MASTER PLAN

CITY OF MIDLAND, MICHIGAN

January, 2013

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Executive Summary

Introduction

The City of Midland adopted this edition of the Master Plan in 2007 ***and as updated in 2012***, by resolutions of both the Planning Commission and City Council. The Master Plan provides a comprehensive long-range guide to managing growth, development, redevelopment, and public investments in the community for a period of about 20 years.

The Master Plan includes analysis, recommendations and proposals for Midland's population, economy, housing, transportation, community facilities, natural resources and land use—focusing on the physical layout of various land uses and the compatibility of activities anticipated for the land.

Plan recommendations provide a sound basis for any subsequent regulations, policies and programs intended to help achieve the land use goals and other objectives.

The Public as Foundation

In keeping with the longstanding philosophy of the City, officials turned to its residents and business community to help shape the Plan's goals and objectives. In addition to the common public outreach strategies that rely on public meetings, the Internet and news media, two unique steps were used to gather public attitudes regarding land use and related issues.

Early in 2006, the planning process reached literally into the living rooms of Midland residents to learn their interests and concerns. A technique called *Meetings in a Box* introduced the public to the Master Plan and invited their detailed thoughts and descriptions of the community and their neighborhoods. The approach meant that people who otherwise could not attend a typical city hall meeting still participated in determining the City's future. Nearly 50 households and others hosted a meeting in their living rooms, classrooms and meeting halls, with an average of almost eight people attending. Detailed instructions for the hosts accompanied questionnaires completed by everyone in attendance, along with guidelines to encourage discussion among members of each group. Priorities were set by the groups themselves, with all materials returned to the City for later analysis.

The results from Meeting in a Box helped guide the next stage of public outreach. Two evenings of *Topic Workshops* were held. Essentially focus group discussions, those in attendance offered comments and

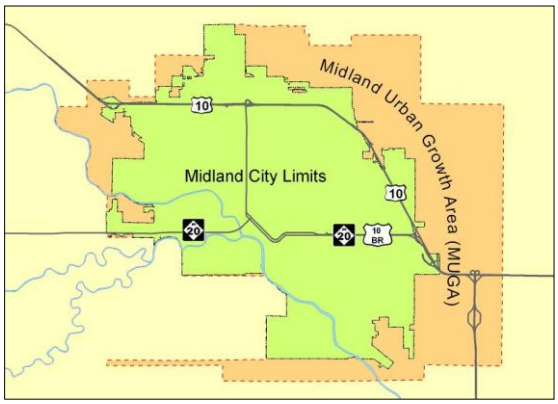
clarifications on ideas raised through initial surveys and Meetings in a Box. Those involved also reacted to some initial analysis prepared by the project team. The outcome from the Topic Workshops served to amplify opinions on several issues, expand on the detail associated with specific topics, and temper the concerns raised seen as less vital to the Master Plan process.

The goals and objectives developed through these two methods served as the foundation for preparation of every chapter in the Master Plan. Natural features, housing, transportation, economic development, community facilities and future land use drew upon the results of the public outreach.

Finally, public opinion combined with the City's land use history and the informed consideration of the Planning Commission and others to form the amalgam that is the City of Midland 2007 Master Plan. Two public open houses to obtain additional comments on the draft plan, and a joint meeting between the Planning Commission and City Council, helped solidify the Plan's recommendations. Finally, there was a public review period that included review by Midland, Bay, and Saginaw Counties, all adjacent Townships, and all local public utility companies, followed by public hearings. Throughout the process, comments were considered and in some cases the draft plan was revised before final adoption. More than most, this is a Plan built on the foundation of Midland's residents.

Recommendations

Thorough analysis of the existing demographics, land use patterns, and projected trends resulted in specific goals related to land use, transportation, and community facilities.



Future Land Use. Future Land Use is the core of Midland's Master Plan. Land use designations shown on the Future Land Use Map offer a guideline as to the intended activity and density on properties throughout the City and within the Midland Urban Growth Area. They are described in detail Chapter 5: Future Land Use.

While nearly all land use categories are shown to expand in terms of total acreage, much will remain the same the Midland. For example, *Low Density Residential* properties—single family housing—will remain the predominant land use. *Parks and Recreation* space may experience modest growth, responding largely to meets the needs of future residential development and changes desired be residents as needs change.

The Master Plan includes two new land use categories:

- ***Downtown*** emphasizes the importance of this area to the City's vitality long term sustainability. In the Future Land Use Map, it connects the existing downtown with the new ballpark. Downtowns typically host a dense mix of retail, restaurants, civic uses, offices, services and residential. These characteristics see renewed emphasis in the Master Plan.

- ***Multi-Use Center*** areas will benefit from redevelopment into urban-style multi-use districts. The Circle area is expected to contain a variety of compatible and supportive uses that increase the density and viability of the Circle. A second Multi-Use Center focuses on redeveloping the Dow Diamond from the existing industrial use and look to commercial and consumer trades. This could include restaurants, art studios, offices, and the types of commercial and light industrial uses that compliment and support the area.

One important change is a reduced emphasis on *Heavy Industrial* for new development. While some locations remain available for this use in southeast Midland, most of the future industrial development is categorized as *Light Industrial*. Light Industrial is compatible with the goals of diversifying the local economy, while at the same time providing opportunities for research, light assembly, warehousing and other activities that will support this industrial sector and the community.

Transportation. In support of the Future Land Use goals of the Midland Master Plan, recommendations are included that maintain and improve the safety and efficiency of the transportation system. Some specific street improvements are described. Gaining efficiencies in the system are touted through expanding multimodal options, enhancing access management (control of driveways), and introducing traffic calming for some residential streets. Also, community facilities such as parks, public safety and utilities are planned to match the pace of growth in the City.

Community Facilities. As the City plans for the future, maintaining existing high quality park and utility systems must be a high priority. The quantity and diversity of parks and recreation facilities across the City are the envy of many other communities in Michigan. The continued excellence in coverage and integration into existing and developing neighborhoods must be a focus for the future.

Implementing the Plan and Measuring Midland's Success

A Master Plan is a compact with the community. Maintaining the focus on the Plan is a promise made to the residents, property owners, business people and institutions in Midland. Its routine use is essential to achieve ultimately the collective goals defined by everyone who participated in developing the Master Plan. A Master Plan is not a zoning ordinance or set of regulations—it is intended to be a guide that is flexible to respond to new information, trends, and opportunities. This Plan must be evaluated, and amended if needed, at least every five years. To this end, the City of Midland Master Plan includes specific tasks and checklists to provide every opportunity to implement the plan, enhance the City's vitality and achieve long term sustainability.

Its preparation may have concluded, but for Midland, this Master Plan is a beginning.

Chapter 1: Introduction

When the first white settlers arrived in the 1830s at a place called "The Forks," they saw the flowing Tittabawassee and Chippewa rivers surrounded by a beautiful wilderness of unlimited hardwood and pine forests, along with conifer swamps. Attracted by reports of the area's rich resources, settlers arrived in waves. Less than 20 years later, the City of Midland was incorporated.

It is often said that change is the only constant. At first, farming and lumber sustained the local economy. By the 1890s, the lumber barons had moved elsewhere. The agrarian economy shifted to manufacturing. The Dow Chemical Company formed—its success went hand-in-hand with the City's for over a century.

Above: Main Street Midland in the first half of the 20th Century. (Source: Midland The Way We Were: Acadia, 2001.)

For decades, Midland's Main Street hugged the curving banks of the Tittabawassee. The downtown teemed with residents, business people and visitors. However, recurring floods eventually forced relocation of the downtown and—not unlike many other Michigan communities—commercial opportunities moved to the City's periphery and along major road corridors with the emergence of the automobile.

Change can be managed in cities. The best way begins with preparation of a comprehensive plan. In the plan, future land uses and redevelopment opportunities are considered, along with the infrastructure, service and cultural components that support and sustain them and the community.

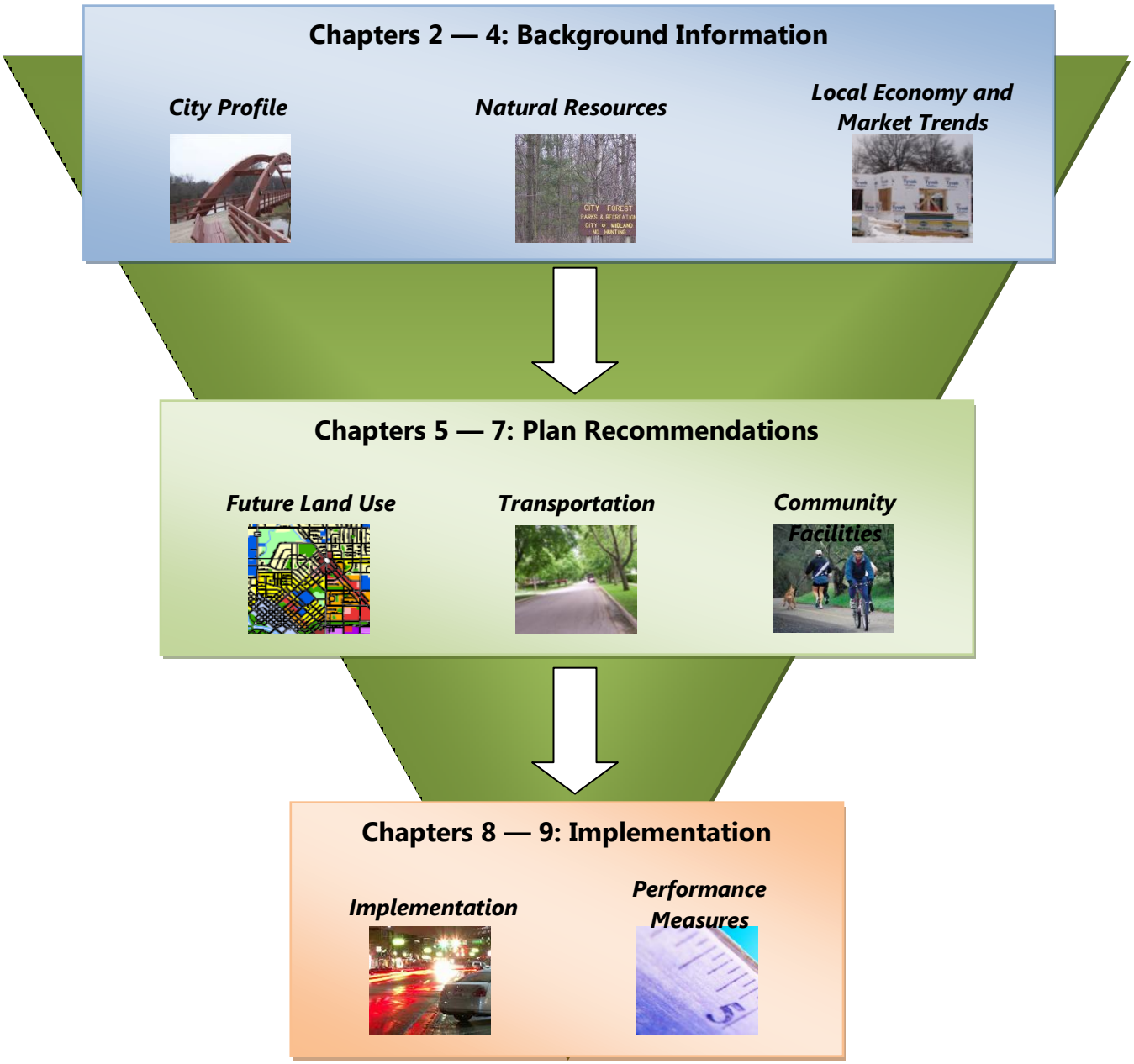
In acknowledging its history and the desire to manage change though preparation of a comprehensive plan, Midland takes the next steps to a prosperous and sustainable future.

Above: Main Street Midland in 2006

The comprehensive plan process summarized in this document began in 2005. Approval of the comprehensive plan occurred nearly two years later, after a massive effort involving hundreds of residents and a committed group of city officials. Their future begins today. In 2012 the Plan was updated to comply with the Michigan Planning Enabling Act.

Plan Organization

This document is organized in a logical progression that establishes current conditions, identifies a vision, denotes goals and objectives, and makes recommendations. Chapter 2: City Profile and Chapter 3: Natural Resource Inventory provides background base data of current conditions and trends in the Midland area. Based on that information and public input, the remainder of the document comprises the plan for the future of the City and the MUGA. Within these chapters, goals are identified that guide Plan recommendations and support the intent of the Plan.



Chapter 2:
City Profile

Introduction

The following is a snap shot of Midland today. Along with Chapter 3: Natural Resource Inventory, this serves as a starting point for understanding the City and aptly determining goals and recommendations. Included are discussions of the following:

- Population Characteristics
- Housing Characteristics
- Community Facilities
- Educational and Cultural Resources
- Existing Land Use

The City's transportation network is discussed in detail in Chapter 6: Transportation.

Population Characteristics

Evaluation of population characteristics provides a more comprehensive understanding of the people that live in Midland. In turn, this information contributes to determining future City needs. Characteristics that are important in this process include trends and projections, ethnicity, age, education, employment, and income. The following discussion profiles and compares the population characteristics of Midland and establishes key findings about its residents.

Population Trends and Projections

Midland has experienced a slower pace of population growth over the past 10 years (Figure 2.1) than in the previous decade. According to the US Census, Midland grew by less than 1% between 2000 and 2010 (Figure 2.2). Most metropolitan areas in Michigan, such as neighboring Bay City, are experiencing a decline in population. In contrast, Midland has experienced strong growth, at a rate greater than Saginaw Township and the State of Michigan. This growth rate is expected to continue gradually into the future.

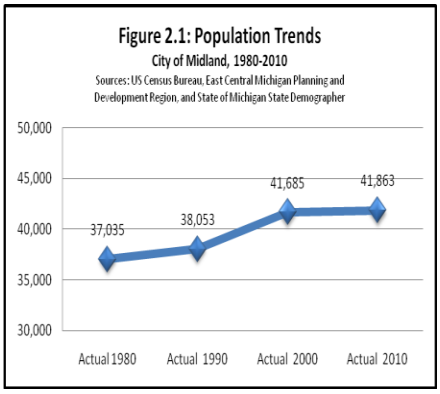


Figure 2.2 Population Trend, 1990-2010

Community Comparison

	Midland	Bay City	Saginaw Twp.	State of Michigan
1990	38,053	38,936	37,684	9,295,297
2000	41,685	36,817	39,657	9,938,444
2010	41,863	34,932	40,840	9,883,640
Growth Rate 1990-2010	<1%	-9%	9%	9%

Source: US Census Bureau

Household Trends

A household includes all the people who occupy a housing unit as their usual place of residence. Consistent with the population growth trend (Figure 2.1), Midland saw a decrease in the number of households between 2000 and 2010. People not living in households are classified as living in group quarters, such as college dormitories.

Figure 2.3 Households

Community Comparison

	2000	2010
City Of Midland	16,648	17,506
City of Bay City	15,208	14,436
Saginaw Twp	17,096	19,799
State of Michigan	3,785,661	3,872,508

Source: US Census Bureau

Due to the decline in average household size, Midland can expect that the future growth rate of households will be higher than that of the population. The decline in household size is a national trend that most communities are experiencing due to the evolution of family types and family sizes in the country. The City of Midland has experienced a decline in average household size over time, similar to the State of Michigan.

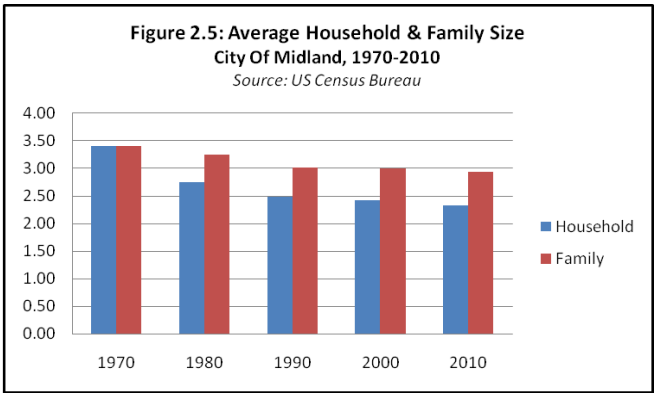
Figure 2.4 Average Household Size

Community Comparison

	2000	2010
City Of Midland	2.42	2.33
City of Bay City	2.38	2.38
Saginaw Twp	2.27	2.52
State of Michigan	2.56	2.49
United States	2.59	2.61

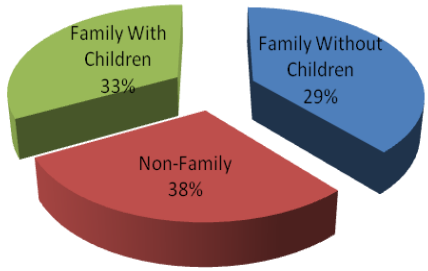
Source: US Census Bureau

According to the Census Bureau, a family is a group of two or more people who reside together and who are related by birth, marriage, or adoption. A family household may contain people not related to the householder, but those people are not included in the family and not all households contain families. Average family size has been decreasing over the past several decades, but at a lower rate than the average household size over the same period (Figure 2.5).



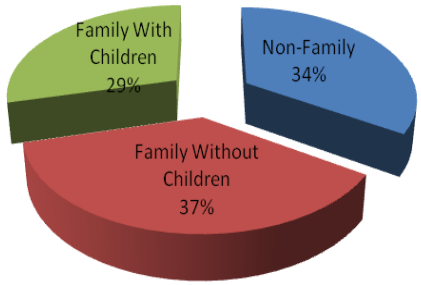
Household types in Midland are almost evenly divided between non-family, families with children, and families without children (Figure 2.6). The largest segment (38%) is "Non-Family." Of the 38% "Non-Family" segment, 82*%* of this subgroup is classified as living alone and may represent a high number of single professionals that work and reside in Midland or a high number of one-person elderly households.

Figure 2.6 Household Type
City of Midland, 2010
Source: US Census Bureau



As in Midland, household types in the State of Michigan are, in general, equally distributed among families without children, families with children, and non-families (Figure 2.7). The share of households comprised of families with children is roughly equal in Midland and across the state. However, of the households without children, Midland has a slightly higher concentration of non-family households, while the State has a slightly higher concentration of family households. This small difference is consistent with the logic that the concentration of non-family households is higher in urban areas than rural areas.

Figure 2.7 Household Type
State of Michigan, 2010
Source: US Census Bureau



Race and Age

The majority (91.9%) of the City's population in 2010 categorized themselves as 'white' according to the US Census Bureau (Figure 2.8). The second highest category is 'Asian' with 3.3% of the population.

The median age in Midland is 38.3 years of age. This is comparable to the median age of the State of Michigan (38.9 years) and the Saginaw--Bay City--Midland Metropolitan Statistical Area (40.3 years). Neighboring Saginaw Township is slightly older than the Midland population with a median age of 41.7 years.

A **Metropolitan Statistical Area (MSA) -** is a geographic entity defined by the Metropolitan areas of Saginaw, Bay City, and Midland based on the US Census Bureau. The Saginaw-Bay City-Midland MSA contains all of Saginaw, Bay, and Midland counties.

Source: US Census Bureau

Figure 2.8 Race and Age
City Of Midland, 2010

Race	City Of Midland	Saginaw-Bay City-Midland MSA
White	91.9%	84.2%
Black	2.2%	10.4%
American Indian	0.3%	0.4%
Asian	3.3%	1.1%
Pacific Islander	0.1%	0.1%
Other Race	0.5%	1.6%
Multi-Racial	1.7%	2.2%
Population By Age	**Midland**	**MSA**
0 to 4 years	6%	6%
5 to 9 years	6%	6%
10 to 14 years	7%	7%
15 to 19 years	8%	8%
20 to 24 years	8%	7%
25 to 29 years	6%	6%
30 to 34 years	6%	5%
35 to 39 years	6%	6%
40 to 44 years	6%	6%
45 to 49 years	7%	5%
50 to 54 years	7%	8%
55 to 59 years	6%	7%
60 to 64 years	5%	6%
65 to 69 years	4%	5%
70 to 79 years	6%	6%
80 and more years	6%	5%

Education, Income and Employment

According to the 2010 US Census, residents of Midland are well-educated with a total of 43% earning a Bachelor Degree or Graduate Degree (Figure 2.11). In comparison to the MSA and the State of Michigan, residents in the City of Midland have nearly twice the number of four-year college graduates within their city limits. In turn, City residents are able to obtain skilled, professional occupations and higher income levels. In 2010, the City had an unemployment rate of 7.2% based on population 16 years and older that are in the civilian workforce. Midland and Bay counties reported higher unemployment rates with 9.4% and 11.7% unemployment, respectively.

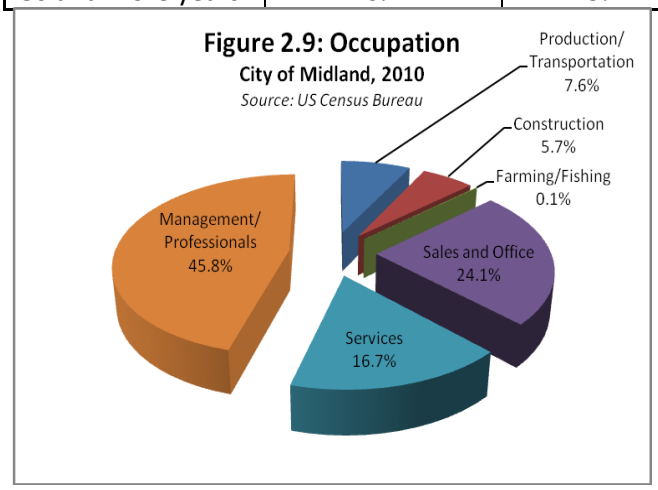


Figure 2.9: Occupation
City of Midland, 2010
Source: US Census Bureau

The largest employment sector for the City is the Management and Professional category, employing 45.8% of residents. The second largest employment sector is Sales and Office occupations

24.1%, followed by Services 16.7% Production/Transportation 7.6%, Construction 5.7%, and Farming/Fishing (0.1%).

The median household income in Midland is $46,861 which is higher than that of Bay City, Saginaw Township, the Saginaw-Bay City-Midland MSA, and the State of Michigan (Figure 2.10).

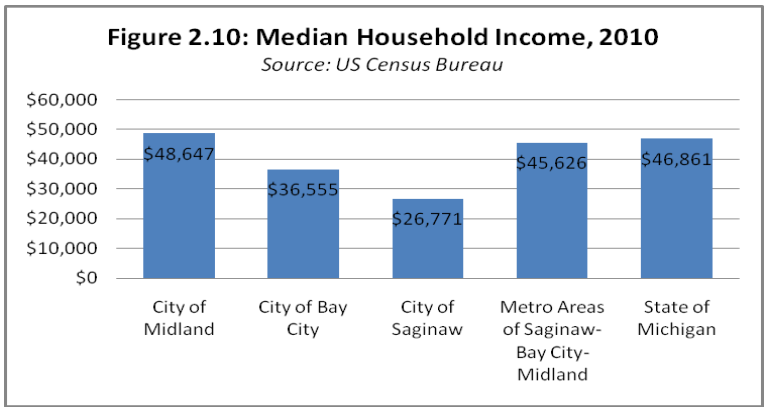


Figure 2.11 Educational Attainment, 2010

Educational Attainment	City Of Midland	Saginaw-Bay City-Midland MSA	State Of Michigan
Less than High School Diploma	6%	12%	12%
High School Graduate	22%	34%	32%
Some College, No Degree	21%	22%	23%
Associates Degree	9%	10%	8%
Bachelors Degree	25%	15%	16%
Graduate or Professional Degree	18%	8%	10%

Source: US Census Bureau

Housing Characteristics

Midland housing stock has been analyzed in order to establish more specific information about residential land uses and the neighborhoods in the City. It is important that goals and objectives in this plan focus on effective strategies related to these elements. Housing characteristics include total housing units, housing unit growth and changes, housing unit type, owner occupancy and housing value.

Housing Age, Type, and Tenure

The 2010 US Census reported 18,119 housing units in the City of Midland. As evidenced by the age of housing (Figure 2.12), significant housing growth occurred between 1940 and 1999. Midland's median year of structures built is 1971, while the Saginaw Bay City Midland MSA is 1966.

Figure 2.12 Age of Housing
City of Midland, 2010

	City Of Midland	Saginaw-Bay City-Midland MSA
2005 or later	0.1%	0.1%
2000 to 2004	3.6%	5.8%
1990 to 1999	12.0%	9.9%
1980 to 1989	13.0%	7.9%
1970 to 1979	16.6%	17.8%
1960 to 1969	15.3%	13.9%
1950 to 1959	21.2%	15.8%
1940 to 1949	6.4%	7.6%
1939 or earlier	11.8%	20.2%

Source: US Census Bureau

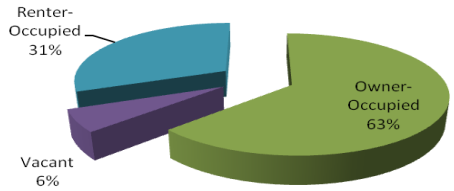
As detailed in Figure 2.13, there have only been slight changes in the diversity of housing types offered from 1990 to 2000. Detached single-family homes continue to be in the majority. These homes come in the form of traditional neighborhoods at the City's core, low density neighborhoods nestled in extensively wooded areas, and typical suburban subdivisions with moderately sized lots. The City also has a high percentage of multiple-family housing units with a total of 24% in 2010. Other housing types include attached single-family condominiums and duplex, or two-family, units.

