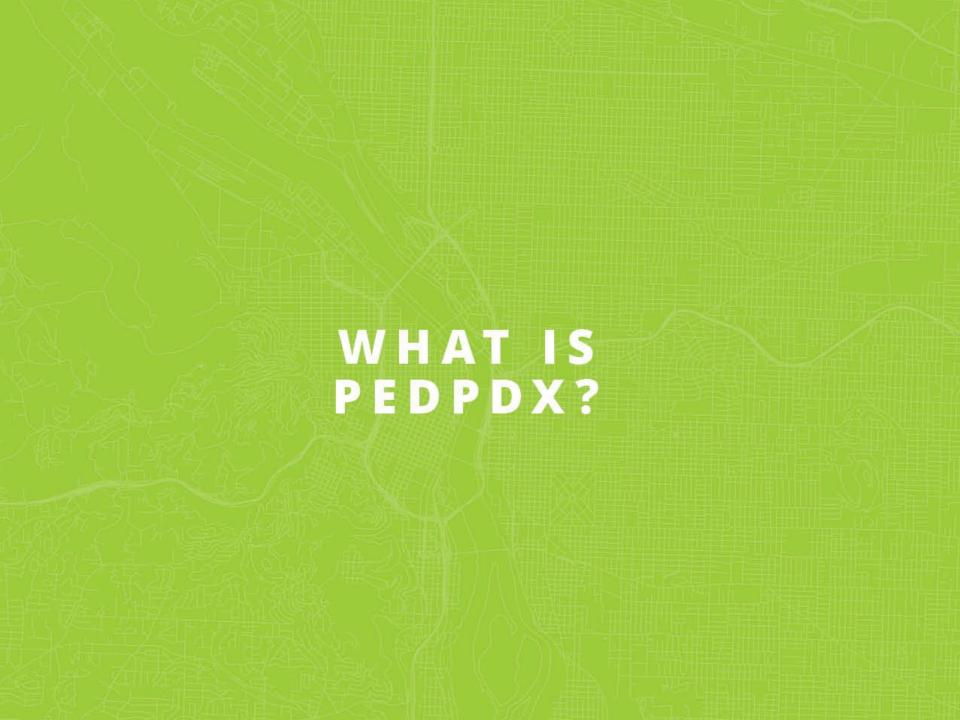
Pedestrian Advisory Committee Onboarding

