East Portland Arterial Streets Strategy

Pedestrian Advisory Committee • June 18, 2019

PBOT
PORTLAND BUREAU OF TRANSPORTATION

Project Overview

What is EPASS and why are we doing it?

- ✓ PBOT has at least 15 projects in planning, design or construction on the major streets in East Portland.
- ✓ Our Vision Zero commitment will continue to direct funds and safety improvements to the High Crash Corridors and intersections of East Portland.
- ✓ EPASS will ensure that we are planning and designing our projects using the latest best practices in arterial design and safety, and with consideration of impacts and benefits to the whole transportation network.

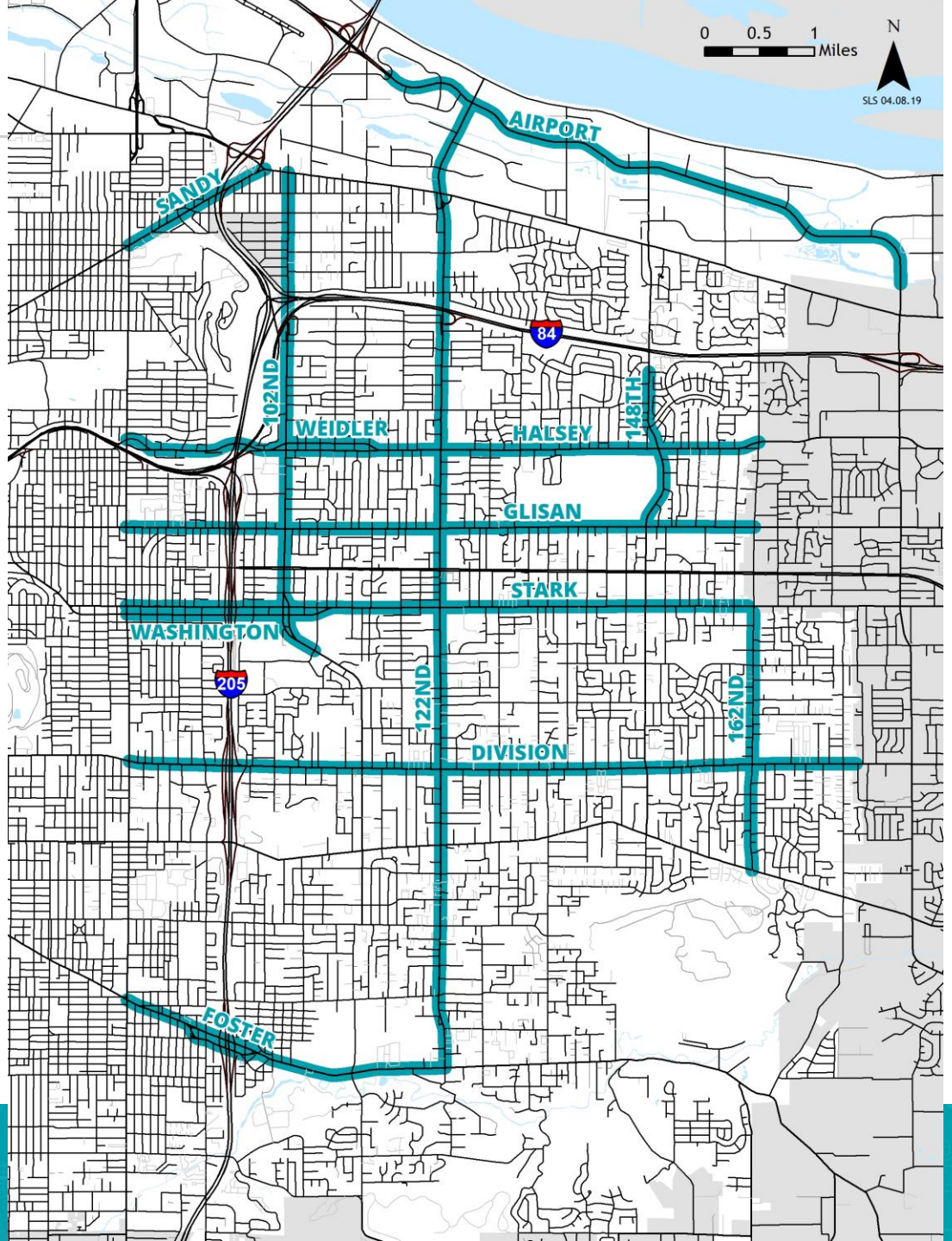
EPASS will:

- Develop design concepts for all roadways on the EPASS network (or share concepts that have already been developed as part of other projects)
- Engage the public to: verify community values heard in other recent outreach efforts, understand opinions on design tools and tradeoffs
- Use travel modeling to understand potential traffic impacts (delay, diversion)
- Identify predicted crash reduction and multimodal completeness benefits
- Develop/refine projects for upcoming funding measures
- Communicate a cohesive strategy to the public

What is the EPASS network?

- 4+ Lane Arterial Streets between 82nd Avenue and eastern City limits, maintained by PBOT:

- NE/SE 102nd Ave
- NE/SE 122nd Ave
- NE 148th Ave
- SE 162nd Ave
- NE Airport Way
- NE Sandy Boulevard
- NE Halsey Street
- NE Glisan Street
- SE Stark Street
- SE Division Street
- SE Foster Road



EPASS: Existing Conditions

Memo 1 Public Input: Feedback from recent East Portland Plans

- East Portland In Motion (2012)
- Vision Zero Action Plan (2016)
- Growing Transit Communities (2017)
- Bloom Report (2018)
- Transportation Systems Plan (TSP) Update (2018)
- Enhanced Transit Corridors (2018)
- PedPDX (In progress)
- “Walking While Black” Focus Groups (2017)
- 122nd Avenue Safety Project (In progress)
- 102nd Avenue Safety Project (In progress)
- Outer Division Multi-Modal Safety Project (In progress)
- East Glisan Street Update (In progress)
- 162nd Avenue Safety and Access to Transit Project (In progress)
- Stark Human-Centered Design Piot (2018)
- 82nd Avenue of Roses High Crash Corridor Plan (2008)

Memo 1: Input: Frequent Themes Across Plans

Safe Crossings

- Difficulty crossing multi-lane arterials on foot or mobility device
- Desire for more frequent and visible crossings, especially near parks and schools

Sidewalks

- Earlier input: maximize sidewalk infill/length
- Recent feedback: focused on wider sidewalks without obstructions

Street lighting

- Lighting is deficient for all modes, often only on one side of an arterial roadway
- Walking at night feels dangerous for traffic and personal safety

Memo 1: Input: Frequent Themes Across Plans

Traffic

- Concern about implementing road reorgs when traffic seems to be getting worse.
- Concerns about cut-through traffic on the few residential streets that connect.