1-unit attached	4%	4%	5%
2-9 units	10%	10%	12%
10 or more units	13%	14%	12%
Other	5%	3%	3%

Source: US Census Bureau

Of these 18,119 homes, 6% were reported vacant by the US Census Bureau (Figure 2.14). In comparison to similar communities, this vacancy rate is typical. There are 11,415, or 63%, owner-occupied units in the City. While this is percentage is a bit low, it can be attributed to the high percentage of multiple-family units. Therefore, it does not raise significant concerns about rental housing when considering the City as a whole. A closer look at census block data can help to isolate any neighborhood specific problems.

Figure 2.14 Housing Tenure
City of Midland, 2010
Source: US Census Bureau



Housing Value

As indicated during the discussion of income and education, housing values in Midland are typically higher than those in comparison communities and counties. When compared to Saginaw Charter Township, Bay City, and the State of Michigan, Midland's median housing value of $139,200 is higher than Saginaw metropolitan area at $114,900, and significantly lower than the State average of $152,600 (Figure 2.15).

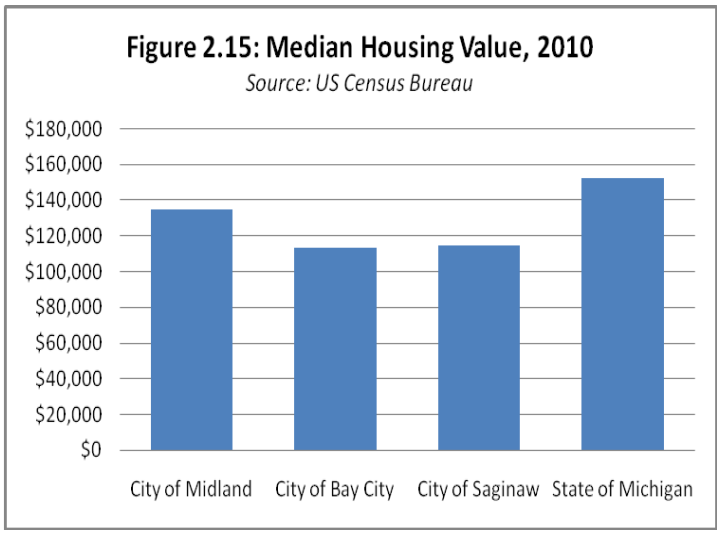


Figure 2.16 provides a breakdown of all owner-occupied housing values, including units in multi-family structures, aggregated by price range. The price range with the most homes was $100,000 to $149,999 with 31%. A strong majority of the homes, 73%, were valued between $50,000 and $199,999.

Figure 2.16 Housing Values

City of Midland, 2010

	City Of Midland	Saginaw-Bay City-Midland MSA
Less Than $50,000	4%	10%
$50,000 to $99,999	20%	28%
$100,000 to 149,999	31%	29%
$150,000 to $199,999	22%	17%
$200,000 to $299,999	12%	10%
$300,000 to $499,999	9%	4%
$500,000 and up	1%	1%

Source: US Census Bureau

Community Facilities

Midland's Community Facilities include a wide array of city services, parks and recreation, and utilities. This section provides an overview of the current organization and facilities associated with these entities, while future goals and recommendations are established in Chapter 7: Community Facilities Plan.

City Services

The City of Midland is governed by a five member City Council, each representing a designated ward of the community. The daily activities of city government are carried out by more than 24 different service areas and 346 full time and 104 part time employees under the direction of the City Manger. The following is a summarized listing of most of the city departments and offices:

- Cable Channel
- City Assessor
- City Attorney
- City Clerk
- Engineering Department
- Finance (Purchasing)
- Fire Department
- Human Resources Department
- Information Services
- Library
- Parks and Recreation Department
- Planning and Community Development Department (Building, Housing)
- Police Department
- Public Services Department (Parks and Recreation, streets, sanitation)
- Utilities Department (water and sewer)

Parks and Recreation

The City of Midland is rich with extensive park and recreation facilities. An inventory of all park and recreation opportunities in the community prepared for the separate Parks and Recreation Master Plan 2010-2015 reveals there are 80 parks are owned and operated by the City of Midland, with over 2,700–acres of parkland. The City park system provides an extremely diverse range of recreation opportunities:

- Several small neighborhood and pocket parks that offer playground equipment, picnic shelters, grills, and benches
- Traditional active recreation including basketball, roller hockey, volleyball and tennis courts, and fields for baseball, softball, soccer, and football.
- Diverse active recreation such as a golf course, disc golf courses, dirt bike track, and skateboard park.
- Passive recreation areas that offer open fields for pick-up games, relaxing in the shade, hiking and biking trails, sledding, cross country skiing, snowshoeing, fitness courses, public art, horseshoe, shuffle board,
- Water activities such as fishing, beaches, swimming pool, spray park

Utilities

Sanitary Sewer System. The City operates its own sanitary sewer collection system which consists of pump stations and sewer lines under the city streets. The system collects wastewater and transports it to the City of Midland Wastewater Treatment Plant. Wastewater is recycled at the Treatment Plant through a stringent process that involves physical and biological processes that remove waste products from the water before it is discharged into the Tittabawassee River. The process and discharge is strictly regulated and monitored by State and Federal laws.

The Wastewater Treatment Plan is capable of treating up to 10 million gallons of wastewater a day, but on average it treats 7 million gallons a day. This indicates there is ample available capacity to accommodate future growth. All wastewater collection links are cleaned on a 2 year rotation.

Storm Water Collection System. The City's storm water collection system is separate from the sanitary sewer system and is constructed primarily under City streets with some areas in the City utilizing ditches and streams for water runoff. The City's storm water system collects precipitation runoff from rooftops, streets, yards, and parking lots and discharges it to local rivers, streams, and drains.

The City's storm water collection system is made up of three major drainage basins identified by the location of their respective outfall. These basins are the Sturgeon Creek Basin, the Snake Creek Basin, and the George Street Basin. Catch basins and other elements of the system are cleaned on a four-year rotation.

Water System. Midland has received its source potable water supply from Lake Huron since 1948. The source water pumping system is jointly owned and operated by the cities of Midland and Saginaw through the Saginaw-Midland Municipal Water Supply Corporation. Water from Lake Huron is drawn into the system through two intake structures located off the shore of Whitestone Point (near AuGres, Michigan). Combined, the two intakes provide a maximum of 230 million gallons per day of available capacity.

Once the water travels the 65 mile pipeline from intake to the Midland Water Treatment Plant, chemicals are added to the raw water to further purify and disinfect it. The City's Water Treatment Plant is capable of providing 48 million gallons per day of treated Lake Huron water to Midland area homes, businesses and industries. In addition, there is a 110-million gallon source water reservoir located to the north of the City of Midland Water Plant on Bay City Road that is used for flow equalization and an emergency supply in case of loss of water supply. There is ample capacity available to accommodate future growth.

Landfill/Recycling. The Midland Sanitary Landfill provides an environmentally responsible and regulatory compliant waste disposal site for Midland County residents. The site includes a landfill, composting, and recycling facilities. City residents are offered curbside pick-up of trash and recyclables along with opportunities for drop-offs.

Gas to Energy. Beginning in 2001, the City began the active collection of landfill gas and the generation of renewable energy. Presently, the project is generating 1,200 MW of base load electricity. This project has dramatically reduced the odor complaints from the landfill while creating a revenue opportunity.

Educational and Cultural Resources

Education and culture have a long-standing interrelationship since the identification of significant historic and cultural resources enhances a community's resource base. The legacy of Midland's private foundations is reflected in the outstanding educational and cultural facilities available within this mid-size community.

Education System

Midland Public Schools. Public education is provided to Midland residents by the Midland Public School District and charter schools. Within the district there are currently 8 elementary schools, four middle schools, two high schools, and one alternative high school. Students attend the schools as geographically designated by the district or can request a different school through the district's "School of Choice" Program.

America's Promise Alliance named Midland one of the 100 best communities for young people for 2010.

The school sites and facilities cover many acres of land in the City. Therefore, the school district plays a significant role in not only the quality of life and education for residents but also in shaping the physical development aspects of the community.

Colleges/Universities/Research Institutes. Midland residents are offered a number of higher learning opportunities within and near the City. Specifically, there are six area colleges and universities including Central Michigan University, Northwood University, Saginaw Valley State University, Delta College and Davenport University. In addition, Midland also is served by a private research institute for professional development, the Michigan Molecular Institute.

Architecture

The City of Midland has benefited from the architectural works of Alden B. Dow and his influence is present in many existing buildings and residential homes. This architectural heritage serves as a distinguished influence on the landscape and Midland's community character.

Religion

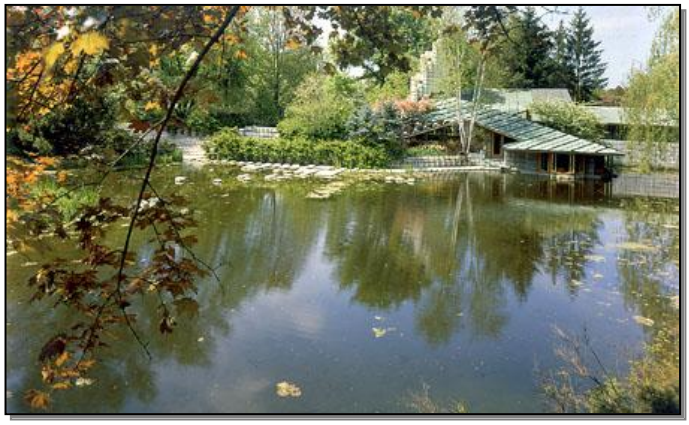
Midland is known as the "City of Churches." Today, more than 85 places of worship represent many denominations in the City.

Grace A. Dow Memorial Library

Designed by Alden B. Dow, the library opened its doors in 1954. The building is dedicated to Grace A. Dow, the wife of Herbert H. Dow, founder of The Dow Chemical Company. The Memorial Library hosts special programs for youth, teen and adults, as well as writer clinics and provides service to over 50,000 card members.

Midland Center for the Arts

Founded in May of 1971, Alden B. Dow dedicated the Center for the Arts. This world-class venue provides state-of-the-art stages for audiences of 400 to 1500 to showcase both local and international performing artists.



The Midland Community Center

The Community Center is a non-profit center that provides a wide array of public recreation and social programming activities for people of all ages.

Bradley House and the HH Dow Historical Museum

The Bradley home was built in 1874 and provides a glimpse of the Victorian Gothic architecture of that time period. The Herbert H. Dow Historical Museum is a replica of the original grist mill, known as the Evens Flour Mill.

AB Dow Home and Studio

Constructed in 1934, the Alden B. Dow Studio represents the very architecture present in many of the existing homes in the Midland area. Built in concert with nature, this active studio is an architectural landmark within the community.

Dow Gardens

Spread over 100 acres, Dow Gardens shares with its visitors the landscaping designed for the home of The Dow Chemical Company founder, Herbert H. Dow, in 1899.

Parks and Recreation: Cultural Resources

Midland's Parks and Recreation Department maintains 80 individual parks throughout the City, providing a variety of recreational services. The park system contains over 2,700 acres of land in Regional/Metropolitan, Community, District and Block parks. Some highlights are listed below.

Pere Marquette Rail Trail. The 30-mile Pere Marquette Rail-Trail is used for walking, running or bicycling and provides a recreational outlet for residents of all ages and abilities. Midland residents have direct access to the trail from The Tridge.

The Tridge. The Tridge, located in the heart of downtown Midland, is a three way pedestrian footbridge built in 1981. The Tridge is one of Midland's most visited parks, and is the starting point of the Pere Marquette Rail Trail.

Trilogy Park. Located in Chippewassee Park, just over the Tridge in downtown Midland provides an outdoor recreation environment for area youth interested in in-line skating and skateboarding.

Currie Municipal Golf Course. Currie Municipal Golf Course is Midland's only public golf course and is located within the floodplain between the confluence of the Tittabawassee and Chippewa Rivers. The golf course provides for public recreation and pervious areas for flood plain management during high water events.

Existing Land Use

Planning for future use is important to understand because it significantly shapes a community's character and quality. In order to create this vision for the future, it is important to know what exists today because that becomes the framework for the future. This section evaluates the existing land use patterns of the City.

An inventory of existing land uses was conducted in April of 2006 to verify the use of properties within the City. This inventory included a review of the City's mapping, aerial photography and a visual assessment survey of the City. This land use inventory is a 'snap shot' of the City's existing land use pattern and will be used to evaluate key issues and strategies related to future land use and development character. Subsequent changes to land use and new development that occurs during the master plan update process will be taken into consideration, but may not be reflected on the existing land use map. The Future Land Use Plan, including factors, goals, land use categories, and Map 5.1: Future Land Use, outline the future development patterns for the City and MUGA in Chapter 5: Future Land Use.

Each land use category is described in this section. Refer to Map 2.1: Existing Land Use for the location of the various land uses. Figure 2.17 provides an approximate acreage breakdown of each land use category by acreage.

Figure 2.17 - Existing Land Use

Source: City of Midland Planning Department, 2012

Land Use	Acreages	Percent
Single Family Residential	5620	24.7%
Two Family Residential	72	0.3%
Multiple Family Residential	578	2.5%
Mobile Home Park	105	0.5%
Retail commercial	728	3.2%
Office Service	595	2.6%
Light Industrial	871	3.8%
Heavy Industrial	4123	18.1%
Waste Related Activity	367	1.6%
Public/Semi-Public	3131	13.8%
Parks and Recreation	2376	10.4%
Parking/Airport	65	0.3%
Agricultural	24	0.1%
No Activity	2597	11.4%
Roads/Water	1498	6.6%
Total	22751	100.0%

Single-Family Residential. The Single-Family Residential land use category includes all parcels in the City occupied by a single-family home. It is the most prevalent land use in the City. In accordance with zoning, the density of these single family areas range from 3 to 6 units per acre. This small-lot residential pattern is consistent with Midland's dense, urban form. While many neighborhoods are of traditional design with grid streets and blocks, there are other areas of the City that offer larger lots, curvilinear streets, and cul-de-sac design. This variety of neighborhood types accommodates different lifestyle choices and desires.

Two-Family Residential. The Two-Family Residential category includes all lots in the City occupied by two-family dwellings, or duplexes. These residential uses appear in small pockets within single family neighborhoods. These are valuable housing resources because they offer a more affordable, lower maintenance option but within the context of a single family neighborhood. Current zoning densities allow a total of 4 duplexes per acre.

Multiple-Family Residential. Multiple-Family Residential includes all housing that offers three or more dwelling units per structure. In Midland, this includes a variety of apartment buildings, apartment complexes, and attached low-rise owner-occupied units sold as condominiums. Similar to two-family residential, they are located in small pockets within single family areas but are more often located along main roadways and close to commercial nodes and centers. Multiple-Family Residential densities are currently zoned at four structures per acres, of varying densities from 3-5 units to seven or more units per structure.

Manufactured Housing Community. This use includes developments of manufactured housing that are licensed and developed in accordance with the Manufactured Housing Commission. There are four manufactured housing communities in Midland, located on the outer edges of the City. Three are located on the southeast side and the other is located in the northwest.

Retail Commercial. Retail Commercial includes all commercial uses that meet shopping, restaurant, entertainment, and service needs of the community and, in many cases, the region. While retail commercial is found throughout the City, the greatest concentrations are at US-10 and Eastman Avenue which includes the mall and many regional shopping centers; along Saginaw Road between Ashman and M-20; at the corner of Eastman and Saginaw Road; and in downtown at Ashman and Main Street.

Office Service. Office Service uses includes professional offices, medical clinics, and dental clinics. These uses are generally found in the same concentrations as the Retail Commercial uses. There is, however, an office concentration along Wackerly Street between Eastman Avenue and Jefferson and at Eastlawn Avenue and Swede Avenue. There is also an area of office service on Eastman Avenue between Saginaw and Wackerly and at the Dow Chemical headquarters.

Public and Semi-Public. This category includes places of worship, schools, City and County offices, the post office, the hospital, and other civic-related uses available to the public. These uses are located throughout the City and most are conveniently located within, and integrated into, the residential neighborhoods.

Parks and Recreation. Parks and Recreation includes all public parks and open spaces in the City. The majority of are owned and operated by the City while others are regional or privately owned. As noted in the profile of community facilities, the City has a large number of parks available for residents.

Light Industry. Light Industry uses are limited to operations that focus on warehousing, research and technology, and limited manufacturing and assembly of products. While these uses generate truck traffic, the operations typically have lower impacts in terms of noise and odors. They also generally operate completely within enclosed buildings and have little to no outdoor storage.

Heavy Industry. Heavy Industry supports a large range of industrial operations including manufacturing, assembling, and many other high impact activities. It also includes lands that, while free of structures or noticeable activity, are vital to the operations of heavy industrial areas. The major Heavy Industry use is the Dow Chemical Company and the Dow Corning Company.

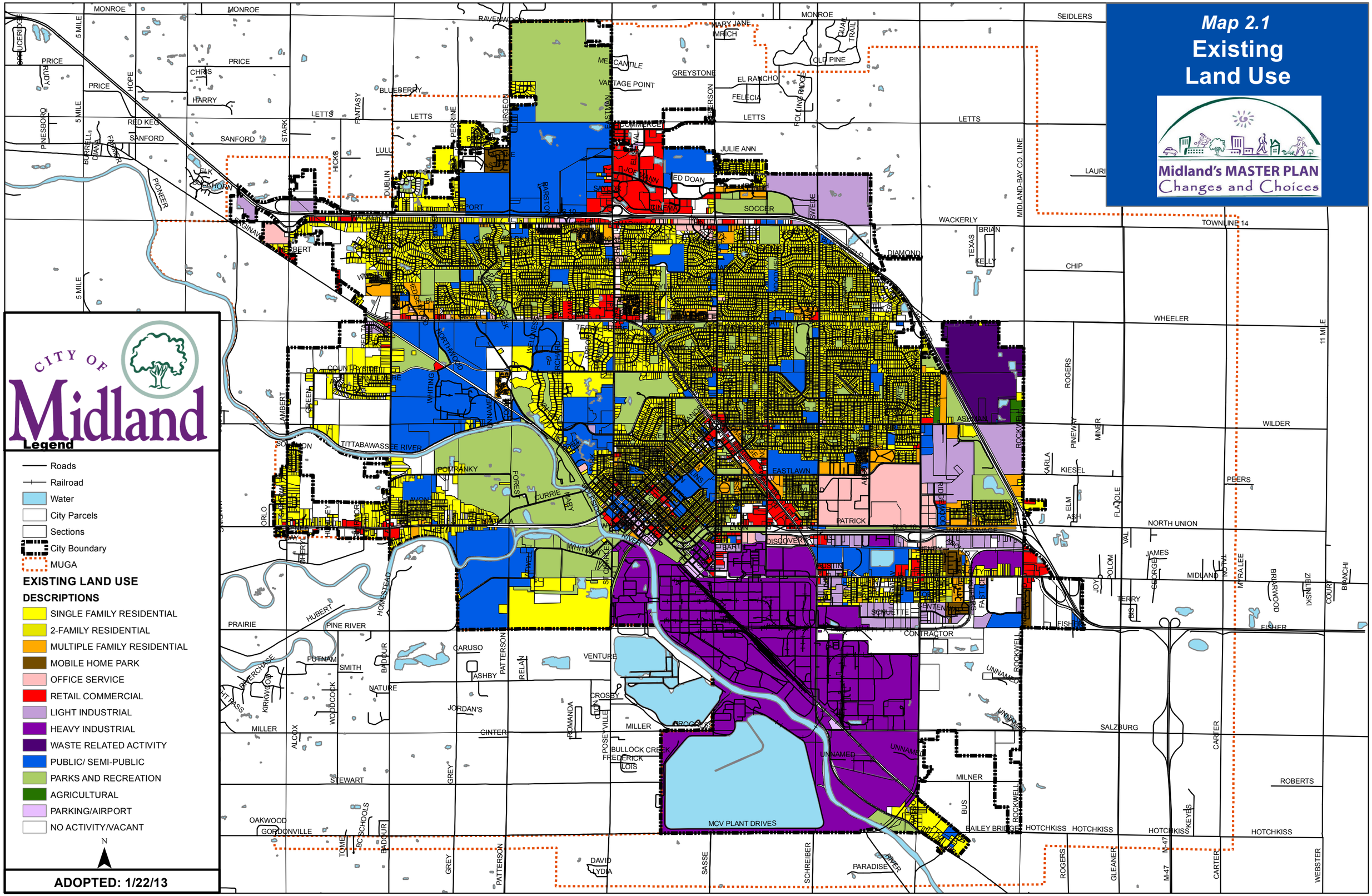
Waste Related Activity. Waste Related Activity pertains to the City-owned and publicly operated landfill on the east side of U.S.-10, south of Wheeler and north of Wilder.

Parking/Airport. Parking/Airport includes all municipal and other dedicated parking areas throughout the City, as well as the City Airport.

No Activity. No activity category includes all other land not identified as an active use above. Many of the areas in this category are floodplain, wetlands, woodlands, agriculture, and other natural areas that are not developable to a higher use as they currently exist. This category also includes any vacant lots throughout the City that have no building or activity.

Map 2.1
Existing Land Use

Midland's MASTER PLAN
Changes and Choices



Chapter 3:
Natural Resources Inventory

Introduction

Located in the heart of an agrarian land base, the City of Midland has developed into a mature 'green' city through thoughtful planning. With 83 city parks, 5,442 acres of woodlands, and miles of natural waterway, residents have an opportunity to get outside and enjoy nature in almost every section of the City. The presence of existing woodlands and wetlands in Midland has been shaped over the course of time by the development of new streets, residential subdivisions, new businesses and industries which are customary metropolitan uses of land.

Many prominent natural features are found throughout Midland, such as the confluence of the Tittabawassee and Chippewa Rivers, Sturgeon Creek, and various wetlands, wooded areas, and open space. These natural features help define the character of the City. Therefore any development on the remaining vacant areas should be considerate of the existing natural features.

An inventory of existing natural features was conducted to identify potential opportunities for conservation and open space developments, and also to identify areas where natural features can be improved upon. Site design should take advantage of the benefits that natural features provide and minimize any disruptions or loss. Map 3.1: Natural Features, illustrates the approximate locations of wetlands, woodlands, and water in the City and MUGA, and floodplain boundaries in the City

Figure 3.1: Existing Land Cover

Midland's Land Cover**		Source
Coverage	Acres **	
Woodlands	5,442	National Land Cover Dataset (NLCD), Michigan Center for Geographic Information (M-CGI), 1992.
Wetlands	2,034	National Wetlands Inventory (NWI), Michigan Center for Geographic Information (M-CGI), 1994.
Water	1,117	Michigan Center for Geographic Information (M-CGI), 2005.
Floodplain	3,933	LSL generated data for City of Midland digitized polygons, 2006

*** Each acreage calculation is from a different dataset and does in many cases overlap with other calculations. For example, each acre of forested or wooded wetlands in the floodplain area are counted as an acre in each of those three categories.*

Regional Scope

A watershed is an area of land that drains into a common body of water. Midland is located within Michigan's largest watershed, known as Saginaw Bay, which encompasses over 8,500 square miles of land. The watershed is known as America's largest contiguous freshwater coastal wetland system, and drains approximately 15% of Michigan's land area. Preserving natural water features, and their adjacent lands, is one of the most practical ways to protect water resources and manage storm water.

Promoting low-impact development and preventing excess storm water runoff is a main priority for Midland's immediate land area and also for the watershed that eventually drains into Lake Huron. By providing standards for natural feature improvements, Midland can improve the natural aesthetic of its northern city atmosphere, while providing low-cost natural infrastructure that can enhance local water quality, control flooding and improve the overall health of the watershed. While Lake Huron is not within a close distance to Midland, it is the source of drinking water for all Midland residents.

Soils

The physiographic conditions within the Midland region is characteristic of many eastern mid-Michigan communities, which as a result of glacier activities 15,000 years ago created a low and level terrain known as Lake-border plains. Elevations within the area range from 600 to 675 feet above sea level.

What the glaciers left behind lies beneath the surface in our soils. A soil survey reveals a significant amount of information about an area that is not visible from the landscape. Soil surveys assist in identifying areas that due to existing soil structures can either accommodate development or are unsuitable for development.

Soil deposits found in the area are a combination of loamy and sandy soils which are suitable for most development. Soils are ranked in a variety of ways to assist communities on how to best manage growth and development and will influence future development in areas where there are large portions of undeveloped lands, especially the northern boundaries of US-10 and adjacent Larkin Township.

Areas of poor soil suitability tend to concentrate in low and level terrain near areas of water where there is little natural drainage. Midland has a number of areas where frequent flooding and standing water occur along the waterways due to poorly drained soils. Implementation of best management practices to reduce the amount of impervious surfaces and preserve the native vegetation that grows within these areas can assist in the soils ability to manage storm water and prevent excess runoff.

The predominant soils in the City are classified as very limited for development. Due to the limited soils and area slopes of 0% to 6%, the natural resource base limits the ability to develop properties without a substantial amount of engineering and related infrastructure.

Midland's urbanization has engineered the landscape to accommodate development through the use of storm sewers, gutters, and surface ditches to drain area lands. As a result, dependence on soil types to limit or design future development will have little influence in the urban areas of town; however, attention to development restrictions in undeveloped areas should be carefully evaluated to protect the areas ability to natural infiltrate rain water and prevent excess storm water runoff. For example, construction activities can be staged to minimize the amount of soil exposed to reduce the amount of erosion and runoff potential that may occur.

