

# **MASTER LAND USE PLAN**

## **EMMETT CHARTER TOWNSHIP**

**Calhoun County, Michigan**

EARTH  
  
TECH

**As Adopted  
September, 1994**

# **MASTER LAND USE PLAN**

*for the*

## **Charter Township of Emmett Calhoun County, Michigan**

### **Emmett Charter Township Board**

James E. Demarest, Supervisor  
Gloria Maichele, Clerk  
Marjorie Garside, Treasurer  
George Gardner, Trustee  
James Talbot, Trustee  
Wayne P. Parks, Trustee  
Dick Doud, Trustee

### **Emmett Charter Township Planning Commission**

Andy Sims, Chairman  
Hugh White, Vice-Chairman  
Marjorie Garside  
Diane Burrows  
Glen Cary  
Ted Linderman  
Arthur Rice  
Joyce Foondle, Zoning Administrator

### **Planning Consultant**

#### **Earth Tech**

*Formerly WW Engineering & Science, Inc.*  
5555 Glenwood Hills Parkway SE  
Grand Rapids, MI 49512

## TABLE OF CONTENTS

Chapter		Page
	INTRODUCTION	i
I.	POPULATION AND ECONOMIC CHARACTERISTICS	I-1
II.	NATURAL FEATURES INVENTORY	II-1
III.	EXISTING LAND USE	III-1
IV.	COMMUNITY FACILITIES	IV-1
V.	PLANNING ANALYSIS	V-1
VI.	GOALS AND OBJECTIVES	VI-1
VII.	FUTURE LAND USE PLAN	VII-1

### Appendices

## LIST OF TABLES

Table		Page
1	Historical Population Change 1980-1990	I-2
2	1980/1990 Age Distribution	I-4
3	Housing Units by Type	I-5
4	Year Residential Structure Built	I-6
5	Per Capita Income: 1979-1989	I-7
6	Occupations of Residents: 1990	I-7
7	Residents Employed by Industry: 1990	I-8
8	Total Farmland Estimates	III-2
9	PA 116 Enrolled Lands	III-4
10	S.E.V. Per Land Use Classification	III-7
11	24-Hour Traffic Counts	IV-12
12	Population Projections	V-1
13	Population Projections by Sub-areas	V-2
14	Emmett Township 1990 Population	V-4
15	Residential Land Area Needs - Year 2013	V-5

## LIST OF MAPS

<b>Map</b>		<b>Page</b>
1	Environmental Limitations	II-3
2	Wetlands	II-5
3	Generalized Land Cover	II-6
4	Generalized Land Use	III-3
5	PA 116 Land	III-5
6	Road Classifications Map	IV-14
7	Population Projection Sub-Areas	V-3
8	Future Land Use	VII-14

## INTRODUCTION

The fundamental purpose of the Master Land Use Plan is to enable the Township Planning Commission to establish a future direction for the Township's physical development. The Township Planning Act, Public Act 168 of 1959, as amended, specifically gives Township Planning Commissions the authority to prepare and officially adopt such plans. Once prepared, officially adopted and maintained, this Plan will serve as an advisory guide for the physical conservation of certain areas and for the development of other areas into desirable living environment for present and future township residents.

Because of the constant change in our social and economic structure and activities, the Plan must be maintained through periodic review and revision so that it reflects contemporary trends while maintaining long range goals.

The Plan will be effective to the degree that it continues to:

- reflect needs and desires of the people;
- realistically interprets and reflects the conditions, trends and the dynamic economic and social pressures for change; and
- inspire concurrence and cooperation among the various public agencies, developers, and the citizens of the Township toward achieving common goals.

The Master Land Use Plan provides:

1. A comprehensive means of integrating proposals that look years ahead to meet future needs regarding general and major aspects of physical conservation and development throughout the Township;
2. An official, advisory policy statement for encouraging orderly and efficient use of the land for residences, businesses, industry, and agriculture, and for coordinating these uses of land with each other, with streets and highways, and with other necessary public facilities and services;
3. A logical basis for zoning, subdivision design, public improvement plans, and for facilitating and guiding the work of the Township Planning Commission and the Township Board as well as other public and private endeavors dealing with the physical conservation and development of the Township;
4. A means for private organizations and individuals to determine how they may relate their building and development projects and policies to official township planning policies; and
5. A means of relating the plans of Emmett Township to the plans of the City of Battle Creek, adjacent townships and to development of the metropolitan area as a whole.

The final element of the plan attempts to synthesize the recommended goals and needs of the Township and the analysis of existing conditions and trends into a land development strategy. The plan concludes with an implementation program.

The Emmett Township Master Land Use Plan is intended to be long-range and dynamic, based on the long-term goals and objectives looking up to 20 years forward. With that in mind, there is an important caveat to this planning process: the Master Land Use Plan is general in scope. It is not always intended to establish the precise boundaries of land use areas or the exact locations of individual future land uses. Its greater function is to serve as a decision making framework. Used correctly, the more detailed future decisions can be related to the broader community-wide perspective provided in the plan, and the decision makers will have confidence that their decisions have a clear and rational basis.

## CHAPTER I

### POPULATION AND ECONOMIC CHARACTERISTICS

This section presents a collection and analysis of basic factors relating to the Township's social and economic characteristics. By comparing the available data, it is possible to identify trends in population and housing, as well as the economic and labor force composition of the Township. Viewed in an historic perspective and in relation to surrounding communities and the region, these trends give valuable insights for potential future conditions and serve as a basis for projections of future population, housing and economic conditions.

#### Population Characteristics

Table 1 illustrates the population change during 1980-90 for Emmett Township, adjacent communities, and Calhoun County. From 1980 to 1990 the U.S. Census indicated that Emmett experienced a moderate decline in population at a rate similar to that of Calhoun County as a whole. In comparison, population growth in most adjacent communities increased slightly. However, due to local indicators such as building permits and tax records, Township officials contested the 1990 census figures and feel strongly that Emmett's population grew significantly in the 1980's. Table 1 presents an estimated 1990 population and also shows more recent population estimates which take into account the significant population increases brought about by recent housing developments.

The city of Battle Creek, located immediately west of Emmett Township, has gained 53,540 people since 1980. This is more than any other community listed in Table 1. However, this large increase in population includes the annexation of Battle Creek Township in the 1980's. Excluding the annexed portions, the City of Battle Creek actually decreased slightly in population between 1980 and 1990.

The population of Marshall Township, located immediately east, and Newton Township to the south, both have seen slight population increases in recent years. According to the 1990 Census data, Marshall Township increased by 3.5% between 1980 and 1990, a gain of 91 persons. Newton Township increased by 46 persons or 2.3%.

U.S. Census data suggests that Pennfield Township, to the north, decreased approximately the same rate as that which the Census Bureau reported for Emmett Township. The 1980 and 1990 Census Data indicates that Pennfield lost 340 people, a decrease of 3.9 %.

The population losses experienced within the County as a whole were the result of out migration caused by the economic downturn that occurred statewide and regionally during the 1980's. This downturn resulted in a significant loss of jobs locally and the relocation of many individual families.

**TABLE 1**  
**HISTORICAL POPULATION CHANGE**  
**1980 - 1990**  
**Emmett Township and Surrounding Communities**

<u>Community</u>	<u>1980</u>	<u>1990</u>	<u>% Change</u>	<u>Absolute Change</u>	<u>Estimated</u>		
					<u>1993</u>	<u>1995</u>	<u>2000</u>
Emmett Township	11,155	10,747 (11,800)*	-3.7% (5.8%)	-408 (645)	<del>12,000</del>	11,900	13,300
Pennfield Township	8,743	8,745	0.02%	2	8,750		
Marshall Township	2,564	2,655	3.5%	91	2,682		
Newton Township	1,979	2,025	2.3%	46	2,039		
Battle Creek, City of	35,724	53,540	49.9%	17,816	58,885		
Calhoun County	141,557	135,982	-3.9%	-5,575	134,309		

SPECIAL CENSUS

Source: 1980 and 1990 US Census Data

\* Estimated 1990 Emmett Township population adjusted upward from official US Census count to reflect local knowledge

Table 2 provides a comparison of the age distribution of persons living in Emmett Township and nearby communities for 1980 and 1990. In 1980, the median age of persons living in Emmett Township was 31.9 years, with 3,190 persons under the age of 18 years, and 1,160 persons 65 years of age and older. During the 1980's, the percentage of persons under 18 years declined to 24.7%, while the percentage above 65 increased to 12.3%. The median age now stands at 35.8 years, which is nearly 4 years older than the 1980 population. In comparison, the neighboring communities included in Table 2 generally indicate the same pattern as Emmett Township.



This pattern of an aging population is a reflection of the general trend within the United States and is a result of the aging baby boom generation. It is also a reflection of the fact that during the economic downturn of the 1980's, many young families moved out of the area in search of employment.

### **Housing Characteristics**

The 1990 Census reveals that there were 4,296 housing units in Emmett Township. This is a 10% increase over 1980 or an addition of 424 units. The vast majority of the new units have been multi family dwelling units, constructed at the Pine Knoll Apartment Complex.

During 1980-1990, Emmett Township experienced a slight decline in the number of persons per occupied dwelling unit, or average household size. Generally, in 1980 there was an average of 2.7 persons per dwelling unit. This is consistent with the national trend of middle and upper income families toward smaller family units and lower birth rates. The average household size for owner occupied dwellings and renter occupied dwellings stands at 2.58 and 2.27 persons respectively.

Table 3 gives a breakdown of housing types located within the Township in 1990. Approximately 80% of the dwelling units in the Township were single family homes. Three hundred and twenty four (324) units are contained within multi-family structures, and 508 units were mobile homes. Zero point six (0.6) percent or 25 of the housing units in the Township were seasonal. Of the 4,300 housing units, 743 units or approximately 17 percent were renter-occupied. In 1990, the vacancy rate for homeowner units and rental units stood at 0.5% and 9.8% respectively.

It is significant to note that with the development of the Pine Knoll Apartment Complex, it is estimated that since 1990, the percentage of multi-family units has increased from 7.6% to over 15% of the Township's housing stock. Based on this increase in the number of rental units, it is estimated that nearly 25% of all housing units are now renter-occupied.

**TABLE 2**

**1980 AND 1990 AGE DISTRIBUTION**

**Emmett Township and Selected Communities**

	<u>Under 18</u>				<u>65 &amp; over</u>				<u>Median Age</u>	
	<u>1980</u>	<u>%</u>	<u>1990</u>	<u>%</u>	<u>1980</u>	<u>%</u>	<u>1990</u>	<u>%</u>	<u>1980</u>	<u>1990</u>
Emmett Twp.	3,190	28.6	2,663	24.7	1,160	10.4	1,328	12.3	31.9	35.8
Marshall Twp.	810	31.6	663	25.0	208	8.1	288	10.8	31.7	37.5
Newton Twp.	552	27.9	489	24.1	210	10.6	260	12.8	34.9	38.4
Pennfield Twp.	2,457	28.1	2,156	25.7	848	9.7	1,084	12.9	32.4	36.4
City of Battle Creek	10,289	28.8	14,789	27.6	5,001	14.0	7,717	14.4	29.8	33.1
Calhoun County	40,910	28.9	36,193	26.6	15,996	11.3	18,160	13.4	30.4	33.9

-----  
 Source: 1980 and 1990 US Census Data

**TABLE 3**  
**HOUSING UNITS BY TYPE**  
**1990**  
**Emmett Township**

	<u>Number</u>	<u>Percentage</u>
1 - unit, detached	3,428	79.8%
1 - unit, attached	36	0.8%
2 to 4 units	103	2.4%
5 to 9 units	33	0.8%
10 or more units	188	4.4%
Mobile Home, trailer	<u>508</u>	<u>11.8%</u>
<b>Total</b>	<b>4,296</b>	<b>100%</b>

-----  
 Source: 1990 US Census Data.

Table 4 provides the age of the Township's housing stock and the number of housing units built during past decades. Unlike many suburban communities, the Township has not experienced a large increase in single family housing construction in the last ten years. It is important to note that in 1990 over 52 percent of the Township's existing housing stock was 30 years of age or older and 20 percent was 50 years of age or older. The age of homes is a significant factor since it tends to define the character and geographic extent of neighborhoods.

**TABLE 4**  
**YEAR RESIDENTIAL STRUCTURE BUILT**

**Township of Emmett**

<u>Year</u>	<u>Number of Units</u>	<u>Percentage of Total</u>
1980 to 1990	424	9.9%
1970 to 1979	897	20.9%
1960 to 1969	739	17.2%
1940 to 1959	1,381	32.1%
1939 or earlier	<u>856</u>	<u>19.9%</u>
<b>Total</b>	<b>4,297</b>	<b>100%</b>

-----  
Source: 1980 and 1990 US Census Data.

Note: 1990 data based on sampled data. Total does not match total provided in Table 3 due to rounding of samples by U.S. Census Bureau

**Economic Characteristics**

As shown in Table 5, the per capita income for Emmett Township in 1989 was \$13,424, which represented a 75.1 percent increase from 1979. The per capita income for the Township is slightly less that of most of the other neighboring townships in Calhoun County and Calhoun County as a whole. In addition, it is generally lower than the State's overall per capita income.

TABLE 5

PER CAPITA INCOME - 1979 - 1989

Emmett township and Selected Communities

<u>Community</u>	<u>1979</u>	<u>1989</u>	<u>% Change 1979 - 1989</u>
Emmett Township	\$7,667	\$13,424	75.1%
Marshall Township	8,381	16,505	96.9%
Newton Township	N/A	15,131	N/A
Pennfield Township	8,038	14,234	77.1%
City of Battle Creek	7,151	12,963	81.3%
Calhoun County	7,211	12,729	76.5%
State of Michigan	9,798	14,154	44.5%

-----  
Source: 1980 and 1990 US Census Data.

Table 6 lists the occupations of Township residents 16 years of age or older who were employed in 1990. Technicians, salespersons and administrative support made up the largest occupation groups, comprising over 27 percent or 1,321 people of a total of 4,842 workers. Skilled workers made up the second largest occupation group, with 1,185 workers or 24.5 percent of the total.

TABLE 6

OCCUPATIONS OF RESIDENTS

Township of Emmett - 1990

<u>Occupation</u>	<u>Number of Workers</u>	<u>Percentage of Total</u>
Managers & Professionals	1,027	21.2%
Technicians, Salespersons & Admin. Support	1,321	27.3%
Service, (households, Protective & Other)	757	15.6%
Farming, Forestry, Fishing & Mining	40	.8%
Skilled Workers	1,185	24.5%
Laborers and Operators	<u>512</u>	<u>10.6%</u>
<b>Total</b>	<b>4,842</b>	<b>100%</b>

-----  
Source: 1990 US Census Data.

The number and percent of Township residents employed in various industries in 1990 is presented in Table 7. Over one-third of the Township residents were employed in manufacturing industries, particularly the manufacturing of non-durable goods. Approximately 20 percent were employed in retail trades, and 19.5 percent were employed in professional and related service industries. In 1990, 270 workers or 5.6 percent of the labor force were self-employed.

Ninety-eight percent of Emmett Township workers used private vehicles to travel to work, one tenth of which car-pooled. The average travel time to work was 17.5 minutes. This indicates that the majority of employment is located outside of the Township but within the Battle Creek Metro area.

Based upon the above socio-economic factors, it can be stated that Emmett Township is a middle class bedroom community of predominately blue collar and service workers.

**TABLE 7**  
**RESIDENTS EMPLOYED BY INDUSTRY**

**Township of Emmett - 1990**

<u>Industry</u>	<u>Number of Workers</u>	<u>Percentage of Total</u>
Agriculture, Forestry, Fishing & Mining	39	0.8%
Construction	354	7.3%
Manufacturing:		
Non-durable goods	791	16.3%
Durable goods	575	11.9%
Transportation, Communication & Utilities	253	5.2%
Wholesale Trade	107	2.2%
Retail Trade	964	19.9%
Finance, Insurance & Real Estate	234	4.8%
Business, Personnel & Entertainment Services	319	6.6%
Professional & Related Services		
Health Services	468	9.7%
Education Services	288	5.9%
Other Professional Services	188	3.9%
Public Administration	<u>262</u>	<u>5.4%</u>
<b>Total</b>	<b>4,842</b>	<b>99.9%</b>

-----  
Source: 1990 US Census Data.

## CHAPTER II

### NATURAL FEATURES INVENTORY

The natural environment has had a significant influence on the development of land use patterns in Emmett Township, helping to shape what the community is today. Natural features, in general, can present both constraints to and inducements for various types of land uses. While failure to acknowledge environmental constraints can lead to costly problems, integration of natural features into an overall Master Land Use Plan can enhance the quality of life for residents and help preserve the character of the Township. At the same time, it is important to recognize that there are land areas which serve a vital function in terms of cultivation, drainage, and wildlife habitat which may never be suitable for urban development.

Following is a discussion of the natural features in Emmett Township as they pertain to broad planning considerations.

#### Regional Setting

Emmett Township covers an approximately 32 square mile land area in Calhoun County. It is bounded on the north by Pennfield Township, on the west and northwest by the City of Battle Creek, on the south by Newton Township, and to the east by Marshall Township, all in Calhoun County.

Interstate Expressway 94 (I-94) passes through the center of the Township in an east/west direction, providing the main access route to the community. Additionally, Business Loop 94 travels in a northwest/southeast direction through the Township and is through the City of Battle Creek. At the regional level, I-94 is a principal transportation corridor along with Interstate Expressway 69 (I-69) which is located approximately three miles east of the Township. I-94 and I-69 link the Kalamazoo and Battle Creek areas with Lansing, Detroit, Chicago and other communities further south in Michigan and in Indiana. Emmett Township lies approximately 22 miles east of downtown Kalamazoo and 45 miles southwest of Lansing.

## Climate

While not located in close proximity to Lake Michigan, the climate of Emmett Township is influenced by the Lake. Seasonal temperatures tend to be modified--making winters comparatively shorter and the growing season longer than areas further inland. According to the data reported by the weather station in Battle Creek, the average minimum daily temperature in January is 15°F, and the average maximum daily temperature in July is 83° F. The average annual rainfall and snowfall, 34 inches and 49 inches, respectively.

