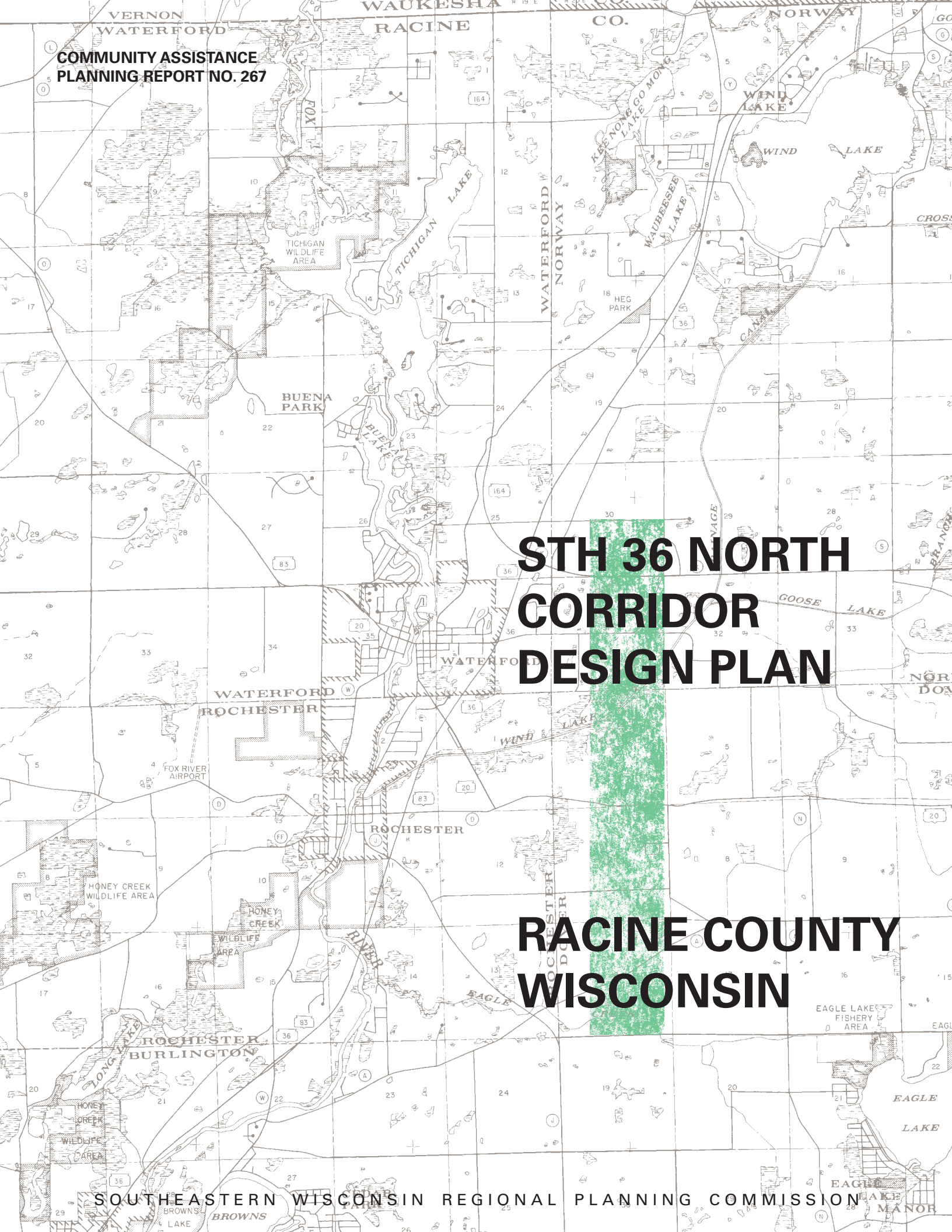
COMMUNITY ASSISTANCE
PLANNING REPORT NO. 267



STH 36 NORTH CORRIDOR DESIGN PLAN

RACINE COUNTY WISCONSIN

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Special acknowledgment is due SEWRPC Principal Planner, Richard R. Kania, RLA, AICP, for his efforts in the conduct of this study and in the preparation of this report.

COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 267

STH 36 NORTH CORRIDOR DESIGN PLAN
RACINE COUNTY, WISCONSIN

Prepared by the

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REPORT SUMMARY

VISION STATEMENT

"Communities along the STH 36 North Corridor seek to provide an attractive visual appearance for people traveling the highway as well as those living and working near it. The communities intend to establish attractive, compact urban centers and encourage aesthetically pleasing development in those centers that will be sensitive to the Corridor's unique natural and historic features, while preserving the scenic and pastoral qualities of the rural landscape located between the urban centers."

Racine County requested the Southeastern Wisconsin Regional Planning Commission to assist the County in the preparation of a corridor design plan to help achieve the visual character desired by local communities along the north segment of State Trunk Highway (STH) 36 in the County. This report sets forth the design plan for the STH 36 North Corridor prepared in response to that request. To help obtain the desired visual quality, the design plan is comprised of two key elements, a composite planned land use map and basic design recommendations.

The design planning effort involved extensive inventories and analyses of the factors and conditions affecting development within the Corridor study area (Corridor), including inventories of the natural resource base, existing land uses and viewsheds, adopted local and areawide plans, and local plan implementation measures in the Corridor. In addition, the effort involved the formulation of a set of recommended Corridor objectives, principles, and standards; careful analyses of the inventory findings and the results of two Corridor opinion surveys; the compilation of a planned land use map for the Corridor based primarily on locally-adopted plans; the preparation of urban and rural design guidelines for the Corridor; and the identification of recommended implementation measures. An informational open house was also held on June 8, 2005, to seek input from the general public on the design plan recommendations.

The Corridor design plan would provide local officials with a tool that will help attain the goals of the communities concerned to preserve and enhance the visual character experienced while traveling along the length of the highway corridor. While not functioning as a land use plan per se, the design plan nevertheless relates to land uses as an important component and determinant of visual character. The design plan indicates the locally preferred land use patterns for the Corridor that will meet the social and economic needs of the communities within the Corridor, while preserving to the maximum extent possible, the rural and natural environment located along the highway. Design guidelines are also provided to channel development towards an aesthetic image desired by local communities and to inform developers in advance what local communities wish to achieve in terms of visual quality without hampering creative or innovative design.

INVENTORY AND ANALYSES

Information regarding the natural and built environments is essential to any sound design planning effort. It is important that existing conditions and past planning efforts in the Corridor study area be thoroughly considered and analyzed before recommendations are formulated that affect the future of that area.

The Corridor study area was defined as an approximately 12.4 square-mile area that includes lands located on both sides of STH 36, measuring one-half mile from its centerline, from the Racine and Waukesha County limits to the north corporate of the City of Burlington in the year 2000, the base year used for data collection. The STH 36 North Corridor viewshed was identified and partly used as a basis to define the study area for the purpose of collecting and analyzing inventory data. About 79 percent of the viewshed is located within this defined Corridor study area.

The design planning effort involved assembling and analyzing information on factors and conditions that affect development within the Corridor study area. Such pertinent data consist of existing natural resources, including environmental corridors and isolated natural resource areas; historical and existing land use characteristics, including the visual context or character of the STH 36 viewshed; pertinent recommendations of community, county, and regional plans as related to the STH 36 North Corridor, including adopted land use plans and park and open space plans; mapping sources such as topographic and cadastral maps; and implementation measures, such as zoning, land division control, official mapping, and State and Federal environmental regulations.

SURVEYS AND OBJECTIVES

The preparation of the Corridor design plan and attendant objectives were guided by the STH 36 North Corridor Design Plan Advisory Committee and, in part, by the results of two Corridor surveys. As part of the public participation process and as a means for assessing the concerns and desires of residents, business operators, and local officials in the Corridor study area regarding various development and design-related matters, two different types of surveys were conducted, a mail questionnaire survey and a visual preference survey. The survey results indicated that the overall vision shared by survey respondents is that of a Corridor with concentrated attractive developments in urban centers while retaining the rural character between these centers. If residential development occurs along the highway, such development should be screened from the highway and, in rural areas, should utilize open space and conservation design concepts. The preservation of existing natural areas, such as woodlands, wetlands, streams, and lakes, was supported by the majority of the participants as an important asset of the Corridor.

Most respondents also agreed that landscape and architectural design standards should be established to guide new intensive urban developments and their proposed physical features. Specifically, most participants preferred low, ground or monument-type signs with attractive landscaping at the base, not tall and/or large signs without plantings. The majority of participants liked buildings with decorative façade materials, protruding and recessing walls, and pitched roofs, rather than those with flat roofs and/or flat continuous walls lacking ornate façade materials. As opposed to parking lots without any landscaping, participants preferred such lots with interior and perimeter landscaping which also screens the parking lot from public view. The results of the surveys are documented by University of Wisconsin-Extension in reports titled, *Highway 36 North Corridor Mail Questionnaire Survey Report*, January 2003, and *Highway 36 North Corridor Visual Preference Survey Summary Report*, February 2003.

The design planning process included the formulation of a set of objectives intended to express the long-term goals of the Corridor Advisory Committee for the STH 36 North Corridor. The objectives are recommended as self-descriptive goals which public policy within the Corridor should promote over time. While considering the survey results, six Corridor objectives were established, with supporting principles and standards, for preparing the Corridor design plan as well as for guiding and evaluating future developments in the Corridor. The objectives are the following:

- Promote a spatial distribution of various land uses in the Corridor that is compatible with a community's character and which will result in an efficient arrangement properly related to supporting public facilities and services.

- Encourage the protection and wise use of the natural resources and agricultural lands in the Corridor.

- Provide an integrated system of public outdoor recreation sites and related open space areas.

- Preserve the historic cultural heritage of the Corridor.

- Maintain and enhance the vitality and visual quality of urban centers in the Corridor.

- Retain the rural character of the Corridor for areas located outside urban centers or planned urban service areas.

THE CORRIDOR DESIGN PLAN

The STH 36 North Corridor Design Plan presents recommendations to achieve the physical appearance and character desired for the Corridor. The design plan consists of two key elements, a composite planned land use map and basic design recommendations comprised of two sets of design guidelines. One set of guidelines, urban design guidelines, applies to development or redevelopment that may occur mostly in urban centers or planned urban service areas, and the other set, rural design guidelines, applies to development that may occur in the rural areas of the Corridor. While it is not the intent of this document to prepare a land use plan per se for the Corridor study area, the report conveys the land use pattern desired by local communities, since the pattern essentially establishes the character of an area. Ultimately, these two elements of the Corridor design plan are intended to be used to help make development decisions, particularly aesthetic design-related decisions, and to guide development as it affects the physical character viewed along the highway corridor. The design plan should be further used to promote attractive, high-quality developments that are sensitive to a community's character, which is often defined by distinct features such as significant cultural and environmental features.

Composite Planned Land Use Map for the Corridor

An important implication of land use plans is that the location and type of uses permitted by local communities directly define the overall visual character of an area. One of the elements of the Corridor design plan is a map that reflects a composite of adopted local land use plans. For the Town of Norway, where no local plan has been adopted, a tentative plan map was prepared and will be refined in the future by the Town. The only refinement to the locally adopted plans, if any, is due to more accurate and updated existing land use information, such as the delineation of environmental corridors, isolated natural resource areas, wetlands, and floodplains, and any recent developments, rezonings, or land use plan amendments that have occurred and differ from the adopted plans. The composite map shows where urban development is encouraged, while preserving the best remaining natural resources.

Of the total 12.4-square mile Corridor study area, about 42 percent would consist of urban uses and the remaining 58 percent would consist of nonurban and rural uses. Several important elements of the character of the Corridor study area may be noted from this plan map. First, preserved natural areas consisting of environmental corridors and isolated natural resources areas would constitute the largest land use in the Corridor study area, occupying about 32 percent of the study area. Urban residential uses, consisting of mostly single-family residential uses, would be the next largest land use category, occupying 29 percent of the study area. Third, agricultural, rural residential, and other open lands would occupy about 25 percent of the study area. Thus, communities along STH 36 will continue to reflect urban centers occupied predominantly by single-family residential uses supported by local business services, while preserving environmentally significant areas and retaining the rural or "country" character between these centers.

Urban Uses and Character

New urban uses, such as residential, commercial, industrial, governmental, and institutional uses, within the Corridor would occur primarily within urban centers—sometimes referred to as the planned urban or sanitary sewer service areas—such as incorporated areas and the Wind Lake-Waubeesee Lake urban hamlet. Most new urban development would take place as infill development and as new development contiguous to, and extending outward from, such existing similar uses located in urban centers.

Based on the composite plan map, residential uses would represent the largest urban land use in the Corridor study area. Urban residential uses are recommended to occur in well-planned neighborhoods with interconnecting streets, sidewalks/pedestrian paths, and bicycle facilities providing access to supporting local services, such as parks, schools, and shopping areas.

Business developments would occur on individual sites and in planned business centers. General retail sales and service type uses should be located primarily in attractive, well-planned shopping centers sharing common parking facilities for customer automobiles and a shopping environment geared to pedestrian use with connecting sidewalks. Commercial uses, such as office and professional business services, should be established in business parks with a design theme expressed in the architecture of attractive buildings and complementary landscaping. Similarly, compatible manufacturing uses could be located in attractive park-like settings consisting of a mixed grouping of corporate headquarters, financial institutions, medical facilities, light industrial uses, and affiliated support services with reasonable access to arterial streets, including STH 36. Downtown areas of communities should continue to be revitalized as a place for local social, cultural, and economic activities in order to maintain the economic vitality and foster a positive image of a community supported by other nearby attractions, including several lakes and the Fox River.

Other urban uses, namely park and recreational, governmental and institutional, transportation, and utility land uses include the continuation of such existing uses as well as some areas for new and expanded facilities to serve future population and economic growth in the Corridor.

Rural or Nonurban Uses and Character

The plan map shows the recommended preservation of most agricultural land located outside planned urban service areas within the Corridor study area. The preservation of existing farmland would ensure that farming operations can continue with minimal disturbance from urban land uses. Importantly, such preservation would also serve to maintain the agricultural/pastoral views and agrarian heritage of the Corridor countryside. If agricultural and open lands located outside planned urban service areas are allowed by local communities to be converted to rural residential development, it is recommended that open space and conservation design concepts be utilized to retain the rural or "country" character of the landscape.

The plan map further conveys that new urban development should be properly related to significant natural resources in order to maintain the environmental quality and natural beauty of the Corridor. Existing primary and secondary environmental corridors and isolated natural resource areas are recommended to be preserved, to the maximum extent practicable, in essentially natural, open uses. Such lands consist of concentrated areas of wetlands, woodlands, steep slopes, lakes, and waterways, including the Fox River. Any development in these natural areas should be limited to required transportation and utility facilities, compatible recreational uses, and, in upland areas, very low-density residential development carefully designed to minimize disturbance to natural resources. Conservation subdivision design, sometimes referred to as cluster development design, is recommended over conventional subdivision design if residential development occurs within environmentally significant areas. Such designs involve the grouping of dwellings on a portion of a parcel, away from sensitive natural features, while preserving the remainder of the parcel in common open space.

Corridor Design Guidelines

Good general land use planning alone does not ensure attractive urban communities or the preservation of rural character, since the proper protection of significant natural resources and "planning by design," that is, attention paid to the detailed layout and design of a development, is also crucial.

To help direct development activities within the STH 36 viewshed, basic design guidelines were prepared. The main purpose of the guidelines is to help establish attractive urban centers along the Corridor while preserving the rural landscape character between these centers. The guidelines are not intended to hinder creative design, but to direct the design of developments to a visual quality desired by the local communities concerned. The guidelines may also serve as potential solutions to design problems or to further enhance the visual experience along STH 36. Two sets of design guidelines, urban and rural, were prepared based, in part, on the aforereferenced survey results that reflect the general public's opinion related to various design-related matters that affect the visual quality of the Corridor. These guidelines should be used by County and local officials to help guide and evaluate proposed development layouts and designs, including detailed site, landscaping, and building plans.

Urban Design Guidelines

Design guidelines were established for urban areas to address various development features that affect the visual quality of such areas. The urban design guidelines should help to enhance and maintain the vitality of urban settings by encouraging environmentally sensitive, aesthetically-pleasing developments that complement/fit the visual urban context of a community or desired design theme. The guidelines should also help reduce the negative impacts inherent in certain site features such as dumpsters, parking lots, and loading/unloading areas. While single- and two-family residential uses are encouraged to follow the design guidelines, most of the guidelines are intended for intensive developments such as multi-family residential, business, and institutional uses.

Urban design guidelines were established for the following:

- General urban character and design concepts, including those for communities, neighborhoods, and downtown or central business districts.

- Basic site planning, including proper site analysis, preliminary sketches, preapplication meetings, and development plan preparation, submittal, and review.

- Parking and service (loading/unloading) areas, including general onsite traffic circulation, parking lot dimensions and surfacing, and orientation in relation to public streets.

- Landscaping, including existing vegetation protection, plant and material selection, street trees, landscaped islands in cul-de-sac turnarounds, landscaping in vision clearance triangles, median landscaping, gateway or main entryway landscaping, base of sign landscaping, minimum amount of open space, buffering rows of doors and between dissimilar uses, building foundation landscaping, interior parking lot landscaping, and screening of parking lots, loading/unloading areas, outdoor storage areas, dumpsters and mechanical equipment.

- Outdoor lighting, including lighting for streets, parking lots, buildings, and signs.

- Architecture, including general building facades, architectural detailing, building scale and mass, strip malls and grouped business buildings, roofs, openings or fenestration—arrangement of windows and doors, material and color selection, visibility of outdoor utility connections and equipment, and compatibility of accessory buildings and structures.

- Historic preservation for sites, buildings, and other structures.

- Signs, including entryway/gateway and service club signs; street and wayfinding signs; monument (ground) signs; pole signs; wall and roof signs; projecting signs; canopy, awning, or marquee signs; master signs; combination of signs; window signs and displays; home occupation signs; discouraged sign types; sign material and color; and signage size, setback, and location.

- Transportation-related features, such as pedestrian and bicycle way connections, frontage street intersections, and vehicular access control.

- Other pertinent design guidelines for above-ground utility lines, cellular and water towers, bridges and retaining walls, stormwater management facilities, erosion and sedimentation control measures, and general maintenance.

Rural Design Guidelines

Design guidelines were also prepared for developments that occur in the rural or "country" areas of the Corridor, which are located mainly between urban centers, to help retain the natural and agrarian character of the countryside. Many of the aforereferenced urban design guidelines would also apply to developments that may occur within the rural portions of the Corridor; however, a more "natural- or country-design" style or theme should be utilized to

be in keeping with the rural visual context customary to the Corridor. Also, while homes on individual lots are encouraged to follow the rural design guidelines, most of these guidelines are intended for overall proposed residential subdivisions and intensive developments, such as certain commercial and institutional uses, that may be allowed by a community.

In addition to the urban design guidelines, suggested rural design guidelines were established for the following:

- General rural or "country" character and design concepts, including the preservation of natural and agricultural features and scenery.

- Open space and conservation design concepts, such as lot averaging and conservation subdivision design—sometimes referred to as cluster development design.

- Architecture, including general "country" style; architectural detailing with a "country" flair; building scale and mass; roofs—peaked vs. flat roofs; material and color selection; and barns, storage buildings, and compatibility of other accessory structures with principal structures.

- Landscaping, including general "natural-, country-, or prairie-design" style or theme, plant and material selection, street trees, and buffering between dissimilar uses (i.e. homes and agricultural activities).

- Streets and related facilities, such as roadside swales and mountable curbing.

- Other pertinent design guidelines for controlled outdoor lighting, signage, "stealth" cellular towers, and natural-looking detention and retention basins.

IMPLEMENTATION

Realization of the Corridor design plan will require faithful, long-term dedication to its underlying objectives and supporting design guidelines by the County and local officials concerned with its implementation. Thus, the preparation of the design plan is only the beginning of a series of actions necessary to achieve the recommendations presented herein.

Important recommended plan implementation measures include: utilizing adopted local master, land use, or comprehensive plans to achieve the local land use character desired and the preservation of significant natural resources; encouraging the use of design guidelines in the preparation of development plans and/or amendments to zoning and land division ordinances, if desired by a community, to include additional design-related provisions consistent with the Corridor design guidelines; establishing development plan submittal and review criteria requirements for the site, landscape, and building plans of intensive developments; appropriate development within environmentally significant areas; and encouraging the use of open space and conservation design concepts, including lot averaging and conservation subdivisions, also known as cluster developments. The Corridor design plan, along with supporting design guidelines, should help guide development and serve as a basis to review proposed development plans.

Additionally, voluntary natural resource and farmland preservation efforts should be considered to help ensure the protection of environmentally sensitive natural features and the continuation of farming, which would also preserve the Corridor's rural character. Preservation techniques or programs may include purchase and transfer of development rights programs, the Wisconsin Farmland Preservation Program, use-value assessment program for agricultural land, conservation easements, the Wisconsin Barn Preservation Initiative and its membership organization Barns Network of Wisconsin, agricultural nuisance notices, the Wisconsin Managed Forest Law, the Kensoha/Racine Land Trust, and various U.S. Department of Agriculture programs.

The design plan also recommends continued intergovernmental cooperation among communities within the Corridor study area and between Racine County and local communities in regard to future development in areas of mutual concern, which, in turn, would affect the visual character of the Corridor.

CONCLUSION

The main purpose of the STH 36 North Corridor Design Plan is to help retain and enhance the aesthetic quality of the Corridor as desired by the communities located along the highway. A composite planned land use plan map and two sets of design guidelines, urban and rural design guidelines, are provided by the design plan to foster sound development. The design plan contains information and recommendations that public officials can use in making consistent decisions about development along STH 36. The design plan also provides developers and other private interests a clear indication of the Corridor objectives and design guidelines, enabling them to take those objectives and guidelines into account when preparing development proposals. The appearance and proper design of sites within the Corridor viewshed will reinforce positive images of communities and safeguard the value of properties to the advantage of both the community and the individual property owners concerned.

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Chapter I

INTRODUCTION

In September 1999, Racine County requested that the Southeastern Wisconsin Regional Planning Commission assist the County in the preparation of a corridor design plan to help identify and achieve the visual character desired by local communities along the north segment of State Trunk Highway (STH) 36 in the County. This report sets forth the desired design plan for the STH 36 North Corridor prepared in response to that request.

The purpose of this planning effort, which was initiated in 2001, is to provide local officials of the communities located in the STH 36 North Corridor study area (Corridor) with a design plan that will help obtain the goals of the communities concerned to preserve and enhance the visual character experienced while traveling the length of the highway corridor. The design plan, while primarily intended to meet local objectives, is also intended to provide design guidelines to help direct any development within the Corridor and to inform developers in advance what the local communities' desire in regard to the aesthetic quality of development. The design plan further indicates the locally preferred land use patterns for the Corridor that will meet the social and economic needs of the communities within the Corridor, while preserving to the extent practicable the rural and natural environment located along the highway. While not functioning as a land use plan per se, the "design plan" nevertheless relates to land uses as an important determinant and component of visual character.

The Corridor design plan is intended to assist local communities in defining and achieving the visual character or characteristics desired while traveling along STH 36. To help achieve this visual quality, the design plan is comprised of two key elements. The first element is a planned land use map reflecting a composite of local land use plans where such plans have been adopted; and the preparation of a planned land use map, based on the regional land use plan, existing zoning, and/or existing land uses for areas where no local land use plan is in place. The only refinement to these locally adopted plans, if any, is due to more accurate and updated existing land use information, such as the delineation of environmental corridors, wetlands, and floodplains, and any recent developments, rezonings, or land use plan amendments that have occurred and differ from the adopted plans. The second design plan element for the Corridor are basic design recommendations consisting of two sets of design guidelines: one set for development or redevelopment that may occur in planned urban service areas and the other set for those that may occur in "rural" portions of the Corridor.

Specifically, the entire design planning effort involved extensive inventories and analyses of the factors and conditions affecting development within the Corridor, including inventories of the natural resource base, existing land uses and viewsheds, adopted local and areawide plans, and local plan implementation measures in the Corridor. In addition, the effort involved the formulation of a set of recommended Corridor objectives, principles, and standards; careful analyses of the inventory findings and two Corridor opinion surveys; the compilation of a land use map for the Corridor based primarily on locally-adopted plans; the preparation of urban and rural design guidelines for the Corridor; and the identification of recommended implementation measures. Ultimately, this design plan document is intended to serve as an advisory guide for local officials within the communities along STH 36 in making design-related development decisions.

THE CORRIDOR STUDY AREA

The STH 36 North Corridor study area is located in the western part of Racine County and extends northeast from the year 2000 corporate limits of the City of Burlington to the Racine-Waukesha County line, as shown on Map 1. The Corridor study area includes lands located on each side of the highway, within one-half mile from its centerline.

The study area includes about 12.6 linear miles of STH 36, encompassing primarily the length of the highway that was recently converted from a two-lane arterial to a divided four-lane arterial. In the year 2000, the approximately 12.4-square mile study area contained mostly portions of two villages and four towns, as shown on Map 2. Of this total study area, about 1.2 square miles, or about 10 percent of the study area, lie within the Villages of Rochester and Waterford, while the remaining portion, approximately 11.2 square miles, or about 90 percent of the study area, lie within the City of Burlington and the Towns of Burlington, Norway, Rochester, and Waterford.

It should be noted that a portion of the Corridor study area was incorporated into the City of Burlington after April 2000, and therefore the corporate limits for this portion is not reflected on the base map. The base year used for data collection is April 2000, for which accurate cadastral, existing land uses, and aerial orthographic photos are readily available. The one-half mile distance selected on each side of the STH 36, measured from its centerline, to define the Corridor study area was based on the extent of a viewshed in the winter, or the area travelers can see from the highway with most vegetation defoliated, as shown on Map 13 of Chapter II. Hence, any development that occurs within this distance would likely affect the view from the highway as well as the overall visual character of the area.

The STH 36 North Corridor Design Plan Advisory Committee considered the study area boundary at several meetings. In considering that boundary, the Committee stressed the importance of reflecting and reinforcing local community land use objectives, particularly where those objectives seek to enhance the visual quality of urban development or redevelopment, and to preserve the rural character of areas outside planned urban service areas, which include farmlands and environmentally sensitive areas within the study area boundary.

ADVISORY COMMITTEE

An intergovernmental coordinating and advisory committee, named the STH 36 North Corridor Design Plan Advisory Committee, was created by Racine County to help guide and assist the technical staff in the preparation of the requested Corridor design plan. The Committee consists of elected or appointed public officials and civic leaders representing the municipalities within the study area, a representative from the City of Burlington, and a representative from the Wisconsin Department of Transportation. The full membership of the Committee is listed on the inside front cover of this report.

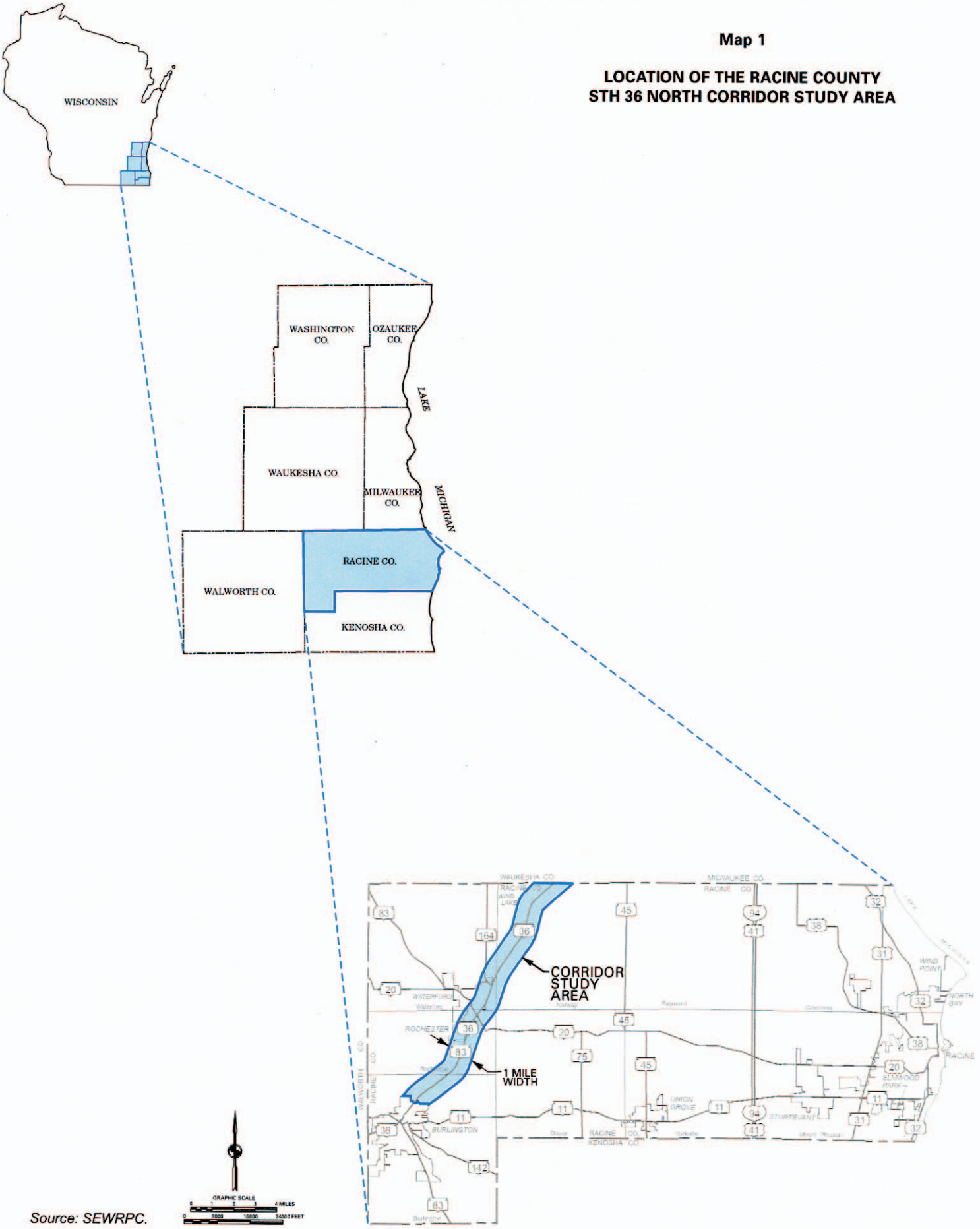
The basic function of the Committee was to actively inform and involve the various units and agencies of government concerned in the Corridor design planning process. The Committee was charged with the responsibility of reviewing and approving the geographic boundary of the study area; reviewing and approving drafts of the report documenting the findings and recommendations of the study as produced by the technical staff; helping to compile a composite planned land use map; assisting in establishing design guidelines for development in urban and rural areas; and helping to identify means of implementation. The Committee was also involved in soliciting general public input by helping to prepare surveys to obtain such input. The Committee also assisted in familiarizing the political and business leadership within the Corridor with the findings and recommendations of the study.

THE DESIGN PLAN PROCESS

The design plan presented in this report was developed through a process consisting of the following basic steps: 1) inventory and analysis, 2) formulation of objective, principles, and standards, 3) development, evaluation, and selection of a recommended Corridor design plan, and 4) identification of recommended implementation measures.

Map 1

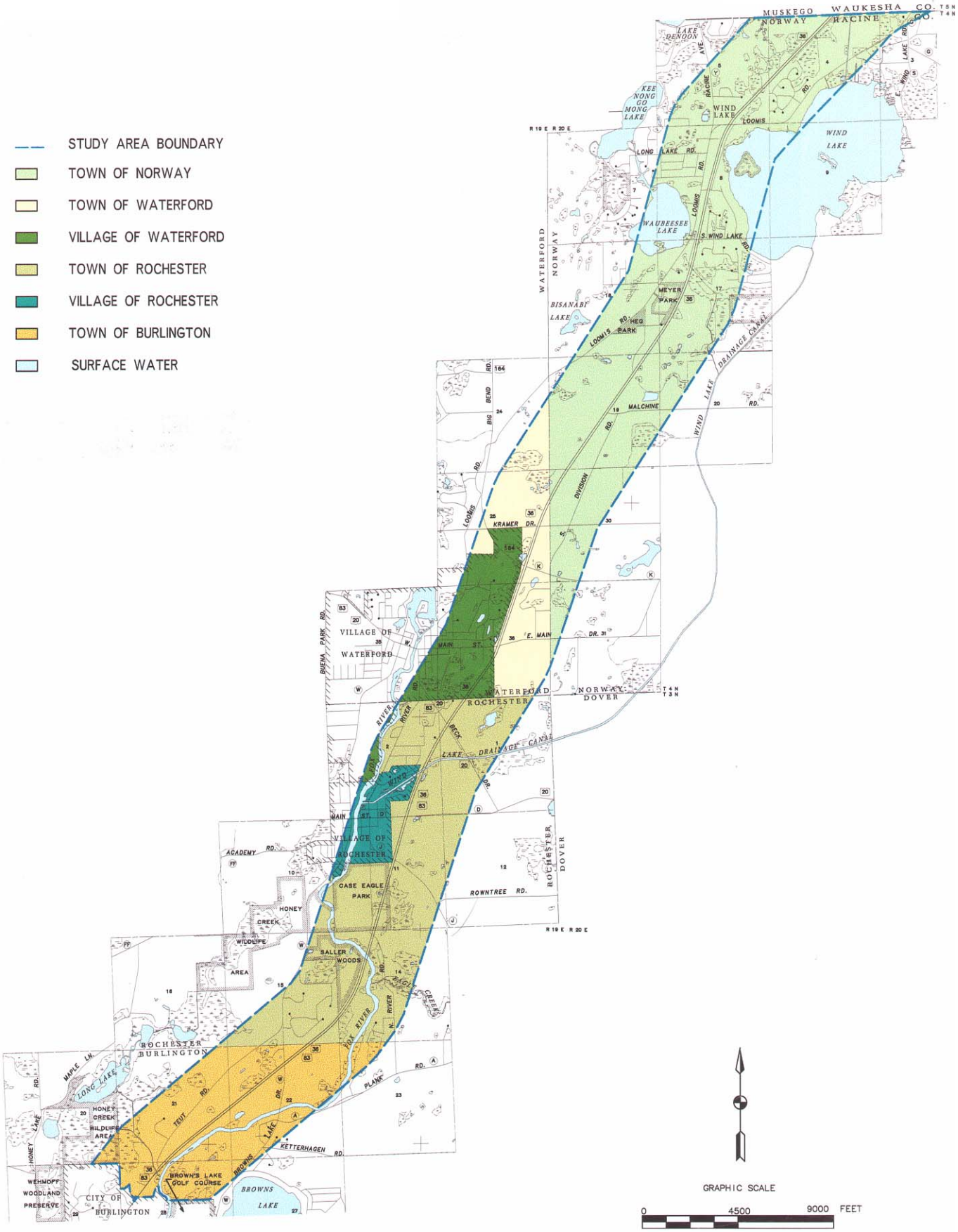
LOCATION OF THE RACINE COUNTY STH 36 NORTH CORRIDOR STUDY AREA



Source: SEWRPC.

Map 2

CIVIL DIVISIONS IN THE RACINE COUNTY STH 36 NORTH CORRIDOR: 2000



Source: SEWRPC.

Inventory and Analysis
Reliable data are essential for the formulation of workable design plans. Consequently, an inventory of existing conditions is the first step in the design planning process. It includes collecting existing information and gathering new information by direct measurements. Most of the necessary inventory data are available in the Southeastern Wisconsin Regional Planning Commission files. Data not available in those files were collected from other sources.

Where possible, inventories requiring graphic presentation were compiled using a geographic information system. Converting graphic data inventories to a computer-compatible format increased the options available in the presentation of material and in later steps of the design planning process. Inventory data were grouped into four general categories: 1) natural resource base, 2) historical development patterns and existing land uses and visual characteristics, 3) existing relevant plans, and 4) existing land use regulations. Analyses of the inventoried data provide an understanding of existing conditions as well as the factors which influence changes in those conditions. The inventories and analyses not only describe existing conditions and development trends, but also provide a basis for identifying problems that may result from poorly planned or designed development in the study area, as well as opportunities and potentials for furthering good design planning in the Corridor.

Formulation of Corridor Objectives, Principles, and Standards
An objective is a goal toward which the attainment of plans and policies are directed. Planning is a rational process for formulating and attaining objectives. The objectives should serve as a guide for design plan preparation and evaluation. The Corridor design plan was thus clearly related to the defined objectives through a set of supporting principles and standards. Objectives may change as new information is developed, as objectives are fulfilled through design plan implementation, or as objectives fail to be implemented due to changing public attitudes and values. Because objectives are essentially reflections of the values held by residents and businesses of a planning area, the formulation of objectives should involve the active participation of local officials, citizens, and business owners. To this end, the results of two opinion surveys and the Corridor Advisory Committee, which includes both key elected and appointed local officials within the study area, provided guidance throughout the entire design planning process.

Development, Evaluation, and Selection of a Recommended Corridor Design Plan
Plan design, evaluation, and selection are the heart of the planning process. The results of the two previous steps, inventory and analysis and the formulation of objectives, helped shape the Corridor design plan. In this third step, a planned land use map is compiled which conveys the desired visual character of the Corridor, determined mostly by the land use pattern desired by local communities in their adopted land use plans. Another element of the design plan includes design guidelines for development or redevelopment that may occur in the urban areas—or planned urban service areas—and the rural areas of the Corridor. The overall Corridor design plan was evaluated by the Corridor Advisory Committee on its ability to meet the agreed upon objectives, and the design plan elements judged best to meet those objectives were selected. An informational meeting was also held to seek public input on the design plan recommendations. The evaluation is important since it provides the opportunity to determine if the selected Corridor design plan is realistic, sound, and workable.

Implementation
Design plan implementation is achieved through the formulation of a policy program, i.e., a series of actions which will ensure plan implementation. In the STH 36 North Corridor study, the focus was on identifying those actions needed to effect implementation of the Corridor design plan primarily at the county and local levels of government through zoning ordinances, land division ordinances, and other actions which need to be taken primarily at the county and local levels of government.

REPORT FORMAT

This document consists of the report summary and five chapters. Following this introductory chapter, Chapter II presents inventory data and historic trend data essential to the design planning effort, including descriptions and analyses of the natural resource base, historical development patterns, existing land uses and public facilities,

existing viewsheds and visual characteristics, existing areawide and local plans, and existing land use regulations. Chapter III presents the key findings of two Corridor surveys and provides a set of Corridor objectives, principles, and standards. Chapter IV presents a composite planned land use map for the Corridor and recommended design guidelines for development that occur within planned urban service areas and in the rural areas of the Corridor. Chapter V describes the actions necessary to facilitate implementation of the design plan recommendations.

Chapter II

INVENTORY FINDINGS

The proper formulation of a Corridor design plan for the STH 36 North Corridor required that factual data be assembled on natural resources, historical and existing land use characteristics, and local community plans and regulatory measures. The required inventories and analyses not only provided essential data describing existing conditions, but also provided a basis for identifying existing and potential problems in the study area, as well as opportunities and the potential for environmentally sensitive, high-quality development.

Accordingly, the first section of this chapter provides data on the natural resource base of the STH 36 North Corridor study area (Corridor), including environmentally significant areas and natural resource-related elements. The second section provides information on historical development patterns, existing land uses, and existing viewshed characteristics of the Corridor. The third section presents information on adopted local and areawide plans and supporting topographic and cadastral maps as related to the Corridor. The final section of this chapter presents information on local land use regulations which have been adopted by Racine County and local governmental units in the Corridor.

NATURAL RESOURCES

The conservation and wise use of the natural resources of an area are fundamental to achieving sound development and to providing a habitable and aesthetically pleasing environment. This design planning effort recognizes that the natural resources of the Corridor are limited and that any urban or rural development needs to be properly adjusted to these resources to avoid serious environmental problems and to maintain resources, as well as the natural and agricultural or pastoral scenery of an area, for the future. A sound evaluation and analysis of the natural resource base is, therefore, particularly important to design planning for the physical development and visual character of the Corridor.

This section, then, presents the results of an inventory and analysis of the natural resource base of the STH 36 North Corridor study area. Included is descriptive information regarding agricultural soil capability, topographic features, water resources, vegetation, wildlife habitats, natural areas, and critical species habitats. Also included is a description of elements closely related to the natural resource base, including outdoor recreation and historic sites. This section concludes with a description of the environmental corridors that have been identified within the study area. These corridors represent concentrations of the most important remaining elements of the natural resource base.

Agricultural Soil Suitability

Soil properties exert a strong influence on the manner in which people use land. Soils are an irreplaceable resource, and mounting pressures upon land are constantly making this resource more and more valuable. A need exists, therefore, in any design planning effort to examine not only how land and soils are presently used, but also how they can best be used and managed for future use.

Much of the STH 36 North Corridor study area is covered by soils that are well suited for the production of crops. Such farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when properly treated and managed. Soil suitability for agricultural use within the Corridor, based on the U.S. Natural Resources Conservation Service classification system, is shown on Map 3. Table 1 provides a description of each soil class. Generally, Class I and II soils are considered National Prime Farmland, and Class III soils are considered Farmlands of Statewide Importance. Map 3 shows that Class I soils encompass less than 0.1 square mile, or less than 1 percent of the study area. Areas identified on Map 3 as Class II soils encompasses about 6.5 square miles, or about 53 percent of the study area. Areas identified as Class III soils encompass about 1.0 square mile, or about 8 percent of the study area. Additional areas are covered by soils rated Class IV or lower if undrained and Class II or Class III if drained. Approximately 1.6 square miles, or about 13 percent of the study area, have been drained and therefore fall into the Class II or III rating. As a result, in all about 9.1 square miles, or about 74 percent of the study area, are covered by Class I, II, or III soils.

The substantial amount of land within the Corridor that contains soils suitable for agricultural productivity, most of which is presently farmed, contributes to the rural country or agricultural views experienced along STH 36. This information is also pertinent for development that may occur in the "rural" areas of the Corridor. Such soil data would be particularly useful if cluster residential development—sometimes referred to as conservation or open space preservation subdivisions—is proposed, so that the residential homes and onsite sewage-disposal systems could be concentrated and located on the most suitable areas for such development while preserving those lands having soils most suitable for agricultural purposes. Preserving agricultural areas would contribute to retaining the agricultural views experienced from the highway.

Topographic Features

The topography, or relative elevation of the land surface, within the Corridor has been determined by the configuration of the bedrock geology and by the overlying glacial deposits. In general, the topography of the Corridor is level to gently rolling, with the low-lying areas associated with lakes, stream valleys, or wetland areas.

Slopes

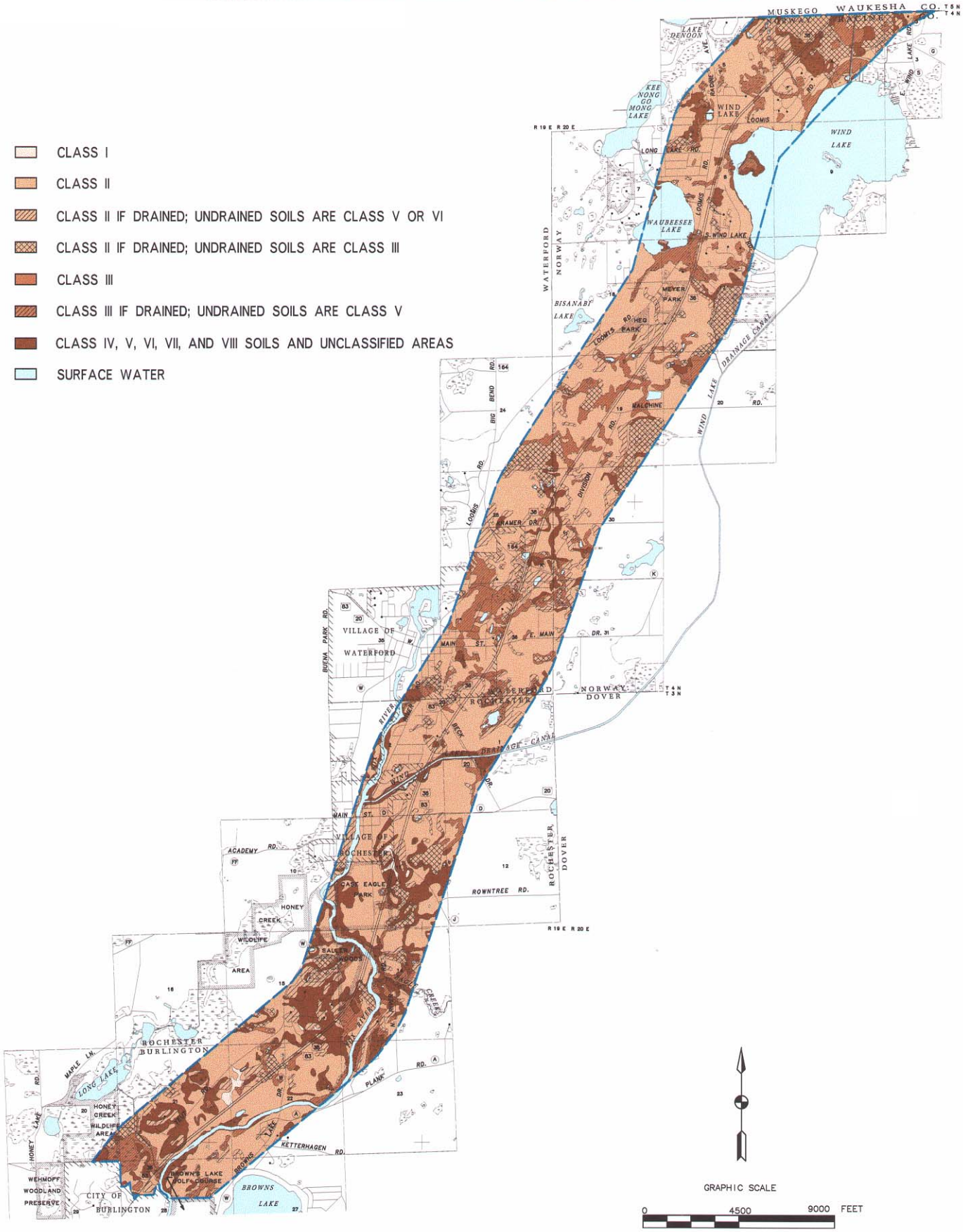
Slope is an important determinant of practicable uses of land. Lands with steep slopes are generally poorly suited for urban development as well as for most agricultural purposes and, therefore, should be maintained in natural cover for erosion control. Lands with less severe slopes may be suitable for certain agricultural uses, such as pasture uses, and for certain urban uses, such as carefully designed low density residential areas. Lands which are gently sloping or nearly level are best suited to agricultural production and to medium- and high-density residential, commercial, or industrial uses. It should also be noted that slope is directly related to water runoff and erosion hazards and, therefore, the type and extent of both urban and rural land uses should be carefully adjusted to the slope of the land. In general, slopes of 12 percent or more should be considered unsuitable for urban development and most types of agricultural land uses and, therefore, should be maintained in essentially natural, open uses. Urban development, if allowed on such slopes, would require careful site planning and above average site-specific design and management. As shown on Map 4, areas having a slope of 12 percent or greater encompass about 0.7 square mile, or about 6 percent of the Corridor and are found mostly in the southern portion of the Corridor. The protection of such steep slopes would also help preserve the natural terrain of the area and, hence, the "natural" views experienced along STH 36.

Scenic Overlooks

Scenic overlooks are defined as locations that provide a panoramic or picturesque view. There are two important components of a scenic overlook: the picturesque view itself, which usually consists of a diversity of natural or cultural features, and the vantage point or overlook from which the scene and its features are observed. In identifying the scenic overlooks in the Corridor study area three basic criteria were applied: 1) the view should provide a variety of features that exist harmoniously in a natural or rural landscape; 2) there should be a dominant or particularly interesting feature, such as a river or lake, which serves as a focal point of the picturesque view; and 3) the overlook should permit an unobstructed observation area from which a variety of natural features can be seen.

Map 3

AGRICULTURAL SOIL CAPABILITY IN THE STH 36 NORTH CORRIDOR



Source: U.S. Natural Resources Conservation Service and SEWRPC.

Table 1

AGRICULTURAL SOIL CAPABILITY CLASSES

Class	Qualitative Description
I	Soils have few limitations that restrict their use.
II	Soils have some limitations that reduce the choice of plants or require moderate conservation practices.
III	Soils have moderate or severe limitations that reduce the choice of plants, require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants, require careful management, or both.
V	Soils are subject to little or no erosion but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife food and cover.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture, range, woodland, or wildlife food and cover.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to grazing, woodland, or wildlife.
VIII	Soils and landforms have limitations that preclude their use for commercial plant production and restrict their use to recreation, wildlife, water supply, or to aesthetic purposes.

Source: U.S. Natural Resources Conservation Service and SEWRPC.

An inventory of scenic overlooks meeting these criteria was conducted. Using the best available topographic maps, all areas with a relief greater than 30 feet and a slope of 12 percent or more were identified. Areas of steep slope with a ridge of at least 200 feet in length and a view of at least three features, including surface water, wetlands, woodlands, or agricultural lands within approximately one-half mile of the ridge, were identified as scenic overlooks. In the Corridor, two such scenic overlooks were identified in the southern portion of the study area, on the west side of STH 36, and overlook the wetland/woodland complexes near and within Saller Woods and the Honey Creek Wildlife Area.

Surface Water Resources

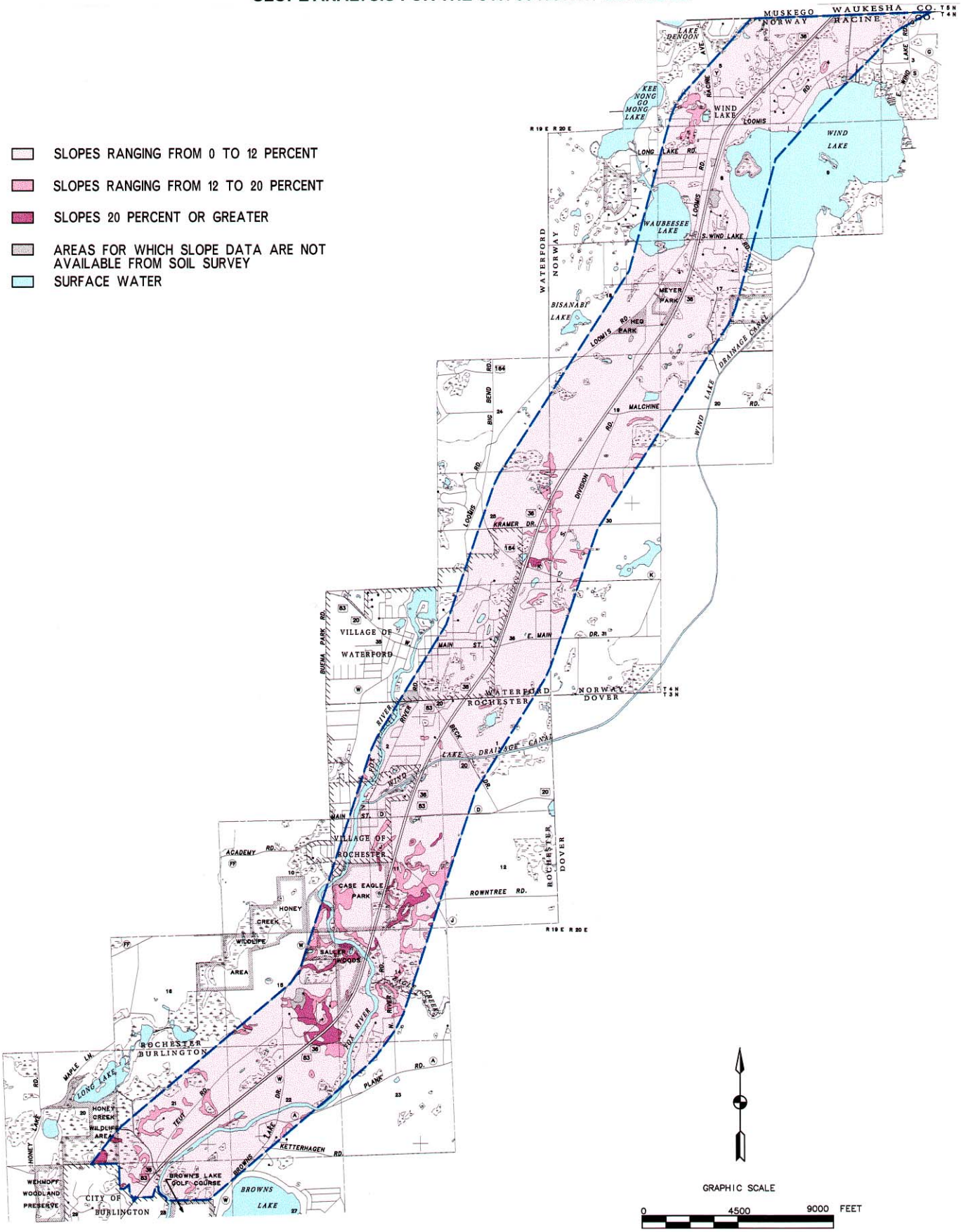
Surface water resources, consisting of streams, rivers, lakes, and associated floodplains, form an important element of the natural resource base of the Corridor, which is located entirely within the Fox River watershed. Lakes and rivers constitute a focal point for water-related recreational activities, provide an attractive setting for properly planned residential development, and, when viewed in the context of the total landscape, greatly enhance the aesthetic quality of the environment. Lakes and rivers are, however, readily susceptible to degradation through improper land use development and management. Water quality can be degraded by excessive pollutant loads, including nutrient loads, from malfunctioning and improperly located onsite sewage-disposal systems; sanitary sewer overflows; urban runoff, including runoff from construction sites; and careless agricultural practices. The water quality of lakes and rivers may also be adversely affected by the excessive development of riverine areas and the inappropriate filling of peripheral wetlands, which remove valuable nutrient and sediment traps while adding to nutrient and sediment sources. The surface water resources in the Corridor are shown on Map 5.

Lakes, Rivers, and Streams

Lakes have been classified by the Regional Planning Commission as being either major or minor. Major lakes have 50 acres or more of surface water area, and minor lakes have less than 50 acres of surface water area. Portions of two major lakes, Wind Lake and Waubeesee Lake, lie within the northern portion of the Corridor. No classified minor lakes exist within the Corridor.

Map 4

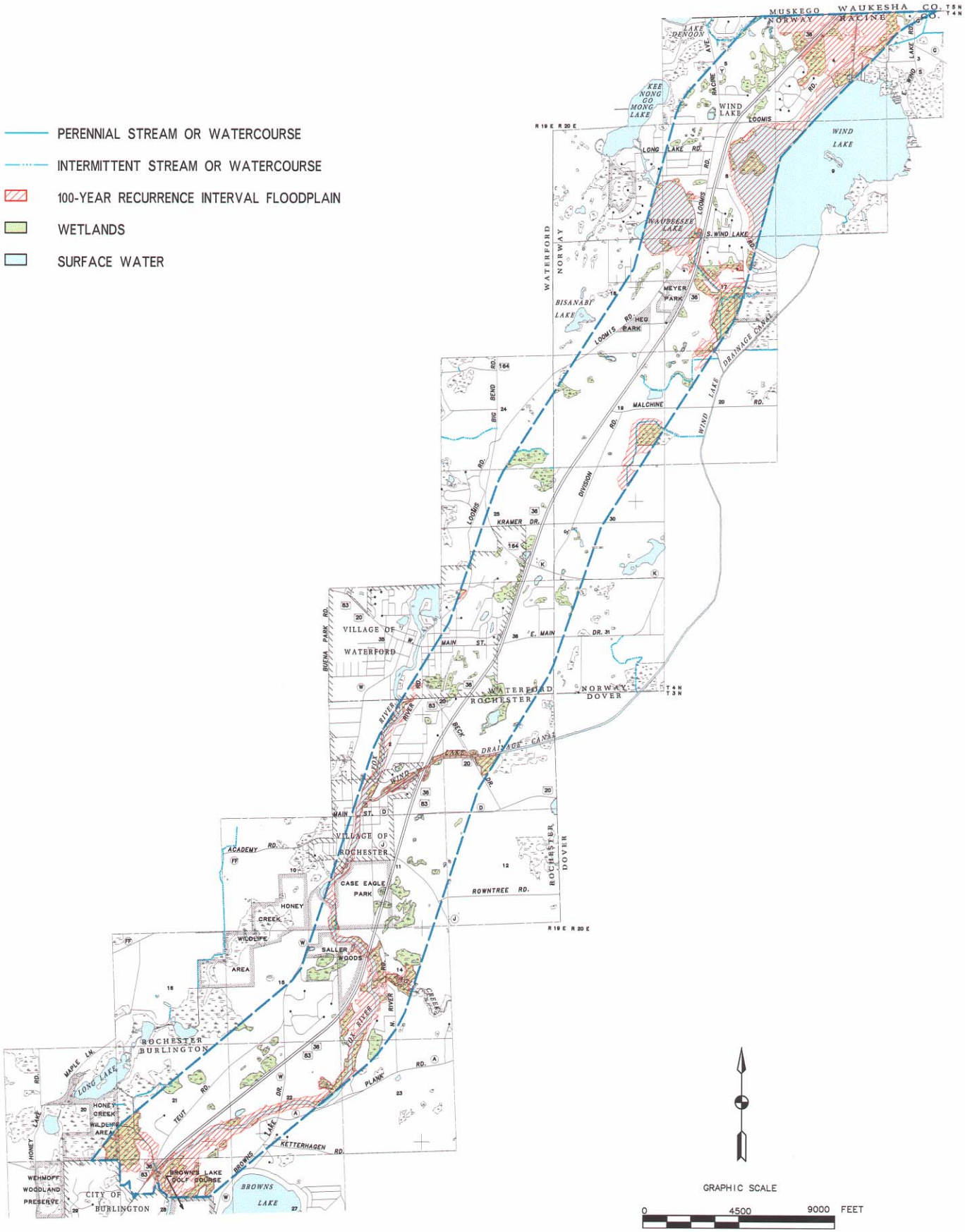
SLOPE ANALYSIS FOR THE STH 36 NORTH CORRIDOR



Source: U.S. Natural Resources Conservation Service and SEWRPC.

Map 5

WETLANDS, FLOODPLAINS, AND SURFACE WATER IN THE STH 36 NORTH CORRIDOR: 2000



Source: Federal Emergency Management Agency and SEWRPC.

Rivers and streams that are classified as perennial or intermittent also exist within the study area, as indicated on Map 5. Perennial streams are defined as watercourses which maintain, at a minimum, a small continuous flow throughout the year except under unusual drought conditions. Intermittent streams are defined as watercourses which do not maintain a continuous flow throughout the year. A total of approximately 13.4 linear miles of perennial and intermittent watercourses exist within the Corridor, including the Fox River, Eagle Creek, and the Wind Lake Drainage Canal. Of this total, about 9.8 lineal miles, or about 73 percent, are perennial watercourses, and the remaining 3.6 lineal miles, or about 27 percent, are intermittent watercourses.

Floodplains

The floodplain of a river or stream includes the wide, gently sloping areas contiguous to, and usually lying on both sides of, the river or stream channel and the channel itself. For planning and regulatory purposes, floodplains are normally defined as the areas subject to inundation by the 100-year recurrence interval flood event. This is the flood event that has a 1 percent chance of occurring in any given year. Floodplain areas are generally not well suited to development, not only because of the flood hazard, but also because of the presence of high water tables and, generally, of soils poorly suited to urban uses. The floodplain areas, however, generally contain important elements of the natural resource base such as high-value woodlands, wetlands, and wildlife habitat and, therefore, constitute prime locations for needed park and open space areas. Every effort should be made to discourage indiscriminate and incompatible development on floodlands, while encouraging compatible park and open space uses. Map 5 shows the approximate location and extent of areas lying within the 100-year recurrence interval flood hazard area, or floodplain, in the Corridor. About 2.3 square miles, or about 19 percent, were located within the 100-year recurrence interval floodplain.

Wetlands

Wetlands are defined as areas that are inundated or saturated by surface or groundwater at a frequency and duration that is sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally occur in depressions and near the bottom of slopes, particularly along lakeshores and stream banks, and on land areas that are poorly drained. Wetlands may, however, under certain conditions, occur on slopes and even hilltops.

Wetlands are generally poorly suited for most agricultural or urban purposes. Wetlands, however, have important scenic, recreational, and ecological values. Wetlands contribute to flood control and water quality enhancement, since such areas naturally serve to store excess runoff temporarily, thereby tending to reduce peak flows and to trap sediments, undesirable nutrients, and other water pollutants. Wetlands may also serve as groundwater recharge and discharge areas. Additional important natural functions of wetlands include the provision of breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of wildlife. In view of these important functions, continued efforts should be made to protect these areas by discouraging wetland draining, filling, and urbanization. The latter can be particularly costly in both monetary and environmental terms. Wetlands in the Corridor, as shown on Map 5, covered about 1.4 square miles, or about 12 percent, of the study area in 2000. The largest concentrations of wetlands in the Corridor occur adjacent to lakes, intermittent streams, and the Fox River, Eagle Creek, and the Wind Lake Drainage Canal.

Woodlands

Woodlands are generally defined by the Regional Planning Commission as those upland areas approximately one acre or more in size having 17 or more deciduous trees per acre, each measuring at least four inches in diameter at chest height, and having 50 percent or more canopy coverage. Coniferous tree plantations and reforestation projects are also considered woodlands.

Under good management, woodlands can serve a variety of beneficial functions. In addition to contributing to clean air and water and regulating surface water runoff, woodlands contribute to the maintenance of a diversity of plant and animal life and the natural scenery. Unfortunately, woodlands which required a century or more to develop can be destroyed through mismanagement in a comparatively short time. The destruction of woodlands, particularly on hillsides, can contribute to increased stormwater runoff and soil erosion, the siltation of lakes and streams, and the

destruction of wildlife habitat and natural views. Woodlands should be maintained for their scenic, wildlife habitat, open space, educational, recreational, and air and water quality protection values. In 2000, wooded areas covered about 1.2 square miles, or about 10 percent, of the study area. As shown on Map 6, woodlands occur in scattered locations throughout the Corridor.

Wildlife Habitats

Wildlife in the Corridor include species such as rabbit, squirrel, woodchuck, raccoon, fox, whitetail deer, pheasant, and water fowl. The remaining wildlife habitat areas provide valuable recreation opportunities and constitute an invaluable aesthetic asset to the study area. The spectrum of wildlife species has, along with the habitat, undergone tremendous alterations since settlement by Europeans and the subsequent clearing of forests and draining of wetlands for agricultural purposes and urban development.

In 1985, the Regional Planning Commission and the Wisconsin Department of Natural Resources cooperatively inventoried wildlife habitat in Southeastern Wisconsin. The results of this inventory are shown on Map 7. Three classes of wildlife habitat are identified: Class I areas contain a good diversity of wildlife, are large enough to provide all of the habitat requirements for each species, and are generally located near other wildlife habitat areas; Class II areas lack one of the three criteria necessary for a Class I designation; and Class II areas lack two of the three criteria for Class I designation.

Wildlife habitats in the Corridor generally occur in association with existing surface water, wetland, or woodland resources. Wildlife habitat areas covered about 3.8 square miles, or about 31 percent of the study area. Of this total habitat area, about 1.0 square mile, or about 8 percent of the study area, were rated as Class I; about 1.6 square miles, or about 13 percent of the study area, were rated as Class II; and about 1.2 square miles, or about 10 percent of the study area, were rated as Class III.

Natural Areas and Critical Habitats

A special inventory was completed in 1994 to identify the most important remaining natural areas, critical species habitats, geological sites, and archaeological sites in Southeastern Wisconsin and to recommend means for their protection and management.[1] Even though no known significant geological or archaeological sites were identified in the study area, sites within the other two categories that existed in the Corridor are discussed below.

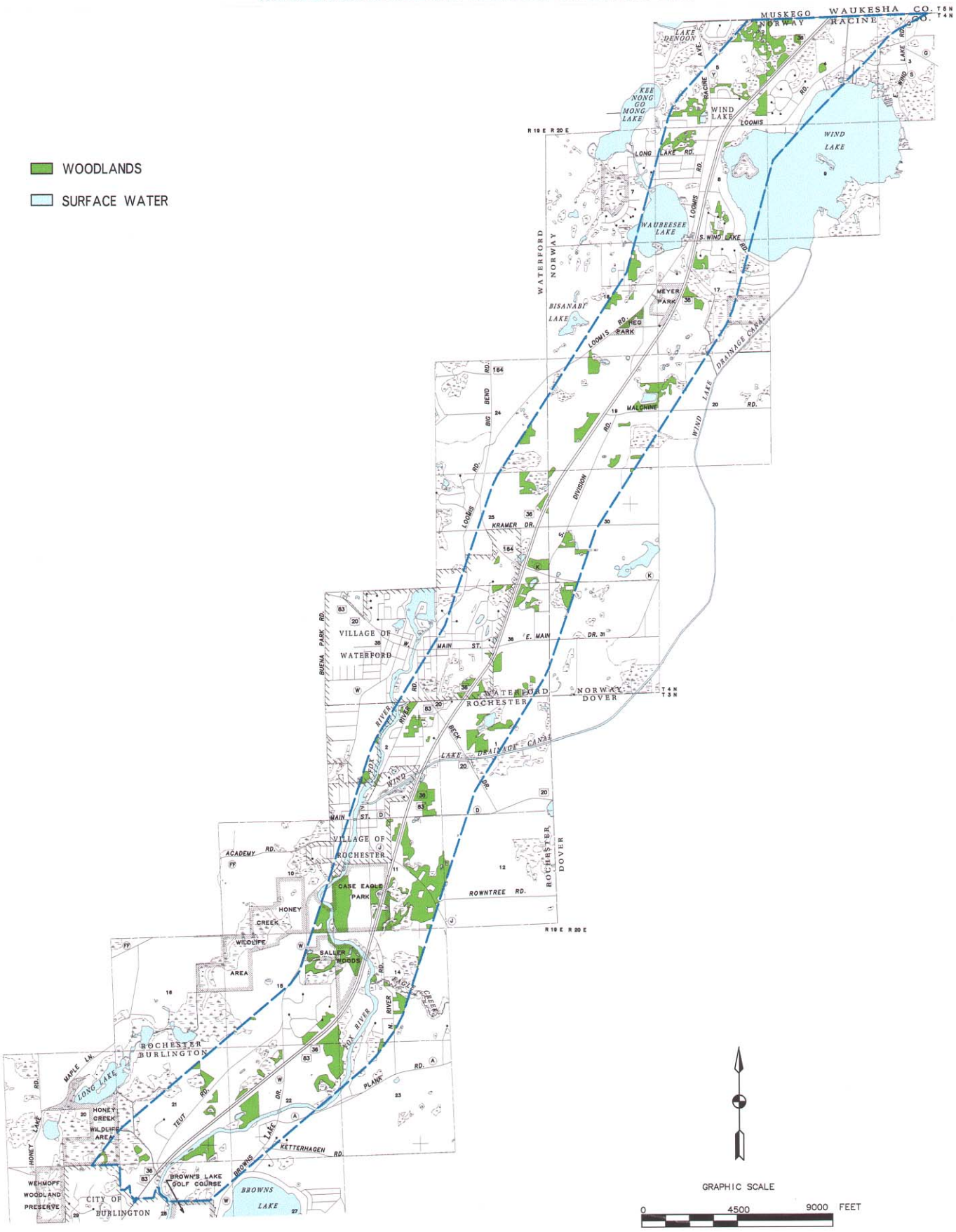
Natural Areas

Natural areas are tracts of land or water so little modified by human activities that they contain intact native plant and animal communities believed to be representative of the pre-European settlement landscape. Natural areas are classified into one of three categories: natural areas of statewide or greater significance (NA-1), natural areas of countywide or regional significance (NA-2); or natural areas of local significance (NA-3). Classification of an area into one of the three categories is based upon consideration of the diversity of plant and animal species and community types present; the structure and integrity of the native plant or animal community; the extent of disturbance from human activities such as logging, grazing, water level changes, and pollution; the commonness of the plant and animal communities present; unique natural features within the area; the size of the area; and the educational value. Seven natural areas, encompassing a total of about 184 acres, or about 2 percent of the Corridor, were identified in the inventory completed in 1994. These sites are shown on Map 8 and listed in Table 2. Most of the sites are located in the southern portion of the Corridor.

[1]*SEWRPC Planning Report No. 42*, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, *September 1997*.

Map 6

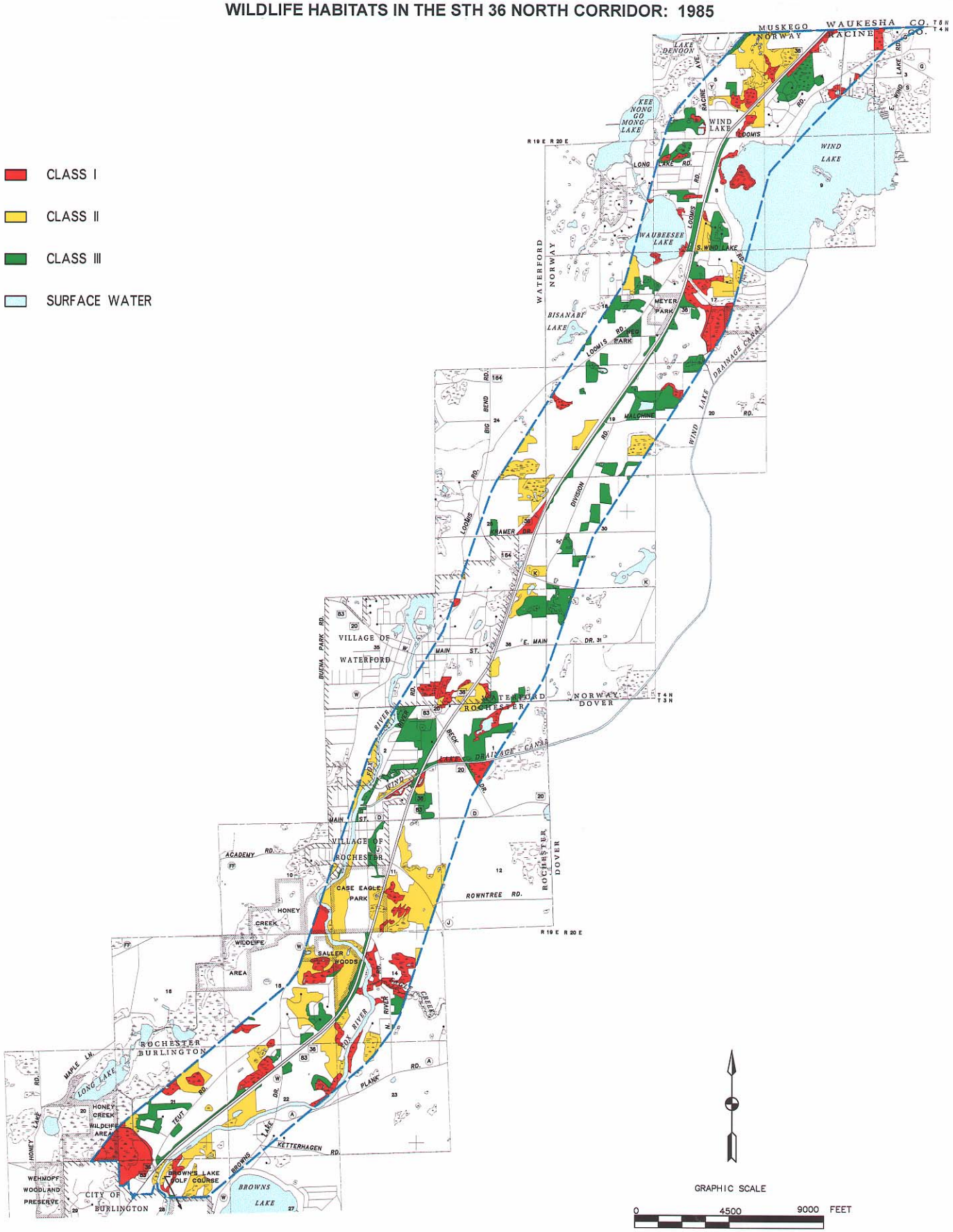
WOODLANDS IN THE STH 36 NORTH CORRIDOR: 2000



Source: SEWRPC.

Map 7

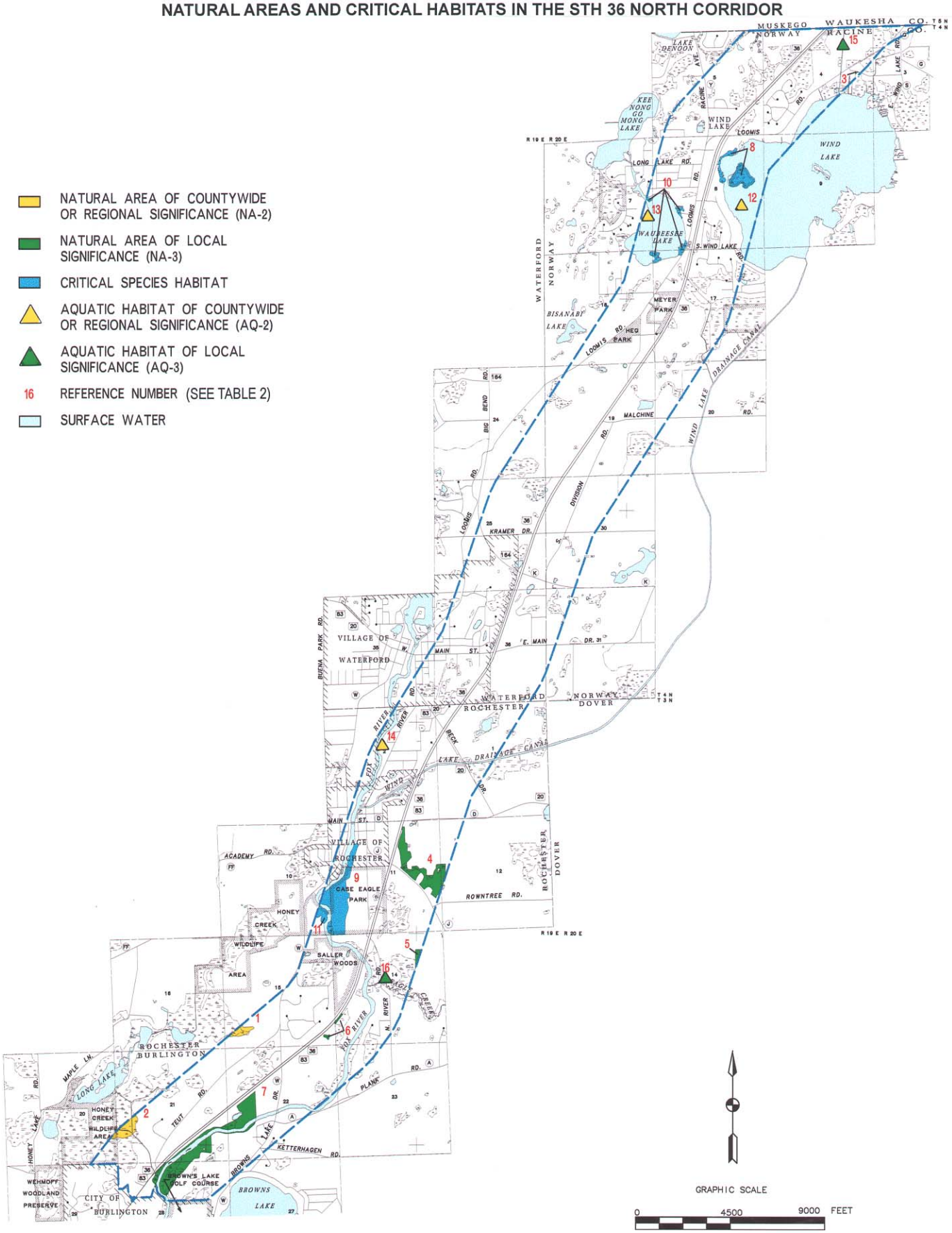
WILDLIFE HABITATS IN THE STH 36 NORTH CORRIDOR: 1985



Source: Wisconsin Department of Natural Resources and SEWRPC.

Map 8

NATURAL AREAS AND CRITICAL HABITATS IN THE STH 36 NORTH CORRIDOR



Source: SEWRPC.

Table 2

NATURAL AREAS AND CRITICAL HABITATS IN THE STH 36 NORTH CORRIDOR: 1994

Number on Map 8	Name	Classification Code[a]	Location	Ownership	Size	Description and Comments[b]
1	Brock Lake Fen	NA-2 (RSH)	T3N, R19E Sections 15, 16, 21 Town of Rochester	Department of Natural Resources and private	8 (231) acres[c]	High-quality wetland complex of fen, shallow marsh, sedge meadow, and small undeveloped lake. The rich native species complement includes a number of uncommon ones, such as beaked spike-rush (*Eleocharis rostellate*), Ohio goldenrod (*Solidago ohioensis*), common bog arrow-grass (*Triglochin maritimum*), and marsh blazing-star (*Liatris spicata*). An integral part of a long northeast-southwest lowland corridor
2	Leda Lake Fen-Meadow	NA-2 (RSH)	T3N, R19E Sections 20, 21, 29 Town and City of Burlington	Department of Natural Resources and private	16 (221) acres[c]	Good-quality wetland complex of small, shallow undeveloped lake, floating sedge mat, fen, sedge meadow, shrub-carr, and shallow cattail-bulrush marsh. Part of Cherry Lake-Brock Lake-Leda Lake environmental corridor
3	Wind Lake Wet Meadow	NA-3 (RSH)	T4N, R20E Section 4 Town of Norway	Private	0.2 (12) acres[c]	A moderate-quality wetland complex of wet meadow, fen, shallow marsh, and sedge meadow on north shore of Wind Lake. Contains marsh blazing-star (*Liatris spicata*), a State-designated special concern species
4	Rowntree Road Woods	NA-3	T3N, R19E, Sections 11, 12 Town of Rochester	Private	48 (74) acres[c]	A typical xeric oak woods, with several wet areas containing lowland hardwoods. An active blue heron rookery is present
5	Eagle Creek Woods	NA-3	T3N, R19E Sections 13, 14 Town of Rochester	Private	3 (84) acres[c]	Typical xeric oak woods—relatively large but with a history of grazing and selective cutting
6	Fox River Prairie	NA-3	T3N, R19E Sections 14, 15 Town of Rochester	Private	2 acres	Prairie remnants along former railway right-of-way, now county bicycle trail. Area consists of two separate patches— hill to the south contains a small, depauperate dry prairie, while to the north a low area contains a larger and better-quality mesic and wet-mesic prairie
7	Fox River Riverine Forest	NA-3	T3N, R19E Sections 21, 22, 28 Town and City of Burlington	Racine County and private	107 (131) acres[c]	Lowland and upland woods bordering the Fox River

Table 2 (continued)

Number on Map 8	Name	Classification Code[a]	Location	Ownership	Size	Description and Comments[b]
8	Wind Lake	CSH-B	T4N, R20E Section 8 Town of Norway	Department of Natural Resources and private	27 (55) acres[c]	Black tern (R) (colony)
9	Case Eagle Park Woods	CSH-B	T3N, R19E Sections 10, 11 Town of Rochester	Racine County and private	63 (65) acres[c]	Acadian flycatcher (T) Cooper's hawk (U) Ovenbird (U) American woodcock (U) Blue-gray gnatcher (U) Wood thrush (U) Chestnut-sided warbler (U)
10	Waubeesee Lake	CSH-P	T4N, R20E Sections 7, 8, 17, 18 Town of Norway	Private	11 (14) acres[c]	Black tern (R) (colony)
11	Case Eagle Park Dry Prairie	CSH-P	T3N, R19E Section 10 Town of Rochester	Racine County	7 (18) acres[c]	Kitten tails (*Besseya bulli)* (T)
12	Wind Lake	AQ-2 (RSH)	T4N, R20E Town of Norway	- -	190 (936) acres[c]	A drainage lake with critical fish and herptile species present
13	Waubeesee Lake	AQ-2 (RSH)	T4N, R20E Town of Norway	- -	122 (129) acres[c]	A deep drainage lake with critical fish species present; adjacent wetlands good for wildlife
14	Fox River downstream from Waterford impoundment to Echo Lake inflow	AQ-2 (RSH)	T4N, R19E Town and Village of Waterford T3N, R19E Town and Village of Rochester Town and City of Burlington	- -	5.9 (10.6) stream miles[c]	Critical fish, herptile, and mussel species habitat
15	Muskego Canal	AQ-3 (RSH)	T4N, R20E Town of Norway T5N, R20E City of Muskego	- -	0.6 (1.2) stream miles[c]	Critical fish species present
16	Eagle Creek upstream from Fox River	AQ-3	T3N, R19E Town of Rochester	- -	0.6 (1.1) stream miles[c]	Bisects an identified Natural Area, Eagle Creek Woods

[a] *NA-2 identifies Natural Area sites of countywide or regional significance.*
NA-3 identifies Natural Area sites of local significance.
CSH-B identifies critical bird species habitat sites.
CSH-P identifies critical plant species habitat sites.
AQ-2 identifies critical aquatic habitat sites of countywide or regional significance.
AQ-3 identifies critical aquatic habitat sites of local significance.
RSH, or Rare Species Habitat, identifies those sites which support rare, threatened, endangered, or "special concern" species officially designated by the Wisconsin Department of Natural Resources.

[b] *"R" refers to species designated as rare or special concern.*
"T" refers to species designated as threatened.
"U" refers to species designated as uncommon.
"Drainage lakes" are lakes that have both an inlet and an outlet and whose main water source is stream drainage.

[c] *Site area, lake, or stream is located partially within the STH 36 North Corridor study area. The number without parentheses refers to the acreage or stream miles within the Corridor study area, and the number in parentheses is the total site area or stream miles, including those beyond the study area.*

Source: Wisconsin Department of Natural Resources and SEWRPC.

Critical Habitats

Critical habitats are those areas, outside of natural areas, where the main value lies in their ability to support rare, threatened, or endangered species. Such areas constitute "critical" habitat that is important to ensure survival of a particular species or group of species of special concern.

A total of four critical bird or plant species habitats have been identified within the Corridor. Two of the sites support rare, special concern, threatened or uncommon bird species, and the other two sites support rare, special concern, or threatened plant species. These habitat sites, which in 1994 encompassed an area of about 108 acres, or about 1 percent of the Corridor, are shown on Map 8 and described in Table 2.

Also identified within the Corridor are five critical aquatic habitats that support threatened or rare fish, herptile (amphibians and reptiles), or mussel species. The five habitats include three aquatic habitats of countywide or regional significance (AQ-2), and two aquatic habitats of local significance (AQ-3). As shown on Map 8 and indicated in Table 2, there are about seven stream miles and 312 lake acres of such habitats in the Corridor.

Resource-Related Elements

Elements closely linked to the natural resources, such as scenic overlooks mentioned earlier, are considered in the design planning process. Park and open space sites, including related trails, and historic sites may be enhanced by the presence of natural resource features and, due to the commitment of land to such uses, contribute to the preservation of the existing resource features.

Park, Recreation, and Open Space Sites

An inventory of park and open space sites and outdoor recreational facilities in the Corridor was conducted in 2000. As shown on Map 9, there were 14 such sites encompassing a total of approximately 482 acres, or about 6 percent of the Corridor. Of this total, 12 sites encompassing about 459 acres were publicly owned, and two sites encompassing about 23 acres were privately owned. These sites include protected natural features and provide public boat access and a variety of recreational facilities for local residents, from playgrounds to baseball diamonds.

Recreation Trails and Rustic Roads

Opportunities for trail-oriented recreation activities such as hiking, bicycling, and nature study, and routes for pleasure driving are provided in the Corridor. Racine County has developed trail-oriented recreational facilities throughout the County. As shown on Map 9, existing hiking and bicycling trails in the Corridor include a 3.5-mile segment of the 4.3 mile Burlington Trail portion of the Fox River Trail in the City of Burlington and the Towns of Burlington and Rochester; the 7.4-mile Waterford-Wind Lake Trail in the Village of Waterford and the Towns of Norway, Rochester, and Waterford; and three segments, totaling 4.1 miles, of the 100-mile "on-the-road" Racine County bicycle route.

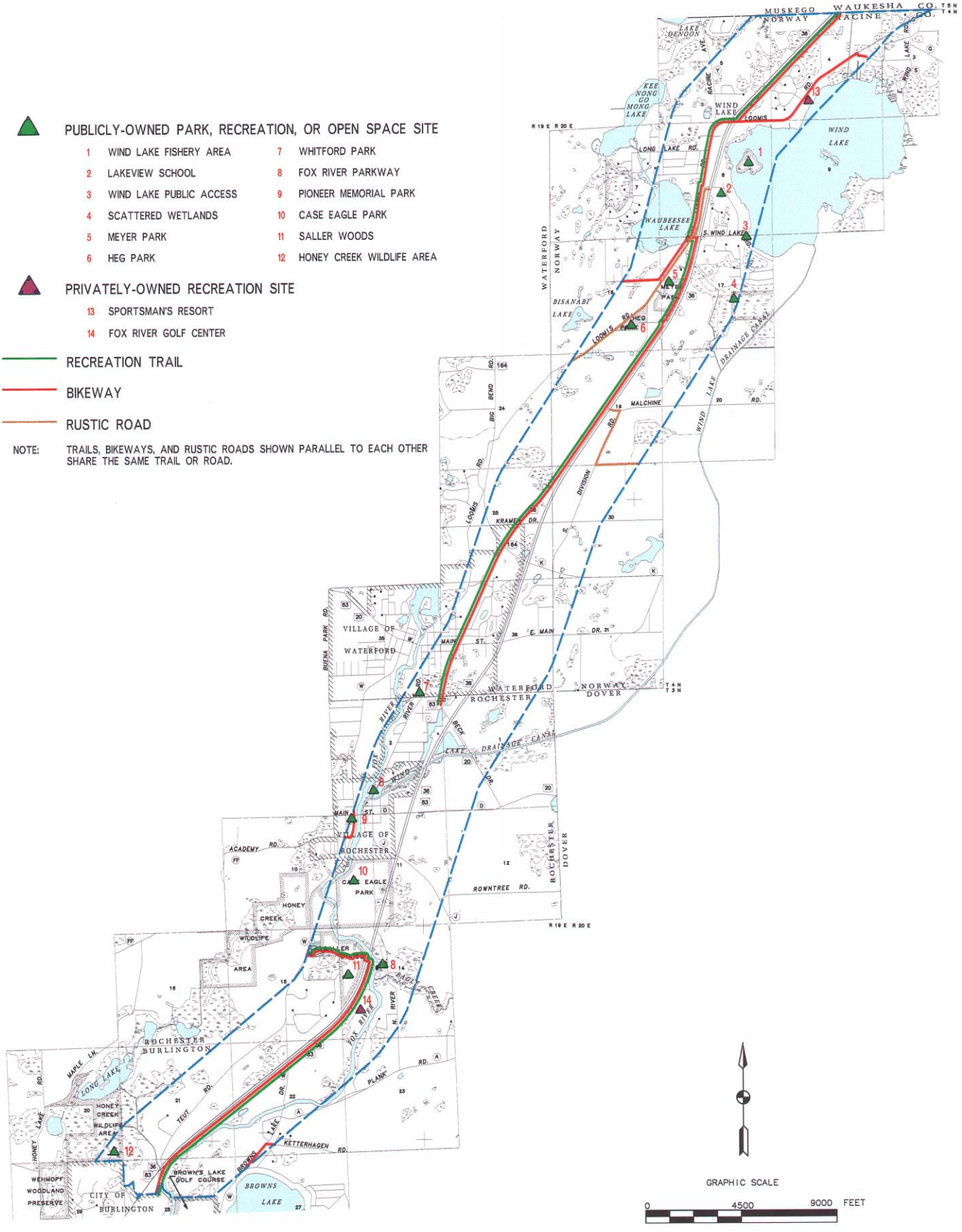
Map 9 also shows portions of two designated rustic roads within the Corridor. Rustic roads are scenic, lightly traveled country roads designated for the leisurely enjoyment of hikers, bikers, and motorists. The Corridor includes a 2.1-mile segment of the 3.1-mile Rustic Road R-5 located on S. Loomis Road, between STH 36 and STH 164 in the Towns of Norway and Waterford; and a 1.0-mile segment of the 2.3-mile Rustic Road R-30 located on portions of Hillcrest, Hanson, Division, and Malchine Roads, between CTH K and STH 36 in the Town of Norway.

