

7 BEST PRACTICES

Pedestrian Access to Transit

NEW YORK, SAN FRANCISCO, PORTLAND, DENVER

The pedestrian environment is the foundation for good access to public transit and is critical for attracting new riders, increasing ridership among existing passengers, and improving the overall travel experience. Since every rider begins and ends a transit trip as a pedestrian, the quality of the pedestrian environment is an important part of the trip and can be a deciding factor when choosing whether or not to take transit at all, especially for those with the option to drive. The presence of high-quality pedestrian amenities and infrastructure is also important for supporting all forms of multimodal transportation, including biking, walking, carsharing, carpooling, etc.



Pedestrian access to transit is critical for supporting and increasing transit ridership.

WHAT IS IT AND WHY DO IT?

Pedestrian access to transit refers to the extent to which the pedestrian environment, amenities, and infrastructure support passengers in accessing transit services. The quality of these features is paramount in attracting new riders and maintaining existing ridership. Pedestrian infrastructure includes an array of amenities and improvements, including wide and textured sidewalks, platforms, level boarding features, curb ramps, benches, lighting, signage, building overhangs, travel information, wayfinding signage, and bus shelters. When well-designed, these pedestrian improvements and infrastructure can help to increase the safety, comfort, and enjoyment of the entire transit trip and promote access to transit. The quality of the pedestrian environment is also influenced by the presence of street trees and landscaping, active retail uses at street level, outdoor café seating, and public art.

Well-designed and enjoyable pedestrian infrastructure enhances public spaces and works synergistically with transit services to create active urban neighborhoods that support economic development as well as walking, biking, and transit. In line with climate protection and air quality goals, walking can replace short driving trips, reduce vehicle cold starts that create the greatest amount of pollution, and connect riders to high-capacity transit for longer trips.

How do you design a pedestrian-friendly transit streets?

Studies have shown that when pedestrians and drivers are aware of and attentive to each other's presence, the crash rate declines. There are a number of strategies that raise awareness of pedestrians and improve visibility for people driving and on foot. Improving the overall pedestrian environment is conducive to transit ridership in general, but

concentrating these improvements in the vicinity of transit facilities is especially effective in improving pedestrian access to transit. These improvements include:

- **Special, colored or raised paving at crosswalks** assist in calming traffic and raise driver awareness that they are in a zone where pedestrians are expected to be crossing.
- **Pedestrian-only crossing phases** during signal cycles allow pedestrians to cross the intersection in any direction while all vehicles are stopped with a red light.
- **Leading pedestrian interval** gives pedestrians a few second head start to claim the right-of-way ahead of turning traffic.
- **Prohibiting right turns on red** prevents vehicles from turning into crossing pedestrians. Signal phases need to accommodate adequate time for through movement to reduce the urge to violate the no-turn-on-red.

- **Reducing intersection widths** improves visual contact between drivers and pedestrians and reduces crossing distances and the time needed to cross on foot.
- **“Curb bulbs”** affect crossing widths by extending a section of the sidewalk into the road at an intersection. they are often placed at the end of an on-street parking lane. Pedestrians standing on the bulb can see and be seen by drivers before crossing.
- **Road diets** reduce the width or number of travel lanes, often by converting a 4 lane street into 2 or 3-lane plus bike lane and/or a center turn lane. This reduces crossing distances, vehicle speeds, and the number of travel lanes pedestrians must negotiate when crossing. Road diets have been done on 12th Avenue in Seattle.

Over and above improving safety, each of these practices also conveys a message to both drivers and pedestrians that a street, place or neighborhood is intended to be visited on foot. Motorized traffic will be more aware and attentive to potential pedestrians, and people on foot feel more comfortable and invited to walk in an area offering multiple pedestrian-focused design elements.



Road diets, make streets more pedestrian friendly and accommodate multi-modal transportation options.

Source: Dan Burden.

What are the elements of a healthy pedestrian environment?

Elements that create additional comfort, aesthetics, and amenities contribute to a pleasant pedestrian experience. If the pedestrian environment is unpleasant, people will tend to avoid walking and spending time outside of their cars; whereas, an enjoyable pedestrian environment supports neighborhood shopping, “parking once” for the day, and increased levels of transit ridership. Developing a healthy pedestrian environment reinforces efforts to improve pedestrian access to transit.

