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A LAND USE AND TRAFFIC CIRCULATION PLAN FOR THE VILLAGE OF FREDONIA: 2000

FREDONIA

MILWAUKEE

WAUBEKA

FREDONIA

WAUBEDONIA
COUNTY PARK

OZAUKEE COUNTY WISCONSIN

FREDONIA
SAUKVILLE

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Special acknowledgement is due Mr. Patrick J. Meehan, Senior Planner, for his contribution to the preparation of this report.

**COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 38**

**A LAND USE AND TRAFFIC CIRCULATION PLAN
FOR THE VILLAGE OF FREDONIA: 2000**

**VILLAGE OF FREDONIA
OZAUKEE COUNTY
WISCONSIN**

Prepared by the

**Southeastern Wisconsin Regional Planning Commission
P. O. Box 769
Old Courthouse
916 N. East Avenue
Waukesha, Wisconsin 53187**

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September 1980

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September 21, 1980

Mr. Roland Moths
President
Village of Fredonia
936 Fredonia Avenue
Fredonia, Wisconsin

Dear Mr. Moths:

In June of 1977, the Village of Fredonia requested the Southeastern Wisconsin Regional Planning Commission to prepare a land use plan, street system plan, and plan implementation devices for the Village. The planning effort was initiated in December of 1977, and the Regional Planning Commission staff, working with the Village Plan Commission, has now completed all of the technical work required to prepare the plans and related implementation devices and is pleased to transmit those plans as documented in this report.

In addition to setting forth a recommended land use plan, recommended street system plan, and recommended plan implementation devices for the Village, this report presents pertinent information on the present stage of development of the Village, including information on population, employment, land use, sanitary sewerage, water supply, and transportation. In addition, information is presented on the topography and drainage pattern, soils, flood hazard areas, woodlands, wetlands, wildlife habitat areas, prime agricultural areas, and primary environmental corridor areas of the Village and environs, all of which constitute important considerations in any local planning effort. Based upon certain assumptions concerning future population and employment levels in the Village, the report, as already noted, sets forth a recommended land use plan, a supporting street system plan, and a recommended zoning ordinance for the Village. These plans, which are consistent with regional as well as local development objectives, are intended to serve as a point of departure for the making of day-to-day development decisions by village officials and as a basis for developing more detailed plans and plan implementation devices.

The Regional Planning Commission is appreciative of the assistance offered by the Village Board and the Village Plan Commission in the preparation of this report. The Commission staff stands ready to assist the Village in presenting the information and recommendations contained in this report to the public for its review and evaluation, and in adopting and implementing the recommendations contained herein.

Sincerely,



Kurt W. Bauer
Executive Director

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Chapter I

INTRODUCTION

In June 1977 the Village of Fredonia asked the Southeastern Wisconsin Regional Planning Commission for assistance in the preparation of a land use plan and an implementing zoning ordinance. The plan and implementing ordinance were intended to help guide and shape the development of the Village and surrounding areas in the public interest. The recommended land use plan and accompanying implementation devices, including a summary of recommended zoning districts presented in this report, have been prepared by the Commission staff in direct response to that request. This report consists of a summary of the findings and recommendations of the land use planning effort mounted in response to the village request and is intended to assist in defining the land use development objectives of the Village, and in identifying and attaining a spatial distribution of land use development in the village area which will achieve those objectives over time.

The land use planning effort was initiated in December 1977 and completed in December 1979. Data compiled by the Commission under regional and subregional planning programs were used in the planning effort, supplemented with information provided by village officials, residents of the Village, and special field surveys conducted by Commission staff. The total planning effort involves four phases. The first phase, completed in 1978, consisted of an inventory and analysis of the existing cultural and natural resource base of the Village and surrounding areas. The second phase involved the formulation of a set of land use development objectives for the Village and the preparation of population forecasts for the Village and surrounding study area. The third phase involved the preparation of a land use plan for the design year 2000 which could accommodate the forecast population level while meeting the land use development objectives. The plan, when adopted by the Village Plan Commission and Village Board, is intended to serve as a guide to village officials in the making of land use development decisions. The fourth phase, which will follow adoption of the land use plan, will be to amend the village zoning ordinance and zoning

districts. The zoning ordinance and accompanying zonings districts may serve as one of several implementation devices for plan attainment.

THE PLANNING AREA

The planning area consists of the Village of Fredonia and the unincorporated area within 1.5 miles of the Village. The Village is located in the northwest corner of Ozaukee County. As shown on Map 1, the village proper is bordered on the east, west, and north by the Town of Fredonia and on the south by both the Town of Fredonia and the Town of Saukville. The total study area includes portions of the Town of Fredonia, the Town of Saukville, the Town of Port Washington, and the Town of Belgium, all of which are in Ozaukee County. The study area encompasses an area of approximately 36 square miles.

REGIONAL INFLUENCES

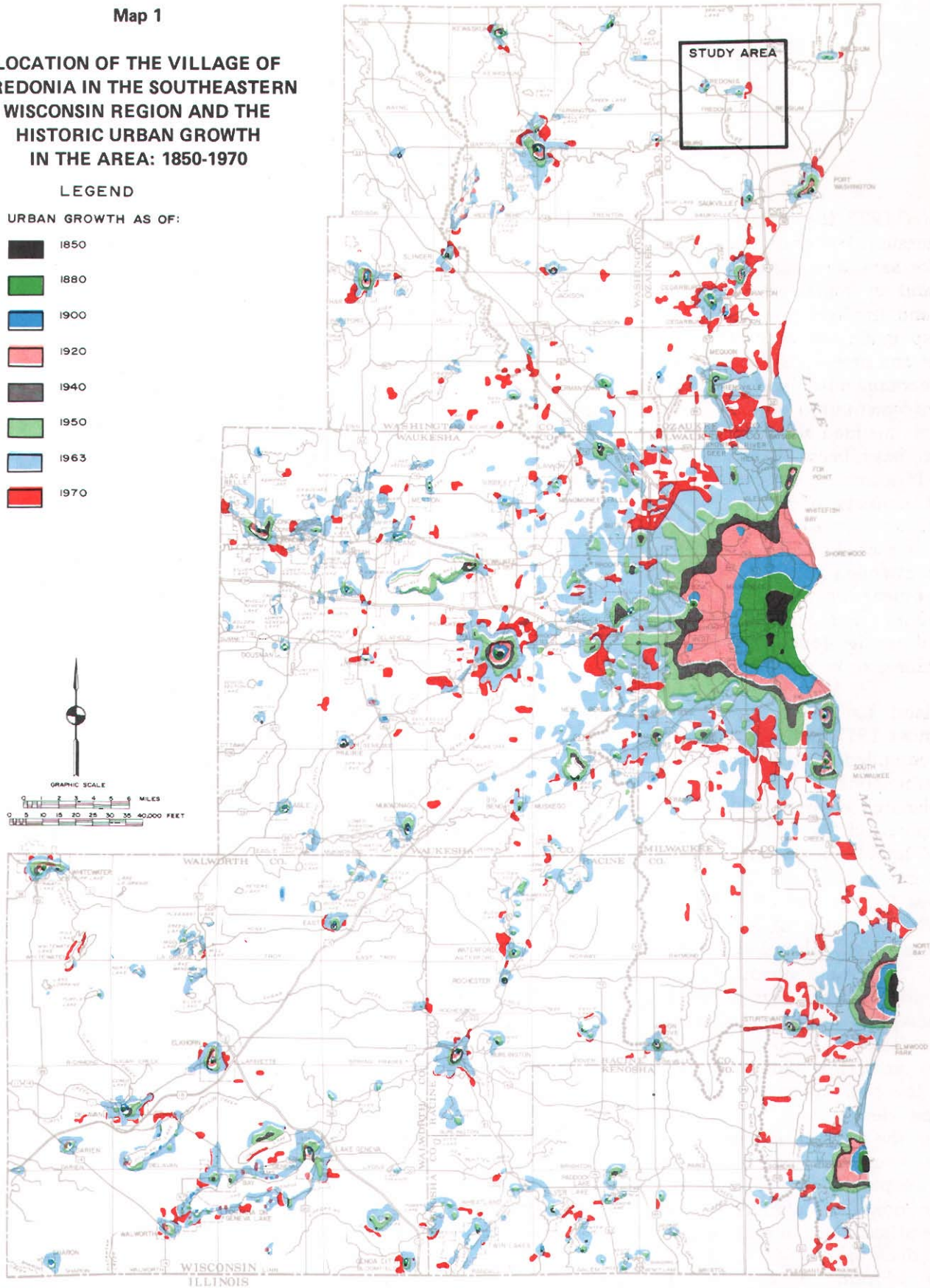
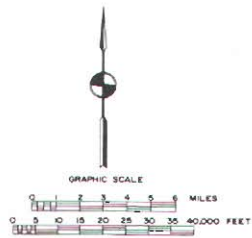
Sound planning practice dictates that local plans be prepared within the framework of adopted areawide plans. The Southeastern Wisconsin Regional Planning Commission is the official areawide planning organization for the seven-county Southeastern Wisconsin Region, which includes Ozaukee County and the Village of Fredonia. The Commission has, since its creation in 1960, pursued the preparation of an advisory plan for the development of the Region through the systematic formulation of those elements of such a plan most important to the units and agencies of government operating within the Region. The salient recommendations of the adopted regional plan elements applicable to the Village of Fredonia and unincorporated area within 1.5 miles of the Village are graphically summarized on Map 2. These elements include the regional land use plan, the regional transportation plan, the regional park and open space plan, the Milwaukee River watershed plan, the regional water quality management plan, and the regional housing plan.

Map 1

**LOCATION OF THE VILLAGE OF
FREDONIA IN THE SOUTHEASTERN
WISCONSIN REGION AND THE
HISTORIC URBAN GROWTH
IN THE AREA: 1850-1970**

LEGEND

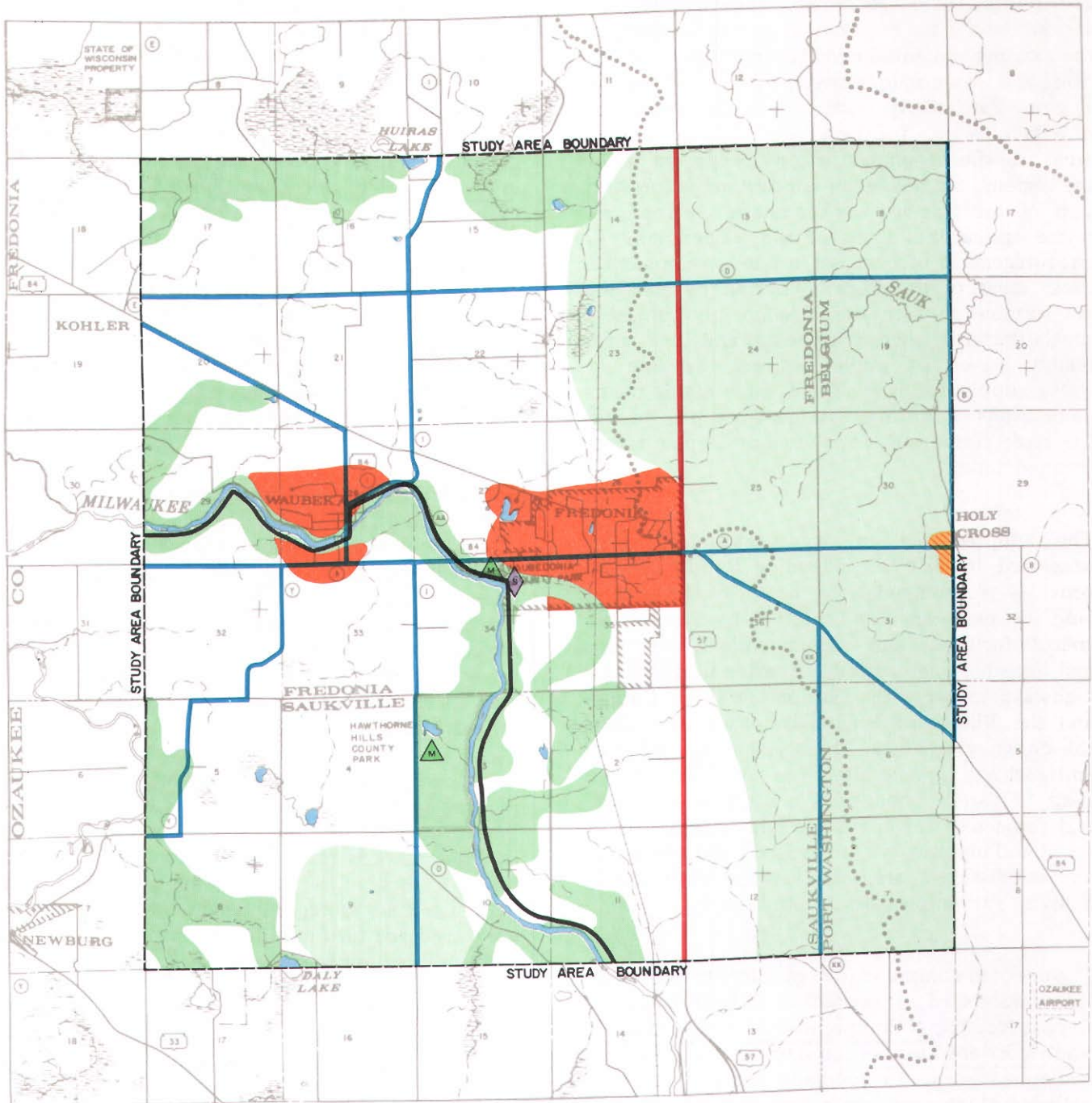
URBAN GROWTH AS OF:














Source: SEWRPC.

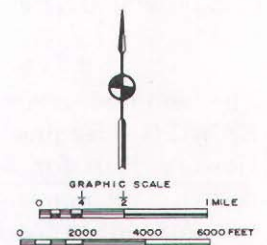
Map 2

**SELECTED ELEMENTS OF THE REGIONAL LAND USE, OPEN SPACE, AND
TRANSPORTATION PLANS FOR THE VILLAGE OF FREDONIA STUDY AREA: 2000**



LEGEND

- | | | | |
|---|---|---|-----------------------------------|
|  | LOW-DENSITY RESIDENTIAL
(0.7-2.2 DWELLING UNITS PER NET RESIDENTIAL ACRE) |  | PRIME AGRICULTURAL LAND |
|  | MEDIUM-DENSITY RESIDENTIAL
(2.3-6.9 DWELLING UNITS PER NET RESIDENTIAL ACRE) |  | OTHER AGRICULTURAL AND RURAL LAND |
|  | MAJOR PUBLIC OUTDOOR RECREATION CENTER
M MULTI-USE SITE |  | WATER |
|  | MAJOR UTILITY CENTER
S PUBLIC SEWAGE TREATMENT PLANT |  | RECREATION CORRIDOR |
|  | PRIMARY ENVIRONMENTAL CORRIDOR | ARTERIAL STREET AND HIGHWAY SYSTEM | |
| | |  | STATE TRUNK HIGHWAY |
| | |  | COUNTY TRUNK HIGHWAY |



Source: SEWRPC.

The adopted regional land use plan, as set forth in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, provides recommendations with respect to the amount, spatial distribution, and general arrangement of the various land uses required to serve the needs of the existing and anticipated future resident population and economic activity levels within the Region. Particularly pertinent to the preparation of a land use plan for the Village of Fredonia study area are the recommendations contained within the regional land use plan concerning the preservation of the primary environmental corridors and prime agricultural lands of the Region, and the encouragement of compact urban development in those areas of the Region covered by soils that are suitable to such use, that are not subject to special hazards, such as flooding, and that can be readily served by public sanitary sewerage and water supply facilities. These three major recommendations of the regional land use plan provide the basic framework for the land use plan recommended herein.

The adopted regional transportation plan, as presented in SEWRPC Planning Report No. 25, provides recommendations on how the regional land use plan can best be served by highway and transit facilities, and recommends a functional and jurisdictional system of arterial streets and highways to serve the Region, Ozaukee County, and the Village of Fredonia study area through the design year 2000. The regional arterial street and highway system plan was developed on the basis of careful, quantitative analyses of existing and projected traffic volume and existing arterial street and highway system capacity and continuity, and as presented herein provides the recommended highway system plan for the study area.

The adopted comprehensive plan for the Milwaukee River watershed, presented in SEWRPC Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed, contains certain important recommendations for floodland management, water pollution abatement, and water supply, all of which were considered in the preparation of the land use plan presented herein.

The adopted regional housing plan described in SEWRPC Planning Report No. 20, A Regional Housing Plan for Southeastern Wisconsin, makes certain recommendations concerning housing development in the Region. The report, in addition to addressing the Region as a whole, addresses smaller subregional areas known as "housing

analysis areas."¹ Housing analysis area No. 1 includes the Village and Town of Fredonia and the Village and Town of Belgium, housing analysis area No. 2 includes the City and Town of Port Washington, and housing analysis area No. 3 includes the City and Town of Saukville. The housing plan contains specific housing recommendations for the planning area, and these were considered in preparing the land use plan presented herein.

The adopted regional park and open space plan, presented in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, and a refinement of that plan for Ozaukee County, presented in SEWRPC Community Assistance Planning Report No. 23, A Park and Recreational Plan for Ozaukee County, address the needs of the Village of Fredonia study area with respect to park, recreation, and open space facilities. The recommendations contained in these two reports for meeting those needs were considered in preparing the land use plan presented herein.

The adopted regional water quality management plan described in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, contains recommendations for the location and sizing of sewage treatment plants, and the construction of trunk sewers. The plan also outlines those areas to be served by sanitary sewers, which were considered in the preparation of the land use plan presented herein.

The findings and recommendations of the aforementioned regional plan elements have important implications for any planning effort for the Village of Fredonia and environs. Pertinent recommendations of these plan elements are included in the land use plan presented herein by reference and are considered further in the inventory and analysis section of this report.

STUDY OBJECTIVES

The local planning effort documented herein has a two-fold purpose. First, this effort is intended to provide the Village of Fredonia with one of the key elements of a comprehensive community development plan—a land use plan. While constituting an important guide to community development, the local plan is also intended to carry the regional land use plan into greater depth and

¹ These subregional areas, when utilized for other analytical purposes, are also known as "planning analysis areas."

detail as necessary for sound regional as well as local planning and plan implementation. Second, the local planning effort documented herein is intended to produce the basis and outline for a comprehensive zoning ordinance for the Village which could constitute one of the means for carrying out the recommended land use plan.

THE PLANNING PROCESS

The land use plan presented herein was developed through a planning process consisting of the following seven steps: 1) inventory of the factors affecting land use development in the planning area; 2) analysis of inventory data and identification of problems; 3) formulation of land use development objectives, principles, and standards; 4) development of alternative land use plans; 5) evaluation of alternative plans; 6) plan selection and adoption; and 7) plan implementation and policy development.

Inventory

Reliable basic planning and engineering data, collected on a uniform, areawide basis, are absolutely essential to the formulation of workable development plans. Consequently, inventory becomes one of the first operational steps in any planning process. The crucial nature of factual information in the planning process should be evident, since no intelligent forecasts can be made or alternative courses of action evaluated without knowledge of the current state of the system being planned. The sound formulation of a land use plan for the Village of Fredonia and environs requires that factual data be developed on the existing land use pattern, on the potential demand for each of the various major land use categories, on the major determinants of these demands, and on local development objectives and constraints, as well as on the underlying natural resource and public utility base and its ability to support land use development.

The inventory not only provides data describing the existing conditions but also provides a basis for identifying existing and potential problems in the planning area. The inventory data are also crucial to the forecasting of future land use needs, formulation of alternative land use plans, and evaluation of alternative plans.

Formulation of Objectives

An objective is a goal or end toward the attainment of which plans and policies are directed. Planning

is a rational process for formulating and attaining objectives. The objectives developed serve as a guide to the preparation of alternative plans and provide an important basis for the selection of a recommended plan from among the alternatives considered. Objectives may change as new information is developed or as a selection is attempted from alternative plans. The formulation of objectives should involve the active participation of citizens as well as elected and appointed public officials.

Development of Alternative Plan Designs

Although the preparation of forecasts is not planning, future needs must be anticipated in the development of alternative plans. In the planning effort, forecasts are required of future events and conditions which are outside the scope of the system to be planned. The future demand for land will depend primarily upon the size of the future population and the nature of future economic activity within the study area. The control of changes in population and economic activity levels, however, lies largely outside the scope of local government activity and, therefore, outside the scope of the local planning process. Future population and economic activity levels must, therefore, be forecast. These levels, in turn, can be used to determine the probable future demand for each of the various categories of land use. This is not to say, however, that governmental policies at the local level cannot influence the course of economic development and, consequently, of population growth.

Plan Evaluation and Selection

Alternative plans should be evaluated based upon their relative ability to attain the development objectives set forth by the Village Plan Commission. Such evaluation involves the use of data obtained during the inventory and analysis stages of the planning process.

Plan Implementation

Implementation of the plan presented herein will require the use of several planning tools of a legal nature. Subdivision regulations, specifying standards to be followed in the laying out of new streets, lots, and improvements in conformance with the plan, should be used in the review of plats and certified survey plats. A zoning ordinance and accompanying zoning map should be used to specify the kinds of land use, the types of building arrangements, the land use intensities, and the supporting facilities permissible in the Village in

order to carry out the intent of the land use plan. An official map should be used which shows the right-of-way lines and site boundaries of streets, highways, parkways, parks, and playgrounds which, according to the land use plan, should be reserved for future public use. The implementation of the

plan is also achieved through the formulation of policies which will ensure plan implementation. The policies should be based upon the desired objectives of the plan and directed toward their respective attainment.

Chapter II

INVENTORY AND ANALYSIS

HISTORY

The history of the Village of Fredonia can be traced to the date of the first permanent settler in the Town of Fredonia. In 1844, Hiram King established residence near an Indian village whose Chief was named Waubeka, for whom the community of Waubeka was later named. In 1847, the Town of Fredonia was formally established from a part of what originally had been the Town of Port Washington. The name Fredonia, given to the area by early settlers, has been translated to mean "free gifts" or "the land where things are freely done." The majority of the early settlers were farmers, and agriculture has remained as the dominant land use in the Town to this day.

In 1848, William Bell established the first post office in the Town of Fredonia on the old Fond du Lac Road. By the late 1800's, the unincorporated Village of Waubeka had become the principal urban community in the Town. The Village of Waubeka boasted two pump factories, a cheese factory, and a tannery, in addition to the mill and dam that had been built to use the water power of the Milwaukee River. In 1872, an event occurred that was to influence the development pattern in the Town and particularly in Waubeka. The Milwaukee & Northern Railway (now Chicago, Milwaukee, St. Paul & Pacific Railroad) planned to build a northern division connecting the Cities of Milwaukee and Green Bay. The railway considered placing the new line through Waubeka; however, two men, Peter Martin and Peter Paulus, each donated a parcel of land to the railroad for the construction of a station, yards, and a stockyard in the area of what was locally called Stoney Creek. As a result, the railroad was built in its present location, and "Fredonia Station" became the first structure built in the area that was to become the Village of Fredonia.

After the opening of the railroad, urban development concentrated at this location in the Town instead of at the previously established settlement of Waubeka. The Village of Fredonia was incorporated in May 1922, with an area of 675.7 acres and a population of 272.

Historic subdivision plats for the Village of Fredonia and environs for the years 1920 through 1978 are listed in Table 1. Considerable platting took place in the Village in 1938 with the platting of the Assessors Plats of Fredonia Village. From 1948 through 1978, some 223 residential lots were platted on approximately 138 acres of land in both the Village and Town of Fredonia. Most of this platting activity took place since 1963.

POPULATION

Information on the size, characteristics, and distribution of the resident population of the Village and surrounding area, and on anticipated changes in these demographic factors over time, is essential to sound local planning since, in the final analysis, the purpose of any local planning program is to benefit the people of the community by maintaining and enhancing living and working conditions in the area. Certain of the land use needs which a land use plan seeks to meet are directly related to the existing and probable future population levels of the planning area. The preparation of population forecasts for a community, such as the Village of Fredonia, located in a dynamic Region is a particularly difficult task, fraught with uncertainties and subject to periodic revision as new information becomes available and may dictate.

As a part of the process of forecasting population levels within the Region, the Commission has delineated geographic planning analysis areas (PAA's) for the entire seven-county Region. There are a total of 60 such PAA's within the Region. Basic population forecasts are prepared by the Commission for the Region as a whole and for each county in the Region. Within each county, however, the forecast population is allocated to the individual PAA's on the basis of the regional land use plan recommendations for that specific area. In effect, the degree of implementation of the regional land use plan will determine whether the forecast population levels are not reached, reached, or surpassed within each PAA. As shown on Map 3, the Village of Fredonia study area is located in parts of PAA's 1, 2, and 3. Only Sections 6 and 7 of the Town of Port Washington (PAA 2) lie within the village study area; and only Sections

Table 1

HISTORIC SUBDIVISION PLATS FOR THE VILLAGE OF FREDONIA STUDY AREA: 1920-1978

Subdivision Name	U. S. Public Land Survey		Year Recorded	Number of Lots	Gross Area Platted (acres)	Net Residential Area (acres)	Percent of Subdivision in Fredonia Study Area
	Section	Quarter Section					
Village of Fredonia Plats							
Plateau Rapids	26	SW	1929	106	.. ^a	.. ^a	100
Assessors Plats 1-7 of the Village of Fredonia	26	SE, SW	1938	115	686.50	650.19	100
	34	NE					
	35	NE, NW					
Leiders Subdivision	26	SE	1948	15	3.76	2.91	100
Jankes Addition	26	SE	1948	10	2.03	1.87	100
Meyers Addition	35	NW	1948	7	1.80	1.30	100
Jankes Addition No. 2	26	SE	1961	6	2.85	2.55	100
Rolling Acres	26	SE	1963	23	11.68	8.02	100
Meadow Brook Estates	35	NE	1963	15	6.14	4.37	100
Meadow Brook Estates Addition No. 1	35	NE	1969	12	5.29	3.62	100
First Addition to Rolling Acres	26	SE	1970	12	10.50	3.42	100
Second Addition to Rolling Acres	26	SE	1971	23	12.17	8.58	100
Meadow Brook Estates Addition No. 2	35	NE	1972	17	8.30	6.41	100
Fox Glen	27	SE	1973	25	16.44	6.79	100
	26	SW					
Fox Glen Addition No. 1	27	SE	1976	33	13.01		100
Town of Fredonia Plats							
Tagay Tay Ridge Subdivision	28	NW	1966	25	44.77	34.87	100
Town of Belgium Plats							
Wellensteins Addition	30	NW	1923	21	4.13	3.51	100
South Cedar Beach	30	NW	1927	45	24.10	24.10	90
	30	SW					
Town of Saukville Plats							
River View Forest	10	SE	1928	45	16.42	13.94	100
River View Forest No. 2	10	SE	1928	18	10.22	9.54	100
Deerfield Hills	10	SE	1975	35	85.05	69.69	2

^a Gross area and net residential acreage of the Plateau Rapids is included in the Village of Fredonia Assessors Plat measurements.

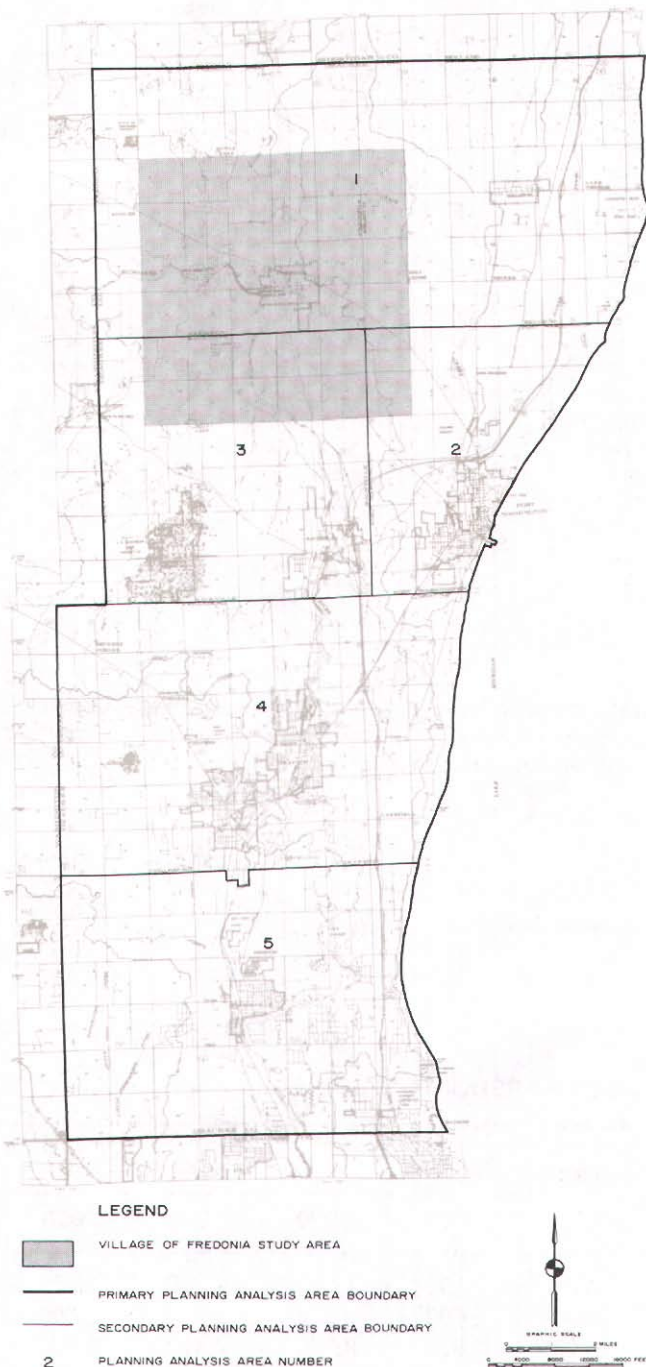
Source: SEWRPC.

1, 2, 3, 4, 5, 7, 8, 9, 10, 11, and 12 of the Town of Saukville (PAA 3) lie within the Village study area. The historic and forecast population levels for the Village of Fredonia study area are presented in Table 2. Table 2 indicates the historic growth of SEWRPC Planning Analysis Area No. 1, of which the Village of Fredonia is a part, and the growth of the adjoining Town of Fredonia, and presents

population forecasts for the Village of Fredonia study area. Because of the small portions of PAA's 2 and 3 which lie within the village study area, population figures for these PAA's are not included in the table. The historic data through 1970 are derived from the U. S. Census of Population, the 1978 data are estimates prepared by the Wisconsin Department of Administration, and the 1980,

Map 3

**LOCATION OF THE VILLAGE OF
FREDONIA STUDY AREA WITHIN
PLANNING ANALYSIS AREAS 1, 2, AND 3**



Source: SEWRPC.

1990, and 2000 data are allocations of the population forecasts prepared by the Regional Planning Commission.

As shown in Table 2, the resident population of the four municipalities encompassed within Planning Analysis Area No. 1—the Town and Village of Fredonia and the Town and Village of Belgium—is collectively expected to increase over the next two decades from 6,068 in 1978 to 7,100 in 2000, an increase of 1,032, or 17 percent. This forecast increase is allocated based on a recommendation of the adopted regional land use plan that urban development within the Region be encouraged to occur in areas that are now or can be readily served by public sanitary sewer facilities. Residential development in rural areas would be encouraged to occur only at gross densities of five acres or more per dwelling unit. If these regional land use plan recommendations are followed, it is possible that the forecast population of about 4,100 residents in the Village of Fredonia study area by the year 2000 can be achieved.

In 1970 the U. S. Bureau of the Census reported the population of the Village as entirely white and almost evenly distributed by sex, with 49 percent of the population female and 51 percent male. Actual and forecast population levels for the Village of Fredonia study area are shown in Tables 2 and 3. Table 3 presents two population forecasts for the study area—Forecast A, which is based upon the year 2000 regional land use plan, and Forecast B, which is based upon recent trends in population growth. Forecast B indicates 1,000 more persons residing in the Village of Fredonia study area than Forecast A by the year 2000. Forecast B population estimates were developed because the 1978 actual population surpassed the Forecast A population for the study area. Comparisons of the actual and forecast population levels for the Village of Fredonia and Village of Fredonia study area. Comparisons are shown graphically in Figure 1.

Table 4 presents population forecasts for the Village of Fredonia study area by age group for the years 1980, 1990, and 2000. The table is based upon 1970 U. S. Census data and upon forecasts as developed by the Regional Planning Commission. Age distribution patterns are important in planning for schools, parks, and other community facilities.

Table 2

**ACTUAL AND FORECAST POPULATION LEVELS FOR SEWRPC PLANNING ANALYSIS AREA NO. 1,
VILLAGE OF FREDONIA, TOWN OF FREDONIA, AND THE VILLAGE OF FREDONIA STUDY AREA: 1850-2000**

Year	SEWRPC Planning Analysis Area No. 1 ^a		Village of Fredonia ^b			Town of Fredonia		Village of Fredonia Study Area	
	Population	Percent Change	Population	Percent Change	Percent of Study Area	Population	Percent Change	Population	Percent Change
1850	1,805	--	N/A	--	--	671	--	N/A	--
1860	4,008	122.0	N/A	N/A	N/A	1,785	166.0	N/A	N/A
1870	3,667	- 8.5	N/A	N/A	N/A	1,688	- 5.4	N/A	N/A
1880	3,787	3.2	N/A	N/A	N/A	1,839	8.9	N/A	N/A
1890	3,356	- 11.4	N/A	N/A	N/A	1,666	- 9.4	N/A	N/A
1900	3,199	- 4.7	N/A	N/A	N/A	1,652	- 0.8	N/A	N/A
1910	3,064	- 4.2	N/A	N/A	N/A	1,421	- 14.0	N/A	N/A
1920	2,960	- 3.4	N/A	N/A	N/A	1,444	1.6	N/A	N/A
1930	3,029	2.3	312	N/A	N/A	1,149	- 20.4	N/A	N/A
1940	3,160	4.3	356	14.1	N/A	1,164	1.3	N/A	N/A
1950	3,589	13.6	471	32.3	N/A	1,191	2.3	N/A	N/A
1960	4,474	24.7	710	50.7	N/A	1,475	23.8	N/A	N/A
1970	5,225	16.8	1,045	47.2	38.0	1,746	18.4	2,748	N/A
1978	6,068	5.9	1,590	52.2	45.7	2,075	9.1	3,478	26.6
1980 ^c	6,100	16.7	1,660	4.4	46.7	1,806	3.4	3,550	2.1
1990 ^c	6,600	8.2	1,990	19.9	51.6	1,865	3.3	3,855	8.6
2000 ^c	7,100	7.6	2,140	7.5	52.2	1,924	3.2	4,100	6.3

NOTE: N/A indicates data not available.

^a SEWRPC Planning Analysis Area No. 1 is composed of the Town of Fredonia, Village of Fredonia, Town of Belgium, and Village of Belgium. Planning analysis areas are homogenous demographic and geographic areas having a community of interest developed and used by SEWRPC for general planning studies. The Southeastern Wisconsin Region is divided into 60 such planning analysis areas.

^b In 1922, the Village of Fredonia was incorporated within the Town of Fredonia.

^c Forecast.

Source: U. S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC.

Table 3

POPULATION FORECASTS FOR THE VILLAGE OF FREDONIA STUDY AREA

Area	1970	1978	Forecast A ^a			Forecast B ^b		
			1980	1990	2000	1980	1990	2000
Village of Fredonia . .	1,045	1,590	1,660	1,990	2,140	1,850	2,200	2,750
Waubeka	500	530	550	600	600	500	575	600
Town of Fredonia . . .	1,746	2,075	2,060	1,990	1,920	2,075	2,300	2,600
Village of Fredonia Study Area.	2,748	3,478	3,550	3,855	4,100	3,550	4,250	5,100

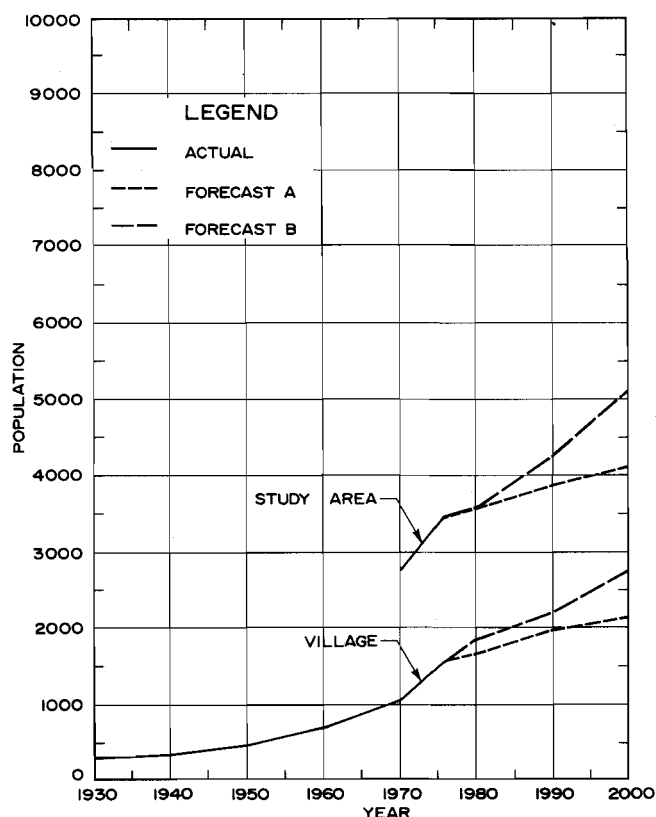
^a Based upon year 2000 regional land use plan.