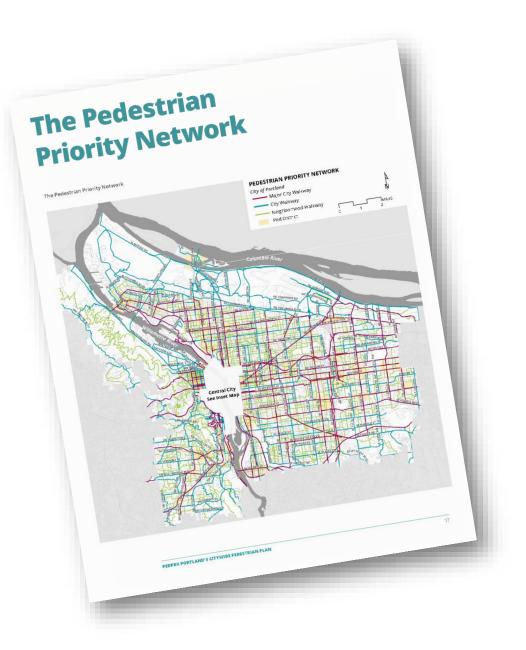


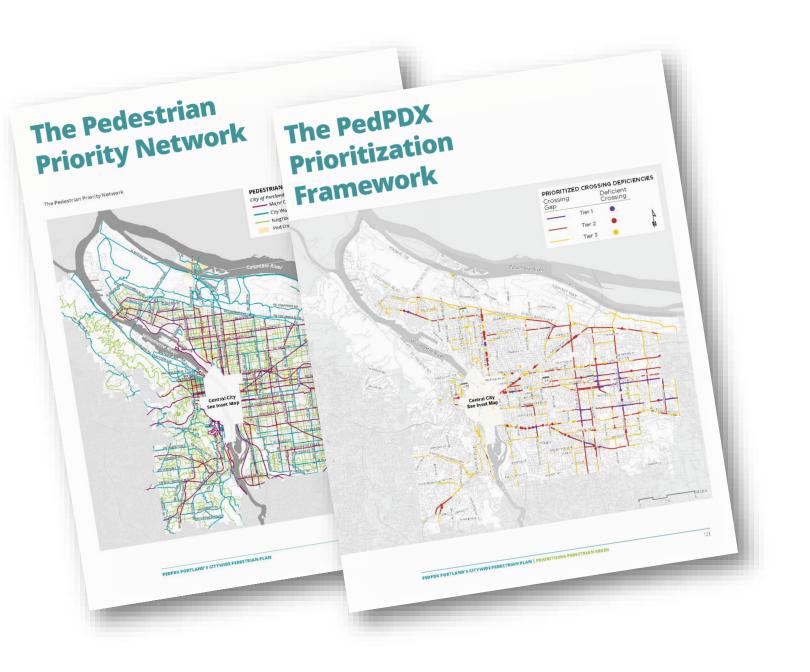


PedPDX is Portland's Citywide Pedestrian Plan. It prioritizes sidewalk and crossing improvements and other investments to make walking safer and more comfortable across the city. The plan identifies the key strategies and tools we will use to make Portland a great walking city for everyone.

PEDPDX MISSION

Through PedPDX, the City of Portland affirms walking as a fundamental human right and the most fundamental means of transportation. PedPDX ensures walking is a safe, accessible, and attractive experience for everyone in Portland by putting pedestrians at the forefront of City policy, investments, and design.

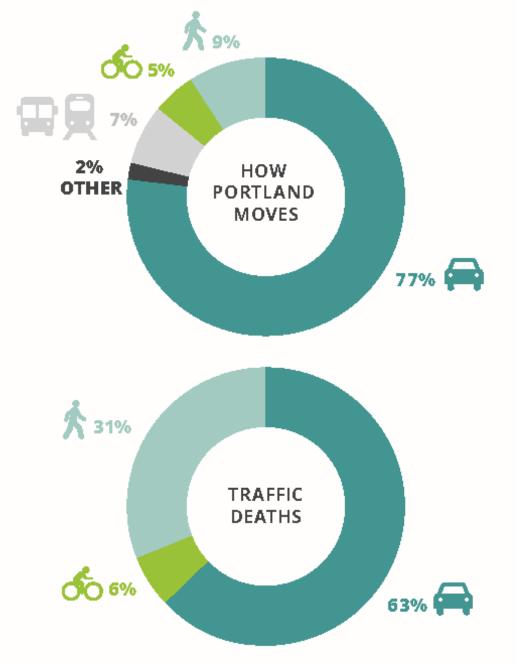






WHATIS
THE STATE OF
WALKING IN
PORTLAND?





Source: 2004-2013 ODOT Crash data: 2015 City of Portland Community Survey People walking in Portland are <u>ten times</u> more likely than people driving to sustain a serious or fatal injury

Approx. 20% of pedestrian crashes in Portland result in a fatality or serious injury (1 in 5)

Portlanders that have to walk (including those who are transit-reliant) are most exposed to these systemic safety issues

Figure 15: Crashes by Month and Lighting Conditions

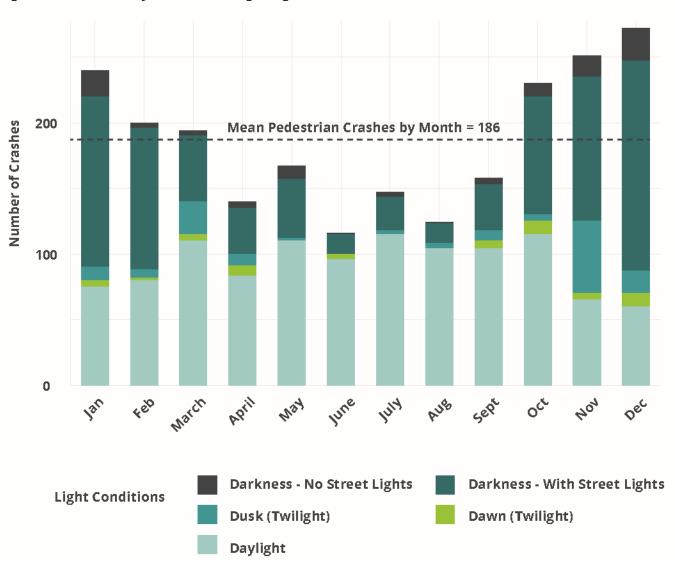


Table 3: Pedestrian Crash Location Type Summary (2006-2015)

