PORTLAND PEDESTRIAN DESIGN GUIDE

PBOT
PORTLAND BUREAU OF TRANSPORTATION

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This document is adopted by PBOT Administrative Rule in [month] 2021, and will be reviewed and amended over time, as needed.

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A. Introduction

A.1 Purpose of the Portland Pedestrian Design Guide

The public right-of-way houses many transportation activities, including walking, bicycling, transit, freight movement, and automobile travel, as well as public infrastructure and assets, such as traffic signals and streetlights, that allow the different transportation modes to function together. In many cases, the right-of-way also contains public utilities such as water, sewer, street trees, and electricity, along with functions that support creating spaces that people want to be a part of, such as sidewalk cafes, permitted encroachments, and gathering places.

Each of these functions has specific design needs that allow each to work, although there are often constraints to work within, whether those constraints are because of another function (e.g., a tree cannot be planted over a water meter) or space (e.g., the right-of-way width is narrow).

The purpose of Portland's Pedestrian Design Guide is to integrate the wide range of design criteria and practices into a coherent set of standards and guidelines that, over time, will promote a walkable city while acknowledging the flexibility that will have to take place due to constraints. It establishes sidewalk design criteria, including requirements for minimum sidewalk widths, street tree space requirements, street corners, and crossings, among others.

The Pedestrian Design Guide was developed in collaboration with City programs and agencies responsible for the form and function of the right-of-way, to address and understand the competing needs within the pedestrian realm and be realistic in how the space can be designed to address all its functions.

The Portland Pedestrian Guide is adopted by PBOT Administrative Rule, as authorized by Portland City Code. Every project that is designed and built in Portland must conform to these requirements.

The Portland Pedestrian Design Guide is a living document that will be revisited and updated over time, as needed, to keep standards current with best practices.

Figure A-1: Sidewalks in Portland need to be thoughtfully designed in order to meet a variety of needs, such as accessibility, mobility, transit, utilities, and street trees, among others.

A.2 When Do These Standards Apply?

A.2.1 Private Frontage Improvements

In Portland City Code Chapter 17.28 Sidewalks, Curbs, and Driveways, responsibility for the construction, reconstruction, and repair of the sidewalk, as well as liability for any damages or injuries resulting from defective conditions, is assigned to the adjacent property owner. Authority is delegated to the City Engineer to require the repair or construction of the sidewalk where it is needed. Per Section 17.88.020 of Portland City Code, private development may trigger the need for right-of-way improvements (and property dedication) along the site frontage. This includes providing or improving sidewalks and walkways in a manner consistent with the City's Pedestrian Design Guide.

In relation to development on private property, sidewalk improvements are, by nature, constructed incrementally and are improved to meet current standards as individual parcels develop or re-develop over time. In this manner, a complete pedestrian network will eventually develop over time.

A.2.2 Capital Projects

Every sidewalk or crossing built in the City of Portland is required to conform to the guidelines and standards in the Pedestrian Design Guide. Non-compliance with any of the requirements in this document will require a design exception.

A.3 Relationship of the Pedestrian Design Guide to Other Plans, Policies, and Design Requirements

This Pedestrian Design Guide is intended to reflect and serve as a key implementation tool for the policies adopted in the City's Pedestrian Master Plan, PedPDX.

While the Pedestrian Design Guide provides the requirements for the design and provision of pedestrian facilities, other regulations or codes relating to the design and provision of pedestrian facilities will also apply, including but not limited to:

- Portland City Code
- Administrative Rules
- Adopted Streetscape Plans
- Traffic Design Manual
- Standard Plans and Specifications
- Encroachment permitting requirements
- Americans with Disabilities Act

A.3.1 Streetscape Plans, Area Plans, and the Pedestrian Design Guide

While the Pedestrian Design Guide establishes the baseline requirements for the design and provision of pedestrian facilities in Portland, these guidelines and standards may be superseded by an adopted Streetscape or Area Plan where specialized or unique design treatments are desired. Where an adopted Master Street Plan is silent on any particular element of the right-of-way, the requirements of the Pedestrian Design Guide will apply.

B. Sidewalks and Walkways

B.1 Sidewalk Width Requirements

The **sidewalk corridor** is the portion of the right-of-way intended for the use of pedestrians, generally along the sides of streets, between street intersections, and including corners. The sidewalk corridor functions to provide an environment for walking that is separated from vehicle movement.

This section identifies required sidewalk corridor widths along each of the various Street Design Classification types. See Section B.2 for design requirements specific to each zone of the sidewalk.

B.1.1 Street Design Classifications

Sidewalk corridor width requirements are determined according to Street Design Classification, as identified in the City's Transportation System Plan (TSP). Street Design Classifications provide general design guidance based on the current and planned land use context around the street. Street Design Classifications are the only classifications within the TSP that address land use.

Using Street Design Classifications to determine right-of-way design requirements allows for a unified approach to street design across the transportation and planning bureaus, and helps ensure that a street's transportation and land use functions are considered in tandem.

In addition to Street Design Classifications, the TSP provides Pedestrian Classifications for each street in the transportation network. Pedestrian Classifications represent each streets' function within the citywide pedestrian network. Street Design Classifications strongly parallel Pedestrian Classifications, ensuring that in most cases the Street Design Classification reflects the pedestrian needs (and vision) of a sidewalk corridor.

Table B-1 on the following page summarizes the various street types that comprise the Street Design Classification system.

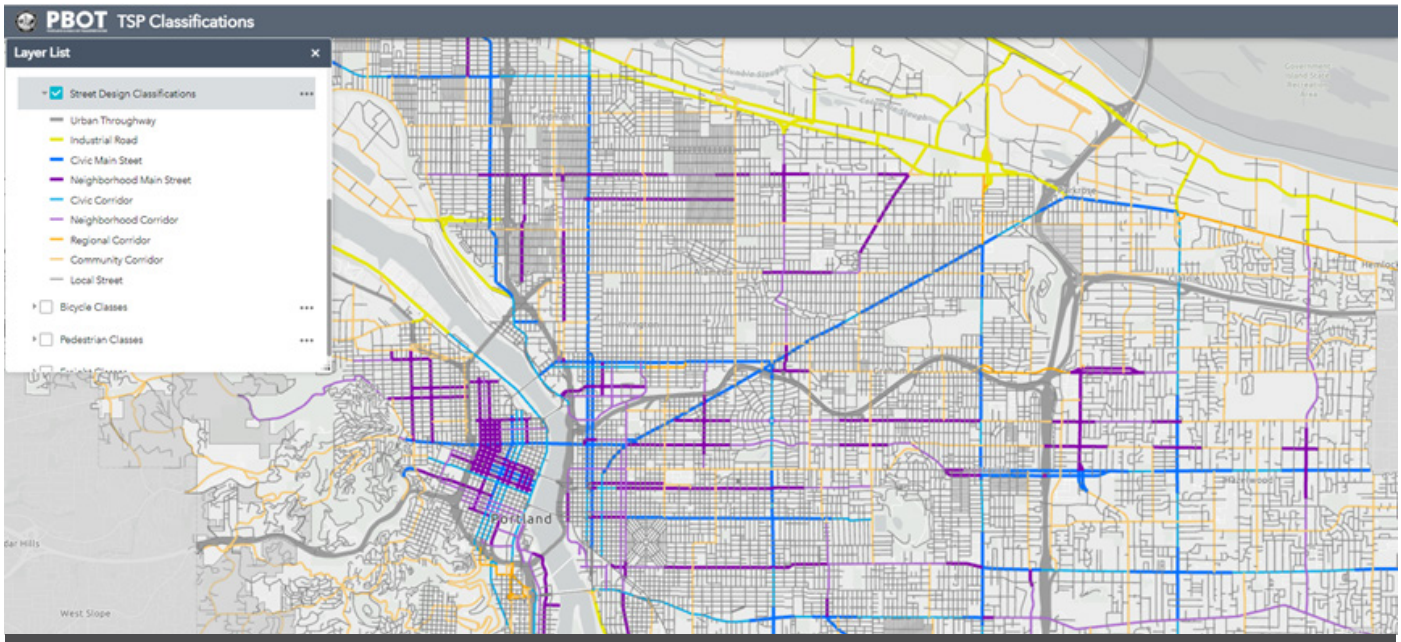


Figure B-1: Street Design Classifications, as shown in this map, are intended to marry the transportation and land use functions of streets throughout Portland.

Table B-1: Street Design Classifications and Pedestrian Character

Civic Main Streets

SE Hawthorne and 16th Ave

Transportation System Plan Definition:

Civic Main Streets are designed to emphasize multimodal access within major activity centers. They are segments of Civic Corridors located within the Central City, Regional Centers, Town Centers, Neighborhood Centers, and other areas of intensive commercial activity. Civic Main Streets traverse through the City's Pedestrian Districts, as identified by PedPDX. Development along Civic Main Streets consists of a mix of uses that are oriented to the street.

Pedestrian Character and Function:

- Typically classified as Major City Walkways within Pedestrian Districts
- Should be designed to emphasize pedestrian access to adjacent land uses while also accommodating access and mobility for other modes
- Have high levels of pedestrian use, accessing businesses, high-density housing, and transit along the street
- Accommodate place-making functions, like street cafes, sidewalk vendors, and vegetation, among other elements

Neighborhood Main Street

NE Alberta St and 11th Ave

Transportation System Plan Definition:

Neighborhood Main Streets primarily serve surrounding neighborhoods and are designed to emphasize multimodal access within activity centers. They are most often located within the Central City, Regional Centers, Town Centers, Neighborhood Centers, and other areas of intensive commercial activity. Development consists of a mix of uses oriented to the street.

Pedestrian Character and Function:

- Typically classified as Major City Walkways located in Pedestrian Districts
- Should be designed to emphasize pedestrian access to adjacent land uses while also accommodating access and mobility for other modes
- Need to have sidewalk corridors able to accommodate high volumes of pedestrians accessing destinations, including transit
- Accommodate place-making functions, like street cafes, sidewalk vendors, and vegetation, among other elements

Civic Corridors

SW Barbur Blvd and Condor St

Transportation System Plan Definition:

Civic Corridors serve people throughout the City and are designed to emphasize multimodal mobility *between* major activity centers. Civic Corridors are located primarily along major transit corridors and connect the Central City, Regional Centers, Town Centers, and Neighborhood Centers. Development consists of a mix of uses that are oriented to the street.

Pedestrian Character and Function:

- Typically classified as Major City Walkways
- Feature wider right-of-way
- Should accommodate medium volumes of pedestrians accessing destinations, including transit
- Need sidewalk corridors to be designed to provide a buffer between pedestrians and higher-speed and volume vehicle roadways

Neighborhood Corridor

NW 12th Ave and Marshall St

Transportation System Plan Definition:

Neighborhood Corridors primarily serve surrounding neighborhoods and are designed to emphasize multimodal mobility between activity centers. Neighborhood Corridors are primarily located along transit corridors that connect the Central City, Regional Centers, Town Centers, and Neighborhood Centers. Development consists of a mix of uses that are oriented to the street.

Pedestrian Character and Function:

- Typically classified as Major City Walkways
- Should accommodate medium volumes of pedestrians accessing destinations, including transit
- May have limited right-of-way width

Regional Corridor

S Macadam Ave and the Sellwood Bridge

Transportation System Plan Definition:

Regional Corridors serve people throughout the City and are designed to emphasize multimodal mobility between cities in the region. Regional Corridors connect Regional, Town, and Neighborhood Centers to other cities in the region.

Pedestrian Character and Function:

- Typically classified as City Walkways or Major City Walkways
- Feature wider right-of-way and can typically provide the desired space for each mode and function, including sidewalk corridors
- May have lower volumes of pedestrians accessing destinations, including transit
- Sidewalk corridors need to be designed to provide a buffer between pedestrians and higher speed and volume vehicle roadways

Community Corridor

SE Stark St and 14th Ave

Transportation System Plan Definition:

Community Corridors primarily serve surrounding neighborhoods and are designed to emphasize multimodal mobility between neighborhoods. Community Corridors connect Regional, Town, and Neighborhood Centers to surrounding neighborhoods.

Pedestrian Character and Function:

- Typically classified as City Walkways
- May have low volumes of pedestrians accessing destinations, including transit
- Need sidewalk corridors to be designed to provide a buffer between pedestrians and higher-speed and volume vehicle roadways
- May have limited right-of-way width

Industrial Roads

NE Airport Way

Transportation System Plan Definition:

Industrial Roads are designed to emphasize freight mobility while also accommodating other modes and providing local access. Industrial Roads typically serve industrial areas and freight sites, with a significant percentage of trips being made by trucks.

Pedestrian Character and Function:

- Typically classified as City Walkways
- Have few pedestrian destinations and, generally, low pedestrian volumes
- Need sidewalk corridors to be designed to provide a buffer between pedestrians and higher-speed and volume vehicle roadways
- May incorporate alternative sidewalk designs that combine bicycling and walking above the curb to provide protection from vehicle traffic

Local Streets

N Russet St and Burrage Ave

Transportation System Plan Definition:

Local Streets are designed to complement planned low and medium-density housing and reduce dependence on arterials for local circulation.

Pedestrian Character and Function:

- Typically classified as Neighborhood Walkways or Local Service Walkways
- Have low to medium pedestrian use depending on time of day and proximity to destinations such as schools, parks, and transit
- Alternative walkways or shared street design without sidewalks may be appropriate where traffic volumes are sufficiently low

B.1.2 Zones of the Sidewalk Corridor

The sidewalk corridor consists of three zones – the Pedestrian Through Zone, the Furnishing Zone, and the Frontage Zone (see Figure B-2). The intent and purpose of each of these zones is discussed in detail in the sections that follow. Table B-3 (page 15) provides required widths for each zone according to Street Design Classification, as identified in the Transportation System Plan.

When sidewalk-level bicycle lanes are provided, there are two additional zones: the Bicycle Facility and the Street Buffer Furnishing Zone. These zones and their requirements are addressed in Section B.4 Sidewalk Level Bicycle Facilities.

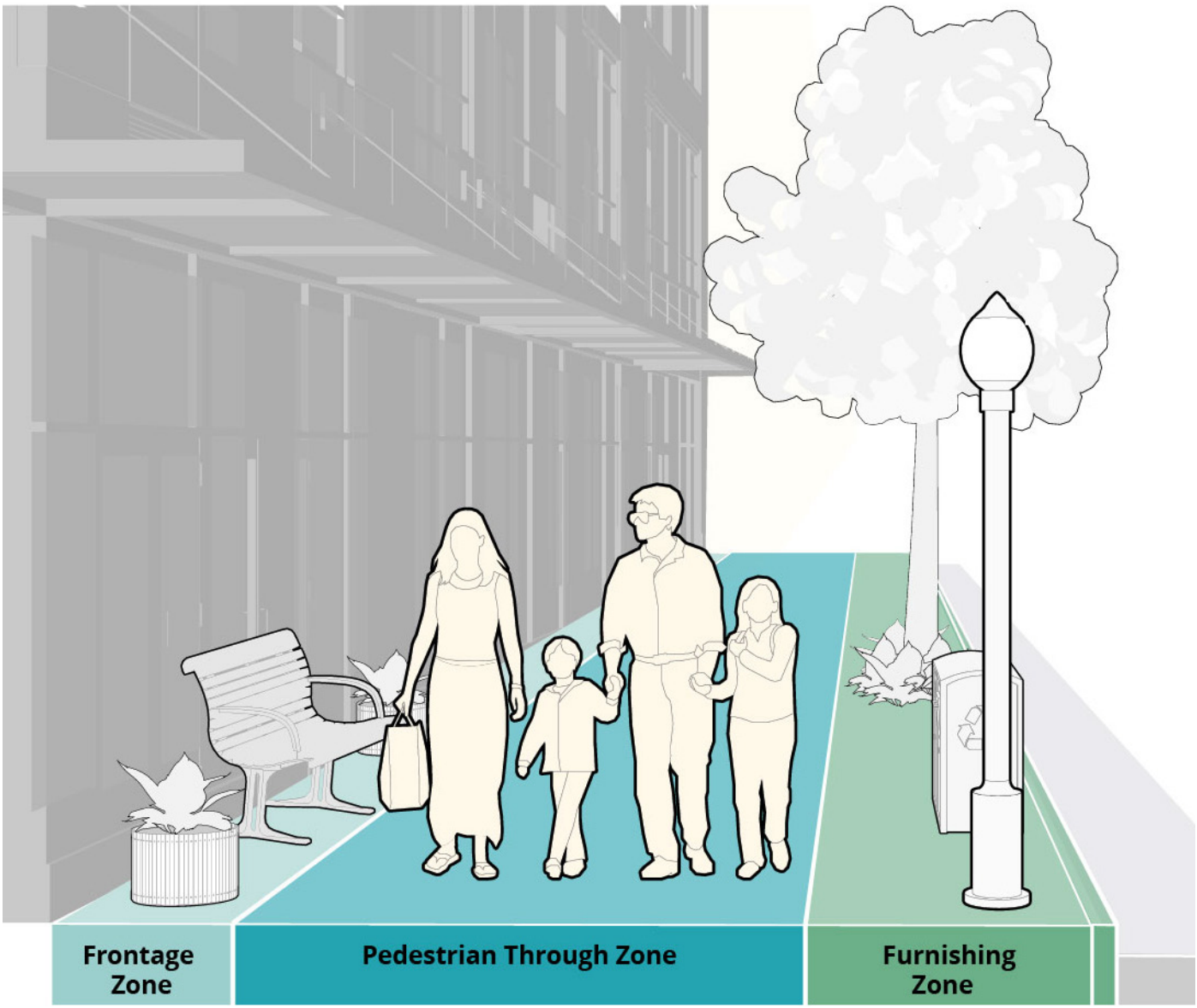


Figure B-2: Zones of the Sidewalk Corridor

B.1.2.a Purpose and Intent of Pedestrian Through Zone Width Requirements

The **Pedestrian Through Zone** is the area of the sidewalk corridor intended for pedestrian travel. The Pedestrian Through Zone should be entirely free of above-ground permanent and temporary objects in order to provide an obstruction-free, continuous corridor for people to travel.

The required widths for the Pedestrian Through Zone identified in Table B-3 (page 15) are determined based on the volume (or expected volume) of people walking along that street type – higher volumes of pedestrians warrant wider sidewalk facilities. It is also important to consider that widths need to be designed for opposing flow, people walking next to each other, those carrying bags or packages, and those with mobility devices.

An average adult walking comfortably and in a straight line has a width of around 2.5 feet. Other individuals, including those carrying bags or using mobility devices have wider width requirements, between 3 and 4 feet. A 6-foot minimum width for the Pedestrian Through Zone allows, at minimum, two people to walk side by side or pass each other in opposing directions in relative comfort. Figure B-4 illustrates the range of comfortable walking widths.

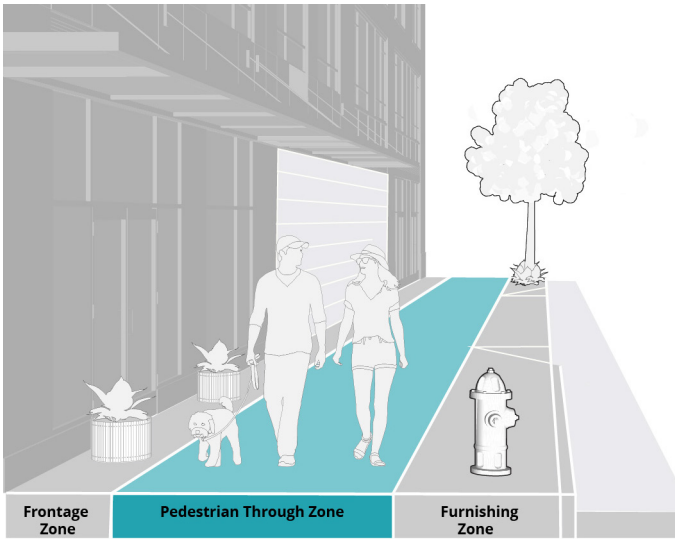


Figure B-3: Placement of the Pedestrian Through Zone

Table B-3 establishes a citywide minimum Pedestrian Through Zone width of 6 feet. In addition to ensuring that two people can walk comfortably side-by-side, this citywide minimum width helps to create consistency and helps to ensure that sidewalk capacity needs are met as the City allows increased development intensity within residential zoning districts. In areas with greater expected pedestrian traffic, such as along Civic and Neighborhood Main Streets, an 8-foot-wide Pedestrian Through Zone provides comfortable space for three people to walk together or to pass others on the sidewalk.