^b Based upon existing development trends.

Source: SEWRPC.

Figure 1

ACTUAL AND FORECAST POPULATION LEVELS FOR THE VILLAGE OF FREDONIA AND STUDY AREA



Source: SEWRPC.

The housing and population characteristics data for the Village of Fredonia study area, as summarized in Table 5, indicate a rapid growth in both population and housing units between 1960 and 1970 and between 1970 and 1978. The number of persons per housing unit has increased by about 7 percent since 1970, bringing the number of persons per dwelling unit to 3.78 in 1978. This phenomenon is contrary to regional, state, and national trends, all of which have evidenced significant reductions in household size. In 1978, based upon building permits issued since the 1970 U.S. Census of Population and field investigations, the total number of housing units in the Village proper was 422—a 110 percent increase over the 1960 figure.

Table 6 shows the number and type of building permits issued in the Village of Fredonia from 1970 to 1976. The bulk of the building permits issued during this period were for single-family home construction. The table shows 1970, 1971, 1975, and 1976 as peak years of building activity in the Village of Fredonia during this time period.

ECONOMY

The 1970 median family income in the Village of Fredonia, as indicated in Table 7, was \$12,652. That is, 50 percent of the families in the Village had a yearly family income over \$12,652 and 50 percent had an income under \$12,652. According to the Department of Housing and Urban Development (HUD), low- and moderate-income families, or lower-income families, are those families whose incomes do not exceed 80 percent of the median family income of the Village (with adjustments for smaller and larger families). Based upon the data shown in Table 7, 62 families in the Village—approximately 27 percent of all families in the Village—were lower-income families having a yearly family income of \$10,122 or less in 1970. Very low-income families are those with a yearly income totaling less than 50 percent of the Village median family income; this income was \$6,326 for the Village in 1970. Based on Table 7, 32 families, or 14 percent of all families in the Village, were very low-income families in 1970.

In 1970 approximately 433 persons, or 41 percent of the village population, was in the labor force, which by definition consists of persons 14 years and over classified as employed or unemployed plus members of the Armed Forces. Of the total 433 persons in the labor force in 1970, nine, or 2 percent, were unemployed. Table 8 shows the employed population 14 years of age and over by occupation and sex in the Village of Fredonia in 1970. According to Table 8, white collar workers, comprised of professional, technical, and kindred workers, sales workers, clerical and kindred workers, and managers and administrators (except farm), represent 163 employed persons, or 38 percent of the employed population. Blue collar workers, comprised of craftsmen and kindred workers, operatives (except transport), transport equipment operatives, and laborers (except farm), represent 198 employed persons, or approximately 47 percent of the employed population. Service workers, comprised of private household workers, represent 39 employed persons, or 9 percent of the employed population. There were no farm-related occupa-

Table 4

**POPULATION FORECASTS FOR THE VILLAGE OF FREDONIA
STUDY AREA BY AGE GROUP: 1980, 1990, AND 2000**

Age Group	1970 Census Population		Forecast Population ^a					
			1980		1990		2000	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Under 5 (preschool population)	287	10.43	314	8.84	285	7.39	247	6.03
5-9 (elementary school population) . .	354	12.90	387	10.91	348	9.02	292	7.12
10-13 (middle school population).	281	10.25	305	8.60	279	7.23	236	5.76
14-17 (high school population)	249	9.06	285	8.04	270	7.00	254	6.20
18-64 (adult population).	1,365	49.66	1,955	55.06	2,307	59.86	2,643	64.45
65 years or Older (elderly population).	212	7.70	304	8.55	366	9.50	428	10.44
Total	2,748	100.00	3,550	100.00	3,855	100.00	4,100	100.00

^a Based upon year 2000 regional land use plan.

Source: SEWRPC.

Table 5

POPULATION AND HOUSING CHARACTERISTICS OF THE VILLAGE OF FREDONIA: 1960-1978

Characteristics	Year			Difference 1960-1978	
	1960	1970	1978	Number	Percent
Total Population	710	1,045	1,590	880	123.9
Total Housing Units	201	297	422	221	109.9
Persons per Housing Unit	3.53	3.51	3.78	0.25	7.1
Owner-Occupied Housing Units . . .	161	223	N/A	N/A	N/A
Renter-Occupied Housing Units . . .	29	69	N/A	N/A	N/A
Vacant Housing Units	11	5	N/A	N/A	N/A

NOTE: N/A indicates data not available.

Source: U. S. Bureau of Census and SEWRPC.

Table 6

**BUILDING PERMITS ISSUED IN THE
VILLAGE OF FREDONIA: 1970-1978**

Year	Number of Permits Issued	Type of Residential Structure
1970	19	Single-family
1971	17	Single-family
	1	Six-family
	1	Four-family
1972	8	Single-family
1973	8	Single-family
	4	Condominiums
1974	11	Single-family
	4	Apartments
1975	18	N/A
1976	17	Single-family
	1	Four-family
1977	14	Single-family
	2	Two-family
1978	13	Single-family
	2	Two-family
Total	140	--

NOTE: N/A indicates data not available.

Source: SEWRPC.

Table 7

FAMILY INCOME IN THE VILLAGE OF FREDONIA: 1970

Income Range	Number of Families	Percent of Total
Less than \$ 1,000	0	0.00
\$ 1,000 - \$ 1,999	5	2.20
\$ 2,000 - \$ 2,999	5	2.20
\$ 3,000 - \$ 3,999	5	2.20
\$ 4,000 - \$ 4,999	11	4.85
\$ 5,000 - \$ 5,999	6	2.64
\$ 6,000 - \$ 6,999	0	0.00
\$ 7,000 - \$ 7,999	4	1.76
\$ 8,000 - \$ 8,999	10	4.41
\$ 9,000 - \$ 9,999	13	5.73
\$10,000 - \$11,999	45	19.82
\$12,000 - \$14,999	46	20.26
\$15,000 - \$24,999	54	23.79
\$25,000 - \$49,999	18	7.93
\$50,000 or More	5	2.20
Total	227	100.00
Median	\$12,652	--

Source: U. S. Bureau of the Census and SEWRPC.

tions reported in 1970 in the Village. However, a substantial amount of land within the Village was devoted to agricultural and open space uses. This apparent irregularity may be attributed to the small sample used to determine occupation by the Bureau of the Census, and to the fact that many farmers hold multiple jobs and list their nonfarm job as their principal source of income.

THE NATURAL RESOURCE BASE

The natural resources of an area are vital to its economic development and its ability to provide a pleasant and habitable environment for human

life. Natural resources not only condition, but are conditioned by, growth and development. Meaningful planning efforts must, therefore, recognize the existence of a limited natural resource base to which urban and rural development must be properly adjusted if serious environmental and developmental problems are to be avoided. This is particularly true in the Village of Fredonia study area, where an increasing number of urbanites are becoming year-round residents seeking not only the varied recreational opportunities that are offered by this and the surrounding areas, but also the feeling of open space which these areas lend to residential development. A sound evaluation

Table 8

**EMPLOYED POPULATION 14 YEARS OF AGE AND OVER BY
OCCUPATION AND SEX IN THE VILLAGE OF FREDONIA: 1970**

Occupation	Male		Female		Total	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Professional, Technical, and Kindred Workers . . .	25	9.58	11	6.75	36	8.49
Managers, Administrators, Except Farm.	51	19.54	5	3.07	56	13.21
Sales Workers	4	1.53	5	3.07	9	2.12
Clerical and Kindred Workers.	13	4.98	49	30.06	62	14.62
Craftsmen, Foremen, and Kindred Workers	36	13.79	6	3.68	42	9.91
Operatives, Except Transport.	95	36.40	33	20.25	128	30.19
Transport Equipment Operatives	9	3.45	--	--	9	2.12
Labor, Except Farm.	19	7.28	--	--	19	4.48
Farmers and Farm Managers	--	--	--	--	--	--
Farm Laborers and Foremen	--	--	--	--	--	--
Service Workers, Except Private Household	5	1.92	34	20.86	39	9.20
Private Household Workers	--	--	--	--	--	--
Occupation Not Reported.	4	1.53	20	12.27	24	5.66
Total	261	100.00	163	100.00	424	100.00

Source: U. S. Bureau of the Census and SEWRPC.

and analysis of the natural resource capabilities is, therefore, particularly important to planning for the development of the area.

For the purposes of the Village of Fredonia land use plan, the principal elements of the natural resource base were defined as 1) the physiography, including principal topographic features and watershed and related subbasin locations; 2) soil characteristics; 3) wetland and lowland features, including surface water areas, wetland areas, areas of poorly drained soils, areas of organic soils, and floodland areas; 4) woodland areas; and 5) wildlife habitat areas. Sites having recreational and historic value, while not strictly a part of the natural resource base, are closely linked to the underlying resource base and were, therefore, considered as an integral part of the base for land use planning purposes.

Without a proper understanding and recognition of these elements and of the interrelationships which exist between them, human use and altera-

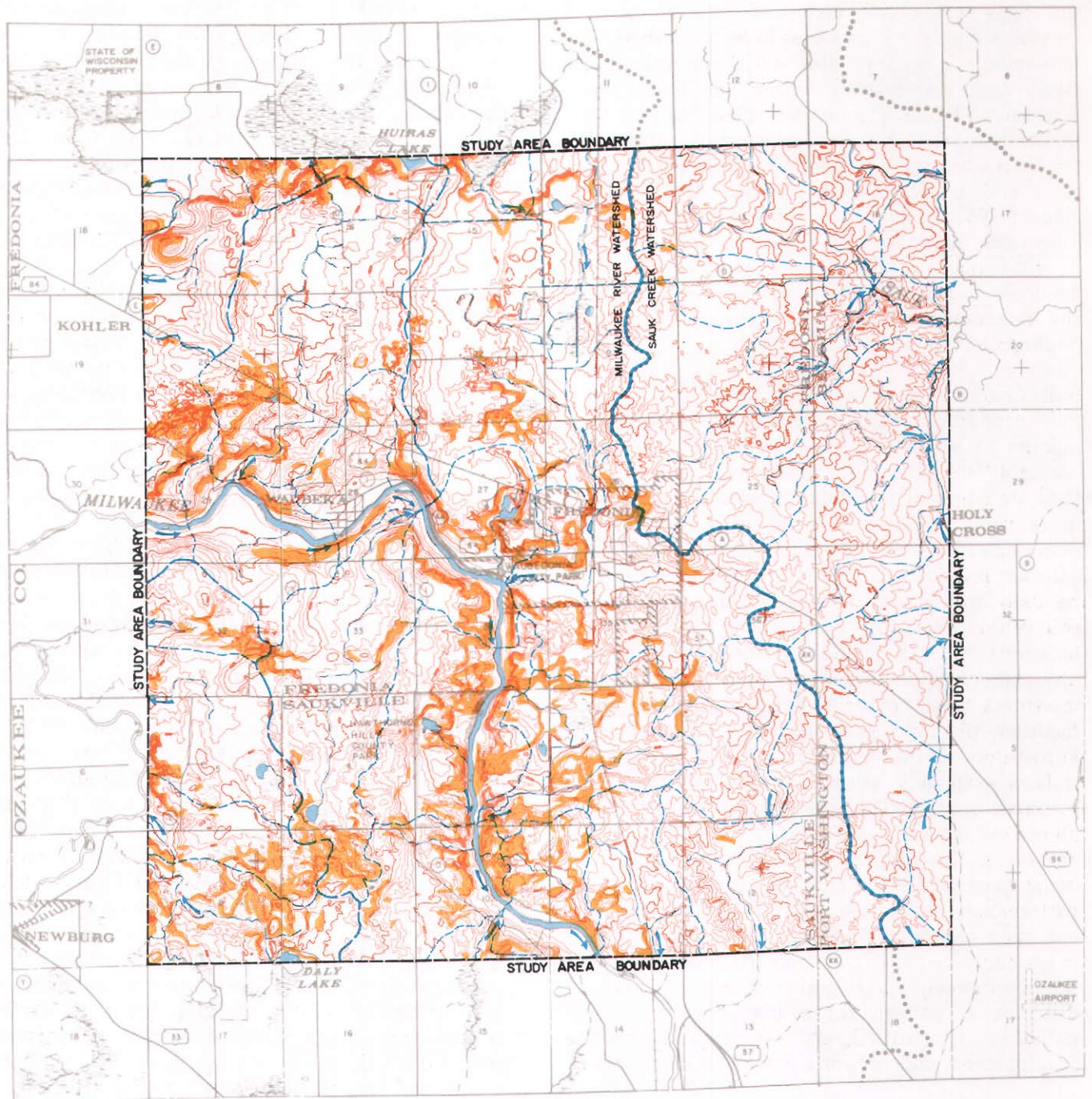
tion of the natural environment proceeds at the risk of excessive costs in terms of both monetary expenditures and environmental degradation. The natural resource base is subject to grave misuse through improper land use and transportation facility development. Such misuse may lead to severe environmental problems which are difficult and costly to correct, and to the deterioration and destruction of the natural resource base itself. Intelligent selection of the most desirable land use plan from among the alternatives available must, therefore, be based in part upon a careful assessment of the effects of each plan upon the supporting natural resource base.

Topographic and Related Watershed Features

The principal topographic and related watershed features of the study area are shown on Map 4. The western half of the study area is characterized by rolling terrain with slopes of up to 12 percent and steep slopes exceeding 12 percent along the Milwaukee River. The eastern half of the study area is characterized by gently rolling terrain.

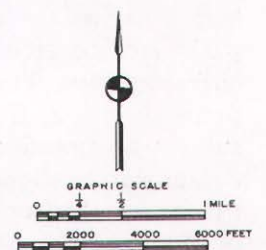
Map 4

PRINCIPAL TOPOGRAPHIC AND WATERSHED FEATURES IN THE VILLAGE OF FREDONIA STUDY AREA



LEGEND

- | | | | |
|--|------------------------------------|--|--|
| | CONTOUR INTERVAL -- 10 FEET | | DIRECTION OF FLOW |
| | MAJOR WATERSHED BOUNDARY | | WATER |
| | SUBWATERSHED BOUNDARY | | TOPOGRAPHY WITH 12 PERCENT SLOPE OR MORE |
| | SUBBASIN BOUNDARY | | |
| | PERENNIAL STREAM OR WATERCOURSE | | |
| | INTERMITTENT STREAM OR WATERCOURSE | | |



Source: SEWRPC.

The Village of Fredonia study area is located within two major watersheds, as shown on Map 4. Twenty-five square miles in the western portion of the study area, or 69 percent of the study area, is located within the Milwaukee River watershed. The remaining 11 square miles, or 31 percent of the study area, are located within the Sauk Creek watershed. While a watershed plan has not been prepared for the Sauk Creek watershed, such a plan has been completed for the Milwaukee River watershed and is documented in SEWRPC Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed. The recommendations of that plan as they apply to the Village of Fredonia study area have been incorporated into the recommended land use plan for the Village documented herein.

Soils Characteristics

Soil properties exert a strong influence on the manner in which man uses land. Soils are an irreplaceable resource, and mounting pressures upon land are constantly making this resource more and more valuable. A need exists, therefore, in any planning effort to examine not only how land and soils are presently used, but also how they can best be used and managed. This requires an areawide soil suitability study which maps the geographic locations of various kinds of soils; identifies their physical, chemical, and biological properties; and interprets these properties for land use and public facilities planning. The resulting comprehensive knowledge of the character and suitability of the soils is extremely valuable in every phase of the planning process. The soils information presented herein constituted a particularly important consideration in the preparation of the land use plan, being essential for the analysis of existing land use patterns, alternative plan synthesis and evaluation, and plan selection. The soil assessments are used in conjunction with the other data presented for the development and selection of a desirable spatial distribution pattern for residential, commercial, industrial, agricultural, and recreational land use development, and for various facility locations.

Map 5 shows the areas of the Village of Fredonia study area covered by soils possessing five selected characteristics. These characteristics are: 1) slow permeability; 2) fluctuating or high water table or subject to ponding, overwash, or runoff hazard; 3) subject to flooding or overflow; 4) underlain by shallow bedrock; and 5) slopes of 12 percent or greater.

Soils which exhibit a slow permeability rate are most abundant in the eastern half of the study area, as are soils with a fluctuating or high water table or which are subject to ponding, overwash, or runoff hazard. Soils subject to flooding or overflow are found in small areas along the Milwaukee River and in various other scattered locations throughout the study area. Soils underlain by shallow bedrock, soils in which septic tank filter fields are subject to siltation, and soils in which the groundwater table is subject to contamination are found in only one area—along the southern bank of the Milwaukee River west of Waubeka. As noted earlier, soils with slopes exceeding 12 percent are generally located along the Milwaukee River, in the extreme southwest corner of the study area, and along the northern border of the western half of the study area. Smaller areas of land having slopes 12 percent or greater are scattered throughout the western half of the study area. Only a very few areas of slopes in excess of 12 percent are found in the eastern half of the study area.

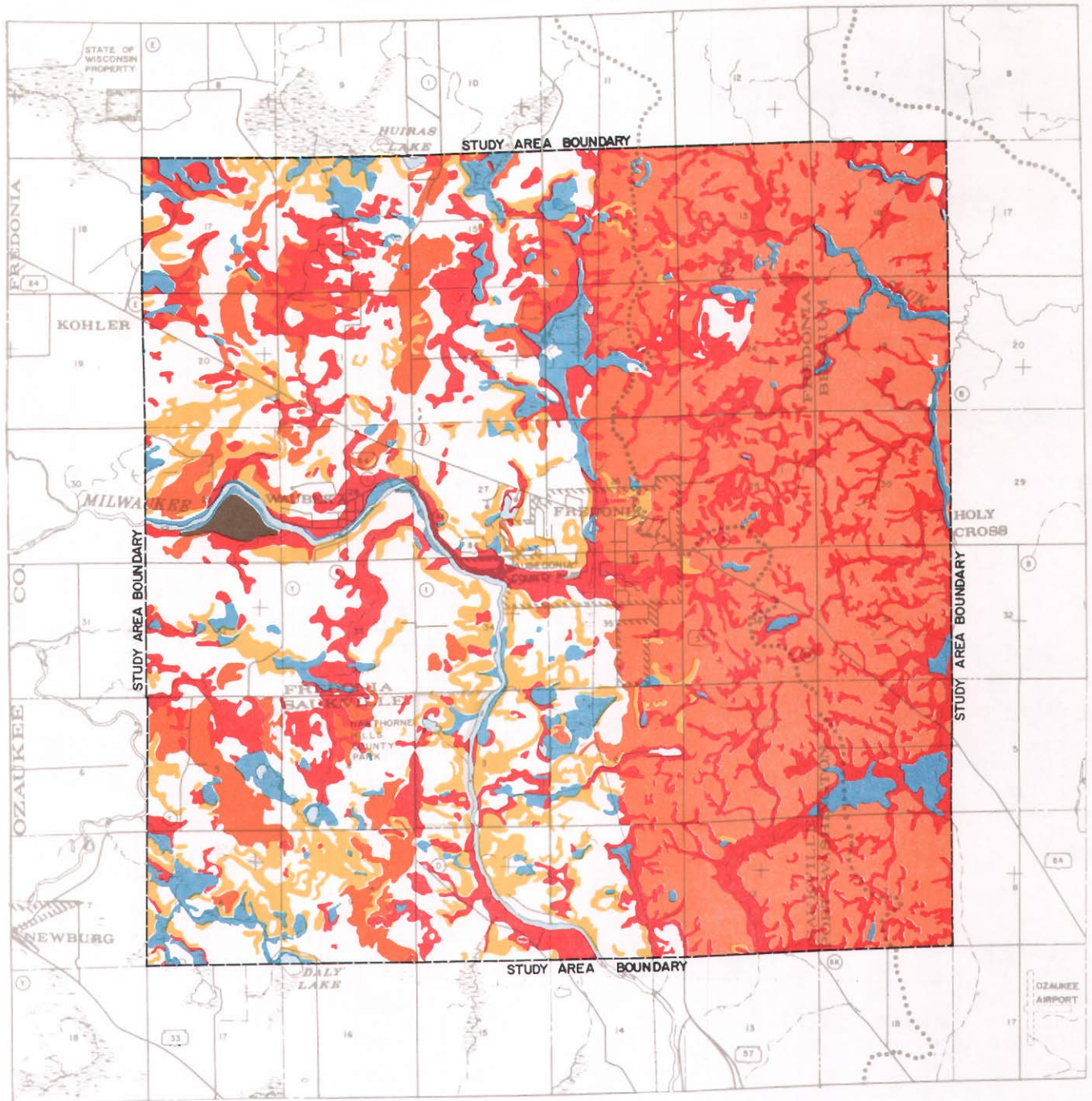
As shown on Map 6, approximately 72 percent of the study area is covered by soils having severe or very severe limitations for residential development with conventional septic tank systems on lots less than one acre in size. Almost all of the eastern half of the study area is covered by such soils.

As shown on Map 7, approximately one-third of the Village of Fredonia study area is covered by soils having severe or very severe limitations for residential development with conventional septic tanks on lots one acre or more in size. Characteristically, these soils have slow permeability rates, a high or fluctuating water table, and a high shrink-swell ratio, and may be located on steep slopes and be subject to periodic flooding or surface ponding in low areas. All of these characteristics are detrimental to development for urban use, and particularly to residential use utilizing septic tanks for sewage disposal. As noted on Map 7, the eastern half of the Village of Fredonia study area exhibits a dispersed pattern of soils with very severe limitations. The western half of the study area, on the other hand, has large areas covered by soils with severe limitations for residential development, particularly along the Milwaukee River.








The soil limitations shown on Maps 6 and 7 are based upon the use of the conventional septic tank. The Wisconsin Department of Health and Social

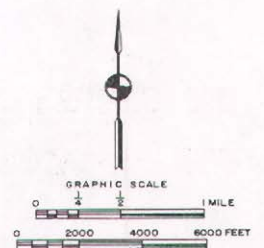
Map 5

SELECTED CHARACTERISTICS OF SOILS IN THE VILLAGE OF FREDONIA STUDY AREA



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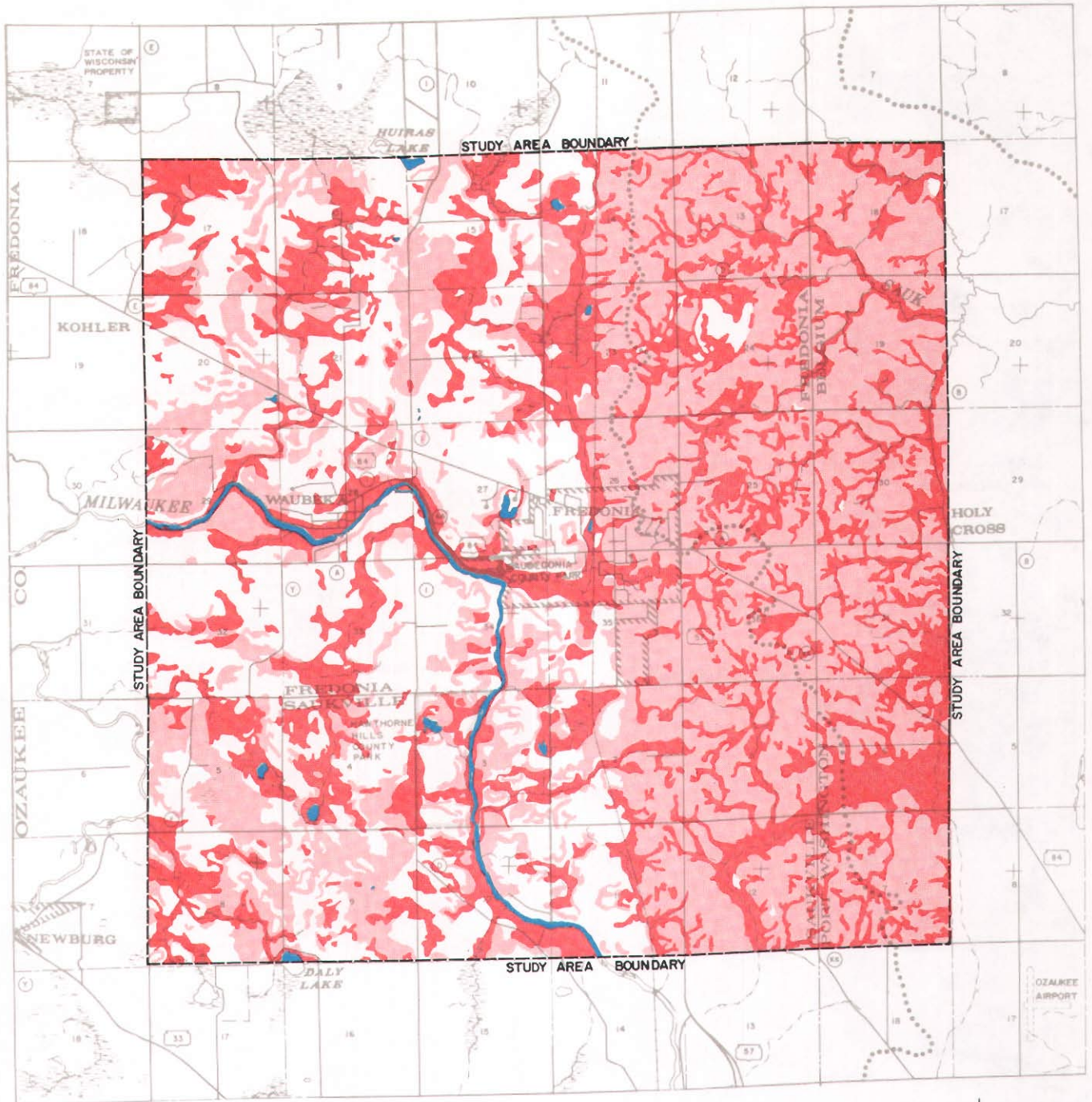
- | | | | |
|---|---|---|--|
|  | SOILS THAT HAVE A SLOW PERMEABILITY RATE |  | SOILS HAVING A SLOPE OF 12 PERCENT OR MORE |
|  | SOILS THAT HAVE A FLUCTUATING OR HIGH WATER TABLE OR ARE SUBJECT TO PONDING, OVERWASH, OR RUNOFF HAZARD |  | OTHER SOILS |
|  | SWAMPS, MARSHES, ORGANIC MATERIALS, OR SOILS THAT ARE SUBJECT TO FLOODING OR OVERFLOW |  | WATER |
|  | SOILS THAT ARE UNDERLAIN BY SHALLOW BEDROCK OR IN WHICH FILTER FIELDS ARE SUBJECT TO SILTATION OR THE GROUNDWATER TABLE IS SUBJECT TO CONTAMINATION | | |



Source: SEWRPC.

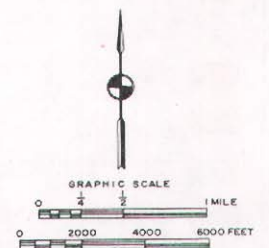
Map 6

**SOIL LIMITATIONS FOR RESIDENTIAL DEVELOPMENT ON LOTS LESS THAN ONE ACRE IN SIZE
NOT SERVED BY PUBLIC SANITARY SEWERAGE SYSTEMS IN THE VILLAGE OF FREDONIA STUDY AREA**



LEGEND

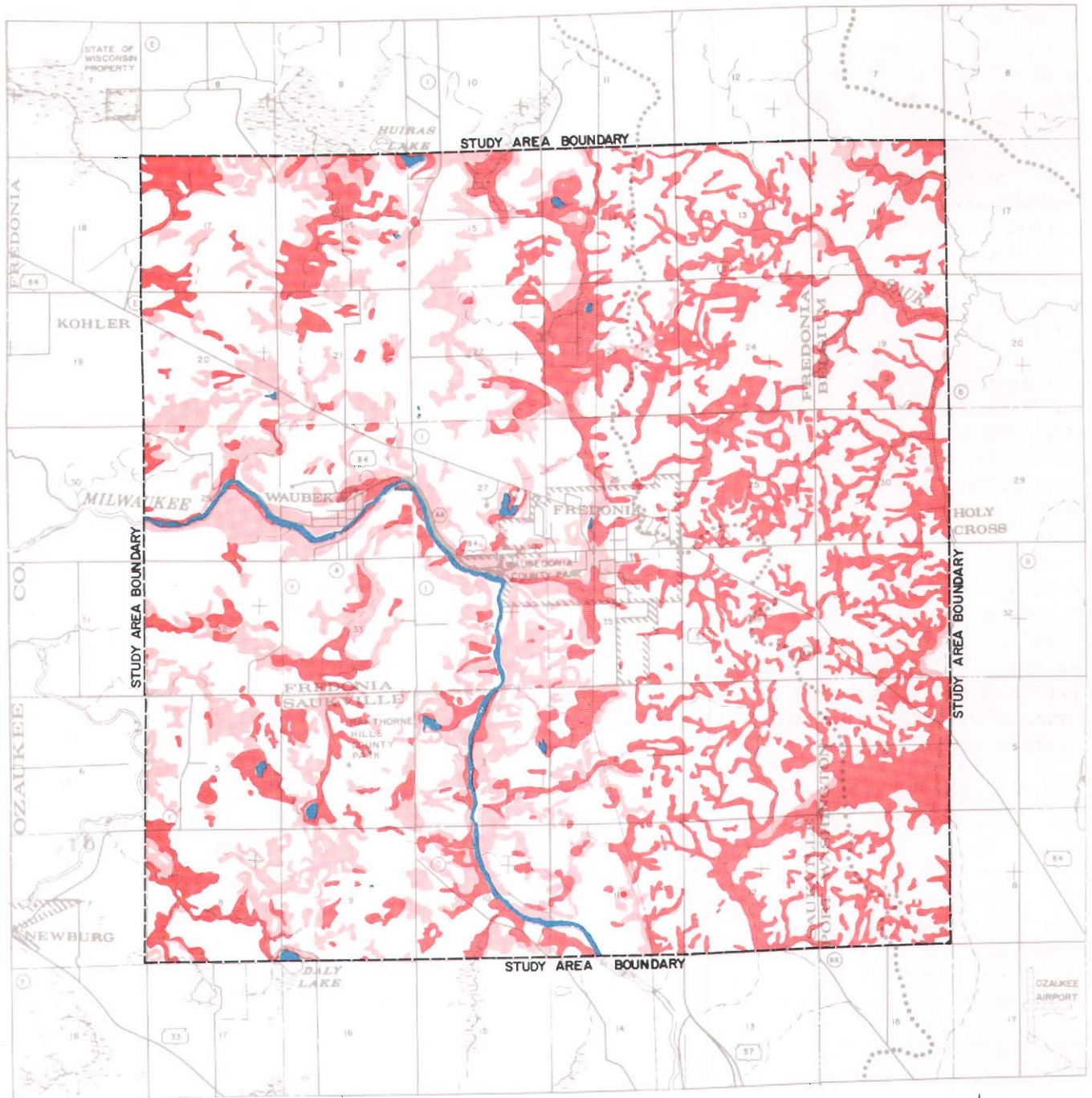
- AREAS COVERED BY SOILS HAVING VERY SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH ONSITE SEWAGE DISPOSAL SYSTEMS ON LOTS LESS THAN ONE ACRE IN SIZE
- AREAS COVERED BY SOILS HAVING SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH ONSITE SEWAGE DISPOSAL SYSTEMS ON LOTS LESS THAN ONE ACRE IN SIZE
- WATER



Source: SEWRPC.

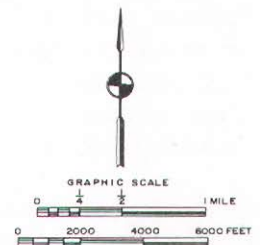
Map 7

**SOIL LIMITATIONS FOR RESIDENTIAL DEVELOPMENT ON LOTS ONE ACRE OR MORE IN SIZE
NOT SERVED BY PUBLIC SANITARY SEWERAGE SYSTEMS IN THE VILLAGE OF FREDONIA STUDY AREA**



LEGEND

- AREAS COVERED BY SOILS HAVING VERY SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH ONSITE SEWAGE DISPOSAL SYSTEMS ON LOTS LARGER THAN ONE ACRE
- AREAS COVERED BY SOILS HAVING SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH ONSITE SEWAGE DISPOSAL SYSTEMS ON LOTS LARGER THAN ONE ACRE
- WATER



Source: SEWRPC.

Services, as a part of a research and demonstration program being conducted in cooperation with the University of Wisconsin, is currently permitting the use of several experimental alternate onsite soil absorption sewage disposal systems on a conditional basis for existing development. These systems are commonly referred to as "mound systems." Unlike conventional gravity flow septic tank systems, the experimental mound systems utilize mechanical pumps to evenly distribute the effluent from the septic tank in the mound filter field. The mound system is applicable on an experimental basis in three types of areas: 1) in areas covered by soils with slow permeability; 2) in areas with shallow bedrock; and 3) in areas covered by soils with a high water table. Ozaukee County has approved the use of the mound system and will consider its use under certain conditions to correct or repair failing systems on lots with existing structures, and on lots recorded prior to November 1, 1975, by plat or certified survey map. To date, several applications for the installation of the experimental systems have been approved by the County. Before such systems can be installed in the County, however, the local units of government must adopt a resolution authorizing the construction of the experimental systems. If all new development in the Village is required to be served by municipal sanitary sewer services, the "mound" problem should not become an issue. No new subdivision plats within the planning area should be approved that will require "mound" systems for the treatment and disposal of liquid wastes.

Map 8 shows the areas covered by soils suitable for residential development with public sewer service. Areas covered by soils having severe or very severe limitations for such use are dispersed throughout the study area, with most such areas occurring near streams and in wetlands. Soils with severe and very severe limitations for residential development with public sewer service represent 4,159 acres, or 17.9 percent, of the study area.

Lowland Features

For the purposes of the land use study, lowland features were defined as wetlands, areas covered by wet soils, organic soils, and poorly drained soils, and areas subject to periodic flooding. Each of these environmental characteristics is explained in some detail in the following sections.

Wetlands: Wetlands are considered herein as areas in which the water table is at or near the land sur-

face. Such areas are generally unsuited or poorly suited for most agricultural or urban development purposes. Wetlands, however, have important ecological value in a natural state. Wetlands contribute to flood control and stream purification, since such areas naturally serve to temporarily store excess runoff and thereby tend to reduce peak flood flows. It has been found that except during exceptional periods of high runoff following prolonged drought, concentrations of nutrients in waters leaving such areas are considerably lower than in waters entering the wetlands. The inventory of wetland areas, as shown on Map 9, was conducted by the Regional Planning Commission as part of the land use inventory.

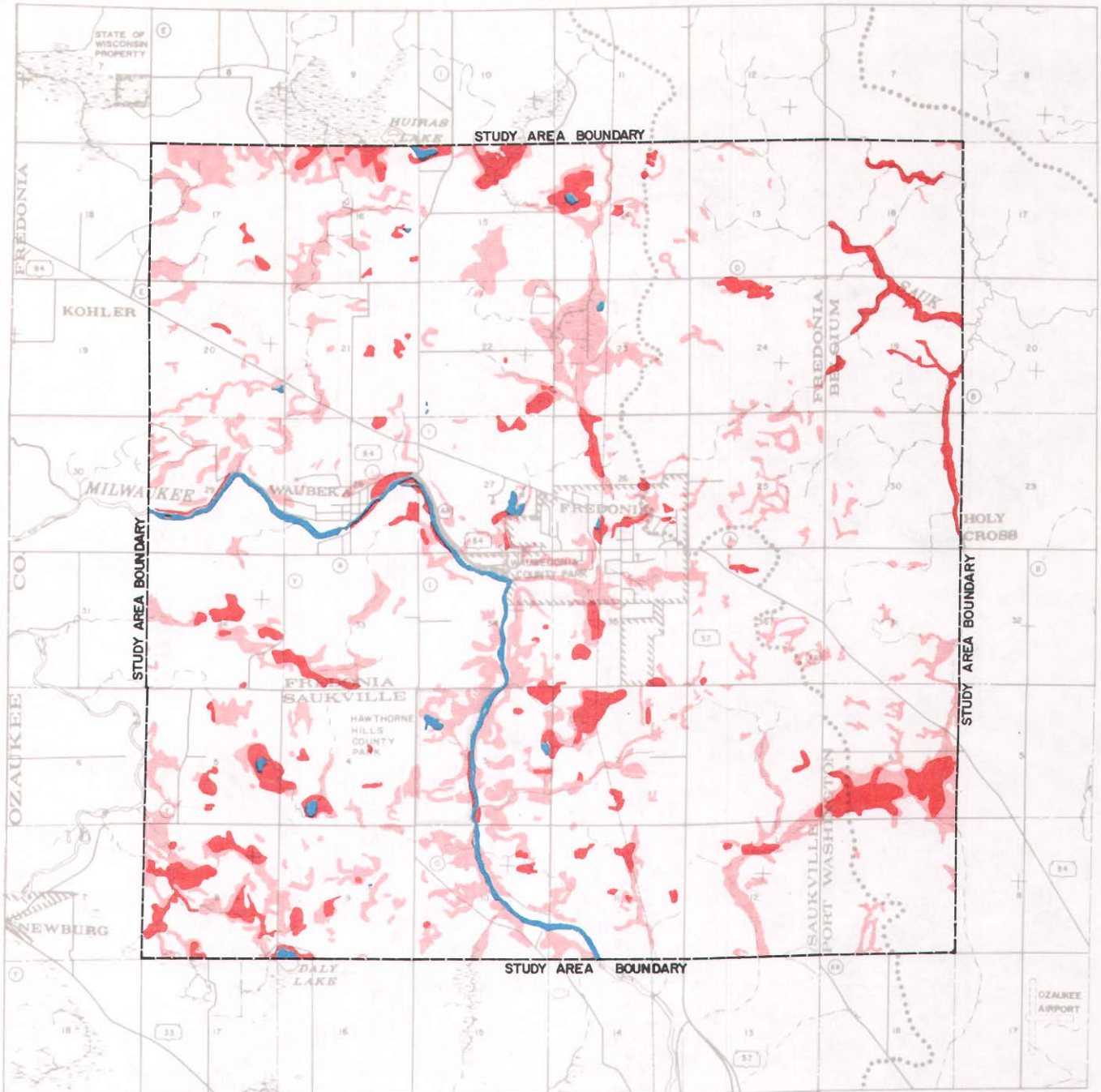
Wet Soils: Wet soils, organic soils, and poorly drained soils form a significant lowland feature and are closely associated with wetland areas and floodland areas. Areas covered by soils which are wet, poorly drained, or composed of organic materials are shown on Map 9.

