

AMENDMENT TO THE

OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN: 2010

AS ADOPTED BY THE

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

JANUARY 1993

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**AMENDMENT TO THE OZAUKEE COUNTY
JURISDICTIONAL HIGHWAY SYSTEM PLAN: 2010**

**This Document Amends SEWRPC Planning Report No. 17,
A Jurisdictional Highway System Plan for Ozaukee County, December 1973**

Prepared by the

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February 1992

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AMENDMENT TO THE OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN: 2010

INTRODUCTION

On December 5, 1973, the Ozaukee County Board of Supervisors adopted a jurisdictional highway system plan. That plan, set forth in SEWRPC Planning Report No. 17, A Jurisdictional Highway System Plan for Ozaukee County, was based upon a comprehensive study of the jurisdictional responsibilities for the construction, maintenance, and operation of arterial streets and highways in Ozaukee County. The plan was prepared under the guidance of a technical coordinating and advisory committee consisting of federal, state, county, and local officials.

In the 16 years since adoption of the Ozaukee County jurisdictional highway system plan, some progress has been made toward implementation of the plan and certain revisions have been made to that plan to take into account changing conditions. In January 1990, the Ozaukee County Highway Committee requested the Commission to reactivate the Ozaukee County Jurisdictional Highway Planning Committee and to ask that Committee to reexamine the arterial street and highway needs of the County. In response, the Commission indicated that it would reconvene the Ozaukee County Jurisdictional Highway System Planning Committee, conduct with the Committee whatever studies might be necessary to identify and consider needs that may not be currently addressed by the adopted Ozaukee County jurisdictional highway system plan, amend the County jurisdictional highway system plan as may be necessary, and document the findings and recommendations of the reexamination in a report.

The purpose of this report is fourfold. First, the report is intended to document in summary form the original Ozaukee County jurisdictional highway system plan as adopted and amended to date. Second, the report is intended to summarize the major actions taken to date to implement both the functional highway improvement and the jurisdictional responsibility elements of the plan. Third, the report is intended to document any proposed revisions to the plan emanating from the current study effort. Finally, the report is intended to serve as a redescription of the Ozaukee County jurisdictional highway system

plan for use in the preparation of a new regional highway system plan.

As an amendment to the aforementioned SEWRPC Planning Report No. 17, this document is intended to be reviewed and approved by the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Ozaukee County, by the Highway Committee of the Ozaukee County Board of Supervisors, by the Board itself, and by the Southeastern Wisconsin Regional Planning Commission as the official areawide planning agency for southeastern Wisconsin.

BACKGROUND

Original Ozaukee County Jurisdictional Highway System Plan

The Ozaukee County jurisdictional highway system plan adopted in 1973 was based upon the functional highway system recommended in the original regional transportation system plan.¹ That plan consisted of recommendations concerning the location, type, capacity, and service levels of the arterial street and highway facilities needed to serve the developing and changing Southeastern Wisconsin Region. Except for freeways, however, that original plan did not contain recommendations as to which levels and agencies of government should assume responsibility for the construction, operation, and maintenance of each of the various facilities included in the functional plan. It was recommended in the plan that the Wisconsin Department of Transportation assume jurisdictional responsibility for all proposed freeways. The subsequently prepared Ozaukee County jurisdictional highway system plan, then, together with similar plans for the six other counties compris-

¹See *SEWRPC Planning Report No. 7, The Regional Land Use-Transportation Study, Volume One, Inventory Findings: 1963, May 1965; Volume Two, Forecasts and Alternative Plans: 1990, June 1966; and Volume Three, Recommended Regional Land Use-Transportation Plans: 1990, November 1966.*

ing the Southeastern Wisconsin Region, represented a logical sequel to, and an implementation action recommended in, the original regional transportation system plan. In effect, the functional highway system plan prepared at the regional level was converted to a jurisdictional highway system plan on a county-by-county basis.

The primary purpose of jurisdictional highway system planning is to group into classes the arterial streets and highways that serve similar functions and which, accordingly, should have similar design standards and levels of service. Once this classification process is completed, it is possible to assign jurisdictional responsibility for the design, construction, operation, and maintenance of each of the groups to the state, county, and local levels of government in a logical manner. Thus, each county jurisdictional highway system plan indicates which highway facilities should be the primary responsibility of state government, county government, and local—city, village or town—government.

The jurisdictional highway system plan is intended to help provide the County, over time, with an integrated highway transportation system that would effectively serve and promote a desirable land use pattern in the County, abate traffic congestion, reduce travel time and costs, and reduce accident exposure. The plan was intended to help to concentrate appropriate resources and capabilities on corresponding areas of need, thus assuring the most effective use of public resources in the provision of highway transportation.

The Ozaukee County jurisdictional highway system plan was based upon certain "functional" criteria for jurisdictional classification, that is, the plan recommendations as to whether or not a given facility should be a state trunk highway, a county trunk highway, or a local arterial street or highway, were based upon careful consideration of the existing and probable future function of each facility in the total arterial highway system. The particular function that a facility serves was defined by examining three basic characteristics of the facility: 1) the kinds of trips served, 2) the land uses connected and served, and 3) the operational characteristics of the facilities themselves. The specific functional criteria used for jurisdictional classification of arterial highways in Ozaukee County are summarized in Table 1.

The selected criterion which best characterizes trip service was trip length. In general, this criterion states that the longest trips should be accommodated on state trunk highways and the shortest trips on local streets and highways, with the intermediate length trips being accommodated on county trunk highways.

With respect to the land uses connected and served, the criteria note that state trunk highways should serve land uses of areawide importance, e.g., interregional transportation terminals such as General Mitchell International Field, regional shopping centers, higher educational facilities, and regional industrial centers. County trunk highway facilities should serve land uses of countywide importance, such as general aviation airports, county parks, large truck terminals, and subregional commercial and industrial centers. Local arterials should serve the land uses of local importance.

The criteria for the operational characteristics involve considerations of system continuity, spacing, and traffic volume.

In the jurisdictional highway system planning process, careful analyses were made to identify the trips served by, the land uses served by, and the operational characteristics of, each facility. Application of the criteria to these data resulted in the recommended jurisdictional highway system plan.²

The jurisdictional highway system plan for Ozaukee County adopted by the County Board of Supervisors on December 5, 1973, and by the Regional Planning Commission on March 7, 1974, is shown on Map 1. The arterial street and highway system recommended in the original plan totaled about 319 route miles of facilities. Of this total arterial system, 97 route miles, or about 30 percent, were proposed to constitute the state trunk highway system, a decrease of two route miles from the then existing system of state trunk highways and connecting streets. The system was expected to carry about 67 percent of the arterial traffic demand generated within Ozaukee County. The recommended

²See *SEWRPC Planning Report No. 17, A Jurisdictional Highway System Plan for Ozaukee County, October 1974.*

state trunk highway system is identified by red lines on Map 1.

The county trunk highway system recommended in the original plan consisted of about 176 route miles, or an additional 55 percent of the total arterial network. This system represented an increase of 56 miles over the previous county trunk highway system. The county trunk highways were expected to carry about 25 percent of the arterial travel demand. The initially recommended county trunk system is identified by blue lines on Map 1.

Finally, the original plan recommended a local trunk highway system consisting of the remaining 46 route miles of arterial facilities, or about 15 percent of the total planned arterial network. The local trunk highways were expected to carry about 8 percent of the arterial travel demand. This recommended local system is identified by green lines on Map 1.

Revisions to the Original Plan

Since its adoption, the Ozaukee County jurisdictional highway system plan has been amended twice. A brief review of these amendments follows.

Second-Generation Regional Transportation Plan: 1978: The most extensive set of revisions to the original jurisdictional highway system plan for Ozaukee County was made in the adoption of the second-generation regional transportation system plan.³ This plan, which is shown on Map 2, was adopted by the Regional Planning Commission on June 1, 1978, and by the Ozaukee County Board of Supervisors on August 1, 1979.

The second-generation regional transportation system plan took into account changing conditions throughout southeastern Wisconsin. These included changes in forecast levels of population and economic activity, household formation rates, and labor force participation rates, and, of

particular importance within Ozaukee County, changes in public attitudes toward the construction of additional freeways.

Of particular significance to the Ozaukee County arterial street and highway system plan and the jurisdictional assignments based on that original plan was the elimination from that plan of a major arterial street and highway improvement: the Stadium Freeway. The elimination from the plan of this major new highway facility resulted in numerous other changes to the functional highway system plan and the resulting reassessment of jurisdictional responsibility resulted in changes to the entire network. All these revisions were reviewed and approved by the Technical and Intergovernmental Coordinating and Advisory Committee for Jurisdictional Highway Planning for Ozaukee County.

Milwaukee Northwest Side/Ozaukee County Plan Amendment: 1983: The second change to the original Ozaukee County jurisdictional highway system plan came about in 1983 as a result of the completion of a study to determine the best way to meet existing and probable future transportation needs in the northwest side of Milwaukee County and southern Ozaukee County which would result from the elimination of the Stadium Freeway from the second-generation regional transportation system plan.⁴ In Ozaukee County, the transportation system plan recommended by the study basically reaffirmed the recommendations of the adopted regional transportation system plan. The only changes were the addition of Donges Bay Road to the arterial street and highway system as a local arterial from River Road to Port Washington Road (CTH W) in the City of Mequon; a reduction in the recommended number of travel lanes on STH 57 between Bonniwell Road and the Milwaukee-Ozaukee County line from four to two, except for a short segment in the Village of Thiensville; and a reduction in the recommended number of travel lanes from six to four on IH 43 between the Milwaukee-Ozaukee County line and Mequon Road. The latter change was a result of state legislation enacted

³See SEWRPC Planning Report No. 25, A Regional Land Use Plan and A Regional Transportation Plan for Southeastern Wisconsin—2000, Volume One, Inventory Findings, April 1975; and Volume Two, Alternative and Recommended Plans, May 1978.

⁴See SEWRPC Planning Report No. 34, A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee County Study Area, August 1983.

Table 1

SUMMARY OF FUNCTIONAL CRITERIA FOR JURISDICTIONAL CLASSIFICATION OF ARTERIAL HIGHWAYS IN OZAUKEE COUNTY

Criterion	Arterial Type				
	I (state trunk)		II (county trunk)	III (local trunk) ^a	
<u>Trip Service</u> Average Trip Length (miles)	<u>Urban</u> More than 16	<u>Rural</u> More than 21	<u>Urban</u> 10 to 18	<u>Rural</u> 5 to 21	<u>Urban</u> 2 to 10
<u>Land Use Service</u> Transportation Terminals	<u>Urban^b and Rural^c</u> Connect and serve interregional rail, bus, and major truck terminals; air carrier airports; and seaports		<u>Urban^b and Rural^c</u> Connect and serve freeway interchanges, general aviation airports, pipeline terminals, major interregional truck terminals, and rapid transit and modified rapid transit system loading and unloading points not served by Type I arterials		<u>Urban^b</u> Connect and serve truck terminals generating 250 or more truck trips per average weekday, and off-street parking facilities having a minimum of 150 parking spaces not served by Types I and II arterials
Recreational Facilities	<u>Urban and Rural</u> Connect and serve all state parks having a gross area of 500 or more acres		<u>Urban and Rural</u> Connect and serve regional parks and special recreational use areas of countywide significance, such as zoological and botanical gardens, arenas and stadia seating a minimum of 10,000 persons not served by Type I arterials, and public recreation areas providing on-site parking for a minimum of 250 vehicles		<u>Urban</u> Connect and serve community parks not served by Types I and II arterials
Commercial Centers	<u>Urban and Rural</u> Connect and serve major retail and service centers		<u>Urban and Rural</u> Connect and serve community retail and service centers not served by Type I arterials		<u>Urban</u> Connect and serve neighborhood retail and service commercial centers not served by Types I and II arterials
Industrial Centers	<u>Urban and Rural</u> Connect and serve major regional industrial centers		<u>Urban and Rural</u> Connect and serve major community industrial centers not served by Type I arterials		<u>Urban</u> Connect and serve major community industrial centers not served by Types I and II arterials
Institutional	<u>Urban and Rural</u> Connect and serve universities, county seats, and state institutions		<u>Urban and Rural</u> Connect and serve institutions, accredited degree-granting colleges, public vocational schools, and community hospitals not served by Type I arterials		<u>Urban</u> Connect and serve city and village halls and high schools not served by Types I and II arterials
Urban Areas	<u>Rural</u> Connect and serve urban areas of 2,500 or more population		<u>Rural</u> Connect and serve developed areas of 500 or more population		--
<u>Operational Characteristics</u> System Continuity	<u>Urban and Rural</u> Interregional or regional continuity comprising total systems at the regional and state levels		<u>Urban and Rural</u> Intermunicipality and intercounty continuity comprising integrated systems at the county level		<u>Urban</u> Intracommunity continuity comprising an integrated system at the city or village level
Spacing	<u>Urban and Rural</u> Minimum 2.0 miles		<u>Urban and Rural</u> Minimum 1.0 mile		<u>Urban</u> Minimum 0.5 mile
Volume	<u>Urban</u> Minimum 6,500 vehicles per average weekday (2010 forecast)		<u>Urban</u> 3,500 to 6,500 vehicles per average weekday (2010 forecast)		<u>Urban</u> 3,500 vehicles per average weekday (2010 forecast)
	<u>Rural</u> Minimum 4,500 vehicles per average weekday (2010 forecast)		<u>Rural</u> 1,000 to 4,500 vehicles per average weekday (2010 forecast)		<u>Rural</u> --

Table 1 (continued)

Criterion	Arterial Type		
	I (state trunk)	II (county trunk)	III (local trunk) ^a
<u>Traffic Mobility</u>	<u>Urban</u> Average overall travel speed ^d 30 to 70 miles per hour <u>Rural</u> Average overall travel speed 40 to 70 miles per hour	<u>Urban</u> Average overall travel speed ^d 25 to 50 miles per hour <u>Rural</u> Average overall travel speed 30 to 60 miles per hour	<u>Urban</u> Average overall travel speed ^d 20 to 40 miles per hour
<u>Land Access Control</u>	Full ^e or partial control of access	Partial control of access ^f	Minimum control of access ^g

^a A rural subcategory for Type III arterials is not provided.

