A TRANSPORTATION SYSTEM THAT

ALLOWS THE HEALTHY CHOICE TO BE THE EASY CHOICE

WILL CONTRIBUTE TO HEALTHIER LIFESTYLES WITHIN THE COMMUNITY.

3 CHAPTER 3: EXISTING CONDITIONS & DEMOGRAPHICS

Miamisburg is situated in southwestern Ohio along the banks of the Great Miami River in Montgomery County. It is part of the Dayton Metropolitan Statistical Area (MSA), also known as Greater Dayton or the Miami Valley, which draws its name from the Great Miami River and the native Miami people who inhabited the area prior to European settlement.

The 2020 U.S. Decennial Census determined Miamisburg to have a population of 19,923. This represents a 1.3% drop from the 2010 census. In that same period, Montgomery County population stagnated, growing by less than 1,000 residents (0.1%), and the Dayton MSA grew by 1.6% when accounting for the loss of Preble County to the Springfield MSA. Ohio's population also grew by more than 2% between 2010 and 2020. Despite population loss from the 2010 census, Miamisburg's population is still slightly above the 2000 census, and far above the 1980 census. This data indicates Miamisburg's population stabilized after two decades of strong growth.

It should be noted that the 2020 COVID-19 Pandemic created issues in capturing census data. For example, the U.S. Census Bureau typically relies on door-to-door canvasing to capture data and obtain census responses from those who may not complete the mail-in forms. Because of uncertainty caused by COVID-19, and the need for social distancing, this practice was not possible. Additionally, the Census Bureau could not set up informational tables at events throughout the nation. Attendance at these events is crucial to spreading awareness for the Decennial Census. Because of these and other challenges, there is a higher likelihood of low counts than in previous censuses. These factors likely had an impact on the accuracy of the count in Miamisburg.

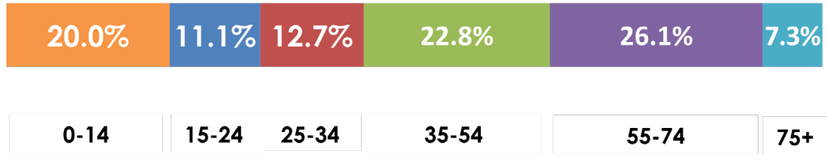
» Table 3-1 Population from 1980

Data from U.S. Census Bureau Tables DP-1, PHC-T-3, & Population Report P-25 No. 276

Year	Miamisburg		Montgomery County		Dayton MSA		Ohio	
	Population	Change	Population	Change	Population	Change	Population	Change
2020	19,923	▼ -1.3%	535,840	▲ 0.1%	814,049 [1 2]	▼ -3.3%	11,799,448	▲ 2.3%
2010	20,181	▲ 3.6%	535,153	▼ -4.3%	841,502 [3 4]	▼ -11.5%	11,536,504	▲ 1.6%
2000	19,489	▲ 9.2%	559,062	▼ -2.6%	950,558	▼ -0.1%	11,353,140	▲ 4.7%
1990	17,843	▲ 20.6%	573,809	▲ 0.4%	951,270 [5 6]	▲ 1.0%	10,847,115	▲ 0.5%
1980	14,797		571,697		942,083		10,797,630	

Miamisburg had a median age of 40.4 according to the 2021 American Community Survey (ACS), nearly two years higher than the U.S. median age of 38.8. Miamisburg, like many communities across the nation, has experienced an average age increase. By 2035, the number of Americans 65 and older is projected to outnumber those under 18 for the first time ever. An aging population uses roadways, sidewalks, and bicycle lanes in a different way than children or younger adults. Additionally, men and women experience transportation networks in separate ways, especially during hours of darkness and on public transit. These points provide valuable context for future transportation planning actions. Transportation investments may need to account for an older than average user base.

Current makeup of Miamisburg's population:



» Table 3-2: Population by age in Miamisburg

Source: 2021 ACS-Year Estimates, Table S0101

Families make up a large portion of households in Miamisburg, with over 70% of households being classified as families. Families are defined by the U.S. Census Bureau as a household consisting of "two people or more related by birth, marriage, or adoption and residing together." Of all households in Miamisburg, around a third (31%) have children under 18. Miamisburg's family (3.11) and household (2.66) size is on par with national and state averages, while being larger than regional averages.

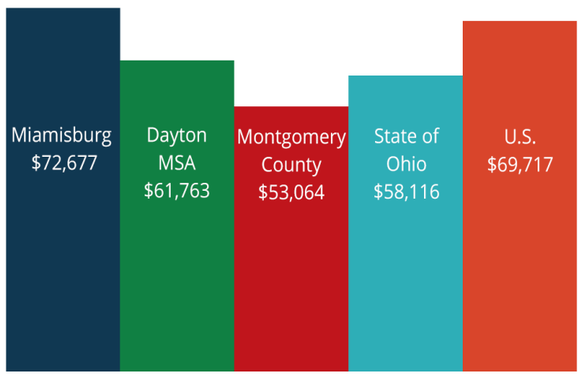
Despite a generally aging population, there is still a sizable population of children and families, and will continue to be as Miamisburg continues to be an attractive place to raise a family. Thus, Miamisburg will still need to plan for active transportation that includes children and young families. See table 4-2 above for more information.

Annual Median Income

Annual median household income (AMHI) in Miamisburg is $72,677, slightly higher than the U.S. median of $69,717. Regionally, Miamisburg has a moderately higher median household income than Montgomery County, the Dayton MSA, and the State of Ohio.

[1]U.S. Census Bureau, National Population Projections, 2017, www.census.gov./programs-surveys/popproj.html
[2]U.S. Census Bureau, https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html

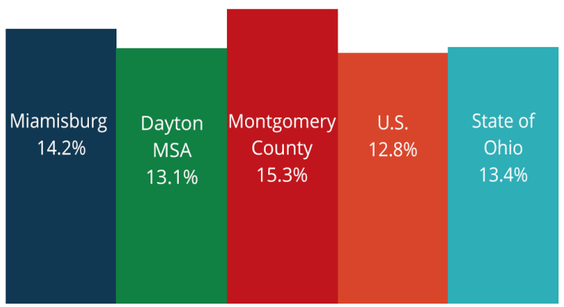
CHAPTER 3: EXISTING CONDITIONS & DEMOGRAPHICS



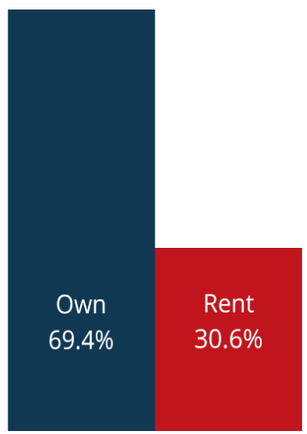
MEDIAN HOUSEHOLD INCOME

Higher AMHI translates into lower rates of family poverty than all of the above geographies and is lower than the national rate. However, Miamisburg has a higher individual rate of poverty than all but Montgomery County. Higher rates of poverty, or lower median household income lead to higher rates of public transit usage, as the ability to afford a vehicle diminishes as income decreases. They may also lead to a higher number of those who walk or bike to their final destination.

The rate of owner-occupancy in homes is nearly 70% (69.4%), far higher than the region, state, and nation. Home values in Miamisburg are higher than regional and state medians, but significantly lower than the national median home value. All socio-economic metrics can be found in detail in the charts on this page.



FAMILY POVERTY RATE



OWN VS RENT

LABOR & EDUCATION

When analyzing 2022 data (the latest year available with complete data), Miamisburg has a higher rate of unemployment when compared to the nation and region (5%). Labor Force Participation (the percentage of those 16 years and older) is roughly similar to the nation and region. Miamisburg lags behind others in levels of post-secondary education, but excels in high school graduation rates, being well above the national average. The percentage of Miamisburg residents who have completed a graduate degree is nearly 50% lower than the national average and is one-third lower than the regional average. For bachelor's degrees, Miamisburg is seven percentage points lower than the national average (26.4% versus 33.7%) and is nearly five points lower than the regional average (26.4% versus 31%).

The type and number of jobs in certain industries can have a strong effect on transportation networks. The economy of Miamisburg offers employment opportunities in a variety of industries, totaling an estimated 12,231 jobs (U.S. Census Bureau, 2021). Health and Social Services is the largest industry by employment, due in part to the large footprint of Kettering Health, Miamisburg's largest employer. Because of the number of people employed, Kettering Health may draw significant traffic into its site in Miamisburg, creating potential traffic issues.

Other industries include Manufacturing, reflected in the large presence of Avery Denison and Yaskawa Motoman Robotics, as well as management of companies and enterprises. Manufacturing businesses tend to drive substantial semi-truck traffic, which can not only have an effect on the condition of roads due to weight, but also on flow due to the size and slow speed of delivery trucks. Retail, Trade, Accommodations, and Food Services round out the top five industries in Miamisburg. Retail and Food Service, in particular, can drive increased traffic to their locations, especially given the propensity of retail and food establishments to cluster together in regional centers. The large number of employees in these industries means there are many establishments, which in turn may lead to increased traffic from customers.

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TRANSIT SERVICES AND CONNECTIVITY

The Greater Dayton Regional Transit Authority (RTA) serves communities within Montgomery County and parts of Greene County, Ohio. As of December 2023, they provide service to 16 fixed routes as well as four on-demand service zones. Fixed Routes 18 and 19 currently serve the City of Miamisburg, with a roughly 45-to-50-minute headway on weekdays, and 50-to-55-minute headway on weekends. These routes are supported by On-Demand Service Zone #1.

Current Service

RTA currently offers two routes, #18 and #19, with service in Miamisburg. Bus #18 connects downtown Miamisburg with downtown Dayton in a loop format, stopping in downtown West Carrollton, as well as Moraine, to the north. Bus #19 offers service from RTA's South Transit Center on Lyons Road to east of the city, to downtown Dayton's Wright Stop Plaza Transit Center. See Map 4-1.