Historic Site

While not a natural resource base element per se, historic sites were considered as being culturally significant and worthy of consideration in this design planning effort. Historic sites in Racine County often have important recreational, educational, and cultural value. A number of inventories and surveys of historic sites have been conducted by various units and agencies of government in the Southeastern Wisconsin Region. The results of these inventories and surveys, on file at such agencies as the Wisconsin State Historical Society, indicate that there are more than 1,000 historic sites in Racine County. Particularly significant historic sites are listed on the National Register of Historic Places. Four historic districts and 35 historic sites in Racine County are listed on the National Register. One such site exists within the northern portion of the Corridor in the Town of Norway: the Norwegian Buildings at Heg Park located on the west side of STH 36, near the intersection of Heg Park Road and S. Loomis Road.

Map 9

TRAILS, RUSTIC ROADS, AND PARK, RECREATION, AND OPEN SPACE SITES IN THE STH 36 NORTH CORRIDOR: 2000



Source: SEWRPC.

Environmental Corridors and Isolated Natural Resource Areas

As defined by the Regional Planning Commission, environmental corridors are elongated areas in the landscape that encompass concentrations of recreational, aesthetic, ecological, and cultural resources. Such areas generally include one or more of the natural resource base elements previously discussed in this section.

Map 10 shows the location and extent of environmental corridors and other environmentally significant areas, termed "isolated natural resource areas", within the STH 36 North Corridor study area as delineated by the Regional Planning Commission.[2] The essentially linear corridors represent a composite of the best remaining elements of the natural resource base in the study area and have immeasurable environmental and recreational value. Preservation of the primary environmental corridors, and careful consideration of preserving secondary environmental corridors and isolated natural resource areas, in an essentially open, natural state—including compatible park and open space uses and rural-density residential uses—will serve to maintain a high level of environmental quality in the area, protect the natural beauty of the area, and provide valuable recreation opportunities. Preservation will also avoid the creation of serious and costly environmental and developmental problems such as flood damage, poor drainage, wet basements, failing pavements and other structures, excessive infiltration of clear waters into sanitary sewers, and water pollution.

Primary Environmental Corridors

Primary environmental corridors are by definition at least 400 acres in size, two miles long, and 200 feet wide. These corridors include steep slopes, surface water areas, wetlands, woodlands, wildlife habitats, natural areas, and critical species habitats. In 2000, about 2.6 square miles, or about 21 percent of the study area, were encompassed within the primary environmental corridors shown on Map 10. These corridors are mostly located along perennial and intermittent streams, including the Fox River, Eagle Creek, and the Wind Lake Drainage Canal, and the large wetland areas associated with these streams and the lakes within the study area. The protection of primary environmental corridors from intrusion by incompatible development, and thereby from degradation and destruction, should be one of the principal objectives of a design plan.

Secondary Environmental Corridors

While secondary corridors may have many of the same qualities as primary corridors, they are smaller in size. Such corridors are by definition at least 100 acres in size and one mile long, and often contain remnant resources from former primary environmental corridors which have been developed for intensive agricultural or urban land uses. As shown on Map 10, about 0.4 square mile, or about 3 percent of the study area, was encompassed within secondary environmental corridors in 2000. Secondary environmental corridors are located in the northern portion of the study along streams and also encompass wetlands associated with these streams. Secondary environmental corridors facilitate surface water drainage, maintain "pockets" of natural resource features, and provide for the movement of wildlife, as well as for the movement and dispersal of seeds for a variety of plant species. Such corridors should be preserved in essentially open natural uses as development proceeds within the study area, particularly when the opportunity is presented to incorporate them into urban stormwater detention areas, associated drainageways, and park and open space sites.

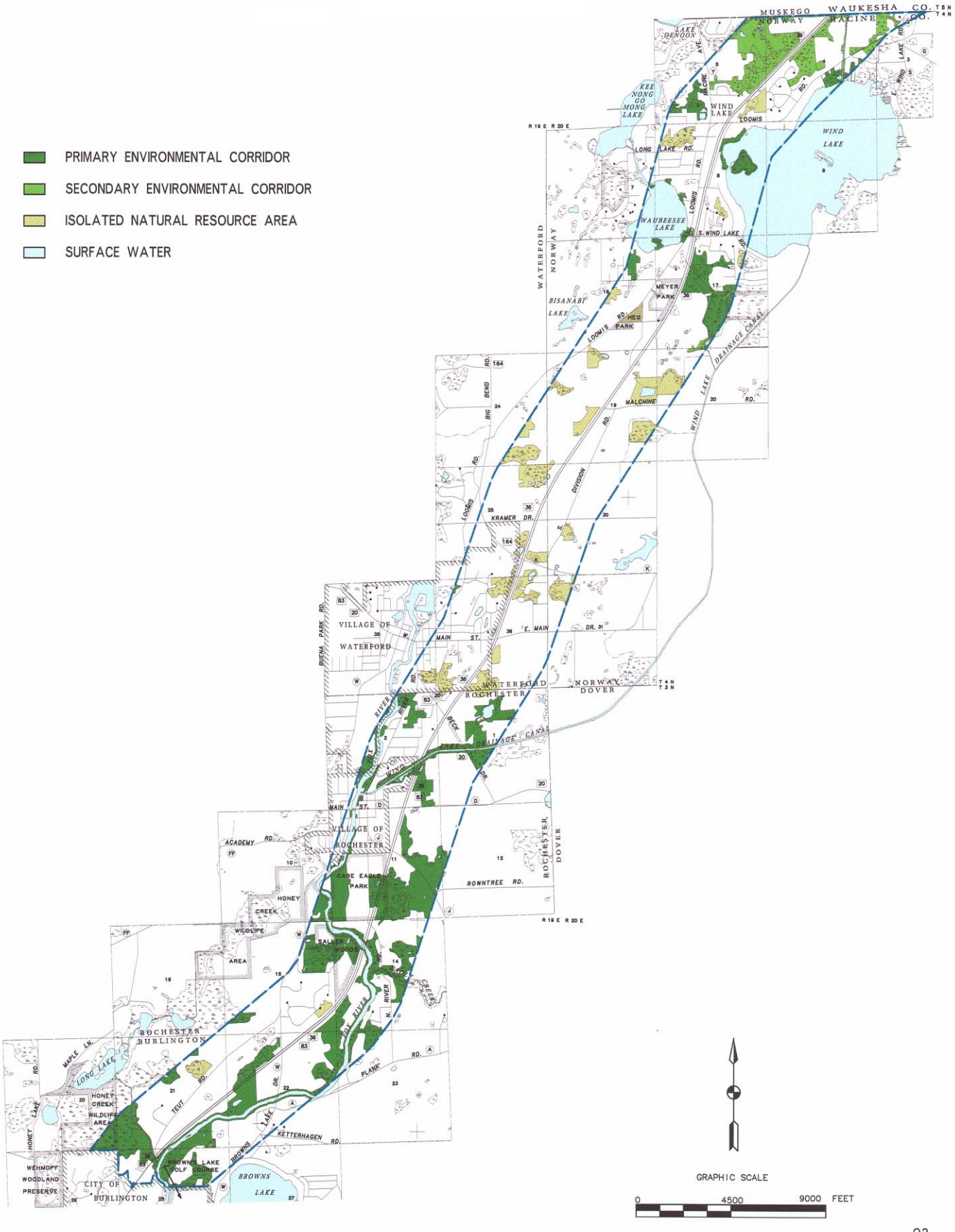
Isolated Natural Resource Areas

In addition to the primary and secondary environmental corridors, other small concentrations of natural resource base elements exist within the study area. These elements are isolated from the corridors by urban development or agricultural uses and, although separated from the environmental corridor network, may have important residual natural values. Isolated natural features may provide the only available wildlife habitat in an area, provide good locations for local parks and nature study areas, and lend aesthetic character and natural diversity to an area. Important isolated natural resource areas within the study area include a geographically well-distributed variety of

[2]*A detailed description of the process for delineating environmental corridors in Southeastern Wisconsin is presented in SEWRPC Technical Record, Vol. 4, No. 2,* Refining the Delineation of Environmental Corridors in Southeastern Wisconsin, *March 1981, pp. 1-21.*

Map 10

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS IN THE STH 36 NORTH CORRIDOR: 2000



Source: SEWRPC.

isolated wetlands, woodlands, and wildlife habitat. These areas should be protected and preserved in a natural state whenever possible. Isolated natural resource areas, which are at least 200 feet wide and five acres or greater in size, are shown on Map 10. In 2000, these areas encompassed about 0.7 square miles, or about 5 percent of the study area.

HISTORICAL AND EXISTING LAND USE CHARACTERISTICS

If the STH 36 North Corridor design plan is to constitute a sound and realistic guide to the making of decisions concerning the physical development of the Corridor study area, it should be based upon consideration of the built environment as well as the natural resources of the area. This section presents information on historical development patterns, existing land uses, and existing viewshed characteristics. These pertinent features are described in this section as they affect the physical development and hence the visual character of the Corridor.

Historical Development Patterns and Changing Character

Drawing from historic maps and photographs, the Regional Planning Commission has assembled information that documents the historical pattern of urban development in the Region. The results of that inventory effort for the Corridor study area are shown on Map 11. While urban development in the Corridor began in the mid-1800's, it was not until the mid-1900's that any significant amount of urban growth began to take place.[3]

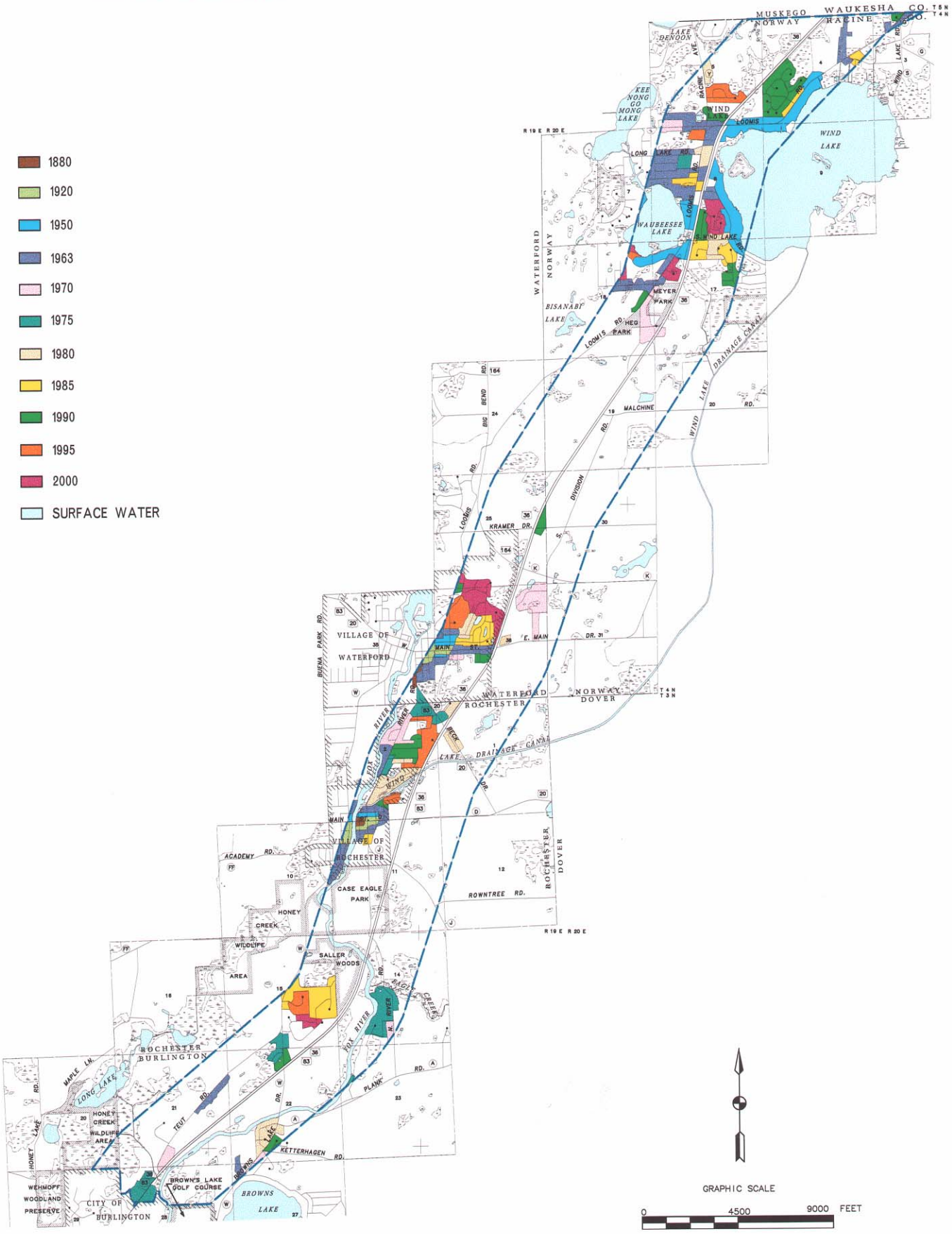
The general character of the Corridor study area has changed over time. Shortly after completion of the U.S. Public Land Survey in 1836, the conversion of land from native vegetation to agricultural uses began. Soon thereafter, the presence of waterways such as the Fox River attracted settlers, who harnessed the water power to operate mills, and rail lines and accompanying railroad depots developed in surrounding areas. In the late 1800's, urban hamlets or centers developed at these mills and depots as trade centers supporting farmers in the Corridor area. As these centers continued to grow, an electric interurban railway line (abandoned in 1951), additional roads, schools, churches, stores, and hotels soon followed. The role of these agricultural communities and retail trade centers supporting surrounding areas continued through the Second World War. Eventually developers began offering farmers good prices for their land in order to build residential subdivisions. This trend towards suburbanization was influenced by people working in the metropolitan Milwaukee area who wished to live in a more rural setting. The urban communities within the Corridor eventually established themselves as a haven for metropolitan commuters. Today, residents of these urban centers, such as the incorporated Villages of Rochester and Waterford and the unincorporated urban hamlet or enclave of the Wind Lake-Waubeesee Lake area, are served by a variety of commercial activities supported by various public services including public utilities, such as electric power facilities, natural gas facilities, and sanitary sewer services, and community facilities, such as schools, fire stations, and municipal halls.

Map 11 shows in detail the location and extent of historical urban development that has occurred in the Corridor from 1880 and selected succeeding years up to 2000. As shown on this map, only a small amount of land within the Corridor—located in the Villages of Rochester and Waterford—were devoted to urban uses from 1880 to 1920 while outlying areas consisted primarily of rural agricultural lands. Beginning in about 1950, urban development increased significantly outward from these Villages and the urban enclave of the Wind Lake-Waubeesee Lake area and in scattered locations in the Corridor study area. Some of the new developments within the Corridor that are commercial in nature were attracted by the exposure of STH 36. The remainder of the development consisted primarily of residential land uses. The views experienced along STH 36, before it was established as a major highway, reflected small urban centers separated by vast areas of natural and agricultural lands. As shown on Map 11, over time the urban centers have increased in size and some have incorporated while

[3]*For the purposes of this analysis, urban development is defined as those areas where houses or other buildings have been constructed in relatively compact groups or where a closely spaced network of minor streets has been constructed, indicating a concentration of residential, commercial, industrial, governmental, or institutional lands uses. The continuity of such development was considered interrupted if a quarter-mile or more of rural land uses, such as agriculture, woodlands, or wetlands, were present and the above conditions were generally absent.*

Map 11

HISTORICAL URBAN DEVELOPMENT PATTERN IN THE STH 36 NORTH CORRIDOR: 1880-2000



Source: SEWRPC.

the agricultural and natural landscape between them has somewhat decreased. By analyzing the historic development pattern shown on Map 11, it appears that most urban growth would likely continue within and adjacent to the urban centers in the Corridor.

Existing Land Uses

One of the most important implications of land uses is that the type of use within the highway corridor directly defines the type of view or image projected along the STH 36. The Regional Planning Commission inventories existing land uses in the southeastern Wisconsin region every five years. The first land use inventory was conducted in 1963, and the most recent such inventory was conducted in 2000. The data gathered in this latest inventory were mapped and analyzed in order to define the existing character along STH 36. The existing 2000 land uses in Corridor are shown on Map 12, and the amount of land devoted to each type of land use in the Corridor is set forth in Table 3. Of the total 12.4-square mile Corridor study area in 2000, the incorporated areas occupied about 1.2 square miles, or about 10 percent, while the remaining 11.2 square miles, or about 90 percent, were occupied by unincorporated areas.

Several important characteristics of the study area can be noted by examining Map 12 and Table 3. First, in 2000 agricultural-related uses were the predominant land uses, representing about 39 percent of the Corridor. Second, natural resources consisting of water, wetlands, and woodlands represented about 27 percent of the Corridor in 2000. Third, single-family residential land uses represented about 12 percent of the Corridor. Residential land uses, however, represented the largest group of urban uses in the Corridor and the incorporated areas. This information supports the perception of the Corridor as consisting of urban centers surrounded by still “open” lands of lakes, cultivated fields, and natural areas that provide attractive settings visible from STH 36.

Urban Land Uses

Urban land uses—consisting primarily of single-family residential, commercial, recreational, and transportation uses—encompassed 2,189 acres, representing about 28 percent of the total area of the Corridor in 2000. Such uses occupied 359 acres, or about 46 percent, of the incorporated areas of the Corridor and 1,831 acres, or about 26 percent, of the mostly rural unincorporated portion of the Corridor. However, most urban uses, about 1,666 acres or 76 percent, were concentrated within planned sanitary sewer service areas, as defined later in this chapter and shown on Map 19. These service areas include the urban centers consisting of incorporated communities and the urban enclave of the Wind Lake-Waubeesee Lake area. A discussion of the different types of urban uses within the Corridor follows.

Residential

Residential lands comprised the largest urban land use category encompassing 1,069 acres, or about 49 percent of all urban land uses and about 14 percent of the total area of the Corridor. As indicated in Table 3, most of the existing residential development in the Corridor consisted of single-family residential dwellings with some two-family and multi-family residential developments. The existing residential uses are concentrated in and near urban centers with some scattered homesites in the rural areas of the Corridor. The nature and extent of residential development is a major determinant of the type and location of utilities and community facilities needed to serve local residents.

Commercial and Industrial

In 2000, commercial retail sales, services, office buildings, and associated parking uses accounted for 77 acres, or about 4 percent of the urban land uses and about 1 percent of the total land uses in the Corridor. Industrial land uses accounted for 22 acres, or about 1 percent of the urban land uses within the Corridor and less than 1 percent of the total Corridor study area in 2000. Industrial uses and most commercial uses are located in urban centers where public sanitary sewer services are available. In addition, most commercial uses were located along major arterial streets, including STH 36 and at its intersection with other arterial highways.

Transportation and Utilities

In 2000, transportation and utility land uses accounted for 795 acres of land, or about 36 percent of the urban land uses and about 10 percent of the total land uses in the Corridor. This category comprised the second largest group

Map 12

EXISTING LAND USES IN THE STH 36 NORTH CORRIDOR: 2000

Source: SEWRPC.

Table 3

SUMMARY OF EXISTING LAND USES IN THE STH 36 NORTH CORRIDOR: 2000

Land Use Category	Number Of Acres	Percent of Subtotal (Urban or Nonurban/ Rural)	Percent of Total
Urban[a]			
Residential[b]			
Single-Family	978	44.7	12.4
Two-Family	59	2.7	0.7
Multi-Family	32	1.5	0.4
Subtotal	1,069	48.9	13.5
Commercial	77	3.5	1.0
Industrial	22	1.0	0.3
Transportation and Utilities			
Arterial Streets and Highways	461	21.0	5.8
Collector and Local Streets	319	14.6	4.0
Communications and Utilities	15	0.7	0.2
Subtotal	795	36.3	10.0
Governmental and Institutional	48	2.2	0.6
Recreational[c]	178	8.1	2.3
Urban Land Use Subtotal	2,189	100.0	27.7
Nonurban/Rural			
Natural Resource Areas			
Water	451	7.9	5.7
Wetlands	922	16.1	11.7
Woodlands	763	13.3	9.6
Subtotal	2,136	37.3	27.0
Agricultural	3,066	53.5	38.7
Open Lands[d]	525	9.2	6.6
Nonurban/Rural Land Use Subtotal	5,727	100.0	72.3
Total	7,916	- -	100.0

[a]*Includes related off-street parking areas for each urban land use category.*

[b]*Includes farm residences; other farm buildings are included in the agricultural land use category.*

[c]*Includes only those areas used for intensive outdoor recreational activities.*

[d]*Includes unused lands and lands under development as of April 2000.*

Source: SEWRPC.

of urban land uses in the Corridor. Included in this land use category are streets and highways, utility substations, sewage treatment plants, and communication facilities. Each principal urban land use category shown on Map 12 and listed in Table 3, however, includes related off-street parking areas.

Most intensively developed areas such as concentrated urban areas in the Villages of Rochester and Waterford and the Wind Lake-Waubeesee Lake area are served by public sanitary sewer services; domestic water is provided from a centralized public water supply system for the Village of Waterford and onsite private wells for all other

urban areas; and stormwater drains through limited engineered storm sewer systems and natural watercourses, roadside swales, and culverts. In the rural areas, sewage is treated by onsite sewage-disposal systems; domestic water is provided from onsite private wells; and stormwater drains through natural watercourses, roadside ditches, and culverts.

Governmental and Institutional
In 2000, governmental and institutional land uses accounted for 48 acres of land in the Corridor study area, representing about 2 percent of the urban land uses of the Corridor and about 1 percent of the total land uses in the Corridor. Major governmental and institutional land uses in the study area include churches, fire stations, and public and private schools. Governmental and institutional land uses are located mostly in urban centers.

Recreational
In 2000, recreational land uses represented 178 acres of land, or about 8 percent of the urban portion of the Corridor and about 2 percent of the total Corridor study area. This category includes only those areas that have been developed for recreational uses, with facilities such as playgrounds, major trails, tennis courts, baseball diamonds, soccer fields, and other playfields. Most recreational facilities are located within or near concentrated urban areas. A complete identification of all park and open space sites in the Corridor was shown earlier in this chapter on Map 9.

Nonurban/Rural Land Uses
Nonurban land uses consist of wetlands, woodlands, surface water, agricultural lands, and other open lands. Nonurban lands totaled 5,727 acres, or about 72 percent, of the Corridor study area in 2000. Such uses occupied 421 acres, or about 54 percent, of the incorporated areas of the Corridor and 5,305 acres, or about 74 percent, of the mostly rural unincorporated areas of the Corridor. Nonurban land uses were the predominant general land use in not only the entire Corridor study area, but also in both the incorporated and unincorporated portions of the Corridor. The various types of nonurban land uses that occupy the Corridor are described below.

Natural Resource Areas
Natural resource areas include wetlands, woodlands, and surface waters that are located throughout the Corridor. Such natural features occupied 2,136 acres, or about 37 percent, of the total nonurban land uses in the Corridor and about 27 percent of the total land uses in the Corridor in 2000. Of this total, wetlands represented 922 acres, or about 12 percent of the Corridor; woodlands occupied 763 acres, or about 10 percent of the Corridor; and surface water represented 451 acres, or about 6 percent of the Corridor. More detailed information regarding the location and importance of natural resource areas was provided earlier in this chapter under the natural resources section.

Agricultural
The agricultural land use category shown on Map 12 includes all croplands, pasture lands, orchards, nurseries, and nonresidential farm buildings. Farm residences, together with an approximately 20,000-square-foot dwelling site area, were classified as single-family residential land uses. In 2000, agricultural lands occupied 3,066 acres, or about 39 percent of the nonurban portion of the Corridor and about 54 percent of the total area of the Corridor. Map 18, discussed and shown later in this chapter, indicates those lands which were identified as prime agricultural land under the County farmland preservation plan and which met the criteria and remained in agricultural use in 2000. Despite some scattered residential home sites that exist within the Corridor, the Corridor still contains numerous intact blocks of farmland located between urban centers.

Open Lands
Open lands include lands in rural areas that are not farmed, lands in concentrated urban areas that have not been developed, or lands that were under development as of April 2000. Examples of open lands in urban areas include undeveloped portions of park sites, excess transportation rights-of-way, subdivision outlots, and undeveloped portions of commercial and industrial lots. Open lands accounted for 525 acres, or about 7 percent of the Corridor in 2000.

Existing Viewshed and Visual Characteristics Along STH 36

The existing STH 36 viewshed and the associated visual elements that define this viewshed reflect the visual experience from the arterial highway. Conversely, the viewshed also incorporates the visual experience of those Corridor landowners, residents, and business patrons who can see STH 36. There is significant potential for the communities within the Corridor to present a positive image to highway users. Since the STH 36 Corridor is a major highway with unique visual characteristics located along it, an effort should be made to preserve and enhance its distinct characteristics to avoid the threat of projecting a highway strip commercial image. A discussion of the STH 36 viewshed characteristics follows.

Existing Viewshed

Map 13 identifies the existing viewshed along STH 36. As discussed in Chapter I, the one-half mile distance selected on each side of the STH 36, measured from its centerline, to define the Corridor study area was based, in part, on the extent of the STH 36 viewshed in the winter, or the area travelers can see from the highway with most vegetation defoliated. About 79 percent of the viewshed is located within the defined Corridor study area. Any existing and proposed physical features that lie within the viewshed will ultimately affect the visual experience along the highway. This delineated viewshed could be used to help identify the location and extent of existing visual characteristics that should be protected or enhanced in order to preserve aesthetic qualities and views. In addition, the defined viewshed could be used, in part, to help determine the extent of a zoning overlay district that may be used to regulate the design appearance of development or redevelopment that may occur within a certain distance from the STH 36.

Existing Visual Characters of the STH 36 Viewshed

The character of the Corridor as viewed from STH 36 may be categorized into four distinct types of views or images, which are shown on Map 13. The urban character of the Corridor is defined mostly by two types of distinct "urban views" consisting of "residential views"—concentrated areas of single-, two-, and/or multi-family dwellings—and "commercial views"—concentrated areas of business development—located mostly in urban centers. These urban views reflect, in part, the visual image of urban centers, which are vital civic, business, and cultural centers of the Corridor. The overall view of urban centers should project an attractive and viable, long-term urban setting by promoting environmentally sensitive, high-quality development.

The rural/nonurban character of the Corridor is defined largely by two types of prominent "rural/nonurban views." There are "natural views"—significant natural areas consisting of rivers, lakes, ponds, wetlands, and/or woodlands—and "pastoral views"—farmsteads with cultivated fields and/or pasture lands—located mostly in the rural portion of the Corridor between concentrated urban areas. These views should be protected to the extent possible, including those located near the urbanizing segments of STH 36 within and adjacent to urban centers, as urban development proceeds in the Corridor study area.

The identification of these views indicates the predominant character of a defined area and suggests the type of design guidelines that should be used by proposed development or redevelopment to preserve or improve said views. Namely, urban design guidelines would be used for areas with urban views and rural design guidelines for areas with rural views.

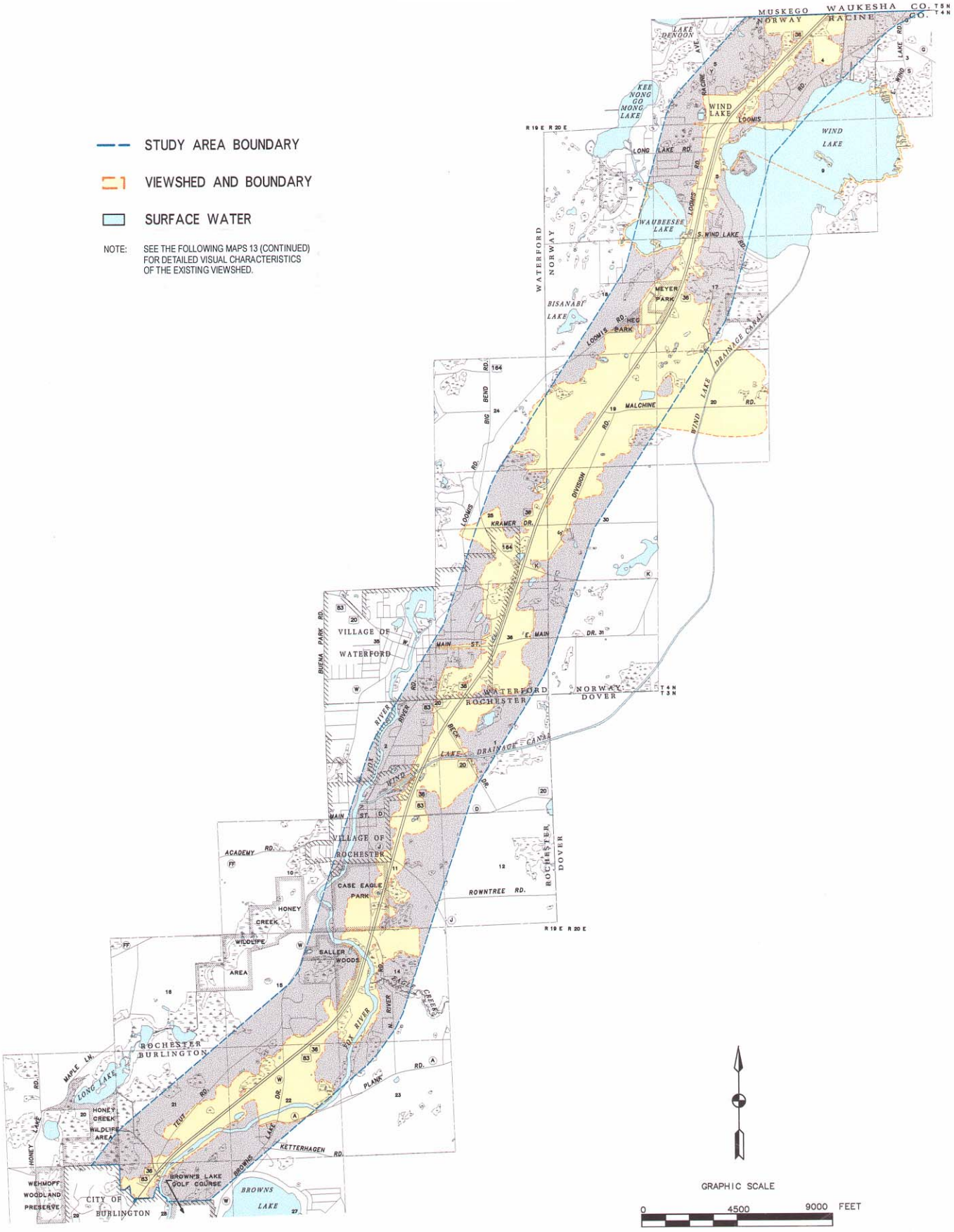
Existing Physical Features of the STH 36 Viewshed

In addition to identifying general concentrated areas of urban and rural/nonurban views, Map 13 also identifies specific physical features that define the STH 36 viewshed. Some of these features function as landmarks that have a very clear visual form, contrast with their visual background, and occupy prominent spatial location that plays a significant role in establishing both a sense of place and community identity.

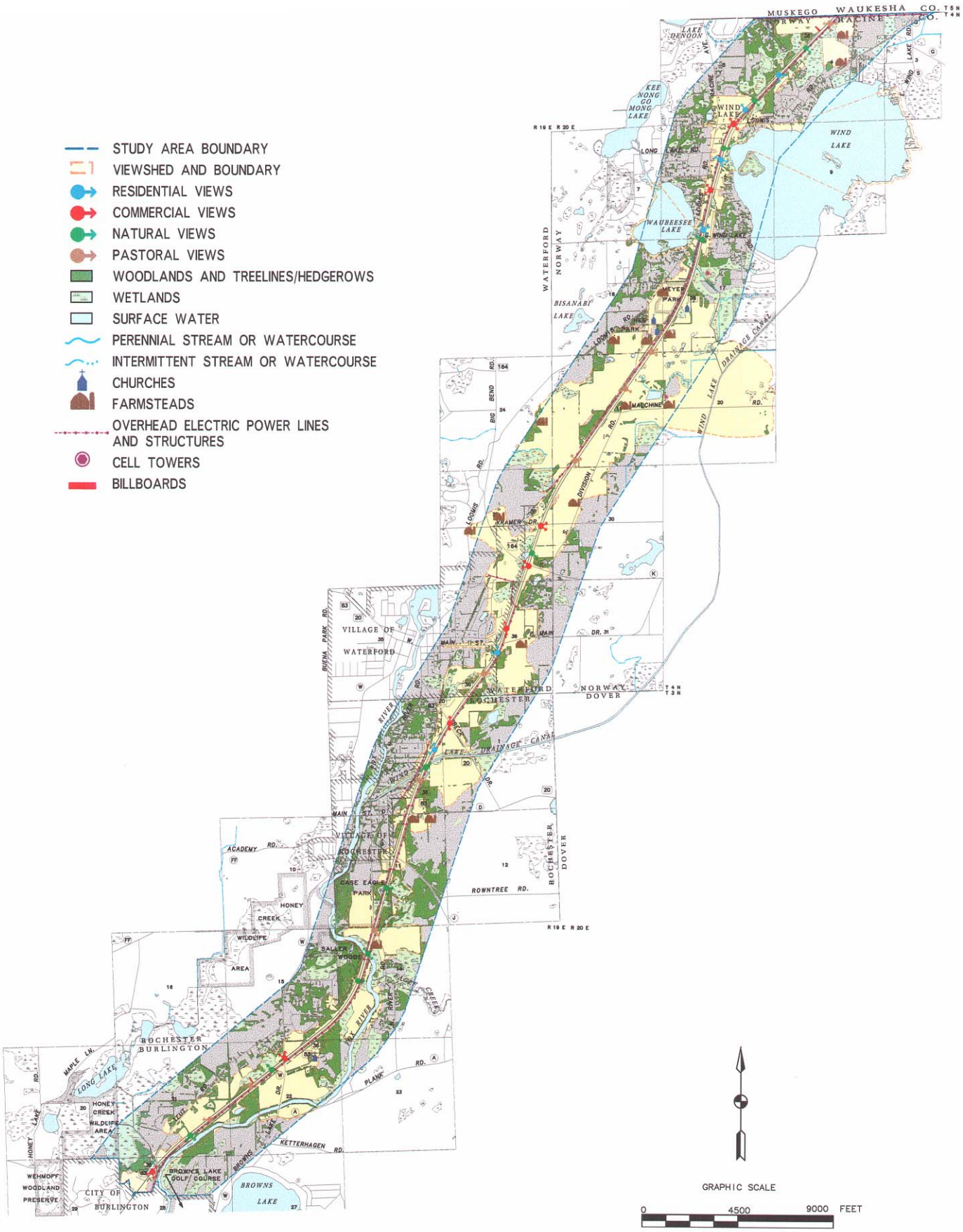
Map 13 identifies large man-made features within the viewshed that are readily noticeable from STH 36, such as farmsteads, churches, cell towers, and billboards. Farmsteads, containing farm houses, barns, silos, and/or outbuildings, that are properly maintained play an important role in reflecting a community's agrarian heritage. All of these man-made elements influence the landscape viewed from the highway. Natural features are also

Map 13

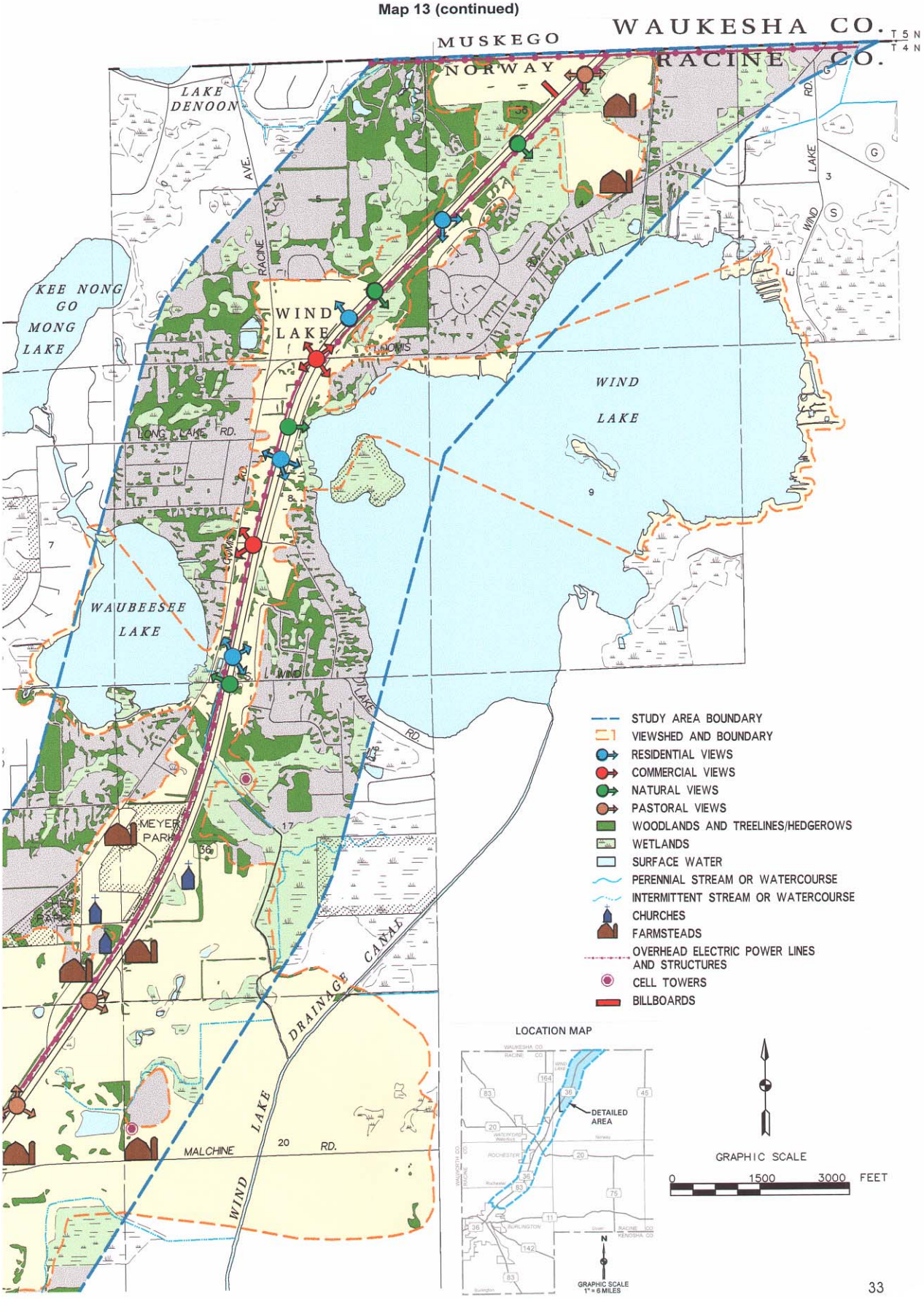
EXISTING VIEWSHED AND VISUAL CHARACTERISTICS ALONG STH 36: 2002



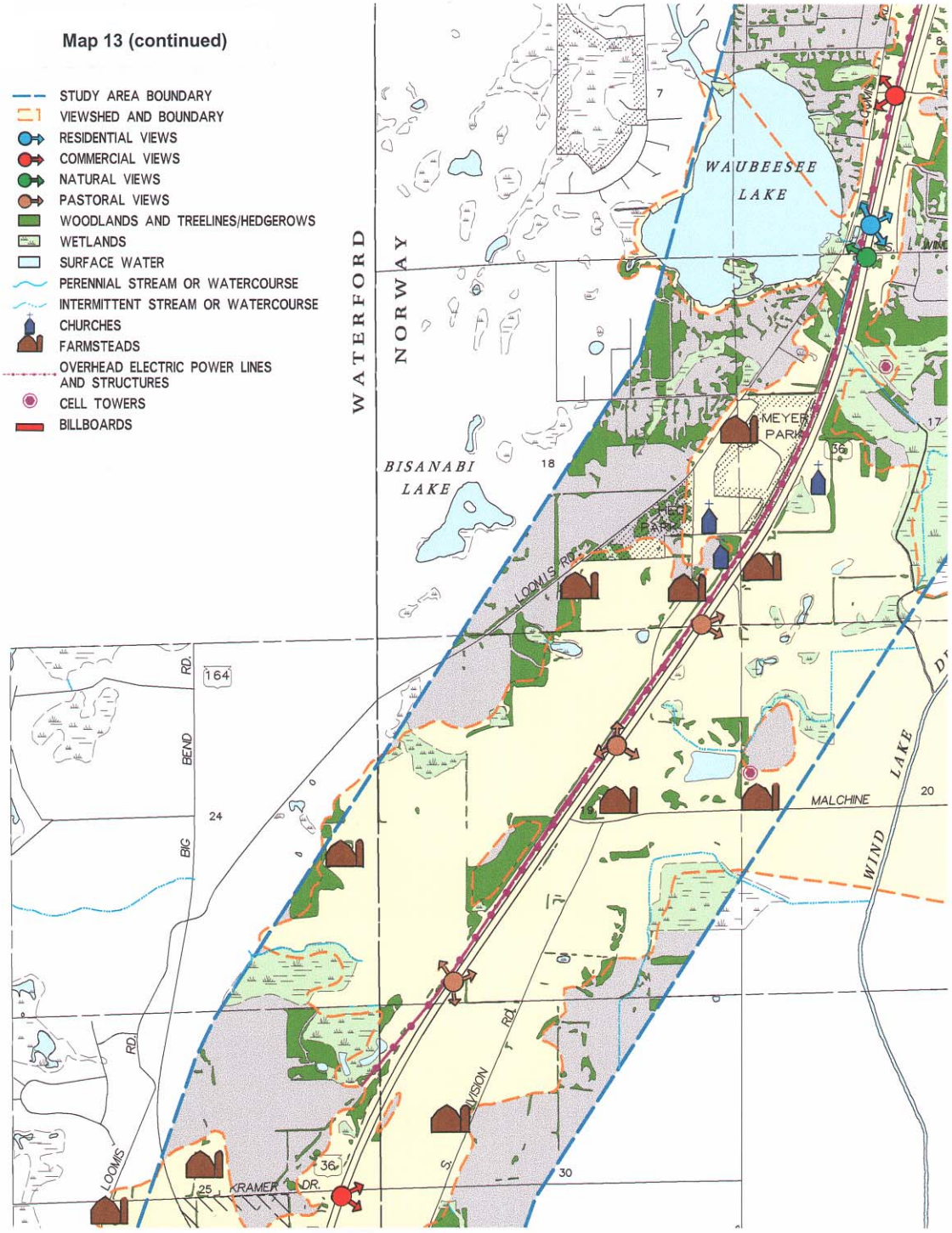
Map 13 (continued)



Map 13 (continued)



Map 13 (continued)

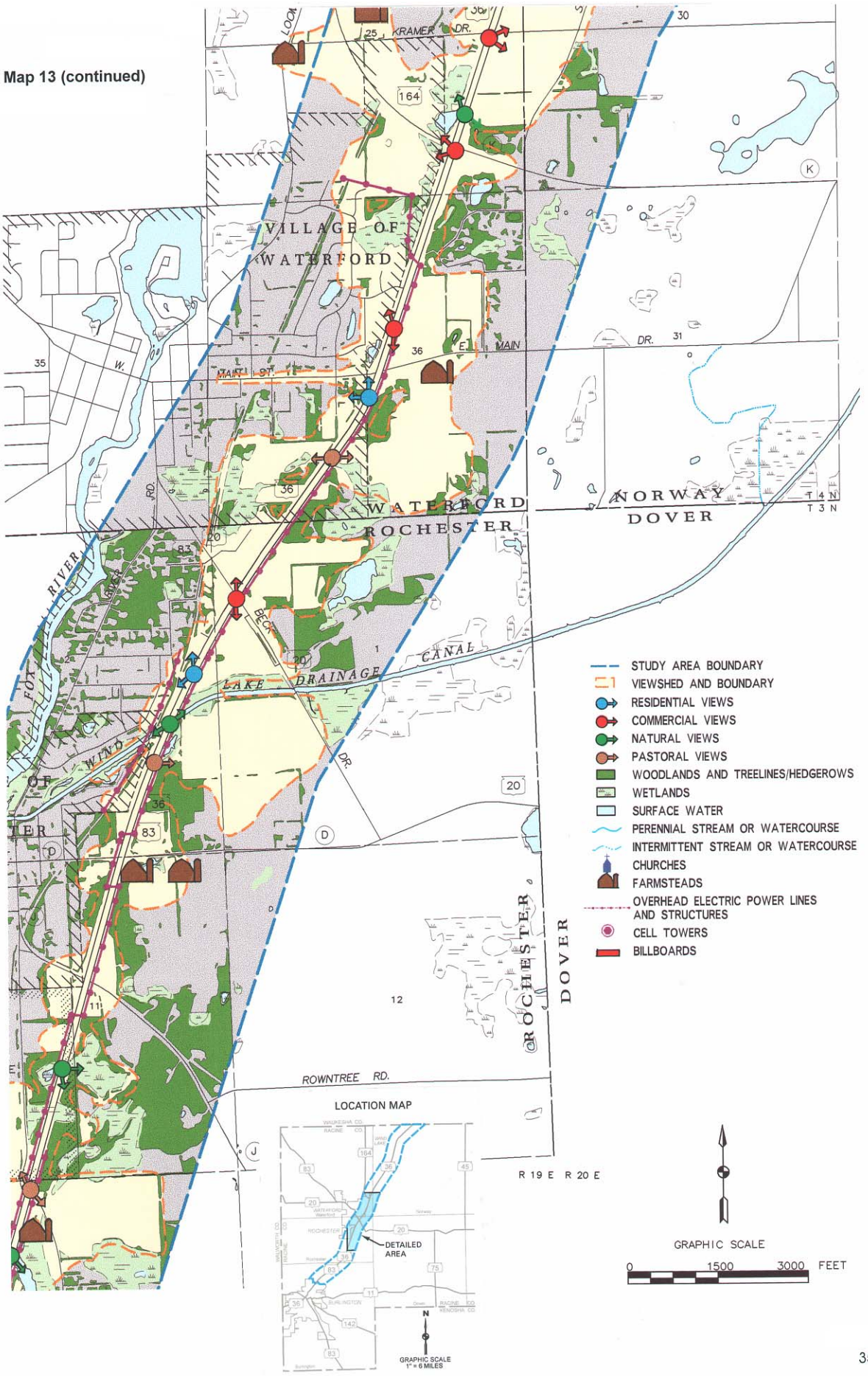


LOCATION MAP

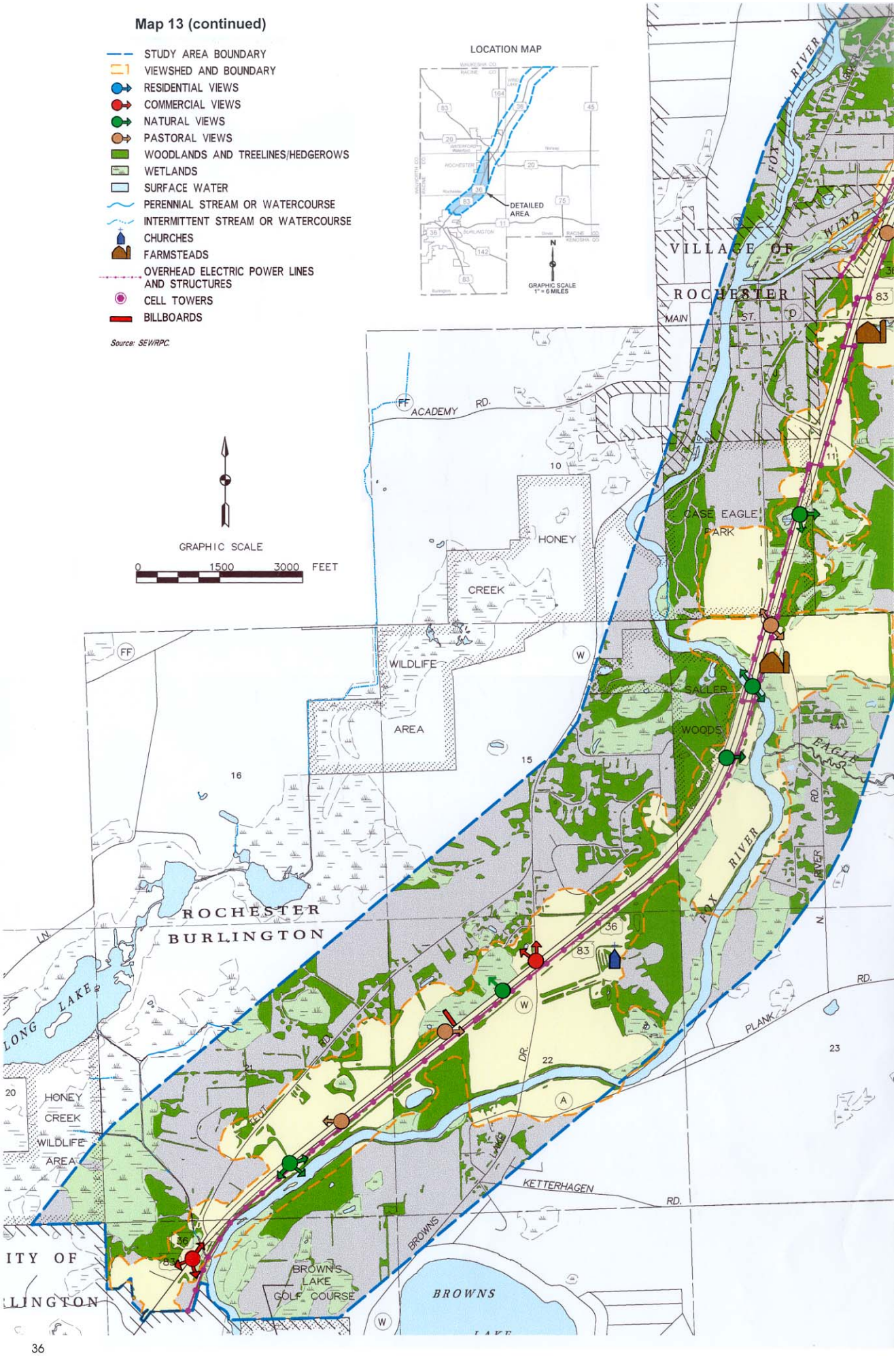
GRAPHIC SCALE

0 1500 3000 FEET

Map 13 (continued)



Map 13 (continued)



shown on Map 13, including rivers, lakes, ponds, woodlands, treelines/hedgerows, and wetland areas. These natural resources are positive attributes of the Corridor that provide travelers along STH 36 with a variety of pleasing views.

The following are other features that affect the visual quality of the STH 36 viewshed:

- The rows of overhead electric power transmission (both tall wooden poles and pylon towers) and distribution (utility lines hung on low wooden poles) wires and supporting structures, as identified on Map 13, obstruct or distract from views of the highway scenery.

- A concentration of signs in certain areas creates a sense of visual clutter; and a number of signs, including billboards, are excessively large and/or high, which detracts from the visual experience along the Corridor.

- Most of the existing freestanding business signs adjacent to STH 36 provide little or no landscaping at the base of the sign, missing an opportunity to enhance their aesthetic appeal from the highway.

- Community "Welcome" signs surrounded by attractive landscaping are lacking in certain areas where they could provide a sense of location, direction, and identity.

- Many business building elevations facing public streets, including STH 36, and customer parking lots provide no or insufficient building foundation landscaping, which could consist of decorative mulch, grass, flowers, shrubs, or trees, to complement and enhance the aesthetic appeal of the building as well as of the site.

- Some buildings lack interesting facade designs and contain other incompatible building features that do not complement the neighboring buildings, thereby creating a nonunified and unattractive urban design setting. Examples of basic building elements that distract from the image and character of the Corridor are noncomplementary colors, discordant materials, nonvariable rooflines, and lack of protruding and recessing walls.

- Many parking lots, loading/unloading service areas, and outdoor storage areas lack adequate landscaping, thus creating an unattractive "sea of asphalt." Missing landscape elements include few or no landscape islands with plantings in the interior of parking lots and at the end of parking rows, and insufficient perimeter landscaping to screen parking lots, service areas, and storage areas from adjacent residences and public streets, including STH 36.

- Dumpsters and mechanical equipment in some areas are not placed in unobtrusive locations and lack structural screening with attractive landscaping.

- Attractive perimeter landscape strips with plantings along the boundaries of many individual sites are either not provided or are insufficient. In some cases, buildings are too close to the STH 36 right-of-way, and provide limited opportunity for perimeter landscape strips between the building and the highway.

- Some areas of residential development near or abutting the STH 36 right-of-way provide little or no landscape buffering between the dwelling units and the arterial highway.

- Some streets within urban centers that are visible from STH 36 have received minimal landscaping in the form of street trees, decorative streetlights, unique street signs, or distinguishable crosswalks.

- Certain business developments contain overly bright, poorly directed, or cluttered outdoor lighting for signs, buildings, and parking lots, while others lack good subtle lighting to help provide a sense of identification and orientation.

The above physical characteristics were used to help identify design guidelines that will be prepared to protect and enhance the visual image of the Corridor as experienced from STH 36. Visual characteristics along STH 36, both positive and negative features, are also discussed in Chapter III under the Corridor Surveys section with survey results further summarized in Appendices A and B.

EXISTING PLANS

During the plan preparation, the STH 36 North Corridor design plan should give consideration to areawide and local planning efforts. The design plan should take into account any specific local planning and design-related objectives reflected in locally adopted plans that relate to the Corridor study area. Accordingly, an important step in the design planning process was the assembly of information pertaining to the existing framework of areawide and local plans and supporting topographic and cadastral maps. This section presents, in summary form, the inventory findings with respect to these matters.

Land Use Plans

The framework of adopted land use plans is intended to serve as a basis for guiding the physical development of the Corridor, which will affect the visual character of the study area. An understanding of pertinent recommendations contained in areawide and local land use plans is, therefore, important for compiling a planned land use map for the Corridor that reflects land use patterns from adopted plans.

Areawide Land Use Plan

An adopted regional land use plan, documented in SEWRPC Planning Report No. 45, *A Regional Land Use Plan for Southeastern Wisconsin: 2020*, December 1997, provides recommendations regarding the amount, spatial distribution, and general arrangement of the various land uses required to serve the needs of the existing and anticipated future resident population and economic activity levels within the Region. Particularly pertinent to local planning efforts are the recommendations for the preservation of primary environmental corridors and the most productive farmlands of the Region, and for the encouragement of a more compact pattern of urban development while the remaining areas—those not located within environmental corridors, designated prime farmlands, or needed to accommodate anticipated future urban development—be maintained in agricultural or other rural uses to retain the rural character of the area. The regional plan further recommends that new urban development be encouraged to occur contiguous to and outward from the existing urban centers in areas that are covered by soils suitable for such use, that are not subject to hazards such as flooding, and that can be readily served by such essential urban facilities as public sanitary sewerage and water supply. These important recommendations provide a basic framework around which many community land use plans were developed. The regional land use plan as it pertains to the Corridor is shown on Map 14.

Local Land Use Plans

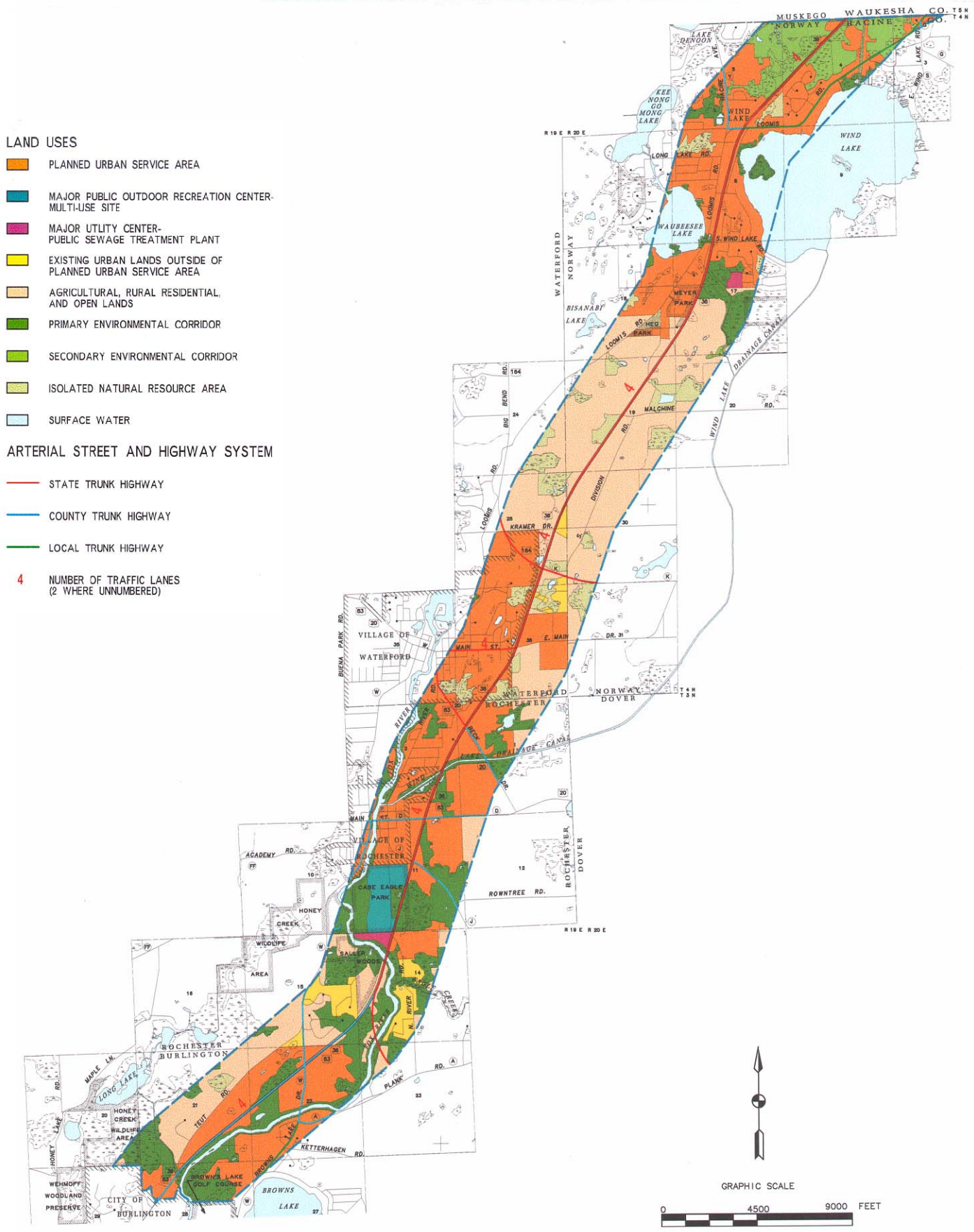
In addition to working closely with the Regional Planning Commission in developing the framework for regional plans, local units of government in the STH 36 North Corridor study area are continuously undertaking locally focused planning efforts. Generally, these local plans and studies are set within the regional plan framework and are intended to refine and detail the recommendations contained in the regional plans. A basic understanding of these local plans and studies is important in order to ensure the integration of locally desired development objectives into the design plan for the STH 36 North Corridor. Map 15 reflects a compilation of planned land use patterns from those communities that have adopted a land use plan or a border agreement reflecting agreed-upon land uses for a given area as of September 2001. Where different types of land uses are recommended by different community land use plans for the same area, Map 15 denotes both types of uses for such areas. Such differences occur for certain areas located near the boundaries of incorporated and unincorporated areas. The following is a brief description of those local plans and studies which have significance for the preparation of a composite planned land use map for the Corridor.

Town of Norway

Even though the Town of Norway does not have an adopted land use plan as indicated in Map 15, the Town intends to eventually prepare such a plan in the near future. The Town, however, has prepared, with the assistance

Map 14

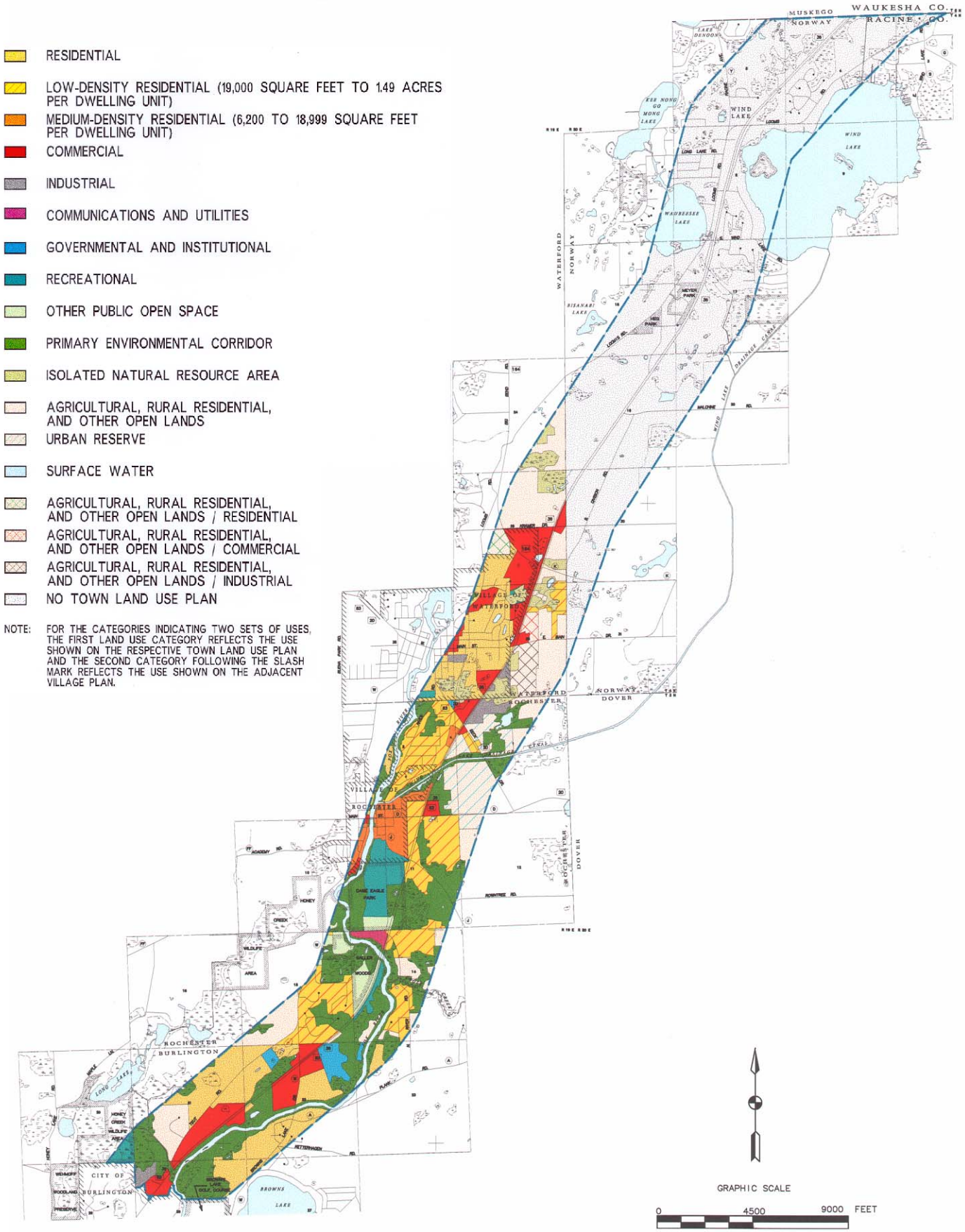
REGIONAL LAND USE AND TRANSPORTATION SYSTEM PLANS AS RELATED TO THE STH 36 NORTH CORRIDOR



Source: SEWRPC.

Map 15

GENERALIZED LOCALLY PLANNED LAND USES IN THE STH 36 NORTH CORRIDOR



Source: SEWRPC.

of the Southeastern Wisconsin Regional Planning Commission (SEWRPC), a plan for the preservation of environmentally sensitive areas as set forth in SEWRPC Community Assistance Planning Report No. 215, *An Environmentally Sensitive Lands Preservation Plan for the Town of Norway Sanitary District No. 1, Racine County, Wisconsin*, June 1996. Particularly pertinent to the STH 36 North Corridor are the recommendations for the protection of a variety of important natural resources, including three large lakes and associated shorelands and floodplains, wetlands, and woodlands and other upland natural resources, many of which are encompassed in existing environmental corridors and isolated natural resources areas as identified earlier in this chapter.

Town of Waterford
The Town of Waterford adopted a land use plan as set forth in SEWRPC Community Assistance Planning Report No. 217, *A Land Use Plan for the Town of Waterford: 2010, Racine County, Wisconsin*, May 1995, and in an amendment thereto in September 2001. The amended plan modifies slightly the proposed pattern of land use in the 2010 plan and takes into account population forecasts through the year 2020 as well as changes in corporate limits resulting from recent annexation of former Town territory by the Village of Waterford. The amended plan is intended to serve as a guide for the physical development of the Town of Waterford to the design year 2020.

Village of Waterford
The Village of Waterford has adopted a master plan as set forth in a document entitled, *Village of Waterford Master Plan*, June 1998. The plan is intended to be used to manage and direct orderly growth and development in the Village.

Town and Village of Rochester
The Town and Village of Rochester have both adopted a land use plan as set forth in SEWRPC Community Assistance Planning Report No. 237, *A Land Use Plan for the Town and Village of Rochester: 2020, Racine County, Wisconsin*, November 1999. The plan is intended to serve as a guide for the land use development of the Town and Village of Rochester to the year 2020.

Town of Burlington
The Town of Burlington adopted a land use plan as set forth in a document entitled, *Town of Burlington Land Use Plan*, January 1994, and amendments thereto in February 1999 and August 2004. The plan is intended to serve as a guide for the physical development of the Town of Burlington while diligently protecting its natural resources and agricultural lands. In 2001, the Town of Burlington entered into a boundary agreement with the City of Burlington which provides a basis for establishing future land use and municipal boundaries between the two communities for certain areas of mutual interest within a portion of the Corridor as reflected in a plan encompassed in a document entitled *STH 36/83 North Corridor Plan* discussed below.

City of Burlington
The City of Burlington has adopted a number of plans. One such plan pertinent to the Corridor study area is a detailed land use plan for a defined STH 36/83 North Corridor area. The plan is set forth in a document entitled, *STH 36/83 North Corridor Plan, City of Burlington, Racine County, Wisconsin*, April 1999. This plan, which includes recommended street and lot layouts envisioned by the City of Burlington, is intended to serve as a detailed development guide for the City for the STH 36/83 North Corridor area. This plan was also used as a basis for entering into a boundary agreement with the Town of Burlington as mentioned above.

Areawide Transportation Plans
The regional transportation system plan, presented in SEWRPC Planning Report No. 46, *A Regional Transportation System Plan for Southeastern Wisconsin: 2020*, December 1997, provides recommendations on how the regional land use plan can best be served by arterial street and highway and transit facilities. In 2003, the design year 2020 plan was extended to the year 2025, and amended to include the recommendations of a regionwide freeway reconstruction study. The plan recommends a functional and jurisdictional system of arterial streets and highways to serve the Region through the design year 2025, together with a functional network of various types of transit lines. The regional transportation system plan was developed on the basis of careful

quantitative analyses of existing and probable future traffic movements within the Region, and of existing highway and transit system capacity and use. The regional transportation system plan, as it pertains to the Corridor, is shown on Map 14.

An adopted regional bicycle and pedestrian facilities system plan, presented in SEWRPC Planning Report No. 43, *A Regional Bicycle and Pedestrian Facility System Plan for Southeastern Wisconsin: 2010,* December 1994, and in an amendment thereto in December 2001 to amend and extend the plan to the design year 2020, provides recommendations to encourage increased bicycle and pedestrian travel as alternatives to travel by automobile within the Region in a safe and efficient manner. The plan includes a recommended regional bicycle-way system designed to provide connections between urbanized areas and incorporated areas with a population of 5,000 or more located outside of urbanized areas and connections to major parks and other major activity centers. The regional bicycle-way system plan, as related to the Corridor, is shown on Map 16.

Areawide Park and Open Space Plans

The regional park, outdoor recreation, and related open space plan, as described in SEWRPC Planning Report No. 27, *A Regional Park and Open Space Plan for Southeastern Wisconsin--2000,* November 1977, identifies existing and probable future park and open space needs within the Region and recommends a system of large regional resource-oriented parks, recreational corridors, and smaller urban parks, together with their attendant recreational facility requirements, to meet these needs. The portion of the regional park plan that applies to Racine County, including the Corridor study area, and is documented in SEWRPC Community Assistance Planning Report No. 134, *A Park and Open Space Plan for Racine County,* September 1988 and was revised in 1989. In 2001, this County plan was updated in a second edition of the aforereferenced document and consists of both an open space preservation element and an areawide outdoor recreation element, intended to, respectively, protect areas containing important natural resources and to provide resource-oriented recreational sites and facilities. These two elements of the County plan, as they pertain to the Corridor, are depicted on Maps 16 and 17.

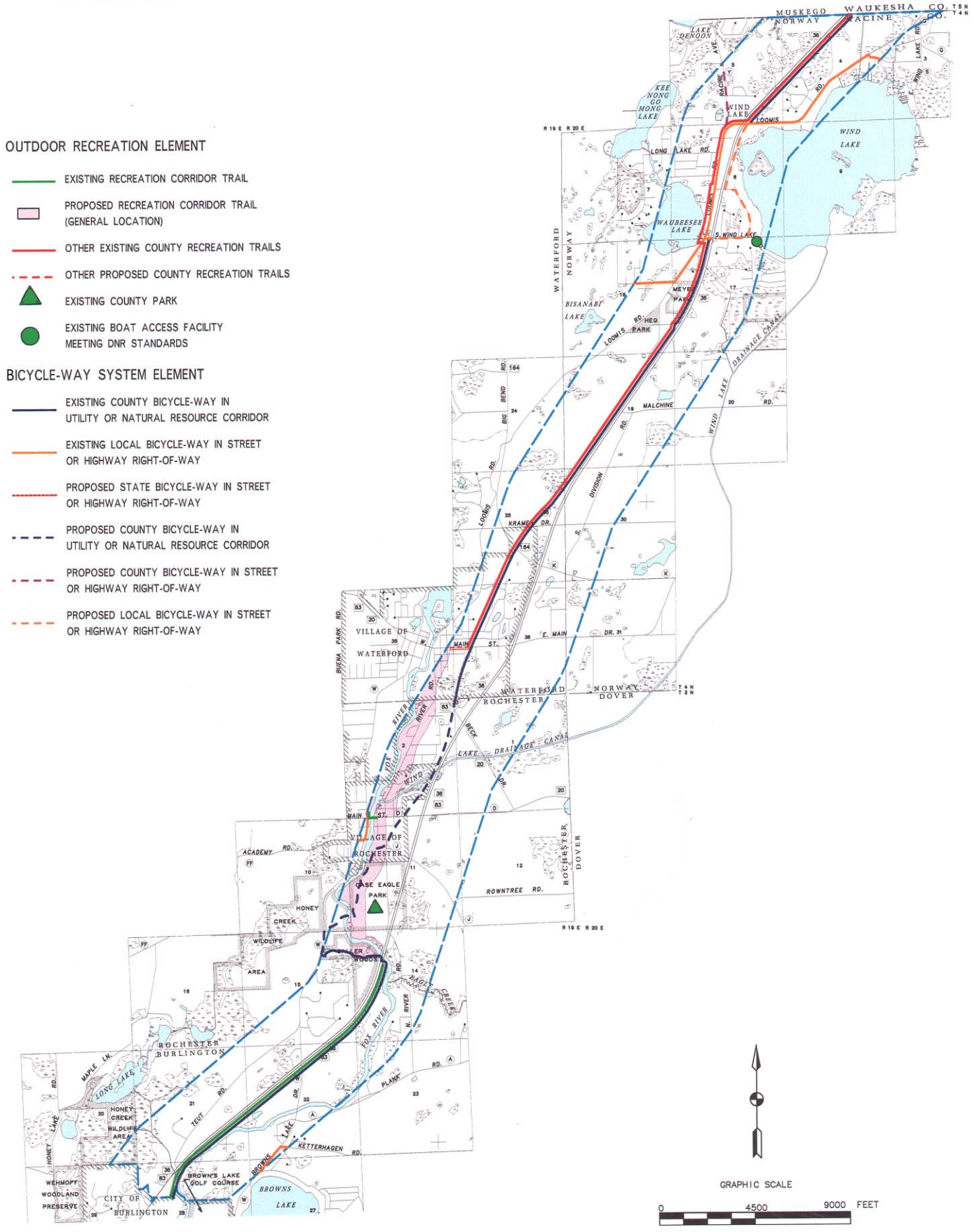
One of the components of the open space preservation plan element mentioned above, which is pertinent to the Corridor, is the recommended preservation of prime agricultural lands. The park and open space plan recommends that Racine County and local units of government preserve to the extent practicable prime agricultural lands recommended for preservation under the Racine County farmland preservation plan.[4] Agricultural lands recommended to be preserved as related to the Corridor are shown on Map 18. Planning for the preservation of agricultural lands and protection of such lands through zoning received impetus in 1977 with the passage of the Wisconsin Farmland Preservation Program. The program is intended to help counties and local units of government preserve farmland through local plans and zoning and to provide tax relief, in the form of State income-tax credits, to farmland owners who participate in this program.

The Racine County park and open space plan takes into account the recommendations of a regional natural areas plan documented in SEWRPC Planning Report No. 42, *A Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin,* September 1997. The regional natural areas plan recommends the protection and preservation of such areas in the Region as an important supplement to the open space preservation recommendations of the Regional and County land use and park and open space plans. The primary purpose of the plan is to identify the most significant remaining natural areas, critical habitats, geological sites, and archaeological sites in the Region, and to recommend means for their protection and management. The plan identifies potential sites to be placed in public or private protective ownership, and other sites to be protected, insofar as it is possible, through zoning and other regulatory means without protective ownership. It also recommends that a detailed management plan be prepared and implemented for each site placed under protective ownership. Map 8 shown earlier in this chapter shows the seven natural areas, four critical bird or plant species habitats, and five critical aquatic habitats in the Corridor as identified in the regional natural areas plan.

[4] *SEWRPC Community Assistance Planning Report No. 46,* A Farmland Preservation Plan for Racine County, Wisconsin, *August 1981.*

Map 16

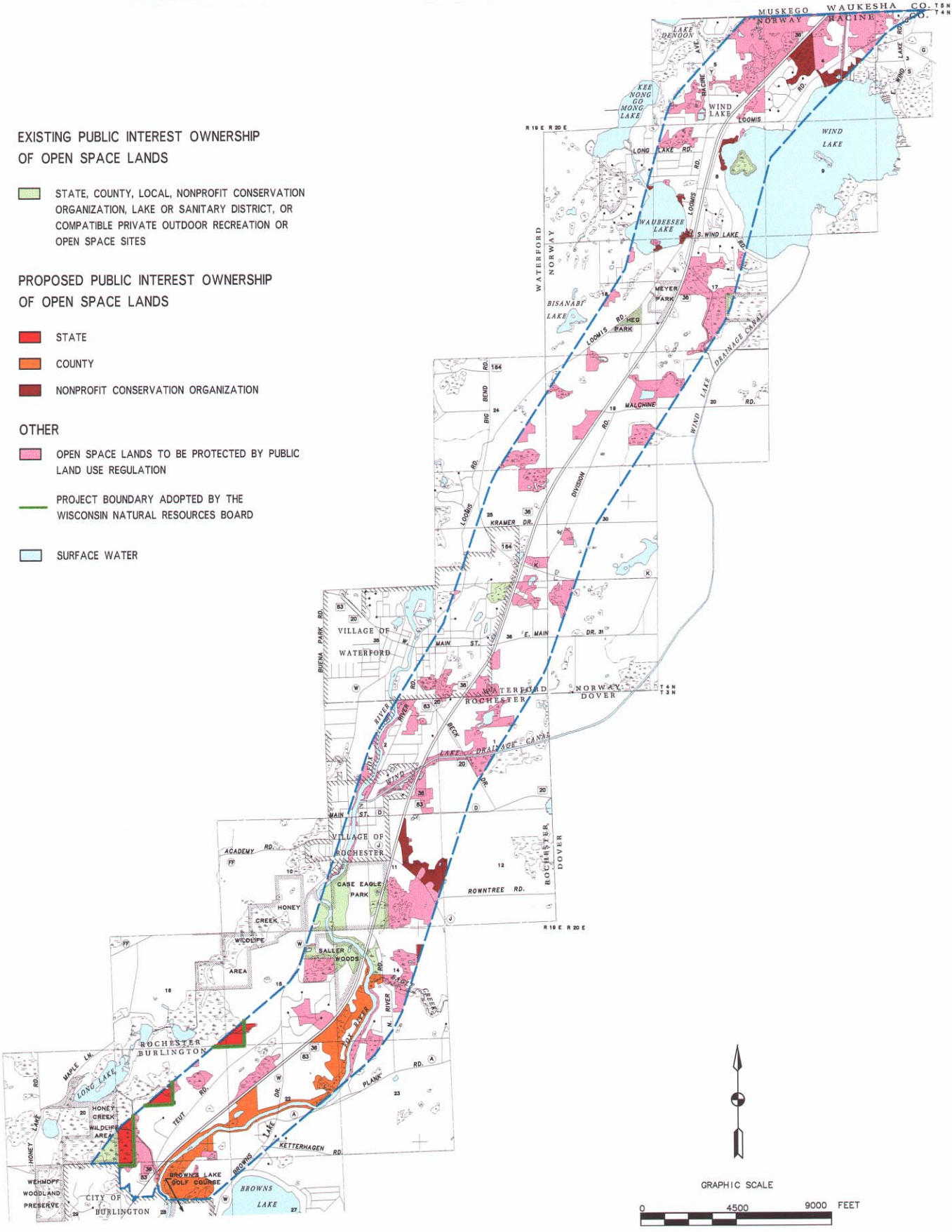
REGIONAL BICYCLE-WAY SYSTEM PLAN AND THE OUTDOOR RECREATION ELEMENT OF THE RACINE COUNTY PARK AND OPEN SPACE PLAN AS RELATED TO THE STH 36 NORTH CORRIDOR



Source: SEWRPC.

Map 17

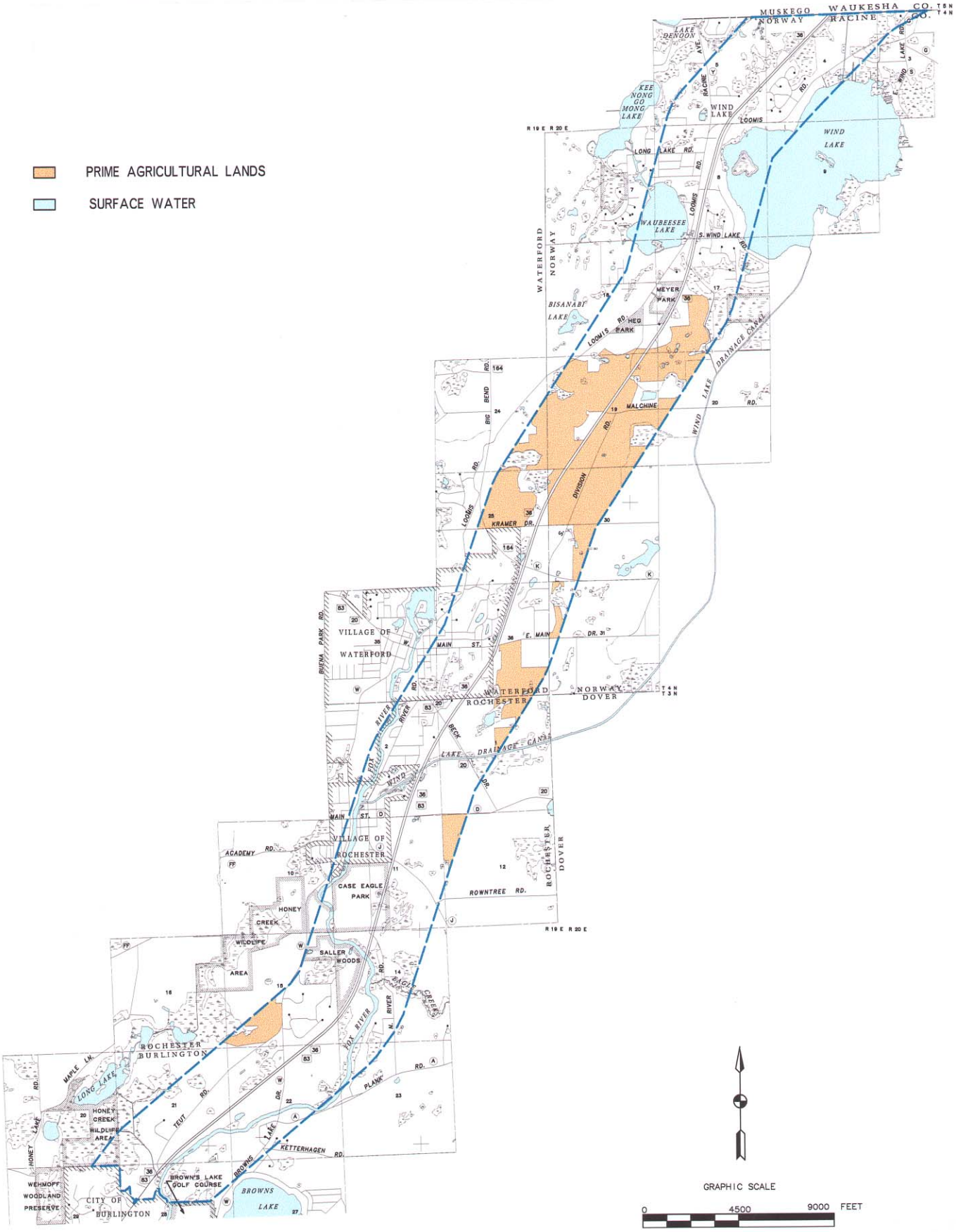
OPEN SPACE PRESERVATION ELEMENT OF THE RACINE COUNTY PARK AND OPEN SPACE PLAN AS RELATED TO THE STH 36 NORTH CORRIDOR: 2020



Source: SEWRPC.

Map 18

PRIME AGRICULTURAL LAND PRESERVATION ELEMENT OF THE RACINE COUNTY PARK AND OPEN SPACE PLAN AS RELATED TO THE STH 36 NORTH CORRIDOR: 2000



Source: SEWRPC.

Water Quality Management Plans

A regional water quality management plan is intended to provide recommendations to help meet a federal mandate that the waters of the United States be made, to the extent practical, "fishable and swimmable." The findings and recommendations of the water quality management planning program for Southeastern Wisconsin are described in SEWRPC Planning Report No. 30, *A Regional Water Quality Management Plan for Southeastern Wisconsin—2000*, June 1979. The regional water quality management plan consists of a land use and sanitary sewer service area element, a point water pollution abatement element, a nonpoint water pollution abatement element, a wastewater sludge management element, and a water quality-monitoring element. The adopted regional water quality management plan includes recommended sanitary sewer service areas attendant to each recommended sewage treatment facility in the Region. These initially recommended sanitary sewer service areas were based upon the urban land use configuration identified in the regional land use plan for the year 2000. As such, delineation of the areas was necessarily general, and did not reflect more detailed local planning considerations. Accordingly, the plan recommends that each community served by public sanitary sewerage facilities refine and detail sanitary sewer service areas for their area.

In response to the above recommendation, several communities within the Corridor adopted a plan designating a detailed sanitary sewer service area for their respective sewage treatment plant. Map 19 shows three such refined sanitary sewer service areas as they pertain to the Corridor study area and as documented in SEWRPC Community Assistance Planning Report No. 247, *Sanitary Sewer Service Area for the Town of Norway Sanitary District No. 1 and Environs, Racine and Waukesha Counties, Wisconsin*, June 1999; SEWRPC Community Assistance Planning Report No. 141 (2nd Edition), *Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin*, April 1996, and amendments thereto in June 2000 and December 2003; and SEWRPC Community Assistance Planning Report No. 78 (2nd Edition), *Sanitary Sewer Service Area for the City of Burlington and Environs, Racine County, Wisconsin*, December 2001, and an amendment thereto in September 2002. This composite map is relevant to the Corridor because the planned sanitary sewer service areas identified within the study area are often times used to define future planned urban service areas where urban development may occur within a community.