^b Urban arterial facilities are considered to "serve and connect" given land uses when direct access from the facility to roads serving the land use area is available within the following maximum over-the-road distances from the main vehicular entrance to the land use to be served: Type I arterial facility, 1.0 mile; Type II arterial facility, 0.5 mile; Type III arterial facility, 0.25 mile.

^c Rural arterial facilities are considered to "connect and serve" given land uses when direct access from the facility to roads serving the land use area is available within the following maximum over-the-road distances from the main vehicular entrance to the land use to be served: Type I arterial facility, 2.0 miles; Type II arterial facility, 1.0 mile.

^d Average overall travel speed is defined as the sum of the distances traveled by all vehicles using a given section of highway during an average weekday divided by the sum of the actual travel times, including traffic delays.

^e Full control of access is defined as the exercise of eminent domain or police power to control access as to give preference to movement of through traffic by providing access connections only at selected public roads via grade-separated interchanges.

^f Partial control of access is defined as the exercise of eminent domain or police power to control access so as to give preference to the movement of through traffic to a degree that, in addition to access connections at selected public roads, there may be some direct access to abutting land uses, with generally one point of reasonably direct access to each parcel of abutting land as these parcels existed at the time of an official declaration that partial control of access shall be exercised.

^g Minimum control of access is defined as the exercise of eminent domain or police power to regulate the placement and geometrics of direct access roadway connections as necessary for safety.

Source: SEWRPC.

in July 1983 that prohibited the use of state or federal funds to widen IH 43 from Bender Road in Milwaukee County to the Ozaukee County-Sheboygan County line. The changes in the plan were recommended by the Citizens Intergovernmental and Technical Coordinating and Advisory Committee for the Milwaukee Northwest Side/Ozaukee County Transportation Improvement Study, adopted by the Regional Planning Commission on September 8, 1983, and by the Ozaukee County Board of Supervisors on December 5, 1983.

Overview of Current Plan

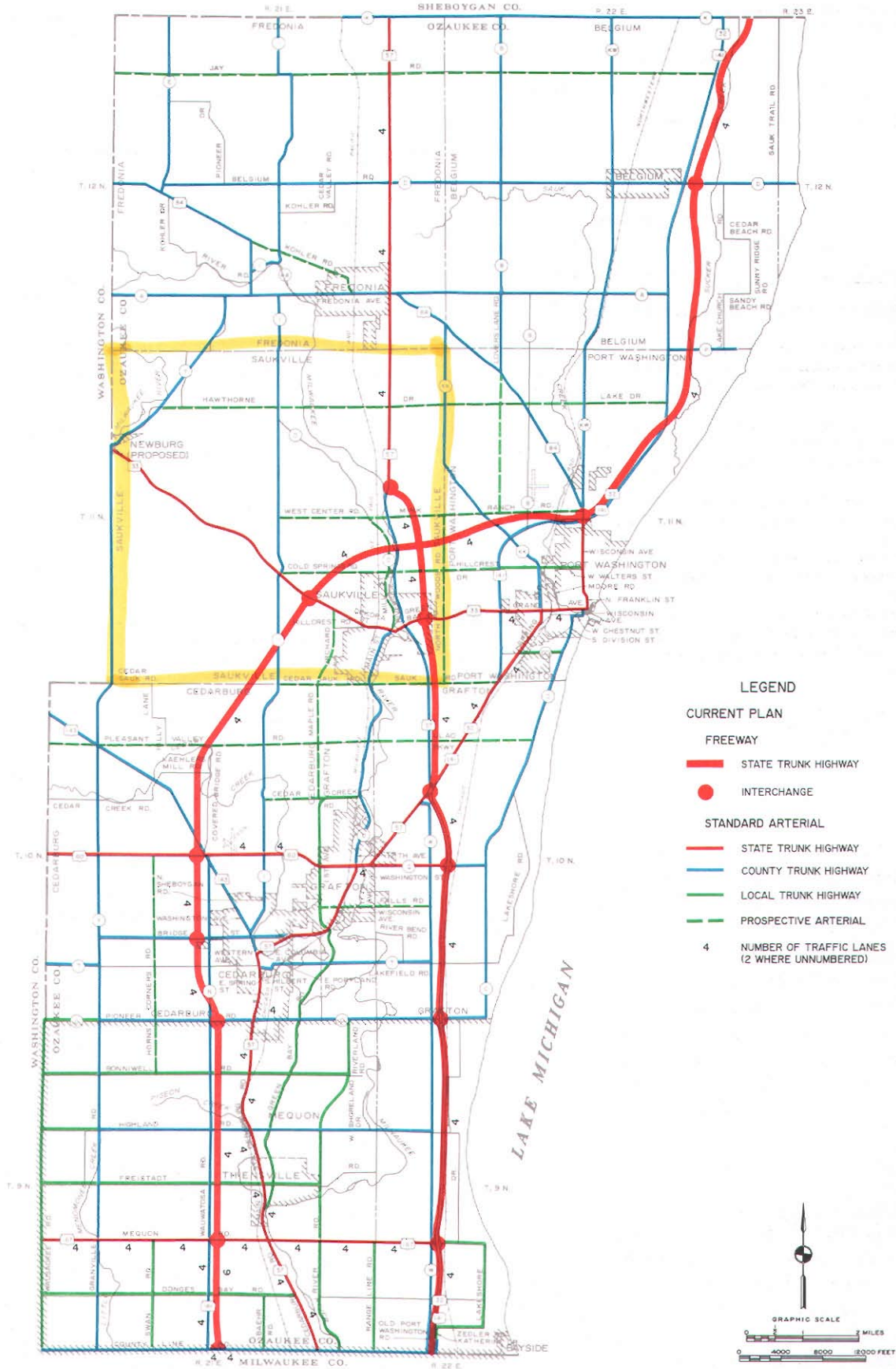
The jurisdictional highway system plan for Ozaukee County, then, as amended to date, is shown on Map 3. The arterial street and highway system recommended in the amended plan totals about 307 route miles of facilities. Of this total arterial system, 89 route miles, or about

29 percent, are proposed to constitute the state trunk highway system. This represents a decrease of 11 route miles from the present system of state trunk highways and connecting streets as of December 31, 1989. The state trunk highway system is expected to carry about 61 percent of the arterial traffic demand within the County. The current recommended state trunk highway system is identified by red lines on Map 3.

The county trunk highway system recommended in the amended plan consists of about 166 route miles, or an additional 54 percent of the total arterial network. This system would represent an increase of 28 route miles over the existing county trunk highway system. The county trunk highways are expected to carry about 22 percent of the arterial travel demand within the County. The current recommended county trunk highway system is identified by blue lines on Map 3.

Map 1

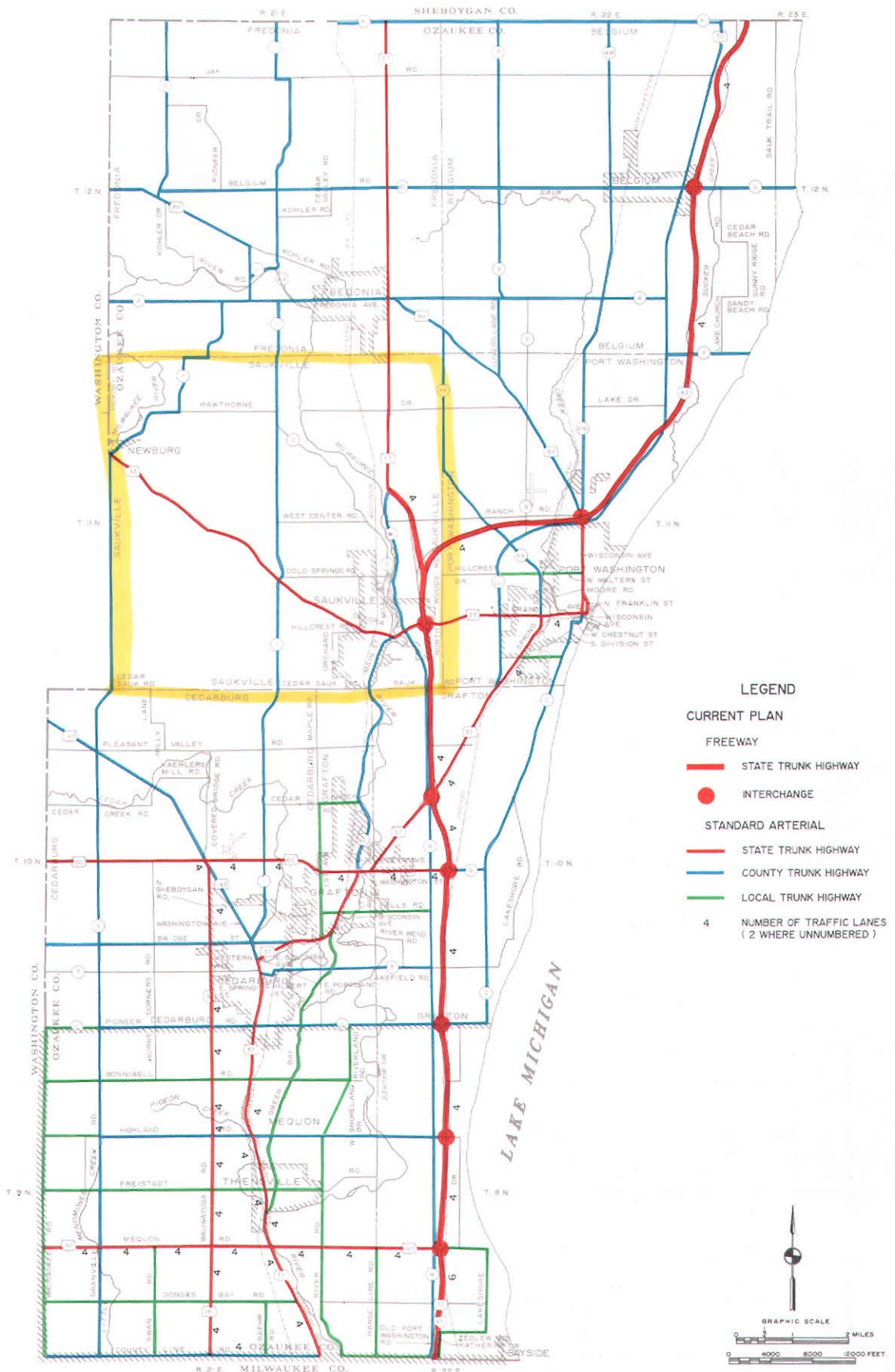
JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR OZAUKEE COUNTY ADOPTED IN 1973



Source: SEWRPC.