Service along Bus #19's route has a limited impact on Miamisburg residents. The line serves the retail area at the far eastern edge of Miamisburg. The line does not enter Miamisburg's residential areas, and thus does not provide residents with transit access to those retail areas on the east side of I-75, which are difficult and dangerous to access on foot or bicycle from Miamisburg's residential neighborhoods. It does, however, bring visitors into the city's retail areas to spend money and help businesses in the area. Residents of Miamisburg would need to ride Bus #18 from downtown Miamisburg to an area outside of the city to catch the #19 Bus to the retail area east of I-75.

RTA also offers a dial-a-ride on-demand service. This service is offered in areas of the Miami Valley where service is non-existent or limited. Users can schedule a ride with the Uber or Lyft apps, or by calling RTA. Services are offered seven days a week, 20 hours a day.

Proposed Redesigned & New Service

The RTA is working to better connect Dayton to suburban and rural communities including Miamisburg. Both Bus Lines #18 and #19 are proposed to be adjusted while a new route, the West Connector, is proposed. Adjustments to the existing lines will be of minimal consequence to Miamisburg, with most adjustments to routing and stops occurring upstream, closer to Dayton. See Map 4-2.

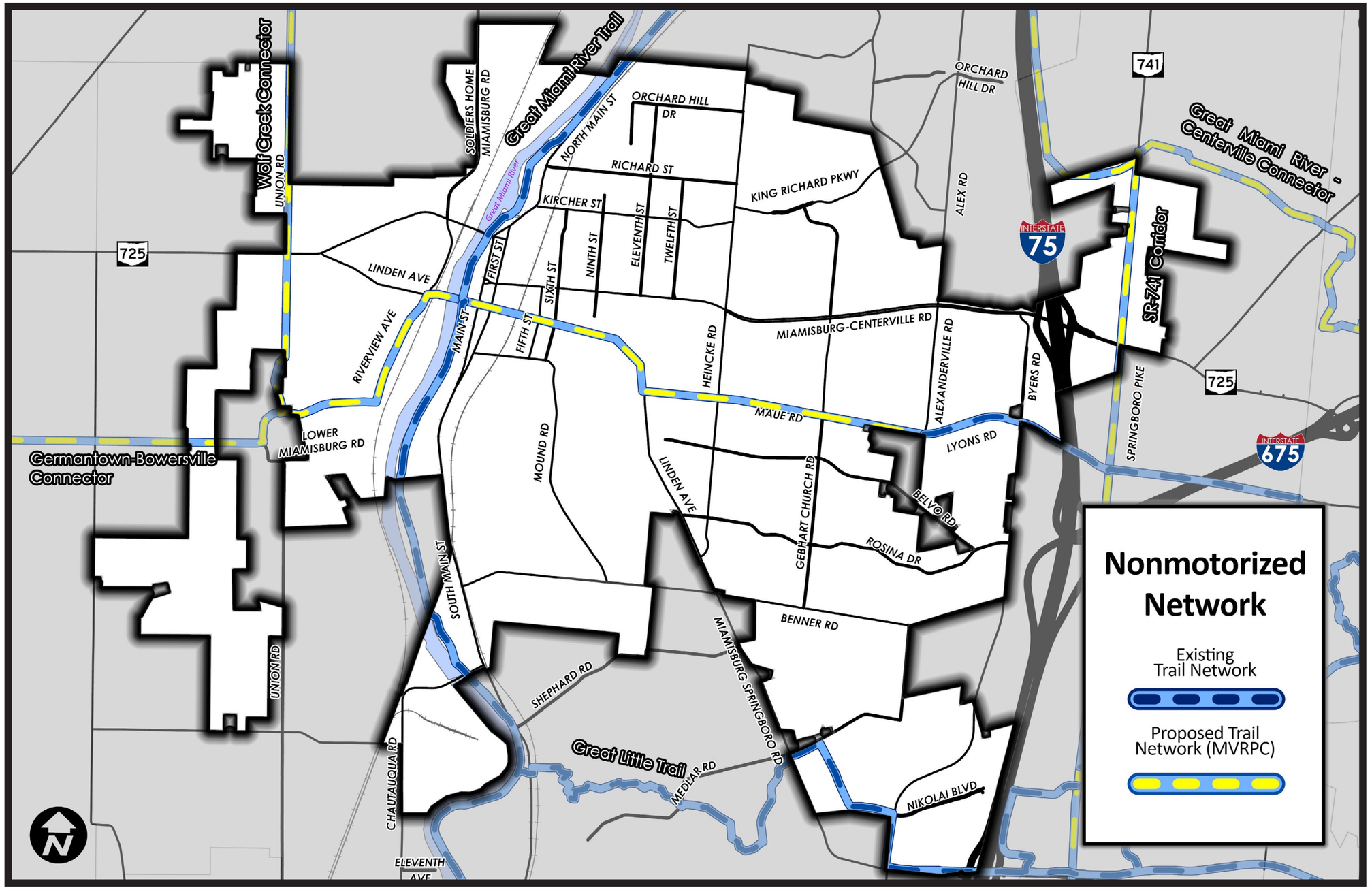
The West Connector is a proposed new line, which would serve Miamisburg in a north/south alignment. Routing would see the new line enter Miamisburg along Alex Road before heading east and stopping at the South Transit Center. Service would continue south before looping back north. The northern terminus would be at the Northwest Transit Center, in northwest Dayton. The West Connector would provide service to the west side of the Dayton region, while also providing east/west access across I-75 for Miamisburg residents.

NON-MOTORIZED TRANSPORTATION

Non-motorized transportation is one of the most essential elements of a transportation network. This is because all trips, regardless of mode, begin and end with the pedestrian. It is important to build a transportation network that not only accommodates but plans for pedestrian and bicycle activity. Common elements of a non-motorized network include on-street and off-street bike trails, signed bike routes, and sidewalks.

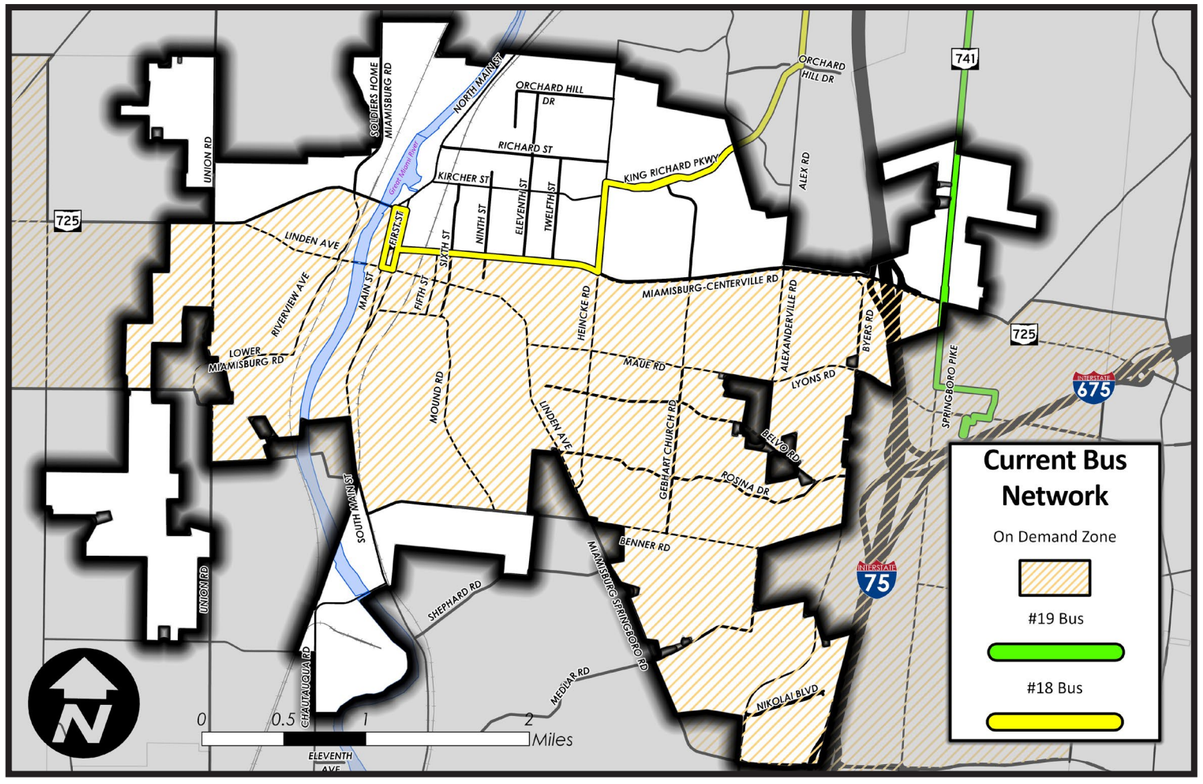
In order to advance the construction of a non-motorized network of transport, changes in policy and design are essential. Dutch cities such as Groningen, where half of all trips are completed on a bicycle, mandate construction of bicycle infrastructure for all new development. Many countries in northern Europe see such infrastructure as an essential element of urban design and an important part of the overall fabric of the city. Elements of complete bicycle infrastructure may include, but are not limited to: separated lanes, separate signalization of intersections, public bike repair stations, off-street bicycle trails, bicycle racks and parking, and even bicycle-specific signage.

For pedestrian infrastructure, sidewalks are the first and most basic step in providing walkable neighborhoods. However, the urban form and built environment have a strong influence on the true walkability of a place. Zoning, design guidelines and construction standards & specifications must align to facilitate creation of spaces within the City that can create and leverage pedestrian-friendly and accessible spaces. Pedestrian-friendly, or pedestrian-scale, as popularized by Danish architect Jan Gehl, is an essential part of cities, and describes an urban environment which can be experienced and enjoyed on foot. Spaces designed in this manner encourage pedestrian activity and walking, creating vibrant neighborhoods and places for people and businesses alike.

