Zoning to Promote Health and Physical Activity

By Marya Morris, AICP

In the mid-1990s, public health experts began to focus their attention on the extent to which the built environment can either help or hinder the public’s ability to become or stay healthy.

These experts recognized that many of the community planning and design tools that were being used to implement smart growth objectives—such as bicycle and pedestrian planning, mixed use, and encouraging compact form—may also be a key to creating communities where people could be physically active on a regular basis and where air quality could be improved.

The new focus on the relationship between community design and physical activity was sparked by soaring rates of obesity nationwide, a trend that has been widely reported in the popular media. As obesity rates have climbed steadily in the last three decades, health experts realized that long-standing approaches aimed at getting people to modify their eating habits and exercise to reduce their weight and improve their cardiovascular health were only modestly effective. What’s more, the Centers for Disease Control also in the last ten years identified other health problems that are affected by land use and the built environment. These include the relationship of land-use decisions and transportation systems to air quality and respiratory health; the impact of urban design and street design on the rates of pedestrian injuries and deaths; the relationship between the built environment and transportation systems and the mobility and quality of life of the elderly; and the ways in which land-use decisions affect community water quality, sanitation, and outbreaks of disease.

A SHARED HISTORY

While the recent flurry of media and professional attention paid to the planning and public health connection may make the issue seem new, the two disciplines have a long shared history. The first master plans and zoning ordinances enacted early in the 20th Century were aimed at preventing overcrowding and stemming the spread of contagious disease in urban areas. Early zoning laws required homes to be kept separate from noxious industry and nuisances and mandated residential building designs that would provide tenement dwellers with adequate air and light.

As the century progressed, traditional town planning gave way to conventional urban sprawl, which was facilitated in large part by Euclidean zoning and subdivision standards. The sharp separation of land uses—a fundamental tenet of zoning—is now recognized as one of several hindrances to communities’ efforts to create high-quality neighborhoods, balance transportation with land use and jobs with housing, and protect the environment. Today, the health focus on zoning and subdivision regulations (and the plans that support them) is aimed at understanding the impacts of the regulations and the actions necessary to mitigate the negative effects on today’s predominant health prob-
A lack of street connectivity is another problem. Isolated, single-use subdivisions that have no direct street or pedestrian connections to surrounding shopping areas, schools, or other destinations make it very difficult for people to choose to walk even when they are motivated to do so.

And finally, there are small actions that have large consequences. For example, municipalities may waive the developers’ requirement to install sidewalks or, in some cases, not require sidewalks at all. Developers may argue that sidewalks add costs to development, and some neighbors may prefer the rural feel of a neighborhood without sidewalks, but such neighborhoods send a direct message: No one walks here. The health consequences of what may seem like a fairly inconsequential requirement need to be recognized.

**CURRENT PLANNING PRACTICE**

Even with active communities as a potential positive by-product of smart growth implementation, very few comprehensive and functional (e.g., transportation, land use, trails) plans that have met smart growth objectives even mention health or physical activity as a basis for the need to curb sprawl and improve development patterns. By overlooking health and activity as a key impetus for good planning or smart growth, planners are missing an opportunity to leverage support from new health partners and the public for what the planning profession has been actively trying to accomplish in other areas, like reducing traffic congestion and minimizing sprawl.

What can planners do to change the direction of their community to encourage physical activity? APA’s Research Department is currently working with the Robert Wood Johnson Foundation on a project titled, “Planning and Designing the Physically Active Community.” This project will culminate in a PAS Report to be published later in 2004. Resources from this project are available on the APA website.

The project centers on what we’ve termed the “five strategic points of intervention” where planners can effect change:

**Visioning and goal setting.** From the outset, the planning process should address the relationship between planning and health and include goals for improving health and physical activity through improved land-use planning and community design.

**Plans and planning.** Creating opportunities for citizens to be physically active needs to be an explicit, not simply implied, goal in comprehensive plans, as well as many of the functional plans and plan elements that most jurisdictions prepare, including those for transportation, bicycling and trails, circulation, housing, and parks and recreation.

**Implementation tools.** There are numerous changes that can be made to zoning and subdivision regulations to create neighborhoods where residents have more opportunity to be active. One is to revise ordinances to permit New Urbanist or traditional neighborhood developments, either as an overlay, as a requirement in certain districts, or community-wide. Other tools include:

- increasing development densities;
- requiring sidewalks and trails in new developments;
- retrofitting already developed areas with sidewalks, trails, and bike paths;
- instituting traffic calming measures;
- linking open spaces; and
- requiring street connectivity.