Best practices for a healthy pedestrian environments include:

- **Active sidewalks and transparent building facades.** Buildings and streetscapes that activate the environment, such as sidewalk cafes and parks, build community and stimulate the desire to walk to reach destinations. Transparent building facades with windows at street level create interest and also open up the pedestrian realm, so people are not forced to walk beside an imposing blank wall. Land uses that attract pedestrians include pubs, grocery stores, and parks.
- **Human-scale sidewalks.** Sidewalk widths should be proportional to the height of buildings and roadway size. Where multi-story buildings and multi-lane roads are present, sidewalks must be wider in order to counteract the bulk of the buildings and create a pedestrian realm in proportion to the scale of the automobile travel lanes. First story building articulations between storefronts, tree canopies, and awnings and overhangs create a human-scale space for walking.
- **Visual interest and diversity.** Diverse environments attract people on foot. This includes diversity in land use and shop types, architecture styles, landscape designs, and people.



Colorful pavement patterns create a gateway from the building entrance to the outside pedestrian realm.

Source: N\N Archives

- **Attractive and distinctive sidewalk treatments.** Unique sidewalk surfaces are placemaking elements that add interest to the walking environment. Defined connections between buildings and the adjacent sidewalk direct foot traffic to entrances and extend the pedestrian realm from the sidewalk to the building.
- **Urban nature.** A tree canopy that provides shade and shelter and defines an “outdoor hallway” also helps achieve balance between pavement and planted areas. Grass strips, planters, and bioswales reintegrate ecological functions into the urban realm and draw visitors.



Seating, plants, and active street-level windows are attractive to people on foot.

Source: N\N Archives

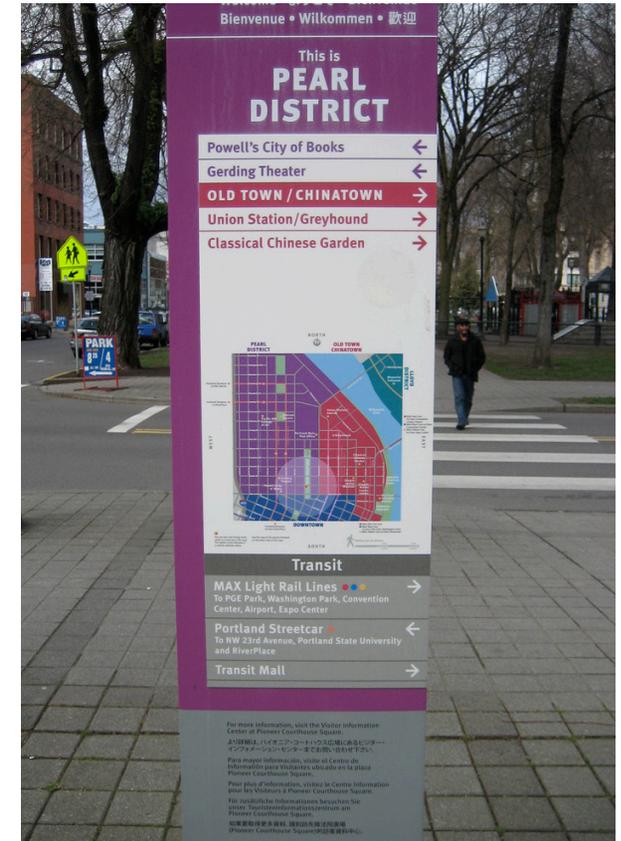
- **Pedestrian furnishings** such as seating and weather protection, water fountains and trash receptacles, and street trees and other green elements invite foot traffic. These amenities create usable places for people to rest, to reflect, to have a sense of refuge, to meet and greet, and to see and be seen.
- **Wayfinding.** Street signs, maps, and unique area treatments such as historical displays and public art help pedestrians orient themselves and create interest and comfort. Streetscapes that are inherently easy to navigate invite travel by foot and make driver and pedestrian behavior more predictable and thus, safer.

What items support a comfortable and safe walking environment for people of all ages and abilities?

“Universal design” concepts seek to ensure that the transportation network serves people of all abilities, ages, and demographics. Whether a pedestrian is an adult or a child, using a wheelchair or pushing a stroller, or traveling during times of low visibility, streets that work for children, the elderly, and people with special mobility needs serve everyone better.

Americans with Disabilities Act (ADA) guidelines and requirements direct appropriate sidewalk and curb cut design and guide ramp placement at curbs and building entrances. Limiting curb cuts, leveling grades, and reducing cross-slopes can make sidewalks safer and more comfortable for all walkway users. Removing obstacles from the sidewalk, including litter, utility poles, or trash cans, creates a clear path of travel for everyone. This also includes regular monitoring and maintenance of cracks and warps. Adopting a more aggressive approach to undergrounding of utilities clears pathways and improves the aesthetic quality of streetscapes.

