

## **BOOK 3** *of* **4**

# SYSTEMS DEVELOPMENT

How do we get there?



# Acknowledgments

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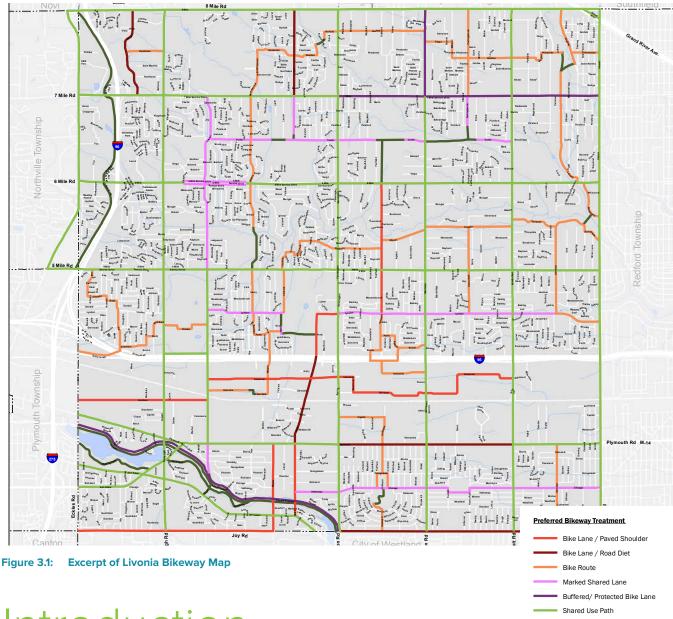
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## Introduction

The **Systems Development Book** presents conditions and strategies for growing and maintaining the City's key infrastructure systems. The Future Transportation plan evaluates vehicular movement, nonmotorized connectivity, transit connections, and innovative mobility strategies. The book presents emerging themes and findings for sustainability, water and sewer, neighborhoods, healthy communities, and parks.

# Sustainability and Resiliency

A sustainable and resilient community possesses a healthy environment, strong economy, and prioritizes the well-being of its residents. While maintaining this natural, social, and economical balance, these concepts work to solve current local issues and look forward to the future through a lens of innovation and progress. This section covers the physical landscape and public programs in Livonia as it relates to sustainability and resiliency.

#### LAND COVER

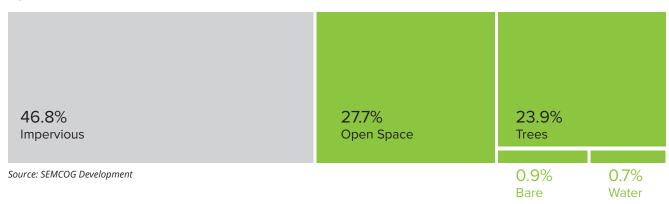
It is important to look at land cover when talking about sustainability because of its affects on climate stabilization, stormwater management, and water quality. In comparison to Westland, Livonia has a slightly higher impervious surface ratio. Trends in reducing pervious surface starts with setting standards or guidelines for future development. Popular practices for stormwater management include green roofs, bioretention (rain gardens), land permeable paving and pavers.

According to the Southeast Michigan Council of Governments (SEMCOG), approximately 10,730.9 acres of land (46.8%) in Livonia are considered to be impervious. This includes buildings, roads, driveways, and parking lots. In terms of pervious acreage, 23.9% of the City consists of trees and 0.9% is bare. Bare land includes soils, aggregate piles, and unplanted fields. Approximately 0.7% of the City is water, which includes all rivers, lakes, drains, and ponds. The map on the following page and graphic below show proportions of land cover in Livonia.



Earth Day 2017, Livonia MI

Figure 3.2: Livonia Land Cover (2010)





Map 3.1: Pervious vs. Impervious Land Cover





**Pervious vs. Impervious Land Cover** Livonia, MI



Special Event, Take Pride in Livonia Day

## SUSTAINABILITY INITIATIVES AND PROGRAMS IN LIVONIA

Beyond efficient use of the land, policies supporting sustainability are important to promote and enforce resilient practices. As a member of Michigan Green Communities, the City of Livonia is dedicated to conserving energy and natural resources, while reducing pollution. The City's efforts have been recognized with awards from SEMCOG and the Michigan Municipal League. The following programs and initiatives were put in place to work towards their sustainability goals.

#### Recycling

The City of Livonia offers residents two options for recycling through the Curbside Recycling Program and the drop-off Recycle Center.

#### **Greenleaf Commission on Sustainability**

The mission of the commission is to encourage energy efficiency, conservation, and environmentally friendly practices. It promotes sustainable living and encourages the Livonia community to incorporate environmentally friendly practices into their daily lives. The Greenleaf Commission provides information and resources to help residents accomplish this.

#### **Emergency Response Plans**

The Livonia Community Emergency Response Team (CERT) program educates citizens about disaster preparedness for hazards that could impact our area, and trains them in basic disaster response skills.

#### **Regional Ride Share Program**

The Southeast Michigan Commuter Connect is a trip planning service that helps connect commuters to transportation options. The program intends to reduce Michigan's carbon footprint by promoting smart and eco-efficient transportation practices.

#### **Nextdoor**

The City of Livonia has partnered with Nextdoor to share important updates and information requests via the Nextdoor network. There are over 78 neighborhoods in Livonia that are active with Nextdoor neighborhood websites.

EFFICIENT NEIGHBORHOOD DESIGN

Parks, open space, and natural areas are important to the long-term vitality of neighborhoods.

Successful integration of the built environment and public open space ensure a high quality of life for residents.





Sustainable Placemaking Example, Rochester, NY

#### IMPORTANCE OF EFFICIENT AND SUSTAINABLE DEVELOPMENT

Monitoring and evaluating the efficiency of a city's programs and policies is extremely important in order to successfully plan for strengthened adaptability and productivity of a city. This responsibility falls under the reliance of municipalities, as the prosperity of the built environment, climate and energy, economy, community culture, equity, safety, natural systems, and innovation of its community depend on sustainability. Municipalities can increase their sustainability by incorporating green initiatives as well as supporting the long term financial health of its businesses and increasing residential density.

#### **Brownfield Redevelopment Authority**

The first initiative is the Brownfield Redevelopment Authority. Under the U.S. Environmental Protection Agency, a brownfield, the expansion, redevelopment, or reuse of a property which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

#### **Asset Management Program**

The second initiative is an asset management program that examines the conditions of the City's water infrastructure. This is a critical move in light of the environmental and health issues that aged water infrastructure can cause when they are either insufficient to handle the higher levels of storm water being experienced today and or contain contaminants that impact the quality of drinking water.

