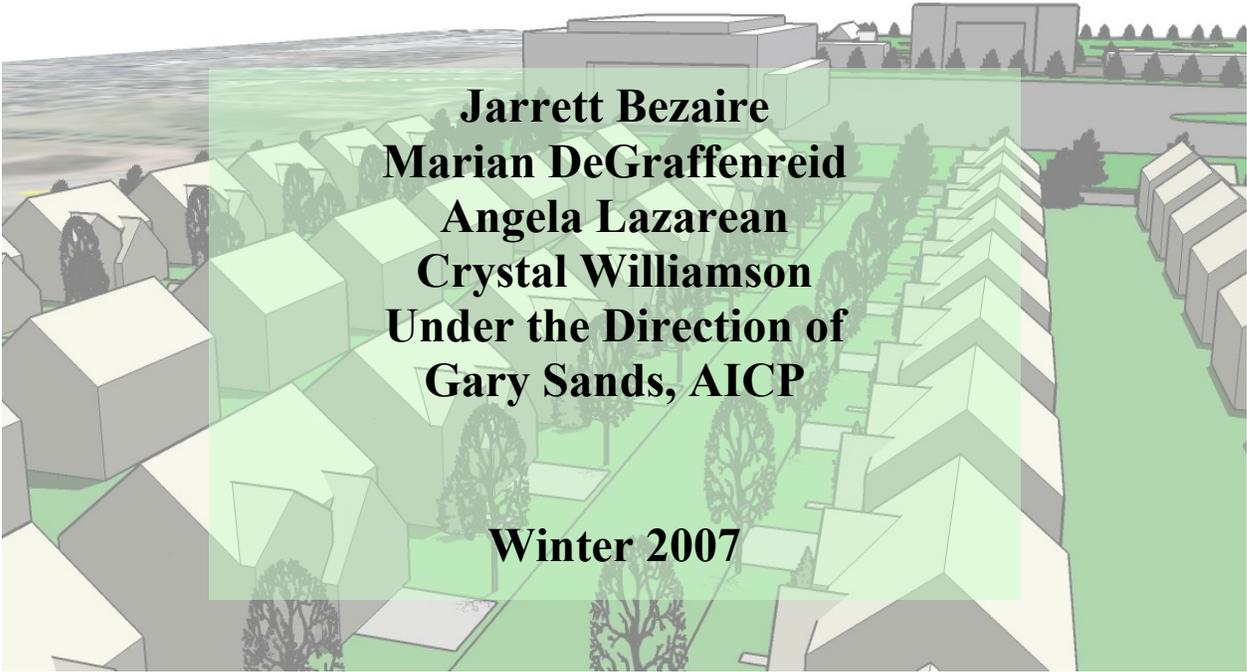




**Wayne State University
Capstone Project
Redevelopment Proposal for
Lansing Township
General Motors Sites**



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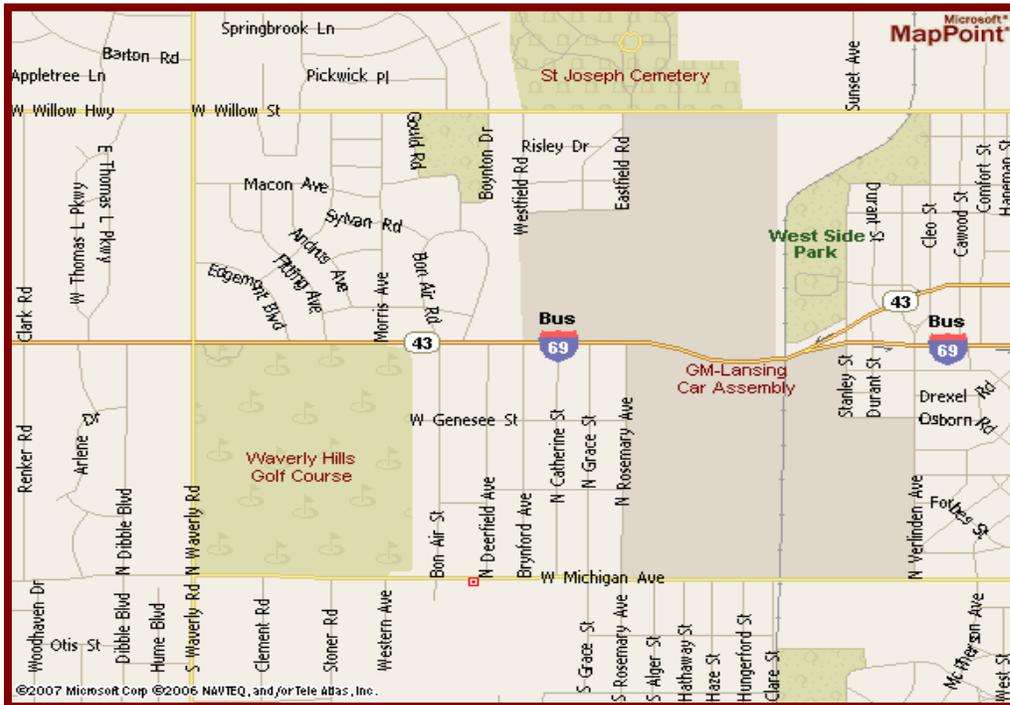
Executive Summary

Wayne State University Urban Planning graduate students have conducted a feasibility study for the potential re-use of two General Motors plant sites in Lansing Township, Michigan. The study area includes the western section of the township, the largest of the five separate areas that make up the Township. It includes most of the township's industrial developments (including the General Motors Lansing Craft Center and General Motors Lansing Metal Center automobile factories), both of which were closed and shuttered in early 2006. The purpose of our report is to explore options for the two General Motors sites described above.

The surrounding area mainly includes single-family residences, some multi-family and commercial businesses primarily along Saginaw and Rosemary Avenue. This report addresses concerns, issues and challenges facing Lansing Township. A key objective of our proposal is a lively diversity of uses, potentially including: homes, shops and restaurants, office space, a performing arts center with a theater, and a Township civic space with a health facility and a public pool. Another option is a golf course with a miniature golf aspect to it, as well as dining/banquet facilities and a clubhouse.

Lansing Township is located in the northwest corner of Ingham County immediately adjacent to Clinton and Eaton Counties. The township presently consists of five segments distributed in various locations within the original 36 square mile township. These segments comprise 5.46 square miles. The site to the north of Saginaw Business (I-69), is the Metal Craft Center, (Plant #6) bounded by Willow Street to the north and Saginaw to the south, residential streets to the west and railroad tracks to the east. The site to the south of Saginaw is the Lansing Car Assembly, (Plant #2), bounded by Saginaw to the north, Michigan Avenue to the south, Rosemary Avenue to the west and the railroad separating it from the GM Verlinden site to the east. (Map 1)

Map 1



Source: www.yahoo.com

Approach

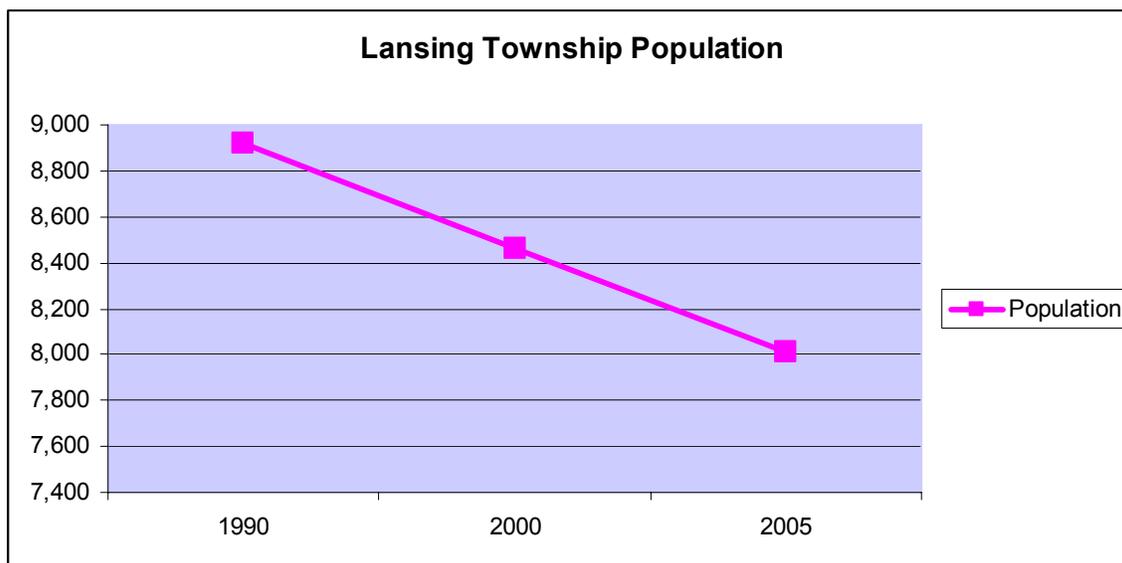
Our methodology entailed an examination of historical planning data, combined with new community-specific objectives, focused ideas, and market feasibility studies for the target area. This project provides a comprehensive examination of the affected sites and surrounding areas considering demographics, market assessments, trade area characteristics, redevelopment options, and financing to develop a detailed action plan. The proposed plan will take into consideration the maintenance and phasing of the proposed development to minimize interruptions of residents and businesses. More importantly, the phasing process will also help in determining how the project should be built in order to take advantage of various market opportunities, since the entire development cannot be built at one time. In all cases, the new environments will present a clear vision for Lansing Township, its residents, and General Motors. The study will serve as a marketing tool for the two sites, specifically detailing both the long and short term vision of the area. We have identified the major stakeholders in this project as the residents, business owners, and township officials, as well as General Motors.

Demographics

In order to recommend a re-use proposal, it is important to build a greater understanding of the demographic and economic characteristics of the area. Any proposal for new development should not proceed without fully understanding the current and future population trends that may occur to this demographic. To assess the demographic characteristics of Lansing Township, U.S. Census data were collected for the township, the City of Lansing, the State of Michigan, and Ingham County. In addition, data for census tracts 34 and 35, the area where the two GM sites are located within the township were also used for the purpose of comparison.

One question concerns overall growth as how much did the locality grow over the decade; did it grow faster or slower than other places? By comparison with previous censuses, we can learn how rapidly an area has grown or declined in population or housing. Census data for Lansing Township show the township losing population over the past 15 years.

Figure 1



Source: Census 2000

A second important question concerns the income of the local population. To answer this we compare Lansing Township to the region and the U.S. and find out whether this local area is above or below average. The average income for the township is \$41,017;

compared to the State (\$44,667) and U.S (\$41,994), Lansing Township is below average. The township holds a very large share of elderly population, most of whom live on fixed incomes. Looking at the income distribution for Tracts 34 and 35, almost half of the population is making \$50,000 or more for Tract 34 so this portion of the township is above the average of the region and country.¹ On the other hand Tract 35 has about less than 32% of its population with incomes of \$50,000 or more. This tract has one-quarter of its households in the \$35,000 - \$49,999 income bracket.

Table 1 Household Income Distribution, 2000

Households Income Distribution	Lansing Township	Census Tract 34	Census Tract 35
Less than \$10,000	7.4%	4.0%	6.5%
\$10,000 - \$34,999	32.1%	35.8%	36.8%
\$35,000 - \$49,999	22.8%	19.4%	25.1%
\$50,000 - \$99,999	33.1%	41.3%	30.5%
\$100,000 - \$199,999	4%	5.2%	1.2%
\$200,000 or more	0.5%	1.2%	0%

Source: Census 2000

The township has a high percentage (29.2%) of 25 year-olds that have a bachelor's degree (Table 2). This is the portion of the population that is highly sought after by economic developers and government leaders pursuing "creative class" and "cool cities" strategies. This population is highly concentrated in census tract 34, north of Saginaw Highway.

Table 2 Bachelor Degree of Higher Education

Bachelors Degree +Education	Lansing Township	Census Tract 34	Census Tract 35
Total Population	8,458	1,778	1,868
Percentage of Total Population	29.2%	28.3%	4.8%

Source: Census 2000

¹ Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrices P52, P53, P54, P79, P80, P81, PCT38, PCT40, and PCT41.

On the other side of the spectrum, 30% of the population are seniors, 62 years of age or older. This is significantly higher than Michigan (14%) or US (12%).² The senior population contributes to the low average household size in the township. An important goal of the township should be to accommodate and retain the senior population.

Local area analysis has special qualities that demand specialized theory. We have identified Reversed Causal Order, from housing to population to labor force as the driving factors in redeveloping these two sites.³ The housing stock forms the primary basis for collecting census data for local areas. About 50% of Lansing Township's housing stock is just about 50 years old (See Table 4). The median housing value (\$90,800) of the housing stock reflects the age. The owner occupancy rate of 53.5% is low compared to Michigan 73.8% and the U.S. at 62.2%. Even moderate increases in this rate could benefit the township.

Table 3 Year Structure Built

Year Structure Built	Lansing Township	Census Tract 34	Census Tract 35
1999 to March 2000	0%	0.0%	0.0%
1995-1998	0.4%	.7%	.7%
1990-1994	3.1%	.9%	1.9%
1980-1989	4.7%	2.5%	6.6%
1970-1979	16%	7.9%	23.3%
1960-1969	25.7%	31.3%	15.4%
1940-1959	42.6%	45.5%	16.6%
1939 or earlier	7.5%	11.3%	34.4%

Source: Census 2000

Table 4 Housing Value

	Lansing Township	Census Tract 34	Census Tract 35
Median Value	\$90,800	\$96,600	\$63,500

Source: Census 2000

² Census 2000

³ Myers, Dowell. (1992) *Analysis with Local Census Data Portraits of Change*. Academic Press, Los Angeles California.

