Village of Roberts

Town of Warren

COMPREHENSIVE PLAN

Village of Roberts / Town of Warren

COMPREHENSIVE PLAN

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Comprehensive Plan prepared with assistance from

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PREFACE

The foundation of any community or region is rooted in its people, its economic base, and its foresight for the future. The citizens of Roberts/Warren, in their decision to update the existing Land Use Plan, have acknowledged that no region remains static over time. Concern over growing urban development pressure from the Twin Cities metropolitan region and internal growth of county municipalities has prompted the reassessment of the entire planning process of Roberts/Warren.

The Comprehensive Plan is a key element in formulating the approach that a community will take in addressing the issues of land use, public policies toward development, and infrastructure requirements. The purpose of the Comprehensive Plan is to provide a framework for the governing body to ensure that a course, focused on a common goal, is maintained.

One definition of planning is that it is the conscious selection of policy choices. The preparation of a comprehensive plan is a commitment to the future of the community.

To achieve this the plan should be:

1. **Comprehensive.** The plan must address all areas of the joint community as well as all activities associated with regulating development.
2. **Flexible.** The plan must be structured to summarize policies and proposals and allow for flexibility to facilitate the ever changing needs of the area.
3. **Provident.** The initial requirements of the plan are to achieve solutions to short term issues, whereas, the ultimate goal of the plan is to provide a perspective of future development and predict possible problems as far as 20 years into the future.

With these general guidelines as a basis, specific issues must be addressed by analyzing the growth patterns and physical features of the community. While a variety of factors influence where and when development takes place, several basic categories can be analyzed to assess the impact of past and future growth. The categories this plan addresses are: *Housing; Economic Development; Land Use; Public Facilities; Transportation; Agricultural, Natural, and Cultural Resources; Intergovernmental Cooperation,* and *Implementation.*

Because growth pressures from the Minneapolis/St. Paul metropolitan area are being felt in St. Croix County, much of the attention of this plan is in terms of impact rather than statistical forecast. The reason for this approach stems from the way in which forecasts or projections are made. Generally, projections are based on past trends or knowledge of certain specific factors which will influence growth.

In terms of Roberts/Warren, past trends would not be able to predict increases in population and development associated with growth pressures from the metropolitan area. In addition, there is no clear factor that shows how much growth will occur in the near future. The influence and degree of impact associated with rapid growth in St. Croix County will be a result of factors generated outside the immediate boundaries of the County and Roberts/Warren. While the cost of building homes or commercial structures in St. Croix County and other areas to the west increases, Roberts/Warren will begin to be looked on as an affordable option. When costs associated with travel time to the metropolitan area offset the price of housing, Roberts/Warren will be looked on as a base from which to commute. As the area to the west increases in intensity as an employment center for the region, Roberts/Warren will be viewed as an area desirable for residential housing. Some of this scenario is beginning to be realized and will likely continue to be a component in Roberts/Warren's future development. The exact time when rapid growth occurs is not the key issue. The key issue is the acknowledgement that Roberts/Warren is in a region where growth is occurring, foresight is provided to anticipate the problems associated with growth, and the appropriate policies and planning process are in place to address growth when it occurs. This Comprehensive Plan confronts these issues and provides a basis for the policies which will shape the joint community in the future.

Statewide Comprehensive Planning

In furtherance of comprehensive planning, the State of Wisconsin leaped to the forefront of states with the enactment of so-called "Smart Growth" planning legislation.

ACT 9 reflects the principles of Smart Growth, a topic high on the agenda of public concern and debate as the nation enters the 21st century. Although Smart Growth has been defined in somewhat different terms by various sources, the basic concept is:

That growth which conserves natural resources and open space, enhances economic vitality, coordinates development with infrastructure in a cost-effective manner, provides transportation options (including walking and bicycling), and enhances the livability of communities.

1999 WISCONSIN ACT 9

This Act, relating to comprehensive planning, was passed by the legislature in 1999 and signed into law on May 10, 2000. It defines the contents of a comprehensive plan, heretofore referred to in Wisconsin Statutes as the Master Plan. The new definition is much broader and definitive than the former. The Act goes on the state, "Beginning on January 1, 2010, any program or action of a local governmental unit that affects land use shall be consistent with that local governmental unit's comprehensive plan, e.g.:

- Municipal incorporation procedures under s. 66.012, 66.013, or 66.014.
- Annexation procedures under s. 66.021, 66.024, or 66.025.
- Cooperative boundary agreements entered into under s. 66.023.
- Consolidation of territory under s. 66.02.
- Detachment of territory under s. 66.022.
- Municipal boundary agreements fixed by judgment under ss. 66027.
- Official mapping established or amended under s. 62.23 (6)
- Local subdivision regulation under s. 236.45 or 236.46
- Extraterritorial plat review within a city's or village's extraterritory plat approval jurisdiction, as is defined in s. 236.02 (5)
- County zoning ordinances enacted or amended under s. 59.69
- City or village ordinances enacted or amended under s. 62.23 (7)
- Town zoning ordinances enacted or amended under s. 60.61 or 60.62
- An improvement of a transportation facility that is undertaken under s. 84.185
- Agricultural preservation plans that are prepared or revised under subch IV of Chapter 91
- Impact fee ordinances that are enacted or amended under s. 66.55
- Land acquisition for recreational lands and parks under s. 23.09 (20)
- Zoning of shorelands or wetlands in shorelands under s. 59.692, 61.351, or 62.231
- Construction site erosion controls and stormwater management zoning under s. 69.693, 61.354, or 62.234
- Any other ordinance, plan, or regulation of a local governmental unit that relates to land use

Furthermore, the procedure required by Act 9 for adopting a comprehensive plan is more complex than that previously required for adopting a master plan.

INTRODUCTION

The Comprehensive Plan

The future course of development for Roberts/Warren joint planning community is contained in this Comprehensive Plan. This long-range guide brings together many planning elements, coordinating them to maintain an environment that is attractive, efficient, and pleasing to the area residents. Each element sets desired development direction consistent with the goals and policies that have been established to maintain and enhance quality of the community desired by citizens and officials.

The Comprehensive Plan is general in nature, allowing for flexibility. It is comprehensive because it considers many elements and their inherent relationship with each other. The plan is properly balanced and blended, giving emphasis to those characteristics desired.

The plan has evolved through a careful, deliberate process of data collection, analysis of potential alternatives, and goal formation—each stage being a step toward refining the Comprehensive Plan. During the course of this process, each point of view has been carefully reviewed and incorporated into the final plan.

The plan will provide a service to the two jurisdictions if the guidelines promulgated by the plan are followed. The guidelines are important to the elected and appointed officials as they evaluate the developmental elements during the course of administering the plan. Understanding by private interest groups (such as developers) will assure conformance with plan objectives.

The Comprehensive Plan is a guide. It can accommodate the uses that have been selected to continue, and enhance the quality environment for which the area has come to be known. Each of the proposed uses has been measured to produce a well ordered, functioning community, attractive and satisfying to its citizens. The plan is not a zoning plan, yet it does show desired uses for certain sectors of the community that, in some instances, may be interpreted as zoning proposals. The plan is a guide to be used by officials in initiating changes in zoning to achieve desired land use and as a basis for evaluation requests from individuals.

> Comprehensive *means consideration of the interaction between man's use of land and the natural characteristics of the community. It also means consideration of the interaction between the various levels of government and the private sector. By acting wisely in the present, the community can avoid having to correct costly mistakes in the future.*

Prior to the development of the proposed Comprehensive Plan and development of the long-range proposal portion of this plan, an understanding of existing conditions as well as a brief history of the region are provided, The history of the region is provided to establish the roots of the area. Existing conditions are analyzed to form the base from which the planning decisions for the future will begin. From this base, proposals can be introduced to adequately address the future needs of the community in terms of infrastructure improvements, land use, and development policies.

Because the land use element of this plan represents an update to an existing Land Use Plan prepared in 1994, statistical data and historical background for the period prior to 1992 have been summarized to place emphasis on development occurring after this time and potential development for the future. Much of the history, regional setting, and geology of the area has been outlined in the previous Land Use Plan. The following synopsis is a review of the information contained in that document and a review of recent developments.

Citizen Participation Plan: A Visioning Process

The Smart Growth law requires each plan to include a comprehensive citizen participation plan. A good participation process should offer citizens a range of participation options to have meaningful input into the process. Effective public input is critical for plan implementation; the more broad-based and enduring community support that is gained, the easier it will be to implement the plan.

The public participation approach used a visioning process to develop the comprehensive plan. Visioning is a process in which the community builds consensus on a description of their preferred future—the set of conditions they want to see in the future. Residents work together to define key issues and to develop shared goals, objectives, and strategies to realize these goals. The community developed a vision for the future and a series of goals, objectives, and strategies to guide the future of the area. The visioning process began with issues identification that took place during a joint Plan Commission meeting. This preliminary step of issue identification narrowed the range of discussion to those issues most important to the community, which created greater likelihood of consensus—especially since there was broad community participation.

In April 2001, the Village/Town conducted a public meeting aimed at building momentum for the planning process, soliciting citizen input, and facilitating consensus about a general vision for the future development of the community.

Below is the vision statement of the joint community. The vision statement represents the fundamental expression of purpose, and is the point of reference for all decision-making. It establishes the broad ideal from which the goals and objectives outline on the following pages derive.

VISION STATEMENT
Roberts/Warren Community

Roberts/Warren should have its own "sense of place," and should be recognized by residents and visitors as a pleasant place to live, work, and shop.

Overall goals and objectives were derived from the above vision statement.

Planning goals and objectives represent the expression of the community's vision and statement of intent. The following goals and objectives statements guide the comprehensive plan decision making process.

These goals and objectives serve as a guide in preparing the various elements of the Comprehensive Plan. They are an outcome of the community participation phase of the planning process.

What Are Goals and Objectives?

Goals are generally defined as the ultimate aim towards which an effort is directed. The goals outlined below are broad to provide a general framework for which Roberts/Warren can strive to achieve. Objectives, on the other hand, are defined as an action directed to achieve the stated goal.

Some of the objectives are developed to achieve the goals are non-physical in nature. They are included here as they directly relate to the community's well being, though the actual follow-up to the objective will be accomplished under various programs.

OVERALL GOAL

There are several goals of the Comprehensive Plan and they serve as the primary basis for adopting the plan. Decisions made with regard to development should be based on achieving the following goal:

Goal:

Orderly, attractive community growth which:

- ***Maintains and enhances the identity and historical character of the Roberts/Warren community.***
- ***Achieves a well balanced land use pattern.***
- ***Enhances compatibility of land uses.***
- ***Balances growth at the community's periphery.***

Objectives:

- Establish/define edge characteristics at each community edge such as low density, open space oriented residential development.
- Respect natural features; integrate into development.
- Utilize open space within new developments to establish/reinforce community edges.
- Preserve natural, cultural, and historic amenities.
- Protect residential areas from incompatible land uses through transitional land uses and/or buffering.
- Direct development incrementally out from the core, thereby conserving land and development costs and reducing "leap-frog" sprawl.

Issues and Opportunities

As input was received from elected/appointed officials, staff, and citizens of the Village and Town, various issues came to the forefront. Through the citizen participation process, these points were distilled to four issues. With each issue, an opportunity to address the point was identified.

Issue 1
How can Roberts/Warren preserve a small town, rural atmosphere, enhance a sense of community, and still grow?

Opportunity—The Comprehensive Plan is the official document to provide guidance with respect to decision about the physical development of the community. In cooperation among the Town, Village, and County, the plan will seek to preserve and accentuate the difference between the Village's urban growth boundaries and the unserviced rural and semi-rural Town areas. The Village should develop in a compact and efficient manner, while the surrounding Town lands should be open, agricultural, and developed at lower densities and do so with assistance of the County.

Issue 2
How can the Village and the Town work more closely to resolve land use issues?

Opportunity—Under the new state comprehensive planning statutes, the Village and Town are strongly encouraged to cooperate and coordinate with respect to land use related issues. The comprehensive planning effort by both entities provides a timely structure to identify and address common concerns.

Issue 3
How can the Village and Town grow their commercial/industrial tax base?

Opportunity—The plan provides the opportunity to identify appropriate lands for industrial and commercial activity based on transportation, infrastructure and organizational structure.

Issue 4
What measures must the Village/Town take to control land use and growth within the planning area?

Opportunity—The Village and Town should work cooperatively regarding long-term growth boundary agreements, services provision, and joint land use planning.

The contents of this plan detail the means to address these items.

BACKGROUND

Existing Community Character

A major contributing factor to the community character of the Roberts/Warren is its rural/agricultural heritage and economy. Made viable by the productive soils (Map 1) and efficient location in relation to transportation and agricultural markets, the community is home to many active farm operations.

Dispersed development destroys the perception and character of "rural" areas when it becomes too dense. What makes a rural area "rural" is the overwhelming visual dominance of open spaces between residences, or clusters of residences, and the operation and conduct of agricultural activities or maintenance of natural areas in those open spaces. Some planning research has shown that people consider areas to be "rural" in character when there is an overall density of less than one dwelling unit per 35 to 40 acres, and where there is a minimum lot size of one acre. This indicates that "rural character" can be attained with an overall density standard and a minimum lot size standard. This threshold characteristic is supported by State and County definitions which set 35 acres an the minimum size for farmland preservation.

Beyond the destruction of rural character, dispersed development at densities of greater than one dwelling per 35 acres (whether in clusters or individual projects) also creates inefficiencies in terms of providing services—school bus transportation, telephone, electric, natural gas, cable TV, etc. This can become extraordinarily costly since the new residents coming into such areas often have expectations for a more suburban or urban level of services, in contrast to residents that are more attuned to the rural lifestyle.

In jurisdictions which have experienced significant non-rural development intrusions, electoral parity shifts to the side of the dispersed suburban resident, and demands for higher levels of urban services will increase. Consequently, dependence on property taxes will tend to rise and the agricultural land owner will foot an increasingly disproportionate larger share of the tax load because of the amount of owned land. To balance this inequity, one must consider the relationship between services received and funding responsibility, and the necessary protection of the right to farm.

Land Use Mixture and Development Scale

In addition to concerns regarding the land use pattern and residential density or non-residential intensity, jurisdictions concerned about the preservation and enhancement of community character should also address the mixture of land uses and the scale of development—both in terms of individual structures, and in terms of the balance between the built environment (structures, paved areas and signage) and the landscaped environment (lawns, decorative plantings, and buffer yards).

Small towns are characterized by a mixture of land uses that are a blend of a variety of residential uses, commercial services, industrial, institutional, and recreational areas. Traditional land use regulation has

tended to segregate these uses into large patches of land uses linked (or separated) by streets and parking lots. Conversely though, there are uses which clearly must be segregated from each other—residential development from industrial activities involving hazardous materials (and vice-versa to protect industrial operations), residential activities from adult entertainment use, etc.

The criteria for separating or integrating conflicting or complementary uses should be a matter of development intensity and scale, as well as concerns about preventing conflicts between incompatible land use types. For example, a 2,500 s.f. convenience store is generally compatible in a residential neighborhood whereas a 150,000 s.f. supermarket is not. Daily and evening operations, industry production, storage of materials, traffic and parking, and landscaping/buffering are all concerns to be considered. The overriding criteria though, are the protection of the public's health, safety, and welfare—balanced with the protection of the individual's right to enjoyment of property.

The community's land use regulations should recognize the need to integrate some appropriate land uses with one another and to separate some uses which are incompatible.

Farmland Preservation

Agriculture is a key part of the local, county, and state economy. The accepted minimum parcel size for a viable farm unit (and for qualifying for state provided farm preservation tax credits) is 35 acres. Recognizing a balance is needed between growth demands, viable public services and farmland preservation, sites that are immediately adjacent to Urban Growth Boundaries (or that could reasonably be expected to be added to existing functional service areas) should be considered as transitional development districts with 35 acre minimum parcel sizes and not as exclusive agricultural use. The 35 acre requirement in the transitional area forces the proposed development into a review process which enables public participation and effective review of development for compliance with the adopted plan.

Water Quality

Paradoxically, prime farmlands are also very visually attractive and suitable for development. Soil types (Map 2) in the Town, however, are also physically limiting for non-farm development because of physical constraints limiting septic drain fields (Map 3). Areas which have high water tables (Map 4) or clay soils do not absorb wastewater effectively. Conversely, the poorer agricultural soils—relatively thin soil (Maps 5, 6) over sandy-stony glacial till formations with steeper slopes—present problems because wastewater absorption is too rapid. If there is not time for the natural process of soil organisms and chemistry to effectively breakdown sanitary waste, bacteria will reach and contaminate groundwater.

Recent research findings indicate that bacteria and inorganic compounds travel through soil from surface to groundwater significantly faster than previously believed. Consequently, not only do agricultural practices need modification to protect groundwater resources, but extreme caution should be used in siting non-farm residential uses in areas where residents could be at risk because development density is beyond the carrying capacity of the land to support and provide potable water supply.

Since a functioning public water and sewer system is available in the Village, it is not unreasonable to expect/restrict dense, non-farm development to locate within the service area.

Since groundwater contamination from septic systems is directly related to the density of the systems and soil conditions, non-farm

development should be prohibited on lots of less than two acres in size. This acreage limit is quadruple the current state minimum but evaluation of septic system failures indicate that more primary and reserve drain field space should be required to permit more effective systems. This standard should be applied to development proposals that are not served with public sanitary sewer, such as farm residences or agri-business uses. Other development (and development at a greater density) should only be permitted in the Urban Growth Boundary to protect ground water quality.

Community Identity and Aesthetics

Community identity is an important factor in creating a "sense of place" for any locality or neighborhood. How a neighborhood looks, landmarks that are remembered or used to give directions, and the interaction of neighbors all create identity. A neighborhood is the hallmark of a small town—everyone knows their neighbor, helps when needed, and looks out for each other.

Attractive physical appearance is achieved by review of site plans to assure that adequate landscaping, appropriate signage, and proper building materials are employed. The development approval process should include this review in addition to articulating the requirements.

Planning Area

The planning area encompasses all those lands within the approximately 36 square mile survey township comprised of the civil 35.6 square mile of Town of Warren and the almost 0.4 square mile Village of Roberts. The joint community lies in the western one-half of St. Croix County which abuts the State of Minnesota, the boundary of which with the State of Wisconsin is formed by the St. Croix River. The joint community is located approximately nine miles east of the City of Hudson, Wisconsin and 24 miles east of the twin cities of Minneapolis/St. Paul, Minnesota. IH-94 traverses the southwestern area of the joint community in an east-west direction. The Union Pacific railroad bisects the joint community and the Village in an east-west direction.

The 2000 population of the joint community was 2,289 (969 Village—1,320 Town). The joint community lies within the commutershed of the Twin Cities, and a commuter park and ride lot is located near the IH-94/STH 65 interchange and is well utilized. The Kinnickinnick River is the only major tributary in the joint community and traverses the extreme southeast corner of the community. A major portion of the joint community is tributary to two small lakes known as Twin Lakes which have no surface outlet.

The approximately 36 square mile area of the joint community is divided into two distinctly different areas of topographic features. The western approximately one-third of the community is predominately rolling and hilly with steep wooded slopes in some areas (Map 7). The eastern two-thirds of the community, in contrast, is relatively flat to gently rolling (Map 8). The village is located in the center of the joint community in the western part of this latter, relatively flat area. The wooded, hilly area extends on both sides of IH-94 as it traverses the southwest quadrant of the community. Soils are, generally, well to excessively drained in the western hilly areas of the community and well drained to poorly drained in the flatter "till plain" of the eastern two-thirds of the community. The principal problem related to soils is that the sandy excessively drained soils when used for urban density septic tank development may contribute to

private water well contamination.

The community has relatively little water and wetland area (Map 9). The Kinnickinnick River (including its minor tributaries, floodlands, and wetlands) flows through the extreme southeastern part of the community, although there are very few acres of sustained wetlands adjacent to this river within the joint community. There are three separate clusters of small lakes, all in the western one-half of the community. The Three Lakes area on the northern community boundary includes about 160 acres of water surface. There is also a series of connecting small lakes and wetlands west of 100th Street in Section 6. The Twin Lakes in the southwest quadrant of the community encompasses about 200 acres of surface water. There are several very small intermittent ponding/wetland areas in the eastern two-thirds of the community. The largest separate wetland is located in Section 11, in the northeast quadrant of the community.

Water/Sewer Facilities

The Village of Roberts owns and operates both a public sanitary sewerage system and public water supply system. While only the Village is served with public sanitary sewerage facilities in 1992, the wastewater treatment plant is actually located in the Town of Warren, one-half mile southwest of the Village, on the eastern edge of Twin Lakes. Treated effluent from the wastewater treatment plant outfalls into the lakes. All the developed area of the Village is served with public sanitary sewerage facilities. The plant is, presumably, capable of accommodating limited future growth in urban development.

The Village public water supply system includes two wells and 250,000 gallons of elevated storage. Again, in 1992, only the Village provides public water service. The public water supply system is also, presumably, expandable.

Existing Land Use

Because the joint Town/Village community is sparsely populated, existing urban land use is not a major land use factor relative to the total community. The Village, however, is almost entirely urban while the Town if almost entirely rural. Following is a brief synopsis of various major land uses in the joint community.

Residential Use— In 2000, approximately three-fifths (200 acres) of the Village was developed for residential and adjoining access street purposes. The approximate Village population of 1,000 is housed 402 dwelling units, or about 2 dwelling units per gross acre. The Village population is, therefore, relatively compact. Approximately 20 percent of all dwelling units are two or multi-family units, not including the mobile homes which are clustered in a multi-family density. In contrast, the Town (with over 1,300 population) has over five times the land developed for residential use. In addition, except for a few very small subdivisions, the residential use is dispersed and is virtually all single-family units. Residential use in the town is located almost entirely in the western one-half of the Town on relatively large lots.

Commercial Use—The principal areas of commercial use in the community lie within the Village. The central business district of the Village fronts primarily on Main Street, encompassing a mix of community retail uses as well as some industrial and institutional uses. A community bank and a service station (both located adjacent to STH 65 on opposite ends of the Village) make up the remainder of commercial use in the Village. Other commercial uses in the Village and to a larger extent in the Town are for the most part home occupations and uses which have evolved as a natural outgrowth of the other uses of land (for example, farming). Many of these uses are considered non-conforming uses and therefore are expected to be eliminated over time. A highway commercial use is located near the IH-94/STH 65 interchange on 70th Avenue in the Town and is the single largest approved commercial land use in the Town.

Industrial Use—Like commercial use, industrial use in the community is sparse. Industrial uses such as feed mill and warehousing are intermixed with commercial development within the Village central business district. Industrial use in the Town is comprised of a concrete product manufacturing use on STH 65 adjacent to the Village. Other industrial uses exist as home occupations of which some are also non-conforming uses which should be eliminated over time or made legitimate through zoning where feasible.

Governmental and Institutional Uses—Such uses in the Village are comprised of the elementary school located on School Street and east of residential properties fronting Division Street. The Village Hall and garage on the corner of E. Maple Street and Division Street, the Roberts/Warren Fire Department station at the intersection of Elm Street and West Boulevard, Village well and water storage sites, and a fraternal hall on Main Street are all institutional uses. Land devoted to these uses (except for the school) is very limited. The Village of Roberts also owns the wastewater treatment plant site located in the Town on the NE edge of Twin Lakes.

There are several large tracts of land in the Town owned by state or federal governmental agencies. For the most part these lands (or water) encompass recreational or other open space uses. The Wisconsin DNR and the U.S. fish and Wildlife Service own approximately 290 acres in U.S. Public Land Survey Section 5 in the Town. Most of these lands abut Three Lakes. The United States also owns 157 acres of (predominately) wetland in Section 11. The Wisconsin DNR owns a large, odd-shaped tract of land along the Kinnickinnick River in Sections 35 and 36 which primarily encompass the floodlands of the river in this area. The Wisconsin DNR also owns approximately 20 acres of land adjacent to Twin Lakes. These state and federal lands have, for the most part, been set aside for fish and wildlife management.

Recreation Use—The approximate 13.4 acre Village Park is the second largest single tract of land use in the Village. The park includes a recreation building that doubles as a community center. Although there are no Town parks, there are a few private recreation areas. The St. Croix Valley Girl Scout Council owns and operates an approximately 230 acre camp in U.S. Public Land Survey Section 8, south of 100th Avenue. There is also a privately owned 260 acre golf course in Section 20 on 80th Avenue in the Town. There is a 160 acre tract in Section 6 owned by a private hunting club but maintained in primarily agricultural use.

Agricultural Use—The approximate 40 acres of agricultural land in the Village accounts for about 16 percent of all Village land. The remainder of the over 30 square miles of agricultural and agricultural-related land in the joint community lies within the Town. The lands in the eastern, flatter two-thirds of the Town are intensively used for

standard field crop and dairy agricultural purposes. Agricultural land in the western, hilly one-third of the Town is used more for pasture and hay crops for horses and beef cattle.

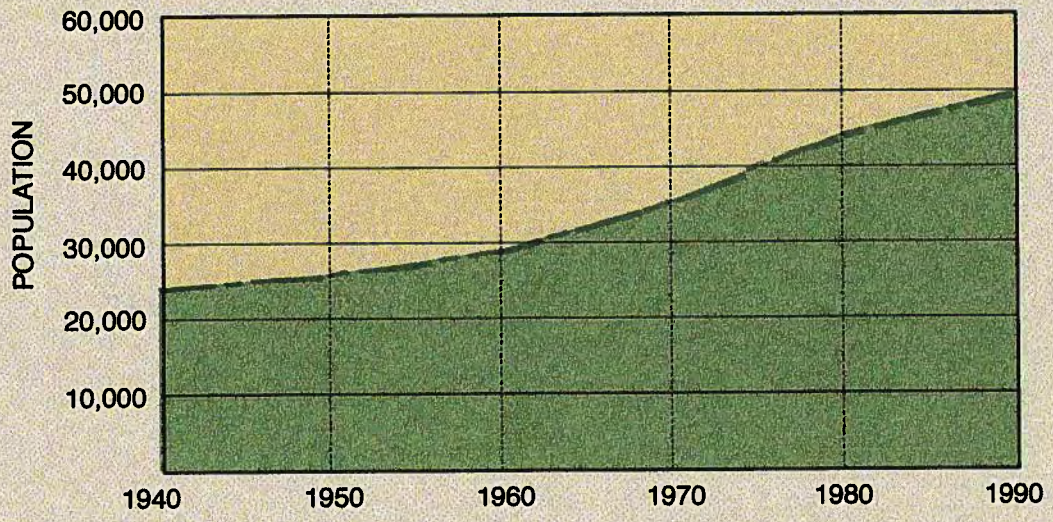
Urban uses comprise only a small portion (less than 8 percent) of the total approximately 36 square mile area of the joint Town/Village community. Clearly, in terms of urban use, there is ample opportunity for growth. Rural (agricultural) use will continue to prevail in the community well into the 21st century. However, to maintain efficient and quality agricultural use as the community urbanizes, care must be taken in the design, location and implementation of urban development, pursuant to the adopted land use plan.

Growth Trends

Growth in the Roberts/Warren community has been due in part to its close proximity to the Twin Cities urbanized area. Along with its location, the area's population, housing, economic conditions, and environmental characteristics have directly affected the joint community's past growth patterns. The influence of the Minneapolis/St. Paul area, as well as Village/Town resources, will also form the basis for future community growth and development *(Figure 1)*.

FIGURE 1

HISTORICAL POPULATION • St. Croix County
1940–1990



- St. Croix County's population increased at a faster rate than the surrounding counties in Wisconsin.
- St. Croix County's population has doubled in the last 50 years.
- The majority of the growth occurred between 1970 and 1990.
- The population growth in the county, from 1960–1990, was almost evenly distributed between incorporated and unincorporated areas.
- The growth in the western towns of the county is apparent as early as the 1960s.
- The Towns of Hudson, St. Joseph, Troy, and Somerset had very large population increases in the 1970s.
- Between 1980–1990, St. Croix County's population increase was to to three times the surrounding counties.
- The decade of the 1970s had the greatest population increase—almost 26 percent.
- The 1995 population estimate for the county is 56,002.
- The unincorporated population of the county grew 31 percent in the 1970s.
- In the 1970s, the unincorporated areas of the county accounted for 60 percent of the county's population growth.
- In the 1980s, the reverse occurred, with the incorporated communities of the county accounting for 60 percent of the growth.
- In 1960, over 49 percent of the residents in St. Croix county lived in its cities and villages. Farm population accounted for about 36 percent of the county's population, with the rural non-farm population at about 15 percent.
- In 1970, the rural population again exceeded the urban population of the county. A major contributor was the rural non-farm population, which grew to about 28 percent of the total population—exceeding the rural farm population which decreased to about 23 percent of the total population.
- The decade of the 1970s brought about a major increase in the rural non-farm population and, at the same time, a continued decrease in the rural farm population.
- In 1980, the incorporated population of the county accounted for 47 percent of the total population. Rural non-farm population accounted for about 39 percent and the rural farm residents less than 14 percent.
- The trend continued in the 1980s with the 1990 rural non-farm population accounting for about 43 percent of the county's population, and the rural farm population about nine percent.
- The county's incorporated population accounted for about 49 percent of the population in 1990.

Source: St. Croix County Development Management Plan

Demographic Characteristics

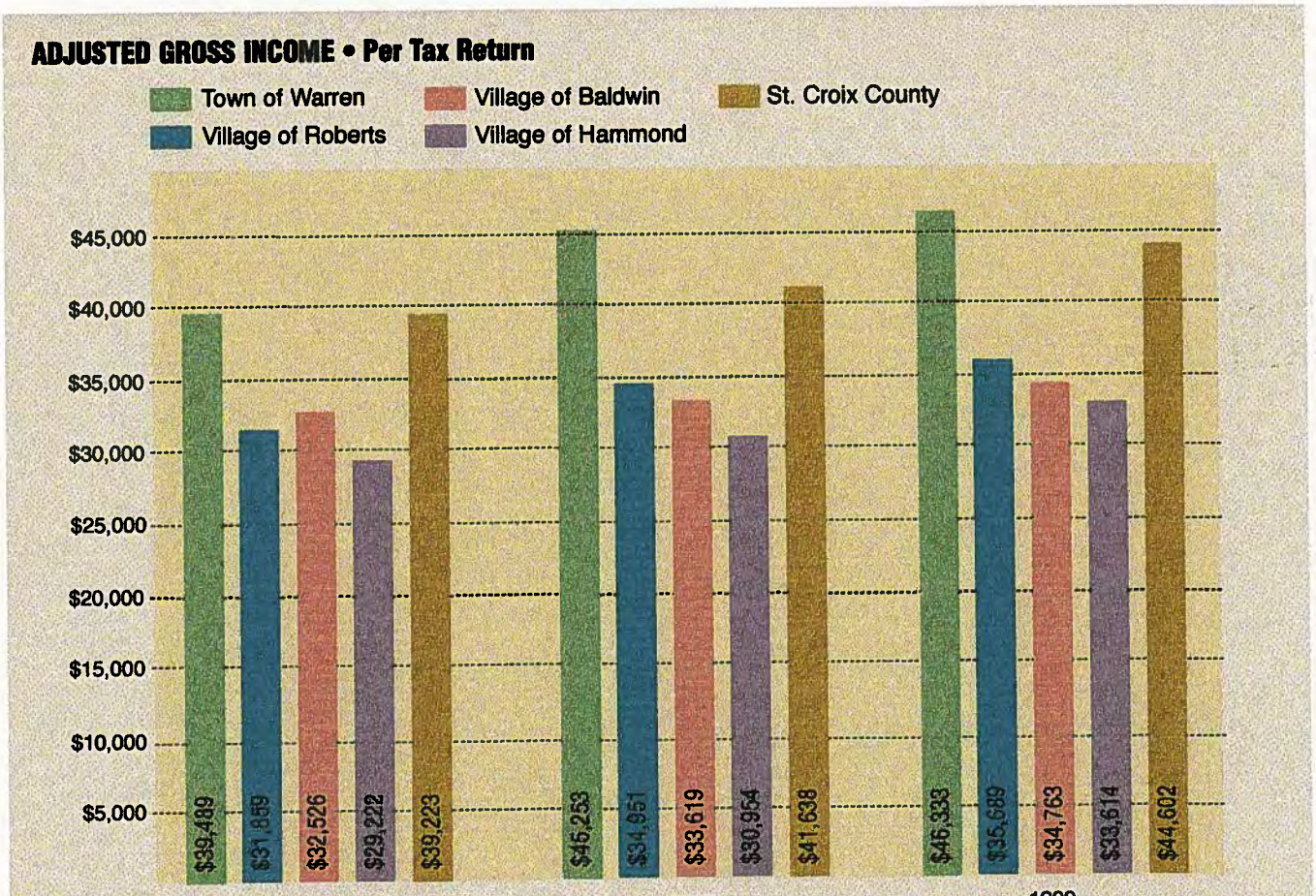
Household Income (see Figure 2)

While information pertaining to median household income has not been released from the 2000 Census, Figure 2 compares Adjusted Gross Income (A.G.I.) over the most recent 3-year reporting period for various neighboring jurisdictions.

Existing Age Distribution (see Figure 3)

The median age of the Village of Robert's population in 1990 was 27.8 years. For the Town of Warren, 31 years. In 2000, the median ages were 31.8 and 35.9, respectively. In both cases, a relatively significant increase occurred in the aging of the population (10% in the Village of Roberts, 11% in the Town of Warren) during the decade of the 1990s.

FIGURE 2



Total Adjusted Gross Income

Town of Warren	$16,546,059	$20,409,124	$21,544,653
Village of Roberts	$23,193,638	$24,710,609	$28,158,544
Village of Baldwin	$38,575,828	$45,150,567	$52,109,401
Village of Hammond	$15,809,333	$18,107,995	$20,302,621
St. Croix County	$1,113,267,112	$1,233,662,668	$1,404,745,563

Source: Department of Administration Demographic Services Center

FIGURE 3

POPULATION • Demographics

2000 Census

	NUMBER OF PERSONS		PERCENT OF TOTAL	
	Village of Roberts	Town of Warren	Village of Roberts	Town of Warren
SEX				
Male	484	686	49.9%	52.0%
Female	485	634	50.1%	48.0%
AGE				
Under 5 years	62	84	6.4%	6.4%
5 to 9 years	64	109	6.6%	8.3%
10 to 14 years	54	130	5.6%	9.8%
15 to 19 years	92	126	9.5%	9.5%
20 to 24 years	81	56	8.4%	4.2%
25 to 34 years	173	127	17.9%	9.6%
35 to 44 years	169	289	17.4%	21.9%
45 to 54 years	129	210	13.3%	15.9%
55 to 59 years	54	67	5.6%	5.1%
60 to 64 years	27	40	2.8%	3.0%
65 to 74 years	35	55	3.6%	4.2%
75 to 84 years	23	21	2.4%	1.6%
85 years and over	6	6	.6%	0.5%
TOTAL POPULATION	**969**	**1,320**	**100%**	**100%**
Median age	31.8	35.9		
18 years and over	728	907	75.1%	68.7%
Male	365	474	37.7%	35.9%
Female	363	433	37.5%	32.8%
21 years and over	679	860	70.1%	65.2%
62 years and over	80	104	8.3%	7.9%
65 years and over	64	82	6.6%	6.2%
Male	23	44	2.4%	3.3%
Female	41	38	4.2%	2.9%

Source: 2000 U.S. Census

Population and Growth

The 2000 Census measured the population of the Roberts/Warren community at 2,289. While the combined community realized significant growth in percentages between 1970-1990 (see Figure 4) the actual numbers were relatively small. What this figure also indicates is that the Town of Hudson to the west experienced significant growth, not only by percentage, but also in numbers. It is expected that this growth pressure, as a result of spillover from the Minneapolis/St. Paul/Hudson area will continue eastward into Roberts/Warren in the upcoming decades. Figure 5 , depicting projections made in 1995, bears this out.

FIGURE 4

POPULATION GROWTH • Selected St. Croix County Communities

1960–1990

Community	1960	1970	1980	1990	% Change 1960–70	% Change 1970-80	% Change 1980-90
Warren Town	**614**	**622**	**897**	**1,008**	**+1.3%**	**+44.2%**	**+12.4%**
Roberts Village	**308**	**484**	**833**	**1,043**	**+57.1%**	**+72.1%**	**+25.2%**
Hammond Town	773	764	822	819	–1.2%	+7.6%	–.4%
Hudson Town	649	925	2,012	3,692	+42.5%	+117.6%	+83.5%
Kinnickinnic Town	667	755	1,051	1,139	+13.2%	–39.2%	+8.4%
Richmond Town	701	1,091	1,338	1,400	+55.6%	–22.6%	+4.6%
Hammond Village	645	768	991	1,097	+19.1%	+29.0%	+10.7%
City of Hudson	4,325	5,049	5,434	6,378	+16.7%	+7.5%	+17.4%
City of New Richmond	3,316	3,707	4,306	5,106	+11.8%	+16.2%	+18.6%
St. Croix County	**29,164**	**34,354**	**43,262**	**50,251**	**+17.8%**	**+25.9%**	**+16.2%**

Source: U.S. Census, 1960–90

FIGURE 5

POPULATION PROJECTIONS • Development Management Plan

1990–2020 / St. Croix County

Community	1990 Census	1995 Estimate	2000 Census	2005 Projection	2010 Projection	2015 Projection	2020 Projection
Warren Town	**2,008**	**1,146**	**1,320***	**1,363**	**1,472**	**1,580**	**1,689**
Roberts Village	**1,043**	**1,062**	**969***	**1,203**	**1,273**	**1,343**	**1,414**
Hammond Town	819	922	947	1,034	1,090	1,146	1,202
Hudson Town	3,692	4,487	6,212	5,945	6,731	7,516	8,299
Kinnickinic Town	1,139	1,343	1,400	1,622	1,762	1,902	2,041
Richmond Town	1,400	1,546	1,556	1,750	1,852	1,954	2,057
Hammond Village	1,037	1,189	1,153	1,350	1,431	1,512	1,593
City of Hudson	6,378	7,326	8,715	8,682	9,360	10,038	10,716
City of New Richmond	5,106	5,549	6,310	6,367	6,776	7,185	7,594
St. Croix County	**50,251**	**56,002**	**60,655**	**65,446**	**70,235**	**75,022**	**79,805**

Source: West Central Wisconsin Regional Planning Commission, 1995

*Roberts/Warren updated from 2000 Census Data

The population of Roberts/Warren experienced significant growth spurts in the decade between 1970 and 1980 (72% and 44%, respectively).

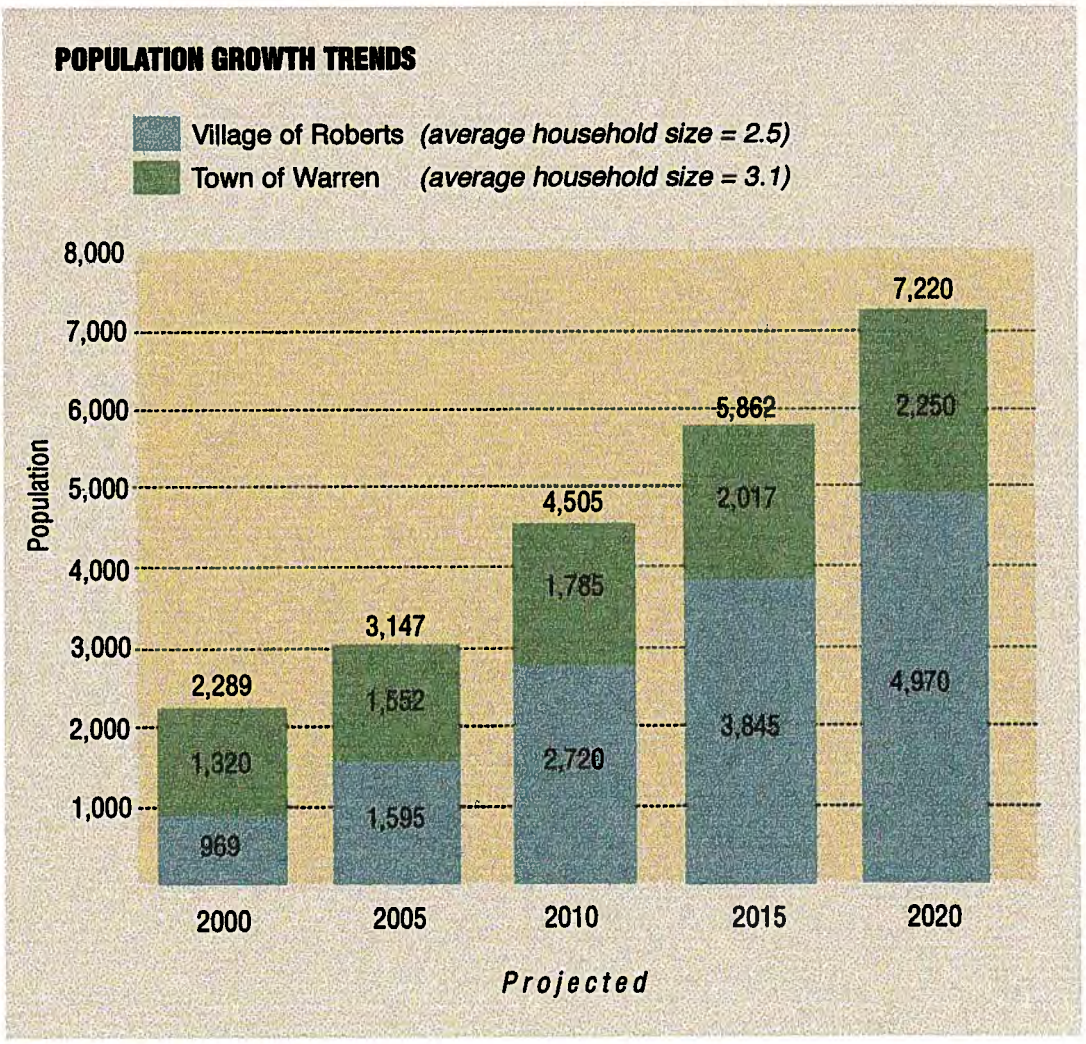
Population projections by West Central Wisconsin Regional Planning Commission (WCWRPC) in 1995 suggest a modest 5-6% increase every five years for the Village and a 7-8% growth rate for the Town to the year 2020.

The actual populations in 2000 for the Village (969) and Town (1,320) were slightly below the 1995 forecasts. However, both the Village and Town have been experiencing heightened residential construction activity. With respect to Roberts, 700 residential lots were platted or approved in concept in year 2000. Due to sanitary sewer treatment constraints, the Village can mete out only 250 residential permits (the estimated maximum treatment capacity remaining). The Village, as a policy matter, elected to issue approximately 50 residential building permits per year over the next 5 years (solutions and alternatives to the sanitary sewer treatment is discussed elsewhere in this plan). Assuming the sanitary capacity issue is resolved by 2006, assuming all 700 lots have been platted, and assuming 250 residences have been constructed between 2000 and 2005, it is forecasted that the

remaining 450 residential building permits would be issued by 2010 (an average of 90 permits per year). Further, assuming a similar growth rate (90 permits per year) over the next decade (2011–2020) the Village can expect to add up to an additional 900 residential units by the year 2020 for a total of 1,600 new residential units over the next 20 years. At the present average household size of 2.5, the Village can expect to grow to a 2020 population of 4,970 (see Figure 6).

The Town (with a 2000 population of 1,320) has averaged 15 new homes per year since 1995. Based on Town growth strategies presented elsewhere in this plan, it is assumed that with an average of 15 new homes per year, the Town will grow in population to 2,250 (726 dwelling units x 3.1 average household size).

FIGURE 6



UTILITIES AND COMMUNITY FACILITIES

Introduction

The term "community facilities" (see Map 10) is quite broad and consequently is often subdivided into the various component elements which typically compose the local public services provided by a community. Using this format, consideration of aspects dealing with the protective services of police and fire departments, refuse disposal, and education will be analyzed.

The discussion dealing with community services is an area which is often viewed by residents with notable interest since it is traditionally dealing with the local services and facilities most visibly provided by local government. These aspects are often a measure of quality of lifestyle provided within a community. Thus the manner in which they are provided typically reflects on the community as a place to live and work.

In addition, by the nature of the category, these are the aspects that may at times be most susceptible to the so called "growing pains" in developing areas. Elements such as parks, schools, and protective services must closely be examined in relation to the development they are intending to support. Care to not over extend or fail to foresee needed expansion of such services is an important consideration in the future plan development.

The present and future development of a community are always guided by the decision of the past. Settlement patterns, transportation networks, land uses, and architectural style are all physical evidence of a community's development. Although the historical enterprises, social institutions, and cultural heritage are much less visible, they are no less important to community needs and expectations.

INVENTORY AND ANALYSIS— EXISTING FACILITIES

Water System

Inventory of Existing System

The existing water system in the Village of Roberts consists of an elevated water tower, two water supply wells, and a water distribution system (see Map 11).

The water tower is a 250,000 gallon elevated, single-pedestal water storage facility constructed in 1991. The tower is located on the south side of Tower Street within the Village limits.

The water supply is from groundwater, and is pumped from two wells. Both wells are located in the Jordan aquifer, at a depth of approximately 300 feet below ground elevation. Well #1 is located at the southwest corner of Tower Street and Division Street and has a capacity of 625 gallons per minute (gpm).

Well #2 is located along the east side of Park Street near the Village Park and north of the new Post Office. This well has a current capacity of approximately 125 gpm. The current water supply capacity is inadequate when the larger well is out of service. The 125 gpm well (Well #2) should, at a minimum, be upgraded to its original operating condition (225 gpm) to maintain adequate water supply to meet the maximum daily demand. The capacity of Well #2 has been diminishing in recent years. The Village is currently investigating the reduced capacity of this well. The existing wells and water tower can maintain fire flows of 2500 gpm for a 2-hour period.

The water distribution system consists of approximately 46,000 lineal feet of water main pipe and approximately 80 hydrants. The water main pipe is 4-inch diameter through 14-inch diameter. Approximately 26,000 lineal feet of pipe is 6-inch diameter, over 6,000 lineal feet is 8-inch diameter and approximately 8,200 lineal feet is a 14-inch system that was installed from the water tower to the business park on the northwest side of Roberts. The mapping in Appendix I shows the existing water system.

Current water usage in the Village of Roberts, based on data from annual Public Service Commission (PSC) reports and data from the WWTF is shown in Figure 7:

Based on daily pumping rates (per Village of Roberts staff), average water use during the year 2000 was typically between 75,000 and 80,000 gpd.

The existing water distribution system does not allow for 2500 gpm flows throughout the Village. Typical flows (based on fire flow readings) to existing residential areas vary from 600 gpm to 2500 gpm. Available flow to the Roberts Business Park is 3,500 gpm at 20 psi based on fire flow readings at the intersection of Packer Drive and Grupe Street.

Aquifer and Bedrock Information

According to Water Resources of Wisconsin, St. Croix River Basin, Hydrologic Investigations Atlas HA-451, Young and Hindall, 1973, the Warren/Roberts area is underlain by up to 50 feet of glacial deposited soil (unconsolidated material) over bedrock. The glacial deposits are variable ranging from coarse sand and gravel (pitted outwash) on the west half of the township to finer grained ground moraine on the east half. The Village of Roberts is situated on ground moraine soils over St. Peter Sandstone and Prairie du Chien dolomite (interbedded sandstone and dolomite). The bedrock geology in the Town of Warren is similar. The Galena, Decorah and Platteville sandstone formations are present in topographical high points and St. Peter

FIGURE 7

CURRENT WATER USAGE • Village of Roberts

	PSC REPORTS AVERAGE DAY USE (GPD)	WWTF DATA AVERAGE DAY USE (GPD)
1998	62,400	65,700
1999	60,900	67,900
2000	58,300	73,700

Sandstone and Prairie du Chien dolomite are present over the remaining area. The maps in Appendix II detail the glacial and bedrock geology.

The bedrock geology in the area is mapped as the Ancell Group of the St. Peter Formation overlying the Prairie du Chien Group. According to Bedrock Geology of Wisconsin - West Central Sheet, Brown, 1988, and Ground-Water Resources and Geology of St. Croix County, Wisconsin, Borman, USGS, July 1976, the St. Peter Sandstone is defined as sandstone, dolomitic in places, white to yellow-brown, fine to medium-grained. The formations in the Prairie du Chien Group are described as dolomite and sandy dolomite. The Prairie du Chien Group is further broken down into several recognizable units: the Willow River and New Richmond Members of the Shakopee Formation, and the Oneaota Formation underlying the Prairie du Chien is the Trempealeau Formation consisting of fine to medium grained sandstone, dolomite, and some light gray silt stone.

Ground water elevation and flow direction is presented on the water table map (from Water Resources of Wisconsin, St. Croix River Basin, Hydrologic Investigations Atlas HA-451, Young and Hindall, 1973) in Appendix II. On the west half of the Township, ground water is generally flowing west to northwest, and drops approximately 60 feet from 960 msl in the Village of Roberts to 900 msl in the northwest corner of the Township. On the east half of the Township, the water table appears to vary less than 20 feet (20 foot contours are available) and appears relatively flat, (approximately 960 msl) towards the Kinnickinnic River

The unconsolidated zones above the bedrock (according to Water Resources of Wisconsin, St. Croix River Basin, Hydrologic Investigations Atlas HA-451, Young and Hindall, 1973) in the unconsolidated zone (sand and gravel aquifer, less than 50 foot depth) are not mapped as aquifers, and therefore is not considered to be a viable aquifer. However, probable well yields from the bedrock (sandstone aquifer) are good, likely greater than 1,000 gallons per minute through the entire Township. The maps in Appendix II present the well yield information.

Water Quality

Water quality in the Town of Warren is good, with a moderate to slightly hard water. There are localized iron levels, as well as localized elevated nitrate levels. The elevated nitrate levels may be confined to the upper aquifer areas. The deep Prairie du Chien aquifer (in underlying sandstone) is not expected to have elevated nitrate levels.

Recommendations

When citing a new well location (for Well #3), a Wellhead Protection Plan will be required. At the time, it is recommended to prepare a Comprehensive Wellhead Protection Plan for all wells (#1, #2 and #3) in the Village of Roberts.

Well #3 will likely be at a depth of 300 feet. It is recommended to obtain a pre-approved site by the WDNR prior to installing the test well. If the test well pumping rate and quality is acceptable, the test well can be converted to the final well. Based on other results in the area, it is anticipated that the well will produce adequate quantity and quality of water. Nitrates may be anticipated to be a problem in the shallow aquifers, but at a depth of 300 feet, nitrates are not anticipated to be present.

It is recommended that the Village of Roberts complete a Water Distribution Study that evaluates individual pipes and connections for the existing and future water system (including wells and storage system recommended in this report). The distribution system should be analyzed through computer modeling. Recent data on fire flows available

throughout the Village should be obtained for calibrating the model. Fire flow recommendations from the ISO should also be obtained. The water distribution study for the Village of Roberts should evaluate pipe upgrades required for the existing water distribution system and provide recommendations for distribution loops in the Urban Growth Area.

Sanitary Sewer

Inventory of Existing System

The existing sanitary sewer system consists of a Wastewater Treatment Facility and a sanitary sewer collection system (see Map 12).

The Wastewater Treatment Facility was constructed in 1983 and has a design flow capacity of 135,000 gallons per day and a Biological Oxygen Demand capacity of 262 pounds per day (lb/day). Average flow and BOD loading at the treatment plant over the past four years (1997 through 2000) are shown below in Figure 8.

Primary treatment is provided by a manually cleaned bar screen and primary clarifier. Secondary treatment is provided by a rotating biological contactor (RBC) system. Final clarification for biological solids removal is provided prior to discharge to the west lake of Twin Lakes. Solids removed from the clarification process are aerobically digested and then transferred to the regional Biosolids Facility in Ellsworth, Wisconsin for processing. The centrate from the solids processing facility is returned to the Roberts WWTF for treatment.

There is approximately 48,000 lineal feet of sanitary sewer in the Village of Roberts system. The pipe varies in size from 8-inch diameter to 18-inch diameter. The East Interceptor, constructed in 1998, consists of

FIGURE 8

WASTEWATER TREATMENT • Average Flow and BOD Loading

	AVERAGE FLOW (GPD) DESIGN CAPACITY 135,000	AVERAGE BOD (LB/DAY) DESIGN CAPACITY 262
1997	70,530	130
1998	65,710	125
1999	67,830	135
2000	73,660	154

approximate 5,500 feet of 18-inch and 6,000 feet of 12-inch pipe. Most piping throughout the Village is 8-inch diameter. The mapping in Appendix III shows the sanitary sewer pipe locations and sizes, manholes, and WWTF.

The sanitary sewer service area map shows the gravity service area for the existing East Interceptor. Based on this map, there are approximately 2,080 acres within the 20-year Urban Growth Boundary that could be served by gravity through this interceptor.

Storm Water System

In the past ten years, stormwater management has become a major concern for municipalities. Storm water management includes quantity and quality control of stormwater leaving a site.

Storm Water Quantity—Increased runoff from development increases the rate and volume of runoff leaving a site. This may overload the existing storm sewer system or potentially causing down-gradient flooding. Through storm water quantity control in new developments, the rate and volume of storm water leaving a developed site would be the same or less than the rate and volume leaving the site under pre-developed conditions.

Storm Water Quality—Development can cause a decrease in storm water quality by washing pollutants (heavy metals, nutrients and others) into down-gradient bodies of water. Providing storm water quality treatment can reduce the pollutants from new developments, thus protecting down-gradient water bodies.

The Village of Roberts has an existing storm water management plan (Appendix IV). The existing plan identified problem flooding areas for existing and future land use conditions. Recommendations were made for possible solutions to each drainage problem. For existing areas, this plan identifies areas that have experienced flooding/drainage problems in the Village. Several of the problem areas have been improved due to street and storm water projects, including Warren Street, Ash Street and Maple Street upgrades. Other problem areas have been improved due to maintenance by Village staff. As the Village plans future street upgrades, it is recommended to continue reference to this plan to identify problem areas that could be addressed.

The existing storm water management plan provides recommendations for future storm water management ponds for future land use conditions. The plan recommends regional ponds to control storm water runoff. The future land use conditions have changed since the plan, and storm water regulations are undergoing significant changes in recent years, and are anticipated to continue to change in the next few years. To date, the Village has required developers of major sub-divisions to construct storm water quantity and quality ponds on their property. This has maintained pre-developed flow conditions from developed sites, and has addressed storm water quality issues, especially while the sites were under construction.

It is recommended that the Village of Roberts continue to require developers to provide storm water quantity and quality control on a site-by-site basis for areas that are currently under development or have been annexed to the Village and are developed within the next few years. In 2-3 years (prior to annexation of additional major subdivisions or industrial development), it is recommended that the Village complete a Storm Water Study for stormwater quantity and quality control from future developments. Storm water regulations will likely undergo significant changes in the next few years, and the Storm Water Study could incorporate the new regulations. The Storm Water Study should evaluate the current requirement of individual ponds for each major subdivision versus the development of regional ponds.

