	15.7
Maywood Park	809	247	247.2
Milwaukie	21,365	262	37.4
Oregon City	35,004	274	45.7
Portland	620,540	391	61.6
Rivergrove	321	0	0.0
Sherwood	19,012	158	10.5
Tigard	51,642	232	54.2
Troutdale	16,486	291	36.4
Tualatin	26,617	338	7.5
West Linn	26,267	76	7.6
Wilsonville	22,932	148	17.4
Wood Village	4,056	444	49.3
Uninc. Clackamas	113,172	223	53.0
Uninc. Multnomah	10,187	39	19.6
Uninc. Washington	204,098	116	15.7
METRO	1,603,229	285	46.7

Figure 5-3



By Month

Month	2011-2015 Annual Pedestrian Crashes	
	All Injury	Serious
January	53	11.0
February	41	7.2
March	35	5.4
April	29	4.2
May	30	4.0
June	27	4.6
July	30	3.8
August	30	6.0
September	33	5.8
October	46	6.6
November	50	8.0
December	53	8.2
12 MONTHS	457	74.8

Figure 5-4

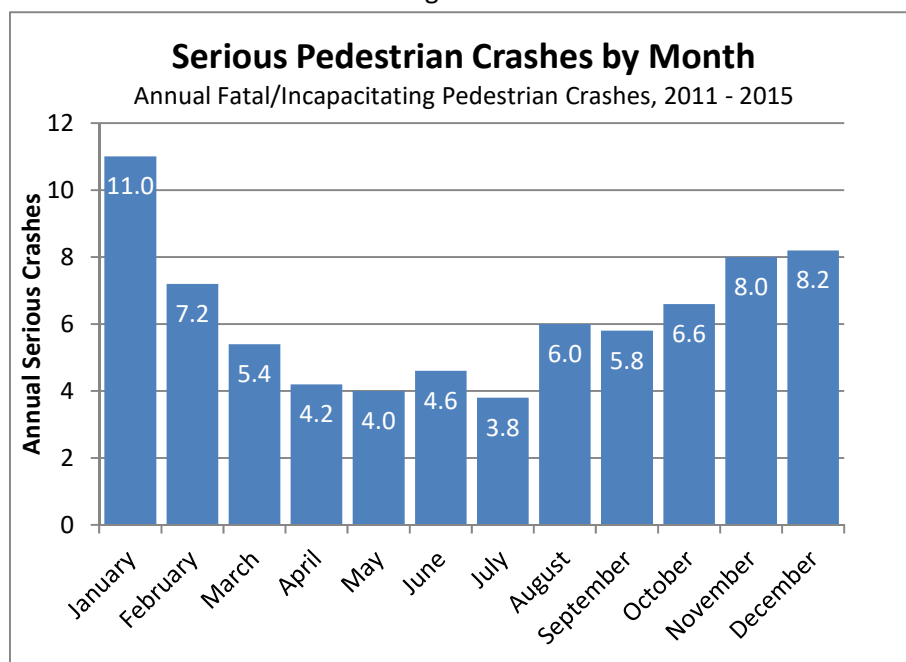


Figure 5-4 presents the annual average number of Serious crashes by month. Fall and winter months generally have more Serious Pedestrian crashes, coinciding with the darkest months.

By Time of Day

Figure 5-5

Serious Crashes by Day of Week and Hour Annual Fatal/Incapacitating Pedestrian Crashes, 2011 - 2015											
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Hour	Average Wkday	Average Wkend
12 AM	0.2	0.0	0.0	0.0	0.2	0.4	0.8		12 AM	0.1	0.5
1 AM	0.6	0.0	0.2	0.0	0.0	0.0	0.0		1 AM	0.0	0.3
2 AM	1.0	0.0	0.0	0.2	0.2	0.4	0.4		2 AM	0.2	0.7
3 AM	0.2	0.2	0.2	0.0	0.0	0.2	0.2		3 AM	0.1	0.2
4 AM	0.2	0.0	0.0	0.0	0.0	0.0	0.0		4 AM	0.0	0.1
5 AM	0.0	0.4	0.0	0.6	0.4	0.0	0.2		5 AM	0.3	0.1
6 AM	0.0	0.2	0.8	0.6	0.2	0.6	0.2		6 AM	0.5	0.1
7 AM	0.2	0.0	0.2	0.4	0.2	0.2	0.0		7 AM	0.2	0.1
8 AM	0.0	1.0	0.2	0.2	0.0	0.8	0.0		8 AM	0.4	0.0
9 AM	0.6	0.0	0.2	0.2	0.4	0.2	0.2		9 AM	0.2	0.4
10 AM	0.0	0.0	0.0	0.2	0.0	0.0	0.4		10 AM	0.0	0.2
11 AM	0.2	0.4	0.2	0.4	0.6	0.8	0.4		11 AM	0.5	0.3
12 PM	0.0	0.4	0.0	0.2	0.2	0.0	0.2		12 PM	0.2	0.1
1 PM	0.0	0.2	0.4	0.4	0.2	0.4	0.4		1 PM	0.3	0.2
2 PM	0.4	0.8	0.4	0.2	0.8	0.4	0.4		2 PM	0.5	0.4
3 PM	0.4	1.2	1.2	0.6	1.2	1.2	0.8		3 PM	1.1	0.6
4 PM	0.2	0.6	0.6	1.2	0.6	0.8	0.6		4 PM	0.8	0.4
5 PM	0.6	1.0	1.6	1.0	1.0	0.6	0.0		5 PM	1.0	0.3
6 PM	0.6	0.8	1.2	1.2	1.4	1.8	1.6		6 PM	1.3	1.1
7 PM	0.8	0.2	0.8	0.8	1.8	1.2	2.2		7 PM	1.0	1.5
8 PM	0.8	0.2	1.4	0.4	0.6	0.6	0.8		8 PM	0.6	0.8
9 PM	0.8	1.0	0.4	0.4	0.8	0.6	0.6		9 PM	0.6	0.7
10 PM	0.6	0.6	0.2	0.2	1.0	0.8	0.6		10 PM	0.6	0.6
11 PM	0.2	0.0	0.4	0.2	0.6	0.6	0.4		11 PM	0.4	0.3
	Sun	Mon	Tue	Wed	Thu	Fri	Sat			Average Wkday	Average Wkend
All Day	8.6	9.2	10.6	9.6	12.4	12.6	11.4		All Day	10.9	10.0

Figure 5-5 presents the rate of Serious Pedestrian crashes by day of the week and hour of the day using a “heat map” format. Dark cells indicate the highest relative crash time periods; light cells indicate the lowest relative crash time periods. The average weekday and weekend day are summarized on the right side of the figure, while each day is summarized and compared at the bottom of the figure.

The weekday late afternoon and evening peak hours produce the highest number of Serious Pedestrian crashes. A larger proportion of evening crashes are evident as compared to all crashes. Late Friday night/early Saturday morning and late Saturday night show somewhat high rates of Serious Pedestrian crashes. Thursday, Friday, and Saturday have the highest rates of Serious Pedestrian crashes, predominantly evening crashes.

By Weather

2011-2015 Annual Pedestrian Crashes	
Weather	Serious Crashes
Cloudy/Clear	53.6
Rain/Fog	19.6
Sleet/Snow	0.2
Unknown	1.4
METRO	74.8

The majority (72%) of Serious Pedestrian crashes occurred in clear or cloudy conditions (Figure 5-6), as compared to 80% for all crashes (Figure 2-16).

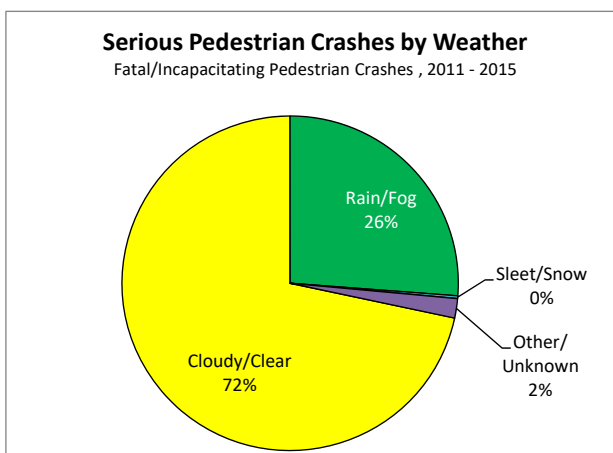


Figure 5-6

By Road Surface Condition

2011-2015 Annual Pedestrian Crashes	
Road Condition	Serious Crashes
Dry	48.4
Ice/Snow	0.4
Wet	25.0
Unknown	1.0
METRO	74.8

The majority (65%) of Serious Pedestrian crashes occurred in dry conditions (Figure 5-7), as compared to 73% for all crashes (Figure 2-17).

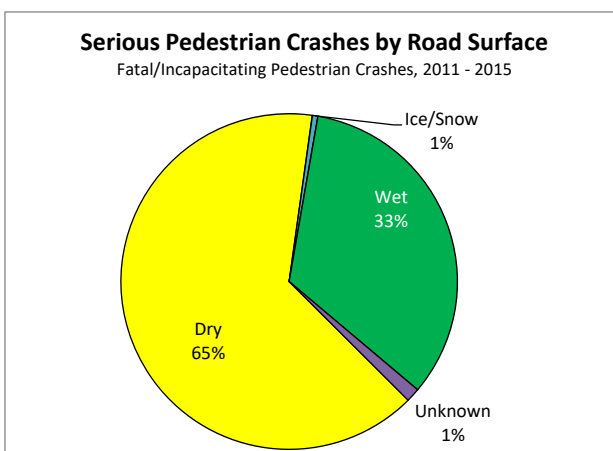


Figure 5-7

By Lighting

2011-2015 Annual Pedestrian Crashes	
Lighting	Serious Crashes
Daylight	27.2
Dawn/Dusk	8.4
Night - Dark	9.6
Night - Lit	29.6
Unknown	0.0
METRO	74.8

Only 36% of Serious Pedestrian crashes occurred in daylight (Figure 5-8), as compared to 59% for all crashes (Figure 2-18). **Serious Pedestrian crashes are significantly more likely after dark as compared to other modes.**

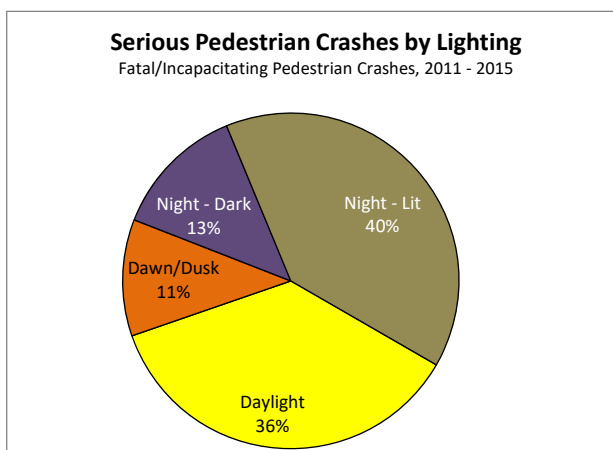


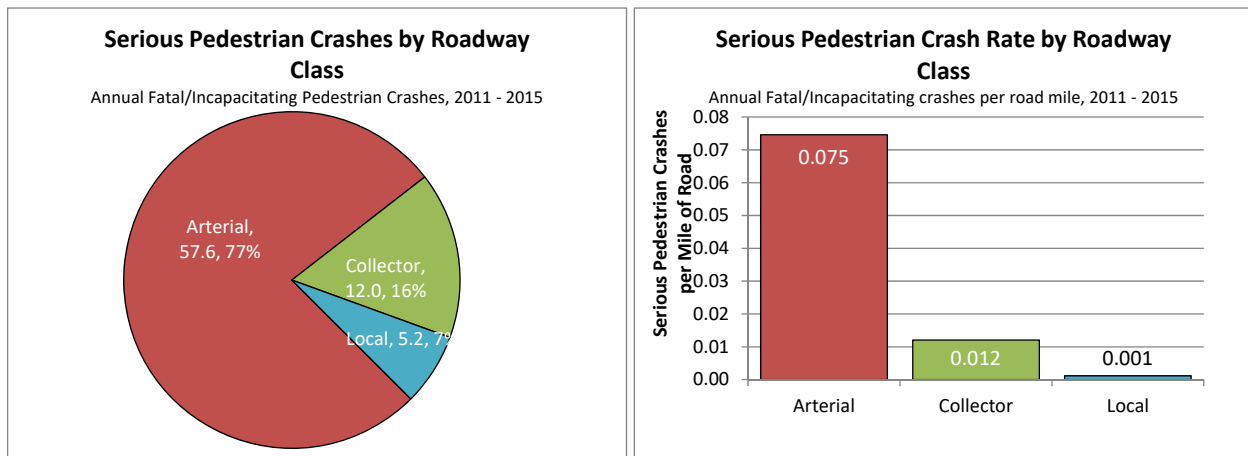
Figure 5-8

By Roadway Classification

Roadway Classification	Total Road-Miles	Annual VMT (2015)	2011-2015 Annual Pedestrian Crashes		
			Serious	Serious per Road-Mile	Serious per 100M VMT
Arterial	772	4,281,000,000	57.6	0.075	1.35
Collector	994	1,081,000,000	12.0	0.012	1.11
Local	4,565	620,000,000*	5.2	0.001	0.84
METRO	6,331	5,982,000,000	74.8	0.012	--

* VMT for local streets is a low-confidence estimate

Figures 5-9 and 5-10

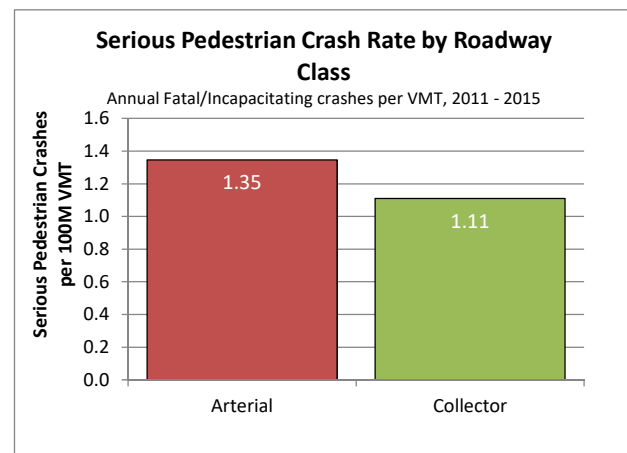


As with overall crashes, the region's Serious Pedestrian crashes occur primarily on the arterials, accounting for 77% of these crashes. Figure 5-9 presents the distribution of Serious Pedestrian crashes by roadway classification. As can be seen in Figure 5-10, which presents the rate of Serious Pedestrian crashes per mile of roadway, arterial roadways are about 6 times as likely as collectors per mile to be the location of a Serious Pedestrian crash, and more than 65 times as likely as local streets per mile to be the location of a Serious Pedestrian crash.

Figure 5-11

As can be seen in Figure 5-11, when normalized by motor vehicle traffic volume, the Serious Pedestrian crash rate on arterials is still higher than on collectors. A reliable estimate of vehicle miles travelled was not available for local streets.

Many transit routes follow arterial roadways, increasing the need for people to cross these roadways safely.

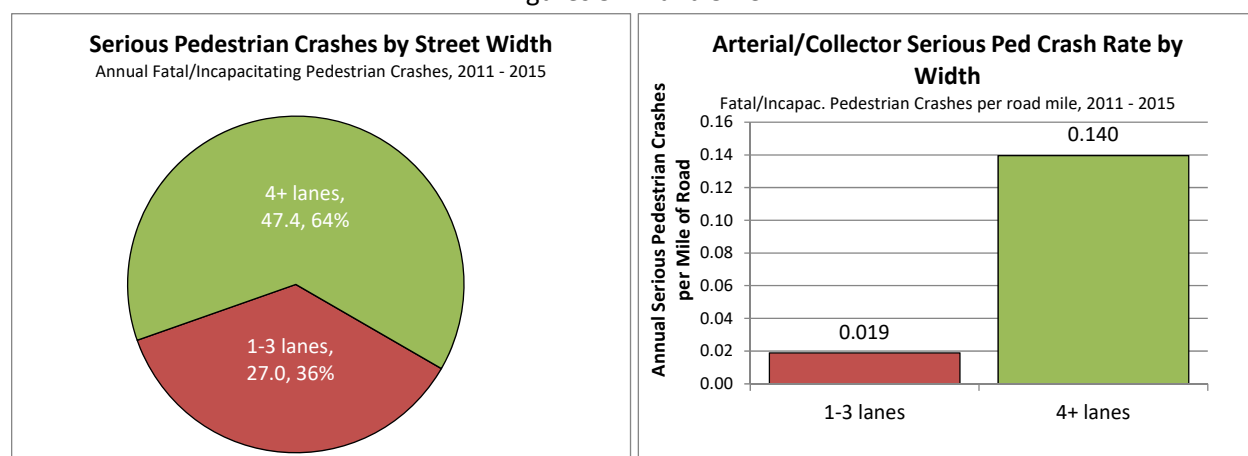


By Number of Lanes

Number of Lanes*	Total Road-Miles	2011-2015 Annual Pedestrian Crashes		
		Serious	Serious per Road-Mile	Serious per 100M VMT
1 – 3 Lanes	1,427	27.0	0.019	0.91
4+ Lanes	340	47.4	0.140	1.73
METRO	1,766	74.4	0.042	1.31

* Arterial and Collector roadways only

Figures 5-12 and 5-13

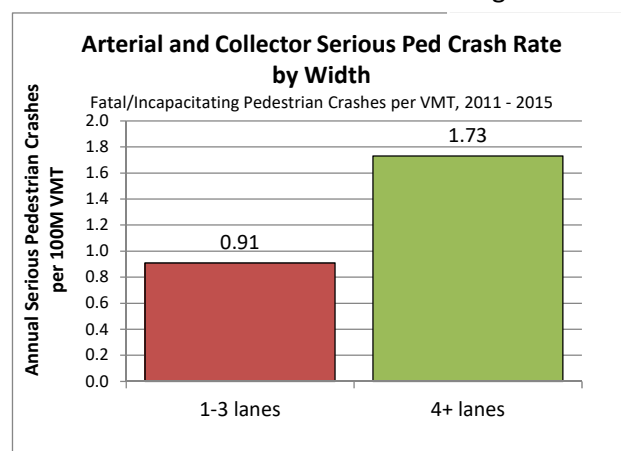


The influence of street width is consistent with the influence of roadway classification (Figure 5-12). Wider roadways are the location of a disproportionate number of Serious Pedestrian crashes in relation to both their share of the overall system (Figure 5-13) and the vehicle-miles travelled they serve (Figure 5-14). The Serious Pedestrian crash rate increases dramatically for roadways with 4 or more lanes. This effect is in spite of the fact that such arterials often discourage pedestrian travel in the first place, thereby reducing potential pedestrian exposure.

As can be seen in Figure 5-14, even when normalized by motor vehicle traffic volume, the Serious Pedestrian crash rate on wider roadways is still substantially higher than on narrower roads. Wider roadways are particularly hazardous to pedestrians.

Many transit routes follow wider roadways, increasing the need for people to cross these roadways safely.