LOCATION TYPE	NUMBER OF CRASHES	PERCENT OF CRASHES	NUMBER OF KSI* CRASHES	PERCENT OF KSI* CRASHES	PROBABILITY OF A KSI* CRASH
Signalized Intersections	971	43.5%	97	33.4%	13.1%
Unsignalized Intersections	614	27.5%	127	25.5%	15.8%
Mid-block	567	25.4%	148	38.9%	26.1%
Driveway	78	3.5%	8	2.1%	10.3%
Total	2,230	100%	380	100%	17.0%

^{*} KSI = Killed or Serious Injury Crash

Table 3: Pedestrian Crash Location Type Summary (2006-2015)

LOCATION TYPE	NUMBER OF CRASHES	PERCENT OF CRASHES	NUMBER OF KSI* CRASHES	PERCENT OF KSI* CRASHES	PROBABILITY OF A KSI* CRASH
Signalized Intersections	971	43.5%	97	33.4%	13.1%
Unsignalized Intersections	614	27.5%	127	25.5%	15.8%
Mid-block	567	25.4%	148	38.9%	26.1%
Driveway	78	3.5%	8	2.1%	10.3%
Total	2,230	100%	380	100%	17.0%

^{*} KSI = Killed or Serious Injury Crash

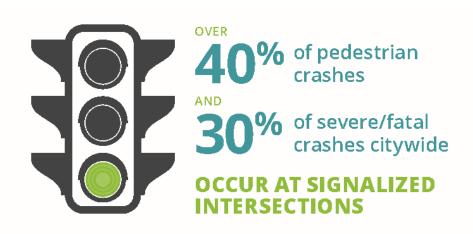


Table 4: Pedestrian Crash Summary by Roadway Size (2006-2015)

ROADWAY SIZE	CENTERLINE MILES		CRASHES		CRASH OCCURENCE	KSI* CRASHES		PROBABILITY OF KSI*	KSI CRASH RISK
	#	%	#	%	RISK FACTOR*	#	%	CRASH	FACTOR*
2 Lanes	2,521	96.3%	481	74.6%	0.77	121	77.6%	25.2%	1.04
3-4 Lanes	80	3.1%	108	16.7%	5.47	22	14.1%	20.4%	0.84
5 or More Lanes	21	0.8%	56	8.7%	11.04	13	8.3%	23.2%	0.96
Total	2,621	100%	645	100%	1.00	156	100%	24.2%	1.00

^{*} KSI = Killed or Serious Injury Crash; Crash Occurrence Risk Factor = % Crashes / % Centerline Miles; KSI Crash Risk Factor = % KSI Crashes / % All Crashes

Table 4: Pedestrian Crash Summary by Roadway Size (2006-2015)

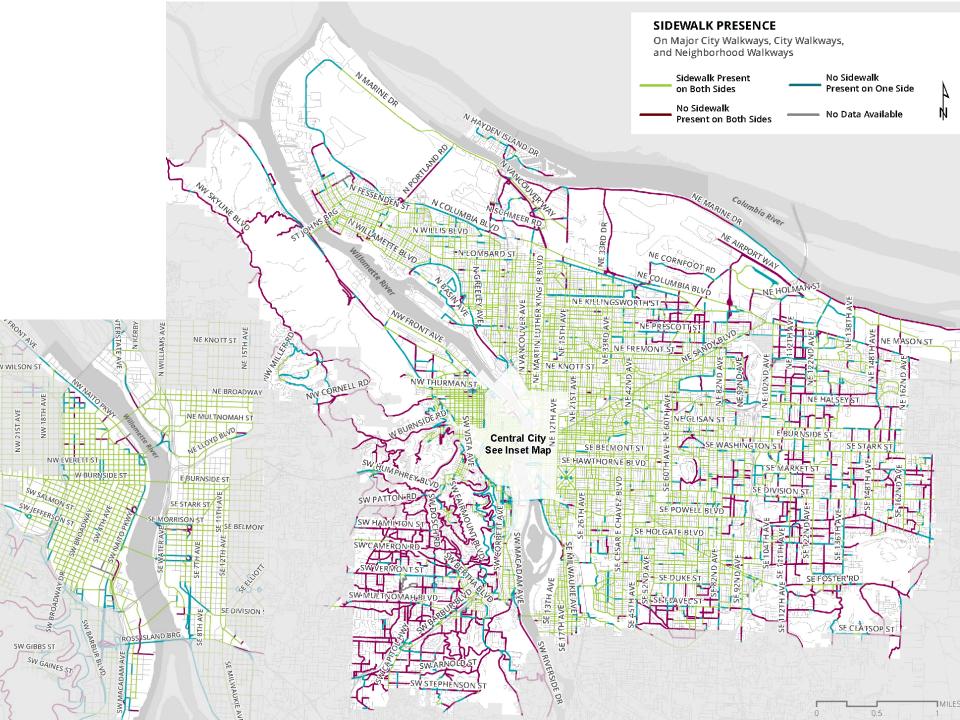
ROADWAY SIZE	CENTERLINE MILES		CRASHES		CRASH OCCURENCE	KSI* CRASHES		PROBABILITY OF KSI*	KSI CRASH RISK
	#	%	#	%	RISK FACTOR*	#	%	CRASH	FACTOR*
2 Lanes	2,521	96.3%	481	74.6%	0.77	121	77.6%	25.2%	1.04
3-4 Lanes	80	3.1%	108	16.7%	5.47	22	14.1%	20.4%	0.84
5 or More Lanes	21	0.8%	56	8.7%	11.04	13	8.3%	23.2%	0.96
Total	2,621	100%	645	100%	1.00	156	100%	24.2%	1.00