Table 5 Occupancy Tenure

Occupancy Tenure	Lansing Township	Census Tract 34	Census Tract 35
Total Housing Units	4104 (100%)	1,112 (100%)	1,367 (100%)
Owner Occupied	53.5%	72.7%	53.8%
Renter Occupied	46.5%	27.3%	46.2%
Average Household Size	2.05	2.24	2.18

Source: Census 2000

Homeownership can add about \$5000 average value to a home.⁴ Lansing Township has, overall, a low owner-occupancy rate 53.5%. This redevelopment option could prove essential to optimizing the development of a mixed type of housing and increase owner-occupancy rates in the township. Literature also cites better social outcomes for children raised in owner-occupied housing and better neighborhood amenities.⁵ If we take the renter-occupied tenure of Tracts 34 and 35 and multiply that by the average of \$5000 the value that could be added to the neighborhood respectively: \$1, 520,000 for Tract 34 and \$3,155,000 for Tract 35. All around for the township, about \$9,540,000 in value could be tapped into through this development by increasing homeownership rates.

Table 6 Renter Units Calculation for Homeownership Value

	Lansing Township	Census Tract 34	Census Tract 35
Renter occupied Units	1908*5000	152*5000	631*5000
Value Added	= \$9,540,000	= \$760,000	= \$3,155,000

Source: Census 2000 and Journal of Housing Research

Table 7 Household Size By Type

Household Size by Type	Lansing Township	Census Tract 34	Census Tract 35
Total	4,153	1,134	1,364
1 Person	39.9%	30.1%	38.2%
2 or more Persons	60.1%	69.9%	61.8%

Source: Census 2000

⁴ Coulson, N. Edward, Seok-Joon Hwang and Susumu Imai, "The Benefits of Owner-Occupation in Neighborhoods," Journal of Housing Research, Volume 14 (Issue 1), pp. 21-48, 2003.

⁵ Green, K. Richard and White, J. Michelle, "Measuring the Benefits of Homeowning: Effects on Children," Journal of Urban Economics, Volume 41, pp. 441-61 1997.

The data above once again adds to the driving element of our senior population. We can see 39.9% of 1-person households for the overall township and 30.1% and 38.2% respectively for the census tracts.

Market Analysis

The market analysis data examined considers four market segments: residential, retail, office, and industrial. The best long-term development opportunities appear to lie in senior housing. Existing senior housing units currently have a 6% vacancy rate, but the number of people over age 62 (30%) will continue to increase over time, suggesting an opportunity for new housing. Although there is a market for new senior housing, both market rate and affordable, is limited in the near term. Over the long run the township must add new housing to broaden the range of options available.

The retail market in the Greater Lansing area is doing well. The vacancy rates in the West submarket, which includes the plant sites, are just 4.3%, the lowest in the area.⁶ Absorption rates have been positive in the last six months in this submarket. This submarket actually records the lowest vacancy rate (7.8%) in strip centers, compared to the market average of 14.5%. According to the CBRE report on the Greater Lansing Area, the West and North submarkets represent the best opportunities for future growth in retail.⁷ The office vacancy rate in the West submarket is 17.8%, and at the I-96/West Saginaw interchange, it is 21.9%. While the absorption rate in the West submarket is 14.7%, even continued strong demand will not bring the area close to national vacancy rates for 1-2 years.

Industrial real estate is one of the best performing asset classes within the property sector. The West submarket vacancy rate expected at 5.5% seems to give it an advantage over the rest of the area. Given the shift of the national economy to a post-industrial economy, more former manufacturing facilities will become vacant over the coming years.

⁶ <http://www.cbre.com/NR/rdonlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/443870/2006v2retailmrktsurvey.pdf>, pg 2

⁷ <http://www.cbre.com/NR/rdonlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/443870/2006v2retailmrktsurvey.pdf>, pg 1

Recommendations

In order to maximize the flexibility of the site, we recommend zoning the entire site as a Planned Unit Development. A PUD allows for flexible use of a property through the “designed grouping of varied and compatible land uses, such as housing, recreation, and commercial centers... all within one contained development or subdivision”⁸. Planned Unit Development has a number of advantages: it allows residents to keep a smaller private yard, in addition to sharing in common open space; can take on a number of different final forms; can help to add character to a neighborhood through street grid and sidewalk design; and allows for a greater degree of administrative flexibility than other approaches⁹.

Within the framework of the PUD zoning, we have created two redevelopment scenarios. As summarized in the tables that follow, each would provide a mix of uses that would add residents, jobs, and tax base to the community. The acreage figures (as well as the site plans below) are intended to be illustrative of the proportion of each site to be devoted to each use. The details of specific site plans will eventually be determined by the market conditions, in conjunction with the developer and other stakeholders.

⁸ http://en.wikipedia.org/wiki/Planned_unit_development

⁹ http://en.wikipedia.org/wiki/Planned_unit_development

Development Proposal I

Elements of Proposal	Development I
Market Rate Housing	(50 Acres) - Lot sizes no less than 80 x 120 feet, can exceed 80 x 140 . with or with out attached garages. - Not more than four homes per acre x 50 acres. - Maximum of 200 homes on 50 acres - Market demand determining number and sizes of homes for next phase of development
Senior Housing	(20 Acres) - Two Story Maximum - Type of senior living homes based on senior population demand.
Entertainment	(5 Acres) - Movie theater
Commercial	(20 Acres) - Medical supply store, - Home Health Service Supply - Retail to accommodate new and existing households.
Recreation	(5 Acres) Family Recreation Center
Open Space	(5 Acres) - Green Space, - Porous pavement pathways
Business Park	(40 Acres) Office Space, 3 to 4 Story buildings, Sq. ft. varying per Tenant

Development Proposal II

Elements of Proposal	Development II
Market Rate Housing	(50 Acres) - Lot sizes no less than 80 x 120 feet, can exceed 80 x 140 with or with out attached garages. - Not more than four homes per acre x 50 acres. - Maximum of 200 homes on 50 acres - Market demand determining number and sizes of homes for next phase of development
Senior Housing	(20 Acres) - Two Story Maximum - Type of senior living homes based on senior population demand.
Entertainment	(20 Acres) - Movie theater - Performing arts center
Commercial/Mixed Use	(10 Acres) Civic Space, Library, Retail, sq. ft. varying.
Recreation	(10 Acres) - Family Recreation Center, - Public space for community gatherings
Golf Course	Golf Course (45 Acres): - Mini-put range, - Driving Range, - Clubhouse, - Dining/Banquet Facility

Financing

Our analysis of potential financing tools and identification of the right mix of various finance strategies is identified below. The creation of a Tax Increment Financing (TIF) district seems like the most likely approach to financing the project. We recommend TIF financing through a Brownfield Redevelopment Authority because Lansing Township already has a BRA board in place for such. We have also identified the need of a Local Development Finance Authority (LDFA) for the redevelopment of these two sites primarily for the purpose of funding the infrastructure needs of the re-development.

Introduction

1.1 Project Overview

Wayne State University Urban Planning graduate students have conducted a feasibility study outlining development options for the two General Motors plant sites in Lansing Township, Michigan. The study area includes the largest section of the western side of the township. It includes most of the township's industrial developments (including the General Motors Lansing Craft Center and General Motors Lansing Metal Center automobile factories), both of which were closed and shuttered in early 2006. The purpose of our report is to explore options for the two General Motors sites.

The surrounding area mainly includes single-family residences, some multi-family and commercial businesses primarily along Saginaw Highway and Rosemary Avenue. This report addresses concerns, issues and challenges facing Lansing Township. A key objective of our proposal is a lively diversity of uses, including homes, shops and restaurants, office space, a performing arts center with a theater, and a township civic space.

Lansing Township is located in the northwest corner of Ingham County immediately adjacent to Clinton and Eaton Counties. The township presently consists of five segments distributed in various locations within the original 36 square mile township. These segments comprise 5.46 square miles. The site to the north of Saginaw Business (I-69), is the Metal Craft Center, (Plant #6) bounded by Willow Street to the north and Saginaw to the south, residential streets to the west and railroad tracks to the east. The site to the south of Saginaw is the Lansing Car Assembly, (Plant #2), bounded by Saginaw to the north, Michigan Avenue to the south, Rosemary Avenue to the west and the railroad separating it from the GM Verlinden site to the east.

1.2 Objectives

Goals for the project include the following:

Encourage a mixed-use redevelopment of the properties to build up the jurisdiction's sense of community and maximize green space. Actions leading us to final redevelopment proposals are a comprehensive examination of the affected sites and surrounding areas, an analysis of the present tax base, market assessments, identification of trade area characteristics, and financial feasibility.

1.3 Approach

Our methodology entailed an examination of historical planning data, combined with new community-specific objectives, focused ideas, and market feasibility studies for the target area. This project provides a comprehensive examination of the affected sites and surrounding areas considering demographics, market assessments, trade area characteristics, redevelopment options, and financing to develop a detailed action plan. The proposed plan will take into consideration the maintenance and phasing of the proposed development to minimize interruptions of residents and businesses. More importantly, the phasing process will also help in determining how the project should be built in order to take advantage of various market opportunities, since the entire development cannot be built at one time. In all cases, the new environments will present a clear vision for Lansing Township, its residents, and General Motors. The study will serve as a marketing tool for the two sites, specifically detailing both the long and short term vision of the area.

1.4 Identification of Major Stakeholders

The success of any project depends on clearly determining who the main stakeholders are and how they will be impacted by the project. Our group has identified four major stakeholders for any type of new development of the two General Motors sites: General Motors, Lansing Township, local township residents, and the private market.

1.5 Project Goals

We have identified the following goals as driving elements towards our final proposals.

- Ensure all recommendations are consistent with trade area market trends and development;
- Ensure these recommendations are consistent with local wants, but also reflect market realities;
- Develop attractive, livable and walkable spaces that promotes both the civic and lifestyle needs of residents

General Motors

Figure 1 Site Aerial



This map pinpoints the location of the two GM property parcels. Both located along Saginaw Highway, with Plant #6 occupying space from Saginaw to Willow, and bounded by railroad tracks to the east and a residential neighborhood to the west. Plant #2 occupies Saginaw to Willow, and is bounded by Rosemary St. to the west and the former Verlinden site and railroad tracks to the east.

2.1 Historical background of the GM Sites



- Lansing Township Craft Center Plant #6

- Plant size- 985,000 sq-ft.

GM opened the Craft Centre in 1940 to make munitions for WWII. Later it produced the now discontinued Chevrolet SSR. It was shuttered in March 2006- the plant employed 400.



- Lansing Township Metal Fabricating Division Plant #2

- Plant size – 1.7 Million sq-ft

Across the street, the Metal Center once employed 1200. This plant was opened in 1952 to make jets during the Korean War. It was shuttered in November of 2006.

2.3 Development Process

The success of any redevelopment proposal requires all stakeholders to pursue similar goals towards the end result. General Motors should continue to play the role of good corporate citizen and upstanding community leader, which it has done in many other redevelopment projects. According to GM's Environmental Principles, established in 1991, they are committed to using sound environmental practices in their business decisions in order to protect human health, natural resources, and the global environment.

The environmental principles that General Motors uses as guidance are as follows:¹

1. We are committed to actions to restore and preserve the environment.
2. We are committed to reducing waste and pollutants, conserving resources, and recycling materials at every stage of the product life cycle.
3. We will continue to participate actively in educating the public regarding environmental conservation.
4. We will continue to pursue vigorously the development and implementation of technologies for minimizing pollutant emissions.
5. We will continue to work with all governmental entities for the development of technically sound and financially responsible environmental laws and regulations.
6. We will continually assess the impact of our plants and products on the environment and the communities in which we live and operate with a goal of continuous improvement.

2.4 Past Brownfield Redevelopment Cases

General Motors strives to find unique ways to reuse properties so they once again become active, productive parts of a community. Over the last two decades GM has redeveloped thousands of acres of property across the country. Many communities affected by a closed facility have relied on GM as a strong foundation of their economic structure for decades. In these communities local leaders are concerned with two priorities replacing jobs and tax revenue.

General Motor's successes have generated thousands of new jobs in more than thirty communities across the country. These redeveloped businesses help replace tax revenue

¹ http://www.gm.com/company/gmability/environment/plants/brownsfield_redev/index.html

once provided by GM; helping maintain the services and quality of life for residents. Below are two examples of redevelopments that could potentially replicate the possibility of the two GM sites located in Lansing Township.

- **Hyatt Hills — Clark, N.J.**

When GM built Hyatt-Clark Industries in 1938, the site manufactured hard rubber products such as steering wheels and door handles, later switching to roller bearings. GM sold the property in 1981, but reacquired it several years later. During the 1990s, GM reviewed and assessed the site and determined a market for a public golf course. Since the property straddles both Clark and Cranford townships, a joint effort between both jurisdictions and GM allowed this dream of a golf course to become a reality. Plans for the course include a miniature golf course, clubhouse, driving range and dining facilities. The course was opened in 2001.²

- **Centerpoint Business Campus — Pontiac, Mich.**

In 1992, the former GM Truck and Bus manufacturing site was selected for the new GM Truck Group headquarters and global engineering center. Nearly three-quarters of the existing building was demolished and the remaining 1.1 million square feet converted into office and laboratory space, resulting in reuse of a 4.4 million square foot industrial brownfield site. The project has also led to extensive commercial and retail business development, bringing new life and jobs to the area. Future developments at Centerpoint include a 600,000 square foot product engineering facility for GM.³

2.5 Impact of Development on Lansing Township

Market conditions may affect the sale date for the property and as a result the redevelopment time table. What General Motors decides, or decides not to do, with the property is obviously a big concern to any sort of redevelopment efforts. There are several different decisions that GM can make. If the corporation decides that existing market conditions are not very promising and decides to hold off on the sale of the properties until these conditions improve, this would affect any sort of quick turnover of the property or its redevelopment costs.

² http://www.gm.com/company/gmability/environment/plants/brownsfield_redev/study_clark.html

³ http://www.gm.com/company/gmability/environment/plants/brownsfield_redev/study_pontiac.html

Alternatively, they can decide to cut their commitments to these properties and hope for a quick resale with low prices, which could encourage the next property owner either towards a higher profit margin from its reuse, or allow for below-market pricing. Another scenario would be that GM sells the property off in segments, which could open the door to below-optimal redevelopment. Any sort of piece meal sale and redevelopment will lead to less optimal redevelopment. Ultimately, General Motors' decision rests solely under its own control, but it is hoped that they coordinate their efforts with other stakeholders in the community.