Major advantages and disadvantages of these alternatives are:

Individual ponds for Major Subdivisions

Advantages

- simple system where each developer controls runoff from site, therefore no monetary negotiations are required
- pond is constructed as project development begins

Disadvantages

- maintenance (mowing, sediment removal, pipe cleaning, etc) of several small ponds is more expensive than maintenance of regional pond
- small development sites either have ponds on small parcels or have no storm water control

Regional Pond System

Advantages

- Simpler, less expensive maintenance (one large pond to maintain rather than several small ponds)
- Allows utilization from small sites that are developed

Disadvantages

- Pond likely planned on a property that is not under development, therefore Village needs to procure land and construct pond from private property owner
- Village required to construct large, regional pond prior to entire discharge area to pond being developed (typically develop pond when one of the first developments in drainage area is developed). Village funds project until reimbursement is obtained as entire drainage area is developed.

The Storm Water Study should evaluate alternatives and costs to meet new regulatory requirements and Village requirements, and provide a recommendation to the Village. The Storm Water Study should also consider establishment of a Storm Water Utility Fee. This fee should be considered for both alternatives (individual ponds and regional ponds). Storm Water Utility Fees can fund development of regional ponds, maintenance of ponds, maintenance of pipe systems, etc.)

In addition, the Town of Warren and Village of Roberts should:

- Establish an Erosion Control Ordinance to minimize erosion and sediment-laden runoff during construction of sites in the Village. Erosion control practices typically require construction sites to utilize temporary or permanent storm water ponds, to maintain natural vegetation during construction, to stabilize disturbed areas as soon as possible after construction, to install erosion control measures (silt fence, straw bales, etc) as appropriate, and to utilize Wisconsin Best Management Practices (WDNR Publication).
- Establish an ordinance for storm water quantity and quality control from developed sites after completion of the Storm Water Study. The ordinance would establish requirements for individual pond sizing or establish monetary (or land) contributions required to fund a regional pond. If the Village decides to continue with individual ponds for major subdivisions, at a minimum the ordinance should require that post-development flow conditions (rate and volume) do not exceed pre-development flow conditions for the 3-year, 10-year, 25-year and 100-year storms.

Police Department Services

The Police Department primarily confronts crime and disorder in the community. A police officer is often called upon to deal with crisis situations and must be equipped to respond, investigate, and attempt to solve these incidents. The Village currently has a part-time chief, 1 part-time administrative assistant, 2 full-time police officers, and 3 part-time police officers.

Presently, police protection for the Town of Warren is provided by the St. Croix Sheriff's Department. As with the other outlying towns of the county, the sheriff's department provides routine patrols through the area and responds to emergency situations.

With this type of arrangement, which is typical in rural areas, the officers' patrol time must be shared with surrounding towns in the county and thus a patrol car cannot be within the Town of Warren at all times.

With the use of radio equipment, response time to emergencies can usually be quite rapid. With officers driving patrol areas within the Town of Warren or neighboring towns, the ability to quickly respond to traffic accidents and similar situations allows an adequate level of safety and protection.

Fire and Rescue Services

The Fire Department protects life and property from fire and environmental hazards and responds to medical emergencies and rescues. Major goals of the Fire Department are to reduce fire hazards, efficiently address emergency needs of citizens, and economically provide essential services.

The Roberts/Warren Fire Association currently has its own fire department consisting of a 33 member volunteer force of fire fighters (some are also EMT's and First Responders). The fire station is housed in the village of Roberts.

Refuse Disposal

The Village presently contracts with Superior Services for weekly pick-up. The Town also utilizes Superior Services for pick-up—once a month each for garbage and recyclables.

Telephone, Cable TV, Gas and Electric Services

Telephone services are supplied by Ameritech. Baldwin Telecom supplies Cable TV (available in Village only). Gas and electric services are supplied by Midwest Gas NSP (Village) and NSP/St. Croix Electric (Town).

Library Services

The Hazel Mackin Community Library is located in the Village of Roberts. The library was established in 1975, moved to a new building in 1985, and was remodeled in 1986 into the present library. A report titled "Program Statement for the Hazel Mackin Community Library" documents the existing system and current deficiencies of the existing public library. The deficiencies include inadequate space to house books and to provide internet service, ASA accessible areas, limited work space, inefficient computer use, and inadequate space for children's programs. The report recommends a 7,300 square foot facility to serve a future population of 5,000 people.

School District

St. Croix Central is a dynamic, expanding district. The district enjoys potential for growth while still maintaining small town values of honesty and friendliness. Because of its proximity to larger cities, workplaces, and universities, the community has more resources to draw upon than many comparably sized districts.

The St. Croix Central School District offers a comprehensive K-12 program. The

district is involved in on-going professional curriculum review and evaluation. An excellent core curriculum is available to the higher education bound students, and students not planning post-secondary education are able to take advantage of a comprehensive vocational program. (Figure 9)

All elementary students (Early Childhood-Grade 5) in the district attend school at the West Campus in the Village of Roberts. The Middle School (Grades 6-8) and High School (Grades 9-12) are located in Hammond. The school district encompasses 105 square miles and accommodates 1,022 students at three buildings. The district staff includes a District Administrator; Elementary, Middle School, and High School Principals; a Director of Pupil Services; 3 Guidance Counselors; 73 Teachers; and 44 support staff.

St. Croix Central High School—Beyond the basics, (English, Science, Math and Social Studies), students have choices in the allied arts (Art, Home Economics, Computers, Technical Education and Music). Constructed in 1999, the Senior High School continues the district long-standing emphasis on academic achievement (Figure 10). Beginning and advanced classes in Spanish are standard offerings. Advanced courses, including Calculus, are available in the Math/Science area. Qualifying students may also earn post secondary credit off-campus at UW-RF or WITC New Richmond, or they may earn college credits at SCC by taking advanced placement courses (Figure 11).

St. Croix Central Middle School—The Middle School is unique in its focus upon the special needs of the 12-15 year old age group. It features uninterrupted core classes, no bells, and interdisciplinary team meeting time for teachers. Also featured are community service projects, many field trips (including an eighth grade trip to Washington D.C.), and a highly involved parent volunteer group (VIM—Volunteers in the Middle).

St. Croix Central Elementary School—The hallmarks of quality education begin at the elementary school where students receive basic instruction in a friendly, safe environment. A favorable student-teacher ratio of 20:1 enhances the personal touch at SCC (Figure 12). Additional support personnel in Reading, Art, Physical Education, Music, and Exceptional Education further reduce this ratio (Figure 13).

FIGURE 9

GRADUATION RATE • St. Croix Central High School

	No. of 12th Graders Enrolled	No. of Graduates	No. of Cohort Dropouts	Graduation Rate %
St. Croix High	81	75	0	100%
State Totals	63,725	58,312	6,671	89.73%

Source: Wis. Department of Public Instruction, Center for Educational Statistics

FIGURE 10

POSTGRADUATION FOLLOW-UP • St. Croix Central High School

	No. of Grads	1 Yr. Tec/Job Training	2 Yr. Voc/Tec	4 Yr. Col/Univ	Military	Employment	Seeking Employment	Misc.
St. Croix High	75	1.3	33.3	50.7	5.3	9.3	0.0	0.0
State Totals	58,312	1.9	20.7	47.3	2.4	9.4	2.6	15.6

Source: Wis. Department of Public Instruction, Center for Educational Statistics

This table shows the percentage of graduates who have indicated their intention to follow a specific course of action after high school, including *Job Training Program, Vocational or Technical College, Four-Year College or University, Enlist in the Military, Employment* ,or *Seeking Employment.* The *Miscellaneous* category includes students who selected Undecided and Other or who didn't return a survey.

FIGURE 11

WISCONSIN READING COMPREHENSION TEST RESULTS • St. Croix Central School District

	Enroll at Test Time	No. of Students Tested	Percent Tested	Minimal	Basic	Proficient	Advanced
District Totals	67	67	100	4.0	17.9	58.2	20.9
State Totals	64,282	4,650	92.8	5.9	16.8	49.7	20.4

Source: Wis. Department of Public Instruction, Center for Educational Statistics

This table shows the results of the statewide Wisconsin Comprehensive Reading Test given to all third graders. This test is a legislative mandate. Results include students in three groups: *Percentage Below the Performance Standard, Percentage Above the Performance Standard,* or *Percent Inconclusive.*

FIGURE 12

STAFFING RATIOS • St. Croix Central School District

Staff Type	District F.T.E.	District Percent of Total	District Pupil/Staff Ratio	State Pupil/Staff Ratio
Licensed Instruction	75.70	65.15	13.24	13.55
Administration	3.60	3.10	278.33	255.54
Aides/Support/Other	36.89	100.00	27.16	25.70
OVERALL TOTALS	**116.19**	**100.00**	**8.62**	**8.57**

Source: Wis. Department of Public Instruction, Center for Educational Statistics

District Pupil/Staff ratios are calculated by dividing the Third Friday Enrollment by the Full-Time Equivalency employment district-wide and in each of three categories: *Licensed Instructional Staff, Administrative Staff,* and *Aids/Support/Other Staff.*

FIGURE 13

SCHOOL DISTRICT ENROLLMENT BY GRADE • St. Croix Central School District / 1992–2001

Grade	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	% Change 1992-2001
Pre-K through 5	491	479	489	462	427	443	410	443	404	–21%
6 through 8	216	230	252	267	254	247	438	230	236	–9%
9 through 12	272	264	294	310	310	312	616	349	328	+17%
TOTAL	**979**	**973**	**1,035**	**1,039**	**991**	**1,022**	**1,039**	**1,022**	**968**	**–1%**

Source: Wis. Department of Public Instruction, Center for Educational Statistics

Future Issues / Concerns

The district is experiencing and will continue to experience enrollment growth (Figure 14) over the next ten year period which will exceed the present building capacities. Total enrollment is projected to increase from its current level of 1,034 to approximately 1,432 students for the 2004-2005 school years. This is a projected total increase of 398 students (38.5%) for grades K-12. The average class size of 82 for the current academic year is projected to increase to 110 by the year 2004-2005. Though economic development within the region may result in an accelerating rate of growth, the district has utilized a more conservative approach to forecast enrollment projections.

Enrollment: The district can anticipate enrollment increases over the five year short term period to require 4.0 to 5.0 sections per grade level and should use no less than 4.0 sections per grade level as the basis for programming and planning of program space requirements.

District Facilities: District buildings vary significantly in age and current general physical condition. The Elementary School, as discussed above, is in good condition. The Jr./Sr. High School was constructed in 1938 with additions constructed in 1952, 1959, 1962, 1966, 1970, and 1980. It has served the District well for more than 70 years. However, the facility can no longer continue to serve both junior and senior high school programs.

Specific issues are as follows:

- Though the building appears to be structurally sound, it is much too static to respond to current educational programs and teaching methodologies. Rapid changes in technology will continue to require modifications which are increasingly difficult to implement due to limitations created by existing structural, mechanical, and electrical systems.
- Roofs and windows needs to be replaced, masonry restoration work is required, and doors and hardware should be replaced.
- The basic building systems, including mechanical and electrical systems, are in need of significant repair and/or replacement.

FIGURE 14

ENROLLMENT PROJECTIONS • St. Croix Central School District

Grade	1994–1995	1999–2000 (5-year)	2004–2005 (10-year)	Projected Increase	% Change
K through 2	234	266	299	65	+28%
3 through 5	255	307	319	64	+25%
6 through 8	252	287	349	97	+38%
9 through 12	293	400	465	172	+59%

Source: Wis. Department of Public Instruction, Center for Educational Statistics

FUTURE COMMUNITY FACILITIES NEEDS

Urban Growth Boundary

Urban service areas are delineations around existing municipalities and sanitary districts where public sanitary sewer service is either currently available or planned at some point in the future. The urban growth boundary delineation indicates the land area that adjoins existing or planned sewer service areas that could be cost-effectively and efficiently served by public sanitary sewer systems.

The purpose of the urban growth boundary delineation is to encourage the location of new development in areas that can be served by public services, particularly public sanitary sewer, and developed at higher "urban densities." By encouraging development within existing municipalities and sanitary/utility districts and developing at "urban densities," there will be less development pressure on the rural areas.

A second purpose of the long-range urban growth boundary is to delineate areas around incorporated municipalities and sanitary districts that preserves a reasonable expansion area for future urban development. Allowing areas on the edges of incorporated municipalities and sanitary districts to be "prematurely" developed on private septic systems and wells often makes future higher-density urban development on public utilities difficult and costly. Preserving future urban expansion areas will have the long-term affect of reducing development pressure in the rural areas.

Undeveloped agricultural land within the delineated urban growth boundary should be considered "transitional" farmland.

Recommended Detailed Urban Growth Boundary Policies

The following are proposed policies for zoning and regulating land use and land divisions within designated urban growth boundaries:

1. Maintain agricultural preservation policies for land within urban service areas until such time as sanitary sewer service is available and the land can be rezoned and developed on public sewers or a negotiated boundary agreement redefining the urban service area is entered into between the Village and Town.
2. Environmental corridors within urban growth boundaries should be treated the same with respect to zoning and land use regulations as environmental corridors elsewhere.
3. Prohibit land divisions within delineated urban service areas that do not conform to agricultural preservation policies, unless such land divisions are approved jointly by the Village and Town.
4. Encourage the Village to adopt staging or phasing plans for the expansion of public facilities and development within urban growth boundaries.

The following are the key goals for the lands classified as urban growth boundaries:

1. Encourage higher density residential development in areas where public utilities are available.
2. Encourage nonagricultural-related businesses and industries to locate in areas where public utilities are available.
3. Preserve sufficient area in the Village to allow reasonable growth.
4. Achieve cooperation and coordination between the Village of Roberts and the Town of Warren with respect to long-range planning and land use regulations.

Water System

Water Supply and Storage Capacity

To determine requirements for water supply and storage capacity, three general engineering criteria (one for water supply and two for storage) are evaluated. These criteria are;

- The minimum well supply with the largest well out of service should equal or exceed the maximum day domestic demand (assures storage will be replenished in 24 hours if two maximum days occur successively)
- The storage facility capacity should provide water to satisfy the peak hour rate less the well supply rate with the largest well out of service for a minimum period of four hours (assures storage capacity when domestic demand exceeds pumping capacity)
- The storage facility capacity should be available for fire fighting following peak hour (assures that capacity is available for fire fighting after peak hour demand)

Based on the estimated population of 4,970 people in the year 2020, the maximum daily demand is estimated to be 1,004,000 GPD. The current system (with well #2 upgraded to 225 gpm) can provide 324,000 GPD with one well out of service. It is recommend that the Village upgrade well #2 to a 400 gpm capacity, and add a third well with a 400 gpm capacity. Therefore, with one well out of service, there will be two operational wells. The two wells would provide a minimum supply of 1,150,000 GPD, which meets estimated maximum daily demands in the year 2020.

The estimated growth in the Village requires upgrading the water tower system to provide additional daily supply and to provide upgraded fire protection. It is recommended that the Village provide fire flow of 3,500 gpm for a 3-hour period to the existing and future business, commercial and industrial areas in the Village. Therefore, an additional water tower will be required. The capacity of the water tower should be 600,000 gallons, which would provide a total capacity of 850,000 gallons. This would allow a fire protection flow of 3500 gpm for 3-hours with the largest municipal well out of service.

The Public Facilities Needs Assessment, November 2000 (Figure 15), details probable costs and an estimated schedule for these improvements:

FIGURE 15

REQUIRED WATER SYSTEM UPGRADES • Village of Roberts

REQUIRED UPGRADE	ESTIMATED SCHEDULE	ESTIMATED COST
Well #2 — Upgrade to 400 gpm	Year 2002	$41,000
Well #3 — 400 gpm	Year 2005	$385,000
Water Tower — 600,000 gallon	Year 2011	$1,238,000
TOTAL WATER SYSTEM UPGRADE		**$1,664,000**

The fire flow requirements of providing 3500 gpm for a 3-hour period (with one well out of service) will not be met until the 600,000 gallon water tower is constructed. However, the upgrade of Well #2 to 400 gpm will provide 2500 gpm fire flow for a two hour period (with both wells in service until the year 2005. The addition of Well #3 will provide 2500 gpm for a two hour period (with both wells in service) until the year 2011.

These recommendations assume that the pumps in the wells can operate as needed 24-hours per day. Currently, the Village has an agreement with NSP to operate the pumps at non-peak hours, thus reducing their electrical rates. The Village's electric costs for operating the wells at non-peak hours are approximately $150 per month. The same usage at peak hours would cost approximately $300 per month. Currently, there is a saving of $150 per month, or $1,800 per year. It is recommended that the Village of Roberts continue pumping from their wells at non-peak hours until demands cannot be maintained. At that time, the Village will need to pump at peak-hours until a financial analysis (evaluating impact fee fund, construction costs, interest rates, electric rates, etc.) justifies construction of the water tower.

New water tower location

It is recommended to locate the new water tower south of County Trunk Highway "TT" and east of 130th Street, as shown on the Water System Map (Map 11). This location is a high point along the future STH 65 East Arterial, located on the far east side of future development in Roberts. This provides separation and balance between the existing water tower (which is proposed to remain in service) and the future water tower. The future water tower location is close to the Roberts Business Park and is the highest location north of the future industrial development areas next to Interstate Highway 94.

New municipal well location and depth

A proposed area for a new municipal well is shown on the Water System Map (Map 11). The recommended area is within the area of future residential development south of the current Village limits. As discussed earlier, well productivity throughout the Town of Warren is anticipated to be high. The proposed well location is based on the following requirements/setbacks:

- located in a future residential area
- 600 feet from future commercial areas (due to potential fuel storage tanks)
- 200 feet from sanitary sewer main
- separation from Union Pacific Railroad

Additional setback requirements for municipal wells are based on Wisconsin Administrative Code Chapter NR 811. Some of the requirements, including setbacks from storm sewer mains and storm water detention ponds, need to be evaluated when siting the new municipal well. Abandoned landfills (Village/Town landfill and Tri-County disposal site) in the area are greater than 1,200 from the proposed future well site location.

The new municipal well (Well #3) is recommended to be in the same aquifer (approximately 300 feet below ground surface) as the existing wells.

Water Service Area

The elevation of the existing water tower and the elevation of the proposed water tower can serve the future Urban Growth Area, with the exception of the high point along IH-94 just west of the STH 65 intersection.

Sanitary Sewer System

Wastewater Treatment Requirements—Remaining Excess Capacity

The existing Wastewater Treatment Facility for the Village of Roberts has limited excess capacity for new development. The treatment facility has a design flow capacity of 135,000 gallons per day (GPD) and a design BOD loading of 262 pounds per day (lb/day). Excess wastewater treatment capacity is determined below based on Year 2000 average yearly and peak monthly values:

Design Capacity less Year 2000 Average Yearly Flow = Excess Capacity

135,000 gpd - 74,000 gpd = 61,000 gpd

Design Capacity less Year 2000 Peak Monthly Flow = Excess Capacity

135,000 gpd - 83,000 gpd = 52,000 gpd

Average use per person per day, based on year 2000 wastewater flow and census data is:

Average Flow / Person = 74,000 gpd / 990 people = 75 gpd/person

The excess flow capacity results in allowable new development as shown in Figure 16.

FIGURE 16

WASTEWATER TREATMENT EXCESS CAPACITY • Allowable New Development

EXCESS CAPACITY	AVERAGE FLOW/PERSON (HISTORIC)	EXCESS CAPACITY	AVERAGE PEOPLE/UNIT (HISTORIC)	EXCESS CAPACITY
61,000 gpd	75 gpd/person	813 people	2.5 people/unit	325 units
52,000 gpd	75 gpd/person	693 people	2.5 people/unit	277 units

As of September 2001, the WWTF is limited by flow capacity. Currently there are two new subdivisions (Hillcrest Meadows and Rolling Meadows) that are partially developed with single-family home and twin homes under construction, and a third new subdivision (ShaRonDale) that has completed utility/road construction, but no home construction. A fourth major subdivision (Townsedge Subdivision) is in the planning stages (estimated 27 units). The new subdivisions have been granted a set number of sewer hook-up units by the Roberts Village Board per their developer agreements.

Wastewater capacity for the current treatment plant has also been reserved for the Roberts Business Park, to ensure continued development of the Business Park. The Village Board has reserved 25% of the remaining treatment capacity for development of the business park. Remaining wastewater treatment capacity at the existing facility is shown in Figure 17.

The excess capacity (based on the average of the average yearly and the peak monthly capacity)at the existing WWTF is zero (0) units, based on the number of allowable units that each developer has been allowed.

Wastewater Treatment Requirements—Facility Upgrade

■ *Background—Facility Upgrade*

The Village of Roberts is in need of a Wastewater Treatment Facility upgrade. Normally, as a community's wastewater treatment system reaches its capacity a facility plan is performed which considers the effluent requirements for a nearby discharge point. However, the normal process is complicated for this region because the communities of Central St. Croix County lie within an area that is designated by the WDNR as being environmentally sensitive. Most of the potential receiving waters near these communities are classified as Outstanding or Exceptional Resource Waters.

FIGURE 17

REMAINING WASTEWATER TREATMENT CAPACITY • Existing Facility

	AVERAGE YEARLY CAPACITY	PEAK MONTHLY CAPACITY	DETERMINED CAPACITY
Current Excess Capacity	**325 units**	**277 units**	**301 units**
*Reserved for:**			
Roberts Business Park	70 units	70 units	70 units
Hillcrest Meadows Subdivision	60 units	60 units	60 units
Rolling Meadows Subdivision	131 units	131 units	131 units
ShaRonDale Subdivision	40 units	40 units	40 units
Townsedge Subdivision	0 units	0 units	0 units
Total Reserved	**301 units**	**301 units**	**301 units**
REMAINING EXCESS CAPACITY	**24 UNITS**	**–24 UNITS**	**0 UNITS**

* verbal

The State of Wisconsin has restricted the use of these possible effluent receiving waters by Code and protected the status of these streams under anti-degradation rules. Currently, there is no practical way of controlling the amount of pollution entering these waters from overland runoff. However, very restrictive controls have been placed on point source discharges. It is WDNR's position that when existing wastewater treatment system design capacity is reached, no additional discharges to existing outfall locations will be permitted (ie. Twin Lakes, linear seepage cells, etc.). WDNR has stated that curtailment of growth may be needed if an acceptable long-term solution is not found. Forced curtailment of growth is not an acceptable alternative for communities within this region, including the Village of Roberts.

■ *Background—Regional Wastewater Commission*

The communities within the Central St. Croix County region consist of environmentally conscientious citizens. Community leaders realized several years ago, as the increased pressure for development began, a long-term solution must be found. Several attempts to develop individual community facility plans within the region did not produce a solution because reasonable, achievable and cost effective effluent limits could not be obtained for discharge to locally available receiving waters. Several meetings were held to discuss the problem at a local level. No measurable progress was made so the communities felt it was necessary to solicit the assistance of state legislative members.

On September 1, 2000, a meeting was arranged with WDNR in New Richmond, Wisconsin. Representatives of affected communities within the St. Croix and Pierce County region were in attendance at this meeting. Also in attendance at this meeting were area legislators and WDNR staff, including WDNR Secretary George W. Meyer and various local and regional WDNR personnel. A presentation on area growth and wastewater treatment issues facing these St. Croix and Pierce County communities was made and a list of alternative solutions was presented. These alternatives are discussed in a later section of this report. During this meeting it was made public that WDNR supported the alternative of transporting treated wastewater to the Mississippi River. The preferred point of discharge would be after the confluence of the St. Croix and Mississippi Rivers. Representatives of the WDNR also pointed out that this issue was a regional issue. Therefore a regional-based plan to address this issue should be developed. The communities in attendance at this meeting were encouraged to form a Commission to work on alternative analysis and develop a long-range solution to the problem.

Several of the communities being affected the most (by the pressure of increased growth with little wastewater capacity) formed an inter-governmental cooperative agency to work on this issue. The Central St. Croix County Regional Wastewater Planning (CSCCRWP) Commission held it's organizational meeting on December 5, 2000. The Commission was created to evaluate regional wastewater treatment issues within the St. Croix and Pierce County region. Initially the CSCCRWP Commission included the Villages of Roberts and Hammond. Later the Villages of Baldwin and Woodville joined the Commission. Also, the communities of River Falls and Ellsworth have expressed interest and attended the meetings, however, they did not join the Commission.

■ *Phase I Report*

Phase 1 of this Feasibility Study was initiated by the CSCCRWP Commission to consider fourteen possible long-term alternatives for wastewater treatment and disposal for

communities within this region. The current wastewater systems for the Village's of Roberts, Hammond, Baldwin and Woodville in Central St. Croix County were approaching design capacity and the method of effluent disposal being used by these communities will not be approved by WDNR for additional discharges. The communities of River Falls and Ellsworth in Pierce county also face similar situations. At the beginning of Phase 1 of the Feasibility Study, the Village's of Roberts and Hammond were the only members of the Commission. Therefore, the Phase I study was designed to evaluate alternatives best suited for Roberts and Hammond. The Village's of Baldwin and Woodville have since joined the Commission and their interests will be specifically addressed in the next phase of the project.

Phase 1 of the study involved the initial study of three effluent disposal alternatives:

- *The Mississippi River Discharge Alternative*—The results of the Phase 1 investigation indicate that although complex, this alternative is technically feasible. Estimated costs for the implementation of this project are high. Its economic feasibility will be dependent on establishing funding sources which result in realistic user charge rates for involved communities.
- *The Groundwater Discharge Alternative*—This alternative is recommended for short-term or intermediate-term use by smaller communities in this region to alleviate growth related wastewater treatment issues. . For the Commission-member communities of Roberts and Hammond, it is recommended that facility planning for wastewater treatment improvements utilizing this effluent disposal option begin now.
- *The Willow River Discharge Alternative* —No further investigation of this alternative is recommended due to established discharge limits that cannot be achieved economically.

The Phase I Report recommends that the Village's of Roberts and Hammond begin the facility planning process for wastewater treatment system improvements needed to sustain the expected growth that will occur in these communities in the next 20 years. Effluent disposal to the groundwater by means of constructed absorption ponds is recommended as part of this planning. This alternative has been proven to be a feasible short-term to intermediate-term effluent disposal method for communities of this size in this region. Effluent disposal by this method should be located in a rural setting away from planned development and should be provided with an adequate buffer zone to limit human contact.

Several potential long-term solutions to this regional problem have been proposed. The regulatory, political, environmental, economic and human health impacts of each potential solution must be assessed so that the most cost-effective and environmentally sound solutions are identified for member communities. The Phase I Report also recommends that a second phase of this regional Feasibility Study be performed to supplement the analysis of the Mississippi River Discharge alternative and to consider other alternatives available for Commission-member communities.

■ *WDNR Response To Phase I Report*

The WDNR responded to the Phase I report in late November 2001. The St. Croix River is not an acceptable location to discharge wastewater effluent from Roberts and Hammond. There are legal questions pertaining to St. Croix effluent limits that remain unresolved. However, it is unclear when some of these questions might be resolved and because of project timing, the Department's past position on effluent discharges to the St. Croix River and the uncertainty regarding public acceptance, it is the intent of Roberts

and Hammond to discard the St. Croix River as a viable option. WDNR supports this position.

■ ***Facility Planning***

Roberts and Hammond submitted a joint facility plan in March 2002 that concluded there is not any economically viable surface water effluent discharge options available to them. For this reason, the facility plan focus was on a groundwater discharge from a joint treatment facility.

The facility plan proposes that the existing discharge to Twin Lakes be abandoned and the Village's discharge will need to be transported to a remote absorption pond site, discharging to groundwater. The treatment requirements for groundwater disposal of municipal wastewater are established in State of Wisconsin Code NR 206. In addition, the report for Phase 1 of the Central St. Croix County Regional Wastewater Planning Commission Feasibility Study established the need for exceptional wastewater effluent quality for this type of disposal based on the environmental quality within the area. That study also determined that providing exceptional effluent quality is needed to enhance public acceptability for this type of effluent disposal within this region.

Appendix III contains a list of construction activities that would be applicable to the Village of Robert's for a remotely located joint treatment system. The sources of cost estimates include USEPA Construction Cost Estimate Curves for Wastewater Treatment Plants, Mean's Construction Cost Data, and our Opinion on Probable Costs. The Opinion of Probable Cost for the Village of Roberts for a remotely located, joint treatment facility is $3,200,000 (Appendix III).

■ ***Sanitary Sewer Collection System Needs***

East Interceptor. The East Sanitary Sewer Interceptor was constructed in 1998 to serve the Roberts Business Park. The interceptor location is shown on the Sanitary Sewer Service Areas map and on the detailed sanitary sewer maps in Appendix III. The sewer interceptor consists of 18-inch pipe from the WWTF to CTH "TT", and 12-inch sewer from CTH "TT" to the north. The East Interceptor serves a total of approximately 360 acres within the current Village limits, and serves approximately 1,200 acres within the 20-year planned Urban Growth Area.

West Interceptor. The West Sanitary Sewer Interceptor is proposed to extend from the location of the existing WWTF to the north to a gravity service area. The West Interceptor can serve approximately 270 acres within the planned 20-year Urban Growth Area. The West Interceptor, based on the total potential gravity service area, is recommended to be a 24-inch pipe. An approximate location of the West Sanitary Sewer Interceptor is shown on the Sanitary Sewer Service Areas map.

Low areas directly north of the existing WWTF will require temporary lift stations to provide sanitary sewer service until the remotely located WWTF is constructed. During planning for the new facility, it is recommended to evaluate direct discharge by gravity into the existing WWTF digestor, which could serve as a lift station to pump wastewater to the remotely located site. If this occurs, the temporary lift stations could be abandoned and wastewater from the west service area could discharge directly to the future lift station. If utilizing the digestor as a lift station is not feasible, it is recommended that the new lift station that is constructed allow for gravity discharge from the west service area. The Village of Roberts should also evaluate utilizing their existing headworks for future pre-treatment of all or a portion of the Village's wastewater prior to discharge to the

joint WWTF. Feasibility of these options should be evaluated in the Facility Plan for the remotely located joint wastewater treatment facility.

Lift Stations. The areas south of the existing WWTF can be served by a common lift station at a depth of approximately 20 feet below the existing grade at the treatment facility. The elevation of this lift station should also be evaluating during evaluation of lift station options to discharge to the remotely located WWTF. It is recommended that the areas in this "lift station" service area are not allowed to annex or develop until the remotely located treatment facility is operational.

Two additional, small lift station service areas are located on the north edge of the existing Village limits and the 20-year Urban Growth Area. It is recommended that these service areas be limited to the currently annexed areas and the additional area east of the currently annexed area and west of the future STH 65 East Arterial.

Law Enforcement Facilities

Inventory of Existing System—The existing Law Enforcement Facilities consist of office space within Village Hall and garage space in the garage adjacent to Village Hall. Based on the estimated population in 20 years, additional staff and additional garage space will be required.

Deficiencies of Existing System—There are no known deficiencies in the Village of Roberts Law Enforcement Facilities. Anticipated growth has initiated an evaluation of future needs and an assessment of options for expansion of Village Hall.

Required Public Facilities for New Development—Evaluation of existing law enforcement facilities requires additional office/work space. The Village plans to remodel the existing Village Hall Law Enforcement Facilities to serve future development. This project is planned for 2002. The remodeled space will serve the Village up to a total population of 3,000 people. Therefore, based on current population projections, it is estimated that the facility will provide adequate capacity for approximately 11 years.

UTILITIES AND COMMUNITY FACILITIES

Goals and Objectives

Goal:

Adequate public services and utilities provided in a cost-effective manner, and staged and sized to meet the demands of rational growth.

Objectives:

- Ensure that future development does not over-burden existing or planned public improvements or service capacities.
- Enhance the public water system to assure the highest quality of water.
- Protect the natural environment and the health of all residents by serving village land uses with adequate sanitary sewer and waste water treatment facilities.
- Ensure intergenerational equity through capital improvement and development practices which distribute the costs of development to those that benefit from public facilities.

Goal:

Accessible community facilitates provided on a fair and equitable basis which contribute to a high quality living environment.

Objectives:

- Ensure that municipal functions, and community buildings and sites are accessible to all residents.
- Maintain communication and cooperation with other governmental jurisdictions in an effort to provide accessible public facilities and spaces which serve the needs of the area residents.
- Ensure effective protection of lives and property from fire through appropriately located fire facilities and capacities.
- Support effective law enforcement through the provision of adequate facilities to protect the lives, property, and rights of the residents of Roberts/Warren.
- Provide those public facilities needed to encourage continued economic development.
- Support the establishment of schools of appropriate size, number, character and quality to assure the excellent education of students within the Roberts/Warren community.

Policy

- Adopt and implement a Capital Improvements Program which identifies and prioritizes capital projects (Village and Town).

TRANSPORTATION

Introduction

A transportation system represents a key element in the functional operation of a community. Of particular importance, especially for smaller communities, is the local road system since it often has the greatest direct input by local government.

A wisely conceived road system can result in many benefits and long term cost savings for a community. Being an integral aspect of the community, it plays a major role in the efficiency, safety, and overall desirability of the community as a place to live and work.

In analyzing the road system, several aspects and factors can be examined in an effort to discern possible shortcomings as well as plan for future needs. Analysis of traffic patterns through examination of the road system, review of traffic counts, study of accident reports, discussion with individuals at the local, county, and state levels and finally, a field survey of the roads can all aid in providing input into possible recommendations pertaining to the system.

To begin the analysis relative to Roberts/Warren, an examination of the existing configuration or pattern of the road system is in order.

Transportation influences the lives of all people in some way every day. A transportation system should provide for the orderly movement of people, goods, and services locally and on a regional basis. A diversified, well-balanced transportation system is a major factor in the growth of the residential, commercial, and industrial elements of a community, in addition to providing residents with a desirable environment in which to live. Transportation systems must be planned to make allowance for the best use of the characteristic features of each transportation mode. Air, rail, bus, truck, automobile, bicycle, and even pedestrian circulation systems have a role to play in the total picture.

The road system is composed of three levels of government jurisdiction. These include the Town/Village system composed of local roads, the County system of trunk highways and the State and Federal highway systems. It can be seen that the County trunk highways and local roads comprise the greatest mileage. However, in terms of the functional role and the amount of traffic carried by each type, I-94 is most significant.

In an urbanizing area, parallel collector roads and corridors should be provided at 1/2 mile intervals to accommodate future traffic demands. Failure to provide these roads will overload the current network and cause unacceptable travel delays and congestion. An additional parallel roadway is preferable to retro-actively widening an existing road to a width that would be completely out of character with this community. The new roads should be rationally located to avoid drainage crossings and so that ROW and improvements can be acquired through the development process.

Additionally, land use development should be carefully coordinated with street and intersection capacities in order to preserve the functioning of existing and planned roadway network. Access to commercial and industrial and apartment sites need to be provided on arterial/collector systems to avoid vehicle travel through less "intensely developed" residential areas. Locations of high traffic uses should be carefully designed to assure safe vehicle and pedestrian access and circulation—and prevent extremely hazardous situations.

Inventory and Analysis

Existing Roadway System

The Town of Warren contains a grid of north-south and east-west streets on approximate 1-mile spacing along section lines. The Transportation Maps (Maps 13 and 14) show the street layout in the Township. The Town of Warren has approximately 48 miles of streets that are maintained by St. Croix County staff. The Village has approximately 8.5 miles of street that are maintained by Village staff.

Arterial streets include Interstate Highway 94 (IH 94) which extends east west near the south edge of the Township, U.S. Highway 12 (USH 12) which also extends east west through the center of the Township, and State Trunk Highway 65 (STH 65) which runs north-south through the center of the Township. Other arterial streets include the County Highways. STH 65 includes a 1-mile section near the north edge of the Village of Roberts that extends east-west concurrent with USH 12. The members of the Joint Plan Commission view this 1-mile section as a "congested" area. Wisconsin Department of Transportation (WisDOT) traffic counts show an annual average daily traffic (AADT) of 7,100 vehicles for this "congested" 1-mile section for the year 2000. Traffic volume data for Warren and the Village of Roberts from the "Wisconsin Highway Traffic Volume Data 2000" and from a WisDOT funded project (to study STH 65 and interchange access) are in Appendix V.

Collector streets are located throughout the Village of Roberts. Division Street extends north south through Roberts, from STH 65/USH 12 to CTH TT. Division Street is the main thoroughfare to travel in a north-south direction through Roberts. A detailed street map for the Village of Roberts is in Appendix V.

The St. Croix County Development Management Plan, March 2000, includes a detailed discussion of traffic volumes, commuting patterns, highway investments and traffic forecasts.

Conclusions from the plan are: "The transportation system in St. Croix County will continue to be a significant influence on the growth and development patterns in the county. The highway network, in particular, plays the dominant role in the movement of people and goods and as such, receives the lion's share of attention with regard to public investment in its maintenance and operation. The continuous cycle of transportation improvements— promoting development—requiring more transportation improvements—promoting more development, must eventually reach a balance in order for both to operate efficiently and cost-effectively. The growth management issues that St. Croix County is faced with will undoubtedly require consideration of best management practices not only for the public transportation facilities, but also for the development served by those facilities."

Existing Pedestrian Traffic

The Village of Roberts has some sidewalks/walking paths for pedestrian traffic, but sidewalk is not part of every street nor is sidewalk being required as part of every development. Recently, the Village Board has required sidewalk in select areas where pedestrian traffic is anticipated to be higher, where access to the Village Park is required and where diversion of pedestrian traffic away from Division Street can be accomplished.

Existing Rail Transport

The Union Pacific Railroad runs east west through the Township and through the Village of Roberts approximately 1/2-mile south of USH 12. In St. Croix County, this rail currently serves the communities of Hudson, Roberts, Baldwin, Hammond, Woodville and Wilson. The track generally carries 6 trains each day of approximately 100 cars each. The trains travel at approximately 40 mph.

The Union Pacific Railroad is the former Chicago-Northwestern (freight) mainline between Minneapolis-St. Paul and Chicago, and also the former "Old 400" route (passenger trains) from Minneapolis-St. Paul to Chicago.

Existing Bikeway Systems

There are no existing bikeway systems in the Town of Warren / Village of Roberts.

Existing Air Transportation

There is currently no existing air transportation available in the Town of Warren. The nearest publicly owned airport is in the City of New Richmond, approximately 10 miles north of Roberts. The New Richmond Municipal Airport has a terminal building and a seaplane base, but does not have scheduled passenger services.

The Minneapolis-St. Paul International Airport provides scheduled passenger service. The airport is located approximately 25 miles west of the Town of Warren.

Existing Mass Transportation

There is an existing park-and-ride lot located at the northeast corner of the intersection of IH-94 and STH 65.

The St. Croix County plan states that "the continued growth of the St. Croix County work force commuting to the Minneapolis-St. Paul Metropolitan Area would appear to warrant investigation of commuter transit linkages, particularly in conjunction with the development of strategically located park-and-ride lots."

Future Transportation Plans

State Trunk Highway 65 East Arterial

The Town of Warren and Village of Roberts Joint Planning Commission, along with input from Wisconsin Department of Transportation staff, evaluated several alternatives for a new corridor to route STH 65-vehicle traffic from north of the Village of Roberts to IH-94. The alternative routes that were evaluated are shown in Appendix V. The East Arterial shown on the Transportation Map presents the alternative route chosen by the Warren/Roberts Joint Plan Commission. The map depicts a 300-foot right-of-way corridor with wider right-of-way for access ramps at the USH 12 intersection.

The East Arterial route shown is an approximate location. If implemented, the final route determination would be based on Environmental and Corridor studies completed by WisDOT. The joint commission prefers the East Arterial route shown due to:

- The close proximity to the developing industrial park on the northwest edge of the Village of Roberts
- The desire to have future STH 65 be a physical barrier to development, defining a separation between urban area (Village of Roberts) and agricultural land (Town of Warren) remaining east of the East Arterial. The East Arterial location is intended to be the east edge of development for the Village of Roberts. Future areas added to the currently planned Urban Growth Area would be areas surrounding the planned West Sanitary Sewer Interceptor, thus not requiring additional land for development east of the East Arterial.
- The continuation of the current STH 65 - IH 94 interchange location, in consideration of the existing businesses that have located at the interchange.

The proposed East Arterial is not currently part of the WisDOT long range plan; however, the WisDOT has initiated a traffic study for the STH 65 corridor proposed in this plan. The WisDOT is evaluating:

- current intersections and upgrades, if necessary at this time
- anticipated traffic volumes and time frames for when upgrades to current intersections will be required
- locations and types of access points required for the proposed route

The study is anticipated to be completed in the spring of 2002, and will provide recommendations for intersection upgrades for current STH 65 and recommendations for access to the East Arterial route. Future Comprehensive Plan updates should incorporate these recommendations.

Division Street

Division Street will be a Neighborhood Collector Street based on estimated development. The street design standards in the Village Subdivision Ordinance require that this street be 42-foot width (face-to-face) with curb and gutter. New street construction is proposed from Tower Street to USH 12. It is recommended that sidewalk extend from USH 12 to CTH TT along Division Street. Therefore, new sidewalk will be required on the north and south ends of Division Street at locations where there is currently no sidewalk. The map of proposed improvements (Map 14b) shows the proposed street and sidewalk construction areas.

County Trunk Highway TT

County Trunk Highway TT will also be a Neighborhood Collector Street. The street design standards discussed above apply to this street. Also, it is recommended that sidewalk be extended on CTH TT from Village limits to Village limits. The proposed street

and sidewalk construction areas along CTH TT are shown on Map 14.

Future Pedestrian Traffic

Sidewalk construction is recommended (as development occurs in the area) along Division Street and CTH TT, for safety concerns to separate vehicular traffic from pedestrian traffic. It is also recommended that sidewalk be extended to the existing park to allow increased pedestrian traffic to the park with minimal disruption to the existing streets near the park. Walking paths and sidewalks should be extended and connected to new developments adjacent to existing developments. The proposed sidewalk locations are shown on Map 14.

Future Rail Transport

The current freight rail transport through the communities of Warren and Roberts is expected to continue in the future.

There is also a possibility that a high-speed passenger rail could extend from Minneapolis-St. Paul to Chicago following the Union Pacific right-of-way through Warren and Roberts. The potential high-speed passenger rail was planned to extend through LaCrosse, Wisconsin, following the current Amtrak route. However, the WisDOT (through government involvement initiated by the Chippewa Valley High Speed Rail Task Force) has hired a consulting firm to evaluate the alternative routes, including the current Union Pacific route through Warren and Roberts.

The consulting firm is expected to complete their study, which will recommend a route, in early 2002. The high-speed rail is anticipated to provide service through 6 passenger trains per day in each direction from Minneapolis-St. Paul to Chicago. The high-speed passenger train would be a direct route from Eau Claire to Minneapolis-St. Paul, with no stops at smaller communities. The communities along the route would be affected by:

- *evaluation of at-grade intersections, with the desire to have grade separation at intersections for high speed passenger service*
- *potential high speed freight rail service that would serve smaller communities along the route*
- *potential commuter passenger train service that would serve smaller communities along the route*

There is currently no funding for the high-speed rail transport. However, if developed, the high-speed rail is estimated to be developed over a 10-year time frame. Future comprehensive plan updates should address developments in the high-speed rail initiative.

Opinion of Probable Costs and Estimated Schedule for Required Transportation System Upgrades

Estimated costs (that the Village would be responsible for) for the transportation system upgrades are detailed in the Public Facilities Needs Assessment report prepared for the Village of Roberts in November 2000. The cost for CTH TT upgrades would be shared with St. Croix County as detailed in the cost estimate (see Figure 18 below).

Future Bikeway Systems

The proposed bikeway system, based on the St. Croix County Development Management Plan, in the Town of Warren/Village of Roberts is presented on the Transportation Map. The proposed bikeway system consists of one north south and two east-west bike routes. The north-south route follows 100th, 107th, and 110th Streets. The east-west routes follow 80th Avenue/CTH "TT" near the center of the Township, and follow CTH "E" along the northern edge of the Township.

Future Air Transportation

The Minneapolis/St. Paul International Airport is the region's major airport. It is relatively conveniently located within a 45 minute drive of the joint community. The location is a critical locational asset to the area. This facility will continue to serve the air travel needs of the community.

Future Mass Transportation

It is anticipated that the Wisconsin Department of Transportation will continue to operate the park and ride located at the northeast corner of the IH 94/STH 65 intersection. The planned STH 65 East Arterial may necessitate reconstruction of the park and ride.

FIGURE 18

REQUIRED TRANSPORTATION SYSTEM UPGRADES • Village of Roberts

REQUIRED UPGRADE	ESTIMATED SCHEDULE	ESTIMATED COST
Division Street (street, curb, sidewalk)	Year 2002–2004	$627,000
CTH TT (street, curb, sidewalk) *Less CTH TT County Share*	Year 2015–2020	$576,000 ($71,000)
Sidewalk to Park	Year 2002–2004	$30,000
TOTAL TRANSPORTATION SYSTEM UPGRADE		**$1,162,000**

TRANSPORTATION

Goals and Objectives

Goal:

A transportation system providing reliable, safe and economical movement of people and goods, both within the community and the surrounding region, and which anticipates the demands of growth.

Objectives:

- Coordinate transportation planning with land use development by providing a transportation framework with which various land development patterns can be supported.
- Construct a street system based on the character and function of each element established in the thoroughfare plan adopted as a part of the comprehensive plan.
- Stage the construction of street improvements according to a capital improvements plan which coincides with demands of growth.
- Minimize conflicts between vehicular, pedestrian, bicycle and train traffic.
- Maximize use of available regional transit through effective and appropriate linkages.

Policies

- Develop an official street map for the Village and the Urban Growth Area.
- Coordinate with Wis. DOT the STH 65 by-pass corridor.

HOUSING

Introduction

Americans began the 20th century bound to choosing their homes around the source of a square meal. They ended the century free to choose homes like breakfast cereal.

With ever-thinning ties to factories and farms, Americans have an unprecedented freedom of choice on where to live, work, and play. They have exercised those freedoms nationwide in ways broadly reflected by the 2000 Census.

When discussing the rate at which an area is growing, it is not only important to consider the speed at which growth is occurring but also the location within a given geographic region where growth is taking place. The location of growth provides insight as to future development, as well as indicating the factors which precipitated the initial growth.

The impact of many "local" development activities are felt beyond the local borders, sooner or later. For example, cars from a new subdivision or shopping area do not stop at any one jurisdictional border; school districts have a hard time planning for the influx of students coming from the new residential developments approved by the multiple towns, cities, and villages that make up the district.

The concern for housing has traditionally been a concern with the provision of basic shelter. The complexity of housing today often obscures this traditional issue. It is hard to define what constitutes basic shelter today. To those purchasing a house, that purchase represents an array of services and amenities. To some, housing is an investment that can be either long-term or short-term. From the point of view of the public sector, housing creates a demand for the provision of a particular set of public services, while it also is an important source of revenue. Housing is both a private commodity and a public good.

Impacts add up. One house or one tavern or one convenience store might have slight impacts, but each undeniably demands services, generates travel, creates economic activity, and adds to the tax base. The impacts of these small decisions persist through time and, over time, combine with one another to change a community.

The objectives and policies related to housing are oriented toward achieving the residential development goal:

Residential Development Goal

Provide a quality living environment for all age and economic groups through the orderly future residential development in harmony and balance with other uses in those areas where desirable municipal amenities can be provided economically and through strengthening of existing residential areas.

Probably no single area of concern in community development will receive greater attention in the near future than the ramification of housing. Of the land devoted to urban development, no single land use involves greater acreage than residential land use.

Three primary considerations will affect housing supply:

- Protection of existing housing stock through effective code enforcement, and
- Design of new residential areas to foster the quality growth and development of the community. New residential development should be encouraged in areas which can be served conveniently and economically by municipal facilities and utilities.
- Ability to provide services (police, fire, school, sanitary sewer, water, etc.) without burdening current systems.

Future residents of Roberts/Warren will require a mixture of housing types to meet individual requirements of preference, age, family size, and income. This will be necessary in order that each family and individual may find suitable housing at a location convenient to jobs, recreation, and commercial facilities.

Land use and housing are essential elements in a neighborhood environs analysis. Implications of residential land use in Roberts/Warren are presented in the land use analysis chapter. This section of the analysis is concerned with the size of the existing housing stock as well as a description of the area's housing stock in terms of basic housing unit characteristics.

Lacking access to any comprehensive housing condition data, this inventory relies on the Bureau of the Census data (both the 2000 and 1990 census, since all of the 2000 housing data was not available at the time of plan preparation) to provide a reasonably accurate measure of the conditions with respect to the key housing factors as reported in the Census. Interpretation of the data should be tempered by the fact that it is based on samples of generally five, fifteen, or twenty percent.

This summary will be reported on a community basis with comparisons available at the Village and Town level. Direct comparison may not always be made between preceding year's census data since different methods of collection and enumeration were used. Included in the analysis is a discussion of the number and distribution of housing units and a classification of housing units as well as occupancy/vacancy status. Also included is a review of housing characteristics indicating structure age and cost characteristics.

Number and Distribution of Housing Units

The total housing stock in the joint community in 2000 consisted of 830 housing units. This is an increase of 183 housing units since 1980 and represents a 15 percent increase in the housing inventory (Figure 19).

FIGURE 19

HOUSING • Number of Units

	NUMBER OF UNITS		1990–2000 CHANGE	
	1990	2000	Number	% Change
Village of Roberts	389	402	+13 units	+2%
Town of Warren	327	437	+110 units	+25%

Source: U.S. Bureau of the Census 2000

Household Characteristics

In recent decades the increasing economic dependence of the elderly, the retired, and adult unmarried population as well as fewer children per married couple, has been effective in steadily reducing household size. This has been a general trend throughout the country and seems to be characteristic of Roberts/Warren. Based on the census taken by the U.S. Bureau of the Census in 2000 (Figure 20), the average household size equaled 2.47 and 3.10 for the Village and Town, respectively. The 1990 average household size was 2.85 for Roberts and 3.19 for Warren.

FIGURE 20

HOUSING DEMOGRAPHICS • 2000 Census

	NUMBER OF PERSONS		PERCENT OF TOTAL	
	Village of Roberts	Town of Warren	Village of Roberts	Town of Warren
HOUSEHOLD BY TYPE				
Total Households	**392**	**426**	**100.0%**	**100.0%**
Family households (families)	256	359	65.3%	84.3%
With own children under 18 yrs.	130	197	33.2%	46.2%
Married couple family	191	326	48.7%	76.5%
With own children under 18 yrs.	92	173	23.5%	40.6%
Female h'hldr, no husband present	41	18	10.5%	4.2%
With own children under 18 yrs.	29	13	7.4%	3.1%
Nonfamily households	136	67	34.7%	15.7%
Householder living along	101	44	25.8%	10.3%
Householder 65 yrs. and over	22	11	5.6%	2.6%
Households w/individuals under 18 yrs.	138	203	35.2%	47.7%
Households w/individuals 65 yrs.+	50	56	12.8%	13.1%
Average household size	2.47	3.10	—	—
Average family size	3.00	3.38	—	—
HOUSING OCCUPANCY				
Total Housing Units	**402**	**437**	**100.0%**	**100.0%**
Occupied housing units	392	426	97.5%	97.5%
Vacant housing units	10	11	2.5%	2.5%
For seasonal, recreational, or occasional use	2	6	0.5%	1.4%
Homeowner vacancy rate (percent)	—		—	—
Rental vacancy rate (percent	2.8		—	—

Source: 2000 U.S. Census

Structural Characteristics

Single-family units remain the most dominant housing type throughout the joint community. Figure 21 shows the number and percentage breakdowns of year-round structures by structure type. As indicated, there were 457 single-family housing units in Roberts/Warren in 1990, which comprised 64% of the community's year-round housing stock. Over 25% percent of the community's year-round housing units were 50 or more unit structures. Eight percent of the community's year-round housing units were 2-unit structures.

FIGURE 21

HOUSING • Units in Structure
1990

	NUMBER OF UNITS		PERCENT OF TOTAL	
	Village of Roberts	Town of Warren	Village of Roberts	Town of Warren
1-unit, detached	154	303	40%	93%
1-unit, attached	2	0	1%	—
2 to 4 units	44	13	11%	4%
5 to 9 units	16	0	4%	—
10 or more units	149	11	38%	3%
TOTAL HOUSING UNITS	**389**	**327**	**100%**	**100%**

Source: 1990 U.S. Census

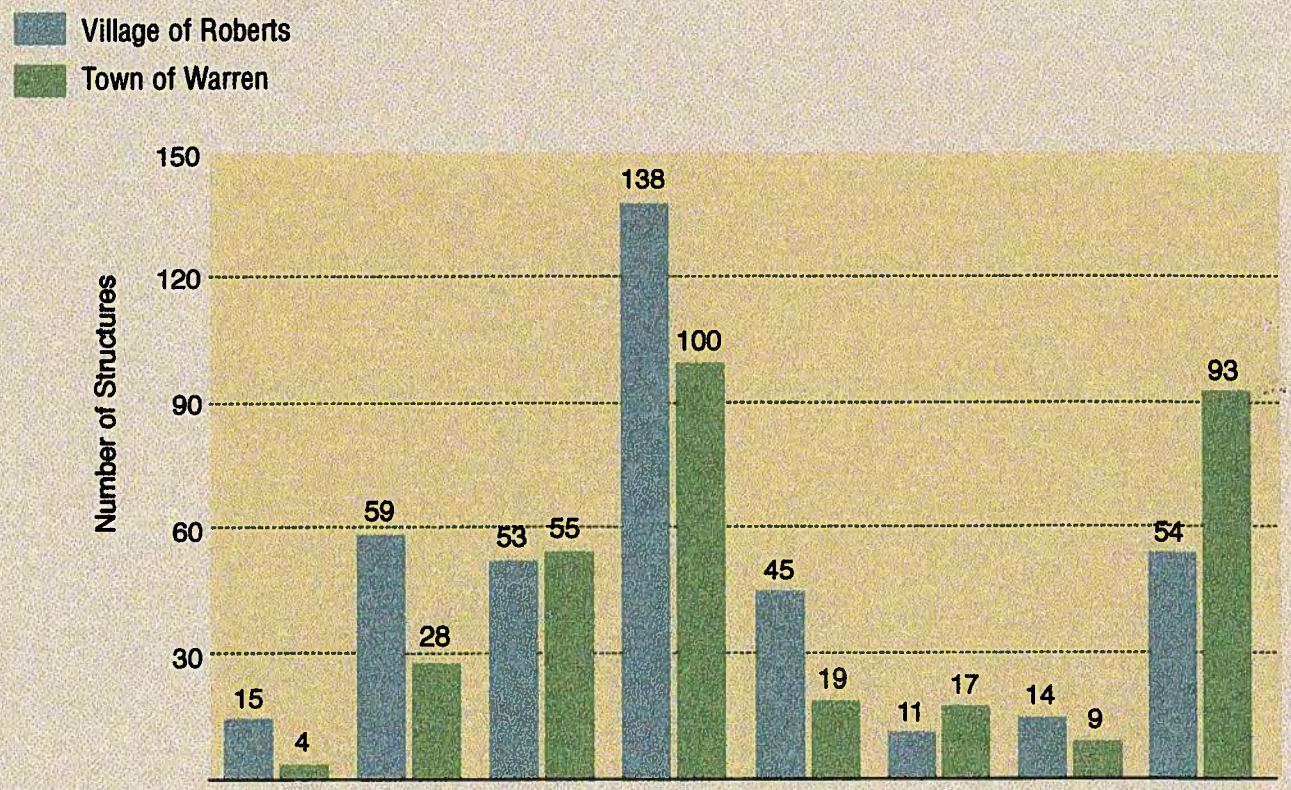
Age of Structure

Another indicator of housing condition is the age of the housing unit. The relationship between the age of the structure and the quality of housing is difficult to specify. Well-constructed and well-maintained housing units provide sound housing over very long periods of time. Poorly constructed or poorly maintained housing units may deteriorate over a short period of time.