With the previously mentioned policies and programs put in place by the City of Livonia, and efficient use of the land, great strides have been made towards sustainability.

#### **KEY FINDINGS**

Through the analysis and consideration of the sustainability topics discussed above, the following list presents the section's key findings:

- With open space scattered throughout the City, it is important to preserve and protect Livonia's pockets of natural land.
- While the City directs initiatives that support a sustainable community, programs dedicated entirely to sustainability are low in number. Programs should be modernized and reflect today's needs and advancements.

## Water and Sewer

With today's development demands and recommendations set forth in this plan, the City's aging water and sewer infrastructure needs to be addressed. Major concerns with the urbanization of communities include flood control, stormwater detention, and protecting drinking water. The following sections provide background on Livonia's water and sewer systems.

#### **WATER MAIN**

The water distribution system service area covers 36 square miles, outlined in Map 3.2, and obtains its supply through the Great Lakes Water Authority. There are approximately 466 miles of transmission and local distribution mains, varying in size from 6 to 36 inches in diameter. The slight majority of the City's water system was constructed between 1950 and 1970. Completed in 2010, the Livonia Water System Master Plan evaluates the adequacy of the water supply, provides an infrastructure assessment, and recommends improvements. Findings from the plan concluded the water system generally provides adequate service with recommendations for water main replacement/rehabilitation for several focus areas.

#### **STORM**

Located in the Rouge River Watershed, the City of Livonia has in place an existing Stormwater Management Program, as well as stormwater design standards and ordinances. The last Stormwater Management Plan was completed in 2002. This document reviews the City's existing stormwater system and management practices and sets recommendations relating to physical improvements, policy amendments, and funding options. Since its adoption, several grants have been awarded for projects called out in the plan.



Manhole cover in Livonia, MI

#### **SANITARY**

The last Asset Management Plan for wastewater was completed in 2016. The goal of the Sanitary Asset Management Program is to provide and maintain high quality sanitary sewer collection services to existing and future customers in a cost effective manner while protecting human health and the environment. With 450 miles of sanitary sewer pipe and a 10,000 structure manhole network, the system was found to be aging and in need of routine inspection and associated rehabilitation activities. According to the plan, the sanitary sewer system is considered to be in good to fair condition.

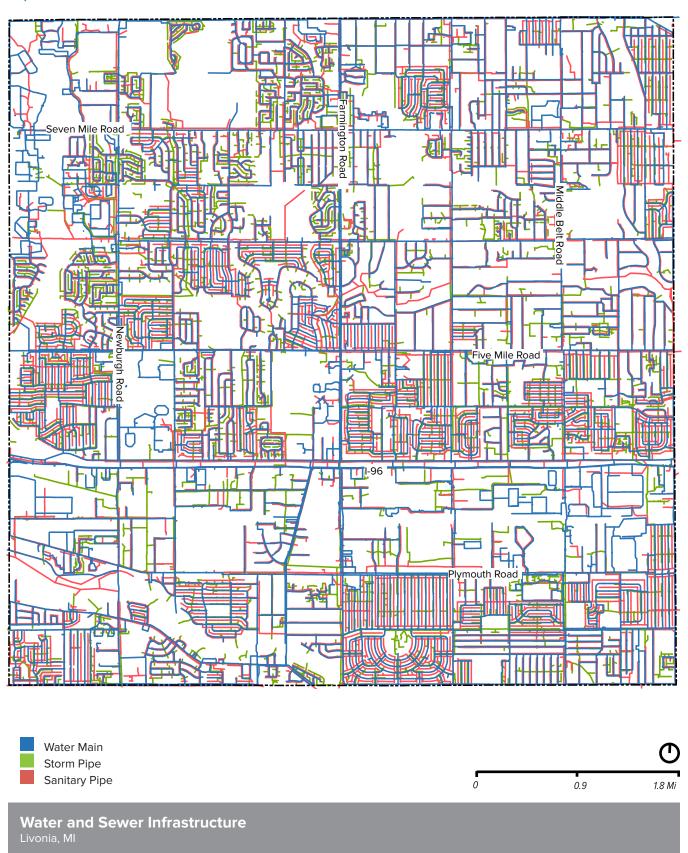
#### **KEY FINDINGS**

Through the analysis and consideration of the infrastructure topics discussed above, the following list presents the section's key findings:

- While the majority of plans addressing water and sewer are up to date, the Stormwater Management Plan should be updated to reflect current needs.
- Capacity needs are currently being met, but additional water storage may be necessary.
- Aging infrastructure in subdivisions requires replacement and rehabilitation.



Map 3.2: Water and Sewer Infrastructure<sup>1</sup>



## Future Transportation Plan

The Future Transportation Plan sets forth recommendations for the development of public right-of-way in a manner consistent with and supportive of recommendations for Future Land Use. The Future Transportation Map maintains the existing thoroughfare plan designation and adds a design typology designation. The map also displays the current Livonia Community Transit system and the planned Livonia Bike Loop.

LIVONIA VISION 21 officially adopts Bike Walk Livonia as the plan for nonmotorized transportation in the City. The network is designed to link Livonia's most prominent parks, commercial districts, and employers, and establishes easy to navigate connections for people to drive, walk, bike and ride in their neighborhoods and around the City.

#### **PRIORITY PROJECTS**

The Future Transportation Plan outlines justification for the LIVONIA VISION 21 three-year priority project list, with emphasis on the following three transportation projects:

- East Plymouth Road Corridor Plan
- Livonia Bike Loop
- · Transit and Innovative Mobility Study

#### THOROUGHFARE PLAN

The City of Livonia developed during an era that focused on accommodating automobiles. Livonia's neighborhoods, shopping centers, schools, offices, and churches are connected through a vast road system and typically provide ample parking facilities. Initially, safe and strong non-motorized travel amenities were not prioritized in design, leaving many arterial corridors without sidewalks and bicycle facilities. The Bike Walk Livonia Plan outlines principles and priorities for retrofitting the transportation system to provide connectivity by all modes. A strength of Livonia's roadway network is that it is primarily a grid pattern, which allows for easier navigation and connectivity by all travelers.