Lansing Township

3.1 History and Location

Lansing Township was first organized in 1842. In 1847, when the first census was taken, the township had a population of 88 people. It was once the Capitol of the State of Michigan. The incorporation of the City of Lansing in 1849 changed the township boundaries, creating the City of Lansing as the State Capitol.

Lansing Township is located in the northwest corner of Ingham County, in the south central portion of Michigan's Lower Peninsula. The spatial layout of the township can best be described as fragmented. The township is broken into five pieces of land. Because of the township's irregular shape, it has several borders. The western portion of the township is bordered on the west by Delta Township in Eaton County, on the north by Clinton County, on the east by the City of Lansing and on the south by the Grand River and the City of Lansing. The eastern portion of the township is bordered on the west by the City of Lansing, on the north by Clinton County, on the east by the City of Lansing and the City of East Lansing, and on the south by the City of Lansing.

Residents on the west side of the township attend Waverly Community Schools and those on the east side of the township attend Lansing Public Schools. The Waverly School District was established as a result of a vote in 1958 to consolidate four independent school systems west of Lansing. In order to accommodate projected population expansion in the Delta-Waverly community, plans were laid to build the present middle

and senior high schools, as well as East Intermediate, Colt, Winans, Windermere View, and Elmwood Elementary Schools. Today over 3,000 students attend school in the Waverly Community School Districts. Fall 2005-06 MEAP passing scores for grade 6 in reading and math were 81% and 72% compared to the State of Michigan which were 80% and 65%.⁴ The Lansing School District is made up of over 16,000 students and covers parts of three counties.⁵

The township has little to no undeveloped land making these sites highly significant. The western section of the township is the largest, and includes most of the township's industrial developments. The northeastern section of the township is heavily industrialized on its western end (west of Wood Road), but since 2002 this section has become the 'downtown' of Lansing Township with the construction of the Eastwood Towne Center. The central eastern sections of the township are almost exclusively residential, save for a small strip of land that runs along either side of US-127. The northern portion of these two sections contains the large Grosebeck neighborhood, and the smaller southern portion includes part of the Urbandale neighborhood. The southeastern section of the township is exclusively rural in nature.

3.2 Population

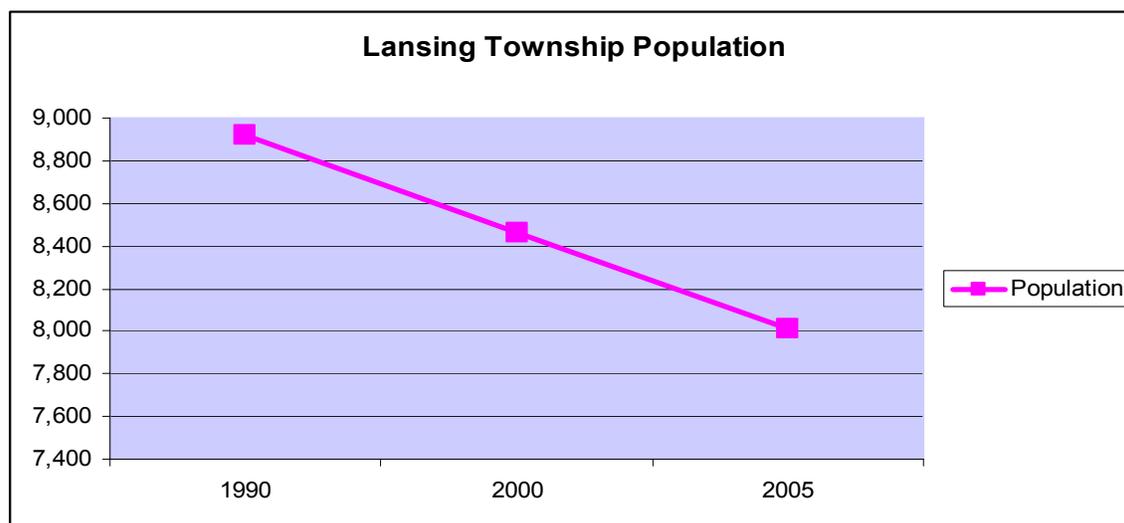
In order to recommend a re-use proposal for land within Lansing Township, it is important to build an understanding of the demographic and economic characteristics of the area. Any proposals for new development should not proceed without fully understanding the existing and future population trends that may occur to this demographic. To assess the demographic characteristics of Lansing Township, Census data for the years 1990 and 2000 were collected for the township; data was also specifically collected for census tracts 34 and 35, the area where the two GM sites are located within the township. Additionally, demographic characteristics from the Census for the years 1990 and 2000 were collected for the City of Lansing, Ingham County and the State of Michigan.

⁴ <http://web.waverly.k12.mi.us/annualreports.htm>

⁵ https://edline.net/pages/lansing-sd/district_general_information

In 2000, Lansing Township was home to 8,458 people. This number is down from 8,919 in 1990. Since 1990, the study area has experienced a population decline of 461, about a 5.2% decrease. From 1990 to 2000, the cities of Lansing and East Lansing both lost residents, as did inner portions of DeWitt and Delta townships. Lansing's population decreased from 127,321 to 119,128, which was a 6.4% decrease while the State of Michigan saw an increase in total population of 6.9%.

Figure 2 Population Graph



Source: Census 2000

Table 1: Population Change 1990-2000, Census Tracts 34 & 35

	Census Tract 34	Census Tract 35
Total Population Year 1990	2,606	3,010
Total Population Year 2000	2,523	2,985
Change	-83	-25

Source: U.S. Census Bureau

Table 2: Total Population, 1990-2000

	1990	2000	% Change
Michigan	9,295,297	9,938,444	6.92%
City of Lansing	127,321	119,128	-6.43%
Lansing Township	8,919	8,458	-5.17%
Ingham County	281,912	279,320	-0.92%

Source: U.S. Census Bureau

According to the 2000 census, the median age of the population in Lansing Township was 34.8 years, and for Ingham County the median age was 30.4. In addition, 46.4% of the population is between the ages of 25 to 59 and approximately 30% are 62 years of age and over. This is significantly higher than Michigan (14%) or US (12%).⁶ In 1990, approximately 20% of the population was in the age 60+ group, which indicates that the number of senior citizens is increasing. Moreover, in 2000, there were 888 households with individuals 65 years of age and over living in them (21.6%) of the total.

The racial composition of Lansing Township is not very diverse, as a substantial majority of the population is white. In 2000, approximately 85.6% of the population was white, 9.7% was black, 2.3% Asian, and 2.7% other. Compared to 1990 all of the racial groups increased in number over the 10-year time period, except the white population which decreased from 8,074 in 1990 to 7,239 in 2000. In contrast, in 2000 the City of Lansing population was 65% white, with blacks (22%), and the remaining 13% made up of other races. The racial composition of residents in Lansing Township remains consistent with the racial composition of the population in the state.

Poverty status for families in Lansing Township, in 2000, was 5.2% and for individuals 7.5%. These numbers are significantly lower than the City of Lansing where 13.2% of families and 16.9% of individuals were below the poverty level. For the State of Michigan, 7.4% of individuals and 10.5% of families lived below the poverty level in 2000.

Race and poverty status are highly correlated. In the Lansing region in 2001, 66% of non-Asian minority elementary students attended high-poverty schools, up from 60% in 1995. The percentage of white students in those schools was stable, at just 13% in both years. Student poverty in the Lansing region is highly concentrated within the Lansing schools, as well as in several outlying suburban districts. Poverty increased slightly in the Lansing district as a whole from 1995 to 2001, but nine suburban school districts, including Maple Valley and Grand Ledge, saw faster increases during the period.

⁶ Census 2000

Nevertheless, poverty levels remained very low in other suburban districts, including DeWitt and Okemos.⁷

In the Waverly community schools district, the poverty status for school aged children between 5 and 17 (in PK-12 grades) has been increasing. In 2000, there were 3,697 students in this age group in the Waverly school district and 269 of the children were from families in poverty. In 2004, that number decreased to 3,496, but the number of children with families in poverty increased to 353.⁸

3.3 Housing Stock and Tenure

The housing stock in Lansing Township is quite old and is an indication that there is the potential to build additional housing that offers amenities that are more modern.

According to 2000 census data, 50% of the 4,317 housing units in Lansing Township were built in 1959 or earlier and only 0.4% of the homes were built between 1995 and 1998. In Michigan, 43% of the housing stock was built prior to 1959 and in the U.S., only 35% of the housing stock is as old. The average household size was 2.05 and the average family size was 2.78.

Based on a July 2006 report by the National Association of Realtors, home prices in the Lansing region have risen at a moderate pace in recent years. Even though prices actually declined in the first quarter of 2006, there is little concern about a price bubble (a large price correction) given the highly affordable conditions in the region. The current housing outlook is forecast to be good – despite rising interest rates and an otherwise slow economy.

Within the Lansing-East Lansing MSA, housing vacancy rates increased from 4.9% in 1990 to 5.2% in 2000. For Lansing Township, the vacancy rate for owner occupied homes was 1.3% and the rental vacancy rate was 4.3%. Compared to 1990, the homeowner vacancy rate increased slightly from 0.9% but decreased from 11.2% for rentals. The area overall has a low vacancy rate compared to the state average of 12%. According to the Greater Lansing Association of Realtors, the average sale price of

⁷ Michigan Metropatterns, A Regional Agenda for Community and Prosperity in Michigan, April 2003

⁸ <http://www.census.gov/cgi-bin/saige/saige.cgi>

homes in the local market was \$149,493 in the 4th Quarter of 2003, up 3.5% over the same period in 2002.

In 2000, approximately 54% of 4,104 housing units in Lansing Township were owner-occupied and 46% were renter-occupied. The median housing value was \$90,800 compared to \$115,600 for the State of Michigan and \$119,600 for the U.S. The median rent paid by Lansing Township residents in 2000 was \$519, 43.3% paid between \$500 and \$749 in gross rent.

Table 3 Occupancy Tenure

Occupancy Tenure	Lansing Township	Census Tract 34	Census Tract 35
Total Housing Units	4104 (100%)	1,112 (100%)	1,367 (100%)
Owner Occupied	53.5%	72.7%	53.8%
Renter Occupied	46.5%	27.3%	46.2%
Average Household Size	2.05	2.24	2.18

Source: Census 2000

Local area analysis has special qualities that demand specialized theory. We have identified Reversed Causal Order, from housing to population to labor force as the driving factors in redeveloping these two sites.⁹ The housing stock forms the primary basis for collecting census data for local areas. About 50% of Lansing Township's housing stock is just about 50 years old (See Table 4). The median housing value (\$90,800) of the housing stock reflects the age. The owner occupancy rate of 53.5% is low compared to Michigan 73.8% and the U.S. at 62.2%. Even moderate increases in this rate could benefit the township.

⁹ Myers, Dowell. (1992) *Analysis with Local Census Data Portraits of Change*. Academic Press, Los Angeles California.

Table 4: Year Structure Built

Year Structure Built	Lansing Township	Census Tract 34	Census Tract 35
1999 to March 2000	0%	0.0%	0.0%
1995-1998	0.4%	.7%	.7%
1990-1994	3.1%	.9%	1.9%
1980-1989	4.7%	2.5%	6.6%
1970-1979	16%	7.9%	23.3%
1960-1969	25.7%	31.3%	15.4%
1940-1959	42.6%	45.5%	16.6%
1939 or earlier	7.5%	11.3%	34.4%

Source: Census 2000

3.4 Education and Income

As of 2000, in Lansing Township, 26.6% had some college, 25.2% received a high school diploma or GED, 18.1% of the residents held a bachelor's degree, 11.1% held a graduate or professional degree, 10% had less than a high school education, and 9% held an associate degree. Compared to the State of Michigan, 83.4% of persons aged 25 and over were high school graduates and 28.1% had a bachelors degree or higher in 2000.

A second important question concerns the income of the local population. To answer this we compare Lansing Township to the region and the U.S. and find out whether this local area is above or below average. The average income for the township is \$41,017; compared to the State (\$44,667) and U.S (\$41,994), Lansing Township is below average. The township holds a very large share of elderly population, most of who live on fixed incomes. Looking at the income distribution for Tracts 34 and 35, almost half of the population is making \$50,000 or more for Tract 34 so this portion of the township is above the average of the region and country.¹⁰ On the other hand Tract 35 has about less than 32% of its population with incomes of \$50,000 or more. This tract has one-quarter of its households in the \$35,000 - \$49,999 income bracket. (Table 4)

¹⁰ Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrices P52, P53, P54, P79, P80, P81, PCT38, PCT40, and PCT41.

Table 5: Household Income Distribution

Income Distribution	Lansing Township	Census Tract 34	Census Tract 35
Less than \$10,000	7.4%	4.0%	6.5%
\$10,000 - \$34,999	32.1%	35.8%	36.8%
\$35,000 - \$49,999	22.8%	19.4%	25.1%
\$50,000 - \$99,999	33.1%	41.3%	30.5%
\$100,000 - \$199,999	4%	5.2%	1.2%
\$200,000 or more	0.5%	1.2%	0%

Source: Census 2000

The township has a high percentage (29.2%) of 25 year-olds that have a bachelor's degree or higher (Table 3). This is the portion of the population that is highly sought after by economic developers and government leaders pursuing “creative class” and “cool cities” strategies. This population is highly concentrated in census tract 34, north of Saginaw Highway.

Table 6: Educational Attainment

Bachelors Degree or Higher Education	Lansing Township	Census Tract 34	Census Tract 35
Total Population	8,458	1,778	1,868
Percent of Bachelors Degree 25+	29.2%	28.3%	4.8%

Source: Census 2000

3.5 Regional and Local Growth Rates

According to the Tri-County Regional Report 2005, the counties of Clinton, Eaton, and Ingham, show an increase in projected population by 2030. This regional population forecasting model shows trends which indicate continued slow population growth over the next 25 years; which amount to less than one percent per year on an annualized basis. That one percent is on the urban fringe, while city centers have little growth or population loss. The General Motors site redevelopment can help turn the tables and keep the population located in the urban core. Projections for the State of Michigan and the U.S. also anticipate increases from 9,938,444 to 10,694,172 and 281,421,906 to 363,584,435 respectively, by 2030.