Wetlands

Wetlands are vital to the environmental quality of Midland and serve a variety of important functions that benefit the community such as:

- mitigating flooding by detaining surface runoff;
- controlling soil erosion and sediment loading in rivers and lakes;
- providing links with ground water and improving water quality, and;
- providing important wildlife, flora, and fauna habitats.

Wetlands may include areas that are seasonably wet, by a surface or ground water influence, to areas that are more permanently saturated throughout the year. An additional aesthetic benefit to the City is the unique habitat it provides for migratory and resident wildlife.

Wetlands are scattered throughout the City, with the majority of wetlands found along the edge of water ways. There are some isolated wetlands in the northeast corner of the City, as well as within the designated floodplain area.

Currently, the Michigan Department of Environmental Quality regulates all wetlands that are contiguous with (within 500 feet of) a waterway or any wetland that is greater than five acres in size through Part 303 of the Natural Resources and Environmental Protection Act (NREPA). Any dredging, excavating, construction on or making use of a wetland (such as for storm water) requires a permit from the MDEQ. Permits will generally not be granted unless the issuance is in the public interest and necessary to realize the benefits derived from the activity. If a wetland fill permit is granted, mitigation, such as creating new wetlands within the same drainage way or enhancement of existing wetlands is required. Refer to Map 3.1: Natural Features for an illustration of the location and type of wetlands located in the Midland area.

Vegetation

The Midland area was originally covered with hemlock and white pine forests. Marshes and swamps were present in many of the low lying areas and served as excellent habitat for Michigan's native wildlife. Much of the surrounding landscape was timbered and utilized for agricultural activities. Second growth forests emerged as a mixture of hardwoods and pine that surround the perimeter of the City.

The predominant vegetation within the City consists of a manicured, urban landscape of grass, lawns and landscaping plants. Woodlands within the City limits can be found in street trees and are being managed and planted with a variety species. A diversity of tree species along the street right-of-way is important for a safe and healthy urban forest.

Woodlands influence the micro-climate by moderating ground-level temperatures, reduce air pollution and soil erosion, provide effective noise and wind screens, and provide important wildlife, flora, and fauna habitats.

A significant wooded feature within Midland is the City Forest. The Midland City Forest is roughly a square mile of Saginaw Valley woodland bisected by Newell Creek in the northern portion of the City. It is a mixture of wetland and low land covered with mature pines and mixed hardwoods and provides a source of natural cover for local wildlife, as well as low-impact public recreation opportunities. The City

Forest is within close proximity to portions of the Au Sable State Forest, creating opportunities for the City to provide links to wildlife corridors.

A wildlife corridor is defined as an area of natural or semi-natural habitat that has been linked to nearby areas of habitat to form a corridor of undeveloped land that can maintain movement of wildlife through an urban setting. Wildlife corridors also provide additional privacy for area residents and allows for a 'greening' of neighborhoods by linking habitats and woodlands. These can be either inland or along a water way.

Vegetated systems along the waterfront provide habitat for aquatic wildlife and allow room for floodwater to be absorbed without damaging residential structures. Known in many urban areas as green infrastructure, these areas are defined as an interconnected network of green space and other environmental assets that conserve the function of the natural ecosystem and provide associated benefits to people. River and creek side vegetation cover also varies throughout the City, with portions of Jacobs Drain running through large portions of commercial land uses, with a large amount of impervious surface, to areas of Sturgeon and Snake Creek running through manicured residential neighborhoods.

Streamside buffers with native vegetation can be a low-cost and natural enhancement for the stabilization of the bank. In addition, an evaluation of City park lands along the Tittabawassee River should be measured and monitored for improvement to vegetated buffer strips along the waterways to prevent fertilizer and sediment runoff and stream bank erosion.

Northern portions of the City which are still undeveloped provide for opportunities to properly integrate natural features within a new development, such as open space developments. By preserving large portions of natural vegetation within an open space design development, unique habitats can be preserved. From an environmental perspective, open space preservation can help protect air, land, and water resource quality. Residential development can be accommodated without disrupting woodland stands, enhancing neighborhood developments and improving the overall aesthetic look the community.

A significant resource just outside of Midland is the Chippewa Nature Center. Over 1,200 acres of land has been preserved for the general public to experience a varied array of ecosystems, from wetlands, woodlands and a interpretive farm. Located on the south side of Chippewa River, the property provides low impact recreation and learning opportunities for area residents, while also preserving a system of open land that buffers the waterway.

Consistent with the ecosystem theme, preserving open spaces in a manner that promotes linking systems through naturally occurring corridors can improve the natural feature base. Ensuring that green space, parks and pathway access is readily available creates a vital city core for thriving residents and a clean environment. Urban green space provides significant benefits including improving overall quality and attractiveness of neighborhoods; improving human health; increasing property values; reducing heating and cooling costs; and helping to stabilize city weather. For coordination of the long-term stewardship and management of preserved natural areas and corridors, partnerships with area land conservancies that have inventoried these systems would be beneficial.

Water

Rivers and streams are integral elements of a community. They provide an aesthetic residential and recreation element, as well as serve the needs of area wildlife. Three main rivers flow through Midland County, the Pine, Chippewa and Tittabawassee Rivers. The most notable natural resource in the City of Midland is the presence of the confluence of the Tittabawassee and Chippewa Rivers along the banks of downtown. The headwaters of these rivers stretch inland and are a part of the greater Saginaw Bay Watershed system with coverage in all or parts of 22 counties.

The presence of these waterways has created a large area of riparian ecosystem within the City important for wildlife habitat, riverside vegetation and public recreation. Their connection to area wetlands and floodplains makes them an important part of the water storage and filtration process. The river environment also presents a natural environment for civic gatherings, for both residents and tourists.

Areas where land and water interface, riparian areas, tend to be fragile environments. Midland has many City parks that have protected riparian areas. For consistency throughout both public and private landholdings, riparian buffers that follow all waterways can be measured and catalogued to find a recommended distance that appears to be consistent along the entire waterway. Riparian buffers provide protection from erosion and sedimentation, as well as removing pollutants associated with manicured park lands from area storm water runoff. Buffer strips are areas of vegetation located adjacent to streams or rivers, lakes, ponds and wetlands. These buffer strips can be a low maintenance alternative to flood control if plantings are done using native vegetation that is acclimated to area weather conditions and can stabilize themselves in area soils.

Floodplains

The floodplains associated with the Tittabawassee and Chippewa Rivers occupy a significant area within the City. The nearly level alluvial plain that borders these waterways has created a substantial floodplain within the City that encompasses nearly 3,900 acres of land. Within these floodplains, a large percentage of the City's wooded lands and wetlands are also present. Indeed, a portion of the Midland downtown area lies within the floodplain and approximately 1,000 parcels are located within the designated floodplain. The floodplain boundary within the City of Midland is delineated on Map 3.1: Natural Resources.

Floodplain land receives some measure of protection under state and federal regulations. Areas designated as a flood hazard area include land, which on the basis of available floodplain information is subject to a 1% or greater chance of flooding in any given year. Despite these existing regulations, Midland still has a key role to play in maintaining the integrity of the floodplain. Loss of floodplain land or a change in its use can cause diminished water quality and increased flooding downstream.
Areas located within the 100 year floodplain are approximate and should be used for general planning purposes only; the Flood Insurance Rate Map (FIRM), published under the Federal Emergency Management Act, is the official source. The City of Midland is an active participant in the Community Rating System (CRS) which was created by the National Flood Insurance Program (NFIP) to encourage

communities to establish floodplain management practices that exceed the minimum federal standards required for NFIP participation. The better the rating received in a 10 point scale, the lower the insurance rates are for property owners and renters. The Michigan Department of Environmental Quality (MDEQ) is responsible for regulating floodplains and approving any alternatives.

Land Quality

Midland has a long history of industrial development along its riverfront. As a result, a number of sites have become contaminated from operations occurring years ago when environmental protection measures were not a high priority. Many funding opportunities exist to stimulate reuse and redevelopment of these sites which can remediate soils found on many of these properties.

A `brownfield site' means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. A single property or a city can, under state regulations, be designated as a brownfield – the City of Midland has received this designation, which provides certain advantages in responding to contaminated properties and their cleanup The Michigan Brownfield Program provides opportunities for remediation of environmental problems on-site to make them competitive with non-contaminated and/or "Greenfield" sites. Funds are targeted to projects that promote economic development and reuse of brownfield properties, and may serve to reinvigorate existing urban areas in Midland that have been neglected.

The Michigan Department of Environmental Quality maintains a listing of contaminated sites through their Environmental Response Division. Michigan's Public Act 451 of 1994 (the Natural Resources and Environmental Protection Act), also known as NREPA, provides for the identification, risk assessment, funding, remediation and priority evaluation of environmental contamination sites in the state.

Part 201 of this act, Environmental Remediation, discusses the details of remediation of contaminated sites, and Midland has sixteen sites documented as Part 201 sites. Part 213 of NREPA addresses Leaking Underground Storage Tanks, known as LUST sites, and Midland has 48 designated open LUST sites. An Open LUST site means a location where a release has occurred from an underground storage tank system, and where corrective actions have not been completed to meet the appropriate land use criteria. LUST sites are also classified as brownfields for purposes of economic development and can be remediated through new development opportunities and available grant funding.

Because water resources are interconnected, many uses on the land and within the soils have a long-term affect on the area watershed and water quality. Improvements and clean up of all know sites can make dramatic improvements to area water quality and the City's quality of life.

Map 3.1 Natural Features

Midland's MASTER PLAN
Changes and Choices

CITY OF Midland

LEDGEND

- CITY BOUNDARY
- WOODLANDS
- WATER BODIES
- SECTIONS
- MUGA
- NATIONAL WETLANDS INVENTORY

N

Adopted: January 22, 2013

Chapter 4:
Local Economy and Market Strategies

Introduction

A strong diversified economy in Midland and the surrounding region is critical to the well being and future success of the city. Midland has several unique advantages – two Fortune 500 companies' global headquarters, a nationally recognized public school system, a regional hospital affiliated with University of Michigan, and beautiful natural features – that make it a wonderful place to live, work and play. The community draws from several supporting organizations to bring projects together and make them a success. These partners include several local foundations, non-profits and governmental agencies. The City's Master Plan is based on the understanding of a desired economic future for the city of Midland. Through careful thought and planning, Midland can continue to chart its unique course while providing for it citizens and local businesses.

Every community seeks to provide a strong economic base so that its residents can prosper and that community services are available. The residents of the City of Midland recognize the importance of providing for commercial and industrial economic growth while creating additional tax-base and preserving significant natural features for the community. In today's global market place where transportation and telecommunication are no longer major hurdles, start-up companies are realizing that their success is based upon a talented and educated workforce, creative ideas and innovation and the ability to adapt at a rapid pace. As an aggressive and enthusiastic supporter of industrial and manufacturing growth, Midland has the ability to attract and retain businesses which support the local economy.

Existing Conditions

Employment Sector Profile

As of March 2012, the number of people in the City of Midland's civilian labor population age~~d~~ 16 and over totaled 19,114. Table 4.1 shows the employment in Midland County by industrial NAICS code.

Figure 4.1: City of Midland Employment by Industry NAICS Code, 2Q 2011

NAICS Code	Industry	Employment
31-33	Manufacturing (Continuing Growth Area)	4,654
61,62	Educational services, and health care and social assistance (Continuing Growth Area)	4,457
44-45	Retail trade	2,165
71, 72	Arts, entertainment, and recreation, and accommodation and food services	1,786
54, 55, 56	Professional, scientific, and management, and administrative and waste management services (Continuing Growth Area)	1,256
81	Other services, except public administration	981
52, 53	Finance and insurance, and real estate and rental and leasing	978

23	Construction	926
22, 48-49	Transportation and warehousing, and utilities	527
92	Public administration	451
42	Wholesale trade	436
51	Information	346
11, 21	Agriculture, forestry, fishing and hunting, and mining	151

Source: US Census Bureau, American Community Survey, 2008 - 2010 Three-Year Survey

These data clearly show that Midland's economic base is the manufacturing sector, followed closely by the healthcare, educational and retail trade industries.

Future Trends

Future Employment Trends

Midland continues to be a hub of chemical and technology manufacturing. The Dow Chemical Company and Dow Corning Corporation both have their global headquarters in our region, and both maintain significant manufacturing plants in Midland. Over the past five years, both companies have invested heavily in their local manufacturing operations: Dow Corning's Midland Plant invested $180 million in site improvements and upgrades while maintaining local employment at 1,350 people, while Dow Chemical has invested almost $1 billion, including $132 million from Dow AgroSciences to support manufacturing of existing products and production of new molecules.

Midland is positioned well to capitalize on a burgeoning global technology manufacturing economy. Our chemical and materials manufacturing expertise translates well to advanced technology manufacturing operations, particularly in the alternative energy manufacturing sector. In the past two years, Dow Chemical has announced three major local projects that will drive our future business growth:

- **Dow Solar Solutions**, which manufactures the DOW™ POWERHOUSE™ Solar Shingle. This $250 million plant is projected to employ over 1200 people.
- **Dow Kokam**, which manufactures advanced lithium-ion batteries for hybrid vehicles. This facility will employ 600 local people.
- The **Dow Business Process Service Center,** a partnership with Tata Consultancy Services, employing over 1200 people, and invest $45 million into the community.

Moving forward, we see potential employment growth in the community being driven by these expansions into solar and battery manufacturing, with suppliers and bolt-on investment coming to the community to support these growing sectors. High-tech manufacturing and ancillary support services will be crucial to our ongoing employment growth, which follows logically from the numbers in Chart 4.1.

In addition, two other areas of the economy will be important drivers of Midland's employment growth: health care and business support services. Health care currently contributes to Midland's second-highest employment number in Chart 4.1, and has undergone significant expansion in the past five years, with a $115 million addition to MidMichigan Medical Center–Midland and important upgrades to their oncology and cardiology services. Meanwhile, business support (noted as "professional, scientific and management" on Chart 4.1) will continue to expand both at the Dow Business Process Service Center and in related areas to support our other major manufacturers and their investments.

Future Economic Trends and Cluster Development

Industry clusters are groups of interconnected companies in a particular field that are present in a region. The companies involved in a cluster may include suppliers, service providers and supporting educational facilities. Clusters are typically export oriented and have a regional concentration that is higher than the national average, such as chemicals or plastics in Midland's case, as well as the emerging alternative energy sector. The theory behind clusters is that companies of all sizes can achieve more by assisting one another.

A "cluster analysis" of these particular companies can be useful when describing Midland's current economic status and planning for future growth. However, the industry clusters in Midland do not only refer to the city, but to the entire county. Midland Tomorrow, the county-wide economic development agency, works to develop resources within the community to attract new firms to these clusters in Midland County.

Additionally, understanding the supply chains for cluster industries and specific companies can increase the effectiveness of international business attraction efforts, through identifying gaps in the chain and being more targeted in attracting related investment.

Midland Tomorrow works closely with economic base companies and accesses other resources in the county to understand the relevant supply chains, with the goal of accelerating strategic business attraction activities through focusing on companies that complement industry/cluster strengths or fill supply chain gaps.

Focused international business attraction will be directed initially toward Japan, driven by an emerging foundation of investment activity in the county, coupled with long standing business relationships and a 30-year Sister City

partnership with Handa City, Aichi Prefecture, which can be leveraged for additional foreign investment opportunities.

Other Trends and Opportunities

Economic Development Zone: Midland's industrial complex consists of nearly 5,000 acres of existing chemical manufacturing facilities, power generation, research and development, and manufacturing support services. As noted, this area has recently seen new development of over $1 billion in new manufacturing facilities for alternative energy technology and strategic development of new manufacturing support services. This growth provides an unprecedented opportunity for the community to develop new development tools to build on and encourage new growth in creation of an economic development zone.

In 2012, work commenced in creating the zone through a residential property purchase program within the boundaries of the industrial complex within the City of Midland. These fifty residential areas are surrounded by industry and landlocked by major transportation corridors of Business US-10/M-20 and Saginaw Roads. The Dow Chemical Company launched the property purchase program in partnership with Midland Tomorrow. The properties will be prepped for redevelopment by Midland Tomorrow, and then sold to developers for industrial uses. Other commercial and industrial properties that become available will be strategically evaluated for acquisition by Midland Tomorrow based upon the location within the zone and the overall harmony with adjacent uses.

Additionally, Midland Tomorrow is working with the State of Michigan, the Michigan Economic Development Corporation, and regional and local partners to establish a unique set of tools for use in the zone to expedite new venture formation, technology commercialization, attraction of international technology companies, and establishing new University linkages.

Downtown Development. Midland's downtown is the heart of this unique community. With the new minor league baseball stadium, the downtown area is poised for growth. Midland's Downtown Development Authority has been active in beautification projects, including streetscape improvements and building façade programs. Additionally, the DDA is active in sponsoring events such as the Chili & Salsa Taste-Off, Cruise 'n Car show, Farmer's Market and several sculpture exhibits, all of which encourage residents to take advantage of downtown dining and shopping.

The Downtown Development Authority has been successful in attracting new investment over the past 5 years. The new $35 Million restaurant and bar development at The H Hotel has considerably enhanced Main Street and serves to draw additional patrons for dining and entertainment. Two buildings on Main Street have been acquired by a developer and will see demolition and redevelopment in 2012/2013 timeframe. A major remodel and expansion at St. Brigid's Catholic School, costing $2 Million, has brought an additional 100 school children to the Downtown on a daily basis.

With the creation of the Great Lakes Loons, the minor league baseball team, and the construction of the Dow Diamond Baseball Stadium, downtown Midland has even more possibilities for retail growth as well as residential housing and mixed-use opportunities. The adjacent, 100 year-old, printing building operated by McKay Press, became vacant and available when the firm moved to a modern state of the art printing facility in Midland. The property has been acquired by developers with a planned 230,000 square foot office and retail complex designed to complement the Dow Diamond. This $49 Million development is slated to start construction in 2013 and will provide the impetus for additional residential and commercial development.

New Commercial Development. Midland residents crave increased shopping and dining options, particularly in the area close to the Midland Mall, located on the north side of the city between Eastman and Jefferson. Desired retail opportunities in particular include furniture retailers; men's and women's clothing stores, and diversified family restaurant selections. Proactive marketing of the City and its market opportunities to leaders within these retail sectors can help to get the attention of those seeking new market and expansion locations. The City can be proactive in recruiting new businesses by providing necessary utility infrastructure, well-maintained transportation corridors and a streamlined planning review process, in areas that currently are not development ready.

The Circle, Center City Corridor Improvement Authority The area known fondly as "The Circle" in Midland is home to several unique businesses. The Circle can be defined as the commercial district at the intersection of South Saginaw, Ashman Street and Jefferson Avenue. On May 12, 2008, the City of Midland adopted Ordinance #1657 to create a Corridor Improvement Authority along Saginaw Road from the Circle south to Patrick Road. In August of 2008 the City appointed a board of Directors to carry out the intent of the ordinance. A Development Plan was adopted in 2010, outlining proposed improvement projects. A Tax Increment Financing Plan was adopted in 2012, providing one source of funding for the District. The Authority is working to analyze the demographics and business statistics of this area and develop long-range plans to promote its economic growth, primarily through acquisition and construction of public facilities and renovation of existing buildings to spur economic development there. The Authority may finance its activities through rent and leases, donations, special assessments, revenue bonds, and tax increment financing (TIF) plans.

Neighborhood Commercial. Several neighborhoods across the City contain old, often dilapidated former commercial-use buildings. Many were liquor stores or small grocery stores, as well as some light manufacturing or office. The City should encourage the reuse and redevelopment of these buildings to reestablish suitable neighborhood commercial opportunities. The City should also encourage the redevelopment of active neighborhoods by maintaining sidewalks and street lights to provide safe, clean and maneuverable walkways.

In new residential areas, zoning regulations should be reviewed to allow for and encourage new and appropriate neighborhood commercial uses, consisting of convenience stores and services for residential neighborhoods. It is important to assure the provision of adequate buffering and landscaping to make these uses compatible with a residential setting. The buffering techniques are also important to protect the value and character of adjacent homes.

Economic Development Tools

Economic Gardening – Local Business Assistance

Traditionally, and especially in Michigan, economic developers focus on expanding local companies and attracting new ones by making the business climate more favorable for those companies, usually by helping them secure incentives and assisting with their local and state permitting. Midland Tomorrow, the economic development corporation serving Midland County (including the City of Midland) still pursues this approach as a vital component of the assistance they provide local businesses.

However, this traditional model does not address the potential to assist companies in developing their growth entrepreneurially. To address these unique opportunities, Midland Tomorrow also maintains an "economic gardening" program to assist local businesses. Working directly with these companies, Midland Tomorrow helps them develop and commercialize any combination of new products, new customers and new markets, and address the key changes that they may need to make in order to grow, using a combination of in-house knowledge of business development and technology commercialization, as well as the knowledge of partner agencies throughout the region. This assistance can take many forms, including establishing connections with local marketing intelligence providers and other resources, vetting new ideas for commercialization, providing networking opportunities, and reviewing business plans to identify resources to drive growth.

The differences and complementary strengths of each approach are summarized in the following chart:

Traditional Retention and Expansion	Economic Gardening
Annual visits to many companies of all sizes	Focus on second-stage companies with the desire, capability and opportunity for growth
Focus on reducing costs	Assist with developing core strategy
Tools are primarily tax abatements and regulatory assistance	Tools are sophisticated business support services

Work with companies after they have identified their strategies	Meet frequently to build strategy proactively
Connect companies with local resources	Connect companies with local resources

Business Attraction

Most business site selectors will base initial decisions on factors which include transportation availability, facilities, work force, environmental considerations and community support. To remain competitive, Midland must continue to work to diligently in improving and maintaining the following areas.

Utility Infrastructure. Proper utilities, such as water and sewer, gas and electric lines, waste removal, wireless telecommunication coverage, and high speed Internet are all necessary for companies. Companies providing these services include Consumer's Energy and Midland Cogeneration Venture, one of the largest cogeneration power plants in the US. Midland Cogeneration Venture, with a generating capacity up to 1,500 MW, is responsible for about 10% of the electricity used in Michigan's Lower Peninsula. Midland Cogeneration Venture is jointly owned by CMS Energy (49%), El Paso Corporation (44%), and Dow Chemical (7%)

Transportation. Access to major highways is imperative to the success of any businesses. Midland is conveniently situated adjacent to US-10, which runs east and west. This highway connects with I- 75 15 miles east of the city and with US-27 23 miles west of the city, which each connect with larger cities of Detroit and Lansing, respectively. In addition to the interstate and federal highway, Midland has several state highways that provide access to Mt. Pleasant, Bay City and Saginaw.

Along with the highway system, Midland has access to an international airport, seaport, rail transport and bus service.

- **Airport:** MBS International Airport, located in Freeland, eight miles southeast of Midland, is the fourth busiest airport, in terms of commercial use, in Michigan. MBS is a tri-government facility operated by the City of Midland, the City of Saginaw and Bay County. The City of Midland also owns and operates the Jack Barstow Municipal Airport, located north of U.S.-10, west of Eastman Avenue.

- **International seaport:** Customs port of entry is located 18 miles east of Midland and is connected by pipelines, rail and limited access highways.

- **Rail transport:** CSX, Inc. and Central Michigan Railroad. Amtrak Passenger Service is available in Flint (approximately one hour away).

- **Bus Service:** Dial-a-Ride bus service is available within the City of Midland. Greyhound Passenger service is available in Saginaw and Bay City (both approximately thirty minutes away).

Education. An educated workforce is necessary for the survival of any industry. According to the 2010 US Census, 42.9% of the population had obtained a bachelor's degree, compared with 25% of the U.S.

population overall. The high percentage of college educated adults in Midland can most likely be attributed to Dow Chemical's and Dow Corning's workforce. Many employees of these companies have relocated to Midland to take high-tech and other professional jobs. Spouses of these employees also tend to be highly educated and seek highly-skilled employment locally. Additionally, Northwood University, a private four-year college is located in Midland and several public universities and community colleges are within a 30 minute drive of downtown Midland. Incentives and Enhancement Programs

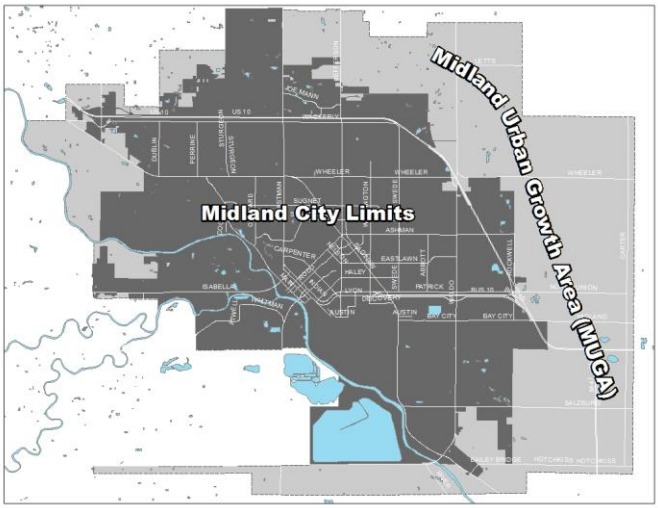
The City of Midland offers tax incentives to local and incoming manufacturers and other businesses that meet the relevant criteria. The primary incentive tool is the tax abatement authorized under Michigan Public Act 198 of 1974, which grants a reduction of approximately 50% of real and personal property tax to a manufacturing business for a set period of time. Eligibility for P.A. 198 assistance and the use of these incentives is governed by the City's tax abatement policy enacted in 2011.

