CITY OF NOVI

Master Plan for Land Use

DRAFT February 2025

INSERT RESOLUTION

ACKNOWLEDGEMENTS

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CITY OF NOVI

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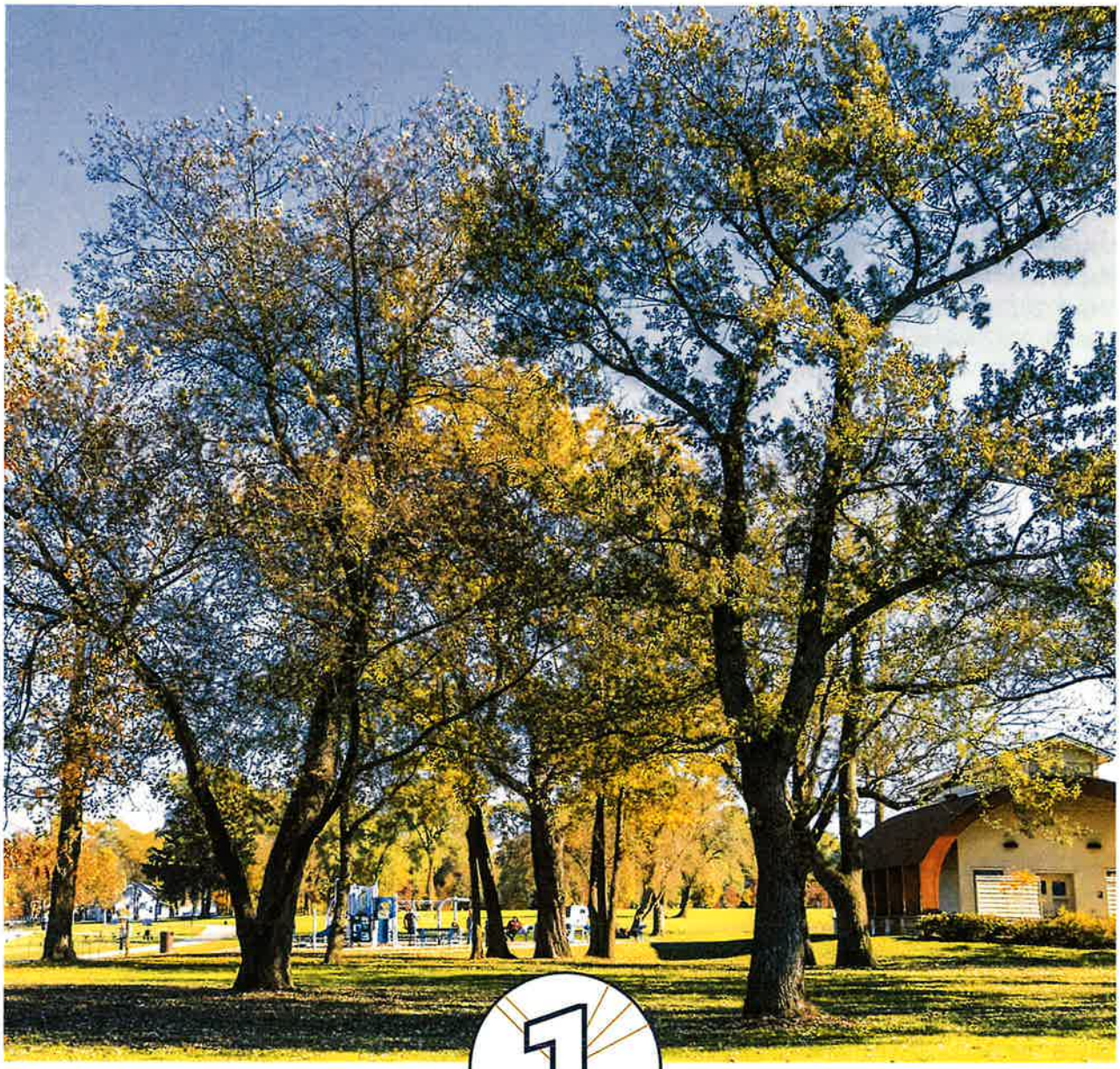

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INTRODUCTION

PURPOSE OF A MASTER PLAN

Planning involves selecting policy choices that relate to the community's land use, growth, and physical development. The purpose of the Novi Master Plan for Land Use is to identify the objectives and strategies and state the goals for land use and development the City will pursue to attain its goals.

STATUTORY BASIS

The Michigan Planning Enabling Act (PA 33 of 2008) enables municipalities to write a master plan that guides development to meet current and future needs and promotes its residents' health, safety, and general welfare. It encourages the wise use of resources and supports new economic development opportunities appropriate to the community. The master planning process asks a community to look to the future to determine what it wants to look like in 20 years, where it is going, how it will get there, and how it will know it has achieved its goals.

The Novi Master Plan for Land Use is a document that inventories and analyzes elements that make the community work. The Master Plan is comprised of a vision statement and action plan with specific strategies and tools for making coordinated land use decisions. It also assesses current programs, services, structures, and infrastructure into one document to inform how the City will plan its future.

REGIONAL CONTEXT

The City of Novi is located in southwest Oakland County at the convergence of three major corridors: I-96, I-275, and M-5. The City is located approximately 25 miles northwest of downtown Detroit and has a population of over 66,000 residents. The City of Novi was originally established as a township in 1832, eventually became a village, and later incorporated as a city in 1969. For decades, it has been one of Oakland County's fastest-growing municipalities. It is bordered on the north by the Cities of Walled Lake and Wixom and Commerce Township, the south by the City of Northville and Northville Township, east by Farmington Hills, and the west by Lyon Township.

HISTORICAL CONTEXT FOR THE MASTER PLAN

Communities change over time; therefore, a community needs to review the Master Plan every five years to determine if the community's vision is the same. This Plan represents an update to the 2016 Master Plan for Land Use created by the Novi Planning Commission in accordance with the Michigan Planning Enabling Act (MPEA). Previous plans, including the 1993 Master Plan for Land Use and Novi 2020 Master Plan for Land Use (from the year 2000), were also consulted in this process. This document has been updated to include all new information available to the City (i.e., US Census, American Community Survey, SEMCOG, and county documents) and addresses the City's desires for the future.

PLANNING PROCESS

Updating the Master Plan for Land Use began in 2022 and consisted of two primary components. The first component focused on an analysis of issues such as demographics, natural features, the real estate market, economic development, and land use. The second component focused on the existing and forecasted future transportation network. A steering committee composed of City Council, Planning Commission, and administrative staff representatives was established to provide local insight throughout the planning process. The steering committee typically met every month to review and comment on various sections of the plan and attended the master plan open houses to engage with residents.

COMMUNITY ENGAGEMENT

In 2022, the steering committee, through the City, issued a web-based survey using Polco® survey software. That outreach garnered 842 responses providing information on a variety of topics, including quality of life, reasons for selecting Novi as a community of choice, challenges facing the city, housing preferences, level of support for protecting natural features and open spaces, employment and occupation, and other demographic metrics.

On February 25, 2023, and March 2, 2023, the steering committee hosted two open houses for the community to comment on the status of the plan and land use preferences for several identified redevelopment sites. As an introduction to the planned open houses, the City prepared a video explaining the master plan process, its impact on future land use decision-making, with an invitation to attend the scheduled open houses. This video ran on the City's local government channel.

The concluding components of the community engagement process will include an opportunity to review the draft Master Plan for Future Land Use during the 63-day review period and participation at a public hearing as part of the adoption process.

GUIDANCE AND MANAGEMENT

The City of Novi has a timely record of reviewing and updating its planning documents. The City has been on a growth trajectory since the last quarter of the 20th century through the 1st quarter of the 21st century. This growth has resulted in new housing and retail developments, office and technology businesses, and an ever-expanding traffic network.

The outcome of this plan update focused on the future transformation of the city's central core. This area is bordered by Haggerty on the east, Beck Road on the west, Twelve Mile Road on the north, and Grand River on the south. This core area contains a significant amount of the city's retail development, influenced by today's shopping preferences for e-commerce versus brick-and-mortar retailing. National trends suggest that suburban shopping plazas and regional shopping centers will experience further loss in retail tenants resulting in vacancies and conversion to non-retail uses. In anticipation of these trends, the 2025 Master Plan for Future Land Use envisions the transformation of these areas into mixed-use districts allowing for a variety and mix of residential and non-residential land uses. The plan also introduces the walkable density concept, which encourages higher-density residential developments within these mixed-use districts that will help support eating and drinking establishments, retail shopping, offices, and open spaces.

Lastly, the plan includes assessing the transportation network and recommendations to improve system capacity and safety. Although not included in this plan, a companion to this planning effort is the Active Mobility Plan which evaluates non-motorized options and recommendations for the City. The Active Mobility Plan and the Master Plan for Land Use will provide the City with solid advice for the future that will enhance the quality of life for Novi residents and aid in the continued development of the community.

Pavilion Shore Park

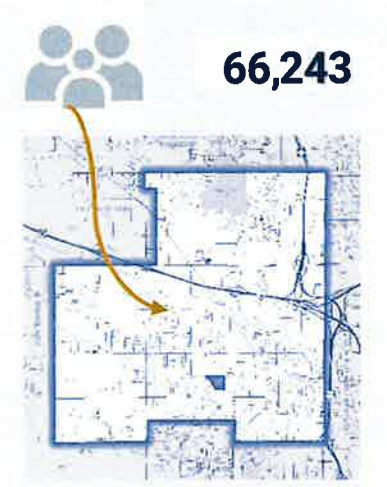
- Novi's population is growing faster than predicted.
- Novi's population is aging.
- Novi is diversifying: its racial/ethnic groups, foreign born residents, and languages other than English have grown since 2000.

2

DEMOGRAPHICS

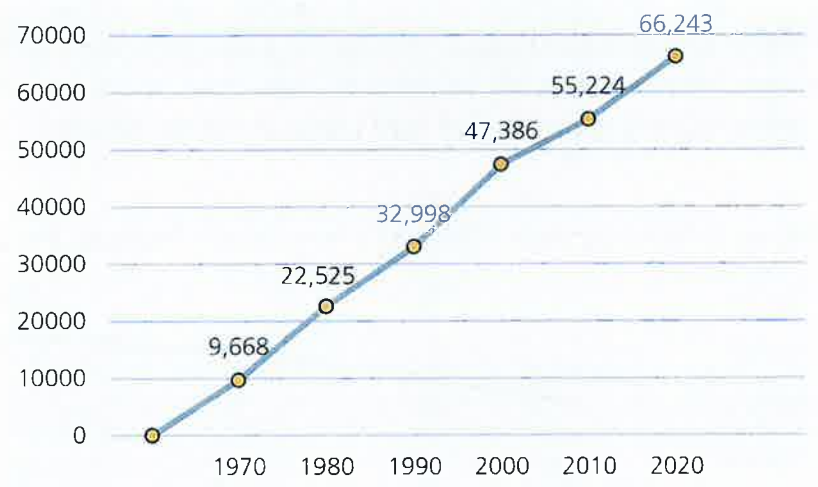
A strong understanding of a community's demographics and its socioeconomic attributes is key to ensure the master planning process culminates in the development of strategic goals and actions for inclusive growth and development in Novi. Through the data dashboard, this section will touch on the City's major demographic trends. In addition to city-wide trends, this section also presents regional comparisons to enable a holistic understanding of large-scale influences on growth and development in the city. To this end, the regional comparisons are divided into two categories; "Surrounding Communities," which refer to the municipalities that share boundaries with Novi, and "Similar-sized Communities" which refers to proximal municipalities with a comparable population size. This section uses the data from the decennial censuses, American Community Survey (ACS) 5-year estimates, and the Southeast Michigan Council of Governments (SEMCOG) Community Profile.

Figure 1: Population, 2020



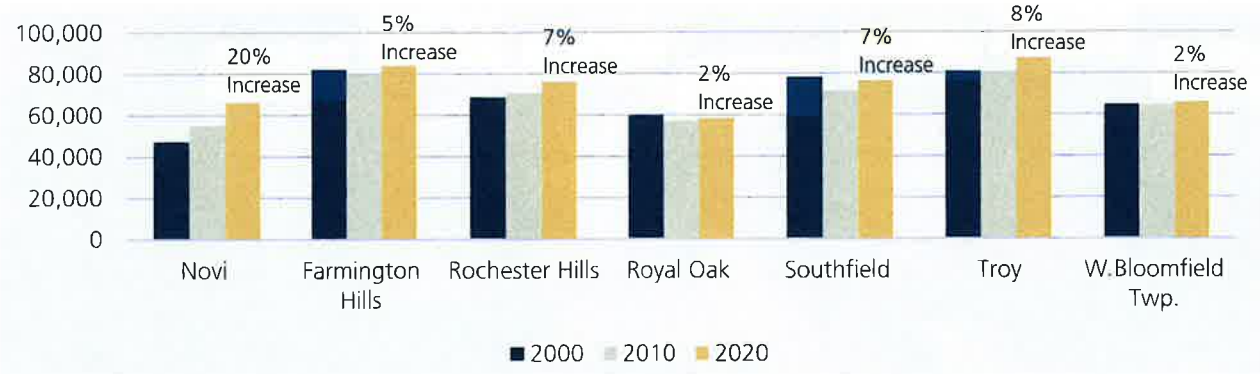
The 2020 census records the total population in Novi as 66,243 residents.

Figure 2: Population Growth, 1970–2020



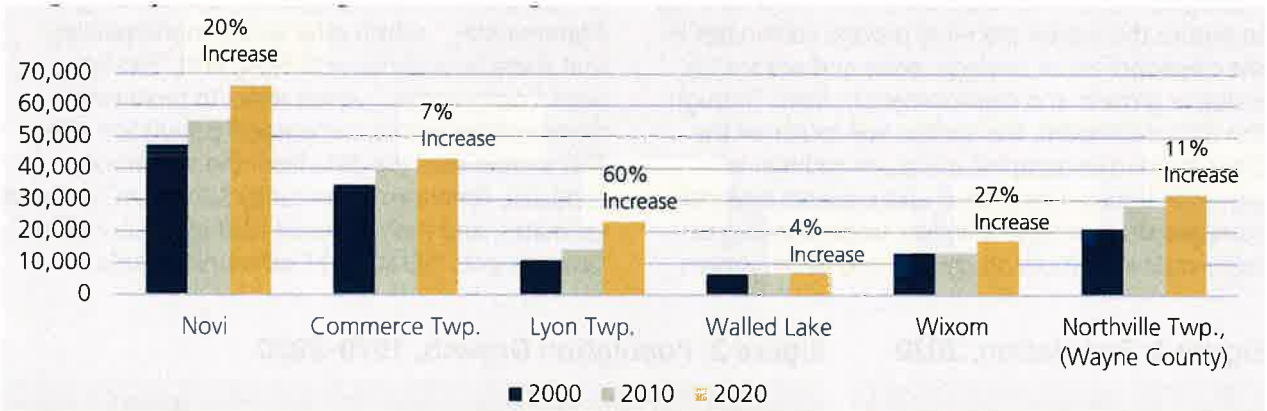
Novi has witnessed dramatic population growth since its incorporation as a city in 1969; over the last decade the population has increased by 20%.

Figure 3: Population Change: Similar-Sized Communities, 2000–2020



Between 2010 and 2020, Novi outpaced the growth rate of the Oakland County (6%) and other similar-sized communities in the county.

Figure 4: Population Change: Surrounding Communities, 2000–2020



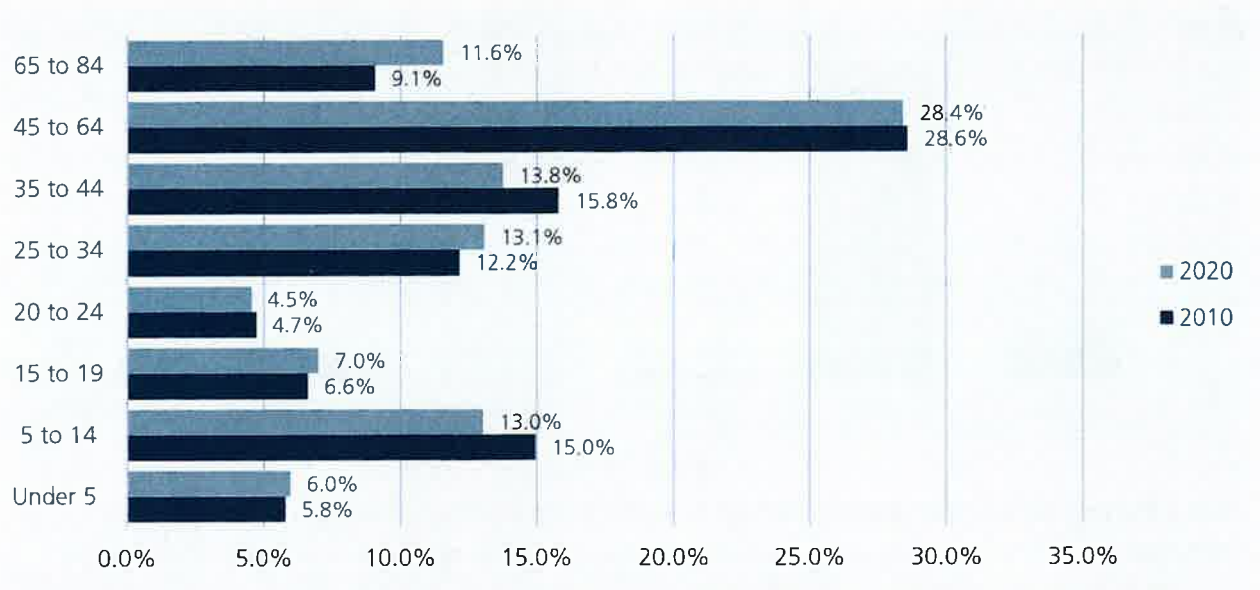
While population increase is consistent across surrounding communities, the pace of growth varies. Although a much smaller total population, the growth rates of Lyon Township (60%) and Wixom City (27%) outpaced Novi (20%) in the last decade.

Figure 5: Novi Exceeds SEMCOG's Population Forecast for 2025

SEMCOG's population forecasts projected nearly 7,000 Novi residents between 2015 and 2045. However, as of 2020, the city has already surpassed the 2025 projection and is only about 1,175 shy of the 2045 forecast (67,417). With almost 1,275 new housing units underway, translating to approximately 3,240 people, the city stands to surpass the 2045 forecasts in the next few years. In short, Novi is growing at much faster pace than predicted.

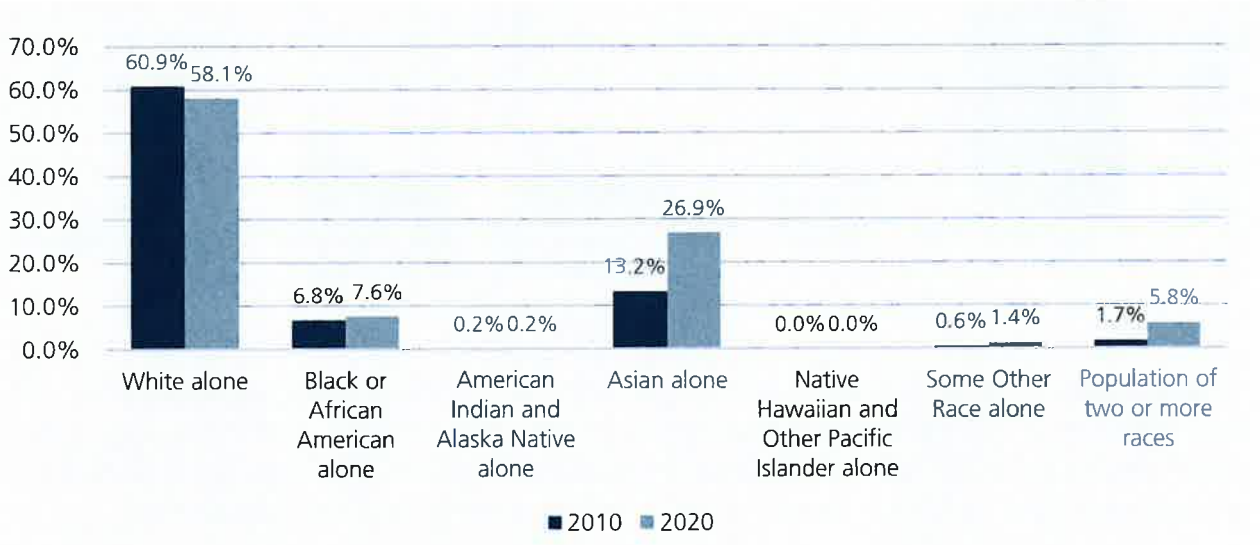
Terra - Upcoming Housing Development

Figure 6: Age, 2010–2020



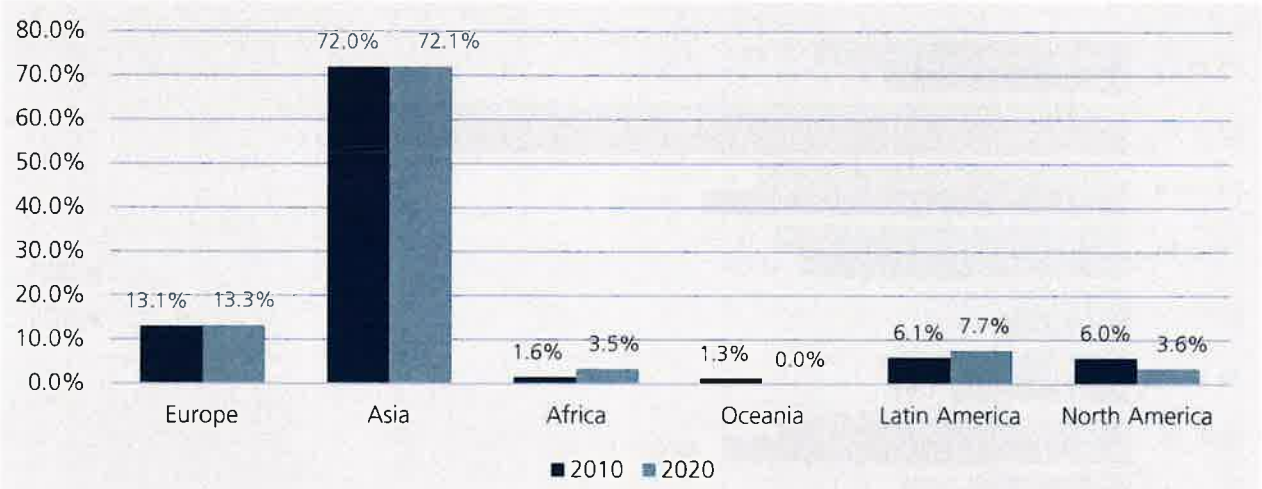
With a median age of 39.2 years, Novi's population is aging; the 45-64 age cohort is the largest (28.4%) and 40% of the population is above 45 years of age, establishing Novi as a place for mature families and experienced working professionals. The school age cohort, ages 5-14 years, is the second largest group likely due to the popularity of the city's school districts. However, the size of this age group has shrunk in the last decade, likely correlated to the population decrease in the 35-44 age group.

Figure 7: Race, 2010–2020



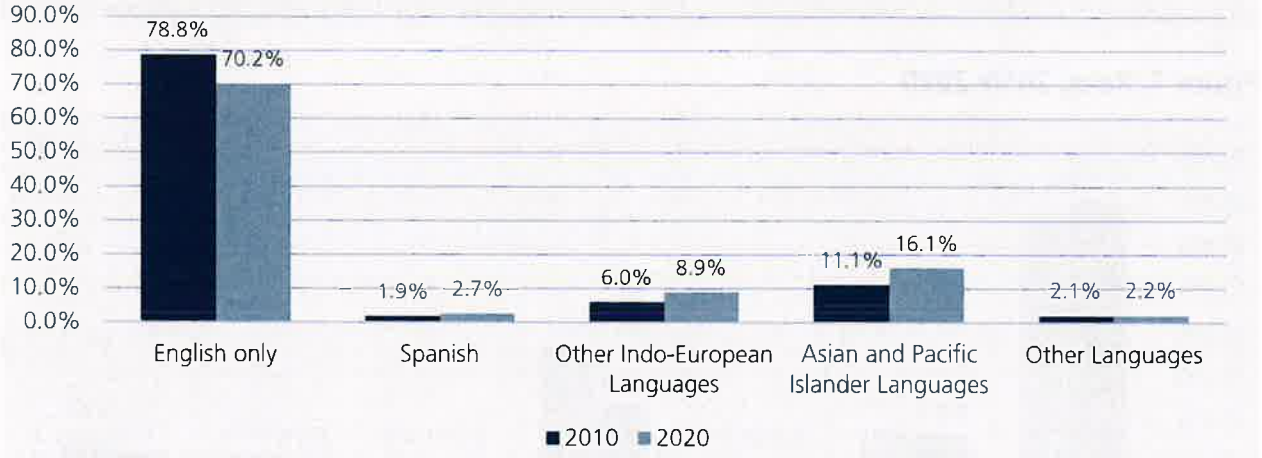
The racial makeup of Novi's population has changed in the past decade. The "Asian alone" population rose from 13.2% to 26.9% while the "White alone" population decreased from 60.9% to 58.1 %. The population identifying as "Black or African American alone" and "Two or more races" experienced smaller percentage increases.

Figure 8: Foreign-Born Population, 2010 and 2020



Novi's thriving automotive industry attracts a substantial number of foreign-born residents. Consistent with the diversification of Novi's population between 2010 and 2020, the foreign-born portion of city residents increased from 18.4% to 26.8%. Individuals born in Asia made up approximately 72% of the foreign-born total each year with the greatest proportions coming from Japan, India, and China.

Figure 9: Language Spoken at Home, 2010 and 2020



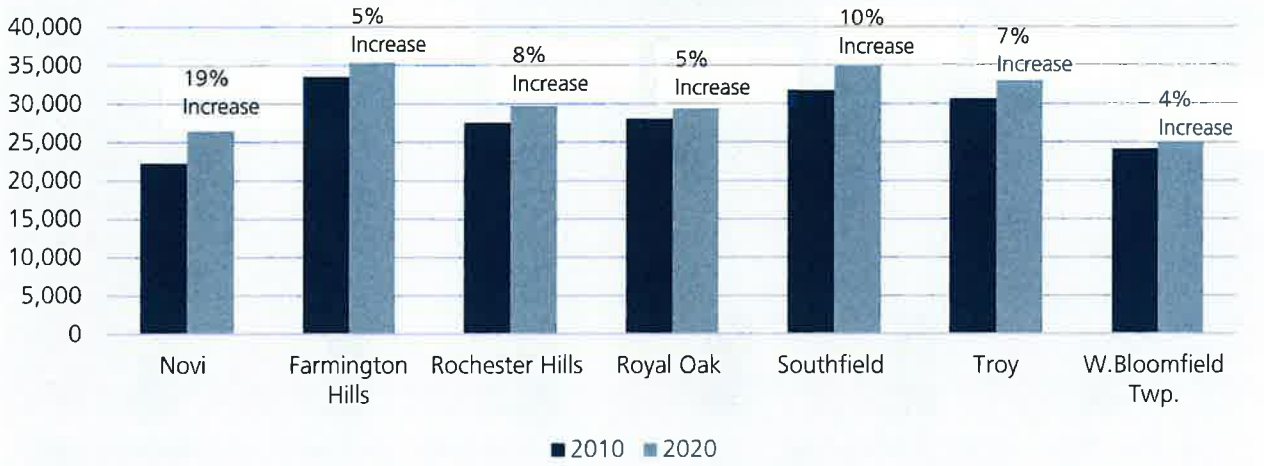
Corresponding to Novi's diverse population, 29.8% of the population speak languages other than English at home of which more than 50% speak Asian and Pacific Islander languages. The overall change in foreign-born population and languages spoken at home together indicate an influx of immigrant population which impacts the housing market and the local economy.

Figure 10: Average Household and Family Size, 2010–2020

2.46 → 2.49

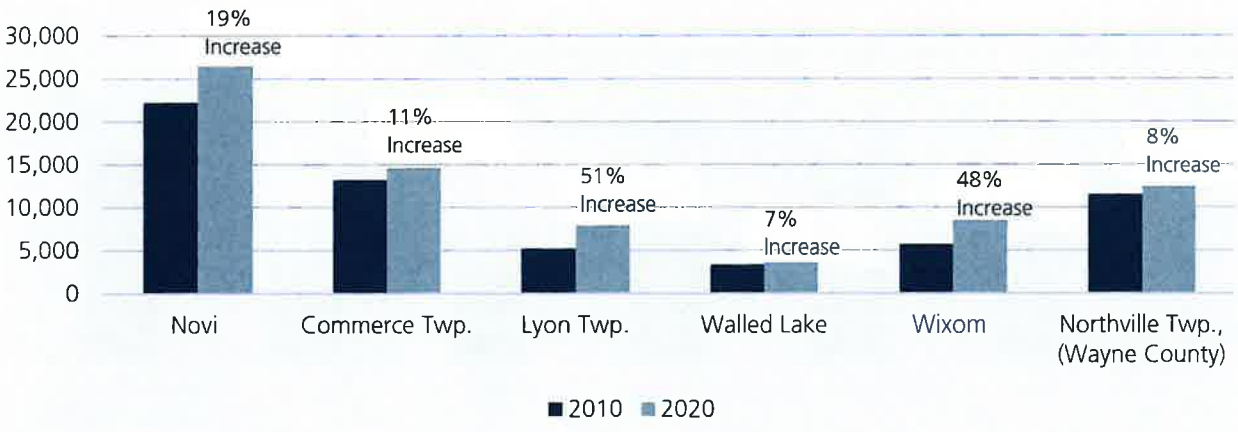
The average household size in Novi increased slightly from 2.46 in 2010 to 2.49 in 2020; this deviates from a common trend observed across cities where household sizes are decreasing.

Figure 11: Households: Similar-sized Communities, 2010–2020



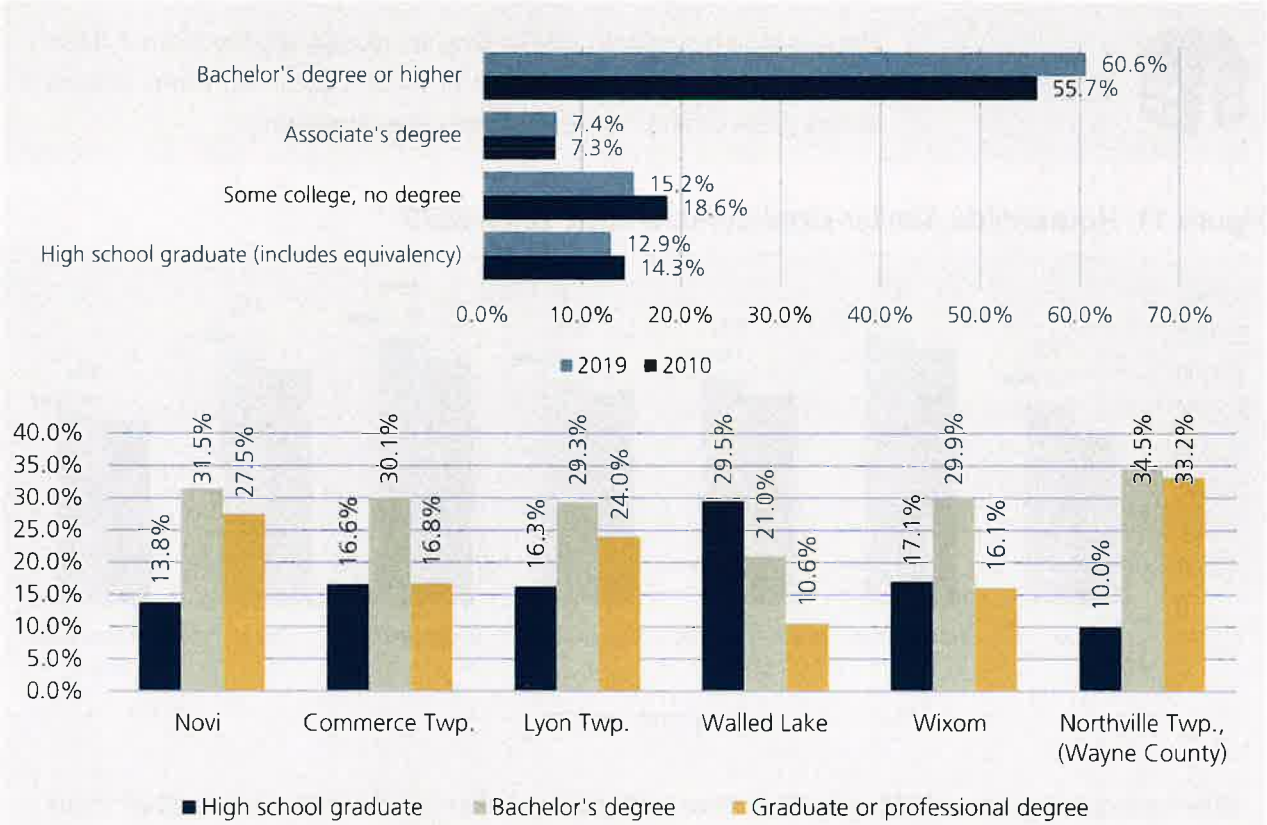
When comparing household growth in Novi with other similar-sized communities, all of them witnessed slower growth rates. The lack of new construction to meet the housing demand is a major issue in most communities. Novi's number of new builds caters to the regional housing demand, leading to an overall increase in households.

Figure 12: Households: Surrounding Communities, 2010–2020



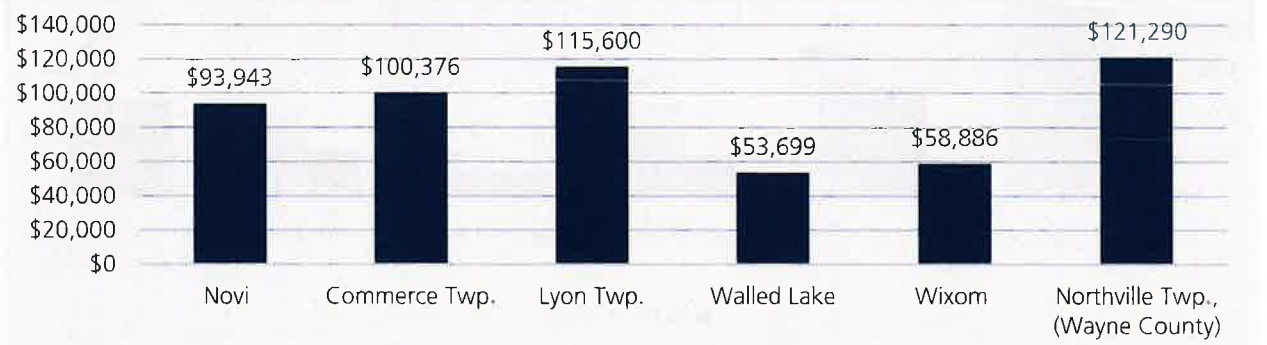
The number of households in Novi increased by 18.9% to 26,458 from the 2010 estimates (22,258); though much smaller in number, the number of households in Lyon Township and Wixom grew at a faster rate (approximately 51%) likely due to easy availability of land for development.

Figure 13: Educational Attainment, 2010 and 2019

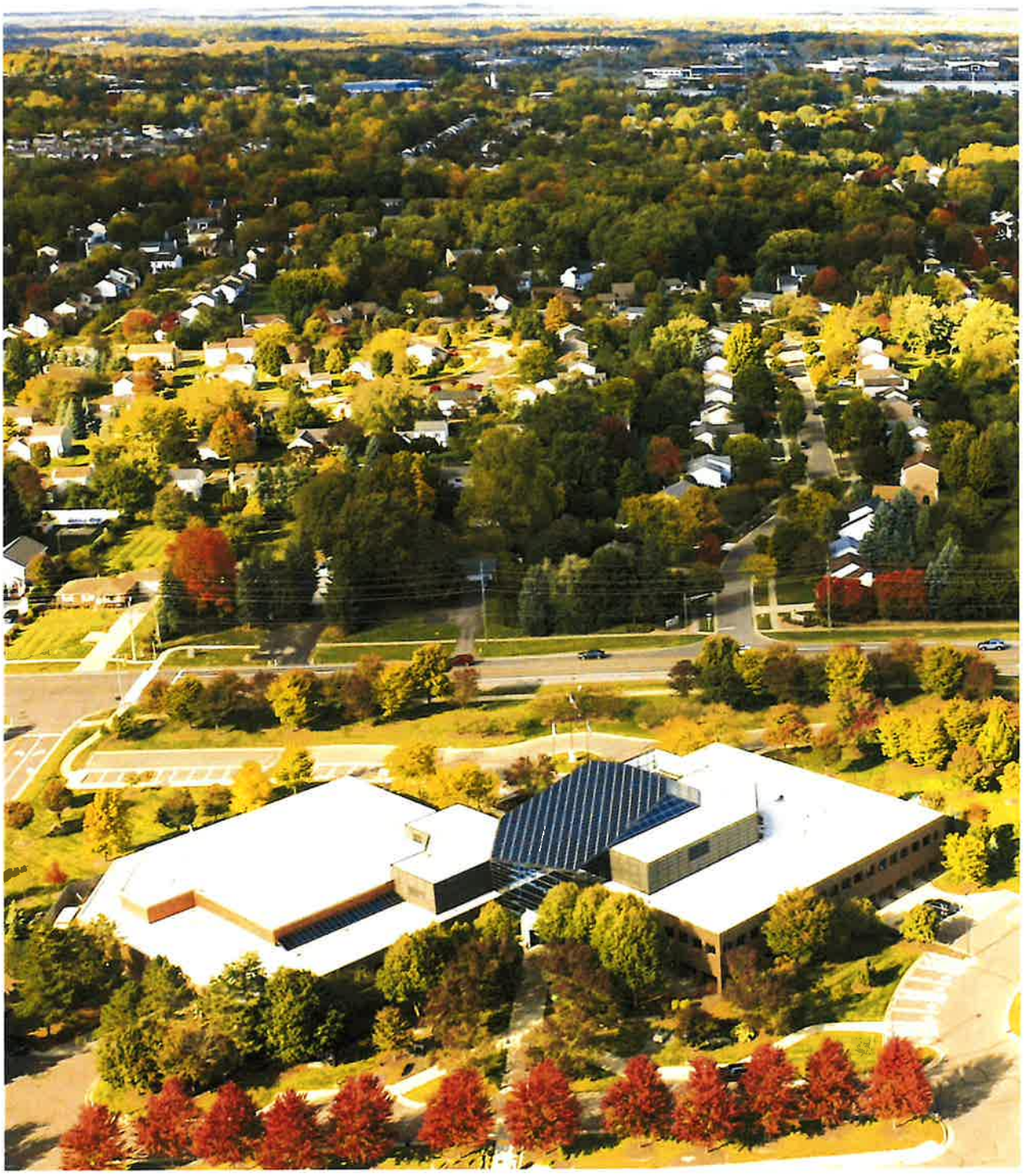


Novi residents benefit from some of the best school districts in the state and demonstrate a high level of high educational attainment. Approximately 96% of the population possess at least a high school degree and nearly 60% of Novi's residents have earned a bachelor's degree or higher. Among the surrounding communities, only Northville Township shows higher educational attainment levels.