Ensuring the visibility and consistent placement of signage makes wayfinding systems more navigable and helpful for all people on foot and even drivers. Pedestrians of all abilities need adequate green lengths during signal cycles to allow time to cross. Importantly, when unique paving materials or raised crosswalks are used to provide a visual and tactile signal of the pedestrian environment, care must be given to ensure that any pavement treatments do not hinder movement for those using wheelchairs or canes. Attention to universal design principles throughout the downtown will promote and support pedestrian travel for all segments of the population.



Wayfinding helps pedestrians, transit users, and tourists find their way to key attractions, transit facilities, and shopping,

Source: Flickr, user: Ned Richards

HOW WELL DOES IT WORK?

Studies have shown that improving pedestrian conditions can decrease the frequency of short automobile trips and increase transit mode share. Research by the Transit Cooperative Research Program found that many pedestrians are willing to walk between 0.5 and 1 mile to access transit, longer than the traditional focus on 0.5 mile. This suggests that the pedestrian environment and conditions are important for supporting those who are able and willing to walk to access transit services.

Studies have shown a direct correlation between multiple transit options, quality of pedestrian infrastructure, density of mixed use developments, and improved health. The Victoria Transport Policy Institute released the report “Evaluating Public Transportation Health Benefits” in June 2010, showing that communities with public transit have increased levels of physical activity.

By requiring that transit facilities, infrastructure, and equipment be accessible to all people, the American with Disabilities Act (ADA) ensures that a certain baseline of accessibility must be met. However, many cities and transit authorities are working together to provide higher quality pedestrian amenities and greater levels of accessibility than required by the ADA to create transit-supportive environments. Cities have found that focusing pedestrian improvements at transit facilities and beyond can be an effective way to increase transit ridership.

Following are descriptions of programs designed to improve pedestrian access to transit service and improve overall pedestrian and passenger environment. Examples are from New York, San Francisco, Portland, and Denver.

PROGRAMS FOCUSING ON PEDESTRIAN ACCESS TO TRANSIT

Safe Routes to Transit, New York, NY

New York City Department of Transportation (NYCDOT) developed three programs under their Safe Routes to Transit Program to improve access to transit facilities. The goal of the program is to improve pedestrian and motor vehicle movement around subway entrances and bus stops to make accessing mass transit easier and more convenient. The program focused on improving pedestrian access at:

- **Bus stops under the EIs (elevated subway structures):** These locations posed unique challenges as many buses were unable to get to the curb and pedestrians were forced to wait, board, and alight the bus in the middle of the street.

Before:

86th and Bay Parkway in Brooklyn (this location was completed in 2004)



After:

NYCDOT improved the road geometry to improve pedestrian visibility and enhance bus operations near elevated subway structures in New York City



At these locations, NYCDOT is altering the road geometry to improve pedestrian visibility, bus stops are being raised behind a new curb line and traffic navigation is being improved using signage. NYC DOT will make these improvements at 42 locations across the city will be updated.

- **Subway/Sidewalk Interface:** This will improve sidewalks, crosswalks and other parts of the walking environment around bus stops where walking is currently difficult. NYC DOT selected 23 priority subway stations to receive improvements after examining stations for narrow sidewalks and corners, inadequate signal timing, and traffic congestion.
- **Sidewalks to Buses:** This initiative implements sidewalk and other pedestrian improvements to improve access to bus stops. It includes the installation of new sidewalks, crosswalks, and bus waiting areas to facilitate walking and transit use.

Before:

40th Street station on the 7 train, Queens



After:

NYCDOT identified 23 stations for improvements to subway stations to improve pedestrian access.



Pedestrian Access and Bus Stop Improvements, Portland, Oregon

Portland, Oregon has taken a comprehensive approach to improving pedestrian and bicycle access to its transit facilities. When adding the new MAX Green line to the Transit Mall downtown, TriMet took the opportunity to rethink transit access and how well the mall worked as a public space and how it interfaced with transit facilities and local businesses. As part of this larger, more comprehensive planning effort, the City and TriMet developed an integrated vision for enhancing access to transit through placemaking, wayfinding, and new shelters.

Placemaking improvements which include public art, wide sidewalks, storefront renovations, and lighting improvements, support the overall pedestrian environment and are critical for a pedestrian friendly, transit-supportive environment. Wayfinding improvements, which include simplified maps and signage, help to orient visitors to the Center City's attractions, shopping, and transit services. New and improved



TriMet installed new transit shelters and covered bicycle facilities downtown that provide weather protection and travel information.

glass and steel shelters were installed along the Transit Mall and other bus stops in the downtown. The new glass and steel shelters, are well-lit and create an open, attractive, and safe pedestrian environment as well as covered space for bike parking.