The classification of year-round housing units in the community according to the year in which the structure was built is presented in Figure 22. Housing units are classified by the year of original construction, not by the date of any later remodeling, additions, or conversions.

FIGURE 22

HOUSING STRUCTURES • Year Built



Year Built:	1989 to March 1990	1985 to 1988	1980 to 1984	1970 to 1979	1960 to 1969	1950 to 1959	1940 to 1949	1939 or earlier
Percent of Total:								
Village or Roberts	4%	15%	14%	35%	12%	3%	3%	14%
Town of Warren	1%	9%	16%	31%	6%	5%	5%	29%

Source: 1990 Census of Population and Housing

Contract Rent

Contract rent is the monthly rent agreed to, or contracted for, regardless of any furnishings, utilities, or services that may be included. The statistics for rent include one-family houses on ten acres or more. (See Figure 23.)

FIGURE 23

HOUSING • Renter Occupied Units
1990

	NUMBER OF UNITS		PERCENT OF TOTAL	
	Village of Roberts	Town of Warren	Village of Roberts	Town of Warren
CONTRACT RENT				
Less than $250	17	4	17%	29%
$250 to $499	69	9	70%	64%
$500 to $749	12	1	13%	7%
$750 to $999	0	0	—	—
$1,000 or more	0	0	—	—
TOTAL RENTER OCCUPIED	**98**	**14**	**100%**	**100%**
Median Rent	$361	$317		

Source: 1990 U.S. Census

Cost of Housing

This section concentrates on the two broad financial categories concerning the sales or rental value of the housing stock. The categories are important input into the determination of the extent to which the housing demand can be economically satisfied and are good indications of the composition and character of the overall housing condition of the area.

Value

Value is the respondent's estimate of how much the property (house and lot) would sell for if it were for sale. The statistics on value are shown only for one-family houses on less than ten acres (Figure 24). The value tabulations include mobile homes/trailers and units in cooperatives/condominiums.

The largest percentages (78% for the Village, 76% for the Town) of housing units in the community were valued at between $50,000 and $99,999. Only a slight proportion (9.7 percent) of the homes were valued at less than $50,000.

FIGURE 24

HOUSING • Owner Occupied Units
1990

	NUMBER OF UNITS		PERCENT OF TOTAL	
	Village of Roberts	Town of Warren	Village of Roberts	Town of Warren
VALUE				
Less than $50,000	25	3	18%	2%
$50,000 to $99,999	106	015	78%	74%
$100,000 to $149,999	5	30	4%	21%
$150,000 to $199,999	0	4	—	3%
$200,000 to $299,999	0	0	—	—
$300,000 or more	0	0	—	—
TOTAL OWNER OCCUPIED	**136**	**142**	**100%**	**100%**
Median Value (dollars)	$64,100	$83,800		

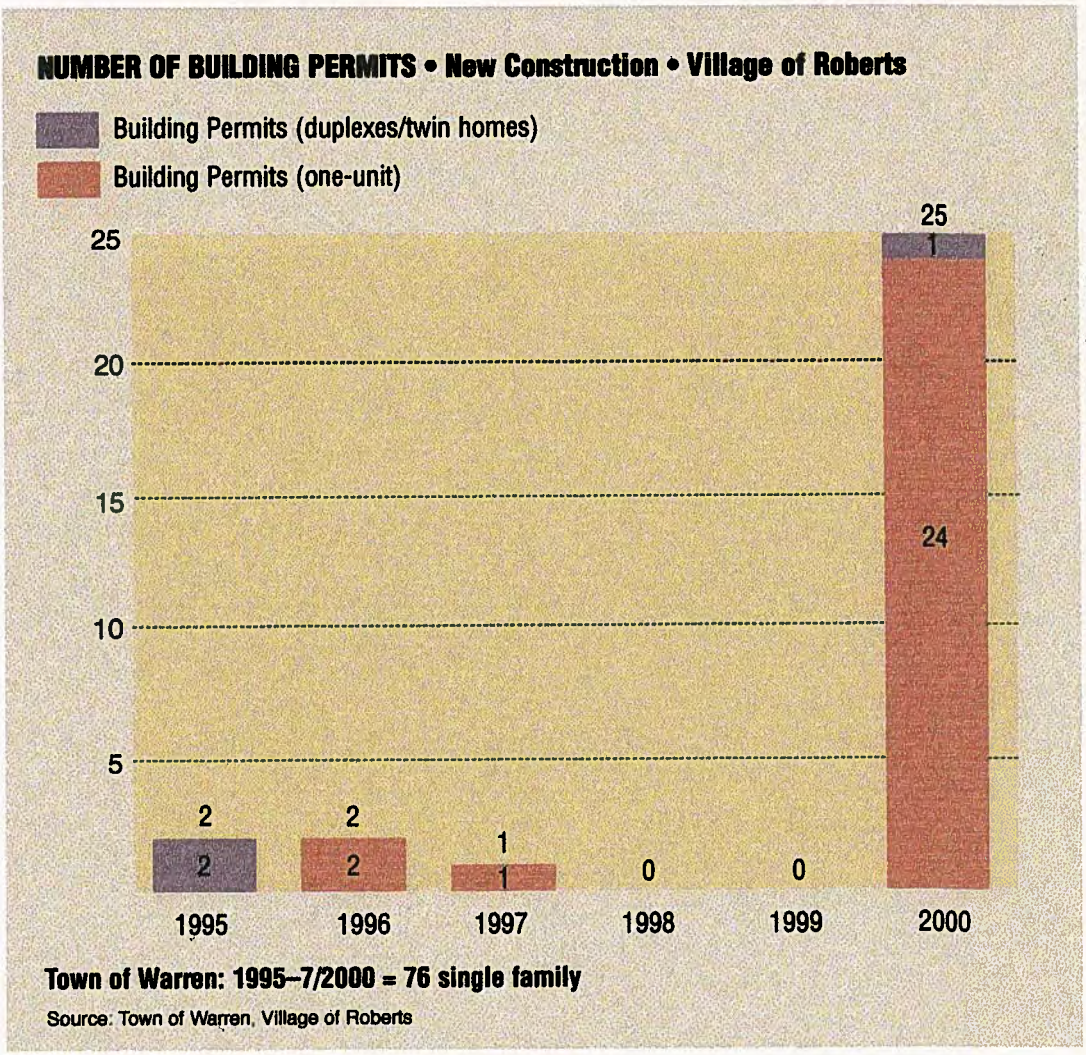
Source: 1990 U.S. Census

Other Housing Related Information

In addition to census data the community has a permit-issuing system which provides a tally on new residential construction. The number of building permits issued for new residential construction between 1995 and 2000 is included in Figure25. Several interesting features are brought out in this graphic, including:

- The steady number of building permits for new housing construction over the past 2 years is an indicator of substandard housing replacement and the effect of smaller household size in the community.
- A large amount of residential construction in the area allows the filtering process to function properly. As more persons move into new housing units, older but good quality housing units become available for others. Furthermore, the potential for overcrowding is reduced.
- New residential construction creates jobs and adds to the tax base of a community. It is also an indicator of the relative economic health of the community.

FIGURE 25



Tenure Status

A housing unit is owner-occupied if the owner or co-owner lives in the unit, even if it is mortgaged or not fully paid for. All other units are classified as renter-occupied, including units rented for cash rent and those occupied without payment of cash rent.

In 1990 there were 552 (266 in the Village, 285 in the Town) owner-occupied units, and 131 renter-occupied housing units (100 in the Village, 31 in the Town). In 2000, the Village had 287 and the Town had 401 owner-occupied units (688 total) and 130 (105 in the Village, 25 in the Town) renter-occupied units (see Figure 26). While the ratio of owner-occupied to renter-occupied residential units remained basically the same in the Village between 1990 and 2000, the Town shifted slightly to having a smaller percentage of its housing units as rental (see Figure 26).

Vacancy Characteristics

Vacancy rates are generally used to indicate the supply and demand conditions in the housing market. It is generally assumed that the housing market fails to function effectively when the total vacancy rate falls below three percent. Roberts' rental vacancy rate is 2.8 percent. Vacancy figures alone, however, cannot indicate quality properties. The housing units which are vacant and available for sale or rent may or may not provide a supply of standard housing units in the variety of types and the price ranges that people seek.

FIGURE 26

HOUSING • Occupancy and Tenure

	NUMBER OF UNITS		PERCENT OF TOTAL	
	Village of Roberts	Town of Warren	Village of Roberts	Town of Warren
Occupied Housing Units	366	316	94%	97%
Owner Occupied	*266*	*285*	*73%*	*90%*
Renter Occupied	*100*	*31*	*27%*	*10%*
Vacant Housing Units	23	11	6%	3%
For Seasonal, Recreational, or Occasional Use	0	3	—	—
TOTAL HOUSING UNITS	**389**	**327**	**100%**	**100%**
Homeowner Vacancy Rate (%)	1.5%	1.4%		
Rental Vacancy Rate (%)	9.9%	6.1%		
Persons per Owner Occupied Unit	3.02	3.22		
Persons per Renter Occupied Unit	2.39	2.94		
Units with over 1 person per room	13	5		

NOTE: Percentages in italics are based upon the row immediately preceding (e.g., *Owner Occupied* and *Renter Occupied* are percentages of Occupied Housing Units, not Total Housing Units.

Source: 1990 and 2000 U.S. Census

HOUSING

Goals and Objectives

Goal:

A high quality residential character, with a balanced range of housing opportunities.

Objectives:

- Maintain the primary single-family residential character of the village.
- Ensure attractive neighborhoods with identifiable character.
- Promote diversity in the housing stock which provides a balanced range of housing opportunities.
- Distribute multi-family developments to appropriate locations throughout the Village in order to avoid excessive population densities in any single area.
- Provide for large lot (2-5 acre) development in the Town.

Policy

- Identify Smart Growth areas to provide housing where adequate public services are already available.

ECONOMIC DEVELOPMENT

Introduction

The economic viability of a community is essential to quality of life and to the ability of government to finance services needed by residents and businesses. Roberts/Warren are not different from other communities. Residential, commercial, and industrial uses return different levels of revenue and require different levels of municipal services.

The area's economy has changed considerably in the last fifty years. It no longer has a primary shopping district. Two-income families, the automobile, and accepted commute times have changed who conducts business in the communities and when. At the same time among the strengths of the area is its major rail and highway access, and an educational system that contributes to a quality workforce. The two communities' future economic vitality and stability will depend on capitalizing on these positives and creatively working in cooperation with the business community to have a well-balanced and diversified economic strategy.

Technology has brought changes to industrial businesses. Through improved waste treatment and best management practices, heavy manufacturing factories are capable of being as clean as any office complex. In today's world industries often are evaluated on their use of local skills and talents, their effect on the environment and quality of life, and how they affect municipal services. Changes in the regional market, for example, have brought many firms to St. Croix County and the Twin Cities region. Properly designed industrial parks can be good neighbors, if attention is paid to proper zoning, density, utilities, and access.

Any economic development strategy should be fiscally sound. Roberts and Warren must determine its assets and aggressively market its strengths.

The objectives in this chapter encourage a fiscally sound economic development strategy which capitalizes on existing land availability and promotes growth in those areas of the joint community set aside for commercial and industrial development.

Current Conditions

There will be increasing competition for economic development dollars from other communities and it will be necessary to market aggressively in seeking firms to locate here.

Economic growth means that new businesses will start to pay a share of local property taxes, making the share for residential property owners a little less. Economic development also means jobs for residents.

Additionally, expansion of the local economy demonstrates to those both inside and outside of the community that Roberts/Warren is a dynamic area. Economic development should be energetically sought and given a full measure of public support, because of the substantial benefit that business activity brings to the community.

The Village of Roberts has a few scattered commercial sites. Generally, commercial uses in the Village fall into two general categories. The first, and most prevalent, are the businesses located along arterial roadways such as

USH 12 and STH 65. These commercial uses can create a greater level of impact on the community, primarily because of traffic safety and accessibility impacts.

A second category of businesses generally seen is on the edges of the Village proper, located in the rural and agricultural areas of the Town of Warren, and at the I-94/STH 65 interchange. These businesses can be secondary to the existing residential or agricultural use or may be the primary land use. The impacts of these businesses are minimized by being located in the low density development areas.

Area Potential

The population and the economy of a community are two important factors in assessing its current situation and future possibilities. Population change is a rather obvious indicator of a community's past growth or decline, and may also give some clue to future trends.

The population of a locality is not just numbers of people, but is a resource pool from which skills and knowledge can be drawn for use within the economy. Certain characteristics of a particular population, such as its age and income structures, indicate what such skills and knowledge will be. A population also is a ready market for local economic goods and services.

The economy of a community consists of all the institutions by which people provide goods or services for others. It draws upon locally available skills and knowledge, using them to produce for local and non-local markets. Economic growth will generally attract people to a community, while economic decline drives them away in search of better opportunities. Thus economic trends, by attracting people to or repelling people from a given locality, have a direct effect on population growth and characteristics. The two factors are interdependent and form the essential ingredients for the survival of a community.

Elsewhere in the plan illustrations of past population growth and projection for the future are provided. However, at the time of the drafting of this plan, complete 2000 census data is not available. Lacking at this time, and pertinent to the element, is data regarding up-to-date commuting distances and job sector/place of work information. Though not available for this plan, it is not fatal to the integrity of any of the elements. The plan attempts to frame and focus economic factors as they impact Roberts/Warren (i.e., proximity to the Twin Cities, Hudson, Interstate 94) and begin to lay the framework for future growth of the local environs. More important than the analysis of demographic data at this time, are major policy decisions to be made by Village and Town officials regarding land use, infrastructure improvements, community facilities, and implementation techniques. These are presented throughout the plan.

Fortunately, it is expected that all 2000 census information will be available for the first 5-year update of the plan (projected at this time for 2006 or 2007). At that time the Village and Town can look back at their progress of the first five years of implementation and have at hand additional demographic information to help refine the economic development element of this plan.

Opportunities

Since improvement of the tax base, as well as a general upgrading of economic opportunities, is a necessary and desirable program for the community to undertake, new industries and businesses should be attracted to Roberts/Warren whenever possible. The community can improve its attractiveness by:

- Making available and protecting suitable industrial and business sites.
- Initiating improvements in the central business district.
- Fostering, through local development groups, the compilation and distribution of information regarding local industrial and business opportunities.

Commercial Development

To encourage local commercial growth it will be necessary to maintain and improve the appearance and quality of existing business districts, and effectively limit further commercial development to areas that are compatible with and accessible to existing land uses. Three different type of commercial development districts are recommended for Roberts/Warren:

- A central business district in the downtown area.
- A general commercial/industrial area at the I-94/STH 65 interchange.
- Highway-oriented commercial areas at the southwest quadrant of the USH 12/STH 65 intersection.

Central Business District

The Village should consider downtown revitalization efforts. Revitalization efforts of the business district could strengthen the economic sector of the community and this activity should be encouraged in the future. Village officials and central business district (CBD) merchants and business people should entertain a program to improve the appearance of the CBD. Storefront improvements, sitting areas, and landscaping in the area will all add to the comfort and appeal of shopping in the CBD. Improvements made in the CBD should be consistent with an overall theme or development plan to provide a focus to the business district. Retail establishments not consistent with CBD retail uses (i.e., drive-in restaurants) should be discouraged in the CBD and located within the highway commercial district.

The Village should investigate the possibility of establishing a redevelopment organization for the CBD. A redevelopment district is an area identified by the Village in which capital improvements are planned to correct or alleviate problems associated with business, land use, transportation, and community facilities and services. A comprehensive strategy should be designed to address such things as: demolition of dilapidated structures, relocation of certain businesses, opening up land for commercial or light industrial development, and the provision of adequate facilities and services such as streets, water, and sewer. The improvements are intended to generate additional economic activity while promoting sound community development.

To administer such a program the Village should establish a redevelopment authority consisting of village officials, CBD merchants and land owners, and other interested persons. The redevelopment authority will be directly responsible to the Village Board. The authority's task will be to prepare and

implement a district redevelopment strategy. The purpose of the plan will be to identify areas in the district that can be made available for new or expanding commercial/housing activities and to identify ways the district can be improved. The redevelopment authority will have the authority to acquire and sell land within the redevelopment district. Funding for the redevelopment project will come from the Village (i.e. tax incremental district), state, federal monies, and private contributions.

General Commercial Areas

Outlying commercial areas should not compete with the central business district but should maintain a market unique to themselves. Highway-oriented commercial establishments should be development in a manner that is compatible with available community facilities and services, convenient for public use, and integrated with the transportation system to ensure safe and efficient access and egress.

While commercial/industrial sites in the unsewered areas of the Town may provide some service needs, many of the businesses that may locate in these sites will not require specific locational needs, but rather require a cheaper building site. The types of businesses that can piggyback on each other may not locate in such sites. Uses that may locate in these areas are usually independent of other businesses. Many times, less retail-type businesses or light industrial-type uses will locate in these areas. There will be situations, however, where visibility and traffic volume will be of prime importance to locating businesses.

The Village/Town should prohibit future commercial development within the transportation corridor designated to connect STH 65 with I-94 (see Transportation section). The function of the corridor will be to reroute STH 65 traffic within the Village to minimize traffic congestion. It is essential that vacant land within the corridor be preserved from conflicting land uses to minimize costs of construction. The Village/Town should exercise official mapping powers to regulate use of land within the corridor.

Highway-Oriented Commercial Areas

A large corridor of acreage has been recommended for commercial use southwest of the intersection of STH 12/65. It is recommended that any commercial development adjacent to the residential development in the area of STH 65/12 be of a less intensive nature that will not adversely affect the adjacent residential properties. It is also recommended that the commercial development proceed in an orderly manner with no large leapfrogging.

Industrial Development

Future industrial growth in the Roberts/Warren planning area will involve two types of activities: the expansion of existing industrial and the attraction of new industries. In both instances, the availability of lands to serve the needs of specific types of industrial development will be essential.

Land available and suitable for industrial development is virtually unlimited in the planning area. The present Village of Roberts industrial park is filling up and further expansion of the industrial park is expected. Development is primarily limited by the difficulty and costs required to extend utilities to service industrial sites.

An industrial park is a highly restricted type of planned industrial district in which special emphasis and attention are given to aesthetics and community compatibility. Subdivided and developed according to a master plan which includes detailed provision for streets (and in this case rail) and all necessary utilities, the park provides serviced sites for a community of industrial and industrial-oriented uses.

Adequate control of the land, buildings and industrial operations is provided through zoning, private restrictions incorporated as legal requirements in deeds or sale or leases, and the provision of continuing management—all for the purpose of assuring attractive and efficient uses with the park, and the harmonious integration of the industrial area into the community in which it is located.

Community Support

Roberts/Warren's community development efforts will be successful only if public officials and citizens are willing to support and encourage implementation of the comprehensive plan's recommendations. Active citizen participation has been encouraged throughout the planning process to insure that the desires of the community are reflected in the comprehensive plan. The Village/Town Boards, the joint Planning Commission, and local citizens should work together in achieving the goals of the joint community's development program.

It is recommended that Roberts/Warren's industrial development program be continued to promote industrial development in the Village and in the Town at the I-94/STH 65 interchange.

ECONOMIC DEVELOPMENT

Goals and Objectives

Goal:

A strong base of industry, retail businesses and services providing a broad range of job opportunities, a healthy tax base, and improved quality of services to Roberts/Warren residents.

Objectives:

- Ensure economic development opportunities through a governmental agenda which supports appropriate private investment.
- Promote, retain, and attract development that will provide viable employment opportunities for village and town residents and that will strengthen the area's economic base.
- Guide compatible and related commercial and industrial uses to specific and appropriate locations based on fundamental linkages in support of those areas (i.e., truck routes, adequate infrastructure).
- Prevent undesirable commercial and industrial forms of development in order to provide a safe, healthful, and pleasant environment in which to live.
- Support the development of industrial parks which provide good environments for new and expanded businesses.

Policy

- Implement Village's Economic Development Strategy.

AGRICULTURAL, NATURAL AND CULTURAL RESOURCES

Introduction

Natural resources and physical features in Roberts/Warren's planning area determine, in large part, the present and future shape of the built environment. Because they are shared by and of benefit to the entire community, they provide the first criteria on which sound planning decisions are made. Soils, topography, and ground and surface waters are at the same time assets and constraints. For example, by identifying those soils which can support roads and structures as buildable, the communities designate where residential, commercial, and industrial growth may occur. Soils identified as unsuitable for building often serve other functions, such as ensuring groundwater quality, flood control, or conservation habitat (Map 15). Land is deemed suitable for agriculture based on soils, parcel size, location with reference to urban services and existing land use.

The term open landscapes is best used to describe the concept of open space. These landscapes may include open fields used for agriculture or conservation habitat, wetlands, woodlands, greenways, stream corridors, or roadways planted in native species. They can include usable, functional leisure or recreation spaces in existing and new residential, commercial, and industrial areas. Village/Town parks are implicitly part of the open landscapes concept.

These landscapes can also serve a variety of functions, whether privately or publicly owned. They are a means of preserving and enhancing natural resources and physical features—particularly water and air quality.

Roberts/Warren's location in a rural, open setting is consistently identified as one of the unique features which residents value. This plan provides for open landscapes to maintain its quality of life, diversity, and community character.

The plan acknowledges the importance of evaluating environmental impacts and the potential effect one land use may have on adjacent properties or an area as a whole. It attempts to forestall potential conflicts arising from incompatible or inappropriate land uses in certain areas.

The physical features and natural resources of an area represent both opportunities and limitations for a community's development. The natural landscape offers a pre-formed setting for the location of industry, housing, and community facilities. The local geology, topography, soils, and water resources have considerable influence on the type, extent, location, and intensity of land uses.

By giving consideration to its natural environment, this plan encourages the community to "live within its means," making planning decisions that are environmentally sound and reasonably beneficial to the entire community.

Agricultural

While the growth and economic development in Roberts/Warren has many positive aspects, the development pressures pose a serious threat to the agricultural resources, rural character, and small town lifestyle that most residents of the community value. As land values have increased and new non-farm residents move into the Village and the surrounding Town, the natural resources and traditional agricultural practices are threatened.

The Roberts/Warren community is rich in many natural resources. The community's location results in a very scenic landscape with valleys, scenic vistas, and a pleasing mix of open and forested land. The natural beauty of the landscape has been retained mainly due to the relatively low level of developed land uses. Environmental corridors (basically a combination of steep slopes, forested land, and surface water with associated wetlands) are a convenient way of locating and mapping many of the natural and cultural features considered significant in the landscape.

Historically, agriculture has been the largest and most important single industry in the community. It is a very important "export" industry for the area. It brings in dollars from the outside and has formed much of the basis for other sectors in the area's economy. Farming has supported many agricultural-related businesses and services. However, the size of the agricultural sector is not likely to increase and most of the new income and employment in the area have come from the expansion of the private non-farm wage and salary sector. This private non-farm wage and salary sector is where most of the economic growth of the area has come from recently and that situation is likely to continue.

Statewide, the number of farms and the farm population have been decreasing. Yet the average farm operation is considerably larger now than in the past and much more capital intensive. It appears that the cost-price squeeze is tighter now than in the recent past, making the continuation of farming difficult.

The removal of land from agricultural uses is not always avoidable. Roads need to be built. People need places to live, work and play. Considering that agriculture needs land in order to operate and that land is one commodity we cannot manufacture, it seems logical to make some effort to assure that there will be land available to farm in the future.

Development that does occur in rural areas should be encouraged to locate in such a manner so as to not take prime farmland out of production or cause difficulties to established farming operations.

The Role of Farming in a Developing Community

Because farming plays an important role throughout the economy of St. Croix County and the Roberts/Warren environs, farm land should be protected. Farming operations support a wide variety of retail businesses. By maintaining a policy of protecting farm land the community can encourage continued prosperity for individual farmers and the local commercial interests who depend on the agricultural economy.

With every farming operation lost, due to retirement or consolidation, the assumption that the land will continue to be used for agricultural purposes may not be accurate. The farming sector will likely strive to maintain the preservation of prime farm land. However,

there will also be a tendency on the part of individual land owners to consider abandoning their farm operations because of development pressures and the significant increases in land values associated with these pressures. In addition, larger farming operations or corporations may see fit to offset economic downturns by developing or selling off acreage considered expendable.

The potential for a high return on farmland conversion presents an incentive to resist reinvestment, or sell out to development interests. By shifting and concentrating development away from agricultural areas towards areas adjacent to existing urban services, the joint community can effectively serve to reduce development uncertainty in the outlying portions of the planning area. This type of development approach will provide stability to land owners who wish to continue farming and will likely encourage reinvestments in, and expansion of, existing agricultural operations. This approach will also provide developers with the knowledge that adequate buffering will be maintained from large scale and sometimes aesthetically offensive agricultural operations. Finally, concentrating development adjacent to existing public utilities will reduce the public costs of development, limit destruction of the environment, and reduce the effects of "urban sprawl."

Sprawl is costly to tax payers because of the expense involved in extending public utilities to service relatively small numbers of residents. In addition, new residents in rural areas will likely demand better police, fire, and ambulance protection as well as improved public sewers, public water, trash service, and better roads—benefits which they have typically received in urban areas. Concentrating development, by contrast, is less expensive, more efficient, protects farm land and reduces conflicts between incompatible uses. Because modern farming techniques and practices are noisy, dusty, and in the case of livestock operations, odor producing, residential development should be encouraged to locate in concentrated areas adjacent to municipalities. Over the past few decades state and national trends have indicated a move toward larger farming operations. Much of this phenomenon can be attributed to technical advances in the farming industry that allow farmers to utilize greater amounts of acreage and produce better and more abundant crops. The changes in farming practices result in farmers use of heavy machinery, the incorporation of numerous chemicals in the production of crops and irregular working hours during certain periods of the year. In addition, farming operations generate by-products, such as animal and chemical waste. Just as it would not be appropriate to locate residential developments adjacent to industrial areas, non-farm residential and commercial development should be discouraged from locating in agricultural areas whenever possible.

An influx of residential uses into predominately agricultural areas would also make expansion of existing agricultural business difficult because of the incompatibilities of competing uses. In addition, the increased traffic, eventual repair or upgrading of rural roads, lack of sanitary facilities, and unnecessary destruction of farm land caused by development would all be costly burdens—both economically and environmentally to the Roberts/Warren community.

Related to the preservation of farm land is the environmental benefit of discouraging development in a piecemeal and random fashion. While flooding is not a problem in most of the area, potential problems do exist which could limit development.

Development in recognized flood plains,

the control of surface run off, and the location of sanitary sewer disposal systems are all problems to consider before development takes place. While much of the soil in the Village/Town is suited for the production of row crops, not all areas of the planning area have soil comprised of associations which drain well. This problem has a potentially significant impact in terms of the type and density of a given development. In addition, because data indicates that tree cover in the planning area is relatively small, the management of existing timber should be a priority. The majority of timber resources are controlled by private owners. However, decisions by the Village/Town to approve rezoning in wooded areas in order to preserve prime farm land, may be detrimental to the limited forested areas as well as being an indiscriminate approach to development.

Because the planning area outside of the village limits is predominantly undeveloped and agricultural in nature, emphasis is placed on discouraging indiscriminate growth and utilizing the existing infrastructure and extensions from the Village. This plan assumes an increased rate of growth within the Village and the current rate of growth in the Town. Recognizing this growth, the plan will encourage locations and uses which are beneficial to the future development of the community and discourage situations that would create negative impacts. This plan also delineates logical limits for development and provides for the proper efficient development of the entire planning area.

An extensive portion of the planning area, in addition to lands currently located within the village limits, are located in the Town. Agriculture is shown in areas best utilized for the production of cash crops and dairying, and should be protected from urban development because of its value as an irreplaceable resource within the planning environs. One of the plan's goals is to protect these areas of agricultural heritage and prevent the conversion, or at least premature conversion, of farm land to non-agricultural uses.

Portions of the land in this category currently are used for farmsteads and very low density residential uses. Some isolated residential subdivisions are also included in the agricultural land use category. Development of new isolated subdivisions, is strongly discouraged in this plan.

Economic conditions favor clustering of farm activities without urban intrusion for successful agriculture. The plan's strategies provide adequate opportunities for development of housing and employment while preserving the rural integrity of the community.

The environmentally sensitive land use category has been created to protect natural resources and/or woodlands. The land use has been shown mainly along creeks, adjacent to wetlands, and in densely wooded areas. It is assumed that the majority of land illustrated would remain in private ownership. Generalized mapping of the environmentally sensitive areas is contained in the plan (Map 6).

However, review of any new development proposals in an area adjacent to or identified as environmentally sensitive, should include a detailed review of current flood plain, soils, wetland, and other site-specific information.

Although some development may already exist in these areas, further development within or adjacent to the areas should generally be limited to recreational or agricultural uses. If development is proposed in the areas, careful consideration of the existing natural resources and adjacent land uses must be considered beforehand. The long-term economic and physical health of the land and its residents depends on the preservation of these areas.

Parks and Recreation

A community's role in providing park and recreational facilities is an important aspect in the overall planning and development process. It is an element that for the most part is initiated at the local level with local decision making being the primary determinant on the development of such facilities.

Beyond the social benefits derived from leisure time activities associated with parks, other more physical benefits can be derived. The preservation of some acreage for park purposes in a relatively natural state assists in reducing run-off, can provide a reserve of publicly owned acreage for long-range public improvements, and may serve as a buffer between varying types of land use. These factors may be especially pertinent in the instance of acreage along drainage ravines.

In addition to the aesthetic amenities and social benefits, preservation of park areas can be very important in maintaining good natural drainage, reducing erosion, providing buffer strips, and serving as utility easements.

Access to parks is of primary important in planning. Neighborhood parks should be easily accessible by children without having to cross major barriers such as high traffic volume roadways, railroad corridors, or drainageways and streams. The larger community-wide parks should, in addition to offering pedestrian access by the immediate neighborhood, accommodate vehicle access and parking.

In addition to access, an appropriate amount of acreage must be acquired and developed in response to community needs. As growth occurs there will be demand for playfields for organized sports such as soccer and baseball, and court facilities for basketball and tennis. This demand is not likely to diminish in the future. More passive recreational pursuits will also be in demand: picnic facilities, nature preserves, and walking trails.

Mission Statement

It is the mission of the Planning, Zoning, and Parks Committee and the County Parks Department to acquire, develop and maintain a creative, efficient, and responsive parks system, available to all citizens, residents, and non-residents alike, composed of a variety of park areas and special recreation facilities that contribute to the well-being of individuals and families and to the attractiveness of the county and the social and economic health of the county and its communities, while at the same time protecting, conserving, and enhancing the county's natural, historical, and cultural resources.

—St. Croix County Outdoor Recreation Plan

Provision of recreation sites for the physically challenged must also be addressed in terms of both access and facilities.

Lacking an outdoor recreation plan of their own, the Village and Town are served by the St. Croix County Outdoor Recreation Plan. Though this plan, updated in April 2000, does not make specific recommendations regarding the Roberts/Warren jurisdictions, it does enable the community to participate in the Stewardship Program which includes the following specific grant programs for local communities: Urban Green space, Aids for Development of Local Parks, Recreational Trails Act, urban Rivers, Streambank Protection, and Land and Water Conservation Fund.

Existing Recreation Areas

The first step in developing a recreation planning program involves the inventory of the community's recreation facilities. The inventory includes an estimate of acreage of publicly and privately owned properties developed or designated for public recreational use. It includes an analysis of the number and condition of existing facilities and of land development potential for parks within the community.

The Village directly provides only one recreational park and playground for its residents. Map 1 indicates the location of existing recreational areas. A description of the Village's existing recreational areas follows.

- ***Roberts Community Park*** *(17 acres)*

The Roberts Community Park is the only park facility in the Village and receives almost constant use from the residents. It is the site of the Village's annual festival (Roberts Good Neighbor Days). The men's and women's bar leagues, Little League, and 4-H leagues use the park for softball games almost every night of the week. The park is located east of Division Street and is intersected by Park Street and Hennessey Drive. It is bounded by a main line of the Union Pacific railroad on the south. The park provides a fenced, regulation softball field with backstop, dugouts, benches, and bleachers; several new pieces of playground equipment; two picnic shelters (one very large and one smaller); one grill; ten picnic tables; fences, double tennis courts; a Lions Club Community Center with handicapped accessible restrooms; a sledding area; two paved parking areas with parking stops; and an unpaved parking lot where a skating rink is installed in the winter and tents are set up for the annual festival in the summer.

- ***Warren Town Park/Community Center*** *(24.5 acres)*

This facility adjacent to Twin Lakes, is composed of a Community Center, a 1-1/2 mile hiking trail, and 2,100 ft. of lake frontage. Proposed for development in 2003 is a playground and a handicapped accessible observation deck.

- ***St. Croix Central School*** *(1 acre)*

The Village grade school provides some recreational facilities to the residents also. The school is located east of Division Street, between School Street and Central Street. Facilities include a softball field, playground equipment, two soccer fields, and an open playfield. Improvements at this site are not necessary.

- ***Walking, Bicycling, and Snowmobiling Routes***

The St. Croix County bike route runs through the south edge of the Village of Roberts along County Trunk Highway T. The county snowmobile route starts on the western edge of town, follows West Boulevard to Main Street, continues east to Division and Maple Streets, and then heads northeast across the community park. The Village Board has designated all village streets as acceptable snowmobile routes to allow residents access to the county trail.

Park Standards

The population-ratio method is a widely used method of determining requirements for outdoor recreation. This is accomplished by assigning an acreage requirement for each 1,000 people in a community. St. Croix County's minimum standard is 12.5 acres per 1,000 people. Ideally this acreage should be distributed throughout the community so that residential areas, various age groups, and activity needs are served in the best possible manner. The standard does not include school property used only for educational purposes; golf courses; undeveloped, vacant land; or public areas not devoted to recreational uses. Various park types and distribution of park acreages are shown below in Figure 27. These standards are based upon National Recreation and Park Association recommendations. The neighborhood and community park acreages are combined to reach the 12.5 acres per 1,000 standard.

FIGURE 27

RECREATIONAL SPACE STANDARDS

CLASSIFICATION	ACRES/ 1,000 PEOPLE	SIZE RANGE	POPULATION SERVED	SERVICE AREA
Playlots	—	2,500 sq. ft. to 1 acre	500–2,500	Sub-neighborhood
Vest-Pocket Parks	—	2,500 sq. ft. to 1 acre	500–2,500	Sub-neighborhood
Neighborhood Parks	2.5	Minimum 5 acres up to 20 acres	2,000–10,000	1/4–1/2 mile
District Parks	2.5	20–100 acres	10,000–50,000	1/2–3 miles
Large Urban Parks	5.0	100+ acres	One for each 50,000	Within 1/2 hour driving time
Regional Parks	20.0	250+ acres	Serves entire population in smaller communities should be distributed throughout larger metro areas.	Within 1 hour driving time
Special Areas and Facilities	—	Includes parkways, beaches, plazas, historical sites, floodplains, downtown malls, small parks, tree lawns, etc. No standard is applicable.		

Source: National Recreation and Park Association

Action Program

Specific recommendations:*

■ *Roberts Community Park*

The village park is the center of many community activities. Development of this facility should continue.

— The existing ball field should have overhead, ball field floodlights (with metal grills for protection of the lights) installed.

— New handicapped accessible restrooms should be located inside a new storage building which could be built next to the picnic shelter. The storage would be used for picnic tables, etc.

— A second picnic grill (handicapped accessible) should be installed. One additional picnic table (with longer ends for handicapped accessibility) could be located near the new grill.

— There should be one signed and marked handicapped parking space at each of the parking areas (for a total of three handicapped parking spaces).

— The existing water faucet near the picnic area could be replaced with a hand pump, similar to the pumps found at waysides. This would make it possible for the public to have water access while decreasing vandalism.

— A bike rack could be installed in the parking area near, the ball field.

— Separate recycling and garbage containers should be located near the ball fields, picnic area and courts.

Recreation offers an outlet for a person's physical, mental, or creative powers. The activities are engaged in from choice—not with the thought of any reward beyond the participation itself—and are activities from which the individual receives personal enjoyment and satisfaction.

— Park signs, identifying the facility to the public, should be posted at all entrances. Signage will promote civic pride and responsibility, and will encourage visitors. The signs should contain information on hours, regulations, maintenance, usage, and contact people.

■ *Walking/Biking/Snowmobiling*

The Village/Town should evaluate designated walking, biking, and snowmobiling trails to establish a trail system that is safe for residents. The Village/Town should make use of state and county trails, and should work with those agencies to extend and improve routes.

* *Recommendations from 1995 St. Croix County Outdoor Recreation Plan*

Environmentally Sensitive Areas

The environmentally sensitive category also encompasses open space which is preserved as wetlands, floodplains, stormwater management, areas of existing vegetation, primary major roadway corridor enhancements, and key buffer areas (Maps 16, 17, 18, 19). Ultimate ownership of areas designated as environmentally sensitive may either be public or private. Within future residential areas, "fingers" of open space should be utilized to reinforce the concept of the integration of open space within future residential development.

The plan indicates a system of linear environmentally sensitive swaths or greenways throughout the planning area. These areas are intended to promote environmental well-being, preserve natural corridors for wildlife migration, optimize aesthetic benefit, enhance community form, and provide a sense of community identity.

Recreation open space allows people to relax in a pleasant environment, participate in sports, learn about the environment, and enjoy nature. Recreation open spaces are those areas specifically designed to allow and encourage the public to participate in these activities. Increased recreational demand requires not only more land but also more facilities for a wider range of activities. Recreation open space must provide the land and the variety of activities to meet the needs of all segments of the population.

AGRICULTURAL, NATURAL, AND CULTURAL RESOURCES

Goals and Objectives

Goal:

A balanced and healthful relationship between people and their environment.

Objectives:

- Ensure an appropriate amount of land for parks and open space throughout the village and the surrounding area, placing special emphasis on preserving and enhancing the natural and scenic environment.
- Cooperate with the development community in acquiring land for parks and open space in order to meet the recreational and open space needs of the community.
- Maintain park, recreation, and open space policies and in order to maintain consistency with sound planning principles.
- Promote the development of a bicycle path system for recreation benefits.
- Maintain the quality of the environment by preserving the land's natural character through appropriate land development policies.
- Restrict development in environmentally-sensitive areas to protect and conserve natural resources, especially ground water, woodlands, and wetlands.
- Promote those forms of development which will have the least impact on ground water, woodlands and wetlands, and which are appropriate to soil, geology and slop conditions.
- Coordinate development plans with the appropriate governmental agencies to minimize air, noise, and water pollution.

Policy

- Preserve unique wildlife habitat (Wetlands Program).

Goal:

In recognition of the important economic function the existing agricultural business performs in the local economy, and the significant role of the rural landscape in contributing to the appearance of the community, the comprehensive plan seeks to preserve prime agricultural cropland within the planning area.

Objectives:

- Support and encourage sound soil conservation practices.
- Establish design guidelines to reduce the conflict between development and agricultural practices on cropland.
- Support farmers' right to farm and increase community awareness of the rights and privileges of farmers in the planning area.
- Encourage the use of environment friendly agricultural practices and development of alternative agricultural crops and products to contribute to a healthful environment and to diversify the local agriculture economy.
- Preserve prime agricultural cropland by discouraging inappropriate development, buffering agricultural land from other uses, and promoting environmentally sound land management and development practices.
- Encourage the preservation of existing trees and shrubbery as well as encourage the planting of new trees and shrubbery.

Policy

- Promote programs that preserve agricultural lands (CRP, Farmland Preservation Program, etc.).

Land Use

LAND USE

Introduction

The comprehensive plan is a set of proposed guidelines for the future development of the community. These guidelines have been formulated by the joint Roberts/Warren Plan Commission. The plan is intended to cover a period extending from the present to the year 2022. It is felt that this period is long enough to provide the necessary perspective for the future, while remaining short enough to be relevant to the residents of the area and to the officials who will be called upon to implement the plan.

The plan itself is comprised of two distinct but interrelated components. The primary means of expressing the plan is the future land use map. However, the map cannot and should not stand alone as a planning tool. The land use map is supplemented and explained by goals and policies.

The Land Use map is intended to be a graphic and pictorial description of the desired pattern of land use showing the general location, character, and intensity of land uses for the foreseeable future. The map itself is not intended to be a rigid end-product document, but a necessary and useful planning tool which will help the community clarify and better evaluate issues and alternatives and thereby formulate policies which will best achieve local objectives in an effective, but flexible, manner. By using the technique of producing a future land use map which displays the general location of land uses rather than site specific, detailed locations, the community is provided with means of indicating its desires on a community-wide basis. The generalized nature of the land use plan also provides the joint community with the necessary flexibility required to analyze future development proposals in more detail at later dates. The flexibility is needed because different areas of the planning area have different characteristics, opportunities, and problems. However, the goals and policies of the land use map should be referred to when land use decisions are required.

It is important to emphasize that the land use map is only a guide to indicate the locations of various land uses and it does not change zoning. Specific locations for land uses will be determined by the goals and policies presented in this document to development proposals.

The plan includes land use proposals for both the Village of Roberts and the Town of Warren planning area. It includes 20-year projections of anticipated population increases, and identifies the type, amount, and location of land and public facilities needed to accommodate this increase. The plan outlines areas that would be suited for residential, commercial, industrial, and transportation uses during the planning period.

The planned mixture of land uses will be beneficial in providing diversity, vitality, and convenience within the community. The opportunity to live, work, and shop within a small and conveniently arranged geographical area is not always available to most residents of sizeable communities.

Map 20 presents the Roberts/Warren planning area future land use plan. The major premise of the plan is that future development should occur in areas adjacent to and comparable with existing development in a manner which will guide and direct development into desirable forms and patterns rather than inefficient sprawl throughout the area. This growth policy will encourage the most economical and efficient provision of public services and facilities in future years.

The plan also promotes the preservation and conservation of the Roberts/Warren planning area's natural and environmentally sensitive areas. Roberts and the Town of Warren must strive to protect their environmental resources as pressures to develop wooded and other unique natural areas (such as steep slopes) for urban use increase. Development should be prohibited in floodplains and wetlands, should not disrupt natural drainageways, and should be compatible with soil conditions. The comprehensive plan for the Roberts/Warren planning area delineates those natural and environmentally sensitive areas that should be generally discouraged for urban development (Map 21).

The Roberts/Warren comprehensive plan provides a framework to assist the communities in planning for and regulating development while preserving the agricultural nature of the area. While the plan does legally control the use of property, it also provides a basis for legislative and administrative measures such as zoning and subdivision regulations. Essentially, the plan serves as a reference and a guide to private developers, individual citizens, elected officials, and staff in the sale, purchase, or development of property.

Development of the land use element was based on information outlined in earlier sections of the plan, particularly the sections regarding citizen input and goals and objectives. For example, a frequent comment in early listening sessions was that the 1994 land use plan has served the communities well. Development of this updated plan used this 1994 plan as a starting point, incorporating refinements based on resident's comments and current development trends throughout the area.

Another key goal which is reflected in the future land use element is preservation of agricultural land. Because farming plays an important role throughout the economy of St. Croix County, farm land should be protected. Farming operations support a wide variety of retail businesses. By maintaining a policy of protecting farm land, Roberts/Warren can encourage continued prosperity for individual farmers and the local commercial interest who depend on the agricultural economy.

Key additions to the land use plan contained in this element include:

- **The plan shows future growth boundaries which are generally consistent with existing development patterns and clustered to preserve contiguous agricultural uses.** The plan is designed to be generally consistent with the current Village plan where future development is proposed. Most of the outlying areas are proposed for continued agricultural use on the land use map for two primary reasons. First, the plan emphasizes the importance of agriculture as a primary land use. To minimize conflicts with adjacent residential development, the plan encourages appropriate denser development closer to existing developed areas of the Village for extension of utilities and other needs and services. Second, anticipated increases in population can easily be supported by areas illustrated by the urban growth boundary on the plan without development of areas planned for agriculture within the 20-year timeframe of this planning document (Figure 28).

bers could not be considered a "growth boom," but rather a watermark of stable growth. It is anticipated that unless drastic changes occur in the St. Croix County area, growth will continue to occur at a stable and healthy rate.

One factor that is apparent from existing data is the location and type of development taking place within Roberts/Warren at this time (Map 22). The western portion of the Town has received more activity in terms of development. In addition, the development has generally taken the form of low density, large lot land divisions.

There are several reasons why western areas of the planning area are experiencing growth while other areas of the joint community are less active in terms of new development. One reason is related to the transportation patterns of the region. Roberts/Warren is historically and geographically tied to areas located to the west. The location for a majority of new residential construction is likely associated with commuting patterns to western St. Croix County employment centers. Roberts/Warren is serviced by Interstate 94 and State Highway 12 and STH 65 which allow for easily accessed commuting routes to the west and job centers.

The second factor which provides some explanation of the predominance of residential construction in the west is the general lay of the land—in terms of physical features, parcel arrangement, and application of current land use policies (see Map 23). Generally speaking, the western portion of the Town of Warren consists of predominantly more wooded land with greater terrain relief than areas in the eastern portion of the Town. Typically, people who desire a large lot rural residence prefer land with the features prevalent in western Warren. The eastern portion of the Town typically consists of larger tracts of rolling land utilized for farming operations. The larger tracts of land in the eastern areas of the Town and the lack of relief and wooded terrain, would tend to reduce desirability and availability of land for sale or use as residential construction sites.

The Town and County, as governmental units, have also contributed to the concentration of development patterns in the western portion of the Town. One policy as set forth in the 1994 land use plan requires the land lying west of 110th Street to continue to be developed at low density (5+ acres per residential site) so as to not degrade the natural hilly terrain containing steep wooded slopes.

Land Use Designations

The preceding existing conditions and assessment of those conditions form the base for this section of the plan. The future land use portion of this plan defines the arrangement of land for the future development of the Roberts/Warren community.

Because the Town is predominantly undeveloped and agricultural in nature, emphasis is place on discouraging indiscriminate growth and utilizing the existing infrastructure and locations of Town and Village developments. This plan assumes the rate of growth within the Town and Village will accelerate in the future. Recognizing this growth, the plan encourages locations and uses which are beneficial to the future development of the area and discourages situations that create negative impacts. The plan also delineates logical limits for development and provides for the proper efficient development of the Town and Village.

This plan is an expression of the community's vision of future development and should be used as a guide in the decision making process of officials on all matters relating to development. However, the key word is "guide." Eventually new development not anticipated by this plan will occur—some of which may require substantial shifts in policy direction. Recognition that a Comprehensive

Plan is dynamic and not a static document is a key point in the implementation of the plan. Viewing the plan in this manner will ensure that the plan is seen merely as a general guide and should not be used as a specific set-in-stone instrument.

In addition, during the course of preparing this plan, input from a variety of sources was solicited in order to produce a finished product that reflected the wishes and needs of the residents of the Roberts/Warren community. It should be noted that in the process of producing this plan, every effort was taken to incorporate the ideas provided by local residents and community leaders.

The specific designations for proposed land uses in this plan are, for the most part, basic in terms of specific densities and intensity levels of individual areas. More important, from the communities' standpoint, are the locations for proposed uses and the reasoning behind the choice of any area for a given use designation. An example of this is in the area of Single Family Residential densities. It is important to remember that areas adjacent to the Village of Roberts are rural agricultural areas. With this in mind, specific definitions of Low and Medium density developments in the Town portions of the plan may be different than corresponding classifications within the Village. It should also be remembered that development of all areas outlined for a specific use are contingent upon the provision of public services(storm water control, sanitary sewers, public water) and uniformity in applying subdivision regulations. In addition, the development of areas designated as potential growth regions should be attained in a reasonable manner working from existing urban services outward and not in a checkerboard fashion. More specifically, this means that even though an area may be designated for a particular land use, development of that area is contingent upon two factors: 1) the provision of basic utilities at the time of development or within a reasonable time after the development is completed, and 2) land slated for development located between the proposed development and existing development has been reasonably built out.

With these considerations in mind the following designations will be applied to proposed land uses:

Land Use Categories

Agriculture

The Agriculture category covers an extensive portion of the planning area. Agriculture is shown in areas best utilized for the production of cash crops and should be protected from urban development because of its value as an irreplaceable resource. One of the goals is to protect the area's agricultural heritage and prevent the conversion of farm land to non-agricultural uses.

Portions of the land in this category are used for farmsteads and very low density residential uses. Several isolated residential subdivisions are also included in the agricultural land use category. Some of these subdivisions may have been approved prior to development of stronger state agricultural preservation policies. Expansion of existing isolated subdivisions is allowed but development of new isolated subdivisions is strongly discouraged in this plan.

Rural Low Density Residential

This category is reserved for areas not expected to receive urban services (public water, sanitary sewer) during the 20-year planning period of the plan. Typical areas would include the hilly, wooded and steep sloped lands in the western one-third of the Town. Parcels for residential development should be no less than five (5) acres in size.

Low Density Residential

This category is defined as areas suited for single family land use with a maximum density of 1 dwelling unit per 2 acres. Low Density land use should be located in areas in close proximity of the Village and may be connected to public or semi-public water and sanitary systems at the time of development. Most of the proposed Low Density areas will act as buffer between Agriculture and more dense development. Scattered residential development in rural areas is generally discouraged. Decisions regarding the location of new Low Density development should be based on technical issues such as access to existing utilities, soil conditions, and water drainage and on context issues such as surrounding zoning and land use. The Town/Village should try to limit development, when possible, to areas that are poor in natural resources, saving fertile soils for agricultural purposes.

Planned developments which incorporate clustering of homes and preservation of open space are encouraged in low density residential areas. Where possible, natural features such as streams or woodlands should be used as a buffer between new homes and agriculture.

Medium Density Residential

This category is defined as areas suited for residential land use with a maximum density of 4 dwelling units per acre. Medium Density land use should occur in areas located adjacent to the Village and must be connected to public or semi-public water and sanitary systems at the time of development. Again, decisions regarding the location of new residential development should be based on technical and context issues. In most cases, development within medium density residential areas should occur through annexation to the Village.

Multiple Family Residential

Multiple Family Land Use is defined as areas currently zoned for multiple family use. Density levels should be based on an individual site-by-site basis and final judgment on density levels determined after proposals for development have been submitted. Multiple Family land use should generally be annexed into the Village and have access to water, sewer, and other services at the time of development. Other issues to be considered are the rate of development and the type of housing stock. The rate of development should be consistent with the ability of local taxing bodies to provide adequate services as well as match the rate of growth of the surrounding area. The housing stock should fit the character of surrounding development, when possible, with slight variations in color and design. Careful attention should be paid to surrounding transportation, as this type of land use will generate higher traffic volumes. Multiple Family Residential may be located near commercial land uses to maintain compact growth within a community environment.

Commercial

This land use category includes retail and service uses, as well as some office uses, which provide needed goods and services to residents and businesses. The expansion of commercial uses will be needed as residential growth increases in order to provide more goods and employment opportunities. All of the areas recommended for Commercial use are located along primary or secondary arterial roads.

Industrial

Industrial land use include non-agricultural manufacturing, warehousing, wholesale operations, and distribution facilities which provide jobs and products for area residents. It is recommended that this type of development occur in large parcels, rather than in scattered sites. Industrial development should be coor-

- **The density of low and medium density residential land use has been slightly increased to promote the Village's policy of compact, contiguous growth.** The increased density is designed to promote compact, contiguous growth in areas which can be serviced by appropriate public or private water and sanitary sewer systems.
- **Commercial land use has been added or extended to areas surrounding the Village.** In order to avoid wasteful use of land and to most efficiently use public facilities and services, the concept of urban growth boundary is introduced in the plan. Urban growth boundaries are areas in and around existing communities which are most suitable for expanded urban development and capable of being provided with urban services.

Urban services are public services normally provided or needed in urban areas, in addition to the basic or general governmental services available to all residents. Urban services include: public water supply and distribution systems; sanitary sewerage systems,; higher levels of police and fire protection; solid waste collection; urban drainage facilities; streets with curbs, gutters, and street lighting; and neighborhood facilities such as parks and schools. Not all urban services need be provided in every urban growth boundary nor must all urban services by provided in the initial stages of development.

The delineated urban growth boundary is a long-range service area containing more than enough land to accommodate anticipated population growth to 2020 (See Figure 29—Future Land Use Roberts/Warren). The provision of services within this area should

FIGURE 28

EXISTING LAND USE • Village of Roberts and Town of Warren

LAND USE DESCRIPTION	MAPPED TOTAL	INSIDE VILLAGE LIMITS	INSIDE URBAN GROWTH BOUNDARY	OUTSIDE VILLAGE LIMITS, INSIDE URBAN GROWTH BOUNDARY	OUTSIDE URBAN GROWTH BOUNDARY
Ag/Rural Residential	21,208	344	3,244	2,900	17,977
High Density Residential	17	17	17	0	0
Medium Density Residential	104	104	104	0	0
Commercial	30	20	10	0	0
Industrial	121	63	101	39	20
Government/Institution	20	17	20	3	0
Park/Recreational	17	17	17	0	0
Recreational	341	12	12	0	329
Conservancy	1,148	0	0	0	1,148
Cemetery	3	0	0	0	3
TOTAL ACRES	**23,036**	**594**	**3,525**	**2,942**	**19,477**

be staged to provide for compact urban growth. The fact that a particular parcel of land falls within an urban growth boundary does not necessarily mean that urban services should be extended to serve it immediately.

To ensure that adequate areas for residential development are illustrated on the land use map, population estimates have been developed. The West Central Wisconsin Regional Planning Commission in 1995, estimated that Roberts/Warren will reach a population of 3,013 by the year 2020. This estimate is based on historic growth trends. In comparison, it is estimated that if all areas are developed as illustrated on the land use map, the area's population capacity would be approximately 7,255.

It is important to realize that this population capacity is not a population projection. This capacity is based on recommended development densities and current household size. However, what this capacity value indicates is that the plan should provide sufficient land to accommodate anticipated growth in the next 20 years.

An advocate of agricultural preservation might argue that based on this projected capacity, the future urban growth boundary should be scaled back to match the projected 2020 population of approximately 7,200. This has not been done for several reasons. First, our national history and laws promoting private property rights suggest that a land use plan must be flexible. It is not possible or prudent to project which specific parcels will develop at what time. Therefore, the urban growth boundary should show more area for development than is actually projected since it

FIGURE 29

FUTURE LAND USE • Village of Roberts and Town of Warren

LAND USE DESCRIPTION	MAPPED TOTAL	INSIDE VILLAGE LIMITS	INSIDE URBAN GROWTH BOUNDARY	OUTSIDE VILLAGE LIMITS, INSIDE URBAN GROWTH BOUNDARY	OUTSIDE URBAN GROWTH BOUNDARY
Ag/Rural Residential	18,359	0	0	0	15,589
High Density Residential	87	47	87	40	0
Medium Density Residential	1,120	357	1,120	763	0
Commercial	276	12	260	248	16
Industrial	455	83	455	372	0
Government/Institution	58	42	46	3	12
Park/Recreational	1,511	23	23	0	1,465
Recreational	0	0	0	0	357
Conservancy	0	0	0	0	2,469
Cemetery	3	0	0	0	3
TOTAL ACRES	**21,869**	**564**	**1,991**	**1,426**	**19,878**

is inevitable that some properties within an anticipated development area will remain in agriculture or vacant. Second, multiple goals in this plan suggest the need both to preserve agricultural lands and to allow for appropriate development. Providing some additional land for development beyond what a population projection might suggest allows greater flexibility for the plan to adjust to future economic conditions.