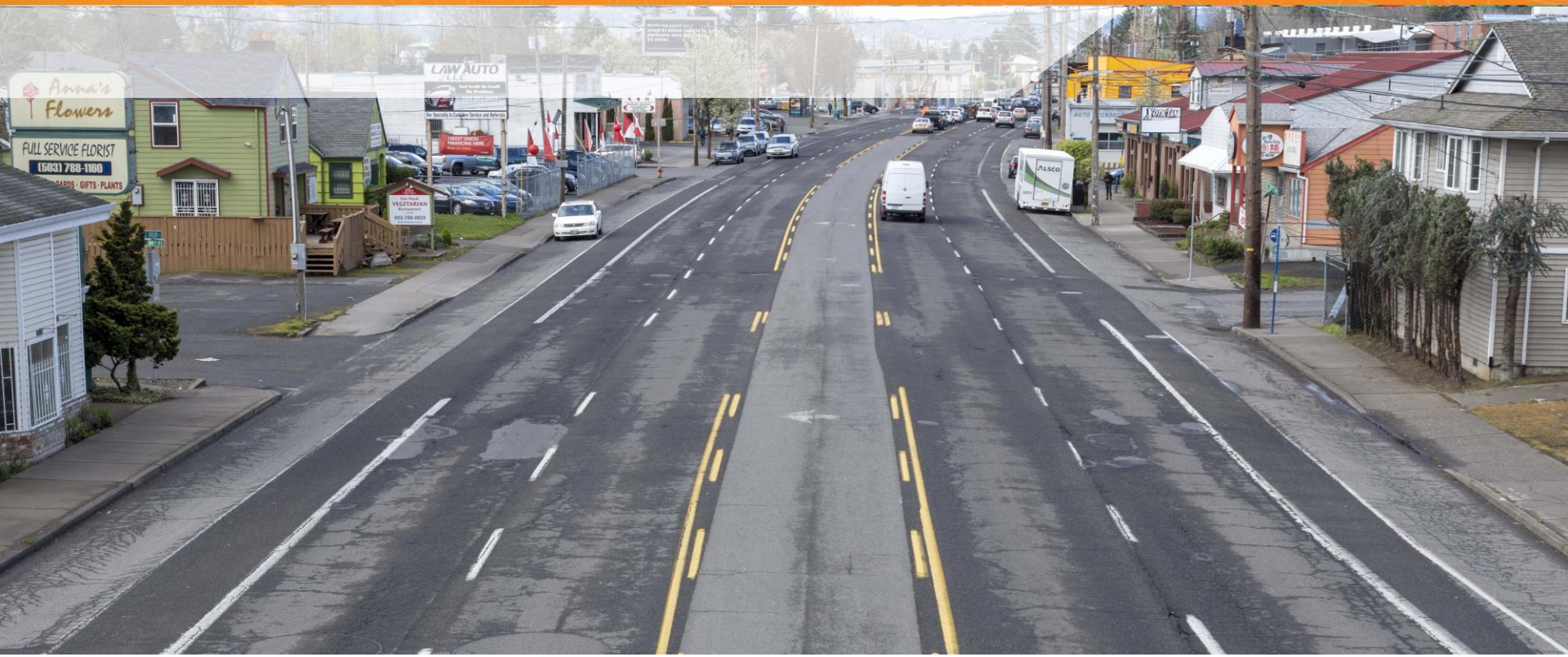
Speeding/Enforcement

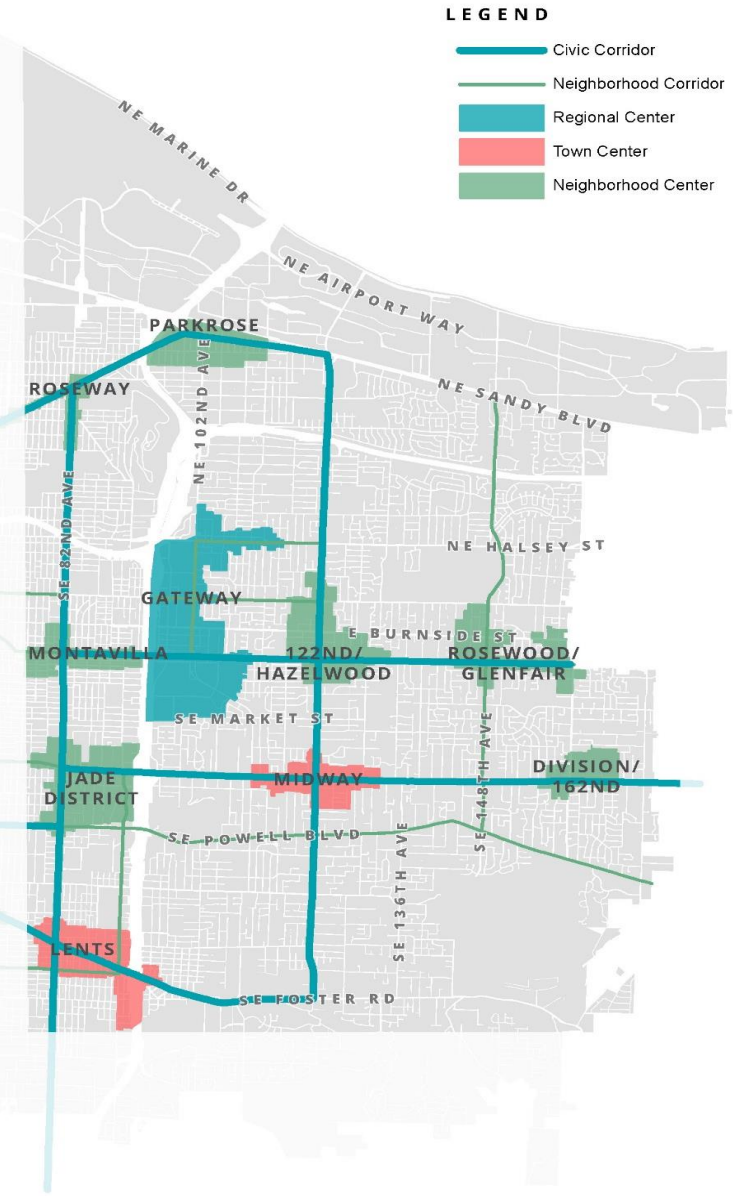
- Violent crashes causing loss of life and destroying infrastructure & property
- Particularly high speeds during off-peak hours and near low-density uses
- Desire for more traffic enforcement, but concerns about racial profiling

Bicycle Infrastructure

- Lower levels of support compared to other areas of Portland
- Commonly heard there aren't destinations to bike to, jobs are too far away
- Greenways and paths had higher levels of support than bike lanes on arterials, but with concerns about camping.

EPASS: Arterial Policy & Projects





East Portland Comp Plan Designations

Regional Center:

- Gateway

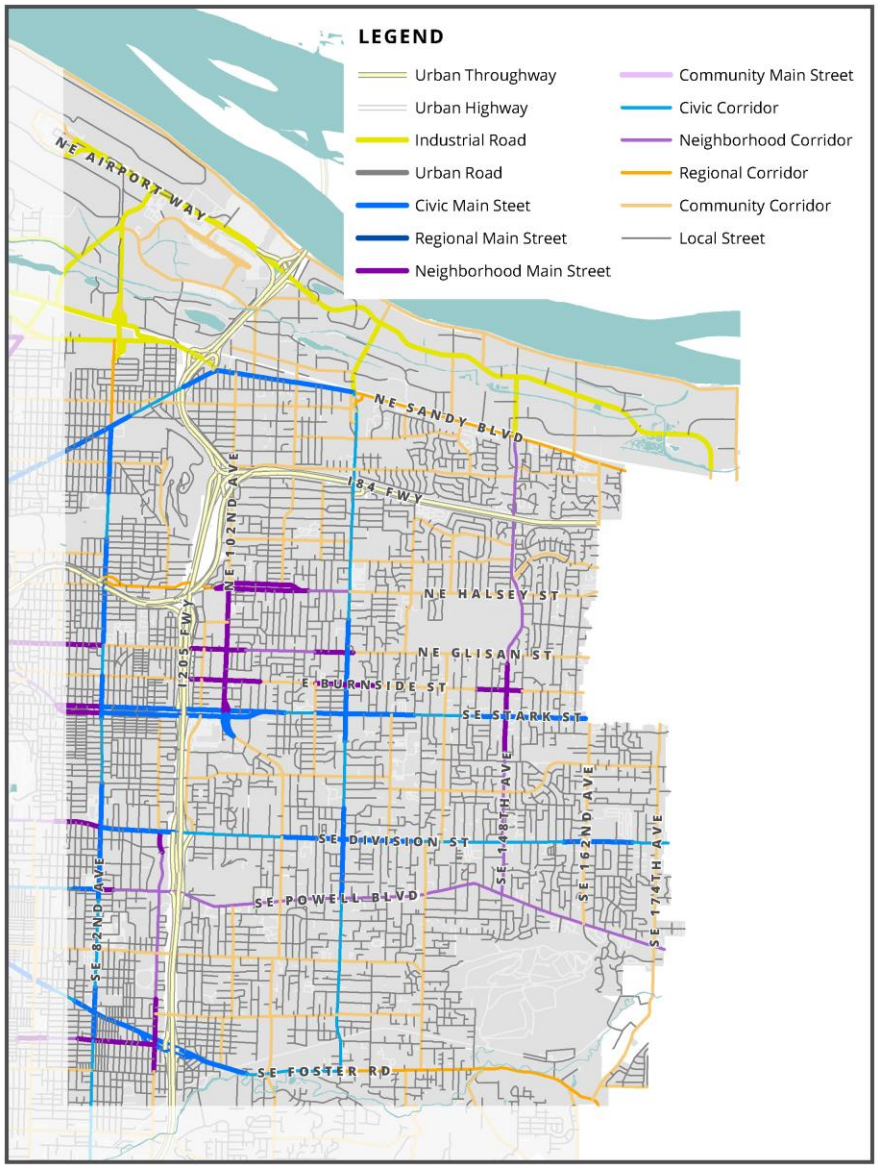
Town Centers:

- Midway
- Lents

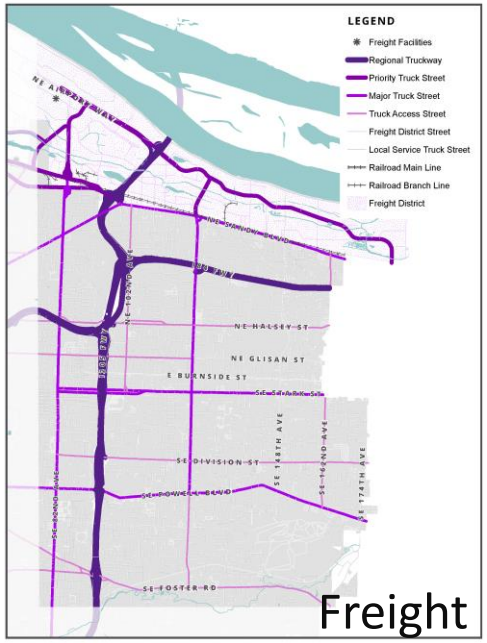
Neighborhood Centers:

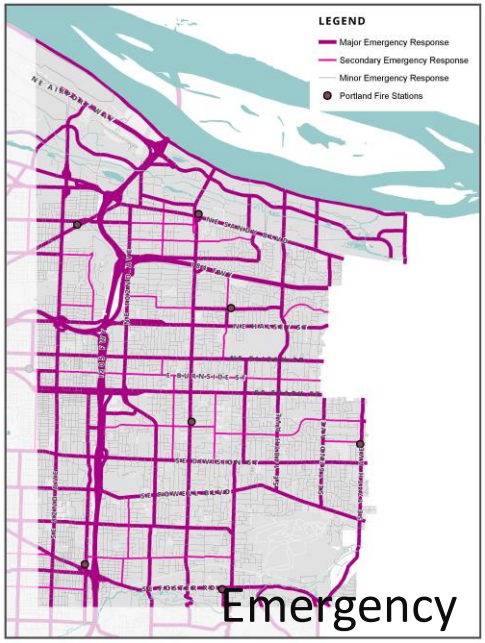
- Parkrose
- Roseway
- 122nd/Hazelwood
- Rosewood/Glenfair
- Jade
- Division/162nd

Comprehensive Plan Street Design Classifications



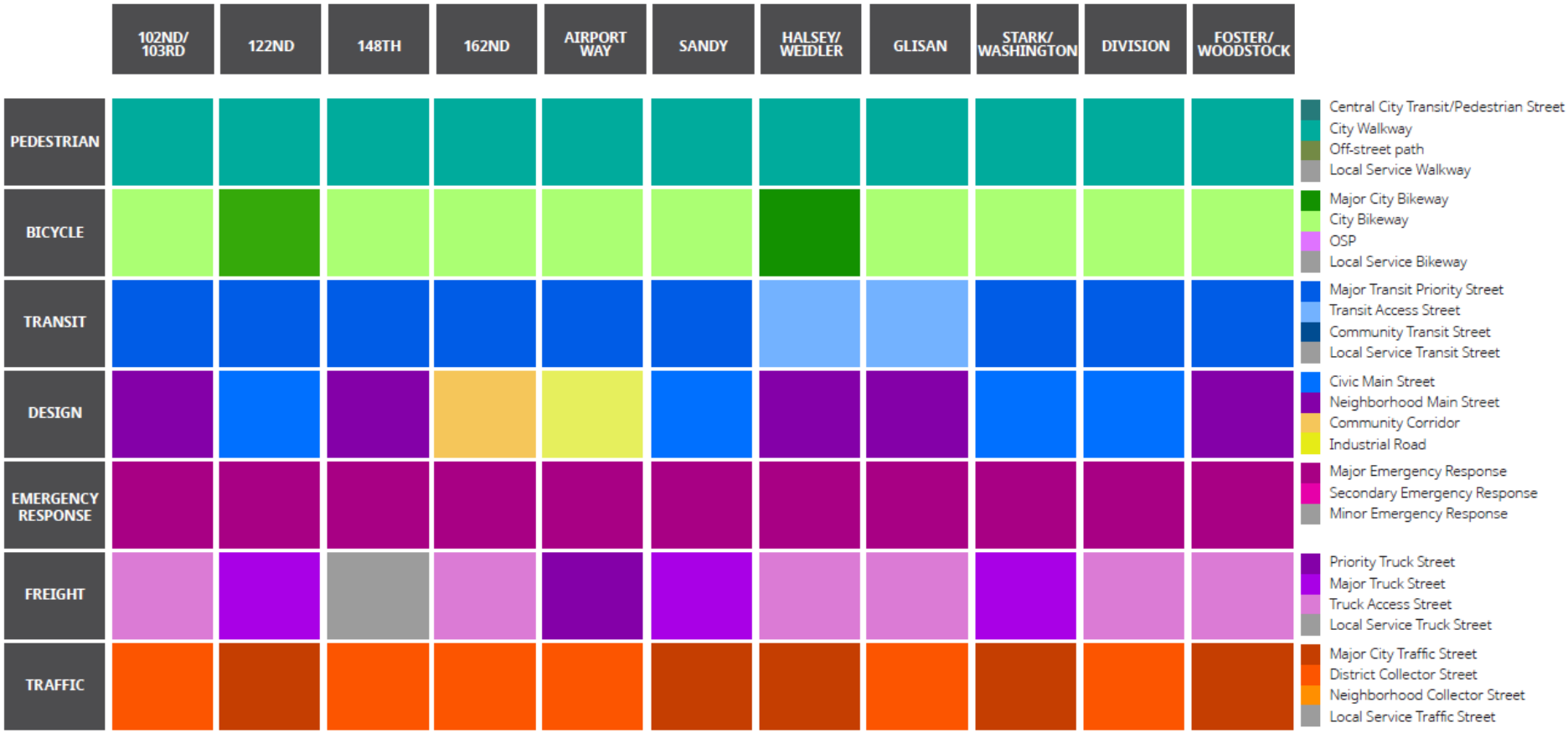
East Portland Street Functional Classifications



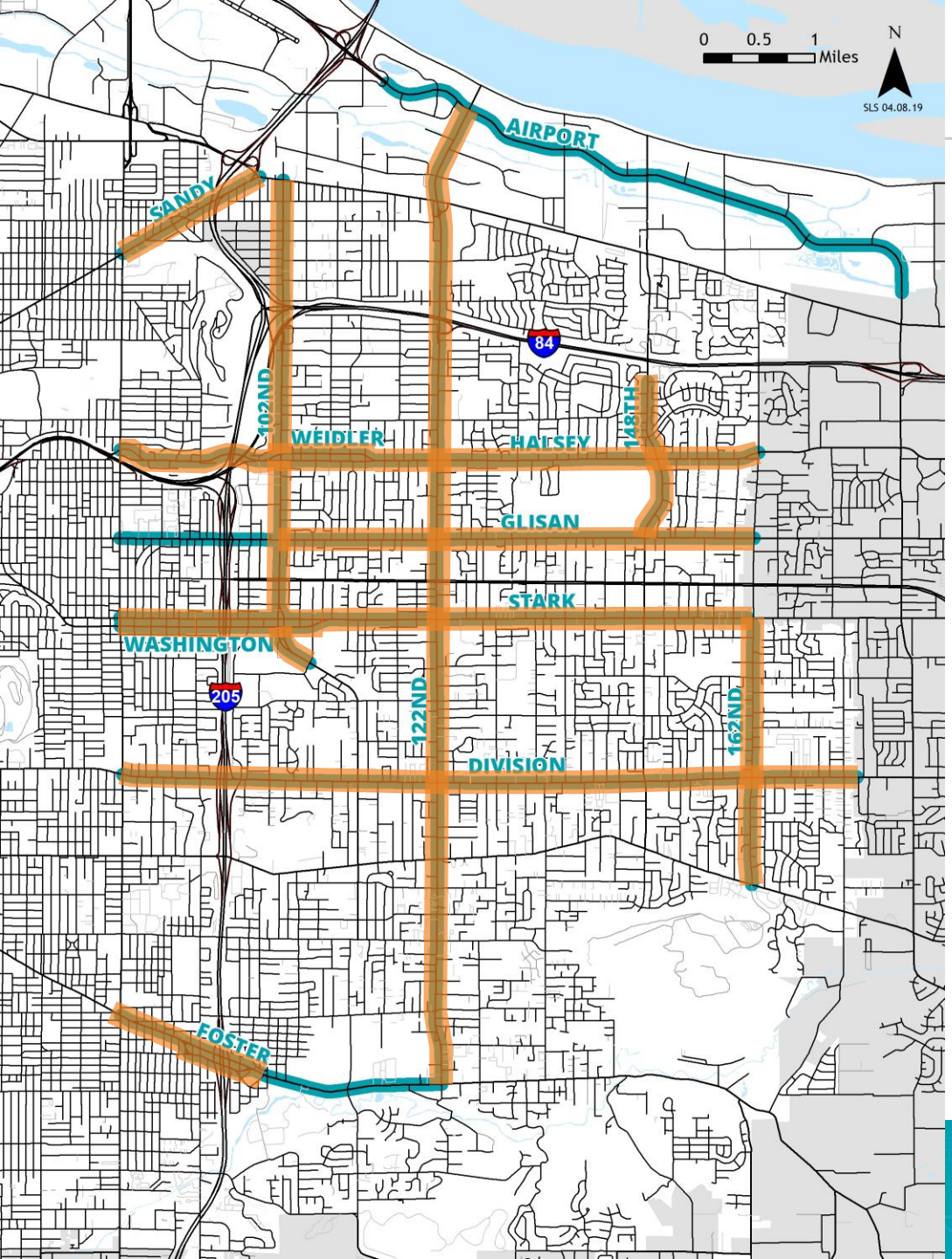


Arterial Transportation System Plan Designations

EPASS Network Street Classifications



East Portland Street Pedestrian Classifications



East Portland Arterial Projects in Progress

2019

- Foster Streetscape
- Halsey-Weidler Streetscape
- NE 102nd Ave Pilot Project
- East Glisan Street Update

2020

- Outer Division Multimodal Safety Project
- SE 162nd Ave Safety & Access to Transit
- NE 148th Ave Crossing & Restriping
- Outer Halsey Safety Project
- 122nd Ave Safety Project Phase 2