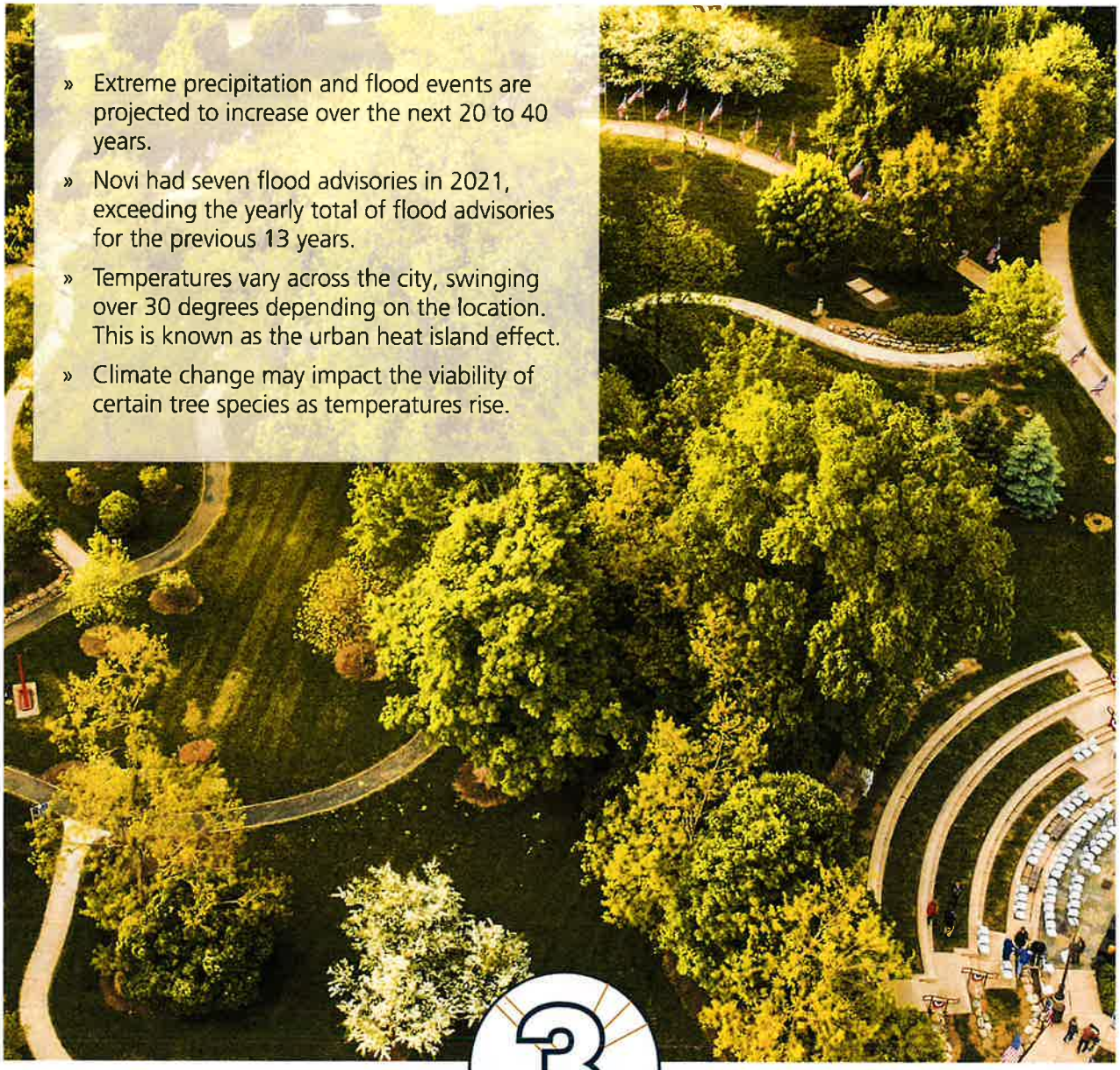
Figure 14: Median Income, Surrounding Communities, 2020



The city's median household income decreased from $95,131 in 2010 to $93,943 in 2020, possibly part of the aftermath of the COVID-19 pandemic. Among the surrounding communities all the townships have a higher median household income than Novi, but the cities have lower median household incomes.



Greater Novi



- Extreme precipitation and flood events are projected to increase over the next 20 to 40 years.
- Novi had seven flood advisories in 2021, exceeding the yearly total of flood advisories for the previous 13 years.
- Temperatures vary across the city, swinging over 30 degrees depending on the location. This is known as the urban heat island effect.
- Climate change may impact the viability of certain tree species as temperatures rise.

3

NATURAL FEATURES & RESILIENCY

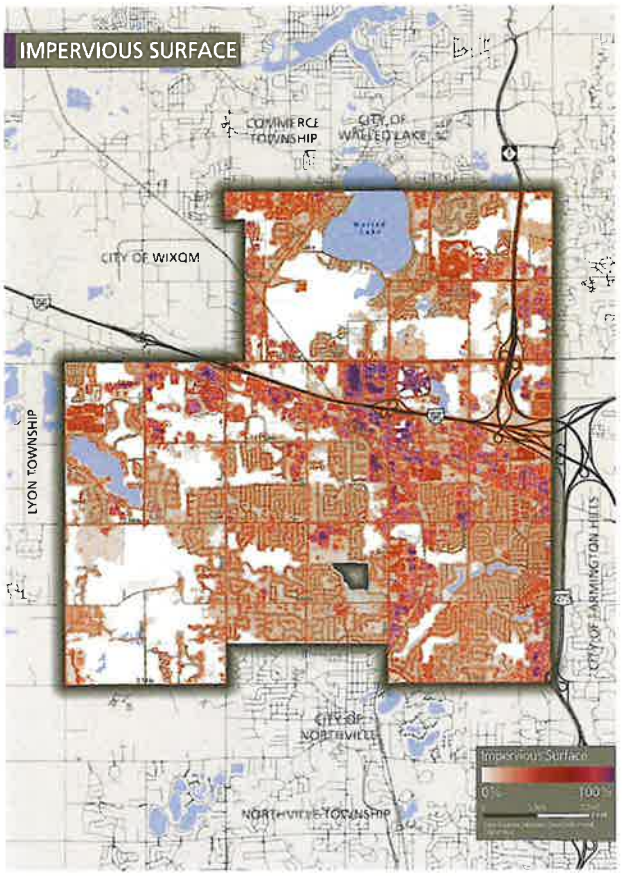
As suburban communities have grown, the natural environment has historically been compromised to make space for large shopping malls, subdivisions, and office parks. The integrity and value of the natural environment have become an influential force in development and planning decisions. As the climate continues to change, past policies and practices are insufficient to deal with the new reality of higher temperatures, more extreme precipitation events, and milder winters. Planning for climate resilience is now an essential part of modern-day planning practice. The following section will inventory the natural features within Novi, discuss their importance to planning, quality of life, and resiliency, and provide strategies to ensure their preservation. Since the 1980's, Novi has implemented strong policies to protect and preserve natural areas within the city, including establishing buffers around wetlands, adopting a woodland protection ordinance, and implementing low impact design principles in civic projects.

THE BUILT ENVIRONMENT

The built environment is defined as the network of manmade structures, systems, and spaces that have been altered beyond their natural state. A common measure of the built environment is the presence of impervious surfaces. SEMCOG's 2010 land use analysis estimates that roughly 30% of Novi is impervious.[1] Regionally, the impervious surface coverage is 15% because SEMCOG includes rural and undeveloped communities, a lower percentage of coverage than Novi. The adjacent communities of Farmington Hills and West Bloomfield Township have 37% and 26% impervious surface coverage, respectively.[2] Novi's impervious surfaces are concentrated along transportation lines and commercial corridors, with parking lots and denser residential development as top contributors.

Areas with high concentrations of impervious surfaces have several impacts on the natural environment and human health. Notably, impervious surfaces increase the risk of flooding because water cannot infiltrate into the soil and into the groundwater system. As a result, water flows across the ground and eventually enters stormwater systems or ponds in lower-lying areas of the city, picking up contaminants that eventually enter the water system. Impervious surfaces also absorb solar radiation which increase the ambient temperatures to higher levels. These higher temperatures can be dangerous and even fatal for sensitive populations like seniors or persons with respiratory conditions.[3] To mitigate the impacts of impervious surface cover, Novi has required stormwater management plans for new developments since the 1990's.

Map 1: Impervious Surface

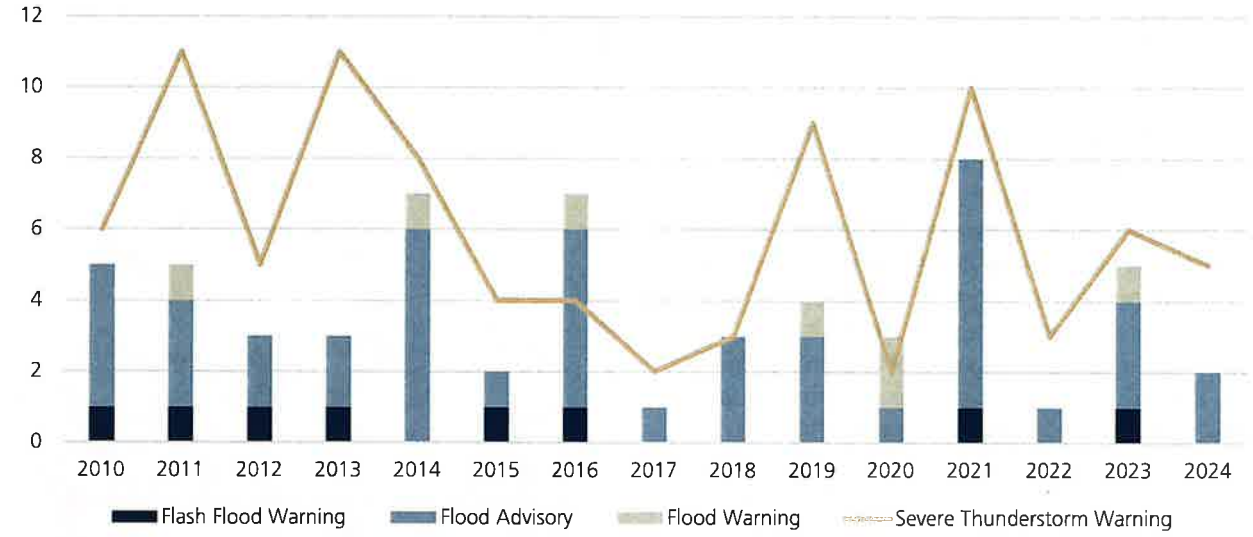


Flooding

Over the past 13 years, Novi has experienced an average of three flood advisories, 0.5 flood warnings, and 0.6 flash flood warnings annually (Figure 15).[4] In 2021, Novi had seven flood advisories, more than any of the previous 13 years. In 2022, the number declined to historic averages.

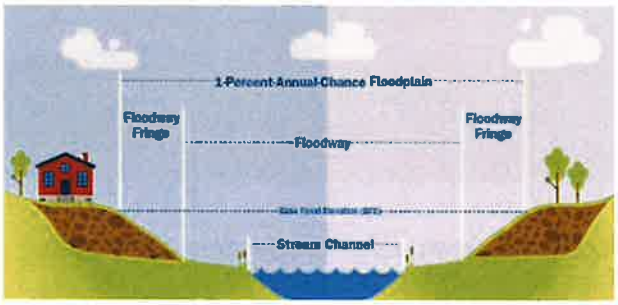
While recent history has not shown any dramatic changes in local weather, the Great Lakes Integrated Science and Assessment Program (GLISA) predicts that Novi will experience an increase of 1.5 to 2.0 inches more rain in the next 20 to 40 years. This amount of rain seems small, but could correlate with one or two more flood events per year, depending on the rate of rainfall.

Figure 15: Flood Events in Novi



Source: Iowa State University

Figure 16: Floodway v. Floodplain



Source: Tulsa Engineering & Planning

Flooding can cause substantial damage to property and infrastructure. The Federal Emergency Management Agency (FEMA) quantifies flood risk by mapping various flood zones. The floodway is the channel directly adjacent to a body of water that is above water during periods of normal water elevation. The fringe areas of the floodplain (the entire area at risk of flooding) are either in the 1.0% or the 0.2% annual percent chance of flooding zones. However, as precipitation events increase in frequency and become more severe, the 1.0% and 0.2% annual chance zones are likely optimistic estimates meaning that infrastructure for the 1.0% and 0.2% annual hazards is likely underestimating the true amount of risk. The City reviews FEMA floodplain maps on a yearly basis.

To control the movement of water and reduce flood risk, the City of Novi has adopted storm water regulations. Most development/redevelopment projects in Novi require a storm water management plan which is reviewed by the city engineer and approved by the Planning Commission. These stormwater regulations have recently been updated to be consistent with Oakland County standards. However, only new developments or major projets are required to update their stormwater plans.

First Street Foundation, a climate risk assessment group that analyzes risk at a property level, estimated that nationally 14.6 million properties are at risk of substantial flooding, 70% higher than the number reported by FEMA.[5] First Street Foundation estimates that a 1% flood event has a 26% chance of occurring over the next 30 years and the 0.2% flood event has a 6% chance of occurring over the next 30 years. According to the First Street Foundation, an estimated 496 residential homes, 30 commercial properties, and 4 social facilities (schools, libraries, etc.) are at minor risk of flooding in Novi.[6] While this represents less than 1% of the city's properties, the impacts can be grave for the property owners.

Green Infrastructure

Strategies to mitigate flooding impacts include preserving natural areas and capturing or infiltrating stormwater. One of the best tools to capture and infiltrate stormwater is green infrastructure. Broadly defined, green infrastructure includes measures that use plant or soil systems,

Map 2: Flood Hazard

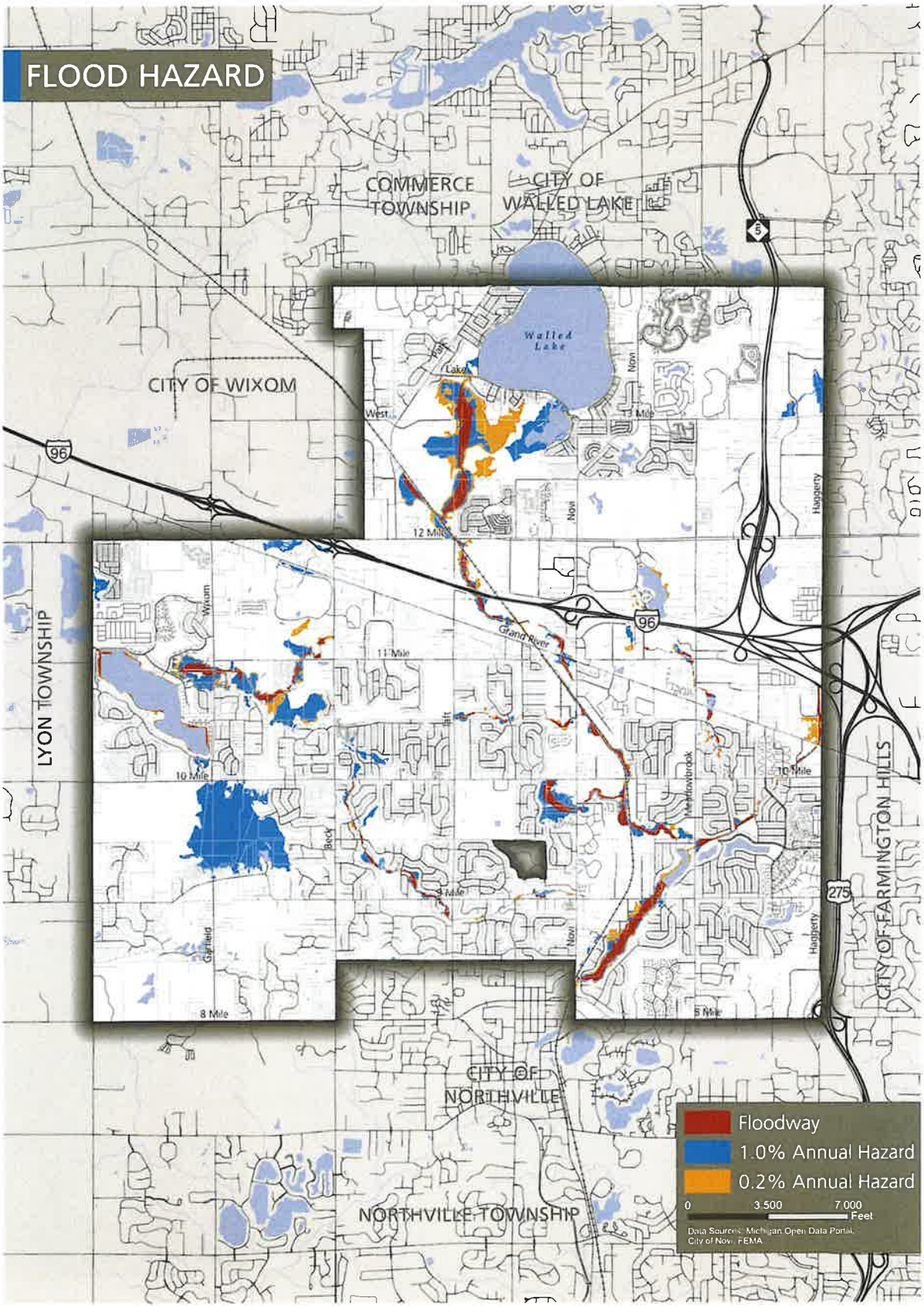


Table 1: Green Infrastructure Methods

Method	Description	Example
Rainwater Harvesting	Systems that collect and store rainwater for later use.	
Rain Gardens	Shallow, vegetated gardens that collect and absorb runoff from streets, sidewalks, and roofs.	
Planter Boxes	Boxes along sidewalks, streets, or parking lots that collect and absorb rainwater; they can be designed with a notch to allow additional stormwater to flow in, as with rain gardens. These also serve as streetscaping elements.	
Bioswales	Linear and vegetated channels, typically adjacent to a road or parking lot, that slow, retain, and filter stormwater.	
Permeable Pavement	Pavement that absorbs, filters, and stores rainwater.	
Green Roofs	Vegetated roofs that absorb and filter rainwater.	
Tree Canopy	Trees reduce and slow the flow of stormwater.	

Source: United States Environmental Protection Agency

permeable pavement, or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters.[7] The table titled "Green Infrastructure Methods" (page 24) shows several common types of green infrastructure that could be included as design standards in the city's Zoning Ordinance or invested in by using municipal funds on strategic properties.

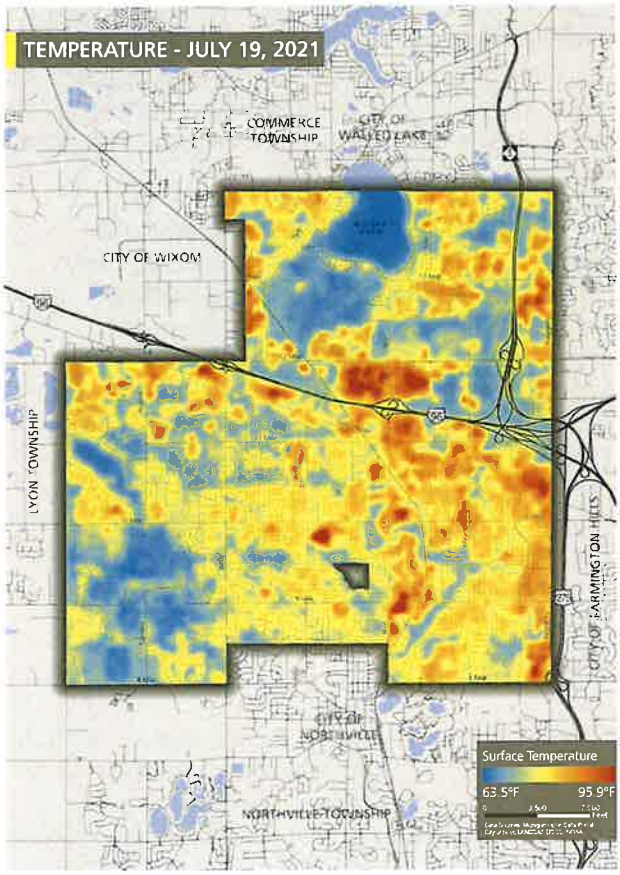
Typically, public investment leads the way in the implementation of green infrastructure. Streetscapes and public facility improvements/ construction often include green infrastructure elements. To incentivize private investment to adopt green stormwater practices where an optional development process is chosen, the city could require development with a certain amount of impervious surface to incorporate green infrastructure or offer development bonuses (additional buildable area, landscaping credits, etc.) for projects that incorporate green infrastructure.

While not explicitly referred to as green infrastructure, natural areas, open space, and parks, serve a similar purpose. These areas are often better at capturing stormwater because they more closely resemble and/or perform as a natural system. Unlike the green infrastructure examples discussed previously, natural spaces do not retrofit existing space to serve a stormwater purpose but are inherently stormwater infiltration systems. In addition to providing recreational and aesthetic enhancements, natural areas, open space, and parks should be planned as stormwater management resources. Landscaping requirements outlined in Novi's Zoning Ordinance state that inclusion and placement of vegetation in new development is a requirement in the city. A prime example of the intersection of landscaping requirements and stormwater management is the Haggerty Corridor Corporate Park. City staff and the Northern Equities Group worked on a design for the manufacturing and business park that includes wetland mitigation, retention basins, and vegetation restoration.

Urban Heat Island

The higher temperatures created by impervious and large surfaces absorbing solar radiation are known as the urban heat island effect. Urban and developed areas tend to experience higher

Map 3: Temperature - July 19, 2021



temperatures compared to more natural areas. Map 3 shows the surface temperature in Novi, derived from satellite data captured on that day. Temperatures vary across the city, swinging over 30 degrees depending on where you are. The mall and big-box commercial center along 12 Mile and Novi Road is the hottest area in the city, a result of the vast parking and large structures. The industrial areas and high school also experience higher temperatures compared to the rest of the City. The reported high temperature on July 19, 2021, was 83 degrees Fahrenheit, indicating other areas of Novi experience temperatures over 10 degrees higher than the reported high.[8] GLISA estimates that the City of Novi will experience an average increase in 4 degrees Fahrenheit by 2050.

High ambient temperatures have implications for human health and contribute to heat-related illness and complications. The elderly, children, and low-income populations are particularly susceptible to complications from high temperatures. From 2004-2018, there were an average of 704 heat-related deaths annually in the United States.[9] Additionally,

elevated ambient temperatures require climate control systems (air conditioners) to work harder to lower indoor temperatures to a comfortable level, requiring more energy. Given that the current energy grid is still reliant on fossil fuels, increased energy needs correlate to increased greenhouse gas production, which drives temperatures higher over time.

The primary mitigation strategy to reduce the impact of urban heat islands is increasing tree canopy and vegetation. Plants cool ambient temperatures in several ways, shading and releasing water vapor into the air through evapotranspiration. Shade trees are estimated to reduce household energy consumption by 5% - 15%.[10] To reduce the heat islands around Novi's shopping centers and industrial areas, parking could be broken up with vegetated parking islands, and reducing parking requirements can limit the amount of impervious surface that absorbs and radiates solar radiation.

Renewable Energy

Critical to transitioning to a sustainable and climate resilient future is the switch away from fossil fuels and towards renewable sources. In suburban communities, like Novi, there is limited opportunity for the adoption of utility grade renewable energy like solar arrays or wind farms. However, personal systems like rooftop solar panels are an effective way of incorporating renewable energy into Novi's existing land uses. Novi's Zoning Ordinance permits rooftop solar panels in all districts as an accessory use, allowing for the widespread adoption of solar facilities across the City. It is estimated that rooftop solar systems can offset household energy costs by 73% - 99%, reducing supplemental energy needs.[11] Additionally, DTE offers a program in which customers can electively switch to a portion of their energy coming from renewable sources. The City can also look to shift to renewable energy through energy improvements on City properties and shifting towards electric vehicles in the City motor pool. In 2024, City Council prioritized studying the need for electric car chargers at city facilities.

THE NATURAL ENVIRONMENT

The natural environment includes natural areas that are both native and constructed. The preservation and enhancement of the natural environment is an essential part of community planning because of the vast ecosystem services natural spaces provide humans. Generally, ecosystem services fall into one of four categories: supporting (soil formation, photosynthesis), provisioning (food, water, materials), regulating (pollination, flood control), and cultural (aesthetics, recreation, education). These benefits are essential for human existence and for creating healthy and vibrant communities.

Wetlands

Wetlands are one of the most unique and fragile ecosystems. They provide numerous natural services that range from water filtration and capture to protecting animal habitats. Wetlands have the unique capacity to retain large amounts of water especially during periods of excessive precipitation and then slowly release it into the environment over time, reducing the impacts of flooding. Because of their sensitivity and importance to the broader ecosystem, wetlands are tightly regulated. Wetlands larger than five acres or located within 500 feet of a stream are regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Wetlands that are not regulated by EGLE are regulated by Novi. Activity within the wetlands is tightly restricted by the City, ensuring the preservation of these sensitive features. However, the areas adjacent to wetlands do not receive the same protection. Many areas next to wetlands are mowed lawns, and common lawn fertilizers can negatively alter the delicate nutrient balance of a wetland. Novi requires a 25-foot native vegetated buffer around a wetland to support ecosystem health and to aid in filtering contaminants before they reach the wetland.

Woodlands & Trees

Woodlands and trees are some of the most valuable natural features. Woodlands and trees provide natural screening, buffer noise and wind, stabilize soil, provide wildlife habitat, reduce energy consumption through shading, and naturally cool the surrounding air. It is estimated that a single tree can provide an equivalent value of $73 of air conditioning, $75 of erosion control, $75 of wildlife habitat, and $50 of air pollution reduction. Over 50 years, a single tree can provide a $57,151 equivalent value of ecosystem services.[12]

In Novi, woodlands and trees are protected through the Woodlands Protection Ordinance which was adopted to preserve or replace woodlands and

Map 4: Regulated Natural Features

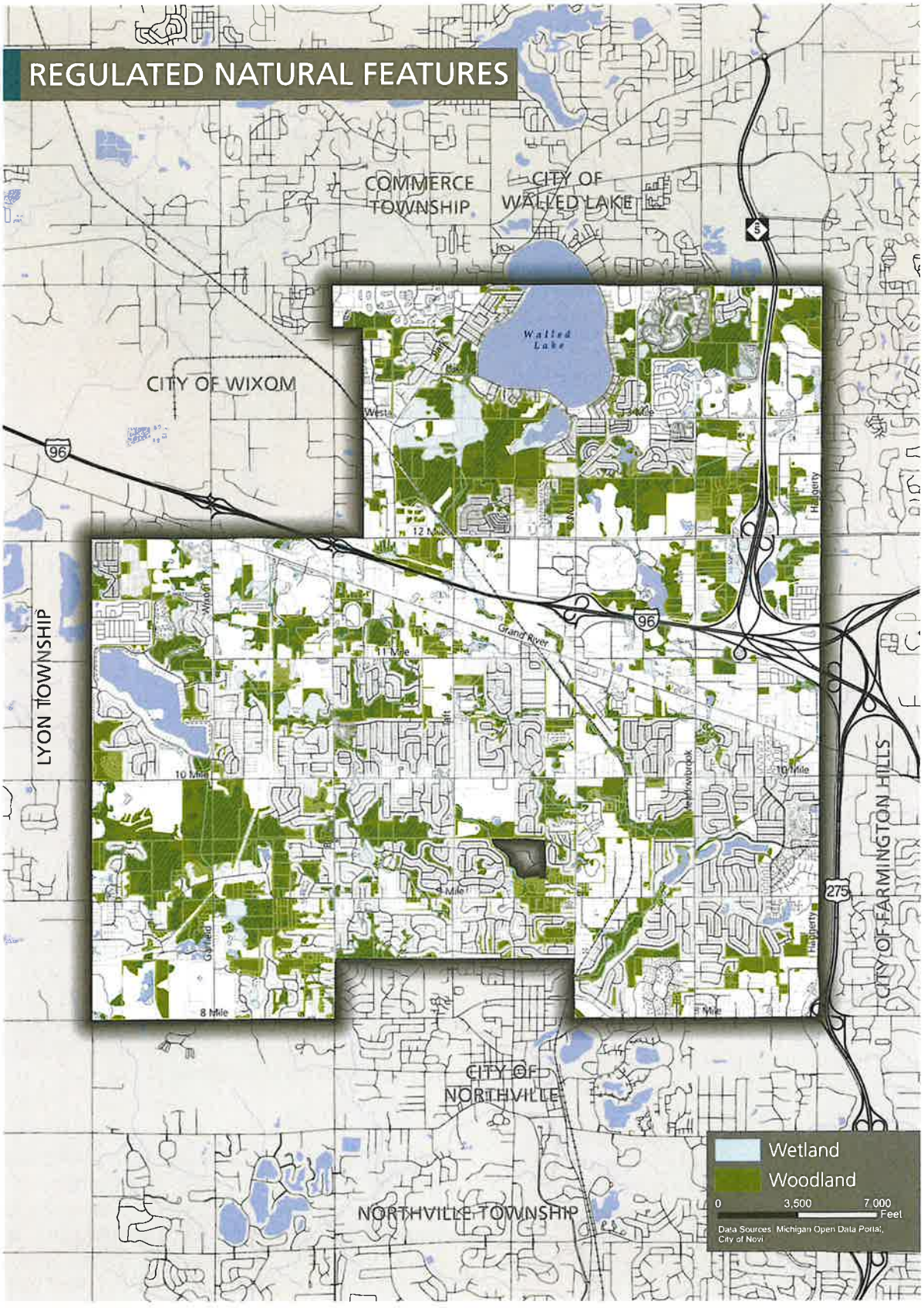
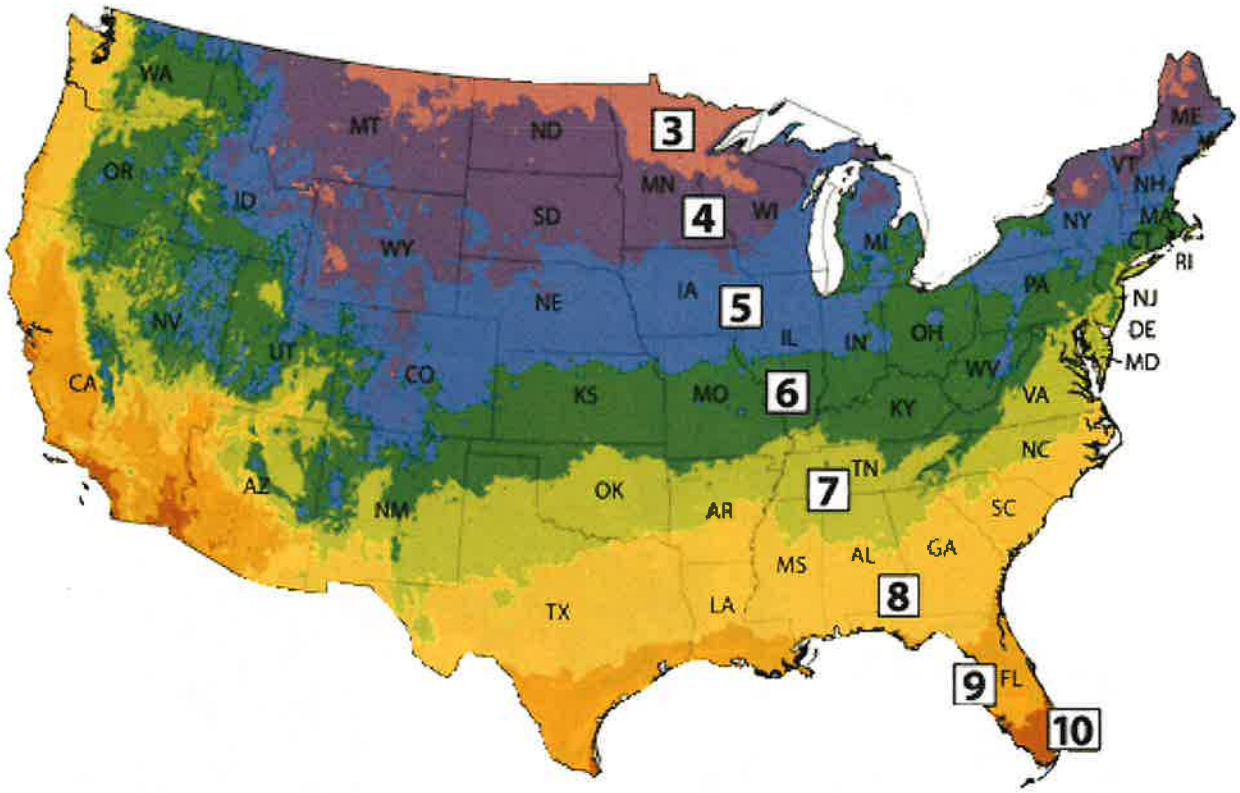


Figure 17: Plant Hardiness Zones



Source: MichiganBulb

trees in the face of spreading development and increasing demand for land. The ordinance applies to land designated as a regulated woodland, as shown in the map titled "Regulated Natural Features," and any tree with a Diameter Breast Height (DBH) of 36 inches or greater. The ordinance requires a permit to remove, damage, or significantly alter any tree or land regulated by the ordinance, protecting designated woodlands during the construction process, and mandatory tree replacement if land must be cleared. The Woodland Protection Ordinance should be evaluated to ensure that it is up to date.

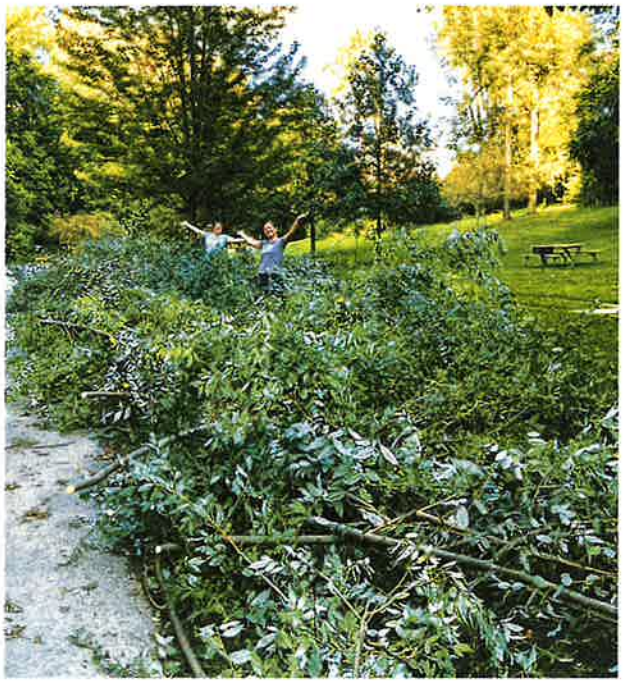
In recognition of the efforts Novi has undertaken to preserve the woodlands and trees, the City received Tree City USA designation. Novi has been a Tree City for the past 30 years and over the past 12 years has received the Growth Award which recognizes additional efforts and ongoing preservation and maintenance of woodlands and trees.[13] The City should continue its efforts to preserve, support, and expand woodland and tree preservation.

While the City has adopted policies to preserve the woodlands and trees from development and direct human action, climate change poses an additional threat. Rising temperatures can make it challenging for trees, especially those native to cooler environments, to survive. Hardiness zones are a standard measurement ranging from 1 to 11 that can be used to determine what plants will survive in the local area. Currently, Novi is in zone 6 but by the end of the century it is estimated that Novi will be in zone 8.[14] Planting requirements in the Zoning Ordinance, Woodland Protection Ordinance, and city policies should be reviewed to ensure that plants being recommended for planting can tolerate warmer hardiness zones.

Invasive Species

Species that are non-native and whose introduction to a new area will cause harm to the local ecosystem are considered invasive species. Invasive species can out compete native species and overwhelm local ecosystems, so it is important to monitor their spread and introduction. Novi has

taken aggressive steps to prevent the spread of invasive species by physically removing them from city parks. Warming temperatures can accelerate the spread of invasive species. The milder winters allow plants, animals, and insects that may have been restricted by the cold to move farther north. These invasive species that may not be a current threat will become increasingly more common in the future. Novi should continue efforts to remove and control existing invasive species and monitor any new invasive species being reported in central and northern Ohio, the plant hardiness zone just below Michigan, as these would be the species first to become invasive in Michigan as climate change continues. In addition to dedicated efforts to removing these species, the City has provided resources and information about the most common invasive species to inform the public and empower property owners to proactively remove them.



Autumn Olive Clearing

Sources

1 Environment & Land Use Profile – City of Novi, SEMCOG, https://semcog.org/community-profiles/communities=2170#Land

2 Environment & Land Use Profile, SEMCOG, https://semcog.org/data-and-maps/community-profiles/custom#Land

3 Heat Islands, United States Department of Environmental Protection, https://www.epa.gov/heatislands/heat-island-impacts#:~:text=Heat%20islands%20contribute%20to%20higher,and%20non%2Dfatal%20heat%20stroke

4 Iowan Environmental Mesonet, Iowa State University, https://mesonet.agron.iastate.edu/vtec/search.php#bypoint/-83.4759/42.4806

5 First Street Foundation, "First Street Foundation Releases New Data Disclosing Flood Risk of Every U.S. Home," Jun 2020, https://firststreet.org/press/2020-first-street-foundation-flood-model-launch/

6 Novi Flood Risk, First Street Foundation, https://riskfactor.com/city/novi/2659440_fsid/flood

7 "What is Green Infrastructure?," United States Environmental Protection Agency. https://www.epa.gov/green-infrastructure/what-green-infrastructure

8 Weather Underground – History, https://www.wunderground.com/history/daily/KPTK/date/2021-7-19

9 Heat Islands, United States Department of Environmental Protection, https://www.epa.gov/heatislands/heat-island-impacts#:~:text=Heat%20islands%20contribute%20to%20higher,and%20non%2Dfatal%20heat%20stroke.

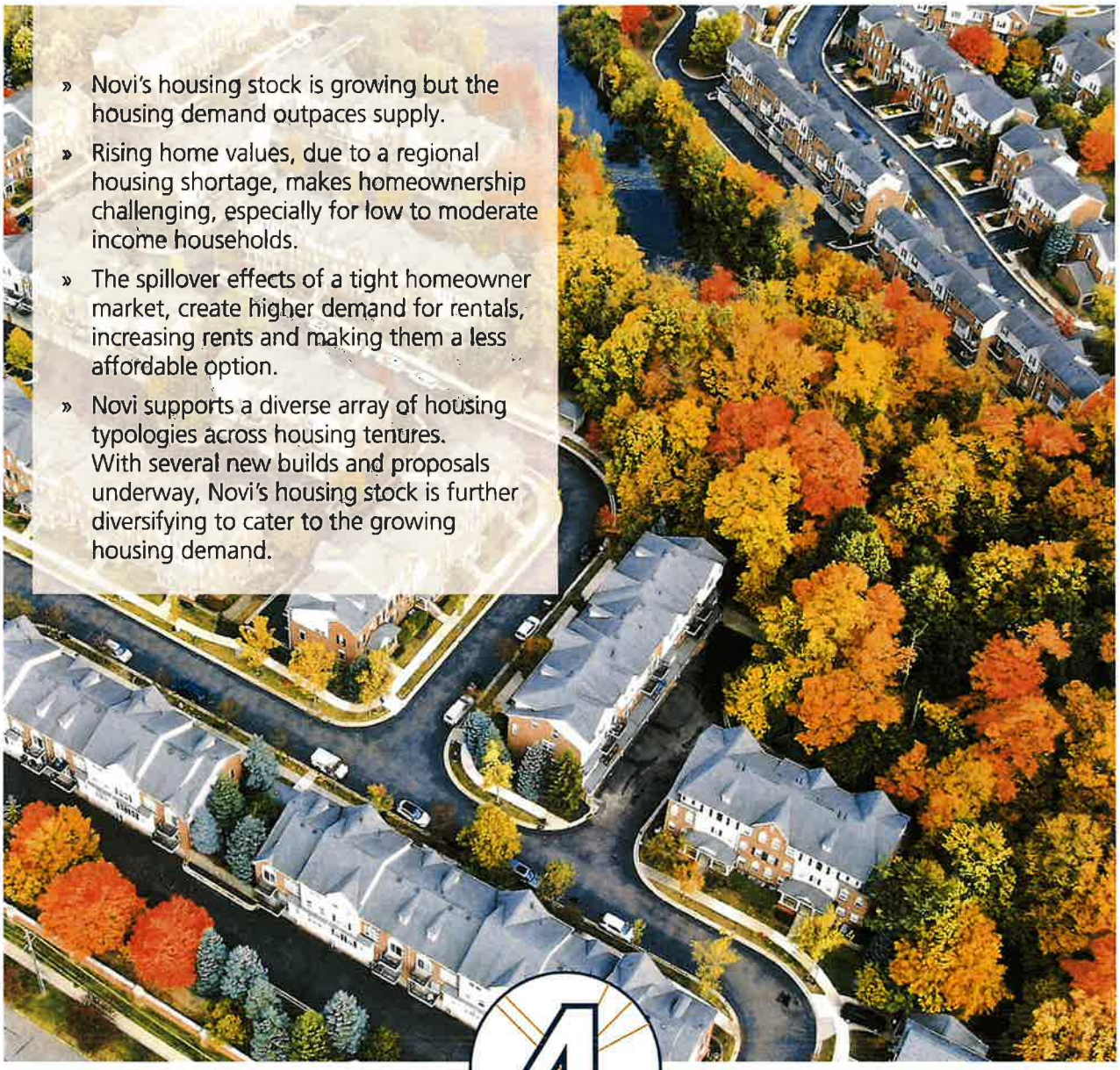
10 Palmer, L., "Shade Trees help Save Energy," Yale Climate Connections, Mar. 2016, https://yaleclimateconnections.org/2016/03/shade-trees-help-save-energy/

11 Michigan Solar, EnergySage, https://www.energysage.com/solar-panels/mi/

12 Kuhns, M., "What is a Tree Worth," Utah State University Forestry Extension, https://forestry.usu.edu/trees-cities-towns/urban-forestry/what-is-a-tree-worth#:~:text=They%20have%20found%20that%20a,a%20tree%20value%20of%20%2457%2C151.

13 Tree City USA, https://www.arborday.org/programs/treecityusa/growth-award/

14 United States Geologic Survey – Office of Sustainability and Climate, Climate Change Pressures in the 21st Century, https://storymaps.arcgis.com/stories/9ee0cc0a070c409cbde0e3a1d87a487c



- Novi's housing stock is growing but the housing demand outpaces supply.
- Rising home values, due to a regional housing shortage, makes homeownership challenging, especially for low to moderate income households.
- The spillover effects of a tight homeowner market, create higher demand for rentals, increasing rents and making them a less affordable option.
- Novi supports a diverse array of housing typologies across housing tenures. With several new builds and proposals underway, Novi's housing stock is further diversifying to cater to the growing housing demand.

