

PBOT

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CITY ENGINEER AND CITY TRAFFIC ENGINEER DIRECTIVE

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ST 003-01	ST 003	October 21, 2022	
Subject	Issuer		
ADA Ramp Locations Relative to the Legal Crosswalk	Steve Townsend, P.E., City Engineer <i>Steve Townsend</i> Wendy Cawley, P.E., City Traffic Engineer <i>Wendy Cawley</i>		

PURPOSE:

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

BACKGROUND:

The Americans with Disabilities Act of 1992 (ADA) triggers the obligation to provide curb ramps where a sidewalk, accessible route or pedestrian walkway crosses a curb. Typically, curb ramps provide access to a street crossing from a sidewalk. ADA does not require crossings to be marked or address how they are to be marked; marked crosswalks are addressed by the Manual on Uniform Traffic Control Devices (MUTCD).

DIRECTIVE:

At intersections construct ADA ramps at all legal crossings so that the throat of the bottom of the ramp resides within the legal crosswalk. In cases where a bottom landing in the street is required (such as diagonal ramps), the entire bottom street landing should also lie within the legal crosswalk. A design variance may be requested when a portion of the ramp landing falls outside of the legal crosswalk. Apply ORS 801.220 when determining the location of the area of the legal crosswalk. Construct ramps in relation to the legal crossing as follows:

1. At a marked crosswalk

The legal crosswalk is where the marked crosswalk is striped in conformance with the Manual on Uniform Traffic Control Devices (MUTCD).

2. At intersections where crosswalks are not marked by striping

- a. ***Where there is a sidewalk or shoulder*** the legal crosswalk is identified by extending the face of curbs (or edges of the travelled roadway if there are no curbs) on either side of the street and



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extending the back of sidewalks (or edges of shoulders) from one side of the street to the other. Where sidewalk corridors are narrower than City standards the back of the legal crosswalk is determined by the future planned back of sidewalk so the ADA ramp will be located within the desired pedestrian through zone according to the [Portland Pedestrian Design Guide](#), typically between 4 feet and 12 feet from curb or edge of roadway. The crosswalk shape may be trapezoidal and is limited to a maximum of 20 feet in width as measured from the curb toward the property line. The entire ramp throat must be within the 20-foot maximum.

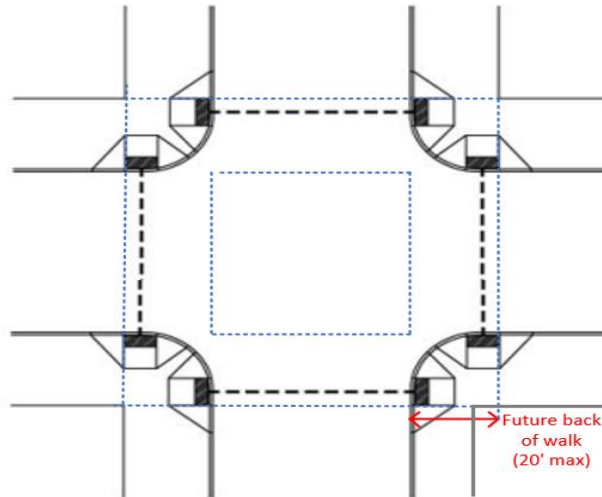


Figure 1: Legal Crossings at Unmarked Crosswalks

- b. **Where there is no sidewalk or shoulder** on one or more corners of the intersection, the legal crosswalk is identified by extending the lateral lines of the sidewalk or shoulder on both sides of the street as if there were a sidewalk or a shoulder. The crosswalk width is not less than 6 feet and no more than 20 feet. Apply the [Portland Pedestrian Design Guide](#) to determine the future planned pedestrian corridor configuration and consult with the City Traffic Engineer or their designee. Note that ADA ramps are not required on the corners where sidewalk is non-existent.