**ASh THE AUTHOR**

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**About the Author**

Marya Morris, AICP, is a senior research associate at the American Planning Association and project director for the Planning and Designing the Physically Active Community project with the Robert Wood Johnson Foundation. The research reported in this article on local ordinances that promote walkability and physical activity was funded by a grant to APA from U.S. EPA Office of Smart Growth and the Centers for Disease Control and Prevention.
In larger metropolitan areas it will include transit-supportive development.

**Site Design and Development.** A number of improvements to the pedestrian realm and streetscape that can encourage physical activity can be accomplished through site plan review or design review. These measures protect people from traffic and inclement weather and provide safe, well-lighted routes and gathering places. They include:
- requiring or encouraging ground-floor retail uses and awnings, especially along transit routes;
- prohibiting blank walls;
- including street trees, landscaping, and street furniture;
- locating parking to the side or rear of commercial buildings; and
- minimizing the amount of surface parking overall.

**Public Facility Siting.** Unlike the four points above, planners may participate in local decision making on the location and design of public buildings and facilities, including schools, libraries, and parks, but rarely do they have direct control over the process. Many school districts are not required to consider local plans or development regulations when siting a new school. This has resulted in many new, large sprawling schools being constructed on the urban fringe while smaller, neighborhood-level schools are closed. Only in the last few years have policy makers outside the school district begun to look at the impacts of school-siting decisions on sprawl, transportation, health, and educational quality.

**SURVEY OF PLANNERS**

In Spring 2003, APA surveyed 1,000 planners to determine the barriers that exist to incorporating health goals in comprehensive and functional plans and land-development regulations as well as the extent to which planners and planning agencies are already addressing health goals.

The largest barrier, according to 40 percent of the respondents, was that physical activity is not regarded as a planning issue. The second-highest reported barrier (reportedly 28 percent) was that physical activity is an assumed, not a stated, goal. Like most local government agencies, planning departments are perpetually faced with limited resources to tackle complex work programs and responsibilities. In that vein, 13 percent of respondents said the barrier to incorporating physical activity was that it would detract from other departmental priorities.

As mentioned above, many of the planning tools implemented under a smart growth plan are directly supportive of goals to increase physical activity. Specifically, smart growth seeks to encourage compact design, walkable neighborhoods, and the creation of more transportation options. We asked respondents to indicate which of the ten smart growth principles (as promulgated by the U.S. EPA Office of Smart Growth) have been implemented in their community since 1998 (Figure 1). At 76 percent, provision for mixed-use development scored the highest, followed by open space preservation at 63 percent. In fact, with the exception of the certainty principle (that is, providing clear rules and timelines for development review), around half of all respondents indicated that all the principles had been implemented to some degree since 1998. Together, the implementation of numerous smart growth principles and measures will provide a solid foundation for expanding community planning and design to address the goal of increasing physical activity.

We asked respondents to indicate the specific measures their jurisdiction had implemented to support walkability and physical activity. Recognizing that many reforms take place incrementally, we asked respondents to tell us whether the actions had been implemented to a large extent, to some extent, or not at all (Figure 2). Again, mixed-use development was the...
most commonly implemented measure, with 31 percent indicating they had included provisions in the zoning ordinance to permit it and an additional 50 percent having done it to some extent (i.e., presumably they allowed it in some but not all districts). Also scoring high were bicycle and pedestrian trails, with 26 percent indicating they had required or encouraged the incorporation of such facilities into subdivisions since 1993, with an additional 46 percent having done so to some extent.

Increasing development density near transit also scored high—16 percent indicated it had been implemented to a great extent, and 46 percent said it had been done to some extent.

Scoring lower, although still relatively common, were several other measures, including requiring or providing pedestrian-friendly architecture, such as building designs that minimize the amount of blank wall area in high pedestrian-traffic areas, awnings and shelters near transit, and street furniture and street trees.

Next, we asked respondents to be even more specific about facilities being installed to support bicycling and walking, such as sidewalks, bike lanes, and street furniture (Figure 3). We asked whether each element is required by the jurisdiction in most cases, all cases, some cases, or not at all. In practice, the jurisdiction installs some facilities, such as bike lanes; on the other hand, a developer installs sidewalks in most cases.