Floodlands: The floodlands of a river or stream are the wide, gently sloping areas contiguous with, and usually lying on both sides of, a river or stream channel. Rivers and streams occupy their channels most of the time. However, during even minor flood events, stream discharges increase markedly such that the channel is not able to convey all the flow. As a result, stages increase and the river or stream spreads laterally over the floodlands. The periodic flow of a river onto its floodlands is a normal phenomenon, and in the absence of major, costly, structural flood control works, will occur regardless of whether or not urban development occurs on the floodlands.

For planning and regulatory purposes, floodlands are normally defined as the areas, excluding the channel, subject to inundation by the 100-year recurrence interval flood event. This is the event that would be reached or exceeded in severity once on the average of every 100 years. Stated another way, there is a 1 percent chance that this event will be reached or exceeded in severity in any given year. The 100-year recurrence interval floodland contains within its boundaries the areas inundated by floods of less severe but more frequent occurrence such as the 50-, 25-, 10-, and 5-year recurrence interval events. Floodland areas are generally not well suited to urban development because of flood hazards, high water tables, and inadequate soils. Generally, however, these floodland areas are prime locations for needed parks and open space.

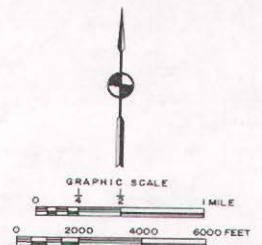
Map 8

**SOIL LIMITATIONS FOR RESIDENTIAL DEVELOPMENT ON LOTS SERVED BY PUBLIC
SANITARY SEWERAGE SYSTEMS IN THE VILLAGE OF FREDONIA STUDY AREA**



LEGEND

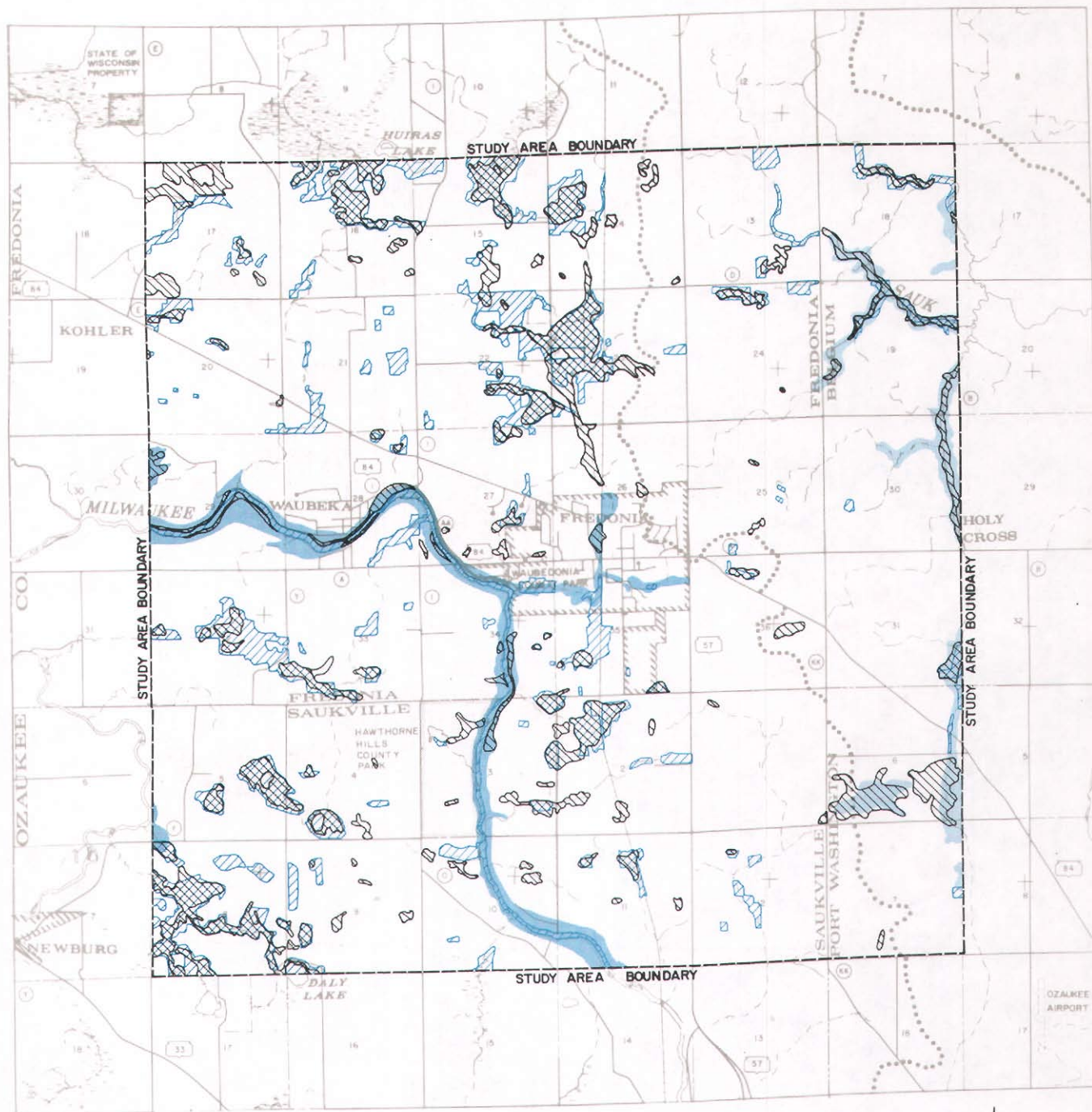
- AREAS COVERED BY SOILS HAVING VERY SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT SERVED BY PUBLIC SANITARY SEWERS
- AREAS COVERED BY SOILS HAVING SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT SERVED BY PUBLIC SANITARY SEWERS
- WATER







Source: SEWRPC.

Map 9

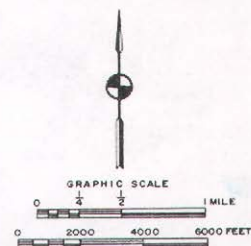
WETLAND AND LOWLAND FEATURES IN THE VILLAGE OF FREDONIA STUDY AREA



LEGEND

-  SURFACE WATER AND WETLAND AREA
-  WET, POORLY DRAINED, AND ORGANIC SOILS
-  FLOODPLAIN AREA AS DETERMINED BY DETAILED WATERSHED STUDIES
-  FLOODPLAINS DETERMINED BY APPROXIMATE METHODS

Source: SEWRPC.



The Village of Fredonia study area lies within two watersheds, the Milwaukee River watershed and the Sauk Creek watershed. Flood hazard areas have been delineated under the Milwaukee River watershed study, the findings and recommendations of which are set forth in SEWRPC Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed. However, a watershed plan has not been prepared by the Regional Planning Commission for the Sauk Creek watershed. To date, flood hazard boundaries in this watershed have been delineated by approximate methods by the U. S. Department of Housing and Urban Development, Federal Insurance Administration. Floodland areas extend along the Milwaukee River in the western portion of the study area and along Sauk Creek in the eastern portion of the study area. These floodplain areas are shown on Map 9.

In recent years, concern has been mounting over the potential effects of changing land use patterns on flood flows and flood hazards in rapidly urbanizing portions of the Region. Methods for abating flood damages in flood-prone areas are being structured into regulatory ordinances. Foremost in importance among the available methods are floodland zoning regulations based on definitive flood hazard data.

Village of Fredonia Flood Insurance Study: In January 1979, the U. S. Department of Housing and Urban Development, Federal Insurance Administration (FIA) (now Federal Emergency Management Agency), completed its study of flood hazards in the Village of Fredonia, and the preliminary study and maps were presented to the Village Board on October 2, 1979. Subsequent revisions to this preliminary map were made in November 1979 based upon field and office investigations. The flood insurance study investigated the existence and severity of flood hazards in the Village, and is to be used to convert the Village of Fredonia to the regular program of flood insurance administered by the Federal Emergency Management Agency. The study will serve to aid in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

Hydrologic analyses were performed to establish the peak discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source affecting the community. Also, the hydrologic characteristics of the streams in the community were analyzed to provide esti-

mates of the elevations of the floods of the selected recurrence intervals along each flooding source studied. The revised preliminary boundaries of the 100-year recurrence interval floodplain as delineated by the FIA for the Village of Fredonia are shown on Map 10. Those floodplain areas shown in green on the map were determined using approximate methods. Those areas shown in blue were determined by detailed engineering methods. A refinement of this preliminary study will be necessary in order to delineate further those floodplain boundaries for which approximate methods were used.

Areas with significant concentrations of various lowland features occur primarily in the north-central portion of the total study area, along both the Milwaukee River and Sauk Creek.

Wildlife and Woodland Areas

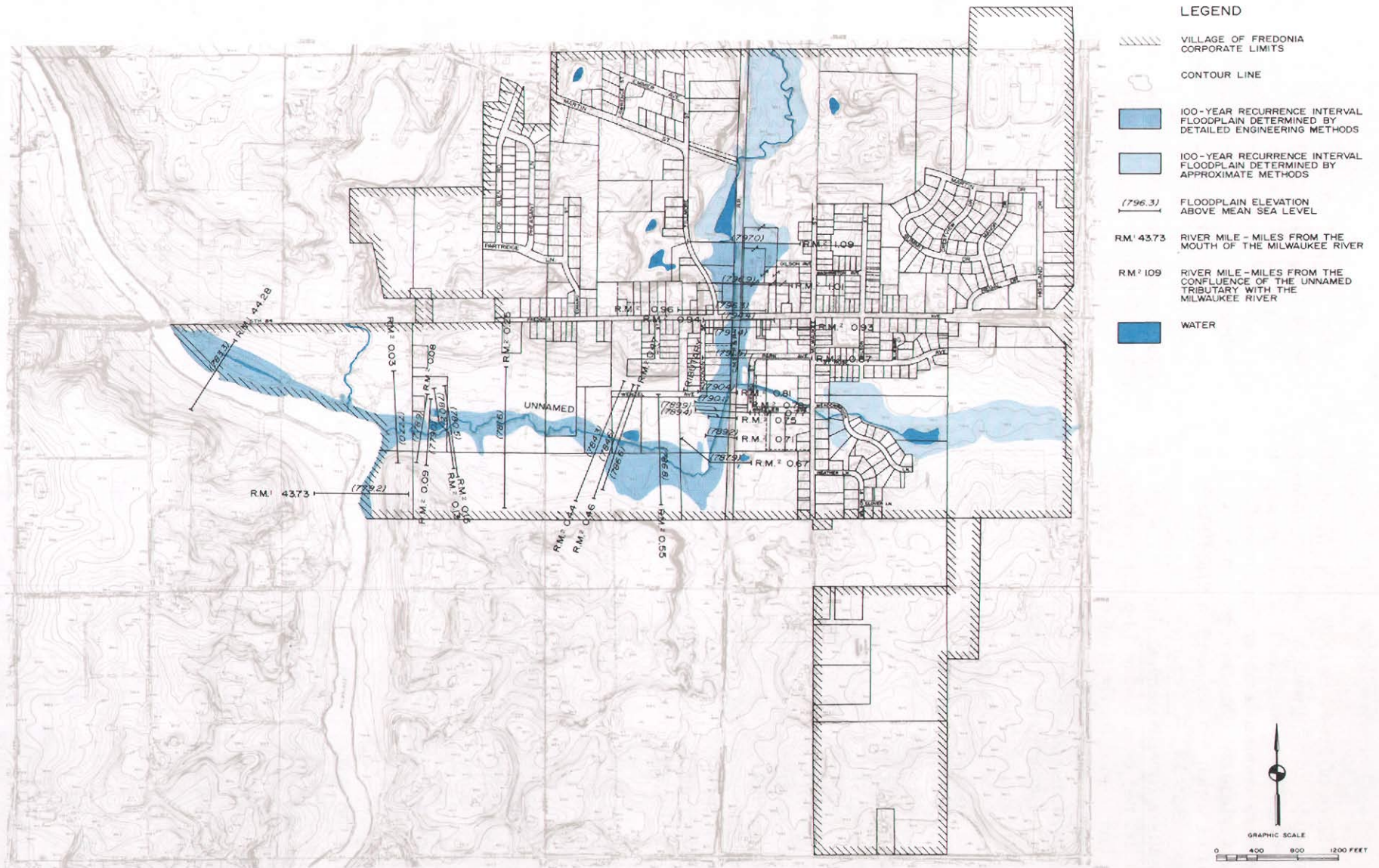
Wildlife Habitat: The remaining wildlife habitat areas in the Village of Fredonia study area, which were inventoried by the Regional Planning Commission as a part of its 1963 and 1970 land use and cover inventories, are shown on Map 11 in terms of three classifications based on an appraisal of their overall value as habitat and potential for recreational use. The principal criteria used in determining the three classifications were size and quality of the habitat area, location of the habitat area, and number and kind of species within each area. The wildlife habitat areas were rated as having either high, medium, or low values.

A high-value wildlife habitat area is an area which has a large diversity of species and which meets the requirements of the major species which inhabit the area. In a high-value area, the vegetation provides for nesting, travel routes, concealment, and modification of weather impact. In addition, such an area has undergone little or no disturbance and is located in proximity to other wildlife habitat areas.

A medium-value wildlife habitat possesses all of the features of a high-value habitat but at a lower level of quality. The species diversity may not be as high as in the high-value areas. The structure and composition of the vegetation may not adequately provide for nesting, travel routes, concealment, or modification of weather impact. The area may have undergone disturbances or may not be located in proximity to other wildlife habitat areas. Deficiencies in any one or more of these factors may contribute to the area's classification as a medium-value wildlife habitat area.

Map 10

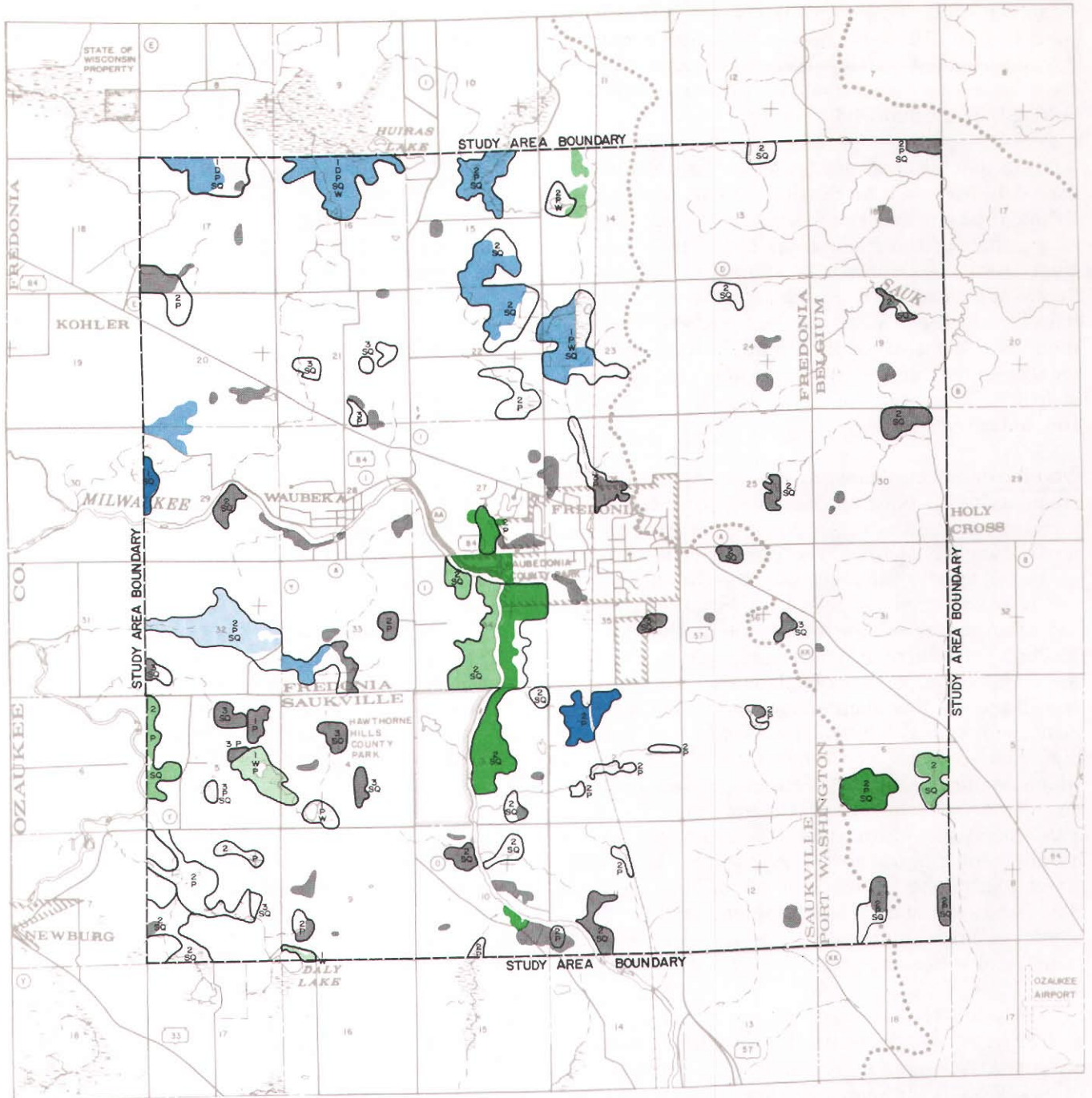
REVISED PRELIMINARY DELINEATION OF THE 100-YEAR RECURRENCE INTERVAL FLOODPLAIN FOR THE VILLAGE OF FREDONIA



Source: U. S. Department of Housing and Urban Development, Federal Insurance Administration; and SEWRPC.

Map 11

WOODLAND AND WILDLIFE HABITAT AREAS IN THE VILLAGE OF FREDONIA STUDY AREA



LEGEND

WOODLAND AREA

- AESTHETIC FOREST HIGH-VALUE STAND
- AESTHETIC FOREST MEDIUM-VALUE STAND
- AESTHETIC FOREST LOW-VALUE STAND
- COMMERCIAL FOREST HIGH-VALUE STAND
- COMMERCIAL FOREST MEDIUM-VALUE STAND

- COMMERCIAL FOREST LOW-VALUE STAND
- OTHER WOODLAND AREAS

WILDLIFE HABITAT AREA

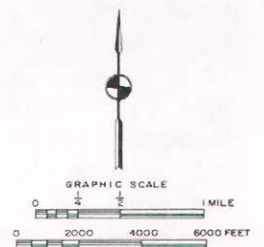
-

WILDLIFE HABITAT RATING

- 1 HIGH-VALUE
- 2 MEDIUM-VALUE
- 3 LOW-VALUE

TYPE OF WILDLIFE

- D DEER
- P PHEASANT
- SQ SQUIRREL
- W WATERFOWL



A low-value wildlife habitat area is an area of a supplemental or remnant nature which is usually considerably disturbed. However, such an area may provide the only available range in the area, supplement areas of a higher quality, or provide corridors linking higher-value wildlife habitat areas.

Wildlife habitat areas are found in the most abundance in the western portion of the study area, although there are small scattered areas in the eastern half of the study area. The wildlife habitat areas are located primarily along the Milwaukee River and associated streams, as well as along streams which are a part of the Sauk Creek watershed. The forms of wildlife found in these habitats are designated and located on Map 11, and are identified primarily as deer, pheasant, squirrel, and waterfowl.

Woodlands: Woodlands in the study area have much value beyond monetary return for their forest products. Under good management they can serve a variety of uses. The quality of life within an area is greatly influenced by the overall quality of the environment, as measured in terms of clean air, clean water, scenic beauty, and diversity. In addition to contributing to clean air and water, the maintenance of woodlands within the area can contribute to the maintenance of a diversity of plant and animal life in association with human life. The existing woodlands of the study area, which required a century or more to develop, can be destroyed through mismanagement within a comparatively short time. The deforestation of hillsides contributes to the siltation of lakes and streams and the destruction of wildlife habitat. Woodlands can and should be maintained for their scenic, wildlife, open space, educational, recreational, and watershed protection values.

Primarily located on ridges and slopes, along lakes and streams, and in wetlands, woodlands provide an attractive natural resource of immeasurable value. Woodlands enhance the beauty of the streams and glacial land forms of the area, and are essential to the maintenance of the overall environmental quality of the area.

The inventories of woodlands in the Village of Fredonia study area were conducted by the Regional Planning Commission as part of its 1963 and 1970 land use and cover inventories. The woodland areas, as shown on Map 11, are scattered throughout the study area. However, significant concentrations are found in the western portion of the

study area, with large wooded areas being located along the Milwaukee River and in the northwest corner of the study area. The lack of major concentrations of woodland areas in the eastern half of the study area may be attributed to the historic intensive agricultural development in this area.

Other Natural Resource Elements

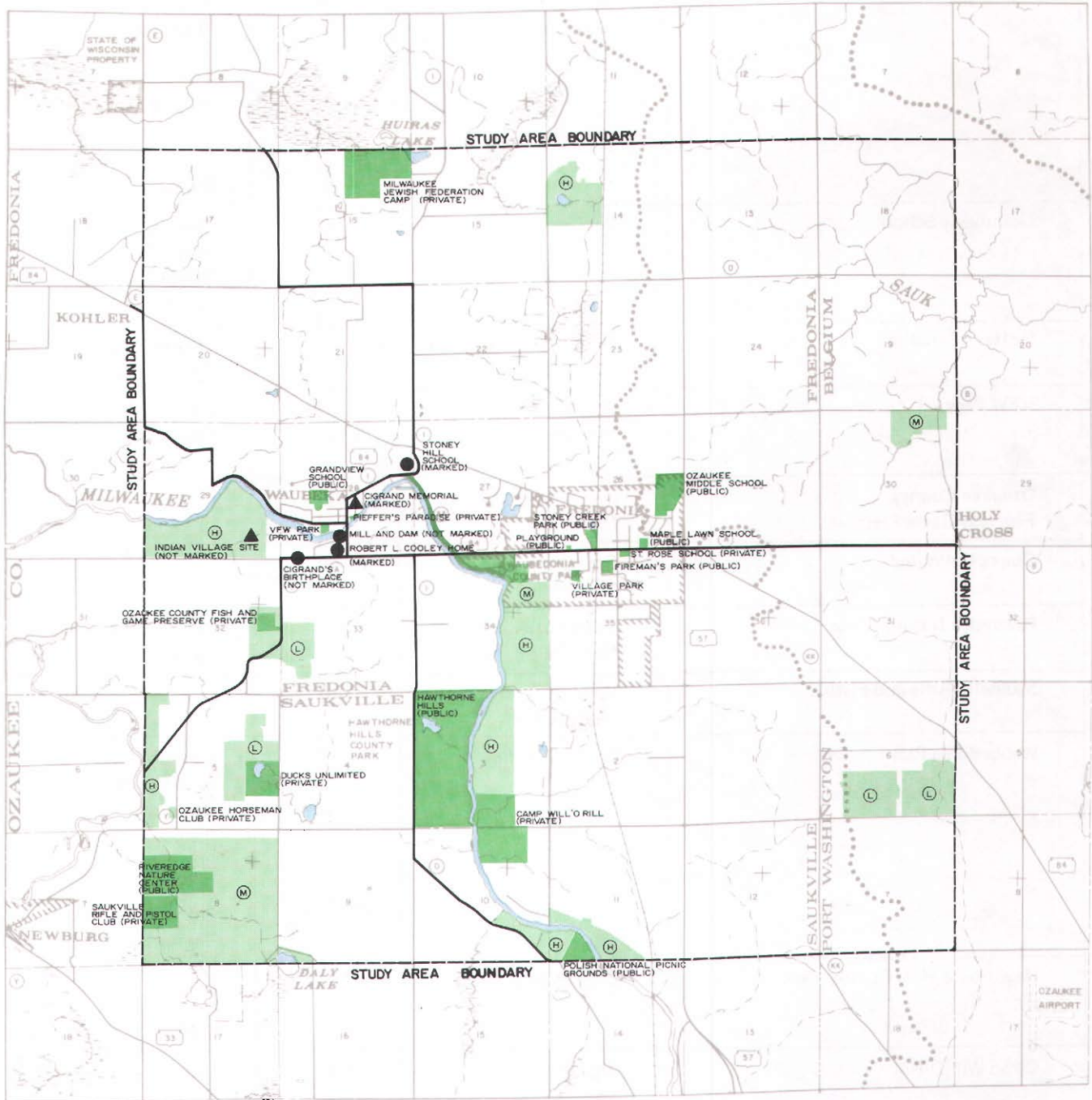
In addition to the basic elements of the underlying and sustaining natural resource base, existing and potential sites having scenic, scientific, historic, and recreational value should be considered in any comprehensive land use planning effort. Although these elements are not strictly a part of the natural resource base, they are so closely linked to the underlying resources that it is considered desirable to consider them along with that base. Map 12 presents the location and extent of these additional elements within the village study area.

As indicated on Map 12 and in Table 9, there are 18 existing parks, or recreation and related open space areas, in the study area, of which eight are in public ownership and 10 in private ownership. Altogether, these 18 parks contain 1,068 acres of land. Approximately 95 acres of land within the village limits are presently used for recreational purposes and 973 acres of land currently outside the village limits are used for recreational purposes. A majority of the recreation sites outside the village limits are privately owned.

The potential park sites shown on Map 12 are those identified in the Regional Planning Commission potential park site inventory originally conducted in 1964 and updated in 1975. This inventory identified a total of 65 potential park sites totaling some 9,800 acres in Ozaukee County. Fifteen sites, encompassing approximately 1,626 acres, are located within the Village of Fredonia study area. Seven of the sites, comprising a total of approximately 721 acres, or about 44 percent of all potential parkland in the study area, were rated as high-value sites. High-value sites are those which possess the most favorable developmental potential for the type of development recommended. Based on the inventory results, such sites have no serious development limitations. Four of the 15 sites, comprising a total of approximately 589 acres, or about 36 percent of all potential parkland in the study area, were rated as medium-value sites. Medium-value sites possess certain development limitations, as revealed by the inventory; such sites may take on added value as demand for park sites within the area increases. Four of the 15 sites, compris-

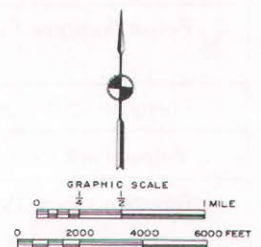
Map 12

EXISTING AND POTENTIAL PARK SITES AND CULTURAL FEATURES IN THE VILLAGE OF FREDONIA STUDY AREA



LEGEND

- EXISTING RECREATIONAL SITE
- POTENTIAL PARK SITE
- H HIGH VALUE
- M MEDIUM VALUE
- L LOW VALUE
- CULTURAL HISTORICAL SITE
- STRUCTURAL HISTORICAL SITE
- SCENIC DRIVE



Source: SEWRPC.

Table 9

PARK AND OPEN SPACE SITES IN THE VILLAGE OF FREDONIA STUDY AREA

Name of Site	Ownership	Acres	Type of Facilities
Camp JCC	Organizational/ Nonpublic	96	Baseball diamond Basketball goal Ice-skating rink Picnic area Playfield Playground Ski touring trail Swimming beach
Grandview School	Public school	12	Basketball goal Playfield Playground Softball diamond
Peiffer's Paradise	Nonpublic private (restricted)	1	Playground Swimming pool
VFW Park	Organizational/ Nonpublic	2	Picnic area Playfield Softball diamond
Ozaukee County Fish and Game Preserve	Organizational/ Nonpublic	62	--
Ducks Unlimited	Organizational/ Nonpublic	40	--
Riveredge Nature Center ^a	Organizational/ Nonpublic	249	Nature study facility Ski touring trail
Saukville Rifle and Pistols	Nonpublic private (restricted)	40	--
Waubedonia Park	County/Public	47	Basketball goal Boat launch Camp site Picnic area Playfield Playground Softball diamond Tennis court
Hawthorne Hills County Park	County/Public	281	Golf course Picnic area Ski hill
Camp Will-O-Rill	Organizational/ Nonpublic	100	Organizational camp
Polish National Picnic Grounds ^b	Organizational/ Nonpublic	89	Picnic area Playfield
Playground (Village of Fredonia)	Village/Public	1	Playground
Village Park (Village of Fredonia)	Village/Public	3	Softball diamond
Fireman's Park (Village of Fredonia)	Village/Public	3	Basketball goal Playground Softball diamond

Table 9 (continued)

Name of Site	Ownership	Acres	Type of Facilities
St. Rose School	Organizational/ Nonpublic	1	Basketball goal Playfield Playground
Maple Lawn School	Public School	2	Playfield Playground
Ozaukee Middle and High Schools	Public School	39	Baseball diamond Basketball goal Playfield Softball diamond

^aSeventy-eight acres of this facility are inside the Village of Fredonia study area.

^bTwenty acres of this facility are inside the Village of Fredonia study area.

Source: SEWRPC.

ing a total of approximately 316 acres, or about 20 percent of all potential parkland in the village study area, were rated as low-value sites. Low-value sites possess certain major development limitations and, therefore, have relatively poor potential for development as park sites without major modification. Map 12 identifies the major potential park and open space sites as identified in the Regional Planning Commission inventory in order that such sites may be protected from inadvertent destruction as the result of urban land use or highway facility development.

The Village of Fredonia study area has six sites and structures of cultural and historic value, as shown on Map 12. However, only three have been considered of sufficient significance to be officially marked. The three marked sites are the Stoney Hill School, the Cigrand Memorial, and the Cooley Home. The Stoney Hill School, which was recently added to the National Register of Historic Places, is the location of the first Flag Day observance to be held in the United States in 1885. The school teacher who conceived of the idea for Flag Day was Bernard J. Cigrand, and a marker has been

placed in his memory in the unincorporated Village of Waubeka. The third marked site is the home of the Cooley family, one of the early families that settled in the Town. Robert Cooley, a son of an original settler, was later to become prominent in the field of vocational education, and at one time headed the Milwaukee vocational school system.

ENVIRONMENTAL CORRIDOR DELINEATION

The preservation of the natural resource and natural resource-related elements, especially where these elements are concentrated in identifiable geographic areas, is essential to the maintenance of the overall environmental quality of the study area, to the continued provision of certain amenities that provide a high quality of life for the resident population, and to the avoidance of excessive costs associated with the development and operation and maintenance of urban land uses in the area.

Seven resource elements of the natural resource base, previously discussed in this chapter, are considered essential to the maintenance of both the ecological balance and the overall quality of life

in the area. These elements include: 1) lakes and streams and their associated floodlands, 2) wetlands, 3) woodlands, 4) wildlife habitat areas, 5) rough topography, 6) significant physiographic features, and 7) wet or poorly drained soils. In addition, there are certain other elements which, although not actually a part of the natural resource base, are closely related to or centered on that base. These elements are: 1) existing outdoor recreation sites, 2) potential outdoor recreation and related open space sites, 3) historic sites and structures, and 4) significant scenic areas and vistas.

The delineation of these natural resource and natural resource-related elements, as shown on the maps contained herein, results in an essentially linear pattern of narrow elongated areas which have been termed primary or secondary environmental corridors by the Commission. Primary environmental corridors are those areas which encompass three or more of the aforementioned 11 environmental elements. Secondary environmental corridors are contiguous areas exhibiting one or two of the 11 elements.

It is important to point out that, because of the many interlocking and interacting relationships existing between living organisms and their environment, the destruction or deterioration of one element of the total environment may lead to a chain reaction of deterioration and destruction. The drainage of wetlands, for example, may have far-reaching effects, since such drainage may destroy fish spawning grounds, wildlife habitat, groundwater recharge areas, and the natural filtration action and floodwater storage areas of interconnecting lake and stream systems. The resulting deterioration of surface water quality may, in turn, lead to deterioration of the quality of the groundwater which serves as a source of domestic, municipal, and industrial water supply and on which low flows in rivers and streams may depend. Similarly, the destruction of woodland cover, which may have taken a century to develop, may result in soil erosion and stream siltation and in more rapid runoff and increased flooding, as well as destruction of wildlife habitat. Although the effects of any one of these environmental changes may not in and of itself be overwhelming, the combined effects will eventually create serious environmental and developmental problems. These problems include flooding, water pollution, deterioration and destruction of wildlife habitat, loss of groundwater recharge, and destruction of the unique natural beauty of the area. The need to

maintain the integrity of the remaining environmental corridors thus becomes apparent. The adopted regional land use plan accordingly recommends that environmental corridors be maintained in an essentially open, natural state, which may, in some cases, include limited agricultural uses and very low-density residential uses.

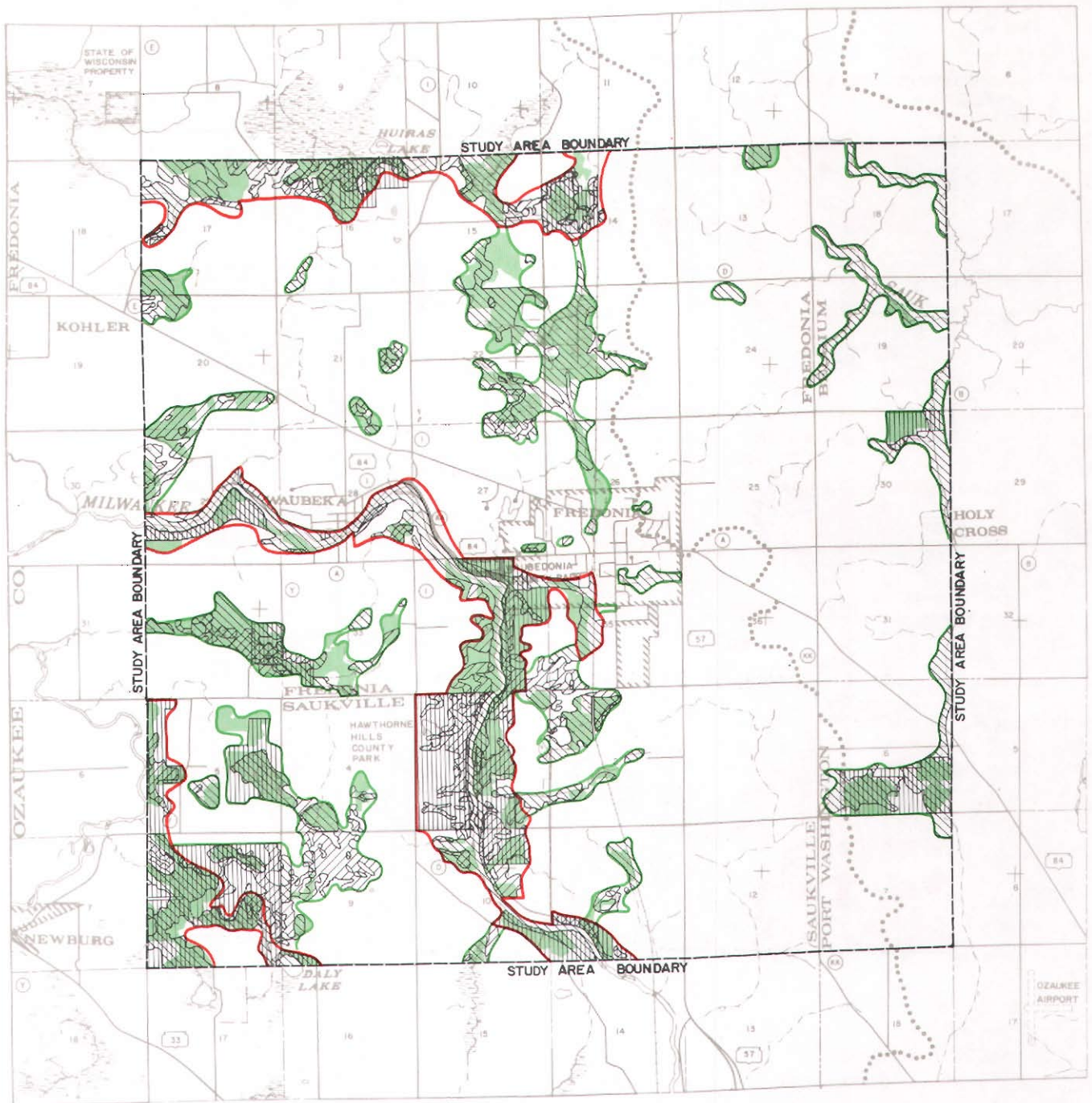
Because of their importance to the overall quality of the environment, the remaining environmental corridors need to be maintained in an essentially open, natural state. Map 13 presents the delineated primary and secondary environmental corridors in the Village of Fredonia study area, as well as the major natural resource elements contained therein. The extent and location of primary environmental corridors, secondary environmental corridors, and other environmentally significant lands within the Village of Fredonia study area is based on the congruence and overlap of the various features constituting such areas. Approximately 3,216 acres of primary environmental corridor, or about 47 percent of the total environmental corridor area and 14 percent of the total study area, are recommended to be preserved and protected in an essentially open, natural state. In addition, approximately 3,595 acres of secondary environmental corridor, or about 53 percent of the total environmental corridor area and 16 percent of the total study area, are recommended to be thoughtfully considered for appropriate use in land use development proposals. For example, in some cases secondary environmental corridor areas may warrant preservation as drainageways and neighborhood park and open space sites.

