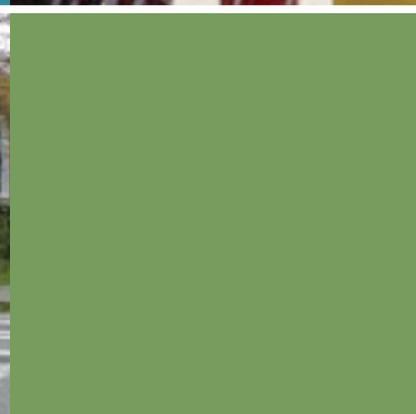
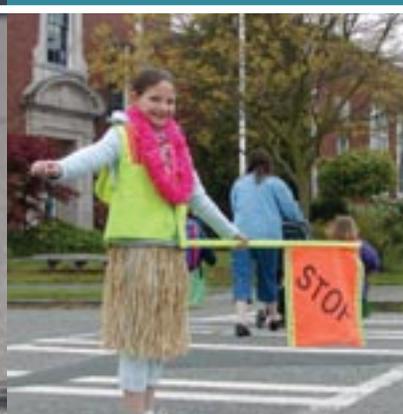
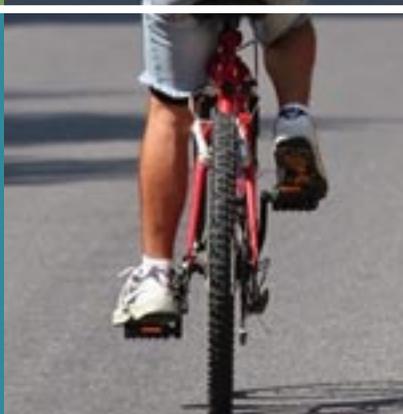
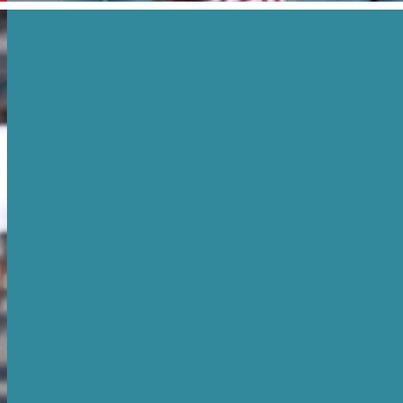
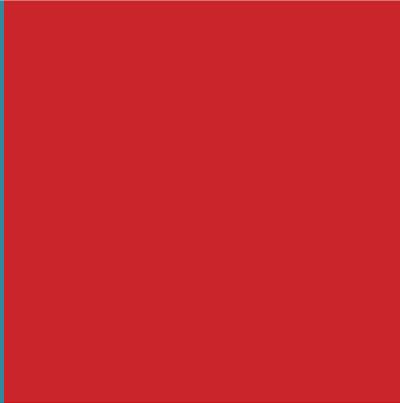


DESIGN GUIDELINES FOR

# Active Michigan. Communities

Imagining, Creating, and Improving Communities for  
Physical Activity, Active Living, and Recreation





Michigan Department  
of Community Health

**MDCH**

Jennifer M. Granholm, Governor  
Janet Olszewski, Director



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EXPERIMENT STATION

**DESIGN GUIDELINES FOR**

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# Active Michigan. Communities

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**Imagining, Creating, and Improving Communities for  
Physical Activity, Active Living, and Recreation**



Katherine Alaimo, Ellen Bassett, Risa Wilkerson, Melissa Smiley, John Warbach,  
Adam Hines, Lily Guzmán, Cynthia Krupp, Jennifer Mosack, and Karen Petersmarck

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To request a copy of *Design Guidelines for Active Michigan Communities*, contact Risa Wilkerson, Michigan Governor's Council on Physical Fitness, Sports, and Health at (517) 347-7891, or [rwilkerson@michiganfitness.org](mailto:rwilkerson@michiganfitness.org). Postage and handling may be required. *Design Guidelines* is also available for downloading at <http://www.mihealthtools.org/communities>.



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# DESIGN GUIDELINES FOR ACTIVE MICHIGAN COMMUNITIES

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# INTRODUCTION: GETTING MICHIGAN MOVING!

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**“Active living environments are places where all people are able and inspired to use their feet to get them places. They are places where people of all ages, incomes and abilities can walk and bike—both for recreation and for transportation.”**

—Michigan Governor’s Council on Physical Fitness, Health and Sports

During the late 1990s, leaders at the Michigan Department of Community Health (MDCH) and the Michigan Governor’s Council on Physical Fitness, Health and Sports created a new state initiative on physical activity. Their goal was to inspire Michigan communities to change their policies and built environment to make it easier for local residents to be physically active. The resulting program, Promoting Active Communities (PAC), helps communities analyze how they can improve their support for active living. The PAC is a web-based self-assessment tool that enables communities to scrutinize their policies, programs, and environments by completing a checklist (<http://www.mihealthtools.org/communities>). The assessment requires teamwork between community leaders, professionals, and citizens, and generates abundant ideas for community improvements. Upon completion, every community receives an award from the Michigan Governor’s Council on Physical Fitness, Health and Sports, based on their assessment score.

Since 2001, more than 70 communities have completed the PAC and received awards. Over 20 communities have completed the assessment multiple times, and most of those have made enough improvements in their community to move up the awards ladder.

Encouraged by so many successes, in 2003 MDCH and the Governor’s Council teamed up with the Prevention Research Center of Michigan/University of Michigan School of Public Health and Michigan State University to improve the PAC Award system, increase promotion efforts, and evaluate the program’s effectiveness. The first step was to form a Michigan Promoting Active Communities Steering Committee of statewide experts, officials, and organizers who work in relevant areas, including social services, legislation, health care, recreation, transportation, urban planning, education, law enforcement, and land use. (Members of the steering committee are listed in the acknowledgements on page 6).

The steering committee oversaw three processes that guided the PAC improvements. First, a systematic review of research on public health, urban and regional planning, and transportation helped identify evidence-based environmental and policy indicators associated with physical activity. Second, focus groups gathered feedback from previous PAC users and neighborhood leaders. Finally, existing tools for assessing neighborhood walkability, bikeability, and built environments were evaluated for use in the PAC. Twenty-seven national and state experts then reviewed all the materials.

Creating an active living community can require oversight, patience, and purposeful planning. One comment consistently heard from previous PAC Award recipients was the need for more specific guidance on how to move forward to achieve a more active community. *Design Guidelines for Active Michigan Communities* is the new companion guide to the PAC program. This book was created to help people in Michigan—city and township leaders, elected officials, planners, transportation professionals, parks and recreation professionals, bicycle enthusiasts, business owners, and neighborhood residents—envision and create safe, walkable, bikeable, and enjoyable Michigan communities.

*Design Guidelines for Active Michigan Communities* is organized into seven chapters.

- Chapter 1, “The Active Living Vision,” sets the stage by describing active living communities. It calls attention to the benefits of these communities and highlights some important Michigan initiatives.
- Chapter 2, “Design Essentials for Active Living,” defines guiding principles for active living that can be applied in rural, suburban, and urban areas.
- Chapter 3, “Designing for Pedestrians,” illustrates common characteristics of pedestrian-friendly communities related to sidewalks, street crossings, and traffic calming.
- Chapter 4, “Designing for Bicyclists,” outlines some of the key features of bikeable communities, including street design elements and bicycle facilities.
- Chapter 5, “Parks, Shared-Use Paths, and Trails,” highlights parks, and shows more possibilities for active travel and recreation on paths separated from motor vehicles.
- Chapter 6, “More Active Living Design Ideas,” provides information on several areas of active living design that are not specific to any one type of user, such as construction and maintenance issues, seasonal concerns, and the design of public transportation and public spaces.
- Chapter 7, “Steps for Creating an Active Living Community,” shares ideas for community planning, organizing, and advocacy.

At the end of the book, you’ll find an annotated guide to resources, a glossary, and a bibliography.

We hope that you and your community members will enjoy this guidebook. Share it with your neighbors and colleagues, and consider changes that your community can make to support active living. We also encourage you to visit the PAC website, gather a PAC team, fill out the assessment questionnaire, and receive an award as you work to *get Michigan moving!*





# 1 THE ACTIVE LIVING VISION

**Active living is a way of life that integrates physical activity into daily routines. The goal is to accumulate at least 30 minutes of activity each day. Individuals may achieve this by walking or biking for transportation, exercise or pleasure; playing in the park; working in the yard; taking the stairs; and using recreation facilities.”**

—“A Primer on Active Living by Design” (Robert Wood Johnson Foundation, 2004)

## What Are Active Living Communities?

Active living communities make it easy for people to include physical activity in their daily lives. Walking to work, school, the store, or just for fun is safe and convenient. Bicyclists are respected, and roads are built for all forms of transportation, not just cars. Recreation opportunities are accessible—parks, playgrounds, and all kinds of sports facilities are located near people’s homes and are open to all residents.

Research shows that people are more likely to get exercise if active recreation and transportation opportunities are nearby and easy to access (Ewing et al., 2003; MDCH, 2004; Humpel et al., 2002; Owen et al., 2004; Matson-Koffman, et al., 2005; Godbey et al., 2005; Handy, 2005; Frank and Engelke, 2001). This is important news—in a survey conducted by the Michigan Department of Community Health, less than 50 percent of adults reported meeting the recommended 30 minutes per day of physical activity. Twenty-five percent said they participated in no leisure-time physical activity at all. These statistics are one reason why Michigan consistently ranks among the heaviest states in the nation: 62 percent of Michigan adults are overweight or obese, and the prevalence of overweight children has tripled during the last 20 years (MDCH, 2004).

Sedentary lifestyles are linked not just to obesity but also to cardiovascular disease, hypertension, osteoporosis, diabetes, and some cancers. This makes physical inactivity second only to smoking as a lifestyle risk factor for disease and premature death (USDHHS, 1996).

## RECOMMENDATIONS FOR PHYSICAL ACTIVITY

It’s never too late to become active. Starting a more active lifestyle now can improve your health and quality of life, make you feel more energetic, and reduce stress.

The U.S. Centers for Disease Control and Prevention recommend that:

- Adults should accumulate 30 minutes or more of moderately intense physical activity on five or more days per week, or 20 minutes or more of vigorously intense physical activity on three or more days per week.
- School-aged children and adolescents should get at least 60 minutes of moderately to vigorously intense physical activity every day (CDC, 2006).



Photo credit: © eva serrabassa, <http://www.iStockphoto.com>.

## THE ABUNDANT BENEFITS OF PHYSICAL ACTIVITY

According to the American Heart Association, physical activity has the power to:

- Increase energy levels
- Reduce stress and tension
- Improve mood
- Reduce the risk of heart disease, colon cancer, and osteoporosis
- Maintain range of motion and prevent arthritis
- Help prevent and treat type 2 diabetes
- Improve blood cholesterol levels
- Prevent and treat high blood pressure
- Improve weight control
- Prevent bone density loss
- Improve the quality of sleep and the ability to fall asleep quickly
- Improve self-image
- Increase muscle strength
- Help prevent or delay chronic illness and diseases associated with aging
- Increase years of independence at the end of life (American Heart Association, 2005; Wilkinson, 2002).



**Active communities provide plentiful choices for social interaction. The variety of restaurants on Royal Oak's Main Street is a definite draw!**  
Photo credit: City of Royal Oak, Planning Dept.