Figure 3 Regional Growth Trends

3.6 Regional and Local Assets/Amenities

Lansing Township benefits from a number of locational advantages. In particular, it has access to traffic and potential visitors along Highway I-496, and is well positioned relative to the metropolitan area's amenities. Some of these amenities include the Sparrow Medical Network, Michigan State University, Capital City Airport, the Michigan State Capitol, Downtown Lansing, and various golf courses that are clustered in north and central Lansing. (See Map 1 in Appendix A)

The Lansing area is seen as extremely stable, both by diversity of its economic base, and in its capital stock. The economy is lead by the State of Michigan, Michigan State University, and General Motors. According to a report in Expansion Management magazine, the Lansing area ranks among the top fifty college-educated workforces in the country¹¹. The metro area is considered a five-star "Knowledge Workers Metro", which places it with 72 other metro areas as the top twenty percent of metro areas in this ranking¹². This designation examines three key areas: human capital (workforce),

¹¹<http://www.lansingstatejournal.com/apps/pbcs.dll/article?AID=/20070418/NEWS03/704180373/1004/RS10>

¹²<http://www.lansingstatejournal.com/apps/pbcs.dll/article?AID=/20070418/NEWS03/704180373/1004/RS10>

educational institutions, and research and development spending¹³, as well as factors such as engineering and science activity. This is seen as an indicator of the high quality of life in the region¹⁴. The region boasts 22.1% of its residents having an associate's degree or better¹⁵.

It is difficult to underestimate the potential of this property for Lansing Township. Given that the township has experienced limited housing development in 50 years¹⁶, and is facing the major loss of its industrial tax base from the shuttering of the two plants, any development that would assist the township in creating positive momentum would be welcome.

In order to achieve success, the local development of Lansing Township needs to be led by strong population growth and economic development¹⁷. This could best be realized through the development of the property in such a manner that it helps to trigger the long-term re-invention of the community¹⁸. Lansing Township has already pursued one project that has helped to lead the redevelopment of the community: the Eastwood Town Centre. Relying largely on the benefits of location and clustering, the project has been deemed a success. It has also allowed the township to diversify its tax base.

Lansing Township Residents

4.1 Community Input

It is important for the residents to have input regarding redevelopments that will impact their community and livelihood. To help us with this task we invited 100 randomly selected residents from the west side of the township to participate in a survey and be part of a group discussion. With feedback from participants, we hoped to obtain information that will help us make proposals to the township and General Motors regarding the best re-use for these sites.

¹³ <http://www.lansingstatejournal.com/apps/pbcs.dll/article?AID=2007704230315>

¹⁴ <http://www.lansingstatejournal.com/apps/pbcs.dll/article?AID=/20070418/NEWS03/704180373/1004/RS10>

¹⁵ <http://www.lansingstatejournal.com/apps/pbcs.dll/article?AID=2007704190325>

¹⁶ <http://www.lsj.com/apps/pbcs.dll/article?AID=20061217/DELTAWAVERLY01/612500...>, pg. 1

¹⁷ <http://www.lsj.com/apps/pbcs.dll/article?AID=20061217/DELTAWAVERLY01/612500...>, pg. 1

¹⁸ <http://www.lsj.com/apps/pbcs.dll/article?AID=20061217/DELTAWAVERLY01/612500...>, pg. 1

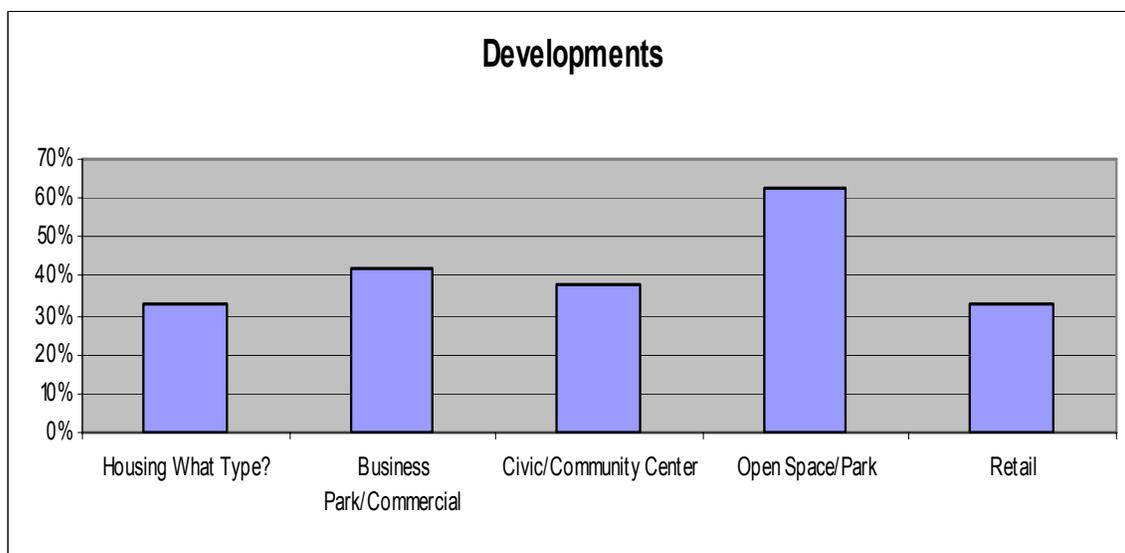
4.2 Residential Surveys

On February 25, 2007, the survey was sent out to find out what the residents of the township were interested in seeing come out of the two shuttered GM sites. Some of the questions we asked the residents were, how long have you lived in the township are you a homeowner or renter, what would you do with the two sites, what types of development would best serve your needs as a community and what do you dislike about the township, etc. A copy of the survey sent out is included in Appendix F.

Twenty five respondents returned the survey with the following results. Ninety-six percent of them are homeowners, and 11 of them have been living in Lansing Township for 20 or more years. These data alone show the character that these residents care deeply about what will go into the redevelopment of these two sites. Also, 11 are retired and living alone, adding to the significance of the senior population. When asked if the closure of the GM plants has had any impact on their family, 66.7% of the respondents said no.

In terms of possible uses, the chart below shows the results of how the residents wanted to see these two sites used. Open Space/Park scored highly followed by Business Park/Commercial and then Civic/Community Center.

Figure 4 Favored Developments



Some of the main themes that we have seen in respondents answers throughout the survey were:

- We want to see nice family homes
- We would like open space included in the developments
- We would like to see walking/running trails
- This township does not have a community center for families
- This township does not have an identity
- This township lacks a cultural experience

When asked what the residents liked about living in Lansing Township, respondents most favored municipal services and how great they are. Residents also cited proximity to freeways, shopping, schools, airports, etc. as factors of why they like living here. This is definitely something to take into consideration from a developer's standpoint as well.

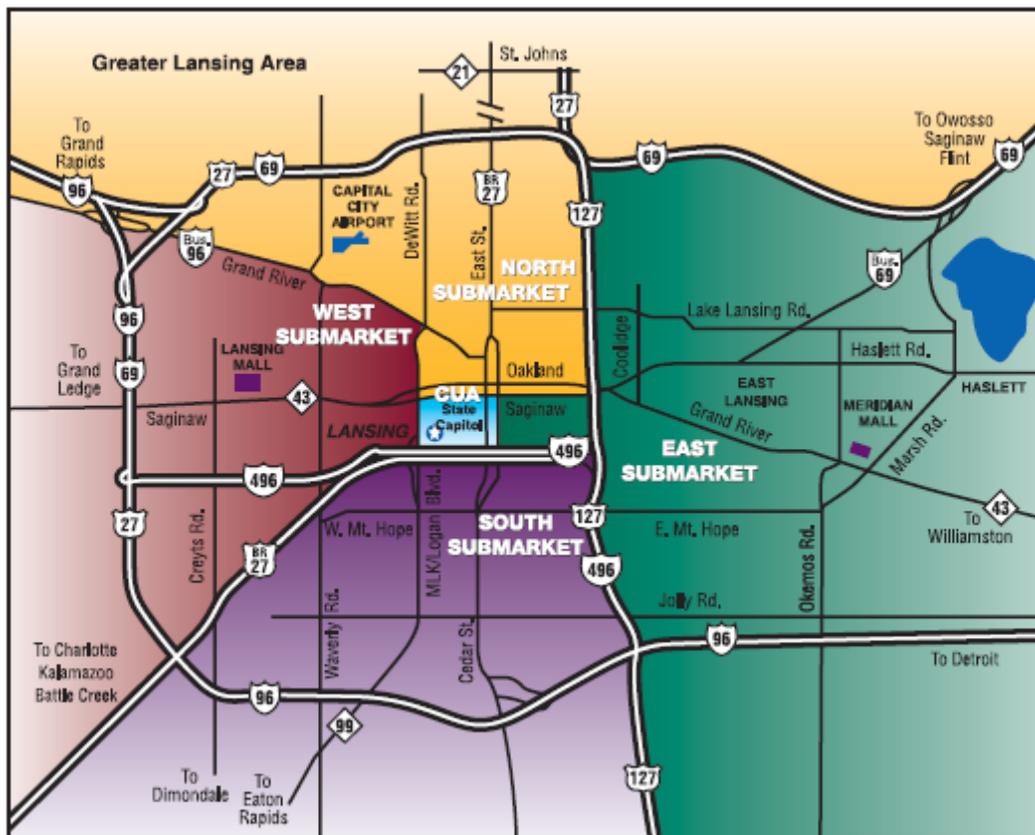
Private Market

5.1 Regional Market Definition

Lansing Township is part of a larger trade area known as the Greater Lansing Area. The Greater Lansing Area is composed of Clinton, Eaton, and Ingham Counties, with the capital City of Lansing at its center¹⁹. The development sites are located within the West submarket.

¹⁹ <http://www.cbre.com/USA/US/MI/Lansing+Partner/profile.htm?pageid=7>

Figure 5 Lansing Area Submarkets



5.2 Regional Market Analysis

The market analysis for Lansing Township has four components: Residential, Retail, Office, and Industrial.

Residential Market

Housing vacancy rates in the Lansing region have increased from 5.2% in 2000 to 7.5% by 2003²⁰. Overall, however, the region has a low vacancy rate when compared to the state vacancy rate of 12%²¹. The vacancy rate in 2000 in Lansing Township is 5.9%

²⁰ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 56

²¹ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 56

(2000, US Census). Only 15% of housing stock in Ingham County has been constructed since 1990, compared to over 22% in Clinton and Eaton counties²².

The biggest long-term opportunities for developers lie in senior housing. There are currently limited housing options for seniors within the region. Existing senior housing units currently have a 6% vacancy rate²³, but the rate of people over 62 (30%) will continue to increase over time, suggesting an opportunity for new housing.

Recent new construction is primarily composed of condominiums²⁴. New condo and housing development around the Eastwood Centre represents a challenge to any other new housing development around these sites, though given the long-term goal of the municipality to increase or stabilize its population, there are opportunities here worth exploring, through the long-term diversification of its housing stock.

Retail Market

The retail market in the Greater Lansing Area is doing well. Both the Meridian Mall and the Lansing Mall have developed into major shopping destinations. Additionally, the Eastwood Centre has slowly grown into a shopping destination, with its success prompting new investment phases for the project²⁵.

The West submarket has benefited from its proximity to highways to position itself as a regional leader. In the West submarket, the vacancy rates for retail are just 4.3%, the lowest in the area²⁶. Absorption rates have been positive in last six months in the West submarket. The West submarket actually records the lowest vacancy rate (7.8%) in strip centers, compared to the market average of 14.5%.

²² Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 56

²³ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 64

²⁴ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 57-59

²⁵ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 71

²⁶ <http://www.cbre.com/NR/rdonlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/443870/2006v2retailmrktsurvey.pdf>, pg 2

According to the CBRE report on the Greater Lansing Area, the West and North submarkets represent the best opportunities for future growth in retail²⁷. This represents an effort to continue to build upon the existing concentrations of retail space in these submarkets. Regional retail growth is anticipated in the West submarket is in the intersection of I-96 and the West Saginaw Highway. Opportunities exist for retailers to shift closer to the interchange and area traffic generators. CBRE expects to see growth in this area for years to come. This is unlikely to adversely affect sites further from the interchange.

Office Market

There is not much positive news for the office market in the Lansing Area. The vacancy rate in the West submarket at 17.8%, and at the I-96/West Saginaw interchange it is at 21.9%. While the absorption rate in the West submarket is at 14.7%, even the strong demand will not bring the area close to national vacancy rates for 1-2 years. Future increases in demand are projected to come from Michigan State University and medical users of space, though the state can hardly increase demand until it has sorted out its budgetary problems.

Industrial Market

Industrial real estate is one of the best-performing asset classes within the property sector²⁸. Given the shift of the national economy to a post-industrial economy, it is projected that more former manufacturing facilities will become vacant over the coming years. The West submarket has a major advantage, given its abundance of industrial property. The West submarket makes up 47.5% of the total industrial space in the region²⁹. The West submarket expected vacancy rate of 5.5% seems to give it an advantage over the rest of the area. This data suggests that the clustering of such properties in this submarket within the region has paid dividends.

²⁷ <http://www.cbre.com/NR/ronlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/443870/2006v2retailmrktsurvey.pdf>, pg 1

²⁸ "Industrial Market Trends", ULI, January 2007, pg. 3

²⁹ <http://www.cbre.com/NR/ronlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/496231/lansingMarketView1q07ind.pdf>, pg 3

One must consider, however, that the strong growth in the submarket was driven by the General Motors sites. Given the building of a new manufacturing facility in Delta Township, it seems unlikely that GM will continue to be the primary driver for industrial property. Additionally, the other regional economic drivers, MSU and hospitals, both rely on institutional and office uses for their activities. Macroeconomic trends also help to determine the use of these properties. Nationally, the manufacturing sector has shrunk as a share of the economy³⁰ through both a shift towards a service-based economy, and productivity improvements³¹ which diminish the need for more employees and space for existing manufacturers. While the clustering of industrial land in the West submarket has paid considerable dividends in the past, it seems now that the most useful proposal is to find diverse uses to alter the function of this area.