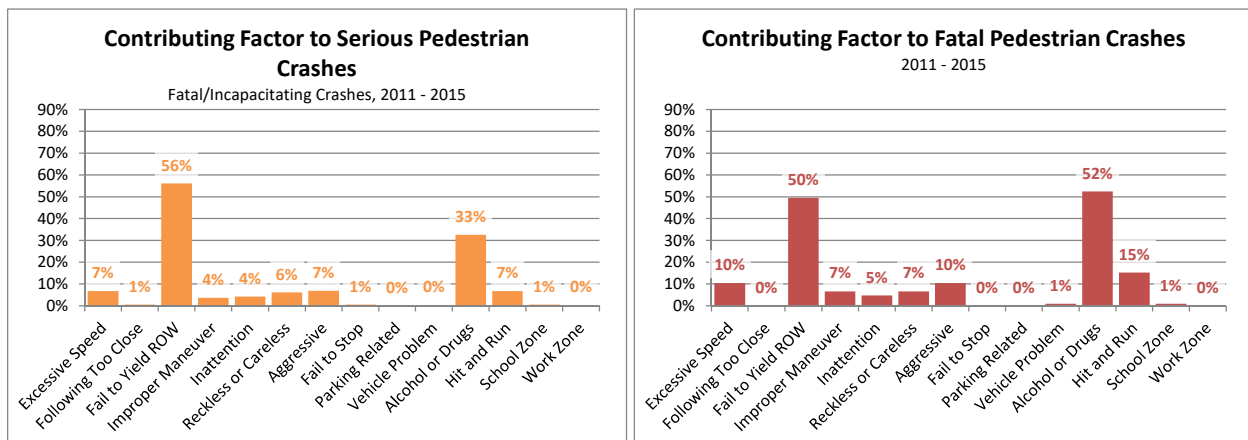
Figure 5-14



By Contributing Factor

Factor	2011-2015 Annual Crashes (Pedestrian)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	10	2.2	3	3	2	10	5
Following Too Close	1	0.0	0	1	0	1	0
Fail to Yield ROW	334	10.4	32	162	127	331	42
Improper Maneuver	18	1.4	1	8	6	17	3
Inattention	16	1.0	2	7	5	16	3
Reckless or Careless	16	1.4	3	8	3	16	5
Aggressive	11	2.2	3	4	2	11	5
Fail to Stop	3	0.0	0	1	2	3	0
Parking Related	1	0.0	0	0	1	1	0
Vehicle Problem	1	0.2	0	0	1	1	0
Alcohol or Drugs	53	11.0	13	20	9	53	24
Hit and Run	18	3.2	2	6	6	17	5
School Zone	6	0.2	0	3	3	6	0
Work Zone	4	0	0	2	2	4	0
METRO	461	21.0	54	218	164	457	75

Figures 5-15 and 5-16



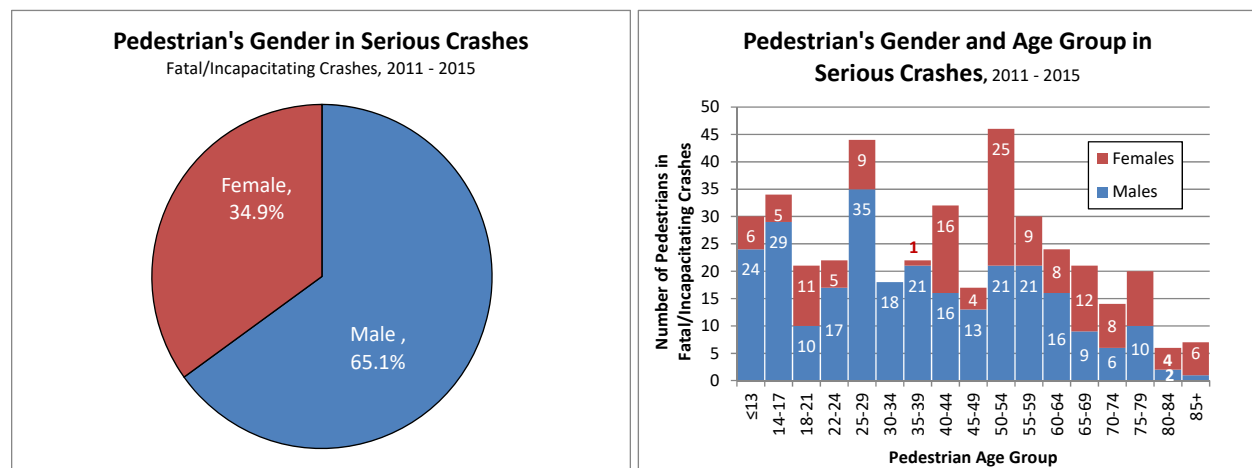
Figures 5-15 and 5-16 present the proportion of Pedestrian crashes by contributing factor for Serious and Fatal crashes, respectively. Alcohol or Drugs and Fail to Yield ROW are the most common factors. The determination of contributing factors is described in more detail in Section 7.

These data do not specify whether the driver, the pedestrian, or both were at fault, but fault in Pedestrian crashes is explored in more detail in Section 7.

By Pedestrian's Age and Gender

The age and gender of pedestrians involved in crashes are presented in the following table and Figures 5-17 and 5-18.

Age	Total Male Pedestrians (2011 – 2015)			Total Female Pedestrians (2011 – 2015)		
	All	Serious	Percent Serious	All	Serious	Percent Serious
≤13	117	24	20.5%	70	6	8.6%
14-17	126	29	23.0%	90	5	5.6%
18-21	113	10	8.8%	96	11	11.5%
22-24	101	17	16.8%	103	5	4.9%
25-29	154	35	22.7%	112	9	8.0%
30-34	105	18	17.1%	65	0	0.0%
35-39	59	21	35.6%	71	1	1.4%
40-44	97	16	16.5%	98	16	16.3%
45-49	110	13	11.8%	55	4	7.3%
50-54	113	21	18.6%	127	25	19.7%
55-59	73	21	28.8%	61	9	14.8%
60-64	61	16	26.2%	62	8	12.9%
65-69	33	9	27.3%	43	12	27.9%
70-74	26	6	23.1%	32	8	25.0%
75-79	23	10	43.5%	15	10	66.7%
80-84	11	2	18.2%	18	4	22.2%
85+	10	1	10.0%	22	6	27.3%
Unknown	66	1	1.5%	61	6	9.8%
METRO	1,398	270	19.3%	1,201	145	12.1%



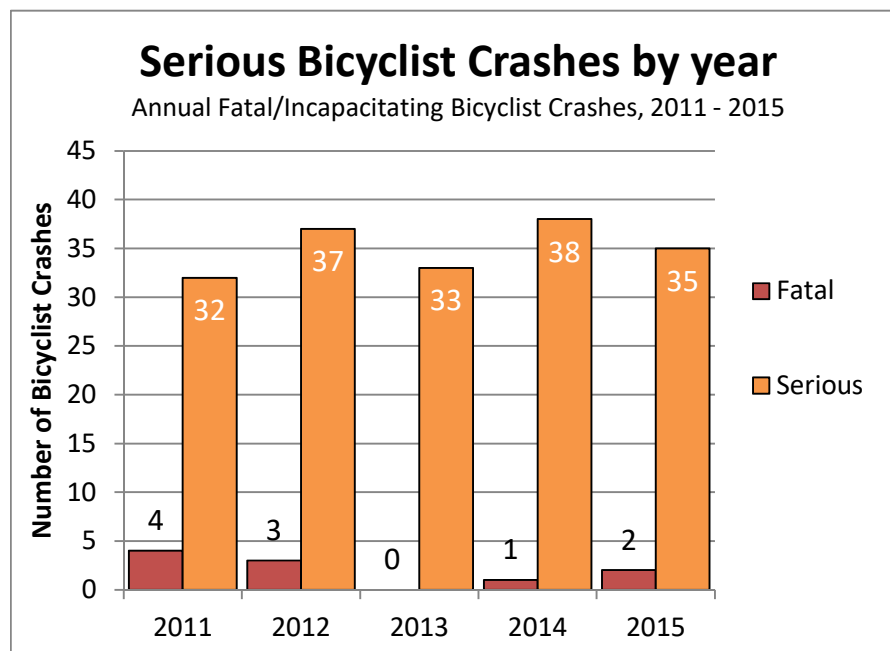
Figures 5-17 and 5-18

Section 6 – Bicyclists (Non-Freeway Crashes)

By Year

Year	Fatal Crashes (Fatalities)	Injury A Crashes	Injury B Crashes	Injury C Crashes	All Injury Crashes	Serious Crashes
2011	4 (4)	28	283	166	481	32
2012	3 (3)	34	357	167	561	37
2013	0 (0)	33	320	132	485	33
2014	1 (1)	37	311	160	509	38
2015	2 (2)	33	262	181	478	35
METRO	10 (10)	165	1,533	806	2,514	175

Figure 6-1



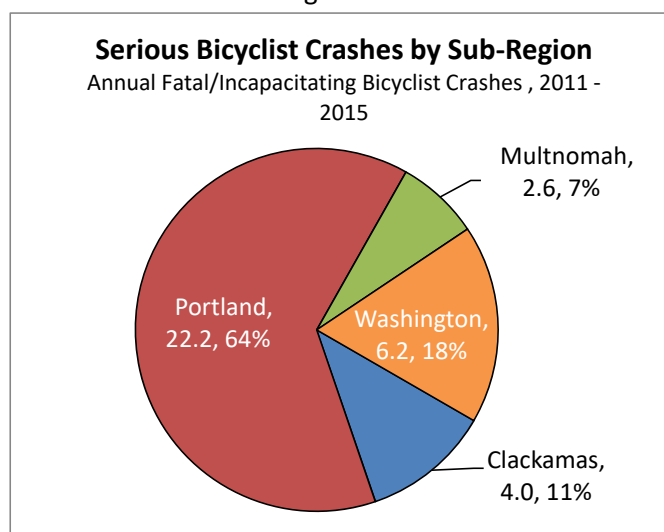
As presented in Figure 6-1, Serious Bicyclist crashes fluctuated over the 5-year period, while Fatal Bicyclist crashes declined. No clear trend is evident.

By Sub-Region

Sub-region	2011-2015 Annual Bicyclist Crashes					
	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Clackamas	0.2	3.8	26	13	43	4.0
Portland	1.2	21.0	193	98	314	22.2
Multnomah (excl. Portland)	0.0	2.6	24	15	42	2.6
Washington	0.6	5.6	63	35	104	6.2
METRO	2.0	33.0	306	161	502	35.0

Sub-region	Population (2015)	Annual VMT (2015)	Annual Bicyclist Injury Crashes		Annual Serious Bicyclist Crashes	
			per 1M residents	per 100M VMT	per 1M residents	per 100M VMT
Clackamas	290,630	1,048,000,000	149	4.1	14	0.4
Portland	620,540	2,096,000,000	505	15.0	36	1.1
Multnomah (excl. Portland)	152,611	548,000,000	273	7.6	17	0.5
Washington	539,448	2,031,000,000	192	5.1	11	0.3
METRO	1,603,229	5,723,000,000	313	8.8	22	0.6

Figure 6-2



With the highest population, transit usage, VMT, and number of bicyclists, Portland has 64% of the region's Serious Bicyclist crashes (Figure 6-2). Portland also has the highest rate of Serious Bicyclist crashes per capita and per VMT. Multnomah (excludes Portland), Clackamas County and Washington County have lower rates of Serious Bicyclist crashes, which is likely partially due to fewer people cycling.

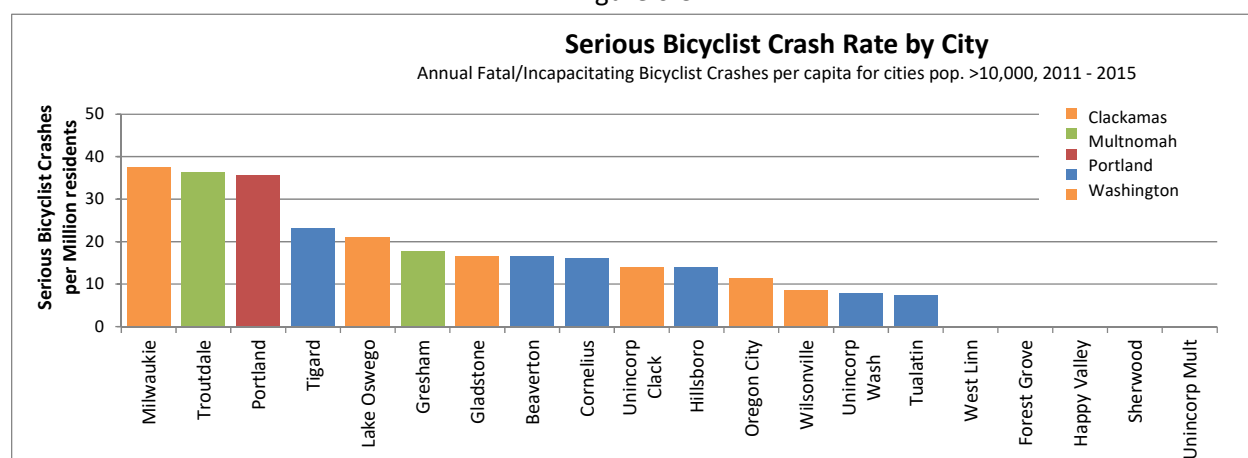
By City

City	2011-2015 Annual Bicyclist Crashes					
	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Beaverton	0.2	1.4	14	7	22	1.6
Cornelius	0.0	0.2	2	1	2	0.2
Durham	0.0	0.0	0	0	1	0.0
Fairview	0.0	0.0	1	0	1	0.0
Forest Grove	0.0	0.0	4	2	6	0.0
Gladstone	0.0	0.2	2	1	3	0.2
Gresham	0.0	2.0	18	12	32	2.0
Happy Valley	0.0	0.0	2	0	2	0.0
Hillsboro	0.2	1.2	15	11	28	1.4
Johnson City	0.0	0.0	0	0	0	0.0
King City	0.0	0.0	0	0	0	0.0
Lake Oswego	0.0	0.8	2	1	4	0.8
Maywood Park	0.0	0.0	0	0	0	0.0
Milwaukie	0.0	0.8	4	2	7	0.8
Oregon City	0.0	0.4	4	1	6	0.4
Portland	1.2	21.0	193	98	314	22.2
Rivergrove	0.0	0.0	0	0	0	0.0
Sherwood	0.0	0.0	1	1	2	0.0
Tigard	0.0	1.2	9	5	15	1.2
Troutdale	0.0	0.6	2	2	4	0.6
Tualatin	0.0	0.2	5	3	8	0.2
West Linn	0.0	0.0	1	0	2	0.0
Wilsonville	0.0	0.2	1	1	2	0.2
Wood Village	0.0	0.0	1	1	2	0.0
Uninc. Clackamas	0.2	1.4	9	6	16	1.6
Uninc. Multnomah	0.0	0.0	2	0	2	0.0
Uninc. Washington	0.2	1.4	13	6	20	1.6
METRO	2.0	33.0	306	161	502	35.0

While Portland has the largest number of Serious Bicyclist crashes, it is apparent from Figure 6-3 that there are a several cities with a relatively high rate of Serious Bicyclist crashes per capita. Troutdale, Milwaukie, and Portland all experienced relatively high rates of Serious Bicyclist crashes between 2011 and 2015.

City	Population (2015)	2011-2015 Annual Bicyclist Crashes	
		All Injury per 1M residents	Serious per 1M residents
Beaverton	96,704	230	16.5
Cornelius	12,389	194	16.1
Durham	1,430	420	0.0
Fairview	9,357	150	0.0
Forest Grove	23,630	254	0.0
Gladstone	11,990	250	16.7
Gresham	111,716	285	17.9
Happy Valley	20,835	115	0.0
Hillsboro	100,109	278	14.0
Johnson City	588	0	0.0
King City	3,817	0	0.0
Lake Oswego	38,156	115	21.0
Maywood Park	809	494	0.0
Milwaukie	21,365	328	37.4
Oregon City	35,004	166	11.4
Portland	620,540	506	35.8
Rivergrove	321	0	0.0
Sherwood	19,012	116	0.0
Tigard	51,642	287	23.2
Troutdale	16,486	267	36.4
Tualatin	26,617	301	7.5
West Linn	26,267	69	0.0
Wilsonville	22,932	96	8.7
Wood Village	4,056	444	0.0
Uninc. Clackamas	113,172	145	14.1
Uninc. Multnomah	10,187	177	0.0
Uninc. Washington	204,098	98	7.8
METRO	1,603,229	313	21.8

Figure 6-3



By Month

Month	2011-2015 Annual Bicyclist Crashes	
	All Injury	Serious
January	21	1.4
February	28	2.2
March	33	1.6
April	38	1.0
May	46	2.6
June	48	3.4
July	61	5.0
August	57	4.0
September	60	4.8
October	49	2.6
November	34	3.0
December	28	3.4
12 MONTHS	502	35.0

Figure 6-4

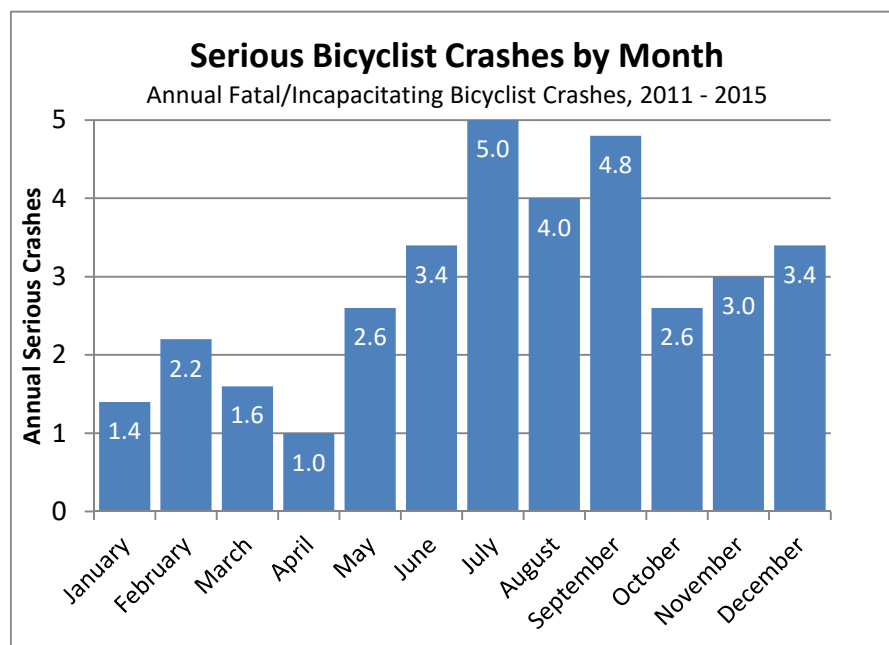


Figure 6-4 presents the annual average number of Serious Bicyclist crashes by month. May through December generally have more Serious Bicyclist crashes, with the peak corresponding to the summer months, likely related to the higher number of people cycling in the warm and dry months.

By Time of Day

Figure 6-5

Serious Crashes by Day of Week and Hour Annual Fatal/Incapacitating Bicyclist Crashes, 2011 - 2015											
Hour	Sun	Mon	Tue	Wed	Thu	Fri	Sat		Hour	Average Wkday	Average Wkend
12 AM	0.2	0.0	0.0	0.0	0.0	0.0	0.2		12 AM	0.0	0.2
1 AM	0.2	0.0	0.0	0.0	0.0	0.2	0.4		1 AM	0.0	0.3
2 AM	0.2	0.0	0.0	0.0	0.0	0.0	0.0		2 AM	0.0	0.1
3 AM	0.0	0.0	0.0	0.0	0.2	0.0	0.0		3 AM	0.0	0.0
4 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0		4 AM	0.0	0.0
5 AM	0.0	0.2	0.0	0.0	0.0	0.0	0.0		5 AM	0.0	0.0
6 AM	0.0	0.0	0.0	0.8	0.2	0.4	0.0		6 AM	0.3	0.0
7 AM	0.0	0.4	0.0	0.8	0.6	0.2	0.0		7 AM	0.4	0.0
8 AM	0.0	0.0	0.0	0.8	0.8	0.4	0.2		8 AM	0.4	0.1
9 AM	0.2	0.2	0.2	0.0	0.4	0.2	0.0		9 AM	0.2	0.1
10 AM	0.0	0.0	0.0	0.6	0.4	0.2	0.4		10 AM	0.2	0.2
11 AM	0.2	0.0	0.0	0.2	0.2	0.4	0.4		11 AM	0.2	0.3
12 PM	0.0	0.2	0.4	0.6	0.8	0.0	0.0		12 PM	0.4	0.0
1 PM	0.0	0.0	0.2	0.4	0.0	0.6	0.2		1 PM	0.2	0.1
2 PM	0.4	0.4	0.2	0.2	0.0	0.8	0.0		2 PM	0.3	0.2
3 PM	0.0	0.4	0.0	0.6	0.4	0.2	0.8		3 PM	0.3	0.4
4 PM	0.4	1.2	0.6	0.8	0.6	0.4	0.0		4 PM	0.7	0.2
5 PM	0.6	0.2	1.0	0.8	1.0	0.4	0.4		5 PM	0.7	0.5
6 PM	0.2	0.4	0.4	0.2	0.6	0.0	0.4		6 PM	0.3	0.3
7 PM	0.0	0.8	0.4	0.0	0.6	0.0	0.0		7 PM	0.4	0.0
8 PM	0.0	0.0	0.0	0.4	0.2	0.0	0.2		8 PM	0.1	0.1
9 PM	0.2	0.2	0.0	0.4	0.4	0.0	0.0		9 PM	0.2	0.1
10 PM	0.0	0.0	0.2	0.2	0.0	0.2	0.4		10 PM	0.1	0.2
11 PM	0.0	0.2	0.0	0.0	0.0	0.0	0.0		11 PM	0.0	0.0
	Sun	Mon	Tue	Wed	Thu	Fri	Sat			Average Wkday	Average Wkend
All Day	2.8	4.8	3.6	7.8	7.4	4.6	4.0		All Day	5.6	3.4

Figure 6-5 presents the rate of Serious Bicyclist crashes by day of the week and hour of the day using a “heat map” format. Dark cells indicate the highest relative crash time periods; light cells indicate the lowest relative crash time periods. The average weekday and weekend day are summarized on the right side of the figure, while each day is summarized and compared at the bottom of the figure.