Map 2

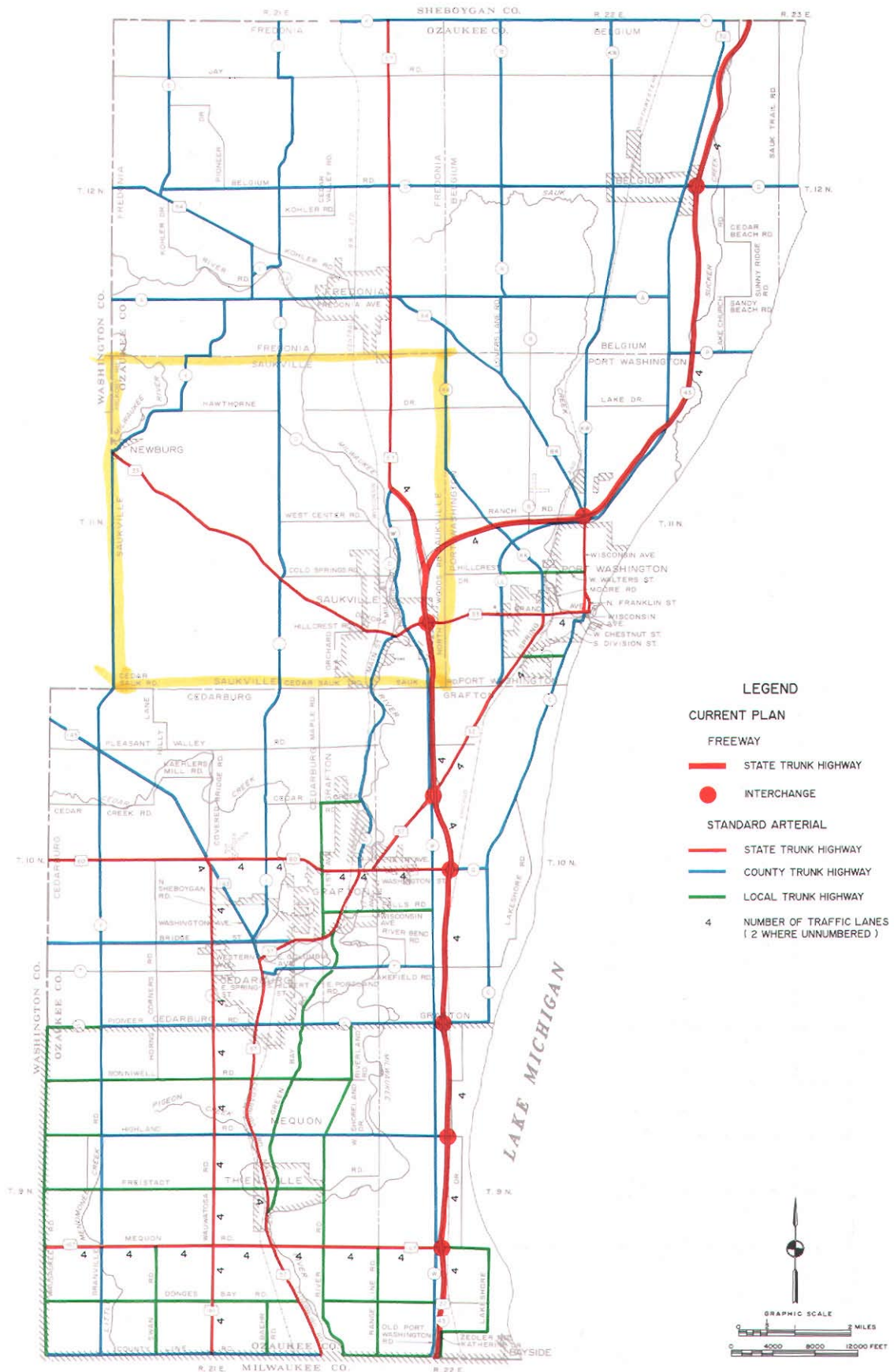
JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR OZAUKEE COUNTY AS AMENDED IN 1978



Source: SEWRPC.

Map 3

JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR OZAUKEE COUNTY AS AMENDED IN 1983



Source: SEWRPC.

Finally, the local trunk highway system element of the current plan consists of the remaining 52 route miles of arterial facilities, or about 17 percent of the total planned arterial network. This recommended local system is identified by green lines on Map 3.

It is important to recognize that this highway system plan has been prepared within the context of the adopted regional transportation system plan. That is, the highway system improvement and expansion recommended in the highway system element of the plan represents the improvements needed to meet the traffic demands from the adopted regional land use plan which may not be expected to be resolved with the substantial transit improvement and expansion and increased carpooling recommended in the adopted regional transportation system plan.

The transit element of the adopted regional transportation system plan, as shown on Map 4, recommends significant improvements to, and expansion of, the public transit system in southeastern Wisconsin. Recommendations are provided for both rapid, or express, elements of the transit system and for local elements of the system. The rapid, or express, elements are intended to link the major commercial, industrial, institutional, and recreational activity centers to each other and to the various residential communities. Rapid transit services are characterized by relatively high operating speeds, and preferential treatment, such as the provision of exclusive rights-of-way or reserved lanes. Such service generally has relatively low accessibility, that is, wide station spacings, which may vary from one-half to two miles or more. Local transit service is provided over arterial, collector, and local streets, generally by a grid system of lines at one-half mile to one-mile spacing, with stops every one-eighth to one-quarter mile to accommodate passenger boarding and alighting.

The adopted regional transportation plan recommends development of a system of approximately 56 miles of rapid transit routes, all within Milwaukee County. The plan recommends the initial institution of limited stop, express bus service on these routes, with eventual upgrading to light rail transit recommended. The plan further recommends that the first corridor to be considered for such upgrading be the northwest

corridor. These express bus/light rail rapid transit routes are intended in the plan to provide significantly improved public transit service, connecting the various activity centers in Milwaukee County to each other and providing an attractive alternative mode of travel to the personal automobile.

The rapid transit element of the plan also recommends the implementation of a commuter rail line from the Milwaukee central business district through the Cities of St. Francis, Cudahy, South Milwaukee, Oak Creek, Racine, and Kenosha into the Chicago area. The commuter rail line is proposed to be provided over the Chicago & North Western Transportation Company "Old Line," or lakefront railway line. The plan also identifies a potential for commuter rail service in the Milwaukee-Oconomowoc and Milwaukee-Grafton corridors as well.

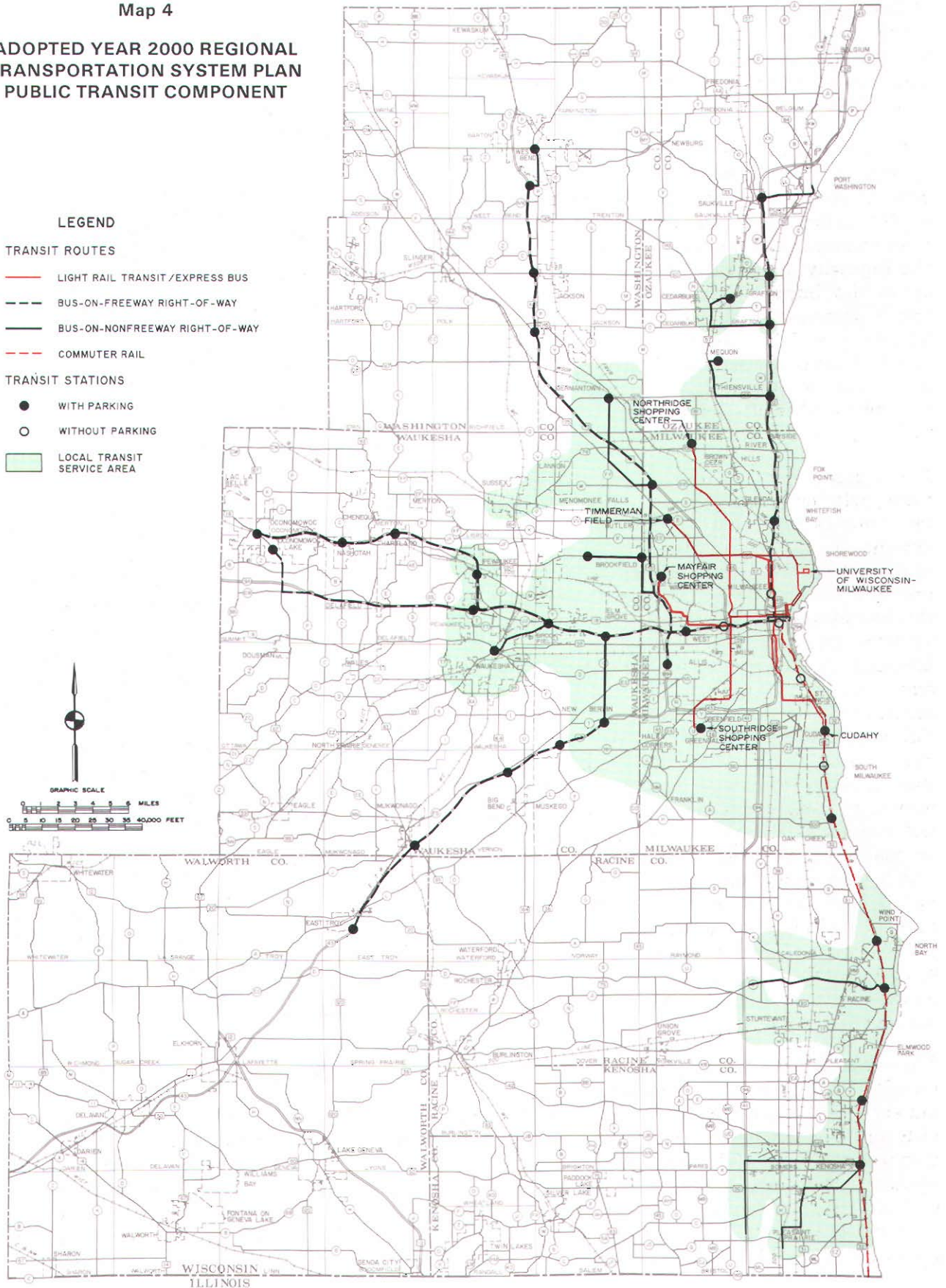
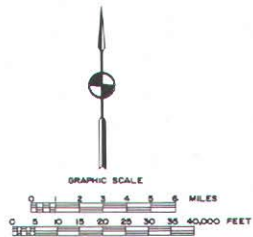
The plan also recommends the significant expansion and improvement of bus-on-freeway, or "freeway flyer," rapid transit services. The plan envisions extension of such service into outlying counties, including Ozaukee, Washington, Waukesha, Walworth, and Racine and Kenosha Counties. The expanded service would operate to and from the outlying areas both to and from the Milwaukee central business district, thus providing for "reverse" commuting. The service is envisioned to operate with a limited number of intermediate stops to provide connections with the proposed express bus and light rail routes in Milwaukee County and with local bus service. Importantly, the plan envisions that the freeway flyer buses will receive preferential treatment on the Milwaukee area freeway system as a result of the implementation of the freeway traffic management system proposed under the transportation system management component of the regional transportation system plan.

The regional transportation system plan recommends the ultimate extension of local transit service to all of the greater Milwaukee area, including northwestern and southern Milwaukee County, southern Ozaukee County, southeastern Washington County, and eastern Waukesha County, and the expansion of local transit service in Kenosha, Racine, and Waukesha areas to serve existing and planned development.

Map 4

**ADOPTED YEAR 2000 REGIONAL
TRANSPORTATION SYSTEM PLAN
PUBLIC TRANSIT COMPONENT**

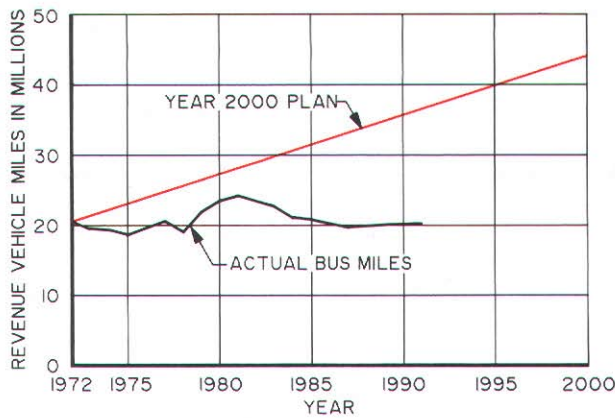
- LEGEND**
- TRANSIT ROUTES**
- LIGHT RAIL TRANSIT / EXPRESS BUS
 - - - BUS-ON-FREEWAY RIGHT-OF-WAY
 - BUS-ON-NONFREEWAY RIGHT-OF-WAY
 - - - COMMUTER RAIL
- TRANSIT STATIONS**
- WITH PARKING
 - WITHOUT PARKING
- LOCAL TRANSIT SERVICE AREA



Source: SEWRPC.