It should be noted that Map 19 only shows gross sanitary sewer service areas. The more refined and detailed plans set forth in each of the aforereferenced documents identify specific areas that may be served by such services (net planned sanitary sewer service areas), areas ineligible to be served due to environmental hazards, and environmentally significant areas that should be preserved.

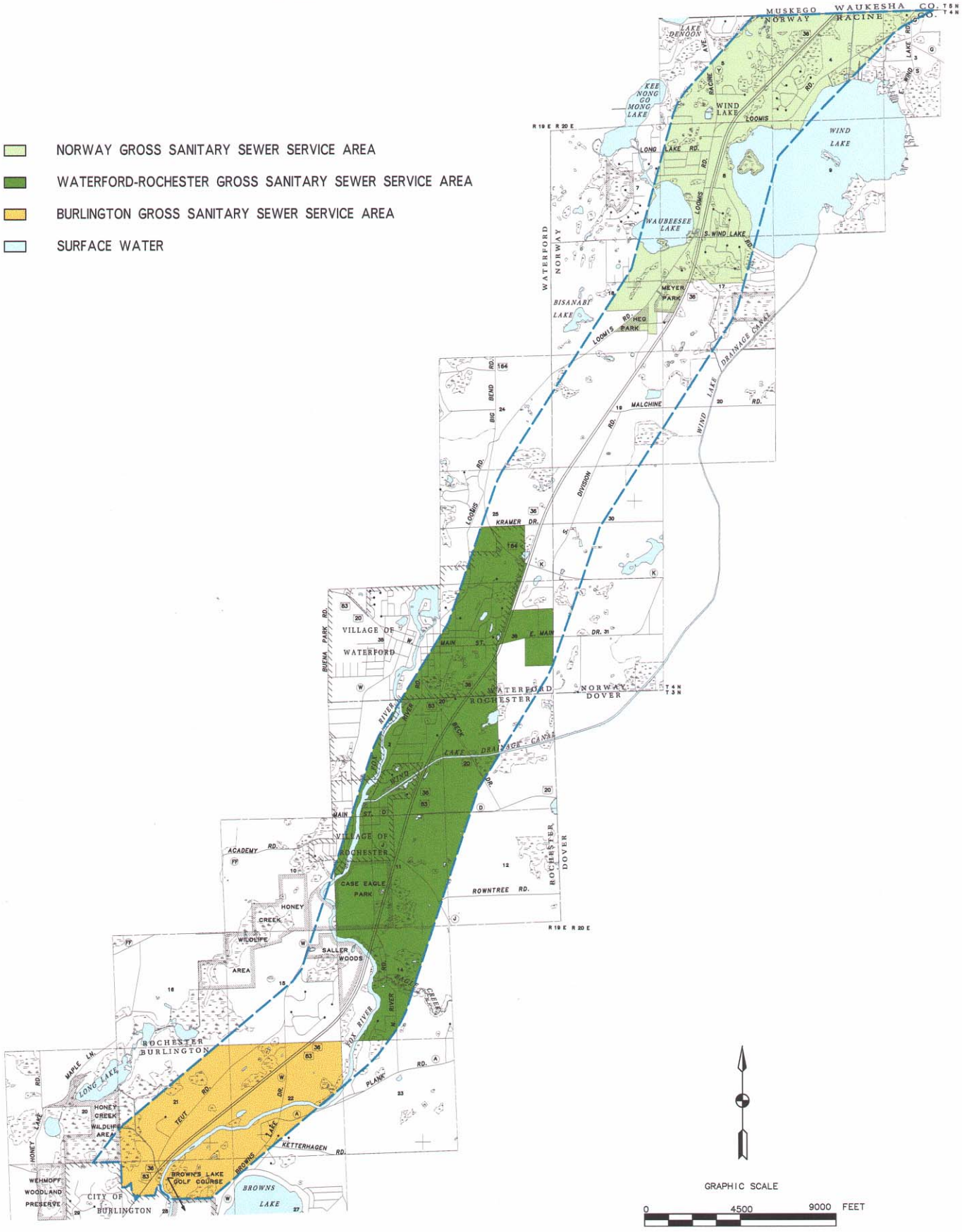
In addition to the regional water quality plan elements, there is a subregional plan element which is also of importance to the Corridor. This plan element consists of a comprehensive plan for the Fox River watershed and is documented in SEWRPC Planning Report No. 12, *A Comprehensive Plan for the Fox River Watershed*, February 1970. This subregional plan contains recommendations for generalized land use, resource conservation, park and outdoor recreation, flood control, and stream and lake water pollution abatement, as well as water supply plan elements which pertain to the Corridor study area.

Topographic and Cadastral Maps

Good, large-scale topographic and cadastral, or real property, maps provided essential information for preparing a design plan for and conducting a visual assessment of the Corridor. Topographic maps, at scales of one inch equals 200 feet, were prepared for the Corridor study area and environs in 1997 and 1999. The topographic mapping consists of control survey features, such as U.S. Public Land Survey section corners and section lines; planimetric features, such as existing roads, buildings, and treelines; hydrographic features, including streams, lakes, and wetlands; and hypsometric features, such as two-foot contour interval lines and spot elevation values. Cadastral maps, at a scale of one inch equals 200 feet, were also prepared for the Corridor and surrounding areas as part of a cadastral mapping project initiated by Racine County and administered by the Regional Planning Commission. The cadastral mapping includes existing property boundary lines, street and railway right-of-way boundaries, subdivision and platted land boundaries, associated text such as property dimensions, and tax key numbers. The topographic and cadastral maps are available in both digital and hardcopy form.

Map 19

GENERALIZED PLANNED SANITARY SEWER SERVICE AREAS IN THE STH 36 NORTH CORRIDOR



Source: SEWRPC.

The visual analysis of the Corridor used the above mapping data, which helped identify and locate existing significant landmarks that effect the visual experience from the highway, such as man-made features (fences, walls, buildings, cell towers, utility poles, and signs/billboards) and natural features (wetlands, woodlands, and steep slopes) shown on topographic maps. The mapping information also helped determine the extent of viewsheds from the highway by relating features shown on the maps to those recognized in the field, such as wetlands, tree lines, hedgerows, buildings, and other structures. The mapping of such viewsheds, in turn, helped define the extent of the Corridor area to be studied and the property owners to be surveyed, as discussed later. Specifically, the one-half mile distance selected on each side of the STH 36 right-of-way to define the Corridor study area was based, in part, on the extent of viewsheds mapped in the winter, or the area travelers can see from the highway with most vegetation defoliated. Any development that occurs within this distance will likely affect the view from the highway as well as the overall visual character of the area.

EXISTING REGULATIONS

Good community development depends not only on sound planning and design practices at all levels of government, but on practical implementation measures as well. Local development objectives and supporting design guidelines are often expressed most forcefully, and sometimes solely, in local land use control ordinances. Existing land use and development regulations affect the type of uses allowed, as well as the detailed design and site layout of proposed developments, which ultimately defines the long-term aesthetic character of an area. The following presents in summary form the existing regulations in effect in the Corridor study area, including zoning, land division control, official mapping, and pertinent State and Federal regulations.

Zoning

Zoning is one of the major plan and design implementation devices available to any community. A zoning ordinance is a law that regulates and restricts the use of private property in the public interest. The ordinance may divide a community into districts to confine or promote certain land uses in areas well suited to those uses. Within a given zoning district, a zoning ordinance may also regulate the height, size, shape, and placement of structures on a site with the intention of assuring adequate light, air, and open space for each building; reducing fire hazards; and preventing overcrowding, traffic congestion, and the overloading or underuse of utility systems. A zoning ordinance may also contain specific provisions that affect the design and site layouts of a parcel, such as the size and placement of structures, signs, parking, screening/buffering, and landscaping. Zoning may be further used to protect and preserve natural resources. Zoning, therefore, can largely define and affect the overall visual character of an area.

Local Zoning Ordinances

Each of the incorporated communities in the study area, the Village of Waterford, Village of Rochester, and City of Burlington, has an adopted zoning ordinance and attendant zoning district map to regulate development within the respective civil division. The unincorporated areas within the Towns of Burlington, Norway, Rochester, and Waterford are under the jurisdiction of the Racine County Zoning Ordinance. The Racine County Zoning Ordinance currently in effect was adopted by Racine County in 1969 and approved by each town. The general zoning provisions of the County zoning ordinance are jointly administered by Racine County and the towns in the County. As stipulated in Chapter 59 of the *Wisconsin Statutes*, towns which are under the jurisdiction of a county zoning ordinance must be given the opportunity to review and comment upon all proposed zoning amendments. If a town board formally disapproves a proposed zoning district boundary change within the town—or if a majority of the towns in the county disapprove a change in district regulations—a county may not approve the proposed zoning change without revision. Conversely, zoning changes proposed by a town must be formally approved by the county.

Zoning Maps

In mid-2000, the Regional Planning Commission completed a re-inventory of all local zoning ordinances and zoning district maps in the Region. Local zoning maps were converted to a uniform classification system to permit a comparative analysis. All local zoning district categories were converted to that common classification system and their boundaries delineated on one inch equals 2,000-foot scale county base maps. The land use

zoning information so mapped was then quantified by measuring and tabulating the areas devoted to each category. A composite map of the local zoning districts in the Corridor is shown on Map 20. The areal extent of lands lying within each of the generalized zoning districts is set forth in Table 4.

Collectively as of 2000, County and local units of government have zoned 24 percent of the Corridor for residential development, representing 1,900 acres, or about three square miles. Residential is the dominant zoning within sanitary sewer service areas served by public sanitary sewerage facilities, which includes the incorporated Villages of Rochester and Waterford and the unincorporated hamlet in the Wind Lake-Waubeesee Lake area.

Local communities have zoned nearly 8 percent of the Corridor for commercial and industrial development, such areas totaling about 617 acres, or almost one square mile. Major concentrations of commercially-zoned land are found in the villages within the Corridor, as well as at the major intersection of STH 36 with STH 20, STH 164, CTH W, and CTH Y. Industrially-zoned land lies primarily in the Village of Waterford and the Town of Rochester.

Agricultural zoning in the Corridor has been applied to 3,356 acres of land, or about five square miles, representing nearly 42 percent of the total area. Of that total, 1,036 acres, or about two square miles, representing about 13 percent of the area, has been zoned for exclusive agricultural use, that is, placed into a zoning category that has a minimum farm parcel size of 35 acres. Exclusive agricultural zoning is located within all four towns in the Corridor, which includes the Towns of Burlington, Norway, Rochester, and Waterford. The remaining agricultural zoning is agricultural in name only since it permits nonfarm-related residential development on less than five-acre parcels. Such zoning also occurs in all four towns located within the Corridor. This zoning category comprises about four square miles and represents about 29 percent of the Corridor area.

Lowland conservancy zoning, used to protect such natural resources as wetlands and floodplains, is prevalent throughout the STH 36 North Corridor. In total, County and local units of government have applied such zoning to 1,287 acres, or about two square miles, representing about 16 percent of the Corridor area. As shown on Map 20, the lowland conservancy zoning covers most of the riverine and wetland areas of the Corridor.

Development Plan Reviews

Good zoning practice dictates that for major developments the developers submit development plans consisting of site, landscaping, and building plans to the local officials for review and approval. Through such review, the community can be assured that the development proposals will not: create traffic congestion or safety problems; prevent an adjacent property from receiving light and air; substantially increase the danger of fire; create drainage, flooding, or erosion problems; endanger the public health and safety; or substantially diminish surrounding property values. More specifically, through a development plan review process, the community can be assured that:

1. The proposed use conforms to the uses permitted in the zoning district and the community comprehensive plan or element thereof.

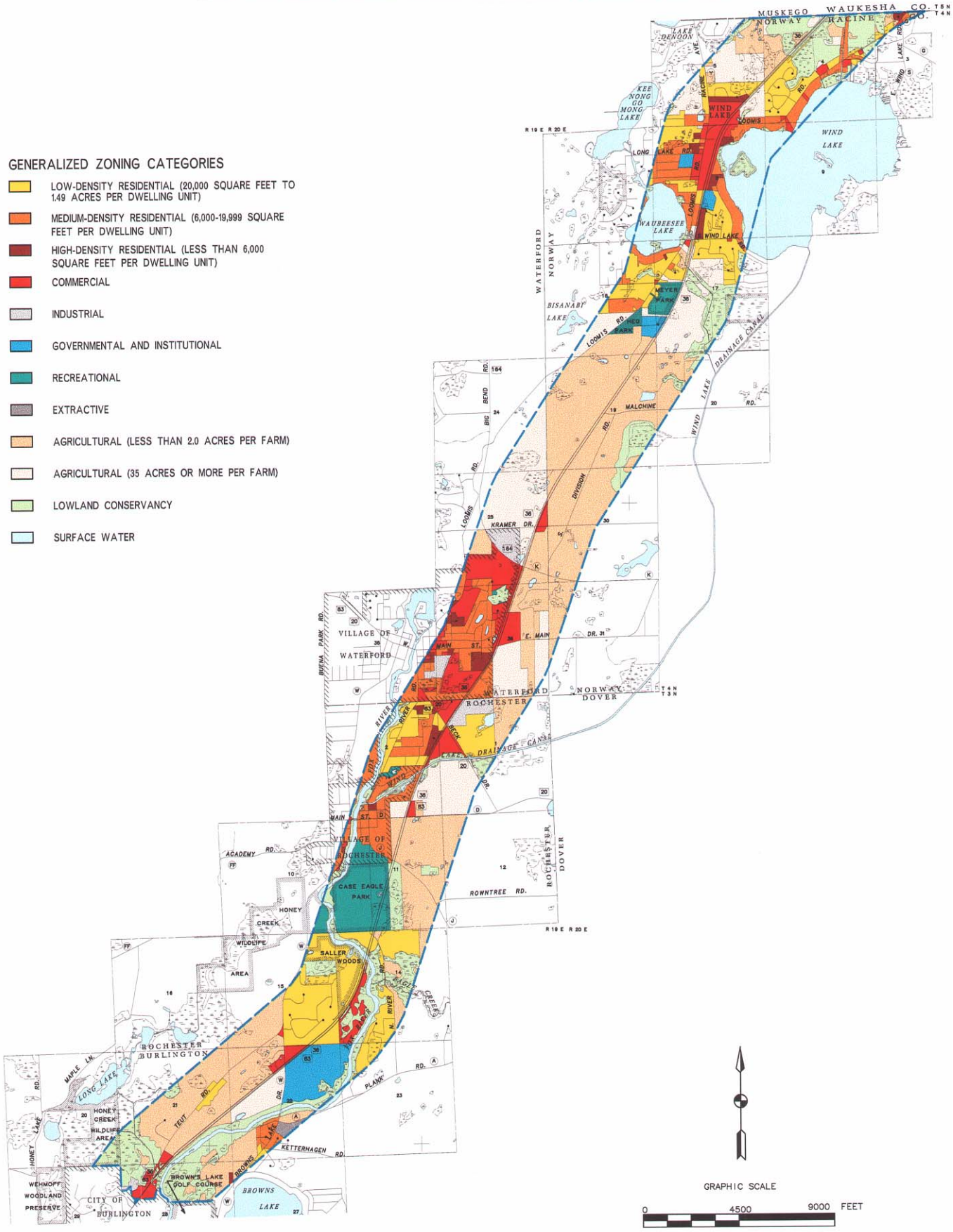
2. The dimensional arrangement of buildings and structures conforms to the required yard setback and height restrictions of the zoning ordinance.

3. The proposed use conforms to all use and design provisions and requirements in the zoning ordinance.

4. There is a proper relationship between the existing and proposed streets and highways in the vicinity of the project, so as to assure the safety and convenience of pedestrian and vehicular traffic. This can best be accomplished by using site plan review in concert with a sound plan for arterial street and highway access management.

Map 20

EXISTING GENERALIZED ZONING IN THE STH 36 CORRIDOR: 2000



Source: SEWRPC.

Table 4

EXISTING GENERALIZED ZONING DISTRICTS IN THE STH 36 NORTH CORRIDOR: 2000

Generalized Zoning District Class	Total Area Zoned (acres)	Percent of Total Corridor Area
Residential		
Low-Density (20,000 square feet-1.49 acres per dwelling unit)	1,066	13.5
Medium-Density (6,000-19,999 square feet per dwelling unit)	723	9.1
High-Density (less than 6,000 square feet per dwelling unit)	111	1.4
Subtotal	1,900	24.0
Commercial	512	6.5
Industrial	105	1.3
Governmental and Institutional	181	2.3
Recreational	289	3.7
Extractive	13	0.2
Lowland Conservancy	1,287	16.2
Surface Water	273	3.4
Agricultural		
Less than 2.0 acres per farm	2,320	29.3
35 or more acres per farm	1,036	13.1
Subtotal	3,356	42.4
Total	7,916	100.0

Source: SEWRPC.

5. The proposed buildings, structures, and entryways on the site are situated and designed to minimize adverse effects on occupants of adjacent and surrounding properties by means of adequate design of vehicular ingress/egress, interior/exterior traffic flow, stormwater drainage, erosion control, grading, lighting, and parking, as specified by the local zoning ordinance or other laws.

6. Natural features of the landscape are retained where they can enhance the development on the site, where they furnish a barrier or buffer between the project and adjoining properties used for dissimilar purposes, or where they assist in preserving the general safety, health, and appearance of the area.

7. Adverse effects of the proposed development and activities on adjoining residents or owners are minimized by appropriate screening, fencing, or landscaping, as provided or required by the local zoning ordinance.

8. Buildings and structures are readily accessible to emergency vehicles and disabled individuals.

9. The development plan, as approved, is consistent with the intent and purpose of the local zoning ordinance, which promotes the public health, safety, and general welfare; encourages the use of lands in accordance with their character and compatibility; avoids the overcrowding of population; lessens congestion on public roads and streets; reduces hazards to life and property; and facilitates existing comprehensive plans or elements thereof.

10. The development plan as approved is consistent with the objectives, principles, standards, and design guidelines set forth in a community's comprehensive plan or element thereof.

The Racine County Zoning Ordinance does not require site plans to be submitted for major development projects permitted as a principal use in the zoning district; however, such plans are required for conditional uses and proposed planned unit developments. In addition, the County ordinance requires, as part of all zoning permit

processes, a plat or survey that shows the location, property boundaries, dimensions, elevations, uses, and size of certain existing and proposed features, including the subject site, structures, easements, streets, parking lots, highway access restrictions, yard setbacks, floodplain limits (if any), and the grades of the subject site and abutting lands. Additional information may be required as part of the zoning permit or conditional use process by the affected town, the County Planning and Development Committee, and other regulatory agencies.

Similar to the County's process, the Village of Waterford Zoning Code does not require a site plan submittal for major developments, unless the project is a proposed planned community (unit) development. The Village Code, however, requires a plat or survey to show similar information as required by Racine County for conditional uses in business and industrial districts. At the discretion of the Village of Rochester Zoning Administrator, development plans such as operational (site) and building plans may be required for certain developments for review and approval by the Village Plan Commission if the development could have an adverse impact on the surrounding area. The Village of Rochester Zoning Ordinance also requires development plans to be submitted for planned unit developments. The City of Burlington Zoning Ordinance requires site plans to be submitted for review and approval by the City Plan Commission for all major developments, except agricultural, single-family residential, and two-family residential uses. The ordinance also requires architectural plans and landscape plans to be submitted for uses proposed in certain zoning districts, and further establishes a list of specific data to be provided on such plans.

In accordance with all of the aforementioned ordinances, local building inspectors or zoning administrators will not issue occupancy permits until all improvements shown on development plans are completed. Any changes to the proposed improvements shown on the original development plans may be subject to further review by the respective municipalities.

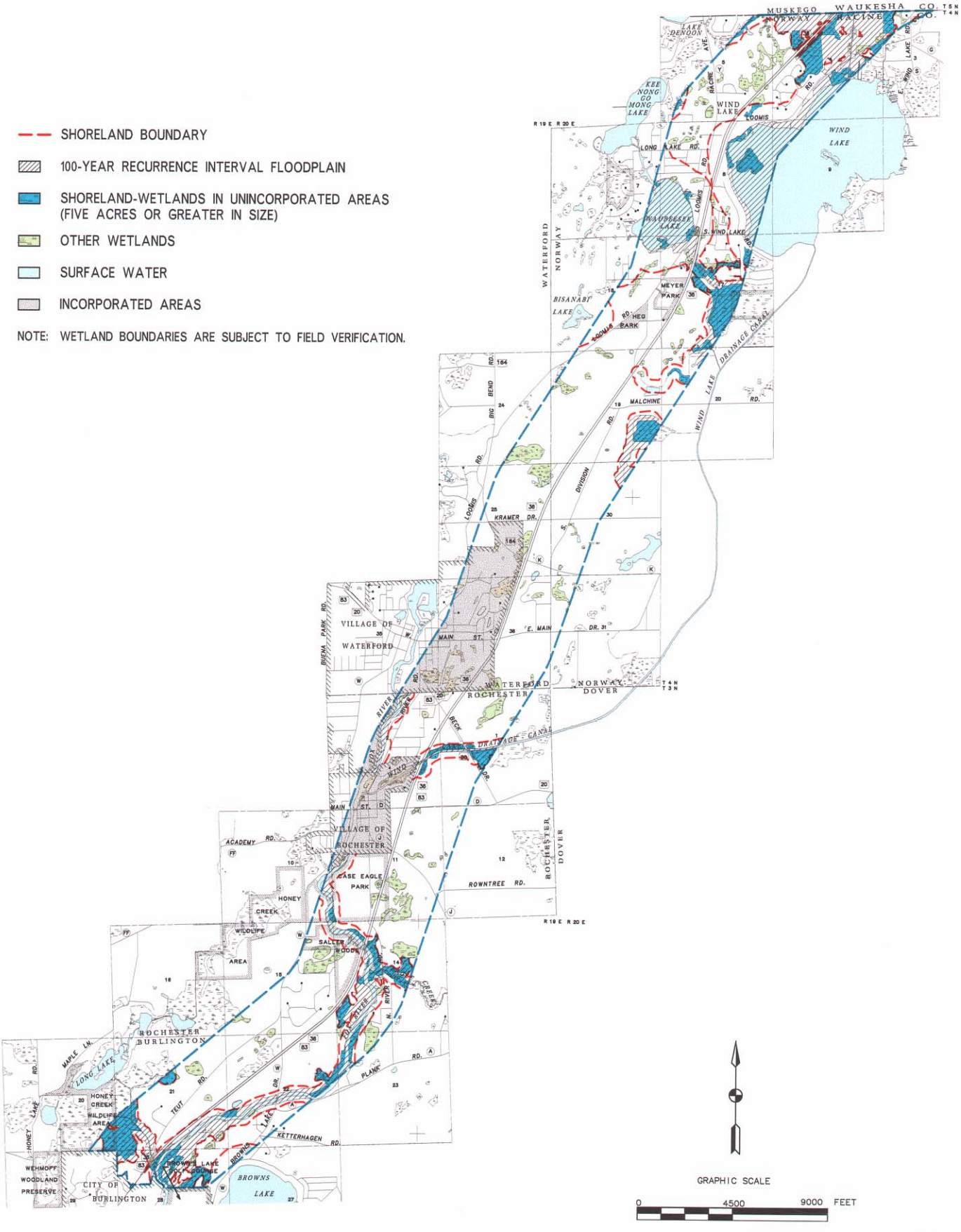
Racine County Shoreland and Floodplain Zoning

Under the *Wisconsin Statutes*, counties are responsible for the zoning of shoreland areas within towns. Accordingly, the Racine County Zoning Ordinance also contains shoreland and floodplain protection regulations. Shorelands are defined in the Statutes as land within the following distance from the ordinary high-water mark (shoreline) of navigable waters: 1,000 feet from a navigable lake, pond, or flowage; and 300 feet from the shoreline of a navigable river or stream, or to the landward side of the 100-year recurrence interval floodplain, if the floodplain extends more than 300 feet from the shoreline of the river or stream. The floodplains and shorelands in the towns of Racine County, including the Towns of Burlington, Norway, Rochester, and Waterford in the Corridor study area, are regulated by the County shoreland and floodplain protection regulations. The County ordinance also contains a Shoreland-Wetland Overlay (SWO) District that regulates all shoreland-wetlands five acres or larger in size. Although State law gives counties exclusive authority to implement shoreland zoning requirements, in practice, Racine County and the towns act together to cooperatively implement zoning in the shoreland areas of the towns. All town lands in the Corridor that are subject to the Racine County shoreland and floodland regulations for the year 2000 are shown on Map 21.

The Racine County shoreland regulations also apply to shoreland areas in the Corridor annexed to cities or villages after May 7, 1982. After annexation, the incorporated municipality is responsible for administering the County regulations on any shoreland areas located on such annexed lands. Section 59.692(7) of the *Wisconsin Statutes* requires county shoreland regulations to remain in effect in areas annexed after that date unless the annexing city or village has adopted shoreland regulations that are at least as restrictive as the county's regulations. County shoreland regulations are usually more restrictive than city or village regulations, because State regulations requiring the adoption of shoreland zoning ordinances specify more restrictive standards for county ordinances than for city and village ordinances. Some of the provisions that must be included in county shoreland ordinances but are not required in city and village ordinances are larger minimum lot sizes; 75-foot minimum structure setback requirements from shorelines; limitations on tree cutting and clearing vegetation along shorelines; and restrictions on filling, grading, lagooning, dredging, ditching, and excavating in shorelands.

Map 21

UNINCORPORATED AREAS IN THE STH 36 NORTH CORRIDOR SUBJECT TO RACINE COUNTY SHORELAND AND FLOODPLAIN PROTECTION ZONING REGULATIONS: 2000



Source: SEWRPC.

Land Division Regulations

A land division ordinance is a public law that regulates the division of land into smaller parcels. Land division ordinances provide for appropriate public oversight of the creation of new parcels and help ensure that: new urban development is appropriately located; lot size minimums specified in zoning ordinances are observed; arterial street rights-of-way are appropriately dedicated or reserved; access to arterial streets and highways is limited in order to preserve the traffic-carrying capacity and safety of such facilities; adequate land of parks, drainageways, and other open spaces is appropriately located and preserved; street, block, and lot layouts are appropriate; and adequate public improvements are provided. Land division ordinances can be enacted by cities, villages, and towns and by counties, with the latter applying only to unincorporated areas. Thus, within unincorporated areas, it is possible for both counties and towns to have concurrent jurisdiction over land divisions. Cities and villages also have plat approval jurisdiction over subdivisions proposed near their corporate boundaries.

Ideally, land division control regulations are a means of implementing or carrying out a community comprehensive plan or plan element thereof, including design related elements. As such, land division regulations should coordinate and integrate development with the comprehensive plan, and they are, therefore, properly prepared within the context of such a plan. Since land division is not merely a means of marketing land, but rather the first step in the process of building a community, substantial benefits are derived from sound subdivision regulations. Much of the form and character of a community is determined by the quality of its land divisions and the standards which are built into them. Once land has been divided into blocks and lots, streets established, and utilities installed, the development pattern is permanently established and unlikely to be changed. For generations, the entire community, as well as the individuals who occupy these subdivisions, will be influenced by the quality and character of the subdivision design.

Land Division Ordinances

All municipalities within the STH 36 North Corridor have an adopted land division ordinance. In addition, Racine County has adopted a land division ordinance, but this jurisdiction is confined to the unincorporated town areas. Chapter 236 of the *Wisconsin Statutes* sets forth general regulations governing the platting of land, including, among others, street layout requirements, necessary approvals, recording procedure, and the vacating and altering of plats. By reference and associated text, the local ordinances conform to the general procedures outlined in the Statutes for platting land within their civil division and, if applicable, their extraterritorial plat approval jurisdiction area. In each case, the land division ordinance generally regulates land divisions defined as subdivisions in State law. The definition of “subdivision” varies somewhat for each community and may be defined generally as a division of land into three to five parcels or more of a size ranging from 1.5 to 35 acres or smaller, at any one time or by successive divisions within a five year period. Such land divisions are created by a subdivision plat. Many of the local units of governments also regulate minor land divisions, that is, those divisions of land that are not defined as a “subdivision” and are typically created through the use of a certified survey map. All of the units of government having a land division ordinance provide for regulation of minor land divisions except Racine County.

The Racine County Land Division Ordinance further details the review requirements of those factors designated by the State for local review. The land division ordinance sets forth procedures to be followed in the submittal and review of preliminary and final subdivision plats by the County and establishes certain basic design standards. Under the County ordinance, certain improvement requirements, such as those related to street surfacing and to the installation of curbs and gutters, sidewalks, street trees, and street lamps, are left to the determination of the Town Board concerned. The Racine County ordinance does not apply to lands within incorporated areas. However, Racine County is by State law an objecting agency for subdivision plats located within incorporated communities. The County may object to plats that are in conflict with adopted County plans for any parks, parkways, expressways, major highways, airports, drainage channels, schools, or other planned public developments. The County staff also provides assistance and recommendations for the design and appropriate planning of developments proposed within certain incorporated communities, including the Village of Rochester.

The adopted land division ordinances in each of the local municipalities within the Corridor include not only the similar guidelines and procedures as the County ordinance, but also requirements for sidewalks, streets, park land

dedication, and construction site erosion control. Each of the ordinances includes specific data requirements to be provided on all preliminary plats, final plats, and certified survey maps. Importantly, the ordinances may require subdividers to install subdivision improvements such as sanitary sewers, water distribution lines, sidewalks, bicycle paths, streetlights, street trees, street signs, street pavements, streets, utilities, stormwater drainage facilities, and erosion and sediment control devices; to provide easements for certain improvements; and to make provision for park and recreation sites or pay a fee in lieu of site dedication. These ordinances set forth specific design standards for required facility improvements, which would also influence the visual quality of a development.

As provided by the *Wisconsin Statutes*, the Villages of Rochester and Waterford and the City of Burlington exercise extraterritorial plat approval jurisdiction to regulate any proposed subdivision that is located outside of their respective corporate limits but within one and one-half miles of the corporate limits of these communities, except where the area may overlap another extraterritorial jurisdiction. When an extraterritorial jurisdiction overlaps with that of another city or village, the jurisdiction in the overlapping area is divided on a line in which all points on the line are equidistant from the boundaries of each municipality concerned so that not more than one municipality exercises such extraterritorial authority over any area. Such a situation exists and could arise because of the proximity of the Village of Rochester, the Village of Waterford, and the City of Burlington.

Official Mapping

Official mapping authority, granted to local governments under Section 62.23(6) of the *Wisconsin Statutes*, is an important but historically underutilized plan implementation tool. An official map is intended to identify the location and width of existing and proposed streets, highways, parkways, and drainageways, and the location and extent of railway rights-of-way, public transit facilities, parks, and playgrounds. The adoption of an official map prevents the construction of buildings or structures and their associated improvements on lands designated for future public use. The results of the inventory of local plans and land use regulations conducted by the Commission in 2000 indicated that within the STH 36 North Corridor, only the City of Burlington has an official map. The City of Burlington official map shows a future western extension of Dorster Avenue and a northeastern extension of Wegge Road connecting to Dorster Avenue in the southern portion of the Corridor study area.

State and Federal Environmental Regulations

Chapter Comm 83 of the *Wisconsin Administrative Code* provides regulations for the protection of environmental health and safety through the proper siting, design, installation, inspection, and maintenance of private sewerage systems. In July 2000, several changes to Comm 83 regulations took effect. Those changes include the recognition of new technologies, which provide more options for the type of onsite sewage-disposal systems available for use, opening land to development which, in the past, did not meet the criteria for onsite private sewage systems. Racine County regulates the location, design, construction, alteration, and maintenance of all private waste disposal systems throughout the County in accordance with Chapter Comm 83 and the Racine County sanitary code and private sewage system ordinance.

Chapters NR 110 and Comm 82 of the *Wisconsin Administrative Code* require that the Wisconsin Department of Natural Resources, in its regulation of public sanitary sewers, and the Wisconsin Department of Commerce, in its regulation of private sanitary sewers, make a finding that all proposed sanitary sewer extensions conform with adopted areawide water quality management plans and the sanitary sewer service areas identified in such plans. One of the criteria considered by the State agencies in the review of locally proposed sewer extensions is the conformance with the areawide water quality management plan with regard to the area proposed to be served. The State agency concerned must find that the area proposed to be served is located 1) within an approved sewer service area and 2) outside of areas involving physical or environmental constraints which, if developed, would have adverse water quality impacts. Areas in the Corridor having such physical or environmental constraints may include wetlands, shorelands, floodplains, steep slopes, highly erodible soils and other limiting soil types, and groundwater recharge areas, as identified earlier in this chapter.

Chapter NR 103 of the *Wisconsin Administrative Code* establishes water quality standards for wetlands. These standards, like the more general policies set forth for wetlands protection under Section NR 1.95, are applied by

the Wisconsin Department of Natural Resources in all its decisions under existing State authority. The water quality standards for wetlands are intended to provide protection to all waters of the State, including wetlands, for all present and potential future uses, such as for public and private water supply; for use by fish and other aquatic life and by wild and domestic animals; for preservation of natural flora and fauna; for domestic and recreational uses; and for agricultural, commercial, industrial and other uses.

Under Section 404 of the Federal Clean Water Act as amended, the U.S. Congress has provided for the regulation of most wetlands in the Nation, with the exception of isolated nonnavigable wetlands. The U.S. Army Corps of Engineers, working in cooperation with the U.S. Environmental Protection Agency, regulates the discharge of dredged and fill materials into waters of the United States, including lakes, rivers, and wetlands. In carrying out this responsibility, the Corps of Engineers identifies waters of the United States, including wetlands, and determines when permits are required for the discharge of dredged and fill materials. Some silviculture, mining, and agricultural activities in water and wetland areas may be exempt from the individual permit requirement; certain minor activities, such as boat ramp construction and shore stabilization, may be undertaken under a pre-approved general, or nationwide, permit. Section 401 of the Act requires that the issuance of such Federal permits must be consistent with State water quality policies and standards. The Wisconsin Department of Natural Resources protects both wetlands under the jurisdiction of the Corps of Engineers and isolated wetlands outside of the Corps jurisdiction.

SUMMARY

This chapter describes the natural resources, historical and existing land use characteristics, areawide and local plans, and existing regulations as they relate to the STH 36 North Corridor. Of relevance to the preparation of a design plan for the Corridor are the following findings:

- The Corridor exhibits some significant natural resources that contribute to the natural and agricultural scenery experienced from the highway, which should be preserved accordingly. Approximately nine square miles, or about 74 percent of the Corridor study area, are covered by Class I, II, and III soils, which are well suited for agricultural use. Existing surface waters and floodplains, wetlands, woodlands, and wildlife habitat areas within the Corridor provide attractive settings and greatly enhance the aesthetic quality of the environment. Significant surface water features visible from STH 36 include Wind Lake, Waubeesee Lake, Fox River, Eagle Creek, and the Wind Lake Drainage Canal. The Corridor includes seven sites identified as natural areas under criteria established by the Wisconsin Natural Areas Preservation Council; four sites identified as critical bird or plant species habitat sites; and five sites identified as critical aquatic habitats.

- Other natural resource-related elements that exist in the study area in 2000 include two scenic overlooks, 15 miles of recreation trails and bicycle routes, three miles of designated rustic roads, one significant historic site, and 14 park, recreation, and open space sites to provide residents in the Corridor a variety of recreational facilities from playgrounds to baseball diamonds.

- The best natural resource features of the Corridor study area, as in other parts of Southeastern Wisconsin, occur in linear concentrations on the landscape and are referred to as environmental corridors. Primary environmental corridors in the study area are primarily associated with major lakes and their tributaries. In 2000, these corridors encompassed about 2.6 square miles, representing about 21 percent of the study area. Secondary environmental corridors encompassed about 0.4 square mile, representing about 3 percent of the study area. Other small concentrations of the natural resource base, known as isolated natural resource areas, encompassed about 0.7 square mile, representing about 5 percent of the study area.

- Only a small amount of land within the Corridor—located in trade centers established at mills and railroad depots—were devoted to urban uses from 1880 to 1920, while outlying areas consisted primarily of rural lands in natural and agricultural uses. Beginning in about 1950, urban development increased significantly outward from these centers along with the suburbanization of the Corridor by mostly

metropolitan commuters. Hence, the views experienced along STH 36, before it was established as a major highway, reflected small urban centers—trade centers—separated by vast areas of native vegetation and agricultural lands. Over time the urban centers, such as the Villages of Rochester and Waterford and the urban enclave of the Wind Lake-Waubeesee Lake area, have increased in size while the agricultural and natural landscape between them has somewhat decreased. By analyzing the historical development patterns, it appears that most urban growth will likely continue within and adjacent to the urban centers in the Corridor.

- Of the approximately 12.4 square-mile Corridor study area, urban land uses constituted about 3.4 square miles, or about 28 percent, of the total study area in 2000. However, most urban uses, about 2.6 square miles or 76 percent, were concentrated within planned sanitary sewer service areas. Nonurban/rural land uses, which include water, wetlands, woodlands, agricultural lands, and other open lands, occupied the remaining 8.9 square miles, or about 72 percent, of the total study area. Nonurban/rural land uses were the predominant general land use in not only the unincorporated portion of the Corridor (74 percent), but also the incorporated portion (54 percent).

- Agricultural-related uses were the largest land use category in the study area in 2000, encompassing about 39 percent of the Corridor. The next largest group was natural resource areas consisting of water, wetlands, and woodlands, encompassing about 27 percent of the Corridor. Third, single-family residential land uses represented about 12 percent of the Corridor. Residential uses, however, represented the largest group of urban uses in the Corridor and the incorporated areas. The overall character of the Corridor is defined by concentrated urban centers surrounded by still "open" lands of lakes, cultivated fields, and natural areas that provide attractive settings visible from STH 36.

- The viewshed of STH 36 was delineated and used to help define the Corridor study area; to identify the location and extent of existing visual characteristics that should be protected in order to preserve aesthetic qualities and, hence, views; and to determine the extent of a zoning overlay district that may be used to regulate the design appearance of development or redevelopment that may occur within a certain distance of STH 36.

- The existing character of the Corridor as viewed from STH 36 was categorized into four distinct types of views or images. The urban character of the Corridor is defined mostly by "residential views"—concentrated areas of single-, two-, and/or multi-family dwellings—and "commercial views"—concentrated areas of business development—located mostly in urban centers. The rural/nonurban character of the Corridor is defined largely by "natural views"—significant natural areas consisting of rivers, lakes, ponds, wetlands, and/or woodlands—and "pastoral views"—farmsteads with cultivated fields and/or pasture lands—located mostly in the rural portion of the Corridor between concentrated urban areas. The identification of these views indicates the predominant character of a defined area and suggests the type of design guidelines that should be used by proposed development or redevelopment to preserve or improve said views, such as the use of urban design guidelines for areas with urban views and rural design guidelines for areas with rural/nonurban views.

- Specific physical features that define the STH 36 viewshed include large man-made features that are readily noticeable from the highway such as farmsteads, churches, cell towers, and billboards. Natural features that provide travelers along STH 36 with a variety of pleasing views include rivers, lakes, ponds, wetlands, woodlands, and treelines/hedgerows. Other features that affect the visual quality of the STH 36 viewshed were identified, including overhead utility lines, signs, landscaping, parking lots, building architecture, streetscaping, and lighting.

- Pertinent recommendations of local, county, and regional plans, as they relate to the STH 36 North Corridor, have important implications for any local planning and design efforts. These include land use, transportation system, bicycle-way system, water quality management, and park and open space plans. Supporting topographic and cadastral maps were also essential for conducting a visual analysis of the

Corridor, identifying an existing viewshed and visual characteristics of STH 36, defining the extent of the Corridor area to be studied, and identifying the property owners to be surveyed.

- Zoning regulations are in effect throughout the entire Corridor study area. Each of the incorporated areas of the City of Burlington and the Villages of Rochester and Waterford has an adopted zoning ordinance and attendant zoning district map. The unincorporated Towns of Burlington, Norway, Rochester, and Waterford are under the jurisdiction of the Racine County Zoning Ordinance. The County general zoning provisions are administered jointly by Racine County and the Towns. The County zoning ordinance also regulates the shorelands and floodplains within the unincorporated areas, including shoreland-wetlands that are five acres or greater in size. Each of the aforementioned zoning ordinances require submittal of some form of development plan for most major developments to be reviewed and approved by local Plan Commissions and other local and County officials to ensure compliance with the zoning ordinance and attendant design-related provisions.

- An analysis of local development objectives as expressed through adopted zoning district maps as of 2000 indicates that, collectively, local units of government in the Corridor have zoned about three square miles, or 24 percent of the Corridor, for residential use; about one square mile, or 8 percent of the Corridor, for commercial and industrial use; about five square miles, or 42 percent of the Corridor, for agricultural use; and about two square miles, or 16 percent of the Corridor, as lowland conservancy.

- All communities within the Corridor have adopted land division ordinances to regulate the subdividing and improvement of lands within their respective municipality. Racine County also has adopted a land division ordinance, but this jurisdiction is confined to the unincorporated town areas. The land division ordinances for the incorporated areas also apply to land divisions proposed within their extraterritorial plat approval jurisdiction, that is, lands within one and one-half miles of their corporate limits. All of the ordinances regulate subdivisions created by plats, and most ordinances, except Racine County, regulate minor land divisions created by certified survey maps. These ordinances set forth detailed design standards and specific data to be provided on all preliminary plats, final plats, and certified survey maps, where applicable. The ordinances also require the subdivider to install subdivision improvements, although the type of improvements required varies among the local governments.

- Only the City of Burlington has an adopted official map, which applies to a southern portion of the Corridor study area. Official maps are intended to reserve land for future public use and open space sites such as streets, drainageways, parks, and parkways within civil divisions as well as the extraterritorial plat approval jurisdiction of cities and villages.

- A series of State and Federal environmental regulatory programs control the use of waters and wetlands and the potential water quality impacts of development in the Corridor. These include Chapters NR 103, NR 110, Comm 82, and Comm 83 of the *Wisconsin Administrative Code*, and Sections 401 and 404 of the Federal Clean Water Act.

Chapter III

SURVEYS AND OBJECTIVES

Design planning is a rational process for formulating and meeting objectives. Therefore, the formulation of objectives is an essential task to be undertaken before design plans are prepared. As part of this process, a set of Corridor objectives, along with supporting principles and standards, were formulated by the Corridor Advisory Committee based, in part, on the results of two forms of corridor surveys. This chapter presents key findings of the surveys as well as the set of objectives, principles, and standards which were used as a guide in the preparation of the overall Corridor design plan.

CORRIDOR SURVEYS

The public participation process undertaken as part of the design planning effort included conducting two different types of Corridor surveys—a mail questionnaire survey and a visual preference survey. The survey instruments were prepared jointly by the Corridor Advisory Committee and the staff of SEWRPC, Racine County, and University of Wisconsin-Extension. Conducted in 2002, the surveys provided all officials within communities lying in the Corridor study area, as well as all residents and business operators within the Corridor, an opportunity to share their views regarding various development and design-related matters that affect the visual quality of the Corridor. The survey results are intended to provide the Corridor Advisory Committee with additional insight into the preferences of the public, which will be considered during the preparation of the Corridor design plan. With this insight, the ability of the Committee to make development decisions, particularly aesthetic design-related decisions likely to be supported by local officials, residents, and businesses, would be enhanced.

Mail Questionnaire Survey

The mail questionnaire survey relied on objectively crafted questions that were reviewed by the Corridor Advisory Committee and pre-tested by a survey work group. The refined and selected questions were then compiled into a four-page mail questionnaire form and sent out to all local officials and property owners within the Corridor study area. Concerned people outside the study area and the tenants within it were also given the opportunity to participate through community announcements and news releases, which were used to inform the general public that they could obtain such surveys from their municipal hall. Therefore, this survey process allowed anyone within the Corridor and the surrounding area an opportunity to express their opinions via the survey. At the same time, the key audience of Corridor property owners was targeted. The University of Wisconsin-Extension working with SEWRPC sent the return-by-mail questionnaire to all resident and non-resident property owners in the Corridor study area as well as to local elected officials and plan commissioners. In total, 2,354 questionnaires were distributed along with background cover letters and postage-paid return envelopes. Some 964 surveys were returned, representing a response rate of about 41 percent after subtracting nondeliverables. A total of 910 of these surveys submitted numeric data in time for tabulation and were the basis for calculation and analysis.

The overall vision shared by local residents, business operators, and elected officials alike, is that of a Corridor with concentrated attractive developments in urban centers while retaining the rural character between those centers. If

residential development occurs along the highway, such development should be screened from the highway and, in rural areas, should utilize open space and conservation design concepts. Most survey respondents agreed that landscape and architectural design standards should be established to guide new intensive urban developments and their proposed physical features, such as signs, lighting, parking lots and service areas, building architecture, and general landscaping, to help ensure attractive urban centers. Respondents favored certain types of designs for the aforementioned features, which are similar to the survey results from the visual preference survey as described below. The preservation of existing natural areas, such as woodlands, wetlands, rivers, and lakes; natural vegetation screening such as trees and shrubs; and agricultural views and uninterrupted open space were all supported by the majority of the participants as important assets of the Corridor. The survey results are summarized in Appendix A and documented by UW-Extension in a separate report titled, *Highway 36 North Corridor Mail Questionnaire Survey Report*, January 2003.

Visual Preference Survey

A visual preference survey was also conducted by UW-Extension to supplement the return-by-mail questionnaire survey. This survey relied on photographic images of certain design features as a visual aid to solicit the opinion of people attending a forum scheduled in conjunction with their respective local government, mostly plan commission meetings. All local officials and citizens in attendance were invited to participate in this survey process, which was conducted at the municipal hall of each of the communities that lie within the Corridor study area. The participants at these pre-arranged meetings were asked to indicate how much they "like" or "dislike" images that were grouped into four categories focusing on signs, building design, and the interior and exterior of parking lots. A total of 62 slides were presented to participants who were asked to rank each of the images on a sliding scale indicating a negative, neutral, or positive response, while also allowing opportunities to write comments on the image. Through this process, a total of 80 persons participated in the detailed ranking of visual preferences relating to the Corridor design plan study, for an average attendance of about 14 persons per municipal forum.

By analyzing the photos and the survey results, it appears that most participants preferred low, ground or monument-type signs with attractive landscaping at the base as opposed to tall and/or large signs without plantings. The majority of participants liked buildings with decorative façade materials, protruding and recessing walls, and pitched roofs, rather than those with flat roofs and/or flat continuous walls lacking ornate façade materials. Compared to generally disliked parking lots without any landscaping, participants preferred parking lots with interior and perimeter landscaping which also help screen the lots from public view. These survey results are summarized in Appendix B and documented by UW-Extension in a separate report titled, *Highway 36 North Corridor Visual Preference Survey Summary Report*, February 2003.

CORRIDOR OBJECTIVES, PRINCIPLES, AND STANDARDS

The design planning process included the formulation of a set of objectives intended to express the long-term goals of the Corridor Advisory Committee for areas located in at least the defined viewshed of STH 36 within the Corridor study area. While considering the survey results, six major Corridor objectives, accompanied by principles and standards which support and help explain the objectives, were formulated by the Committee to guide the preparation of the Corridor design plan. The objectives are proposed as self-descriptive goals which public policy within the Corridor should promote over time. The objectives and supporting principles and standards, as well as design guidelines discussed in the next chapter, should not be used as absolute decision rules for identifying development patterns, since the standards and design guidelines, particularly, should be applied with judgment in more detailed development planning and engineering studies which will be needed during plan implementation.

With respect to the application of these objectives, it is sufficient that there be a consensus within the Corridor Advisory Committee that development proposals support, or at least do not conflict with, the objectives. Such consensus represents the most practical evaluation of the ability of proposals to meet the Corridor objectives. Their application is facilitated by complementing each objective with a set of specific standards which are, in

turn, directly related to a principle which supports the chosen objective as clarified below. In addition, a composite planned land use map and design guidelines are presented in the next chapter for further guidance in evaluating future development and redevelopment in the Corridor.

Definitions

The terms "objective," "principle," "standard," "guidelines," "design plan," "policy," and "program" are subject to a range of interpretations. To clarify their meanings, the following defines these terms as they are used within the context of this report:

1. *Objective*: A goal or end toward the attainment of which plans and policies are directed.

2. *Principle*: A fundamental, generally accepted tenet used to support objectives and prepare standards and plans.

3. *Standard*: A criterion used as a basis of comparison to determine the adequacy of plan proposals to attain objectives.

4. *Guidelines*: A body of information intended to provide guidance in the location, design, and maintenance of development and redevelopment and which are intended to be judiciously applied and which may be departed from in specific situations.

5. *Plan or Design Plan*: a design which seeks to achieve agreed-upon objectives.

6. *Policy*: A rule or course of action used to ensure plan implementation.

7. *Program*: A coordinated series of policies and actions to carry out a plan or design plan.

Although this chapter deals with only the first three terms, an understanding of their interrelationship and the concepts they represent is essential to the following discussion of objectives, principles, and standards.

Objectives, Principles, and Standards

To be useful in design planning, objectives should be logical, stated clearly, and, to the extent feasible, derived from local values. The quantification of objectives for plan design and evaluation is facilitated by complementing each objective with a set of specific standards. These standards are directly related to a planning principle that supports the objective as follows.

OBJECTIVE NO. 1 – GENERAL LAND USE CHARACTER AND DEVELOPMENT PATTERN

To promote a spatial distribution of various land uses in the Corridor which is compatible with each community's character and which will result in an efficient arrangement of land uses properly related to supporting transportation, utility, and public facility systems in order to assure the economical provision of public services.

Principle

The proper location and extent of commercial, educational, transportation, and recreational facilities are important determinants of the quality of urban life in the Corridor area and should be designed to meet the needs of community residents.

Urban Uses Principle

The proper location of urban uses to land can avoid costly environmental and developmental problems, aid in the establishment of sound settlement patterns, promote the wise use of irreplaceable resources, and can maximize amenity and convenience in terms of accessibility to supporting land uses. The transportation and public utility facilities and the development pattern which these facilities serve and support are mutually interdependent in that the development pattern determines the demand for, and loadings upon, transportation and utility facilities; and these facilities in turn, are essential to, and form a basic framework for, land use development.

Standards

1. Urban residential uses should be located in well-planned neighborhood units served by centralized public sanitary sewerage and water supply facilities and contain, within safe and convenient walking and biking distances, necessary supporting local services such as parks, schools, and shopping areas. They should have reasonable access through the appropriate component of the transportation system to employment centers, community and major shopping centers, cultural and governmental centers, and secondary schools and higher educational facilities.

2. Suburban and rural residential uses should have reasonable access through the appropriate component of the transportation system to local service uses; employment, commercial, cultural, and governmental centers; and primary and secondary educational facilities.

3. Retail and service commercial uses should be located in planned commercial centers with reasonable access through the appropriate component of the transportation system (i.e. minor land-access streets or collector streets) to arterial street and highway facilities. Such centers should be further served by adequate power supply and centralized public sanitary sewerage, water supply, and stormwater-management facilities. Development of new commercial strip areas, that is, long rows of contiguous individual parcels each with nonshared, direct street access along arterial streets or highways, should be avoided.

4. Industrial uses should be located in planned business or industrial parks with reasonable access through the appropriate component of the transportation system to arterial street and highway facilities. Industrial uses should be provided with adequate water supply, public sanitary sewerage and stormwater-management facilities, and power supply, including natural gas and electricity.

5. Development plans should be consistent with locally adopted land use plans and adopted amendments thereto.

Transportation System Principle

An integrated transportation system connects various land use activities in neighborhoods, communities, counties, and the Region, thereby providing the accessibility needed to support these activities. As a major feature of a community, transportation facilities should possess a high aesthetic quality with proper visual relation to the landscape and "cityscape" to help preserve the beauty of the physical environment.

Standards

1. Arterial streets and highways and supporting collector and minor land-access streets should provide access not only to all land presently devoted to urban use but also to land planned for such use. All streets and highways in the Corridor study area should be placed into one of the following functional classifications:

   Minor Land-Access Streets
   This subsystem provides access to and from individual building sites.

   Collector Streets
   This subsystem collects traffic from urban uses abutting land access streets and conveys it to arterial streets and/or activity centers.

   Arterial Streets
   This subsystem provides for the expeditious movement of through traffic into, out of, and within each community. Where possible, arterial streets should not be located through existing or planned residential neighborhoods.

2. Streets and highways in the Corridor should be improved to cross-sections typically included in local land division ordinances or engineering specifications, including those specifications established by State or County governmental units that have jurisdiction over arterial streets and highways.

3. Proposed streets and highways should comply with adopted access-control plans, jurisdictional highway system plans, official maps, detailed neighborhood unit development plans, and other officially adopted detailed development or redevelopment plans. Access along STH 36 will continue to be controlled by and subject to the Wisconsin Department of Transportation review and approval in order to preserve the traffic design operation of the four-lane highway for safely channelizing traffic movements.

4. Off-street parking and loading facilities should be located near the land uses which they are intended to serve.

5. Bicycle and pedestrian facilities should be provided as part of an overall transportation system to reduce air pollution, reduce energy consumption, encourage outdoor recreational pursuits, improve public health, reduce transportation cost, and provide for convenient travel between residential areas and shopping centers, schools,

parks, and transit facilities. A community bicycle and pedestrian facilities plan should be based, in part, on the planning and design standards established for such facilities in SEWRPC Planning Report No. 43, *A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010*, December 1994, and in an amendment thereto dated December 2001.

6. Transportation facilities have a significant impact on the visual character of a community and, therefore, should meet the following standards:

   a. Transportation facility construction plans should be developed using sound geometric, structural, and landscape design standards which consider the aesthetic quality of the transportation facilities and the areas through which they pass.

   b. Transportation facilities should be so located as to avoid or minimize disturbance of visually pleasing buildings, structures, historic sites, and natural features and to enhance, and avoid interference with, vistas to such features.

OBJECTIVE NO. 2 – NATURAL RESOURCES PROTECTION

To encourage the protection and wise use of the natural resources and agricultural lands in the study area. The preservation of sufficient high-quality open space lands for protection of the underlying and sustaining natural resource base will enhance the social and economic well-being and environmental quality of the Corridor area.

Principle

The proper use of land can assist in maintaining an ecological balance between human activities and the natural environment. Such ecological balance and natural beauty are important determinants of a community's ability to provide a pleasant and habitable environment for all forms of life. Preservation of the environmentally significant features of the natural resource base further contributes to the maintenance of the ecological balance, natural beauty, and economic well-being of the Corridor area.

Standards

1. The proper relation of urban and rural land use development to soils, as noted below, can serve to avoid costly environmental and developmental problems, aid in the establishment of better settlement patterns, and promote the wise use of an irreplaceable resource:

   a. Developments should not be located in areas covered by soils having severe development limitations, such as high or fluctuating water tables, slow permeability rates, erodibility on slopes, low bearing capacity, high shrink-swell potential, and frost-heave. When development is proposed on soils exhibiting severe limitations, careful attention should be given in the design to properly overcome these limitations. Such development could utilize open space and conservation design concepts where development would occur on areas of a parcel most suitable for development while those areas exhibiting severe limitations are preserved as undeveloped open space.

   b. Undeveloped areas in the Corridor that are covered by the most productive soils for agricultural use, which are those designated by the U.S. Natural Resources Conservation Service as comprising agricultural soil capability Classes I and II, and are not required to meet the future land use needs of the resident population and economic activity levels for the Corridor area should be preserved for agricultural use.

   c. The location of nonfarm residential development in prime agricultural areas located outside of planned urban service areas in the Corridor should be discouraged. If permitted, such development should utilize open space and conservation design concepts provided that the locations can accommodate an acceptable private well system and are covered by soils suitable for the use of onsite sewage-disposal systems.

2. Lakes, rivers, and streams and their associated floodplain and shorelands should be preserved because these features contribute to a community's environmental health in a number of ways. They add to the atmospheric water supply through evaporation; provide a suitable environment for desirable and sometimes unique plant and animal life; provide opportunities for certain scientific, cultural, and educational pursuits; constitute prime recreational areas; provide a desirable aesthetic setting for certain types of land use development; serve to store and convey flood waters; and provide a source of water. Floodplain storage and flow capacities should not be reduced by any development which would otherwise cause or be subject to flood damage.

3. Wetland areas adjacent to streams or lakes and wetlands within areas having special wildlife and other natural values should not be drained or filled and should not be allocated to any urban development except limited recreational use.

4. Woodlands should not be used for urban development except for limited recreational uses and very low-density residential uses. When urban development does occur in such areas, the impact upon the woodland areas should be minimized by practicing sound conservation design principles.

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

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

   b. Wildlife populations should be maintained in balance with the holding capacity of the land.

6. The remaining natural areas and critical species habitat areas in the Corridor study area should be preserved because they are important in a number of ways including economically, insofar as they support advances in agriculture and medicine; functionally, insofar as they enhance surface-water and groundwater quality, minimize erosion, and enhance air quality; educationally; recreationally; aesthetically; scientifically; and biologically, insofar as they maintain biological and genetic diversity. In a less tangible but equally important way, natural areas and critical species habitats contribute to mental well-being and to the overall quality of human life.

7. Environmental corridors and isolated natural resource areas are a composite of the best individual elements of the natural resource base. Therefore, all remaining undeveloped lands within designated primary environmental corridors[1] should be preserved in essentially natural, open use. All remaining undeveloped lands within the designated secondary environmental corridors[2] and isolated natural resource areas[3] should also be considered for preservation.

OBJECTIVE NO. 3 – RECREATIONAL OPPORTUNITIES

To provide an integrated system of public outdoor recreation sites and related open space areas that will provide the resident population of the Corridor area with adequate opportunities to participate in a wide range of outdoor recreation activities.

Principle
The provision of outdoor recreation sites and related open space areas promotes the maintenance of physical and mental health by providing opportunities to participate in a wide range of activities. An integrated park and related open space system properly related to the natural resource base, such as the existing surface water network, can generate the dual benefits of satisfying recreational demands in an appropriate setting and protecting and preserving valuable natural resource amenities and scenery. Finally, an integrated system of outdoor recreation sites and related open space areas can contribute to the orderly growth of the Corridor area by lending form and structure to development patterns.

Standard
The public sector should provide sufficient recreation sites and open space lands to accommodate a system of outdoor recreation sites and related open space areas to meet the demand of residents for both intensive and passive recreational activities. To fulfill these requirements, the recreation-related open space standards contained in adopted county and local park and open space plans should be met.

[1] *Primary environmental corridors are, by definition, at least two miles in length, 400 acres in area, and 200 feet in width.*

[2] *Secondary environmental corridors are at least one mile in length and 100 acres in area. Such corridors that link or serve to connect primary environmental corridor segments, particularly when the secondary corridors are related to surface drainage, have no minimum area or length criteria.*

[3] *Isolated natural resource areas are at least five acres in area and 200 feet wide. Such areas consist primarily of isolated wetland and woodland areas which have been separated physically from the environmental corridor network by intensive urban or agricultural land uses.*

OBJECTIVE NO. 4 – HISTORIC PRESERVATION

To preserve the historic heritage of the Corridor.

Principle
The preservation of structures, sites, and districts possessing historic or architectural significance will promote the educational, cultural, and general welfare of residents of the Corridor and provide for a more interesting, attractive, and vital Corridor. Accordingly, it is in the public interest to promote the protection, enhancement, perpetuation, and use of sites and improvements of special historic interest or value.

Standards

1. Farmstead features such as structurally sound and distinctive silos, windmills, barns, outbuildings, and even stone walls in hedge rows should be preserved since these features reflect an important cultural image of an agrarian heritage.

2. Historic sites, buildings, and structures identified in intensive historic surveys should be protected through the application and enforcement of a local historic preservation ordinance and an attendant Landmarks Commission or other similar committee.

3. The standards promulgated by the U. S. Department of the Interior may be used for any historic preservation projects in the Corridor. These standards govern all forms of historic preservation treatments, including acquisition, protection, stabilization, preservation, rehabilitation, restoration, and reconstruction.

OBJECTIVE NO. 5 – VITALITY AND VISUAL QUALITY OF URBAN CENTERS

To maintain and enhance the vitality of the urban centers, such as villages, cities, and urban hamlets, in the Corridor.

Principle
Urban centers are vital civic, business, and cultural centers of the Corridor, and the continual enhancement and proper care of such centers will help to ensure attractive and viable, long-term urban settings in which to live, work, and play.

Urban Center Principle
Urban centers provide community-level commercial facilities and services, cultural facilities, and other public and quasi-public facilities and services in convenient proximity to residential areas, where there are interconnecting streets, sidewalks, and bicycle facilities to ensure ready access.

Standards

1. Urban centers within the Corridor should be enhanced as concentrated locations of urban residential uses served by community-level public facilities and retail and service businesses. To retain aesthetically-pleasing urban centers, communities should promote environmentally sensitive, high-quality development that reflects the visual character desired by the respective community which would further instill a sense of community identity, pride, and economic prosperity.

2. Urban centers should continue to capitalize on and improve development orientation towards lakes and waterways as they abut or extend through, and are an integral part of, a vibrant center.

3. Urban centers should establish pedestrian- and bicycle-friendly environments by providing sidewalks and bicycle facilities complemented with attractive streetscape amenities, such as benches, street trees, decorative streetlights, and community “Welcome” signs, to foster a more readily identifiable center with a unique visual experience.

4. Underutilized land in urban centers, including downtown areas, should be redeveloped to contribute to the maintenance of a concentrated relationship between land uses which would reinforce the overall level of convenience and accessibility of services to the resident population. Compact and continuous downtown development in urban centers further encourages economic vitality and fosters a positive image of a community.

5. Urban development proposed on sites containing environmentally sensitive features, such as wetlands, woodlands, and steep slopes, should be designed so as to preserve or minimize disturbance to these features since their preservation would also enhance the site with a natural visual design flair.

6. A comprehensive set of development plans, including site, sign, landscaping, and building plans, should be prepared and submitted for, at least, major developments for proper local review to ensure compliance with local design-related regulations and/or guidelines. The plan submittal and review process should indicate the type of detailed information to be provided on development or redevelopment plans so that local officials can properly review said plans to ensure that the community's desired aesthetic character is achieved.

7. Appropriate urban design guidelines for site layout, landscaping, and architectural features should be established as part of the protection and enhancement of urban centers. Such guidelines would serve to help direct development and redevelopment in urban centers towards the desired character sought by the community. These guidelines would also assist local officials in evaluating development proposals. In addition, the guidelines should ideally be incorporated into applicable zoning and land division ordinances, or included in a community urban design guide manual.

8. A community's design guidelines should be consistent with the Corridor urban design guidelines established herein for those areas of the community that lie within the Corridor study area to help ensure some degree of design consistency among urban centers along the highway.

9. Urban design guidelines should be included as an element of local comprehensive plans for urban communities.

Existing Urban Area Viability Principle
The preventative maintenance, rehabilitation, and redevelopment of existing urban areas, including residential, commercial, and industrial uses, and the visual improvements to such uses in urban centers are important to the aesthetic and economic vitality of the centers.

Standards
1. Communities should encourage high-quality redevelopment and new infill development compatible with the surrounding neighborhood character in existing concentrated urban areas in order to retain the visual and economic appeal of urban centers.

2. Buildings and accessory features, including landscaping and parking lots, which have only minor deterioration should be upgraded and maintained in sound condition to the maximum extent possible.

3. Buildings and accessory facilities which have significantly deteriorated should be repaired and rehabilitated and measures should be taken to eliminate or minimize future deterioration.

4. Buildings and accessory facilities which have deteriorated to the point of becoming a health or safety hazard for occupants and which are not economically feasible to rehabilitate should be considered for replacement with new development.

OBJECTIVE NO. 6 – MAINTENANCE OF RURAL CHARACTER

To retain the rural character of the Corridor for areas located outside urban centers or planned urban service areas.

Principle
The maintenance of the rural character of lands outside urban centers or planned urban service areas will contribute to the overall physical and economic well-being of the Corridor. It will help to maintain the cultural heritage and natural beauty of the unincorporated areas, contribute to the preservation of wildlife habitat and other environmentally sensitive areas, avoid environmental and developmental problems, maintain the viability of farming areas, and help control costs of local public services.

Standards
1. Existing farmstead structures, such as historic homes, barns, silos, and windmills, should be preserved, whenever possible, since they function as recognizable landmark features that help define the country setting.

2. Communities should promote rural preservation through the use of residential cluster development, lot averaging, purchase of development rights, transfer of development rights, conservation easements, deed restrictions, or any combination of these methods.

3. Proposed development in rural areas should only occur in areas containing suitable soils and topography for the proper siting of building pads, private wells, private sewage-disposal systems, driveways, and any accessory structures while preserving distinct land features that contribute to the rural image, such as wetlands, hills with steep topography, and hedgerows with mature trees. Whenever possible, residential development should utilize open space and conservation design concepts.

4. Development plans, including site, landscaping, and building plans, should be prepared and submitted for, at least, major developments for proper local review to ensure compliance with local design-related regulations and/or guidelines. The plan submittal and review process should specify the type of detailed information to be provided on development plans so that local officials can properly review said plans to ensure that the community's desired rural character is achieved.

5. Appropriate rural design guidelines should be established to help preserve the natural and agrarian character of the countryside. Such guidelines would serve to help direct development in rural areas towards the desired rural character the community seeks. These guidelines would also assist local officials in evaluating development proposals. Such guidelines should ideally be incorporated into applicable zoning and land division ordinances.

6. A community's design guidelines should be consistent with the rural design guidelines for the Corridor established herein.

7. Rural design guidelines should be included as an element of local comprehensive plans for rural communities.

SUMMARY

This chapter presented objectives chosen by the Corridor Advisory Committee to guide the preparation of the Corridor design plan and to express the goals which public policies within the Corridor should promote over time. These objectives, along with supporting principles and standards, were based, in part, upon the results of two types of corridor surveys conducted in 2002. Key findings in this respect are as follows:

- Two different forms of surveys—a mail questionnaire survey and a visual preference survey—were conducted as part of the public participation process for the Corridor design plan. The survey results indicated that the overall vision shared by survey respondents is that of a Corridor with concentrated attractive developments in urban centers while retaining the rural character between these centers. If residential development occurs along the highway, such development should be screened from the highway and, in rural areas, should utilize open space and conservation design concepts. The preservation of existing natural areas, such as woodlands, wetlands, rivers, and lakes, was supported by the majority of the participants as an important asset of the Corridor.

  Most respondents also agreed that landscape and architectural design standards should be established to guide new intensive urban developments and their proposed physical features. Specifically, most participants preferred low, ground or monument-type signs with attractive landscaping at the base, not tall and/or large signs without plantings. The majority of participants liked buildings with decorative façade materials, protruding and recessing walls, and pitched roofs, rather than those with flat roofs and/or flat continuous walls lacking ornate façade materials. As opposed to parking lots without any landscaping, participants preferred such lots with interior and perimeter landscaping which also screens the parking lot from public view.

- Six Corridor objectives were formulated, with supporting principles and standards, for preparing design plans as well as for guiding and evaluating proposed developments in the Corridor. The objectives deal primarily with: 1) compatible and efficient arrangement of various land uses, 2) protection of the natural resource base, 3) provision of outdoor recreational opportunities, 4) preservation of historic resources, 5) maintenance and enhancement of urban centers, and 6) retention of rural character and open space preservation.

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Chapter IV

THE CORRIDOR DESIGN PLAN

The STH 36 North Corridor design plan contains recommendations to achieve the physical appearance and character desired for the Corridor. The design plan consists of two key elements—a composite planned land use map and basic design recommendations. The latter, in turn, consists of two sets of design guidelines. One set of guidelines—urban design guidelines—applies to development or redevelopment that may mostly occur in planned urban service areas, and the other set—rural design guidelines—applies to development that may occur in the rural areas of the Corridor. While it is not the intent of this document to prepare a land use plan per se for the Corridor study area, the report conveys the land use pattern desired by local communities, since the land use pattern essentially establishes the overall visual character of an area. Ultimately, the two elements of the Corridor design plan are intended to be used to help make development decisions, particularly aesthetic design-related decisions, and to guide development or redevelopment as it affects the physical character viewed from the highway corridor.

The Corridor design plan should promote the public interest rather than the interests of individuals or special groups within the Corridor. The very nature of the design plan contributes to this purpose, for it facilitates consideration of the relationship of all development proposals, whether privately or publicly advanced, to the overall appearance desired for the Corridor.

PURPOSE AND VISION

Since the completion of the STH 36 reconstruction project, Racine County has become concerned with development pressures along the highway that may negatively impact the visual appeal experienced from the arterial. Local officials from the communities through which STH 36 traverses shared this concern and supported the preparation of a design plan for the Corridor.

Since the design planning process began, property owners and business operators within the Corridor study area were encouraged to participate by sharing their views on what the appearance of the Corridor should be over time. Two different types of Corridor surveys—a mail questionnaire survey and a visual preference survey—helped identify the aesthetic preferences of residents and business operators for the Corridor. It was through this public participation, in conjunction with the Corridor Plan Advisory Committee's guidance and analysis of information provided by the Regional Planning Commission, that a vision for the Corridor's preferred future aesthetic character was shaped.

The overall vision shared by local residents, business operators, and elected officials, is that of a Corridor containing attractive developments in urban centers while retaining the rural character between these centers. If residential development occurs along the highway, such development should be screened from the highway and, in rural areas, should utilize open space and conservation design concepts. Most agreed that site, landscape, and architectural design standards should be established to guide the physical features of new intensive urban developments, such as signs, lighting, parking and service lots, buildings, and general landscaping, to help ensure attractive urban centers. Environmentally significant features in the Corridor, such as woodlands, wetlands, streams, and lakes, should be recognized for their unique natural features and importance to the Corridor's visual character, and should be preserved accordingly.

THE COMPOSITE PLANNED LAND USE MAP FOR THE CORRIDOR

One of the most important implications of land use plans is that the location and type of use permitted by local communities directly defines the overall visual character of an area. Map 22 reflects a composite of adopted local land use plans. In the Town of Norway, where no local land use plan is in place, a tentative plan was prepared. The tentative Town plan was based on a planned sanitary sewer service area plan, an environmentally sensitive lands preservation plan, existing zoning, and existing land uses as related to the Town of Norway. The Town intends to prepare a land use plan in the near future which would take the place of the tentative plan presented herein. The only refinement to the other locally adopted plans shown on Map 22 is due to more accurate and updated existing land use information, such as the delineation of environmental corridors, isolated natural resource areas, wetlands, and floodplains, and any recent developments, rezonings, or land use plan amendments that have occurred and differ from the adopted plans.

Map 22 shows those areas of the Corridor where urban development is encouraged, while avoiding and thus preserving the best remaining natural resources. The data in Table 5 compares existing 2000 and planned land uses in the Corridor. Under the adopted local plans, most urban uses would be concentrated within planned sanitary sewer service areas identified on Map 19 in Chapter II, which are sometimes used to define planned urban service areas. Existing natural features would largely be preserved, and most agricultural uses would take place in the rural areas located outside planned sanitary sewer service areas.

Urban Residential Development

Map 22 shows that most new residential development in the Corridor would be created through the infilling of existing vacant residential lots as well as on vacant developable land in designated residential areas located within planned urban service areas. Table 5 indicates that residential development would occupy about 2,305 acres, or 29 percent of the Corridor in 2020. Most urban-density residential areas are proposed to be served by public sanitary sewer and water supply facilities. The residential density reflected on the composite map provides a general range of density, if any, as incorporated from local plans. Adopted local land use plans and zoning maps should be further consulted to determine the specific dwelling type, such as single-, two-, or multi-family dwelling units, and the specific lot sizes required by each community.

Commercial and Industrial Development

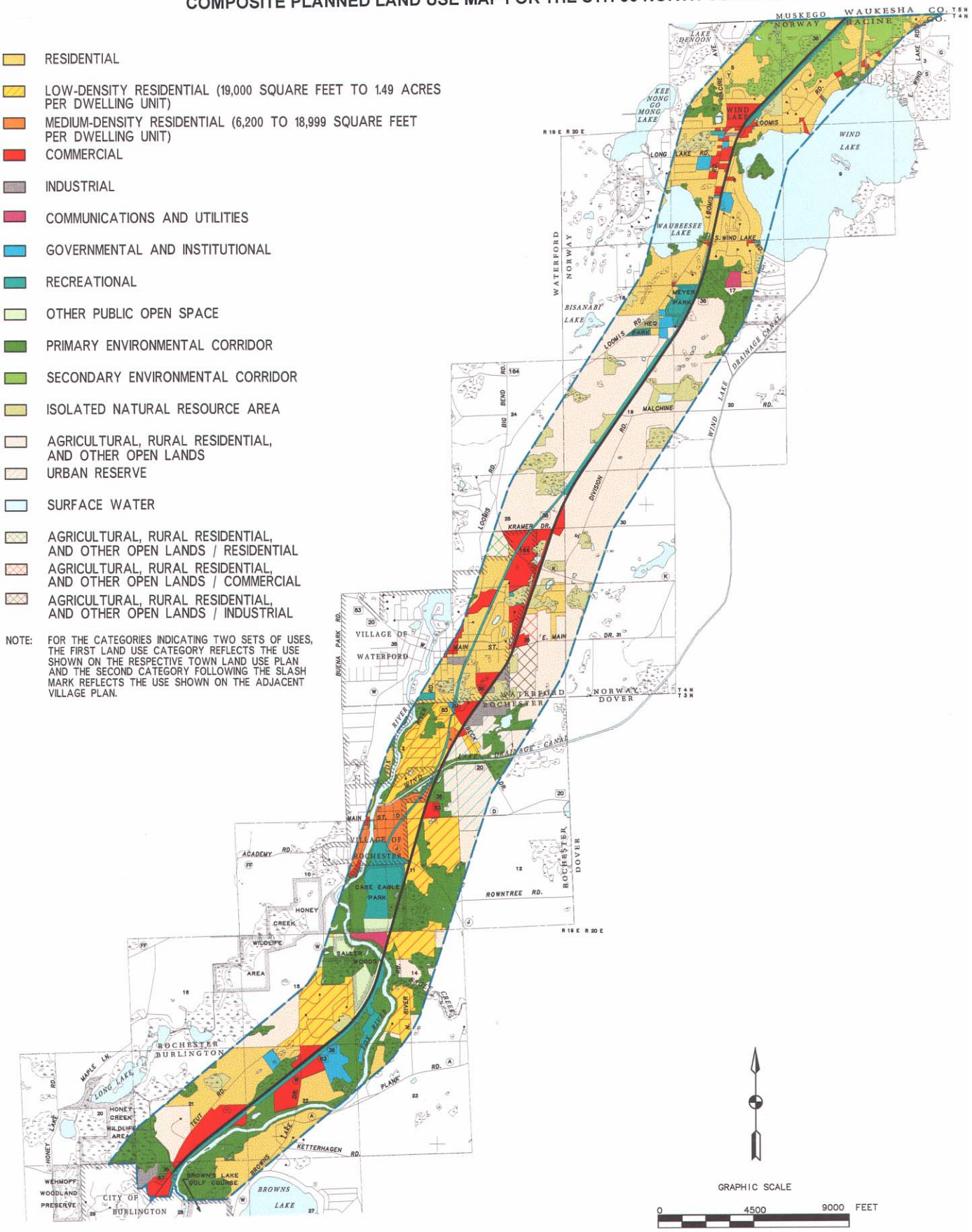
New commercial and industrial areas shown on Map 22 are proposed to occur contiguous to, and extending outward from, such existing developments located in planned urban service areas. These developments lie primarily along arterial streets, including STH 36 and at its intersection with Loomis Road, Big Bend Road (STH 164), Beck Drive (STH 20), and Browns Lake Drive (CTH W). Table 5 indicates that commercial and industrial developments would encompass about 528 acres, or 7 percent of the Corridor, if developed as planned. Local land use plans and zoning maps should be referred to in order to determine the specific location and principal types of businesses that may be allowed within a community, including planned shopping centers, general retail sales and services, office and professional business services, and limited or general industrial uses.

Other Urban Development

Other urban land uses, namely, governmental and institutional; communication and utilities, park and other public open space; and associated street rights-of-way and off-street parking areas are recommended to be increased to serve future population and economic growth in the Corridor. Such areas, as shown on the map, represent mostly a continuation of existing uses with some potential expansion. Based on the map, the increase in park and recreation land uses would occur primarily as a result of the proposed connection of the Fox River Trail and Waterford-Wind Lake Trail, from Beck Drive to Case Eagle Park in the Village and Town of Rochester, and the development of recreation facilities on the Case Eagle Park site. At this time, it is anticipated that the areas designated as “other public open space” within Case Eagle Park and Saller Woods Park would remain in open space. Such areas could, however, be converted to intensive recreational uses if necessary.

Map 22

COMPOSITE PLANNED LAND USE MAP FOR THE STH 36 NORTH CORRIDOR



Source: SEWRPC.

Table 5

SUMMARY OF 2000 EXISTING AND 2020 PLANNED LAND USES IN THE STH 36 NORTH CORRIDOR

Land Use Category[a]	Existing 2000 Land Uses		Planned Change: 2000-2020		Planned 2020 Land Uses	
	Acres	Percent	Acres	Percent	Acres	Percent
Urban						
Residential[b]	1,436	18.1	869	60.5	2,305	29.1
Commercial and Industrial[b]	140	1.8	388	277.1	528	6.7
Governmental and Institutional	60	0.8	46	76.7	106	1.3
Communications and Utilities[c]	18	0.2	13	72.2	31	0.4
Recreational[d] and Other Public Open Space	324	4.1	74	22.8	398	5.0
Urban Subtotal	1,978	25.0	1,390	70.3	3,368	42.5
Nonurban/Rural						
Primary Environmental Corridor[e]	1,703	21.5	44	2.6	1,747	22.1
Secondary Environmental Corridor[e]	264	3.3	92	34.8	356	4.5
Isolated Natural Resource Areas[e]	444	5.6	-6	-1.4	438	5.5
Agricultural, Rural Residential, and Other Open Lands[b,f]	3,527	44.6	-1,520	-43.1	2,007	25.4
Nonurban/Rural Subtotal	5,938	75.0	-1,390	-23.4	4,548	57.5
Total	7,916	100.0	- -	- -	7,916	100.0

[a] *Street rights-of-way and off-street parking areas are included in the associated land use category.*

[b] *Areas indicated as urban reserve and those shown with two sets of land uses on Map 22 were included in the land use category consisting of agricultural, rural residential, and other open lands. If the latter of the two sets of land uses occurs, then residential uses would encompass about 2,328 acres, or 29 percent of the Corridor; commercial and industrial uses would encompass about 609 acres, or 8 percent of the Corridor; and agricultural, rural residential, and other open lands would encompass about 1,903 acres, or 24 percent of the Corridor.*

[c] *Includes only the sewage treatment plants and utility properties.*

[d] *Includes only intensive outdoor recreational areas and recreation trails in utility rights-of-way.*

[e] *Includes associated surface water areas.*

[f] *Includes agricultural uses and related farm residences and open space.*

Source: SEWRPC.

Agricultural, Rural Residential, and Other Open Lands

The "agricultural, rural residential, and other open land" category delineated on Map 22 encompasses agricultural lands; rural-density residential development; and other open lands, such as small wetlands and woodlands not included within environmental corridors or isolated natural resource areas. As indicated in Table 5, such uses would total about 2,007 acres, or 25 percent of the Corridor in 2020. The composite map envisions that existing agricultural lands within planned urban service areas would, as market demand dictates, be converted to

urban uses during the planning period. In addition, agricultural and opens lands located outside planned urban service areas are intended to remain in such uses, or could be converted to either rural-density residential development, as defined in locally adopted land use plans and zoning maps, or to small specialty or hobby farm units at gross densities ranging from five to 35 acres per dwelling unit.

It is important to recognize that rural residential development may occur in the form of individual lots under conventional subdivision design or in the form of a clustered design, sometimes called open space or conservation subdivision design. Whenever possible, agricultural and open lands which are converted to residential development should utilize the cluster design concept as supported by the survey results in Appendix A. Under this concept, individual lot sizes are reduced while retaining the overall rural density of the development parcel. Areas not located within individual lots are retained in permanent agricultural or open space use. By using this type of design, areas consisting of the most productive farmlands could be preserved, and farming operations thus continue with minimal intrusions from urban land uses. Importantly, cluster development may also minimize the visual impact of residential development and help maintain a sense of open space along the highway corridor.

Environmentally Significant Areas

In order to effectively guide development in the Corridor into a pattern that is efficient, stable, safe, healthful, and attractive, it is necessary to carefully consider the location of the various land uses as they relate to the natural resource base of the Corridor. Locating new development outside environmental corridors and other environmentally significant areas will serve to maintain a high level of environmental quality in the Corridor, and will also avoid the creation of costly developmental problems such as flood damage, wet basements, and failing pavements.

Map 22 shows substantial preservation of the remaining environmental corridors and isolated natural resource areas. The environmental corridors include planned corridors consisting of undeveloped floodplains within planned urban service areas that will likely revegetate over time and be reclassified as part of an adjacent existing environmental corridor. Development within environmental corridors and isolated natural resource areas should be limited to required transportation and utility facilities, compatible recreational uses, and very low density residential development carefully designed so as to minimize the impact on significant natural features. Cluster or conservation subdivision design concepts are recommended over conventional subdivision design if residential development occurs within environmentally sensitive areas.

Environmental Corridors

Environmental corridors, more fully described in Chapter II, are elongated areas in the landscape that contain concentrations of high value elements of the natural resource base. Primary environmental corridors contain almost all of the best remaining woodlands, wetlands, wildlife habitat areas, as well as floodplains and steeply sloped areas where intensive development would be ill-advised.[1] The protection of the primary environmental corridors against intrusion by urban development is an important objective of the design plan and locally adopted land use plans. Accordingly, Table 5 indicates no loss of primary environmental corridor during the planning period. As shown on Map 22, primary environmental corridors would occupy approximately 1,747 acres, or 22 percent of the study area. These corridors are located primarily along the Fox River, Eagle Creek, and the Wind Lake Drainage Canal, and include the large wetland areas associated with these streams and the lakes within the study area. Primary environmental corridors should, to the maximum extent practicable, be maintained for resource preservation and limited recreation.

[1]*Primary environmental corridors are, by definition, at least two miles in length, 400 acres in size, and 200 feet in width.*

The secondary environmental corridors are located in the northern portion of the study area along streams and also encompass the large wetland complexes associated with these streams.[2] These corridors would comprise about 356 acres of land, or 5 percent of the total study area. The secondary environmental corridors should be carefully integrated into urban and rural development with the goal of preserving corridor resources. Such areas may serve as wildlife migratory routes and may also lend themselves to public uses such as parks, drainageways, or floodwater detention areas.

Isolated Natural Resource Areas

Isolated natural resource areas consist of small areas, at least five acres in size, with important natural resource values which are separated geographically from primary and secondary environmental corridors. Most of these areas, which are located throughout the Corridor study area, consist of wetlands or woodlands that are at least 200 feet wide and five acres in size. Isolated natural resource areas would occupy approximately 438 acres, or 6 percent of the study area. It is recommended that such areas be preserved in essentially natural, open uses whenever possible, since these areas sometimes serve as the only available wildlife habitat in an area and lend natural diversity to a community.

Other Environmentally Sensitive Lands

Even though Map 22 only shows the large concentrations of environmentally significant areas, other lands not located within designated environmental corridors and isolated natural resource areas should also be considered for preservation. Such areas include floodplains, wetlands less than five acres in size, and treelines or hedgerows. Floodplains should be preserved as urban development occurs adjacent to such areas; however, existing agricultural uses or agricultural-related activities may continue within the floodplain. Sites considered for development that contain environmentally sensitive features should incorporate the preservation of these elements into the site design whenever possible. Similar to isolated natural resource areas, the preservation of these features may provide the only available wildlife habitat in an area and lend aesthetic character and natural diversity to the Corridor study area.

CORRIDOR DESIGN GUIDELINES

Good general land use planning is crucial for the future of the STH 36 North Corridor. But it cannot alone ensure an attractive urban community or the preservation of rural character. This is because the proper protection of significant natural resources and "planning by design," or attention paid to the detailed layout and design of development in the Corridor, are also crucial.

To help direct proposed development and redevelopment activities within the STH 36 viewshed identified on Map 13 in Chapter II, basic design guidelines were prepared. The main intent of the guidelines presented herein is to help establish attractive urban centers along the Corridor while preserving the rural landscape between the urban centers. Achieving this objective, in turn, would retain and improve the visual appeal experienced from STH 36 as desired in the vision statement for the Corridor. The guidelines are intended to serve as a basis for determining desired physical development layouts and appearances, and not as inflexible, rigid, and narrow rules that may stifle innovative design alternatives which still achieve the intent of the guidelines. Two sets of design guidelines, urban and rural, were formulated based, in part, on survey results that reflect the general public's opinion related to various design-related matters that affect the visual quality of the Corridor. These guidelines should be used by local officials to provide guidance to applicants and to assist in the evaluation of development proposals, including site, landscaping, and building plans.

[2] *Secondary environmental corridors are, by definition, at least one mile in length and 100 acres in area. Such corridors that link or serve to connect primary environmental corridor segments, particularly when the secondary corridors are related to surface drainage, have no minimum area or length criteria.*

CORRIDOR URBAN DESIGN GUIDELINES

The following design guidelines are recommended for development or redevelopment that occurs in mostly urban centers—sometimes referred to as planned urban or sanitary sewer service areas—such as incorporated areas and the Wind Lake-Waubeesee Lake urban enclave, located within the STH 36 viewshed. These guidelines should help to enhance and maintain the vitality of urban settings by encouraging environmentally sensitive, high-quality developments with attractive architecture and landscaping that fits the visual urban context of a community or desired design theme. The guidelines should also lessen the negative impacts inherent in certain site features such as dumpsters, parking lots, and loading/unloading areas. While single- and two-family residential uses are encouraged to follow the design guidelines, most of the guidelines are intended for intensive developments such as multi-family residential, business, and institutional uses.

General Urban Character and Design Concepts

Overall Community Character and Design Concept

Urban centers, such as villages, cities, and urban hamlets, in the Corridor should continue to be enhanced as vibrant, concentrated locations of mostly residential uses supported by businesses and public services. The urban communities should be designed with a human-scale focus with attractive streetscaping that complements aesthetically-pleasing buildings within a pedestrian- and bicycle-friendly environment. The overall character of a community should ultimately represent a community's desired overall design theme or focused design themes for certain identified areas, such as a nautical design theme for lakefront areas, a colonial design theme for historic business areas, or a "prairie-style" or "country" design theme for areas surrounded by a natural setting.

