

CITY ENGINEER AND CITY TRAFFIC ENGINEER DIRECTIVE

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Subject		Issuer	
ADA Ramp Locations Relative to the Legal Crosswalk		Todd Liles, P.E., Interim City Engineer <i>Todd Liles</i> Wendy Cawley, P.E., City Traffic Engineer <i>Wendy Cawley</i>	

1 PURPOSE

Provide guidance to engineers for locating ADA compliant curb ramps (ADA ramps) at intersections relative to the legal crosswalk.

2 BACKGROUND

2.1 CROSSWALKS

Section 801.220 of the Oregon Revised Statutes (ORS)¹ defines two types of legal crosswalks: marked and unmarked. The area of a marked crosswalk is designated by pavement markings. The location and design of marked crosswalks are addressed by the Manual on Uniform Traffic Control Devices (MUTCD)².

ORS 801.220 describes the location of the area of an unmarked crosswalk by the following:

- 1) Where sidewalks, shoulders or a combination thereof exists, a crosswalk is the portion of a roadway at an intersection, not more than 20 feet in width as measured from the prolongation



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of the lateral line of the roadway toward the prolongation of the adjacent property line, that is included within:

- a. The connections of the lateral lines of the sidewalks, shoulders or a combination thereof on opposite sides of the street or highway measured from the curbs or, in the absence of curbs, from the edges of the traveled roadway; or
 - b. The prolongation of the lateral lines of a sidewalk, shoulder or both, to the sidewalk or shoulder on the opposite side of the street, if the prolongation would meet such sidewalk or shoulder.
- 2) If there is neither sidewalk nor shoulder, a crosswalk is the portion of the roadway at an intersection, measuring not less than six feet in width, that would be included within the prolongation of the lateral lines of the sidewalk, shoulder or both on the opposite side of the street or highway if there were a sidewalk.

Further, ORS 801.220 states that “Whenever marked crosswalks have been indicated, such crosswalks and no other shall be deemed lawful across such roadway at that intersection.”

This ORS definition has resulted in confusion in many applications within the City of Portland. This directive provides PBOT’s interpretation of ORS 801.220 and guidance for how the location of the area of an unmarked crosswalk should be determined within the City of Portland.

2.2 ADA RAMPS

The Americans with Disabilities Act of 1992 (ADA) requires curb ramps where a sidewalk, accessible route or pedestrian walkway crosses a curb or barrier.³ Typically, ADA ramps provide access to a street crossing from a sidewalk.

The ADA Accessibility Standards, Section 406.6⁴, directs that a minimum 48-inch-deep clear space that matches the width of the ramp be provided at the bottom of a diagonal ADA ramp and that it be located outside of active travel lanes. The Public Rights-of-Way Accessibility Guidelines (PROWAG)⁵, Section R304.2.4, requires a minimum 48-inch X 48-inch clear area be provided at the bottom of a perpendicular ADA ramp and that it be located within the crosswalk and outside of parallel automobile and bicycle travel lanes.

PBOT has found that designing ADA ramps to meet these location requirements does not always meet the needs of all pedestrians or maximize accessibility. This directive addresses that deficiency and provides guidance on the location of ADA ramps with respect to crosswalks in the City of Portland.

3 DIRECTIVE

3.1 UNMARKED CROSSWALKS

PBOT interprets the ORS 801.220 usage of “lateral lines of the sidewalks, shoulders or a combination thereof” to define the portion of the roadway designated for pedestrian use. In the City of Portland, this is called the “sidewalk corridor”⁶ and is typically bounded by the face of curb on one side and the property line on the other. Where there is no curb, the pedestrian area is bounded by the edge of the travel lane on one side and the property line on the other.

Legal crosswalks exist at all intersections. Where there are no crosswalk markings, use the boundary lines described above to determine the legal crosswalk location as follows:

- 1) In the case of a typical four-legged intersection, the area of the legal crosswalk is the connection of these boundary lines through the intersection as shown in Figure 1. The resulting legal crosswalk shape is often trapezoidal.
- 2) In the case of a T intersection, the area of the legal crosswalk is the prolongation of these boundary lines through the intersection to the pedestrian area on the other side of the street as shown in Figure 2.

Where this results in a crosswalk area that is less than six feet wide, then offset the boundary line between the pedestrian and vehicle areas six feet toward the property line to define the legal crosswalk as shown in Figure 1.