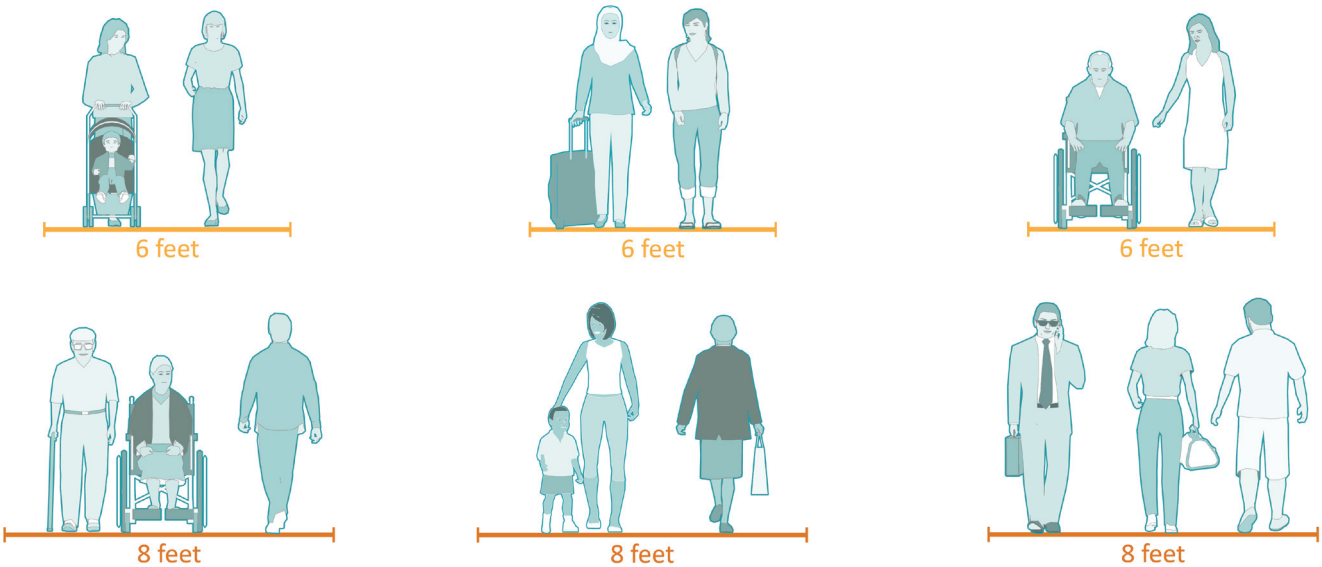


Figure B-4: Comfortable walking widths

B.1.2.b Purpose and Intent of Furnishing Zone Width Requirements

The **Furnishing Zone** buffers pedestrians from the adjacent roadway and is where sidewalk infrastructure such as street trees, driveway approaches, signal poles, utility poles, streetlights, controller boxes, stormwater management, bicycle parking, hydrants, signs, parking meters, driveway aprons, grates, vault lids (a cover on the opening to a vault or other workspace beneath a sidewalk), and street furniture should be located (Figure B-5). This is also the area where people exit from parked cars on the street. Providing Furnishing Zone widths as prescribed in Table B-3 helps the Pedestrian Through Zone remain clear of obstructions by providing a space in the sidewalk corridor for these elements. The furnishing zone includes and is measured from the face of the curb, which is typically 6 inches wide.

The following are the main functions and uses for the Furnishing Zone:

- **Provide space for street trees.** City policies and residents consistently cite the importance of street trees in improving air quality, increasing residents' quality of life, reducing the urban heat island effect, and supporting stormwater runoff retainment. Outside of parks, the Furnishing Zone provides the largest publicly operated space that is available for trees.
- **Increase pedestrian safety.** Separating pedestrians from the roadway greatly increases their actual and perceived safety as they walk along the corridor. The buffer that the Furnishing Zone provides is especially important on streets where there are large volumes of vehicles.

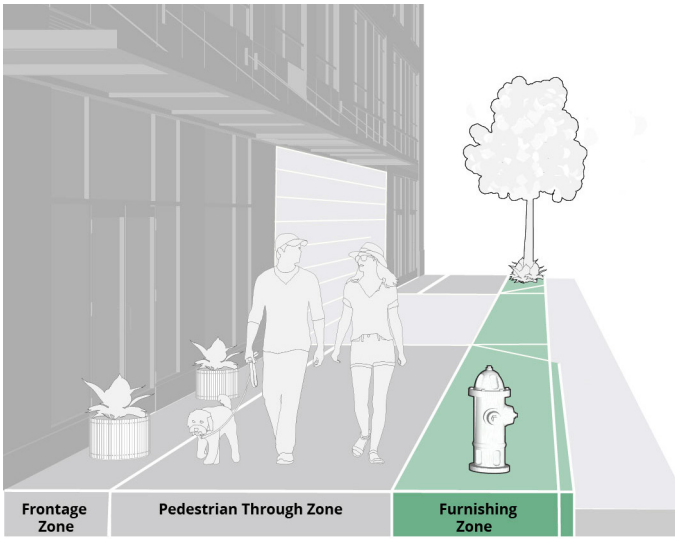


Figure B-5: Placement of the Furnishing Zone

- **Support street functionality.** Furnishing Zones provide pedestrian access to and from the street to the adjacent property, and is the primary and preferred place in sidewalk corridors for utilities, street furniture, bike parking, hydrants, traffic signal cabinets, stormwater facilities, water, and other sidewalk corridor elements. By placing these functions in the Furnishing Zone, they are easy to access, yet do not impede the continuous movement of pedestrians or vehicles.
- **Allow for curb functions.** On roadways with curbed cross sections, the top of the curb serves as the boundary between the street and the Furnishing Zone. Curbs serve multiple purposes, including stormwater conveyance, pavement edge support and delineation, aesthetics, sidewalk separation, and reduction of maintenance operations.

The widths required of Furnishing Zones, per Table B-3, are intended to "hold" the necessary functions of each Street Design Classification type (e.g., a street tree needs a required amount of space for it to grow, bike racks are a set size, etc.).

B.1.2.c Purpose and Intent of Frontage Zone Width Requirements

The **Frontage Zone** is the area next to the Pedestrian Through Zone that is abutting or adjacent to the private property line (Figure B-6). This zone allows pedestrians a comfortable shy distance from building fronts in areas where buildings are at the lot line or from elements such as fences and hedges on private property.

In vibrant pedestrian-focused areas, the Frontage Zone is activated by adjacent property uses – it's the space for pedestrians to window shop or have people wait in line. It is also the preferred location for outdoor dining, allowing customers and servers the ability to interact without having to cross the Pedestrian Through Zone. Depending on the width of the Frontage Zone, this area might work in concert with building setbacks to allow additional space for the previously mentioned uses. Ideally, a vibrant main street would have an extremely active Frontage Zone.

The Frontage Zone also serves important purposes in areas of the city where the land uses don't necessarily warrant active Frontage Zone uses – like low-density residential or industrial zones. In these cases, the Frontage Zone can be important as a flexible area when road construction or sidewalk repair occurs, so the City does not have to intrude on the adjacent property owner's property, or as an area that allows grading to different elevations between the sidewalk and property using methods other than retaining walls. The Frontage Zone also provides an area to transition elevation changes between adjacent building floor elevations and the sidewalk elevation at entry doors to help meet ADA access requirements.

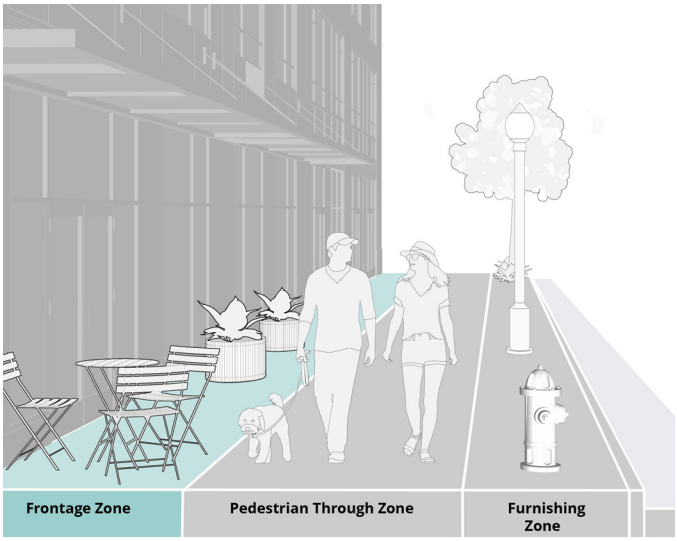


Figure B-6: Placement of the Frontage Zone

The main factor in determining the Frontage Zone widths in Table B-3 is the amount and type of adjacent building uses most likely to occur along various Street Design Classifications. Table B-2 summarizes the typical activities that would be likely to occur on streets with a specific Street Design Classification and the width that would be needed to support these uses. As shown in Table B-2, the uses on Main Streets require the most space – a typical café table needs at least 2.5 feet of width.

Table B-2: Frontage Zone uses and minimum widths

Street Design Classification	Typical Frontage Zone Uses	Minimum Width Requirement
Civic Main Street	Sidewalk cafes and restaurants, waiting area for shops and take-out, planters	2.5'
Neighborhood Main Street	Sidewalk cafes and restaurants, waiting area for shops and take-out, planters	2.5'
Civic Corridor	Small sidewalk cafes, planters	1.5'
Neighborhood Corridor	Small sidewalk cafes, planters	1.5'
Community Corridor	Planters, barrier between sidewalk and parking lot, shy zone between public sidewalk and private property at back of walk	1.5'
Regional Corridor	Planters, barrier between sidewalk and parking lot, shy zone between public sidewalk and private property at back of walk	0.5'
Industrial Road	Barrier between sidewalk and parking lot, shy zone between public sidewalk and private property at back of walk	0.5'
Local Street	Flexible space for construction uses or grading, shy zone between public sidewalk and private property at back of walk	0.5'

For the Street Design Classifications that could be assumed to have a moderate amount of Frontage Zone activity and higher-intensity land uses – Neighborhood, Civic, and Community Corridors – 1.5 feet may allow for some extension of a business on the sidewalk corridor. The activity would need to occupy a constrained space, and/or would need to be designed to ensure that there is consistent and adequate space for unobstructed pedestrian movement. More information and details on how to place and permit Frontage Zone uses can be found in the City's sidewalk permitting application and Encroachment Permit policies.

Regional Corridors are likely to have few pedestrian-scale activities, or businesses that use the Frontage Zone as an informal expansion area. As such, the Frontage Zone is just wide enough to provide a small space as a flexible barrier – 0.5 feet – which allows sidewalk corridor space to be prioritized for the Pedestrian Through Zone and Furnishing Zone.

Industrial Roads and Local Streets also have a small Frontage Zone – 0.5 feet. Land uses along these Street Design Classifications do not typically have development up to the right-of-way and do not use the Frontage Zone for activation purposes. Instead, this Frontage Zone would be set aside for construction purposes or to remedy any grading issues that might be present between the street and the property.

Figure B-7: NW 23rd Ave is a Neighborhood Main Street and has sidewalks that house a variety of functions including transit stops, street trees, sidewalk cafes, and merchandise displays.

B.1.3 Required Sidewalk Corridor Widths by Street Design Classification

Table B-3 shows the required widths for sidewalk corridors overall and for each zone of the sidewalk corridor, per each Street Design Classification. See Section B.2 for design requirements specific to each zone of the sidewalk corridor.

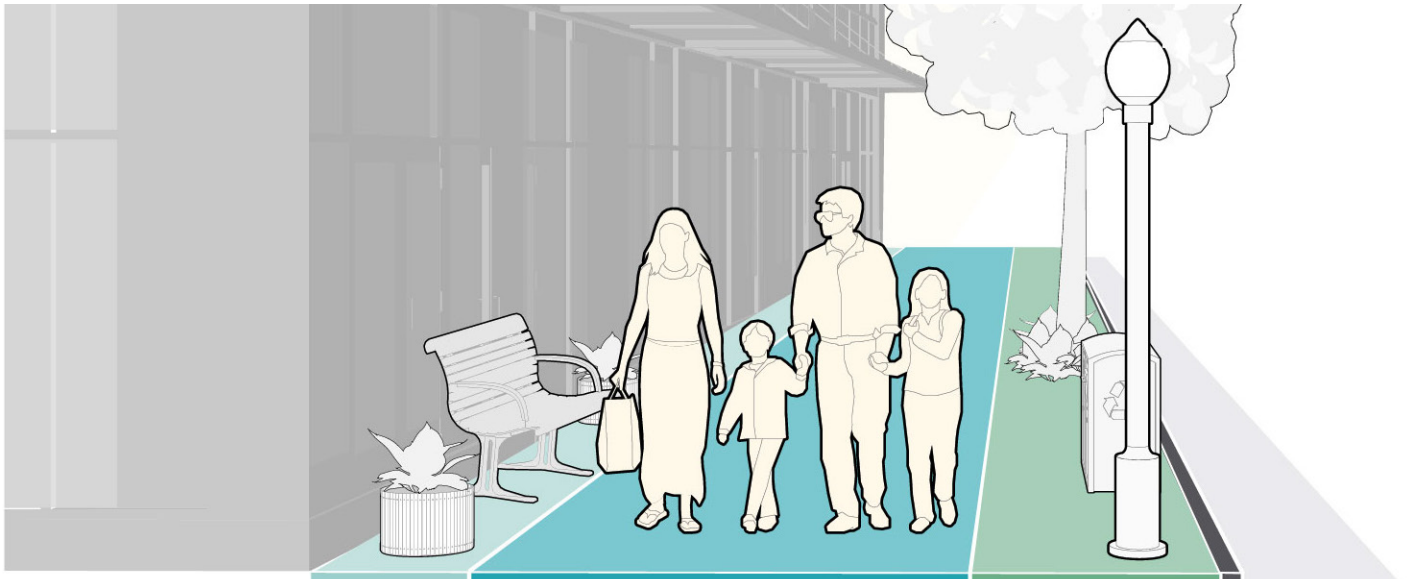
While the required widths in Table B-3 should be met in most situations, there are some situations where they will be unable to be met – either because of limited right-of-way, topography, or other site constraints.

See Section B.5 for acceptable variations to required sidewalk corridor widths that require either a design exception (for capital projects) or an approved Public Works Alternative (for frontage improvements associated with private development).

B.1.3.a Required Pedestrian Through Zone Width

- **Minimum Pedestrian Through Zone Width.** The minimum required Pedestrian Through Zone width for any sidewalk on any street type citywide is 6 feet. This minimum required width is intended to provide adequate width for two people to walk side by side or for two people to pass each other on the sidewalk.

Table B-3: Required sidewalk corridor widths by Street Design Classification



Street Design Classification	Frontage Zone *minimum width*	Pedestrian Through Zone *minimum width*	Furnishing Zone *minimum width*	6" Curb *minimum width*
Civic Main Street	2.5'	8'	4'	15'
Neighborhood Main Street	2.5'	8'	4'	15'
Civic Corridor	1.5'	6'	4'	12'
Neighborhood Corridor	1.5'	6'	4'	12'
Community Corridor	1.5'	6'	4'	12'
Regional Corridor	0.5'	6'	5'	12'
Industrial Road	0.5'	6'	5'	12'
Local Street[1]	0.5'	6'	4'	11'

1. Any Local Street within a Pedestrian District must provide a minimum 12-foot-wide sidewalk corridor. See Section B.1.3.d for details.

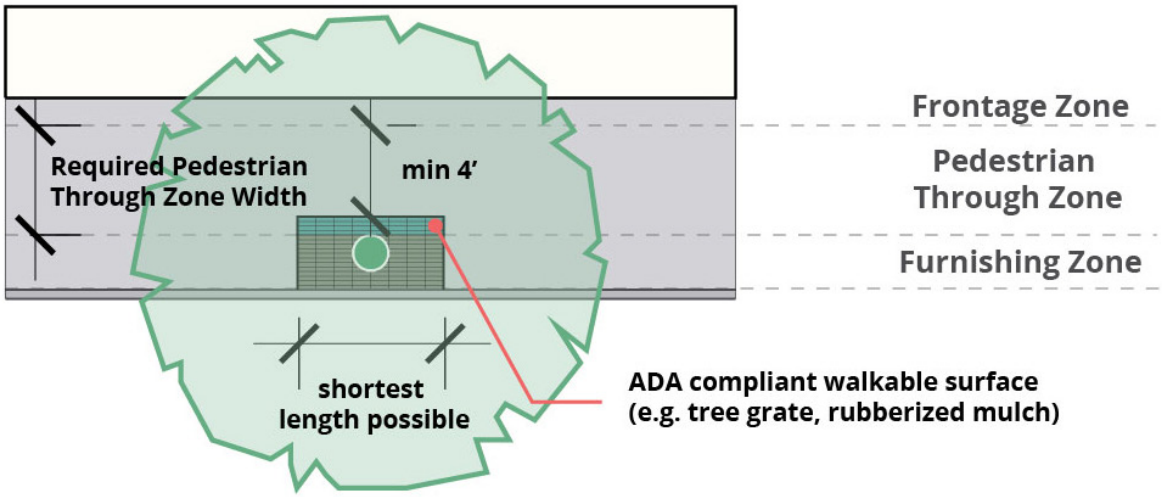


Figure B-8: Tree well encroachment into the Pedestrian Through Zone

On Main Streets where there are higher anticipated levels of pedestrian use, the minimum Pedestrian Through Zone width is 8 feet. This wider width allows three people to fit comfortably side by side or to pass each other on these higher volume sidewalks.

- **Pedestrian Through Zone Must Remain Clear.** The Pedestrian Through Zone is the area intended for pedestrian travel. This zone should be entirely free of permanent and temporary objects at all times. Vertical and horizontal encroachments into the Pedestrian Through Zone are not permitted. See Section B.3 for details regarding where within the sidewalk corridor permanent and temporary objects and encroachments are permitted to be located.

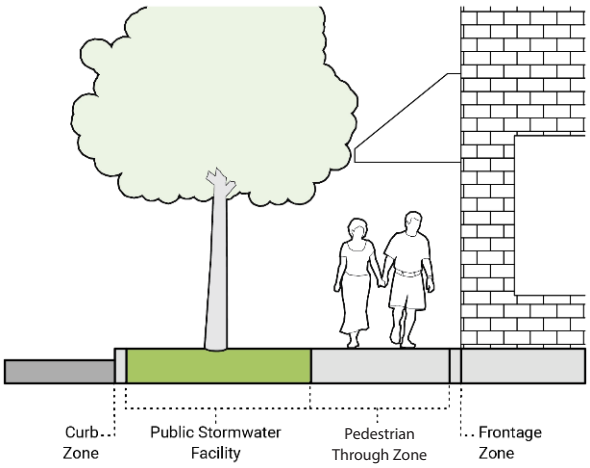


Figure B-9: Furnishing Zone requirements for stormwater facilities

- **Tree Well Encroachments into the Pedestrian Through Zone.** Where the minimum furnishing zone width prescribed in Table B-3 cannot be met due to right-of-way constraints, tree wells may extend into the Pedestrian Through Zone provided that the area of encroachment provides an ADA compliant walkable surface, such as bonded rubberized mulch or a tree grate (Figure B-8). The tree well surface must not decrease the paved area of the Pedestrian Through Zone to less than 4 feet. The tree itself must be located entirely outside of the Pedestrian Through Zone.

B.1.3.b Required Furnishing Zone Width

- **Minimum Furnishing Zone Width.** Furnishing Zones are required in all sidewalks in accordance with Table B-3.
- **Furnishing Zone Widths and Stormwater Requirements.** If a surface stormwater facility is required per the City's Stormwater Management Manual, the furnishing zone should be 8-feet wide or as otherwise determined by BES and PBOT (rather than the width prescribed in Table B-3). Refer to the Stormwater Management Manual for more details.
- **Curb-Tight Sidewalks.** In certain constrained contexts, curb-tight sidewalks (sidewalks with reduced Furnishing Zone widths, or no Furnishing Zone) may be provided. See Section B.5.2 (page 36) for circumstances in which curb-tight sidewalks may be permitted, and associated dimensional requirements.