^{*} KSI = Killed or Serious Injury Crash; Crash Occurrence Risk Factor = % Crashes / % Centerline Miles; KSI Crash Risk Factor = % KSI Crashes / % All Crashes



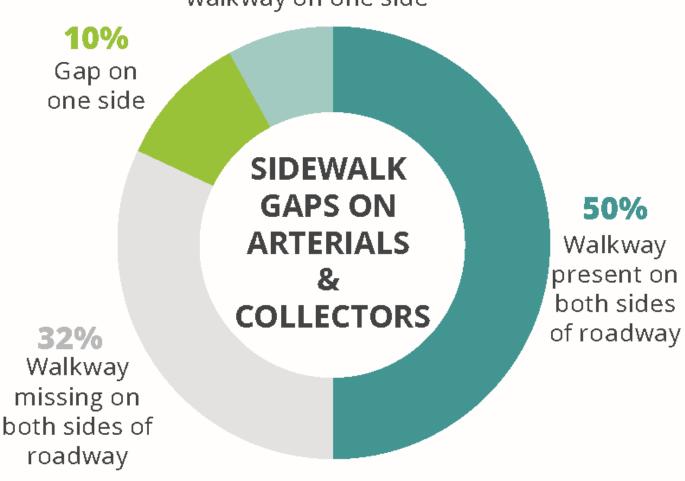








Gap on one side, may meet criteria for walkway on one side





Gap on one side, may meet criteria for walkway on one side

10% Gap on one side

SIDEWALK
GAPS ON
ARTERIALS
&
COLLECTORS

50%

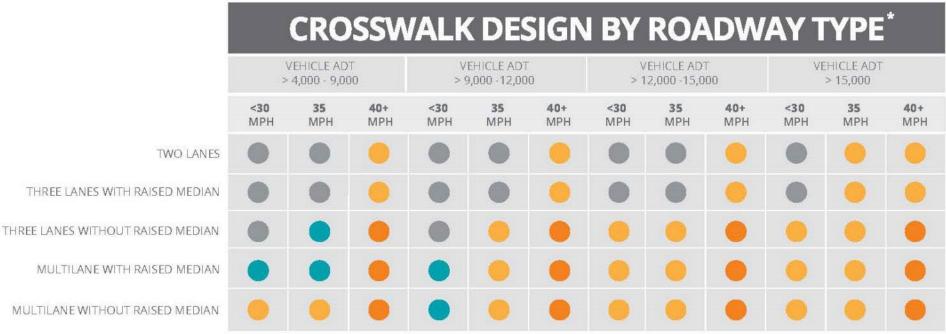
Walkway present on both sides of roadway

32%
Walkway
missing on
both sides of
roadway

Approximately <u>350 miles</u> of missing sidewalk on arterials/collectors



Existing crosswalk design guidelines



^{*} All crossings must be scoped by an engineer to ensure recommended treatment is appropriate and ADA ramps and illumination are in place.

Marked Crosswalk

Marked Crosswalk, island or curb extensions, enhanced signing and striping

Marked Crosswalk and enhanced/active warning (islands and RRFB's)

Marked Crosswalk and pedestrian hybrid or full signal



New PedPDX crossing spacing guidelines

Inside Pedestrian Districts:

DESIRED SPACING OF

530 feet

between marked crossings



City Walkways and Major City Walkways within Pedestrian Districts

DESIRED CROSSING FREQUENCY

530 ft

Pedestrian Districts are areas where high levels of pedestrian activity exist or are planned, including the Central City, Gateway regional center, town centers, and near MAX stations.

