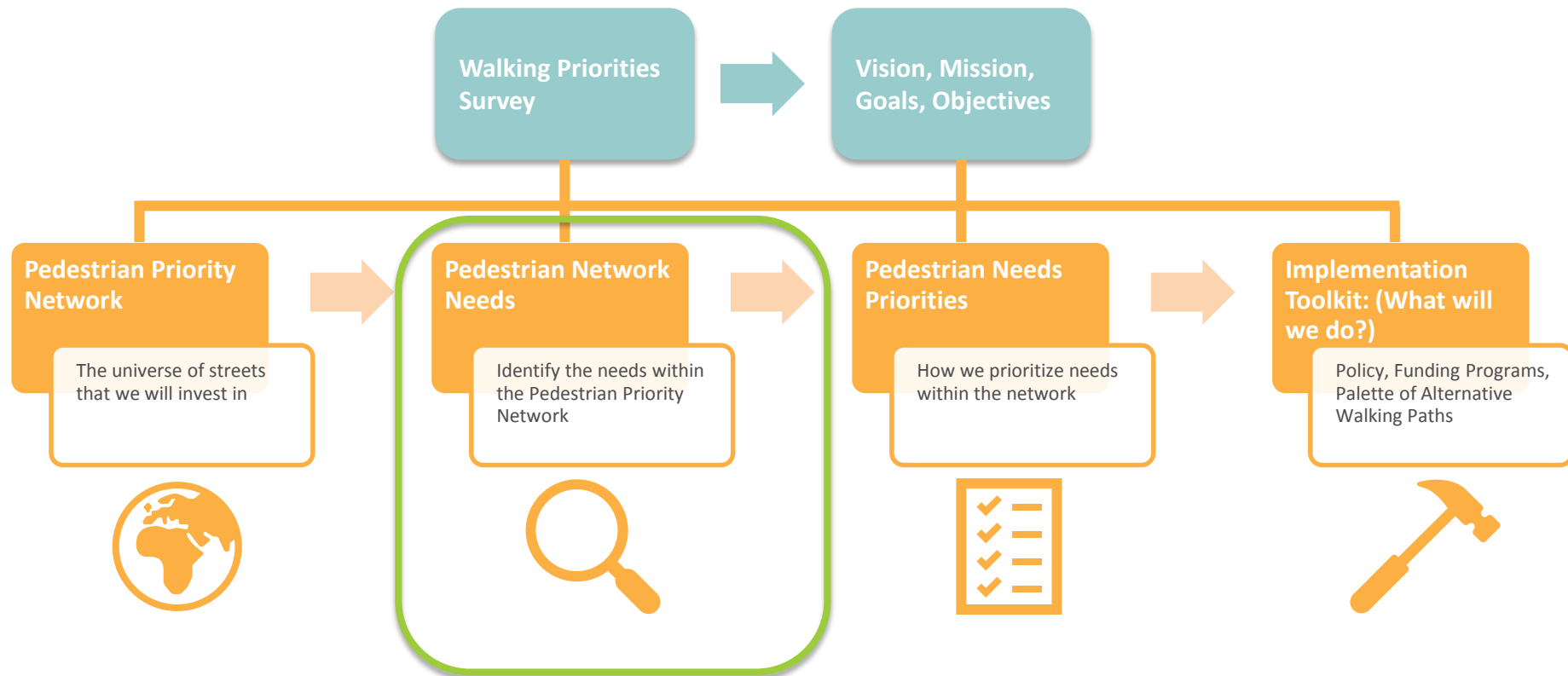




03. Network Needs Analysis



Process for identifying / prioritizing pedestrian needs





Identifying Network Needs

The purpose of the Network Needs Analysis is to understand where there are gaps and deficiencies across and along the Pedestrian Priority Network, and the extent of those gaps and deficiencies. These locations will be prioritized in a future phase.



Pedestrian Network Needs

Crossing the Roadway

- Gaps
- Deficiencies

Along the Roadway

- Gaps
- Deficiencies



Analysis Overview

- **Crossing gaps and deficiencies** are identified for all City Walkways and Major City Walkways
- **Gaps along the roadway** are identified for all Pedestrian Priority Network streets identified as Arterials or Collectors in the TSP, and will eventually be identified for all Pedestrian Priority Network streets
- **Deficiencies along the roadway** are identified for all PPN streets with Pedestrian Districts and all Major City Walkways citywide



Crossing the Roadway: Gaps

- **Inside Pedestrian Districts:** maximum spacing of 530 feet between marked crossings (about two blocks)
- **Outside of Pedestrian Districts:** maximum spacing of 800 feet between marked crossings (about three blocks)