B.1.3.c Required Frontage Zone Width

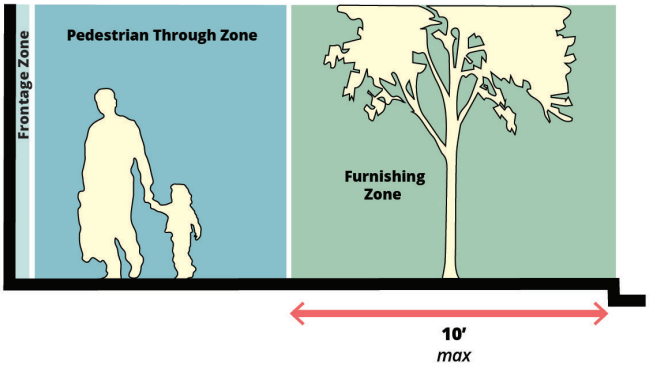
- **Minimum Frontage Zone Width.** Frontage Zones are required in all sidewalks in accordance with Table B-3.
- **Encroachments**. Elements such as stairs, stoops, rails, bay windows, awnings, canopies, overhangs, signs, flags, banners, marquees, cornices, brackets, fences, walls, and planters must comply with the encroachment policies set out in the TRN 8.08 Encroachments in the Public Right-of-way. Such elements are subject to an Encroachment Permit from the City Engineer.

B.1.3.d Exceptions to Table B-3 Sidewalk Corridor Widths

- **Local Streets within Pedestrian Districts.** Local Streets located within designated Pedestrian Districts must comply with sidewalk corridor requirements for "Neighborhood Corridors" and must provide a minimum 12-foot-wide sidewalk corridor on both sides of a street, even if only one side falls within a Pedestrian District boundary.
- **Existing Sidewalks.** See TRN 1.22 to determine when an existing sidewalk is not required to be reconstructed in accordance with the widths established in Table B-3.
- **When There is Additional Right-of-Way Available.** When additional right-of-way is available behind the curb beyond the minimum dimensions required by Table B-3, it should be initially allocated to the Furnishing Zone to help maximize soil volumes and street tree viability, especially for larger canopy trees. Once the Furnishing Zone is 10 feet in width, any additional available right-of-way shall be allocated to either the Furnishing Zone or the Frontage Zone, whichever PBOT determines better meets the character of the right-of-way and/or the adjacent development. If the additional right-of-way is topographically constrained, it is acceptable to not develop the entire right-of-way. In addition, efforts should be made to connect sidewalks from adjacent properties. Figure B-10 shows the process for allocating additional right-of-way.

Step 1

Increase the **Furnishing Zone** up to 10 feet.



Step 2

After the Furnishing Zone is 10 feet wide, additional width can be allocated to either the **Furnishing Zone** or **Frontage Zone**, per PBOT staff discretion.

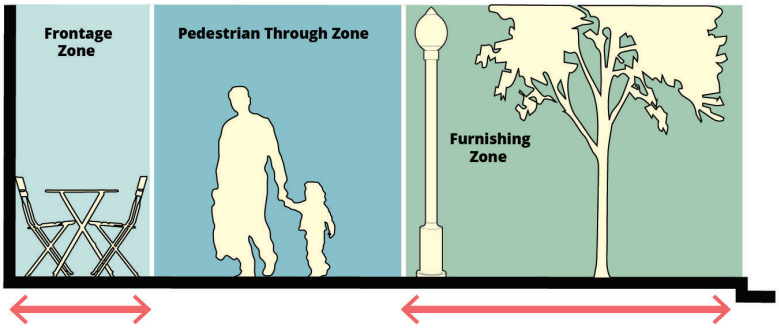


Figure B-10: Process for allocating additional right-of-way

B.2 Sidewalk Corridor Design Details

B.2.1 Design Requirements for All Zones

Design requirements for all zones of the sidewalk corridor should comply with P-551, the City's Standard Drawing and Details for sidewalks, unless superceded by an adopted streetscape plan. P-551 should be followed for the sidewalk's materials, construction, scoring grid, and finish.

B.2.2 Design Requirements for The Pedestrian Through Zone

B.2.2.a Walking Surfaces

Walking surfaces shall be firm and stable, resistant to slipping, and allow for ease of passage by people using canes, wheelchairs, or other devices to assist mobility. Walking surface and scoring requirements are found in P-551, the City's Standard Drawing and Details for sidewalks. Concrete pavers may be used in the Pedestrian Through Zone only to address tree root conflicts and require prior approval by the City Engineer. Specifications for concrete pavers are found in P-572 - Concrete Pavers.

B.2.2.b Cross Slope

Cross slope requirements are found in P-551, the City's Standard Drawing and Details for sidewalks. If additional slope is required to match grades, the cross slope within the Pedestrian Through Zone may be as much as 1:25, provided that a 4-foot-wide portion within the Pedestrian Through Zone remains consistent with the cross slopes required in P-551.

B.2.2.c Running Grade

Per ADA requirements, running grades for publicly accessible routes such as sidewalks should be less than 1:20. They may only be steeper than 1:20 if the adjacent roadway is at the same slope.

B.2.2.d Driveways

Driveway aprons should not intrude into the Pedestrian Through Zone. See Section B.3.7 for more guidance on driveway design in the Furnishing Zone.

Figure B-11: Sidewalks need to meet a set of requirements in order to support access and be comfortable for all users.

B.2.3 Design Requirements for the Furnishing Zone

B.2.3.a Tree Wells and Continuous Planting Strips

The design requirements for the Furnishing Zone are dependent on the zoning assigned to the adjacent parcel, as well as the type of building permit granted, if private development is triggering the sidewalk corridor frontage improvement. Generally, continuous landscape strips, as illustrated in Figure B-12, are required along parcels with residential zoning, while tree wells separated by paving, as illustrated in Figure B-13, are required along parcels with mixed-use or commercial zoning.

Table B-4 specifies where tree wells or continuous planting strips are required according to the adjacent property's zoning designation and permit type.

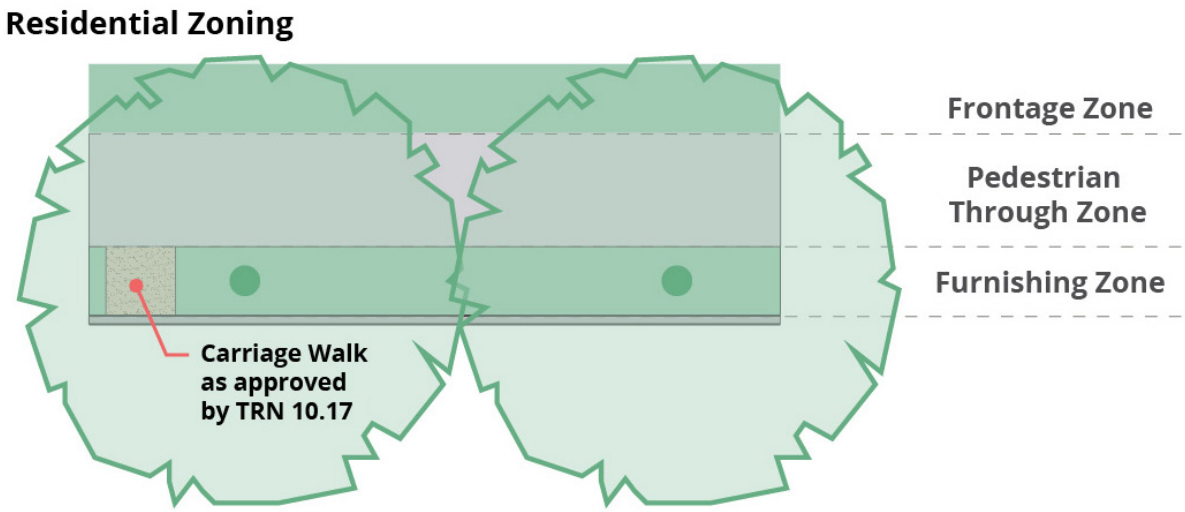


Figure B-12: Tree well and continuous planting strip configuration

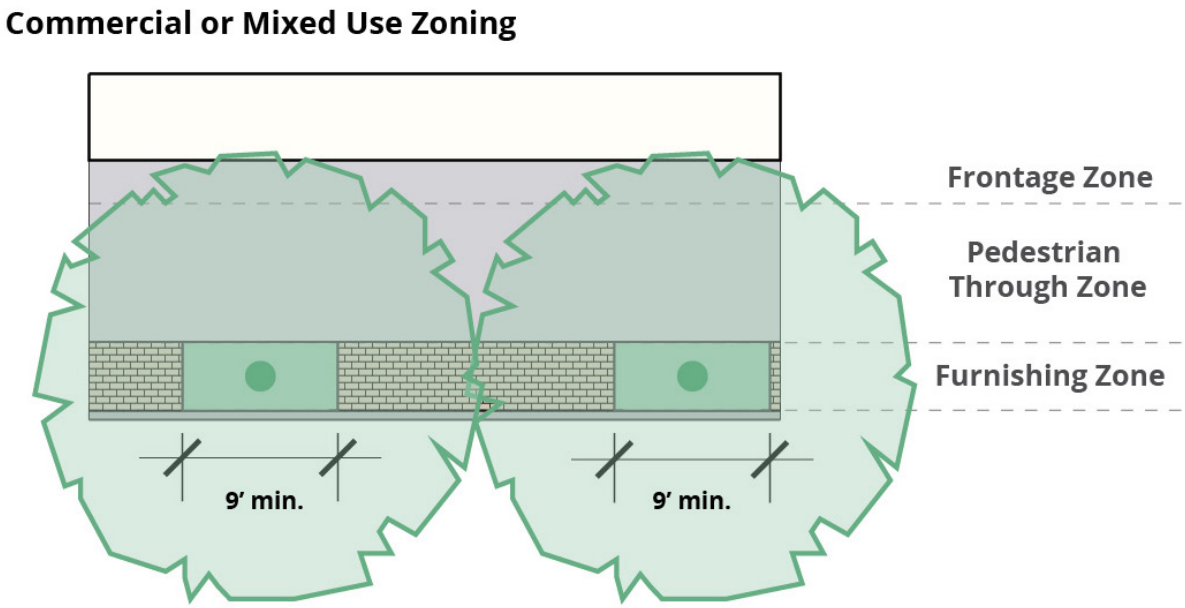


Figure B-13: Tree planting in tree wells

Table B-4: Tree well and continuous planting strip considerations

Zoning of Adjacent Parcel	**Permit Type** (for private frontage improvements)	**Tree Well**	**Continuous Planting Strip**	**Considerations**
Single Dwelling Zone	Residential		x	If the adjacent or existing sidewalk corridor is curb tight, no tree wells or planting strips are necessary. For streets with furnishing zones of less than 3 feet, a paved furnishing zone may be allowed. A continuous planting strip will be allowed to remain as such.
Single Dwelling Zone	Non-residential (e.g., school, church)	x		If the property has an existing planting strip, a a design exception (or a public works alternative for private development) may be made to retain the planting strip.
Multi-Dwelling Zone	Residential (single-family or duplex permit)		x	If the adjacent or existing sidewalk corridor is curb tight, it will be allowed to remain. For streets with furnishing zones less than 3 feet, a paved furnishing zone may be allowed. May allow a design exception for a planting strip depending on context.
Multi-Dwelling Zone	Multi-dwelling project that is residential only	x		Conditions may depend on adjacent sidewalk corridor.
Multi-Dwelling Zone	Multi-dwelling project that has a retail component	x		Tree wells are highly preferred - hardscaped portions are needed for entrance/egress from parked vehicles or furnishing zone demands like café seating or bike racks.
Commercial-Mixed Use Zone	Residential	x		May allow a a design exception (or a public works alternative for private development) for a planting strip depending on context.
Commercial-Mixed Use Zone	Non-residential	x		Planting strips are highly discouraged because of anticipated furnishing zone uses - café seating, newspaper boxes, parked vehicle access, etc.
Commercial-Mixed Use Zone	Mixed Use	x		Tree wells are highly preferred - hardscaped portions are needed for entrance/egress from parked vehicles or furnishing zone demands like cafe seating or bike racks.
Industrial and Employment Zones		x		Look to match the existing context.
Campus Institution Zones		x		May allow a design exception for a planting strip depending on context.
Open Space Zone		x	x	Look to match the existing context – a park in a lower density area should have a continuous planting strip, versus a park in a higher density area that should have tree wells.
Any (see "Considerations")	Any (see "Considerations")		x	In addition to the zoning districts and permit types specified above, continuous planting strips may also be provided on streets within any zoning district **where on-street parking is not provided within the curb zone**.

Exceptions to Table B-4 will be reviewed on a case-by-case basis in accordance with the following criteria/ considerations:

- The area is adjacent to a school and is used for bus loading.
- The area is within a bus stop zone established by a public agency.
- The width of the furnishing zone is less than 2 feet in an R zone.
- Sand set pavers may be placed within the furnishing zone without a permit in any zone if no more than 50% of the area of the furnishing zone is hardscaped.
- Other cases as deemed necessary by the City Engineer.

In addition to the locations specified in Table B-4, continuous planting strips may also be provided on streets within any zoning district where on-street parking is not provided within the curb zone.

Design Requirements for Continuous Planting Strips

- Where continuous planting strips are required per Table B-4, green (grass) or softscape/landscape with street trees is required. If desired, up to 50% of the surface area may be hardscaped instead of green (grass) or softscape with street trees using concrete, bricks, sand set pavers, or softscape depending on whether the location is commercial or residential.
- Hardscaped carriage walks may be provided intermittently.
- Continuous planting strips may provide plantings between street trees. All plantings within the Furnishing Zone shall be maintained by the adjacent property owner.

Design Requirements for Tree Wells

- For commercial or mixed-use frontages, hardscape with tree wells is the approved option for furnishing zones, per Table B-4.
- Hardscape shall be provided between tree wells to provide a walkable surface (see B.2.2.a Walking Surfaces). Hardscape treatments within the furnishing zone may include pavers and should be placed on top of subgrade soil treatments that provide root expansion opportunities.
- Tree wells should be a minimum of 9 feet long and shall extend for the full width of the Furnishing Zone prescribed by Table B-3. Maximum tree well length is 10 feet.
- Urban Forestry may approve tree wells less than 9 feet in length when site constraints preclude providing minimum tree well lengths. Site constraints may include but are not limited to utility provisions to buildings, accommodating signal poles, utility vaults, driveways, etc.
- Open tree wells may include mulch, ground level landscaping and/or shrubs, or may provide walkable surfaces such as tree grates or rubberized mulch. All plantings and treatments within the furnishing zone shall be maintained by the property owner.
- When a stormwater facility is within the furnishing zone and there is adjacent on-street parking, refer to the Stormwater Management Manual stepout design guidance as found in SW-300 and SW-302. Width and design requirement for the stormwater facility can be found in the Green Street Typical Details.

B.2.3.b Driveways

Driveway aprons should remain solely within the Furnishing Zone. Refer to the City's Standard Drawings and Details on driveways – P-528 – for specific design requirements.

As needed, the sidewalk may be partially dropped to meet the grade at the top of the apron. This is preferred to extending the sloped apron into the Pedestrian Through Zone Specific design guidance is available in P-529, P-531 and P-532 of the City's Standard Drawings and Details.

B.3 Sidewalk Corridor Uses and Elements

The following sections address common elements that may be placed in the Furnishing Zone or Frontage Zone of the sidewalk corridor, along with the design considerations and parameters that should be met. These elements should not impede the Pedestrian Through Zone widths required by Table B-3.

B.3.1 Transit Stations and Shelters

Transit stations and shelters are an integral piece of creating a cohesive link between the pedestrian environment and transit. Transit shelters, benches, and poles should be sited in accordance with the 1997 Intergovernmental Agreement for Bus Shelter/Bench Siting and Advertising (1997 IGA) between PBOT and TriMet, and per the transit stop design placement guidance in Portland's Traffic Design Manual:

- **Shelter or bench distance from the curb.** Shelters placed near the curb with their back to the street should be placed, at minimum, 2 feet from the back of curb. If there is no parking lane, and the bus is not completing a turn, an 18-inch margin between the back of shelter and the street may be acceptable with PBOT and TriMet approval. Benches should be placed 18 inches from the back of curb.
- **Preservation of the Pedestrian Through Zone.** Where bus stops are on a major arterial street with a bus shelter facing the street and where there is a travel lane next to the curb, the minimum Pedestrian Through Zone as required in Table B-3 must be maintained. If the placement of the transit station or shelter must intrude into the Pedestrian Through Zone as required in Table B-3, the Pedestrian Through Zone can be decreased to 5 feet per the 1997 IGA.
- **Transit Stations and Shelters in Pedestrian Districts.** The Pedestrian Through Zone width as required in Table B-3 should not be reduced to accommodate a transit shelter within Pedestrian Districts. If a shelter is desired within a Pedestrian District and there is insufficient sidewalk width, right-of-way should be acquired or a modified transit shelter design should be provided such that the vertical elements of the shelter do not impinge upon the required Pedestrian Through Zone.
- **"Pass by" zone.** Per the 1997 IGA, a transit shelter may take up to half of the Pedestrian Through Zone, provided that a pedestrian "pass by" zone is provided that is equal to or greater than 5 feet. Four feet may be provided if mutually agreed upon by PBOT and TriMet, which is the minimum width to meet ADA requirements.
- **Canopy Extension and Vertical Elements.** The canopy of a transit shelter may extend into the Pedestrian Through Zone, if needed, but vertical elements must stay outside of the designated Pedestrian Through Zone.

Various transit shelter placements for sidewalks with and without furnishing zones are shown in Figure B-14 and Figure B-15. For each layout, the design shall meet the requirements stated above. The graphics show general placement of a transit shelter - more details on the direction of the shelter opening and type of shelter should be determined per the site, and include considerations of other sidewalk corridor uses such as street trees.

In some locations, transit islands may be used to create space for waiting and boarding or alighting transit riders while maintaining the required Pedestrian Through Zone width. Figure B-16 shows the elements of preferred designs for sidewalk-level bicycle facilities behind transit platforms. More guidance can be found in the National Association of City Transportation Officials Transit Street Design Guide.

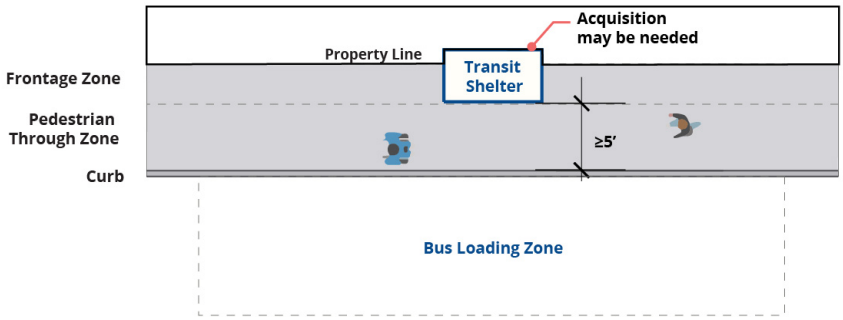
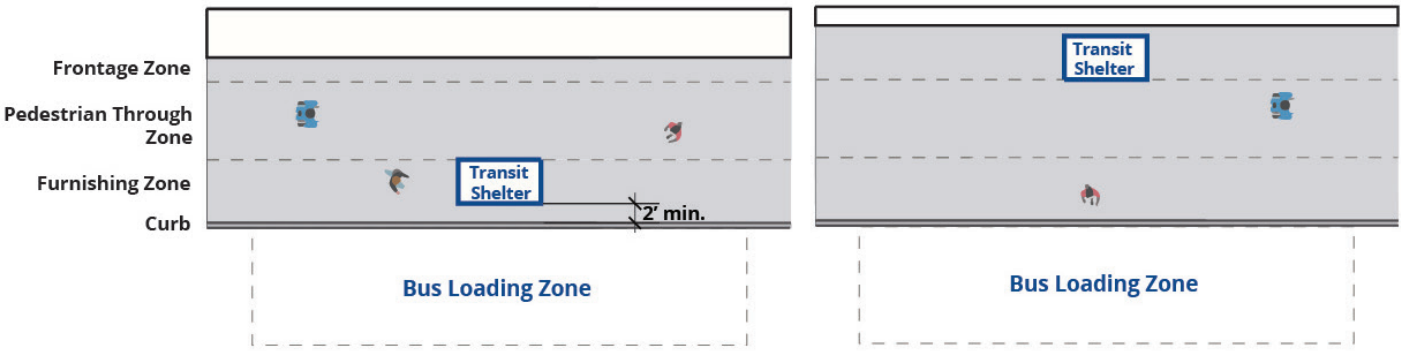


Figure B-14: Transit shelter siting on curb-tight sidewalks

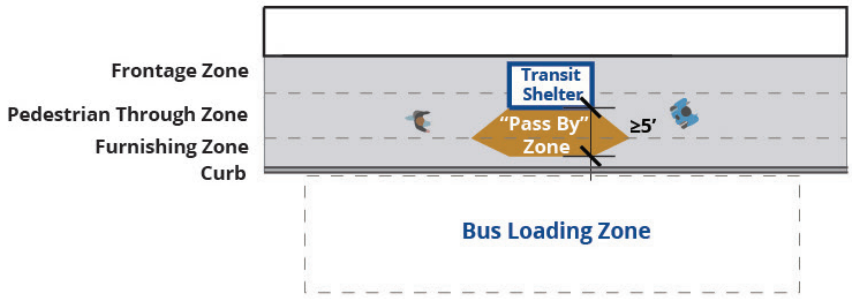
1 Preferred Option

Transit shelter fully located in the Frontage or Furnishing Zone. There should be no intrusion into the Pedestrian Through Zone. This option may require wide sidewalks (such as on the bus mall) or smaller shelters or benches.