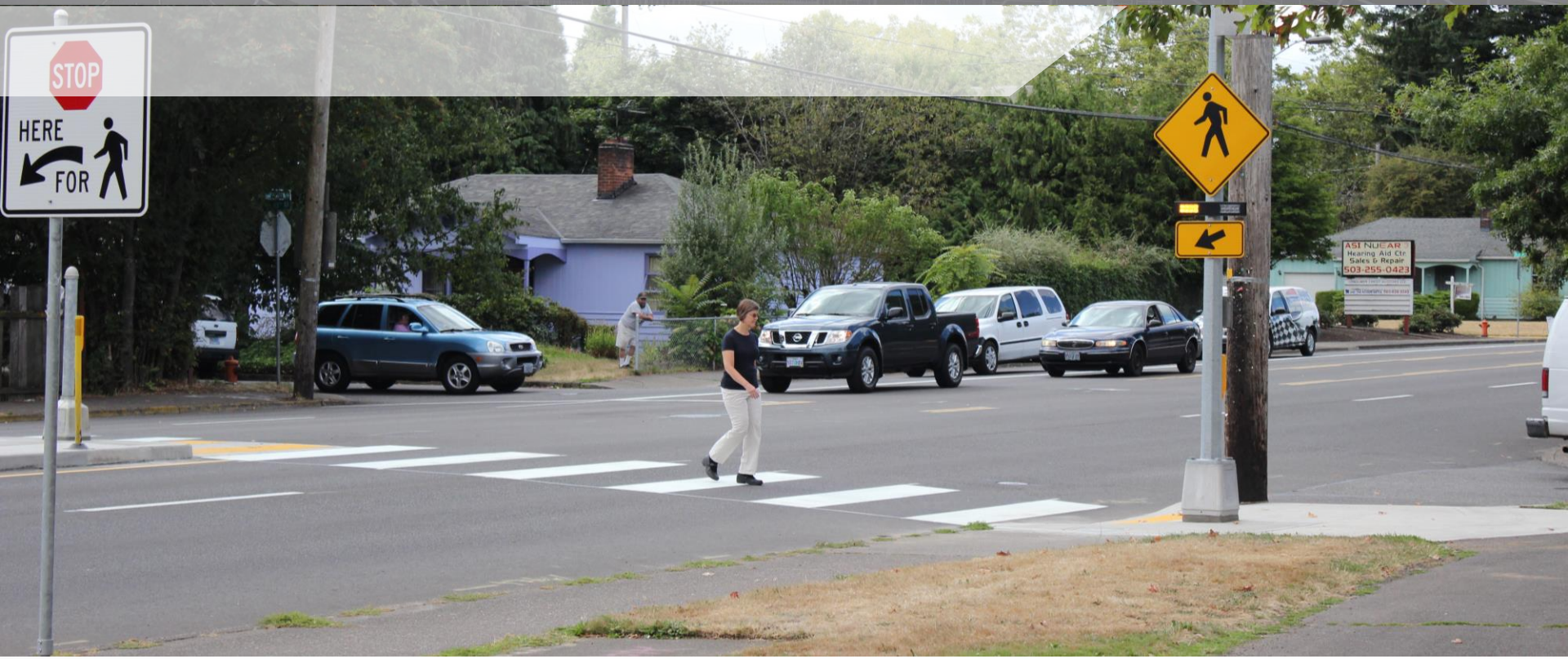
2021

- Lents Town Center Phase 2
- Outer Stark Safety Project
- NE Halsey Safety & Access to Transit
- Jade/Montavilla Connected Centers

Project Development

- Stark/Washington Couplet
- 148th Avenue Improvements
- Enhanced Transit Corridors / Rose Lanes
- Add'l investments on 122nd, 162nd

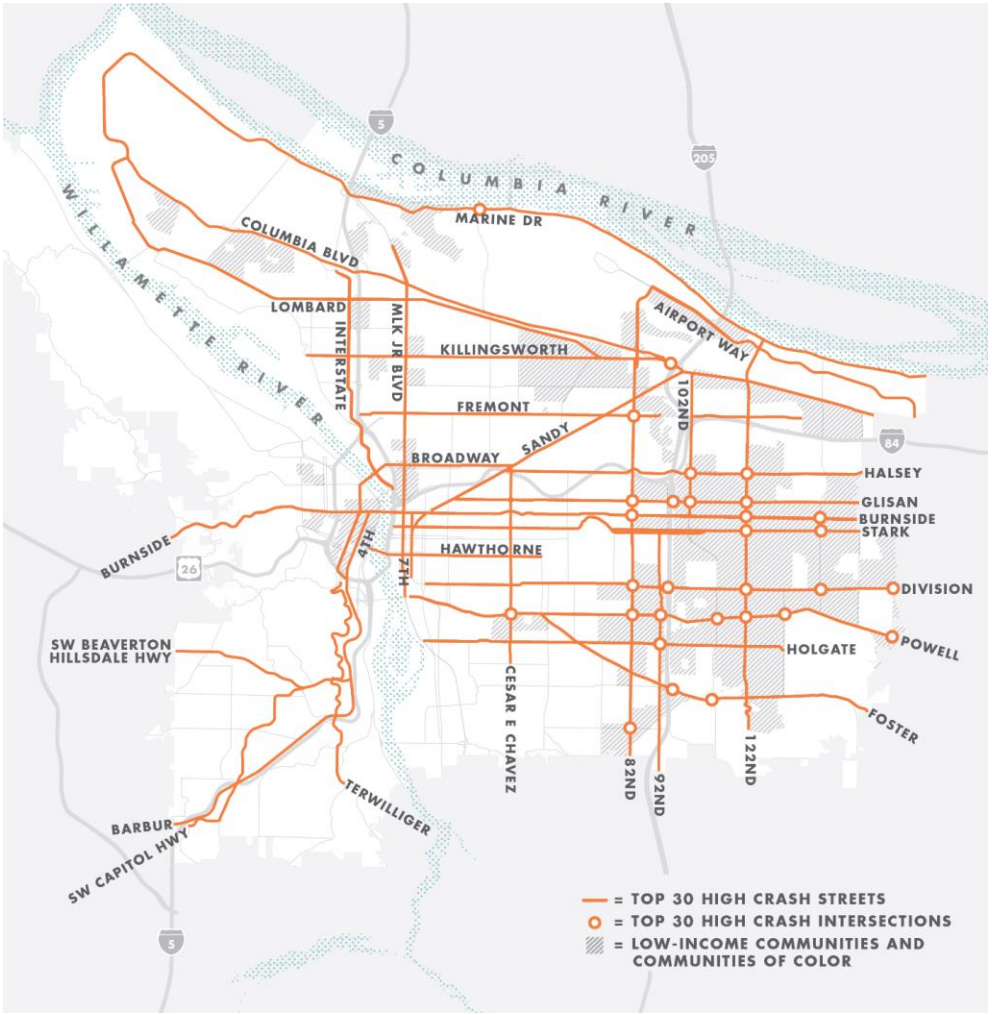
EPASS: Crash History and Safety Analysis



Memo 3: Traffic Safety Analysis on EPASS Corridors

- East Portland has a disproportionate number of serious injury and fatal crashes relative to the city as a whole
- Over half of the High Crash Corridors, and 28 out of 30 High Crash Intersections are located in East Portland
- Except for NE 148th and SE 162nd, ALL of the EPASS network are in the High Crash Network

