



**ACTIVE DESIGN
MIAMI**

DESIGN & POLICY STRATEGIES FOR HEALTHIER COMMUNITIES



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Cover photo by Sandy Dewitt



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INTRODUCTIONS

MIAMI CENTER FOR ARCHITECTURE & DESIGN AND THE MIAMI CHAPTER OF AMERICAN INSTITUTE OF ARCHITECTS

On a business trip to New York City in 2008, Cheryl Jacobs, then Director of Community Relations at Zyscovich Architects, learned of Active Design Guidelines, that had been developed by the City of New York and the American Institute of Architects New York. Understanding how much of an impact design can have on our health and well-being, Ms. Jacobs was struck by how relevant the work could be in communities across the country, especially South Florida. That visit proved to be the catalyst for what would become Active Design Miami.

Through her involvement with the Health & the Built Environment Committee of the Consortium for a Healthier Miami-Dade and the Fit City Miami Symposia, an opportunity became available to develop Miami's version of Active Design and in October 2015, the Florida Department of Health, funded through a grant from the Centers for Disease Control and Prevention, contracted the Miami Center for Architecture & Design (MCAD) to develop Active Design Miami (ADM).

Work began immediately with a clear first priority: create a collaborative, open process that would enable the Active Design Miami team to develop a set of strategies ideally suited to Miami's context and needs. Following New York's successful model, the Active Design Miami Advisory Council was organized and included representation from multiple sectors including urban planning, architecture and design professions, public health, transportation, municipal agencies, universities, consultants, foundations, and local community organizations. The successful development of Active Design Miami has in large part been due to the insight and experience contributed by this extensive and diverse group.

Please use these strategies to create special experiences throughout our communities that bridge health and design!



MIAMI CENTER FOR ARCHITECTURE & DESIGN



AIA
Miami

FLORIDA DEPARTMENT OF HEALTH

Miami-Dade County has a profound understanding of the need for improved access to physical activity opportunities among its residents. Incorporating physical activity into everyday life is a crucial aspect to helping Miami-Dade County and the State of Florida reach the goal of becoming the Healthiest State in the Nation. Substantial evidence demonstrates that having Healthy Community Designs can positively affect the public's health by encouraging active transportation and active recreation while providing access to healthy foods.

In an effort to provide improved access to physical activity opportunities, the Florida Department of Health in Miami-Dade County worked conjointly with the Miami Center for Architecture & Design and The Miami Chapter of the American Institute of Architects to develop the Active Design strategies. Active Design Miami is tailored specifically to accommodate Miami's unique makeup and diverse population.

The Miami Center for Architecture & Design is partially funded through the Partnerships to Improve Community Health (PICH) grant, which allows them to create these guidelines. Active Design Miami is destined to be utilized by the County, municipalities and communities. The Consortium for a Healthier Miami-Dade's Health and the Built Environment committee provided a platform for various partners in the community to contribute their valuable expertise to this venture.

The Florida Department of Health in Miami-Dade County is committed to our partners and confident that through partnerships such as these, we will continue to actively work towards creating an environment that promotes physical activity and an overall healthier lifestyle by incorporating active design into current and future projects.



ACTIVE DESIGN MIAMI | AN INTRODUCTION

WHAT IS ACTIVE DESIGN, AND WHY IS IT IMPORTANT?

*“Design is not just what it looks like and feels like.
Design is how it works.”*

- STEVE JOBS

Active Design is an approach to shaping communities that leverages evidence-based urban design and architecture solutions to improve public health. Active Design recognizes that our buildings, streets and neighborhoods influence day-to-day behavior, and directly impact community wellbeing. For example, walkable streets and inviting parks encourage regular physical activity, while congested corridors and sprawling development patterns discourage movement on foot.

Origins of Active Design


The concept of Active Design originated in New York City, where a cross-sector, multi-disciplinary collaboration resulted in the development of Active Design Guidelines: Promoting Physical Activity and Health in Design. Published in 2010, the Guidelines translate health research into design strategies that support a more livable city, where residents can easily incorporate physical activity and make healthier choices everyday.¹ The publication has inspired communities around the world to elevate design as a crucial tool for addressing health issues.

“Architects are public health workers... because we have an influence on America's public health that we're only now beginning to grasp.”

- REAR ADMIRAL BORIS LUSHNIAK
Acting US Surgeon General 2014

Today's global epidemic of chronic diseases is driven by a range of factors – including the powerful impact of the built environment. To reverse negative health trends, the Centers for Disease Control and Prevention (CDC) recommends that communities focus on supporting healthy eating and active living in a variety of settings.





The International Physical Activity and Environment Network (IPEN) released their findings on an international study connecting city design to physical activity and health. IPEN found that residents of “Activity Friendly” neighborhoods worldwide did 90 minutes more physical activity than their counterparts in less active neighborhoods.²

Active Design Miami

Miami-Dade County faces a number of challenges that can benefit from use of Active Design strategies. The region is experiencing many common health concerns, including rising obesity and chronic disease rates, and high rates of depression and other mental health issues.

In many areas, single-use development patterns and car-centric street designs prioritize automobiles over people, neglecting the potential for shared use of roads by pedestrians, bicyclists, and transit users. Public parks and plazas are often limited in their effectiveness due to a lack of accessibility, a limited range of activities, and the absence of shade, seating, water fountains, and other amenities that support user comfort. The combined effect of these development patterns reduces the likelihood of residents engaging in physical activity, while increasing commute times and social isolation.

Miami-Dade is experiencing significant demographic shifts and a reorientation toward urban living. Active Design Miami (ADM) capitalizes on this surge of attention and collaborative interest around identifying design solutions to support healthy living. Active Design Miami builds upon local priorities, needs, and development contexts to provide a toolkit for both short- and long-term action to improve community health and wellbeing.

HOW DO WE KNOW THESE STRATEGIES WORK?

The strategies found in Active Design Miami are based on decades of research and theory connecting design with mental, physical, and social health outcomes. Strategies were developed with input from a range of local advisors as well as the Center for Active Design, a leading non-profit organization using design to foster healthy and engaged communities. The Center for Active Design drew upon its extensive research database to ensure each ADM strategy is supported by evidence, including peer-reviewed journals, expert reports, and best practices from professional associations. Supporting references for the strategies can be found at the end of each chapter.

HOW SHOULD ACTIVE DESIGN MIAMI BE USED?

Active Design Miami was created with diverse audiences in mind, recognizing that everyone who influences the design of communities has the ability to impact health. Active Design Miami can be used by a wide range of professionals to:

- **Inform specific design projects.** Architects, health professionals, planners, urban designers, landscape architects, engineers, and developers are presented ideas and insights for incorporating health into upcoming projects.
- **Shape local policies and plans.** Representatives of government agencies, user groups such as cyclists, transit advocates, residents, health practitioners and representatives of community organizations can use ADM strategies to inform policy and the development of community/neighborhood plans.
- **Support thought leaders.** Institutions and NGOs such as universities and colleges with public health, public administration, urban planning and design, architecture and landscape architecture departments and community or health-related foundations can use Active Design Miami as a resource for developing thought leadership and programmatic strategies that seek to improve health through design.
- **Inspire community action.** Health professionals, advocates, organizations, and students are encouraged to incorporate active design concepts and strategies into discussions and action plans. Active Design Miami can provide a basis for brainstorming and prototyping sessions, in which groups are invited to identify selected strategies and initiate hands-on local demonstration projects to address specific needs.

Active Design Miami invites readers of all backgrounds to use this publication as an inspiring tool to understand the intersections of health, urban design, and building design.

It is important to note that ADM strategies are not one-size fit all. Recognizing Miami-Dade's diversity in terms of demographics, development styles, and neighborhood challenges, users can select the most appropriate strategies for their needs. Maximizing use of ADM strategies can greatly enhance the health benefits of a project or initiative.



ACTIVE DESIGN MIAMI | AT A GLANCE

Four Areas of Opportunity

Strategies are organized into four chapters that represent key areas of opportunity for enhancing community wellbeing. Each chapter begins with a stated objective and a series of guiding questions to quickly orient readers toward health priorities.



PARKS & OPEN SPACES

Strategies that address parks, public plazas, open and green spaces, waterways (blueways), and other public spaces.



DEVELOPMENT PATTERNS

Strategies that focus on land use, community development, and planning practices.



TRANSPORTATION & MOBILITY

Strategies that address pedestrian, bicycle, automobile, and transit infrastructure and services.



BUILDINGS

Strategies that identify opportunities to enhance health and well-being within, and immediately surrounding, private and public buildings.

Active Design Miami is designed for ease of use and readability. Information is organized into four strategic areas. Icons are used throughout the publication to highlight particular points of interest, and assist readers in gathering specific information quickly.

Three Types of Strategies

Strategies are further organized into three categories that illustrate the general type of action or intervention required for implementation.



Design strategies



Policy strategies

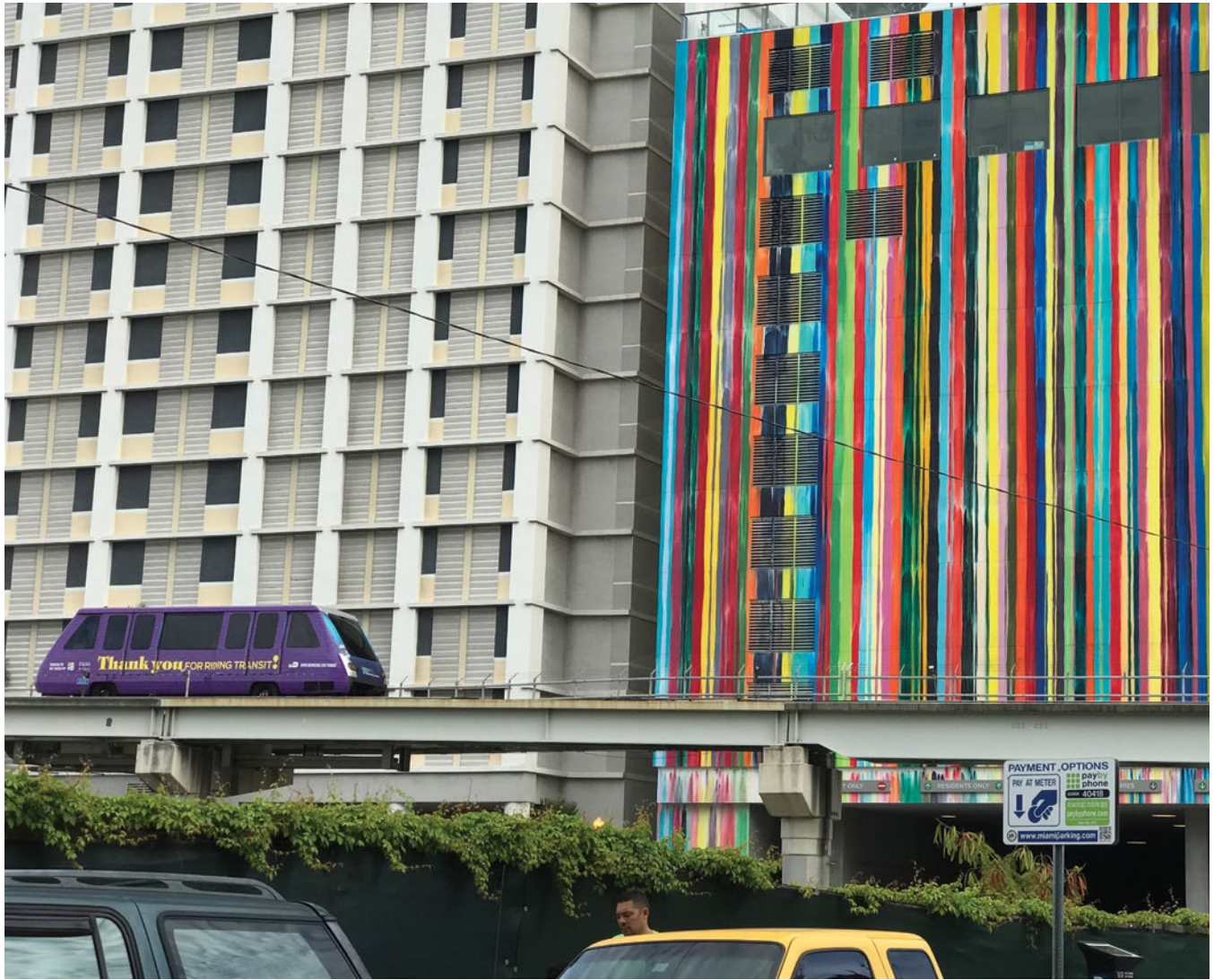


Programming strategies

A summary checklist capturing the full list of strategies from all four areas can be found online at www.activedesignmiami.org.