By a significant margin, the most commonly required element was sidewalks in new developments (63 percent require them in most or all cases; 33 percent require them in some developments). Also scoring high was a requirement or condition that new sidewalks be a minimum of five feet wide (34 percent require them in most or all cases; 31 percent require them in some cases). Urban designers and advocates for pedestrians regard this as the minimum width for users to be able to walk two abreast and to pass others or be passed safely.

Finally, we asked planners to tell us which of the common types of plans in their jurisdiction contain explicit policies, goals and/or objectives related to increasing residents’ opportunities for physical activity (Figure 4). As shown in Figure 4, 84 percent indicated the parks and recreation plan contains such explicit policies, 81 percent indicated that the comprehensive plan contains them, and 75 percent said the bicycle and pedestrian plan contains them.

Further analysis of the actual plans, however, revealed that few even mention health as a goal. This led us to conclude that, in the view of planners we surveyed, the plan policies, goals, and objectives related to walkability, alternate transportation modes, and quality-of-life enhancement (all of which are commonly found in the plans listed in the survey) are inherently supportive of physical activity goals and thus such plans were perceived to be explicitly attentive to health concerns. While it is significant that planners perceive that physical activity and health of residents are being addressed in these plans, expressly stating such goals would require a stronger civic commitment to health on the part of the local jurisdiction and would result in programming and resources directed at creating active communities. And, of course,

Specifically, smart growth seeks to encourage compact design, walkable neighborhoods, and the creation of more transportation options.

![Figure 3. Implementation of specific activity-friendly elements.](image)

![Figure 4. Activity-friendly planning undertaken by responding jurisdictions in the last five years.](image)
The ground floors of buildings are chiefly transparent and do not present blank walls, and require that the ground floors of parking garages contain commercial or service uses. The overlay would also include standards for the installation of awnings or canopies over building entrances.

The local zoning map would display the overlay, which may or may not have boundaries that coincide with the underlying zoning district. However, the standards contained in the overlay would prevail over conflicting provisions in the underlying zone. Where the overlay is silent, for example, on matters such as the location of accessory buildings and side yards, the underlying zoning district regulations would control.

The growing trend in cities enacting connectivity requirements is reflective of several larger trends and forces shaping planning and land development. These trends include:

- The new focus of many regional and local transportation plans that recognize bicycling and walking as transportation modes that are to be accommodated routinely in transportation plans, models, and funding formulas.
- An awareness that the traditional street hierarchy of arterial, collector, and local streets has reinforced the problems caused by conventional single-use zoning of neighborhood, isolation, and inaccessibility (by all modes, but in particular walking) between peoples’ origins and destinations.
- The emergence of traditional town planning principles (i.e., New Urbanism) into the mainstream as a community planning and design approach, whether it is on a communitywide or project-level scale.
- Growing recognition of the relationship between neighborhood design and residents’ level of physical activity and rates of overweight and obesity.
- A long-standing desire on the part of residents, local officials, and others to tame the effects of the automobile on communities and to provide for alternative transportation modes at the neighborhood, city, and regional levels.

In general, connectivity requirements have the purposes of creating multiple, alternate routes for automobiles and creating more route options for people on foot and on bicycles. Additional requirements can be added to the ordinances to establish pedestrian routes and passageways between land uses that can link isolated subdivisions to each other, and create the shortest, safest routes possible between origins and destinations. Almost all communities that have pursued street connectivity also prohibit or greatly limit gated streets or gated communities.

In Planning for Street Connectivity: Getting from Here to There (PAS Report 515, May 2003), author Susan Handy describes what supporters of connectivity point to as its potential benefits and what those who oppose it see as its potential detriments.

Perceived Benefits
- Decrease traffic on arterial streets
- Provide for continuous and more direct routes allowing for travel by nonmotorized modes
- Provide greater emergency vehicle access
- Improve utility connections, facilitate maintenance, and enable efficient trash and recycling pickup

Pedestrian Overlay District (POD). Pedestrian overlay ordinances are intended to result in districts and areas in which people are able to walk to and from their destinations, and where pedestrians are given deference to automobiles. Such an overlay district can be considered one of a group of plan and ordinance types that redirect land-use and transportation development and spending priorities toward a more balanced transportation network that accommodates all modes and all users. Such plans and ordinances also aim to promote and improve public health but by creating environments where people have opportunities to incorporate physical activity into their daily routines.