## What Do Active Living Communities Look Like?

While all are unique, most active living communities have common design characteristics. In active living communities, leaders embrace the concepts of mixed use and compact design. Instead of office parks on the outskirts of town, shopping strips along highways, and schools and subdivisions in the middle of cornfields, homes and businesses are built close to existing retail shops, restaurants, and community services such as the library or post office. These mixed-use developments bring people closer to the places they frequently travel. Having homes and businesses close together shortens the distances between where people live and where they want to go, making it more likely that residents will walk or bike.

In addition to compact design, active living communities have streets, bike lanes, sidewalks, shared-use paths, and trails that form a complete non-motorized transportation network. Have you ever traveled on a sidewalk that suddenly ends, with no sidewalk on the other side of the street and no sign of an extension straight ahead? Or found yourself at a busy intersection, but the pedestrian signal leaves you without time to cross the street? One of the most common barriers to walking and biking is this incomplete network. In contrast, a walkable community has continuous sidewalks—on both sides of the street—designed with buffers of grass, trees, or parked cars to protect pedestrians from motor vehicle traffic. Sidewalks are wide enough for people to walk together and pass those going the opposite way. Walkways lead pedestrians to the front doors of their destinations without forcing people to cross chaotic parking lots. Streets are designed in a grid-like manner, not a maze of cul-de-sacs, and offer multiple routes to different places. Crossings are safe, convenient, and provide adequate time for pedestrians to cross comfortably. Active living communities are also bikeable. Bike routes are clearly marked, safe, and connected between places bicyclists want to go.

An efficient and convenient public transportation system greatly expands the possibilities for active living. A five-minute walk to a bus stop, followed by a bus ride across the city and a short walk to the final destination, provides more physical activity than parking near the front door of all your errand stops. Without a public bus system, many trips would be impossible to walk in a timely fashion. Many public buses now have bike racks that allow bicycle commuters to travel much greater distances as well.

Finally, active living communities are fun and exciting places to live, providing plentiful choices for recreation and social interaction. Parks, playgrounds, community centers, tennis courts, and trails are within easy reach of all residents, and lively downtown areas offer diverse storefronts, year-round cafes, theaters, and summer festivals. The natural beauty, abundant lakes and rivers, and open spaces found in Michigan present great opportunities for active living.

But the true test of an active living community is how many people you see out walking. Think about your favorite Michigan town or city—you probably chose a place where you and others enjoy being out and about!

## There's More to Gain Than Just Getting Active

Getting more people to exercise is not the only benefit of active living design. There are economic, environmental, equity, safety, and social benefits as well.



**Active living communities create new economic opportunities. Downtown living, for example, encourages shop owners to keep shops open later, which enhances the attractiveness of downtown as a destination.** Photo credit: Image from the Metropolitan Design Image Bank. © Regents of the University of Minnesota. Used with permission. All rights reserved.

### Stronger Local Economies

Active community design makes good economic sense. One study of conventional development (often called sprawl) found 10 percent more annual public service deficits and 8 percent higher housing occupancy costs as compared to managed growth (Burchell and Mukherji, 2003). Physical inactivity also costs the state of Michigan almost \$9 billion annually, through higher health insurance premiums, lost productivity, and increased state-funded Medicaid payments (Chenoweth, 2003). In addition, transportation expenses consume an average of 19 percent of a family's budget. With the rising cost of gasoline, fewer driving trips adds up to immediate savings.

Walkability also increases property values. Researchers have found that real estate agents and developers sell houses faster and at higher prices if they are located next to a trail or within a walkable neighborhood. One study reported that a 5–10 mph reduction in traffic speeds increased adjacent residential property values by 20 percent (Local Government Commission Center for Livable Communities, 2000). Active



**Active living communities mix land uses. Need bread? Hop on a bike, just like this boy.** Photo credit: Russ Soyring.

## SPRAWLING WAISTLINES

Are people who live in compact communities more likely to walk than people who live in sprawling suburbs? A recent study, "Relationship Between Urban Sprawl and Physical Activity, Obesity, and Morbidity" (Ewing et al., 2003), looked at the association between urban sprawl and walking, weight and hypertension. Researchers measured the degree of sprawl with a county "sprawl index" that used data available from the U.S. Census Bureau and other federal sources. Sprawling counties are spread-out areas where homes are separated from places people need to go (such as workplaces, schools, and stores). Often the only routes between places are busy high-speed roads that are unsafe for biking or walking. The researchers found that people living in counties marked by sprawling development were less likely to walk, weighed more, and were more likely to have high blood pressure.





**Active living communities are walkable.** Photo credit: Russ Soyring

community design can also attract new employers. Many companies find that walkable, livable communities provide a perk that interests prospective employees.

### A Cleaner Environment

Active community design supports a cleaner environment. Motorized transportation accounts for 32 percent of greenhouse gas emissions, 28 percent of common air pollution, 51 percent of toxic air pollution, and 23 percent of toxic water pollution (Brower and Leon, 1999). A family that walks two miles a day rather than driving those miles will prevent, on average, 730 pounds of carbon dioxide from entering the atmosphere each year

(USDOT/FHWA, 1992). Each commuter who walks or bicycles to work (or takes the bus or train!) could save hundreds of gallons of gasoline per year (Shapiro et al., 2002).

### Greater Social Equity

Convenient and safe opportunities for transportation and physical activity should be provided for all citizens. Nearly one-third of Michigan residents don't drive because they're too young, too old, or physically unable; they choose not to drive; or they can't afford a vehicle (MLUI, 2000). These residents cannot move safely or easily around the community unless it is designed for all modes of transportation. Viable options for walking, biking, and using public transportation provide affordable access to the places that people need to go. Rails-to-trails (walking/biking paths along abandoned railroad corridors that often run through town), and free or low-cost parks and recreation centers located throughout a community provide all residents with opportunities for healthy physical activity.

### Increased Safety

Pedestrian-vehicle crashes are a serious concern. Over 5,000 people die annually in the United States after being hit by a vehicle (1994–2003) and over 70,000 are injured (STPP, 2004). The most vulnerable people, who often cannot drive, are most at risk. Of all pedestrian deaths, 21 percent are seniors (age 65+), and 16 percent are children; pedestrian injury is the third leading cause of unintentional injury-related death among children ages 5 to 14 (STPP, 2004). In general, reducing traffic speeds and/or volume (both of which encourage people to walk or bike) results in a safer community. At lower speeds, crashes are less frequent, and those that do occur are less likely to be lethal (Insurance Institute for Highway Safety, 2000).

### Enhanced Community Connections

People are healthier and happier when they feel connected to a place and to other people. Spontaneous social meetings—bumping into neighbors



**Active living communities facilitate spontaneous connections like the new friendship here.** Photo credit: Russ Soyring

while walking to work, school, the post office, a restaurant, or just around the block—can create stronger ties. In contrast, driving to every destination, including work, can limit opportunities for these connections. Worse, longer commutes leave less leisure time available for family, friends, and neighbors (Putnam, 2000). Getting people outside and active can increase people’s sense of community and their enjoyment of life.

## Michigan Is Moving Toward Active Living Design

**“If you plan cities for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places.”**

—Fred Kent, founder and president of Project for Public Spaces

Since World War II, Michigan and much of the country have built streets, neighborhoods, shopping centers, towns, and cities with the automobile in mind, not pedestrians or bicyclists. Michigan is one of the fastest sprawling states in the United States. Although Michigan’s population is growing very slowly, the people of this state are consuming land at an alarming rate—the urban and built-area growth rate is estimated at six times higher than the population growth rate (Skole et al., 2002). Between 1982 and 1997, the state’s developed land acreage increased by more than 30 percent (Norris and Soule, 2003). One result of such development is an increase in dependence on cars as the places people need to go are farther and farther away from their homes.

But changes are afoot. Many Michiganders are embracing and reinvesting in older walkable cities and have created a demand to rethink the design of new places. Several initiatives highlight this creative energy.



Representatives from the City of Ann Arbor receive their Promoting Active Communities award in 2005. Photo credit: Governor’s Council on Physical Fitness, Sports and Health

### The Promoting Active Communities Award

The Michigan Department of Community Health and the Michigan Governor’s Council on Physical Fitness, Sports and Health are working to help Michigan communities change their built environments and policies to make it easier for community residents to be physically active. The Promoting Active Communities (PAC) program offers a web-based self-assessment checklist that helps communities scrutinize their programs, policies, and environments. The assessment, which requires teamwork between



**Active living communities are fun and exciting places to live. Detroit's beautiful Tricentennial State Park is only one of many activity-oriented destinations along Detroit's transformed riverfront. Visit soon!** Photo credit: Downtown Detroit Partnership

community leaders, professionals, and citizens, generates ideas for community improvements. Every community that completes an assessment receives an award based on their assessment score. To learn more, go to <http://www.mihealthtools.org/communities>.

### Michigan Health Tools

The PAC Award is just one of eight ongoing initiatives of the Michigan Department of Community Health intended to get communities thinking about how their policies and environments can improve health. The other programs are Healthy Community Checklist, Promoting Healthy Eating, Healthy Work Environments, Healthy Schools—Healthy Students, Walk by Faith, Public Health Steps Up Challenge, and the Legislative Health Challenge. See <http://www.mihealthtools.org> for more information.

### Safe Routes to School Initiatives

Safe Routes to School is an international movement to make it safe, convenient, and fun for children to bicycle and walk to and from school. When routes are safe, walking and biking provide an easy way for children to get the regular physical activity they need for good health. Safe Routes to School initiatives also help ease traffic jams, lessen air pollution, unite neighborhoods, and contribute to students' readiness to learn in school.

The Michigan Governor's Council on Physical Fitness facilitated a two-year pilot effort funded by the Michigan Department of Transportation to develop a statewide Safe Routes to School program. A 25-member coalition of state leaders from a variety of disciplines plus 11 schools developed resources and strategies to help Safe Routes to School teams improve routes and encourage walking and bicycling. For more information on Michigan's Safe Routes to School toolkit, trainings, and more, visit <http://www.saferoutesmichigan.org>.

### The Michigan Land Use Leadership Council

Shortly after assuming office in 2003, Governor Jennifer Granholm, supported by Senate Majority Leader Ken Sikkema and Speaker of the House Rick Johnson, announced the formation of the bipartisan Michigan Land Use Leadership Council, co-chaired by former Governor William Milliken and former Attorney General Frank J. Kelley. The council was charged with determining how to minimize the negative effects of current and projected land-use patterns on Michigan's environment and economy.

With extensive public participation, the council recommended ways to address four major categories of land-use concerns: infrastructure and community services, land resource-based industries, planning and development, and revitalization of urban areas. One key recommendation is to create walkable neighborhoods. Others include mixing land uses, preserving open space, providing a variety of transportation options, strengthen-

ing and directing development toward existing communities, taking advantage of compact design, and supporting local Safe Routes to School programs (MLULC, 2003).

### The Michigan Department of Transportation

In 2003, Governor Granholm instructed the Michigan Department of Transportation (MDOT) to use context-sensitive design, to the extent possible, for transportation projects. Context-sensitive design considers the physical setting of the community and engages stakeholders early in project planning. This process offers an opportunity to address residents' concerns such as achieving walkability, maintaining historic character, and developing other active community features.