Chapter 5:
Future Land Use

The Future Land Use Map and Plan together provide broad guidance for land use decisions and form the basis for the zoning regulations and capital investment decisions to help meet Plan objectives. This Plan will guide future decisions related to acceptable locations of the City's Zoning Districts, which are each assigned a more specific set of allowed uses and dimensional standards in the Zoning Ordinance. This chapter reviews the influential factors and general goals relating to future land use and outlines the resulting land use categories displayed on Map 5.1: Future Land Use.

Relationship to the Midland Urban Growth Area (MUGA)

Seven townships located in three different counties make up the area known as the MUGA. Each of these townships has their own future land use and zoning plans in place. The City of Midland Master Plan does not change the designation of any land outside the City limits. However, Michigan law allows the City to plan beyond its borders to help ensure coordinated and compatible development in the future, especially where the land is intended to be added to the City. The Future Land Use Map plans for all areas in the Midland City Limits and the MUGA.



Above: Map showing the relationship between Midland City Limits and the MUGA.

Influential Factors

The Future Land Use Plan reflects input from residents of Midland and its surrounding areas, and discussions with local decision makers and agencies. The Plan considered existing land use patterns, zoning, the MUGA, other factors and generally accepted planning principles, described below.

Existing Land Use

Many areas within the City Limits are already highly developed with an urban land use pattern and are not proposed to redevelop as part of this plan. The most significant changes proposed are in areas where the existing land use pattern provides the opportunity for new development infill or in areas outside the City Limits where water, sewer, and transportation infrastructure are not currently available. Existing use does not automatically preserve that land use designation for the future. The existing land use patterns in and around Midland are discussed in Chapter 2: City Profile.

Midland Urban Growth Area (MUGA).

The MUGA was initially established in 1969 as the area around the City that could eventually be provided water and sewer service as the City Limits were expanded. Over the last four decades, the MUGA boundaries have been modified and the City limits have expanded incrementally into the MUGA. Accordingly, the MUGA is a band around the City limits that serves as the potential, long-range City limits. Properties in the MUGA must be annexed by the City if the land owners desire City water and sanitary sewer services for their property. The Future Land Use Map and plan illustrate recommended long-term land uses within the MUGA in the event that those areas are annexed into the City. Because development in the outlying MUGA areas may not occur for many years to come, the proposed Future Land Use Map boundaries are more general than the precise plan boundaries within the more significantly developed City limits. The policies that regulate the MUGA include requiring any area requesting water and sewer service be contiguous with the current City Limits, and ultimately annex into the City before services are provided. These policies allow the City to promote orderly growth by coordinating and controlling the type and pattern of higher intensity uses developing in the MUGA. To improve the compatibility of land uses between the City and adjacent Townships, the existing and planned land use patterns and current zoning designations of neighboring Townships were considered when determining Midland's future land use designations.

Existing Zoning

Existing zoning designation was another factor considered in determining the use categories and locations. However, there is no vested interest that guarantees existing zoning will remain unchanged. Throughout the Master Plan process, existing zoning regulations and district boundaries were considered to prevent as many conflicts as possible.

Relationship of Incompatible and Non-Conforming Uses

One of the objectives of the future land use plan is to prevent, reduce, or eliminate incompatible land use relationships throughout the MUGA. Providing a sufficient transition or adequate buffering between land uses, especially those with certain conflicting characteristics, is essential. Although some areas throughout the City and MUGA may presently be developed and/or zoned for a use that is more intense than or incompatible with the proposed future land use designation, redevelopment or reuse of these sites in the future will provide an opportunity to eliminate or improve these situations.

Infrastructure and Public Facilities/Services

In addition to the planned land use and current zoning, the intensity of use that can be developed is limited based on the availability and capacity of the infrastructure. This includes utilities, streets, parks, schools, and municipal services and facilities. Factors such as the quality and capacity of the road network limit the type and intensity of uses due to the potential impacts on traffic operations. The City's planned transportation improvements and those recommended in the Transportation Chapter of this Plan were considered in determining the land use boundaries and intensities on the Future Land Use Map.

General Market Conditions

While this Plan establishes the future land use designation for property throughout the City and MUGA, it also considers the total land planned for each future land use category. The current and future demand for any one type of land use must be compared to the planned land use area in the MUGA to promote sustainable, high-quality development throughout the City. The Master Plan process included consideration of current market conditions and opportunities being studied in the City. Future updates of this Plan should include a reevaluation of market opportunities to ensure that the City's near term economic development goals are adjusted to build on successes and include external influences. The market conditions in the Midland area are discussed in greater detail in Chapter 4: Local Economy and Market Strategies.

Natural Features

Wetlands, woodlands, rivers, floodplain areas, poor soils, steep slopes and other natural features all impact the types of land use that are most appropriate throughout the City and MUGA. Federal or State laws regulate many of these areas and will impact the intensity of development on a given site. While the natural features were considered in choosing the type of land use for a given area in the City or MUGA, the intensity and density of use will ultimately be constrained naturally by the development site features. The City's Natural Features are discussed in detail in Chapter 3: Natural Resources Inventory.

Previous City Master Plan

The previous City Master Plan, adopted by Midland in 2007, was used as a base for the Future Land Use Map and categories included in this chapter. Any major changes between the previous and new versions were evaluated based on the various factors discussed in this chapter to ensure a change was warranted.

Desires of the City

The land use categories and configuration desired by City residents and officials have been expressed through a variety of public open houses, meetings, and visioning sessions. The results of the Meetings-In-A-Box sessions have been incorporated throughout the document, most notably in the established objectives outlined in the beginning of this section. When the plan was updated in 2012, additional public open houses and a public hearing were held to review these goals.

Goals

Based on the influential factors identified above, the following are the land use goals for the City of Midland and the MUGA. These should be considered along with the goals established in Chapter 6: Transportation, and Chapter 7: Community Facilities in future decision making.

Goal 1: Promote efficient and coordinated capital improvements.

Goal 2: Encourage integration or mixture of appropriate uses to create great places, promote a healthy, walkable community, and reduce vehicle trips.

Goal 3: Protect the long term stability of existing, quality neighborhoods.

Goal 4: Provide a diversity of housing types and costs to meet the needs of all age and income groups.

Goal 5: Strengthen and diversify the major employment opportunities in the City.

Goal 6: Expand and enhance the vibrancy of the Downtown by adding density, mixed-use developments, and incorporating the ballpark area.

Goal 7: Promote housing that is inviting to younger professionals, especially in the downtown area.

Goal 8: Accommodate small nodes of neighborhood commercial at major intersections where major residential development is taking place.

Goal 9: Utilize office uses as a transition between higher and lower intensity land uses.

Goal 10: Protect and promote the long term vitality of existing commercial districts including Downtown and Ashman Circle.

Goal 11: Broaden restaurant and retail choices.

Future Land Use Categories

In addition to the geographic delineation of land use categories on the Future Land Use Map, the text of this Plan provides further guidance when evaluating potential uses on a site. Table 5.1 summarizes the acreage of each future land use category and provides the acreage of similar existing land use categories for comparison. The location, uses, and general character of each category are outlined below.

Table 5.1 - Future Land Use

Source: City of Midland Planning Department, 2012

Land Use Category	Planned Acreages	Percent of Total Planned	Existing Developed Acreage[4]	Percent of Total Developed
Low Density Residential	18,543	46.2	5,620	30.1
Medium Density Residential	1,789	4.5	72	0.4
High Density Residential	1,142	2.9	683	3.7
Public Parks and Recreation	2,952	7.7	2401	12.8
Institutional and Civic	1,981	5.0	3,196[1]	17.1
Office Service	395	1.0	595	3.2
Commercial	1,656	4.1	728	3.9
Downtown[2]	160	0.4	na	na
Multi-Use Center[2]	99	0.3	na	na
Light Industrial	5,583	14.7	871	4.7
Heavy Industrial	5,753	15.1	4,490[3]	24.1
Total	40,053	100	18,656[4 5]	100

[1] Institutional & Civic existing developed acreage includes existing land use categories Public, Semi-Public and Parking/ Airport

[2] The Downtown and Multi-Use Center Future Land Use designations include a variety of existing land uses

[3] Heavy Industrial includes the existing land use categories Heavy Industrial and Waste Related Activity

[4] Please refer to the Existing Land Use Map and Acreage table in Chapter 2: City Profile for more detailed description

[5] The total acreage is a sum of all of the existing land use categories except No Activity (vacant/ undeveloped land areas), water and roads.

Low Density Residential

Specific Objectives. Low Density Residential development in Midland should protect the vitality of existing, high-quality residential neighborhoods. In addition, areas developing as Low Density Residential that are located on naturally constrained lands (eg. woodlands, wetlands, floodplain) should promote use of an open space clustered design to allow a reasonable number of homes while preserving the area's natural resources and creating high-quality residential developments.

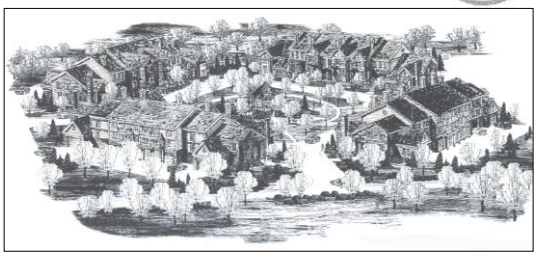
General Location. Low Density Residential is the predominant existing land use in the City, mostly concentrated within the loop formed by US-10, M-20, and North Saginaw Road. The Future Land Use Map provides for expansion of Low Density Residential development to the west, north, and east of the City limits. Low Density Residential should be buffered from higher intensity uses with Medium- or High-Density Residential or Office-Service land uses. Approximately 46.2% of the land area in the City and MUGA is planned for Low Density Residential land use.

Intended Land Uses. The Low Density Residential land use designation is intended to accommodate single-family residential development. In cases where natural features constrain the buildable area of a development, clustered development with permanently dedicated open space should be encouraged to preserve Midland's natural resources. Accessory and support uses such as small to moderate sized churches, parks, elementary and middle schools, neighborhood commercial, home occupations and small-scale care facilities may also be allowed. The neighborhood commercial nodes shall only be allowed as adjacent residential develops, and must be restricted in size and appropriately spaced to minimize the impact on the new neighborhoods. Many of the existing neighborhood commercial nodes, parks, schools and churches are identified on the Future Land Use Map. Residential density in these areas shall not exceed six dwelling units per acre.

An example of Low Density Residential in Midland.

General Character Description. To protect the vitality of the existing Low Density Residential neighborhoods in the City, development in the Low Density Residential areas will continue to follow the traditional neighborhood design principles that currently prevail in these areas. Infill and redevelopment in existing Low Density Residential areas must be compatible with the surrounding environment, including the scale and character of the existing neighborhood. Street design in new Low Density Residential developments should include an interconnected street system, sidewalks, street trees and adequate lighting. Homes will generally maintain traditional design elements such as prominent front entryways, and recessed attached or rear yard detached garages.

Medium Density Residential



An artist's rendering of a Medium Density Residential development.

Specific Objectives. Medium Density Residential development in Midland contributes to the goal of providing a wide variety of housing types and price ranges to accommodate residents in all lifestyle stages. This variety should include residential development designed to attract young professionals from other areas of the country into Midland to begin and grow their careers, especially in the planned Medium Density Residential areas near the Downtown. Furthermore, the higher density residential development allows for the design of developments with pedestrian connections to nearby commercial, institutional, and civic uses.

General Location. The main clusters of planned Medium Density Residential are located in the following areas:

- The neighborhoods north and east of downtown
- A strip located in between Wackerly and US-10 near Dublin
- Several areas that serve as transitional use between Commercial or Industrial and Low Density Residential adjacent to interchanges with US-10:
  - South of the Stark Road interchange
  - Northeast of the Eastman interchange and Midland Mall
  - East of the Waldo Road interchange

Intended Land Uses. The intended land uses within Medium Density Residential areas include single family houses, attached single-family buildings, or low density multiple family developments. This includes townhouses, attached condominiums, and senior housing developments. Other accessory and support uses such as churches, parks, schools, neighborhood commercial and home occupations may also be allowed. Residential densities in these areas shall not exceed ten dwelling units per acre.

An example of Medium Density Residential in Midland.

General Character Description. Medium Density Residential development should include high-quality design that emphasizes pedestrian connections with surrounding uses, provides alternatives to the Low Density and High Density Residential developments, and act as a buffer between Low Density neighborhoods and higher intensity use. The design and character of the buildings should complement any adjacent single family residential neighborhoods.

High Density Residential

Specific Objectives. High Density Residential development in Midland contributes to the goal of providing a wide variety of housing types and price ranges to accommodate residents in all lifestyle stages. Higher density residential development allows for the design of developments with pedestrian connections to nearby commercial, institutional, and civic uses to provide both affordable housing in the City and homes for those seeking low and no maintenance ownership opportunities. These developments may also cater to the growing older age segments of the population.

General Location. The higher density developments should be convenient to arterial roadways (see Chapter 6: Transportation), public facilities and nearby shopping. There are several areas in the City that are already developed as High Density Residential. The main clusters of undeveloped planned High Density Residential are located in the following areas:

- Two areas, on the northeast edge of Downtown and on the east side of Jefferson
- Several areas that serve as transitional use between Commercial nodes or Industrial and Residential:
  - South side of the North Saginaw/Stark intersection
  - West side of Waldo north of the US-10 interchange
  - Northeast of Midland Mall

Intended Land Uses. The intended land uses within High Density Residential areas include high-density single family and various types of multiple family developments. This includes mid-rise apartments and condominiums, townhouses, and senior housing developments.

An example of High Density Residential in Midland.

General Character Description. New or infill High Density Residential should include high-quality, innovative design, that emphasizes pedestrian connections with nearby shopping and transportation.

Key Changes. The addition of a Medium- and High-Density Residential node adjacent to the US-10 interchange at Waldo Road should be designed as a new village cluster that is supported by the commercial and office components also planned in the area. Redevelopment of apartments in the Downtown area is also encouraged, and could include mixed-use opportunities with commercial uses on the first floor and apartments or condominiums above.

Public & Private Parks & Recreation

An entrance to Pere Marquete

Specific Objectives. The Parks and Recreation facilities in the City are intended to provide the full spectrum of park facilities in locations that are convenient for residents and visitors alike. As this Plan is not a parks and recreation plan, the designated areas on the Future Land Use Map only recognize existing parks and recreation facilities in the MUGA. The City currently has a Parks & Recreation Plan, which more specifically discusses the existing and planned facilities and outlines goals and objectives for maintaining the City's Parks system as its boundaries continue to expand.

Playground at a City Park

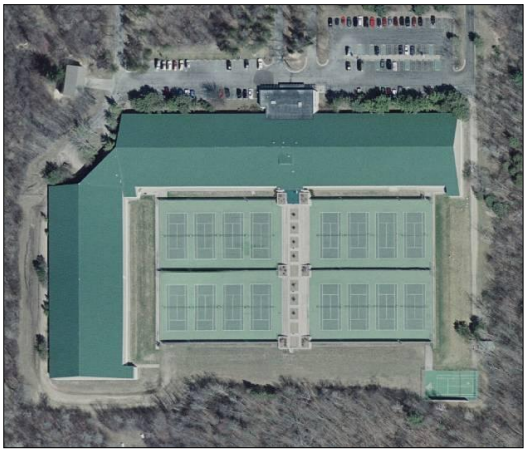
General Location. The Future Land Use Map illustrates, with two shades of green seen above, the location of existing Public (dark green) and private (light green) Parks & Recreation facilities. Both types of parks are located throughout the City. As residential developments occur, park space should be provided within each development. Currently, about seven percent of the City's land is set aside for park space. This ratio should be maintained when future land develops as the City limits expand.

Public pathway along M-20.

Intended Land Uses. Land uses that are included in the Parks and Recreational category are public and private recreation facilities such as playgrounds, pathways and nature trails, picnic areas, soccer fields, public softball and baseball fields, indoor sports facilities, and open space areas. Generally, these areas include uses that provide active and passive recreation sites. In addition, new private commercial recreational facilities may be located in certain commercial and industrial areas.

General Character Description. High-quality and diverse park offerings promote a higher quality of life for families and visitors alike. Parks and Recreational facilities should continue to be integrated into the City's new and existing neighborhoods to create a comprehensive system. Parks and open spaces should offer opportunities for recreation, picnicking and

A public park along the Tittabawassee River.



A private recreation facility along Wackerly.

relaxing. As possible, the City should link park sites via a network of pedestrian and bicycle pathways.

Institutional & Civic

Above: Three examples of institutional uses in the City of Midland.

Specific Objectives. The main objective of Institutional & Civic uses is to continue to provide high quality services, meet future needs of the population and employers, and to locate new facilities at accessible sites compatible with other planned land uses.

General Location. Institutional and Civic uses are scattered throughout the City and create a network of resources that make up the "City of Science and Culture." These designations include City Hall, other County and City municipal buildings, the hospital, utility-related buildings, schools and churches, along with regional cultural amenities such as the Courthouse, the Midland Center for the Arts, Herbert H. Dow Historical Museum, Dow Gardens, the Herbert D. Doan Midland County History Center.

Intended Land Uses. Institutional uses include existing places of worship, community buildings, and public and private schools. This designation also includes publicly owned senior housing facilities, medical facilities, and non-commercial day care buildings.

General Character Description. In general, local Institutional uses are encouraged to have buildings located and designed to promote a neighborhood scale and character. This includes a building design that emulates residential structures, and a site layout with sidewalk connections to neighborhoods. In addition, landscaping promotes the feel of natural open space areas similar to residential yards and park land. In areas where the Institutional use is located adjacent to higher intensity uses, a more suburban, larger scale and form is acceptable.

An example of an Institutional use in Midland.

Commercial

Specific Objectives. The location, design, and size of Commercial areas throughout Midland impact many areas of everyday life. The following goals and objectives should be considered in the size, location and development of planned commercial areas:

- Commercial centers should be sized and located to best interact with surrounding uses while also providing convenience and limiting unnecessary congestion.
- The impacts on the sustainability of the Downtown, City Center and Circle districts must be considered when planning for additional commercial in these areas of the City.
- Larger suburban commercial centers should be located near freeway interchanges to alleviate traffic impacts on City streets.
- As major new residential development occurs, small nodes of neighborhood commercial may be located at the intersection of some major roads (SEE Chapter 6: Transportation). Not every intersection of major roads will have a commercial node; the best locations for these nodes will be determined as the MUGA develops. One way to develop these commercial nodes that provides opportunity to require integration with neighboring residential is as part of a mixed-use Planned Unit Development (PUD).
- High intensity commercial uses should be buffered from Low Density Residential with a Medium- or High-Density Residential or Office-Service use, where practical.

General Location. The planned Commercial areas can be classified into two categories: large commercial centers/areas and small neighborhood commercial nodes. In addition, areas designated as Office-Service, Downtown, and Multi-Use Center on the Future Land Use Map all have a significant, but restricted commercial component. Planned Commercial comprises about 4% of the land area inside the MUGA.

Large Commercial Centers**.** Large concentrations of planned Commercial development are intended to include large scale commercial development, and are located along major thoroughfares in the City, including:

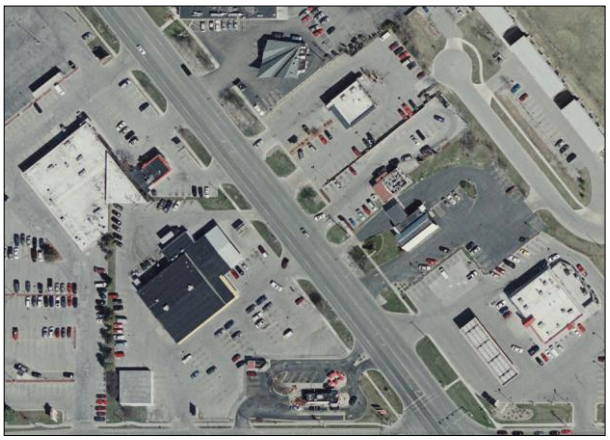
- South Saginaw from the Circle to Bay City Road
- North Saginaw at Ashman, Dublin, and Stark
- North of the Stark/US-10 Interchange
- North of the Waldo/US-10 Interchange
- East and West of the Bay City/US-10 Interchange
- Commercial centers should be sized and located to best interact with surrounding uses while also providing convenience

Small Neighborhood Commercial Nodes. Small nodes of neighborhood commercial are intended for the convenience of nearby uses. In areas planned for residential but not yet developed as such, these nodes are not illustrated on the Future Land Use Map. As residential development occurs in an area, the need for a compact node of commercial at main intersections (of 4-5 total acres per intersection) would allow their development as a supporting use in an area planned for residential (see the Low Density Residential Intended Uses). In areas with existing residential development, the largest (most sustainable) nodes are retained and illustrated on the Future Land Use Map at major intersections around the City, including:

- Flajole and Midland Road
- Wheeler and Swede
- Wheeler and Jefferson
- Waldo and Bay City Road
- Monroe and Eastman

Intended Land Uses. The planned Commercial areas are intended to have a variety of uses, determined by the size and geographic location of the planned areas. The larger scale commercial centers will require a large amount of floor space and parking, and will cater to a regional market. These centers might include hotels, restaurants, movie theaters, drive-through restaurants, and large retailers, as well as complimentary office and service uses. Conversely, the small nodes of neighborhood-scale commercial are intended to include uses that support the nearby residential developments without adversely impacting the residents. These uses are naturally constrained by the small geographic size of the nodes, and might include small restaurants, carry-out convenience stores, or small strip commercial centers. The localized, neighborhood configuration of these nodes also promotes local trips and walkable alternatives.

General Character Description. The two main types of planned commercial areas in the City will take on a different character based on geographic size, location, and surrounding uses. Access management regulations will provide additional planning oversight as these areas are developed to provide safe travel and ease in general traffic circulation.

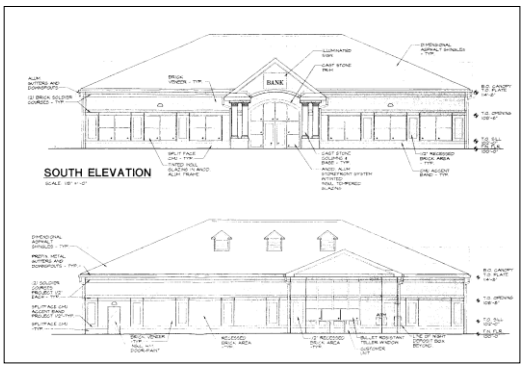


Shown above, the South Saginaw corridor is an example of an existing Large Commercial Center.

Large Commercial Centers. Large, undeveloped planned commercial areas along US 10 at Stark, Waldo and Bay City roads provide the opportunity for coordinated, high-quality commercial centers that can be integrated with neighboring office and residential areas and designed to minimize congestion and crashes. Design features should include internal circulation throughout the center, pedestrian connections to adjacent areas, overall consistent design elements, and City identification features to enhance the image of the City at these gateways.

Neighborhood Commercial Nodes. Neighborhood commercial nodes are allowed to develop in residential areas (according to the objectives and location guidelines above). Existing neighborhood commercial uses may be consolidated into fewer locations. Any new commercial nodes in developing areas should be limited to 4-5 acres of total land at an intersection of main roads, and should include landscaping and design features to minimize impacts on adjacent residential neighborhoods.

Office-Service



Above: A sample office building design compatible with single family neighborhoods.

Specific Objectives. As Office-Service districts are frequently located to serve as a transitional buffer to single family residential, the design and uses of each Office-Service development must be carefully evaluated for compatibility with adjacent uses. The Office-Service designation is more restrictive than the Commercial designation, and limits the intensity of uses in certain areas around the City and MUGA.

General Location. Office-Service uses are allowed in all areas planned with Downtown, Mixed-Use, Commercial, and Office-Service future land use designations. The areas limited to only Office-Service uses are primarily located south of the Stark/US-10 interchange, southeast of Waldo, and along Eastman and Wackerly near the interchange. Areas with the greatest freeway visibility are best suited for higher-profile corporate office uses. Planned Office-Service comprises less than 1% of the land area inside the MUGA.

Intended Land Uses. Commercial Office and Service uses serve both local and regional market areas. Typical uses found in these areas might include medical offices, personal service establishments, bank offices, law offices, and corporate offices including regional headquarters.

One area of Office-Service use in the City of Midland.

General Character Description. The Office-Service uses are often located in buildings that can be very compatible with Single Family neighborhood character. For smaller Office-Service uses, the incorporation of residential style design and building materials, appropriate lighting, and significant landscaping can significantly reduce the impacts on adjacent residents and promote high-quality commercial development. For larger Office-Service developments, emphasis should be placed on high-quality design and materials, including the design and activity taking place along rear property lines where residential developments may be abutting.

Downtown

Specific Objectives. The area designated as Downtown on the Future Land Use Map supports the goals of expanding and enhancing the vibrancy of the Downtown by adding density, mixed-uses developments, and expanding to incorporate the ballpark area. The boundaries of this designation provide flexibility for a healthy variety of uses, including mixed-use buildings and developments, without identifying specific properties for each different residential, commercial, office, or civic use. The goal of the Downtown and Multi-Use Center designations is to jointly provide a wide range of density and complementary land uses.

General Location. The location of the Downtown designation stretches from Ripley on the northwest to Haley on the southeast, and from the River on the southwest to approximately Grove on the northeast. It includes areas previously planned for Downtown, Office, and Commercial, and also includes the ballpark and its parking facilities on the southeast edge.

