



Urban Land  
Institute



# COLUMBUS<sup>★</sup>2050

Creating Blueprints for Change

Cover Photography ©Brad Feinknopf/feinknopf photography.


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**ULI Columbus**

1196 Hope Avenue  
Columbus, OH 43212

**Urban Land Institute**

1025 Thomas Jefferson Street, NW Suite 500 West  
Washington, DC 20007-5201



# COLUMBUS<sup>★</sup>2050

## A Special Thanks

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ULI Columbus gratefully acknowledges the additional support in the production of this publication from the following in-kind sponsors:

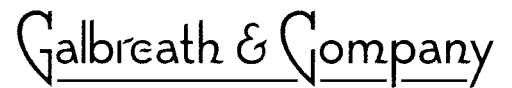


## Columbus 2050 Partners

In 2010, ULI Columbus, in partnership with the City of Columbus, Franklin County–Economic Development and Planning, the Mid-Ohio Regional Planning Commission (MORPC), and The Ohio State University Knowlton School of Architecture, engaged in Columbus 2050, a regional visioning initiative to explore strategic urban development in the Central Ohio region.



## Columbus 2050 Sponsors







The mission of the Urban Land Institute (ULI) is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. ULI is committed to:

- Bringing together leaders from across the fields of real estate and land use policy to exchange best practices and serve community needs;
- Fostering collaboration within and beyond ULI's membership through mentoring, dialogue, and problem solving;
- Exploring issues of urbanization, conservation, regeneration, land use, capital formation, and sustainable development;
- Advancing land use policies and design practices that respect the uniqueness of both built and natural environments;
- Sharing knowledge through education, applied research, publishing, and electronic media; and
- Sustaining a diverse global network of local practice and advisory efforts that address current and future challenges.

Established in 1936, the Institute today has nearly 30,000 members worldwide, representing the entire spectrum of the land use and development disciplines. ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute has long been recognized as one of the world's most respected and widely quoted sources of objective information on urban planning, growth, and development.



ULI Columbus exists to create vibrant, sustainable communities where people want to live. This mission is underpinned by the following core values that define the way the organization does things and which are incorporated as a matter of course in all its efforts:

- Openness and Collaboration—bringing together a group of people with a wide range of interests; focusing on inclusivity across disciplines and demographics; and fostering an open exchange of ideas and best practices.
- Development of Agents for Improvement—educating people on emerging land use trends; promoting a “give and get” aspect to involvement in the organization; focusing on education beyond real estate fundamentals or continuing education credits; and being recognized as an authoritative think tank for developing a better community.
- Effectiveness—incorporating practical experience into programming; and providing content, programs, and outreach efforts that are forward thinking and that can have an impact on the community.

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“The drive toward 2050 is about building sustainable communities that withstand the test of time. It is about building for people and about building in harmony with the natural environment—not in spite of it.”

—*The City in 2050: Creating Blueprints for Change*

## Dear Reader:

ULI Columbus has demonstrated great leadership in convening a community-based conversation, which culminates in this publication, *Columbus 2050*. Working as a response to ULI's *The City in 2050: Creating Blueprints for Change*, ULI Columbus has systematically explored the underlying drivers of community growth, sustainability, and resilience.

ULI's engagement in the 2050 program has been made possible by the generosity of the Galbreath Family Foundation. With the Galbreath family's deep roots in Columbus, it is no coincidence that ULI Columbus would respond to this dialogue.

ULI's ongoing work to highlight industry best practices is enhanced by this initiative to explore the "best futures," which can lead us to a deeper understanding of "the responsible use of land." ULI Columbus has collaboratively and creatively leveraged the original *City in 2050* publication and the traveling exhibition to bring the many issues to life in the Columbus context.

Recent years may go down in history as the Great Recession, yet it has been during these last three years that we have marked a milestone where more than 50 percent of the world's people live in cities. Around the world, the trends related to urban transformation are coming into focus:

- By 2050, we will be joined by an additional 3 billion people, of which 2 billion will live in urbanized areas and be rooted in the economics of the middle class;
- While mega-cities expand in Asia, Africa, and South America, the United States is the only fully industrialized country to aggressively grow its metropolitan centers;
- By 2050, the United States will have added over 100 million people, with the majority living in urban communities. Across the country, average households will be both smaller and older;
- Emerging policies and new technologies related to energy, water, health care, and education will transform local and national economies as we know them today.

From shifting demographics to new market preferences; from creative mixed-use development to decentralized energy production; from innovations in green building to advances in distribution and logistics; the city in 2050 will be the product of countless acts of innovation.

We would like to congratulate all the individuals who participated in the ULI Columbus initiative to formulate this publication. Your effort has helped advance ULI's multiyear effort to raise awareness about the need for innovation in urban development practices. This publication marks a beginning for ULI Columbus to engage, educate, and inform—and represents a tool that will trigger dialogue and actions leading to positive outcomes through community development.

Sincerely,



Patrick L. Phillips  
Chief Executive Officer



Lizanne Galbreath Megrue  
Managing Partner, Galbreath and Company

# The City in 2050:

Creating  
Blueprints  
for  
Change



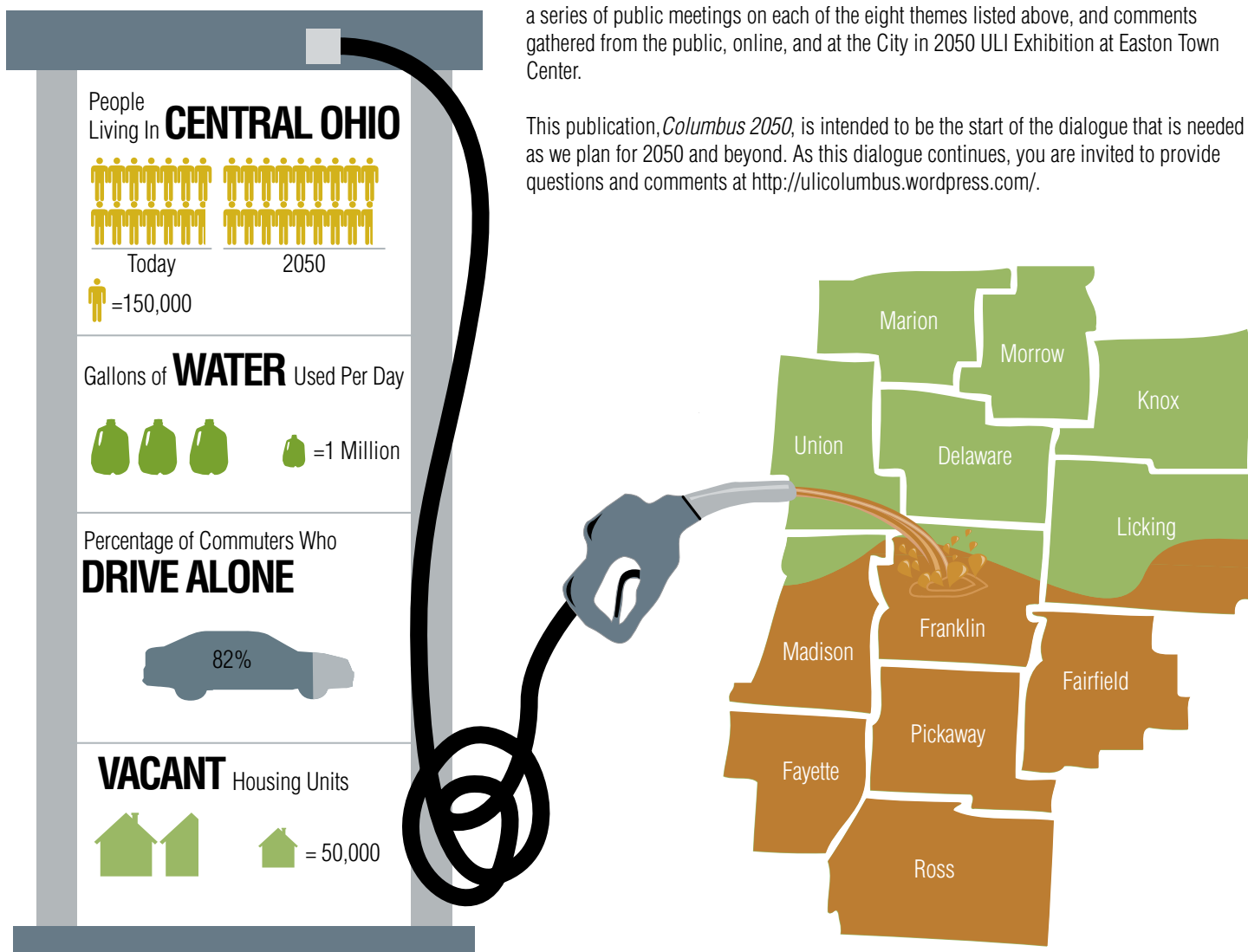
# Introducing Columbus 2050

## How and Where Will We Live, Work, and Play in the Year 2050?

In furtherance of its mission to provide leadership in the responsible use of land, the Columbus District Council of the Urban Land Institute (ULI Columbus), in partnership with the city of Columbus, Franklin County, the Mid-Ohio Regional Planning Commission, and The Ohio State University (OSU) Knowlton School of Architecture's Department of City and Regional Planning, has developed a strategic vision, Columbus 2050, that explores these important questions for our 12-county Central Ohio region.

Using the framework of ULI's national initiative, *The City in 2050: Creating Blueprints for Change*, our project, Columbus 2050, provides a collaborative forum for land development leaders within the public and private sectors, as well as the general public, to focus on the following themes: Metro Metrics; Plan It. Build It.; The City Wild; Getting Around; Water, Power, Light.; Full-Spectrum Housing; Whole Buildings; and Click, Learn, Go, Get. The resulting strategic vision is based on research conducted by undergraduate and graduate students from the City and Regional Planning program at The Ohio State University's Knowlton School of Architecture, the results of a World Café event with local stakeholders, a series of public meetings on each of the eight themes listed above, and comments gathered from the public, online, and at the City in 2050 ULI Exhibition at Easton Town Center.

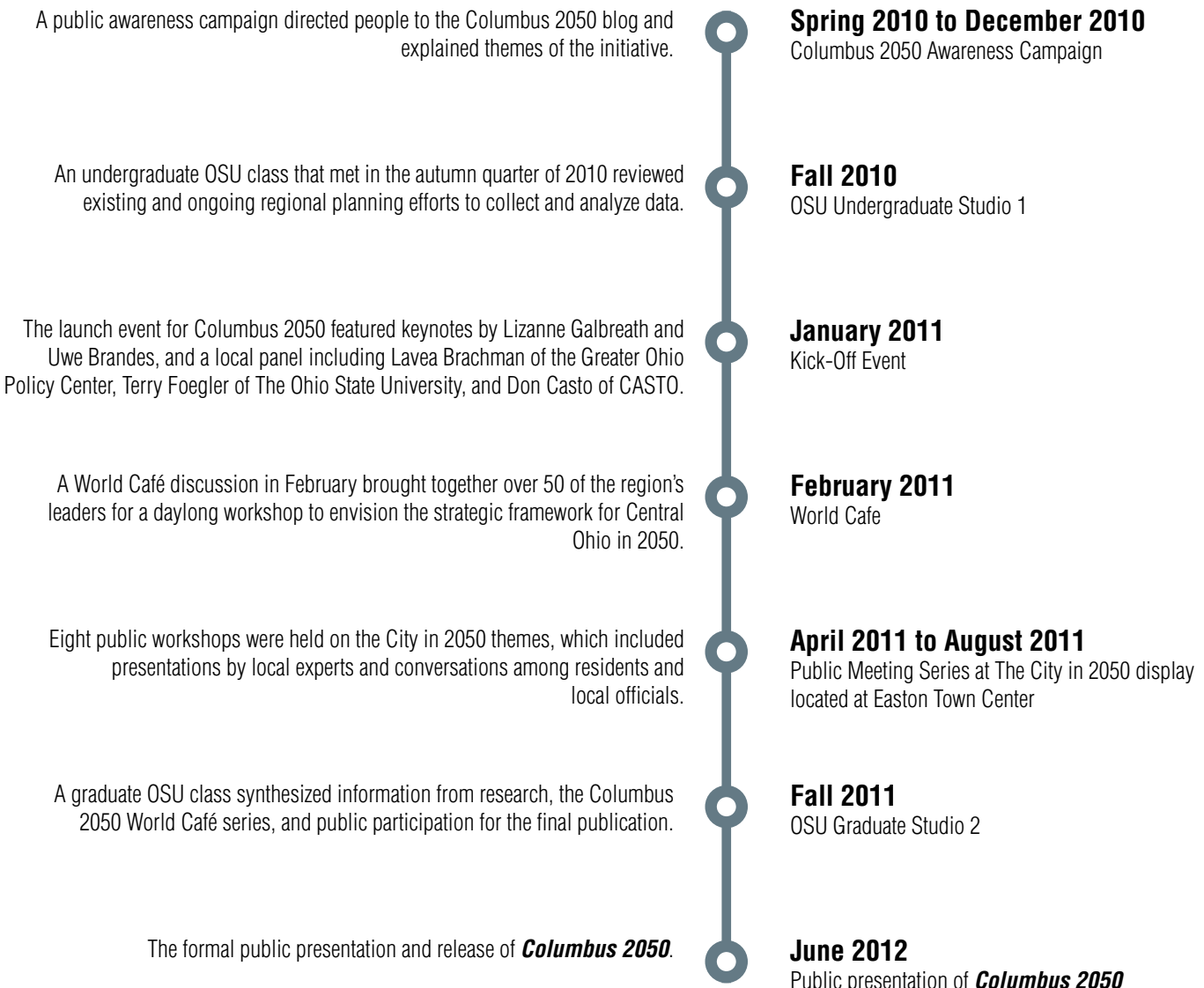
This publication, *Columbus 2050*, is intended to be the start of the dialogue that is needed as we plan for 2050 and beyond. As this dialogue continues, you are invited to provide questions and comments at <http://ulicolumbus.wordpress.com/>.





“In only 38 years, when we mark the midpoint of the 21st century, Central Ohio will have experienced unprecedented growth—serving a larger and more diverse population than ever in our history.”

### Columbus 2050 Project Timeline





# METRO METRICS

# Planning for and Embracing a Whole New Central Ohio

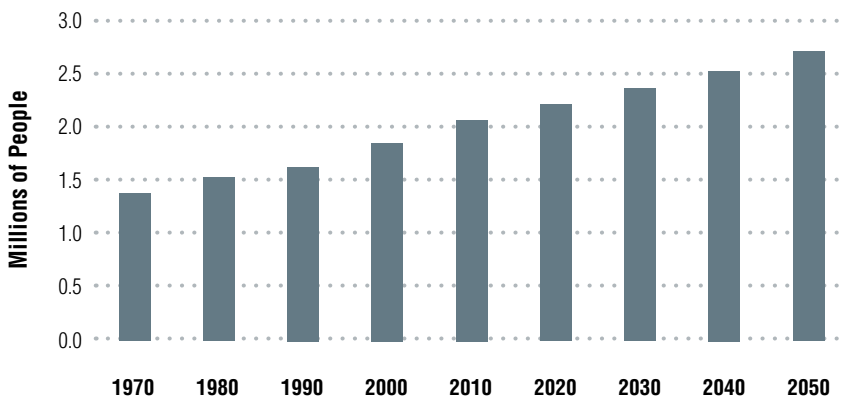
 **The Ohio Statehouse, Capital Square**

Image Source: City of Columbus Planning Division,  
Daniel Thomas

Central Ohio is young, diverse, and growing. Today, with a population of over 2 million, more people live in the 12-county region of Central Ohio than in the entire state of West Virginia.<sup>1</sup> Cultural diversity ranges from Amish rural to international cosmopolitan, and the economy encompasses everything from world-class horse breeding to repair of missile guidance systems.