MDOT also supports other active living programs including the Federal Safe Route to School Program; Nonmotorized Planning and Technical Assistance, which includes training opportunities; and the Transportation Enhancement Program, which provides opportunities for non-motorized projects, such as streetscapes, pedestrian and bicycle facilities, safety and education activities, and conversion of abandoned rail corridors to trails. Walkability audits of Michigan communities are also available upon request (see the Resources section for more information).



Alpena's Center Building mixes uses and will provide an economic benefit to the city. Photo credit: Dan Burden

### The Cool Cities Initiative

The movement toward active community design received a further boost in 2003 when Governor Granholm launched the Cool Cities Initiative. Building vibrant, energetic cities that attract jobs, people, and opportunities to Michigan is a key component of Governor Granholm's economic vision for Michigan. Across the state, 150 communities have formed local Cool Cities advisory groups. Nearly 50 communities have been named Cool

Cities Designees, which gives them priority access to existing state grants, loans, tax credits, and services that can help create vital, mixed-use neighborhoods. Some also received a catalyst grant to jump-start their improvement plans.

## WHAT DO YOUNG PEOPLE WANT FOR MICHIGAN?

Young adults are leaving Michigan in large numbers. To find out how to attract and keep the next generation of entrepreneurs, researchers working for the Cool Cities Initiative surveyed university students and recent college graduates (MEDC, 2004). Most respondents were young, single, college-aged students and Michigan residents.



"Safe streets and neighborhoods" was the most highly rated attribute when choosing a place to live. "Walkable streets," "affordable living," and "safe streets" appeared on the top ten list for all three types of cities (downtown, suburbs, and small town/rural). The demand is high to re-create Michigan communities as places where more people are able and inspired to walk and bike frequently.





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## 2 DESIGN ESSENTIALS FOR ACTIVE LIVING

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**To help you start thinking about active living design, this chapter highlights some of the guiding principles that encourage community residents to adopt an active living lifestyle. These principles arise from three sources: 1) accepted “best practices” in design; 2) recommendations from respected experts in walkability, bikeability, and transportation planning; and 3) the experiences of people who walk, bike, run, dog-walk, commute, and shop in Michigan and elsewhere** (Burden, 2002; Bicycle Federation of America Campaign to Make America Walkable, 1998; Hirschhorn and Souza, 2001; Ewing, 1999a, 1999b).

**At the end of this chapter, you will see how the guiding principles work in different settings.**

### The Guiding Principles

#### Transportation Begins and Ends with Walking

For virtually every trip—from home to the store, from the car to the office, from the office to a lunch date—at least part of the trip is on foot. For those who are able, walking is common to all forms of travel. Unfortunately, the walking part of the trip is often overlooked. As a good example, consider the parking lot at an average shopping center. The trip from your car to the front door can be unnerving. You have to dodge speeding vehicles cutting across parking lanes, hop out of the way of vehicles suddenly backing out of spaces, and dash to the front door to avoid inclement weather. No wonder people hunt for the closest parking spot!

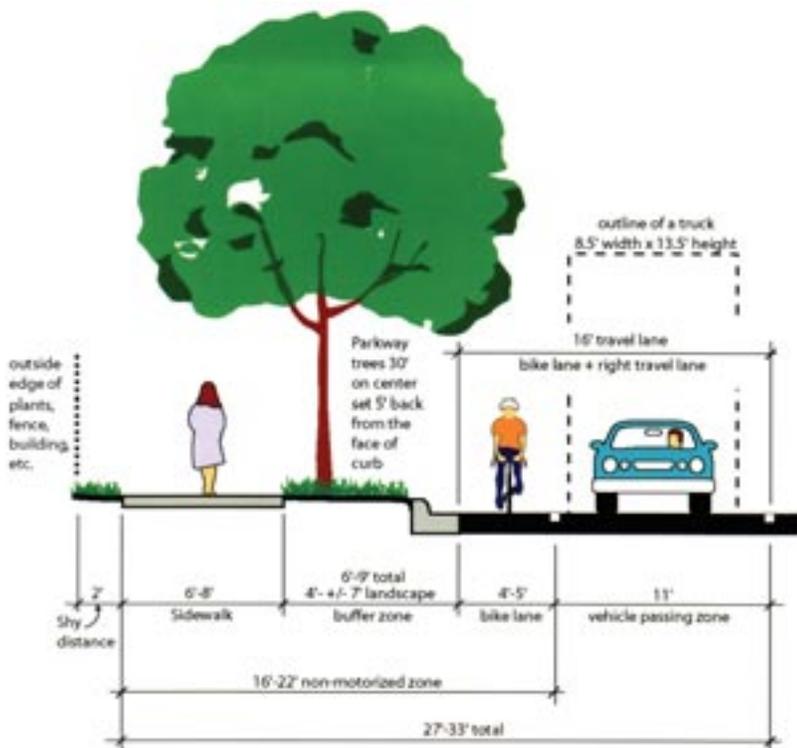
#### Plan for Your Most Vulnerable Populations

Regular physical activity should be a lifelong goal for everyone, but many cities and towns have hurdles that limit activity for some people.



Photo credit: Image from the Metropolitan Design Image Bank. © Regents of the University of Minnesota. Used with permission. All rights reserved.

Photo credit: © Steve Lovegrove, <http://www.iStockphoto.com>.



**A complete street.** Drawing credit: Norm Cox

When planning for facilities and infrastructure, keep in mind the needs of children as well as elderly and disabled residents. They tend to move more slowly and be less visible to other people in public. Work with your local planner to survey these groups, or speak with their advocacy organizations. Ensure that sidewalks, street designs, public transit stops, public spaces, and parks and recreation facilities meet their needs. When a community's design works for the most vulnerable residents, it works for everyone.

### Complete Your Streets

Make sure that streets work for all users, not just for those in vehicles. A *complete street* fully accommodates pedestrians by providing safe and accessible sidewalks, well-marked crosswalks,

street lighting for safety, and tree shade for comfort. The street should employ design elements or traffic calming techniques that slow cars. For bicyclists, a complete street provides marked bike lanes or wide curb lanes, marked bicycle routes, and signs advising motorists of the presence of bicyclists. One way to figure out which streets need completing is to create a bicycle and pedestrian master plan. Good examples can be found in "Active Living and Recreation Resources" near the end of this book; see the "Policies and Planning" section.

### Create a Transportation Network with Many Connections

A robust transportation network links valued destinations through a variety of means and routes. Think of a spider web: a network with many connections, where threads of differing thickness represent different modes of transportation. More connections mean shorter distances between the places you want to go and thus less time to get to your destination. A network offering multiple modes of transportation also can make it easier to get places. For example, to bike to a friend's house you could ride on streets with bike lanes, then hop onto a shared-use path, and finally get on a bus equipped with a bike rack.



Photo credit: Image from the Metropolitan Design Image Bank. © Regents of the University of Minnesota. Used with permission. All rights reserved.

## Ensure Equitable Access to Opportunities for Activity

Active living design provides people of all means with close and easy access to areas that enhance physical activity, such as parks and trails. During planning, consider the proposed placement of such areas. If a trail can be reached only via busy roads or if the park with play equipment is too far away, a parent might hesitate to push a baby in a stroller to get there. Make facilities available to all groups in society. A family without a car may not have the means to reach even the nearest park. Older, built-up neighborhoods, for instance, may have less open space or fewer parks than newer ones—although they may have better sidewalks! Local governments should list their physical activity assets, determine areas with deficits, and take action, such as creating pocket parks or investing in sidewalks, to ensure walk- and bikeability for all.



Photo credit: © Dave Logan,  
<http://www.iStockphoto.com>

## Build with Safety and Security in Mind

Physical activity has two precursors: safety and security. *Safety* means that when people window-shop on the street or sprint up a hill on a shared-use path, they feel confident that they will come to no physical harm. Good design and maintenance are essential to feeling safe. For example, sidewalks need to

be well lit and buffered from vehicles on roadways by planted strips, street trees, or parking. Walking and biking surfaces need to be level and clear of debris. Low-hanging branches that narrow usable space, threaten eyes, and obstruct visibility must be removed. Intersections should be designed to prioritize pedestrian safety and reduce conflicts with motor vehicles.

*Security* means that pedestrians and bicyclists can move without fear of crime or some other threat, such as an unleashed dog. Security is strongly linked to people's perception of the environment. While crime might not be an actual problem, the fear of crime deters physical activity. Again, design is critical to feeling secure. Try to maximize the number of "eyes on the street" (Jacobs, 1961). The more people you have on the street or watching the street, the stronger your feeling of security even if surrounded by strangers. To enhance security, businesses and homes should have doorways and windows oriented toward the street. In shopping areas, commercial buildings and parking

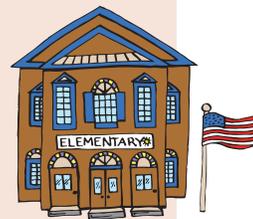


Photo credit: © Tony Tremblay,  
<http://www.iStockphoto.com>

## SCHOOL SITING

Neighborhood schools are vital to active living communities. Schools located within residential areas make it easier for students to walk and bike to class. Walking and biking paths are not usually part of the design plan for outlying schools, so there can be traffic and chaos around the school during arrival and dismissal times.

The trend of siting schools on the edge of town (or further) has received much scrutiny. Inexpensive land at the edge of town may seem like a good way to keep school costs down when deciding whether to preserve a neighborhood school or construct a new one elsewhere. However, the expenses associated with upgrading the streets and utilities, the extra time and energy costs for parents who choose to drive their kids to school, and the added costs of school busing are usually not calculated into the cost analysis.



While schools are exempt from local site plan review and zoning requirements, you can influence school siting decisions. The Michigan Land Use Institute published a report on school siting that explores the subject using Michigan cases (McClelland, 2004). A Safe Routes to School movement is growing across the state as local teams of school personnel, parents, students, and community leaders work together to improve the walking and biking routes around their schools, giving children the opportunity to be physically active at least twice daily (<http://www.saferoutesmichigan.org>).



Photo credit: Image from the Metropolitan Design Image Bank. © Regents of the University of Minnesota. Used with permission. All rights reserved.

garages should have retail businesses on the first floor; encourage restaurants to have sidewalk cafes or verandahs. In residential districts, houses placed closer to narrowed streets can create a welcoming, secure neighborhood feeling.

### Embrace Downtowns, Density, and Mixed Use

Density is the critical ingredient of an exciting built environment. Density means there are enough people and attractive destinations close enough together to encourage enjoyable life on a street. Higher densities are a key trait of some of Michigan's most

attractive urban areas: the shopping areas of downtown Holland; the cafes, restaurants, and bars of Main Street, Ann Arbor; and the loft apartments, shops, and art galleries of Royal Oak. Market research has shown that people like density if it is "done right." In fact, densely developed walkable communities now constitute one of the highest value sectors of the real estate market.

How is density done right? One way is to mix land uses. This allows commercial spaces, such as retail shops, galleries, and restaurants, to mingle with residential dwelling units, such as loft apartments and townhouses, and with public facilities and buildings, such as libraries and small parks. Land uses can be mixed both horizontally (existing side by side) and vertically (stacked on top of one another, such as a loft apartment above a coffee shop). Mixing land use encourages active living by bringing people's homes and work closer to the other places they want to go, then making it easier to walk or bike. To move toward an active living environment, think about how to increase the mixed use and density of your community.