Key Findings

- Approximately **3,520** new marked crossings needed
- **79%** of the total miles of City Walkways/Major City Walkways have a gap
- Average gap length is roughly **1/3 mile**

NW Skyline Boulevard, 9.28 mile gap

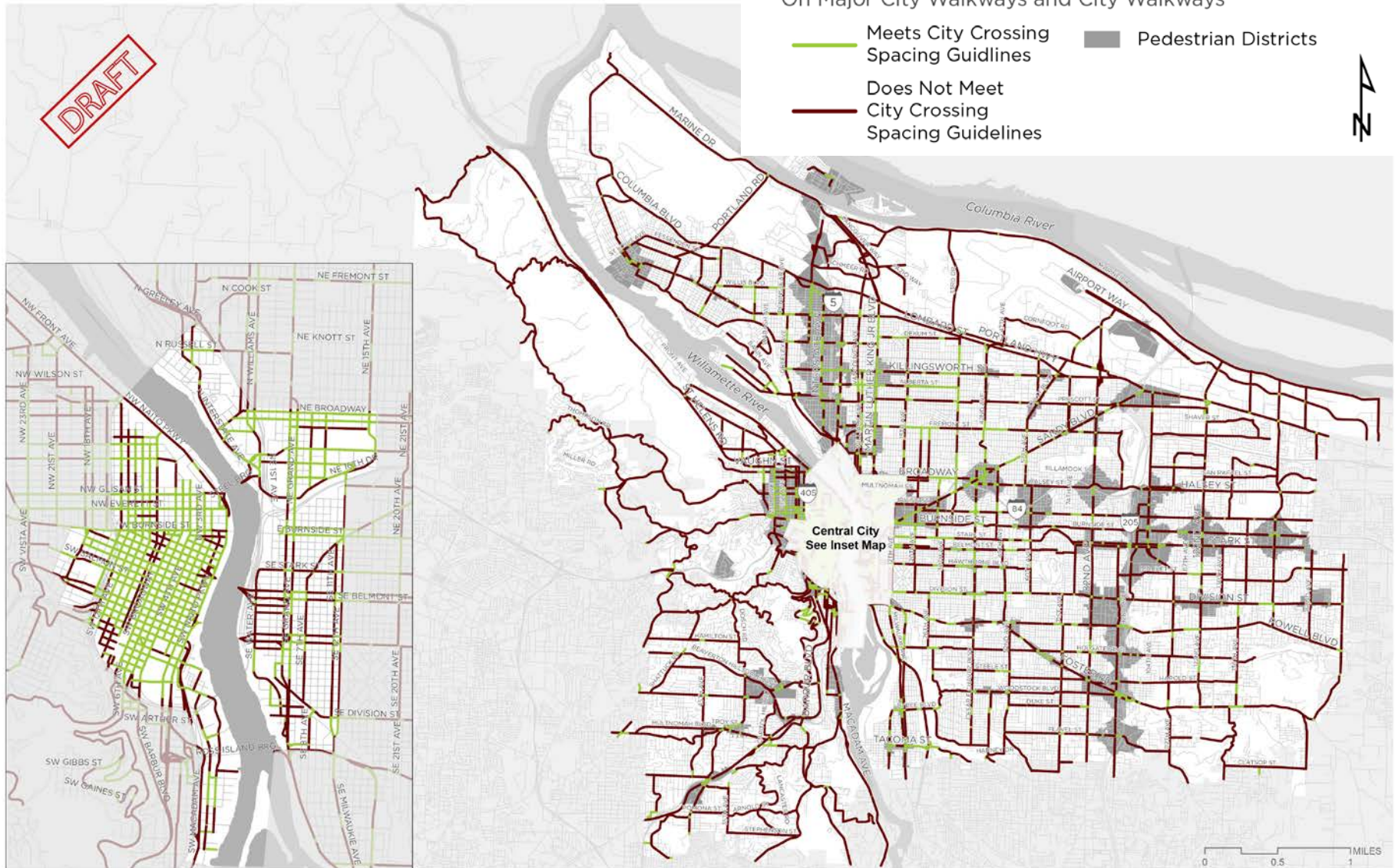




CROSSING GAPS

On Major Walkways and City Walkways

- Meets City Crossing Spacing Guidelines
- Does Not Meet
- City Crossing Spacing Guidelines
- Pedestrian Districts



PedPDX Implications

- Gaps are less prevalent in pedestrian districts than on streets outside of districts
- There are many marked crossings needed to meet the standard!