3. At T-Intersections and Offset Intersections

The legal crosswalk is identified by extending the face of curbs (or edges of the travelled roadway if there are no curbs) on either side of the street and extending the back of sidewalks (or edges of shoulders) from one side of the street to the other. Where sidewalk corridors are narrower than City standards the back of the legal crosswalk is determined by the future planned back of sidewalk so the ADA ramp will be located within the desired pedestrian through zone according to the [Portland Pedestrian Design Guide](#), typically 4 feet to 12 feet from curb or edge of roadway.

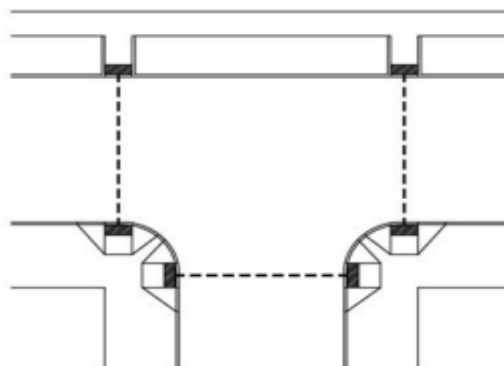


Figure 2: Legal Crossings at a T-Intersection

T-intersections generally result in 3 legal crossings, as shown in Figure 2. If existing site constraints preclude the ability to construct curb ramps for each legal crossing, a curb ramp may be omitted for one of the two crossings at the top of the “T”. Engineering judgment must be applied to determine whether curb ramp construction is feasible. At a minimum, at least one accessible street crossing must be provided across each street unless the City Traffic Engineer (or designee) determines the crossing should be closed **for safety reasons**. If it is determined that curb ramp construction is infeasible the City Traffic Engineer (or designee) will determine if the crossing should be closed to all pedestrians.

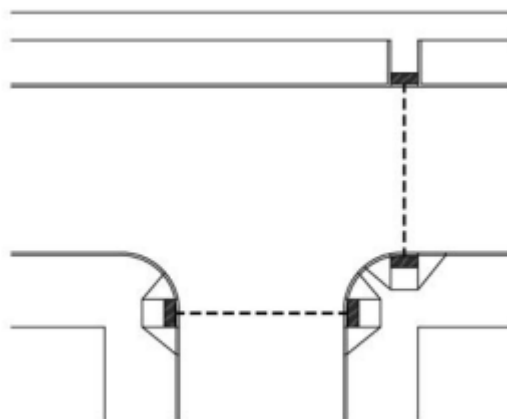


Figure 3: Provide at Least One Crossing of Each Street at a T-Intersection

At offset intersections it may be necessary to close a crossing between the two intersections. The traffic engineer will take into consideration out-of-direction travel for pedestrians to get to an accessible crossing before closing a crossing. It may be preferable to provide crossings on the outer legs of the offset intersection. It may also be acceptable to share one crossing in the middle of the intersection where turning movements are minimal.