Development Factors

The type of growth occurring west of Roberts/Warren in the Hudson area and eastern suburbs of the Twin Cities Metropolitan Area has the potential to be significant in terms of impact on this joint community. With rapid growth in residential construction in western St. Croix County, increases in residential development pressure will be felt within the plan area. If land prices increase dramatically in the areas cited above, Roberts/Warren may see the effects of "leap frogging" residential development. Rapid residential development in Roberts/Warren is also dependent on the availability of ample and acceptable commuter opportunities. I-94 and STH 65 will be significant factors on this issue.

Presently, the area west of Roberts/Warren appears to have adequate land area available to meet current development demand. However, as land values (and in turn market values) increase, certain segments of the buying public may be forced out of that housing market. These residents would be forced to seek affordable housing elsewhere and weigh the price of commuting versus the price of affordable housing. As indicated elsewhere in the plan, based on the number of residential lots already platted or approved in concept, there is growing pressure for residential development, particularly in the Village.

In general, the majority of workers tend to locate as close as possible to their place of employment. The large areas of undeveloped land still available west of Roberts/Warren still provide ample opportunities for residential development, as long as people are willing to buy or rent housing at current prices. The second factor concerning future growth is based on the shift in the employment centers of the Minneapolis/St. Paul region. In an area the size of the Twin Cities metropolis, not all jobs are "new" jobs. In some cases a corporation will simply relocate out of the aging and sometimes expensive center ring of a city to gain needed space for expansion. While the relocation may bring jobs to the area, some of those jobs are currently filled by people who commute from St. Croix County and other outlying areas. What this means for Roberts/Warren is that substantial residential development may not occur simply because of increased job opportunities in western St. Croix County. What may actually be happening is that residents of the Twin Cities area may be altering their commuting routes because their jobs are now moving closer to their place of residence. At this time, 2000 census figures are not available for analysis. While the number of building and land division permits being issued in Roberts/Warren have increased over recent years, these num-

dinated with transportation facilities, municipal annexations, and capital improvements because of the traffic it generates and other land use issues. Industrial uses are best suited in areas adjacent to existing developed land (preferably commercial uses) and in close proximity to arterial roads and railroads.

Government/Institutional

Public uses are properties owned and operated by federal, state, or local government and include: schools, cemeteries, or governmental administration and services. Institutional uses are private uses which generally serve the public and include religious facilities and private schools. This plan shows existing public and institutional uses. It is important to consider the current use of public and private facilities and the possible need for more such facilities as growth occurs.

Parks and Recreation

Private Open Space—This category refers to private land which has either been preserved as open space of stormwater detention or is used for recreation purposes such as a private golf course or a sportsman club. Private Open Space land uses are generally welcome in any area because they utilize existing natural features and bring community activities to the area. However, these properties should be regulated to avoid destruction of existing environmental resources and to minimize impact on surrounding properties.

Public Open Space—Public Open Space refers to land owned by a public organization and utilized as open space or public recreation. Areas that contain parks, golf courses, and other public recreational activities are considered to be Public Open Space land uses. This type of use may be allowed anywhere in the plan. The acquisition of particular scenic areas and/or areas of environmental quality should be considered for future Public Open Space. The addition of Open Space areas along bike paths would also be a desirable use of land.

LAND USE

Goals and Objectives

Goal:

A range and balance of land use activities which are respectful of their natural environment, compatible with surrounding land uses and which provide opportunities to pursue all essential aspects of contemporary life within the community.

Objectives:

- Maintain a sense of the character and history of Roberts/Warren through land use and development practices.
- Develop a visually pleasing and efficiently organized community, with proper regard for economic practicality, convenience, and aesthetics.
- Ensure an equilibrium between development of land and the underlying natural systems.
- Maintain a visual and physical separation between incompatible land uses.
- Organize the location, character, and intensity of land use based on accessibility, environmental conditions, community facilities, neighborhood environment, public safety, traffic impact and public utility capacity.
- Promote a thriving community through the development of a wide range of land use activities in their appropriate context.

Policies

- Promote contiguous, compatible development rather than sprawling and scattered development to maximize use of existing and presently programmed community facilities, and to minimize public service costs.
- Coordinate "trans-jurisdictional" issues (such as land use, zoning, transportation, open space, sanitary sewer service, stormwater) with Village, Town, and County.

Intergovernmental Cooperation

INTERGOVERNMENTAL COOPERATION

Introduction

Successful implementation of the recommendations of a comprehensive plan involves a complex set of intergovernmental factors. The Village of Roberts and the Town of Warren cannot achieve their common vision on their own. First, the vision extends beyond their existing boundaries into areas for which other units of government also have visions, and usually more authority. Second, even within its boundaries, other units of government have substantial influence (e.g., county, schools, state highways, etc.). Often coordination with other units of government is the only way, or the most effective way, to solve a problem or achieve an objective.

This is a good point at which to mention one overall recommendation which is central to the successful implementation of the plan: to promote good communication between all governments covered by the plan. A great deal can be accomplished if the leaders can communicate openly and negotiate issues in good faith.

Genuine effective planning must enable local officials and citizens to estimate and measure the cumulative impacts of large and small developments and the effect of the community's development on its neighbors and region.

Following are several examples of intergovernmental cooperation. In most cases, the greatest benefit of coordination will be the results of a proactive effort initiated by the Village and Town.

■ ***Services/Equipment***

The village and Town should work together and with other units of government, both formally and informally to enhance service delivery.

Examples:

— Mutual Aid Agreements between area fire departments/districts.

— Joint agreements between the school district and local parks and recreation interests to cooperatively share facilities, programs, and education.

— The sharing between the Village and Town of building and public improvement inspection services.

— To reduce costs and eliminate unnecessary duplication of equipment purchases, share specialized pieces of equipment.

■ ***Continued Joint Planning***

The Village and Town should continue to collaborate on planning, land use, and zoning concerns by:

— Continuing the Joint Planning Commission and establishing a regular meeting date.

— Jointly initiate discussions with St. Croix County to establish procedures that will allow the Roberts/Warren community to successfully implement its comprehensive plan. Of particular concern is county zoning in the Town and the application of county land division ordinance to lands addressed by the comprehensive plan.

■ ***Annexation***

In Sections 66.021, 66.024, and 66.025 of the State Statutes, provision has been made for property owners to transfer contiguous parcels from towns to cities or villages generally in order to receive urban services such as water and sanitary sewer. Conversely, cities and villages may annex adjoining parcels in towns for similar reasons or to provide for urban growth and expansion.

Annexation is often one of the most contentious issues between incorporated and unincorporated areas. Incorporated areas often feel that annexation is the only way the community can grow and prosper while towns see it as an assault on their territory and an erosion of their tax base. Very often relations between jurisdictions are damaged by historic concerns about annexation. Development decisions can be made based upon a fear of annexation or a desire for territory rather than the best interests of the community as a whole.

Recommendations: This plan makes no recommendations about municipal boundaries or boundary changes. The plan does identify the areas where urban development should occur and where urban services should eventually be provided. If annexations do occur, they should be consistent with the land use recommendations of this plan.

■ ***Extraterritorial Powers***

State Statutes provide for some planning oversight for developing areas around cities and villages. These include extraterritorial zoning and plat review, and official mapping. These powers are granted to villages for lands within 1-1/2 miles of village boundaries.

These communities are able to review zoning changes in the extraterritorial areas through a joint committee with members of both the village and the affected town. Villages also share review authority over platting and subdivisions in their extraterritorial area. This review authority is mainly concerned with land division standards and subdivision improvement standards, rather than land use or zoning. Finally, towns and villages can officially map right-of-way for future streets and drainageways in their planning areas.

Recommendation: The Village and Town should include consistency with this land use plan as a consideration in their joint extraterritorial reviews and actions, and in official mapping.

Existing/Potential Conflicts

Village/Town

- No apparent conflicts or future conflicts.

Village/School District

- No apparent conflicts or future conflicts.

Village/County

- No apparent conflicts or future conflicts.

Town/County

- Potential conflicts regarding zoning/platting approvals and process.

Resolution of Future Conflicts

The village, town, and county will resolve future conflicts on planning issues, land use, and zoning concerns by:

- Establishing a Joint (village/town) Planning Commission, setting regular meeting dates and using this forum to resolve land use disputes. Also need to meet with county regarding zoning and planning concerns.

INTERGOVERNMENTAL COOPERATION

Goals and Objectives

Goal:

The village/town will cooperate with the other units of government in and around Roberts/Warren in order to obtain the highest quality service for residents in the most cost-efficient manner. By cooperating with the other units of government in the area, the village and town will seek to lessen or eliminate the duplication of services, uncertain or overlapping areas of responsibility, and otherwise waste of tax dollars.

Objectives:

- Foster communication between the different units of government in the area to help ensure effective and efficient service delivery to all residents.
- The village and town assume responsibility and will exercise their authority to properly plan the land uses within their planning area.

Policies

- Attempt to coordinate the comprehensive plan with the county's development plan to ensure an organized approach to the development of lands in the planning area.
- The town will endeavor to work with the county and other units of government having jurisdiction within the town's planning area to coordinate infrastructure development and improvements.

IMPLEMENTATION

The keystone effort expressed in the previous chapters is the preparation of the comprehensive plan. The plan is the instrument which the Village/Town Boards will utilize to plan for and guide the growth and development of Roberts/Warren over the next twenty years.

The comprehensive plan is considered to be a flexible guide to decision making rather than an inflexible blueprint for development. The decisions reflected in it regarding the location of different land uses were based on existing knowledge of the characteristics and expressed priorities of Roberts/Warren leaders and its people and anticipated growth and development patterns. As this knowledge or comprehension of these and other factors expands and makes existing proposals undesirable, then the plan should be amended.

Amendments should be made only after a realistic evaluation of existing conditions and the potential impact of such a change is made. Amendments should not be made merely to accommodate the daily pressures of planning and/or government. It is important to recognize that planning is a process that should occur on a continuing basis if the community is to take advantage of new opportunities as conditions change.

This comprehensive plan presents many proposals for the Roberts/Warren community which are considered reasonable, feasible, and extremely important to the welfare of the entire community. However, the value of the comprehensive plan will be measured in terms of the degree of success which the community achieves in accomplishing these proposals. The effectiveness of the comprehensive plan will be directly related to the ongoing recognition of the plan proposals by the Village Board, Town Board, and by the appointed boards and commissions. Their future decisions in taking administrative action, particularly those involving applications of provisions in the Zoning Ordinance and Subdivision Regulations, will determine the degree of success the community achieves in accomplishing the goals set forth in the plan.

It might be overly optimistic to expect every goal, objective, and strategy of this comprehensive plan to be fully actualized. However, the community is confident that this plan is based on sound principles and recommendations, and that the closer to reality this plan becomes, the more desirable and livable the community will be.

The Plan Commissions play a very critical role in the planning process and must be ever alert to the opportunities and needs of the community; bringing such needs to the attention of the elected bodies or other agencies within the community having direct responsibility for public improvements. The appraisal of local needs and the continuing application of the planning principals set forth herein will assure maximum benefits from the plan and will result in orderly and economical achievement of the goals which have been established in preparation of this plan.

Implementation depends upon both private and public action. Public action includes administration of the zoning ordinance and subdivision regulations, long range financial programming, and the review by the Plan Commissions of proposals affecting the physi-

cal development of the community. The Plan Commissions have a continuing responsibility to see that the plan is kept alive, as well as adjusted to conform with changing conditions. It must be realized that a change in one phase of the plan will, in most probability, affect all parts of the plan; and therefore, thoughtful consideration should be given to all implications before making a decision.

Administrative personnel and appointive boards and commissions will have the Plan to guide then in decision making. Close cooperation between the Village and the Town is essential to proper administration and effectuation of the plan. Coordination with other governmental jurisdictions (i.e., County) and agencies is equally important to realization of planning goals.

The greatest number of decisions affecting urban development are made by citizens through private actions. Thus, it is essential that the public understand and support the plan. Through involvement of citizens in the development of the plan's goals and objectives, as well as additional input at various other stages of the planning process, it is the express intent of the plan to reflect the views of the community.

Plan Adoption

The first official action toward plan implementation is the adoption, by the Roberts/Warren Joint Plan Commission of the plan document as the general statement of public policy on land development within the community. After adoption by resolution by the Joint Plan Commission, each respective Board (Village and Town) must adopt the plan by ordinance. This action formalizes the plan document as the current basic frame of reference on general development patterns over the next 20 years. The plan, thereby, becomes a tool for communicating the community's land use policy and for coordinating various individual decisions into a consistent set of actions to harmoniously shape the area's continued growth in the desired manner.

Development Control Ordinances

One of the most important tools of plan implementation is the authority to control development of private land. Most jurisdictions have a zoning ordinance and subdivision regulations which provide specific land use restrictions and development standards. Since the early 1920's, when the concept of land development control was initiated in the United States, development control techniques have been expanded, refined and subjected to all levels of judicial scrutiny. As the purview of municipal authority has changed along with new land development techniques, so much the development control ordinances.

- ***Zoning Regulations:*** Careful application of modern zoning controls can go far in assisting the community in accomplishing the goals of this comprehensive plan. The zoning ordinance establishes definitions, standards and procedures for administrative and legislative bodies to review and approve specific land developments. The existing zoning ordinance should be updated to reflect the plan recommendations.
- ***Subdivision Regulations:*** Instituting development standards for land subdivision is another regulating measure of importance in community development. It is essential that the opening of new residential and other areas, by the platting for sale of lots, be at a level which will not be a liability to the public at a future date. Subdivision regulations serve an important function by ensuring the orderly growth and development of unplatted and undeveloped land. Granted under Chapter 236 of the Wisconsin Statutes, the regulations for sewer and water facilities, storm water drainage, lot sizes, street design, open

space, and other improvements necessary to ensure that a new development will be an asset to the joint community.

Good subdivision controls include minimum standards for street widths, lot sizes, block sizes, street grades, utility easements, etc. In addition, such conditions as dead-end streets, offset intersections and the relationship of streets to adjacent neighborhoods should be regulated in a reasonable manner and in the public interest. The Village's subdivision ordinance should include clear statements of development policies. These policies should detail the developer's responsibilities for providing sanitary sewers, storm sewers, water, roads and other improvements. The Village has the power to enforce such regulations through approval of plats by the Plan Commission as well as the Village Board and to require bonds or other surety to assure standard construction of such improvements.

Additionally, the Village is empowered, via State Statutes to review the subdivision of land within unincorporated territory up to 1-1/2 miles from its corporate limits. It is this authority that gives the Village the opportunity to ensure that development in unincorporated territory is in conformance with the "official" plan for these areas.

It is important that the Joint Plan Commission give careful attention to the enforcement of these regulations and general standards. Each preliminary plat should be reviewed thoroughly to assess the compatibility of the proposed street pattern with adjoining land. It is important that the proposed development plan follow recommended land planning standards and it is essential that the engineering design of streets, storm drainage facilities, sanitary sewers, and utility systems conform with adopted criteria and requirements. An engineering review is important as the Plan Commission passes judgment on a proposed development plan.

The areas to be platted should also be compared with the comprehensive plan to determine what, if any, attention should be given to future school sites, park sites, thoroughfares, changes in land use, and in other elements of the Plan.

- ***Official Mapping:*** The official map is another tool for land use control that can be used to preserve the integrity of the comprehensive plan and to regulate future growth. Chapters 60 and 62 of the Wisconsin Statutes provide for the establishment of an official map to indicate all existing and planned streets, parks and other public uses. The official map enables the Village/Town to prevent private development from occurring in areas designated for other uses. The Village and Town presently have no official map, but should adopt one and update it periodically. All proposed street extensions, park areas and drainageways should be identified on the map.
- ***Sign Regulations:*** The regulation of signs is one of the more controversial and difficult responsibilities of a development control program. However, such regulations are necessary in order to control the size, location, erection, number and maintenance of signs. Sign regulations are intended to fulfill "quality of life" objectives by ensuring that a desirable and attractive living environment is maintained in the community. The Village has sign regulations contained in the Zoning Ordinance. These should be reviewed as to their adequacy to implement the plan.
- ***Codes:*** Building, electrical, plumbing, mechanical, and fire prevention codes

provide sound standards for the safe construction, use, and occupancy of buildings. These codes should be considered implementation devices of plan for a variety of reasons. First, use of the codes insures that the high quality of development sought as an objective of the plan is, in fact, carried out via the permit and inspection requirements of the codes. Secondly, through the same permit requirements, government is providing a check-off point to insure that the land uses proposed are in accordance with the proposed uses embodied in the plan and permitted by the appropriate zoning district. Finally, use of the codes provides a mechanism that insures that, following the construction of the building to the required standards, it is maintained in an acceptable fashion over time.

- ***Capital Improvement Plan:*** A method by which the public related components of the comprehensive plan can be implemented is through capital improvements programming (CIP). A CIP provides an orderly sequence of funding, prioritization and project status. It furnishes a means of assuring that projects will be carried out in accordance with the community's ability to pay without creating an excessive tax burden.

  A capital improvement may be defined as a major expenditure of public funds, beyond maintenance and operating costs, for the acquisition or construction of a needed physical facility. Salaries, supplies, and other overhead expenditures are considered maintenance and operating costs and should be provided for elsewhere in the annual budgetary process. Improvements or acquisitions of a permanent nature representing a long-term investment of public funds are considered a capital improvement.

  A capital improvement program is simply a method of planning for major capital expenditures and scheduling them over a period of years in order to maximize the use of public funds. It is a means of attempting to coordinate a physical development plan with the jurisdiction's current and anticipated financial resources.

  The capital improvements program is a five-year plan. The overall purpose of assigning years to proposed projects is to provide a short-range outline for action, and a long-range schedule of project completion for an accurate picture of needed capital improvement projects and resources,

  The first year phase of the program presents the most comprehensive and detailed picture of those projects scheduled for immediate action. This phase of the program, known as the capital improvement budget, is presented with a detailed list of anticipated expenditures and sources of funding. The second phase of the capital improvements program includes those projects specified as being necessary but not of an urgent or immediate nature to warrant inclusion into the first year of the program. This phase does not require a detailed cost breakdown, however estimates of capital costs should be provided. The capital improvements program provides continuity by addressing long-range projects and therefore minimizing duplication or conflicts with other improvements.

  It is important to note that the capital improvements program should be reviewed and updated each year. Those projects which were scheduled but were not undertaken should be re-evaluated and rescheduled in the capital improvements program as determined by the needs, desires, and financial characteristics of the community.

- ***Annexation:*** The orderly development of a community depends upon periodic expansions of its boundaries to include development of its fringes. The economic growth of territory on the fringe of a village can be attributed primarily to the advantages derived from association with industry, business and other facilities located within the corporate limits. The health, safety, welfare and prosperity of the entire community dictates that such adjacent territory be incorporated and share in the advantages offered by the Village and at the same time participate in the cost of municipal operations. Annexation is an integral part of the overall planning process. It is a tool to be used in guiding and ensuring orderly municipal growth and development. A Village should establish a definite annexation policy and continuous annexation program in conformance with the framework of its plan.

  The capability of the fringe area to contribute enough in added tax revenues to the Village to pay for the cost of added services over a period of time is normally the major determining factor in the decision-making process of whether or not to annex. However, the economic feasibility to annex is not the only consideration to be made. Certain intangible benefits which can be difficult to measure in monetary terms have to be evaluated. These intangible factors affecting annexation decisions are:

  — Increased property valuation and a broadened tax base for will raise the limit of municipal bonds that the Village can sell to finance future improvements.

  — The increase in population of the community in the future census is an indicator of the Village's qualification for more state and federal funds distributed on a population basis.

  — The land adjacent to the Village has a direct effect on development and property values within the community.

- ***Urban Growth Boundary:*** The Village and Town should use the urban growth boundary concept as a guide for future development. Specifically, development should be limited outside of the urban growth boundary until a substantial portion of land within the urban growth boundary is developed. The urban growth boundary delineations are based on population and land use projections, existing zoning and development patterns, the location of environmentally sensitive areas, and meetings with local officials to determine where growth should occur. These urban growth boundaries reflect a narrowing of growth options to include only areas best suited and actually needed for development by the year 2020. Restricting development to within the urban growth boundary will reduce the cost of public services and utilities.

- ***Citizen Involvement:*** Public support is a principal tool in the planning program. First, citizen participation is essential during plan preparation to ensure that issues addressed and proposals offered reflect local desires and attitudes. The Joint Planning Commission actively participated in plan development. Second, public involvement is needed to implement the comprehensive plan. Many of the plan's recommendations will require years of effort and financial commitment. Only with strong community support can such efforts be maintained. Accordingly, the community's civic and business organizations should actively promote the plan and its importance among Roberts/Warren residents.

- ***Continuing Planning Program:*** An effective planning program should be continually reviewed and updated to reflect the processes of actual development and the changing attitudes and priorities of the community. Resource information should be gathered and studied to determine trends and reevaluate projections, forecasts and plans. In five years, the comprehensive plan should be reviewed in depth to make any necessary policy and recommendation changes in relation to the direction and character of community development at that time.
- ***Comprehensive Plan Monitoring and Review:*** Although not truly an implementation device, the importance of plan monitoring and review to the implementation of the plan should be noted. The plan is based on variables that are dynamic and whose future direction cannot always be accurately predicted. Accordingly, such variables as population and urban development characteristics should be periodically compared against the plan's assumptions and recommendations (at least every 3 to 5 years).

This plan paints a broad and long-range picture of desirable land uses, transportation systems, the character of the natural landscape, and public facilities and services. The Plan is a guide and not a straightjacket. Ultimately, the Joint Plan Commission and Village/Town Boards will determine the direction of the community to assure that it is responsive to new opportunities and changing conditions.

IMPLEMENTATION

Goals and Objectives

Goal:

The village and town will cooperate with other units of government in order to obtain the highest quality of service for village and town residents in the most cost efficient manner. By cooperating with other units of government in the Roberts/Warren area, the village and town will seek to lessen or eliminate the duplication of services, uncertain or overlapping areas of responsibility, and otherwise waste of tax dollars.

Objectives:

- Attempt to coordinate the Comprehensive Plan with St. Croix County to ensure an organized approach to the development of the planning area.
- Foster communication between different units of governmetn in the area to help ensure effective and efficient service delivery to all residents.
- The village and town will endeavor to work with the county and other units of government having jurisdiction within the planning area to continue infrastructure development and improvements.
- Enhance community development through efficient delivery of government services and coordinated regional growth.

Policies

- Establish mutually agreeable edges and edge character.
- Coordinate development with St. Croix County and the state.

Conclusion

Regardless of what course future development does take in the Roberts/Warren community, demands for public services and increased pressures for unsuitable development of land will continue. Without some control over future development the community will not be able to effectively and economically meet these demands. This could result in various problems for the taxpayers, including: land use and traffic problems; high taxes, minimal municipal services; low and declining property values; and congested and blighted environmental conditions. Community officials have recognized the problems and the potential, and they are preparing for orderly development. Part of this program, the preparation of a comprehensive plan and a program for its implementation, has now been accomplished.

This is only the first step, however. The plan can either become a static policy statement gathering dust on a shelf, or it can be transformed into a dynamic action program for orderly, efficient and rewarding development. The first alternative will do nothing to improve the stature of the community—the second alternative will. Given a concerned government and citizenry, the planning program can become a blueprint for growth that will change as the community changes, yet will always give the community considered objectives to reach.

2003–2007 Action Plan

In Figure 30 (see next page), the foregoing strategies are supplemented by specific recommended actions and their responsible parties for the next five years. It is recommended that the Action Pan be updated annually.

FIGURE 30

2003–2007 ACTION PLAN • Village of Roberts / Town of Warren

What	Who	When
ORGANIZATION:		
1. Designate party(ies) responsible for implementing and updating comprehensive plan.	Village/Town Boards	2003
2. Create six member Town/Village Plan Committee	Village/Town Boards	2003
INTER-GOVERNMENTAL COOPERATION:		
1. Coordinate plans with Fire District, School District, and County	Joint Plan Commission	2003–2007
2. Explore extraterritorial zoning committee	Village/Town Boards	2003–2007
LAND USE:		
1. Coordinate Village, Town, and County Land Use Plans.	Joint Plan Commission	Ongoing
2. Update zoning ordinance and map.	Village Plan Commission	2004
3. Update Comprehensive Plan every 5 years.	Joint Plan Commission	2007
TRANSPORTATION:		
1. Division Street (street, curb, sidewalk, storm sewer)	Village Board	2004–2005
2. Sidewalk to park.	Village Board	2003–2005
3. Bypass lane for business park entrance.	Village Board	2003
4. Intersection upgrades per WisDOT studies (study results available 2002).	Village Board	2006
SEWER, WATER, STORM SEWER:		
1. Upgrade well #2 to 400 gpm.	Village Board	2003
2. WWTP upgrade.	Village Board	2005–2006
3. Complete water distribution system study.	Village Board	2004
4. Prepare erosion control ordinance.	Village Board	2003
5. Storm water study.	Village Board	2004
COMMUNITY FACILITIES:		
1. New municipal garage.	Village Board	2003
2. Upgrade village hall/police areas.	Village Board	2004–2005
3. Upgrade park facilities.	Village Board	2003–2007
4. Add fire station.	Village/Town Boards	2003–2007
5. Add library.	Village/Town Boards	2003–2007
PARKS and RECREATION:		
1. Prepare parks and outdoor recreation plan.	Joint Plan Commission	2005–2007
ECONOMIC DEVELOPMENT:		
1. Evaluate potential grants for job creation (WisDOT TEA, DOC).	Village Board	2003–2007
2. Create recruitment packet, map of sites/land available.	Village Board	ongoing
HOUSING:		
1. Explore Wisconsin Smart Growth Dividend Program and other funding resources.	Joint Plan Commission	2005–2007
AG / NATURAL RESOURCES:		
1. Preserve wetlands and prime agricultural land.	Village/Town Boards	Ongoing

APPENDIX I

Water System

EXISTING WATER SYSTEM EVALUATION - YEAR 2001
ROBERTS, WISCONSIN
OCTOBER 2001

DEFINITIONS

Average Daily Demand Total amount of water used in 365 days / 365 days

Maximum Daily Demand Maximum amount of water used in 1 day over the past 3 years (ISO definition)

Maximum Hourly Demand Maximum amount of water used in one hour period over past 3 years
Typically expressed as daily rate

DETERMINE DESIGN PARAMETERS

1. Average Daily Demand

		1997	1998	1999	2000
Residential	gallons	18,618,000	19,213,000	18,344,000	17,729,000
Commercial	gallons	3,566,000	2,312,000	2,742,000	2,643,000
Industrial	gallons	0	0	0	0
Other	gallons	1,418,000	1,269,000	1,131,000	893,000
TOTAL	gallons	23,602,000	22,794,000	22,217,000	21,265,000
Average Day Use	GPD	64,663	62,449	60,868	58,260

Based on pumping rates and time, water volume per day = 75,000 to 80,000 gallons

Average Daily Demand = 80,000 gallons per day

2. Maximum Daily Demand

		1997	1998	1999	1999
WWTP Average	GPD	70500	65700	67900	73700
WWTP Maximum	GPD	125500	123400	100800	131600
Peak Day Factor		1.8	1.9	1.5	1.8

Maximum daily demand typically varies from 1.5 to 3.0 times the average daily demand
Based on WWTP data for average and maximum daily flows, peak factor = 1.5 to 1.9
Water Demand Peaks are likely higher than WWTP peak flows, use peak factor of 2.5

Maximum Daily Demand = Average Daily Demand * Peak Factor = 80,000 * 2.5 = 200,000
Maximum Daily Demand = 200,000 gallons per day

3. Maximum Hourly Demand

Maximum hourly demand typically varies from 2.0 to 8.0 times the average daily demand
Peak factor may be significantly higher for small water systems
Use a peak factor of 6.0
Maximum Hourly Demand = Average Daily Demand * Peak Factor = 80,000 * 6.0 = 480,000

Maximum Hourly Demand = 480,000 gallons per day

4. Required Fire Flow

Maximum ISO rating requires 3500 gpm for 3.0 hours
Water main loop to business park designed for 3500 gpm flow

WATER SUPPLY CAPACITY

1. Assure storage is replenished in 24-hours if two maximum days occur successively

Minimum Well Supply (with largest well out of service) >= Maximum day domestic demand

Minumum Well Supply = 125 gpm = 180,000 gpd
Maximum Day Demand = 200,000 gpd

Minimum Well Supply < Maximum Day Demand
Criteria Not Satisfied

WATER STORAGE CAPACITY

1. Assure storage capacity when domestic demand exceeds pumping capacity

Storage Facility Capacity > Peak Hour Rate - Well Supply Rate (with largest well out of service) for a 4-hour period

Storage Facility Capacity = 250,000 gallons
Peak Hour Rate = 480,000 gpd = 20,000 gph
Well Supply Rate (with largest well out of service) = 125 gpm = 7,500 gph

(Peak Hour Rate * 4 hours) - (Well Supply Rate * 4 hours) = 50,000

Storage Facility Capacity > Peak Hour Rate - Well Supply Rate for 4-hour period
Criteria Satisfied

2. Assure that capacity is available for fire fighting during peak hour demand

Storage Facility Capacity > Peak Hour Demand + Fire Fighting Requirements - Well Supply

Storage Facility Capacity = 250,000 gallons
Pumping Capacity (both wells) = 625 gpm + 125 gpm = 750 gpm = 45,000 gph
Pumping Capacity (smallest well out of service) = 625 gpm = 37,500 gph
Pumping Capacity (largest well out of service) = 125 gpm = 7,500 gph
Peak Hour Demand = 20,000 gallons per hour

Fire Fighting Requirements = 3,500 gpm for 3.0 hours = 630,000 gallons
Fire Fighting Requirements = 2,500 gpm for 2.0 hours = 300,000 gallons
Fire Fighting Requirements = 2,000 gpm for 2.0 hours = 240,000 gallons
Fire Fighting Requirements = 1,500 gpm for 2.0 hours = 180,000 gallons

Evaluate 3,500 gpm for 3.0 hours with both wells in service
Peak Hour Demand + Fire Fighting Requirements - Well Supply
20,000 (3) gallons + 630,000 gallons - 45,000 (3) gallons = 555,000 gallons
Storage Facility Capacity is not adequate

Evaluate 2,500 gpm for 2.0 hours with both wells in service

Peak Hour Demand + Fire Fighting Requirements - Well Supply

20,000 (2) gallons + 300,000 gallons - 45,000 (2) gallons = 250,000 gallons

Storage Facility Capacity is adequate

Evaluate 2,500 gpm for 2.0 hours with smallest well out of service

Peak Hour Demand + Fire Fighting Requirements - Well Supply

20,000 (2) gallons + 300,000 gallons - 37,500 (2) gallons = 265,000 gallons

Storage Facility Capacity is not adequate

Evaluate 2,500 gpm for 2.0 hours with largest well out of service

Peak Hour Demand + Fire Fighting Requirements - Well Supply

20,000 (2) gallons + 300,000 gallons - 7,500 (2) gallons = 325,000 gallons

Storage Facility Capacity is not adequate

FUTURE WATER SYSTEM EVALUATION with EXISTING WELLS
based on average of "low" and "high" population projections
ROBERTS, WISCONSIN
OCTOBER 2001

	Year 2000	Year 2005	Year 2010	Year 2015	Year 2020
Estimated Residential Units	400	650	1100	1560	2012
Estimated Persons / Dwelling Unit	2.47	2.47	2.47	2.47	2.47
Estimated Population	990	1,610	2,720	3,850	4,970
Year 2000 Avg Demand (GPD)	80,000				
Avg Demand (GPD) / Person	81	81	81	81	81
Average Daily Demand (GPD)	80,000	130,100	219,800	311,100	401,600
Maximum Daily Demand (GPD) PF=2.5	200,000	325,300	549,500	777,800	1,004,000
Maximum Hourly Demand (GPD) PF=6.0	480,000	780,600	1,318,800	1,866,600	2,409,600
Maximum Hourly Demand (GPH)	20,000	32,500	55,000	77,800	100,400
WATER SUPPLY CAPACITY					
Maximum Daily Demand (GPD)	200,000	325,300	549,500	777,800	1,004,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	125	125	125	125	125
Total Well Supply Rate (gpm)	750	750	750	750	750
Well 1 Supply (GPD)	900,000	900,000	900,000	900,000	900,000
Well 2 Supply (GPD)	180,000	180,000	180,000	180,000	180,000
Total Well Supply (GPD)	1,080,000	1,080,000	1,080,000	1,080,000	1,080,000
WATER STORAGE CAPACITY					
Year 2000 Storage Facility Capacity (gal)	250,000	250,000	250,000	250,000	250,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	125	125	125	125	125
Total Well Supply Rate (gpm)	750	750	750	750	750
Domestic Demand (Peak Hour x 4 hrs) (gal)	80,000	130,000	220,000	311,200	401,600
Well 1 Supply (gpm x 4 hrs) (gal)	150,000	150,000	150,000	150,000	150,000
Well 2 Supply (gpm x 4 hrs) (gal)	30,000	30,000	30,000	30,000	30,000
Total Well Supply (gpm x 4 hrs) (gal)	180,000	180,000	180,000	180,000	180,000
Required Storage Volume					
Peak Hour Rate - Well 1 Supply Rate	-70,000	-20,000	70,000	161,200	251,600
Peak Hour Rate - Well 2 Supply Rate	50,000	100,000	190,000	281,200	371,600
Peak Hour Rate - Total Well Supply Rate	-100,000	-50,000	40,000	131,200	221,600
WATER STORAGE CAPACITY					
Evaluate Fire Requirements 2500 gpm for 2 hours					

Fire Flow Requirements (gallons)	300,000	300,000	300,000	300,000	300,000
Peak Hour Demand for 2 hours	40,000	65,000	110,000	155,600	200,800
Well 1 Supply for 2 hours	75,000	75,000	75,000	75,000	75,000
Well 2 Supply for 2 hours	15,000	15,000	15,000	15,000	15,000
Total Well Supply for 2 hours	90,000	90,000	90,000	90,000	90,000
REQUIRED STORAGE VOLUME					
Well 1 in Service	265,000	290,000	335,000	380,600	425,800
Well 2 in Service	325,000	350,000	395,000	440,600	485,800
Total Wells in Service	250,000	275,000	320,000	365,600	410,800
Evaluate Fire Requirements 3500 gpm for 3 hours					
Fire Flow Requirements (gallons)	630,000	630,000	630,000	630,000	630,000
Peak Hour Demand for 3 hours	60,000	97,500	165,000	233,400	301,200
Well 1 Supply for 3 hours	112,500	112,500	112,500	112,500	112,500
Well 2 Supply for 3 hours	22,500	22,500	22,500	22,500	22,500
Total Well Supply for 3 hours	135,000	135,000	135,000	135,000	135,000
REQUIRED STORAGE VOLUME					
Well 1 in Service	577,500	615,000	682,500	750,900	818,700
Well 2 in Service	667,500	705,000	772,500	840,900	908,700
Total Wells in Service	555,000	592,500	660,000	728,400	796,200

NOTES:

Does not meet supply or storage requirements with proposed system

Water Supply Capacity not Adequate

Recommend upgrading Well#2 capacity to meet current supply requirements

See FUTURE WATER SYSTEM EVALUATION with UPGRADING WELL TO 225 GPM

FUTURE WATER SYSTEM EVALUATION with UPGRADING WELL TO 225 GPM
ROBERTS, WISCONSIN
OCTOBER 2001

	Year 2000	Year 2005	Year 2010	Year 2015	Year 2020
Estimated Residential Units	400	650	1100	1560	2012
Estimated Persons / Dwelling Unit	2.47	2.47	2.47	2.47	2.47
Estimated Population	990	1,610	2,720	3,850	4,970
Year 2000 Avg Demand (GPD)	80,000				
Avg Demand (GPD) / Person	81	81	81	81	81
Average Daily Demand (GPD)	80,000	130,100	219,800	311,100	401,600
Maximum Daily Demand (GPD) PF=2.5	200,000	325,300	549,500	777,800	1,004,000
Maximum Hourly Demand (GPD) PF=6.0	480,000	780,600	1,318,800	1,866,600	2,409,600
Maximum Hourly Demand (GPH)	20,000	32,500	55,000	77,800	100,400
WATER SUPPLY CAPACITY					
Maximum Daily Demand (GPD)	200,000	325,300	549,500	777,800	1,004,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	225	225	225	225	225
Total Well Supply Rate (gpm)	850	850	850	850	850
Well 1 Supply (GPD)	900,000	900,000	900,000	900,000	900,000
Well 2 Supply (GPD)	324,000	324,000	324,000	324,000	324,000
Total Well Supply (GPD)	1,224,000	1,224,000	1,224,000	1,224,000	1,224,000
WATER STORAGE CAPACITY					
Year 2000 Storage Facility Capacity (gal)	250,000	250,000	250,000	250,000	250,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	125	125	125	125	125
Total Well Supply Rate (gpm)	750	750	750	750	750
Domestic Demand (Peak Hour x 4 hrs) (gal)	80,000	130,000	220,000	311,200	401,600
Well 1 Supply (gpm x 4 hrs) (gal)	150,000	150,000	150,000	150,000	150,000
Well 2 Supply (gpm x 4 hrs) (gal)	30,000	30,000	30,000	30,000	30,000
Total Well Supply (gpm x 4 hrs) (gal)	180,000	180,000	180,000	180,000	180,000
Required Storage Volume					
Peak Hour Rate - Well 1 Supply Rate	-70,000	-20,000	70,000	161,200	251,600
Peak Hour Rate - Well 2 Supply Rate	50,000	100,000	190,000	281,200	371,600
Peak Hour Rate - Total Well Supply Rate	-100,000	-50,000	40,000	131,200	221,600
WATER STORAGE CAPACITY					
Evaluate Fire Requirements 2500 gpm for 2 hours					

Fire Flow Requirements (gallons)	300,000	300,000	300,000	300,000	300,000
Peak Hour Demand for 2 hours	40,000	65,000	110,000	155,600	200,800
Well 1 Supply for 2 hours	75,000	75,000	75,000	75,000	75,000
Well 2 Supply for 2 hours	27,000	27,000	27,000	27,000	27,000
Total Well Supply for 2 hours	102,000	102,000	102,000	102,000	102,000
REQUIRED STORAGE VOLUME					
Well 1 in Service	265,000	290,000	335,000	380,600	425,800
Well 2 in Service	313,000	338,000	383,000	428,600	473,800
Total Wells in Service	238,000	263,000	308,000	353,600	398,800
Evaluate Fire Requirements 3500 gpm for 3 hours					
Fire Flow Requirements (gallons)	630,000	630,000	630,000	630,000	630,000
Peak Hour Demand for 3 hours	60,000	97,500	165,000	233,400	301,200
Well 1 Supply for 3 hours	112,500	112,500	112,500	112,500	112,500
Well 2 Supply for 3 hours	22,500	22,500	22,500	22,500	22,500
Total Well Supply for 3 hours	135,000	135,000	135,000	135,000	135,000
REQUIRED STORAGE VOLUME					
Well 1 in Service	577,500	615,000	682,500	750,900	818,700
Well 2 in Service	667,500	705,000	772,500	840,900	908,700
Total Wells in Service	555,000	592,500	660,000	728,400	796,200

NOTES:

Does not meet supply or storage requirements with proposed system

Water Supply Capacity Adequate through Year 2004 with largest well out of service

Storage Volume Adequate through Year 2002 for 2500 gpm for 2-hours with both wells in service

See FUTURE WATER SYSTEM EVALUATION with UPGRADING WELL TO 400 GPM

FUTURE WATER SYSTEM EVALUATION with UPGRADING WELL TO 400 GPM
ROBERTS, WISCONSIN
OCTOBER 2001

	Year 2000	Year 2005	Year 2010	Year 2015	Year 2020
Estimated Residential Units	400	650	1100	1560	2012
Estimated Persons / Dwelling Unit	2.47	2.47	2.47	2.47	2.47
Estimated Population	990	1,610	2,720	3,850	4,970
Year 2000 Avg Demand (GPD)	80,000				
Avg Demand (GPD) / Person	81	81	81	81	81
Average Daily Demand (GPD)	80,000	130,100	219,800	311,100	401,600
Maximum Daily Demand (GPD) PF=2.5	200,000	325,300	549,500	777,800	1,004,000
Maximum Hourly Demand (GPD) PF=6.0	480,000	780,600	1,318,800	1,866,600	2,409,600
Maximum Hourly Demand (GPH)	20,000	32,500	55,000	77,800	100,400
WATER SUPPLY CAPACITY					
Maximum Daily Demand (GPD)	200,000	325,300	549,500	777,800	1,004,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	400	400	400	400	400
Total Well Supply Rate (gpm)	1,025	1,025	1,025	1,025	1,025
Well 1 Supply (GPD)	900,000	900,000	900,000	900,000	900,000
Well 2 Supply (GPD)	576,000	576,000	576,000	576,000	576,000
Total Well Supply (GPD)	1,476,000	1,476,000	1,476,000	1,476,000	1,476,000
WATER STORAGE CAPACITY					
Year 2000 Storage Facility Capacity (gal)	250,000	250,000	250,000	250,000	250,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	400	400	400	400	400
Total Well Supply Rate (gpm)	1,025	1,025	1,025	1,025	1,025
Domestic Demand (Peak Hour x 4 hrs) (gal)	80,000	130,000	220,000	311,200	401,600
Well 1 Supply (gpm x 4 hrs) (gal)	150,000	150,000	150,000	150,000	150,000
Well 2 Supply (gpm x 4 hrs) (gal)	96,000	96,000	96,000	96,000	96,000
Total Well Supply (gpm x 4 hrs) (gal)	246,000	246,000	246,000	246,000	246,000
Required Storage Volume					
Peak Hour Rate - Well 1 Supply Rate	-70,000	-20,000	70,000	161,200	251,600
Peak Hour Rate - Well 2 Supply Rate	-16,000	34,000	124,000	215,200	305,600
Peak Hour Rate - Total Well Supply Rate	-166,000	-116,000	-26,000	65,200	155,600
WATER STORAGE CAPACITY					
Evaluate Fire Requirements 2500 gpm for 2 hours					

Fire Flow Requirements (gallons)	300,000	300,000	300,000	300,000	300,000
Peak Hour Demand for 2 hours	40,000	65,000	110,000	155,600	200,800
Well 1 Supply for 2 hours	75,000	75,000	75,000	75,000	75,000
Well 2 Supply for 2 hours	48,000	48,000	48,000	48,000	48,000
Total Well Supply for 2 hours	123,000	123,000	123,000	123,000	123,000
REQUIRED STORAGE VOLUME					
Well 1 in Service	265,000	290,000	335,000	380,600	425,800
Well 2 in Service	292,000	317,000	362,000	407,600	452,800
Total Wells in Service	217,000	242,000	287,000	332,600	377,800
Evaluate Fire Requirements 3500 gpm for 3 hours					
Fire Flow Requirements (gallons)	630,000	630,000	630,000	630,000	630,000
Peak Hour Demand for 3 hours	60,000	97,500	165,000	233,400	301,200
Well 1 Supply for 3 hours	112,500	112,500	112,500	112,500	112,500
Well 2 Supply for 3 hours	72,000	72,000	72,000	72,000	72,000
Total Well Supply for 3 hours	184,500	184,500	184,500	184,500	184,500
REQUIRED STORAGE VOLUME					
Well 1 in Service	577,500	615,000	682,500	750,900	818,700
Well 2 in Service	618,000	655,500	723,000	791,400	859,200
Total Wells in Service	505,500	543,000	610,500	678,900	746,700

NOTES:

Does not meet supply or storage requirements with proposed system

Water Supply Capacity Adequate through Year 2010 with largest well out of service

Storage Volume Adequate through Year 2005 for 2500 gpm for 2-hours with both wells in service

See FUTURE WATER SYSTEM EVALUATION with UPGRADING TO 3-WELL SYSTEM

FUTURE WATER SYSTEM EVALUATION with UPGRADING TO 3-WELL SYSTEM
ROBERTS, WISCONSIN
OCTOBER 2001

	Year 2000	Year 2005	Year 2010	Year 2015	Year 2020
Estimated Residential Units	400	650	1100	1560	2012
Estimated Persons / Dwelling Unit	2.47	2.47	2.47	2.47	2.47
Estimated Population	990	1,610	2,720	3,850	4,970
Year 2000 Avg Demand (GPD)	80,000				
Avg Demand (GPD) / Person	81	81	81	81	81
Average Daily Demand (GPD)	80,000	130,100	219,800	311,100	401,600
Maximum Daily Demand (GPD) PF=2.5	200,000	325,300	549,500	777,800	1,004,000
Maximum Hourly Demand (GPD) PF=6.0	480,000	780,600	1,318,800	1,866,600	2,409,600
Maximum Hourly Demand (GPH)	20,000	32,500	55,000	77,800	100,400
WATER SUPPLY CAPACITY					
Maximum Daily Demand (GPD)	200,000	325,300	549,500	777,800	1,004,000
Well 1 Supply Rate (gpm)	625	625	625	625	625
Well 2 Supply Rate (gpm)	400	400	400	400	400
Well 3 Supply Rate (gpm)	400	400	400	400	400
Total Well Supply Rate (gpm)	1,025	1,025	1,025	1,025	1,025
Well 1 Supply (GPD)	900,000	900,000	900,000	900,000	900,000
Well 2 Supply (GPD)	576,000	576,000	576,000	576,000	576,000
Well 3 Supply (GPD)	576,000	576,000	576,000	576,000	576,000
Total Well Supply (GPD)	1,476,000	1,476,000	1,476,000	1,476,000	1,476,000
Well Supply with Largest Well Out of Service	1,152,000	1,152,000	1,152,000	1,152,000	1,152,000
WATER STORAGE CAPACITY					
Year 2000 Storage Facility Capacity (gal)	250,000	250,000	250,000	250,000	250,000
Well Supply Rate with Largest Well Out of Service (gpm)	800	800	800	800	800
Total Well Supply Rate (gpm)	1,425	1,425	1,425	1,425	1,425
Domestic Demand (Peak Hour x 4 hrs) (gal)	80,000	130,000	220,000	311,200	401,600
Well Supply with Largest Well Out of Serv(gpm x 4 hrs) (gal)	192,000	192,000	192,000	192,000	192,000
Total Well Supply (gpm x 4 hrs) (gal)	342,000	342,000	342,000	342,000	342,000
Required Storage Volume					
Peak Hour Rate - Rate with Largest Well Out of Service	-112,000	-62,000	28,000	119,200	209,600
Peak Hour Rate - Total Well Supply Rate	-262,000	-212,000	-122,000	-30,800	59,600
WATER STORAGE CAPACITY					
Evaluate Fire Requirements 2500 gpm for 2 hours					

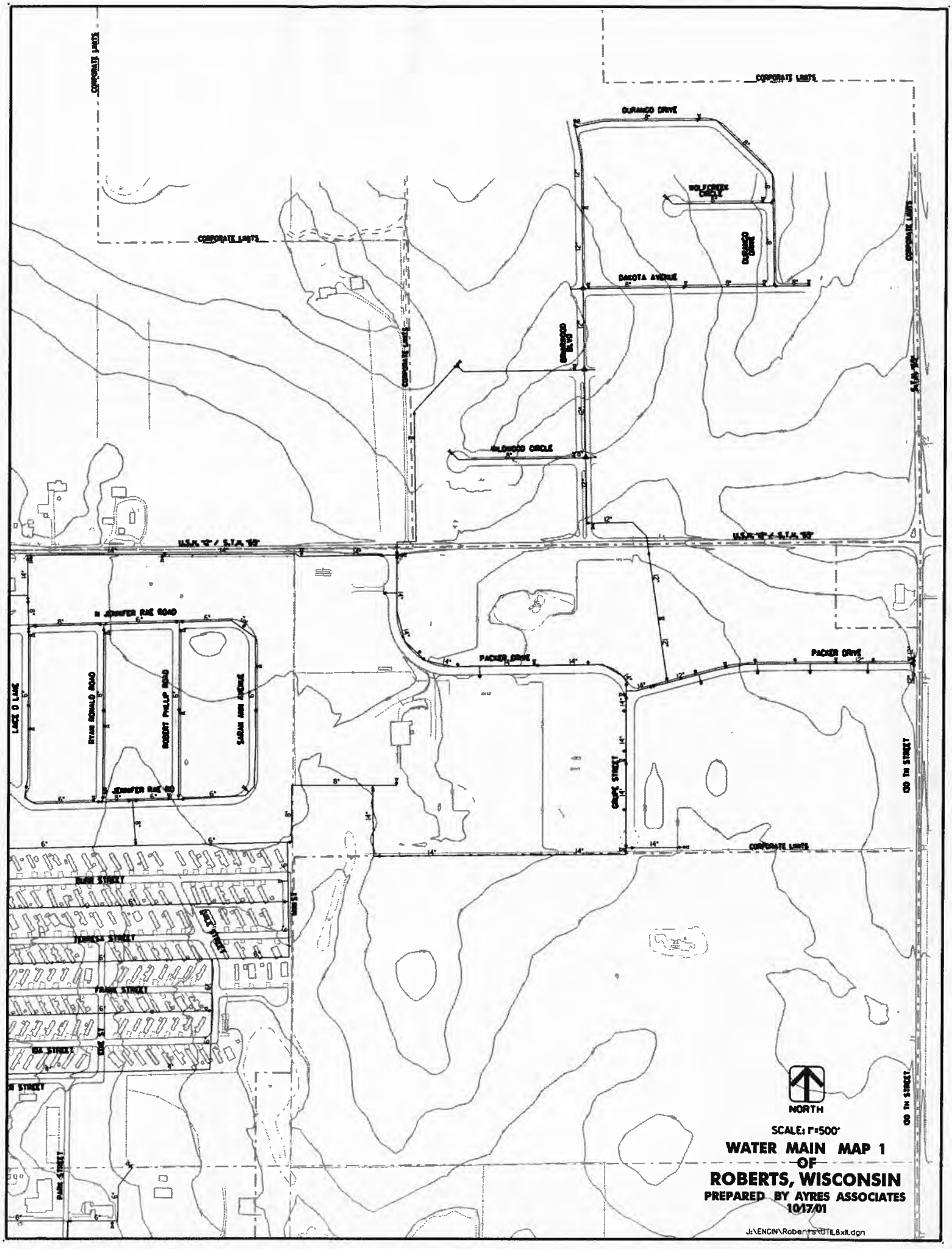
Fire Flow Requirements (gallons)	300,000	300,000	300,000	300,000	300,000
Peak Hour Demand for 2 hours	40,000	65,000	110,000	155,600	200,800
Supply for 2 hours with Largest Well Out of Service	96,000	96,000	96,000	96,000	96,000
Total Well Supply for 2 hours	171,000	171,000	171,000	171,000	171,000
REQUIRED STORAGE VOLUME					
Largest Well Out of Service	244,000	269,000	314,000	359,600	404,800
Total Wells in Service	169,000	194,000	239,000	284,600	329,800
Evaluate Fire Requirements 3500 gpm for 3 hours					
Fire Flow Requirements (gallons)	630,000	630,000	630,000	630,000	630,000
Peak Hour Demand for 3 hours	60,000	97,500	165,000	233,400	301,200
Well Supply for 3 hours with Largest Well Out of Service	144,000	144,000	144,000	144,000	144,000
Total Well Supply for 3 hours	256,500	256,500	256,500	256,500	256,500
REQUIRED STORAGE VOLUME					
Largest Well Out of Service	546,000	583,500	651,000	719,400	787,200
Total Wells in Service	433,500	471,000	538,500	606,900	674,700

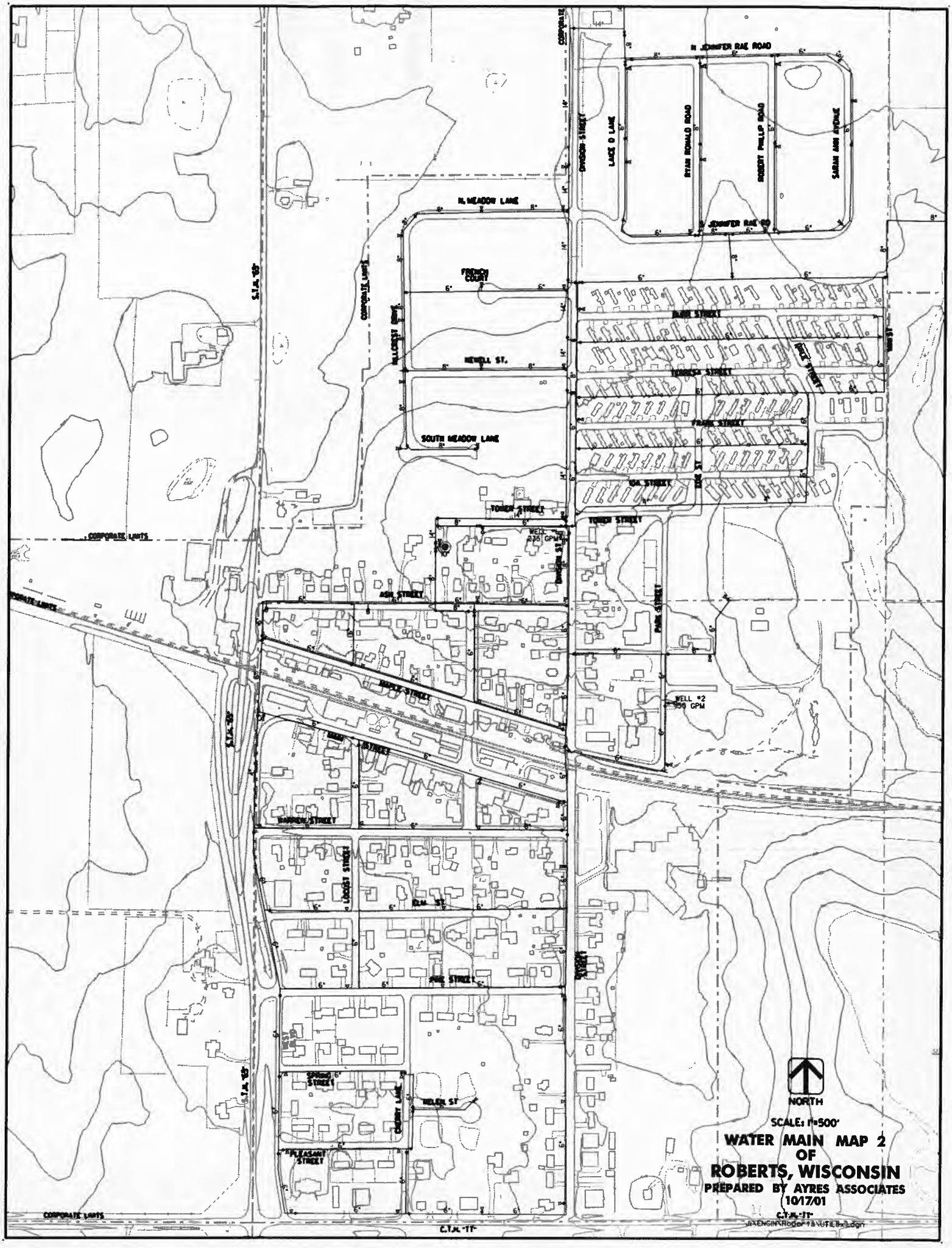
NOTES:

Does not meet supply or storage requirements with proposed system

Water Supply Capacity Adequate through Year 2020 with largest well out of service

Recommend additional storage capacity of 600,000 gallons for Total Storage Capacity of 850,000 gallons to provide 3500 gpm fire flow for 3-hour period


CORPORATE LIMITS
DURANGO DRIVE
DURANGO CIRCLE
DURANGO BLVD
DAKOTA AVENUE
MILDRED CIRCLE
U.S.H. "X" / S.T.H. "XX"
N JENNIFER RAE ROAD
LACE O LANE
RYAN RONALD ROAD
ROBERT PHILIP ROAD
SARAH ANN AVENUE
JENNIFER RAE RD
PACKER DRIVE
GRUPE STREET
OLD 74 STREET
MAIN STREET
PARK STREET
OAK STREET
NORTH
SCALE: 1"=500'
WATER MAIN MAP 1
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
10/17/01
J:\ENGIN\Roberts\UTIL8x11.dgn


N. JENNIFER RAE ROAD
RYAN RONALD ROAD
ROBERT PHILLIP ROAD
SARAH ANN AVENUE
JENNIFER RAE RD
LAKE O LANE
DIVISION STREET
N. MEADOW LANE
FRENCH COURT
HILLCREST DRIVE
NEWELL ST.
SOUTH MEADOW LANE
MAIN STREET
TERESA STREET
FRANK STREET
OAK STREET
ELM ST
TOWER STREET
WELL 235 GPM
ASH STREET
PARK STREET
MAPLE STREET
WELL #2
350 GPM
BIRCH STREET
WARREN STREET
LOCUST STREET
ELM ST.
PINE STREET
SPRUCE STREET
CHERRY LANE
HELEN ST
PLEASANT STREET
CORPORATE LIMITS
S.T.H. "35"
C.T.H. "T"
NORTH
SCALE: 1"=500'
WATER MAIN MAP 2
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
10/17/01

APPENDIX II

Environmental Information

INFORMATION CIRCULAI
NUMBER 3

Ground-Water Resources and Geology of St. Croix County, Wisconsin

by
R. G. Borman
U.S. Geological Survey

This report is a product of the Geological and Natural History Survey Water Resources Program which includes: systematic collection, analysis, and cataloguing of basic water data; impartial research and investigation of Wisconsin's water resources and water problems; publication of technical and popular reports and maps; and public service and information. Most of the work of the Survey's Water Resources Program is accomplished through state-federal cooperative cost sharing with the U.S. Geological Survey, Water Resources Division.