4

HOUSING

Across Michigan and the country, there is a housing shortage. Home construction has not returned to pre-Great Recession levels, which means that for at least a decade, the compounding effects of a housing shortage have been felt by many. In Michigan, it is predicted that by 2045 there will be a shortage of 150,000 units.[1]

The housing situation has put homeowners and home-seekers at odds in some areas as the undersupply of housing benefits existing homeowners while newcomers to the market are at a disadvantage. For existing homeowners, increased demand and competition for their homes drives up the prices. They benefit from the equity gained in their investment which they can roll into their next home. However, because not enough new units have been built, these same homeowners may be stuck in their homes as they wait to downsize somewhere in their community. For newcomers to the market, the combination of low vacancy rates and skyrocketing housing prices and mortgage rates make the purchase of a home particularly difficult for moderate income earners, such as young professional or single income earners. Consequently, these groups tend to stay in rentals longer or bid up the cost of older homes that were once attainable to lower-income households. Rents increase because of increased competition, leaving renters less opportunity to save for a down payment on a home. Many households are in less-than-ideal housing situations when it comes to finding a unit with the price, type, and location that fits their lifestyle and needs.

These challenges are not unique to Novi. An inventory of existing conditions and dynamics for the City's housing market illuminate opportunities to continue to support residents of all tenure classes and income levels.

THE CURRENT STATE OF NOVI'S HOUSING MARKET

This section of the plan summarizes the existing conditions and current trends of Novi's housing market. To effectively present a snapshot of the city's housing market, the analysis in this section is organized into four categories: Housing Supply, Homeowner's Market, Renter's Market, and Housing Diversity. While the housing data and trends are folded into this larger framework, it is important to acknowledge that the data is interrelated so it is possible that data points could fall into more than one of the four categories. Wherever possible such links between data in different categories in this section have been explained. Detailed data tables are in the Appendix.

Houses on Shawood Street

HOUSING SUPPLY

Novi's housing stock is growing but the housing demand outpaces supply.

- In 2020, Novi recorded a total of 27,380 housing units, a 13% increase since 2010; given that the population grew by 20% in the same period, the growth of housing units has not kept pace.
- Though largest in terms of number of housing units among the surrounding communities, Novi experienced a slower rate of increase in housing units than Lyon Township and Wixom. [Figure 17]
- Over the past two decades, the largest number of building permits was issued between 2000 and 2005 (3,188); since then, only half the number of permits has been issued within 5-year periods. [Figure 18]
- Despite the slowing rate of building permits, the Home Builders Association of Southeast Michigan estimates that Novi issued the highest number of single-family residential permits in Oakland County in 2020.[2]
- Approximately 396 housing units are under construction and 1,979 are proposed, which includes both single-family and multi-family housing typologies.[3]
- Though new construction indicates a forthcoming increase in housing supply, the distribution across housing typologies, tenure type, and cost will determine how well these units cater to the housing demand.

Figure 18: Percent Increase of Housing Units from 2010 to 2020

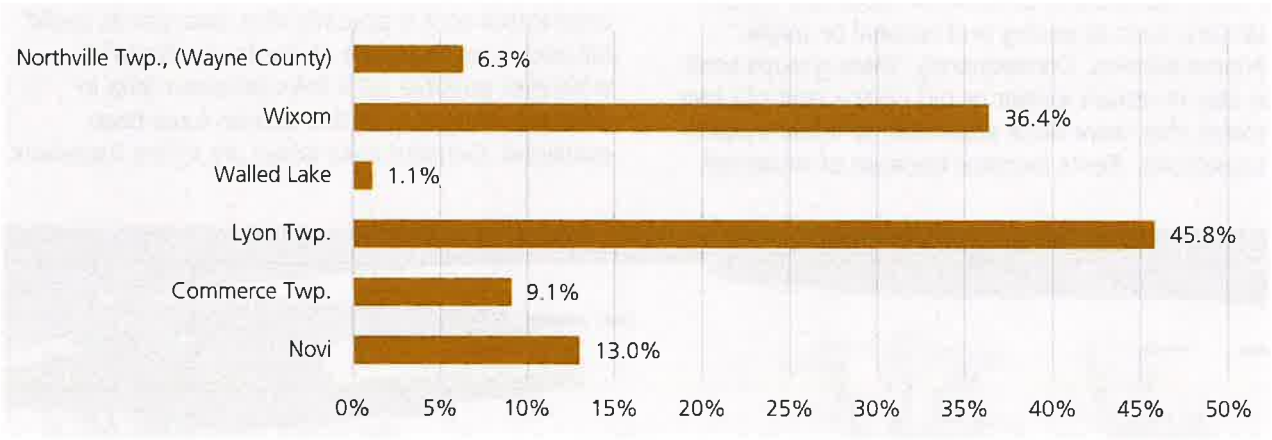
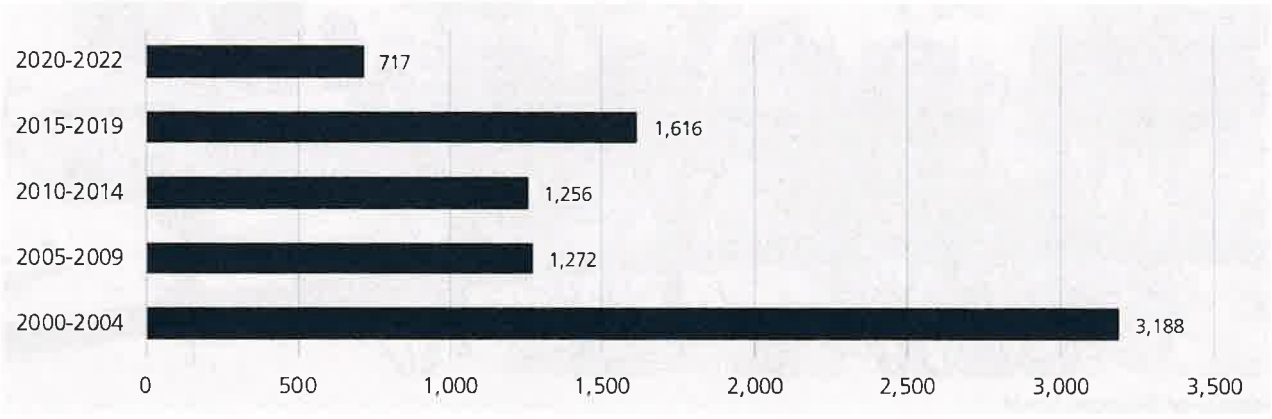


Figure 19: Building Permits, 2000–2024



THE HOMEOWNER'S MARKET

Rising home values, due to a regional housing shortage, makes homeownership challenging.

- Owner-occupied housing units still account for a majority (64%) of occupied units in Novi, a slight increase from 2010 (62%).
- Novi boasts a low vacancy rate of about 5%, indicating a strong housing market. However, only 4% of all vacant properties are in the market are pending sale as opposed to 21.9% in 2010; in other words, lesser percentage of homes are available for sale in 2010 than 2020. Therefore, increasing the housing supply would cater to the growing demand.[4]
- According to the Department of Housing and Urban Development (HUD), cost-burdened households are those who spend more than 30% of their income on housing; of Novi's owner-occupied housing units, 67% have mortgage payments and nearly 20% of those households are cost burdened. (Figure 20)
- The average sale price increased by almost 80% to $457,440 over the last decade which is attainable for less than half the city's households that earn approximately 1.4 times the Area Median Income (AMI).[5,6]

Figure 20: Housing Units Growth Rate, 2010–2020 (All housing units including apartments)

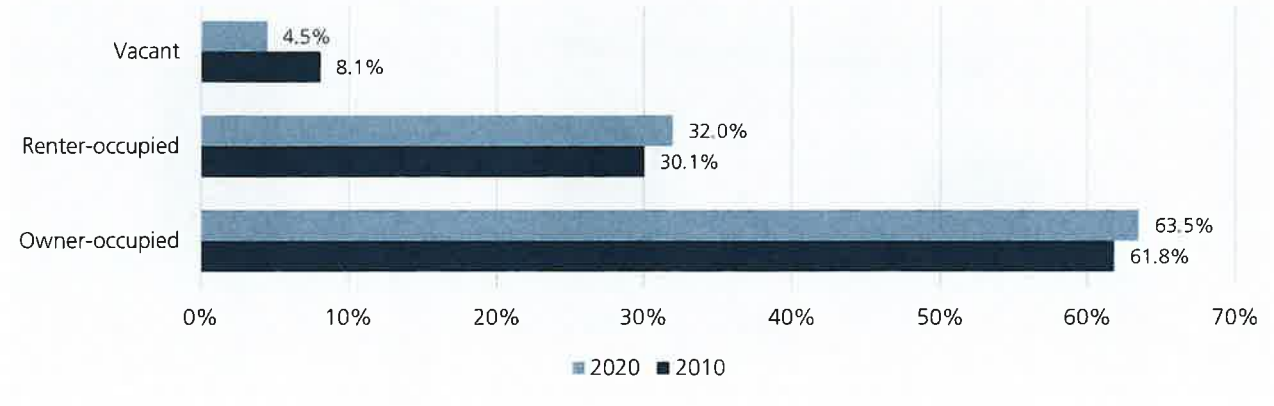
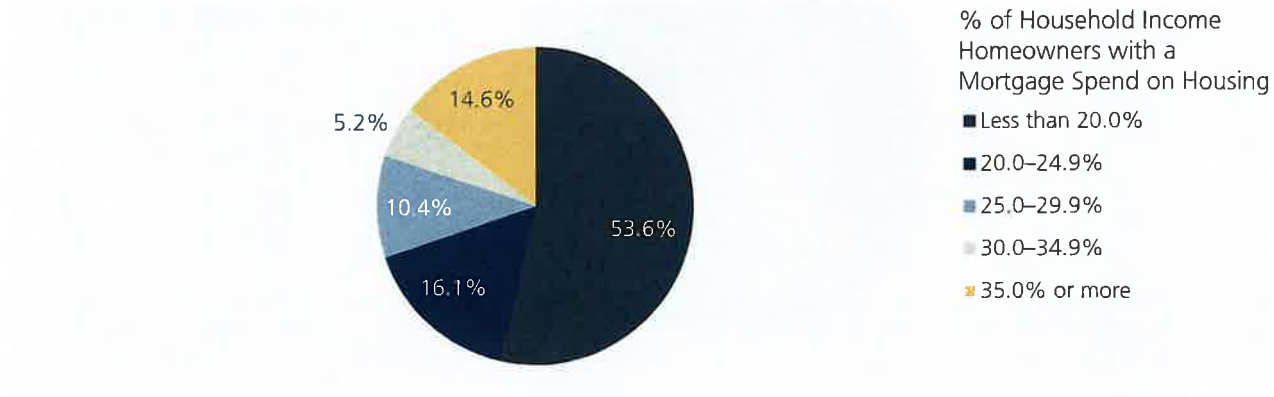


Figure 21: Selected Monthly Owner Costs as a Percentage of Household Income, 2020



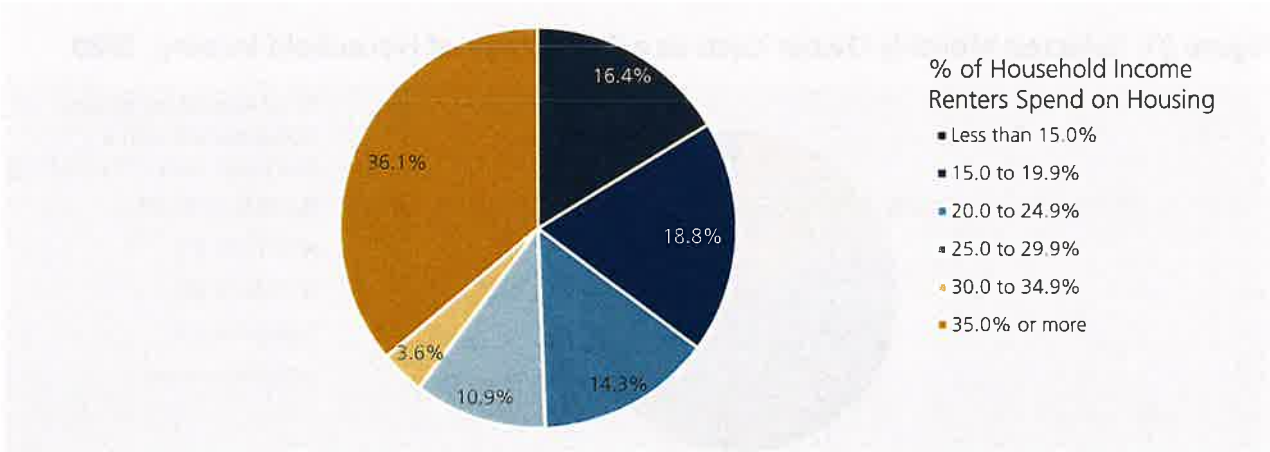
THE RENTER MARKET

The spillover effects of a tight homeowner market, create higher demand for rentals, increasing rents and making them a less affordable option.

- Renter-occupied housing units comprise about 32% of Novi's occupied housing units. (Figure 19)
- The surrounding townships have a considerably larger share of homeowners than renters, reiterating the shifting preferences and/or availability of more rental units in cities compared to townships.
- Of Novi's 5% vacant housing units, about 50% are available for rent. This could be due to Novi's high percentage of immigrants who may be a floating population that opt for shorter leases.[7]
- The increasing demand for rental units drives up the rent. The average rent on a 1,100 square feet unit in Novi is $1,736.[8]
- Of Novi's renter-occupied housing units, nearly 40% are cost burdened. (Figure 23)
- Over three-quarters of the city's rental communities were built prior to the 2000s and the average monthly rent on these units is $1,413 (June 2022).

Figure 22: Average Rent, 2024

Figure 23: Gross Rent as a Percentage of Household Income, 2023



HOUSING DIVERSITY

Novi supports a diverse array of housing typologies across housing tenures. With several new builds and proposals underway, Novi's housing stock is further diversifying to cater to the growing housing demand.

- Approximately 50% of Novi's housing stock consists of single-family homes while only 1% of all units consist of duplexes. 140 duplexes have been added over the past decade. (Figure 23)
- Unlike many Michigan communities, over 40% of Novi's housing stock is located in higher density multi-unit condominiums and apartment units. (Figure 23, Map 5)
- Novi also houses five mobile home parks which account for about 7% of all housing units. (Figure 23)
- Of the 396 housing units under construction, about 21% are detached single-family units.[9]
- Proposed housing developments (approximately 1,979 housing units) constitute a wide spectrum of typologies including duplexes, townhomes, apartments, condominiums, and mixed-use units.[10]
- The existing housing stock is diverse. It is evident that the City is actively diversifying the housing typologies to further improve affordability and accessibility. It will be critical to adapt and match the current and upcoming housing stock with demand. (Figure 24)

Figure 24: Housing Diversity, 2010–2019

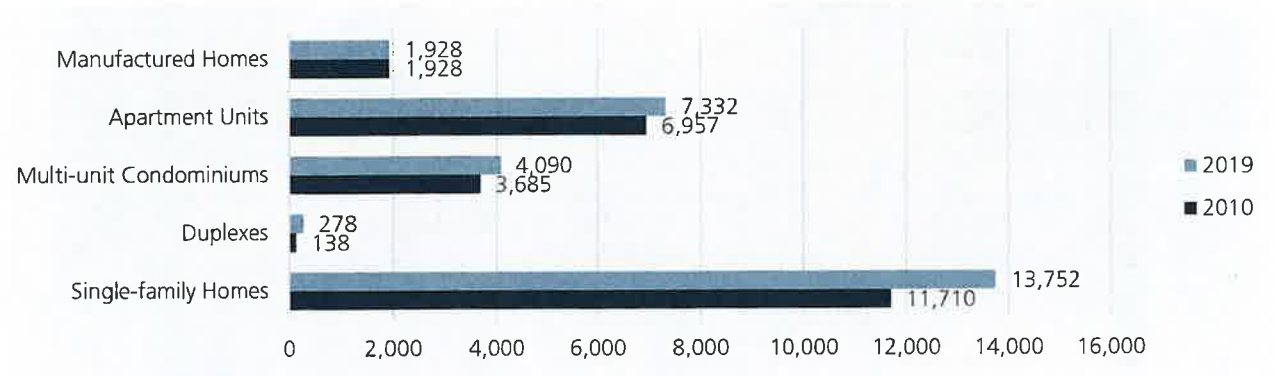
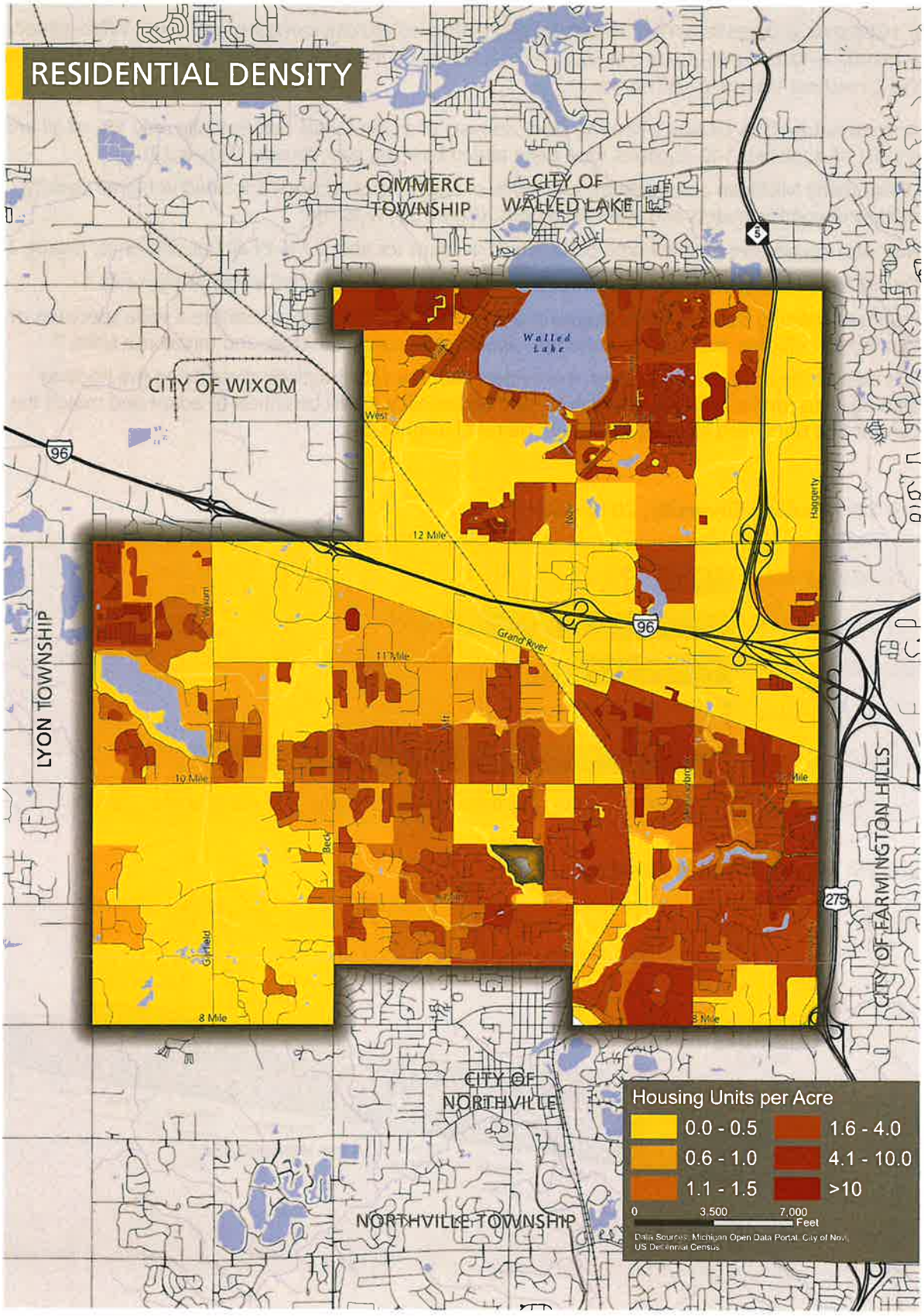


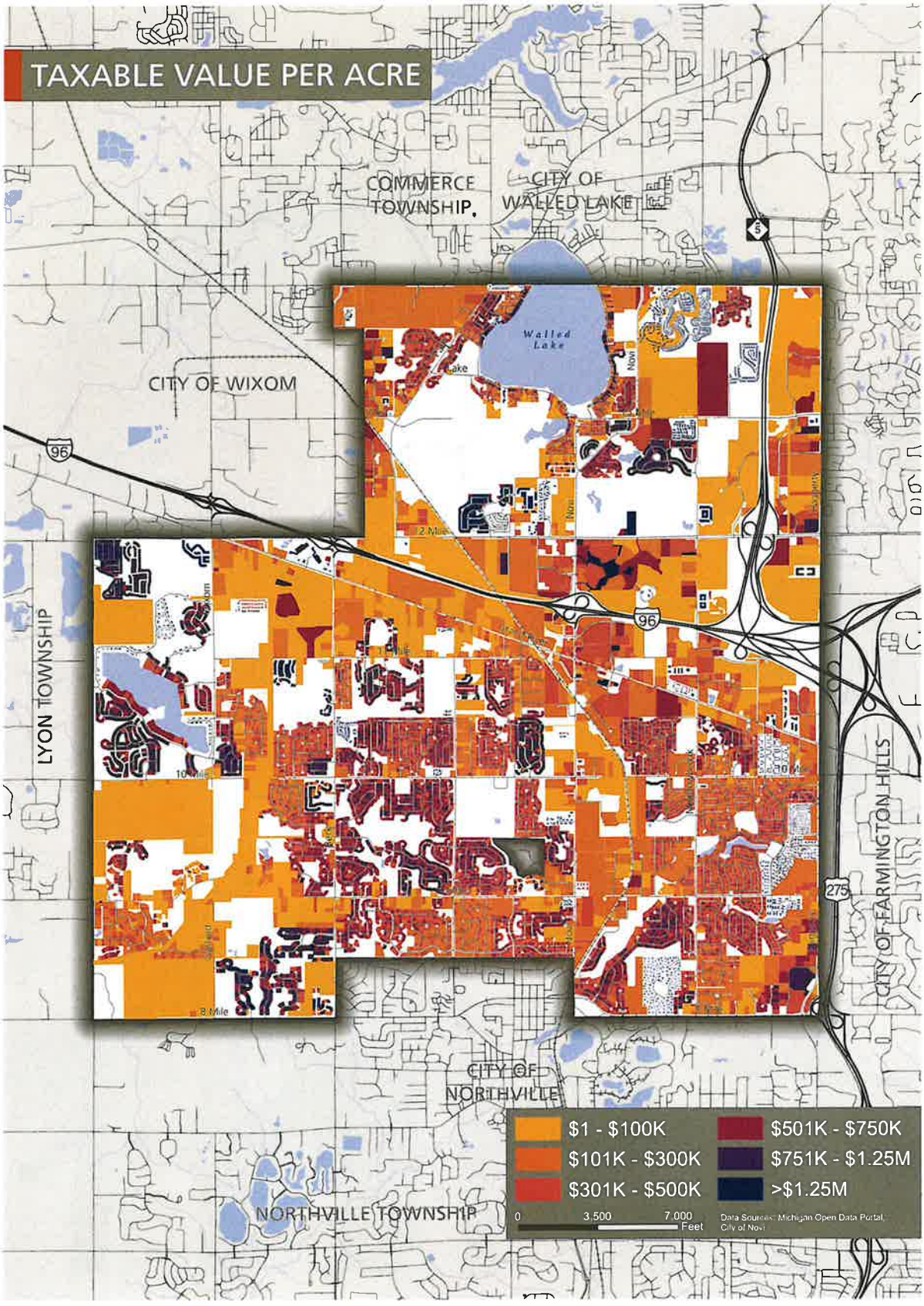
Figure 25: Missing Middle Housing

Source: Opticos Design, Inc.

Map 5: Residential Density



Map 6: Taxable Value Per Acre



Water Tower

Sources

1 "Zoning Reform in Michigan: What Can You Do Now?" Michigan Association of Planning, Spring Institute, May 2022.

2 Cavitt, Mark. "Michigan Home Construction at 14-Year High, but Increased Costs, Labor Shortage, and Unpredictable Supply Chain Hampering Industry." The Oakland Press. The Oakland Press, November 7, 2021. https://www.theoaklandpress.com/2021/11/07/michigan-residential-construction-at-14-year-high-but-increased-costs-and-unpredictable-supply-chain-hampering-industry/.

3 City of Novi, https://cityofnovi.org/services/community-development/development-projects-in-process.

4 American Community Survey, 2016-2020 5-Year Estimates.

5 City of Novi, Sales Data.

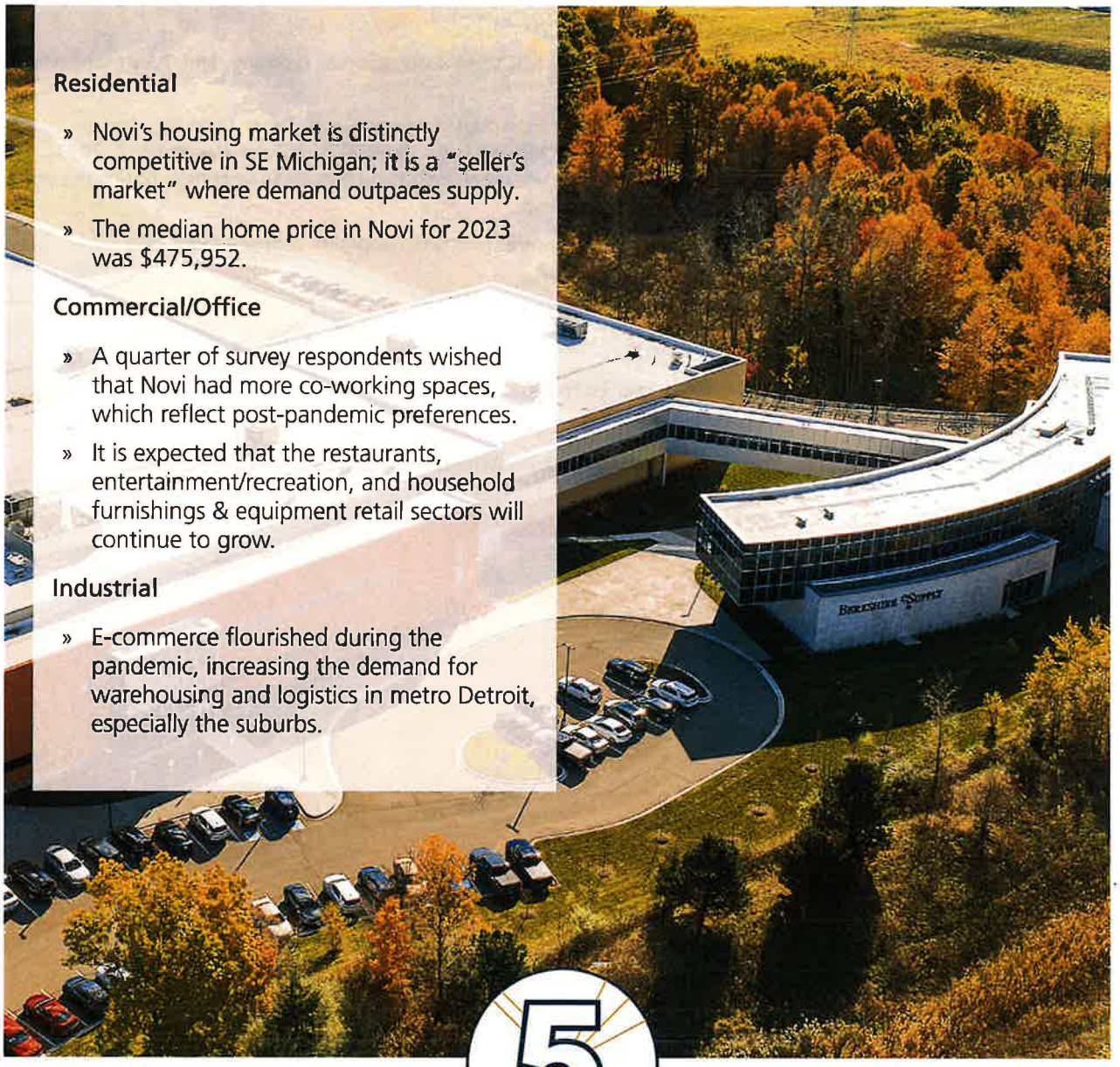
6 Calculation based on HUD's cost burden criteria.

7 American Community Survey, 2016-2020 5-Year Estimates.

8 City of Novi, Sales Data.

9 City of Novi, https://cityofnovi.org/services/community-development/development-projects-in-process.

10 Ibid.



Residential

- Novi's housing market is distinctly competitive in SE Michigan; it is a "seller's market" where demand outpaces supply.
- The median home price in Novi for 2023 was $475,952.

Commercial/Office

- A quarter of survey respondents wished that Novi had more co-working spaces, which reflect post-pandemic preferences.
- It is expected that the restaurants, entertainment/recreation, and household furnishings & equipment retail sectors will continue to grow.

Industrial

- E-commerce flourished during the pandemic, increasing the demand for warehousing and logistics in metro Detroit, especially the suburbs.

5

MARKET ANALYSIS

Novi is recognized as a thriving market in southeast Michigan. The Novi Road/I-96 interchange is a destination shopping area that includes Twelve Oaks Mall along with other "big box" retail shopping, dining, and entertainment opportunities. Beyond offering diverse retail and entertainment prospects, the city is an employment hub for a wide variety of industries, including financial services, health care, research and development facilities, and automobile manufacturing and suppliers. Novi also has one of the most unique event operations in the entire country in the form of the Suburban Collection Showplace, a 55 acre privately owned exposition, conference, and banquet center, drawing large numbers of people to the city. This diverse economy coupled with distinguished school districts makes Novi an attractive place to live. While the city is known for its large homes in a traditional single-family neighborhood setting, it also offers many opportunities for smaller-scale multi-family dwellings.

To continue to remain an attractive and vibrant place to work, live, and shop, the city seeks to understand how the population and economy are changing, which will inform key policy decisions around housing and redevelopment. To this end, this section of the Master Plan analyzes regional and local residential, commercial, office, and industrial markets and land use trends to project the future changes to the city's taxable value of existing and vacant property. The future projected revenue is compared against the projected cost of public services base to calculate the gap between revenues captured and services provided. In addition to projecting the changes to existing property, this section also projects the future taxable value of the future land use plan to highlight how the zoning changes recommended in the Master Plan could impact future taxable value and revenues.

WHAT IS A MARKET ANALYSIS AND WHY IS IT USEFUL?

The real estate market, also referred to as "the market," is an overarching term that collectively addresses buying, selling, and redevelopment of properties either in the form of buildings or land. The market may be further subdivided into several submarkets based on varying the base criterion; for example, from an economic standpoint, it may be subdivided into the buyers' market and the sellers' market; from a land use standpoint, it may be broadly subdivided into the residential, commercial, and industrial markets; and from a tenure perspective, it includes homeowners' and renters' market.

A market analysis examines past, present, and future real estate data and trends to understand the community's demand and preferences and helps cater supply accordingly. It is a valuable tool to:

- Demonstrate demand for a particular type of development and/or redevelopment.
- Provide input and comparable data for the financial feasibility of a project.
- Market the available resources to attract developers and investors.
- Build community support through targeted placemaking.[1]

This market assessment draws on data and trends gathered through a variety of methods including:

- An analysis of data obtained from the city and the Census.
- A review of secondary data and independent research.
- A review of data obtained through proprietary modeling and mapping software.
- A survey of residents of the Novi area.

This market analysis will subsequently serve as the foundation for identifying the highest and best use of the selected redevelopment sites, and it will guide future development in Novi.

CONTEXT

Regional Framework

Real estate trends in any community are not isolated events; market trends constantly change and evolve in response to local and regional socioeconomic shifts. Therefore, to fully comprehend the current and emerging trends in Novi's market, this assessment studies trends in the larger regional context of Oakland County, metro Detroit, and southeast Michigan to accurately capture and predict the future land use patterns in the City.

The COVID-19 Pandemic

The COVID-19 pandemic has disrupted real estate markets globally, and the United States is no exception. Owing to lockdown and social distancing mandates, in the months following March 2020, offices, malls, and restaurants, were vacated while homes simultaneously fulfilled the functions of all these spaces. E-commerce became the predominant way to shop, and barring essential workers, Work From Home (WFH) emerged as the "new normal" for office workers. Despite expectations of a protracted recession and extended period of recovery, the economy began to bounce back more quickly than expected and economic output has reverted to pre-COVID measures.[2] Mirroring the elasticity of the economy, some markets such as retail and offices experienced a temporary hiatus while industrial and residential markets witnessed a dramatic increase on the demand side. Through all these changes one theme that consistently emerges is the need for flexible spaces.[3] As the lines between home, work, retail, and entertainment blur, real estate that can easily adapt has become exceedingly valuable. Therefore, in addition to reviewing past and current market trends specific to Novi and the surrounding region, this assessment focuses on emerging trends in the COVID-19 pandemic context to predict future investment avenues.

RESIDENTIAL MARKET

Novi's regional location, about 25 miles northwest of Detroit, combined with exceptional school districts and a flourishing economy, make the city a sought-after place to live. It is the third-fastest growing housing real estate market in 2022 and has been ranked among the top ten best places to live in Michigan.[4,5] As a northern suburb in Metro Detroit, and given Detroit's unemployment rate has fallen under the national averages after nearly two decades, the City has also been the secondary beneficiary of Detroit's economic recovery.[6] With suburbs gaining additional significance in the post-pandemic world, Novi can expect to see an accelerated demand for housing caused by the ripple effect of this regional growth.

Demographic Trends Impacting the Residential Market

Demographic changes profoundly influence the housing market; therefore, it is essential to closely monitor the population and the community's preferences to predict trends in housing and strategize around housing supply. Novi's local and regional demographic trends are discussed in detail in Chapter 2 of this plan, but several that directly impact the housing market are listed below:

- Novi's population and households grew by nearly 20% in the last decade; the city is growing at a much faster pace than predicted and has already surpassed the SEMCOG population projections for 2025.
- The population growth rate of Novi outpaced that of Oakland County by 6% and other similar sized communities including Farmington Hills, Rochester Hills, Royal Oak, Southfield, Troy, and West Bloomfield Township, suggesting that the City is also growing rapidly in the regional context.
- The growth of housing units in Novi also outpaced that of other similar-sized communities, due to an increasing number of new builds.
- With a median age of 39.2 years, Novi's population is aging; the 45-64 age group is the largest (28.4%) and nearly 40% of the population is above 45 years of age, establishing Novi as a place for mature families while also creating a demand for diverse housing typologies allowing residents to age in place.
- The combined decrease in the school-age cohort and 35-44 age cohort, despite the city's exceptional school districts, suggests that families with young kids may be migrating out. A likely explanation is Novi's housing may be inaccessible for families seeking "starter homes."

These demographic trends together indicate a need for housing of varied typologies, from starter home to senior housing, at various price points to cater to the needs of different demographic groups.

Novi's Residential Market

Novi's housing market is distinctly competitive in southeast Michigan. Redfin, a popular real estate brokerage, rates Novi 88 on a scale of 100 for competitiveness, indicating a "very competitive" market. Homes receive multiple offers and often standard contingencies are waived, and the most popular listings go "pending" in about five days and sell for approximately 7% over the list price.[7,8]

Figure 26: Residential Market Snapshot

Sources:
Novi Data: Redfin. Novi Housing Market, 2022. https://www.redfin.com/city/15385/MI/Novi/housing-market..

SE Michigan Dat: Remax of Southeast Michigan. SE Michigan Housing Snapshot. https://www.remax-detroit.com/blog/wp-content/uploads/sites/145/2022/07/Jun-22-Snapshot.jpg.

*SEMCOG Housing Data. https://semcog.org/housing.

In real estate terms, Novi is a "seller's market" where demand outpaces supply.

With median sales and gross rent costs that are nearly 1.5 times the median of the region as well as low vacancy rates, Novi's housing market is growing faster than the Southeast Michigan (Figure 25). Given the rate at which the population and economy is growing, this trend is expected to continue and may have the following outcomes:

- On the upside, the city can expect an influx of investment in the housing sector which can boost supply.
- On the downside, with rising construction and labor costs, it is possible that new builds will be accessible only to higher-income households.
- As a result, working-class households are forced into renting; however, with an average rent of $1,413, even the rental market can be unaffordable to nearly 35% of Novi's households.[9,10]

There is no doubt Novi will continue to attract investment in residential development, and high-end ownership and rental properties will remain lucrative prospects. To advance equitable and sustainable growth in this market, the city should consider incentivizing affordable and market-rate housing for developers.

What's Selling in Novi?

Table 2 records the housing sales data in Novi over the last decade. Except for 2012, the average home size decreased between 2010–2018 and subsequently increased between 2019–2021. While the increasing average household size is a plausible explanation, it is also likely that with the onset of the pandemic (March 2020), households started seeking larger homes to accommodate additional spaces such a home office, gym, children's play area, etc. Table 3 also shows that homes that are 3,000 to 5,000 square feet were the top choice during the pandemic, thereby increasing the average sales price for this type of housing by 20%.[11] Homes with offices and basements are most popular in Novi and are integral features in nearly 60% of the listings with a sale-to-list ratio of 102.5%.[12,13]

As demand for larger homes increased between 2020 and 2021, and as average sale price per square foot increased, more mid-size homes (1,500-2,000 square feet) sold in 2021 (19.3%). This is unsurprising as people who cannot afford to enter the competitive large-home market seek out mid-size housing typologies (like condos and duplexes) in pursuit of more affordable options. Alternatively, as the population of Novi ages, empty nesters (45-64 years) and seniors (65+ years) often gravitate towards smaller homes from both an

Table 2: Housing Sale Data 2010–2021

Sale Year	Number of Units Sold	Average of Floor Area (sq. ft.)	Average Sale Price	Average Sale Price/sq. ft.
2010	174	2,304	$254,384	$99
2011	752	2,260	$251,935	$101
2012	783	2,320	$280,729	$110
2013	766	2,283	$307,485	$126
2014	960	2,207	$315,587	Data not available
2015	1,007	2,169	$316,739	$139
2016	1,021	2,194	$338,424	$147
2017	912	Data not available	$320,544	Data not available
2018	964	2,183	$368,105	$165
2019	919	2,260	$389,720	$168
2020	1,028	2,262	$394,533	$172
2021	997	2,292	$457,440	$192

Source: City of Novi

Table 3: Percentage Units Sold by Area, 2010–2020

Floor Area (sq. ft.)	2019	2020	2021
Under 750	0.4%	0.6%	0.3%
750 - 1,000	4.2%	3.8%	4.4%
1,000 - 1,500	22.9%	20.5%	17.5%
1,500 - 2,000	15.1%	16.2%	19.3%
2,000 - 2,500	17.6%	19.2%	18.7%
2,500 - 3,000	19.7%	19.5%	15.0%
3,000 - 5,000	18.8%	20.0%	22.6%
Over 5,000	1.2%	0.2%	1.3%
Vacant	–	–	1.0%

Source: City of Novi

Table 4: Housing Preferences by Age

Housing Type	25-34	35-44	45-54	55-64	65+	Total
Detached single-family home	87%	94%	91%	76%	65%	82%
Townhouse	14%	20%	25%	24%	20%	22%
Mid-rise apartment/condominium	14%	7%	8%	22%	13%	12%
Senior living apartments	3%	1%	6%	23%	45%	17%
Accessory dwelling unit	6%	4%	10%	10%	13%	9%
Mixed-use	20%	10%	11%	7%	3%	9%
Live/work unit	10%	4%	2%	4%	2%	4%
Bungalow court	1%	5%	7%	9%	8%	7%
Duplex	8%	7%	6%	6%	7%	7%
Triplex/Quadplex	4%	4%	3%	3%	4%	4%
Courtyard apartments	7%	6%	4%	3%	12%	6%
High-rise apartment/condominium	4%	7%	4%	3%	2%	4%
Manufactured/mobile home	3%	0%	1%	1%	2%	1%

Source: Novi Master Plan Survey: 842 Responses

affordability and maintenance standpoint. These trends indicate that there is a demand for both larger traditional single-family homes and "smaller lot" homes.

What Does the Community Want?

Only one third of respondents of the Master Plan survey agreed or strongly agreed that there are sufficient housing options in Novi to meet their future housing needs. When asked what housing options respondents would like to live in 10 years from now, the responses indicated demand for more diverse housing types. The most popular housing type remained the detached single-family home, followed by townhomes and senior living apartments. Two of the more uncommon housing types (accessory dwelling units and mixed-use units) received 9% interest among respondents. The table titled "Housing Preferences by Age" illustrates the interest in housing unit type varied by age. Understandably, senior living apartments were most popular among older populations. Courtyard apartments and accessory dwelling units were also popular housing choices, and younger generations tended to prefer mixed-use and live/work buildings compared to the older generations.