INTRODUCTION REFERENCES

1. <https://centerforactivedesign.org/guidelines/>
2. Sallis, 2016; www.ipenproject.org



Downtown Miami, Florida

CHAPTER 1

**COMMUNITY CONTEXT
& VISION**

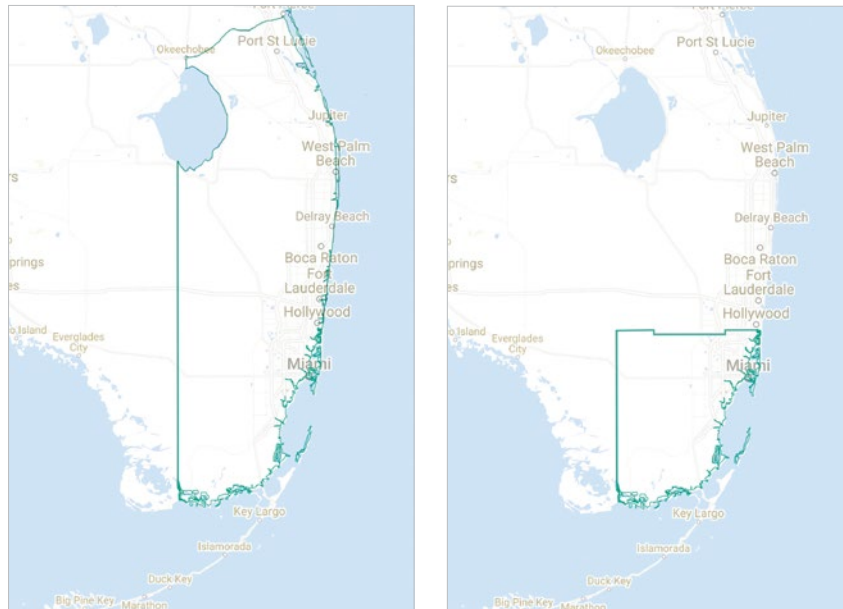
ACTIVE DESIGN MIAMI was developed through a collaborative process to ensure that all strategies directly address Miami's needs and priorities. To achieve this, a team of advisors began by reviewing Miami-Dade County's growth, population dynamics, health indicators, and development patterns.

MIAMI-DADE COUNTY HISTORY

Miami-Dade County was formed in 1836, incorporating a sizable portion of what is now South Florida, extending from Indian Key to Jupiter Inlet. When the City of Miami was incorporated in 1896, the population in all of Miami-Dade County was still fewer than 1,000 residents.¹ By 1925 the county's land area was reduced to its present-day size, while its population surpassed 110,000. By 1945, the population nearly tripled to 315,000 residents.²

The development of Henry Flagler's railroad and an extensive trolley system facilitated commercial activity that significantly contributed to the development of the city and county. Over time, concerted efforts of the automotive industry and rapid, unregulated land development promoted car travel over all other transportation modes. By 1970, Miami Dade's population reached 1,267,792 with continued immigration being the greatest contributor to population growth.³

In the early 1920s and 1930s, a commuter could travel between Coral Gables and Downtown Miami in 15 minutes using the streetcar and trolley network. Today the trip can be up to 30 minutes in non-peak travel hours alone.



Miami-Dade County Boundary, late 1800s; Miami-Dade County Boundary, present day.



Travelers and a railcar at the FEC station in downtown Miami. 1950.



Passengers at the Florida East Coast Railway station in downtown Miami. Circa 1940.



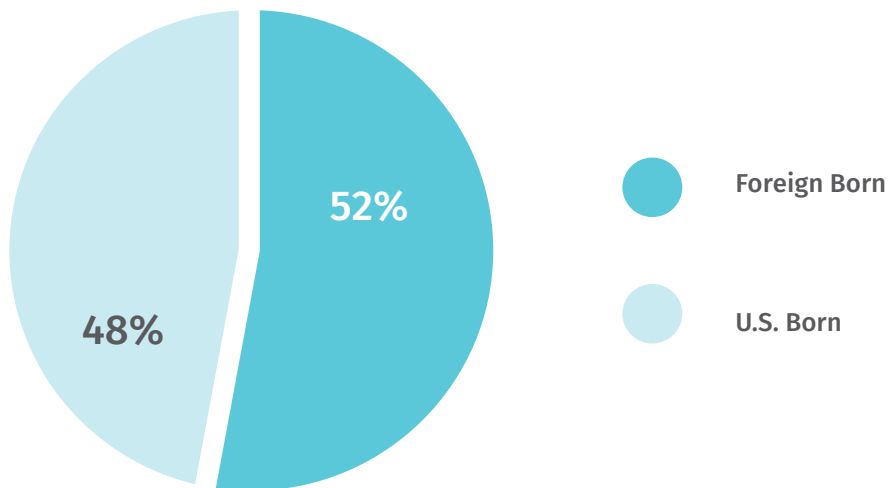
The Colonnade Building, at the intersection of Coral Way and Ponce de Leon Boulevard, was built in 1926 to house George Merrick's sales offices. Streetcars and trolleys ran between Coral Gables and Miami from 1925 to 1935, and, within the city, for an even shorter time.

Miami-Dade’s development patterns (described by some as unbridled sprawl), pushed the boundaries of the urbanized area south and west into the fringes of the Florida Everglades, where land values decoupled from municipal regulations and services enabled lower housing prices, and created opportunities for new and first generation residents establishing roots in this community. As highways and other urban services were extended to these developments, lower land costs were, in effect, subsidized by the taxpayers. In the absence of additional transportation services, driving became the dominant mode for commuting and travel.

MIAMI-DADE COUNTY TODAY

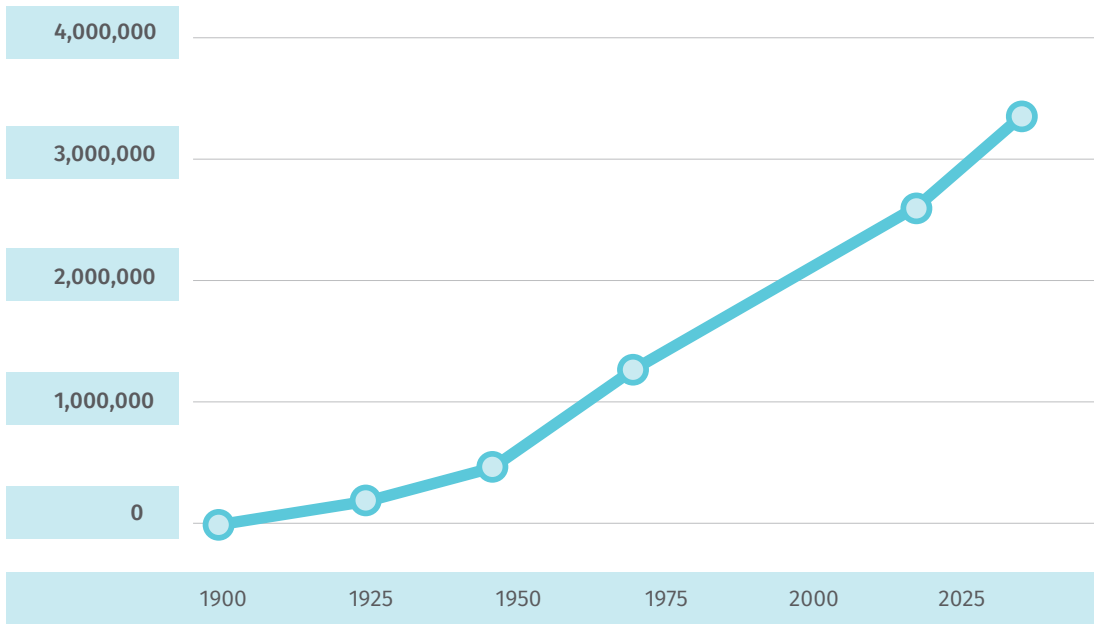
Miami-Dade remains the most populous county in Florida with nearly 2.7 million residents and the seventh largest county by population in the US.⁵ Immigration is a major driver of Miami-Dade’s demographic and population dynamics. Miami-Dade is the county with the highest percentage of foreign-born residents in the U.S., and the only place where this population accounts for more than half of all residents.⁶

Miami-Dade’s rapid growth occurred during an era when suburban planning models shaped building and zoning regulations, while a patchwork of governance models dictated the form of housing, transportation, and public space. In some areas, this resulted in leafy suburban neighborhoods; in others, setbacks and single-use zoning restrictions generated adverse impacts. Demographic diversity as well as disparities in municipal services has led the region to experience a broad range of challenges, opportunities, and resource needs.



MIAMI-DADE COUNTY FOREIGN BORN POPULATION⁷

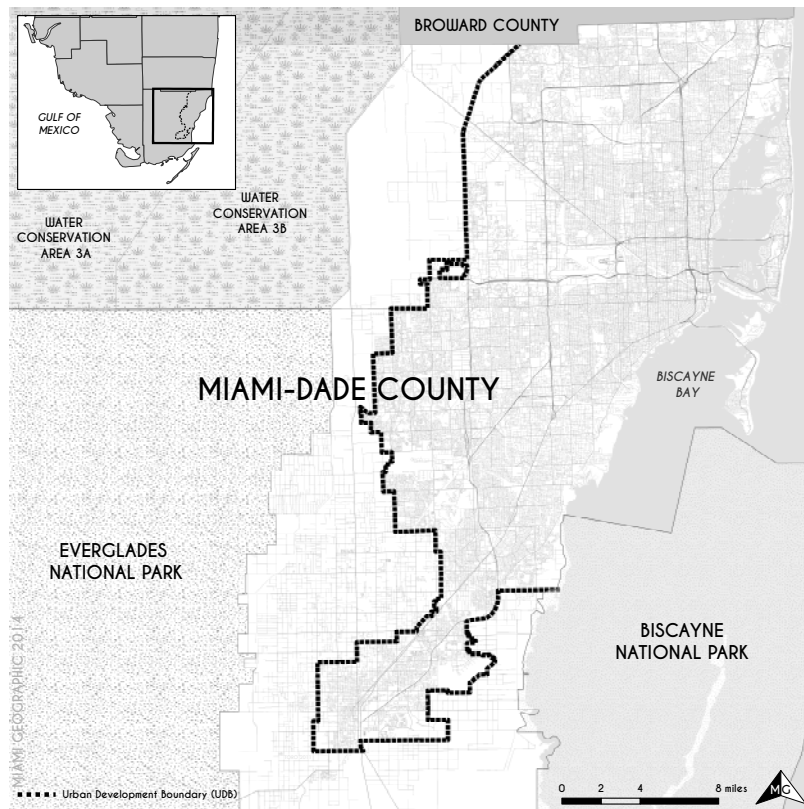
MIAMI-DADE COUNTY POPULATION,⁴ 1896 - 2035





Across the county, the impact of car-centric development patterns play a key role in residents' levels of physical activity and well being. A recent study determined that the proximity of a resident's home to Miami-Dade County's Urban Development Boundary (UDB) affected physical activity, particularly walking. The study found an 11% increase in "purposive walking" for each mile of distance a resident lived away from the UDB and closer to the denser, more walkable Central Business District.⁸

Approximately 68% of adults in Miami-Dade County are overweight or obese, as are roughly 13% of high school students.⁹ According to the U.S. Department of Health and Human Services' Healthy People 2020 initiative, Miami-Dade County ranks 61st out of 67 in health outcomes in Florida. Poor nutrition and lack of physical activity are the dominant contributors to these unfavorable health outcomes.¹⁰ Another study found that 35.5% of Miami-Dade residents reported feeling sad and/or depressed every day over the last two years.¹¹



Urban Development Boundary (2013) for Miami-Dade County.