Labor Market

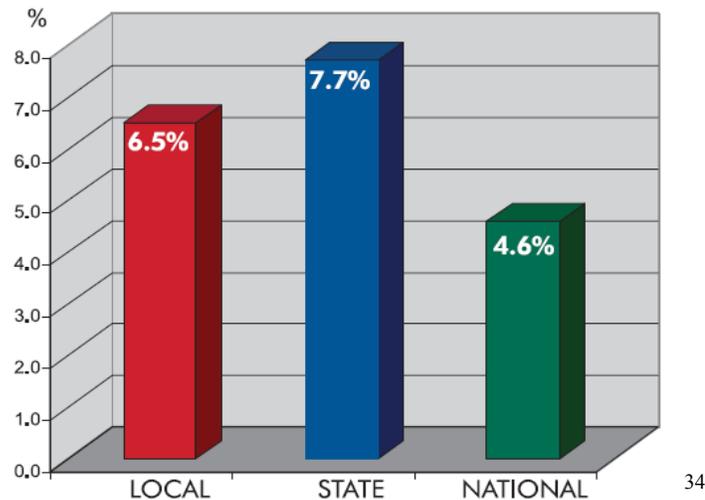
Overall, the labor market in the region is seeing some difficulties. While the region's unemployment rate rose from 5.8% to 6.5% from January 2006 to January 2007, it remains below the state average of 7.7%³². Although this rate compares well with the region and the state, it is above the national average of 4.6%. Additionally, the forecast job growth for the region was just 7.5% from 2000-2010, which was below the job growth rates for both the state and the country³³.

³⁰ http://midwest.chicagofedblogs.org/archives/2006/08/how_should_we_g.html

³¹ <http://www.freetrade.org/node/91>

³² <http://www.cbre.com/NR/rdonlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/496231/lansingMarketView1q07ind.pdf>, pg 2

³³ http://www.michigan.gov/documents/Lansing_90414_7.pdf, pg 1

Figure 6 Unemployment Rate, January 2007

In examining the impact of the closure of the GM plants, CBRE concludes it is not expected to have any discernable effect on area employment. Tier one suppliers are anticipated to absorb all remaining employees affected by the displacement of the GM plant closure and the opening of a smaller plant in Delta Township³⁵. This is important in considering that the impact of these closures is minimal on employment in the region. When looking at the area's biggest employers³⁶, it is interesting to note that higher education facilities are among the three large contributors to the area (MSU, Lansing Community College, and Lansing School District), followed by the health care sector (Sparrow Health System, and Ingham Regional Medical Center)³⁷. Education and health services added the largest absolute number of jobs (400) to the region from April 2005-April 2006³⁸. Additionally, these sectors help form a regional advantage for the Lansing area. Besides manufacturing, sectors identified as competitive-advantage industries for the region included insurance, storage, financial institutions, educational services, and hospitals³⁹. "Visitor import" of service to incoming patients to the region is estimated to have spin-off benefits through family expenditures, with increased retail spending in the area between \$5 and \$10 million⁴⁰.

³⁴ <http://www.cbre.com/NR/rdonlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/496235/lansingMarketView1q07ret.pdf>, pg 2

³⁵ <http://www.cbre.com/NR/rdonlyres/32997FE6-4D13-11D4-A8A3-00508B5B0FEB/496235/lansingMarketView1q07ret.pdf>, pg 4

³⁶ Employed 2000 people or more

³⁷ http://www.lansingchamber.org/econ_dev/econ_rp.php#7

³⁸ http://www.lansingchamber.org/econ_dev/econ_rp.php#1

³⁹ http://www.michigan.gov/documents/Lansing_90414_7.pdf

⁴⁰ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 21

Components of Redevelopment Proposals

Given the market analysis for the region, there are several core components that would succeed on these sites. They are: housing, entertainment, commercial/mixed use, civic space, open space, business park, senior housing & golf course. The justification for each component is provided below.

6.1 Housing

Broad demographic forces are fueling national growth and increasing consumer demand for urban living. Changes in demographic trends such as immigration, an aging population, and smaller households mean that Americans are demanding more choices in how and where they live. A growing segment of the population prefers communities that are walkable and livable. Middle-aged couples without children have become more receptive to urban neighborhoods, cultural amenities, and shorter commutes; young people are experimenting more with urban lifestyles that offer more diversity. America's family structure is changing as women and men are delaying marriage and having fewer children. The typical family of the suburban era, a married couple with school-aged children, is now less than 25% of American households.⁴¹

6.2 Entertainment

Based on resident feedback, the area is lacking in entertainment, particularly family-oriented centers. As part of our recommendations we are proposing a movie theater and/or performing arts center to stimulate the economy and improve the quality of life. Nationally, such facilities can be found in cities and towns of all sizes, each uniquely reflecting a local mission, history, and cultural development. Some centers succeed with thoughtful landscaping and signage, while others are involved in the renovation of existing buildings and attracting complimentary businesses. Many are found in downtown areas, but they can flourish in suburban, rural, and neighborhood locations as well.⁴²

⁴¹ Katz, Bruce. The Brookings Institute. "Six Ways Cities Can Reach Their Economic Potential"

⁴² <http://www.msac.org/programs.cfm?sec=Programs&id=232>

6.3 Commercial/Mixed-Use

Mixed use residential buildings and neighborhoods are best suited to those who prefer public amenities to private, regulated personal space. Mixed use guidelines often result in residential buildings with street front commercial space. Retailers have the assurance that they will always have customers living right above and around them, while residents have the benefit of being able to walk a short distance to get groceries and household items, or see a movie. With the anticipated growth of retail in the west submarket and an increase in population from this development, commercial activity could increase the township's tax base and serve existing and new households. Besides the benefit of households needing groceries and the township needing tax base, together they need to have a strong sense of community.

6.4 Civic Space

The rewards of transforming a portion of these sites to civic space along with commercial can go way beyond just the space, enhancing its surrounding buildings and neighborhood. Great public places contribute to community health – whether socially, economically, culturally or environmentally. They add enhancement to the civic realm – not only visually, but also in providing a sense of character and a forum for public activities. They can be anchors for downtowns and communities, acting as focal points for definition and foundations for healthy growth. All of these assets, as well as the opportunity these places offer for people to relax and enjoy themselves, add up to greater community livability.

When cities and neighborhoods have thriving civic spaces, residents have a strong sense of community; conversely, when such spaces are lacking, people may feel less connected to each other. Great civic spaces are really great public places. They are recognized and valued in their cities and towns as places with their own special flavor that relate to and nurture the larger community and bring the public together.⁴³

6.5 Open Space

⁴³ http://www.pps.org/info/placemakingtools/casesforplaces/benefits_public_spaces

The open space we are proposing will be planned around new housing development on the sites. Parks and green space that are currently in place in Lansing Township are not connected and do not relate to the community as a whole and lack balance between walking trails, playing field and picnic sites.

6.6 Business Park

When the office market improves, Lansing Township should be moving towards the post-industrial economy. We have identified opportunities for expansion within the medical and educational sectors; thus providing for spin-off opportunities of administrative jobs. The Business Park would be in a premier location as it would benefit from all the surrounding markets. Alternatively, if turned into a small business incubator, the proximity to universities and major transportation links would provide an advantage to the companies willing to come there.

6.7 Senior Housing

Many communities across the United States are facing a new demographic reality. While the 1950's and 1960's proved to be the era of the baby boomers, this same cohort has continued to age well to present day. Advances in medical technology have yielded sharp increases in life expectancy. As a result of both demographics and technology, most Western societies are poised to experience a sharp increase in both the percentage of seniors as total population, and in absolute numbers. In 2000, an estimated 35 million people in the United States were 65 or older, accounting for almost 13% of the total population. In 2011, the "baby boom" generation will begin to turn 65, and, by 2030, it is projected that one in five people will be age 65 or older. Even more significant, the population age 85 and older is currently the fastest-growing segment of the older population.⁴⁴

The benefits of senior housing within a community are numerous: they can contribute to a community's cultural diversity; senior units benefit from proximity to medical offices, campuses, and resources; close proximity to retail and shopping allows seniors opportunities to spend their disposable income; and close proximity to golf courses and

⁴⁴ Katz, Bruce. The Brookings Institute. "Six Ways Cities Can Reach Their Economic Potential"

other neighborhood amenities provide further opportunities for seniors to spend within the community⁴⁵. The layout of the sites represents a good opportunity to create a haven-type atmosphere for senior living accommodations.

6.8 Golf Course

The design, operation and construction of a golf course are too immense a subject to cover in this report. The specifications herein are presented give basic requirements for the development of a golf course facility as proposed in Development II (Figure 12). A 9-hole par 3 golf course is proposed, to be comprised of 45 acres. This size of a golf course area is normally sufficient to include a practice putting green, a practice driving range, the clubhouse area, and parking facilities. The practice putting green should be equal in size to the largest putting surface on the course. Putting surfaces may vary in size from 3,000 to 15,000 square feet.⁴⁶

General Motors chose to redevelop their Clark, New Jersey manufacturing plant into a golf course because of environmental issues. Because of the presence of contaminants on the site, the available uses were limited in terms of development options. For example, it was decided that the development of single-family homes with large lots would not be the best use for the property due to the possibility of future liability issues. As an alternative, The Hyatt Hills Golf Complex was designed on the property as a first-rate, public golf facility, consisting of a scenic regulation nine-hole course, an elegant, full-service clubhouse, a driving range, putting green, and an eighteen-hole miniature golf course. We are recommending a similar type of project that would add a tax base to the green space if the golf course were managed by a privatize entity.

As another example, the City of Detroit has privatized four of its six golf courses, Chandler Park, Palmer Park, Rackham Golf Club and Rouge Park. In the first year of private management, the total revenues generated for the four courses created a surplus of \$200,000, compared to a deficit of \$500,000 when they were run by the city. The contractor, American Golf, is primarily responsible for golf-course operations and

⁴⁵ Anderson Economic Group, Market Strategy Study Charter Township of Lansing Downtown Development District, 2004: pg 65

⁴⁶ "Urban Planning and Design Criteria", Second Edition, DeChiara, J. and Kopplemean, 1975.

development, including virtually all aspects of the operating risk. The concession agreement between American Golf and the City of Detroit is a twenty-year contract. The terms of the contract include an initial term for ten years, with two additional five-year renewals. In the first two years (1991 and 1992), the city did not receive a share of the gross revenue. Contractually, the city was entitled to receive a minimum payment of \$50,000 each year. For the next eight years of the agreement, 1993-2000, the city agreed to a percentage share of the gross revenues for green fees and cart rentals, driving range ball rentals and merchandise, food and beverage receipts.⁴⁷ A key reason Detroit leased out its courses was its inability to make needed capital improvements

Many municipalities are faced with competing demands for limited government dollars and the difficulties of operating commercial enterprises and are therefore increasingly turning to golf course privatization. Some of the benefits of golf course privatization include the following:

- **Cost Savings.** Government rules and practices can drive up costs. For example, golf-management firms typically enjoy discounts on everything from fertilizer to insurance, a buying power advantage that local governments do not usually possess.
- **Increased Revenues.** From better advertising to programs that speed up play and allow more golfers to use the course, private operators often institute management practices that increase revenues.
- **Increased Quality.** Most golf-course privatizations require the private contractor to make capital improvements in the course to improve its quality.
- **Risk Minimization.** In many golf-course privatizations, the city gets a guaranteed rent even if the course revenues do not increase. This ensures that during the term of the contract, taxpayers will not be subsidizing the course.

Community Outreach. Most private operators can afford to expand a city's community golf programs and are required to plan these programs as part of the privatization contract. An example of typical community outreach programs include: teaching junior golfers, promoting special events for nonprofit community-based organizations, offering

⁴⁷ City of Detroit Fiscal Analysis Department

employment and internships to needy and at-risk youths, and supporting local youth-services programs.⁴⁸

Redevelopment Issues

7.1 Brownfield Legislation

Brownfields are agricultural, commercial or industrial properties that have been impacted by contaminants, including hazardous substances and petroleum products. Developers have historically avoided such properties because of legitimate concerns relating to uncertain environmental liabilities. Because of these concerns, Brownfields properties were typically overlooked in favor of undeveloped “greenfields,” such as farmland or woodland, where potential environmental contamination liabilities do not exist. The environmental and financial policies that lead developers to pursue greenfields rather than rehabilitate Brownfields caused deleterious results. Contaminated sites were left as blights on the surrounding communities while pressures mounted to develop more and more open space.

During the last five years, state legislatures and environmental agencies have acted vigorously to promote Brownfield development through legislative and regulatory initiatives. Currently at least 43 states have some form of Brownfields legislation or voluntary cleanup program that actively encourages the remediation, reuse or redevelopment of environmentally impaired property. These programs, however, provide liability protection under state law only. Therefore, Brownfields legislation addressing federal environmental liabilities for owners and tenants of Brownfields remediated in compliance with state standards became essential.

Federal environmental statutes that require remediation of contaminated property typically impose strict liability on owners even if the owner did not cause the contamination. Although the United States Environmental Protection Agency (EPA) rarely requires additional remediation of Brownfields properties under federal statutes, once a property has been remediated to state cleanup standards, nothing forecloses EPA

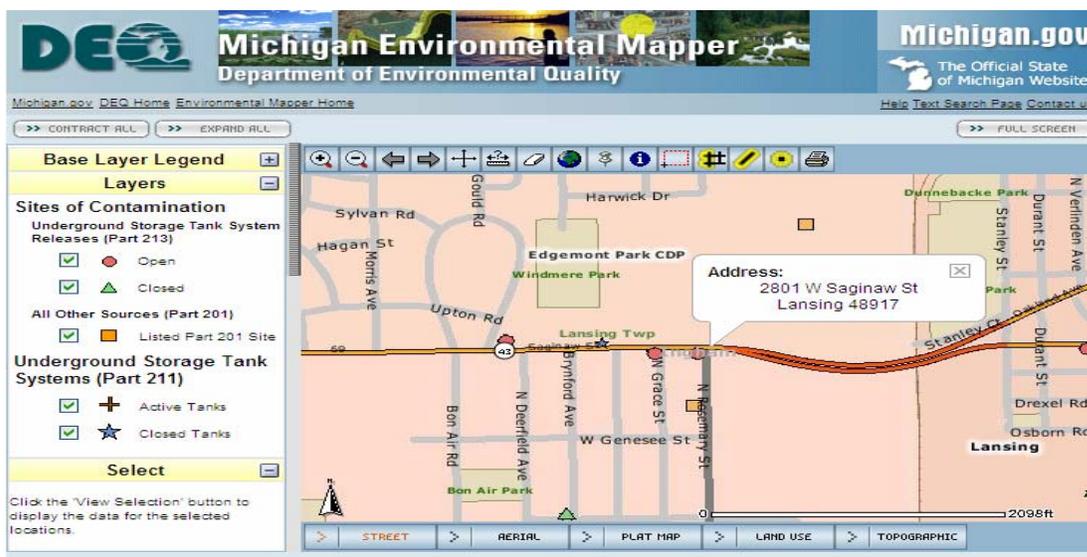
⁴⁸ Reason Public Policy Institute, August 1999

from doing so. Therefore, it is the perceived threat of EPA enforcement that significantly inhibited the development of Brownfields sites.