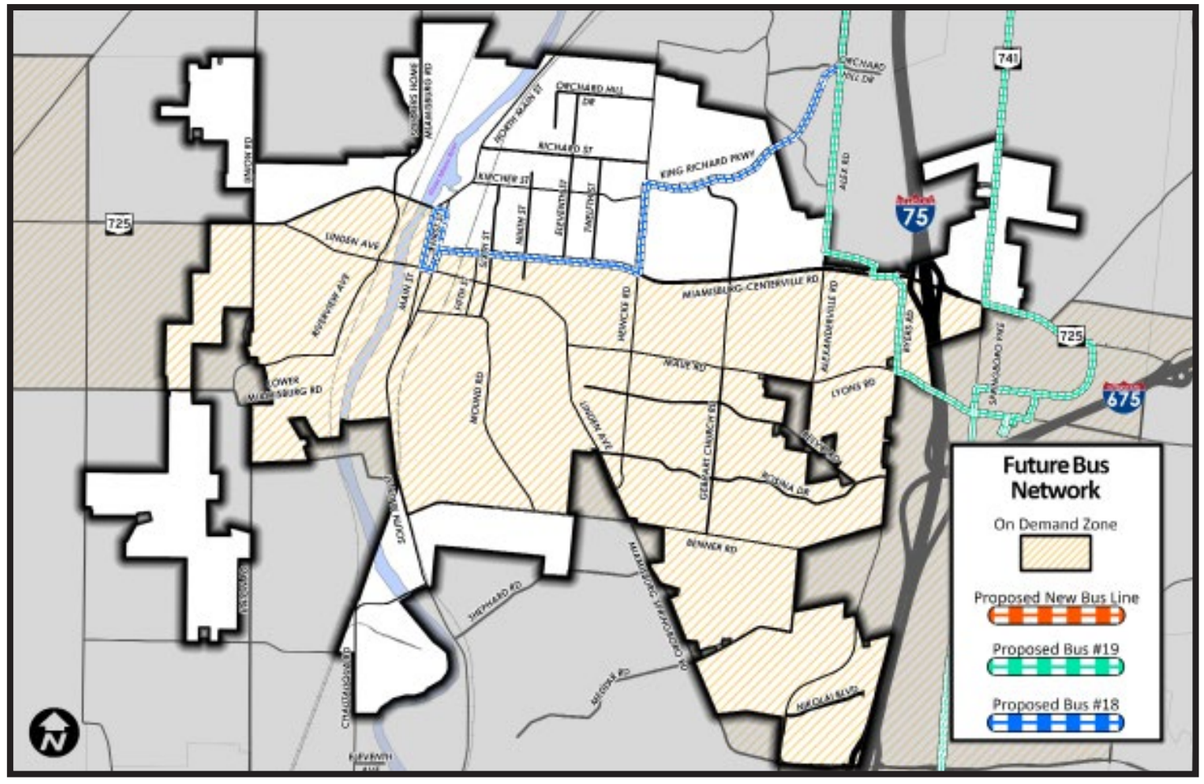


» Map 3-1: Miamisburg's Non-Motorized Network

CHAPTER 3: EXISTING CONDITIONS & DEMOGRAPHICS



» Map 3-2: Miamisburg's Current Bus Network



» Map 3-3: Potential Future Bus Network

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Existing Non-Motorized Transportation Network

Bicycle and pedestrian travel have increased in Miamisburg as the network of trails and sidewalks has grown over the years. Plans call for continued investment in facilities that allow citizens to leave their car at home and reap the health benefits of walking and bicycling as a regular mode of transportation.

Sidewalks exist on many of Miamisburg's streets and roads. Construction of sidewalks typically corresponds with the year in which the home was built, or in some cases, the jurisdiction in which the home was built. For example, a neighborhood of homes built in the 1990s most likely has sidewalks. However, if that home was built in a township, which typically lacks regulations requiring improvements like sidewalks, that neighborhood is unlikely to have sidewalks. Additionally, long rural or semi-rural two-lane roads are not as likely to have sidewalks. Most sidewalks on local and residential streets are poured concrete, four or five feet in width. The vast majority, if not all, of the residential sidewalks within Miamisburg are detached, meaning there is a tree lawn/park strip between the sidewalk and the road.

Dedicated bike paths and trails, aside from providing a recreational amenity to the area, also operate as another mode of non-motorized travel. Well-planned and complete trail and path systems afford people the opportunity to walk, bike, or even scoot to their destinations when they would have otherwise driven. One example is the Great Miami River Trail, which runs along the Great Miami River. It covers 77 miles, beginning in Fairfield and ending in Piqua, and cuts through the heart of Miamisburg.

In addition to the Great Miami River Trail, the Great Little Trail also serves Miamisburg. Beginning along the Great Miami Trail between Crains Run Road and Shephard Road in unincorporated Miami Township, it traverses through mostly unincorporated territory just south of Miamisburg in an east/west fashion. The trail enters the City near the intersection of Miamisburg-Springboro Road and Medlar Road, moving mostly along the south edge of the city until passing over I-75 and exiting the city. From its western terminus at the Great Miami River Trial to the point it enters Miamisburg, the trail is completely divorced from the public right-of-way. From this point east, it runs as a separated trail along the road. The Great Little Trail ends at its current eastern terminus on West Social Row Road, on the border to Centerville and unincorporated Washington Township.

Miami Valley Regional Planning Commission (MVRPC) assists in planning for hiking and biking trails, including off-street routes like the Great Miami River and Great Little Trails. Map 4-3 shows not only the existing trails, but those at various stages of planning from MVRPC. Those trails connect Miamisburg to the greater Dayton region and, through inter-regional planning, to far-reaching destinations like Cincinnati and Columbus via statewide trails. However, while these trails may be planned, they still require funding mechanisms and plans at the local level to ensure they come to fruition.

The Germantown-Bowersville Connector presently terminates at the intersection of Lyons Road and Alexanderville Road. It is projected to continue westbound on Maue Road, to Linden Ave., then across the Great Miami River to southbound Riverview Ave. before heading westbound on Lower Miamisburg Road and out to Germantown. The Wolf Creek Connector is planned to start/end on the Germantown-Bowersville Connector at the city limits along Lower Miamisburg Road. This trail will connect north to Englewood, intersecting planned trails that will provide access to Moraine, Dayton, and Brookville.

On the east side of the city, east of I-75, two proposed trails will connect the city to regions east, north, and south. The Great Miami River – Centerville Connector proposes to connect West Carrolton/ Moraine with Centerville, intersecting the planned SR-741 Corridor Trail along the way. The SR-741 Corridor Trail is partially built from its southern terminus south of Springboro to the Montgomery County line, as well as along a small stretch of unincorporated Montgomery County south of I-675. When completed, the trail will connect Springboro in Warren County with a trail network leading Dayton and beyond.

To encourage the development of these trails and others, the city should begin the process of creating an Active Transportation Plan. This plan would allow for extensive planning of both off- and on-street trails and paths to make non-motorized transportation not only safer, but more efficient, accessible, and equitable. The planning process would also allow for robust public engagement to understand the needs of the public.

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NETWORK UTILIZATION

Network utilization describes who is walking and bicycling, where, and how often. Several factors impact network usage, including land use and development patterns, the presence or absence of active transportation facilities, proximity of destinations, safety concerns, and socioeconomic need. Determining the level of walking and bicycling activity in Miamisburg provides an understanding of where people are already walking and bicycling and where there may be a lack of infrastructure, because there are low levels of walking and bicycling activity.

The project team used StreetLight Data to analyze levels of walking and bicycling and to better understand where and when walking and bicycling activity is occurring within Miamisburg. StreetLight is a data analytics company that specializes in traffic and transportation analysis. Using a combination of submitted data and gathered locational data from smart devices, StreetLight is able to provide accurate traffic analysis and data for nearly any road or pedestrian trail. Using StreetLight, analysis of bicycle and pedestrian activity allows for examination of trips based on destination and origin from delineated geographic areas. Based on the analysis, the following areas have high levels of walking and biking:

Walking activity:

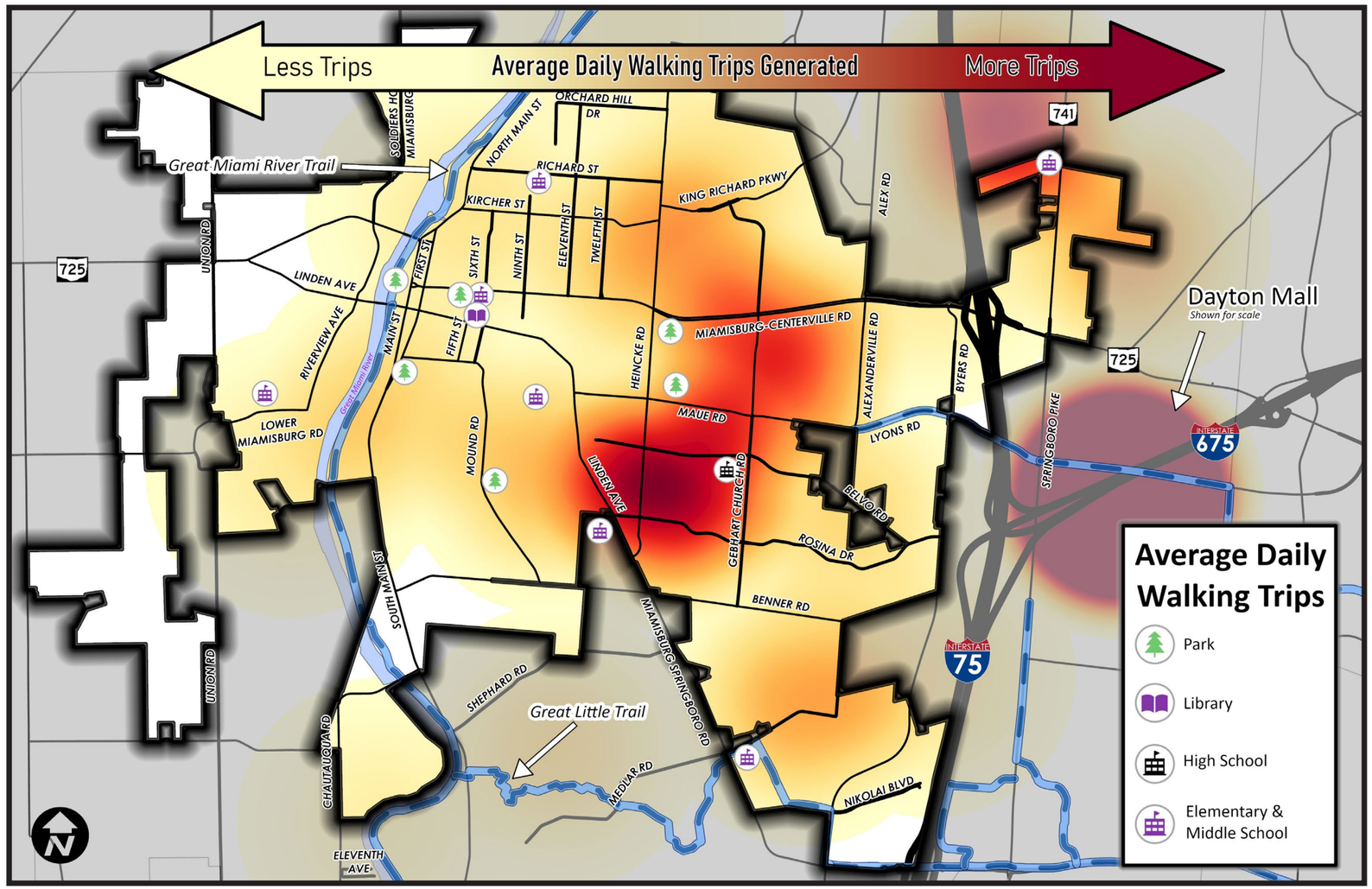
- Downtown
- Kinder Elementary School
- Medlar View Elementary School
- Miamisburg High School
- Mound Elementary School

Bicycling activity:

- Southwest Miamisburg, on the east side of the Great Miami River, near Great Miami River and Great Little Trail trail heads
- Downtown Miamisburg north of SR-725
- Downtown Miamisburg south of SR-725
- Southeast Miamisburg, bounded by Benner Road and Miamisburg-Springboro Road / Austin Blvd, and I-75

StreetLight data was also leveraged to understand where pedestrian trips start and stop. Map 4-4 demonstrates parts of Miamisburg with the highest number of trips. Those areas around Miamisburg Middle and High Schools, as well as the area near Kettering Health, have the highest number of walking trips.

Somewhat surprising is that the downtown area does not have a high density of trips. Possible explanations for this include the relative high number of trips in other areas (Dayton Mall, Miamisburg Middle and High School) relative to downtown. Another explanation could be that people simply are not taking walking trips to downtown, opting instead to ride their bike or drive. More expectedly, rural areas to the extreme west and south have relatively few walking trips. Dayton Mall and surrounding retail, which resides mostly outside of Miamisburg, generated the highest number of pedestrian trips, mostly due to people walking from one business to another. The visualization of trips in that area was left on the map for demonstrative purposes.



» Map 3-4 shows density of bicycle trips in Miamisburg. Data shows trends that are not unexpected. For instance, the largest number of bike trips starting or stopping are concentrated near downtown, and to the south of Miamisburg. Density of trips in these areas coincides with existing bicycle infrastructure with the Great Miami River.

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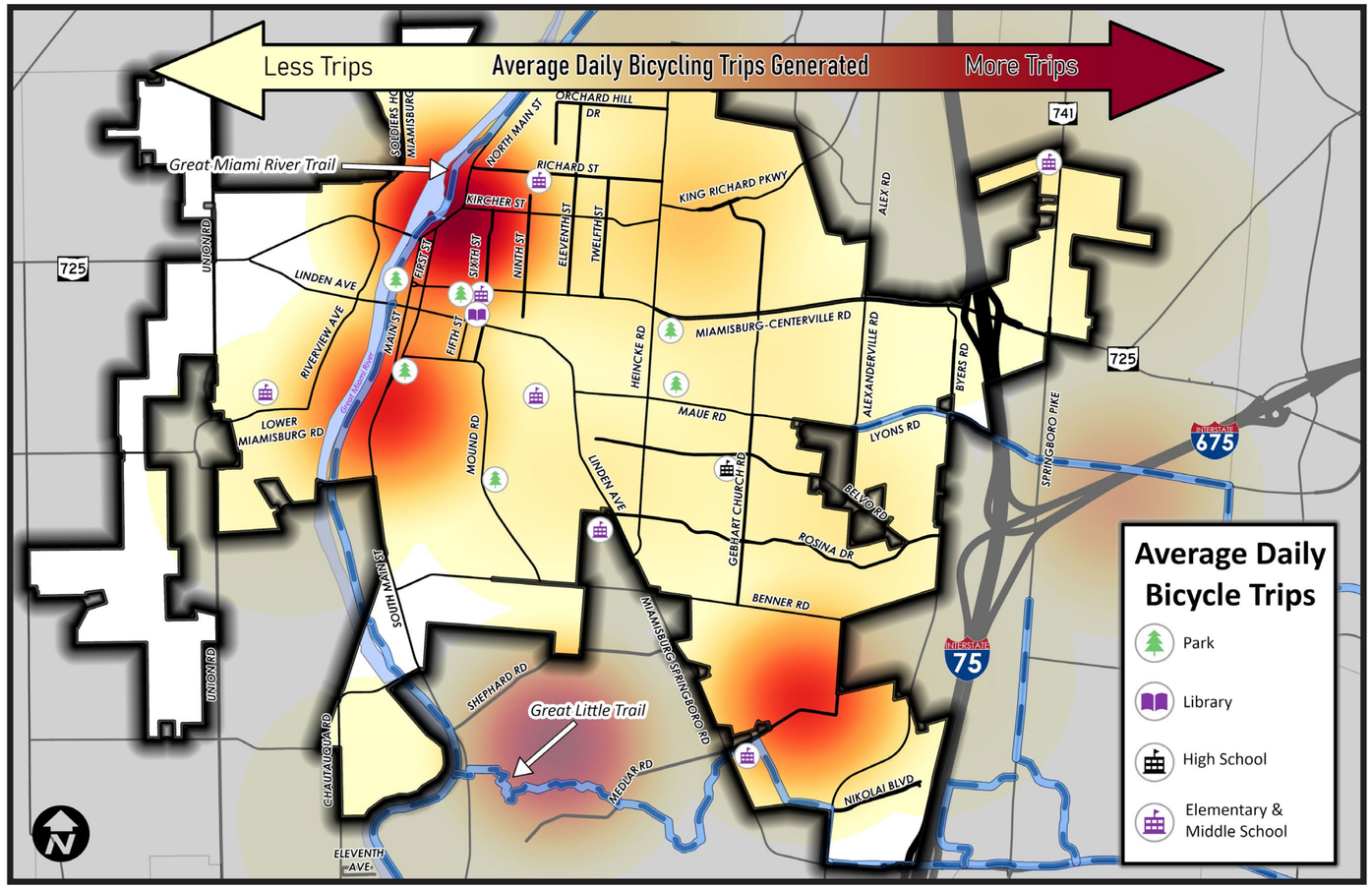
Areas of high need and high demand should be prioritized for bicycle and pedestrian improvements because residents in these areas likely rely more heavily on active transportation options for getting around.

The abundance of trips in areas with strong biking and walking facilities is a strong indication that people will utilize those facilities if they are provided. Therefore it is important to look at areas lacking bicycle and pedestrian infrastructure to determine if those facilities could be a catalyst for increases in those modes of transportation. For example, the relatively low levels of walking in northern portions of Miamisburg, despite proximity to destinations, could be explained by lack of safe walking and biking routes.

Areas of high need and high demand should be prioritized for bicycle and pedestrian improvements because residents in these areas likely rely more heavily on active transportation options for getting around. High demand areas, or those areas that would have high utilization of active transportation options, include: the neighborhoods surrounding the downtown core, neighborhoods in north Miamisburg, Miamisburg Middle School, and Medlar View Elementary School. When overlaid with areas of high need, there is clear overlap between some areas of high demand and some areas of high need. These are the parts of Miamisburg that should be a priority for active transportation improvements.

Analysis of high activity areas as shown above, as well as low activity areas, demonstrates important patterns and provides potentially important insight into transpiration networks and use patterns. For instance, while there was low to moderate pedestrian travel to Downtown, there was virtually no bicycle travel with a final destination within Downtown and originating from other areas of Miamisburg. Is this because there were no bicyclists on the streets, or was it because those users on bicycles originating from within Miamisburg did not have a final destination of Downtown, instead stopping Downtown on the way to the Great Miami River Trail and beyond? Is there a need for additional bicycle infrastructure downtown to draw bicyclists to downtown businesses? The only way to determine the answer is to conduct in-person counts and studies of pedestrian and bicycle traffic via an active Transportation Plan. It should be noted that, while the data from StreetLight is generally trustworthy and relevant, it is not absolute. Absent physical counts and observational studies conducted on site, the walking and bicycling data provided is a rough approximation. Data is then weighted by StreetLight based on factors such as population, land use patterns, and number of observed trips generated based on cellular data.[4]



» Map 3-5 shows density of bicycle trips in Miamisburg. Data shows trends that are not unexpected. For instance, the largest number of bike trips starting or stopping are concentrated near downtown, and to the south of Miamisburg. Density of trips in these areas coincides with existing bicycle infrastructure with the Great Miami River Trail and the Great Little Trail.

