



What Makes a Community Livable?

# Livability

# 101



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## About the AIA – The American Institute of Architects

Since 1857, the AIA has represented the professional interests of America's architects. As AIA members, more than 75,000 licensed architects, emerging professionals, and allied partners express their commitment to excellence in design and livability in our nation's buildings and communities. Members adhere to a code of ethics and professional conduct that assures the client, the public, and colleagues of an AIA-member architect's dedication to the highest standards in professional practice.

## About the AIA – Center for Communities by Design

The Center for Communities by Design is a catalyst, convener and source of information that helps AIA members work with citizens and other stakeholders to envision and create more sustainable, healthy, safe and livable communities.

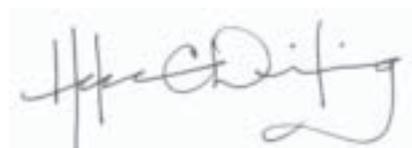
To learn more about the AIA Center for Communities by Design, visit [www.aia.org/livable](http://www.aia.org/livable)

## Livability 101 for Communities

Livability 101 offers communities the resources to develop a vision for the future and enables them to be engaged in a successful process with the expertise offered by the architectural profession. As designers of the built environment, architects play an important role in shaping our communities. Their design affects our safety, health, and the environment as well as the quality of life in our neighborhoods, towns, cities, and regions. This publication seeks to strengthen the relationship of citizens and architects by sharing a common vocabulary to create a sustainable framework for building more livable communities.

## Livability 101 for Architects

Livability 101 engages architects as members of their communities, to use and share their knowledge, skill, and experience to participate in civic life. Architecture expresses the values of society and has the power to enrich the human spirit and ensure livability for this and future generations. Livability 101 provides architects with the necessary vocabulary and elements needed to empower communities and make decisions that will shape more livable communities.



Helene Combs Dreiling, FAIA, Hon. SDA,  
Team Vice President, AIA Community

Barracks Row, in the heart of Washington, D.C.'s Capitol Hill neighborhood, has flourished as the result of an \$8.5 million streetscape improvement project.



# Street-Savvy Design

By Ellen Vanderslice, AIA

Cities and towns allow people to exchange goods, services, and ideas. Historically, public streets have been fundamental to this process, as it has been along these corridors that people have had the opportunity to mingle. Yet, for much of the last century, American streets have been designed primarily for the movement of cars from one point to another, rather than for public exchange along the way.

As the automobile prevailed, other modes of transportation that are more conducive to face-to-face interaction—such as walking, bicycling, and public transit—gradually declined. The speed of automo-



The streetcar is one of many options for travel in Portland, Ore.  
Courtesy Portland Office of Transportation

bile travel brought about the need for larger signs and signals, and a demand for convenient parking. The result is that many American thoroughfares were eventually reduced to anonymous ribbons of asphalt lined by parking lots and giant illuminated signboards. Replicated over and over across America, this pattern of development lacked any sense of place and fostered a feeling of estrangement among the citizenry.

Fortunately, today's urban planners and city leaders have learned from the experience of the last century. People, by nature, are drawn to vibrant, sociable venues. To ensure a healthy neighborhood, this dynamic must begin at the level of the street. Today, there is a growing movement to reclaim our streets from the tyranny of the car—and the isolation it generates—by offering more transportation choices and making roads more friendly to people.

Consider, for example, Portland, Oregon. In the early 1970s the city initiated a plan to combat the flight of downtown businesses by making the core a vital place that attracts people. In the 1980s, to protect inner-city neighborhoods from increasing traffic, the city implemented a comprehensive traffic-calming program and used federal funds to construct a new light-rail system instead of a freeway. The 1990s brought bicycling and pedestrian programs and the adoption of master plans. Aided by Oregon's land-use controls, the result is a com-



RiverPlace is a development of housing, shops, and cafes along a pedestrian riverfront esplanade. The development replaced an old, limited-access highway.

Courtesy Portland Office of Transportation

pact, livable city where walking, bicycling, and taking transit are real choices.

In recent years, many other communities, large and small, have implemented a variety of simple street-design strategies to rekindle civic life. Some of the most successful techniques are described below.