Residential Market Trends

Missing Middle Housing

The effects of the statewide housing shortage are felt in most of Southeast Michigan. With most communities emerging as seller markets with dramatically rising rents, there is a gap between supply and demand. Cities have an added challenge of low availability of land to increase supply through new builds. Therefore, increasing density becomes a likely solution, but one which doesn't always gain the community's acceptance. Under such circumstances, Missing Middle housing typologies (see Figure 24) such as Duplex, Triplex, Quadplex, Bungalow Courts, Multiplex, and Live/Work units have gained traction as they weave density and diversity into the fabric of traditional single-family residential neighborhoods. These missing middle typologies also pave the path towards equitable housing by addressing two very important aspects: housing availability and housing affordability. Missing Middle characteristics include:

- Medium density but lower perceived density
- Smaller well-designed units
- Reduced lot sizes
- Walkability and multi-modal access

With over 40% higher-density multi-family units, a considerably greater percentage than surrounding similar sized cities of Farmington Hills (36%), Rochester Hills (19%), and Royal Oak (30%), Novi's housing inventory already includes many of these housing typologies, including duplexes, townhomes, and multi-family apartments.[14]

Flexible Homes

Homes have been transformed into multipurpose spaces in response to the pandemic, and having flexible spaces within homes has become a recent feature. More time spent at home calls for evolved flex-space design and greater-square-footage floor plans, with a deemphasis on indoor shared amenities in favor of outdoor living and recreation space.[15] Homes with office spaces, basements, flexible common areas, patios, and decks are receiving the most competitive offers.[16,17]

Build to Rent

Homeownership is vital for overall economic wellbeing, but renting is quickly becoming a preferred option in cities due to high housing costs and inventory shortages. Some young adults, empty nesters, seniors, and immigrants prefer to rent due the convenience and flexibility it offers. With this growing demand for rental units, many developers are building to rent in southeast Michigan across an array of housing typologies, typically more spacious than apartments and include shared amenities.[18]

Mixed-Use Residential in Suburbs

With the flexibility that WFH offers, people are choosing to move to less dense suburbs. However, the pandemic also reemphasized the advantage of having everyday goods and service within walking distance; mixed use areas are thus becoming a highly popular option. Especially in the metro Detroit region where the suburbs have diverse communities and economic opportunities, mixed-use properties may be easily integrated along denser corridors. Mixed-use residential properties also tend to have smaller footprints, add housing diversity, and serve as a more affordable housing option in highly competitive markets. Furthermore, in communities which don't have a downtown, mixed-use developments create "community hubs" and encourage alternative modes of commuting including walking and biking, which is beneficial to reduce traffic on the major thoroughfares.[19]

Future Residential Market Avenues in Novi

Given the demographic trends, sales trends, demand-supply market dynamics, and community preferences, the question is what type of housing should be developed in Novi? The recommendations are as follows:

- Continue to build larger (3,000-5,000 square feet) detached single family units with flexible spaces or multi-use spaces to cater to the new normal in the COVID-19 era of live, work, and shop from home.
- Channel new investment towards mid-size (1,500-2,000 square feet) missing middle typologies to improve housing diversity and affordability.
- Incentivize smaller-footprint mixed-use residential units along the Grand River Corridor.
- Consider allowing Accessory Dwelling Units in some residential areas, including single family neighborhoods where appropriate,

to provide more housing options for young adults, the elderly, or residents in transition to homeownership.

- Identify specific areas in the city in proximity to healthcare and recreational facilities for developing senior living facilities to enable the population of Novi to age in place.
- Pursue "Build-for-Rent (BFR)," "single-family rental (SFR)" and "single-family-built-to-rent (SFBR)" developments to increase the rental housing stock.
- Improve affordability by offsetting high costs of construction and labor by developing affordable rate units, both ownership and rental, in combination with upscale units.
- Incentivize affordable infill housing where feasible to supply housing to the low- and moderate-income population of Novi.

COMMERCIAL MARKET

The COVID-19 pandemic has transformed the commercial real estate market. In response to a global public health catastrophe, and with the arrival of quarantines and social distancing mandates, the commercial market was entirely disrupted. Semi-public and public spaces such as offices, shopping malls, restaurants, convenience stores, gyms, and entertainment venues that once provided a sense of community became obsolete, and all these uses found ways into peoples' homes or backyards. WFH and e-commerce became a lifestyle for most, raising questions on the future of commercial real estate. But the market showed surprising resilience. With faster than anticipated economic recovery and a renewed need for flexible and open social spaces, the commercial markets bounced back. This analysis will broadly focus on three commercial markets: Retail, Office, and Industrial.

Socioeconomic Trends Impacting the Commercial Market

Local and regional socioeconomic trends drive commercial real estate. Household income, spending potential, and preferences impact the type of commercial investments funneled into a community. Novi's local and regional economic trends are discussed in detail in Chapter 6 of this plan, but several pointed trends that directly impact the commercial market are listed below:

- The city's median household income increased from $95,131 in 2010 to $98,020 in 2019, but subsequently decreased to $93,943 in 2020, likely an effect of the COVID-19 pandemic. However, the surrounding cities of Walled Lake and Wixom recorded only about 60% and the southeast Michigan region about 70% of Novi's median household income in 2020, indicating the city's economic status in the region.
- With a strong presence in the auto sector, Novi is the beneficiary of international immigrants and business visitors, which creates a market niche for commercial real estate.
- Manufacturing is still the leading industry driving Novi's economy, followed closely by professional, scientific, management, and administrative support, waste disposal and remediation services, and educational services, healthcare, and social assistance.[20] Manufacturing refers to the mechanical, physical, or chemical transformation of materials, substances, and other components into new products. SEMCOG's regional forecast also predicts that while the former will see a decline, the latter two industries will witness growth by nearly 50% and 30%, respectively.[21] Since the two growth industries typically require office and/or retail spaces, Novi can expect an increase in demand for commercial real estate, especially small to mid-sized offices.[22]
- Roughly 41,000 people from adjacent communities commute into the City for work. These daily work commuters regularly frequent food and drinking establishments, visit parks, and personal services and seek out various entertainment options near their place of work, adding additional demand for more such spaces.[23]
- Simultaneously, data from the National Association of Realtors (NAR) recorded that Oakland County had the highest Work from Home score in 2020 statewide, indicating that retail and office markets will have to be flexible to accommodate the changing work patterns.[24,25]
- The pandemic induced a surge in e-commerce, therefore the demand for industrial spaces and warehouses has skyrocketed in the region.

Novi's Commercial Market

Novi is a regional hub for commercial activity. Its economy includes international corporations with local and regional offices as well as owner-operated businesses serving the local area. While Novi is recognized for its large concentration of retail businesses clustered at the Novi Road and I-96 interchange, including the regional Twelve Oaks Mall, there are several large retail centers in the City as well as many individual retail businesses.[26] Auto showrooms are integral to Novi, with several luxury auto brand venues along Haggerty Road and Grand River Avenue. The city's industrial and office parks are home to companies in high tech research and development, health care, transportation and logistics, manufacturing, and domestic and foreign automotive-related suppliers. As the city reopens, the demand for social and interactive retail destinations has grown, paving the way to new market entrants such as Michigan's first indoor skydiving company iFLY.[27]

Novi offers an array of commercial properties for sale and for lease. In 2022, the average price per square foot in Novi was $192 which is on par with that of Oakland County $193.50 per square foot. This is indicative of a competitive regional commercial market.[28] The average rent per square foot on commercial properties in Novi was around $19.5. Figure 27 shows the change in Novi's commercial property vacancy rate in comparison to Oakland and Wayne Counties. Novi's market experienced a significantly greater disruption than the counties during and in the aftermath of the pandemic; however, in the second half of the 2021, the market swiftly stabilized, and for the last two quarters of 2024 had lower vacancy rates than Oakland County.

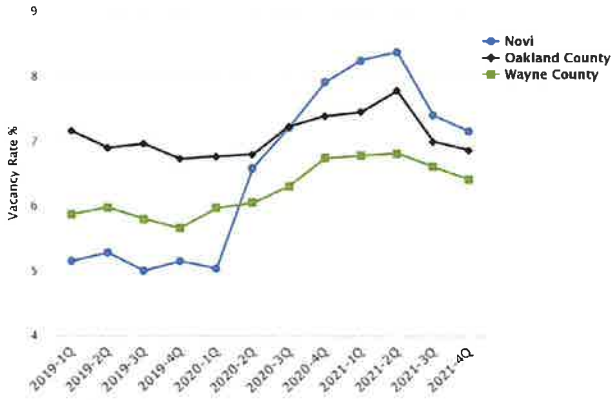
Novi undertakes rigorous efforts to attract large-scale business, which increases taxable values and creates jobs. These active business development endeavors distinguish Novi's commercial market from the rest of the region. The city also extends several types of property tax abatements to developers and offers one of the lowest city property tax rates (10.2 mills) among comparable communities, while providing exceptional services and prime locations that attract investment in competitive commercial markets.[29]

Novi's Retail Market

In the aftermath of the pandemic, retail spaces had to quickly adapt to accommodate the transition to compete with e-commerce. "Retailers immediately had to scale up their home delivery and curbside pickup services while overhauling their supply chains to meet shifting consumer demand and overcome severe shortages."[30] As communities reopen post pandemic, retailers in the suburbs are benefiting the most.[31] Novi can expect to see a spike in the demand for retail spaces.

In 2024, Novi's retail vacancy rate was 4.8% with an average $26.67/square foot market rent and an average $166/square foot market sale price.[32] Figure 28 shows that Novi's retail vacancy rate dropped below the City's office, industrial, and flex vacancy rates between the third and fourth quarter of 2021. Figure 30 illstrates greater fluctuation in retail vacancy rates in comparing Novi to Oakland and Wayne Counties. 2024 ended with Novi's retail vacancy below that of Oakland County, indicating the market is following the trajectory of anticipated suburban retail growth.

Figure 27: Vacancy Rates, March 2020



Source: City of Novi

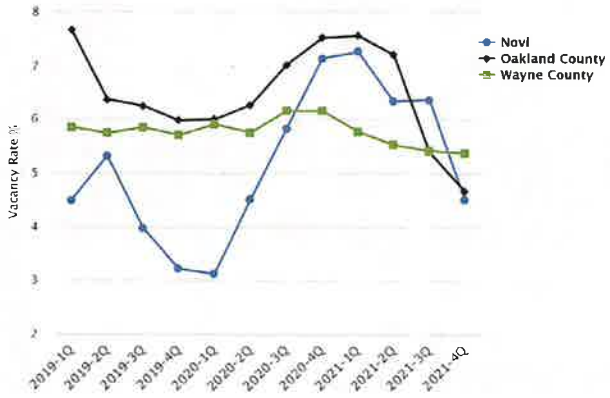
Figure 28: Retail Vacancy Rates, March 2020

Source: City of Novi

Figure 29: Commercial Market Snapshot (Retail, Industrial, and Office)

Sources:
i. Crexi, Novi Market Overview
ii. City of Novi Website
* Not all listings include rent/sq.ft.

Figure 30: Retail Vacancy Rates: Novi, Oakland County, and Wayne County, March 2020



Source: City of Novi.

How Do Residents Spend Their Money?

A useful demand indicator in the retail market is measuring how and where households spend their money. ESRI's proprietary software calculates the "Spending Potential Index" to measure the amount spent on various goods and services by Novi households relative to a national average of 100. In addition to the spending potential index, Table 5 also captures the total dollar value and average amount spent by households as annual figures per retail category.[33] Housing emerges as the top expenditure followed by health care. Residents of Novi exhibit a higher spending potential than the national average in all categories, especially under the travel and education categories.

Specifically relating to the retail market, households in Novi spent the most on food. With restaurants closing dine-in services during the pandemic, grocery stores boomed as did outdoor dining, take-out and curb-side service. Outdoor recreation areas were among the few safe places to socialize during the pandemic. Coming out of the pandemic, the demand for entertainment opportunities surged explaining the expenditures on "Entertainment/ Recreation" and "Household Furnishings & Equipment" as households began improving their gardens, installing new entertainment centers, and converting closets and dead space into home offices."[34] It is expected that these retail sectors will continue to grow, and Novi's retail market should be prepared to meet this demand.

Table 5: Consumer Spending, 2022 Forecast

Spending Category	Total Spent	Average Spent	Spending Potential Index
Shelter (Housing)	$861,818,368	$31,859.02	139.00
Health Care	$252,956,697	$9,351.10	132.00
Food at Home	$225,211,601	$8,325.44	134.00
Food Away from Home	$162,019,956	$5,989.43	139.00
Entertainment/Recreation	$134,613,946	$4,976.30	136.00
Travel	$110,300,965	$4,077.52	142.00
Support Payments/Cash Contributions/ Gifts in Kind	$100,775,654	$3,725.39	137.00
Household Furnishings & Equipment	$ 96,141,592	$3,554.09	139.00
Apparel & Services	$ 90,783,745	$3,356.02	139.00
Education	$ 77,549,553	$2,866.79	146.00
Vehicle Maintenance & Repairs	$ 45,637,940	$1,687.11	134.00
Personal Care Products & Services	$ 38,334,462	$1,417.12	139.00

Note: Consumer spending expenditures are shown by broad budget categories that are not mutually exclusive. Consumer spending does not equal business revenue.

Source: ESRI Market Profile.

What Retail Does the Community Want?

The Master Plan survey asked respondents several questions on commercial and retail development, and the detailed responses are presented in the Appendix. A few pointed trends impacting retail demand are listed below:

- Survey respondents demonstrated the highest demand for more recreation/public space, with 61% indicating that there was not enough in Novi.
- The greatest demand for retail goods was in the sporting goods, hobby, and book & music store sector, with 28% of respondents indicating that there was not enough in Novi.
- When asked if there were any specific businesses/establishments survey takers would like to see operate/open in Novi, food/grocery stores and general retail businesses were most listed.
- When asked about commercial redevelopment, about 77% of respondents support a "downtown type" development, 51% support hybrid shopping venues, and 19% support strip malls. Only 13% support a regional mall style of development.

Novi's Office Market

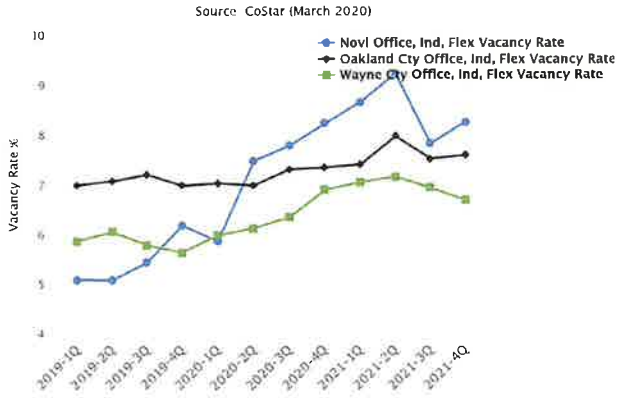
The pandemic scaled up the "Work from Home" (WFH) model. Excluding essential workers, emergency responders, and physical laborers, almost all employers authorized employees to WFH, which disrupted the office real estate market. But in the hopes that the shutdown would be temporary, firms around the nation did not want to give up their office spaces, and vacancy rates were at an all-time high.[35]

Novi's economy includes international corporations with local and regional offices as well as owner-operated businesses serving the area. The city is also an industry leader in Healthcare and Research and Development (R&D) which tends to use large swaths of office and laboratory spaces. Consequentially, the vacancy rate in the "Office, Industry, and Flex" markets has gradually increased from mid-2022 (7% in Q2) to 2024 (8% in Q4) (Figure 31). Figure 32 illustrates that vacancy in these markets is comparable between Novi and Oakland County with greater consistency (and lower vacancy rates) evident in Wayne County. As

Figure 31: Office, Industry, and Flex Vacancy Rates, March 2020

Source: City of Novi

Figure 32: Office, Industry, and Flex Vacancy Rates: Novi, Oakland County, and Wayne County, March 2020



Source: City of Novi

of 2024, Novi's office inventory as a vacancy rate of 10.8% with an average $25.59/square foot market asking rent and an average $160/square foot market sale price.[36]

Nevertheless, Novi's office market is on the path to recovery, ending 2021 at an 8% vacancy rate. Considering the office vacancy rate in the Detroit-Warren-Dearborn metro area during the same period was 11%, Novi's office market still stands out regionally.[37] This may be in part due to the growing investment in corporate headquarters in the metro region. For example, in 2021, Magna International Inc.'s four-year-old headquarters sold for $322.22 per square foot for a total of $58 million.[38]

What Office Spaces Does the Community Want?

A quarter of survey respondents wished that Novi had more co-working spaces. Co-working space is a business service model where individuals working independently or collaboratively in a shared office space and use common facilities such as conference rooms, telecommunication facilities, and printer equipment.

Retail and Office Market Trends

Suburbs are the "new hubs"

The pandemic in many ways invigorated suburbia. WFH and e-commerce provided flexibility to households to move further away from their jobs in cities into the suburbs, shifting the demand for commercial spaces to the suburbs from the cities.[39] Retail spaces also had to be reconfigured to accommodate physical changes such as curb-side pickup and space for delivery vehicles that feed e-commerce. Such retrofitting and reengineering can be accommodated in suburbs more efficiently than in a downtown or Central Business District (CBD).

Smaller Square Footage and Short-Term Leases

The trend of WFH and online shopping is here to stay. According to a recent survey, most employees prefer a hybrid work model, but both employers and employees believe that a physical space is necessary to foster collaboration and a healthy work culture.[40] Given the uncertainty, most companies have not been signing long-term leases.[41] Even with the healthcare sector and "telehealth" gaining prominence, many prefer to operate out of smaller clinics without the need for large waiting rooms. Flexible office and flexible retail can be achieved by offering smaller footprints and short-term leases. Smaller spaces with shared facilities provide more financial incentives for businesses and companies to invest in physical spaces, and short-term leases offer flexibility to reassess needs on a continual basis.

Functional Outdoor Spaces

Outdoor areas facilitated safe social interaction during the pandemic, and the demand for functional outdoor areas has been on the rise. Restaurants with outdoor seating before the pandemic were a luxury, but now outdoor space is a necessity. Designing commercial retail and office spaces with flexible outdoor spaces will encourage people to frequent such spaces.

Future Avenues for Retail and Office Markets in Novi

Through the pandemic, Novi's retail and office markets have shown resilience. The challenge that lies ahead for the city is to redevelop the existing inventory and vacant commercial properties to meet the changing demand.

The recommendations are as follows:

- Develop commercial and office spaces to have smaller footprints with shared facilities.
- Expand neighborhood-scale retail to include everyday uses such as local grocery stores, food establishments, gyms, and other frequented businesses.
- Incentivize mixed-use infill development in Novi's town center to create a walkable destination in the city with storefronts and pedestrian amenities.
- Redevelop office spaces as co-working spaces to allow for maximum flexibility and to provide opportunities for firms to set up satellite offices in Novi.
- Wherever feasible, encourage functional outdoor spaces, especially with primary uses such as restaurants, bars and taverns, cafes, and the like.

Novi's Industrial Market

The industrial market is the only real estate market that boomed from the e-commerce wave stirred by the pandemic. Due to robust demand for logistical real estate, an acute scarcity of supply, and rising replacement costs, high rents keep the market booming and vacancy rates at a record low."[42] Closely following the trend in retail and office and pushed by a shortage of larger parcels of land for industrial and warehouse uses, this market is expanding in the suburbs. In metro Detroit, the total area of industrial/warehouse space under construction in 2021 jumped from 6.69 million square feet in the second quarter to 7.58 million square feet in the third.[43]

Manufacturing is still the largest industry in Novi, and the city has a strong automotive presence

regionally and globally; these industries continue to advance Novi's industrial real estate.[44] The booming industrial market likely stabilized the rapidly increasing vacancy rates, which reached an all-time high of 9.2% by mid-2021. As of August 2022, Novi's industrial inventory is 254,276 square feet across a total of 14 active listings.[45] As Novi's Lineage Logistics, a global temperature-controlled real estate investment trust (REIT), acquires facilities globally, the city can expect expansions in the industrial market. There is also a booming market in the suburbs of southeast Michigan to supply warehousing and logistics as developers like Ashley Capital, NorthPoint Development LLC, and Flint Development undertake large-scale projects in the metro region.[46]

Regional Industrial Market Trends

Demand for Infill Warehousing and Logistics Spaces is Increasing

As the backbones of e-commerce, the demand for warehousing and logistics continues to grow in metro Detroit. In all five counties (Wayne, Oakland, Macomb, Washtenaw, and Monroe) mammoth buildings are under construction near freeways.[47] In many instances, these spaces are being developed as "flex" spaces without an actual buyer or tenant lined up. However, with demand outpacing supply, regulatory barriers to new construction, and raising construction costs, large-scale "new builds" for warehousing are becoming an increasingly unsustainable solution. As a result, smaller-scale infill industrial development is gaining traction as a potential solution in largely urbanized areas.

Future Avenues for Industrial Markets in Novi

How can Novi capitalize the industrial sector? The recommendations are as follows:

- Increase focus on smaller industrial footprints (30,000 to 60,000 square feet) that cater to research and development, technology, and specialized engineering.
- Provide flex-space and multi-tenant buildings.

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Sources

1 Brett, Deborah L. Real Estate Market Analysis: Trends, Methods, and Information Sources, 3rd ed. Washington, DC: Urban Land Institute, 2019.

2 PwC and the Urban Land Institute: Emerging Trends in Real Estate® 2022. Washington, D.C.: PwC and the Urban Land Institute, 2021.

3 Ibid.

4 Aceable. Michigan's Fastest Growing Markets and 2022 Trends, 2022. https://www.aceableagent.com/blog/michigans-fastest-growing-markets-and-trends/.

5 Niche. 2022 Best Places to Live in Michigan, 2022. https://www.niche.com/places-to-live/search/best-places-to-live/s/michigan/.

6 PwC and the Urban Land Institute: Emerging Trends in Real Estate® 2022. Washington, D.C.: PwC and the Urban Land Institute, 2021.

7 A pending sale in real estate means that the seller has accepted an offer on their home, but the deal is yet to be finalized.

8 Redfin. Novi Housing Market, 2022. https://www.redfin.com/city/15385/MI/Novi/housing-market.

9 City of Novi. Average Rents, 2022.

10 American Community Survey. 2016-2020 5-Year Estimates.

11 Redfin. Novi Housing Market, 2022. https://www.redfin.com/city/15385/MI/Novi/housing-market.

12 Ibid.

13 Sale-to-list ratio measures how much above or below the seller's asking price buyers are paying for homes.

14 City of Novi.

15 PwC and the Urban Land Institute: Emerging Trends in Real Estate® 2022. Washington, D.C.: PwC and the Urban Land Institute, 2021.

16 Redfin.

17 RE/MAX of Southeastern Michigan.

18 Alexandra Ciuntu. Built-to-Rent Homes Expected to Hit All-Time High in 2022, Fueled by Need for Space and Privacy. Rent Café, 2022. https://www.rentcafe.com/blog/rental-market/market-snapshots/built-to-rent-single-family-homes-double-in-2022/#:~:text=Built%2Dto%2Drent%20communities%20are,have%20a%20direct%2Daccess%20garage.

19 Shelby Tankersley. Livonia, Farmington Hills look at walkable real estate trends to attract younger residents. Hometown Life, 2022. https://www.hometownlife.com/story/news/2022/02/25/mixed-use-developments-latest-metro-detroit-trend-new-housing/9242398002/.

20 As per the United States Census Bureau, the manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

21 SEMCOG 2045 Regional Development Forecast.

22 As per the United States Census Bureau, the manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

23 United States Census Bureau, OnTheMap, 2019.

24 NAR's Work from Home Score encapsulates factors that reflect the current fraction of workers already working from home and factors that are expected to support the trend to work from home or work remotelyinternet connectivity, the fraction of workers that work in industries that have normally been heavy occupiers of office space, home affordability, and a county's population growth.

25 National Association of Realtors (NAR), Work From Home Counties, 2020. https://www.nar.realtor/research-and-statistics/research-reports/work-from-home-counties.

26 Wikipedia contributors. Novi, Michigan. Wikipedia, The Free Encyclopedia. Wikipedia, The Free Encyclopedia, 2022. https://en.wikipedia.org/wiki/Novi,_Michigan.

27 Marcus & Millichap. Detroit Retail Market Report, 2022. https://www.marcusmillichap.com/research/market-report/detroit/detroit-2q22-retail-market-report.

28 Crexi, Oakland County For Sale Market Overview.

29 City of Novi, https://www.cityofnovi.org/services/economic-development/resources/incentives/propertytaxabatementpolicy.aspx.

30 PwC and the Urban Land Institute: Emerging Trends in Real Estate® 2022. Washington, D.C.: PwC and the Urban Land Institute, 2021.

31 Marcus & Millichap. Suburban Retail Outlook, 2022. https://www.marcusmillichap.com/research/market-report/detroit/detroit-2q22-retail-market-report.

32 Yardi Matrix, https://www.commercialcafe.com/commercial-real-estate/us/mi/novi/?CoworkingWorkspaceTypes=0&Zoom=10&Viewport=-84.18437682442553,42.20422399069918,-82.88936339669115,43.00978335018946&GeopickerType=viewport.

33 ESRI Market Profile.

34 PwC and the Urban Land Institute: Emerging Trends in Real Estate® 2022. Washington, D.C.: PwC and the Urban Land Institute, 2021.

35 Ibid.

36 Yardi Matrix, https://www.commercialcafe.com/commercial-real-estate/us/mi/novi/?CoworkingWorkspaceTypes=0&Zoom=10&Viewport=-84.18437682442553,42.20422399069918,-82.88936339669115,43.00978335018946&GeopickerType=viewport.

37 National Association of Realtors. NAR Commercial Real Estate Metro Market Report | 2022.Q1. https://cdn.nar.realtor/sites/default/files/documents/2022-q1-commercial-metro-market-reports-mi-05-09-2022.pdf.

38 Kirk Pinho. Magna Seating's new Novi headquarters fetches pandemic-era high for office building: Crain's Detroit Business, 2021. https://www.crainsdetroit.com/real-estate/magna-seatings-new-novi-headquarters-fetches-pandemic-era-high-office-building.

39 Marcus & Millichap. Suburban Retail Outlook, 2022. https://www.marcusmillichap.com/research/market-report/detroit/detroit-2q22-retail-market-report.

40 PwC. PwC Pulse Survey: Next in work.

41 Kirk Pinho. Real Estate Insider: Looking back at the biggest commercial real estate stories of the year: Crain's Detroit Business, 2021.

42 PwC and the Urban Land Institute: Emerging Trends in Real Estate® 2022. Washington, D.C.: PwC and the Urban Land Institute, 2021.

43 Kirk Pinho. Real Estate Insider: Looking back at the biggest commercial real estate stories of the year: Crain's Detroit Business, 2021.

44 As per the United States Census Bureau, the manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.

45 Yardi Matrix, https://www.commercialcafe.com/commercial-real-estate/us/mi/novi/?CoworkingWorkspaceTypes=0&Zoom=10&Viewport=-84.18437682442553,42.20422399069918,-82.88936339669115,43.00978335018946&GeopickerType=viewport.

46 Kirk Pinho. Real Estate Insider: Looking back at the biggest commercial real estate stories of the year: Crain's Detroit Business, 2021.

47 Kirk Pinho. Real Estate Insider: Looking back at the biggest commercial real estate stories of the year: Crain's Detroit Business, 2021.

- Real estate, which includes leasing, appraisal services, and financing, has the highest economic output in Oakland County totaling over $11 billion.
- Over half of the workers and the county's economic output are in growth sectors.

6

ECONOMIC CONDITIONS

EMPLOYMENT

In 2019, roughly 6,800 Novi residents (30.1%) were employed in the manufacturing sector, more than any other sector. The manufacturing sector broadly refers to the mechanical, physical, or chemical transformation of materials, substances, or components into nw products. "Professional, scientific, management, administrative and waste management services," and "educational services, healthcare, and social assistance" had 4,028 (17.8%) and 3,961 (17.5%) employees from Novi, respectively. In total, 65.4% of Novi workers are employed in these three sectors.

While 68.3% of Novi residents over the age of 16 participate in the labor force, not all of them are employed in Novi. Only 2,924 people both live and work in the city (based on W2 addresses). Roughly 23,000 people who live in Novi commute outside the city, and roughly 37,000 people commute into the city for work. Most people commuting into Novi (inflow) are coming from the adjacent communities with a large share coming from communities between Novi and Detroit, including Detroit itself. Those commuting out of the city for work (outflow) also typically work in adjacent communities with an emphasis on Detroit and surrounding communities.

A more detailed look at the Novi workforce provides a glimpse into the industrial subsectors of the City that have the greatest number of employees. It is important to note that while not all employees are residents of Novi, all industry subsectors are in Novi. The table titled "Greatest Employment by Sector, 2023" illustrates the top 10 industries by employment. Novi's economic development report of 2022 further details the City's largest employers by name.

Table 6: Greatest Employment by Sector, 2023

Industry Subsector	Employees	% of All Workers	Average Employee Compensation
Retail – General Merchandise Stores	5,652	8.6%	$42,477
Architectural, Engineering, and Related Services	3,741	5.7%	$147,072
Hospitals	3,505	5.3%	$102,364
Truck Transportation	3,090	4.7%	$88,047
Full-Service Restaurants	2,271	3.4%	$34,256
Offices of Physicians	2,176	3.3%	$111,257
Retail – Clothing and Clothing Accessories Stores	1,754	2.7%	$37,604
Management of Companies and Enterprises	1,579	2.4%	$158,034
Couriers and Messengers	1,411	2.1%	$55,219
Limited-Service Restaurants	1,287	2.0%	$28,496

Source: IMPLAN, 2023

Table 7: Novi's Top Ten Employers, 2022

Employer	Industry	# of Employees	% of Total City Employment
Ascension Providence	Hospital, Healthcare	2,395	4.15%
Harmon	Audio Electronics	935	1.62%
Novi Community Schools	Education	683	1.18%
ITC Holding, Inc.	Electric Utilities	583	1.10%
Ryder System	Transportation and Logistics	500	0.87%
Yanfeng	Automotive Supplier	450	0.78%
Hanon	Automotive Parts Manufacturing	375	0.65%
Lineage Logistics	Temperature-Controlled Logistics	371	0.64%
Fox Run	Retirement Community	331	0.57%
Magna International	Automotive Interiors	311	0.54%

Source: City of Novi

Table 8: Top Five Largest Industries in the City of Novi, By Economic Output

Industry	Total Economic Output (millions)	Average Employee Compensation	Labor Income (millions)	Employment
Electric power transmission and distribution	$945.9	$228,565	$133.5	586
Architecture, engineering, and related services	$812.7	$147,072	$501.2	3,741
Hospitals	$742.5	$102,364	$359.1	3,505
Truck transportation	$626.6	$88,047	$201.8	3,091
Retail - General merchandise stores	$539.1	$42,477	$234.3	5,652

Source: IMPLAN, 2023.

Table 9: Top Five Export Industries in Oakland County

Industry	Location Quotient	Total Economic Output
Propulsion units and parts for space vehicles and guided missiles manufacturing	4.87	$180,701,821
Nonferrous metal smelting and refining	4.19	$18,832,477
Broadwoven fabric mills	4.05	$13,344,963
Communications equipment manufacturing	3.91	$80,511,164
Photographic and photocopying equipment manufacturing	3.71	$8,358,414

Source: IMPLAN, 2019.

SECTOR ANALYSIS

Economies are diverse, complex webs of relationships. Products on the shelf often go through multiple stages of manufacturing that involve globablly-source materials and are designed, engineered, and built by many people. IMPLAN, an input-output economic modeling tool, was used to illustrate the interdependency of sectors in Oakland County. The analysis was performed at a county scale to better capture a regional economy while retaining relevance to Novi. In total, 546 unique industries were included in the analysis. Data used in the analysis was collected from various governmental sources including the Bureau of Economic Analysis, Census Bureau, and Internal Revenue Service. IMPLAN models upstream economic activity which includes the resources, supply, and manufacturing of goods and services. It does not model sales, use, and disposal activity.

IMPLAN models several elements of economic output, including labor income, intermediate output, and value added.

- **Intermediate inputs** include the purchase of goods and services used to produce other goods and services. For example, a computer manufacturing company would need to buy metal, plastic, and electronic parts in order to produce the final computer, all of which would be considered intermediate inputs.
- **Value Added** represents the contribution to the gross domestic product (includes labor income).
- **Labor Income** is the total cost of labor and includes wages and all benefits.
- **Proprietor Income** is the income of the corporation/proprietor.
- **Taxes on Production & Imports** includes all taxes on goods and services including tariffs,

Table 10: Economic Base

Industry Type	Description	Location Quotient	2014 – 2019 Economic Output
Growth	Industries that have a strong presence in the region and are expanding.	LQ >1	Positive Change
Emerging	Industries that are expanding but have yet to establish a strong presence.	LQ<1	Positive Change
Mature	Industries that have been a specialty for the region but are declining.	LQ>1	Negative Change
Declining	Industries with a small presence and declining economic activity.	LQ<1	Negative Change

Source: IMPLAN, 2023

Table 11: Industry Trends

	Industry Count		Employment		Economic Output ($M)	
	Total	% of Total	Total	% of Total	Total	% of Total
Growth	115	26.6%	549,193	56.7%	$113,453	58.4%
Emerging	141	32.6%	287,657	29.7%	$53,146	27.4%
Mature	44	10.2%	82,632	8.5%	$16,495	8.5%
Declining	133	30.7%	49,207	5.1%	$11,174	5.8%

Source: IMPLAN, 2019

property taxes, and sales taxes. Government subsidies and other tax exemptions are also included as negative values.

» **Other Property Income** is the remaining dollars after taxes, labor income, and intermediate inputs are purchased, essentially profit. Total economic output is the combined value of elements described above.

Of the 546 industries modeled by IMPLAN, 433 are active in Oakland County. Table 6, "Top Five Largest Industries in Oakland County, By Economic Output" highlights the five industries with the largest economic output. Real estate, which includes leasing, appraisal services, and financing, has the highest economic output in Oakland County totaling over $11 billion. One third of Michigan's total economic output from the real estate industry originates from Oakland County. The real estate industry employs the second highest number of individuals in the county, behind

Berkshire Stacks

Table 12: Top Industry Trends

Top Industries	Growth Industries	Emerging Industries	Mature Industries	Declining Industries
#1	Real Estate ($11,700M)	Hospitals ($6,579M)	Wholesale – professional and commercial equipment ($1,961M)	Automobile manufacturing ($1,914M)
#2	Architectural, engineering, and related services ($9,747M)	Scientific research and development ($2,183M)	Wholesale – drugs, druggists supplies, and sundries ($1,772M)	Motor vehicle transmission manufacturing ($1,359M)
#3	Insurance ($6,352M)	Other motor vehicle parts manufacturing ($1,963M)	Other financial investment activities ($1,586M)	Retail – General Merchandise ($1,019M)
#4	Management of companies ($5,027M)	Full-service restaurants ($1,681M)	Computer systems design services ($1,511M)	Motor vehicle interior manufacturing ($851M)
#5	Employment services ($3,756M)	Limited-service restaurants ($1,650M)	Wireless telecommunications carriers ($1,412M)	Vehicle metal stamping ($833M)

architecture, engineering, and related services industry, which employs roughly 52,000 people in Oakland County.

To provide additional insight into the Oakland County economy a base sector analysis was performed. A base sector analysis identifies which industries are exporting goods and services out of the region (Oakland County) and which are importing goods and services. An exporting industry is worth identifying because it draws money into the region and indicates a regional competitive advantage. A value of one or more indicates that the industry is exporting goods and services. A value below one indicates that the industry is importing goods and services into the region. These values are known as a location quotient. As shown in Table 7, titled, "Top Five Export Industries in Oakland County," manufacturing industries remain a regional specialty for Oakland County; 19 of the top 20 export industries in Oakland County are manufacturing. However, the top 20 export industries only account for 4% of Oakland County's economic activity, indicating that regional specialties are not as productive as other industries.

To identify economic trends the 2019 figures for Oakland County's industries were compared to the 2014 figures. Industries were then classified into one of four groups: growth, emerging, mature, and declining. Table 8, titled "Economic Base" shows Oakland County's industries based on their location quotient and change in economic output.

Oakland County's economy is healthy. Over half of the workers and the county's economic output are in growth sectors. Additionally, over one quarter of industries, workers, and economic output are in an emerging sector. While over 30% of industries are classified as "declining," these industries account for only about 5% of total employment and economic output. The high number of industries in decline indicates that the Oakland County economy will likely see transition towards industries that are performing better.

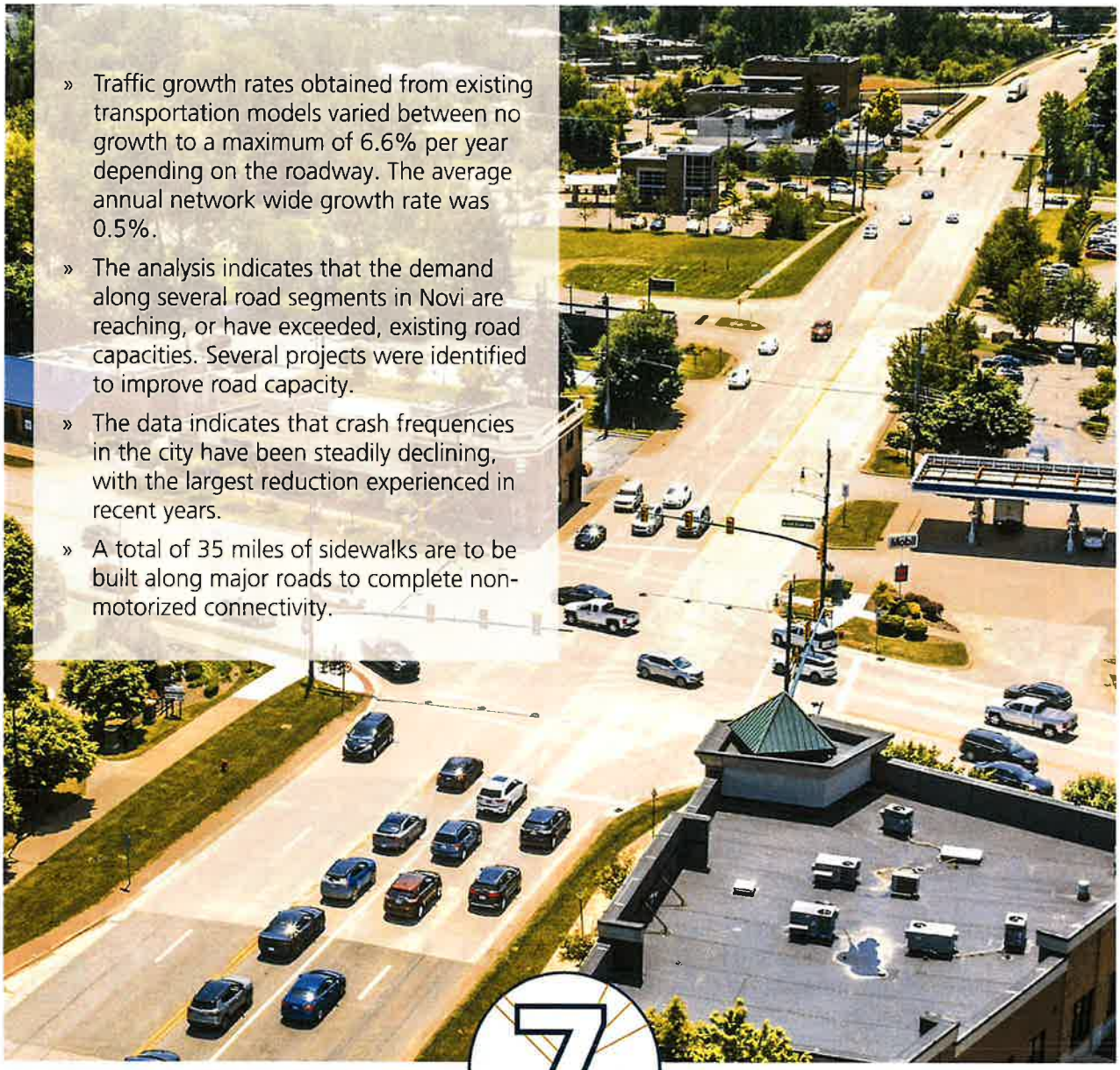
The growth industries in Oakland County are the drivers of the regional economy. Emerging industries are those in healthcare, science, and food service, which aligns with national economic trends. Declining industries in Oakland County are auto manufacturing and general retail

Worker Inside Berkshire

merchandising. Southeast Michigan's automotive manufacturing industry has been declining for over half a century and general merchandise (Sears, KMART) has been declining nationwide.

The growth and emerging industries, especially those in the professional services and healthcare sectors, tended to locate in traditional office spaces (office parks, strip commercial). However, the COVID-19 pandemic significantly altered working/commuting trends and many more workers work from home, especially in Oakland County. The demand for office space will likely not increase to pre-pandemic demand in the foreseeable future, but flexible workspaces may be a hybrid alternative.

Berkshire Warehouse



- Traffic growth rates obtained from existing transportation models varied between no growth to a maximum of 6.6% per year depending on the roadway. The average annual network wide growth rate was 0.5%.
- The analysis indicates that the demand along several road segments in Novi are reaching, or have exceeded, existing road capacities. Several projects were identified to improve road capacity.
- The data indicates that crash frequencies in the city have been steadily declining, with the largest reduction experienced in recent years.
- A total of 35 miles of sidewalks are to be built along major roads to complete non-motorized connectivity.