Figure 1

SOUTHEASTERN WISCONSIN URBAN PUBLIC TRANSIT SYSTEM BUS MILES OF SERVICE PROVIDED: 1972-2000



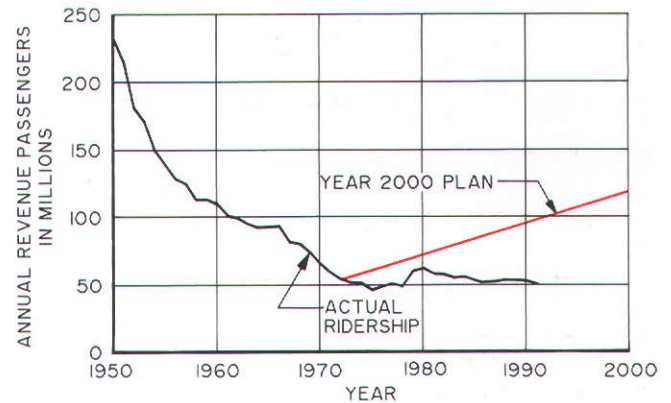
Source: SEWRPC.

Thus, the public transit component of the year 2000 adopted regional transportation system plan envisions a substantially expanded and improved transit system. The public transit component of the plan envisions the development of a true areawide transit system with a rapid transit element to serve a wide variety of trips and provide a competitive and attractive alternative to the automobile. Planned transit service levels, as measured by the vehicle miles of transit service provided and the average speed of a transit trip, were proposed to be nearly twice as good as existing levels, as shown in Figure 1. The plan envisions more than a doubling of the existing level of transit use in southeastern Wisconsin, as shown in Figure 2.

Within Ozaukee County, bus-on-freeway service is proposed to operate over three routes and serve six stations, as well as collect and distribute passengers on route extensions within the communities of Port Washington, Cedarburg, Grafton, Thiensville, and Mequon. The service would operate in both directions and would be provided at 12- to 15-minute headways in the morning and afternoon peak periods, and 30- to 60-minute headways in the midday and evening off-peak periods. The bus-on-freeway service would connect not only with the Milwaukee central business district, but also with the planned express bus routes. Under the plan, about 12,000 transit person trips would be

Figure 2

SOUTHEASTERN WISCONSIN URBAN PUBLIC TRANSIT SYSTEM RIDERSHIP: 1950-2000



Source: SEWRPC.

generated within Ozaukee County on an average weekday in the year 2000, representing about 4 percent of the approximately 300,000 total person trips which may be expected to be generated on all travel modes in the year 2000.

Functional Highway Improvements

Of the recommended 307-mile-total arterial street and highway network for Ozaukee County, about 261 miles, or 84 percent, are roads that may be categorized for functional improvement purposes by the term "system preservation," that is, existing facilities that over the plan implementation period will require either no improvement, resurfacing only, or in some cases reconstruction to provide the same traffic carrying capacity. An additional 23 miles, or 8 percent, may be categorized by the term "system improvement," that is, existing facilities that over the plan implementation period will need to be reconstructed and widened to provide additional traffic lanes for traffic carrying capacity. The remaining 23 miles, or 8 percent, may be categorized by the term "system expansion," that is, totally new arterial highway facilities.

Those functional highway projects undertaken in Ozaukee County since the adoption of the original jurisdictional highway system plan in 1973 and which fall into the system improvement and system expansion categories as

Table 2

**ARTERIAL STREET AND HIGHWAY SYSTEM IMPROVEMENT AND
EXPANSION PROJECTS COMPLETED IN OZAUKEE COUNTY: 1973-1989**

Facility	Limits	Miles	Project Type
State IH 43	STH 32-STH 57 interchange to the Ozaukee-Sheboygan County line in Ozaukee County	17.07	Expansion
STH 57	IH 43 interchange to CTH W in the Town of Saukville	1.78	Expansion
STH 57	Riverview Drive to Grand Avenue in the Village of Thiensville	0.28	Improvement ^a
STH 167	Wisconsin Central Ltd., railway line to IH 43 in the City of Mequon	3.40	Improvement
STH 181	Milwaukee-Ozaukee County line to STH 167 in the City of Mequon	2.00	Improvement
Subtotal	--	24.53	--
Local Falls Road	1st Avenue to Cedar Drive in the Village of Grafton	0.65	Expansion
Total	--	25.18	--

^aThis improvement was implemented by the Village of Thiensville.

Source: SEWRPC.

defined above, are identified in Table 2. These six system improvement and expansion projects are also shown on Map 5, along with 27 system preservation highway projects completed in Ozaukee County since 1973 in accordance with recommendations contained in the original jurisdictional highway system plan.

Taken together, the system improvement and expansion projects noted above total about 25 miles and represent about 55 percent of the total such miles of system improvement and expansion projects recommended in the plan as amended to date. The system preservation projects identified above total about 64 miles and represent about 25 percent of the system preservation work recommended in the plan. The status of all functional highway improvement projects by improvement category and by planned jurisdictional system is summarized in Table 3.

Jurisdictional Highway Transfers

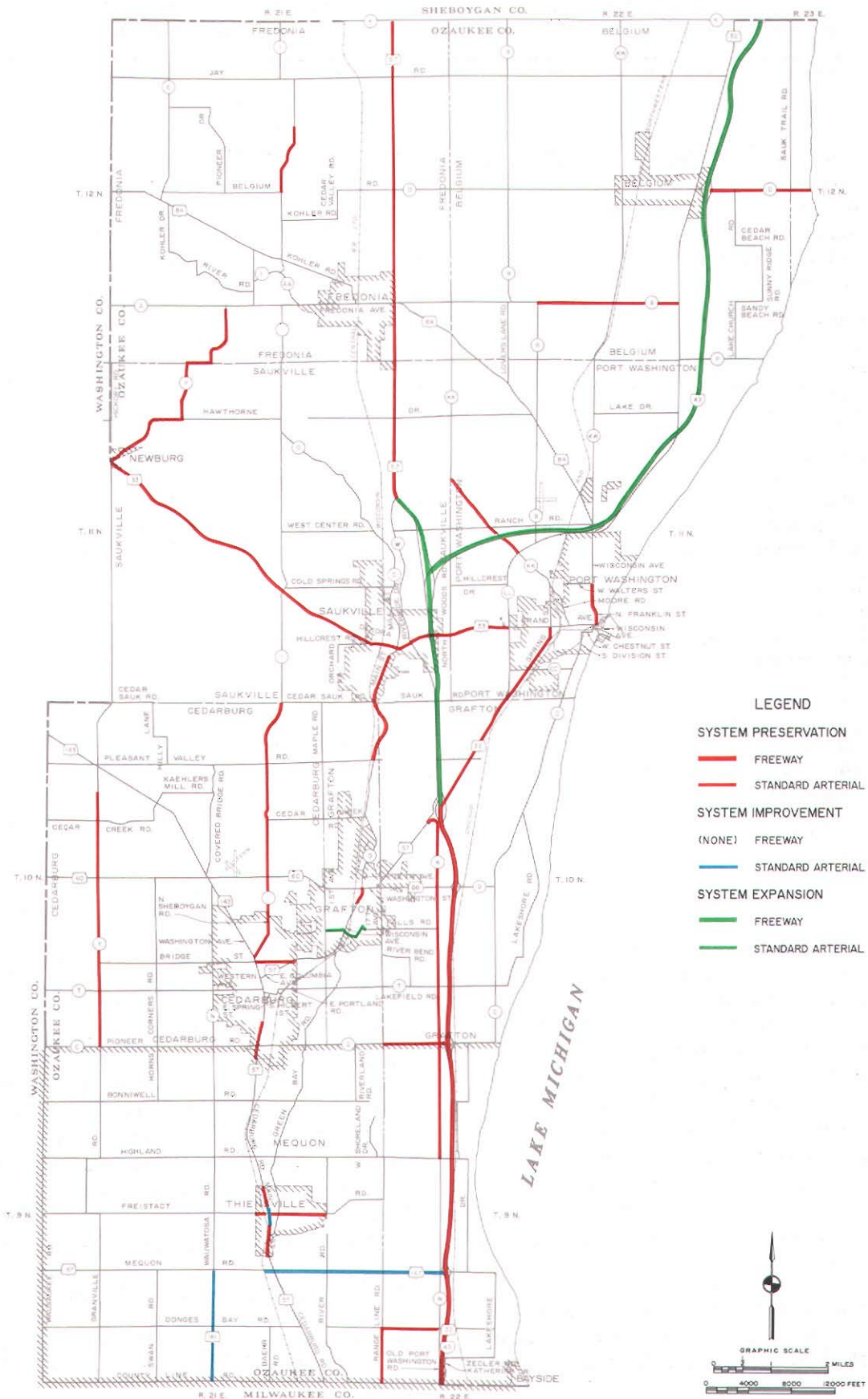
Progress made to date in implementing the jurisdictional transfer element of the Ozaukee County plan as amended are summarized in Table 4 and on Map 6. The amended plan proposed a net reduction in the number of miles on

the state trunk highway system, to be accomplished through the transfer of selected facilities to the county trunk highway network. A total of about 38 miles was identified for transfer to the county trunk highway system from the state trunk highway system. Approximately 20 miles, or about 53 percent, have been transferred, including former USH 141 from the Town of Port Washington south town line to the Sheboygan County line in the Town of Belgium and the Town of Port Washington; and STH 57 from STH 32 at IH 43 to CTH W in the Village of Saukville, Town of Grafton, and Town of Port Washington.

The addition of new facilities to the state trunk highway system, including IH 43 from STH 57/STH 32 to the Sheboygan County line and STH 167 from IH 43 to CTH W, and the transfer of former CTH Q from STH 57 to IH 43, totals approximately 20 miles and, thus, offsets the reduction in state trunk highway mileage to date. The transfer of the remaining 18 miles from the state trunk highway system to the county highway system is expected to be partially offset by the transfer of about seven miles of current county or local trunk highway facilities to the state trunk highway system.

Map 5

ARTERIAL STREET AND HIGHWAY PROJECTS COMPLETED
IN OZAUKEE COUNTY BY IMPROVEMENT CATEGORY: 1973-1989



Source: SEWRPC.

Table 3

**STATUS OF FUNCTIONAL HIGHWAY IMPROVEMENTS IN OZAUKEE COUNTY BY
IMPROVEMENT CATEGORY AND PLANNED JURISDICTIONAL SYSTEM: 1973-1989**

Improvement Category	State Trunk Highway	County Trunk Highway	Local Trunk Highway	Total
System Preservation				
Standard Arterials				
Length (miles)	49.2	163.7	48.0	260.9
Projects Completed (miles)	32.1	29.2	3.2	64.5
Percent Implemented	65	18	7	25
System Improvement				
Standard Arterials				
Length (miles)	21.4	2.0	--	23.4
Projects Completed (miles)	5.8	--	--	5.8
Percent Implemented	27	--	--	25
System Expansion				
Freeway				
Length (miles)	17.1	--	--	17.1
Projects Completed (miles)	17.1	--	--	17.1
Percent Implemented	100	--	--	100
Standard Arterials				
Length (miles)	1.8	--	4.0	5.8
Projects Completed (miles)	1.8	--	0.7	2.5
Percent Implemented	100	--	18	43
Total System				
Length (miles)	89.5	165.7	52.0	307.2
Projects Completed (miles)	56.8	29.2	3.9	89.9
Percent Implemented	63	18	8	29

Source: SEWRPC.

Of the 45 miles of highways proposed to be added to the county trunk highway system, nearly 22 miles, or about 49 percent, have been added to date. This mileage includes the transfer from the State to the County of portions of former USH 141 in the Towns of Belgium and Port Washington, former STH 57 in the Village of Saukville and the Towns of Grafton and Saukville, and Wausaukee Road in the Village of Germantown and the City of Mequon. Ultimately, this segment of Wausaukee Road is proposed to be returned to the local trunk highway system.

A total of about four miles of highway has been added to the local trunk highway system. Approximately two miles of former county trunk

highway facilities have been transferred to local jurisdiction, including CTH C from STH 57 to the east corporate limit of the City of Cedarburg in the City of Cedarburg and CTH M from Freistadt Road to a point 0.5 mile south of Bonniwell Road in the Village of Germantown and the City of Mequon. Ultimately, the segment of CTH C is proposed to be returned to the county trunk highway system. The remaining mileage represents the addition of Falls Road from 1st Avenue to CTH W in the Village and Town of Grafton to the local highway system.