For Major City Walkways and City Walkways within Pedestrian Districts the desired spacing between marked pedestrian crossings is 530 feet.

Demonstrating existing crossing demand will not be required to justify new marked crossings within Pedestrian Districts.

On a street with standard 200-ft blocks, the 530-ft crossing frequency results in a marked pedestrian crossing approximately every other block.

Outside of Pedestrian Districts:

DESIRED SPACING OF

800 feet

between marked crossings



City Walkways and Major City Walkways outside of Pedestrian Districts

DESIRED CROSSING FREQUENCY

800 ft

City Walkways and Major City Walkways provide walking access to important land use and transit destinations. The desired spacing between marked pedestrian crossings on these streets is 800 feet.

On a street with standard 200-ft blocks, the 800-ft crossing frequency results in a marked and/or enhanced pedestrian crossing approximately every three blocks.

To ensure that new marked crossings on streets with lower pedestrian volumes do not result in driver disregard of crosswalks, a minimum of 20 pedestrian/bicycle crossings per peak hour will be required to provide new marked/enhanced crossings on City Walkways and Major City Walkways outside of Pedestrian Districts or where there is not a transit stop.

At Transit stops:

WITHIN OF ALL TRANSIT STOPS

100 ft



Transit Stops

DESIRED CROSSING WITHIN

100 ft

Moving forward, PBOT practice will be to provide a marked pedestrian crossing at all transit stops², regardless of street classification.

Demonstrating existing crossing demand will not be required to justify new marked crossings at transit stops.

Marked crossing requirements at transit stops may be implemented by providing new marked crossings at existing transit stops, and/or by strategically relocating or consolidating transit stops such that they are located at existing marked crossings. This will require PBOT capital project managers to collaborate with TriMet to consolidate, relocate, or otherwise confirm stop locations.

² Engineering judgement may deem marked crossings unwarranted in some locations, particularly on two-lane streets with very low vehicle volumes and low transit ridership

Example: Outer Division



EXISTING SAFETY ELEMENTS

Traffic signal

RFB (Rapid Flashing Beacon)

Existing: 17 crossings (in almost 100 blocks)

Example: Outer Division



Existing: 17 crossings (in almost 100 blocks)

Coming Soon: 40 crossings total

New City of Portland policy:

Provide marked crossings at <u>all</u> transit stops



Approximately 3,500 marked crossing gaps on arterial/collector network

PRIORITIZING PEDESTRIAN NEEDS

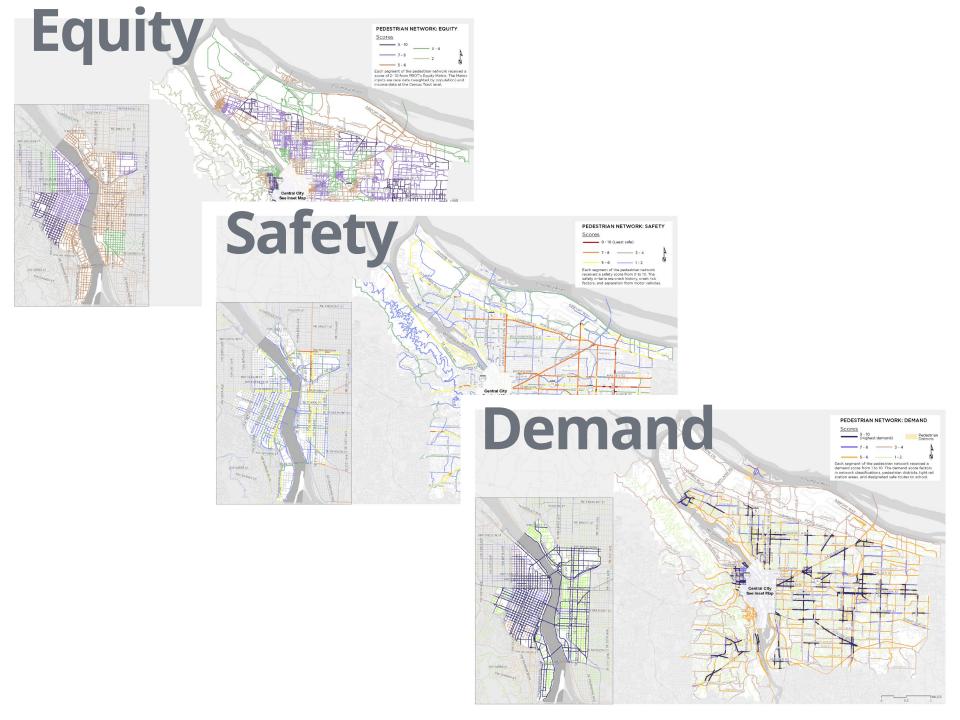
Why a data-based approach?