The metrics of Central Ohio illustrate trends in population growth, economic strength, and patterns of development. Predictions include more—and more diverse—people in Central Ohio by 2050. To remain competitive, the region must plan to meet the needs of this growing and changing population. Forty years ago, Dublin, Ohio, had fewer than 700 people and Delaware County had a population of 45,000—approximately the same size of Dublin today.<sup>2</sup> The Interstate-270 outer belt was under construction, and State Route 315 was not yet completed as a freeway between downtown and the northern suburbs. Rickenbacker was an active Air Force base, American Honda Motor Co. Inc. was 15 years from locating in Marysville, and prisoners lived in the Ohio Penitentiary near where the Nationwide Arena now sits. Forty years from now, as we look back on the Central Ohio of 2012, undoubtedly we will be amazed at how much has changed.

## Projected Growth in Population



Source: U.S. Census, 1970–2010 Calculations from 2010–2050, MORPC.

## Accommodating and Attracting Future Growth

By 2050, an estimated 604,000 more people will live in the region.<sup>3</sup> Over the past 40 years, the Central Ohio population grew by 707,000 people. It added 235,900 between 2000 and 2010 alone. Simply put, Central Ohio will absorb a population equal to the entire city of Boston over the next 40 years. Absorbing this population will take careful planning and could create untenable demands on public infrastructure and tax revenues if not managed smartly.

**Central Ohio will absorb a population equal to the entire city of Boston over the next 40 years.**



**▲ The Ohio Penitentiary, 1952 Aerial**

Image Source: The Columbus Dispatch Archives

**▲ The Arena District, 2009 Aerial**

Image Source: ©Brad Feinknopf/feinknopf photography

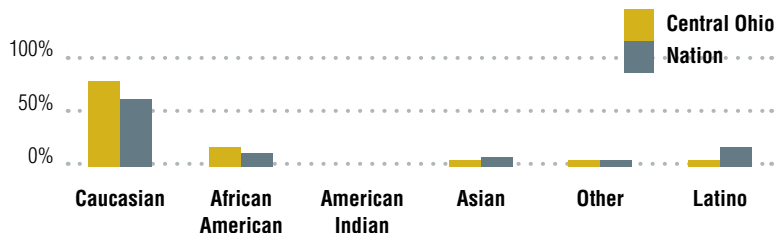
There are currently 890,000 housing units in Central Ohio.<sup>4</sup> At least 250,000 additional housing units will be necessary to meet the future population demand.<sup>5</sup> The estimated net residential density is 1.75 units per acre.<sup>6</sup> Franklin County has the highest net density at 4.2 units per acre, and Delaware has the lowest at less than one unit per acre. If current residential building trends continue, adding 250,000 new housing units will consume an additional 225 square miles of land, approximately the size of the area within the I-270 outer belt.

Just adding rooftops does not address all of the challenges surrounding housing. Condition, amenities, and technology integration in the existing housing stock are just as important as the location of new housing. Nearly 60 percent of the region's housing stock was built within the past 40 years.<sup>7</sup> Changes will need to be made to the current housing stock to integrate energy savings and technology to maintain marketability. Moreover, changes in demographics and the costs associated with expanding public infrastructure are drivers that affect the residential marketplace.

Central Ohio's population in 2050 will be very different from that of today. The region is becoming increasingly diverse. Though not as diverse as the nation, 60 percent of the people added to the region over the past ten years were from a non-Caucasian ethnic background, which parallels the national trend.

Over the past ten years, one of every five new people came here from a different country.<sup>8</sup> The foreign-born population now represents 6 percent of the regional population. In fact, 53 percent of the foreign-born population entered the region during the past 10 years.<sup>9</sup> And, while Central Ohio represents approximately 18 percent of the state's population, 25 percent of the state's non-English-speaking people live in the Central Ohio region. Approximately one of every 12 people who live in Central Ohio does not speak English well. Spanish, Chinese, and languages from African countries constitute 60 percent of the foreign languages spoken.

**2010 Ethnic Structure: Central Ohio and the Nation**



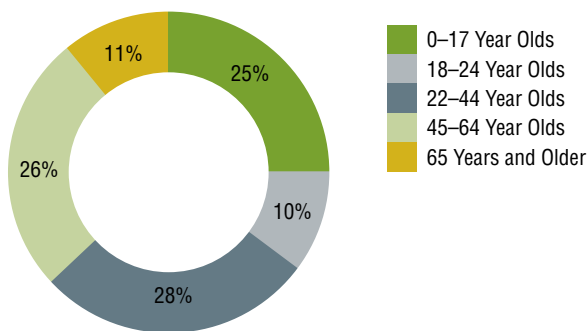
Source: U.S. Census, 2010.

“With the expected additional population growth over the next 40 years, it will be critical for Central Ohio to expand job opportunities and skill sets as we build a high-tech 21st-century economy.”

—Honorable Michael B. Coleman, Mayor, City of Columbus

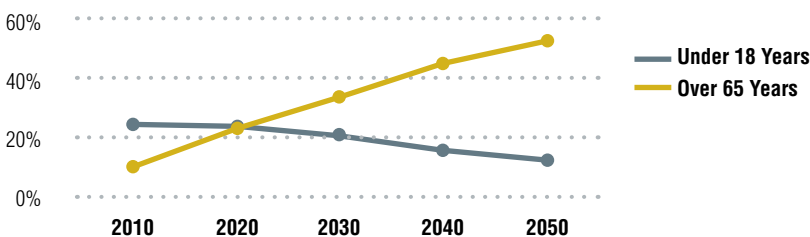
In addition to ethnicity and culture, the age structure of the region is changing. In part because of a large university population, the region historically has been young. The median age of the region's population in 2010 was 35.7 compared to the national median of 37.2.<sup>10</sup> However, in 2010, there were also 15,000 children younger than 5 and 13,000 people 85 and older.<sup>11</sup> By 2050, the surge of baby boomers will have retired and be on the other side of 90. An aging population will require more services, be less mobile, and have different housing needs from what is available today.

### Central Ohio Age Demographics



Source: U.S. Census 2010.

### Projected Growth in Population under 18 and over 65



Source: U.S. Census, 2010; Calculations from 2010-2050, MORPC.

“Place is not only important, it is more important than ever.”

—Richard Florida

## Ensuring a Place for Central Ohio in the Global Economy

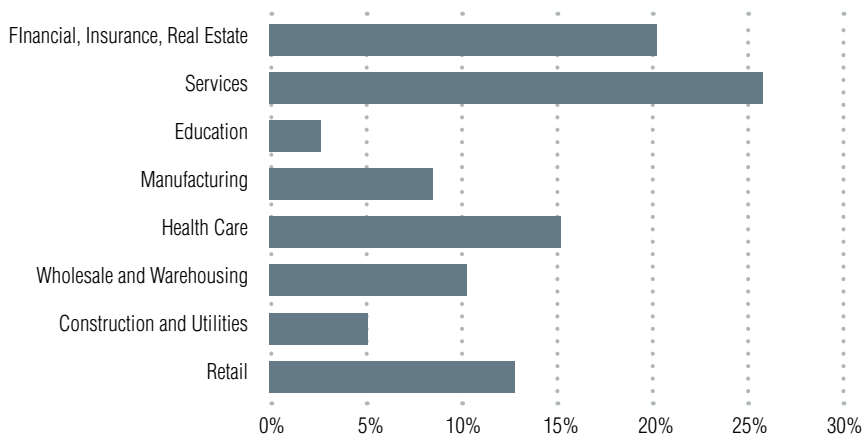
Central Ohio has nearly 1 million jobs, and the strength of the economy lies in part in the diversity of its industries.<sup>12</sup> Central Ohio is fortunate to have prominent elements of the educational and medical fields—“eds and meds.”

Nearly 30,000 jobs are associated directly with state government, and proximity to the capitol encourages other indirect jobs. The Ohio State University alone employs nearly 30,000 people, and the university’s impact is huge. A number of major global technology companies, most notably the Battelle Memorial Institute, Chemical Abstracts Service, and Online Computer Library Center, are here in part because of the presence of OSU. Central Ohio has world-class medical and research facilities. *U.S. News and World Reports* ranks OSU’s Wexner Medical Center, James Cancer Hospital and Solove Research Institute, and Nationwide Children’s Hospital among the top 20 hospitals in the nation for a variety of specialty areas, including cancer and pediatric medicine.<sup>13</sup>

The Columbus region is also home to six Fortune 500 companies—just one less than Seattle.<sup>14</sup> It is also the headquarters of 15 Fortune 1,000 companies. Being home to national and regional headquarters for retail, financial, insurance, and fast food corporations has historically kept the unemployment rate of the region relatively low. After all, The Limited, Victoria’s Secret, Nationwide Insurance, Big Lots, Donatos Pizza, and Wendy’s Hamburgers were all born here.

Many businesses based in Central Ohio have an international presence. Eleven of Central Ohio’s Fortune 1,000 companies are represented in 65 countries across the globe.<sup>15</sup> And while many of the businesses that call Columbus home have global connections, the region is also home to many internationally based businesses. In 2012, 644 foreign-owned businesses were located in the Columbus region, representing 37 countries. These companies employ more than 39,000 workers, which represents 4.1 percent of the regional workforce.

## 2009 Employment Profile



Source: U.S. Bureau of Labor Statistics, 2009.

## Assurance of Having a Skilled Workforce

To accommodate the expected population, a minimum of 318,000 new jobs will need to be created.<sup>16</sup> The current economic structure will be affected by technology, increased globalization, and possible changes to health care policies. Retail trade currently represents approximately 13 percent of total employment.<sup>17</sup> Many of these jobs will be affected by future shopping trends as Internet buying advances on traditional visits to brick and mortar stores. Having a skilled workforce that is prepared and adaptive to business needs is critical to the economic success of the region.

Ensuring a skilled workforce starts with how we educate our children. Delivering lessons across the Internet is gaining in popularity. Political boundaries that define school districts may become blurred as teachers interact virtually with students, rather than in the physical classroom. What's more, access to lifelong learning opportunities will be necessary to be competitive in attracting and keeping this workforce.

Changes are also taking hold in workplaces. Many of today's workers are tethered to their worksites. Forty years ago, there were no desktop computers or email. Between 2000 and 2010, the number of people in Central Ohio who worked from home increased by 67 percent to 44,000.<sup>18</sup> While some industries will always require physical attendance, a portion of the labor force will never need to present itself at the office. In 2010, 20 percent of the regional workforce conducted business that did not rely on a 9-to-5 schedule.<sup>19</sup>

 **Central Ohio Farmland**

Image Source: MSI | KKG



Columbus is situated within one day's drive of more than 44 percent of the total U.S. and Canadian populations.

Entrepreneurship will also play a larger role in the future economy. Today, four of five businesses in Central Ohio employ fewer than 20 workers, whereas larger businesses employ 80 percent of the workforce.<sup>20</sup> Business incubators that support high-tech and international startup firms and shared office spaces are examples of how economic repositioning is already taking place.

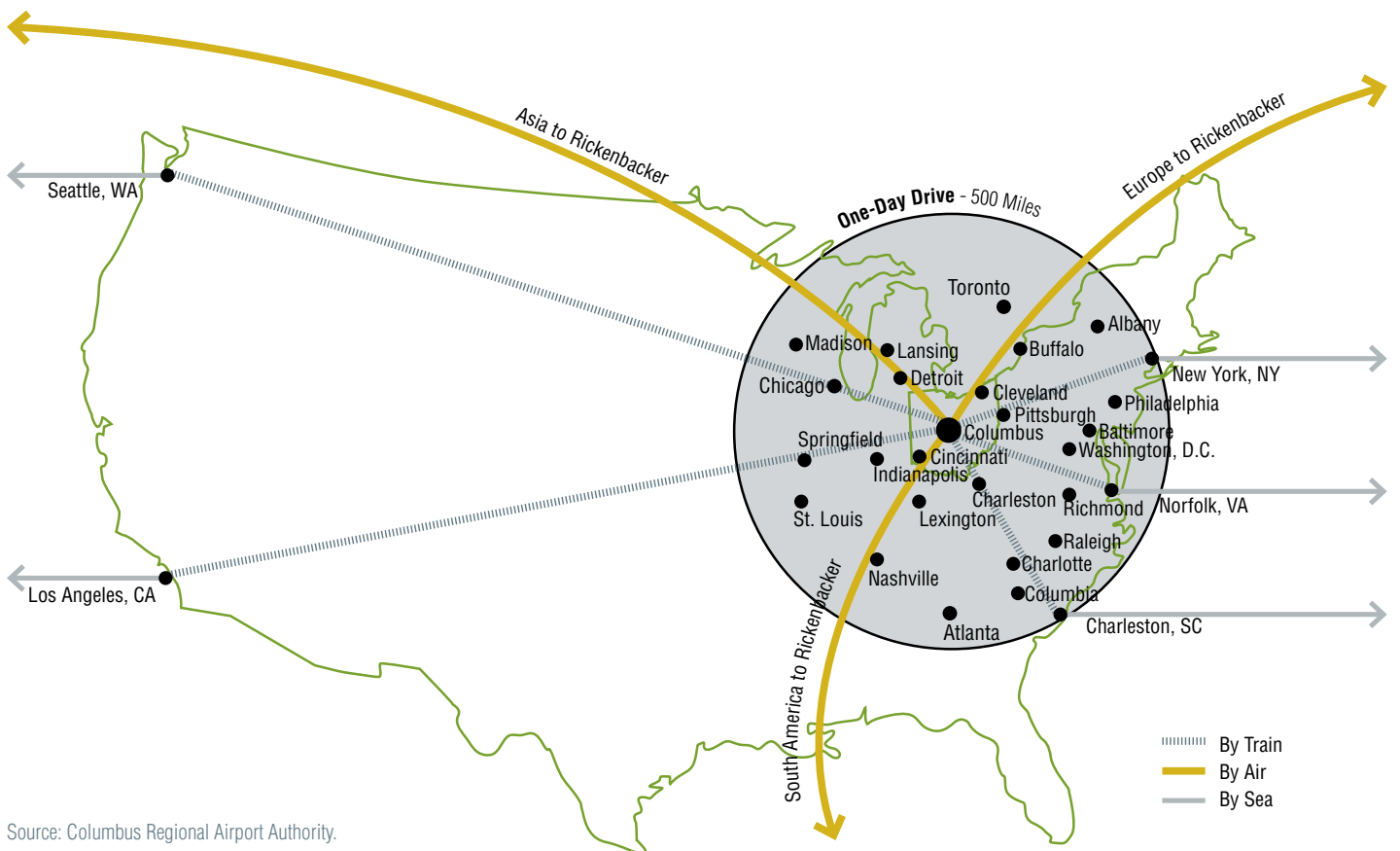
Unfortunately, between 2000 and 2010, the median income of the region remained relatively stagnant. The region's median yearly household income of \$50,150 reported in 2010 was ranked 35th in the nation, just slightly higher than the national average of \$50,045.<sup>21</sup> The unemployment rate was 8.8 percent in Central Ohio compared to 9.6 percent for the nation.<sup>22</sup> Preparing workers and employers for the future economy to get ahead of the changes that are coming is a way to rise up from the middle of the pack.