Neighborhood Character and Design Concept

Neighborhoods of a community should be designed and developed in a spatially organized manner around a central feature, or focal point, such as a neighborhood park or elementary school, to promote a sense of physical unity as a planned unit. Any proposed development within a defined neighborhood should be compatible with the neighborhood character. Neighborhood residents should have safe and convenient access to parks, schools, shopping areas, employment centers, and other community facilities. Hence, bicycle and pedestrian ways should be a part of, or connected to a trail system, such as the Burlington or Waterford-Wind Lake Recreation Trails, providing access for both utilitarian and recreational purposes. Neighborhoods should also have ready access to an arterial street system, which includes STH 36. Urban activities and services within a neighborhood should be available through an internal network of collector and minor land-access streets designed to facilitate vehicular circulation, as well as bicycle and pedestrian circulation, while discouraging heavy volumes of arterial traffic through the neighborhood.

Central Business District (Downtown) Character and Design Concept

Usually urban centers contain an identifiable historic downtown area or central business district that should continue to be developed with a human-scale emphasis with unique buildings close to sidewalks or streets, and streetscaping that further supports a pedestrian- and bicycle-friendly environment. Certain features of the downtown streetscape façade, especially street trees and decorative street lights, may be continued along the "Main Street" that traverses through and/or leads traffic into the business district. Any proposed development or redevelopment within historic business districts should be compatible with a community's selected downtown design theme.

Compliance with Local Ordinances and Plans

The desired aesthetic character a community seeks should be, and often times is, expressed in local ordinances governing zoning and subdivision control. Community character may also be reflected in comprehensive plans or plan elements thereof, such as community land use plans, detailed neighborhood plans with street and lot layouts, and historic downtown development or redevelopment plans. All development proposals should comply with locally adopted ordinances and plans, and meet their intent.

Adopted plans should be used on a continual basis and referred to any time a development or redevelopment proposal is submitted for local review and approval. Development proposals should at least meet the recommendations of adopted plans, or, if at variance in some respect with adopted plans, should still be harmonious with sound community development objectives and standards. Local officials should remain receptive to proposed plan changes that can be shown to enhance an adopted plan while yet remaining compatible with the objectives for the development of the community as a whole.

Basic Site Planning

Site Analysis

Prior to site design, a site analysis should be conducted to not only determine suitable locations on the site for various facilities such as buildings, parking, and utilities, but also the location of any significant historical or natural features and site constraints, such as poor soils, steep slopes, and floodplains, as identified in Chapter II. The proper identification and preservation of said site elements will help produce a development that is sensitive to a community's historical and environmentally significant features while also retaining an attractive view from STH 36. Preserving certain site features will further help to avoid serious and costly environmental and developmental problems such as flood damage, poor drainage, water pollution, wet basements, and failing pavements and building foundations.

Preliminary Sketches and Preapplication Meetings

Prior to formal submittal of detailed development plans, a "sketch" plan and attendant site analysis information should be presented at a preapplication meeting. A site analysis completed for the sketch-plan layout of a proposed development is not usually as technically comprehensive as those required for engineered development plans. Although the engineering constraints on a site should be generally understood and taken into account, the site analysis for the purpose of designing a sketch plan is intended primarily to identify landscape character, preservation areas, and building areas.

In addition to discussing the sketch-plan layout, the preapplication meeting allows local officials and/or supporting staff an opportunity to advise the applicant/developer as to the procedure to be followed and the local regulations and pertinent plan information governing or guiding the development of lands in the community. At the same time, the developer can apprise the municipality of his own objectives for the site and the reasoning behind aspects of the design that are important from his perspective. This process may prevent expensive redesign cost and frustration, reduce formal plan review and approval processing time, avoid costly development problems, gain public acceptance, and help achieve a better design.

Development Plan Preparation, Submittal, and Review

A set of development plans consisting of site, landscaping, and architectural plans should be prepared for intensive developments such as residential subdivisions, planned unit developments, multi-family dwellings (three or more dwelling units per building), and commercial, industrial, governmental, institutional, and recreational uses, but not including a single- or two-family home proposed on an individual lot, which is typically reviewed by the local zoning administrator or building inspector. The preparation of such development plans would foster a comprehensive design that properly integrates various physical features which will define the overall image of the proposed development and establish its proper context with adjoining land uses. This set of plans should be submitted for local review and approval to ensure compliance with local regulations and guidelines affecting the community's desired character. Proposed developments should also be in concert with broader zoning and subdivision ordinances, including any design-related provisions, which may affect the detailed site design.

Parking and Service Areas

General Onsite Traffic Circulation

The vehicular circulation system within and around individual parcels with parking lots should be developed so as to provide easy access to parking facilities from the larger community without lessening the safety or capacity of arterials. Provision for traffic circulation between adjacent commercial uses, for example, should be provided

through coordinated access drives, shared parking lots, and interconnecting bicycle and pedestrian ways between parcels, all of which may be landscaped and partially screened from public streets. The use of shared driveways and parking lots between compatible land uses, as illustrated later in Figure 27, should be promoted where the driveway centerline may be the property line between two parcels of land or may be a mutually agreed-upon land access easement. Such shared arrangements reduce the number of driveway openings for both safety and aesthetic benefits and avoidance of circuitous traveling. Conflicts between vehicles and pedestrians should be avoided where possible and, where conflicts cannot be totally avoided, conflicts should be minimized by means of landscaped dividers or aesthetic rails. Also, delivery and service circulation patterns on the site should not conflict with pedestrian or general vehicular traffic in the area.

Number of Parking Spaces

A sufficient number of parking spaces should be provided in accordance with local zoning requirements. Reserved parking stalls should be provided for the physically disabled pursuant to the Americans with Disabilities Act and Section 346.503 of the *Wisconsin Statutes*.

When warranted, adjustments to the minimum number of parking spaces required should be allowed to avoid constructing unneeded and excessive impervious surfaces in areas that could otherwise be preserved or converted to landscaped open space. The open space, which would otherwise have been converted to pavement, should be retained as open lands and not be developed for other purposes. The number of parking spaces needed may be reduced due to employees working off-site; operations with cooperative/shared parking arrangements with different peak parking demand; or the provision of alternative transportation such as van pool operations, car-pooling, and bicycles.

Parking Lot Dimensions

Recommended design dimensions for parking lots are shown in Figure 1. The recommended dimensions will help avoid unnecessary impervious surfaces and preserve aesthetics while ensuring proper functionality. Parking lot drives should have a width as specified in Figure 1 based on the parking space angle and whether the drive or traffic aisle will accommodate one- or two-way traffic. Dimensions for handicapped parking spaces should comply with those established in the Americans with Disabilities Act. Parking dimensions may be adjusted due to significant site constraints, parking lots with one-way traffic aisles (not less than 12 feet wide), designated spaces for compact cars, or common access aisles for wheelchairs shared between parking spaces for the disabled.

Surfacing and Parking Space Identification

All traffic aisles, off-street parking areas, and loading/unloading areas should be graded and hard-surfaced with concrete or asphalt so as to be dust-free, properly drained, and more easily cleaned. Parking areas for five or more vehicles should have the aisle and parking spaces clearly marked in order to distinguish between parking stalls and vehicular circulation areas.

Parking Lot Visibility from Arterial Streets

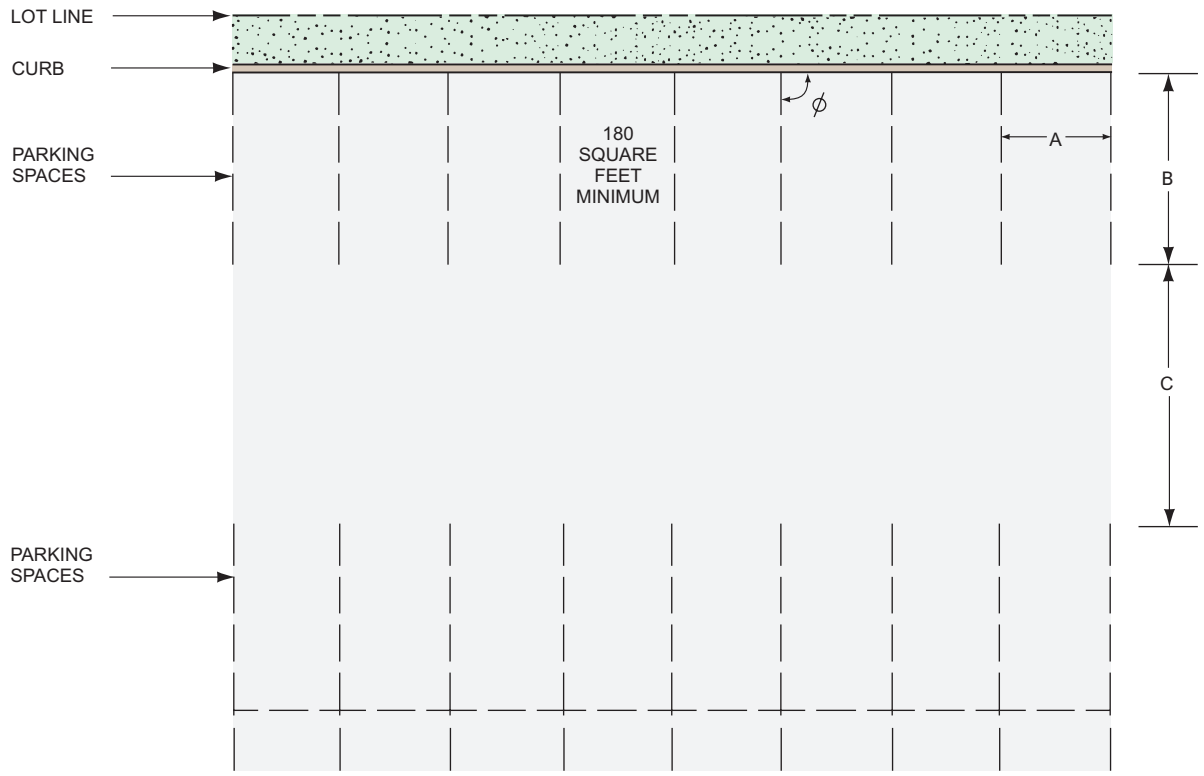
Parking lots should be landscaped appropriately, as specified under the landscaping subsection, while remaining partially visible from an adjoining arterial street or highway, having clearly marked entrances and exits, and being visually distinguishable from public rights-of-way. Parking lots without an access drive or traffic aisle and containing parking stalls with direct access onto a street right-of-way should be avoided due to, in part, the inability to visually buffer them.

Curbs and Barriers near Structures and Lot Lines

Curbs or barriers should be installed at least five feet, and preferably 10 feet, from structures and property lines to prevent parked vehicles from damaging structures or from extending over lot lines and sidewalks. In addition, adequate space should be provided for landscaping and visual screening which would further help prevent vehicles in off-street parking areas from directly backing onto public sidewalks and streets.

Figure 1

SUGGESTED DESIGN DIMENSIONS FOR PARKING LOTS AT VARIOUS ANGLES



Design Dimensions (feet)	Key	Degrees (⌀)				
		0	30	45	60	90
Stall Width	A	9	10	10	10	10
Stall Length	B	22	18	18	18	18
Aisle Width	C	12	12	12	16	24[a]

[a] *Two-way aisle.*

Source: SEWRPC.

Parking and Service Area Locations

General

Parking lots should be sited to minimize walking distances to the facility the parking lot is serving, which may also increase or enhance the setback from public streets, including STH 36. Parking spaces for the disabled should be located as close as possible to a building entrance which allows such persons to enter and leave the parking area without assistance and, if possible, without crossing traffic lanes or passing behind other parked vehicles. Service and loading areas should be located for convenient service vehicle access, while being screened from ready visibility.

Parking Lot Orientation in Relation to Public Streets

Parking lots visible from streets should be partially screened to "soften" the visual effect of such a use and should not be excessively large without landscaping. If a parking lot is proposed between a building and an adjacent street in a front yard or a rear yard of a reverse-frontage lot, the number of parking rows in said yard should preferably be minimized to no more than four rows with the remaining spaces located in either the side or

opposite yard. If more than four rows of parking spaces are allowed in such street yards, then a minimum 10- to 20-foot wide landscaped median or peninsula, extending the full length of a parking row, is encouraged to be provided in the parking lot at a spacing of every 120 feet or every four parking rows, as illustrated in Figure 2. Sidewalks should be provided in said median, where necessary, to allow for safe and convenient pedestrian access between public sidewalks, parked vehicles, and the principal building as shown in this Figure.

Service Area Orientation in Relation to Public Streets
Service or loading/unloading areas containing rows of loading docks and/or overhead doors should preferably be located in the rear of buildings to shield such areas from public view. As an alternative due to site constraints or rear yards of reverse-frontage lots facing public streets, service areas could be located in side yards with proper buffering, as indicated under the landscaping subsection.

Other Parking Lot Design Guidelines
The design guidelines for landscaping and lighting in parking lots should follow those established under the landscaping and lighting subsections.

Landscaping

General
Landscape design for sites in the Corridor should be integrated with overall site and building plans, not merely as an afterthought, and should be consistent with the design theme for a site and/or the desired community character. Landscaping provides aesthetic and functional benefits by enhancing the overall attractiveness of a site as well as the community and contributing to the general welfare of the public by providing shade, shelter, and screening. To ensure that landscape features are properly installed and maintained, upon submittal and approval of proposed landscape plans, a comprehensive maintenance schedule and a financial guarantee should be required to ensure the installation of landscape materials in accordance with the approved plans. Any proposed landscaping should recognize traffic safety requirements including those for sight distances, vision triangles, and vehicular recovery areas. Many of the following landscaping design guidelines are supported by the survey results, as indicated in Appendices A and B.

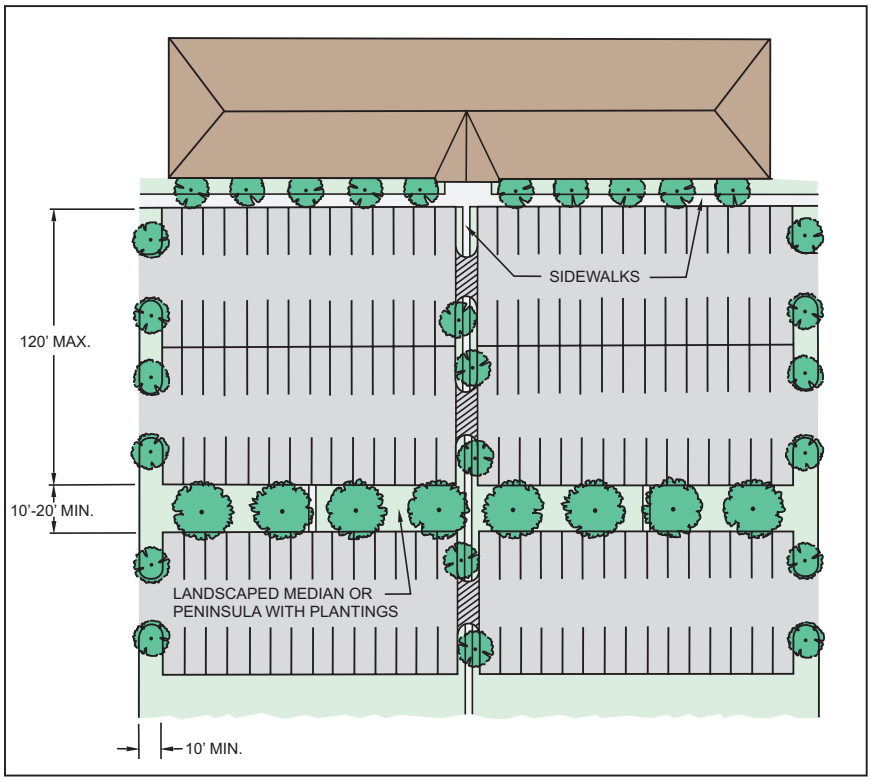
Existing Vegetation
Every effort should be made to protect and retain existing trees, shrubbery, vines, and grasses. Removal of existing vegetation should be minimized and, when permitted, cutting and clearing should be conducted so as to prevent erosion and sedimentation and to preserve and improve scenic qualities. Trails constructed in environmentally sensitive areas should be designed so as to result in the least removal and disruption of vegetation with minimal impairment to the natural beauty of the Corridor. Trees should be protected and preserved during construction as illustrated in Figure 3 and in accordance with sound tree conservation practices, including the use of wells, islands, or retaining walls whenever abutting grades are altered. Special consideration should be given to preventing soil compaction and stockpiling of soil or construction materials, even if temporarily, in existing tree root zones—the area beneath the tree canopy that lies within the "dripline" of the canopy as identified in Figure 3.

Selection of Landscape Plants and Materials
Trees and shrubs, meeting the most recent edition of the American Association of Nurseryman's Standards for nursery stock, should be planted at appropriate intervals along public rights-of-way, adjacent to buildings, and in other designated onsite planting areas. The type of planting should be determined by the topographic features and microclimate of the site. The spacing of plants should be determined by soil conditions, land use, terrace width, utility locations, and design theme. Appendix C sets forth the species characteristics of various trees, shrubs, ornamental grasses, groundcovers, and vines to aid in the selection of landscape plantings in the Corridor based, in part, upon species hardiness to environmental conditions. For guidance purposes, Appendix C also recommends desirable sizes and spacing of certain plant species to be used for buffering or screening.

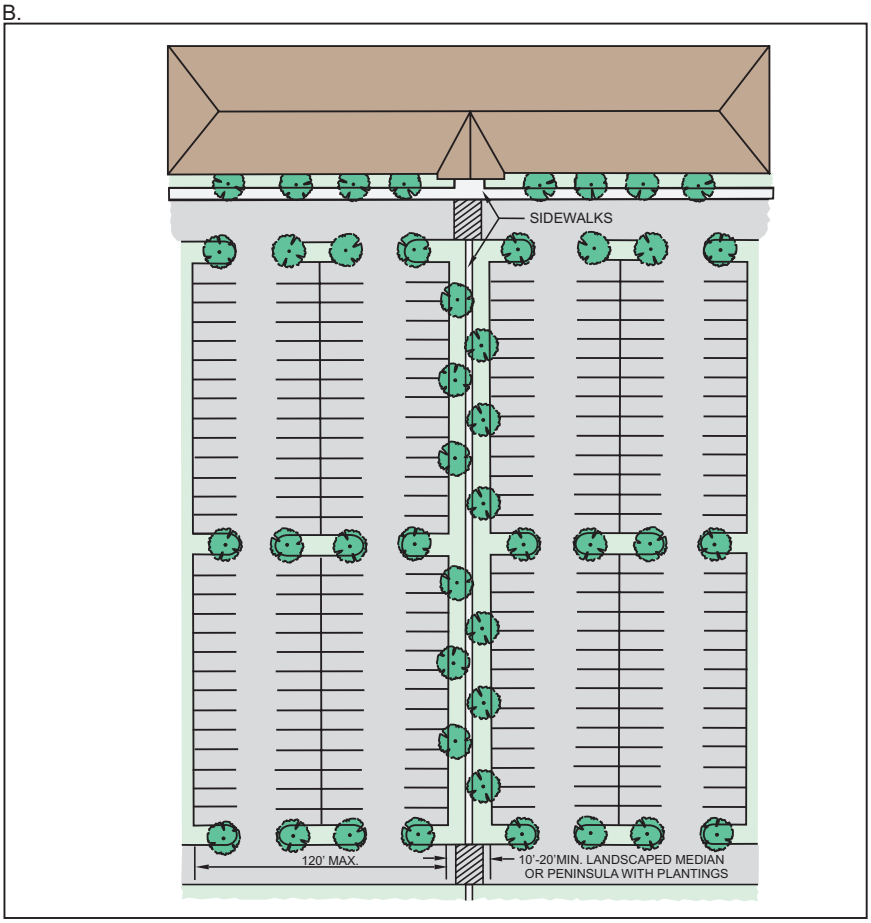
Figure 2

PROVISION OF A LANDSCAPED MEDIAN OR PENINSULA IN A LARGE PARKING LOT

A.



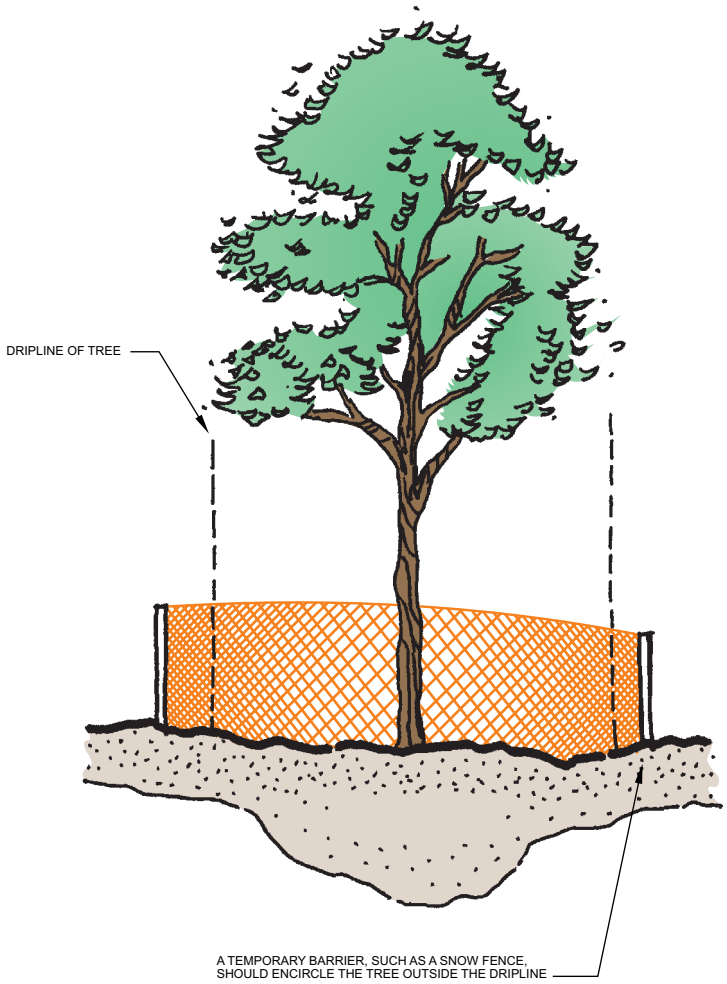
B.



Source: SEWRPC.

Figure 3

PROTECTION OF EXISTING TREES



Source: SEWRPC.

Plants selected for use in the urban environment, such as in parking lots and along streets, should be salt-tolerant. Decorative mulch, such as stone or shredded hardwood bark, with underlying fiber-like weed barrier should be used in lieu of turf grass where heavy pedestrian and vehicular traffic is present or where the availability of water is limited. If such grass is proposed in landscaped areas, it should be properly maintained and protected from pedestrian and vehicular traffic, otherwise an "all-weather" surface material should be used, such as decorative pavement surface or stone mulch with underlying weed barrier. Excessive pavement of open space areas with hard-surface materials such as asphalt or concrete should be discouraged. Flower beds should only be provided if provisions are made for proper maintenance; otherwise, groundcover or ornamental grasses could be used, which require little maintenance. Berms are beneficial for plants especially if more suitable planting soil is placed above planting areas containing poor soil and drainage. Invasive plants identified in Appendix D should not be used in landscaping.

Natural native plants, including prairie grass and wildflowers, should be used in areas of steep topography, along rural roadways, and in designated "natural" areas of parks and greenways in the Corridor to preserve or achieve a natural appearance while reducing maintenance cost. To preserve water supply, natural landscaping and xericscaping-a landscape arrangement with plants that require minimal water-should be encouraged.

Wind and Landscape Planting
Landscaping may be provided to minimize winter wind and to promote summer wind effects on structures. Winter wind protection is afforded by providing landscaping of an adequate height on the west side of buildings. An optimum distance between a windbreak and a building is approximately twice the height of the windbreak. A windbreak consisting of two rows of coniferous trees, which may be located in buffer yards adjacent to arterial streets, is nearly optimal for efficiency, and additional rows would not significantly increase its effectiveness as a windbreak. Figure 4 illustrates the concept.

Noise and Landscaping
Groups of trees, shrubs, and other landscape masses, such as earth berms or ornate solid fences and walls, can serve as noise barriers and should be utilized where noise could create problems for neighboring land uses. Such landscaped noise barriers are most effective when the barrier is near the noise receiver or source, including STH 36.

Solar Access and Landscape Planting
With respect to solar access, plants installed to the south of structures should be deciduous species with a broad branching habit and open twig patterns that would provide shading in the summer and permit sunlight through the branches in the winter. Figure 5 illustrates these concepts.

Street Trees
Street trees should be provided along public rights-of-way because of their aesthetic benefits. They also enhance air quality by providing shade and absorbing carbon dioxide. Any trees proposed in street rights-of-way should be coordinated with the government agency that has jurisdiction. Appendix E provides a list of trees that may be used as street trees. Any trees proposed in street rights-of-way should be coordinated with the government agency that has jurisdiction. A minimum of one deciduous shade tree of at least two inches in diameter measured at 4.5 feet above ground level, about chest height, and meeting the American Association of Nurserymen's Standards for nursery stock should be planted for each 50 feet of street frontage. Trees may be planted closer together than suggested in Appendix E depending on the type of tree selected, the desired design effect to be achieved, and the amount and quality of growing space provided for the root system. For those urban areas with limited space between buildings and face of curbs, columnar or small- to medium-scale street trees could be provided and spaced closer together than canopy-type trees. In the rural areas of the Corridor, trees could have some randomness or informality, such as staggering, in their arrangement to avoid the urban appearance the regular space may evoke. Existing healthy trees that are noninvasive and properly protected should be allowed to fulfill a community’s street tree requirement.

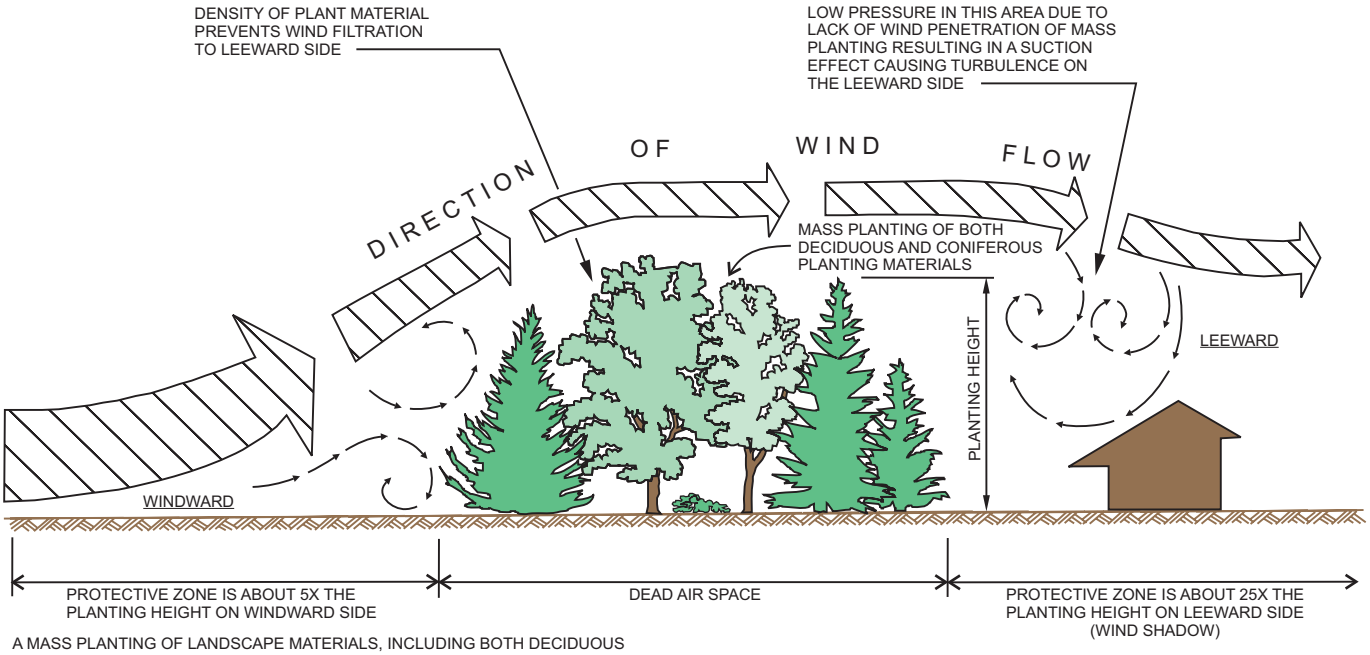
Figure 6 shows the minimum distances a street tree should be located from certain physical features within a street right-of-way. Where streets contain roadside swales, trees should be planted outside of such swales wherever possible, near the street right-of-way line. Trees could be installed on gentle slopes with proper staking. As an alternative, due to steep slopes or other physical constraints, such trees could be planted outside of street rights-of-way on adjoining lots in proposed subdivisions, but preferably no more than five to ten feet from the street right-of-way line. Property owners would be responsible for maintaining the latter trees.

Street Terraces
Terraces should be provided as a separation between roadways and pedestrian travel to reduce the perception of hazard while providing a more pleasant pedestrian environment. A landscaped or surfaced area (i.e. brick-paved street edge), referred to herein as a "terrace", should be provided between the curb or edge of street pavements and the inside edge of concrete sidewalks or asphalt paths. Terraces provide an area off a sidewalk or path for sign posts, street lights, utility poles, refuse containers, and other street furniture; serve as a location for street trees and other landscaping; allow driveway aprons to be located outside of sidewalk or path areas; offer key space for snow storage; and reduce splashing of pedestrians by passing motor vehicles operating on wet pavements.

Terraces that are to contain trees should be at least six feet wide, preferably wider, to allow sufficient space for the root system while minimizing damage to adjacent pavements. If the terrace is 15 feet or wider, trees may be staggered instead of arranged in a linear row. Generally, large street trees should not be planted in terraces less

Figure 4

LANDSCAPING FOR PROTECTION FROM WIND

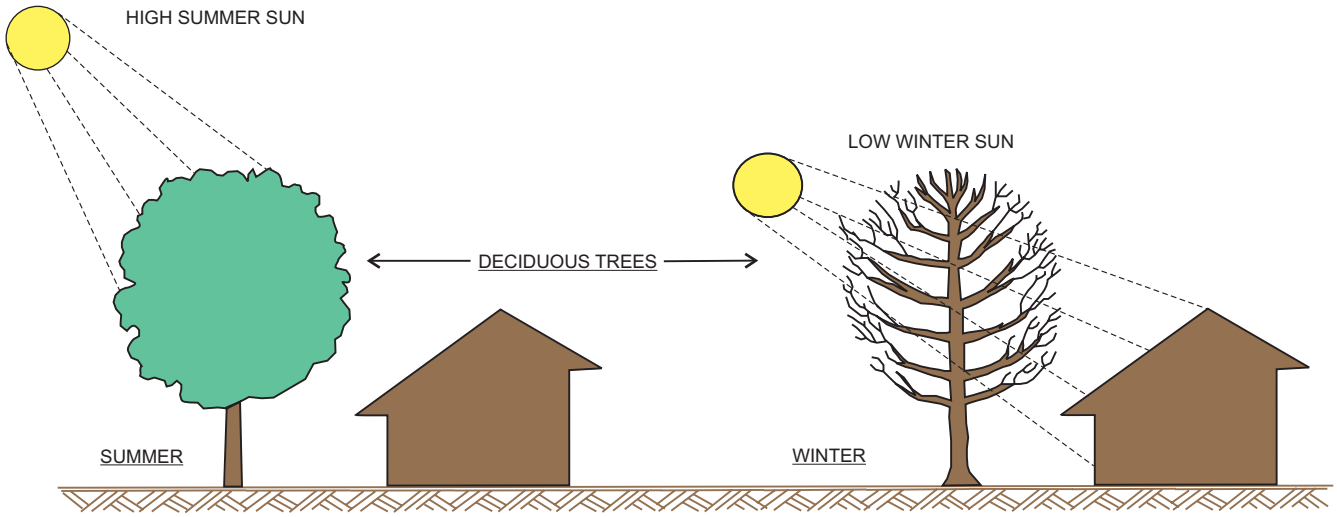


A MASS PLANTING OF LANDSCAPE MATERIALS, INCLUDING BOTH DECIDUOUS AND CONIFEROUS VARIETIES, CAN DECREASE THE WIND VELOCITY ABOUT FIVE TIMES THE PLANTING HEIGHT ON ITS WINDWARD SIDE AND ABOUT TWENTY-FIVE TIMES ITS HEIGHT ON THE LEEWARD (WIND SHADOW) SIDE OF THE MASS PLANTING.

Source: SEWRPC.

Figure 5

DECIDUOUS LANDSCAPE PLANTING AND SEASONAL SOLAR ACCESS

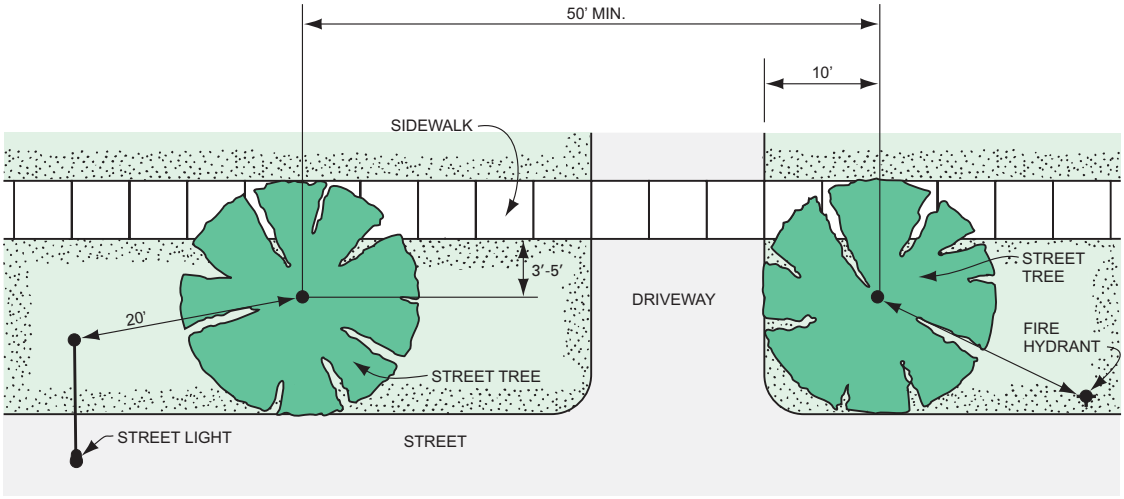


GENERALLY, LANDSCAPE PLANTINGS TO THE SOUTH OF STRUCTURES SHOULD BE BROAD, DECIDUOUS SPECIES WITH OPEN TWIG PATTERNS, AFFORDING THE PASSAGE OF LIGHT THROUGH THE BRANCH STRUCTURE IN THE WINTER. THE CHOICE OF DECIDUOUS PLANTINGS SHOULD BE MADE SINCE THEY DROP THEIR LEAVES IN THE FALL AND ALLOW LOW WINTER SUN TO PENETRATE THEIR BRANCHING STRUCTURE. IN THE SUMMER, THE DECIDUOUS PLANTINGS CAN ALSO PROVIDE SUN SHADING OF THE STRUCTURE, THUS LOWERING UNWANTED SUMMER HEAT GAIN.

Source: SEWRPC.

Figure 6

SUGGESTED MINIMUM STREET TREE PLANTING DISTANCES IN PUBLIC RIGHTS-OF-WAY



Source: SEWRPC.

than four feet wide unless a tree grate or other methods are provided and/or a landscape device is used to control the lateral growth of the root system in certain locations, especially near concrete sidewalks or asphalt paths. Precaution should be taken when placing trees near utility lines.

Cul-de-Sac Turnarounds with Landscaped Islands

Cul-de-sac streets should terminate in a circular or tear-drop turn-around, as shown in Figure 7, with preferably center landscaped islands which may be maintained by the local government or by private means such as a homeowners or condominium association. Such landscaped islands should also be provided in the center of "eyebrow" turn-arounds (half circular cul-de-sacs).

Vision Triangles and Landscaping at Street Corners

Vision Triangles and Landscaping

A vision clearance triangle should be provided in which obstructions, such as structures, vegetation, and parked automobiles, are minimized between the heights of 2.5 and 10 feet above the mean curb grade or, if no curb exists, the centerline street grade. For vegetation, low-growing species are recommended so that intrusion into the vision clearance area does not occur. The vision clearance triangle is the triangular space formed by intersecting nonarterial streets (collector and minor land-access streets) right-of-way lines and a line joining points on such lines at a point 15 feet from their intersection, as shown in Figure 8. In the case of streets intersecting arterial streets and railways, the corner cutoff distances establishing the vision clearance triangle should be increased to 50 feet, as illustrated in Figure 8. Vision clearance triangles at intersections with State or County Trunk Highways should meet the vision corner requirements of the State or the Racine County Public Works Department, but in no case should they be less than those specified in Figure 8.

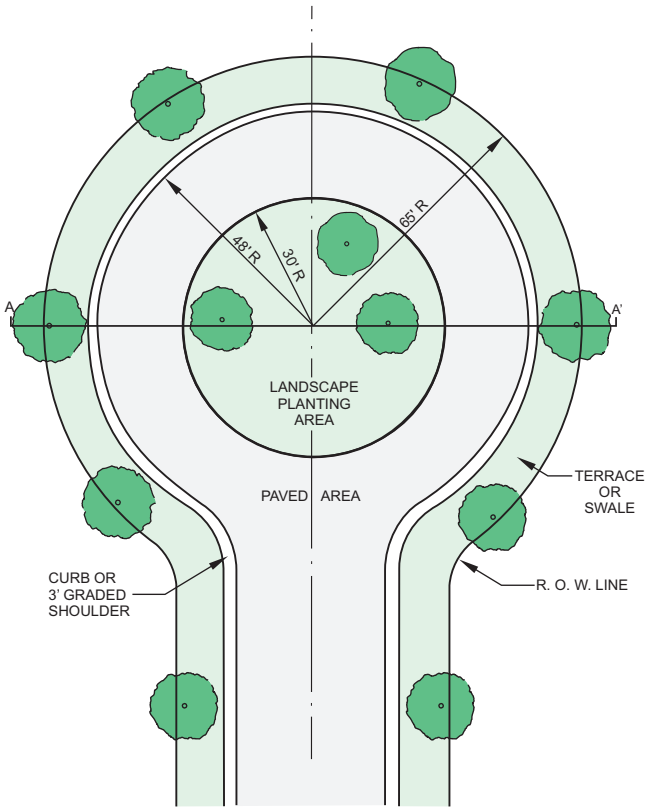
Single-trunk trees may be permitted within the vision clearance triangle provided that they are located as far away from the intersection as possible and that the bottom of the tree canopies are at least 10 feet above the adjacent mean curb grade. Trees, when planted, should be pruned of branches lower than about five feet above grade; thereafter, all trees should be pruned of branches below 10 feet, when feasible, in relation to tree size as it grows. Open fences with less than 25 percent opaqueness and necessary utility poles and traffic, directional, and street name signs may also be allowed; however, any proposed objects within the clearance triangle should be coordinated with the government agency having jurisdiction.

Figure 7

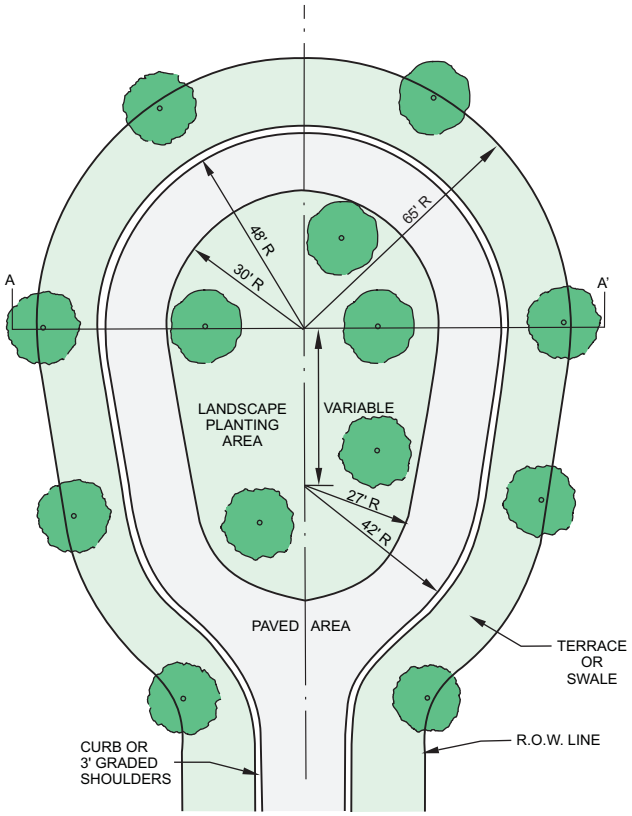
CUL-DE-SAC TURNAROUNDS WITH LANDSCAPED ISLANDS

PLAN VIEWS

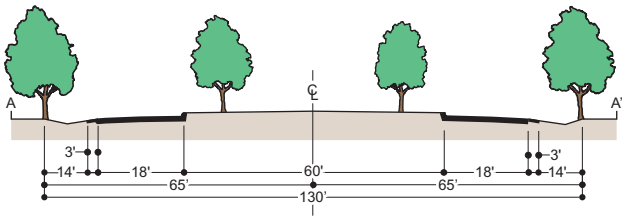
"BULB" TYPE CUL-DE-SAC STREET
WITH CENTER ISLAND



"TEAR DROP" TYPE CUL-DE-SAC STREET
WITH CENTER ISLAND



CROSS-SECTION VIEW



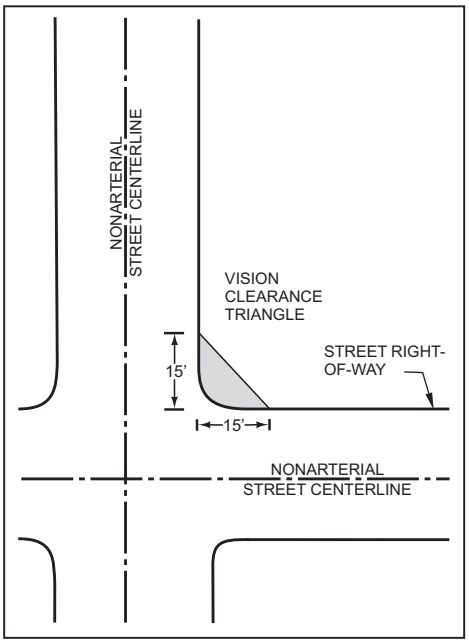
Source: SEWRPC.

Figure 8

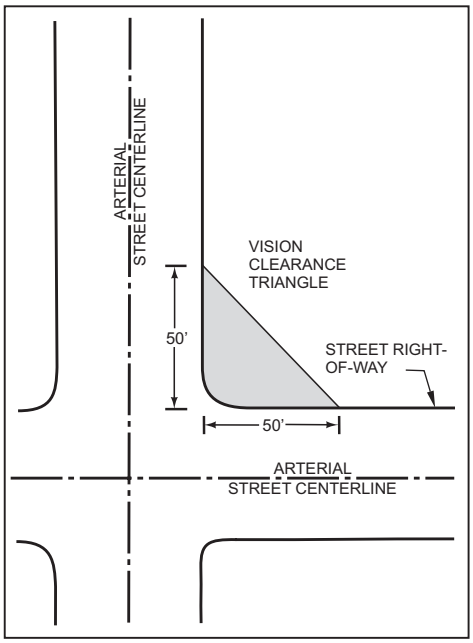
VISION CLEARANCE TRIANGLES

PLAN VIEWS

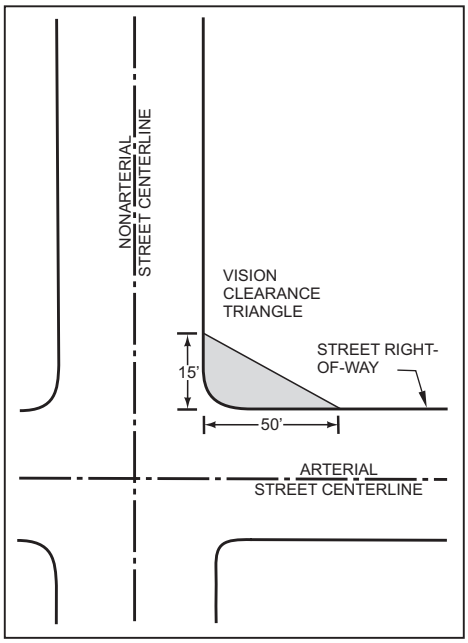
A. TWO NONARTERIAL STREETS INTERSECTING



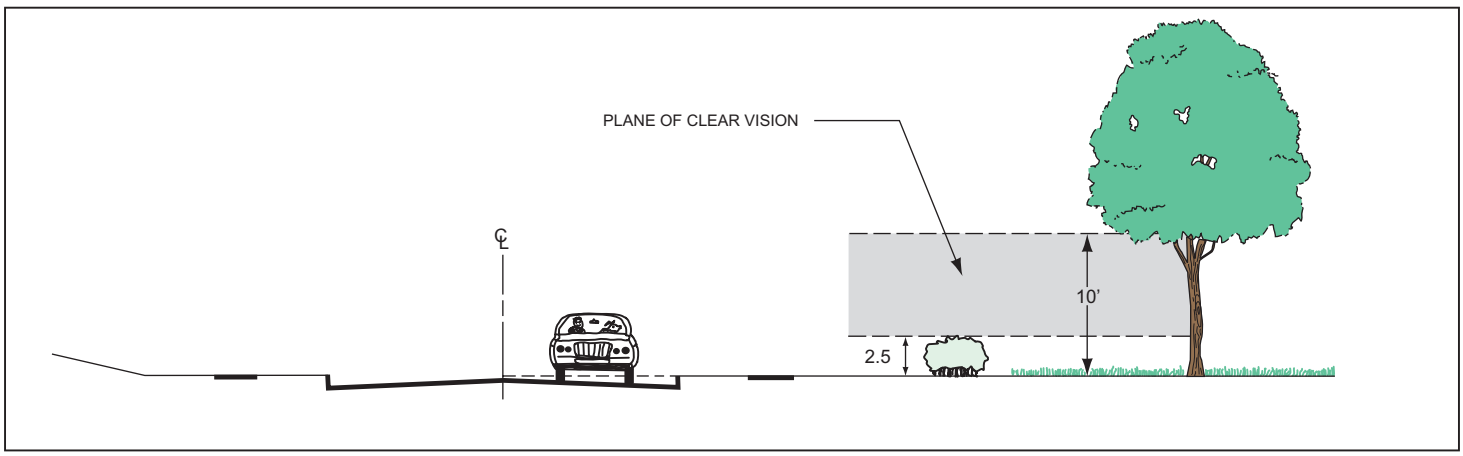
B. TWO ARTERIAL STREETS INTERSECTING



C. NONARTERIAL STREET INTERSECTING AN ARTERIAL STREET



CROSS-SECTION VIEW



Source: SEWRPC.

Corner Property/Street Right-of-Way Lines
Property lines at street intersections should be rounded to an arc with a minimum radius of 15 feet, or, preferably, should be cut off by a straight line through the points of tangency of an arc having a radius of 15 feet or greater. This dimension may need to be increased or an easement should be provided if unique landscaping is proposed at street corners such as those for defining a main entryway into a subdivision or a "gateway" into the community or a Village Center, as discussed below, while still recognizing traffic vision requirements.

Median Landscaping

General
While recognizing traffic visibility requirements, large elevated plant beds, such as those shown in Figure 9, should be provided in all raised street medians to dramatically improve the streetscape of a community. Streetlight poles could contain colorful banners, or at least on poles at selected locations such as median openings and/or street intersections, for aesthetic purposes and to further instill a sense of place, while observing traffic visibility requirements. Any proposed landscaping in street rights-of-way should be coordinated with the government agency that has jurisdiction.

Narrow Medians and Channelizing Islands
Raised medians four feet or less in width should not be comprised of plain asphalt, but should contain ornate concrete or, preferably, decorative masonry pavement or even flowers and ornamental grasses if properly maintained. Raised channelizing islands should also consist of decorative brick and not unattractive asphalt, since pedestrians may use these medians as a safe haven prior to crossing busy streets. As an alternative, such medians may contain a mixed brick and concrete masonry pattern or an ornate "stamped" concrete pattern.

"Gateway" or Main "Entryway" Landscaping
Main "entryways"—sometimes referred to as "gateways"—into communities, parks, residential neighborhoods, historic districts, downtown areas, and business or industrial centers should be well-defined with attractive landscaping and signs for identification, directional, and aesthetic purposes, as well as to further instill a sense of unity. Collector and minor land-access streets functioning as main entrances into public parks, residential neighborhoods, and business or industrial parks should contain an attractive entryway that may consist of a landscaped boulevard-type street entrance. Proper design and maintenance of landscaped entryways, especially those containing center landscaped islands, are crucial for retaining aesthetic appeal and function without obstructing traffic visibility or turn movements. Figure 10 illustrates alternative landscape designs for such "entryways." Other alternative landscaping layouts are provided in Figure 11; however, low ground or "monument" signs, rather than high pole signs, are recommended. A community may determine that the upkeep of most landscaped entryways, except those representing the community as a whole such as defined "gateways" with community "Welcome" signs, should be primarily the responsibility of property owners or private organizations such as a subdivision homeowners association or neighborhood organization.

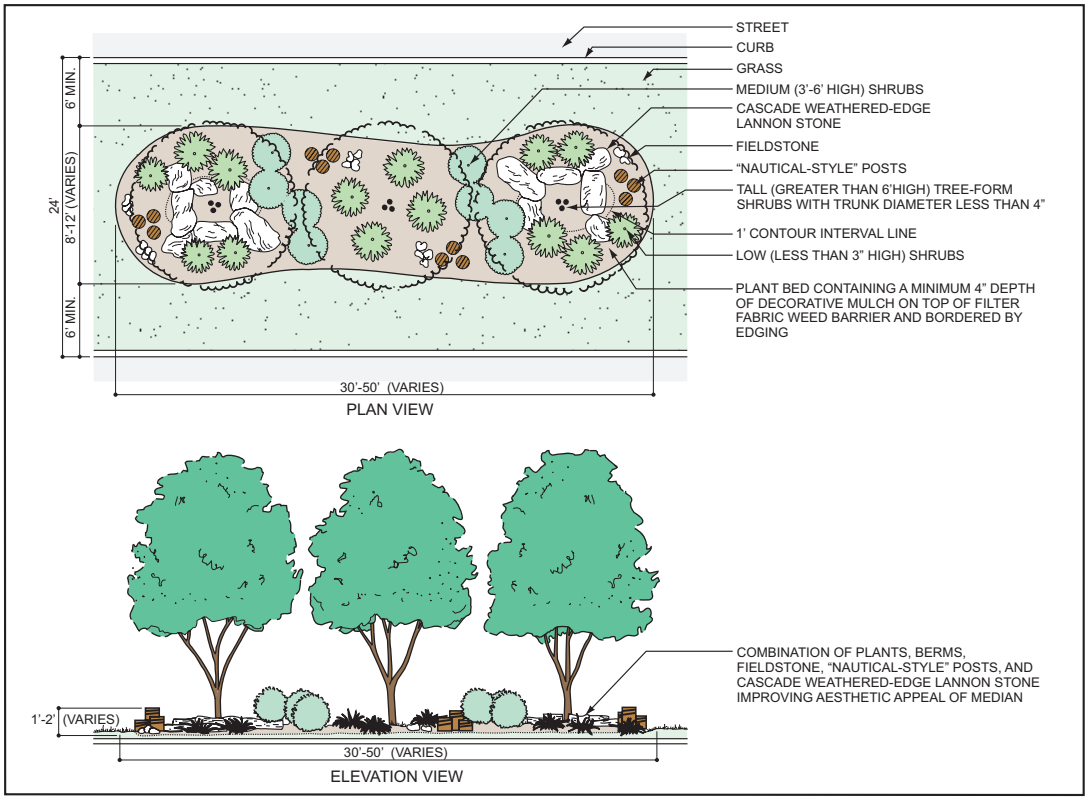
Sign Landscaping
A landscaped bed should be placed at the base of freestanding advertisement signs to improve the aesthetics as well as the noticeability of signs. The length of the planting area should be at least 1.5 times the length of the sign face, and at least six feet wide. The planting area should consist of a combination of decorative mulch, flowers, groundcover, ornamental grasses, shrubs, or other plantings, except turf grass, which should be provided around the sign without obstructing the sign face, as illustrated in Figure 11.

Minimum Open Space
A minimum of 15 to 25 percent of the total site area should be maintained in open space for proposed intensive developments such as multi-family residential, commercial, and industrial uses. Open space areas may include existing vegetation, landscaping, pedestrian paths, and sidewalks, but should not include buildings, structures, streets, driveways, alleys, dumpster pads, parking areas, and service (loading/unloading) areas.

Figure 9

ALTERNATIVE LANDSCAPE BEDS FOR HIGHWAY MEDIANS

A. LANDSCAPING WITH BERMS, POSTS, STONES, AND PLANTS



B. LANDSCAPING WITH PLANTERS AND PLANTS

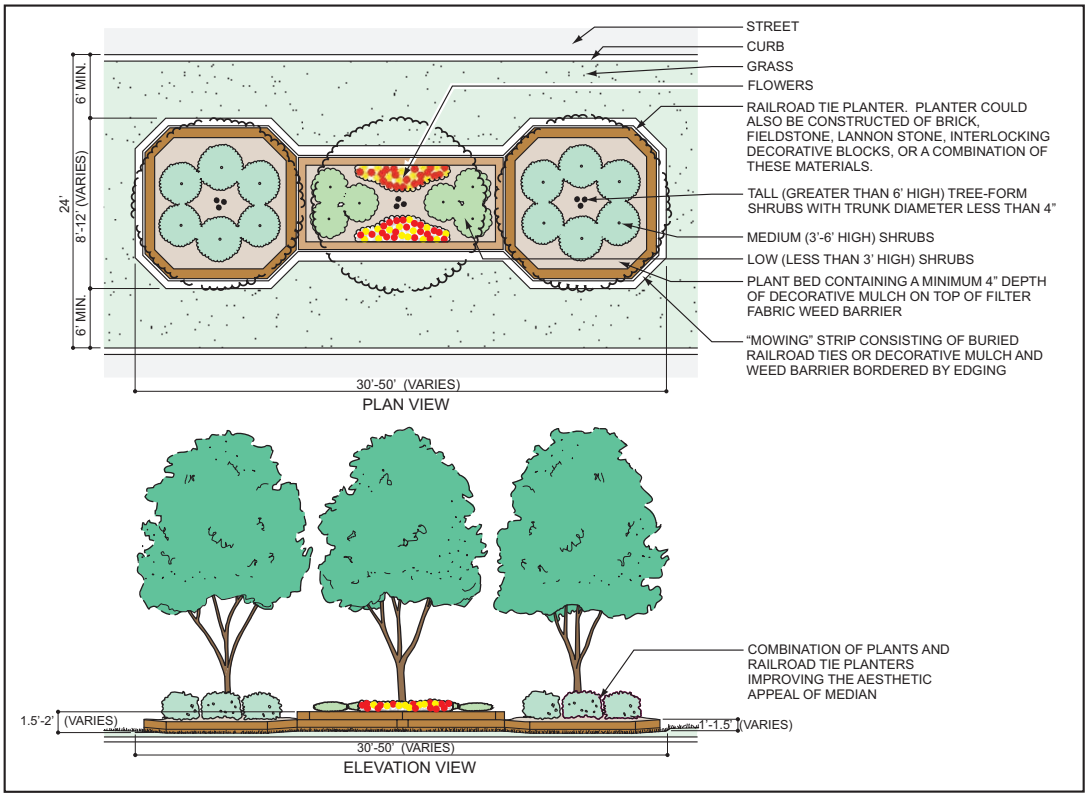
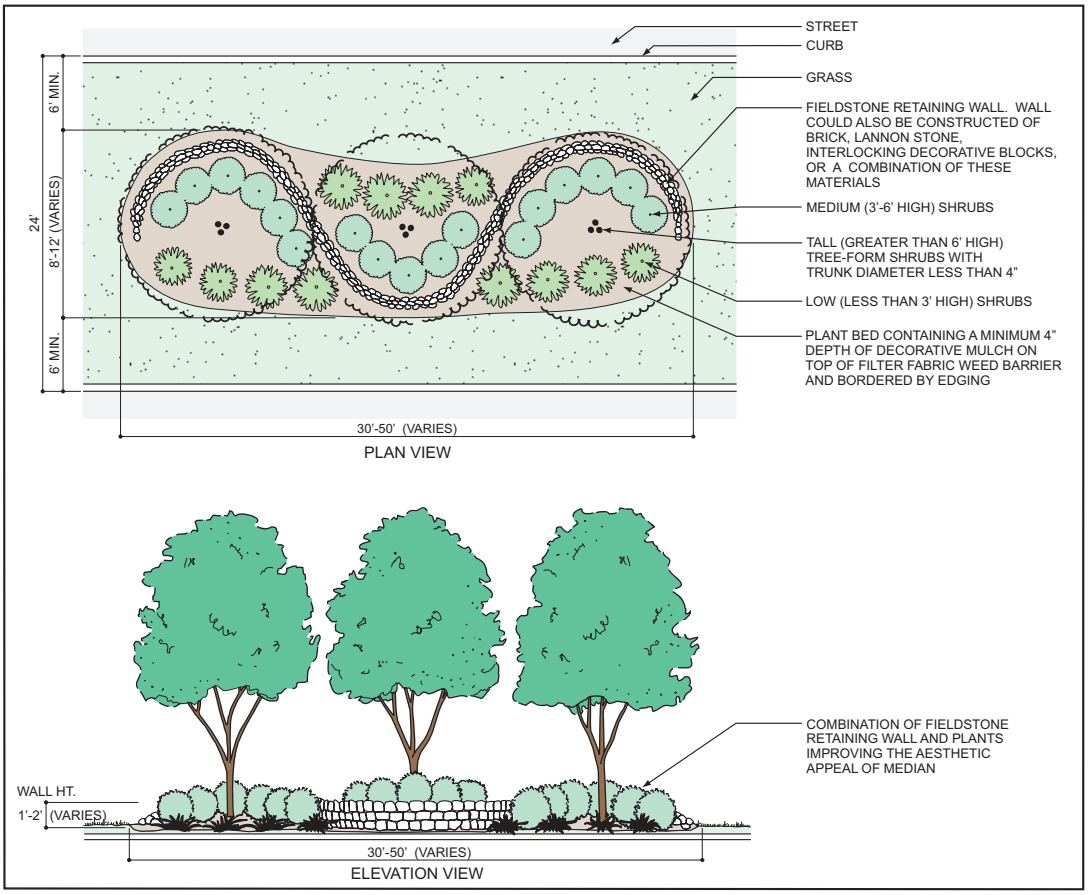


Figure 9 (continued)

C. LANDSCAPING WITH FIELDSTONE WALL AND PLANTS



Source: SEWRPC.

Buffering

Buffers Between Dissimilar Uses

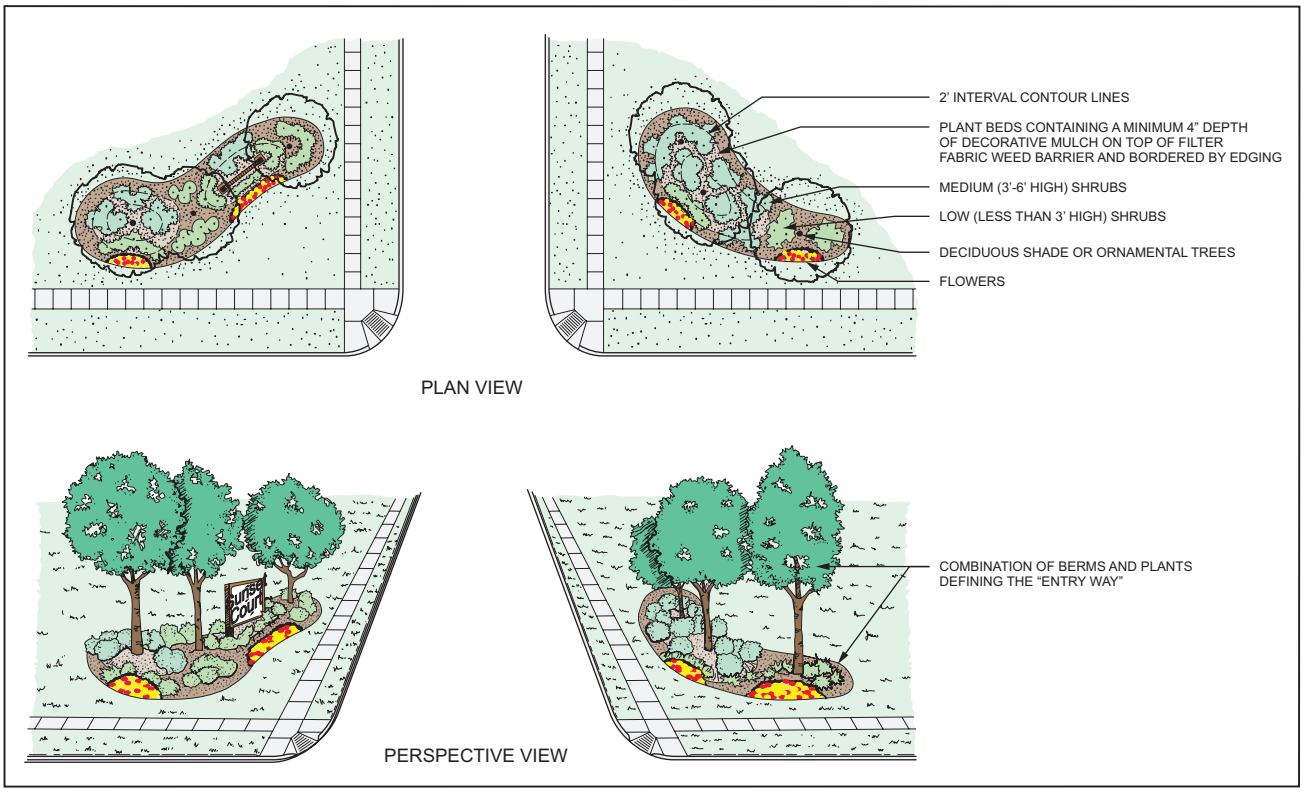
Landscaped buffer strips, sometimes referred to as buffer or transitional yards, should be provided between dissimilar uses to screen or block visual nuisances, air and noise pollutants, or other negative impacts. Buffers could consist of various landscape features such as earth berms with landscape plantings; fencing and walls with plantings; wide green spaces; and grade separations in order to effectively separate or mitigate between differing uses. Landscaped buffer strips provided along public streets, including those along the rear of proposed residential reverse-frontage lots abutting STH 36, as shown in Figure 12, should be designed to ensure a desired visual character of the community. Figure 13 illustrates alternative landscaping that could be provided in such buffer strips. Openings for pedestrian or bicycle access should be provided, and the standards for vision triangles mentioned earlier should be recognized. Also, buffers strips should not be located on any portion of existing or dedicated rights-of-way unless allowed by the government agency having jurisdiction.

If space is limited, a solid ornate fence or wall should be provided, preferably with landscaping such as shrubs or ornamental grasses provided on at least the finished side of the fence or wall; otherwise, the fence or wall could be placed on the property line. If fencing is used, the finished side should face the street or neighboring property with the supporting structural components of the fence facing away from adjacent streets and properties. Some provision of buffering between dissimilar uses is preferable to none at all.

Figure 10

ALTERNATIVE LANDSCAPING FOR MAIN "ENTRYWAYS"

A. LANDSCAPING WITH BERMS AND PLANTS



B. LANDSCAPING WITH RETAINING WALLS AND PLANTS

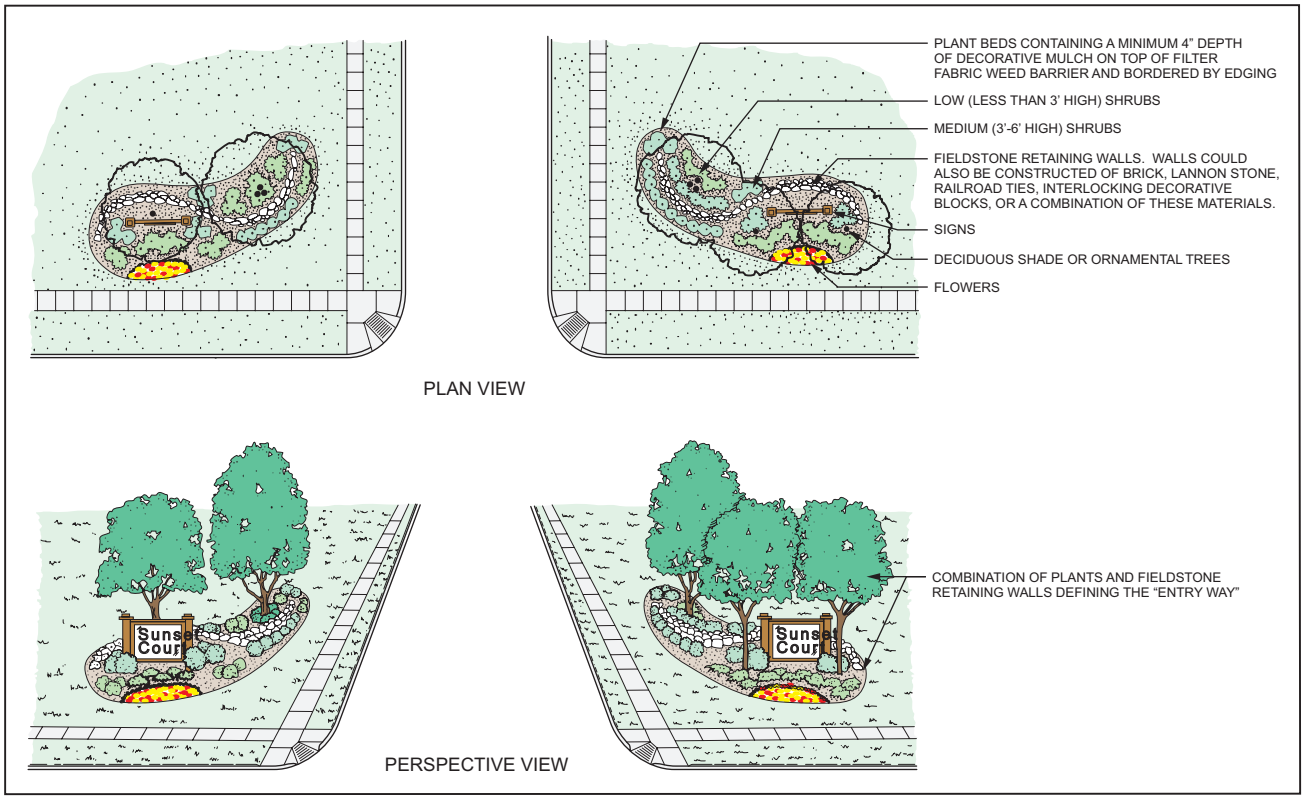
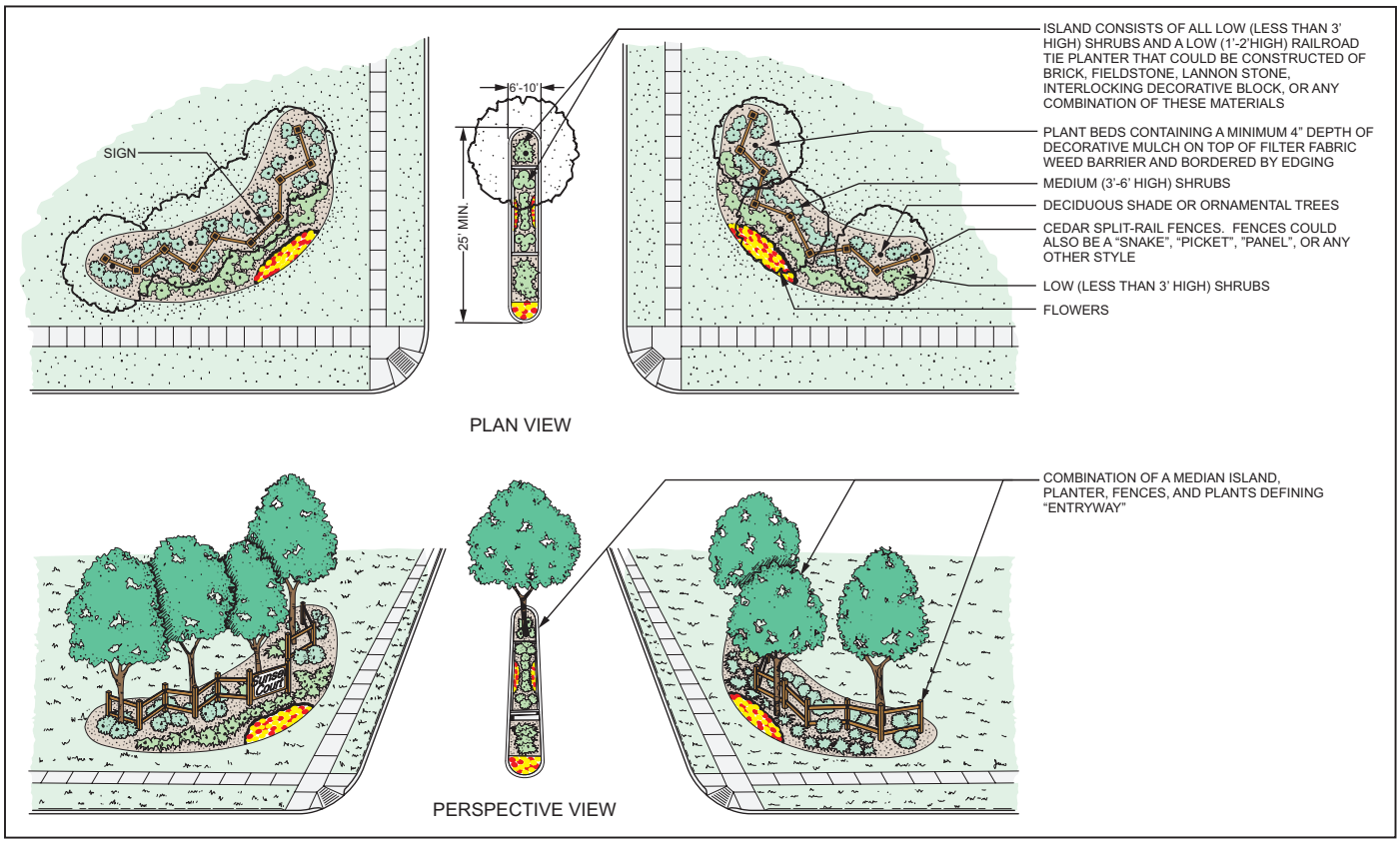
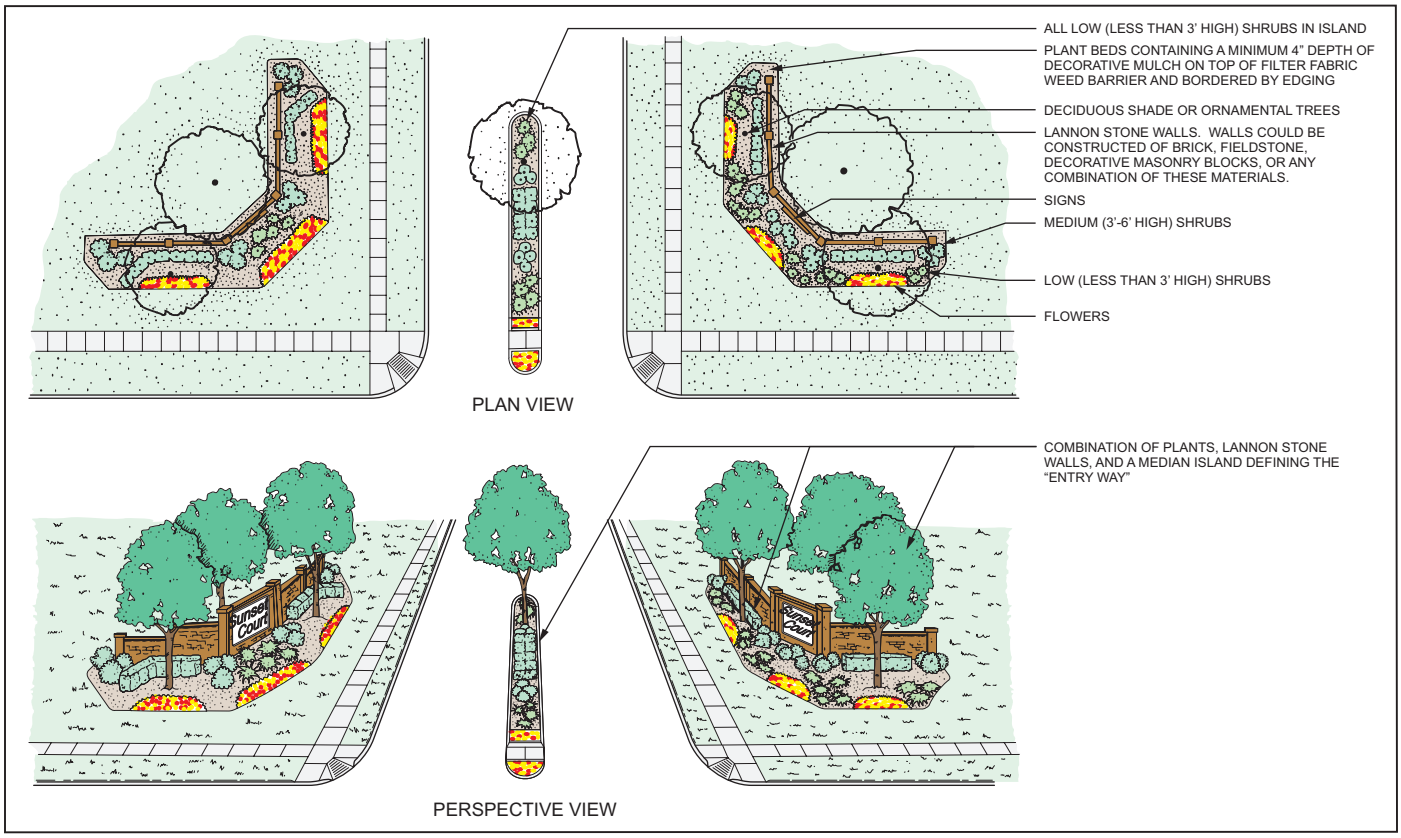


Figure 10 (continued)

C. LANDSCAPING WITH AN ISLAND, FENCES, AND PLANTS



D. LANDSCAPING WITH AN ISLAND, FREESTANDING WALLS, AND PLANTS

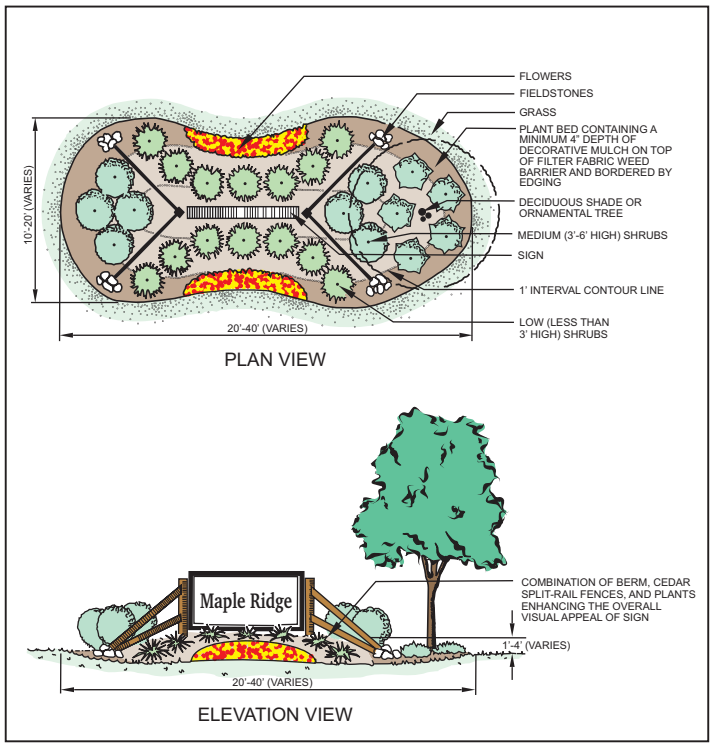


Source: SEWRPC.

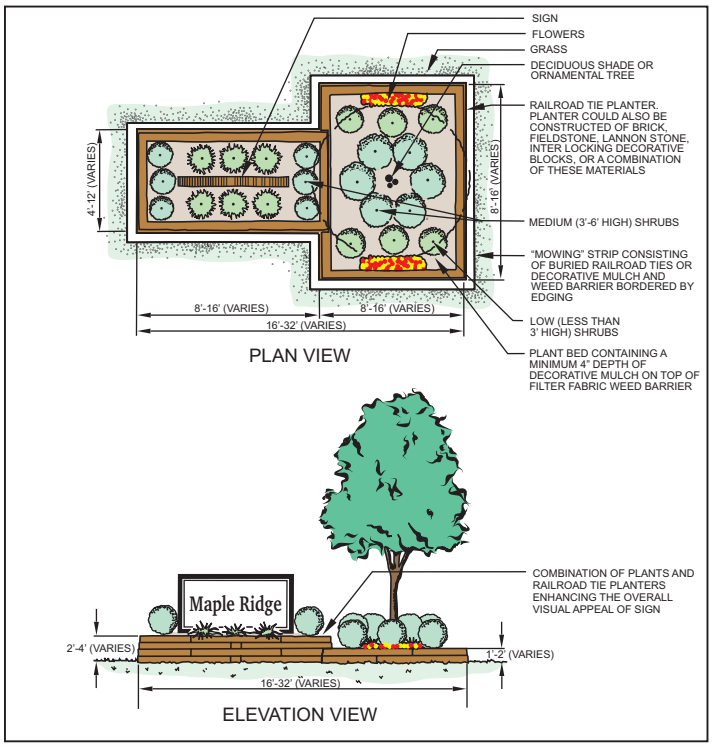
Figure 11

ALTERNATIVE LANDSCAPING FOR FREESTANDING ADVERTISEMENT SIGNS

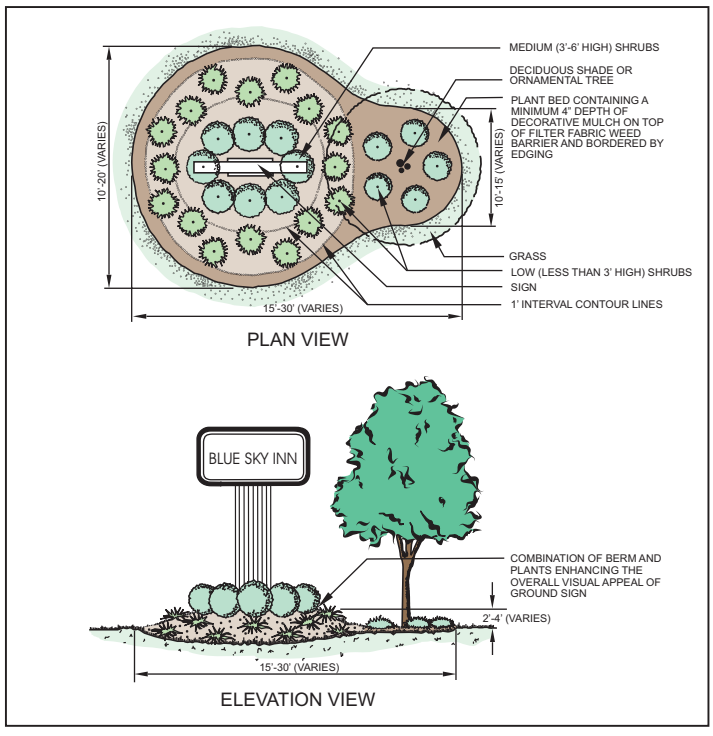
A. LANDSCAPING WITH BERM, DECORATIVE FENCES, AND PLANTS



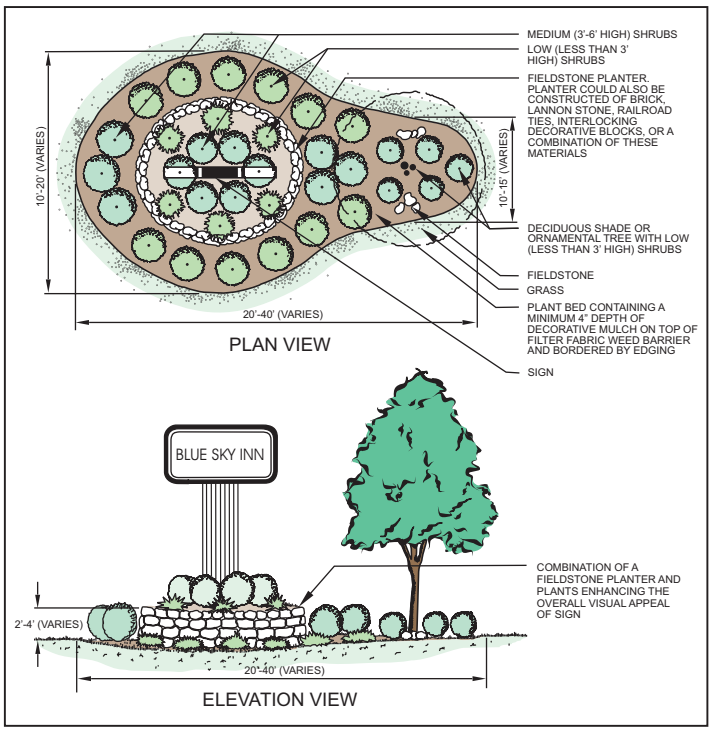
B. LANDSCAPING WITH PLANTS AND PLANTERS



C. LANDSCAPING WITH BERM AND PLANTS



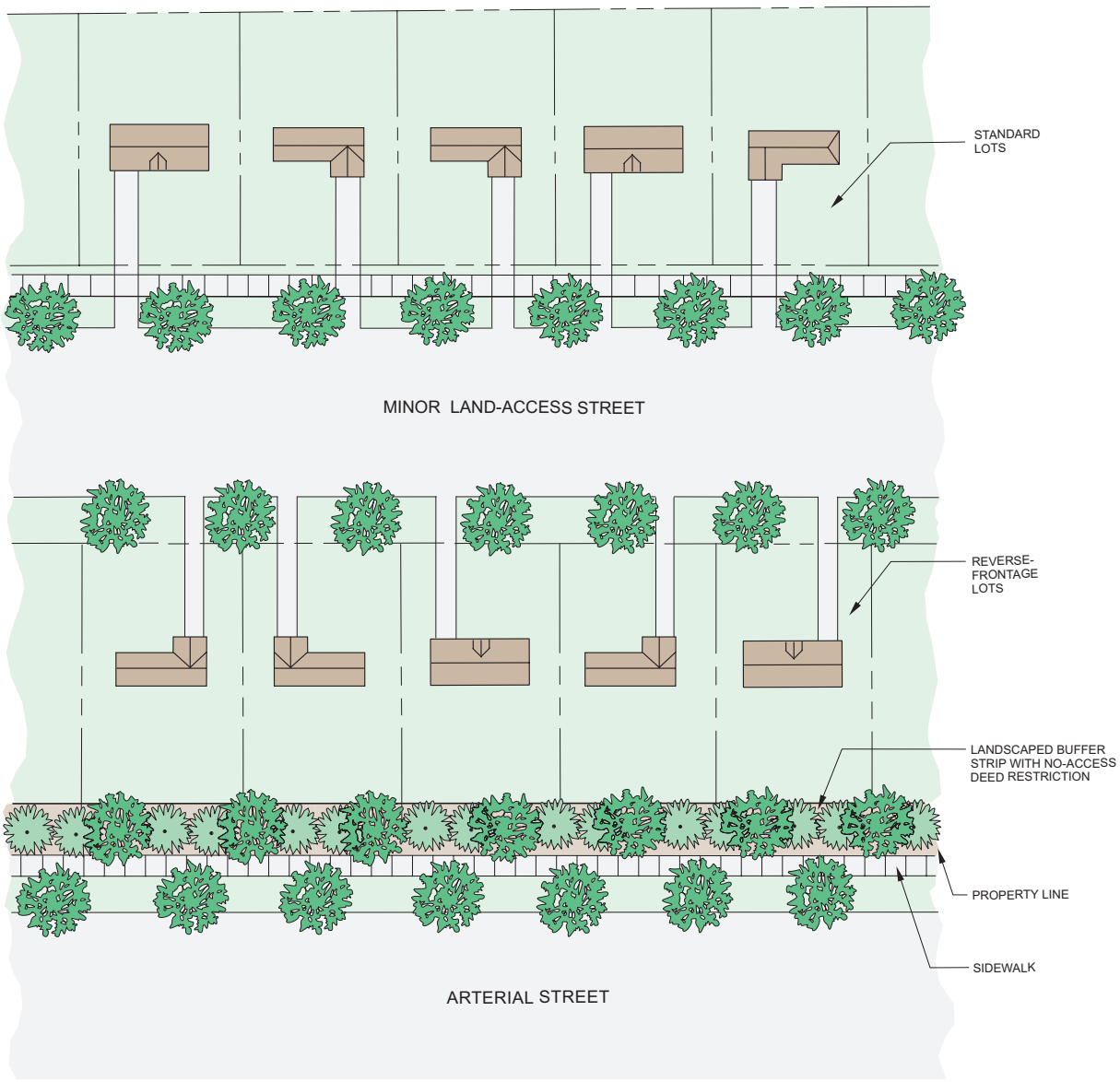
D. LANDSCAPING WITH FIELDSTONE PLANTER AND PLANTS



Source: SEWRPC.