A HOLISTIC VISION FOR HEALTH

In recent years, multiple studies have pointed to the inherent connection between physical, mental, and social well-being.¹² Recognizing this connection, Active Design Miami presents a holistic approach to fostering health.

The combination of heart disease and depression can cause twice the reduction in social interaction than either condition alone.¹³

Up to 50% of cancer patients suffer from a mental illness, especially depression and anxiety, and treating symptoms of depression in cancer patients may improve survival time.¹⁴

THE GOAL: CONNECTIVITY

The overall goal of Active Design Miami is to enhance connectivity in order to improve health outcomes. Active Design Miami addresses connectivity from two perspectives. Physical connectivity addresses mobility, infrastructure, and various pathways linking neighborhoods and public spaces. Social connectivity encourages social and interpersonal connections that benefit individuals as well as the broader community. Active Design strategies play a crucial role in fostering both types of connectivity.



Safety is critical. Miami-Dade County is the fourth most dangerous place to walk or bike in the United States. This presents a major opportunity to enhance mobility options to increase safety, usability, and activity along bike and pedestrian corridors.

GUIDING PRINCIPLES

The collaborative process for developing Active Design Miami is rooted in a set of guiding principles. The following principles provided a foundation of considerations and ideals from which the strategies emerged:

1. Physical, mental, and social health are interconnected and together support overall well-being.
2. Safety is a critical priority. From a behavioral perspective, the perception of safety is as important as safety indicators.
3. Inclusive and equitable design serves everyone in the community, welcoming all ages, abilities, and backgrounds.
4. Knowledge and information sharing empower community members and decision makers to make choices based on measurable outcomes.
5. Sustainability is integrally linked with Active Design. Successful implementation of ADM addresses individual, collective, and ecological health.

It is Active Design Miami's intent that each of these principles remain at the forefront of consideration as diverse practitioners use ADM strategies to develop projects, policies, and practices that maximize community wellbeing.



The Underline.

CHAPTER 1 REFERENCES

1. http://www.miamidade.gov/info/about_miami-dade_history.asp
2. http://digitalcollections.fiu.edu/tequesta/files/1946/46_1_06.pdf
3. <http://www.miamidade.gov/planning/library/reports/2009-miami-dade-county-facts.pdf>
4. <http://flhousingdata.shimberg.ufl.edu/a/population?action=results&nid=4300> (projected population)
5. http://www.floridacharts.com/Charts/atlas/Population/PopAtlas2012/Complete_Population_Atlas_2012.pdf
6. <http://www.census.gov/edgekey-staging.net/content/dam/Census/library/working-papers/2012/demo/POP-twps0096.pdf>
7. http://www.miamidade.gov/info/about_miami-dade_statistics.asp
8. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4171193/>
9. <http://www.countyhealthrankings.org/app/florida/2015/rankings/miami-dade/county/outcomes/overall/snapshot>
10. U.S. Department of Health and Human Services' Healthy People 2020 initiative
11. <http://www.countyhealthrankings.org/app/florida/2015/rankings/miami-dade/county/outcomes/overall/snapshot>
12. <http://www.who.int/bulletin/volumes/91/1/12-115063.pdf>
13. <http://psychcentral.com/lib/the-relationship-between-mental-and-physical-health/>
14. <http://www.who.int/bulletin/volumes/91/1/12-115063.pdf>



Lincoln Road, Miami Beach, Florida



CHAPTER 2

PARKS & OPEN SPACES

Parks and open spaces are essential to well-being. Strong evidence links access to parks and open space with increased levels of physical activity, reduced stress, improved blood pressure and cholesterol & decreased diagnosis of depression.¹

OBJECTIVE

Create an easily accessible network of parks and open spaces for all community members, within a close distance of residences.



“Vibrant spaces connect people to a place and drive economic, social and physical wellbeing.”

- STUART KENNEDY
The Miami Foundation



PARKS & OPEN SPACES DESIGN STRATEGIES

2.1 **Ensure all residents have access to a park and/or green space within a quarter mile of their home.²**

In locations with a lack of available parcel, consider pocket parks that can provide greenery, a place to sit outdoors, a playground, or fitness circle on vacant building lots or other small, irregular pieces of land.

With many competing budgetary demands in local governments, creative opportunities exist to expand parks through public-private partnerships, land swaps with private developers, and park space requirements for new development.

2.2 **Design activity spaces that meet the needs of people of all ages and abilities.³**

Design parks and open spaces that promote physical activity for all ages and abilities such as walking trails, gardens, and bike paths.

Consider locating these activity spaces near a network of multiple modes of transportation including public transportation so that they are accessible to all.

2.3 **Expand opportunities for physical activity through a range of affordable, easily accessible recreation facilities.⁴**

Safe, easy to access walking paths or multi-use trails that support walking, jogging, biking and skating, provide easy opportunities for increased physical activity and recreation.

Provide lighting to enhance actual and perceived safety and encourage evening use of walking paths and multi-use trails.

Fitness zones and community recreation centers in parks provide free or low-cost access to a variety of fitness equipment and programs.

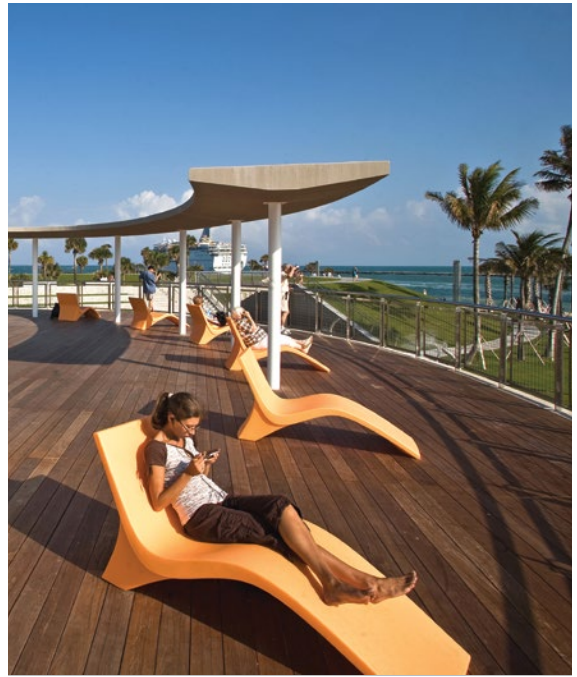
2.4 **Ensure that parks, plazas, and playgrounds are easily accessible to pedestrians and cyclists.⁵**

Parks are an integral part of walking and biking infrastructure, providing a safe traveling corridor for pedestrians and cyclists.

2.5 **Provide amenities—such as trees, lighting, water fountains, and seating—that enable people to enjoy spaces for longer periods of time.⁶**

Clean and accessible public restrooms and amenities, such as moveable, outdoor furniture, encourage people to stay in spaces for longer periods of time.

Given Miami-Dade County's subtropical climate, shade is critical for encouraging activity and use of public spaces. Coverage, such as shade structures and tree canopy, can provide adequate protection.



Public, free fitness equipment installed at Alice Wainwright Park in Miami encourages parkgoers to get in some exercise while enjoying an amazing view! | Moveable furniture in Miami Beach's South Pointe Park encourage greater use of the park and surrounding open areas.



Interesting shade structures add comfort and visual appeal, encouraging people to spend more time in open spaces. | When complete, The Underline will be a safe and connected mobility corridor with clearly marked and lit bicycle and pedestrian facilities.

2.6 Emphasize natural elements and landscaping, including street trees.⁷

Outdoor planters can provide residents with an inviting space by adding color and variety, as well as enable portability to define pathways and boundaries, as well as deliver shade as needed.

Water features add visual appeal potential sound masking, and in low humidity, can contribute to cooling.

2.7 Incorporate a variety of surfaces and textures into children’s play spaces, including colorful ground markings and natural elements.⁸

Play spaces can include both fixed equipment such as climbing structures, slides and balancing surfaces movable equipment such as block-based play systems, building and game sets, and sports nets. Children are more physically active for longer periods of time in unstructured and aesthetically appealing spaces, so open areas of all types are important to support free play.

2.8 Design and maintain parks and open space to promote safety.⁹

Appropriate placement of pedestrian-level lighting not only enhances a public space, but also as increases comfort, security and safety. According to the Pedestrian and Bicycle Information Center, pedestrian-scale lighting should be placed lower in height (12 to 16 feet) than standard street lighting and spaced closer together (about 60 feet on center).¹⁰

Visibility is an important factor. Clear sightlines give park users the ability to verify the presence of persons, and a visible perimeter encourages use, and creates a perimeter of surveillance.

Activating spaces around parks increases informal surveillance and accessibility to groups who may feel more vulnerable in the park interior including women, children, older adults and people with disabilities.

Placement of clear and understandable signage enhances the feeling of safety because it allows people to orient themselves.

Nearly 70 percent of all playground injuries are related to falls to the surface, according to a study conducted by the U.S. Consumer Product Safety Commission.¹¹ Use of loose-fill or synthetic surface materials (hardwood wooden fiber, shredded rubber, sand) in playgrounds to reduce the risk of injury.



Water features in and around open spaces create a pleasant atmosphere, reduces the effects of loud or intrusive sound, and can provide opportunities for seating and gathering. | Playground equipment that challenges through play attracts users of all ages at ArtsPark at Young Circle in Hollywood, Florida.



Interactive, playful and accessible water features encourage kids and adults of all ages and abilities to get active, cool off and have fun. | Clear visibility, soft ground covering, and shade on fixed play equipment create a safe space for play and interaction for all users at Alice Wainwright Park.

- 2.9 Support the development of community gardens.¹²**
Beyond the benefits of access to greenery and healthy produce, studies have shown that involvement in community gardening activities and in neighborhood meetings was associated with positive perceptions of community connectedness.
- 2.10 Install drinking fountains and water bottle refill stations.¹³**
Free access to drinking water is an essential component of parks, and bicycle and running trails. Water bottle refill stations in public places encourage people to drink more water, and also encourage people to refill water bottles which will help reduce waste.
- 2.11 Activate waterfront spaces within neighborhoods and parks to support and encourage water activities such as kayaking, paddle boarding, etc.¹⁴**
With an average high temperature of 76.4°F,¹⁵ Miami provides the perfect opportunity to engage in year round water activities.
- 2.12 Provide amenities to welcome pet owners.¹⁶**
Parks are a great place for dogs to exercise and socialize with other dogs. Incorporating amenities such as drinking fountains, pet wash stations, dog park benches, and pet waste stations welcome pet owners and enhance a pet owners' experience.

Consider whether to design a dog park or provide off-leash hours at a regular park. A 2011 study found that regular dog walkers were more likely to meet the CDC recommended 150 minutes of physical activity per week,¹⁷ and those with access to a dog-supportive park were more likely to regularly walk with their dog.¹⁸



Opportunities for water activities such as kayaking, paddleboarding, and swimming are plentiful in Miami-Dade County. | Water bottle refill station provide cool filtered water at Margaret Pace Park. | Providing simple amenities such as water bowls for Fido installed with conventional water fountains encourages greater use of parks and open spaces.





PARKS & OPEN SPACES POLICY STRATEGIES

2.13 **Partner with organizations to sponsor and maintain green spaces and gardens.**

Urban Paradise Guild (UPG) is an example of a partnership between government and a non-profit organization that aims to re-create and maintain native habitats in the urban areas of Miami-Dade County. UPG project and nursery locations currently include a State of Florida park, three County parks, and a preserve in the City of North Miami.

The benefits of urban-grown food go far beyond taste and nutrition for the consumer. It helps to address critical issues related to climate change by reducing transportation footprint, and when grown organically it stops the pollution caused by chemical farming.

2.14 **Encourage shared use agreements that offer school facilities as places for play and physical activity outside of school hours.¹⁹**

Schools tend to be centrally located and have multiple facilities such as gymnasiums, basketball courts, playing fields, and other recreational facilities. Formal agreements provide community members with convenient and inexpensive access to existing facilities during after school and weekend hours. Organizations such as Safe Routes to School offer useful examples for creating effective agreements.²⁰

2.15 **Create or amend policies to facilitate the activation of waterfront spaces within parks and open spaces.**

Policies that promote and provide public access to waterfront open space should be implemented, and should ensure equitable use for all, as well as economic benefits to the neighborhood.