### Protect and Enhance the Assets That Make Central Ohio Unique

Rich soil, abundant water, and a centralized location that attracted pioneers more than 200 years ago will continue to be magnets for attracting new populations. Agriculture is a fundamental element of the Central Ohio economy. In 2010, approximately 78 percent of Central Ohio's 6,000 square miles were dedicated to agricultural uses.<sup>23</sup> Between 2000 and 2010, more than 100 square miles of agricultural land were lost to development.<sup>24</sup> More than providing a bucolic vista, agriculture is a billion-dollar business.<sup>25</sup> Nearly a quarter of the state's corn crop is grown here. Abundant opportunity lies in expanding upon business opportunities that use value-added processes to turn raw materials into finished products, as well as in providing food to local and global markets. And the locally grown food movement continues to gain a strong foothold in Central Ohio.

Moving goods is a critical piece of the national and international economy. Columbus is situated within one day's drive to more than 44 percent of the total of the U.S. and Canadian populations—more than 150 million people.<sup>26</sup> Seamless connections

### Central Ohio Travel Map



Source: Columbus Regional Airport Authority.



between rail and highway exist because of investments in intermodal facilities to transfer goods. The logistics industry is poised for continued success. However, the interstate infrastructure that connects the region has reached the end of its life cycle. Facilities built 50 years ago are in need of repair, and through reconstruction, opportunities exist to reconnect neighborhoods that were disconnected half a century ago.

### **Bring on the Good Life**

As life expectancy lengthens, people will work well beyond the traditional retirement age of 65 years. The senior workers of the future are the people who are just now entering the workforce. The culture these workers are bringing to their companies and communities will set the tone for the next 40 years. The firm economic foundation the region has with “eds and meds” already embedded provides opportunities to attract workers. However, to retain them, Central Ohio must showcase other quality-of-life attributes, such as housing choices, transportation options, and recreational access.

The ways in which we choose to interact with natural systems, people, and the economy will have vast and cascading influences on the future of the region and on future generations. We have choices to make to achieve the kind of overall environment that will make Central Ohio the place to which other cities will aspire.

## **Columbus 2050 Blueprint:**

Central Ohio’s communities must **collaborate** when planning for imminent demographic, cultural, and lifestyle changes to strengthen the region’s national and international **relevance**.

PLAN IT. BUILD IT.



## Growing Up, Not Out

### Decades of Vitality

Factors such as a growing economy, abundant land, centralized utilities, absence of natural limitations, and an extensive highway system have all contributed to tremendous growth in Central Ohio. A diverse economic base has helped the region weather economic downturns and has fueled demand for new development. The region is often depicted in the media as a bright spot in the Midwest for its relative prosperity at a time when other areas have struggled. With its ability to grow territorially, Columbus was the only major city in Ohio to gain population in the period between 2000 and 2010.<sup>1</sup>

### Land Consumption, Growth Rate, and Land Use

A significant aspect of the region's growth has been an imbalance between population increases and land consumption. In 1950, Columbus had a population of 375,901 and an overall density of about 9,000 people per square mile. By 1980, the population was 564,871, and the average density had fallen to about 3,000 people per square mile. The past 30 years have seen a modest increase in density, but it remains a fraction of the 1950 peak. The imbalance between population increase and land consumption is even more dramatic in some of the region's other communities, particularly Columbus's outlying suburbs. This pattern has been supported and encouraged by the largely autonomous land use decisions, development policies, and regulations of scores of local governments within the region.

Newer development has taken place farther from established population centers and generally has been focused along or beyond the I-270 outer belt, where land is readily available. In these areas, land uses are segregated in a manner that requires using an automobile for even the most basic purposes. Residential areas are further segmented into different densities, unit types, and price ranges with little or no interconnection. Retail has followed new residential developments and higher disposable incomes, yet these new retail outlets typically are not pedestrian-friendly or accessible by public transportation.

### Impact of Outward Development

Many older communities throughout the region have experienced ongoing disinvestment leading to population loss, high vacancy rates, neglected buildings, and deteriorating infrastructure. Neighborhoods with once vital populations and commerce struggle to support the most basic businesses. Communities have invested tremendous resources in their attempts to stem decline but are unable to counter stronger trends supporting the outward movement of people and business.<sup>2</sup>

The territorial expansion of past decades has also come at the expense of natural resources and farmland. Although policies and regulations are in place to protect some of the most critical natural areas, such as floodplains and wetlands, the ecological benefit of many such resources has been permanently lost. Farmland, often well suited for development, is even more vulnerable. The Mid-Ohio Regional Planning Commission estimates that between 2000 and 2010 more than 100 square miles of agricultural land were lost to development. The U.S. Department of Agriculture's Census of Agriculture indicates that the region's 12 counties had 160,000 fewer acres in agricultural production in 2007 than in 2002. While all of this land may not have been lost to development, the loss was most pronounced in areas with the highest levels of growth.

“Given the pace of change going on right now—to be a successful city, you need to plan.”

—Lizanne Galbreath Megrue,  
Managing Partner, Galbreath  
and Company

### ◀ 2010 Downtown Columbus Strategic Plan Sketch

The 2010 Downtown Columbus Strategic Plan has three major objectives: 1) to define needs and opportunities, 2) to identify catalytic projects, and 3) to create policy and strategy recommendations to guide implementation.

Image Source: MSI | KKG, Kelley Design Company, LLC.

“We cannot continue to cannibalize our agricultural assets for the sake of expanding our developed footprint.”

—Joseph Reidy, Partner, Ice Miller LLP

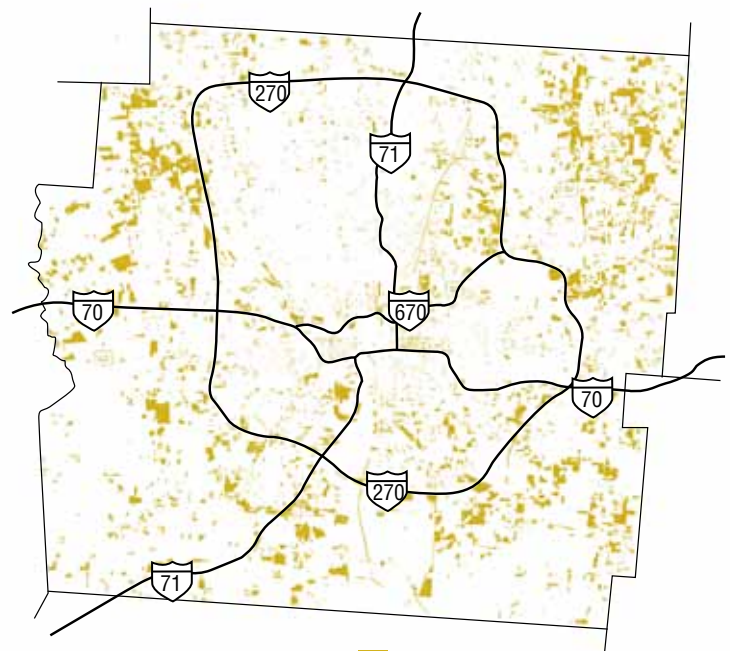
## Growing Inward

Projections show the region will need 250,000 new residential units by 2050. This demand will be met by addressing the region’s current vacancy rates and constructing new housing. The region has the capacity to absorb much, perhaps most, of both types of this growth within areas of existing development.

The demand for this new housing may not follow historic trends of the large-lot, single-family homes that were built in the suburbs. The building industry estimates that due to the economic slowdown, enough vacant building lots are platted to accommodate 15 years worth of population growth. And because of the housing crisis experienced during the second half of the last decade, the region had 12,000 more vacant housing units in 2010 than in 2000, more than the entire city of Hilliard. In total, 79,000 vacant housing units are available in the region.<sup>3</sup> Imagine if all of the homes in a wide swath from downtown Columbus through northwest Franklin County were empty. That is how many housing units stand vacant.

Making use of the not-built-upon residential lots and vacant housing units could accommodate as much as 60 percent of the region’s future housing needs. Taking this into account, an additional 100,000 units will be required to meet the demands of the future population. For reference, approximately 120,000 housing units were added to the regional market since 2000.<sup>4</sup> Increasing densities and infilling development on vacant land where infrastructure is already in place could accommodate much of this future housing need. Thousands of acres of vacant or underutilized land, as well as millions of square feet of empty commercial and industrial space, sit idle. The areas where these vacancies exist generally are well served by public transportation, and have excess infrastructure capacity and a range of uses. In other words, they already have the structural elements necessary for vital active communities. However, even if half of the units currently vacant were reoccupied or rebuilt, the region would still need an additional 210,000 units. Changing market preferences will result in many of the region’s new developments having substantially higher densities, which will ultimately reduce the area needed to accommodate future growth.

## Vacant Parcels in Franklin County



Source: MORPC.

■ Vacant Residential, Commercial, or Industrial



## ◀ The Joseph

A mixed-use project in Columbus's Short North Arts District, the project includes a 135-room boutique hotel with 6,500 square feet of ground-level restaurant space on the east side of High Street and a 60,996-square-foot office building that includes 6,332 square feet of retail space and a 313-space parking structure on the west side of High Street.

Image Source: The Pizzuti Companies, Arquitectonica

## Development Shift Beginning

Communities throughout the region are already focusing more attention on their older core areas. This is true of both landlocked communities and those with capacity for further territorial expansion. While a focus on the older parts of the region is driven in part by a desire to revitalize declining areas, it is also a direct response to changing demographics and market forces. Studies show that people have a growing interest in neighborhoods that are characterized by a strong urban fabric—mixed-use properties, higher population densities, entertainment options, and access to public transportation. In a study conducted by the Columbus Chamber of Commerce, young residents consistently pointed to words such as “downtown” and “public transportation” when describing their ideal city.<sup>5</sup> Columbus's Short North District, for example, is noted for its walkable streets, high-quality built environment, cultural and entertainment options, and proximity to downtown. Many older residents share with their younger counterparts this desire for a more urban lifestyle with smaller residences and fewer maintenance responsibilities.

Columbus's efforts to attract new residential development to the region's core have begun to pay off. From 2000 to 2010, the population of downtown Columbus grew by 40 percent.<sup>6</sup> This is an important shift from decades of steady population loss in the urban core. Even during a national recession, development interest and activity in downtown have been strong. Recent investments in downtown Columbus parks, bike and pedestrian paths, cultural amenities, and educational institutions reinforce this trend.

While Columbus is the largest urban center in the region, other communities are turning their attention to infill and more urban forms of development. Grandview Heights and Nationwide Realty Investors are investing in a new mixed-use development at Grandview Yard, and Upper Arlington is creating an entertainment district on Lane Avenue. Another noteworthy example, the city of Dublin's Bridge Street Corridor Plan, is redefining the traditional suburb. The plan calls for the creation of a new, walkable downtown with mixed-use infill and new development that includes entertainment destinations, restaurants, and housing.



### **The Arena District Master Plan**

The 95-acre Arena District in downtown Columbus, Ohio, is home to the NHL Columbus Blue Jackets and the AAA Columbus Clippers. This formerly underutilized area of the city has rapidly developed since 2000 into a thriving, mixed-use urban neighborhood.

Image Source: MSI | KKG

Other communities have developed zoning overlays, revised parking standards, and mixed-use districts to encourage redevelopment and infill projects in areas where traditional zoning has proven unsuccessful. This emphasis on redevelopment and infill brings needed investment to our central cities and older neighborhoods and helps create the population base necessary for supporting additional businesses and services. The most successful projects have been characterized by high-quality designs, which in turn have been supported by the higher densities and mix of uses they incorporate. They also have involved close collaboration between the public and private sectors, as well as a willingness to consider new policy ideas and regulatory tools.

### **Looking to the Future**

Collaboration among communities is necessary if the region is to be sustainable and vital in the future. Central to this collaboration must be shared priorities about how we manage growth—where it occurs, the form it takes, and how we pay for it. Although the region has experienced a lower rate of growth in recent years due in part to national economic trends, expectations are that Central Ohio will have hundreds of thousands of additional residents over the next several decades. The policies, regulations, and funding frameworks that have guided the patterns and forms of development during the past 40 years will not be adequate to manage this growth.

Given the lessons of the past and the factors that will affect our future, the following principles will be fundamental to Central Ohio's emerging framework for development:

- Most population growth and new economic investment should take place within areas of existing development.
- Communities must increasingly be characterized by vibrant downtowns, neighborhoods, and business districts that incorporate high-quality design and a range of uses and densities.
- High-density residential housing, major office development, and significant cultural institutions should be located in downtown Columbus to maintain it as the region's core.
- Rural and natural areas must remain as distinct elements of the region's land use framework.

Costs will be another challenge. The cost of maintaining and extending infrastructure and services has outpaced economic growth in the region. While the region's past vitality has been lauded, Central Ohio clearly will need to create new methods of funding if it is to address the needs created by past growth and accommodate the population increases anticipated over the next 40 years.

Central Ohio has seen a pattern of development that blurs the line between rural and urban, diluting the strengths of both. Focusing growth and investment in areas of existing development makes economic sense and supports desirable communities. It also minimizes loss of the natural and agricultural resources that are fundamental to the region's diversity. The changes necessary to support these objectives will take time, but great local examples are already in place.

The many jurisdictions of the region operate independently but are also inextricably linked. Many have already demonstrated their ability to collaborate on issues such as transportation, utility service, and solid-waste management. Local governments and the private sector will need to work together even more closely as they address the questions and challenges of managing growth in the face of increasingly limited resources.

## Columbus 2050 Blueprint:

Central Ohio must develop and execute a **comprehensive development strategy** that emphasizes building within the existing developed footprint.



# THE CITY WILD



# Restoring and Growing the Lungs of Our Region

## Importance of Open Space

Central Ohio is rich in natural and open-space resources with thousands of miles of streams, rivers, lakes, ponds, and reservoirs encompassing 16 metro parks with 175 miles of trails and more than 620 city and community parks.<sup>1</sup> These tremendous natural assets position the region well as the global marketplace becomes more competitive. Open-space and natural resources are important contributors to the quality of life of both current and future residents. Access to and protection of open space will be central to the ongoing success of the region in terms of both preservation and attraction and retention of residents.