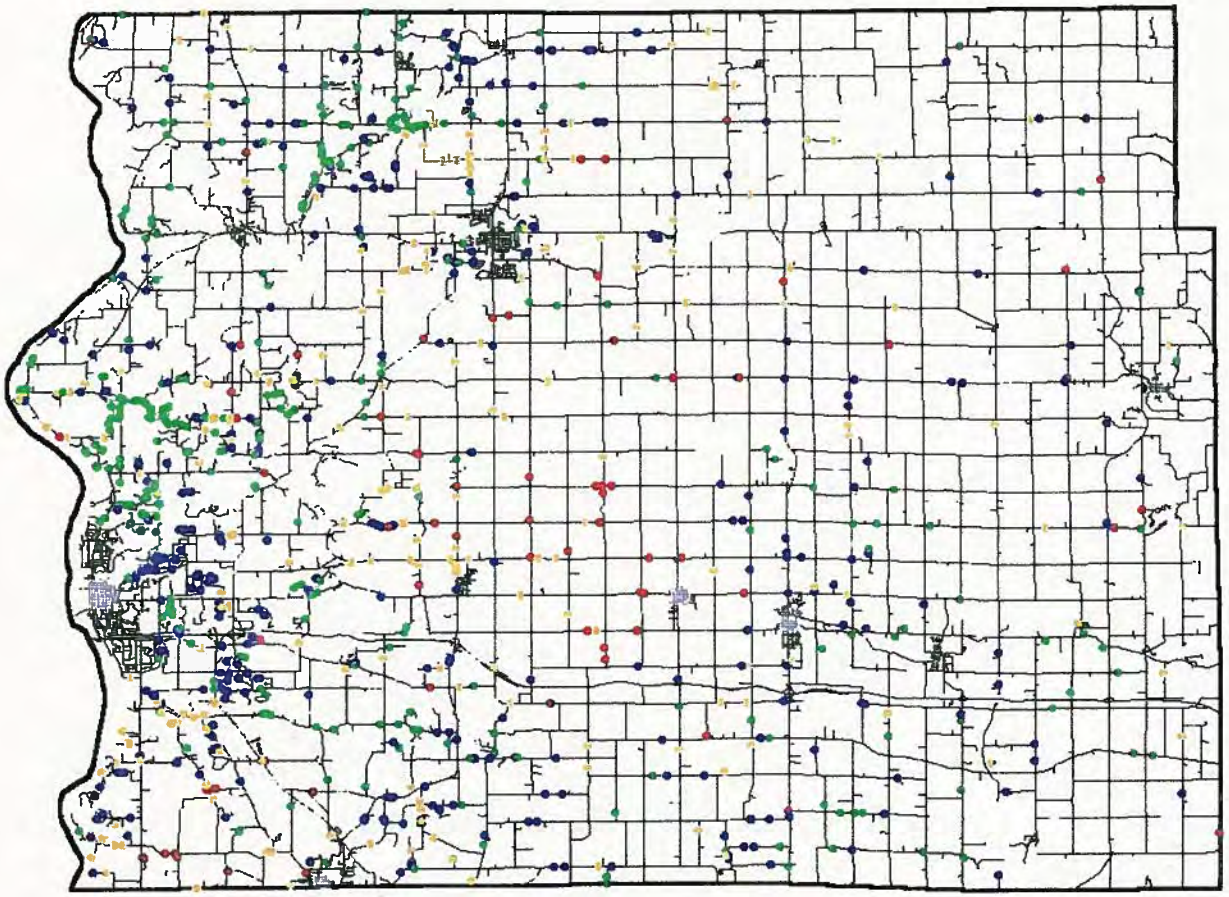
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

and

UNIVERSITY OF WISCONSIN–EXTENSION
GEOLOGICAL AND NATURAL HISTORY SURVEY
M. E. Ostrom, Director and State Geologist
Madison, Wisconsin
July 1976

Available from University of Wisconsin–Extension, Geological and Natural History Survey, 1815 University Avenue, Madison, Wisconsin 53706.

Nitrate in Groundwater

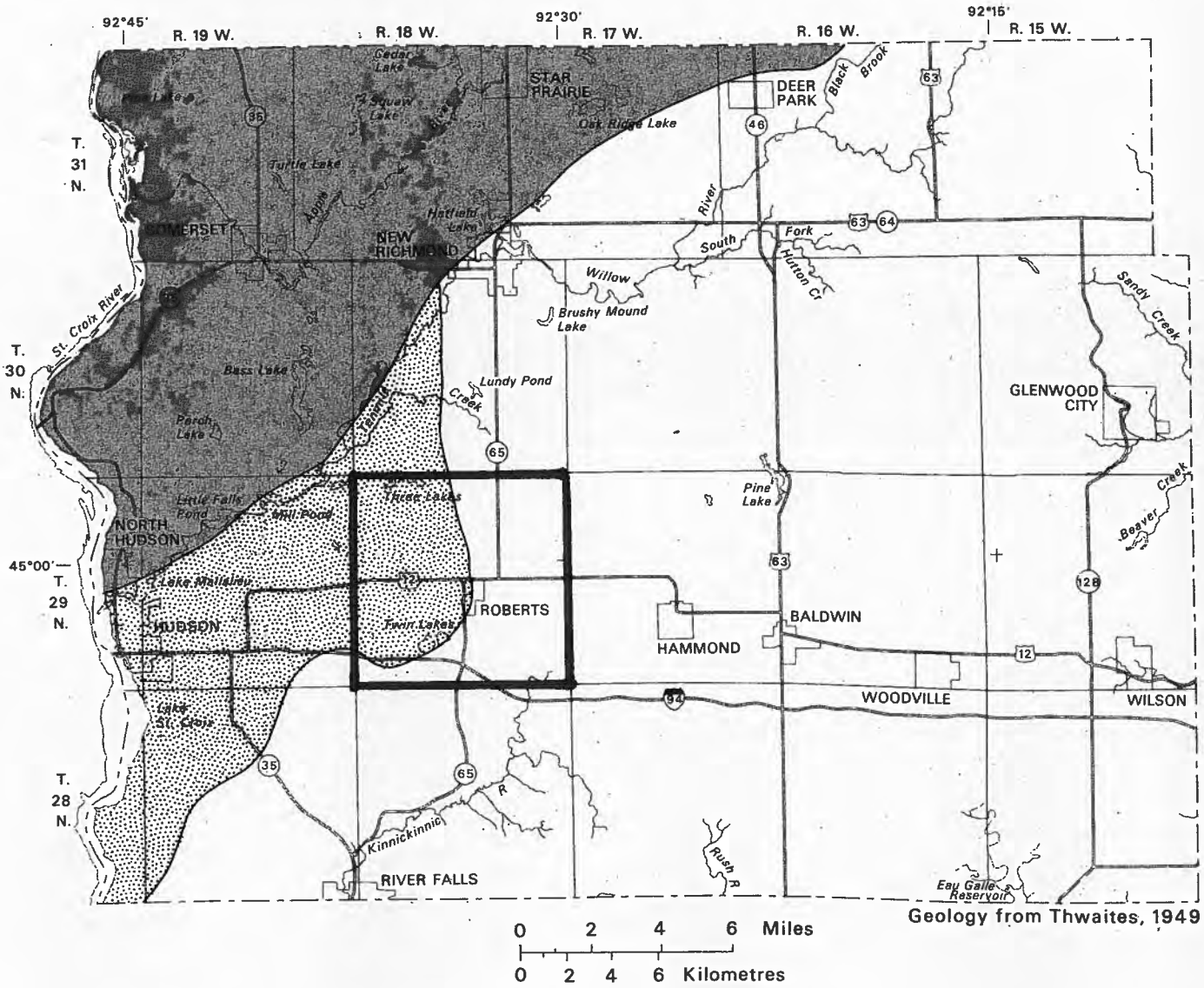


Nitrate

- Less than 2 ppm
- 2 - 4.9 ppm
- 5 - 9.9 ppm
- Over 10 ppm

Source: Drinking Water Program
UW-Extension and LWCD
1999-2001

Layout: James Janke, 4/01



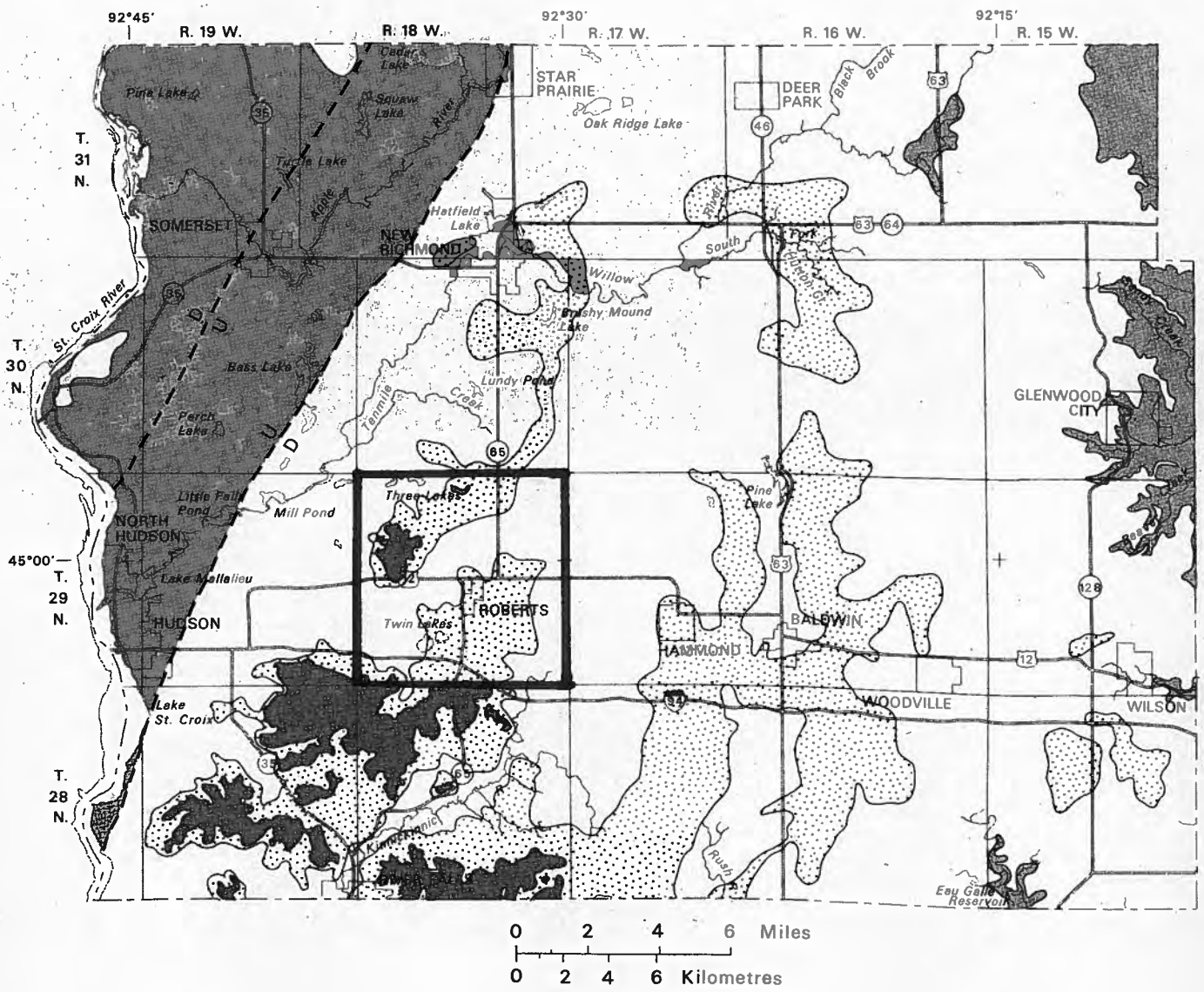
EXPLANATION

End moraine

Pitted outwash

Ground moraine

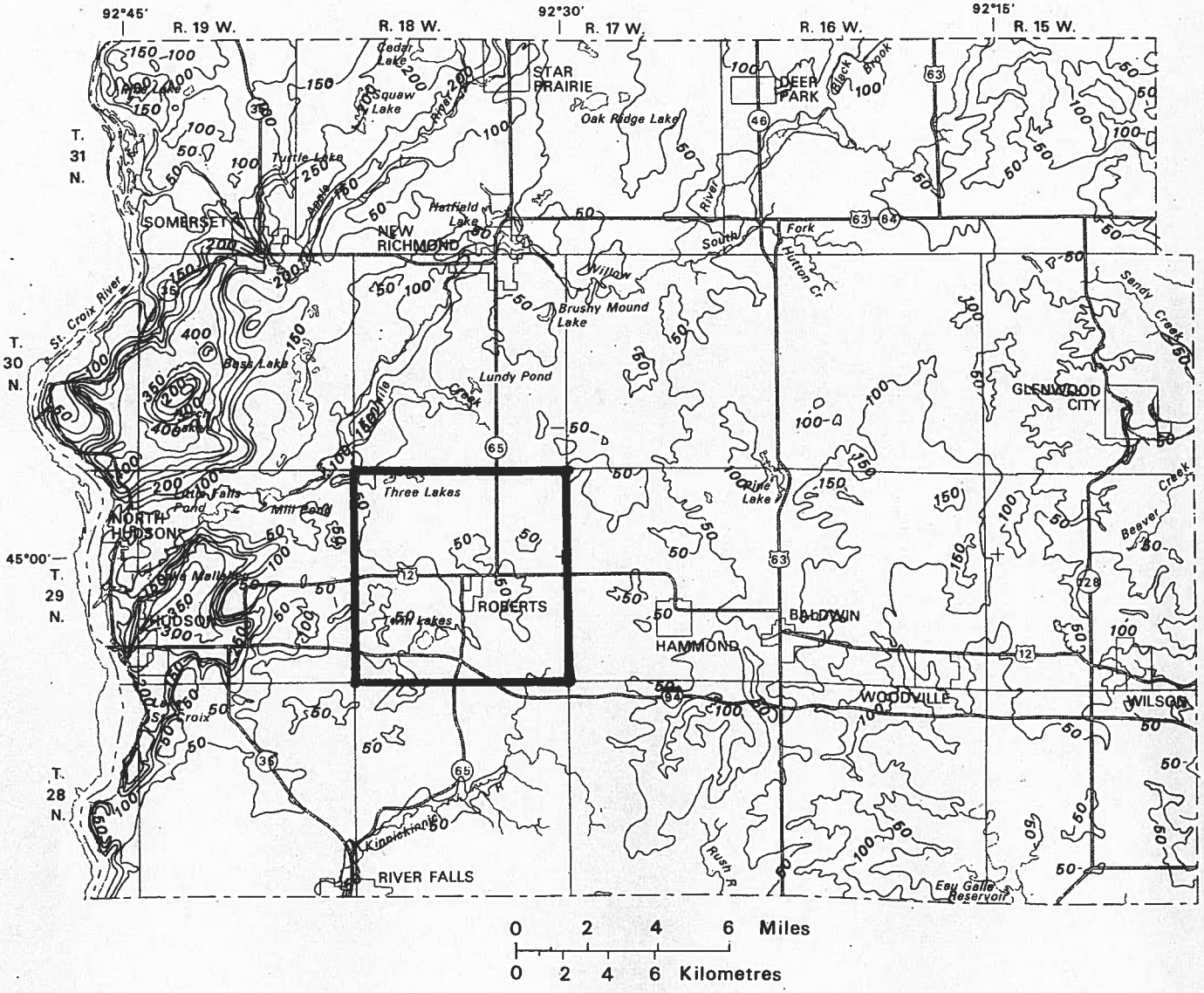
Figure 4. Glacial geology.



EXPLANATION

- Galena, Decorah, and Platteville Formations, undifferentiated — *Mostly dolomite* (ORDOVICIAN)
- St. Peter Sandstone — *Mostly sandstone* (ORDOVICIAN)
- Prairie du Chien Group — *Mostly dolomite* (ORDOVICIAN)
- Trempealeau Formation and Franconia, Galesville, Eau Claire, and Mount Simon Sandstones, undifferentiated — *Mostly sandstone; some shale, siltstone, and dolomite* (CAMBRIAN)
- Inferred fault — U, *upthrown side;* D, *downthrown side*

Figure 2. Bedrock geology.

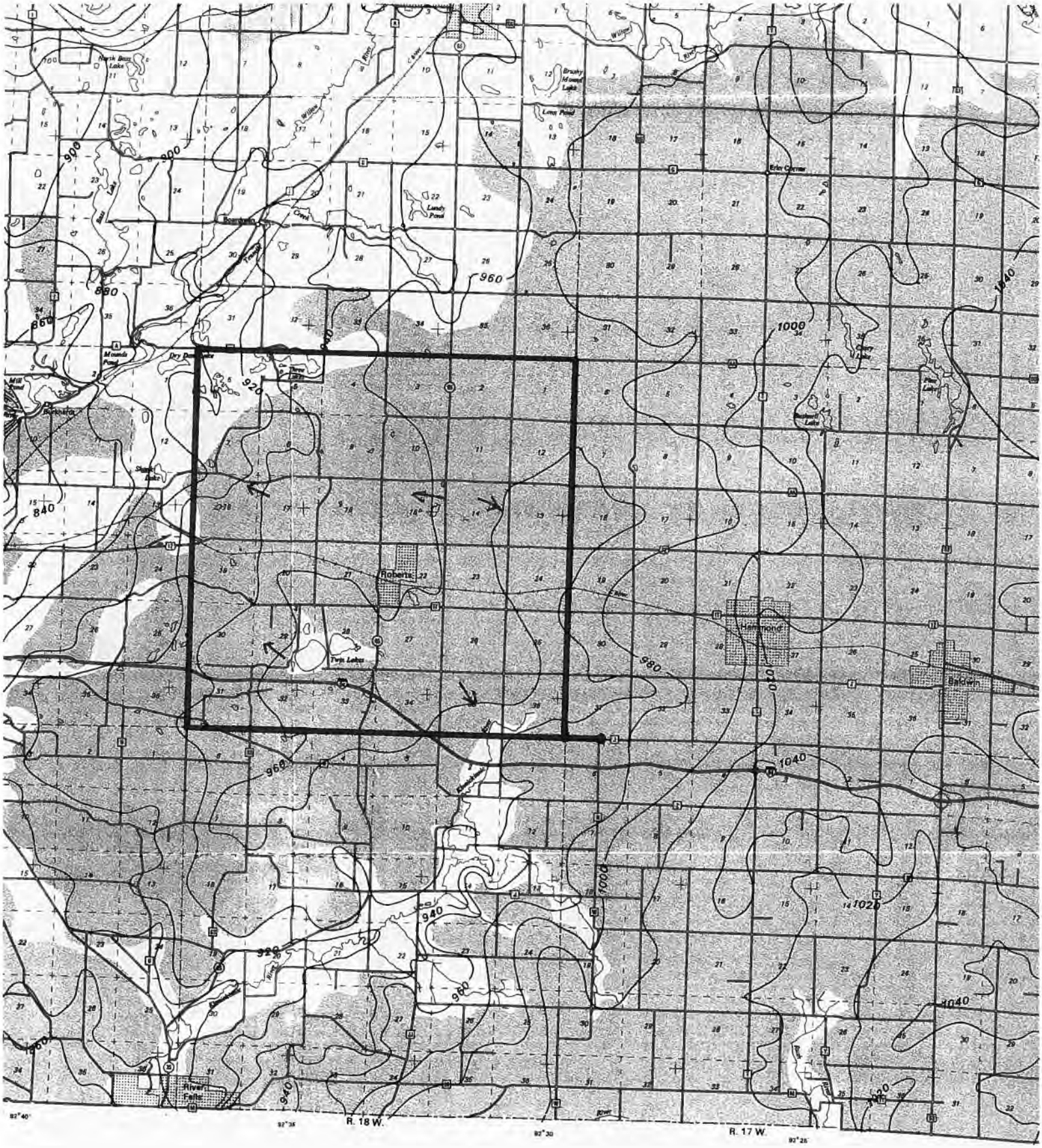


EXPLANATION

150 — Line of equal thickness of unconsolidated materials

Interval 50 feet (15 metres)

Figure 5. Thickness of unconsolidated materials.



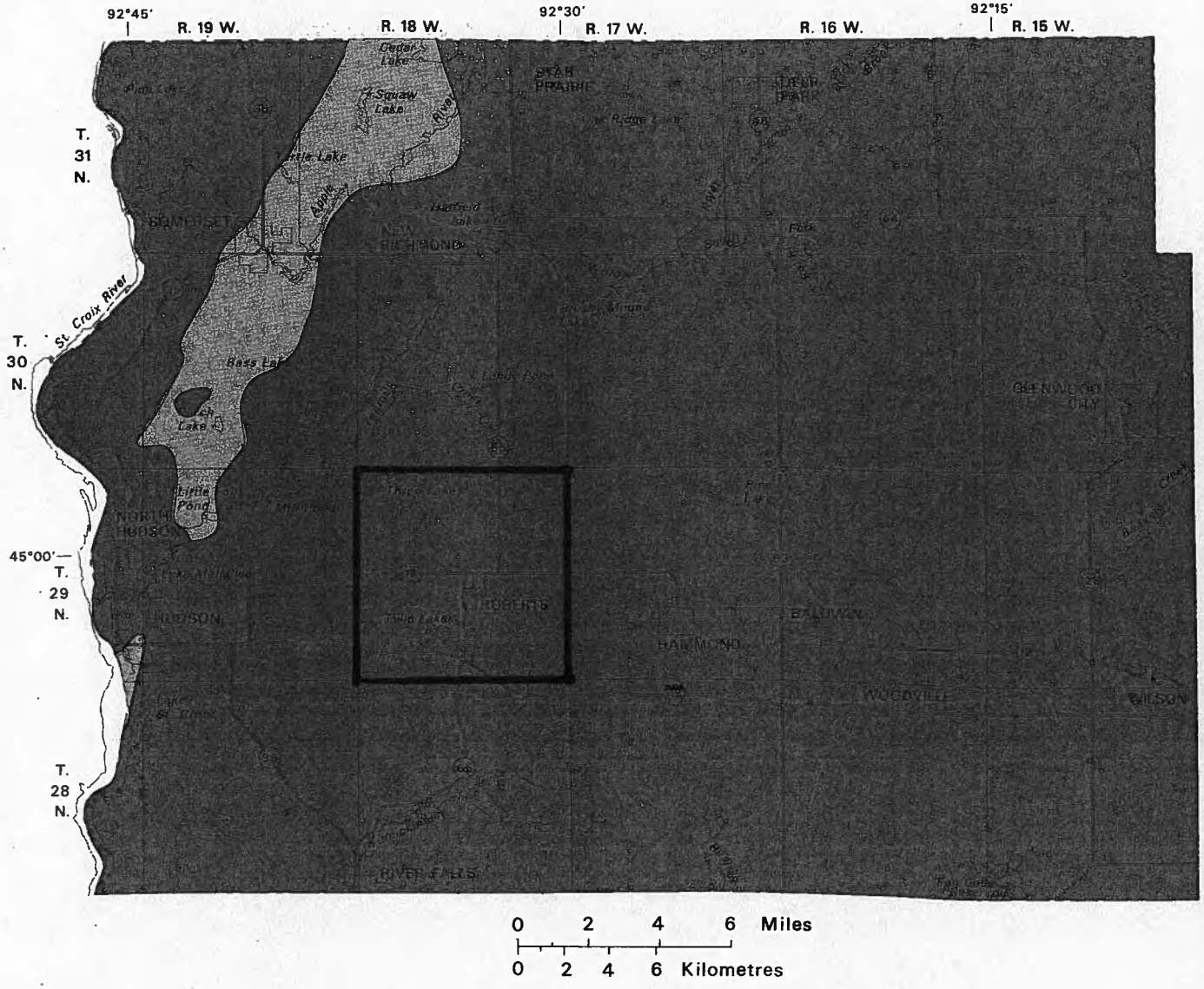
1,320,000 1,340,000 1,360,000 1,380,000

vey

0 1 2 3 4 5 Miles

0 1 2 3 4 5 6 Kilometres

Plate 1. Water-table map of St. Croix County, Wisconsin, 1974



EXPLANATION

Probable well yields

Chances of 500-1,000 gallons per minute (32-63 litres per second) are good

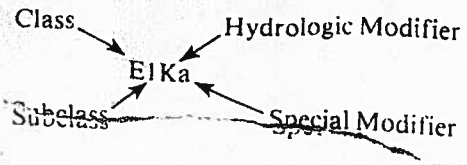
Chances of more than 1,000 gallons per minute (63 litres per second) are good

Figure 11. Probable well yields from the sandstone aquifer.

E2/WØH
WØH
WØH
WØH
WØH
E2H
12
WØH
E2H
E2H
ROBERTS
E2H
E2H
T3H
WØH
TT
E2H
WØH
E2H
E1Ka
WØH
E2H
FØHf
E1Kg
E1W
TWIN LAKES
WØH
E2H
WØH
E1Kf
South Branch Kinnickinnic River
E1H
E1Ka
WØH
E1H
94
WØH
E1H

E
E1H
E2H
E2H
E2H
E2H
E1K
WØH
E2HQ
S3K
65
THREE LAKES
WØH
A2L
E2H
T3K
WØH
WØH
E1H
E2/WØH
T3/E1K
S3/E2
WØH
T3/WØH
WØH
WØH
WØH WØHx
E1KQ
WØH
WØH
WØH
E2H
E2/WØH
WØH
WØH
12
WØH
E2H
E2H
ROBERTS
E2H
TT

LEGEND



Class and subclass

A Aquatic bed
- 1 Submergent
- 2 Floating
- 3 Rooted floating
- 4 Free floating

M Moss

E Emergent/wet meadow
- 1 Persistent
- 2 Narrow-leaved persistent
- 3 Broad-leaved persistent
- 4 Nonpersistent
- 5 Narrow-leaved nonpersistent
- 6 Broad-leaved nonpersistent

S Scrub/shrub
- 1 Deciduous
- 2 Needle-leaved deciduous
- 3 Broad-leaved deciduous
- 4 Evergreen
- 5 Needle-leaved evergreen
- 6 Broad-leaved evergreen
- 7 Dead
- 8 Needle-leaved
- 9 Broad-leaved

T Forested
- 1 Deciduous
- 2 Needle-leaved deciduous
- 3 Broad-leaved deciduous
- 5 Needle-leaved evergreen
- 7 Dead
- 8 Needle-leaved

F Flats/unvegetated wet soil
- Ø Subclass unknown
- 1 Cobble/gravel
- 2 Sand
- 3 Mud
- 4 Organic
- 5 Vegetated pioneer

W Open water
- Ø Subclass unknown
- 1 Cobble/gravel
- 2 Sand
- 3 Mud
- 4 Organic

Hydrologic modifier

- L Standing water, Lake
- R Flowing water, River
- H Standing water, Palustrine
- K Wet soil, Palustrine

Special modifiers

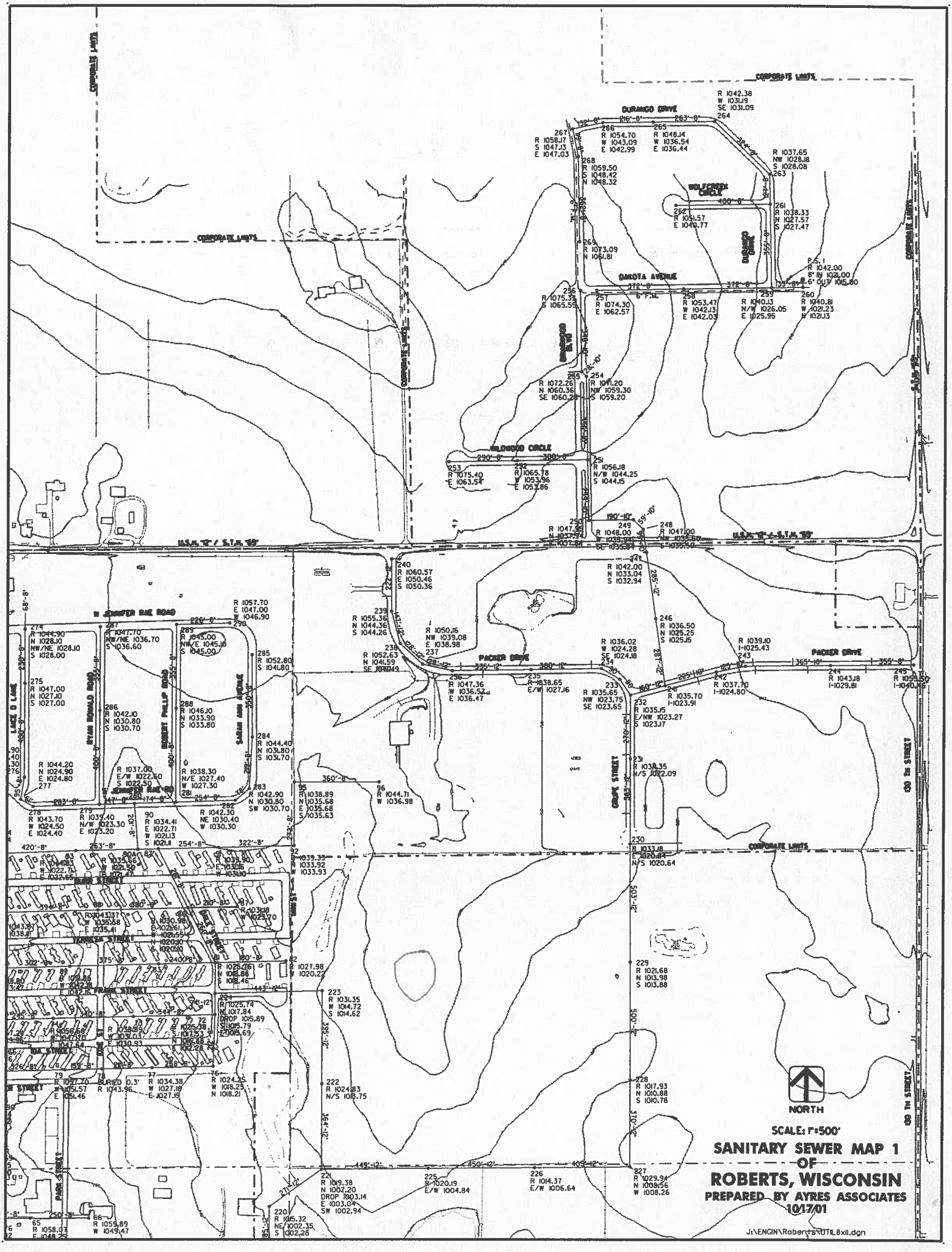
- a Abandoned cropland
- c Man-made cranberry bog
- e Exposed flats complex
- f Farmed in dry years
- g Grazed
- j Central sands complex
- m Floating vegetated mats
- s Ridge and swale complex
- v Vegetation recently removed
- w Floodplain complex
- x Excavated
- z Evidence of muskrat activity

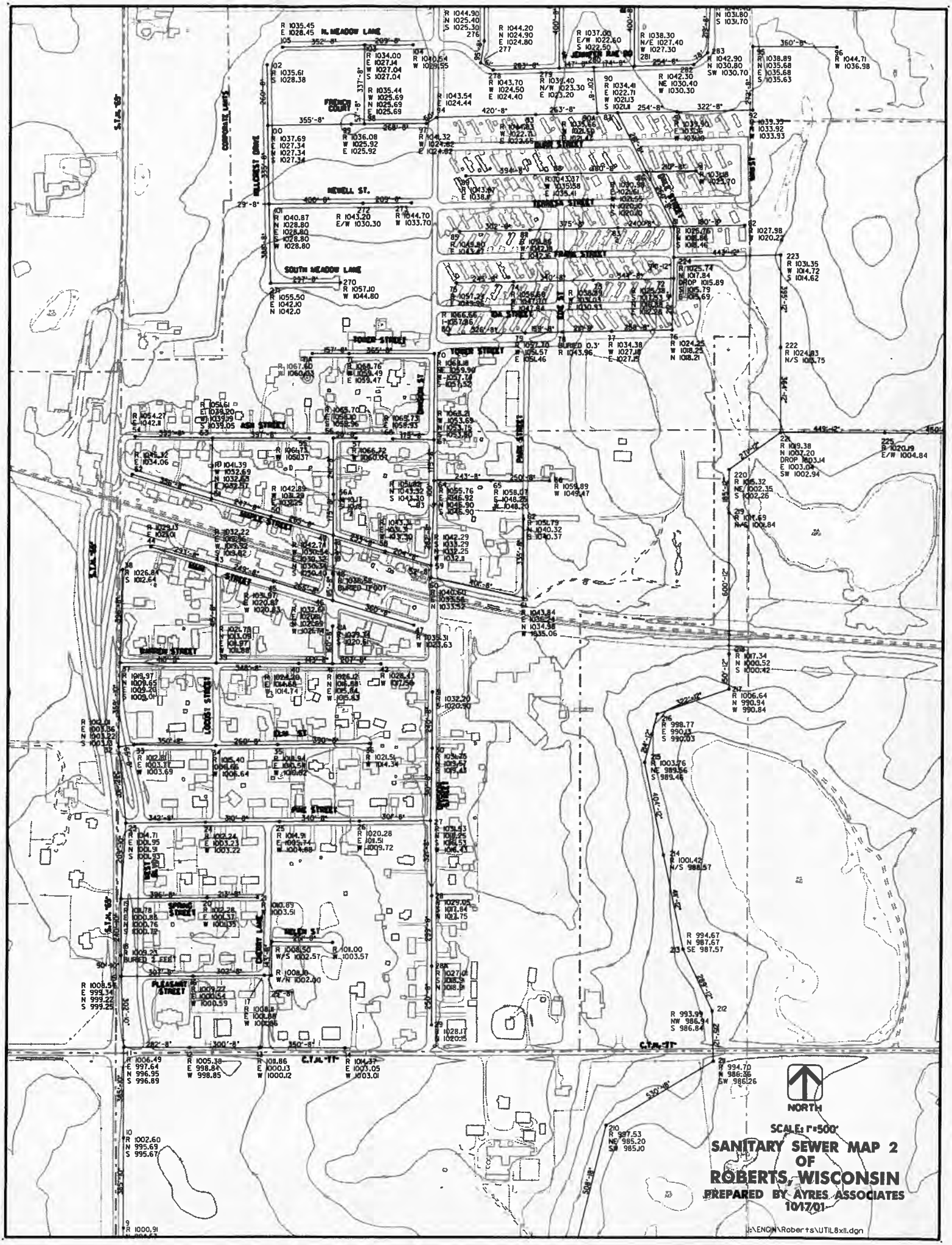
Map symbols

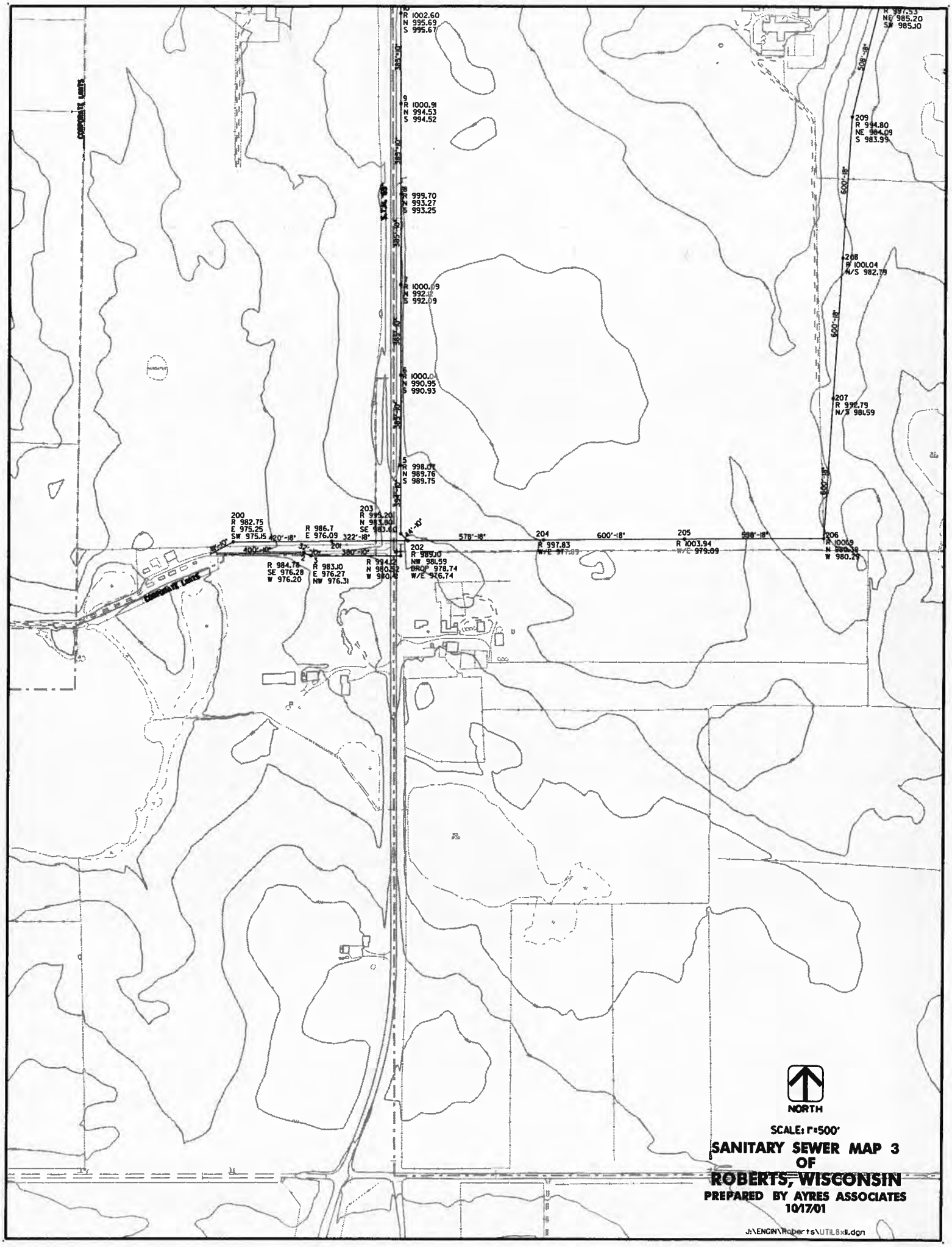
- Upland surrounded by wetland
- Wetland — upland boundary
- Wetland — deep water lake
- Level ditch
- Stream or drainage ditch
- Road
- Railroad
- Dike, levee, abandoned railroad
- Same classification on both sides of linear feature
- Wetland smaller than 2 acres
- Dammed pond smaller than 2 acres
- Excavated pond smaller than 2 acres
- Man-made dam
- Spring within a wetland
- Beaver dam
- Filled land adjacent to wetland
- County boundary
- Township boundary
- Overlap of orthophotoquad on township base map
- Area may no longer be wetland; not field verified
- Area no longer wetland; field verified

APPENDIX III

Sanitary Sewer


CORPORATE LIMITS
DURANGO DRIVE
DURANGO CIRCLE
DURANGO BLVD
DAKOTA AVENUE
WILDWOOD CIRCLE
PACKER DRIVE
U.S.H. "O" / S.T.H. "15"
N JENNIFER RAE ROAD
LAKE O LANE
RYAN RONALD ROAD
ROBERT PHILLIP ROAD
SARAH ANN AVENUE
MAIN STREET
FRANK STREET
PARK STREET
GRUE STREET
CO. TH. "I"
NORTH
SCALE: 1"=500'
SANITARY SEWER MAP 1
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
10/17/01
J:\ENGIN\Roberts\OUTL8.dgn


NORTH
SCALE: 1"=500'
SANITARY SEWER MAP 2
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
10/17/01
S:\ENGIN\Roberts\UTIL8x11.dgn



SCALE: 1"=500'

SANITARY SEWER MAP 3
OF
ROBERTS, WISCONSIN

PREPARED BY AYRES ASSOCIATES
10/17/01

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Opinion of Probable Costs
Remotely Located Joint Wastewater Treatment Plant
With Groundwater Discharge System

Cost Component	Project Cost	Roberts Cost
Local Site – Lift Station/Headworks		
Mobilization, Legal, Administration		$12,800
Sitework, Fill, Grading, Restoration		$22,500
Headworks and Mechanical Screen		$84,400**
Effluent Lift Station		$162,700**
Forcemain – 10 in. - 3.25 mile total		$322,700
Electrical Installation & Labor		$37,100
Mechanical Installation & Labor		$86,500
Subtotal		**$728,700**
Remote Site – WWTP/Absorption Cell		
Mobilization, Legal, Administration	$63,500	$26,350
Sitework, Fill, Grading, Restoration	$230,000	$95,450
Land Acquisition	$480,000	$199,200
Primary Clarification	$289,200	$120,000**
Activated Sludge Secondary Treatment	$460,000	$190,900**
Secondary Clarifier	$433,500	$179,900**
RAS / WAS flow control*	$80,000	$33,200**
Aerobic Digestion / Sludge Storage	$305,300	$126,700**
Sludge Thickening	$265,100	$110,000
Chemical Phosphorus Removal	$135,000	$56,000**
Effluent Disinfection	$149,400	$62,000**
Effluent Flow Metering / Sampling	$48,500	$20,100**
Absorption Pond Construction	$260,000	$107,900
Effluent Dispersal System (if required)	$200,000	$83,000**
Control building, Lab, Maint. Shop	$190,000	$78,850**
HVAC	$48,000	$19,900**
Electrical installation and Labor		$162,050
Mechanical Installation and Labor		$378,100
Subtotal		**$2,049,600**
TOTAL CONSTRUCTION COST		**$2,778,300**
CONTINGENCY (5%)		**$140,000**
ENGINEERING, LEGAL, ADMIN (10%)		**$290,000**
TOTAL PROJECT COST		**$3,210,000**

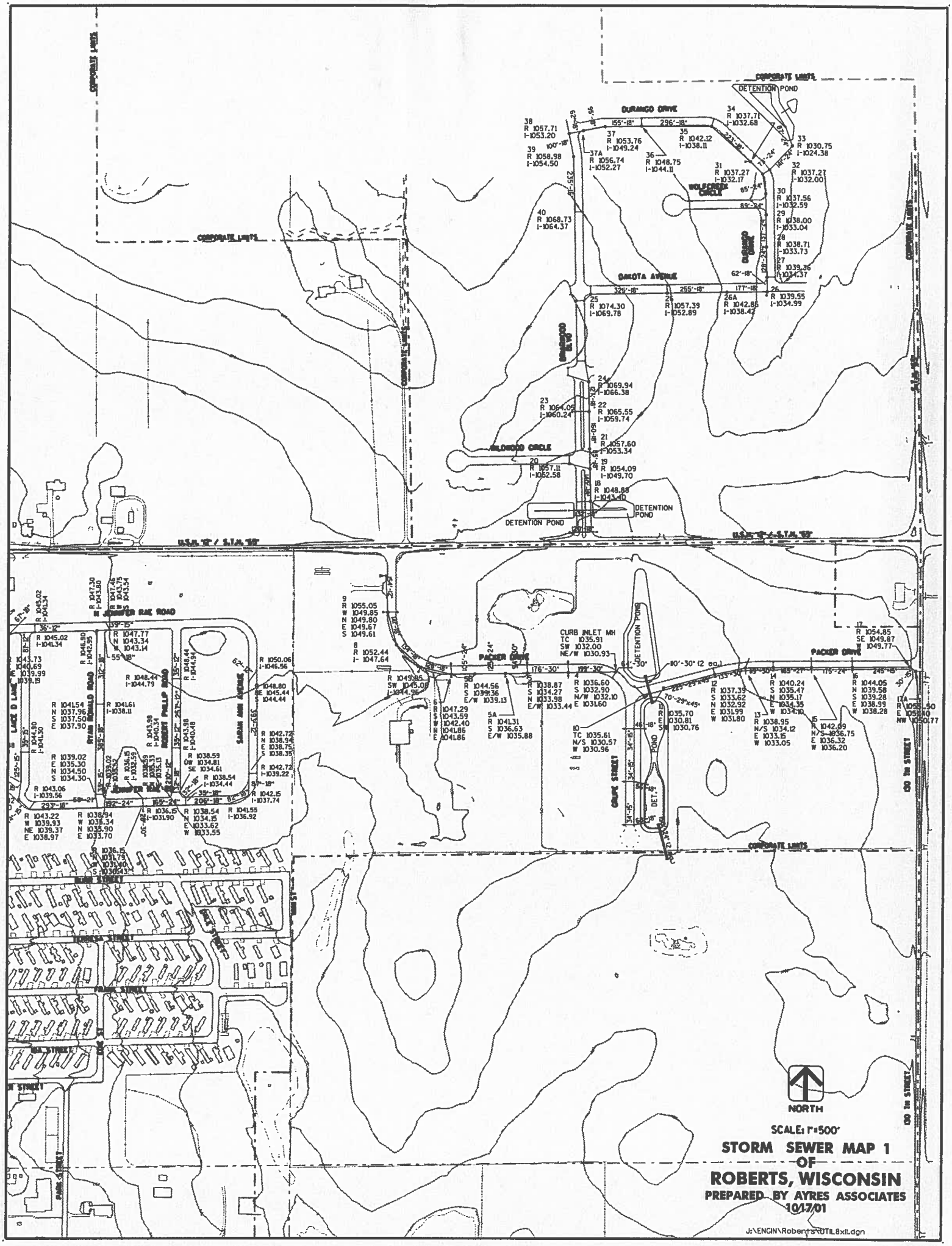
Notes:

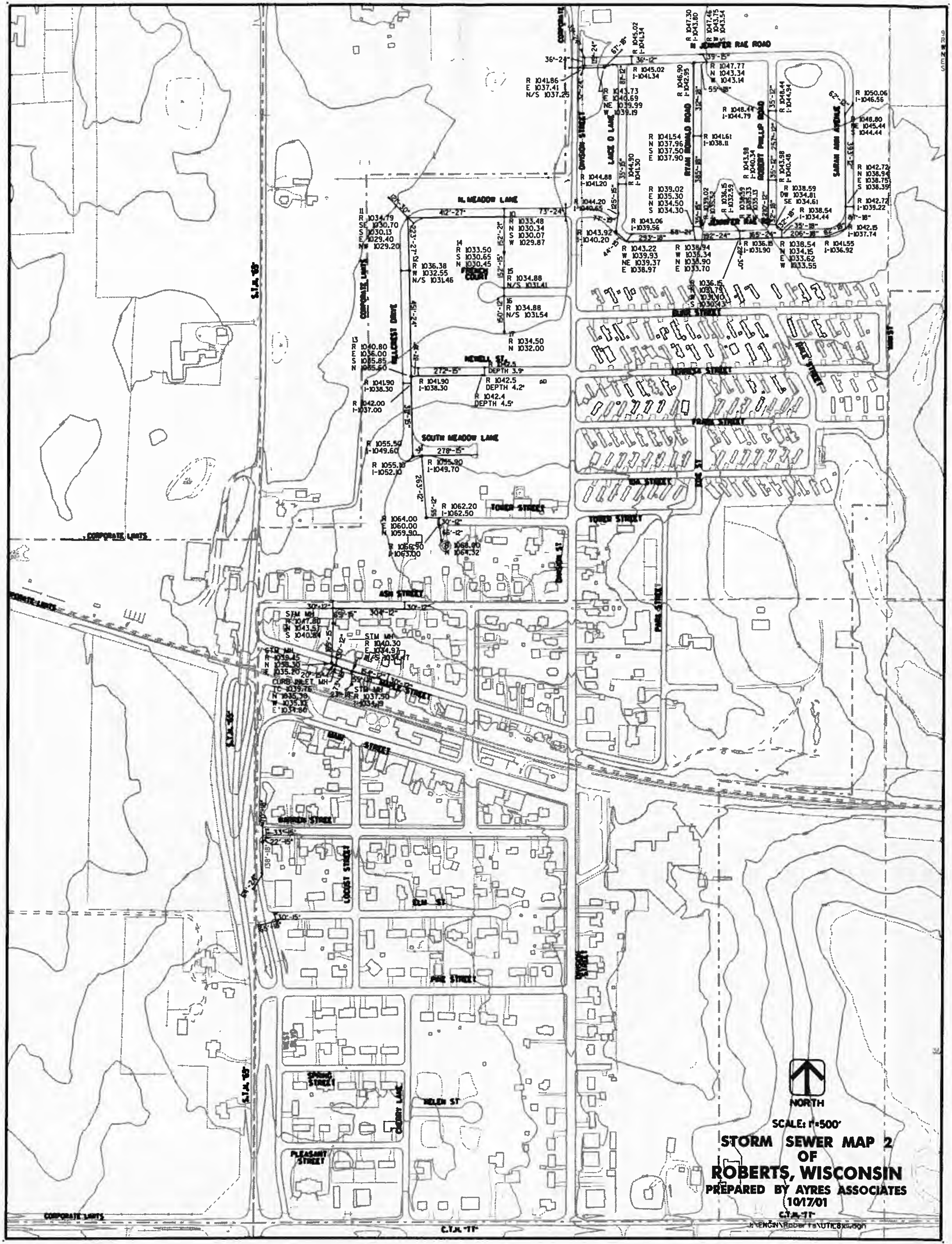
- **Cost used for calculating electrical and mechanical installation & labor costs
- Design Flow = 1,009,000 GPD
- Source: USEPA Cost Curves – 1980 adjusted by consumer price index of 2.41 to 2001 prices

- Roberts cost is 41.5% of total project cost, based on 20-year future design flows for Roberts & Hammond

APPENDIX IV

Storm Water Collection


CORPORATE LIMITS
DETENTION POND
DURANGO DRIVE
WOLFCREEK CIRCLE
DURANGO BLVD.
DAKOTA AVENUE
DETENTION POND
U.S.H. "B" / S.T.H. "59"
PACKER DRIVE
CURB INLET MH
DETENTION POND
GRUPE STREET
NORTH
SCALE: 1"=500'
STORM SEWER MAP 1
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
10/17/01
J:\ENGIN\Roberts\ROTIL8x11.dgn


STORM SEWER MAP 2
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
10/17/01
SCALE: 1"=500'
NORTH
CORPORATE LIMITS
S.T.H. "65"
C.T.H. "TT"
JENNIFER RAE ROAD
OREGON STREET
LAKE O LANE
RYAN RONALD ROAD
ROBERT PHILLIP ROAD
SARAH ANN AVENUE
N. MEADOW LANE
FRENCH COURT
HILLCREST DRIVE
NEWELL ST.
SOUTH MEADOW LANE
BURR STREET
TERRESA STREET
FRANK STREET
IDA STREET
EDE ST
TOWER STREET
DIVISION ST
ASH STREET
PARK STREET
MAIN STREET
WARREN STREET
LOCUST STREET
ELM ST
PINE STREET
SPRING STREET
CHERRY LANE
HELEN ST
PLEASANT STREET
WEST BLVD
STM MH
CURB INLET MH

APPENDIX V

Transportation

STH 65 RE-ROUTE ALTERNATIVES
ROBERTS, WISCONSIN
DECEMBER 2000

	ADVANTAGES	DISADVANTAGES	COMMENTS
Remain As Is		USH 12 Congestion 4-lane from Hwy 12 to IH 94 - HOUSES	Through Development
North Bypass		4-lane from USH 12 to IH 94 - HOUSES	Through Development
West Bypass	Least disturbance to existing homes No exg. development at hwys.12/65 Promote dev. in gravity service area		Through Development
South Bypass to Existing Interchange	Business Park Visibility and Access	4-lane from USH 12 to IH 94 - HOUSES Less Area for Business Park Expansion Promote development east - lift stations	Bypass
South Bypass to Relocated Interchange	Business Park Visibility and Access	4-lane from USH 12 to IH 94 - HOUSES Access to Exg. Business @ Exg Interchange Less Area for Business Park Expansion Promote Development east - lift stations	Bypass