## Design for Multiple Transportation Options

### Start with appropriate land use and urban form

How easily people can travel without a car depends on many factors. By establishing the right number of people (density) and a variety of building types



Washington's Capital Crescent trail accommodates walking and cycling and connects several neighborhoods in the region.

and services (mixed use), community planners set the stage for people to have good reasons to walk, bicycle, or take convenient public transit. An interconnected network of streets makes it possible for people to reach destinations by the shortest possible trip. In contrast, street systems with many cul-de-sacs discourage walking and biking and create unnecessary traffic. Connectivity is important for good transit as well. Transit networks that offer frequent service over a widely connected network draw more riders than those with limited service and out-of-direction routes.

Trails and paths are not a substitute for on-street facilities, since most destinations and transit methods lie on the street system, but they can provide shortcuts or alternate routes of interest. Trails or paths through parks or along waterways can add to the quality of a trip as well as shorten it.

### Complete the streets

If sidewalk space and bicycle lanes are missing or inadequate, they should be added or enlarged. Some cities have successfully eliminated travel lanes on multilane roadways, thereby gaining more space for

sidewalks and bicycle lanes without seriously affecting traffic flow. An example from Portland is the NE Broadway and Weidler couplet. In the 1990s these one-way streets were changed from three to two traffic lanes, bike lanes were added, and the sidewalks were widened from 9 to 14 feet. Since then, business has boomed and cafés have bloomed.

## Design for Walking and Taking Public Transit

### Well-planned sidewalks

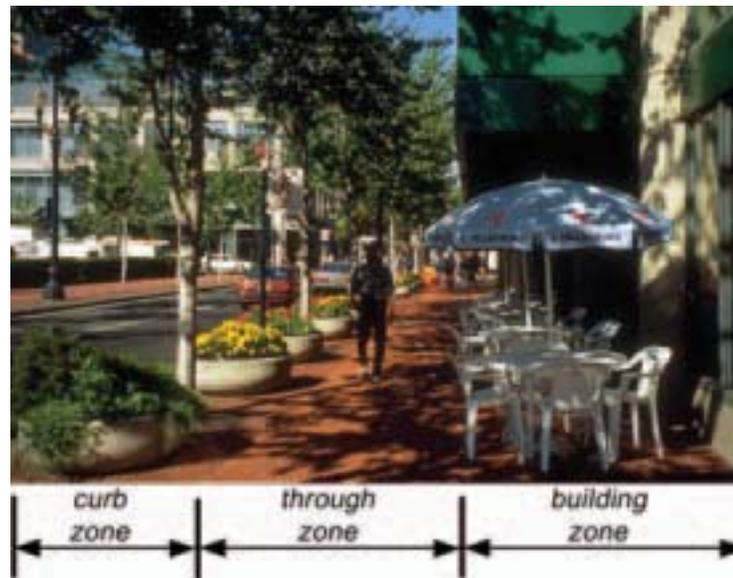
Sidewalks should provide a walking path that is safely separated from motorized vehicles. Good sidewalks are made up of at least three distinct zones: a *through zone*, a *curb zone*, and a *building zone*.

The *through zone* in residential areas should be wide enough to accommodate two people walking

together with room for a third to pass, which amounts to a minimum of 6 feet. This zone should be wider in commercial districts and other areas with high pedestrian traffic. Just how wide will depend on the pedestrian demand and the scale of the street. In large cities, the through zone can be as wide as 20 feet. No obstructions should be allowed within this circulation path.

The *curb zone* serves as a buffer between walkers and the roadway. It may be landscaped or paved. This is the place for street trees and furnishings, such as pedestrian-scaled streetlights, signs, utility poles, bike racks, and parking meters.

The *building zone* is the area where storefront activities can spill onto the sidewalk without



Typical sidewalk zones  
Courtesy Portland Office of Transportation



**Curb extensions**

Courtesy Portland Office of Transportation



**A median refuge island**

Courtesy Portland Office of Transportation



**Street corners must be designed to make crossing safer for pedestrians.**

impeding passersby, whether on foot, in wheelchairs, or moving with some other means of assistance. This zone plays a particularly strong role in luring people onto the public streets and engaging them with their community.