AGRICULTURAL SOILS AND PRIME AGRICULTURAL LAND DELINEATION







Map 14 shows the agricultural capability of soils in the Village of Fredonia study area. The U. S. Department of Agriculture, Soil Conservation Service, at Madison has defined four types of farmland based upon soils factors: national prime farmland, unique farmland, farmland of statewide significance, and farmland of local importance. The soils designated as national prime farmland are the most abundant of the four soils types. These soils are found throughout the study area. Soils designated as unique farmland are scattered throughout the study area, as are soils which represent farmland of statewide significance. Prime farmland is defined as land best suited for producing food, feed, forage, fiber, and oilseed crops, and that is available for these uses; the existing land use of

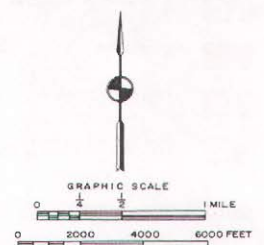
Map 13

ENVIRONMENTAL CORRIDOR ELEMENTS IN THE VILLAGE OF FREDONIA STUDY AREA



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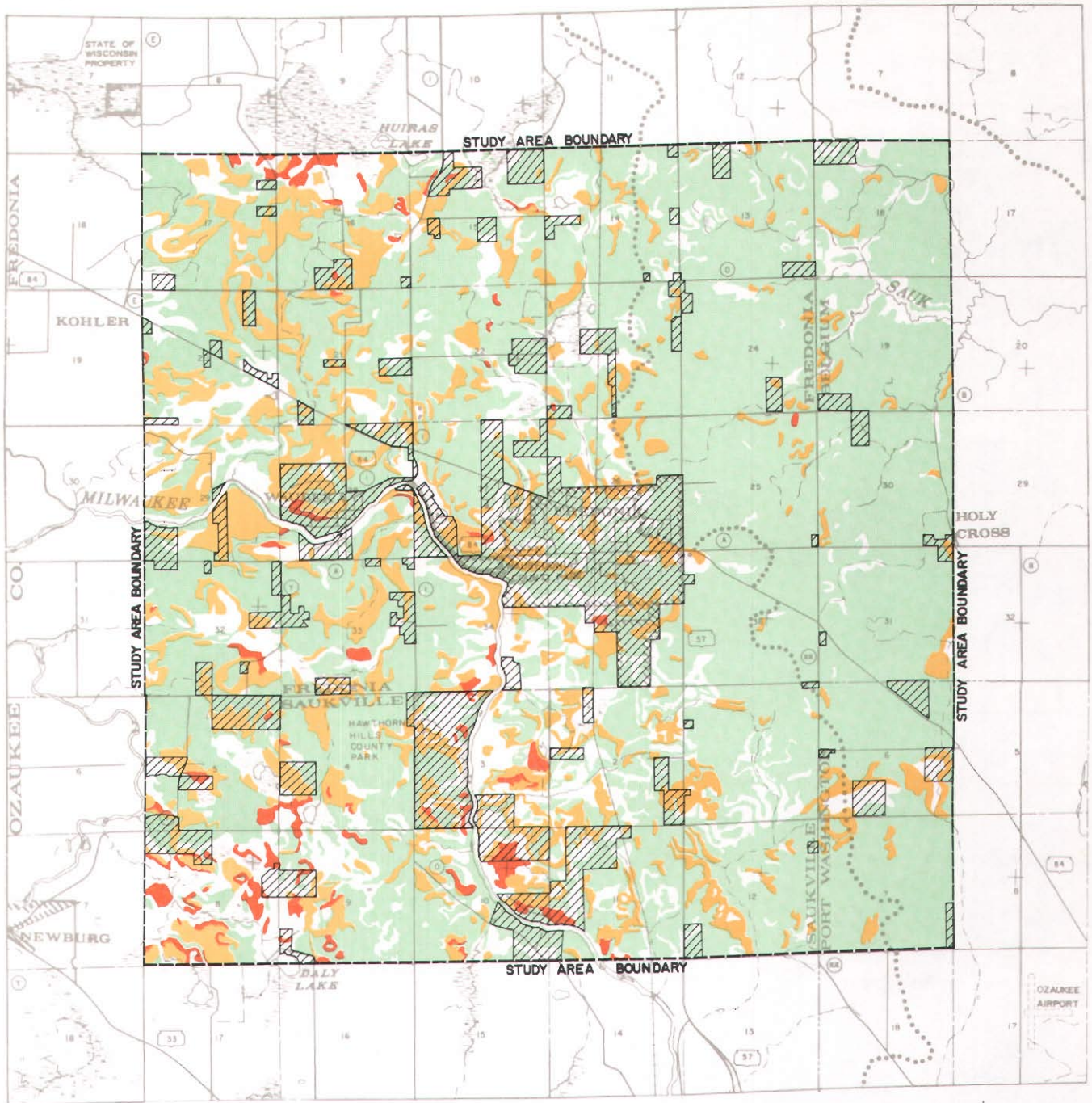
-  WETLAND AND LOWLAND FEATURES (INCLUDING WET, POORLY DRAINED, ORGANIC SOILS)
-  WOODLANDS AND WILDLIFE AREAS
-  RUGGED TERRAIN WITH SLOPES EXCEEDING 12 PERCENT
-  EXISTING AND POTENTIAL OUTDOOR RECREATION SITES AND RELATED OPEN SPACE
-  PRIMARY ENVIRONMENTAL CORRIDOR
-  SECONDARY ENVIRONMENTAL CORRIDOR AND OTHER ENVIRONMENTALLY SIGNIFICANT LANDS



Source: SEWRPC.

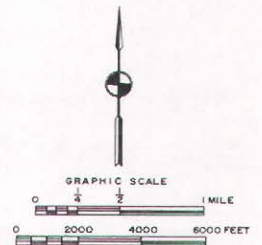
Map 14

AGRICULTURAL CAPABILITY OF SOILS IN THE VILLAGE OF FREDONIA STUDY AREA



LEGEND

- NATIONAL PRIME FARMLAND
- UNIQUE FARMLAND
- FARMLAND OF STATEWIDE SIGNIFICANCE
- AREAS CONTAINING PARCELS OF LAND LESS THAN 35 ACRES IN SIZE



Source: SEWRPC.

prime farmland could be cropland, pastureland, rangeland, forest land, or other land, but not urban land or water. Prime farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when properly treated and managed. Unique farmland is defined as land other than prime farmland that is used for the production of specific high-value food and fiber crops. Unique farmland has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when properly treated and managed. Farmland of statewide significance is defined as land in addition to prime and unique farmlands that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. These classifications of farmlands are based upon policies set forth by the U. S. Department of Agriculture on the protection and preservation of prime farmland.¹

Map 14 also identifies those parcels of land in the study area that are 35 acres or less in size in order to distinguish between these parcels and those land holdings 35 acres or larger in size which are eligible for tax credits under the Wisconsin Farmland Preservation Act, and to assist the communities comprising the Village of Fredonia study area in identifying those areas which should be preserved in agricultural use.

Prime agricultural lands are an important component of the natural resource base and, as such, should be preserved and protected as a matter of sound public policy. The extent and spatial distribution of prime agricultural lands in the study area is shown on Map 15, along with the already delineated primary and secondary environmental corridor areas. The extent and location of prime agricultural lands were derived from the information shown on Maps 13 and 14. To date, the intrusion of incompatible land uses into the environmental corridor areas and the prime agricultural areas of the study area has been minimal.

With proper planning, it should not be necessary for future urban growth to intrude upon environmental corridors or prime agricultural areas in the study area.

EXISTING LAND USE

Any land use plan, if it is to be sound and realistic, must be based upon careful consideration of the existing land use pattern, as well as of the physical character of the land itself. In June 1978, a special field survey was conducted within the Village and study area to determine the nature and extent of the existing use of land throughout the study area. The data gathered in this survey were mapped, charted, and analyzed to provide an important basis for the determination of an appropriate pattern of future land use development in the Village and surrounding area.

The existing land uses in the Village of Fredonia study area are shown on Map 16, and the amount of land devoted to each type of land use in the area is set forth in Table 10. The existing land uses in the incorporated area of the Village of Fredonia are also shown on Map 17, and the amount of land devoted to each type of land use in the Village is set forth in Table 11.

The study area totals approximately 23,170 acres, or about 36 square miles. The incorporated Village occupies about 821 acres, or about 4 percent of the total study area. In 1978 urban land uses occupied about 2,067 acres, or about 9 percent of the study area. Rural land uses, which include wetlands, woodlands, unused land and dumps, and agricultural uses, occupied 21,104 acres, or about 91 percent of the study area.

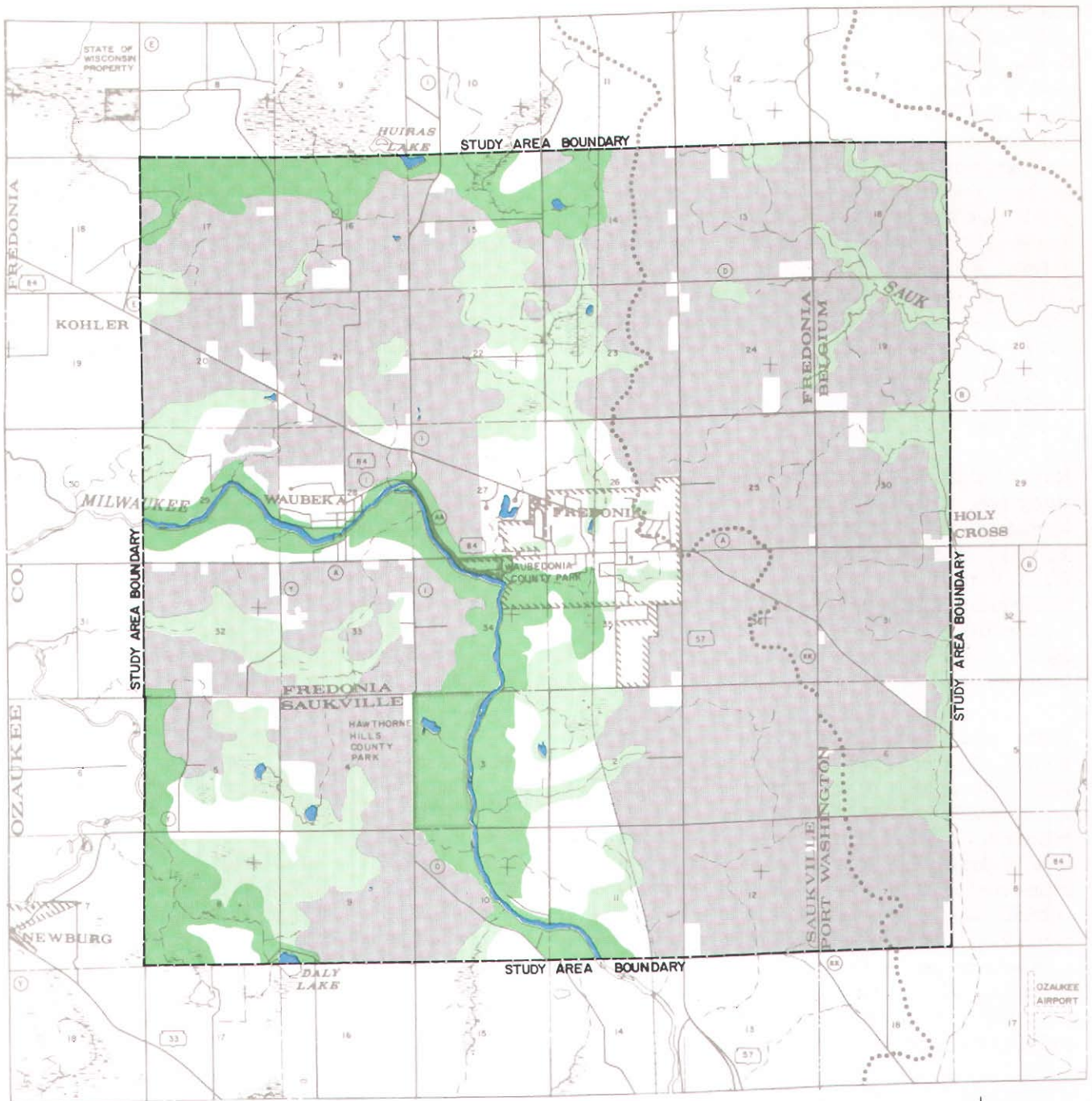
As shown in Table 10 and on Map 16, the singularly largest land use in the study area is agriculture, which represents over 75 percent of the study area. Because of the high proportion of the land in agricultural use, woodlands and wetlands do not constitute as high a proportion of the total area as in other areas of the Region. Together, woodlands and wetlands account for about 3,335 acres, or 14 percent of the total study area. Residential development is still concentrated in the unincorporated Village of Waubeka and Village of Fredonia.

Residential Land Use

Of all the elements of a community land use plan, that which normally holds the interest of the largest number of residents is the portion dealing

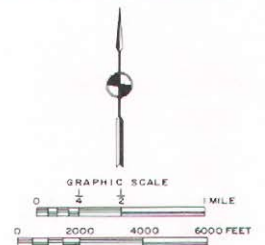
¹See *Land Inventory and Monitoring Memorandum WI-1, U. S. Department of Agriculture, Soil Conservation Service, December 3, 1976.*

**ENVIRONMENTAL CORRIDORS AND PRIME AGRICULTURAL
LANDS IN THE VILLAGE OF FREDONIA STUDY AREA**



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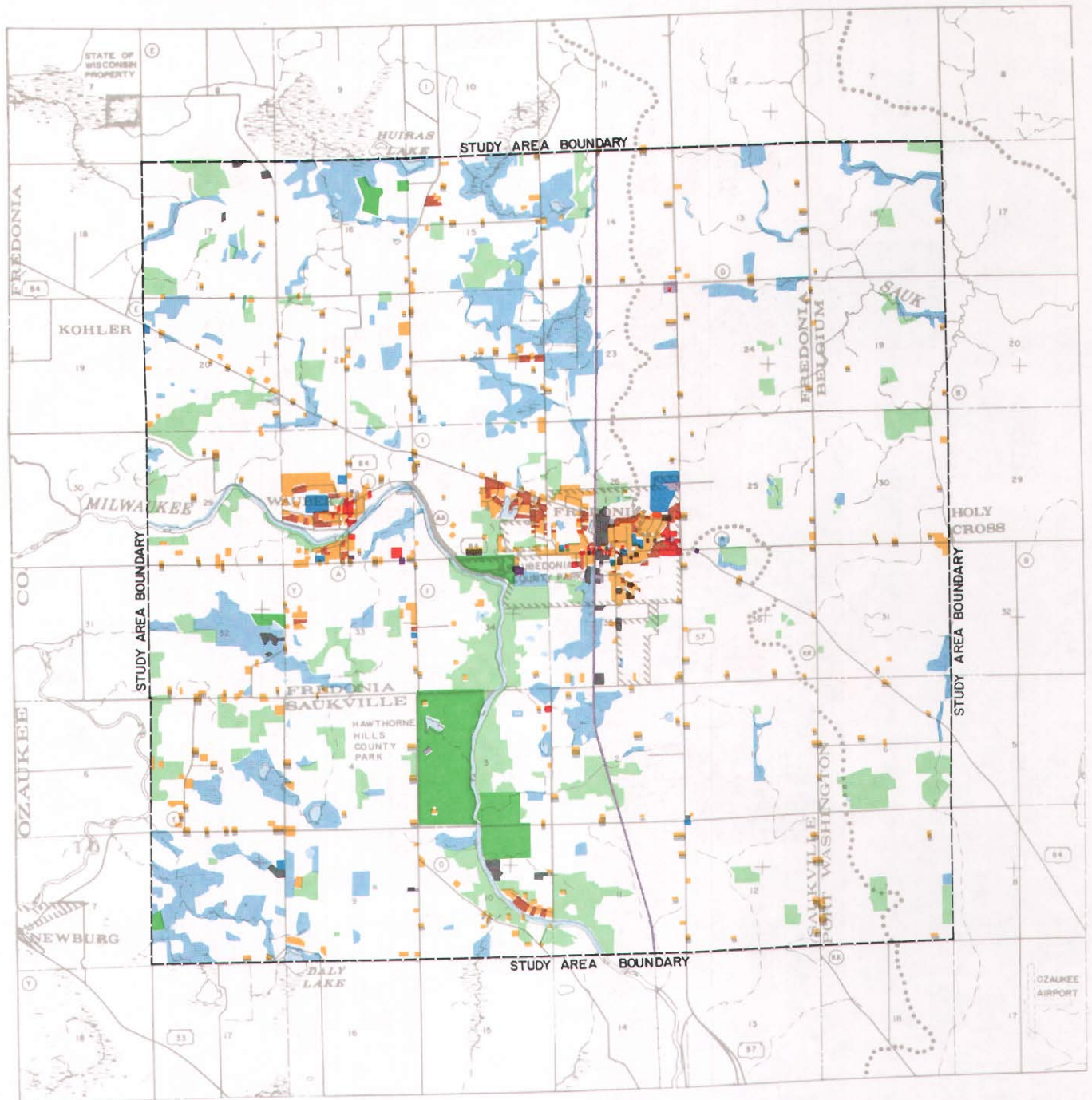
- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR OR OTHER ENVIRONMENTALLY SIGNIFICANT LAND
- PRIME AGRICULTURAL LAND
- WATER


















Source: SEWRPC.

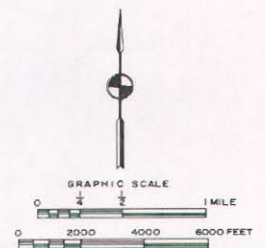
Map 16

EXISTING LAND USE IN THE VILLAGE OF FREDONIA STUDY AREA: 1978



LEGEND

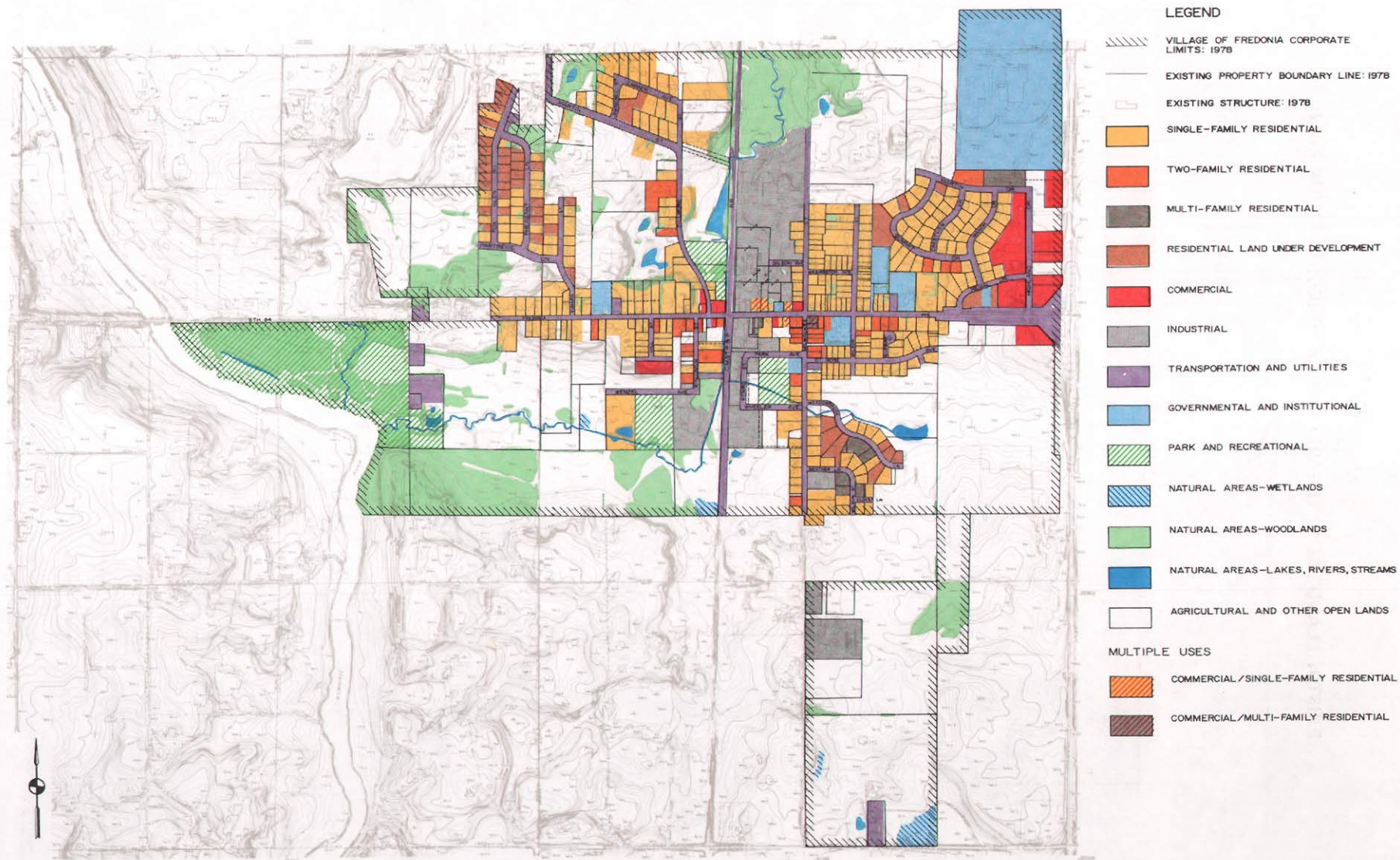
	SINGLE-FAMILY RESIDENTIAL		COMMERCIAL		WETLANDS
	TWO-FAMILY RESIDENTIAL		EXTRACTIVE AND MANUFACTURING		PARKS
	FARMSTEAD		RAILROADS AND PARKING		WOODLANDS
	MULTIPLE-FAMILY RESIDENTIAL		UTILITIES		AGRICULTURAL AND OTHER OPEN LAND
	RESIDENTIAL LAND UNDER DEVELOPMENT		INSTITUTIONAL		WATER



Source: SEWRPC.

Map 17

EXISTING LAND USE IN THE VILLAGE OF FREDONIA: 1978



Source: SEWRPC.

Table 10

SUMMARY OF EXISTING LAND USE IN THE VILLAGE OF FREDONIA STUDY AREA: 1978

Land Use Category	Acres			Percent of Urban/Rural Total	Percent of Total
	1963	1970	1978		
Urban					
Residential					
Developed	285.2	388.5	473.8	22.9	2.0
Under Development	76.3	131.5	49.9	2.4	0.2
Subtotal	361.5	520.0	523.7	25.3	2.3
Commercial					
Major	--	--	--	--	--
Local	16.2	19.7	19.9	0.9	0.1
Other	6.7	8.7	4.4	0.2	0.1
Subtotal	22.9	28.4	24.3	1.1	0.1
Industrial					
Major	--	--	--	--	--
Mining	30.4	24.9	24.9	1.2	0.1
Other	15.4	18.0	19.0	0.9	0.1
Subtotal	45.8	42.9	43.9	2.1	0.2
Transportation and Utilities					
Transportation	696.7	708.2	717.6	34.7	3.1
Off-Street Parking	1.5	11.4	11.4	0.5	0.1
Utilities and Other	151.8	151.8	170.9	8.3	0.7
Subtotal	850.0	871.4	899.9	43.5	3.9
Governmental and Institutional					
Local	37.0	37.0	37.0	1.7	0.1
Other	11.9	41.6	41.6	2.0	0.1
Subtotal	48.9	78.6	78.6	3.8	0.3
Recreational					
Major	--	--	--	--	--
Local	51.1	55.4	89.4	4.4	0.3
Private	103.7	136.4	136.4	6.5	0.5
Other	271.4	270.8	270.8	13.1	1.2
Subtotal	426.2	462.6	496.6	24.0	2.1
Urban Total	1,755.3	2,003.9	2,067.0	100.0	9.0
Rural					
Wetlands	2,033.9	2,019.3	2,019.3	9.5	8.8
Woodlands	1,313.3	1,315.3	1,315.3	6.2	5.6
Unused Land and Dumps	149.9	196.8	196.8	0.9	0.8
Agricultural	17,918.9	17,636.1	17,573.0	83.2	75.8
Rural Total	21,716.0	21,167.5	21,104.4	100.0	91.0
Total Land Use	23,171.4	23,171.4	23,171.4	--	100.0

Source: SEWRPC.

Table 11

SUMMARY OF EXISTING LAND USE IN THE VILLAGE OF FREDONIA: 1978

Land Use Category	Number of Acres	Percent of Urban/Rural Total	Percent of Total
Urban			
Residential			
Single-Family	127.5	33.7	15.5
Two-Family	10.0	2.6	1.2
Multiple-Family	5.0	1.3	0.6
Under Development	15.5	4.1	1.9
Subtotal	158.0	41.7	19.2
Commercial			
Neighborhood Retail and Service	--	--	--
Community Service	18.0	4.8	2.2
Subtotal	18.0	4.8	2.2
Industrial	40.5	10.7	5.0
Transportation and Utilities			
Arterial Streets	13.5	3.6	1.7
Collector Streets	5.9	1.6	0.7
Minor Land Access Streets	32.4	8.6	4.0
Utilities	10.5	2.8	1.3
Subtotal	63.3	16.8	7.7
Governmental and Institutional			
Public	35.5	9.4	4.3
Private	1.5	0.4	0.2
Subtotal	37.0	9.8	4.5
Recreational			
Neighborhood Parks	--	--	--
Community Parks	56.5	14.9	6.9
Other Recreational	5.0	1.3	0.6
Subtotal	61.5	16.2	7.5
Urban Total	378.3	100.0	46.1
Rural			
Natural Areas			
Wetlands	4.5	1.0	0.5
Woodlands ^a	86.5	19.5	10.5
Wet Woodlands	0.5	0.1	0.1
Agricultural, Open, and Unused Lands	351.2	79.3	42.8
Rural Total	442.7	100.0	53.9
Total Land Use	821.0	--	100.0

^aExcluding woodland areas in parks.

Source: SEWRPC.

with residential land use. Since this element of a land use plan exists primarily to provide a safe, attractive, and comfortable setting for residential development, it is appropriate that it be given particularly careful consideration. In the study area, residential land use accounts for approximately 25 percent of the developed urban area but less than 3 percent of the total area. In the Village of Fredonia, residential land use accounts for 41 percent of the developed urban area and about 19 percent of the total area.

In 1963 the amount of land within the study area developed and under development for residential use was about 362 acres. Of this total, 285 acres were developed and in residential use. By 1978, the amount of land developed and under development for residential use had increased to about 524 acres, of which 474 acres were developed and in residential use. This represents an increase in residential land use of about 66 percent since 1963.

Commercial Land Uses

Within the study area, commercial land uses account for 24.3 acres, or 1.1 percent of the urban land uses and 0.1 percent of the total land uses in the study area. Within the Village, commercial land uses occupy 18 acres and represent 4.8 percent of the urban land uses and 2.2 percent of the total land uses in the Village. Several small businesses are located in the central portion of the Village. However, these businesses do not represent a central business district offering a variety of services and goods. Community-oriented businesses are located at the northwest corner of the intersection of STH 84 and STH 57 and provide most of the services and goods serving the Fredonia area.

Industrial Land Uses

Within the study area, industrial land uses account for 43.9 acres, or 2.1 percent of the urban land uses and 0.2 percent of the total land uses in the study area. Within the Village, industrial land uses occupy 40.5 acres and represent about 11 percent of the urban land uses and 5 percent of the total land uses in the Village. These industrial uses are located in the area along the Chicago, Milwaukee, St. Paul & Pacific Railroad. Presently, the Village has designated an area of land located in the east one-half of the southeast quarter of Section 35 for future industrial expansion and industrial development.

Transportation and Utilities

Within the study area, transportation and utilities, which includes arterial streets and highways, collector streets, minor land access streets, off-street

parking, and utilities, accounts for approximately 900 acres, or 44 percent of the urban land uses and 4 percent of the total land uses in the study area. Within the Village, transportation and utilities occupy about 63 acres and represent 17 percent of the urban land uses and 8 percent of the total land uses in the Village.

Governmental and Institutional Land Uses

Within the study area, governmental and institutional land uses account for about 79 acres, or about 4 percent of the urban land uses and 0.3 percent of the total land uses in the study area. Within the Village, these uses occupy 37 acres and represent about 10 percent of the urban land uses and about 5 percent of the total land uses in the Village. The public governmental and institutional land uses include Ozaukee Middle School, Ozaukee High School, Grandview Elementary School, Maple Lawn Elementary School, the Village Hall, and the fire station. Private land uses include St. John's Church and School.

Recreational Land Uses

Within the study area, recreational land uses account for approximately 497 acres, or 24 percent of the urban land uses and 2 percent of the total land uses in the study area. Within the Village, recreational land uses occupy about 62 acres and represent about 16 percent of the urban land uses and 8 percent of the total land uses in the Village. These uses are located and identified on Map 12 and are also shown on Maps 16 and 17.

Rural Land Uses

Rural land uses include wetland areas, woodlands, unused land, open land, dumps, and agricultural lands. Within the study area wetland areas account for 2,019 acres, or about 10 percent of the rural land uses and 9 percent of the total land uses in the study area. Within the Village, wetlands occupy about 5 acres and represent 1 percent of rural land uses and 0.5 percent of the total land uses in the Village. Wetlands are located on Maps 9 and 16 for the total study area and on Map 17 for the Village.

Within the study area, woodlands account for about 1,315 acres, or 6 percent of the rural land uses and 6 percent of the total land uses in the study area. Within the Village, woodlands (excluding woodland areas in public parks) occupy about 87 acres and represent 20 percent of the rural land uses and 11 percent of the total land uses in the Village.

Within the study area, agricultural lands, unused and open lands, and dumps account for 17,770

acres, or 84 percent of rural land uses and 77 percent of the total land uses in the study area. Within the Village, these land uses occupy about 351 acres and represent 79 percent of the rural land uses and 43 percent of the total land uses in the Village.

EXISTING LAND USE REGULATIONS

All land development in the Village of Fredonia is regulated by Chapter 9 of the municipal code entitled "Planning and Zoning" which includes zoning, land, subdivision, and Official Map regulations, all adopted in 1957. The present zoning ordinance of the Village of Fredonia is divided into three districts—Residential District, Business District, and Industrial District. The location of each of these three districts and their respective boundaries is shown on Map 18. Table 12 summarizes the regulations for each of these three districts.

The existing Village of Fredonia zoning ordinance has several shortcomings. The Residential District allows for many types of residential uses, ranging from single-family homes to multiple-family dwellings, within one residentially zoned district, and places no limitations on population density. Mixed residential land uses can result in circulation and traffic conflicts and difficulty in planning for the provision of future utility services, and can create urban design conflicts relating to scale and mass. The Business District permits light manufacturing, warehousing, and office uses, each which should occupy a separate district under separate and distinct regulations. The Industrial District permits land to be used for any purpose whatsoever, including residential uses. Thus, in the Industrial District, there is the potential for unhealthy situations resulting from the intrusion of residential as well as other land uses into the Industrial District.

The study area includes portions of the Town of Fredonia (U. S. Public Land Survey Sections 13 through 17, 20 through 29, and 32 through 36), the Town of Belgium (U. S. Public Land Survey Sections 18, 19, 30, and 31), the Town of Port Washington (U. S. Public Land Survey Sections 6 and 7), and the Town of Saukville (U. S. Public Land Survey Sections 1 through 5 and 8 through 12). The Town of Fredonia has its own zoning ordinance, which makes use of 16 zoning district classifications; the Town of Belgium has its own zoning ordinance, which makes use of 9 zoning district classifications; the Town of Port Washington has its own comprehensive zoning ordinance, which makes use of 8 zoning district classifications; and the Town of Saukville has its own zoning ordinance, which makes use of 14 zoning district clas-

sifications. All of the zoning districts which are within the Village of Fredonia study area are shown on Map 19. A summary of each zoning district, including information on permitted principal uses, permitted accessory uses, conditional uses, residential density, minimum lot requirements, minimum yard requirements, and minimum building height, is found in Table 12.

Land subdivision regulations have a five-fold purpose:

1. To ensure that the subdivision of land will fit into the existing land use pattern and overall plan for the physical development of the community;
2. To ensure that adequate provision is made for necessary community and neighborhood facilities—parks, schools, churches, shopping centers—so that a harmonious and desirable environment will result;
3. To provide adequate standards for the design of the land subdivisions and the improvement of the land being subdivided, with particular attention to such requirements as utilities, storm water drainage, street improvements, and lot improvements;
4. To provide a basis for clear and accurate property boundary line records; and
5. To promote the health, safety, and general welfare of all citizens in the community, as well as the future occupants of the land to be subdivided.

Ideally, subdivision control regulations are a means of implementing or carrying out a community comprehensive plan. As such, subdivision regulations should coordinate and integrate development with the community's comprehensive plan, and are therefore properly prepared within the context of such a plan. Since land subdivision is far more than a means of marketing land—being the first step in the process of building a community—substantial benefits are to be derived from sound subdivision regulations. Much of the form and character of a community is determined by the quality of its land subdivisions and the standards which are built into them. Once land has been divided into blocks and lots, streets established, and utilities installed, the development pattern is permanently established and unlikely to be changed. For generations, the entire community, as well as the individuals who occupy these subdivisions, will be influenced by the quality and character of their design.

By reference, Section 9.08 of Chapter IX of the village municipal code conforms to the procedures outlined in Chapter 236 of the Wisconsin Statutes for platting lands within a village. The village ordinance does not deal, therefore, with the subdivision of land—as it should—into lots larger than 1.5 acres or the subdivision of a parcel of land into less than five new parcels. The dedication of parks, school sites, drainageways, and other public lands is not adequately addressed in the current ordinance. Also, neither design standards for street rights-of-way nor required improvements are reflective of current planning practice. These issues should be addressed in any revision of the village land subdivision control ordinance.

The Official Map is one of the oldest plan implementation devices at the disposal of local communities. It is also one of the most effective and efficient devices which can be brought to bear on the problem of preserving land for future public use. Section 62.23(6) of the Wisconsin Statutes provides that the governing body of a local municipality may establish an Official Map for the precise designation of right-of-way lines and site boundaries of streets, highways, parkways, parks, and playgrounds. Such a map has the force of law and is deemed to be final and conclusive with respect to the location and width of both existing and proposed streets, highways, and parkways, and the location and extent of existing and proposed parks and playgrounds. The statutes further provide that the Official Map may be extended to include areas beyond the corporate limit lines but within the extraterritorial plat approval jurisdiction of the municipality.

The Official Map is thus intended to constitute a means of implementing the community's master plan of streets, highways, parkways, parks, and playgrounds. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use. The Official Map permits the community to protect the beds of future streets, as well as the beds of partially or wholly developed streets which are to be widened by essentially prohibiting the construction of new buildings in such beds. Possible monetary savings which can accrue to the community from such protection are large. The fact that an Official Map assures the integrity of the community's long-range plan of streets is even more important. The Official Map has similar functions with respect to implementing the community's plan of parks, parkways, and other open spaces. An incidental but very important benefit of an Official Map is that it adequately locates and

records existing street lines that constitute the boundaries of the public property, and thereby tends to stabilize the location of real property boundary lines—both private and public.

The Village of Fredonia has an Official Map that was prepared by W. J. Blong, consultant to the Village, in 1957. A copy of this map is reproduced herein as Map 20. Because this map has not been maintained current, it has become obsolete. Streets have been developed within the Village since 1957 that are not in conformance with the proposed streets shown on the 1957 map. The corporate limits of the Village have also expanded and the areas annexed to the Village are not shown on the map. Perhaps most importantly, the 1957 map does not reflect the availability of the topographic and cadastral mapping that the Regional Planning Commission made available to the Village in 1977. Accordingly, a new Official Map should be prepared which seeks to implement the community's current long-range development plans.