2 Secondary Option

Transit shelter sited within Frontage Zone with "pass by" zone that extends into the furnishing zone.



3 Non-Preferred Option

Transit shelter sited within Furnishing Zone with "pass by" zone behind.

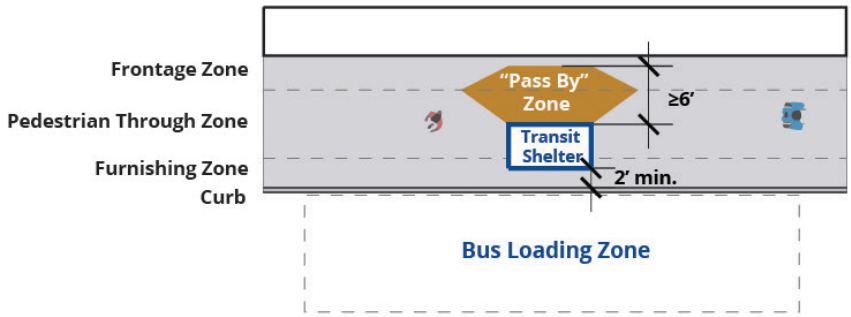


Figure B-15: Transit shelter placement on full sidewalk corridors

Transit shelter placement may result in a bicycle lane that is on the street to be diverted onto the sidewalk corridor, behind a floating transit island. In these situations, the following guidance should be followed:

- The bicycle facility is clearly marked to differentiate it from the Pedestrian Through Zone.
- Pedestrian Through Zone width should, ideally, align with those specified in Table B-3. If those widths are not possible to achieve, Pedestrian Through Zone width reductions specified in the 1997 IGA will apply.
- The bicycle facility is level with the sidewalk (not dropped to street level).
- There are clear indications with railings and/or linear tactile that guide pedestrians to a marked crossing location across the bike lane and give people bicycling indications of where pedestrians may be present.

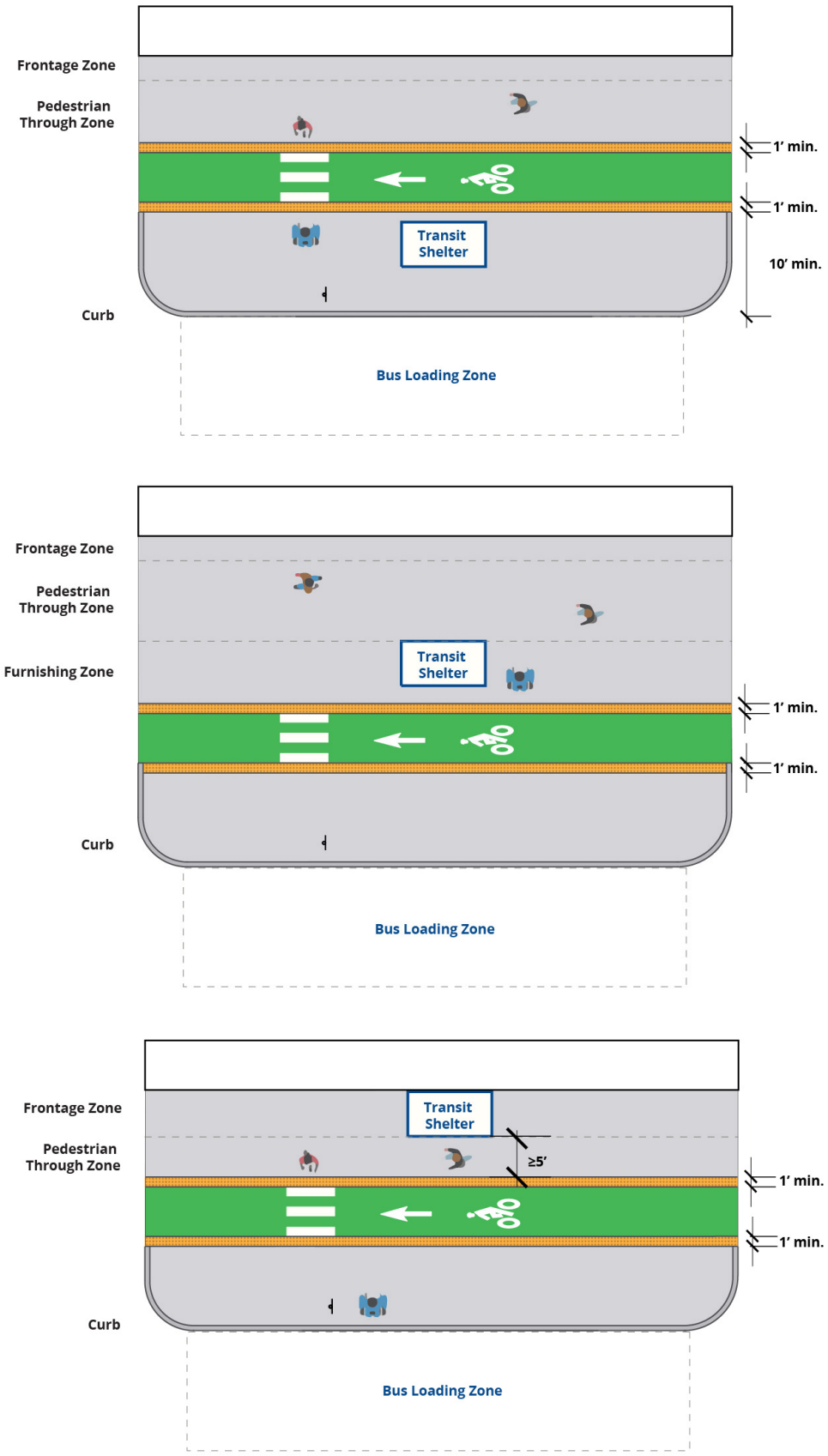


Figure B-16: Transit platform configurations

B.3.2 Bollards and Railings

Bollards and railings are used as a visual and physical separation of pedestrians from vehicles or bicycles and can help clarify the areas that are only for pedestrian use, even if other aspects (low or no curb) may indicate that vehicles are allowed. The following is guidance for the placement and design of bollards and railings:

- **Bollards.** A bollard is a short vertical post that can define streetscape areas for differing uses. Bollards placed in a line can prevent motor vehicles from entering pedestrian space.

  Bollards may be temporary or removable, per their unique purpose and the adjacent pedestrian environment. Lighted bollards may also be useful to help define a space and provide additional pedestrian lighting and visibility.

  Bollards should be placed, at minimum, 18 inches from the back of the curb to avoid damage from parked vehicles. If there is no parking next to the curb, the bollard or barricades may be placed closer to the curb. If bollards are adjacent to a bicycle zone, design should allow for a 1-foot wide space between the bollard and bicycle zone.

  Bollards should be spaced approximately 10 feet apart on center but may be spaced closer together if needed to eliminate vehicle travel. There must be, at minimum, a 5-foot passageway between bollards for pedestrian through travel.

- **Railings.** Railings may be used to better define an edge of a walkway or to create a physical barrier between a walking surface and a walking hazard, or where slopes are in excess of 2:1. They are required for any vertical drop-offs of 30" or more. Railings must comply with current ADA Accessibility Guidelines (ADAAG) and International Building Code. As with bollards, railings should be placed at least 1 foot away from any bicycling zone.

B.3.3 Lighting

Adequate lighting is essential for both real and perceived safety for pedestrians using sidewalk corridors. In May 2019, the City of Portland produced Recommended Light Levels and Guidelines for Roadway Lighting. These guidelines are intended to be used in conjunction with new projects as they are scoped, designed, and constructed. **New frontage improvements associated with private development must meet these lighting level guidelines.**

Utility and lighting infrastructure such as poles shall be placed in the Furnishing Zone.

B.3.4 Café Seating and Vending

Sidewalk cafés and street vending are allowed on select sidewalks per Chapters 17.25 Sidewalk Cafes and 17.26 Sidewalk Vendors, respectively, of Portland City Code. Both sidewalk cafés and street vending are only allowed on sidewalks that are at least 8 feet wide. Sidewalk cafés and street vending should be located primarily in the Frontage Zone.

If café seating and/or street vending is permitted in both the Frontage and Furnishing Zones (as shown in Figure B-17) a minimum of a 6-foot clear Pedestrian Through Zone must be maintained for sidewalks with widths less than 15 feet. A clear Pedestrian Through Zone of 8 feet shall remain for sidewalks that are greater or equal to 15 feet. All other design and accessibility requirements for café seating and street vending on sidewalks is described in Chapters 17.25.060 Location Rules and Review and 17.26.070 Location Review.

Figure B-17: Cafe seating should primarily occur in the Frontage and Furnishing Zones, allowing adequate width for pedestrian through travel.

B.3.5 Bicycle Parking

PBOT issues permits for the installation of short-term bicycle racks within the public right-of-way, including in the sidewalk corridor. Bike racks should be placed in the Frontage or Furnishing Zone and be positioned to ensure that a parked bicycle lies fully within the zone and does not encroach into the Pedestrian Through Zone width as required by Table B-3. All other requirements of bicycle rack placement on sidewalks are located in TRN 10.09 Bicycle Rack Permits.

B.3.6 Hatch/Utility Vault Covers

Hatch/utility vault covers should be located within the Furnishing Zone (as shown in Figure B-18). The surface should be slip-resistant even when wet. The cover should be flush with the surrounding sidewalk surface. For additional regulations related to hatch/utility covers see PBOT Administrative Rules.

B.3.7 Other Encroachments and Right-of-Way Elements

An encroachment is a privately owned structure or infrastructure that is placed within the public right-of-way. The following sections dictate design requirements for common encroachments on the sidewalk corridor. PBOT may allow for a private encroachment into the public ROW under certain conditions in accordance with encroachment policies. Encroachment permits are revocable and considered temporary. Table B-5 outlines siting requirements for encroachments and other sidewalk elements not described in prior sections, and indicates elements for which an encroachment permit may be required.

Encroachments and other sidewalk elements must not become nuisances by either blocking the physical Pedestrian Through Zone or reducing visibility. Failure to maintain the encroachment, immediately upon notification from City, shall be cause for the City to declare the encroachment a nuisance. Unless otherwise specified in City Code or in the permit, the party responsible for maintenance of the right-of-way as specified in Chapter 17.28.020 shall remove the encroachment from the right-of-way upon notice by the City Engineer, with no liability and at no cost to the City. More details on encroachments in the public right-of-way can be found in TRN 8.08 and the City's Encroachments in the Right-of-Way policy.

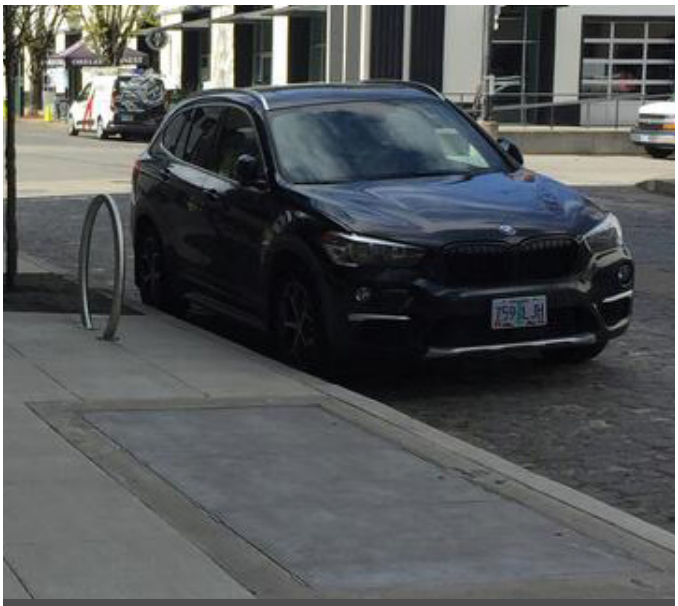


Figure B-18: Hatch/utility vault covers should be located in the Furnishing Zone. Covers located in the Pedestrian Through Zone can effectively narrow the Pedestrian Through Zone as people walk around them to avoid walking on lids.

Table B-5: Sidewalk corridor encroachments and siting guidance

Element	Private Encroachment Permit Required	Preferred Siting	Secondary Siting
Benches	x	Furnishing Zone or Frontage Zone if zones are greater than 3')	Back of walk on private property
Bicycle Lockers		Furnishing Zone or area where there is enough room for clear maneuvering at the door area.	Private property at the back of walk
Bicycle Racks		Furnishing or Frontage Zone. Parallel to curb or building, in either the furnishing or frontage zone. A parked bicycle should not intrude into the Pedestrian Through Zone	If multiple bike racks are needed at a single site, the cub/flex zone is the preferred location.
Café Seating	x	Frontage Zone	Furnishing Zone
Controller Boxes, Irrigation		Furnishing Zone, flush with surface	
Controller Boxes, Signal Cabinets		Furnishing Zone	Back of walk, on acquired right-of-way
Drinking Fountains		Furnishing Zone	
Driveway Aprons		Furnishing Zone	
Fire Hydrants		Furnishing Zone (when furnishing zone is 4' or greater)	Frontage Zone
Elevator Doors	x	Furnishing Zone, flush with surface	
Grates, Tree		Furnishing Zone	
Newspaper Boxes	Varies	Furnishing Zone	Frontage Zone, adjacent to building
Parking Meters		Furnishing Zone, as close to the curb as possible	
Planters	x	Furnishing Zone	Frontage Zone if the planter boxes are removable
Poles – Signal, Light, Utility, 5G and Small Cell Technology		Centerline of pole 2.5' from face of curb (for curbtight sidewalk, centerline of pole 1.5' from back of curb) or centered in Furnishings Zone, whichever is greater.	• Back of walk on private property • If curbtight sidewalk, centerline of pole 1.5' from back of curb • Curb extension
Post Office Box	x	Furnishing Zone, street face of unit flush with curb	
Signs - A-boards, Freestanding, Temporary	Varies	Frontage Zone	Furnishing Zone
Signs - Parking, Street, Traffic		Furnishing Zone, on existing pole if possible. Bottom of sign at 7' above sidewalk.	Frontage Zone or at back of walk on acquired right-of-way or easement
Street Lighting Panels		Furnishing Zone	Frontage Zone
Street Trees		Furnishing Zone	• Back of walk on private property • Bulb-outs
Transit Shelters	x	Furnishing Zone (per Intergovernmental Agreement for Bus Shelter Siting, "Bus Stop and Passenger Amenities Guidelines," Tri-Met, June 1995 and "Bus Stop Guidelines," Trimet, 2010)	May reduce Pedestrian Through Zone to 4'6" by agreement between PBOT and TriMet
Trash Receptables	x	Furnishing Zone	
Utility Vaults	x	Furnishing Zone	Private property
Water Meters	Varies	Furnishing Zone, flush with sidewalk	
Water Quality Sampling Stations		Furnishing Zone	

B.4 Sidewalk Level Bicycle Facilities

The Portland Protected Bicycle Lane Planning and Design Guide states that protected bicycle facilities are the preferred design treatment for bicycle facilities on busy roadways in Portland. As identified in that guide, the preferred method of providing protected bicycle facilities is to elevate bicycle facilities to sidewalk level such that they are separated from vehicle traffic by a vertical curb.

Sidewalk level bicycle facilities may occur as part of a Capital Improvement Program project or as part of a frontage improvements associated with development on private property **but are not required as part of frontage improvements associated with development on private property by this guide**. Any changes requiring sidewalk level bicycle facilities in conjunction with private frontage improvements will occur outside of the Pedestrian Design Guide. However, when provided, facilities must meet the design requirements in this section.

Bicycle facilities at sidewalk level must be designed and constructed with pedestrian functionality, comfort, and safety in mind. The following sections outline the required sidewalk corridor widths and treatments when sidewalk level bicycle facilities are provided. Treatments at corners and crossings and at transit stops are provided in Section C. Corners and Crossings.

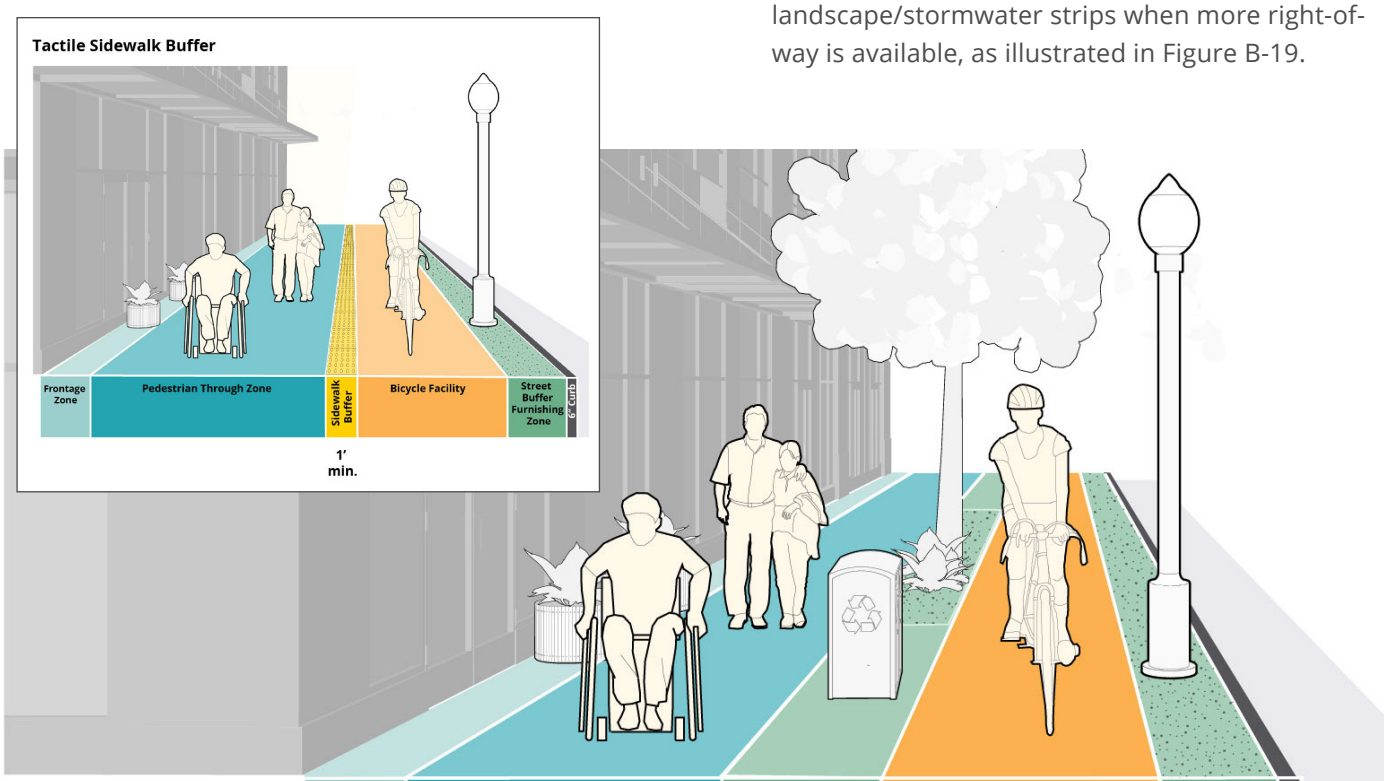
B.4.1 Sidewalk Level Protected Bicycle Facilities

A **sidewalk level protected bicycle facility** is a facility for bicyclists that is located adjacent to the roadway at sidewalk level and that is physically separated from motor vehicle traffic by a vertical curb.