### Street crossings

Walking isn't convenient unless it is safe and easy to cross the streets. Shortening the crossing distance and slowing the approaching traffic are the two most important ways to ensure this. The location of crossing areas must also be considered, and, of course, curbs must be accessible to people of all abilities.

- **Shortening the crossing distance** Curbs that extend the sidewalk or corner area into the roadway, usually the full width of the parking lane, shorten the crossing distance and allow walkers to see and be seen before beginning to cross. *Curb extensions* also keep cars from parking too close to the crosswalk.

A *median refuge island* also effectively shortens the overall crossing distance and protects pedestri-

ans once they reach the middle of the street. It also allows people to traverse one direction of traffic at a time, which usually reduces the waiting time to cross.

- **Slowing the approaching traffic** *Curb extensions* and *refuge islands* narrow the roadway at crosswalks, which helps to reduce the speed of traffic. Small *traffic circles* or *speed humps* also help slow down traffic.

- **Locating crosswalks** Sometimes the middle of the block is the safest place for a crosswalk because walkers do not have to compete here with turning cars. At midblock, crosswalks should be marked on the pavement. For additional safety on multilane streets with very high traffic volumes, *marked crosswalks* should also get *curb extensions*, *median refuge islands*, and possibly even *pedestrian-activated signals*.

- **Making curbs accessible** Access must be provided from sidewalk to roadway for those with disabilities. A separate *curb ramp* for each crosswalk is preferred, with ramps aligned in the direction of

travel. Be sure to include a *detectable warning surface* at the bottom of each ramp.

### Street corners

A street corner serves many functions: It is where walkers congregate and then cross the street, and it is the logical location for traffic hardware such as street-name signs, traffic signals, and utility poles. Corners are also the place where conflicts occur between walkers and vehicles. Sidewalk street corners, therefore, must be designed with plenty of room to ensure the safety of pedestrians.

Unfortunately, engineers have often favored vehicles over pedestrians by designing curbs with large radii. From the perspective of a driver, such a curb allows for faster and easier turning movements by cutting away more of the street corner. From the viewpoint of a pedestrian, however, this means less room on the corner and a longer distance to cross the street. Create adequate space for pedestrians with curb radii of 10 feet or less or with curb extensions.



**Street-oriented retail and benches make for a lively sidewalk.**

Courtesy [www.pedbikeimages.org/](http://www.pedbikeimages.org/) photographer: Dan Burden

### Transit curb extensions

Consider building long curb extensions at bus stops so that buses can stop in the travel lane instead of having to pull over to the curb. Such an extension helps keep buses on schedule while at the same time providing more room for a bus shelter without obstructing the through zone of the sidewalk.

### Pedestrian districts

Many communities have established pedestrian districts, which allow for special standards that improve walkability. Pedestrian districts are usually designated in relatively dense, mixed-use areas with access to frequent transit service. Districts may be established through the local area plan or zoning or through transportation classifications.

Zoning in a pedestrian district may require that buildings be oriented to the street and built to the property line, instead of being set back behind a parking lot. Wider through zones are appropriate for sidewalks here, since more people are walking. Additional amenities, such as special sidewalk and crosswalk paving, pedestrian-scaled streetlights, and benches, are also desirable.

Some cities have experimented with creating *pedestrian malls*, or streets where no traffic is allowed. Some, such as the Pearl Street Mall in Boulder, Colorado, have been highly successful. Others have not: The downtown mall in Eugene, Oregon, which was closed to cars in the 1960s, was reopened to traffic in 2002. Some urban theorists contend that completely closing a street to automobiles can drain it of needed vitality.

## Design for Bicycling

### Bicycle lanes and boulevards

*Bicycle lanes* define a space to ride and make it clear that bicyclists are expected on the roadway. Bicycle lanes should be located between curbside parking (if present) and the travel lanes. They should be one-way in the same direction as traffic. They are usually 5 or 6 feet wide, although this can vary. It is common for the bike lane to shift to the left where there is a right-turn lane for cars. If there is not enough space for a bike lane, consider providing a wide (at least 14 feet) outside lane for motorists and bicyclists to share safely.

*Bicycle boulevards*, typically located on streets with modest volumes of traffic, are designed to encourage bicycle travel. The bicycle boulevard is given priority at minor intersections, and may have signals or other treatment where it crosses major streets. There may also be special signage.