Waterfront public access areas should be inviting to the public; include high quality design elements; ensure uninterrupted waterfront access that is clearly open to the public; promote the greening of the waterfront; facilitate a variety of amenities including access to water, boat launches and anchorages, and play areas; and activate waterfront spaces by improving connections between the water's edge and streets.



Building Family Gardens at the UPG Amelia Garden Center. Credit: Debbie Skaggs for UPG. | After Planting at the UPG Oleta Maritime Hammock project. | Making waterway access easier, more commonplace and adaptive for all users, provides many opportunities for physical activity and recreation.





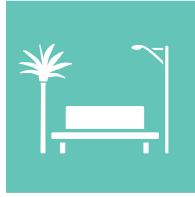
PARKS & OPEN SPACES PROGRAMMING STRATEGIES

- 2.16 Offer spaces and activities that respond to unique local and cultural preferences.²¹**
Provide community members with familiar activities they can easily participate in regardless of language fluency or local knowledge.
- 2.17 Facilitate access to healthy food options in parks and open space.²²**
Food trucks, local vendors, farmers markets, fruit and vegetable stands, and vending machines with high quality food can provide healthy food options in parks and open space.
- A market should be located in a central, high traffic area with ample space to grow, space for customer parking, and amenities for shoppers. It should be planned to be a permanent institution in the community or neighborhood for farmers and consumers.
- 2.18 Program group activities for all ages and abilities that promote social interaction and engagement.²³**
Social isolation may lead to detrimental health effects in older adults, including increased risk for all-cause mortality, dementia, re-hospitalization, and falls. Supporting intergenerational connection and activities reduces social isolation among older adults.
- 2.19 Offer free or low-cost fitness programs in parks and public spaces to encourage physical activity.²⁴**
Programs for older adults that encourage physical activity include fitness circles, outdoor walking clubs, fitness classes like yoga and Tai Chi, dancing, scavenger hunts, and gardening.
- 2.20 Support open streets initiatives and temporary street closures — such as play streets and “ciclovia”—for community gatherings and activities.²⁵**
Streets are one of the most common public spaces in and around every community. Government agencies can facilitate regularly occurring street events such as weekly bike rides. Government agencies can also create easy, low cost processes that allow local organizations and/or people to organize street events for community use.



The Calle Ocho Ciclovía, an event where roads are temporarily open to non-automotive use only, transformed a busy thoroughfare into a safe place for cycling, walking, and simply gathering with family and other locals. | The Coconut Grove Organic Farmers Market offers a variety of produce every weekend. | Communities across Miami-Dade County have successfully incorporated games such as dominoes into parks and open spaces, encouraging locals and visitors to gather, socialize, and incorporate more regular physical activity.





CHAPTER 2 REFERENCES

1. <http://www.nrpa.org/ParksandHealth/Fact-Sheets/Parks-Improved-Mental-Health-Quality-Life/>
2. Rundle et al., 2013; Sturm & Cohen, 2014; Trust for Public Land, 2016
3. Cranney et al., 2016; Joseph & Maddock, 2016; Volkanovski, 2015; World Health Organization, 2007
4. Active Living Research, 2011b; Cohen, Marsh, Williamson, Golinelli, & McKenzie, 2012; Kaczynski, Potwarka, & Saelens, 2008; Rundle et al., 2013
5. Cutts, Darby, Boone, & Brewis, 2009; Weiss et al., 2011
6. Braun, 2015; Coley, Sullivan, & Kuo, 1997; Reynolds, 2007
7. Braun, 2015; S. C. Brown et al., 2016; Kardan et al., 2015; Lovasi et al., 2013
8. Andersen, Klinker, Toftager, Pawlowski, & Schipperijn, 2015; Brittin et al., 2015; Ridgers, Stratton, Fairclough, & Twisk, 2007
9. Jorgensen, Ellis, & Ruddell, 2013; McCormick & Holland, 2015
10. http://www.pedbikeinfo.org/planning/facilities_streetscape_lighting.cfm
11. Tinsworth, Deborah K. and McDonald, Joyce E., "Special Study: Injuries and Deaths Associated with Children's Playground Equipment," Directorate for Epidemiology, U.S. Consumer Product Safety Commission, <http://cpsc.gov/Page-Files/108601/playgrnd.pdf>, 2001.
12. Alaimo, Crawford, & Snyder, 2016; Veen, Bock, Van den Berg, Visser, & Wiskerke, 2015; Wells, Myers, & Henderson, 2014; Whear et al., 2014; C. J. Wood, Pretty, & Griffin, 2015
13. Jasper, Le, & Bartram, 2012; Park, Sherry, Wethington, & Pan, 2012
14. Foley & Kistemann, 2015; Volker & Kistemann, 2013
15. www.usclimatedata.com/climate/miami/florida/united-states/usfl0316
16. Centers for Disease Control and Prevention, 2014; Cutt, Giles-Corti, Knuiaman, Timperio, & Bull, 2008
17. <http://www.cdc.gov/physicalactivity/basics/adults/index.htm>
18. <http://msutoday.msu.edu/news/2011/dog-walkers-more-likely-to-reach-exercise-benchmarks/>
19. Chriqui JF, 2012; Kanters, Bocarro, Moore, Floyd, & Carlton, 2014; Public Health Law Center, 2015
20. <http://www.saferoutespartnership.org/sites/default/files/pdf/Shared-Use-Increasing-Access-to-Physical-Activity-Opportunities.pdf>
21. Hall & Robertson, 2001; McCarthy, 2006
22. Freedman et al., 2016; Jilcott Pitts et al., 2014; Ruelas, Iverson, Kiekel, & Peters, 2012
23. Cattan, White, Bond, & Learmouth, 2005
24. Cohen et al., 2016; Gortmaker et al., 2012; Han et al., 2014; Gregory W. Heath et al., 2012
25. D'Haese, Van Dyck, De Bourdeaudhuij, Deforche, & Cardon, 2015; Hipp, Eyler, & Kuhlberg, 2013; Hipp, Eyler, Zieff, & Samuelson, 2014; Sarmiento, 2010



Soundscape Park, Miami Beach, Florida



CHAPTER 3

DEVELOPMENT PATTERNS

Development patterns in urban and suburban communities are dictated by land use policies and development regulations. The location and type of residential and commercial buildings, parks and public spaces, street networks, transit services, and infrastructure together constitute development patterns.

Development patterns and associated planning and land use policies are critical when prioritizing health and well-being at the community and neighborhood levels. The choice between walking or biking (active transportation) to the nearest grocery store or elementary school versus driving (passive transportation) depends on neighborhood dimension, structure and land use, all of which can ensure or limit access and connectivity.

OBJECTIVE

Ensure connectivity, ease of access, and safe use for residents of all ages and abilities.



“Providing a healthy mix of land uses and services is ultimately about making it easier for people to walk, bike or use transit to take care of their everyday needs instead of getting into a private automobile. Walkability is the nexus between health and the built environment and it can be reinforced at all levels: policy, business, and individual choices.”

- CESAR GARCIA-PONS, LEED™ AP
Perkins + Will





DEVELOPMENT PATTERNS DESIGN STRATEGIES

3.1 Encourage a diverse mix of land uses at all scales of development.¹

Neighborhood design can encourage residents and visitors to walk, bike, and use public transit by incorporating a mix of uses. For instance, housing, offices, retail, parks, restaurants and cafes, professional services, cultural institutions, and schools can be located in close proximity and, in some cases, even co-located, to encourage greater numbers of destinations for walking and biking.

Prioritizing parks and open spaces when planning new developments ensures adequate space will be allocated to provide active and passive recreation areas for future residents and visitors.

3.2 Encourage transit-oriented development at appropriate densities to create vibrant, mixed-use, walkable communities that maximize the value of public transit.²

Major transit stops and transit-oriented developments, or TODs, are most successful when walkability is a key design feature and when located in proximity to everyday places such as grocery and other retail stores, and food service establishments.

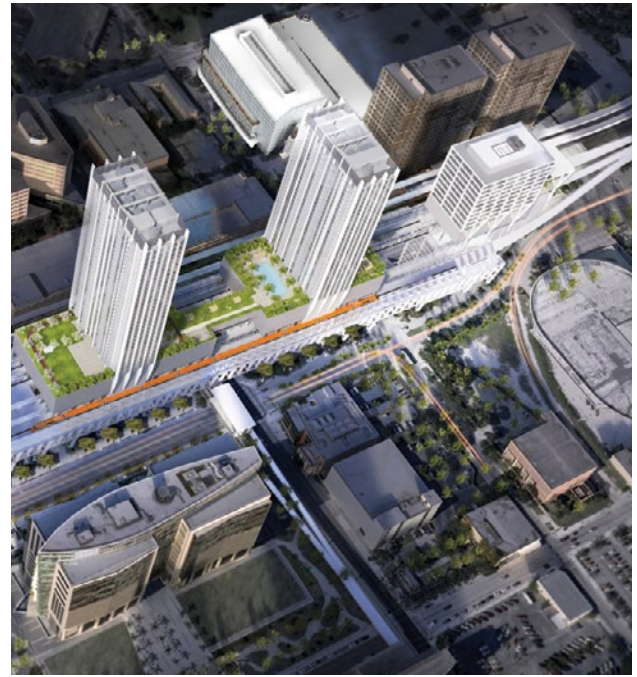
Public transit and transit-oriented developments, or TODs, depend on higher density allowance to maximize efficiency and service.

3.3 Plant trees to provide shade, enhance neighborhoods, and promote social connectedness.³

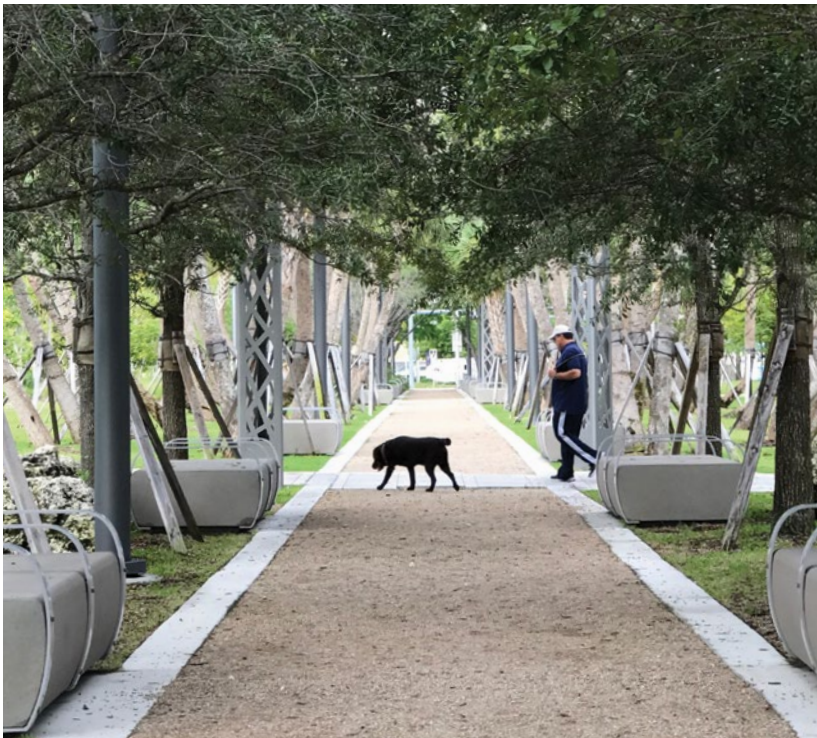
Recent studies indicate that people prefer to be in places with more greenery, and these places also tend to generate greater social activity.⁴ In Miami's climate, shade trees can play an important role in encouraging people to participate in physical activity or outdoor gatherings.



Ensuring homes, jobs, businesses, services, and recreational places are in close proximity to each other is the key feature of Transit Oriented Development.



Daily instances of physical activity are more likely when residences are in close proximity to shopping, dining, and services. | Transit Oriented Development Miami Central by All Aboard Florida.