PUBLIC UTILITIES

Public utility systems are one of the most important and permanent elements influencing growth and development. Moreover, certain utility facilities are closely linked to the surface water and groundwater resources of the area and may, therefore, affect the overall quality of the natural resource base. This is particularly true of sanitary sewerage, water supply, and storm water drainage facilities, which are in a sense modifications of, or extensions to, the natural lake, stream, and watercourse system of the area and of the underlying groundwater reservoir. Knowledge of the location and capacities of these utilities is, therefore, essential to intelligent land use planning.

Sanitary Sewer Service

The existing sanitary sewer service area of the Village of Fredonia sanitary sewerage system totals about 0.71 square mile and has a resident population of about 1,000 persons. The area is served by one separate sanitary sewer system. Presently, sewage from the village system is treated in an activated sludge-type sewage treatment plant located at the southwesterly village limits on the Milwaukee River, to which the treatment plant effluent is discharged. The treatment plant is located on a three-acre site, of which about one acre is currently utilized. The plant site is bounded on all sides by agricultural and open lands. The present sewage treatment plant was built in 1939 and was modified extensively in 1962. The treatment processes provided at the plant are classified as secondary level. Secondary level treatment can

Table 12

EXISTING ZONING DISTRICTS IN THE VILLAGE OF FREDONIA STUDY AREA: 1978

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
	Principal	Accessory			Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
VILLAGE OF FREDONIA ZONING DISTRICTS											
Residential	Single-family dwellings, two-family dwellings, multiple-family dwelling, churches, hospitals, schools, museums, libraries, farming	Accessory buildings when set back a minimum of 60 feet	None	--	11,000 square feet	--	85	25	6 with total width not less than 14	15	25 for dwellings and 75 for public and semipublic buildings
Business	Retail sales, animal hospitals, trucking, warehouses, light industry	--	None	--	None for business uses, 11,000 square feet for dwellings	1,500 square feet	None for business uses, 85 for dwellings	--	None for business uses, 6 with total width not less than 14 for dwellings	None for business uses, 15 for dwellings	75 and three stories for dwellings
Industrial	Industrial uses and manufacturing	--	None	--	None for industrial uses, 11,000 square feet for dwellings	2,000 square feet	None for industrial uses, 85 for dwellings	--	None for industrial uses, 6 with total width not less than 14 for dwellings	None for industrial uses, 15 for dwellings	100 and three stories for dwellings
TOWN OF FREDONIA ZONING DISTRICTS											
A-1 Exclusive Agricultural	Farming, orchards, nurseries	Farm buildings, one single-family dwelling, home occupations	Housing for farm workers, fur farms, commercial egg production, second single-family dwelling	--	35 acres	35 acres	330	75	25	50	60
A-2 Agricultural/Rural Residential	Agricultural warehousing, animal hospitals, stables, single-family dwellings	General farm buildings, garages, home occupations	Grain preparation, fluid milk processing, production of cheese, recreational vehicle storage	--	5 acres	5 acres	330	75	25	50	60
R-1 Suburban Single-Family Residential	Single-family dwellings	Private garages, home occupations	None	--	3 acres	3 acres	200	75	40	50	35
R-2 Single-Family Residential	Single-family dwellings	Private garages, toolsheds, home occupations	None	1	43,560 square feet	43,560 square feet	150	75	25	50	35
R-3 Single-Family Residential	Single-family dwellings	Private garages, toolsheds, home occupations	Planned unit developments	2.2	20,000 square feet	20,000 square feet	100	35	15	25	35

Table 12 (continued)

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
	Principal	Accessory			Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
R-4 Single-Family Residential	Single-family dwellings	Private garages, toolsheds, home occupations	Planned unit developments	6.0	7,200 square feet	7,200 square feet	60	35	10	25	35
B-1 Urban Business	Retail establishments	Garages, off-street parking, residential quarters	Automotive sales or repair, food lockers, funeral homes	--	7,200 square feet	--	60	--	--	25	35
B-2 Highway Business	None	--	Drive-in establishments, gasoline stations, motels	--	43,560 square feet	--	150	50	25	25	35
M-1 Urban Industrial	Automotive body repair, bakeries, manufacturing	Garages, off-street parking, office storage	Sewage treatment plants, fueling stations, meat slaughtering	--	7,200 square feet	--	60	--	--	25	35
M-2 General Industrial	Automotive body repair, bakeries, manufacturing	Garages, off-street parking, office storage	Sewage treatment plants, fueling stations, acid manufacturing	--	43,560 square feet	--	150	50	25	25	35
M-3 Extractive	None	--	Mining, mineral refining, aggregate plant	--	--	--	--	100	100	100	35
P-1 Park	Boat rental, fairgrounds, parks	Buildings accessory to permitted uses	Archery ranges, beaches, golf courses, campgrounds	--	43,560 square feet	--	150	40	40	40	35
P-2 Urban Institutional	Public or private schools, hospitals	Residential quarters, garages, service buildings	Bus terminals, electric plants, water storage, cemeteries	--	7,200 square feet	--	60	--	--	25	35
P-3 Rural Institutional	Public or private schools, churches, public offices	Residential quarters, garages, service buildings	Airports, bus terminals, electric plants, water storage tanks	--	43,560 square feet	--	150	75	25	25	35
C-1 Lowland Conservancy	Agricultural, fishing, hunting	--	--	--	--	--	--	--	--	--	--
C-2 Upland Conservancy	Agricultural, fishing, hunting, single-family dwellings	Farm buildings, domestic stock, home occupations	None	--	5 acres	--	330	100	50	50	35

Table 12 (continued)

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
					Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
	Principal	Accessory									
TOWN OF BELGIUM ZONING DISTRICTS											
R-1 Single-Family Residential	Single-family dwellings	--	Government and public uses, planned unit developments	0.6	1.5 acres	1.5 acres	150	50	One story—20; two stories—30	100	35
R-2 Single-Family Residential	Single-family dwellings	--	Government and public uses, planned unit developments, multiple-family residential quarters	0.6	1.5 acres	1.5 acres	150	50	One story—20; two stories—30	100	35
B-1 Neighborhood Commercial	Retail establishments, existing residences	--	Government and public uses	0.6	1.5 acres	1.5 acres	150	Business—75; existing residential—50	Business—15; one-story existing residential—20; two-story existing residential—30	100	35
B-2 Planned Commercial	None	--	Retail establishments, existing residences, highway-oriented uses	0.6	Commercial—2 acres; existing residential—1.5 acres	Existing residential—1.5 acres	Commercial—200; existing residential—150	Commercial—150; existing residential—50	Commercial—30; one-story existing residential—20; two-story existing residential—30	100	Commercial—45; existing residential—35
M-1 Industrial	Automotive repair, machine shops, warehousing	--	Airports, animal hospitals, dumps	0.6	Industrial—1 acre; existing residential—1.5 acres	Existing residential—1.5 acres	Industrial—200; existing residential—150	50	Industrial and two-story existing residential—30; one-story existing residential—20	100	Industrial—45; existing residential—35
M-2 Planned Industrial	None	--	Industrial uses, airports, animal hospitals, dumps, planned industrial developments	0.6	Industrial—1 acre; existing residential—1.5 acres	Existing residential—1.5 acres	Industrial—200; existing residential—150	50	Industrial and two-story existing residential—30; existing one-story residential—20	100	Industrial—45; existing residential—35

Table 12 (continued)

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
	Principal	Accessory			Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
A-1 Agricultural	Apiculture, dairying, forestry, farming	Farm dwellings	Airports, government and public uses, animal hospitals, dumps	Existing residential—0.6; farm dwellings—0.05	Farms—20 acres; existing residential—1.5 acres	Farms—20 acres; existing residential—1.5 acres	Agricultural—300; existing residential—150	Agricultural—100; existing residential—50	Agricultural—100; one-story existing residential—20; two-story existing residential—30	100	Residential—35; farm structure—60
C-1 Conservancy	Fishing, floodway, hunting	None permitted	Drainageways, accessory structures	--	--	--	--	--	--	--	--
P-1 Park	Public and private parks, playgrounds	--	All structures, government and public uses	--	--	--	--	--	--	--	--
TOWN OF PORT WASHINGTON ZONING DISTRICTS											
A-1 Agricultural	Farming, dairying, quarries, single-family dwellings, parks, churches, nursing homes	Uses incidental to principal uses	--	--	--	--	--	50	20	--	--
R-45 Residential	Single-family dwellings, parks, schools, churches, nursing homes	Uses incidental to principal uses such as home occupations or professional offices	--	1.0	43,560 square feet	43,560 square feet	120	50	20	40	--
R-65 Residential	Single-family dwellings, parks, schools, churches, nursing homes	Uses incidental to principal uses such as home occupations or professional offices	--	0.6	1.5 acres	1.5 acres	140	50	20	40	--
R-65A Residential	Two-family dwellings, single-family dwellings, schools, parks, churches	Uses incidental to principal uses such as home occupations or professional offices	--	1.3	1.5 acres	1.5 acres	140	50	20	60	--

Table 12 (continued)

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
	Principal	Accessory			Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
C-1 General Commercial	Retail stores, community service establishments, taverns, restaurants	Uses incidental to principal uses	Single-family dwellings, two-family dwellings, schools, churches, parks	--	43,560 square feet	--	120 minimum frontage	50	10	40	--
C-2 Highway Business	Drive-in establishments, gasoline stations, motels	--	Single-family dwellings, two-family dwellings, schools, churches, parks	--	43,560 square feet	--	120 minimum frontage	100	10	40	--
M-1 Light Industrial	Laboratories, printing houses, tool making operations, limited manufacturing	Uses incidental to principal uses	Single-family dwellings, two-family dwellings, schools, churches, parks, retail stores, service establishments	--	--	--	--	60	Dependent upon abutting district	Dependent upon abutting district	--
M-2 Heavy Industrial	Cement manufacturing, tanneries, junkyards, general warehousing, lumberyards	--	Single-family dwellings, two-family dwellings, schools, churches, parks, retail stores, laboratories, limited manufacturing	--	--	--	--	100	Dependent upon abutting district	Dependent upon abutting district	--
TOWN OF SAUKVILLE ZONING DISTRICTS											
R-1 Single-Family Residential	Single-family dwellings	--	Multiple-family dwellings, agriculture, utilities	0.2	5 acres	5 acres	250	100 from centerline of right-of-way	One story—20; two-story—30	100	35
R-2 Single-Family Residential	Single-family dwellings	One accessory building	Multiple-family dwellings, agriculture, utilities	0.2	5 acres	5 acres	250	100 from centerline of right-of-way	One story—20; two-story—30	100	35

Table 12 (continued)

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
	Principal	Accessory			Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
R-3 Single-Family Residential	Single-family dwellings	One accessory building	Multiple-family dwellings, agriculture, utilities	0.2	5 acres	5 acres	250	100 from centerline of right-of-way	One story—20; two-story—30	100	35
R-4 Single-Family Residential	Single-family dwellings	One accessory building	Multiple-family dwellings, agriculture, utilities	4.4	10,000 square feet	10,000 square feet	75	68 from centerline of right-of-way	One story—10; two story—15	25	35
B-1 Neighborhood Commercial	Retail establishments, stores, laundries, offices	--	Multiple-family dwellings, agriculture, utilities	--	1.5 acres	--	150	108 from centerline of right-of-way	15	100	35
B-2 Planned Commercial	Retail establishments, stores, laundries, offices	--	Multiple-family dwellings, agriculture, utilities, drive-in establishments	--	2 acres	--	200	183 from centerline of right-of-way	30	100	45
M-1 Industrial	Auto repair, laboratories, manufacturing, agriculture	--	Planned unit developments, multiple-family dwellings, airports, government uses, utilities, animal hospitals	--	--	--	--	--	--	--	--
M-2 Planned Industrial	Agriculture	--	Multiple-family dwellings, airports, government uses, utilities, animal hospitals	--	--	--	--	--	--	--	--
A-1 Agricultural	Apiculture, dairying, farming, forestry, stables	Farm dwellings	Multiple-family dwellings, airports, utilities	0.2	5 acres	5 acres	250	100 from centerline of right-of-way	100	100	60
C-1 Conservancy	Fishing, floodway, hunting, wildlife preserves	--	Drainageways, accessory structures, grazing, utilities	--	--	--	--	--	--	--	--
C-2 Marsh and Wooded Areas	Public and private parks, arboretums, playgrounds	--	All structures, government uses, utilities	--	--	--	--	--	--	--	--

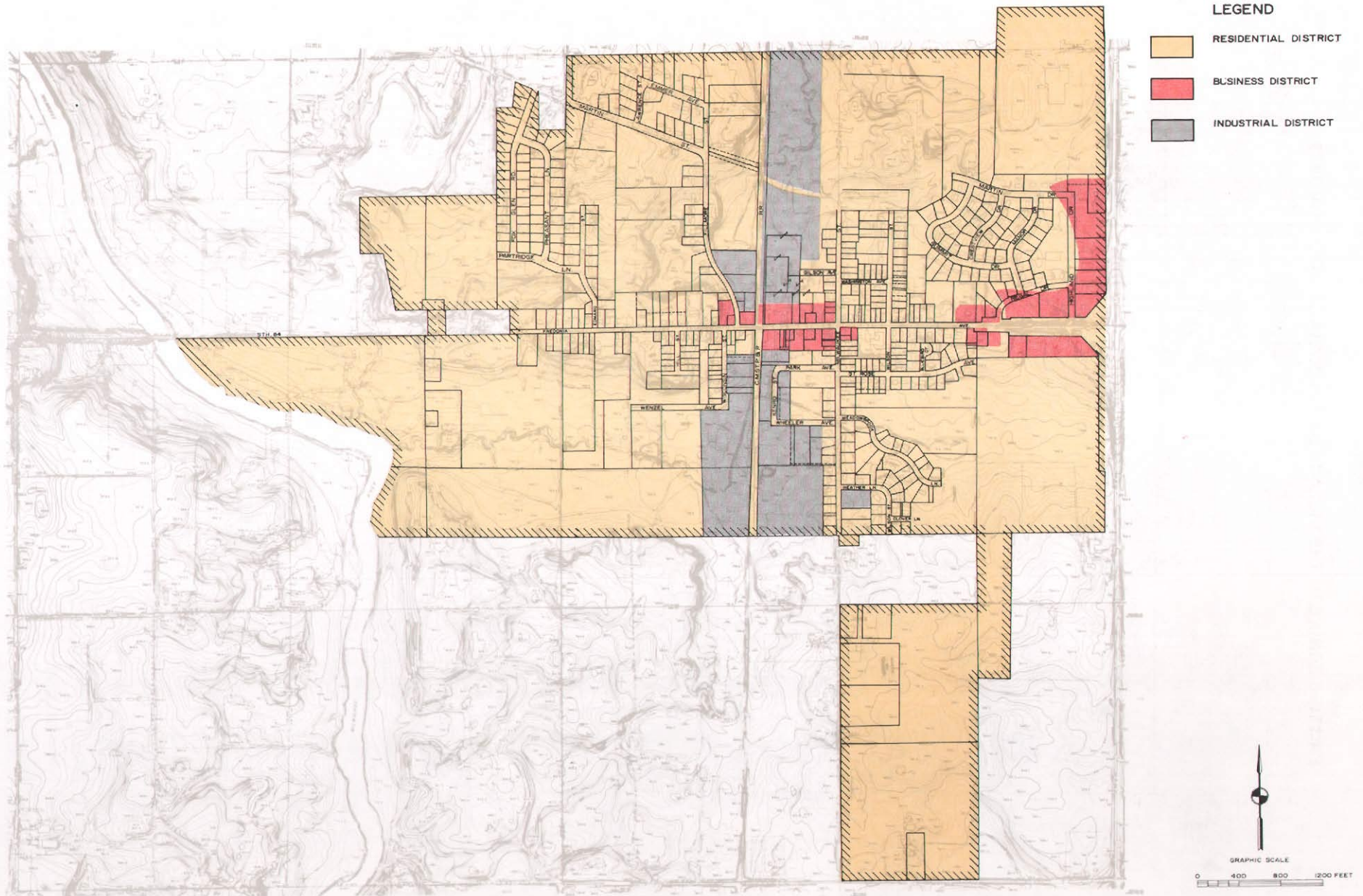
Table 12 (continued)

Zoning District	Permitted Uses		Conditional Uses	Maximum Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
	Principal	Accessory			Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
F-1 Floodway	Drainage, navigation, water control facilities	--	Grazing, horticulture, parking, amusement uses, utilities	--	--	--	--	--	--	--	--
F-2 Floodplain	Flood overflows, water control facilities	--	Parks, arboretums, playgrounds, beaches, utilities	--	--	--	--	--	--	--	--
P-1 Park	Public and private parks, arboretums	--	All structures, agriculture, utilities	--	--	--	--	--	--	--	--

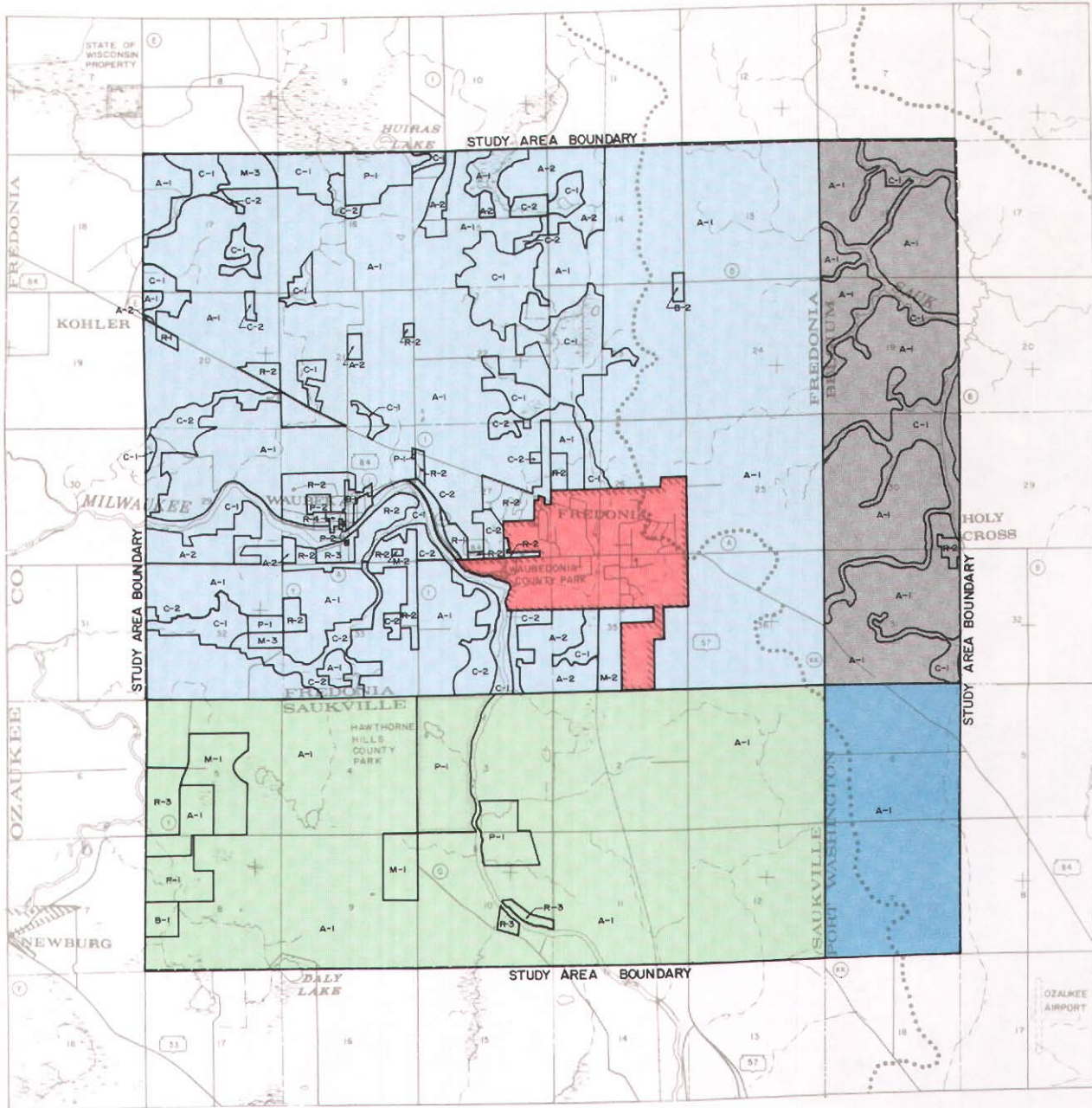
Source: SEWRPC.

Map 18

EXISTING ZONING IN THE VILLAGE OF FREDONIA: 1978



EXISTING ZONING IN THE VILLAGE OF FREDONIA STUDY AREA: 1978



LEGEND

VILLAGE OF FREDONIA

TOWN OF FREDONIA

A-1 EXCLUSIVE AGRICULTURAL DISTRICT
 A-2 AGRICULTURAL/RURAL RESIDENTIAL DISTRICT
 R-1 SUBURBAN SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-2 SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-3 SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-4 SINGLE-FAMILY RESIDENTIAL DISTRICT
 B-1 URBAN BUSINESS DISTRICT
 B-2 HIGHWAY BUSINESS DISTRICT
 M-1 URBAN INDUSTRIAL DISTRICT
 M-2 GENERAL INDUSTRIAL DISTRICT
 M-3 EXTRACTIVE DISTRICT
 P-1 PARK DISTRICT
 P-2 URBAN INSTITUTIONAL DISTRICT
 P-3 RURAL INSTITUTIONAL DISTRICT
 C-1 LOWLAND CONSERVANCY DISTRICT
 C-2 UPLAND CONSERVANCY DISTRICT

TOWN OF BELGIUM

R-1 SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-2 SINGLE-FAMILY RESIDENTIAL DISTRICT
 B-1 NEIGHBORHOOD COMMERCIAL DISTRICT
 B-2 PLANNED COMMERCIAL DISTRICT
 M-1 INDUSTRIAL DISTRICT
 M-2 PLANNED INDUSTRIAL DISTRICT

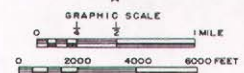
A-1 AGRICULTURAL DISTRICT
 C-1 CONSERVANCY DISTRICT
 P-1 PARK DISTRICT

TOWN OF PORT WASHINGTON

A-1 AGRICULTURAL DISTRICT
 R-4S RESIDENTIAL DISTRICT
 R-6S RESIDENTIAL DISTRICT
 R-6SA RESIDENTIAL DISTRICT
 C-1 GENERAL COMMERCIAL DISTRICT
 C-2 HIGHWAY BUSINESS DISTRICT
 M-1 LIGHT INDUSTRIAL DISTRICT
 M-2 HEAVY INDUSTRIAL DISTRICT

TOWN OF SAUKVILLE

R-1 SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-2 SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-3 SINGLE-FAMILY RESIDENTIAL DISTRICT
 R-4 SINGLE-FAMILY RESIDENTIAL DISTRICT
 B-1 NEIGHBORHOOD COMMERCIAL DISTRICT
 B-2 PLANNED COMMERCIAL DISTRICT
 M-1 INDUSTRIAL DISTRICT
 M-2 PLANNED INDUSTRIAL DISTRICT
 A-1 AGRICULTURAL DISTRICT
 C-1 CONSERVANCY DISTRICT
 C-2 MARSH AND WOODED AREAS
 F-1 FLOODWAY DISTRICT
 F-2 FLOODPLAIN DISTRICT
 P-1 PARK DISTRICT

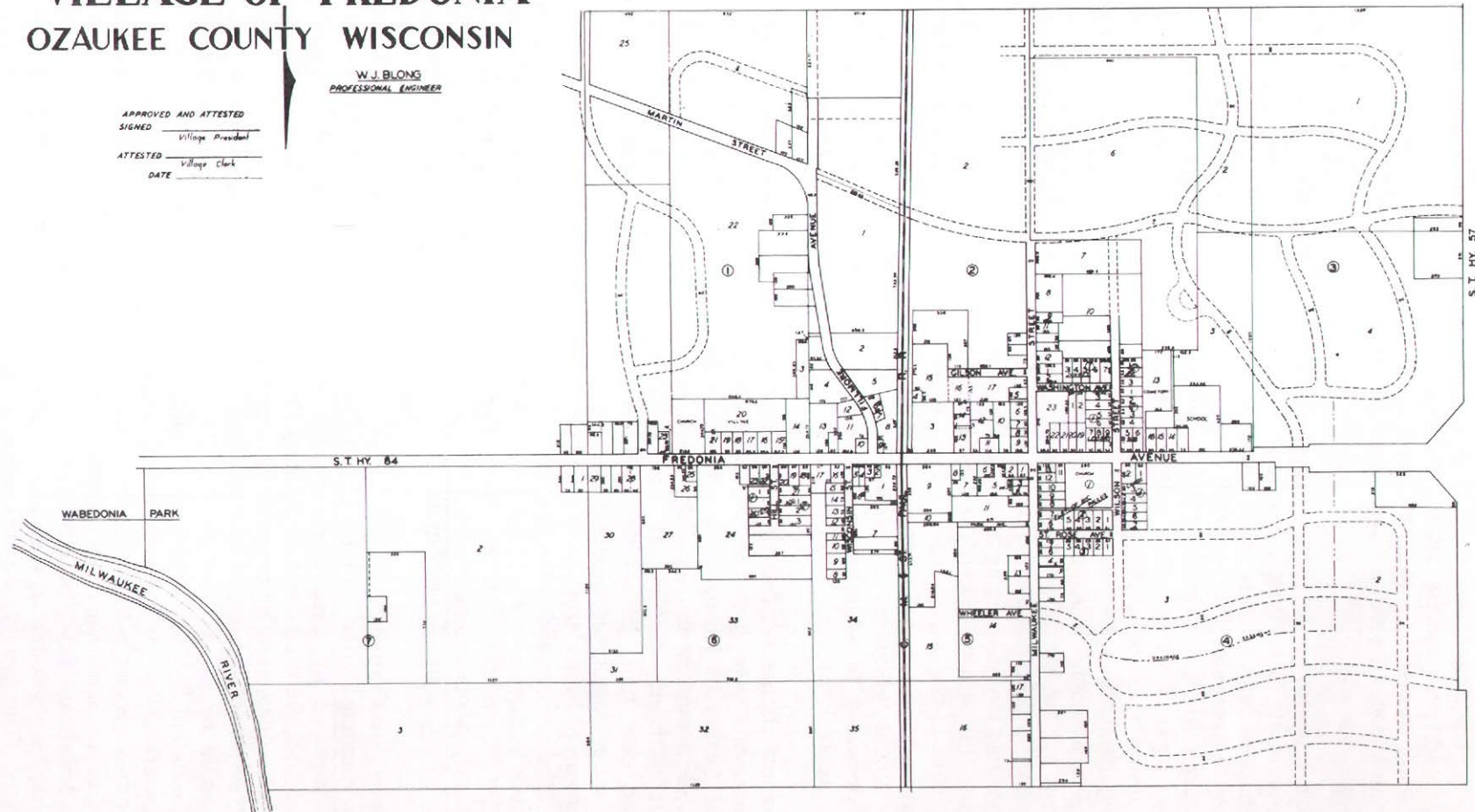


OFFICIAL MAP OF THE VILLAGE OF FREDONIA: 1957

OFFICIAL
OF THE
VILLAGE OF FREDONIA
OZAUKEE COUNTY WISCONSIN

W. J. BLONG
PROFESSIONAL ENGINEER

APPROVED AND ATTESTED
SIGNED _____
Village President
ATTESTED _____
Village Clerk
DATE _____



be defined as biological treatment of the effluent from primary treatment. In such treatment, additional oxygen-demanding organic matter is removed by trickling filters or activated sludge tanks and additional sedimentation. The existing sanitary sewer system and sanitary sewer service area for the Village of Fredonia system are shown on Map 21.

In 1978 a house-to-house survey was conducted of the conditions of existing septic tank systems in the Waubeka Sanitary District by Graef-Anhalt-Schloemer & Associates, Inc., consulting engineers of Milwaukee. About 8 percent of the houses surveyed had septic systems which overflowed and were in direct violation of the point source discharge requirements of the federal Water Pollution Control Act, as amended. A significant percentage, 23 percent of the septic systems surveyed, was found to have a potential for major problems; and 12 percent had required major repairs in the past. The survey found that nearly one-third of the septic systems in the Waubeka area may be subject to serious problems. A study done in 1971 by the Ozaukee County Department of Environmental Health conducted in a similar fashion indicated similar septic tank problems in the area.

The recommendation set forth in the Milwaukee River watershed plan that the Fredonia sewage treatment facility be expanded to provide secondary waste treatment and auxiliary waste treatment of effluent disinfection has remained unchanged over time. In addition, the adopted regional water quality management plan recommends advanced waste treatment for phosphorus removal. The recommended sanitary sewer service area for the Village of Fredonia system as set forth in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, is shown on Map 22.

Based upon the October 1978 preliminary draft, Facilities Planning Report: Waubeka Area Sanitary District, prepared by Graef-Anhalt-Schloemer & Associates, Inc., the Waubeka Area Sanitary District is proposed to be served by a combination gravity-pressure sewer system. The sewage from this system would be treated at a regional treatment facility located at Fredonia, which would also treat sewage generated by the Fredonia sewage system. The proposed project is in conformance with and would serve to implement the regional land use plan, the Milwaukee River watershed plan, and the regional sanitary sewerage system plan as adopted by SEWRPC. The facility, when constructed, will provide centralized public sanitary sewer service to existing and proposed urban development, and will reduce the pollutant loads to affected lakes and

streams, including the main stem of the Milwaukee River. The estimated sanitary sewer service area population in the year 2000, the design year for the plant, is about 3,440. This service area includes the Waubeka area as well as the Village of Fredonia.

Storm Water Runoff

The Village of Fredonia does not have a storm sewer system per se. Storm water drainage is handled by either natural storm water channels or roadside drains and culverts.

Public Water System

The Village of Fredonia water system service area is shown on Map 23. In January 1973, Graef-Anhalt-Schloemer & Associates, Inc., published Report of Water System Evaluation for Village of Fredonia, Wisconsin. In that report, the village water distribution system was analyzed and recommendations for system improvements were made.

The report indicated that the village water supply system does not provide for safe fire flow to more than half of the residential structures in the community. In addition to repairs or the replacement of two well pumps, the following improvements were recommended in the report:

1. The construction of an additional elevated storage tank in the near future for fire protection purposes.
2. The reinforcement of the water distribution system to meet high demand and fire protection needs.
3. Because of the inadequate number of fire hydrants and system valving, the initiation of a program to annually add a number of hydrants and valves to the system to make up the existing deficiency.
4. The installation of an auxiliary diesel or gasoline-powered right-angle drive at one well to provide a water supply during power outages.
5. The development of an improved program of maintenance and operation and record-keeping.

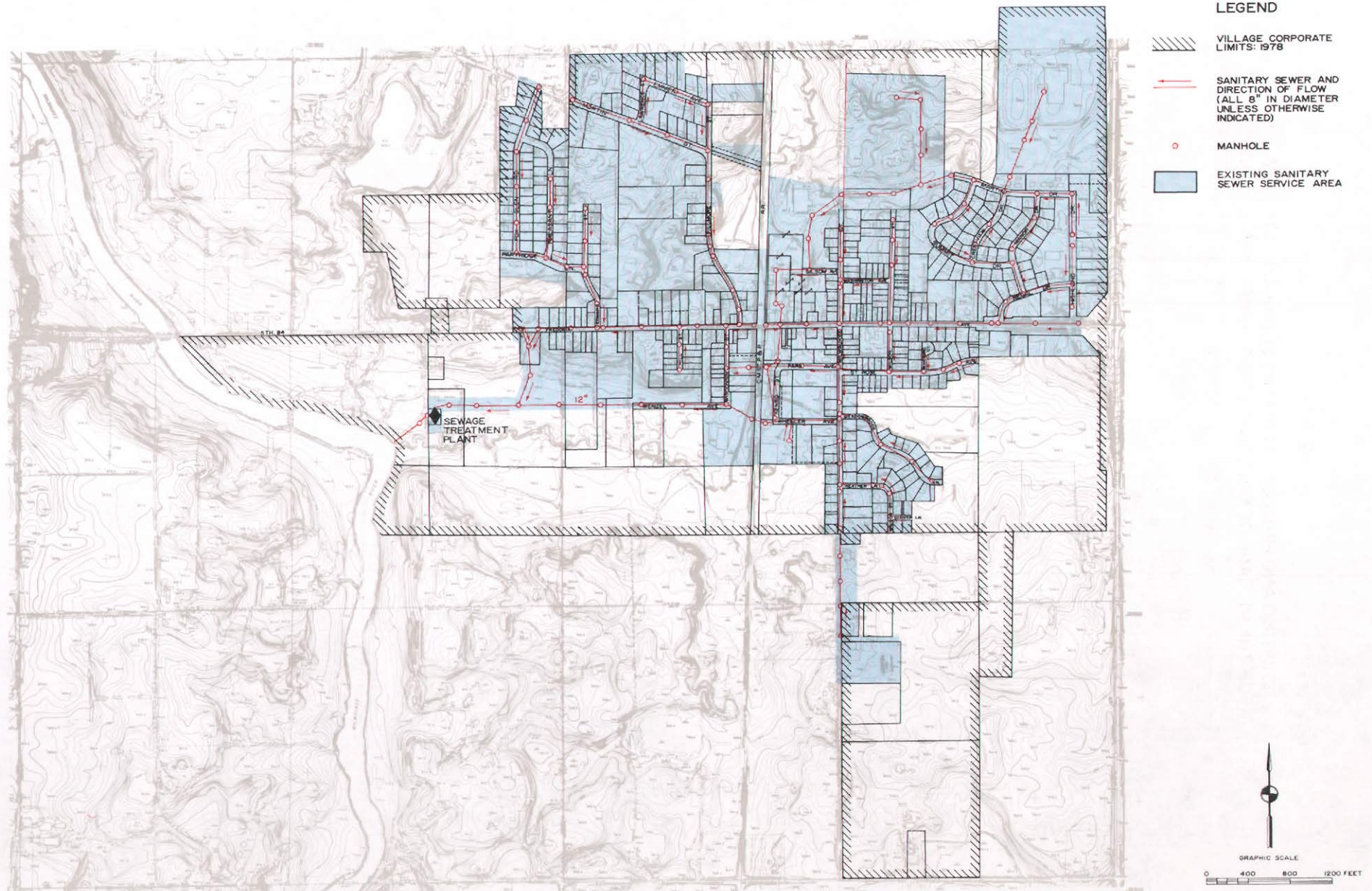
The report recommends that these improvements be staged in four phases. An application was submitted by the Village in November 1978 to the federal Farmers Home Administration for a 75 percent grant for water system improvements.