The weekday evening peak hours produce the highest number of Serious Bicyclist crashes, mirroring the pattern for all crashes, with the 4:00 – 5:59 pm as the worst. Wednesday and Thursday are the two days with the highest number of Bicyclist crashes, which is consistent with the prior report’s data from 2007 – 2009. No other clear trends are evident.

By Weather

2011-2015 Annual Bicyclist Crashes	
Weather	Serious Crashes
Cloudy/Clear	30.6
Rain/Fog	3.6
Sleet/Snow	0.0
Unknown	0.8
METRO	35.0

The majority (88%) of Serious Bicyclist crashes occurred in clear or cloudy conditions (Figure 6-6), as compared to 80% for all crashes (Figure 2-16).

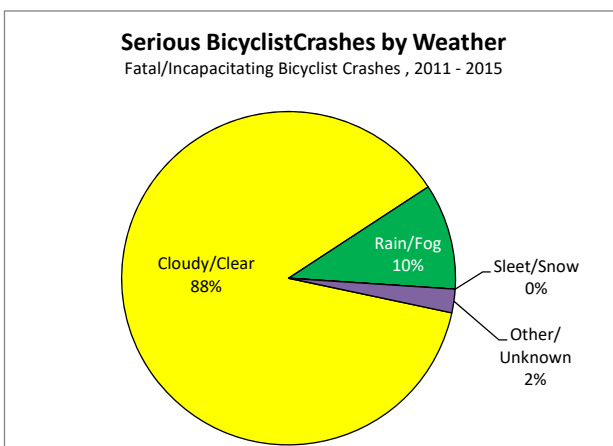


Figure 6-6

By Road Surface Condition

2011-2015 Annual Bicyclist Crashes	
Road Condition	Serious Crashes
Dry	29.2
Ice/Snow	0.0
Wet	5.4
Unknown	0.4
METRO	35.0

The majority (84%) of Serious Bicyclist crashes occurred in dry conditions (Figure 6-7), as compared to 73% for all crashes (Figure 2-17).

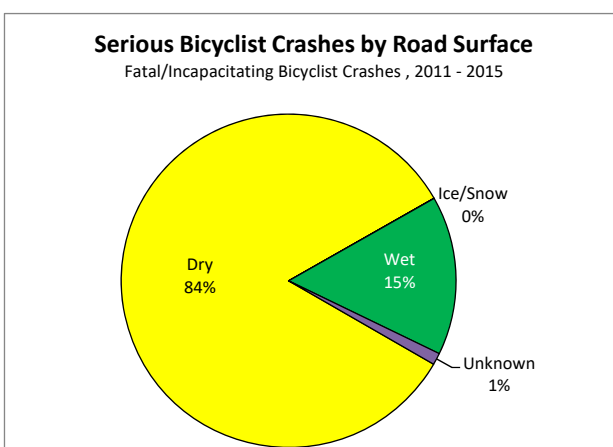


Figure 6-7

By Lighting

2011-2015 Annual Bicyclist Crashes	
Lighting	Serious Crashes
Daylight	24.4
Dawn/Dusk	2.8
Night - Dark	1.6
Night - Lit	6.2
Unknown	0.0
METRO	35.0

The majority (70%) of Serious Bicyclist crashes occurred in daylight (Figure 6-8), as compared to 59% for all crashes (Figure 2-18).

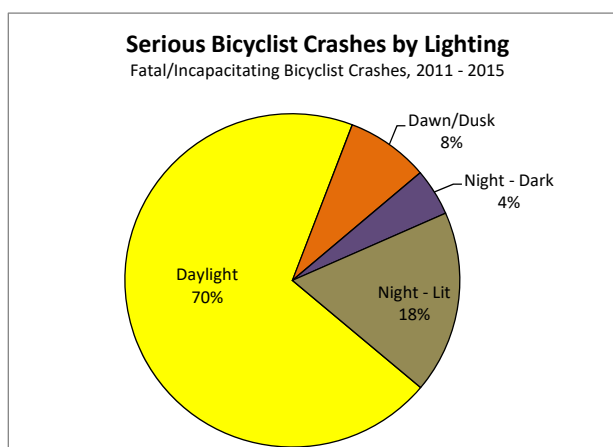


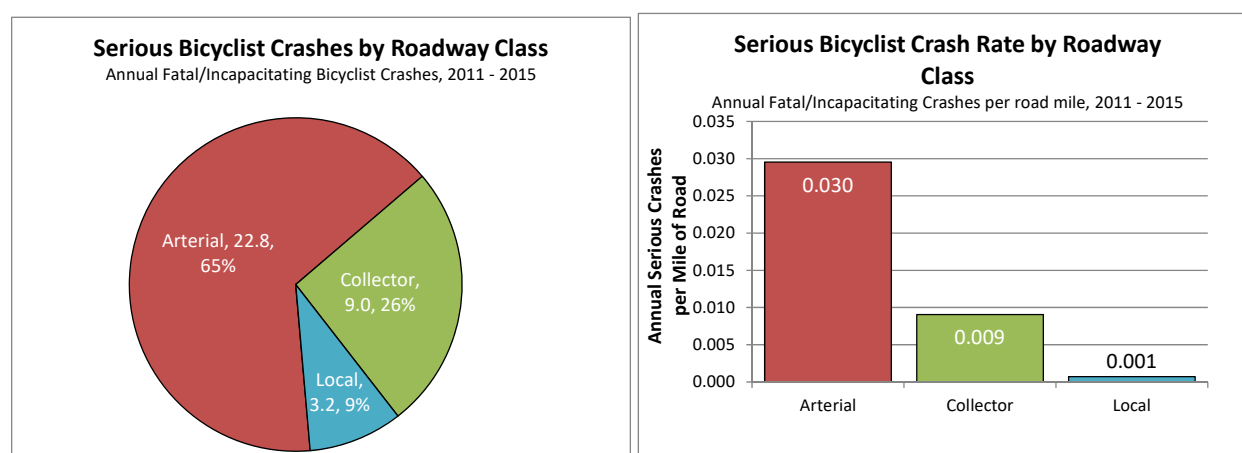
Figure 6-8

By Roadway Classification

Roadway Classification	Total Road-Miles	Annual VMT (2015)	2011-2015 Annual Bicyclist Crashes		
			Serious	Serious per Road-Mile	Serious per 100M VMT
Arterial	772	4,281,000,000	22.8	0.030	0.53
Collector	994	1,081,000,000	9.0	0.009	0.83
Local	4,565	620,000,000*	3.2	0.001	0.52
METRO	6,331	5,982,000,000	35.0	0.006	--

* VMT for local streets is a low-confidence estimate

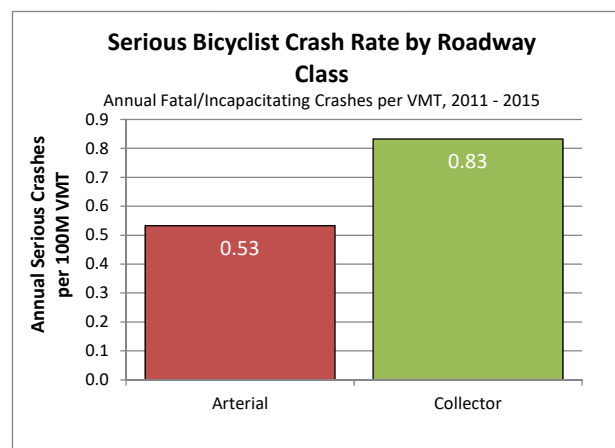
Figures 6-9 and 6-10



As with all crashes, the region's Serious Bicyclist crashes occur primarily on the arterials, accounting for 65% of these crashes. Figure 6-9 presents the distribution of Serious Bicyclist crashes by roadway classification. As can be seen in Figure 6-10, which presents the rate of Serious Bicyclist crashes per mile of roadway, arterial roadways are more than three times as likely than collectors per mile to be the location of a Serious Bicyclist crash, and more than 40 times as likely than local streets per mile to be the location of a Serious Bicyclist crash.

Figure 6-11

As can be seen in Figure 6-11, when normalized by motor vehicle traffic volume, the Serious Bicyclist crash rate on collectors is higher than on arterials. While the reason for this is not clear from the data, it may be related to a higher use of collector roads by cyclists relative to traffic volume as compared to arterials. Vehicle miles travelled was not available for local streets.

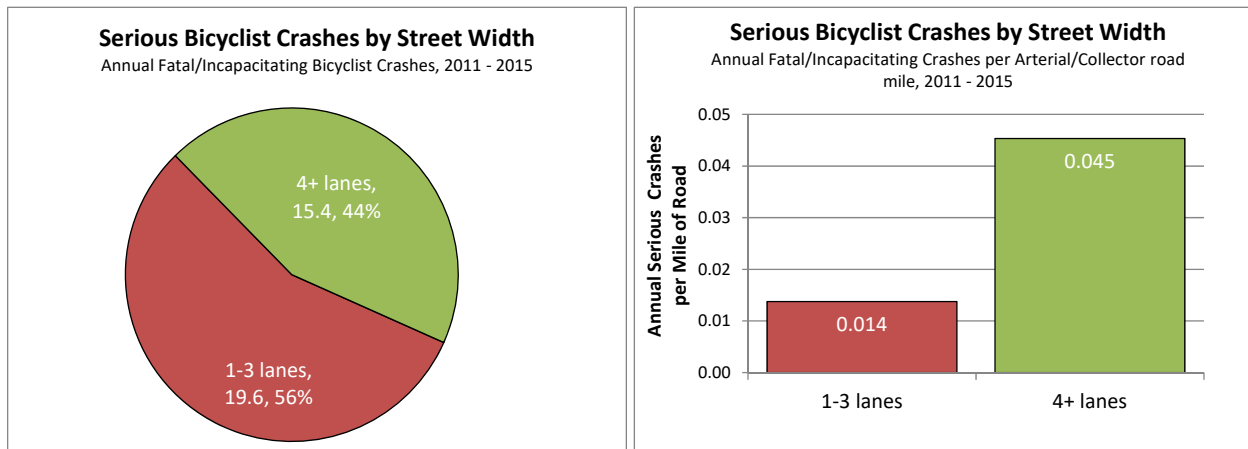


By Number of Lanes

Number of Lanes	Total Road-Miles	2011-2015 Annual Bicyclist Crashes		
		Serious	Serious per Road-Mile	Serious per 100M VMT
1 – 3 Lanes	1,427	19.6	0.014	0.66
4+ Lanes	340	15.4	0.045	0.56
METRO	1,766	35.0	0.020	0.61

* Arterial and Collector roadways only

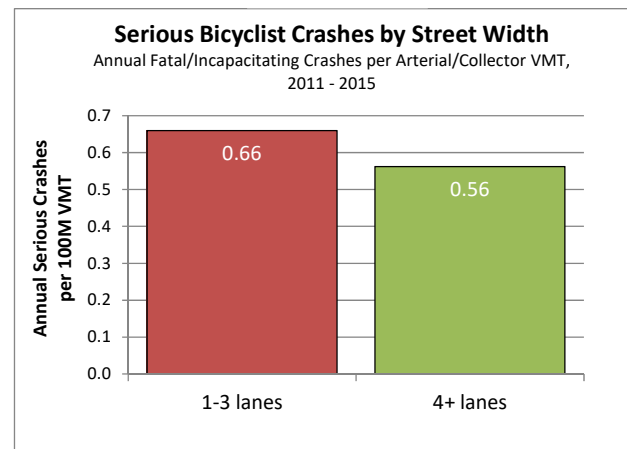
Figure 6-12 and 6-13



The influence of street width is consistent with the influence of roadway classification (Figure 6-12). Wider roadways are the location of a disproportionate number of Serious Bicyclist crashes in relation to their share of the overall system (Figure 6-13), although the effect is not as pronounced as it is for Serious Pedestrian crashes. The Serious Bicyclist crash rate per road mile increases dramatically for roadways with 4 or more lanes. This is a concern, given that in many parts of the region designated bicycling routes often follow arterial roadways with 4 or more lanes.

Figure 6-14

As can be seen in Figure 6-14, when normalized by motor vehicle traffic volume, the Serious Bicyclist crash rate on narrower roads is higher than on wider roads. While the reason for this is not clear from the data, it may be related to a higher use of narrower roads by cyclists relative to traffic volume as compared to multi-lane roadways.



By Contributing Factor

Factor	2011-2015 Annual Crashes (Bicyclist)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	25	0.4	2	16	6	24	2
Following Too Close	13	0.2	0	7	4	11	0
Fail to Yield ROW	417	1.0	28	248	129	406	29
Improper Maneuver	77	0.6	4	41	30	75	5
Inattention	7	0.0	1	4	2	7	1
Reckless or Careless	14	0.4	2	8	3	14	2
Aggressive	35	0.4	2	21	9	32	2
Fail to Stop	10	0.0	0	5	3	8	0
Parking Related	0	0.0	0	0	0	0	0
Vehicle Problem	9	0.0	1	5	3	9	1
Alcohol or Drugs	18	0.8	2	10	4	17	3
Hit and Run	14	0.6	1	8	3	13	1
School Zone	4	0.0	0	2	2	4	0
Work Zone	3	0	1	2	1	3	1
METRO	518	2.0	33	306	161	502	35

Figures 6-15 and 6-16

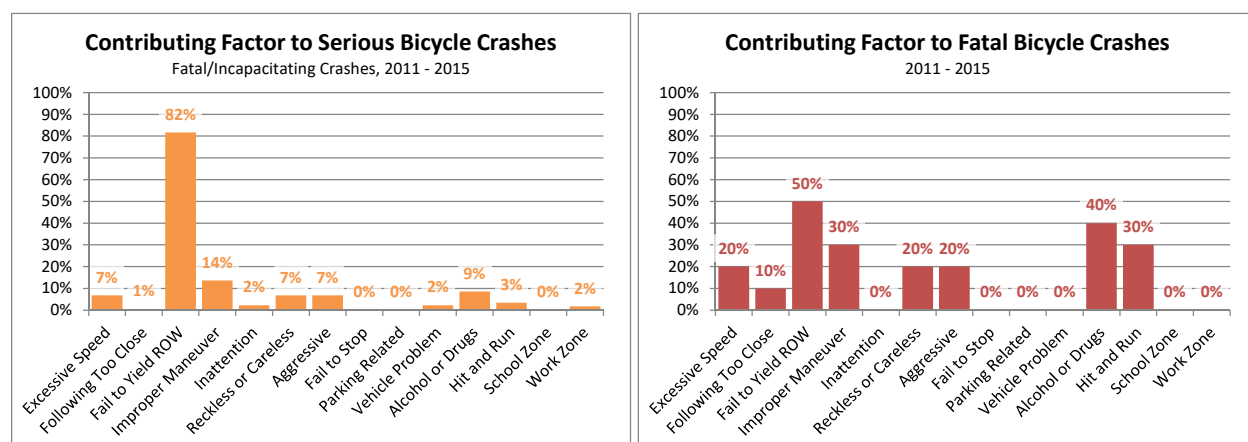


Figure 6-15 and 6-16 present the proportion of Bicyclist crashes by contributing factor for Serious and Fatal crashes, respectively. Alcohol or Drugs and Fail to Yield ROW are the most common factors. The data do not specify whether the driver, the bicyclist, or both were under the influence of alcohol. Other factors, such as Fail to Yield ROW, Excessive Speed, and Aggressive Driving, are for the driver.

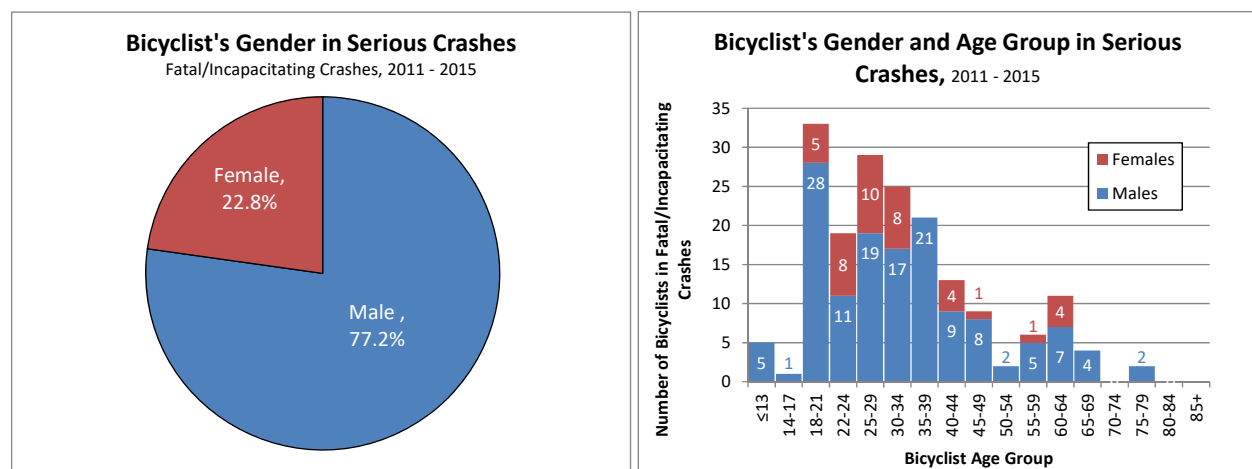
The determination of contributing factors is described in more detail in Section 7.

By Bicyclist's Age and Gender

The age and gender of bicyclists involved in Serious crashes are presented in the following table and Figures 6-17 and 6-18.

Age	Total Male Bicyclists (2011 – 2015)			Total Female Bicyclists (2011 – 2015)		
	All Crashes	Serious	Percent Serious	All Crashes	Serious	Percent Serious
≤13	98	5	5.1%	39	0	0.0%
14-17	131	1	0.8%	23	0	0.0%
18-21	164	28	17.1%	54	5	9.3%
22-24	236	11	4.7%	81	8	9.9%
25-29	223	19	8.5%	149	10	6.7%
30-34	262	17	6.5%	107	8	7.5%
35-39	150	21	14.0%	66	0	0.0%
40-44	154	9	5.8%	48	4	8.3%
45-49	156	8	5.1%	47	1	2.1%
50-54	116	2	1.7%	28	0	0.0%
55-59	96	5	5.2%	16	1	6.3%
60-64	71	7	9.9%	18	4	22.2%
65-69	20	4	20.0%	2	0	0.0%
70-74	17	0	0.0%	0	0	--
75-79	11	2	18.2%	0	0	--
80-84	0	0	--	0	0	--
85+	6	0	0.0%	0	0	--
Unknown	154	0	0.0%	39	0	0.0%
METRO	2065	139	6.7%	717	41	5.7%

Figures 6-17 and 6-18



Section 7 – Crash Type Detail

In this section, the four crash types identified in Section 2 as most prevalent are reviewed relative to all crashes in more detail to identify patterns. As documented in Section 2, the most common Serious crash types were Rear End and Turning, while the most common Fatal crash types were Fixed Object and Pedestrian. More detail on Rear End, Turning, Fixed Object, and Pedestrian crashes are presented here.

For each crash type, detailed crash information was summarized for all crashes of that type. The information includes crash severity and contributing factors.

Crash Severity

Every crash is assigned a crash severity based on the most critically injured victim. From worst to best, the classifications are: Fatal, Injury A, Injury B, Injury C, and PDO (property damage only).

“Serious Crashes” in this report refers to the total number of Fatal and Injury A crashes.

“Injury A” and **“Incapacitating injury”** are used interchangeably. Incapacitating injuries typically are injuries that the victim is not able to walk away from. They are synonymous with the term **“Severe injury”**

“Injury B” and **“Moderate injury”** are used interchangeably.

“Injury C” and **“Minor injury”** are used interchangeably.

“PDO” means property damage only. Crashes must result in \$3,000 or more in damages to be counted.