[4]Streetlight Insight. (2023). StreetLight Pedestrian Volume Methodology and Validation [White Paper]. https://tinyurl.com/streetlight-insight

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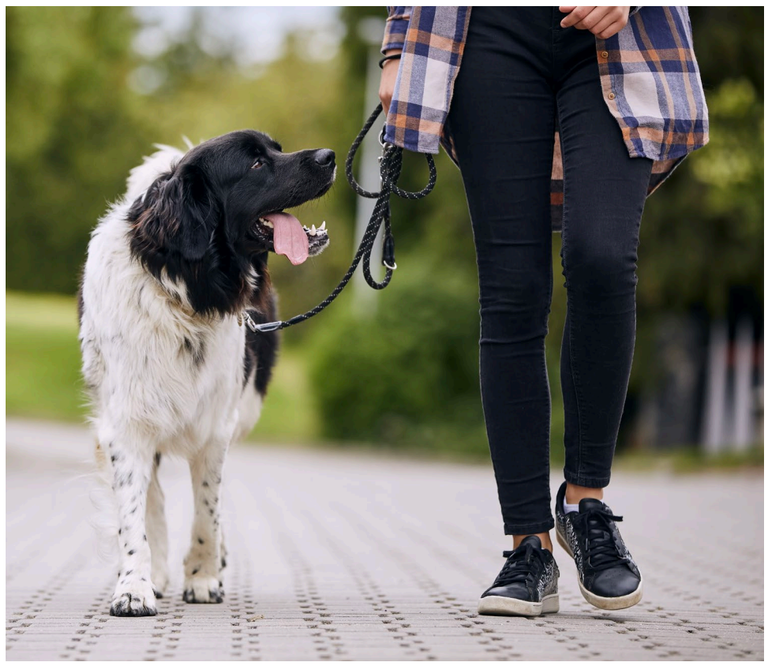
BICYCLE AND PEDESTRIAN CONNECTIVITY

Just as important as providing bicycle and pedestrian facilities and improvements is connecting them together. Without a coherent and accessible network, these facilities only serve to increase maintenance costs while providing minimal benefit to the community. Disjointed networks fail to create value and prosperity. Complete and connected non-motorized transportation networks act as the foundation of a prosperous, healthy, accessible, and equitable community.

Using readily available GIS data, publicly available from sources like Montgomery County and Miami Valley Regional Planning Commission, the non-motorized transportation network was evaluated to investigate the existing, planned, and missing sidewalks and bike routes within city. Sidewalk connectivity gaps were flagged where sidewalks were not observed or identified by the city or others as planned on either side of a roadway.

Miamisburg, with assistance from the Miami Valley Regional Planning Commission (MVRPC), the Dayton region's federally mandated Metropolitan Planning Organization (MPO), has made strides in planning and expanding the non-motorized network. Two dedicated bicycle/multi-use trails connect Miamisburg to other communities. Sidewalks across the city provide accessibility for pedestrians. However, three primary barriers exist within the city that currently impede pedestrian access.



Barrier One — I-75 occupies a major swath of north-south land on the eastern edge of the city. It acts as a barrier between primarily residential areas to the west and the retail center to the east. The main east-west roadway in the city, Miamisburg-Centerville Road (SR-725), has no pedestrian facilities and thus provides no access to the substantial retail area east of I-75. There are currently two other modes of access to the east side of I-75, but only one of those allows access to the retail areas east of I-75 and north of I-675. That single pedestrian connection across the highway is on Lyons Road on the southern reach of the city.

Residents must rely on either a motor vehicle or the circuitous bus service to access the retail center from most of the city. This represents a significant gap in pedestrian connectivity. While the pedestrian access is sufficiently separated from the high-speed traffic on Lyons Road by guardrails and jersey barriers, and the access is sufficiently wide in many parts, the access is still far removed from most of the residential areas of Miamisburg. The additional access point is via the Great Little Trail, described earlier in this report. The upcoming ODOT Exit 44 project will add sidewalks between Byers Road and State Route 741.

Barrier Two — Miamisburg-Centerville Road (SR-725) runs east-west through the center of the city, acting as the major link from downtown to I-75. It is wide, with crossings well over 100 feet in length. Crossings are at grade, with four marked and signalized crossings located along the most dangerous stretch of roadway. In these areas, traffic is fast-moving, at speeds of 50 MPH or greater.

Barrier Three — Finally, the Great Miami River presents the third barrier to connectivity. Much of Miamisburg's existing agricultural land, and thus the lion's share of develop-able greenfield property, is west of the river. Two bridges exist and cross the river roughly a half mile from one another, with one on either side of downtown. Sidewalks are present on both bridges; however, each bridge has a sidewalk on the south side only. These sidewalks are also quite narrow at five feet wide and are exposed to the street without any separation, other than a tall curb. This leaves pedestrians sandwiched between a drop into the river and relatively fast-moving traffic.

There are additional pockets of isolation in the city which create islands lacking access to the wider system. These areas are typically older developments, or those developed prior to incorporation. The only modern area lacking wider connectivity is in the vicinity of Miamisburg Middle School. The school and the adjacent neighborhood have good internal sidewalk connectivity on their own. South Linden Avenue, where the school is located, and bounding the Fair Meadows and Terrington Place subdivisions, has stretches of road without sidewalk. Circumstances are identical for Mound Road, which provides access to those subdivisions from the west, and in northwest Miamisburg near the Orchard Hill Louis-Williams area.

The project team conducted a digital inventory of existing sidewalks, bike lanes, and multi-use paths, and trails using available GIS data and current aerial imagery. The inventory helped the team understand the completeness and connectedness of the current Non-Motorized (Active) Transportation System through a gap analysis that examines physical breaks in an active transportation network, such as sidewalk gaps or missing connections between bicycle facilities as well as generators to biking and walking trips.

Major gaps in the current network include:

- North Miamisburg, north of Richard Street, west of Heincke Road
- Areas west of the Great Miami River
- Connections across SR-725, east of Heincke Road
- Benner Road and points south
- Linden Road south of Maue Road
- Mound Road south of S. 6th Street
- Belvo Road between S. Gebhart Church Road and Jamestown Drive

Destinations currently not reasonably connected by walking or biking facilities include:

- Miamisburg Middle School
- H.V. Bear Elementary School
- Medlar View Elementary School
- Laveta M. Bauer Elementary School
- Dayton Mall and surrounding commercial area
- Kettering Health

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The historical development pattern and built environment is important in the context of transportation, streetscape, and thoroughfare planning.

LAND USE

Miamisburg is a suburb of Dayton and is part of the Dayton Metropolitan Area (Dayton MSA, classified by the U.S. Census Bureau as the Dayton-Kettering MSA). It is far enough outside of Dayton to have grown independently as its own city while others developed as communities that identified as part of the Dayton area. The result is a unique downtown area not found elsewhere in the Miami Valley outside of Dayton.

Being far from Dayton and having it's own development pattern, Miamisburg's Downtown area thrived and grew to support a vibrant and independent economy, traits that are reflected in its shared streetscapes, where all modes of transportation merge into a highly walkable and accessible area. It is only in the last 50 years that the Dayton MSA has begun to strongly influence Miamisburg.

Table 3-3: Era of Home Construction In Miamisburg, OH

Timeframe	*Percent of Homes in Miamisburg*
Built 2020 or later	0.1%
Built 2010 to 2019	1.6%
Built 2000 to 2009	11.1%
Built 1990 to 1999	8.6%
Built 1980 to 1989	14.3%
Built 1970 to 1979	12.6%
Built 1960 to 1969	12.5%
Built 1950 to 1959	15.8%
Built 1940 to 1949	4.5%
Built 1939 or earlier	19.0%

Historical Development Patterns

The growth of Miamisburg can be segmented into four (4) distinct eras. Prewar (before 1939), including developments surrounding the original town core; sprawl and growth (1940-1970), including the Town & Country Subdivision with its smaller homes and intermittent sidewalks; suburbanization (1980-2010), seen in developments like Pipestone, with winding roads and large lots; and post-growth (after 2010), exemplified in the Aberdeen development's smaller lots and long cul-de-sac. See Map 3-7.

According to the American Community Survey (ACS) five-year estimates for 2021, roughly one in five (19%) residences were built during the pre-war era. The sprawl and growth era accounted for almost half (45.4%) of all existing homes built in Miamisburg, while the suburbanization period accounted for about a third (34%) of homes. The post growth era, named as such due to the stagnation of state and national population growth in many regions, accounts for just 1.7% of homes built. The low number of homes built since 2010 in Miamisburg is reflective of the housing crisis and lack of homebuilding across the country. However, recent subdivisions such as Chamberlin Crossing (142 homes) and Deer Valley (200 homes), and Aberdeen (133 homes) have added significantly to the number of new homes build or approved for construction. Table 4-3 demonstrates the homes built in Miamisburg by decade.

The historical development pattern and built environment is important in the context of transportation, streetscape, and thoroughfare planning. The hierarchical nature of roadways, moving from local to collector to arterial to expressway, has a hand in shaping the use and development of cities. This is best seen in the historical shift from streets as the public realm to roads as the vehicular realm. In fact, public right-of-way (roads and streets) are found to make up anywhere from 25% to 35% of developed land within a city , meaning those areas strongly influence the design of the city itself.