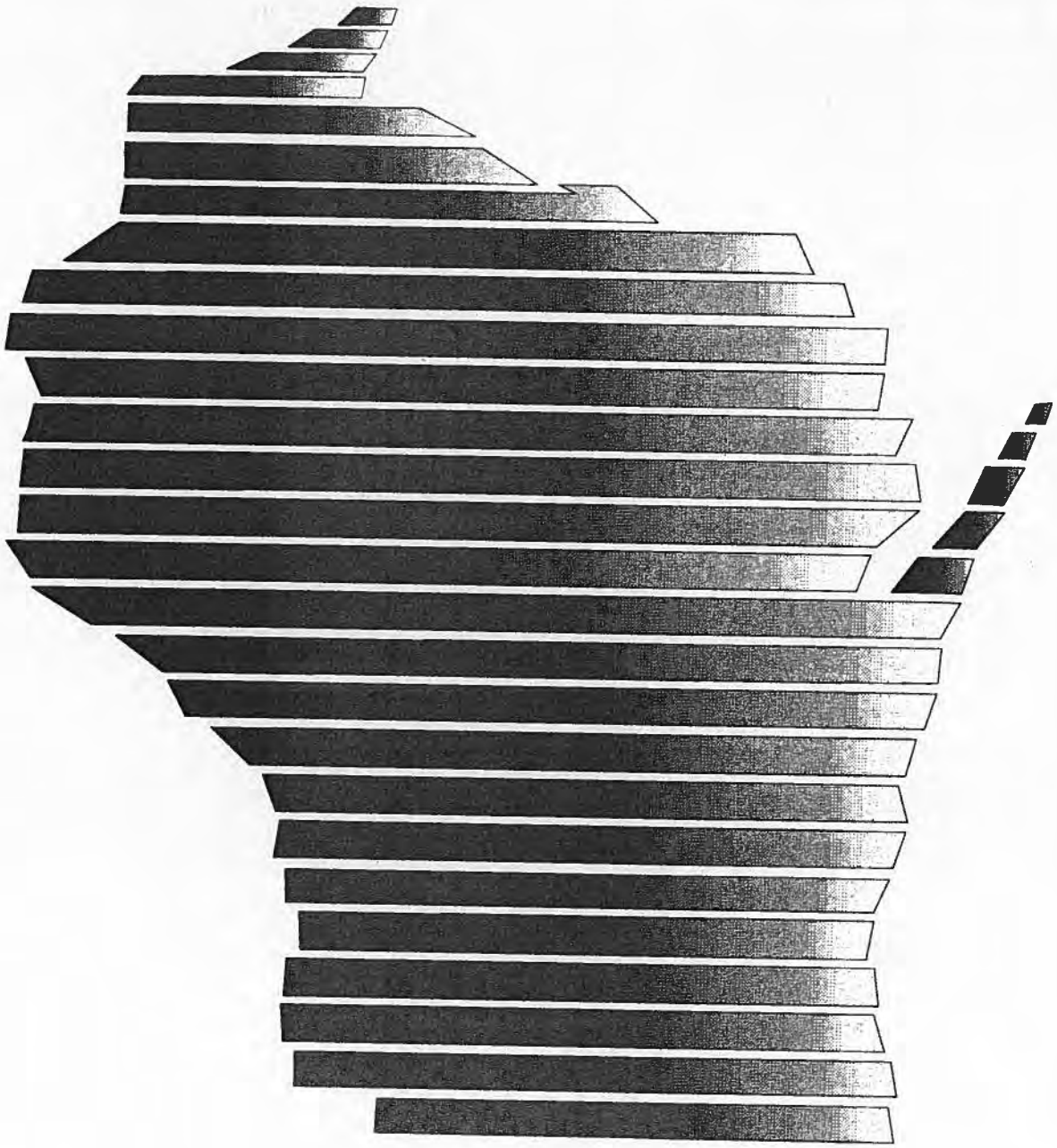
WISCONSIN HIGHWAY TRAFFIC VOLUME DATA 2000

DIVISION OF TRANSPORTATION INVESTMENT MANAGEMENT
BUREAU OF HIGHWAY PROGRAMS
DATA MANAGEMENT

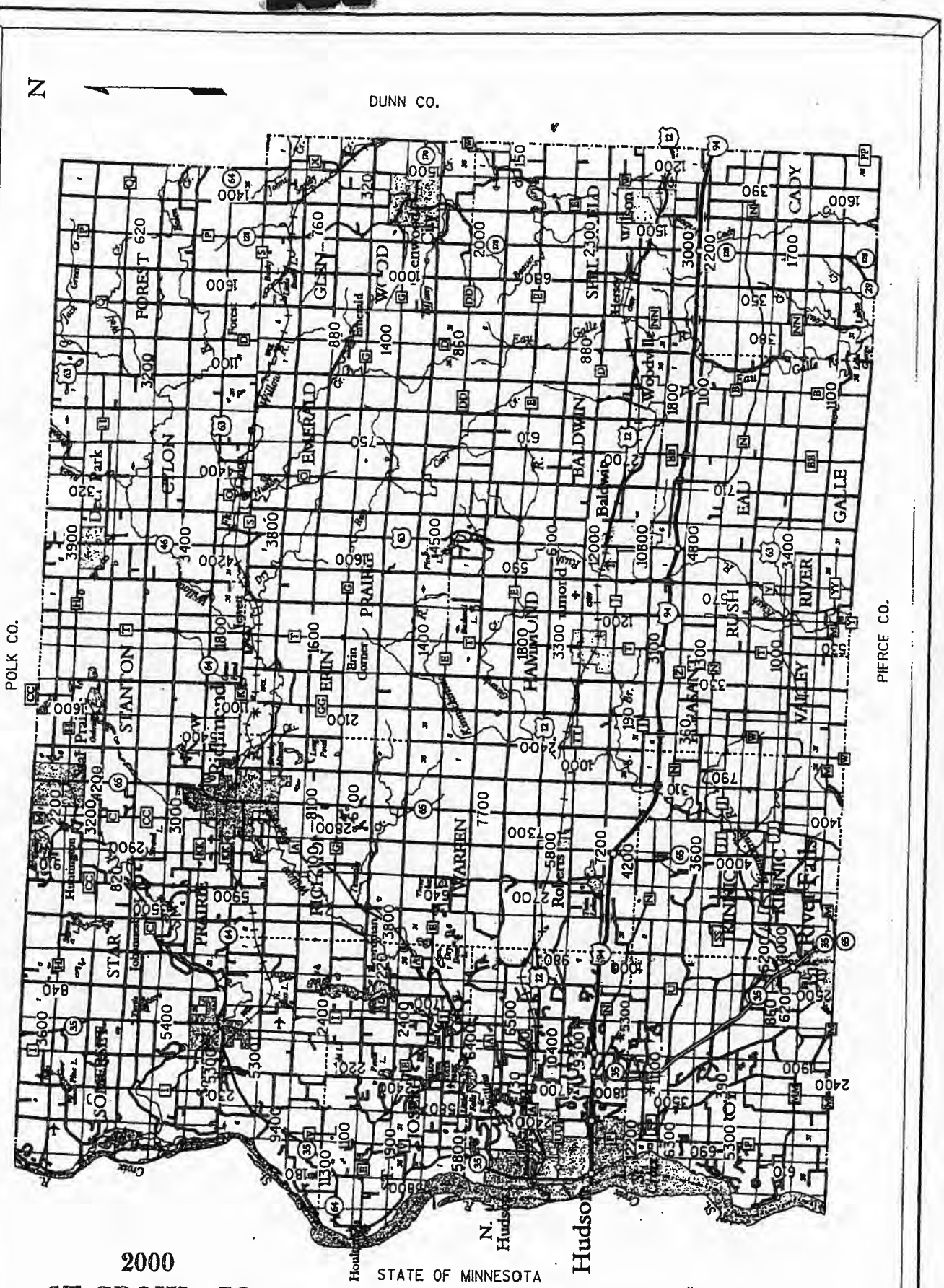
In Cooperation With
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

May 2001

2000 Wisconsin Highway Traffic Volume Data



May 2001

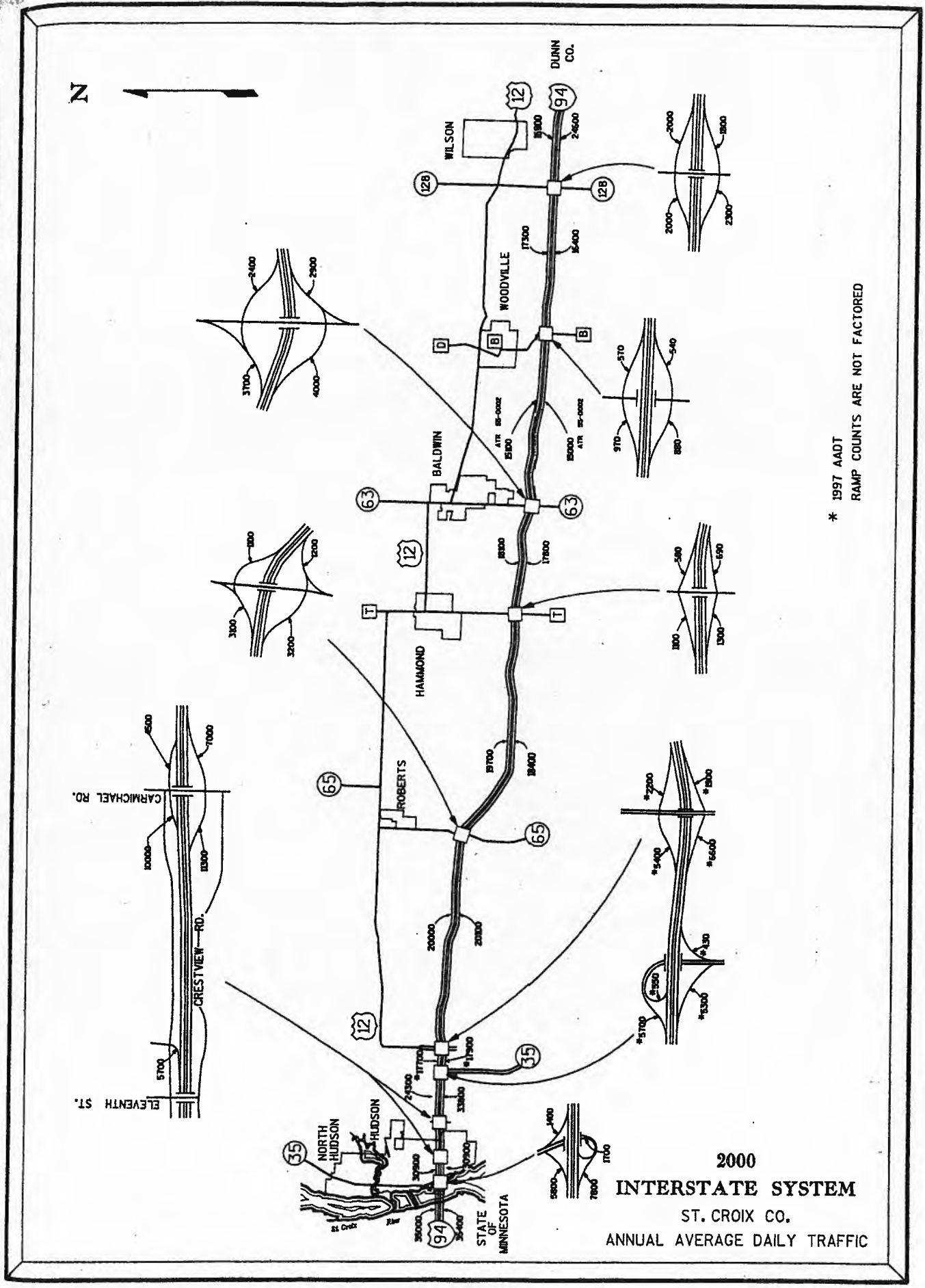


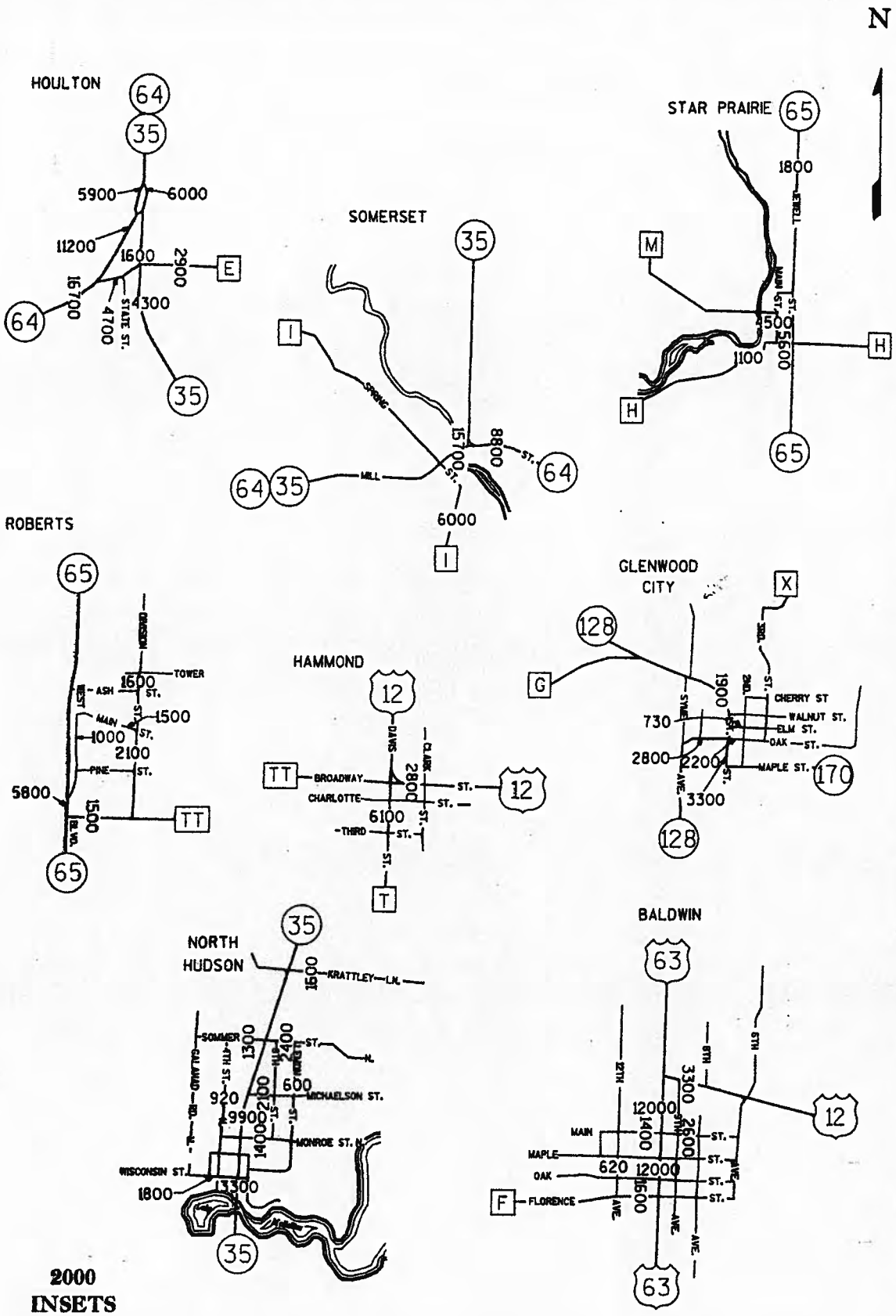
2000

ST. CROIX CO.

ANNUAL AVERAGE DAILY TRAFFIC

* 1997 AADT


N
DUNN CO.
WILSON
WOODVILLE
BALDWIN
HAMMOND
ROBERTS
NORTH HUDSON
HUDSON
STATE OF MINNESOTA
CARMICHAEL RD.
CRESTVIEW RD.
ELEVENTH ST.
* 1997 AADT
RAMP COUNTS ARE NOT FACTORED
2000
INTERSTATE SYSTEM
ST. CROIX CO.
ANNUAL AVERAGE DAILY TRAFFIC



2000
INSETS
ST. CROIX CO.
ANNUAL AVERAGE DAILY TRAFFIC

TRAFFIC FORECAST REPORT

PROJECT ID(S): 1540-08-29
ROUTE(S): STH 65

DISTRICT/COUNTY(IES): #6/St. Croix
LOCATION: STH 35 to the North County Line
COMPLETED: 3/23/01

Traffic Forecasting Section; Bureau of State Highway Programs; Division of Transportation Investment Management

Developed by: Sheila M. Haskins
E-Mail ID: sheila.haskins@dot.state.wi.us
Phone:608-266-1169
FAX #: 608-266-1856

Design Values (%'s)

ROUTE(S):	STH 65		
Design Volume(s):	11750		
K250	9.4	--	--
K100	10.4	--	--
K30	11.4	--	--
P(PHV)	14.7	--	--
T(DHV)	4.0	--	--
T(PHV)	2.3	--	--
D (Dsgn hr	62/38	--	--
K8(ADT)	--	--	--
T(A8HV)	--	--	--

Truck Class %'s

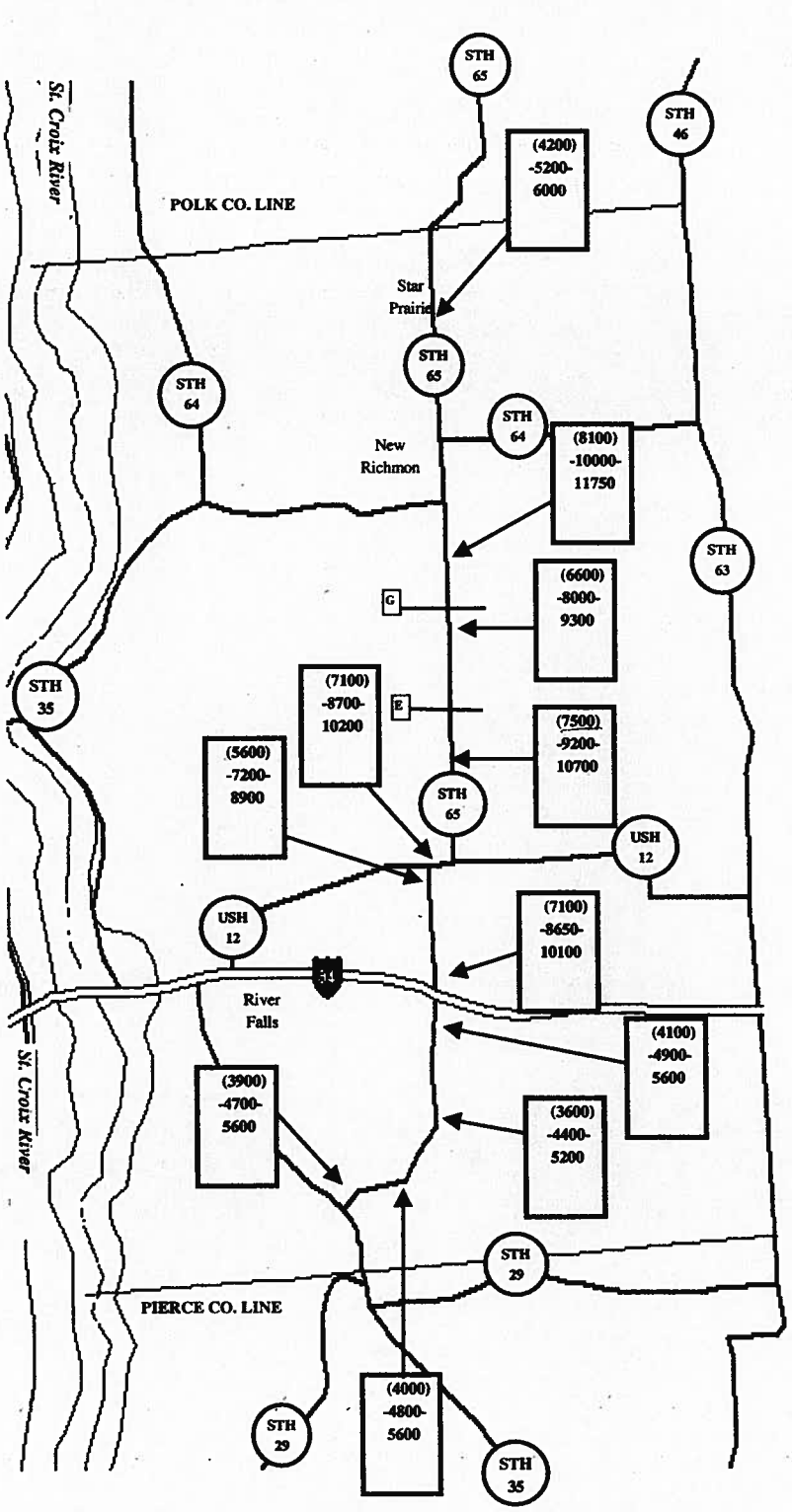
Truck Class	Seg. 1	Seg 2.	Seg. 3
2D	2.9	--	--
3AX	0.8	--	--
2S1+2S2	0.6	--	--
3-S2	0.6	--	--
DBL-BTM	0.1	--	--
TOTAL	5.0%	--	--

Specify Last Count & Forecast Years:

(000) 2000 AADT
-000- 2010 AADT
000 2020 AADT

Notes on the Forecast:

1. This projection assumes that no major new traffic generators will be developed in the vicinity of the project section over the course of the planning period.
2. Historical traffic count trends will continue increasing at a decreasing at a decreasing rate. BoxCox regression is used to project past count data.
3. Truck classification percentages were taken from the "1997 Wisconsin Vehicle Classification Data" manual, station 55-0250, just south of the Polk county line on STH 11 near Star Prairie. The AADT value in 1997 at the classification station was 4600, which may represent a more rural mix of truck class. then the remainder of the route in St. Croix county.
4. The 2000 AADT count was the last count year and the first forecast year



TRAFFIC FORECAST REPORT

PROJECT ID(S): 1540-08-29
ROUTE(S): USH 12

DISTRICT/COUNTY(IES): 6/St. Croix
LOCATION: CTH A-CTH T
COMPLETED: 6-6-01

Developed by: R. Pike
Phone: (608) 266-7997
FAX #: (608) 267-1856
E-Mail ID: robert.pike@dot.state.wi.us

Traffic Forecasting Section; Bureau of State Highway Programs; Division of Transportation Investment Management

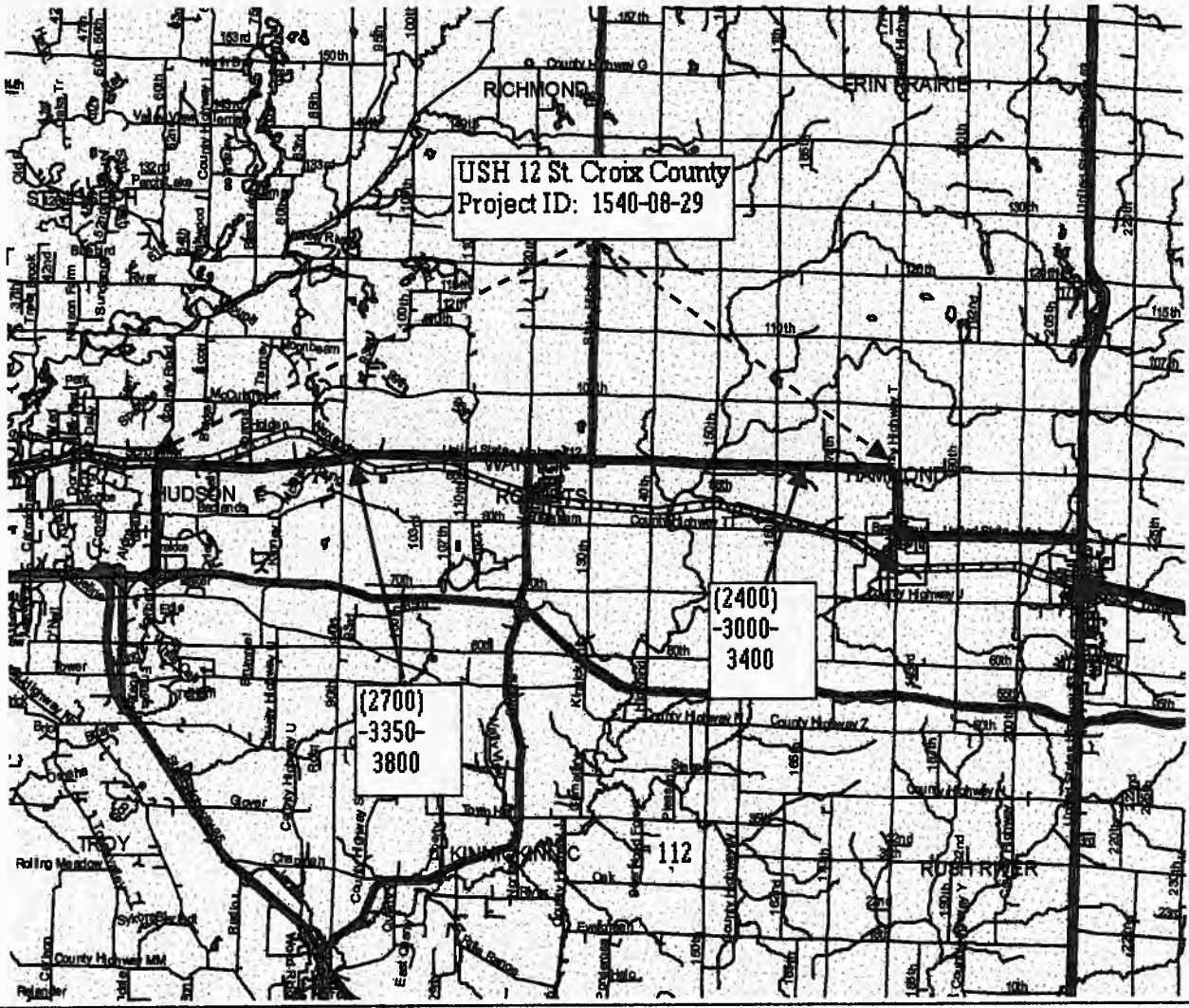
Last Count/Forecast Years:
000 =
(000) = 2000 Count
-000- = 2010 AADT
000 = 2020 AADT

N

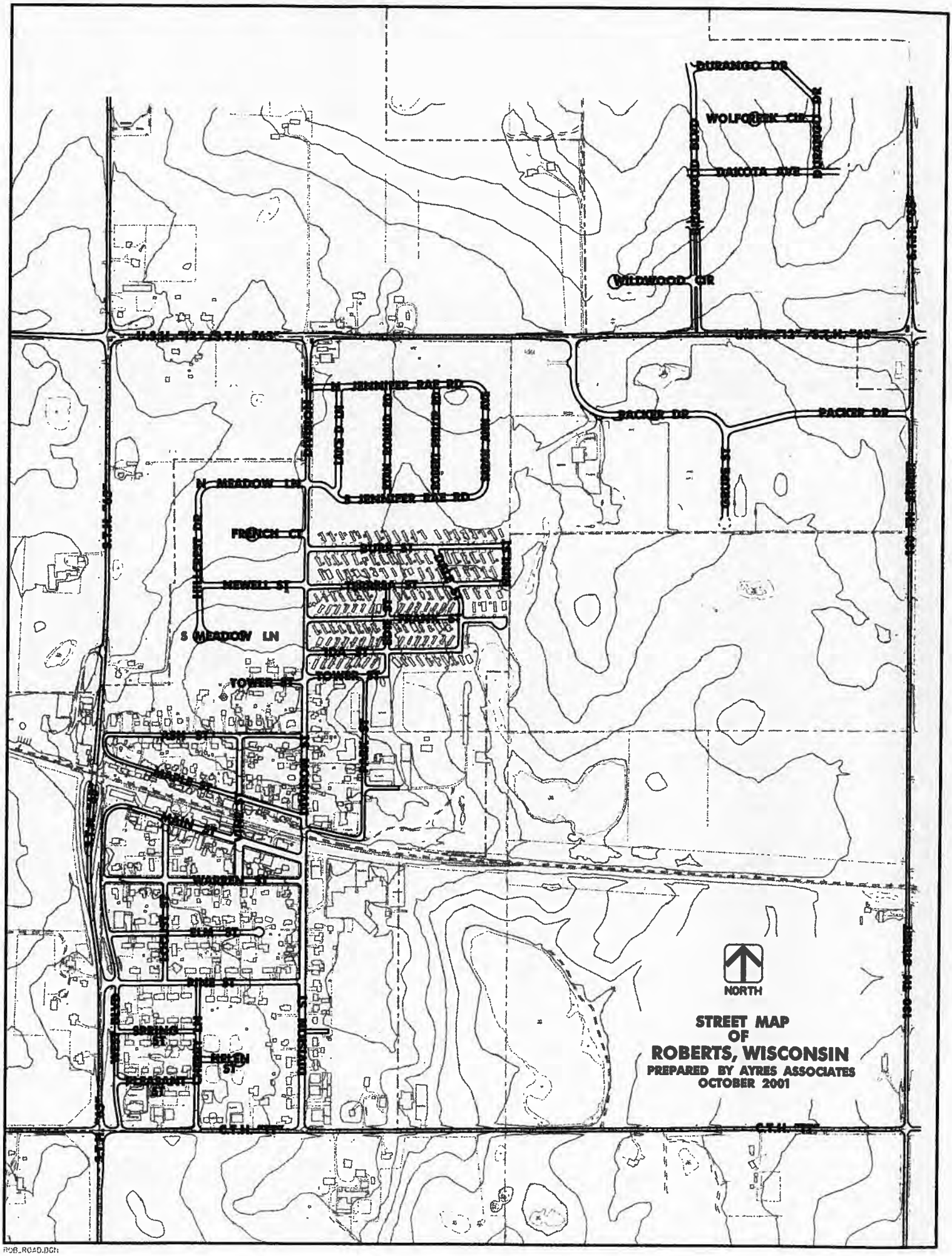
Design Values (%)			
Routes →			
Volume(s):	3800		
K100	11.3		
K50	12.2		
K30	12.8		
P(PHV)	16.4		
T(DHV)	5.2		
T(PHV)	3.9		
D(Dsgn. Hr	60\40		
K8(ADT)			
T(A8HV)			

Truck Class %'s			
Class	Seg. 1	Seg. 2	Seg. 3
2D	2.4		
3AX	1.0		
2S1+2S2	0.4		
3-S2	3.7		
DBL-BTM	0.2		
TOTAL	7.7%		

NOTES ON THE FORECAST:
1. It is assumed that no new major traffic generators will be developed in the project area during the forecast period.
2. Traffic volumes on this segment of USH 12 in St. Croix County have been up and down since the late 1980's.
3. Design parameters are for Factor Group 4, Rural Other, which reflect only moderate seasonal fluctuations in traffic volumes.
4. Truck Classification %s are based on similarly classified facilities.



MORE NOTES ON THE FORECAST:

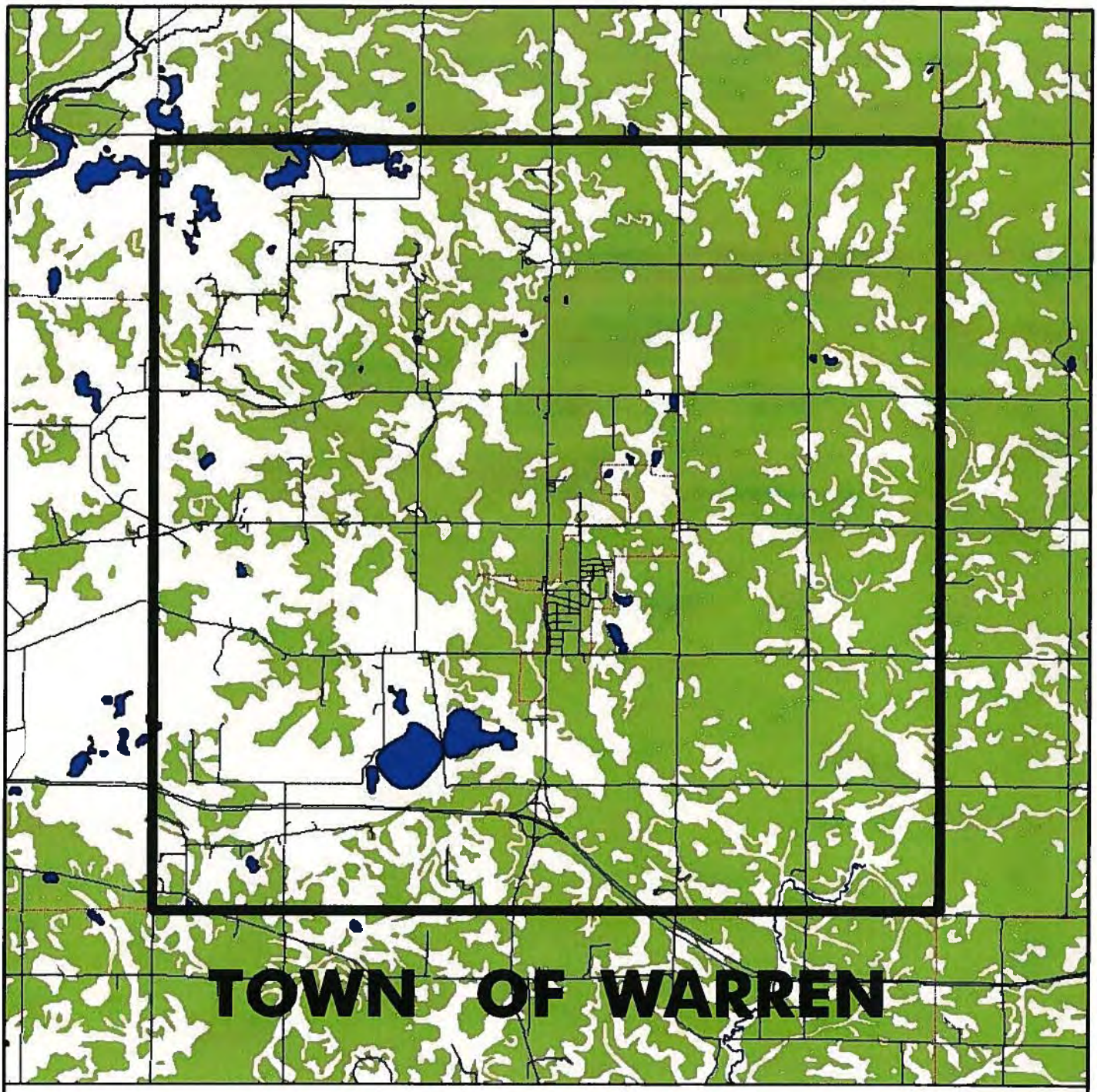

DURANGO DR
WOLFOREK CIR
DAKOTA AVE
WILDWOOD DR
PACKER DR
PACKER DR
N JENNIFER RAE RD
S JENNIFER RAE RD
N MEADOW LN
FRENCH CT
RIVER ST
HEWELL ST
S MEADOW LN
TOWER ST
TOWER ST
ASH ST
MAPLE ST
MAIN ST
WARREN ST
ELM ST
PINE ST
SPRING ST
ELGIN ST
PLEASANT ST
C.T.H. "E"
C.T.H. "E"
NORTH
STREET MAP
OF
ROBERTS, WISCONSIN
PREPARED BY AYRES ASSOCIATES
OCTOBER 2001

ROB_ROAD.DGN

APPENDIX VI

Maps

List of Maps



SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

LESA
Ag Group 1 - 5

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN	DRN. BY: EMA CHK. BY: AWG DATE: FEB 2002 AYRES ASSOCIATES	POTENTIALLY PRODUCTIVE AGRICULTURE LAND	MAP 1

12/05/02
FileDate.tbl
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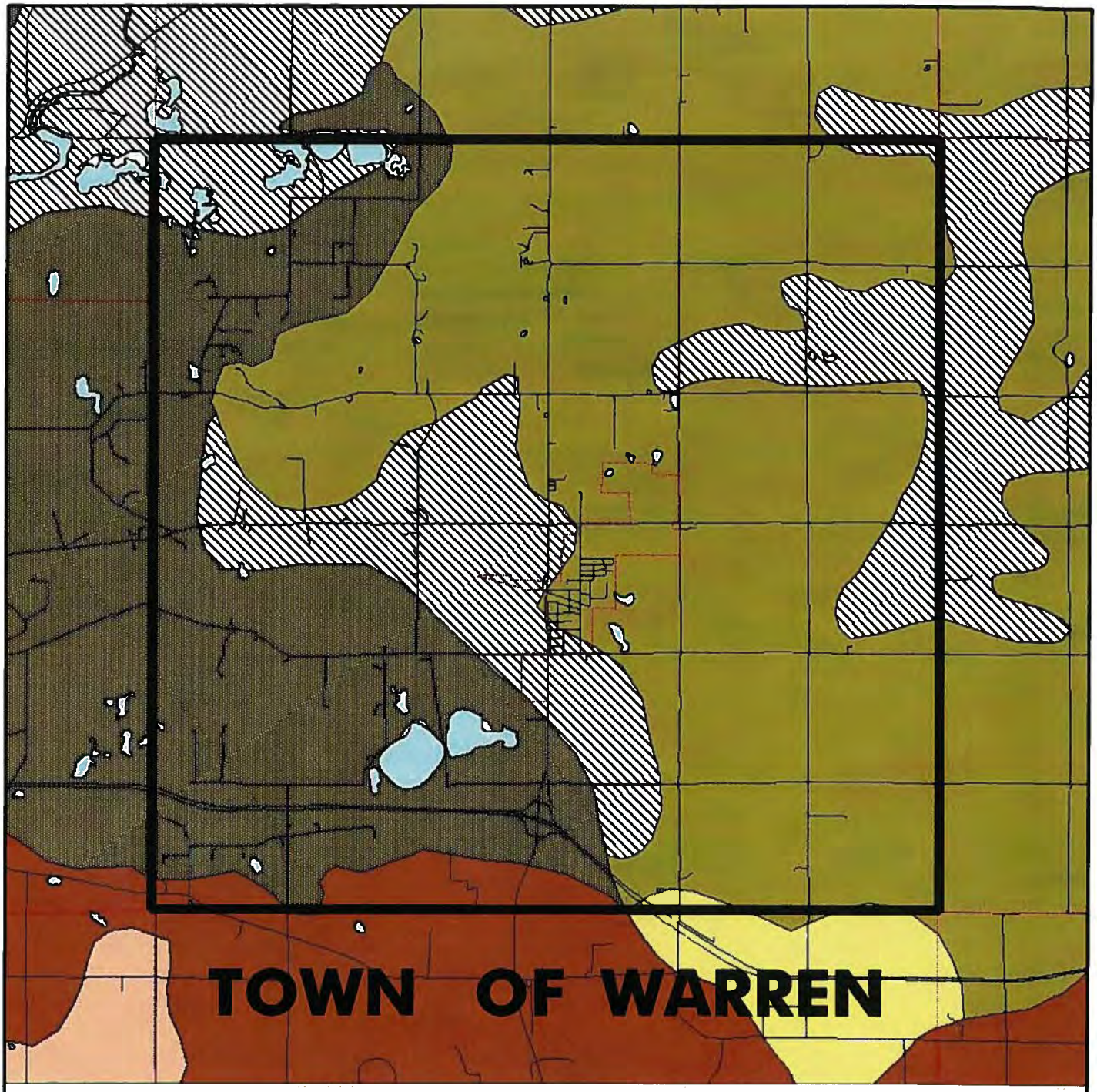

SOIL ASSOCIATIONS

MODERATE TO VERY RAPID PERMEABILITY
- Amery-Cromwell
- Burkhardt-Chetek-Sattre
- Sattre-Pillot-Antigo
- Plainfield-Boone

MODERATE TO SLOW PERMEABILITY
- Santiago-Otterholt-Arland
- Ritchey-Derinda-Whalan
- Santiago-Jewett-Magnor
- Vlasaty-Skyberg

- Lakes & Rivers
- Municipal Boundaries
- Highways & Roads

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

GENERAL SOILS

MAP 2

12/05/02
FileDate.tbl
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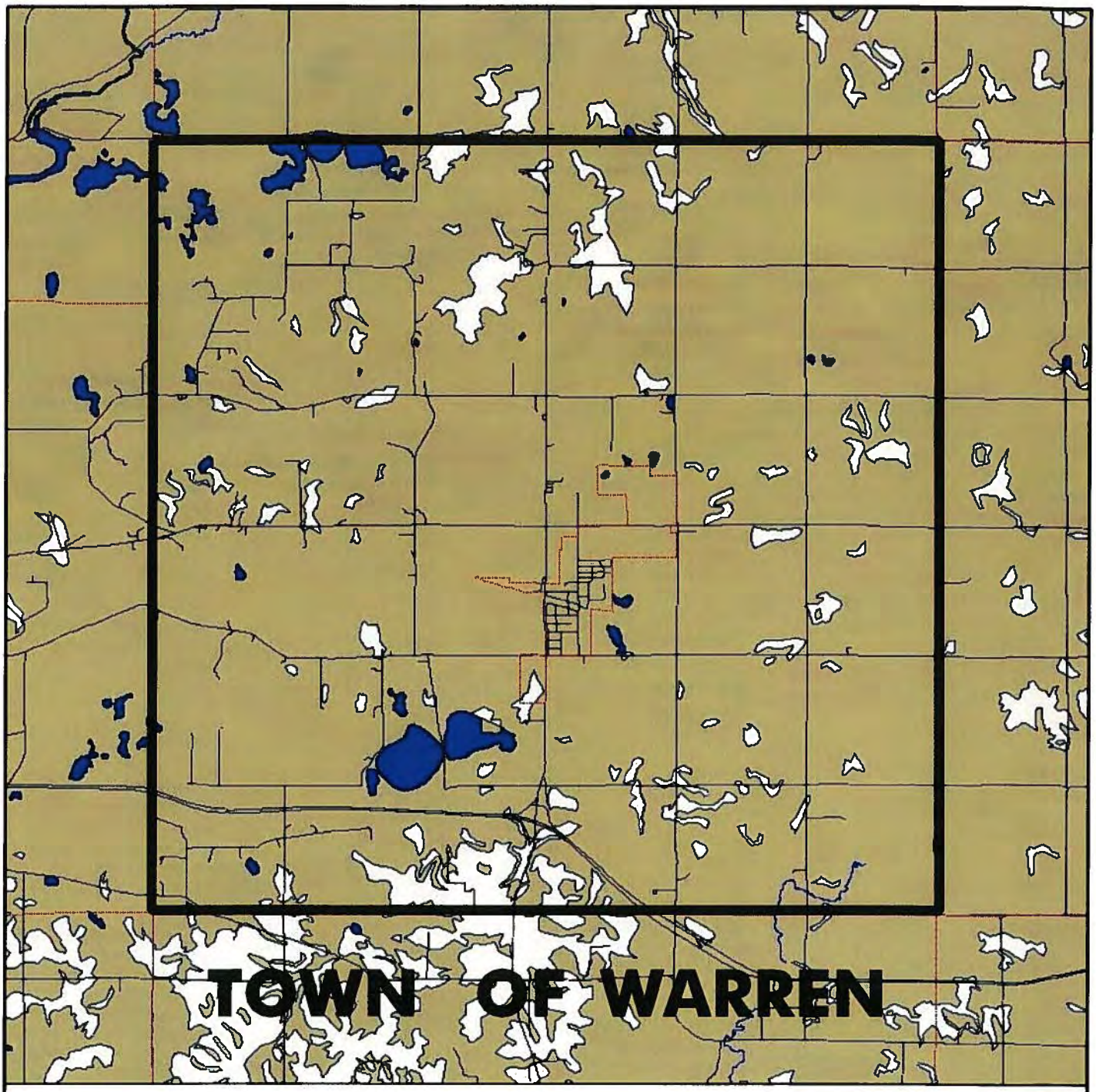

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

- Severe Limitations
- Municipal Boundaries
- Highways & Roads
- Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

LIMITATIONS FOR SEPTIC SYSTEMS

MAP 3

12/05/02
FileDate.tbl
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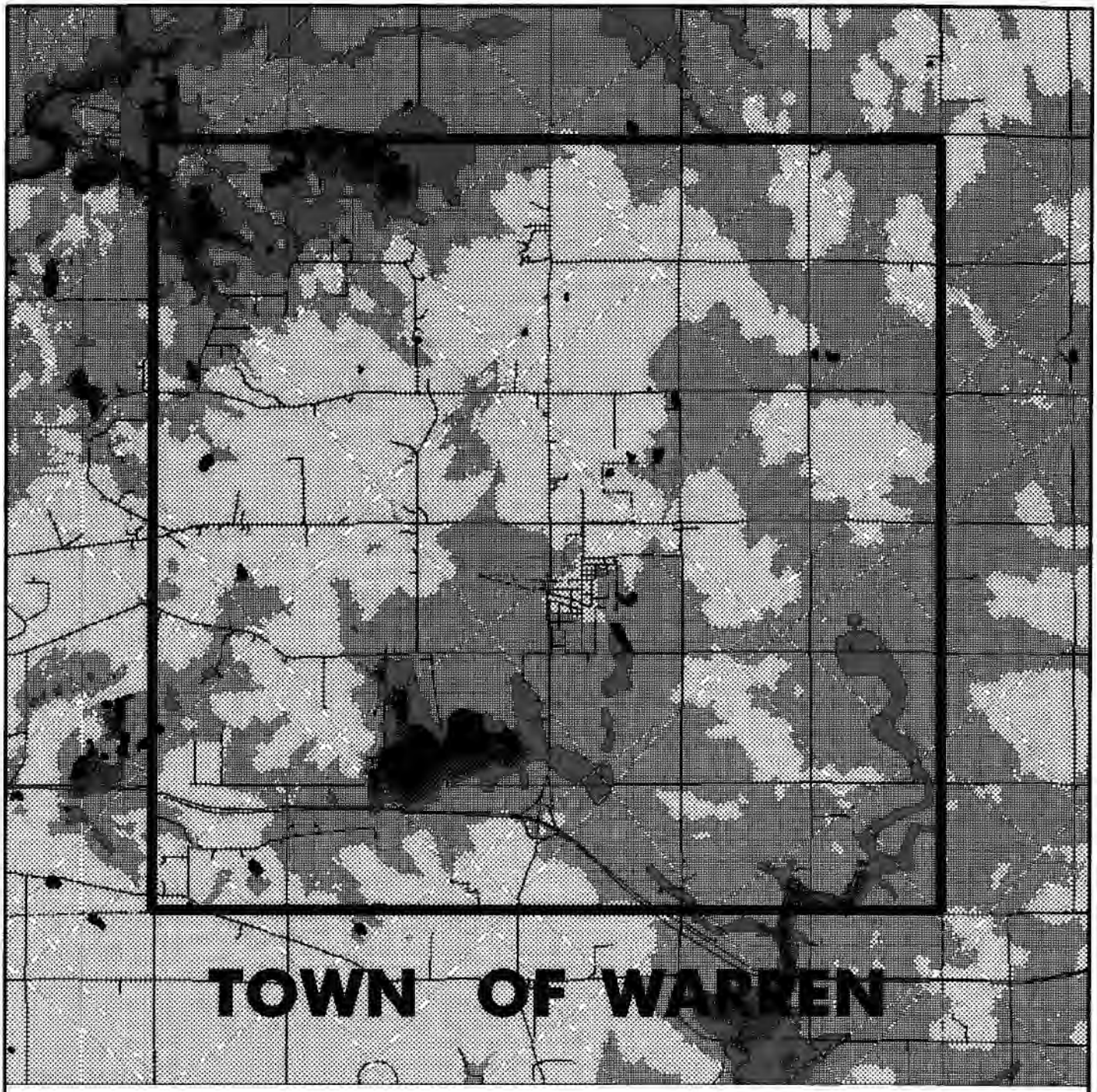

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

- Surface Water
- 1' to 5'
- 6' to 10'
- 11' to 25'
- 26' to 75'
- > 75'
- Municipal Boundaries
- Roads & Highways

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

DEPTH TO GROUNDWATER

MAP 4

12/05/02
FileDate.tbl
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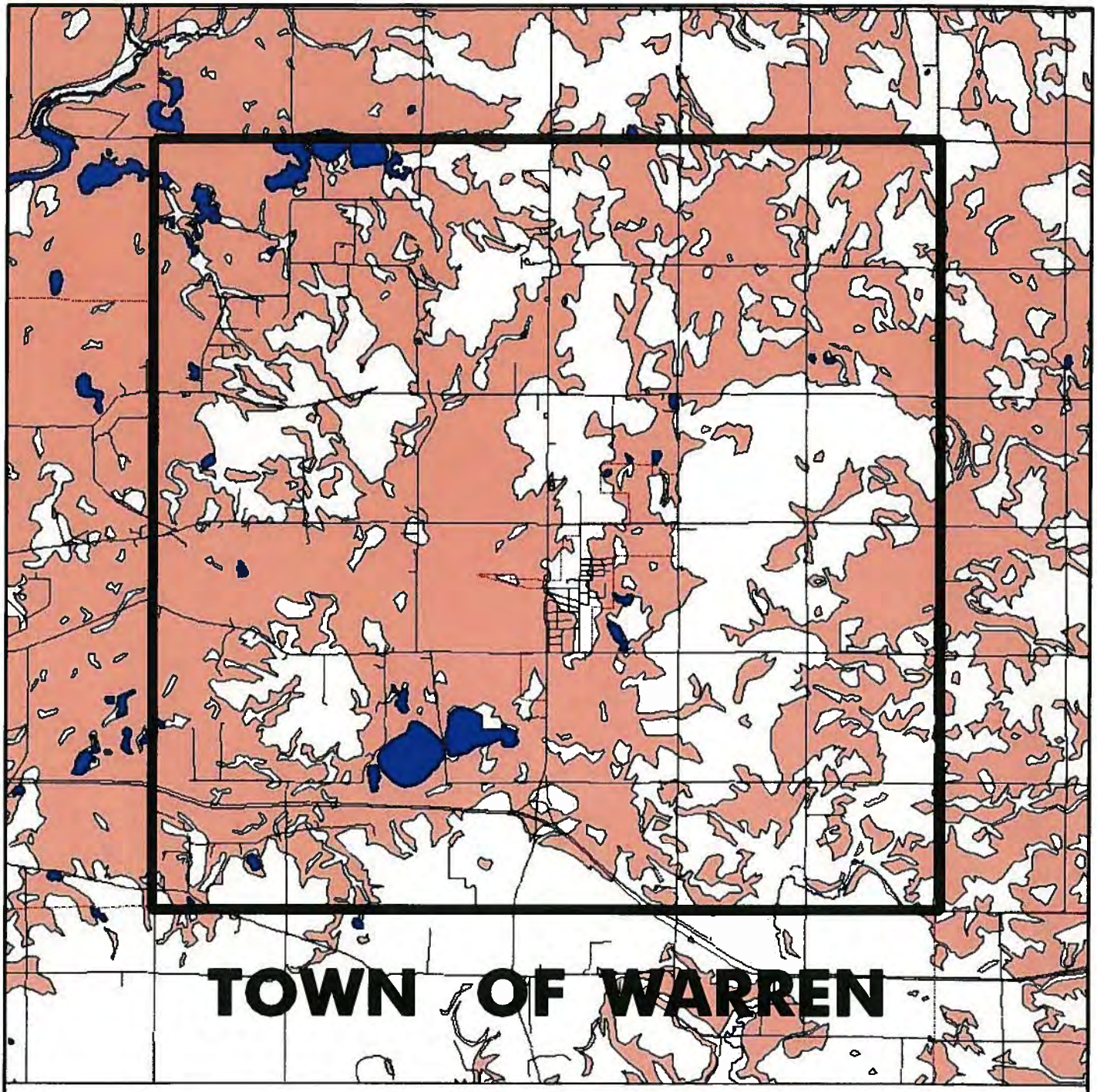

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Probable Sand Deposits Available for Extraction
Municipal Boundaries
Highways & Roads
Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN
VILLAGE OF ROBERTS/
TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

POTENTIAL SAND DEPOSITS

MAP 5

12/05/02
FileDate.tbl
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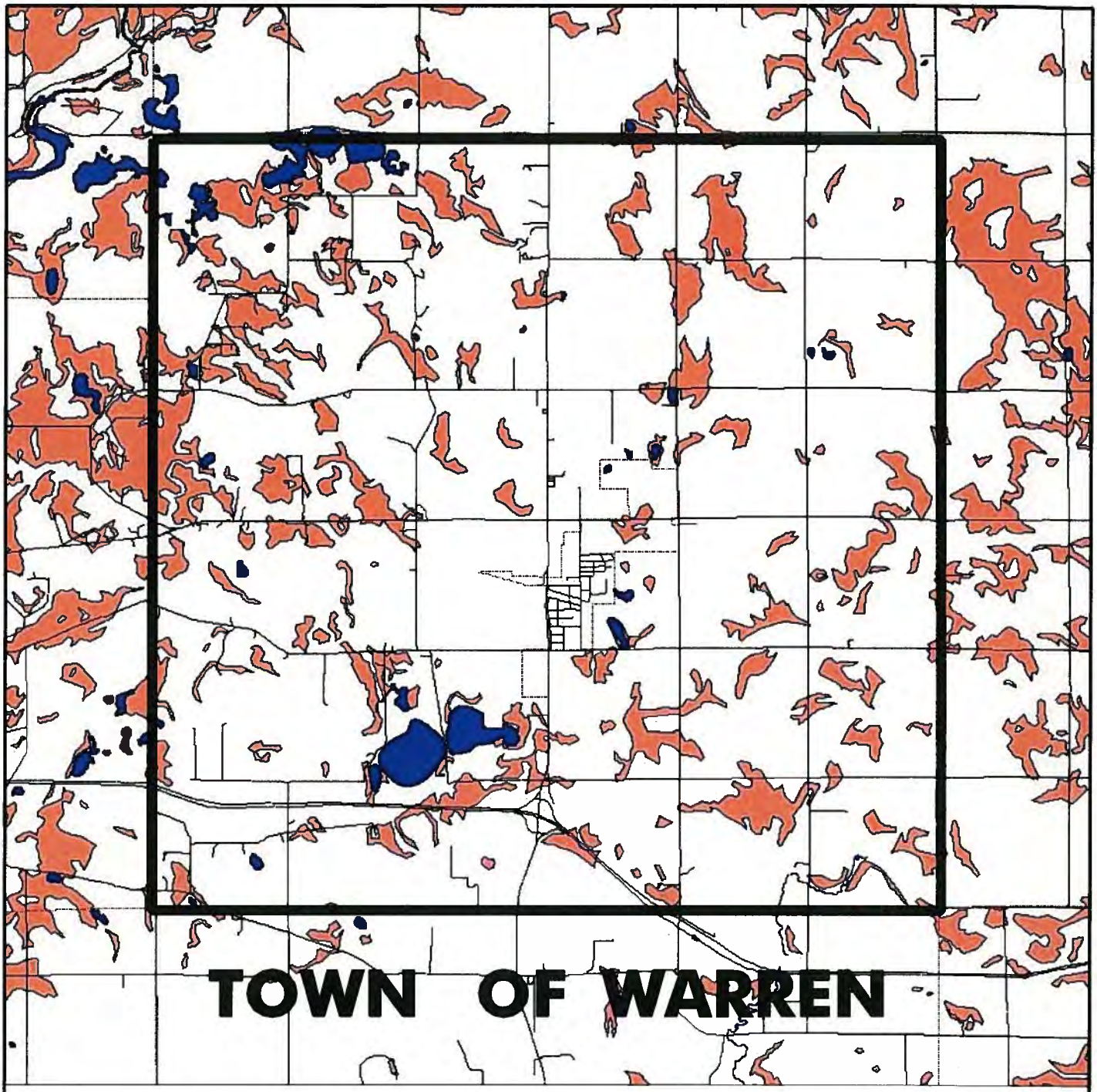

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Probable Gravel Deposit Available for Extraction
Municipal Boundaries
Highways & Roads
Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN
VILLAGE OF ROBERTS/
TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