Intended Land Uses. The Downtown is intended to include a variety of compatible and supporting uses important to a vibrant district, including dining establishments, mixed-use buildings and developments, residential, retail, offices, civic uses and lodging.

General Character Description. Downtown development should include high-quality, higher-density design and materials, with building facades that are close to the front lot line and on-site parking, if any, provided away from the street. Outdoor eating areas and other design features that promote interaction between the activity inside the building and on the street should be encouraged. Coordinated mixed-use developments are an excellent way to provide retail, office, and residential opportunities within the same building or property, and add to the vibrancy of the entire Downtown. As infill and redevelopment occur, streetscape enhancements should be expanded with development. Additionally, efforts must be made to enhance the connection with the ballpark and expand the Downtown core in the area between Cronkright and State to take advantage of pedestrian traffic headed to and from the ballpark.

Key Changes. Although the area delineated as Downtown on the Future Land Use Map is larger than the 2006 Downtown Zoning and DDA Boundaries, the public input offered strong support for expanding Downtown uses. In 2012, the DDA boundaries were expanded to include additional area abutting the ball park. Including the new ballpark in the Downtown designation emphasizes its importance to the Downtown area. The Downtown Development Authority District and the Shopping Area Redevelopment Authority District will also serve as agencies for the future growth and redevelopment of the downtown.

Multi-Use Center

Specific Objectives. The Multi-Use Center designation is intended to provide for the redevelopment and enhancement of four specific areas of the City. These areas are unique and will benefit from a multi- or mixed-use redevelopment pattern with an urban-oriented built form. These areas will allow for a coexistence of a variety of compatible land uses, while increasing density where appropriate. The regulatory approach must consider context of existing development, including existing residential, commercial, industrial and institutional uses, while also facilitating a future for new development that increases activity in these areas. The goal of the Downtown and Multi-Use Center designations is to jointly provide for a wide range of density and complementary land uses, while allowing for a flexibility of regulation that the market can work within.

General Location. Four areas in the City are designated as Multi-Use Center on the Future Land Use Map. The first is Ashman Circle, which is already developed with some commercial and office uses, but needs higher density development to establish a vibrant district. The second is the area southeast of the ballpark, on the edge of the area designated as Downtown on the Future Land Use Map. The third is the area surrounding the Midland Mall at Eastman Avenue, Joe Mann Boulevard and E. Wackerly Street; this area has seen rapid change and store closings as consumer preference is shifting away from regional shopping malls. The fourth is the Waldo Avenue Corridor south of Bay City Road; this area is continuing to undergo change as traffic patterns shift.

Intended Land Uses. While the four Multi-Use Centers designated each share overall design objectives, the intended land uses vary between the two. Each Center is outlined below.

A view of the Circle in 2005.

Midland's Plan for the Circle.

<u>Ashman Circle Area.</u> The Multi-Use Center designation in the Ashman Circle area is intended to include a variety of compatible and supporting uses to increase the density and viability of the Circle. These uses should include dining establishments with outdoor eating areas, retail, office, service, and mixed-use buildings with first floor retail and upper floor office or residential. Civic and institutional uses with similar dense and urban-style design are also allowed. The Circle area should also incorporate pedestrian oriented design elements that promote a walkable district, when possible.

<u>South Midland Redevelopment Area:</u> The area east, southeast of the ballpark is currently home to a mixture of commercial and industrial uses. Redevelopment of this area will include a mixture of high-tech industrial, commercial and offices uses that compatibly bridge the area between residential uses to the north and the higher intensity industrial uses to the south and southeast. Immediate proximity to the U.S. 10 Business Route corridor positions this area well for connectivity to the rest of the city and the region, while close proximity to the downtown district provides easy access to eating, shopping, entertainment and recreational assets.

Northern Commercial Area: As consumer preferences shift, regional mall areas have found success in other markets by converting to a mixture of uses that support a life-style center. The Multi-Use Center designation of this area is intended to allow for a mixture of uses that are compatible with the surrounding commercial uses and the abutting residential uses to the south. This area should allow for a mixture of residential, office, commercial, retail, medical and recreational uses that can support a life-style center. Design elements within the center should facilitate access by people while allowing for ease of access to the center by automotive and public transit.

Waldo Avenue Corridor: As traffic patterns shift along Waldo Avenue and Bay City Roads, development along this corridor should be compatible with higher traffic counts while also fitting well within the context of an established residential neighborhood. New development should be designed to support the retail, restaurant, commercial, office, and service needs of the immediate neighborhood and the surrounding subarea of the city. The built form in this area must be compatible with existing institutional and residential uses that are within this designation or are in the immediate vicinity.

General Character Description. All of these Multi-Use Centers should focus on encouraging redevelopment and requiring consistent site upgrades as development occurs, including improved site design, access management, building facades and landscaping. Generally, parking areas should be in the rear or side rather than in the front of the building. The scale and size of the developments in these areas should be limited to promote a pedestrian scale environment, encourage buildout of the entire center, and include a lower density then Downtown developments.

Light Industrial

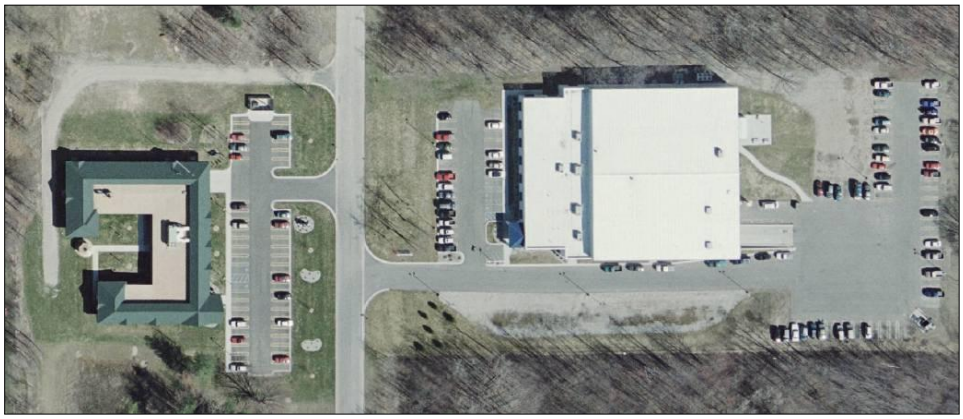
Specific Objectives. Light Industrial developments are an important source of employment and tax base, and have significantly less impact on surrounding uses than Heavy Industrial. This designation is intended to provide concentrated areas throughout the City and MUGA that accommodate coordinated industrial parks with high-tech, low-intensity industrial uses. Existing Light Industrial uses located outside of these districts, especially those that are isolated or obsolete facilities, should be encouraged to relocate to planned Light Industrial areas when the opportunity arises. See Chapter 4, Local Economy and market Trends for more information on specific developments.

General Location. Planned Light Industrial comprises about 13.9% of the land area inside the MUGA.

- North of the Stark Road interchange with US-10
- North of M-20/Waldo interchange, including the existing Eagle Ridge Industrial Park
- Along Schuette and Centennial Roads
- Southeast of the Bay City Road/US-10 interchange
- South side of Gordonville Road west of Mapleton
- South of US-10 along the M-47 corridor in Bay County, southeast of the City

Intended Land Uses. Appropriate intended uses for the Light Industrial district include high-tech industries, research laboratories, light assembly operations and corporate offices. Commercial uses that support industrial activities are encouraged in these areas. Heavy, smokestack industries and large warehouse operations dependent on heavy trucking or rail are not intended for this district. External nuisances, such as noise and odors, should be minimized through design and activity restrictions. These areas are intended to play an integral role in the community's desire to cluster complimentary industries in the general area of one another. These areas also support the public's desire for expanded employment opportunities in the City.

General Character Description. Redevelopment of existing Light Industrial development designated to remain Light Industrial on the Future Land Use Map should include improved site design, access management tools, attractive building facades and significant landscaping to establish a park-like setting. Similarly, new development should take the form of a design-controlled, industrial/research park, with integrated site planning. The planned industrial centers provide an environment for such mix office, commercial, light industrial, and research uses within a controlled environment.



An example of a coordinated industrial park in the City of Midland.

Heavy Industrial

Above: Several examples of Heavy Industrial in the City of Midland.

Specific Objectives. Areas designated as Heavy Industrial on the Future Land Use map include high-intensity industrial uses that require special buffering and consideration in the surrounding areas. These areas are not intended to expand beyond their current boundaries.

General Location. The only two areas of Heavy Industrial are located in the southeast quadrant of the City and on the City Landfill property east of US-10. Planned Heavy Industrial comprises about 14.4% of the land area inside the MUGA.

Intended Land Uses. The City's landfill located west of US-10 is producing methane gas, which is planned to be collected and converted to electricity in the near future. Areas with facilities involved in chemical production, heavy assembly, large warehousing and trucking are intended for this designation.

General Character Description. Areas with Heavy Industrial designations require special planning and site design. The operation of these uses may involve heavy truck traffic, outdoor storage, rail access, odors and noise. Development and redevelopment of these areas should minimize the impacts of these activities by requiring large setbacks and full screening of loading and outdoor storage areas.

Midland Cogeneration Venture is a Heavy Industrial Use.

Chapter 6: Transportation

Introduction

This Chapter describes the various transportation modes in the City including their organization, condition, issues to address and policy goals upon which the recommendations are based. In some cases, the City has primary authority to initiate changes, such as most of the streets and the non-motorized system. In some situations, authority to make decisions on improvements lies elsewhere, such as the State for its trunkline routes ("M" and "U.S." roads). Still, the City recognizes its role to provide input on all the transportation-related decisions so improvements can be coordinated. Refer to the five transportation maps at the end of this chapter for further clarification of the text.

Roadway and Street Functional Classifications

Functional classification is the process by which streets and highways are grouped into classes or systems according to the character of service they are intended to provide. All of the public streets and roadways within the Midland City limits fall within one of the standard functional classifications defined by the Federal Highway Administration and also used by MDOT. The classifications are used as a planning tool by roadway agencies throughout the State to organize and prioritize street hierarchy. The functional classification is based on factors including nationally recognized street spacing standards, the number of lanes of travel, the speed limit, and volumes of a roadway.

As the term infers, all streets are classified according to their primary transportation function. The general classifications and the description of each are outlined in the following sections. The Functional Classification Map in the back of this chapter illustrates the updated classifications in Midland. It should be noted that several street segments differ slightly from the MDOT National Functional Classification map due to more current information regarding traffic volumes and new roadway links.

Principal Arterials - Freeways

The major arterial system, also known as principal arterial system, carries the major portion of trips entering and leaving the Midland area. Freeways are at the top of the principal arterial category, and are limited access facilities that have a primary function of transporting people and goods between cities and urban areas throughout the State. US-10 and the section of M-20/US-10 Business Route (US-10 BR) east of Washington Street are the only two freeway sections in the MUGA.

Other Principal Arterials

Other principal or major arterials can typically accommodate over 20,000 vehicles daily and include surface streets that serve traffic moving through the City, connect major destinations, and provide freeway access across Midland. These streets also provide continuity between rural and urban arterials which meet along the urban boundary.

In Midland, the key surface street sections that are defined as principal arterials include the US-10 Business Route (Patrick/Lyon, Indian/Buttles, Eastman), M-20/Isabella Road, and Eastman Avenue between US-10 and Joe Mann Boulevard. These segments are illustrated on the Current Functional Classification Map.

Minor Arterials

The minor arterial street system includes all arterials not classified as major arterials. It includes facilities that place more emphasis on land access than major arterials, while offering a lower level of traffic mobility. Minor arterials provide connections within the community between different neighborhoods and also to major arterials. They may carry local bus routes and should also connect rural collector roads where they meet the urban boundary. Minor arterial streets in Midland typically handle 5,000 to 20,000 vehicles daily.

Key street segments classified as minor arterial include Saginaw Road, Jefferson Avenue, Waldo Avenue south of US-10, Bay City Road, and Eastman Road north of Joe Mann Boulevard. These segments are illustrated on the Current Functional Classification Map.

Collector Streets

The collector street system provides both local land access service and traffic circulation within residential, commercial, and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the local area to the ultimate destination. Collector streets also collect traffic from local streets in residential neighborhoods and channel it into the arterial system. In highly developed areas, the collector system often includes a grid system to facilitate efficient traffic circulation.

Numerous roads in Midland are classified as collectors. Collector streets, which typically handle 3,000 to 6,000 vehicles daily in Midland, are illustrated on the Current Functional Classification Map.

Local Streets

The local street system comprises all facilities not included in the higher classification systems. It serves primarily to provide direct access to abutting land (typically single family residential) and access to the higher order systems.

Existing Traffic Conditions

Evaluating the existing transportation system provides the foundation for recommendations in this Transportation Plan. The evaluation includes a review of current traffic volumes on major streets and a discussion of recent growth history.

Traffic Volumes and Recent Growth

Daily traffic volumes on the major surface street system are as high as 32,000 vehicles on Eastman Avenue near the Midland Mall and over 27,000 vehicles on North Saginaw Road just east of Eastman. Collector and arterial streets with daily volumes of approximately 5,000 vehicles and higher are highlighted on the Existing Traffic Conditions map according to the change in traffic volumes over the last four years.

Analyses of the current traffic volumes in the City indicated that most of the major streets have experienced a decrease in–traffic volumes during the last five years. Several sections that have experienced the most growth are located around the growing commercial areas north of US-10. The table on page 6.5 outlines recent traffic growth figures on selected key street sections.

The Eastman/U.S.-10 interchange area has some of the highest traffic volumes in Midland.

Figure 6.1: Average Annual Traffic Volume Changes

Street	Cross street	2001	2006	2011	5 year change	10 year change
Ashman	NE of Pine	8,436	5,498	5,525	0.49%	-34.51%
E. Ashman	W of Swede	9,231	8,258	7,822	-5.28%	-15.26%
Buttles	SE of State	14,487	12,353	12,341	-0.10%	-14.81%
Eastman Ave.	N. of Meijer	11,030	10,053	9,781	-2.71%	-11.32%
Eastman Ave.	S of Wackerly	28,962	26,753	25,560	-4.46%	-11.75%
Eastman Ave.	N of US-10	31,329	na	27,952	na	-10.78%
Eastman Ave.	S of Saginaw	19,447	19,309	18,852	-2.37%	-3.06%
Eastman Ave.	N of St. Andrews	21,492	20,362	20,665	1.49%	-3.85%
Indian	SE of State	17,966	11,762	12,459	5.93%	-30.65%
Isabella	SW of Main	22,931	23,613	20,476	-13.29%	-10.71%
Jefferson	N of Wackerly	18,005	14,477	15,836	9.39%	-12.05%
Jefferson	S of Wheeler	13,439	12,249	12,567	2.60%	-6.49%
Joe Mann	E. of Eastman	8,697	9,862	11,966	21.33%	37.59%
W. Main	S of Saginaw	6,560	6,330	5,243	-17.17%	-20.08%
E. Patrick	W of Washington	14,936	12,201	12,559	2.93%	-15.91%
N. Saginaw	W of Sturgeon	10,095	9,909	9,727	-1.84%	-3.65%
N. Saginaw	W of Eastman	26,196	22,246	22,561	1.42%	-13.88%
N. Saginaw	SE of Sugnet	19,724	17,455	16,687	-4.40%	-15.40%
Saginaw, S.	N. of Patrick	21,859	19,039	20,389	7.09%	-6.72%
Sturgeon Ave.	N of Airport	5,304	4,157	4,803	15.54%	-9.45%
Sturgeon Ave.	N of Saginaw	6,568	5,512	5,132	-6.89%	-21.86%
W. Sugnet	E of Orchard	6,485	5,107	4,971	-2.66%	-23.35%
Swede Rd.	S of Wheeler	9,045	8,317	8,075	-2.91%	-10.72%
W. Wackerly	W of Eastman	12,150	13,372	13,006	-2.74%	7.05%
W. Wackerly	E of Eastman	11,923	11,667	11,524	-1.23%	-3.35%
E. Wackerly	E of Jefferson	6,726	6,957	8,112	16.60%	20.61%
Waldo Rd.	N of Ashman	12,567	12,401	11,635	-6.18%	-7.42%
Waldo	N. of Patrick	12,910	12,795	11,843	-7.44%	-8.26%
Washington	N of Sugnet	6,082	4,944	4,682	-5.30%	-23.02%
E. Wheeler	E of Jefferson	8,501	7,848	7,915	0.85%	-6.89%
E. Wheeler	E of Swede	5,626	5,550	5,049	-9.03%	-10.26%

Volume Data Source: City of Midland Engineering Department, MDOT

Goals and Objectives

The long-term Transportation Plan for the City of Midland is based on primary goals that will keep the City's residential, commercial and public areas vibrant. The following are goals and objectives for Midland's transportation network

Goal 1: Maintain and improve safety and efficiency in the transportation system to support land use patterns and ensure that Midland remains an attractive place to live, work, and visit.

Objectives:

A. Maximize the function of City streets through transportation system management techniques (such as intersection signalization or other intersection improvements, control, and access management) and transportation demand management techniques (such as ride-sharing, multiple occupancy vehicle preferred parking, etc) that allow the system to operate at a Level of Service (LOS) of D or better (Level of Service is a standard traffic operation rating that ranks the level of delay into six categories, with A being best and F being worst).

B. Preserve, and obtain when possible, adequate rights-of-way to accommodate future transportation needs, especially in areas where significant development is planned to occur (north Eastman Avenue, north Waldo Avenue, Stark Road, etc).

C. Continue to make land use decisions that direct intense commercial and industrial land uses (and their related truck traffic) to areas where capacity is available and related traffic impacts to residential areas can be minimized.

D. Through a traffic impact study process, make sure that street capacity can accommodate anticipated traffic generated by a development before it is approved. Because funds from road agencies often lag behind demand, funding for improvements needed to offset anticipated impacts should be secured from the developer or accounted for locally as early as possible. Maintain LOS D or better for movements at all affected intersections.

E. Make good use of the new Midland transportation model that has been developed by MDOT for the Bay Region communities. This traffic volume-based transportation model is a powerful tool (using computer software) in transportation planning and is most often used to forecast future traffic volumes by testing land use growth scenarios and new or upgraded roadway sections throughout a community or region.

F. Pursue development of access management policies and plans for the City, especially along existing and future commercial corridors to help preserve capacity and increase safety.

G. Pursue development of traffic calming policies and plans for residential and school problem areas.

Goal 2: Provide and pursue multi-modal transportation alternatives that can improve connectivity between neighborhoods, schools, parks, businesses and other activity areas.

Objectives:

A. Continue development of a continuous system of pathways and sidewalks as an alternative mode of travel and improvement to the City's quality of life.

B. Promote alternative modes of transportation (pedestrian, bicycle, ride-sharing, etc) through capital investment, including dedicated bike lanes, carpooling facilities, bike shelters, and other public stations with amenities such as restrooms, showers, and rental lockers.

C. Require new development, through the site plan review and approval process, to be pedestrian friendly and transit oriented by including links between external and on-site pedestrian systems

Goal 3: Continue to improve the aesthetic appearance of the City's transportation corridors.

Objectives:

A. Maintain and expand improvement efforts along the Lyon Road/Patrick Road/US-10 Business Route corridor.

B. Consider the character of the surrounding area's land use as part of the design of any new or upgraded street projects.

C. Upgrade the aesthetic appearance of major streets through the use of streetscape improvements, retrofit access management improvements, tree preservation, and improved site design standards.

D. Use traffic calming measures to address speed and cut-through problems in residential areas and also to provide opportunities within low speed areas for additional aesthetic improvements.

Goal 4: Endorse the Complete Streets Program

Objectives**:**

A. Sidewalks, shared use paths, street crossings, including under and over passes, pedestrian signals, signs, transit stops and other facilities will be designed, constructed, operated and maintained so that pedestrians including those with disabilities, can travel safely and independently.

B. The Complete Streets Program will address the need for bicyclists and pedestrians to cross and travel on streets even where there is infrequent use. Therefore, the design policy of intersections and interchanges will be to accommodate and to consider the Complete Streets Program for bicyclists and pedestrians in a manner that is safe, accessible and a benefit to the entire community.

C. The Complete Streets Program will consider as a part of any new or reconstruction of designated streets and right of ways the above policy guidelines for the benefit of the entire community and non-motorized transportation.

Transportation Issues and Recommendations

Based on substantial public input, including focus groups, planning commission meetings, staff and officials input, ~~and~~ Meetings-in-a-Box, several areas of traffic-related issues and concern in the City's transportation network were identified since 2007 when the plan was first written. The following pages clearly identify these issues and provide a number of specific, or alternative, transportation improvements for these locations.

Corridors and Intersections

In addition to the issues and projected needs outlined below, the City should continue to monitor potential problem intersections and corridor segments throughout the City. The City's ongoing traffic count program is a useful tool in that process and should be expanded to include the growing areas in the City and MUGA.

North Eastman Sub area

Issues: Based on public input and extensive evaluation, freeway entrances were modified in 2006. The modifications included building access ramps from Wackerly Street at Schade Drive and prohibiting left turns from south bound Eastman Avenue onto eastbound US 10. The north Eastman Avenue subarea includes the US-10 interchange and the Midland Mall. Incremental commercial development over the years has resulted in poor traffic operations at several roadway segments and intersections. As the areas north and east of the Midland Mall continue to develop, the situation is expected to worsen.

Recommendations: To address the significant concerns regarding Eastman Avenue around US-10 and the Midland Mall, the City undertook an extensive analysis of the area (including Joe Mann Boulevard) in 2005-06 with the goal of identifying a set of roadway improvements that would address current deficiencies and projected traffic conditions. Three primary alternatives emerged; a boulevard cross section on Eastman Avenue with traffic signal control (at indirect left turns), a boulevard cross section with roundabouts, and development of a one-way pair (existing Eastman Avenue as northbound, new parallel facility to the west as southbound). The summary analysis of these three alternatives did not clearly indicate a preferred choice. Additional meetings and public input in early 2006 did not result in a consensus on a preferred alternative.

However, subsequent discussions and analyses (Eastman Avenue Design Series – EADS) completed in fall of 2006 have resulted in a decision by City Council to pursue a revised indirect left-turn boulevard alternative, with interim or phased steps over the next 10 years. The final recommendations also included long term consideration of a smart signal system and access management measures.

In addition to Eastman Avenue, providing an additional east/west transportation link and intermittent additional "mid-block" north/south links on the City's north side will become a key element for effectively dispersing development traffic to corridors other than Eastman Avenue. Letts Road was constructed to connect Elisinal and Jefferson, completing one phase of the missing links, illustrated on the Transportation Plan graphic.

Intersection of Eastman Avenue and North Saginaw Road

Issues: Based on reported and observed traffic problems, an evaluation of peak-hour traffic at the intersection of Eastman Avenue and Saginaw Road was completed. The confluence of these two major arterials creates significant congestion during peak hours. The evaluation indicated movements currently experiencing the most delays during peak hours are the southbound Eastman and eastbound Saginaw left turns.

Recommendations: Develop/construct second southbound left turn lane (and corresponding widening on the south side of the intersection). Related signal operation changes will provide additional green time to the eastbound left-turn movement.

Ashman Street and Rodd Street One-Way Pair

Issues: the potential conversion of Ashman Street and Rodd Street from a one-way pair to two-way operation was also identified for potential consideration. These streets were converted from two-way operation to the one-way pair operation many years ago when traffic patterns and volumes between Downtown and the Circle were significantly different.

Recommendations: The City should periodically evaluate the impacts of returning both of these streets to two-way operation, and carefully weigh the potential advantages and disadvantages of doing so. How such a conversion would be handled at each end of these corridor sections will be a key issue. The MDOT transportation model may be an important tool in monitoring traffic in this area and testing operational changes.

Intersection of Jefferson and Wackerly

Issues: This intersection is located at the east end of the major commercial district of the City and has traffic issues related to congestion during certain times of the year and certain times during the week. With a major church located north of the intersection, traffic congestion occurs during Sunday morning as a large volume of traffic enters the intersection at the same time that the Midland Mall opens. This creates conflicts for northbound left turns that must wait for southbound traffic from the church. Also during major events and regular season of the Midland Soccer Club which is located east of the intersection, major traffic congestion is seen during game and tournament times, when parents are entering and exiting the area for soccer games. During shopping times for the Holiday season, there are many traffic back-ups from Joe Mann Boulevard and Cinema Drive that cause long waiting times for entering and exiting the shopping district.

Recommendations: A future roundabout is proposed for the intersection of Joe Mann Boulevard and Jefferson Avenue. The roundabout would allow for all turning movements at the intersection without the disruption of a traffic signal. This would be in conjunction with a boulevard section on Joe Mann Boulevard from Eastman Avenue to Jefferson Avenue, to separate traffic and prohibit left hand turns from businesses, except at designated locations. The boulevard section would provide two lanes in each direction with a landscaped boulevard between the four traffic lanes.

Ashman/Saginaw/Jefferson

Issues: The Ashman Circle area has been the focus of attention and comment for some time, both in regard to traffic operations and pedestrian and business accessibility. However, current capacity analyses indicate that the intersection itself is operating within acceptable levels, even during peak hours.

Recommendations: The Ashman Street/Saginaw Road/Jefferson Avenue intersection should be periodically reviewed for potential physical and operational improvements that retain or may improve traffic flow and increase safety and accessibility for pedestrians and vehicles to/from the adjacent businesses.

Center City Authority Area

Issues: The Center City area extends primarily on Saginaw Road from the Circle on the north end to Patrick Road. This area has developed as a strip, without a coordinated appearance or plan for better access to businesses.