## Topography

The topography in Emmett Township varies from nearly level to somewhat hilly areas. The greatest variations in terrain are located in the central portion of the Township, and are associated with the Kalamazoo River. Only a few slopes exceed 12 percent and therefore topography generally does not pose a major constraint to development. The gentle roll of the topography in the southern portions of the Township are generally conducive for agricultural use.

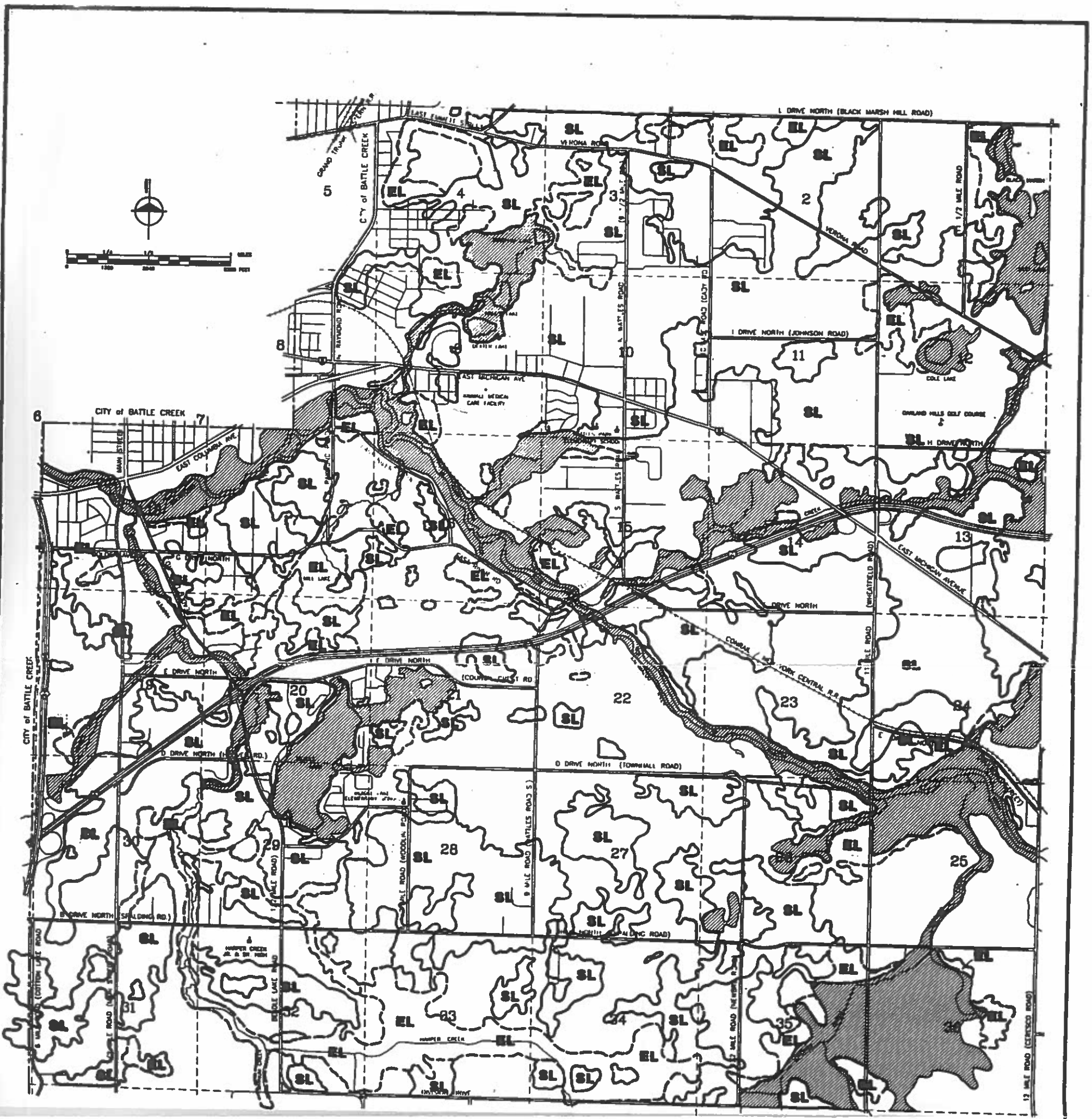
## Soils

The soils in Emmett Township range from well-drained to moderately well drained loams and clays to poorly drained organic soils. Because most residents still rely on septic fields for the disposal of wastewater, the location of various soil types is an important consideration for future land use and infrastructure plans for the Township.

The Environmental Limitations Map (Map 1) shows the location of soils within the Township which generally present severe limitations to both building construction and septic fields. Such soils are generally located in the southernmost portion of the Township along Harper Creek and around Mill Pond located in the northwest corner of the Township. The map was prepared based on information contained in the "Soils Survey of Calhoun County, Michigan" prepared by the U.S. Department of Agriculture. The map takes into consideration soil permeability, wetness, filter qualities, shrink-swell properties, and slope.




It is important to note that Map 1 is general in nature and is not intended as a substitute for on-site investigation or detailed engineering studies. The map is intended to generally define those areas in which intensive development without improved infrastructure can lead to environmental degradation and health hazards.





EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

ENVIRONMENTAL LIMITATIONS

-  EXTREME LIMITATIONS - AREAS EXHIBITING SEVERE LIMITATIONS ON DEVELOPMENT DUE TO PERIODIC FLOODING, PONDING, SLOPES IN EXCESS OF 15% AND/OR POOR LOAD BEARING PROPERTIES OF SOILS.
-  DESIGNATED 100 YEAR FLOOD PLAIN AREA
-  SEVERE LIMITATIONS - AREAS WITH SOILS UNSUITABLE FOR DEVELOPMENT WITHOUT PUBLIC SANITARY SEWERS OR OTHER ENGINEERED SEWAGE SYSTEMS.

MAP 1

ification is required to determine the precise location and boundaries of the mapped features

SOURCE: CALHOUN COUNTY SDR SURVEY



## Wetlands and Woodlands

Wetlands are an important natural feature in the Township and increasingly valued for their water retention and purification aspects as well as for wildlife habitat. Map 2 illustrates the most significant of the wetlands within the Township identified and mapped by the U. S. Department of the Interior. Although on-site analyses are needed to verify the specific boundaries of wetlands, most are subject to regulation by the Goemaere-Anderson Wetland Protection Act. Wetlands within the Township are fairly extensive and comprised of deciduous shrub swamps as well as lowland hardwood and lowland coniferous forest stands. The vast majority are associated with drainage courses lake peripheries and well defined flood plain areas of the Kalamazoo River and its tributaries, such as Harper and Crooked creeks

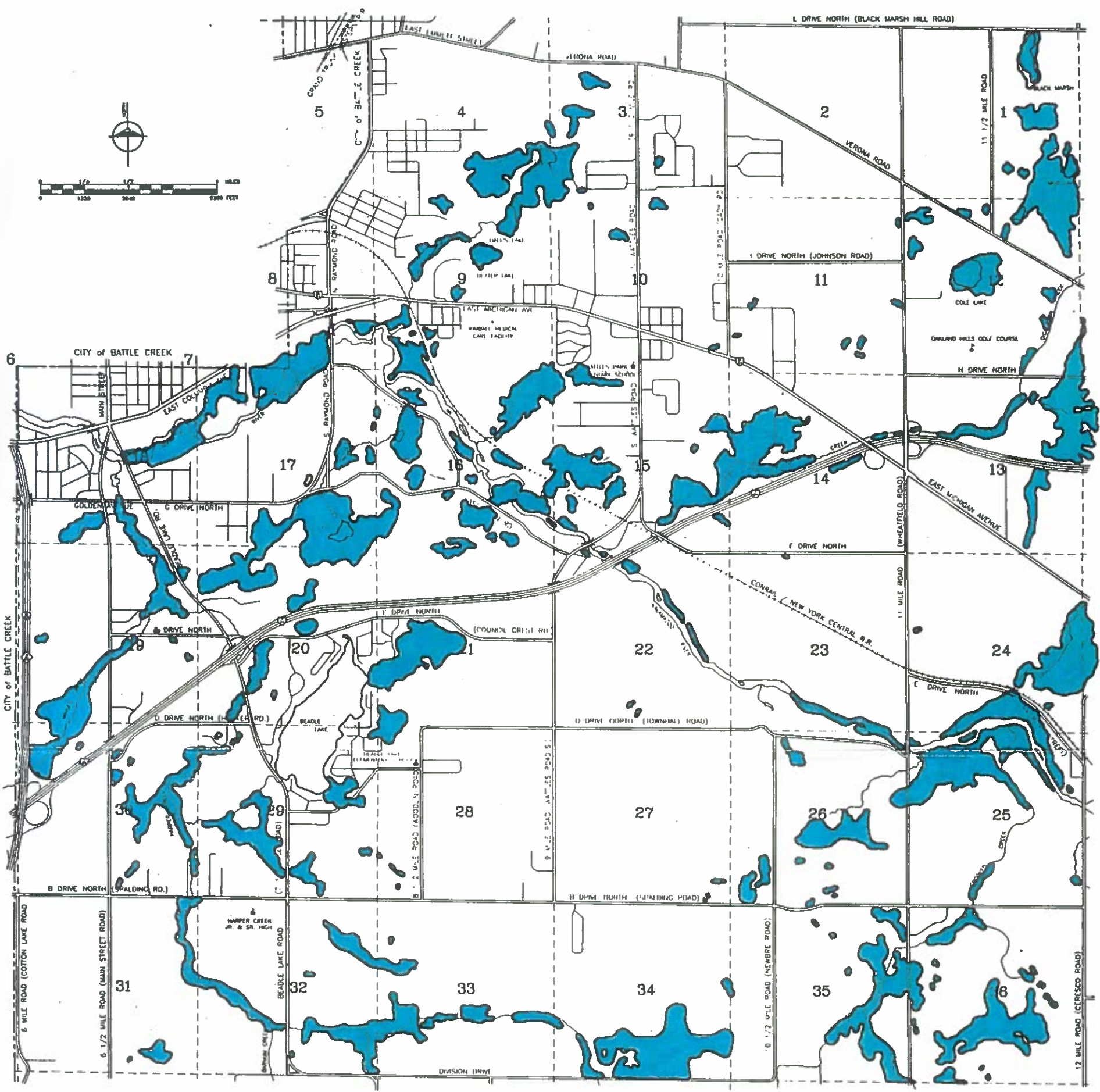
Local forested lands are scattered throughout the Township. Most are associated with low, poorly drained areas and drainage ways. Local forested lands include northern, central, and lowland hardwoods such as beech, maple and oak; aspen and birch associations, and pine stands. These wooded areas provide a variety of habitat settings for wildlife and are an important attribute of the local landscape. As development occurs within the Township, careful site designs which recognize wetlands and tree stands as important amenities can lead to enhanced projects and contribute to maintaining the overall rural character of the Township.

Map 3 illustrates the generalized land cover of the Township and shows the partial relationships of forested, agricultural and developed land areas within the area. It should be noted that many of the areas illustrated as developed, also contain considerable but intermediate areas of natural vegetation.

## Wildlife

The brush, woodlands, wetlands, native grasslands, and waterways of Emmett Township provide good habitat for wildlife.

Wildlife in Emmett Township includes white-tailed deer, cottontail rabbits, raccoons, squirrels, red and gray fox, muskrat mink, opossum, skunk, various song birds and waterfowl, ruffed grouse, and woodcocks. Great Blue Herons are a common sight in the Township, and Sandhill Cranes and Trumpeter Swans may also exist. The Township's lakes and river provide excellent fishing with various pan fish and bass being the most common species.



EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

WETLANDS MAP

 DESIGNATED WETLAND AREAS

MAP 2

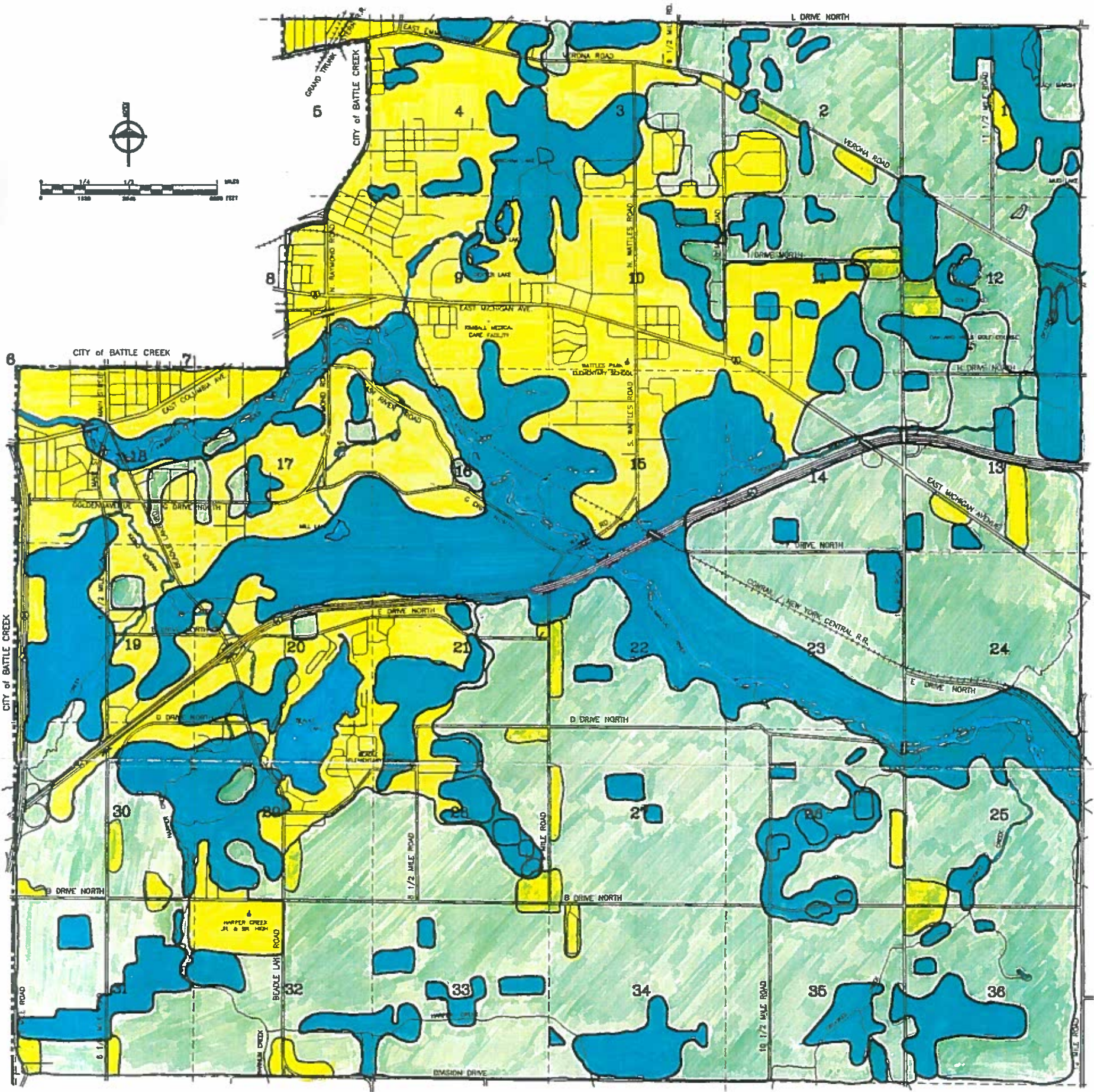
NOTE: Field verification is required to determine the precise location and boundaries of the mapped features

SOURCE: NATIONAL WETLANDS INVENTORY, U.S. DEPT. OF INTERIOR

  
WW Engineering & Science  
A Summit Company

2000 Standard 9000 Printing, 11 x 17.0 in. 271 • Grand Rapids, MI 49503-2011 • (616) 441-4200





**LEGEND**

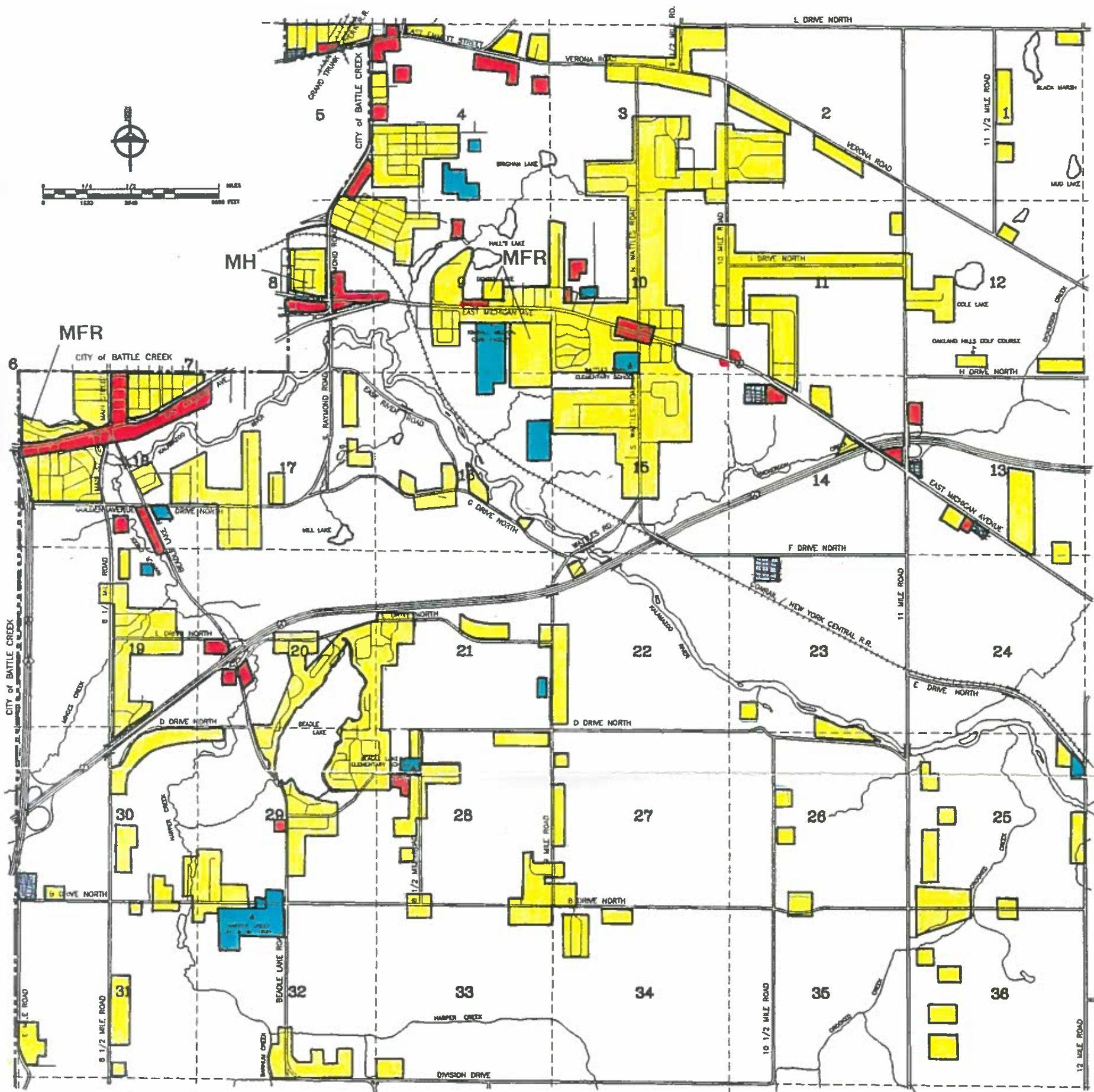
- LAKES & RIVERS
- FORESTED AREAS
- AGRICULTURAL & OPEN LAND AREAS (GENERAL)
- DEVELOPED

**EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN**

**GENERALIZED LAND COVER**

**MAP 3**





**LEGEND**

- INSTITUTIONAL
- COMMERCIAL
- INDUSTRIAL
- RESIDENTIAL

MFR - MULTI-FAMILY  
 MH - MANUFACTURED HOUSING

**EMMETT CHARTER TOWNSHIP  
 CALHOUN COUNTY, MICHIGAN**

**GENERALIZED EXISTING LAND USE**

**MAP 4**



## CHAPTER III

### EXISTING LAND USE

Map 4 illustrates the generalized existing land use in Emmett Township. This map is based on data collected from the Department of Natural Resources and illustrated on the Michigan Resources Information System (MIRIS) maps.