POTENTIAL GRAVEL DEPOSITS

MAP 6

12/05/02
FileDate.tbl
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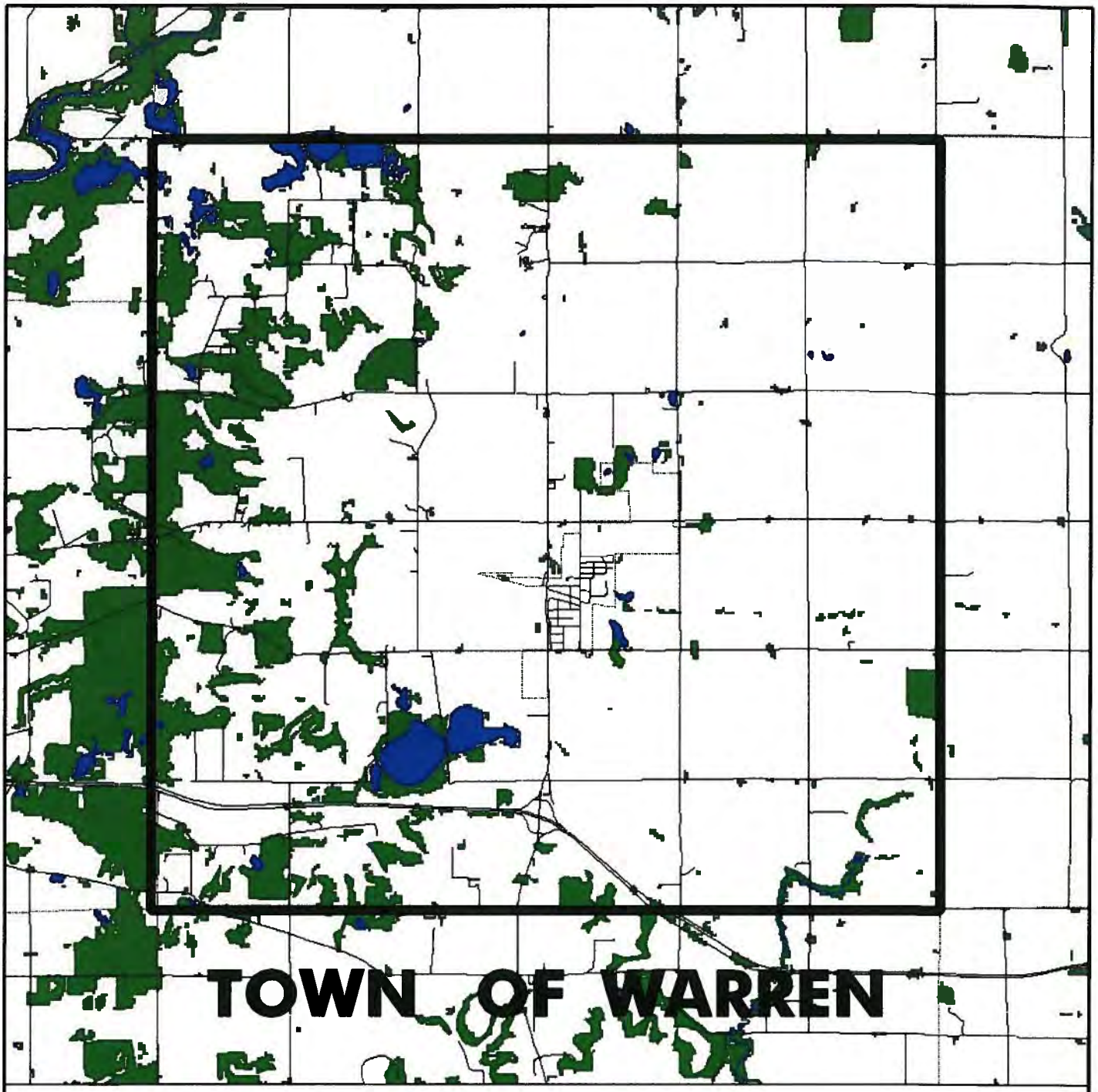

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Woodlands
Municipal Boundaries
Highways & Roads
Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

WOODLANDS

MAP 7

12/05/02
FileDate.tbl
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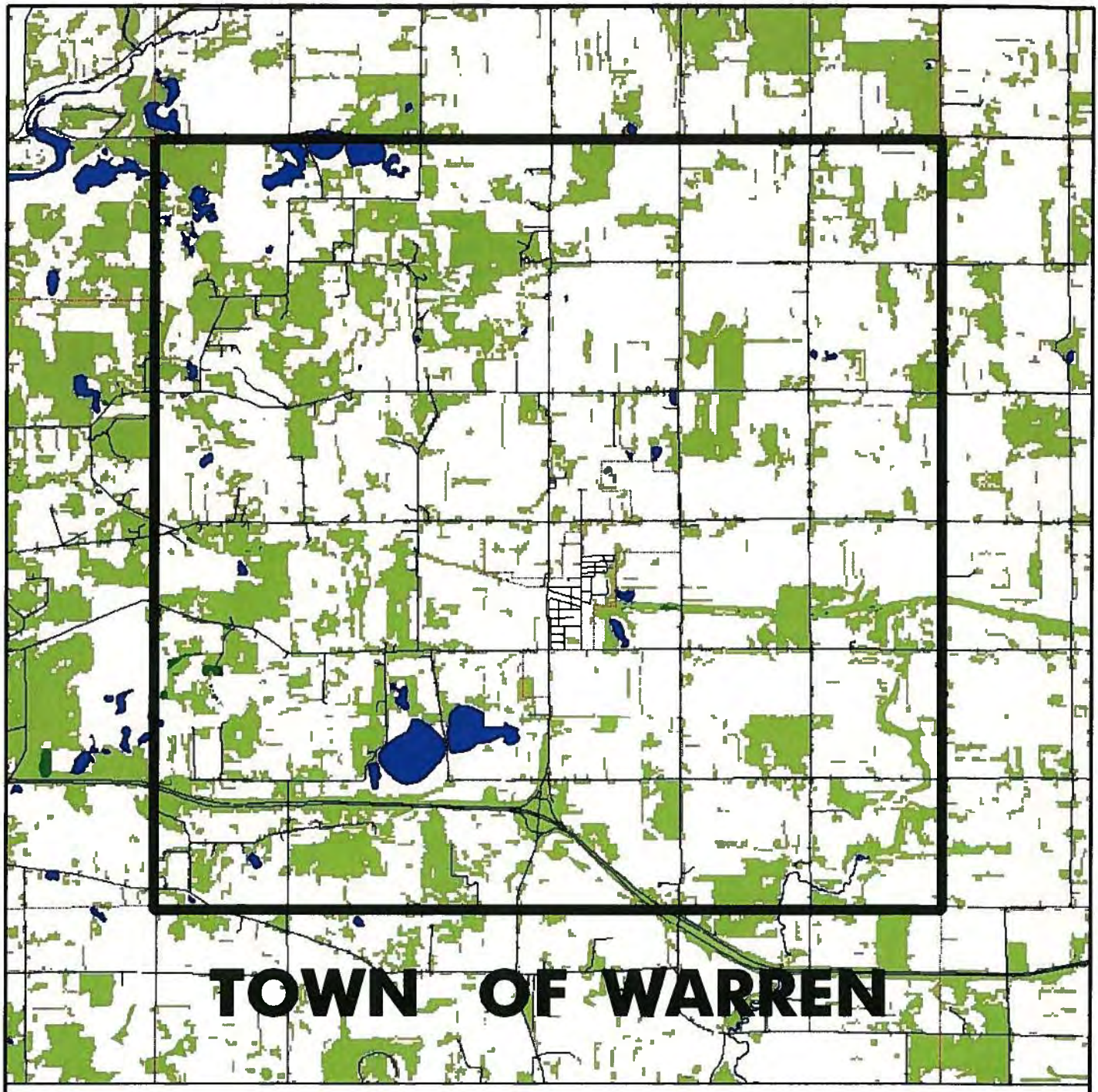

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

- Prairie
- Grasslands
- Municipal Boundaries
- Highways & Roads
- Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

GRASSLANDS AND PRAIRIE REMNANTS

MAP 8

12/05/02
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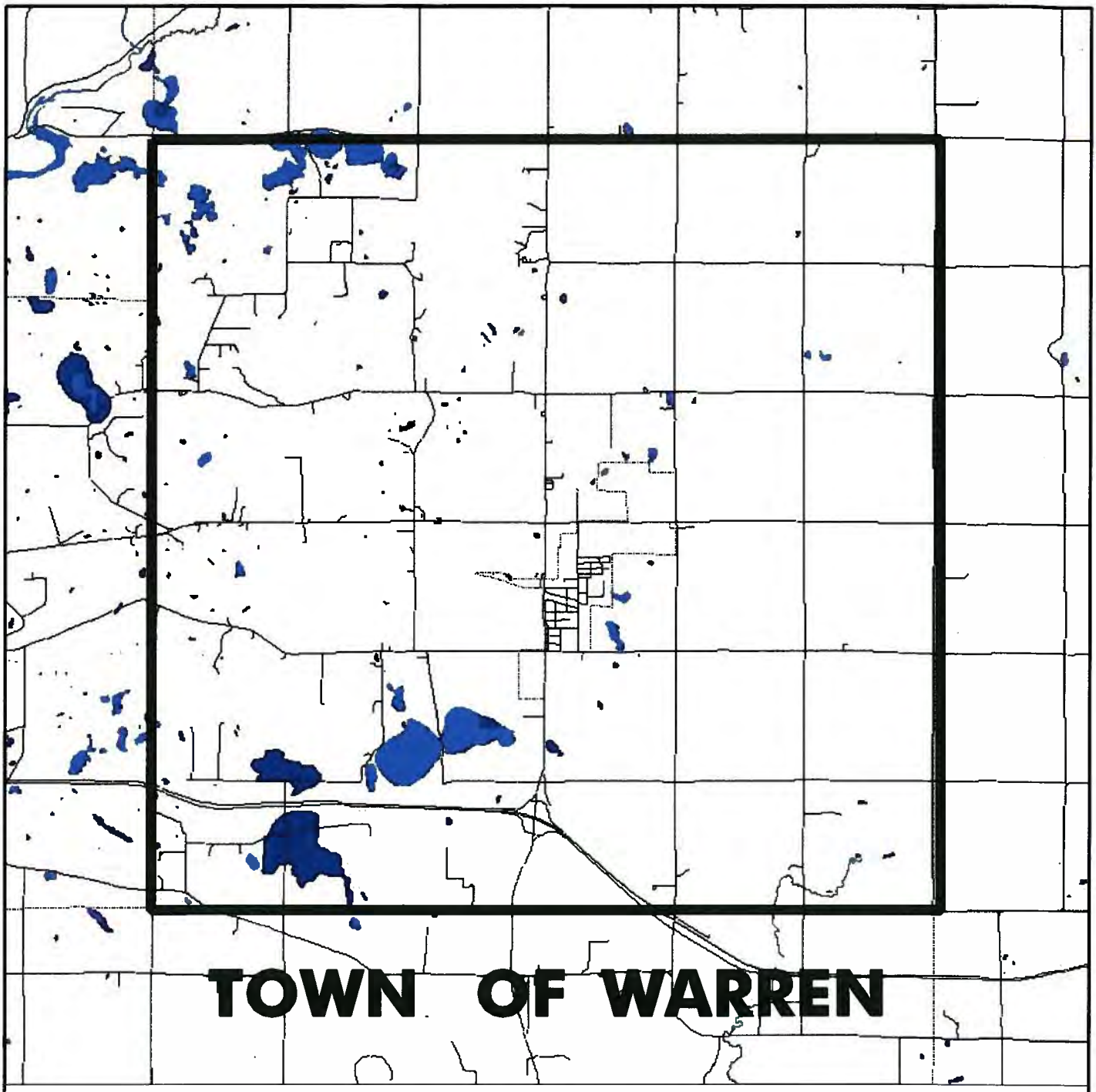

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Depressions
Municipal Boundaries
Highways & Roads
Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN
VILLAGE OF ROBERTS/
TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

CLOSED DEPRESSIONS

MAP 9

12/05/02
FileDate.tbl
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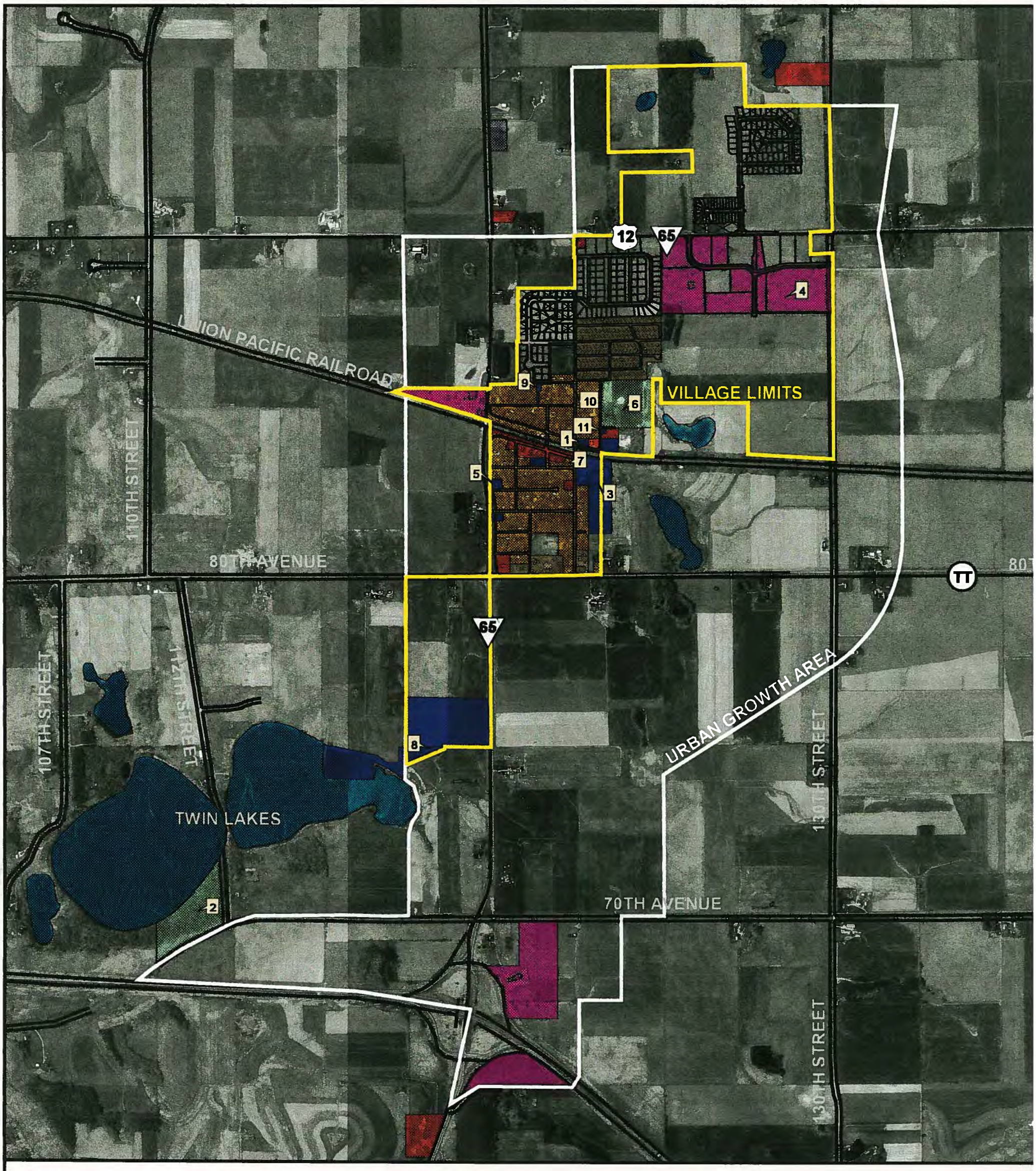


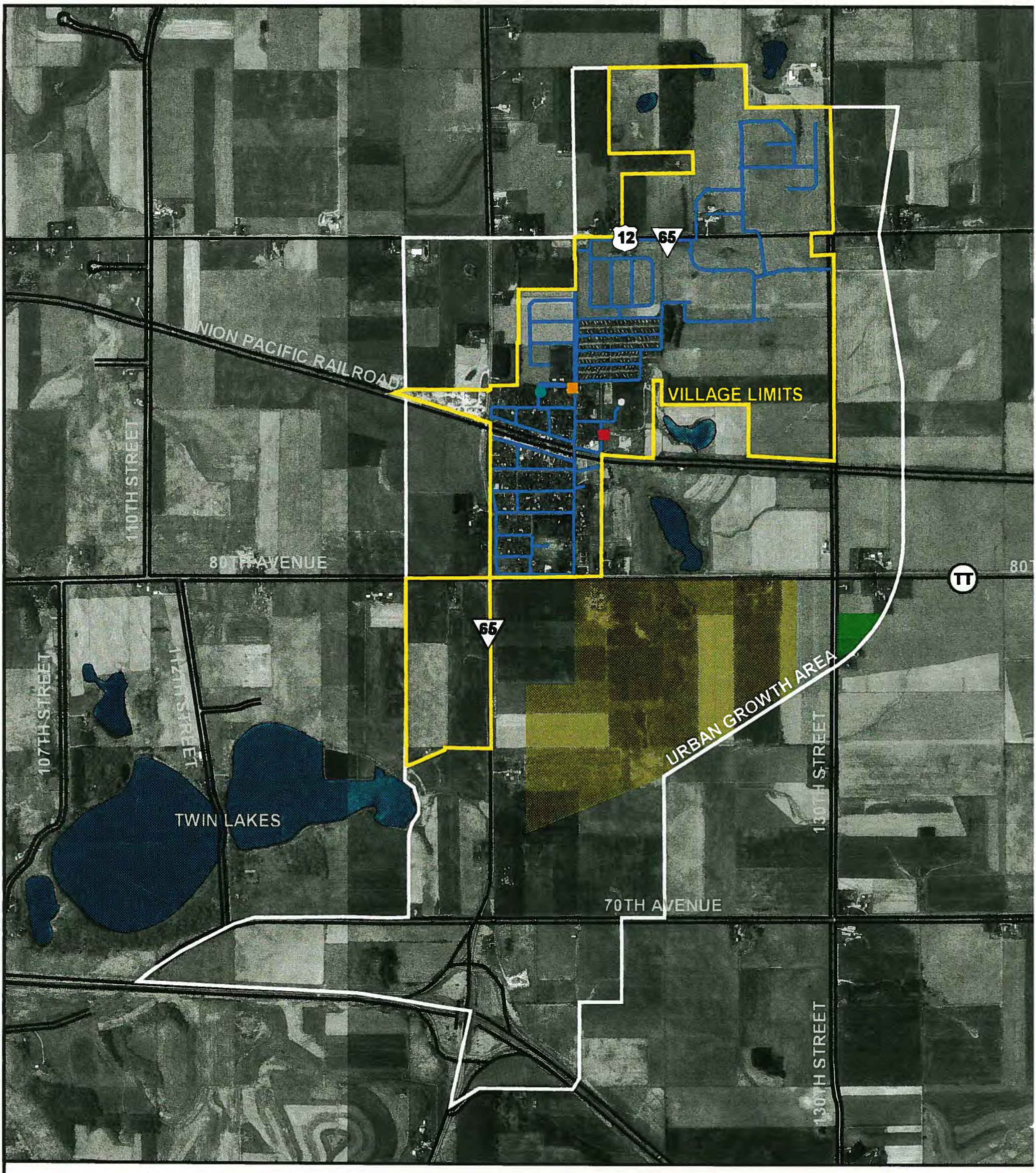
EXISTING COMMUNITY FACILITIES

Location	Description
1	Roberts Village Hall & Public Works
2	Future Warren Town Hall
3	St. Croix Central Elementary School
4	Roberts Business Park
5	Fire Station
6	Village Park
7	Library
8	Wastewater Treatment Facility
9	Water Tower
10	Water Supply Well #1
11	Water Supply Well #2

N

1500 0 1500 Feet

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	COMMUNITY FACILITIES	MAP 10



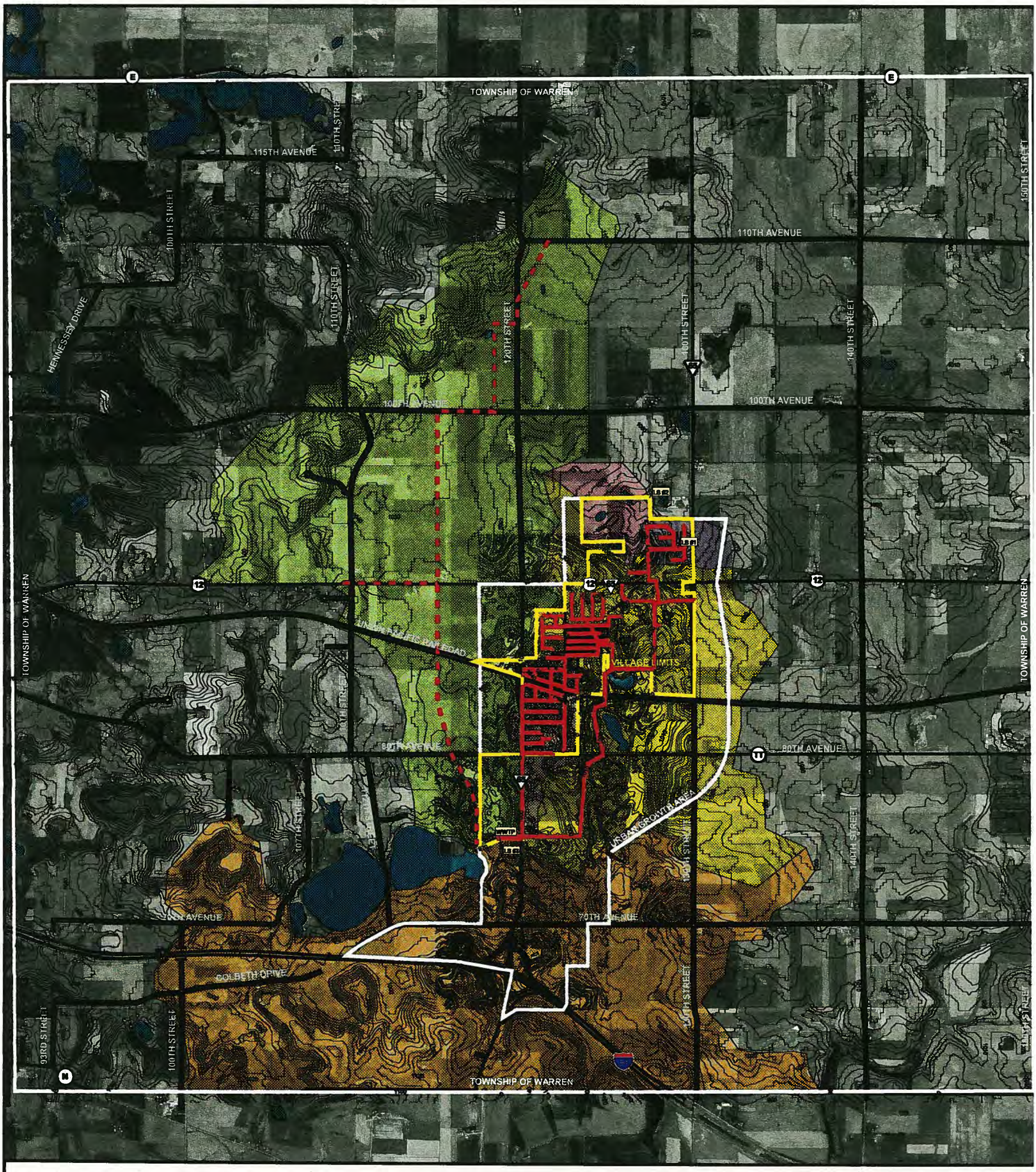
WATER SYSTEM

- EXISTING WATER SYSTEM
- EXISTING WATER TOWER
- EXISTING WELL #1
- EXISTING WELL #2
- FUTURE WATER TOWER LOCATION
- FUTURE WELL SITE LOCATION

N

1500 0 1500 Feet

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	WATER SYSTEM	MAP 11



Wastewater System and Service Areas

- Existing Sanitary Sewer
- Future Sanitary Sewer
- Gravity Area - STH 65 Interceptor
- Gravity Area - East Interceptor
- Gravity Area - West Interceptor
- Lift Station #1
- Lift Station #2
- Lift Station # 3

Wastewater Service Areas (Acres)	In Village Limits	In Urban Growth Area	Total
Gravity Area - STH 65 Interceptor	125	55	180
Gravity Area - East Interceptor	232	791	1023
Gravity Area - West Interceptor	90	270	360
Lift Station #1	50	80	130
Lift Station #2	70	70	140
Lift Station #3	0	450	450

N

3000 0 3000 Feet

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	WASTEWATER SYSTEM AND SERVICE AREAS	MAP 12

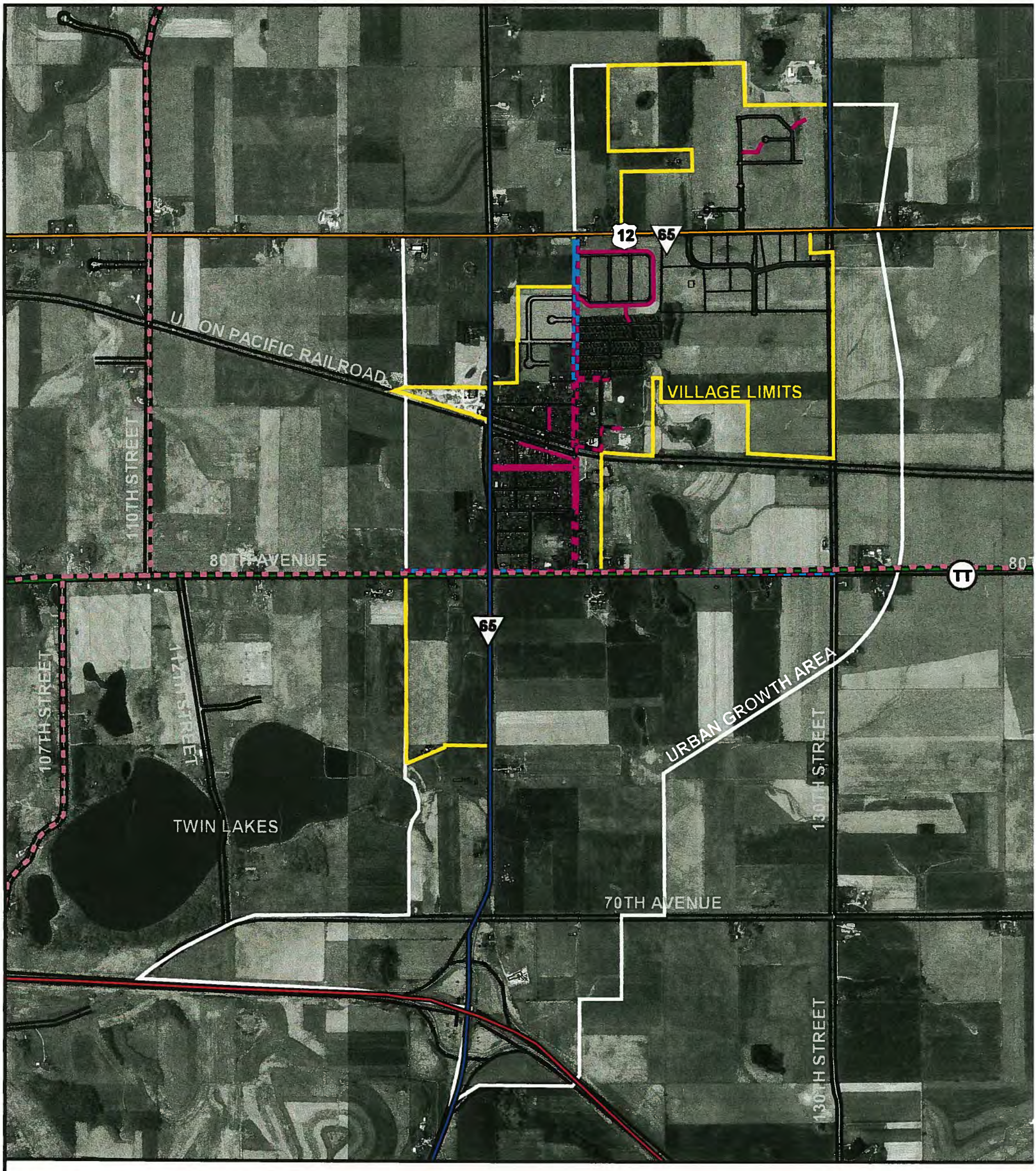
TRANSPORTATION SYSTEM

- INTERSTATE
- U.S. HIGHWAY
- STATE HIGHWAY
- COUNTY TRUNK HIGHWAY
- RECONSTRUCTED STREET
- FUTURE STH 65 EAST ARTERIAL CORRIDOR
- FUTURE BIKE TRAIL
- EXISTING WALKING TRAIL
- FUTURE WALKING TRAIL

N

3000 0 3000 Feet

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	TRANSPORTATION SYSTEM	MAP 13



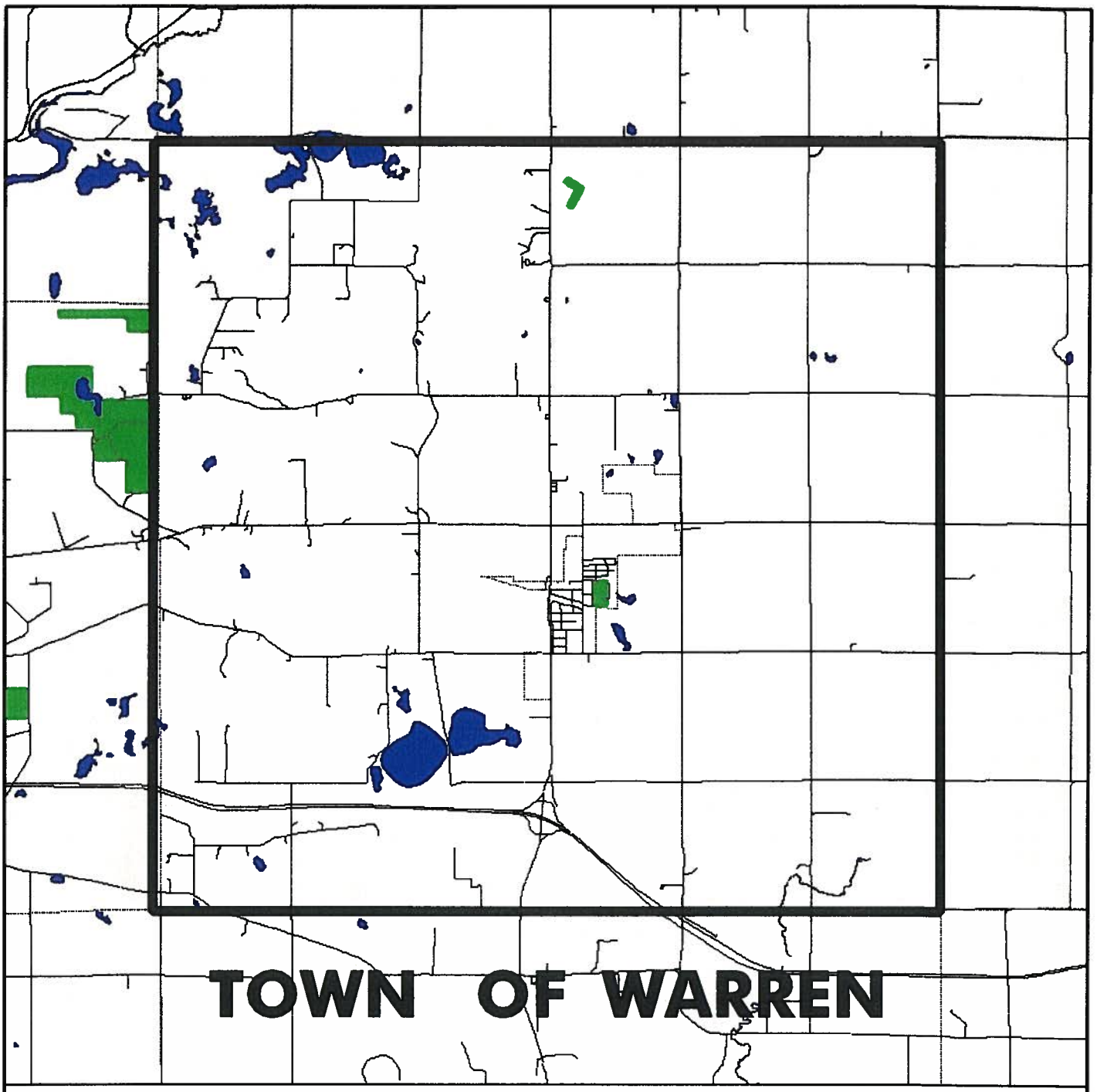
TRANSPORTATION SYSTEM

- INTERSTATE
- U.S. HIGHWAY
- STATE HIGHWAY
- COUNTY TRUNK HIGHWAY
- RECONSTRUCTED STREET
- FUTURE STH 65 EAST ARTERIAL CORRIDOR
- FUTURE BIKE TRAIL
- EXISTING WALKING TRAIL
- FUTURE WALKING TRAIL

N

1500 0 1500 Feet

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	TRANSPORTATION SYSTEM MAP 14



SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Scenic & Recreation
Municipal Boundaries
Highways & Roads
Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN

DRN. BY: EMA
CHK. BY: AWG
DATE: FEB 2002

AYRES ASSOCIATES

RECREATION, SCIENCE AND OPEN SPACES AREAS

MAP 15

12/05/02
FileDate.tbl
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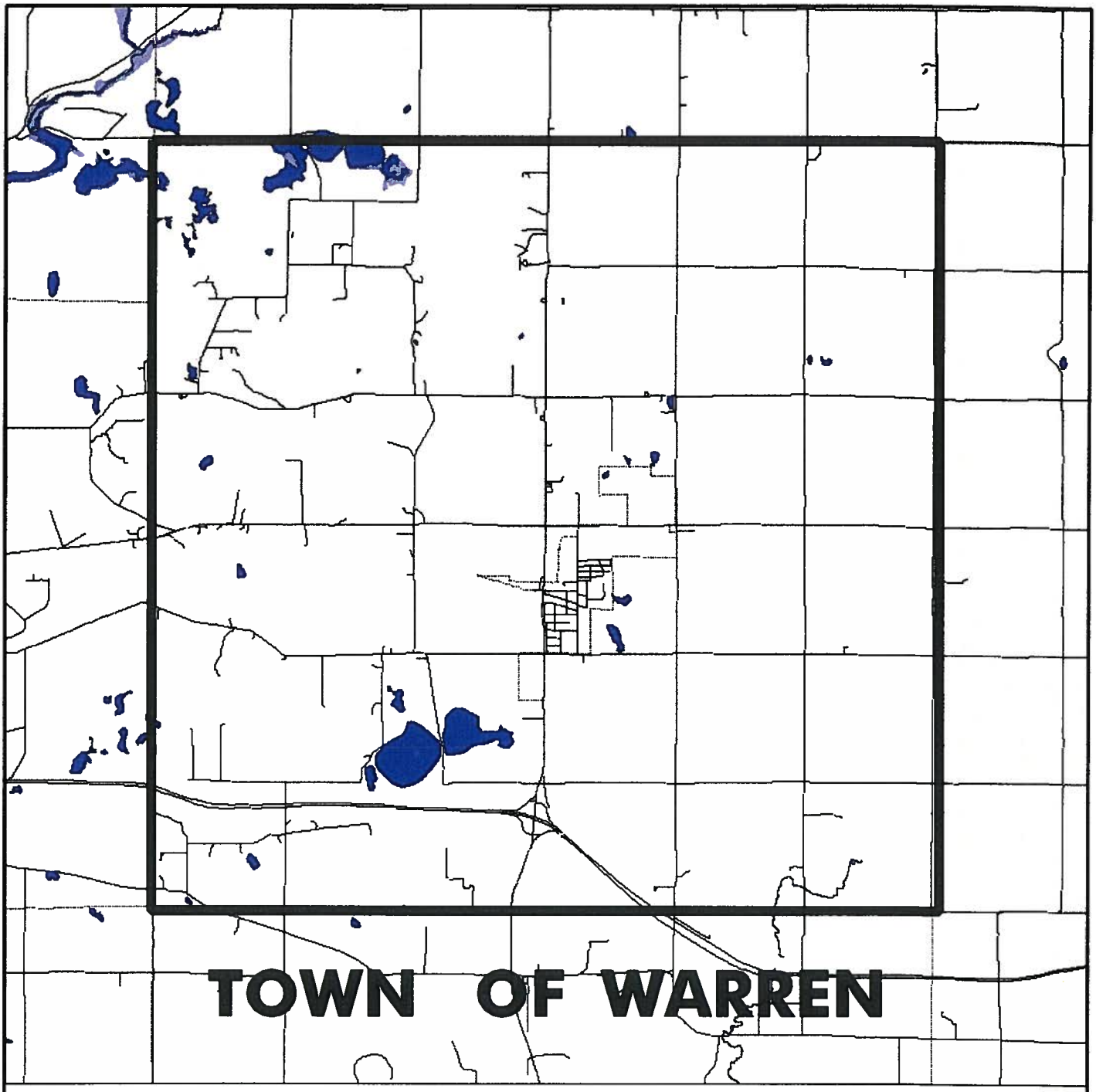

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Floodplain
Municipal Boundaries
Highways & Roads
Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN	DRN. BY: EMA CHK. BY: AWG DATE: FEB 2002 AYRES ASSOCIATES	FLOODPLAINS	MAP 16

12/05/02
FileDate.tbl
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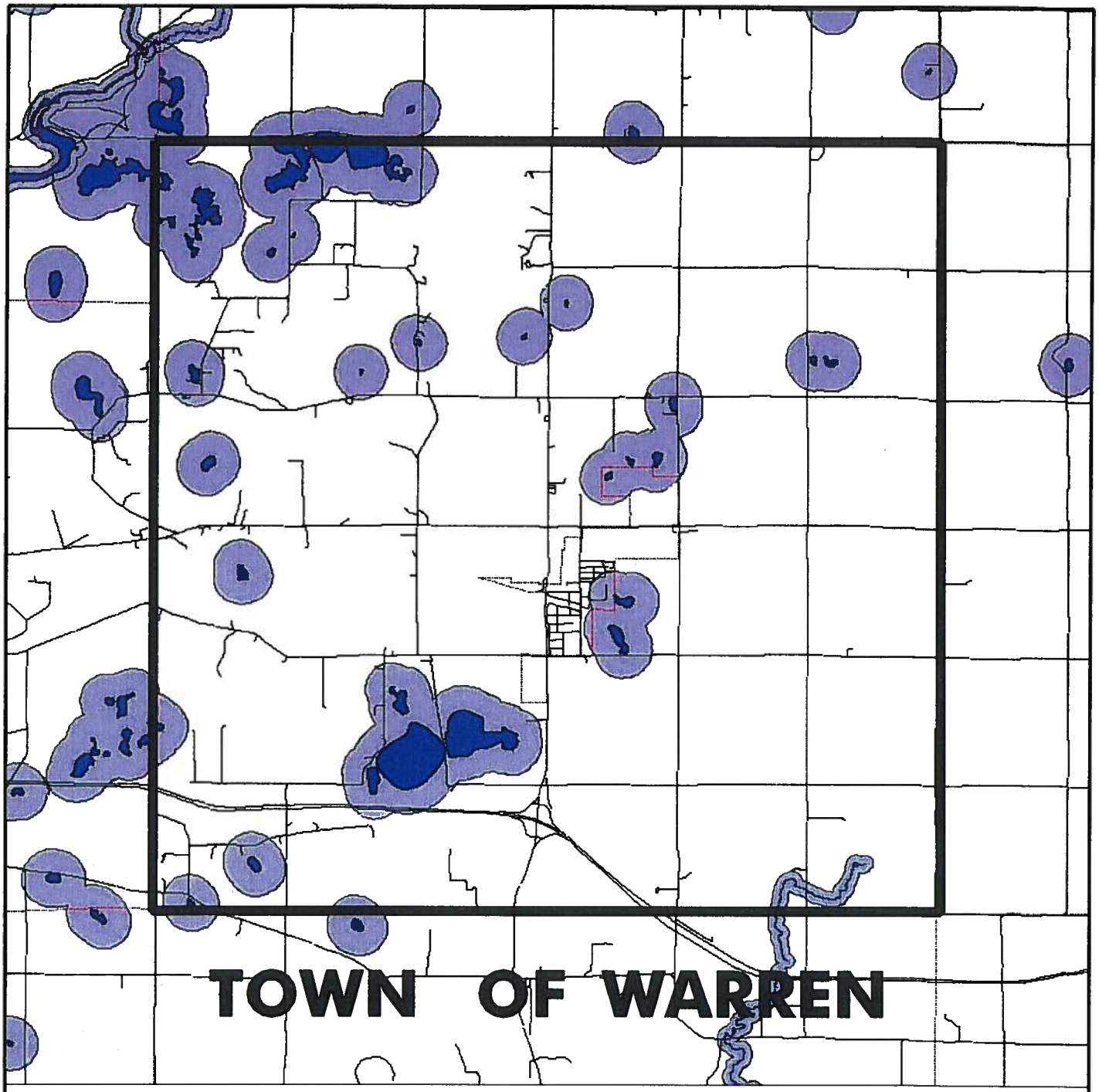

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

Lakes & Ponds Buffered 1000 Ft.
Rivers & Streams Buffered 300 Ft.

- Shoreland
- Rivers & Lakes
- Municipal Boundaries
- Highways & Roads

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN	DRN. BY: EMA CHK. BY: AWG DATE: FEB 2002 AYRES ASSOCIATES	SHORELANDS	MAP 17

12/05/02
FileDate+tbl
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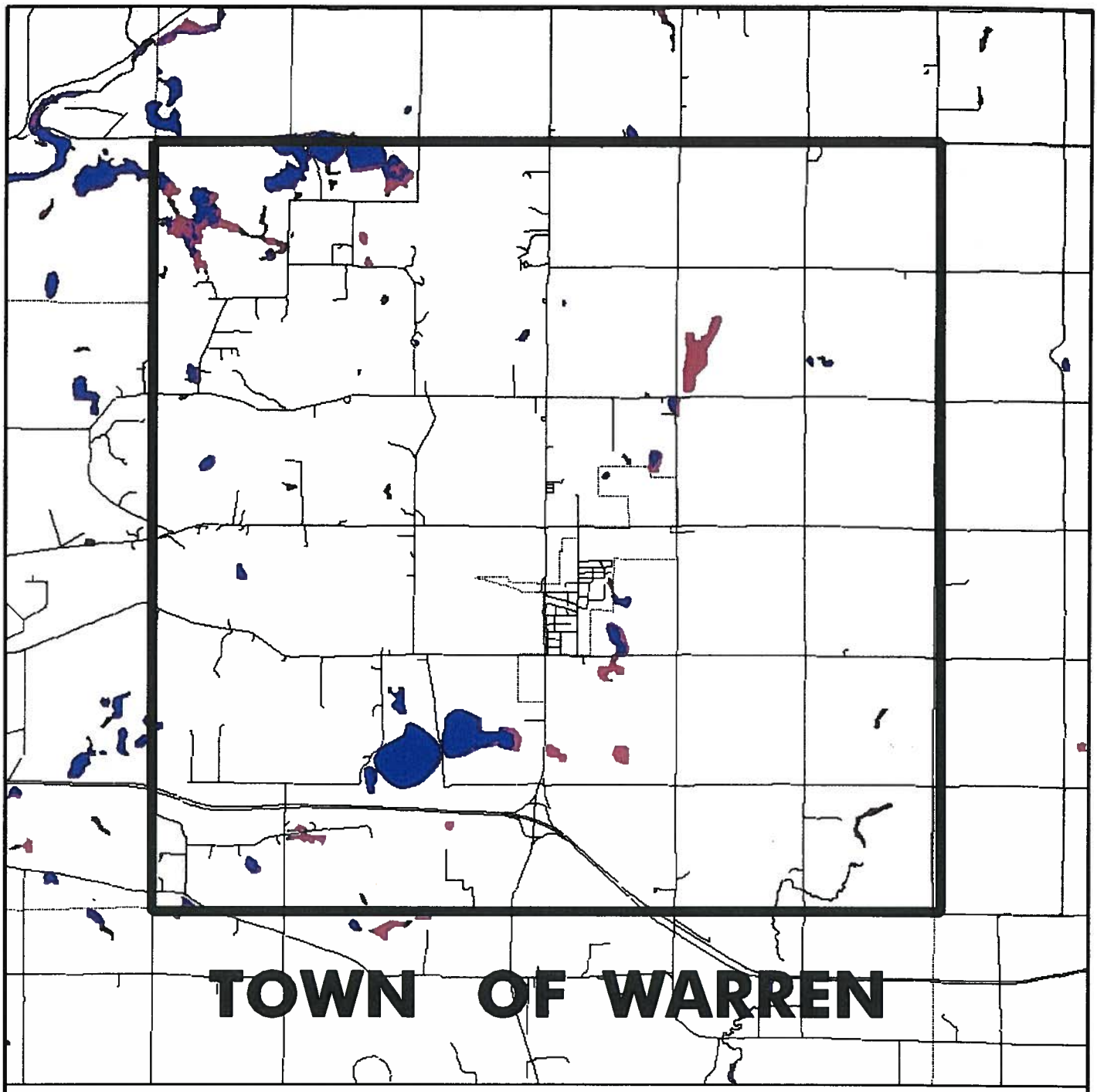

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

- Wetlands
- Municipal Boundaries
- Highways & Roads
- Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN	DRN. BY: EMA CHK. BY: AWG DATE: FEB 2002 AYRES ASSOCIATES	WETLANDS	MAP 18

12/05/02
FileDate.tbl
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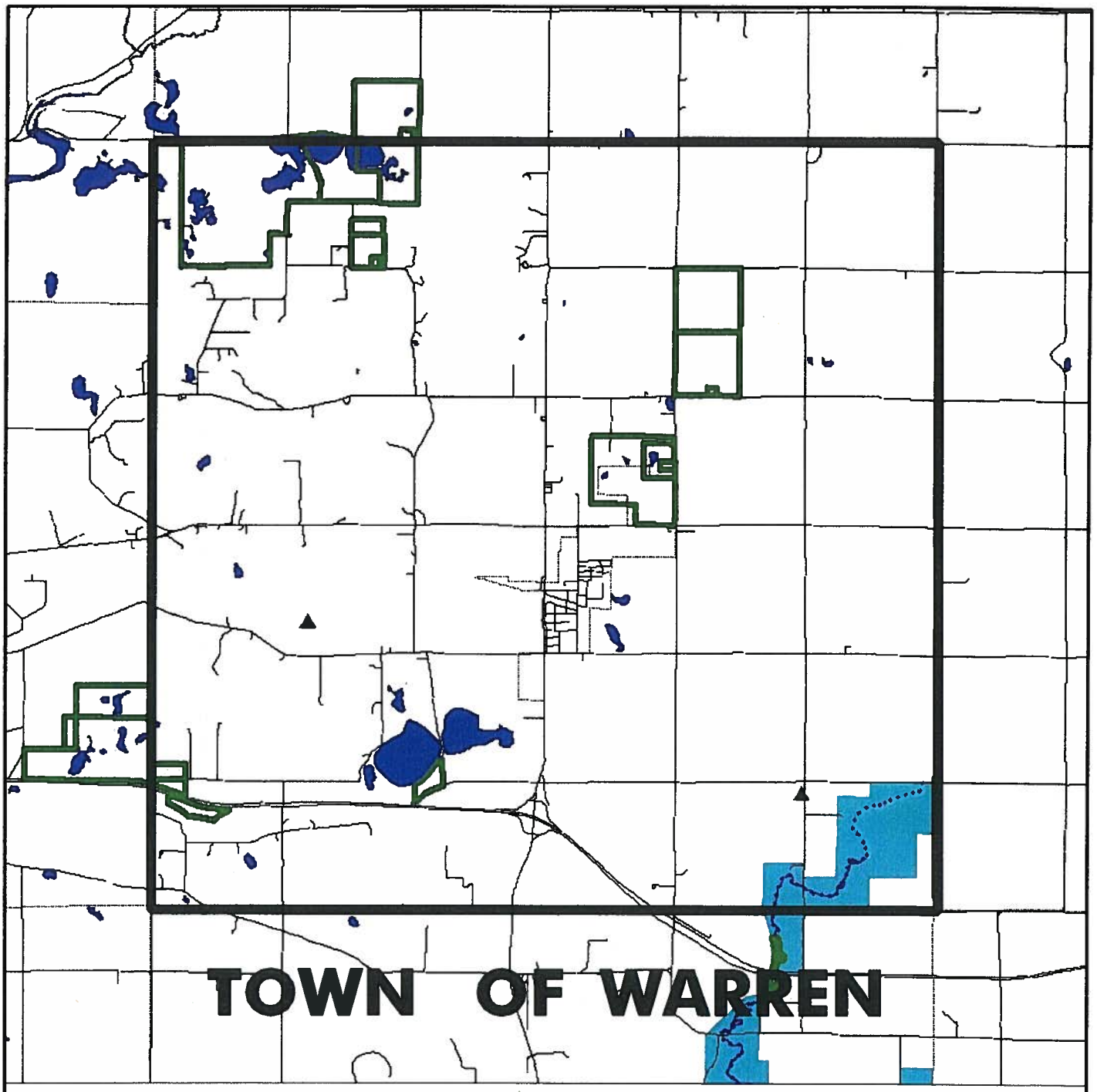

SOURCE: ST. CROIX COUNTY DEVELOPMENT MANAGEMENT PLAN 2000-2020

- Wildlife Areas
- Sensitive Fisheries
- Fisheries Properties
- Endangered or Rare Species
- Municipal Boundaries
- Highways & Roads
- Rivers & Lakes

NORTH

6000 0 6000 12000FT

JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS/ TOWN OF WARREN	DRN. BY: EMA CHK. BY: AWG DATE: FEB 2002 AYRES ASSOCIATES	FISHERIES AND WILDLIFE AREA RARE AND ENDANGERED RESOURCES	MAP 19

12/05/02
FileDate.tbl
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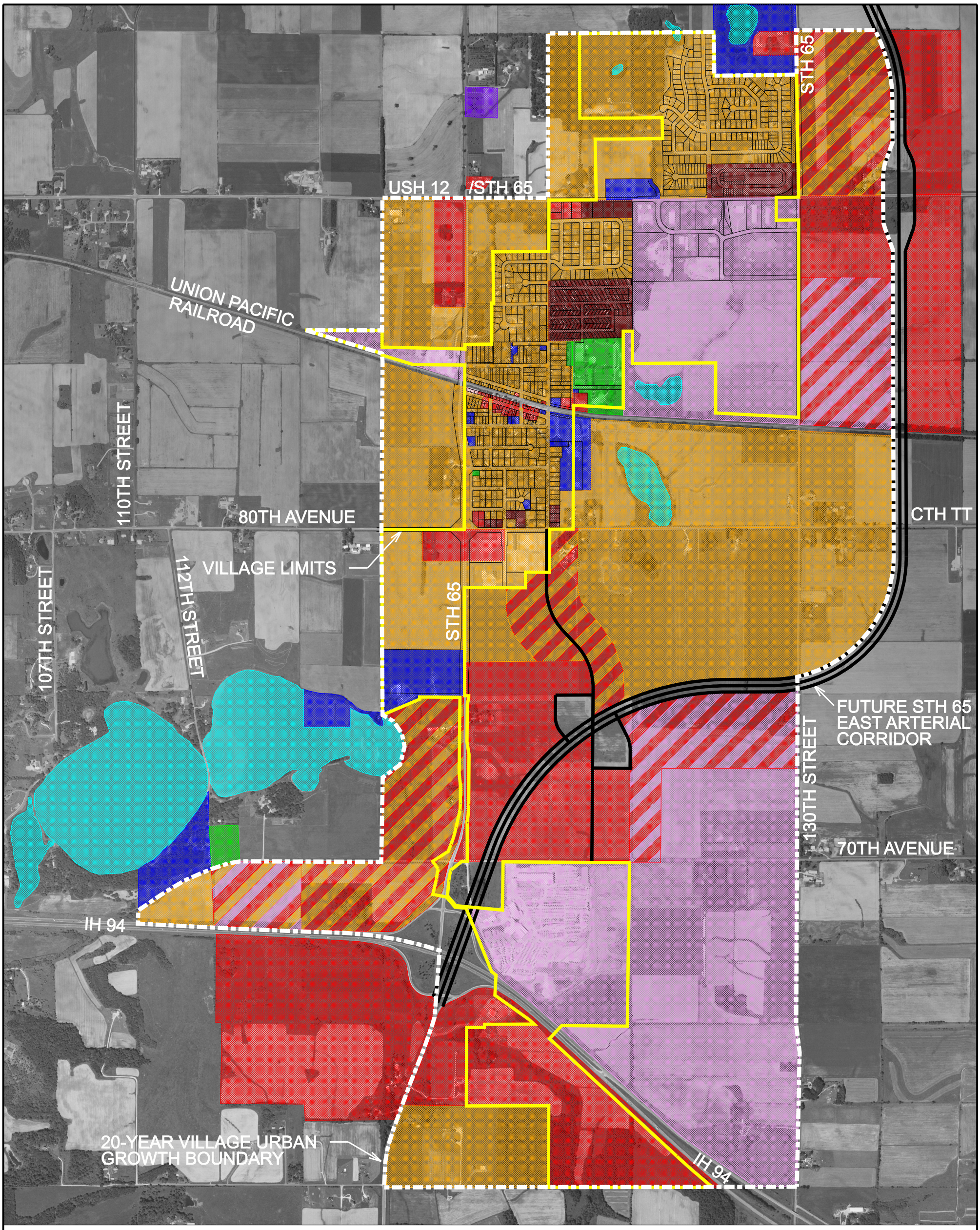

FUTURE LAND USE

- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- GOVERNMENTAL/INSTITUTIONAL
- PARKS AND RECREATIONAL
- CEMETERY
- OPTIONAL OR MIXED LAND USE MEDIUM DENSITY RESIDENTIAL AND/OR COMMERCIAL
- OPTIONAL OR MIXED LAND USE INDUSTRIAL AND/OR COMMERCIAL
- OPTIONAL OR MIXED LAND USE INDUSTRIAL AND/OR COMMERCIAL AND /OR MEDIUM DENSITY RESIDENTIAL