Crossing the Roadway: Deficiencies

Crosswalk design guidelines based on the roadway:

- Speed limit
- Number of lanes
- Average daily traffic (ADT)
- Presence of raised median



Crossing the Roadway: Deficiencies

CROSSWALK DESIGN BY ROADWAY TYPE*												
	VEHICLE ADT > 4,000 - 9,000			VEHICLE ADT > 9,000 - 12,000			VEHICLE ADT > 12,000 - 15,000			VEHICLE ADT > 15,000		
	≤30 MPH	35 MPH	40+ MPH	≤30 MPH	35 MPH	40+ MPH	≤30 MPH	35 MPH	40+ MPH	≤30 MPH	35 MPH	40+ MPH
TWO LANES	●	●	●	●	●	●	●	●	●	●	●	●
THREE LANES WITH RAISED MEDIAN	●	●	●	●	●	●	●	●	●	●	●	●
THREE LANES WITHOUT RAISED MEDIAN	●	●	●	●	●	●	●	●	●	●	●	●
MULTILANE WITH RAISED MEDIAN	●	●	●	●	●	●	●	●	●	●	●	●
MULTILANE WITHOUT RAISED MEDIAN	●	●	●	●	●	●	●	●	●	●	●	●

* 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



City engineers will ultimately assess the appropriate design for each location

Crossing Design





Key Findings

- **5%** of existing marked crossing are potentially deficient
- **2/3** of existing marked crossings are at a signalized intersection