PROPOSED PLAN REVISIONS

The Technical and Intergovernmental Coordinating and Advisory Committee on Jurisdic-

tional Highway System Planning for Ozaukee County met first on June 21, 1990, and again on July 26, 1990, and identified the following potential amendments to the county jurisdictional highway system plan which should be evaluated by the Commission staff for Committee consideration:

- Consideration of the extension of Cold Springs Road from CTH O to IH 43/STH 57.
- Consideration of the need to improve IH 43 between the Milwaukee-Ozaukee County line and STH 167 to provide additional capacity.
- Consideration of the need for a new interchange on IH 43 at Highland Road.
- Consideration of the need for the planned improvement of Wauwatosa Road between STH 167 and CTH C, of CTH N between CTH C and STH 143, of STH 143 between CTH N and STH 60, and of STH 60 between STH 143 and IH 43.
- Consideration of the need to improve Port Washington Road between the Milwaukee-Ozaukee County line and Highland Road.
- Consideration of the planned jurisdictional transfer of STH 143 to the county trunk highway system.
- Consideration of the jurisdictional transfer of STH 57 between STH 60 and STH 167 to the county trunk highway system.
- Consideration of the need to improve STH 57 between IH 43 and the Ozaukee-Sheboygan County line.
- Consideration of the need to improve STH 57 to add additional capacity between the Milwaukee-Ozaukee County line and STH 167.
- Consideration of the need to improve STH 33 between the Washington-Ozaukee County line and STH 32.
- Consideration of the need for the long-planned extension of River Road between Highland Road and Bonniwell Road and the long-planned construction of the River Road structure over the Milwaukee River.

- Consideration of the need to improve Freistadt Road to provide additional capacity between Wauwatosa Road and River Road.
- Consideration of changes in the existing and planned jurisdiction of Freistadt Road, River Road, and Highland Road.
- Consideration of alternative routings of the long-planned one-way pair for STH 32 in the City of Port Washington central business district.
- Consideration of the need to improve Pioneer Road (CTH C) to provide additional capacity between Wauwatosa Road and IH 43.
- Consideration of the need to improve Donges Bay Road to provide additional capacity between STH 181 and STH 57 and to extend Industrial Drive between STH 167 and Donges Bay Road.
- Reevaluation of the scenic drive element of the adopted jurisdictional highway system plan.
- Reevaluation of the long-standing recommendation of the adopted jurisdictional highway system plan to provide a contiguous county trunk highway system through cities and villages of the County.

Extension of Cold Springs Road from CTH O to IH 43/STH 57

The representative of the Village of Saukville on the Advisory Committee requested that consideration be given to the extension of Cold Springs Road from CTH O to IH 43/STH 57. The potential benefits cited with respect to the extension of Cold Springs Road included the potential to provide an additional connection between the Village of Saukville industrial park and IH 43/STH 57. Another benefit cited was that the extension of Cold Springs Road would provide a second Milwaukee River crossing for the Village which has particular importance for the provision of emergency services. Currently, the nearest alternative Milwaukee River crossing to the south is STH 60 in the Village of Grafton, a distance of 4.8 miles, and STH 84 in the Village of Fredonia to the north, a distance of 7.4 miles.

Three sets of alternatives were considered for the suggested extension of Cold Springs Road. One

Table 4

**JURISDICTIONAL HIGHWAY SYSTEM TRANSFERS AND
NEW FACILITIES COMPLETED IN OZAUKEE COUNTY: 1973-1989**

Facility	Limits	Municipality	Length (miles)
Transfers to State/New State Facilities County to State CTH Q	STH 57 to IH 43	Village of Grafton Town of Grafton	1.58
New State Facility IH 43	STH 32/57 to Sheboygan County Line	Village of Saukville Town of Belgium Town of Grafton Town of Port Washington Town of Saukville Town of Saukville	17.07
STH 57	IH 43 to CTH W	Town of Saukville	1.78
Subtotal	--	--	18.85
State Total	--	--	20.43
Transfers to County/New County Facilities State to County USH 141	STH 32 to Sheboygan County line	Town of Belgium Town of Port Washington Village of Saukville Town of Grafton Town of Saukville	14.20
STH 57	STH 32 to CTH W		5.80
Subtotal	--	--	20.00
Local to County Wausaukee Road ^a	From a point 0.5 mile south of Bonniwell Road to CTH C/Pioneer Road	City of Mequon Village of Germantown	1.50
County Total	--	--	21.50
Transfers to Local/New Local Facilities County to Local CTH C ^b	STH 57 to City of Cedarburg east corporate limit	City of Cedarburg	0.62
CTH M	Freistadt Road to a point 0.5 mile south of Bonniwell Road	City of Mequon Village of Germantown	1.50
Subtotal	--	--	2.12
New Local Facility Falls Road	1st Avenue to Cedar Drive	Village of Grafton	0.65
Local Total	--	--	2.77

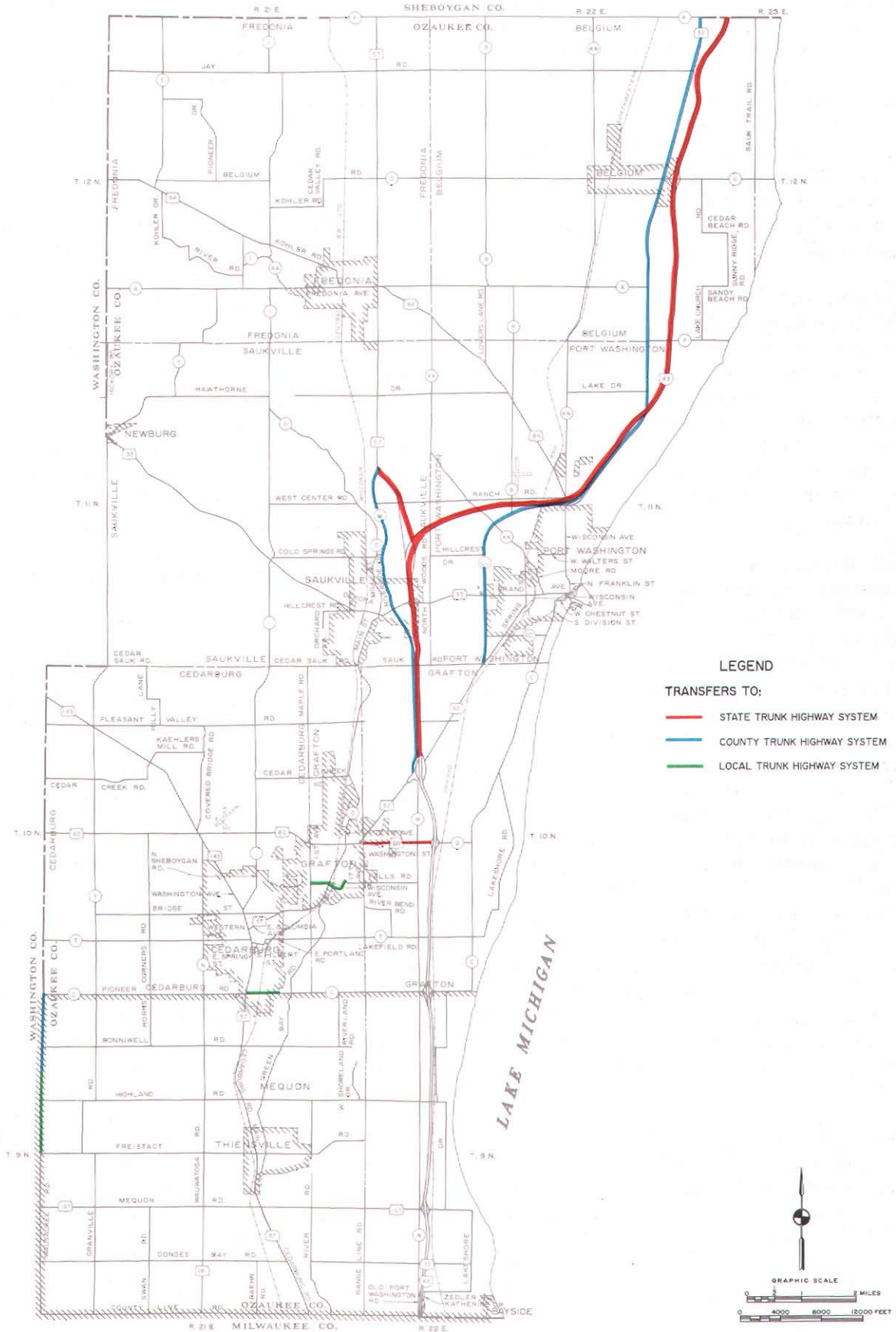
^aThis facility recommended for transfer to local trunk highway system.

^bThis facility recommended for transfer to county trunk highway system.

Source: SEWRPC.

Map 6

JURISDICTIONAL HIGHWAY SYSTEM TRANSFERS COMPLETED IN OZAUKEE COUNTY: 1973-1989



Source: SEWRPC.

set of alternatives would extend Cold Springs Road only to Riverside Drive (CTH W) to provide an additional Milwaukee River crossing. Another set of alternatives would extend Cold Springs Road to, and provide an interchange of Cold Springs Road with, STH 57 and/or IH 43. Another set of alternatives would utilize an extended Cold Springs Road, or an extended W. Center Road and Mink Ranch Road, as a new location for STH 33, thereby providing a bypass of the Village of Saukville. This set of alternatives would also include an interchange with IH 43 and/or STH 57.

Map 7 shows the location of the Milwaukee River floodway at Cold Springs Road. Construction of the structure required for the extension of Cold Springs Road over the river would entail, depending on its alignment, partial placement of the structure and connecting roadways on fill. This may be expected to raise the regulatory flood profile upstream of the bridge and require either appropriate legal arrangements or acquisition of easements.

Three subalternatives possible under the first set of alternatives, Alternatives 1A, 1B, and 1C, which would extend Cold Springs Road to Riverside Drive (CTH W), are shown on Map 8. The direct extension, Alternative 1A, would require the most fill within the floodway and has an estimated construction cost of \$2.0 million. The northerly extension, Alternative 1B, has an estimated construction cost of \$2.7 million and would be located where the floodway is narrower. The southerly extension, Alternative 1C, has an estimated construction cost of \$2.2 million and would connect to a segment of Riverside Drive which is not within the floodway. The southerly extension option would entail the acquisition of three residences. At an Advisory Committee meeting of November 8, 1990, the Village of Saukville representative and the Advisory Committee identified Alternative 1B as the preferred option of the three subalternatives because of its smaller impact on the floodway.