Contributing Factors

The State Department of Motor Vehicles assigns causes and errors to participants in each crash, along with identifiers for certain risk factors, including alcohol and drugs. Several causes, errors, and/or events may apply to any single crash. Based on these causes, errors, and risk factors, crashes were evaluated for 14 contributing factors. The first cause, three errors, and one event were reviewed for up to three drivers and one non-motorist per crash, and classified for this analysis as follows:

Defined Contrib. Factor	DMV codes included in factor	Cause Codes	Error Codes	Event Codes
Excessive Speed	Speed too fast for conditions; Driving in excess of posted speed; Speed racing; Failed to decrease speed for slower moving vehicle; Driving too fast for conditions	1, 30, 31	42, 47, 50, 53	
Following Too Close	Following too closely	7	43	
Fail to Yield ROW (right-of-way)	Did not yield ROW; Passed stop sign or flashing red; Disregarded traffic signal; Disregarded other traffic control device; Disregarded officer or flagman; Disregarded emergency vehicle; Disregarded Railroad signal or sign or flagman; Failed to obey mandatory turn signal, sign or lane markings; Left turn in front of oncoming traffic; Did not have ROW over pedalcyclist; Did not have ROW; Failed to yield ROW to pedestrian; Passed vehicle stopped at crosswalk for pedestrian	2, 3, 4, 14	3, 4, 20, 21, 23, 24, 25, 27, 28, 29, 33	
Improper Maneuver	Drove left of center on two-way road; Improper overtaking; Made improper turn; Other improper driving; Improper change of lanes; Improper use of median or shoulder; Wide turn; Cut corner on turn; Left turn where prohibited; Turned from or into wrong lane; U-turned illegally; Improperly stopped in traffic; Improper signal or failure to signal; Backing improperly (not parking); Improper start from stopped position; Disregarded warning sign, flares, or flashing amber; Passing on a curve, on wrong side, on straight road under unsafe conditions, at intersection, on crest of hill, in no passing zone, or in front of oncoming traffic; Driving on wrong side of road; Driving through safety zone or island; Failed to stop for school bus; Impeding traffic; Straddling or driving on wrong lanes; Improper change of lanes; Wrong way	5, 6, 8, 10, 13, 50	1, 2, 5, 6, 7, 8, 9, 10, 11, 14, 22, 30, 31, 32, 34, 35, 36, 37, 39, 40, 41, 44, 45, 46, 49	
Inattention	Driver drowsy/fatigued/sleepy; Inattention; Distracted by passenger, animal, cell phone, texting, navigation system, or electronic device	16, 27, 28	16	2, 3, 93, 99, 102, 115, 116
Reckless or Careless	Reckless driving; Careless driving	32, 33	51, 52	
Aggressive	Excessive Speed or Following too Close, as defined above	1, 7, 30, 31	42, 43, 47, 50, 53	
Fail to Stop	Failed to avoid stopped or parked vehicle ahead other than school bus		26	
Parking Related	Improperly parked; Improper start leaving parked position; Improper parking; Opened door into adjacent traffic lane		12, 13, 18, 48	
Vehicle Problem	Improper or no lights; Driving unsafe vehicle (no other error apparent); Overloading or improper loading of vehicle with cargo or passengers		15, 17, 85	
Alcohol or Drugs	Alcohol, Drugs			
Hit and Run	Hit and Run			

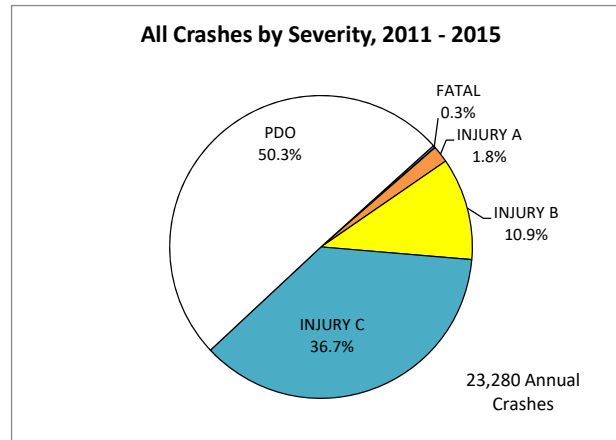
All Crash Types

The following table summarizes all crashes in the region by severity and contributing factor, as defined on the previous page.

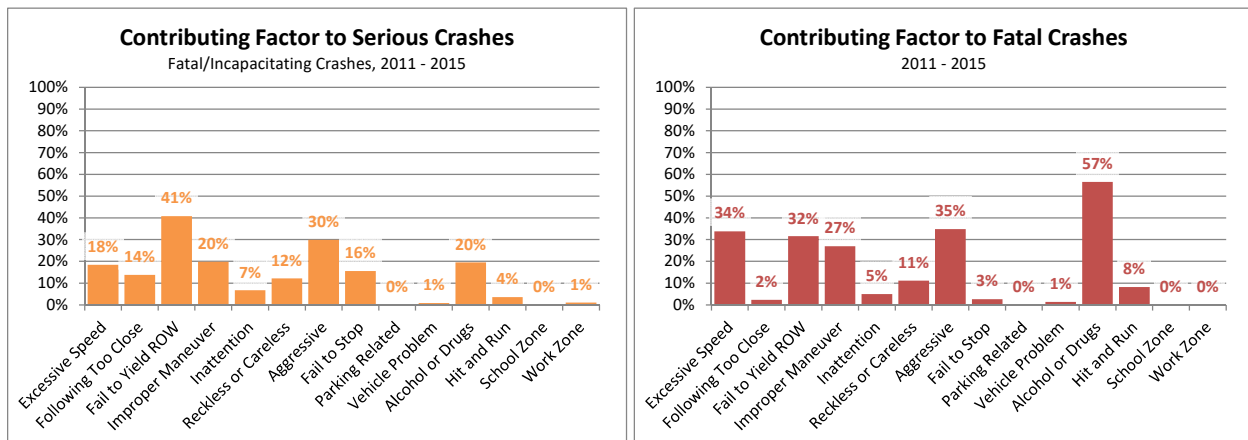
Factor	2011-2015 Annual Crashes (All Crashes)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	2,897	20.6	68	372	1,019	1,480	89
Following Too Close	7,806	1.4	65	486	3,660	4,212	66
Fail to Yield ROW	7,081	19.2	177	1,227	2,369	3,793	196
Improper Maneuver	4,636	16.4	79	400	1,137	1,633	96
Inattention	1,279	3.0	29	166	533	731	32
Reckless or Careless	1,086	6.8	52	234	375	668	59
Aggressive	9,663	21.2	123	771	4,198	5,114	144
Fail to Stop	8,979	1.6	73	514	4,228	4,817	75
Parking Related	136	0.0	0	4	18	22	0
Vehicle Problem	124	0.8	4	18	35	57	4
Alcohol or Drugs	1,056	34.4	60	215	265	575	94
Hit and Run	1,382	5.0	12	104	452	572	17
School Zone	66	0.2	1	13	26	39	1
Work Zone	177	0.2	5	25	69	99	5
METRO	23,280	60.8	420	2,547	8,545	11,573	481

Figure 7-1 presents the crash severity distribution of all crashes. Figures 7-2 and 7-3 present the proportion of crashes by contributing factor for Serious and Fatal crashes, respectively. Each crash may have several contributing factors.

Figure 7-1



Figures 7-2 and 7-3



Alcohol and Drugs, Aggressive Driving (defined as either Excessive Speed or Following Too Close), Excessive Speed, and Fail to Yield ROW are the most common contributing factors to Serious crashes in the region.

Rear End Crashes

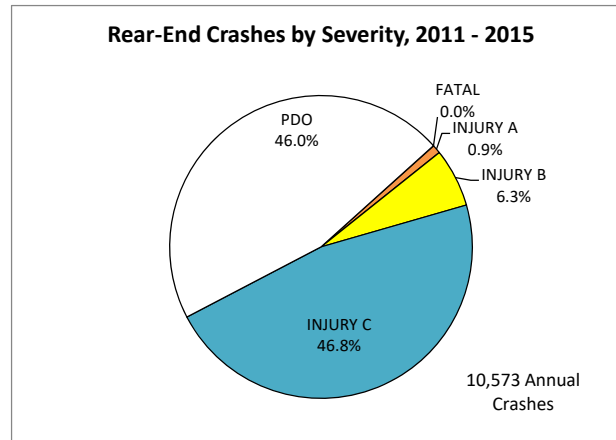
A Rear End crash results when a vehicle traveling in the same direction or parallel on the same path as another vehicle, collides with the rear end of a second vehicle. In this type, the direction of travel was parallel but continuous.

Rear End is the most common crash type in the region, and although it is rarely Fatal it is often Serious. Rear End crashes constitute 7% of Fatal crashes, 21% of Serious crashes, and 45% of all crashes in the region.

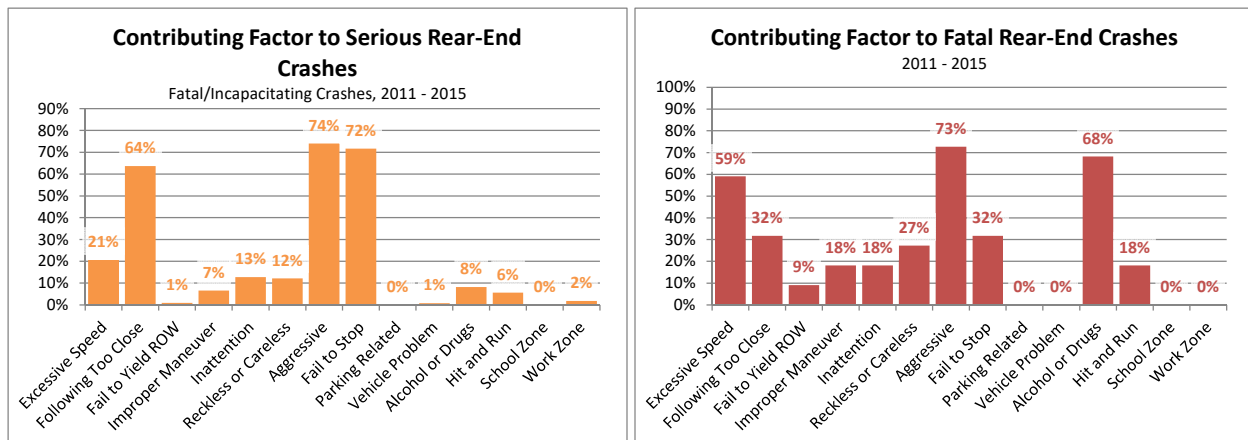
Factor	2011-2015 Annual Crashes (Rear-End Crashes)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	1,591	2.6	18.0	131	727	878	20.6
Following Too Close	7,639	1.4	62.2	470	3,599	4,133	63.6
Fail to Yield ROW	59	0.4	0.6	7	25	33	1.0
Improper Maneuver	455	0.8	5.8	32	184	223	6.6
Inattention	834	0.8	12.0	75	417	505	12.8
Reckless or Careless	412	1.2	11.0	67	209	288	12.2
Aggressive	8,248	3.2	70.8	520	3,865	4,460	74.0
Fail to Stop	8,748	1.4	70.2	503	4,167	4,742	71.6
Parking Related	4	0.0	0.0	0	1	1	0.0
Vehicle Problem	28	0.0	0.8	2	14	18	0.8
Alcohol or Drugs	256	3.0	5.2	36	110	154	8.2
Hit and Run	553	0.8	4.8	32	264	302	5.6
School Zone	21	0.0	0.0	2	11	13	0.0
Work Zone	89	0	1.8	9	42	54	1.8
METRO	10,573	4.4	95.6	661	4,948	5,710	100.0

Figure 7-4 presents the crash severity distribution of Rear End crashes. Figures 7-5 and 7-6 present the proportion of crashes by contributing factor for Serious Rear End and Fatal Rear End crashes, respectively. Each crash may have several contributing factors.

Figure 7-4



Figures 7-5 and 7-6



Rear End crashes are less severe than most crashes, producing a high proportion of Injury C and PDO crashes. Aggressive Driving, Fail to Stop, Following too Closely, and Excessive Speed are factors in a substantial proportion of Serious and Fatal Rear End crashes.

Turning Crashes

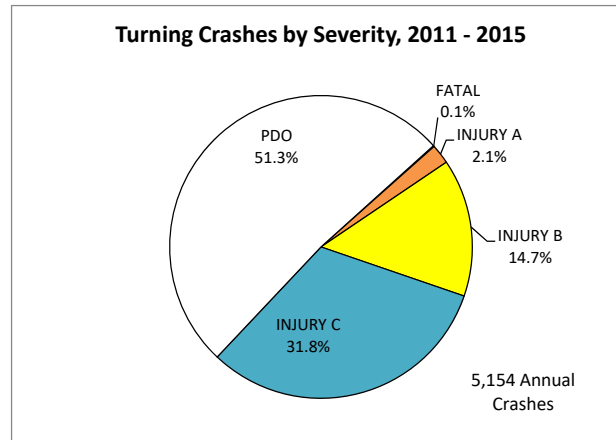
A Turning crash results when one or more vehicles in the act of a turning maneuver is involved in a collision with another vehicle. It differs from an Angle crash in that Turning crashes involve vehicles traveling on the same street, whereas Angle crashes involve vehicles traveling on intersecting streets or driveways.

Turning is the second most common crash type in the region, as well as the most common Serious crash type. Turning crashes constitute 10% of Fatal crashes, 24% of Serious crashes, and 22% of all crashes in the region.

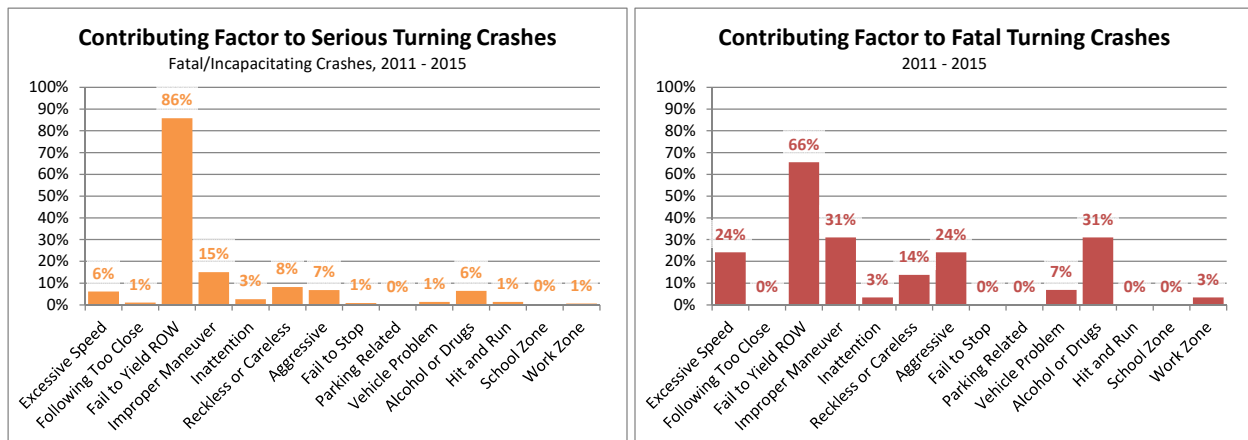
Factor	2011-2015 Annual Crashes (Turning Crashes)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	173	1.4	6	31	54	92	7
Following Too Close	102	0.0	1	7	39	47	1
Fail to Yield ROW	4,017	3.8	94	668	1,340	2,106	98
Improper Maneuver	1,160	1.8	15	104	301	423	17
Inattention	56	0.2	3	11	19	33	3
Reckless or Careless	123	0.8	9	36	41	87	9
Aggressive	238	1.4	6	34	80	122	8
Fail to Stop	86	0.0	1	3	34	38	1
Parking Related	1	0.0	0	0	0	0	0
Vehicle Problem	17	0.4	1	4	6	12	2
Alcohol or Drugs	102	1.8	6	25	31	63	7
Hit and Run	241	0.0	2	20	66	88	2
School Zone	18	0.0	0	5	6	11	0
Work Zone	25	0.2	1	5	7	13	1
METRO	5,154	5.8	108	758	1,638	2,510	114

Figure 7-7 presents the crash severity distribution of Turning crashes. Figures 7-8 and 7-9 present the proportion of crashes by contributing factor for Serious Turning and Fatal Turning crashes, respectively. Each crash may have several contributing factors.

Figure 7-7



Figures 7-8 and 7-9



Turning crashes have an average rate of severity compared to other crash types. Fail to Yield ROW, Alcohol or Drugs, and Excessive Speed are often involved in Serious and Fatal Turning crashes.

Fixed Object Crashes

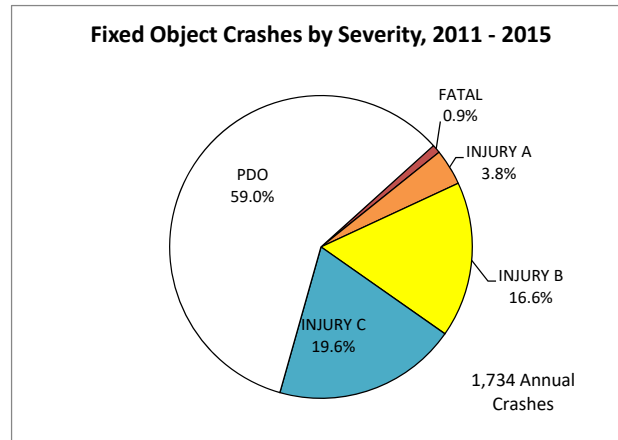
A Fixed Object crash results when one vehicle strikes a fixed or other object on or off the roadway.

Fixed Object is the second most common Fatal crash type in the region. Fixed Object crashes constitute 26% of Fatal crashes, 17% of Serious crashes, though only 7% of all crashes in the region.

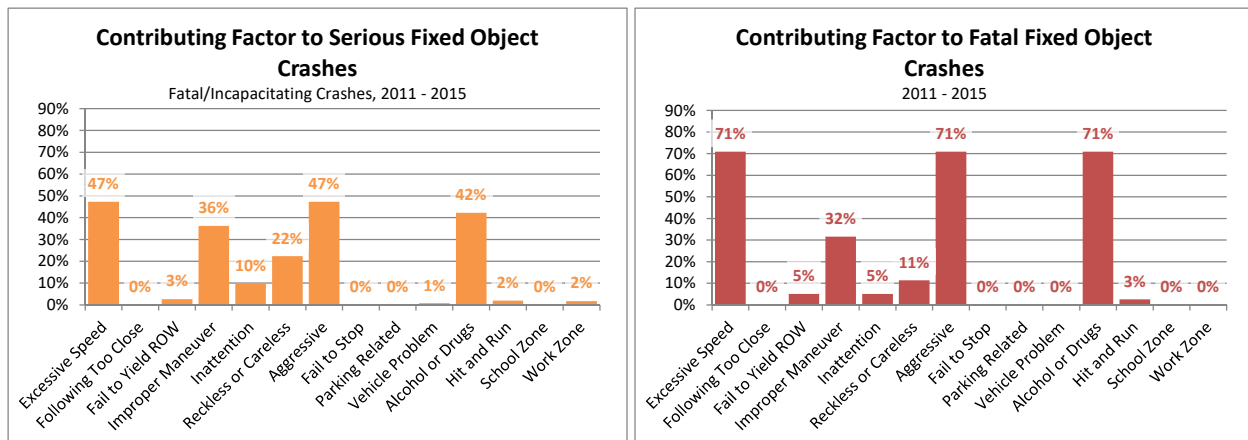
Factor	2011-2015 Annual Crashes (Fixed Object Crashes)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	756	11.2	27.8	136	145	320	39.0
Following Too Close	9	0.0	0.2	2	3	5	0.2
Fail to Yield ROW	31	0.8	1.4	6	5	13	2.2
Improper Maneuver	642	5.0	24.8	98	117	245	29.8
Inattention	216	0.8	7.2	43	46	97	8.0
Reckless or Careless	311	1.8	16.6	71	54	144	18.4
Aggressive	761	11.2	27.8	137	147	323	39.0
Fail to Stop	6	0.0	0.0	1	2	2	0.0
Parking Related	7	0.0	0.0	0	1	1	0.0
Vehicle Problem	33	0.0	0.6	3	6	10	0.6
Alcohol or Drugs	401	11.2	23.6	89	59	183	34.8
Hit and Run	133	0.4	1.2	18	14	33	1.6
School Zone	9	0.0	0.0	2	2	3	0.0
Work Zone	22	0	1.4	4	5	11	1.4
METRO	1,734	15.8	66.6	289	341	712	82.4

Figure 7-10 presents the crash severity distribution of Fixed Object crashes. Figures 7-11 and 7-12 present the proportion of crashes by contributing factor for Serious Fixed Object and Fatal Fixed Object crashes, respectively. Each crash may have several contributing factors.

Figure 7-10



Figures 7-11 and 7-12



Fixed Object crashes have a higher rate of severity including fatalities compared to other crash types. Excessive Speed, Aggressive Driving, and Alcohol or Drugs are often involved in Serious and Fatal Fixed Object crashes.

Pedestrian Crashes

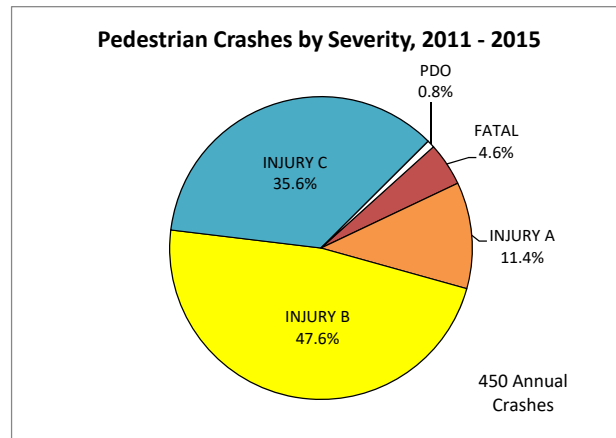
A Pedestrian crash results when the first harmful event is any impact between a motor vehicle in traffic and a pedestrian. It does not include any crash where a pedestrian is injured after the initial vehicle impact.