Photo credit: John Pratt.

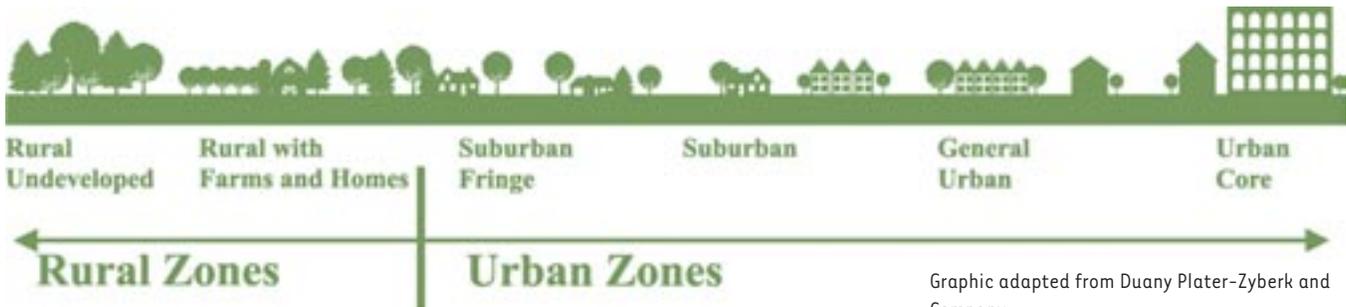
### Remember That Aesthetics Matter

Physical activity is positively associated with pleasing environments. While you might think that aesthetics are in the eye of the beholder, the research literature shows a lot of agreement on what people find attractive and what motivates them to get outside and move. Quality buildings, streets, and landscaping—trees, shrubs, flowers, and other plantings—make a community a more appealing place to be active (Kaplan and Kaplan, 1989; Kaplan et al., 1998). Plants provide interest; they soften the appearance of hard surfaces and provide color, fragrance, and seasonal interest. Trees provide critical shade, reduce temperatures in urbanized areas, and help reduce carbon dioxide. They can also help separate pedestrians from motor vehicle traffic. Attractive and well-maintained homes, interesting buildings, fine public libraries, beautiful streetscapes, and public art create places that inspire people to be physically active (Brownson et al., 2001).

When advocating new design approaches in your community, don't dodge a discussion of aesthetics. Where do you like to visit and stroll? Where do

you not take out-of-town guests? Why? When you know the elements you like and dislike, you can develop a better active living environment. Form-based codes can also help communities create and maintain a pleasing local character (see the “Form-Based Codes” box in Chapter 7 on page 71).

## Applying the Principles



Graphic adapted from Duany Plater-Zyberk and Company.

No matter where you live, you can apply these active living principles to improve active living in your community. A first step is to classify your community according to its land-use and design characteristics. The diagram above can help you do this. The diagram shows common land uses and building types you might encounter in an extended walk from the least developed to the most developed area of a community. Take a minute now and identify the zone on the diagram that best depicts your community. Then read the following sections for recommendations specific to rural, suburban, and urban communities.

### Rural Communities

Research shows that rural residents are more likely than urban residents to be physically inactive and to suffer from related illnesses (Parks et al., 2003). This isn’t surprising if you think about how some rural areas have developed. Typical rural homes in Michigan exist on two-lane county highways. These roads carry fast traffic and have minimal or no shoulders for safe use by pedestrians or bicyclists. Although many rural residents live on large parcels or near open space, the patchwork of private property makes it difficult to go for a nature walk without trespassing. Finally, a shift to highway commercial development—particularly big-box retail—has negatively affected many locally-owned businesses and town or village centers, which are often more walkable environments.

Rural communities can take several key steps to enhance possibilities for active living.

- Make roads more friendly to non-automotive users by providing wide shoulders on heavily traveled, paved county roads. An added benefit: Wide shoulders also reduce maintenance costs.
- When possible, locate new developments so they adjoin existing village centers or other residential areas.



Michigan’s rural areas host many beautiful and productive farms. Photo credit: © Mike P. Kelly, <http://www.iStockphoto.com>



This rural road provides a paved shoulder sufficiently wide for a bicyclist. Photo credit: MDOT

- Require new rural subdivisions to have sidewalks even if the streets have no curbs.
- Reduce motor vehicle traffic lane widths on paved roads to calm fast-moving traffic, and increase shoulder width to make room for bicyclists.
- Use cluster zoning that sets aside land as open space and groups homes on a portion of the property; allow mixed land uses in new developments.
- Develop trails, particularly shared-use trail networks, that link the rural area to other trails and destinations.
- Limit zoning for large-lot residential and highway commercial development.
- Protect large blocks of farmland and open space.



**This established neighborhood might be dubbed the "old urbanism." Houses are oriented to the street, sidewalks are provided and street trees and on-street parking slow drivers down.** Photo source: National Center for Bicycling and Walking



**Suburbs developed in recent decades often feature cul-de-sacs that calm traffic but limit connections between neighborhoods.** Photo credit: Image from the Metropolitan Design Image Bank. © Regents of the University of Minnesota. Used with permission. All rights reserved.

### Suburban Communities

Suburban areas encompass a wide spectrum of places. The suburbs built in the early part of the twentieth century, like Royal Oak and Ferndale, are dense environments with recognizable downtowns and a well-connected road network reflecting a traditional grid pattern. On the diagram, they are classified as suburban.

In contrast, many of the suburbs built after World War II, particularly those built from the 1970s into the 1990s, do not have these features. These communities represent the suburban fringe. They lack traditional downtowns—shopping areas are usually auto-oriented commercial strips running along major roads. The network of roads also suffers from poor connectivity; a driver can't easily get from one place to another through a variety of routes. Neighborhood road networks are frequently disrupted by cul-de-sacs, which were often developed to buffer residents from motor vehicle traffic generated by busy, wide (four or more lanes), and noisy arterials. Moreover, these communities are characterized by very strictly separated land uses. There are large, uniform residential areas in some places, often located miles from the nearest shopping, dining, or employment destinations. To buy the most basic goods—such as a loaf of bread or a roll of toilet paper—driving to a store is the only option. Finally, more recently developed suburbs tend to have fewer common public spaces, like public plazas or parks, which inspire people to congregate and be physically active.

The good news is that suburban communities can take many actions to make their built environment more amenable to physical activity. In fact, many communities have already embarked on this path by using some of the following ideas.

- Make arterial roads more walkable by installing sidewalks on both sides of the road and crosswalks every 600 feet (or about the length of a downtown city block). Build median refuge islands in very wide roads, and plant street trees to slow motor vehicle traffic.
- Implement "road diets" to accommodate bicyclists. Road diets narrow the width of motor vehicle traffic lanes by restriping roads

## BIG BOXES AND PHYSICAL ACTIVITY



**This protected and lit walkway provides a safe approach to the front door for all shoppers.**

Photo credit: Mark Fenton

In recent decades the emergence of “big-box” retail has provided a number of challenges to some communities. While people are most familiar with the impacts on local economies and environments, big boxes also have implications for active living. From this perspective, the key concerns are the scale of these stores, their site design, their location, and the effect these combined factors have on opportunities for physical activity.

Big-box stores cover a lot of land—an average supercenter, for instance, consumes 20 acres of land, most of it under pavement (Hunt and Ginder, 2005). In Michigan and elsewhere, most big-box stores are explicitly designed for customers arriving in cars. There is little or no expectation that someone might walk or bike to the store.

A few design changes can make these retail centers more friendly to pedestrians and bicyclists. Roads near big-box retail sites can have sidewalks and designated crosswalks. The building can be located at the street, with entrances available at the sidewalk and parking lots at the back. Parking lots can include islands with shade trees; sheltered, well-lit walkways can allow people to move safely from their cars to the entrances. Bike racks can be provided at all doors.

The size of parking lots can also be reduced. Many malls and shopping centers have been built anticipating only one day: the peak day in the retail year, the Friday after Thanksgiving. Awareness of the environmental costs of such overbuilding has led communities to adopt maximum parking standards that decrease the number of parking spaces to reflect more appropriate year-round usage. See “Action Step 4: Revise Your Regulations” in Chapter 7 on page 72 for more information. Also, the National Trust for Historic Preservation published a booklet that highlights best practices examples and has model ordinances from several communities (Beaumont, 1994).

and adding designated bike lanes.

- Develop village centers or centralized shopping areas by encouraging in-fill development (such as building a mixed-use retail/residential center on a vacant lot, parking area, or failing shopping center) or increasing the density of existing structures (through additional stories).
- Use public art, banners, landscaping, and distinctive street lighting to brand these village centers as desirable destinations.
- Allow and encourage mixed uses, in particular the development of areas that mix residential, commercial, and non-industrial employment uses. This is being done with both new and redevelopment projects.
- Enhance connectivity by building walking paths between subdivisions and through neighborhoods with numerous cul-de-sacs.
- Establish funding mechanisms to further develop common open spaces, such as parks.
- Collaborate with neighboring local government units to plan shared-use trail systems and greenways. (The development of the Macomb Orchard and Paint Creek Trails in Oakland and Macomb Counties offers a great example. Southeast Michigan is an acknowledged national leader in trail development!)

- Change design standards for new subdivisions. Communities are embracing the development of more compact, street-oriented residential areas, which are often called *traditional neighborhood design* or *New Urbanism*. Alternatively, use cluster zoning, which sets aside open space that can be used for shared-use trails.
- Support public transportation, particularly through mixed-use, transit-oriented development.



**Detroit is rediscovering its waterfront, with loft conversions and the creation of downtown living opportunities.** Photo credit: Downtown Detroit Partnership.

### Urban Communities

Urban communities were often developed with pedestrians in mind. These communities, particularly Michigan’s historic cities, were built in an era when land uses were mixed, downtowns were well developed, houses were oriented toward the street, front porches were ubiquitous, sidewalks and trees lined all streets, and street networks adhered to a grid pattern that enhances walkability.

This doesn’t mean that Michigan’s urban areas face no challenges in achieving active living objectives. Unfortunately, many of the advantages and amenities of cities have been undercut by neglect and disinvestment. Likewise, the industrial character of many cities affected how people viewed and developed key resources, particularly water resources. Some cities literally turned their backs to their rivers (which were being used as sewers). Laudably, many communities—from Detroit to Lansing to Grand Rapids—have rediscovered their rivers and are developing networks of parks, trails, plazas, and other public uses along them.

Urban communities can take many actions to encourage active living.

- Offer incentives to promote the redevelopment of vacant or abandoned urban land or buildings.
- Provide incentives for in-fill development in mixed-use zones, rather than developments at the outer edges of urban areas.
- Allow more mixing of uses in established neighborhood and commercial areas so that restaurants, stores, and loft-style apartments can share the same districts.
- Invest in infrastructure redevelopment and maintenance, particularly focused on sidewalks, parks, and bike lanes.
- Address perceptions of crime through enhanced street lighting, on-foot or bicycle police patrols, and greater support to neighborhood watch groups.
- Collaborate with neighboring local government units to plan inter-city and other shared-use trail systems and greenways. An outstanding example is the Downriver Linked Greenways Initiative running from Dearborn to Detroit. (See the Greenways Initiative of the Community Foundation for Southeast Michigan at <http://greenways.cfsem.org/>.)
- Rework roads to accommodate bicyclists by restriping roads to narrow lanes and putting marked bike paths on major roads and arterials. (Don’t say it can’t be done—in the city of Chicago, more

than 100 miles of arterials roads and another 200 miles of streets are being redesigned to accommodate bicyclists with bike lanes and share-the-road markings).