- **Zones of the Sidewalk Corridor when Sidewalk Level Protected Bicycle Facilities are Provided.** Per Figure B-20, sidewalk corridors with sidewalk level protected bikeways have five zones – the Frontage Zone, Pedestrian Through Zone, Sidewalk Buffer Furnishing Zone, Bicycle Facility, and Street Buffer Furnishing Zone. Figure B-20 shows the allowable widths and ranges of each of the zones based on Street Design Classifications.
- **Frontage Zone and Pedestrian Through Zone.** The Frontage Zone and Pedestrian Through Zone serve the same purposes as described in previous Sections B.1.2.a and B.1.2.c when a sidewalk level bicycle facility is present and must remain consistent with the zone widths prescribed in Table B-3.

Figure B-19: Sidewalk level bicycle facility on SW Bond Ave

- **Sidewalk Buffer Furnishing Zone.** The Sidewalk Buffer Furnishing Zone separates the Pedestrian Through Zone from the bicycle facility and communicates that the two are distinct places with differing functions. The Sidewalk Buffer Furnishing Zone must meet the following:
  - » The minimum width for the Sidewalk Buffer Furnishing Zone is 1 foot; there is no maximum width.
  - » Physical separation or cane detectable delineation is required between the Pedestrian Through Zone and the bicycle facility so pedestrians with vision disabilities can distinguish between the bike lane and the Pedestrian Through Zone. An acceptable detectable edge shall be adjacent to the Pedestrian Through Zone and may be as narrow as a one-foot tactile material (per Figure B-20), or intermittent or continuous tree wells or landscape/stormwater strips when more right-of-way is available, as illustrated in Figure B-19.



Street Design Classification	Frontage Zone	Pedestrian Through Zone	Sidewalk Buffer Furnishing Zone	Bicycle Facility	Street Buffer Furnishing Zone	6" Curb
Civic Main Street	2.5'	8'	1' minimum	See Portland Protected Bicycle Lane Planning and Design Guide	2' minimum	
Neighborhood Main Street	2.5'	8'				
Civic Corridor	1.5'	6'				
Neighborhood Corridor	1.5'	6'				
Community Corridor	1.5'	6'				
Regional Corridor	0.5'	6'				
Industrial Road	0.5'	6'				
Local Street	N/A	N/A	N/A	N/A	N/A	

Figure B-20: Sidewalk level bicycle facility zone widths

  - When provided, periodic breaks in landscaping may occur, for example, to enable pedestrians to access on-street parking.
  - Uses permitted within the Furnishing Zone of the sidewalk per Table B-3 are also permitted within the Sidewalk Buffer Furnishing Zone, as space allows.
  - When the Sidewalk Buffer Furnishing Zone is at least 4 feet wide, street trees should be provided in this zone.
  - If utilities need to be located within the Sidewalk Buffer Furnishing Zone, it must be, at minimum, 3 feet wide.
  - Any vertical element in the Sidewalk Buffer Furnishing Zone should be placed at least one foot from the edge of the bicycle facility.
- **Bicycle Facility.** This is the area where people will ride their bicycles. The width of this zone will be determined according to PBOT's Protected Bicycle Lane Planning and Design Guide. Because pedestrians may see sidewalk level protected bicycling zones as safe places to stand or walk,—not understanding they are bicycle infrastructure—sidewalk level bicycle facilities should not look like the Pedestrian Through Zone.
  - The bicycle facility should include colored pavement (green or black) and/or appropriate bicycle markings to clearly show that the space is intended for bicycling.
  - At locations along the corridor where pedestrians are expected to cross bike lanes, such as transit stops, the paint designating the bicycle facility should be striped to communicate to people on bikes that they should expect pedestrian use in their otherwise dedicated space. Paint and truncated domes should communicate to pedestrians that the designated space is a preferred place to cross.
- **Street Buffer Furnishing Zone.** The Street Buffer Furnishing Zone provides sufficient space so that an open car door does not intrude into the bicycling zone. It also is the space for people loading and unloading from their cars. The width of this zone can be decreased depending on roadway conditions and curb uses. The Street Buffer Furnishing Zone should meet the following:
  - If driveways are present in this zone, the Street Buffer Furnishing Zone must be at least 3 feet to allow adequate space for ramping up and down.
  - If there is on-street parking, the Street Buffer Furnishing Zone must be at least 2.5 feet to allow bicyclists to be out of the range of car doors and individuals exiting vehicles.
  - If neither of these conditions are present, the Street Buffer Furnishing Zone can be reduced to 2 feet.
  - If utilities need to be located within the Street Buffer Furnishing Zone, it must be, at minimum, 3 feet wide.
  - The width of the Street Buffer Furnishing Zone may also impact its use – if it is wide enough, this space may be used for Furnishing Zone purposes such as parking meters, street lighting, or signage poles. Uses permitted in the Furnishing Zone of are also permitted within the Street Buffer Furnishing Zone, as space allows.
  - When the Street Buffer Furnishing Zone is 4 feet or wider, street trees should be provided in this zone.
  - Any vertical element in the Street Buffer Furnishing Zone should be placed at least one foot from the edge of the bicycle facility.
  - In managing right-of-way tradeoffs when providing sidewalk-level bicycle facilities, it is not desireable to reduce both the Sidewalk Buffer and the Street Buffer Furnishing Zone to less than 4 feet. Maintaining at least one of these two furnishing zones to a minimum of 4 feet provides an opportunity to plant street trees.

B.4.2 Multi-Use Paths

A **multi-use path (MUP)** is a paved, off-roadway facility that accommodates people on bikes, pedestrians and those using non-motorized devices on the same path.

It is important to distinguish MUPs from trails and Pedestrian/Bicycle Connections because they have different purposes and, as a result, different design standards. MUPs are facilities that have a transportation purpose (as a pedestrian connection) and have surfaces that are firm, stable, and slip

resistant. Trails are primarily intended for recreation, such as single-track hiking or running. For more information on recreational trail design, reference Portland Trail Design Guidelines. Pedestrian/Bicycle Connections are usually fairly short and not adjacent to a roadway. More information on Pedestrian/Bicycle Connections can be found in Section B.5.4.b.

- **Circumstances allowed.** MUPs are typically provided in locations where right-of-way or other site constraints prevent project designers from providing physically separated or delineated bicycle and pedestrian facilities, where conditions (such as river corridors) lend themselves to such development, and, primarily, for Capital Improvement Projects. **MUPs are not intended to be implemented via development review.** MUPs may be used as "Pedestrian/Bicycle Connections" to meet the City's connectivity requirements per Portland City Code 17.88.40.

  The level of bicycle and pedestrian activity present should factor into the decision as to whether an MUP is appropriate for the context. Because of high levels of pedestrian use and demand, MUPs should not be provided on Major City Walkways within Pedestrian Districts.

- **Design Requirements.** MUPs should be designed as follows:
  - » When providing an MUP, project designers should start by attempting to provide bicycle and pedestrian facilities that are separated and delineated by a one-foot cane-detectable or other physical separation between bicycle and pedestrian spaces, in accordance with Figure B-21. This requires a path width of 11 feet or wider (for one-way bicycle travel). In constrained locations, path widths may be reduced in accordance with Figure B-21. This separation is especially important streets classified as Major City Bikeways, where the TSP has stated that where conditions warrant and where practical, there should be separated facilities for bicycles and pedestrians.
  - » Non-delineated MUPs, as shown in Figure B-22, should only be applied in constrained locations where bicycle and pedestrian volumes are expected to be low.
  - » When accommodating one-way bicycle travel and one lane of bi-directional pedestrian travel, MUPs should be a minimum of 10-feet wide (see Figure B-22).
  - » Marked pedestrian space should be located on the far side of the pathway, away from vehicular travel lanes.
  - » When the pedestrian and bicycle space is delineated, the minimum width for the pedestrian space is 5 feet wide, with 6 feet wide as desirable.
  - » The Frontage Zone and Furnishing Zone serve the same purposes as described in previous sections B.1.2.c and B.1.2.b, respectively. Widths for these zones when a MUP is present should be consistent with the widths prescribed in Table B-3 where right-of-way is available.
  - » MUPs are required to meet tree requirements as per the City's Tree Code, Chapter 11.50 Trees in Development Situations.
  - » See the PBOT Traffic Design Manual for additional design details and requirements for MUPs.

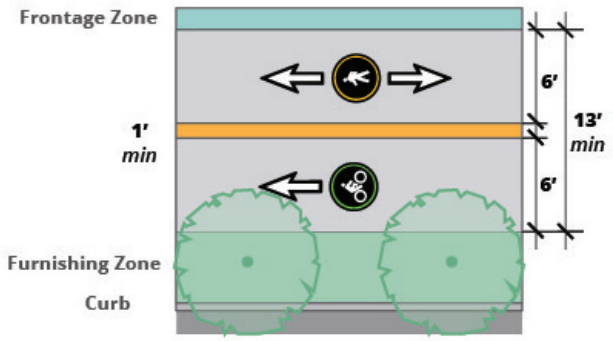


Figure B-21: Delineated Multi-Use Path (preferred)

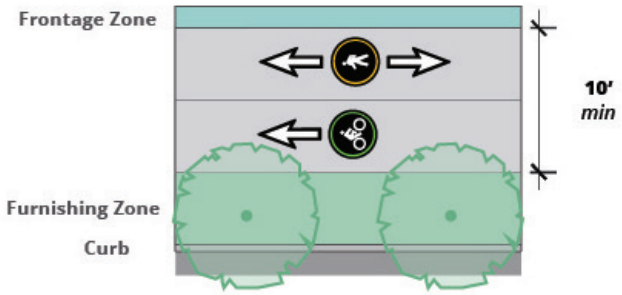


Figure B-22: Non-delineated Multi-Use Path

- **Stormwater Management Requirements.** MUPs are required to meet stormwater management requirements per the City's Stormwater Management Manual.
- **ADA Accessibility Requirements.** MUPs are required to meet ADA accessibility requirements.

There should be no lateral or vertical obstructions within the MUP in order to have clear passageway across the entire path. MUP alignment should provide clear visibility through the length of the connection. More information on meeting accessibility requirements can be found at the City's ADA Page.

Step 1

The preferred MUP design includes a 13 feet or greater pathway (for one way bicycle travel), with a 1 foot tactile strip separating pedestrians from people biking.

Step 2

Decrease path width to 11 feet. A 1 foot tactile strip must remain to separate those walking from those biking.

Step 3

Decrease path width to 10 feet. No tactile separation is provided.

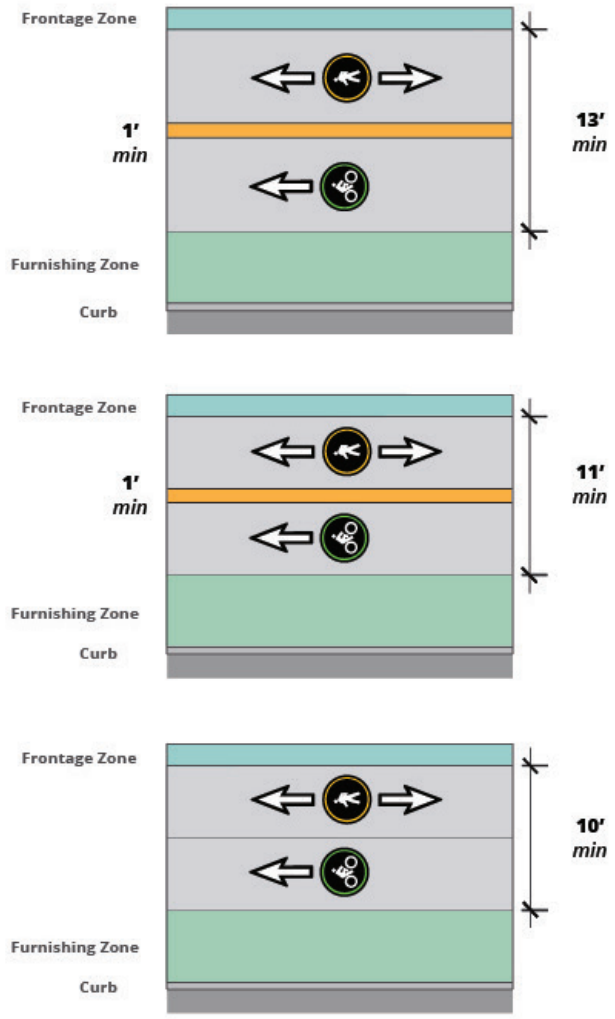


Figure B-23: Process for allocating multi-use path zone widths in constrained conditions

- **Constrained Conditions.** In the case of constrained conditions, allocation of right-of-way space should follow the schematic outlined in Figure B-23.

Step 4

For street design classifications where the Furnishing Zone is over 4 feet, the Furnishing Zone may be reduced to 4 feet.

Step 5

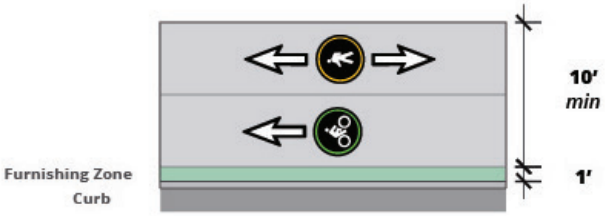
For street design classifications where the Furnishing Zone is 4 feet, the Furnishing Zone may be reduced to 3 feet.

Step 6

f the street meets the requirements for curb-tight sidewalks, the Furnishing Zone my be reduced to 1 foot.

Step 7

If needed to maintain a 10 foot MUP and a 1 foot Furnishing Zone, the Frontage Zone may be eliminated. This should only occur in zones where buildings have a required setback, such as industrial or residential zones, and are not built at the property line.



B.5 Variations for Sidewalks Requiring Approval

All sidewalk variations in this section require either a design exception (for capital projects) or a Public Works Alternative Review request (as part of improvements to the right-of-way associated with development on private property), unless the property meets all of the conditions in TRN 1.22 Infill Development on Streets with an Existing Sidewalk Corridor, in which case they will be granted an administrative exception.

B.5.1 Constrained Site Condition Process

When the sidewalk corridor widths prescribed in Table B-3 cannot be accommodated due to topographic constraints, existing site conditions, or environmental hazards (e.g., landslide risk), the following process for modifying sidewalk width requirements will apply in the following sequence (Figure B-24):

- First, the Frontage Zone may be reduced, if needed, but not below 0.5 feet for any sidewalk corridor. It should be noted that decreases in Frontage Zone widths will eliminate the possibility of future Frontage Zone uses identified in Table B-2.

Step 1

The Frontage Zone may be reduced, if needed, but not below 0.5 feet for any sidewalk corridor. Decreases in Frontage Zone widths will eliminate the possibility of future Frontage Zone uses.

Step 2

For Street Design Classifications where the Furnishing Zone width recommendation is over 4 feet, the Furnishing Zone may be reduced to 4 feet.

Step 3

For Street Design Classifications where the Pedestrian Through Zone is a minimum of 8 feet wide, the Pedestrian Through Zone may be reduced to 6 feet wide.

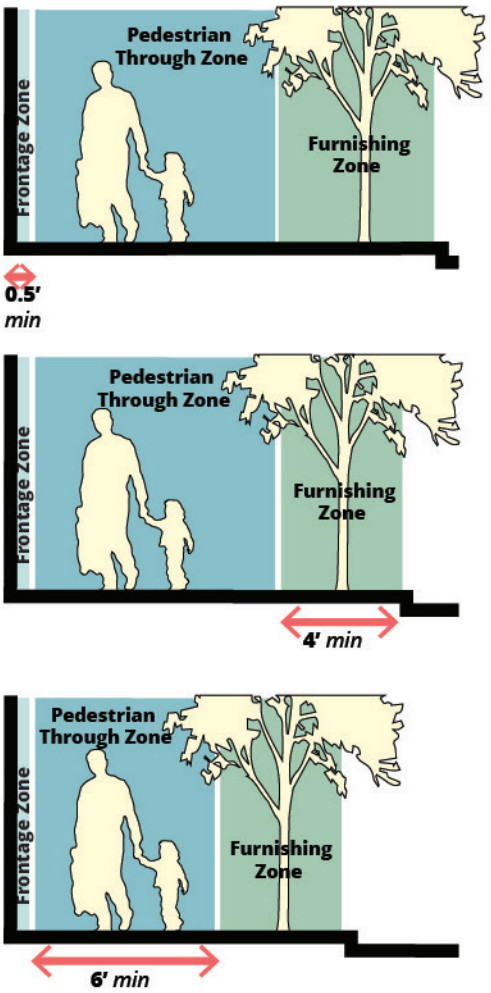
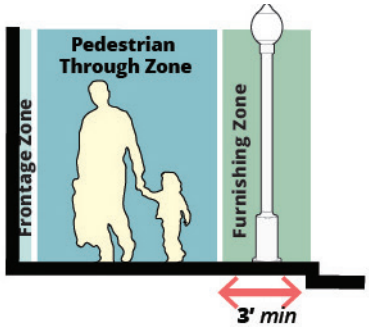


Figure B-24: Process for allocating sidewalk corridor width in constrained conditions

- Second, for Street Design Classifications where the Furnishing Zone width recommendation is over 4 feet, the Furnishing Zone may be reduced to 4 feet.
- Third, for Street Design Classifications where the Pedestrian Through Zone is a minimum of 8 feet wide, the Pedestrian Through Zone may be reduced to 6 feet.
- Fourth, for Street Design Classifications where the Furnishing Zone is 4 feet, the Furnishing Zone may be reduced to 3 feet. Per Chapter 11.50.060 of City Code, trees may be planted in furnishing zones that are 3 feet or wider.
- Fifth, the Furnishing Zone may be reduced below 3 feet to provide a "curb tight" sidewalk. Curb tight sidewalks must meet the conditions and design requirements outlined in Section B.5.2.
- Finally, if needed to maintain a 6 foot Pedestrian Through Zone and a 1 foot Furnishing Zone, the Frontage Zone may be eliminated. This last step may only occur in zones where buildings are set back from the property line.

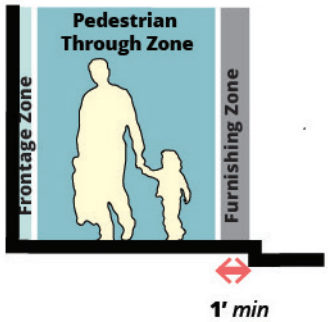
Step 4

For street design classifications where the Furnishing Zone is 4 feet, the Furnishing Zone may be reduced to 3 feet.



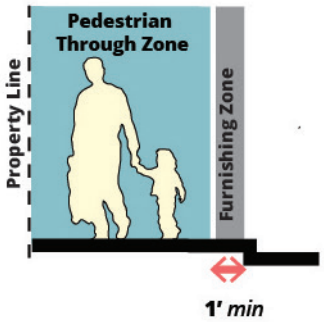
Step 5

If the above sequential adjustments still do not allow for a sidewalk to fit within the site's constrained conditions, the Furnishing Zone may be reduced below 4 feet to provide a "curb tight" sidewalk. Curb tight sidewalks must meet the conditions and design requirements outlined in B.5.2



Step 6

Lastly, if needed to maintain a 6 ft sidewalk corridor and a 1 foot Furnishing Zone, the Frontage Zone may be eliminated. This should only occur in zones where buildings have a required setback, such as industrial or residential zones, and are not built at the property line.