**Table 3.1: Future Transportation Plan Elements** 

Thoroughfare Plan Designations	Description	Miles	R.O.W. Width in Feet	Design Typology Designation
Freeway	Connects communities and services major activity centers.	9.41	n/a	n/a
Arterial Highway	Connects communities and services major activity centers.	6.61	100-120	Boulevard
Arterial Street	Manages heavy volumes of traffic to other areas of the City .	58.84	100-120	Boulevard
Special Arterial	A broad avenue that services adjacent land use.	n/a	180	Boulevard
City Major Road	Manages heavy volumes of traffic to other areas of the City and/or communities.	23.61	n/a	Boulevard
Industrial/Commercial	Funnels or directs traffic primarily for a commercial and/or industrial purpose.	15.79	n/a	Avenue
Collector I	Junction between local streets and major road with high rate of traffic (from major road to major road).	3.12	86	Avenue
Collector II	Junction between local streets and major road.	28.5	70 -100	Avenue
Parkway	Course through a park or landscaped development.	4.39	n/a	Boulevard
Local Street	Provides access into neighborhoods and adjacent properties.	331.91	60	Street
Reserved R.O.W.	Land designated for future highways and streets.	0.51	86	Avenue
Sidewalk	A paved walk for pedestrians within the R.O.W.	n/a	4-10	n/a
Livonia Bike Loop	The Livonia Bike Loop is the phase 1 bike system recommendation from Bike Walk Livonia.	31.73	5-9	n/a
Transit	Livonia Community Transit links to DDOT Bus Route 38 on Plymouth Road and SMART on Grand River. Two fixed routes service peak hour commutes with 18 stops.	n/a	n/a	n/a
Street Discontinuity	Due to environmental constraints or if heavy traffic is not desired.	n/a	n/a	n/a
Railroad Grade Separation	A passage provided at a railroad crossing (overpass/underpass).	n/a	n/a	n/a

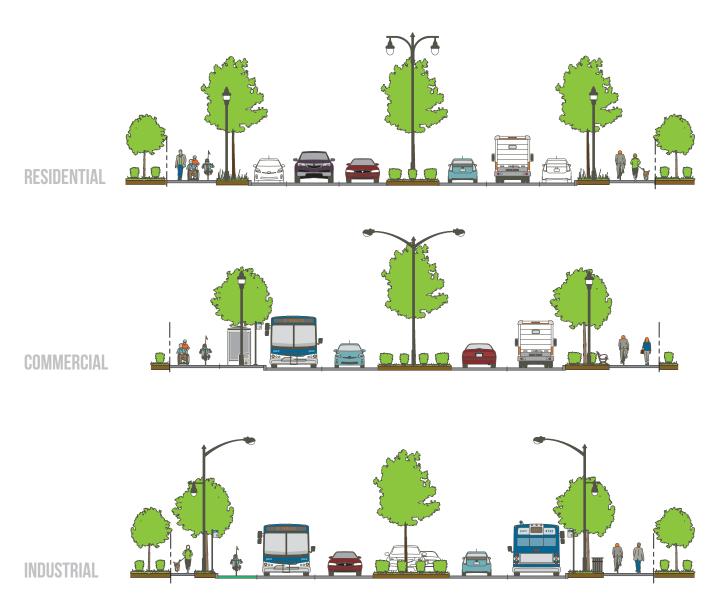
#### **DESIGN TYPOLOGIES**

The Future Land Use Plan establishes three design typologies for retrofitting roadway improvements: Boulevards, Avenues, and Streets. The following sections provide a description and examples of each typology.

## Boulevards

A boulevard is a street designed for higher vehicle capacity and moderate speed, traversing an urbanized area. High vehicle capacity makes boulevards good choices for use as primary transit routes. Boulevards commonly are designed with landscaped medians, making them suitable for green infrastructure treatments. The presence of landscaping, as well as ample separation from vehicle ways, make boulevards desirable pedestrian corridors. Boulevards should include bikeways and are good candidates for bike lanes and shared-use paths, depending on context and the number of driveways and intersections. Boulevards may be equipped with bus lanes or side-access lanes to buffer sidewalks and buildings. Side-access lanes are good candidates for shared lane markings.

Figure 3.3: Example Configurations for Boulevards

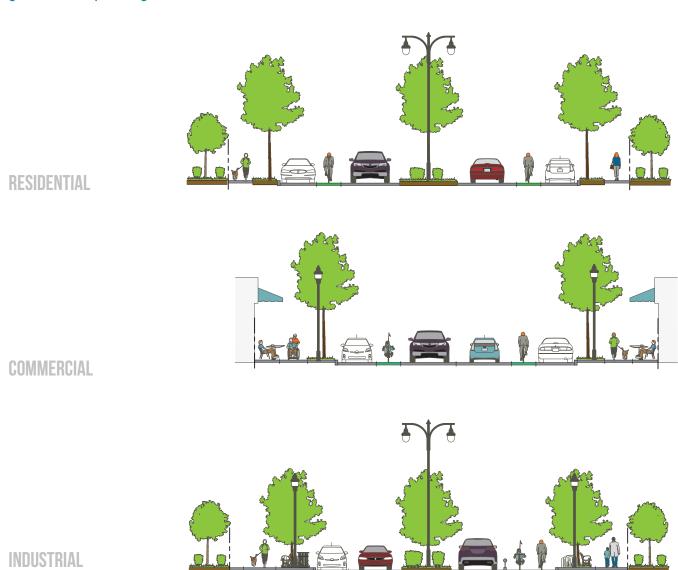




## **Avenues**

An avenue is a street of moderate to high vehicular capacity and low to moderate speed, acting as a connector between urban centers. Avenues often are commercial corridors with wide pedestrian facilities and on-street parking. Avenues may be equipped with landscaped medians and should include bike lanes or marked shared lanes, especially if they are planned links in a bikeway network. Avenues frequently serve as links to a multitude of transit systems.

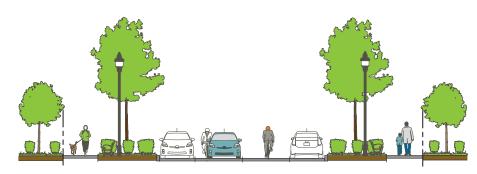
Figure 3.4: Example Configurations for Avenues



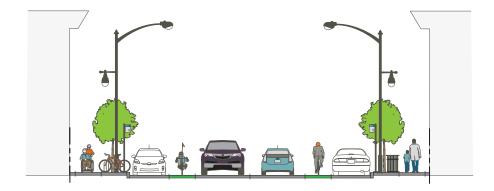
## Streets

A street is a local connection facility. Streets can make connections along commercial corridors but often serve residential areas. Street character may vary in response to the adjacent commercial or residential area. Streets usually have raised curbs, drainage inlets, wide sidewalks, space for parallel parking, and trees in individual or continuous planters. Residential streets with open drainage and no sidewalks are common and appropriate some settings. Signed bike routes using shared lanes and bike boulevards are often appropriate treatments for streets; bike lanes and shared lane markings should be considered on streets with heavier traffic. Transit routes are less common on streets; however, connection to transit via bicycle and pedestrian modes is necessary