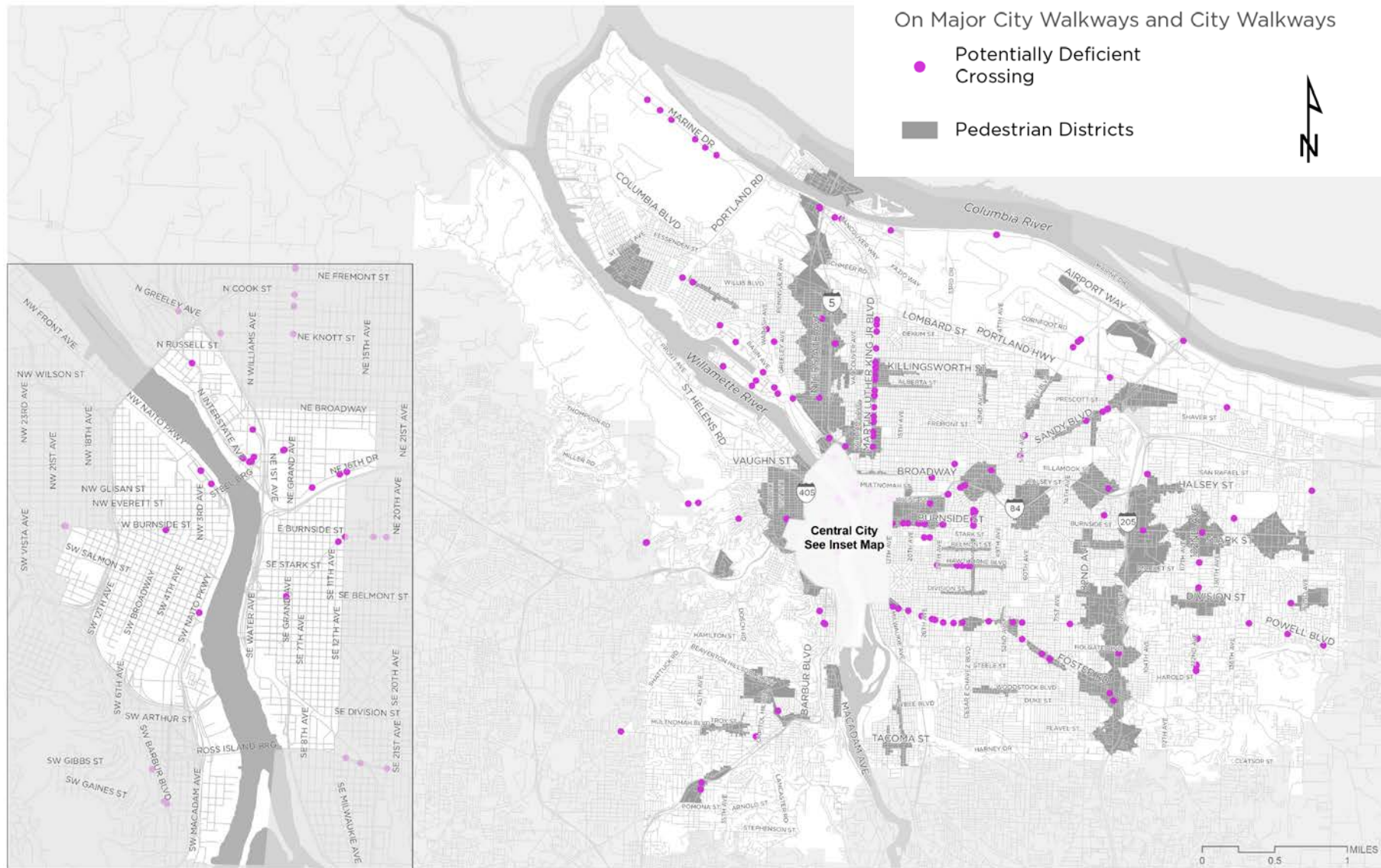




Key Findings

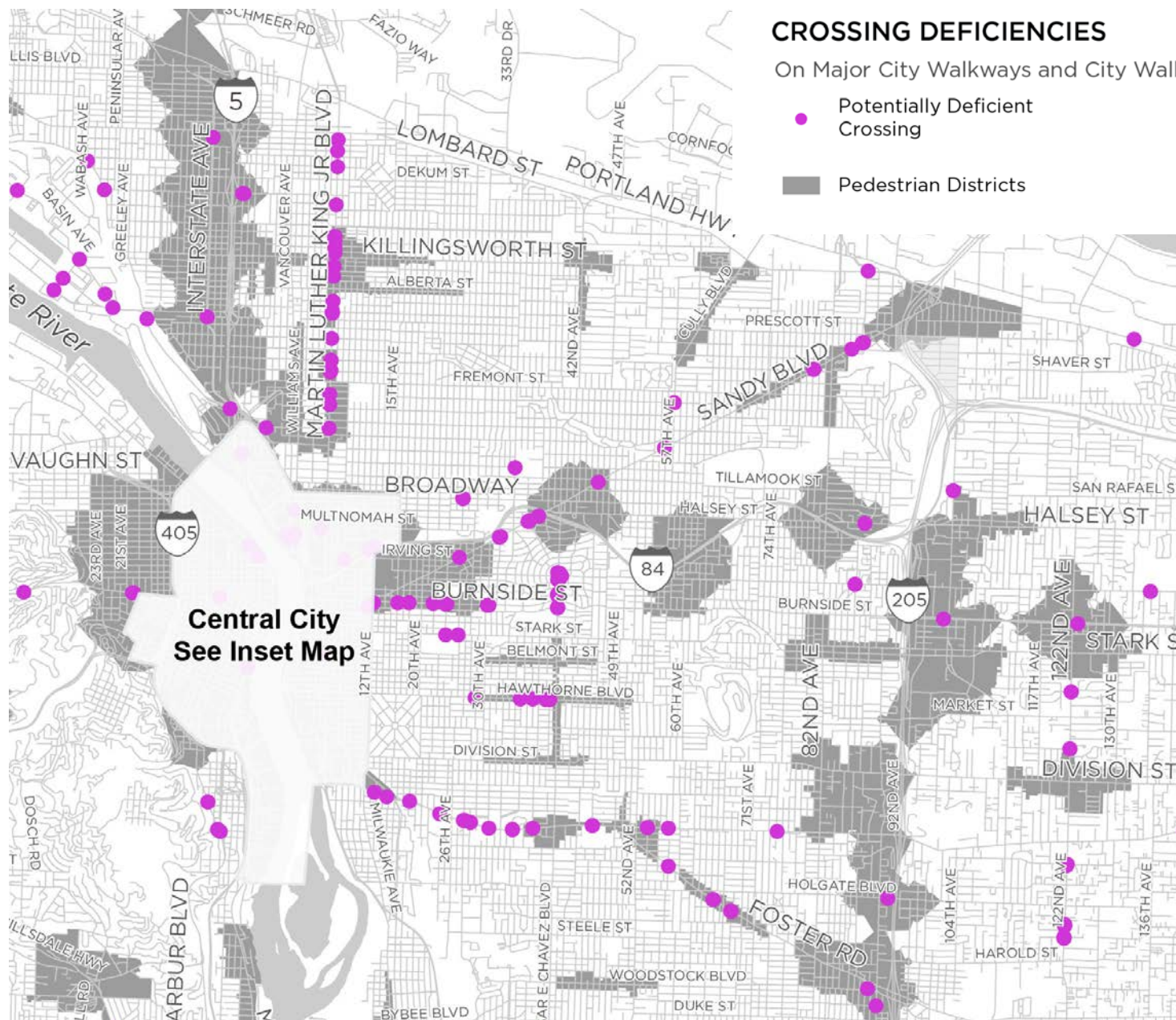
- **94% of deficient crossings** are on a road that would need an RRFB to be considered sufficient