B.5.2 Curb-Tight Sidewalks

Curb-tight sidewalks are sidewalk corridors that are paved up to the curb – there is no vegetation in the Furnishing Zone. That said, there is still a Furnishing Zone that may contain utilities or other small sidewalk corridor needs, but it will be paved and have the same surface treatment as the Pedestrian Through Zone.

Curb-tight sidewalks are not desirable, as they lack the space needed to make a complete, comfortable sidewalk corridor; allow street trees; or buffer pedestrians from roadway traffic. Curb-tight sidewalks should be used sparingly, either because of extremely limited right-of-way or because of the continuation of adjacent existing curb-tight sidewalks (as pursuant to TRN 1.22 - Infill Development on Streets with an Existing Sidewalk Corridor). Curb-tight sidewalks may be continuous or episodic.

Capital projects should attempt to acquire right-of-way sufficient to provide sidewalk widths in Table B-3 before seeking a design exception to provide curb-tight sidewalks. The capital project process includes providing notification to property owners along frontages where sidewalk will be constructed and giving them the opportunity to dedicate right-of-way to the sidewalk project where there is not sufficient room to build sidewalks in accordance with Table B-3. Property owners who chose not to dedicate right-of-way to the sidewalk project at the time of construction are notified that the City-constructed curb-tight sidewalk will be deemed a temporary safety improvement and, as such, property owners may be required to dedicate additional right-of-way and reconstruct the sidewalk in accordance with Table B-3 if triggered by future development or redevelopment of the property. All sidewalk projects, including projects providing curb-tight sidewalks, are subject to stormwater management and street tree requirements.

Figure B-25 shows the required dimensions for curb-tight sidewalks. The paved area, which includes the Furnishing Zone and the Pedestrian Through Zone will be 7 feet wide (with an additional 6 inches for the curb), with a 6-foot-wide Pedestrian Through Zone. All utility poles, signage, street trees, etc. must be located within the Furnishing Zone, which may require purchasing an easement or additional right-of-way from the property owner if pinch point dimensional requirements illustrated in Figure B-25 cannot be met for capital projects.

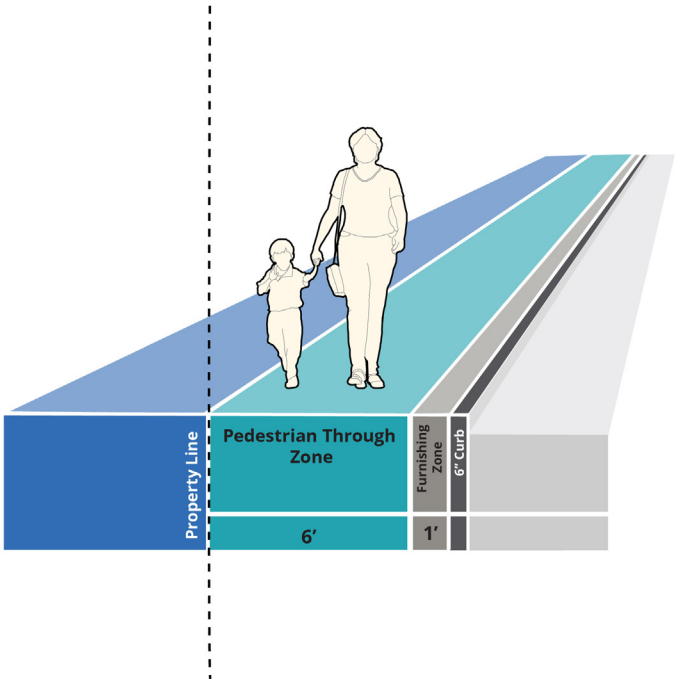


Figure B-25: Curb-tight sidewalk zone widths

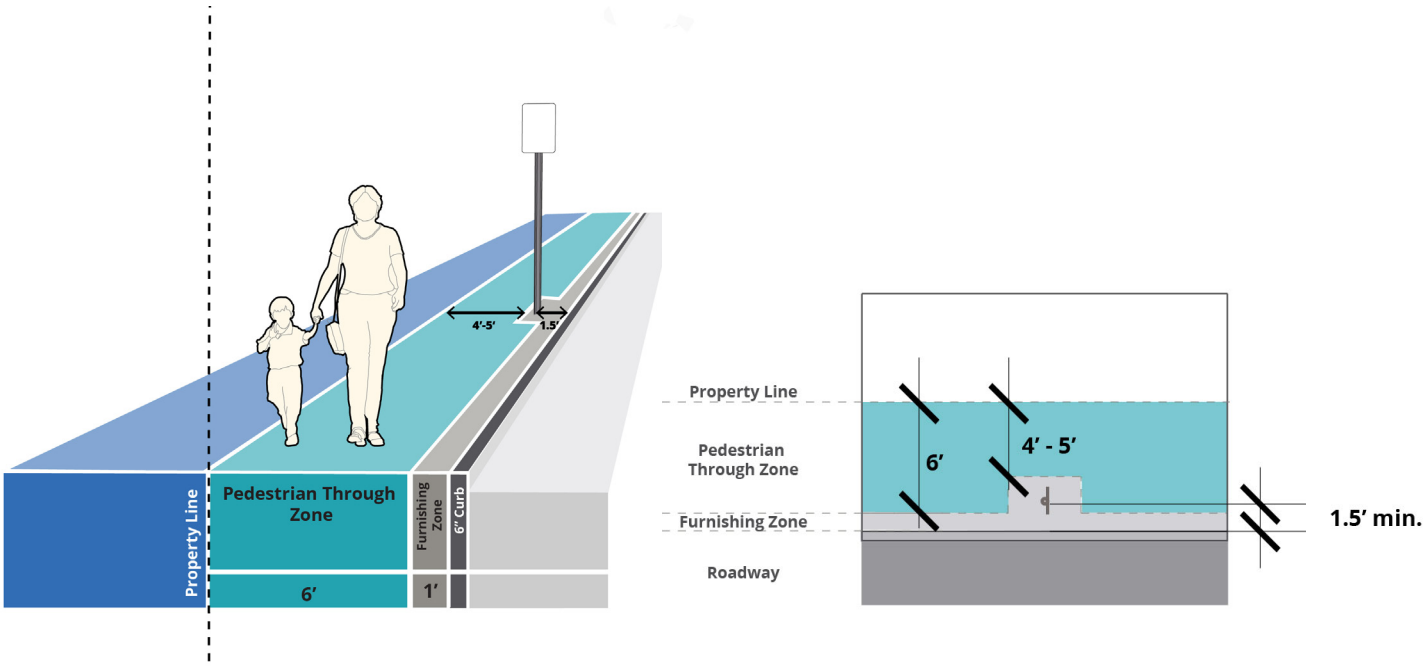


Figure B-26: Pinch point schematic for curb-tight sidewalk corridors

If needed, pinch points may be necessary to locate utilities along a curb-tight sidewalk. Figure B-26 shows an example placement for a utility pole, which needs to be placed, at minimum, 1.5 feet from the curb. The Pedestrian Through Zone shall never be reduced to less than 4 feet and this reduced width shall extend the shortest length possible to allow greater width for pedestrian travel along the sidewalk corridor.

- **Circumstances allowed.** Curb tight sidewalks are only allowed in the following circumstances:
  - » As part of Capital Improvement Program projects when there is not sufficient ROW for a standard sidewalk (in this case they will be deemed "temporary" safety improvements[1])
  - » PBOT Development Review may permit an existing curb tight sidewalk to remain in accordance with TRN 1.22 Infill Development of Streets with an Existing Sidewalk Corridor.
  - » Along topographically or otherwise constrained frontages where site conditions preclude constructing a full-width sidewalk.
  - » The street should have a Local Street traffic classification (per the City's Transportation System Plan). If it has a traffic classification of an Arterial or Collector, the street should not have an auto travel lane adjacent to curb.
  - » The sidewalk is an outcome of a Local Improvement District and curb-tight sidewalks have been approved by the LID agreement. Curb-tight sidewalks built through an LID are considered a permanent improvement

Under all other circumstances, reconstruction of existing curb-tight sidewalks to provide a separated sidewalk in accordance with Table B-3 is required.

1 As part of the capital project process letters are sent to property owners where there is not adequate right-of-way available to construct a full width sidewalk informing property owners of the opportunity to voluntarily dedicate right-of-way for the sidewalk construction. When property owners do decide to voluntarily dedicate right-of-way PBOT constructs a full width sidewalk in accordance with Table B-1. When property owners choose not to dedicate right-of-way to the sidewalk project, PBOT constructs a "temporary" curb-tight sidewalk, and property owners are notified that they may be required to reconstruct the sidewalk in accordance with Table B-2 if or when the property comes in for a development application (unless the property is subject to the provisions of TRN 1.22)

B.5.3 Extending the Furnishing Zone into the Curb Zone

Extending the Furnishing Zone into the curb zone is an optional strategy requested by an applicant or employed as part of capital projects that can increase available space for a Furnishing Zone. This approach may be appropriate where there is not enough right-of-way width to accommodate trees or stormwater facilities within the Furnishing Zone or where larger soil volumes are desired. This strategy may be approved by PBOT if all the following site conditions are present (at a minimum):

- The street is classified as a Local Street, Neighborhood Main Street, or Civic Main Street.
- There is existing on-street parking.
- There is not sufficient room within the sidewalk corridor for a full width Furnishing Zone, per Table B-3 or additional soil volume for trees or stormwater facilities is desired.
- Underground utilities (e.g., water, gas, etc.) are not located within prohibitive distances from where a tree would be planted or stormwater facility within the extension. Refer to the City Tree Planting Standards and standard drawing P-581 Typical Street Tree Installation, and the Stormwater Management Manual for more details.
- Movement of emergency response vehicles is not negatively impacted and curb extensions into the curb zone do not create traffic circulation impacts associated with modifying curb-to-curb pavement widths.
- There is not a curb extension moratorium on the street. The street is not identified in the City's Curb Extension Policy Exemption Map referenced in TRN 1.28 - Curb Extensions for Building and Planning Actions.

Where extending the furnishing zone into the curb zone is being considered as part of PBOT capital project or as part of a frontage improvement application, PBOT staff will evaluate each of the factors above with Portland Parks and Recreation Urban Forestry staff and make a determination based on these non-exhaustive criteria to determine if curb extensions for trees and stormwater facilities are appropriate. In addition, implications for extending the furnishing zone for bicycle circulation and transit priority should also be considered.

Figure B-27: San Francisco uses curb space to increase the available room for tree canopy on select streets with on-street parking.

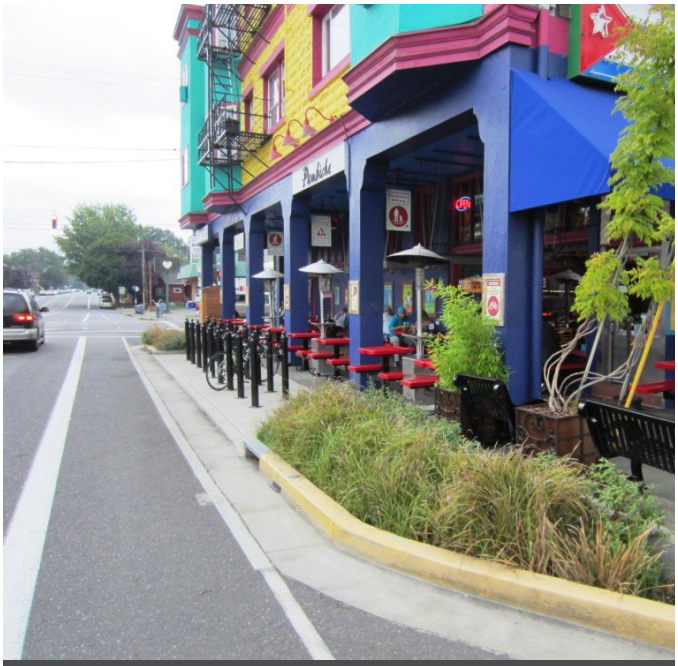
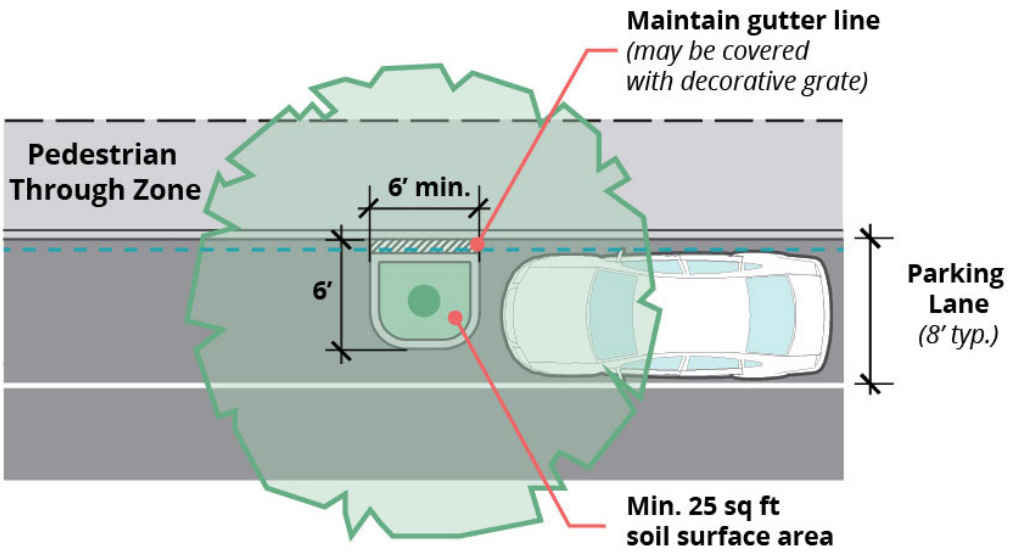


Figure B-28: The curb zone can serve as a location for stormwater facilities is a full frontage zone is not available.

Figure B-29 shows two options for extending the Furnishing Zone into the curb zone – Option A would be for a situation where there is not a Furnishing Zone, and Option B is for a situation where there is an existing Furnishing Zone. Whether a gutter line is necessary, in either case, should be determined based on stormwater analysis.

Figure B-29 also shows the minimum size for a Furnishing Zone extension. As available, an extension can be increased in size along the sidewalk corridor to increase the available space for stormwater facilities of street trees by increasing soil volumes or other Furnishing Zone functions. Extensions can extend up to 6 feet from the adjacent curb line in order to clearly communicate a break in on-street parking and not intrude into a travel lane.

Option A



Option B

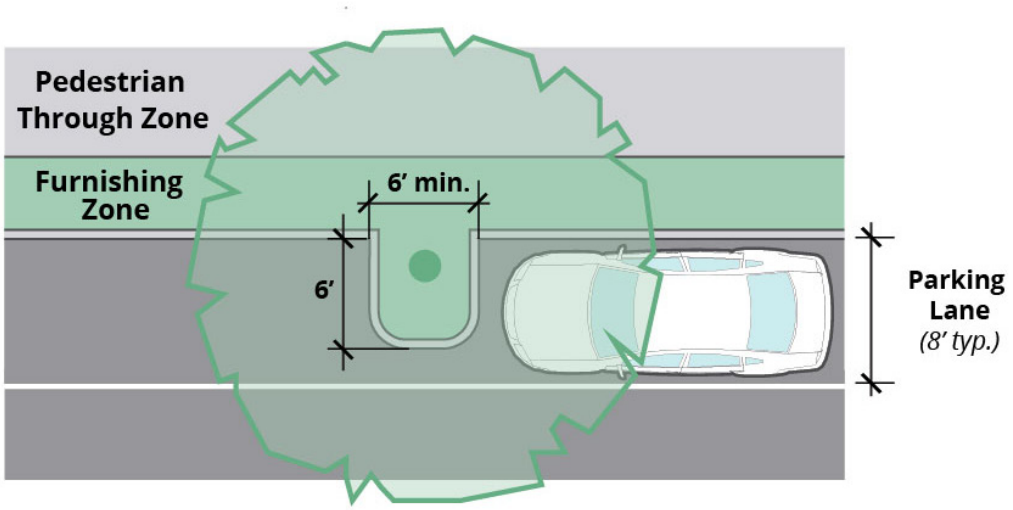


Figure B-29: Options for extending tree wells into the curb zone

B.5.4 Alternative Pedestrian Walkways

Alternative Pedestrian Walkways are pedestrian facilities that provide an alternative to sidewalks, when geography, topography, or neighborhood preference do not allow a full sidewalk to be constructed. Alternative Pedestrian Walkways differ from traditional sidewalks in several ways. In some cases, they use different materials (which must meet ADA standards), may not be aligned with a roadway, or might involve sharing space with other modes. The selective use of Alternative Pedestrian Walkways allows for addressing constraints in the transportation system so that opportunities for public pedestrian access are not lost.

The standard required walkway treatment is the City standard sidewalk, which requires a concrete sidewalk separated physically from the roadway by a concrete curb. Alternative Pedestrian Walkways may be approved at the discretion of PBOT staff when site constraints preclude the provision of a City standard sidewalk and they can be installed in compliance with the City's Stormwater Management Manual requirements.

Proposals for Alternative Pedestrian Walkways must go through the Public Works Alternative Review process for approval (in the case of private frontage improvements) or a Design Exception Process (in the case of capital projects). These processes will ensure that the Alternative Pedestrian Walkway is appropriate for the situation and that the walkway meets ADA requirements.

Alternative Pedestrian Walkways may be permitted at the discretion of PBOT staff in the following circumstances:

- When there are topographic constraints along the roadway that preclude the provision of a traditional street or sidewalk and the criteria in Table B-6 are met
- When there is documented neighborhood preference (such as within an adopted neighborhood plan or as expressed as part of an outreach process) for an Alternative Pedestrian Walkway in lieu of a traditional concrete sidewalk and the criteria in Table B-6 are met
- In the case of Pedestrian/Bicycle Connections, to fulfill the City's pedestrian connectivity requirements of having a pedestrian connection every 330 feet, at minimum, per City Code 17.88.040 Through Streets
- When agreed upon as part of a Local Improvement District

Table B-6 provides the street design and operational thresholds required for each of the Alternative Pedestrian Walkway types. The following sections provide additional requirements for each of the Alternative Pedestrian Walkway types.

Table B-6: Alternative Pedestrian Walkway considerations and requirements

Alternative Pedestrian Walkway Type	Separation From Roadway	Requires Adjacent Roadway	Street Design Classification	Max Speed Limit	Max Vehicle Volume	Traffic Calming Required	Permanent or Temporary
Sidewalk on one side	Curb and, potentially Frontage Zone between walkway and roadway	Yes	Local; Civic, Neighborhood, or Community Corridor; Industrial; Neighborhood Main Street	n/a	n/a	No	permanent
Pedestrian Path Connector	n/a	No	Local	n/a	n/a	n/a	permanent
Pedestrian Shared Street	None	Yes	Local	15mph	500 vehicles/ day	Yes	permanent
Slow Safer Shoulder	Painted separation	Yes	Local	20mph	3,000 vehicles/ day	Yes	temporary
Protected Safer Shoulder	Vertical barrier between pedestrian area and roadway	Yes	Corridor	35mph	n/a	No	temporary
Separated Walkway	Separated by swale, ditch, or landscaping	Yes	Local, Corridor	n/a	n/a	No	permanent

B.5.4.a Sidewalk on One Side of the Roadway

While the City's standard requires sidewalks on both sides of the roadway, there are some situations when development patterns, topography, or other constraints may render sidewalks on both sides of the street infeasible. Ideally, the preferred side of the street for the sidewalk is the side with fewer impacts to existing or new trees (taking into consideration potential conflicts with overhead utilities).

The following minimum conditions should be met for a sidewalk on one side of the roadway to be approved:

- Sidewalks on both sides of the roadway are infeasible due to development patterns, topographic constraints, or other constraints as determined by the City Engineer.
- Existing sidewalk widths should ideally align or exceed those defined in Table B-3.
- Lighting levels should meet the minimums specified in the City of Portland Recommended Light Levels and Guidelines for Roadway Lighting.
- Tree planting requirements should meet Title 11 Tree Code requirements.

Figure B-30: A sidewalk on one side of the street, while not ideal, can improve accessibility along a corridor in cases where a full sidewalk build-out is not possible.