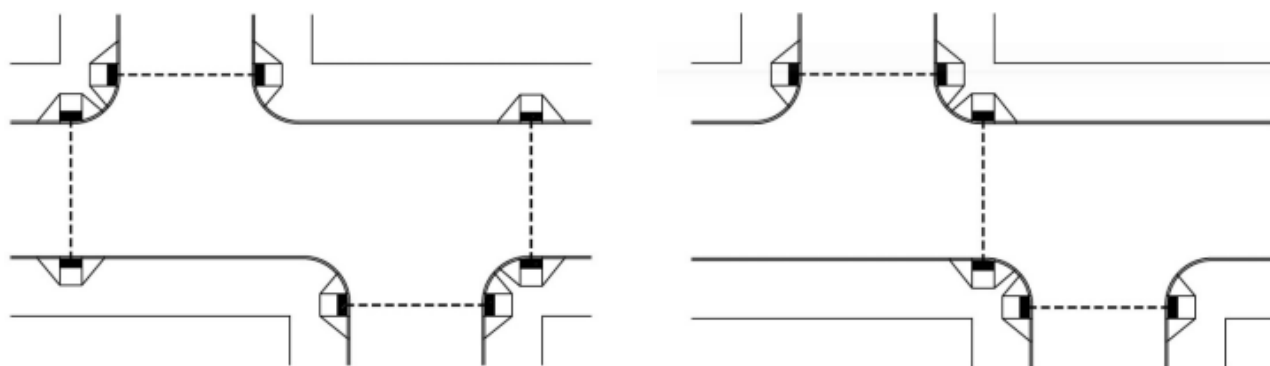


Figure 4: Options for Crossings at Off-Set Intersections

Considerations for driveway conflicts

Driveways are vehicular spaces and present inherent conflicts for pedestrians using them as ADA ramps. Existing driveways are occasionally located within the legal crossing. When this occurs, the driveway **should not** be used to provide an accessible curb ramp. Additionally, detectable warnings or truncated domes should not be placed in driveways. When driveway conflicts occur within a pedestrian crossing the civil designer will work closely with the traffic engineer to determine the best location for an accessible crossing, minimizing shared space between vehicles and pedestrians and limiting pedestrian exposure to vehicular movements. If an appropriate location cannot be identified, the City Traffic Engineer (or designee) will determine if the crosswalk should be closed to all pedestrians.

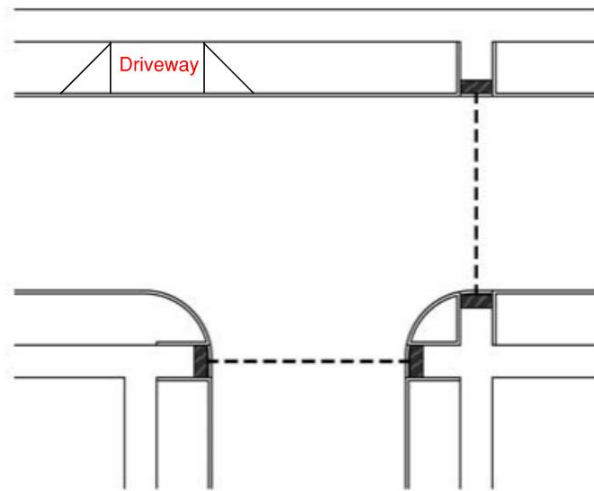


Figure 5: T-Intersection with a Driveway Crossing Conflict

There may be rare cases in which both crossings conflict with existing driveways. In those cases, the civil designer will work closely with the assigned traffic engineer to determine the best location for an accessible crossing. Curb ramps constructed directly adjacent to a driveway with no physical separation may be considered but will require concurrence from the PBOT ADA Technical Advisory Committee. This type of design should only be considered on low volume streets at non-commercial driveways. If considered, the ADA ramp portion of the curb cut, including the detectable warning, should be located outside the alignment with the driveway throat.

For additional information, please contact a PBOT ADA Technical Advisor, the PBOT Traffic Design Supervisor or the City Traffic Engineer.

References

1. ORS 801.220
2. *Kinney v. Yerusalim*, 9 F 3d 1067 (3rd Cir. 1993)
3. www.ada.gov/doj-fhwa-ta, www.ada.gov/pcatoolkit/toolkitmain
4. ADAAG 4.7.1 Curb Ramps
5. www.access-board.gov/guidelines-and-standards/buildings-and-sites/113-ada-standards/backgroundfadaag/422-a-guide-to-adaag-provisions
6. <https://www.ada.gov/doj-fhwa-ta.htm>
7. 2010 ADA Standards 406 – www.access-board.gov/ada/guides/chapter-4-ramps-and-curb-ramps
8. *Rosen v. Wright*, 74 Or.App. 83 {1985}
9. *Howell v. Boyle*, 408 Fed.Appx. 121 (2011)
10. *Portland Pedestrian Design Guide*, www.portland.gov/sites/default/files/2022/PBOT%20Pedestrian%20Design%20Guide%202022.pdf