Existing Crossing Design	Desired Crossing Design for Roadway		
	Blue: pedestrian refuge or curb extension	Orange: RRFB	Red: hybrid or full signal
Blue: pedestrian refuge island or curb extension	NA	87	1
Grey: marked crosswalk	3	105	9



On Major City Walkways and City Walkways

●



PedPDX Implications

- Deficient marked crossings are not as common as crossing gaps
- Most deficient crossings could be made sufficient with the addition of a signal, or by lowering the speed or traffic volume of the street



NE MLK and Jessup



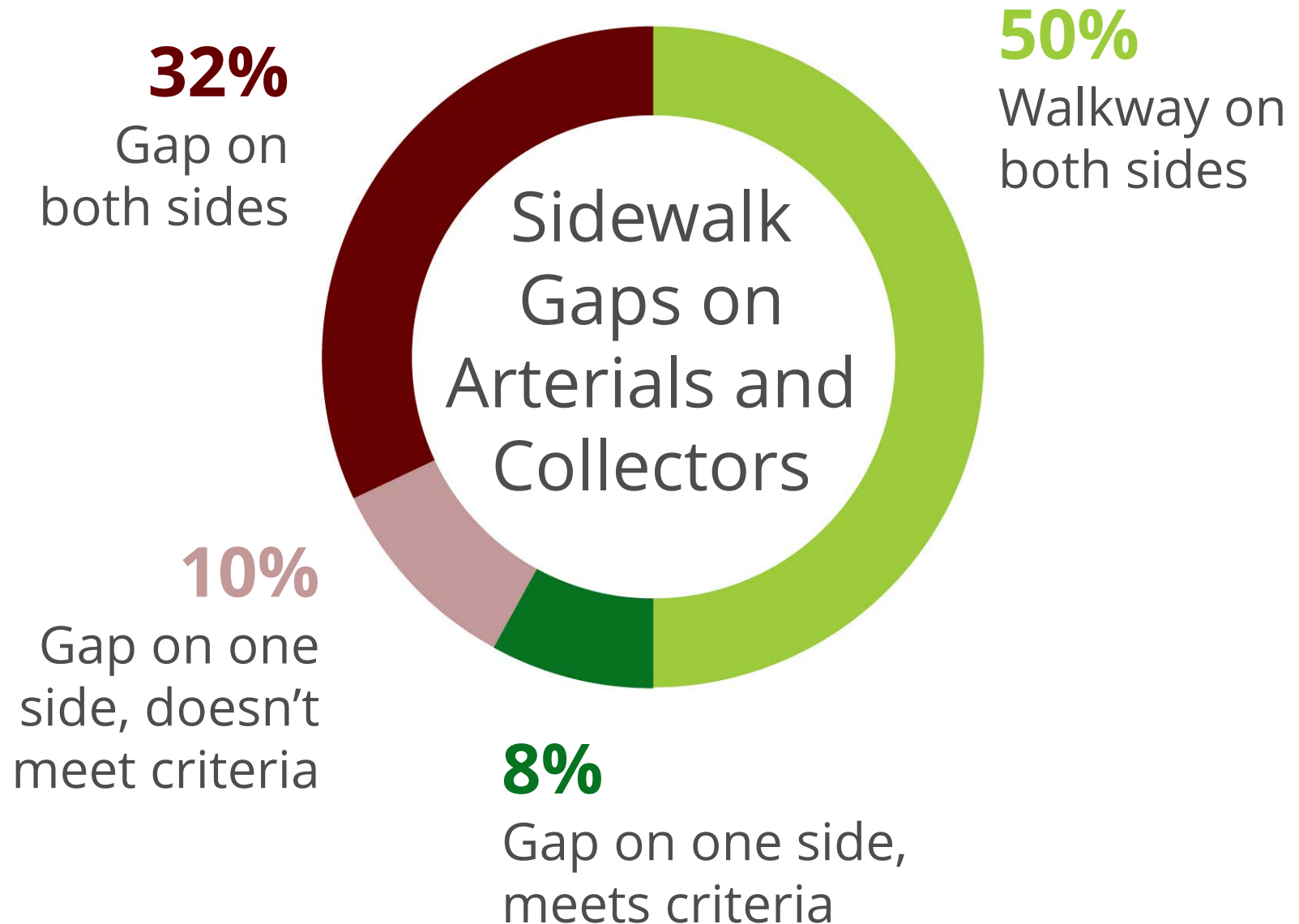
Along the Roadway: Gaps

Pedestrian walkway guidelines:

- Sidewalk on both sides
- OR, meeting Alternative Pedestrian Walkway Guidelines for:
 - Walkway on one side
 - Shared local street



Key Findings

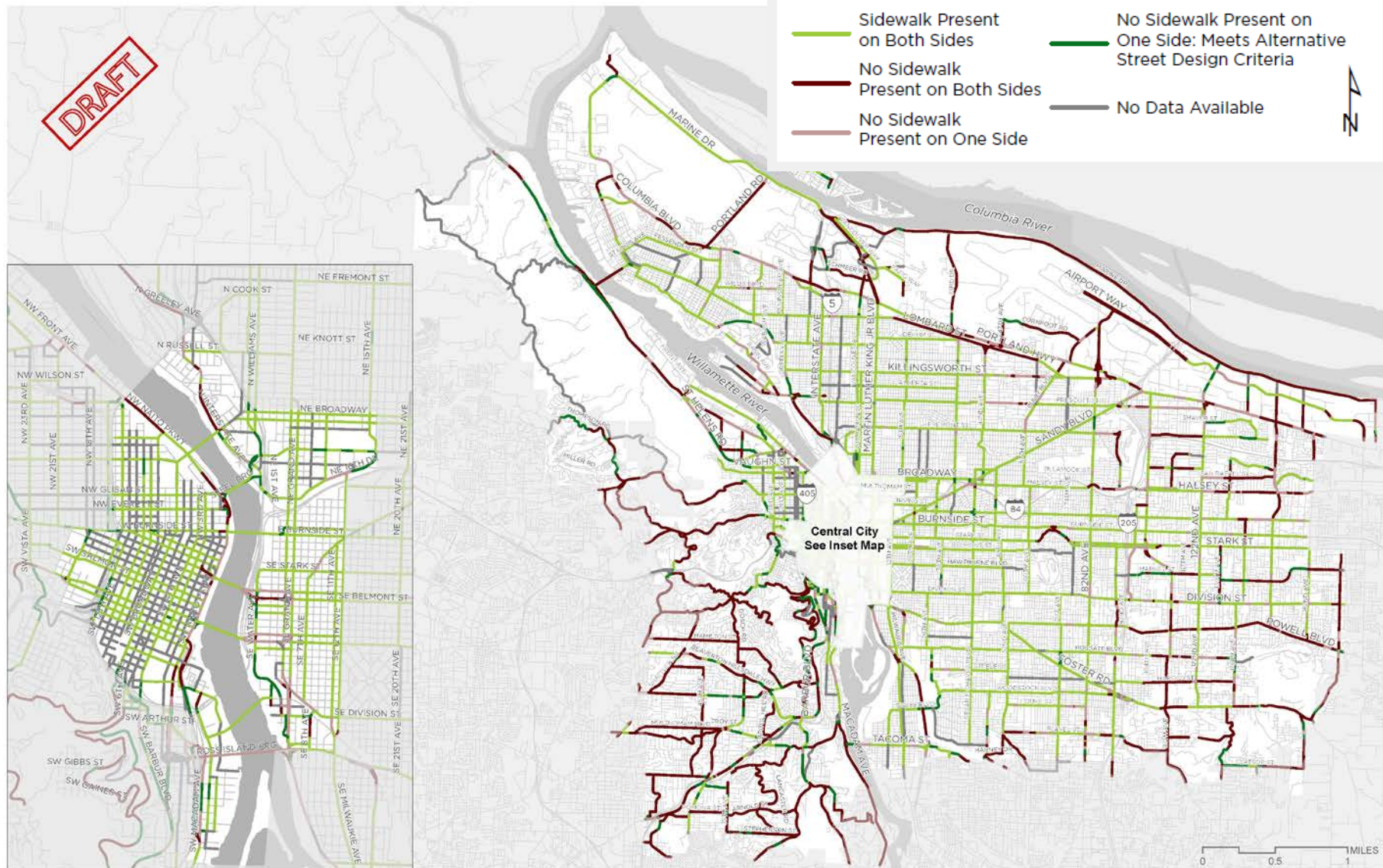


DRAFT

SIDEWALK PRESENCE

On Major City Walkways and City Walkways

- Sidewalk Present on Both Sides
- No Sidewalk Present on One Side: Meets Alternative Street Design Criteria
- No Sidewalk Present on Both Sides
- No Sidewalk Present on One Side
- No Data Available