Tree canopy in Coconut Grove's Regatta Park provides shade, protection, natural beauty for all park users. | High density developments go hand in hand with successful transit services.

3.4 Design neighborhoods to prioritize the pedestrian experience.⁵

Pedestrian pathways such as arcaded, or covered, walkways and midblock pass-throughs increase connectivity and shorten longer blocks to maximize walking time.

Use transparent material for ground floor windows and doors to enhance the pedestrian experience and attract interest for businesses. Avoid blank walls or shuttered windows, as they detract from the perception of safety and sense of walkability.

Minimize pedestrian exposure to rain and high heat, particularly in summer/rainy months by incorporating covered walkways where possible and adequate tree canopy.

Enhance walkability by minimizing pedestrian exposure to surface parking lots, chain link fences and similar elements.

3.5 Apply context-sensitive design solutions to preserve and reflect the character of existing historic neighborhoods.⁶

Preserving local character through design keeps local areas interesting, enhances walkability and promotes community cohesion.

3.6 Display maps and wayfinding for local fresh food options, water fountains, parks and open spaces, near-shore water features, such as coral reefs.⁷

Signage indicating time, direction, and distance for walking and biking provide visual cues and enhance walkability.



Signage along Collins Avenue in Miami Beach makes it easier for people to get oriented and find landmarks and points of interest. | A Coral Gables walk-thru creates easy and accessible connectivity to restaurants, cafes and shops. | Interesting storefront design preserves Coconut Grove's character while enhancing walkability.



DEVELOPMENT PATTERNS POLICY STRATEGIES

3.7 **Plan intergenerational communities to help people of all ages thrive.**⁸

Intergenerational communities promote interaction and cooperation between individuals of different ages and focus on the needs of all residents, especially children and older adults.

Intergenerational communities may include leadership opportunities for all ages, multi-generational programming, and housing, transportation, or workforce policies that address the needs of residents of all ages.⁹

3.8 **Update zoning and building codes to maximize land use mix, support appropriate development densities, and enhance pedestrian connectivity.**¹⁰

Incorporate land use planning and transportation planning at all levels (neighborhood, municipal, county and regional) to ensure the successful use of new or updated transportation corridors.

As an example, The Underline project has spurred land use mix and density changes along the upcoming corridor that will enhance the connectivity and success of all projects.

Leveraging Miami21 and other form-based codes helps emphasize desired design qualities over land use restrictions.

3.9 **Preserve housing affordability and encourage inclusive, mixed income neighborhoods.**¹¹

Diversity in building stock supports affordability by providing older, less expensive options for housing and office uses. Historic preservation efforts may help ensure older buildings remain available for use.

Tools and processes such as inclusionary zoning, land banking, and community land trusts provide options for preserving affordability and mixed-income communities. Each option can be tailored to meet local needs and may include mandatory or voluntary set-aside requirements, affordability levels, and control periods.

Developer incentives such as density bonuses, expedited approval, and fee waivers are built into most inclusionary zoning programs.



Organizations such as the South Florida Community Land Trust (SFCLT) provide affordable housing and related services through single and multi family developments. | Protected and preserved buildings such as Heathcote Apartments on Miami Beach add to the diversity of building stock and may help preserve affordability.



3.10 Promote infill development in urban core communities and deter expansion beyond the urban development boundary.¹²

Address existing gaps such as underutilized, vacant or abandoned parcels by incentivizing infill development projects. These developments help communities address blight, increase density, and add a mix of uses, all of which support more vibrant communities.

Discourage and disincentivize development beyond the Urban Development Boundary, including road construction and commercial and residential projects.

3.11 Update codes to reduce the impact of parking requirements.¹³

Reduction or elimination of minimum parking requirements in new developments helps preserve affordability and encourages walking, biking, and transit use.



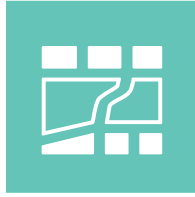
An infill development project by Tecela in Little Havana uses a single lot in order to supply more housing which keeps downward pressure on housing prices without having to tear down most existing housing which is likely already affordable.



Macy's Herald Square, New York

“Store windows don’t belong to buildings or companies. They belong to the people. They are an integral part of everyone’s world. They are a vital and ever-changing contribution to the vibrancy of our streets and cities. They unconsciously influence our spirit.”

- VITTORIO RADICE
Vice Chairman, La Rinascente



CHAPTER 3 REFERENCES

1. *Dill & Howe, 2011; Leyden, 2003; Mumford, Contant, Weissman, Wolf, & Glanz, 2011; Zhu, Yu, Lee, Lu, & Mann, 2014*
2. *G.W. Heath et al., 2006; Mumford et al., 2011*
3. *Coley et al., 1997; Holtan, Dieterlen, & Sullivan, 2014*
4. https://depts.washington.edu/hhwb/Thm_Community.html
5. *Changelab Solutions; Ewing & Cervero, 2010; Ewing, Hajrasouliha, Neckerman, Purciel-Hill, & Greene, 2015; Saelens & Handy, 2008; Sun, Oreskovic, & Lin, 2014*
6. *Phillips & Stein, 2011*
7. *ChangeLab Solutions, 2013; Gibson, 2009; Kaczynski, Wilhelm Stanis, & Hipp, 2014*
8. *C. Brown & Henkin, 2014; Portacolone & Halpern, 2016*
9. <http://www.countyhealthrankings.org/policies/intergenerational-communities>
10. *Chen & Florax, 2010; G.W. Heath et al., 2006*
11. *Johnson, 2002; Levy, 2010*
12. *Aly & Attwa, 2013; Winig, Wooten, & Allbee, 2014*
13. *Garthwaite, 2011; Shoup, 2005*



Lincoln Road, Miami Beach, Florida



CHAPTER 4

TRANSPORTATION & MOBILITY

Transportation and mobility play a leading role in supporting daily physical activity and social connection. Reliability and safety rank among the highest characteristics for successful transportation services.

Varied, safe, and reliable options are key to successful transportation planning. With proper planning and design, residents can be encouraged to walk, bike, and/or use transit for both commuting and everyday trips and errands.

Strategies for incorporating active design into transportation and mobility can sometimes overlap with strategies for parks and public spaces as well as development patterns.

OBJECTIVE

Prioritize people over automobiles by creating well-connected, safe, and easy-to-use use transportation options.



“If we have learned anything about the impact of road building on modern life, it is the fundamental lesson that who we are as a community depends not on how rapidly we travel, but rather, on the density and quality of our destinations and the character of our journey.”

- JOANNA LOMBARD, AIA
Professor, University of Miami School of Architecture



TRANSPORTATION & MOBILITY DESIGN STRATEGIES

4.1 **Encourage walking by incorporating aesthetic and visually interesting elements into streets and sidewalks.¹**

Streetscape elements can encourage walking by making the street and sidewalk more comfortable, interesting and usable for pedestrians. Elements that provide amenity and utility to pedestrians include wide sidewalks; street trees that provide shade; landscaping that provides light and color; the location and quality of lighting; site-furnishing such as seating, bicycle racks, signage, and public art.

4.2 **Create new and enhance existing pedestrian plazas.²**

Pedestrian plazas are open spaces where walking, biking and similar activities are promoted, and automobile traffic is excluded. Plazas provide residents and visitors with gathering and activity space.³

Locate plazas near transit stops and along existing pedestrian streets.

Ensure plazas are attractive, comfortable and well-maintained.

4.3 **Enhance bike mobility by improving bicycle infrastructure, including ensuring bicycle paths, lanes and tracks are interconnected.⁴**

Encourage new, and support existing bicycle commuters through ease of use amenities such as bike ramps on stairs, and clearly designated, ample bike spaces on trains.

Expand bikeshare and locate new stations at train stations and transit hubs.

Prioritize the development of safe, clearly marked, interconnected bicycle pathways that provide direct access to transit stops and other destinations.

4.4 **Facilitate biking by encouraging ample bicycle parking.⁵**

Leverage available space at transit stations as well as within parks and public spaces to provide easily accessible and safe bicycle facilities.



Pedestrian plazas make walking and biking easy, safe and accessible. | Bike ramps allow bicyclists to easily roll their bikes while walking up the stairs.



Clearly marked bike lanes provide enhanced safety on Key Biscayne. | The proposed Miami Loop would incorporate several upcoming and existing multimodal trails into one system connecting a large portion of Miami-Dade County.

4.5 Provide facilities at or near rail and major transit stations that assist commuters in finalizing their trip.⁶

Some examples include bike storage, showers/restrooms, car share stations and bike share stations.

4.6 Provide schools with easy access to transit routes.⁷

Encourage use of bus or rail stops in close proximity to schools by incorporating connected and safe walking and bicycle paths, access gates or similar treatments.

4.7 Encourage walking by providing ample sidewalk space and safe crosswalks.⁸

Factors such as perceived safety and comfort influence pedestrian behavior. Providing plenty of sidewalk space to buffer pedestrians from automobile travel helps reduce the sense of vulnerability while encouraging people to walk more frequently and for longer distances.

4.8 Enhance safety and walkability by incorporating traffic calming elements to reduce driving speeds.⁹

Street design elements such as curb extensions, landscaped medians, raised intersections, and roundabouts help slow traffic speeds and increase safety.

Developing safer streets through design and policy supports increased activity for pedestrians and bicyclists of all ages and abilities, as safety is consistently cited as a primary concern.

4.9 Provide comfortable bus stops with benches and protective shelters.¹⁰

A comfortable and protected shelter is an essential part of a successful transit system. An ideal shelter is one that allows visibility and easy access to the bus, is comfortable and convenient, provides clear information, is safe, and provides protection from weather.

4.10 Use maps and wayfinding to facilitate pedestrian and bicycle access to healthy amenities.¹¹

Highlight distance, time and directions to points of interest such as community centers, local markets, and parks.



The Hollywood Ave pedestrian scramble in Los Angeles has reduced pedestrian accidents and fatalities while maximizing efficiency. | Pedestrian improvements for Flagler Street in Downtown Miami.



Pedestrian islands and clearly marked crosswalks enhance safety and access. | Air conditioned, accessible bus stops in Hialeah protect transit riders from the typical hot and rainy climate and enhance the user's experience.



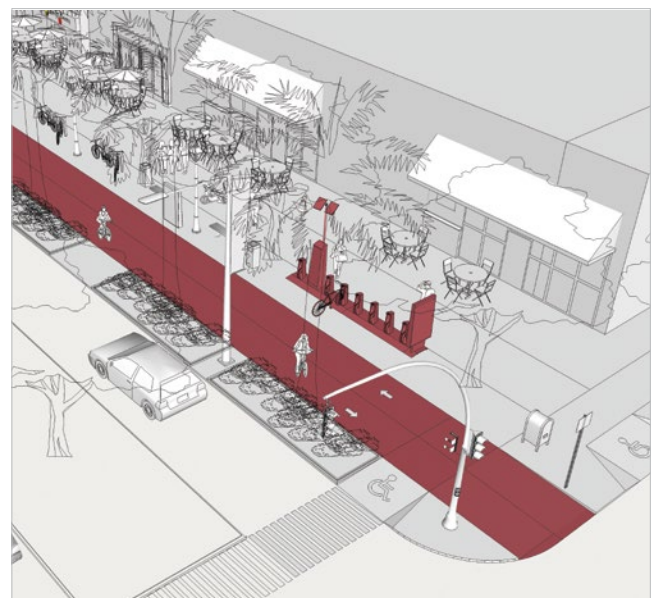
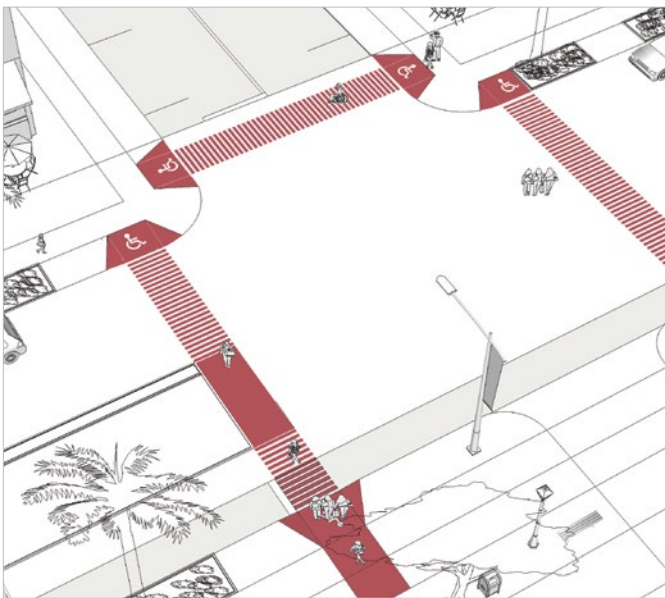
TRANSPORTATION & MOBILITY POLICY STRATEGIES