Pedestrian is the most common Fatal crash type in the region, and the most common crash type to be Fatal. Pedestrian crashes constitute 34% of Fatal crashes, 15% of Serious crashes, though only 2% of all crashes in the region. Pedestrian trips are 10% of all trips in the region.

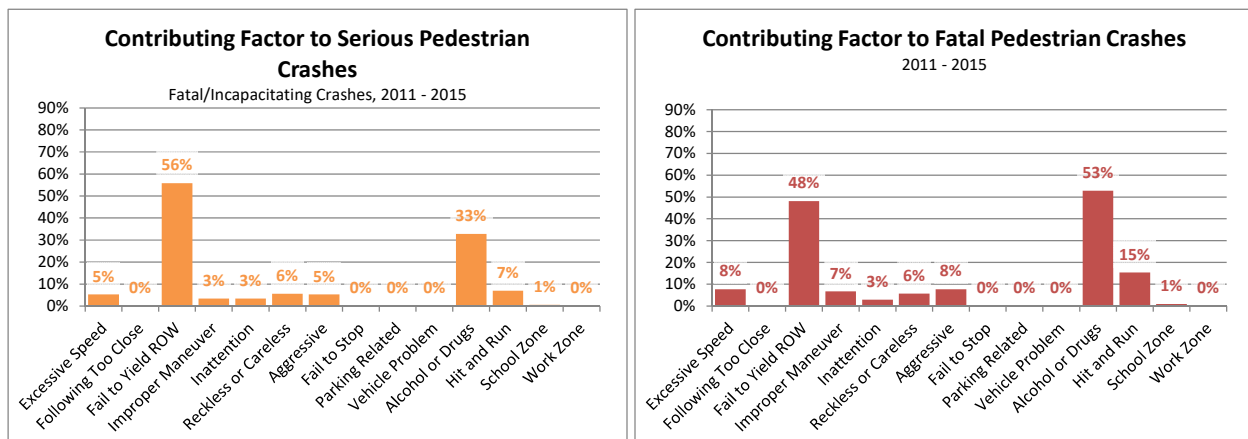
Factor	2011-2015 Annual Crashes (Pedestrian Crashes)						
	All	Fatal	Injury A	Injury B	Injury C	All Injury	Serious
Excessive Speed	7	1.6	2.2	3	1	7	3.8
Following Too Close	0	0.0	0.0	0	0	0	0.0
Fail to Yield ROW	331	10.0	30.2	161	127	328	40.2
Improper Maneuver	13	1.4	1.0	5	5	13	2.4
Inattention	14	0.6	1.8	7	5	14	2.4
Reckless or Careless	14	1.2	2.8	8	3	14	4.0
Aggressive	8	1.6	2.2	3	1	8	3.8
Fail to Stop	1	0.0	0.0	0	0	1	0.0
Parking Related	1	0.0	0.0	0	1	1	0.0
Vehicle Problem	1	0.0	0.0	0	1	1	0.0
Alcohol or Drugs	52	11.0	12.6	19	9	52	23.6
Hit and Run	17	3.2	1.8	6	6	17	5.0
School Zone	6	0.2	0.2	3	3	6	0.4
Work Zone	4	0	0.2	2	2	4	0.2
METRO	450	20.8	51.2	214	160	447	72.0

Figure 7-13 presents the crash severity distribution of Pedestrian crashes. Figures 7-14 and 7-15 present the proportion of crashes by contributing factor for Serious Pedestrian and Fatal Pedestrian crashes, respectively. Further breakdown of the reported error by user follows in Figures 7-16 through 7-19. Each crash may have several contributing factors.

Figure 7-13



Figures 7-14 and 7-15

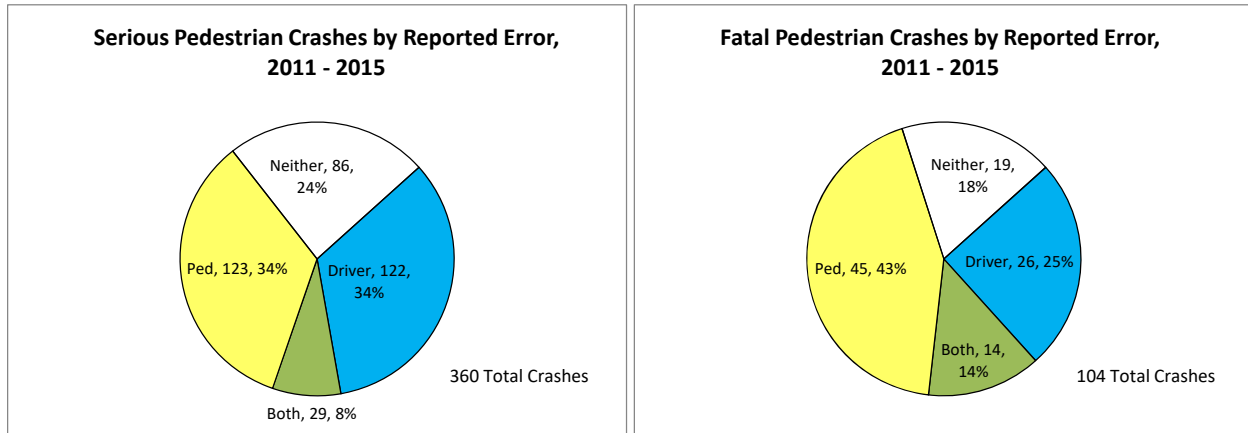


Pedestrian crashes have the highest severity of any crash type. **A Pedestrian crash is more than 26 times as likely to be fatal than a crash not involving a pedestrian, and more than 110 times as likely to be fatal as a Rear End crash, the most common crash type.** Failure to Yield ROW and Alcohol or Drugs are the most common contributing factors.

Additional analysis was done for this crash type to identify how often the driver was reported to be at fault in Pedestrian crashes and how often the pedestrian was reported to be at fault. For the purposes of this analysis, those causes, errors, and events defined at the beginning of Section 7 are considered errors.

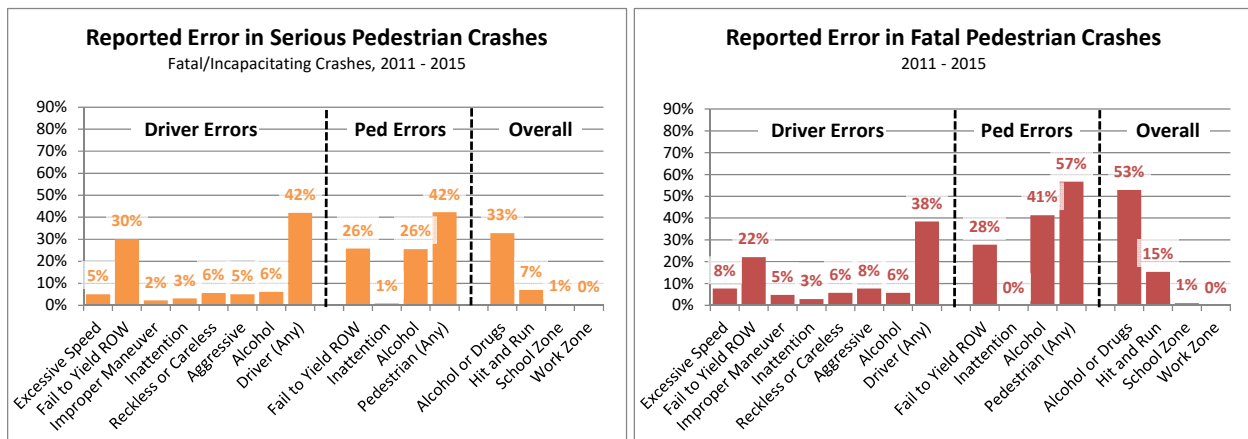
Figures 7-16 and 7-17 present the proportion of Pedestrian crashes by reported error source for Serious Pedestrian and Fatal Pedestrian crashes, respectively.

Figures 7-16 and 7-17



Figures 7-18 and 7-19 present the proportion of crashes by common contributing factor and reported error source for Serious Pedestrian and Fatal Pedestrian crashes, respectively.

Figures 7-18 and 7-19



The Crash Factor Overlaps matrix, Figure 7-20, shows the percentage Serious crashes for different factors.

Crash Factor Overlaps - Percentage of Fatal and Serious Injuries by Row, 2011 to 2015

Figure 7-20 % of all % of left that were...

Guide to reading this chart: Starting with the row names in Column A; Column B represents the % of all crashes pertaining to that row in Column A (eg. 62% of all crashes were on an arterial). The columns following Column B are the % of column A that were also that thing (eg. 18% of arterial crashes [in Column A] were Ped Involved). The columns following Column K [i.e. Ped Involved] are the % of serious crashes that were both that row and column (eg. 55% of serious arterial crashes were at intersections). For rows 1-7, Columns K onward represent the injury type of the row rather than serious crashes.

Column A		Col.B							Col. K																																
Rows 1-7		All crashes	Fatal	Serious	A	B	C	PDO		Ped Involved	Bike Involved	Auto-only	Motorcycle Involved	Truck Involved	Freeway	Arterial	Collector	Local	Intersection	non-Intersection	Angle	Head-on	Rear-end	Turning	Fixed object	Daylight	Darkness- lit	Darkness- no lights	Dawn/ dusk	Speed Involved	Followed too closely	Fail to yield ROW	Improper maneuver	Inattention	Reckless/ Careless	Aggressive	Failed to stop	Alcohol Involved	Drug Involved	Hit & Run	
	All crashes	100%	0.3%	2.1%	1.8%	11%	40%	50%		2%	2%	91%	2%	3%	16%	62%	16%	7%	47%	53%	10%	1%	45%	22%	7%	71%	18%	4%	7%	12%	34%	30%	20%	5%	5%	42%	39%	4%	1%	6%	
	Fatal	0.3%		100.0%	12.2%	14%	15%			36%	4%	38%	18%	8%	7%	69%	21%	3%	37%	63%	7%	8%	7%	10%	26%	38%	39%	15%	7%	34%	2%	32%	27%	5%	11%	35%	3%	46%	20%	8%	
	Serious	2.1%	12.6%		88.9%	15%	22%			16%	7%	60%	15%	4%	10%	66%	18%	6%	49%	51%	11%	4%	21%	24%	17%	59%	26%	8%	7%	18%	14%	41%	20%	7%	12%	30%	16%	17%	5%	4%	
	A	1.8%	1.7%	100.0%		16%	23%			13%	8%	63%	14%	3%	10%	66%	18%	6%	50%	50%	12%	3%	23%	25%	16%	61%	24%	7%	7%	17%	15%	42%	19%	7%	12%	29%	17%	14%	3%	3%	
	B	11%	0.3%	2.8%	2.5%		26%			9%	12%	71%	7%	3%	12%	63%	19%	6%	55%	45%	15%	2%	26%	30%	11%	67%	21%	5%	7%	15%	19%	48%	16%	7%	9%	30%	20%	8%	1%	4%	
	C	40%	0.1%	1.1%	1.1%	7%				2%	2%	93%	1%	2%	17%	66%	13%	4%	48%	52%	10%	1%	57%	20%	4%	72%	17%	3%	7%	12%	42%	29%	13%	6%	5%	48%	48%	3%	1%	5%	
	PDO	50%								0%	0%	96%	1%	4%	16%	59%	16%	8%	45%	55%	9%	0%	42%	23%	9%	71%	17%	4%	7%	12%	31%	28%	26%	5%	4%	39%	36%	4%	1%	7%	
	Ped Involved	2%	4.7%	16.4%	12.0%	48%	38%	1%				2%	2%	2%	75%	16%	7%	53%	47%	1%	0%	1%	1%	2%	36%	40%	13%	11%	7%	1%	55%	4%	4%	6%	7%	1%	29%	9%	7%	% of serious crashes that were also...	
	Bike Involved	2%	0.4%	6.8%	6.4%	59%	32%	3%				1%	5%	1%	64%	25%	9%	73%	27%	27%	1%	3%	63%	0%	70%	18%	5%	8%	7%	1%	81%	14%	2%	7%	7%	0%	7%	2%	3%		
	Auto-only	91%	0.1%	1.4%	1.3%	9%	41%	53%						11%	66%	17%	5%	46%	54%	13%	5%	29%	23%	24%	61%	25%	8%	5%	20%	19%	34%	22%	9%	14%	37%	23%	16%	4%	3%		
	Motorcycle Involved	2%	2.8%	18.0%	15.3%	45%	28%	15%	2%	0%		1%	12%	58%	24%	6%	47%	53%	11%	3%	15%	33%	16%	66%	18%	8%	7%	28%	11%	38%	29%	4%	14%	35%	8%	15%	3%	1%			
	Truck Involved	3%	0.7%	2.5%	1.8%	10%	29%	62%	8%	10%		6%		25%	64%	8%	3%	43%	57%	8%	10%	28%	22%	9%	64%	24%	8%	5%	26%	17%	32%	31%	6%	13%	41%	18%	18%	3%	2%		
	Freeway	16%	0.1%	1.3%	1.2%	8%	43%	51%	3%	1%	70%	18%	9%					4%	96%	1%	1%	54%	1%	24%	57%	30%	9%	4%	37%	34%	3%	23%	9%	19%	61%	28%	16%	4%	3%		
	Arterial	62%	0.3%	2.2%	1.9%	11%	42%	48%	18%	7%	60%	13%	4%					55%	45%	12%	4%	20%	28%	13%	58%	27%	7%	7%	15%	14%	47%	18%	7%	11%	27%	17%	16%	5%	4%		
	Collector	16%	0.3%	2.5%	2.2%	14%	35%	53%	13%	10%	56%	19%	2%					51%	49%	14%	5%	11%	23%	25%	59%	21%	13%	7%	22%	7%	41%	24%	5%	11%	27%	9%	21%	5%	4%		
	Local	7%	0.1%	1.8%	1.7%	11%	24%	65%	19%	12%	52%	15%	2%					53%	47%	20%	4%	5%	16%	22%	67%	20%	9%	4%	19%	2%	40%	26%	6%	15%	20%	2%	19%	7%	4%		
	Intersection	47%	0.2%	2.1%	1.9%	13%	41%	48%	17%	11%	56%	14%	3%	1%	74%	19%	6%				22%	1%	14%	37%	8%	63%	26%	4%	7%	11%	9%	68%	12%	4%	10%	19%	12%	13%	3%	3%	
	non-Intersection	53%	0.3%	2.0%	1.7%	10%	39%	52%	15%	4%	63%	15%	4%	19%	59%	18%	5%			2%	7%	28%	11%	26%	55%	27%	12%	7%	26%	18%	15%	27%	9%	14%	40%	19%	21%	7%	4%		
	Angle	10%	0.2%	2.4%	2.2%	17%	41%	46%	2%	17%	66%	13%	3%	1%	67%	22%	10%	92%	8%						71%	23%	2%	4%	7%	0%	94%	3%	3%	9%	8%	0%	10%	2%	1%		
	Head-on	1%	3.3%	12.1%	9.8%	27%	41%	36%	0%	1%	79%	11%	10%	2%	69%	23%	5%	11%	89%						55%	19%	15%	11%	29%	1%	4%	89%	10%	18%	30%	1%	29%	12%	3%		
	Rear-end	45%	0.0%	0.9%	0.9%	6%	50%	46%	1%	1%	83%	11%	5%	26%	63%	10%	1%	32%	68%						70%	20%	3%	6%	21%	64%	1%	7%	13%	12%	74%	72%	7%	2%	6%		
	Turning	22%	0.1%	2.2%	2.1%	15%	36%	51%	1%	20%	58%	20%	3%	1%	78%	18%	4%	76%	24%						71%	18%	4%	6%	6%	1%	86%	15%	3%	8%	7%	1%	6%	1%	1%		
	Fixed object	7%	0.9%	4.8%	4.0%	17%	21%	59%	2%	0%	83%	14%	2%	14%	52%	27%	7%	24%	76%						39%	40%	17%	5%	47%	0%	3%	36%	10%	22%	47%	0%	37%	10%	2%		
	Daylight	71%	0.1%	1.7%	1.6%	11%	41%	50%	10%	9%	62%	17%	4%	9%	66%	19%	6%	52%	48%	14%	4%	25%	29%	11%					14%	17%	44%	19%	7%	9%	29%	20%	5%	3%	2%		
	Darkness- lit	18%	0.6%	3.0%	2.5%	13%	39%	49%	25%	5%	58%	10%	3%	11%	69%	15%	4%	48%	52%	10%	3%	16%	17%	26%					25%	8%	38%	18%	7%	20%	31%	10%	39%	6%	7%		
	Darkness- no lights	4%	1.1%	4.5%	3.6%	15%	31%	54%	24%	4%	55%	15%	4%	11%	54%	29%	6%	26%	75%	3%	7%	7%	11%	35%					32%	4%	21%	32%	6%	15%	34%	4%	41%	12%	6%		
	Dawn/ dusk	7%	0.2%	2.0%	1.7%	10%	41%	50%	26%	9%	48%	16%	2%	6%	72%	19%	3%	50%	50%	7%	6%	20%	23%	12%					15%	13%	44%	20%	7%	10%	26%	14%	15%	4%	4%		
	Speed Involved	12%	0.7%	3.1%	2.5%	13%	39%	49%	6%	3%	65%	22%	5%	20%	53%	22%	6%	28%	72%	4%	6%	23%	8%	44%	45%	35%	14%	6%		12%	10%	18%	3%	23%	100%	4%	35%	9%	5%		
	Followed too closely	34%	0.0%	0.8%	0.8%	6%	50%	46%	1%	0%	83%	11%	5%	24%	65%	10%	1%	33%	67%	0%	0%	96%	2%	0%	75%	16%	2%	6%	17%		1%	2%	11%	8%	100%	76%	3%	1%	5%		
	Fail to yield ROW	30%	0.3%	2.8%	2.5%	18%	38%	46%	22%	15%	49%	13%	3%	1%	75%	19%	5%	82%	18%	26%	0%	1%	50%	1%	64%	25%	4%	7%	5%	0%		4%	3%	7%	5%	0%	11%	2%	2%		
	Improper maneuver	20%	0.4%	2.1%	1.8%	9%	27%	65%	3%	5%	66%	21%	6%	12%	59%	22%	7%	30%	70%	2%	17%	7%	18%	31%	57%	23%	13%	7%	17%	2%	9%		5%	15%	18%	3%	23%	6%	4%		
	Inattention	5%	0.2%	2.5%	2.4%	13%	47%	43%	10%	2%	77%	8%	3%	14%	68%	14%	5%	30%	70%	6%	6%	40%	9%	25%	60%	25%	7%	7%	9%	22%	20%	16%		23%	28%	32%	7%	2%	0%		
	Reckless/ Careless	5%	0.6%	5.4%	4.9%	23%	42%	39%	8%	4%	68%	17%	4%	16%	60%	17%	7%	39%	61%	9%	5%	21%	5%	31%	42%	42%	10%	6%	35%	9%	24%	24%	13%		42%	10%	44%	12%	6%		
	Aggressive	42%	0.2%	1.5%	1.3%	8%	47%	47%	4%	2%	74%	17%	5%	20%	59%	17%	4%	31%	69%	3%	4%	51%	5%	27%	57%	27%	9%	6%	62%	46%	7%	12%	6%	17%		37%	22%	6%	5%		
	Failed to stop	39%	0.0%	0.8%	0.8%	6%	50%	46%	1%	0%	88%	8%	4%	18%	71%	10%	1%	38%	62%	0%	0%	96%	1%	0%	75%	16%	2%	6%	5%	67%	1%	4%	14%	8%	71%		4%	1%	1%		
	Alcohol Involved	4%	2.9%	8.6%	6.0%	22%	30%	46%	27%	3%	56%	13%	4%	9%	63%	22%	6%	38%	62%	7%	6%	8%	8%	37%	16%	58%	19%	6%	37%	3%	26%	27%	3%	31%	38%	4%		14%	8%		
	Drug Involved	1%	7.1%	13.1%	7.5%	18%	33%	44%	29%	3%	57%	10%	3%	8%	65%	19%	9%	29%	71%	4%	10%	11%	4%	38%	39%	35%	21%	5%	37%	3%	20%	26%	3%	32%	3						

Recipient: Metro Council, Oregon Transportation Commission

Letter: Greetings,

The purpose of this letter is to express our serious concern that the Oregon Department of Transportation (ODOT) has not included a transformational project for 82nd Avenue in the 2018 Regional Transportation Plan (RTP). It is essential that a project that envisions and funds a full upgrade to City standards and facilitates a transfer of ownership be added to the RTP to ensure that 82nd Avenue meets current needs, meets our Vision Zero goals, and supports a jurisdictional transfer of 82nd Avenue to the City of Portland.