Lansing Township has had the benefit of the two General Motors sites in use for the past 40 years. Although the township officials have not designated the surplus property as a Brownfield, perception is a reality. All of our proposals assume the land will be cleaned up to the standards addressed by appropriate environmental parties. The Michigan Environmental Mapper lists sites of contamination and open tank spills in the state. The GMC Lansing #2 Craft Center was listed as having an underground storage tank system release⁴⁹.

The contaminated sites are regulated under Part 201, Environmental Remediation, and under Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). In addition, there are facilities which currently have or had underground storage tank systems regulated under Part 211, Underground Storage Tank Regulations, of Act 451.

Figure 7 MDEQ Enviromapper



Source: <http://www.mcgi.state.mi.us/environmentalmapper/>

⁴⁹ (http://www.michigan.gov/deq/0,1607,7-135-3311_4109_9846_9848-141852--,00.html)

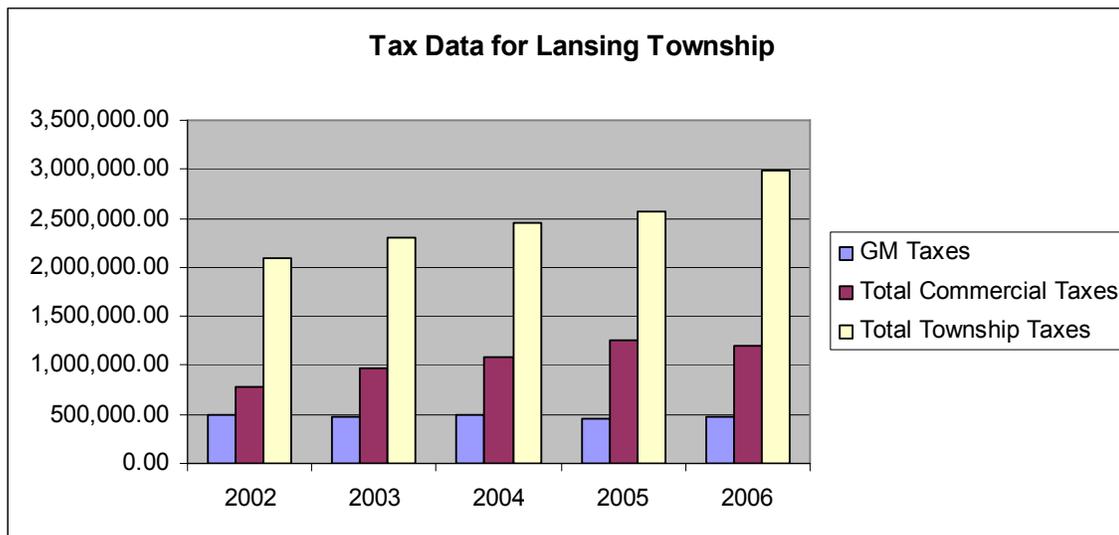
Environmental issues affecting the existing condition and use of land at GM sites #1 and #2, Development I and or Development II should be resolved with the collaboration of General Motors and Lansing Township. Future land use and environmental design elements are recommended to encourage sustainability and should be comprised of recycled/green building components (i.e., landscape, porous pavement pathways, and shrubbery for buffering as needed). Once the land is rehabilitated, it is important that careful consideration be given to the project site to ensure environmental protection of future vegetation.

7.2 Financial Impact of Development

In order to achieve success, the local development of Lansing Township needs to be led by strong population growth and economic development⁵⁰. This could best be realized through the development of the property in such a manner that it helps to trigger the long-term re-invention of the community⁵¹. Lansing Township has already pursued one project that has helped to lead the redevelopment of the community: the Eastwood Town Centre. Relying largely on the benefits of location and clustering, the project has been deemed a success. It has also allowed the township to diversify its tax base. The share of taxes collected by Lansing Township from the General Motors sites has slowly begun to shrink over time, as new sources of revenue from the Eastwood Centre have come online. One caveat is that in considering the 2006 data, the Eastwood Centre had seen a decline in the rate in its commercial tax collection. The increase in township financing was provided by the passage of a mill rate increase during the last municipal election in 2006.

⁵⁰ <http://www.lsj.com/apps/pbcs.dll/article?AID=20061217/DELTAWAVERLY01/612500...>, pg. 1

⁵¹ <http://www.lsj.com/apps/pbcs.dll/article?AID=20061217/DELTAWAVERLY01/612500...>, pg. 1

Figure 8 Tax Data

From the township's perspective, the viability of any redevelopment project for these sites lies in whether or not the project can recapture the foregone tax base that General Motors contributed to the area. The quicker and more efficiently the township can recoup these revenues, through a project that is welcome by the community; the better off it will be in the long-run. Development proposal revenues must match or exceed current revenues gained from the GM manufacturing plants to benefit the Township.

It's difficult to underestimate the potential of this property on Lansing Township. Given that the township has experienced no new housing development in 50 years⁵², and is facing the major loss of its industrial tax base from the shuttering of the two plants, any development that would assist the township in creating positive momentum would be welcome.

7.3 Nonconforming Use

New development should consider tying in with neighborhood development and making it possible to eliminate much of the non-conforming uses in the surrounding areas.

Alternatively, if any coordination with these parcels is difficult to achieve, it is hoped that the development of these sites puts market pressures on the adjacent parcels, through the desire of incoming residents to improve upon its attractiveness, towards a more desirable form. (See Map 3)

⁵²<http://www.lsj.com/apps/pbcs.dll/article?AID=20061217/DELTAWAVERLY01/612500...>, pg. 1

7.4 Zoning-Planned Unit Development

In order to maximize the flexibility of the site, we recommend zoning all property as a Planned Unit Development. A Planned Unit Development (PUD) has the most advantages for mixed land uses including commercial/retail support facilities and community amenities which focus on the total community design. A PUD allows for flexible use of a property through the “designed grouping of varied and compatible land uses, such as housing, recreation, and commercial centers... all within one contained development or subdivision”⁵³. Planned Unit Development has a number of advantages: it allows residents to keep a smaller private yard, in addition to sharing in common open space; can take on a number of different final forms; can help to add character to a neighborhood through street grid and sidewalk design; and allows for a greater degree of administrative flexibility than other approaches⁵⁴.

7.5 Financing

Our analysis of potential financing tools and identification of the right mix of various finance strategies is identified below. The creation of a Tax Increment Financing (TIF) district seems like the most likely approach to financing the project. We recommend TIF financing through a Brownfield Redevelopment Authority because Lansing Township already has a BRA board in place for such. We have also identified the need of a Local Development Finance Authority for the redevelopment of these two sites primarily for the purpose of funding the infrastructure needs of an industrial re-development.

BRA

The Brownfield Redevelopment Financing Act, Public Act 381 of 1996, as amended, allows Brownfield Redevelopment Authorities to utilize tax increment financing to implement Brownfield redevelopment projects. The incremental increases to property tax revenues can be used to finance eligible activities on the site, including baseline environmental assessments, due care activities and additional response activities. Tax increment financing can also be used to fund demolition, public infrastructure, site preparation and lead and asbestos abatement. Unlike other Michigan tax increment

⁵³ http://en.wikipedia.org/wiki/Planned_unit_development

⁵⁴ http://en.wikipedia.org/wiki/Planned_unit_development

financing tools (DDA's, LDFA's, etc...), the Brownfield program allows for the capture of BOTH local and school taxes. In order to capture school tax levies, Michigan Department of Environmental Quality (MDEQ) and/or Michigan Economic Growth Authority (MEGA) approval is required.⁵⁵

The Brownfield Redevelopment Authority is authorized to include environmentally contaminated parcels in the Brownfield Plan. The intent of the BRA is to level the playing field between the costs of developing sites with environmental contamination versus developing greenfields (agricultural land). This encourages redevelopment in cities rather than on agricultural land. When a project area is included in a Brownfield plan, taxes are captured to build up a fund to clean up the environmental problems. Brownfield funds are used to pay environmental expenses only; they do not pay for parking lots, landscaping, demolition or any non-environmental costs. It does not pay for environmental problems that were caused by the current property owner.

In most cases, the BRA does not pay the developer until it has captured taxes from the development, and if the development does not go through for whatever reason, the developer does not get paid. In order to get financial assistance, the developer has to prepare a Brownfield plan. The Brownfield plan is a financial plan that describes the cost of environmental work that the developer plans to do, the new value that the development will create, and how tax capture funds will be used to repay the environmental expenses.

The advantages of using Brownfield Authority Tax Increment Financing are:

- Tax increment financing through an Authority allows a community to pay for eligible environmental and in some instances public infrastructure expenditures.
- The community may create its own remediation fund through excess TIF capture to address long-term redevelopment issues.

LDFA

The Local Development Finance Authority is authorized to capture property taxes on industrial properties within an LDFA district. The captured taxes are used to build and

⁵⁵ http://www.michigan.gov/documents/MSHDA_Brownfield_Tax_Increment_Financing_166090_7.doc

maintain water, sewer, electric and roads, and to do economic development work in that district. The tool is designed to promote economic growth and job creation.

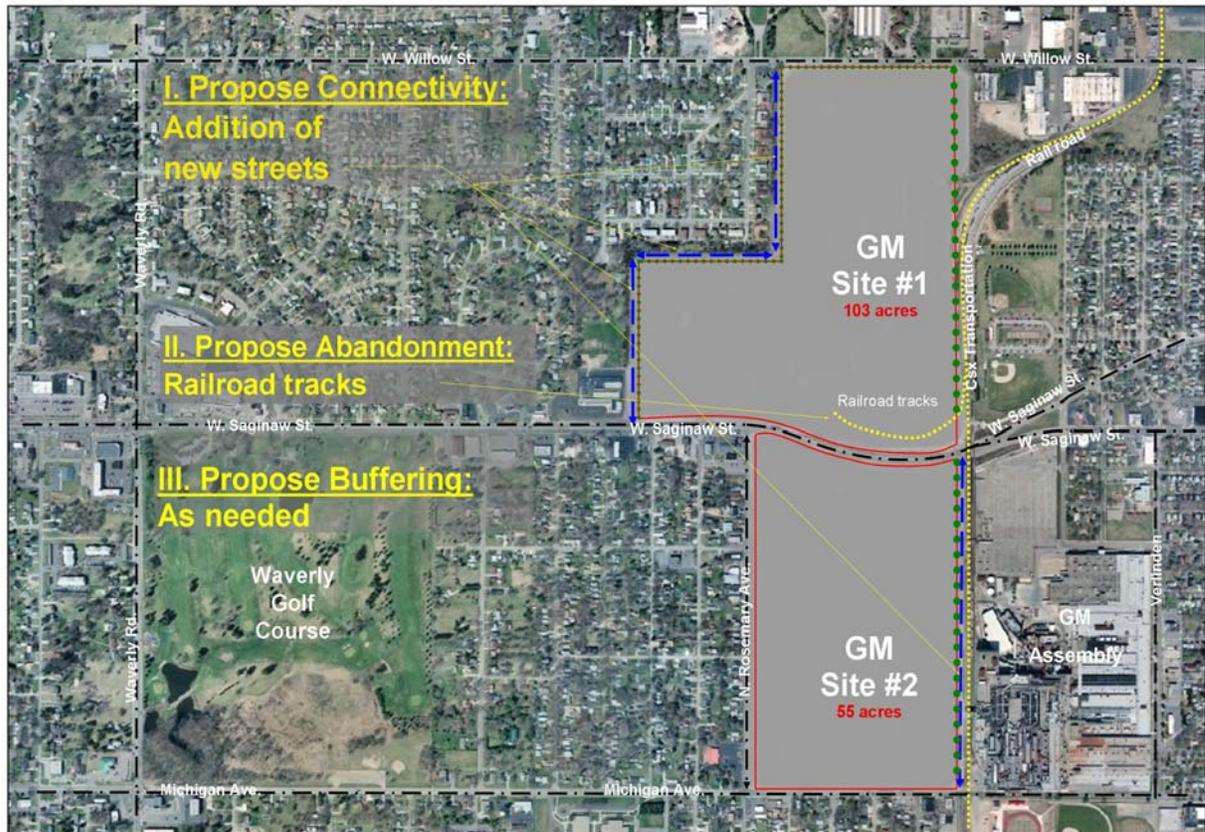
Communities across Michigan have utilized this tool to extend sewer and water lines, construct roads, service manufacturing, agriculture processing or high technology operations. The financing mechanism allows for the capture of the incremental growth of local property taxes over a period of time to fund public infrastructure improvements. By borrowing against the future tax increments, the LDFA is able to finance these public improvements, which can lead to new development opportunities within the community.

The justification for LDFA tax capture is that industrial activities bring dollars into the local economy by creating jobs, so using TIF funds to pay for business park infrastructure are a good investment that brings returns in other areas, such as retail, service industry and the housing market.