7

TRANSPORTATION FRAMEWORK

INTRODUCTION

A transportation plan is a comprehensive review and evaluation of the transportation network. It provides a vision, recommendations, and best practices for addressing existing concerns and accommodating future growth and trends. While congestion and connectivity concerns remain, Novi has made notable investments in improving the overall transportation infrastructure, including significant improvements in the non-motorized network through the construction of new sidewalks, pathways, and trails. This transportation plan builds on the success of previous plans and investments while accommodating anticipated changes. Special emphasis has been placed on improving connectivity, reducing congestion, improving safety, and providing an overall network management which complements the land use master plan. These objectives have been developed based on a review of previous transportation related plans, existing conditions, public engagement activities, and an evaluation of capacity, safety, and overall infrastructure conditions.

PREVIOUS TRANSPORTATION RELATED PLANNING EFFORTS

The City of Novi has historically recognized the importance of the transportation network in protecting and enhancing the quality of life for its residents. Through the years, many road maps and studies have been developed to determine the appropriate infrastructure needs of the community and establish an actionable vision for the future. These studies and select others that were reviewed during the development of this plan are listed in Table 11.

Table 13: Reviewed Transportation Related Efforts

Year	Agency	Name	Description
2011	City of Novi	Non-Motorized Master Plan	Plan establishing goals and implementation strategies that support and encourage safe, convenient, and comfortable ways to walk and bicycle in the community
2012	RCOC	Complete Streets General Guidelines	Complete Street guidelines developed for use in road improvement activities by RCOC
2014	City of Novi	Town Center Study Area	Study to determine the future direction of the City's town center
2014	City of Novi	Storm Water Master Plan Updates	Evaluation of select locations of storm water conveyance concerns
2014	City of Novi	RVSDS Tributary Area Sanitary Sewer Capacity Assessment	Capacity assessment of the City's sanitary collection system
2016	City of Novi	Master Plan	The 2016 Master Plan update for the community's long-range guide for the future
2016	City of Novi	Thoroughfare Master Plan	Plan for developing an efficient, safe, and connected transportation system that considers future growth, and emphasizes improved connectivity and reduced congestion
2017	Oakland County	Potential Natural Areas Assessment Update	Plan to improve natural resource-based decision-making throughout Oakland County by building upon previous Potential Natural Area assessments in Oakland County
2017 - 2024	City of Novi	Non-Motorized Prioritization Updates	Annual or bi-annual updates which help identify future segments and non-motorized improvements to be constructed as additional funding becomes available

Table 13: Reviewed Transportation Related Efforts (continued)

Year	Agency	Name	Description
2020	SEMCOG	Bicycle and Pedestrian Mobility Plan for Southeast Michigan	Regional plan to ensure that the region's nonmotorized system meets the transportation, quality of life, health, and accessibility needs of its residents and visitors.
2020	RCOC	12 Mile Road Improvements	Design for converting 12 Mile Rd from Dixon Rd to the western city limit into a 4-lane boulevard.
2020 - 2024	City of Novi	Strategic Community Recreation & Master Park Plan	Guiding document for the promotion of recreational opportunities in the City.
2021	City of Novi	Roads Committee Discoveries	Plan for prioritizing road projects to maintain safety, improve road conditions and traffic flow, and explore funding opportunities.
2021	City of Novi	Water System Master Plan	Plan for the evaluation of the existing municipal water supply, storage, transmission systems, and distribution systems serving the City.
2022 - 2028	City of Novi	Capital Improvement Program	The City's capital improvement projects between 2022 to 2028
2023 - 2026	SEMCOG	Transportation Improvement Program	SEMCOG's Transportation Improvement Program projects between 2023 - 2026.
2023 - 2027	RCOC	Transportation Improvement Program	Oakland County Federal Aid Committee Transportation Improvement Program projects between 2023-2027
2024	City of Novi	Active Mobility Plan	Comprehensive transportation plan to improve the community's active transportation options.

Town Center

Table 14: Thoroughfare Classification Descriptions

Classification	Description	Examples
Freeways	The highest level of classification which prioritizes mobility over land access. Access is limited and generally provided via ramps.	I-96 (east-west) and M-5 (north-south). The interchange of I-96, I-696, I-275, and M-5 is located partially within the east side of Novi and is a major critical regional infrastructure.
Arterials	Major roadways capable of supporting considerable traffic flows and connecting important centers of activity.	8 Mile Road, 10 Mile Road, Beck Road, Grand River Ave, Haggerty Road, and Novi Road.
Major Arterials	Major arterials represent the most heavily traveled cross city routes within urbanized areas and encourage mobility and commercial traffic.	12 Mile Road between Declaration Drive and Haggerty Road is the only designated major arterial in the city.
Arterials	Arterial are heavily traveled cross city routes which support slightly less mobility relative to major arterials.	8 Mile Rd, 10 Mile Rd, Beck Rd, Grand River Ave, Haggerty Rd, and Novi Rd.
Minor Arterials	Minor arterials provide a lower level of mobility and are intended for shorter trip distances and less traffic	Parts of 9 Mile Road, parts of Meadowbrook Road, West Park Drive, and Wixom Road
Collectors	Roads that connect local roads to the arterials. They provide less mobility and more land access than arterials.	See examples of non-residential and residential collectors below.
Non-Residential Collectors	Connect non-residential areas to arterials.	Regency Drive, Catherine Industrial Road, Bridge Street, Gardenbrook Road
Residential Collectors	Connect residential areas to arterials.	Parts of 11 Mile Road, Cranbrook Drive, Garfield Road, and Old Novi Road.
Scenic Drive Roads	Public roadway offering enjoyment of the environment and natural features in addition to mobility and access.	9 Mile Rd from Napier Rd to Beck Rd
Local Roads	Provide limited mobility and are the primary access to residential neighborhoods and other local areas.	All other roadways in the city are classified as local roads.

EXISTING CONDITIONS

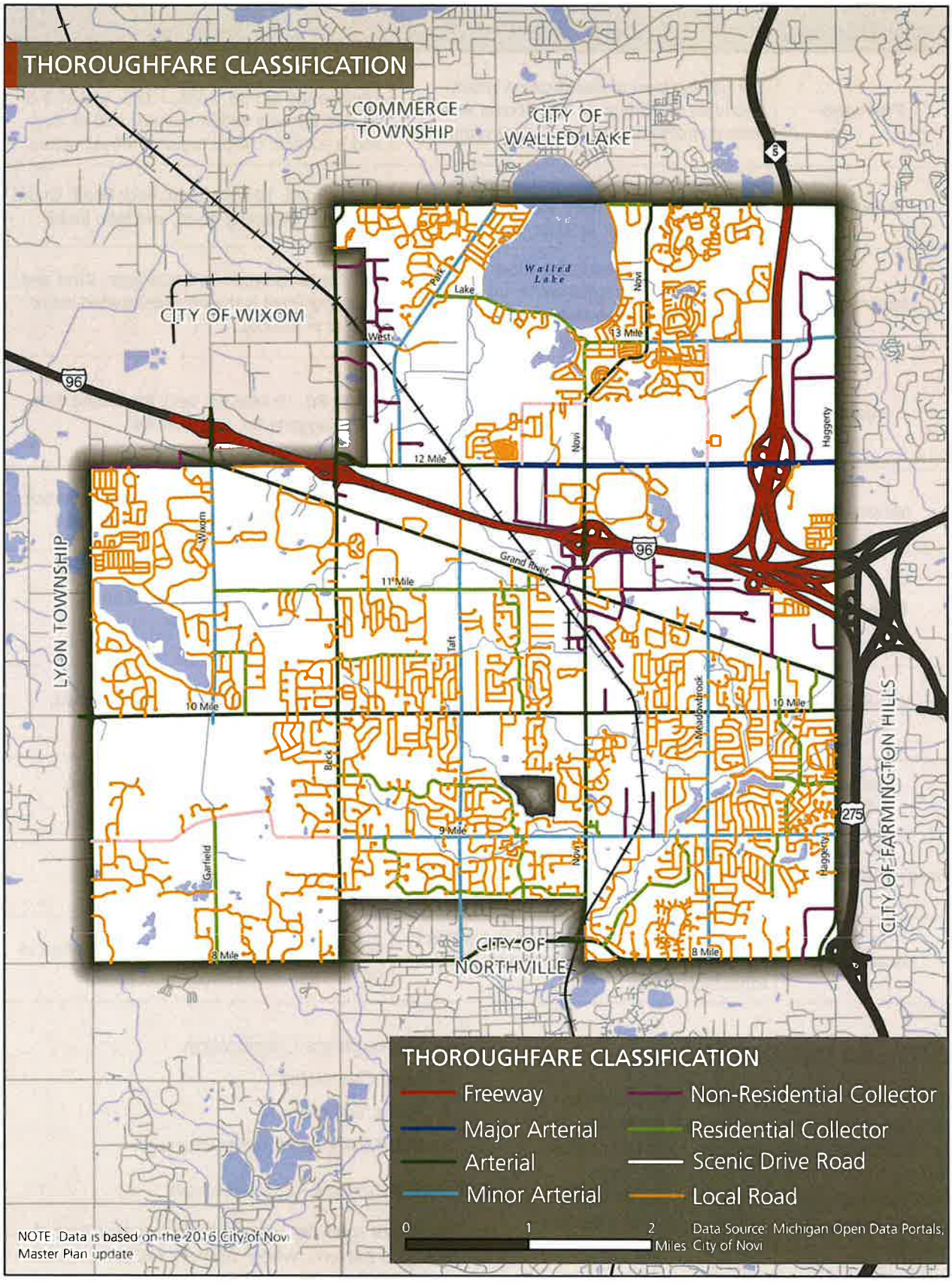
The evaluation of the existing transportation network is based on a review of general transportation characteristics, road conditions, and traffic operations. It is the basis for recommendations. The sections below contain a more in-depth discussion of select topics which include:

- Thoroughfare Classification
- Road Ownership
- Traffic Volume
- Non-Motorized Infrastructure

Thoroughfare Classification

The major road network in Novi is characterized by a grid-pattern, where primary routes run both

Map 7: Thoroughfare Classification



in the east-west and north-south direction. Grand River Avenue presents the only major route running diagonally through the city. According to the city's Thoroughfare Classification, which classifies roads based on mobility and land access, the network is characterized by a combination of freeways, major arterials, arterials, minor arterials, non-residential collectors, residential collectors, scenic drive roads, and local roads.

Road Ownership

Road ownership in the City of Novi falls under four main categories of ownership. These include the state trunkline, county roads (primary or local), city roads (major or minor), and private roads.. The state trunkline is under the Michigan Department of Transportation (MDOT) jurisdiction and includes I-96, M-5, and various interchanges. County roads are under the Road Commission for Oakland County's (RCOC) jurisdiction and include principal arterial routes and Grand River Avenue and Napier Road. City roads are under the City of Novi jurisdiction and comprise most of the road network. The remaining private roads are under the control of various private entities such as neighborhood associations or homeowner associations.

Traffic Volume

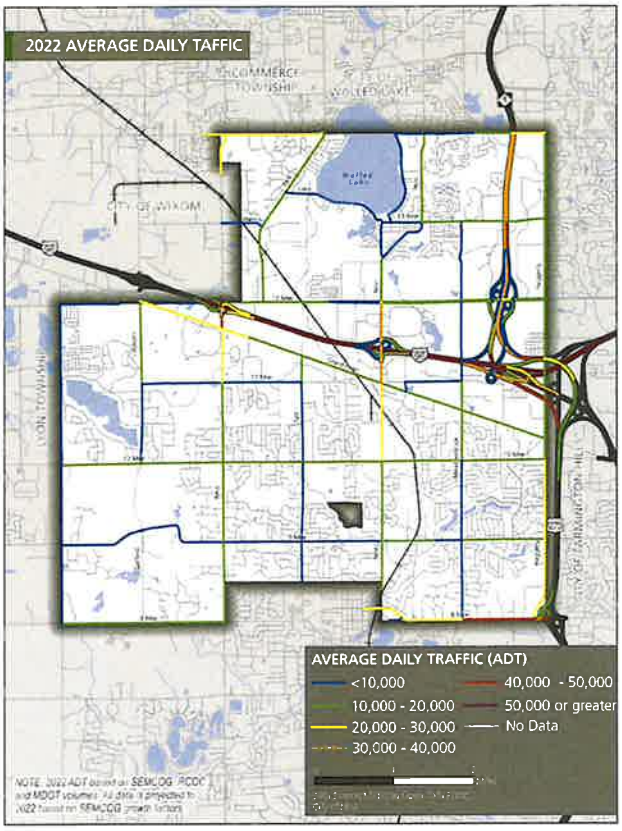
Traffic volumes are one of the most important variables used in evaluating transportation networks. They represent the demand side of the network and are critical in evaluating roadway capacity, safety, and congestion. At the most basic level, traffic volumes can help determine what improvements are needed.

Traffic volumes were collected from various local and regional sources:

- Transportation Data Management System (TDMS)
- RCOC Traffic Count Database System (TCDS)
- Southeast Michigan Council of Governments (SEMCOG) Traffic Volumes
- SEMCOG Traffic Demand Forecast Model (TDFM).

Traffic volumes were collected between 2012 and 2021, with the majority representing 2017 to 2021 counts. In instances where multiple counts were available per road segment, priority was given to observed versus predicted counts, recent data, and the more conservative volumes.

Map 8: Road Ownership

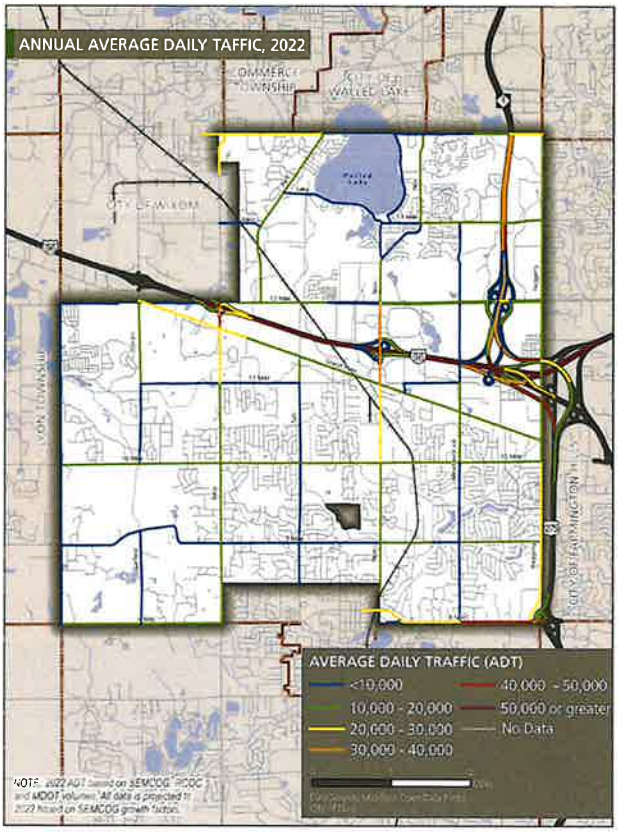


Traffic growth rates were based on SEMCOG's 2015 and 2035 TDFM. The TDFM estimates current and future traffic volumes, speeds, and traffic patterns in southeast Michigan and is used in the development of SEMCOG's long-range transportation plan. Traffic growth rates obtained from these models varied between no growth to a maximum of 6.6% per year depending on the roadway. The average annual network wide growth rate was 0.5%. These data points were then used to project all volumes to 2022 traffic volumes (present volumes) and 2032 traffic volumes (future volumes). Map 9 and Map 10 illustrate the existing (2022) and future (2032) Average Daily Traffic (ADT) for the City's major roadways.

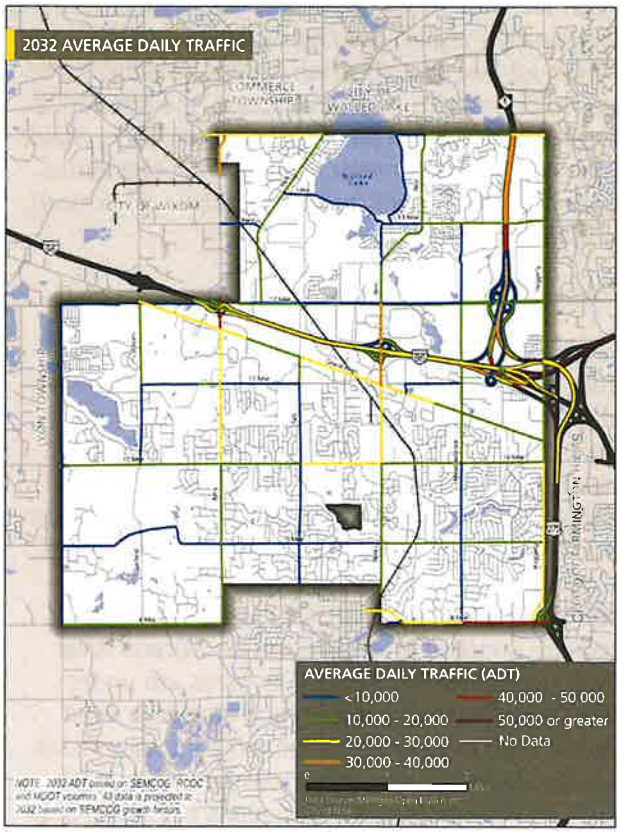
Non-Motorized Infrastructure

The City of Novi is characterized by a robust non-motorized network of sidewalks, pathways, and trails. In 2011, the city developed a dedicated Non-Motorized Master Plan to provide a

Map 9: 2022 Average Daily Traffic



Map 10: 2032 Average Daily Traffic



systematic method for supporting non-motorized transportation. The goal was to establish a physical and cultural environment that supports and encourages safe, comfortable, and convenient ways for pedestrians and bicyclists to travel throughout Novi and into surrounding communities. The plan was comprised of four key elements:

- Facilities
- Policies
- Design guidelines
- Outreach and education

Together these defined the vision for the future of the non-motorized network and included elements such as the type and number of facilities to be built, institutional support for the network, design guidelines based on complete streets principles, and programs to encourage people to safely use the facilities.

Under the leadership of the Walkable Novi Committee, the city has developed regular Non-Motorized Prioritization updates. These updates inventory and rank in two tiers the facilities that need to be constructed. The key output from this prioritization is a list of the top 20 facilities recommended for use in the development of the Capital Improvement Program (CIP). The CIP, among other projects, provides a list of sidewalks and pathways recommended for construction. As facilities are constructed, they are removed from the inventory and new ones are added. Since 2006, the city has built a total of 22 miles of non-motorized facilities. A total of 35 miles are to be built along major roads to complete non-motorized connectivity.

The most recent version of the Non-Motorized Prioritization is the 2022-2024 update. The proposed facilities include a combination of 6 feet wide sidewalks and 8 feet wide pathways along 9 Mile Road, 10 Mile Road, 11 Mile Road, 12 Mile Road, Beck Road, Grand River Avenue, Haggerty Road, and Meadowbrook Road. Together these would provide approximately 6.5 miles of new non-motorized infrastructure if adopted into the CIP.

TRANSPORTATION OPERATIONS EVALUATION

Operations Performance Metrics

Novi's transportation network was evaluated to determine its overall traffic operations performance. The analysis involved a citywide capacity analysis of the road network based on the Volume-to-Capacity (V/C) ratio performance metric. The V/C ratio is a measure of the level of congestion on a given roadway and can determine which parts of the network operate at acceptable levels and which have capacity constraints. The V/C ratio is a function of demand and capacity. Demand is represented by traffic volumes. Whereas capacity represents the maximum traffic flow that can be accommodated by a transportation facility at a given time under various road conditions. Capacity is typically expressed in passenger cars per hour per lane (pc/h/ln) and is a function of various factors such as the number of lanes and Free Flow Speed (FFS). The V/C ratio ranges on a scale of 0 to 1 or greater and can generally be defined as follows:

- 0 = no demand
- 0.8 to 1 = demand reaching capacity
- 1 = demand equals capacity
- Greater than 1 = demand exceeds capacity

Additional factors considered in the capacity analysis and reflected in the V/C ratio include transportation modes including walking, biking, or public transportation, trip characteristics, and temporal variations in the network.

Transportation Model

The transportation operations evaluation for the City of Novi was based on the SEMCOG TDFM. The

TAZ

A unit of geography typically comprised of one or more census blocks, block groups, or census tracks and used in tabulating and evaluating transportation related data.

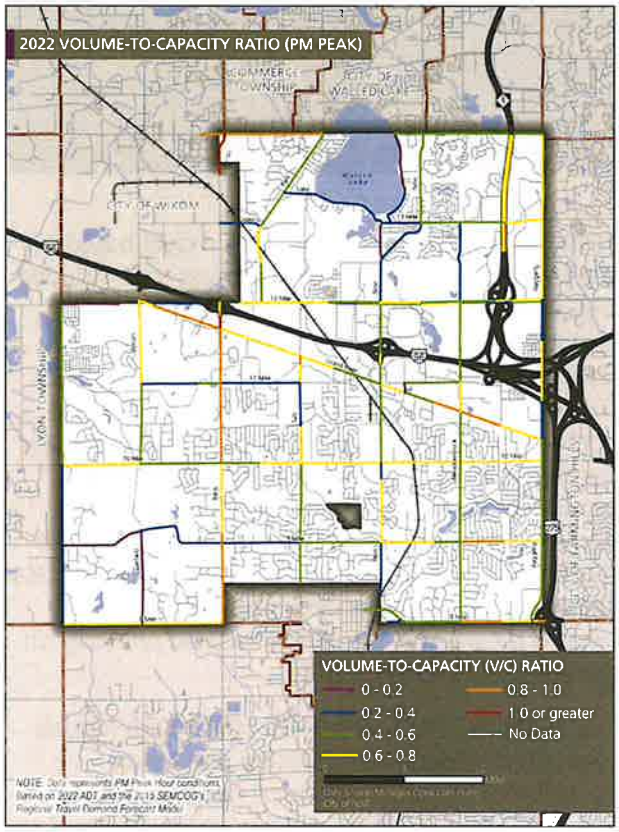
TDFM is a regional transportation model based on the four-step travel modeling process that includes trip generations, trip distribution, mode choice, and traffic assignment. The TDFM contains the transportation network and Traffic Analysis Zones (TAZ) of the southeast Michigan region. A TAZ is commonly defined as a unit of geography typically comprised of one or more census blocks, block groups, or census tracks and used in tabulating and evaluating transportation related data. While this analysis was based on the regional model, data collection and network optimization outside of what is provided in the TDFM focused primarily on the areas within Novi's TAZs.

The SEMCOG 2015 and 2035 TDFM base models were used to determine existing and future capacity for all public non-local roads in the City of Novi. Both models were reviewed and revised to accurately reflect current road configurations and capacities. The 2035 base model included additional changes to the road configuration based on ongoing or planned projects which are either funded or likely to be funded. These projects were identified based in coordination with city staff and review of resources such as the City's 2022-2028 CIP, the Road Committee Discoveries reports, the 2023-2026 SEMCOG's Transportation Improvement Program (TIP), and RCOC projects. Eligible projects identified in the city and incorporated in the 2032 base model as part of this review are provided in

Table 15: Base Model Network Adjustments for Future Conditions

Segment	Limits	2032 Base Model	Proposed
10 Mile Rd	Meadowbrook Road to Haggerty Road	2-Lane Road	3-Lane Road
12 Mile Rd	Beck Road to Cabaret Drive	2-Lane Road	4-Lane Boulevard
Beck Rd	11 Mile Road to Providence Drive	3-Lane Road	5-Lane Road
Wixom Rd	Drakes Bay Drive to Kelsey Bay Drive	2-Lane Road	3-Lane Road
Wixom Rd	Ravine Drive to Island Lake Drive	2-Lane Road	3-Lane Road

Map 11: 2022 Volume-to-Capacity Ratio (PM Peak)



Map 12: 2032 Volume-to-Capacity Ratio (PM Peak) with Planned Improvements

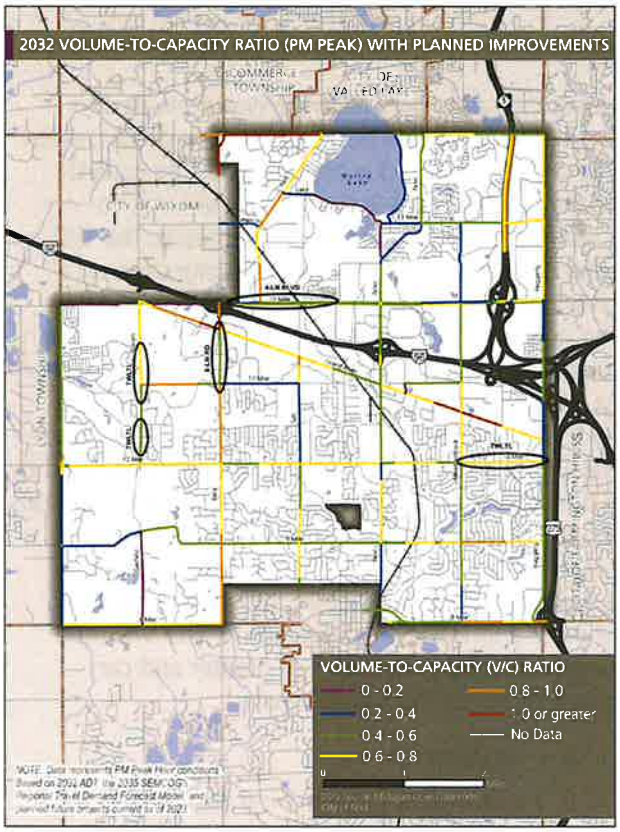


Table 14. When combined with the adjustments based on existing conditions, these projects reflect the future 2032 anticipated road network in the City of Novi.

Capacity Analysis

The capacity analysis for the transportation network was performed for existing 2022 and future 2032 PM peak hour conditions. The PM peak hour was identified as the most appropriate time interval for the analysis as it represents the worst performing hour of the day. Maps 11 and 12 illustrate where the PM peaks take place. Volume/Capacity ratios are provided in intervals of 0.2 with color gradients ranging from purple (low V/C ratio) to red (high V/C ratio). The future 2032 PM peak hour scenario also highlights the planned road capacity improvement projects in the city.

The analysis indicates that the demand along several road segments in Novi are reaching (V/C of 0.8 to 1) or have exceeded (V/C greater than 1) existing road capacities. The more notable of these include segments along Beck Road and Grand River Avenue. While most of the road network is expected to remain in serviceable condition, overall congestion in the future 2032 scenario is expected to worsen as travel demand in the city increases. Akin to the existing scenario, segments along Beck Road and Grand River Avenue remain congested with comparable or worsening V/C ratios. The exception is Beck Road from 11 Mile Road to Providence Drive which is planned to be widened to a 5-lane road per the city's 2022-2028 CIP. Other notable segments which are anticipated to exceed capacity in the future scenario include Pontiac Trail.

Potential Road Capacity Improvements

Following the development of the existing 2022, and future 2032 capacity models, select areas and those with V/C ratios where demand is reaching or exceeding capacity were evaluated further to determine potential corridor-wide capacity improvements. The evaluation considered factors

Table 16: Potential Corridor Related Capacity Improvements

Road Name	From	To	Potential Improvement	2032 V/C Ratio	
				Before	After
9 Mile Road	Napier Road	Beck Road	Pave gravel road	0.4	0.57
9 Mile Road	Meadowbrook Road	Haggerty Road	Install TWLTL	0.73	0.68
10 Mile Road	Wixom Road	Beck Road	Install TWLTL	0.61	0.53
10 Mile Road	Novi Road	Meadowbrook Road	Install TWLTL	0.63	0.6
Beck Road	8 Mile Road	11 Mile Road	Widen to 5-lane road	0.84	0.44
Beck Road*	City Limit	Pontiac Trail	Widen to 5-lane road	1.52	0.86
Grand River Ave	Novi Road	Haggerty Road	Widen to 5-lane road	0.86	0.62
Haggerty Road	8 Mile Road	10 Mile Road	Install TWLTL where missing	0.46	0.46
Haggerty Road	12 Mile Road	13 Mile Road	Install TWLTL where missing	0.75	0.69
Pontiac Trail	Beck Road	West Park Drive	Install TWLTL	1.04	0.82
Taft Road	Grand River Avenue	12 Mile Road	New 2-lane road extension	n/a	0.8
West Park Drive	West Road	South Lake Drive	Install TWLTL	0.83	0.47
West Park Drive	Bristol Circle	Gateway Drive	Install TWLTL	0.72	0.53

*5-lane cross-section should extend south to 12 Mile Rd

V/C ratios provided are for the entire segment. Parts of the segment may exhibit lower or greater V/C ratios. V/C ratios can vary by direction.

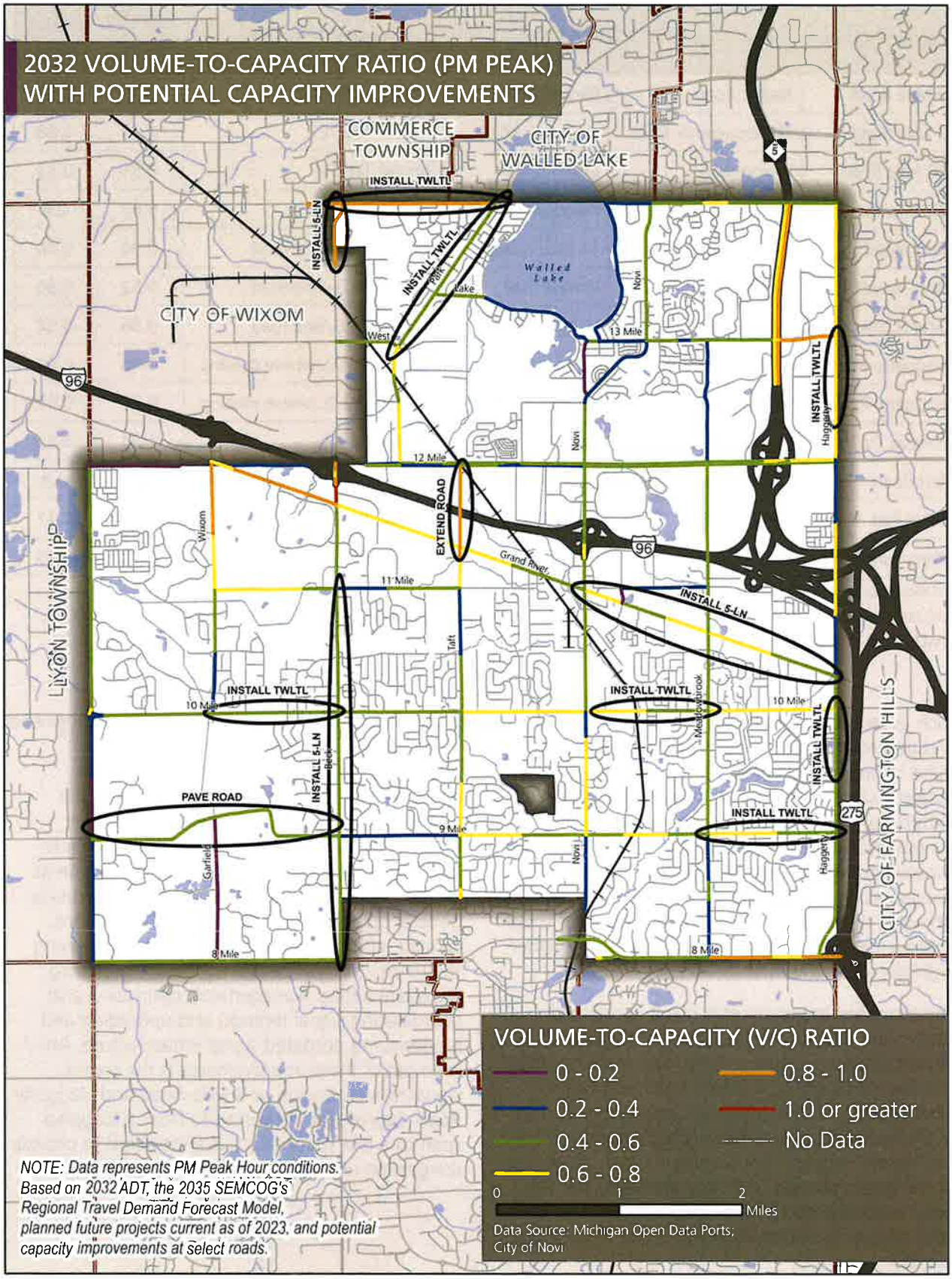
TWLTL = Two-Way Left Turn Lane

such as land use, functional classification, safety, and potential available Right-of-Way (ROW). While these improvements prioritized lower V/C ratios, projects which can improve overall traffic flow patterns and route selection options were also considered. Table 15 presents the corridor related capacity improvements identified as part of this evaluation. Whereas Map 13 illustrates the overall city-wide network performance as a result of these improvements. Potential improvements are further highlighted on the map for ease of use.

The proposed improvements result in reduced congestion and lower V/C ratios for the overall transportation network in Novi. The more notable improvements are along Beck Road and Grand River Avenue as they affect a considerable portion of the network and a relatively high number of road users. Whereas improvements such as paving of the gravel portion of 9 Mile Road and the Taft Road extension to 12 Mile Road provide road users with additional opportunities to travel throughout the city.

It should be noted that despite these improvements some areas of congestion remain. These include segments such as 8 Mile Road west of Meadowbrook Road and the area near the intersection of Grand River Avenue and Beck Road. These facilities are currently 5-lane roads and any additional road widening improvements would not be feasible due to ROW restrictions or general operational and geometric restrictions. Instead, efforts should be placed on maintaining the facilities in serviceable condition, providing adequate access management, optimizing and coordinating signal timings, and upgrading and modernizing outdated signal infrastructure. An example of these improvements is the recent signal modernization of 8 Mile Road and Haggerty Road (signal was converted to from a diagonal span to a box span) which is anticipated to provide congestion relief and significant safety benefits.

Map 13: 2032 Volume-to-Capacity Ratio (PM Peak) with Potential Capacity Improvements



TRANSPORTATION SAFETY EVALUATION

Safety Performance Measures

Safety is a critical component of a transportation network. The objective of traffic safety is to prevent fatalities and injuries for all road users through a comprehensive safety system approach which provides layers of protection and shared responsibility across the entire system. A safe transportation network is one that addresses safety for all road users, promotes safe vehicles, accommodates safe speeds, designs safe roads, and provides appropriate post-crash care. The identification and implementation of safety measures for each element requires a data-driven approach to best identify areas of safety improvement opportunities.

Between 2016 and 2021, crash data from 2020 was not included in the analysis due to COVID-19 disruptions to traffic patterns. Crashes were analyzed separately for segments and intersections to account for the differences between segment and intersection related crashes. The safety evaluation consisted of three main performance metrics:

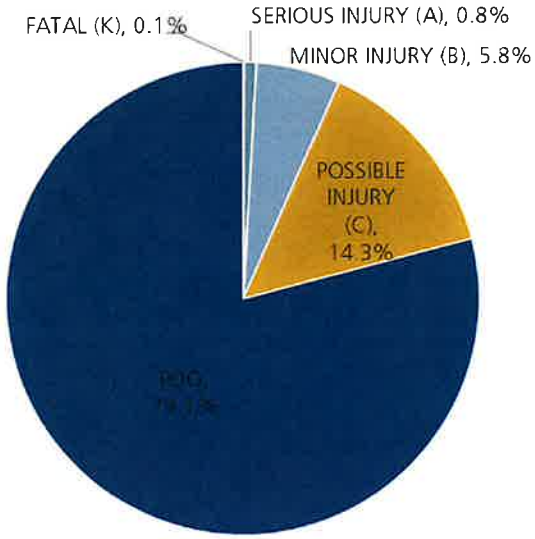
- Crash frequencies – the number of crashes occurring on a specific segment or intersection over a fixed period. A high magnitude of crashes may indicate a safety concern.
- Crash rate – the number of crashes occurring on a specific segment or intersection over a fixed period while accounting for traffic volumes (exposure variable). A high crash rate may indicate a safety concern.
- Crash density – spatial evaluation identifying location specific crash patterns or hot spots. A hot spot indicates a concentration of crashes and thus a potential safety concern.

State of Safety

The safety analysis indicated that the City experienced, on average, 2,130 crashes per year. Of these, 0.1% were fatal crashes and 0.8% were serious injury crashes (Figure 34). In comparison, Oakland County and in Michigan experienced a slightly higher rate of fatal and serious injury crashes for the same period.

Figure 33: Safe System Approach

Figure 34: Crash Severity Distribution, 2016-2019, 2021



A similar positive trend is indicated by a five-year rolling average review of overall fatal and serious injury crashes (Figure 35 and Figure 36 on page 74). The data indicates that crash frequencies in the City have been steadily declining, with the largest reduction experienced in recent years. While some of the crash reductions could be attributed to lower traffic volumes during the COVID-19 pandemic,

Figure 35: Total Crashes, 2013-2021 Five-Year Rolling Averages

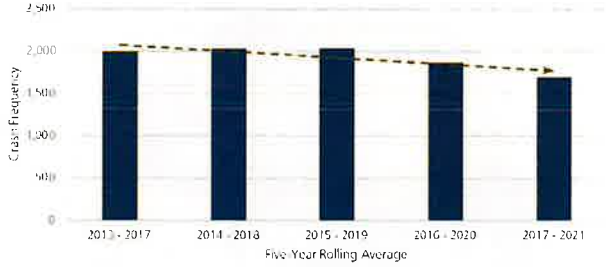
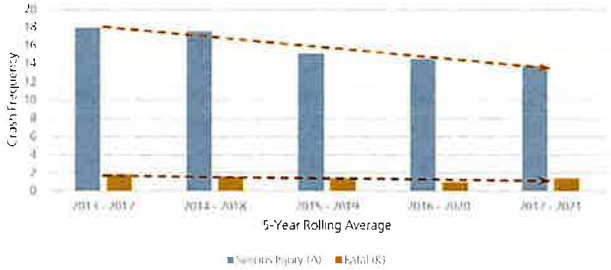


Figure 36: Fatal and Serious Injury Crashes, 2013-2021 Five-Year Rolling Averages



overall trends indicate that traffic safety in the city is improving. This is particularly important for fatal and serious injury crashes whose elimination is the core focus in transportation safety.

Potential Transportation Safety Improvements

High risk safety performing transportation facilities identified in the analysis were further reviewed to determine potential safety countermeasures.

While the focus of this evaluation was to identify engineering related countermeasures, safety strategies should incorporate education, enforcement, emergency, and equity related efforts to achieve the best possible results. Several facilities which indicated a high number of crashes have recently received significant investments and improvements. These facilities were not included in this evaluation as the implemented improvements are anticipated to address known safety deficiencies. Examples include the recent

Table 17: Potential Segment Safety Improvements

Road Name	From	To	Potential Improvement
8 Mile Road	Orchard Hills Place	Haggerty Road	Consider access management along corridor
			Consider coordinating with Northville Township to eliminate the NB LT* movement at Meijer drive
9 Mile Road	Napier Road	Beck Road	Pave road
			Install edge line if paved
			Install wet reflective pavement markings if paved
10 Mile Road	Manor Park Drive	Meadowbrook Road	Consider access management along corridor; Install advance curve warning signs at horizontal curve
Beck Road	8 Mile Road	Casa Loma Ct	Consider installing Two-Way Traffic (W6-3) warning signs
Beck Road	Hickory Street	Pontiac Trail	Install fluorescent yellow sheeting on warning signs
Grand River Avenue	Meadowbrook Road	Seeley Road	Consider high friction pavement surface treatment
Haggerty Road	8 Mile Road	Orchard Hills Place	Install advance signal warning signs upstream of signal
			Consider high friction pavement surface treatment
Haggerty Road	High Pointe Blvd	9 Mile Road	Consider consistent 5-lane road cross-section
			Consider dedicated SB RT lane at 9 Mile Rd if road is widened
Novi Road	10 Mile Road	Gen Mar	Consider access management along corridor
Novi Road	Grand River Avenue	Crescent Blvd	Consider access management along corridor

Some safety improvements provided under the proposed road capacity improvements

Table 18: Potential Intersection Safety Improvements

Intersection Name	Potential Improvement
8 Mile Road & Beck Road	Install signal backplates
9 Mile Road & Haggerty Road	Signal modernization
10 Mile Road & Beck Road	Examine signal timing optimization
	Consider low-level signals for LTs*
10 Mile Road & Novi Road	Examine signal timing optimization
	Install signal backplates
	Consider access management at SW quadrant
10 Mile Road & Haggerty Road	Examine signal timing optimization
	Consider low-level signals for LTs
Beck Road & Grand River Avenue	Examine signal timing optimization
	Examine need for NB RT lane
Haggerty Road & Grand River Avenue	Examine signal timing optimization
	Consider low-level signals for LTs
M-5 & 13 Mile Road	Examine signal timing optimization
	Install signal backplates
	Consider intersection guide lines EB RT, WB RT
M-5 & 14 Mile Road	Examine signal timing optimization
	Consider intersection guide lines EB RT
Novi Road & Crescent Blvd	Examine signal timing optimization
	Consider low-level signals for LTs
Novi Road & Grand River Avenue	Examine signal timing optimization
	Consider access management at SW, SE, NW quadrant
Novi Road & Twelve Oaks/ Karevich Drive	Examine signal timing optimization
	Consider low-level signals for LTs
	Consider eliminating WB LT movement at Karevich Dr**
	Examine increasing storage length for SB RT
Pontiac Trail & West Park Drive	Alt 1: Install signal backplates
	Alt 1: Install reflective sheeting on advance warning signs
	Alt 2: Examine roundabout feasibility

NB/SB/EB/WB - northbound/ southbound/ eastbound/ westbound

LT/RT - left turn/right turn

Signal backplates: Backplates provide a visual contrast between traffic signal heads and the environment, enhancing signal visibility and intersection safety.