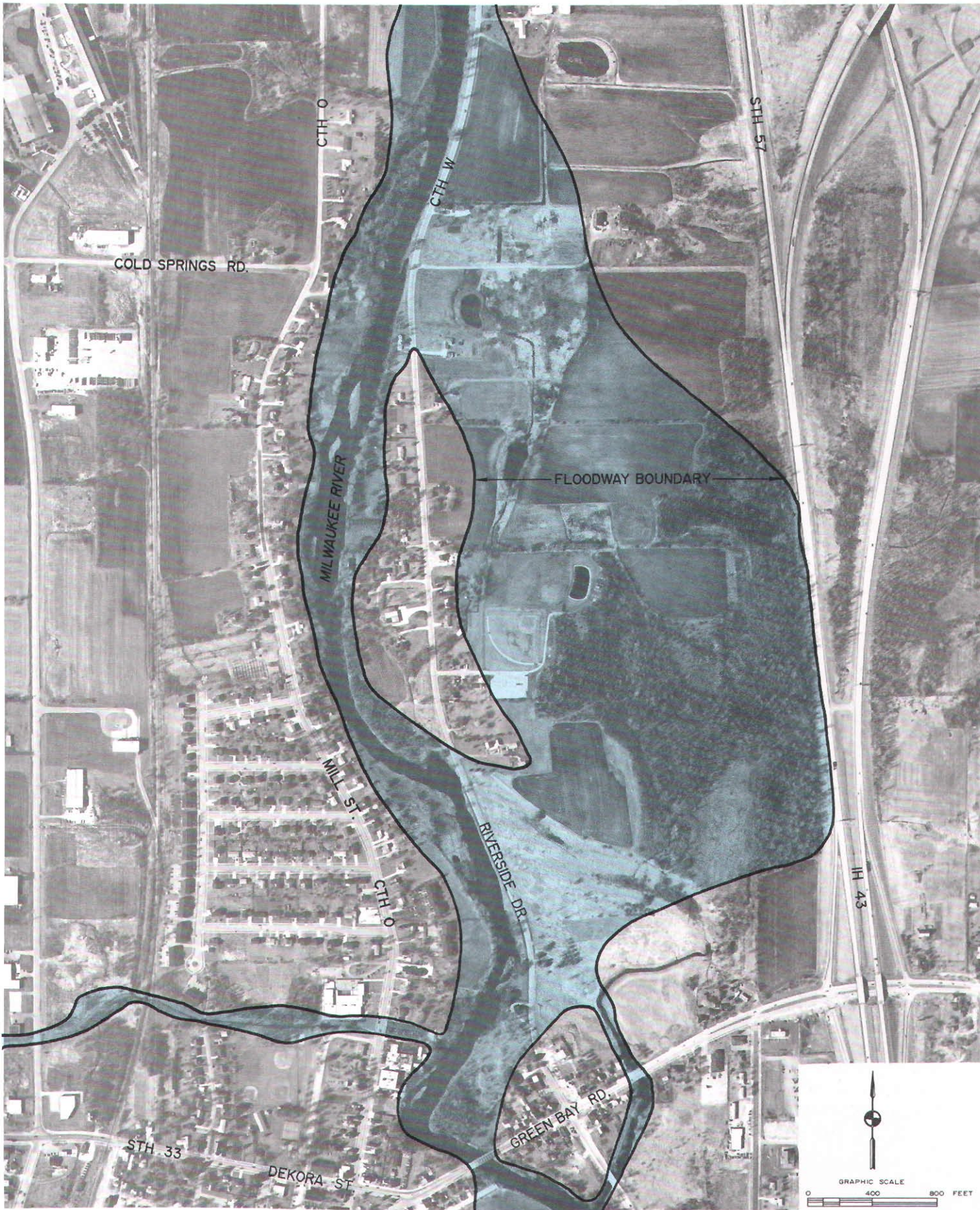
With respect to the second set of alternatives, which would extend Cold Springs Road to a new interchange with IH 43 and/or STH 57, it must be recognized that the U. S. Department of Transportation, Federal Highway Administration, has a policy which requires justification of additional interchanges on the interstate high-

way system. The intent of this policy is to maintain adequate control of access to the interstate highway system to ensure safe and efficient traffic operations. Key requirements for the justification of new access include documentation of the purposes for the additional access, a description of existing and proposed access, the distance to adjacent interchanges, and available alternatives.

The purposes for the proposed access were previously identified. Current access to IH 43 from the Village of Saukville is via STH 33; the proposed access would provide an additional access via the extension of Cold Springs Road. The proposed new interchange with Cold Springs Road would not provide substantially more direct access to IH 43 from the Village or its industrial park. The proposed interchange would provide access to IH 43 which would not entail traveling through the central business district of the Village. The proposed interchange would also provide some traffic relief to STH 33 through the Village by the removal of about 1,400 vehicles per average weekday from the existing volumes of 4,900 to 15,100 vehicles per average weekday and about 3,000 vehicles per average weekday from forecast future year 2010 traffic volume of 7,500 to 18,000 vehicles per average weekday. However, even with the roadway extension and the new interchange, there will be a need to provide four traffic lanes on STH 33 within the Village. Thus, the roadway extension and interchange would not eliminate any otherwise needed roadway improvements and associated costs.

The existing interchange spacing on IH 43 is approximately 0.85 mile between the existing interchanges of IH 43 with STH 57 and of IH 43 with STH 33 and approximately 3.2 miles between the existing interchanges of IH 43 with STH 57 and of IH 43 with STH 32. It may be noted that the spacing between the IH 43-STH 33 and the IH 43-STH 57 interchanges is less than the desirable standard for urban interchange spacing, which is one mile or more. The desirable rural interchange spacing standard is a distance of six miles or more. Provision of direct access to Cold Springs Road to and from the south to IH 43 would exacerbate an existing spacing problem, since the ramp terminals for such access would probably be less than one-half mile from the IH 43-STH 33 ramp terminals and the IH 43-STH 57 ramp terminals.

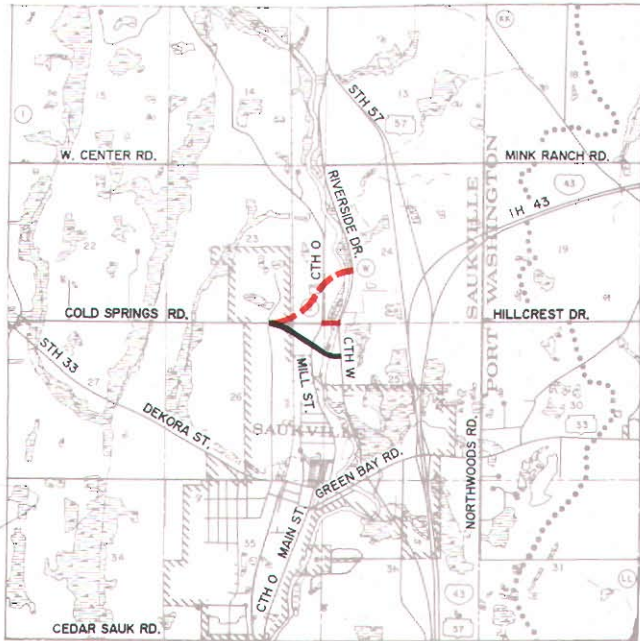
MILWAUKEE RIVER FLOODWAY IN THE VICINITY OF COLD SPRINGS ROAD



Source: SEWRPC.

Map 8

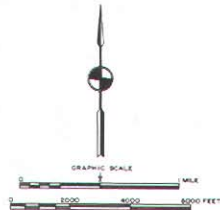
OPTIONS FOR THE EXTENSION
OF COLD SPRINGS ROAD TO RIVERSIDE
DRIVE (CTH W): ALTERNATIVE 1



LEGEND

OPTIONAL ALIGNMENTS

- ALTERNATIVE 1 A
- - - ALTERNATIVE 1 B
- ALTERNATIVE 1 C



Source: SEWRPC.

Map 9 shows the four options for the alternative which would provide for the extension of Cold Springs Road to STH 57 and/or IH 43. Alternative 2A would provide a full interchange with IH 43. It would also provide an interchange with STH 57 to and from the south, since STH 57 south of Cold Springs Road is routed jointly with IH 43. It has an estimated cost of \$9.5 million and may be expected to carry about 3,000 vehicles per average weekday. Alternative 2B would provide a full interchange with STH 57. It would also provide an interchange with IH 43 to and from the south, as IH 43 south of Cold Springs Road is routed jointly with STH 57. It has an estimated cost of \$10.7 million and may be expected to carry about 2,000 vehicles per average weekday. Alternative 2C would provide a full interchange with both IH 43 and STH 57

at an estimated cost of \$11.2 million and it may be expected to carry about 3,200 vehicles per average weekday.⁵

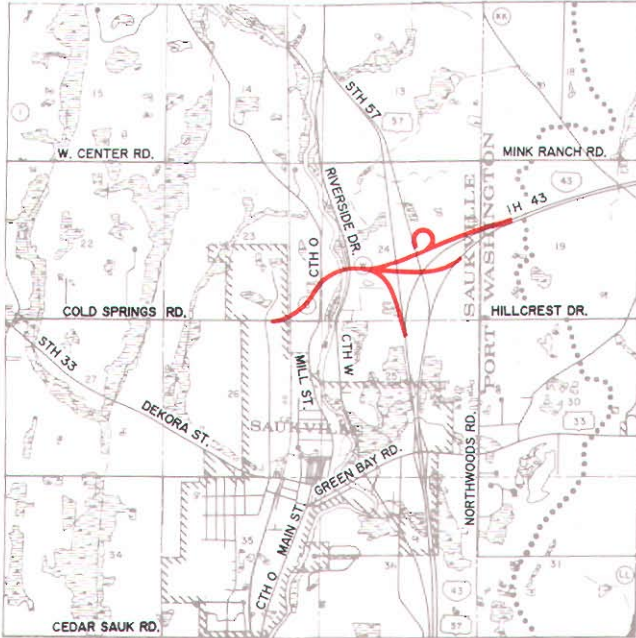
Each of these three subalternatives may be expected to carry relatively modest design year 2010 traffic volumes of 2,000 to 3,200 vehicles per average weekday, entail relatively substantial construction costs of \$9.5 to \$11.2 million, and result in potential negative impacts on traffic safety and operations because of inadequate interchange spacing. None of the subalternatives would provide sufficient relief to reduce the need to improve STH 33 to four traffic lanes by the year 2010. Furthermore, no congestion problems at the existing interchange IH 43 with STH 33 which would require such a potential interchange for relief exist today or are anticipated by the design year 2010. One additional subalternative was identified which would provide the desired interchange at a lower construction cost. This subalternative, Alternative 2D, is also shown in Map 9. However, it also has a relatively substantial capital cost of \$6.2 million for the forecast 1,000 vehicles per average weekday which may be expected to use the interchange. This subalternative provides a full interchange with STH 57, and with IH 43 to and from the south. A connection, however, could also be made to an existing full interchange with IH 43 at STH 32 via Mink Ranch Road.

The third set of alternatives which the Advisory Committee requested be considered was a STH 33 bypass of the Village of Saukville. Two basic alternatives were identified. Alternative 3A, shown on Map 10, would route STH 33 over a combination of W. Center Road and Mink Ranch Road. It would entail a new river crossing between W. Center Road and Mink Ranch Road and would include a new diamond interchange between Mink Ranch Road and STH 57. State Trunk Highway 33 would be routed over STH 57 between the bypass and existing STH 33. Alternative 3B, also shown in Map 10, would route

⁵The three alternatives, 2A, 2B, and 2C, assume the northerly alternative extension of Cold Spring Road. Under the alternative of a direct extension of Cold Spring Road, the estimated construction cost of Alternatives 2A, 2B, and 2C would be \$9.3 million, \$10.3 million, and \$10.8 million, respectively.

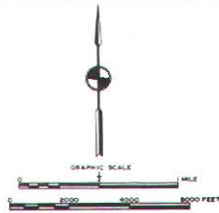
ALTERNATIVES FOR THE EXTENSION OF COLD SPRINGS ROAD TO A NEW INTERCHANGE WITH IH 43