DES BY	AWG
DR BY	JHO
CHK BY	AWG
DATE	APRIL 5, 2007

JOINT COMPREHENSIVE PLAN
VILLAGE OF ROBERTS / TOWN OF WARREN

AYRES ASSOCIATES
Eau Claire, Wisconsin

FUTURE LAND USE
APRIL 2007 REVISIONS

MAP
20-R1

04/09/2007
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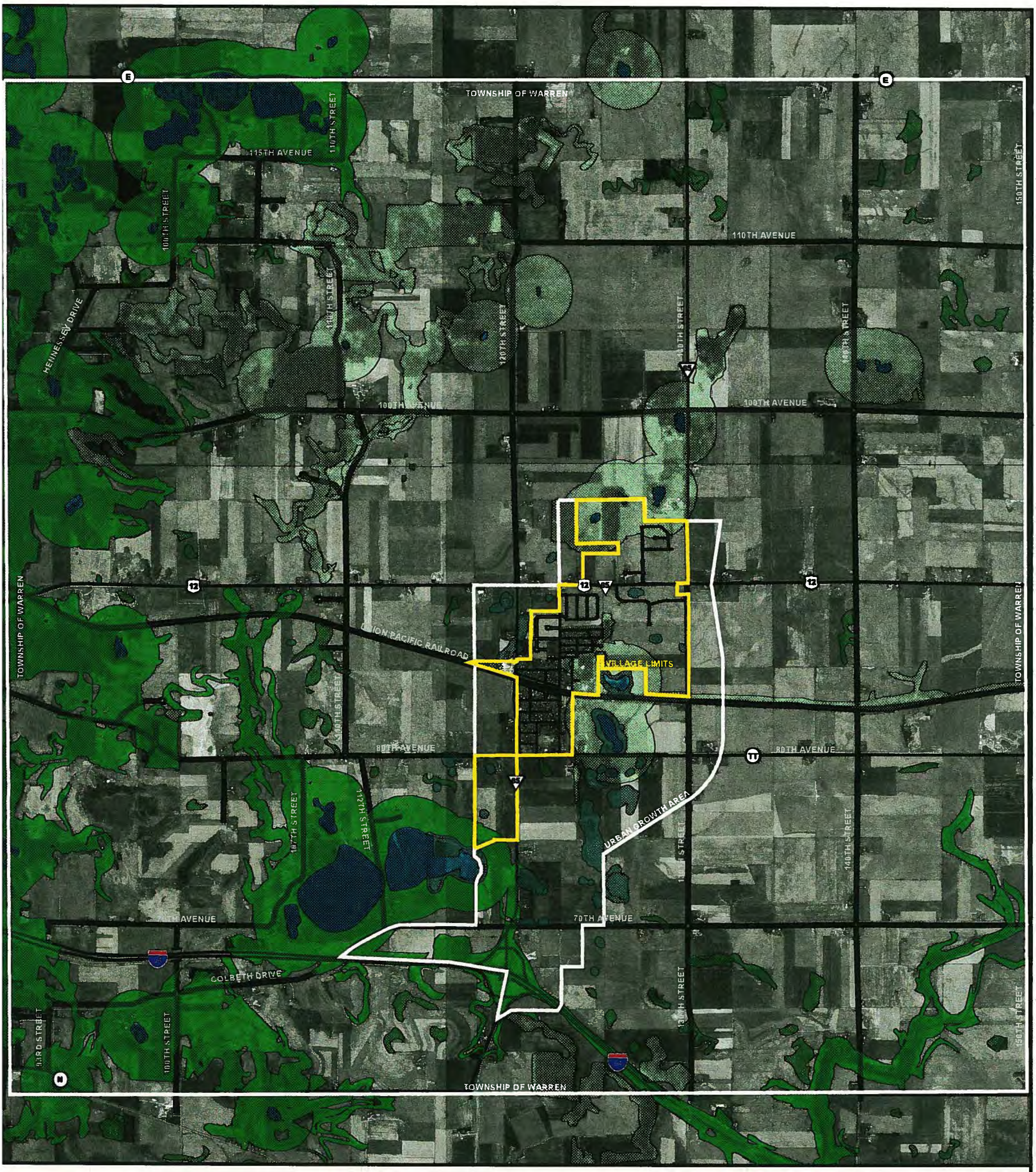
J:\ENGINN\Roberts\2007\23073700\Future Land Use.dgn



ENVIRONMENTAL CORRIDORS

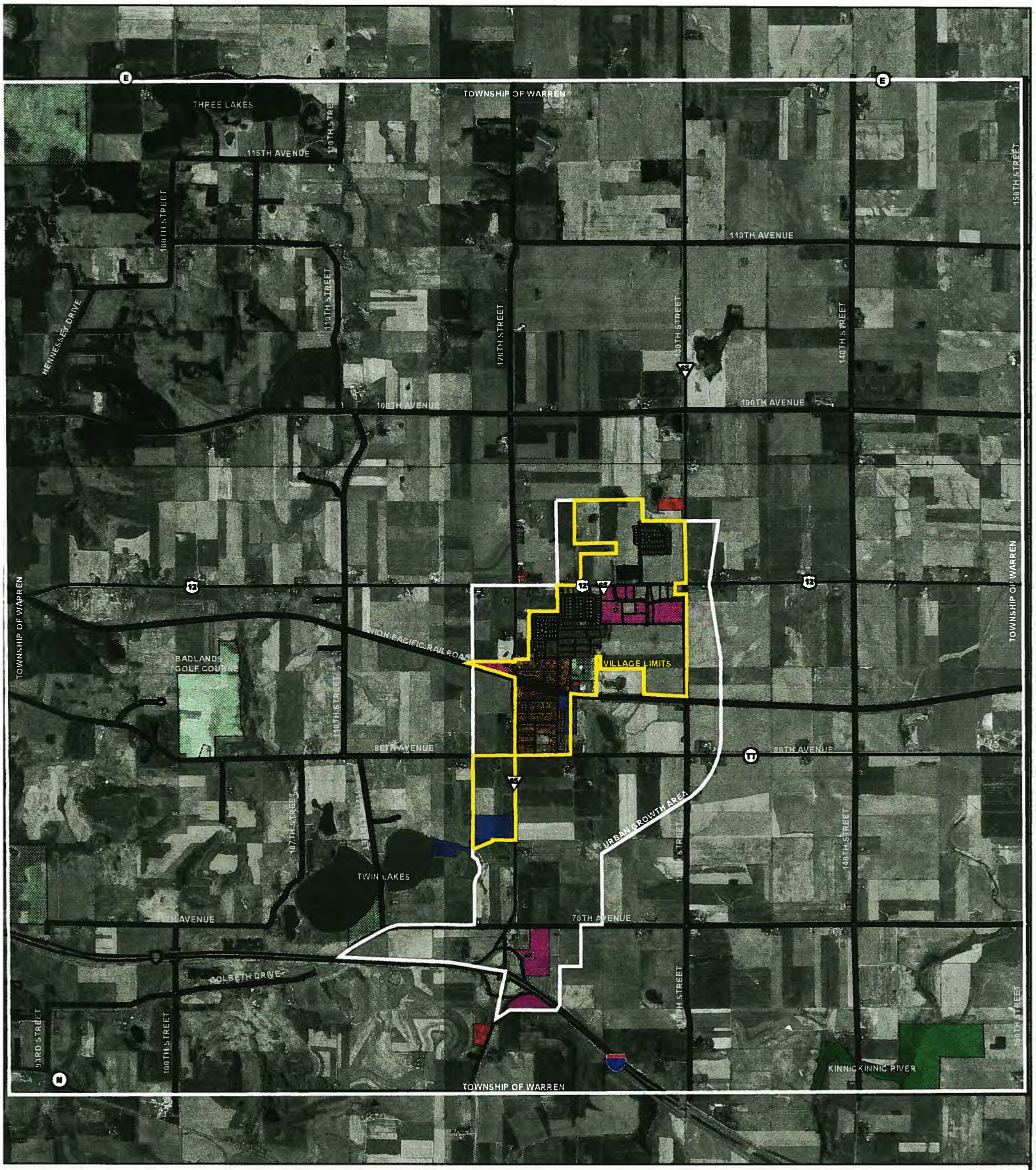
- PRIMARY ENVIRONMENTAL CORRIDORS
- SECONDARY ENVIRONMENTAL CORRIDORS
- INDEPENDENT ENVIRONMENTAL CORRIDORS
- CLOSED DEPRESSIONS

N

3000 0 3000 Feet

Source of Environmental Corridors: St. Croix County mapping
Closed depressions mapped by Ayres Associates (based on available mapping)

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	ENVIRONMENTAL CORRIDORS	MAP 21



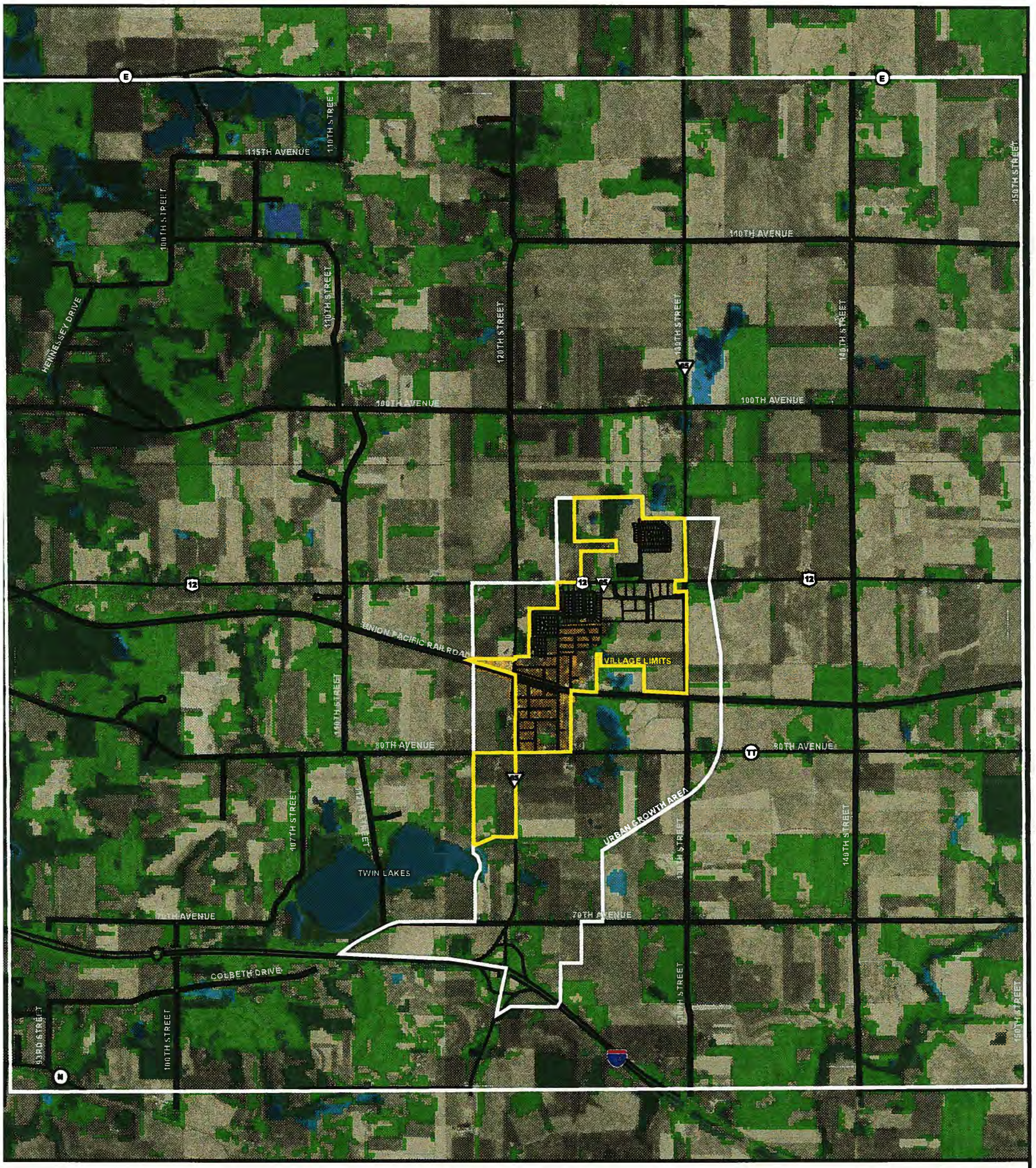
EXISTING LAND USE

- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- GOVERNMENT/INSTITUTIONAL
- RECREATIONAL
- CONSERVANCY
- CEMETERY

N

3000 0 3000 Feet

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	EXISTING LAND USE	MAP 22



EXISTING LAND COVER

- AGRICULTURE
- BARREN/GRASSLAND
- FORESTED
- OPEN WATER
- SHRUBLAND
- URBAN/DEVELOPED
- WETLAND

DR. BY: MJR CHK. BY: AWG DATE: FEB 2002	JOINT COMPREHENSIVE PLAN VILLAGE OF ROBERTS / TOWN OF WARREN	AYRES ASSOCIATES	EXISTING LAND COVER	MAP 23

APPENDIX VII

Planning Programs

APPENDIX VII — Planning Programs

This appendix contains numerous federal, state, county and local programs and legislative references that provide assistance in implementing the Comprehensive Plan.

AGRICULTURE, NATURAL, AND CULTURAL RESOURCES

Conservation Reserve Program (FSA, NRCS, LCD)
The intent of this program is to reduce erosion, increase wildlife habitat, improve water quality, and increase forestland. Landowner sets aside cropland with annual rental payments based on amount of bid. Eligibility varies by soil type and crop history. If owner bid qualifies, the land is accepted into the program. Continuous signup is open for buffers, waterways and environmental practices. Periodic signups announced throughout the year for other conservation practices.

Wetland Reserve Program (NRCS)
The intent of this program is to restore wetlands previously altered for agricultural use. Landowners may restore wetlands with permanent or 30-year easements, or 10-year contracts. Permanent easements pay 100% of the agricultural value of the land and 100% cost sharing: 30-year easements pay 75% of the agricultural value and 75% cost sharing while a 10-year contract pays 75% cost share only. Permanent or 30-year easements must be recorded with the property dead. 10-year contract is not recorded with deed.

Environmental Quality Incentives Program (NRCS, FSA, LCD)
The intent of this program is to provide financial and technical assistance to landowners for conservation practices protecting soil and water quality. Nutrient management and prescribed grazing eligible for cost-sharing are required practices. Assistance for other practices available in selected priority areas. Agricultural producers on agricultural lands are eligible. Projects are selected based on environmental value.

County Land And Water Resource Management Plan Implementation (LCD, DATCP)
The intent of this program is to reduce soil erosion, protect water quality, and conserve county-identified natural resources. The program involves technical assistance and cost-sharing to landowners to install best management practices. Eligibility is determined by the county land conservation departments and committee. Usually a 70% cost-share is provided.

Partners for Fish and Wildlife (FWS)
The intent of this program is to restore grasslands, wetlands, and threatened and endangered species habitats. Up to 100% cost-share is provided to restore wildlife habitat on private lands. Eligible land includes land which can be restored to wetland conditions, degraded or former grasslands that can be restored, and land that can be restored to provide habitat for threatened and endangered species.

Wildlife Habitat Incentives Program (NRCS)
The intent of this program is to develop and improve fish and wildlife habitat on privately owned lands. Nearly any type of land is eligible, including woodlots, shoreland areas, agricultural lands and non-agricultural lands.

Managed Forest Law (DNR)
The intent of this program is to promote forest management practices through property tax incentives. Property must be a minimum of 10 contiguous acres of which 80% must be capable of producing merchantable timber.

Wisconsin Forest Landowner Grant Program (DNR, NRCS, LCD)
The intent of this program is to assist private landowners in protecting and enhancing forested lands, waters, and prairies. Program allows qualified landowners to be reimbursed up to 65% of cost eligible practices. Practice must be identified in the landowners Forest Stewardship Plan to be eligible for cost-sharing. Landowners are required to contact their DNR forester for guidance prior to completing application.

Forestry Incentive Program (NRCS, DNR)
The intent of this program is to provide cost-sharing for forestry practices. Practices include tree planting, site preparation for natural regeneration, and timber stand improvement.

Wildlife Damage Abatement And Claim Program (LCD, DNR)
This program provides claim assistance and abatement to landowners receiving wildlife damage. Assistance is provided to landowners or cropowners receiving damage by deer, geese, or bears to commercial seeding, orchard trees, crops or agricultural lands, nursery stock, or livestock.

USDA Conservation Reserve Enhancement Program (CREP)
This program provides up to $240 million in federal and state funding to help landowners reduce soil erosion, improve water quality and at the same time provide for improved wildlife habitat. In Winnebago County, this could mean roughly $3.5 million available to landowners to enroll an estimated 1,600 acres of cropland into the program. Eligible landowners (those who own crop lands and marginal pasturelands within 150 feet of surface waters, including streams, ponds, wetlands, rivers and lakes) will be able to enroll in 15 year contracts or permanent easements. In doing so, they agree to install conservation "best management practices" such as streamside vegetated buffers, grassed waterways, and wetland restorations. These practices will keep soil in place, protect water quality and provide wildlife habitat for many wildlife species. In return, those landowners will receive federal and state funds for practice installation and long-term rental payments for acreage enrolled in the program. The permanent easement option involves conservation easements that would be held by the State of Wisconsin in perpetuity.

Planning

County Agricultural Preservation Plans

As part of the farmland preservation program, counties are authorized to prepare and adopt agricultural preservation plans required to enable farmland owners to receive tax credits. These plans are components of, and must be consistent with, county development plans, in counties with development plans.

Zoning and Platting Functions

Agricultural Shoreland Management Ordinances

DATCP may provide cost-share grants to offset county and landowner costs of installing shoreland protection practices where counties, cities, villages or towns have adopted agricultural shoreland management ordinances. This authority was enacted into law in 1992.

Tax and Fiscal Policy Regulations

Farmland Preservation Program

The farmland preservation program, administered by DATCP, provides property tax relief to farmland owners and encourages local government to develop farmland preservation policies. Property tax relief is based on income, amount of property tax and type of land use controls protecting the farmland. Farmland protection could consist of either a preservation agreement or exclusive agricultural zoning.

Forest Land Tax Programs

DNR manages three forestry tax laws that provide tax incentives to encourage managing private forest lands for forest crop production while recognizing a variety of other objectives.

Historic Preservation Ordinances

All cities and villages with properties listed in the State Register of Historic Places or National Register of Historic places must enact historic preservation ordinances. Counties and towns are also authorized to enact ordinances to regulate places, structures, objects and districts with special character, historic interest, aesthetic interest, or other significant value to preserve them.

Outdoor Recreation Funding

The DNR administers grants to local governments and non-profit conservation organizations to acquire and develop conservation and recreation lands. The DNR also acquires lands and easements through this program.

Tax Credits for Historic and Archaeological Places

SHS administers state and federal tax credits for rehabilitating historic buildings. Property tax exemptions for archaeological properties listed in the State Register and for certain historic buildings provide incentives for preservation and protection.

U.S. Department of Agriculture—Farm Service Agency
This agency offers several different types of loan programs for farmers and administers other federal programs that deal with crops and livestock.

Specialized Districts

Architectural Conservancy Districts
Cities, villages and towns may create architectural conservancy districts within their boundaries and adopt operating plans for the development, redevelopment, maintenance, operation and promotion of the districts. Architectural conservancy districts are operated under the direction of a district board.

Special Purpose Units of Government

Inland Lake Protection and Rehabilitation Districts
Lake management districts are special purpose units of government administered by a board of commissioners. District voting members make major policy decisions at annual meetings. Districts have the authority to levy taxes, make special assessments, or charge user fees to finance lake management activities. A lake management district may exercise the same powers as a sanitary district if authorized by the unit of government that created the district.

Legislation and Regulations that enable local governments to address and influence the impacts of growth and development

Wetland Water Quality Standards
DNR applies narrative (rather than numerical) water quality standards for wetlands to all its actions potentially affecting wetlands. This may include planning, financial assistance and regulations. Associated with this program is the Wisconsin wetland inventory program, under which the DNR is responsible for mapping wetlands.

Non-point Source Water Pollution Abatement
DNR, in cooperation with DATCP, administers the non-point source water pollution abatement program. This program includes a planning phase which examines land uses and provides cost-share money to landowners and location governments to help them implement best management practices to prevent non-point source pollution. Of the 67 priority watershed projects initiated under the program, 14 are completed, 36 are in the implementation phase, and 17 are in the planning stage.

Agricultural Impact Statements
This program requires agricultural impact statements when a state agency or public entity proposes to acquire an interest in over five acres of farmland through eminent domain.

State and National Registers of Historic Places
SHS lists properties in the State Register, nominates properties to the National Register, and maintains a statewide inventory of about 200,000 historic and archaeological sites and districts. Placement on the registers triggers protections and incentives that further the preservation and continued use of properties, neighborhoods, rural landscapes and communities.

HOUSING

C.D.B.G., HOME/HCRI

Federally funded homeownership and rehabilitation programs administered by state agencies available to villages, towns, not-for-profits, and individuals.

WHEDA

Multifamily loans, home improvement loans, and weatherization loans.

ECONOMIC DEVELOPMENT

State of Wisconsin Programs

The Brownfields Initiative
This program provides grants to persons, businesses, local development organizations, and municipalities for environmental remediation activities for brownfield sites where the owner is unknown, cannot be located or cannot meet clean up costs.

Community Based Economic Development Program
This program is designed to promote local business development in economically distressed areas. The program awards grants to community-based organizations for development and business assistance projects and to municipalities for economic development planning. The program helps community-based organizations plan, build, and create business and technology based incubators, and can also capitalize an incubator tenant and revolving loan program.

Community Development Block Grant (CDBG) Economic Development Program
This program provides grants to communities to loan to businesses for start-up, retention and expansion projects based on the number of jobs created or retained. Communities can create revolving loan funds from the loan payments.

CDBG—Blight Elimination and Brownfield Redevelopment Program
This program can help small communities obtain money for environmental assessments and remediate brownfields.

CDBG—Emergency Grant Program
This program can help small communities repair or replace infrastructure that has suffered damages as a result of catastrophic events.

CDBG—Public Facilities Program
This program helps eligible local governments upgrade community facilities, infrastructure, and utilities for the benefit of low to moderate-income residents.

CDBG—Public Facilities for Economic Development Program
This program offers grants to communities to provide infrastructure for a particular economic development project.

The Community Development Zone Program
This program is a tax-benefit initiative designed to encourage private investment and job creation in economically distressed areas.

The Health Care Provider Loan Assistance Program
This program provides repayment of educational loans up to $25,000 over a five-year period to physician assistants, nurse practitioners, and nurse midwives who agree to practice in Wisconsin. The program is designed to help communities that have shortages of primary care providers and have difficulty recruiting provides to their area.

The Milk Volume Production Program (MVP)
The MVP program is designed to assist dairy producers that are undertaking capital improvement projects that will result in a significant increase in Wisconsin's milk production. The goal of the program is to provide qualifying dairy producers with the type of financing necessary to fill the "equity gap" and to partner with local communities to increase dairy production in Wisconsin.

The Minority Business Development Fund
This program is designed to help capitalize revolving loan funds administered by American Indian tribal governing bodies or local development corporations that target their loans to minority-owned businesses.

The Physician Loan Assistance Program
This program provides repayment of medical school loans up to $50,000 over a five-year period to physicians who are willing to practice in medical-shortage area in Wisconsin.

Recycling Demonstration Grant Program
This program helps businesses and local governing units fund waste reduction, reuse and recycling pilot projects.

The State Infrastructure Bank Program
This program is a revolving loan program that helps communities provide infrastructure improvements to preserve, promote and encourage economic development and/or to promote transportation efficiency, safety and mobility.

WHEDA—Agribusiness Program
This program provides loans through local lenders to help small businesses develop new products, methods of processing, markets or an improved marketing methods for a Wisconsin product using Wisconsin's raw commodities. Loan proceeds under this program can be used for the purchase of land, buildings, equipment, inventory application and closing fees, permanent working capital, soft costs and refinancing existing debt that has matured.

WHEDA—Beginning Farmer Bond Program (BFB)
The purpose of this program is to offer low interest loans to beginning farmers. Eligible uses of loan proceeds include the purchase of land, buildings, machinery, equipment and livestock.

WHEDA—Credit Relief Outreach Program (CROP)
This program features 90% guarantees on loans up to $30,00 made by local lenders. CROP can be used for feed, seed, fertilizer, pesticides, land rent, custom hire, animal feed, UCC filing fees, crop insurance, feeder animals, tillage services, equipment rental or repair, or utilities for commodity production.

WHEDA—Farm Program
This program provides access to credit by guaranteeing a loan made by a local lender. The purpose of the program is to help farmers modernize an existing farm operation. Eligible uses of loan proceeds include acquisition of agricultural assets that are defined as machinery, equipment, buildings, land or livestock to be kept for more than one year.

WHEDA—Linked Deposit Loan Subsidy (LIDL)
This program helps women and minority-owned businesses by offering low interest loans through local lenders. The LIDL Program can be used for expenses including land, buildings and equipment.

WHEDA—Small Business Guarantee Program
This program offers a pledge of support on a bank loan. Loan proceeds can be used to expand or acquire a small business. It can also be used to start a day care business.

Wisconsin Transportation Economic Assistance Program (TEA)
This Wisconsin Department of Transportation administered program provides 50% state grants to governing bodies, private businesses, and consortiums, for road, rail, harbor and airport projects that help attract employers to Wisconsin, or encourage business and industry to remain and expand in the state.

The Wisconsin Fund
This program provides grants to help small businesses rehabilitate or replace their privately owned sewage systems.

The Wisconsin Farm Center
This Program is administered by the Wisconsin Department of Agriculture, Trade and Consumer Protection and provides assistance with a wide range of farm-related subject areas including feasibility analysis, cash flow and enterprise analysis, and debt analysis and restructuring.

Other Financial Programs and Resources

Wisconsin Link
This program is operated by the Wisconsin Milk Marketing Board and features numerous resources that support Wisconsin's dairy industry.

Wisconsin Department of Natural Resources
The WISDNR provides local units of governments and private organizations numerous financial programs for promoting, creating and maintaining recreational facilities. These programs include Land and Recreational Financial Assistance Grants (LR) such as the Stewardship Fund, Recreational Boating Facilities funds, Recreational Trails Program, Snowmobile Trail Aids, Lake Planning Grants and the Non-point Source Pollution Abatement Program in addition to many other programs.

Wisconsin Small Business Administration
The district office of the U.S. Small Business Administration has a wide range of financial information and loan programs.

Tax and Fiscal Policy Regulations

Tax Increment Finance District Program
Cities and villages are authorized to create tax increment financing districts and prepare development or redevelopment plans for them. Regional planning commissions or private consultants often assist cities and villages. Tax increment financing districts are typically used to finance infrastructure costs of commercial and industrial park development. DOR must certify the required project plans of all districts and establish base values.

Wisconsin Development Fund
This program provides financial assistance to Wisconsin businesses to support economic development projects that will create or retain jobs in the state. The program is targeted to specific funding needs, such as labor training, research into new products or processes, facilities or the feasibility of employees owning a business. DOC works very closely with local communities on business location, expansion and retention projects.

Community Development Block Grants
This program offers grants administered both by DOA and DOC. The DOA program provides grants to general purpose units of government on the basis of need and competition. These grants are for housing programs, primarily for low- and moderate-income households and primarily for projects that rehabilitate, demolish or remove buildings. There are two types of community development block grants: federally administered entitlement grants to large cities and state administered application-based grants to small communities. The DOC-administered community development block grants go to local governments, with populations less than 50,000 to help businesses create or retain jobs emphasizing employment for low" and moderate-income individuals. The grants can also be used to help communities provide the infrastructure for a particular economic development project, as well as to help communities upgrade infrastructure and utilities in low- and moderate-income neighborhoods.

Contaminated Lands Remediation
The Land Recycling Law of 1994 encourages redeveloping "brownfields" by limiting liability of purchasers, municipalities, lenders, trustees and administrators of probate estates from certain parts of the Hazardous Substance Discharge Law (spills law). DNR is exploring various funding options to help implement this law. There is no concurrent federal limit on liability.

Petroleum Environmental Cleanup Program
DOC administers this program, which provides partial funding to remediate environmental contamination from petroleum product storage. Included in the coverage are storage-tank systems containing gasoline, gasoline-alcohol fuel blends, kerosene, fuel oil, burner oil, diesel fuel, and used motor oil. Many underground and above ground storage systems are covered, along with their on-site integral piping and dispensing components. DOC coordinates this program with DNR, which has responsibilities related to remediating contaminated sites.

Specialized Districts

Local Development (Urban Development)
Cities are authorized to prepare redevelopment plans for areas that are substandard or unsanitary as a result of inadequate planning; excessive land coverage; lack of proper light, air or open space; defective design and arrangement of buildings; lack of proper sanitary facilities; and the existence of buildings which have become economic or social liabilities.

Reinvestment Neighborhoods
Cities, villages and towns are authorized to delineate reinvestment neighborhoods or areas.

Business Improvement Districts
Cities, villages and towns may create business improvement districts within their boundaries and adopt operating plans for the development, redevelopment, maintenance, operation and promotion of the districts.

COMMUNITY FACILITIES AND UTILITIES

State of Wisconsin Programs

CDBG—Public Facilities Program
This program helps eligible local governments upgrade community facilities, infrastructure, and utilities for the benefit of low to moderate-income residents.

The Health Care Provider Loan Assistance Program
This program provides repayment of educational loans up to $25,000 over a five-year period to physician assistants, nurse practitioners, and nurse midwives who agree to practice in Wisconsin. The program is designed to help communities that have shortages of primary care providers and have difficulty recruiting provides to their area.

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Wisconsin's Priority Watershed Program
Wisconsin's Priority Watershed Program was created in 1978 by the State Legislature. The goal of the program is to improve and protect the water quality of streams, lakes, wetlands and groundwater by reducing pollutants from urban and rural non-point sources. Non-point sources of pollution include erosion from agricultural lands, stream banks and shorelines and developing urban areas; and runoff from livestock wastes and established urban areas. Pollutants from non-point sources are carried to surface or groundwater through the action of rainfall runoff, snowmelt and seepage.

Planning

Park and Recreation Plans
Counties, towns, cities, and villages are authorized to prepare plans relating to the physical development of the community including parks, playgrounds, hunting and fishing grounds, forests and other facilities of a recreational nature.

Zoning and Platting Functions

Water Management Regulations
DNR has authority to issue permits affecting navigable waters of the state for waterway projects which potentially affect adjacent land uses. These include bulkhead line ordinance establishment, bridge or culvert placement, dam construction, stream realignment, retaining wall construction, water diversion and pond construction.

Tax and Fiscal Policy Regulations

Clean Water Fund
Through this program DNR administers grants and loans to municipalities and school districts to design and construct facilities to prevent and abate water pollution.

Specialized Districts

Utility Districts
Towns, villages, and third and fourth-class cities may establish utility districts. In villages and third and fourth class cities, utility district funds may be used to pay for highways, sewers, sidewalks, street lighting and water for fire protection that is not paid for by special assessment. Towns may use utility district funds to pay for any convenience or public improvement that is provided in the district which is not paid for by special assessment.

Special Purpose Units of Government

Sanitary Districts
Sanitary districts may be formed by town boards to plan, construct, and operate public water supply, sewage disposal or solid waste collection facilities. Districts may harvest aquatic plants or treat waters for swimmer's itch or algae problems. Sanitary districts are managed by local commissions, which may levy special assessments and collect charges for activities and services. DNR can also order the formation of sanitary districts, however, there is virtually no oversight of the formation or expansion of sanitary districts.

Drainage Districts
Drainage districts are organized under state law to promote and maintain drainage of agricultural lands. County drainage boards and local circuit courts handle the business of drainage districts. Drainage boards must submit a report to the circuit court, which establishes drainage benefits. These benefits are then used to assess district costs against property in the district.
DATCP regulates agricultural drainage districts through administrative rules that establish performance standards and procedures to assess benefits and investigate district compliance.

School District
All territory in Wisconsin must be included in a school district operating elementary school grades, high school grades, or both. Districts can affect local land use decisions through location of school facilities, which are often part of a physical development plan. However, school districts are separate, autonomous districts with their own elected boards and taxing authority. District boundaries may not have the same boundaries as area municipalities. Processes exist for districts to exchange territory (s. 20.255, Wis. Stats.) and for reorganizing an entire district (ch. 117, Wis. Stats.), but are not used regularly.

TRANSPORTATION

Planning

Transportation Planning
DOT is involved in a variety of systems and facilities planning processes, including work with Metropolitan Planning Organizations (MPOs). In November 1994, DOT adopted TRANSUNKS21, a plan for transportation through 2020. Under TRANSLINKS 21. DOT will pursue completion of the multi-lane Corridors 2020 backbone network including highways 10, 29, 41, 51, 53, and 151. The plan calls for additional investments to rehabilitate and modernize existing state and interstate highways, and addresses land use and highway demand management. DOT also has approval authority for the location of airports.

Transportation Facility Location
The DOT has authority to designate and construct freeways and expressways, and has authority related to bridges that cross state boundary waters. This includes the authority to officially map for future freeways and expressways. The DOT also has approval authority for the location of airports.

DOT Property Acquisition
The DOT acquires land for highways and other transportation facilities by gift, devise, purchase and condemnation. This includes lands for wetland and archaeological site mitigation. The DOT also has first right to acquire abandoned railroad lands. When acquiring or transferring any property containing historic or archeological properties, the DOT must work with the State Historical Society to ensure that such properties are protected.

LAND USE

Wis. §66.1001
Defines comprehensive planning law.

Comprehensive Planning Grants
Grant funds are provided annually by the state through a competitive process for the preparation of a comprehensive plan.

INTERGOVERNMENTAL COOPERATION

Planning

County Solid Waste Management Plans
County solid waste management boards are authorized to develop plans for a solid waste management system. These plans must be consistent with state criteria detailed in Wisconsin Administrative Code and be reviewed by DNR.

DNR Land Acquisition and Property Master Planning
The DNR owns and manages more than 1.2 million acres statewide and has the authority to acquire lands by gift, devise, purchase and condemnation for public purposes. When acquiring and before transferring any property containing historic or archeological properties, the DNR must work with the State Historical Society to ensure protection.

Zoning and Platting Functions

Extraterritorial Zoning
A city or village with a plan commission and a zoning ordinance may exercise extraterritorial zoning jurisdiction. The jurisdiction of a first, second or third class city extends three miles beyond its corporate limits. The jurisdiction of a fourth-class city or village extends one and a half miles beyond the limit. Extraterritorial zoning requires the formation of a joint extraterritorial committee evenly comprised of members of the municipality and the town(s) involved.

County Shoreland/Wetland Management
Each county is required to zone by ordinance all shorelands in its unincorporated areas. Ordinances enacted under the enabling statute supersede all provisions of ordinances enacted under s. 59.97, Wis. Stats. Town approval is not required. Shorelands include areas within 1,000 feet of a lake or 300 feet of a navigable stream. Shoreland zoning ordinances may be more restrictive than minimum state standards, but not less. Counties may permit only certain uses in wetlands of five acres or more within the shoreland zone.

City and Village Shoreland/Wetland Protection Ordinances
Cities and villages are required to zone by ordinance all unfilled wetlands of five acres or more which are shown on DNR's final wetland inventory maps located within shorelands and within the incorporated area. Ordinances adopted under s. 62.23 or s. 61.35, Wis. Stats., may be more restrictive than wetland protection ordinances, but not less restrictive.

County, City and Village Floodplain Ordinances
Counties, cities and villages are required to adopt reasonable and effective floodplain zoning ordinances within one year after hydraulic and engineering data adequate to formulate the ordinance becomes available.

County Subdivision Regulation
County planning agencies are authorized to prepare plans in the form of ordinances for the future platting of lands outside of incorporated areas, or for the future location, of streets or highways or parkways, and the extension or widening of existing streets or highways. A county may adopt these plans without the approval of affected towns.

Extraterritorial Plat Review
Cities and villages that have adopted a subdivision ordinance or official map can exercise extraterritorial plat approval jurisdiction for one and a half miles beyond the limits of a fourth class city or village.

County, City and Village Erosion Control and Storm Water Management Ordinances
Counties are authorized to enact ordinances to control construction site erosion control at sites in unincorporated areas, if the sites are not for building construction or storm water management. Cities and villages are authorized to enact similar ordinances affecting their incorporated areas.

Municipal Boundaries

Municipal Annexation
Annexation is the process by which unincorporated territory becomes part of an existing incorporated municipality. Wisconsin statutes provide a mechanism by which land owners and electors may transfer their contiguous land parcels from unincorporated towns to cities and villages, and by which cities and village can annex adjacent lands. The DOA provides technical assistance and reviews petitions for municipal annexation, providing advisory public interest opinions in counties with a population greater than 50,000.

Municipal Incorporation
Citizens may file a petition with the circuit court to incorporate a designated area within an unincorporated town into a city or village. Incorporation can be used to consolidate an entire town with a municipality. DOA reviews and approves incorporation petitions, which are then subject to a referendum of residents within the proposed incorporated area.

Municipal Consolidation
Consolidations that involve an existing city or village and an entire town follow the same process and standards of municipal incorporation. Incorporated municipalities can consolidate after successful referendum in each community included in the consolidation. No state involvement is required.

Cooperative Boundary Plans
Any combination of cities, villages and towns may determine the boundary lines between themselves under a cooperative plan approved by the DOA. The parties can freeze boundaries, provide for phased boundary changes, or provide that boundary changes may occur if certain conditions are met. The cooperative plan must be made with the general purpose of guiding and accomplishing a coordinated, adjusted, and harmonious development of the territory covered by the plan which will, in accordance with existing and future needs, best promote public health, safety, morals, order, convenience, prosperity or general welfare, as well as efficiency and economy in the process of development. Cooperative boundary plans cover at least a 10-year period. The DOA provides technical assistance to communities preparing cooperative boundary plans, and reviews and approves plans.

Cooperative Boundary Agreements
Two municipalities whose boundaries are immediately adjacent to each other at any point may set the boundary between them. The agreement must be approved by the governing bodies of both municipalities involved and must pass a public referendum in areas to be annexed or detached. This type of agreement can be used to settle boundary-related litigation between communities, or for service sharing agreements between local units of government.

IMPLEMENTATION

Planning

County Erosion Control Plans
Counties designated as priority counties by DATCP are required to adopt erosion control plans. The county Land Conservation Committee prepares plans and identifies land use changes or management practices that would bring areas into compliance with the standards adopted by the committee.

Sewer Service Plans
The DNR is responsible for conducting a continuing planning process to control water pollution, integrating technical measures for pollution abatement and management arrangements necessary to implement those measures. An important element of this process is sewer service area planning. Sewer service area plans, developed locally, are used to determine where a community's sewered development will occur. In areas of the state designated by the Governor, designated area-wide water quality planning agencies (generally regional planning commissions) are responsible for preparing the plan. In other areas, it is DNR's responsibility to work with local governments.

Official Mapping
Cities and villages, and towns exercising village powers, may establish official maps which show streets, highways, historic districts, parks and parkways, playgrounds, railroad rights-of-way, walkways and public transit facilities within and extending beyond their boundaries into their extraterritorial plat approval jurisdiction.

Zoning and Platting Functions

Local Subdivision Regulation
The Village of Roberts and Town of Warren have adopted their own subdivision ordinances.

Nonmetallic Mining Ordinance
Any county, city, village, or town may adopt by ordinance any regulations for the reclamation of nonmetallic mining sites.

Animal Waste Management Ordinance
Any county, city, village, or town may enact an ordinance, regulating the construction of animal waste storage facilities and use of animal wastes, in order to maintain the sanitary conditions of the county.

Town Mobile Home Park Standards
Town boards may adopt mobile home park ordinances with more restrictive standards than the county zoning ordinance.

Tax and Fiscal Policy Regulations

Monies in Lieu of Dedication

Cities, villages and towns can choose to accept money in lieu of a dedication during the approval of a subdivision.

Development Impact Fees

Counties, cities, villages and towns can impose development impact fees. To collect such fees, a community must adopt an ordinance and prepare a public facilities assessment report detailing the costs of services to be offset by fees. Local governments must show a direct correlation between the development and the increased costs of services, infrastructure development and maintenance it requires.

APPENDIX VIII

Town or Warren/Village of Roberts

Design Criteria

APPENDIX VIII

Town of Warren/Village of Roberts Design Criteria

This section deals with the criteria that is basic to most community plan design. It is expected that these criteria be used by not only the Town and Village officials and staff but also private developers and individuals in the specific design, building, and development of the various elements and areas of the community throughout plan implementation. More specifically, this section deals with the design criteria for intensive developed (urban) land areas as well as those design criteria to be utilized for less intensive developed (rural) open-land areas of the community. Also included are design criteria dealing with the important circulation pattern within the community, including the ancillary elements of automotive circulation, parking, bikeways, and pedestrian ways. Also included in this section are design criteria related to public and private utilities even though it is understood that private utilities have long established their own methods and procedures and designs for extending service to a specific development and the design criteria encompassed in this section therefore, deals only generally with private utility matters. Also included are commons on aesthetics and amenities such as lighting, landscaping, and signage.

General

This type of development design can literally make or break a particular development and if not taken seriously by both the developer and the community may result in a development that is detrimental to the community and which the community must long endure. It is important, therefore, that every one concerned with planning and plan review and implementation by fully aware of and understand the various aspects of the design of not only the specific development but of the individual elements of the community. The type of design for a specific area of the community does not necessarily have to be identical to the design of adjacent areas in order to be an integral part of the community and to afford a viable living area for the future residents of that portion of the community.

In the older sections of most older established communities, the "linear" pattern of streets is the predominate design structure. Such is the case in the Village of Roberts. Such design was relatively easy to plan on paper and was, in communities without major fluctuations in topography, easy to provide with utility service. Such linear pattern of streets results in square or rectangular blocks with individual building parcels fronting on paralleling streets. In the earlier years of community development this pattern of development served well, particularly in light of the fact that travel was accomplished either on foot or by horse drawn vehicle and in the early years of the 20th century by a few automobiles which were not very fast, were not very large, were not numerous, and consequently, did not take up a great deal of space on the roadway. The linear pattern of development is still a viable pattern although there is no longer the need for as many cross streets as there once was because most traffic circulation is accomplished faster than in the earlier years and time, not distance, is usually the most critical factor in travel. One of the problems with the older linear developed areas of the older parts of the communities and neighborhoods is that the many paralleling streets also provided through-movement of the then low volume, slow moving traffic where such traffic movements is not longer required or desired in parts of the community. In many communities measures have been taken to reduce the number of paralleling, through streets to discourage through movement of traffic, and therefore simultaneously encourage a less congested community which is more conducive to family living.

A second type of development design that is more contemporary is the "curvilinear" pattern. Must of the residential development during the 1950s, 60s, and 70s was comprised of curvilinear street design with streets following contours and providing longer, odd-shaped blocks rather than the strict linear/rectangular patterns of pre-World War II development. One of the assets of the curvilinear pattern is that it discourages through traffic movement. Another is that streets, and therefore blocks and lots, can be designed to better "fit" the natural contour of the land. One of the problems of such design is that resulting odd shaped blocks and lots are, in some cases, difficult to serve with public facilities. This latter problem was due primarily to the fact that historically the people involved on both the private and public sides of land development design and design review did not pay enough attention to details of the design in the initial stages. The curvilinear type of design, however, is a very viable method of residential development and will not doubt be utilized in further development in the community.

A third type of development design and one that has come about due to the necessity to cut the costs of development which are transferred to the individual home buyer, is "cluster" development where building parcels or spaces are clustered on only a portion of the development site, reducing the standard size of the building parcel, but keeping the same overall density of development retaining large areas of open space between the clusters of five, six, or a dozen individual residences. Such cluster development may, in an urban area, accommodate either single family units, two family units, townhouses, or apartments within a "planned unit development" (PUD). Such development further discourages through movements of traffic and actually places many residences on dead-end streets. Such street patterns are not as easy to maintain as either the linear or curvilinear pattern but the amenities afforded by such dead-end street cluster development in terms of privacy to the individual family is viewed by many as offsetting the problems of providing public service. Such development also reduces the amount of paved area and the length of sewer and water and other utility facilities and thereby lowers the cost of the overall development to initially the designer and ultimately to the public. This type of overall design will probably also be used in the community.

Following are some basic design criteria related to individual elements of intensive physical development in an urbanizing community.

Streets and Other Rights-of-Way. As already noted there are basically three types of streets in a community, including arterial, collector and minor (land access) streets. In urban communities, alleys or service drives may also be useful in commercial, industrial, or institutional areas.

Arterial streets are those streets which provide the basic circulation structure or network of the community as a whole and carry traffic around and through the community and tie the community with other communities and other areas of the region, state, or nation. While freeways are part of the arterial street network, the bulk of arterial street right-of-way and acreage is comprised of so-called standard arterial streets. Such standard arterials may be designated U.S., state, or county trunk highways and may also be major streets within the community with no marked jurisdictional designation. Because of their function of carrying

through traffic, such arterial streets should not penetrate residential neighborhoods but serve them and (where feasible) form the boundary of the neighborhood and (where possible) separate major land uses.

Because arterial streets are designed to carry the through traffic of a community, such traffic should not be impeded by direct access from individual properties which are or should be located on internal minor or collector streets. Backing residential development on arterial streets eliminates direct land access and confines vehicular access to arterial streets via only minor or collector street intersections. Such design provides for a safer and proper function of the arterial street network while directing residential traffic to the minor and collector streets within the neighborhood. Every effort should be made to separate through traffic from internal development or neighborhood oriented traffic.

In the Town of Warren and the Village of Roberts the existing and proposed arterial streets and highways are IH94, USH 12, STH 65, CTH E, CTH TT, Division St., 120th St., 80th Ave., 100th Ave., and portions of 130th St. and 70th Ave. Also, 110th and 112th Sts. May also function as arterials. In the predominately medium density urban areas of the community arterial streets should be spaced one mile apart to form sufficient access to and through the community, and provide the boundaries of neighborhoods. Standard arterial streets range in width from 66 feet to 160 feet. In an urban community, however, contemporary standard arterials are generally designed at 100–120 feet in width which provides for design of multiple lane movement of traffic, particularly at the intersections of tow arterials where such traffic movement is usually critical, essential, and often electronically controlled. Because arterial streets are used by heavier, through traffic and the bulk of truck traffic in the community, the grades of such streets should be limited to 6 percent or less. Also, the right-of-way (land) ultimately required to carry traffic in the community should be acquired early, as the community develops, to allow for future expansion.

Collector streets are those streets in an urban community which function to provide a means for traffic from within the neighborhood or commercial and industrial sections of the community to move on a relatively direct route to the arterial street network. Such collector streets should not,

however, traverse a neighborhood thereby providing a shortcut through the neighborhood and should therefore terminate at a convenient point within the neighborhood. Collector streets provide access to abutting land but such access should be reduced to a minimum in the design of the blocks in the neighborhood. Collector streets have traditionally been built only 66 feet in width in most older communities, however, most contemporary collector streets because of their heavier traffic capacity, usually require an 80 foot width particularly at intersections with other collectors and with arterial streets, in order to provide free flow of movement in all directions at the intersection. Collector streets with their traffic carrying function should not have grades exceeding 8 percent.

Minor streets (or land access streets) are those streets which provide specific access to individual properties within the community. Such streets in most urbanizing communities are designed to be 60 feet in width, although in some specific circumstances where traffic carrying capacity is not needed, 50 foot width streets may be sufficient. Such streets in towns must be 66 feet in right-of-way width by law, although such requirement may be waived by the D.O.T. District Director. Such streets should not, as a rule, exceed 8 percent in grade and should never exceed 10 percent. It should also be noted that the grade of any street should not be less than 0.5 percent in order to provide positive drainage during times of rain storms and snow melt. In fact, the minor street system throughout a community, if well designed, should provide the major surface storm water carrying capacity r the community, funneling the surface drainage over the minor street system to storm sewer inlets or directly to open drainage swales and streams and rivers which traverse the community or to retention/detention ponds designed to store or impede storm water flow.

Certain minor streets may be designed to be dead-end streets, particularly in the case of cluster development but also in the case of conventional linear or curvilinear street design. Such dead-end streets, commonly refereed to as cul-de-sacs because of their bulbous turn-around ending, should be designed to be permanently closed at one end which, as indicated earlier, discourages through movement of traffic in the neighborhood. Such cul-de-sac streets should also not be excessive in length (300 to 900 feet) and should be limited in the number of residential units fronting such streets to avoid high traffic volumes and congestion. Cul-de-sac streets should be

designed with a full understanding of the requirements and function of residential streets and consequently the grade of such streets should not normally exceed 6 percent and the cul-de-sac end should be large enough (75 to 80 feet radius) to accommodate fire equipment, residential moving vans, school busses, and large snow removal equipment.

Pedestrianways of not less than 15 feet in width may be required in addition to street sidewalk,s near the center and entirely across any block over 900 feet in length in medium to high density urban areas to provide adequate pedestrian circulation or access to schools, parks, shopping centers, churches, or transportation facilities. In planned unit developments (PUDs) or cluster development, pedestrian circulation may be better provided in the common open space within the development rather than along minor access streets. Pedestrianways where either required or desired should not have grades that exceed 12 percent. Pedestrianways which may be used to supplement the pedestrian traffic function on sidewalks that are a part of the collector and local arterial street network in the medium to high density urban areas, should be either hard surfaced in the more densely settled areas or surfaced with compactible, water-shedding materials in the less dense or open space areas. Pedestrianways should be 15–20 feet in width in order to provide for proper maintenance.

Streets should intersect each other at nearly right angles as topography and other limitations my dictate. In addition, the number of intersections along an arterial street or highway should be held to a minimum and the distance between such intersections should, normally, be not less than 1,000 feet in urban areas of the community and even greater in the more rural areas of the community. The number of streets converging at one intersection should be held to a minimum, preferably not more than two within a residential area. "T" intersections between either minor or collector streets provide a means of discouraging through traffic while arterial streets should be designed to continue across the community. Collector and minor streets should not be designed to continue across arterial streets. Jogs of less than 250 feet in length from street to street should also be avoided so as not to create a traffic problem by the movement of vehicles around or through a short jog. In the Village of Roberts it is proposed that all arterial and collector streets have full five (5) foot sidewalks on both sides of the street. It is also recommended that minor streets in the Village should include sidewalks although there may be exceptions to the use of

sidewalks on short and dead-end minor streets with less than customary residential street average daily traffic (ADT) loads. Curbs and gutters should be construction on all streets within sewered areas of the community and commercial and industrial streets and the "islands" of cul-de-sacs should have vertical faced curbs.

Railroad rights-of-ways should be accommodated in the overall community design. Crossing of railroads should be limited to arterial street crossings and the lots and blocks should be designed to help separate or screen neighborhood uses from the railroad.

Other easements or rights-of-way may be required in some areas of the community to accommodate open storm drainage or special utility services. Such easements or rights-of-way should be designed to accommodate the specific use with attention to their affect on adjacent uses and access.

Electric power, telephone, and other communication cable should be placed within the public right-of-way whenever possible or practical. In some types of development, such as cluster development, it may be appropriate to place such public utilities within utility easements which can be kept in open space use for ease of accessibility. ***Natural gas mains*** should also be placed in public street right-of-way for ease of installation and access.

Block design. The width, length, and shape of blocks should be suited to the planned use of the land, zoning requirements, need for convenient access, traffic control and safety of street and pedestrian traffic, provision of utilities, and the limitations and opportunities of topography and other natural and man-made barriers.

The length of blocks between intersections in residential areas need not as a general rule be less than 600 feet and should be no more than 1,200 feet in length unless otherwise dictated by exceptional topography, density of development, special traffic or utility needs, or other special considerations. Shorter blocks devote area to unneeded streets and longer blocks hinder safe and efficient traffic circulation.

The width of blocks should be enough to provide for two tiers of standard lots of appropriate depths as described in the zoning ordinance except where otherwise required to separate residential development from though traffic or abut nonresidential development or use. ***Block configuration*** should be carefully designed so as to create blocks which when divided into building lots provide a fairly uniform size and buildable area.

Lot design. The size and shape and orientation of lots should be appropriate for the type of development and use contemplated and should adhere to zoning ordinance requirements. Each lots should be designed to provide an aesthetically pleasing building site and a proper architectural setting for the building contemplated. Lots with more than five sides should be avoided.

The depth of lots should be related to the lot width and excessive lot depth in relation to width should be avoided. A proportion of 2-to-1 should be considered a maximum depth-to-width ratio under normal circumstances. Depth of lots or parcels designed for commercial or industrial use should be adequate to provide for off-street service and parking required by the use contemplated while providing for adequate and safe traffic circulation and meeting the requirements of the zoning ordinance, specifically site design standards. ***Side lot lines*** should be perpendicular to straight streets and radial to curved streets on which the lots front. Lot lines should follow both municipal and individual development boundary lines rather than cross them. ***Double-frontage or "through lots"*** should be avoided except where necessary to provide separation of residential development from arterial street traffic or to overcome specific disadvantages of topography, adjacent use and orientation. Where through lots are necessary or desired they should be designed with extra depth to allow for added screening of adjacent streets or uses. ***Corner lots*** should have an adequate additional width of at least 10 feet to permit adequate building setback requirements of the zoning ordinance.

Lot design efficiency relates to the number of lots provided in any development design divided by the number of lots theoretically possible based on the zoning ordinance requirements. A design efficiency of more than 80 percent is considered good on a development of less than 50 acres, but would probably be poor on a development of 100 acres, and would be very poor on a

200 acre or more development. Meeting the theoretical number of buildable parcels, often very important to the return on the developers investment, may not always be desirable for either the developer or the community and lot design efficiency should be considered but should not be the overriding criteria upon which development decisions are made.

Other Design Considerations

Park and school sites should be centrally located within the community served in order to afford the largest number of residents impeded, safe pedestrian or motorized access to such sites and facilities. Specifically, school and park sites should be directly accessible from arterial streets on no more than one side and on collector or minor access streets on at least two sides, and should be large enough to accommodate the forecast activities at the sites. Combining school and park sites can provide for joint use of some facilities which may reduce both the size and cost of such facilities when provided separately.

Street lighting and landscaping are areas of concern that have been given limited attention by most urbanizing communities, and consequently, very little attention is given the subject by the developer in design and development. The type, size, style, number, and placement of streets lights, for example, should be a conscious design decision as well as a purely utility, physical, service decision. The type, size, and placement of street trees and other landscaping should be concern of the community planners. Developer(s) should be required to provide such aesthetic amenities as part of each development. Where possible such amenities should be maintained by the land owner or maintenance corporation established for each development in the community. Solid waste collection and particularly the storage areas for containers should be of concern to both the developer and the community, particularly in commercial, industrial, and institutional use areas. The landscape and architectural screening of parking areas and other man-made facilities which are inherently not visually pleasing should be considered and dealt with in any site development proposal.

Storm water drainage facilities should be adequate to serve the development, neighborhood, and community. Such facilities may include curbs and gutters, catch basins and inlets, storm sewers,

road ditches, culverts, open channels, water retention/detention structures and settling basins. The facilities should be of adequate size and grade to hydraulically accommodate the maximum potential volumes of flow through and from within the development (based usually on a 25-year storm) and should be designed so as to prevent and control soil erosion and sedimentation and to present no hazards to life and property. Where possible, storm water drainage should be maintained in landscaped open channels of adequate size and grade to hydraulically accommodate maximum potential volumes of flow, subject to review by the Town or Village engineer.

Earth moving such as grading, topsoil removal, mineral extraction, road cutting, waterway construction or enlargement, excavation, channel clearing, ditching, drain tile laying, dredging, and lagooning, should be so conducted as to prevent erosion and sedimentation and to least disturb the natural fauna, flora, water-course, water regimen, and topography. Cut and filled lands outside of street right-of-way should be traded to a maximum slope of 3:1 or the soils angle of repose, whichever is less.

The subdivider should plant those grasses, trees, shrubs, and ground cover, a species and size determined by the Plan Commission, necessary to prevent soil erosion and sedimentation. To prevent erosion and sedimentation in extreme resource conditions the Plan Commission may also want to require the developer to provide or install certain protection and rehabilitation measures, such as fencing, slopes, seeding, trees, shrubs, riprap, wells, revetments, jetties, clearing, dredging, snagging, drop structures, brush mats, willow poles, and grade stabilization structures as set forth in "Best Management" practice manuals.