*Low level signals for LTs: Low-level signals for LTs are typically an additional left turn signal installed at the far-lefts of an intersection and visible to the drivers of left-turning vehicles. They can improve safety by improving left turn signal visibility and compliance.

**The elimination of WB LT movement into Karavech Dr can be accomplished via yellow pavement markings. The objective is to minimize conflicts at the intersection of Novi Rd & W Oaks Dr. These drivers are likely to perform the WB LT at a) the left turn lane 230 ft west which has a longer storage and further away from the intersection and/or b) rerouted at the intersection with W Oaks Dr & Donelson Dr.

signal modernizations at the intersections of 8 Mile Road and Haggerty Road, and 14 Mile Road and Haggerty Road. Table 16 and Table 17 on the previous pages present the potential safety improvements for segments and intersections. It should be noted that certain improvements such as signal timing optimizations, additional turn lanes at intersections, or roadway widenings can also effectively help reduce congestion.

What is Access Management?

Good access management helps maintain adequate traffic flow, reduce congestion, improve safety, preserve the facility functional use, and enhance private land development. Access management is a set of strategies for managing vehicle access points along all types of transportation facilities that balances mobility and access. Under Michigan law, every land parcel must be provided reasonable access. Reasonable access, however, is determined on a case-by-case basis and must consider safety and operational factors such as:

- Intersection and interchange spacing
- Driveway spacing
- Turning lanes
- Median treatments
- Street connections
- ROW considerations
- Land use policies

The likelihood of crashes increases with increasing driveway density. As the number of driveways decreases, the number of conflict points is reduced thus providing drivers with improved merging capabilities and less risky maneuvers. The placement of the driveways is also as important as driveway density. Increasing the distance between driveways reduces the risk of crashes since the number of potential conflict points is reduced. While access management can be implemented at any time, generally the best windows of opportunity are during new development/ redevelopment activities or road construction.

Several strategies exist to provide adequate access management. Some proven and effective treatments include:

- Limit the number of driveways along the road
- Ensure adequate spacing and location between driveways, intersections, and driveways and intersections
- Provide appropriate driveway design and geometrics
- Driveway consolidation
- Provide dedicated lanes for turning movements
- Provide passing lanes
- Restrict some turning movements such as eliminating left turns or providing indirect turns.
- Incorporate medians and appropriate median openings
- Encourage shared access to land parcels where feasible
- Promote efficient and safe internal circulation

ACTIVE MOBILITY PLAN, 2024

In 2024, the City of Novi adopted an Active Mobility Plan in recognition of the increasing demand for alternative forms of travel and the need to promote safe, comfortable, and convenient transportation options within the community. The plan serves as a strategic framework to guide the City's response to this growing demand and ensure broader connectivity within both the City and the larger regional transportation network.

Recommendations from the Active Mobility Plan are organized by Long-Term and Near-Term implementation timelines. The plan's Long-Term Vision is anticipated to be implemented over the next two decades as its recommendations are constrained by available right-of-way and the need to accommodate projected traffic. Road reconstructions present the greatest opportunities for the implementation of these recommendations. Conversely, the Near-Term Vision outlines projects and recommendations that can largely be implemented without changing curb lines and are mostly within the public right-of-way. Road work of any kind (repaving, restriping, and/or reconstruction) presents opportunities to review near-term recommendations.

Long-Term Network Recommendations

The five main components of the Long-Term Network Recommendations serve as a guiding compass for the City of Novi as they direct planning efforts to fulfill the goals of fostering sustainable transportation, creating pedestrian and bicycle-

friendly infrastructure, and being flexible to evolving modes of transportation.

Sidewalks and Sidepaths

All roads should feature sidewalks on both sides of the street, and the City's existing sidewalk network should strive to be continuous with gaps closed and repaired when work is conducted within road rights-of-way. Major collector and arterial roads should have sidewalks with a minimum width of 6 feet with a buffer zone and buffering elements (such as trees) wherever possible. Where feasible, one side of the corridor should have sidewalks expanded to a minimum of 10 feet to accommodate busy roads, especially where on-road bike lanes are absent.

Mid-block Crosswalks

Crosswalk treatments at mid-block locations are identified and distinguished to address potential hazards and elevate the overall pedestrian experience. Many treatments can be implemented within the existing cross-section of roadway and should actively be pursued to improve bicycle and pedestrian safety. The crosswalk typologies are illustrated below:

Bike Lanes

The plan uses a map to illustrate appropriate locations for on-road bicycle facilities. Two types of biking infrastructure are identified and recommended based on roadway speeds and volumes.

- Bike Lane: A painted buffer zone between the bike lane and the motor vehicle lane to add safety and separation from vehicles. Flexible posts may also be included to increase bicyclists' comfort.
- Separated Bike Lane or Sidepath: In areas with high pedestrian traffic, separate facilities for bicycles should be provided to minimize conflicts between pedestrians and bicyclists.

Greenways

A number of key regional corridors play pivotal roles in connecting Novi to the regional trail network. Opportunities to strengthen these connections and to provide abundant greenway access for Novi residents are described below:

High Visibility Crosswalk

Crossing Island

Speed Table

Rectangular Rapid Flash Beacon

Rectangular Rapid Flash Beacon with Island

Pedestrian Hybrid Beacon with Island

Mid-Block Crosswalks.
Source: City of Novi Active Mobility Plan

» ITC Trail to the Michigan Air Line Trail
  - Establish a trail connection across the I-96 interchange at Beck Road.
  - Complete sidepath gaps along 12 Mile and West Park to Pontiac Trail.
  - Provide a trail connection to the Michigan Air Line Trail from Pontiac Trail and West Park Drive.
» ITC Trail to Hines Park Trail
  - Provide a trail connection in the vicinity of the park entrance from the sidepath on the north side of 8 Mile Road to the park trailhead.
  - Support the City of Northville and Northville Township in their efforts to complete a pathway connection along 7 Mile Road to Hines Park Trail.
» Taft Road Alternative
  - Recognizing the strong desire to establish a nonmotorized connection across I-96 at Taft Road, linking the northern and southern parts of the city, it is recommended that the city actively seek opportunities for its construction as the anticipated City West district develops.

Local Road Routes

Connections are proposed to create family-friendly routes that connect neighborhoods to each other and to local destinations such as schools, parks and trails. This network prioritizes low-stress bike routes that traverse neighborhood roads while also emphasizing the creation of crucial sidewalk and pathway connections within subdivisions.

Local road routes can be supported with the following infrastructural improvements:

» Low-stress bike routes that follow neighborhood roads
» Pedestrian and bicycle links to adjacent neighborhoods and local destinations
» Safe routes for walking and biking to schools from nearby neighborhoods
» Short pathway links that connect neighborhoods away from major road corridors

Near-Term Network Recommendations

The three main components of the Near-Term Network Recommendations focus on eliminating gaps and providing the framework for a continuous network to access key destinations and trails through the city. Many of these recommendations could be implemented with modifications to the existing road cross-section and are the focus for mobility improvements for the foreseeable future.

Neighborhood Greenway Network

The Neighborhood Greenway Network is a continuous non-motorized network with amenities to enhance the overall experience for users. These small-scale enhancements play a pivotal role in establishing a continuous route across the city, providing a framework for linking neighborhoods to essential destinations. These enhancements may include:

» Attractive and sustainable landscapes in the buffer zone
» Community art and interpretive signage
» Links to parks and public buildings with water and restrooms
» Periodic rest areas with benches
» Pedestrian scale lighting
» Enhanced year-round maintenance
» Pet waste management
» Uniform wayfinding system that integrates with regional trail network and bike routes
» Events, group rides, and maps to promote network
» Automatic counters and yearly surveys to evaluate use
» A grant program to improve safety at neighborhood entrances
» Upgraded existing facilities
» Sponsor and adopt-a-greenway or trail amenity
» High quality non-motorized link through the Beck Road overpass
» Improved critical gaps in sidepath network
» Warning and detour signs for dead end pathways
» Major off-road trails integrated into the network (such as the ITC Trail and the I-275 Metro Trail)

Connecting to Transit

Efforts to better connect non-motorized users to transit are a critical component to enabling complete mobility for Novi residents. This recommendation seeks to proactively address the needs of non-motorized residents to provide safe and convenient access to transit by addressing gaps in the pedestrian network and ensuring safe, convenient access to the newly established transit stops. The following strategies should be employed to pursue this goal:

- Provide direct access to major destinations along the route
- Coordinate crosswalks with transit stops
- Incorporate streetscape amenities to create an inviting and pedestrian-friendly environment at transit locations
- Establish mobility hubs, a place where people can connect to multiple modes of transportation

Improved Access to Shopping and Dining

Novi's regional shopping opportunities can be enhanced by facilitating easy access for bicyclists and pedestrians to reach businesses directly from the street. Pursuing this transformation enables convenience and an enjoyable experience for visitors and residents alike while also aligning with the broader goal of creating a sustainable, vibrant urban landscape that embraces diverse modes of transportation. Strategies to support pedestrian and bicyclist access to shopping and dining are described below:

- Establish a bicycle friendly business program
- Subsidize placing bike racks in existing developments
- Provide grants to help retrofit existing developments with high quality connections
- Encourage trail centered site development plans
- Provide site plan approval checklist and technical assistance for existing developments

Family walking.

- Provide access from the public pathways and bike lanes along the street to the business' front door
- Better access to public sidewalks and transit for visitors at hotels
- Use new developments, such as the City West District, to model pedestrian and bicycle elements

TRANSIT

Regional Transit

The Regional Transit Authority (RTA) of Southeast Michigan, established in 2012, is responsible for coordinating, overseeing, and improving transit for Macomb, Oakland, Washtenaw, and Wayne counties. As part of its responsibilities, the RTA coordinates and oversees existing transit providers throughout the region, including the Suburban Mobility Authority for Regional Transportation (SMART). SMART is Southeast Michigan's regional public transportation provider for Macomb, Oakland, and Wayne counties. It provides fixed-routes and curb-to-curb service options designed to connect people to employment, commercial centers, and educational institutions. These services are supported by federal and state funding, local contributions through a transit property tax millage, and bus fares.

In November 2022, voters of Macomb, Oakland, and Wayne counties approved a countywide transit millage which, among others, facilitates the expansion of public transportation and transit options in the region. As a result, in September 2023, SMART extended its services in Novi for the first time in its history. The expansion consists of the extension of three existing fixed routes throughout the city (Figure 38). Combined, they help connect people to important employment and commercial centers in Novi such as the Twelve Oaks Mall and the Suburban Collection.

- **Route 305 Grand River** travels along Grand River Ave and extends the current route from Farmington Hills to Wixom Rd
- **Route 740 Twelve Mile** travels along 12 Mile Rd, Beck Rd, and Grand River Ave and extends the current route from Farmington Hills to Wixom Rd
- **Route 805 Grand River Park & Ride** travels along Grand River Ave, Haggerty Rd, Novi Rd, 10 Mile Rd, and 12 Mile Rd and extends the current route from Farmington Hills to the MDOT carpool lot on 12 Mile Rd

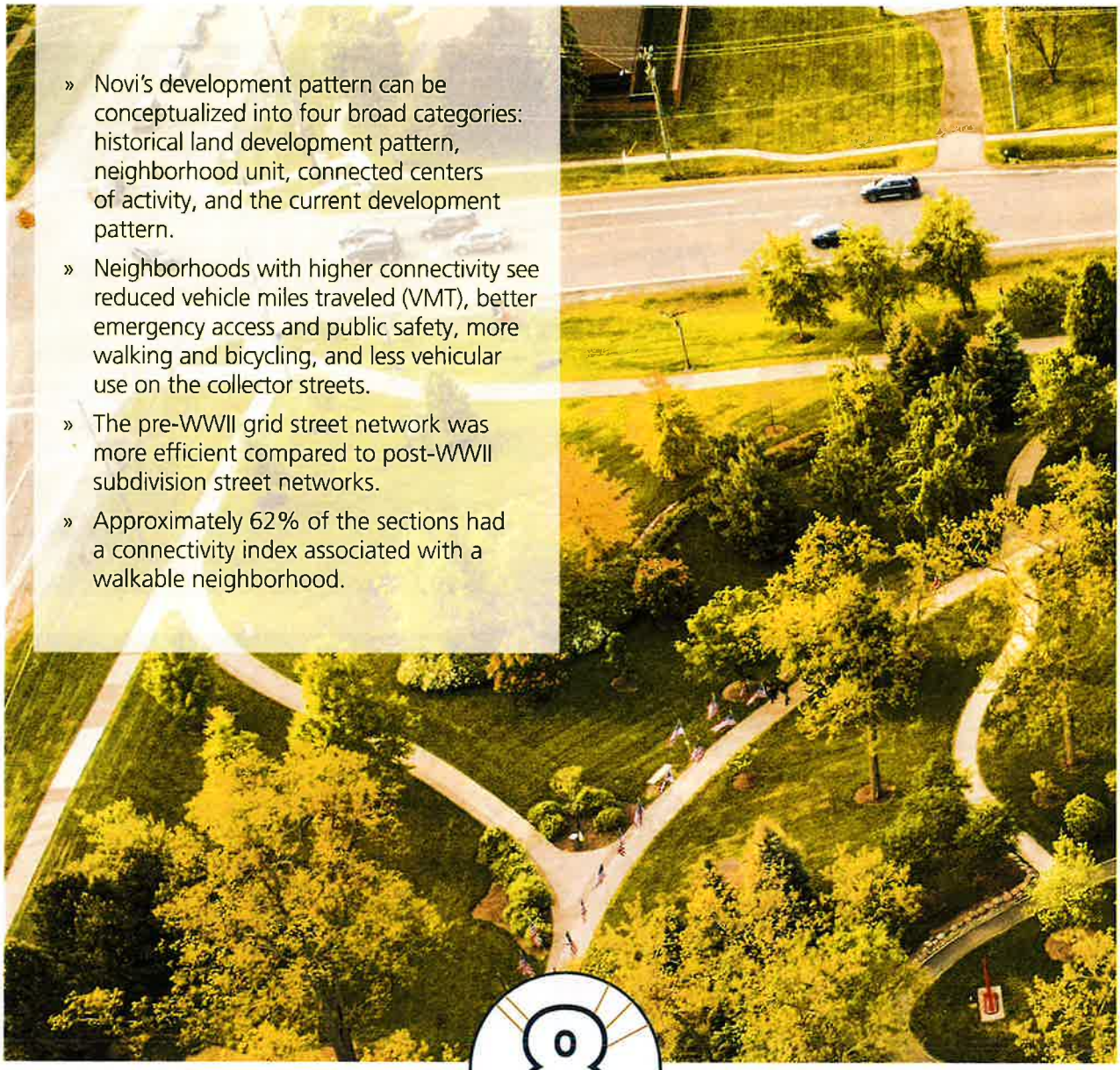
The expansion of the three new routes in Novi corresponds with one of the primary goals of the RTA Advance 2021 Regional Master Transit Plan (RMTP) which is to expand transit to new places. In addition, Grand River Avenue and Twelve Mile Road in Novi are identified as part of two of the 13 regional transit corridors in Southeast Michigan. Regional transit corridors are critical corridors which serve the region's more urban/high density areas, connect key regional destinations, and have strong ridership. The expansion of the three new routes in Novi helps bring these regional transit corridors to their full potential by completing a critical gap in services.

Other Local Transit

The City of Novi's contracted People's Express program provides curb-to-curb transportation services for residents of Novi. Residents over the age of 14 can schedule rides to doctor visits, the library, grocery shopping, or to work. Residents over the age of 55 can use the program for free within the service boundary, and veterans of any age ride for free anywhere within Oakland County. Vehicles are scheduled based on the needs of each passenger with transportation available from 5am to 9am on weekdays, 5am to 5pm on Saturdays, and 8am to 5pm on Sundays.

Figure 37: SMART Routes in the City of Novi

Civic Center.



- Novi's development pattern can be conceptualized into four broad categories: historical land development pattern, neighborhood unit, connected centers of activity, and the current development pattern.
- Neighborhoods with higher connectivity see reduced vehicle miles traveled (VMT), better emergency access and public safety, more walking and bicycling, and less vehicular use on the collector streets.
- The pre-WWII grid street network was more efficient compared to post-WWII subdivision street networks.
- Approximately 62% of the sections had a connectivity index associated with a walkable neighborhood.

8

CONNECTIVITY

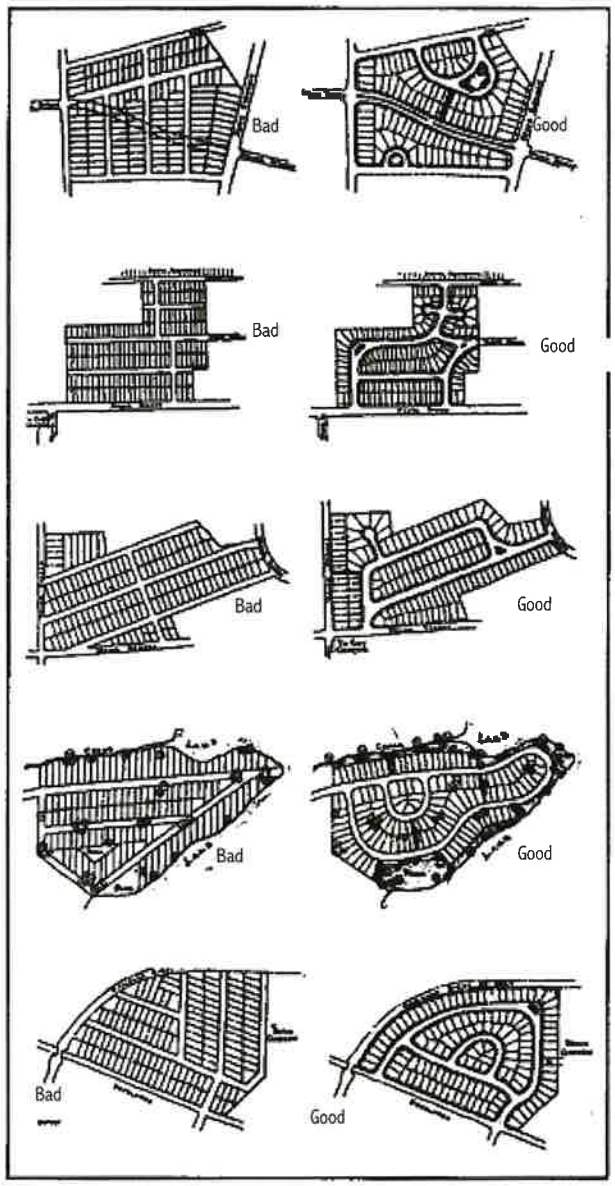
DEVELOPMENT PATTERNS

The City of Novi began as a rural township in southwest Oakland County. Like many rural communities, commerce and people typically congregated where rail and roads converged. This center of activity provided goods and services to the rural community while serving as a foundation for future development. As the population increased, so did commerce, and the rural township evolved into an urban township and then later a city.

Novi is a post-WWII suburban community where the development pattern, particularly for residential areas, was based largely on Federal Housing Administration (FHA) policies and guidelines. FHA was established to restructure the collapsed private home financing system. Because lending institutions and developers relied on FHA mortgage insurance programs for financing, they followed their policies and guidelines to procure insurance and financing incentives. By 1959, three out of five homes were financed, in part, by FHA housing programs.

Beginning in 1935, with FHA's first publication of technical standards and followed by subsequent publications, the FHA concluded that the historical grid pattern used in most European and American cities was outdated, costly, and served to only disperse traffic equally through the community. Instead, FHA proposed three primary forms of residential streets: curvilinear, cul-de-sac, and courts. These street options were noted to be quieter and safer relying on collector streets to feed traffic to major arterials.

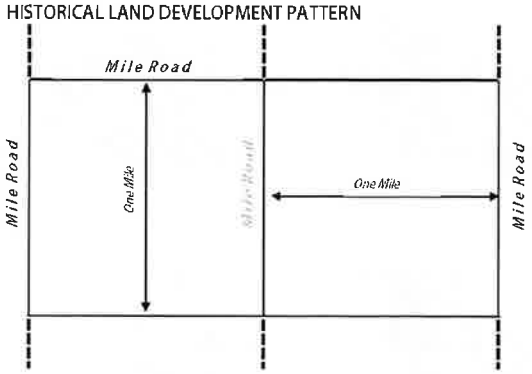
To represent the interests of the real estate development community, the Urban Land Institute (ULI) was formed in 1939. One of its initial goals was to have a set of standard residential guidelines to ensure fair and predictable outcomes at the local level. As a result, ULI further advocated for the use and adoption of FHA subdivision design standards.



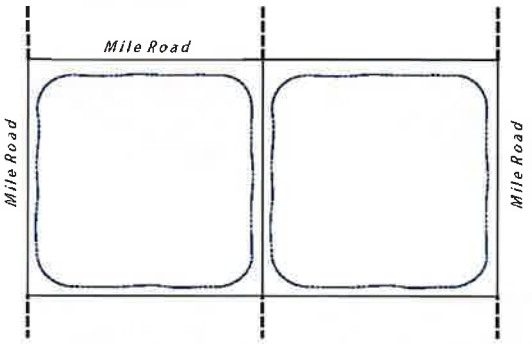
FHA Recommended Subdivision Layouts
(from FHA publications, 1938 - 1952)

City of Novi Subdivision
Source: Google Earth

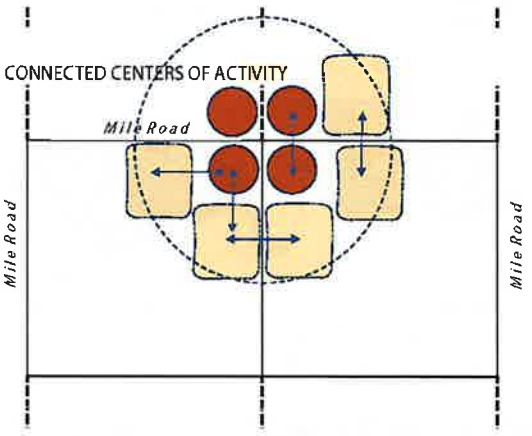
HISTORICAL LAND DEVELOPMENT PATTERN



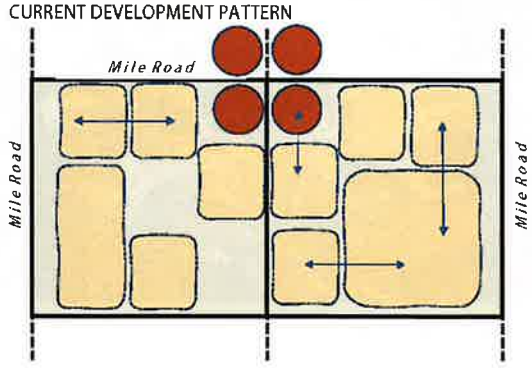
NEIGHBORHOOD UNIT



CONNECTED CENTERS OF ACTIVITY



CURRENT DEVELOPMENT PATTERN



Novi's development pattern may be conceptualized into four broad categories.

Historical Land Development Pattern

The layout for the City is based on the Public Land Survey System, referred to as the "rectangular survey system," proposed by Thomas Jefferson and enacted into law by the Land Ordinance of 1785. This system was based on "townships" and "ranges." A township was set up to be six miles square and land. A range was set up as columns of township set side by side. Each township was planned to have thirty-six 640-acre sections.

Neighborhood Unit

The survey system resulted in 640 acres, or one square mile, defining approximate neighborhood units. Typically, along the edge of the section was a major road. In Novi, there are the "mile" roads: Eight Mile Road through Fourteen Mile Road, that run east and west, and Haggerty Road to Napier Road, which runs north and south. These one-square-mile squares created a boundary for a neighborhood unit. The Residential Planning Areas map in the 1993 Master Plan for Land Use used the sections and mile roads for planning areas.

Connected Centers of Activities

Before the widening of the "mile" roads, centers of activity such as commercial and residential areas developed. Commercial areas typically developed at the corners of the intersecting mile roads, with residential development either adjacent to or in the interior of the neighborhood unit. In the early stages of community development, the mile roads were less congested, where centers of activity were connected and, in some instances were walkable.

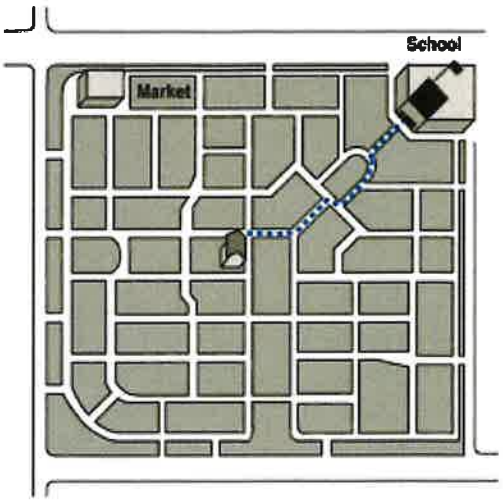
Current Development Pattern

The City's population increase, coupled with regional retail establishments, corporate offices, and employment centers meant the "mile" roads needed to be consistently widened to accommodate vehicular demand. This resulted in internalized connectivity. In some instances, depending on the residential development's layout, there was no connectivity, creating further increased vehicular usage.

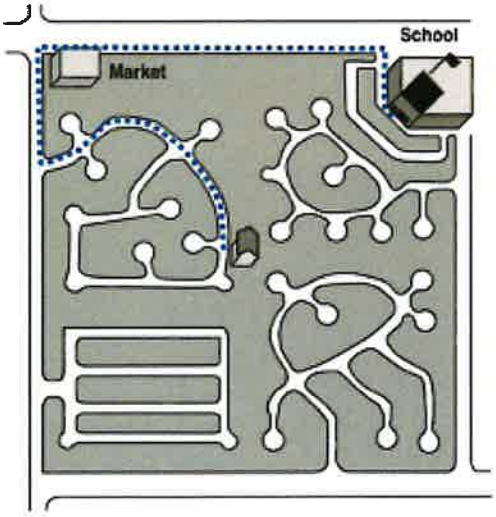
Post-WWII, residential land development relied on a hierarchy of streets ranging from highways to major arterials; to small collectors to the quiet residential streets; terminating with the cul-de-sac. This form of development was, to some degree, promoted by the FHA's insurance financing preferences, resulting in disconnected neighborhoods.

The pre-WWII grid street network was efficient and connected in comparison to post-WWII street networks influenced by FHA guidelines that resulted in more trips and longer driving distances, and occasionally low internal connectivity.

The adjacent images show the impact of post-WWII development patterns influence on travel versus the pre-WWII grid network. As illustrated post-WWII development patterns add to vehicle miles traveled and trip ends which increase traffic counts and volumes.



Pre-WWII Grid Street Network
Source: State of Oregon DOT

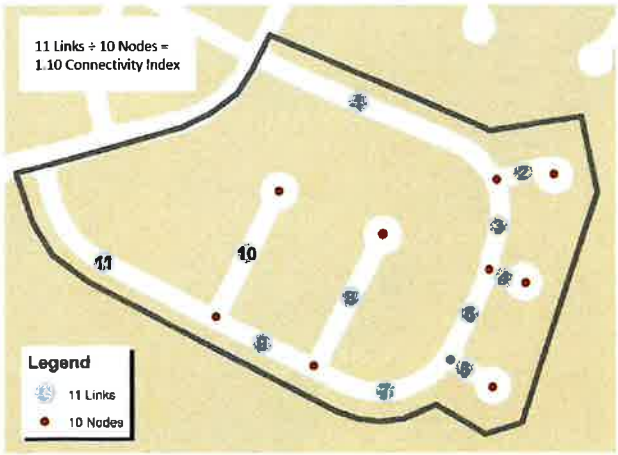


Post-WWII Street Network
Source: State of Oregon DOT

CONNECTIVITY

The City of Novi has 395 subdivisions and developments. The internal connectivity of these developments can vary depending on the configuration of the street patterns and the number of cul-de-sacs. There are several methods used to determine internal connectivity. One method is referred to as the "link node ratio" which measures the links (street segments between intersections) by the number of nodes (intersections and cul-de-sacs). A value of 2.5 indicates a perfect grid street network and a value of 1.0 represents a tree network or a completely disconnected network. A ratio of 1.4 or higher represents a high degree of connectivity in both planning and transportation literature and is considered the base value for walkable neighborhoods. Neighborhoods with higher connectivity ratios see a reduction in vehicle miles traveled (VMT), provide better access for emergency and public safety, see more walking and bicycling, and lessen vehicular use on the collector street network.

Another metric for creating walkable neighborhoods is the Leadership in Energy and Environmental Design–Neighborhood Design (LEED-ND) prerequisite of 140 intersections per square mile. Although this metric seems high, when applied to a 10-acre site, it equates to 2.18 intersections.



Example: Connectivity Link Node Ratio

The link node ratio was used to assess the connectivity index of Novi's 32 sections, meaning that an index of 1.4 or higher indicates neighborhood walkability. Based on the assessment, 20 of the 32 sections had an index of 1.40 or higher, 10 sections had an index between 1.20 to 1.39, and two sections had an index of 1.19 or lower. Approximately 62% of the sections had a connectivity index associated with a walkable neighborhood. Map 14 illustrates by section the general connectivity patterns within the City. Subject to the recommendations of the 2023 Active Mobility Study, the City may consider requiring any new residential developments to target a connectivity index of 1.40 or higher as part of their design.

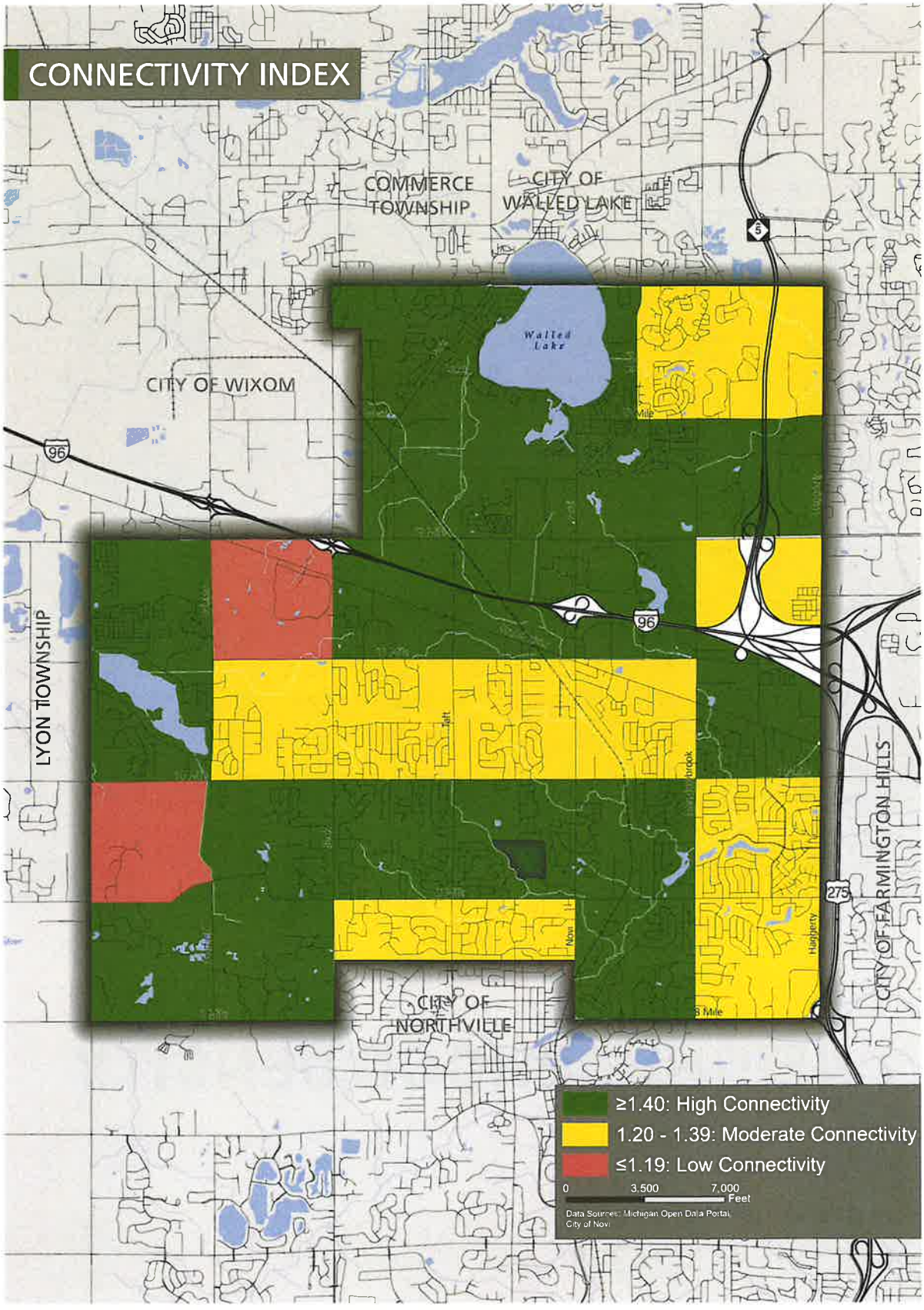
The City has been successful advancing the concept of connectivity through their street design standards [11-194.(a)(19)] and zoning ordinance design requirements, such as the GE District – 3.12.4.C.vi: Design Standards and PSLR – 3.21.2.B: Circulation Standards which address the installation of street stubs on the perimeter of new residential developments for future connection to adjoining properties.

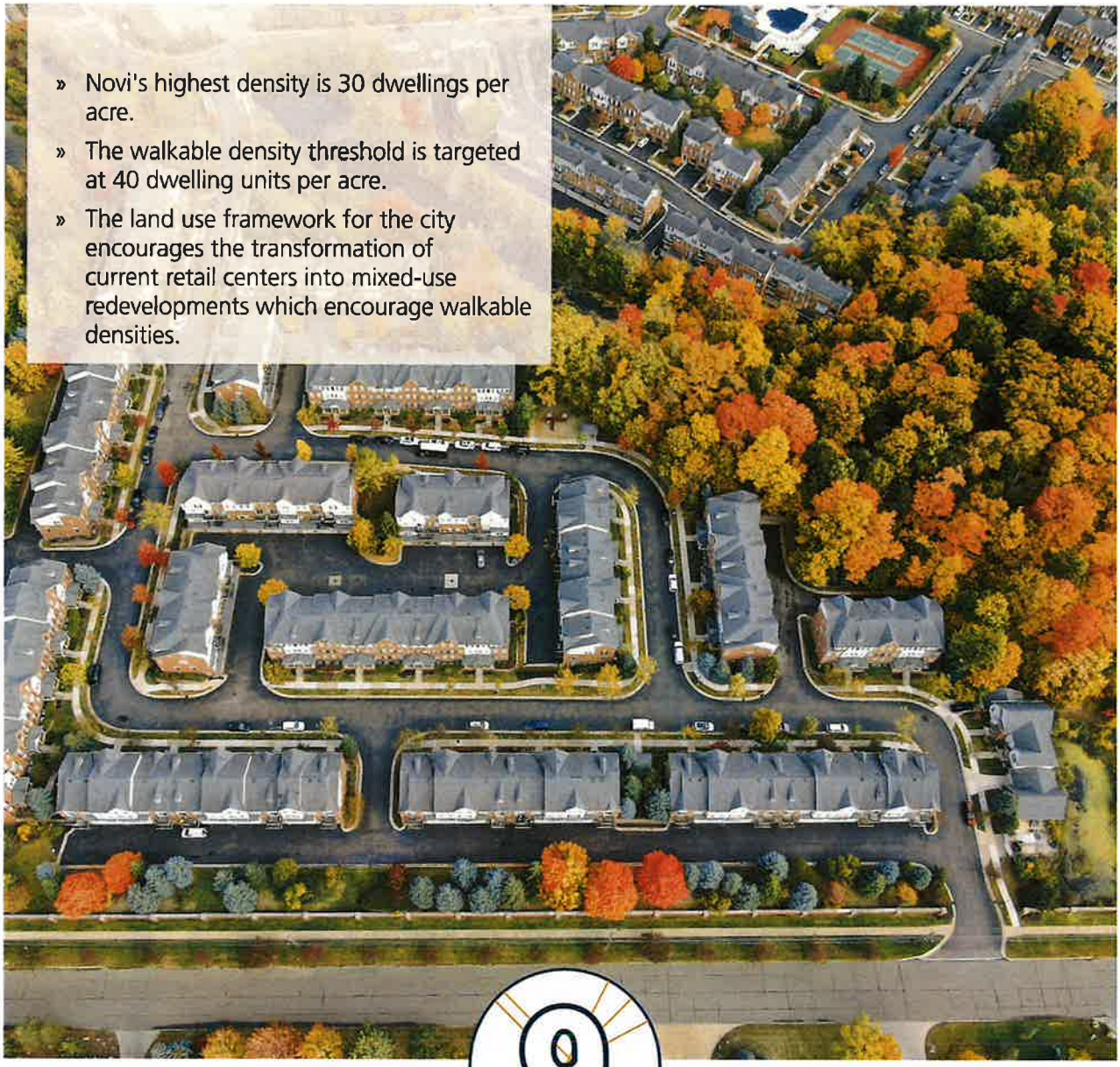
Lastly, another form of connectivity is inter- and intra-city connectivity resulting from some form of public transit. In 2023, the Suburban Mobility Authority of Southeast Michigan (SMART) began bus routes along 12 Mile Road and Grand River Avenue. These routes provide connections to other Oakland and Wayne County communities and allow Novi residents the opportunity for bus service along designated routes in the City. Public transit offers improved transit options for older adults and those individuals with disabilities.

Utilizing the connectivity index as a zoning and land planning tool, street design standards, and recommendations from the Active Mobility Plan will further advance the City's vision as a walkable and connected community.

Bikers and Pedestrians

Map 14: Connectivity Index





- Novi's highest density is 30 dwellings per acre.
- The walkable density threshold is targeted at 40 dwelling units per acre.
- The land use framework for the city encourages the transformation of current retail centers into mixed-use redevelopments which encourage walkable densities.

9

NEIGHBORHOOD DENSITY

NEIGHBORHOOD DENSITY

What is Density?

Density is often misunderstood and, in some instances, used to misrepresent the intent of a development or redevelopment project. Density is nothing more than the amount of development permitted on a parcel allowed under the applicable zoning district measured as dwelling units per acre.

Density has been associated with income status, particularly lower-income households, and property values where higher densities are associated with lower property values as well as higher crime rates. However, sometimes the opposite is true; some of the highest-income households and properties are found in higher-density developments.

Density can be visible and invisible. For example, density that is visible would be a townhouse complex where there are a number of townhouses located on a site. On the other hand, invisible density could be a duplex where two dwelling units are located on a smaller residential lot or a single-family home with an accessory dwelling unit.

Density is as much a perception based on our visualization of a property rather than an understanding of the built environment. Novi's highest density is 30 units per acre located north of Grand River Avenue between Taft and Beck Roads. The central core of the community ranges between 9.3 dwellings per acre to 30 dwellings per acre. The Twelve Oaks Mall and Novi Town Center are factored at 20 dwelling units per acre. Although the densities currently allowed within both retail centers are moderately high, these areas are not truly walkable. Walkable density enhances how people experience urban places. Notably, walkable density focuses on density not as a goal in its own right, but as a powerful tool for achieving community goals, such as quality of life improvements, economic opportunities, equity, and retrofitting sprawl, among other benefits.[1]

The walkable density threshold is targeted at 40 dwelling units per acre. At this scale, there are enough residents to reasonably support local businesses, work within a 5-minute walkshed, and enjoy accessible open space.

Visible Density - Townhouses

Number of Units = 16
Parcel Size = .50 acres
Density = 32.0 units per acre

Invisible Density - Single Family with an Accessory Dwelling Unit above the garage

Number of Units = 2
Parcel Size = 7,000 square feet
Density = 12.4 units per acre

Figure 38: Building Typology by Density

Source: Understanding Density and Development Intensity, March 2019, League of California Cities.

The figure titled "Building Typology by Density" provides a visualization of different building typologies by their respective density. This includes single family, townhomes, walkup apartments, and podium or wraps.

The land use framework for the city encourages the transformation of current retail centers into mixed-use redevelopments allowing for the introduction of residential components. The walkable density concept can play an important role in the success of these redevelopments. Although the minimum threshold is focused on 40 units per acre, it is conceivable with the use of parking decks or liner buildings with internal parking to achieve densities upwards of 50 to 60 units per acre. In Tempe, Arizona, Caldesac, a real estate development company, is opening a 40 unit per acre development prioritizing biking, walking, and transit over cars and parking. They have a similar project in the planning stages in southeast Atlanta, Georgia.