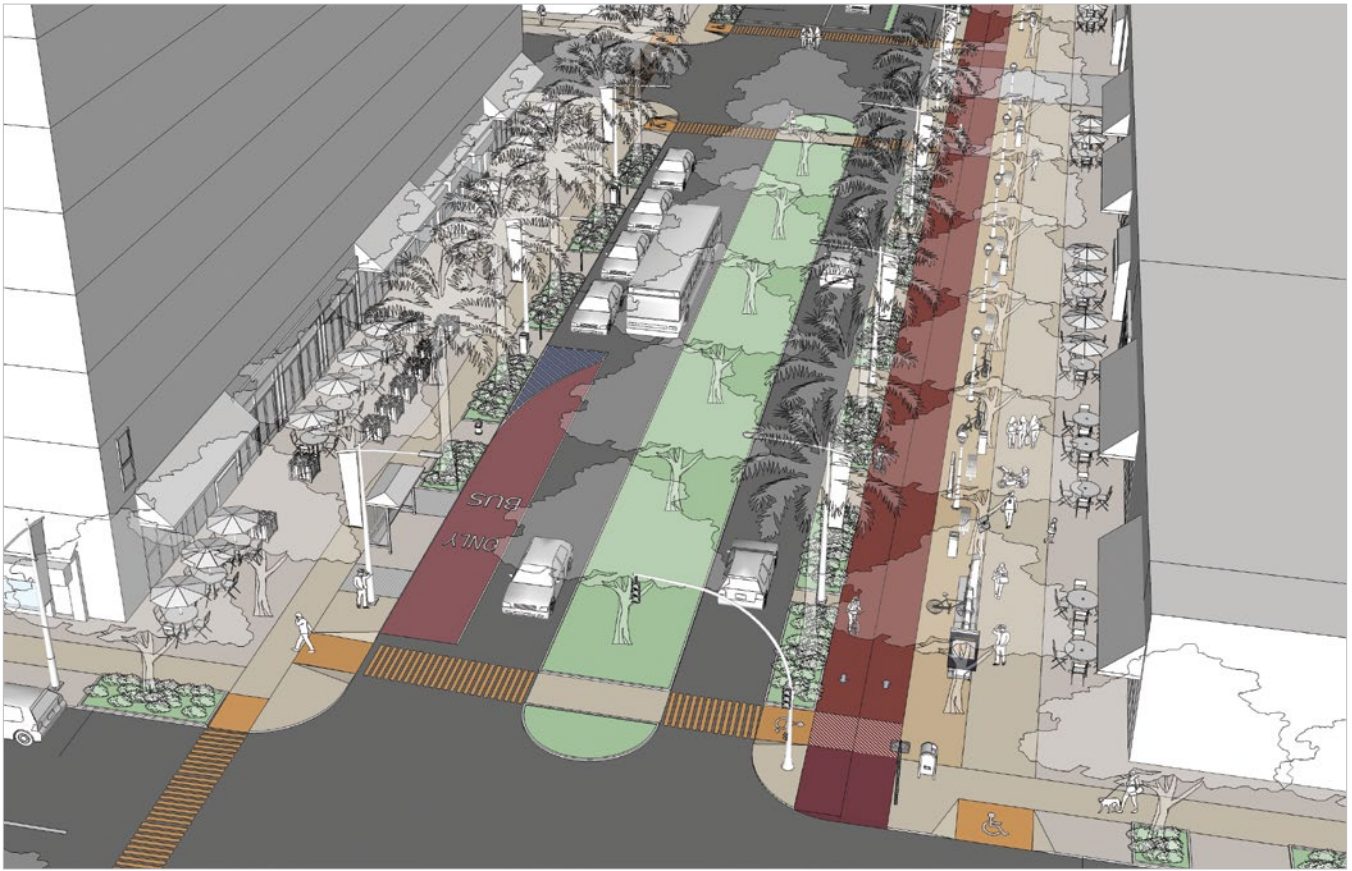
4.11 Implement Complete Streets policies.¹²

A typical complete street contains elements including, but not limited to, improved accessible sidewalks with frequent and safe crossing opportunities, bicycle lanes, defined pedestrian and bicycles spaces including bicycle parking, street trees and benches, pedestrian scaled lighting and accessible pedestrian signals, special bus lanes, comfortable and accessible public transportation stops, median refuges, landscaped curb extensions, roundabouts, on-street parking, among others.

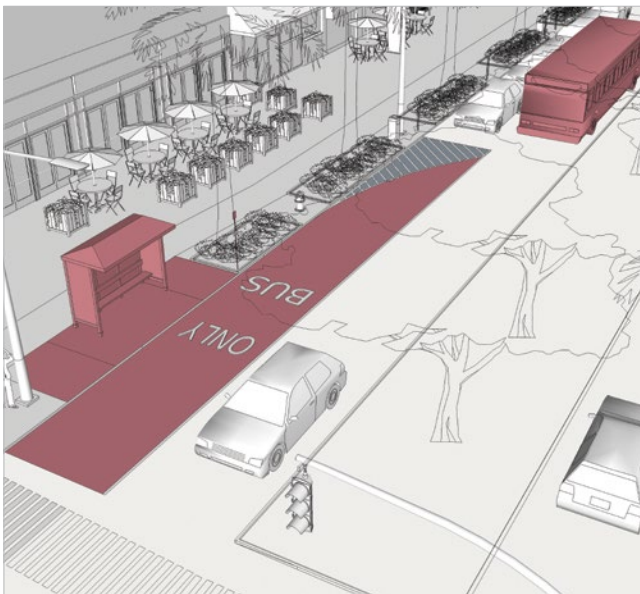
Complete Streets improve safety, encourage more walking and bicycling, help ease transportation woes, are good for air quality and make fiscal sense.¹³

Streets designed by Plusurbia using Complete Streets principles provide safe and comfortable access for people of all ages, abilities as well as all transportation modes and needs. Each mode of travel, walking, biking, public transit, and automobile, is safely supported using dedicated space allocation and clear visual cues. Below, left to right: Safe and accessible walking; Protected lanes for bicycling.





Above: All transportation modes. Below, left to right: Easy access for riding transit; Clearly designated travel lanes for drivers.



4.12 Develop community and neighborhood-scale master plans that prioritize specific community mobility needs.¹⁴

Plans such as a Bicycle and Pedestrian Masterplan provide the basis for policymakers to improve and expand mobility options.

The process of creating neighborhood plans provide important opportunities for engaging residents and identifying critical mobility and connectivity gaps in communities.

4.13 Incentivize commuting via public transit.¹⁵

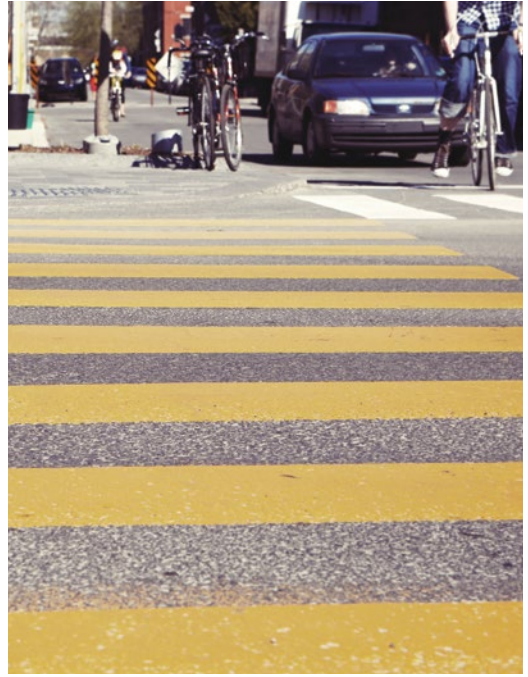
Provide incentives such as reduced parking requirements for transit-oriented development projects (TOD).

Support transit use by providing free or discounted public transit passes for employees.

4.14 Reduce parking requirements for walkable, bikeable, and transit-accessible sites.¹⁶

4.15 Expand access to BikeShare.¹⁷

Encourage use of bike share programs through discounted and/or subsidized memberships.



Miami's Citibike provides flexibility and opportunities to improve mobility.



TRANSPORTATION & MOBILITY PROGRAMMING STRATEGIES

4.16 Encourage and facilitate “walking school buses” and safe routes to schools programs.¹⁸

Walking school buses are an organized mode of active transportation for students walking to school. They have a fixed route, with designated stops and pick up times when children join adult chaperons to walk to school. Walking school bus programs can be implemented in neighborhoods of various socio-economic status.¹⁹

4.17 Incentivize carpool and rideshare programs.²⁰

Advantages of carpooling and rideshare programs include less stress commuting to and from work, financial savings, increases free time for riders, and reduces pollution due to auto emissions.

4.18 Promote and use temporary demonstration installations to evaluate project design.²¹

Demonstration projects done on a temporary basis can be used to illustrate improved street design concepts such as: parklets, mini-plazas, road diets, curb extensions, protected bike lanes, and street closures. Sometimes referred to as tactical urbanism projects, these initiatives can lead to improvements in the experience and aesthetic of the street, enhanced walkability, and a stronger sense of place.



Rideshare services such as Uber and Lyft can be incorporated into local transit / mobility options and services. UberPOOL, for example, allows you to share your ride and split the cost of your trip with another Uber rider headed in the same direction.



Park(ing) Day installations in Downtown Miami demonstrate how on street parking can be repurposed into inviting gathering spaces for people. | University of Miami WalkSafe Program at Charles R. Drew K-8 Center and Miami Park Elementary School 2012.



CHAPTER 4 REFERENCES

1. Cain et al., 2014; de Vries, van Dillen, Groenewegen, & Spreeuwenberg, 2013; Ewing et al., 2015; Lekwa, Rice, & Hibbing, 2007
2. Gehl Studio NY and J.Max Bond Center on Design for the Just City, 2015
3. ADG 34
4. Braun, 2015; Buehler & Dill, 2015; Fraser & Lock, 2011; Pucher, Dill, & Handy, 2010; Sallis et al., 2013
5. Pucher et al., 2010; Transportation Alternatives; Wardman, 2007
6. Katzev, 2003; Scheepers et al., 2014
7. Besser & Dannenberg, 2005; Wilson, Marshall, Wilson, & Krizek, 2010
8. McCormack, 2012; Pfortmueller, Marti, Kunz, Lindner, & Exadaktylos, 2014
9. Bunn et al., 2003; Rothman, Buliung, Macarthur, To, & Howard, 2014; Sun et al., 2014
10. American Public Transportation Association, 2012
11. ChangeLab Solutions, 2013; Gibson, 2009
12. Healthy Places Chicago Department of Public Health, 2013; Moreland-Russell, Eyler, Barbero, Hipp, & Walsh, 2013; Smart Growth America, 2014
13. <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/benefits-of-complete-streets/>
14. Braun, 2015; ChangeLab Solutions, 2013
15. Hamre, 2014; Redman, Friman, Gärling, & Hartig, 2013
16. Hamre, 2014; L. Wood, Frank, & Giles-Corti, 2010
17. DeMaio, 2009; Fuller et al., 2013; Woodcock, Tainio, Cheshire, O'Brien, & Goodman, 2014
18. Dimaggio & Li, 2013; National Center for Safe Routes to School
19. <http://www.countyhealthrankings.org/policies/walking-school-buses>
20. Rivasplata, Guo, Lee, & Keyon, 2013
21. Németh & Langhorst, 2014



Clearly marked crosswalk.