Figure 12

REVERSE-FRONTAGE LOTS TO LIMIT VEHICULAR ACCESS TO ARTERIAL STREETS



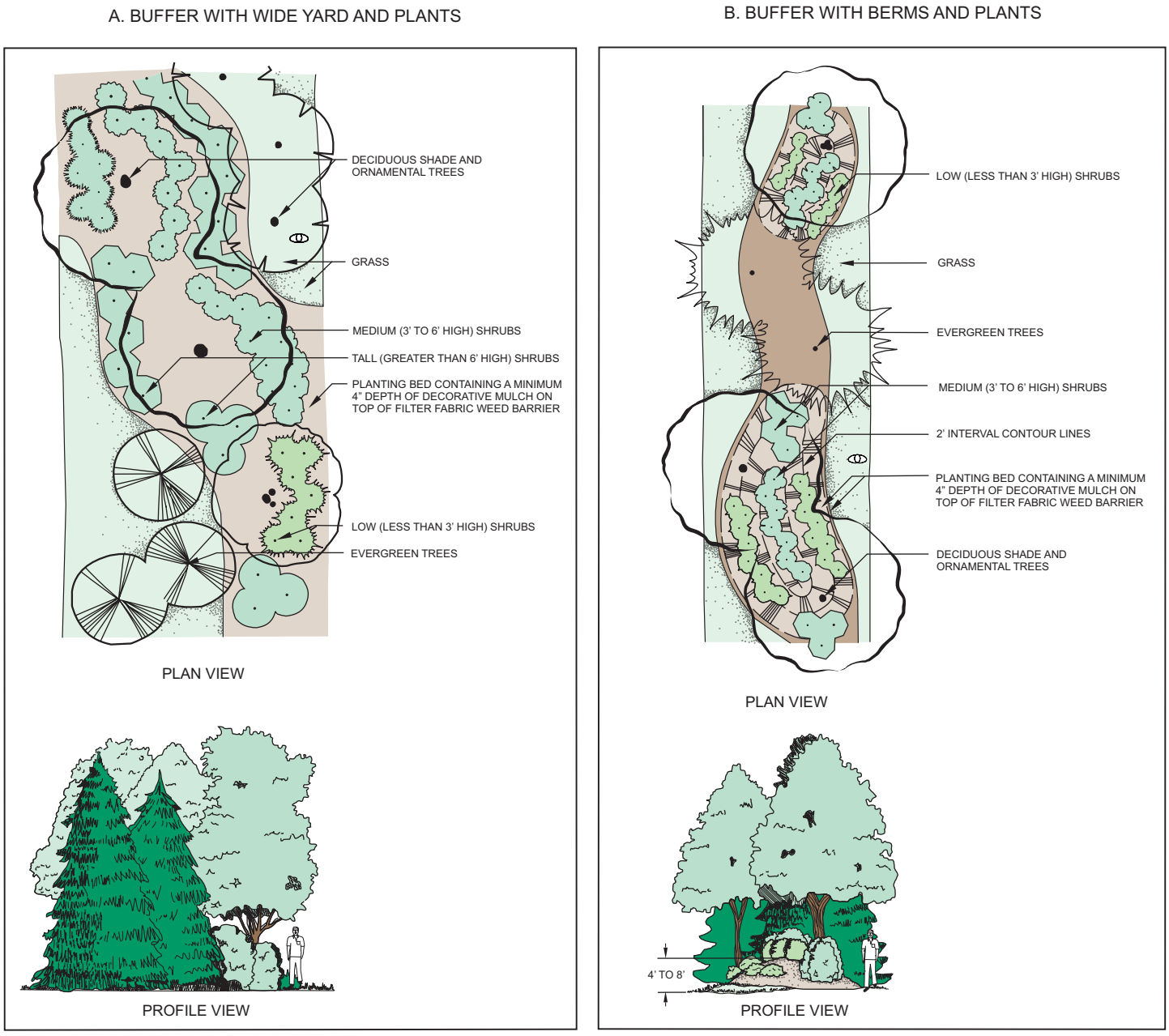
Source: SEWRPC.

Buffering Frontage Streets

A landscaped buffer should be provided between frontage streets and STH 36 to reduce the expansive appearance of paved surface areas totaling from six to eight lanes from both the highway and the paralleling frontage streets. Such a buffer will also mitigate the negative visual effect of parallel vehicular traffic, particularly headlights at night. The buffer should consist of various plants or a combination of berms with landscape plantings in order to break up these negative views. Landscaped buffers provided along such public frontage streets should be designed to reflect the desired visual character of the community while also considering traffic safety requirements. Figure 13 illustrates alternative landscaping that could be provided as landscaped buffers. If space is limited, street trees should be provided as minimal buffering between STH 36 and the frontage street as well as along the other side of frontage streets.

Figure 13

ALTERNATIVE LANDSCAPING FOR BUFFERS BETWEEN INCOMPATIBLE USES



Buffering Rows of Doors

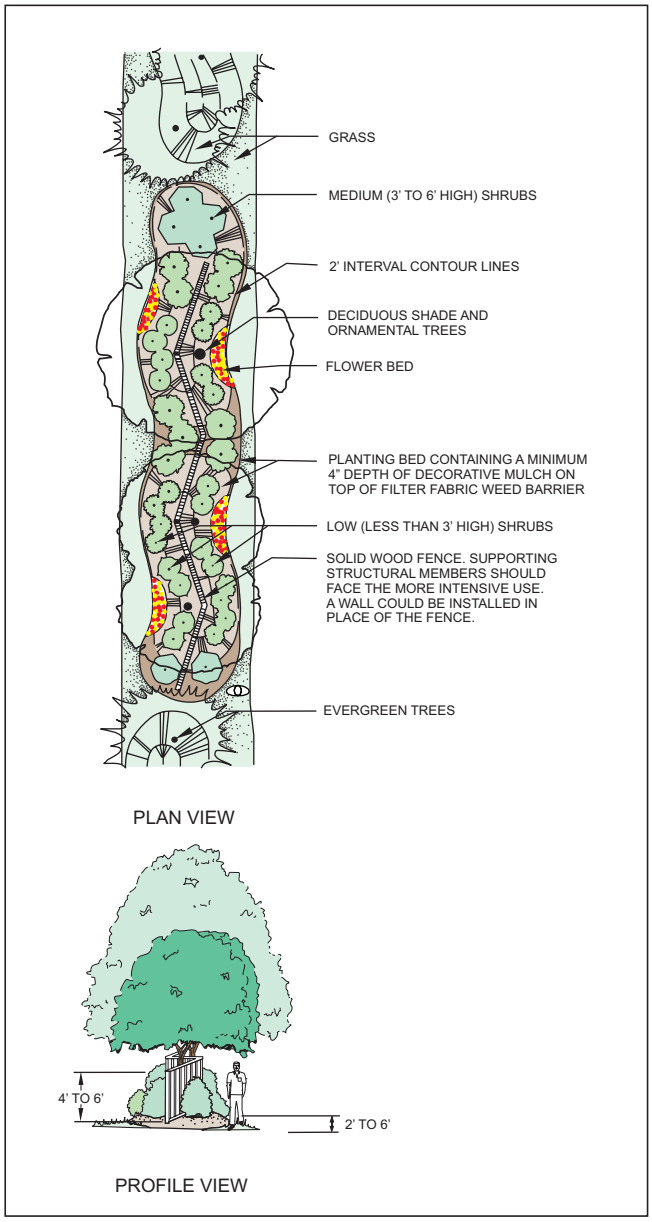
Buildings containing rows of doors such as those for storage, loading docks, and mini-warehouse facilities or detached garages serving multi-family dwellings should be oriented away from public streets. Otherwise, such doors should be buffered from public view with landscaping.

Building Foundation Landscaping

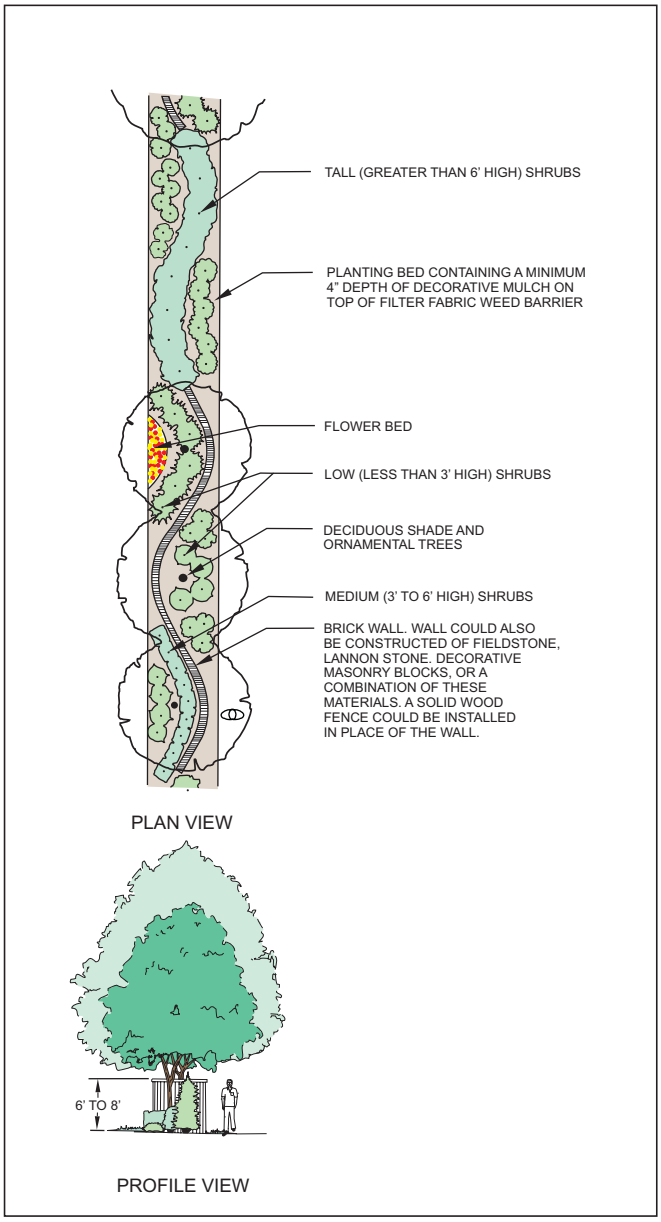
Landscaping adjacent to building foundations contributes to the overall aesthetics of the site as well as the architectural attractiveness of a building, as graphically illustrated in Figure 14. These planting areas could also reduce air-conditioning cost by absorbing potential refraction of warm solar radiation from adjacent pavement into buildings. Landscaped areas at least five feet wide, or preferably wider, and comprised of a combination of

Figure 13 (continued)

C. BUFFER WITH BERMS, FENCING, AND PLANTS



D. BUFFER WITH WALLS AND PLANTS



Source: SEWRPC.

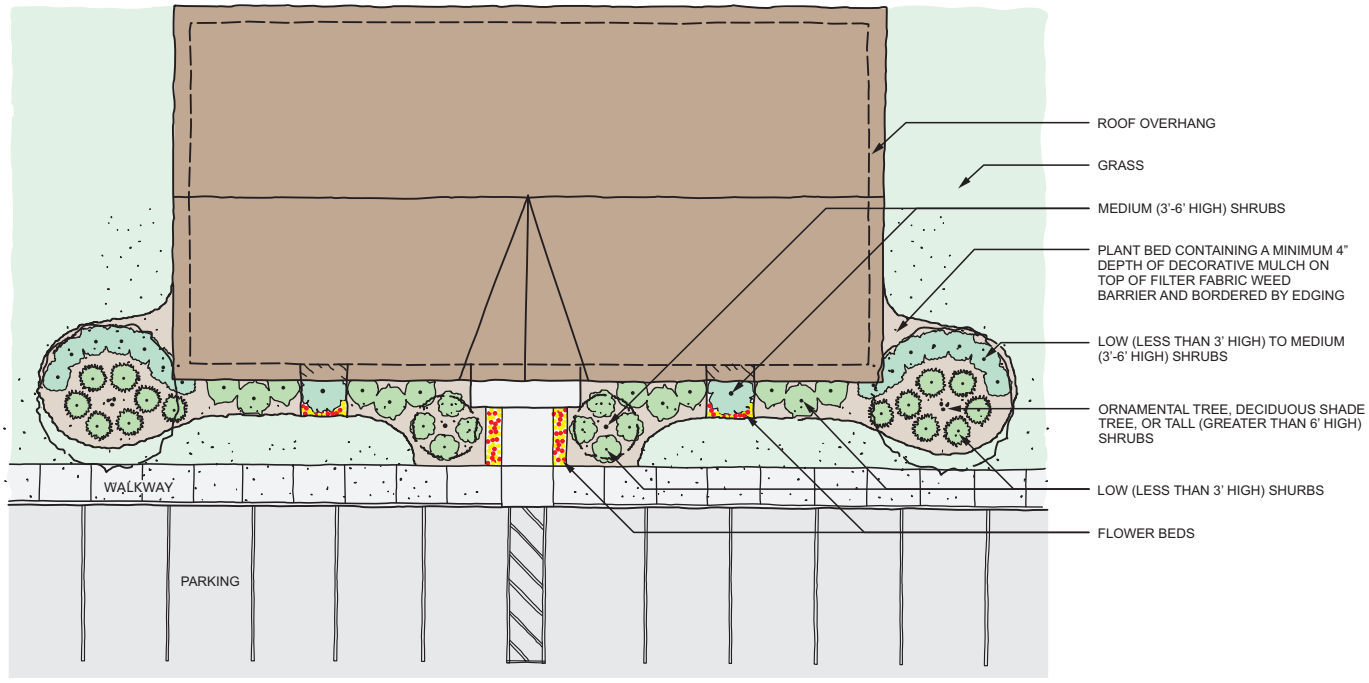
decorative mulch, flowers, ornamental grasses, groundcover, shrubs, or trees should be provided adjacent to building elevations, excluding entrances, visible from streets and parking areas. Foundation planting beds need not be continuous nor directly against the building. Planting areas could be consolidated into large groupings of beds instead of a continuous planting strip and be located at or near the dripline of roof overhangs as illustrated in Figure 14. In applications where adjoining areas of grass are mowed, grouped landscaped plantings may offer additional maintenance advantages over separated shrub or tree specimens that require lawn trimming between.

Where space is limited, large ornate plant containers, flower boxes under window sills, or low elevated planter beds, which may be constructed of the same materials as the principal building, should be provided along the building elevation to help define entrances and add to the aesthetic appeal of a building facade.

Figure 14

ALTERNATIVE LANDSCAPING FOR FRONT ELEVATIONS OF BUILDINGS

A. LANDSCAPING ALONG BUILDING FOUNDATION WITH CONTINUOUS PLANTING BEDS



PLAN VIEW

ELEVATION VIEW

Parking and Service Area Landscaping

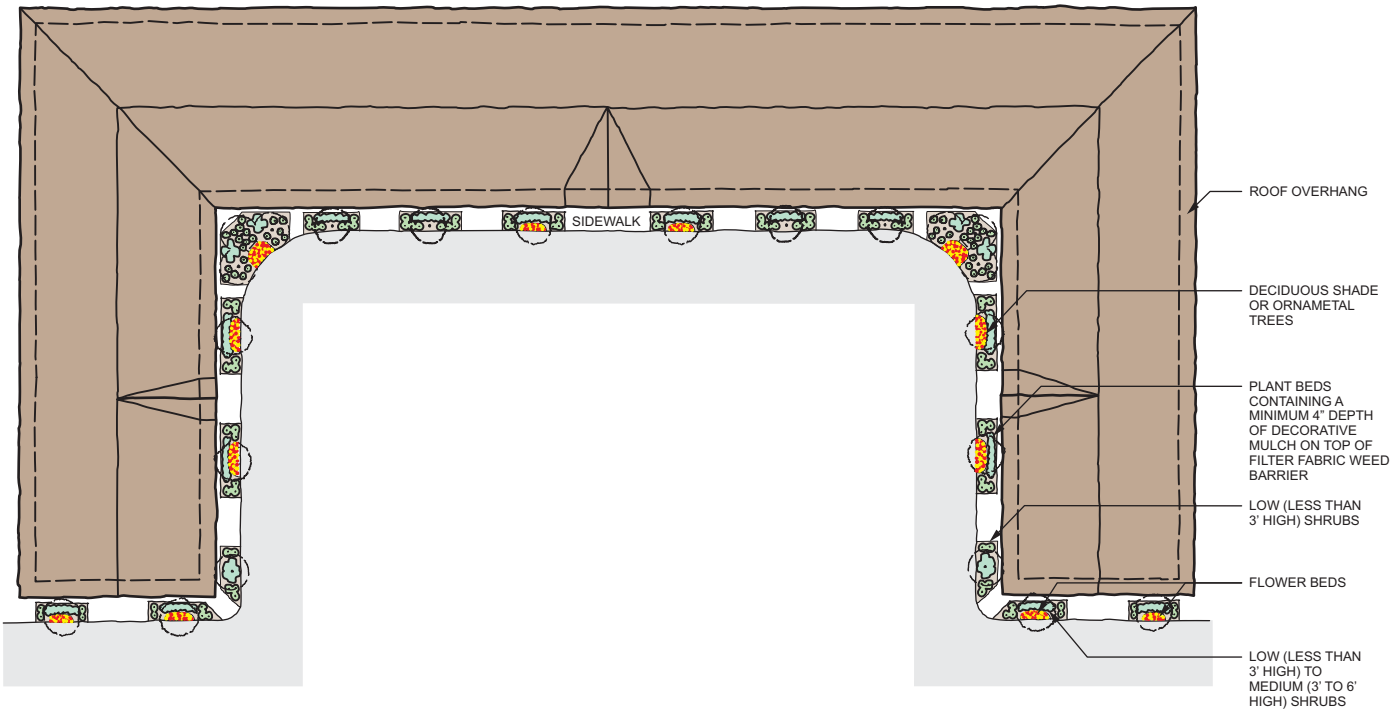
Interior Landscaping

The interior of off-street parking areas serving 20 or more vehicles should be provided with evenly dispersed landscaped areas totaling 5 percent or more of the total parking area. In general, the size of each landscaped area should be at least 150 square feet and not less than six feet wide, preferably 10 feet wide if trees are provided. Trees should be provided at the rate of one deciduous tree at least two inches in caliper at chest height—approximately five feet above ground—for every 15 to 20 parking spaces and should be located in the landscaped areas provided within the parking lot. Location of landscaped areas, selection of plant materials, protection afforded the plantings, including curbing, and provision for maintenance should be considered. Landscaping should be provided in parking lots similar to that shown in Figure 15.

Parking lots in "street yards" or front yards that face STH 36 and other public streets should also meet the design guideline noted earlier entitled, *Parking Lot Orientation in Relation to Public Streets*.

Figure 14 (continued)

B. LANDSCAPING WITH GROUPINGS OF PLANTING BEDS NEAR BUILDING FOUNDATION AND ROOF OVERHANG



PLAN VIEW

ELEVATION VIEW

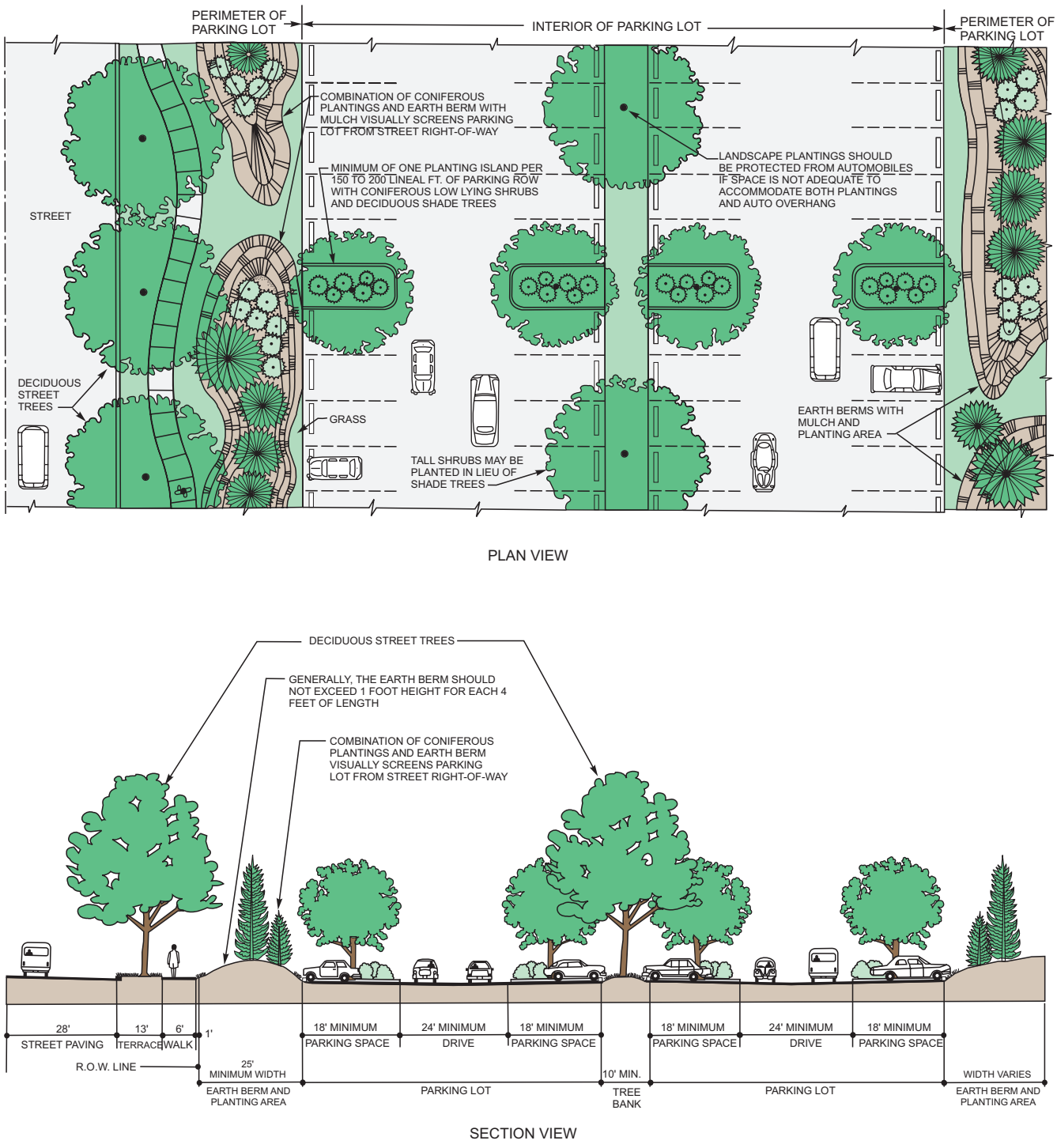
Source: SEWRPC.

Parking Lot Landscaped Islands

At the end of each parking bay, or row of spaces, a landscaped island of a similar dimension as a parking space should be provided to separate the bays from each other or from traffic lanes. Parking bays should not be longer than 150 to 200 feet in length unless a landscaped island contiguous to said parking bay is provided, as illustrated in Figure 15. The dimensions of a landscaped island may vary from the parking space dimension to provide desirable geometric design features, such as rounded corners and angles, to facilitate maneuvering of automobile traffic. However, the total area of any island should not be decreased to less than 150 square feet as a result of such design changes.

Figure 15

RECOMMENDED LANDSCAPING FOR PARKING LOTS



Source: SEWRPC.

It is important to note that the provision of islands is recommended not only for aesthetic purposes, but also for functional and safety purposes. Islands separate parked vehicles from driveways; provide an indication of the parking orientation and layout, especially if parking stripes are absent; provide additional snow storage areas; and provide a visual clearance area, except for the minor obstruction of a tree trunk or light pole located in the island,

for vehicles driving out of the general parking areas onto adjacent driveways. Islands that function as visual clearance areas typically at the end of parking rows should maintain a clear zone between the heights of 2.5 feet and 10 feet above the mean pavement grade adjacent to these islands. Turf grass should be avoided in islands unless properly maintained. As an alternative to grass, decorative mulch, such as stone or shredded hardwood bark, with underlying fiber-like weed barrier may be placed in islands.

Parking and Service Area Screening
Parking lots and loading/unloading service areas, if adjoining a residential use, should be screened from such residential uses by a solid wall, fence, berm, dense evergreen planting, or other effective means, constructed and maintained at a height of at least six feet for parking lots, and eight to 10 feet for loading/unloading service areas. Rows of loading docks should be oriented away from public view by locating the docks to the rear of buildings or, alternatively, to the side of buildings located on a reverse-frontage lot typically abutting two streets. If such orientations are not practical due to site constraints, then screening should be provided.

As supported by the survey results reported in Appendices A and B, parking lots visible from and within 100 feet of a street right-of-way should also be partially screened with evenly distributed landscaping along at least 50 percent of the perimeter to reduce the negative impacts of such a use. The screen could consist of a combination of plantings on top of berms or in planters, provided the combined height is at least three feet above the parking surface after three years. Figure 16 illustrates alternative landscape screening for parking lots visible to the public. The parking lot screen may be reduced in height or eliminated if a difference in grade will screen the parking lot. Also, openings for pedestrian and bicycle access should be provided, and the standards for vision clearance triangles should be recognized. Such screenings may further function as an access barrier to prevent undesirable vehicular access to arterial streets or highways, including STH 36, and to properly and safely channelize traffic movements.

If a berm is used as a screen, it should have a minimum height of 1.5 feet and a crown of at least four feet wide for plantings, with side slopes preferably no greater than one foot of vertical distance to four feet of horizontal distance. The berms should be curving or undulating. Fences and walls, excluding planters, should be constructed no less than three feet in height, measured from the base grade, and should be built of material compatible with the principal building of the site. Where applicable, gaps should be provided between the screen to allow for pedestrian and bicycle access.

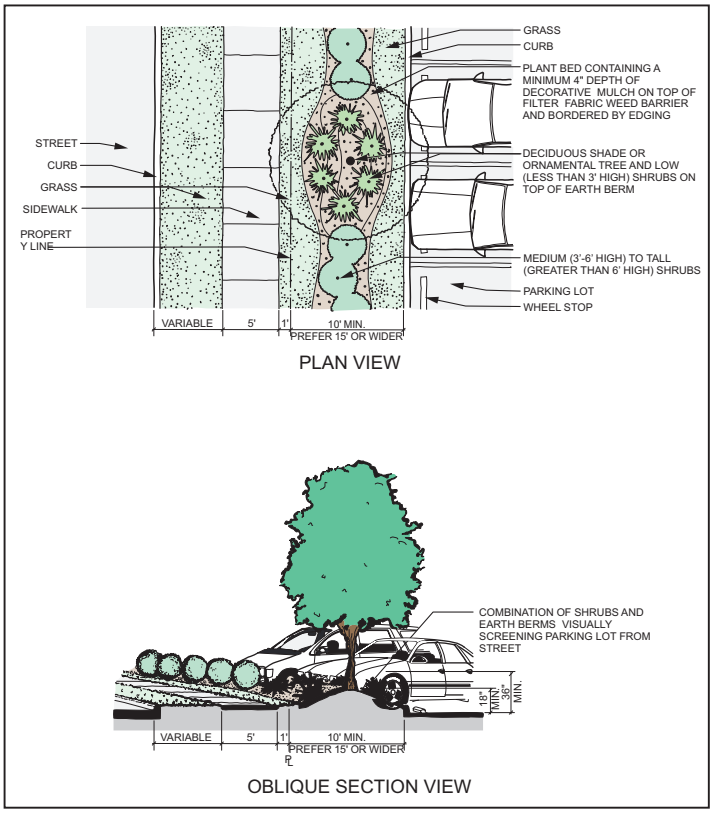
When only plantings are used for screening, the width of the perimeter landscape area should be at least 10 feet, or preferably wider. If berms are provided as barriers, the width of the landscape area should be adequate to accommodate the size of the berm based on its slope, crown, height, and form. When structural barriers are used, the planting width should be at least five feet, or preferably wider. Plantings should be provided between the structure and the adjacent property line to reduce the visual impact and monotony of a continuous structure—"blank wall". To also avoid the monotonous view of a long straight continuous hedge consisting of only one or two types of shrubs, more interesting screenings should be established by encouraging landscape designs that use a variety of plants in a creative planting pattern.

Screening Parking and Service Areas on Sites with Spatial Constraints
In so far as is possible, the visual effects of parking lots should be screened from public streets, as shown earlier in Figure 16, and abutting residential areas to soften the visual impact in accordance with the guidelines established above; however, site area may be limited. In such cases, an attractive wrought-iron fence with brick masonry pillars or a solid ornate wall possibly constructed of materials similar to the principal building, may be provided with associated landscaping such as shrubs, flowers, or ornamental grasses at the base that would complement the architectural theme of the building. If fencing is used, the finished side of proposed fences should face the street or neighboring property with the supporting structural components of the fence facing away from said adjacent streets and properties.

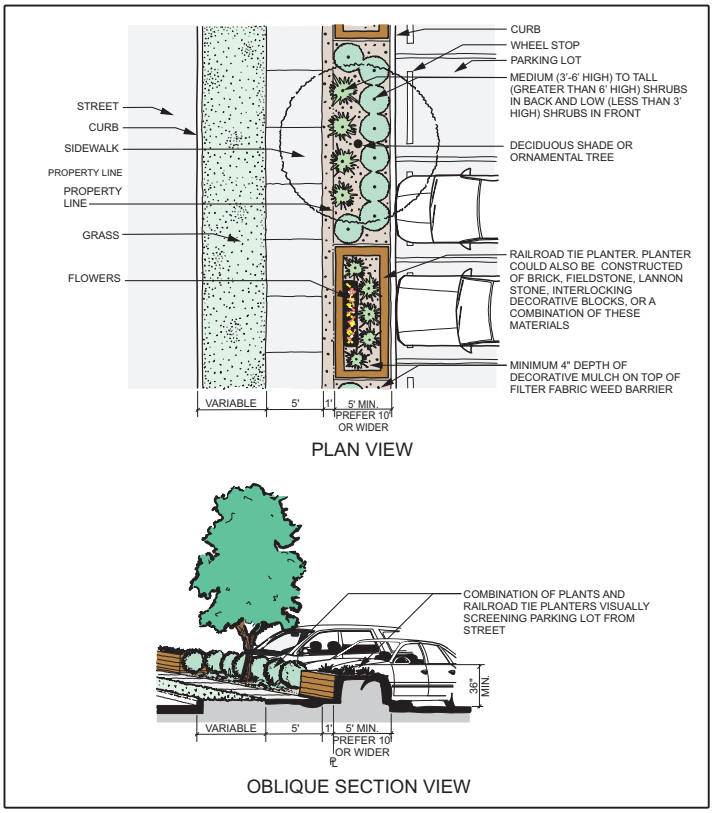
Figure 16

ALTERNATIVE LANDSCAPING FOR PARKING LOT SCREENING AND HIGHWAY ACCESS BARRIERS

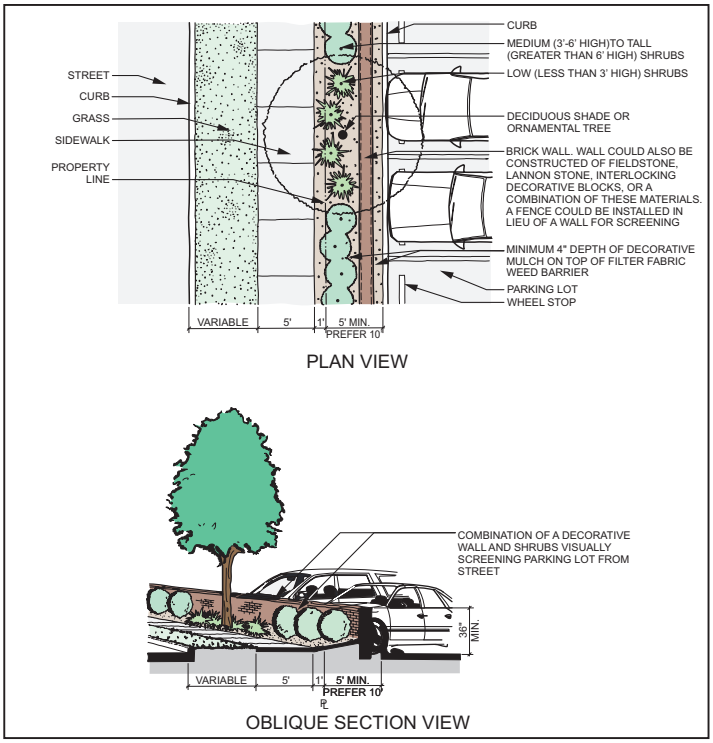
A. SCREENING WITH BERMS AND PLANTS



B. SCREENING WITH PLANTS AND PLANTERS



C. SCREENING WITH WALL AND PLANTS



Source: SEWRPC.

Outdoor Storage Area Screening and Surfacing
Outside storage areas for inventory, vehicles, materials, equipment, supplies, and other materials utilized in the day-to-day operation of a business use should be hard-surfaced, such as with concrete or asphalt, and screened from public view with appropriate vegetation, fencing, or walls of a material compatible with the principal structure and the surrounding area. The outdoor display of certain products or merchandise may be allowed if the display is essential to a business, such as a landscape nursery or a car- or truck sales business, and provided that attractive periphery landscaping, such as elevated plant beds and/or trees and shrubs, is installed along at least 40 percent of the street frontage.

Dumpster and Mechanical Equipment Screening
Mechanical equipment, dumpsters, and other waste receptacles should be placed in unobtrusive locations and/or screened from view while still maintaining necessary access. Dumpsters should be located on paved pads and be screened on all four sides by a solid fence, wall, or gate, with preferably the operable side facing away from streets and adjacent residential areas. The screening structure, ideally, should also be softened by shrubbery or other plantings as described below. Dumpsters should be located preferably next to and in the rear of buildings, or to the side of buildings located on reverse-frontage lots abutting two streets, and be screened with material that is identical to, or compatible with, the building. Dumpsters located near a building could be screened with attached wing walls while utilizing the building as one of the walls surrounding the dumpster. The height of the screening structure should be at least one foot above the top of the dumpster to help prevent the wind from spreading debris over the structure. Plantings should also be provided adjacent to the screening structure in a surrounding landscape bed at least five feet wide, preferably wider, as shown in Figure 17. If space is limited, the width of the landscape bed could be reduced or, at a minimum, the structural screening shown in this Figure should be provided.

Rooftop and at-grade mechanical equipment should also be placed in an unobtrusive location or effectively screened from public view. The screening method used should be compatible with the landscaping and building architecture of the site.

Site Furniture and Amenities
Site furniture and amenities should be provided to serve pedestrians and bicyclists and add visual variety to urban centers, especially central business districts, while evoking the desired community character. Such features include lighting standards, traffic standards, bollards, planters, benches, fences, gates, handrails, drinking fountains, water fountains, sculptures, clocks, bike stands, kiosks, and signage. The design and placement of such items should contribute to the overall design theme for a defined area, serving both aesthetic and utilitarian functions, while adding a sense of design continuity and human scale.

Lighting

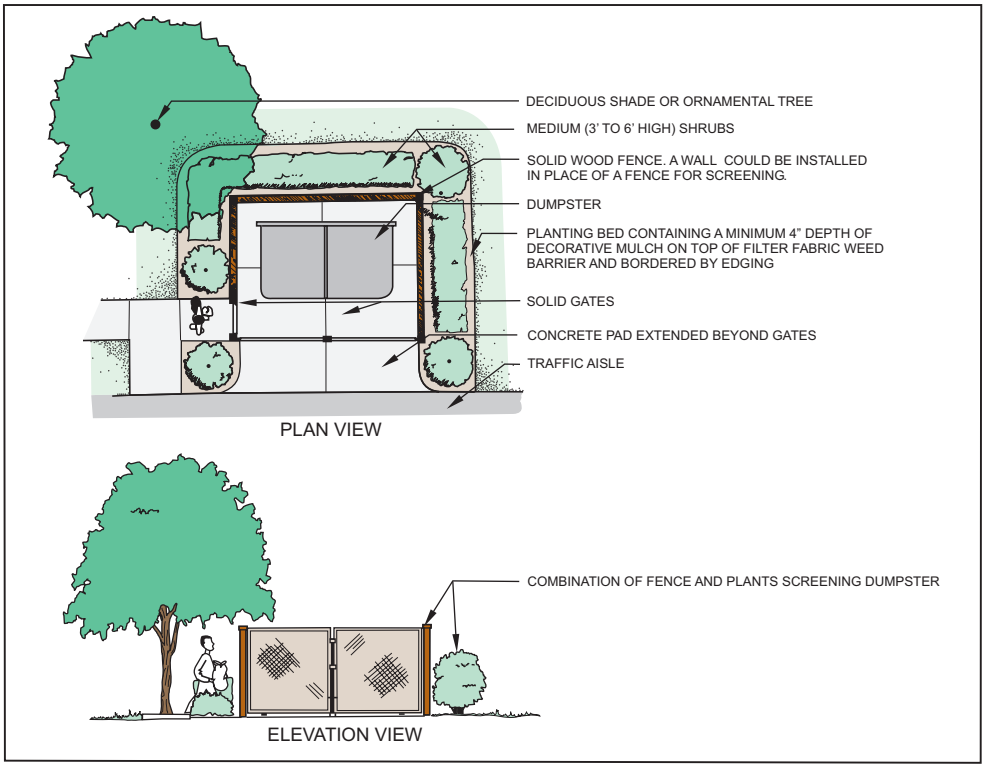
General
All outside lighting should be designed and arranged to prevent glare, reflection, nuisance, inconvenience, or hazardous interference of any kind on, to, or with adjoining streets and properties. Flashing, flickering, pulsating, and other distracting lighting which may distract motorists should be avoided. Due to interest in conserving energy and the night sky for stargazing, most lights should be shielded to efficiently project lighting downwards while maintaining some sense of security and desired illumination. Therefore, shielded luminaries, or luminaries with cutoff optics, and careful fixture placement should be used. The intensity of onsite illumination should not exceed 0.5 footcandles at property lines. All distribution wiring for outdoor lighting should be placed underground. The lighting guidelines herein are not intended to hinder the necessary traffic control measures or illumination levels for public streets.

Parking Lot Lighting
Parking lots should be lit to meet standards established in the Illuminating Engineering Society of North America document RP-20, “Lighting for Parking Facilities,” in which the standards range from 0.2 to 2.0 footcandles, depending on the type of use the parking lot is serving as well as the extent of desired security. In general, the

Figure 17

ALTERNATIVE SCREENING FOR DUMPSTERS

A. SCREENING WITH FENCE AND PLANTS



B. SCREENING WITH WALL AND PLANTS

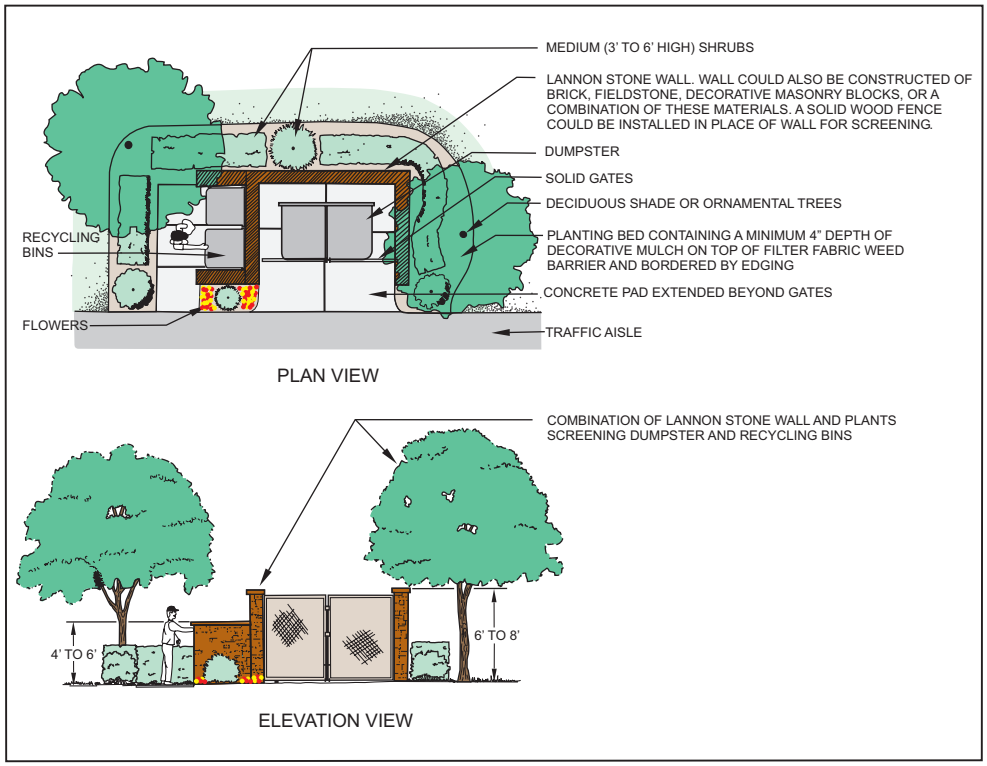
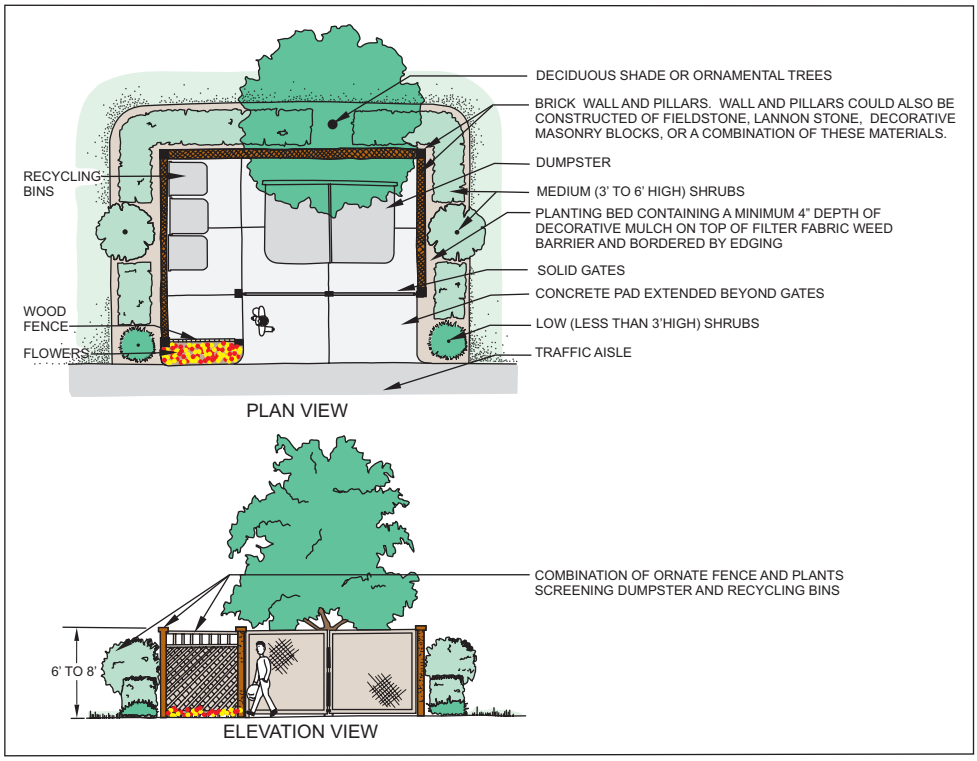


Figure 17 (continued)

C. SCREENING WITH FENCE, WALL, AND PLANTS



Source: SEWRPC.

height from the bottom of the luminaire/light fixture and the surrounding grade should not exceed a height of 20 feet and poles should be placed at least four feet from tire-stops or paved areas, or protected by other approved means. Outdoor lighting for parking lots that are typically vacant after business hours should be turned off or at least reduced to only a few illuminated poles to conserve energy, reduce energy cost, and preserve the night sky.

Preferably a unique design style for parking lot lighting should be selected as part of a comprehensive effort to integrate various site design elements that are compatible with the design theme for a site or the community.

Street Lights

Street lighting should be provided at all street intersections, including the intersections of STH 36 with other streets, for both safety and directional purposes.

Street Light and Traffic Pole Styles

General

The traditional style of tall streetlights could be made more attractive by using colors, such as black or green, instead of the bare silver metal color, especially where STH 36 intersects with "Main Streets." As an alternative, the poles could be colored black or green while the extended arm with the illumination head could remain silver. Uniquely designed street lights should preferably be installed along the "Main Street(s)" of a community, including arterial streets that serve as main "gateways" funneling traffic into urban centers such as Loomis Road leading traffic into the Wind Lake-Waubeesse Lake urban enclave or the southern portion of STH 36 leading into the City of Burlington. The style or color selected for street lights should be emulated in the poles of street signs and traffic signs and signals.

Downtown "Main Street"/Central Business District Lighting
Lighting along the main streets in historic "downtown" areas or central business districts should relate to human and building scale. Primary lighting luminaires within these areas should be mounted on decorative posts at a height of generally 10 to 15 feet. This height allows the lighting to relate to both human and building scale. As an alternative, slightly taller decorative posts at a height of about 20 feet could be used, but such posts should be supplemented with bright colorful banners to be in keeping with the human scale usually desired for such areas. Lighting fixtures or luminaires should be placed so that the light overlaps at a height of about seven feet. Posts and luminaires designed with colorful banners or hanging planters should reflect the overall character desired for the downtown areas or central business districts, such as a historic, modern, or even a mixed historic-style type of lighting with a more contemporary flair. The overall illumination should be about 2.0 footcandles. If only a portion of a Main Street could contain ornate street lights due to cost, the remaining traditional style street lights along said street should consist of a color that matches the color chosen for the uniquely designed street lights in order to ensure some degree of compatibility among lighting features. The distinct design style of the streetlights should also be emulated in bollards and poles for street signs and traffic signs and signals, as illustrated in Figure 18.

Outdoor Building Lighting
Outdoor lighting used to illuminate buildings for aesthetic purposes should contain fixtures that cast the rays directly towards the object that is intended to be illuminated without projecting glare or scattered illumination into the night sky. Outdoor security lights on buildings should at least be shielded to direct lighting towards a defined area, such as an entryway. These lights may also utilize motion sensors where the lights automatically turn-on when a moving object is detected within a certain distance from the fixture.

Sign Illumination
Signs may be illuminated and should not use uncovered bare light bulbs or have elements that are flashing, blinking, moving, rotating, or pulsating, other than public traffic control signs. Signs in residential areas may be lighted indirectly from the exterior but should be internally illuminated.

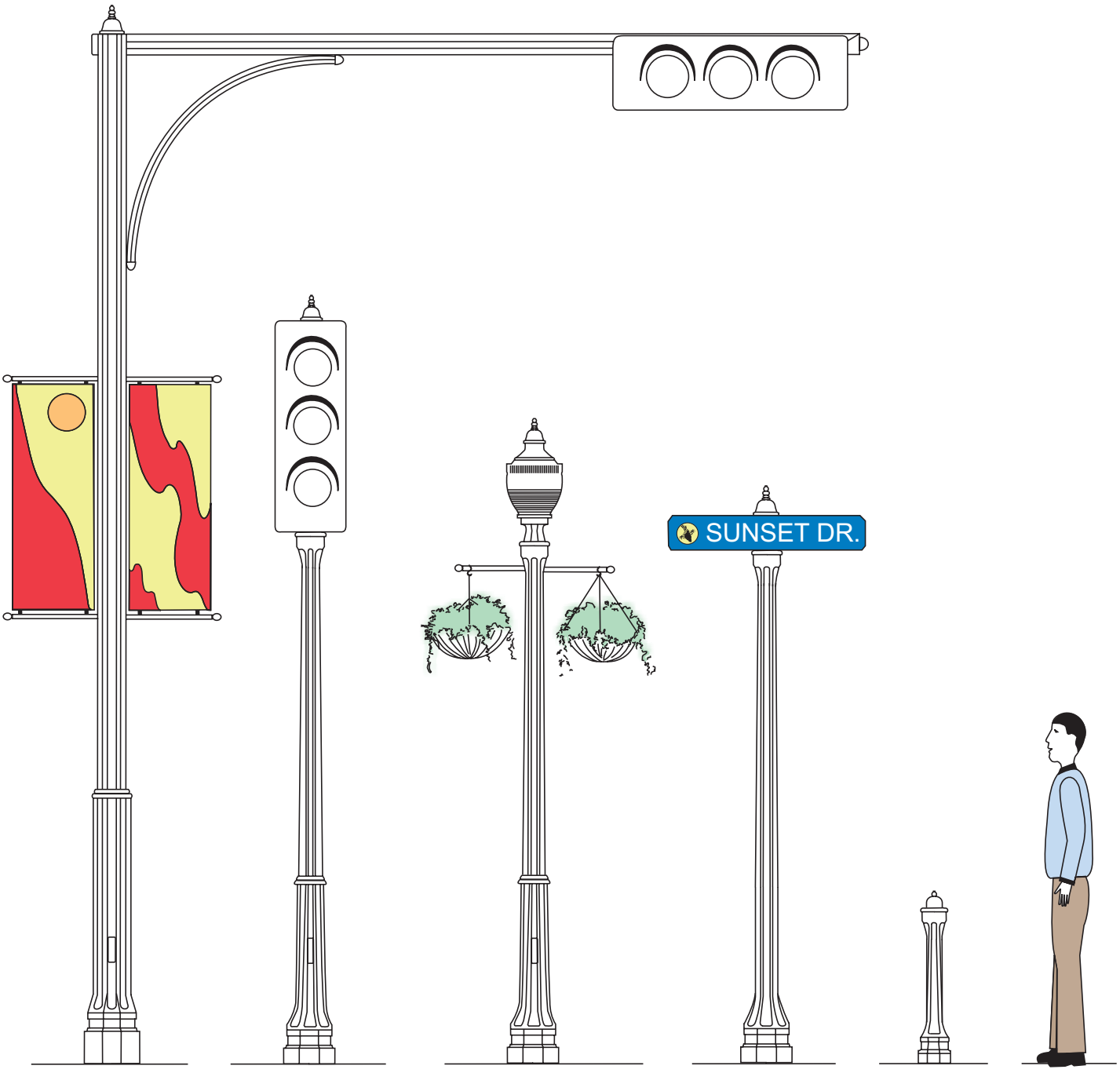
Architecture

General Building Facades
Buildings visible from STH 36 should contain attractive facades, as supported by the survey results reported in Appendices A and B. To retain or establish a unified architectural setting, building designs should be compatible with a style desired for a particular location or with the predominant established architectural style of a defined area, such as an established residential neighborhood, a business park, or a central business district. Nevertheless, variation of the same style should be obtained, without being radically different, to avoid monotony. The guidelines herein are not intended to restrict creative architectural expressions, but rather to direct the expression towards a standard of quality and compatibility with neighboring buildings and to contribute to a community's desired identity for an area to create or retain a sense of place. The structural shapes of buildings, their proportions, the pattern of openings such as doors and windows, the placement of signs, and various other building details all contribute to the overall building façade and streetscape appearance. Although the facades of two adjacent buildings may be different, their overall appearance can be made compatible through the proper use of these visual elements.

To create attractive facades and some variation in architectural styles to avoid overly excessive repetition and drabness, emphasis should be placed on the following: the creation of a varied roofline on a building; use of some variation in door and window styles, size, and shape that are still proportionate to the building scale and mass; creation of well-defined main entryways and wall offsets and recesses; use of subtle colors with bright colors used only for limited accenting; and use of attractive finished material such as stone, brick, wood, or decorative masonry as predominant façade materials, as shown in Figure 19 and Appendix B. An attractive finished design should preferably be provided on all facades (front, back, and sides) of a building, sometimes called "four-sided" architecture, or at least on any façades facing public streets and parking lots.

Figure 18

COMPATIBLE STREET ELEMENT STYLES



Source: SEWRPC.

Figure 19

ATTRACTIVE BUILDING FACADES

A.

B.

C.

D.

E.

F.

G.

H.

Figure 19 (continued)

I.

J.

K.

L.

M.

N.

O.

Figure 19 (continued)

P.

Q.

R.

S.

T.

U.

V.

W.

Figure 19 (continued)

X.

Y.

Z.

AA.

BB.

CC.

DD.

EE.

FF.

GG.

HH.

Source: SEWRPC.

Facades should be further designed to convey human scale through fenestration (arrangement of openings such as windows and doors), building articulation, and landscape plantings. Large buildings, especially nondescript "off-the-shelf-big-box" retail stores, devoid of any architectural character should be discouraged. Large buildings should integrate architectural detailing into the building's design to add aesthetic appeal and to break up otherwise long, faceless walls. This may be done by including, for example, protrusions or recesses in the wall with entryways, porches, and wall offsets/recesses or a change in façade style with multiple pediments and ornate façade corner treatments, as shown in Figure 19 and Appendix B. Main entryways could be prominently defined by using columns, projections, or arches on protruding or recessed entrances. Excessively long façade walls could be further broken-up by providing an L- or a U-shaped building footprint, dividing the structure into a grouping of smaller buildings, and/or dividing the wall into smaller bays or sections by using such features as wall offsets and recesses, windows, and awnings.

Architectural Details

The distinctiveness of new and old classic building styles is directly associated with the presence of architectural details which, therefore, should be preserved or integrated into building design whenever possible. New buildings could include ornamentations like those found on historic buildings or incorporate a more contemporary version or design of such detailing. Uniquely designed sills, lintels, keystones, columns, railings, cornices, dormers, pediments, corner treatments, and other architectural features, as shown in Figures 19 and 36, should be integrated into the design of proposed new or renovated buildings. Ornate materials should also be used in detailing the foundations, entrances, and abovementioned features. Such treatments should emphasize the horizontal and/or vertical rhythm of buildings as well as breakup large blank walls. Even though the details should be somewhat similar to or compatible with adjacent buildings, some variation in design detailing should be added to provide visual interest, especially where more than one building is located on a single parcel or where buildings on adjacent parcels are in proximity. Unarticulated façade surfaces of plain "boxed" buildings constructed of cinder/concrete blocks, concrete slabs, or concrete panels with no decorative detailing as the predominant material should be avoided.

Building Scale and Mass[3]

The relative proportion, or scale and mass, of a building in relation to the proportion of neighboring buildings, to the pedestrian or observer, and to the surrounding landscape should be considered when new buildings are constructed or when existing buildings are remodeled or altered. Visual elements of a building that contribute to the overall scale and mass of a streetscape façade include the visual rhythm and proportion of building components, including doors and windows; the architectural detailing; the visual directional emphasis of the building which is either horizontal or vertical; the symmetrical or asymmetrical character of the building façade; the building height, width, and depth; the type and color of building materials; and the presence or absence of associated landscaping. These elements of building scale and mass should be considered whenever possible to create an attractive environment. Figures 20 and 21 illustrate the relationship of a building's scale and mass to a streetscape and adjacent buildings, respectively.

If a proposed structure is to be larger than surrounding structures, the building should be divided into separate connecting units or bays, or use a break in the façade to be proportional to the scale and mass of neighboring structures, as illustrated in Figure 21. Buildings for intensive developments, such as multi-family residential, commercial, industrial, governmental, and institutional buildings, should stress the horizontal proportion of the façade design where the length of the building should be longer than the height of the primary façade, which is also in-keeping with the desired human-scale setting. Associated windows, entrances, and architectural detailing should complement this horizontal emphasis. In general, buildings should not be more than one story taller or shorter than the height of those in the immediate area. As supported in the mail questionnaire results in Appendix A, buildings within the STH 36 viewshed should preferably be one to two stories in height, but no higher than three stories to retain a human-scale environment.

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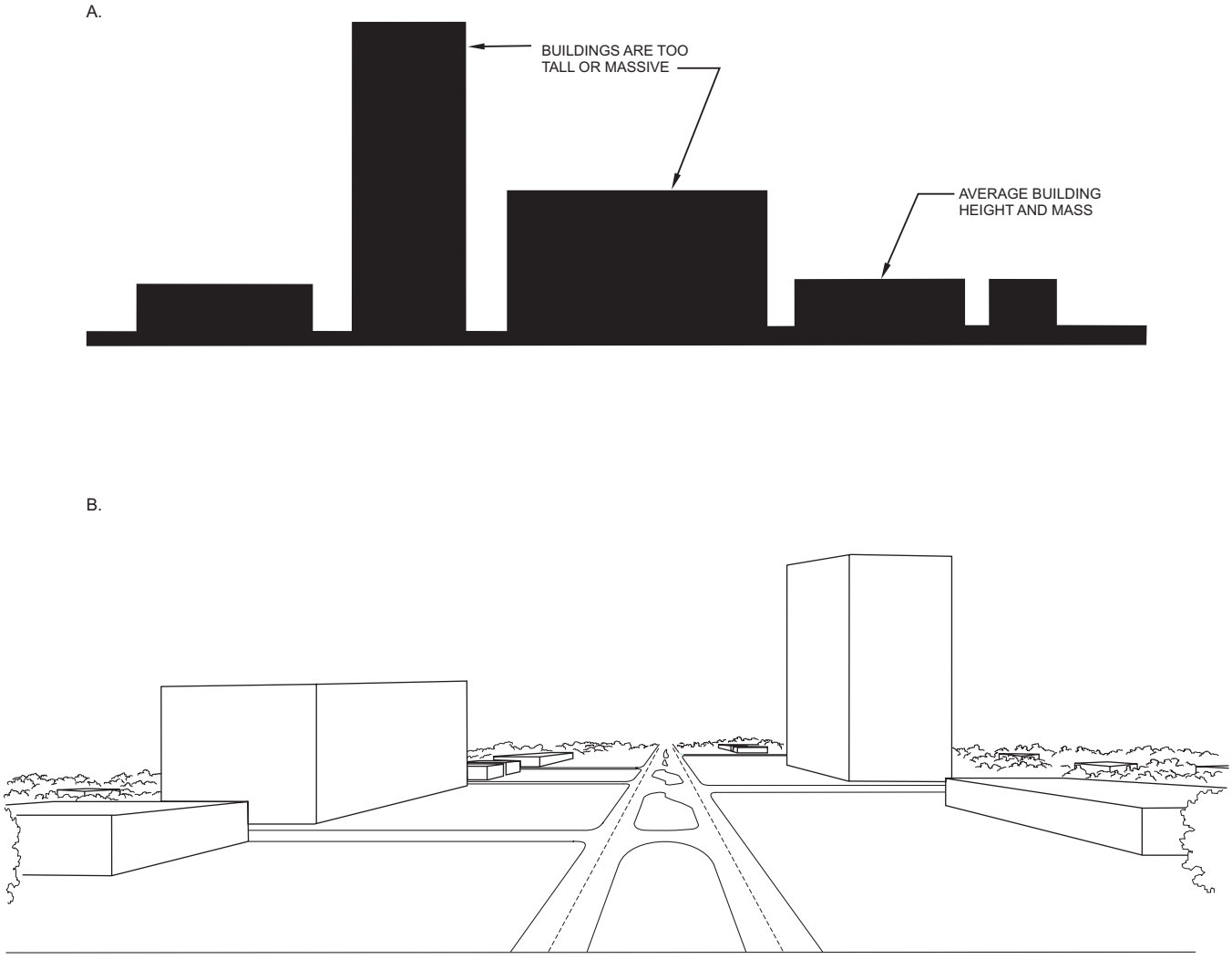
[3]*The mass of a building refers to the overall bulk or volume of space which a building encloses. Scale is the size relationship of one object to another and is conveyed by elements of the building façade where doorways, windows, and architectural details enable people to gauge its relative size and character.*

Figure 20

URBAN SCALE AND MASS OF HIGHWAY BUILDING STREETSCAPE



Source: SEWRPC.

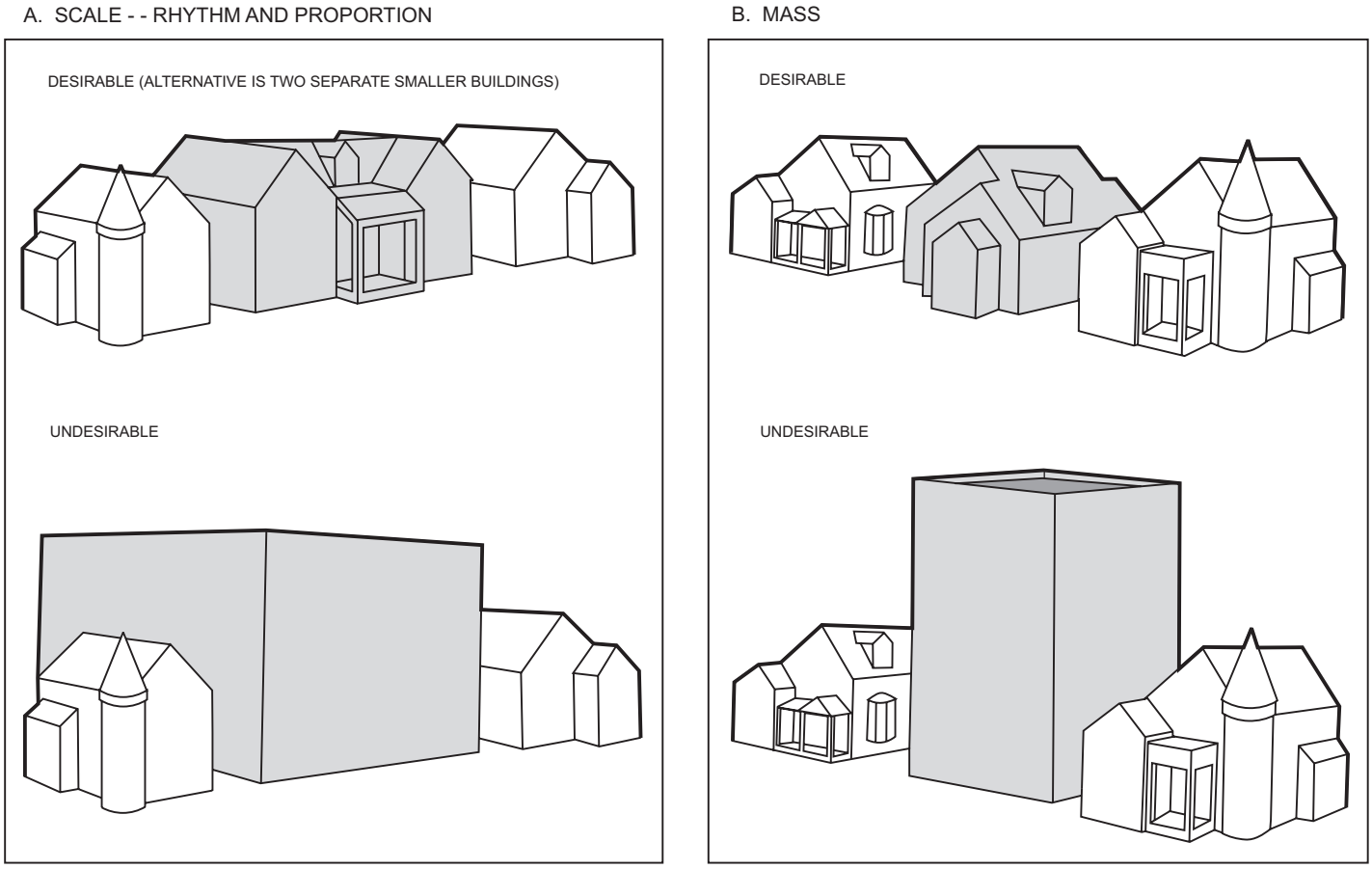
Strip Malls and Grouped Business Buildings

Long linear "strip malls" or suburban strip shopping centers typically found along highway corridors should be avoided and, instead, be provided with breaks in the façade along with a varied roofline as discussed earlier.

Development of new commercial strip areas, that is, long rows of contiguous individual parcels each with non-shared, direct street access along arterial streets or highways, should also be discouraged. Instead, planned commercial centers should be established that are characterized by two or more buildings with similar business characteristics grouped together, such as shopping or office centers, that share onsite parking facilities for customer automobiles and an environment geared to pedestrians with connecting walkways. This establishment should further attempt to create a mix of synergistic commercial uses, such as retail sales and services, in an aesthetically-pleasing setting with a design theme expressed in the architecture of attractive buildings and complementary landscaping. The clustering or grouping of buildings, as opposed to one long building set in a sea of asphalt, could ideally be arranged around a courtyard or common central open space on a parcel, which lessens the visual impact of the retail development as illustrated in Figure 27. This layout breaks the parking into smaller areas, which reduces the visual impact of large expanses of asphalt pavement, and is also conducive to interspersion of landscape plantings.

Figure 21

URBAN SCALE AND MASS OF INDIVIDUAL BUILDINGS



Source: American Planning Association and SEWRPC.

Roofs

General

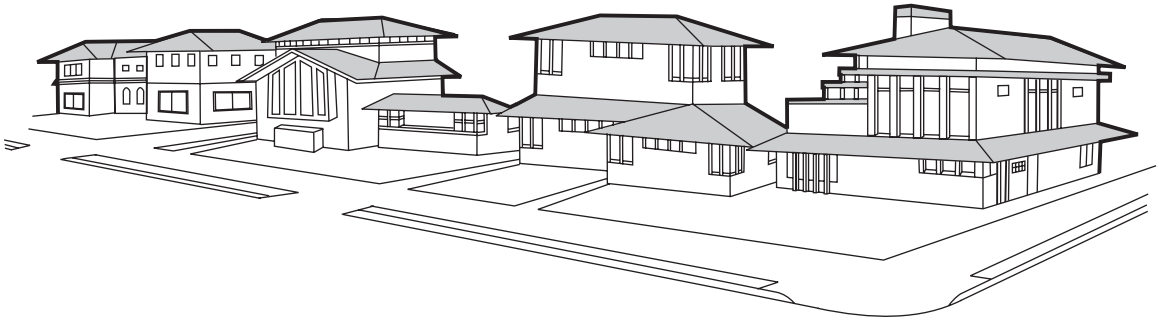
Since roofs significantly affect the architectural style of buildings, this component should properly relate to a building's form, scale, and mass. Roofs are also vital visual elements contributing to the overall character of a commercial center or residential area. The roof design of proposed buildings, therefore, should further respect the traditional roof angles of the surrounding area. Dramatically opposing roof shapes and height, as illustrated in Figure 22, should be discouraged.

An understanding of the various basic types of roof styles can be obtained by analyzing Figure 23 and comparing these illustrations to the building design photographs in Figure 19 and Appendix B. As implied by the survey results in Appendix B, the more variation in the roofline, and yet inkeeping with the architectural style of the building and environs, the more interesting and attractive the building is likely to be perceived. Roofs should be constructed of high quality materials that are consistent with a building's architectural style.

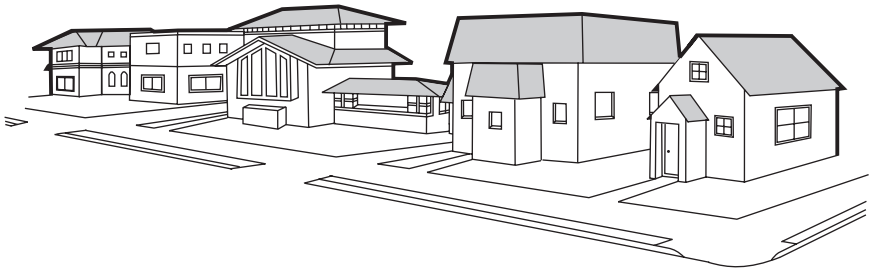
Figure 22

COMPATIBILITY OF ROOF STYLE/SHAPE OF BUILDINGS

DESIRABLE GROUPINGS



UNDESIRABLE GROUPINGS



Source: American Planning Association and SEWRPC.

Peaked Roofs

Peaked roofs, sometimes called pitched roofs, with a variable roofline are preferred over flat roofs with no or little break in the roofline as indicated by the results of the visual preference survey, summarized in Appendix B. Most buildings within the STH 36 viewshed, especially residential areas, are defined by predominantly peaked roofs with ridgelines, such as gable and hip roofs. New buildings or additions should consist primarily of such roofing styles with preferably a varied roofline by using, for example, gable roofs with dormers or multiple pediments that also contain gables.

Communities within the Corridor may also determine that commercial and industrial buildings should consist of only peaked roofs with, for example, a minimum 3/12 pitch (an angle of 14 degrees), with 4/12 (an angle of 18 degrees) or greater preferred, rather than flat roofs. Buildings with large ground coverage or first floor areas could provide sloped roof treatments along the perimeter or edge of the building, preferably on all sides as shown in the mansard and sunken roof illustrations in Figure 23. Pitched roofs should utilize high quality asphalt shingles, cedar shakes, standing-seam metal panels, or other quality products.

Flat Roofs

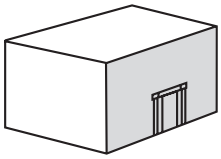
A community may determine that new buildings proposed in certain areas containing existing flat-roof buildings, such as shopping areas or business parks, could either replicate this roof style or provide a combination of flat and peaked roofs for variation. The edges of flat rooflines on new buildings should, nevertheless, be softened for street appeal by "capping-off" the top with decorative cornices, coping, pediments, or parapets (an ornate wall that extends beyond the roof). Some communities may desire that at least the front façade of buildings provide a sloped roof treatment along the edge of the buildings. Even though the predominant roofline of a building may be

Figure 23

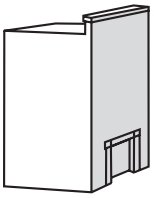
ROOF STYLES

FLAT ROOFS

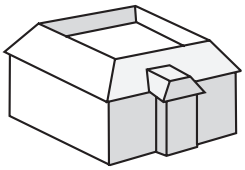
Simple



Flat with Parapet

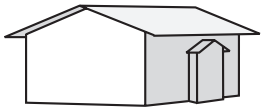


Sunken with Sloped-Edge Roof Treatment

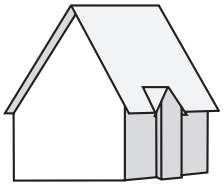


GABLE ROOFS

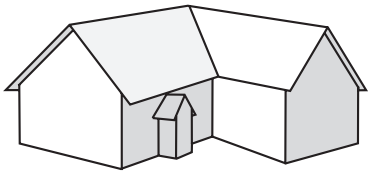
Low Pitch



High Pitch

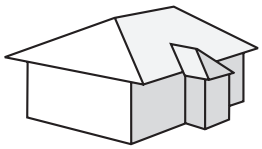


Cross-Gabled

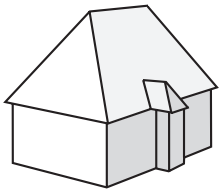


HIP ROOFS

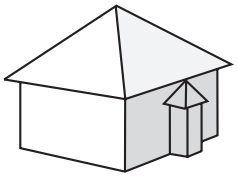
Low Pitch



High Pitch

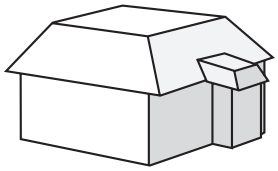


Pyramidal

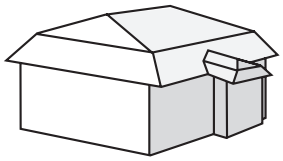


MANSARD ROOFS

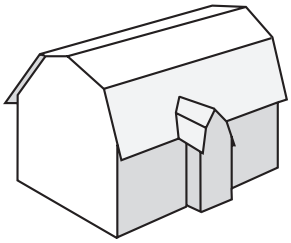
Flat



Peaked



GAMBREL ROOF



Source: SEWRPC.

flat, this line could be varied for greater curb appeal by providing peaked roofs that complement the low horizontal roofline image, such as “low”- (a pitch of less than 7/12 or less than 30 degrees) or “normal”- (a pitch from 7/12 to 8.5/12 or from 30 to 45 degrees) pitched gable or hip roofs on top of pediments, protruding entryways, or “tower-like” corners of the facade.

Openings

General

The orderly arrangement of window and door openings should maintain a harmonious form and proportion to each other, to the building as a whole, and to adjacent buildings, as illustrated in Figure 24. The visual rhythm of windows and doors should usually follow the directional emphasis of the building which is either horizontal or vertical. The placement, proportioning, and design of such architectural features for a building should, nevertheless, provide some variation in style from small to large sizes and from square to multi-faceted shapes and yet project a unified façade composition. To be easily recognizable, main entrances should be clearly defined with, for example, protruding or recessed entryways containing ornate columns/pillars, porticos, overhangs, arcades, or arches. Oversized windows and doors that would project a monumental scale that over-dominates a façade should be avoided. To provide scale and relief, large blank walls should be reconfigured to create horizontal and vertical interest with windows and doors and related detailing.

Service, Storage, and Garage Doors

Rows of loading docks and overhead doors for business service areas, including those for warehouses and self-storage or mini-warehouse facilities, should be oriented away from public streets to instead face side or rear yards. Otherwise, such doors or docks should be buffered from public view with landscaping if there is no feasible alternative orientation.

For residential areas, garages should be properly integrated with the design for a building. To retain the integrity of a building’s architecture, the front or main elevation of multi-family residential buildings facing public streets should not be dominated (more than 50 percent) by a row of garages which is oftentimes accompanied by mostly paved driveways with little landscaping. As an alternative, the row of garages for such buildings could be oriented to face the side or rear yards. If a detached multi-unit garage is proposed, the garage doors could face the side or, preferably, back of the principal building where the building would function as a screen. Otherwise such doors should be softened with architectural detailing and/or buffered with landscaping from public view.

Windows

Windows are an important building component that enhances the architectural style of a building and adds to the “welcoming” atmosphere of an area. Windows should be used to provide transparent building facades, at least at the pedestrian level, for storefronts to increase visibility of business activity which attract the interest of the potential passing customers. Windowless facades should be avoided, especially at the street level and along building elevations exposed to view. Boarded, reflective/mirrored, smoke, and heavily tinted glass with opacity of greater than 60 percent also detract from the “inviting” atmosphere and should be avoided.

To still achieve energy-efficiency and yet retain transparent windows, the following alternative materials could be used: glass with “low E” (emissivity) coatings, which reflects heat in the summer but keeps it in during the winter; glazing with ground-up glass—a ceramic “frit” or enamel—silk-screened onto the surface which is not completely transparent, but allows passers-by to somewhat see through it; double panes of glass with sunshades; lightly tinted windows with some transparency; and canopies and overhangs provided they do not interrupt architectural façade details.

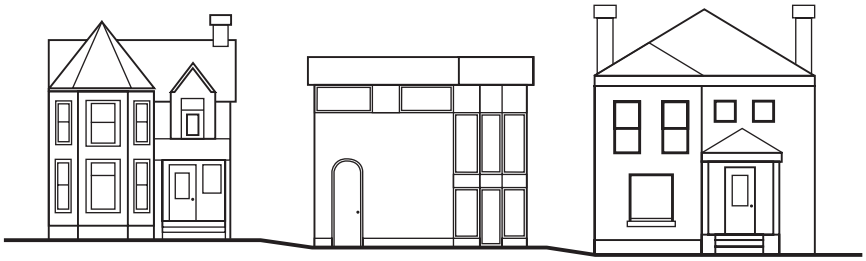
To lessen potential conflicts between birds and windows, the following techniques could also be implemented: use overhangs, blinds, and canted walls; install outdoor plantings close to windows; dim lights during migratory periods; break up windows into smaller panes with visible mullions; or use “fritted” panes—glass that has been treated with small opaque dots, stripes, or other patterns that make it less transparent—for larger surface areas; or other creative methods that allow birds and glass to coexist.

Figure 24

COMPATIBILITY OF WINDOWS AND ENTRANCES

DESIRABLE GROUPINGS

UNDESIRABLE GROUPINGS



Source: American Planning Association and SEWRPC.

Selection of Materials and Colors

General

Selection of materials and colors for the architectural design of buildings and landscaping should be based upon material and color unity, the atmosphere and character desired, the prevailing material and color composition of surrounding buildings and landscape features, the harmoniousness of the various materials and colors used, and microclimatic considerations.

Materials

Since the primary exterior materials used for buildings along STH 36 are typically natural and cultured stone, wood, brick, and, to a limited extent, decorative concrete masonry, deviation from these materials should be minimized. By using these predominant materials, the overall building façade texture of the streetscape would be maintained. Where the proposed materials are allowed to be dissimilar to the existing materials in the surrounding area, other characteristics such as scale, proportion, detailing, color, and textures should be utilized to ensure that some degree of similarity exists for the buildings to be compatible, despite differences. An over-mix of materials such as stucco, fieldstone, brick, and aluminum siding in a limited area should be avoided. Also, asphalt shingle sided buildings, plain concrete-block or -panel buildings, and smooth metal-faced buildings that are characterless should be discouraged. Composite wall and glass panels, curtain wall systems, split-face concrete masonry, and architecturally detailed concrete slabs/panels (such as brushed, rib-faced, or other textured finish), or other decorative-faced concrete masonry units may be permitted by a community for commercial and industrial areas; however, such buildings should include architectural details in the building's design to add character. Building roofs should consist of high quality materials as mentioned earlier under the roofing design guidelines. All facades (front, rear, and sides) of a building should preferably consist of such finished material, or at least on the building elevations exposed to public view.

Colors

The use of colors has a significant effect on the overall appearance of a community or neighborhood, including the view from STH 36. Colors which overwhelmingly clash with the visual character of the area should be avoided. Colors should be selected to complement those of surrounding buildings and such natural building materials as wood, stone, and masonry. Color schemes should consist of neutral subdued hues or earth tone colors such as creams, tans, browns, or grays while trims may be highlighted with complementary accenting colors without overbearing the integrity of the façade. Overall, buildings should consist of a predominantly neutral color tone to avoid overdoing the color scheme with an overwhelming mix of different colors, but yet allow limited highlighting colors to help avoid a drab or monotonous appearance. To minimize discordant use of colors, communities may wish to establish a palette of exterior building colors for use in certain areas such as historic or downtown areas. The range of colors selected should be wide enough to allow variety while still narrow enough to unify all buildings in an area or on a site, such as a business park or planned shopping center.

Outdoor Utility Connections and Equipment

Above-grade utility connections, vents, and other projections through exterior walls should be located away from high visibility areas, such as building entrances, pedestrian areas, or the street side of buildings, and preferably be located in the rear or service areas away from public view. Rooftop and at-grade mechanical equipment, such as air conditioning or air exchanges, should also be placed in unobtrusive locations or screened from public view. The roof or other integral architectural treatment could act as a screen. At-grade utility areas exposed to public view should be concealed with building and/or landscaping materials consistent with the architectural design of the site.

Accessory Buildings and Structures

Accessory buildings and structures should reflect or complement the principal building in terms of building facade character, roof shapes, materials, colors, and architectural details, particularly if these accessory structures are visible from public areas.

Other Architectural-Related Design Guidelines

The design guidelines for building foundation landscaping, dumpster screening, outdoor building lighting, and building signs should follow the guidelines established under the landscaping, lighting, and sign subsections.

Historic Preservation

Preservation Treatments

Treatments undertaken on any designated historic properties in the Corridor should use the standards promulgated by the U.S. Department of the Interior, including the following general standards:

1. Every reasonable effort should be made to use a structure or site for its originally intended purpose, or to provide a compatible use that requires minimal alteration of the site or structure and its environment.

2. The distinguishing original qualities or character of a building, structure, or site and its environment should not be destroyed. The removal or alteration of any historic materials or distinctive architectural features should be avoided.

3. All buildings, structures, and sites should be recognized as products of their own time. This should be considered before alterations are undertaken which have no historical basis and which seek to create an antique appearance.

4. Changes which may have taken place in the course of time are evidence of the history and development of a building, structure, or site and its environment. If these changes have acquired significance in their own right, their significance should be recognized and respected.

5. Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, or site should be treated with sensitivity.

6. Deteriorated architectural features should be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should match that being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historical, physical, or pictorial evidence, rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.

7. The surface cleaning of structures should be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage historic building materials should not be undertaken.

8. Every reasonable effort should be made to protect and preserve archaeological resources affected by, or adjacent to, any acquisition, protection, stabilization, preservation, rehabilitation, restoration, or reconstruction project.

9. Contemporary design for alterations and additions should not be discouraged when such changes do not destroy significant historical features and are compatible with the scale, mass, and architectural features of the historic property and its environment.

10. New additions should be designed so that if removed, the integrity of the original structure is not impaired.

Compliance with Local Historic Preservation-Related Regulations and Guidelines

The preservation of historic sites, buildings, and structures identified in intensive historic surveys should follow local historic preservation-related regulations and guidelines and be properly reviewed by a Landmarks Commission or other similar committee.

Signs

General

In addition to conforming to the requirements of a community sign ordinance, signs should be designed to complement the overall character of the surrounding area. Lettering on signs should be functional as well as visually pleasing. Truly functional lettering uses a typeface which is properly spaced and easy to read and makes its message clear from the distance at which it is intended to be read. Generally, the less cluttered and fewer the words on the sign face, the more likely people will be able to read the sign with ease. And, from an aesthetic point of view, the sign can be smaller while still communicating its message.

The size of proposed signs should be in keeping with the human-scale desired for the Corridor and should not conceal significant architectural features of a building. In addition, the sign composition, structural material, color, logo, and location should be compatible with the principal building architecture and adjoining streetscape. For clarification purposes, the illustration in Figure 25 and the color photographs in Appendix B identify various types of signs.

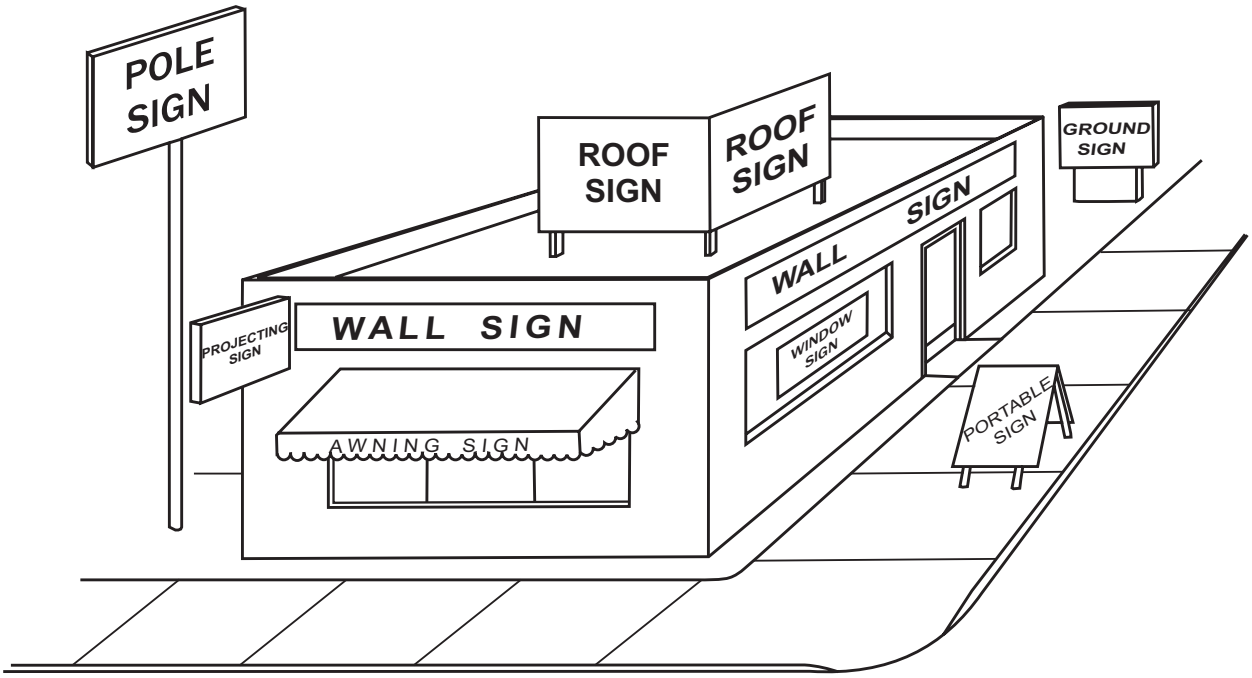
Main "Entryway" and "Gateway" or Community "Welcome" Signs

General

Main "entryways" into recreation parks, residential neighborhoods, historic districts, downtown central business districts, and business or industrial parks should be well-defined with attractive monument-type signs landscaped at the base to provide a sense of identity as well as direction. Downtown areas and residential neighborhoods could

Figure 25

SIGN TYPES



Source: SEWRPC.

also be defined by banners placed on streetlight poles. Community "Welcome" signs with surrounding landscaping should also be provided at key locations along streets functioning as main "gateways" into a community to signify arrival. The design should be representative of the character of the community and should reflect the design theme desired by the community residents.

Service Club Signs

Emblems of service clubs or charitable organizations of a community that are sometimes accommodated on community welcome signs should not obstruct or overly clutter a "Welcome" sign face. As an alternative, a separate panel with an overhead title "Service Clubs of [Name of Community]," could be provided to group and arrange the small emblem signs in a presentable manner with attractive landscaping. Importantly, such signs are best placed where the speed limit has been significantly reduced and/or where drivers may be stopping near intersections.

Street and Wayfinding Signs

Street signs should be located at each street intersection and should be legible for all user groups. Simple "icon" or graphic symbol signs could also be used for aesthetic as well as wayfinding purposes such as, for example, identifying a public parking lot or providing symbolic directions to a public library. Urban communities could utilize graphically unique street name signs that are different from the traditional rectangular street blades by using a dark colored background with contrasting light colored letters and an icon at the end that reflects the community logo or neighborhood identity, as illustrated in Figure 18. Even ornate street-sign poles and distinctively shaped street signs, such as elliptical or oval shapes, could be used for unique aesthetics provided that their wayfinding function is retained.

Monument (Ground) Signs

The results of a mail questionnaire survey and a visual preference survey in Appendices A and B, respectively, indicate that low monument signs, sometimes called ground signs, are much preferred over tall signs. Monument signs are preferably four to six feet in height, but no more than eight to 10 feet in height, supported by columns or pillars on the sides. Combined with the above, a structural base preferably extending the full width of the sign

face, but not less than 75 percent of the width, is considered more desirable than tall pole or multi-listed signs, which are discouraged. The structural support of a sign should consist of materials similar to, or compatible with, the materials used for constructing the principal building. The face of signs should not exceed 32 to 40 square feet on one side or a total of 64 to 80 square feet for all sides for any one premise.

Pole Signs
Signs mounted on a tall freestanding pole(s) or other support such as a column, so that the bottom edge of the sign face is six feet or more above ground, should be discouraged. Even though low monument signs are preferred over tall pole signs, some communities within the Corridor may elect to allow such pole signs. If permitted, pole signs should not exceed 20 feet in height above mean centerline street grade and should not exceed 32 to 40 square feet on one side or a total of 64 to 80 square feet for all sides for any one premise. The sign face should not be less than 10 feet above a sidewalk.