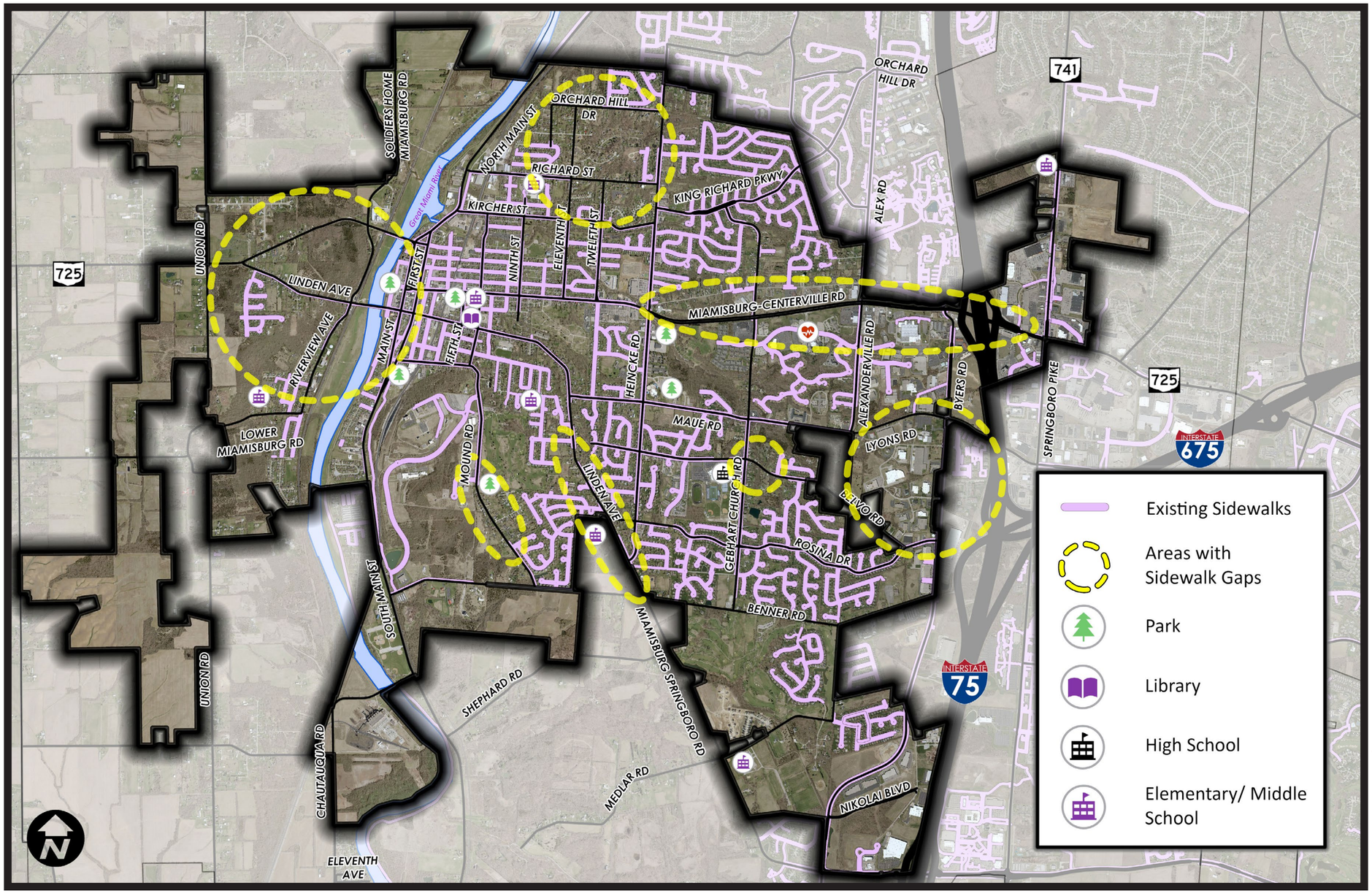
In the historical context, roadways transitioned from narrow traffic lanes and wide pedestrian spaces, centered around pedestrian-scale uses like storefronts and café spaces, to wide traffic lanes and narrow pedestrian spaces. Larger spaces for cars brought higher speeds, eliminating public spaces and storefronts, replacing them with automotive infrastructure like parking lots. Setbacks (the minimum space between a building and the publicly owned right-of-way) became much larger during the 20th century. These are the strong indicators of what is known as sprawl, which happens to be the predominant development pattern in the U.S. during the 20th and 21st centuries. Sprawl, while lacking an agreed-upon singular definition, is identifiable by its characteristics: leapfrog development (which is development that skips adjacent parcels), commercial strip development, single-use development, automobile dominance of accessibility, and a lack of public open space.[5]

These historical patterns of transportation and housing development can be a key indicator in determining when a home was constructed. The era in which a home was built can conversely give insight as to the built form and, thus, the transportation network which connects to that home. In this way, development patterns tell the story of development of transportation networks in Miamisburg.

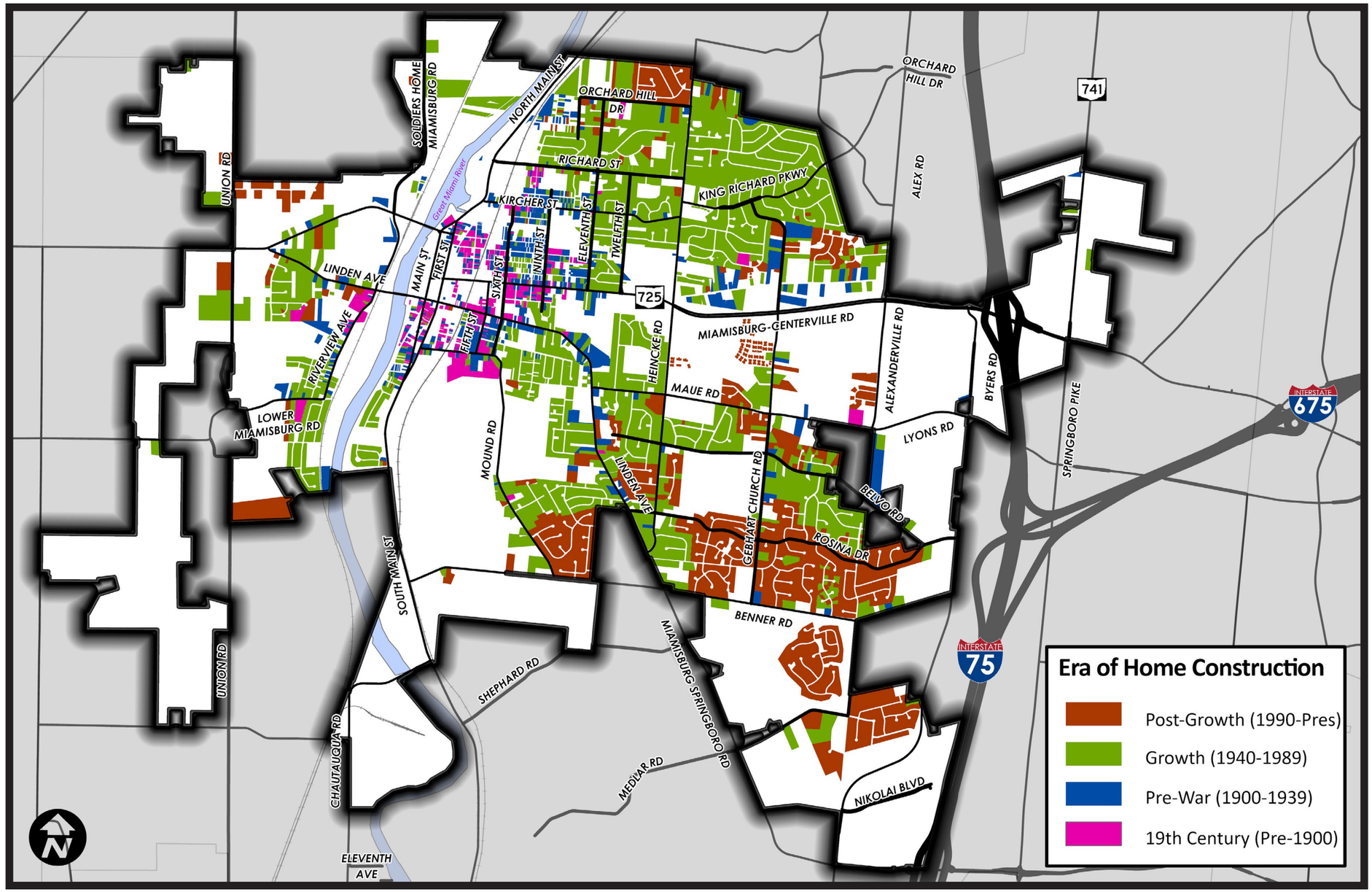
As time passed and lots became larger, homes were built at increasingly far distances from the town core, and from most amenities. This resulted in a city that was built for the personal automobile. Thus, patterns of development in Miamisburg necessitate vehicle ownership to travel and access services, amenities, and even employment.

[5]Gillham, Oliver. (2002). The Limitless City. 1st Edition

CHAPTER 3: EXISTING CONDITIONS & DEMOGRAPHICS



» Map 3-6 visualizes the intersection of lot size and the year a home was built. The map shows a clear pattern of increasing lot sizes as time passes.



» Map 3-7: Historic Development Patterns

CHAPTER 3: EXISTING CONDITIONS & DEMOGRAPHICS

Existing Land Uses

Map 3-8 demonstrates current land uses in Miamisburg. The original downtown area, along the river, shows a mix of uses near one another. Narrow streets and small lots are present, reminiscent of pre- and early-automotive development patterns. Moving from the center to the east, the characteristics of sprawl become increasingly visible. Much of the land is used for single-family residences, and residential lots become increasingly large.

Continuing east from downtown, gridded roadway layouts give way to winding roads and cul-de-sacs with large single-family lots. Commercial areas are sequestered from residential uses, confined to intersections of large roads. These land use patterns culminate in the highway interchange on the far eastern border of Miamisburg. Here, Interstate 75 cuts a large north-south swath, providing quick personal automotive access to points outside of Miamisburg, including Dayton and even nearby Cincinnati.

Land uses in Miamisburg are predominantly residential, as seen in Table 4-4. Residential uses comprise over a third of all uses in Miamisburg (37.5%), with 87% of that being detached single-family residential uses. The result of such widespread detached single-family use is evident on Map 3-8, which shows population densities by census block (the smallest geographic unit of measurement provided by the Census Bureau).

The effects of historical development patterns and land uses on densities is apparent. Density is higher in older parts of Miamisburg, while being generally lower outside of that area, where development happened later. Another observed pattern is the changes in proximal relationship between transportation corridors and residential development across time. Population density is higher near major roadways in older parts of Miamisburg, while density near those same roads is lower in newer parts of the city.