Community Facilities

Schools: The Village of Fredonia study area

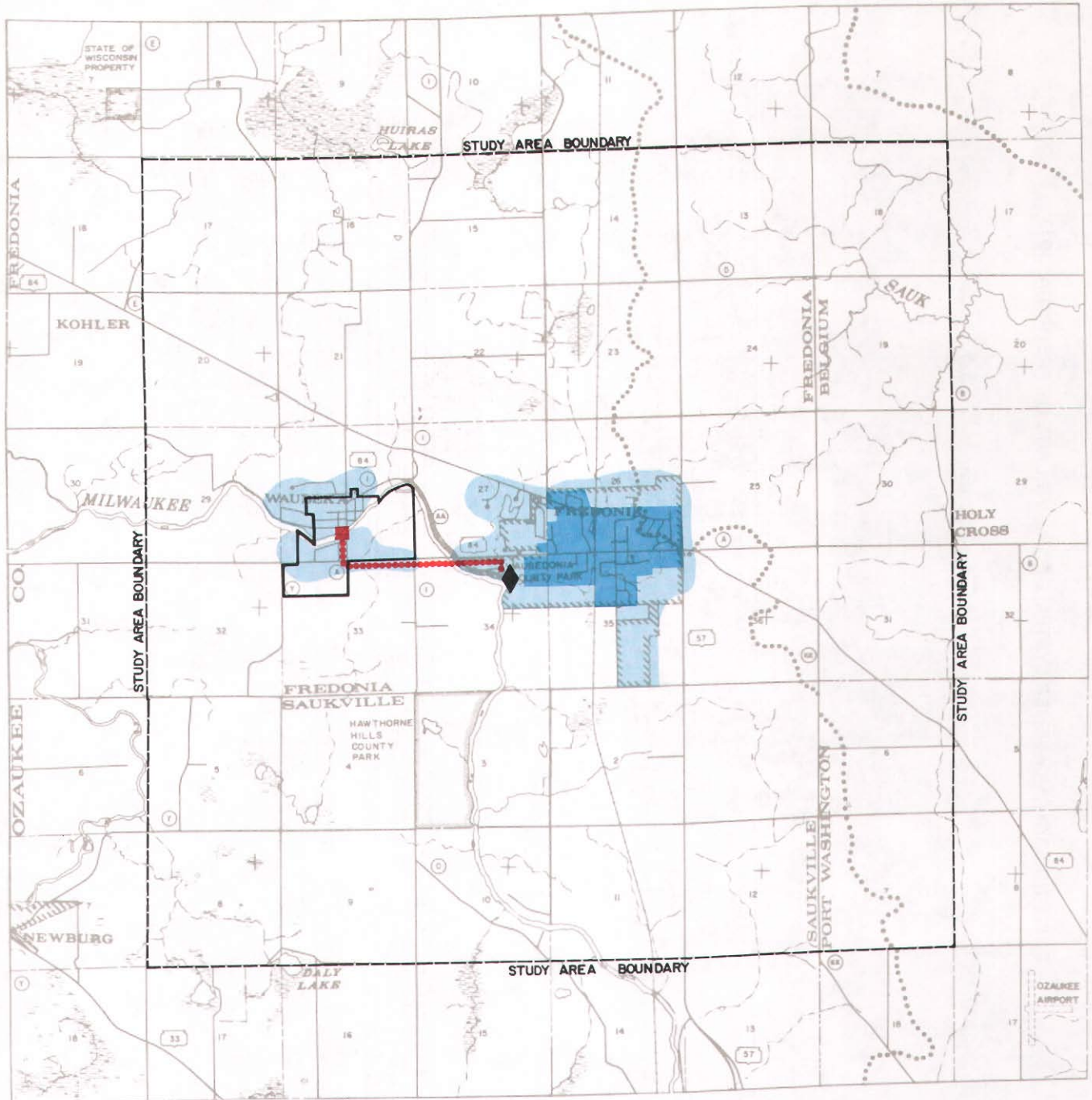
Map 21

EXISTING SANITARY SEWER SYSTEM OF THE VILLAGE OF FREDONIA: 1978



Map 22

**EXISTING AND PROPOSED SANITARY SEWER SERVICE AREA
FOR THE VILLAGE OF FREDONIA STUDY AREA: 1975 AND 2000**



LEGEND

SEWER SERVICE AREAS



EXISTING 1975



PROPOSED 2000

SEWAGE TREATMENT FACILITY



EXISTING PUBLIC TO BE RETAINED

SEWERS AND APPURTENANT FACILITIES



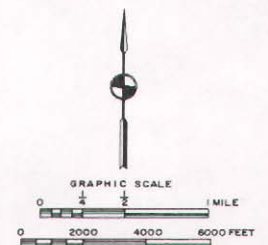
PROPOSED FORCE MAIN



PROPOSED PUMPING STATION



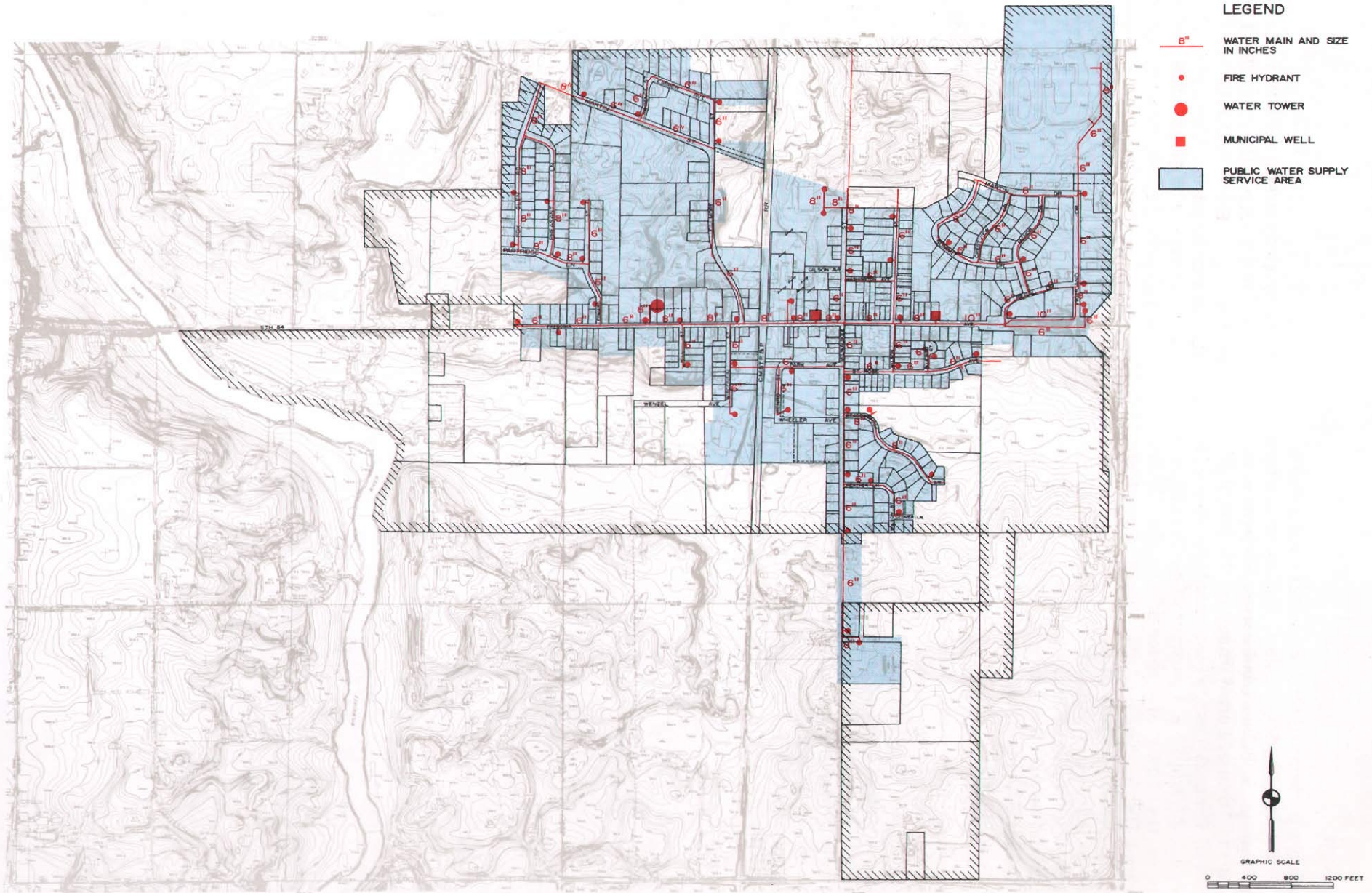
BOUNDARY OF THE WAUBEKA AREA SANITARY DISTRICT CREATED IN 1979



Source: SEWRPC.

Map 23

EXISTING WATER SUPPLY SERVICE IN THE VILLAGE OF FREDONIA: 1978



Source: SEWRPC.

includes portions of three separate school districts: the School District of Port Washington, which includes U. S. Public Land Survey Sections 6 and 7 of the Town of Port Washington; the School District of Random Lake, which includes Sections 15, 16, 17, 20, and 22 and portions of Sections 21 and 29 of the Town of Fredonia; and the Unified School District No. 1 of the Village of Fredonia, which also serves parts of the Villages of Newburg and Saukville and parts of the Townships of Belgium, Fredonia, and Saukville. The limits of these districts within the study area are shown on Map 24. Although the Village of Fredonia study area comprises large portions of the School District of Port Washington and the School District of Random Lake, these areas do not have school facilities within the village study area. However, four of the five school facilities of the Unified School District No. 1 of the Village of Fredonia are within the village study area, including Ozaukee Middle School, Ozaukee High School, Grandview Elementary School, and Maple Lawn Elementary School. The 1978-1979 enrollments for each of these schools is shown in Table 13.

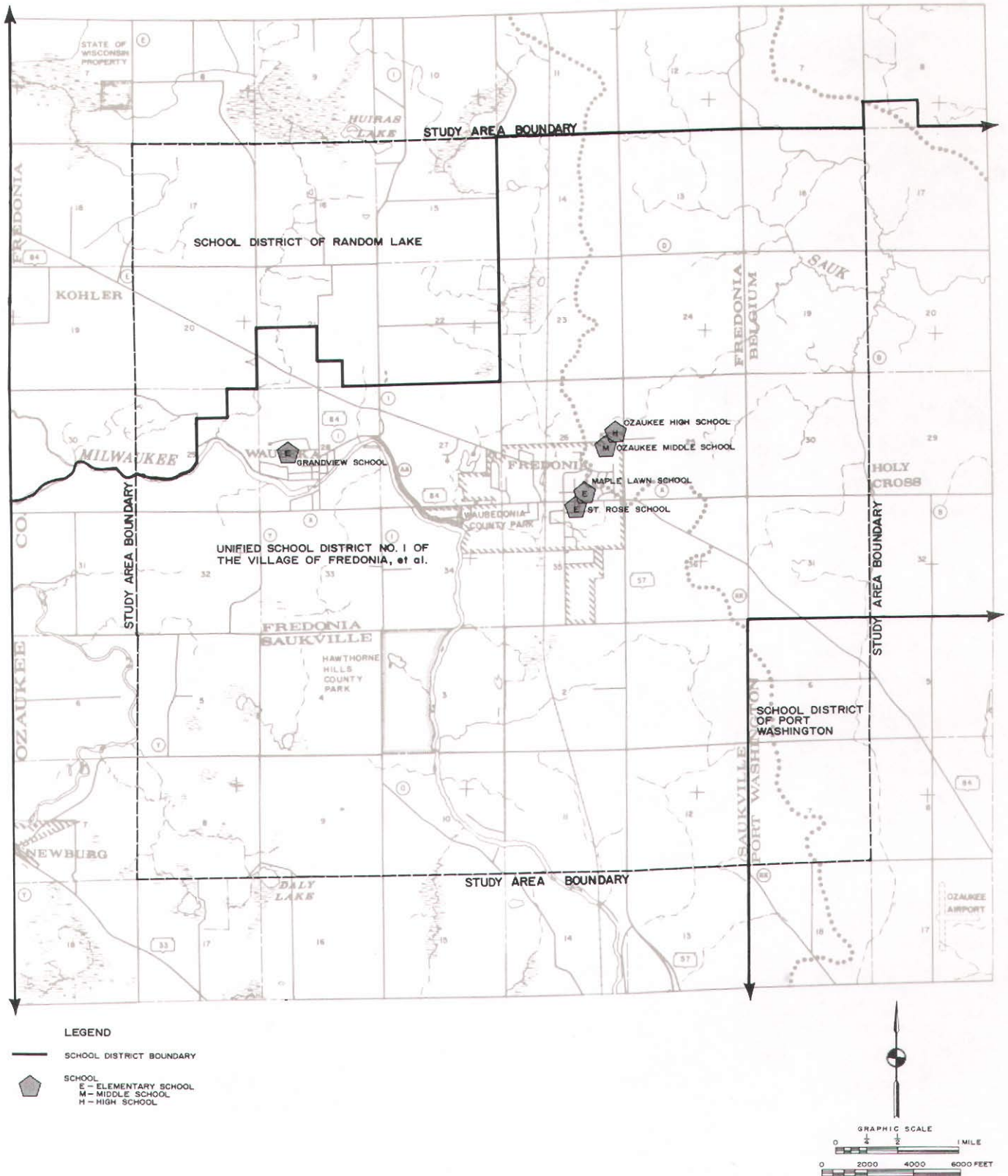
Table 13
ENROLLMENTS FOR SELECTED SCHOOLS
IN THE UNIFIED SCHOOL DISTRICT NO. 1
OF THE VILLAGE OF FREDONIA, PARTS OF THE
VILLAGES OF NEWBURG AND SAUKVILLE, PARTS
OF THE TOWNSHIPS OF BELGIUM, FREDONIA,
AND SAUKVILLE: 1978-1979 SCHOOL YEAR

School	Enrollment
Maple Lawn Elementary School (grades K-3)	132
Grandview Elementary School (grades 1-4).	95
Ozaukee Middle School (grades 5-8).	306
Ozaukee High School (grades 9-12).	370

Source: Unified School District No. 1 of the Village of Fredonia, Parts of the Villages of Newburg and Saukville, Parts of the Townships of Belgium, Fredonia, and Saukville in its report to the Wisconsin Department of Instruction, 1978-1979.

Map 24

EXISTING SCHOOL DISTRICT BOUNDARIES AND SCHOOLS IN THE VILLAGE OF FREDONIA STUDY AREA: 1978



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Chapter III

LAND USE DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS

INTRODUCTION

Planning principles and standards have been developed by the Regional Planning Commission to aid in the application of the nine land use development objectives outlined. These objectives, principles, and supporting standards formed the basis for the formulation of a similar set of local land use development objectives, principles, and standards for the Village of Fredonia planning area. For the purposes of this report, an "objective" is defined as a goal or end toward the attainment of which plans and policies are directed; a "principle" is defined as a fundamental, primary, or generally accepted tenet used to support objectives and pre-

pare standards; a "standard" is defined as a criterion which can be used to determine the ability of alternative plan proposals to meet objectives; and, a "plan" is defined as a design which seeks to achieve agreed-upon objectives.

OBJECTIVES, PRINCIPLES, AND STANDARDS

The land use development objectives, principles, and standards as developed and approved by the Village Plan Commission deal primarily with spatial allocation to, and distribution of, the various land uses in a community, land use compatibility, resource protection, and accessibility. Each objective together with its supporting principles and standards is presented in Table 14.

Table 14

LAND USE DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS FOR THE VILLAGE OF FREDONIA STUDY AREA

OBJECTIVE NO. 1

A balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the Fredonia area.

PRINCIPLE

The planned supply of land set aside for any given use should approximate the known and anticipated demand for that use.

STANDARDS

1. Each land use category should be planned to occupy the area indicated in the following table:

Land Use Category	Development Standard (gross area) ^a
Residential	90 acres per 1,000 persons
Commercial	6 acres per 100 commercial employees
Industrial	12 acres per 100 industrial employees
Governmental and Institutional	12 acres per 1,000 persons
Recreational	
Regional and Multi-Community	As recommended in the regional park and open space plan
Community Parks	2.2 acres per 1,000 persons
Neighborhood Parks	1.7 acres per 1,000 persons
Schools	2.5 acres per 1,000 persons

^aGross areas include street rights-of-way and off-street parking.

OBJECTIVE NO. 2

A spatial distribution of the various land uses which will result in a compatible arrangement of land uses.

PRINCIPLE

The proper allocation of uses to land can avoid or minimize hazards and dangers to health, safety, and welfare and maximize amenity and convenience in terms of accessibility to supporting land uses.

STANDARDS

1. Urban residential uses should be located in areas which are served with centralized public sanitary sewerage and water supply facilities and contain, within a reasonable walking distance, necessary supporting local service uses, such as neighborhood park, local commercial, and elementary school facilities. In addition, urban residential uses should have reasonable access through the appropriate component of the transportation system to employment, commercial, cultural, and governmental centers and secondary school and higher educational facilities.
2. Rural and suburban residential uses should have reasonable access through the appropriate component of the transportation system to local service uses; employment, commercial, cultural, and governmental centers; and secondary school and higher educational facilities.
3. Industrial uses should be located so as to have direct access to arterial street and highway facilities and reasonable access through an appropriate component of the transportation system to residential areas and to railway, seaport, and airport facilities, and should not be intermixed with commercial, residential, governmental, recreational, or institutional land uses.

OBJECTIVE NO. 3

A spatial distribution of the various land uses which will result in the protection and wise use of the natural resources of the area including soils, lakes and streams, wetlands, woodlands, and wildlife.

PRINCIPLE

The proper allocation of land uses can assist in maintaining an ecological balance between the activities of man and the natural environment which supports him.

Soils Principle

The proper relation of urban and rural land use development to soil type and distribution can serve to avoid costly environmental and developmental problems, aid in the establishment of better settlement patterns, and promote the wise use of an irreplaceable resource.

STANDARDS

1. Sewered urban development should not be located in areas covered by soils identified in the detailed regional operational soil survey as having severe or very severe limitations for such development.
2. Unsewered suburban residential development should not be located in areas covered by soils identified in the detailed regional operational soil survey as having severe or very severe limitations for such development.
3. Rural development, including agricultural and rural residential development, should not be located in areas covered by soils identified in the detailed regional operational soil survey as having severe or very severe limitations for such development.

Lakes and Streams Principle

Inland lakes and streams contribute to the atmospheric water supply through evaporation; provide a suitable environment for desirable and sometimes unique plant and animal life; provide the population with opportunities for certain scientific, cultural, and educational pursuits; constitute prime recreational areas; provide a desirable aesthetic setting for certain types of land use development; serve to store and convey floodwaters; and provide certain water withdrawal requirements.

STANDARDS

1. Floodlands should not be allocated for any urban development which would cause or be subject to flood damage.
2. The floodwater storage capacity of floodlands shall not be reduced by urban or rural development.
3. The flow capacity of perennial stream channels and associated floodlands shall not be reduced by urban or rural development.

Wetlands Principle

Wetlands support a wide variety of desirable and sometimes unique plant and animal life; assist in the stabilization of lake levels and streamflows; trap and store plant nutrients in runoff, thus reducing the rate of enrichment of surface waters and obnoxious weed and algae growth; contribute to the atmospheric oxygen supply; contribute to the atmospheric water supply; reduce storm water runoff by providing area for floodwater impoundment and storage; trap soil particles suspended in runoff and thus reduce stream sedimentation; and provide the population with opportunities for certain scientific, educational, and recreational pursuits.

STANDARDS

1. Wetland areas adjacent to streams or lakes, wetlands within areas having special wildlife and other natural values, and wetlands having an area in excess of 50 acres should not be allocated for urban development except that for limited recreational uses, and should not be drained or filled.

Woodlands Principle

Woodlands assist in maintaining unique natural relationships between plants and animals; reduce storm water runoff; contribute to the atmospheric oxygen supply; contribute to the atmospheric water supply through transpiration; aid in reducing soil erosion and stream sedimentation; provide the resource base for forest product industries; provide the population with opportunities for certain scientific, educational, and recreational pursuits; and provide a desirable aesthetic setting for certain types of land use development.

STANDARDS

1. A minimum of 10 percent of the land area of each watershed should be devoted to woodlands.
2. For demonstration and educational purposes, the woodland cover within each county should include a minimum of 40 acres devoted to each major forest type: oak-hickory, northern hardwood, pine, and lowland forest. In addition, remaining examples of the native forest vegetation types representative of presettlement vegetation should be maintained in a natural condition and be made available for research and educational use.
3. A minimum regional aggregate of five acres of woodland per 1,000 population should be maintained for recreational pursuits.

Wildlife Principle

Wildlife, when provided with a suitable habitat, will supply the population with opportunities for certain scientific, educational, and recreational pursuits; comprises an integral component of the life systems which are vital to beneficial natural processes, including the control of harmful insects and other noxious pests and the promotion of plant pollination; provide food sources; offer an economic resource for the recreation industries; and serve as an indication of environmental health.

STANDARDS

1. The most suitable habitat for wildlife—that is, the area wherein fish and game can best be fed, sheltered, and reproduced—is a natural habitat. Since the natural habitat for fish and game can best be achieved by preserving or maintaining in a wholesome state other resources such as soil, air, water, wetlands, and woodlands, the standards for each of these other resources, if met, would ensure the preservation of a suitable wildlife habitat and population.

OBJECTIVE NO. 4

A spatial distribution of the various land uses which is properly related to the supporting transportation, utility, and public facility systems in order to ensure the economical provision of transportation, utility, and public facility services.

PRINCIPLE

The transportation and public utility facilities and the land use pattern which these facilities serve and support are mutually interdependent in that the land use pattern determines the demand for, and loadings upon, transportation and utility facilities, and these facilities, in turn, are essential to, and form a basic framework for, land use development.

STANDARDS

1. Urban development should be located so as to maximize the use of existing transportation and utility systems.
2. The transportation system should be located and designed to provide access not only to all land presently devoted to urban development but to land proposed to be used for such urban development.
3. All lands developed or proposed to be developed for urban residential use should be located in areas serviceable by an existing or proposed public sanitary sewerage system and preferably within the gravity drainage area tributary to such systems.
4. All land developed or proposed to be developed for urban residential use should be located in areas serviceable by an existing or proposed public water supply system.
5. The transportation system should be located and designed to minimize the penetration of existing and proposed residential neighborhood units by through traffic.
6. Transportation terminal facilities, such as off-street parking and off-street truck loading, should be located in close proximity to the principal land uses to which they are accessory.

OBJECTIVE NO. 5

The preservation, development, and redevelopment of a variety of suitable industrial and commercial sites in terms of both physical characteristics and location.

PRINCIPLE

The production and sale of goods and services are among the principal determinants of the level of economic vitality in any society, and the important activities related to these functions require areas and locations suitable to their purpose.

STANDARDS

1. Local industrial development should be located in planned industrial districts which meet the following criteria:
 - a. Direct access to the arterial street and highway system.
 - b. Available adequate water supply.
 - c. Available adequate public sanitary sewer service.

- d. Available adequate storm water drainage facilities.
 - e. Available adequate power supply.
 - f. Site should be covered by soils identified in the detailed regional operational soil survey as having very slight, slight, or moderate limitations for industrial development.
2. Local commercial development, which includes activities primarily associated with the sale of convenience goods and services, should be contained within residential planning units, the total area devoted to the commercial use varying with the residential density. In urban medium-density areas, land devoted to local commercial centers should constitute at least 1.0 percent of the total gross neighborhood area, or about 6.4 acres per square mile of gross neighborhood area.

OBJECTIVE NO. 6

The preservation of open space to enhance the total quality of the urban environment, maximize essential natural resources availability, give form and structure to urban development, and facilitate the ultimate attainment of a balanced, year-round outdoor recreational program providing a full range of facilities for all age groups and sufficient outdoor recreation facilities to allow the resident population of a neighborhood adequate opportunity to participate in intensive nonresource-oriented outdoor recreation activities.

PRINCIPLE

Open space is the fundamental element required for the preservation, wise use, and development of such natural resources as soil, water, woodlands, wetlands, native vegetation, and wildlife. Open space provides the opportunity to add to the physical, intellectual, and spiritual growth of the population; it enhances the economic and aesthetic value of certain types of development; and it is essential to outdoor recreational pursuits.

STANDARDS

1. Local park and related open space sites should be provided within a maximum service radius of one mile of every dwelling unit in an urban area, and should have a minimum gross site area of five acres.
2. Areas having unique scientific, cultural, scenic, or educational value should not be allocated for any urban or agricultural land uses.
3. Local park and related open space sites should, to the maximum extent practicable, perform multi-purpose functions, including storm water storage and movement.

OBJECTIVE NO. 7

The preservation of land areas for agricultural uses in order to provide for certain special types of agriculture, provide a reserve or holding zone for future needs, and ensure the preservation of those unique rural areas which provide wildlife habitat and which are essential to shape and order urban development.

PRINCIPLE

Agricultural areas, in addition to providing food and fiber, can supply significant wildlife habitat; contribute to maintaining an ecological balance between plants and animals; offer locations proximal to urban centers for the production of certain food commodities which may be required by nearby population concentrations for an efficient production-distribution relationship; support the agricultural and agricultural-related economy of the area; and provide open spaces which give form and structure to urban development.

STANDARDS

1. Parcels of land 35 acres or larger in size, of which 50 percent or more consist of national prime farmland as designated by the U. S. Department of Agriculture, Soil Conservation Service, and which are included within national prime farmland parcel aggregates, should be preserved.

2. All agricultural lands surrounding high-value scientific, educational, or recreational resources should be preserved.
3. Attempts should be made to preserve agricultural areas which are covered by soils rated in the detailed regional operational soil survey as having moderate limitations if these soils:
 - a. Generally occur in concentrations greater than five square miles and surround or lie adjacent to areas which qualify under either of the above standards, or
 - b. Occur in areas which may be designated as desirable open spaces for shaping urban development.
4. Nonfarm residential development shall not be located in prime agricultural areas. Nonfarm residential development in other agricultural areas should be discouraged, but, if permitted, should be limited to densities equivalent to a lot area of five acres or greater in size per dwelling unit, providing that the soils are adequately permeable and free from severe bedrock, groundwater, flooding, and steep slope hazards for the installation of an onsite soil absorption sewage disposal system.

OBJECTIVE NO. 8

An integrated transportation system which, through its location, capacity, and design, will effectively serve the existing and proposed land use pattern and promote the implementation of the plan, meeting the anticipated travel demand generated by the existing and proposed land uses.

PRINCIPLE

An integrated transportation system serves to freely interconnect the various land use activities within the neighborhoods, Village, and Region, thereby providing the attribute of accessibility essential to the support of these activities.

STANDARDS

1. The transportation system should provide an orderly hierarchy of arterials, collectors, minor access streets, and pedestrian paths to service the area.

OBJECTIVE NO. 9

The provision of adequate locational choice of housing.

PRINCIPLE

Adequate choice in size, cost, and location of housing units will ensure equal opportunity.

STANDARDS

1. Housing units within the Fredonia area should be geographically well distributed and include a full range of housing by type, size, and cost.

OBJECTIVE NO. 10

A spatial location of residential land uses which is properly related to supportive neighborhood and community services.

PRINCIPLE

Households require a myriad of goods and supportive neighborhood and community services, and, therefore, should be properly located to afford convenient access to existing and proposed commercial facilities, educational facilities, health care facilities, transportation facilities, recreational facilities, and employment opportunities.

STANDARDS

1. The maximum walking distance and travel time standards for supportive neighborhood^a and community services shown in the following table should be met.

Facility	Maximum One-Way Walking Distance (miles)	Maximum One-Way Travel Time for Automobile at 25 mph (minutes)
Shopping		
Local Retail and Service Center	1/2	3
Community Retail and Service Center	1 1/2	15
Major Retail and Service Center	--	20
Industrial Employment		
Community Industrial Center	--	15
Major Industrial Center	--	20
Local Transit	3/4	--
Educational		
Elementary School (K-6)	1/2	--
Junior High (7-9)	1 1/2	15
Senior High (10-12)	--	20
Vocational and Higher Education	--	30
Outdoor Recreational		
Subneighborhood	1/4	--
Local Recreation	1/2	--
Community Recreation	--	20
Major Recreation	--	30
Health Care		
Community Hospital	--	20
Major Medical Center	--	30
Other Supportive Community Services and Facilities		
Day Care Center	1 1/2	15

^aFor a medium-density neighborhood, defined as 2.3 to 6.9 dwelling units per net residential acre.

Source: SEWRPC.

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Chapter IV

THE LAND USE PLAN

INTRODUCTION

A land use plan is the official statement of a municipal legislative body which sets forth its major objectives concerning desirable future physical development. The published land use plan document, as set forth in this report, includes a recommended as well as alternative physical design for the Village of Fredonia and surrounding area. The plan should be used as a tool to improve the physical environment of the community, making the community more functional, beautiful, decent, healthful, interesting, and efficient. In accord with the broad objective of local government, the plan promotes the health, safety, morals, order, convenience, prosperity, and general welfare of the community. Although these terms are customarily associated with police power, they actually pertain to all bodies of government.

The land use plan should promote the public interest rather than the interests of individuals or special groups within the community. The nature of the plan contributes to this purpose, for it facilitates consideration of the relationship of any question to the overall physical development of the entire community. Because the plan is based on facts and on analysis which is thorough and impartial, it helps to prevent arbitrary, capricious, and biased actions. The contributions of the plan to democratic, responsible government help to safeguard the public interest.

The land use plan assists the democratic determination and implementation of community policies on physical development. The plan represents the formulation of long-range goals for the physical development of the community and provides the opportunity for citizen participation in the planning process.

The plan assists in political and technical coordination in community development. Political coordination means that a majority within the community is working toward the same ends. Technical coordination means that there is a logical relationship among the various physical elements dealt with in the plan, and that the planning and

scheduling of actual improvements is efficient so as to avoid conflict, duplication, and waste. Effective coordination development requires a unified, integrated plan if the physical elements of the environment are to be managed without costly conflicts of function and if the political forces of the community are to deal with controversial development issues, including the plan itself, in a constructive manner.

The land use plan should be long-range, providing a means of taking into account long-range considerations concerning physical development while determining short-range actions. This purpose is intended to achieve coordination through time to ensure that today's decision will lead toward tomorrow's goal. The extensive use of forecasts is a significant feature of the plan. In the case of Fredonia, the land use plan is designed for a planning period of approximately 20 years to the year 2000. Being long range means that the plan should make provisions for the future needs of the Village and surrounding study area insofar as it is possible to determine exactly what those needs are likely to be. The plan presents a clear statement of the major land use requirements which must be provided for by the Village in order to promote a desirable development of the Village and surrounding area over a period of years.

The land use plan brings professional and technical knowledge to bear on the making of political decisions concerning the physical development of the community, thus promoting wise decision-making to achieve informed, constructive government. Through the plan, the special knowledge of the professional is brought into play in the democratic political process.

The land use plan should relate its physical design to clearly defined objectives, principles, and standards as described in Chapter III. The objectives, principles, and standards form the guidelines and basis upon which the physical land use plan is formulated.

The land use plan adopted by the Village should not be considered as rigid and unchangeable, but

rather as a guide for the Village for the review of development proposals both within the village corporate limits and within the extraterritorial jurisdiction of the Village. As conditions change from those used as the basis for the preparation of this plan, the plan should be updated and revised as necessary. Accordingly, the plan should be reviewed periodically to determine whether the objectives, as stated earlier, are still valid, as well as to determine the extent to which the various objectives are being realized through the plan.

PLAN DETERMINANTS

The population forecasts presented in this report (see Table 3 in Chapter II) indicate that the Village of Fredonia study area may be expected to reach a resident population level of approximately 4,100 to 5,100 by the turn of the century, and that the area within the corporate limits of the Village of Fredonia may be expected to reach a population of approximately 2,200 to 2,750 over this same period. Accommodating this population increase will require the addition of approximately 144 to 306 housing units to the 1978 stock of 422 housing units in the Village. These population increases would require the conversion of approximately 46 to 115 acres of open land to residential land use in the Village and of approximately 73 acres in the study area. The forecast increase in population may be expected to be accompanied by a need for additional land for industrial, commercial, recreational, and institutional uses, which will also require the conversion of land from rural to urban use.

In order to effectively guide future land use development within the Village of Fredonia study area into a pattern which is efficient, stable, safe, healthful, and attractive, it is necessary to carefully consider the amount and spatial location of the various land uses as they relate to the natural resource base of the area, as well as to the existing transportation system and community utilities and facilities. Natural conditions in the planning area make it necessary to provide public sanitary sewer and water supply services to all future urban development. Natural conditions also indicate the need to protect the primary environmental corridors from intensive urbanization.

One factor important to potential urban development is the existing Village of Fredonia sewage treatment facility. The proposed public sanitary sewer service area, as shown on Map 21, envisions

both an expansion of the existing Village of Fredonia sewer service area and the creation of a new sewer service area in the Waubeka area. The proposed expansion of the existing service area should accommodate anticipated growth in the village area.

The public water system will have to be improved and those problems outlined earlier in this report will have to be overcome in order to serve existing as well as potential urban development. Other community facilities appear to offer few constraints for future growth of the Village. Reevaluation of the facilities from time to time, however, will assure the continued provision of adequate levels of services to the Village.

PLAN DESCRIPTION

This chapter presents a description of the recommended land use plan for the Village of Fredonia study area as well as of two alternative land use plans for the Village itself as an integral part of the study area. The plans presented represent a refinement of the land use pattern recommended in the adopted regional land use plan as required to meet local as well as areawide land use development objectives and needs to the year 2000.

While recognizing the effects and importance of the urban land market in shaping land use patterns within the Region, the regional land use plan, as well as the plan for the Village of Fredonia study area presented herein, seeks to influence the operation of the market in three ways in order to achieve a more healthful and attractive, as well as more efficient, settlement pattern. First, the plans recommend that development trends be altered by encouraging intensive urban development only in those areas which are covered by soils suitable for such development and which can be readily served by essential municipal facilities, including centralized public sanitary sewerage, water supply, and transit facilities. Second, the plans recommend that existing development trends be altered by discouraging intensive and incompatible urban development in those areas identified as primary environmental corridors. Third, the plans recommend that existing development trends be altered by retaining, in essentially rural use, the most productive farmlands and units. These three constraints as applied to meet the particular needs of the Village of Fredonia are reflected in the recommended area land use plan and the two alternatives thereto considered in the planning process.

RECOMMENDED LAND USE PLAN FOR THE STUDY AREA

The recommended land use plan for the Village of Fredonia study area is shown on Map 25. The map indicates both those areas within the study area in which urban development now exists and those in which such development may be permitted in accordance with earlier-stated land use development objectives. Table 15 presents a summary of existing 1978 and recommended design year 2000 land use for the study area. The recommended plan is based upon a forecast resident population for the planning area of 4,100 persons.

Those areas recommended in the plan for residential use, as shown on Map 25, total about 600 acres (see Table 15). The plan map identifies in yellow those areas recommended for suburban residential development at a gross density of from 448 to 1,344 persons per square mile (0.2 to 0.6 dwelling unit per net residential acre). Such suburban development is shown on Map 25 in Sections 27 and 33 of the Town of Fredonia and

Sections 5 and 10 of the Town of Saukville, and represents the full development of existing platted land in these locations.

The areas shown in yellow with orange strips on the plan map represent low-density urban development, residential development which has a density of from 1,568 to 4,928 persons per square mile (0.7 to 2.2 dwelling units per net residential acre). The low-density areas are shown on Map 25 in Sections 30 and 31 of the Town of Belgium (representing existing development) and in the area surrounding the unincorporated Village of Waubeka. The low-density urban development recommended for the outlying areas of Waubeka represents both existing residential lots and an in-filling of vacant lands which are located in the proposed sanitary sewer service area.

The areas shown in orange on plan Map 25 represent medium-density urban development with a gross density of from 5,152 to 15,456 persons per gross square mile (2.3 to 6.9 dwelling units per net residential acre). These medium-density

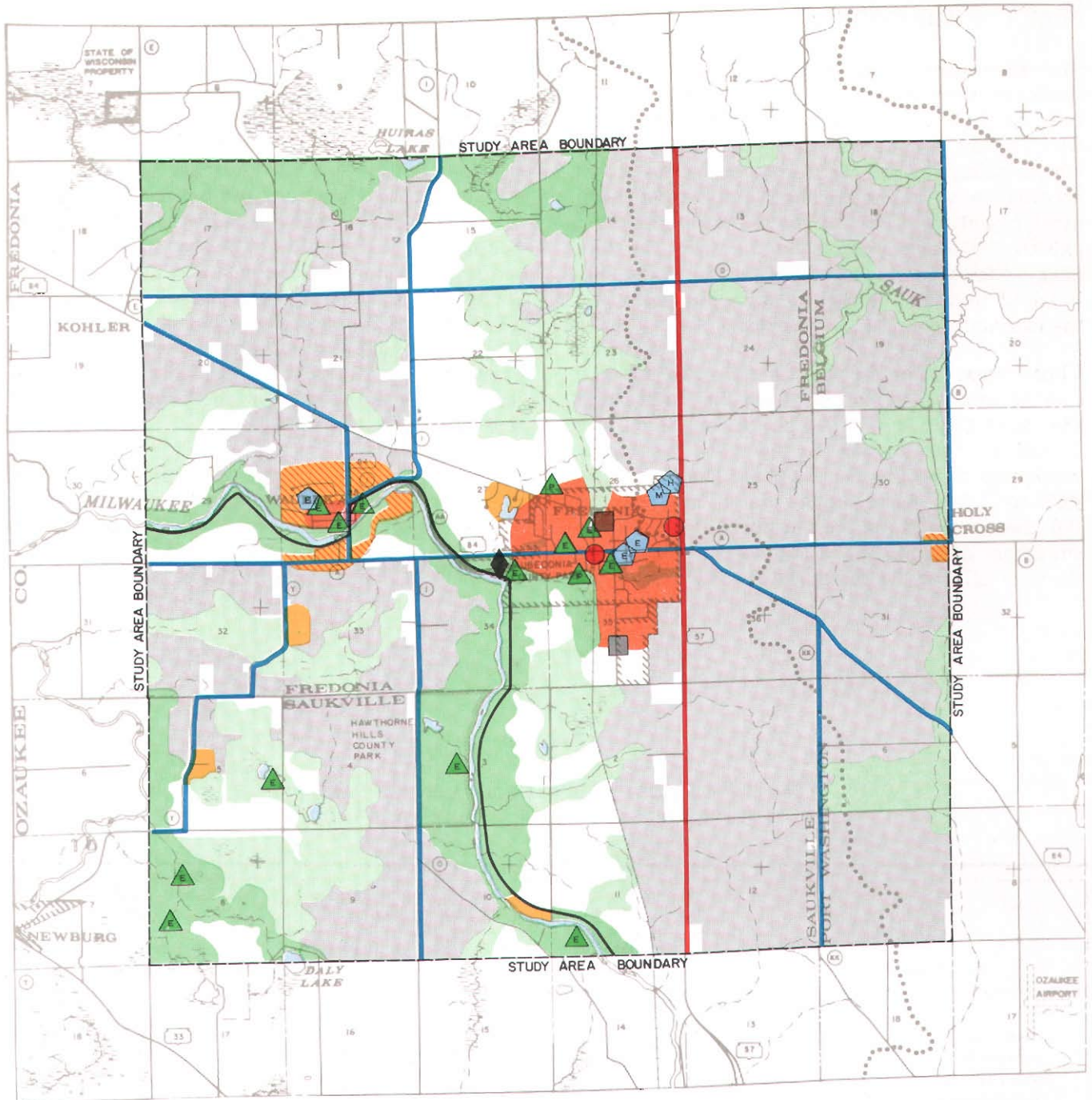
Table 15

SUMMARY OF EXISTING AND RECOMMENDED LAND USE FOR THE VILLAGE OF FREDONIA STUDY AREA: 1978-2000

Land Use Category	Existing Land Use 1978			Plan Increment 1978-2000		Planned Land Use 2000		
	Acres	Percent of Subtotal	Percent of Total	Acres	Percent Increase	Acres	Percent of Subtotal	Percent of Total
Urban								
Residential	523.7	25.3	2.3	73.4	14.0	597.1	26.2	2.6
Commercial	24.3	1.2	0.1	12.5	51.4	36.8	1.6	0.2
Industrial	43.9	2.1	0.2	26.5	60.4	70.4	3.1	0.3
Transportation-Utilities	899.9	43.6	3.9	19.2	2.1	919.1	40.3	4.0
Governmental-Institutional	78.6	3.8	0.3	--	--	78.6	3.4	0.3
Recreational	496.6	24.0	2.1	85.5	17.0	581.1	25.5	2.5
Subtotal	2,067.0	100.0	9.0	216.1	10.5	2,283.1	100.0	9.9
Rural								
Wetlands and Woodlands	3,334.6	15.8	14.4	--	--	3,334.6	16.0	14.4
Agricultural and Other Open Lands . .	17,769.8	84.2	76.6	- 216.1	- 1.2	17,553.7	84.0	75.7
Subtotal	21,104.4	100.0	91.0	- 216.1	- 1.0	20,888.3	100.0	90.1
Total	23,171.4	--	100.0	--	--	23,171.4	--	100.0

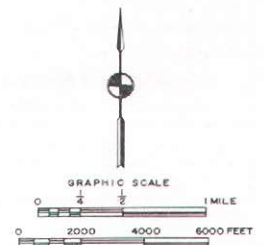
Source: SEWRPC.