- Convert vacant urban land into productive and aesthetically pleasing uses like community gardens.
- Develop or improve public plazas, parks, and facilities such as municipal skating rinks or skate parks.
- Enhance publicity for ethnic shopping areas and distinct destinations such as downtown, and create a strong sense of place for those areas.
- Support the development of farmers' markets, street festivals, art and food fairs, sporting activities, and other public events.
- Add street design details, such as trees, sidewalks, and benches, in neighborhoods and commercial areas to enhance aesthetic appeal.
- Use traffic calming measures on neighborhood streets to reduce vehicular speeds.



**Detroit's Eastern Market provides access to a wide variety of fruits and vegetables for all the city's residents.** Photo credit: Downtown Detroit Partnership.

## Create a Network with All Types of Transportation

Active living communities have transportation networks that allow people to choose their form of transportation, including non-motorized modes such as walking and cycling. The transportation design should fit the location, from rural to suburban to urban. This diagram shows the types of pedestrian and cycling facilities appropriate to different settings.

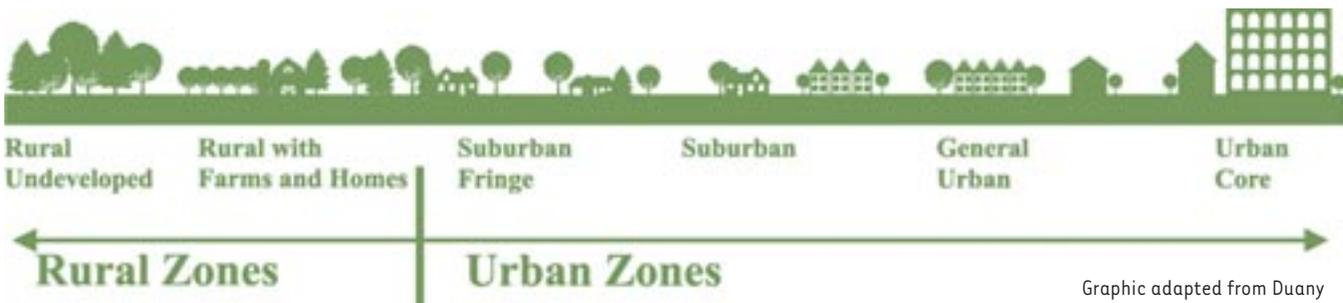
### WALKING

Trails

Shared-Use Paths

Sidewalks

Pedestrian-Oriented Streets



Graphic adapted from Duany Plater-Zyberk and Company.

### CYCLING

Wide Paved Shoulders

Shared-Use Paths (Off-road)

Shared Roadways (Signed or Unsigned for Bicyclists)

Bike Lanes

Wide Curb Lanes





## 7 STEPS FOR CREATING AN ACTIVE LIVING COMMUNITY

**Making your community's active living dream a reality requires action. Citizen involvement in the planning process is crucial. This isn't hard to accomplish: Planning meetings are open meetings. In addition, planning processes—such as approvals of new subdivisions—require public hearings and citizen input, and the final decision makers are city councilors, township trustees, and other leaders elected by you! Remember, you aren't alone in your desire to create an active community environment. Urban planners, architects, landscape architects, and developers as well as members of the business, health, and education communities are getting excited about the design approaches recommended in the previous chapters.**

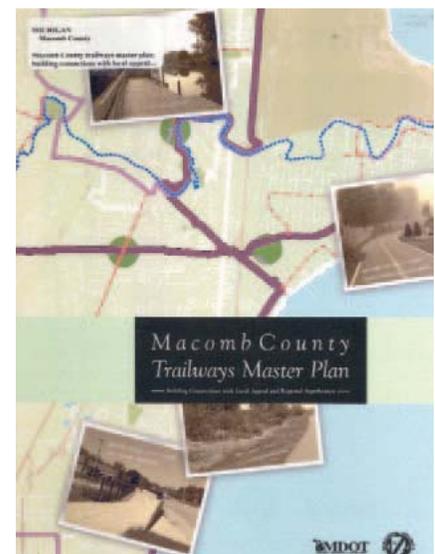
**Four steps will get you started: (1) raise awareness and build coalitions; (2) conduct a community audit; (3) participate in planning; and (4) revise your regulations. If you don't know much about planning, you're not alone. The following primer on planning provides some helpful information before this chapter discusses each of the four steps.**

### Planning 101

Planning is a *process* whereby people and their elected representatives make decisions about their community and its future. In Michigan, the state legislature has given every local government the right to plan for its community and to designate appropriate land uses through zoning. The legislation that grants these rights also lays out guidelines for planning processes, such as requiring open meetings and official records of what happens at meetings.

This section provides a quick guide to help you participate more fully in your local planning process and help move your community toward an active living environment. The following pages describe some of the actors, plans, laws, and processes involved in local planning.

Photo credit: © eva serrabassa, <http://www.iStockphoto.com>.



## The Actors

Many people are involved in planning. These include persons who represent the public interest, such as citizens groups, planning commissioners, professional planners, and elected councilors, as well as individuals from the private sector, such as developers, business owners, and landowners. Above all, local residents play a very important role in determining how their community looks and functions.

In local government, several key personnel are responsible for the planning process. *Planners* are professionals who collect data on the community and conduct important analyses for long-term plans. They are the local government employees with whom developers and investors first interact when they have a project for the community. Planners aren't the sole decision makers, but they provide the information that helps citizens and leaders understand their options and select the best course of action.

The *planning commission* (also called the *planning board*) is a body of volunteers appointed by their local government. Planning commissioners represent citizens' views on their community. They help draft community plans and make decisions on specific development projects. Planning commissioners also act as advisors to elected officials.

Members of the *zoning board of appeals* (also called the *zoning board of adjustment* or *ZBA*), as the name suggests, make decisions regarding disputes over zoning. The decisions of these government-appointed volunteers are final but may be appealed in the courts. For example, if a person living in a single-family residential zone wants to change the use of his or her house from a single-family home to a business office, the person will probably have to appear before the ZBA to explain why this should be allowed. Allowing an owner to use property in a way that conflicts with an ordinance is known as *granting a variance*.

Community residents vote into office *elected leaders*, such as city and village councilors and township trustees. In some communities, a member of the council or board also serves on the planning commission. Decisions about planning and zoning (including those made by the planning commission) become binding and legally enforceable once passed by the elected leaders.

In the private sector, *land owners* and *private developers* are critical actors. Although some of a community's infrastructure is built by the city, town, county, or even state (for example, highways), much more is constructed by the private sector. Private developers create housing subdivisions, shopping centers, malls, and office parks. How they do so is largely directed by the other actors and by local plans and ordinances.

## The Plans

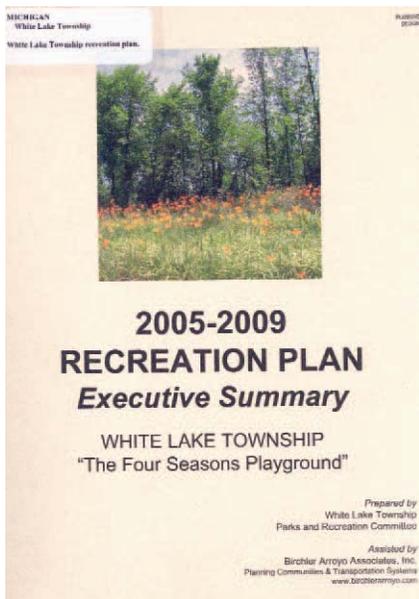
Local governments can craft an unlimited number of plans—and sometimes they do! Communities often create three types of plans: master plans, recreation plans, and neighborhood plans. Metropolitan planning

### THE MASTER PLAN IS IMPORTANT

The master plan:

- Establishes a shared vision for your community and its future
- Lays out tangible goals and specific projects for local government investment
- Provides the basis for local regulations that govern land use and development
- Serves as a community calling card, presenting your community, its vision, and its plans to non-residents and would-be investors





organizations (such as regional planning commissions or councils of government) create a fourth type of plan: regional transportation plans.

The *master plan* (also known as the *comprehensive plan*) identifies a community vision, lays out specific goals and objectives, and details action steps to get there. It is long-term in scope, often extending 20 years into the future. An important aspect of the master plan is the *future land-use map*. This map details where growth is anticipated and what type and intensity of uses are expected or desired.

Master plans often have a section on transportation that sets objectives and investment priorities for local streets. A pedestrian master plan is a specific plan to enhance the walkability of a community. A bicycle master plan, likewise, focuses on making a community more bikeable.

*Recreation plans* cover parks, open spaces, associated facilities, and recreational and cultural programming. These plans have narrower scopes and shorter time frames than master plans. In Michigan, many recreation plans have been created in response to funding programs offered by state government and administered by the Michigan Department of Natural Resources.

*Neighborhood plans* (also called *sub-area plans*) analyze a limited geographical area such as a neighborhood or a commercial shopping area, create a vision for that area, and make recommendations for action. Larger cities that have multiple, distinct neighborhoods or shopping districts often use these plans.

If you are in an urbanized area, the transportation network for your community is also greatly influenced by a *regional transportation plan* (RTP). Most RTPs have as key objectives the safety, accessibility, and reliability of the transportation system. The federal government requires regional planners to prepare an RTP before any federal transportation dollars can flow to the region. RTPs determine how federal funding for transportation is spent. In recent years, most transportation plans have increased spending on non-motorized transportation because the federal government has explicitly supported this expenditure. However, funding for non-motorized transportation is still minuscule compared to that for motorized transportation.

For rural areas, transportation needs are identified through coordination between the Michigan Department of Transportation and local elected officials. Rural Task Forces are often formed to collaborate and identify projects.

## GREENWAYS PLANS

The term *greenway* refers to a linear open space or natural area, often



running along a watercourse such as a creek or river. A greenway can connect people to parks, natural areas, and historical sites. Many greenways facilitate physical activity such as walking, biking, and bird watching. Greenways provide several environmental benefits and are a great asset for active living.

A greenways plan is a plan that compiles information on existing greenspaces, determines ways to protect them from development, identifies funding sources, and establishes appropriate uses and management approaches that will provide benefits for all residents. Greenways plans are normally developed at a regional level, often in conjunction with planning for watershed protection.

A very exciting and ambitious greenways project in southeast Michigan, the Downriver Linked Greenways Initiative, began construction in 2005. The project will link 17 downriver communities and Wayne County, and will provide non-motorized access to over 6,800 acres of parkland. This collaborative effort involves local government, private industry, local foundations, universities, and health and faith-based organizations.

Technical advice on developing greenway plans is available from the GreenWays Initiative at <http://greenways.cfsem.org/>. You can also check out the website of the Rails-to-Trails Conservancy at <http://www.railtrails.org> and the Michigan Trails and Greenways Alliance at <http://www.michigantrails.org>.