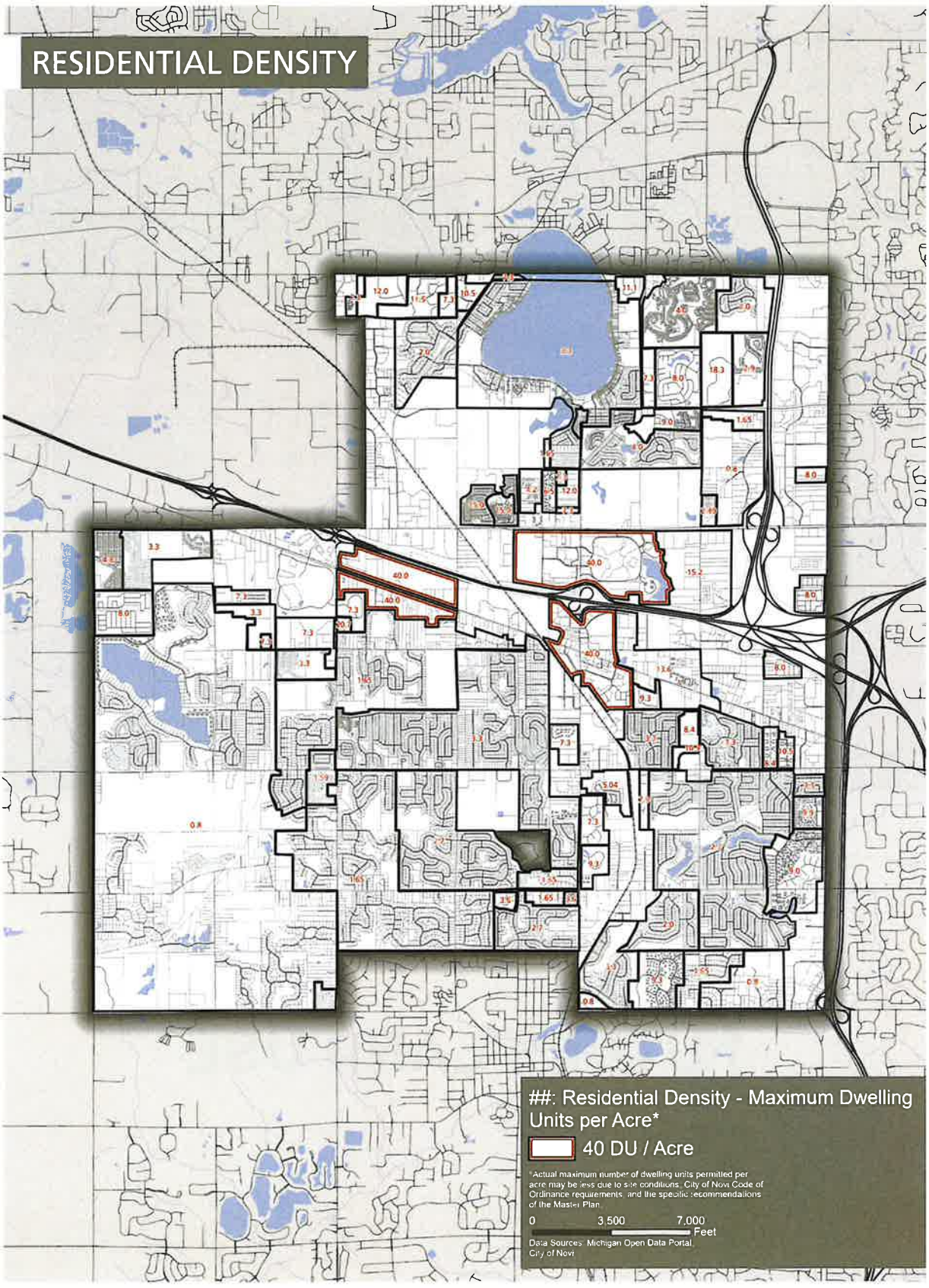
Subject to market conditions, dwellings within these higher-density developments could be either rental units or condominiums. The increased densities in the city's core area strive to reduce the amount of acreage devoted to surface parking and utilize this space for tax-producing properties. In addition, the added population, which will be within convenient walking distance to retail and restaurants, will help create those vibrant mixed-use developments envisioned by the community.

The map titled Residential Density identifies the maximum allowable density by residential development. The 40-unit per acre density is recommended for a portion of the Novi Town Center, 12 Oaks Mall, West Oaks I and II, Fountainview, and City West. These higher-density areas coincide with the new future land use categories that allow for planned unit developments.

Sources

1. Planetizen, Course, Walkable Density, author and lecturer David Nixon.

Map 15: Residential Density



- Future land use categories were reduced from 22 categories to 17, with an emphasis on mixed-use districts.
- The mixed-use categories are in response to market trends that favor a variety of uses, walkability, less surface parking, greater building massing, and higher densities.
- An amendment is proposed to include a Planned Unit Development Overlay option.

10

FUTURE LAND USE

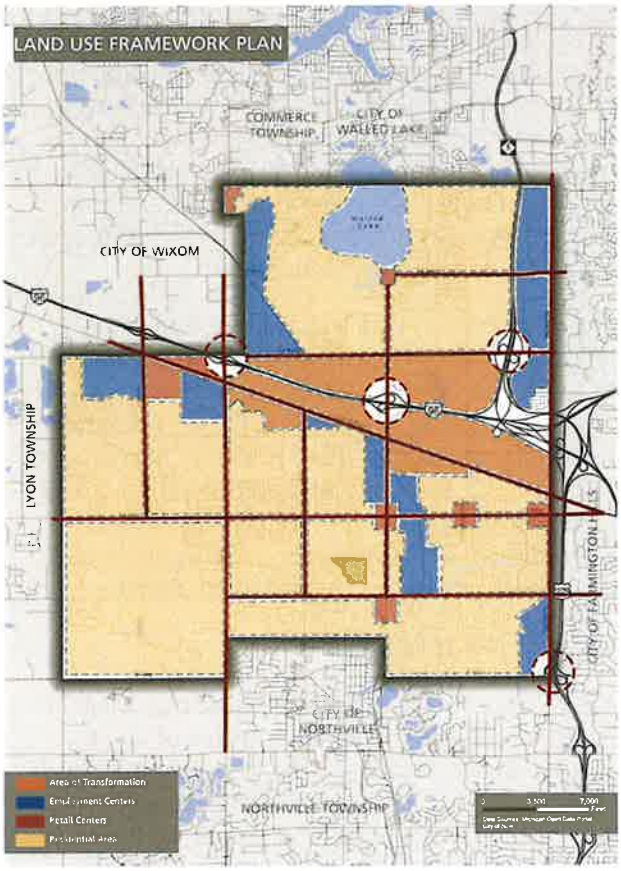
OVERVIEW

For the past several decades the City of Novi has diligently reviewed, revised, and updated its community Master Plan and Future Land Use Map (referred to as the "FLUM"). Each of the master plans outlined various visions for how land within the city should be developed and recommended specific land use categories for implementation. The 1980's and 1990's witnessed significant growth in all major land use categories: residential, commercial, office, and industrial. The core of non-residential development occurred between 12 Mile Road on the north side of the City and Grand River Avenue on the south side. Land north and south of this core area was primarily developed as residential.

The general development pattern for the City is illustrated in the adjacent graphic. The fundamental structure of the City is based on the Public Land Survey System (PLSS) which divides the land into sections which are typically 640 acres, or one square mile. The major arterials, with the exception of Grand River Avenue, run along these mile roads. The internal residential sections are composed of a series of curvilinear roads and cul-de-sacs, some of which connect to each other, and others that provide no connectivity to adjacent streets except the major arterials. The central portion of the City between 12 Mile on the north and Grand River Avenue on the south serves as the primary commercial/office core of the City and the region. Several commercial nodes are also found at the intersections of some of the mile roads. Employment centers tend to locate adjacent to the commercial/office core, along the M-5 and Haggerty Road corridors, and along the rail line which runs diagonally and adjacent to Novi Road. Major gateway entrances into the City are accessed from I-96, I-275, and M-5. Residential developments and subdivisions occur primarily north of 12 Mile Road and south of Grand River Avenue.

The 1993 Master Plan for Land Use updated the 1988 plan. The 1993 plan noted that the City was approximately 37% developed, mentioning that since 1988 there had been 963 acres of new development in the City, with 653 of those acres used for residential development. Interestingly, the plan also enumerated that over 11,000 acres of vacant land zoned for single family uses was still available.

Map 16: Land Use Framework Plan



It was estimated that this available acreage could accommodate upwards of 8,700 housing units, resulting in a holding capacity of 27,600 housing units. Commercial development concentrated around the I-96 and Novi intersection and Grand River Avenue. Nearly 40% of commercially zoned property (654 acres) was dedicated to Twelve Oaks Mall, West Oaks I and II Shopping Centers, and Novi Town Center. Although the plan objectives outlined the Novi Town Center area to encourage a mix of land uses, the housing and density portion of the plan suggested the separation of these uses, where possible. The plan stated, "in rare instances where it is necessary for the convenience of residents to have commercial services integrated with residential uses, the utmost care must be taken in the placement and intensity of the foreign use." Thirty years later, that 1993 policy to encourage the separation of land uses is in direct conflict with policies focused on combining land uses to create connectivity, walkability, and sense of place.

The Novi 2020 Master Plan for Land Use adopted in 1999 revealed the continued growth in the retail sector, noting that the availability of retail square footage exceeded four times the amount needed by the resident population while serving as a regional destination. The plan discussed the proposed Town Center Gateway, a mixed use district, between Meadowbrook Road and the Town Center District, and rezoning of 1,200 acres for office, service, and technology.

The 2016 Master Plan Update noted that the amount of vacant land in the City was decreasing. In 1993, the City had 12,176 acres of vacant and agricultural lands. In 1999, vacant land dropped to 9,384 acres and by 2013 it further decreased to 2,371. In 2022, vacant land accounted for 2,279 acres, cautioning that not all vacant land had the potential for development due to wetlands, woodlands, topography, and other concerns.

CURRENT STATUS

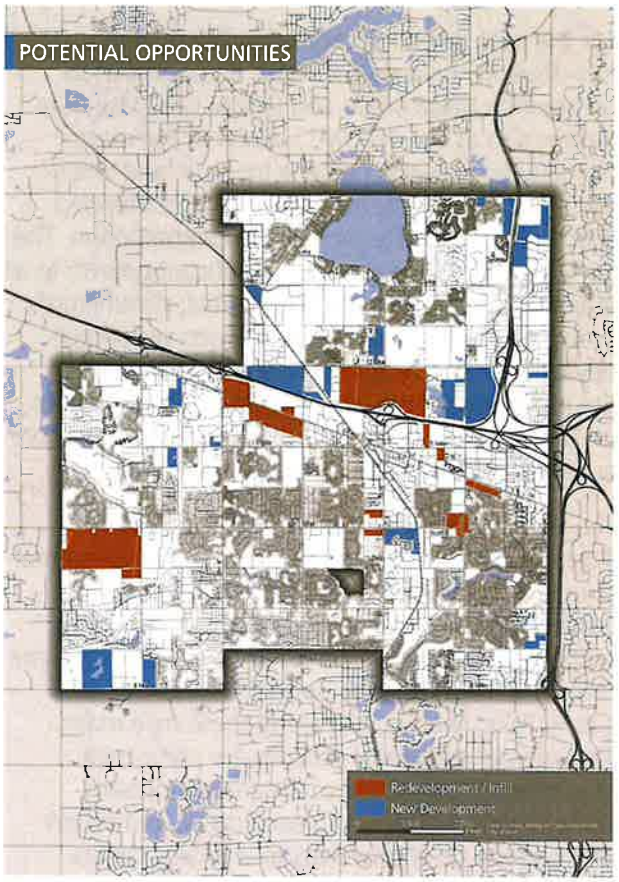
Today, the City of Novi is 91% built out. Map 17 notes what areas, generally 10 acres or larger, that could accommodate new development, and those areas that are available for redevelopment. One of the largest remaining properties for new development is the "Trinity" property located on the west side of the M-5 and Twelve Mile Road interchange, and properties on the south side of Twelve Mile Road between Taft Road and Beck Road. Properties designated for redevelopment or infill include Twelve Oaks Mall, West Oaks I and II, and parcels along Grand River Avenue between Taft Road and Beck Road, and the Links of Novi along Napier Rd.

Table 19: Current Build-Out Status

	Acreage	Percent
Total City	20,027	100%
Built Out	18,181	91%
Redevelopment	972	5%
New Development	874	4%

Source: GIS Data, Beckett & Raeder

Map 17: Potential Opportunities



MARKET

The Novi market is almost fully built out. Discussions with Novi market developers coupled with a review of real estate trends establish a baseline for future land use considerations. Unlike the past several decades where new construction was mainstream, niche development or redevelopment on several remaining sites will take center stage in the next decade. These trends are focused on the near-term, 5-10 years, and do not consider major real estate shifts that are contemplated to occur once autonomous vehicles (AV's) are fully functional and part of the urban landscape.

Overall Real Estate Market Trends

Residential

» Residential market will remain relatively strong. Rising mortgage interest rates will taper the pace of sales.

- There is a market for age-targeted housing for 55+ households with a focus on single level living.
- There is a movement to higher density residential (3-5 units/acre) to accommodate 1,700–2,100 square foot homes with the ability to "age in place" as desirable to a variety of home purchasers.
- Housing will likely become a component of horizontal mixed-use developments.
- There is an opportunity to introduce and encourage residential development along Grand River Avenue between Beck Road and Novi Road.

Retail

- Retail is close to being overbuilt.
- Concern about Twelve Oaks Mall and recent closures. Other regional malls, Lakeside (Macomb County) and Oakland Mall are in the process of redevelopment to other mixed use. Great Lakes Crossing is morphing into an entertainment district.
- Novi Road and I-96 is still the retail hub of the City and a regional destination.
- The introduction of non-retail uses, personal services (i.e. Aspen Dental, urgent care, etc.), into traditional retail locations will likely continue.
- National franchises will desire exposure on Novi Road.
- According to Novi developers, hotels are reaching market capacity.
- Fountain Walk is substantially built out. Fords Garage and Kpot have recently opened and occupy former tenant spaces.

Office

- Office occupancy was significantly impacted by COVID-19.
- Work from Home (WFH) is now an option that will impact the size and functionality of future office space.
- There is a trend toward research, development and technology tenants, and hybrid office space with multi-tenants sharing common facilities. The Impact for Planning (IMPLAN) model supports this shift and emergence in this market sectors.
- The IMPLAN Base Sector Analysis noted that 85% of 413 identified market sectors in Oakland County were either classified as growth or emerging. Growth sectors include real estate, architecture, engineering and technical services, information, insurance, and motor vehicle electrical equipment and manufacturing. Emerging sectors include hospitals (health care), scientific research and development, and other motor vehicle parts manufacturing.
- "Flex" space that overlaps into the industrial sector will increase.
- There is a lack of large vacant acreage in the City for e-commerce fulfillment centers or large distribution facilities.
- There will likely be a demand for relatively smaller, multi-tenant office space in the range of 30,000-50,000 square feet. It is likely that only "pre-leased" office space, not speculative, will be built over the next few years.

Industrial

- Opportunity for "Flex" warehousing which accommodates a variety of uses, including indoor vehicular parking options for service vehicles.
- Build to suit industrial opportunities have cooled due to construction costs, low demand, and higher lease rates. There is a shift toward finding space in existing, vacant facilities in the Livonia and Detroit sub-markets.
- An increase in general storage facilities in Novi.

Health Care

- Move toward outpatient facilities and private Medical Office Buildings (MOB's).
- Ascension Providence is not fully built out with several parcels within the ring road available.

VISUALIZING LAND USE

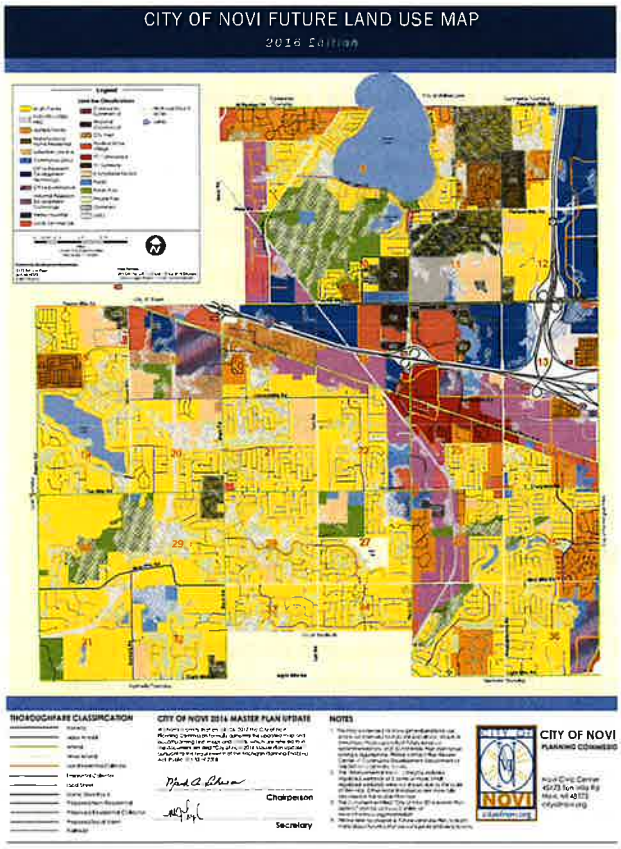
The real estate market is responding to post-COVID impacts, supply and demand within the respective market segments, interest rates, and consumer preferences. IMPLAN modeling notes the continuation of growth and emerging markets focused on science, technology, information, and research and development. As a result, future land use and zoning recommendations need to include

some degree of elasticity and flexibility to respond to these changes. Currently the City's Future Land Use Map has 24 land use categories and the zoning code has 28 zoning districts. Fundamentally, the Future Land Use Map can be consolidated into six land use categories: residential, commercial, institutional, multi-family, office, and industrial. Similarly, the Zoning Map can be consolidated into six districts: single family residential, two-family residential, multi-family residential, commercial, office, and industrial. These consolidated maps present the basic land use and zoning framework for the City.

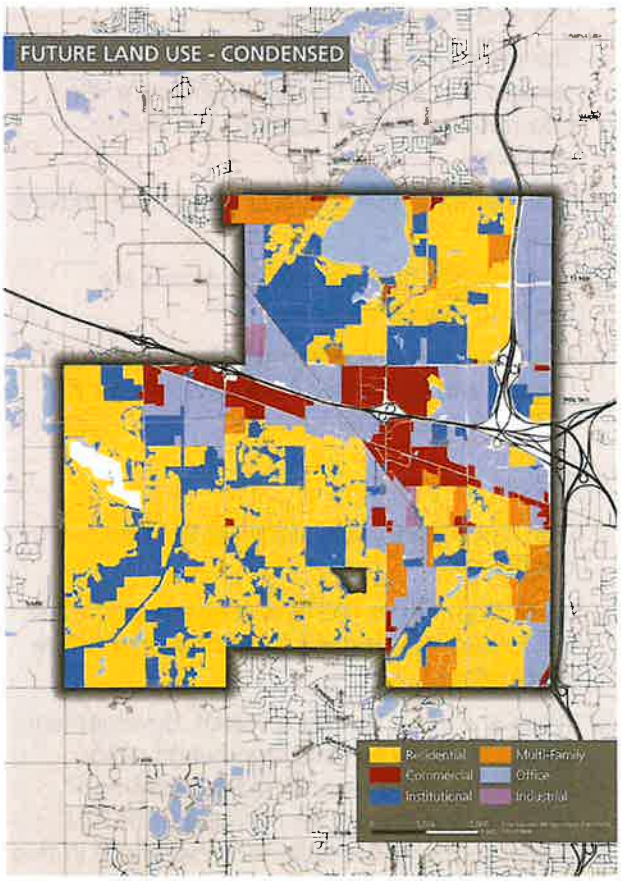
For illustrative purposes, the condensed Future Land Use Map shows residential development primarily north of Twelve Mile Road and south of Grand River. The interior core between Twelve Mile Road and Grand River Avenue is comprised of commercial and office-related uses. The area between Novi Road and the railroad right-of-way, south of Grand River, is comprised of a combination of residential, commercial, office, and industrial uses. The condensed Zoning Map reflects a similar pattern with the exception that much of the office in the Future Land Use Map is classified as industrial on the Zoning Map.

The core area of the city sandwiched between Twelve Mile Road and Grand River Avenue will likely see the most transformation in the near-term. The outlier is Twelve Oaks Mall and the changes that will occur with the closing of several anchors. The majority owner of the mall is Simon Property Group from Indianapolis. The Group's 2021 "Forward Looking Statement" (in the K-10 disclosure) cautioned investors about the "changes in economic and market conditions that may adversely affect the general retail environment; the potential loss of anchor stores or major tenants; the inability to collect rent due to the bankruptcy or insolvency of tenants or otherwise; the intensely competitive market environment in the retail industry, including e-commerce; an

Map 18: Future Land Use (Current)

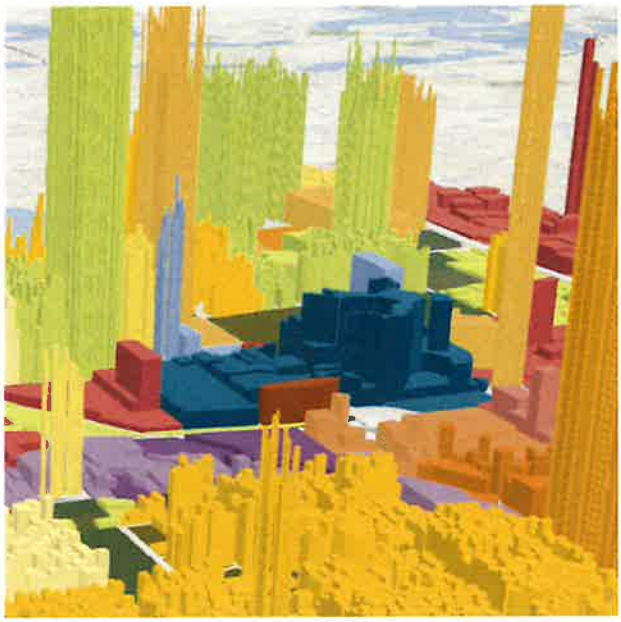


Map 19: Future Land Use (Condensed)



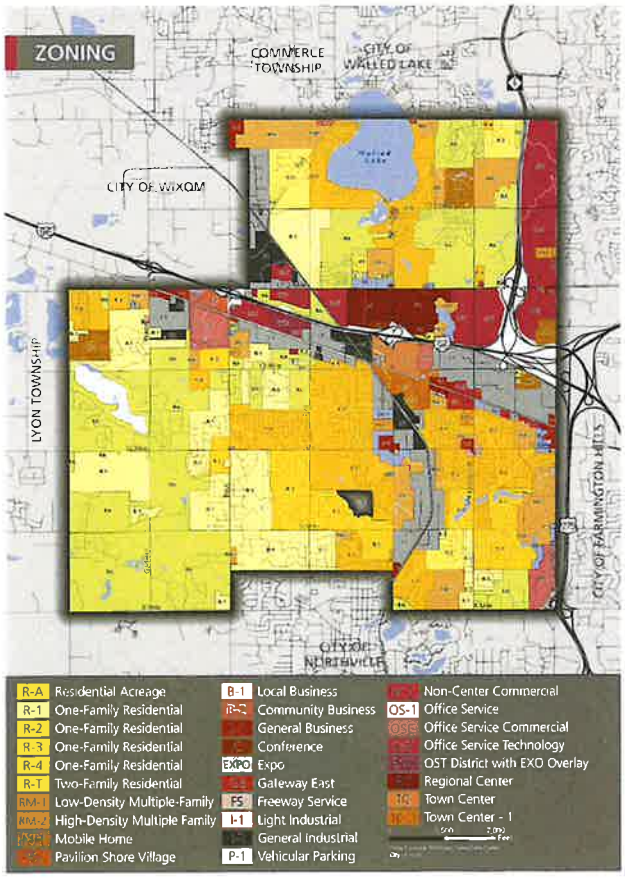
increase in vacant space at our properties." In the 2021 Annual Report they noted the completion of 20 redevelopment projects with the addition of mixed-use components to their market leading centers. A recent redevelopment at Phipps Plaza in Buckhead, Georgia (a suburb of Atlanta) will include a 150-room Nobu Hotel and Restaurant, 13-story LEED gold office building, athletic facilities, and greenspaces for outdoor events, dining, and entertaining. The tag line for the 2021 Annual Report was "Live, Work, Play, Stay and Shop" an obvious harbinger for mixed-uses.

The Twelve Oaks Mall contributes significantly to the City's tax base. The dark green structure in the center of the graphic depicts the taxable valuation per acre of the regional commercial properties. Based on this analysis, Twelve Oaks Mall value per acre ($1,700,000) exceeds West Oaks I and II Shopping Centers and Fountain Walk by four times.

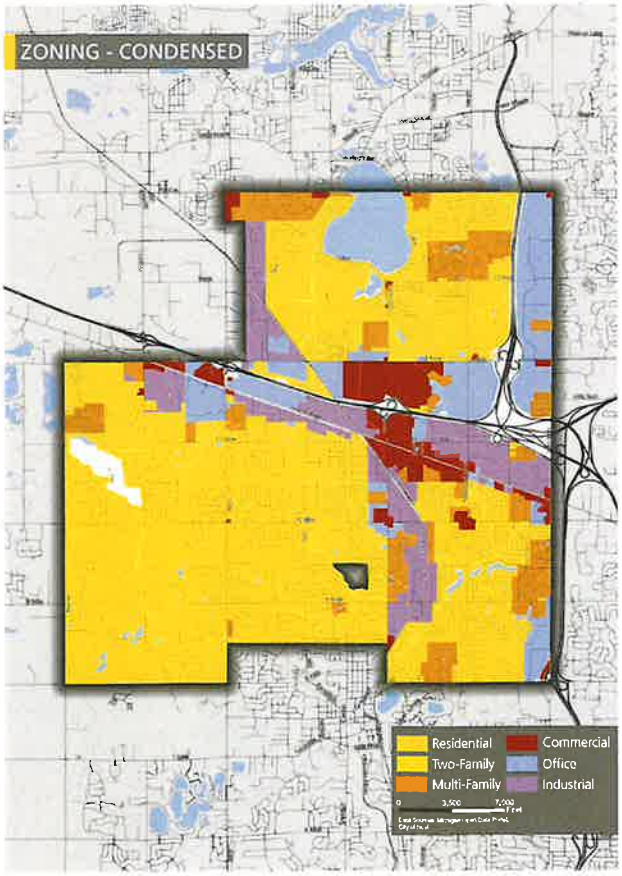


Taxable value per acre.
Data: City of Novi, Graphic: Beckett & Raeder, Inc.

Map 20: Zoning (Current)



Map 21: Zoning (Condensed)



Case Study: Fishers, Indiana

Located roughly 15 miles northeast of Indianapolis, Fishers, Indiana, is a city of just over 100,000 people. Until the 1960's Fishers was a small working agricultural community, but the relocation of a state highway and interstate radically shifted the direction of the City – to that of a premier suburb of Indianapolis. By the turn of the century, Fishers grew to almost 38,000 people, a dramatic rise of roughly 11,000% from the 1960's. Two decades later, Fishes was home to over 100,000 people. This rapid rise in population means that most buildings in Fishers, both residential and commercial, are incredibly new, comparatively speaking. Fishers does not have a historic downtown or commercial corridors that developed slowly over a century, but the desire for retail, entertainment, services remains.

In the early 2010's, in response to community desires, the City of Fishers embarked on creating a vibrant downtown environment from scratch. The city chose the area around their growing municipal campus, which at the time was surrounded by open space, a location that was ideal given its central location in the city and convenient access to the interstate. Construction began with the first investment of $33 million and has not slowed since. Now branded the Nickel Plate District, the area has grown to include several mixed-use buildings with residential spaces, offices, commercial frontages, and public spaces. Following the Nickel Plate Development Code, buildings maintain a cohesive appearance using a mix of sandstone, glass, and modern building materials. While the district itself is walkable, the suburban nature of Fishers means that accessing the site is predominantly done by automobile, but recent investments in a non-motorized plan and a connected rails-to-trails pathway are increasing non-motorized connectivity. To encourage this development, the city employed a mix of incentive tools, primarily using TIF financing; suspending tax revenues received from the district for several decades. Despite the foregoing of tax revenue in the short term, the city and its partners have created a walkable mixed-use environment and succeeded in creating their vision of a modern downtown.

Figure 39: Before and After of the Nickel Plate District

Source: Google

Figure 40: Developments in the Nickel Plate District

Top left: the first mixed-use development, top right: Fisher Police Station; bottom left: mixed-use development; bottom right: residential development.

In the late 2010's, the City embarked on another large-scale transformation project, creating a vibrant hub of entertainment and mixed-use activity; this time on the other side of the interstate on vacant farmland. Now dubbed "The Fishers District," the development includes lodging, residential spaces, many food stores and restaurants, and some commercial space. Primarily an entertainment hub, the area is a lively scene in the evenings and around mealtimes. Building on the success of the Fishers District, the city is planning for three new "neighborhoods" to be developed adjacent to the initial development; these new neighborhoods will include "upscale" residential spaces, an event center, new dining, lodging, and shopping. Given that this development was built on farmland, non-motorized connectivity to external areas (the Nickel Plate District, nearby neighborhoods, regional parks, etc.) remains poor. However, there is a comprehensive plan to expand pathways across the city.

Figure 41: The Fishers District

Top left: mixed-use building in the center of the site; top right: commercial building on exterior edge of the site; bottom left: public space with tables, games, and landscaping; bottom right: lodging

These developments in Fishers did not come to fruition without a few key things: 1) the available space for large-scale transformation, 2) city control over the land being developed, 3) a willingness to invest public money in the projects, and 4) willing private investors. While these projects are assets to the community, they come at a cost. According to Fishers' annual 2020 financial statement, the long-term debt obligations of the City totaled $339M, with annual obligations of around $31M, roughly a quarter of their total annual revenues. While these developments offer aspirational visions for what Novi could be, Novi lacks several of the key elements for making large-scale transformation projects like this possible; there are no large undeveloped pieces of land left, and the City has little public land available for development.

Case Study: Carmel, Indiana

Located to the north of Indianapolis is Carmel, Indiana. A city of just under 100,000 people, it shares many similarities with Fishers, Indiana; both are roughly the same size and very affluent suburbs of Indianapolis. Like Fishers, Carmel grew in the nationwide wave of suburbanization in the 1960s, spurred by the expansion of the freeway system around Indianapolis. Carmel, also like Fishers, was keen on developing a walkable mixed-use environment that would be a hub of commercial and entertainment but approached it differently than Fishers.

In 1996, an ambitious rails-to-trails project was completed. Spanning 25 miles in length, the Monon Trail connects central Indianapolis to the northern suburbs of Carmel, Sheridan, and Westfield. Touted as one of Indiana's top recreation assets, the trail is a vein of activity and life in northern metropolitan Indianapolis. Using the Monon Trail as a main artery, the City of Carmel developed off the trail, beginning with the Carmel City Center. The City Center was a $300M, one million square foot mixed-use project which included a 1,600-seat performing hall, as well as two theaters, a 500 seat, and 200 seat. Developed as a public/private partnership, the city's Redevelopment Commission leveraged TIF and bonds to help complete the project.

Further down the Monon Trail is the city's Arts and Design District which has space for small businesses, independent artists and creatives, and shopping, dining, and entertainment venues. Between the two anchors are mixed-use and residential buildings stretching along the Monon, creating this principal artery of activity and vibrancy. Unlike Fisher's, the Monon Trail creates a high degree of non-motorized access throughout all of the developments, leaving little need for a car. Along the Monon Trail are parklets, public amenities, and public art, fostering a sense of community and culture. Like Fishers, Carmel relies heavily on TIF and bonds to encourage private development. Despite the extensive use of TIF and bonds, both cities retain high bond ratings (AA or AAA) a result of their wealthy and thriving economies.

Figure 42: Monon Trail Developments in Carmel

Top left: Park along the Monon Trail; top right: mixed-use development along the trail (seen in the lower right of the photo), bottom left: townhomes along the trail (seen on the right of the photo); bottom right: mixed-use development in the Arts and Design District (Monon trail in the foreground).

OPTIONS FOR THE FUTURE

The next decade will likely bring transformative change within the central core area of the City. The retail environment is different post-COVID as noted by area developers and retail market trends. Other southeast Michigan malls are in flux. The Mall at Partridge Creek in Clinton Township and Fairlane Mall in Dearborn are struggling. Eastland Center in Harper Woods and Northland Center in Southfield have closed. Lakeside Mall in Sterling Heights is poised for redevelopment by a Florida developer.

Mall and strip suburban commercial retrofit is not a new concept. Many former malls and regional shopping centers have been redeveloped into vibrant, pedestrian-oriented, mixed-use districts. Some examples include, The Street at SouthGlenn in Centennial, CO, Mizner Park in Boca Raton, FL, Mashpee Commons, in Mashpee, MA, and North Hills in Raleigh, NC.

Novi's residential neighborhoods will still be sought after due to the City's high quality of municipal services, public safety, parks, and public/private schools. According to Niche.com, Novi High School is rated 3rd best out of 790 Michigan high schools.

Flexibility is the key to future redevelopment. To address the anticipated changes in the real estate market and provide the flexibility needed to create indoor/outdoor mixed-use developments, new land use designations are suggested. These designations involve the consolidation of the current similarly categorized groups into new categories that encourage horizontal and vertical mixed-use developments.

The future land use framework proposes five new categories: Town Center (TC), Commercial Mixed-Use (CMX), General Mixed-Use (GMU), Office, Service and Technology (OST), and Public/ Quasi Public. A description of each new land use group, their regulated land uses, and distinguishing characteristics can be found on the following pages. As such, these new land use groups entail both the removal and consolidation of other land use zones.

FUTURE LAND USE

Based on the review of existing conditions, prior master plans, and the master plan guiding principles, the Future Land Use Map (FLUM) was developed. Since the City is primarily built-out, the FLUM is somewhat predictable because it reflects the development patterns within the past four decades. Based on the Public Land Survey System, (PLSS) the road network is baked into the FLUM and reflects the "mile" arterial road network. The difference between the 2016 and 2025 Future Land Use is the reduction and reorganization of land use categories.

In the 2016 Master Plan Update, there were 22 land use categories, excluding special zoning designations (PUD, PD1, PD2, and PRO) and wetlands. The 2025 Master Plan for Land Use has seventeen categories, four of which include new mixed-use categories. The mixed-use categories are in response to market trends that favor a variety of uses, walkability, less surface parking, more significant building massing, and higher densities. Each future land use category is described in detail, noting its purpose, regulated uses, and built form.

The four mixed-use categories are primarily located in the central core between 12 Mile Road on the north and either side of Grand River Avenue and along the west side of the M-5 corridor. All strive to create integrated, walkable environments with a unique mix of uses depending on the central theme of the district. Further, their centralized location leverages the investment in the Novi's street network and the regional interstate system.

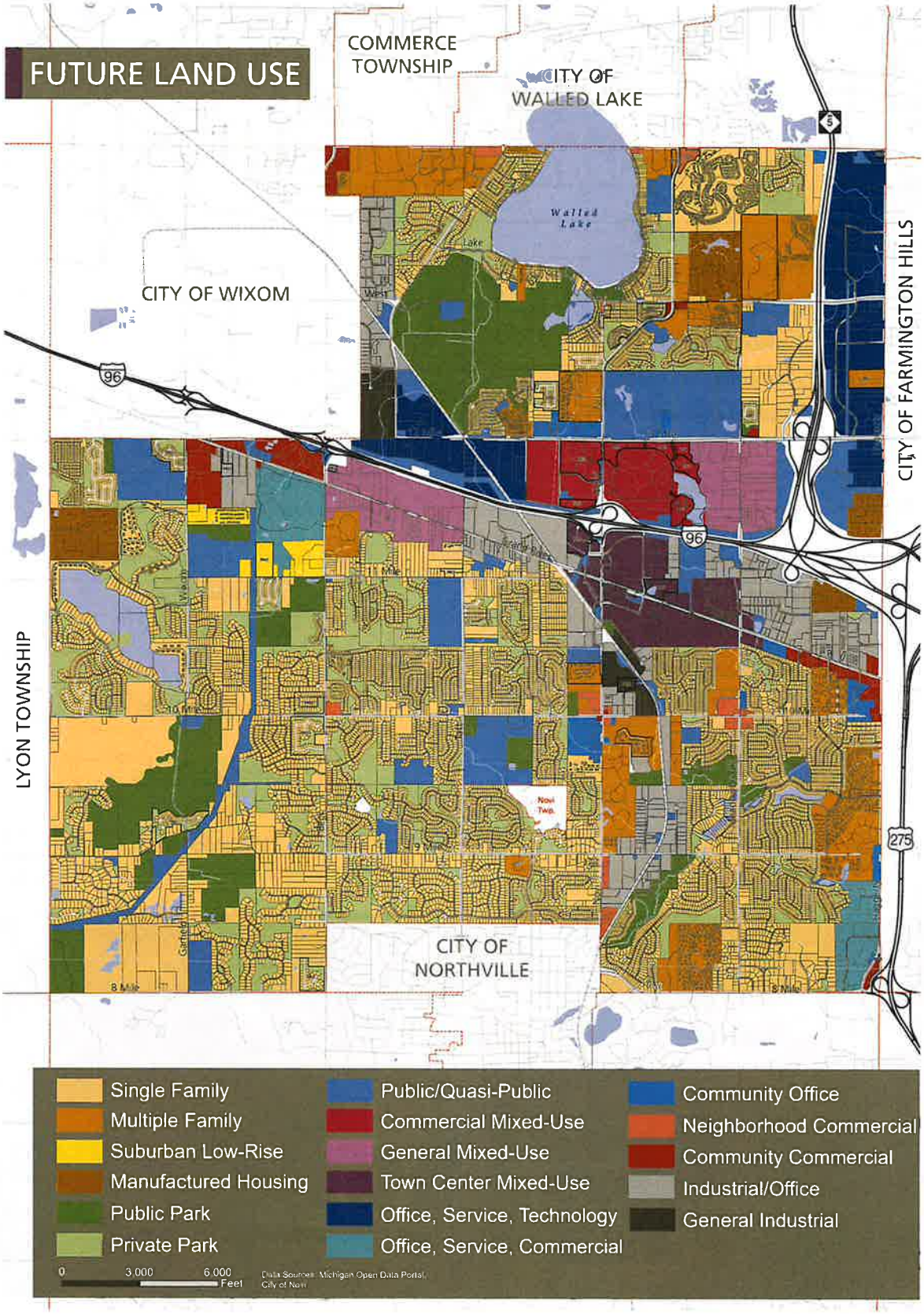
The transportation section of the plan highlights proposed improvements to the overall network to balance anticipated demand with available and future capacity improvements. The City's Active Mobility Plan contemplates the extent and location of nonmotorized routes through the community and their connectivity with public and private activity centers. The transportation system, Active Mobility Plan, and FLUM are collectively layered together to address the City's land and transportation needs.

Table 20: Future Land Use Category Revisions

2016 Future Land Use Categories	2025 Future Land Use Categories
Single Family	Single Family
RUD/PD1/PD2/PRO	
Multiple Family	Multiple Family
Manufactured Home	Manufactured Home
Suburban Low-Rise	Suburban Low-Rise
Community Office	Community Office
Office Commercial	Office, Service, Commercial
Local Commercial	Neighborhood Commercial
Pavilion Shore Village	
Community Commercial	Community Commercial
Regional Commercial	Commercial Mixed-Use
City West	General Mixed Use
TC Commercial	Town Center Mixed-Use
TC Gateway	
Office Research Development Technology	Office, Service, Technology Mixed-Use
Industrial Research Development Technology	Industrial/Office
Heavy Industrial	General Industrial
Educational Facility	Public/Quasi Public
Public	
Utility	
Public Park	Public/Quasi Public
Private Park	Private Park
22 Categories	17 Categories

Residential Neighborhood

Map 22: Future Land Use



Other central themes of the FLUM illustrate that moderate-density multiple-family developments are located in the eastern half of the city north of 12 Mile Road and south of Grand River Avenue. The city's southwest quadrant, principally south of 11 Mile and west of Taft Road, is primarily single-family subdivisions.

Table 20 notes that single-family residential constitutes one-third of the city's land area, followed by rights-of-way at 15% and 15% of is open space formed by a combination of public and private parks decentralized throughout Novi.

Lastly, the four proposed mixed-use districts consist of 2,231 acres or 11% of the city. Three of these districts, the commercial mixed-use, Town Center mixed-use, and general mixed-use districts will provide opportunities for additional residential development in the city.