As our population increases, additional development pressure will occur on natural resources. By focusing the majority of population growth and new economic investment within areas of existing development and using open space to define development strategies, Central Ohio will become a leader in protecting natural resources and providing unique recreational and open-space amenities. To accomplish this, the region's natural infrastructure will need to be considered just as important as its transportation and utility infrastructure. Properly planned and protected, these natural and open-space assets can be used to manage the entire ecosystem, shaping development patterns and the built environment, while at the same time providing recreational opportunities and preserving habitat.

As the community implements improvements and enhancements to the region's open-space system, the following principles should be considered:

- Continue to invest in and protect open space to improve the economic, social, and environmental health of the region.
- Develop and maintain all scales of open space, from regional trail systems to pocket parks.
- Create an integrated, cohesive open-space network that connects greenways, trails, parks, and open space to neighborhoods and commercial districts.
- Expand the geographic coverage of Metro Parks to form a robust and regionally funded maintenance and management entity for this interconnected open-space network.

## Role of Open Space in the Urban Realm

Parks and public spaces are essential to the economic, social, and environmental health of communities. These assets provide a multitude of benefits for communities, including creating public gathering spaces; connecting residents, workers, and visitors to nature; improving public health; and spurring economic development and revitalization.

Open space generates community cohesion by providing a venue for daily social interaction. In addition to day-to-day use, these spaces are venues for special events and community gatherings. Residents with convenient access to open space maintain better physical health.<sup>2</sup> Cities with high-quality parks and open spaces have higher rates of community attachment and economic growth. Residents of cities with parks, attractive waterfronts, tree-lined streets, playgrounds, and trails report a higher degree of satisfaction with their communities.<sup>3</sup> These cities also demonstrate higher rates of gross domestic product growth.

“Open space in our urban core not only provides social benefits, but it creates economic vitality for the entire Central Ohio region.”

—Guy Worley, President and CEO, CDDC/Capitol South

### North Bank Park

Image Source: ©Randall Lee Schieber Photography

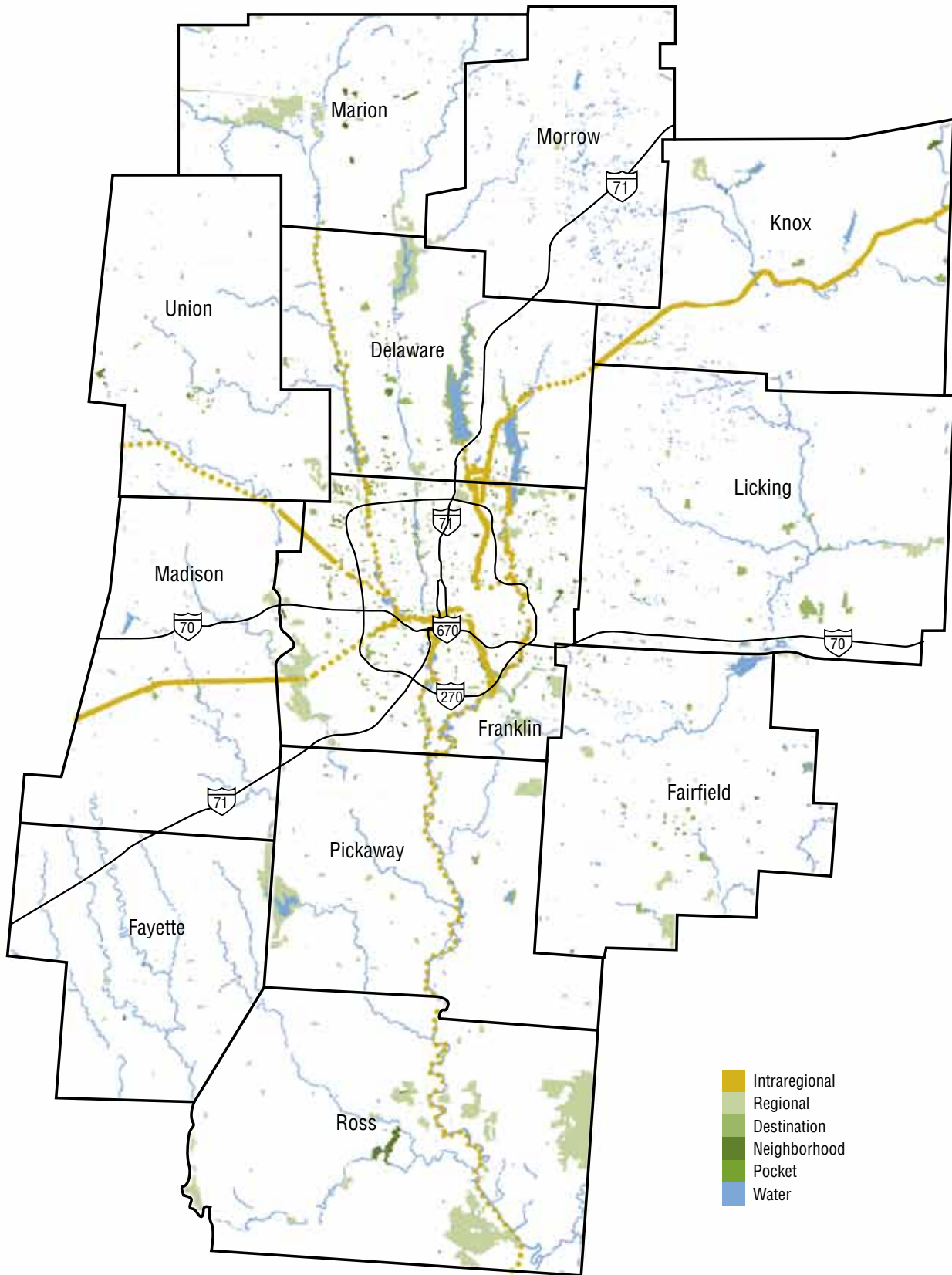
## Scales of Open Space

It is important to distinguish between open-space systems and the scales of park and natural infrastructure that are essential to a livable community. To succeed in protecting and enhancing open-space opportunities throughout Central Ohio, it will be important to consider all types of open space. These include the following:

- **Intraregional:** Open-space networks that connect Central Ohio to other regions of the state. For example, the Ohio-to-Erie bicycle trail will eventually link Columbus to Cincinnati and Cleveland. Portions of the bicycle trail are already in place, and the trail between Columbus and Cincinnati is nearly complete. This trail will be an important link for both local and visiting cyclists. Located in the middle, Columbus will enjoy a significant future source of tourism activity and revenue.
- **Regional:** Open space that is designated to serve the entire region. Examples are state parks, Columbus and Franklin County Metro Parks and greenways that are typically, but not always, located along the rural-suburban fringe. These areas provide more extensive recreational options due to their size. Combined with conservation areas and conservation easements, these larger tracts of land can be used to protect extensive areas of open space, shaping development and preserving natural resources.
- **Destination:** Parks and open spaces that are designed to be a destination for local and community-wide events. While used on a daily basis, these facilities can accommodate larger community gatherings and sporting events. Examples include the Scioto Mile and Columbus Commons in downtown Columbus and Coffman Park in Dublin.
- **Neighborhood:** Parks and open space intended for daily use by area residents who primarily live nearby. These parks and open spaces provide a wide variety of functions, depending on community needs and space considerations.
- **Pocket:** These are extremely small-scale parks, plazas, and open spaces primarily found within denser urban areas. They provide seating, shade, and quiet space away from the urban environment. Often tucked into leftover spaces, pocket parks can add a dynamic vibrancy to the streetscape. Examples include Franklinton Community Gardens, Frank Fetch Park in German Village, and Poplar Park in the Short North.

Investment in all different scales of open space should be encouraged throughout the region. As new development occurs, meaningful open space should be created that links with existing open-space systems. Dublin's Bridge Street Corridor Form-Based Code is a good example of this type of policy with land set aside for a greenway connection. It includes requirements on the size, type, and location of open space that should be created for new development. Columbus's Traditional Neighborhood Development Code is a similar piece of legislation. It has generated a variety of neighborhood-level parks throughout several residential developments in the city. The cooperation between Columbus, New Albany, and Plain Township is an example of a joint effort to create a regional park working in conjunction with Metro Parks. Conservation of critical habitats and open space is a joint effort of Columbus, Franklin County, several townships, and Metro Parks in the Darby watershed.

## Existing Open Space



Source: MORPC.



## Creating Integrated Connections

Open spaces of all types and scale should be connected to each other to build a network of open space throughout the region. The public comments from the ULI Columbus “The City Wild” event make clear the need to weave natural assets into the urban fabric. Improved access to natural areas will increase quality of life and positively affect surrounding property values. This can be accomplished through a more interconnected open-space system that is accessible by bike paths and trails that link parks, greenways, and conservation areas to neighborhoods and commercial and employment centers. The combination of waterways and existing greenways and open spaces in Central Ohio provides a start to creating a green system that can serve as the arteries of Central Ohio. Three Creeks Metro Park and the Alum Creek Greenway are excellent examples.



Across the region, the opportunity exists to improve urban and community surroundings with parks, trails, and streetscapes that unite neighborhoods. Currently, the park and trail system in the Central Ohio Region is not as connected as it could be. Increasing the ties between parks and natural areas to urban life will increase the overall health of cities and communities. Quality parks and open space nearby enhance individuals’ quality of life and encourages daily exercise in a world where obesity and healthfulness are major concerns.<sup>4</sup>

New trails and paths could stem from existing trails by creating a “network of green” for hiking, walking, and biking. With a complete network of trails, parks will be connected along natural corridors. These trails should also lead to urban paths that link inner-city neighborhoods to the region’s green assets.

 Image Source: ©Randall Lee Schieber Photography

The Central Ohio region is wealthy with waterways, which offer many assets to the communities surrounding them. Watersheds protect surrounding natural assets such as wildlife habitats, trails, and streams by providing a method for resource management that transcends municipal boundaries. Central Ohio contains three different watersheds, including the Scioto, which covers much of the region’s 12 counties; Muskingum along the eastern counties; and Hocking to the southeast.<sup>5</sup> These watersheds, much like the rivers and streams within them, cross city, township, and county boundaries.

Using the river corridors and watersheds will connect people to the natural systems surrounding them by providing opportunities for passive and active use. Additionally, when the interconnected park system is designed to include stream networks, wetlands, and other low-lying areas, the network can provide multiple benefits to stormwater management, which creates an efficient system to store, carry, and filter storm runoff.

The Scioto watershed offers a way to tie together the rural and urban lands in the Columbus area. It encompasses a majority of the counties in the Central Ohio region and stretches south to the Ohio River. In Central Ohio, the Scioto watershed covers seven counties (Ross, Pickaway, Fayette, Madison, Franklin, Delaware, and Union), and three counties (Morrow, Marion, and Fairfield) have about half their area within this watershed. The Scioto watershed also contains around 21 sub-watersheds. Major streams and rivers within the area include Alum Creek, Scioto River, Olentangy River, Big Darby Creek, Licking River, and Paint Creek. The use of the stream corridors, which connect across the watershed, provides opportunities for trails connecting the region.<sup>6</sup>

“You can measure the health of a city by the vitality and energy of its streets and public open spaces.” —William H. Whyte

## Central Ohio Greenway Trails



Source: MORPC

## Realizing the Vision

Central Ohio has already done an admirable job of implementing greenway trail programs and has removed some low-head dams on smaller streams, namely, on Alum Creek and upstream portions of the Olentangy River. Interconnecting these individual greenway projects and river restoration efforts into a networked system of trails and links along naturalized waterways will be the task of the next few decades.

As an example of the type of thinking needed to improve connections and river health, the 2010 Downtown Columbus Strategic Plan advanced a strategic vision for removing low-head dams on the Scioto and Olentangy rivers to create a 16.5-mile greenway corridor that connects Scioto Audubon Metro Park and downtown Columbus to numerous neighborhoods and High Banks Metro Park to the north. This catalytic idea builds on the recent financial investment and current plans to restore river health. The city of Columbus has taken the first step toward a healthy river with its efforts to implement a \$2.5 billion wet-weather management program to reduce the occurrence of combined sewer overflows.

Columbus is also working with OSU and the Army Corps of Engineers to remove the 5th Avenue Dam. This removal is the first step in restoring the natural river course and enhancing habitat along this key north-south corridor. In downtown Columbus, nearly all of the riverfront park system from North Bank Park and the Scioto Mile to Scioto Audubon Metro Park has been remade into an outstanding park destination.



### ▲ Scioto Mile

Image Source: ©Randall Lee Schieber Photography



### ▲ Columbus Commons

Image Source: The EDGE Group

With the removal of the Main Street dam, the initial link in this river greenway system will be created between OSU and downtown Columbus. In time, this model can extend north along the river corridor, connecting neighborhoods to the river and to downtown Columbus. Looking ahead, other greenways in Central Ohio can be developed in a similar manner, connecting linear stream corridors to existing parks, open spaces, neighborhoods, and commercial areas.

To implement interconnected greenways elsewhere in Central Ohio, a variety of tools, standards, and development techniques are needed at each level of government to ensure that open spaces are preserved where appropriate, parks are established, and the network of trails is extended throughout the region. These tools include the following:

- Parkland dedication requirements as part of rezoning and subdivision platting;
- Development standards that manage stormwater while protecting natural drainage ways, protect mature tree stands, preserve and buffer wetlands, and protect other natural features from the adverse impacts of development;
- Funding mechanisms to ensure that resources are not only protected for future generations but also can be adequately maintained.

## Creating a one-of-a-kind integrated open-space network will also fuel the region's competitive edge.

### **Maintenance and Management**

In order to maintain and manage this interconnected system of open spaces, a new approach is needed. One possibility will be to blur jurisdictional boundaries by expanding the role of Metro Parks in the region. Metro Parks already maintains and manages much of Central Ohio's natural assets, providing a place for individuals to enjoy the outdoors, and educating the public on Ohio's native features. The majority of the money used to operate Metro Parks in Central Ohio comes from property tax levied on Franklin County residents. This ten-year, 0.75-mill levy, passed by Franklin County voters in 2009, will provide income for capital and operating expenses as well as land acquisition by levying \$7.50 in revenue for every \$1,000 of the property's value.<sup>7</sup> Additional funding is derived from grants, donations, investments, state and local government funds, and receipts of park operations.

Central Ohio will have to implement a funding approach that allows parks in every county to receive necessary funding. While each jurisdiction could still manage its own parks on an individual basis, a common fund could be created to allow for the expansion of greenway and trail systems that are proposed as part of the vision for 2050. Additional funds for water conservation, land protection, and corridors could come from foundations, corporations, nonprofits, and private citizens, but Central Ohio will need to come together to fully achieve this regional vision for open space.

## Competitive Edge

This vision for 2050 supports the economic vitality of the Central Ohio community by conserving natural areas, maintaining a dynamic natural landscape, connecting and enhancing open spaces, and funding a regional network through public and private resources. This big idea will permanently protect natural habitats and open spaces from the center of Columbus to the rural outskirts. Creating a one-of-a-kind integrated open-space network will also fuel the region's competitive edge. When compared with its global competition, the Columbus area will stand out for being an environmentally friendly place to live, work, and play. Having protected and connected green corridors will enhance quality of life and draw new residents and corporations. It will also ensure that Central Ohio's growth is both economically and environmentally sustainable.

## Columbus 2050 Blueprint:

Central Ohio must create a robust, regionally funded, **integrated open-space network** that reaches across jurisdictional lines.