## The Laws

For plans to become reality, they need to be backed up by law. Local-level laws are known as *ordinances* (sometimes referred to as *codes*). Local-level ordinances are passed in order to protect the health, safety, and welfare of the community. The main ordinances important to planning are zoning ordinances and subdivision ordinances.

*Zoning ordinances* split all the land within the boundaries of a locality into *land-use zones*. The ordinances dictate how owners can use their property within each zone. A classic zoning ordinance has two parts: a map showing the zones and a text explaining each zone and its appropriate uses.

The idea of *nuisance* forms the basis for zoning. Some land uses are not complementary—such as placing a loud, polluting factory next to a nursing home. Zoning separates uses that will likely conflict (and hurt the community’s health, safety, and welfare). The separation of uses, however, can go too far. Previously, planners thought that commercial and residential uses were a poor mix, but now many people recognize that such mixing is the hallmark of a vibrant community and a critical element of an active living environment.

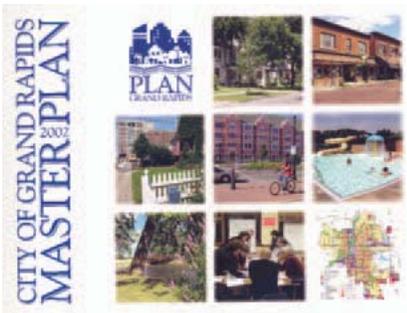
Many communities are investigating and adopting *form-based codes*. These codes focus attention on physical design, the form of the building, and its uses and relationship to the street. Unlike zoning ordinances, which generally provide two-dimensional maps and text, form-based codes use graphics and three-dimensional illustrations of desired forms of development.

*Subdivision ordinances* control the act of subdividing land within incorporated areas (such as cities or townships). A request to split a piece of land into two or more parcels generally has to go through a governmental review. Local governments first started to pay attention to land subdivision to make sure that road networks were adequate; now the review focuses on ensuring that the resulting parcels are designed appropriately so that utilities can be provided, public safety ensured, and aesthetic standards met. Subdivision ordinances lay out dimensional standards and other criteria—such as minimum lot size, setbacks from the road, road widths, and landscaping requirements—that are critical to active living environments. Many of the recommendations in this book relate to subdivision ordinances.

## The Processes

Two main planning processes exist at the local level: the master planning process and the site plan review process. They take place at different geographic scales (one for cities, villages, or townships, the other for parcels) and cover different time periods (one long, the other short).

**Master Planning** In the *master planning process*, community members create a vision for the development of their community and then outline the steps needed to reach it. The process differs from one com-



munity to another but typically goes through several stages characterized by different tasks and different actors. At the beginning, professional planners inventory community assets, identify current land use, and project future land requirements (such as for a new state highway). They also analyze the local economy, trends in population growth, housing stock and affordability, and the transportation system. (However, planners have not usually considered the health of community members.) These findings are typically presented to local citizens for feedback about desired community goals. Alternative plans for achieving those goals are formulated, and ultimately a preferred path is selected as the master plan. (See the Walkersville flow diagram later in this chapter for an example.)

The local planning commission usually takes a lead role in developing a master plan, but members of the public are also asked to join planning task forces. Required public comment and feedback sessions are held frequently.

Once written, a master plan is unlikely to become reality unless three things happen: (1) it is officially adopted by the governing body; (2) the actions and investments identified in the plan make it into the city budget, most importantly, the *capital improvements budget*; and (3) the plan's objectives (for instance, to enhance business activity by allowing mixed-use development) are given legal backing through changes to local ordinances.

**Site Plan Review** In the *site plan review process*, local governments review and approve proposed development plans for a particular piece of property. This review ensures that the proposed land use or activity complies with applicable local ordinances and state statutes. The development plans should also be compatible with the character of the surrounding area, the adjacent land uses, the natural environment, the capacities of public services and facilities, and residents' health, safety, and welfare. Local government units differ in which types of developments they require to go through site plan review. Subdivisions and major developments usually are reviewed by the planning commission; individual single- and two-family homes and minor remodeling of existing buildings are often reviewed by the zoning administrator or exempted.

Site plan review can be a time-consuming process for both the developer and the local government unit. Some planning departments invite developers to pre-application conferences to discuss elements of the development project and the procedures of local site plan review. Pre-application conferences can facilitate smoother and speedier reviews; they also provide a wonderful opportunity to talk about local objectives like enhancing walkability and bikeability.

After reading this quick overview of local planning, you're ready to learn more about the four action steps that will help you create an active living community.



A recent non-motorized training for Michigan Department of Transportation employees (MDOT). MDOT is a great resource for your community. Photo source: MDOT

## Action Step 1: Raise Awareness and Build Coalitions

To move your community toward active living, people must understand the connections between land use, transportation infrastructure, and physical activity. Coalitions can help you educate people and guide your community as it makes changes. The following steps can help get you starting working toward creating an active living community.

1. **Create partnerships and coalitions.** Many groups share your interest in active living environments. Your local parks and recreation department, businesses that promote outdoor recreation, and biking and walking clubs are natural allies. With the growing focus on childhood obesity, schools (particularly those with Safe Routes to School programs) and parents are quite motivated to consider the health effects of land use and urban design. Your local city and county public health departments, Michigan State University Extension, universities, and health care providers are also potential allies due to their concerns about obesity, chronic disease, and environmental health.

Consider contacting professional, community, and advocacy organizations as well as business and merchants' associations to support events or spread the word. Planners, architects, landscape architects, and their professional organizations, such as the Michigan Association of Planning, are very interested in new ways to create better environments and urban places. Statewide environmental, bicycle, trail, and greenway organizations can help you advocate for a more physically active community. You could also contact groups that champion the rights of elderly or people with disabilities. Working together, you can create a groundswell of enthusiasm that will be heard at city hall and beyond.



**Tip:** Working to complete the Michigan Promoting Active Communities Award (mentioned in Chapter 1) is the perfect way to bring like-minded individuals together to think about active living. You can find the web-based application at <http://www.mihealthtools.org/communities>.

2. **Build relationships with the development community.** When building coalitions and partnerships, don't forget about the development community. Developers build much of a city's infrastructure but often have little input in its visioning and planning process. Many know that they can profit from increased real estate values by building vibrant, higher-density, walkable developments but have a difficult time getting innovative projects approved. Engaging even one developer in your community can be very rewarding.
3. **Use the local media.** Many Michigan residents don't know about active living concepts. Newspapers are always trolling for local

interest stories; many accept articles or essays from their readers. You could also contact a reporter who covers land use and local planning issues and ask him or her to write about active living. Radio and television stations may provide ways to educate the public through local-access programs. Getting press coverage may be easier than you think.

4. **Make public presentations.** Another way to spread the news is to speak to local service groups (such as the Rotary Club and the Optimists), community-based organizations (such as the local Parent Teacher Association), and concerned business groups (such as the Chamber of Commerce). You can find many ideas for presentations in the “Active Living and Recreation Resources” section of this book.
5. **Lead by example.** Probably the best way to raise awareness is to lead by example. Walk whenever and wherever you can. Pull your bike out of the garage and head down to your local farmers’ market. Tell the people you meet on the street why you are doing it and what your experience is like.

Some people in your community may resist these ideas. You may have to explain the ideas behind complete streets, road diets, and other concepts that don’t fit traditional models. Thankfully, professional organizations, influential reference materials (such as the *Guide for the Development of Bicycle Facilities* [AASHTO, 1999] and the *Guide for the Planning, Design, and Operation of Pedestrian Facilities* [AASHTO, 2004]), and experiences with active living design are beginning to undercut resistance and illustrate the benefits of these design approaches. For example, the Michigan Department of Transportation’s non-motorized transportation team has worked with a number of communities and their engineers to develop walkable and bikeable transportation networks.

Members of the local police, fire, and public works departments might fear that making narrower streets and other design changes could lower service levels or put the public at risk by delaying emergency response. It is important that code changes and traffic calming interventions result from a collaborative process with all partners at the table. A publication of the Local Government Commission, *Emergency Response: Traffic Calming and Traditional Neighborhood Streets* (Burden, provides a reasoned discussion of facts and myths associated with emergency response and traffic calming that can be a useful centerpoint for this discussion.

Finally, retailers may worry that changes such as adding on-street parking will discourage customers. In fact, studies show that enhanced street amenities, slower traffic, and more pedestrians increase retail sales. (For more information, see [http://www.lgc.org/freepub/PDF/Land\\_Use/focus/walk\\_to\\_money.pdf](http://www.lgc.org/freepub/PDF/Land_Use/focus/walk_to_money.pdf) or <http://www.uwex.edu/ces/cced/lets/0703ltb.html>.)



Walkability expert Dan Burden led these participants on a recent audit of Flint. You can do this in your own community by following the suggestions outlined in this section. Photo source: MDOT

## Action Step 2: Conduct a Community Audit

Before you can make change happen, you need to know the existing conditions of your roads, sidewalks, and community layout. Earlier chapters suggested you go out and hit the streets, whether on bicycle or on foot. Now it's time to do so methodically, writing down your experience and documenting areas of your community that are problematic or exemplary. This process is known as *conducting a community audit*.

Community audits are easy and fun. Many available checklists or questionnaires can guide and document your experience.

The Promoting Active Communities Award program mentioned in Chapter 1 provides a checklist tailored to Michigan communities. As stated earlier, the assessment requires teamwork between community leaders, professionals, and citizens, and generates ideas for community improvements. Every community that completes an assessment receives an award from the Michigan Governor. You can complete the assessment at <http://www.mihealthtools.org/communities>.

You can also find two easy-to-use neighborhood audit checklists offered by the Pedestrian and Bicycle Information Center at <http://www.walkinginfo.org/cps/checklist.htm> and <http://www.bicyclinginfo.org/cps/checklist.htm>. At the end of this book, "Active Living and Recreation Resources" lists some other sources for audits. Select one that seems most appropriate for your community and objectives.

### Tips for Auditing

These tips will help you get the most benefits from your community audit.

- **Don't audit alone.**

Invite your local government planner, engineer, private developer, members of the downtown development authority, representatives of neighborhood associations, law enforcement, or public

works supervisor to participate. Involve your friends and neighbors, and try to work with people of all ages.

- **Take a camera.** Photos will help you remember details and convey information to others.

- **Take a map.** Larger communities with many neighborhoods and shopping areas vary in their walkability and bikeability—you will need to keep track of where you have been. Look at a map of your entire city or



Audits can be really low tech! This audit team measures widths in human arm spans. Photo credit: National Center for Bicycling and Walking

town: Does the street network where you are walking or biking reflect the layout of the rest of your city?

- **Choose an appropriate time of day for your audit.** For example, if your objective is to increase walkability so more children can walk to school, you will want to walk when school starts and lets out because traffic volumes change throughout the day.
- **Don't audit only in ideal conditions.** It is easy and pleasurable to walk on a sunny, 75-degree summer day. But successful communities support physical activity year-round. Walk or bike when it is rainy, when there is snow, and/or when it is hot and humid. Do pedestrians have sufficient protection from the elements? Are sidewalks kept clean? Do elderly people have places where they can rest and cool off? You may also want to assess the area when it is dark to see if adequate lighting exists.
- **Be safe.** Wear reflective clothing and pay attention to traffic. Safety is another reason to bring other people along.
- **Share your findings.** You need to share the results of the audit, particularly with decision makers. Use this information to talk to your local school board, planning commission, elected leaders, and county road commissioners. They can help you determine how to fund improvements.