Redevelopment Options

Site Analysis

Figure 9 GM Assembly Plants Site Analysis



Source: Lansing Township Planning Department, WSU- Marian P. DeGraffenreid, Winter 2007

Figure 9 shows the 189 acres of land where the existing GM sites #1 and #2 are located in Lansing Township. The planning program for this project required basic research including a figure-ground analysis, plan preparation and design implementation. In order to maximize the reuse of these properties, our group believes that some infrastructure improvements must occur. First, to allow for traffic flow along the sites, we suggest creating new streets: one along the border between the former Plant #2 site (referred to on the map as Site#2) Verlinden site, and another along the buffer between the former Plant #6 site (referred to on the map as Site #1) and the adjacent neighborhood. This would also include ensuring connectivity with the existing street grid. Secondly, we would abandon, and later remove, the existing railroad track access point that connects to the former Plant #6 site. Finally, we propose buffering along the sites as needed, principally

along the two new streets, in order to ensure that residents can minimize noise pollution from the new developments. Additional research may be needed to make land use determinations such as: Architectural Survey, Topographical Land Survey, Environmental Survey, Construction and Route Survey and Civil Engineering.

Based on the information provided by the Lansing Township Planning Commission for the existing GM sites, the site and land use analysis leads to the following recommendations:

I. Propose Connectivity:

- a) Addition of new streets along the northwest perimeter of GM Site #1 and along the southeast perimeter of GM Site #2, connecting these streets to main thoroughfares: W. Saginaw, Michigan Avenue, and West Willow Street.
- b) A local street system to provide direct access to abutting land and for local traffic movement within the proposed site developments.⁵⁶

II. Abandonment:

- a) Removal of railroad tracks that currently occupy the southeast portion of GM Site #1

III. Buffering: (Specified for separation of land uses)

- a). Strip Buffer- used to separate residential from highways and other traffic arteries, around commercial developments, and parking lots. (Size would vary depending on whether the buffer is planted or not).⁵⁷
- b) Area Buffer- these may be used to protect one use from another adverse use such as residential from noise or fumes or nuisances.⁵⁸

IV. Infrastructure Improvements:

⁵⁶ "Urban Planning and Design Criteria", Second Edition, DeChiara, J. and Kopplemean, 1975

⁵⁷ "Urban Planning and Design Criteria", Second Edition, DeChiara, J. and Kopplemean, 1975

⁵⁸ "Urban Planning and Design Criteria", Second Edition, DeChiara, J. and Kopplemean, 1975

- a) Maintenance and improvements to existing damaged sidewalks located around sites #1 and #2
- b) Improve streets located around perimeter of sites #1 and #2 (i.e.- curbs, driveway aprons, street paving as needed).

8.2 Architectural Specifications

Development I and Development II

Design implementation should include Zoning and Land Use Specifications for Development I and Development II, and should correlate with Lansing Township Building Codes and Zoning Ordinance. Mixing of land uses is encouraged and shown in Figures 10 and 11 which entail commercial, business park and civic along Saginaw. A specification for building heights up to 35ft (or based on Township Building Codes and Zoning Ordinance) allows correlation with existing architecture in the area. A Single-Family Cluster neighborhood design layout with a rectangular block street grid system is shown in Appendix D. Given these examples, we do understand that the market and the developer's considerations may lead to other design solutions for the property.

Traffic and pedestrian connectivity is as shown in Figure 9, demonstrates clear and legible integration of connecting existing and proposed streets to main thoroughfares such as W. Willow, Saginaw and Michigan Street. Development I and Development II encourage implementation of clear and legible pedestrian routes linking them to and from the project site. The usage of clearly marked signage is recommended to direct both pedestrian and vehicular traffic flow. Walking paths and bike paths are encouraged where possible within the project site (with bike path grades to not exceed 5 to 6 percent for short distances 200 ft. to 400 ft. or 2 percent for long distances and can be integrated into open/green space as shown in Figure 13 or as determined by Lansing Township Building Codes and Zoning Ordinance).⁵⁹

Housing types and densities should correlate with basic principles for building single-family homes on large lot sizes as recommended 4 homes per acre (See Appendix D).

⁵⁹ "Architectural Graphic Standards, Eighth Edition, Ramsey, Charles and Harold Sleeper, Wiley, 1998".

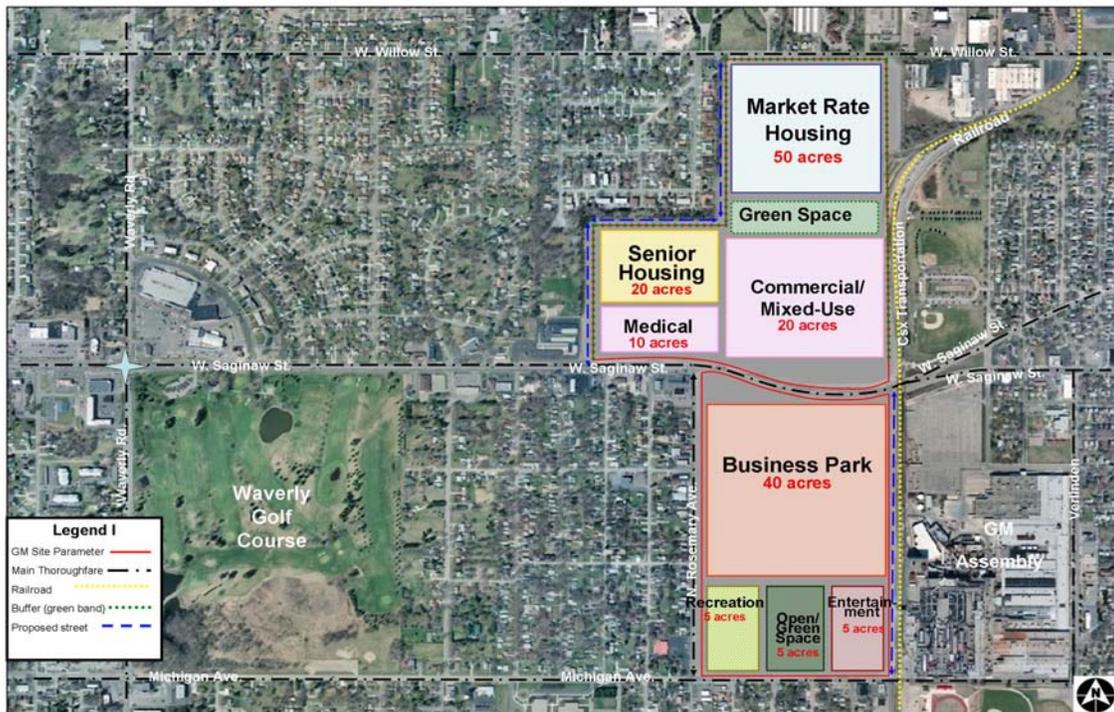
Development I and Development II both contain design elements catered to an urban setting which consist of cognitive, functional, a sense of place and cultural/ aesthetic features. The site plan/layout allows for low density housing which architectural characteristics should be incorporated into the aesthetic features of the proposed civic and commercial areas linking the entire project site together while establishing a new look and sense of place.

Development Proposals

After researching the existing conditions of GM Sites #1 and #2, site analysis and concept planning was used to determine acreage calculations and future land use with design specifics for proposed Development I (See Figure 10). A second proposal, Development II was designed as an alternative based on possible land use hazards and or determination of future loss of green space and outdoor recreation currently known as Waverly Hills Golf Course, located just minutes from GM sites #1 and #2 (See Figure 13). The second scenario assumes that the City of Lansing will sell the Waverly Hills Golf Course to a private developer, who redevelops the property in such as way either to eliminate or restrict public access to the green space of the property. This creates a potential net reduction in green space for the area, which is contentious.

It also assumes General Motors may run into trouble in its remediation process. Given the complexity involved in removing 3 underground storage tanks on the former Site #2, the task is deemed unfeasible. As a result, they have determined, similarly to their decision in the Clark, N.J. case, to proceed with the sale of the land, but to retain a stake in the property. A private owner is secured for the GM site. Given the limitations of other development options, they decide to build a golf course on the site. This allows the township to regain some green space, while seeing an economic use of the property, which yields some tax benefits.

Figure 10
Development 1



Elements	Development I
Market Rate Housing	(50 Acres) - Lot sizes no less than 80 x 120 feet, can exceed 80 x 140 . with or without attached garages. - Not more than four homes per acre x 50 acres. - Maximum of 200 homes on 50 acres - Market demand determining number and sizes of homes for next phase of development
Senior Housing	(20 Acres) - Two Story Maximum - Type of senior living homes based on senior population demand.
Entertainment	(5 Acres) - Movie theater
Commercial	(20 Acres) - Medical supply store, Home Health Service Supply - Retail to accommodate new and existing households.
Recreation	(5 Acres) Family Recreation Center
Open Space	(5 Acres) - Green Space, Porous pavement pathways
Business Park	(40 Acres) Office Space, 3 to 4 Story buildings, Sq. ft. varying per Tenant

Figure 11

Oblique Aerial View of Development I: Lansing Township, MI



Figure 12
West Oblique View of Proposed Development I



Development II

Figure 13



Elements	Development II
Market Rate Housing	(50 Acres) - Lot sizes no less than 80 x 120 feet, can exceed 80 x 140 with or without attached garages. - Not more than four homes per acre x 50 acres. - Maximum of 200 homes on 50 acres - Market demand determining number and sizes of homes for next phase of development
Senior Housing	(20 Acres) - Two Story Maximum - Type of senior living homes based on senior population demand.
Entertainment	(20 Acres) - Movie theater, Performing arts center
Commercial/Mixed Use	(10 Acres) Civic Space, Library, Retail, sq. ft. varying.
Recreation	(10 Acres) - Family Recreation Center, - Public space for community gatherings
Golf Course	Golf Course (45 Acres): - Mini-put range, - Driving Range, - Clubhouse, - Dining/Banquet Facility

Figure 14

Oblique Aerial View of Development II: Lansing Township, MI



Figure 15

Golf Course View of Proposed Development II



Conclusions and Recommendations

9.1 Phasing

Our group recognizes that the development proposals outlined above cannot be accomplished simultaneously. The market will be the guide towards the optimal phasing of the development of these properties. The phasing of the both of the development proposals is very similar. Given the nature of the current market, and its prospects for recovery, we suggest the following outline best suits the pace for the outlined developments.

The development of new housing should not begin until all of the lots have been rehabilitated and identified for development. Housing for Development I and Development II should be built by way of phasing. The first phase of housing to be constructed should consist of three to five single-family model homes. The style and size of the homes is to be determined by the developer (not to exceed more than 80 sf. x 140 sf. and not more than 200 homes on 50 acres of land located on the project site).

As the population settles on the residential lots, this would help spur the development of amenities, such as commercial and medical space. Finally, as the township's fiscal capacity improved, the feasibility of developing green space on the parcel could be achievable. On the former Plant #2 site, the development of the business park would occur as the regional and local market improves. Again, as the township's commercial tax base grew, it would allow them to pursue development of recreational facilities and green space along the southern portion of the site.

Development #2's phasing process would follow much of the Development #1 timeframe. The development begins on the former Plant #6 site, followed by the Plant #2. Again, market rate housing would be the first component to be redeveloped; this would be followed by senior housing. As population in the area increased, the development of commercial space amenities would become feasible. As township tax base increases, the development of entertainment space becomes possible. This would hopefully extend to the development of civic space on the former Plant #2 site. Finally, the golf course development would be achieved. Obviously, these projections for

phasing are not guaranteed to occur. Given the flexibility in integrating the elements of this project, however, we feel like it's a realistic assumption on the project's development.

9.2 Collaboration of Stakeholders

Our proposed recommendations to develop these two sites have taken into consideration the Verlinden plant located adjacent to Plant #6 and across the street from Plant #2. A site feasibility study was done for the General Motors Verlinden Avenue plant by MSU Planning Practicum students in the Spring of 2006. Any development that will occur on these three sites collectively should be complementary to each other and beneficial to adjacent neighborhoods. Regional factors indicate that all three sites are suited for several different redevelopment options and the most viable redevelopment would be a mix of uses.⁶⁰

We would highly encourage looking at redevelopment as a 4-way partnership between the Township, General Motors, The City of Lansing and the private market developers. The Township needs to be an active participant to provide infrastructure through a Local Development Financing Authority and should also work with the private market to provide basic infrastructure needs. GM's retained interest should be for environmental purposes as stated in their redevelopment process.

⁶⁰ MSU Study, Spring 2006

Appendices

Appendix A: List of Figures

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2. Lansing Township Population Graph
3. Regional Growth Trends
4. Favored Developments
5. Lansing Area Markets
6. Unemployment Rates, 2007
7. MDEQ Enviromapper
8. Tax Data – Lansing Township
9. GM Site Analysis
10. GM Development I Figure Ground with Elements
11. GM Development I Oblique Views
12. GM Development I West Oblique Views
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14. GM Development II Oblique Views
15. GM Development II Golf Course Views

Appendix B: List of Tables

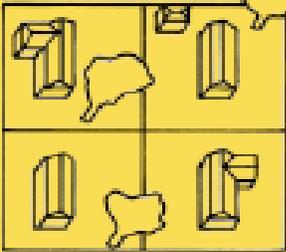
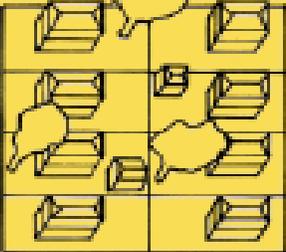
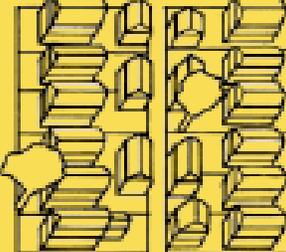
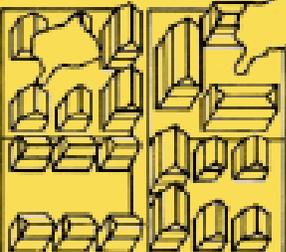
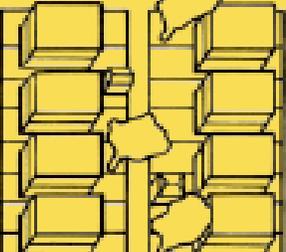
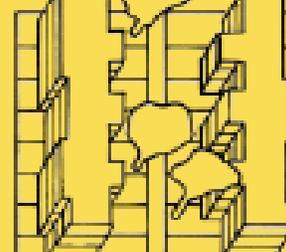
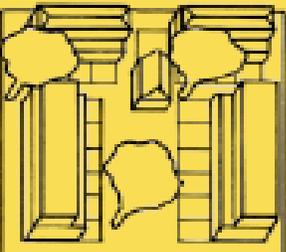
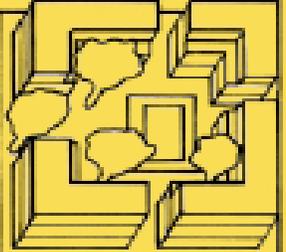
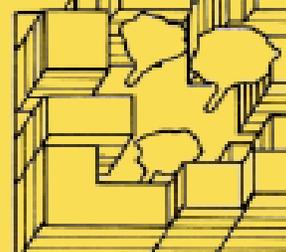
1. Table 1: Population Change 1990-2000, Census Tracts 34 & 35
2. Table 2: Total Population, 1990-2000
3. Table 3: Occupancy Tenure
4. Table 4: Year Structure Built
5. Table 5: Household Income Distribution
6. Table 6: Educational Attainment