- Make sure we are directing limited resources to the greatest needs first
- Aligns spending with adopted City goals/objectives
- Help ensure we provide improvements in an equitable manner across the city (not complaintbased)



Which kinds of places are the most important to improve for walking in Portland?

	improve for walking in Portland?	Citywide
EQUITY	Areas that serve people who need to rely on walking the most	5.11
SAFETY	Streets where people walking have been killed or injured	5.08
DEMAND	Streets connecting people to transit/ bus stops	5.06
SAFETY	Along and across busy streets	4.99
DEMAND	Streets connecting families and children to schools	4.99
DEMAND	Streets connecting people to neighborhood commercial districts	4.73
	Streets connecting people to community facilities like libraries	4.66
	Areas where the most people live and/ or work	4.55
	Residential streets lacking sidewalks or walking paths	4.54
	Streets connecting people to parks	4.52



www.pedpdx.com



The Implementation Toolbox is the programmatic work plan to advance the vision and mission of PedPDX.

ACTION 1.3

Explore options to enabl pedestrian improvemen

PBOT's Development Review group reviews all street and frontage improvements associ with private development. In Portland, priva development is typically required to make st frontage improvements along the property of a development project. This includes prov improving sidewalks in a manner consistent City's Pedestrian Design Guide. A large prop new sidewalks constructed or improved in P time have been provided in conjunction with

development activities. Current City Code only requires developers (the sidewalk frontage directly adjacent to the There are no mechanisms in place to encour enable private developments to provide ped infrastructure beyond the immediate prope including crossing enhancements that could future tenants, or sidewalk extensions beyo property to connect to new development to neighborhoods.

142

The PBOT PBOT Policy, Innovation, and Regis Collaboration will work with Development Re City Attorney, and City Council to explore me for encouraging off-site pedestrian improve in conjunction with private development. Of to explore include offering SDC credits or ot development fee walvers for voluntary provi off site crossing or sidewalk improvements, updating PBOT's multi-modal level-of-service criteria to require off site pedestrian mitigati appropriate.

PEDPDX PORTLAN

Improve visibility of pedestrians at crossings Strategy 2 Reduce turning movement conflicts at intersections

ACTION 2.4

provide high visibility cros crossings when restriping crosswalks.

The PedPDX Safety Analysis found that signalize intersections are not preventing pedestrian crain Portland, Over 40% of pedestrian crashes and of severe/fatal crashes citywide occur at signalli intersections. Over a quarter of all crashes invol turning driver failing to yield when the person v has the right of way at the signal.



Improving the visibility of pedestrian crosswalks at signalized intersections may help make cross pedestrians more visible to people driving, PBO Traffic Design Manual has historically called for crosswalk markings with two transverse lines (running perpendicular to oncoming traffic) at signalized intersections. In contrast, high visibili "continental") crosswalks with longitudinal lines to traffic flow allow drivers to see the marked cr from a greater distance. This increased visibility drivers more time to safely stop for a pedestrial waiting to cross. The PBOT Traffic Design Manua currently requires these high-visibility "continen crosswalk markings at uncontrolled crossings al school crossings where increased visibility is nei PEDPDX PORTLAND'S

Strategy 3

ACTION 3.2

Develop a pilot to study prohibiting "turn-on-red" within Pedestrian Districts and at High Pedestrian Crash Intersections.

Allowing rights on red is common throughout the city. Left turns on a red light are also allowed when the driver is turning onto a one-way street, which is common downtown. To make these movements, drivers must pull forward into the crosswalk to look for a gap in on-coming traffic, into and across the path of pedestrians who have a "walk" signal. This can create a dangerous situation if the driver does not see a pedestrian entering the crosswalk. It is particularly dangerous for blind pedestrians, who do not receive visual clues (through signals or eye contact with the driver) that the driver intends to turn against the signal. Furthermore, drivers looking for gaps in traffic to make the turn do not always look the opposite direction to check for crossing pedestrians before making the turn against the