Table 21: Future Land Use Tabulations

Land Use Category	Acres	Percent
Single Family	6,585	32.9%
Multiple Family	1,402	7.0%
Manufactured Home	322	1.6%
Public Parks	1,444	7.2%
Public/Quasi Public	1,362	6.8%
Private Parks	1,573	7.9%
Office Service Commercial	301	1.5%
Neighborhood Commercial	92	0.5%
Community Commercial	237	1.2%
Community Office	151	0.8%
Suburban Low Rise	111	0.6%
Industrial/Office	988	4.9%
General Industrial	143	0.7%
Commercial Mixed-Use	387	1.9%
Town Center Mixed-Use	428	2.1%
General Mixed-Use	510	2.5%
Office, Service, Technology Mixed-Use	906	4.5%
Rights-of-Way	3,085	15.4%
TOTAL	**20,027**	**100.0%**

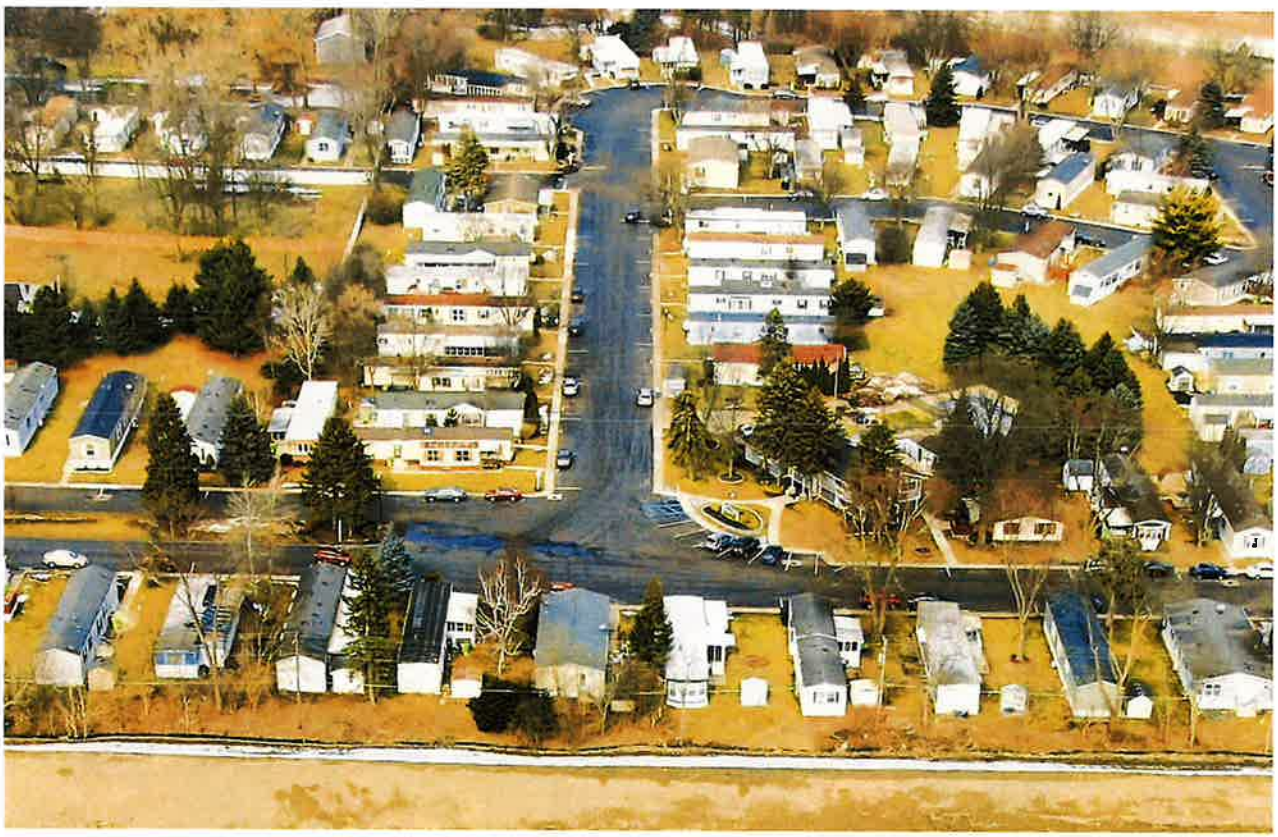
SINGLE FAMILY		
Purpose	The Single Family land use category reflects existing and future areas that accommodate single family detached, single family attached, and two-family residential properties. Densities are relatively low.	
Regulated Uses	**Non-Residential** » Group day care homes » Family day care homes » Golf Courses » Private noncommercial recreation areas » Home Occupations	**Residential** » Single Family (detached and attached) » Two Family (attached) » Accessory Dwelling Units (ADU's)
Built Form	Primarily individual detached dwellings ranging in lot size from 7,500 square feet to 1 acre. Typically arranged in planned developments with access to a local collector or arterial streets. Interior streets have reasonable widths which promote slower traffic speeds with parallel sidewalks. In some instances, adjacent developments are connected to larger residential neighborhoods.	

Example: Single Family Subdivision

MULTIPLE FAMILY		
Purpose	The Multiple Family land use category provides opportunities for mid- to high-density residential developments mainly consisting of low-rise and high-rise apartments. These developments are typically located near office and commercial districts along major arterials and function as a transition between single family residential districts and commercial areas.	
Regulated Uses	**Non-Residential** » Convalescent homes » Hospice Centers » Child and Family Care Facilities » Independent and Congregate Care Facilities » Home Occupations	**Residential** » Multiple-family dwellings » Single Family » Two Family
Built Form	Residential developments that exceed single family residential densities. Multiple-family developments can range in size between 2-stories to 5-stories depending on the zoning district. Developments include on-site parking and some outdoor amenities.	

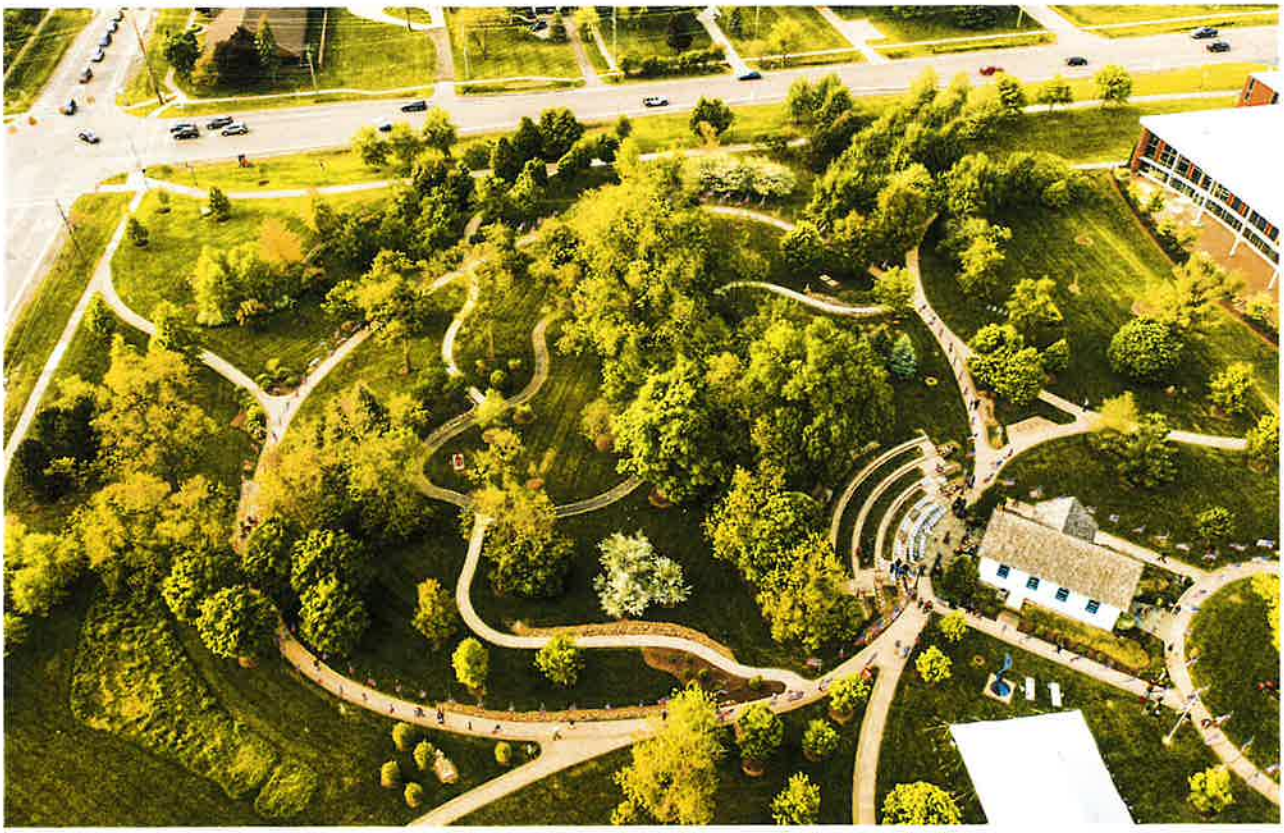
Example: Multiple Family Development

MANUFACTURED HOME		
Purpose	This land use is designated for housing within a manufactured housing community, created according to the regulations in the Manufactured Home Commission Act. Housing in these areas is manufactured in a factory, brought to the site, and in most cases placed on property leased from a park operator.	
Regulated Uses	**Non-Residential** » Farms and Greenhouses » Cemeteries	**Residential** » Single Family » Mobile Homes » Manufactured Housing Units » Mobile Home Condominium
Built Form	Mobile homes and manufactured housing are typically located in planned parks. These parks usually include private roads and project amenities including, but not limited to community rooms, health facilities, pool, and outdoor playgrounds. These projects are usually under one ownership and managed by a property management firm.	



Example:Manufactured Housing Development on Seeley Road

PUBLIC PARK		
Purpose	The Public Park land use category designates properties that are under the ownership of the City of Novi and used for park and recreation facilities and activities, open space, and preservation of natural and sensitive landscapes.	
Regulated Uses	**Non-Residential** » Parks » Recreation Activities (Indoor and Outdoor) » Open Spaces » Natural and Sensitive Areas » Nonmotorized facilities	**Residential** » None
Built Form	Depending on the specific park, the character can range from active outdoor recreation (Bosco Fields), natural areas (Rotary Park), to nonmotorized trails (Lakeshore Park).	



Example: City of Novi Fuerst Park

PUBLIC/QUASI PUBLIC		
Purpose	The Public/Quasi Public land use category includes non-park facilities and properties under the ownership of public municipalities, non-profits, utility companies, public and private schools, and religious institutions.	
Regulated Uses	**Non-Residential** » Government Offices » Schools (Public, Charter, and Parochial) » Essential Services » Utility Substations and Support Facilities » Cemeteries » Infrastructure Support Buildings and Yards	**Residential** » None
Built Form	Public and Quasi Public facilities represent a broad spectrum of land and building types. For example, Novi City Hall is a large governmental building accessible to the public for business, legislative, and cultural uses. Likewise, public and private cemeteries are characterized by their low scale and open spaces. Utility companies that provide water, sewer, gas, electric, and broadband facilities have both subsurface facilities, and above ground facilities, such as, towers, utilities buildings, substations, and accessory uses.	

Example: Novi Public School Campus

PRIVATE PARK		
Purpose	The Private Park land use category designates land within residential subdivisions and housing developments that provide private open space and/or recreational amenities to their residents. The properties are maintained and operated by the homeowner association (HOA) or property management group and add to the overall open space of the community.	
Regulated Uses	**Non-Residential** » Park and Open Space » Recreation Facilities	**Residential** » None
Built Form	Open space within a residential subdivision housing development. Some of these areas include forested areas, wetlands, and ponds that are used for stormwater management.	

Example: Private Neighborhood Park

OFFICE SERVICE COMMERCIAL		
Purpose	The Office Service Commercial (OSC) land use category, is designed and intended to accommodate a large office building or a planned complex of office buildings with related commercial retail and service establishments which may serve the area beyond the confines of the office complex itself.	
Regulated Uses	**Non-Residential** » Professional Office Buildings » Medical office, including laboratories and clinics » Financial Institutions » Personal Service Institutions » Places of Worship » Restaurants (sit down) » Amusement and Entertainment Use	**Residential** » None
Built Form	Office buildings of greater height and more intense land use activity in an otherwise low-density community. Because of the greater building height, intensity of land use, and associated higher volumes of vehicular and pedestrian traffic, it is further intended that this district be located only in proximity to areas of major commercial or civic development and have direct access to freeway or major thoroughfares.	

Example: Hino Motor USA on Twelve Mile Road

NEIGHBORHOOD COMMERCIAL		
Purpose	The neighborhood commercial land use category focuses on providing a handful of retail and service businesses that serve adjacent neighborhoods.	
Regulated Uses	**Non-Residential** » Retail businesses » Professional and Service Businesses » Instructional Centers » Coffee Shop/Bakeries » Restaurants (Sit-Down)	**Residential** » None
Built Form	Small-scale buildings that are typically compatible with the adjacent neighborhoods where they are located. Businesses serve both pedestrian and vehicular customers. Building scale is usually limited to 1-story, however, on occasion there may be a 2-story building. Parking is typically off-street, however, in certain circumstances where on-street parking is available that should be encouraged.	

Example: Novi Road and Grand River Avenue Commercial District

COMMUNITY COMMERCIAL		
Purpose	The community commercial land use category is designed to cater to the needs of a larger consumer population, and is generally characterized by an integrated or planned cluster of establishments served by a common parking area, generating greater volumes of vehicular and pedestrian traffic, and located at the intersection of two thoroughfares (Major Arterial or Minor Arterial).	
Regulated Uses	**Non-Residential** » Retail businesses » Professional and Service Businesses » Restaurants/ Microbreweries » Personal Service-related Businesses » Medical Offices » Hotels and Motels » Car Dealership » Fueling Station, Oil Change, Car Wash	**Residential** » None
Built Form	Buildings may be grouped into shopping centers with centralized parking lots, or the business can be developed on a single parcel. Primarily vehicular-oriented, these uses are typically located along streets with high traffic counts, such as major arterials. Building height is typically 1-story with some architectural fenestration that make the buildings look taller.	

Example: Grand River Avenue and Grandview Lane

COMMUNITY OFFICE		
Purpose	The community office category is to cater to small office buildings that are occupied by a variety of tenants, such as accountants, attorneys, physicians, dentists, and insurance agents. This type of land use is located along major thoroughfares and in some instances they abut residential areas. Example locations include 12 Mile Road west of Novi Road, Novi Road near 10 Mile Road, and along Haggerty Road near 9 Mile Road.	
Regulated Uses	**Non-Residential** » Professional and Service Businesses » Personal Businesses » Places of Worship » Financial Institutions	**Residential** » None
Built Form	Multi-tenant buildings located on a separate parcel with access to a major thoroughfare. Low scale (1-3 stories) with off-street landscaped parking lots. Typically adjacent to a commercial zoning district.	

Example: Community Office District along West Twelve Mile Road

SUBURBAN LOW RISE		
Purpose	The suburban low rise land use category is a transitional land use utilizing low scale commercial and offices mixed with residential land use to buffer more traditional adjacent residential districts.	
Regulated Uses	**Non-Residential** » Retail Businesses » Professional and Service Businesses » Schools	**Residential** » Single Family Attached » Multiple Family
Built Form	Buildings can be located on a campus-like setting and are between 1 to 3 stories in height. Examples include the Everbrook Academy of Novi, Rose Senior Living at Providence Park, and the Villas at Stonebrook.	

Example:Rose Senior Living Providence Park

LIGHT INDUSTRIAL/OFFICE		
Purpose	This Industrial land use category designates property that is, or will be, used for research or light industrial uses including warehousing and wholesale activities. Industrial activities, such as processing, packaging, assembly, or treatment of finished or semi-finished products are found within this category.	
Regulated Uses	Non-Residential » Research and Development » Warehousing and Wholesale Establishments » Manufacturing » Laboratories » Data and Information Processing Centers » Medical Offices	Residential » None
Built Form	Buildings are typically single-site developments with support facilities, such as loading and unloading areas and docks. Often located along the CSX Rail corridor with access to major arterials and the Interstate. Buildings vary in size with maximum heights regulated to 40 feet.	

Example:Orotex Corporation located on Venture Court

GENERAL INDUSTRIAL		
Purpose	This Industrial land use category designates property that is used for manufacturing, assembly, and fabrication operations. These facilities are normally not located near or adjacent to residential properties due to the noise, odors, hours of operation, and truck traffic.	
Regulated Uses	**Non-Residential** » Outdoor Storage » Junkyards » Lumber and Planing Mills » Manufacturing Operations » Metal Plating, Buffing and Polishing » Self-Storage Facilities » Central Dry Cleaning Plants » Tool & Die Plants » Concrete Facilities	**Residential** » None
Built Form	Sites and buildings tend to be large. Normally located near major arterials or rail lines.	

Example: Morrison Industries 46480 Magellan Drive

COMMERCIAL MIXED USE (CMX)		
Purpose	The CMX land use category allows for a combination of commercial, office, lodging, and residential within an integrated development. Parks, plazas, and pedestrian areas are encouraged to provide a high degree of connectivity between uses. These areas would be primarily commercial/retail in nature with ancillary uses that create opportunities for shopping, dining, living, and playing. Properties within this designated land use category can also utilize the PUD option as a development tool to provide a variety of uses within an approved master plan development.	
Regulated Uses	**Non-Residential** » Retail; General, Regional and National » Restaurants; Dine-in with Outdoor Seating » Professional Offices & Hotels » Open Space and Plazas » Parking Structures	**Residential** » Upper Story Apartments and Lofts » Attached Single Family » Multiple Family
Built Form	Dense, pedestrian-dependent, mixed use development accessible from an Interstate or major thoroughfare. Preference to utilize land for buildings instead of surface parking lots. Allowance for higher buildings with a limitation of 6-8 stories. Outdoor retail and dining connected with plazas and outdoor gathering spaces. On-street and deck parking facilities.	

Example:Fountain Walk

TOWN CENTER MIXED USE (TC)		
Purpose	The Town Center Mixed Use category is designed and intended to promote the development of a pedestrian oriented, neighborhood-scaled, commercial service district in which a variety of retail, commercial, office, civic, residential uses, and open space are permitted. Based on existing development patterns, pedestrian circulation is internal within the respective properties. Properties within this designated land use category can also utilize the PUD option as a development tool to provide a variety of uses within an approved master plan development.	
Regulated Uses	**Non-Residential** » Retail; General » Restaurants; Dine-in with Outdoor Seating » Professional Offices & Hotels » Public and Quasi Public » Parks, Plazas and Open Space	**Residential** » Upper Story Apartments and Lofts » Attached Single Family » Multiple Family
Built Form	Retail, workplace, and civic activities mixed with attached housing types such as lofts and apartments all developed at a community scale. Commercial and office uses are allowed on the first floor and upper stories of the structure. Designed to increase walkability and create an intimate urban space where pedestrian traffic is favorable to vehicular traffic. Traditional building materials with a building height of 1-story to 3 stories.	

Example: Novi Town Center Area

GENERAL MIXED USE (GMX)		
Purpose	The GMX land use category provides the highest flexibility of the categories. It recognizes that certain properties will be developed based on prevailing market trends utilizing a site-specific master plan to guide development, reserving certain portions of the subject property for different land use typologies. Properties within this designated land use category can also utilize the PUD option as a development tool to provide a variety of uses within an approved master plan development.	
Regulated Uses	**Non-Residential** » Retail; General » Exhibition and Conference Facilities » Research and Development » Scientific and Technical Services » Healthcare Facilities » Professional Offices » Restaurants » Open Space and Plazas	**Residential** » Attached Single Family » Multiple Family » Upper Story Apartments and Lofts
Built Form	Unique properties that may have environmental limitations (wetlands, brownfields, etc.) Development is focused on maximizing the site while creating a unique and integrated development. Pedestrian walkability and connectivity would be desirable. Building height could vary between 2 to 5 stories.	

Example: Mashpee Commons, Mashpee, MA

OFFICE, SERVICE, TECHNOLOGY MIXED USE (OST)		
Purpose	The OST land use classification positions the City to accommodate existing office, research and development enterprises, and forecasted growth and emerging market sectors. Properties within this designated land use category can also utilize the PUD option as a development tool to provide a variety of uses within an approved master plan development.	
Regulated Uses	**Non-Residential** » Professional Offices » Research and Development » Scientific and Technical Services » Healthcare » Information Technology » Automotive-related Research » Light Industrial Without Assembly » E-commerce Distribution » Pharmaceutical Research	**Residential** » None (including with PUD Optional Development Tool)
Built Form	Primarily office environments dedicated to research, development, and technology businesses. Low-rise to mid-rise buildings typically established in a campus-like setting with outdoor spaces and walkways. Building heights 1-story to 3 stories.	

Example: PT Solutions and Berkshire eSupply West 14 Mile Road

ZONING PLAN

The purpose of a zoning plan is to take note of areas where the Future Land Use Plan and Zoning Ordinance are not sufficiently calibrated so that appropriate changes can be made to align the two. In Novi, there is significant alignment between the FLUM and the zoning districts. There are several zoning amendments recommended. Table 20 shows the linkage between the future land use categories and the corresponding zoning districts, and what zoning ordinance revisions will be required to advance the implementation of the FLUM.

Recommended Zoning Amendments

1. Consider Allowing Accessory Dwelling Units in Appropriate Areas.

Accessory dwelling units (ADU's) are residential units that can be a detached dwelling unit on the same lot as the primary or an attached dwelling unit to the primary dwelling. The purpose of an ADU is to provide a smaller dwelling footprint that can be used to supplement housing demand providing housing for a family member (e.g., granny flat, on-site caregiver, family member) or non-family member.

2. Planned Unit Development (Mixed-Use Developments)

Create a planned unit development (PUD) provision that would accommodate the four transformational mixed-use districts: Commercial Mixed-Use, General Mixed-Use, Town Center Mixed-Use, and Office, Service, Technology Mixed-Use (refer to Map 23). The PUD would be an overlay provision and not a traditional zoning district. The purpose and intent are to allow, with city approval, innovative and transformative development of properties within the designated land use categories based on the vision described in the Master Plan. Land uses allowed within the respective PUD would be based on the underlying zoning districts and those listed in the land use descriptions. Advantages of the PUD overlay are variations in dimensional and bulk requirements, site development standards (i.e. parking, landscaping, lighting, etc.), and the ability to mix land uses into an integrated, master planned development based on market conditions.

3. Planned Unit Development (General)

Amend the Zoning Ordinance to allow for a general planned unit development on properties 10 acres or more in size anywhere within the City. The type and intensity of the PUD would be based on the FLUM and the guiding principles of the Master Plan.

4. Lighting/Photometrics

Review current standards to make sure they align with LED lighting photometrics. Incorporate lighting recommendations from the 2023 Active Mobility Plan related to pedestrian crossings and intersections.

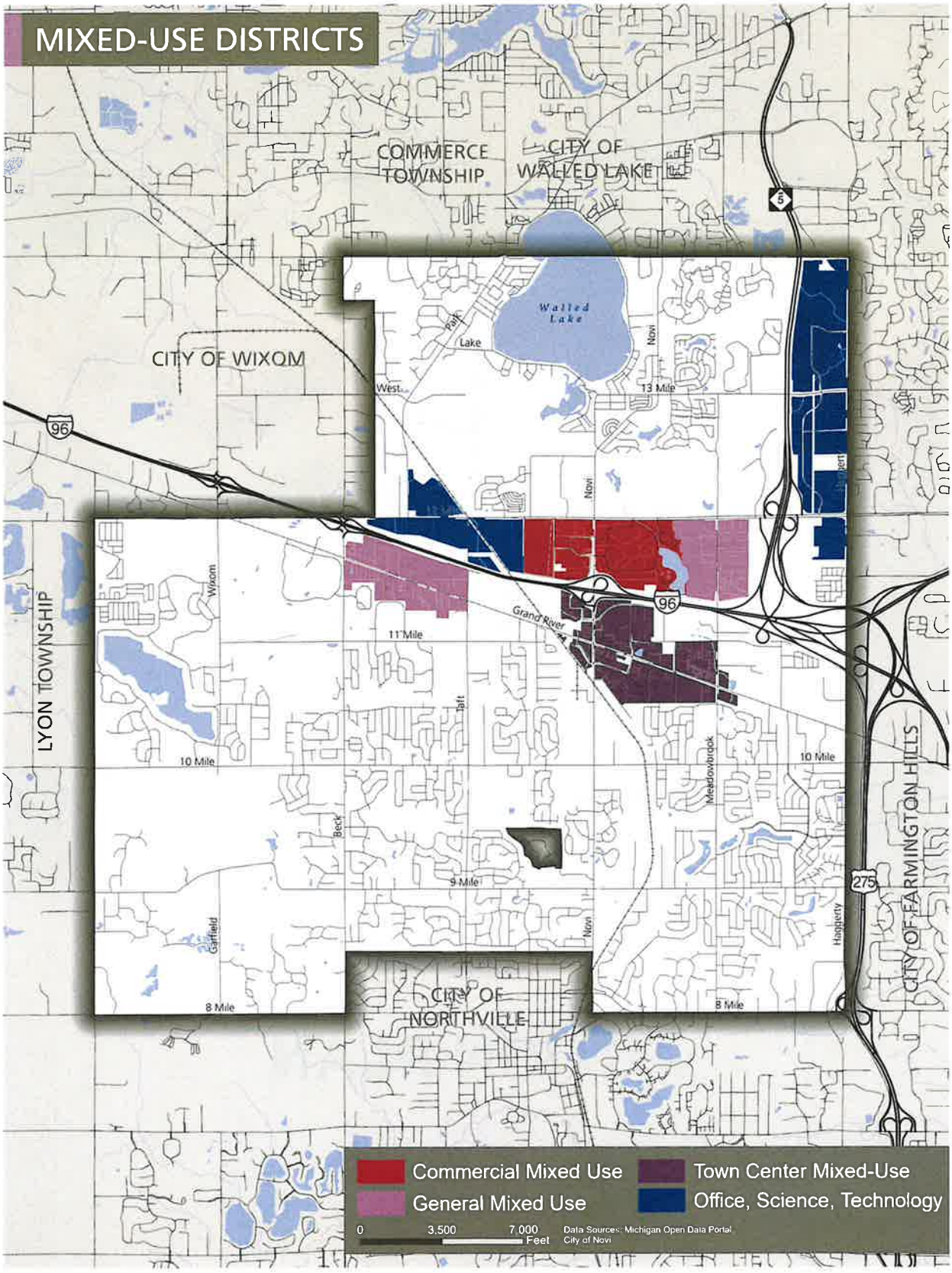
Table 22: Zoning Plan

Future Land Use Category	Applicable Zoning District(s)	Description of Revisions
Single Family	R-A: Residential Acreage R-1: One-Family Residential R-2: One-Family Residential R-3:One-Family Residential R-4: One-Family Residential RT: Two-Family Residential	Possible inclusion of Accessory Dwelling Units (ADU's)
Multiple Family	RM-1: Low Density, Low-Rise RM-2: High Density, Mid-Rise	No revisions
Manufacture Home	MH: Mobile Home Park	No revisions
Public Park	Most Zoning Districts	No revisions

Table 22: Zoning Plan (continued)

Future Land Use Category	Applicable Zoning District(s)	Description of Revisions
Public/Quasi Public	Most Zoning Districts	No revisions
Private Park	R-A: Residential Acreage R-1: One-Family Residential R-2 One-Family Residential R-3 One-Family Residential R-4: One-Family Residential RT: Two-Family Residential RM-1: Low Density, Low-Rise RM-2: High Density, Mid-Rise	No revisions
Office Service Commercial	OSC: Office Service Commercial	No revisions
Neighborhood Commercial	B-1: Local Business	No revisions
Community Commercial	B-2: Community Business	No revisions
General Business	B-3: General Business	No revisions
Community Office	OS-1: Office Service	No revisions
Suburban Low Rise	PSLR: Planned Suburban Low Rise	No revisions
Industrial Light	I-1: Light Industrial	No revisions
Industrial Heavy	I-2: General Industrial	No revisions
Commercial Mixed Use	RC: Regional Center C: Conference RM-1: Low Density; Low Rise PD-1: Planned Development PD-2: Planned Development	Amendment to include a Planned Unit Development Overlay Option
General Mixed-Use	OST: Office Service Technology EXO: Exposition Overlay I-1: Light Industrial B-3: General Business RA: Residential Acreage OS-1: Office Service FSL: Freeway Service City West	
Town Center Mixed-Use	TC: Town Center TC-1: Town Center-1 OSC: Office Service Commercial B-3: General Business NCC: Non-Center Commercial GE: Gateway East RM-1: Low Density, Low Rise RM-2: High Density, Mid Rise P-1: Vehicular Parking	
Office, Service, Technology Mixed-Use	OST: Office, Service, Technology I-1: Light Industrial B-3: General Business RM-2: High Density, Mid Rise MH: Mobile Home Park	

Map 23: Transformational Mixed-Use Districts



11

ACTION PLAN

NOVI MASTER PLAN FOR LAND USE GUIDING PRINCIPLES

Guiding principles are not goals and objectives. Goals define a desired outcome, while objectives are measurable actions used to achieve the goal. Guiding principles are synonymous with the community's aspirations and core values. Guiding principles are used to help with decision-making and developing strategies. They are formed after listening and participating in a process, in this case, the preparation of the community master plan.

The guiding principles associated with the **Master Plan for Land Use** included the following:

Novi is a community that builds on its assets.

The community survey conducted as an initial component of the master plan process revealed that residents consider Novi a safe community to live in with an appreciation for its diversity and sense of community. When asked, "What do you like about Novi?" the four top responses included the school district, recreation options, diverse community, and quality of municipal services. These assets are foundational for a community sought after as a place to reside and attract business.

A community that celebrates the diversity of its residents.

The diversity of Novi's residents is recognized as a community asset. Since 1970, the city has grown from 9,668 residents to 66,243 in 2020, and part of this growth was due to residents of Asian origin choosing Novi as their home. Today, this population segment accounts for 27% of Novi residents. Jane Jacobs (1969) in the "Economy of Cities," Richard Florida (2002) in the "Rise of the Creative Class," and Bassett-Jones (2005) in "Creativity and Management" recognize that diverse populations create what is known as the "Diversity Dividend." This dividend manifests in the skills, knowledge, and labor that a diverse population adds to the local economy, an underlying fabric of world-class cities.

A city that demands quality real estate development.

Since its inception as a community, Novi has recognized the importance of quality real estate development in the City's long-term development. Local codes, ordinances, and design guidelines have been instrumental in directing growth and ensuring that it is done correctly with an eye toward quality. This attention to detail (building, landscaping, stormwater management, wetland and woodland preservation, and other site amenities) creates a unique sense of place that adds to the value of the development properties and perpetually attracts residents and businesses to the community.

A place where the built and natural environment coexists for the benefit of its residents.

The city has over 1,400 acres of public park and recreational facilities, with access to an additional 427 acres owned by public/private schools and used by Michigan State University. Complementing public open spaces are the vast number of private open areas and parks that are accessible to residents within their respective subdivisions and residential developments. This network of public and private open spaces and parks allows the built and natural environment to coexist.

A city that embraces the transformation of its existing commercial activity centers.

The community survey and the master plan open houses offered insight into resident preferences toward commercial activity centers. Overall, residents recognized that the changing retail landscape would likely induce a transformation of existing commercial developments. In both the survey and open houses, residents preferred commercial districts that included a mix of commercial and residential uses, with higher densities in a pedestrian-scale atmosphere.

A community that promotes welfare, health, and safety for its residents.

The City of Novi Police Department is accredited through the Commission on Accreditation for Law Enforcement Agencies (CALEA®), and the Parks, Recreation, and Cultural Services Department is nationally accredited. Similarly, through its 2022-2027 Strategic Plan, the Novi Fire Department is seeking accreditation for its service. These three departments play a significant role in promoting the welfare, health, and safety of Novi's residents. The Parks, Recreation, and Cultural Services Department engages more than 140,000 users annually, and its Older Adult Services Division provides focused recreation, fitness, and wellness activities for "Baby Boomers" and the "Silent Generation."

A community that strives to connect neighborhoods and activity centers with nonmotorized access.

The 1999, 2011, and 2023 Non-motorized Plans all strive to increase the number and length of non-motorized facilities in the city. As noted in the 2022 Non-motorized Update, the City has built approximately 20 miles of non-motorized network, not including those made within private developments. The 2023 Active Mobility Plan will propose additional non-motorized facilities throughout the community, focusing on connecting neighborhoods to activity centers, recreational facilities, and regional networks.

A city that uses fiscal resources wisely to advance the community master plan and associated capital improvements program.

The 1993, 1999, 2016, and 2025 Master Plan for Land Use all integrate land use planning with transportation planning. Prior master plans proposed new street connections, which entered the City's Capital Improvement Program (CIP). The implementation resulted in new development opportunities that consistently advanced planning efforts. The City's CIP is pervasive and enumerates by fiscal year the type, location, amount, and funding sources for various projects that benefit the community and advance the community master plan.

2016 GOALS

Quality and variety of housing. The City of Novi is known for its high-quality residential neighborhoods. It should strive to ensure the availability of a wide range of attractive housing choices protected from noise, traffic, and other impacts of non-residential development. Encourage the development of neighborhood open space and neighborhood commercial goods and services to minimize motorized travel.

Community identity. The City's identity is primarily based on its high-quality residential neighborhoods and schools, destination retail and convention space, and parks. The City should supplement that identity by enhancing the preservation of its historic resources and expanding its cultural opportunities. New development of land should continue to be of high-quality design and materials.

Environmental stewardship. The City of Novi is significantly enhanced by preserving natural resources in residential and non-residential areas. Maintain public and private stewardship of the natural environment by conserving open space, protecting woodlands and wetlands, and utilizing low-impact development techniques.

Infrastructure. Invest wisely in the ongoing maintenance and improvements to existing infrastructure, including utilities and the transportation network. Ensure that new development minimizes the demands placed on the City's existing infrastructure. Support the City's entire transportation network by developing and enhancing non-motorized transportation facilities and amenities.

Economic development. The City's developed land, infrastructure, and natural resources are interconnected and collectively impact the daily lives of the City's residents and business owners. The City should strive to balance the economy, the environment, and the community to ensure sustainable development that meets the needs of today while ensuring the needs of future generations can be met.

ACTION PLAN

As noted at the beginning of this section, there are three components for implementation: **guiding principals, goals**, and **actions.** Guiding principles are related to the community's aspirations and core values while goals define a desired outcome. This trilogy's last component are the actions which are used to achieve the goals.

The goals outlined in the Action Plan are those listed in the 2016 Plan for Future Land Use. Some actions contained in the 2016 document have migrated into this Action Plan if they were deemed relevant and still need to be accomplished. These 2016 actions are highlighted. Other new actions that advance the initiatives outlined in the 2025 Plan for Land Use are incorporated. Adjacent to each action is the primary responsible entity that will serve as a lead to promote its completion.

Actions should be used administratively to guide department work plans and serve as a guide for the annual Planning Commission work program pursuant to MCL 125.3819 (2).

Table 23: Action Plan

GOAL A	**Quality and variety of housing.** The City of Novi is known for its high-quality residential neighborhoods. It should strive to ensure the availability of a wide range of attractive housing choices protected from noise, traffic, and other impacts of non-residential development. Encourage the development of neighborhood open space and neighborhood commercial goods and services to minimize motorized travel.	
A1	Continue to rezone properties in the southwest quadrant for low-density development consistent with the recommended density on the Future Land Map to protect natural features and open space.	Planning Commission City Council
A2	Implement a general Planned Unit Development (PUD) land development option that encourages a variety of "missing middle" housing typologies in the same development site and mixed-use developments.	Planning Commission City Council
A3	Continue to invest federal Community Development Block Grant (CDBG) funds in target neighborhoods for housing rehabilitation.	Community Development
A4	Evaluate the zoning ordinance for small lot housing development around Walled Lake to reduce nonconformities and allow for context-sensitive design.	Planning Commission
A5	Amend the zoning ordinance to encourage "age-in-place" housing types, considering experts' recommendations, to include affordable options such as low-maintenance detached single-family homes, attached single-family homes, and townhouses.	Planning Commission City Council
A6	Explore opportunities to increase housing density in the proposed mixed-use planned unit development area to create "walkable density" environments.	Planning Commission City Council
A7	Continue to coordinate planning efforts with the Parks & Recreation Department to ensure convenient non-motorized access to neighborhood parks and natural areas.	Planning Staff
A8	Consider ordinance changes to permit attached accessory dwelling units in limited, appropriate areas with appropriate restrictions.	Planning Commission City Council

Table 23: Action Plan (continued)

GOAL B	**Community identity.** The City's identity is largely based on its high-quality residential neighborhoods and schools, destination retail and convention space, and its parks. The City should supplement that identity by enhancing the preservation of its historic resources and expanding its cultural opportunities. New development of land should continue to be of high-quality design and materials.	
B1	Encourage the use of high quality right-of-way plantings, site landscaping, and building materials to enhance the appearance of the community.	Planning Commission
B2	As development and redevelopment occur, incentivize the use of LEED-certified buildings, water resources, and energy-efficient best practices, and green infrastructure techniques through zoning and permit bonuses.	Planning Commission City Council
B3	Encourage the Corridor Improvement Authority (CIA) to work in collaboration with the Planning Commission to improve the design standards and character of Grand River Avenue.	Corridor Improvement Authority (CIA)
B4	Evaluate the Zoning Ordinance landscaping requirements to ensure that large parking lots increase the percentage of plantings to reduce heat island effects, especially in areas noted on the Surface Temperature map.	Planning Commission
GOAL C	**Environmental stewardship.** The City of Novi is significantly enhanced by the preservation of natural resources in both residential and non-residential areas. Maintain public and private stewardship of the natural environment using low-impact development techniques.	
C1	Evaluate code and ordinances to ensure provision are incorporated to reduce runoff volume and improve water quality by replicating the site's natural hydrology and water balance.	Planning Commission & Engineering
C2	Review the off-street parking requirements to determine appropriate changes and possible parking reductions and/or parking maximums for residential, business, and commercial parking requirements.	Planning Commission
C3	Utilize a general Planned Unit Development ordinance provision to encourage the preservation of natural features, such as woodlands, wetlands, and wildlife habitats.	Planning Commission & Developers
C4	Implement the Active Mobility Plan's Near-Term Network recommendations to create continuous walking and biking networks to reach key desinations. Three primary components include: Neighborhood Greenway Network, Connection to Transit, and Improved Access to Shopping and Dining.	Planning Commission
C5	Implement recommendations in the Active Mobility Plan with a focus on reducing vehicle miles traveled (VMT) and providing residents with alternative modes of transportation.	Planning & Engineering
C6	Implement the Active Mobility Plan's vision for a Regional Trail Network by working with neighboring communities and seeking funding opportunities to create a connected 30-mile loop through Novi and through surrounding communities.	City Parks & Recreation

Table 23: Action Plan (continued)

GOAL D	**Infrastructure.** Invest wisely in the ongoing maintenance and improvements to existing infrastructure, including utilities and the transportation network. Ensure that new development appropriately relates to the City's existing and planned infrastructure. Support the City's entire transportation network through the development and enhancement of non-motorized transportation facilities and amenities.	
D1	Continue with the annual 6-year Capital Improvement Program that identifies infrastructure needs for the City.	City Administration
D2	Conduct a 5-year review of the Volume to Capacity ratio performance to determine city network modifications and identify potential projects and the impact of the Active Mobility Plan.	City Engineering
D3	Provide and maintain adequate water and sewer service for the City's needs with a careful review of infrastructure capabilities when considering a rezoning for higher-density developments.	City Engineering
D4	Apply the Active Mobility Plan's Long-Term Network recommendations to public and private development projects to continue to enhance safety and connectivity of the non-motorized network.	Engineering & Planning
D5	Continue to encourage retrofitted existing developments and destinations to provide bicycle and pedestrian access and bicycle parking.	Planning
D6	Apply best practices from the AMP to Major Corridors to enhance safety and promote bicycle and pedestrian mobility when a road is undergoing reconstruction or widening to promote complete streets.	City
D7	Implement the recommendations of the Active Mobility Plan.	City
GOAL E	**Economic development.** The City's developed land, infrastructure, and natural resources are interconnected and collectively impact the daily lives of the City's residents and business owners. The City should strive to maintain the balance between the economy, the environment, and the community to ensure sustainable development that meets the needs of today while ensuring that the needs of future generations can be met.	
E1	Implementing the PUD mixed-use districts to assist with transforming existing retail centers and remaining undeveloped properties.	Planning Commission
E2	Review standards for development in business/office/research/industrial parks, amend as necessary to ensure that these developments maintain high standards for design, landscaping, and buffering.	Planning Commission
E3	Evaluate the applicability of using Federal and State programs to provide opportunities for affordable housing, such as Michigan's housing tax increment financing, and residential housing districts.	Planning Commission
E4	Use the Corridor Improvement Authority to implement the Grand River Master Plan Corridor Concept.	CIA
E5	Focus recruitment efforts on scientific, research and development industries, architectural, engineering and related services.	Economic Development
E6	To ensure timely and certain completion of desirable projects that meet ordinance requirements, consider granting administrative approval for OST development as an incentive.	Planning Commission

APPENDIX