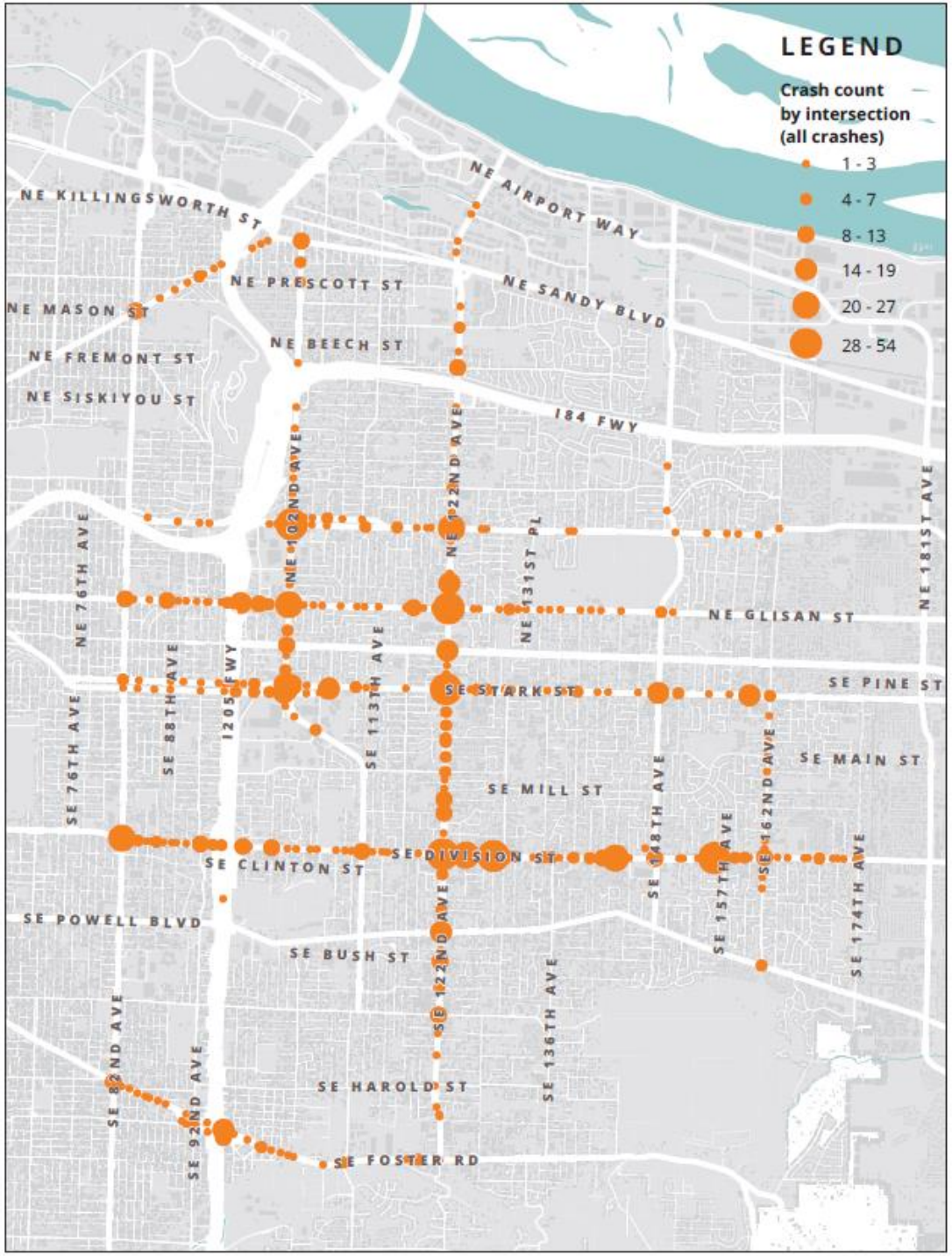
Vision Zero High Crash Network



Data and Methodology

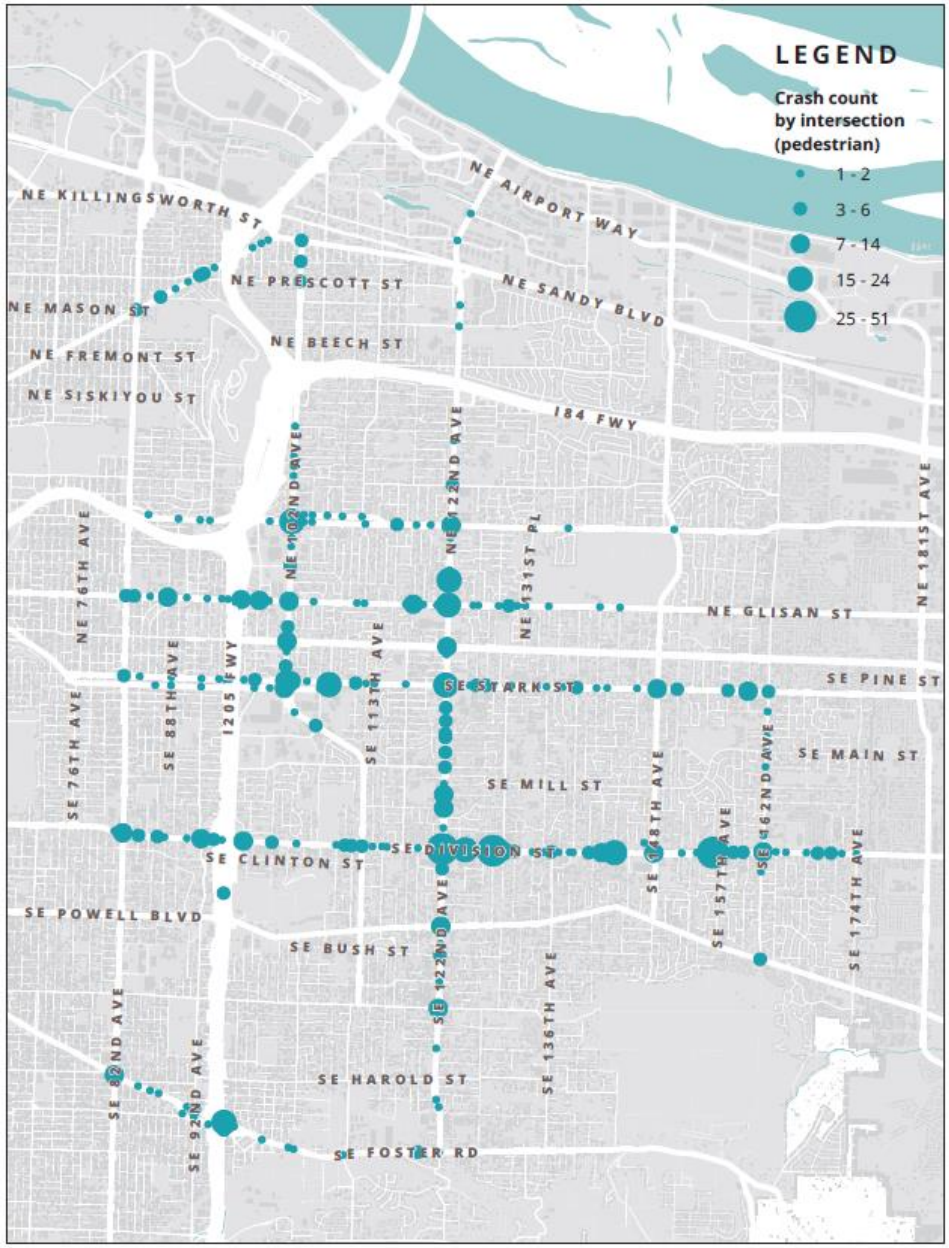
- 10 most recent years of crash data (2007-2016)
  - ✓ Used crash data for all crashes for vulnerable users (pedestrians and bicyclists)
  - ✓ Analyzed Injury A and fatal crashes for vehicles
- Documented crash type for each mode
- Analyzed crash totals and crashes/per mile for each mode

- Looked at the most recent traffic speed count collection data by corridor (between 2015-2018)
  - ✓ 85th percentile speed
  - ✓ % over "safe speeds" (30 mph)
  - ✓ "Excessive speeds" (11+ over posted)
- Documented multimodal infrastructure
  - ✓ Sidewalk presence & width
  - ✓ Adherence to crossing spacing guidelines
  - ✓ Bicycle facilities presence & quality
  - ✓ Street lighting presence



Combined Modal Crashes on EPASS Corridors

- Top 10 High Crash Intersections in the City of Portland:
  - SE 122nd & Stark
  - SE 82nd & Powell
  - SE 122nd & Division
  - NE 122nd & Glisan
  - SE 92nd & Holgate
  - SE 122nd & Powell
  - SE 148th & Stark
  - SE 136th & Powell
  - NE 122nd & Halsey
  - SE 174th & Powell