Recommendations*:* A Development Plan was adopted in 2012, outlining proposed improvements to the area including street scaping, a roundabout at the Circle, boulevards, facades, and sign changes. A Tax Increment Financing Plan has been adopted by City Council for the Authority area and will begin collecting taxes to fund proposed improvements in January of 2013.

West Side River Crossing/Connector

Issues: Lack of a good north/south arterial along the city's west side results in longer drive times and poor circulation for drivers oriented to and from this side of the city. This existing issue will worsen as the area around the Stark Road interchange with US-10 develops with commercial, industrial, and higher density residential.

Recommendations: Pursue analyses and funding for development of a new Tittabawassee River crossing, between M-20 and Saginaw Road. The alternatives should include (at a minimum) the Stark Road/Lambert Road/Sandow Road and Dublin Avenue/Vance Road corridors, each of which has its advantages and disadvantages that need to be explored in detail. Significant local/private funding will need to be obtained to support city and state funding of any alternative for this to move forward in the near future.

Stark Road at US-10

Issues: Future development in the area of this interchange is expected to result in the need for additional roadway improvements to maintain acceptable capacity and/or sound access.

Recommendations: As development continues in this area, traffic impact studies should be evaluated to determine when improvements are needed. Stark Road from Saginaw to the northern edge of the MUGA will need to be expanded to a three-lane cross section.

Other Intersections

Issues: Several additional intersections throughout the City were identified as needing further evaluation and ongoing counts. These intersections included:

- Sturgeon/Wackerly
- Sturgeon/Airport
- Isabella/Vance
- Sugnet/Swede
- Saginaw/St. Andrews

Recommendations: These additional intersections were found to be operating within acceptable levels. The two projected deficient intersections, Sturgeon Avenue/Wackerly Street and Sturgeon Avenue/Airport Road, should both be considered for left-turn lanes and intersection capacity improvements in the future, with the possibility of signalization. The City will continue to encourage MDOT to install an actuated signal at Isabella Street and Vance Road. Monitor Sugnet Road and Swede Avenue intersection for possible signalization.

Freeway Interchanges

Waldo Avenue Interchange with US-10

Issues: One potential project to be considered is the reconstruction of existing US-10/Waldo Avenue partial interchange to a full interchange. Currently, freeway access is only provided to and from the west. A full interchange would provide for better access for residents and businesses in that area as well as provide an alternative to the congested Eastman Avenue interchange. For a full interchange to be effective, local collector and arterial streets that feed into the interchange area must be in place to provide access. In anticipation of a potential full interchange, the City has constructed a connector corridor (Joe Mann Boulevard/Joseph Drive/Diamond Drive) to provide better access from the Eastman Avenue and Jefferson Avenue corridors to Waldo Avenue. MDOT commissioned a study in 2003 to address this issue and develop a set of potential interchange alternatives (discussed below).

Above: One potential interchange configuration.

Recommendations: One of the areas planned for significant commercial and higher density residential is along Waldo Road just north of the existing US-10/Waldo partial interchange. Completion of a full interchange could support development of planned commercial and higher density residential uses in this area.

MDOT's potential interchange alternatives defined a preferred design based upon cost and footprint (right-of-way needs). Although the preliminary alternatives ranged from a standard four-quadrant interchange to a single point urban interchange (SPUI), the findings supported a more standard layout (shown on the previous page). If the full interchange project proceeds, additional environmental and traffic studies would be needed to lead the final design.

Based on planned development, by 2020 Waldo Road could experience daily volumes of 15,000 to 20,000 vehicles (1,200 to 1,800 peak hour vehicles) in this area. Waldo will need to be widened to at least three lanes, with the potential need for five lanes in the short section just north of an upgraded interchange.

Based on these projections, the City should continue to pursue this upgrade with MDOT. Ample right-of-way should be reserved along Waldo Road through site plan review or other processes. If the Waldo Avenue/Road interchange is upgraded, improvements to Wheeler Street and Waldo Avenue around the interchange will be needed to manage the traffic in the area. It should be noted that under current funding constraints, it is likely that significant local or private funding will be needed in order to put an interchange upgrade on MDOT's project list(s) and to eventually get the improvements constructed.

Lyon Road-to-Patrick Road Crossover

Issues: The Lyon Road to Patrick Road crossover, located immediately west of the grade-separated freeway portion of M-20/US-10 BR, has been an area of concern for some time (see Existing Conditions Map). This intersection has been the site of numerous crashes related to poor visibility, limited reaction time, and relatively high-speed traffic. The City and MDOT have conducted an analysis of this intersection to identify potential alternatives.

Recommendations: The Lyon Road to Patrick Road crossover issue has been addressed in part by the analyses commissioned by the City and MDOT. Although the primary goal is eliminating the crossover, this will require development and implementation of improvements to accommodate the diverted traffic.

An MDOT study conducted to evaluate this interchange area evaluated several alternatives, some of which called for increased use of James Savage Road to S. Saginaw Road. Given the recent closure of Bay City Road/Austin Street/Washington Street, it appears that any alternative calling for increased use of James Savage is not practical. An alternative explored as part of this master plan process is the potential use of a high-volume roundabout located near the Washington Street/Patrick Road/Lyon Road area. In any case, the City should continue to pursue elimination of the current safety issues related to the existing crossover but make sure that the future alternatives and the ultimate design takes into account the street closure elements to the south.

Other Traffic Issues, Recommendations, and Opportunities

In addition to potential improvements to major streets noted above, there are some scattered problem areas identified by the public and through the review of data. While several physical and operational improvements to the transportation system are recommended, there are also several programs and procedures that may improve traffic and safety, especially in areas where road or intersection expansion is not feasible.

Public Transportation

Issues and Conditions: Public transportation is provided to Midland residents by Dial-A-Ride Transportation (DART). DART provides demand-response transportation to destinations within the City limits. Demand-response service requires users to schedule rides a minimum of 60 minutes in advance or residents can schedule standing order service, meaning a consistent time and location. DART is available for use by all residents.

Recommendation: As Midland continues to grow, the feasibility and ridership of a fixed-schedule route or route network should be periodically evaluated. Connecting the City's residential areas with the Circle, Saginaw, Downtown, and Minor League Ballpark areas would provide a great community service and encourage use of alternate modes of transportation.

Access Management

Issues: The proliferation of driveways along commercial corridor segments causes confusion, congestion, and crashes. Both of these predominantly commercial areas need retrofit access management plans and additional policies and regulations in place to address this issue and improve the long-term health of these corridors.

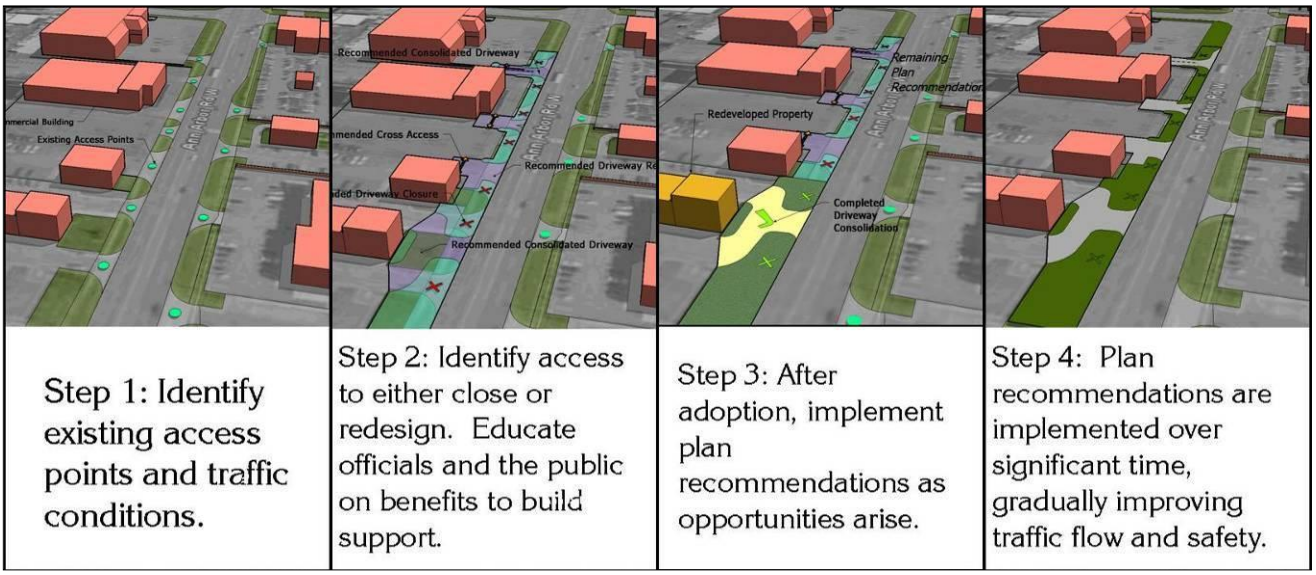
Recommendations: Access management is a set of techniques whose goal is to maintain efficient traffic flow, preserve the street's capacity, and reduce the frequency and severity of crashes while maintaining reasonable access to adjacent land uses. Careful placement (or relocation in the case of retrofit areas) of access points reduces conflicts with traffic using other access points and traffic flowing through intersections. The City should pursue a pilot access management plan for a select segment of street in the City. Saginaw and Eastman are two candidates that would have the biggest potential benefit of a corridor-specific access management plan. Access management usually involves tools to appropriately space access points or restrict problematic turning movements. These tools include the following items:

- Adequate spacing of access points along the same side of the street
- Alignment or spacing from access points on the opposite side of the street
- Placing commercial driveways a sufficient distance from intersections to minimize impact to intersection operations
- Geometric design such as channelized right turns to restrict certain turning movements (usually left turns) by use of a raised island,
- Location/spacing of traffic signals

- Shared access systems (connections between land uses, shared driveways, frontage roads or rear service drives)

The Access Management Plan and implementation process are illustrated in the graphic below.

Figure 6.2: Access Management Plan



Application of access management plans and regulations can provide several benefits to motorists, land uses, and non-motorists in the City of Midland. These benefits are most obvious if applied in a retrofit manner to corridor sections such as S. Saginaw Road and north Eastman Avenue (see specific recommendations on the Transportation Plan Map). The following is a list of benefits often resulting from an effective access management plan and ordinance language.

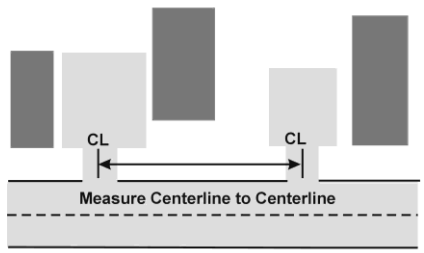
- Reduce crashes and crash potential
- Preserve or increase roadway capacity and the useful life of roads
- Decrease travel time and congestion
- Improve access to and from properties
- Ensure reasonable access to properties (though not necessarily direct access nor the number of driveways preferred by the landowner/developer)
- Coordinate land use and transportation decisions
- Improve environment for pedestrians and bicyclists (less driveways to cross)
- Improve air quality by reducing congestion and delays
- Maintain travel efficiency and related economic prosperity

Driveway spacing standards commonly used in local communities and State and county agencies in Michigan are noted in the table below (MDOT guidelines). Flexibility is encouraged only in retrofit areas, where meeting spacing standard would be difficult. The main goal of the plan and

ordinance is to improve safety and traffic flow by reducing the number of driveways in built-up areas regardless of the resulting driveway spacing.

Posted Speed limit	Along arterials	Along other Roadways
35 mph or less	245 ft.	150 ft.
40 mph	300 ft.	185 ft.
45 mph	350 ft.	230 ft.
50 mph	455 ft.	275 ft.
55 mph	455 ft.	350 ft.

Figure 6.3: Minimum Driveway Spacing Measurement



The Transportation Plan Map and Sample Area Map illustrates some specific recommendations for the two corridors identified as access management problem areas. The City should consider and incorporate the preceding standards into its regulations to help improve access conditions throughout the City.

Traffic Calming

Issues: The problem ~~area~~ is the perceived cut-through traffic and inappropriate high speeds for residential neighborhood***s***.

Recommendations: Traffic calming refers to roadway design features and strategies intended to reduce vehicle speeds and through traffic volumes on a street. Traffic calming measures can range from minor modifications of an individual street to comprehensive redesign of a street network. Only minor modifications of individual streets are needed to address the problem areas identified through the Master Plan process, but comprehensive standards for future developments are encouraged. The objectives of a traffic calming project typically include one or more of the following:

- Reduce traffic speeds
- Reduce cut-through traffic
- Increase safety
- Reduce traffic-related noise
- Enhance aesthetics of the street
- Consider needs of all residents and business owners
- Redefine the image of a neighborhood

Strategies or measures that can be part of a traffic calming toolbox include:

- Median islands
- Speed humps (not bumps) or speed tables
- Mid-block chokers (narrowing of the street)
- Chicanes
- Roundabouts
- Small Traffic Circles
- Pavement treatment

- Bike lanes
- Street trees
- Partial or full street closures

A successful traffic calming program involves educating staff planners and engineers about calming strategies. In addition, policies and guidelines for implementing traffic calming projects must be established and funding sources developed. Specific projects may be initiated by neighborhood requests (may be by petition), traffic safety programs, or as part of a community redevelopment project.

Due to the large number of neighborhoods in Midland with through roads, Midland should develop a traffic calming program to maintain safety and aesthetics of neighborhoods. Based upon master plan input, a pilot traffic calming program should include portions of Dilloway at/near its approaches to Eastman Avenue and/or at Chapel near the school where speed and safety are a concern.

New Transportation Model

The City should take full advantage of the new transportation model (computer/software driven) that has been developed for the Midland area's major street system.—The model calibration has been updated. MDOT worked with City staff to ensure that the existing conditions model matches known street characteristics. Now, the City can request testing of various land use and roadway improvement alternatives and identify potential street system impacts. This model is an excellent tool to supplement and improve upon existing long-term traffic projections.

Non-Motorized Transportation

Introduction

Promoting non-motorized transportation and access through the City and to the region will yield many benefits and add value to the area in many ways. The following section discusses the different types of non-motorized facilities, identifies benefits, and provides recommendations for improving the existing system.

The Midland Non-Motorized Transportation Advisory Committee (NMTAC) was formed by the City Planning Department on July 17, 2008 as recommended by the 2007 City of Midland Master Plan which outlined the need for a comprehensive multi-year non-motorized transportation plan.

Creating a safe and welcoming alternative to our current automobile-centric transportation system can have profound and positive effects on the quality of life of Midland's children and citizens and encourage more visitors to the city as shown by the success of the Pere Marquette Rail Trail. The Midland community can realize significant health, environmental, social and economic benefits by becoming more pedestrian and bicycle active to fulfill both recreational and transportation needs. To enable this change a more pedestrian and bicycle friendly infrastructure is required.

The vision of the NMTAC is that within a 5 to 10 year time horizon, more elementary and middle school children will walk or bike to school and that its' citizens will increasingly walk or bike to and from their recreational and transportation destinations in the city. The NMTAC has identified 5 areas of focus necessary to achieve the vision:

- Education & Encouragement: Develop and implement programs that educate and encourage children and citizens of the benefits of non-motorized transport, to develop the skills required, and to take advantage of the NMT infrastructure.
- Engineering: Implement projects that transform the current infrastructure to a more pedestrian and bicycle friendly infrastructure.
- Enforcement: See that a Governance system is put in place that manages the NMT infrastructure, standards and compliance.
- Evaluation: Maintain a consistent program to measure the success, challenges and future needs of NMT efforts.

http://www.midland-mi.org/government/departments/planning/Planning/NMTCommittee.htm

Non-Motorized Pathways

Non-motorized pathways generally refer to any physical facility such as a wide paved pathway, widened road shoulders and trails along natural rivers that can be used by walkers, joggers, roller bladders and cyclists. Commonly referred to as a bike path, bike route or rail-trail, these non-motorized pathways are typically designed for cyclists, although they are just as often used by pedestrian walkers, joggers and families with strollers. Several non-motorized pathway examples include:

- Bike Routes
- Wide Curb Lanes
- Separated Pathways

- Bike Lanes
- Paved Shoulders
- Sidewalks

Benefits of Pathways

Pathways benefit residents and improve communities by providing direct recreation and transportation opportunities. Specifically, benefits provided by pathways include:

- **Recreation Opportunities.** An increase in pathways is one important response to the increased demand for recreation. Walkers, joggers, hikers, runners, cyclists, rollerbladers, cross country skiers, and horseback riders all take advantage of trails. Pathways provide an opportunity for residents to enjoy their community and take in the natural and cultural features of Midland at their own pace.

- **Transportation Alternatives.** A network of non-motorized pathways in Midland will ensure that residents can travel safely without the use of an automobile. The Plan identifies pathways linking residential neighborhoods, schools, recreation facilities, and commercial nodes.

- **Environmental Protection.** Reduced reliance on the automobile leads to reduced pollution and traffic congestion.

- **Enhanced Economics.** Pathways tend to reduce crime and increase property values. Experience nationwide has shown that well-planned trails attract families, local residents, and other friendly, responsible people, whose presence on the trails serves as a neighborhood watch, driving troublemakers away. Access to pathways is an amenity that many homebuyers appreciate. Close proximity to pathways may improve property values

- **Improved Health.** Pathways help people of all ages and health incorporate exercise into their daily routines by providing safe and easy access to the places they need or want to go.

- **Outdoor Education.** Pathways traverse a wide range of environments and can be used as an outdoor classroom. The installation of interpretive signage can describe natural, cultural or historic aspects of community.

- **Quality of Life.** A good quality of life makes a community attractive to visitors and residents alike. Areas with a high quality of life often include parks, ample open space, and good schools with a safe and walkable environment.

Regional Attractions

Pere Marquette Rail Trail

The Pere Marquette Rail Trail is an old railroad line that was turned into a pathway. It is a separated twelve-foot wide asphalt path that begins at the Farmers Market in Downtown Midland, at the end of Ashman Street at the base of the Tridge. Within the City limits, the trail runs 3 miles. It extends over 27 miles west to the City of Clare. The trail leads recreational enthusiasts through Midland's Emerson Park, the Dow Museum and the Bradley House.

City Forest Trail

Located on the northern edge of the City, the City Forest has over 520 acres of woods and nature paths for area residents to explore. Summer months bring mountain biking and hiking, while winter activities include cross country skiing and an iced toboggan run. Working with the Michigan Mountain Biking Association, the City of Midland has developed over eight miles of natural terrain in the City Forest for off road bicycle enthusiasts.

Chippewa Nature Trail

As an environmental education center, the Chippewa Nature Center (CNC) provides several opportunities for non-motorized activities. Area residents can walk, bike, or in-line skate from the Nature Center to downtown Midland on a paved 3.5 mile pathway. Access is gained through a parking area near the Tridge to the CNC Visitor Center.

Existing City Pathways

Midland has several posted bike routes that run through the City, such as those along Washington Street. Local street right of way widths of 66 feet allow for on-street parking with space for marked bike routes along the existing paved area. A sidewalk system exists throughout Downtown streets and along most of the streets within the City. Midland's Department of Public Services follows a sidewalk maintenance program. As new developments occur, sidewalks and lighting are required within the City Limits. Wider, asphalt pathways located farther from the road than typical sidewalks are in place in several areas of the City. These trails provide connections to Downtown shopping and sidewalks and City parks. The three main segments of these pathways are the Pere Marquette Trail, a trail that follows M-20 from the Farmer's market east past Waldo Road, and a trail on the north side of US-10 east of the

Midland Mall. The City plans to connect these existing segments to form a continuous pathway loop around the City in the future. See Map 6.5: City Pathway Network, for an approximate future alignment of a pathway loop.

City Park System

Trails at many parks in the City provide an internal system of pathways for active recreation. Midland's numerous public parks are located throughout the City and offer both paved and nature trails.

Greenways

Midland has a system of natural corridors along the riverfront that could support an expanded network of trails. These corridors represent excellent opportunities to provide connections to the existing pathway network while expanding the City's recreational offerings.

Recommendations

- Develop linkages between neighborhoods, schools and parks for non-motorized travel.
- Encourage new businesses to include dedicated space for bike racks and bicycle parking areas on site plans.
- Evaluate and encourage increased bicycle-oriented facilities at City parks, including bike stations with bathrooms and rental lockers.
- Establish minimum design standards for future pathway connections and consider adding appropriate signage and striping for bike lanes as part of street improvements.
- Clearly identify staging areas where people can park and begin their trips on area pathways and the Rail Trail.
- Consider the benefits and costs of constructing pedestrian overpasses across Eastman near the US-10 interchange.
- Educate the public about awareness and tips to maintain personal safety on the paths at all times.
- Improve signage and directional maps for bikers ending their Pere Marquette Rail Trail trip in Midland to encourage day trips to Downtown destinations through pathways and sidewalks.
- Work with area interest groups, such as Safe Trails and Roads for Pedestrians and Cyclists, to obtain user-based feedback about proposed pathway and cycling improvements.

The following is a summarized list of the physical improvements the committee considered critical to the success of NMT in Midland. Prioritization by the City & NMT Committee should be based upon annual evaluation of available funding and the continuance of projects already underway.

	2009-2010	2011-2012	2013-2014	2015 +
Multi-Use Paths				Patrick Road to Stratford Park Stratford to Eastman Eastman to Dublin City Forest
Bike Lanes	Ashman Street & Rodd Street (completed 2010)	Swede Avenue (completed 2011)	Sugnet Road Eastlawn Avenue (2012/2013)	
Designated Bicycle Routes	Completed 2011			
Sidewalks	Various locations	Various locations	Various locations	Various

Accomplishments

Ashman Street, Rodd Street and Swede Roads are now marked as bicycle routes with signage. The City-wide bike route as shown on the map in this chapter is also completed with signage and stenciling on the road.

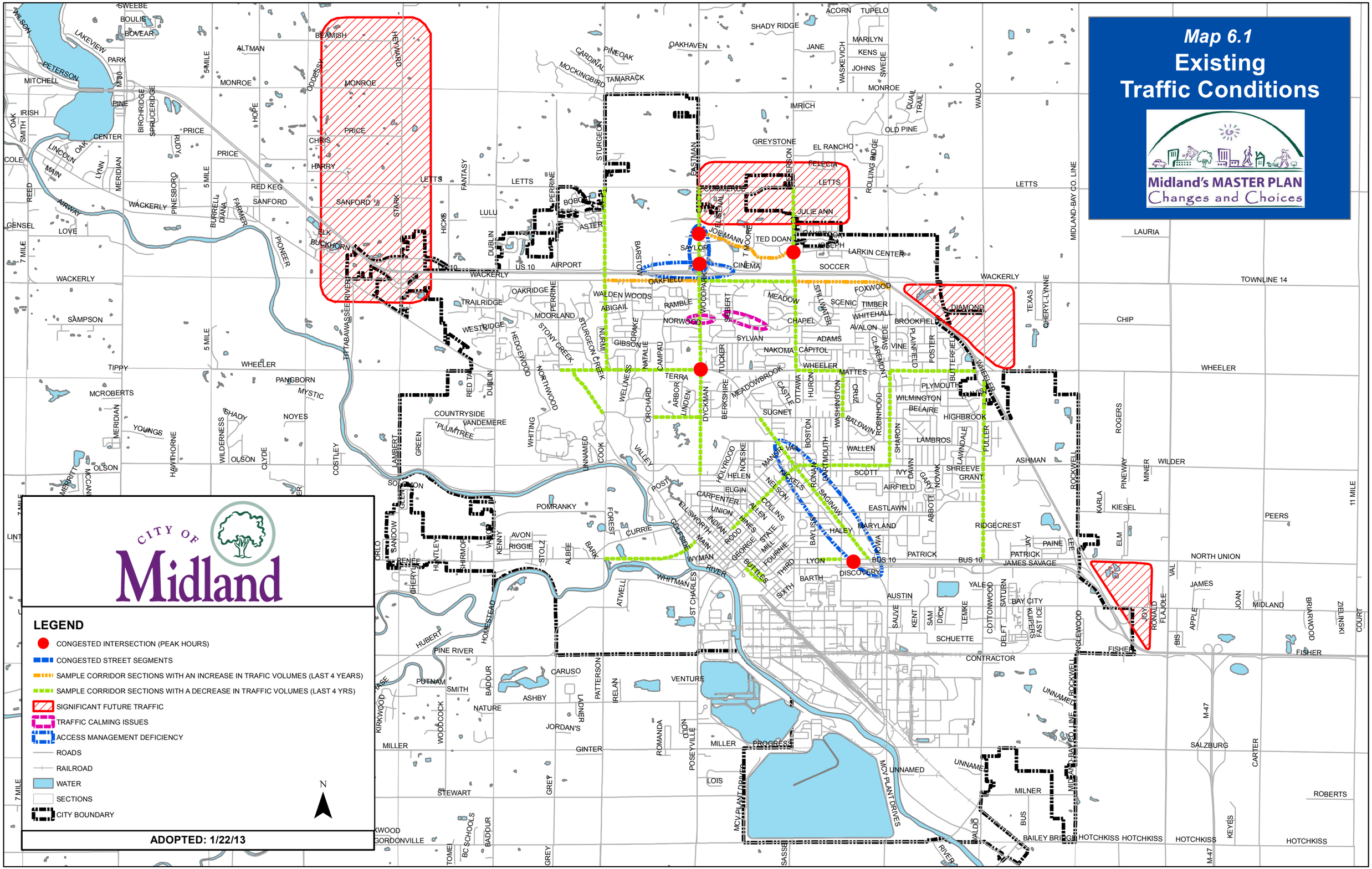
The City has been recognized with an Honorable Mention as a Bicycle Friendly Community by the League of American Bicyclists. An application has been submitted for further recognition and is pending.