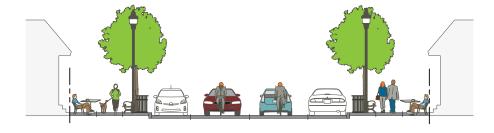
Figure 3.5: Example Configurations for Streets



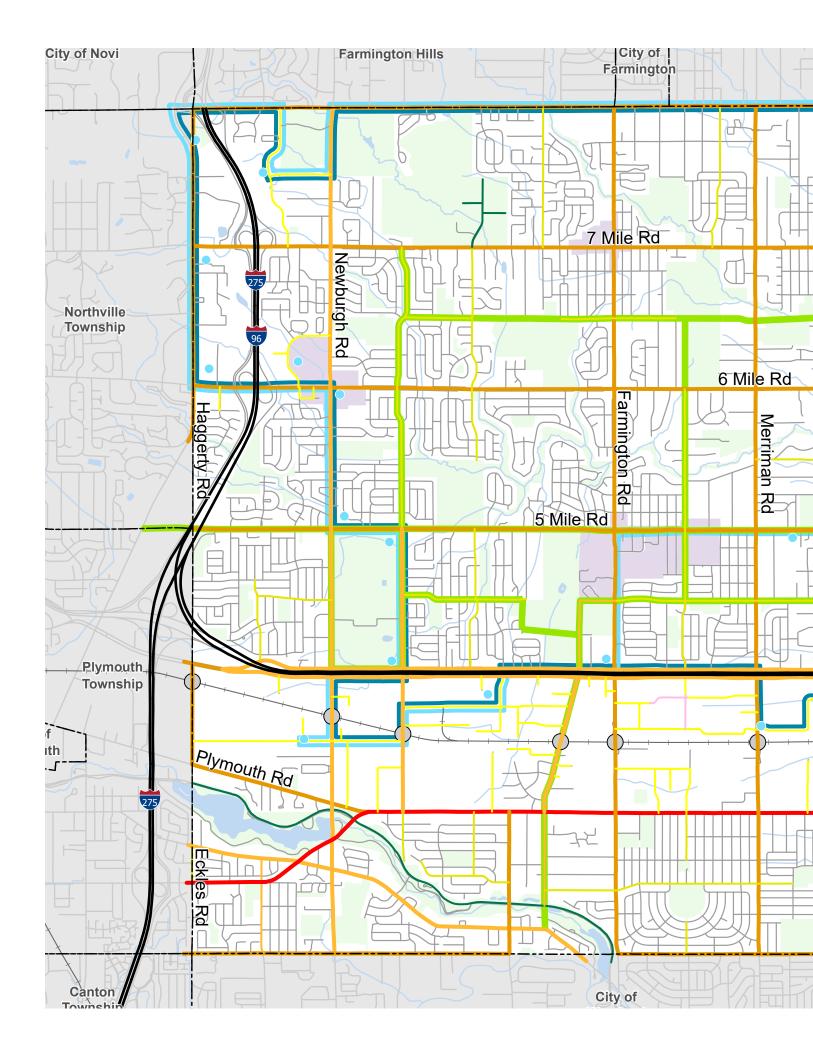
RESIDENTIAL

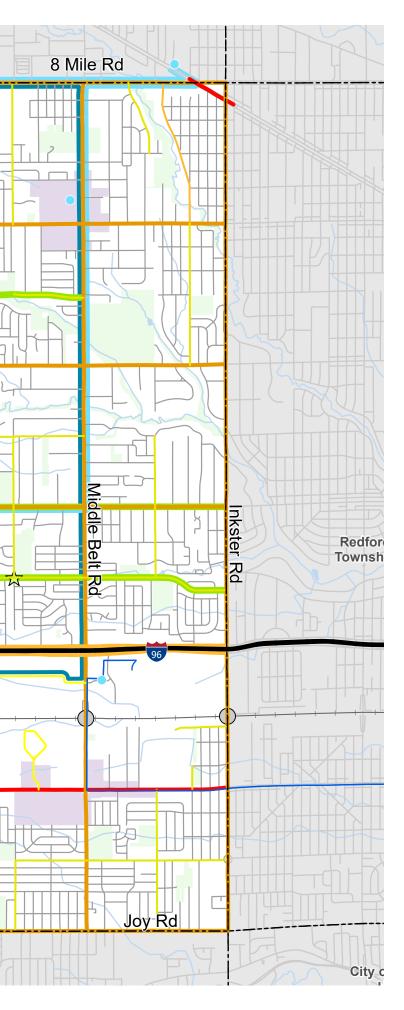


**COMMERCIAL** 



**INDUSTRIAL** 





## **Future Transportation Map**

City of Livonia, Michigan

#### **THOROUGHFARES**

- Boulevards / Arterials (100-120 ft)
  - Arterial Highway
    - Arterial Street
  - City Major Road
- Avenues / Collectors (70-100 ft)
  - Collector 1
  - Collector 2
  - Industrial/Commercial
  - Reserved R.O.W.
  - Parkway
- Streets / Locals (60 ft)
  - Local Street
- ★ Street Discontinuity
- Railroad Grade Separation
- Livonia Bike Loop

#### LIVONIA COMMUNITY TRANSIT

- Botsford Run
- Millennium Park Run
  - Bus Stop
- DDOT Route 38

#### **LAND USE**

- City Center / Mixed Development Center
- Parks and Community









# Innovative Mobility Strategies

LIVONIA VISION 21 advances Livonia's transportation network with innovative mobility strategies for connecting residents locally and regionally. The single occupant vehicle travel pattern characterized by door-to-door private vehicle trips can be supplemented by mixedmode behaviors. Whether its sharing a ride to a meeting with a colleague, walking to lunch, or riding your bike to the trail, the one mode transportation day is in the past. The Plan adopts the following Innovative Mobility Connectivity Framework to guide future transportation policy in the City.

**INNOVATIVE MOBILITY** CONNECTIVITY **FRAMEWORK** 

#### Multimodal Land Use Strategy:

Encourage place-based system design that increases travel choices linking to multimodal transit hubs.

#### Walkable and Ridable Densities:

Encourage walkable and ridable housing infill and adaptive reuse within mixed development centers around multimodal transit hubs. A housing density of 16 dwelling units per acre is considered to be transit supportive. Pedestrian priority should be given within mixed development centers minimally ½ mile from multimodal transit hubs.

Safe and Convenient Bike **Accommodations:** Bikeways and bike sharing systems should continue to be a priority for system implementation as guided by Bike Walk Livonia. Facilities within 2 to 4 miles of the hubs should be prioritized with a high priority given to intersection treatments that connect neighborhoods. The Livonia Bike Loop includes near term connections to neighborhoods and destinations as well as priority crossing retrofits where appropriate.