Emmett Township is still rural in character, with a majority of its land acreage devoted to agricultural and open space uses. Approximately one third of the Township now supports urban and suburban development, with residential development as the second most prevalent land use. While homes are scattered throughout the Township along county roads, major concentrations occur in the north central portion of the Township and along the fringes of the City of Battle Creek where public sewer service is available. Other significant concentrations are found around Beadle Lake.

Most commercial and industrial land uses are located along East Columbia Avenue and North Raymond Road. Commercial development is also prevalent along East Michigan Avenue. Notable commercial and industrial areas are also located adjacent to Emmett Township in the Southwest and Northwest, just inside the border of the City of Battle Creek.

Institutional uses such as churches, cemeteries, the Township Hall, fire stations, and schools are dispersed at various locations in the Township. During the past 20 years, the most significant change in land use has been the conversion of land to single-family residential use. The Township's proximity to employment centers such as Kelloggs and other urban amenities in Battle Creek as well as easy highway access has encouraged this growth.

The following is a description of the major land uses in Township:

#### **Agricultural Land Use**

This category of land use includes cropland, orchards, and pastures. It also includes woodland and low-lying wetlands which are not under cultivation. Approximately, 70 percent of the Township is devoted to farming or open space. The major agricultural crops produced in Emmett Township include corn, wheat, hay, and some dairy products.

Based on a review of MIRIS land/cover (1978) maps and comparisons of the 1979-1993 property line maps, approximately 636 acres of farmland was lost between 1979 and 1992. Table 8 illustrates the acre loss per section number. The vast majority has converted to residential use.

TABLE 8

EMMETT TOWNSHIP  
TOTAL FARMLAND ESTIMATES

<u>Section</u>	<u>1978 Acres</u>	<u>1993 Acres</u>	<u>Acre Loss</u>
1	361	361	--
2	512	512	--
3	136	94	42
4	0	0	--
8	0	0	--
9	0	0	--
10	46	46	--
11	214	214	--
12	240	204	37
13	281	281	--
14	365	365	--
15	67	67	--
16	20	20	--
17	81	81	--
18	19	19	--
19	24	24	--
20	10	0	10
21	239	81	158
22	372	333	39
23	515	415	100
24	538	538	--
25	259	359	--
26	513	513	--
27	608	605	3
28	362	164	198
29	113	101	12
30	150	150	--
31	429	429	--
32	501	491	10
33	517	517	--
34	504	477	27
35	564	564	--
36	<u>336</u>	<u>336</u>	<u>--</u>
<b>TOTAL</b>	<b>8998</b>	<b>8363</b>	<b>636</b>

Estimated farmland acres lost between 1979-1992: 636 acres or 7.0%

Source: Miris Land/Cover, 1978  
1993 Property Maps, Emmett Township

At the present time, there are approximately 2,900 acres of land in the Township that are enrolled in the P.A. 116 Farmland Open Space Preservation Program (Map 5 and Table 9). Under this program, property owners agree to relinquish development rights to their land for a minimum enrollment period of ten years in exchange for tax credits. Given the level of participation by area farmers, it appears that P.A. 116 has helped to keep large portions of the Township devoted to farming or open space.

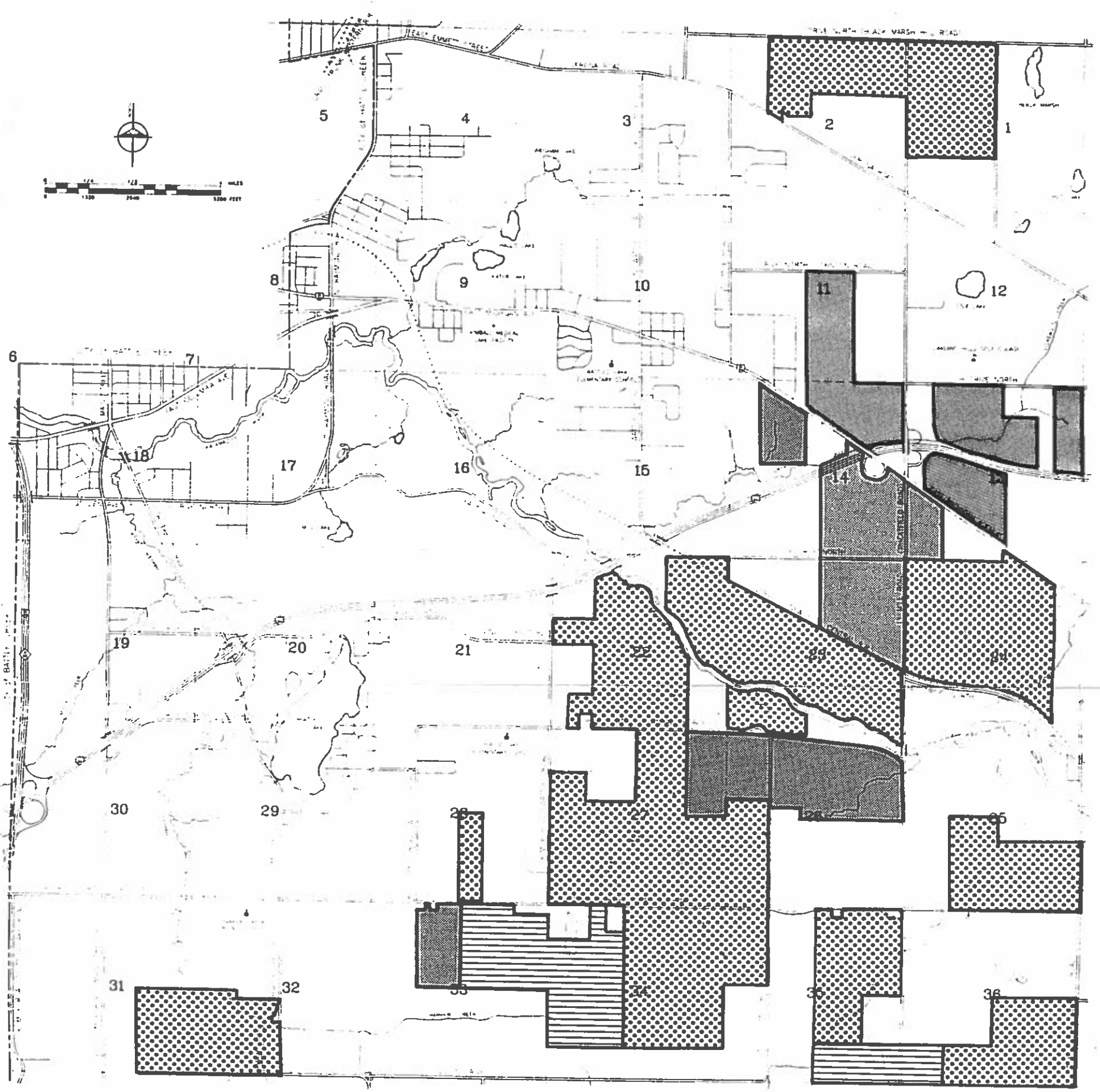
**TABLE 9**  
**PA 116 ENROLLED LANDS (IN ACRES)**

<u>Section</u>	<u>Total (in acres)</u> <u>Terminated</u>	<u>Total (in acres)</u> <u>Expired</u>	<u>Total (in acres)</u> <u>In-effect</u>
1	-	-	200
2	-	-	180
11	-	100	-
13	-	225	-
14	-	330	-
22	-	-	274
23	-	145	348
24	-	-	335
25	-	-	198
26	-	288	-
27	-	79	367
28	-	-	30
31	-	-	275
33	180	50	-
34	155	-	300
35	80	-	199
36	<u>40</u>	-	<u>200</u>
<b>TOTAL</b>	<b>455</b>	<b>1,217</b>	<b>2,906</b>

-----  
Source: Township PA 116 Files


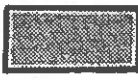

Many of the farming areas contain lands which are naturally endowed with the soil quality, growing season, and moisture content necessary to sustain high crop yields under average farming practices. Farming such land is feasible with minimal input of energy and economic resources, and results in the least damage to the environment. As illustrated by the map, there are large P.A. 116 agricultural lands in Emmett Township. Specifically, major concentrations exists in the Southeast quarter of the Township.





EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

**PA-116 AGREEMENTS**

-  - TERMINATED
-  - EXPIRED; SUBJECT TO RE-ENROLLMENT OR TERMINATION
-  - IN EFFECT

**PA-116 ENROLLED LANDS**

**MAP 5**



Source: Emmett Township Records (may not be all inclusive)

## **Residential Land Use**

This category includes detached single-family homes, multi-family dwelling units, mobile home parks, seasonal homes and condominiums which can be constructed as either multi-family units or single-family detached homes, both of which could be owner or renter occupied.

As previously stated, the highest concentrations of residential development occur in the fringe areas adjacent to the City of Battle Creek and in the north central portions of the Township. The style and types of homes in these areas vary primarily with age and location. Following are several basic observations regarding existing residential development within Emmett Township.

- Approximately 50% of the homes in Emmett Township were constructed prior to 1960, with the majority of these in the years 1940 to 1959. Many of these homes are located in the northwest, in neighborhoods such as Vernora Subdivision and Brownlee Park and the Golden Avenue/Columbia Avenue areas, as well as around Beadle Lake. Most of these developments are on very small lots, many of which are now considered non-conforming. Many of the homes are occupied by low and moderate income families and individuals.

The majority of these areas are served by public sewer and many have public water service.

- Since the late 1950's, the majority of single family residential growth has occurred in the north central portion of the Township in the Wattles Road/East Michigan Avenue area. Additional growth has also occurred south of I-94 in the Beadle Lake area.

The primary trend for recent single family development has been in this southwest area. Most of the demand is in areas presently unserved by utilities.

- Significant multi-family development now exists in the Township. Multi-family areas occur adjacent to Dexter Lake in the North 1/2 of Section 9 and adjacent to the medical care facility south of East Michigan Avenue, also in Section 9.
- There are approximately 500 mobile homes within the Township. The vast majority are situated in older relative obsolete mobile home parks.
- As a broad land use category, the value of residential properties as a percentage of the Township's total S.E.V. has remained relatively constant since 1985 at between 74% and 73%. By comparison, the percentage of S.E.V. attributed to industrial and agricultural properties has declined and the value of commercial properties increased.
- While considerable amounts of vacant property north of I-94 are zoned for residential use, the highest demand is in the southwest.

**TABLE 10**  
**EMMETT TOWNSHIP**  
**S.E.V. PER**  
**LAND USE CLASSIFICATION**

Land Use	1992	Percent Change 1992 & 1990	1990	Percent Change 1990-1985	1985
AG.	2.5% \$3,212,845	-9.0%	3.2% \$3,529,895	-28.7%	5.4% \$4,542,600
COM.	15.7% 20,333,306	39.9%	13.3% 14,535,106	37.8%	12.5% 10,548,953
IND.	1.8% 2,320,100	1.1%	2.1% 2,344,761	8.5%	2.6% 2,160,300
RES.	73.0% 94,655,225	17.4%	73.9% 80,655,840	28.9%	74.0% 62,560,735
DEV.	0.5% 661,850	-12.5%	0.7% 756,500	--	--
<b>TOTAL REAL</b>	<b>129,741,586</b>	<b>18.8%</b>	<b>109,165,729</b>	<b>29.2%</b>	<b>84,513,801</b>

-----  
Source: 1992, 1990 and 1985 Final  
Equalization Reports of Calhoun Co.

### Commercial Land Use

Commercial land use within the Township is most predominantly located along East Columbia Avenue, along Raymond Road, north of East Michigan Avenue and sporadically along East Michigan Avenue. Other areas of historical and emerging commercial activity are at the Beadle Lake Road/I-94 and East Michigan Avenue/I-94 interchanges. A major emerging area of commercial activity is along the B Drive/6 1/2 Mile Road in the extreme southwest corner of the Township. The newest area is a direct extension of the major regional commercial center that has developed in Battle Creek adjacent to the Lakeview Square Mall.

The majority of commercial development situated along Columbia Avenue and East Michigan Avenue can be termed strip commercial development. The total S.E.V. of commercial properties within the Township in 1992 stood at 20.3 million dollars or 15% of the Township total.

## **Industrial Land Use**

Industrial development within the Township is relatively limited. The most significant industrial areas include the Michigan Livestock Exchange off Emmett Street in Section 8 and the several other small industries located along Raymond Road and East Emmett Street. The largest single industry is the MSI/Battle Creek Stamping plant located in Section 23. Another industrial area is found in the Beadle Lake Road/Golden Avenue area. With a 1992 S.E.V. of 2.3 million dollars, industrial properties represent only about 2% of the Township's total S.E.V. There are presently about 600 acres of vacant, industrial zoned property in the Township. The majority of this is in the F Drive/11 Mile Road area.

## CHAPTER IV

### COMMUNITY FACILITIES

The Township's community facilities provide tangible services to its residents and enhance the local quality of life. As the Township's population grows, the demand for these services will also grow. This will translate into the need to expand existing community facilities; build more roads, sewers, and bridges; and hire additional public service personnel. As a basis for planning for these future needs, below is a description of existing community facilities within the Township.

#### Township Hall

The Emmett Township Hall is located at 620 Cliff St. The building, constructed in the early 1940's, was added onto during the 1950's and presently consists of the main Administration Building and the Public Services Building. Township personnel located in the main Administration Building include the Supervisor, Clerk, Treasurer and Public Safety. The public services building houses the Departments of Water and Sewer, Building and Planning, Assessing, and Building Inspections. The Township Hall is currently at capacity in meeting administrative needs however, no serious plans to construct a new facility are now underway. There is presently no meeting room capability at the Township Office complex. As a result most public meetings are held at a local elementary school building. It is expected that the Township will ultimately need to develop a new complex.

#### Police and Fire Protection

The Township provides police and fire services through the Public Safety Department. The Department employs a full-time Director and Lieutenant along with four full-time Public Safety Officers (PSO's) and eight part-time officers. Of the eight part-time officers, four are cross-trained for police and fire, and four are police trained only. In addition, approximately seventeen volunteers assist the department as needed.

The nearest Michigan State Police Post is located relatively nearby at 610 W. Columbia Drive in the City of Battle Creek. While the State Police Post does not patrol the Township, they will respond to emergencies. The Township participates in a mutual aid agreement with all other communities in Calhoun County that provides an exchange of public safety equipment and personnel in time of need.

The Township maintains the Public Safety Facility at the Main Administration Building. It houses one quint truck, one pumper truck, one rescue rig, two grass rigs, and four patrol vehicles.

## **Libraries**

There are no public libraries located in Emmett Township. However, Emmett Township presently has a dedicated millage that supports the Willard Public Library in the City of Battle Creek. For a fee Emmett Township residents are also able to utilize the Marshall Public Library in Marshall.

## **Cemeteries**

The Township operates and maintains the Newbre Cemetery and the Ceresco Cemetery. The Newbre Cemetery is located at the B Drive North and 9 Mile Road intersection and is approximately three acres in size. The Ceresco Cemetery is located on 12 Mile Road and is about five acres in size. Also within the Township is the Sandstone Cemetery (no longer accepting burials) which is maintained by the Township and the Floral Lawn Cemetery which is privately owned and operated.

The Newbre and Ceresco cemeteries total about eight acres in size, and appear to have adequate capacities to meet the immediate needs.

## **Schools**

Emmett Township is served almost entirely by the Harper Creek Community Schools, which is a part of the Calhoun County Intermediate School District. Facilities include the High School, located on B Drive North, the Junior High School, which is adjacent to the High School, Beadle Lake Elementary on C Drive North, and Wattles Park Elementary on South Wattles Road.