Every five years, the region creates a vision for our transportation system for the next twenty years with our highest priorities. A failure to include this project in the RTP, and follow-up with immediate funding for planning and design, could result in this critical improvement being delayed for decades. For people walking in Portland, 82nd Avenue is the most dangerous street, with 140 pedestrian collisions in a ten-year period, including seven pedestrian deaths and 25 serious injuries. In addition, 82nd Avenue is the sixth most dangerous street for bicyclists and twelfth most dangerous street for people in motor vehicles.

The City of Portland wrote to the Area Commission on Transportation (ACT) to request that this project be included in the constrained RTP. It is our understanding that ODOT has not responded to this request and has not included 82nd Avenue in the 2018 RTP.

The lack of stewardship and prioritization of state highways routed as urban arterials are why they are often called "orphaned highways." These roads, including 82nd Avenue, are some of our most important and dangerous streets. 82nd Avenue is a critical transit route, with Line 72 having the fifth highest ridership in the TriMet system, more than either the MAX Yellow Line and MAX Orange Line. Many of these riders get on and off along 82nd Avenue. We urge the Department to add 82nd Avenue to years 1-10 of the constrained 2018 RTP and prioritize funding for planning and project development to ensure the project can be delivered as soon as possible.

As we better understand how historically marginalized communities are unfairly impacted by the dangerous streets in East Portland, this is one of the biggest equity issues facing the region. East Portland is home to

roughly 20 percent of the City of Portland, including 13 neighborhoods and more than 150,000 Portlanders. East Portland is more racially and ethnically diverse compared to the city as a whole, with over a third of the population identifying as something other than “white.” Due to a larger stock of affordable housing, among other factors, this part of the City has seen significant population increase as compared to Portland overall. Between the 2000 and 2010 U.S. censuses, 44 percent of citywide population increase can be attributed to growth in East Portland. The need to serve this vibrant, diverse and expanding community in a better, smarter and safer way is urgent.

We understand that the 2018 RTP is quickly moving toward completion. Therefore, we request that you respond back to this letter as soon as possible and add this project. In addition, we encourage you to examine why ODOT has repeatedly avoided improving safety on their streets and question whether a change in leadership is necessary to create a culture at ODOT that values the lives of all our community members whether they walk, bike, take transit, or drive.

Signatures

Name	Location	Date
Kiel Johnson	Portland, OR	2018-03-28
Jessica Engelman	Portland, OR	2018-03-30
Diane Jones	Portland, OR	2018-03-30
Topher Henness	Milwaukie, OR	2018-03-30
Meghan Humphreys	Portland, OR	2018-03-30
erik mitchell	Portland, OR	2018-03-30
Kate Walker	Portland, OR	2018-03-30
Tom Chalifoux	Portland, OR	2018-03-30
Anna Ryan	Portland, OR	2018-03-30
Kathleen Parker	Portland, OR	2018-03-30
Anthony Dryer	Vancouver, WA	2018-03-30
Mark Colman	Portland, OR	2018-03-30
Samantha Auclair	Portland, OR	2018-03-30
James Jennings	Portland, OR	2018-03-30
Sarah Aaserude	Portland, OR	2018-03-30
pam wyatt	portland, OR	2018-03-30
John M Brown	Honolulu, HI	2018-03-30
Eric Wilhelm	Portland, OR	2018-03-30
Aileen McDiarmid Sapp	Portland, OR	2018-03-30
Mitch Beardsley	Portland, OR	2018-03-30

Name	Location	Date
Ashley Lopez	Portland, OR	2018-03-31
Eric Porter	Portland, OR	2018-03-31
Elise Huggins	Portland, OR	2018-03-31
Capella Crowfoot Lapham	Seattle, WA	2018-03-31
adelle martin	Portland, OR	2018-03-31
Doug Klotz	Portland, OR	2018-03-31
mike kinnunen	Portland, OR	2018-03-31
Shelly Garteiz	Portland, OR	2018-03-31
Jonathan Jayne	Portland, OR	2018-03-31
Leanne Robertson	Portland, OR	2018-04-01
Tabor Kelly	Vancouver, WA	2018-04-01
Thelma Mitchell	Portland, OR	2018-04-02
Joyce Rimert	portland, OR	2018-04-02
Kelly Riback	Newport, OR	2018-04-02
Geraldine Cordova	oregon City, OR	2018-04-02
William Lynn	Oregon City, OR	2018-04-02
Caitlin Reid	Portland, OR	2018-04-02
Becca Spain	Portland, OR	2018-04-02
Benjamin orwoll	Portland, OR	2018-04-02
Jenna Wilkinson	Portland, OR	2018-04-02
Molly Newman	Portland, OR	2018-04-02
Lise Ferguson	Portland, OR	2018-04-02

Name	Location	Date
Katie Alton	Portland, OR	2018-04-02
Karleigh Taylor	Portland, OR	2018-04-02
GC MacCrone	Portland, OR	2018-04-02
Allan Rudwick	Portland, OR	2018-04-02
rick kappler	Portland, OR	2018-04-02
Charles Tso	Portland, OR	2018-04-02
Chris Smith	Portland, OR	2018-04-02
Kem Marks	Portland, OR	2018-04-02
Aaron Brown	Portland, OR	2018-04-02
Cory Hoover	Eugene, OR	2018-04-02
Juana Laynes	US	2018-04-02
Bradley Baker	Portland, OR	2018-04-02
Kelly Southworth	Portland, OR	2018-04-02
Mandy Carlson	Portland, OR	2018-04-02
Cynthia Boelling	Portland, OR	2018-04-02
Kelsey Knight-King	Portland, OR	2018-04-02
Catherine Gould	Portland, OR	2018-04-02
Melanie Guthrie	Portland, OR	2018-04-02
Dustin Hokland	Portland, OR	2018-04-02
Marjorie Winzenried	Portland, OR	2018-04-02
Devra O'Gara	Portland, OR	2018-04-02
Josh Mahar	Portland, OR	2018-04-03

Name	Location	Date
Diane Inman	Portland, OR	2018-04-03
Jason Gaylor	US	2018-04-03
Analysa Puentes	US	2018-04-03
Jonathan Boyne	US	2018-04-03
Amanda Irish	Portland, OR	2018-04-03
Arlene Zuckerman	US	2018-04-03
Anna Peters	US	2018-04-03
Kenny Champion	Winchester, VA	2018-04-03
Andy Gilbert	US	2018-04-03
Cathy Heidenescher	US	2018-04-03
Connie Hicks	US	2018-04-03
Frank Renda	US	2018-04-03
Amy Carrick	US	2018-04-03
Alina Dunbar	San Jose, CA	2018-04-03
Dawn Draper	Portland, OR	2018-04-03
Richard Sheperd	Portland, OR	2018-04-03
Trevor Strang	Portland, OR	2018-04-03
boris ahumada	Portland, OR	2018-04-03
Salina Hart	Damascus, OR	2018-04-03
Kate Johnson	Portland, OR	2018-04-03
Corie Charnley	Portland, OR	2018-04-03
Allison Sliter	Portland, OR	2018-04-03

Name	Location	Date
Kathleen Murphy	Portland, OR	2018-04-03
Tom McTighe	Portland, OR	2018-04-03
Todd Lemoine	Portland, OR	2018-04-03
Dan Loda	Portland, OR	2018-04-03
Bill Griesar	Vancouver, WA	2018-04-03
Rebecca Casanova	Portland, OR	2018-04-03
Megan Reville	Portland, OR	2018-04-03
Daren Zook	Portland, OR	2018-04-03
Maryann Roulier	Portland, OR	2018-04-03
Roberta Robles	Portland, OR	2018-04-03
Stacey Triplett	Portland, OR	2018-04-03
Amy Forester	Portland, OR	2018-04-03
Sallie Cogan	Portland, OR	2018-04-03
Sergio Acena	Portland, OR	2018-04-03
Hope Asana	Portland, OR	2018-04-03
Steele Valenzuela	Amherst, MA	2018-04-03
Jed Hafner	Portland, OR	2018-04-03
Electra Langley	Portland, OR	2018-04-03
Maya Herzig	Portland, OR	2018-04-03
n. nash, m.a.	Portland, OR	2018-04-03
stacey schroeder	Portland, OR	2018-04-03
Brandon Fox	Portland, OR	2018-04-03

Name	Location	Date
Benjamin Ware	Portland, OR	2018-04-03
Aileah Carlson	Portland, OR	2018-04-03
Garth Upshaw	Portland, OR	2018-04-03
Jared Austin	Portland, OR	2018-04-03
Marijane White	Portland, OR	2018-04-03
Kyle Pinniger	Portland, OR	2018-04-03
Gena Gastaldi	Portland, OR	2018-04-03
Cherrie Abraham	Portland, OR	2018-04-03
Ellie Schmidt	Portland, OR	2018-04-03
Bessie Ramirez	US	2018-04-03
Toni Hamilton	US	2018-04-03
Natalie Brooks	US	2018-04-03
Kymberli Carr	US	2018-04-03
Tricia Laramore	US	2018-04-03
Julie Dhossche	Portland, OR	2018-04-03
Rick Reynolds	Portland, OR	2018-04-03
Jill Duren	Portland, OR	2018-04-03
Deborah Edwards	Corvallis, OR	2018-04-03
Maria Leatha	Portland, OR	2018-04-04
Marne Duke	Portland, OR	2018-04-04
Annette Gerlecki	Portland, OR	2018-04-04
Teresa Hill	Portland, OR	2018-04-04

Name	Location	Date
Arnaud Simon	Portland, OR	2018-04-04
Philip Nemer	Portland, OR	2018-04-04
Lisa Rhuman	Gresham, OR	2018-04-04
Robert Ortiz	US	2018-04-04
Sharon Balzano	US	2018-04-04
Ardis Skillett	US	2018-04-04
Gayle Gromala	US	2018-04-04
Gary Thaler	US	2018-04-04
Mary Stewart	Portland, OR	2018-04-05
Taylor Nichols	Portland, OR	2018-04-05
Blake Sampson	Portland, OR	2018-04-06
Nicole Andeen	Portland, OR	2018-04-10
Michael Andersen	Portland, OR	2018-04-12
joshua force	Portland, OR	2018-04-12
Megan Kelly	Iraq	2018-04-12
Eric Mullendore	Portland, OR	2018-04-12
Brian Setzler, CPA	Portland, OR	2018-04-12
Jessica McCauley	US	2018-04-12
Caitlyn Millette	US	2018-04-12
Daniel Gebhart	Portland, OR	2018-04-13
Betsy Reese	Portland, OR	2018-04-13
Mark Birdsall	Portland, OR	2018-04-15

Name	Location	Date
Tim Davis	Portland, OR	2018-04-15
chris mccraw	Portland, OR	2018-04-15
Melinda Musser	Portland, OR	2018-04-15
Becca Priddy	Portland, OR	2018-04-15

APRIL 19TH TESTIMONY - JPACT

Hi, my name is Lisa Wilson. I work full-time at Portland State University. My husband and I are privileged to own our home right here in the Lloyd Center area which means that attending these meetings is easy for me. This is my third month in the audience at a JPACT meeting.

I'm also a member of Bus Riders Unite which is a public transit advocacy group led by people of color and others who are low-income and/or transit dependent. Bus Riders Unite is a division of OPAL - a non-profit which stands for Organizing People and Activating Leaders. I'm speaking up this morning because OPAL, along with seven other organizations, is part of the Getting There Together Coalition that wrote JPACT a letter dated March 14th. This letter was included in the materials available for attendees at next day's JPACT meeting on March 15th and it's where I got my own copy.

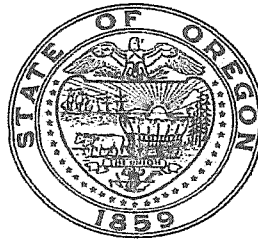
At the same meeting last month on March 15th, the Chairperson responded to a letter from Clackamas County and also responded to a letter from Washington County. The agenda for the March meeting and the minutes for the March meeting reflect this.

Because the letter written by the Getting There Together Coalition was dated March 14th, perhaps the Chairperson could not review the letter in time for the JPACT meeting the next day. But I certainly expected a response to be included in today's agenda for JPACT's April meeting. However, it has been overlooked again.

People of color, people who are low-income, and people who are transit-dependent often don't have a voice at the table. When marginalized populations are not here in person, JPACT should at the very least acknowledge when they write a letter about their priorities for the RTP. From an equity standpoint, it is of course also sensible and necessary to discuss implementation of these priorities as JPACT and Metro make decisions going forward. Thank you for hearing me.

MICHAEL DEMBROW
OREGON STATE SENATOR
SENATE DISTRICT 23

ALISSA KENY-GUYER
OREGON STATE REPRESENTATIVE
HOUSE DISTRICT 46



To: Mayor Ted Wheeler, PBOT Director Leah Treat, ODOT Director Matt Garrett,
ODOT Region 1 Manager Rian Windsheimer

Date: April 18, 2018

Re: Inter-jurisdictional Transfer of 82nd Ave from the State of Oregon to the City of Portland

Oregon Department of Transportation (ODOT) recently completed a 2-year study of 82nd Avenue to identify projects that could be feasibly be done in the next 7 to 10 years that would "build toward community goals."

The community goals are self-evident in various studies that have been completed regarding 82nd Avenue. These studies (Imagine 82nd, 2008; Jade District Visioning Plan, 2014; East 82nd Avenue Corridor, 2016) articulate a vision of 82nd Avenue infrastructure that provides easy access to pedestrians, bicyclists, and public transit. Shared concepts include a "sense of place," safe crossings, and wider sidewalks with trees and outdoor seating.

While we appreciate the work that has gone into the ODOT report, the result does not support our community vision. For example, the report offers "enhanced crossings," which are simply refugee islands in areas of high traffic volumes without any crosswalks or pedestrian activated signals. The report acknowledges that sidewalks along 82nd Avenue need improvement, but stipulates they be built to ODOT standards of 6 feet wide. Community standards articulate a sidewalk width of 9 or more feet. Because ODOT applies highway design standards to 82nd Avenue, ODOT has limited ability to bring 82nd Avenue to City of Portland and community standards.

To create the transformative 'sense of place' that area residents have articulated (in many languages!) for years, we seek an expedited transfer of ownership of 82nd Avenue from the State of Oregon to the City of Portland. *It is critical that this process get underway as soon as possible, BEFORE ODOT spends funds to make improvements that are not aligned with our vision.*

Rather than ODOT spending those dollars on improvements, we seek shared funding (to be negotiated) from the State of Oregon and City of Portland that will allow the City to design and transform 82nd Avenue with community input. To help determine the level of funding necessary, we request a meeting with you to discuss the costs associated with road maintenance (repaving), improved sidewalks, and crossings. We recognize that choices will need to be made to prioritize which segments of 82nd Avenue get initial funding, and which of the improvements are most needed.

MICHAEL DEMBROW
OREGON STATE SENATOR
SENATE DISTRICT 23

ALISSA KENY-GUYER
OREGON STATE REPRESENTATIVE
HOUSE DISTRICT 46

Finally, there's the broader issue of the longer-term state of the street. An integrated plan for 82nd should include full modernization, including significant upgrades to pedestrian infrastructure and traffic calming; bicycle path on a street parallel to 82nd Avenue; accommodation for increasing density; and a commitment to affordable housing and anti-displacements strategies. Progress must not leave our vulnerable communities behind.

We look forward to having a meeting at your earliest convenience to discuss proactive and comprehensive planning for the vibrant and inclusive community we all wish to see on 82nd Avenue.

Sincerely,



Sen. Michael Dembrow
Senate District 23



Rep. Alissa Keny-Guyer
House District 46

Cc's:

Rep. Jeff Reardon
Rep. Barbara Smith Warner
Sen. Rod Monroe
City of Portland Commissioner Dan Saltzman
City of Portland Commissioner Amanda Fritz
City of Portland Commissioner Nick Fish
City of Portland Commissioner Chloe Eudaly
Multnomah County Commissioner Jessica Vega Pederson
Metro Councilor Bob Stacey
April Bertelson, Portland Bureau of Transportation
Radcliffe Decanay, Portland Bureau of Planning and Sustainability
Brian Wong, 82nd Avenue Improvement Coalition
Frank Harris, 82nd Avenue Business Association
Todd Struble, Jade District
Kem Marks, East Portland Action Plan
Terry Dublinski-Milton, Southeast Uplift
Doug Fasching, Central Northeast Neighbors
Lore Wintergreen, East Portland Neighborhood Office



Metro

2018 Regional Travel Options Strategy

Presentation to JPACT – April 19, 2018

Today's purpose and outcome

- Review final draft of 2018 Regional Travel Options (RTO) Strategy
- Affirm policy direction and request adoption of Strategy



RTO program purpose

- Reduce drive-alone auto trips in the region and increase use of transit, bicycling, walking, ridesharing and teleworking
- Relieve congestion, part of federally required Congestion Management Process
- Implement Climate Smart Strategies
- \$3.1 Million in Regional Flexible Funds + \$200K ODOT funding (annually)

Focus areas addressed

- Improve performance
- Expand geographically and demographically
- Support and grow SRTS efforts
- Use technology effectively



2018 RTO Strategy Goals

1. **Increase access to and use of travel options** to reduce vehicle miles traveled, provide cleaner air and water, improve health and safety, and ensure people have choices for travelling around the region
2. **Expand the RTO program** to effectively reach existing and new audiences
3. **Implement a regional Safe Routes to School program**
4. **Measure** program, **evaluate** impacts, and continually **improve** the program

Public comment period

Feb. 5-23: What we heard

- Overall support for updated Strategy, affirmed new program direction
- Continue supporting local partners + help expand the program
- Increase efforts to reach underserved communities
- Improve performance measurement and outcomes

Updated RTO policy direction

- Continue support of Core Partners
- Actively create Emerging Partners – jurisdictions and non-profits
- Support Safe Routes to School education, particularly in Title 1 schools
- Leverage technology to help people make travel choices

Safe Routes to School

1. Grants to continue existing programs
2. Capacity to directly work with school districts to create new programs
3. Technical assistance for better coordination, support between partners



New funding methodology

- More efficient process, reduce grant application burden
- Focus on supporting Core partners and developing Emerging partners
- Five funding categories, recommended funding levels for each
- Reviewed with TPAC – April 6

Questions and request for adoption



2018 RTP: Draft Regional Transportation Safety Strategy

Joint Policy Advisory Committee on Transportation
April 19, 2018

2018 RTP: Draft Regional Transportation Safety Strategy

1. Sets regional safety policies
2. Updates current plan
3. Identifies recommended strategies and actions to reduce fatal and severe injury crashes
4. Uses data-driven Vision Zero safe system approach
5. Applies a public health and equity lens
6. Meets Federal safety requirements