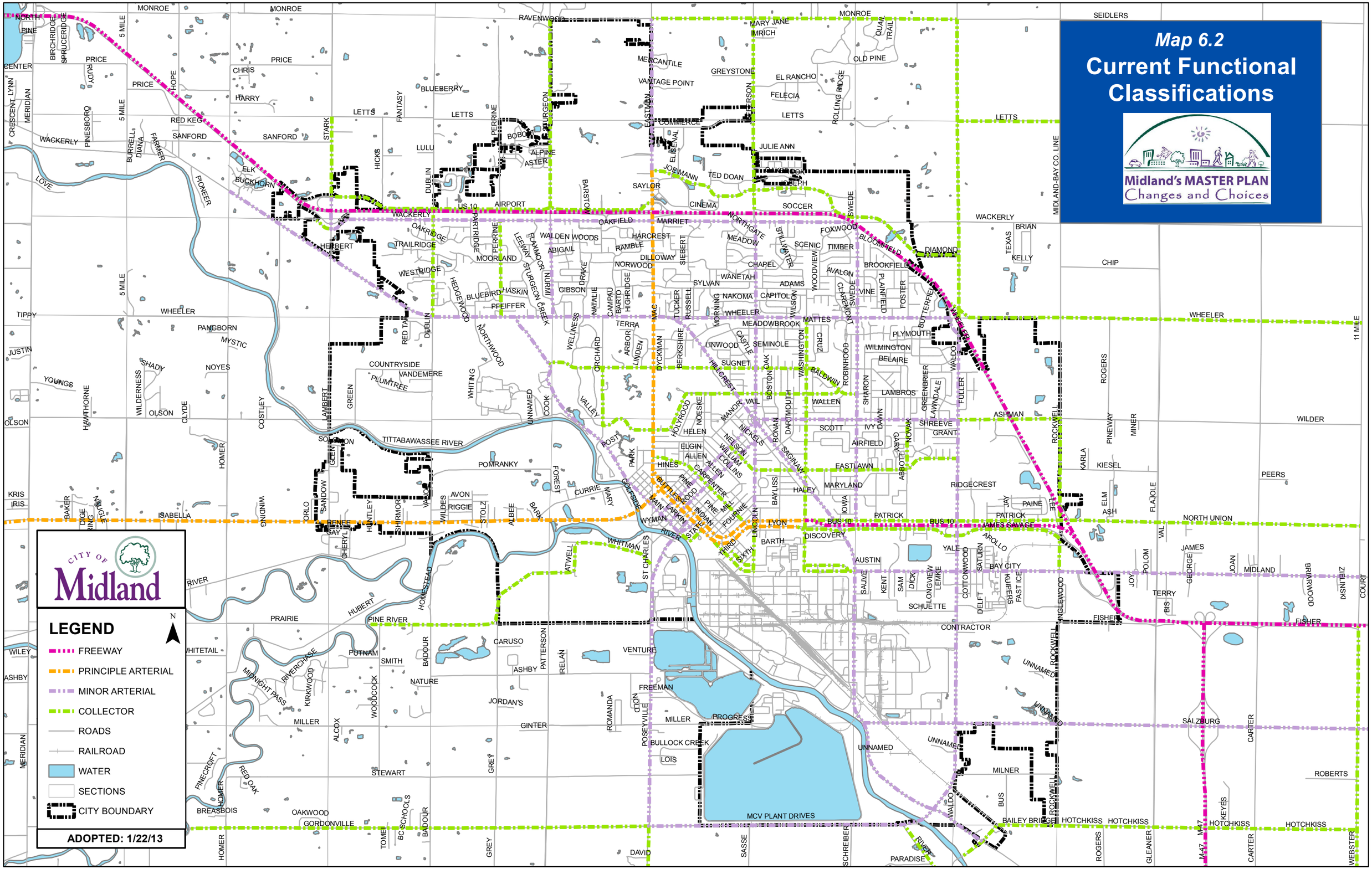
Implementation

The Midland City Pathway Loop Map shows the general route a loop path could take. It is not intended to define the exact route the pathway, as well as additional key pathways segments to connect the City's key cultural and recreational facilities. Further research and negotiations with property owners will determine the final alignments. The City-wide pathway system should conform to established national standards for safety while reflecting the unique character of Midland. Pathways should be convenient, aesthetically pleasing, and beneficial to the general quality of life in Midland while complementing the motorized transportation system.

Map 6.1
Existing Traffic Conditions

Midland's MASTER PLAN
Changes and Choices




Map 6.2
Current Functional Classifications
Midland's MASTER PLAN
Changes and Choices
CITY OF
Midland
LEGEND
N
FREEWAY
PRINCIPLE ARTERIAL
MINOR ARTERIAL
COLLECTOR
ROADS
RAILROAD
WATER
SECTIONS
CITY BOUNDARY
ADOPTED: 1/22/13
TITTABAWASSEE RIVER
MCV PLANT DRIVES
MIDLAND-BAY CO. LINE

Map 6.3
Transportation Plan

Midland's MASTER PLAN
Changes and Choices

DEVELOP REAR SERVICE DRIVE ALONG WEST SIDE IN LONG TERM.

CONTINUE TO PRURSUE THE CHOSEN BOULEVARD ALTERNATIVE TO PROVIDE A MORE EFFICIENT AND SAFER CORRIDOR SECTION.

CONSIDER DEVELOPING ADDITIONAL NORTH/SOUTH LINKS IN NORTEAST PART OF TH M.U.G.A.

MONITOR VOLUMES ON THIS SECTION OF JEFERSON FOR POTENTIAL WIDENING/EXPANSION. MUST BE CONTEXT - SESITIVE GIVEN RESIDENTIAL NATURE

PURSUE ACCESS MANAGEMENT TECHNIQUES ON EASTMAN IN ADDITION TO, OR A PRECURSOR OF MAJOR CAPACITY IMPROVEMENTS.

NUMEROUS COMM. DRIVEWAYS - CLOSE/ COMBINE WHEN OPPORTUNITY ARISES.

IN LONG TERM, CONTINUE TO SEEK/ DEVELOP AN ADDITIONAL RIVER CROSSING ON WEST SIDE - STARK RD. AND DUBLIN RD. ARE TWO OF SEVERAL POTENTIAL CORRIDORS.

ONE POTENTIAL INTERCHANGE ALERNATIVE (SINGLE POINT URBAN INTERCHANGE)

CLOSE/COMBINE DRIVEWAYS LOCATED TOO CLOSE TO SIGNALIZED INTERSECTION.

REDUCE THE NUMBER OF CLOSELY - SPACED COMMERCIAL DRIVEWAYS.

SEE SAMPLE AREA ACCESS MANAGEMENT GRAPHIC FOR FURTHER RECOMMENDATIONS

RETROFIT ACCESS IMPROVEMENTS MOST LIKELY WHEN SITE COME IN FOR OTHER APPROVAL PROCESS.

CITY OF Midland

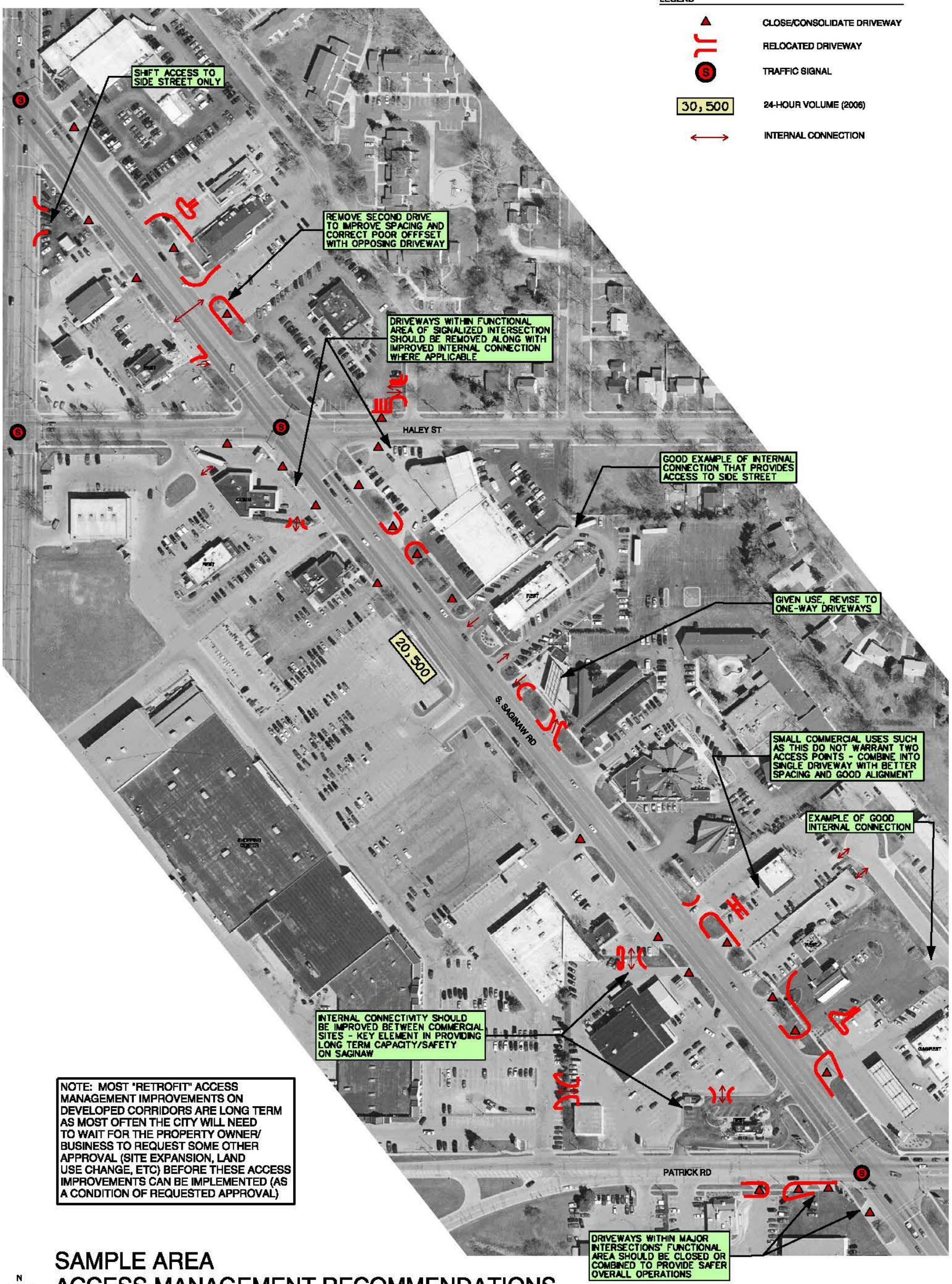
LEGEND

N

MAJOR CAPACITY/SAFETY IMPROVEMENTS AREA

- INTERSTECTION IMPROVEMENTS
- CORRIDOR WIDENING
- PLANNED/POTENTIAL NEW STREET
- ROADS
- RAILROAD
- ACCESS MANAGEMENT IMPROVEMENT OR PLANNING
- WATER
- SECTIONS
- CITY BOUNDARY

ADOPTED: 1/22/13



NOTE: MOST "RETROFIT" ACCESS MANAGEMENT IMPROVEMENTS ON DEVELOPED CORRIDORS ARE LONG TERM AS MOST OFTEN THE CITY WILL NEED TO WAIT FOR THE PROPERTY OWNER/ BUSINESS TO REQUEST SOME OTHER APPROVAL (SITE EXPANSION, LAND USE CHANGE, ETC) BEFORE THESE ACCESS IMPROVEMENTS CAN BE IMPLEMENTED (AS A CONDITION OF REQUESTED APPROVAL)

N

SAMPLE AREA ACCESS MANAGEMENT RECOMMENDATIONS

S. SAGINAW AREA - MIDLAND MASTER PLAN

SCALE 1"=60'

AERIAL PHOTOGRAPHY PROVIDED BY CITY OF MIDLAND
DATE OF PHOTOGRAPHY: 2005

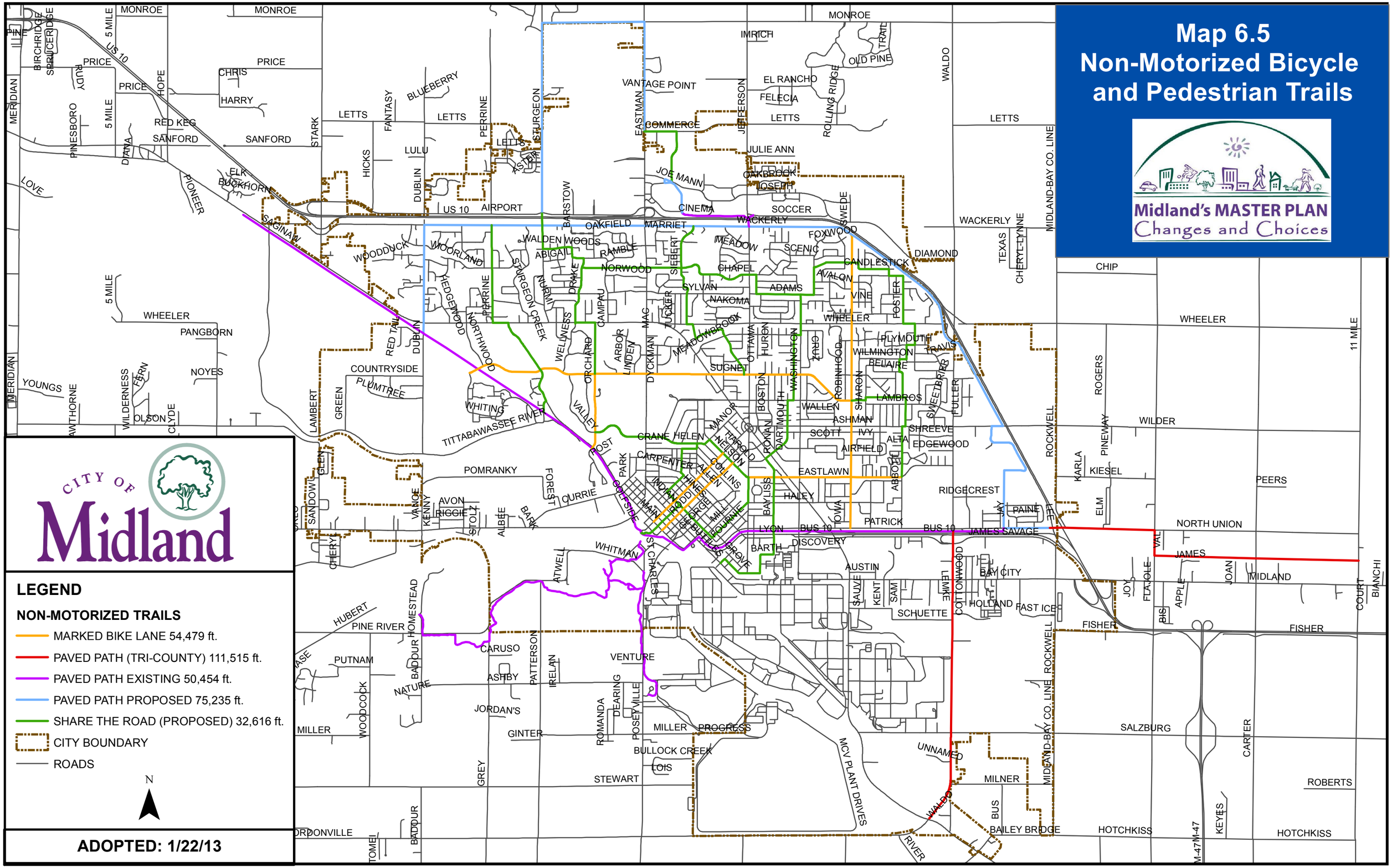
Map 6.4

Sample Area Acess Management Recommendation Plan

Midland's MASTER PLAN
Changes and Choices

Map 6.5
Non-Motorized Bicycle and Pedestrian Trails

Midland's MASTER PLAN
Changes and Choices



Chapter 7:
Community Facilities Plan

Introduction

The City's community facilities have a direct impact on the safety, health and overall quality of life for Midland area residents. As outlined in Chapter 2: City Profile, community facilities include services such as police, fire, City offices, schools, recreation, and utilities. As new residents, new land uses, new businesses and new neighborhoods become part of the community, the City's facilities must expand and integrate with these changes. This Chapter discusses goals and policies that will address maintenance and expansion of utilities and parks and recreation facilities.

Facilities Vision and Goals

The vision for the City is to strive for a high quality of life for current and future residents by maintaining a diverse and unified system of community facilities and services. Included in this vision is preservation and appreciation of parks and open space within the City and the MUGA.

The following is an outline of goals and objectives that should be considered during important capital investment decisions, policy decisions, and changes to regulations. These elements should also be interwoven into other decisions related to issues such as land use, transportation, neighborhoods, and economic development.

Goal 1: Continue to offer the highest quality, efficient services and facilities for residents.

- Ensure new parks, public safety, and utility facilities are conveniently located to serve residents.

Goal 2: Promote community services and facilities that integrate and unify the community.

- Continue to promote the historical and cultural resources provided in the community.
- Promote the continued development of public facilities within new neighborhoods.
- Promote prevalent traditional neighborhood design elements that incorporate community facilities into neighborhoods.

Goal 3: Continue to acquire, develop, maintain and preserve open space and recreation facilities.

- Implement the recommendations of the City of Midland Parks and Recreation Plan (and update the plan every five years).

- Acquire and preserve open space and parkland, concentrating on developing recreation space in new neighborhood areas.

Goal 4: Preserve significant natural features in the City and MUGA.

- Encourage developers to integrate existing open space and parkland into new developments.
- Develop ordinances which preserve the integrity of the natural settings of neighborhoods, communities, open spaces and parks, and develop clear procedures for their enforcement.

Facilities Recommendations

The City has always strived to offer Midland residents the most desirable community facilities to maintain their quality of life. As the City plans for the future, maintaining existing high quality park and utility systems must be a high priority. The following recommendations for maintaining and improving the City's community facilities should be used with the broad goals offered above in making capital improvement, policy, and regulatory decisions.

Utilities

The City's current policies and regulations tie the expansion of utility services to annexation into the City Limits. This provides the City with tools to promote well-planned, contiguous development around the existing City Limits and within the MUGA. The City should continue to use current utility policies to promote a systematic pattern of development that efficiently utilities existing infrastructure and allows focused infrastructure improvements along planned corridors.

Parks and Recreation

The quantity and diversity of parks and recreation facilities around the City are the envy of many other communities across the region. The City should pursue ordinance incentives to promote the development and integration of parks into new developments. These incentives could include density bonuses or other dimensional modifications that would provide an added benefit for the developer to design for parks, recreation, and civic facilities within new neighborhoods.

Chapter 8: Implementation

Introduction

Previous chapters provide background information and analysis on the key issues and trends in the City of Midland at the time this Plan was adopted in 2007 and updated in 2012. Goals and objectives throughout the Plan provide a foundation to guide the resolution of issues and establish policies for decision-making in the future. Recommendations are listed throughout the Plan; some are described in detail or shown on the various maps, while others are more of a policy guide for the future. This format enables the Plan to be flexible and applicable to new issues, opportunities, and alternatives that may arise. Some of the key recommendations are summarized in a chart on the following pages.

This implementation chapter should be used as a resource when the City begins implementing the goals and objectives of this plan. Over time, the City may discover new implementation approaches. Changes to the specific strategies are to be expected; more importantly, the City must remain committed to upholding the integrity of the goals and objectives of the document. Michigan planning law requires that the Plan be reviewed and revised or reaffirmed at least every five years. It is advisable for the Plan to be used on a consistent basis and discussed annually to determine if any amendments need to be considered. In addition, new Planning Commission and City Council members should be provided with a copy before they take office to give them background on the City and its adopted policies. New City staff members should also be made aware of the Plan and its goals, policies, and purpose.

While the Planning Commission and City staff has primary responsibility for the implementation of this Plan, a number of groups were involved in the creation of this Plan and serve an important role in its implementation. These groups are listed below with a brief summary of their role in the Plan and implementation:

- **City Officials – Planning Commission, Zoning Board of Appeals, City Council.** The Planning Commission, ZBA, and City Council must work together to promote frequent use of the Master Plan and routinely evaluate the need for amendments to the Zoning Ordinance and other regulations.
- **City Staff – Planning and Community Development.** The City Planning and Community Development Department staff needs to maintain and update the website information related to the Master Plan, including public relations materials from the process to sustain the positive public involvement process.
- **City Staff – Engineering.** The City Engineering Department is involved primarily in the infrastructure required to support the City, including new development and redevelopment.

The staff needs to incorporate the Master Plan into studies, plans, and capital expenditures for transportation, utilities, and other facilities.

- **Parks & Recreation Division.** A separate Parks Master Plan was adopted in 2004 and updated in 2010***,*** that guides the specific policy and improvements related to parks, open space, recreational facilities, and recreational programming in the City. The objectives of the Parks and Recreation Master Plan should be considered by the Planning Commission in land use decisions and conversely, the objectives of the Master Plan needs to be integral in Parks and Recreation decisions.
- **Downtown Development Authority (DDA).** The DDA is a subsection of the City government and is an essential partner in any efforts to expand the boundaries, uses, or density of Downtown Midland.
- **Center City Authority (CCA).** The Center City Authority is a district that extends from just north of the Circle south to Patrick and Saginaw Roads. The Authority should work with the Planning Commission to identify Zoning Ordinance amendments ***that will*** ~~to~~ provide more flexibility for creative, mixed-use developments in the CCA areas.
- **Midland Public Schools.** The location, size, and type of Midland schools facilities will be an important element of City expansion.
- **Michigan Department of Transportation and the Bay-Saginaw-Midland Metropolitan Planning Organization (MPO).** MDOT has jurisdiction over many of Midland's major roads, including US-10 and M-20, while the local MPO is involved in transportation planning and forecasting for the Midland region. Any major transportation improvements will be coordinated through these agencies.
- **Public Services Providers.** The Midland Fire Department, Police Department, Emergency Medical Services, and all of the services departments in City government play an important role in the safety and overall quality of life for the Midland area. Relevant agencies must be included wherever their input might guide and improve City decisions. This includes, but is not limited to, site plan review, road circulation, extension, or closure.
- **Utility Providers.** Expansion of Midland City Limits will require additional utilities and infrastructure, which must be anticipated and accommodated in coordination with Midland's utility providers.
- **Midland, Saginaw, and Bay Counties, and surrounding Townships.** Decisions made by the City, adjacent Townships, and Counties all affect one another. Ongoing coordination between all government units is important to achieving the long-term goals of this Plan.
- **Other Groups.** Other groups, including the Dow Foundation and Midland Tomorrow, that provided input should be informed and included in discussion of projects and programs that may assist in Plan implementation.
- **Private Property Owners and Developers.** Many recommendations of this Plan may require some assistance from private property owners and developers to be implemented. Right-of-way donation, construction or donation of lands for public or private parks, and assistance with infrastructure upgrades for larger developments are all examples of how this important group can assist in Plan implementation.

Implementation Tools

Tools to implement the Master Plan generally fall into these categories:

- City Ordinance, including the Zoning Ordinance
- Capital improvement programs derived from budgetary powers
- Programs or additional studies derived from the City Charter and approvals by the City Council or administration

Each tool has a different role toward Plan implementation. Some suggest specific short term priorities, some are long term policies and others involve on-going activities. The following table provides specific recommendations and implementation measures. The key tools are described on the next page, in no particular order of importance.

Land Use Regulations

The purpose of the primary tools for Plan implementation, such as the Zoning Ordinance and other land use regulations, are summarized below.

Zoning Map. The intent is that changes to the zoning map over time will gradually result in better implementation of the objectives encouraged in the Future Land Use Map. In some cases, the City may wish to initiate certain zoning changes as part of an overall zoning map amendment. Other changes to the zoning map will be made in response to requests by landowners or developers. In those cases, City officials will need to determine if the time is proper for a change. A key point to remember is that the future land use plan is a long range blueprint: Implementation is expected, but gradually, in response to needs, conditions and availability of infrastructure.

Zoning Regulations. Zoning regulations control the intensity and arrangement of development through standards on lot size or density, setbacks from property lines, building dimensions and similar minimum requirements. Various site design elements discussed in this Plan are also regulated through site plan review, which addresses landscaping, lighting, driveways, parking and circulation, access management, pedestrian systems and signs. Zoning can also be used to help assure performance in the protection of environmentally sensitive areas such as floodplains, state regulated wetlands and woodlands.

Subdivision, Land Division and Condominium Regulations. Subdivision, land division and condominium regulations control the manner in which property is subdivided in the City and the public improvements required to support the development. The distinctions are not always apparent once a project is built, but the approval procedures are different due to separate state statutes that govern the three types of land development/division in Michigan.

Development Review and Approval Process. Most land development regulations are applied when new construction is proposed. The City of Midland has a comprehensive development review process from development conceptualization to building occupancy. Once proper zoning is in place, a site plan must be approved followed by approval of building and site engineering construction plans and then permits for construction. Buildings and sites are inspected and then occupancy permits are issued. Regulations are enforced through a combination of monitoring by city staff and in response to complaints.