**GETTING AROUND**



## Greater Mobility. More Choices.

Imagine an easy commute to work by catching the morning train. Imagine quick, low-pollutant travel options that carry us to a thriving downtown, and welcoming pedestrian ways that entice people out of their cars to shop in their own neighborhoods. Imagine long bike rides through the rural countryside and stops at vibrant suburban town centers for lunch. Imagine Columbus as a pulsing 24-hour city filled with the sounds of people and activity. It is all part of a very real future for Central Ohio, and a comprehensive transportation system can help us get there.

### Create a Regionally Supported Transportation Vision

The region would gain a return on an investment in a mass rail transit system. The absorption of 604,000 more people and 318,000 more jobs will strain existing transportation infrastructure and services. People will continue to walk on sidewalks and ride their bikes on bikeways, but while automobiles, buses, and trucks continue to be the primary modes to move people and goods, our aging roads and bridges will need to be maintained. Committing resources to build and operate an expanded mass transit system will be expensive yet necessary for the region to compete for skilled labor, combat rising energy costs, and prepare for diminishing fossil fuel resources.

The transportation system required is complex, and the vision will need to be comprehensive. At minimum, it will need collective agreement among residents, business, and political leadership to financially support the following:

- An integrated transportation system that allows safe and easy transfer between modes;
- Mass transit options using dedicated right-of-way;
- A regional bikeway system;
- Adequate maintenance of the existing system, including roads for autos and trucks; and
- Denser and more diverse land use, development, and redevelopment to cater to a wider range of lifestyles and allow the new transportation investments to be successful.

We need to address many transportation issues, including the following:

- Building and maintaining greenways that flow through the region that form a natural framework for a regional trail system for hikers and bikers;
- Expanding national and international air connections, as well as improving ground connections between the airports and the urban core, which are necessary for hosting national events and conventions; and
- Rebuilding our aging interstate system that rings the city of Columbus and links Central Ohio to national markets, which is necessary for Central Ohio to maintain its position as a leader in logistics.

Establishing a common voice to accomplish these things will propel the region toward the goal of raising Columbus above its peers.



#### Electric Car Charging Stations

Located at The Ohio State University Center for Automotive Research

Image Source: A. Gaston

## North American Mass Transit Systems



Source: The Transport Politic.

### Give Central Ohio a Loud Voice

The common voice needs to be loud to get the attention of state and national leaders. Current funding mechanisms for transportation are unsustainable. Reliance on a gas tax to support roadway maintenance, while at the same time encouraging alternative fuels and more fuel efficient vehicles is an unsustainable business model. Relying on sales taxes to fund transit with receipts that rise when times are good (and ridership declines) and fall when times are bad (and ridership increases) is another funding system destined to fail.

Local actions to clearly define transportation solutions are a start, but ultimately, funding challenges at the state and national levels will need to be resolved to build new infrastructure. Current transportation funding methods need to be dismantled for the nation to maintain its global economic foothold and for Central Ohio to compete and achieve prosperity for its residents.

### Lay Tracks for Future Success

Columbus is one of the largest cities in the country that does not have a fixed-guideway mass transit system (e.g., streetcar, light rail, or commuter rail). The area relies entirely on fixed-route bus service for public transportation. Currently, Central Ohio is “auto-centric,” with nearly 83 percent of commuters driving alone to work each day.<sup>1</sup>

U.S. Census data collected between 2006 and 2010 show that more people walked to work than used public transportation in every county in the Central Ohio region, including Franklin County. However, that will not be true in the future. Changes to the automobile industry’s fuel distribution systems and efficiency will take decades to integrate into the mainstream marketplace. An aging population, lifestyle preferences of younger



generations, increased environmental awareness, increased competition for labor and business, rising costs of driving, and questionable funding from the national arena are all forcing the region to confront the deficiencies in the current transportation system. Now is the time to prepare for additional travel options.

Additional options should include light rail. Bus routes and light rail have been investigated seven times since 1980, with the most recent study completed in 2005. Unfortunately, up to now, public support has been insufficient to encourage regional leadership to pursue light rail construction. Experience, wisdom, and lessons learned should be used to motivate Columbus to establish a transit system that riders can rely on for 24-hour service.

Central Ohio has an advantage over other communities because of the amount of work that it has already done on transit, which includes the following:

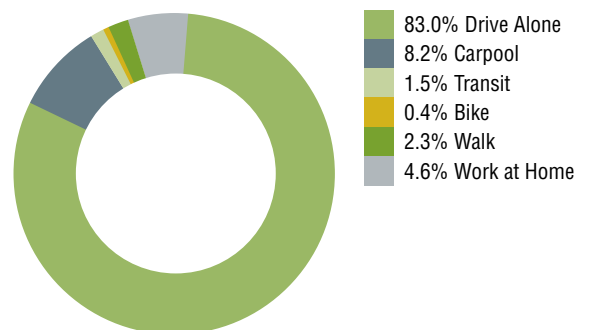
- Working to identify potential alignments and station locations;
- Completing technical documentation for environmental review;
- Establishing procedures for estimating ridership; and
- Preparing local communities to modify land use regulations to accommodate transit stations.

### Columbus Re-Wired Design Competition 2009

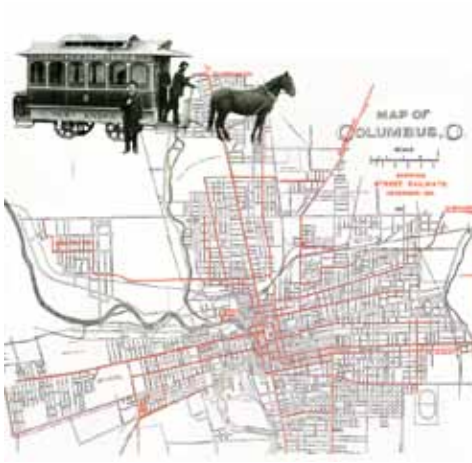
Downtown Columbus Rapid Transit Station

Image Source: Acock Associates Architects

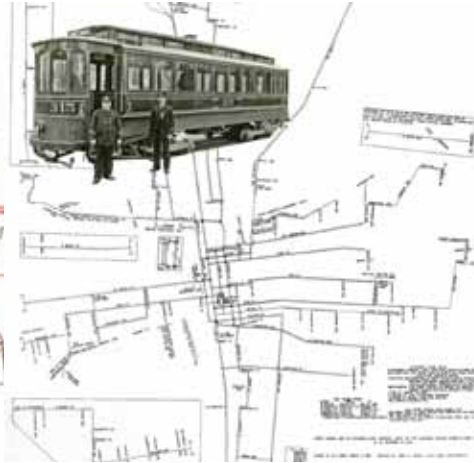
### Commuter Travel Modes in Central Ohio



Source: American Community Survey, U.S. Census 2006–2010.



**1901 Columbus Street Rail Map**  
Horse-Drawn Streetcars



**1925 Columbus Street Rail Map**  
Electric Streetcars



**1949 Trolley Coach/Motor Bus Map**  
Electric Motor Coaches/Buses

## ▲ Central Ohio Transit Timeline

Image Source: Acock Associates Architects

Having a recognized mass transit system will help advance the region toward the good life that its people crave.

## Take Action Now

A light rail system can cost anywhere between \$20 million and \$100 million per mile to build, depending on the circumstances. The North Corridor in Columbus is approximately 15 miles long. In comparison, the nine-mile line Charlotte completed in 2009 cost \$900 million.<sup>2</sup> Federal funding might cover approximately half of construction costs. The local community would need to secure 25 percent of the initial costs from the state and contribute a minimum of 25 percent of the cost of construction, plus all of the operating costs. Moreover, many communities around the nation are competing for the same funding, and consequently, a multi-year-long waiting period exists for available funds.

Even so, communities have it in their power now to prepare for the transportation system of the future by altering their development methods to accommodate public transportation and nonvehicular traffic. Planners and designers who pay attention to bus stop locations and agreed-to design standards visibly elevate transit as a travel option. For instance, the Short North Kroger incorporated a covered bench for bus riders into its High Street façade. Reducing conflict points between modes allows travelers to move from one mode to another seamlessly and with greater safety. A deliberate approach toward developing in ways that put more pedestrians on the streets can build momentum for attracting businesses and connecting people to their communities.

Focused density and mixing uses in critical corridors—where transit services exist—will grow the market for transit ridership and have an increasingly positive influence on land values and private investment. More pedestrian traffic can build momentum for neighborhood businesses and connect people to their communities, as well as generate additional support for neighborhood retail and further create 24/7 activity.

Local communities have tools they can adapt or use now to start moving toward being an attractive, livable, walkable, and lifelong community. Some of these actions include

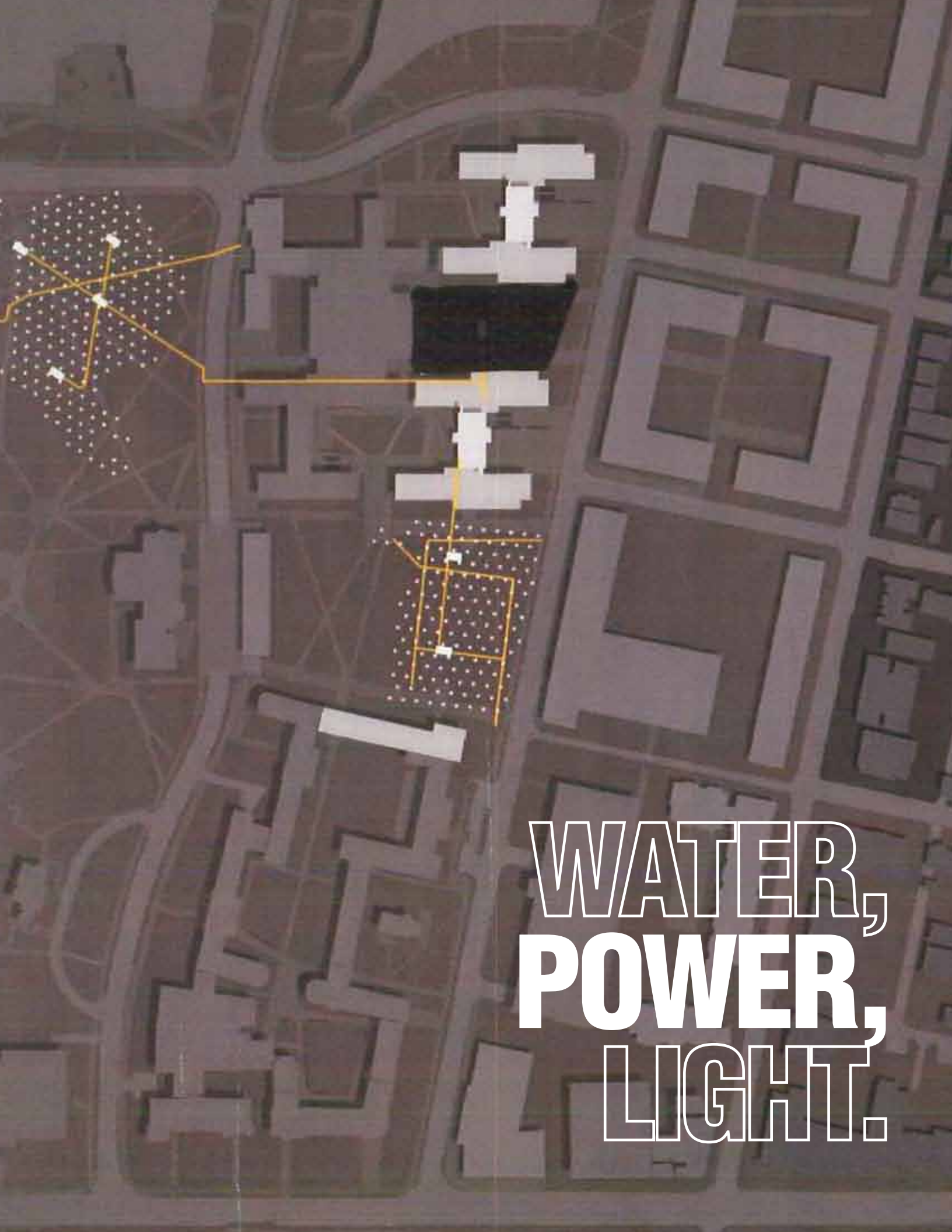
- Modifying zoning codes to reduce barriers to density and mixed land uses;
- Modifying site plans to push development up to the curb to improve access to transit;
- Redeveloping areas so housing and many of the services people use every day are within walking and cycling distance of each other; and
- Using rights-of-way to accommodate all modes of travel—bike, car, and pedestrian traffic.

### **Embrace the Future**

Transportation connects market economies and connects people to their neighborhoods. It creates the hustle and bustle that make communities hum. Coordinated commitment to investing in a complete and comprehensive transportation system that includes more transit options using exclusive right-of-way will move Columbus toward being a 24-hour city.

## **Columbus 2050 Blueprint:**

Central Ohio must build a **comprehensive** regional multimodal transportation system.



WATER,  
**POWER,**  
LIGHT.

## Create a Net-Zero-Energy Region

Energy and utility systems are so integral to functioning communities, they often go without notice. They power our homes and businesses, supply clean water, protect our environment, and enable us to communicate with each other. Central Ohio's communities have invested billions of dollars in this infrastructure, which, in turn, has supported the region's steady growth. As we move toward 2050, our ability to maintain and improve these systems will determine our viability as a region.

We will have to reinvent, revalue, and repurpose current infrastructure, assets, and resources, based on local, national, and global trends and impacts, which include the following:

- Increasing scarcity of fresh water nationally and globally;
- Inevitable changes in energy supply and sources;
- Information exchange increasingly critical to all sectors of the community;
- Current approaches to waste management that are unsustainable; and
- Challenges of aging infrastructure.

### Water: How Much Do We Use? How Much Will We Need?

As sources of freshwater worldwide continue to dwindle, we must ensure that our region has safe and plentiful sources. In 2010, the Columbus Department of Public Utilities produced an average 140 million gallons of water per day for distribution throughout its system, which serves more than 1.1 million customers.<sup>1</sup> This translates to use of more than 300 million gallons of water per day by Central Ohio's residents.

The region has many water sources, including the Scioto River, the Olentangy River, and several smaller tributary creeks. Central Ohio also is fortunate to have an extensive aquifer system, supplying millions of gallons per day to community systems and individual homes. All of these sources will be necessary to meet anticipated growth projections. Central Ohio is estimated to add another 604,000 people by 2050. Given current water use rates, this population would require an additional 750,000 gallons of water per day. Responding to this demand will be costly. A 9 billion-gallon reservoir currently is under construction in southern Delaware County. Work is also underway to expand well fields in the region. Areas that are currently being used for quarry activity may one day serve as additional water sources.

### Water Conservation and Regional Advantage

These efforts are important, but in the long term, conservation must play a bigger role in meeting our water supply needs. This is increasingly clear as water shortages become more common.