ALTERNATIVE 2A

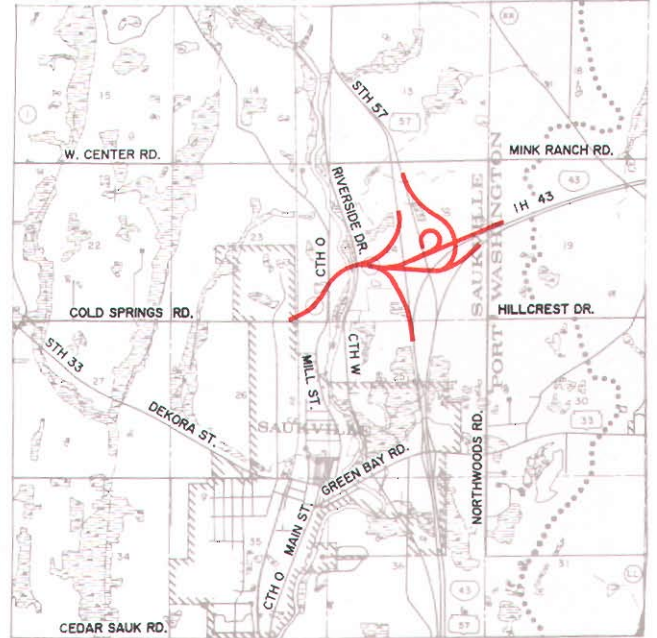


LEGEND

— ALTERNATIVE ALIGNMENT

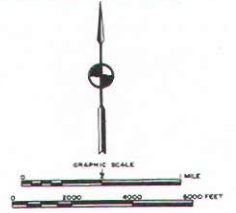


ALTERNATIVE 2C

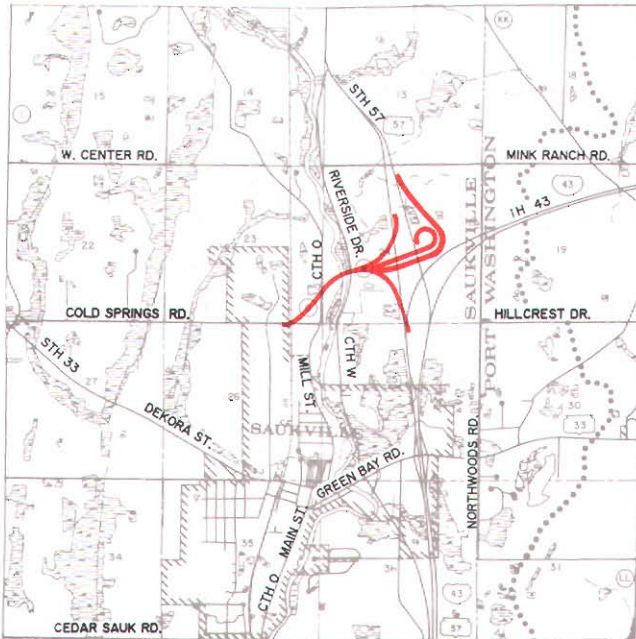


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— ALTERNATIVE ALIGNMENT

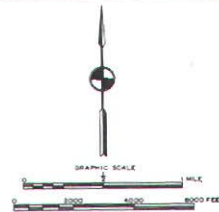


ALTERNATIVE 2B

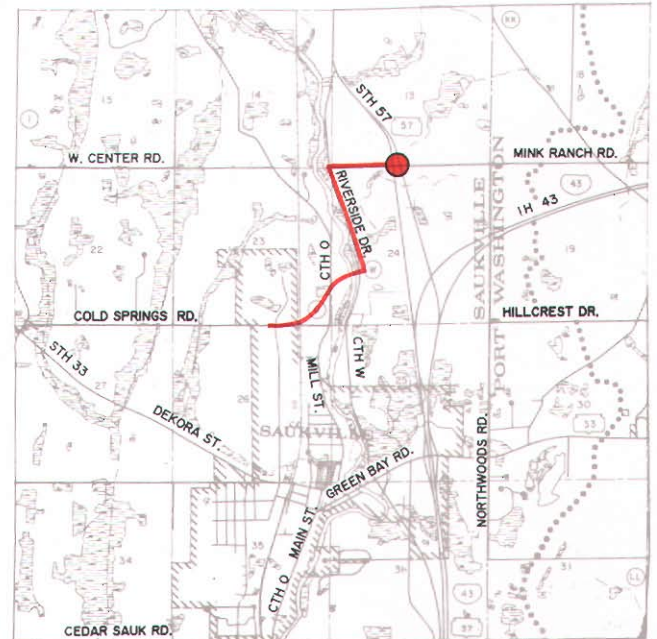


LEGEND

— ALTERNATIVE ALIGNMENT



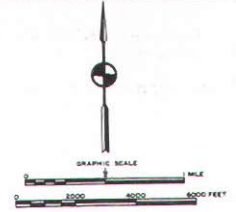
ALTERNATIVE 2D



LEGEND

— ALTERNATIVE ALIGNMENT

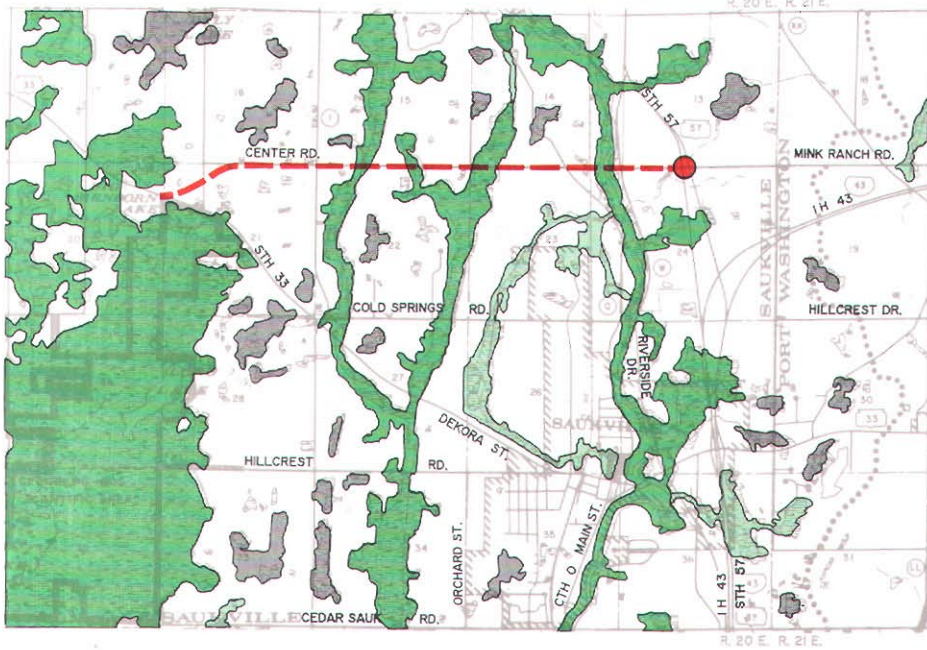
● PROPOSED INTERCHANGE



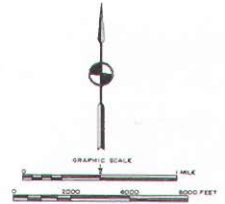
Map 10

ALTERNATIVES FOR THE EXTENSION OF CENTER ROAD BETWEEN CTH O AND STH 57

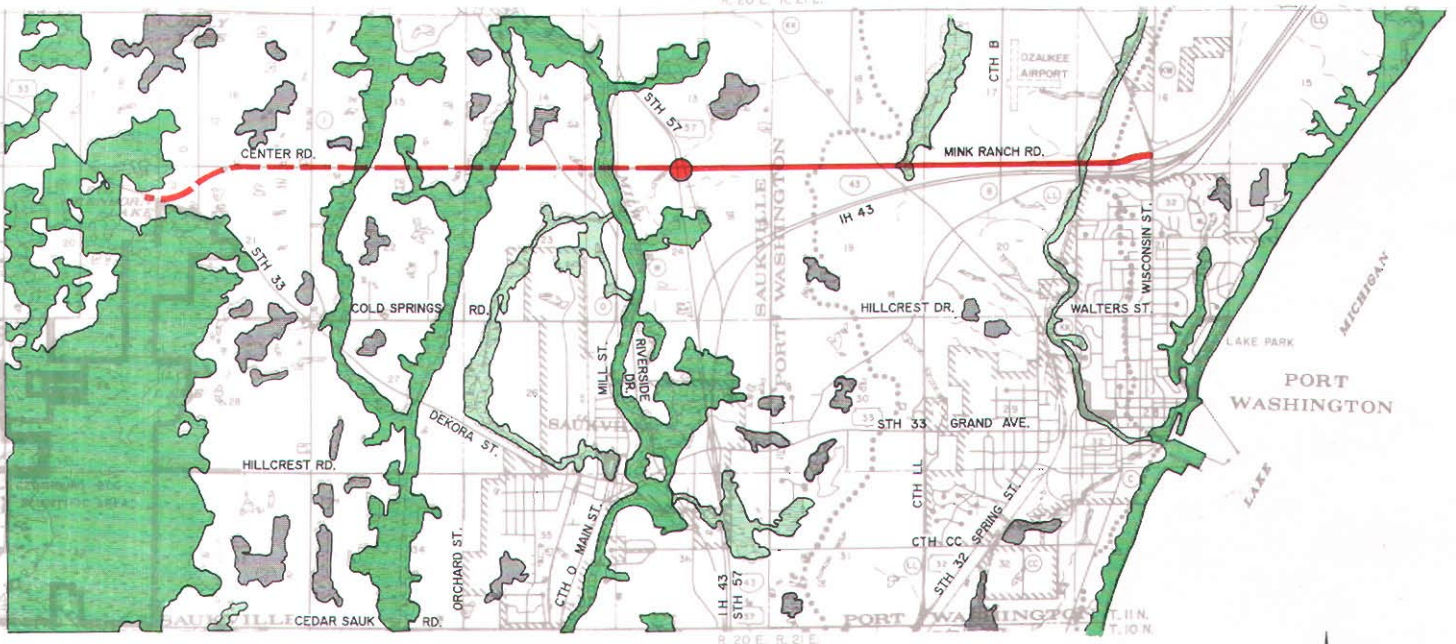
ALTERNATIVE 3A



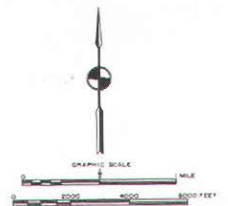
- LEGEND**
- PRIMARY ENVIRONMENTAL CORRIDOR
 - SECONDARY ENVIRONMENTAL CORRIDOR
 - ISOLATED NATURAL AREA
 - WETLANDS
 - PROPOSED INTERCHANGE
 - ALTERNATIVE ALIGNMENT



ALTERNATIVE 3A: SUBALTERNATIVE 1

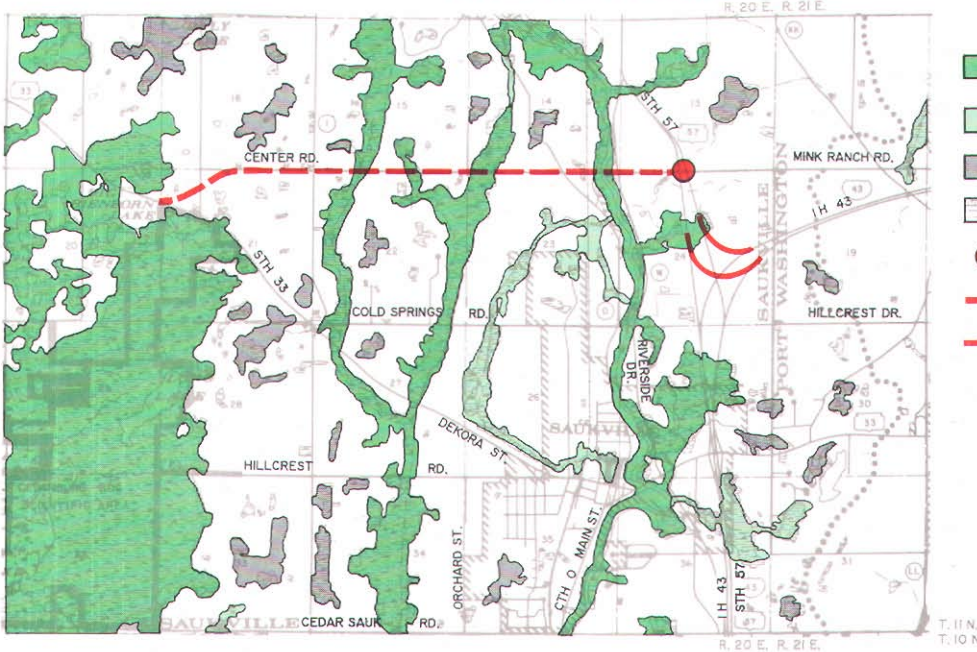


- LEGEND**
- PRIMARY ENVIRONMENTAL CORRIDOR
 - SECONDARY ENVIRONMENTAL CORRIDOR
 - ISOLATED NATURAL AREA
 - WETLANDS
 - PROPOSED INTERCHANGE
 - ALTERNATIVE ALIGNMENT NO. 3A
 - OPTION NO. 1



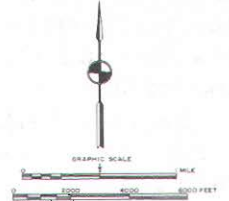
Map 10 (continued)

ALTERNATIVE 3A: SUBALTERNATIVE 2

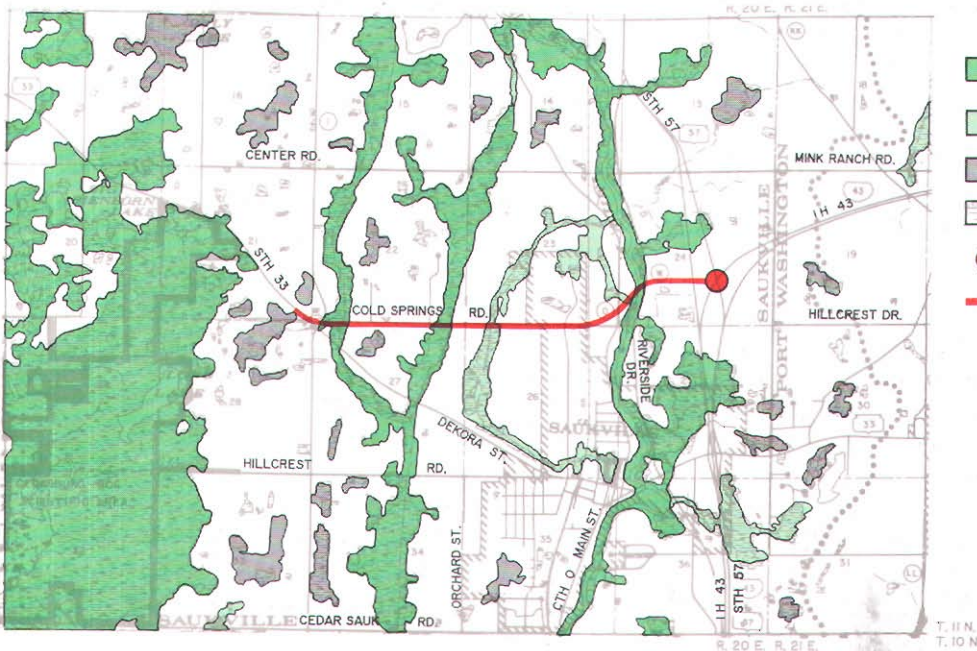


LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL AREA
- WETLANDS
- PROPOSED INTERCHANGE
- ALTERNATIVE ALIGNMENT NO.3A
- OPTION NO. 2

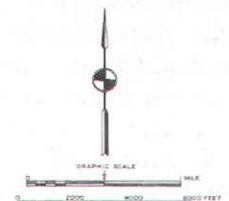


ALTERNATIVE 3B



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL AREA
- WETLANDS
- PROPOSED INTERCHANGE
- ALTERNATIVE ALIGNMENT



Source: SEWRPC.