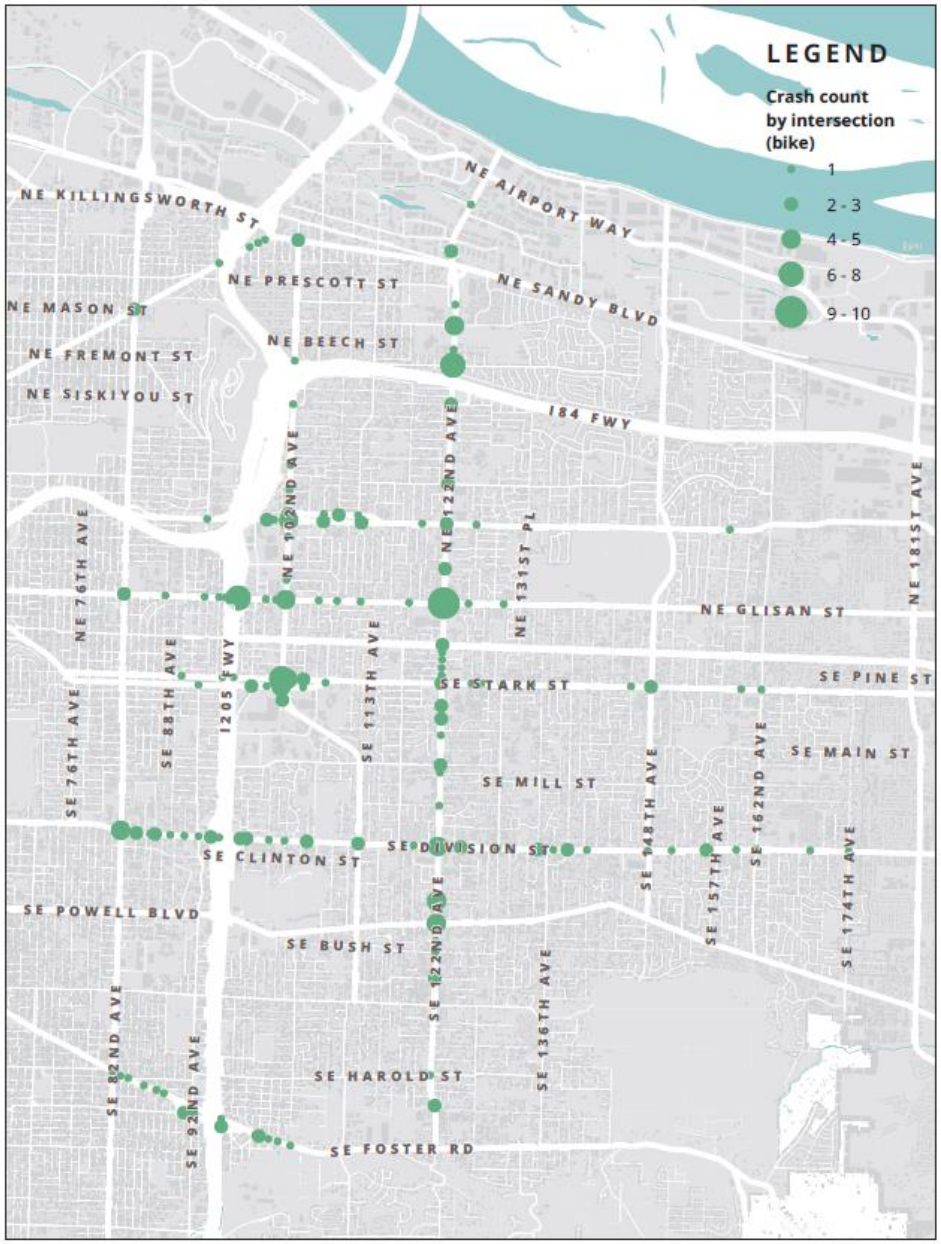


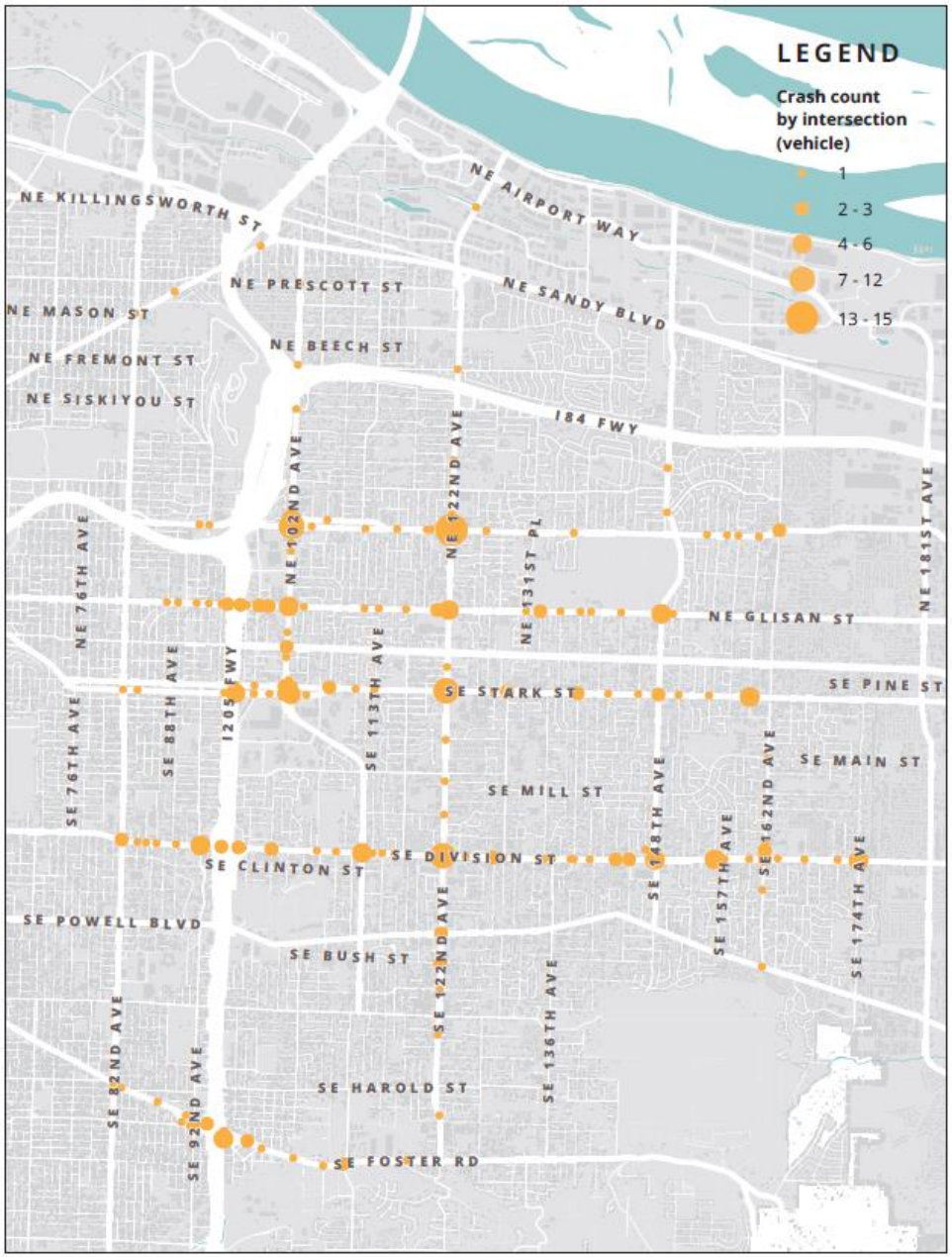
Pedestrian Crashes on EPASS Network

- Using our data method, crash types that most commonly involved pedestrians were rear-end crashes
- NE/SE 102nd and NE/SE 122nd had high frequency of turning movement crashes
- NE/SE 122nd, NE Glisan, SE Stark, SE Division had high frequency of straight movement crashes

Bicycle Crashes on EPASS Network

- SE 122nd has the highest number of bicycle crashes (70), followed by SE Division and NE Glisan
- Most common crash type is a vehicle turning movement
- Second highest crash type is angle crash





Injury A and Fatal Vehicle Crashes on EPASS Corridors

Most common crash type:

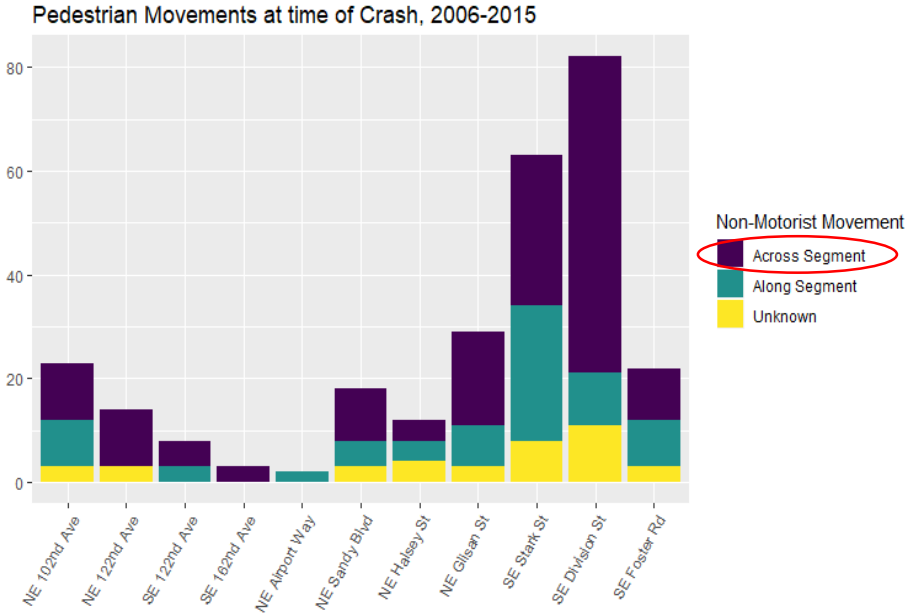
- Turning movements on 102nd, 122nd, NE Sandy, NE Glisan, SE Stark
- Rear-end on SE Division
- Fixed object on NE Airport Way
- Angle on SE Foster, SE Stark