Enrollment for the 1992-1993 school year totals 2631 students in grades K-12.

Small portions of the Township in the Brownlee Park area and north of Columbia Avenue are in the Battle Creek School District.

## **Road System**

The Road Classification map illustrates the layout of the road system within Emmett Township. All public surface roads within the Township are under the jurisdiction of the Calhoun County Road Commission. Roads designated as primary roads by the County include the following:

- 6-1/2 Mile Road (Main Street)
- 7-1/2 Mile Road (Beadle Lake Road)
- South Raymond Road
- North Raymond Road
- South Wattles Road
- North Wattles Road
- 11 Mile Road (Wheatfield Road)
- 12 Mile Road (Ceresco Road)

- Verona Road
- B Drive North (Spalding Road)
- G Drive North (Golden Avenue)
- East Michigan Avenue, East of Wheatfield Road
- East Columbia Avenue, between North Raymond and Michigan Avenue

Interstate highway, I-94, and state trunkline, East Michigan Avenue (west of I-94), run east-west through the Township. The remaining roads are designated as county local roads.

Map 6 and Table 11 provide estimated 24-hour directional traffic counts for May and June of 1992, as taken at select locations by the Calhoun County Road Commission. East Columbia Avenue, a four lane arterial, experiences the largest traffic volumes. Most traffic counts on the two lane roadways within the Township fall below the standard two way stop sign capacity of two-lane paved roads, which is 8,000 to 10,000 vehicles per 24 hours. Notable two lane roadway segments at or approaching capacity include Beadle Lake Road near I-94, B Drive North, west of 6 1/2 mile Road and Emmett Street, west of North Raymond Road. East Michigan Avenue, which is part of the state highway system (Business Loop I-94) is also experiencing capacity problems. Part of East Michigan Avenue is scheduled for widening in the near future. Generally speaking, the northwest portion of the Township, nearest the City of Battle Creek, witnesses the highest traffic volumes as a direct reflection of the local development pattern.

Several local roads could exceed the 8,000 vehicles by the year 2020. Depending on the type of development that occurs along these corridors and the traffic generated by the development, road widening or turning lanes may be needed. The number of additional lane segments can be reduced by managing the number and location of driveways. Also, by requiring adequate building setbacks now, the cost of road widening can be reduced in the future.

For land use planning purposes, it is useful to recognize that the various roads within Emmett Township are intended to have different functions. An understanding of these functions can lead to decisions as to the desirable use of each road segment, road right-of-way, widths, building setbacks, and adjoining land use. Below is a brief description of three road types which are important to consider in Emmett Township.

*Limited Access Highway* - These facilities are devoted entirely to the movement of large volumes of traffic at high speeds over relatively long distances. These roads provide little or no direct access to individual properties adjoining the roads. Interstate highway, I-94, is an example of such a road. Because the Township has direct access to this regional transportation route, local residents are within a reasonable commute to jobs in Kalamazoo and elsewhere. Access to I-94 also makes Emmett a potentially attractive location for industrial and commercial growth in the future.

TABLE 11

EMMETT TOWNSHIP  
 24-HOUR TRAFFIC DIRECTIONAL COUNTS AT  
 SELECTED LOCATIONS

<u>Location</u>	<u>Date</u>	<u>One Way 24-Hour Traffic Volume</u>
(SB) N. Raymond - North of Michigan Avenue	6/92	1,574
(NB) N. Raymond - North of Michigan Avenue	6/92	5,548
(NB) 11 Mile - Between D Drive and E Drive	6/92	778
(SB) 11 Mile - Between D Drive and E Drive	6/92	756
(WB) B Drive North - East of 6 Mile	5/92	3,407
(EB) B Drive North - East of 6 Mile	5/92	3,566
(NB) Beadle Lake Road - South of B Drive North	5/92	2,944
(SB) Beadle Lake Road - South of B Drive North	5/92	2,993
(NB) Beadle Lake Road - South of I-94	5/92	4,170
(SB) Beadle Lake Road - South of I-94	5/92	3,443
(WB) B Drive North - East of Beadle Lake Road	5/92	1,871
(EB) B-Drive - North - East of Beadle Lake Road	5/92	1,778
(NB) 11 Mile Road - North of Verona Road	5/92	681
(SB) 11 Mile Road - North of Verona Road	5/92	715
(NB) 9 Mile Road - South of E Drive North	6/92	875
(SB) 9 Mile Road - South of E Drive North	6/92	983
(NB) 11 Mile Road - North of I-94	6/92	1,798
(SB) 11 Mile Road - North of I-94	6/92	1,879
(SB) 9 Mile Road - North of B Drive North	6/92	644
(NB) 9 Mile Road - North of B Drive North	6/92	893
(SB) Beadle Lake Road - North of E Drive North	6/92	4,513
(NB) Beadle Lake Road - North of E Drive North	6/92	5,084
(WB) Golden Avenue - East of Beadle Lake Road	6/92	1,333
(EB) Golden Avenue - East of Beadle Lake Road	6/92	1,172
(SB) Wattles Avenue North - North of I-94	6/92	1,702
(NB) Wattles Avenue North - North of I-94	6/92	1,737
(WB) River Road - West of Wattles	6/92	422
(EB) River Road - West of Wattles	6/92	548
(WB) Verona Road - Northwest of 11 Mile Road	6/92	2,839
(EB) Verona Road - Northwest of 11 Mile Road	6/92	3,030
(SB) Raymond Road - South of Emmett Street	6/92	5,460
(NB) Raymond Road - South of Emmett Street	6/92	1,688
(NB) Wattles Avenue South - North of F Drive North	6/92	1,109
(SB) Wattles Avenue South - North of F Drive North	6/92	1,134
(WB) E Drive North - East of Beadle Lake Road	6/92	1,245



TABLE 11 cont.

EMMETT TOWNSHIP  
24-HOUR TRAFFIC COUNTS AT  
SELECTED LOCATIONS

<u>Location</u>	<u>Date</u>	<u>One-Way 24-Hour Traffic Volume</u>
(EB) E Drive North - East of Beadle Lake Road	6/92	2,506
(SB) Main Street - Near Kalamazoo River Bridge	6/92	1,085
(NB) Main Street - Near Kalamazoo River Bridge	6/92	1,003
(EB) Columbia Avenue East - Southwest of Michigan Ave.	6/92	7,078
(WB) Columbia Avenue East - Southwest of Michigan Ave.	6/92	3,657
(EB) Verona Road - Southeast of 11 Mile Road	6/92	1,473
(WB) Verona Road - Southeast of 11 Mile Road	6/92	1,572

- (NB) - North Bound
- (SB) - South Bound
- (EB) - East Bound
- (WB) - West Bound

Note: For estimation purposes, one-way volumes can be doubled to achieve approximate 24 hour 2-way counts.

Source: Calhoun County Road Commission, 1992

*Major Arterial Roads (County Primaries)* - The major function of these roads is to move a fair volume of traffic within and through a community. A secondary function is to provide access to adjacent properties. In Emmet Township, the major arterials are the county primary roads, such as East Michigan Avenue, B Drive North, and 6-1/2 Mile Road. Many residents use these roads when traveling to and from the Township.

*Minor Arterial Roads (County Locals)* - These roads provide for internal traffic movement within a community and connect these local land areas with the major arterial road system. Providing direct access to adjacent properties is an important function of these roads. The majority of the roads in Emmett fall under this classification. Examples of such roads include Division Drive, D-Drive North, and F-Drive North. Over time, as development in the Township increases, traffic along minor arterials will also increase. Some minor arterial roads may eventually become major arterial roads.

### Water System

Currently, Emmett Township residents and businesses receive their water either through individual private wells or from public water service extended from the City of Battle Creek system. Over the past decade, residential and commercial growth has been experienced which has increased the need and desire for municipal water service in the Township considerably.

The existing water supply from the City of Battle Creek is obtained from the Verona well field located in the low pressure service district to the east across the Battle Creek River from Bailey Park to the north of Emmett Township. There are currently 21 of 39 wells in operation. According to the City, the Michigan Department of Public Health has rated the aquifer capacity of the Verona well field to be 42 MGD and the firm pumping capacity of the well field to be 24 MGD. The water quality for the City system is generally good. The City currently adds a phosphate product to the water for sequestering the iron. Chlorine and fluoride are also added to the water.

In 1993, the City produced 11.6 million gallons of water to its customers. Approximately 93% of the water use is within the City of Battle Creek. The remaining 7% is used by the other customers which include the City of Springfield, Pennfield, Bedford and Emmett Townships. According to records provided by the City of Battle Creek, the water used by Emmett Township between December 1992 and November 1993 was approximately 78,506,000 gallons or an average of approximately 215,000 gallons per day. This equates to approximately 1.85% of the total water pumped by the City. Of that amount, approximately 70% was consumed by the Township's 12 largest customers.

With a rated aquifer yield of 42 MGD, there appears to be sufficient capacity in the City aquifer to meet the projected demands of the area for a 20 year period. The future maximum day demands are projected to reach 33 MGD which exceeds the current pumping capacity of 24 MGD by 9 MGD. It will be necessary at some point, to install additional production wells to meet this demand. It is concluded that the existing and future water supply needs of Emmett Township can be adequately satisfied by the City of Battle Creek water system.

Figure 14 in the Appendix illustrates the existing and planned water distribution system serving the Township as developed as part of the Township's Water System Master Plan Study.

### Wastewater System

Portions of Emmett Township are currently provided wastewater treatment service by connection to the City of Battle Creek. The remainder of the Township residences and businesses use on-site septic systems for wastewater treatment.

The City of Battle Creek provides wastewater service to the City of Springfield and the Townships of Emmett, Bedford and Pennfield. Based on an intergovernmental agreement signed by all the communities, the capacity within the City's system will be distributed on a first come, first serve basis, including capacity for the City itself.

The City wastewater treatment plant currently treats an average of 14,000,000 gallons of wastewater per day, with maximum day flows reaching 20,000,000 gallons. The average day design capacity of the plant is 27,000,000 gallons. Treated wastewater from the plant is discharged to the Kalamazoo River.

The Township is connected to the City of Battle Creek sewer system at five separate points. All of the flow from these points eventually ends up at a common point at the intersection of Kendall St. and the Kalamazoo River where it is then transported to the treatment plant through the City's 54 inch trunk sewer south of the river.

In a wastewater system, the two primary components that must be considered when evaluating the ability of the system to provide service to its existing and future customers is the treatment plant and collection system capacities. It is estimated that the plant has enough capacity to serve additional flow from approximately 121,000 population equivalents. The City should have no problem with handling the additional flows from Emmett Township. The Appendix contains maps illustrating the existing and proposed sanitary sewer collection system.

## CHAPTER V

### PLANNING ANALYSIS

By looking at population projections, the existing land use mix, and basic planning assumptions, guidelines for determining the various land use needs can be determined. Through this process, the Township Board and the Planning Commission will know if it is reasonable to plan for the development of several thousand acres or a few hundred acres for a specific type of land use.

#### POPULATION PROJECTIONS

Projections of future population growth provide a bridge between the present and the future in the comprehensive planning process. These projections provide a general basis for determining future land needs and needs for future public capital improvements and community services. Population projections are however, only refined estimates of what the future might hold, for it is clearly impossible to accurately forecast the end result of untold individual and public decisions. Population projections must be based upon background information and good judgment. These projections are then utilized as a "yardstick" by which planning decisions are made.

There are numerous techniques for projecting future population growth. However, because of the unreliability of 1990 census data for Emmett, it is difficult to extrapolate an accurate positive growth trend. For the purpose of this plan, it has therefore been assumed that for each five year increment there will be an increase in the Township population of between 300 and 600 individuals. The high range (600) is based upon the population increases that have been witnessed by local officials in recent years based on housing construction, and low range (300) is based upon the increases that occurred between 1970 and 1980 and the approximate increases witnessed by the nearby Townships of Newton and Marshall during the 1980's. *ths*

The results of the two estimates are shown in the following Table.

TABLE 12

#### POPULATION PROJECTIONS

	<u>1993</u>	<u>1998</u>	<u>2003</u>	<u>2013</u>
1.	12,000	12,810	13,410	14,610
2.	12,000	12,300	12,600	13,200

1. Rapid growth rate projection based on observed 1990 to 1993 growth.
2. Historical growth trends adjusted upward to recent local adjustments of 1980 to 1990 census figures.

A geographic breakdown of the overall population projections was also made for the Township to reflect a total "Build Out" scenario under the zoning which existed in 1994 (Table 13). This was done by drainage sub area to assist in the process of water and sewer utility planning. The projections utilized the rapid growth rate projections described on the previous page. The sub-areas referenced are illustrated on Map 7.

The significance of the "build out" projection lies not in the year in which the population is expected to occur but that the Township can hypothetically expect to support approximately 50,000 residents. Based upon the land use controls presently in place, these figures can be used as a bench mark for future planning. Adjustments made in the amount of land allocated to a particular density of residential land use can therefore have a profound impact on the population that could be accommodated within the Township.

Table 14 presents the 1990 estimated sub-area dwelling unit counts and estimated sub-area population estimates. These figures are derived from 1990 census block information, overlaid with current zoning. These estimates were used in making the builders projections

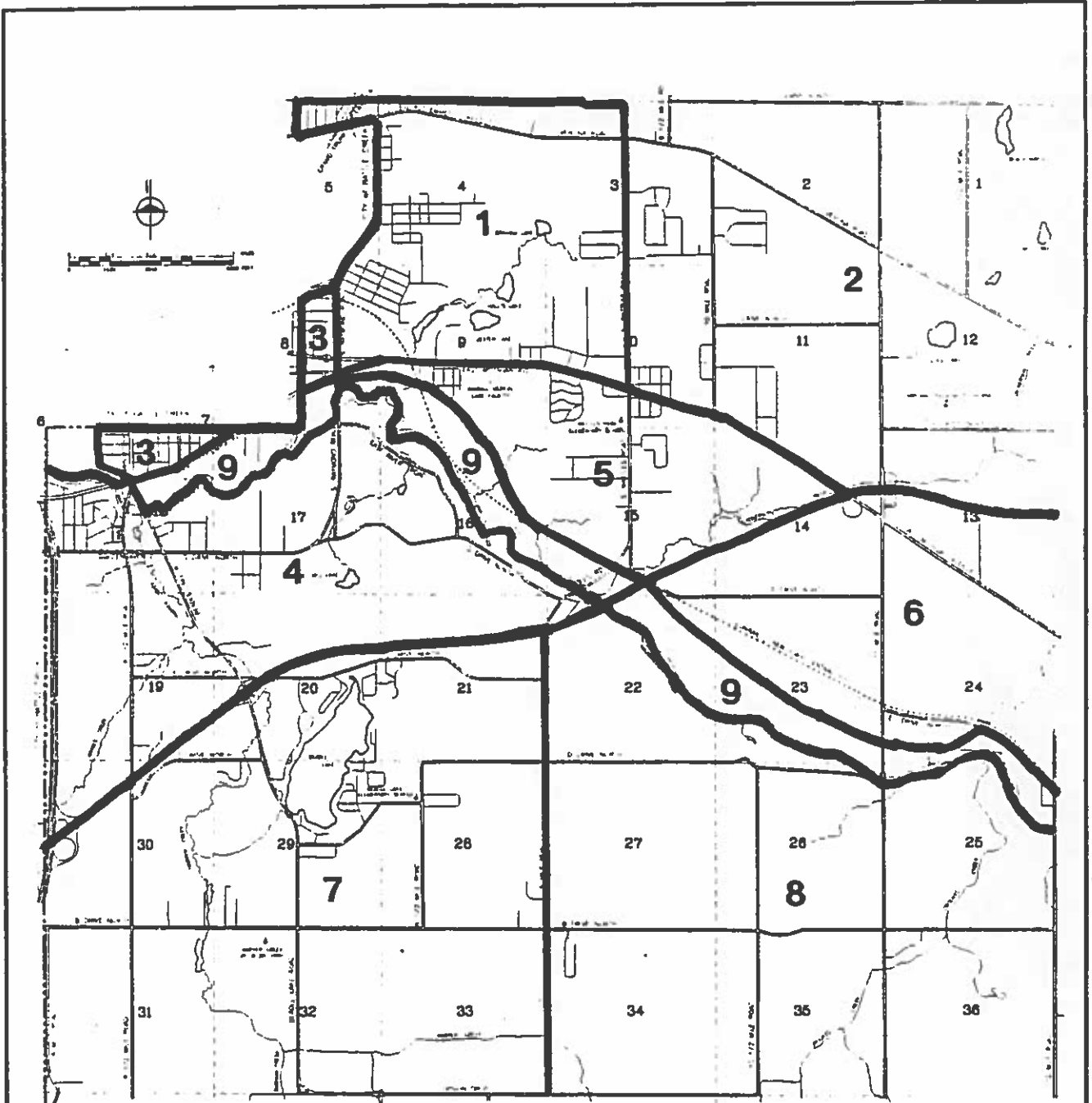
Under present zoning, subareas 6 and 7 would support the highest concentrations of new residential development. Even in the areas zoned for agricultural use, present zoning could result in population densities of well over 1,000 persons per square mile.

**TABLE 13**

**Emmett Township  
Population Projections by Sub-area**

Area	Total Populations				
	1990	1998	2003	2013	Buildout
1	2,415	2,520	2,580	2,640	8,219
2	1,703	1,900	1,995	2,145	6,971
3	1,006	1,000	1,000	1,000	925
4	1,140	1,350	1,490	1,600	11,718
5	1,034	2,230	2,300	2,440	4,591
6	153	175	200	350	2,158
7	2,254	2,600	2,720	2,960	10,882
8	527	560	600	825	6,615
9	475	485	525	650	688
<b>Total</b>	<b>10,707</b>	<b>12,820</b>	<b>13,410</b>	<b>14,610</b>	<b>52,767</b>

Regardless of the forecasting methods or projection utilized, it can be assumed that the Township will continue the general patterns of growth exhibited in the past. However, in a community such as Emmett, which is located in proximity to urban areas, the growth of housing and population will be strongly impacted by trends experienced by the larger geographic region. The major determinants of future population growth in Emmett will include the following.



EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

MAP 7



**TABLE 14**

**Emmett Township  
1990 Populations**

Area	Dwelling Units			Population Density (persons/unit)	Populations		
	Agricultural	Residential	Total		Agricultural	Residential	Totals
1	0	1,243	1,243	1.94	0	2,415	2,415
2	193	394	587	2.90	560	1,143	1,703
3	0	504	504	2.00	0	1,006	1,006
4	0	461	461	2.47	0	1,140	1,140
5	21	308	329	3.14	66	968	1,034
6	51	19	70	2.19	111	42	153
7	229	579	808	2.79	639	1,615	2,254
8	176	41	217	2.43	427	100	527
9	1	132	133	3.57	4	471	475
<b>TOTALS</b>	<b>671</b>	<b>3,681</b>	<b>4,352</b>		<b>1,807</b>	<b>8,900</b>	<b>10,707</b>

- Availability of public utilities.
- The economic health of the Battle Creek metropolitan area.
- The types and quantity of housing permitted or encouraged within the Township.
- The availability and quality of local support services required for residential development such as police and fire protection, surfaced roads, and the quality of schools.
- The image of the Township as a desirable place to live.
- The economic and land use policies of nearby and adjoining communities.

### RESIDENTIAL LAND NEEDS

With a potential population increase of up to 2,500 persons and assuming the current average of 2.7 persons per unit, it is anticipated that nearly 925 additional housing units could be needed by 2013.

In 1990, 80 percent of the dwelling units in Emmett Township are single-family homes, with the remaining 20 percent of the units consisting of mobile homes (12%) and multi-family structures (8%). Of the single-family homes, approximately 65 percent are located on platted lots which are zoned as Medium or Low Density Residential. The number of single-family homes on large lots in the Agricultural Districts is estimated at 20 percent. Applying the various existing housing mix percentages to the 925 additional units expected by 2013 yields the residential land area needs as shown in the following Table. Land requirements per unit are based on estimated averages and existing zoning and right-of-way requirements.

**TABLE 15**  
**Residential Land Area Needs - Year 2013**  
**Emmett Township**

<u>Housing Type</u>	<u>Existing Housing Mix (%)</u>	<u>Future Number of Units</u>	<u>Estimated Land Requirement per Unit</u>	<u>Approx. Future Land Use Need (Acreage)</u>	<u>Future Need x 3</u>
Single-Family Agricultural	15.0	140	2.5 Acres (Ave.)	350	1,050
Single-Family Medium/Low Density	65.0	601	18,000 sq. ft. (Ave.)	250	750
Multiple Family	8.0	80	5,000 sq. ft.	10	30



<u>Housing Type</u>	<u>Existing Housing Mix (%)</u>	<u>Future Number of Units</u>	<u>Estimated Land Requirement per Unit</u>	<u>Approx. Future Land Use Need (Acreage)</u>	<u>Future Need x 3</u>
Mobile Homes	<u>12.0</u>	<u>11</u>	6,000 sq. ft.	<u>15</u>	<u>45</u>
	100.0	832		625	1,875

-----  
Source: WW Engineering & Science, Inc.

The above estimated acreage requirements are based on the assumption that 1990 housing mix percentages will continue into the future. If this occurs, over 600 acres (nearly one square mile) of land will be needed for residential purposes by the year 2013.

It is unlikely, however, that the current housing trends will remain the same through 2013. As the number of total housing units in the Township increases, the size of individual lots will tend to decrease, and housing density will increase. In addition, population projections and the resultant projections of housing units are subject to a relatively high margin of error. For this reason areas zoned and planned for a particular land use typically exceeds the acreage computed. Multiplying by a factor of 3 is a common yardstick.

The Township's future land use policies can also have a significant impact on future residential development. Decisions regarding zoning designations and re-districting, sewer extensions, the amount of land set aside for non-residential purposes, and the extent to which multi-family structures and mobile homes are encouraged or discouraged will all impact future residential land use patterns.

## COMMERCIAL LAND NEEDS

It is roughly estimated that at the present time approximately ten acres of land has been developed to commercial use for each 1,000 people in the Township. Using this as a rule of thumb and factoring in an expected population increase of 5,000 to 8,000 people within a market area that includes Emmett Township, the City of Battle Creek and portions of surrounding communities, it can be expected that there will be a demand for approximately 50 to 80 acres of additional commercial development. Comparing this estimate to the amount of vacant land that is currently zoned for commercial use, it can be concluded that, on this basis alone, the consideration of large new areas for commercial development is not required. Instead, the primary consideration relative to commercial land needs is ensuring that the areas planned for the various types of commercial use (retail, service, offices, etc.) are appropriately located to satisfy the desired pattern of development and community needs.

## **INDUSTRIAL LAND NEEDS**

As a general rule, the ratio of labor to acres of developed light or medium industry in communities with a fairly balanced economy is 10 to 20 workers for each acre of industrial land.

At the present time, there are approximately 950 acres of land that are zoned for industrial use in Emmett Township. Of this amount, relatively few acres (75 to 100) are actually developed or put to an intensive industrial related activity.

Based upon the above rule of thumb, the existing nature of industrial land and uses within the Township and a rough estimate of future manufacturing related workers that will reside in the Township, it is not suggested that significant additional amounts of land be set aside for future industrial use. Similar to planned commercial areas, future industrial areas should be strategically located in response to the access and utility needs of industry.

## CHAPTER VI

### GOALS AND OBJECTIVES

As part of the Master Planning Process, the Emmett Township Planning Commission made a determined effort to obtain the input of citizens, landowners and business owners of the Township regarding their likes, dislikes and concerns for the direction of development in the Township. This was accomplished through a futuring session meeting at which citizens were asked to participate, as well as through the mailing of an attitude survey to a random sampling of over 900 Township property owners.

In summary, many residents felt that there is a need to better protect natural resources and to control growth in a manner that maintains residential atmosphere while providing opportunities for commercial and industrial development. Other needs that were identified during the futuring session and survey included: better zoning enforcement, the control of blight and improved roads and road maintenance.

A summary of the futuring session and survey is included in the Appendix.

Planning goals are statements that express the community's long-range desires and serve to provide direction for related planning activities. Based upon the Emmett Township Futuring Session and the results of a citizen survey and upon technical analysis of the community, the following goals and objectives have been developed. The goals are presented by major topic areas.

#### **Goal: Agriculture and Open Space**

Minimize the encroachment of residential, commercial and industrial uses into prime farming areas.

#### *Objectives*

- Through proper planning and transitional zoning techniques discourage spot zoning and the encroachment of non-farm development into prime farm areas.
- Encourage the use of P.A. 116 of 1974 preservation agreements by area farmers that are consistent with the overall land development needs of the area.
- Identify areas that are presently zoned for agricultural use which, due to their location and the encroachment of non-farm development, should be planned and zoned an alternative long range use.

## **Goal: The Environment**

Improve the image of Emmett Township and conserve the area's natural resources such as groundwater, wetlands, the natural drainage network, woodlands, and wildlife habitat.

### *Objectives*

- Institute land use plans, policies and regulations intended to minimize or avoid impacts on air and water quality.
- Implement more stringent zoning and related development review tools that encourage land developers to take natural features such as soils, topography, hydrology, and natural vegetation into account in the process of site design.
- Promote soil conservation and wise use of fertilizers and pesticides.
- Establish landscape guidelines for new commercial, industrial, and residential developments which will offset the loss of natural vegetation caused by development.
- Determine the feasibility of establishing a Township recycling program/center.
- Provide necessary sewer and water utilities concurrently with new development.

## **Goal: Residential Land Use and Housing**

Strengthen the stability of existing residential areas and accommodate a variety of housing opportunities to maintain affordability for a wide range of income levels.

### *Objectives*

- Work with the Calhoun County Road Commission to improve and maintain residential streets and ensure safe access to neighborhoods.
- Encourage the maintenance and preservation of the existing housing stock through proper zoning and housing code enforcement.
- Provide increased police and fire service to the neighborhoods.
- Implement zoning standards better equipped to influence the location and design of mobile home parks
- Protect residential areas from commercial and industrial land uses by requiring open space, landscaping, and buffered thoroughfares and encouraging transitional land uses.

- New subdivisions should include amenities such as open space, sidewalks, bike and foot paths, and where appropriate, pedestrian linkages to commercial centers and parks.

### **Goal: Commercial Development**

Provide for basic service and shopping needs in a manner that limits commercial strip development and prevents unnecessary traffic and land use conflicts.

#### *Objectives*

- Implement regulations that encourage the shared use of commercial driveways and control the number and spacing of driveways.
- Implement policies and regulations that promote family oriented neighborhood convenience centers.
- Work with the local business community to encourage and maintain a desired mix of commercial and service opportunities available to Township residents.
- Develop more stringent landscaping, sign, and building appearance guidelines or ordinances to promote aesthetics and the vitality of the commercial districts.

### **Goal: Industrial Development**

Provide for light industrial development in industrial park settings.

#### *Objectives*

- Preserve land for future industrial purposes in areas which have easy access to major arteries such as I-94.
- Promote high quality industrial development through the use of local site plan review regulations.
- Develop zoning regulations that separate residential areas from industrial areas with appropriate buffer strips, open space or other transitional land uses.
- Use zoning to prevent incompatible uses from intruding into industrial areas.

### **Goal: Utilities**

Provide public utilities and storm drainage to promote environmental quality and ensure the safety and well being of Township residents.

#### *Objectives*

- When extending sanitary sewer and water utilities, give priority to existing residential areas.
- Use public utility funding practices that place the cost of utilities on users.
- Institute standards which require developers to install streetlights and underground wiring within each new development area.
- Develop a Capital Improvement Plan to determine other future public work projects and needs and their scheduling.

### **Goal: Transportation**

Provide for adequate transportation routes that will compliment balanced, orderly growth and ensure convenience and safety for residents and workers.

#### *Objectives*

- Give priority to roads in areas intended to support the highest concentrations of development.
- Work with Calhoun County Road Commission to improve maintenance on existing roadways and to address traffic controls, sight restrictions, drainage and ditching.
- Establish solid communication with Calhoun County Road Commission personnel to promote road improvement policies consistent with goals of the Township.

### **Goal: Community Facilities and Public Safety**

Achieve a high level of public safety and public services.

#### *Objectives*

- Expand Public Safety Department capabilities to match a standard ratio relating to the size of the Township's population.
- Provide street lighting in identified residential areas and at key street intersections where necessary.

**Goal: Parks and Recreation**

Develop a parks and recreation plan and expand outdoor recreation facilities to meet the needs of existing and future residents.

*Objectives*

- Acquire land areas for development of future parks - including open spaces for active play and preserves along the river for passive recreation.
- Develop neighborhood park facilities in conjunction with school facilities to provide an economical and convenient recreation opportunities.
- Work with developers to set aside land for parks and obtain easements for pedestrian/bicycle paths.

## CHAPTER VII

### FUTURE LAND USE PLAN

The Future Land Use Plan is a compilation of descriptions, recommendations, and justification for future land use in Emmett Township. It serves as an overall framework for the management and regulation of future development and also serve as the basis for evaluating zoning requests.

The Township Planning Act, Public Act 168 of 1959, as amended, specifically gives Township Planning Commissions the authority to prepare and officially adopt a Plan. When prepared, officially adopted, and maintained, this Plan should provide an advisory guide for the physical conservation of certain areas and for the development of other areas into the best possible living environment for present and future township residents.

Because of the constant change in our social and economic structure and activities, the Plan must be maintained through periodic review and revision so that it reflects contemporary trends while maintaining long-range goals.

The Master Land Use Plan is general in scope. It is not in most cases intended to establish precise boundaries of land use or exact locations of future uses. It is also important to note that there is no schedule to implement the recommendations contained here. The timing of a particular land use is dependent upon a number of factors such as availability of public utilities, provisions for adequate roadways, effect on public services, and the demand for a particular land use versus the available land zoned for this use. Those, plus other factors, must be considered when reviewing a request for rezoning a particular parcel of land.

#### THE RELATIONSHIP OF PLANNING TO ZONING

The relationship between land use planning and zoning is an important one. Planning is basically the act of planning the uses of land within a community for the future from a policy standpoint, while zoning is the act of regulating the use of these lands by law or ordinance. The laws of the State of Michigan require that a community engage in land use planning activities, including the preparation of a comprehensive plan or Master Plan, prior to the initiation of a zoning ordinance in a community.

The following narrative provides a better understanding of the terms "planning" and "zoning".

#### *Land Use Planning*

Land Use Planning is the process of guiding the future growth and development of a community. Generally, a document is prepared known as the Master Plan which addresses the various factors relating to the growth of a community. Through the processes of land use planning, it is intended that a community can preserve, promote, protect, and improve public health, safety, and general welfare. Additional considerations include: comfort, good order, appearance, convenience, law



enforcement and fire protection, preventing the overcrowding of land to avoid undue concentration of population, facilitating the adequate and efficient provision of transportation, water, sewage requirements and services, and conservation, development, utilization and protection of natural resources within the community.

### **Zoning**

Zoning is one of the instruments, along with capital improvements programming and the administration of local subdivision regulations, which implements the goals and policies of a Master Plan. The enactment and administration of the zoning ordinance are legislative and administrative processes conducted by local units of government relating to the implementation of the goals and policies of the Master Plan.

### **PLAN CONCEPTS**

The goals and policies previously outlined and analysis of the Township's physical, social and economic makeup has allowed the formulation of four broad concepts that were used in the development of a long range development plan. These include:

1. *Urban and Rural Service Areas:* Within the 20-year planning period and beyond, there will be increasing demands for land that can be developed for higher density residential uses as well as land for commercial and industrial purposes. Because of these demands and the need to make efficient accommodations for such, a major objective of the Master Land Use Plan is to delineate those areas considered best suited or able to support the higher intensity uses.

In consideration of existing soil and development patterns and a general need to promote efficiency in the delivery of a wide range of services such as fire and police protection, utilities and other services, the Master Land Use Plan delineates a long-range "Improved Services Boundary." It is within this boundary that the majority development is intended to be accommodated. This boundary is flexible but is intended to represent the approximate long-range extent of non-rural type of development, and the area in which the Township should concentrate its public improvements.

2. *Balanced Residential Character:* Varying income levels and life styles of newcomers and residents, the availability or unavailability of utilities and physical limitations of the Township, require that a variety of housing types and densities be provided for.
3. *Provide for a Variety of Commercial and Industrial Types:* Given the Township's accessibility to regional transportation arteries as well as the employment and shopping needs of local residents, a range of both locally and regionally oriented types of commercial and industrial development should be provided for. To accomplish this the various types of economic development must be encouraged to locate in the areas best suited to meet individual business needs. The deliberate and objective guidance of different types of economic development toward specific locations will also help to avoid

or minimize future land use and traffic conflicts while over time, broadening the community's tax base structure.

4. *Protect Environmental Resources:* Emmett Township has a variety of environmental resources. These natural features should be protected and incorporated into development projects.

## **LAND USE CATEGORIES**

The Master Land Use Map recommends a number of different land use classifications. The following descriptions of these future land use classifications explain the intended uses and location characteristics for each classification.

### ***Open Space Conservancy***

This land use classification includes the Kalamazoo River flood plain and other areas in the Township which should be preserved and protected due to their environmental sensitivity and their importance for natural open space, drainage retention, groundwater recharge and wildlife habitat. Uses within these areas should be limited to those which have minimal impact upon the important natural characteristics of the site or which would serve to enhance or blend in with the existing conditions of the site. Some of the natural features found in the area such as the Kimball Pines County Park and the Ott Biological Preserve are already under protective ownership. Other areas may also warrant consideration for possible inclusion in the area's park and recreation system.

While many of the Township's important open space areas are currently zoned under the Open Space, Water Body Conservation District, it is recommended that this district be expanded to include those additional areas illustrated on the Future Land Use Map.

In addition to State environmental standards which can be relied upon to protect many of the privately held wetland, stream and flood plain areas of the Township, it is recommended that all uses be subject to local zoning and site plan review standards which, when appropriate, can be called upon to enforce limitations on the density or intensity of land use. These standards should examine the use in light of its effects on surface and ground water pollution, alteration of the natural flow of water or retention capacity of the flood plain, grading of natural land contours, removal of trees or other vegetation, and effect on wildlife habitat. Such standards could be applied to projects within the Open Space Conservancy Area as well as on new development proposals located generally throughout the Township.

### ***Agricultural/Rural Residential District***

This land use category is intended to accommodate farming as well as to provide for very low density residential development on large lots with a density of approximately one unit per three acres. The recommended lot sizes will provide adequate area for septic system placement and will result in fewer non-farm activities next to active farms than if higher density residential uses were located next to agricultural areas. Agricultural activities would be encouraged in the areas, as the

primary land use. A secondary function of this category is to serve as a long range holding area for lands that might ultimately be considered for more intensive development when other areas become fully developed.

The Agricultural/Rural Residential classification recognizes the desire by homeowners for a rural environment relatively close to urban amenities. At the same time, this land category is intended to encourage the preservation of wetlands, woodlands, and open spaces which are useful as water retention and ground water discharge areas, provide valuable habitat for wildlife, and have important aesthetic and scenic values.

The characteristics utilized in establishing the general boundaries and extent of the Agricultural/Rural Residential planning areas include; relatively long distances from existing utilities and urban amenities, large areas of PA 116 Enrollment, areas with soils that are generally unsuitable to support intensive development due to severe topography or septic system limitation, and areas considered suitable for long term investment for farming due to current minimum land fragmentation.

In summary, the primary objectives of this land use classification are:

1. To preserve woodlands and wetlands which are essential as water retention, water purification and ground water recharge and which have important wildlife habitat, aesthetic and scenic value.
2. To encourage the continued use of valuable farm land while accommodating rural estate types of residential development at a density that will maintain the overall rural character and not overcapacitate the soil and roadways.
3. To accommodate a wide variety of non-farm uses that require large land areas.
4. To provide a "land bank" for areas of land that could be allowed to develop more intensively when the Township determines that more intensive structural development is appropriate and when the necessary public facilities and infrastructure is in place to support it.