As part of the PedPDX public outreach, members of portland's disability community in particular have expressed strong support for eliminating "turn-onred." Engineering studies show a significant increase in pedestrian crashes where "right-on-red" is permitted 12. The City Traffic Engineer, PBOT Signals and Street Lighting, and Vision Zero staff will develop a pilot to study prohibiting "turn-on-red" in high pedestrian demand districts and/or at pedestrian high crashes intersections. The pilot study will establish evaluation criteria and based on the findings of the pilot the City Traffic Engineer may consider permanent



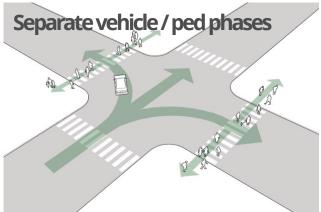
PEDPDX OBJECTIVES ADDRESSED

No Turn on Red

A pilot study will allow PBOT to monitor what impact Considerations prohibiting "turn-on-red" might have on pedestrian safety and automobile congestion. It will also offer an opportunity to monitor driver compliance. The pilot study should be coupled with education about the safety concerns underlying the study, as well as enforcement for

170% increase in right turn crashes where right turn on red is permitted - Handbook of Road Safety Measures, Elvik, R. and Vaa, T., 2004 prohibitions on "turn-on-red" at key locations.













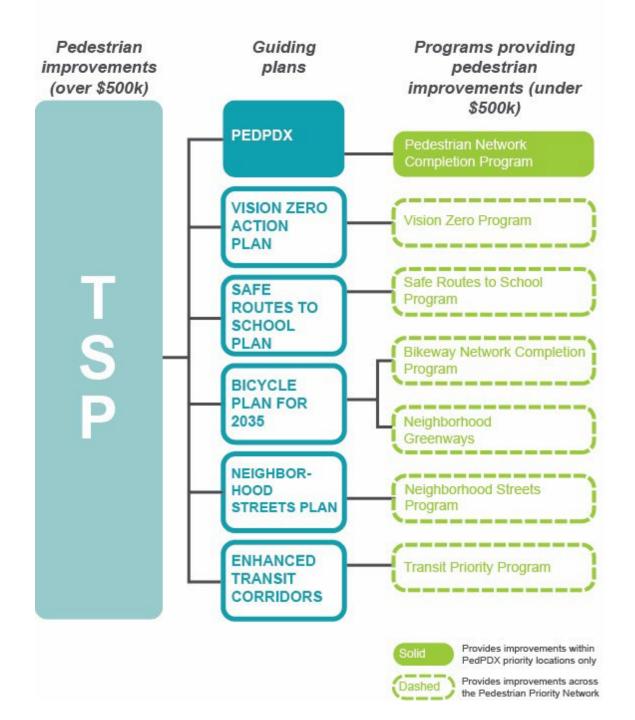








PBOT pedestrian projects



The City of Portland's Transportation System Plan (TSP) is a 20-year plan that guides transportation investments in Portland. It houses key goals and policies for the City's transportation system and provides a list of major transportation projects the City intends to implement over the next 20 years to help realize the vision of the Comprehensive Plan.

https://www.portland-tsp.com/#/

Project Stages

Project Selection

- Project priority
- Readiness
- Feasibility
- Funding source
- Etc...

Project Development



- Project Development/ Planning stage
- 0 10%
- Address modal needs / conflicts
- Identify preferred concept
- Define project scope

Design / Engineering

- 30%
- 60%
- 90%

Construction

Maintenance

PBOT

Curb Ramp Improvements

- Capital Improvements
- Corner Repair Program
- ADA Curb Ramp Request Program
- ADA Transition Plan

Sidewalk Repair Program

Local Improvement Districts

Street Lighting Program

Development Review

- Pedestrian Design Guide

Construction Access and Sidewalk Closure Policies

Community-Initiated
Improvements and Activation

- Portland in the Streets
- Urban Trails Program

Pedestrian Safety and Education Programs

- Crosswalk Enforcement Actions
- Yard Sign Lender Progran
- Pedestrian/Driver Safety Trainings
- Partner Agency Safety Campaigns

Education and Encouragement Programs

- SmartTrip:
- Sunday Parkways

PS/BDS

Zoning Code

- Land use regulations
- Pedestrian friendly design requirements for development of private property