RECOMMENDED LAND USE PLAN FOR THE VILLAGE OF FREDONIA STUDY AREA: 2000



LEGEND

- | | | |
|---|---|--|
| SUBURBAN DEVELOPMENT
(0.2 - 0.5 DWELLING UNITS PER NET RESIDENTIAL ACRE) | PARK
E EXISTING
P PROPOSED | SEWAGE TREATMENT PLANT |
| LOW-DENSITY URBAN DEVELOPMENT
(0.7 - 2.2 DWELLING UNITS PER NET RESIDENTIAL ACRE) | PRIMARY ENVIRONMENTAL CORRIDOR | WATER |
| MEDIUM-DENSITY URBAN DEVELOPMENT
(2.3 - 5.9 DWELLING UNITS PER NET RESIDENTIAL ACRE) | SECONDARY ENVIRONMENTAL CORRIDOR
AND OTHER ENVIRONMENTALLY SIGNIFICANT LANDS | ARTERIAL STREET AND HIGHWAY SYSTEM |
| COMMUNITY RETAIL AND SERVICE CENTER | PRIME AGRICULTURAL LAND | STATE TRUNK |
| COMMERCIAL | OTHER AGRICULTURAL AND RURAL LANDS | COUNTY TRUNK |
| INDUSTRIAL | SCHOOL
E ELEMENTARY SCHOOL
M MIDDLE SCHOOL
H HIGH SCHOOL | PROPOSED LOCAL RECREATIONAL CORRIDOR (TRAIL) |



Source: SEWRPC.

residential areas are located in the Village of Fredonia and the unincorporated Village of Waubeka. Generally, the medium-density urban development in Waubeka represents existing development. The orange area shown in the Village of Fredonia is discussed in somewhat greater detail in the section on alternative land use plans for the area within the corporate limits of the Village of Fredonia.

The 600 acres of suburban, low-density urban, and medium-density urban residential development include both existing residential development and land to accommodate further residential development at the envisioned density levels. The residential acreage recommended to support the forecast population level of 4,100 for the study area is based upon the standards set forth in Table 14 of Chapter III.

The recommended plan also identifies two types of areas within the study area which can generally support residential development at a gross density of 448 persons per square mile (0.2 dwelling unit per net acre). The areas shown in white on Map 25, while generally intended for agricultural use, could sometimes be used for rural estate development. Map 14 in Chapter II shows those parcels of land recommended for agricultural use which are a minimum of 35 acres in size. The determination of areas to be used for five-acre estate development should be based on the information provided on Map 14 and on site-specific data on the suitability of an area for rural estate development. The light green areas, identified on Map 25 as secondary primary environmental corridors, also could be utilized for rural estate development, depending upon the site-specific limiting characteristics involved. Among the most important site-specific factors relating to such development are soil limitations for the use of onsite sewage disposal systems, which may limit the location of individual lots. While the total acreage of these two types of areas exceeds the need, the physical limitations of the land may be expected to reduce the potential area available for five-acre residential lot development.

Until sanitary sewer service is provided in the Waubeka area, soil limitations for the operation of septic systems should be an important consideration in the location of new residential land use development in this area.

The areas delineated on the plan map as prime agricultural areas should be encouraged to remain in agricultural use, free from urban intrusion. Also,

those areas identified as primary environmental corridors should be preserved in essentially natural open uses.

Community-oriented retail and service districts should be encouraged to remain in the Village of Fredonia, as shown on Map 25. Also, future industrial expansion within the study area should be encouraged to occur in the south half of Section 35, as shown on the plan map.

The park and related open space uses shown on the plan map are based upon the recommendations contained in SEWRPC Community Assistance Planning Report No. 23, A Park and Recreation Plan for Ozaukee County. General recommendations regarding primary environmental corridor, secondary environmental corridor, and agricultural lands preservation have already been noted. No recommendations regarding specific proposed park sites are made for those areas of the study area lying in the Town of Belgium—Sections 18, 19, 30, and 31; the Town of Port Washington—Sections 6 and 7; or the Town of Saukville—Sections 1 through 5 and 8 through 12. Symbols representing park locations indicate existing parks in those portions of the study area lying in the Towns of Belgium, Port Washington, and Saukville. One Type IV park is recommended to be developed in Section 27 in the Town of Fredonia. Type IV park sites are defined as small sites which typically serve a neighborhood. Such sites usually provide facilities for intensive, nonresource-oriented, outdoor recreation activities, and are generally provided in urban areas. The recommended uses for this proposed Type IV park are discussed later in this plan report.

The arterial highway network required to serve probable future traffic demands in the study area to the year 2000 is also shown on the plan map, as well as on Map 2 in Chapter I of this report. Map 12 in Chapter II shows those highways with scenic and recreational value. The arterial network set forth on the plan map is identical to that proposed in the adopted regional transportation system plan.

An efficient arterial street and highway network provides the necessary means of access from both rural and urban areas to supporting service, employment, recreation, and cultural centers. It is essential, therefore, that land use development be designed to preserve the maximum efficiency of the arterial street and highway system and to

utilize as much of the existing system as possible. It is, therefore, recommended that the Village of Fredonia refer to the regional transportation plan as it pertains to Ozaukee County in making decisions concerning arterial street and highway development. While the construction of some new land access streets may be required for implementation of the recommended land use plan for the study area, no additions to the arterial network are recommended in the study area. The arterial network as proposed provides adequate access to the regional transportation system. Limited access to mass transit services within the Region is available through Greyhound Bus Lines, which provides flag stop service at the intersection of STH 57 and STH 84 adjacent to the Village of Fredonia.

ALTERNATIVE PLANS FOR THE VILLAGE OF FREDONIA

Two alternative land use plans were prepared for the Village of Fredonia proper. These are shown as Alternative Plan A on Map 26 and Alternative Plan B on Map 27. Alternative Plan A is based upon a population forecast of approximately 2,750 persons for the Village in the year 2000, and Alternative Plan B upon a forecast of approximately 2,140 persons. Also shown on Alternative Plans A and B are tentative street locations to accommodate growth beyond the year 2000, pursuant to the request of the Village Plan Commission. These street locations take into consideration future needs for traffic circulation, storm water drainage, sanitary sewerage, water supply, and a sound arrangement of land uses. Planning of the streets and land uses involved careful consideration of such factors as topography, soil suitability, land slopes, drainage patterns, flood hazards, woodland cover, wetland cover, existing land use, and real property boundaries.

Table 16 indicates the future land use needs within the Village of Fredonia to the year 2000 as derived from the two population forecasts for the Village by land use category. The land use patterns advanced in Alternative Plans A and B are summarized in Table 17.

Alternative Plan A—The Recommended Plan

Residential: Plan A—the recommended plan—indicates both those areas within the Village in which residential development now exists and those areas in which such development can be permitted in

accordance with the land use development objectives, principles, and standards set forth in Chapter III. New residential development is proposed to occur through the expansion of existing residential areas. The residential areas shown in yellow on the map represent single-family dwelling development, those in orange represent two-family dwelling development, and those in brown represent multiple-family development. Altogether, approximately 226 acres, representing an increase of about 83 acres, or 58 percent, over residential uses in 1978, are recommended to be in residential use by the year 2000 (see Table 17). The increase in acreage is based upon the incremental development standard set forth in Table 16, which indicates that 90 gross acres of residential land will be needed per 1,000 population increase. The in-filling of vacant land in the northwest portion of the Village with single-family dwelling uses and the minor in-filling of other vacant parcels with single-family dwellings would result in an increase in area devoted to single-family dwelling use of 60.2 net acres by the year 2000. Two-family dwelling uses are recommended to be located in the central and southern areas of the Village along Wisconsin Street and Milwaukee Street, and also in an area near the intersection of STH 84 and STH 57, representing a total increase in two-family dwelling uses of 7.8 net acres by the year 2000. Additional multiple-family dwelling development is planned for an area on the west side of Milwaukee Street in the southern portion of the Village, and in the northwest corner of the Village north of Martin Street, pursuant to the direction of the Village Plan Commission. The proposed multiple-family development in that area represents an increase of about 8 acres, or 160 percent, over the five acres in multiple-family dwelling use in 1978.

Commercial: In 1978 about 19 gross acres in the Village were in commercial land uses, representing a development ratio for commercial land uses of 17 acres of land per 100 commercial employees. According to SEWRPC development standards, community commercial land uses should average about six acres per 100 commercial employees. Existing commercial facilities exceed this standard. However, since the village commercial area serves a much larger geographic area than just the village proper, it is recommended under this alternative that commercial land use acreage be expanded by 8.9 acres by the year 2000, or by 49 percent. It is recommended that the additional 8.9 acres of commercial development fill in vacant parcels of

Table 16

FUTURE URBAN LAND USE NEEDS IN THE VILLAGE OF FREDONIA: 2000

Urban Land Use Category	Gross Area 1978 (acres) ^a	Percent of Village	Development Ratio: 1978 ^a	SEWRPC Incremental Development Standard ^b	Urban Land Needs: 2000							
					Alternative Plan A (recommended plan)				Alternative Plan B			
					Incremental Forecast Population 1978-2000	Required Incremental Acreage 1978-2000	Total Gross Acres ^a	Percent of Village	Incremental Forecast Population 1978-2000	Required Incremental Acreage 1978-2000	Total Gross Acres ^a	Percent of Village
Residential	162.5	19.8	102.2 acres per 1,000 persons	90 acres per 1,000 persons	1,160 persons	104.4	266.9	32.5	610 persons	54.9	217.4	26.5
Commercial	19.4	2.4	17.2 acres per 100 commercial employees ^c	6 acres per 100 commercial employees	341 commercial employees	10.6 ^d	30.0	3.7	250 commercial employees	6.6 ^d	26.0	3.2
Industrial	48.5	5.9	22.6 acres per 100 industrial employees ^e	12 acres per 100 industrial employees	250 industrial employees	32.8	81.3	9.9	157 industrial employees	18.3	66.8	8.1
Governmental and Institutional	39.8	4.8	24.9 acres per 1,000 persons	12 acres per 1,000 persons	--	-- ^f	39.8	4.8	--	-- ^f	39.8	4.8
Recreational	65.6	8.0	41 acres per 1,000 persons	6.4 acres per 1,000 persons	--	93.7 ^f	159.3	19.4	--	93.7 ^g	159.3	19.4
Other	485.2	59.1	--	--	--	--	243.7	29.7	--	--	311.7	38.0
Total	821.0	100.0	--	--	--	--	821.0	100.0	--	--	821.0	100.0

^a Gross areas include street rights-of-way and off-street parking.

^b These figures are based upon SEWRPC incremental development standards for a medium-density urban area and represent gross acres.

^c Based upon an estimate of 113 commercial employees in 1978.

^d Because the existing community-level commercial facilities come close to meeting year 2000 needs, the in-filling of underutilized commercial lands is recommended.

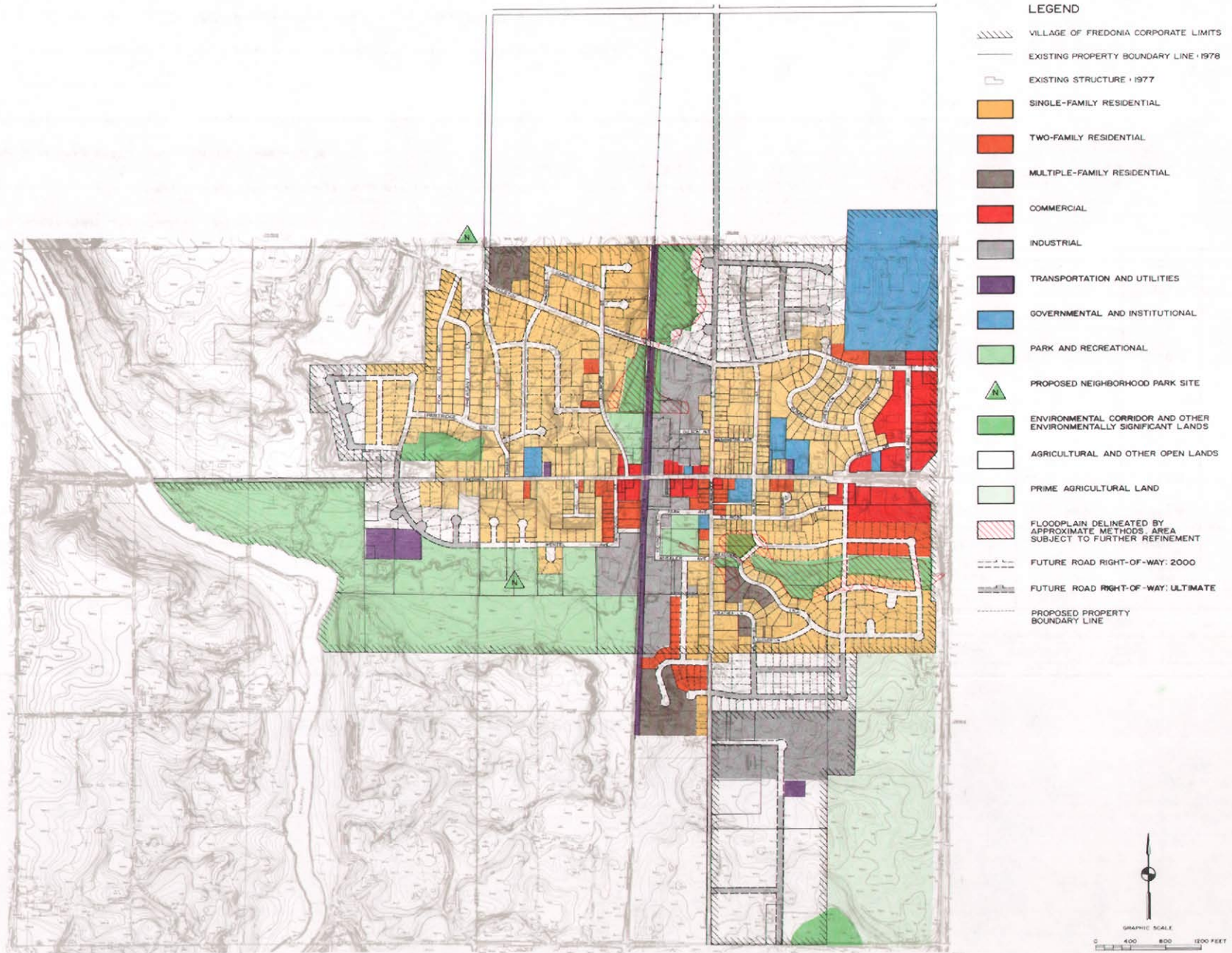
^e Based upon an estimate of 215 industrial employees in 1978.

^f The existing governmental and institutional land uses in the Village meet the needs of the forecast population.

^g Per recommendations contained in SEWRPC Community Assistance Planning Report No. 23, A Park and Recreation Plan for Ozaukee County.

Source: SEWRPC.

VILLAGE OF FREDONIA ALTERNATIVE LAND USE PLAN A—RECOMMENDED PLAN: 2000



VILLAGE OF FREDONIA ALTERNATIVE LAND USE PLAN B: 2000

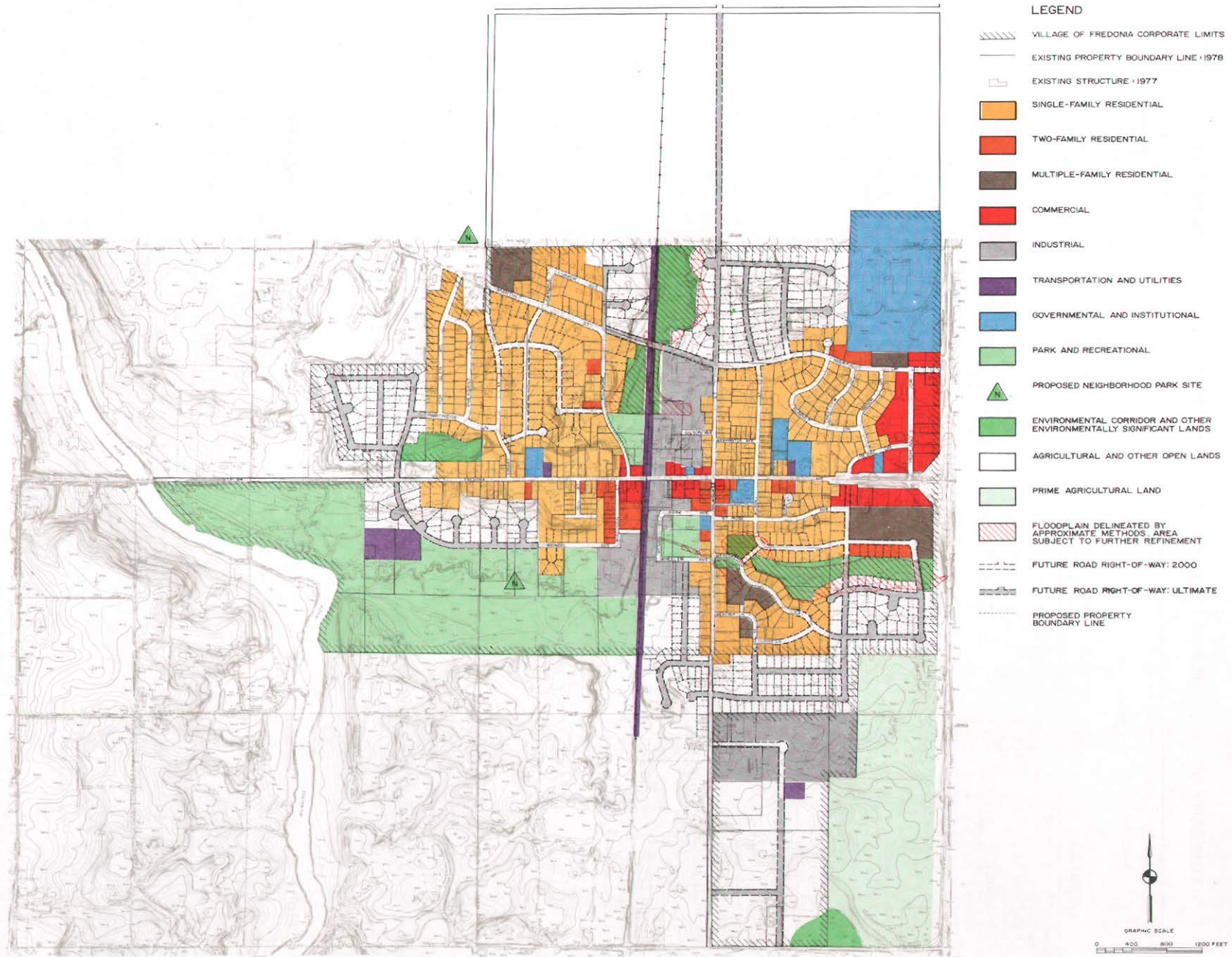


Table 17

SUMMARY OF EXISTING AND ALTERNATIVE LAND USES FOR THE VILLAGE OF FREDONIA

Land Use Category	Existing Land Use 1978			Alternative Plan A (Recommended Plan)						Alternative Plan B					
				Plan Increment 1978-2000		Planned Land Use 2000				Plan Increment 1978-2000		Planned Land Use 2000			
	Acres	Percent of Subtotal	Percent of Total	Acres	Percent Increase	Acres	Percent of Subtotal	Percent of Total		Acres	Percent Increase	Acres	Percent of Subtotal	Percent of Total	
Urban															
Residential															
Single-Family	127.5	33.7	15.5	60.2	47.2	187.7	31.4	22.9		30.6	24.0	158.1	29.9	19.3	
Two-Family	10.0	2.6	1.2	7.8	78.0	17.8	3.0	2.2		2.8	28.0	12.8	2.4	1.5	
Multiple-Family	5.0	1.3	0.6	15.0	300.0	20.0	3.3	2.4		8.0	160.0	13.0	2.5	1.6	
Subtotal	142.5	37.7	17.4	83.0	58.2	225.5	37.7	27.5		41.4	29.1	183.9	34.7	22.4	
Commercial															
Neighborhood															
Retail and Service	--	--	--	--	--	--	--	--		--	--	--	--	--	
Community															
Retail and Service	18.0	4.8	2.2	8.9	49.4	26.9	4.5	3.3		6.0	33.3	24.0	4.5	2.9	
Subtotal	18.0	4.8	2.2	8.9	49.4	26.9	4.5	3.3		6.0	33.3	24.0	4.5	2.9	
Industrial	40.5	10.7	5.0	30.7	75.8	71.2	11.9	8.7		19.1	47.2	59.6	11.3	7.3	
Governmental and Institutional															
Public	35.5	9.4	4.3	--	--	35.5	5.9	4.3		--	--	35.5	6.7	4.3	
Private	1.5	0.4	0.2	--	--	1.5	0.3	0.2		--	--	1.5	0.3	0.2	
Subtotal	37.0	9.8	4.5	--	--	37.0	6.2	4.5		--	--	37.0	7.0	4.5	
Park and Recreational															
Neighborhood Parks	--	--	--	10.0	--	10.0 ^a	1.7	1.2		10.0	--	10.0 ^a	1.9	1.2	
Community Parks	56.5	14.9	6.9	74.5	131.9	131.0	21.9	16.0		74.5	131.9	131.0	24.7	16.0	
Other Recreational	5.0	1.3	0.6	--	--	5.0	0.8	0.6		--	--	5.0	0.9	0.6	
Subtotal	61.5	16.2	6.5	84.5	137.4	146.0	24.4	17.8		84.5	137.4	146.0	27.6	17.8	
Streets and Other Public Ways															
Arterial Streets	13.5	3.6	1.7	--	--	13.5	2.2	1.7		--	--	13.5	2.6	1.7	
Collector Streets	5.9	1.6	0.7	3.6	61.0	9.5	1.6	1.1		3.6	61.0	9.5	1.8	1.1	
Minor Land Access Streets	32.4	8.6	4.0	25.1	77.5	57.5	9.6	7.0		12.9	39.8	45.3	8.5	5.5	
Utilities	10.5	2.8	1.3	10.5	1.3	10.5	1.8	1.3		--	--	10.5	2.0	1.3	
Subtotal	63.3	16.7	7.7	39.2	61.9	91.0	15.2	11.1		16.5	24.3	78.8	14.9	9.6	
Urban Subtotal	378.3	100.0	46.1	246.3	65.0	597.6	100.0	72.8		167.5	44.3	529.3	100.0	64.5	
Rural															
Agricultural, Open Lands, Unused Lands, and Natural Areas	442.7	100.0	53.9	- 246.3	- 55.6	223.4	100.0	27.1		- 167.5	- 37.8	291.7	100.0	35.5	
Rural Subtotal	442.7	100.0	53.9	- 246.3	- 55.6	223.4	100.0	27.1		- 167.5	- 37.8	291.7	100.0	35.5	
Total	821.0	--	100.0	--	--	821.0	--	100.0		--	--	821.0	--	100.0	

^a Five acres of the proposed neighborhood park (Type IV) for the northern portion of the Village lie within the Town of Fredonia and are not indicated.

Source: SEWRPC.

land along Martin Drive and Regal Drive. Also, an area of commercial use is shown on the plan map contiguous to and on the south side of STH 84, west of STH 57.

Industrial: During the planning period, an additional 30.7 acres of industrial land would be required for new and expanding industry under Alternative A. This figure represents an increase of about 68 percent over the 1978 figure of approximately 49 acres. The additional acreage is based upon the SEWRPC development standard of 12 acres of industrial land use for each 100 industrial employees. In 1978 the Village averaged approximately 23 gross acres of industrial land use for each 100 industrial employees. As

shown on Map 26, further industrial development should occur in those areas contiguous to existing industrial uses and on the south side of the Village in the village-designated industrial park.

Governmental and Institutional: In 1978 the Village had about 25 acres of governmental and institutional land uses per 1,000 population, representing a total of about 40 gross acres of governmental and institutional land uses for the entire Village. The SEWRPC development standard for governmental and institutional uses is 12 acres per 1,000 persons. Accordingly, the Village has sufficient governmental and institutional lands available to meet the needs of the Village to the

year 2000, and no additional lands for this purpose have been designated under Alternative Plan A. There is the potential for the development of small governmental and institutional facilities on vacant portions of these lands.

Environmentally Significant Lands: Six areas on Alternative Plan A are shown as environmentally significant lands. These areas total approximately 25 acres, or 3 percent of the village area, and are located in various portions of the Village: two areas extend in an east-west direction south of Rose Avenue; there are three areas along the northernmost portions of the Chicago, Milwaukee, St. Paul & Pacific (Milwaukee Road) Railroad; and there is an area west of Edmaro Street and north of Fredonia Avenue. These areas are characteristically wetland areas with a high water table, and thus pose severe and very severe soils limitations for urban development to be served by public sanitary sewer service. These areas are recommended to be preserved as open space lands.

A low-lying area, covered by poor soils which occupies approximately three acres located north of STH 84 and west of Fillmore Street is shown as proposed for single-family residential use, pursuant to the direction of the Village Plan Commission.

Recreation and Open Space: Recreational needs in the Village of Fredonia to the year 2000 have been outlined in SEWRPC Community Assistance Planning Report No. 23, A Park and Recreation Plan for Ozaukee County. The purpose of that plan is to guide the acquisition and development of lands for park, outdoor recreation, and related open space purposes to meet the recreation demands of the resident population and to protect and enhance the underlying and sustaining natural resource base of Ozaukee County. This section outlines the recommendations set forth in Community Assistance Planning Report No. 23 pertaining to the Village.

Based upon the analyses presented in Community Assistance Planning Report No. 23, there is a need for additional outdoor recreation sites and facilities in the Village of Fredonia by the year 2000. Under Alternative Plan A it is recommended that 146 acres be allocated for recreation and open space use by the year 2000. To meet the outdoor recreation site and facility needs of the Village, the following four recommendations were made:

1. The acquisition and development of a Type IV park site in the southeast quarter of Section 27, as shown on Map 25. This

site should provide basketball goals, an ice-skating rink, a playfield, and a playground, as well as areas for passive recreational use. The primary function of this site is the provision of recreation opportunities for residents in the northwestern portion of the Village.

2. The acquisition and development of a Type IV park site in the northeast quarter of Section 34. This park should provide a softball diamond and areas for passive recreational use.
3. The provision of additional outdoor recreation facilities at Stony Creek Park. Under this recommendation, the Village would develop tennis courts, a horseshoe pit, and a picnic area, and would provide additional support facilities as required at the site.
4. The preservation of primary environmental corridor lands within the Village of Fredonia.

Streets and Circulation: The proposed street system for the community is organized on a functional basis and consists of arterial, collector, and land access streets. Arterial streets are arranged so as to facilitate ready access to centers of employment, governmental activity, shopping and services, and recreation, both within and beyond the boundaries of the community. They are properly integrated with and related to the existing and proposed regional system of major streets and highways and are continuous and in alignment with existing or planned arterial streets and highways with which they are to connect. Two existing arterial highways are located on Alternative Plan A—STH 84, which runs in an east-west direction through the center of the Village, and STH 57, which runs in a north-south direction contiguous to the eastern edge of the Village. In order to promote traffic safety and protect the capacity of the arterial street system, the plan proposes to limit direct access of building sites to arterial streets by backing lots against the arterials. The depth of the lots backed against the arterials has been increased over the generally prevailing lot depth within the community in order to provide room for a planting strip to buffer the residential uses from the arterial streets.

The adopted jurisdictional highway system plan for Ozaukee County, as documented in SEWRPC Planning Report No. 17, recommends the eventual conversion of Fredonia Avenue from a state trunk highway to a county trunk highway. The jurisdic-

tional highway system plan further recommends a desirable cross-section for this facility consisting of a 48-foot pavement on an 80-foot right-of-way, adequate to provide two lanes for moving traffic with parking, or four lanes for moving traffic without parking. Because of the difficulties, disruption, and cost entailed in the widening of the right-of-way for Fredonia Avenue through the Village, however, the Plan Commission determined that the right-of-way should remain 66 feet in width. This right-of-way could accommodate a 44-foot pavement, adequate to provide the necessary traffic capacity.

The adopted jurisdictional highway system plan for Ozaukee County also identifies Kohler-Martin-Fillmore Streets as a prospective arterial that may require development beyond the design year of the jurisdictional highway system plan. That plan recommends that in rural areas, this prospective arterial be provided with a 22-foot pavement on a 100-foot right-of-way. The jurisdictional plan makes no recommendations with respect to the cross-section of this prospective arterial in an urban area, such as the Village. Because of the inadequate existing right-of-way for Fillmore Street—49.5 feet—the Village Plan Commission proposes that Martin Street be extended to the east to intersect with STH 47, as shown on Map 26, and that it function as a collector street and as the route of the prospective arterial called for in the adopted county jurisdictional highway system plan.

Collector streets are arranged so as to provide ready collection and distribution of traffic from residential areas and conveyance of this traffic to and from the major street and highway system, and are properly related to special traffic generators and other proposed concentrations of population or activities and to the major streets to which they connect. Milwaukee Street, which runs in a north-south direction, currently serves as a collector street and is recommended to be extended, as need develops, beyond the planning period.

The proposed land access street network of minor roads is designed and located to achieve the most efficient use of land; discourage use by through traffic; minimize street area; provide an aesthetic setting for residential development; facilitate the provision of efficient storm water drainage, sewerage, and public water supply facilities; and complement the natural terrain, thereby minimizing the need for grading during the development process. The street locations are based upon con-

sideration of a number of factors, including soil characteristics, topography, property boundaries, a hierarchy within the total street system, land use, and sound design criteria.

Wenzel Avenue is shown extended to the west and north on the plan, terminating at Fredonia Avenue. It is recognized that the steep slope located to the south of Fredonia Avenue presents a severe problem that would have to be overcome by careful engineering in order to accomplish this extension. As an alternative, Wenzel Avenue could be extended westerly to the entrance drive for Waubedonia County Park. Such extension would, however, require the concurrence and cooperation of the County.

Recommended street and highway cross-sections for arterials, collectors, and minor land access roads are shown in Appendix E.

Alternative Plan B

The second alternative land use plan considered is based upon a population forecast of 2,140 for the Village as discussed earlier in this chapter. This alternative plan would foster slightly less growth than would Alternative Plan A. Alternative Plan B, as shown on Map 27, differs from Alternative Plan A in the population level to be achieved by the year 2000 and in the attendant extent of land uses needed to accommodate the forecast population level. This alternative plan shows 68.3 less acres of various urban land uses than does Alternative Plan A, representing a decrease from the recommended urban land uses in Alternative Plan A of 11.4 percent.

With the exception of the amount of land devoted to the various uses, Alternative Plans A and B are similar in concept. The land use pattern proposed under Alternative Plan B is discussed briefly below.

Residential: As in Alternative Plan A, Alternative Plan B indicates both those areas within the Village in which residential development now exists and those areas in which such development can be permitted in accordance with the land use development objectives, principles, and standards set forth in Chapter III. Alternative Plan B recommends that about 184 acres be allocated for residential use, 42 acres, or 19 percent, less than under Alternative Plan A.

Commercial: As stated earlier, in 1978 the Village had a total area of approximately 18 acres of commercial land. Under Alternative Plan B it is recom-

mended that approximately 24 acres of land be allocated for commercial uses, an increase of about 83 percent over the 1978 figure. As in Alternative Plan A, it is recommended that the additional six acres of commercial development fill in vacant parcels of land along Martin Drive and Regal Drive. Also, an area of commercial land use is shown on the plan map contiguous to and on the south side of STH 84, west of STH 57.

Industrial: During the planning period, an additional 19.1 acres of industrial land would be required for new and expanding industry under Alternative Plan B, representing an increase of about 47 percent over the 1978 figure of about 41 acres for industrial uses. As in Alternative Plan A, further industrial development should occur in those areas contiguous to existing industrial uses and on the south side of the Village along the east side of Milwaukee Street in the village-designated industrial park.

Governmental and Institutional: As mentioned under Alternative Plan A, the Village has sufficient governmental and institutional lands available to meet the needs of the Village to the year 2000. Consequently, no additional lands for this purpose

have been designated under Alternative Plan B. There is the potential for the development of small governmental and institutional facilities on the vacant portions of these lands.

Environmentally Significant Lands: As in Alternative Plan A, six areas of environmentally significant lands are shown on Alternative Plan B, representing approximately 25 acres of land, or 3 percent of the village area. These areas are characteristically wetland areas which exhibit a high water table, and thus pose severe and very severe soil limitations for urban development to be served by public sanitary sewer service.

As in Alternative Plan A, a low-lying area covered by poor soils which occupies approximately three acres located north of STH 84 and west of Fillmore Street is shown as proposed for single-family residential use, pursuant to the direction of the Village Plan Commission.

Recreation and Open Space: As mentioned under Alternative Plan A, recreational needs for the Village of Fredonia to the year 2000 have been outlined in SEWRPC Community Assistance Planning Report No. 23, A Park and Recreation Plan for Ozaukee County.

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Chapter V

PLAN IMPLEMENTATION

INTRODUCTION

The recommended land use plan described in Chapter IV of this report provides a design for the attainment of the development objectives set forth in Chapter III of this report. In a practical sense, however, the plan is not complete until the steps to implement that plan are specified. After formal adoption of the land use plan (see Appendices A and B for suggested adopting resolutions), realization of the plan will require faithful, long-term dedication to the objectives on which the plan is based by the village officials concerned with its implementation. Thus, the adoption of the plan is only the beginning of a series of required actions necessary to achieve the objectives expressed in this report. The plan should be used as a guide for land development in the Village and surrounding areas within the Village's extraterritorial jurisdiction. Adjustments to the plan should be made as required by changing conditions. Consequently, one of the important tasks of plan implementation is a periodic reevaluation and reexamination of the plan to ensure that it is properly reflective of current conditions.

Attainment of the recommended land use plan for the study area will require some changes in the development policies of the Village. Since the maintenance of the present character of the study area is dependent to a considerable extent upon preserving and protecting the natural resource base, the density of new development should be carefully regulated to ensure that new development at urban densities (greater than 0.7 dwelling unit per net residential acre) is confined to those areas where urban services can be provided. These areas generally comprise the unincorporated Village of Waubeka and the Village of Fredonia, as shown on Map 25, Suburban development, as shown on Map 25, should be restricted to the areas now occupied by such development, with only in-filling of existing lots being permitted.

Development requiring the conversion of the best remaining agricultural lands to urban use, the draining and filling of wetlands, or the grading of hilly wooded sections should be avoided. This

policy is central to a sound development strategy for the study area. In fact, the effectiveness of many of this report's more specific recommendations will be lost if this policy is ignored or greatly compromised. Development policies and practices which respect the limitations of the natural environment in the long term will not only preserve the overall quality of the environment in the Village and study area, but will avoid the need to provide costly urban facilities and services over an ever-widening area. Any residential development in the remainder of the study area should be permitted only on rural estate-size lots in order to preserve the rural character and setting of the area. Such rural estate lots should have a minimum area of five acres. The soils maps provided to the Village as part of the land use planning program and the soils maps presented in Chapter II of this report should be reviewed by the Village prior to the approval of additional land subdivisions within the extraterritorial plat approval jurisdiction of the Village.