Wall and Roof Signs
As indicated in the visual preference survey results in Appendix B, wall signs are preferred over roof signs. Wall signs in business areas should not project more than 12 inches from a building's wall surface; should not exceed one square foot of area for every one linear foot of building face width on which it is mounted; and should not extend above the roofline of a building, unless it is erected on a parapet wall or fascia that extends above the roofline of a flat roof on at least three sides of a building. Signs proposed on or over a roof of a building should be discouraged.

Projecting Signs
Flush-mounted face signs (i.e. wall or canopy signs) on building walls or canopies are preferred over projecting signs, since projecting signs are usually located in shopping centers or downtown central business districts with predominantly flat storefronts that are oriented parallel to streets or traffic aisles and close to sidewalks. If a projecting sign is allowed, it should not exceed 25 square feet per face; should not extend more than six feet from the building to which it is attached; should not exceed a height of 20 feet above the mean centerline street grade or extend beyond the height of the roofline, whichever is lower; and should not be less than 10 feet above a sidewalk. In downtown areas, a "master" projecting sign for businesses within a single multi-tenant building should only display the owner, business, or shopping complex name. Overall, the height of projecting signs should be consistent between stores in the same vicinity.

Canopy, Awning, or Marquee Signs
A canopy, awning, or marquee used as a "sign" should not dominate the façade of the building to which it is attached. Signs affixed to canopies, awnings, or marquees should not exceed a height of two feet nor extend vertically or horizontally beyond the limits of said canopy, awning, or marquee. A name sign not exceeding two square feet in area located immediately in front of the entrance to an establishment may be suspended from a canopy, awning, or marquee provided that the name sign is at least ten feet above any sidewalk.

Master Signs
A freestanding master sign for developments with multiple tenants should display the owner, business, or shopping center name only. Master signs should be used to reduce clutter by integrating existing signs and eliminating unnecessary ones on a site, to provide a coherent sign with minimal verbiage, and to be positioned so that it will not blight the streetscape. A community may allow, however, the name of the major anchor(s) of a shopping center to be added to a master sign. Preferably tenants should rely on wall signs for advertisement, in order to avoid cluttered pole signs containing multi-listed sign faces. Multi-listed signs concentrated on a single support structure were perceived as projecting a negative image, according the results of a visual preference survey in Appendix B. They may also pose potential hazards to destination-seekers among moving traffic.

Combination of Signs
The total number of signs on any one development site should be subject to local review and approval as part of a master sign program and should be limited as follows:

1. Up to two advertising signs may be allowed per principal building unless otherwise specified herein, but no more than one freestanding sign. Wall, canopy, fascia, monument, or pole signs—if the latter is permitted by a community, not exceeding a total of two, may be used, subject to approval by local officials.

2. Multi-tenant buildings may provide a tenant directory near entryways—preferably as a monument or ground type sign—as one of the two signs permitted.

3. Separate individual wall, canopy, or fascia signs should be allowed for each tenant in a shopping center subject to review and approval by local officials of an overall coordinated sign plan for the shopping center. The size of signs approved in this manner should be calculated using the width of the bay occupied by each tenant. Individual wall, canopy, or fascia signs should not exceed 32 to 40 square feet in area, with a maximum height of two feet for the sign face.

4. Large developments with multiple street frontage may have an additional wall sign, monument sign, or pole sign—if the latter is permitted by a community—to identify the development, upon local review and approval.

5. Price signs for gasoline or diesel fuel sales as required by law should not be subject to limitation on the numbers of signs, however, such price signs shall not exceed 20 square feet in area and should be located on a monument-type sign.

6. Directional sign faces less than four to six square feet in area should not be subject to limitations on the number of signs, but should require review and approval by local officials. Other incidental signs include, but should not be limited to, those that read “enter,” “exit,” “do not enter,” “shipping,” and “receiving”. No direction signs should be placed in a street right-of-way.

7. Menu boards and changeable copy reader boards may be added to a wall sign or pole sign—if the latter is permitted by a local community, upon local review and approval, without reducing the size of the wall sign or pole sign; however, such reader boards should not exceed 20 square feet in area.

A combination of any of the abovementioned signs should meet all the design guidelines for that type of individual sign.

Window Signs and Displays

Window displays should be uncluttered and preferably free of signs. If signs are permitted on windows, such signs, except for painted signs or decals, should be placed only on the inside of buildings; should not cover more than 15 to 20 percent of the glass area of the pane upon which the sign is displayed; should not be placed on glass doors or window areas that will impede pedestrian safety or prohibit view by police; and should be placed behind clear glazed windows and not on unglazed windows. Window signs are usually not calculated as part of the total sign square footage permitted by a community.

Home Occupation and Professional Home Office Signs

The sign face for home occupations or professional home offices should not exceed two square feet in area and should preferably be mounted flush against the dwelling.

Discouraged Signs and Outdoor Off-Premise Signs

Advertisement signs should not resemble, imitate, or approximate the shape, size, form, or color of railroad or traffic signs, signals, or devices. Signs should not obstruct or interfere with the effectiveness of railroad or traffic signs, signals, or devices. Pole, roof, moving, flashing, truck (not incidental vehicular signs), mobile (i.e. a sign transported on a trailer), and off-premise (i.e. billboards) signs should be avoided. Official signs and off-premise signs identifying civic or other nonprofit community service organization, usually located at municipal boundaries, could be allowed.

Sign Material and Color

Panel-type signs supported by structures comprised of materials similar to or compatible with the building materials of the principal structure are more preferable than standard "franchise" and "brand name" signs with no ornate structural support. Desirable sign faces include those constructed of natural stone or wood-carved material, or those made of cultured material which has the appearance as a wood- or stone-carved sign, and ornamental metal signs with painted or raised letters and/or logos of hand-crafted quality. The predominant color for sign faces should usually be subtle or neutral and should be complementary to the hues of the principal building on a site. The use of bright colors on sign faces should be limited and complementary with the predominant sign color. Bright accenting colors could be used to highlight borders, logos, symbols, or letters to help establish an attractive, vibrant sign.

Sign Setback and Location

All signs, including the sign face and supporting structures, should be set back preferably 10 feet or more from a street right-of-way or a side or rear lot line. In downtown or central business district areas, an awning, canopy, marquee, or projecting sign may extend into a street right-of-way, but should not extend beyond a point one foot back from the vertical plane formed by the street curb line. Such covers and projecting signs in a shopping center should not extend beyond a point one foot back from the vertical plane formed by the curb line. Other than official signs and traffic or railroad control signs, no signs should be located in a street right-of-way, unless permitted by local regulations and, if applicable, the State or County government agency having jurisdiction over a highway right-of-way. Signs subject to official review and approval may include, for example, a residential neighborhood sign proposed in the island of a boulevard-type entrance located within a collector street right-of-way, or a community "Welcome" sign proposed within a State or County Trunk Highway right-of-way, including STH 36.

Other Sign Design Guidelines

The design guidelines for sign landscaping and illumination should follow those established under the landscaping and lighting subsections.

Transportation-Related Features[4]

General-Streets and Related Facilities

The design layout of proposed streets, highways, and related facilities, such as pedestrian and bicycle facilities, should comply with adopted jurisdictional highway system plans; official maps (including community street system plans); detailed neighborhood plans; bicycle, pedestrian, and recreation trail system plans; and other development or redevelopment plans. Neighborhood unit development plans should show precise street and lot layouts with an integrated system of pedestrian and bicycle facilities that connect residents to key activity centers such as parks, schools, shopping areas.

Street Cross-Sections

Streets, highways, and attendant facilities, such as sidewalks and bike paths or lanes, should be designed in accordance with cross-sections typically included in local land division ordinances or engineering specifications, including those specifications established by State or County governmental units that have jurisdiction over

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[4]*The design guidelines set forth in this subsection are not intended to serve as a comprehensive guide to the design of streets and highways including those accommodating bicycle and pedestrian facilities, but are intended to suggest certain design treatments that may be appropriate in certain situations. Precise design specifications should be determined during engineering studies for specific street, highway, and bicycle-way projects, and should be based, in part, on the recommendations contained in the most recent edition of,* A Policy on Geometric Design of Highways and Streets, *and the* Guide for the Development of Bicycle Facilities, *both published by the American Association of State Highway and Transportation Officials; the* Manual on Uniform Traffic Control Devices*, published by the U.S. Department of Transportation, Federal Highway Administration; and the* Wisconsin Bicycle Facility Design Handbook, *published by the Wisconsin Department of Transportation.*

arterial streets. Collector and minor land-access streets can generally accommodate bicycle travel without widening the roadway due to the usually low traffic speeds and volumes. Sidewalks or pedestrian paths, with attendant landscaping such as planting beds or street trees, may be provided in areas of existing or planned urban development, in accordance with the criteria set forth in Table 6, to provide a pleasant pedestrian environment and to help reduce unnecessary vehicular travel, including on STH 36.

Pedestrian and Bicycle Way Connections

Off-street bike and pedestrian ways should be provided to connect cul-de-sac streets and adjacent streets across blocks of 900 feet or longer, and should be provided to connect adjacent subdivisions, subdivisions and activity centers, and activity centers and employment centers where alternative on-street routes are unduly circuitous. Subdivisions proposed near the recreational trail that parallels STH 36 should also provide a connection from said subdivisions to the trail. Examples of site designs that facilitate bicycle and pedestrian travel are illustrated in Figure 26. Such bicycle and pedestrian ways should consist of access easements or dedicated outlots/rights-of-way at least 20 feet in width. Pavement widths of at least five feet, or wider depending on the type and volume of users, should be provided.

Frontage Street Intersections

The outer separations at any intersections between arterial streets, such as STH 36, and paralleling frontage roads should be from 150 feet up to 600 feet in width, depending on the volume of average daily traffic on the crossroad, for traffic safety purposes, where practical and feasible. Narrow separations such as 45 to 85 feet wide between arterial streets and paralleling frontage roads, except at intersections, are acceptable.

Vehicular Access Control

General

To preserve the traffic design operation of arterial streets and highways for safely channelizing traffic movements, driveways, streets, and other highways proposed to intersect arterial highways should comply with adopted access management plans for arterial highways. Such plans attempt to properly integrate land-use and transportation planning objectives for highway corridors. Access along STH 36 will continue to be controlled by and subject to review and approval by the Wisconsin Department of Transportation in accordance with an approved access-control plan.

Arterial Highway Access Barriers

No-access easements for motorized vehicles and physical barriers, such as ditching, curbing, fencing, plantings, berms, or other landscape barriers, should be provided to prevent undesirable vehicular access to arterial streets or highways and to properly and safely channelize traffic movements. Figure 16 illustrates alternative landscaping methods that could be used as access barriers. Where applicable, openings should be provided in the barriers for convenient pedestrian and bicycle access.

Reverse-Frontage Lots to Limit Arterial Highway Access

Reverse-frontage lots should be located adjacent to arterial streets or highways, such as STH 36, to limit vehicular access from abutting land uses. A landscaped buffer strip should be provided with a nonaccess reservation along the rear property lines of residential reverse-frontage lots, as illustrated earlier in Figures 12 and 13. The landscaped buffer strip should be completed as part of a development to ensure proper installation and design continuity. Normal depths of reverse-frontage lots, as well as widths of corner lots, should be increased relative to the width of the buffer strip during platting.

Shared Cross-Access and Entryways

Businesses and other land uses with similar characteristics should be clustered in proximity of one another to provide safe and efficient circulation linkages for vehicular, bicycle, and pedestrian traffic. Shared cross-access and entrance drives should be encouraged, as illustrated in Figure 27, between adjoining compatible uses to help reduce the number of unnecessary, duplicated driveway intersections along an arterial. This arrangement, in turn, preserves open space, reduces construction cost, minimizes disruption of highway traffic flow from vehicles

Table 6

RECOMMENDATIONS FOR THE PROVISION OF SIDEWALKS IN AREAS OF EXISTING OR PLANNED URBAN DEVELOPMENT WITHIN THE STH 36 NORTH CORRIDOR

Roadway Functional Classification	Land Use	New Streets[a,b]	Existing Streets[a,b]
Arterial Streets[c]	Industrial Commercial Residential	Both sides Both sides Both sides	Both sides Both sides Both sides
Collector Streets and Minor Land-Access Streets[d]	Industrial Commercial Residential	At least one side[e] At least one side[e] At least one side[e]	At least one side At least one side At least one side

[a]*Sidewalks may be omitted along sides of streets where there are no existing or anticipated uses that would generate pedestrian trips on that side. Sidewalks proposed through environmentally sensitive areas should be reviewed on a case-by-case basis to determine if such a sidewalk is needed, or if there are alternative routes or options that may be less disruptive such as, for example, a boardwalk over wetlands.*

[b]*Asphalt pathways may be provided in place of concrete sidewalks along busy arterial and collector streets, except for those in downtown areas (for aesthetic reasons) with no building setbacks, when the pathway would function as a shared recreation path for walking, bicycling, and in-line skating, and would connect to parks and schools.*

[c]*Where there are marginal access control or service and frontage roads, the sidewalk along the main road may be eliminated and replaced by a sidewalk along the service or frontage road on the side away from the main road.*

[d]*Sidewalks need not be provided along courts and cul-de-sac streets less than 600 feet in length, unless such streets serve multi-family development or connect to points of interest with pedestrian outlots or easements located between lots leading to, for example, schools, parks, or shopping areas. Also, sidewalks need not be provided along the side of streets that are served by adjacent parallel off-street walkways or recreation trails; however, sidewalks should be provided on the opposite side of said street.*

[e]*Sidewalks should be provided along both sides of busy collector streets where there are existing or anticipated uses that would generate pedestrian trips on each side.*

Source: SEWRPC.

entering onto and exiting off of the arterial; reduces the number of potential points of conflicts between through and turning traffic; facilitates the control and separation of vehicles and pedestrian movements; and generally enhances safety. Joint access reservations or easements should be provided for both shared cross-access and entrance drives mutually agreed upon between properties. Access provisions should be evaluated on case-by-case basis to determine the safety and feasibility of shared access.

Other Transportation-Related Design Guidelines

The design guidelines for street trees and terraces, vision triangles and landscaping at street corners, cul-de-sac turnarounds with landscaped islands, median landscaping, and buffering frontage streets should follow the guidelines established earlier under the landscaping subsection.

Other Pertinent Design-Related Guidelines

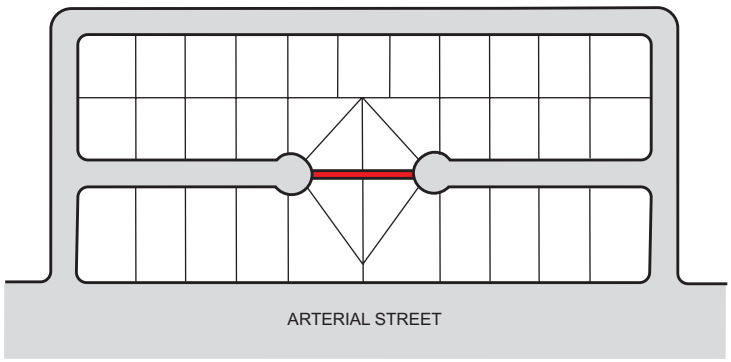
Wetlands and Buffer Strips

Wetland and shoreland areas should be preserved in accordance with applicable local and State regulations. A buffer strip with permanently vegetated open space of at least 10 to 15 feet wide should be provided immediately adjacent to all wetlands, unless a greater buffer is required by local or County ordinances.

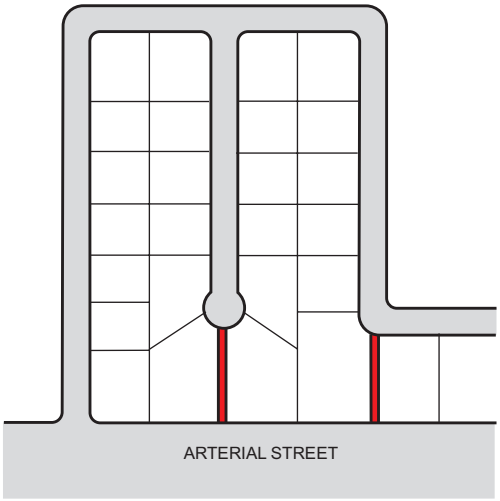
Figure 26

EXAMPLES OF SITE DESIGNS WHICH FACILITATE BICYCLE AND PEDESTRIAN TRAVEL

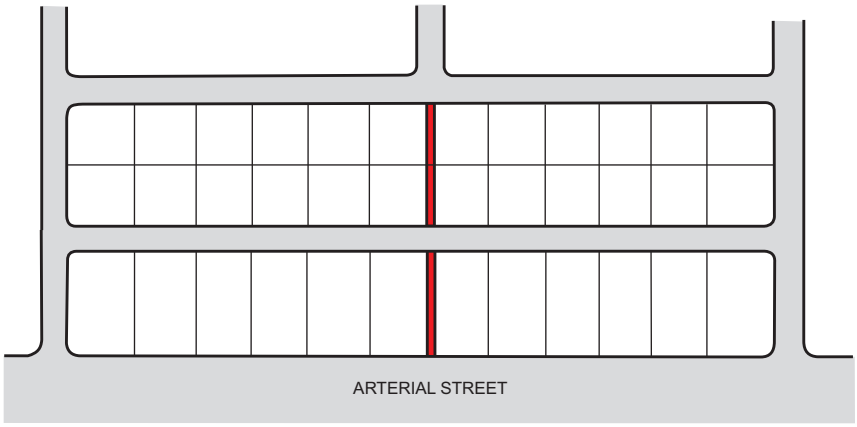
A. BICYCLE AND PEDESTRIAN CONNECTIONS BETWEEN CUL-DE-SAC STREETS



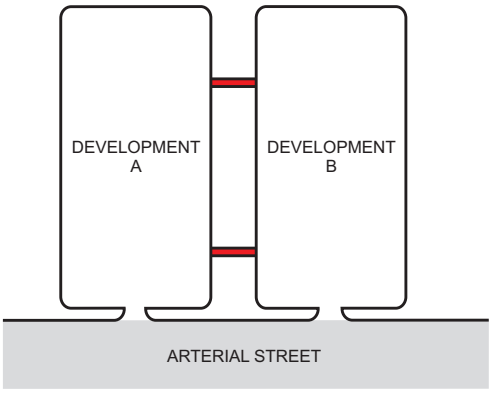
B. BICYCLE AND PEDESTRIAN CONNECTIONS ACROSS BLOCKS



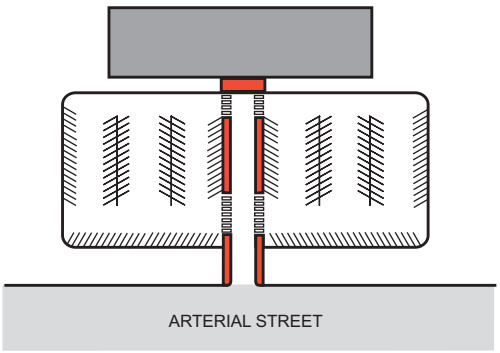
C. BICYCLE AND PEDESTRIAN CONNECTIONS ACROSS LONG BLOCKS



D. BICYCLE AND PEDESTRIAN CONNECTIONS BETWEEN ADJACENT DEVELOPMENTS



E. DESIGN OF PARKING LOT TO FACILITATE BICYCLE AND PEDESTRIAN ACCESS (WHERE PARKING CANNOT BE LOCATED TO REAR OF BUILDING)

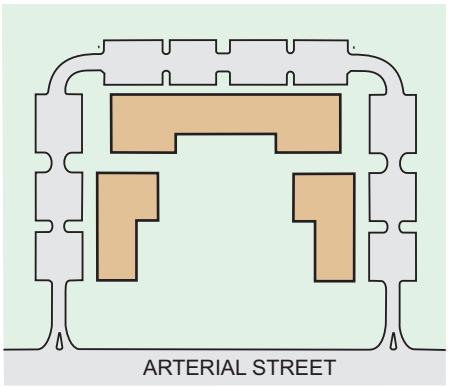


Source: SEWRPC.

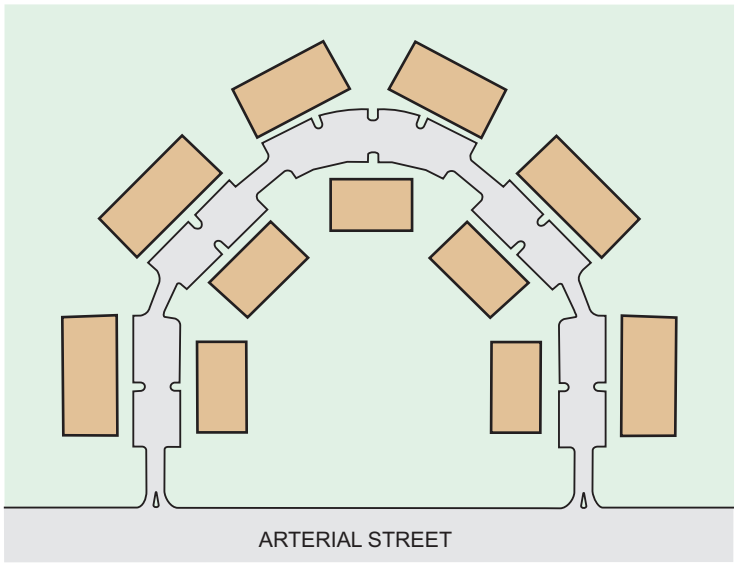
Figure 27

SHARED ENTRYWAYS, CROSS-ACCESS, AND PARKING LOTS IN COMMERCIAL AREAS

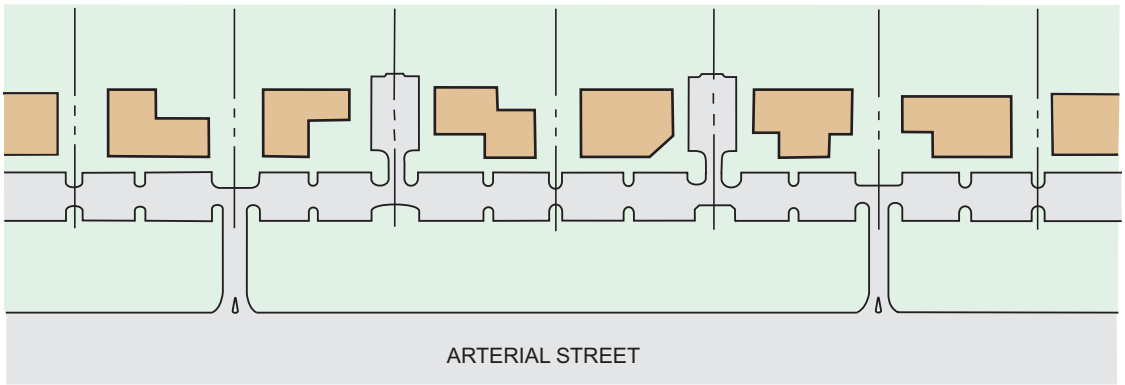
A.



B.



C.



Source: SEWRPC.

Above-Ground Utility Cables
The location or relocation of above-ground utilities underground should be considered. Overhead wires detract from the overall appearance of the Corridor and typically add to visual clutter. If the placement of all utility cables underground is not practical, the secondary distribution lines located on wooden poles could be buried while retaining the major transmission lines on tower type supports such as pylon towers or tall wooden structures, or converting the pylon towers to less visually obtrusive single pole supports. If this alternative is impractical, then the aboveground utilities could be relocated to an unobtrusive location where the cables would be less visible to public view, such as in the rear of properties or behind hedgerows or wooded areas.

Cellular Towers
Antennas preferably should be co-located on and carefully integrated with existing structures such as water towers, public buildings, utility transmission towers, barns, or farm silos, as shown later in Figure 39. If a new freestanding tower is warranted, the structure should be designed with an unguyed, monopole style and accommodate at least four antennas to avoid the proliferation of additional towers in the vicinity. Guyed towers and lattice towers should be discouraged, unless the lattice appearance or an alternative design would better blend in with the surrounding environment, subject to local review and approval. The man-made "stealthing" of new freestanding towers to attempt an authentic appearance as a tree or other "natural" image is usually difficult and should be avoided since the projected image usually appears too "fake."

Water Towers
If municipal water towers are to be located within the Corridor viewshed, they should be visually presentable and well-maintained. Since water towers are highly visible landmarks, the towers should consist of a predominant subtle or neutral color, such as a light blue, light green, light tan, or white color, while vibrant accenting colors could be reserved for creating a graphically pleasing logo and/or name, with attractive stylish lettering, of the community to be placed on the tower for aesthetic and location identification purposes.

Ornate Bridges and Retaining Walls
When new bridges and retaining walls need to be installed or existing faceless bridges and walls need to be replaced, they should be constructed with an unique design instead of the typical bland "modern" style. The facades of parapets and walls could consist of ornate materials such as fieldstone, lannon stone, decorative masonry, interlocking geometrically-shaped blocks, ornate precast concrete panels, or poured-concrete walls with unique "color-stamped" patterns or geometric patterns defined by scorelines and "brushed" surfaces with smooth edges as opposed to plain poured-concrete surfaces. Unless a community wishes to intentionally screen motor vehicles, the parapet—low wall or railing—of bridges should be partially "open," and yet function as a barrier for safety reasons, so that motorists can see through the parapet to enjoy the scenery from the bridge.

Lots

General
The size, shape, and orientation of lots should be appropriate for the location of a proposed subdivision, for the preservation of natural resources, and for the type of development to be accommodated. The lots should be designed to provide an aesthetically pleasing building site and proper design setting for the building and landscaping contemplated.

Lot Sizes
Lots sizes should contain sufficient area to adequately accommodate buildings, parking, landscaping, screening, and all required setbacks or yards. Areas and dimensions of all lots should conform to the requirements of local zoning ordinances. Normal lot depths and widths should also be increased relative to the width of any buffer strips provided along abutting arterial streets, highways, and railways. In certain cases, the depth should be increased to accommodate shared land-access roads or traffic aisles between adjoining compatible uses and aligned parallel with arterial streets to help reduce the number of access points along arterials.

Corner Lots
Corner lots should have an additional width of at least 20 feet to permit adequate building setbacks from side streets—"street yards".

Double-Frontage Lots
Double-frontage lots, sometimes called "through" lots or reverse-frontage lots, should be prohibited, except where necessary to provide separation of development from arterial traffic, such as STH 36 traffic, or to overcome specific disadvantages of topography and orientation.

Stormwater Management Facilities

General
Stormwater management facilities should be adequate to serve a proposed development, and may include curbs and gutters; catch basins and inlets; storm sewers; open channels; roadside swales; culverts; water detention or retention facilities; infiltration facilities; and existing natural depressions, wetlands, and streams. The facilities should be of adequate size and grade to accommodate peak rates and volumes of runoff from and through a proposed development, and should be so designed as to prevent and control nonpoint source pollution while presenting no hazards to life or property. When natural features on the site are to be incorporated in the stormwater management system, appropriate measures should be implemented to avoid degrading the quality of those features. Stormwater facilities should, as a minimum, follow the design standards established by the Wisconsin Department of Natural Resources (WDNR) in a document titled, *Wisconsin Storm Water Manual, Part Two: Technical Design Guidelines for Storm Water Best Management Practice.* Ultimately, stormwater management plans for proposed developments should be submitted for local review and approval to ensure compliance with local engineering standards for properly managing stormwater runoff.

Detention and Retention Basins
Stormwater detention or retention basins should have a gently sloping "safety shelf" with a maximum depth of one foot around the perimeter and should be graded to a safe slope, no steeper than one vertical to four horizontal above the "safety shelf." Such basins should blend into the landscape with natural plantings surrounding the perimeter of the basin designed with a natural curving form in order to avoid the bare, rigid "impact crater" or "ice cube tray" geometric appearance. Ponds should also have edges planted with aquatic plants.

Erosion and Sedimentation Control Measures

General
Earthmoving activities, 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 conducted so as to prevent erosion and sedimentation and to minimize disturbance to natural fauna, flora, watercourses, water regimen, and topography. Construction activities should be planned so that the soil is disturbed a minimal amount of time. In general, cut and filled lands outside street rights-of-way should be graded to a slope not exceeding 25 percent or the angle of repose of the soil, whichever is less. All erosion control measures should meet local requirements for such measures and the design standards identified by the WDNR in a document titled, *Wisconsin Construction Site Best Management Practice Handbook.* Ultimately, erosion and sedimentation control plans for proposed developments should be subject to local review and approval to ensure compliance with local engineering standards for proper erosion and sedimentation control.

Grade Stabilization
To help prevent erosion and sedimentation, a developer should plant grasses, shrubs, and trees—the species and size of which should to be determined based on those identified in Appendix D. Municipalities may require a developer to provide or install protection and other rehabilitation measures such as fencing, slopes, riprap, wells, revetments, berms, jetties, snagging, drop structures, brush mats, or other grade stabilization structures.

General Maintenance
A complete and thorough public maintenance program for public lands, as well as individual private maintenance programs, especially in business areas, should be established. Improvements to buildings and their continued positive appearance depend on proper maintenance procedures. Maintenance programs should include staking, watering, fertilizing, spraying, weeding, pruning, replacing, augmenting, and other general maintenance of landscape planting areas; picking up litter and emptying trash containers in a timely fashion; sweeping, cleaning, and repairing paved surfaces; the care and maintenance of site furniture; and the repair and/or replacement of non-functioning streetlights and fixtures and other amenities. Establishing a maintenance program will help to ensure the continued attractiveness and viability of communities within the Corridor viewshed.

CORRIDOR RURAL DESIGN GUIDELINES

The following design guidelines are recommended for developments that occur in the rural or "country" areas of the Corridor, which are located mainly between urban centers. These rural design guidelines are intended to help retain the natural and agricultural/pastoral views desired between urban centers, as supported by the survey results in Appendix A. If development is allowed, it should be in keeping with the rural visual context customary to the Corridor.

It should be noted that many of the aforereferenced urban design guidelines presented in Part 2 would also apply to developments that may occur within the rural portions of the Corridor. Therefore, if a community allows certain "urban" developments in the rural areas, the guidelines outlined in the above urban design guideline section should be followed while incorporating a more "natural- or country-design" style or theme, where applicable. Also, while homes on individual lots are encouraged to follow the proceeding design guidelines, most of the rural design guidelines are intended for proposed residential subdivisions and intensive developments such as certain commercial and institutional uses that may be allowed by a community.

General Rural or "Country" Character and Design Concepts

Overall Character and Design Concept

Rural areas located outside of and between urban centers in the Corridor should retain the rural or "country" character projected by a combination of natural and agricultural scenery. If development is permitted in these areas, the design should utilize open space and conservation design concepts, as supported by the results of a mail questionnaire survey reported in Appendix A. In addition, proposed developments should incorporate a design theme, such as a "country-" or "prairie-style," that complements the rural character. Most developments, however, should be preferably nestled into the landscape and hidden from view, since the perception of rural character is usually a result of what is seen from roads while traveling through the countryside. If this principle is followed, the overall character of a development should complement a community's existing and/or desired rural character by preserving or enhancing the view of a development parcel from adjacent roadways.

Preservation of Natural and Agricultural Features and Views

The rural character visible along STH 36 is defined by a combination of natural and agricultural views, as shown in Figure 28, which should be protected in so far as possible from encroaching urban development.

Natural Features and Views

The "natural" views of the Corridor are defined by such distinct natural features as wetlands, woodlands, hedgerows, treelines, large single trees, rolling topography, steep slopes, pronounced hilltops, stream corridors, and lakes, which may also function as wildlife habitats. If present on development parcels, these features should be preserved and integrated into the site layout by practicing open space and conservation design concepts as illustrated in Appendix F. Excessive clear cutting and grading should be avoided by carefully designing designated construction zones to minimize site alterations to existing natural vegetative cover and the basic topographic pattern. Existing vegetation should also be protected in accordance with sound conservation practices to preserve the natural character of the rural landscape.

As further identified on Map 10 and Figure 29, many of the natural features lie within concentrated areas referred to as environmental corridors and isolated natural resources areas. The preservation of these areas will help retain the natural beauty of the Corridor landscape, and will also avoid costly development problems such as flood damage, wet basements, and failing pavements. Properly relating new development to such environmentally significant areas will also preserve the scenic beauty of the natural resource base. Cluster design concepts are recommended over conventional subdivision design if residential development occurs within the upland portions of these environmentally significant areas, as illustrated in Figure 30.

Figure 28

RURAL OR COUNTRYSIDE VIEW/CHARACTER

A. OVERALL VIEW - RURAL PRESERVATION

B. AGRICULTURAL OR PASTORAL VIEW

C. NATURAL VIEW

D. OBSTRUCTED VIEW

Source: SEWRPC.

Figure 29

ENVIRONMENTAL CORRIDOR

A. CORRIDOR IN RURAL AREA

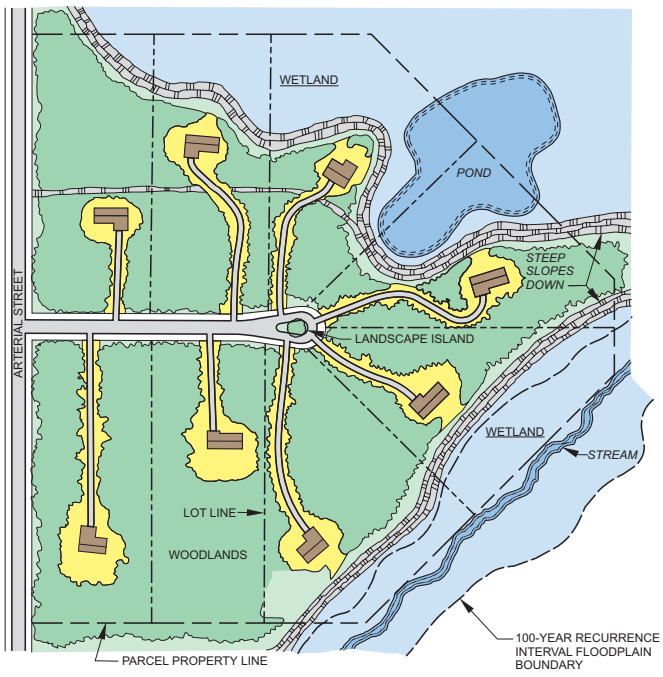
B. CORRIDOR NEAR URBAN AREA AS A PARKWAY

Source: SEWRPC.

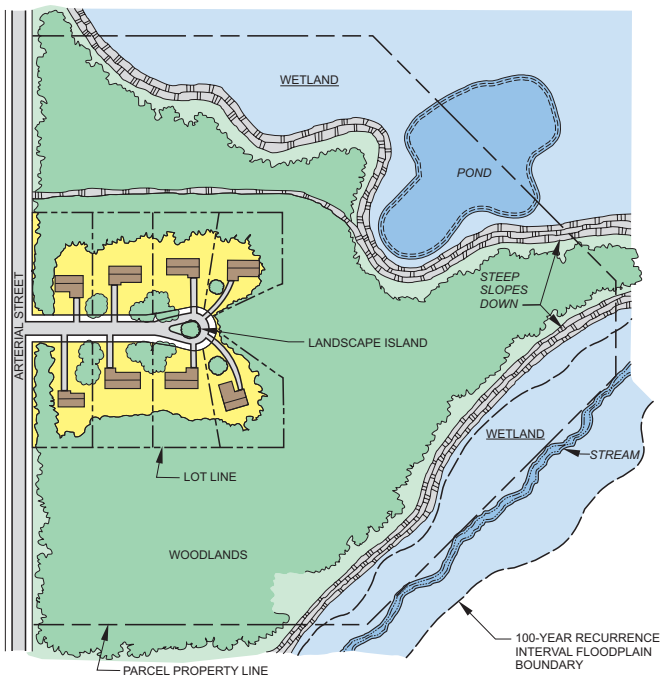
Figure 30

ALTERNATIVE RESIDENTIAL DEVELOPMENT DESIGNS COMPATIBLE WITH PRIMARY ENVIRONMENTAL CORRIDORS

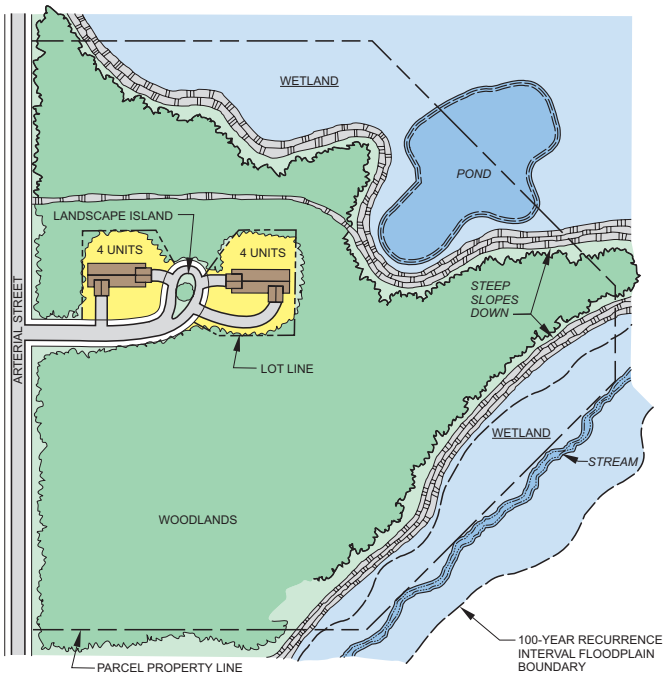
A. CONVENTIONAL FIVE-ACRE LOT DESIGN



B. CLUSTERED ONE-ACRE LOT DESIGN



C. CLUSTERED CONDOMINIUM DEVELOPMENT DESIGN



Source: SEWRPC.

Figure 31

PRESERVED FARMSTEAD INTEGRATED INTO CONSERVATION SUBDIVISION

NOTE: A BARN COMPLEX SERVES AS A HORSE STABLE AND IS INTEGRATED INTO THE SUBDIVISION DESIGN AS AN AMENITY. IT IS SURROUNDED BY AMPLE OPEN SPACE, PRESERVING RURAL LANDSCAPE CHARACTER NEXT TO THE PERIMETER ROAD.

Source: SEWRPC

Agricultural Features and Views

Agricultural and/or pastoral features that largely define the agrarian image include orchards, pastures, cultivated fields, and related farmstead structures such as farmhouses, barns, wooden outbuildings, silos, and windmills. Some of these agricultural-related elements may be significant historical features or unique cultural features, which may not be officially designated as historically significant per se, but should be protected since they may function as recognizable landmark features that help define the rural or country setting. These features will also help retain the agrarian heritage by reminding the public of the rural ethnic groups that settled in the area. Even piled stone walls, vegetated fence rows, and ruins, such as old stone silos and other remnants, contribute to rural landscape and should be considered for preservation.

Development allowed on land containing such features should preserve and integrate them into the site design, as shown in Figure 31 and discussed under the conservation subdivision design guidelines. In addition, the historic preservation guidelines established earlier under the urban design section should also be used to preserve both significant historic and cultural features so that any repairs or additions to buildings do not alter the design character of the structure.

Compliance with Local Ordinances and Plans

A community's desire to retain its rural or "country" setting should be, and often is, expressed in local ordinances, such as zoning and land division ordinances which include design-related regulations. The basis of these controls are comprehensive plans, or plan elements thereof, such as community land use plans, open space preservation plans, detailed neighborhood cluster development plans, or rural design guidelines. Proposed developments should comply with local ordinances and plans, and meet their intent. Both adopted ordinances and plans should be referred to on a continual basis any time a development proposal is submitted for review and approval.

Basic Site Planning and Development Plan Review

The guidelines for basic site planning, which includes proper site analysis, preliminary sketches, and preapplication meetings—and development plan preparation, submittal, and review—should follow the previously discussed urban design guidelines.

Open Space and Conservation Design Concepts

Conservation Subdivision Design

Conservation subdivision design is a preferred subdivision design method, as supported by the survey results reported in Appendix A, if residential development is allowed in rural areas. When properly designed, this type of development, sometimes called rural cluster development, can help preserve significant natural, historical, and cultural features as well as maintain the rural or "country" character of the Corridor landscape. Lot sizes, for example, would be reduced and clustered while the rest of the site concerned is retained in permanent open space use, as illustrated in Figures 32 and 33. The design concept also attempts to arrange most lots and internal subdivision roads behind existing hills, vegetation, or structures of rural character to hide new homes, accessory buildings, and mowed lawns, as shown in Figure 34. Where such existing site features are absent, the use of unobtrusive berms that undulate both vertically and horizontally, towards and away from the viewer, and/or the use of natural landscaping should be implemented. The design process for conservation subdivision design is further explained in Appendix F.

Lot Averaging

Lot averaging is another means of gaining the flexibility to situate housing away from significant natural environmental features, as illustrated in Figure 35. With this technique, lot areas are permitted to be reduced below the minimum size provided that the area by which they are reduced is added to one or more other lots in a development, as long as the agreed-upon overall density is achieved and environmentally significant features are preserved. Although the opportunity to maintain environmentally sensitive features under unified ownership is lessened, the flexibility in the location of homesites still permits more site-sensitive design than does conventional development. Because lot averaging does not create common space, a homeowners association is not needed.

Architecture

General Style

To retain the countryside image, architectural styles should complement the visual rural context of natural and agrarian settings, as illustrated in Figure 36. Buildings may be designed with a "country" style, such as a Craftsman, Prairie, or French Country style, for example. Nevertheless, communities in the Corridor should be receptive to certain other unique styles that have compelling architectural merit, such as low buildings with flat or low pitched roofs and glass-paneled walls that appear to blend in and retain the low horizon of the landscape, by being hidden or naturally tucked into the terrain.

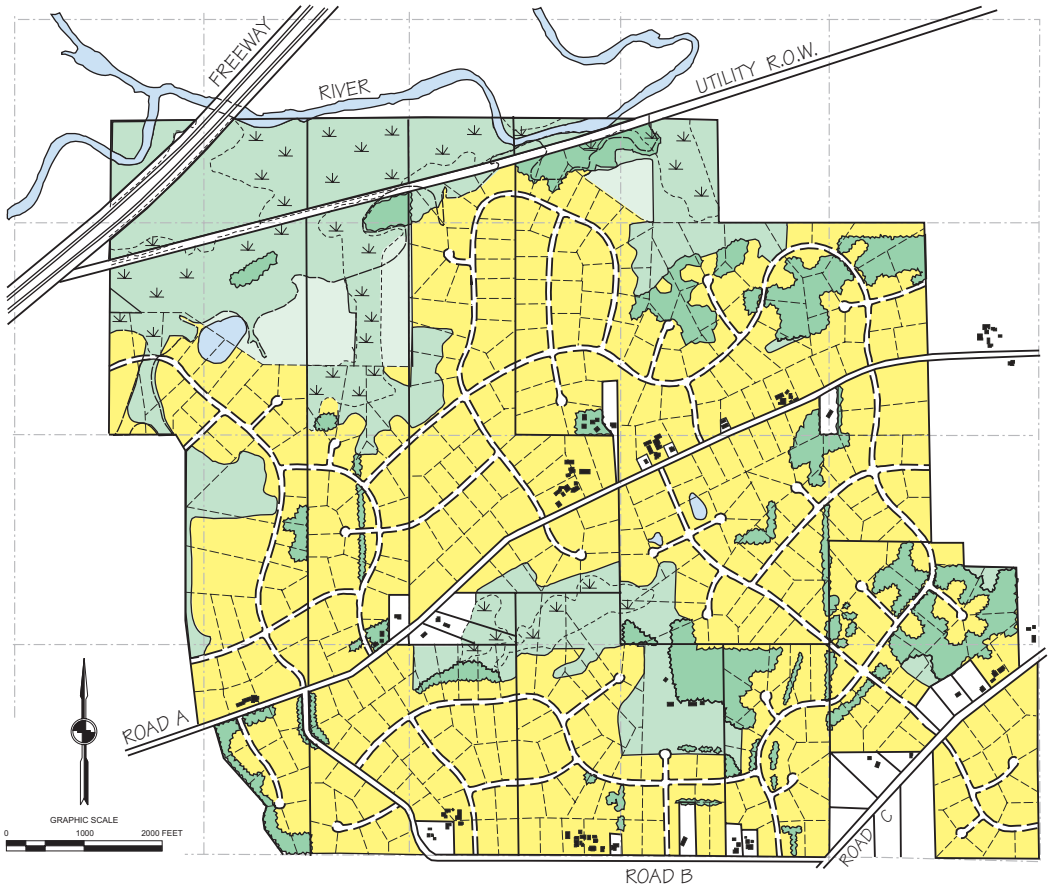
Buildings should otherwise be constructed of mostly peaked roofs with predominantly subdued hues of natural or cultured wood, stone, or brick facade materials that characterize the rural area. Attractive finished design should preferably be provided on all facades (front, back, and sides) of a building, or at least on any facades facing public view. Smooth metal-faced buildings and plain box-shaped, concrete buildings that are devoid of any architectural detailing or merit and are incompatible with the rural architectural character of the surroundings should be avoided.

Architectural Details

The projection of an architecture style with a "country" flair is also associated with a building's detailing. In addition to the recommended roof style and façade material and colors discussed below, distinct building elements that convey a country architectural character may include such elements or ornamentations as weather vanes, lightning rods, distinct rooftop vents, steeples, cupolas, turrets, dormers, finials, or decorative corner brackets.

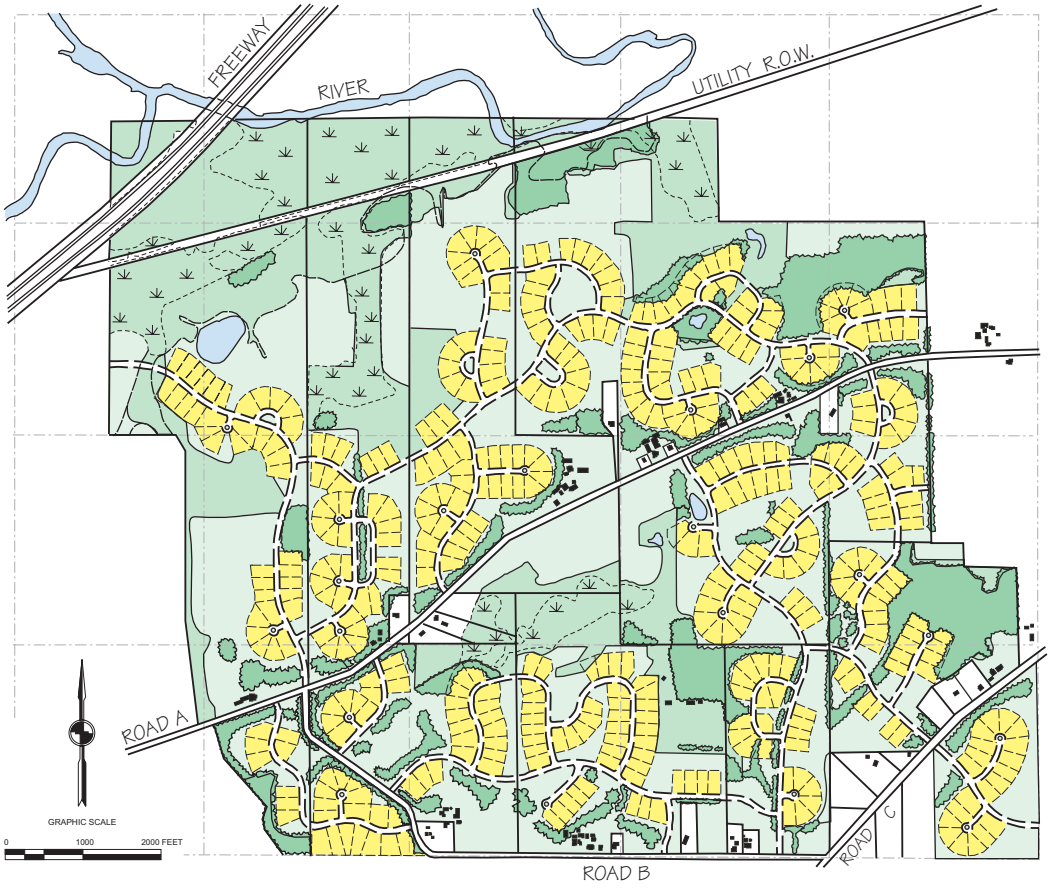
Figure 32

COMPARISON OF CONVENTIONAL AND CONSERVATION SUBDIVISION DESIGNS



A-1. CONVENTIONAL SUBDIVISION DESIGN

- PRIMARY ENVIRONMENTAL CORRIDOR, SECONDARY ENVIRONMENTAL CORRIDOR, AND ISOLATED NATURAL RESOURCE AREAS
- OTHER COMMON OPEN SPACE
- WOODLANDS AND HEDGEROWS
- 100-YEAR RECURRENCE INTERVAL FLOODPLAIN
- WETLANDS
- SURFACE WATER
- EXISTING HIGHWAY OR STREET RIGHT-OF-WAY
- EXISTING PROPERTY LINE
- EXISTING STRUCTURES
- PROPOSED LOT AREA
- PROPOSED STREET RIGHT-OF-WAY
- PROPOSED PROPERTY LINE

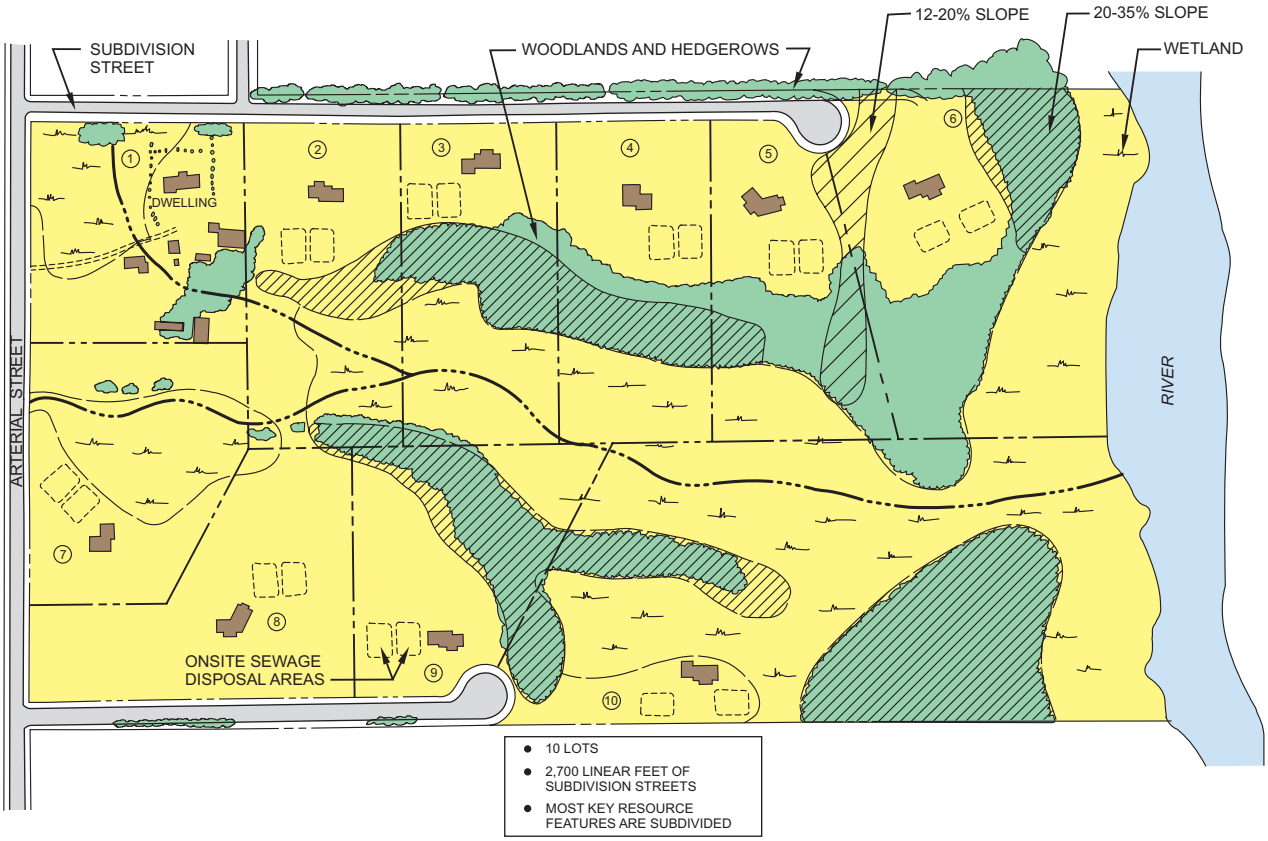


A-2. CONSERVATION SUBDIVISION DESIGN

- PRIMARY ENVIRONMENTAL CORRIDOR, SECONDARY ENVIRONMENTAL CORRIDOR, AND ISOLATED NATURAL RESOURCE AREAS
- OTHER COMMON OPEN SPACE
- WOODLANDS, HEDGEROWS, AND LANDSCAPED BUFFERS
- 100-YEAR RECURRENCE INTERVAL FLOODPLAIN
- WETLANDS
- SURFACE WATER
- EXISTING HIGHWAY OR STREET RIGHT-OF-WAY
- EXISTING PROPERTY LINE
- EXISTING STRUCTURES
- PROPOSED LOT AREA
- PROPOSED STREET RIGHT-OF-WAY
- PROPOSED PROPERTY LINE

Figure 32 (continued)

B-1. CONVENTIONAL SUBDIVISION DESIGN



B-2. CONSERVATION SUBDIVISION DESIGN

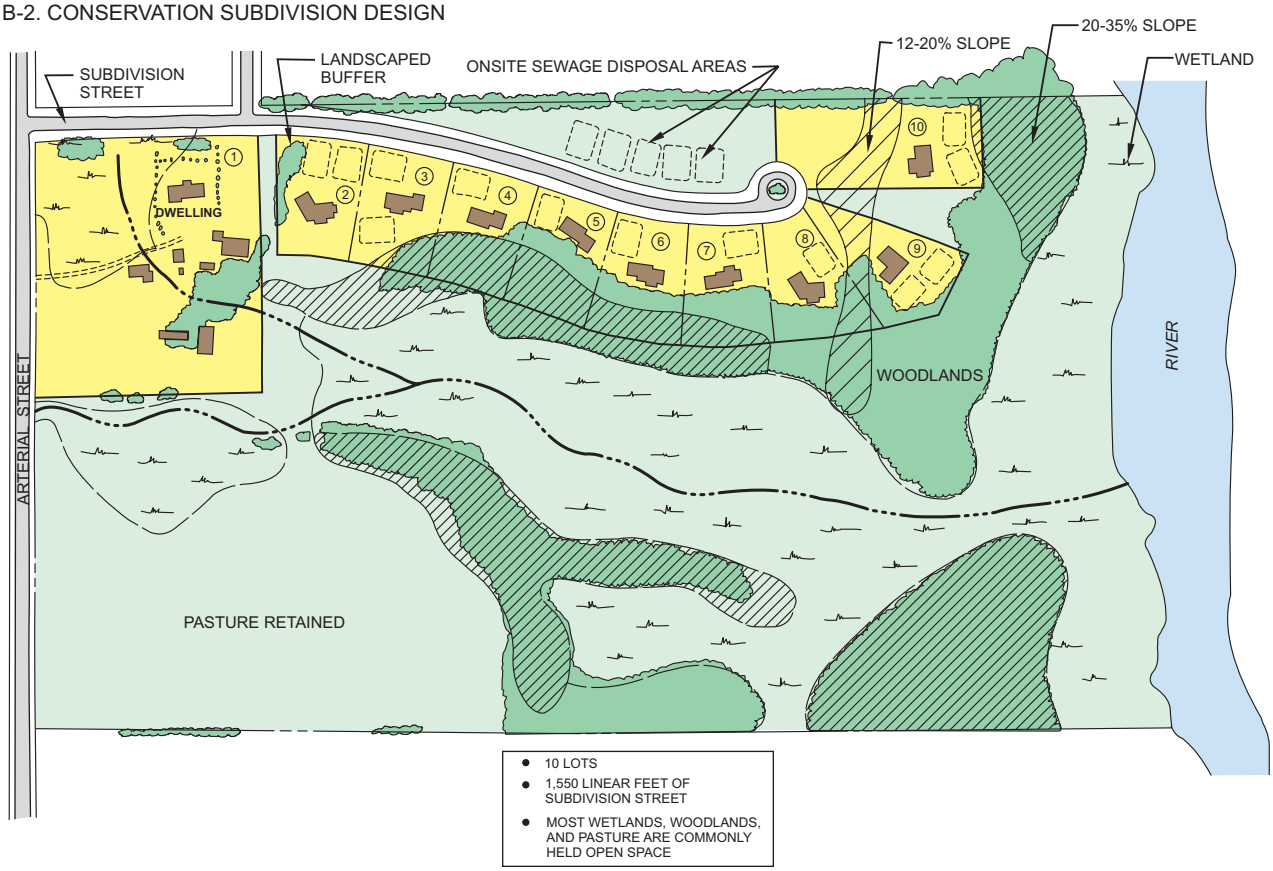
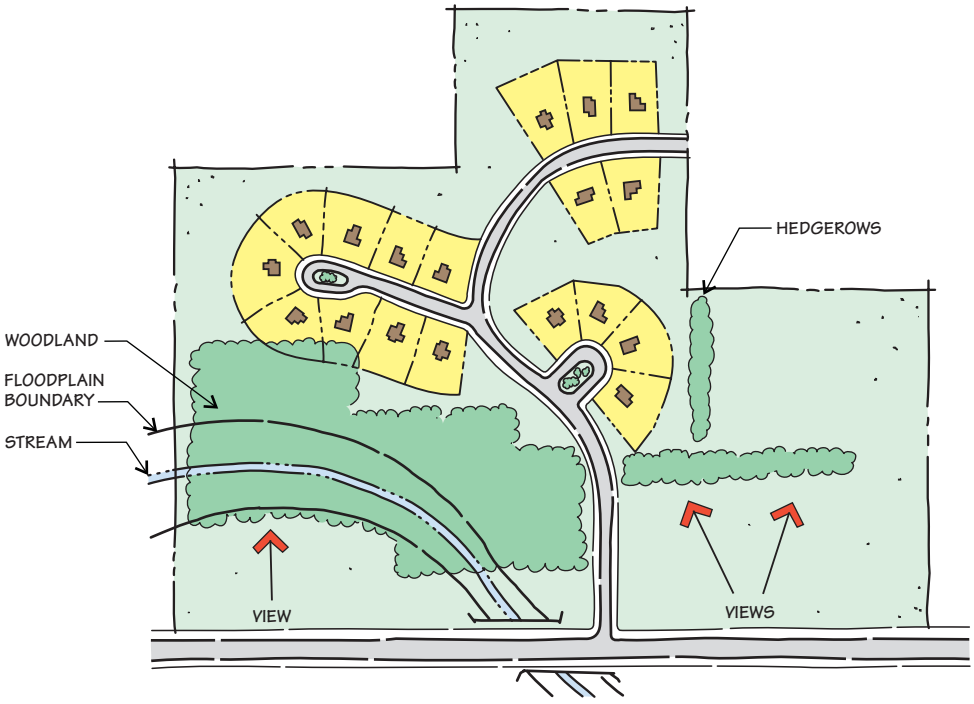


Figure 32 (continued)

C-1. CONVENTIONAL SUBDIVISION DESIGN

Acres: 93
Lots: 18
Density: 1 Dwelling Unit/ 5 Acres
Average Lot Size: 5 Acres
Common Open Space: 0%

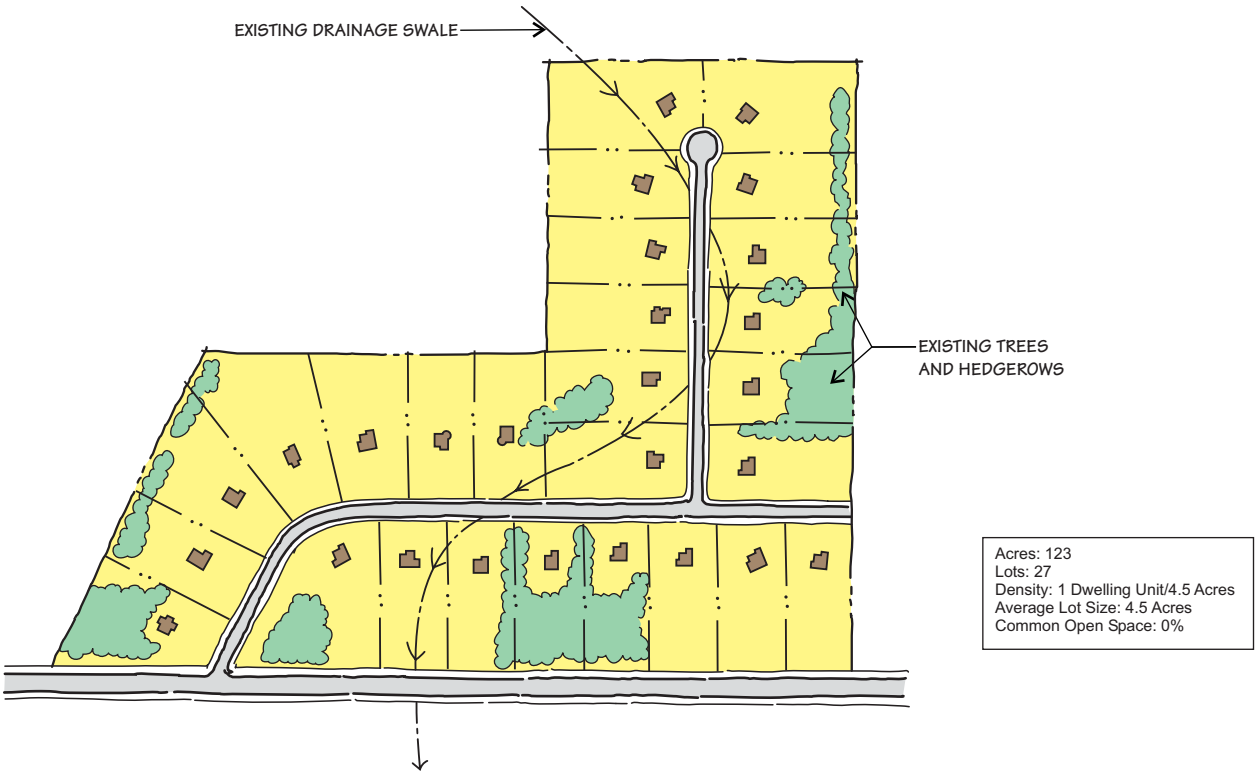
C-2. CONSERVATION SUBDIVISION DESIGN



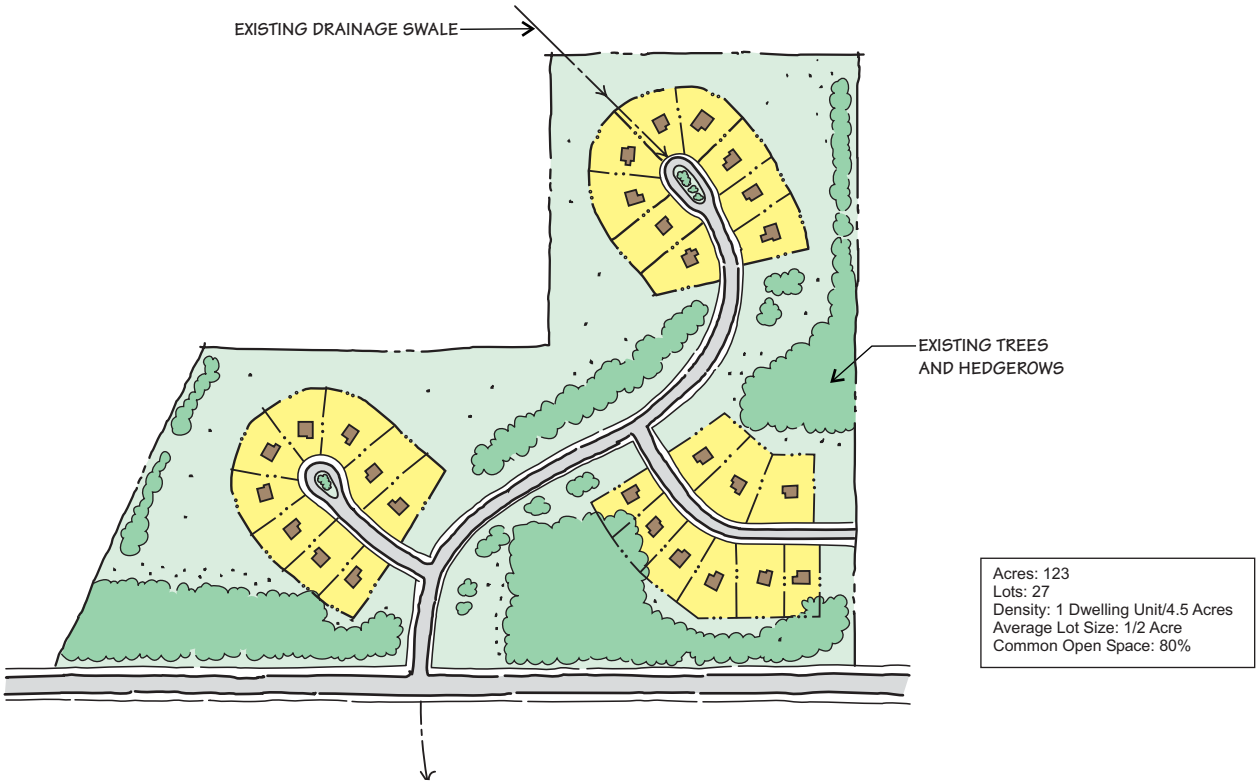
Acres: 93
Lots: 18
Density: 1 Dwelling Unit/ 5 Acres
Average Lot Size: 1/2 Acre
Common Open Space: 85%

Figure 32 (continued)

D-1. CONVENTIONAL SUBDIVISION DESIGN



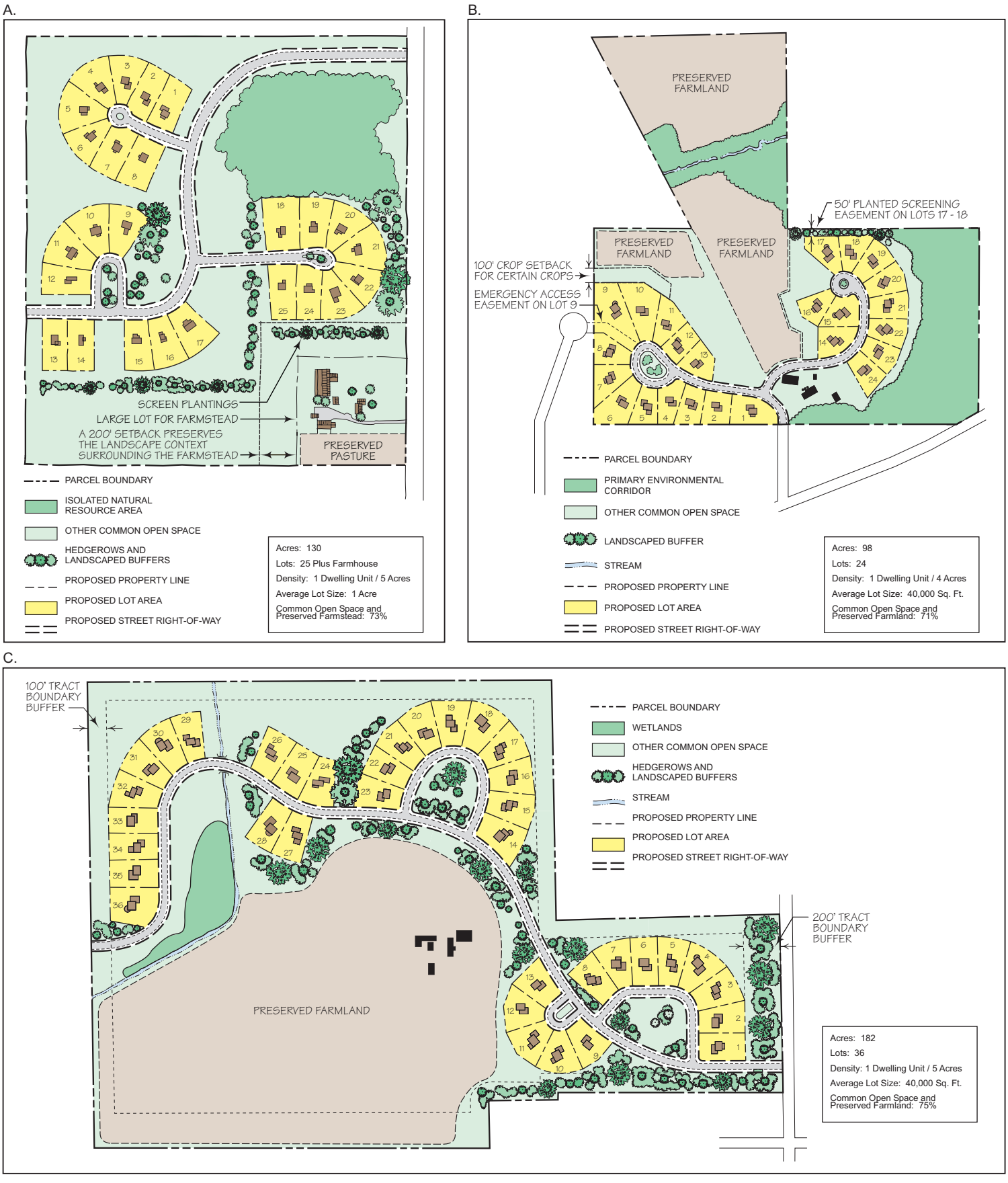
D-2. CONSERVATION SUBDIVISION DESIGN



Source: SEWRPC.

Figure 33

CONSERVATION SUBDIVISION DESIGNS WITHIN AGRICULTURAL AREAS



Source: SEWRPC.

Figure 34

PRESERVATION OF VIEW FROM A HIGHWAY

A. AERIAL VIEW OF A CONSERVATION SUBDIVISION (LEFT SIDE)
AND A CONVENTIONAL SUBDIVISION (RIGHT SIDE)

B. VIEW FROM HIGHWAY

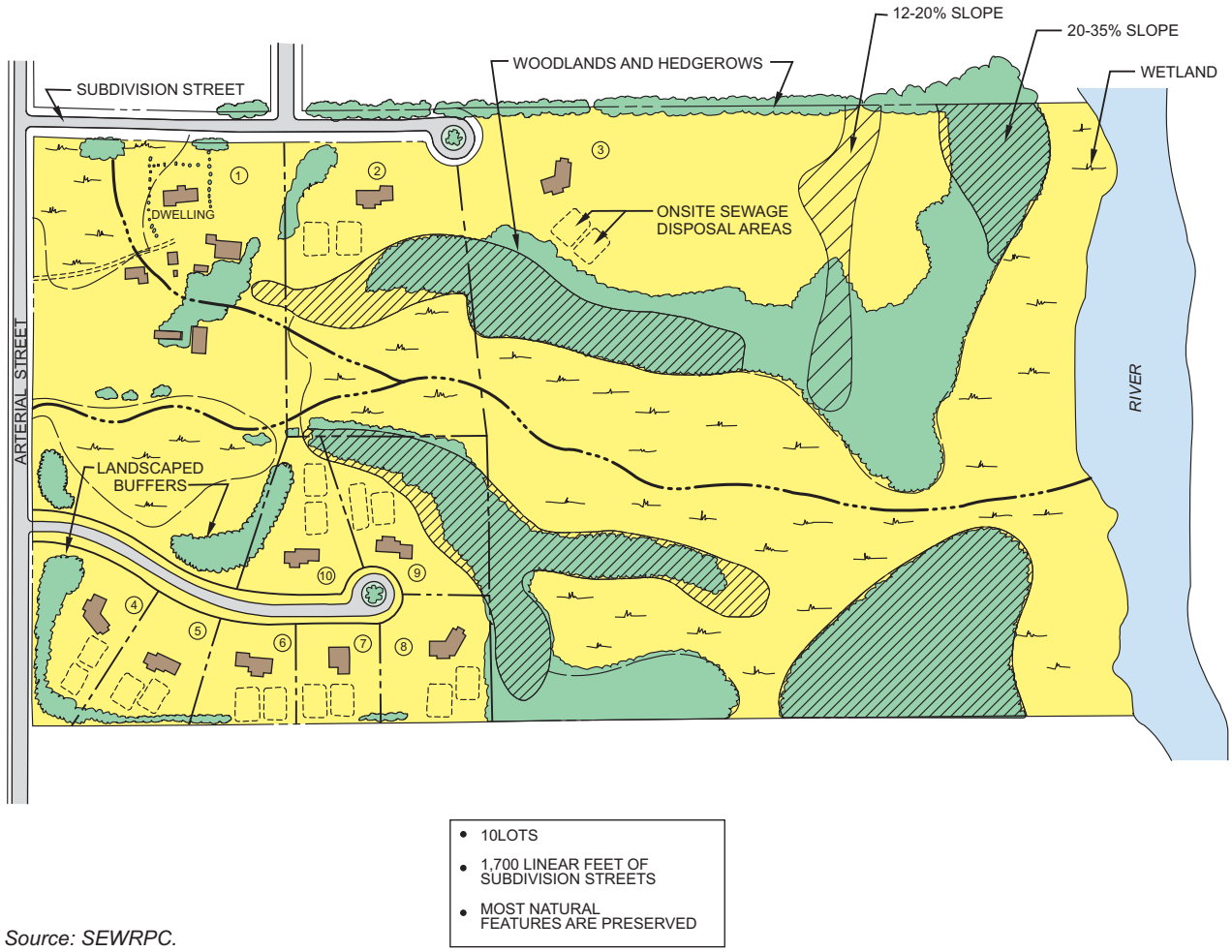
Source: SEWRPC.

Building Scale and Mass

The scale and mass of new buildings and expansion of existing buildings should be compatible with the proportion of neighboring buildings and the surrounding rural landscape. As supported in the survey results in Appendix A, principal buildings such as homes and business buildings within the STH 36 viewshed should preferably be one to two stories in height to retain the low landscape horizon.

Figure 35

EXAMPLE OF LOT AVERAGING



Source: SEWRPC.

Roofs

Roofs are strong visual elements that affect the architectural style of buildings and the character of an area. Proposed roof designs should, therefore, complement the traditional roof angles of the Corridor countryside. Mostly peaked roofs should be used, such as gable, hip, or even gambrel roofs, as shown in Figure 23. Roofing materials should consist of high quality asphalt shingles, dimensional shingles, cedar shakes, raised-seamed metal panels, or other quality products. Buildings designed with other roofing styles that demonstrate compelling architectural merit may be allowed, such as a flat roof building, for example, with a horizontal directional emphasis that appears to blend in with the landscape horizon.

Selection of Materials and Colors

Selection of materials and colors for both building and landscape design should be based upon material and color unity, the desired atmosphere and character, the prevailing material and color composition of surrounding buildings, compatibility with existing landscape features, and microclimatic considerations like sun and wind exposure.

Figure 36

"RURAL OR COUNTRY" COMMERCIAL ARCHITECTURE

A.

B.

C.

D.

Figure 36 (continued)

E.

F.

G.

H.

I.

Figure 36 (continued)

J.

K.

L.

M.

Source: SEWRPC.

Since the primary exterior materials used in the rural areas are typically natural and cultured stone, wood, and brick, deviation from these materials should be avoided. By using these predominant materials, a consistency toward country character would be enhanced, for example, via cedar, limestone, fieldstone, red or cream city brick, or even siding with a wood texture appearance. Asphalt shingle-sided buildings, plain concrete-block or panel buildings, and smooth metal-faced buildings without character should be discouraged.

Colors have a significant effect on the rural image and those which clash with the country character of the area should be avoided. Colors should be selected to complement the colors of surrounding buildings and landscape and such natural building materials as wood, stone, and masonry. Color schemes should be nonflorescent and consist of predominantly neutral subdued hues or earth tone colors such as creams, tans, subtle greens, browns, grays, or even "barn red" (oxide red color typically found on farm buildings). Communities may wish to establish a palette of desired exterior building colors to help minimize discordant use of colors.

Barns and Storage Buildings

Barns and related outbuildings should be preferably constructed with a traditional gambrel or gable roof and natural or cultured façade materials of wood, stone, or a combination thereof. If prefabricated metal pole or storage buildings are permitted, façades facing public view should be softened with trees and shrubs to retain the rural character.

Accessory Buildings and Structures

Accessory buildings and structures should be compatible with principal structures in terms of building facade character, roof shapes, materials, colors, and architectural details, particularly if these accessory structures are exposed to public view.

Other Architectural-Related Design Guidelines

The design guidelines for building foundation landscaping, dumpster screening, rooftop and at-grade mechanical equipment screening, outdoor building lighting, and building signs should follow the previously discussed urban design guidelines. These related elements of a building should, nevertheless, project a rural or "country" design image.

Landscaping

General Style

Landscape design should be integrated with overall site and building plans, not merely an afterthought, and should be consistent with the country character desired for the rural area, as illustrated in Figure 37. Preferably the visual impact of development is buffered from view or, if visible, should integrate a "country" or "prairie" landscape design theme.

The landscape architecture for proposed developments should follow a natural approach to landscape design by utilizing large groupings of shrubs and perennials, including wildflowers and ornamental or prairie grasses, which would project an established natural or countryside appearance. This design theme may be referred to as a "natural," "country," or "prairie" landscape architectural style. Formal landscape designs with plants pruned into ridged, geometric shapes and set in a linear pattern, often evenly spaced, should be avoided. Plants should be set in naturally curved, meandering planting beds arranged in a series of rhythmic layers with larger plant materials located to the rear of the plant bed border and shorter shrubs or perennials located near the front. Trees should be clustered or randomly staggered, rather than being linearly and equally spaced apart. When stone walls are used, they should be low with plants placed intermittently along them to create a softening effect.

Proposed fences should consist of open designs with less than 50 percent opaqueness and may consist of a row of "snake", "buck", or "post-and-rail" style fences or, to a limited extent, ornate picket or wrought-iron fences on individual lots. Solid fences should generally be avoided, unless to screen more intensive uses or objectionable views, since they project a more urban appearance that takes away from the desired "open" country atmosphere. Berms should similarly be low, unless to screen, with gentle slopes and be configured into an undulating and meandering form to blend in with the surrounding topography.

Figure 37

"COUNTRY" LANDSCAPING FEATURES

A. STAGGERED ROADSIDE TREES

B. WOODEN FENCE WITH COMPLEMENTARY TREES

C. “NATURAL” LANDSCAPING

Source: SEWRPC.

Existing Vegetation and Selection of Plants and Materials

Existing trees and shrubs that are noninvasive should be retained and properly protected, including those located in hedgerows and woodlots. Trees and shrubs should be protected and preserved during construction as illustrated earlier in Figure 3 and in accordance with sound plant conservation practices, including the prevention of soil compaction and stockpiling of soil or construction materials in existing tree root zones—the area beneath the tree canopy that lies within the "dripline" of the canopy.

The selection of plants and landscape materials should follow the guidelines established earlier under the urban design guidelines. Appendix D identifies invasive plants that should not be used for landscaping, while Appendix C provides a list of recommended trees, shrubs, ornamental grasses, and groundcovers for landscaping purposes. Native plants, including prairie grass and wildflowers, could also be used to create a natural landscape style. Mostly natural fieldstone or limestone (sometimes called Lannon Stone), and to a limited extent, brick or cultured material should be used for walls. Fences should be constructed of mostly wood, such as pine or cedar, or materials that project a wood appearance. Stone pillars could be used in place of wood fence posts.

Buffering

Buffers should be provided between dissimilar uses to reduce or block visual nuisances, air and noise pollutants, or other negative impacts as discussed under the urban design guidelines. Buffering should be provided between homes and agricultural activities and between busy streets, such as STH 36, and proposed residential subdivisions that may be designed with reverse-frontage lots (see Figure 12) or a conservation design concept. Existing hills, hedgerows, wooded areas, or agricultural-related structures, such as barns or stone walls, should preferably be used as buffers between dissimilar uses. If new landscaped buffers are necessary, the landscape design for these buffers should consist of a natural or "country" landscape design theme, as illustrated in drawings A and B in Figure 13, which may include natural-looking berms or open fences.

Street Trees

Even for streets with roadside swales, street trees should be provided for developments proposed along public rights-of-way at a rate of one tree every 50 feet, as discussed earlier under the urban design guidelines. In rural areas, trees could have some randomness or informality, such as staggering, in their arrangement to avoid the urban appearance that regular spacing may evoke. Appendix E provides a list of trees that may be used as street trees. Existing healthy trees that are noninvasive and properly protected should be allowed to fulfill a municipality's street tree requirement, except that tree density in woodlots should not be allowed to compensate for long gaps without trees in any system of "averaging" or reasonable distribution.

Whenever possible, street trees should be planted outside of roadside swales, near the street right-of-way lines as illustrated in the cross-section view of Figure 7. Trees could be installed on gentle slopes with proper staking. As an alternative, due to steep slopes or other physical constraints, such trees could be planted outside of street rights-of-ways on adjoining lots in a proposed subdivision, but preferably no more than five to ten feet from the street right-of-way line.

Other Landscaping Design Guidelines

Design guidelines for buffering frontage streets; cul-de-sac turnarounds with landscaped islands; vision triangles and landscaping at street corners; building foundation landscaping; parking and service area landscaping and screening; dumpster and mechanical equipment screening; and wind, noise, solar access, and landscape planting should follow the urban design guidelines discussed earlier. However, a more natural landscape design layout should be utilized as discussed in this rural guidelines section.

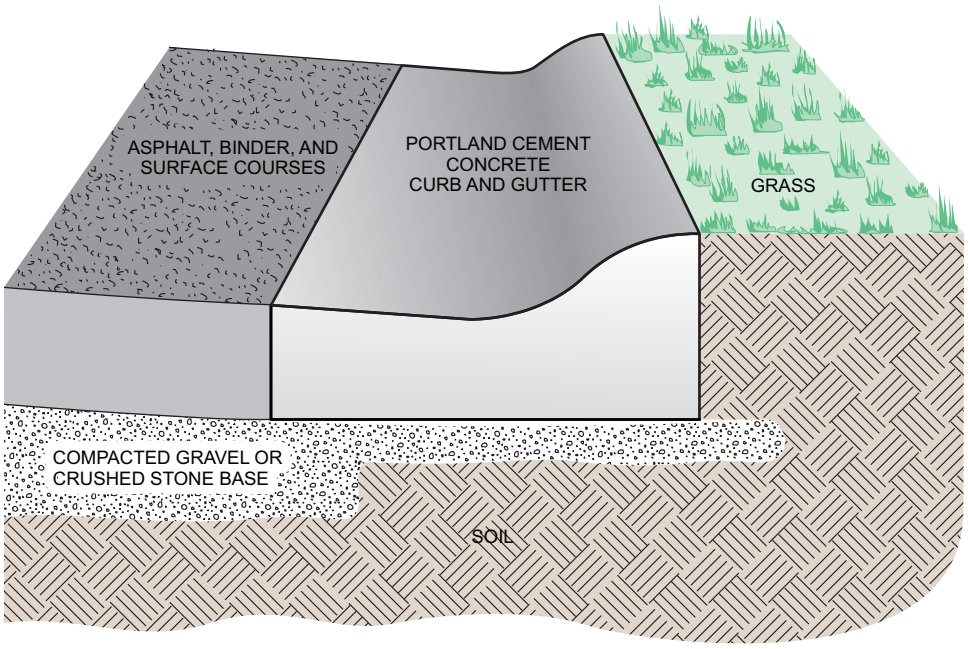
Streets and Related Facilities

General

The design guidelines for streets and related facilities should basically follow those outlined earlier under the urban design guidelines. Streets, highways, and attendant facilities, such as pedestrian and bicycle facilities,

Figure 38

TYPICAL MOUNTABLE CURB CROSS-SECTION



Source: SEWRPC.

should comply with locally adopted plans and be designed in accordance with rural street cross-sections with swales typically included in local land division ordinances or engineering specifications.

Roadside Swales

Most streets within the rural area use roadside swales without curbing for stormwater drainage, which conveys a more rural appearance. Side slopes of roadside swales should preferably not exceed one foot vertically to every four feet horizontally, but no steeper than one to three. Side slopes steeper than one to four are not only more difficult to mow, but do not blend well with natural land forms.

Curbing

Where curbing may be provided for proper stormwater management in certain areas, such curbing should preferably be mountable curbs, also referred to as roll-face curbs, as shown in Figure 38. Mountable curbs project a less rigid, harsh edge than vertical-faced curbs, which have a more urban appearance. Curbing may also be advised for the protection of existing large trees near the road edge which do not pose a particular hazard, where regrading to accommodate a swale system would otherwise spell their demise.

Other Transportation-Related Design Guidelines

The design guidelines for the following transportation-related features should follow those under the urban design guidelines while utilizing a "natural- or country-style" landscape architectural design where applicable: cul-de-sac turnarounds with landscaped islands, vision triangles and landscaping at street corners, buffering frontage streets, vehicular access control, and shared driveways.

Other Pertinent Design-Related Guidelines

Lighting
The lighting guidelines established under the urban design guidelines should be followed to preserve the "dark silhouettes of country nights," as supported by the survey results reported in Appendix A. Outdoor lighting should be limited and contain shielded luminaries with downward reflections. In addition, outdoor lighting could consist of lighting on timers or motion detectors so that light is emitted only when necessary.

In conservation subdivisions, streetlamps may be installed with a design that is compatible with the neighborhood character and type of development and as approved by the municipality.

Signs
Usually advertisement signs, other than official signs, home occupation signs, and those tastefully identifying civic or other nonprofit community service organizations, should be visibly absent from the rural landscape. If a community allows advertisement signs for certain uses, then the sign design guidelines established earlier under the urban design section should be followed. In addition, such advertisement signs should be preferably low monument-type signs constructed of natural stone or wood-carved materials, or comparable cultured material, and be set in a landscape bed with a natural or "country" design style.

In conservation subdivisions, street signs may be installed that contain a design compatible with the neighborhood character and type of development and as approved by the municipality.

Cellular Towers
The design guidelines established earlier for cellular towers under the urban design section should be followed. Preferably such towers are "stealthed" by being integrated with existing structures such as barns, silos (see Figure 39), or even utility transmission towers, if burial of utility lines is impractical.

Stormwater Management Facilities
The guidelines established for stormwater management facilities under the urban design section should be followed. Proposed detention and retention basins should blend into the rural landscape, as shown in Figure 40, with aquatic plants and natural vegetation around the perimeter, using a free form, curving configuration as opposed to a rigid geometric appearance.