According to the U.S. Geological Survey, "groundwater depletion has been a concern in the Southwest and High Plains for many years, but increased demands on our groundwater resources have overstressed aquifers in many areas of the nation, not just in arid regions. In addition, groundwater depletion occurs at scales ranging from a single well to aquifer systems underlying several states."<sup>2</sup> This highlights Central Ohio's advantage in having access to essential water resources, but also points out the need to conserve. Limits on irrigation, increased use of native plant species, integration of more efficient appliances and fixtures, and advances in industrial processes must all play a part in achieving a future with a plentiful and safe supply of water.

**“To grow, prosper, and remain sustainable, we must embrace change and transformation.”**

**—Michael G. Morris, Executive Chairman, AEP**

#### South Oval Geothermal Well Field

The geothermal well system currently being installed in the South Oval as part of the South High Rises Renovation and Addition project, once completed, will have approximately 250 wells drilled to a maximum depth of around 500 feet.

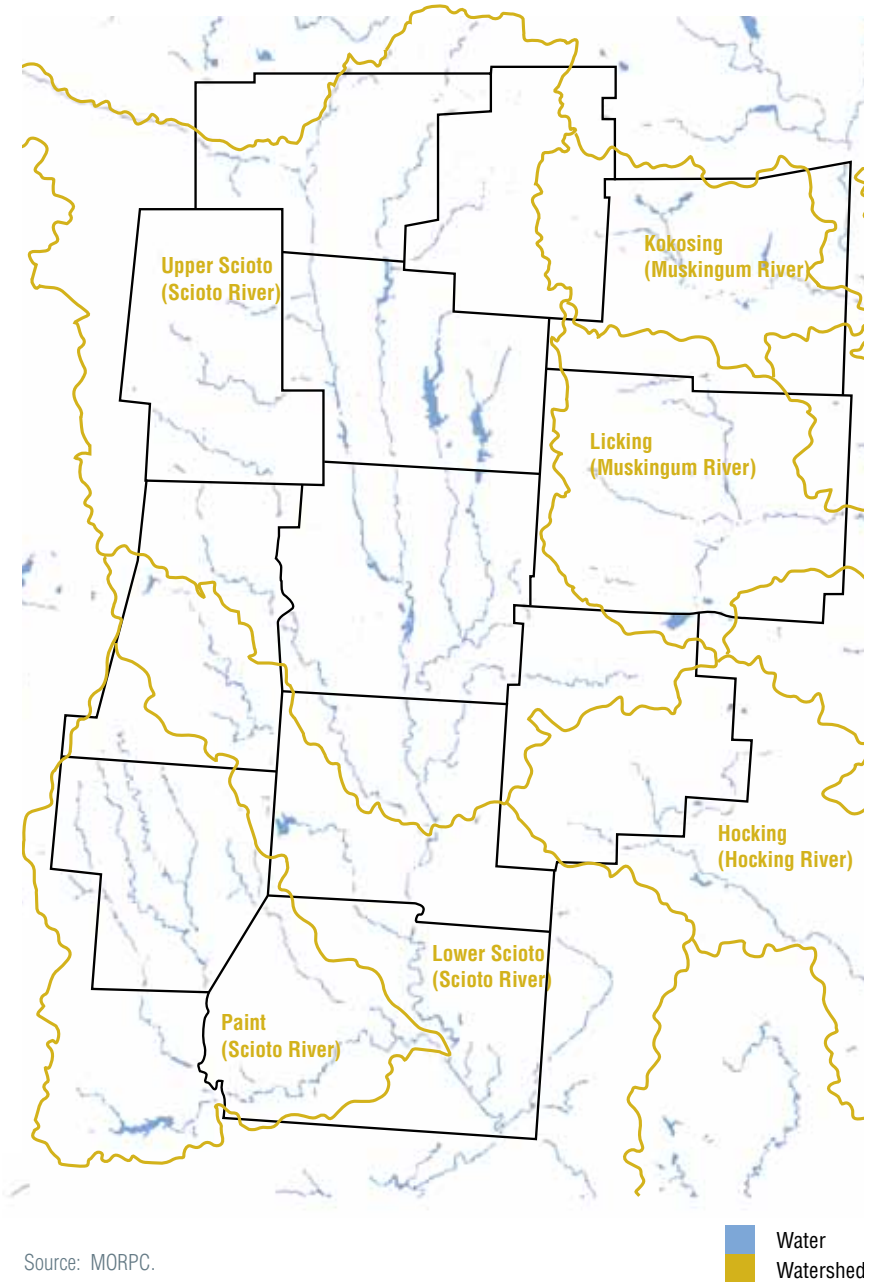
Image Source: The Ohio State University



### ▲ The Big Darby Accord

Image Source: City of Columbus, Planning Division

## Central Ohio Watersheds



Commercial, agricultural, and residential land uses near bodies of water have the potential to pollute surface and groundwater. Many Central Ohio communities already have applied land use planning and management tools to protect stream corridors and encourage groundwater infiltration. Best management practices are being used to filter out sediment and harmful chemicals. Refining and expanding the use of these techniques will help ensure Central Ohio's competitive advantage in attracting business, residents, and investments in the future.



## Power: More Efficient, More Sources

Central Ohio relies almost exclusively on fossil fuels for power. The Public Utilities Commission of Ohio reports that the state currently draws only 1 percent of its energy from renewable sources.<sup>3</sup> While new sources and technology may extend the anticipated life of coal, oil, and natural gas reserves, these are only temporary solutions. Use of fossil fuels also negatively affects the environment and human health. Additionally, as dominant fuel sources grow increasingly scarce, costs will inevitably rise. Communities that encourage conservation of current supplies and development of new sources will be best positioned for the future.

“Decentralized and alternative technologies will enable new design solutions. Higher energy and water prices will induce investment and alter behavior patterns.” —*The City in 2050: Creating Blueprints for Change*

Industry tools, such as smart meters and digital monitoring systems, are now in place to complement increased efficiencies in mechanical systems and consumer goods. As customers learn more about their energy consumption patterns, they will be in a better position to conserve and lower their costs. Utility providers are also looking at new systems for distributing and managing energy at neighborhood and district levels.

Geographic, topographical, and climate differences all have a hand in determining the energy forms that are possible and profitable for a region. Ultimately, no single source will be able to meet the increasing demand for energy. Renewable energy production in Central Ohio has been primarily limited to modest applications of solar and wind technology. More recent efforts have focused on geothermal energy. By investing in renewable energy sources, the region will build a more secure energy future and will reduce the negative environmental impacts associated with fossil fuels.

Ohio has set an ambitious standard for 2025, articulated in the Ohio Revised Code:

By the year 2025, 25 percent of the electricity sold by each utility or electric services company within Ohio must be generated from alternative energy sources. At least 12.5 percent must be generated from renewable energy resources, including wind, hydro, biomass and at least 0.5 percent solar. The remainder can be generated from advanced energy resources, including nuclear, clean coal and certain types of fuel cells. In addition, at least one half of the renewable energy used must be generated at facilities located in Ohio. All companies must meet annual renewable and solar energy benchmarks that increase as a percentage of electric supply each year.

## **Reduce, Reuse, Recycle**

Many of Central Ohio's waste management practices, such as its extensive use of landfills, are not sustainable. The mission of the Solid Waste Authority of Central Ohio (SWACO) is to manage the municipal solid-waste stream to achieve environmentally responsible and cost-effective disposal, to treat solid waste as a resource capable of yielding recovered materials and energy in order to reduce dependence on landfills as our primary solid-waste disposal option. SWACO puts this mission into practice by recycling plastic, glass, metal, paper products, and electronics and by harvesting methane from its landfills. But this is just the start. Reduction of solid-waste generation at each household, business, and institution and composting food and yard waste are additional steps that can significantly reduce the volume of solid waste we generate.

Biodigestors are being used to generate electricity from domestic sanitary waste and agricultural waste and can be a significant source of electric power. Virtually all of the components of our buildings can be recycled into new building materials or other uses, greatly reducing the volume of construction and demolition debris that currently is put into landfills. Continued development of regional waste management systems will yield significant environmental and economic benefits.

## **Getting to Net-Zero Energy**

Central Ohio can choose to move beyond the state's goal by striving to become a net-zero-energy region. A net-zero standard means that the region overall would produce as much energy as it consumes. The concept can also be applied to an individual building or a neighborhood. One of the most attractive options for renewable energy in Ohio comes in the form of geothermal resources. According to the Ohio Department of Natural Resources, geothermal energy can be harnessed for structural temperature control and can be used as a direct source for electricity generation. Because the earth continually produces heat from its core, it maintains relatively stable temperatures beneath its surface year-round. This presents Central Ohio with the possibility of a cleaner and longer-lasting solution to its energy problems that is not dependent on climate.

Accommodating new energy sources and technology will require that communities change their building and development regulations. Many forms of renewable energy become more efficient when applied in the form of energy cooperatives, beyond simply an individual building or single property. Geothermal systems, for example, become significantly more efficient and affordable when extended over larger areas.

**“The technology we’ll use in 2050 hasn’t been invented yet, so it’s hard for communities to prepare—beyond attitude.” —Local High School Student**

## Light: Staying Connected

The technological cutting edge of today is often obsolete the next year—or even the next month. Forty years ago, the microprocessor had just been invented and hand-held calculators were just beginning to show up in the classroom. It was another decade before home computers were featured in advertisements. Today, computer ownership is pervasive in homes across the United States.

Being connected through access to the Internet and integration of computer technology is no longer optional for regions that want to remain competitive economically. Most Central Ohio municipalities have already installed broadband systems. These investments will have direct economic benefits through job growth, increased communication efficiencies, and reduced vehicle use. Current technologies are not, however, likely to be relevant in 2050. In the words of a local high school student, “The technology we’ll use in 2050 hasn’t been invented yet, so it’s hard for communities to prepare—beyond attitude.”

The region already benefits from the presence of national leaders in technological innovation, such as The Ohio State University and Battelle Memorial Institute. They serve as catalysts for commerce and education. Anticipating the technological advances that will be prevalent in 2050 may not always be possible, but Central Ohio can work to be a leader in this arena by supporting organizations devoted to innovation and taking the steps necessary to adapt to evolving technology.



### Warner Cable

According to the Columbus Historical Society, in 1977 Warner Cable launched the first interactive cable system.

Image Source: A. Gaston

## Columbus 2050 Blueprint:

Central Ohio must conserve current resources and develop new energy sources to achieve a **net-zero-energy future.**



# FULL-SPECTRUM HOUSING

## More Choices, More Places

### Where We've Been

Sixty percent of the region's 900,000 housing units were built during the past 40 years, with the vast majority of that activity taking place outside I-270. This residential stock is generally characterized by lower densities and almost complete auto dependence. This housing is typically segregated by size, type, and price range with little interconnection between other neighborhoods, community facilities, businesses, and retail amenities. This is true even of residential developments exhibiting design qualities of new urbanism. While these areas may include a mix of housing types and emphasis on pedestrian accessibility, they often remain isolated from the broader community.

### Empty Units

Single-family homes have long dominated Central Ohio's suburban residential market. At a time when the region struggles to address vacancies caused by foreclosure and disinvestment, changing demographics mean that a smaller percentage of the population is seeking traditional, stand-alone, owner-occupied units. Vacancies are not limited to the single-family market, however; many older communities with multifamily units are facing similar challenges. As new multifamily units are built, older units in areas of broad disinvestment struggle to maintain occupancy.

### Costs of Housing

Residential options in suburban portions of the region, often characterized by higher-cost single-family homes, are unaffordable to a growing percentage of workers in businesses that locate in these areas. The region's diffuse land use patterns often make transit solutions unfeasible. The geographic disconnect between jobs and housing places burdens the region's infrastructure, individual budgets, and the environment.

Affordability remains a challenge in downtown Columbus as well. The supply of affordable housing options in downtown's core and surrounding historic neighborhoods has not kept pace with demand, and the imbalance is likely to grow—although recently, financing opportunities and demand for rental units have been increasing. Meanwhile, older areas experiencing disinvestment face the opposite challenge—how to attract businesses and jobs to neighborhoods with affordable housing and underemployment. The ability to finance affordable housing in urban locations in many cases will require public support.

### Demand for More Choices

Rising energy costs, changing household size and composition, emerging technologies and design concepts, and a growing desire for mixed-use, higher-density locations are all contributing to a major shift in the housing market. The Urban Land Institute's initiative, *The City in 2050: Creating Blueprints for Change*, made clear that housing in the future will need to encompass more options.

Successful housing will mean a diversity of options. Thriving communities will provide a full spectrum of prices and types, catering to shifting demographic preferences. Buyers and renters will balance lifestyle choices with market options: retirees will downsize up the street; a family with children will move without changing schools; and employees will find homes near their jobs.<sup>1</sup>

“Successful housing will mean a diversity of options.”

—*The City in 2050: Creating Blueprints for Change*

### ◀ Neighborhood Launch

This condominium development will eliminate parking lots and renovate the Gay Street corridor, creating a new, energetic neighborhood that encompasses nine city blocks and revitalizes a downtown Columbus neighborhood.

Image Source: A. Gaston

## ▶ Harrison Park

Harrison Park is located in the Harrison West neighborhood of near north Columbus between downtown and The Ohio State University's main campus. This once-polluted industrial site has become a beautiful, vibrant, and high-quality residential neighborhood.

Image Source: A. Gaston



The ULI publication *The City in 2050* lists five interconnected characteristics that housing will need to exhibit in coming decades:

- The Perfect Fit—Smaller, more affordable homes, with more emphasis on neighborhood amenities;
- Fifteen Minutes to Everything—Denser, mixed-use neighborhoods with easy access to shopping, open space, recreation, daily services;
- Location, Location, Connection—Homes well connected to the rest of the region by a variety of transportation options;
- Design Diversity—Variety of housing options to fit emerging population preferences; and
- Nourishing Community—Integration of wider range of amenities and services with housing.

### Looking to 2050

These factors are relevant to Central Ohio's changing residential market. During the next 40 years, Central Ohio's population will become increasingly diverse, consist of smaller households, and include more older residents. Nationally, the portion of the population age 65 years and older is growing faster than any other age group. By 2050, more than 20 percent of the U.S. population will be in this category. As this segment grows, its need for more and different types of housing will have a significant impact on the residential market.

Another population segment, “echo boomers”—those born between 1982 and 1995—is also emerging as important to the housing market. Nationally and locally, echo boomers are moving back into inner cities to take advantage of smaller residences conveniently located in 24-hour neighborhoods. Designers and builders are experimenting with smaller, more adaptable units to accommodate residents who want flexible living spaces close to jobs, schools, and entertainment.

“In many cities, a big university is becoming the economic engine that a big corporation used to be.” —Rob Gurwitt

As our economy and employment base evolves, the housing market will have to respond. People employed in the fields of medicine, education, and government have become major components of the demand for new housing. Central Ohio encompasses the state capital, 23 hospitals, and nine public and private four-year universities and colleges. These institutions have a huge economic and cultural influence on the community. They also serve as primary drivers of housing demand, employ thousands of workers, and play a direct role in community development. Examples include Nationwide Children’s Hospital’s investment in area housing and The Ohio State University’s involvement in Weinland Park and the Near East, home to the OSU’s East Hospital Campus.



