



tool kit

Designing for Pedestrians On Strategic Regional Thoroughfares

Purpose

Safe minimum design for pedestrians typically includes a sidewalk and crosswalk; however, to encourage pedestrian travel as a viable travel mode along strategic thoroughfares, communities should address the convenience and comfort of pedestrians as a chief consideration when designing pedestrian-oriented places.

The following pedestrian values should direct design of a complete pedestrian network:

- Shortened walking distances
- Separation (or buffer) from moving traffic
- Frequent safe and visible crossings along thoroughfares
- Aesthetically pleasing surroundings and amenities
- Barrier-free accessibility (ADA)
- Continuous door-to-door pedestrian connections

This toolkit identifies elements, trends, and resources for pedestrian design along strategic thoroughfares in the Atlanta region.

Pedestrian Design

Planning for pedestrians should take on a long-term view. Although pedestrian facilities may not be needed immediately, they will likely be needed as development occurs and density of an arterial increases. Coordination between future land use plans and thoroughfare design is essential to building a well-balanced and efficient transportation network.

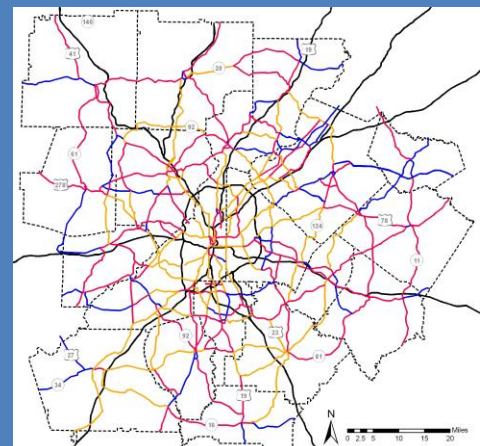
To account for the changing pedestrian needs along thoroughfares, a range of pedestrian treatments can be planned dependent on the location of the road and the resources available to a community. Referencing the Georgia Department of Transportation's (GDOT's) *Pedestrian & Streetscape Guide* is a solid starting point.

PEDESTRIAN ACCIDENTS

According to the Georgia Department of Transportation (GDOT) *Pedestrian & Streetscape Guide*, common causes of accidents include the following:

- Driver inattention
- Hit while crossing an intersection (50%)
- Hit while crossing mid-block (33%)
- Struck from behind while walking along roadway, same direction as traffic
- Motorist exceeding safe speed
- Darting into street midblock
- Vehicles backing up

Understanding where these injuries and fatalities occur in your community provides a starting point for improving design for pedestrians along strategic thoroughfares.



Strategic Regional Thoroughfare Network



Sidewalks and Walkways

Sidewalks are typically raised and located adjacent to curbs or separated from the curb by a linear planting strip. Walkways are at ground level with no separation from the ground surface. Walkways can serve as an interim or less formal solution to sidewalks. Roadside shoulders can serve as pedestrian travel areas in rural areas, but they should be designed appropriately to safely accommodate pedestrians.

Sidewalks can be provided on one or both sides of the street. Ideally there are sidewalks on both sides, but the decision of where to place sidewalks will likely be determined by available space within the right-of-way, environmental and budget limitations, and locations of high volume uses along the road. Sidewalks and walkways should also be designed to meet Americans with Disabilities Act (ADA) standards.

Aesthetics and Design Materials

The minimum width for pedestrian sidewalks should be four feet; however, areas with higher pedestrian traffic should consider adding additional sidewalk width. Doing so provides sufficient space to safely accommodate greater capacity. Typically, if a planting strip is not provided between the sidewalk and the road, it is recommended that an extra 2 ft. be added to the width.

The type, color, and texture of pedestrian facilities can also have an important influence on pedestrian safety. A change in appearance will alert drivers of other conditions along the thoroughfare, such as the potential for a pedestrian.

Safety Features of Pedestrian Design

Most thoroughfares are intended for both high capacity and high speeds. Traffic speed is as important as traffic volume – maybe more so. As such, additional design elements are recommended for securing a sense of safety for pedestrians. A high speed thoroughfare with no little to no buffer will

act as a deterrent to pedestrians. The following road treatments provide needed buffers between travel lanes and pedestrians in urban areas that offer protection from high speed elements:

- On-street parking
- Planting strip
- Bike lane – minimizes potential cyclist and pedestrian conflicts and provides an additional buffer

Additional safety measures include the following. These items will in many cases require coordination with local zoning and development regulations.