#### **Transportation Network**

Companies: Encourage ride hailing services provided by transportation network companies, like Uber and Lyft, to operate in the City. Facilitate service by creating priority curbside drop-off locations and designated places to wait for fares.

Connected and Automated Vehicles (CAV): Become an early adopter of connected and automated vehicle technology through policy and leading by example with fleet management and facility design. Review and update zoning and engineering standards accordingly.

- CAV land form impact areas:
  - » Access management
  - » Building disposition
  - » Auto-oriented land uses
  - » Parking requirements
  - » Building massing
- CAV roadway function impact areas
  - » Turning radii
  - » Target speed
  - » Lane width
  - » Clearance
  - » Engineering judgment

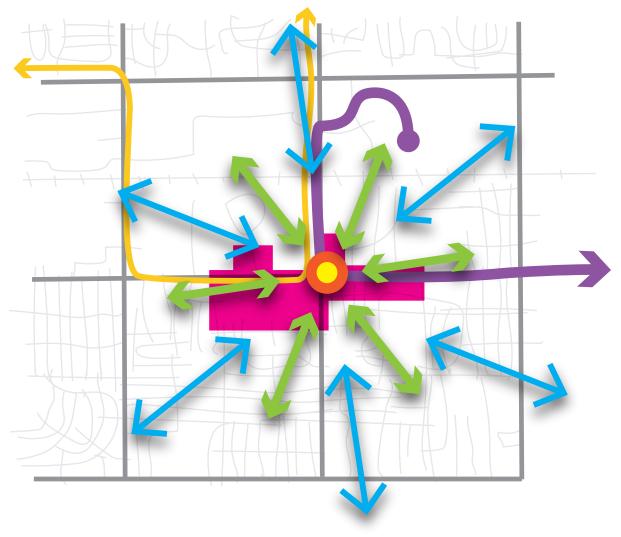


Figure 3.6: Innovative Mobility Connectivity Framework



Multimodal Transit Center

Mixed Development Area Walk Zone



Bikeways and Bike Share



Transportation Network Companies Ride Hailing / Car Share



Regional Transit



Local Transit / Circulator Demand Response Mini-Transit

Local Transit: Support and encourage the expansion of Livonia Community Transit which currently operates two-peak hour local circulator routes to connect to DDOT and SMART routes as well as an on-demand resident ride paratransit program. In the future, demand response mini-transit, including driverless shuttles, could be utilized to connect to multimodal transit hubs during peak hours and circulator service could be expanded.

Regional Transit: Consider supporting connectivity to regional transit service. The current Connecting Southeast Michigan Plan developed by the Regional Transit Authority (RTA) will improve Livonia's connectivity to the region with 15-minute service recommended on Grand River corridor and a Commuter Express Route along the Plymouth Corridor. Livonia is also located in the Core Area Flexible Mobility designation, which is earmarked for transit investment at \$20 Million per year.

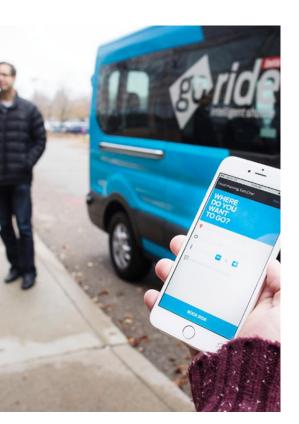
**Corridor Planning:** Implement system improvements through strategic corridor planning and segment improvements. Near-term corridors for study include:

- · Plymouth Road
- 5 Mile Road
- 7 Mile Road
- Middle Belt Road





Planning for Connected and Autonomous Vehicles (CAV) requires the balancing of transportation objectives and safety with all modes.



#### CONNECTED AND AUTONOMOUS VEHICLES

LIVONIA VISION 21 supports advancing the City's transportation network with a robust and sustainable vision for future development. The vision realizes the full potential of CAV's and Transportation Network Companies (TNC's) and changing mobility preferences and employment patterns. This technology offers the potential for shorter travel distances, slower traffic speeds, and more transportation options, and pick-up and drop-off zones.

The early adoption of CAV's and TNC's technology offers Livonia many benefits, including potential reductions in parking requirements, the re-purposing of excess parking lots, shared/flexible vehicle lane usage, the inclusion of other modes on the street, reduction of vehicle lane dimensions, the setting of safe target speeds, the design of safe intersections and crosswalks, and pedestrian-priority streets. Excess rightof-way capacity resulting from CAV capacity improvements should be given to bicycles and transit.

LIVONIA VISION 21 recognizes that to realize the benefits of CAV and TNC technologies, strategies must be deployed in conjunction with transit and nonmotorized systems, particularly to service the first and last miles transit trips or integrated into a leg of a nonmotorized travel day.

Livonia's Future Transportation Plan promotes land use policy that encourages population density and bicycle facilities near mixed development centers, allowing individuals the opportunity to walk or bike to destinations rather than rely upon CAV's and TNC's for short trips.



#### **NETWORK FUNCTION**

#### **REGION**

Landmark Entertainment Large Employers Event Parking

#### CITY

Institutions Day / Night Life Entrepreneur / Small Business Parks / Drop-off

#### DISTRICT

Housing Public Space Services

# MOBILITY LIVONIA PLAN ACCESSIBILITY

LAND FORM

#### REGION

Arterials / Freeway Transit Corridors Bikeways

#### CITY

Collectors Transit Routes Bikeways

#### DISTRICT

Locals Transit Stops Streetscapes

#### BIKE WALK LIVONIA AND THE LIVONIA BIKE LOOP

As mentioned prior, the Bike Walk Livonia Plan includes expansive recommendations for the development of the nonmotorized network in the City and is adopted as part of LIVONIA VISION 21. The proposed Livonia Bike Loop is the defining feature of the bikeway network. The loop will connect to 80% of Bike Walk Livonia's established priority destinations and 55% of the secondary destinations. In total, the Livonia Bike Loop will connect 13 parks community facilities, 11 schools, and 7 commercial districts. The Loop can be subdivided into six distinct projects:

#### Project 1:

Hubbard, between Lyndon and Rotary Park - underway

#### · Project 2:

Lyndon, between Levan and Inkster - underway

#### Project 3:

Stark, between Hines Park and Lyndon

#### · Project 4:

Levan, between 5 Mile and 7 Mile

#### Project 5:

Curtis, Between Levan and 7 Mile / Middle Belt

#### · Project 6:

5 Mile, between Haggarty and Inkster and the St. Mary's Loop

#### ACCESS MANAGEMENT

Access management strategies can improve pedestrian and vehicle circulation and safety. Access management reduces the number of points of access to the street from adjacent properties. This benefits pedestrians by reducing the number of points along a sidewalk where they may encounter a vehicle, and it benefits traffic by reducing the number of points for other vehicles to enter the street. Cross access and rear alleys between developments helps to limit total number of driveways as sites are redeveloped.