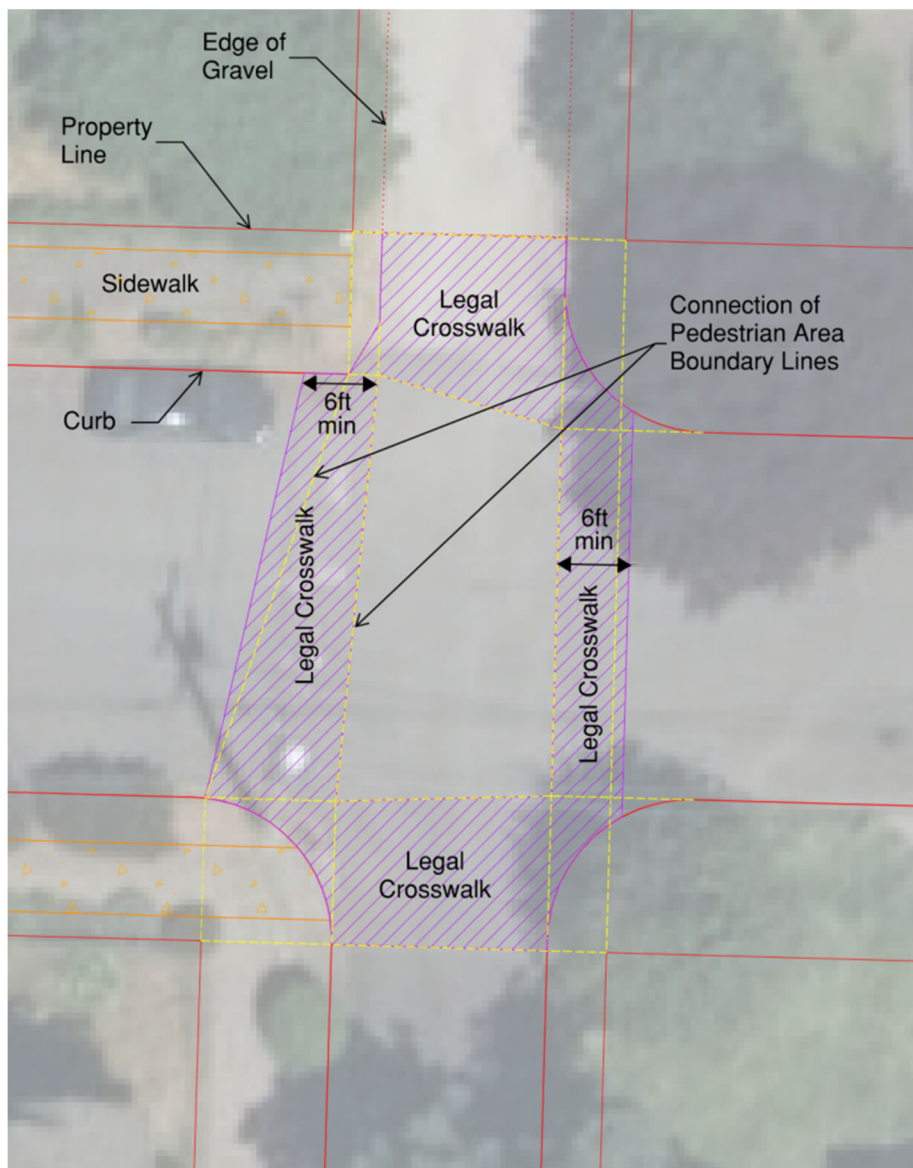


Figure 1: Four-legged Intersection

ORS 801.220 specifies that the legal crosswalk be “not more than 20 feet in width”. PBOT interprets this to mean that if the available width between the face of curb or the edge of travel lane and the property line is greater than 20 feet, then the legal crosswalk is the 20-foot-wide portion closest to the travel lane as shown in Figure 2.