- Where transit is provided along a street with sidewalk on one side, marked crosswalks should be provided at all transit stops.
- Where transit is provided along a street with sidewalk on one side, concrete bus loading pads should be provided on the non-sidewalk side.

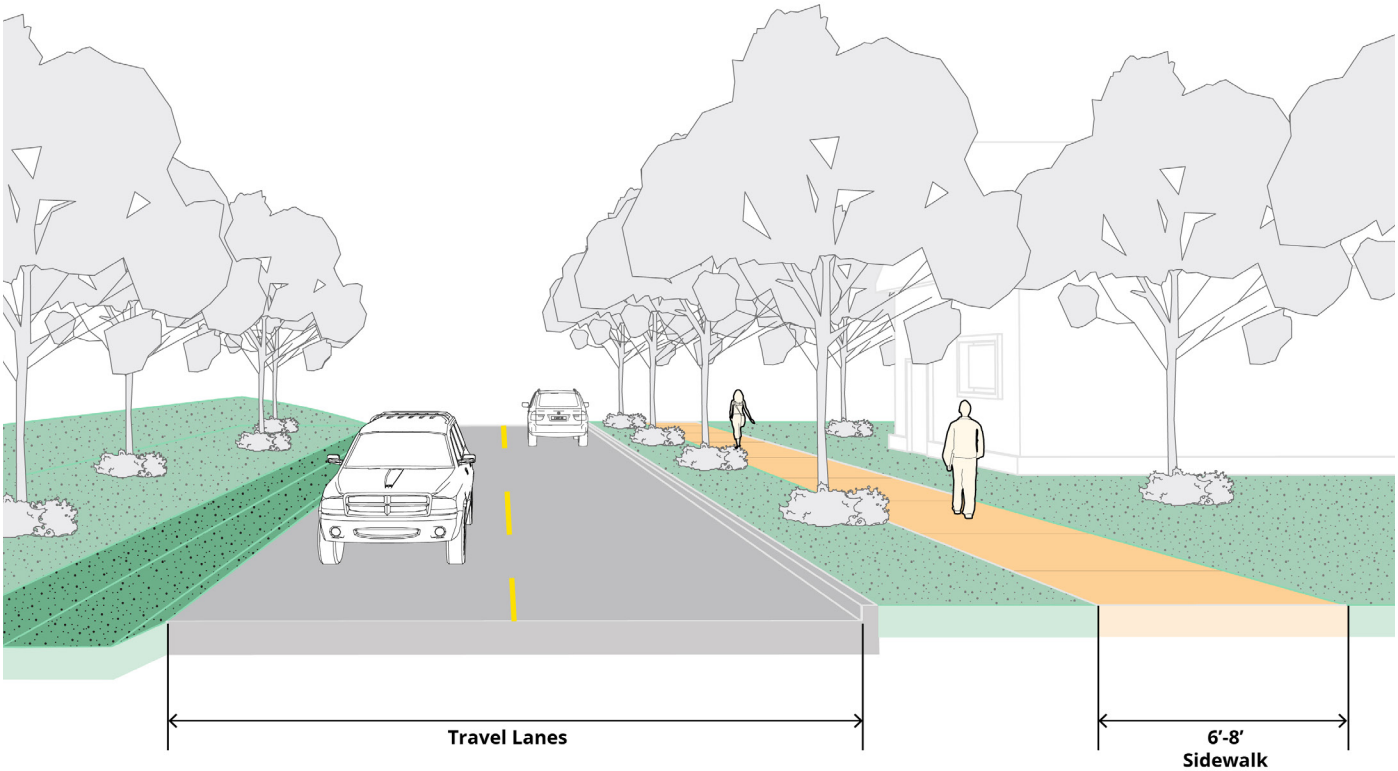


Figure B-31: Sidewalk on One Side of Roadway

B.5.4.b Pedestrian/Bicycle Connection

A **Pedestrian/Bicycle Connection** provides a short walkway segment in a public right-of-way, independent from motor vehicular traffic. Pedestrian/Bicycle Connections are typically located mid-block, with no adjacent roadway. They may be provided on rights-of-way that are too steep to provide a traditional full roadway connection, or to fulfill the City's pedestrian connectivity requirements of having a pedestrian connection every 330 feet, at minimum, per City Code 17.88.040 Through Streets.

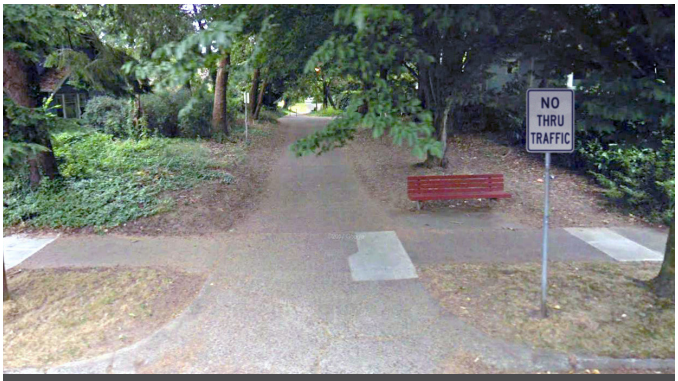


Figure B-32: The NE Klickitat St Esplanade in NE Portland crosses multiple streets to connect into Irving Park.

The following minimum conditions should be met to approve a Pedestrian/Bicycle Connection:

- The right-of-way should have a Local Street Design Classification.
- Facilities should be designed to accommodate both pedestrian and bicycle travel wherever possible.
- The paved portion of a Pedestrian/Bicycle Connection must be, at minimum, 6 feet. Between 6 and 10 feet, these paths are appropriate for pedestrian-only use and should be prioritized for pedestrians, but will most likely also be used by bicyclists so should acknowledge that in any design decisions (e.g., signage). Wider Pedestrian Path Connections over 10 feet may be designed for bicycle and pedestrian use. Refer to Section B.4.2 Multi-Use Paths for direction on widths and required mode separation.
- The pathway surface must be paved using cement concrete, asphalt concrete, or other hardscape material. Gravel and dirt pathways are not permitted on Pedestrian/Bicycle Connections.

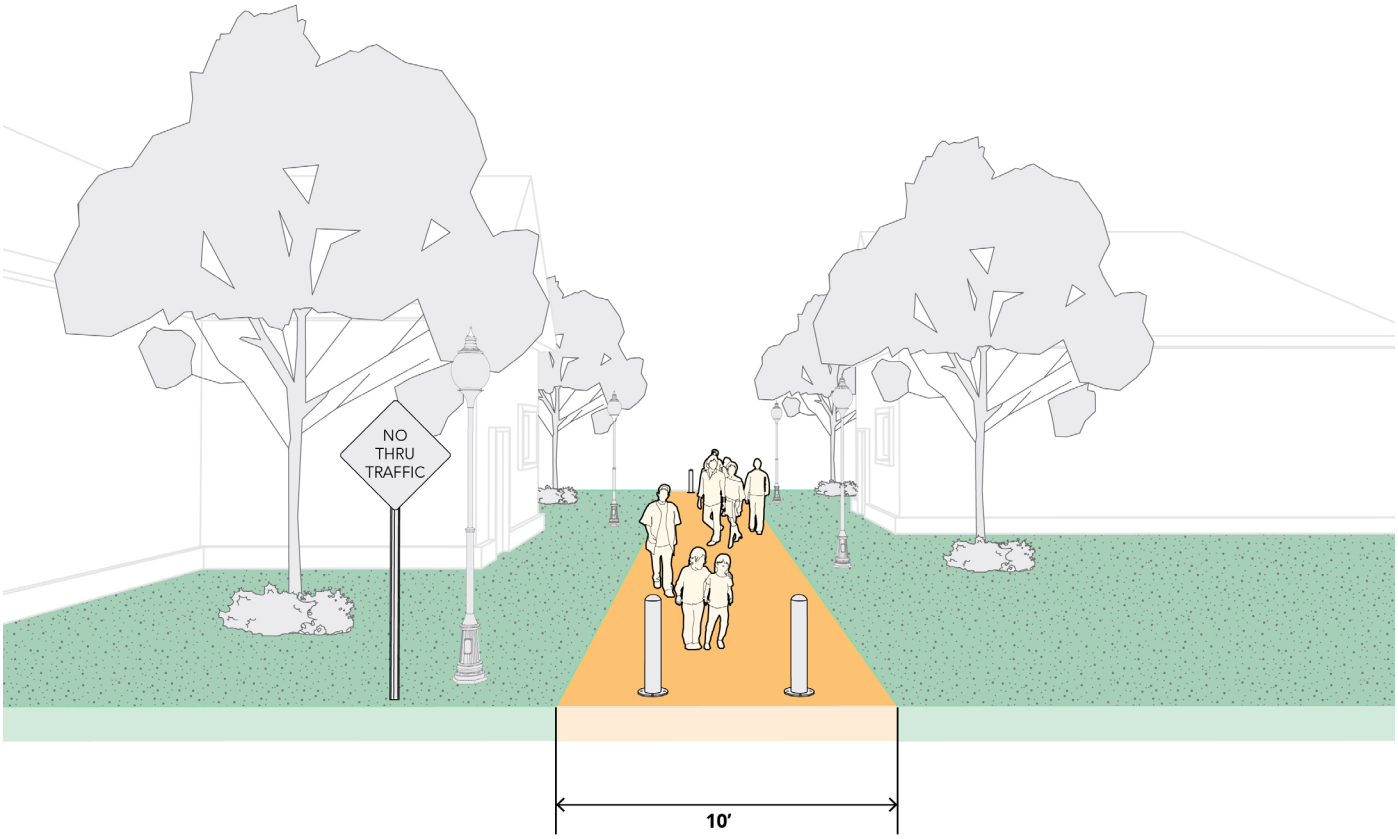


Figure B-33: Pedestrian/Bicycle Connection

- To the extent possible, Pedestrian/Bicycle Connection need to meet the requirements of ADA. Acceptable non-compliance would be where following the topography requires a running slope that is steeper than ADA allowance.
- Where topography is too steep for a path, a staircase may be used. Per ADA requirements, an alternate accessible path must be available and signage identifying that alternate route must be posted. The alternate accessible path requirement, may be met along the existing street grid (designs should meet accessibility guidelines to the maximum extent possible). If a stairway is built, it must meet ADA standards for stairways. Figure B-35 includes design guidance for a public stairway built as part of a Pedestrian/Bicycle Connection. Stairways may be used to comply with the connectivity requirements in Portland City Code 17.88.40.
- The pathway should meet MUP lighting requirements as specified in the City of Portland Recommended Light Levels and Guidelines for Roadway Lighting.

Figure B-34: A staircase off SW Terwilliger Blvd in Southwest Portland provides a direct connection for pedestrians to reach OHSU. An accessible route is provided on the nearest full street connection.

- Pedestrian/Bicycle Connections will satisfy code requirements for pedestrian connectivity, as defined in Portland City Code 17.88.040 Through Streets.
- Bollards may be used at street openings, where appropriate, to discourage unwanted use by motor vehicles.

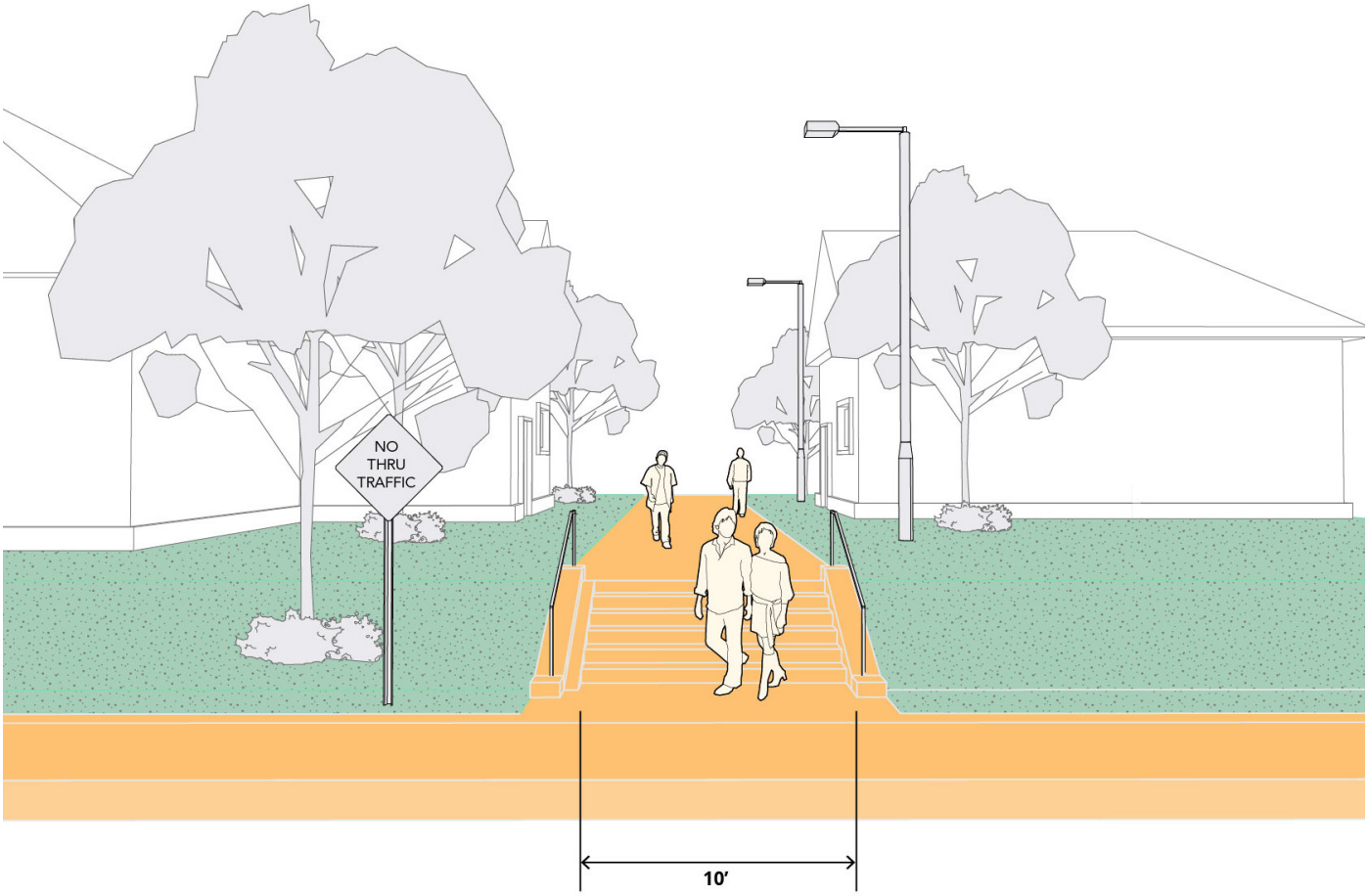


Figure B-35: Pedestrian/Bicycle Connection - stairway

B.5.4.c Pedestrian Shared Street

A **Pedestrian Shared Street** is designed to serve people walking, biking, and driving on a shared travelway on very low-volume and low-speed streets. **Pedestrian Shared Streets are intended to be used in conjunction with capital projects and are not intended to be used in conjunction with private development.**

The following minimum conditions should be met for a Pedestrian Shared Street to be approved:

- The right-of-way must have a Local Street design classification, posted speed limit equal or less than 15 mph, and a maximum vehicle volume of 500 vehicles per day.
- A Pedestrian Shared Street should be designed to match the requirements of a "Shared Residential Street" as defined by City Ordinance #185759 and a "Narrow Residential Roadway" as defined by ORS 801.368.
- Total travelway shall not exceed 18 feet to facilitate slow vehicle speeds.
- Lighting requirements as specified in the City of Portland Recommended Light Levels and Guidelines for Roadway Lighting should be met.

Figure B-36: SW 19th Ave is a new pedestrian shared street in Southwest Portland. This street is designed and signed for 15 mph travel, and includes PBOT "Shared Street" signs.

- "Shared Street" signs must be provided at the beginning and end of the Pedestrian Shared Street segment, per ORS 801.368.
- No centerline marking should be used on Pedestrian Shared Streets.
- Traffic calming tools such as speed humps or horizontal shifts in the road should be provided to create slow vehicle operating conditions.
- *Optional:* Stormwater, landscaping, and/or trees may be located within the shoulder area at regular intervals to visually and physically narrow the corridor, add to the aesthetic environment, and encourage slow speeds.

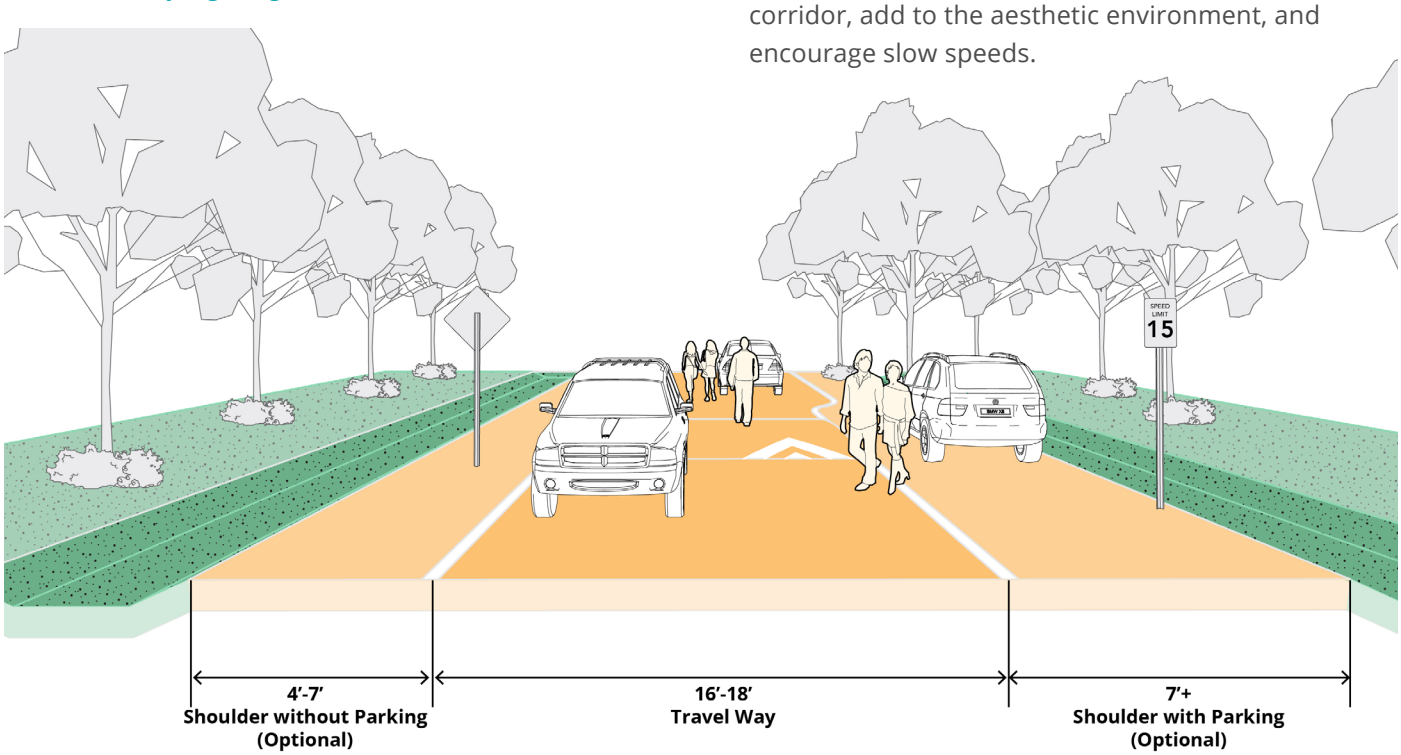


Figure B-37: Pedestrian Shared Street

B.5.4.d Slow Safer Shoulder

A **Slow Safer Shoulder** is a paved roadway shoulder delineated with lane striping, intended to provide pedestrian accommodation separated from moving traffic. This treatment is appropriate on local streets and works best paired with traffic calming to create slow operating conditions.

The following minimum conditions should be met for Slow Safer Shoulders to be approved:

- The right-of-way must have a Local Street Design Classification, posted speed limit equal or less than 20mph, and a maximum vehicle volume of 3,000 vehicles per day.
- Walkway width should be 8 feet but may be reduced to 6 feet in constrained locations.
- Lighting requirements as specified in the City of Portland Recommended Light Levels and Guidelines for Roadway Lighting should be met.
- A double white line should be painted between travel lanes and shoulder walkway. Where extra space is available, mark as buffer separation.
- Vehicles should be prohibited from parking on Slow Safer Shoulder through signs and markings.