DISCUSSION DRAFT

2018 Regional Transportation Plan

Regional Transportation Safety Strategy

A strategy to achieve Vision Zero in the greater Portland region

March 20, 2018

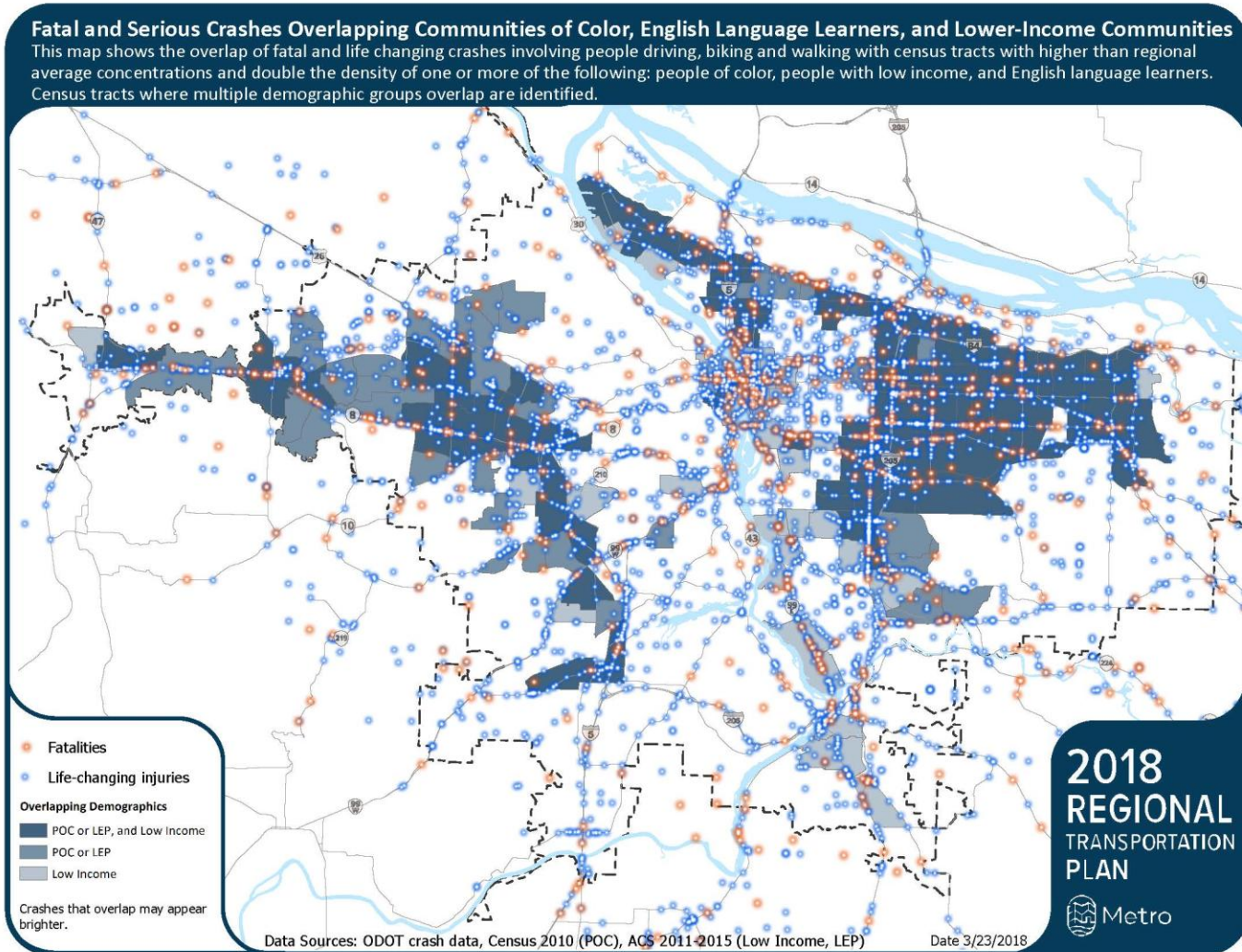
oregonmetro.gov/safety

Top three findings

1. Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65
2. Traffic deaths are disproportionately impacting people walking
3. A majority of traffic deaths are occurring on a subset of arterial roadways

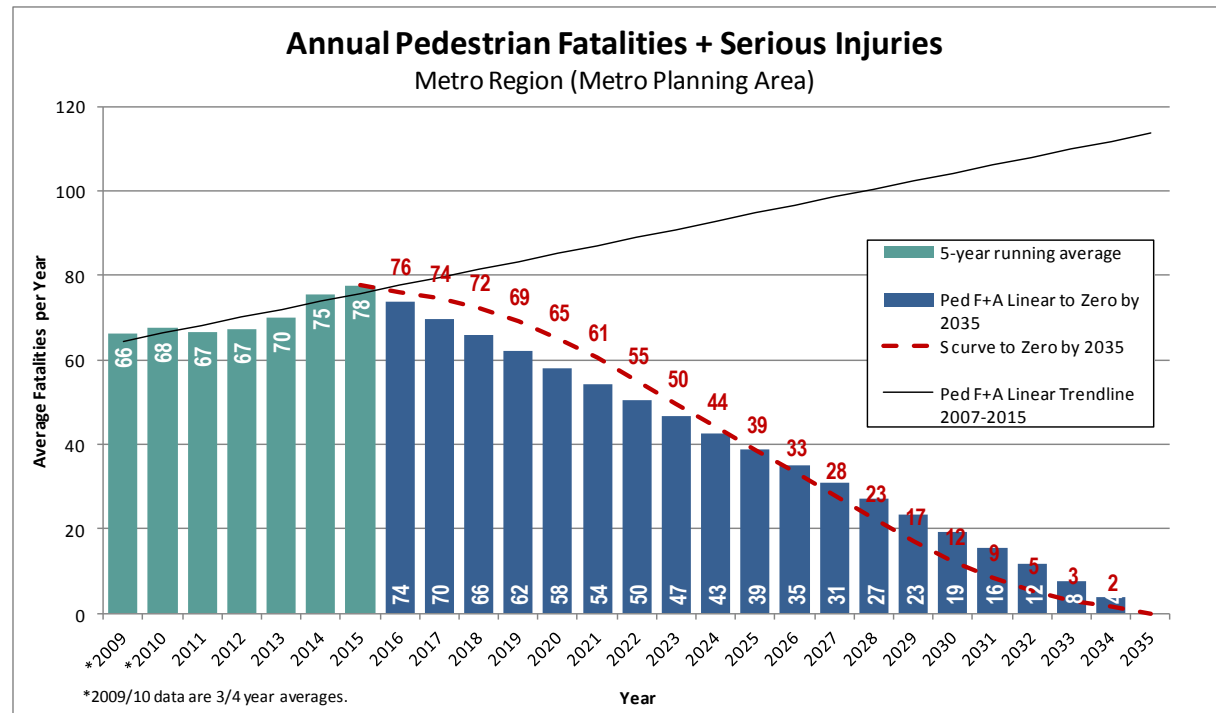


Finding 1: Traffic deaths are increasing and are disproportionately impacting people of color, people with low incomes and people over age 65



Finding 2: Traffic deaths are disproportionately impacting people walking

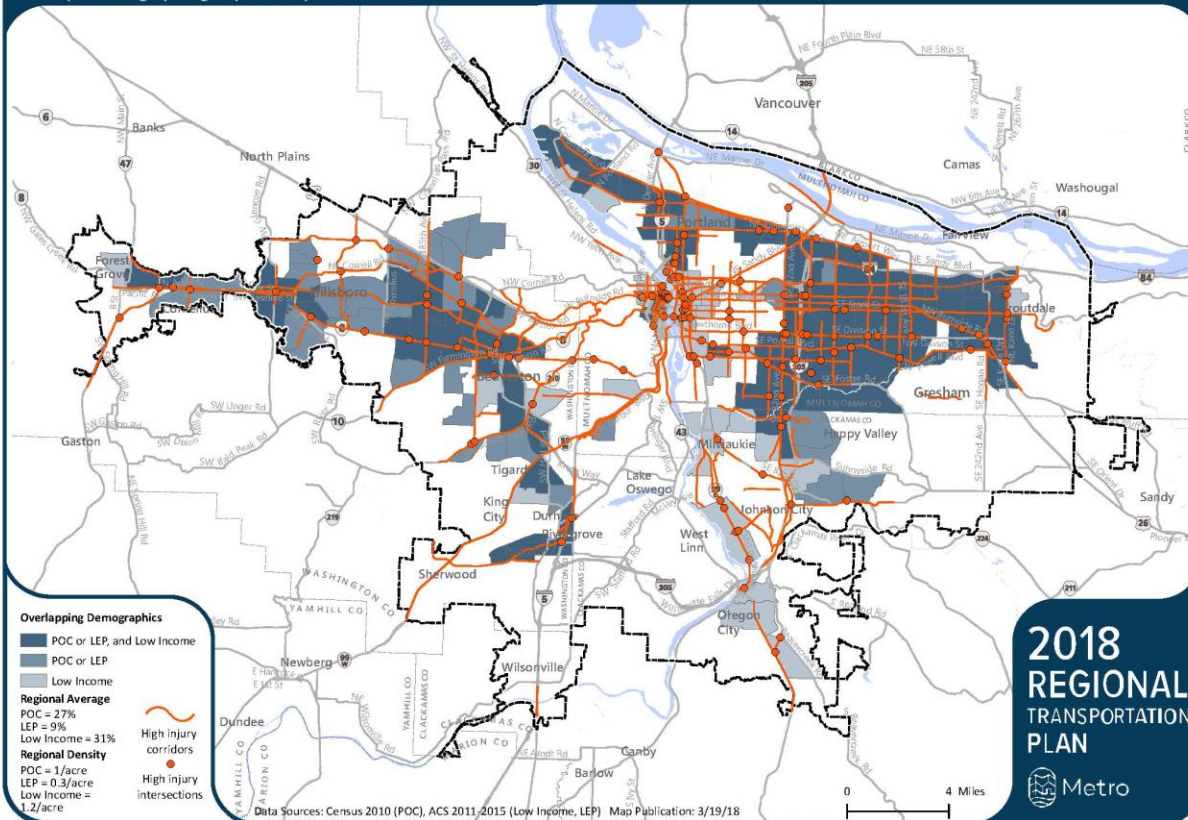
Pedestrian deaths are the most common type of fatal crashes in the region



Finding 3: A majority of traffic deaths are occurring on a subset of arterial roadways

High Injury Corridors Overlapping Communities of Color, English Language Learners, and Lower-Income Communities

This map shows the overlap of regional high injury corridors and road intersections with census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color, people with low income, and English language learners. Census tracts where multiple demographic groups overlap are identified.



A combination of high speeds, speeding, mixing of different modes, and lack of separation can contribute to deadly crashes

Approach: Achieving Vision Zero with a Safe System approach – guiding principles

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behavior

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

VISION ZERO

Traffic deaths are **PREVENTABLE**

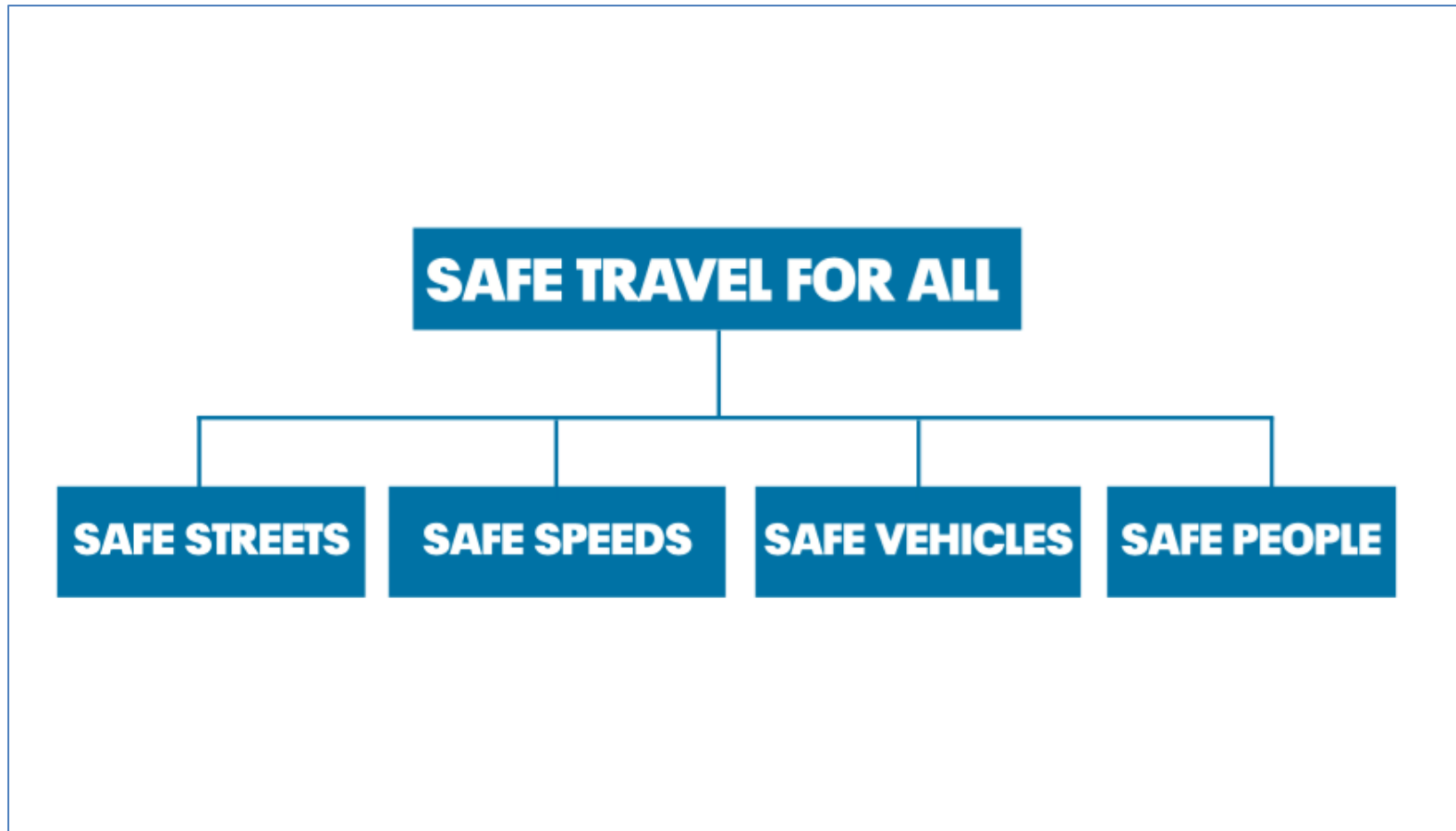
Integrate **HUMAN FAILING** in approach

Prevent **FATAL AND SEVERE CRASHES**

SYSTEMS approach

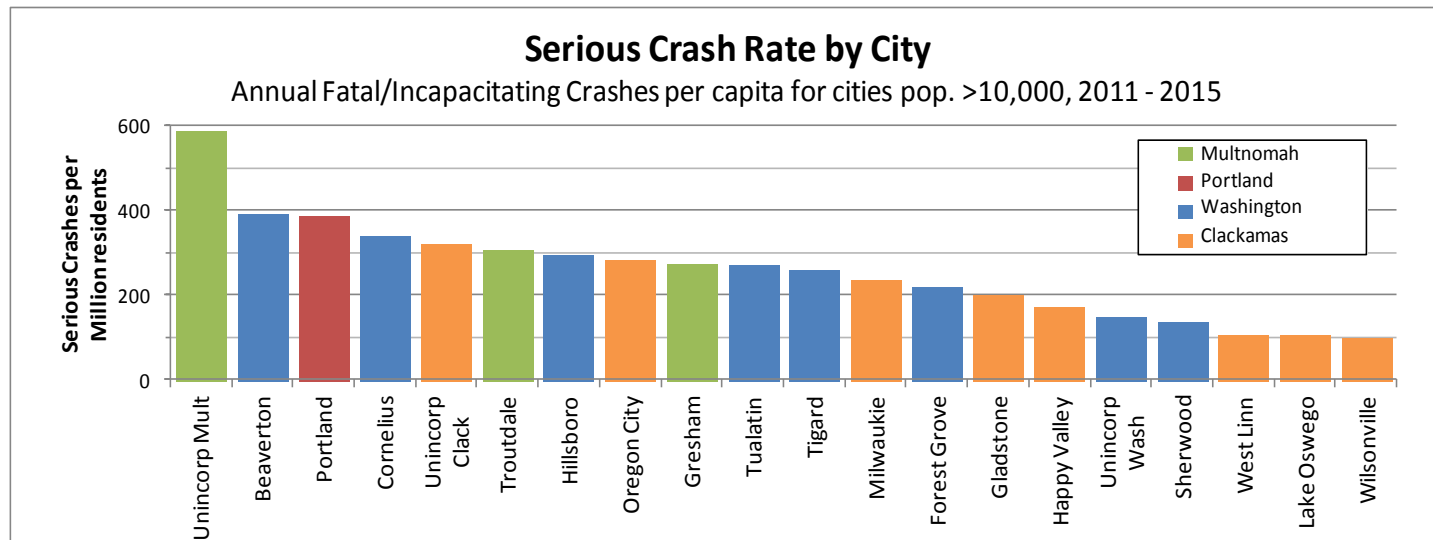
Saving lives is **NOT EXPENSIVE**

Approach: Safe travel for all requires a multi-pronged approach



Policy: 2018 RTP Vision Zero target for 2035 *(updated)*

By 2035 eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a sixteen percent reduction by 2020 (as compared to the 2015 five year rolling average), and a fifty percent reduction by 2025.



Policy: 2018 RTP Safety and Security Goal (*updated*)

Goal 5: Safety and Security

People's lives are saved,
crashes are avoided and
people and goods are secure
when traveling in the region.



Policy: 2018 RTP Safety and Security Objectives *(updated)*

Objective 5.1 Transportation Safety

Eliminate fatal and severe injury crashes for all modes of travel.

Objective 5.2 Transportation Security

Reduce vulnerability of the public and critical passenger and freight transportation infrastructure to crime and terrorism.



Policy: 2018 RTP Safety Policies *(new)*

1. Focus safety efforts on eliminating traffic deaths and severe injury crashes
2. Prioritize safety investments on high injury and high risk corridors and intersections
3. Prioritize vulnerable users with higher risk of being involved in a serious crash, including people of color, people with low incomes, people with disabilities, people walking, bicycling, and using motorcycles, people working in the right-of-way, youth and older adults

Policy: 2018 RTP Safety Policies, cont. *(new)*

4. Increase safety and security for all modes of travel and for all people through the planning, design, construction, operation and maintenance of the transportation system
5. Make safety a key consideration in all transportation projects, and avoid replicating a known safety problem with any project or program
6. Employ a Safe System approach and use data and analysis tools to support data-driven decision making
7. Utilize safety and engineering best practices to identify low-cost and effective treatments that can be implemented systematically in shorter timeframes than large capital projects

Strategy: Six safety strategies

- 1 Protect vulnerable users and reduce disparities
- 2 Design roadways for safety
- 3 Reduce speeds and speeding
- 4 Address aggressive and distracted driving
- 5 Address impairment
- 6 Ongoing engagement and coordination

People Killed While Walking



National pedestrian traffic deaths, 2008-12, and race by census tract . Source: Dangerous by Design, 2011 and Safe Routes to School National Partnership

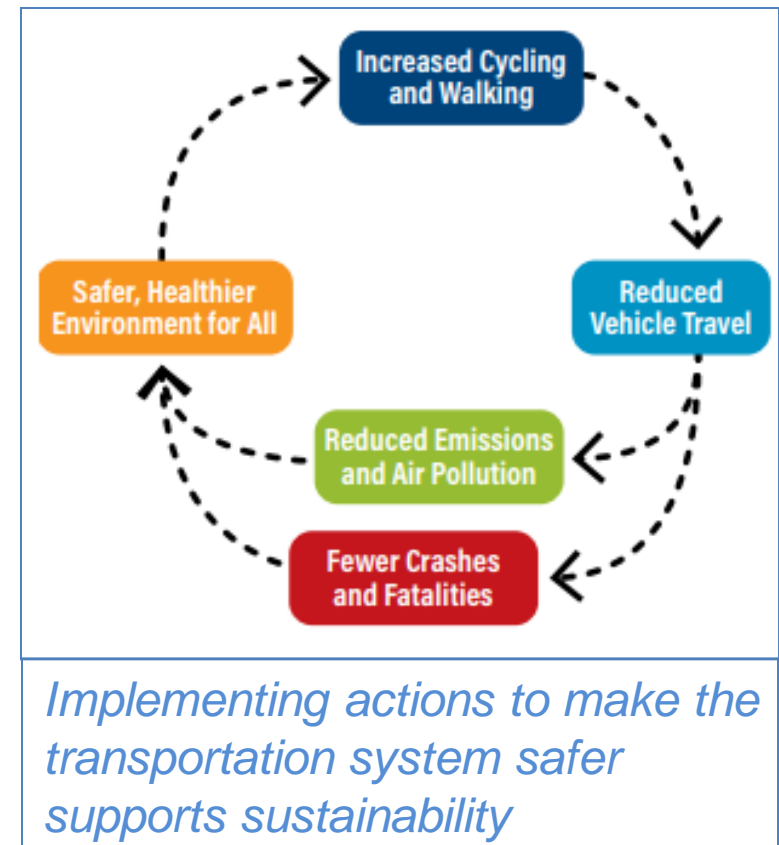
People Killed While Walking by Income



National pedestrian traffic deaths, 2008-12, and census tract per capita income. Source: Governing, 2014 and Safe Routes to School National Partnership

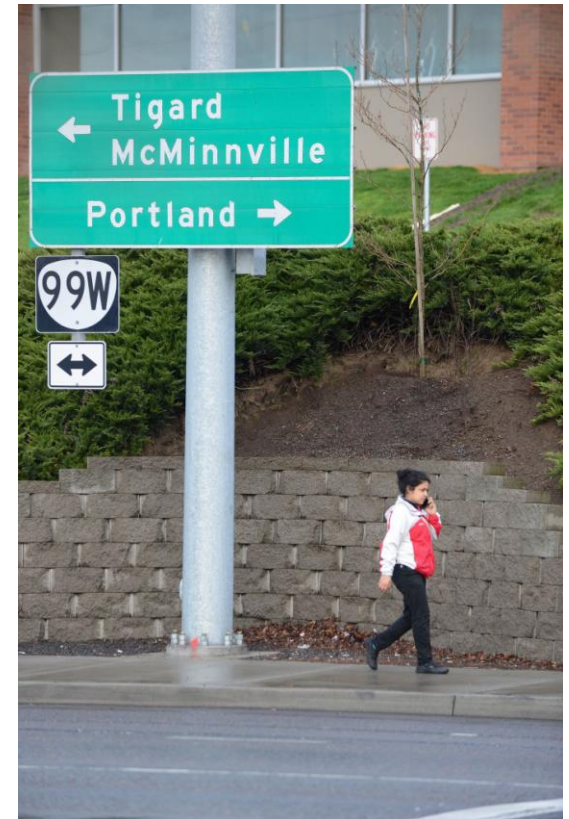
Strategy: Each strategy has a set of actions