CHAPTER 5

BUILDINGS

Buildings' entrances, interior spaces, and immediate surroundings play a key role in engaging people in physical and social activities. Building designers and developers can incorporate active design strategies in large and small ways to impact health and well being.

By incorporating and highlighting health as a prominent outcome of architecture and interior design, skill and creativity can be used in private and public buildings to meet the needs of developers and users.

OBJECTIVE

Maximize opportunities for physical activity and social connection within and around buildings.



Many strategies in Active Design Miami can help you achieve credits that may apply towards LEED® certification. For example, synergies exist between stair design strategies and LEED™ Pilot Credit “Design for active occupants,” as well as strategies related to indoor bicycle facilities and LEED™ Credit “Bicycle facilities.” Check out the LEED™ Credit Library and the Pilot Credit Library at www.usgbc.org/credits for more information.



BUILDING DESIGN STRATEGIES

5.1 **Maximize accessibility and visibility of stairs.¹**

Stairs placed close to and immediately visible from a building's entrance encourage increased use. Placing stairs so they are encountered prior to elevators also increases likelihood of use.

Installing fire-rated glass in emergency exit (egress) stairs enhances visibility and encourages use. Fire-rated glass can be used to convert existing stairs or to maximize required egress stairs in new buildings.

5.2 **Create attractive, visually appealing stairs.²**

Encourage stair use by incorporating natural light, interesting views, art and music.

Where possible, upgrade finishing standards for stairs to match or exceed similar standard used in public corridors within a building.

Provide ample space on stairways to allow small, informal gatherings and other social activities to occur.

5.3 **Provide convenient, attractive circulation paths.³**

Highlight both interior circulation options and outdoor walking paths.

5.4 **Design sidewalk and façade elements that improve the pedestrian experience.⁴**

Some examples include shade, street trees, benches, canopies, and windows.

5.5 **Orient building entrances and circulation pathways to prioritize active transportation options.⁵**

Position main building entrances and pathways towards sidewalks, transit stops, and/or bike parking areas. Avoid directing main entrances toward surface parking lots or garages.



At the center of the Ziff Ballet Opera House lobby is a grand, open staircase and adjacent ramp with artwork created by José Bedia on the terrazzo floor inviting guests of all abilities to enter the Adrienne Arsht Center for the Performing Arts of Miami-Dade County.



Gold finishes such as those used on the stairs are consistent throughout the Alfred I. DuPont Building, built in 1939. / Artist José Bedia created site-specific work at Ziff Ballet Opera House. His design includes an etched-glass lobby stair railings depict tropical sights and sounds, musical instruments, exotic birds and sea creatures.



Fire-rated glass, natural light, and colorful graphics transform ordinary fire stairs into light-filled communicating stairs at Planned Parenthood of New York City in Queens, New York.

5.6 Provide secure, accessible indoor bicycle storage facilities in both commercial and residential buildings.⁶

Secure bicycle parking refers to covered, locked storage facilities for bikers. This type of storage for residents, as well as employees commuting by bicycle, keeps equipment in a safe area, protected from weather and theft.

Equally as important is to provide convenient outdoor bicycle parking, particularly for delivery service and other quick trips.

5.7 Allocate space and provide easy access to on-site exercise facilities and play areas in commercial and residential buildings.⁷

On-site exercise facilities, play areas, and multi-purpose spaces in public, workplace, and residential buildings make it easier for users to improve their health and well-being. They also provide for a place for building users to engage with each other.

5.8 Provide on-site gardening opportunities.⁸

Incorporate rooftop gardens, greenhouses and/or community gardens where possible.

Explore use of raised garden beds for on-site gardening facilities to accommodate users of all ages and abilities.

5.9 Provide healthy vending machines and water fountains and refill stations with fresh, clean water.⁹

The Dietary Guidelines for Americans, 2010 recommends that Americans “reduce the intake of calories from solid fats and added sugars.”¹⁰ Tap water from fountains and refill stations is not only low cost and provides for hydration, but is also a calorie-free drink that reduces added sugars and extra calories.

5.10 Provide accessible and well-equipped kitchens and eating spaces to promote healthy eating.¹¹

The design of a kitchen and eating space can not only encourage healthy eating, but it also provides for a way for building inhabitants to engage with each other.



The Alfred I. DuPont Building, a historic building in Miami, Florida, provides indoor, secure bicycle facilities for its building users. | Painted raised garden beds created by Health in the Hood in Miami is providing health and wellness opportunities to underserved communities.



BUILDING POLICY STRATEGIES

5.11 Incentivize the development of visible, attractive stairs.¹²
Prominent, attractive stairs can be incentivized by eliminating the space used for the stairway from the maximum Floor Area Ratio (FAR) calculation.

5.12 Provide incentives and update codes for on-site bike facilities, such as parking.¹³
Update ordinance dictating how bike parking is calculated in residential buildings. Current ordinances determine required bicycle parking based on automobile parking spaces, which results in a reduction of bicycle parking spaces in locations with lower car parking requirements.

5.13 Develop incentives and/or update codes to support on-site gardening.¹⁴
On-site gardening allows many urban residents and restaurants to grow their own produce through soilless, aeroponic, hydroponic or rooftop gardening.

Incentives and code amendments can go a long way towards facilitating on-site gardening.

5.14 Develop incentives and / or update codes for on-site recreation space.¹⁵
Rooftop areas can be used for both on-site gardening and recreation spaces by updating building codes to support increased weight rating and appropriate access point requirements to rooftops.



Rooftop gardens provide opportunities to grow fruit, vegetables, and herbs particularly in places with limited open, green spaces. | The Madison Downtown Condominium in Miami's urban core uses the rooftop of its garage to provide its residents with an outdoor recreation space that includes tennis and basketball courts.





BUILDING PROGRAMMING STRATEGIES

- 5.15 Post prominent and clear signs that encourage stair use.¹⁶**
Studies have shown that if the average adult climbed two minutes of stairs every day, it would overcome the weight-gain trend that American adults are experiencing. It is also a free workout.¹⁷
- Point of decision prompts and motivational signs that encourage stair use are a great way to promote their use.
- Each organization is different, however, and messages that motivate some may not be motivating to others. It is important to consider your audience, and tailor the messages accordingly.
- 5.16 Provide comfortable spaces for lactation support.¹⁸**
These spaces should be equipped with electrical outlets, comfortable chairs, a table, and nearby running water.
- 5.17 Incorporate spaces for farmers markets and small produce stands.¹⁹**
Farmers markets not only provide healthy, seasonal fresh fruits and vegetables, but also offer variety, are sustainable, promote local agribusiness, and serve as a way to connect with the community. Consider open plazas, government facilities and parks, parking lots, and places near public transportation when setting up a market or produce stand.
- 5.18 Increase access to change rooms or showers for active commuters.²⁰**
On site showering facilities (showers, change rooms, lockers, etc.) encourage people to come to work by different healthier means of travel such as cycling and also use lunch hours for taking exercise/jogging.
- Showering facilities should increase the possibility of increased productivity due to improved fitness and alertness.²¹
- 5.19 Select healthy food vendors for on-site restaurants and vending machines.²²**
A 2010 study showed that improving the types of foods and beverages served and sold in the workplace positively affected employees' eating behaviors and resulted in net weight loss.²³
- Providing education and resources about healthy living and eating, helps building inhabitants understand why company leadership/building management is making an effort to provide healthier food and beverages.
- 5.20 Offer onsite active programming and maintain spaces for community and health activities, such as fitness classes, walking clubs, cooking classes, and cultural events.²⁴**
Develop maintenance plans for common spaces, including fitness areas, gardens, walking paths, and stairs.



The Our Biscayne Farmer's Market transformed a median parking lot along a portion of Miami's iconic Biscayne Boulevard in order to give nearby residents access to fresh produce. | At Miami International Airport, MIAmamas suites are located at each of the airports concourses (post-security) to provide nursing mothers with a quiet and comfortable space for breastfeeding their infants or pumping milk.



Healthy food vendors such as The Empanada Lady provide organic and vegan prepared food options for employees of neighboring businesses and residents. | Miami-Dade County Commissioner Juan C. Zapata hosted a series of pop-up art galleries, "Art After Dark," at the Kendale Lakes Library to activate libraries during normal "off hours."



CHAPTER 5 REFERENCES

1. *Garland, Baban, Garland, Bey, & Sanchez, 2014; Nicoll, 2007*
2. *Boutelle, Jeffery, Murray, & Schmitz, 2001; Garland et al., 2014; U.S. Green Building Council, 2009*
3. *City of New York, 2010*
4. *Coley et al., 1997; Ewing et al., 2015*
5. *City of New York, 2010*
6. *Pucher et al., 2010; Wardman, 2007*
7. *Active Living Research, 2011a; Powell, Slater, Chaloupka, & Harper, 2006*
8. *Wells et al., 2014; Whear et al., 2014; Zick, 2013*
9. *Jasper et al., 2012; Patel et al., 2014*
10. *US Department of Agriculture, US Department of Health and Human Services. Dietary Guidelines for Americans, 2010. 7th ed. Washington, DC: US Government Printing Office; 2010. <http://health.gov/dietaryguidelines/dga2010/dietaryguidelines2010.pdf>. Accessed September 20, 2016.*
11. *Almeida et al., 2014; Sobal & Wansink, 2007*
12. *Garland et al., 2014; Nicoll, 2007*
13. *Pucher et al., 2010; Transportation Alternatives; Wardman, 2007*
14. *Wells et al., 2014; Whear et al., 2014*
15. *Powell et al., 2006; Active Living Research, 2011)*
16. *Bellicha et al., 2015; Soler et al., 2010; Task Force on Community Preventive Services, 2010*
17. *<http://cityroom.blogs.nytimes.com/2009/06/10/to-improve-public-health-city-urges-use-of-stairs/>*
18. *Bai, Gaits, & Wunderlich, 2015; Tsai, 2013*
19. *Freedman et al., 2016; Jilcott Pitts et al., 2014; Ruelas et al., 2012*
20. *Hamre, 2014; Wardman, 2007*
21. *http://www.worldgbc.org/files/4314/1372/1140/140918_Research_note_-_Access_to_Transport.pdf*
22. *Hanks, Just, Smith, & Wansink, 2012; Moran, Krepp, Johnson Curtis, & Lederer, 2016; Wansink & Hanks, 2013*
23. *Groeneveld IF, Proper KI, van der Beek AJ, Hildebrandt VH, van Mechelen W. Lifestyle-focused interventions at the workplace to reduce the risk of cardiovascular disease—a systematic review. *Scand J Work Environ Health*. 2010*
24. *Hersch, Perdue, Ambroz, & Boucher, 2014; U.S. Department of Health and Human Services, 2015*