### Action Step 3: Participate in Planning

The next key step to creating an active living community is to participate in planning. You can attend planning commission meetings or even serve as a planning commissioner yourself. The immediate task, however, is to read your community's plans to see whether they address residents' needs for physical activity.

#### Which Plans Should We Look At?

Local governments create a dizzying array of plans, but for active living purposes, two local plans are most important: the Master Plan and the Recreation Plan. You also should review the Regional Transportation Plan prepared by your Regional Planning Commission or Council of Government. (See "Planning 101" earlier in this chapter for some basic information about these plans.) Call the main information number listed for your local government offices to find out how you can receive copies of these plans.

#### The Master Plan (also called the Comprehensive Plan)

A common shortcoming of the master plan is that it lays out a great vision but fails to identify tangible steps to get there. The more concrete the plan, the more likely the plan will be realized. The ideal master plan—like that presented for the mythic township of Walkersville on the next pages—carries active living concepts from vision to expenditure. Read your community's master plan to see how well it addresses ways to achieve its vision.



East Lansing dubbed its master plan process the "Big Picture." Achieving a more walkable community is a key objective. Photo credit: East Lansing Planning Dept.



East Lansing residents participate in the "Big Picture" process. Photo credit: East Lansing Planning Dept.

## 1. INVENTORY THE COMMUNITY AND READ THE EXISTING MASTER PLAN

### Examples of Findings

- Only 65 percent of Walkersville neighborhoods have sidewalks.
- City has 10 parks; 8 out of 10 are developed for active recreation; 2 include nature areas.
- Downtown has adequate street lighting. However, street lighting is inadequate in most neighborhoods (lights on poles over main intersections).
- All schools have marked crosswalks and/or crossing guards.
- Strip commercial centers on South Ash Street are not connected; sidewalks are missing on the east side of the street.
- Entry point for Lakeland Rail-Trail exists in nearby Rockville (3 miles away), but residents must drive to it because M21 has no sidewalks or shoulders, and traffic speeds are high.

## 2. UPDATE THE MASTER PLAN

### MASTER PLAN VISION STATEMENT

Walkersville will improve its position as a beautiful and vibrant small town surrounded by rural countryside and working farms. Walkersville will be a place where individuals, families, and businesses enjoy and value a sense of history; a healthy, attractive, and walkable central business district; a strong regional economy; conservation of natural resources; diversity and accessibility of recreational opportunities; fair and effective land development laws; and efficient public safety and local government services.

### Master Plan Goals

**Active Living Goal #1:** All existing streets will be attractively landscaped and serve people using a full spectrum of travel modes, including bicyclists, pedestrians, and motorists.

**Active Living Goal #2:** A greenspace system throughout Walkersville brings nature closer to residents and provides multi-purpose pathways for non-motorized transportation and recreation.

### Other Master Plan Goal Topics

- Transit opportunities
- Safe pedestrian and bike access and connectivity
- Visual quality and amenities of public places
- Mixed land use

# WALKERSVILLE:

DECISIONS FOR ACTIVE LIVING, FROM MASTER PLANNING THROUGH IMPLEMENTATION

## 3. IMPLEMENT THE MASTER PLAN

### Master Plan Policies

**Active Living Policy #1:** It is the policy in Walkersville that sidewalks or paths should be provided to link businesses with each other and with residential areas.

**Active Living Policy #2:** It is the policy in Walkersville that streets will be developed in a manner that maximizes connections between places. Subdivisions based on cul-de-sacs and dead-end streets will be discouraged.

**Active Living Policy #3:** It is the policy in Walkersville that all arterial and connector streets shall be constructed with minimum 5-foot-wide bike lanes.

**Active Living Policy #4:** It is the policy in Walkersville that a greenspace system will be established that provides connected greenway trails and natural habitats.

### Integrate into Zoning Ordinance

Add concepts of mixed use, access management, and new standards for sidewalk and street construction.

### Educate Walkersville Citizens, Developers, and Local Officials

Teach people about active living.

### Update the Walkersville Capital Improvements Program

Include funds for sidewalk construction, right-of-way purchases, easements, pedestrian and bike bridges, and lighting.

### Have Developers Coordinate with Walkersville Officials

Determine sidewalk locations, connections, and standards for sidewalks, greenspace, and greenway trails.

### Master Plan Action Statements

**Active Living Action Statement #1:** Revise the Walkersville zoning ordinance to require sidewalks, trails, and pathways in all condo, planned unit development, and other projects requiring a special use permit and site plan review.

**Active Living Action Statement #2:** Amend the Walkersville subdivision regulation to require sidewalk connections within new plats.

**Active Living Action Statement #3:** The Walkersville planning commission will develop a greenspace plan that provides greenway connections within Walkersville and to trails and destinations in nearby communities.

**Active Living Action Statement #4:** Include sidewalk construction costs and trail right-of-way easement purchases in the Walkersville capital improvements program.

**Active Living Action Statement #5:** Develop and circulate active living design guidelines to Walkersville officials, developers, and citizens.

### Have Officials Coordinate with Adjoining Units of Government

Work together to fund and construct pathways and non-motorized connections.



## IMPROVING THE SITE PLAN REVIEW PROCESS



Site plan review is the process of checking and approving detailed plans for a development before construction. A planning commission can perform site plan review, but this technical process usually requires input from many professionals. Reviews typically check that a project complies with local, state, and federal regulations; provides for an adequate road network and other public services; and meets aesthetic and landscaping requirements, among other factors.

Improved site plan reviews also consider health and physical activity objectives. The National Association of County and City Health Officials developed a simple checklist for examining such concerns associated with land use. You can find this checklist at <http://archive.naccho.org/Documents/LandUseChecklist-03-10-03.pdf>. Look it over and talk with your local planner about using it during site plan review in your community.

### The Recreation Plan

To address the needs of all your community residents, the recreation plan for your community should consider both passive and active recreation. Passive recreation refers to recreation that involves natural resources, such as hiking, horseback riding, cross-country skiing, bird watching, kite flying, and canoeing. Enhanced opportunities for passive recreation are particularly important for people who have limited physical abilities. Active recreation refers to organized team sports and other activities that typically require playing fields, facilities, or extensive equipment. Communities should provide recreation opportunities for all ages and during all types of weather—indoor and outdoor, summer and winter. Check to see whether your community’s recreation plan covers these areas.

### Transportation Plans

For active living purposes, it is useful to look at two regional documents relating to transportation. If you are in an urban area, the first document to look at is the regional transportation plan (RTP) for your region. If you are in a rural area, transportation planning is jointly coordinated between the Michigan Department of Transportation and local elected officials. Most transportation plans have as key objectives the development of a safe, accessible, and reliable transportation system. Your regional transportation plan should have explicit objectives and investment projects for pedestrians, bicyclists, and transit riders.

The second document is the transportation improvement program (TIP) that applies to your locality. The TIP is a list of all transportation projects receiving federal funding for your region. It reflects the investment priorities of local governments and transportation agencies arising from your region’s RTP or local plans. Many are available online from your regional planning commission or council of government.

### What to Consider When Reading Community Plans

After reading these planning documents, write down your impressions. Here are a few questions to get you started.

- Do the goal statements in the plans include walkability or bikeability objectives?
- Do the goal statements specify that the community must meet the needs of residents of all ages, including elderly people? Communities should be built so that residents can “age in place” or grow older without having to change communities.
- Do the plans inventory and evaluate the community’s existing facilities and resources for physical activity?
- Do the plans allow mixed-use development, strengthen downtown shopping areas, or support historic preservation?
- Do the plans detail explicit actions to take or identify and prioritize investment projects for active living?



## Action Step 4: Revise Your Regulations

Now that you've read the plans and understand local policy and goals, it's time to turn to law. Many current environments that impede physical activity didn't just happen: it was mandated by law. Local laws like zoning ordinances and subdivisions regulations helped create the unfortunate auto-dependent, architecturally monotonous, and even characterless nature of many American cities. One commentator has called this the "geography of nowhere" (Kunstler, 1993).

To make your community an exciting and distinct destination that is amenable to physical activity, it is necessary to critically examine the local zoning ordinances, subdivision regulations, and site plan review processes. (See "Planning 101" earlier in this chapter for explanations of these ordinances and processes.) Collect your community's zoning ordinance, zoning map, and subdivision ordinance. (Your community's subdivision ordinance might be a chapter in the zoning ordinance.) In some localities, you will want the comprehensive codebook, in which all local laws—including those associated with land use and urban design—have been compiled.

To help you examine these documents, the large table in this chapter pulls together a matrix of active living design elements and some recommended actions to take or standards to adopt. Compare the provisions of your ordinances to these standards. Differences you find provide a starting point for discussions about community design, regulation, and ways to encourage physical activity through land-use planning. Your community may need only a few key changes to its regulations to promote active living.

Revising regulations is a technical process that requires local government leadership, so you will need to present your findings in a persuasive manner to your local government planning commission, community planning staff, and public safety, engineering, and legal staff. Once they have agreed that changes are needed, these actors should take a lead role in revising or writing regulations specific to your community. They might even want to adopt form-based codes that focus more on design and less on land uses. (See "Form-Based Codes" on p. 71.)

Now that your community is well on its way to active living, remember that these changes will not happen overnight. With lots of patience and perseverance, your active living goals can become positive changes within your community. To help guide you along the way, numerous resources are listed in the following section. We encourage you take advantage of the information and guidance provided by these organizations, documents, and websites. Best wishes in becoming a healthier, happier, active living community!

## REVISE YOUR REGS: ACTIVE LIVING DESIGN STANDARDS MATRIX

This chart will help you scrutinize your community’s regulations, development standards, and processes to see how well they support designs that encourage people to get more physical activity. Be sure to consult with appropriate guidebooks (for example, AASHTO 1999 and 2005) and with specialized professionals (such as walkability-oriented engineers, planners, and landscape architects) as you move forward.