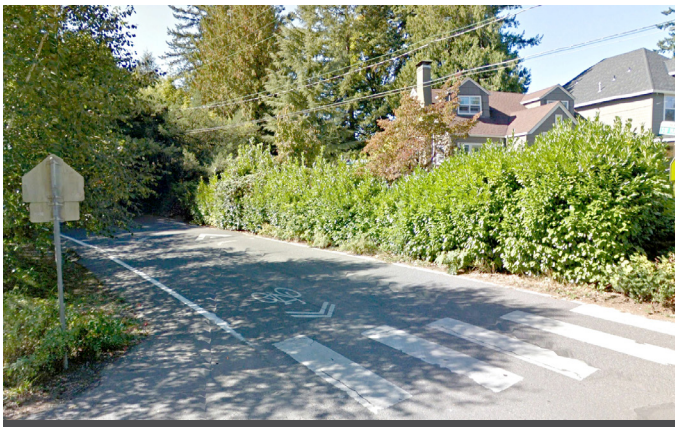


Figure B-38: SE Maplewood Road in Southwest Portland combines a slow safer shoulder with a neighborhood greenway route. Bicyclists and motor vehicles operate in a shared travel area. Pedestrians travel on the striped shoulder.

- Tactile warning surface indicators should be used to indicate intersection crossing areas and side street crossing should be marked.
- If there is not enough space for an 8 foot shoulder and 3 foot buffer, the shoulder should be decreased to 6 feet before the buffer width is decreased.
- *Optional:* Provide traffic calming elements when speed and volume thresholds are not met e.g., posted speed reductions, removing center lines, narrowing travel lanes.

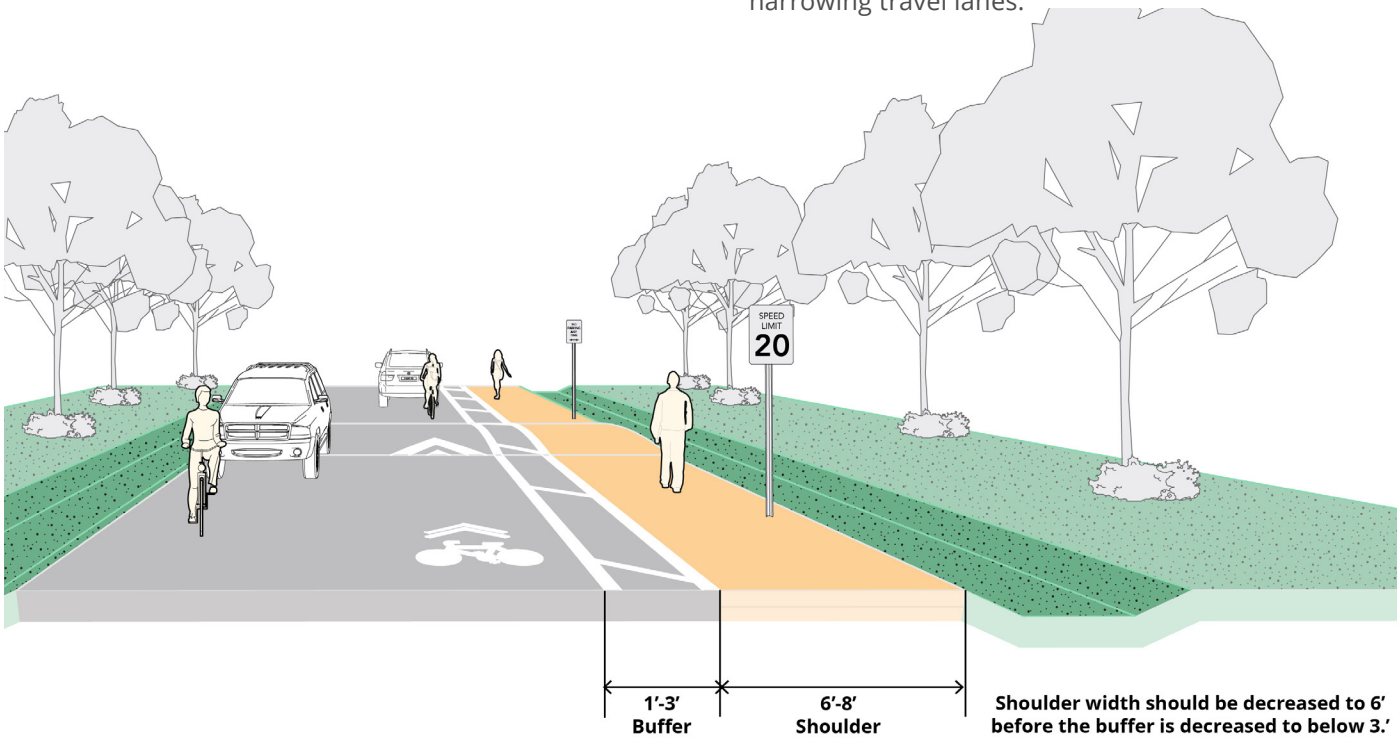


Figure B-39: Slow Safer Shoulder

B.5.4.e Protected Safer Shoulder

Protected Safer Shoulders are paved roadway shoulders, delineated with lane striping and separated from moving traffic with a physical barrier, such as delineator posts or a traffic separator. Permeable or pervious pavement may be used, as possible.

The following minimum conditions should be met for Protected Safer Shoulders to be approved:

- The right-of-way must have a Local or Corridor Street Design Classification and have posted speed limits equal or less than 35 mph.
- Minimum walkway width should be 6 feet (clear).
- Acceptable separation methods may include delineator posts or traffic separators which should be 1 to 3 feet in width.
- Side street crossings should be marked.
- If intended for use by bicyclists, widths and markings should comply with section B.4.2 Multi-Use Paths.
- Lighting requirements as specified in the City of Portland Recommended Light Levels and Guidelines for Roadway Lighting should be met.
- Vehicles should be prohibited from parking on Protected Safer Shoulders through signs and markings where there are gaps in delineation.
- Tactile warning surface indicators should be used to indicate intersection crossing areas.

Figure B-40: This Protected Safer Shoulder on NE 60th increases pedestrian access for a one mile stretch of between NE Going and NE Lombard Streets in the Cully Neighborhood.

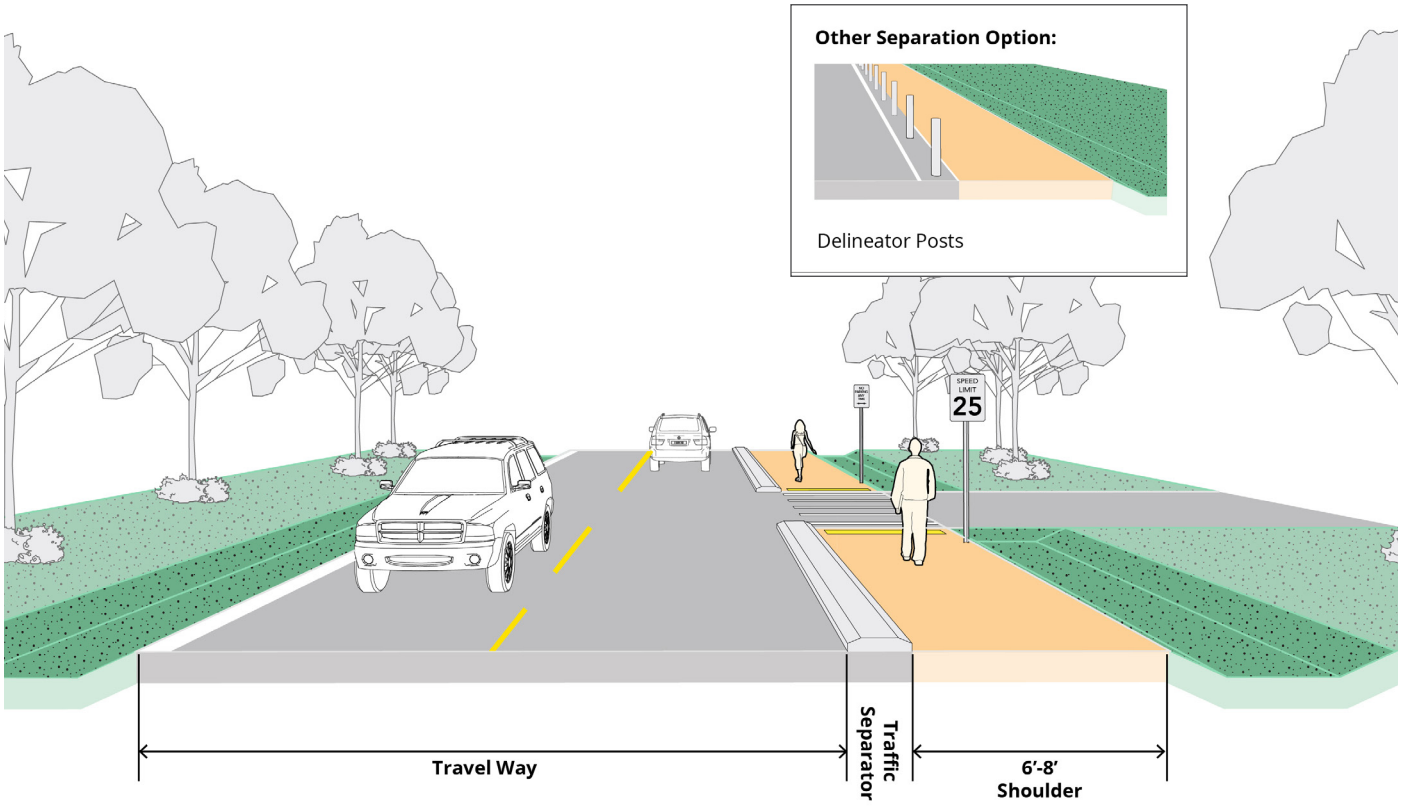


Figure B-41: Protected Safer Shoulder

B.5.4.f Separated Walkway

On streets without curbs, a **Separated Walkway** provides an exclusive pedestrian walkway separated from the roadway with an unpaved area. The separation area may integrate a swale, ditch or landscaping.

The following minimum conditions should be met for Separated Walkways to be approved:

- The right-of-way must have a Local or Corridor Street Design Classification.
- Minimum walkway width should be 6 feet (clear).
- The area between the roadway and walkway should, at minimum, meet the Frontage Zone widths required in Table B-3.
- If intended for use by bicyclists, widths and markings should comply with section B.4.2 Multi-Use Paths.
- Lighting requirements as specified in the City of Portland Recommended Light Levels and Guidelines for Roadway Lighting should be met.
- Tree planting requirements should meet Title 11 Tree Code requirements.

Figure B-42: SW Taylors Ferry Road in Southwest Portland doesn't meet minimum widths, but provides an unpaved separation from the roadway.

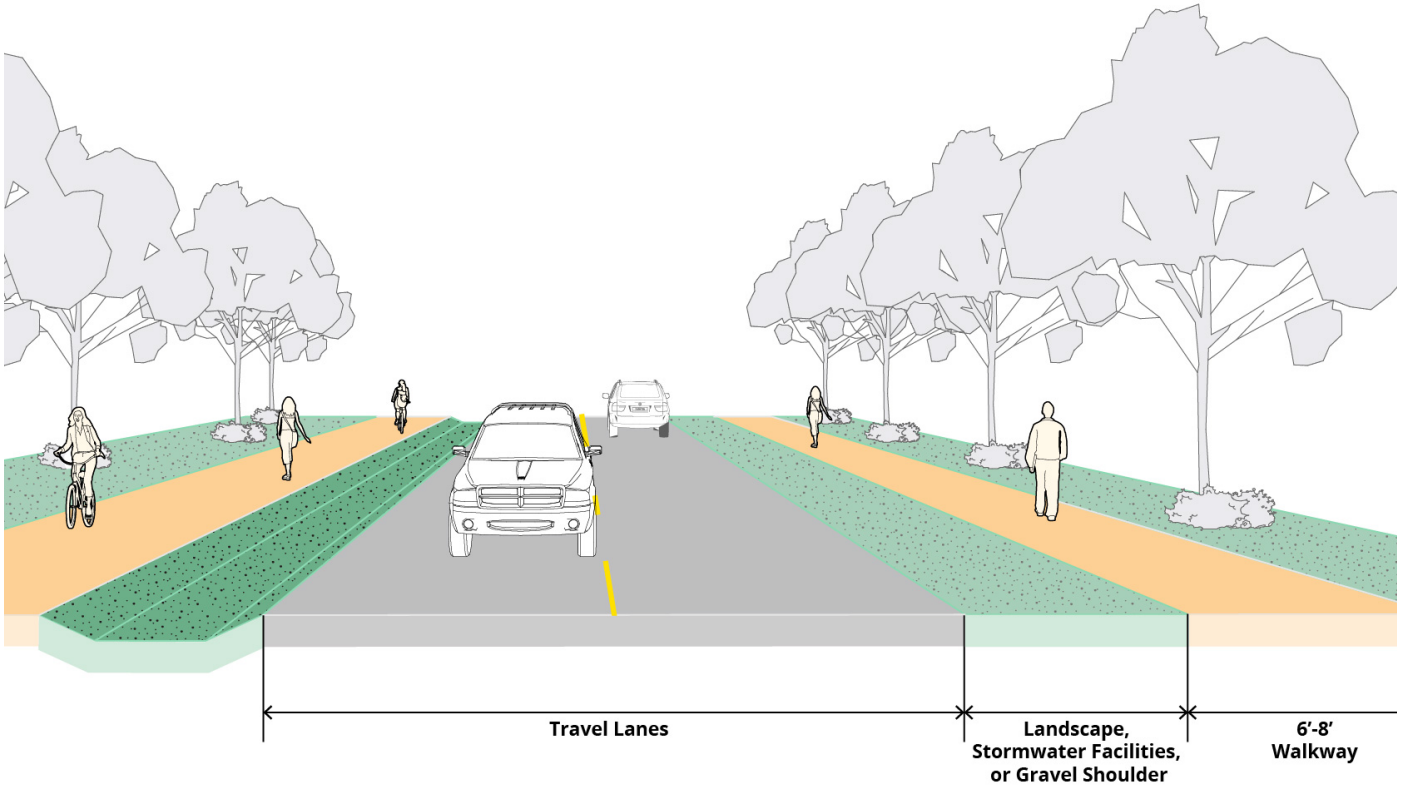


Figure B-43: Seperated Walkway

B.6 Maintenance Responsibilities for the Sidewalk Corridor

In accordance with Portland City Code, property owners are responsible for constructing and maintaining sidewalks. PBOT's sidewalk repair program notifies property owners when cracked or damaged sidewalks along a property must be repaired. However, there are elements within the sidewalk corridor that are not addressed by the PBOT Sidewalk Repair program.

Table B-7 below identifies the party responsible for maintaining elements within the sidewalk corridor after construction is complete.

Table B-7: Sidewalk Elements and Party Responsible for Maintenance after Construction

Sidewalk Corridor Element	Party Responsible for Maintenance after Construction	Relevant City Code Section (if applicable)
Sidewalk pavement	Adjacent property owner	17.28.020
Vegetation/street trees within the furnishing zone	Adjacent property owner	11.60.060
Tree grates/mulch/artificial mulch within tree wells	Adjacent property owner	17.28.020
Vegetation overgrowth from private property	Adjacent property owner	16.70.800
Sidewalk level bike lanes	PBOT	17.28.020
Corners and curb ramps	PBOT	17.28.020
Curbs [2]	PBOT	17.28.020
Multi-use path	PBOT	17.28.020

2 Curbs that are part of or monolithic to the sidewalk are the responsibility of the adjacent property owner. In addition, the property owner is responsible for curb damage due to incidents and tree root damage.

C. Corners and Crossings

CONTENT FORTHCOMING

Glossary

Accessible route - in the ADA, a continuous route on private property that is accessible to persons with disabilities. There must be at least one accessible route linking the public sidewalk to each accessible building. See also "Continuous path."

ADA - Americans with Disabilities Act of 1990; broad legislation mandating provision of access to employment, services, and the built environment to those with disabilities.

Alternative Pathway - a design for a pedestrian facility along a roadway that is an alternative to a standard sidewalk with curb.

Connector pathway - a walkway, trail, stair or other pedestrian facility not situated along a street. This may occur as a pathway within a public right-of-way where no street has been built, in a public walkway easement on private property, or as a path in a park or other open space.

Continuous path - per the ADA, a continuous, unobstructed pedestrian circulation path within a public sidewalk connecting pedestrian areas, elements and facilities in the public right-of-way to accessible routes on adjacent sites.

Cross slope - the slope of the sidewalk across the usual line of travel.

Curb extension - an area where the sidewalk and curb are extended into the parking lane, usually in order to shorten pedestrian crossing distance. Also called "bulb-out" or "curb bulb."

Curb Zone - the portion of the Sidewalk Corridor that physically separates the sidewalk from the roadway.

Development - all improvements on a site, including buildings, other structures, parking and loading areas, landscaping, paved or graveled areas, and areas devoted to exterior display, storage or activities which create the need for additional usage or construction of public infrastructure.

Frontage - the length of public right-of-way adjacent to a property, measured in feet.

Frontage Zone - a linear portion of the Sidewalk Corridor, adjacent to the edge of the right-of-way (or property line).

Furnishing Zone - a linear portion of the Sidewalk Corridor, adjacent to the curb that contains elements such as street trees, signal poles, utility poles, streetlights, controller boxes, hydrants, traffic signs, street signs, parking signs, parking meters, driveway aprons, planting strip, or street furniture.

Grade separation - the separation of a pedestrian facility from facilities for vehicular movement by placing the facilities at different vertical elevations. Examples include pedestrian overpasses and underpasses.

Local Service Walkway - pedestrian classification in the Transportation Element of the Comprehensive Plan. Local Service Walkways are intended to provide safe and convenient access to local destinations such as residential neighborhoods.

MUTCD - Manual on Uniform Traffic Control Devices, a publication of the Federal Highway Administration that establishes a national standard for traffic control.

Pedestrian - according to Portland's City Code, "a person afoot; a person operating a pushcart; a person riding on, or pulling a coaster wagon, sled, scooter, tricycle, bicycle with wheels less than 14 inches in diameter, or a similar conveyance, or on roller skates, skateboard, wheelchair or a baby in a carriage."

Pedestrian District - districts characterized by dense mixed-use development with a concentration of pedestrian-generating activities. These districts are identified and classified in the Transportation Element of the Comprehensive Plan to ensure that improvements in the right-of-way provide for the ease of pedestrian movement through the use of appropriate design treatments.

Public stair - a public facility of more than three steps, either in public right-of-way or a public walkway easement, for the use of the public.

Right-of-way - an easement held by the City over land owned by the adjacent property owners that allows the City to exercise control over the surface and above and below the ground of the right-of-way.

Running grade - the slope of the sidewalk or roadway along the line of travel.

Sidewalk - an improved facility intended to provide for pedestrian movement; usually, but not always, located in the public right-of-way adjacent to a roadway.

Sidewalk Corridor - the area located within the public right-of-way between the curb line of a street or roadway edge and the property line at the edge of right-of-way.

Street - any street as defined in the City Charter, including all area between property lines and area dedicated to street use.

Street Design Classification - a classification system from the City's Transportation System Plan that provides general design guidance based on the current and planned land use context around the street.

Tactile warning - a surface treatment with a distinctive pattern of truncated domes, cones or bars, detectable by a long cane or underfoot, which are used to alert the vision-impaired of approaching streets and hazardous surface or grade changes.

Transportation System Plan – the City of Portland's 20-year plan to guide transportation policies and investments. This plan meets state and regional planning requirements and addresses local transportation needs.

Walkway - a pedestrian facility, whether in the public right-of-way or on private property, which is provided for the benefit and use of the public.

Widened shoulder - a pedestrian facility provided immediately adjacent to the roadway.

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Photos from the Portland Bureau of Transportation, unless noted otherwise.

To obtain a copy of this document or for more information about this project, please visit:

www.portland.gov/transportation/planning/pedestrian-design-guide-update

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