◀ **Weinland Park Neighborhood Master Plan**

Image Source: Goody Clancy

▶ **Nationwide Children’s Hospital Master Plan**

Image Source: MSI | KKG





### BriHi Square

BriHi Square, a public/private partnership, is a dynamic community gathering place at the heart of historic downtown Dublin's BriHi District. BriHi Square is the gateway to Dublin's Historic District and an iconic celebration of culture and community.

Image Source: OHM Advisors

### Change Already Underway

Fortunately, changing housing preferences and needs coincide well with emerging patterns for how Central Ohio might best move forward—growing up, not out. Areas of existing development throughout the region, with substantial capacity for residential redevelopment, will play a more important role in the next several decades.

### Beyond the Core

Many people find themselves unable to live in the communities where they grew up due to limited housing options. New residential units at varying density levels will help communities retain and attract residents. Inner-ring suburbs with their abundance of stable, affordable housing and strategic locations are well positioned for residential infill units and the redevelopment of aging multifamily units. Communities where large single-family homes are predominant may see more shared living arrangements and programs to encourage aging in place. Here, too, infill development will serve to diversify the housing choices for segments of the population for whom homeownership and larger units are undesirable or impractical.



Because residents are increasingly choosing housing preferences based on quality of life and neighborhood scale amenities, it will be critical that communities encourage proximity and connections between complementary land uses and activity centers. In the future, residents will most likely be less interested in maintaining large lawns and properties, and more interested in having access to open space and greenways. A similar priority will be placed on conveniently located retail centers, community facilities, and services.

## Columbus 2050 Blueprint:

Central Ohio communities must plan to meet the **housing demands** of an increasingly diverse and multigenerational population within the existing developed footprint.



**WHOLE BUILDINGS**

## Balance Old and New

### Structuring New Opportunity

Buildings and their construction account for nearly half of all annual energy consumption in the United States. Increased volatility in the energy market and the need to accommodate future growth presents a clear challenge; we will need to build more sustainable buildings and retrofit existing structures to be more energy efficient.

Central Ohio is slated to grow by 600,000 residents by 2050, and they will need 250,000 new housing units in which to live. This growth represents an opportunity to reshape development practices, implement sustainable building technologies, and make existing buildings more energy efficient. Focusing growth within already urbanized areas of the region will create a market for the renovation and reuse of the 79,000 vacant housing units in Central Ohio. While a portion of the existing building stock may not be salvageable, the recycling industry undoubtedly will become more sophisticated in reducing waste, creating alternative energy, and becoming a source for new types of building materials.

New development should use sustainable design practices, emphasizing flexibility to maintain long-term usability. Design innovation will require more than the latest technologies—it will require creating spaces that can be reused rather than torn down. New buildings will need to be flexible in the way they are used, as well as in the technology they use.

For maximum impact, sustainable design, reuse, and renovation practices should extend beyond individual structures and apply to entire neighborhoods and urban districts. In other words, this philosophy should encompass whole systems. New housing, office, and retail developments should emphasize higher densities in the region's major corridors, especially those with transit service. Mixed-use buildings should be a significant component of these developments.

As the region grows, the following principles should be considered to reduce the energy demands of buildings:

- An integrated design process across the building community should be encouraged.
- Sustainable building practices should be encouraged by codes and regulations and incentivized within the marketplace.
- Sustainable practices should extend beyond individual buildings and projects to whole neighborhoods and districts to maximize cost-effectiveness and minimize environmental impact.

**“With energy, less is more, so higher efficiency comes from properties with a lower energy intensity.”** —*ULI Greenprint Foundation Performance Report*

### ◀ Thompson Library at OSU

Referred to as the cornerstone of The Ohio State University, Thompson Library has undergone three renovations since it opened in 1912. The most recent renovation was completed in 2009.

Image Source: ©Brad Feinknopf/feinknopf photography



### **The Grange Insurance Audubon Center**

A dynamic environmental education center that is the catalyst for revitalizing a physically and aesthetically deficient urban brownfield site, the Audubon Center not only serves as a learning facility connecting urban youth with their natural environment, but also the building itself demonstrates sustainable design practices.

Image Source: ©Brad Feinknopf/feinknopf photography

### **What Are Whole Buildings?**

According to the National Institute of Building Sciences, whole building design combines two components: an integrated design approach and an integrated team process. The integrated design approach calls upon stakeholders in the building community to create a design that combines individual expertise and provides a variety of perspectives. These individuals include technical planning and design professionals, construction teams, building material experts, natural system experts, and other individuals and groups. This approach differs from standard planning and design techniques that rely on the expertise of specialists who may work isolated in their own fields of development.

Whole building design also incorporates an integrated team process, in which the design team and stakeholders collaborate throughout each phase of the project. This process is used to evaluate costs, quality-of-life issues, adaptability to future innovations and needs, environmental impact, productivity, creativity, and how occupants will benefit from their use of the building. Whole buildings draw from the vast and diverse knowledge pool of this interdisciplinary team throughout the life of the project. The process begins with identification of the need for a building or development, then continues with the planning, design, and construction phases, and finally ends when the building becomes operational and occupied.<sup>1</sup>

New computer simulation technologies are emerging that enable the whole building design team to make integrated decisions that minimize the risks of green technologies. Technologies like building information modeling are required to realize true whole buildings through integrated building information models. These models take advantage of the collaborative environment of multidisciplinary expertise, simulation of real-world effects, coordination of construction sequences, fabrication, and management and monitoring of the facility's performance over its life cycle.

## Meeting Market Demand with New Technologies

Cheap and plentiful energy has been the foundation for our built environment and consumer-driven culture for at least the past 60 years. But in the past decade, we have come to realize that energy is no longer cheap or plentiful. If energy costs continue to rise, fortunately so will the demand for efficiency and sustainability. Given the energy consumption of buildings, the opportunity exists for vast energy savings. Using current technology, existing buildings can be retrofitted and new ones constructed to be more efficient, and in some cases, completely independent of the energy grid. This ability has intrinsic economic value in the form of lower operating costs and enhanced work environments.

Developers, owners, and investors are realizing that investing in available energy-saving and water-saving technologies can produce advantageous returns, creating more marketable and valuable real estate assets. Under-floor systems help produce healthier indoor climates through increased fresh-air flow, natural convection, and individual workstation controls. They also decrease utility costs tied to heating and cooling. Window and lighting technologies can adjust to daylight levels, reducing electricity bills while providing more comfortable work settings. Green roof designs and new building envelopes can help lower energy use, cooling by day and insulating at night. On-site power in the form of solar power generators and micro wind turbines can reduce reliance on non-renewable sources of energy. Stormwater can be treated on site to remove the burden from city sewer treatment systems. Rainwater can be captured and used for flushing toilets and landscaping. As design, real estate, and construction professionals find ways to design zero-net-energy buildings, energy-positive buildings will be the new leadership standard.

The city of Columbus and The Ohio State University are already realizing these benefits and are pursuing geothermal systems for heating and cooling. The redevelopment of the Lazarus building in downtown Columbus is an excellent local case study for how to make an energy-efficient retrofit economically successful. The Lazarus Building has achieved Leadership in Energy and Environmental Design (LEED) Gold certification by implementing a number of green technologies, including a green roof, rainwater harvesting for the cooling system, low-flow plumbing, energy-efficient windows, and HVAC automation controls. Waste generation and construction costs were also reduced by maintaining 75 percent of the original structure, saving \$25 million, which is equivalent to 50 percent of the cost of constructing a new 600,000-square-foot building. This also prevented more than 5,000 truckloads of concrete, steel, and other construction materials from going into a landfill, potentially disturbing residents, damaging roads, creating traffic congestion, and increasing air pollution.<sup>2</sup>

### ▼ The Lazarus Building

The Lazarus & Company flagship store, a historic landmark of downtown Columbus, was renovated to qualify as LEED Gold-certified building with office and retail spaces.

Image Source: ©Brad Feinknopf/feinknopf photography



## ▶ The Ohio State University College of Public Health

The Cunz Hall Renovation is the new home for The Ohio State University College of Public Health. The LEED project features a rain garden, a green roof, and dramatic new glazed entries in a modern update to a 1960s-era brutalist building.

Image Source: ©Brad Feinknopf/feinknopf photography



### Incentivizing the Marketplace

Central Ohio can take the lead in creating new regulations and standards that accommodate, encourage, and implement these new design practices that will shape the future of buildings. The region must create incentives that target the construction and real estate sectors with mechanisms such as low-interest green loans and mortgage rates that encourage a complete overhaul of existing development practices. Creating a tidal push that encourages developers to invest in a built environment that is able to harness on-site waste produced by buildings will, in turn, generate a surplus of energy that can be plugged back into the grid.

To begin to address incentives, Columbus has created the Green Columbus Fund as part of its Get Green Columbus initiative.<sup>3</sup> The \$1 million fund is a reimbursement grant program that uses financial incentives to encourage sustainable development, redevelopment of brownfield sites, and green development practices. Priority is given to projects in the already developed portions of the city. This innovative program is a starting point for the type of incentives that will be needed to encourage whole building design techniques throughout the region.

### Scaling Up Whole Buildings to Whole Systems

The approach of whole building design becomes more meaningful when applied on a broader scale.<sup>4</sup> The sharing and management of resources at a neighborhood or district level realizes efficiencies at a greater economy of scale than independent interests. While this takes greater coordination, it increases opportunities for resource consumption reduction, power generation, and cost savings. For example, sustainable projects such as rain gardens or green streets that handle stormwater on site are more environmentally sound and cost effective if implemented on a neighborhood scale. Geothermal heating and cooling systems are cost-prohibitive for most individual homeowners, but a neighborhood-wide system drives down costs and makes this innovative and efficient technology more affordable. Higher-density, mixed-use developments in urban corridors

can reduce energy demand and maximize existing investments in infrastructure and transit. It is time to move beyond one-time demonstration projects of green technologies and create neighborhood and districtwide solutions that have greater societal, environmental, and cost benefits.

To remain competitive in the 21st century, cities will have to address energy efficiency and usage. Technologies already exist that meet many of these efficiency goals. Buildings have the potential to generate their own energy, recycle their own water, and become a contributor to the electricity grid rather than its largest consumer. With the projected growth of Central Ohio, we have the opportunity to scale up these technologies in a way that increases efficiency and affordability and enhances the competitive edge of the region.

## Columbus 2050 Blueprint:

Central Ohio must make systemic changes to facilitate development of **sustainable** whole buildings and communities that emphasize quality of place.

A nighttime photograph of a city street. A large, illuminated archway spans the street, with the words "SHORT NORTH" in white, glowing letters at the top. The archway is supported by a dark metal truss structure. Below the arch, a string of warm white lights hangs across the street. In the background, another similar archway is visible. The street is filled with cars, and their lights create long, horizontal light trails in red and white. On the left, a building has a sign that says "MARCELLA'S". The sky is a deep blue, and the overall atmosphere is vibrant and urban.

SHORT NORTH

CLICK, LEARN,  
**GO, GET.**



# Reimagine the Marketplace

## An Evolving Retail Marketplace

Retail is evolving into a dynamic, technology and information-driven marketplace. The industry is undergoing seismic shifts in terms of how people are shopping, how retailers are targeting customers, and how people are using commercial space.

Consumers are shopping online more than ever, with Internet sales up 15 percent during 2011 alone.<sup>1</sup> E-commerce has made its mark by the overnight delivery of goods from warehouses to doorsteps. Consumers can now compare products and prices online, without spending time driving to multiple stores. And when they do visit stores, smart phones allow consumers to compare in-store goods and prices with online options in real time. This has dramatically altered certain retail segments such as books, movies, and music, which can now be purchased online more conveniently. Numerous chain stores across industry segments are discovering they no longer need as much square footage due to online trends and logistics delivery technologies that reduce the need for storage.<sup>2</sup> Converging with these changes is a retail marketplace that is overleveraged. In the Columbus region, vacancy rates stand at around 10 percent, and there has been no significant retail growth since 2002.<sup>3</sup>

Yet even with these massive market shifts and changes in consumer behavior, the physical retail environment is still relevant. Consumers still desire human interaction and the social event known as shopping. Destinations for shopping, health care, culture, or education will reinvent how we shop, learn, and socialize. Accessible locations that allow buyers to confirm or conclude transactions will be the new markers of success.

This represents a clear opportunity in Central Ohio to reshape the built environment. Just as Easton Town Center became a national model for lifestyle centers, Central Ohio has the ability to be at the forefront of new retail concepts.<sup>4</sup> Central Ohio is a center of retail talent, with numerous retail and restaurant chain headquarters, as well as retail developers and architecture, and design and retail marketing firms. It is also a national and regional distribution and logistics hub. The region is also investing heavily in medical, education, and research facilities. These employment and population magnets are expanding in the region, creating 24/7 cores of activity.

Given these assets, we have the opportunity to develop robust retail centers of urban development that define the region. We need to develop retail in a more economically sustainable manner that enhances the creation of community. As the region continues to grow, the following principles should be considered:

- Retail growth should be encouraged and incentivized in already developed urbanized areas and corridors, especially in proximity to residential and employment centers.
- A mix of uses should be encouraged in new retail projects to enable economic longevity and create a more vibrant urban experience.
- Business incubation partnerships should be encouraged among existing education institutions, businesses, and entrepreneurs to develop the next generation of retail leaders.
- The region's distribution and logistics expertise should be leveraged to create a hub that drives employment and creates new retail opportunities for consumers.

“Great projects feel good; they convey authenticity and a positive energy that resonates well beyond that of their goods and services.”

—Yaromir Steiner, Founder and CEO, Steiner + Associates

### Short North Arts District

Known as Columbus's “art and soul,” the culturally rich Short North is pioneering the urban revitalization of Central Ohio.

Image Source: Tiffany Morisue



▲ **City Center Mall**

Image Source: Ohio Historical Society

▼ **Easton Town Center**

Image Source: © Brady Design Limited

## Focus on the Retail Experience

The region has not witnessed the construction of a new, large retail center since 2002, and no concrete plans for additional centers have been made public. As retail patterns have shifted, traditional malls have closed. City Center Mall, once a regional retail force, eventually struggled with high vacancy rates and a consumer base that fled the city at 5 p.m. After 20 years (1989–2009), City Center shut its doors for good. City Center's downtown location served residents in the core neighborhoods, as well as 100,000 office workers. Yet it failed, because its interior-focused design did not generate spin-off retail activity on surrounding streets.

Built during the late 1990s and early 2000s, Tuttle Mall, Easton Town Center, and Polaris Fashion Place reorganized the regional consumer base with massive amounts of retail square footage built adjacent to suburban growth areas on the northwest, north, and northeast sides of the Columbus area. The rule that retail follows rooftops certainly applies, but this growth also signaled the end of City Center Mall. City Center's walled-in, predictable, and controlled shopping experience was no longer desirable in the marketplace. In a market filled with choice, consumers are more attracted to retail destinations that offer an experience.