# Healthy Communities

Healthy communities are measured through the standard quality of life that is driven by the municipal services available to residents. Strong municipal leadership that prioritizes citizen involvement helps to provide a basis for transparent, equitable access to quality spaces and programs that enrich the lives of all community members. Livonia residents benefit from proximity to local health care providers including St. Mary's Mercy Hospital. The following section outlines current programs and policies that the City of Livonia provides to support its healthy community.



Fire Station Open House, Livonia MI

Public Safety Services are essential to strong, healthy communities. The culture of safety and health is *supported through* public education and engagement opportunities, such as the Livonia Fire Station Open House.

#### **COMMUNITY WELLNESS INITIATIVES** AND PROGRAMS IN LIVONIA

The following sections outline key municipal services put in place by the City of Livonia that promote well-being for all residents.

#### **Resources for Seniors**

Livonia's Commission on Aging was established to provide citizen output on programs and services that are beneficial and promote the enrichment of the lives of the senior population.

The Civic Park Senior Center offers various activities and resources available to Livonia seniors. Livonia provides information on nutrition programs through Wayne County and local resources. Transit options for seniors offered through the Senior Center Bus Service, which provides rides within the City limits on a donation basis.

#### **Food Programs**

In the summer months, access to fresh, local produce is available through the Wilson Barn Farmer's Market. The barn also hosts various other community events and previously served as a functioning dairy farm. Another option for fresh produce are the Community Gardens are located at Greenmead Historical Park, where residents can rent garden plots. Focus: HOPE Food Distribution and Commodity Foods Distribution programs also help serve qualified residents to distribute food.

#### **Youth Assistance Program**

Livonia's youth assistance program offers the following components through the Youth Employment Resource Center:

- Trained Volunteer Mentors
- Wayne County Jail/Milan Federal Prison Tours
- · Outdoor Adventure Challenge
- · Community Work-service
- Project Impact Group
- Alternative Parenting Skills
- Youth Employment

#### **Youth Activities and Sports Programs**

It was reported in the Mayor's 2014 State of the City address that 16,000 Livonia youth residents participated in team sports. Coordinating organizations include:

- Livonia Junior Athletic League
- Livonia Hockey Assocation
- · Livonia Hawks and Wolves Soccer Clubs,
- Livonia Parks and Recreation,
- Livonia Family YMCA
- Livonia Gymnastics Academy
- · Livonia Community Swim Club
- · Fairway Farms Swim Club

- · Newburgh Swim Club
- · Bulldog Aquatic Club
- Livonia and Clarenceville School District Teams
- Catholic Youth Organization at St. Michael and St. Edith Schools
- Business Bowling and Dance Groups
- · Neighborhood Association Activities
- TJW Junior Golf Program

#### **Southeast Michigan VA Medical Facilities**

Livonia promotes and provides information regarding the following medical facilities for veterans in Southeast Michigan:

- John D. Dingell VA Medical Center
- · VA Pontiac Outpatient Clinic
- VA Ann Arbor Healthcare System

- VA Ann Arbor Shuttle Service
- · Westland Area Shuttle

#### **City of Livonia Services Dedicated Towards Community Wellness**

The City offers Mental Health Counseling to Livonia residents and provides financial assistance to income eligible individuals to obtain professional mental health counseling services.

The Medical Equipment Loan Closet is located at the Civic Park Senior Center and offers wheelchairs, transfer/bath benches, canes, walkers, portable commodes and other durable medical aids to Livonia residents to loan.

The Livonia Emergency Assistance Program is provided by the Housing Commission to provide eligible low/moderate income residents with utility shut-off assistance.

#### **Clubs and Organizations**

To support a strong and connected community, the City's Parks and Recreation Department co-sponsors a large number of club and athletic groups. The clubs include organization for those interested in the arts, culture, athletics, and a task force dedicated to education and empowerment for Livonia's youth.

#### TRENDS IN HEALTH AND WELLNESS

Healthy and sustainable initiatives can enhance the overall quality of life in a community, attract talented individuals, and encourage high-quality development. Investments in park space, trails, and other community amenities promote a healthy lifestyle for residents and help to draw regional visitors.

Municipalities that embrace diversity, value resident ownership and participation, and build on community assets are most successful in achieving a healthy community.

#### **KEY FINDINGS**

Through the analysis and consideration of the healthy community topics discussed above, the following list presents the section's key findings:

• The City of Livonia has a strong network of programs and policies that support a healthy community. It is important that residents are aware of all resources available to them.



## Parks

From neighborhood parks to open green spaces, the wide-ranging benefits of parks reach economic development, community health, and sustainability and resiliency. This section provides a review on Livonia's parks, recreational facilities, and natural space.



Mies Park, Livonia MI

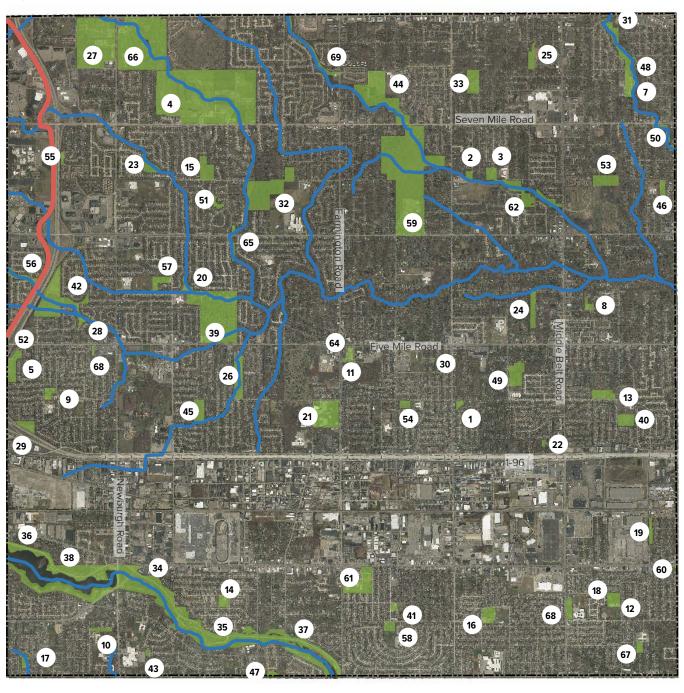
#### LIVONIA PARKS

The City of Livonia owns over 1,389 acres of park and recreational land with 60 parks and a community recreation center. A great importance is placed on pride of public and recreational spaces through Adopt or Sponsor a Park Programs and Take pride in Livonia Day. Nature preserve sites include Grandview park, Windridge Park, Bicentennieal Park, Rotary Park, Blue Grass Park. With various nature trails throughout the City, paths dedicated to walking are available at Bicentennial Park, Clements Cirlce, Mies Park, Jack E. Kirksey Recreation Center, Rotary Park, and Bien Park. Map 3.3 shows all parks located in the City of Livonia.