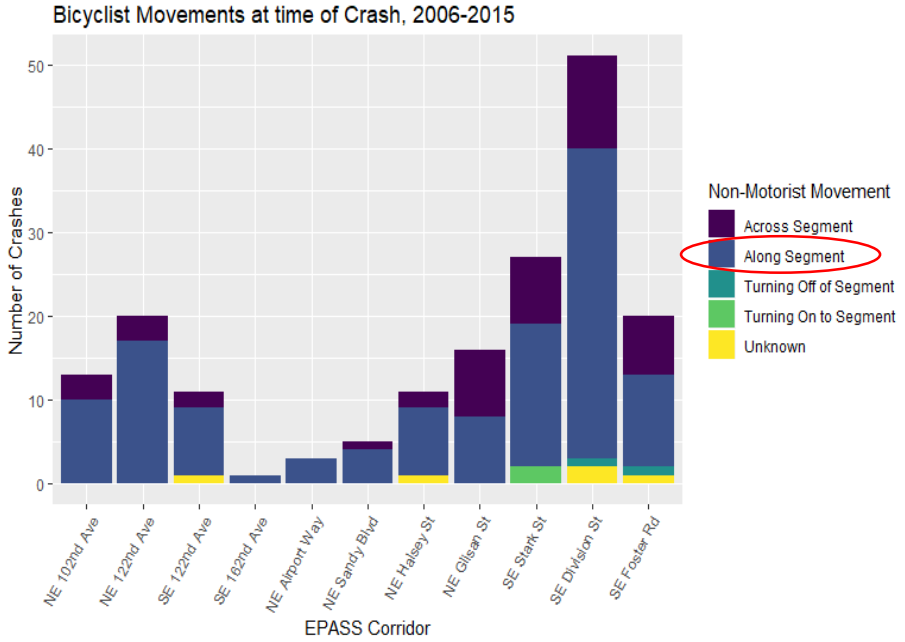
Crashes per Mile for all Modes

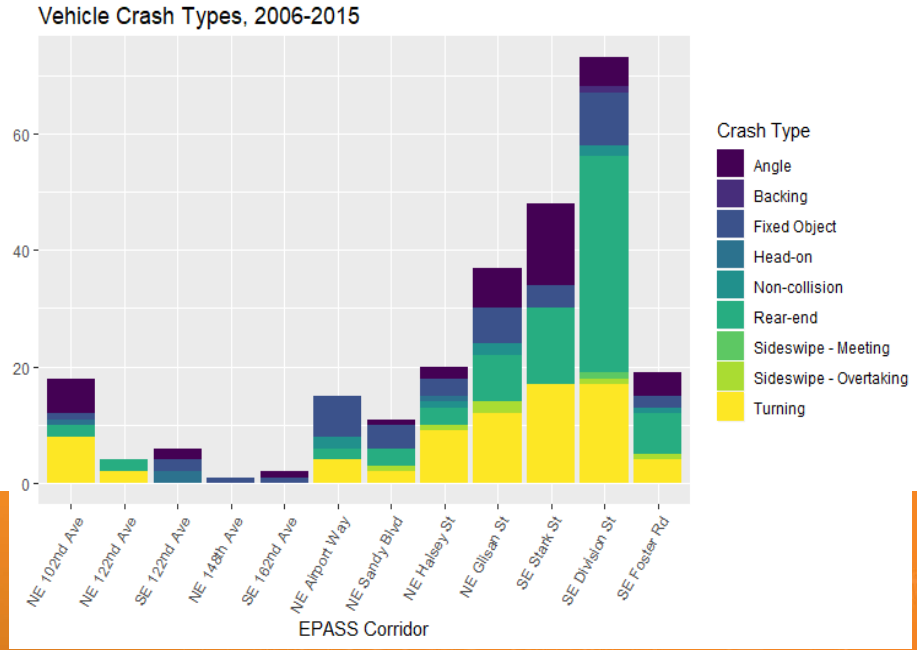
- SE Division has the highest crash per mile rate for both pedestrians and vehicles, and the second highest for bicycles
- The combined crash per mile rate for SE Division is more than twice as high as the next highest corridor
- NE/SE 122nd has the highest per mile rate of bike crashes
- NE Airport Way and NE 148th have very low crash per mile rates

	NE/SE 102nd	NE/SE 122nd	NE 148th	SE 162nd	NE Airport	NE Sandy	NE Halsey	NE Glisan	SE Stark	SE Division	SE Foster
Corridor Length (mi)	3.47	6.20	1.03	1.64	3.77	0.99	4.80	4.01	5.34	4.65	2.66
Ped Crashes	14.42	22.57	-	4.88	0.79	23.19	5.83	18.19	20.23	56.77	16.18
Bike Crashes	3.17	11.28	-	4.27	1.32	6.05	4.38	6.73	5.62	10.54	8.28
Vehicle Crashes	4.04	3.06	2.91	3.66	3.97	3.02	6.25	9.47	8.80	15.70	9.41
Total Crashes	***21.63***	***36.92***	***2.91***	***12.80***	***6.09***	***32.26***	***16.46***	***34.39***	***34.65***	***83.01***	***33.86***

Crashes by Movement

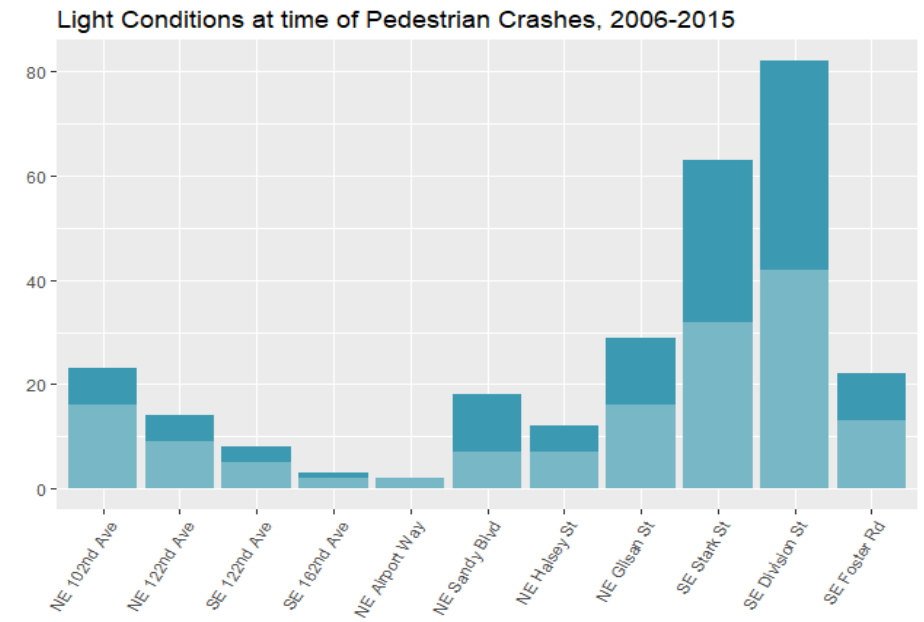


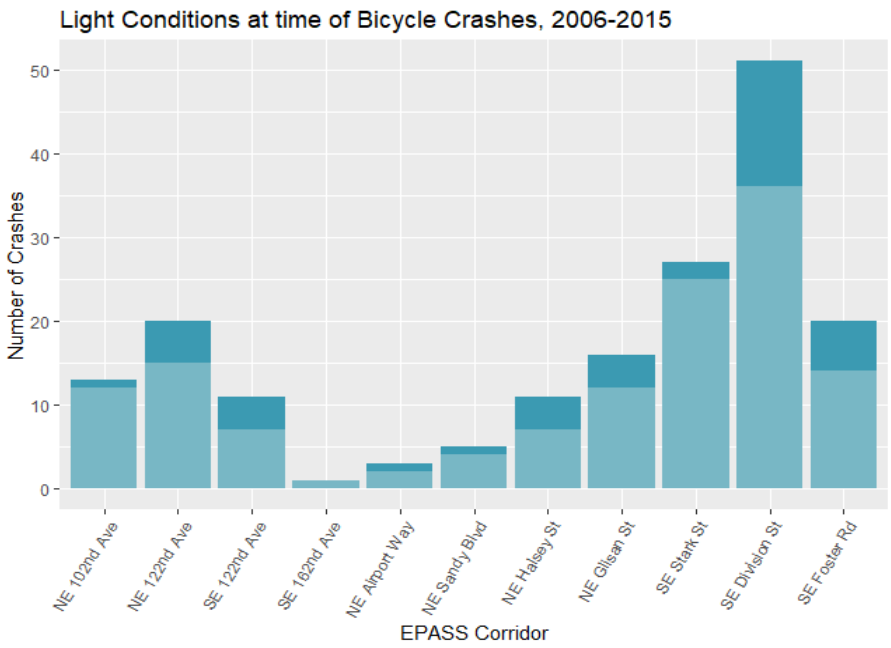


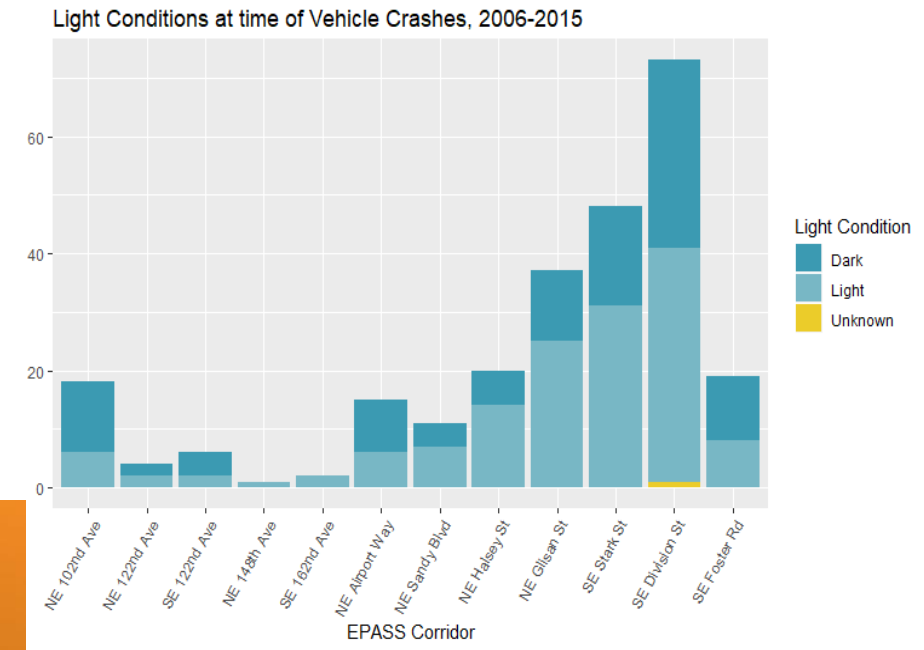


- Most ped crashes occur when person is travelling <u>across</u> segment
- Most bike crashes occur when bikes are travelling <u>along</u> segment

Crashes by Light Conditions







- Lighting more of a factor in ped crashes compared to bike and vehicle crashes.