### ***Low Density Residential Area***

This district is intended primarily for single-family homes in fairly rural settings but in traditional subdivision formats and density. The areas are intended to be served by public water and sanitary sewer. Lot sizes will vary depending upon the type of utility service provided.

If no utilities are provided, a lot width of 100 feet with 30,000 square feet of lot area should be provided to insure public health and environmental protection. If public water or sanitary sewer is provided, approximately 20,000 to 25,000 square feet of land is suggested. If both water and sanitary sewer is provided, lot sizes could be reduced to approximately 18,000 square feet and still provide the desired residential character. It is recommended that these requirements be

incorporated in provisions relating to the R-A Zoning District contained within the Emmett Township Zoning Ordinance.

LDR areas are intended to be located where they can be logically served by the eventual extension of public utilities.

In designating the LDR areas, the existence of or the likelihood of public utilities was taken into consideration as were existing development densities, the adequacy of travel routes and the desire to concentrate new areas of traditional single family subdivision development in an efficient manner.

It should be noted that significant areas of the Township are presently zoned A-A but are illustrated as part of the Master Land Use Plan as LDR. Because many are not foreseen to be served by public utilities in the near future, actual zoning to the R-A Low Density Residential classification should proceed cautiously, to avoid leapfrog development and/or the development of an over-abundance of fairly large lots initially unserved by utilities and adequate roadways.

### ***Medium Density Residential***

The Medium Density areas are intended as extensions to existing developments that have occurred consistent with the current RB Medium Density Residential Zoning Districts. Lot sizes are intended to range from 10,000 to 15,000 square feet in size. They serve as the primary areas in support of conventional single family subdivision development within the Township. The attempt has been made to plan and expand these areas where the full range of utilities is likely to occur in the foreseeable future.

### ***High Density Single Family Residential***

The High Density Single Family Residential District is suggested to encompass those areas of the Township that are presently developed for single family residential purposes on lots of between 5,000 and 10,000 square feet. Such areas include the Brownlee Park area and the Verona Subdivision off Emmett Street in the northwest corner of the Township, the Wattles Park area and areas off Columbia Avenue. Such areas are currently zoned within the medium moderate density category but contain lot sizes considerably smaller than the required RB District standards. Recognition of these areas under the RU Residential District contained within the Zoning Ordinance is recommended as a means of encouraging reinvestment in these areas for continued residential use. It is felt that their non conforming status within the RB District could discourage such reinvestment.

### ***Multiple Family Residential Areas***

The majority of Multiple Family Residential areas (MFR) illustrated on the Master Land Use Plan Map are for the most part already reflected by existing zoning. The most significant new area for future multi-family development is in the 6 1/2 Mile/B Drive North area. It is envisioned that such development should occur in concert with commercial growth in that area. Multi-family and

commercial uses developed under an overall plan containing a variety of retail, office and residential uses is considered desirable for this area.

The proposed areas are intended to satisfy the demands for apartment and attached dwelling units, while serving as transitional uses from commercial areas and transportation routes to the lower density residential uses. Several of the proposals are recommended as logical alternatives to commercial strip development. It is recommended that all multi-family developments be provided with public water and sewer facilities to ensure public health.

### ***Manufactured Housing Parks***

The Master Land Use Map recognizes the existing Mobile Home Parks within the Township. The Map also proposes that an area east of BL-94 in Section 19, an area along Verona Road in Section 10 and an area on South Raymond Road be reserved for future manufacture home park development.

Given the several existing mobile home parks, it is felt that with the proposed additional areas adequate land area will be provided to satisfy long-range demands while minimizing conflicts between these uses and adjacent low, medium, and high density single family residential areas.

As a general policy, it is recommended that the rezoning of any land in support of manufactured housing and multi-family residential development recommendations illustrated on the Master Land Use Plan be deferred until specific applications are made. This will allow maximum opportunity to ensure that appropriate levels of public utilities are available to support the development.

### ***Commercial***

The Plan proposes dividing the existing and future Commercial Zoning Districts into three types of commercial land use categories; neighborhood commercial, highway commercial and general commercial. While the Master Land Use Map does distinguish between these three types of commercial areas, it should be recognized that finite boundary decisions on types of commercial development desired in specific locations may be made at the time of requests for rezoning.

### ***Neighborhood Commercial***

The Plan proposes commercial development within this category to serve the convenience shopping needs of Township residents and to a lesser extent the needs of through vehicular traffic. Such convenience retail uses would include a pharmacy, convenience store, ice cream shop, service station, banks, etc. Commercial uses that generate higher traffic volumes and attract people from beyond the local area should not be located within this category. The primary areas suggested for neighborhood commercial are those located along East Michigan Avenue. Others are associated with the existing General Commercial area. Yet to be developed areas are designated in the Beadle Lake/B Drive area as a means of supporting expected residential growth.

### *General Commercial*

The intent of General Commercial District is to provide areas for those commercial businesses and services that have large land needs and other types of business that are not generally compatible with small scale retail shopping and service establishments or larger scale shopping centers. Uses such as car and R.V. dealers, auto repair shops, lumber yards and similar uses are included in this category.

Most of the existing commercially zoned areas on East Columbia Avenue and North Raymond Road have been given this Master Plan designation due to the type of development it now supports and its good access to residents and commuters of the larger Battle Creek area.

### *Highway Commercial and Office*

This land use category is intended for office, retail, and service uses which cater to Township residents as well as regionwide and the motoring public. These commercial uses are envisioned to occur on a larger scale than neighborhood commercial uses, and will have a highway orientation in terms of visibility, access, and traffic generation.

Shopping centers, motels, office buildings and mixtures of retail and services enterprises planned as complexes are the types of development to be encouraged in these areas. Areas near all three I-94 interchanges have been given this designation with the most significant being in the 6 1/2 Mile/B Drive area where an overall scheme of mixed retail, office and Multi-Family Residential is encouraged.

For all new commercial development within the Township, specific site criteria are needed to assure that sufficient setback, landscaping, parking, drainage, driveway location, lighting, buffer, and sign controls are provided. Unless careful site planning and access controls are instituted, even a limited number of additional commercial establishments at a given location within the Township could lead to traffic problems along adjoining roads. It is therefore recommended that together with stringent site plan and access standards, the rezoning of land for commercial purposes be done incrementally to help assure that development is not done prematurely or haphazardly.

Specific recommendations relating to the regulation of commercial development include:

1. The use of flexible planned unit development zoning provisions that allow the review and approval of proposals incorporating integrated mixed uses, joint accesses and alternative access characteristics. This approach is strongly recommended for the B Drive North/6 1/2 Mile Road area where a mixture of retail/office and residential uses is encouraged.

2. The use of more stringent zoning standards and site plan review processes which promote desirable objectives and a careful scrutinization of site plan features such as:
  - a. **Water, Sewer and Drainage:** Unless public or collective systems for these utilities are provided it is recommended that major development not be permitted unless careful consideration is given to the individual methods to handle septic and expected water usage and runoff.
  - b. **Driveway location and spacing:** Driveways should be located as far from street intersections as possible to avoid left turn conflicts and businesses should be encouraged to share driveways whenever possible. Driveways should be minimum of 100 feet apart to reduce conflicts and provide gaps in traffic for safer ingress and egress. In the highway commercial area, it is recommended that commercial parcels have a minimum of 150 feet of street frontage to promote adequate driveway spacing.
  - c. **Landscaping:** Commercial development should provide landscaping along street edges and between uses to enhance aesthetics and to screen parking areas. Specific landscaping requirements should be incorporated into the zoning ordinance to ensure adequate and uniform landscape treatment among all businesses within a particular district.
  - d. **Alternate Access:** In the interchange areas, a secondary means of ingress and/or egress should be provided if possible. Such alternate access could take the form of access to an intersecting street for corner parcels, access across adjacent parking lots, access to another street to the rear of the property, a frontage road or service drive paralleling the major street.
  - e. **Signs:** The number, size and location of signs should continue to be controlled and kept to a reasonable minimum to avoid motorist confusion and to ensure individual business identity.
  - f. **Building Setback:** In order to preserve the necessary right-of-way required for future road widenings, commercial structures should be required to set back a minimum of 100 feet from existing sixty-six foot wide right-of-ways.

### ***Industrial Development***

This category of land use is intended to accommodate a limited area for the support of such uses as manufacturing and processing, warehousing, and similar establishments.

The Industrial Land Use category as depicted on the Master Land Use Plan is intended to provide and reserve an appropriate land area for existing and future industrial development. In doing so, it is recognized that fairly extensive industrial development is viewed favorably by the Township due to the recognition of available and accessible lands and utilities. Therefore, the plan encourages significant future industrial activity. Due to an existing surplus of vacant

industrially zoned land, many of the areas designated are a reflection of areas currently zoned or associated with an existing industrial use. Others are logical extensions of previously planned or zoned areas.

The following guidelines are intended for use in implementing the industrial land use plan:

1. Improve site plan review standards relative to industrial uses to ensure building and site design quality and that those industries being proposed will not jeopardize environmental quality. Rely on sewage discharge standards to limit the types of industrial development that can utilize the public system.
2. Utilize provisions in the zoning ordinance that would discourage extensive outdoor storage and activity areas that would detract from the character of the Township.
3. Encourage the landscaping of industrial sites through site plan review.
4. Incorporate access control and minimum setback mechanisms similar to those recommended for commercial development areas into zoning provisions relating to the industrial zone.

### ***Public/Semi-Public***

This category includes those areas and facilities such as schools and government buildings which are available for use by the general public. Semi-public uses are those used by a limited number of people with specific interests which are generally non-profit in nature such as churches, non-public schools, private golf courses and medical or institutional facilities. The Plan recognizes that it is necessary to provide for the establishment of certain non-residential land uses within residential areas subject to the implementation of measures which are designed to insure compatibility. Such non-residential uses commonly include religious and educational institutions; golf courses and public utility facilities. Traffic generation, noise, lighting and trespassing should be carefully controlled in order to mitigate the negative impacts on residential uses. Expansion or location of these uses should depend upon compatibility with adjacent land uses and the extent to which neighborhood character will be maintained.

### **STREETS**

The primary objective of the Street Plan of Emmett Township is to provide a street network which will encourage the most logical development of the area while providing for the safe and efficient movement of people and goods.

### ***Problems***

One of the major problem with the street system is increased traffic volume on the rural collectors. Other factors that may become increasingly significant as growth continues include the need for better traffic and access controls along B Drive, 6 1/2 Mile Road and 11 Mile Road in order to avoid traffic and land use conflicts.



## ***Recommendations***

The following transportation related recommendations are intended to address existing problems and to avoid problems in the future:

- Within zoning and subdivision regulations institute access controls intended to reduce traffic conflicts along the major and minor arterials thereby preserving their volume and function.
- Establish road improvement priorities. Through cooperation with the Calhoun County Road Commission, monitor traffic volumes and road conditions as part of a program to establish road improvement priorities. In this way, the Township can objectively allocate its limited resources to those areas already having the greatest need.
- Consider the ability of existing roadway conditions to handle projected traffic volumes resulting from new development when reviewing site plans and rezoning requests.
- It is recommended that zoning and subdivision controls officially recognize the hierarchy of the road network by taking into consideration the traffic volume, noise, speed and clear vision requirements of each roadway class. Such requirements should translate in larger minimum lot frontages and building setbacks along major streets than those along local streets.

## **UTILITIES**

Plans for a public water distribution system and sanitary sewer collection system expansion have been developed for the Township.

The proposed layout for each utility as outlined in these plans should be used as a guide in determining where water lines and sanitary sewers should go and what size they should be to facilitate in the Township's long range service. Each utility plan has been coordinated with the Master Land Use Plan. Each system will be extended one leg at a time based on interest by residential or commercial developments. Each extension will have to be evaluated and designed by a professional engineer and the specifics regarding line size and the need for lift stations will be determined on an individual case basis. Future extensions should take into account the line sizes in the recommended layout, however, to ensure that the future projected flows can be served.

Until a formal Capital Improvements Program is initiated, extensions to the system will most likely be made at the request of interested residents, businesses or developers. Because of this, extra care must be given to avoid expensive leapfrog development and extensions based only on land development speculation.

## IMPLEMENTATION

In order for the Master Plan to serve as an effective guide to the continued development of Emmett Township it must be implemented. Primary responsibility for implementing the Plan rests with the Emmett Township Board, the Planning Commission, and the Township staff. This is done through a number of methods. These include ordinances, programs, and administrative procedures which are described in this chapter.

It is important to note that the Master Plan itself has no legal authority to regulate development in order to implement the recommendations of the Plan. This implementation must come from the decisions of the Township Board and Planning Commission to provide needed public improvements and to administer and establish regulatory measures relative to the use of the land. Cooperation between adjacent municipalities and Calhoun County is also essential.

The private sector, including individual home and land owners, is also involved in fulfilling the recommendations of the Master Plan by the actual physical development of land uses and through the rezoning of land. The authority for this, however, comes from the Township. Cooperation between the public and private sectors is therefore important in successful implementation of the Master Plan.

Previous elements of the Plan set forth Goals and Objectives and Land Use Plan recommendations which serve to guide the future development of Emmett Township. Many of the specific implementation recommendations of this chapter are taken from these objectives.

The following sections are a list of the major activities which the Emmett Township Planning Commission should pursue in order to be pro-active in the implementation of this Master Plan.

### ZONING

Zoning represents a legal means for the Township to regulate private property to achieve orderly land use relationships. It is the process most commonly used to implement community Master Plans. The zoning process consists of an official zoning map and zoning ordinance text.

The official zoning map divides the community into different zones or districts within which certain uses are permitted and others are not. The zoning ordinance text notes the uses which are permitted and establishes regulations to control densities, height, bulk, setbacks, lot sizes, and accessory uses.

The zoning ordinance also sets forth procedures for special approval regulations and sign controls. These measures permit the Township to control the quality as well as the type of development.

Subsequent to the adoption of this Plan, the Township Planning Commission and Township Board should review and make any necessary revisions to the zoning regulations to ensure that the recommendations of the Plan as outlined in this section are instituted.

The Plan recommends the following specific changes to the Township Zoning Ordinance:

1. Create three categories of Commercial Land Use to promote district character for neighborhood areas, general commercial areas and highway or regional oriented areas.
2. Revise the site plan review provisions of the Ordinance to cover all permitted commercial and industrial developments and to specify required contents of site plans for better protection of the natural features of the land and to incorporate surface and ground water protection standards..
3. Increase the required front yard setback for developing commercial and industrial areas located along major roads to 75 to 100 feet and adopt access control measures to regulate the commercial and industrial development. Such measures should address the number, size and spacing of driveways, service drives or frontage roads, building setbacks, deceleration lanes, and driveway alignment. The Commission should work with the Calhoun County Road Commission to enlist their cooperation in enforcing such measures.
4. Develop specific landscaping regulations for buffering between uses, and improving the appearance of buildings and parking lots.
5. Extend the boundaries of the Open Space and Water Body Conservation District.
6. Create a mapped, High Density Single Family Residential Zoning District to reflect existing lot sizes in certain areas of the Township.
7. Amend the Zoning Ordinance to require a three step lot size scale for Low Density Residential District areas, depending on the availability of utilities. Maintain the lot size for parcels without both utilities and decrease the minimum lot size for parcels with one or both utilities.
8. Review and revise the Zoning Ordinance to better delineate uses permitted by right and by special use to better provide the Planning Commission with criteria to determine the location of certain uses.

## **PREPARE AND ADOPT CAPITAL IMPROVEMENTS PROGRAM**

Capital Improvements Programming is the first step in a comprehensive management system designed to regulate priorities and programs to community goals and objectives. It is a means of planning ahead for the funding and implementation of major construction and land acquisition activities. The typical CIP is six years in length and updated yearly. The first year in each CIP contains the capital improvement budget. The program generally includes a survey of the long-

range needs of the entire governmental unit covering major planned projects along with their expected cost and priority. The Township Board then analyzes the projects, financing options, and the interrelationship between projects. Finally, a project schedule is developed. Priority projects are included in the Capital Improvements Program. Low priority projects may be retained in a Capital Improvements Schedule which may cover as long as 20 years.

The CIP is useful to the Township, private utilities, citizens, and investors, since it allows coordination in activities and provides the general public with a view of future expectations. With the completion of the Master Utilities Plan and the Master Land Use Plan, Emmett Township is in a good position to establish improvement priorities and formally institute this annual process.

### **PLANNING COMMISSION WORK PROGRAM**

The Plan recommends that the Planning Commission prepare a work program in January of each year. This work program would set forth the tasks or goals which the Planning Commission determines to accomplish for the upcoming year. This will allow the Commission to stay focused on important tasks and help to implement the goals and objectives identified within this Plan.

### **PLANNING EDUCATION**

Planning Commissions should attend planning seminars to keep themselves informed of planning issues and learn how to better carry out their duties and responsibilities as Planning Commissioners. These seminars are regularly sponsored by the Michigan Society of Planning Officials (MSPO) and the Michigan Township Association (MTA) and are a valuable resource for Planning Commissions. There are also several planning publications which are a useful information tool for Planning Commissioners. The main publications are Planning and Zoning News and Michigan Planner Magazine.

### **REVISIONS TO THE MASTER PLAN**

The Master Plan should be updated periodically (minor review every one to two years, major review every five to ten years) in order to be responsive to new growth trends and current Township attitudes. As growth occurs over the years, the Master Plan goals, land use information, population projections, and other pertinent data should be reviewed and revised as necessary so the Plan can continue to serve as a valid guide to the growth of the Township.

*APPENDICES*

**EMMETT TOWNSHIP  
SUMMARY OF FUTURING SESSION  
MEETING - MAY 20, 1993  
LIST OF "LIKES" AND "DISLIKES"**

**I. Agriculture and Environment**

**LIKES**

- Open spaces.
- Recreational areas.
- Environment.
- Clean river.
- Important to food supply.
- Good community to raise children in.
  
- Open space for wildlife.
- Land availability.
  
- Creeks.
- Park and rivers - County Park.
- Tree-lined streets.
- Railroads.