In July 2010, TriMet revised their Bus Stop Guidelines to identify design, placement, and amenity recommendations as they work with communities to improve transit access throughout the city. The document outlines the design guidelines that maximize effectiveness of bus service, including amenities and street treatments. It acknowledges that bus stops play an important role in public spaces and are as much a part of a community as streets, pathways, parks and plazas. It also explores ways in which TriMet encourages jurisdictions, neighborhood associations and citizens to recognize the value bus stops play in the community and looks for ways to build partnerships with these entities to enhance bus stops.

TriMet initiates capital projects to make significant improvements to route efficiency, on-street and bus stop safety, accessibility and comfort. Its Transit Facilities Development Program upgrades targeted bus stops with the stated goal of “increasing transit ridership by improving the total transit experience” by focusing on on-street transit and pedestrian facility improvements”. Capital Improvements are made using curb ramps, ADA landing pads, sidewalks, curb cuts, new poles and bus stop signage, as well as amenities (benches, shelters, solar LED lighting).



TriMet sandblasted vandalized glass in bus shelters to beautify bus stops, save money, deter vandalism, and improve the passenger's experience.

Source: TriMet



Improved lighting at shelters helps to provide a safe and inviting place to wait for transit.

Source: Thomas LeNgo, Flickr user

Transit Shelter Program, San Francisco, CA

San Francisco Municipal Transportation Agency (SFMTA) was one of the first transit agencies to develop a formal shelter program in 1987. The purpose of the program was to replace old shelters in San Francisco with new shelters that provide improved travel information, seating, lighting, and weather protection and to maintain the shelters on an ongoing basis to keep them in good repair. Previously, many shelters were not well maintained and had become covered in graffiti.

The agency initiated its shelter program through an innovative arrangement with a private contractor, CBS Outdoor. Under the arrangement, the contractor owns and maintains the shelters and pays for improvements. SFMTA does not pay the contractor to manage the shelters; the contractor pays for the



Before SFMTA initiated its shelter program, many of its shelters were poorly maintained and covered in graffiti.

improvements by selling advertising, which is placed prominently in the shelters. In 2007, SFMTA entered into a 15-year contract with Clear Channel with the option of one 5-year renewal after 2017. The contract with Clear Channel requires that the company install between 1,110-1,500 new shelters over five years, replace 39 kiosks, provide 1,500 traffic controllers, and

install 3,000 solar-powered customer-information signs. It stipulates that the contractor make a one-time signing payment of \$5 million and pay \$500,000 for administration costs. In addition, they will make minimum annual payments to the agency during the duration of the contract—for example, they will have to pay \$8.6 million to SFMTA in 2010.



Clear Channel began installing new solar-powered bus shelters with LED lighting and wireless routers in 2009. The roof and steel structure are constructed from recycled materials.

Transit Access Guidelines, Denver, Colorado

Denver's Regional Transportation District (RTD) recognizes the value of pedestrian linkages to transit facilities and their importance in supporting ridership growth. While RTD makes decisions regarding the siting and design of its facilities, community access is often beyond the immediate purview or direct control of transit agencies. RTD can, however, coordinate with other parties—such as local governments and the development community—that are responsible for the development and regulation of the physical infrastructure and built environment surrounding those facilities. The impact of those parties' actions on transit suggests that RTD's interests are served by collaborating with them on access concerns.

In 2009, Denver's Regional Transportation District (RTD) released Transit Access Guidelines to ensure that transit access is improved comprehensively and consistently and to support coordination with other entities. This document provides guidelines within the agency and to other coordinating parties regarding how to design access to the various stations and stops. The guidelines outline the roles and responsibilities (RTD responsibility vs. non-RTD responsibility) for each public agency with respect to pedestrian and bicycle access improvements



Denver's RTD implemented new Access Guidelines in 2009 that support pedestrian linkages to its transit facilities.

RTD's guidelines encourage access to the transit system through a hierarchy of modes, in order of priority: pedestrians, bus riders, bicyclists, vehicles (short-term parking), and vehicles (long-term parking). Guidelines are specific to transit modes including light rail, commuter rail, and bus transit. Specific design standards such as walk speeds, platform design dimensions, access points, path distances to entrances, and sight line considerations are included. The guidelines also promote transit-oriented development principles in joint development projects and require that pedestrian-oriented design, density, and mix of land uses support transit access be considered during review.