PedPDX Implications

- Most streets with gaps in the sidewalk have them on **both sides** of the streets



SE Powell near 104th Street



PedPDX Implications

- ~**45%** of the streets with gaps on only one side meet Alternative Design Criteria



SW Terwilliger Boulevard



Along the Roadway: Deficiencies

- For the purposes of this analysis, a minimum **6-foot sidewalk width** was used as the standard
- Ultimately, a wider sidewalk clear zone will be required for many streets
- The analysis included all Major City Walkways and all streets in Pedestrian Districts

Key Findings

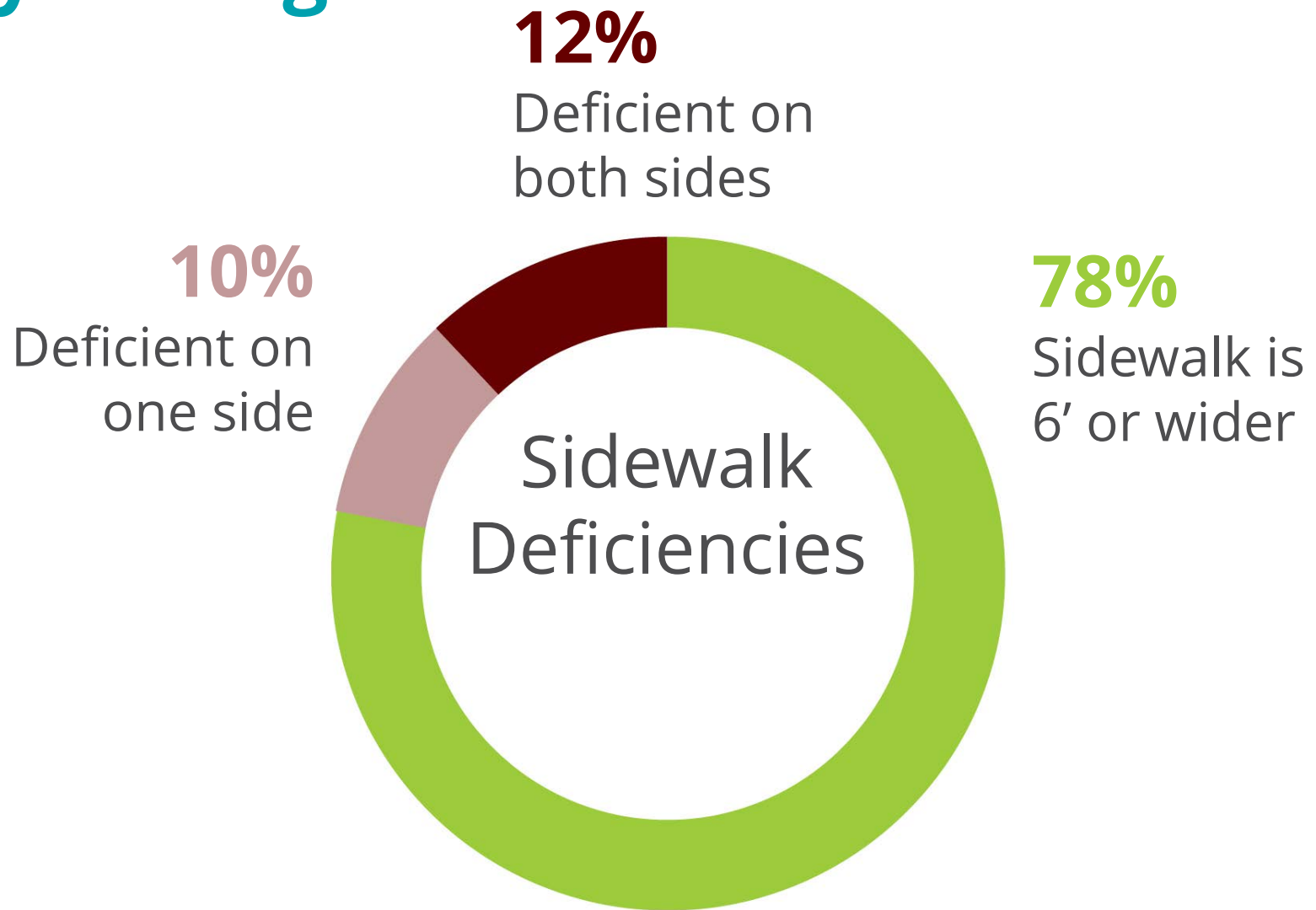
22% of streets with existing sidewalks have a deficient clear zone width on **one or both sides** of the street