Other Relevant Design-Related Guidelines
Design guidelines for historic preservation, wetlands and buffer strips, above-ground utility cables, water towers, bridges and retaining walls, and erosion and sedimentation control measures should follow the previously discussed urban design guidelines.

SUMMARY

This chapter has presented a Corridor design plan for the north segment of STH 36 in Racine County. The plan is designed to achieve the objectives identified by the Corridor Advisory Committee based, in part, on the results of public input from a mail questionnaire survey and a visual preference survey. The design plan is intended to help achieve the aesthetic character desired by local communities within the Corridor study area, as viewed from the highway. The design plan should be used by the County and local officials to guide development and redevelopment in the Corridor that will complement the desired design theme or existing visual urban or rural character of the community. The STH 36 North Corridor design plan is comprised of two key elements, a composite planned land use map and basic design recommendations, as discussed below.

- A plan map was prepared that reflects a composite of adopted local land use plans and, where no such plan is in place, a tentative plan was prepared. This composite map conveys the land use pattern desired by communities located within the Corridor study area in which such patterns also define the overall visual character desired for various areas. The plan map shows that urban development would be concentrated

Figure 39

"STEALTHED" CELL TOWER

Source: SEWRPC.

within urban centers-sometimes referred to as planned urban or sanitary sewer service areas-where such development already exists. Significant existing natural features and most agricultural lands located in rural areas between the urban centers would be preserved. The plan map, along with supporting design guidelines, would help avoid the appearance of an unattractive, continuous commercial strip often evident along arterial highways.

- Basic design recommendations consisting of two sets of design guidelines were formulated: one set for development or redevelopment that may occur in urban centers or planned urban service areas and the other set for those that may occur in "rural" portions of the Corridor. During the preparation of these guidelines, results from the two aforereferenced surveys were considered, which reflect the general public's opinions related to various design-related matters that affect the visual quality of the Corridor. The urban and rural design guidelines should be used by County and local officials to guide and evaluate future development or redevelopment proposals, including related site, landscaping, and building plans. The guidelines may also provide potential design ideas for preserving and enhancing the aesthetic appeal of the Corridor or provide potential solutions to design problems. Achieving this objective will retain and improve the visual quality experienced from STH 36, as set forth in the vision statement for the Corridor.

Figure 40

"NATURAL" DETENTION/RETENTION BASINS

A.

B.

Source: SEWRPC.

Urban design guidelines were established to help maintain and enhance the vitality of urban settings by promoting attractive high-quality developments that are sensitive to existing significant environmental and historical features of a community. The guidelines should help avoid visual clutter and soften the negative impacts inherent in certain site features such as dumpsters, parking lots, loading/unloading areas, and overhead utility lines. While single- and two-family residential uses are encouraged to follow the design guidelines, most of the guidelines are intended for intensive developments such as multi-family residential, business, and institutional uses. Urban guidelines were prepared for desired urban character

and design concepts, basic site planning, parking lots and service areas, landscaping, outdoor lighting, building architecture, historic preservation, signage, transportation-related features, overhead utility lines, cellular and water towers, bridges and retaining walls, stormwater management facilities, and erosion and sedimentation control measures. Plant selection guides were also provided to identify appropriate plants to use in landscaping.

Design guidelines were also established for development that may occur in the rural areas of the Corridor to help retain the rural or "country" visual context customary to the Corridor. Even though many urban design guidelines would also apply to developments that may occur within the rural portions of the Corridor, a more "natural- or country-design" style or theme should be utilized, where applicable. The rural design guidelines pertain to desired rural or "country" character and design concepts, including the preservation of natural and agricultural features and scenery; open space and conservation design concepts, such as lot averaging and conservation subdivisions; building and landscape architecture; streets and related features such as street trees, roadside swales, and mountable curbing; and other pertinent physical features, such as controlled outdoor lighting, signage, stealth cellular towers, and natural-looking detention and retention basins.

Chapter V

IMPLEMENTATION

The recommendations of the STH 36 North Corridor Design Plan, described in the previous chapter, provide a design for attaining the objectives set forth in Chapter III. In a practical sense, however, these recommendations are not complete until the steps necessary to implement them have been specified. This chapter presents techniques that can be used to implement the design plan.

ZONING

Of all the means currently available to implement the Corridor design plan, perhaps the most important is zoning. A zoning ordinance and accompanying zoning district map are used to legally assure that proposed development and redevelopment occurs in conformance with local plans or elements thereof, including design guidelines. Racine County and each local government participating in the study should determine which of the recommendations advanced in the Corridor design plan it wishes to implement. City and Village plan commissions and governing bodies should review their respective zoning ordinances and maps to identify amendments necessary to implement desired design guidelines. Town governments should work with Racine County to identify changes to the County zoning ordinance and map needed to implement mutually-desired design guidelines. Design guidelines specific to the STH 36 Corridor could be implemented through an overlay district with design regulations that would apply only within the Corridor. An alternative would be to implement selected design guidelines on a voluntary basis. Recommended design guidelines and implementation strategies are described in more detail in the following sections.

Basic Zoning Changes

The visual character a community seeks should be, and oftentimes is, expressed in zoning and land division ordinances as well as adopted local plans. Consequently, local zoning maps should be reasonably consistent with adopted local master, land use, or comprehensive plans and, if not, should be revised accordingly. All development proposals should comply with locally adopted ordinances and plans and meet their intent.

One of the most effective regulatory methods used to retain the rural setting and natural beauty of a community is to utilize a zoning map to enforce the intent of a community land use plan that identifies areas to remain as agricultural and natural areas. The delineation of conservancy-related zoning districts should be updated, as necessary, to continue to ensure the preservation of significant natural resources. Zoning maps should reflect the most up-to-date boundaries of lowland and upland natural resources, such as wetlands, woodlands, steep slopes, and natural areas and critical species habitat sites, which may have changed over time.

Two alternative forms of residential development that would allow more site-sensitive design in residential developments are lot averaging and conservation subdivision design, also known as cluster development. These alternatives allow more flexibility in site design and lot layout than do conventional subdivisions, thereby providing a greater opportunity to preserve open space and significant natural resources. Although lot averaging and conservation subdivisions could be established under a planned unit development zoning district, such uses should be listed as either a permitted or conditional use in basic zoning districts that allow single-family residential

development. This inclusion would clearly indicate that the community considers open space and conservation design concepts as acceptable alternative subdivision design methods. Conservation subdivision design is described later in this Chapter.

Corridor Overlay Zoning District

Although the design guidelines recommended by this plan could be applied to an entire community, Racine County and the participating local governments may wish to apply Corridor design regulations only to areas located along STH 36. In this case, an overlay zoning district, potentially named the STH 36 Corridor Design Overlay District or STH 36 Scenic Management Corridor Overlay District, should be included in the County or community zoning ordinance. An overlay zoning district is a district that is superimposed over one or more existing zoning districts or portions thereof. Overlay districts can be used to require special regulations in addition to those contained in the underlying basic zoning district(s).

An overlay district specifies requirements that take precedence over, or are in addition to, those of the underlying district. Overlay regulations usually would prevail over conflicting provisions, if any, in the underlying basic zoning district. Where the overlay is silent, for example, on matters such as the location of accessory buildings and side yards, the underlying zoning district regulations would apply. Uses proposed in an underlying basic zoning district that is overlaid with a Corridor overlay district would then be required to meet the Corridor design guidelines as well as the requirements of the underlying basic zoning district.

A Corridor design overlay district could be applied, for example, to lands located within ¼ mile, or 1,320 feet, of the STH 36 centerline or right-of-way lines. This distance may be selected since any development that occurs on lands located within this distance would likely affect the view from the highway as well as the character of the area. As shown on Map 13 in Chapter II, 61 percent of the identified highway viewshed would be located within ¼ mile of STH 36, measuring from its centerline, and 79 percent within ½ mile. It is important to note that a distance "near" the highway should be selected since the visual experience from STH 36 would more likely be affected from development that occurs close to the highway. Also, if development occurs along the highway, it may be difficult for viewers traveling the highway to see beyond the development due to erected buildings and buffers.

Development Plan Review and Design Regulations and Guidelines

The properly guided appearance and design of development within the Corridor will continue to ensure attractive communities and help stabilize or increase property values for the good of both the communities and individual property owners. To achieve these objectives, County and local zoning ordinances should contain requirements for submittal of development plans and for the provision of additional detailed information pertaining to the site, landscaping, and building elements of a proposed development or redevelopment, as specified in Appendix G. Zoning ordinances should require that a complete set of development plans consisting of site, landscaping, and architectural plans be prepared for all intensive developments, such as multi-family residential, commercial, industrial, governmental, and institutional developments. Such plans should be submitted for County or local review and approval to ensure compliance with local design-related regulations and guidelines intended to protect or obtain the community's desired aesthetic character. Appendix G also suggests site plan and architectural review guidelines that could be incorporated into the County and local zoning ordinances. Development plans for a single- or two-family home proposed on an individual lot should be reviewed and approved by the local zoning administrator or building inspector, as is typically current practice.

Communities should determine whether compliance with selected design guidelines should be mandatory (regulatory approach) or voluntary (nonregulatory approach). The guidelines may be established as a freestanding manual to be used to encourage proposed developments to voluntarily follow them, or desired guidelines selected by a community may be incorporated into a zoning ordinance for mandatory compliance. Recommended guidelines for building foundation planting; sign dimensions and landscaping; interior parking lot landscaping; screening of parking lots, loading/unloading areas, outdoor storage areas, dumpsters, and outdoor mechanical equipment; buffer landscaping between dissimilar uses; building mass, facade, and materials; controlled outdoor lighting; burial of above-ground utility lines; "stealth" cellular towers, and other design issues are set forth in Chapter IV.

The design regulations or guidelines adopted by a community may be quantitative in nature, so that compliance is directly measurable, or subjectively qualitative in nature (i.e. design style or "form-based"). Determination of compliance with subjective design guidelines should involve experienced judgment by a qualified designer, such as a professional engineer, architect, and/or landscape architect, as applicable.

Model Ordinances Containing Design-Related Provisions
In addition to potential revisions to zoning and land division ordinances, participating communities should also consider other ordinances containing design-related provisions that would affect the quality of development within the Corridor. Chapter NR 152 of the *Wisconsin Administrative Code* sets forth a model erosion and sedimentation control ordinance that was prepared by the Wisconsin Department of Natural Resources. Chapter NR 152 also includes a model post-construction storm water management zoning ordinance for use by local communities to help properly manage storm water runoff from proposed development sites. Both model ordinances are available on the website for the Wisconsin Administrative Code and Register at www.legis.state.wi.us/rsb/code.

The Wisconsin Historical Society of Wisconsin, Division of Historic Preservation, has prepared several versions of model historic preservation ordinances. Section 62.23(7) of the *Wisconsin Statutes* requires that any municipality containing property listed on the National or State Registers of Historic Places must enact a historic preservation ordinance to safeguard such resources. Stewardship of significant historic features in local communities should be a high priority of both the public and private sector.

LAND DIVISION REVIEW AND REGULATIONS

Sound land division regulations are an important means of implementing a community's plan and of coordinating the layout, design, and improvements of private land development proposals within a community. Adopted local community master, land use, or comprehensive plans should serve as a basis for the preparation and review of proposed subdivision plats and certified survey maps. The review should ascertain that each proposed land division is properly related to existing and proposed land uses as well as the community or neighborhood character. The STH 36 North Corridor design plan, particularly the design guidelines, could also assist local officials in the review of proposed land divisions. Land divisions should consider the proper layout of streets, blocks, and lots as well as the topography, soils, drainage, and vegetation of the site. Proposed subdivisions should be designed as integral parts of the larger community. Any proposed departures from a community's plan should be carefully considered by local officials and should be allowed only when such departures are warranted in the public interest. As of January 1, 2010, proposed land divisions must be consistent with a local government's comprehensive plan, in accordance with Section 66.1001(3) of the *Wisconsin Statutes*. An amendment to the comprehensive plan would be required prior to approval of a land division that was not consistent with the adopted comprehensive plan.

Land division ordinances should specify administrative review and approval processes, and set forth appropriate design standards and other specific data required to be provided on all preliminary plats, final plats, and certified survey maps. Ordinances should contain provisions that recommend sketch or concept plans, and attendant site analysis information, to be presented at pre-application meetings, such meetings may prevent expensive redesign cost, reduce formal plat review and approval processing time, avoid costly development problems, and help achieve a better design, including designs for conservation subdivisions. Proposed minor land divisions that may eventually be incorporated into a larger development on an adjoining parcel held by the same owner should include such a sketch plan of the overall development showing the potential integration of the adjoining sites.

Participating local communities and Racine County should consider amending their land division ordinances to include specific provisions for conservation subdivisions. These provisions could include, among others, standards regarding the amount of land to be retained in open space; flexibility in the design of street lamps and street signs to be provided in order to retain the rural or "country" design style of conservation subdivisions; and the use of covenants, easements, or deed restrictions to ensure the preservation of open space land. Other suggested changes that would improve the ordinances include requirements for landscaped buffer strips between

dissimilar uses, including proposed lots abutting limited access highways, for noise attenuation, buffering, and access control; additional lot depth or width to accommodate these landscaped buffer strips; natural-looking detention and retention basins; vision clearance areas and attendant deed restrictions to be provided on plats; street trees provided and spaced, at most, every 50 feet of public street frontage in the street right-of-way or five to 10 feet from the street right-of-way on adjoining properties; and proper protection of existing trees during construction, including the use of wells and islands, limiting access drives to prevent soil compaction, and avoiding stockpiling soil or construction materials in root zones. Finally, landscaped islands in cul-de-sac turnarounds may be an improvement required by ordinance which can be maintained by the municipality or by private means, such as a homeowners or condominium association.

APPROPRIATE DEVELOPMENT CONSIDERING ENVIRONMENTALLY SIGNIFICANT AREAS

Primary and secondary environmental corridors, isolated natural resource areas, and other environmentally significant areas, such as small areas of wetlands and woodlands, are recommended to be preserved to the maximum extent possible. Lowland portions of these environmentally sensitive areas, such as wetlands and floodplains, are typically placed in conservancy and floodplain zoning districts which serve to reinforce Federal, State, and County regulations that protect such areas from inappropriate development. Upland portions of such areas, including woodlands and steep slopes, are generally not protected by Federal or State regulations. County or local regulations are often necessary to protect the upland portions of environmental corridors and isolated natural resource areas.

While seeking to preserve environmental corridors and other environmentally significant areas, it is recognized that such uses as limited residential development, transportation and utility facilities, and certain recreational uses may be accommodated within these environmentally significant areas without jeopardizing their overall integrity. In this respect, general guidelines for types of development that may be accommodated within various component natural resource features of environmental corridors have been developed by SEWRPC and are set forth in Appendix H. These guidelines are not exhaustive, but with good judgment may be extended to, and be used for, the evaluation of proposals for similar types of development not specifically listed. Open space and conservation design techniques should be encouraged when development, including residential uses, is accommodated in the upland portions of such areas, as illustrated in Figure 30 in Chapter IV.

OPEN SPACE AND CONSERVATION DESIGN

Open space and conservation design concepts, including conservation subdivisions and lot averaging, are encouraged for residential development allowed in rural and environmentally significant areas. Conservation subdivision and lot averaging alternatives provide more flexibility in site design and lot layout than do conventional subdivisions, and allow more site-sensitive design. These two types of conservation developments could be allowed as either a permitted or conditional use in zoning districts that permit residential uses. The densities allowed for such developments should be at least equivalent to those permitted under conventional development.

Conservation Subdivision Design

Conservation subdivision designs, sometimes referred to as cluster development designs, involve the grouping of dwellings on a portion of a development tract, preserving the remainder of the parcel in open space. Management options for the open space areas include, among others, preservation of existing natural features, restoration of natural conditions, and continued agricultural use. The open space may be owned by a homeowners' association, the local municipality, Racine County, the State, the Kenosha/Racine Land Trust, other private conservation organizations, or the original landowner. Conservation easements and deed restrictions should be used to protect the common open space from future conversion to more intensive uses.

In comparison to conventional subdivision designs, conservation subdivision designs afford greater opportunity for preserving open space and maintaining the rural character of the landscape. When properly designed, the visual impact of residential development can be minimized, thereby maintaining rural character, preserving significant natural features and agricultural lands, creating opportunities for nonpublic ownership of open space, and increasing

the efficiency of infrastructure development. Infrastructure installation costs borne by the developer and public infrastructure maintenance costs may be reduced due to shortened street and utility lengths.

In the conservation subdivision design process, open space preservation areas are delineated first, with residential clusters designed around those areas. The residential clusters should be integrated with the topographic and other natural features, taking full advantage of the settings provided by those features without causing undue disturbance. They should be buffered from nearby agricultural lands, as appropriate, so as to minimize conflicts between farming and residential uses. To the extent practicable, the residential clusters should be located in areas which are visually screened from existing public roadways, so that existing rural open space vistas are maintained. The process of designing a conservation subdivision should take place in three basic steps as described and illustrated in Appendix F.[1]

Lot Averaging

In some cases it may be determined that a conservation subdivision or cluster development is not appropriate for a particular parcel. In other cases the community may be uncomfortable with the idea of joint ownership of common open space. In such cases, the community concerned could consider permitting lot averaging as a means of preserving rural areas, as illustrated in Figure 35 in Chapter IV. Maintaining an overall rural density, the lot sizes would be permitted to vary as long as the lot area that is taken from one lot is transferred to one or more other lots, so that a minimum average lot size is maintained within the development site concerned. Lots within the development larger than the minimum lot size required by the zoning ordinance would be deed restricted to prevent further division. Although no common open space is created, the advantage of lot averaging is flexibility of site design and the ability to concentrate some of the permitted dwellings on smaller lots in certain areas of the development parcel while the remaining permitted dwellings would be located on a few larger lots. Alternatively, a large parcel could be maintained in agricultural use with smaller lots developed with homes. Features of the rural landscape or environmentally sensitive areas can be preserved, albeit on private lots.

Lot averaging is a development technique providing for great flexibility in the type of rural residential options accommodated, including historic farmsteads retaining a rural flair and possibly use, as well as large nonfarm estates which are held in individual private ownership. Concomitantly, the balance of smaller than normal lots in a given development would be less expensive than their counterparts within conservation subdivisions, because no common open space is being leveraged.

PURCHASE AND TRANSFER OF DEVELOPMENT RIGHTS

As indicated by the public opinion survey, which is summarized in Appendix A, there is widespread support for the preservation of natural resources that define the pastoral and natural views experienced from STH 36. During the design planning process, the Corridor Advisory Committee requested information pertaining to open space preservation techniques referred to as purchase of development rights (PDR) and transfer of development rights (TDR) programs as potential future tools to help preserve the rural or "country" character of the Corridor. These two techniques are based upon the premise that development rights are distinct attributes of land ownership which can be sold or otherwise transferred, similar to other rights associated with land, such as mineral rights or air rights. A description of these techniques is presented below, recognizing that ultimately their application, if permitted and encouraged by public actions, will be determined largely by the operation of the urban land market.

Before PDR or TDR programs are implemented, discussions should be undertaken among Racine County, the concerned municipalities, farm interests, and conservancy organizations to assess the viability of a PDR or TDR program. Generally, this would include scope, scale, cost, funding and startup options, and shared management responsibilities such as public/private partnerships between governmental units and conservancy organizations.

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[1] *See SEWRPC Planning Guide No. 7,* Rural Cluster Development Guide, *December 1996, for additional information regarding the conservation subdivision concept and the manner in which it may be applied as a planning and zoning technique. This document can also be found on the SEWRPC website at "www.sewrpc.org/communityassistance/conservationsubdivisions."*

Purchase of Development Rights
Purchase of development rights programs are intended mainly to ensure the long-term preservation of agricultural lands or significant natural areas. Under a PDR program, the owner of farmland, for example, receives a payment for relinquishing rights to development. Deed restrictions are used to ensure that the lands concerned remain in agricultural or other open use. Such restrictions are attached to the land and remain in effect regardless of future sale or other transfer of the land.

PDR programs may be administered and funded by State, county, or local units of government, land trusts or other private organizations, or combinations thereof. The amounts paid to farmland owners under PDR programs may be calculated on the basis of the number of dwelling units permitted under existing zoning, or on the basis of the difference between the market value of the land and its value solely for agricultural purposes, or on some other basis. Alternatively, development rights can be donated by the landowner, which may be beneficial from the standpoint of income tax savings. The primary limitation of PDR programs is the potentially high cost.

If fully funded and implemented, PDR programs can provide assurance that farmland will be permanently retained in open use. Landowners receive a potentially substantial cash payment while retaining all other rights to the land, including the right to continue farming. The money paid to the landowner may be used for any purpose, such as debt reduction, capital improvement to the farm, or retirement income. Land included in a PDR program remains on the tax roll and continues to generate property taxes, but generally at a rate which reflects the limitation(s) in development potential. Since the land remains in private ownership, the public sector does not ordinarily incur any land management responsibilities, unless that is mutually sought at the time of agreement.

Transfer of Development Rights
Under a transfer of development rights program, the right to develop a specified number of dwellings units under existing zoning may be transferred from one parcel, which would be maintained in open space use, to a different parcel where the number of dwelling units permitted would be correspondingly increased. When the parcels are held by the same owner, the development rights are, in effect, simply transferred from one parcel to the other by the owner. When the parcels are held by different landowners, the transfer of development rights involves a sale of rights from one owner to another, at fair market value. In any event, the result is a shift in density away from areas proposed to be maintained in farming or other open use toward areas recommended for development.

The transfer of development rights may be implemented only if authorized under county or local zoning. To enable the transfer of development rights, the zoning ordinance must establish procedures by which the TDR technique will be administered, including the formula for calculating the number of residential dwelling units which may be transferred from the "sending" area to the "receiving" area. The zoning district map must identify the sending and receiving areas, or at least identify the districts within which development rights can be transferred from one parcel to another.

While the creation and administration of a TDR program is somewhat complicated and seldom used, the technique remains a means for preserving open space and maintaining rural densities and character, while directing development to areas where it may best be accommodated.

OTHER NATURAL RESOURCE AND FARMLAND PRESERVATION TECHNIQUES[2]

Several other preservation techniques that have proved successful in other communities in Wisconsin and across the nation experiencing development pressures may have relevance for the communities within the STH 36 North Corridor. These include:

[2] *Additional information relative to farmland preservation can be found in* Saving American Farmland: What Works, *American Farmland Trust, 1997.*

Wisconsin Farmland Preservation Program
The Wisconsin Farmland Preservation Program allows farmers who agree to maintain farmland in agricultural use to receive annual State income tax credits. The farm must be a minimum of 35 acres, and must produce a minimum of $6,000 in gross farm receipts in the previous year or $18,000 in the previous three years. Contracts are for a 10-year period.

Use-Value Assessment
In 1995, the Wisconsin Legislature acted to lessen the property tax burden on farmers by mandating the "use-value" assessment of agricultural land. Under this system, agricultural lands are assessed based solely on their value for farming, without regard to development potential or existing zoning. Landowners who sell their land after owning the land for less than five years would be required to pay a modest penalty to the Wisconsin Department of Revenue, an amount equal to 5 percent of the difference between the sale price and the use-value during the last year of ownership. While this program may be expected to provide substantial property tax relief to owners of farmland, it does so without attaching any additional restrictions to the land, so that there is no guarantee that the land will not be converted to urban use. Nevertheless, use-value assessment provides some financial relief to farmers, which serves to encourage continued farming within the Corridor.

Conservation Easements
A conservation easement is a legally recorded, voluntary agreement that limits land to specific uses. Conservation easements may apply to entire parcels of land or to specific parts of a property. Easements may be permanent or for a term that imposes restrictions over a limited number of years. Land protected by conservation easements remains on the tax rolls, ordinarily at a reduced rate, and is privately owned and managed. Easements may be purchased by, or donated to, a governmental unit or a private conservancy organization. Provided that certain conditions are met, donors of easements may be eligible for income, estate, and/or property tax benefits.

Purchase-of-an-agricultural-conservation-easement (PACE) programs, better known as purchase-of-development-rights (PDR) programs, as discussed earlier, may be used to pay farmers to keep their land available for agricultural use. In this case, landowners would sell an agricultural conservation easement to a qualified government agency or private conservation organization. Presumed development rights to the land are relinquished in exchange for compensation. The landowner retains full ownership and use of the land for agricultural purposes.

Wisconsin Barn Preservation Initiative and Barns N.O.W.
The Wisconsin Barn Preservation Initiative and its membership organization, known as the Barns Network of Wisconsin (Barns N.O.W.), attempts to help preserve old wood frame barns and other historically significant rural structures. Since farmsteads are often converted to residential subdivisions, the program sponsors workshops to explain how such structures could be converted into residential homes or carefully integrated with residential lots as accessory structures that may function as a garage, storage shed, workshop, studio, den, home occupation business, or simply remain as a reminder of our agrarian heritage. Iowa and New York have programs that help pay for structural repairs of barns, including beams, sills, cabling, and roof work, through grant programs. Barns N.O.W. is working to establish a similar foundation that would make direct grants for repairs if owners contribute a matching amount.

Right-To-Farm Ordinances
A right-to-farm ordinance is intended to provide some degree of protection to farmers and farm operations from public and private nuisance claims[3]. Wisconsin has right-to-farm legislation (Section 823.08 of the *Wisconsin*

[3] *Nuisance claims are lawsuits relating to impacts from noise, dust, chemicals, irrigation, and odors generated by farming activities, or impeded traffic movements due to farm machinery using public roads.*

Statutes) which protects farmers against nuisance lawsuits, unreasonable local regulation, and recapture of legal costs. Local communities are encouraged by the State to use their zoning powers to further protect agricultural activities.[4]

Agricultural Nuisance Notices
Agricultural nuisance notices are used to alert buyers of agricultural land that agriculture is the primary economic activity of that area, and that the buyer may experience inconvenience or discomfort arising from accepted agricultural practices. In some cases, the notice may be recorded on the deeds to new homes. Such notices may help to ensure that people who purchase houses in an agricultural zone will recognize and be more tolerant of the sometimes inconvenient impacts of agricultural activities.

Wisconsin Managed Forest Law
The Managed Forest Law is an incentive program intended to encourage sustainable forestry on private woodlands in Wisconsin. Owners of at least 10 acres of contiguous wooded land that is used primarily for growing forest products are eligible to apply for the program through the Wisconsin Department of Natural Resources (DNR). Following approval of the application, the DNR prepares a management plan for the property, which will require some timber harvest at prescribed intervals and payment at that time of a "stumpage" tax. The program can provide very significant property tax savings for participating landowners.

USDA Programs
The U.S. Department of Agriculture (USDA) administers a variety of incentive programs which indirectly may help prevent nonfarm development in agricultural areas. These programs include the Conservation Reserve Program (CRP), the Conservation Reserve Enhancement Program (CREP), and the Wetland Reserve Program (WRP), among others. Under these programs, the landowner enters into an agreement to restore or protect lands for a 10-year or longer period in return for cash payments or assistance in making land conservation improvements.

Kenosha/Racine Land Trust
The Kenosha/Racine Land Trust may purchase lands containing significant natural resources or hold conservation easements for such lands in Kenosha and Racine Counties. This nonprofit organization, established in 1993, does not yet own land, but holds conservation easements and monitors the conservation restrictions within these easements. Land trusts help protect land and water resources for the public benefit and are eligible to participate in State grant programs that fund land or conservation easement acquisitions.

INTERGOVERNMENTAL COOPERATION

The Corridor design plan presented in this report includes recommendations for Racine County, the City of Burlington, the Villages of Rochester and Waterford, and the Towns of Burlington, Norway, Rochester, and Waterford. In the preparation of this design plan, these local units of governments have taken a cooperative approach to planning and decision-making regarding future development in areas of mutual concern. It is recommended that such efforts continue, and that other adjacent communities be included in cooperative planning efforts as appropriate. Additional activities in this respect could range from periodic meetings of officials representing each municipality for the purpose of discussing development or land use matters to the cooperative preparation of detailed development or neighborhood plans for areas both within and outside of the Corridor study area. Such cooperative efforts increase the likelihood for coordinated development within the STH 36 Corridor achieving, insofar as practicable, the Corridor objectives for all municipalities involved.

[4] *"Right-to-farm" legislation in Iowa, similar to Wisconsin's legislation, was struck down on September 1998 by the Iowa Supreme Court on the basis that it constituted a "taking" of the property rights of landowners adjacent to farms. Although the Wisconsin "right-to-farm" legislation has not been challenged, local communities, in light of the Iowa decision, should consult with their attorneys before adopting local "right-to-farm" legislation.*

SUMMARY

This chapter has presented information on various implementation measures which should be considered by Racine County and the local units of governments within the Corridor. These include suggested changes to zoning and land division regulations to include design-related provisions; the inclusion of development plan submittal and review criteria requirements for site, landscape, and building plans; information regarding appropriate development within environmentally significant areas; the use of open space and conservation design concepts; continued intergovernmental cooperation; and, potentially, the use of purchase and/or transfer of development rights, among other natural resource and farmland preservation techniques. The application of such implementation measures will help to achieve the recommendations of the STH 36 North Corridor design plan.

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APPENDICES

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Appendix A

SUMMARY OF THE MAIL QUESTIONNAIRE SURVEY RESULTS FOR THE HIGHWAY 36 NORTH CORRIDOR

Appendix A-1

HIGHWAY 36 NORTH CORRIDOR SURVEY SALIENT FINDINGS

DESCRIPTION OF SURVEY FINDINGS

A mail questionnaire survey was conducted to provide the Corridor Advisory Committee with data to help prepare design guidelines. The key findings of the survey are discussed below.

Characteristics of Survey Respondents
The "average" respondent for the Highway 36 North Corridor Survey (one who uses the highway at least sometimes) travels STH 36 at least once or twice weekly (75%), has used the highway for 10 years or more (74%), uses the highway because of proximity to local shopping areas (70%), and lives within about one-half mile of it (76%). Ninety-two percent of respondents care at least somewhat about the views experienced along STH 36; and 62 percent like, at least somewhat, the visual quality of developments along the highway. It is important to note that respondents have a stake in the appearance of the highway corridor, and because of proximity most could be affected by any design guidelines. In subsequent sections, concern will be shown to exist; however, this is oriented more to future prospects than present conditions.

Preferences in Views
From STH 36, respondents most like seeing natural areas (95%), agricultural views (87%), uninterrupted open space (80%), recreational areas (79%), and country nights/dark silhouettes (62%). They most dislike seeing parking lots and service areas (69%), bright lights (68%), land undergoing development (66%), and businesses (53%). Country nights/dark silhouettes, the least appreciated of the "likes" mentioned was favored by an 5.5:1 margin; while businesses, the least objectionable of the "dislikes" was disfavored by a 2:1 margin.

General Design Options
Most general design options and potential directions asked about in the questionnaire were received by the respondents with substantial agreement. Among the options which elicited the strongest level of agreement were (yes = strongly agree plus agree; no = disagree plus strongly disagree; remainder = primarily neutral/no opinion):

	Yes	No
• Establish comprehensive landscape and architectural design standards	80%	9%
• At least partially screen all residential development	78%	8%
• Set all rural buildings far back from the highway	61%	17%
• Significantly set back business development to reduce its visibility	62%	18%
• Encourage conservation/cluster subdivisions that preserve open space	59%	23%
• Buildings in urban centers could be located closer to the highway given visual screening	54%	27%
• It doesn't much matter how close development gets to Hwy. 36 or what it looks like	7%	83%
• People should be able to do what they want with landscaping and development design	15%	71%

Substantial margins of preference exist for most of the options highlighted; and in questions designed to offer an alternative viewpoint and verify internal consistency within the questionnaire, this pattern held for objection.

Signs

Concerns existed among respondents regarding the prospects for signs along STH 36. Equally, there was support for some sign controls. Seventy-six percent said signs should be regulated along Hwy. 36 because some significantly detract from visual character; while 13 percent said the property owner's choice in signs is valuable, because they know best about the site. Fifty-eight percent would prohibit very large signs along STH 36, including billboards; while 29 percent said any size and type of sign should be open for consideration subject to local review and approval. Seventy-two percent would encourage low, ground monument-type signs of natural materials; while 10 percent said tall, pole-mounted signs are beneficial and exceed the value of aesthetic considerations. The greatest concerns with signs along STH 36 were large size (68%), height (61%), disruption of open space (60%), and proximity to structures or other signs (clutter) (57%).

Landscaping and Natural Area Protection

Strong support was revealed for natural area protection and landscaping along the highway. In fact, such support equaled or exceeded all other categories of questions. The following illustrate response patterns to related survey statements:

	Yes	No
• Protect natural areas, particularly those with trees and shrubs	88%	3%
• Natural landscape remaining is very valuable; design any developments around it	86%	5%
• Allow preserving natural vegetation to meet certain landscaping requirements	83%	5%
• Encourage but don't require landscaping for development	20%	65%

Respondents were asked where landscaping with plantings, berms, and/or ground covers should be required for development site features along STH 36. Strong agreement or agreement was voiced over 80 percent of the time for dumpsters, mechanical equipment, stored materials, and loading/unloading service areas; over 70 percent of the time for parking lots, buildings facing the highway, between dissimilar land uses like residential and commercial areas, and to screen residential areas from the highway; and over 60 percent and 50 percent, respectively, favored landscaping for the base of freestanding signs and the interior of parking lots. Disagreement or strong disagreement with these options ranged from only 2 to 9 percent.

Lighting

In addition to the preferences noted earlier regarding country nights/dark silhouettes, bright lights in the STH 36 corridor were disliked by a ratio of 7.5:1. Fifty-nine percent of respondents said future lighting along the highway could be reduced or at least not increased; while 29 percent said increased lighting is not only expected, but essential for convenience and safety. Seventy-four percent favored short, subtle lighting in development serving its purposes; while 10 percent said tall, bright lighting is the most important thing for reaching destinations at night. Seventy-four percent also said short, downward reflecting lights provide less distraction from the highway and less detraction for neighbors or the night sky; while 12 percent favored tall, broadly spreading lights in parking lots to clearly help identify destinations and their entryways.

Parking and Service Areas

Strong guidelines were favored for most parking and service areas along STH 36. In fact, shielding of loading and unloading docks, service areas, and dumpsters elicited the strongest reaction of any single question in the survey (45:1 ratio of support). The following show agreement compared to disagreement:

	Yes	No
• Locate (un)loading docks, service areas and dumpsters shielded from the highway	90%	2%
• Parking lots should contain trees and shrubs in interior landscaped islands	78%	4%
• Locate limited parking between a business and the highway; put remainder on side	64%	10%
• Screen parking the full length between a business and the highway	60%	12%
• When a business's inland side is very important, then allow loading, service, and storage along the highway, if screened	55%	25%
• Full screening of parking may be unreasonable; lots visible from the highway should be screened at least halfway	50%	25%
• Businesses know best what image to project; should decide for themselves without design guidelines	10%	76%

Again, reliance on private decision-makers (businesses here) turned a general pattern of agreement to disagreement within the question category.

Other Design Considerations

Fifty-seven percent of respondents favored architectural design controls for accessory structures such as storage buildings and commercial garages; 51 percent favored controls for the side(s) of buildings facing the highway and any other public street; and 50 percent favored controls for screening or separation structures such as walls and fences. Minimum open space requirements were favored for commercial developments (65%), multi-family developments (62%), and industrial developments (61%). Finally, building height limits of a two-to-three-story maximum were favored by 66 percent of respondents, as opposed to 17 percent who said some tall buildings were okay (four or more stories).

LIST OF SALIENT FINDINGS

The following list the abovementioned salient findings and presents additional survey results.

CHARACTERISTICS OF SURVEY RESPONDENTS

	HAVE THESE TRAITS
Travel Hwy. 36 at least once or twice weekly **54%** almost every day	**75%**
Have used the highway for 10 years or more **50%** for 20 years or more	**74%**
Use the highway for local shopping areas **62%** access to metro areas; 55% commuting	**70%**
Live within about one-half mile of Hwy. 36 **63%** own property within ½ mile	**76%**
Care at least somewhat about the views **57%** care very much	**92%**

DIVIDED SATISFACTION AT PRESENT WITHIN THE HWY. 36 CORRIDOR

	AGREE
The visual quality of the drive has improved since four lane conversion **27%** say the view has declined **25%** say remained the same	**37%**
Like, at least somewhat, the visual quality of developments **33%** like them very little or dislike them	**62%**
Signs have grown to be a problem in certain areas **40%** say signs are not much of a concern	**42%**
Existing amount and type of lighting is not a concern **33%** say lighting has become a problem in certain areas	**51%**

REACTION TO VISION ALTERNATIVES FOR THE HIGHWAY CORRIDOR

	FAVOR
Urban growth concentrated in centers; rural character in between	**48%**
Continuous open space where presently undeveloped	**45%**
No further development unless screened from view	**31%**
Scattered development along entire length	**28%**
Full development along entire length	**6%**

WHERE SHOULD CONCENTRATED-LOOKING DEVELOPMENT OCCUR

Only in/around existing urban-looking areas	**45%**
Nowhere; new developments should be well screened and rural looking	**34%**
Anywhere there is a market	**14%**

SIGHTS MOST LIKED FROM HWY. 36

	LIKE
Natural areas	**95%**
Agricultural views	**87%**
Uninterrupted open space	**80%**
Recreational areas	**79%**
Country nights/dark silhouettes	**62%**

SIGHTS MOST DISLIKED FROM HWY. 36

	DISLIKE
Parking lots and service areas	**69%**
Bright lights	**68%**
Lands undergoing development	**66%**
Businesses	**53%**

STRONG AGREEMENT WITH MOST HIGHWAY CORRIDOR GENERAL DESIGN OPTIONS

	YES	NO
Establish comprehensive landscape and architectural design standards	**80%**	**9%**
At least partially screen all residential development	**78%**	**8%**
Set all rural buildings far back from the highway	**61%**	**17%**
Significantly set back business development to reduce its visibility	**62%**	**18%**
Encourage conservation/cluster subdivisions that preserve open space	**59%**	**23%**
Buildings in urban centers could be located closer to the highway given visual screening	**54%**	**27%**
Businesses could be located close to the highway in certain areas if partially screened	**47%**	**32%**
It doesn't much matter how close development gets to Hwy. 36 or what it looks like	**7%**	**83%**
People should be able to do what they want with landscaping and development design	**15%**	**71%**

SIGN CONCERNS ALONG HWY. 36 AND SUPPORT FOR CONTROLS

MAJORITY AGREE		MINORITY AGREE
76%	Regulate signs, some significantly detract from visual character	
	Property owner choice in signs is valuable, they know best about site	**13%**
58%	Prohibit very large signs (billboards)	
	Any size/type of sign should be open for consideration and local review	**29%**
72%	Encourage low, ground monument-type signs of natural materials	
	Tall, pole-mounted signs are beneficial, exceed aesthetic considerations	**10%**

GREATEST SIGN CONCERNS

	CONCERNED
Large size	**68%**
Height	**61%**
Disruption of open space	**60%**
Proximity to things (clutter)	**57%**

STRONG SUPPORT FOR NATURAL AREA PROTECTION AND LANDSCAPING ALONG THE HIGHWAY

	YES	NO
Protect natural areas, particularly those with trees and shrubs	**88%**	**3%**
Natural landscape remaining is very valuable, design any developments around it	**86%**	**5%**
Allow preserving natural vegetation to meet certain landscaping requirements	**83%**	**5%**
Encourage but don't require landscaping for development	**20%**	**65%**
Given changing character, formal landscaping is preferable to preserving natural vegetation	**35%**	**42%**

REQUIRE LANDSCAPING/SCREENING FOR DEVELOPMENT SITE FEATURES ALONG HWY. 36

	YES	NO
Dumpsters, mechanical equipment, stored materials	**87%**	**2%**
Loading/unloading service areas	**82%**	**4%**
Parking lots	**79%**	**4%**
Buildings facing the highway	**77%**	**5%**
Between dissimilar land uses (residential and commercial)	**73%**	**4%**
Residential areas from the highway	**72%**	**5%**
Base of freestanding signs	**62%**	**6%**
Interior of parking lots	**51%**	**9%**

RESTRAINT FAVORED IN HIGHWAY CORRIDOR LIGHTING

MAJORITY AGREE		MINORITY AGREE
59%	Future lighting along the highway could be reduced/not increased	
	Increased lighting is not only expected, but essential for convenience and safety	**29%**
74%	Short, subtle lighting could serve its purposes along Hwy. 36	
	Tall, bright lighting is most important for destinations at night	**10%**
74%	Short, downward reflecting lights provide less distraction/detraction	
	Tall, spreading lights clearly help identify destinations/entryways	**12%**

STRONG GUIDELINES FOR MOST PARKING AND SERVICE AREAS ALONG HWY. 36

	YES	NO
Locate (un)loading docks, service areas and dumpsters shielded from the highway	**90%**	**2%**
Parking lots should contain trees and shrubs in interior landscaped islands	**78%**	**4%**
Locate limited parking between a business and the highway, put remainder on side	**64%**	**10%**
Screen parking the full length between a business and the highway	**60%**	**12%**
When a business's inland-side is very important, then allow loading service, and storage along the highway, if screened	**55%**	**25%**
Full screening of parking may be unreasonable; lots visible from the highway should be screened at least halfway	**50%**	**25%**
Parking between businesses and highways is acceptable if greater building setbacks occur	**47%**	**25%**
Businesses know best what image to project; should decide for themselves without design guidelines	**10%**	**76%**

ARCHITECTURAL DESIGN CONTROLS/GUIDELINES FAVORED

	AGREE
Accessory structures such as storage buildings and commercial garages	**57%**
The side(s) of buildings facing the highway and any other public street	**51%**
Screening or separation structures such as walls and fences	**50%**
Entire building exteriors, whether or not the sides face the highway	**40%**

MINIMUM OPEN SPACE REQUIREMENTS SUPPORTED

Commercial developments	**65%**
Multi-family developments	**62%**
Industrial developments	**61%**

BUILDING HEIGHT LIMITS PREFERRED

2 – 3 story maximum	**66%**
Some tall buildings are okay (4 or more stories)	**17%**

Following is the survey questionnaire that was mailed, with collective response data entered. The portion of respondents selecting the optional choices at each question is the basis for calculating percentages. Often, the percentages among question options will not total to 100%, because a limited number of survey respondents will have skipped any given question. Where multiple options could be selected, however, the percent totals by question will exceed 100%.

Appendix A-2
HIGHWAY 36 NORTH CORRIDOR SURVEY PERCENT RESULTS

PART A: GENERAL EXPERIENCE AND VISUAL CHARACTER ALONG THE HIGHWAY

1. How often do you travel on Hwy. 36 anywhere between the City of Burlington and the Wind Lake area? **(Check all that apply)**

54%	Almost every day	16%	Several times monthly	1%	Don't use Hwy. 36 (Please stop now and return survey if checked)
21%	Once or twice weekly	2%	Rarely		
21%	Year 'round	3%	Changes seasonally		

2. How long have you had experience in the area using the highway? **(Check only one)**

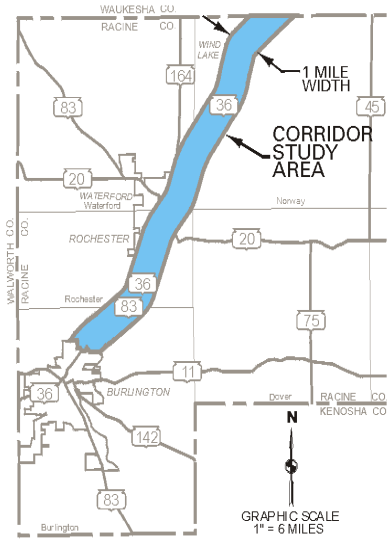
6%	Less than 3 years	23%	10 to 19 years
20%	3 to 9 years	50%	20 years or more

3. What has happened to the visual quality of the drive down Hwy. 36 since its conversion from two lanes to four lanes? **(Check only one)**

37%	Improved	6%	No opinion
25%	Remained the same	2%	Little experience/haven't driven it enough
27%	Declined		

4. Why do you use the highway? **(Check all that apply)**

55%	Commute to and from work	70%	Proximity to local shopping areas
38%	Pleasure driving	62%	Access to metro areas
13%	Admiring scenic views	30%	Nearby recreation areas, i.e., lakes, river, trails
13%	Movement of business products		



5. As you travel Hwy. 36, do you generally care about the views experienced along it? **(Check only one)**

57%	Very much	6%	Very little
35%	Somewhat	2%	Not at all
		0%	No opinion

6. What, if any, sights do you **like** or **dislike** seeing from Hwy. 36? **(Check all that apply)**

Like	Dislike	
95%	1%	Natural areas (woodlands, wetlands, lakes, rivers)
87%	3%	Agricultural views (farm buildings, fields)
35%	44%	Residential areas
26%	53%	Businesses
79%	4%	Recreational areas
80%	5%	Uninterrupted stretches of open space
13%	66%	Lands undergoing development
10%	69%	Parking lots and service areas
62%	11%	Country nights/dark silhouettes
9%	68%	Bright lights
1%	2%	None of the above

7. What best describes your vision of, or for, the Hwy. 36 corridor? **(Check all that apply)**

6%	Full development along the entire length of the highway	48%	Urban growth concentrated in centers, such as city and villages, while retaining the rural character in between
28%	Scattered development along the entire length of the highway	31%	No further development, unless screened partially from view
45%	Continuous open space and natural/ pastoral views where presently undeveloped	2%	No opinion

8. Where should concentrated-looking areas of development (such as residential neighborhoods, businesses, and industries) be able to occur along Hwy. 36? **(Check only one)**

14%	Anywhere there is a market	45%	Only in and around existing areas that are urban looking
34%	Nowhere--new developments should be well screened from view and be rural in appearance	4%	No opinion

9. In general, how do you like the visual quality of developments along the highway? **(Check only one)**

12%	Very much	21%	Very little
50%	Somewhat	12%	Dislike
		5%	No opinion

10. Comments about the general visual character of the Hwy. 36 corridor: 42% have comments

PART B: GENERAL DESIGN OPTIONS AND POTENTIAL DIRECTIONS

Please place an "x" in the box following each statement which best represents your opinion regarding the Hwy. 36 corridor.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL/ NO OPINION	DISAGREE	STRONGLY DISAGREE
1. All residential development should be at least partially screened from view along the highway.	45%	33%	12%	6%	2%
2. Residential development that preserves open space, sometimes called conservation or cluster subdivisions, should be encouraged along Hwy. 36.	23%	36%	14%	15%	8%
3. Comprehensive landscape and architectural design standards should be established for all new multi-family, business, and institutional development within the highway corridor.	42%	38%	8%	6%	3%
4. People should be able to do whatever they want with landscaping and design of developments on their parcel(s) along Hwy. 36.	5%	10%	10%	38%	33%
5. Business development should be set back significantly to reduce its visibility from Hwy. 36.	30%	32%	14%	14%	4%
6. Business development could be located close to the highway in certain areas if it is at least partially screened from view.	7%	40%	15%	21%	11%
7. All buildings should be set back far from the highway in rural areas.	25%	36%	17%	14%	3%
8. Buildings in the "urban centers" along Hwy. 36 (i.e., villages) could be located closer to the highway given visual screening.	6%	48%	14%	19%	8%
9. It doesn't much matter how close development gets to Hwy. 36 or what it looks like when driving by.	3%	4%	5%	27%	56%

10. Comments on general design options: 22% have comments

PART C: SPECIFIC DESIGN OPTIONS AND PREFERENCES

SIGNS

Considering visual character or aesthetics, **please check the one statement concerning signs with which you MOST agree for each of the paired alternatives given in questions 1 through 4 below.**

1. 40% Signs are really not much of a visual concern in the Hwy. 36 corridor.

   or

   42% Signs visible along the highway have grown to be a problem in certain areas.

2. 13% The property owner's choice in signs along the highway is valuable, because they know best how to maintain an attractive business site while also directing potential customers.

   or

   76% Signs should be regulated along Hwy. 36, because some significantly detract from the visual character of the area, and exceed the need for location identification.

3. 58% Very large signs, including "billboards," should be prohibited along Hwy. 36.

   or

   29% Any size and type of sign should be open for consideration along the highway subject to local design review and approval.

4. 72% Low, ground or monument-type signs of natural materials (wood, stone, or brick) should be encouraged for Hwy. 36 destinations.

   or

   10% Tall, pole-mounted signs are beneficial along the highway because their quick identification exceeds the value of aesthetic considerations.

5. Please indicate whether you consider any of the following a visual concern with signs along Hwy. 36. **(Check all that apply)**

   61% Height
   68% Large size
   46% Lighting
   26% Color combinations
   43% Short setback from highway
   57% Proximity to structures or other signs ("clutter")
   25% Detraction from buildings
   60% Disruption of open space
   33% Type and arrangement of supports
   45% Inadequate landscaping
   16% Too small/too far back
   38% Lack of uniformity (no theme)
   37% Rooftop or mobile sign options

6. Comments on signs: 20% have comments

LANDSCAPING AND NATURAL AREAS

Please place an "x" in the box after each statement which best represents your opinion regarding the Hwy. 36 corridor.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL/ NO OPINION	DISAGREE	STRONGLY DISAGREE
1. The natural landscape which remains along stretches of Hwy. 36 is very valuable to the area, representing an asset around which any developments should be designed.	54%	32%	6%	3%	2%
2. Natural areas along the highway, particularly those with the natural screening of trees and shrubs, should be protected.	60%	28%	6%	3%	0%
3. Developments along Hwy. 36 which preserve the natural vegetation should be allowed to use these features to meet certain landscaping requirements.	34%	49%	7%	3%	2%
4. The character of the Hwy. 36 corridor is changing, and formally landscaped developments are preferable to preserving natural vegetation.	12%	23%	16%	28%	14%
5. Landscaping with plantings, berms, and/or ground covers should be required for the following development site features along Hwy. 36:					
a. Along buildings facing the highway.	39%	38%	10%	4%	1%
b. To screen parking lots.	44%	35%	8%	3%	1%
c. In the interior of parking lots.	22%	29%	29%	8%	1%
d. To screen loading/unloading service areas.	47%	35%	7%	3%	1%
e. To screen residential areas from the highway.	36%	36%	13%	4%	1%
f. At the base of freestanding signs.	27%	35%	21%	5%	1%
g. To screen dumpsters, mechanical equipment and stored materials.	59%	28%	4%	1%	1%
h. Between dissimilar land uses (for example, residential and commercial areas).	37%	36%	14%	3%	1%
6. Landscaping may be encouraged, but should not be required for development along Hwy. 36.	6%	14%	6%	30%	35%

7. Comments on landscaping and natural areas: 18% have comments

LIGHTING

Considering visual character or aesthetics, **please check the one statement with which you MOST agree for each of the paired alternatives given in questions 1 through 4 below**.

1. 51% The existing amount and type of lighting in the Hwy. 36 corridor is not a concern.

   or

   33% Lighting visible along the highway has grown to be a problem in certain areas.

2. 29% For convenience and safety in a developing area, like the Hwy. 36 corridor, increased lighting is not only expected, but also essential.

   or

   59% While some new lighting may be warranted, destinations along the highway are so easily recognized that lighting could be reduced, or at least not increased in the future.

3. 74% Short, subtle lighting in developments could serve its purposes along the Hwy. 36 corridor.

   or

   10% Tall, bright lighting clearly seen from a distance is the most important thing for reaching destinations at night along the highway.

4. 12% The benefit of tall, broadly spreading lights in parking lots is that they also clearly help identify destinations and their entryways.

   or

   74% The benefit of short, shielded lights with downward reflection in parking lots, is that they provide less distraction from the highway and less detraction for neighbors or the night sky.

5. Comments on lighting: 15% have comments

PARKING AND SERVICE AREAS

Please place an "x" in the box after each statement which best represents your opinion regarding the Hwy. 36 corridor.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL/ NO OPINION	DISAGREE	STRONGLY DISAGREE
1. Limited parking should be located between a business and the highway; the remainder can be located on the side.	21%	43%	19%	6%	4%
2. Parking between a business and Hwy. 36 is an acceptable trade-off if it means that greater setbacks of buildings can occur.	6%	41%	20%	18%	7%
3. Parking between a business building and the highway should be screened the full length (i.e., berms, landscaping, or fencing).	26%	34%	20%	10%	2%
4. Full screening of parking lots may be unreasonable. Thus, lots visible from the highway should be partially screened at least halfway along their length.	10%	40%	17%	18%	7%
5. Parking lots along Hwy. 36 should contain, and thereby be "softened" by, trees and shrubs in interior landscaped islands.	31%	47%	11%	3%	1%
6. Loading and unloading docks, service areas, and dumpsters should be located so as to be shielded from the highway.	52%	38%	3%	1%	1%
7. Sometimes the appearance of a business on its inland side (away from the highway) is very important. Then loading, service, and storage placed along the highway should be allowed, if screened from view.	10%	45%	13%	16%	9%
8. Businesses know best what they need and what image to project. Thus, they should decide for themselves how to function without design guidelines affecting appearance.	4%	6%	8%	37%	39%

9. Comments on parking and service areas: 13% have comments

OTHER DESIGN CONSIDERATIONS

1. Architectural design controls can be used to achieve a certain visual design theme (excluding one- or two-family residences). Please indicate whether you would favor design guidelines for any of the following within the Hwy. 36 corridor. **(Check all that apply)**

   51% The side(s) of buildings facing the highway and any other public street
   40% Entire building exteriors, whether or not the sides face the highway
   57% Accessory structures such as storage buildings and commercial garages
   50% Screening or separation structures such as walls and fences
   18% No opinion

2. Beyond design controls, minimum open space requirements can also be set (usually a percent of a parcel consisting of grass, landscaping, natural areas, sidewalks and paths--but not the surface area of buildings, parking lots, and driveways). Would you support minimum open space requirements for any of the following? **(Check all that apply)**

   62% Multi-family developments
   65% Commercial developments
   61% Industrial developments
   17% No opinion

3. Strictly from the standpoint of appearance, please indicate which of the following building height limits you prefer within the Hwy. 36 corridor. **(Check only one)**

   17% Some tall buildings are okay (4 or more stories)
   66% 2 - 3 story maximum
   11% No opinion

PART D: FURTHER RESPONDENT DATA

1. Do you live, work, own property, or operate a business **within about one-half mile** of Hwy. 36? **(Check all that apply)**

   76% Live 18% Work 63% Own property 9% Operate a business 5% None within ½ mile

2. Do you feel your responses in this survey are consistent with any other adults in your household or business? **(Check only one)**

   73% Very much
   14% Somewhat
   1% Very little
   4% No opinion
   6% Not applicable

3. After thinking through and answering the questions in this survey, would you say that your awareness of visual or aesthetic design issues has changed in any of the following ways? **(Check only one)**

   11% Very much
   39% Somewhat
   26% Very little
   20% Not at all

Thank you! Please also feel free to insert sheets as needed for any additional comments. 4% have comments

Following is the survey questionnaire that was mailed, with collective response data entered. The number of responses received for the optional choices at each question is shown. Often, the total responses among questions will vary considerably, because a limited number of survey respondents will have skipped any given question, and multiple options could sometimes be selected.

Appendix A-3
HIGHWAY 36 NORTH CORRIDOR SURVEY NUMERIC RESULTS

PART A: GENERAL EXPERIENCE AND VISUAL CHARACTER ALONG THE HIGHWAY

1. How often do you travel on Hwy. 36 anywhere between the City of Burlington and the Wind Lake area? **(Check all that apply)**

492	Almost every day	144	Several times monthly	5	Don't use Hwy. 36 (Please stop now and return survey if checked)
194	Once or twice weekly	15	Rarely		
188	Year 'round	27	Changes seasonally		

2. How long have you had experience in the area using the highway? **(Check only one)**

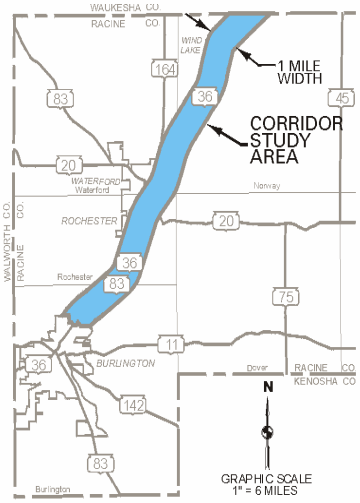
56	Less than 3 years	213	10 to 19 years
178	3 to 9 years	457	20 years or more

3. What has happened to the visual quality of the drive down Hwy. 36 since its conversion from two lanes to four lanes? **(Check only one)**

336	Improved	57	No opinion
225	Remained the same	17	Little experience/haven't driven it enough
247	Declined		

4. Why do you use the highway? **(Check all that apply)**

500	Commute to and from work	634	Proximity to local shopping areas
344	Pleasure driving	560	Access to metro areas
121	Admiring scenic views	272	Nearby recreation areas, i.e., lakes, river, trails
114	Movement of business products		



5. As you travel Hwy. 36, do you generally care about the views experienced along it? **(Check only one)**

521	Very much	53	Very little
314	Somewhat	14	Not at all
		2	No opinion

6. What, if any, sights do you **like** or **dislike** seeing from Hwy. 36? **(Check all that apply)**

Like	Dislike	
866	11	Natural areas (woodlands, wetlands, lakes, rivers)
795	23	Agricultural views (farm buildings, fields)
319	398	Residential areas
240	483	Businesses
719	40	Recreational areas
731	46	Uninterrupted stretches of open space
121	601	Lands undergoing development
89	627	Parking lots and service areas
566	100	Country nights/dark silhouettes
83	619	Bright lights
12	21	None of the above

7. What best describes your vision of, or for, the Hwy. 36 corridor? **(Check all that apply)**

55	Full development along the entire length of the highway	438	Urban growth concentrated in centers, such as city and villages, while retaining the rural character in between
252	Scattered development along the entire length of the highway	280	No further development, unless screened partially from view
410	Continuous open space and natural/ pastoral views where presently undeveloped	18	No opinion

8. Where should concentrated-looking areas of development (such as residential neighborhoods, businesses, and industries) be able to occur along Hwy. 36? **(Check only one)**

130	Anywhere there is a market	413	Only in and around existing areas that are urban looking
309	Nowhere--new developments should be well screened from view and be rural in appearance	38	No opinion

9. In general, how do you like the visual quality of developments along the highway? **(Check only one)**

106	Very much	189	Very little
456	Somewhat	105	Dislike
		45	No opinion

10. Comments about the general visual character of the Hwy. 36 corridor: 378 have comments

PART B: GENERAL DESIGN OPTIONS AND POTENTIAL DIRECTIONS

Please place an "x" in the box following each statement which best represents your opinion regarding the Hwy. 36 corridor.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL/ NO OPINION	DISAGREE	STRONGLY DISAGREE
1. All residential development should be at least partially screened from view along the highway.	407	299	107	52	14
2. Residential development that preserves open space, sometimes called conservation or cluster subdivisions, should be encouraged along Hwy. 36.	213	330	128	135	71
3. Comprehensive landscape and architectural design standards should be established for all new multi-family, business, and institutional development within the highway corridor.	377	343	76	51	26
4. People should be able to do whatever they want with landscaping and design of developments on their parcel(s) along Hwy. 36.	48	91	87	346	303
5. Business development should be set back significantly to reduce its visibility from Hwy. 36.	271	295	128	128	35
6. Business development could be located close to the highway in certain areas if it is at least partially screened from view.	62	367	135	192	96
7. All buildings should be set back far from the highway in rural areas.	266	327	150	127	25
8. Buildings in the "urban centers" along Hwy. 36 (i.e., villages) could be located closer to the highway given visual screening.	54	439	125	171	73
9. It doesn't much matter how close development gets to Hwy. 36 or what it looks like when driving by.	23	36	45	249	508

10. Comments on general design options: 199 have comments

PART C: SPECIFIC DESIGN OPTIONS AND PREFERENCES

SIGNS

Considering visual character or aesthetics, **please check the one statement concerning signs with which you MOST agree for each of the paired alternatives given in questions 1 through 4 below.**

1. 359 Signs are really not much of a visual concern in the Hwy. 36 corridor.

   or

   386 Signs visible along the highway have grown to be a problem in certain areas.

2. 122 The property owner's choice in signs along the highway is valuable, because they know best how to maintain an attractive business site while also directing potential customers.

   or

   689 Signs should be regulated along Hwy. 36, because some significantly detract from the visual character of the area, and exceed the need for location identification.

3. 531 Very large signs, including "billboards," should be prohibited along Hwy. 36.

   or

   265 Any size and type of sign should be open for consideration along the highway subject to local design review and approval.

4. 656 Low, ground or monument-type signs of natural materials (wood, stone, or brick) should be encouraged for Hwy. 36 destinations.

   or

   92 Tall, pole-mounted signs are beneficial along the highway because their quick identification exceeds the value of aesthetic considerations.

5. Please indicate whether you consider any of the following a visual concern with signs along Hwy. 36. **(Check all that apply)**

   - 553 Height
   - 618 Large size
   - 422 Lighting
   - 240 Color combinations
   - 392 Short setback from highway
   - 519 Proximity to structures or other signs ("clutter")
   - 229 Detraction from buildings
   - 543 Disruption of open space
   - 298 Type and arrangement of supports
   - 410 Inadequate landscaping
   - 141 Too small/too far back
   - 345 Lack of uniformity (no theme)
   - 338 Rooftop or mobile sign options

6. Comments on signs: 178 have comments

LANDSCAPING AND NATURAL AREAS

Please place an "x" in the box after each statement which best represents your opinion regarding the Hwy. 36 corridor.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL/ NO OPINION	DISAGREE	STRONGLY DISAGREE
1. The natural landscape which remains along stretches of Hwy. 36 is very valuable to the area, representing an asset around which any developments should be designed.	487	286	50	30	18
2. Natural areas along the highway, particularly those with the natural screening of trees and shrubs, should be protected.	547	251	51	27	4
3. Developments along Hwy. 36 which preserve the natural vegetation should be allowed to use these features to meet certain landscaping requirements.	313	448	61	26	14
4. The character of the Hwy. 36 corridor is changing, and formally landscaped developments are preferable to preserving natural vegetation.	113	206	147	259	131
5. Landscaping with plantings, berms, and/or ground covers should be required for the following development site features along Hwy. 36:					
a. Along buildings facing the highway.	359	344	85	35	9
b. To screen parking lots.	403	317	77	30	6
c. In the interior of parking lots.	196	261	263	69	9
d. To screen loading/unloading service areas.	431	321	65	24	7
e. To screen residential areas from the highway.	331	330	115	40	12
f. At the base of freestanding signs.	244	318	193	43	11
g. To screen dumpsters, mechanical equipment and stored materials.	540	259	35	12	7
h. Between dissimilar land uses (for example, residential and commercial areas).	337	325	123	23	9
6. Landscaping may be encouraged, but should not be required for development along Hwy. 36.	55	131	56	269	319

7. Comments on landscaping and natural areas: 164 have comments

LIGHTING

Considering visual character or aesthetics, **please check the one statement with which you MOST agree for each of the paired alternatives given in questions 1 through 4 below**.

1. 468 The existing amount and type of lighting in the Hwy. 36 corridor is not a concern.

   or

   298 Lighting visible along the highway has grown to be a problem in certain areas.

2. 269 For convenience and safety in a developing area, like the Hwy. 36 corridor, increased lighting is not only expected, but also essential.

   or

   533 While some new lighting may be warranted, destinations along the highway are so easily recognized that lighting could be reduced, or at least not increased in the future.

3. 673 Short, subtle lighting in developments could serve its purposes along the Hwy. 36 corridor.

   or

   92 Tall, bright lighting clearly seen from a distance is the most important thing for reaching destinations at night along the highway.

4. 111 The benefit of tall, broadly spreading lights in parking lots is that they also clearly help identify destinations and their entryways.

   or

   673 The benefit of short, shielded lights with downward reflection in parking lots, is that they provide less distraction from the highway and less detraction for neighbors or the night sky.

5. Comments on lighting: 137 have comments

PARKING AND SERVICE AREAS

Please place an "x" in the box after each statement which best represents your opinion regarding the Hwy. 36 corridor.

STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL/ NO OPINION	DISAGREE	STRONGLY DISAGREE
1. Limited parking should be located between a business and the highway; the remainder can be located on the side.	188	393	173	58	34
2. Parking between a business and Hwy. 36 is an acceptable trade-off if it means that greater setbacks of buildings can occur.	56	375	179	163	67
3. Parking between a business building and the highway should be screened the full length (i.e., berms, landscaping, or fencing).	236	314	182	90	17
4. Full screening of parking lots may be unreasonable. Thus, lots visible from the highway should be partially screened at least halfway along their length.	87	362	158	167	62
5. Parking lots along Hwy. 36 should contain, and thereby be "softened" by, trees and shrubs in interior landscaped islands.	286	429	97	23	8
6. Loading and unloading docks, service areas, and dumpsters should be located so as to be shielded from the highway.	475	346	28	9	6
7. Sometimes the appearance of a business on its inland side (away from the highway) is very important. Then loading, service, and storage placed along the highway should be allowed, if screened from view.	92	408	121	150	80
8. Businesses know best what they need and what image to project. Thus, they should decide for themselves how to function without design guidelines affecting appearance.	36	56	74	338	352

9. Comments on parking and service areas: 120 have comments

OTHER DESIGN CONSIDERATIONS

1. Architectural design controls can be used to achieve a certain visual design theme (excluding one- or two-family residences). Please indicate whether you would favor design guidelines for any of the following within the Hwy. 36 corridor. **(Check all that apply)**

468 The side(s) of buildings facing the highway and any other public street
367 Entire building exteriors, whether or not the sides face the highway
518 Accessory structures such as storage buildings and commercial garages
454 Screening or separation structures such as walls and fences
163 No opinion

2. Beyond design controls, minimum open space requirements can also be set (usually a percent of a parcel consisting of grass, landscaping, natural areas, sidewalks and paths--but not the surface area of buildings, parking lots, and driveways). Would you support minimum open space requirements for any of the following? **(Check all that apply)**

561 Multi-family developments
594 Commercial developments
558 Industrial developments
155 No opinion

3. Strictly from the standpoint of appearance, please indicate which of the following building height limits you prefer within the Hwy. 36 corridor. **(Check only one)**

155 Some tall buildings are okay (4 or more stories)
597 2 - 3 story maximum
103 No opinion

PART D: FURTHER RESPONDENT DATA

1. Do you live, work, own property, or operate a business **within about one-half mile** of Hwy. 36? **(Check all that apply)**

695 Live
160 Work
597 Own property
82 Operate a business
44 None within ½ mile

2. Do you feel your responses in this survey are consistent with any other adults in your household or business? **(Check only one)**

666 Very much
127 Somewhat
5 Very little
37 No opinion
50 Not applicable

3. After thinking through and answering the questions in this survey, would you say that your awareness of visual or aesthetic design issues has changed in any of the following ways? **(Check only one)**

98 Very much
351 Somewhat
236 Very little
184 Not at all

Thank you! Please also feel free to insert sheets as needed for any additional comments. 35 have comments

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Appendix B

SUMMARY OF THE VISUAL PREFERENCE SURVEY RESULTS FOR THE HIGHWAY 36 NORTH CORRIDOR

Appendix B-1

HIGHWAY 36 NORTH CORRIDOR SURVEY SALIENT FINDINGS

The purpose of conducting the visual preference survey was to provide the Corridor Advisory Committee with information to help prepare acceptable design guidelines through citizen participation. The survey presented participants with different images of signs, building designs, and parking lots so that they could record whether they "liked" or "disliked" an image. The following summarizes the results and indicates potential positive and negative features that participants may have liked or disliked by analyzing each image.

Signs

Certain features of the signs were more preferred over others. Overall, monument signs—sometimes called ground signs--were the preferred style for signs, and tall signs with large sign faces were the least preferred. Participants that lived within a half mile of STH 36 had a stronger preference for signs that were at eye-level—ground or monument signs—while those living one mile or more from the highway had higher valued preference scores for signs that were larger and taller. Some participants commented that tall, large signs are appropriate for freeways (i.e. IH 94), but not Highway 36.

Positive Features

- Low monument signs—sometimes referred to as ground signs
- Wall mounted signs appear more preferable than roof-top mounted signs
- Subdued or non-obtrusive signs with simplified and minimal lettering (noncluttered)
- Signs using brick and other decorative materials as part of their design structure
- Signs accented with attractive landscaping, such as flowers and ornate shrubs, at the base

Negative Features

- Tall signs and large sign faces
- Roof-top signs and pole signs
- Multiple sign faces concentrated on one support structure appear cluttered
- A series of tall freestanding signs in close proximity to each other projects a cluttered appearance
- Signs lacking ornate materials as part of their supporting structure
- Signs without surrounding landscaping such as flowers and shrubs

Building Design

For the majority of the building images, the preference values were mostly neutral, meaning that there was neither a positive or negative preference for that design style. However, the overall percentages of positive, neutral, and negative values implied a preference or dislike for certain types of building features. In general, "residential-looking" buildings with pitched roofs and surrounded by green space with attractive landscaping were preferred over box-shaped buildings lacking ornate design characteristics and surrounding landscaping.

Positive Features
- Facades constructed of natural and ornate materials such as wood, brick, or decorative masonry blocks
- Buildings with pitched (peaked) roofs such as gable, hip, or gambrel roofs
- Buildings with variable rooflines
- Buildings with ornate accenting features such as horizontal or vertical accenting bands
- Facades with protruding and/or recessing walls
- Buildings surrounded by green space with attractive landscaping

Negative Features
- Buildings that look like a box devoid of unique design features
- Buildings with flat roofs
- Long linear, strip mall designed buildings
- Buildings that lack protruding and/or recessed walls
- Buildings surrounded by large areas of asphalt with little landscaping

Parking Lots

Some participants indicated that no slides showed parking lots located in the back of buildings, and mentioned that such parking could be located in the rear. Overall, well-defined parking lots with interior and perimeter landscaping was preferred over lots that lack such landscaping and proper striping.

Positive Features of the Interior of Parking Lots
- Breakup of parking lot with landscaped islands containing decorative mulch, shrubs, and trees
- Well-defined parking lots with proper striping and landscaped islands at the end of parking rows

Negative Features of the Interior of Parking Lots
- No or minimal landscaping inside parking lots
- Lack of striping in parking lots

Positive Features of the Exterior of Parking Lots
- Full or partial screening of parking lots from the road
- Parking lot screenings with unique landscape designs
- Large areas of green space between the parking lot and road

Negative Features of the Exterior of Parking Lots
- Parking lots with no screening, or screenings that lack interesting designs
- Parking lots with no or minimal green space and landscaping, such as shrubs and trees, around the perimeter

Appendix B-2

VISUAL PREFERENCE SURVEY RESULTS

A. Visual Preference Survey Results for Signs

Name: (optional) _____ Date: _____ **Profile:** Elected Official | Resident | Commission Member | Other

Location: Less than 0.5 mile | Less than 1 mile | Greater than 1 mile | **From Hwy 36**

Instructions: Rate each image on the following scale. Use 1 to 9 scale as a continuum to indicate how much you "like" or "dislike" an image. In general, 1-2-3 indicate a negative response, 4-5-6 indicate a neutral response, and 7-8-9 indicate a positive response.

Slides 1-6 Restaurants **Slides 7-18** Retail/Services **Slides 19-21** Gas Stations

Signs	*Negative* (1 2 3)	*Neutral* (4 5 6)	*Positive* (7 8 9)	**Comments:** Positive Elements	Negative Elements
1	(0%)	(19%)	(81%)	28	0
2	(81%)	(17%)	(2%)	0	26
3	(63%)	(29%)	(8%)	0	11
4	(12%)	(50%)	(38%)	5	6
5	(54%)	(41%)	(5%)	1	14
6	(37%)	(50%)	(13%)	2	9
7	(6%)	(27%)	(67%)	15	4
8	(26%)	(59%)	(15%)	3	14
9	(58%)	(38%)	(4%)	0	19
10	(4%)	(49%)	(47%)	10	7
11	(0%)	(21%)	(79%)	20	0
12	(59%)	(36%)	(5%)	0	18
13	(66%)	(30%)	(4%)	0	33
14	(49%)	(47%)	(4%)	4	24
15	(5%)	(58%)	(37%)	7	6
16	(29%)	(54%)	(17%)	3	8
17	(45%)	(39%)	(16%)	0	24
18	(1%)	(21%)	(78%)	18	2
19	(60%)	(40%)	(0%)	0	17
20	(64%)	(33%)	(3%)	1	17
21	(8%)	(52%)	(40%)	8	8

NOTE: THE RED NEEDLE REPRESENTS THE OVERALL AVERAGE RESULT. THE NUMERICAL PERCENT, ALSO REFLECTED BY THE COLORED BAR , IN EACH BOX IS THE PERCENTAGE OF PARTICIPANTS THAT SELECTED THE NEGATIVE, NEUTRAL, OR POSITIVE VALUE.

A. Signs

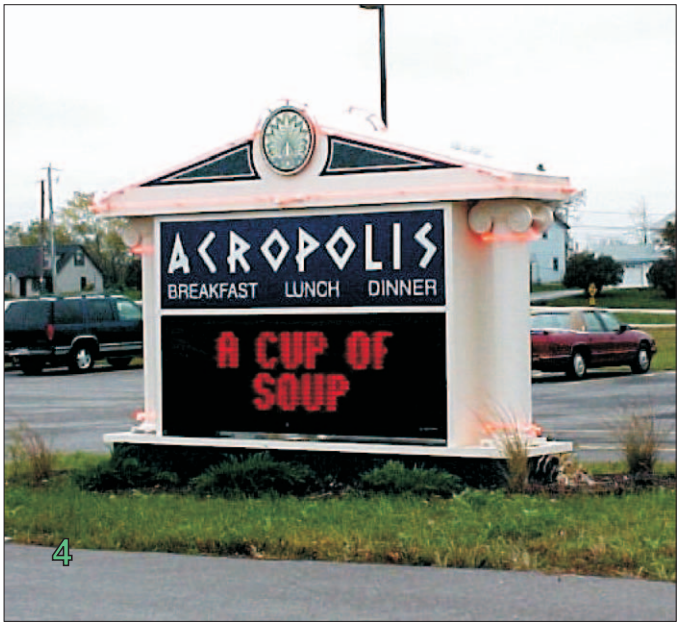
Instructions: Rate each image on the following scale. Use 1 to 9 scale as a continuum to indicate how much you "like" or "dislike" an image. In general, 1-2-3 indicate a negative response, 4-5-6 indicate a neutral response, and 7-8-9 indicate a positive response.

SLIDES 1-6 Restaurants **SLIDES 7-18 Retail/Services** **SLIDES 19-21 Gas Stations**

Average 7.2: Negative 0% Neutral 19% Positive 81%

Average 2.6: Negative 81% Neutral 17% Positive 2%

Average 3.6: Negative 63% Neutral 29% Positive 8%



Average 5.8: Negative 12% Neutral 50% Positive 38%

A. Signs (continued)

Average 3.4: Negative 54% Neutral 41% Positive 5%

Average 4.4: Negative 37% Neutral 50% Positive 13%

A. Signs (continued)

Average 6.5: Negative 6% Neutral 27% Positive 67%

Average 4.7: Negative 26% Neutral 59% Positive 15%

Average 3.4: Negative 58% Neutral 38% Positive 4%

Average 6.1: Negative 4% Neutral 49% Positive 47%

A. Signs (continued)

Average 7.2: Negative 0% Neutral 21% Positive 79%

Average 3.4: Negative 59% Neutral 36% Positive 5%

Average 3.0: Negative 66% Neutral 30% Positive 4%

Average 3.8: Negative 49% Neutral 47% Positive 4%

A. Signs (continued)

Average 5.9: Negative 5% Neutral 58% Positive 37%

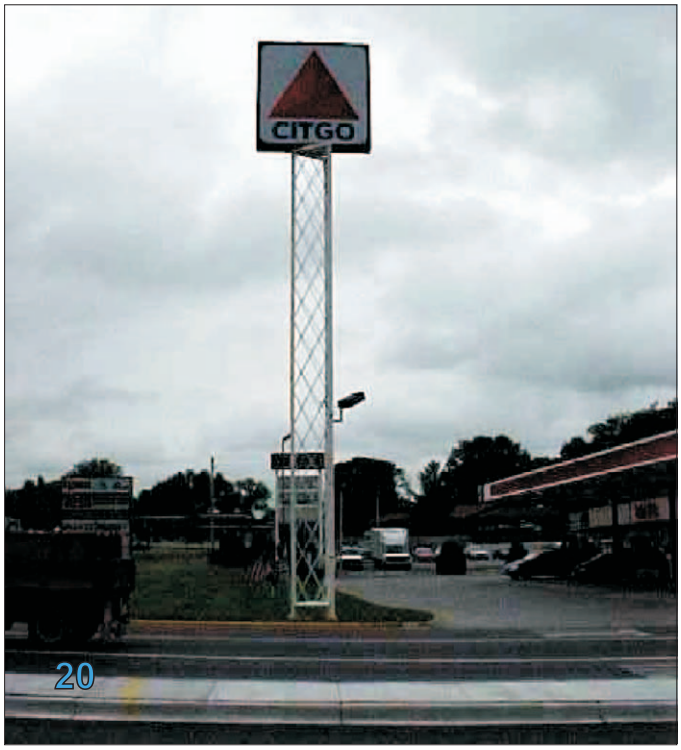
Average 4.7: Negative 29% Neutral 54% Positive 17%

Average 4.2: Negative 45% Neutral 39% Positive 16%

Average 7.0: Negative 1% Neutral 21% Positive 78%

A. Signs (continued)

Average 3.3: Negative 60% Neutral 40% Positive 0%



Average 3.1: Negative 64% Neutral 33% Positive 3%

Average 5.0: Negative 8% Neutral 52% Positive 40%

B. Visual Preference Survey Results for Building Design

Instructions: Rate each image on the following scale. Use 1 to 9 scale as a continuum to indicate how much you "like" or "dislike" an image. In general, 1-2-3 indicate a negative response, 4-5-6 indicate a neutral response, and 7-8-9 indicate a positive response.

Slides 1-7 "Big" Retail **Slides 8-15** Fast Food **Slides 16-17** Retail **Slides 18-19** Lodging **Slides 20-21** Gas Stations

Building Design	*Negative*	*Neutral*	*Positive*	Comments: Positive Elements	Comments: Negative Elements
1	(33%) 1 2 3	(52%) 4 5 6	(15%) 7 8 9	1	5
2	(12%) 1 2 3	(52%) 4 5 6	(36%) 7 8 9	6	4
3	(36%) 1 2 3	(48%) 4 5 6	(16%) 7 8 9	3	12
4	(13%) 1 2 3	(43%) 4 5 6	(44%) 7 8 9	12	3
5	(5%) 1 2 3	(40%) 4 5 6	(55%) 7 8 9	13	2
6	(40%) 1 2 3	(47%) 4 5 6	(13%) 7 8 9	1	8
7	(11%) 1 2 3	(49%) 4 5 6	(40%) 7 8 9	5	3
8	(36%) 1 2 3	(56%) 4 5 6	(8%) 7 8 9	2	8
9	(1%) 1 2 3	(56%) 4 5 6	(43%) 7 8 9	9	0
10	(4%) 1 2 3	(47%) 4 5 6	(49%) 7 8 9	7	4
11	(8%) 1 2 3	(48%) 4 5 6	(44%) 7 8 9	7	2
12	(24%) 1 2 3	(61%) 4 5 6	(15%) 7 8 9	1	6
13	(5%) 1 2 3	(23%) 4 5 6	(72%) 7 8 9	7	2
14	(32%) 1 2 3	(55%) 4 5 6	(13%) 7 8 9	1	5
15	(31%) 1 2 3	(60%) 4 5 6	(9%) 7 8 9	0	7
16	(3%) 1 2 3	(25%) 4 5 6	(72%) 7 8 9	14	0
17	(67%) 1 2 3	(28%) 4 5 6	(5%) 7 8 9	0	9
18	(32%) 1 2 3	(56%) 4 5 6	(12%) 7 8 9	3	2
19	(21%) 1 2 3	(48%) 4 5 6	(31%) 7 8 9	3	5
20	(5%) 1 2 3	(49%) 4 5 6	(46%) 7 8 9	4	1
21	(22%) 1 2 3	(65%) 4 5 6	(13%) 7 8 9	3	3

Do you live, work, own property, or operate a business within about one-half-mile of Hwy. 36?
(Check all that apply)
__Live __Work __Own Property __Operate a Business __None

NOTE: THE RED NEEDLE REPRESENTS THE OVERALL AVERAGE RESULT. THE NUMERICAL PERCENT, ALSO REFLECTED BY THE COLORED BAR , IN EACH BOX IS THE PERCENTAGE OF PARTICIPANTS THAT SELECTED THE NEGATIVE, NEUTRAL, OR POSITIVE VALUE.

B. Building Design

Instructions: Rate each image on the following scale. Use 1 to 9 scale as a continuum to indicate how much you "like" or "dislike" an image. In general, 1-2-3 indicate a negative response, 4-5-6 indicate a neutral response, and 7-8-9 indicate a positive response.

SLIDES 1-7 "Big" Retail SLIDES 8-15 Fast Food SLIDES 16-17 Retail SLIDES 18-19 Lodging SLIDES 20-21 Gas Stations

Average 4.4: Negative 33% Neutral 52% Positive 15%

Average 5.5: Negative 12% Neutral 52% Positive 36%

B. Building Design (continued)

Average 4.4: Negative 36% Neutral 48% Positive 16%

Average 5.9: Negative 13% Neutral 43% Positive 44%

B. Building Design (continued)

Average 6.4: Negative 5% Neutral 40% Positive 55%

Average 4.0: Negative 40% Neutral 47% Positive 13%

Average 5.9: Negative 11% Neutral 49% Positive 40%

B. Building Design (continued)

Average 4.2: Negative 36% Neutral 56% Positive 8%

Average 6.1: Negative 1% Neutral 56% Positive 43%

Average 6.3: Negative 4% Neutral 47% Positive 49%

Average 5.9: Negative 8% Neutral 48% Positive 44%

Average 4.9: Negative 24% Neutral 61% Positive 15%

Average 6.8: Negative 5% Neutral 23% Positive 72%

B. Building Design (continued)

Average 4.5: Negative 32% Neutral. 55% Positive 13%

Average 4.6: Negative 31% Neutral 60% Positive 9%

Average 7.1: Negative 3% Neutral 25% Positive 72%

Average 3.3: Negative 67% Neutral 28% Positive 5%

B. Building Design (continued)

Average 4.4: Negative 32% Neutral 56% Positive 12%

Average 5.3: Negative 21% Neutral 48% Positive 31%

Average 6.1: Negative 5% Neutral 49% Positive 46%

Average 4.7: Negative 22% Neutral 65% Postive 13%

C. Visual Preference Survey Results for Parking Lots

Instructions: Rate each image on the following scale. Use 1 to 9 scale as a continuum to indicate how much you "like" or "dislike" an image. In general, 1-2-3 indicate a negative response, 4-5-6 indicate a neutral response, and 7-8-9 indicate a positive response.

Slides 1-10 Interior View **Slides 11-20** Exterior View

Parking Lots

	Negative 1 2 3	*Neutral* 4 5 6	*Positive* 7 8 9	**Comments: Positive Elements**	**Negative Elements**
1	(58%)	(36%)	(6%)	3	14
2	(0%)	(30%)	(70%)	14	0
3	(34%)	(56%)	(10%)	1	9
4	(1%)	(43%)	(56%)	6	3
5	(3%)	(21%)	(76%)	8	5
6	(68%)	(28%)	(5%)	0	11
7	(25%)	(59%)	(16%)	0	5
8	(29%)	(63%)	(9%)	0	6
9	(48%)	(48%)	(4%)	0	6
10	(11%)	(54%)	(35%)	2	2
11	(71%)	(26%)	(3%)	0	7
12	(5%)	(16%)	(79%)	10	1
13	(63%)	(35%)	(3%)	2	5
14	(4%)	(30%)	(66%)	8	3
15	(14%)	(61%)	(25%)	9	3
16	(3%)	(35%)	(63%)	10	1
17	(14%)	(69%)	(18%)	4	2
18	(4%)	(20%)	(76%)	8	1
19	(15%)	(55%)	(30%)	5	5
20	(16%)	(71%)	(13%)	4	1

NOTE: THE RED NEEDLE REPRESENTS THE OVERALL AVERAGE RESULT. THE NUMERICAL PERCENT, ALSO REFLECTED BY THE COLORED BAR , IN EACH BOX IS THE PERCENTAGE OF PARTICIPANTS THAT SELECTED THE NEGATIVE, NEUTRAL, OR POSITIVE VALUE.

C. Parking Lots

Instructions: Rate each image on the following scale. Use 1 to 9 scale as a continuum to indicate how much you "like" or "dislike" an image. In general, 1-2-3 indicate a negative response, 4-5-6 indicate a neutral response, and 7-8-9 indicate a positive response.

SLIDES 1-10 Interior View **SLIDES 11-20** Exterior View

Average 3.4: Negative 58% Neutral 36% Positive 6%

Average 7.1: Negative 0% Neutral 30% Positive 70%

Average 4.4: Negative 34% Neutral 56% Positive 10%

C. Parking Lots (continued)

Average 6.5: Negative 1% Neutral 43% Positive 56%

Average 7.0: Negative 3% Neutral 21% Positive 76%

Average 3.1: Negative 68% Neutral 28% Positive 5%

C. Parking Lots (continued)

Average 4.8: Negative 25% Neutral 59% Positive 16%

Average 4.4: Negative 29% Neutral 63% Positive 9%

Average 3.8: Negative 48% Neutral 48% Positive 4%

C. Parking Lots (continued)

Average 5.6: Negative 11% Neutral 54% Positive 35%

Average 2.9: Negative 71% Neutral 26% Positive 3%

Average 7.0: Negative 5% Neutral 16% Positive 79%

C. Parking Lots (continued)

Average 3.2: Negative 63% Neutral 35% Positive 3%

Average 6.9: Negative 4% Neutral 30% Positive 66%

Average 5.4: Negative 14% Neutral 61% Positive 25%

C. Parking Lots (continued)

Average 6.7: Negative 3% Neutral 35% Positive 63%

Average 5.2: Negative 14% Neutral 69% Positive 18%

Average 6.9: Negative 4% Neutral 20% Positive 76%

Average 5.6: Negative 15% Neutral 55% Positive 30%

Average 5.0: Negative 16% Neutral 71% Positive 31%

Appendix C

A PLANT SELECTION GUIDE FOR LANDSCAPE PLANTING WITHIN THE STH 36 NORTH CORRIDOR

The following tables list plants recommended for landscape use for any developments or redevelopments proposed along STH 36. The plant selection guide is divided into seven tables consisting of deciduous trees, evergreen trees, deciduous shrubs, evergreen shrubs, ornamental grasses, groundcovers, and vines. The first five tables further group the plants by height. The tables are not exhaustive, but include plants that are usually available within southeastern Wisconsin.