- Bai-Lynn Playfield
- Bainbridge Park
- Beverly Park
- Bicentennial Park & Nature Preserve
- 5. Bien Park
- 6. Bluegrass Park & Nature Preserve
- 7. Botsford Pool
- 8. Broadmoor Park
- 9. Castle Gardens Park
- 10. City Park
- 11. Civic Center Park
- 12. Clements Circle Park and Pool
- 13. Compton Park
- 14. Country Homes Park
- 15. Denmar Nature Preserve
- 16. Devon-Aire Woods Park
- 17. Dover Nature Preserve
- 18. Elliot Tot Lot
- 19. Elm Park
- 20. Fairway Park
- 21. Ford Field and Eddie Edgar Ice Arena
- 22. Gaylord Tot Lot
- 23. Gold Manor Park
- 24. Golfview Nature Preserve
- 25. Grandview Nature Preserve
- 26. Greenbriar Nature Preserve
- 27. Greenmead Historical Park
- 28. Greenwood Park
- 29. Grennada Nature Preserve
- 30. Harry Wolf Tot Lot
- 31. Hearthstone Park
- 32. Helman Nature Preserve
- 33. Hillcrest Park
- 34. Hines County Park
- 35. Hines Park Levan Knoll

- 36. Hines Park Newburgh Pointe
- 37. Hines Park Oak Grove
- 38. Hines Park Sumac Pointe
- 39. Idyl Wyld Golf Course
- 40. John F. Dooley Park
- 41. Kleinert Play Field
- 42. Laurel South Park
- 43. Linden Wood Park
- 44. Livonia Jaycee Park
- 45. Madonna Nature Preserve
- 46. Meadows Park
- 47. Middle Rouge Parkway
- 48. Moelke Park
- 49. Nash Park
- 50. Nature Preserve
- 51. Nottingham West Park
- 52. Oasis Golf Center
- 53 Parkview Park
- 54. Pastor Park
- 55. Prides Court Park
- 56. Quakertown Park
- 57. Robert C. McCann Park
- 58. Rosedale Park
- 59. Rotary Park & Nature Preserve
- 60. Sesquicentennial Park
- 61. Sheldon Park & Pool
- 62. Sunset Park
- 63. Tennis Courts
- 64. Veteran's Memorial Plaza
- 65. Wayne-Six Park
- 66. Whispering Willows Golf Course
- 67. Wilson Acres Park
- 68. Wilson Barn
- 69. Winridge Nature Preserve

Map 3.3: Parks







#### TRENDS IN PARKS AND OPEN SPACE

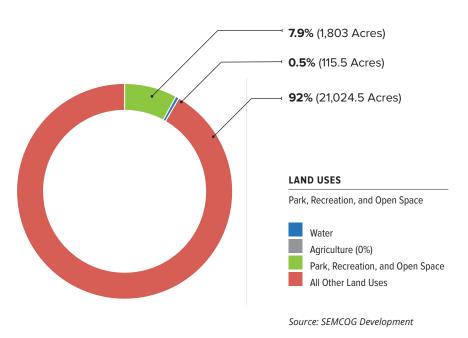
With trends in people-oriented design, park space is extremely important to create public space that brings all residents and visitors together and to increase the area's quality of life. One way municipalities are increasing their percentage of park space is to repurpose under-utilized sites and properties as park, green, or open space. As the need for green space grows, the goal for many is create these public spaces whenever and wherever possible. While the addition of park space is growing in demand, there is an equal demand for conservation of existing open space and green space

Roughly 18% of the City consists of parkland and open space. Approximately 1,919 acres of the City is utilized as parkland and open space. This includes agricultural uses, park land, recreation, open space, and water. Land uses that are not considered for natural space include residential, commercial, industrial, institutional, transportation, and utility. The graphic below shows the distribution of the natural land use.

The National Recreation and Park Association (NRPA) states that the typical ratio of 10.1 acres of parkland per 1,000 residents is offered through municipality. Cities that have populations from 50,000 to 99,999, on average, have a ratio of 9.4 acres of parkland to 1,000 residents. Livonia, with a population within that range, has nearly double the acreage of parkland, open space, and green space per 1,000 residents. With significant parkland, it is important for Livonia to preserve and promote these spaces, and maintain quality parks.



Figure 3.7: Natural Land Uses – Livonia, 2008



#### **KEY FINDINGS**

Through the analysis and consideration of the topics discussed above, the following list presents the section's key findings:

- With an abundant and wide-spread network of parks, it is important to protect and preserve current open space.
- Adequate funding and management is important as the current network ages and new development increases.

# Housing and Neighborhoods

As the City's backbone, Livonia's neighborhoods provide a close-knit, small-town sense of community, and family-oriented atmosphere. The following sections discuss the City's residential areas and the housing stock that fill its neighborhoods.

#### RESIDENTIAL CHARACTER

The majority of Livonia's neighborhoods are laid out in both a traditional grid pattern and curvilinear pattern with cul-de-sacs, and consist of primarily low-density, single family dwellings. The housing stock reflects mid-to-late 20th Century development patterns of Metropolitan Detroit subdivisions, with 70% of the housing stock built between 1950 and 1980, the newer development concentrated towards the northwest corner of the city.

The overall character boasts a family-friendly atmosphere and accessible cost of living, central location, and strong municipal services and amenities. There are currently 14 neighborhoods designated, with one historic district, Old Rosedale Gardens. The framework of the mile grid serves as the arterial roadways, routing traffic, north, south, east, and west. Interstate 96 allows for east-west access, while Interstate 275 allows for north-south access in and out of Livonia.