- Ensure visibility – provide street lighting and pedestrian-scale lighting
- Increase pedestrian visibility - require street-level windows for building facades along pedestrian corridors
- Manage potential conflicts – limit the number and width driveways
- Provide pedestrian islands
- Install countdown signals at traffic lights that let pedestrians know exactly when a traffic light will change

Clear Zone Requirements

Vegetative buffer strips with canopy trees or buildings with awnings can play an important role in pedestrian design by doing double-duty as a buffer and providing shade for pedestrians during hot weather months.

GDOT and the American Association of State Highway and Transportation Officials (AASHTO) provide specific requirements for safe distances between lateral obstructions and motorists travel lanes. These requirements are typically tied to speeds, so most thoroughfares will require a notable distance between travel lanes and street trees, street furniture, poles, or other potential dangerous obstruction. The SRTP Management and Design Guidelines provide specific guidance on required clear zones depending on the corridor and regulated speed.

Curb and Gutter

The curb and gutter of a street provide both stormwater management and a raised separation between the pedestrian and motorists. Rolled curbs allow parked cars to encroach onto the sidewalk, so these types of curb are typically discouraged.

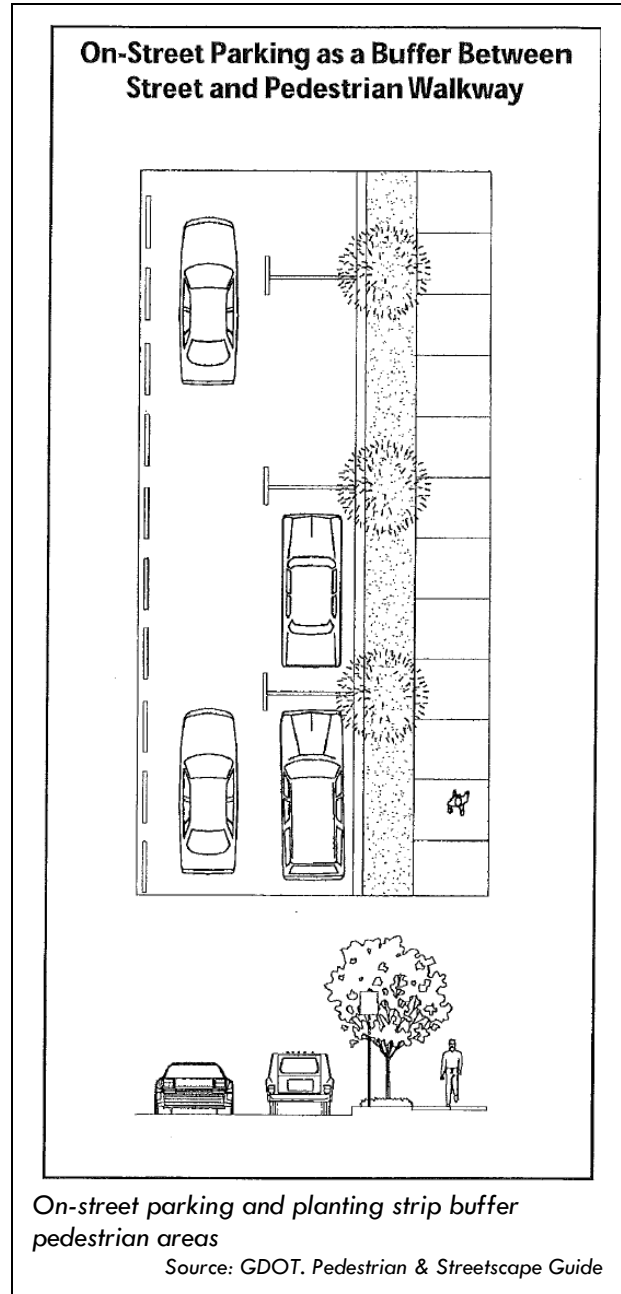
Bike Lanes & On-street Parking

Incorporation of bike lanes and on-street parking in street design adds to the buffer between the pedestrian and motorist. The bike lane should be designed to reflect GDOT guidelines, and a clear separation should prevail between the pedestrian area and bike lane either via curb and gutter or an appropriate striping.

