

Chapter 4—Engineering

4.10 Street Furniture and the Sidewalk Corridor



Introduction

The pavement area in the road, from curb-to-curb in urban areas, is often considered when trying to build or retrofit a Complete Street. But the area between the road and the property line also needs to be taken into account. Every person is a pedestrian at some point in their journey, and street furniture can play an important role in making pedestrians safer and more comfortable.

In an urban area there may be a lawn or tree buffer (see section 4.11 on Street Trees), a sidewalk, and even outdoor seating for a restaurant. “Street furniture” includes bike parking, benches, light poles, transit shelters, parking meters, and garbage containers, among others. As with all components of Complete Streets, context-sensitivity is paramount. Installing bike racks, water fountains, benches, and garbage containers may not be appropriate alongside a rural street that only has a few people walking on it. The frequency of street furniture may need to be adjusted, with denser areas having a higher frequency of street furniture.

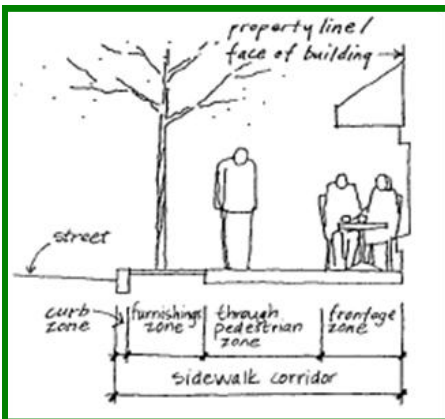


◀ Many elements of street furniture can be seen here along High Street in Columbus, OH, including news kiosks, light poles, benches, and a bus shelter.

(Photo: MORPC, 2011)

Zone Types

The space between buildings (property line) and the road (pavement) is known as the “sidewalk corridor.” It is helpful to think of the “sidewalk corridor” in terms of zones. There are four types of zones. Moving from the road to the building, they are (1) the Curb Zone, (2) the Landscape or Furniture Zone, (3) the Pedestrian Zone, and (4) the Frontage Zone (p. A-5, [Portland Pedestrian Design Guide](#), 1998).



▲ Sidewalk corridor zones in a commercial area. (Photo: p. A-5, [Portland Pedestrian Design Guide](#), 1998)



◀ While basic, this sidewalk corridor in Columbus, OH includes all four zones. (Photo: MORPC, 2010)

- Note the utility pole, signage, and garbage container in the furniture zone.
- Also note the different material used to help define the furniture zone.

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Curb Zone

The curb zone is defined by the curb itself. It is the closest zone to the street. The curb zone creates a border between the paved roadway and the sidewalk corridor. Other features of the curb zone (p. A-6 to A-7, [Portland Pedestrian Design Guide](#), 1998):

- The recommended minimum width of the curb zone is six inches. Additional width beyond six inches may be required if the curb zone includes on-street parking or curb extensions.
- Curbs make routine maintenance (such as street sweeping) of roads easier as they provide the operators with a solid edge.
- Curbs discourage motor vehicles from driving into the pedestrian area.
- Curbs can be helpful for pedestrians navigating with a cane.
- In addition to the “normal” curb, other elements in the curb zone can include: curb extensions, curb ramps, and on-street vehicle parking ([Seattle Toolbox, Curb Zone Space](#)).
- Curb ramps facilitate wheelchair, stroller, and pedestrian street crossings. Curb ramps are sloped and should be designed to meet ADA requirements.

For more information on Curb Extensions (also known as bulb-outs or neckdowns) or on-street parking, please see section 4.11 Traffic Calming.



◀ Even though a large number of boxes are temporarily stacked in the Furniture Zone for delivery, the sidewalk corridor is wide enough to provide adequate space for a pedestrian in Brooklyn, NY.

(Photo: J. Sandoval, 2011)

Furniture Zone (or Landscape Zone or Planter Zone or Furnishing Zone)

The furniture zone is located between the curb zone and the pedestrian zone. This zone provides space for obstacles, which keeps them out of the way of pedestrians traveling in the pedestrian zone. Other features of the furniture zone (p. A-7, [Portland Pedestrian Design Guide](#), 1998 and [Designing Sidewalks and Trails for Access](#), 2001):

- The recommended minimum width of the furniture zone is 2 feet.
- On-street parking will increase the minimum width to 3 feet, so that car doors can open without blocking the pedestrian zone. The areas adjacent to opening car doors will need to be free of obstacles as well.
- Transit stops and transit shelters will need a minimum width of 4 to 8 feet.
- In areas with large snow accumulations during winter, the furniture zone should have a minimum width of 6 feet.
- “Street furniture” includes bike parking, benches, water fountains, signage, utility poles or boxes, news kiosks, light poles, transit shelters, fire hydrants, grates and hatch covers, parking meters, public telephones, mailboxes, and garbage containers.
- Movable objects should be chained or otherwise secured so they are not moved into the pedestrian zone.