American Airlines Arena, Downtown Miami

CHAPTER 6

CASE STUDIES

MIAMI DADE COLLEGE WOLFSON CAMPUS CLASSROOM BUILDING 8

LEED Silver, with Physical Activity Credit – 2014

Project partners

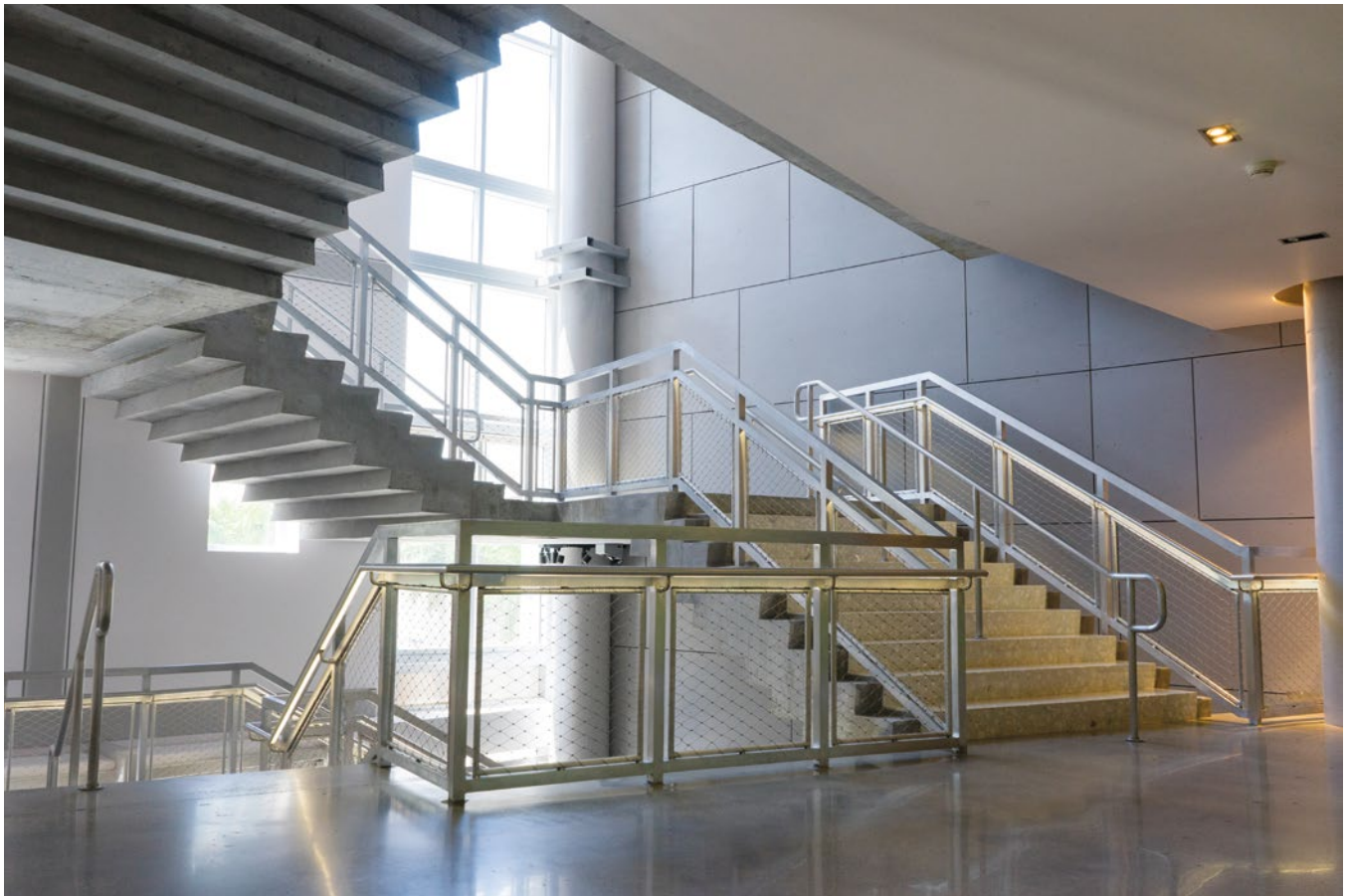
Zyscovich Architects
Miami Dade College

Summary

Miami Dade College Wolfson Campus Classroom Building 8 includes approximately 110,000 GSF of new academic and support spaces, including a wellness center and exercise facilities. In its design, Zyscovich Architects incorporated prominent stairs with natural light that are wide enough to invite student interaction.

The design encourages students to walk up the stairs and avoid taking the elevators. In addition, the wellness center is located on the upper floor. Although predominantly a classroom building, there are many student life elements that are fused together vertically by the main open staircase and the visible active vertical circulation located within the principal path of travel.





Miami Dade College Wolfson campus, Building 8 stairs.

MILLION TREES MIAMI

Million Trees Miami – 2011 to present

Project Partners

Miami-Dade County
Neat Streets Miami Board
Municipalities
Universities, non-profits and foundations

Summary

Launched in 2011, Million Trees Miami Campaign is a community-wide effort to plant one million trees by 2020 in order to achieve a 30% tree canopy cover for Miami-Dade County. To date, an overall tree canopy of 19.9% has been achieved.

A recent Urban Tree Canopy Assessment performed by the University of Florida and Florida International University positively correlated tree canopy with median income, but negatively correlated with percentage of African American and Hispanic residents. Therefore, tree plantings are being strategically implemented in minority and lower income communities to support environmental and health equity.



Million Trees Miami tree planting.



Tree canopy at Coconut Grove's Peacock Park.

GRAND PARK LOS ANGELES

Los Angeles, California – 2012

Project partners

Grand Avenue Authority
Rios Clementi Hale Studios
Los Angeles Music Center

Summary

After a multi-year planning process centered on civic engagement and feedback, the 12-acre Grand Park LA in the City's urban core was redesigned to visually and physically connect Grand Avenue to the existing park space, as well as activate the park for visitors of all ages.

Through a series of stairs, accessible ramps and sloped walks, pedestrians are invited into a vibrant garden environment with tree-shaded sidewalks, drought-tolerant plants, an interactive fountain plaza, performance lawns and courtyards, plenty of street lights, movable park furniture, and kiosks to encourage the walking and exploration of the area.

Throughout Grand Park, open spaces invite visitors to enjoy casual sitting, leisurely strolling, and civic gatherings. Grand Park has four distinct areas featuring amenities including the restored historic Arthur J. Will Memorial Fountain with a new wadeable membrane pool, an intimate performance lawn, a community terrace planted with drought tolerant specimen plants representing Los Angeles diversity, and a grand event lawn.





Arthur J. Will Memorial Fountain, Grand Park, Los Angeles, CA.

MCDONALD'S CYCLE CENTER

Chicago, IL – 2004

Project partners

City of Chicago
Chicago Department of Transportation
McDonald's
Muller + Muller, Ltd., Architect

Summary

The McDonald's Cycle Center is a 16,450 square foot state-of-the-art facility in the northeast corner of Millennium Park dedicated to promoting the use of bicycles for commuting to and from Chicago's Loop in an effort to reduce traffic and pollution in the city.

The Cycle Center offers 300 bicycle parking spaces, bicycle rentals, bike tours and Segway Tours, plus lockers, showers, bike repair, and other amenities designed to encourage biking downtown. The Cycle Center has drawn international attention with many wanting to emulate it as a success story in urban planning and transit oriented development.



Bike parts and tools, locker room supplies, bike tours and rentals and more made easily available at McDonald's Cycle Center.



Indoor, protected bike storage at McDonald's Cycle Center.

ATLANTA BELTLINE

Atlanta, Georgia

Project partners

Atlanta BeltLine, Inc.
Atlanta BeltLine Partnership
City of Atlanta

Summary

The Atlanta BeltLine, one of the largest, most wide-ranging urban redevelopment programs currently underway in the U.S., is a sustainable redevelopment project that provides a network of public parks, multi-use trails and transit along a historic 22-mile railroad corridor circling downtown and connecting 45 neighborhoods.

The BeltLine represents a new framework for the region’s growth, centered on Transit Oriented Development, an unprecedented expansion of park land and public spaces, and vital expansion of the regional transit and transportation network. Four trail segments are open, six spectacular new or renovated parks are now open for public enjoyment, and new affordable housing is making it easier to live along the corridor.

These are the key elements that will be developed over the life of the Atlanta BeltLine Project:

- 22 miles of pedestrian-friendly rail transit
- 33 miles of multi-use trails
- 1,300 acres of parks
- 5,600 units of affordable housing
- 1,100 acres of brownfields remediated
- \$10-20 billion in economic development
- 30,000 permanent jobs
- 48,000 one-year construction jobs
- Public art
- Historic preservation
- Sustainability





Atlanta Beltline recreational area in the Old Fourth Ward.



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Active Design Miami Advisory Council:

Alejandro Garavito, City of Miami Beach

Anamarie Garces, UHP and UHS

Avra Jain, Vagabond Group

Bernard Zyscovich, FAIA, Zyscovich Architects Inc.

Carlos Cruz Casas, Miami-Dade County

Collin Worth, City of Miami

Daniel Chatlos, Commissioner Zapata Policy Aide

Darian Martin, City of Miami Gardens

David Henderson, Miami-Dade County MPO

Elizabeth Wheaton, City of Miami Beach

Erin Sutherland, Akerman

Jane Gilbert, The Miami Foundation

Jenifer Briley, Jenifer Briley + Associate

Jennifer Llorente, Miami-Dade County

Jerry Bell, Miami-Dade County RER/Planning

Jim Murley, Miami-Dade County

Joanna Frank, Center for Active Design

Joanna Lombard, University of Miami

Josette Severyn, Akerman

Juan Mullerat, Plusurbia

Karen Hamilton, South Florida Regional Planning Council

Karen Weller, Florida Department of Health
Katy Sorenson, Good Government Initiative
Kimberly Brown, Miami-Dade County RER/Planning
KuanJan Ding, Health & the Built Environment Committee
Maria Nardi, Miami-Dade County Parks, Recreation and Open Spaces
Mark Woerner, Miami-Dade RER/Planning
Meg Daly, The Underline
Michael Goolsby, Miami-Dade RER/Building
Nichole Hefty, County Office of Sustainability
Patrice Gillespie Smith, Neat Streets Miami, Miami-Dade County
Pete Wood, Health Foundation of South Florida
Ray Nellissery, Health & the Built Environment Committee
Rogelio Madan, City of Miami Beach
Ryan Shedd, City of Miami
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University of Miami Department of Public Health Sciences
University of Miami School of Architecture

PHOTOGRAPHY CREDITS

Andrew Frey & Jason Chandler



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Emma Reyes



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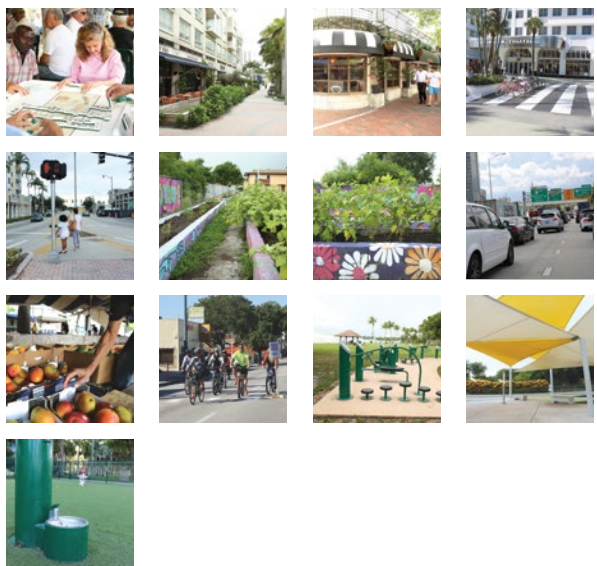
History Miami | Liddle & Kohn



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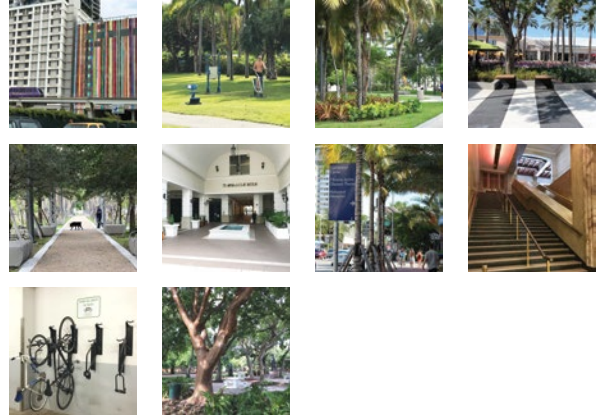
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Isabella Bru



Maggie Fernandez



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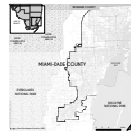
Miami Central



Laurent Saint Louis



Miami Geographic / Matthew Toro. 2014. miamigeographic.com/2014/04/14/meet-the-udb/



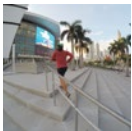
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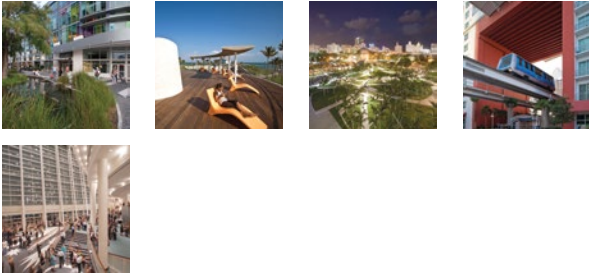
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