Land Use & Transportation Connection

Pedestrians regularly move in and out of the public right-of-way. Because of this, coordination between right-of-way and site design plays an important role in facilitating a positive pedestrian environment. Some design recommendations that can be formalized in local ordinances include the following:

- Reduced setbacks in downtowns, neighborhood centers, and activity centers create a welcoming environment to pedestrians
- Flexible and reduced parking requirements, allowing for on-street parking, shared parking – results in shorter walking distances between uses
- Mixed-use zoning combines trips and often allows for the higher density needed for a true pedestrian environment. *(continued on next page)*



Case Study

The City of University Place in the Tacoma, Washington area has been successful at implementing complete street characteristics for pedestrians and bikers by developing public-private partnerships. For example, the City worked with the gas company to share costs for converting gravel shoulders into sidewalks during gas line replacements.



Thoroughfare in City of University Place, WA

Photo Credit: Dan Burden (National Complete Streets Coalition)



ARC STRATEGIC REGIONAL THOROUGHFARE PLAN

- Building facades oriented towards pedestrians
- Reduced parking requirements
- Street trees and other appropriate vegetative buffer strips

Incorporating these site design requirements in zoning and land development codes can ensure that pedestrian trips from the public sidewalk, bike lane, transit, or a private vehicle to their destination are safe.

People are likely to walk to a specific location if they perceive that the distance is not too long. Perceived distance can be influenced by the type of land uses, the general layout of streets, and parcel by parcel. Short blocks, mid-block intersections, and continuous walkway from front doors of uses to transit stops or the sidewalk can encourage pedestrian travel. These design elements can be written into the development regulations of a local code, creating a collaborative relationship between public improvements and public or private land uses.

Urban Areas

Urban areas and activity centers that encourage a grid layout or short blocks will be more accommodating to pedestrian mobility. Because of a higher degree of use, pedestrian facilities located along urban thoroughfares will often require a greater width than suburban or other areas.

Pedestrian-Friendly Site Design Checklist

- Delineated walkways through parking lots
- Connections to neighborhoods and surrounding areas
- Convenient and safe access to transit and adjacent sidewalks
- Alignment of walkways for convenience and reduced travel distances
- Accessible routes to travel to and from the site, as well as throughout the site
- No barriers (walls, ditches, landscaping or roads without safe crossings) to pedestrian travel
- Placement of parking in rear
- Building setback lines and building entrances near street and sidewalk

Source: GDOT. 2003. *Toolkit 10 Pedestrian & Streetscape Guide* as modified by Jacobs Engineering.

Suburban Areas

Distinguish between corridors that have a high likelihood of pedestrian traffic versus those that are oriented for vehicle mobility. Areas with land use characteristics that attract pedestrians should be designed with lower speeds, sidewalk buffers, and other appropriate pedestrian amenities such as pedestrian amenity zones and pedestrian islands.

Rural Areas

Provide paved shoulders in new construction and reconstruction projects. The paved shoulder provides an area for pedestrians to operate when sidewalks are not feasible. Roadside ditches should also be designed as to minimize risk to pedestrians. In cases where there is sufficient right-of-way, roadside ditches can serve as an additional buffer between vehicles and pedestrians.

Resources

SRTP Management and Design Guidelines. Atlanta Regional Commission.

Various sections provide guidance for pedestrian design along multi-purpose thoroughfares.

Pedestrian & Streetscape Guide. 2003. GDOT.

A variety of toolkits for addressing pedestrian design needs.

Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities. 2006. ITE. *Provides guidance on a variety of context sensitive solutions for pedestrians along thoroughfares.*

Safe Routes to School. www.saferoutesga.org
Resources for developing safe pedestrian and bicycle routes between homes and schools.

PEDS. www.peds.org
Resources to help improve engineering of the pedestrian environment in the metro Atlanta area.