#### **RESIDENTIAL LAND USE AND ZONING**

The following list outlines all residential zoning districts within Livonia, established in the current Zoning Ordinance:

- · One Family Residential District
- Rural Urban Farm District
- Two Family Residential District
- Condominium Residential District
- Multiple Family Residential District
- High Rise Multiple Family Residential District
- Condominium High Rise Multiple Family Residential District
- Housing for the Elderly District

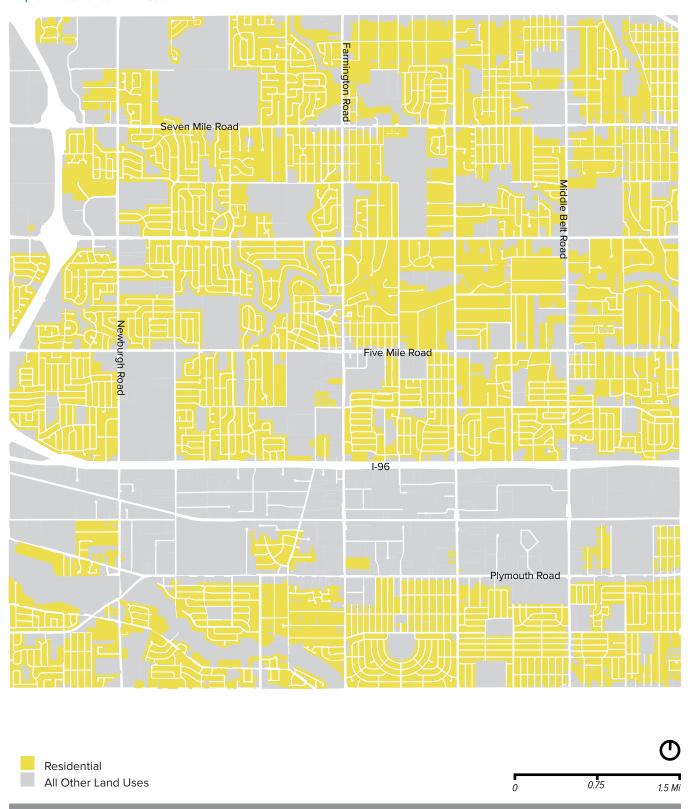
The Single-Family Residential District is the largest area zoned for residential uses. Map 3.4 displays current land use zoning districts throughout the City of Livonia that are strictly residential in comparison to all other land uses. Overall, about 45% and 10,335.80 acres of the City is zoned for residential development. Within it's residential development, the City's housing stock is 84% owner-occupied and 16% renter-occupied.



Old Rosedale Garden, Livonia MI



Map 3.4: Residential Land Use



Residential Land Use Livonia, MI

### NEIGHBORHOODS ASSOCIATIONS:

Neighborhood associations reinforce community pride and ownership, create effective methods for addressing resident needs, and serve as a collective voice in partnership with city government. Livonia houses the following organized neighborhoods and associations:

- Brookside of Livonia
- · Burton Hollow Swim Club
- Clements Circle Civic Association
- Coventry Gardens
- Devon-Air Civic Association
- Fairway Farms Swim and Tennis Club
- Newburgh Swim Club
- Nottingham West Civic Association
- Old Rosedale Gardens Home Owners Association
- On the Pond Condominiums
- SMB Estates Civic Association
- Stoneleigh Village
- Woodbrooke Homeowners Association
- Livonia Neighbors and Friends
- Woodbury Park



Newburgh Park, Livonia

#### HOUSING TRENDS

From diverse housing options to quality public space, there are a number of variables that go into developing and maintaining quality neighborhoods. Providing a range of housing options in safe and comfortable neighborhoods is critical to the overall success of the community, from a workforce and economic development perspective, to socialization and community pride. In simple terms, neighborhoods are the back bone of a community and foundation for how a city operates now and for generations to come.

Current national trends show that the majority of individuals choose where to live based on location first, and then resolve the logistics of finding employment and housing. This results in increased competition for jobs and housing in popular urban areas that offer the desired amenities. Because of this, a declining number are choosing to live in outlying suburbs, small towns, and rural areas as these locations lack the sought-after amenities and have less opportunities for employment.

As housing needs and wants change with the shifting demographics, gaps in affordability and availability also become apparent. Average-income earning individuals and families are struggling to find suitable, affordable housing. An increasingly popular solution described in Book 2 is "Missing Middle Housing." "Missing Middle Housing" is a term referring to a range of multi-unit or clustered housing types with a range in affordability, compatible in scale with single family homes that help meet the growing demand for walkable urban living. It addresses the desires of both millennials and baby boomers while considering the available housing stock. As the emphasis on walkability and the diversifying of lifestyles, households and incomes increase, it is extremely important to address the location and type of housing in the community.

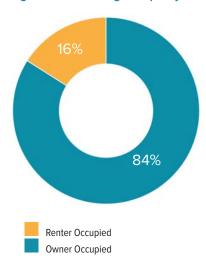


Outlined in the table below, between 2010 and 2018, the vast majority of building permits issued have been for single family housing, with only 60 in 2010 for multi-unit apartment. Compared to similar communities (Canton Township, Plymouth Township, and Lyon Township), Livonia has had fewer flexible living units permitted from 2015-2018.

Prior to 2015, the greatest growth was in Single Family Detached dwellings, alongside a significant decrease in Multi-Unit Apartments. The table displays these changes from 2000 - 2010, as this shows greater fluctuations in housing type that 2015-2018 and to emphasize long term changes in housing development. The graphic to the right outlines occupancy rates in Livonia, showing the majority of households being owner occupied.

With a declining number of flexible living options being introduced in Livonia, it is important for the City to focus on development that varies in size, affordability, and density from the existing housing. Further recommendations in this plan support the needs of future generations, based on lifestyle trends and the existing conditions of Livonia's housing stock and neighborhoods.

Figure 3.8: Housing Occupancy



37,164 Total Housing Units

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Table 3.1: Livonia Housing Type

Haveing Tops	2010		2015		Change	New Units
Housing Type	Number	Percent	Number	Percent	2010-2015	Permitted 2015 - 2018
Single Family Detached	33,645	86.63%	34,055	86.77%	410	169
Duplex	86	0.22%	89	0.23%	3	0
Townhouse / Attached Condo	1,162	2.99%	1,155	2.94%	-7	0
Multi-Unit Apartment	3,863	9.95%	3,843	9.79%	-20	12
Mobile Home / Manufactured Housing	83	0.21%	104	0.26%	21	0
Other	0	0.00%	0	0.00%	0	
Total	38,839		39,246		407	181
Units Demolished						-25
Net <sup>1</sup>						156

Source: U.S. Census Bureau, Census 2010, and 2015 American Community Survey 5-Year Estimates, SEMCOG Development <sup>1</sup>Net = Total Permitted Units - Units Demolished

#### **KEY FINDINGS**

Through the analysis and consideration of the housing and neighborhood topics discussed above, the following list presents the section's key findings:

- The current neighborhood character supports a wide range of residents, but is primarily geared towards families and older generations.
- Zoning is spatially segregated. This drives the need for connectivity to support walkability and easy access to neighborhood amenities.
- Within the past eight years, the primary type of housing permitted has been Single-Family Detached. Similarly, the vast majority of today's housing stock consists of owner occupied dwellings. This calls for the need to diversify housing options in terms of size and functionality.

LIVONIA VISION 21 CITY OF LIVONIA, MI