### COMMERCIAL AND RESIDENTIAL BUILDINGS

Active Living Design Element	Revise Your Ordinance or Plan to:	Recommended Standard or Action
Building setbacks	<ul style="list-style-type: none"> <li>Reduce building setbacks to create development that is inviting to pedestrians and enhances safety by raising the numbers of “eyes on the street.”</li> <li>Establish New Urbanist or traditional neighborhood design (TND) zones and standards.</li> </ul>	<ul style="list-style-type: none"> <li>Allow zero or near lot line development (buildings situated at the front of parcels and built right up to or close to sidewalks) for both residential and commercial developments in mixed-use zones.</li> <li>Establish “build to” lines of 10–15 feet.</li> </ul>
Mixed-use zones	<ul style="list-style-type: none"> <li>Establish mixed-use zone(s).</li> <li>Create appropriate descriptions of an array of complementary uses.</li> </ul>	<ul style="list-style-type: none"> <li>Mixed-use zones should allow for mixing of residential, office space, schools, retail shopping, food/restaurants, outdoor recreation, and civic/public uses.</li> <li>Allow neighborhood stores, day care, small office buildings, and schools in existing residential neighborhoods.</li> <li>Allow second-story apartments and offices in neighborhood commercial buildings.</li> </ul>
Parcel sizes	<ul style="list-style-type: none"> <li>Reduce or eliminate minimum parcel size requirement.</li> <li>Raise the number of houses allowed per acre to enable compact design and support transit systems.</li> <li>Allow for longer, narrower lot sizes that increase the number of lots facing the street.</li> </ul>	<ul style="list-style-type: none"> <li>Compact design has residential densities ranging from 6 to 12 units/acre.</li> <li>Higher densities (13–45 units per acre) are appropriate for mixed-uses zones or established urban centers.</li> </ul>
Parking for commercial areas	<ul style="list-style-type: none"> <li>Reduce the required number of parking spaces per square foot of retail space or set maximum parking allowances.</li> <li>Allow for parking at the rear of commercial buildings.</li> <li>Create separate walking areas through parking lots to safely separate motorists and pedestrians.</li> <li>Allow on-street parking on arterial streets.</li> </ul>	<ul style="list-style-type: none"> <li>Maximum parking allowance: 4 spaces per 1,000 square feet of commercial leaseable space.</li> <li>Enable flexible parking standards (e.g., negotiated in the site plan review). The number of spaces can be varied to reflect other available parking such as on-street parking or lots that can be shared with users with different peak times (e.g., office parking space shared with bar/restaurant).</li> </ul>
Residential garages	<ul style="list-style-type: none"> <li>Encourage placement of garages at the rear of parcels; avoid “snout houses” in which forward-jutting attached garages dominate the street.</li> </ul>	<ul style="list-style-type: none"> <li>Allow the development of rear-entry garages and detached structures using alleyways in new subdivisions.</li> </ul>

Adapted from these sources: Burden, 2002; Bicycle Federation of America Campaign to Make America Walkable, 1998; Hirschhorn and Souza, 2001; Ewing, 1999a; AASHTO, 1999.

chart continues on next page

Active Living Design Element	Revise Your Ordinance or Plan to:	Recommended Standard or Action
Bike Lanes	<ul style="list-style-type: none"> <li>• Require accomodation of bike lanes on all arterial streets (including both new road construction and reconstruction).</li> <li>• Add bike lanes to existing streets by narrowing the width or reducing the number of automobile travel lanes.</li> </ul>	<ul style="list-style-type: none"> <li>• AASHTO recommended widths for bike lanes: for roads with no curb and gutter, minimum 4 feet; for roads with on-street parking, 5 feet. (For more complete information see AASHTO, 1999.)</li> </ul>
Buffer zones and planting strips	<ul style="list-style-type: none"> <li>• Require planting strips or buffer zones of adequate width between sidewalks and streets. Roadways with higher vehicle speeds require greater separation from sidewalks.</li> </ul>	<ul style="list-style-type: none"> <li>• Planting strips can range from 4 to 12 feet in width; minimum recommended width is 6 feet.</li> <li>• Place trees along existing planting strips.</li> <li>• Maintain obstruction-free pedestrian area</li> </ul>
Crossing Signals	<ul style="list-style-type: none"> <li>• Provide crossing signals at key intersections to help pedestrians determine when to cross.</li> </ul>	<ul style="list-style-type: none"> <li>• Pedestrian signals should be integrated with streetlights (automatically giving pedestrians time to cross) at intersections on high-volume roads</li> <li>• Crossing signals should give adequate time for elderly or disabled people to safely cross the road; slower pedestrians travel at approximately 3 feet per second.</li> <li>• For high pedestrian volumes, consider countdown timers on pedestrian signals.</li> </ul>
Crosswalks	<ul style="list-style-type: none"> <li>• Consider using marked and raised crosswalks near all schools.</li> <li>• Require marked crosswalks at all major intersections with signals.</li> <li>• Add pedestrian signals and other amenities; crosswalks alone are not enough to protect pedestrians.</li> <li>• Maintain high-visibility pavement markings</li> </ul>	<ul style="list-style-type: none"> <li>• Recommended standard width for crosswalks: 10 feet.</li> <li>• Width of marking lines should be selected according to needed visibility. A minimum of 10–12 inches wide is recommended; 18–24 inches wide is appropriate for places requiring greater visibility.</li> <li>• All legs of intersections with traffic signals should be marked and available for pedestrian use.</li> </ul>
Curb Cuts	<ul style="list-style-type: none"> <li>• Minimize curb cuts, like driveways, that increase the possibility of crashes between pedestrians, bicyclists, and motorists.</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt access management approaches; consult Michigan Department of Transportation for more details.</li> <li>• Scrutinize curb cuts closely during the site plan review process.</li> </ul>
Curb Ramps	<ul style="list-style-type: none"> <li>• Prefer using two curb cuts at 90 degrees to align with sidewalks instead of using one continuous ramp.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum width of curb ramp: 5 feet.</li> <li>• Scrutinize curb ramps at all intersections; upgrade to standards set by the Americans with Disabilities Act.</li> </ul>
Median and central crossing islands	<ul style="list-style-type: none"> <li>• Require the installation of islands on newly built wide streets.</li> <li>• Require islands on all reconstruction projects of wide roads.</li> </ul>	<ul style="list-style-type: none"> <li>• Consider median islands for all roads wider than 60 feet.</li> <li>• Island dimensions: 8–10 feet long and a minimum of 6 feet wide, with a minimum island size of 50 square feet.</li> <li>• Islands should be illuminated and have curb ramps or cut-throughs for accessibility.</li> </ul>

# STREETS AND SIDEWALKS

Active Living Design Element	Revise Your Ordinance or Plan to:	Recommended Standard or Action
On-street parking	<ul style="list-style-type: none"> <li>• Allow on-street parking on both sides of the street in residential neighborhoods.</li> <li>• Allow angle parking where speeds are appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Restripe wide streets to provide on-street parking and/or designated bike lanes. Bike lanes should be a minimum of 4 feet, with 5 feet allotted next to parked cars.</li> </ul>
Paved shoulders	<ul style="list-style-type: none"> <li>• Require wide shoulders on all new or reconstructed major county roads or heavily traveled roads with speeds 35 mph or higher.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum width for paved shoulder with painted shoulder line: 4 feet.</li> </ul>
Sidewalks	<ul style="list-style-type: none"> <li>• Require sidewalks on both sides of all city streets and in new residential subdivisions.</li> <li>• Require extensions or connections between previously developed sidewalks and new sidewalks.</li> <li>• Place sidewalks in rural areas at schools, businesses, and worksites.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum sidewalk widths: 5 feet in residential neighborhoods; 10 feet in commercial areas outside downtown; 12 feet in downtown shopping areas.</li> </ul>
Sidewalk maintenance	<ul style="list-style-type: none"> <li>• Require all sidewalks to be cleared of snow within 24 hours of snowfall.</li> <li>• Schedule routine maintenance with higher frequency in spring and fall (storm debris and leaves, respectively)</li> <li>• Create a sidewalk repair program to periodically replace deteriorating or buckled concrete.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop an inspection and maintenance schedule and checklist for the public works department.</li> <li>• Require annual reports on sidewalk maintenance from local government officers.</li> </ul>
Street and lane widths	<ul style="list-style-type: none"> <li>• Allow for narrower street widths in residential neighborhoods.</li> <li>• Reduce lane widths on arterial and collector streets to calm traffic.</li> </ul>	<ul style="list-style-type: none"> <li>• Recommended street widths: 24–26 feet for roads in residential neighborhoods; smaller streets can work (for more information, see Burden, 2002).</li> <li>• Standard lane widths in commercial areas (12–14 feet) can be reduced to 9–11 feet.</li> <li>• Eliminate unnecessary travel lanes (e.g., reduce four lanes to three).</li> </ul>
Street connectivity	<ul style="list-style-type: none"> <li>• Require streets to connect to other streets and destinations.</li> <li>• Support a grid street design.</li> <li>• Prohibit dead-end streets or cul-de-sacs unless terrain or existing road patterns require them.</li> <li>• If cul-de-sacs are used, provide pedestrian/bike connections at the ends of streets.</li> </ul>	<ul style="list-style-type: none"> <li>• Use block lengths of 250–350 feet (measuring from intersection to intersection).</li> </ul>
Street lighting	<ul style="list-style-type: none"> <li>• Require appropriate lighting in all new and redevelopment projects.</li> <li>• Require lighting at all road intersections</li> </ul>	<ul style="list-style-type: none"> <li>• Height for pedestrian-appropriate lighting fixtures: 8–12 feet.</li> <li>• Full-spectrum light is recommended to reduce glare and provide more realistic colors at night.</li> <li>• Lights should be shielded downward to reduce light pollution.</li> </ul>
Street trees	<ul style="list-style-type: none"> <li>• Require all new developments to plant street trees along roadways</li> </ul>	<ul style="list-style-type: none"> <li>• Trees should be regularly spaced along streets at intervals ranging from 15 to 50 feet apart. Smaller intervals create more attractive streets, but intervals must take into account the size of mature trees and their canopies.</li> <li>• Trees appropriate for planting are 8–10 feet high with a 2-inch diameter trunk at time of planting.</li> </ul>

# OTHER BICYCLE, PEDESTRIAN, AND RECREATION AMENITIES

Active Living Design Element	Revise Your Ordinance or Plan to:	Recommended Standard or Action
Bicycle parking	<ul style="list-style-type: none"> <li>Require commercial buildings and shopping areas to provide bicycle parking places.</li> </ul>	<ul style="list-style-type: none"> <li>Locate parking within 50 feet of entrances.</li> <li>Transit stations and high-volume locations should offer covered bike parking.</li> <li>See recommended codes (in Resources section) for examples of bike parking standards.</li> </ul>
Open space	<ul style="list-style-type: none"> <li>Require new developments to set aside land for playgrounds or pocket parks.</li> </ul>	<ul style="list-style-type: none"> <li>Use cluster zoning to protect open space.</li> <li>Consider giving density bonuses (e.g., allowing additional housing units) to developers that use cluster zoning.</li> <li>Work with developers to provide walking trails on open space provided in projects.</li> <li>Require a neighborhood park or other common space for subdivisions of 30 or more parcels.</li> </ul>
Pedestrian amenities	<ul style="list-style-type: none"> <li>Require benches, trash cans, and street trees in public areas.</li> </ul>	<ul style="list-style-type: none"> <li>Amenities should be placed close to buildings or along roadways in buffer zones without blocking sidewalks.</li> </ul>
Transit	<ul style="list-style-type: none"> <li>Support transit lines and transit stops in or along all new developments and reconstruction projects.</li> <li>Include bike racks on buses and vans in urban areas.</li> </ul>	<ul style="list-style-type: none"> <li>Work with local transit officials to provide transit stops throughout the community.</li> <li>Ensure that transit stops are free of obstacles and accessible to people with disabilities.</li> <li>Provide a minimum 4-foot-wide clearance zone for opening bus doors.</li> <li>Provide well-lit shelters and covered structures, where feasible.</li> </ul>
Two-way shared-use paths	<ul style="list-style-type: none"> <li>Support development of shared-use paths.</li> <li>Prepare a greenway plan to identify appropriate open space and participate in regional trails-planning efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Minimum shared-use path width: 10 feet. Provide 12 feet in areas with high levels of use.</li> <li>Install proper signage at heights appropriate to pedestrians, bicyclists, and motorists to warn of trail crossings.</li> <li>Unpaved (dirt or ground) 2-foot shoulders can reduce potential conflicts and increase capacity at minimal cost.</li> </ul>