Appendix C: Business Inventory

Businesses Inventory	Street
Adams Plating	Rosemary St
Classic Automotive	Rosemary St
Car Wash	Rosemary St
Westgate Tavern	Rosemary St
Renewal Technologies	Rosemary St
Lens Carpet Care & Consultants	Rosemary St
Capital Tool Grinding	Rosemary St
Jerry's Body Shop	Rosemary St.
Vette Customs Inc	Rosemary St
Auto Care	Rosemary St
Rosemary Apartments	Rosemary St
Morley's F Post	Rosemary St
UAW Local	Michigan Ave
Mike's Care	Michigan Ave
Bank	Saginaw and Stanley
Housing	Saginaw and Stanley
Verlinden Elementary School	Genesse St.
Metal Fabricating Plant	Willow St
Cemetery	Willow St
All Safe Storage	Willow St
DeLuca's Restaurant	Willow St
Alro Steel	Willow St
Gas Station	Willow St
Community Health	Saginaw
Holy Cross Church	Saginaw
Murray's Auto	Saginaw
Rite Aid	Saginaw
AAA Insurance Agency	Saginaw
Flower World	Saginaw
Cash Advance	Saginaw
Tuxedo Rentals	Saginaw
Peerless Furniture	Saginaw
National City Bank	Saginaw
Gas Station	Saginaw
Dentist Office	Saginaw

Appendix D: Housing Types and Densities for Development I and II

HOUSING TYPES AND DENSITIES

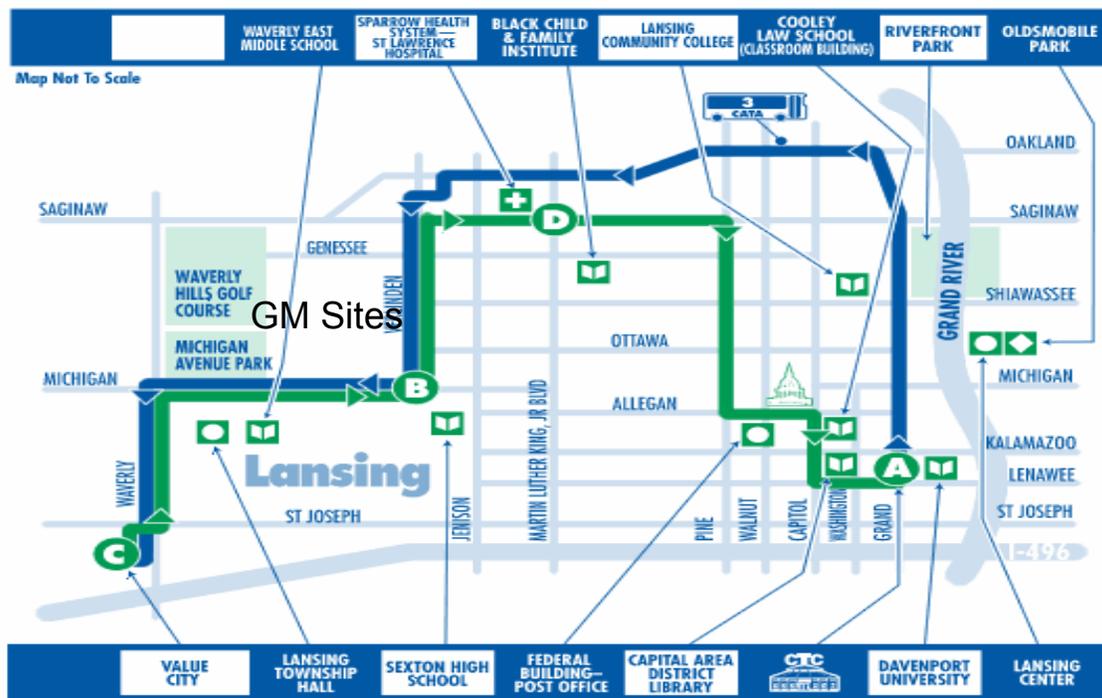
 <p>Suburban Ranch Houses 4-6 units/acre</p>	 <p>Single Family Detached 8-12 units/acre</p>	 <p>Small-Lot Single Family With Second Units 16-24 units/acre</p>
 <p>Cottage Courts 16-24 units/acre</p>	 <p>Duplexes/Fourplexes 16-32 units/acre</p>	 <p>Townhouses 12-48 units/acre</p>
 <p>Cohousing Block 20-50 units/acre</p>	 <p>Garden Apartments 20-60 units/acre</p>	 <p>Mid-Rise Apartments 40-200 units/acre</p>

Stephen M. Wheeler

20 / SMART INFILL

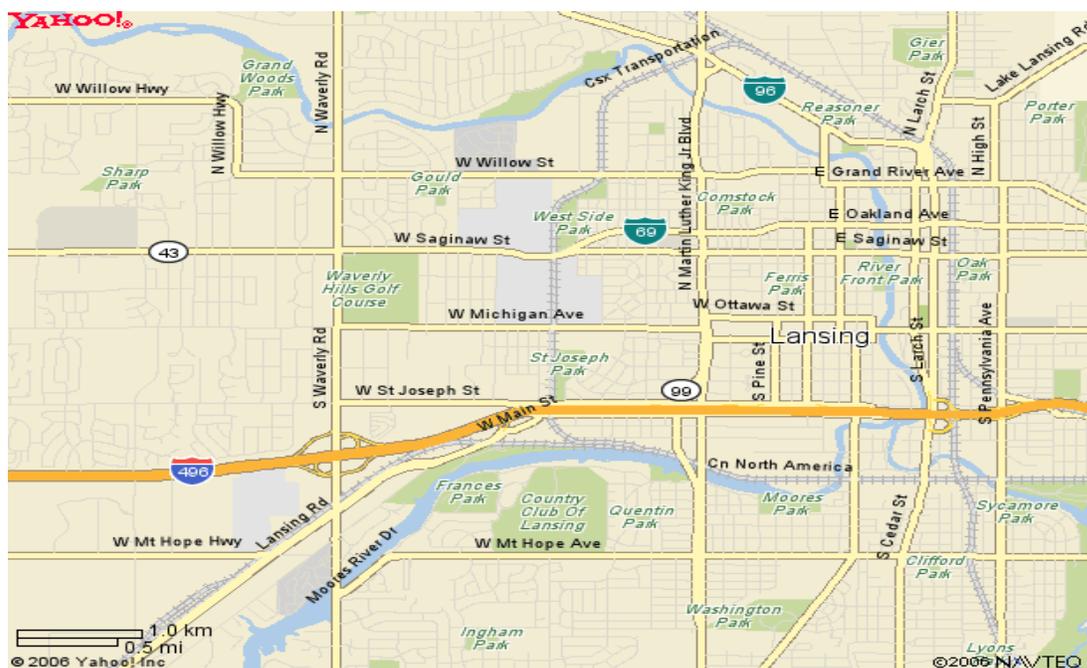
Appendix E: Maps

Map 1



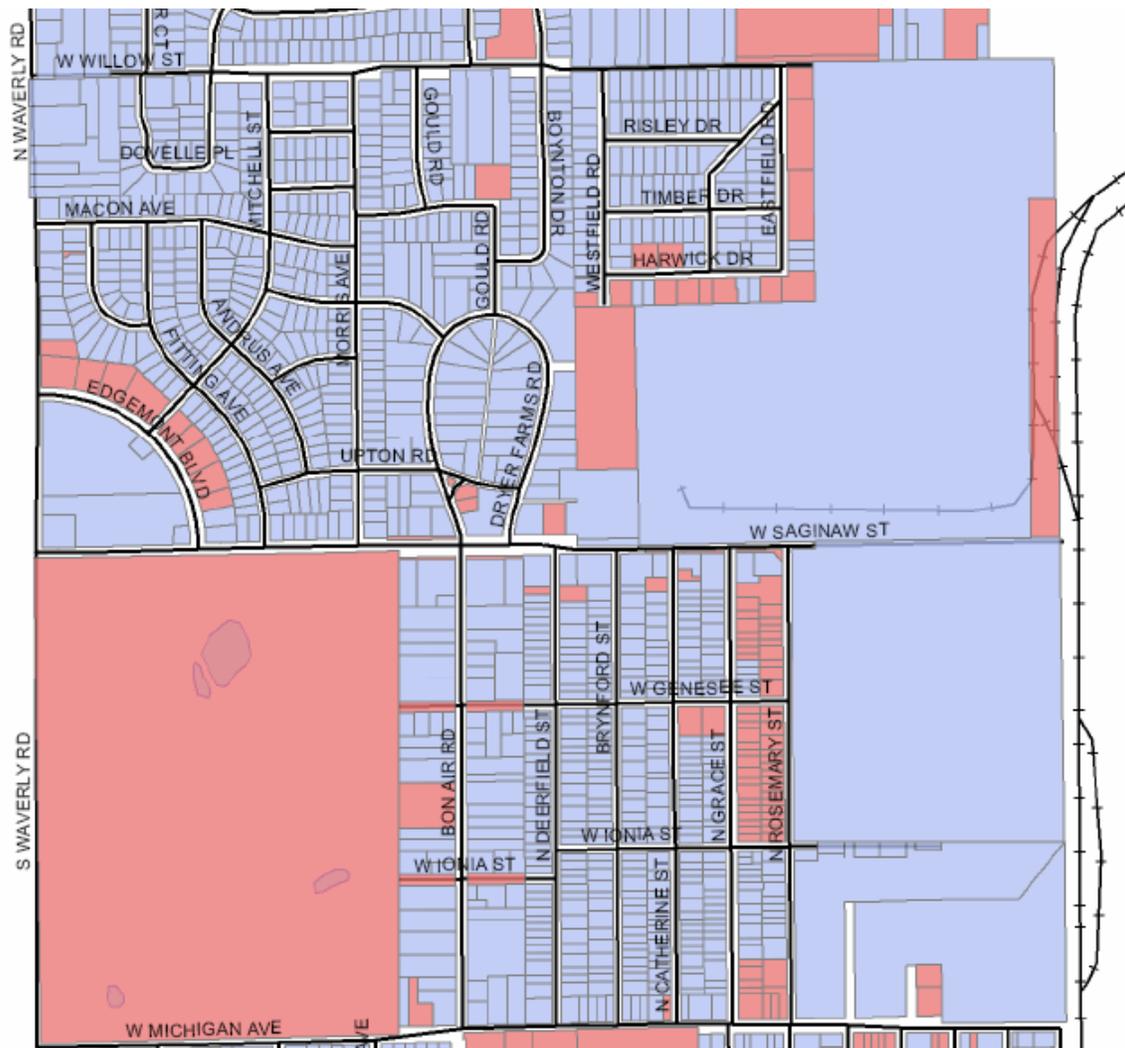
Source: Capital Area Transportation Authority

Map 2



Source: www.yahoo.com

Map 3 Non-Conforming Uses



Source: Lansing Township Planning Department

Legend

-  Conforming
-  Non-Conforming

Appendix F: Residential Survey

Dear Resident,

We are a group of four graduate students enrolled in the Master of Urban Planning Program at Wayne State University. As part of our course requirements, we are working with the Lansing Township Planning Commission and Brownfield Redevelopment Authority to study and recommend various redevelopment options for the two General Motors plants located in your community. Our goal is to make sure that our recommendations will be compatible with community goals, existing land uses, and market realities.

We believe that it is important for the residents to have input regarding redevelopments that will impact their community and livelihood. To help us with this task we would like to invite you to participate in a survey and be part of a focus group. With feedback from participants like you, we hope to obtain information that will help us make proposals to the Township and General Motors regarding the best re-use for these sites.

The attached brief survey will help give us an idea of your needs as a community before we meet with you. Please take a few minutes to complete the survey and return it in the attached self-addressed/stamped envelope before March 15, 2007.

The meeting will take place on March 29, 2007 at the Township City Hall (3209 W. Michigan Ave.) beginning at 7:30 pm. We thank you in advance and look forward to meeting you. We anticipate the meeting to last for about two hours and refreshments will be served.

Regards,

Jarrett Bezaire
Marian DeGraffenreid-Johnson
Angela Lazarean
Crystal Williamson

If you have any questions or concerns please contact:

Faculty Advisor - Gary Sands (313) 577-0543
Township staff - Steve Hayward (517) 827-1082

Enclosure: Survey

1. What is the length of your residency in Lansing Township?

- 1 Year
- 1-5 years
- 5-10 Years
- 10-20 Years
- 20+ Years

2. What do you think should be done with the two GM plants?

3. What type of developments would best serve your needs as a community? (Please select all that interest you)

- Housing
 - If so, what type of housing?

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- Business Park/Commercial
 - Civic/Community Center
 - Open Space/Park
 - Retail

4. What do you like about living in Lansing Township?

5. What do you dislike about living in Lansing Township?

6. Are you an owner or renter?

- Owner
- Renter

7. What is your family size?

8. What is your occupation?

9. How has the closure of the GM plants impacted your family? Please explain

- Little Impact
- Moderate Impact
- Substantial Impact

10. Do you plan on moving out of the Township in the next five years? If so, why?

Any additional comments:

Again, we want to thank you for your participation and feedback and look forward to seeing you at the meeting on Thursday March 29, 2007 @ 7:30 pm.