- Multi-pronged actions to address design, enforcement, regulations, education/outreach, and coordination
- Identify actions that are proven or recommended to reduce serious crashes
- Emphasize systemic solutions over individual behavior change
- Potential disproportionate equity impacts from enforcement should be addressed



Strategy: Implementation - the next five years

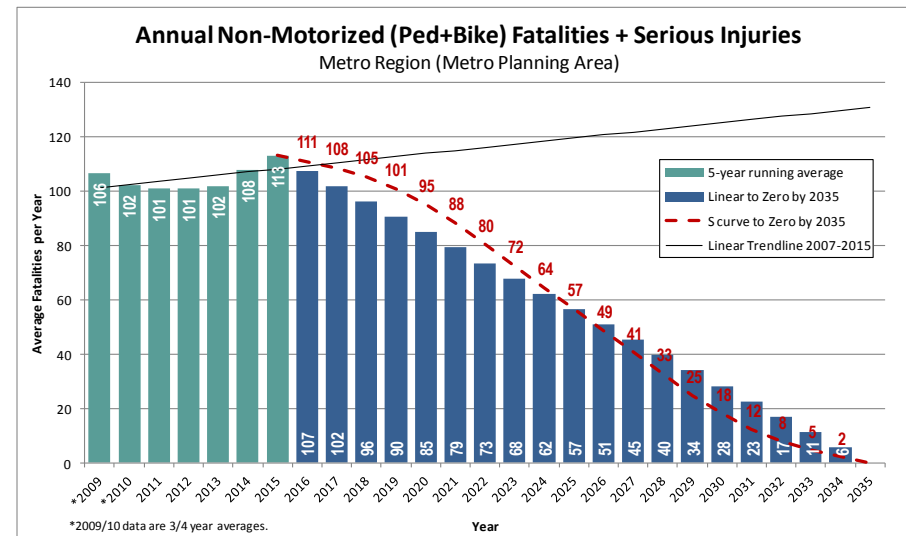
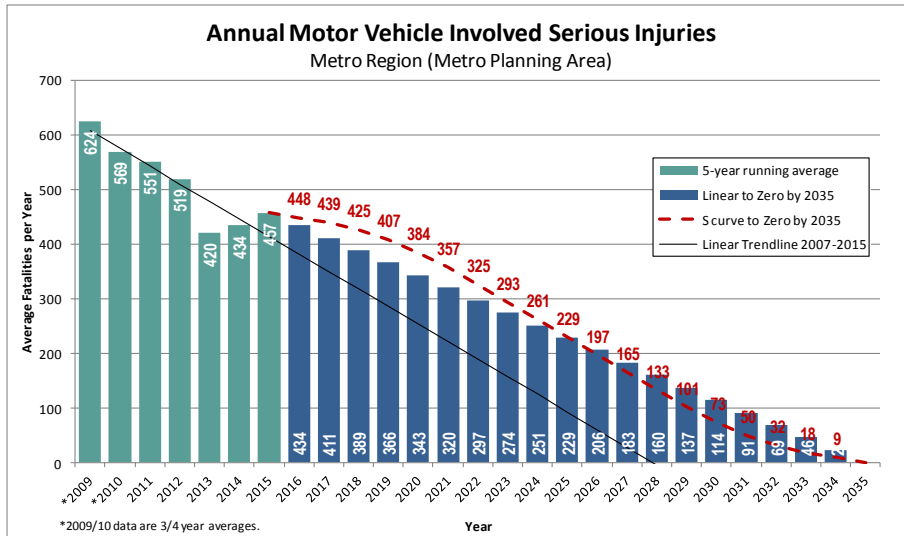
1. Sustain and increase current efforts
2. Develop Metro work program
3. Ongoing engagement and coordination
4. Implement and update adopted land use, transportation and safety plans
5. Complete safety projects in 2018 RTP



Strategy: Measuring progress – annual safety targets

Reporting Year (based on a 5-year rolling average)	FHWA Performance Measures						
	Fatalities (People)	Fatality Rate		Serious Injuries (People)	Serious Injury Rate		Non-Motorized Fatalities and Serious Injuries (People)
		Per VMT (People/ 100 MVMT)	Per capita (People/ 100k pop)		Per VMT (People/ 100 MVMT)	Per capita (People/ 100k pop)	
2011 - 2015 (Base)	62	0.9	4.0	457	6.4	29.4	113
2014 - 2018	58	0.8	3.6	425	5.8	26.5	105
2015 - 2019	55	0.7	3.4	407	5.5	25.1	101
2016 - 2020	52	0.7	3.2	384	5.1	23.4	95
2017 - 2021	49	0.6	2.9	357	4.7	21.5	88

Note: Due to rounding, addition of numbers across modes may result in minor variation from totals.



Next steps

- 4/19 –JPACT
- 4/24–MPAC
- 4/25-6/28– Update Draft Safety Strategy
- 6/29– 45-day public comment
- 8/14 – 10/ 1– Finalize Draft Safety Strategy
- 10/10 &18– MPAC/JPACT recommendation to Council
- 11/11– Direction from Metro Council to finalize Safety Strategy
- 12/6– Metro Council considers adoption of Final Safety Strategy

Questions for JPACT

1. Has past policy direction been adequately addressed?
2. Does JPACT have further input or questions on the Draft Safety Strategy?





2021-24 STIP

Background and Overview

JPACT

Presented by:

Jon Makler, R1 Planning Manager

ODOT

April 19, 2018

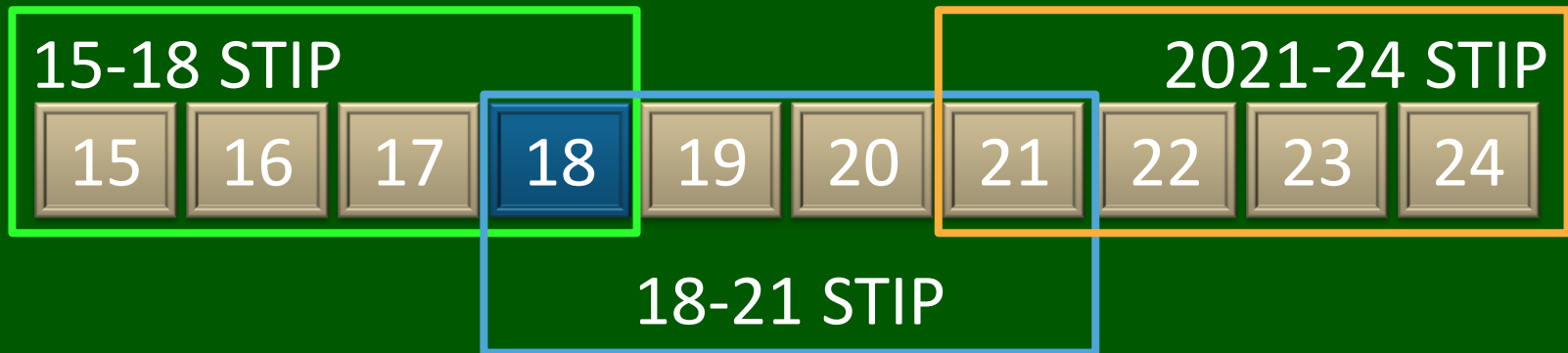


Agenda

- Introduction
- Fix-It Program Overview
- Leverage Program
Timeline/Approach

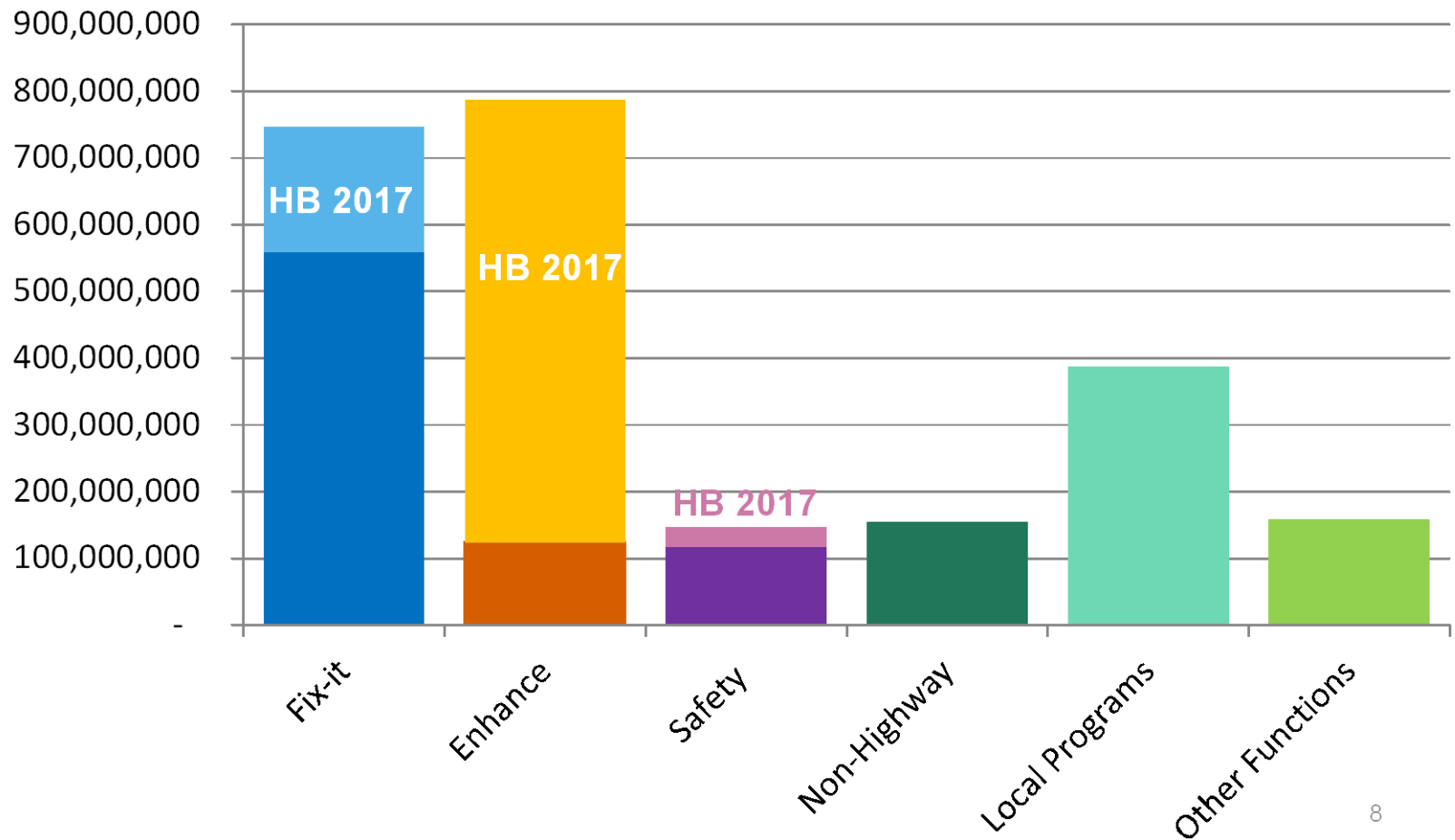


Introduction



2021-24 STIP Allocation (\$2.45B/3 years)

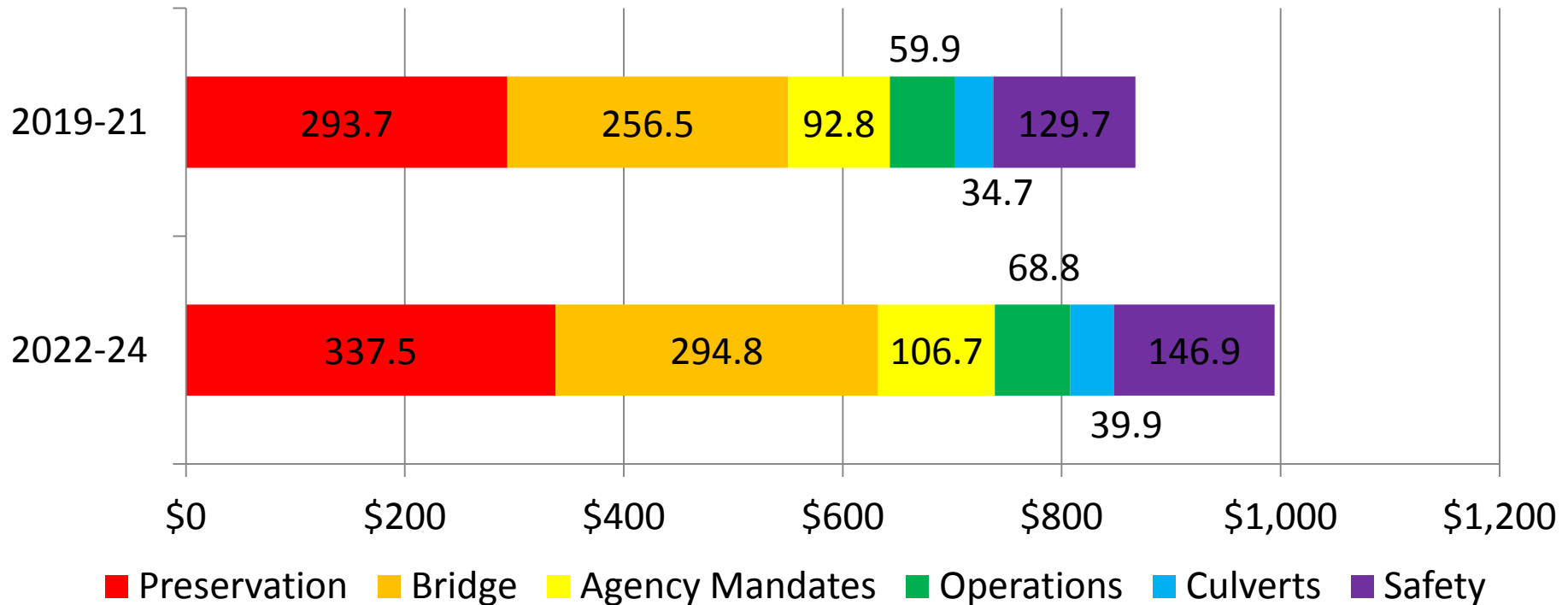
December OTC Decision

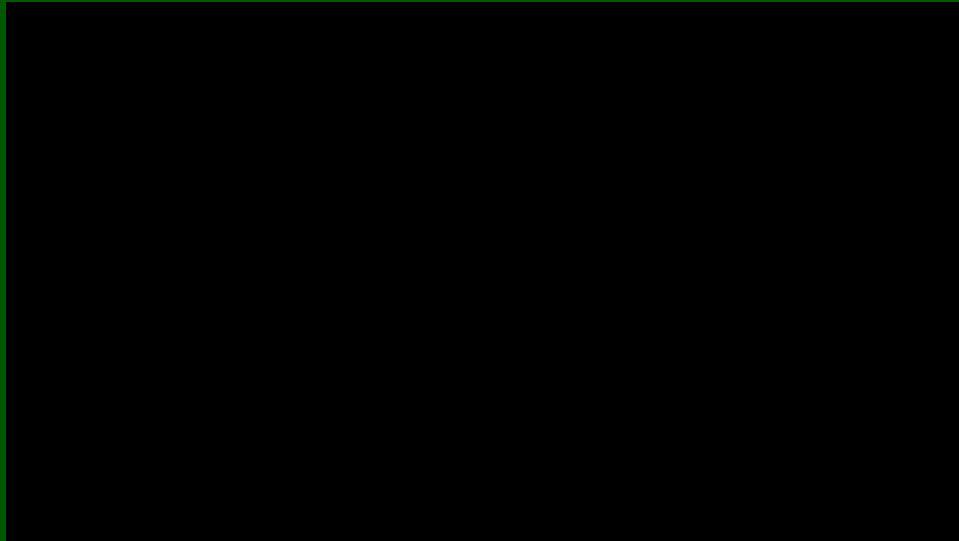


Fix-It Program Allocation Comparison

If the next STIP follows the same distribution as the last:

Fix-It Program Funding Levels (millions)





Fix-It Program Overview

<https://www.youtube.com/watch?v=drxakQYA1c4>

Leverage Programs

2021-24 STIP



State Highway

Region 1: \$8.5M



Safety

Region 1: \$10.7M



Active
Transportation

Region 1: \$7.5M



Leverage Programs

Eligible Activities

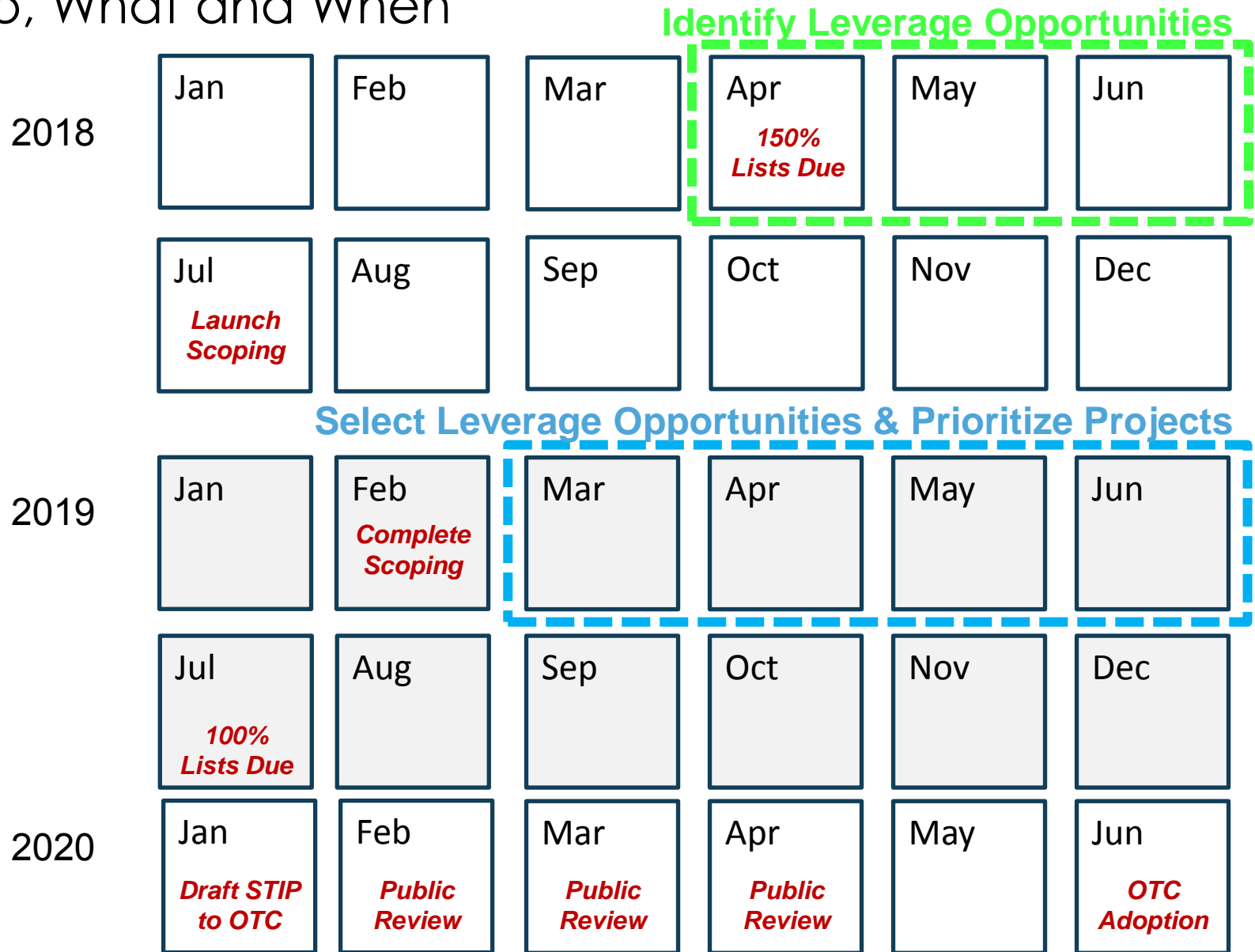


Add features to ODOT Fix-It projects on the State Highway System



2021-24 STIP Development Timeline

Who, What and When



Thank you.