**DISLIKES**

- Offensive odors in residential.
- Splits of frontage for residential.
- Overall water quality.
- Too many car lots.
- Too many junky cars.
- Houses on too much land-one house in the middle of 6 acres.
- Farmers can stop and start growth.
- Agriculture; often when sold, gets sold to different kinds of businesses and converts into spot zoning.
- Township needs to be cleaned up.
- Spot zoning.
- Pollution-trash dumped on roads.

**II. Residential Land Use & Housing**

**LIKES**

- Well maintained houses.
- Variety of homes for sale.
- Municipal water and sewer.
- Adequate streets.
- Range of housing values.
- Accessibility between residential and schools, retail and major highways.
- Environmentally safe housing.
- Available public safety.
- Good schools.
- More services.
- Residential-bedroom to the City.
- Diversity of the Township.
- Good small business community.
  
- Size of homes.

**DISLIKES**

- Houses in ill repair.
- Dumping along roadways.
- Streets in poor condition.
- Mobile home parks.
- Sewer/water not available to all.
- Dirt roads.
  
- Lack of multi-family.
- Industrial next to residential.
- Commercial uses within residential.
- Poorly maintained trailer parks.
- High taxes lowered (???)
- Lack of major industry.
- Need for more police and fire protection - fire hydrants near subdivisions.

**III. Recreation and Open Space**

**LIKES**

- Biological preserve.

**DISLIKES**

- Lack of riverfront recreation/parks.
- Parks Commission - cost, liability.
- Lack of ability to preserve.
- Industrial zoning near rivers and open space.
- Development in open areas without utilities planned.

**IV. Commercial and Industrial**

**LIKES**

- Home town feeling among many small businesses.
- Employment.
- Variety of tax base.
- Hometown atmosphere.

**DISLIKES**

- No supermarket.
- No commercial or industrial district.
- No incubator program.
- No central business district.
- Lack of infrastructure.
- Older areas decaying.
- Residential mixed with industrial.
- Not enough industrial/commercial variety.

**V. Utilities and Transportation**

**LIKES**

- Makes a neater neighborhood.
- Accessibility to other towns.
- Transportation for elderly persons.

**DISLIKES**

- No water/sewer on South Raymond Road.
- No commercial or industrial district.

**VI. Community Facilities & Public Safety**

**LIKES**

- Ability of Township staff to work in the conditions of the Township's facilities and perform in the manner we've all come to expect.
- Generally, public safety is good.
- Fire Department's interaction with other townships.
- School system.
- Township administration and Public Safety.
- School system - progressive.
- Park-camping on the river.

**DISLIKES**

- Lack of public safety officers (understaffed).
- Township officers (inadequate).
- Second fire station not able to be manned.
- Lack of community focal point for meetings.
- Lack of road control
- Need better use of Wattles Junior High School.
- Township Hall location and layout (poor)..
- Fire Department coverage (distance).
- Need of a better park facility at or around river.
- Not enough access to river.



**EMMETT CHARTER TOWNSHIP  
FUTURE DEVELOPMENT SURVEY**

The Emmett Township Planning Commission is now working on a Master Land Use Plan for the Township and would like your help in the process. This document will be used to help direct future growth and development.

Recently, the Planning Commission, together with the Township Board and a fifteen member Citizen Task Force, met in a "Futuring Session" intended to generate ideas and concerns about the future development of the Township. From the ideas generated at this meeting, a series of preliminary Community Planning Goals and Objectives relating to the future of Emmett have been written. Those preliminary Goals and Objectives are presented on the following pages, along with a few more generalized opinion-type questions.

We ask that you take a moment to read over the statements and indicate your response to each statement. Once completed, simply re-fold and staple or tape the questionnaire (with the return address facing outward) and drop it in the mail. Postage is prepaid. To ensure confidentiality, be sure to block out or remove the sticker with your name on it. Thank you for your cooperation.

Emmett Charter Township  
Planning Commission

**1. Minimize the encroachment of residential, commercial, and industrial uses into prime farming areas.**

	Agree	Disagree	No Opinion
a. Through proper planning and zoning, discourage spot zoning and non-farm development in prime farm areas.	<u>68%</u>	<u>25%</u>	<u>7%</u>
b. Encourage the use of farmland and open space preservation agreements by area farmers and approve those that are consistent with the overall land development needs of the area.	<u>69%</u>	<u>18%</u>	<u>13%</u>
c. Identify non-prime farm areas now zoned for agricultural use which, in the long range, should be planned for other use.	<u>65%</u>	<u>20%</u>	<u>15%</u>

**2. Improve the image of Emmett Township and conserve natural resources by minimizing disturbances to surface and groundwater, wetlands, natural drainage, woodlands, and wildlife habitat.**

	Agree	Disagree	No Opinion
a. Institute land use plans, and policies designed to minimize or avoid impacts on air and water quality.	<u>90%</u>	<u>7%</u>	<u>3%</u>
b. Implement zoning and development review tools that require developers to take natural features into account in the process of site design.	<u>88%</u>	<u>6%</u>	<u>6%</u>
c. Promote soil conservation and the wise use of fertilizers and pesticides.	<u>92%</u>	<u>4%</u>	<u>3%</u>
d. Establish landscape guidelines for new development which will preserve and increase trees and ornamental vegetation.	<u>76%</u>	<u>18%</u>	<u>6%</u>
e. Upgrade the aesthetic appearance at each entrance to the Township to establish a more pleasant and positive Township identity.	<u>41%</u>	<u>34%</u>	<u>24%</u>
f. Determine the feasibility for a Township recycling center.	<u>61%</u>	<u>27%</u>	<u>12%</u>
g. Provide necessary sewer and water utilities with new development.	<u>60%</u>	<u>28%</u>	<u>12%</u>

**3. Strengthen the stability of existing residential areas, promote a development pattern compatible with the Township's remaining rural areas, and accommodate a variety of housing opportunities.**

	Agree	Disagree	No Opinion
a. Encourage the highest concentrations of residential development to occur where there are adequate existing utilities or where future utilities can be most economically and efficiently provided.	<u>73%</u>	<u>20%</u>	<u>7%</u>
b. Through zoning, provide for a variety of housing types to accommodate varying needs in household size, location, style, and income levels.	<u>60%</u>	<u>33%</u>	<u>7%</u>
c. Accommodate an overall housing mix consisting of conventional single-family, two-family, multi-family, and manufactured dwelling units.	<u>47%</u>	<u>39%</u>	<u>15%</u>
d. Encourage the maintenance and preservation of existing homes through better code enforcement.	<u>71%</u>	<u>22%</u>	<u>7%</u>

e.	Encourage the use of the Planned Unit Development concept to help preserve open space within residential developments.	<u>65%</u>	<u>16%</u>	<u>19%</u>
f.	Implement zoning standards better equipped to influence the location and development of mobile home parks.	<u>78%</u>	<u>11%</u>	<u>11%</u>
g.	Residential areas should be separated from high traffic areas and commercial and industrial uses by transitional land uses, open space, landscaping, and buffered thoroughfares.	<u>79%</u>	<u>14%</u>	<u>7%</u>
h.	Promote neighborhoods with amenities such as sidewalks, bike paths, open space, and pedestrian linkage to commercial centers, parks, and community service.	<u>53%</u>	<u>32%</u>	<u>14%</u>
<b>4. Provide for the basic service and shopping needs of residents but limit and control commercial strip development.</b>				
		Agree	Disagree	No Opinion
a.	Discourage commercial development that requires public utilities that cannot be economically and efficiently provided.	<u>65%</u>	<u>26%</u>	<u>9%</u>
b.	Encourage the shared use of commercial driveways and limit the number of driveways.	<u>56%</u>	<u>29%</u>	<u>15%</u>
c.	Promote neighborhood convenience centers that are family oriented.	<u>61%</u>	<u>30%</u>	<u>9%</u>
d.	Work with local businesses to achieve the best mix of retail and service businesses.	<u>83%</u>	<u>12%</u>	<u>5%</u>
e.	To avoid over development and commercial sprawl, consider the availability of commercial areas in adjacent communities when allocating land area for future regionally oriented commercial development.	<u>68%</u>	<u>20%</u>	<u>12%</u>
f.	Encourage a family theme park to locate in the area.	<u>37%</u>	<u>47%</u>	<u>16%</u>
g.	Promote aesthetics and high quality site design by using landscaping, sign, and building appearance guidelines or ordinances.	<u>63%</u>	<u>21%</u>	<u>16%</u>
<b>5. Provide for light industrial development in well served, easily accessible industrial park settings.</b>				
		Agree	Disagree	No Opinion
a.	Establish and reserve land for future industrial purposes in areas which have easy access to major arteries such as I-94.	<u>76%</u>	<u>20%</u>	<u>4%</u>
b.	Use available tax incentives to attract research and develop types of uses and small to medium sized corporations to locate here.	<u>58%</u>	<u>37%</u>	<u>5%</u>
c.	Discourage piece-meal development outside of industrial parks.	<u>64%</u>	<u>31%</u>	<u>4%</u>
d.	Promote quality industrial development through local site plan review.	<u>76%</u>	<u>15%</u>	<u>9%</u>
e.	Require the availability of utilities and road improvements prior to allowing industrial development.	<u>74%</u>	<u>17%</u>	<u>9%</u>
f.	Industrial areas should be separated from residential areas by buffer strips or transitional land uses such as agriculture.	<u>82%</u>	<u>10%</u>	<u>8%</u>
g.	Other uses should be prevented from locating in industrial areas.	<u>55%</u>	<u>30%</u>	<u>16%</u>
h.	Encourage employers to provide employee recreational areas.	<u>47%</u>	<u>34%</u>	<u>19%</u>
<b>6. Provide adequate public utilities and storm drainage to promote environmental quality and public health.</b>				
		Agree	Disagree	No Opinion
a.	Expand sanitary sewer and water, giving priority to existing residential areas in need, followed by service to industries.	<u>66%</u>	<u>26%</u>	<u>8%</u>
b.	Encourage funding practices for improvements to public utilities that appropriately place the cost of utilities on users.	<u>67%</u>	<u>25%</u>	<u>9%</u>
c.	Develop a capital improvements plan to determine other future public works projects and needs and their scheduling.	<u>60%</u>	<u>25%</u>	<u>15%</u>
d.	Determine the feasibility of a Township operated sewage plant.	<u>35%</u>	<u>51%</u>	<u>14%</u>
e.	Institute standards which require developers to install streetlights and underground wiring within each development area.	<u>73%</u>	<u>17%</u>	<u>10%</u>

**7. Provide convenient and safe transportation routes that support balanced, orderly growth.**

	Agree	Disagree	No Opinion
a. Give priority to roads in areas intended to support the highest concentrations of development.	<u>71%</u>	<u>24%</u>	<u>5%</u>
b. Work with Calhoun County Road Commission to improve maintenance on existing roadways and to address traffic controls, sight restrictions, drainage and ditching.	<u>82%</u>	<u>15%</u>	<u>3%</u>
c. Establish solid communication with Calhoun County Road Commission personnel to promote road improvement policies consistent with goals of the Township.	<u>92%</u>	<u>6%</u>	<u>2%</u>
d. Prepare for the potential of a high speed rail system traversing and stopping in the Township.	<u>41%</u>	<u>42%</u>	<u>17%</u>
e. Promote public bus routes further into the Township.	<u>49%</u>	<u>34%</u>	<u>17%</u>

**8. Ensure an optimal level of public safety and services.**

	Agree	Disagree	No Opinion
a. Consider relocating the Township Hall and the Public Safety Department to an area more centralized to the Township's population.	<u>23%</u>	<u>66%</u>	<u>11%</u>
b. Explore the consolidation of area wide services such as public safety, schools and libraries.	<u>42%</u>	<u>48%</u>	<u>10%</u>
c. Expand Public Safety Department capabilities to match a standard ratio relating to the size of the Township population.	<u>55%</u>	<u>35%</u>	<u>10%</u>
d. Install street lighting where necessary.	<u>71%</u>	<u>24%</u>	<u>6%</u>

**9. Develop a local parks and recreation plan and expand active and passive outdoor recreation facilities to meet the needs of existing and future residents of the Township.**

	Agree	Disagree	No Opinion
a. Acquire land areas for development of future parks-including open spaces for active play and preserves along the river for passive recreation.	<u>51%</u>	<u>39%</u>	<u>10%</u>
b. Develop a linear park system along the river which links with the City of Battle Creek.	<u>42%</u>	<u>46%</u>	<u>12%</u>
c. Develop neighborhood recreation facilities in conjunction with school facilities to provide economical and convenient recreation opportunities.	<u>54%</u>	<u>37%</u>	<u>9%</u>
d. Plan for the development of an interconnecting bicycle path system.	<u>41%</u>	<u>42%</u>	<u>17%</u>
e. Work with residential developers to set aside suitable portions of land for parks, road easements for pedestrian/bicycle paths.	<u>58%</u>	<u>32%</u>	<u>11%</u>

**10. How important are the following?**

	Very Important	Important	Not Very Important
a. Preserving farmland	<u>52%</u>	<u>34%</u>	<u>14%</u>
b. Improving fire and police protection	<u>41%</u>	<u>42%</u>	<u>17%</u>
c. Providing more public recreation facilities	<u>10%</u>	<u>27%</u>	<u>63%</u>
d. Regulations against junk and blight	<u>65%</u>	<u>24%</u>	<u>11%</u>
e. Maintaining and improving roads	<u>55%</u>	<u>32%</u>	<u>7%</u>
f. Setting aside more lands for commercial development	<u>18%</u>	<u>53%</u>	<u>29%</u>
g. Setting aside more lands for industrial development	<u>22%</u>	<u>43%</u>	<u>35%</u>

**11. Are you satisfied with the following?**

	Yes	No	No Opinion
a. Overall appearance	<u>57%</u>	<u>30%</u>	<u>13%</u>
b. Police protection	<u>71%</u>	<u>19%</u>	<u>10%</u>
c. Fire protection	<u>76%</u>	<u>14%</u>	<u>11%</u>
d. Condition of gravel roads	<u>39%</u>	<u>37%</u>	<u>24%</u>
e. Condition of paved roads	<u>44%</u>	<u>53%</u>	<u>3%</u>
f. Refuse collection	<u>78%</u>	<u>12%</u>	<u>10%</u>
g. Zoning enforcement	<u>37%</u>	<u>42%</u>	<u>22%</u>

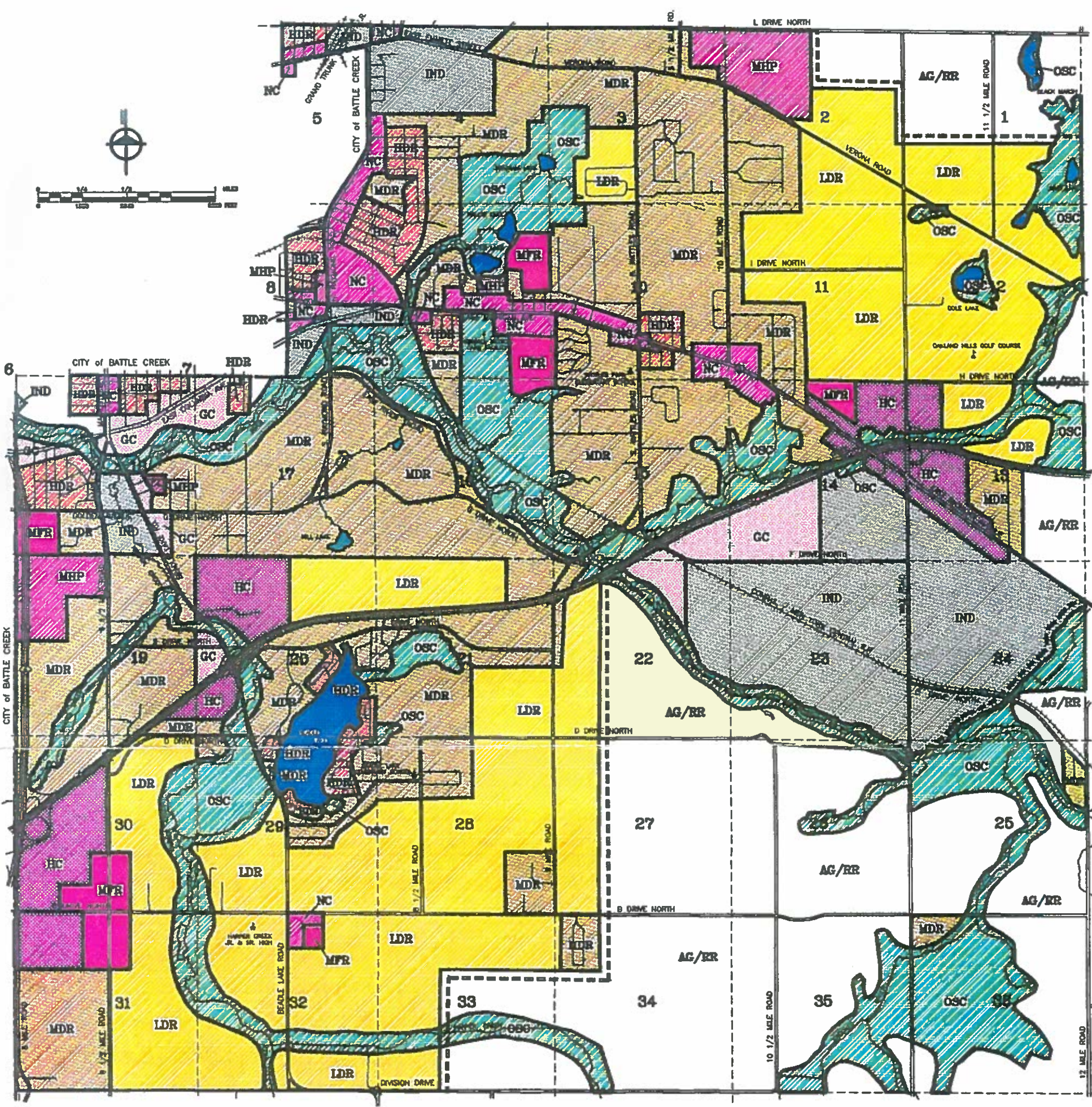
---

12. Would you be willing to pay more taxes/fees for the following?

	Yes	No	Maybe
a. Police protection	<u>35%</u>	<u>51%</u>	<u>15%</u>
b. Sewage collection and treatment	<u>15%</u>	<u>77%</u>	<u>9%</u>
c. Water and distribution supply	<u>15%</u>	<u>71%</u>	<u>11%</u>
d. Roads	<u>36%</u>	<u>53%</u>	<u>12%</u>
e. Recreational facilities	<u>11%</u>	<u>80%</u>	<u>10%</u>
f. Storm drainage	<u>10%</u>	<u>86%</u>	<u>11%</u>
g. Zoning/Blight Ordinance enforcement	<u>30%</u>	<u>54%</u>	<u>16%</u>