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- Furniture zones can either be paved or planted.
 - In a commercial area the furniture zone may be paved, but should include trees, flowers, and shrubs in order to improve the quality of the pedestrian zone.
 - In other areas the furniture zone may consist of grass, but should be paved for access walkways, such as at bus stops. Street trees, shrubs, and ground cover may also be appropriate.
- Natural drainage systems can be installed in the furniture zone to improve stormwater runoff management ([Seattle Toolbox, Natural Drainage](#)). For more information on stormwater management, see section 4.9 Innovative Practices.
- If street trees are planted rather than shrubs, grass, flowers, or ground cover, then additional space may be needed in the furniture zone to accommodate the tree roots properly. For more information on Street Trees, see section 4.11.
- A good design resource for some street furniture elements can be found in the [NYC Street Design Manual](#). It also includes information on different materials for use in crosswalks and sidewalks, lighting and traffic signal poles.



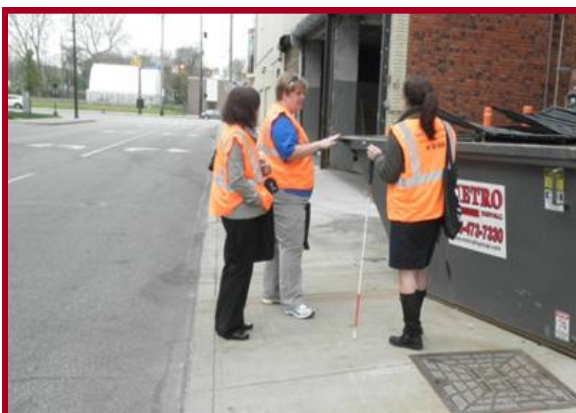
▲ The furniture zone shown here in Hilliard, OH includes benches, shrubs, and light poles. (Photo: MORPC, 2010)

- The pedestrian zone is also outlined with red brick on the sidewalk.



◀ This sidewalk corridor includes a curb, pedestrian, and furniture zone in Columbus, OH. (Photo: MORPC, 2010)

- The furniture zone has been moved behind the pedestrian zone so that the bus shelter, garbage container, and news kiosks do not block the pedestrian zone.



▲ This pedestrian zone in Cleveland, OH includes the corner of a dumpster, which is hazardous to blind pedestrians. (Photo: MORPC, 2011)

- The chest-high corner sticks out and would not be detected by a cane. The dumpster should be



◀ This pedestrian zone is blocked by a fire hydrant and a stop sign pole in Columbus, OH. (Photo: MORPC, 2010)

- Note the utility pole in the frontage zone.

Pedestrian Zone (or Sidewalk Zone or Walkable Zone)

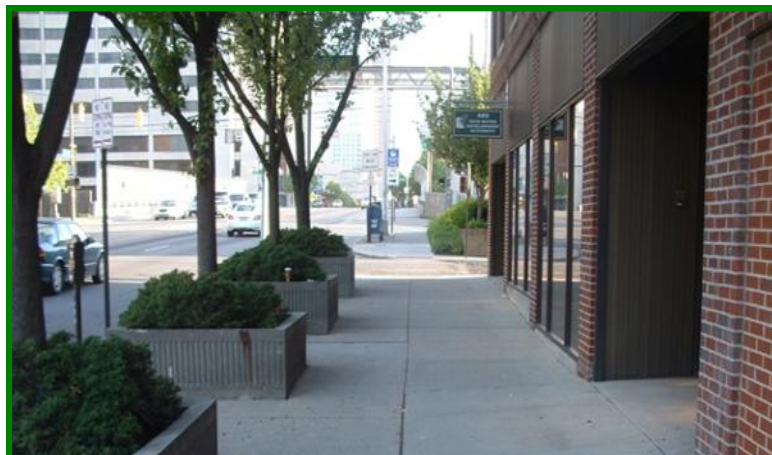
The pedestrian zone is the clear space for pedestrians on the sidewalk. It is located between the furniture zone and the frontage zone. This area should be completely free of objects. Other features of the pedestrian zone ([Designing Sidewalks and Trails for Access](#), 2001):

- This zone is what people commonly refer to as “the sidewalk” although the sidewalk may technically include the frontage zone and the furniture zone.
- It is important to keep this area free of protruding objects and vertical obstructions. Individuals with visual impairments can be particularly at risk from such objects.
- The minimum width of the pedestrian zone is five feet. This allows a wheelchair user to travel comfortably, and also allows two pedestrians to walk side by side. People traveling with a sighted guide or guide animal are also best accommodated by at least five feet of pedestrian zone.
- The pedestrian zone should be expanded based on the anticipated volume of roadway users.
- Larger widths are generally needed in denser areas. Many local communities may have recommendations based on the type of roadway or neighborhood zone.
- If the pedestrian zone is narrower than recommended, providing passing spaces at least every 200 feet will help accommodate users.



◀ The pedestrian zone is less than the recommended 5 feet, but an effort has been made to maximize it in Columbus, OH. (Photo: MORPC, 2010)

- The utility pole is as close to the curb as possible, while the skinnier parking meters have been moved to the frontage zone.