After residential uses, undeveloped land is the second largest land use in Miamisburg, at 14.2%. Map 3-9 shows location of vacant land across the city. A majority of the vacant land is confined to large tracts of land on the periphery of the City. Of the 745 vacant parcels in the city, 24 are greater than 10 acres. Those parcels account for 53% of vacant land, representing significant opportunity for development or open space preservation.

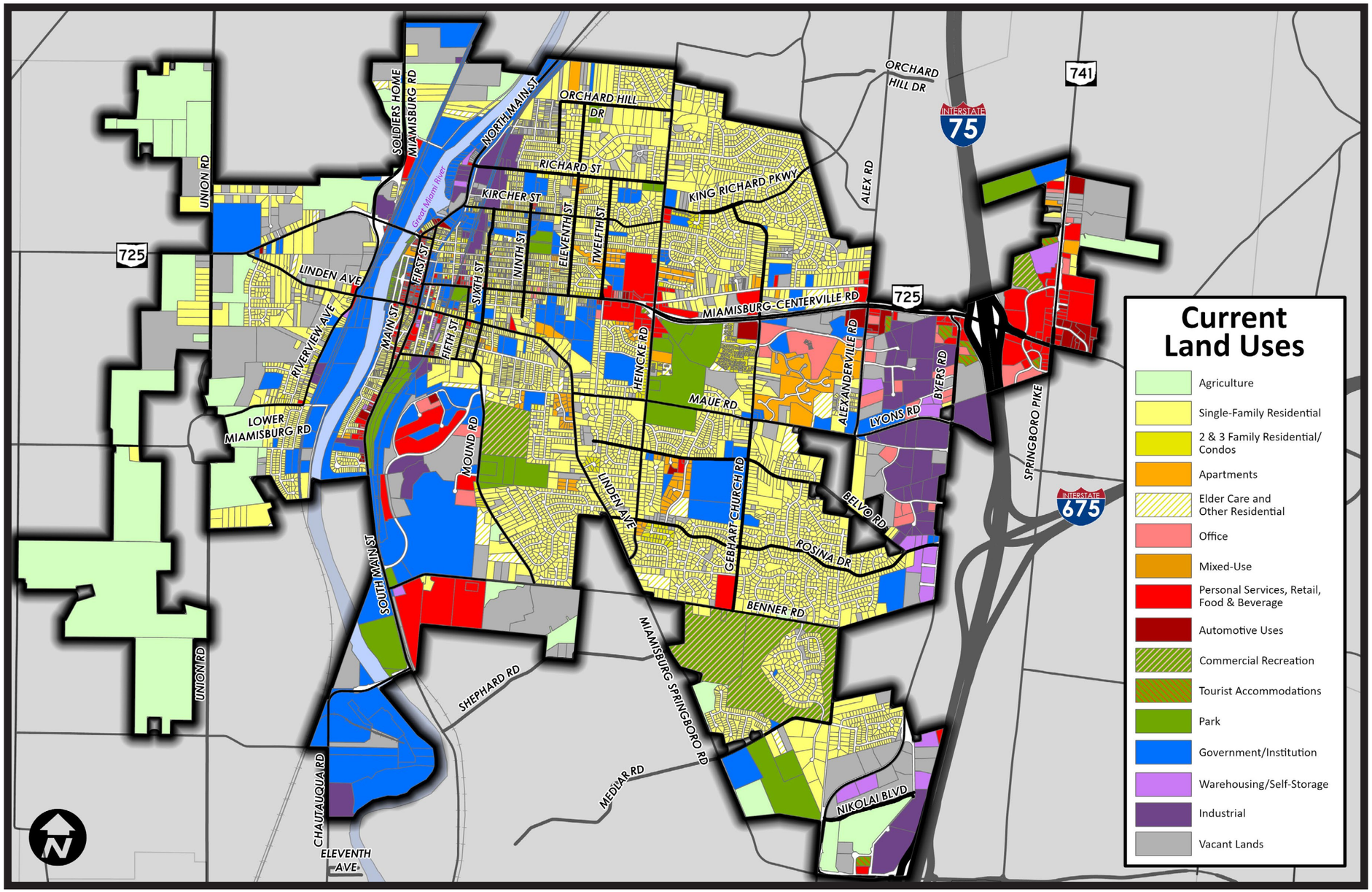
Similarly, agricultural uses occupy 13.2% of Miamisburg land, representing further potential for preserved open spaces or future development. Agricultural uses are not only economically important, many communities are historically connected to their farming heritage and see preservation of farmland as culturally important. From a transportation perspective, agricultural uses require consideration due to the need for large farming implements and trucks that not only require significant lane width and clear space outside of the lanes of travel, but also require additional load-bearing considerations. However, agriculture in western Miamisburg represents the last large-scale opportunity for residential and/or commercial growth within the existing municipal boundaries.

Government and institutional uses, which include government land, schools, and hospitals, accounts for 13.8% of land uses in Miamisburg. These uses may have certain streetscape planning needs, such as hospitals or police and fire stations, which may require both easy pedestrian access and special signalization for immediate and unimpeded street access. The next largest land use in the city is commercial uses, which may include anything from regional shopping centers to corner convenience stores.

These uses in suburban communities like Miamisburg have typically developed with significant parking areas and large setbacks, leaving the building to occupy a small portion of the site. Thus, commercial areas may need significant changes in streetscapes and transportation networks, as they are usually overbuilt for automobiles and do not take the non-automobile user into account. However, commercial areas still need to accommodate higher traffic counts, especially for regional shopping centers and amenity areas (such as grocery stores).

Land Use Category	Acreage	% Of all Uses
Agriculture	912.0	13.15%
Total Agricultural Uses	**912.0**	**13.15%**
Single-Family Residential	2393.0	34.51%
Two- and Three-Family Residential	52.0	0.75%
Condo	26.7	0.39%
Misc. Residential	56.6	0.82%
Elder Care	24.5	0.35%
Apartments	157.4	2.27%
Total Residential Uses	**2597.8**	**37.46%**
Mixed-Use	0.1	0.00%
Offices	68.2	0.98%
Services	18.8	0.27%
Retail	193.4	2.79%
Tourist Accommodations	15.5	0.22%
Commercial Recreation	233.6	3.37%
Misc. Commercial	131.8	1.90%
Warehousing/Self-Storage	100.1	1.44%
Automotive	50.9	0.73%
Total Commercial Uses	**812.4**	**11.71%**
Industrial	355.6	4.85%
Total Industrial Uses	**336.1**	**4.85%**
Parks & Protected Area	334.9	4.83%
Total Parks & Protected Area Uses	**334.9**	**4.83%**
Government/Institutional	984.2	13.82%
Total Gov't & Institutional Uses	**958.1**	**13.82%**
Undeveloped	824.6	14.18%
Total Vacant Uses	**983.7**	**14.18%**
Total Land Area	**6935.0**	**100%**

» Table 3-4: Land Uses in Miamisburg
Source: Montgomery County Auditor's Office, CT Consultants' Analysis