Nothing has proved this point more than Easton Town Center. While it still has department store anchors, big-box outlets, and an enclosed mall area, it also has an outdoor "Main Street" storefront design that provides a more urban streetscape experience. Its success has been nationally recognized and is seen as a model for the boom in so-called lifestyle centers that integrate retail into a high-quality, pedestrian-friendly environment.<sup>5</sup>



As Central Ohio grows, successful shopping districts and retailers will have to be experientially relevant to their consumers. The monopoly of the retailer controlling the distribution and selection of goods presented to the customer will be replaced by experience providers, who will see their roles not only as distributors of goods, but also as partners providing services of value to the customer.<sup>6</sup> These services range from festive and high-energy dining environments, to knowledgeable advisers (in fashion or electronics), to the ability to try before buying (food or clothes), to a place to see and touch or a place to learn how to use the merchandise (Apple Store).

As retail integrates a mix of uses, a new public realm will anchor a shared urban experience, as much if not more so than traditional department store anchors. These civic spaces will rise in importance once areawide business improvement districts assume more stewardship functions to create quality destinations.<sup>7</sup> Coordinated designs for both public and private spaces will transform ordinary streetscapes into uniquely branded, marketable environments such as Columbus Commons.

All of this has implications for existing malls and retail centers and the built environment. Run-of-the-mill or out-of-the-way single-use malls without easy access will be passed by and be better suited to different forms of residential or office redevelopment.<sup>8</sup> Well-planned urban districts, those with good urban planning structure, historic or not, will be adapted and reused. Poorly planned areas will require fundamental changes in terms of use, character, and development strategies. Compared to past development planning that favored outward growth, more infill development, higher densities, and less expansion into green areas will be encouraged.

Mixed-use retail centers will not only create vibrant public spaces but will also have far greater revenue potential for municipalities than typical retail centers. A study commissioned by the Sonoran Institute found that on a per acre basis, mixed-use development yields higher tax revenues for communities than its big-box counterparts. The figure below is a comparative model between a typical big-box development and a typical mixed-use development. Both have exposure to The Ohio State University market and are located on important transportation corridors. The mixed-use development has just 125,000 square feet less than the big-box strip mall, but it yields three times more revenue per acre using 2009 tax figures. The key finding of the study is that mixed-use developments have a built-in consumer base for shopping and other activity that dramatically increases economic sustainability and longevity.



 **The Apple Store at Easton Town Center**

Image Source: © Brady Design Limited

## Big Box vs. Mixed Use

Measurement	Lennox Town Center (Big Box)	South Campus Gateway (Mixed Use)
Annual Tax Revenue (2009)	\$1,148,694	\$805,608
Assessed Acres	35.74	7.50
<b>Tax Revenue to Acre Ratio</b>	<b>\$32,143 Per Acre</b>	<b>\$107,414 Per Acre</b>
Retail Space	353,913 Sq. Ft.	225,00 Sq. Ft.
Parking Spaces per 1,000 Sq. Ft.	6.94 (Surface Lot)	3.83 (Garage)
Market Value (2009)	\$32,502,900	\$57,100,100
<b>Land Value to Acre Ratio</b>	<b>\$311,788 Per Acre</b>	<b>\$928,533 Per Acre</b>

Source: Franklin County Auditor.



### **The North Market**

A public market located in the Arena District, the North Market is one of Central Ohio's best small business incubators.

Image Source: ©Randall Lee Schieber Photography

## **Capitalize on the Knowledge Base**

Central Ohio is well positioned to be a leader in the creation of this new retail environment. As the headquarters of numerous retail industry leaders, the region has the potential to be the test market for new retail formats. A large college and university student population creates a strong entrepreneurial base for new retail enterprises, as well as a youthful market for goods and services. Growth in medical, higher education, and research facilities also provides the opportunity to create new mixed-use retail centers that respond to the needs of those populations.

The retail talent in the region presents the opportunity become a market leader in new retail experiences. Just as Central Ohio is known as the test market for the country in terms of products and food, the region could serve as the test market for new approaches to retail districts that integrate urban design and a mix of uses that appeal to consumers' desire to have a range of different shopping experiences.

While market innovation will undoubtedly emerge from the region's retail knowledge base, there is untapped potential in terms of local business startups. Graduates of Ohio State University's Fisher College of Business and the Columbus College of Art and Design are more likely to aspire to own their own businesses than previous generations.<sup>9</sup> Bringing together retail expertise, educational institutions, and students to form business incubators within the retail marketplace will ensure the region's status as a retail leader. Fostering and harnessing local retail entrepreneurs will also enliven the regional retail marketplace, grow new businesses, and increase employment opportunities.

Looking to 2050, growth will be driven by intellectual capital. In addition to Central Ohio's strong base of retail knowledge, the region is wealthy in terms of health care and education institutions. The Central Ohio region has nationally recognized university and medical systems, including The Ohio State University, Ohio State University's Wexner Medical Center, and Nationwide Children's Hospital. These are high-growth areas of the economy and major employment sectors. The concentration of knowledge, resources, and creativity will create new ideas that form spin-off businesses and attract businesses.

Today, massive investments are underway across these sectors, with expansion plans slated to bring thousands of new jobs throughout the community. Our education and health care assets will continue to drive the residential marketplace and attract population growth. This, in turn, will increase a demand for mixed-use retail environments that will form new urban districts and neighborhoods at the core of the region's growth.

## **Harness the Power of Logistics**

Central Ohio is a logistics and distribution hub that can serve 44 percent of the country's population within a day's drive. This geographic advantage will become even more important as fuel costs continue to rise, making Columbus one of the most efficient locations to reach the greatest number of U.S. consumers.

While most businesses will still desire traditional storefronts, big-box retailers could be repositioned as part of warehouse distribution districts. Still well parked, accessible, and conveniently located, these big-box retailers would be located along the urban edge, with smaller-footprint retailers located in urban areas. This would allow smaller inventories on a store-by-store basis and potentially turn "next day delivery" of online purchases into "from a location nearby."<sup>10</sup> Columbus is ideally suited to take advantage of these logistics synergies and begin to develop a new retail paradigm.

## Conclusion

Looking ahead to 2050, Central Ohio has an opportunity to continue its prominence in the retail marketplace. By embracing technology, focusing on mixed-use retail development, growing local businesses, and harnessing the power of its logistics expertise, the region will transport more than just goods across the country; it will also develop new retail strategies that will be models for other cities across the United States.

## Columbus 2050 Blueprint:

Central Ohio can become the **national creative hub** of the new retail marketplace by expanding on its existing retail knowledge.

## Moving Forward

As stated up front, Columbus 2050 is intended to be the **start** of the dialogue that is needed as we plan for 2050 and beyond. We hope this will be a call to action for our Central Ohio region—for local government, the development community, and the broader public—to act **now** to capitalize on the talents of our people and our natural assets to succeed in the global marketplace.



## METRO METRICS

Central Ohio's communities must **collaborate** when planning for imminent demographic, cultural, and lifestyle changes to strengthen the region's national and international relevance.

## THE CITY WILD

Central Ohio must create a robust, regionally funded, integrated **open-space network** that reaches across jurisdictional lines.



## WATER, POWER, LIGHT.

Central Ohio must conserve current resources and develop new energy sources to achieve a **net-zero-energy future.**

## WHOLE BUILDINGS

Central Ohio must make systemic changes to facilitate development of **sustainable** whole buildings and communities that emphasize quality of place.





## PLAN IT. BUILD IT.

Central Ohio must develop and execute a comprehensive **development strategy** that emphasizes building within the existing developed footprint.

## GETTING AROUND

Central Ohio must build a **comprehensive** regional multimodal transportation system.



## FULL-SPECTRUM HOUSING

Central Ohio communities must plan to meet the **housing demands** of an increasingly diverse and multigenerational population within the existing developed footprint.

## CLICK, LEARN, GO, GET.

Central Ohio can become the **national creative hub** of the new retail marketplace by expanding on its existing retail knowledge.



## Metro Metrics

- 1 U.S. Census, 2010.
- 2 U.S. Census, 1970 (for Dublin and Delaware counties).
- 3 This estimate is based on compounded growth of 0.0643 percent over the next four decades, half the rate experienced between 2000 and 2010.
- 4 U.S. Census, 2010.
- 5 This is based on an assumed regional 2.4 person per household size; 2010 household size was 2.47 people.
- 6 See the Mid-Ohio Regional Planning Commission's (MORPC) 2010 land use model.
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- 10 U.S. Census, "American Community Survey," 2006–2010, one-year sample.
- 11 U.S. Census, 2010, for children under 18 and seniors over 85.
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## Plan It. Build It.

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- 2 Ibid.
- 3 Ibid.
- 4 Ibid.
- 5 Columbus Chamber of Commerce, "2011 State of the Young Professional," <http://www.columbus.org/www/dcms/files/pdf/reports/sotyp-final-report-10-26printto.pdf>.
- 6 Bill Bush, "Census Shows Columbus' Growth Uneven," *Columbus Dispatch*, accessed March 11, 2011, <http://www.dispatch.com/content/stories/local/2011/03/11/census-shows-columbus-growth>.

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### Columbus 2050 Authors

#### Andrew Overbeck \*

Senior Associate  
MKS&K

#### Nancy Reger \*

Deputy Director, Transportation  
MORPC

#### Kevin Wheeler \*

Assistant Planning Administrator  
Department of Development  
City of Columbus

### Columbus 2050 Editor

#### Martha Leonard

### Knowlton School of Architecture Columbus 2050 Studios

#### Professor

Kyle Ezell

#### Graduate Studio

Michael Anderson  
Matthew Dickinson  
Christin Doyle  
Marianne Eppig  
Christopher Flynn  
Anna Garcia  
Rachel Grass  
Tyler Grzegorzczak  
Patrick Hewitt  
Dominic Marchionda  
Michael Novakov  
Alan O'Connell  
Abby Onstott  
J.M. Rayburn  
Sharonda Whatley

#### Undergraduate Studio

Alex Beim  
Leslie Brorein  
Hoa Dao  
Ayden Ergun  
Patrick Frazier  
David Gentile  
Tyler Grzegorzczak  
Benjamin Hershey  
Dwight Holley  
Stephanie Kensler  
Josh Lapp  
Tina Livingston  
Dan Mayer  
Sean McNash  
Kent Miller  
Vincent Rapp  
Maria Watson  
Jennifer Williams  
Christopher Zapp

### Participants

Charisma Acey  
Doug Aschenbach \*  
Paul Astleford  
Ann Aubry  
James Barna  
Jonathan Barnes \*  
Alex Beim \*  
Andrew Boatright  
Michael Bongiorno \*  
Rhonda Border-Boose  
Christopher Boring  
Heather Bowden  
Lavea Brachman  
Michael L. Bradley  
Kacey Brankamp  
Richard Buchsle  
Kacey Campbell  
Paul Carlson  
Jean Carter Ryan  
Don Casto \*  
Derrick Clay  
Franklin B. Conaway  
Mark Daniels \*  
William Dargusch \*  
Eben Dowell  
Jim Dziatkowicz  
Jennifer Evans-Cowley  
Kyle Ezell  
Matthew E. Ferris \*  
Alex Fischer  
Terry Foegler \*  
Kathleen M. Fox \*  
Sandy Frey  
Bob Gable  
Lizanne Galbreath \*  
Catherine Girves  
Bob Gorman \*  
Jeff Green  
Tom Gregoire  
Tim Gribben  
Bill Habig \*  
Tedd N. Hardesty  
Steven Heiser  
Steve Hermiller

Dale Heydlauff  
Ralph Ireland \*  
Kristen Jensen  
Daniel Jones  
Michael Jones  
Chester R. Jourdan, Jr.  
Meredith Joy  
Kyle Katz \*  
Jung Kim \*  
Loretta King  
Brian Kinzelman \*  
Abigail Kiracofe  
Doug Kridler  
Tracy La Mar-Nickoli  
Thomas Latchem  
Rick Livingston  
Dan Lorek  
Richard Lorenz  
Jack Lucks  
Bruce Mansfield  
Eric Mathis  
George Mattei  
Alan D. McKnight  
J. Jeffrey McNealey \*  
Ellen Mee  
David Meleca  
Kathryn Meyer \*  
Chris Miller  
Rabi Mishalani  
David Moore  
Douglas Moore  
Hazel Morrow-Jones  
Tony Murry, Jr. \*  
David Norris  
John O'Meara  
Bart Overly  
Christine Palmer \*  
Betsy Pandora  
Vince Papsidero \*  
Meera Parthasarat  
Eric Phillips  
Scott Phinney  
Nicholas Popa  
Dr. Jay Ramanathan

Jason Reece  
Nancy Reger \*  
Cleve Ricksecker  
Tim Rollins  
Lauren Rummel  
Lou Ruscilli  
Tony Ruscilli \*  
Boyce Safford  
Chip Santer  
James Schimmer \*  
Steve Schoeny  
Bill Schottenstein  
Mark Schuetz  
Chris Shirer  
Clarence Simmons  
Tim Skinner \*  
Jenny Snapp  
Erica Spaid  
David J. Staley  
Matthew Starr \*  
Scott Steiner  
Yaromir Steiner \*  
Jeff Stephens  
Maurice Stevens  
Mike Stevens  
Jim Sweeney  
Andrew Taylor  
John Tetzloff  
Scott Ulrich \*  
Thomas Van Cleef  
Thomas Vetter \*  
Nate Vogt  
Mark Wagenbrenner  
Susan Weber  
Ira Weiss  
William R. Westbrook  
Richard Westerfield  
Doreen Whitley  
Curtis Williams, Sr. \*  
Joe Williams \*  
Roger Williams  
Jackie Winchester

## Columbus 2050 Committee

### Joseph Reidy \*

Columbus 2050 Chair  
Partner  
Ice Miller, LLP

### Jennifer Evans-Cowley \*

Associate Dean for Academic Affairs and Administration  
The Ohio State University Knowlton, College of Engineering

### Matthew Ferris \*

Vice President  
E.P. Ferris and Associates

### Jamie Greene \*

Principal  
ACP Visioning & Planning, Ltd.

### Ralph Ireland \*

Chief Development Officer  
Steiner + Associates

### Kyle Katz \*

President  
The Katz Interests, Inc.

### Keith Myers \*

Principal  
MSI + KKG

### Vince Papsidero, AICP \*

Planning Administrator  
City of Columbus

### Nancy Reger \*

Deputy Director, Transportation  
MORPC

### Kyle Rooney \*

Vice President/General Manager  
Turner Construction Company

### James Schimmer \*

Director  
Franklin County—Economic Development and Planning

### Joe Williams \*

Partner  
Wagenbrenner Development

## ULI Columbus Project Staff

### Alicia Gaston

District Council Coordinator

### Marianne Eppig

Intern

\* ULI MEMBER



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### David Mayhood

Chair, District Councils

### Marilee Utter

Executive Vice President, District Councils

## ULI Project Staff

### Uwe Brandes

Senior Vice President, Initiatives

### Heidi Sweetnam

Vice President, District Councils

### Betsy VanBuskirk

Creative Director

### James Mulligan

Senior Editor



## Urban Land Institute

### **Urban Land Institute**

1025 Thomas Jefferson Street, NW  
Suite 500 West  
Washington, DC 20007-5201  
[www.uli.org](http://www.uli.org)



## Urban Land Columbus Institute

### **ULI Columbus**

1196 Hope Avenue  
Columbus, OH 43212  
<http://columbus.uli.org>