Additional Pedestrian Crash Findings

- Signalized intersections are where the largest share of pedestrian crashes occur (38%) and two-thirds of these crashes are when turning vehicles fail to yield to pedestrians.
- Crashes at unsignalized intersections are most commonly due to vehicles going straight failing to yield to pedestrians, and/or pedestrians not providing enough time/space for a vehicle to stop.
- Division Street has a much higher rate of pedestrians being struck while crossing between intersections than other corridors.

Multimodal Infrastructure & Lighting

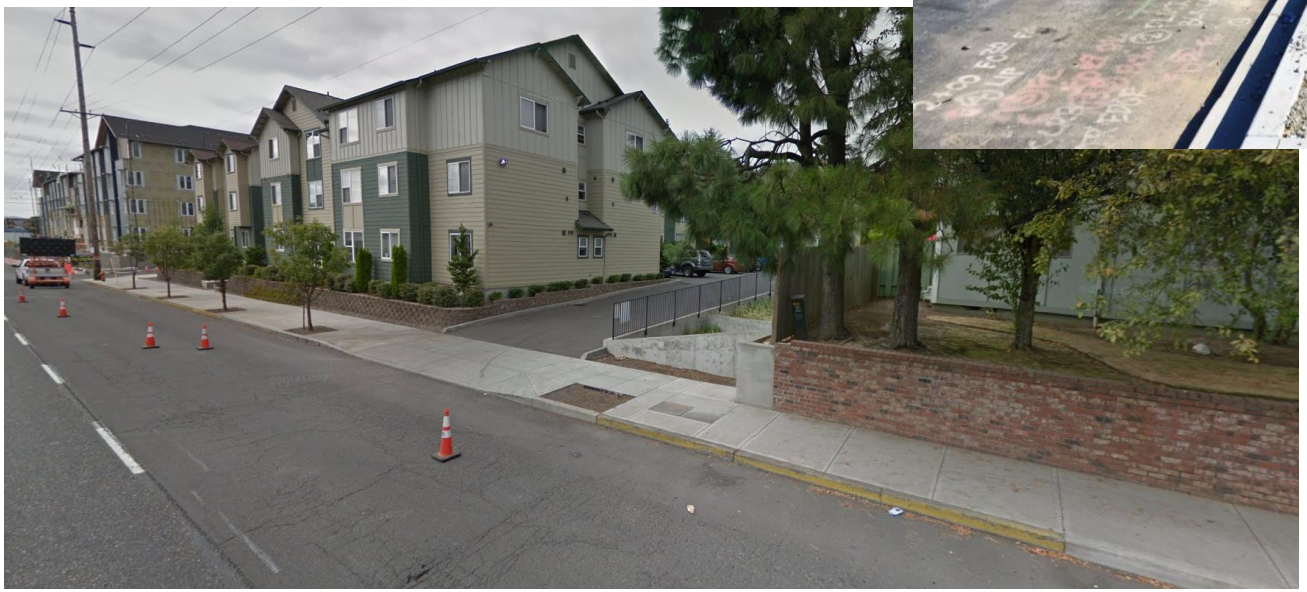
- Conditions vary widely across the EPASS network
- Most of the EPASS network has sidewalk, but it is often not built to PBOT width standards
- Street lighting is not uniform, and most typically only on one side of the roadway
- Few EPASS corridors meet PBOT crossing spacing guidelines
- Bicycle facilities are varied, with none to standard parking adjacent bike lanes. A few small segments have buffered or protected bike lanes

Street Design Menu
Pedestrian Considerations

Sidewalks

- Improvement options:
  - ✓ Widen outward through incremental development or ROW acquisition
  - ✓ Widen inward
  - ✓ Relocate obstructions
  - ✓ PBL as ped infrastructure

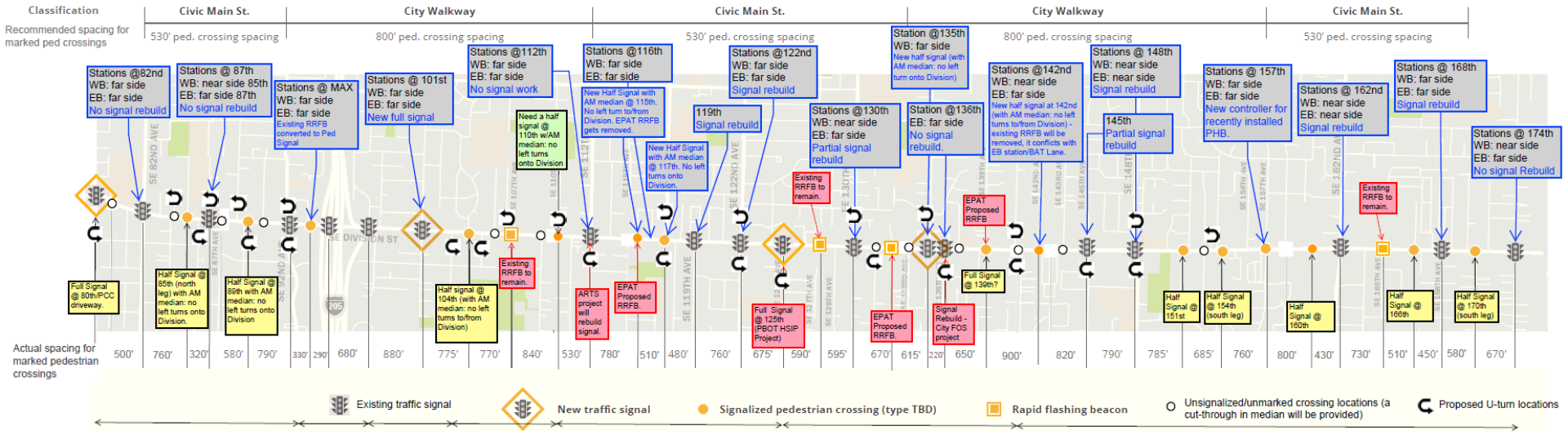
- Look at land use context



Crossings

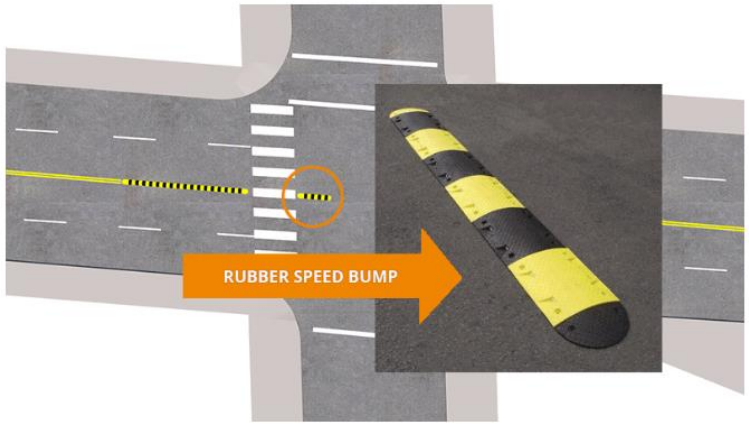
- New PedPDX guidelines for marked crosswalk spacing:
  - ✓ 800’ between crossings on City Walkways
  - ✓ 530’ between crossings in Pedestrian Districts and on Main Streets
  - ✓ Marked crosswalk within 100’ of all transit stops

- Improvement types (generally):
  - ✓ Marked crosswalk / RRFB on 3-lane roadways
  - ✓ Pedestrian hybrid beacon /half signal / full signal on 5-lane roadways



Major Signalized Intersections

- Toolbox options:
  - ✓ Separating walk phase from vehicle turn phase
  - ✓ Left turn calming
  - ✓ Leading pedestrian interval
  - ✓ High visibility crosswalks
  - ✓ Improved lighting



Question for the PAC

- How should we change the design of East Portland arterial streets to make them safer and more comfortable for walking, using mobility devices, and accessing transit?

Next Steps

- Public survey
- Travel modeling tasks
  - Existing network
  - Planned projects
- Cross section development:
  - NE Airport Way: Glenn Widing – 181st
  - NE Sandy Blvd: 82nd – Killingsworth
  - NE Halsey St: 132nd – 162nd
  - NE Glisan St: 82nd – 102nd
  - SE Foster Rd: 101st – 122nd
- Project stakeholder meetings
- Draft strategy document: Oct 2019

https://www.portlandoregon.gov/transportation/epass

Thank you!

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