» Map 3-8: Current Land Uses

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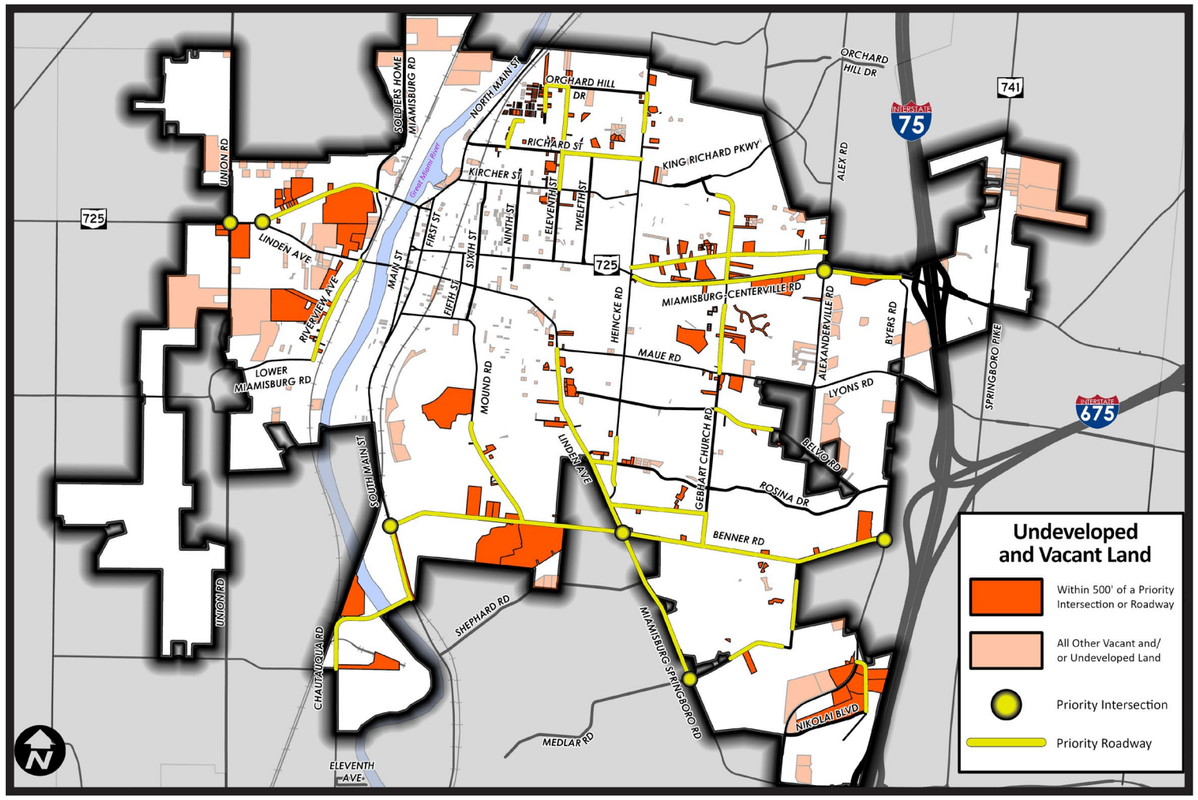
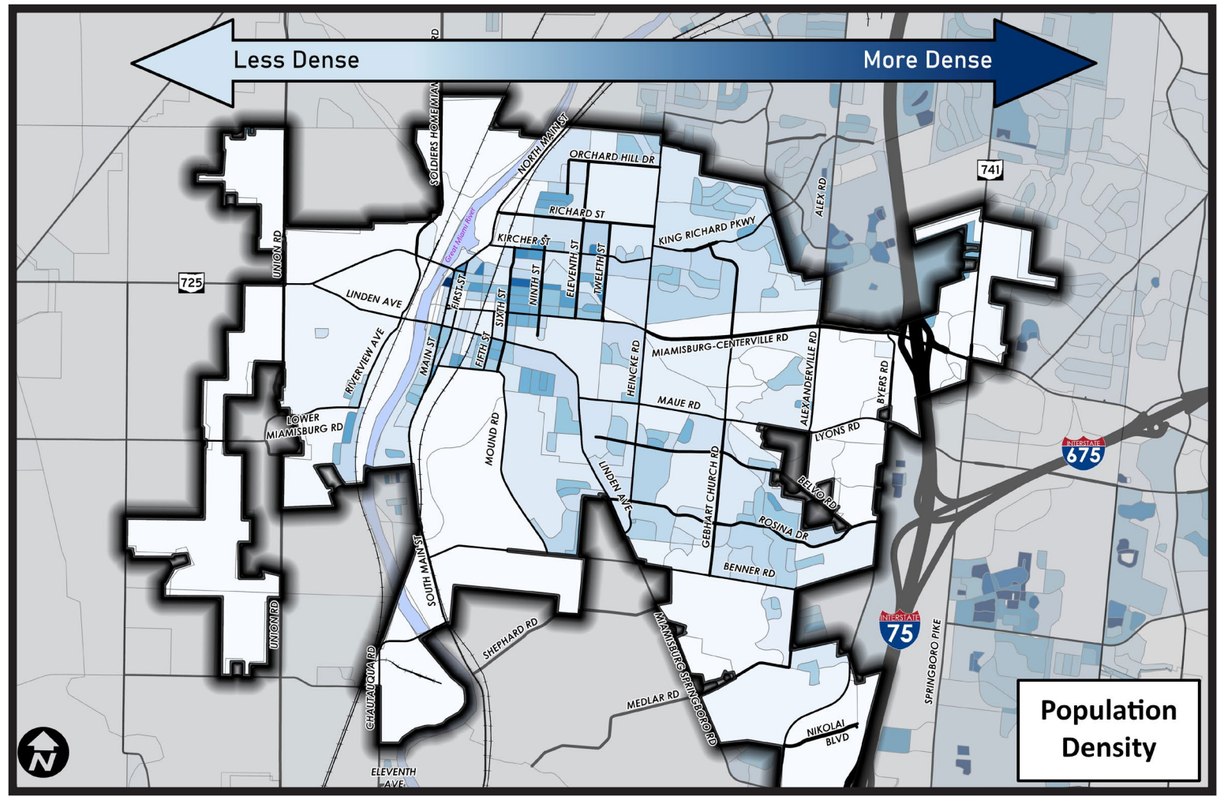
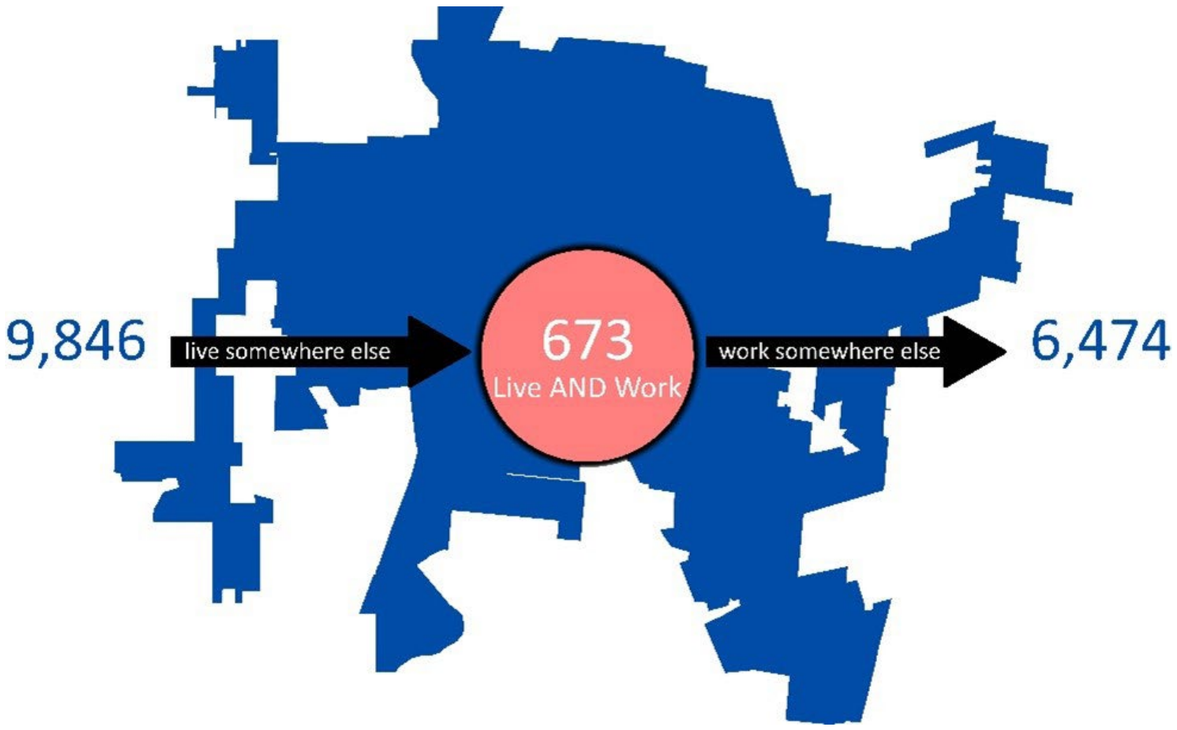
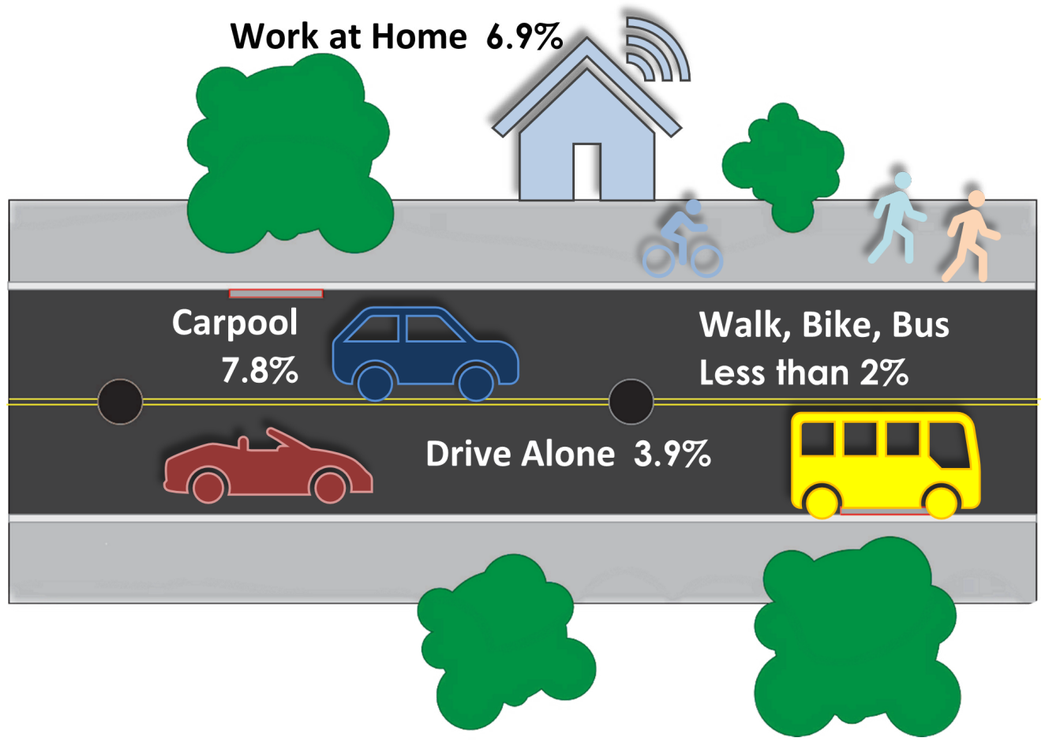


» Map 3-9: Undeveloped and Vacant Land



» Map 3-10: Population Density





COMMUTING TRENDS

Miamisburg's transportation network sees heavy usage from workers commuting to and from work. According to 2021 U.S. Census Bureau data, over 16,000 people travel within Miamisburg on the way to work. These patterns place significant strain on transportation networks and must be taken into account for transportation planning.

Modes of transportation, commuting distance, and work destination are important factors to consider in a transportation plan. Residents of Miamisburg have strong access to a vehicle, with only 4.7% of households lacking access to a personal vehicle. This figure is nearly half of the national rate, and substantially lower than the state and region, indicating there may be more vehicles on the road per-capita than other places. Residents disproportionately use personal vehicles to commute to work, with four out of five residents driving alone to work. In fact, less than 2% of residents use anything other than a personal car to get to work.

With so many workers in Miamisburg driving a motor vehicle to work, the number of cars on the roads during peak times may be greater than what is seen regionally and nationally. This may be reflected in the average commute time for Miamisburg residents. At an average commute time of 22.1 minutes, workers from Miamisburg have a longer commute than those in the region but have a shorter commute than the state and national average.