Pedestrian Design Guide

- Guidelines for sidewalks, corners, crosswalks, stairs, and pathways

Zoning Code enforcement

SES

Stormwater Management

- Bioswales
- Street tree program
- Curb extensions

PPR

Urban Forestry

Trails within Parks property

THER

ODOT

Tri-Met

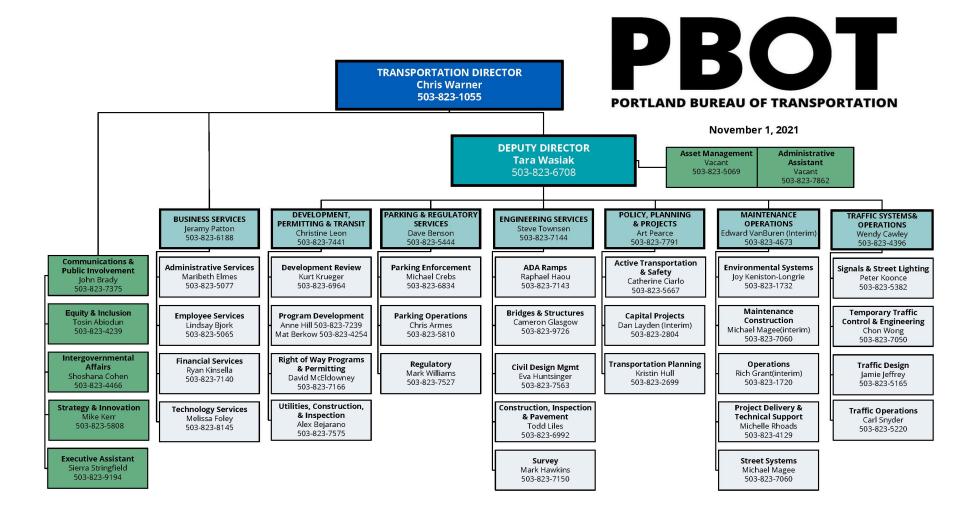
Multnomah County

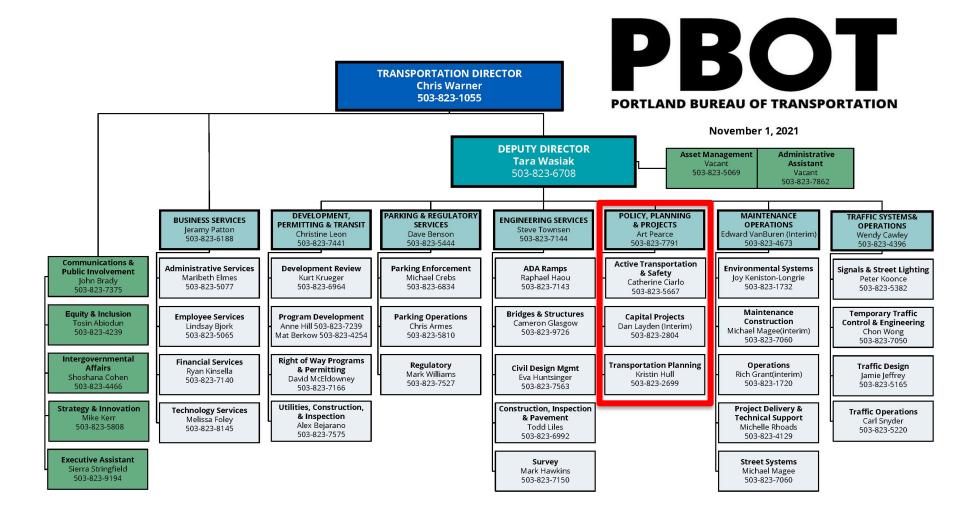
- Maintenance/Management of bridges

Metro

State Parks

Private Development





POLICY, PLANNING & PROJECTS

Art Pearce 503-823-7791

Active Transportation & Safety

Catherine Ciarlo 503-823-5667

Capital Projects

Dan Layden (Interim) 503-823-2804

Transportation Planning

Kristin Hull 503-823-2699

- Vision Zero
- Safe Routes to School
- Sunday Parkways
- TDM Policy
- Bike share/scooter share

POLICY, PLANNING & PROJECTS

Art Pearce 503-823-7791

Active Transportation & Safety

Catherine Ciarlo 503-823-5667

Capital Projects

Dan Layden (Interim) 503-823-2804

Transportation Planning

Kristin Hull 503-823-2699 Capital project design and delivery (ex: Better Naito Forever, SW Capitol Hwy Improvements, Earl Blumenauer Bridge)

POLICY, PLANNING & PROJECTS

Art Pearce 503-823-7791

Active Transportation & Safety

Catherine Ciarlo 503-823-5667

Capital Projects

Dan Layden (Interim) 503-823-2804

Transportation Planning

Kristin Hull 503-823-2699

- Transportation System Plan
- Area plans ("In-Motion" plans)
- Corridor plans (82nd Ave)
- Modal plans (PedPDX)