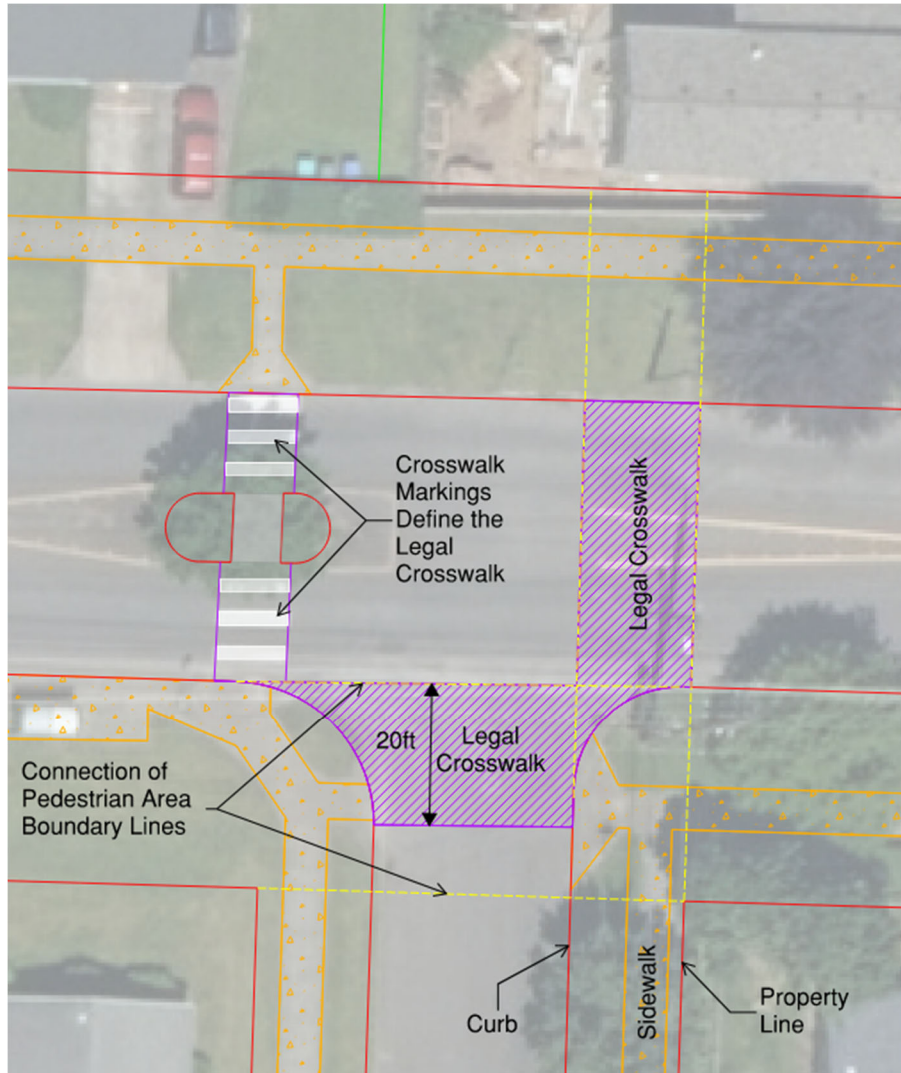


Figure 2: T Intersection

3.2 MARKED CROSSWALKS

The legal crosswalk is where the marked crosswalk is striped in conformance with the MUTCD.

A marked crosswalk on one leg of an intersection does not change the existence of any other crosswalks on other legs of the same intersection. ORS 801.220 describes both marked and unmarked crosswalks and states, “Whenever marked crosswalks have been indicated, such crosswalks and no other shall be deemed lawful across such roadway at that intersection.” PBOT interprets ORS 801.220 as a marked and

unmarked crosswalk cannot both exist across the same leg of an intersection and the marked crosswalk takes precedence.

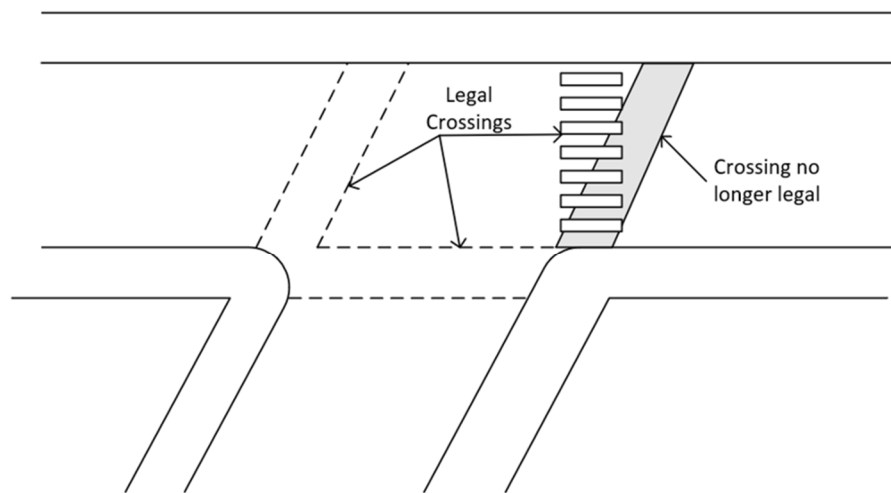


Figure 3: Marked Crosswalk Supersedes Unmarked Crosswalk

3.3 ADA RAMP LOCATION

At intersections and midblock crosswalks ADA ramps should be designed so that the clear area at the bottom of the ADA ramp is located entirely within the legal crosswalk. However, priority should also be assigned to meeting all of the design goals that best serve the users such as:

- Grade breaks that are perpendicular to the ramp running slope, such as at the transition to the street at the gutter (e.g., perpendicular ramp orientation to the curb line)
- Ramps that provide the shortest crossing distance (e.g., perpendicular ramp orientation to the street alignment)
- Ramps aligned with ramps on the other side of the crosswalk (e.g., alignment of ramp pairs with each other)
- Ramps that do not require out-of-direction travel (e.g., alignment of ramps with the sidewalk corridor)

Note: These design goals are evolving and are described in detail in other PBOT design guidance.

A variance is required when part or all of an ADA ramp's clear area is located outside of the legal crosswalk. This is documented on the ADA Curb Ramp Design Report and requires signed approval by an ADA Technical Advisor. When any part of an ADA ramp's clear area is located more than 20ft from the curb face or edge of travel lane, written support from the Traffic Engineer is also required. This is typically in the form of an email from the Traffic Engineer and is included with the ADA Curb Ramp Design Report.

4 REFERENCES

1. [Oregon Revised Statutes, Chapter 801 of Title 50, Oregon Vehicle Code](#)
2. [Manual on Uniform Traffic Control Devices, 2009 Edition with Revisions 1, 2, and 3](#)
3. [28 § C.F.R. 35.151 \(i\): Code of Federal Regulations, Title 28, Part 35.151 \(i\)](#)
4. [ADA Accessibility Standards](#)
5. [Public Right-of-Way Accessibility Guidelines](#)
6. [PBOT Pedestrian Design Guide 2022](#)