◀ This furniture zone includes parking meters, a mailbox, signage, and planter boxes with street trees in Columbus, OH. (Source: MORPC, 2010)

- The pedestrian zone is appropriately wide for a dense urban area.
- Note the signage in the frontage zone (green sign) is sufficiently high so as not to intrude on pedestrians.

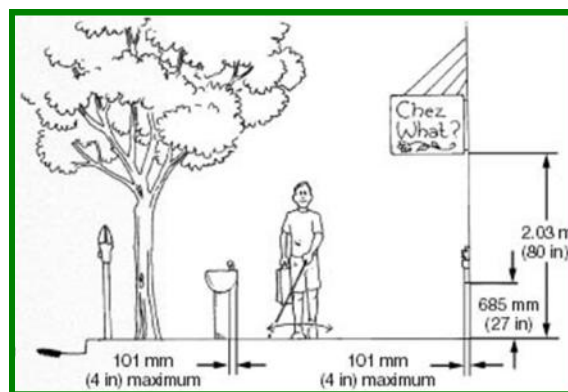
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Frontage Zone

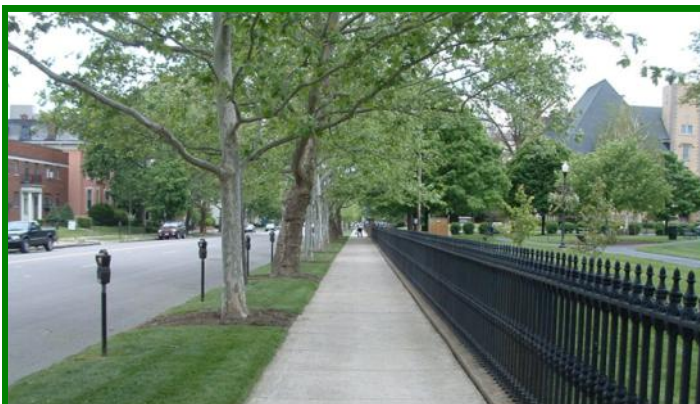
The frontage zone is the space between the property line and the pedestrian zone. By giving appropriate space for the frontage zone, pedestrians can avoid getting hit by doors opening into the sidewalk. The property line is typically a building in dense urban areas. Other features of the frontage zone ([Designing Sidewalks and Trails for Access](#), 2001):

- The recommended minimum width of the frontage zone is 12 inches.
- The frontage zone is a shy zone, because pedestrians tend to avoid walking directly next to buildings and walls.
- Sidewalk entertainment, street cafes, and street vendors may be located in the frontage zone. The frontage zone will need to be widened in these instances.
- Signage for businesses may also be located in the frontage zone ([Seattle Toolbox, Frontage Zone](#)).
- People with vision and/or auditory impairments may travel in the frontage zone to stay oriented. They tend to travel between 1 foot and 4 feet away from the building.
- Any items in the frontage zone should be detectable by people with vision impairments who use long white canes for mobility.
- It is important to keep this area free of protruding objects and vertical obstructions. Individuals with visual impairments can be particularly at risk from such objects.
- In residential areas the frontage zone may be eliminated, because there is no building at the property line. For example, there may be landscaped front yards.



▲ In the first image several objects could impede a blind pedestrian using a long white cane. (Source: Figure 4-8 and 4-9 in [Designing Sidewalks and Trails for Access](#), 2001).

- In the second image the objects have been moved out of the pedestrian zone and the frontage zone.



◀ The property line on the right is defined by a wrought-iron fence instead of a building, Columbus, OH. (Photo: MORPC, 2010)

- The furniture zone includes parking meters, grass, and street trees.
- The frontage zone is marked by the different pavement material on the right edge.

Extending the Sidewalk Corridor

It is possible to extend the sidewalk corridor without rebuilding the curb. This involves taking roadway space and converting it to another use. This can provide a buffer between pedestrians on the sidewalk and the vehicles in the roadway.

- This type of project is also known as a “pop-up café” or “parklet.”
- The most typical use for this extension is outdoor restaurant seating.
- This is especially appropriate in areas where the sidewalk corridor is too narrow for the volume of pedestrians. Low vehicle speeds are also more conducive to this project.
- This has been piloted in San Francisco, New York City, and San Juan, Puerto Rico.
- A well-designed sidewalk extension should not impede proper drainage.



▲ This sidewalk extension converts two on-street parking spaces into outdoor restaurant seating in San Juan, PR.
(Photo: J. Sandoval, 2011)

- Note the narrow sidewalk. The outdoor seating helps to buffer pedestrians from the motor vehicles.



- ▶ This sidewalk extension is buffered by large planter pots in San Juan, PR .
(Photo: J. Sandoval, 2011)
- Red umbrellas provide shade.

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Sources and Resources

- Designing Sidewalks and Trails for Access. Part II of II: Best Practices Design Guide. (2001.) Federal Highway Administration. Washington, D.C. Chapter Four: Sidewalk Corridors. <http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks204.htm> (Retrieved June 7, 2011)
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- Seattle Toolbox, Natural Drainage (Furniture Zone). http://www.seattle.gov/transportation/pedestrian_masterplan/pedestrian_toolbox/tools_deua_drainage.htm (Retrieved June 7, 2011)