### Bicycle parking and use on public transit

Safe and convenient bicycle parking is essential. Many cities now provide simple *hitching post bicycle racks* as part of standard street furniture. Development regulations should also require new buildings to provide both long- and short-term parking for bicycles.

Transportation options are increased greatly when bicyclists can also use the transit system. Many cities now have bicycle racks on buses, and some cities allow bikes on rail transit.

*Ellen Vanderslice is a project manager for Transportation Engineering in the City of Portland Office of Transportation, Portland, Oregon.*



**Typical bicycle lanes**

Courtesy Portland Office of Transportation



**Bicycle boulevards may include traffic calming devices like traffic circles.**

Courtesy Portland Office of Transportation



**Buses can accommodate bicycles.**

Courtesy [www.pedbikeimages.org/](http://www.pedbikeimages.org/) photographer: Dan Burden



**A hitching post bicycle rack**

# AIA's 10 Principles for Livable Communities

## 1. Design on a Human Scale

Compact, pedestrian-friendly communities allow residents to walk to shops, services, cultural resources, and jobs and can reduce traffic congestion and benefit people's health.



Good sidewalks create an environment where people feel comfortable walking.

## 2. Provide Choices

People want variety in housing, shopping, recreation, transportation, and employment. Variety creates lively neighborhoods and accommodates residents in different stages of their lives.



Farmers' markets bring a community together, provide healthy food, and support the local economy.

## 3. Encourage Mixed-Use Development

Integrating different land uses and varied building types creates vibrant, pedestrian-friendly, diverse communities.



First-floor retail and commercial uses, like this restaurant at the base of an office building, contribute to street life.

## 4. Preserve Urban Centers

Restoring, revitalizing, and infilling urban centers take advantage of existing streets, services, and buildings and avoid the need for new infrastructure. This helps to curb sprawl and promote stability for city neighborhoods.



A former auto shop is converted to a neighborhood supermarket.

## 5. Vary Transportation Options

Giving people the option of walking, biking, and using public transit, in addition to driving, reduces traffic congestion, protects the environment, and encourages physical activity.



Bike lanes and sidewalks are important elements of transportation infrastructure.

## 6. Build Vibrant Public Spaces

Citizens need welcoming, well-defined public places to stimulate face-to-face interaction, collectively celebrate and mourn, encourage civic participation, admire public art, and gather for public events.



A small canal flows through the Lurie Garden at Chicago's Millennium Park.

## 7. Create a Neighborhood Identity

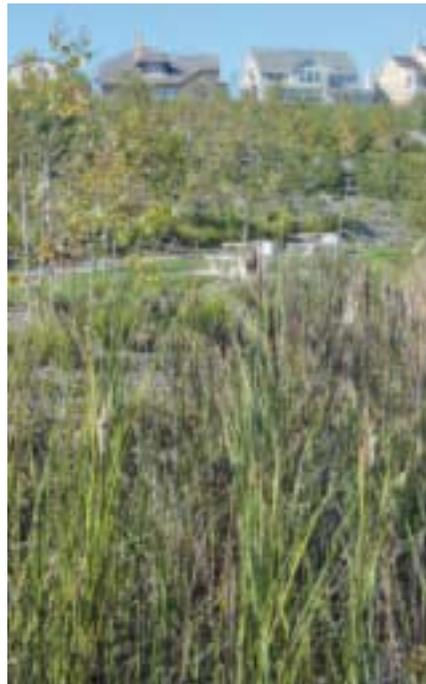
A “sense of place” gives neighborhoods a unique character, enhances the walking environment, and creates pride in the community.



The arch in Washington Square Park in New York City makes this an instantly recognizable place.

## 8. Protect Environmental Resources

A well-designed balance of nature and development preserves natural systems, protects waterways from pollution, reduces air pollution, and protects property values.



Wetlands help control storm water runoff in Ladera Ranch, California.

## 9. Conserve Landscapes

Open space, farms, and wildlife habitat are essential for environmental, recreational, and cultural reasons.



The Bay Trail waterfront promenade along Chrissy Field in San Francisco.

## 10. Design Matters

Design excellence is the foundation of successful and healthy communities.



Frank Gehry's amphitheater at Chicago's Millennium Park.

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