N Concord Ave
between
Ainsworth and
Rosa Parks
(neighborhood
walkway in a
pedestrian district)



Key Findings

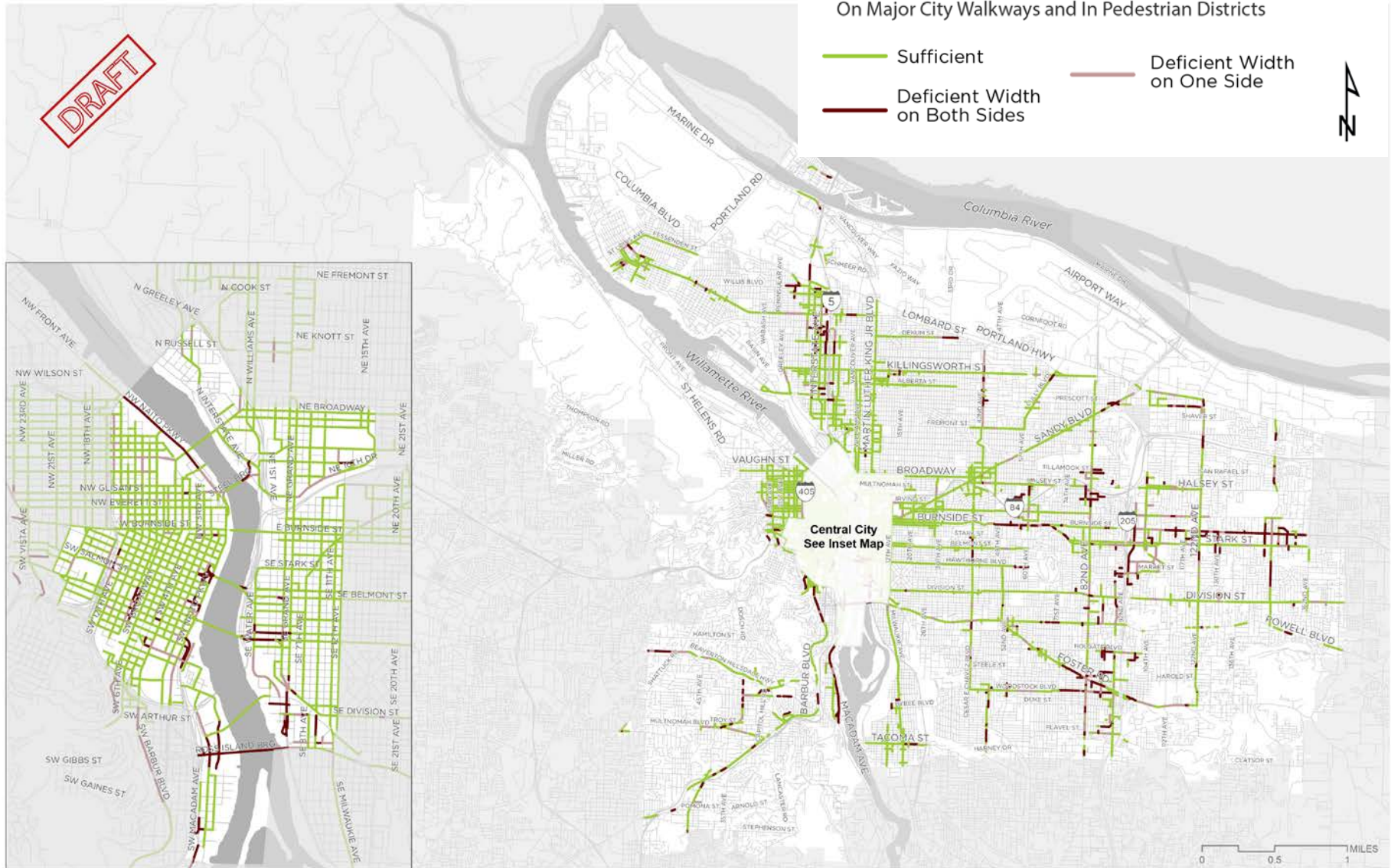




SIDEWALK DEFICIENCIES

On Major City Walkways and In Pedestrian Districts

-  Sufficient
-  Deficient Width on Both Sides
-  Deficient Width on One Side





PedPDX Implications

- City Walkways and Major City Walkways within pedestrian districts have the lowest rate of sidewalk deficiency, however that is based on a 6' width
- Neighborhood walkways are more likely than City Walkways to have a sidewalk that is too narrow

Thank you



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