A POD provides for a specific mix of uses that generally work well in a pedestrian environment. In addition, it would prohibit setbacks of principal buildings, contain standards for the inset of entrances in order to protect pedestrian movement, require that ground floors of buildings are chiefly transparent and do not present blank walls, and require that the ground floors of parking garages contain commercial or service uses. The overlay would also include standards for the installation of awnings or canopies over building entrances.

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A survey by APA of planners on community design and physical activity revealed that a majority of communities (65 percent) require new sidewalks to be a minimum of five feet wide. Urban designers and pedestrian advocates regard a five-foot width as the minimum needed to enable people to walk two abreast and to pass others or be passed safely.
Perceived Detriment

- Increase traffic on residential streets
- Increase infrastructure costs and impervious cover
- Require more land for development, thus increasing housing costs and threatening the profitability of housing development

Handy says these potential outcomes have not been fully studied to adequately determine which assertions are most supportable. Further, the research on connectivity has generally compared the extremes—the traditional grid with a conventional suburban curvilinear pattern—ignoring the fact that many communities have a hybrid of the two systems. She concludes that connectivity requirements should be aimed at increasing connections without significantly increasing through traffic in residential areas. This can be done by avoiding long, straight streets that may encourage speeding, using curves to slow traffic, and allowing cul-de-sacs where natural or built features prevent connectivity.

Connectivity ordinances generally use one of two methods to evaluate proposed developments. The first method is to establish a maximum block length. In Portland, Oregon, the maximum block length is 530 feet; in Austin, Texas, it is 600 feet, and in Fort Collins, Colorado, it is 660 feet. The appropriate block length for any community can be determined by examining and measuring the dimensions of blocks in residential areas of the city that reflect the desired scale, character, and connectivity that the municipality is hoping to achieve within new developments. In contrast to the above examples, in Great Streets (MIT Press 1993), Alan Jacobs provided average block lengths in a number of major U.S. cities. For example, to contrast the above examples, the mean block length in San Francisco’s city center is 353 feet; in Lower Manhattan, it is 274 feet; and in areas of Boston built as of 1895, it was 190 feet.

A good connectivity ordinance will establish spacing and linkage standards to ensure that the local street system provided by a new development, whether public or private, connects with adjoining development. Often local governments fail to ensure that streets in new developments link up with street stubs provided in older development, typically as a result of concerns by residents over traffic problems. This ordinance reminds local officials and planners charged with reviewing such development of the importance of providing multiple points of linkage to adjoining properties through collector and local residential streets, so it is not necessary for vehicles and pedestrians to use the arterial street systems.

CONCLUSION

In the late 19th and early 20th Centuries, city planning and the emerging concept of zoning were regarded as tools for protecting the public’s health. Over time, advancements in technology, industry, lifestyle, transportation, and pollution prevention caused the two fields to diverge for most of the 20th Century. Today planners and public health officials are renewing their collaborative efforts and are sharing information and approaches to achieving their respective missions. The two fields now recognize that the tools communities are using to promote smart growth also support emerging public policy to change community planning and design to promote physical activity among residents. For planners, the interest by health professionals lends additional credibility to smart growth policies and programs that are already aimed at land conservation, improved air quality, compact growth, and reduced traffic congestion.

Access the APA Research Department web site at www.planning.org for a bibliography of references on planning and designing physically active communities and complete results of the survey described here.

ZONING REPORTS

THE DESTRUCTION OF HOUSING CAPITAL: A PRELIMINARY EXPLORATION INTO DEMOLITIONS AND DISASTERS


Residential housing is such an essential element of any community’s land-use pattern that, upon reflection, it seems crucial that we know not only how it gets built but when and under what circumstances we may expect it to disappear as well. This study considers a number of variables in reaching some conclusions about the stages through which housing units pass on their way to demolition.

FILLING IN THE SPACES: TEN ESSENTIALS FOR SUCCESSFUL URBAN INFILL HOUSING


Supported by a grant from the Washington Association of Realtors, this report from a Seattle-based housing group outlines a series of political, industry, marketing, design, and regulatory initiatives for “a framework for pursuing change” and fostering the environment within which change can happen to produce infill housing in urban neighborhoods. As such, it is a succinct, well-organized policy manual for those involved in the issue.

Cover photo of Iowa Ave. in downtown Iowa City, Iowa. Photo provided by Iowa City Planning Department.