Capital Improvement Plan (CIP) and Capital Projects

A CIP is a multi-year program that lists recommended improvements, timing, estimated costs and funding for infrastructure (streets, pathways, sidewalks, sanitary sewers, waterlines, storm sewers and drainage) and community facilities (public buildings, fire, police and parks). Capital projects should be identified and constructed in a manner that helps support and promote desired development, and to meet the needs of residents and businesses already in the City. The number of projects and their timing is influenced by several factors, in particular the cost, need for environmental clearance or approval by other agencies, and funds available. For example, the amount of funding available from outside sources varies as new programs become available. Funding is also influenced by the timing of development (i.e. tax revenue), tax abatements, and other changes to the anticipated tax base.

Additional Studies and Programs

A variety of housing, economic development, informational and other programs are used by the City to assist with implementation of recommendations in this Plan. Programs targeted toward various neighborhoods could also be created to respond to specific situations such as traffic calming where traffic speeds or volumes are a concern.

Recommendations

The following table includes specific recommendations for the implementation measures necessary to achieve the goals and objectives established in this Plan. The matrix includes general recommendations and key responsibility, with additional detailed implementation measures.

Figure 8.1: Implementation Recommendations and Measures

Recommendation *(Key Responsibility)*	Implementation Measures
A. Natural Features	
A1. Update Site Plan Review Standards *[Planning Commission (P.C.)]*	• Incorporate a natural features component in the Zoning Ordinance review standards to address alternative naturally sensitive storm water management, open space provisions, tree protection standards, additional 'greening' standards for urban infill/commercial redevelopment, and reference to applicable greenway/green infrastructure plans. ***Not done.***
B. Land Use	

Figure 8.1: Implementation Recommendations and Measures	
Recommendation *(Key Responsibility)*	**Implementation Measures**
B1. Implement future land use plan through zoning *(P.C.)*	• Maintain zoning that implements the Future Land Use Plan. ***Ongoing.*** • Rezone properties to be consistent with the Future Land Use Plan. For properties that are planned for uses different than the current zoning, the City could initiate rezoning. In most cases, the rezoning per the plan will gradually occur over the 20 year plan time frame, in association with a developer request or a change associated with utility or road improvements. As additional properties within the MUGA are annexed, follow the Future Land Use Map and Plan in determining the most appropriate zoning. ***Ongoing.*** • Amend the Zoning Ordinance to accommodate the wide variety of uses desired, including expanded retail offerings and mixing uses within a single building or development. Add additional provisions to promote mixed-use developments and buildings to accommodate Downtown and Multi-use Center at the Circle. ***Partially completed.*** • Create an overlay district to promote the mixed-use redevelopment of the area east of the Minor League Ballpark as a Multi-use center. ***Not done.*** • Update and expand Downtown zoning to promote developments that include high-density residential. ***Partially done.*** • Evaluate and strengthen required traffic impact, environmental and fiscal impact evaluations for larger projects or projects inconsistent with the Future Land Use map. ***Not done.*** • Update zoning regulations for newly developing residential areas to allow and encourage a limited amount of appropriate neighborhood commercial uses at the intersection of major collector or arterial streets (at one or more corners), including convenience stores and services for residential neighborhoods. ***Not done.*** *(Land Use continued on next page)*
B2. Incorporate additional design standards into Zoning Ordinance *(P.C.)*	• Amend the Zoning Ordinance to incorporate the design related recommendations such as Office-Service design that is compatible with adjacent residential character, landscaping, commercial architecture, corridor-specific access management and PUD design options. ***Not done.*** • Consider creation of access management overlay districts to address the recommendations for access management, landscape, sidewalks and signs for new development and gradual upgrades to existing sites as they redevelop. These districts could be used in developed areas to retro-fit access and in undeveloped areas to guide future access decisions along developing corridors. ***Not done.*** • Outline and detail additional design, layout (including size, height, and setbacks) and use parameters for the neighborhood commercial nodes in the Zoning Ordinance. ***Not done.***

Figure 8.1: Implementation Recommendations and Measures	
Recommendation *(Key Responsibility)*	**Implementation Measures**
B3. Promote or expand alternative development options *(P.C.)*	• Consider expanding the PUD regulations to streamline the development review process and encourage mixed-use development. ***Not done.*** • Include incentives in the Zoning Ordinance to promote clustered residential development, especially in areas with unique natural features. ***Not done.***
C. Transportation	
C1. Coordinate Improvements with Engineering Department	• Routinely monitor the transportation conditions and work with the Engineering staff to identify future improvements based on land development patterns and proposals. ***Not done.***
C2. Incorporate Corridor and Intersection Subarea recommendations in transportation capital improvements planning *(Engineering Department)*	North Eastman Subarea • Pursue a revised indirect left-turn boulevard alternative (see Chapter 6: Transportation for more detail), with interim or phased steps over the next 10 years. ***In progress.*** • Develop and implement smart signal system and access management measures. ***Not done.*** • Provide an additional east-west transportation link and intermittent additional "mid-block" north-south links on the City's north side similar to those illustrated on the Transportation Plan Map. ***Not done.*** *(C2. continued on next page)*

Figure 8.1: Implementation Recommendations and Measures	
Recommendation *(Key Responsibility)*	**Implementation Measures**
C2. Incorporate Corridor and Intersection Subarea recommendations in transportation capital improvements planning *(Engineering Department)*	<u>Intersection of Eastman and North Saginaw</u> • Develop/construct second southbound left turn lane (and corresponding widening on the south side of the intersection). ***Not done.*** <u>S. Washington/W. Bay City Road Closure/Vacation</u> • Any closure should include construction of new east/west street between Washington Street and S. Saginaw Road **(Discovery Way – Completed)** , and include termination of James Savage just west of Saginaw by creating a cul-de-sac or by re-routing south to intersect with the new street. ***Not done.*** <u>Ashman and Rodd One-Way Pairs</u> • Periodically evaluate the impacts of returning both of these streets to two-way operation, and carefully weigh the potential advantages and disadvantages of doing so. ***Not done.*** • Use the MDOT transportation model to monitor traffic and testing operational changes. ***Not done.*** <u>Intersection of Jefferson and Wackerly</u> • Improve signal operations with left-turn phasing. ***Not done.*** • If/when the overpass is reconstructed, correct alignment of Jefferson north of intersection. <u>Ashman/Saginaw/Jefferson (Ashman Circle Area)</u> • Review potential physical and operational improvements to improve traffic flow and increase safety and accessibility for pedestrians and vehicles to/from the adjacent businesses. ***Not done.*** *(C2. continued on next page)*

Figure 8.1: Implementation Recommendations and Measures	
Recommendation *(Key Responsibility)*	**Implementation Measures**
C2. Incorporate Corridor and Intersection Subarea recommendations in transportation capital improvements planning	West Side River Crossing/Connector ***Not done.*** • Continue ongoing analyses and pursue funding for development of a new Tittabawassee River crossing, between M-20 and Saginaw Road. • Consider potential routes when reviewing any development plans for the area. Stark Road at US-10. ***Not done.*** • Expand Stark Road from Saginaw to the northern edge of the MUGA to a three-lane cross section as traffic volumes in the area continue to increase. Other Intersections • Projected deficient intersections, Sturgeon/Wackerly and Sturgeon/Airport, should both be considered for left-turn lanes in the future, with the possibility of signalization. ***Not done.***

C3. Incorporate Freeway Interchange Subarea recommendations in transportation capital improvement planning *(Engineering Department)*	Waldo Interchange with US-10
	• Continue to pursue the interchange upgrade with MDOT. ***Not done.***
	• Reserve right-of-way along Waldo Road through site plan review or other processes. ***Not done.***
	  • If the Waldo interchange is upgraded, the following improvements will be needed to manage traffic in the area:
	  ◦ Waldo will need to be widened to at least three lanes, with the potential need for five lanes in the short section just north of an upgraded interchange.
	  ◦ Intersections along Wheeler and Waldo should be evaluated to determine any intersection improvements needed.
	Lyon-to-Patrick Crossover
	• Continue to pursue elimination of the current safety issues related to the existing crossover, including elimination of the crossover completely or reconfiguration of the interchange to increase safety. ***Ongoing***

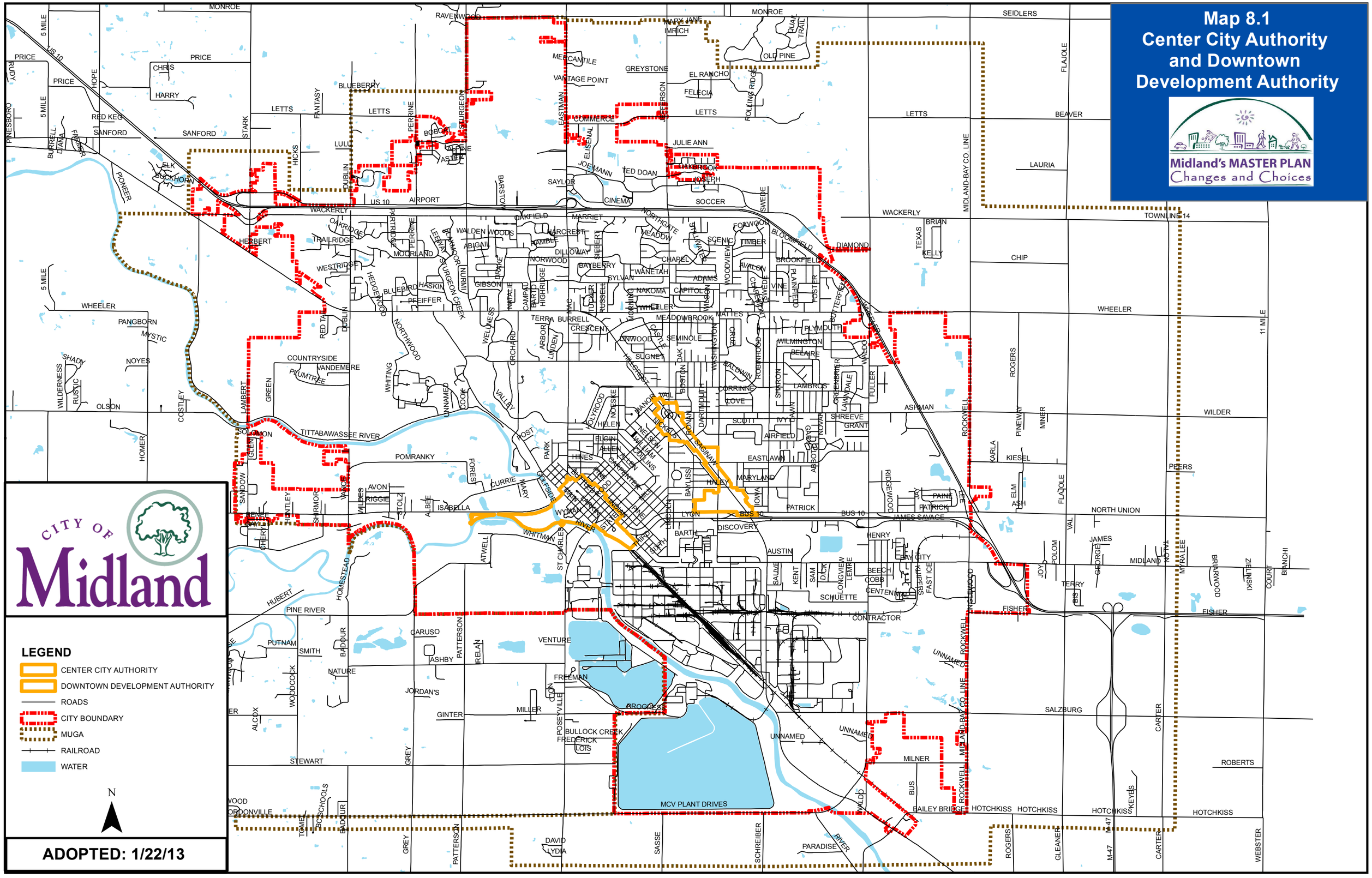
Figure 8.1: Implementation Recommendations and Measures	
Recommendation *(Key Responsibility)*	**Implementation Measures**
C4. Develop Access Management Program *(Planning, Engineering Departments)*	• Regulate access through Zoning Ordinance standards (and possible overlay districts) to limit the overall number of access points, ensure adequate spacing from other access points and intersections, and promote internal cross-access. ***Not done.*** • The sample access management recommendations for South Saginaw completed as part of this plan could be expanded and incorporated into an overlay district for that corridor. ***Not done.*** • Identify funding sources (such as City, DDA, or PSD) that could be used to encourage closure, relocation, or redesign of driveways identified in access management plan recommendations. ***Not done.*** *(Transportation continues on next page)*
C5. Develop Traffic Calming Program *(Planning Department)*	• Develop a traffic calming program in the Zoning Ordinance or as a standalone ordinance to maintain safety and aesthetics of neighborhoods. ***Not done.*** • Start a pilot traffic calming program on Dilloway near Eastman Avenue and near Chapel to lower speeds and improve safety. ***Not done.***
C6. Enhance and Expand Pathway System *(Planning, Public Services Departments)*	• Establish a City Pathways Plan, which would include many of the following tasks: ◦ Develop linkages between neighborhoods, schools and parks for non-motorized travel. ***Ongoing.*** ◦ Require new businesses to include dedicated space for bike racks and bicycle parking areas on site plans. ***Done.*** ◦ Establish minimum design standards for future pathway connections and consider adding appropriate signage and striping for bike lanes as part of street improvements. ***Not done.*** ◦ Clearly identify staging areas where people can park and begin their trips on area pathways and the Rail Trail. ***Done.*** ◦ Educate the public about awareness and tips to maintain personal safety on the paths at all times. ***Ongoing.*** ◦ Improve signage and directional maps for bikers ending their Pere Marquette Rail Trail trip in Midland to encourage day trips to Downtown destinations through pathways and sidewalks. ***Done.*** ◦ Emphasize linkage between sidewalks and paths ***Ongoing.*** ◦ Promote construction of sidewalks ***Ongoing.***

Figure 8.1: Implementation Recommendations and Measures	
Recommendation *(Key Responsibility)*	**Implementation Measures**
C7. Promote Context Sensitive Solutions (CSS) *(Engineering and Planning Departments, P.C.)*	• Incorporate and apply Context Sensitive Solutions (CSS) design measures in new transportation projects (see Chapter 6: Transportation for detail). This includes, but is not limited to, natural road corridor buffers, streetscape improvements, landscaping, and pedestrian amenities such as raised crosswalks and traffic calming. ***Not done.*** • Add language to the engineering design regulations to require CSS in larger transportation projects. ***Not done.***
D. Community Facilities	
D1. Maintain Parks and Recreation *(Planning, Public Services Departments. P.C.)*	• Use the City of Midland Parks Master Plan to guide new parks and recreation facilities, especially in developing areas. ***Ongoing.*** • Pursue Zoning Ordinance incentives to promote the development and integration of parks into new developments. ***Not done.*** • Include density bonuses in the Zoning Ordinance and other dimensional modifications that would provide an added benefit for the developer to design for parks, recreation, and civic facilities within new neighborhoods. ***Not done.*** *(Community Facilities continued on next page)*
D2. Utilities	• The City Engineering Department maintains a separate listing of infrastructure conditions, improvements, plans, and priorities. They should continue to monitor the capacity and condition of the City's utilities and coordinate any improvements with planned land use delineated in this Plan. ***Ongoing.***
E. Economic Development	
E1. Downtown Residential *(DDA, CCA, P.C.)*	• Work with the DDA and build on the financing, legal, zoning, parking, and code recommendations in the recently completed market study to attract new residential developments to downtown. ***Ongoing.***
E2. Retail Opportunities	• Provide necessary utility infrastructure, well-maintained transportation corridors and a streamlined planning review process for underdeveloped areas. ***Ongoing.***
E3. Industrial	• Work cooperatively with Midland Tomorrow as it pursues a cluster industry approach to strengthen the local economy. This may include Zoning Ordinance amendments to support the mixing of retail, service, and industrial uses required in cluster locations. ***Done.***

Figure 8.1: Implementation Recommendations and Measures	
Recommendation ***(Key Responsibility)***	**Implementation Measures**
E4. Enhance the Circle District and South Saginaw *(P.C., PSD)*	• Use the Center City Authority area to encourage high-quality redevelopment, while taking care not to detract from the Downtown. • Open, widen, extend, realign, pave, maintain or otherwise improve roads and construct, reconstruct, maintain or relocate pedestrian walkways. ***Not done.*** • Use the abilities of the CCA designation to acquire, own, maintain, demolish, develop, improve, or operate properties, off-street parking lots or structures to improve the Saginaw corridor. ***Not done.*** • Construct, maintain, and operate malls with bus stops or shelters, information centers and other public interest buildings. ***Not done.*** • Promote unique economic development in the district through conducting market research and public relations campaigns; developing, coordinating and conducting retail and institutional promotions; and sponsoring special events and related activities. **Ongoing.** • Recognize the distinct role this CCA serves compared with the Downtown-DDA and encourage them to complement, and not compete with, each other.

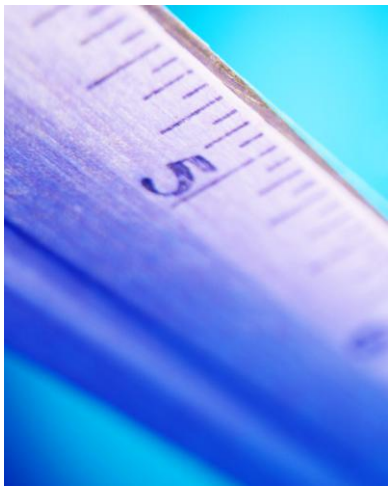
Map 8.1
Center City Authority and Downtown Development Authority

Midland's MASTER PLAN
Changes and Choices



Chapter 9:
Performance Measures

Introduction



The preceding Master Plan text completes the cycle of identifying conditions, establishing a vision and goals, and making specific recommendations. This Chapter builds on the specific recommendations of Chapter 8: Implementation by enumerating a focused set of recommendations and implementation measures, establishing a time table (where practical), and incorporating key responsibilities (where possible).

This Chapter is a guide and point of reference as the City proceeds with implementation of the recommendations outlined in this Plan. Over time, the City may discover new implementation approaches. This Chapter focuses on the most significant and involved recommendations and implementation measures, to provide both a streamlined summary and a progress chart for the City. As the authors and most frequent users of this document, the Planning Commission holds a key responsibility for vigilance in reviewing the recommendations and progress of the Plan, and providing direction to City staff and officials to keep implementation on track. This Chapter highlights the key implementation measures and allows a quick, comprehensive review of the Plan's implementation strategies for frequent reminder and consideration. In addition, as this Plan is intended to be flexible and respond to new information, trends, and opportunities, the Planning Commission is responsible for recognizing an impetus for Plan review prior to the legally mandated 5 year review standard.

Figure 9.1: Performance Measures Matrix provides a mechanism by which the Planning Commission can gauge the progress of the Master Plan implementation. The "Timeframe/Frequency" column outlines an ambitious but prioritized timeline for tackling each set of tasks. The "Status" column is intended to help the plan holders, including the public, officials, and staff, keep track of the progress of each row. Frequent use of the Plan will encourage regular review of this chapter and identification of future actions.

Reference the following codes for the Key Responsibilities column in Table 9.1: Performance Measures Matrix:

- PC – Planning Commission
- CC – City Council
- ZBA – Zoning Board of Appeals
- PLAN – Planning & Development Department
- PW – Public Works Department
- ENG – Engineering Department
- PARK – Parks and Recreation Groups
- CG – Community Groups
- DDA – Downtown Development Authority

- CCA – Center City Authority

Figure 9.1: Performance Measures Matrix

Recommendation/Measures	Key Responsibilities	Timeframe/ Frequency	Status
1. Review, Amend, and Update Master Plan and Maps	**PC, PLAN, ZBA**	**Review annually, finish update every 5 years (begin review before end of year 3)**	
a. Review Master Plan and amend, if necessary, when conditions significantly change	PC	Review if significant change in conditions	***5 year cycle***
b. Identify, review any conflicts between Master Plan and Zoning Ordinance observed in rezoning/variance reviews	PC, ZBA, PLAN	Review if disconnect between rezoning/variances is identified	***Ongoing***
2. Review and Update Zoning Ordinance	**PC, CC, PLAN, ZBA**	**Review/amend at end of 1st Qtr and 3rd Qtr**	***Ongoing***
a. Upgrade Site Plan Review Standards to incorporate pronounced natural features considerations	PC, PLAN	Within 6-12 months of Master Plan adoption	***Not done***
b. Implement Future Land Use Plan through Zoning Ordinance updates	PC, PLAN	Immediately following Master Plan adoption, and continuing through each bi-annual Zoning Ordinance review	***Ongoing***
c. Accommodate new mixtures and design of uses within current or new districts, including Downtown Residential and cluster industry	PC, PLAN	Within 6-12 months of Master Plan adoption	***Complete***
d. Strengthen and expand alternate development options, including PUD and other mixed-use agreements	PC, PLAN	Within 2-5 Years	***Not done***
e. Develop standards and amend the Zoning Ordinance to include Access Management regulations and Plan guidelines	PC, PLAN, ENG, PW	Within 6-12 months of Master Plan adoption *(Table continues on next page)*	***Not done***
3. Establish new alternate tax financing districts for select areas and expand existing districts	**PC, PLAN, ENG, PW, DDA, *CCA*, CG, CC**	**1 year for *CCA* and DDA Plans, review new and unused programs annually**	***Ongoing***

Recommendation/Measures	Key Responsibilities	Timeframe/ Frequency	Status
a. Formalize a Center City Authority and use it to encourage development of Saginaw and the Circle area	PC, PLAN, CCA	Within 6-12 months of Master Plan adoption *(table continues on next page)*	***Complete***
b. Update Plan and evaluate expansion of DDA boundaries, including provisions encouraging Downtown residential	PC, PLAN, DDA	Within 1-2 years of Master Plan adoption	***Complete***
4. Implement recommended improvements from Transportation Plan	**PC, ENG, PLAN, PW**	**Evaluate feasibility of new programs within 6 months of Plan adoption, review need for transportation improvements annually and cross-check with budget and capital improvements plan**	***Not done***
a. Incorporate Transportation Plan recommendations in transportation capital improvements plan	PLAN, ENG	Include warranted projects from Plan during annual capital improvements planning	***Not done***
b. Develop Access Management Program (in conjunction with Zoning Ordinance regulations)	PLAN, PC, ENG	Within 6-12 months of Master Plan adoption	***Not done***
c. Develop Pilot Traffic Calming Program	PLAN, ENG	Within 6-12 months of Master Plan adoption	***Not done***
d. Enhance and Expand Pathway System, including updating/creating Parks & Recreation and Pathways Plans	PLAN, PW, ENG	Review and update relevant plans within 1 year of Master Plan adoption	***Complete***

Conclusion

This Master Plan represents over a year of effort by the Planning Commission, City staff, residents, community organizations and representatives of the business community. Development of the plan involved collection and analysis of data on population, land use, environmental, transportation, infrastructure and socioeconomic conditions. The Plan is based upon this information and input from the public. It sets forth several recommendations, and as such, this Plan will only be as successful as the implementation measures taken to realize the vision set forth in previous Chapters. Implementation of the Plan will require a long-term, substantial commitment from the City and from each community and agency involved in oversight of the City and MUGA. This commitment will be tested over time, and with determined progress the strategies of the Plan can be implemented and the progress assessed using measurable evaluation tools. Deliberate determination and coordinated support will be needed to achieve adoption of regulatory recommendations. Budgets and improvement programs will need to be prepared to incorporate the recommendations of this Plan into Midland's future.

Acknowledgements

Planning Commission - Adopted November 22, 2016

Planning Commission

James Bain, Jr.
Gayle Hanna, Vice Chair
Dave Heying
Andrew Koehlinger
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RESOLUTION ADOPTING THE MASTER PLAN AND FUTURE LAND USE MAP UPDATE FOR THE CITY OF MIDLAND

At a meeting of the Planning Commission of the City of Midland, located in Midland County, Michigan, held on January 22, 2013at 7:00P.M. at City Hall,

The Planning Commission determined that:

WHEREAS, the Michigan Planning Enabling Act, P.A. 33, of 2008, requires the Planning Commission to make and adopt a basic plan or parts of a plan corresponding with major geographic sections or divisions of the City, including areas outside of current municipal boundaries, as a guide for the physical development of the municipality; and

WHEREAS, Notices of Intent to prepare an updated Master Plan were sent to all required entities and other governmental agencies, consistent with the provisions of the Michigan Planning Enabling Act, P.A. 33, of 2008; and

WHEREAS, the Planning Commission has made careful and comprehensive surveys and studies of present conditions and the future needs of the City and surrounding land areas, and have met consistently to research and prepare a draft of the updated Master Plan and Future Land Use Map; and

WHEREAS, the Master Plan update includes text, maps, land use and development policies, existing and future land use, demographics, transportation, and implementation proposals; and

WHEREAS, the Planning Commission has developed a Future Land Use Map for the City of Midland that allocates land in appropriate amounts for the future development of single-family and multiple family residential uses; retail and office uses; and public uses and industrial uses; and

WHEREAS, the Planning Commission held a public hearing in accordance with the procedures of the Michigan Planning Enabling Act, P.A. 33, of 2008, and said plan was on display before the public hearing in accordance with P.A. 33, of 2008;

RESOLVED that the City of Midland Planning Commission adopts the updated Master Plan, dated January 22, 2013.

YEAS: Heying, Senesac, McLaughlin, Young, Stewart, Hanna, Mead

NAYS: None

ABSENT: Pnacek, Tanzini

Chairperson Roger Mead

January 22, 2013
Date