---





**LEGEND**

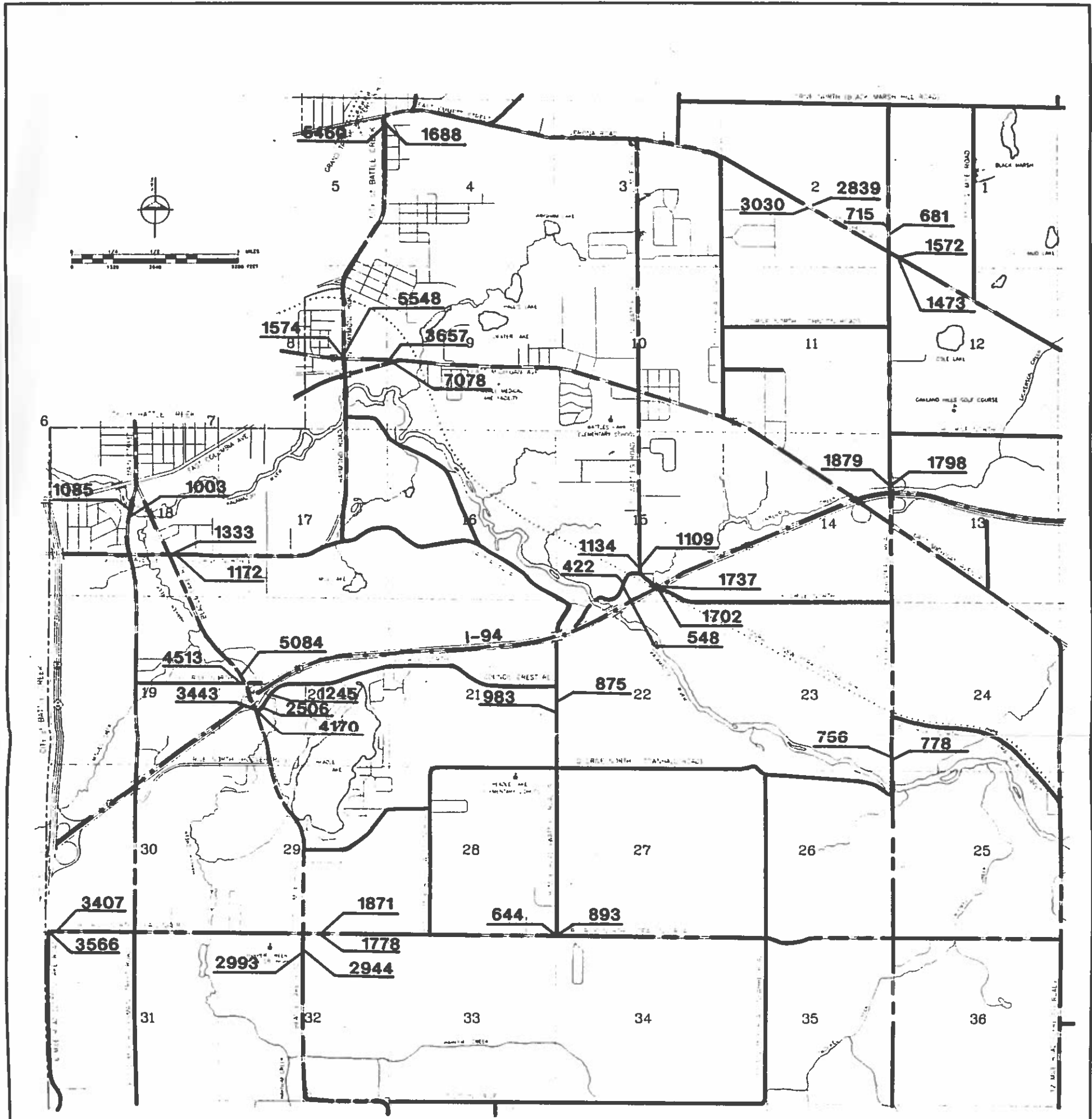
- OSC OPEN SPACE CONSERVATION
- AG/RR AGRICULTURAL/RURAL RESIDENTIAL
- LDR LOW DENSITY RESIDENTIAL
- MDR MEDIUM DENSITY RESIDENTIAL
- HDR HIGH DENSITY SINGLE FAMILY RESIDENTIAL
- MHP MANUFACTURED HOME PARK
- MFR MULTI-FAMILY RESIDENTIAL
- NC NEIGHBORHOOD COMMERCIAL
- GC GENERAL COMMERCIAL
- HC HIGHWAY COMMERCIAL/OFFICE
- IND INDUSTRIAL
- IMPROVED SERVICES BOUNDARY

**EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN**

**MASTER LAND USE PLAN**

OCTOBER 1994





EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

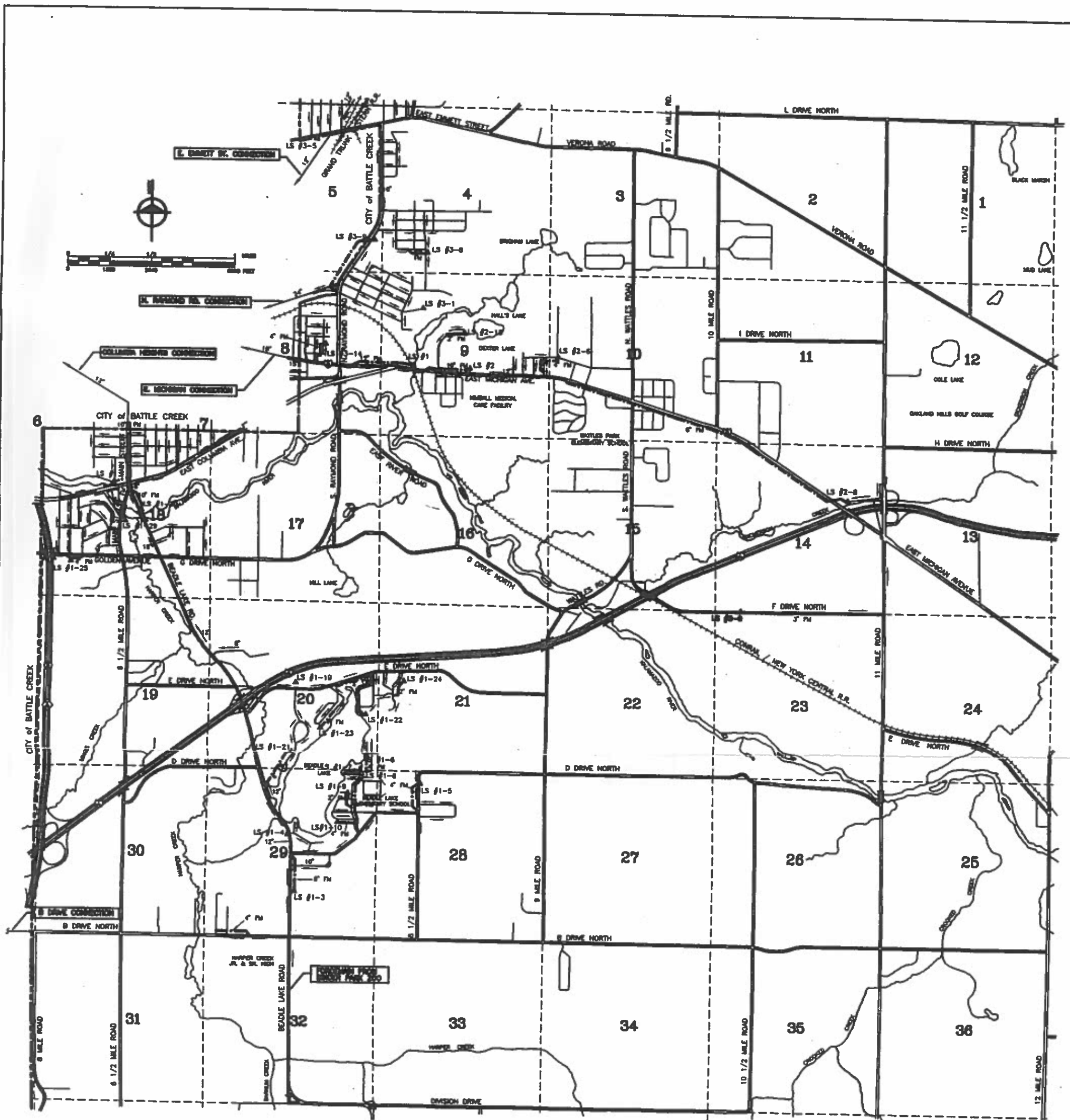
- INTERSTATE HIGHWAY
- — — STATE TRUNKLINE
- · — · — COUNTY PRIMARY
- — — COUNTY LOCAL
- 5315 ESTIMATED 24 HOUR TRAFFIC COUNT  
(May and June, 1992)

ROAD CLASSIFICATION MAP

MAP 6



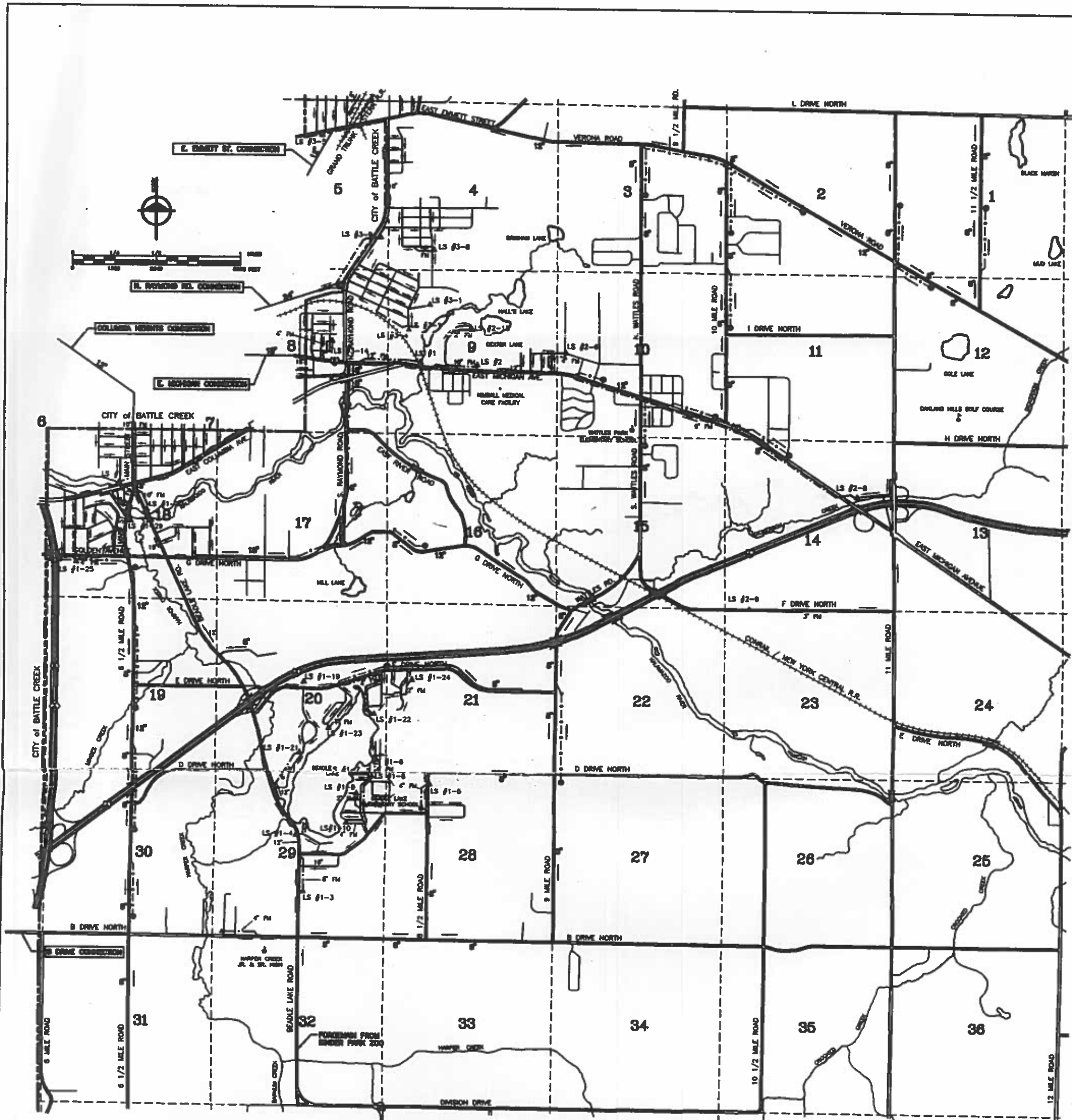
Source: Calhoun County Road Commission



EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

Figure 3  
EXISTING WASTEWATER COLLECTION SYSTEM  
(APRIL 1994)

- LS #1-1 LIFT STATION
- SAN. SEW. (IF UNLESS OTHERWISE NOTED)
- - - FORCEMAIN

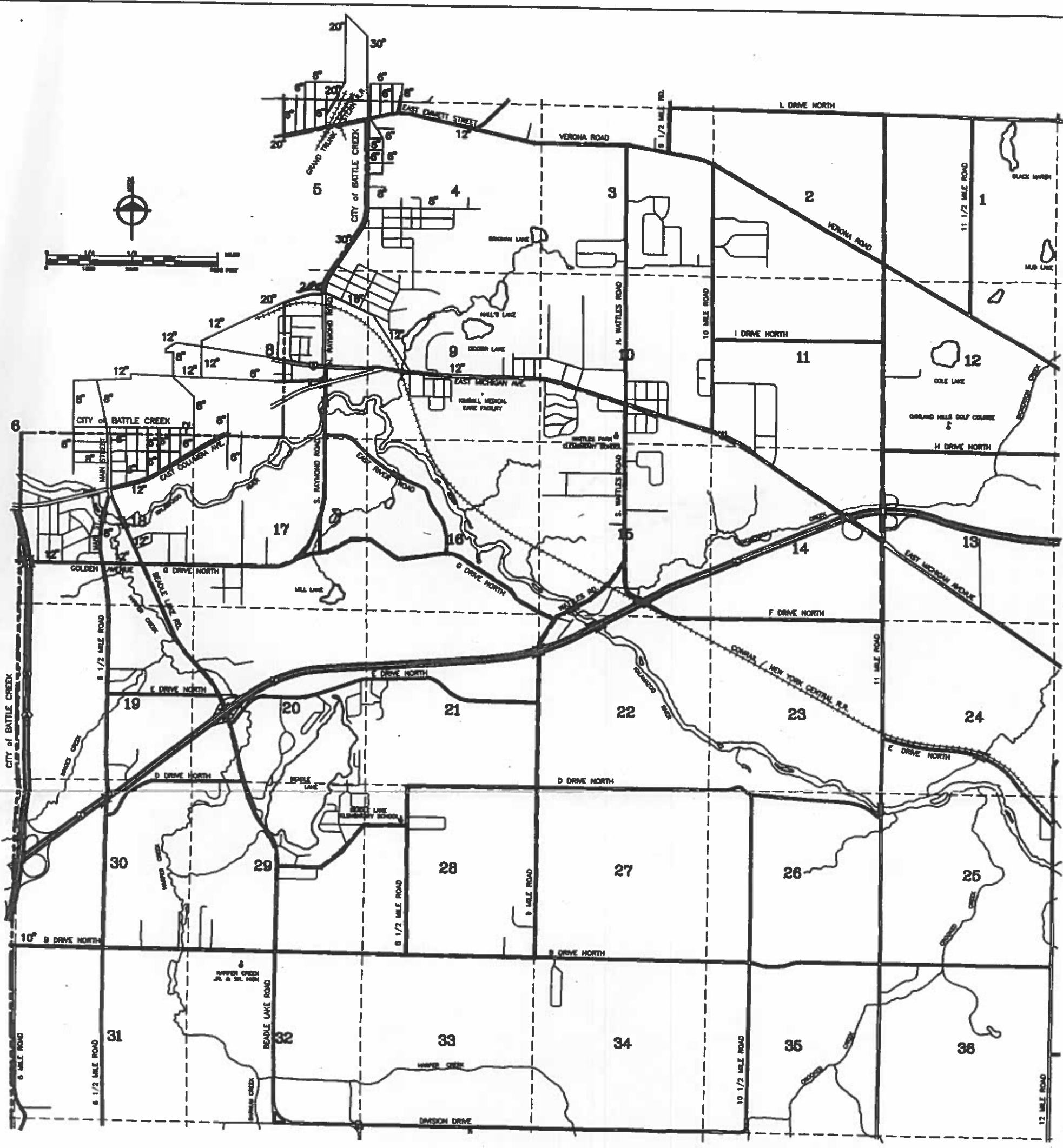


EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN

Figure 10  
WASTEWATER COLLECTION SYSTEM MASTER PLAN LAYOUT

EXISTING		FUTURE	
LS #	▲	●	▲
—	SAN. SEW.	—	SAN. SEW.
- - -	FORCEMAIN	- - -	FORCEMAIN





**EMMETT CHARTER TOWNSHIP  
CALHOUN COUNTY, MICHIGAN**

**Figure 14  
WATER SYSTEM MASTERPLAN LAYOUT**

- 6" EXISTING
- FUTURE 10"
- FUTURE 12"

EARTH  
TECH