Attainment of the recommended land use plan for the village proper will require not only changes in certain development policies of the Village, but also the introduction of and modification of certain plan implementing instruments. These changes should include the strict review of all subdivisions for conformance with the plan and plan objectives, the adoption of an updated zoning ordinance to reflect current land uses and to assist in implementing the plan, and the adoption of an Official Map to implement the land use plan for streets, highways, parkways, parks, and playgrounds.

PUBLIC INFORMATIONAL MEETING AND HEARING

Although the state village planning enabling act does not require local plan commissions to hold public hearings on proposed plan elements prior to the adoption of those elements, it is, nevertheless, recommended that in order to provide for and promote active citizen participation in the planning process, the Village Plan Commission hold one or more public informational meetings and formal public hearings to acquaint village

residents and landowners with all details of the proposed plan, and to solicit public reaction to the plan proposals. The plan should be modified to incorporate any desirable new ideas which may be advanced at the informational meeting and hearing.

In accordance with this recommendation, a combined public informational meeting and hearing was held by the Village of Fredonia Plan Commission on December 19, 1979. As a result of the information provided at this hearing, the Village Plan Commission adopted the recommended plan maps at the conclusion of this meeting and hearing.

SUBDIVISION PLAT REVIEW

Following adoption of the land use plan, the plan should serve as a basis for the review of preliminary plats and certified survey maps. Urban subdivisions should not be approved in areas recommended to remain in nonurban use unless the developer can fully justify changing the land use plan. Any such proposed departures from the land use plan should be carefully considered by the Village Plan Commission, and any changes should be made by that Commission only when it finds that such departures are warranted. All urban subdivisions should be required to provide a full complement of urban services.

ZONING

Following adoption of the land use plan by the Village Plan Commission and certification to the Village Board, the Village Plan Commission should initiate amendments to the village zoning ordinance and zoning district map to bring both documents into conformance with the proposals advanced in the adopted land use plan as presented herein. Of all the land use implementation devices presently available, perhaps the most important and most versatile is local police power. In other words, land use development can be controlled through the adoption of appropriate zoning ordinances, including zoning district regulations and zoning district delineations. Map 28 shows the zoning district boundaries required to implement the plan, and Table 18 provides an outline of the recommended zoning districts and summarizes the respective district regulations. Pursuant to state enabling legislation, the zoning changes recommended by the Plan Commission can only be enacted by the Village Board after formal public hearing. The proposed zoning districts and attendant regulations are discussed below.

General Agricultural District

This district is intended to provide for the continuation of general farming and related uses in those areas of the Village that are not yet committed to urban development. It is further intended that this district protect lands contained therein from urban development until their orderly transition into urban-oriented districts is required. The district provides for a minimum lot size of five acres.

Single-Family Residential District

Three single-family residential districts are proposed for the zoning ordinance. The Rs-1 District provides for a minimum lot size of 16,000 square feet; the Rs-2 District for 11,000 square feet; and the Rs-3 District for 8,000 square feet. All single-family residential districts are intended to be served by both public sanitary sewer and public water supply facilities.

Two-Family Residential Districts

Two, two-family residential districts are proposed. One district, the Rd-1 District, provides for a minimum lot size of 11,000 square feet and the other district, the Rd-2 District, provides for a minimum lot size of 7,200 square feet. Both districts are intended to be served by public sanitary sewer and water supply facilities.

Multiple-Family Residential District

Two multiple-family residential districts are proposed. The Rm-1 District is intended for multiple-family dwellings not to exceed an overall density of 10.9 dwelling units per net acre, and the Rm-2 District is intended for multiple-family dwellings not to exceed 14.5 dwelling units per net acre. Both districts are intended to be served by public sanitary sewer and water supply facilities.

Central Business District

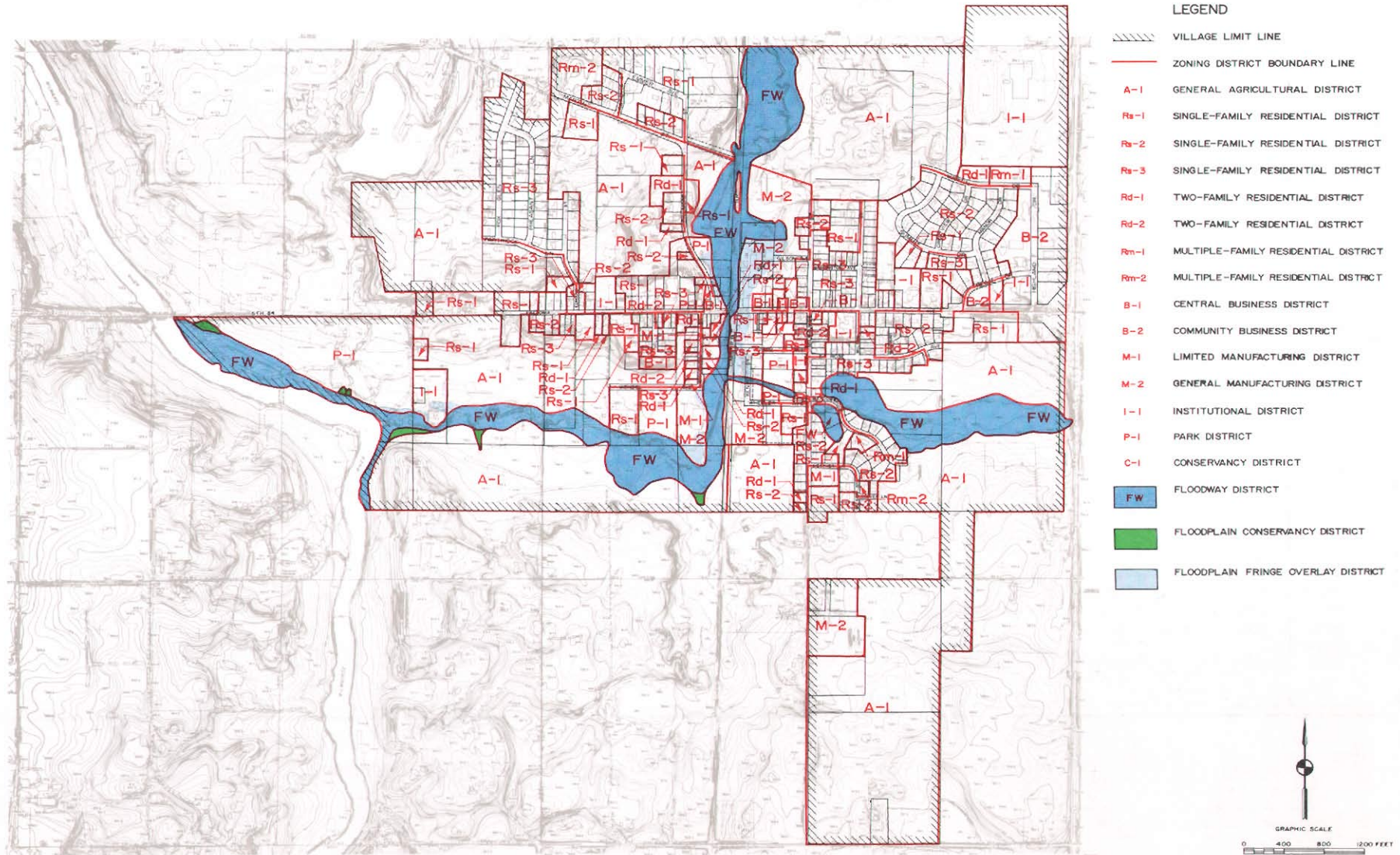
The B-1 District is intended to provide for the orderly continuation of the traditional central business district in the Village of Fredonia. The business activities of this type of district are of a general nature and are characterized by on-street parking.

Community Business District

The B-2 District is intended to provide for individual or small groups of retail and customer service establishments, such as those in the commercial area located along the western side of STH 57 in the Village. This type of district is generally located away from the traditional central business district and provides such amenities

Map 28

RECOMMENDED ZONING MAP FOR THE VILLAGE OF FREDONIA



Source: SEWRPC.

Table 18

SUMMARY OF PROPOSED ZONING DISTRICTS FOR THE VILLAGE OF FREDONIA

District	Permitted Uses		Conditional Uses	Maximum Residential Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
					Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
	Principal	Accessory									
A-1 General Agricultural	Agriculture, general farming, pasturing, truck farming, hobby farming	Farm dwellings, garages	Drive-in establishments, transmitting towers	0.2	5 acres	5 acres	300	50	25	50	60
Rs-1 Single-Family Residential	Single-family dwellings	Garages, carports, storage sheds, home occupations	Colleges, hospitals	2.7	16,000 square feet	16,000 square feet	90	25	15	25	35
Rs-2 Single-Family Residential	Single-family dwellings	Garages, carports, storage sheds, home occupations	Colleges, hospitals	3.9	11,000 square feet	11,000 square feet	75	25	10	25	35
Rs-3 Single-Family Residential	Single-family dwellings on lots existing January 1, 1979	Garages, carports, storage sheds, home occupations	Mobile home parks	5.4	8,000 square feet	8,000 square feet	80	25	8	25	35
Rd-1 Two-Family Residential	Two-family dwellings	Garages, carports, storage sheds, home occupations	--	7.9	11,000 square feet	5,500 square feet	85	25	10	25	35
Rd-2 Two-Family Residential	Two-family dwellings on lots existing January 1, 1979	Garages, carports, storage sheds, home occupations	--	12.1	7,200 square feet	3,600 square feet	50	25	6	25	35
Rm-1 Multiple-Family Residential	Multiple-family dwellings	Garages, carports	--	10.9	11,000 square feet	One bedroom—4,000 square feet; Two bedrooms or more—5,000 square feet	85	25	20	25	35
Rm-2 Multiple-Family Residential	Multiple-family dwellings	Garages, carports	--	14.5	11,000 square feet	One bedroom—3,000 square feet; Two-bedrooms or more—3,500 square feet	85	30	20	25	35

Table 18 (continued)

District	Permitted Uses		Conditional Uses	Maximum Residential Dwelling Units per Net Acre	Minimum Lot Requirements			Minimum Yard Requirements			Maximum Building Height (feet)
					Total Area	Area per Family	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)	
	Principal	Accessory									
B-1 Central Business	Stores	Garages, off-street parking and loading, residential quarters	Automotive sales, food lockers	--	3,600 square feet	--	40	--	--	25	35
B-2 Community Business	Bakeries, stores, supermarkets, offices	Garages, off-street parking	Drive-in establishments, gasoline stations	--	20,000 square feet	--	80	25	10	25	35
M-1 Limited Manufacturing	Small manufacturing and processors, warehousing	Parking and loading areas	Outside storage	--	4,800 square feet	--	40	25	10	25	45
M-2 General Manufacturing	Heavy manufacturing	Parking and loading areas	Nuisance industries	--	20,000 square feet	--	90	25	25	25	60
I-1 Institutional	Public office buildings, schools, churches	Parking and loading areas, related residential quarters	Utilities, hospitals	--	11,000 square feet	--	70	25	10	25	35
P-1 Park	Parks, playgrounds, playfields	Parking and storage	Golf courses, campgrounds	--	--	--	--	40	40	40	35
C-1 Conservancy	Open space uses, not including structures	Parking	Golf courses, clubs, shooting ranges	--	--	--	--	--	--	--	--
FW Floodway	Open space uses, not including structures	None	Navigational structures, bridges, utilities, bulkhead lines	--	--	--	--	--	--	--	--
FC Floodplain Conservancy	Open space uses, not including structures	None	Navigational structures, bridges, utilities, bulkhead lines	--	--	--	--	--	--	--	--
FFO— Floodplain Fringe Overlay	Open space uses, not including structures	None	Filling, structures on fill	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a
PUD— Planned Unit Development Overlay	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a	-- ^a

^a Depends upon requirements of underlying basic use districts.

Source: SEWRPC.

as increased open space and off-street parking and loading facilities.

Manufacturing Districts

The M-1 Limited Manufacturing District is intended to provide for manufacturing, industrial, and related uses of a limited nature and size. M-1 Limited Manufacturing Districts are not located in basic industrial groupings, and the relative proximity of such districts to other uses requires restrictive regulation.

The M-2 General Manufacturing District is intended to provide for manufacturing and industrial development of a more general and less restrictive nature than the M-1 Limited Manufacturing District. The relationship of an M-2 General Manufacturing District to surrounding land use would create fewer problems of compatibility and would not normally abut directly upon residential districts.

Institutional District

The I-1 Institutional District is intended to eliminate the ambiguity of maintaining in unrelated use districts areas which are under public or public-related ownership and in which the use for public purpose is anticipated to be permanent.

Park District

This district is used to provide for areas where the open space and recreational needs, both public and private, of the citizens can be met without undue disturbance of natural resources and adjacent uses.

Conservancy District

This district is used to preserve, protect, and enhance the lakes, streams, and wetland areas of the village area. No new urban development would be permitted in this district. Although Map 28 does not show the immediate use of this district, it is available for use as may be necessary in the future.

Floodway District

This district is intended to be used to protect people and property from flood damage by prohibiting the erection of structures that would impede the flow of water during periodic flooding. Permitting use of the floodway would also increase damages in the broader floodplain by increasing flood stages.

Floodplain Conservancy District

This district is intended to preserve in essentially open space and natural use lands which are unsuit-

able for intensive urban development purposes because of poor natural soil conditions and periodic flood inundation. The proper regulation of these areas will serve to maintain and improve water quality, prevent flood damage, protect wildlife habitat, and prohibit the location of structures on soils which are generally not suitable for such use.

Floodplain Fringe Overlay District

This district is intended to provide for and encourage the most appropriate use of land and water in areas subject to periodic flooding, and to minimize flood damage to people and property.

Planned Unit Development Overlay District

The Planned Unit Development (PUD) Overlay District is intended to permit developments that will, over a period of time, be enhanced by coordinated site planning, diversified location of structures, and/or mixing of compatible uses. Such developments are intended to provide a safe and efficient system for pedestrian and vehicle traffic; to provide attractive recreation and open spaces as integral parts of the developments; to enable economic design in the location of public and private utilities and community facilities; and to ensure adequate standards of construction and planning. The PUD overlay district under this ordinance will allow for flexibility of overall development design, with the benefits of such design flexibility intended to be derived by both the developer and the community, while at the same time maintaining, insofar as possible, the land use density and other standards or use requirements as set forth in the underlying zoning districts.

OFFICIAL MAPPING

Following adoption of the land use plan for the Village of Fredonia, existing and proposed streets, highways, parks, parkways, and playgrounds shown on the plan should be incorporated into an Official Map for the Village and surrounding area. Section 62.23(6) of the Wisconsin Statutes provides that the Village Board of any village may establish an Official Map for the precise designation of right-of-way lines and site boundaries of streets, highways, parkways, parks, and playgrounds. Such a map has all the force of law, and the location and width on such a map of both existing and proposed parks and playgrounds, is deemed to be final and conclusive. The Statutes further provide that the Official Map may be extended

to include areas beyond the corporate limits lines but within the extraterritorial plat approval jurisdiction of the municipality.

The Official Map is intended to be used as a precise planning tool to implement the land use plan for streets, highways, parkways, parks, and playgrounds. One of the basic purposes of the Official Map is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use. Furthermore, the Official Map is the only arterial street and highway system plan implementation device that operates on an areawide basis in advance of land development. Therefore, the map can effectively ensure the integrated development of the street and highway system. And, unlike subdivision control, which operates on a plat-by-plat basis, the plan, with the Official Map as one of its implementation instruments, can operate over a wide planning area well in advance of development proposals. The Official Map is useful for achieving public acceptance of long-range plans in that it serves legal notice of the government's intention to all parties concerned well in advance of any actual improvements. It thereby avoids the altogether too common situa-

tion of development being undertaken without knowledge or regard for the long-range plan, and does much to avoid local resistance when plan implementation becomes imminent.

The Village Plan Commission and Village Board should act to adopt an Official Map after public hearing. It should be noted that Wisconsin Statutes specifically provide that the approval of a subdivision plat by the Village Board constitutes an amendment to the Official Map, thus providing flexibility in its administration. A suggested Official Map Ordinance is contained herein as Appendix C. And the proposed Official Map for the Village of Fredonia is shown as Appendix D.

In addition to the aforementioned implementation steps, there should be a strengthening of the planning and development review procedures in the Village to ensure that all development proposals are evaluated against the plan recommendations contained herein. It is suggested that in these matters, the Village either continue to seek and utilize the assistance available from the Southeastern Wisconsin Regional Planning Commission or employ a private planning consultant.

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APPENDICES

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Appendix A

A SUGGESTED VILLAGE PLAN COMMISSION RESOLUTION FOR ADOPTING THE VILLAGE OF FREDONIA LAND USE PLAN

WHEREAS, the Village of Fredonia, pursuant to the provisions of Section 61.35 and 62.23(1) of the Wisconsin Statutes, has created a Village Plan Commission; and

WHEREAS, it is the duty and function of the Village Plan Commission, pursuant to Section 62.23(2) of the Wisconsin Statutes, to make and adopt a master plan for the physical development of the Village of Fredonia; and

WHEREAS, the Village of Fredonia requested the Southeastern Wisconsin Regional Planning Commission to prepare a land use plan for the Village, which includes:

1. Collection, compilation, processing, and analyses of various types of demographic, economic, natural resource, land use, and transportation and other materials pertaining to the Village.
2. A forecast of growth and change.
3. A land use and arterial street system plan map.
4. Suggested revisions to village ordinances for the implementation of the selected plan; and

WHEREAS, the aforementioned inventories, analyses, objectives, forecasts, land use plans, and implementing ordinance revisions are set forth in a published report entitled SEWRPC Community Assistance Planning Report No. 38, A Land Use Plan for the Village of Fredonia: 2000, Ozaukee County, Wisconsin; and

WHEREAS, the Village Plan Commission considers the plan to be a valuable guide to the future development of the Village.

NOW, THEREFORE, BE IT RESOLVED that pursuant to Section 62.23(3)(b) of the Wisconsin Statutes, the Village of Fredonia Plan Commission on the ____ day of _____, 1980, hereby adopts SEWRPC Community Assistance Planning Report No. 38 as a guide for the future development of the Village of Fredonia.

BE IT FURTHER RESOLVED that the Secretary of the Village of Fredonia Plan Commission transmit a certified copy of this resolution to the Village Board of the Village of Fredonia.

_____, Chairman
Village of Fredonia Plan Commission

ATTESTATION:

_____, Secretary
Village of Fredonia Plan Commission

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Appendix B

A SUGGESTED VILLAGE BOARD RESOLUTION
FOR ADOPTING THE VILLAGE OF FREDONIA LAND USE PLAN

WHEREAS, the Village of Fredonia, pursuant to the provision of Sections 61.35 and 62.23(1) of the Wisconsin Statutes, has created a Village Plan Commission; and

WHEREAS, the Village Plan Commission has prepared, with the assistance of the Southeastern Wisconsin Regional Planning Commission, a plan for the physical development of the Village of Fredonia and its environs, said plan embodied in SEWRPC Community Assistance Planning Report No. 38, A Land Use Plan for the Village of Fredonia: 2000, Ozaukee County, Wisconsin; and

WHEREAS, the Village Plan Commission did on the _____ day of _____, 1980, adopt SEWRPC Community Assistance Planning Report No. 38, and has submitted a certified copy of that resolution to the Village Board of the Village of Fredonia; and

WHEREAS, the Village Board of the Village of Fredonia concurs with the Village Plan Commission and the objectives and policies set forth in SEWRPC Community Assistance Planning Report No. 38.

NOW, THEREFORE, BE IT RESOLVED that the Village Board of the Village of Fredonia on the _____ day of _____, 1980, hereby adopts SEWRPC Community Assistance Planning Report No. 38 as a guide for the future development of the Village of Fredonia; and

BE IT FURTHER RESOLVED that the Village Plan Commission shall annually review the village land use plan and shall recommend extensions, changes, or additions to the plan which the Commission considers necessary. Should the Plan Commission find that no changes are necessary, this finding shall be reported to the Village Board.

_____, President
Village of Fredonia Board

ATTESTATION:

_____, Clerk
Village of Fredonia

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Appendix C

A SUGGESTED OFFICIAL MAP ORDINANCE FOR THE VILLAGE OF FREDONIA

SECTION 1. Introduction

WHEREAS, the Village Board of the Village of Fredonia, after recommendation by the Village Plan Commission, has heretofore adopted on _____, 19__, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin as a guide for community development in the Village of Fredonia; and

WHEREAS, the Village of Fredonia and the Southeastern Wisconsin Regional Planning Commission have cooperatively prepared a land use plan for the Village of Fredonia; and

WHEREAS, the Village Plan Commission has recommended to the Village Board that an Official Map Ordinance be established for the Village of Fredonia; and

WHEREAS, the Village Board of the Village of Fredonia has determined that it is necessary for the proper physical development of the Village to establish an Official Map Ordinance for the Village of Fredonia.

NOW, THEREFORE, the Village Board of the Village of Fredonia, Wisconsin, do ordain as follows:

SECTION 2. Intent

It is the intent of the Village Board to establish an Official Map for the Village of Fredonia, Ozaukee County, Wisconsin, for the purpose of conserving and promoting the public health, safety, convenience, economy, orderliness, and general welfare of the Village to further the orderly layout and use of land; to stabilize the location of real property boundary lines; to ensure proper legal descriptions and proper monumenting of land; to facilitate adequate provision for transportation, parks, playgrounds, and storm water drainage; and to facilitate the further subdivision of larger tracts into smaller parcels of land.

SECTION 3. Authority

This Ordinance is enacted under the authority granted by Section 62.23(6) of the Wisconsin Statutes.

SECTION 4. Jurisdiction

The jurisdictional area of this Ordinance shall include lands in U. S. Public Land Survey Township 12 North, Range 21 East; Township 11 North, Range 22 East; Township 11 North, Range 21 East; and Township 12 North, Ranges 22 and 23 East, Ozaukee County, Wisconsin, including all of Sections 23, 24, 25, 26, 27, 34, 35, and 36, and portions of Sections 13, 14, 21, 22, 28, 29, 32, and 33 of Township 12 North, Range 21 East; portions of Sections 6 and 7, Township 11 North, Range 22 East; all of Sections 2 and portions of Sections 1, 3, 4, 10, 11, and 12 of Township 11 North, Range 21 East; and portions of Sections 19, 30, and 31 of Township 12 North, Ranges 22 and 23 East.

SECTION 5. Official Map

There is hereby established as the Official Map for the Village of Fredonia the maps which accompany this Ordinance. All notations, references, and other information shown thereon shall be as much a part of this Ordinance as though the matters and information thereon

were fully described herein. These maps shall bear the title "Official Map of the Village of Fredonia, Wisconsin," their date of adoption or amendment, and their sheet number as recorded in Section 5.3 of this Ordinance. No other map prepared by the Village or by private parties shall bear the words "Official Map" upon its face, except as authorized by this Ordinance.

5.1 The Official Map shall consist of one (1) map sheet,

5.2 The Official Map shall show the following information:

5.21 The location and width of all platted and existing streets, highways, drainageways, and parkways, and the location and extent of parks and playgrounds within the corporate limits of the Village of Fredonia as heretofore laid out, adopted, and established by law.

5.22 The location and width of all proposed streets, highways, drainageways, and parkways, and the location and extent of proposed parks and playgrounds as shown in land use plans adopted by the Village Plan Commission.

5.23 In areas of the Village where plans have not been adopted, the proposed location and width of all streets and highways as shown on A Jurisdictional Highway System Plan for Ozaukee County.

5.24 Changes and additions as authorized by Section 6 of this Ordinance.

SECTION 6. Changes and Additions

The Village Board may change or add to the Official Map so as to establish the exterior lines of, widen, narrow, extend, or close any platted, existing, proposed, or planned streets, highways, parkways, parks, or playgrounds.

6.1 The Village Board shall refer any change or addition to the Official Map to the Village Plan Commission for review and report thereon prior to adoption. The Village Plan Commission shall report its recommendation to the Village Board within 60 days.

6.2 Changes and additions for the locating, widening, or closing, or the approval of the locating, widening, or closing, of streets, highways, parkways, parks, or playgrounds by the Village under provisions of law other than this section shall be deemed to be a change or addition to the Official Map.

6.3 A public hearing of parties in interest and citizens before the Village Board shall be required before any changes or additions to the Official Map are effective. Parties in interest are those persons owning land which is to be placed on or removed from the Official Map, abutting property owners, and all property owners within 100 feet. Notice of the public hearing shall be published as a Class 2 notice pursuant to the requirements of Chapter 985 of the Wisconsin Statutes.

6.4 Changes and additions made by duly approved subdivision plats shall not require the public hearing if the changes or additions do not affect any land outside the area being platted.

SECTION 7. Building Permits

For the purpose of preserving the integrity of the Official Map, a building permit shall be required for any structure or part thereof that shall hereafter be located, erected, moved, reconstructed, extended, enlarged, converted, or structurally altered. No permit shall

hereafter be issued for any building in the bed of any existing or proposed street, highway, or parkway shown on the Official Map. No permit for the erection of any building shall be issued unless a street, highway, or parkway giving access to such proposed structure has been duly placed on the map.

The Building Inspector may require each applicant for a building permit to submit a plan, prepared and certified by a registered land surveyor, showing accurately the location of any proposed building with reference to any street, highway, or parkway shown on the Official Map.

SECTION 8. Municipal Improvements

No public sewer or other municipal street utility or improvement shall be constructed in any street, highway, or parkway of the Village of Fredonia until such street, highway, or parkway is duly placed on the Official Map.

SECTION 9. Appeals

The Board of Zoning Appeals shall have the power to review any administrative decision of the Village Building Inspector to deny a permit for the erection of a structure under this Ordinance and to grant relief from the requirements of this Ordinance under the provisions of Section 62.23(6)(d), (f), and (g) of the Wisconsin Statutes.

SECTION 10. Certified Copy of Map

There shall be a certified copy of the Official Map described in Section 5. The certified copy shall be kept in the office of the Village Clerk, and shall be available for inspection by any interested person during regular office hours. The certified copy shall bear on its face a certification that it is a true copy of the Official Map described in and accompanying this Ordinance, and shall show the date of adoption of this Ordinance and shall be signed by the Village President and countersigned by the Village Clerk. Thereafter, no change or addition to such Official Map shall become effective until it shall have been indicated by the appropriate convention on the aforesaid certified copy of the Official Map and a certificate placed thereon or attached thereto bearing the number and date of adoption of the amending ordinance. The certificate shall be signed by the Village President and countersigned by the Village Clerk.

SECTION 11. Map to be Filed with Register of Deeds

The Village Clerk shall be responsible immediately upon adoption of the Official Map or any amendment thereto for recording a true copy of the amended Official Map with the Register of Deeds of the County of Ozaukee, Wisconsin.

SECTION 12. Enforcement

It shall be the duty of the Village Building Inspector and the Chief of Police to enforce the provisions of this Ordinance.

SECTION 13. Penalties

Any person, firm, or corporation who fails to comply with the provisions of this Ordinance shall, upon conviction thereof, forfeit not more than \$200 and not less than \$50 and cost of prosecution for each violation, and in default of payment of such forfeiture and costs shall be imprisoned in the county jail until payment thereof but not exceeding 30 days.

No damages shall be allowed for the taking by any governmental agency, for street, highway, and parkway purposes, any building erected in violation of this Ordinance.

SECTION 14. Severability and Conflict

If any section or part of this Ordinance is adjudged unconstitutional or invalid by any court of competent jurisdiction, the remainder of this Ordinance shall not be affected thereby. All other ordinances or parts of ordinances of the Village inconsistent with this Ordinance to the extent of the inconsistency only are hereby repealed.

SECTION 15. Effective Date

This Ordinance shall be effective after adoption by the Village Board and publication or posting as provided by law.

Adopted _____

Published _____

Effective _____

Village President

Countersigned:

Village Clerk

OFFICIAL MAP
OF THE
VILLAGE OF FREDONIA
OZAUKEE COUNTY
WISCONSIN

PREPARED BY THE SOUTHEASTERN
WISCONSIN REGIONAL PLANNING
COMMISSION
WAUKESHA WISCONSIN

GRAPHIC SCALE
0 400 800 1200 FEET

GRID NORTH

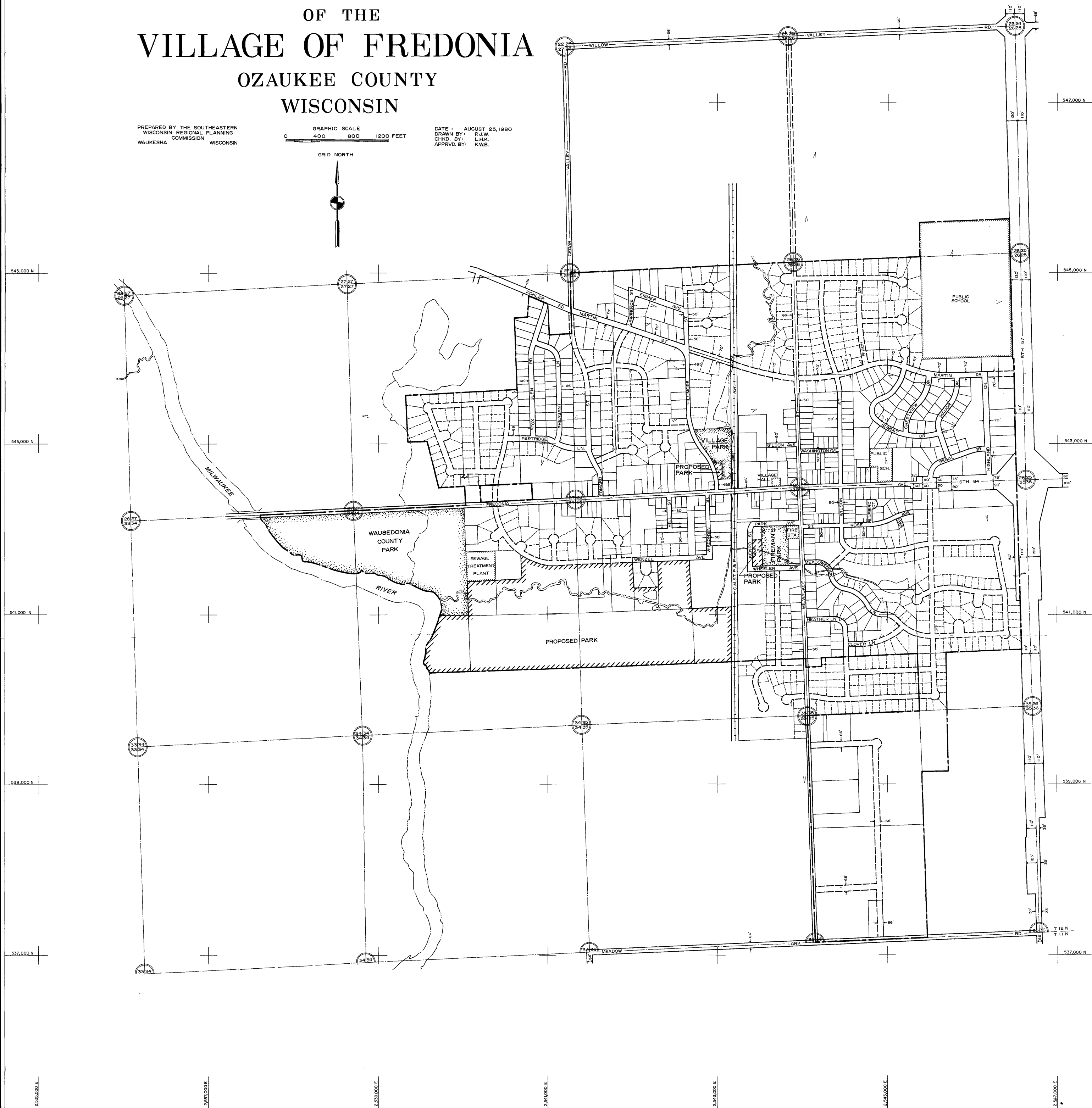
DATE: AUGUST 25, 1980
DRAWN BY: P.J.W.
CHKD. BY: L.H.K.
APPRVD. BY: K.W.B.



- LEGEND
- SECTION LINE
 - QUARTER SECTION LINE
 - CORPORATE LIMIT LINE
 - PARKWAYS, PARKS, AND PLAYGROUNDS
 - PROPOSED PARKWAYS, PARKS, AND PLAYGROUNDS
 - EXISTING PUBLIC STREET RIGHT-OF-WAY (60' WIDE UNLESS OTHERWISE INDICATED)
 - PROPOSED PUBLIC STREET RIGHT-OF-WAY (60' WIDE UNLESS OTHERWISE INDICATED)
 - PUBLIC STREET PROPOSED TO BE VACATED
 - EXISTING PROPERTY LINE
 - PROPOSED PROPERTY LINE
 - WATER
 - NOTE: CIRCULAR TURN-AROUNDS AT THE END OF ALL CUL-DE-SACS HAVE A RIGHT-OF-WAY RADIUS OF 60'

ESTABLISHED AS THE OFFICIAL MAP FOR THE VILLAGE OF FREDONIA, OZAUKEE COUNTY, WISCONSIN BY ORDINANCE NO. _____ ADOPTED ON THE _____ DAY OF _____, 1980, UNDER THE AUTHORITY GRANTED BY SECTIONS 61.35 AND 62.23(6) OF THE WISCONSIN STATUTES

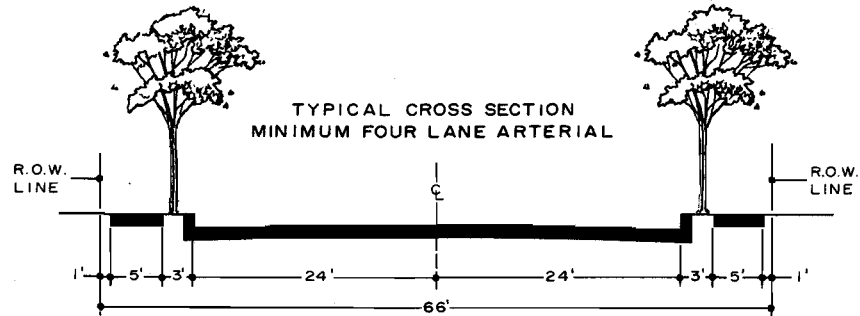
ATTEST: _____
VILLAGE PRESIDENT
COUNTER SIGNED: _____
VILLAGE CLERK



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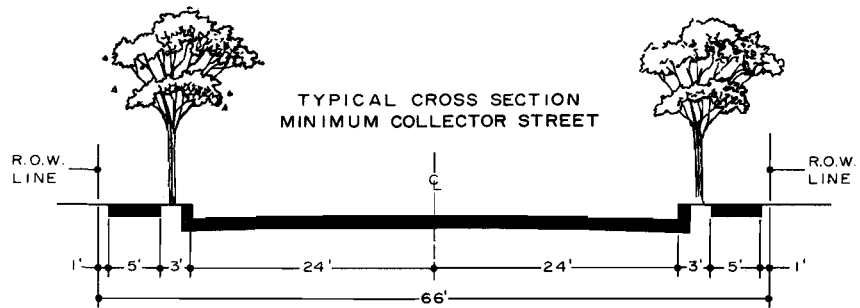
Appendix E

TYPICAL STREET AND HIGHWAY CROSS-SECTIONS RECOMMENDED FOR THE VILLAGE OF FREDONIA



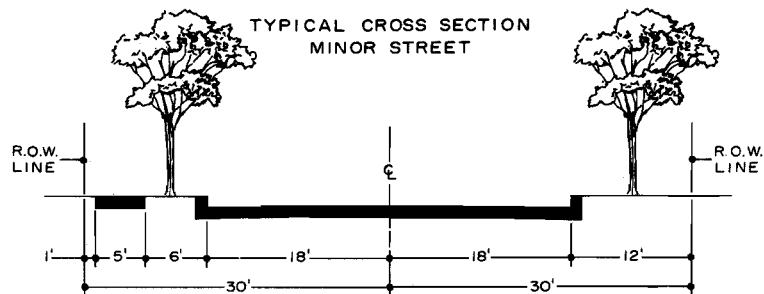
6" GRAVEL BASE
48' HIGH TYPE PAVEMENT, 66' R.O.W.
SIDEWALK, STREET LIGHTING
ESTIMATED CONSTRUCTION COST PER MILE:
\$765,000 (WITH STORM SEWER)
\$495,000 (WITHOUT STORM SEWER)

CAPACITY RANGE:	LEVEL OF SERVICE	MAXIMUM SERVICE VOLUME
	B	12,300 VEH./DAY
	C	12,800 VEH./DAY
	D	13,900 VEH./DAY



6" GRAVEL BASE
48' HIGH TYPE PAVEMENT, 66' R.O.W.

ESTIMATED CONSTRUCTION COST PER MILE:
\$765,000 (WITH STORM SEWER)
\$495,000 (WITHOUT STORM SEWER)



6" GRAVEL BASE
36' HIGH TYPE PAVEMENT
60' R.O.W.

ESTIMATED CONSTRUCTION COST PER MILE:
\$282,000 (WITH STORM SEWER)
\$192,000 (WITHOUT STORM SEWER)

NOTE: ESTIMATED COSTS ARE IN CONSTANT 1978 DOLLAR AMOUNTS