Prior to selecting plants for a specific location, various site characteristics should be carefully analyzed including soil type, drainage conditions, hardiness zone, growing space, available sunlight, wind exposure, salt exposure/plant tolerance, utility lines, traffic visibility, typical snow cover, expected foot traffic and compaction, among other site conditions that could affect the growth of plants.

Plants should also be selected to help establish a design theme for a development and/or achieve the desired neighborhood or community character. Interesting or creative landscape architectural details should be further encouraged that use a diverse variety of plants in planting patterns integrated with other landscape features to avoid uncreative and monotonous landscape designs. To be avoided are plants spaced too far apart with excessively large gaps or the monotonous view of a long straight hedge consisting of only one or two types of shrubs and not properly integrated as a part of a design theme.

As a general guide, trees and shrubs used for buffering or screening purposes should consist of the following minimum sizes:

1. Deciduous shade trees and ornamental trees should contain a caliper size of at least two inches and 1.5 inches in diameter, respectively, which are measured at least six inches above the root system or ground level.

2. Evergreen trees should be at least five to six feet in height.

3. Deciduous and evergreen shrubs used to screen parking areas from public streets should be at least 18 to 24 inches in height and grow to obtain an overall screening height of at least three feet above the parking surface after three years. A minimum plant size of five to six feet in height is suggested for buffering between incompatible land uses. Smaller plants could be used if combined with other landscape measures, such as planters or berms, provided the desired degree of buffering or screening is achieved.

Deciduous trees selected for installation along streets should contain a caliper size of at least two inches in diameter, measured 4.5 feet (about chest height) above ground level. The over-use of one type of tree should be avoided. For a more complete guide to street tree planting, refer to the sources referenced at the end of this appendix.

In the table, the nonitalicized first name is the common name(s) for a plant, and the second name in parentheses is its botanical name. Abbreviations used in the following tables include:

cvs. – cultivars;
spp. – species;
ssp. – subspecies;
var. – variety.

A. DECIDUOUS TREES

TALL TREES -- 40-100 feet in height; plant at least 40-50 feet apart; columnar species, 20-30 feet apart

● Ash, Fallgold Black	(*Fraxinus nigra* 'Fallgold')
●* Ash, Green	(*Fraxinus pennsylvanica* and cvs.)
●* Ash, White	(*Fraxinus americana* and cvs.)
* Beech, American	(*Fagus grandifolia*)
Beech, European	(*Fagus sylvatica*)
Catalpa, Northern	(*Catalpa speciosa*)
* Cherry, Black	(*Prunus serotina*)
* Coffeetree, Kentucky	(*Gymnocladus dioica*)
● Elm, Hybrid DED resistant only	(*Ulmus* x 'Hybrids')
Filbert, Turkish	(*Corylus colurna*)
● Ginkgo; Maidenhair Tree Male Only	(*Ginkgo biloba* and cvs.)
Hickory, Shagbark	(*Carya ovata*)
●* Hackberry, Common	(*Celtis occidentalis* and cvs.)
* Honeylocust, Common	(*Gleditsia triacanthos*)
● Honeylocust, Thornless Common	(*Gleditsia triacanthos* var. *inermis* and cvs.)
Horsechestnut	(*Aesculus hippocastanum* and cvs.)
Katsuratree	(*Cercidiphyllum japonicum*)
Larch, European	(*Larix decidua*)
Larch, Japanese	(*Larix kaempferi*)
* Linden, American; Basswood	(*Tilia americana* and cvs.)
● Linden, Littleleaf	(*Tilia cordata* and cvs.)
● Linden, Silver	(*Tilia tomentosa*)
● Maple, Norway	(*Acer platanoides* and cvs.)
●* Maple, Red	(*Acer rubrum* and cvs.)
* Maple, Silver	(*Acer saccharinum* and cvs.)
●* Maple, Sugar	(*Acer saccharum* and cvs.)
Oak, Black	(*Quercus velutina*)
* Oak, Bur	(*Quercus macrocarpa*)
● Oak, Pin	(*Quercus palustris*)
●* Oak, Red	(*Quercus rubra*)
* Oak, Swamp White	(*Quercus bicolor*)
* Oak, White	(*Quercus alba*)
* Sycamore; American Planetree	(*Platanus occidentalis*)
Tuliptree; Tulip Magnolia	(*Liriodendron tulipifera*)
● Zelkova, Japanese	(*Zelkova serrata* and cvs.)

MEDIUM TREES -- 30-40 feet in height; plant at least 20-35 feet apart, depending on spread

* Birch, River	(*Betula nigra* and cvs.)
Birch, Whitespire	(*Betula platyphylla* var. *japonica* 'Whitespire')
Buckeye, Ohio	(*Aesculus glabra*)
Cherry, Kwanzan Oriental	(*Prunus serrulata* 'Sekiyama')
● Cherry, Sargent	(*Prunus sargentii* and cvs.)
Chokecherry, Amur	(*Prunus maackii*)
Corktree, Macho Amur	(*Phellodendron amurense* 'Macho')
● Elm, Lacebark; Chinese Elm	(*Ulmus parvifolia*)
● Goldenraintree, Panicled	(*Koelreuteria paniculata*)
* Gum, Black; Black Tupelo	(*Nyssa sylvatica*)
● Horsechestnut, Ruby Red	(*Aesculus* x *carnea* 'Briotii')
● Pear, Callery	(*Pyrus calleryana* and cvs.)
Willow, Golden Weeping	(*Salix x sepulcralis* 'Tristis')

LOW TREES -- 15-30 feet in height; plant at least 15-30 feet apart, depending on spread

* Chokecherry	(*Prunus virginiana* and cvs.)
Crabapples, Ornamental; Flowering Crabapples	(*Malus* spp. and cvs.)
* Dogwood, Pagoda	(*Cornus alternifolia)*
* Hawthorn, Cockspur	(*Crataegus crus-galli* and cvs.)
* Hawthorn, Dotted	(*Crataegus punctata*)
* Hawthorn, Downy	(*Crataegus mollis*)
Hawthorn, Washington	(*Crataegus phaenopyrum*)
Hawthorn, Winter King	(*Crataegus* x *viridis* 'Winter King')
●* Hophornbeam; Ironwood	(*Ostrya virginiana*)
●* Hornbeam, American; Ironwood; Musclewood	(*Carpinus caroliniana*)
● Lilac, Japanese Tree	(*Syringa reticulata* and cvs.)
Magnolia, Loebner	(*Magnolia* x *loebneri* and cvs.)
Magnolia, Saucer	(*Magnolia* x *soulangiana*)
Magnolia, Star	(*Magnolia stellata* and cvs.)
Maple, Amur	(*Acer ginnala* and cvs.)
● Maple, Globe Norway	(*Acer platanoides* 'Globosum')
* Mountainash, American	(*Sorbus americana*)
Mountainash, European	(*Sorbus aucuparia* and cvs.)
Mountainash, Korean	(*Sorbus alnifolia*)
* Mountainash, Showy	(*Sorbus decora*)
* Plum, American	(*Prunus americana*)
Plum, Newport	(*Prunus* x 'Newportii')
Redbud, Eastern	(*Cercis canadensis)*
* Serviceberry, Allegany	(*Amelanchier laevis* and cvs.)
* Serviceberry, Apple	(*Amelanchier* x *grandiflora and cvs.*)
* Serviceberry, Downy; Juneberry	(*Amelanchier arborea*)
Willow, Contorted; Corkscrew Willow	(*Salix matsudana* 'Tortuosa')
Willow, Laurel	(*Salix pentandra*)

B. EVERGREEN TREES

TALL TREES -- 60-80 feet in height; plant at least 25-35 feet apart, depending on spread

Fir, Douglas	(*Pseudotsuga menziesii*)
Fir, White	(*Abies concolor*)
* Hemlock, Canadian	(*Tsuga canadensis*)
* Pine, Eastern White	(*Pinus strobus*)
Spruce, Colorado Blue	(*Picea pungens* var. *glauca* and cvs.)
Spruce, Norway	(*Picea abies*)

MEDIUM TREES -- 40-60 feet in height; plant at least 25-35 feet apart, depending on spread

Pine, Austrian	(*Pinus nigra*)
* Pine, Jack	(*Pinus banksiana*)
* Pine, Red	(*Pinus resinosa*)
Pine, Scots; Scotch Pine	(*Pinus sylvestris*)
Pine, Swiss Stone	(*Pinus cembra* and cvs.)
Spruce, Serbian	(*Picea omorika*)
* Spruce, White	(*Picea glauca*)

LOW TREES -- 15-40 feet in height; plant at least 10-25 feet apart, depending on spread

* Arborvitae, American; White Cedar	(*Thuja occidentalis* and certain cvs.)
Juniper, Iowa Chinese	(*Juniperus chinensis* 'Iowa')
Juniper, Mountbatten	(*Juniperus chinensis* 'Mountbatten')
* Redcedar, Eastern	(*Juniperus virginiana* and cvs.)
Spruce, Black Hills	(*Picea glauca* var. *densata*)
Yew, Upright Japanese; Pyramidal Japanese Yew	(*Taxus cuspidata* 'Capitata')

C. DECIDUOUS SHRUBS

TALL SHRUBS -- 8-10 feet in height, sometimes 15 feet in height; plant at least 4-6 feet apart

	Beautybush	(*Kolkwitzia amabilis*)
*	Bladdernut, American	(*Staphylea trifolia*)
	Buckeye, Bottlebrush	(*Aesculus parviflora*)
	Cherry, Manchu; Nanking Cherry	(*Prunus tomentosa*)
	Cotoneaster, Manyflowered	(*Cotoneaster multiflorus*)
	Dogwood, Corneliancherry	(*Cornus mas* and cvs.)
*	Dogwood, Gray	(*Cornus racemosa*)
*	Dogwood, Pagoda	(*Cornus alternifolia*)
*	Dogwood, Redosier	(*Cornus sericea* and cvs.)
	Euonymus, European; Spindletree	(*Euonymus europaea*)
	Euonymus, Winged; Burning Bush	(*Euonymus alata*)
	Forsythia, Meadowlark	(*Forsythia* x 'Meadowlark')
	Fringetree	(*Chionanthus virginicus*)
	Hydrangea, Peegee	(*Hydrangea paniculata* 'Grandiflora')
	Lilac, Chinese	(*Syringa* x *chinensis*)
	Lilac, Common	(*Syringa vulgaris* and cvs.)
	Lilac, Hyacinth	(*Syringa* x *hyacinthiflora* and cvs.)
	Lilac, Preston	(*Syringa* x *prestoniae* and cvs.)
	Maple, Dwarf Amur	(*Acer ginnala nana*)
*	Ninebark, Common	(*Physocarpus opulifolius*)
	Peashrub, Siberian	(*Caragana arborescens*)
	Pearlbush	(*Exochorda racemosa*)
	Plum, Double Flowering; Flowering Almond; Rose-Tree-of-China	(*Prunus triloba*)
	Privet, Amur	(*Ligustrum amurense*)
	Privet, Cheyenne	(*Ligustrum vulgare* 'Cheyenne')
*	Serviceberry (See Low Deciduous Trees)	(*Amelanchier* spp.)
	Serviceberry, Shadblow	(*Amelanchier canadensis*)
	Smoketree; Smokebush	(*Cotinus coggygria* and cvs.)
*	Sumac, Smooth	(*Rhus glabra*)
*	Sumac, Staghorn	(*Rhus typhina* and cvs.)
*	Viburnum, American Cranberrybush	(*Viburnum trilobum*)
	Viburnum, Arrowwood	(*Viburnum dentatum*)
*	Viburnum, Blackhaw	(*Viburnum prunifolium*)
	Viburnum, Burkwood	(*Viburnum* x *burkwoodii*)
*	Viburnum, Nannyberry	(*Viburnum lentago*)
	Viburnum, Sargent	(*Viburnum sargentii*)
	Viburnum, Wayfaringtree	(*Viburnum lantana* and cvs.)
*	Wahoo, Eastern	(*Euonymus atropurpurea*)
	Willow, Goat; French Pussy Willow	(*Salix caprea*)
*	Witchhazel, Common	(*Hamamelis virginiana*)

MEDIUM SHRUBS -- 5-8 feet in height; plant at least 3-4 feet apart

	Bayberry	(*Myrica pennsylvanica*)
	Cherry, Purpleleaf Sand	(*Prunus* x *cistena*)
	Chokeberry, Red	(*Aronia arbutifolia*)
	Cotoneaster, Hedge	(*Cotoneaster lucidus*)
	Cotoneaster, Peking	(*Cotoneaster acutifolius*)
	Cotoneaster, Spreading	(*Cotoneaster divaricatus*)
	Crabapple, Jewelberry	(*Malus* 'Jewelberry')
	Dogwood, Creamedge; Variegated Dogwood	(*Cornus alba* 'Argenteo-marginata')
	Dogwood, Isanti Red	(*Cornus sericea* 'Isanti')
	Euonymus, Dwarf Winged; Dwarf Burning Bush	(*Euonymus alata* 'Compacta')
	Forsythia, Sunrise	(*Forsythia* x 'Sunrise')
*	Hazelnut; American Filbert	(*Corylus americana*)
	Jetbead	(*Rhodotypos scandens*)
	Lilac, Miss Kim	(*Syringa patula* 'Miss Kim')
	Lilac, Meyer; Palibin Lilac	(*Syringa meyeri* 'Palibin')
	Lilac, Persian	(*Syringa persica*)
	Mockorange, Glacier	(*Philadelphus* x *virginalis* 'Glacier')
	Mockorange, Lemoine	(*Philadelphus* x *lemoine* and cvs.)
	Privet, Golden Vicary	(*Ligustrum* x *vicaryi*)
	Privet, Regel's Border	(*Ligustrum obtusifolium* var. *regelianum*)
	Rhododendron, P.J.M. Hybrid	(*Rhododendron* x 'P.J.M. Hybrids')
	Rose, Father Hugo	(*Rose hugonis*)
*	Rose, Prairie; Climbing Rose	(*Rosa setigera*)
	Rose, Rugosa	(*Rosa rugosa* and cvs.)
	Spirea, Bridalwreath	(*Spiraea prunifolia*)
	Spirea, Ural False	(*Sorbaria sorbifolia*)
	Spirea, Vanhoutte	(*Spiraea* x *vanhouttei*)
	Viburnum, Koreanspice	(*Viburnum carlesii*)
*	Viburnum, Witherod	(*Viburnum cassinoides*)
	Weigela, Old-Fashioned; Cardinal Bush	(*Weigela florida*)
	Weigela, Red Prince	(*Weigela* x 'Red Prince')
	Willow, Dwarf Arctic	(*Salix purpurea* 'Gracilis')
*	Winterberry	(*Ilex verticillata*)

LOW SHRUBS -- 2-5 feet in height; plant at least 2½-3 feet apart

	Azalea, Northern Lights Hybrid	(*Azalea* x 'Northern Lights Hybrids')
	Barberry, Japanese	(*Berberis thunbergii* and cvs.)
	Barberry, Korean	(*Berberis koreana*)
	Box or Boxwood, Green Velvet	(*Buxus* x 'Green Velvet')
	Box or Boxwood, Wintergreen Korean Littleleaf	(*Buxus sinica* var. *insularis 'Wintergreen'*)
*	Chokeberry, Glossy Black	(*Aronia melanocarpa* var. *elata*)
*	Cinquefoil, Bush; Potentilla	(*Potentilla fruticosa* and cvs.)
	Coralberry, Indiancurrant	(*Symphoricarpos orbiculatus*)
	Cotoneaster, Cranberry	(*Cotoneaster apiculatus*)
	Cotoneaster, Rock	(*Cotoneaster horizontalis*)
	Currant, Alpine	(*Ribes alpinum*)
	Daphne, Burkwood	(*Daphne* x *burkwoodii* and cvs.)
	Deutzia, Compact Lemoine	(*Deutzia* x *lemoinei* 'Compacta')
	Floweringalmond, Pink Dwarf	(*Prunus glandulosa* 'Sinensis')
	Floweringquince, Texas Scarlet	(*Chaenomeles* x *superba* 'Texas Scarlet')
	Forsythia, Bronx	(*Forsythia viridissima* 'Bronxensis')
	Honeysuckle, Clavey's Dwarf	(*Lonicera* x *xylosteoides* 'Clavey's Dwarf')
*	Honeysuckle, Dwarf Bush	(*Diervilla lonicera*)
	Hydrangea, Smooth	(*Hydrangea arborescens* and cvs.)
	Lead Plant	(*Amorpha canescens*)
	Mockorange, Golden	(*Philadelphus coronarius* 'Aureus')
	Ninebark, Dwarf Common	(*Physocarpus opulifolis* 'Nanus')
	Oregongrape, Mayhan	(*Mahonia aquifolium* 'Mayhan')
	Privet, Lodense	(*Ligustrum vulgare* 'Lodense')
	Rose, Knock Out Hybrid	(*Rosa* x ' Knock Out Hybrids')
	Rose, Virginia	(*Rosa virginiana*)
*	St. Johnswort, Kalm's	(*Hypericum kalmianum*)
*	Serviceberry, Running	(*Amelanchier stolonifera*)
*	Snowberry	(*Symphoricarpos albus*)
	Spirea, Billiard	(*Spiraea* x *billiardii*)
	Spirea, Bumalda	(*Spiraea* x *bumalda* and cvs.)
	Spirea, Grefsheim	(*Spiraea* x *cinerea* 'Grefsheim')
	Spirea, Japanese	(*Spiraea japonica* and cvs.)
	Spirea, Japanese White	(*Spiraea albiflora*)
	Spirea, Snowmound	(*Spiraea nipponica* 'Snowmound')
	Stephanandra, Cutleaf	(*Stephanandra incisa* 'Crispa')
*	Sumac, Fragrant	(*Rhus aromatica* and cvs.)
	Viburnum, Compact European Cranberrybush	(*Viburnum opulus* 'Compactum')
	Viburnum, Dwarf European Cranberrybush	(*Viburnum opulus* 'Nanum')
	Viburnum, Dwarf Koreanspice	(*Viburnum carlesii* 'Compacta')
	Willow, Silver Creeping	(*Salix repens* var. *nitida*)
	Winterberry, Red Sprite	(*Ilex verticillata* 'Red Sprite')

D. EVERGREEN SHRUBS

TALL SHRUBS -- 8-10 feet in height, sometimes 15 feet, plant at least 6-8 feet apart, depending on spread				
	Arborvitae, American	(*Thuja occidentalis* and certain cvs.)	Juniper, Rocky Mountain; Colorado Red Cedar	(*Juniperus scopulorum* and cvs.)
	Arborvitae, Ware	(*Thuja occidentalis* 'Wareana')		
	Juniper, Chinese	(*Juniperus chinensis* and certain cvs.)	Yew, Upright Japanese; Pryramidal Japanese Yew	(*Taxus cuspidata* 'Capitata')
	Juniper, Hetz Blue	(*Juniperus chinensis* 'Hetzii')		
MEDIUM SHRUBS -- 2-8 feet in height; plant at least 4-6 feet apart, depending on spread				
	Arborvitae	(*Thuja occidentalis* and certain cvs.)	Juniper, Pfitzer	(*Juniperus chinensis* 'Pfitzeriana')
	Arborvitae, Globe	(*Thuja occidentalis* 'Globosa')	Pine, Mugo	(*Pinus mugo* var. *mugo*)
	Juniper, Blue Star Singleseed	(*Juniperus squamata* 'Bluestar')	Spruce, Dwarf Alberta	(*Picea glauca* 'Conica')
	Juniper Chinese	(*Juniperus chinensis* and certain cvs.)	Spruce, Nest	(*Picea abies* 'Nidiformis')
	Juniper, Fishtail	(*Juniperus squamata* 'Meyeri')	Yew, Anglojapanese	(*Taxus* x *media* and cvs.)
*	Juniper, Oldfield Common	(*Juniperus communis* var. *depressa*)	Yew, Dwarf Japanese	(*Taxus cuspidata* 'Nana')
LOW SHRUBS -- 6-24 inches in height; plant at least 4-6 feet apart depending on spread				
	Juniper, Chinese	(*Juniperus chinensis* and certain cvs.)	Juniper, Kallay's Compact Pfitzer	(*Juniperus chinensis* 'Pfitzeriana Kallay's Compacta')
	Juniper, Common	(*Juniperus communis* and cvs.)		
*	Juniper, Creeping	(*Juniperus horizontalis* and cvs.)	Juniper, Sargent	(*Juniperus chinensis* var. *sargentii*)
	Juniper, Japanese Garden	(*Juniperus chinensis* var. *procumbens*)	Juniper, Savin	(*Juniperus sabina* and cvs.)

E. ORNAMENTAL GRASSES

TALL GRASSES -- 6-8 feet in height				
*	Bluestem, Big; Turkeyfoot	(*Andropogon gerardii* 'Sentinel')	Reed Grass, Feather	(*Calamogrostis* x *acutiflora* 'Karl Foerster'; 'Stricta')
	Dot Grass, Little	(*Miscanthus sinensis* 'Puenktchen')		
	Feather Grass, Silver	(*Miscanthus sinensis* 'Silberfeder')	Silver Grass, Amur; Silver Banner Grass	(*Miscanthus sacchariflorous*)
*	Indian Grass	(*Sorghastrum nutans* and cvs.)		
	Maiden Grass; Japanese Silver Grass	(*Miscanthus sinensis* and certain cvs.)	Silver Grass, Purple; Flame Grass	(*Miscanthus sinensis* 'Purpurascens')
	Moor Grass, Tall Purple	(*Molinia caerulea* ssp. *arundinacea* and cvs.)	Switch Grass; Panic Grass	(*Panicum virgatum* and certain cvs.)
			Zebra Grass	(*Miscanthus sinensis* 'Zebrinus')
	Porcupine Grass	(*Miscanthus sinensis* 'Strictus')		
	Ravenna Grass	(*Saccharum ravennae; Erianthus ravennae*)		
MEDIUM GRASSES -- 3-5 feet in height				
*	Bluestem, Little	(*Andropogon scorparius* and cvs.)	Reed Grass, Korean Feather; Fall Blooming Reed Grass	(*Calamagrostis arundinacea* var. *brachytricha*)
	Fountain Grass	(*Pennisetum alopecuroides* and certain cvs.)	Reed Grass, Variegated Feather	(*Calamagrostis arundinacea* 'Overdam')
	Frost Grass; Siberian Graybeard	(*Spodiopogon sibericus)*	Rye Grass, Wild	(*Leymus arenarius*)
	Maiden Grass, Little Fountain	(*Miscanthus sinensis* 'Kleine Fontane')	Switch Grass, Blue or Red	(*Panicum virgatum* and certain cvs.)
	Oats, Northern Sea; Wild Oats; Wood Oats	(*Chasmanthium latifolium*)		
LOW GRASSES -- 8-24 inches in height				
	Blood Grass, Japanese	(*Imperata cylindrica* var.*koenigii* and cvs.)	Mondo Grass, Black	(*Ophiopogon planiscapus* 'Niger')
*	Dropseed, Prairie	(*Sporobolus heterolepis* 'Wisconsin')	Moor Grass, Purple	(*Molinia caerulea* and cvs.)
	Fescue, Blue	(*Festuca ovina glauca* and cvs.)	Oat Grass, Blue	(*Helictotrichon sempervirens* and cvs.)
	Fountain Grass	(*Pennisetum alopedcuroides* and certain cvs.)	Oat Grass, Striped Bulbous; Tuber Oat Grass	(*Arrhenatherum elatius* ssp. *bulbosum* 'Variegatum')
	Grama, Sideoats	(*Boutelouca curtipendula*)	Quaking Grass, Perennial	(*Briza media*)
	Hair Grass, Tufted; Tussock Grass	(*Deschampsia caespitosa* and cvs.)	Sedge, Creeping Broad-Leaved	*(Carex siderosticha* 'Variegata')
	Hakone Grass, Golden Variegated	(*Hakonechloa macra* 'Aureola')	Sedge, Japanese; Kan Suge	(*Carex morrowii* 'Variegata')
			Sedge, Tufted	(*Carex elata* 'Bowles Golden')
	June Grass; Hair Grass	(*Koeleria macrantha; Koeleria cristata*)	Woodrush, Greater	(*Luzula sylvatica* 'Marginata')

F. GROUNDCOVER

	GROUNDCOVER				
	Bugleweed	(*Ajuga reptans* and cvs.)		Ivy, Bulgarian	(*Hedera helix* 'Bulgaria')
	Cinquefoil, Cushion	(*Potentilla verna nana*)		Juniper (See Low Evergreen Shrubs)	(*Juniperus* spp. and cvs.)
	Cotoneaster, Cranberry	(*Cotoneaster apiculatus*)		Lily, Plantain; Funkia	(*Hosta* and cvs.)
	Daylily	(*Hemerocallis* and cvs.)		Lily-of-the-Valley	(*Convallaria majalis*)
	Deadnettle, Spotted	(*Lamium maculatum* and cvs.)		Pachysandra, Japanese; Japanese Spurge	(*Pachysandra terminalis* and cvs.)
	Euonymus, Purpleleaf	(*Euonymus fortunei* 'Colorata')		Periwinkle; Myrtle	(*Vinca minor* and cvs.)
	Fern, Ostrich	(*Matteuccia struthiopteris; Peteretis nodulosa)*		Phlox, Moss	(*Phlox subulata* and cvs.)
	Fleeceflower, Low Japanese	(*Polygonum cuspidatum* var. *compactum*)		Stephanandra, Cutleaf	(*Stephanandra incisa* 'Crispa')
	Goutweed, Silveredge; Snow-on-The-Mountain; Bishop's Weed	(*Aegopodium podagraria* 'Variegatum')		Stonecrop; Sedum	(*Sedum* spp.)
				Strawberry, Barren	(*Waldsteinia ternata*)
				Sumac, Gro-Low Fragrant	(*Rhus aromatica* 'Gro-Low')
	Hat, Bishop's	(*Epimedium* spp.)	*	Wildginger, Canada	(*Asarum canadense*)
*	Honeysuckle, Dwarf Bush	(*Diervilla lonicera*)		Woodruff, Sweet	(*Galium odoratum*)

G. VINES

	VINES				
	Akebia, Fiveleaf	(*Akebia quinata*)		Grape	(*Vitis* spp. and cvs.)
*	Bittersweet, American	(*Celastrus scandens*)		Honeysuckle, Dropmore Scarlet	(*Lonicera* x *brownii* 'Dropmore Scarlet')
	Bittersweet, Oriental	(*Celastrus orbiculatus*)			
	Clematis	(*Clematis* and cvs.)		Honeysuckle, Everblooming; Goldflame Honeysuckle	(*Lonicera heckrottii*)
	Clematis, Sweet Autumn	(*Clematis maximowicziana*)			
	Creeper, Engelmann Virginia; Woodbine	(*Parthenocissus quinquefolia)* 'Engelmannii')		Hydrangea, Climbing	(*Hydrangea anomala* spp. *petiolaris*)
				Ivy, Boston; Japanese Creeper	(*Parthenocissus tricuspidata* and cvs.)
	Dutchmanspipe	(*Aristolochia durior*)			
	Euonymus, Bigleaf	(*Euonymus fortunei* var. *vegeta* and cvs.		Kiwi, Arctic Beauty; Kolomikta Actinidia	(*Actinidia kolomikta*)
	Wintercreeper				
				Trumpetcreeper; Trumpetvine	(*Campsis radicans*)
	Fleecevine, Silver; Silver Lace Vine	(*Polygonum aubertii*)		Wisteria, Kentucky	(*Wisteria macrostachya*)

● Street tree (also see Appendix E). Only Dutch elm disease (DED) resistant and male Ginkgo trees should be selected for this purpose. The overuse of one type of tree should be avoided.

*Wisconsin native.

Source: E. R. Hasselkus, A Guide to Selecting Landscape Plants for Wisconsin, *University of Wisconsin-Extension, Madison, Wisconsin, 1998; Michael A. Dirr,* Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, *5th Ed.*, *Stipes Publishing Company, Champaign, Illinois, 1998; Richard D. Schein, Ph. D.,* Street Trees: A Manual for Municipalities, *Treeworks, State College, Pennsylvania, 1993; Henry D. Gerhold, Willet N. Wandell, and Norman L. Lacasse*, Landscape Tree Factsheets, *Pennsylvania State University, University Park, Pennsylvania, 2005; Henry D. Gerhold, Norman L. Lacasse, and Willet N. Wandell,* Compatible Tree Factsheets for Electric Lines and Restricted Spaces, Including Evergreens for Screens, 2nd Ed., *Pennsylvania State University, University Park, Pennsylvania, 2001; M. Hockenberry Meyer, D. B. White, and H. Pellett,* Ornamental Grasses for Cold Climates, *North Central Regional Extension Publication 573, University of Minnesota-Extension, St. Paul, Minnesota, 1998*; *Rick Darke,* The Color Encyclopedia of Ornamental Grasses, *Timber Press, Inc., Portland, Oregon, 1999; and SEWRPC.*

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Appendix D

INVASIVE PLANTS

The following list of invasive plants should not be used for landscaping.

Common Name(s)	Botanical Name(s)
TREES	
Black Locust	*Robinia pseudoacacia*
White Poplar	*Populus alba*
SHRUBS	
Autumn Olive	*Elaeagnus umbellata*
Common Buckthorn	*Rhamnus cathartica*
European Barberry	*Berberis vulgaris*
Glossy, Columnar, or Tall-Hedge Buckthorn	*Rhamnus frangula*
Most Honeysuckles	*Lonicera (L.) tatarica, L. x bella, L. morrowii,* and *L. maackii*
Multiflora Rose	*Rosa multiflora*
Russian Olive	*Elaeagnus angustifolia*
VINES	
Japanese Honeysuckle	*Lonicera japonica*
Porcelain Berry	*Ampelopsis brevipedunculata*
FORBS	
Black Swallow-Wort	*Vincetoxicum nigrum*
Burdock	*Arctium minus*
Canada Thistle	*Cirsium arvense*
Creeping Charlie	*Glechoma hederacea*
Crown Vetch	*Coronilla varia*
Dame's Rocket	*Hesperis matronalis*
Garlic Mustard	*Alliaria petiolata*
Japanese Knotweed	*Polygonum cuspidatum*
Leafy Spurge	*Euphorbia esula*
Musk or Nodding Thistle	*Carduus nutans*
Purple Loosestrife	*Lythrum salicaria*
Spotted Knapweed	*Centaurea maculosa*
Wild Parsnip	*Pastinaca sativa*
GRASSES	
Quack Grass	*Elytrigia repens* or *Agropyron repens*
Reed Canary Grass	*Phalaris arundinacea*

Source: SEWRPC.

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Appendix E

POTENTIAL STREET TREES

In the table, the nonitalicized first name is the common name(s) for a plant, and the second name is its botanical name.

TALL TREES – 40-100 feet in height; plant at least 40-50 feet apart; columnar species, 20-30 feet apart	
Ash, Fallgold Black	*Fraxinus nigra* 'Fallgold'
* Ash, Green (G.A.)	*Fraxinus pennsylvanica*
Aerial G.A.	'Aerial'
Marshall Seedless G.A.	'Marshall Seedless'
Patmore G.A.	'Patmore'
Summit G.A.	'Summit'
* Ash, White (W.A.)	*Fraxinus americana*
Autumn Applause W.A.	'Autumn Applause'
Autumn Purple W.A.	'Autumn Purple'
Champaign County W.A.	'Champaign County'
Rosehill W.A.	'Rosehill'
Skyline W.A.	'Skyline'
Elm, Hybrid (H.E.) (DED resistant only)	*Ulmus x* 'Hybrids'
Homestead H.E.	'Homestead
New Harmony H.E.	'New Harmony'
New Horizon	'New Horizon'
Pioneer H.E.	'Pioneer'
Regal H.E.	'Regal'
Valley Forge H.E.	'Valley Forge'
Ginkgo (G.); Maidenhair Tree (Male only)	*Ginkgo biloba*
Autumn Gold G.	'Autumn Gold'
Lakeview G.	'Lakeview'
Sentry G.	'Fastigiata'
* Hackberry, Common (C.H.)	*Celtis occidentalis*
Prairie Pride C.H.	'Prairie Pride'
Honeylocust, Thornless Common (T.C.H.)	*Gleditsia triacanthos* var. *Inermis*
Imperial T.C.H.	'Imperial'
Majestic T.C.H.	'Majestic'
Moraine T.C.H.	'Moraine'
Shademaster T.C.H.	'Shademaster'
Skyline T.C.H.	'Skyline'
Sunburst T.C.H.	'Sunburst'
Horsechestnut, Bauman	*Aesculus hippocastanum* 'Baumannii'
* Linden, American (A.L.)	*Tilia americana*
American Sentry L.	'American Sentry'
Redmond A.L.	'Redmond'
Linden Littleleaf (L.L.)	*Tilia cordata*
Chancellor L.L.	'Chancellor'
Glenleven L.L.	'Glenleven'
Greenspire L.L.	'Greenspire'
Linden, Silver	*Tilia tomentosa*
Maple, Norway (N.M.)	*Acer platanoides*
Cleveland N.M.	'Cleveland'
Columnar N.M.	'Columnare'
Crimson King N.M.	'Crimson King'
Deborah N.M.	'Deborah'
Emerald Lustre N.M.; Pond N.M.	'Emerald Lustre'
Emerald Queen N.M.	'Emerald Queen'
Greenlace N.M.	'Greenlace'
Harlequin N.M.; Silver Variegated N.M.	'Drummondii'
Royal Red N.M.	'Royal Red'
Schwedler N.M.	'Schwedler'
Summershade N.M.	'Summershade'
Superform N.M.	'Superform'
* Maple, Red (R.M.)	*Acer rubrum*
Autumn Flame R.M.	'Autumn Flame'
Bowhall R.M.	'Bowhall'
Red Sunset R.M.	'Red Sunset'
Schlesinger R.M.	'Schlesingeri'
* Maple, Sugar (S.M.)	*Acer saccharinum*
Black Maple	ssp. *nigrum*
Green Mountain S.M.	'Green Mountain'
Legacy S.M.	'Legacy'
Oak, Pin	*Quercus palustris*
* Oak, Red	*Quercus rubra*
Zelkova, Japanese (J.Z.)	*Zelkova serrata*
Green Vase J.Z.	'Green Vase'
Village Green J.Z.	'Village Green'
MEDIUM TREES – 30-40 feet in height; plant at least 20-35 feet apart, depending on spread	
Cherry, Sargent (S.C.)	*Prunus sargentii*
Columnar S.C.	'Columnaris'
Elm, Lacebark; Chinese Elm	*Ulmus parvifolia*
Goldenraintree, Panicled	*Koelreuteria paniculata*
Horsechestnut, Ruby Red	*Aesculus x carnea* 'Briotii'
Pear, Callery (C.P.)	*Pyrus calleryana*
Aristocrat C.P.	'Aristocrat'
Autumn Blaze C.P.	'Autumn Blaze'
Bradford C.P.	'Bradford'
Chanticleer C.P.; Cleveland Select C.P.	'Chanticleer'
Redspire C.P.	'Red Spire'
Select C.P.	'Select'
LOW TREES – 15-30 feet in height; plant at least 15-30 feet apart, depending on spread	
Hawthorn, Thornless Cockspur	*Crataegus crus-galli* var. *inermis*
* Hophornbeam; Ironwood	*Ostrya virginiana*
* Hornbeam, American; Ironwood; Musclewood	*Carpinus caroliniana*
Lilac, Japanese Tree (J.T.L.)	*Syringa reticulata*
Ivory Silk J.T.L.	'Ivory Silk'
Summer Snow J.T.L.	'Summer Snow'
Maple, Globe Norway	*Acer platanoides* 'Globosum'

*Wisconsin Native

NOTE: The abbreviations ssp. and var. represent subspecies and variety, respectively. DED resistant means Dutch elm disease resistant. The overuse of one type of tree should be avoided.

Source: *E.R. Hasselkus,* A Guide to Selecting Landscape Plants for Wisconsin, *University of Wisconsn-Extension, Madison, Wisconsin, 1998; Michael A. Dirr,* Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, *5th Ed., Stipes Publishing Company, Champaign, Illinois, 1998; Richard D. Schein, Ph.D.,* Street Trees: A Manual for Municipalities, *Treeworks, State College, Pennsylvania, 1993; Henry D. Gerhold, Willet N. Wandell, and Norman L. Lacasse,* Landscape Tree Factsheets, *Pennsylvania State University, University Park, Pennsylvania, 2005; Henry D. Gerhold, Norman L. Lacasse, and Willet N. Wandell,* Compatible Tree Factsheets for Electric Lines and Restricted Spaces, Including Evergreens for Screens, *2nd Ed., Pennsylvania State University, University Park, Pennsylvania, 2001; and SEWRPC.*

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Appendix F

THE CONSERVATION SUBDIVISION DESIGN PROCESS

Conservation subdivisions, sometimes called cluster developments, maintain a significant portion of a development site in common open space by minimizing individual lot sizes, while maintaining the overall density of development specified by a local master plan or zoning ordinance. Conservation subdivisions should be designed around the area proposed to be preserved in open space; that is, the areas for open space preservation should be set aside before the streets and lots are laid out. The design process for conservation subdivisions should follow three basic steps while taking into consideration applicable local regulations, such as zoning, official mapping, and land division control provisions; and pertinent adopted planning recommendations, such as recommended streets, parks, greenways, and recreational trails. The recommended three-step process is:

1. Identification and analysis of existing conditions, or site analysis;

2. Delineation of preservation areas; and

3. Layout of dwelling locations and street and lot patterns.

STEP ONE: SITE ANALYSIS

The design of a conservation subdivision around the area to be preserved first requires a proper site analysis. The analysis should identify existing features that determine the landscape character of a site and analyze those features to determine the desirability of preserving them. A site analysis should also identify features that present obstacles that must be considered in the design.

The inventory of existing conditions should include all natural and human-made features of a site. Some of these will be natural areas protected by law, such as floodplains, wetlands, shoreland areas, and water bodies. Other areas that are developable, but contain certain features that may lend character to the rural landscape (see Figure F-1), should also be identified. Such areas could include hedgerows along an abutting road or dividing two fields; a healthy stand of trees atop a rise in terrain; diverse woodlands; wildflower meadows; fallow farm fields; wildlife habitats; areas that afford good views; historic buildings or ruins; fencerows; and even lone specimen trees. Obstacles that must be accommodated in the design may include such features as power line rights-of-way, transmission towers, utility easements, and drainageways.

It should be noted that a site analysis completed for the sketch-plan layout of a conservation subdivision is not usually as technically comprehensive as those required for engineered preliminary plats. Although the engineering constraints on a site should be generally considered, the site analysis for the purposes of designing a sketch plan for conservation subdivision layout is intended primarily to identify landscape character, preservation areas, and building areas. While some of the elements required for sketch plans and typical preliminary plats will be the same (topography, for instance), the level of detail and accuracy required for documenting conditions for engineering purposes is not needed at the sketch-plan level. The elements of a site analysis for the purposes of conservation subdivision design would supplement and precede the site information normally required for conventional subdivision design. When the approval process moves on to the preliminary-plat stage, complete documentation and analysis oriented toward proper engineering practices would then be needed. The conservation subdivision layout would then be adjusted, if necessary, to accommodate engineering considerations.

Figure F-1

RURAL LANDSCAPE FEATURES

A. NATURAL FEATURES

Woodlands, hedgerows, and large single trees are important landscape elements to identify in a site analysis and to preserve in a final design.

B. FARMSTEAD REMNANT

Ruins, such as this old stone silo, are strong rural landscape elements which may be worthy of preservation.

Source: SEWRPC.

A good site analysis done for the purpose of conservation subdivision sketch-plan layout will include field investigations and should, at a minimum, consist of a map, or set of maps, showing the following:

1. A topographic analysis identifying slopes over 12 percent and under 2 percent. The topographic map should have a scale of one inch equals 100 feet or more, with a vertical contour interval of two feet or less. Hilltops and ridge lines should be highlighted.

2. An analysis of drainage patterns. The management of stormwater runoff from a site depends largely upon the existing drainage patterns which, for greatest economy and site preservation, generally should not be altered. Onsite drainage patterns are part of a larger drainage network and connect to the drainage patterns of adjacent sites. The role a particular site plays in the overall watershed should be recognized.

3. A vegetation analysis, identifying woodlands, hedgerows, specimen trees, meadows, prairie remnants, pastures, and active or fallow farm fields. Vegetation should be identified as evergreen or deciduous. The health and condition of each vegetative type should be identified. Predominant species in hedgerows and woodlands should be identified. Specimen trees should be identified by species, size, and health. Unique or endangered plant species should be noted.

4. A delineation of soil types and identification of selected soil characteristics, as provided by the information in the regional soil survey completed for the Regional Planning Commission by the U. S. Natural Resources Conservation Service. Such characteristics would include, for example, suitability of soils for crops, pasture, woodland, wildlife habitat, and recreation, as well as for building foundations, roadways, and onsite sewage-disposal systems. Prime agricultural soils and alluvial floodplain soils should be noted.

5. Shoreland protection areas, including the minimum 75-foot building setback from the ordinary high-water mark of navigable waters, the 100-year recurrence interval floodplain boundaries, and lakes, ponds, streams, and wetlands. Significant groundwater recharge or well-head protection areas, if such information is available.

6. Boundaries and characteristics of primary and secondary environmental corridors, and isolated natural resource areas, as identified in the adopted regional plans or local comprehensive or master plans. Natural areas and critical species habitat sites.

7. Wildlife habitat, whether in fields, wetlands, or woodlands. Predominant species of birds, mammals, amphibians, reptiles, and fish should be identified when possible. The presence of rare or endangered species should be noted.

8. Historic or cultural features, including ruins and stone fencerows.

9. Other existing buildings and structures. All buildings in a farm complex should be located and identified as to their use, as well as the locations of existing wells and onsite sewage-disposal systems.

10. Scenic vistas, both into the site from adjacent roads, trails, and hilltops, and outward from the site.

11. Classifications of existing streets and highways adjacent to the development parcel as well as desirable or undesirable points of entry into the parcel. Street connections required by the local official map should be noted.

12. Existing physical conditions surrounding the development parcel within 200 feet. These might include such notes as "adjacent residential homes," "connection to county trail," or "view to historic barn." The size and extent of existing adjacent open space areas should be noted, as well as any further open space connections these spaces may have.

13. Future areawide plans that may affect the physical layout of the site should also be taken into account. These could include, among others, plans for future parks; open space, trail, and bikeway systems; agricultural preservation areas; arterial and other street networks; stormwater management facilities and other utilities; and general land use plans.

Step 1 in Figure F-2 is an example of a typical site analysis. This is often accompanied by a written narrative that further explains the existing conditions on the site.

STEP TWO: DELINEATION OF PRESERVATION AREAS

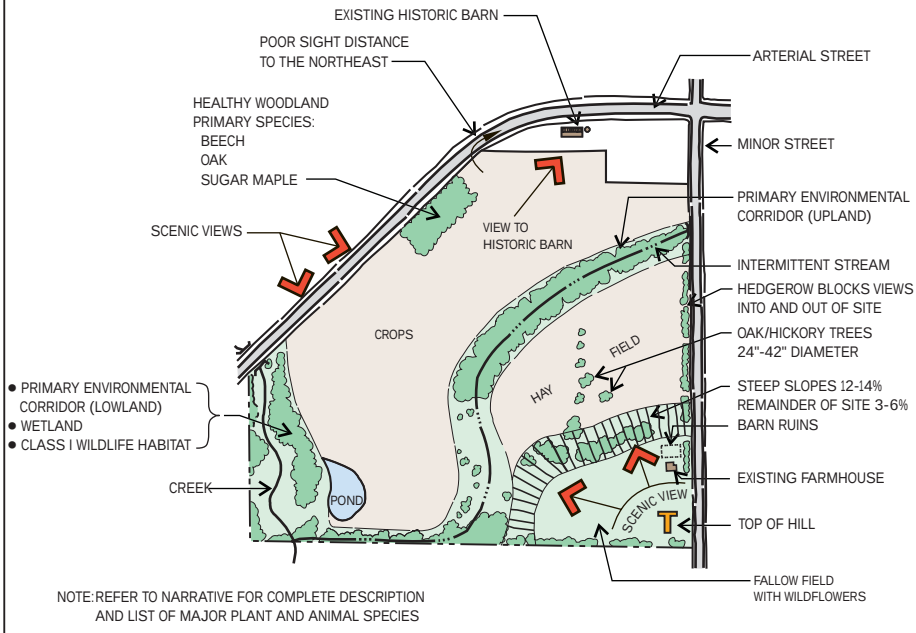
After determining the existing conditions on a site, the next step is to determine which areas should be preserved, as shown in Step 2 of Figure F-2. Areas of first and second priority for preservation should be identified.

Areas of first priority will include two types of areas: those protected through State and Federal regulations, such as floodplains, wetlands, and shorelands, and those connecting to larger municipal, county, or regional park and greenway systems, such as primary environmental corridors. The more open space areas are connected, the more valuable they become. The concept of connectedness is very important when trying to preserve meaningful open space. Fragmented open space areas lead to disrupted wildlife migration paths, nonfunctional wildlife corridors, inefficient farming operations, and piecemeal trail systems. Areas of disconnected open space preserved on a variety of development parcels, while valuable to some degree, cannot have the same impact on preservation of landscape character as continuous open space does. When areas of open space in conservation subdivision developments on adjacent parcels abut each other, the impact on landscape character is greater than if they are separated by visible development.

Figure F-2

CONSERVATION SUBDIVISION DESIGN

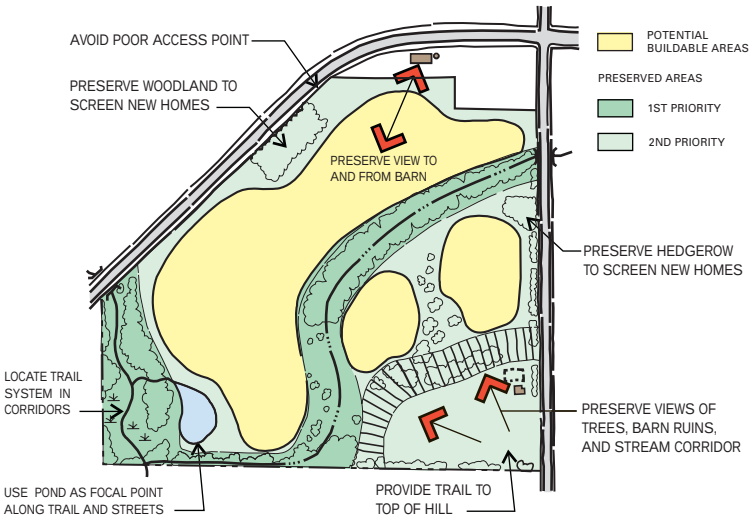
STEP 1 - INVENTORY AND ANALYSIS OF LANDSCAPE CHARACTER



NOTE: REFER TO NARRATIVE FOR COMPLETE DESCRIPTION AND LIST OF MAJOR PLANT AND ANIMAL SPECIES

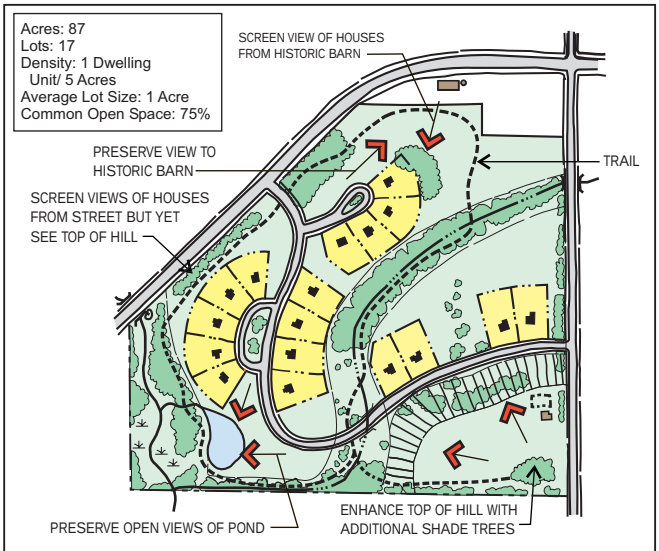
A site analysis for the purpose of conservation subdivision design would supplement and precede the engineering information normally required for a conventional subdivision. When the approval process moves to the preliminary plat stage, the conservation subdivision layout would then be adjusted to accommodate engineering considerations.

STEP 2 - PRESERVED AREAS PLAN



Areas of first and second priority for preservation should be identified and preservation areas should be connected.

STEP 3 - STREET AND LOT LAYOUT



After areas for preservation are identified, specific locations for building lots and streets are determined.

Source: SEWRPC.

The goal of connectedness in open space should always be kept in mind, not only in terms of the importance of connecting onsite open space with offsite open space, but also in terms of connecting all onsite open space as much as possible. While the opportunity to connect areas of onsite open space with adjacent offsite areas is not always available, areas of open space within the site can and should be connected. In this way, it may even be possible to restore key gaps between presettlement vegetation relicts, which were separated by agricultural operations. Zoning ordinance regulations should require that acceptable open space parcels be of a specified minimum size and that areas of open space be connected as much as is practicable.

After designating first priority areas for preservation, regulated environmentally constrained areas and areas that provide connections to offsite open space, areas of second priority are added. These would include other developable areas with natural features that have been identified as contributing to the particular rural landscape character of the site, as seen from adjacent roads and other public ways, as well as from within the site. Some judgments may have to be made at this stage as to the desirability of preserving certain areas of marginal value. For example, a hedgerow with weak-wooded or diseased trees may not be desirable for preservation, while retaining open areas to eventually be landscaped to screen new homes is desirable.

Not all the open space will be environmentally constrained land, nor should it be. On parcels that have a great deal of environmentally constrained land, not all of it may be accepted as meeting the open space requirement of the zoning ordinance. Also, such constrained lands, or a percentage of it, may not be allowed towards calculating the development density. In part, this is because development may be precluded anyway, such as in floodways; and, in part, the fact that such open space may not be considered publicly usable, such as with certain wetlands. On parcels with few constraints, much of the open space will be in well-drained upland areas that would be considered buildable. Decisions would have to be made as to which portions of these areas should be used for lots and which should be saved for open space. These decisions should be based on the overriding objective of preserving rural landscape character.

In the process of determining the preservation areas, the areas available for buildings, streets and lots are, by default, also identified. These are the “left over” areas. This process is the opposite of that often used in the design of a conventional subdivision, where the leftover areas are the areas considered unsuitable for building. Often the areas with the most attractive natural amenities in a conventional subdivision are set aside first to be included in a few prime lots that can be sold at a premium price. By contrast, all of the lots within a conservation subdivision may become more valuable, leveraged upward by the presence of common open space amenities.

STEP THREE: CONCEPTUAL DELINEATION OF STREET AND LOT LAYOUT (SKETCH PLAN)

When preservation areas are set aside, their outlines give shape to the building areas. On many development parcels, the areas available for building will be larger than the area needed to accommodate the permitted number of lots. Thus, the third step in the conservation subdivision design process is to determine more specifically the preferred locations of building lots and how best to provide access to them with streets (see Step 3 in Figure F-2).

The street and lot layout at this stage in the design process is conceptual only. Because of the large variety of street layouts that are possible through the flexibility permitted by conservation subdivision regulations, agreement on the general acceptability of a plan should be reached before the plan is more precisely detailed. While general municipal engineering principles should be followed, no detailed site engineering is done at this stage, although all zoning and subdivision regulations should be consulted to determine achievability of the proposed development concepts. It is beneficial for both the developer and the municipality to reach a consensus on a conceptual sketch plan before the developer incurs the costs of preliminary engineering. During review of the sketch plan, design changes can be made at little cost to the developer, lesser review time to the municipality, and with frustrations minimized. Thus, before the preparation of a preliminary plat is initiated, both the developer and the municipality should have agreed upon a conceptual layout.

The result of this process will be that streets and houses blend into the landscape in a natural way that protects the character of the site as seen within the site and from adjacent streets. This is again the opposite of houses being forced onto the landscape in a form determined by rigid lot sizes and the configuration of parcel boundaries, as is often the case in conventional subdivision design and development.

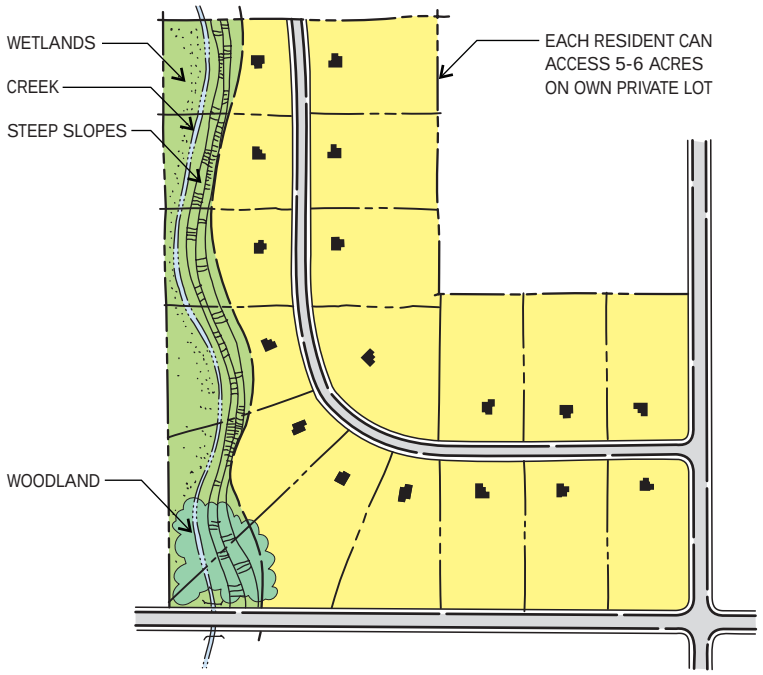
EXAMPLES OF CONSERVATION SUBDIVISION DESIGNS

Hypothetical examples of conservation subdivision designs, contrasted with conventional designs for the same site, are presented in Figures F-3. Additional examples of conservation subdivision designs, along with means for implementing this type of design concept, are presented in SEWRPC Planning Guide No. 7, *Rural Cluster Development*, December 1996.

Figure F-3

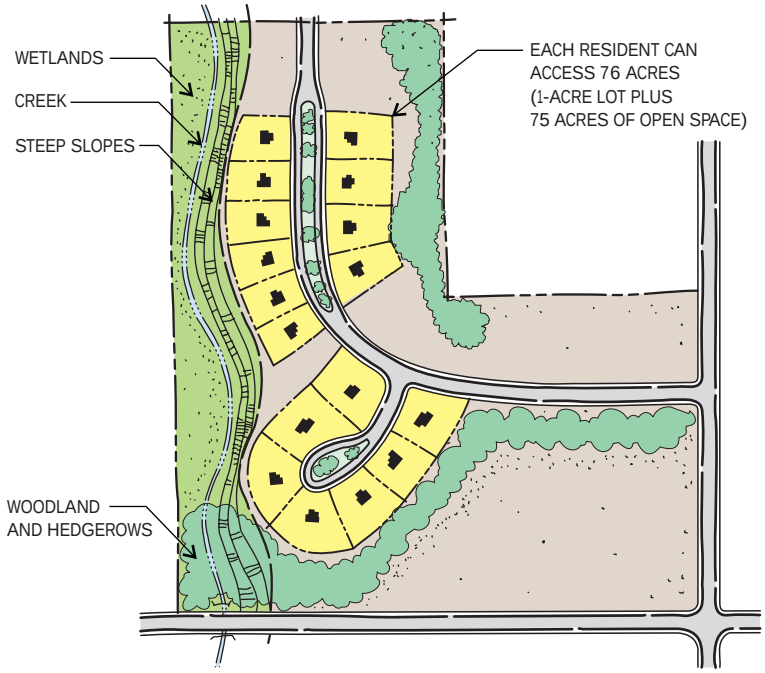
COMPARISON OF CONVENTIONAL AND CONSERVATION SUBDIVISION DESIGNS

A-1. CONVENTIONAL SUBDIVISION DESIGN



Acres: 104
Lots: 17
Density: 1 Dwelling Unit / 6 Acres
Average Lot Size: 5 Acres
Common Open Space: 0%

A-2. CONSERVATION SUBDIVISION DESIGN

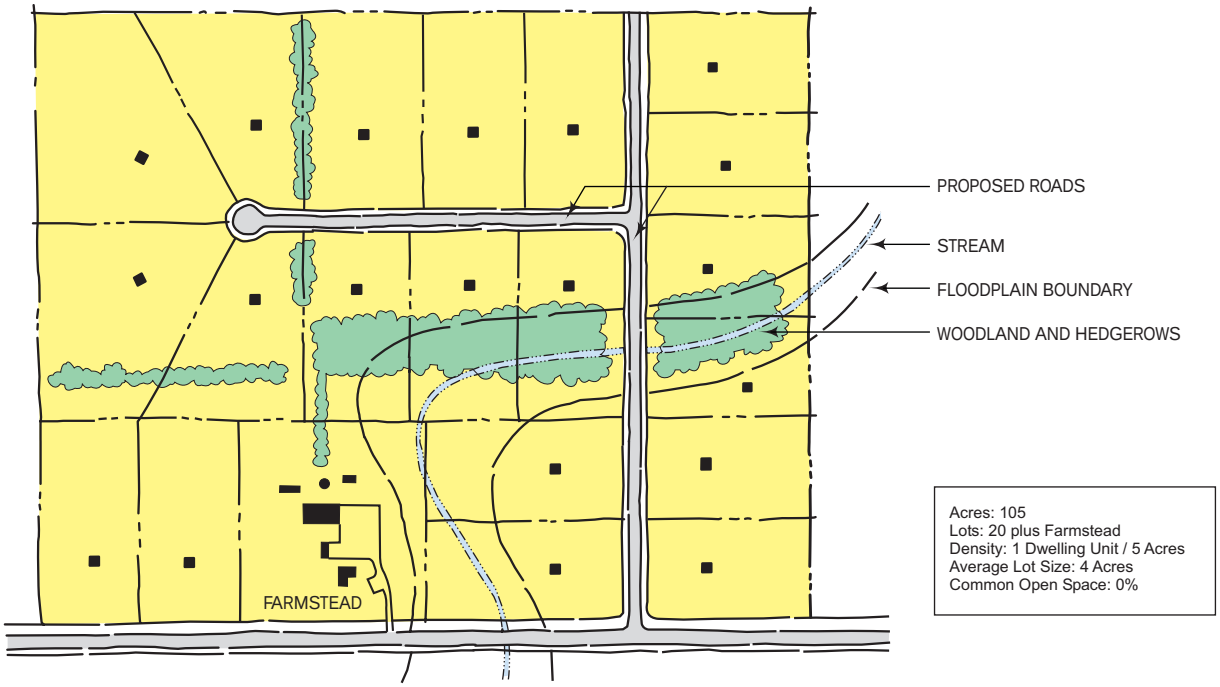


Acres: 104
Lots: 17
Density: 1 Dwelling Unit / 6 Acres
Average Lot Size: 1 Acre
Common Open Space: 75%

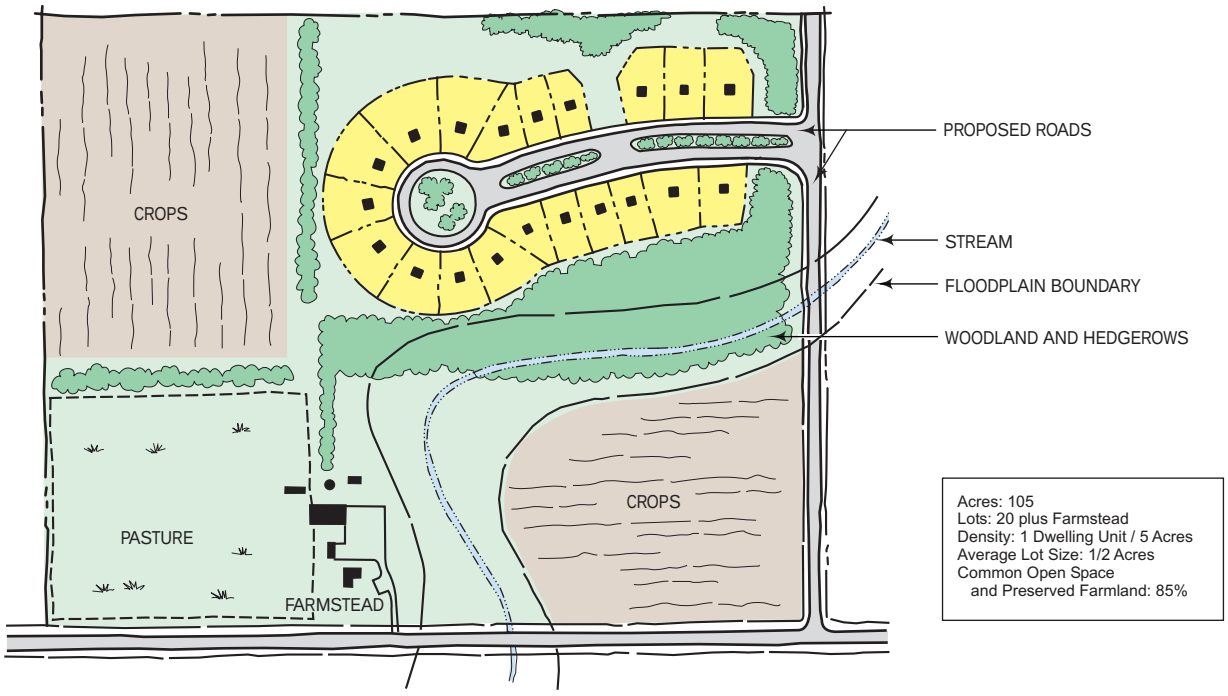
Through a reduction in lot size, open space can be created without losing density.

Figure F-3 (continued)

B-1. CONVENTIONAL SUBDIVISION DESIGN



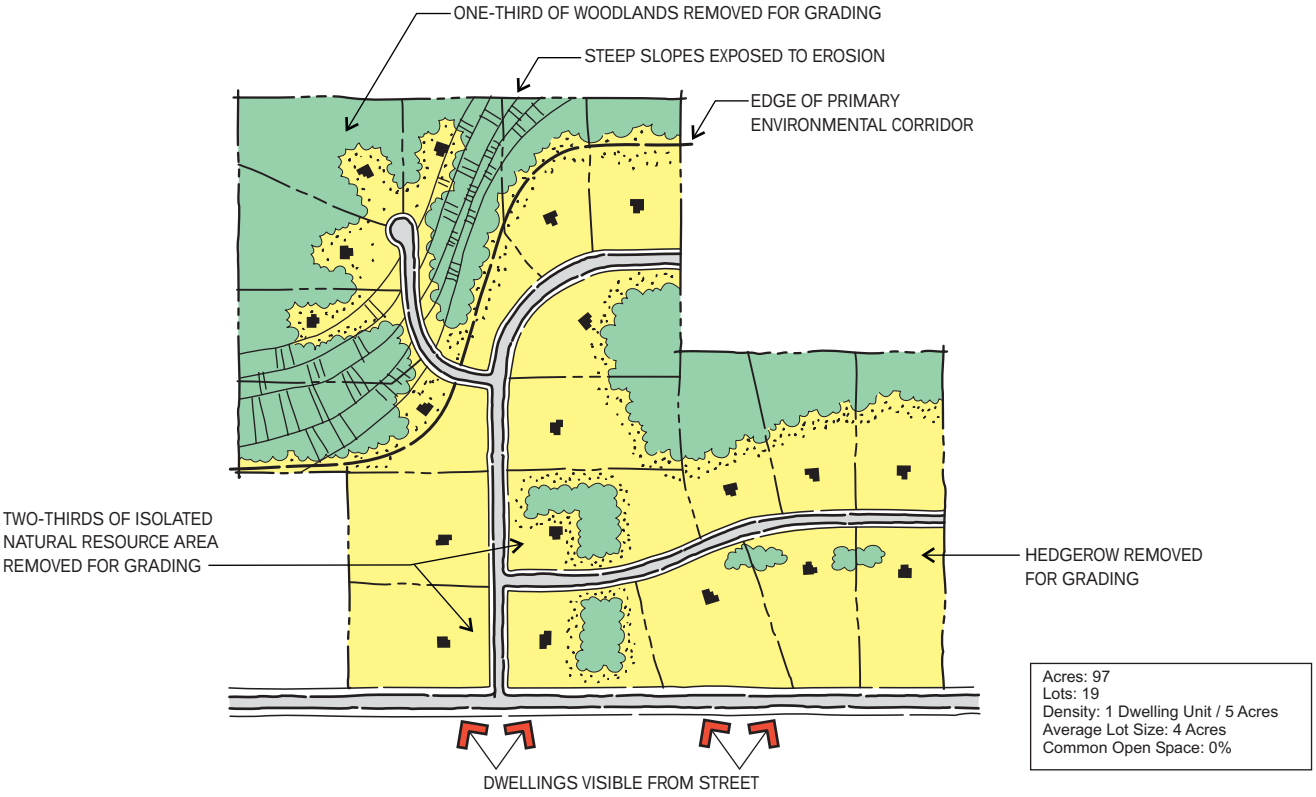
B-2. CONSERVATION SUBDIVISION DESIGN



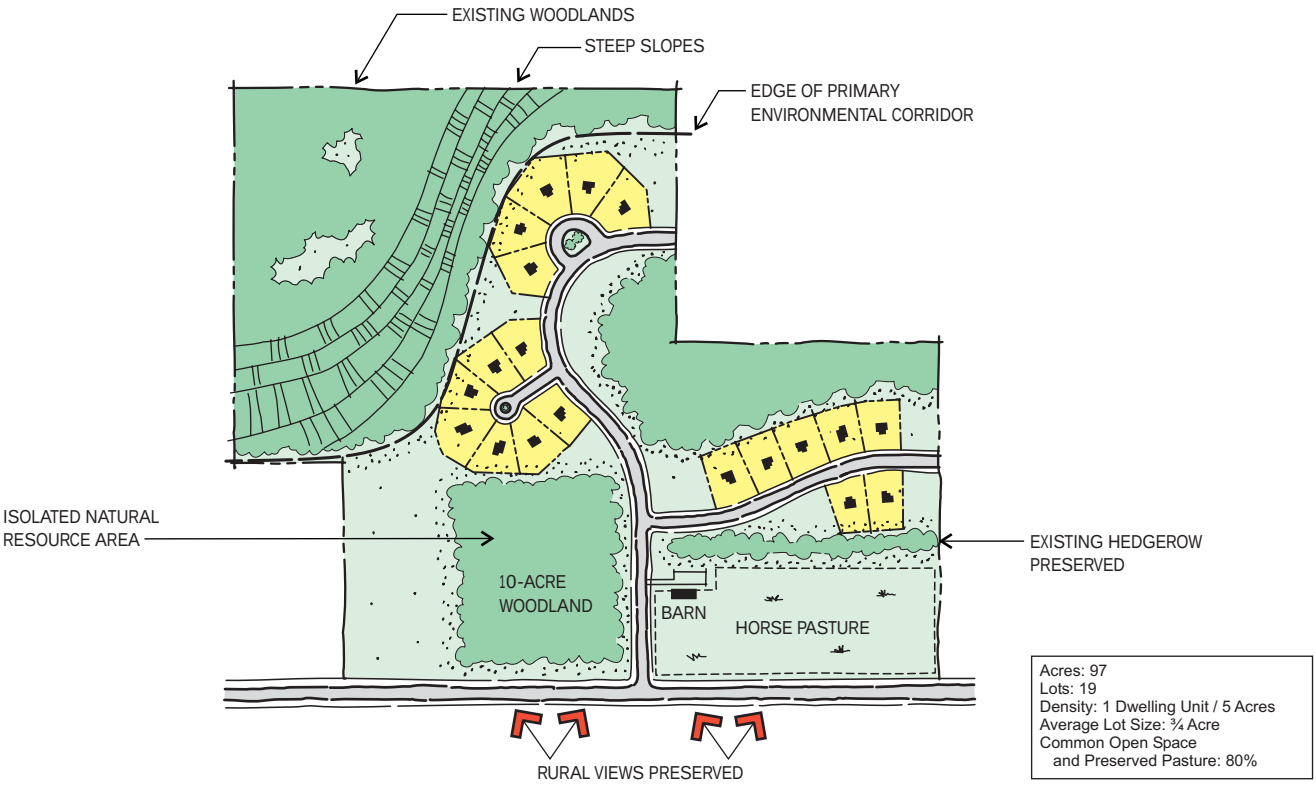
Conservation subdivision development can help preserve farming activities.

Figure F-3 (continued)

C-1. CONVENTIONAL SUBDIVISION DESIGN



C-2. CONSERVATION SUBDIVISION DESIGN



Conservation subdivisions can preserve environmental features and views.

Source: SEWRPC.

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Appendix G

SUGGESTED SITE PLAN AND ARCHITECTURAL REVIEW GUIDELINES

The compatibility of proposed development with the character of a community is a critical public concern. A review committee and/or Plan Commission, typically a Plan Commission at the local level and a committee at the County level, may review proposed site plans and building designs to avoid development that may have an adverse impact on the character of a community and/or neighborhood. The development or redevelopment of sites and buildings should be consistent with the general intents and purposes of promoting the public health, safety, and general welfare; maintaining the attractive appearance of the community or neighborhood; and promoting development and redevelopment of buildings and lands consistent with the adopted community comprehensive plan, or element thereof. Site plan and architectural review guidelines are set forth herein for the specific purpose of promoting an attractive community, compatible development, and stability of property values. These guidelines may be formalized in a zoning ordinance or may be used as voluntary guidelines.

If a community wishes to require the submittal and review of detailed development plans for all intensive uses by its Plan Commission, the provision below could be added to each basic zoning district that allows intensive uses as a permitted principal use or a conditional use, such as multi-family residential, commercial, industrial, governmental, institutional, and recreational uses. A single- or two-family home proposed on an individual lot would not require Plan Commission review, but would continue to be reviewed and approved by the County or a community zoning administrator.

"**Plans and Specifications to be Submitted to Plan Commission**

To encourage a [insert type of proposed principal uses permitted in the basic zoning district such as multi-family residential, business, manufacturing, recreational, or governmental/institutional uses] environment that is compatible with the community or neighborhood character, zoning permits for uses allowed in the [name of zoning district] should not be issued without review and approval by the [name of municipality] Plan Commission. Said review and approval should be concerned with, but not limited to, the general layout, building plans, traffic generation and circulation, driveway locations, parking, loading and unloading, landscaping, signage, and open space utilization in accordance with [insert section number of zoning ordinance that requires site plan and architectural review]."

Development Plan Data

Proper development plan data should be submitted to the municipality for review and approval. In addition to stormwater management plans and erosion and sedimentation control plans, the following development plan data should be submitted where applicable with all plan review applications:

1. Site plan drawn to a recognized engineering scale.

2. Name of project.

3. Owner's and/or developer's name and address.

4. Architect's and/or engineer's name and address.

5. Date of plan submittal along with all dates of revision, if applicable.

6. Scale of drawing, north arrow, and site size information (area in square feet or acres) as well as the square footage devoted to building space, parking, any other paving, landscaping, and open space.

7. Density of residential uses and the number of dwelling units by type.

8. Existing and proposed topography shown at contour intervals of two feet or less. Topography should extend 50 feet onto adjacent property or to the building on the adjacent lot, whichever is greater.

9. The characteristics of soils related to contemplated specific uses.

10. Total number, size, and location of parking spaces, loading facilities, drives, and driveway openings.

11. Exterior facilities for the disabled, including ramps and parking spaces.

12. Copies of any letters of review or permits granted by applicable Federal, State, or County regulatory agencies having jurisdiction over highway access, if applicable.

13. All building and yard setback lines.

14. Location of all existing and proposed easements including natural resource protection and mitigation area easements, landscape buffer yard easements, access easements, utility easements, and all other easements.

15. Where applicable, both the 100-year recurrence interval floodplain and the floodway; environmental corridors and isolated natural resource areas; and wetland areas.

16. The type, size, and location of all existing and proposed structures, including fences and walls, with all structural dimensions shown.

17. The height of all existing and proposed buildings and other structures.

18. Existing and proposed street names.

19. Existing and proposed rights-of-way and widths, including street, railway, and utility rights-of-way.

20. Existing and general location of proposed sanitary sewers, water mains, storm sewers, and other drainage facilities and features.

21. Proposed location, size, and type of all signs to be placed on the site.

22. The location, height, and type of all outdoor lighting, including individual fixture and gross illumination levels in footcandles.

23. Existing isolated, individual trees and the boundary of woodlands.

24. Location, extent, type, and size of proposed landscape materials and plantings. This information may be provided on a combined site/landscape plan or a separate landscape plan.

25. Location and size of pedestrian sidewalks and walkways, and bicycle lanes or paths.

26. A graphic outline of any development staging.

27. Architectural plans, elevations, and perspective drawings and sketches illustrating the design, character, colors, materials, and dimensions of proposed structures.

28. Other data as required by the Plan Commission, Zoning Administrator, Planner, or Engineer.

Review Guidelines
The following guidelines or principles should be established as review criteria to be applied to all new structures and uses and to changes or additions to existing structures and uses:

1. The proposed use(s) should conform to the uses permitted in the applicable zoning district.

2. The dimensional arrangement of buildings and structures should conform to the required area, yard, setback, and height restrictions of the zoning ordinance.

3. The relative proportion of the scale and mass of a building to neighboring existing buildings, to pedestrians or observers, and to other existing buildings should be maintained or enhanced when new buildings are built or when existing buildings are remodeled or altered.

4. The visual continuity of roof shapes, rooflines, and their contributing elements (e.g. parapet walls, coping, and cornices) should be maintained in building development or redevelopment where applicable, such as in historic districts and downtown areas.

5. No building should be permitted where the design or exterior appearance will be of such unorthodox or abnormal character in relation to its surroundings as to be unsightly or offensive to generally accepted taste and community standards.

6. No building should be permitted where the design or exterior appearance will be so similar with those adjoining as to create excessive monotony or drabness.

7. No building should be permitted where any exposed facade will be constructed or faced with finished material which is not aesthetically compatible with nearby facades or presents an unattractive appearance to the public and to surroundings properties.

8. The facades of multi-family residential, commercial, industrial, governmental, and institutional buildings exposed to public view, such as from public streets and parking lots, should be finished with an aesthetically pleasing material such as stone, brick, wood, ornate masonry material, or decorative glass panels, except where the building style requires a different material. Siding which has the appearance of wood siding, a “brushed” surface, or other compatible attractive surfaces may be allowed by the County or local government. No plain concrete-block buildings or smooth metal-faced buildings, except those with an attractive finished surface listed above, should be allowed.

9. Since the selection of building colors has a significant aesthetic and visual impact upon the public and neighboring properties, colors should be selected to be in general harmony with existing neighborhood buildings. The use of bright colors should be limited and used only as an accent.

10. Accessory buildings should be built with materials compatible with those of the principal building on the same site, except that if the principal building does not conform with these guidelines, then new accessory buildings should be built so as to be compatible with structures on surrounding properties which are in conformance.

11. No rows of garage doors for multi-family residential uses, such as doors of detached garages and doors that occupy more than 50 percent of the façade of principal buildings, or rows of overhead doors or loading docks for commercial, manufacturing, institutional, or recreational buildings, should face a public street.

The Plan Commission may permit rows of garage doors, overhead service doors, and loading docks to face a public street when it has made a finding that there is no feasible alternative location for such doors or docks and, insofar as is practicable, such doors and docks facing public streets are screened and/or softened by architectural detailing.

12. Outside storage areas for inventory, materials, equipment, supplies, scrap, and other materials utilized in the day-to-day operation of a principal use should be hard-surfaced with either concrete or asphalt and screened from public view with appropriate vegetation, fencing, or walls of a material compatible with the principal structure and the surrounding area. The Plan Commission may permit the outdoor display of products or merchandise when it makes a finding that such a display is essential to a business or industrial use, such as a landscape-nursery or car-sales business, provided that said displays do not overly dominate the publicly viewed frontage and attractive periphery landscaping is provided.

13. Mechanical equipment, such as heating, air conditioning, and ventilating equipment, at grade-level and on rooftops, should be screened from public view or located in a manner that is otherwise unobtrusive.

14. No building or sign should be permitted to be sited on the property in a manner which would unnecessarily destroy or substantially damage the natural beauty of the area, particularly insofar as it would adversely affect values incidental to real property ownership in that area, or which would unnecessarily have an adverse effect on the beauty and general enjoyment of existing buildings on adjoining properties.

15. No building or use should be permitted that would have a negative impact on the maintenance of safe and healthful conditions in the County or local government.

16. Building and uses should maintain existing topography, drainage patterns, and vegetative cover insofar as is practical to prevent indiscriminate or excessive earth moving or clearing of property, disfiguration of natural land forms, and disruption of natural drainage patterns, except that areas dominated by monocultural or non-native species may be enhanced by conversion to more natural, presettlement vegetation types.

17. Buildings and uses should provide for safe traffic circulation and safe driveway locations.

18. Buildings and uses should provide adequate parking and loading areas.

19. Appropriately landscaped buffers should be provided between dissimilar uses.

20. Appropriate erosion control measures should be utilized in all new development.

21. Buildings and uses should be provided with adequate public services as approved by the appropriate utility.

22. Refuse and recycling areas should be screened by completely enclosing such areas with a wall or fence of a material compatible with the principal structure and surrounding area. Except at the gate, any wall or fence should be surrounded with a landscape bed at least five feet wide consisting of plants.

23. No buildings should impair the enjoyment of historic attractions and areas of significant historic interest.

24. Buildings on premises which have historic significance should be encouraged to be maintained or restored, insofar as is practicable, in a manner which will protect their historic significance in accordance with the standards promulgated by the U.S. Department of the Interior for historic preservation projects.

25. Development and redevelopment should be consistent with the public goals, objectives, principles, standards, policies, and design guidelines set forth in the adopted County or local government comprehensive plan, or element thereof.

26. Buildings and uses should make appropriate use of open spaces. The Zoning Administrator or Plan Commission may require appropriate landscaping and planting screens. A landscaping maintenance program, together with appropriate assurances, should be submitted.

27. Other design-related principles deemed appropriate on or in the vicinity of the project may be imposed by the Plan Commission.

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Appendix H

DEVELOPMENT TYPES COMPATIBLE WITH ENVIRONMENTAL CORRIDORS

Component Natural Resource and Related Features within Environmental Corridors[a]	Development Type															
	Transportation and Utility Facilities (see General Development Guidelines below)				Recreational Facilities (see General Development Guidelines below)											Rural-Density Residential Development (see General Development Guidelines below)
	Streets and Highways	Utility Lines and Related Facilities	Engineered Stormwater Management Facilities	Engineered Flood Control Facilities[b]	Trails[c]	Picnic Areas	Family Camping[d]	Swimming Beaches	Boat Access	Ski Hills	Golf	Playfields	Hard-Surface Courts	Parking	Buildings	
Lakes, Rivers, and Streams	--[e]	--[f,g]	--	--[h]	--[i]	--	--	X	X	--	--	--	--	--	--	--
Shoreland	X	X	X	X	X	X	--	X	X	--	X	--	--	X	X[j]	--
Floodplain	--[k]	X	X	X	X	X	--	X	X	--	X	X	--	X	X[k]	--
Wetland[m]	--[k]	X	--	--	X[n]	--	--	--	X	--	--[o]	--	--	--	--	--
Wet Soils	X	X	X	X	X	--	--	X	X	--	X	--	--	X	--	--
Woodland	X	X	X	--	X	X	X	--	X	X	X	X	X	X	X[p]	X
Wildlife Habitat	X	X	X	--	X	X	X	--	X	X	X	X	X	X	X	X
Steep Slope	X	X	--	--	--[q]	--	--	--	--	X[r]	X	--	--	--	--	--
Prairie	--	--[g]	--	--	--[q]	--	--	--	--	--	--	--	--	--	--	--
Park	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	--
Historic Site	--	--[g]	--	--	--[q]	--	--	--	--	--	--	--	--	X	--	--
Scenic Viewpoint	X	X	--	--	X	X	X	--	X	X	X	--	--	X	X	X
Natural Area or Critical Species Habitat Site	--	--	--	--	--[q]	--	--	--	--	--	--	--	--	--	--	--

NOTE: An "X" indicates that facility development may be permitted within the specified natural resource feature. In those portions of the environmental corridors having more than one of the listed natural resource features, the natural resource feature with the most restrictive development limitation should take precedence.

GENERAL DEVELOPMENT GUIDELINES

- Transportation and Utility Facilities: All transportation and utility facilities proposed to be located within the important natural resources should be evaluated on a case-by-case basis to consider alternative locations for such facilities. If it is determined that such facilities should be located within natural resources, development activities should be sensitive to, and minimize disturbance of, these resources, and, to the extent possible following construction, such resources should be restored to preconstruction conditions. The above table presents development guidelines for major transportation and utility facilities. These guidelines may be extended to other similar facilities not specifically listed in the table.

- Recreational Facilities: In general, no more than 20 percent of the total environmental corridor area should be developed for recreational facilities. Furthermore, no more than 20 percent of the environmental corridor area consisting of upland wildlife habitat and woodlands should be developed for recreational facilities. It is recognized, however, that in certain cases these percentages may be exceeded in efforts to accommodate needed public recreational and game and fish management facilities within appropriate natural settings. The above table presents development guidelines for major recreational facilities. These guidelines may be extended to other similar facilities not specifically listed in the table.

- Residential Development: Limited residential development may be accommodated in upland environmental corridors, provided that buildings are kept off steep slopes. The maximum number of housing units accommodated at a proposed development site within the environmental corridor should be limited to the number determined by dividing the total corridor acreage within the site, less the acreage covered by surface water and wetlands, by five. The permitted housing units may be in a single-family or multi-family structures. When rural residential development is accommodated, conservation subdivision designs are strongly encouraged.

  Single-family development on existing lots of record should be permitted as provided for under county or local zoning at the time of adoption of the land use plan.

Footnotes to appendix H

[a] *The natural resource and related features are defined as follows:*

Lakes, Rivers, and Streams: Includes all lakes greater than five acres in area and all perennial and intermittent streams as shown on U.S. Geological Survey quadrangle maps.
Shoreland: Includes a band 50 feet in depth along both sides of intermittent streams; a band 75 feet in depth along both sides of perennial streams; a band 75 feet in depth around lakes; and a band 200 feet in depth along the Lake Michigan shoreline.
Floodplain: Includes areas, excluding stream channels and lake beds, subject to inundation by the 100-year recurrence interval flood event.
Wetlands: Includes areas that are inundated or saturated by surface water or groundwater at a frequency, and with a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions..
Wet Soils: Includes areas covered by wet, poorly drained, and organic soils.
Woodlands: Includes areas one acre or more in size having 17 or more deciduous trees per acre with at least a 50 percent canopy cover as well as coniferous tree plantations and reforestation projects; excludes lowland woodlands, such as tamarack swamps, which are classified as wetlands.
Wildlife Habitat: Includes areas devoted to natural open uses of a size and with a vegetative cover capable of supporting a balanced diversity of wildlife.
Steep Slope: Includes areas with land slopes of 12 percent or greater.
Prairies: Includes open, generally treeless areas which are dominated by native grasses.
Park: Includes public and private park and open space sites.
Historic Site: Includes sites listed on the National Register of Historic Places. Most historic sites located within environmental corridors are archeological features such as American Indian settlements and effigy mounds and cultural features such as small, old cemeteries. On a limited basis, small historic buildings may also be encompassed within delineated corridors.
Scenic Viewpoint: Includes vantage points form which a diversity of natural features such as surface waters, wetlands, woodlands, and agricultural lands can be observed.
Natural Area and Critical Species Habitat Sites: Includes natural areas and critical species habitat sites as identified in the regional natural areas and critical species habitat protection and management plan.

[b] *Includes such improvements as stream channel modifications and such facilities as dams.*

[c] *Includes trails for such activities as hiking, bicycling, cross-country skiing, nature study, and horseback riding, and excludes all motorized trail activities. It should be recognized that trails for motorized activities such as snowmobiling that are located outside the environmental corridors may of necessity have to cross environmental corridor lands. Proposals for such crossings should be evaluated on a case-by-case basis, and if it is determined that they are necessary, such trail crossings should be designed to ensure minimum disturbance of the natural resources.*

[d] *Includes areas intended to accommodate camping in tents, trailers, or recreational vehicles which remain at the site for short periods of time—typically ranging from an overnight to a two-week stay.*

[e] *Certain transportation facilities such as bridges may be constructed over such resources.*

[f] *Utility facilities such as public sanitary sewers may be located in or under such resources.*

[g] *Electric power transmission lines and similar lines may be suspended over such resources.*

[h] *Certain flood control facilities such as dams and channel modifications may need to be provided in such resources to reduce or eliminate flood damage to existing development.*

[i] *Bridges for trail facilities may be constructed over such resources.*

[j] *Consistent with Chapter NR 115 of the* Wisconsin Administrative Code.

[k] *Streets and highways may cross such resources. Where this occurs, there should be no net loss of flood storage capacity or wetlands. Guidelines for mitigation of impacts on wetlands by Wisconsin Department of Transportation facility projects are set forth in Chapter Trans 400 of the* Wisconsin Administrative Code.

[l] *Consistent with Chapter NR 116 of the* Wisconsin Administrative Code.

[m] *Any development affecting wetlands must adhere to the water quality standards for wetlands established under Chapter NR 103 of the* Wisconsin Administrative Code.

[n] *Only appropriately designed boardwalks/trails should be permitted.*

[o] *Wetlands may be incorporated as part of a golf course, provided there is no disturbance of the wetlands.*

[p] *Only if no alternative is available.*

[q] *Only appropriately designed and located hiking and cross-country ski trails should be permitted.*

[r] *Only an appropriately designed, vegetated, and maintained ski hill should be permitted.*

Source: SEWRPC.