STH 33 over an improved Cold Springs Road and provide a direct connection to STH 57 and IH 43. Other alternatives which would provide a bypass to the south of the Village on new alignment were also identified. Such bypass alternatives would provide the desired additional river crossing, but would not improve access to and from the Village of Saukville industrial park. Therefore, an alternative bypass on an alignment south of the Village was eliminated from further consideration.

Provision of an STH 33 bypass on the alignment identified in Alternative 3A may be expected to divert approximately 4,000 vehicles per average weekday from the existing route of STH 33 through the Village of Saukville in the forecast design year 2010, including about 1,000 vehicle trips per average weekday to and from the Saukville industrial park. Thus, it may be expected that under this alternative the forecast design year 2010 average weekday traffic volumes on existing STH 33 within the Village would range between 4,500 vehicles and 15,100 vehicles per average weekday. This compares to a forecast 7,500 to 18,000 vehicles per average weekday under a do-nothing alternative. Because the forecast average weekday traffic volumes in the design year 2010 may be expected to be as high as 14,000 vehicles per average weekday and exceed the design capacity of a two-lane arterial facility of approximately 13,000 vehicles per average weekday, the need to provide four traffic lanes through the Village would not be eliminated under this alternative. The addition of lanes could, however, be postponed.

Provision of an STH 33 bypass north of the Village of Saukville under Alternative 3A on a combination of W. Center Road and Mink Ranch Road may be expected to require the improvement of the existing roadways to high standard two-lane facilities and to require the construction of a direct connection between STH 33 and W. Center Road. Construction of a new roadway between CTH O and CTH W would be necessary as well to provide the crossing of the Milwaukee River and the necessary connection of W. Center Road with Mink Ranch Road. The construction of a diamond interchange between Mink Ranch Road and STH 57 would accommodate traffic to and from the north and south on STH 57, and to and from the south on IH 43.

The estimated cost of Alternative 3A is \$6.5 million. Implementation of this alternative may be expected to have a negative impact on the environmental corridors and primary agricultural lands through which the roadways would pass, as shown on Map 10. Further, depending upon final design of the connection between W. Center Road and Mink Ranch Road, this connection might sever Ehlers County Park, between the Milwaukee River and CTH W, from a point about 400 feet north of Mink Ranch Road to a point about 1,900 feet south of Mink Ranch Road. This alternative may be expected to require acquisition of approximately 34 acres of land and an outbuilding in the northeast quadrant of the intersection of Mink Ranch Road and STH 57. While this alternative does satisfy the objective of providing an additional crossing over the Milwaukee River, access to the industrial park would be only marginally improved. Industrial park-oriented traffic to and from the north could use CTH O to access the new interchange with STH 57 but, because of travel indirection, the improvement in access over the existing STH 33 interchange would be modest. The structural improvement of CTH O may be necessary to accommodate increased truck loadings, at an estimated cost of \$0.75 million. The total cost of this alternative, then would approximate \$7.3 million.

Two subalternatives of Alternative 3A were considered to provide a connection between Mink Ranch Road at STH 57 and IH 43 to and from the north. The first, Subalternative 1, would consist of the improvement of Mink Ranch Road between STH 57 and STH 84 to a high standard two-lane facility. Access to IH 43 would be via STH 84 to the IH 43/STH 32 interchange. The second, Subalternative 2, would consist of the construction of ramps between STH 57 and IH 43 within the existing IH 43-STH 57 interchange to accommodate traffic to and from the north on IH 43. Approximately 800 vehicles per average weekday may be expected to make these movements. The estimated cost to improve Mink Ranch Road between STH 57 and STH 84 is \$2.2 million. The estimated cost to construct the ramps within the existing interchange is \$2.3 million. The total cost of implementing Alternative 3A and Subalternative 1 is estimated to be \$9.5 million; and the total cost to implement Alternative 3A and Subalternative 2 is estimated to be \$9.6 million.

In addition to its cost and the relatively low forecast design year average weekday traffic volumes expected, Subalternative 1 may be expected to have a negative impact on the environmental corridor and the primary agricultural lands through which the roadway passes. This subalternative may be expected to require the acquisition of about 12.5 additional acres of land. It should be noted that the vertical alignment of Mink Ranch Road between CTH B and STH 84 includes long, steep grades. Modification of the vertical alignment may be expected to require added right-of-way, substantial fill, and a structure over the Chicago & North Western Transportation Company trackage, raising the cost of this option even further.

In addition to the cost of construction and the relatively low forecast design year average weekday traffic volumes expected, Subalternative 2 may be expected to have a negative impact on traffic safety and operations due to resultant substandard ramp spacing. Provision of a ramp from southbound STH 57 to northbound IH 43 may result in substantial weaving between the on-ramp from Mink Ranch Road and the off-ramp to IH 43. This weaving movement, in particular, may be expected to degrade traffic safety and operations at the interchange. Access to the industrial park to and from the north on IH 43 would be improved for businesses located at the northern end of the industrial park, but would remain essentially unchanged for businesses located at the southern end of the industrial park.

The second alternative STH 33 bypass considered, Alternative 3B, would provide the bypass along Cold Springs Road with a full interchange with IH 43 and STH 57. Alternative 3B may be expected to divert approximately 6,000 vehicles per average weekday from the existing route of STH 33 through the Village of Saukville in the design year 2010, including about 3,000 vehicle trips per average weekday to and from the Village industrial park. Thus, it may be expected that the forecast design year 2010 average weekday traffic volumes on existing STH 33 within the Village would range between 4,500 vehicles and 12,000 vehicles per average weekday under this bypass alternative. This compares to a forecast 7,500 to 18,000 vehicles per average weekday under a do-nothing alternative. Implementation of this bypass alternative, therefore, may be expected to postpone beyond

the year 2010 the need to provide four traffic lanes on the existing route of STH 33 through the Village as average weekday traffic volumes on existing STH 33 would remain slightly under the estimated design capacity of a two-lane facility of 13,000 vehicles per average weekday in the plan design year 2010. The estimated cost of the improvements delayed to provide four traffic lanes and a new four-lane structure over the Milwaukee River is \$1.1 million, which is relatively small compared to the \$13.2 million cost of this bypass alternative.

This alternative does satisfy both the objective of providing an additional crossing over the Milwaukee River and the objective of improving access to the Village of Saukville industrial park. It would also enhance industrial park access to and from the west on STH 33. The estimated cost of providing a direct connection between STH 33 and Cold Springs Road and the improvement of Cold Springs Road to a high standard two-lane facility is \$2.2 million. The total cost of providing an STH 33 bypass, including the extension of Cold Springs Road across the Milwaukee River and the provision of an interchange which would permit all movements between both IH 43 and STH 57 and Cold Springs Road, is estimated to be \$13.2 million.

The implementation of this alternative, however, may be expected to have a negative impact on the environmental corridors and primary agricultural lands through which Cold Springs Road is located and would require the acquisition of approximately 12 acres of land between STH 33 and CTH O. Interchange spacing with attendant potential negative impacts on traffic safety and operations may be expected to be a problem. The diversion of traffic to Cold Springs Road, currently a nonarterial street, from the existing route of STH 33 and the rerouting of STH 33 over Cold Springs Road may be opposed not only by residents living along Cold Springs Road, but also by merchants along the existing route of STH 33. It should also be noted that the Wisconsin Department of Transportation has generally indicated concern about the jurisdictional transfer of existing local nonarterial facilities to the state trunk highway system because of the absence of access control along the existing facilities.

In summary, three sets of alternatives were considered to provide an additional Milwaukee River crossing in the Village of Saukville area

and to improve access to the Village of Saukville industrial park. Another purpose of the alternatives was to provide some relief to existing STH 33 through the Village. Current traffic volumes on existing STH 33 through the Village approach and exceed the design capacity of the existing two traffic lanes provided; forecast traffic volumes may be expected to approach the design capacity of an undivided four-lane cross-section through the Village.

One of the sets of alternatives examined was the provision of a river crossing through the extension of Cold Springs Road from CTH O over the Milwaukee River to CTH W. The best of the three subalternatives examined would extend Cold Springs Road, at a cost of \$2.7 million, to the north to provide a connection with CTH W. The second set of alternatives proposed the further extension of Cold Springs Road to the east beyond CTH W to provide an interchange with IH 43 and STH 57. The estimated cost of such an interchange is relatively substantial, ranging from \$6.2 million to \$11.2 million. The number of vehicles served is estimated to be relatively modest, estimated from 1,000 to 3,200 vehicles per average weekday in the year 2010. This traffic diverted from STH 33 would not be sufficient to avoid the need for improvement of the existing route of STH 33, but would provide some desirable relief. The interchange would create inadequate spacing between interchanges on IH 43. The third set of alternatives examined would provide a bypass for STH 33 around the Village of Saukville. The bypass would be connected to STH 57 and IH 43 via a new interchange. Two alternative locations for the bypass were examined, one along W. Center Road and Mink Ranch Road, the other along Cold Springs Road. The alternative located along Cold Springs Road appeared to be the more desirable, since it may be expected to divert substantially more traffic from existing STH 33, approximately 6,000 vehicles per average weekday compared to 3,000 vehicles per average weekday. It would also result in an improvement of access to the Village of Saukville industrial park. The alternative bypass along Cold Springs Road, however, has an estimated cost of \$13.2 million and would not avoid the need to improve STH 33 to four traffic lanes through the Village, although it might permit postponing that improvement to or just beyond the year 2010.

It was recommended by the Commission staff at the December 19, 1990, meeting of the Advisory Committee that the Ozaukee County jurisdictional highway system plan be amended to add Cold Springs Road between STH 33 and CTH O to the arterial street system and to further add to the plan the extension of Cold Springs Road over the Milwaukee River to CTH W. This alternative would provide a modest improvement in access to the industrial park by providing an alternative route and will provide a river crossing alternative to STH 33 in the Village of Saukville area. It is recommended that this extension of Cold Springs Road be constructed in such a way that it would be consistent with a potential future extension of Cold Springs Road to a potential interchange with IH 43 and STH 57 and with the potential future use of Cold Springs Road as a bypass route for STH 33. It is not recommended that the plan be amended at this time to add the further extension of Cold Springs Road to an interchange with IH 43 and STH 57 or to recommend the use of Cold Springs Road as an STH 33 bypass, since neither appears warranted at this time. It is appropriate, however, that the plan be amended to add Cold Springs Road and the extension of Cold Springs Road with a new Milwaukee River crossing to the adopted plan and to recommend that such extension and crossing be provided consistent with a potential interchange and STH 33 bypass. At some future date, if traffic increases faster than anticipated, reconsideration could be given again to the amendment of the Ozaukee County jurisdictional highway system plan to add the further extension of Cold Springs Road to IH 43 and STH 57 with an appropriate interchange and also to utilize Cold Springs Road as an STH 33 bypass of the Saukville area.

After the Commission staff's presentation of its analysis and recommendation concerning the extension of Cold Springs Road to the Advisory Committee on December 19, 1990, the Commission staff was requested to make presentations to both the Village and Town of Saukville Plan Commissions.

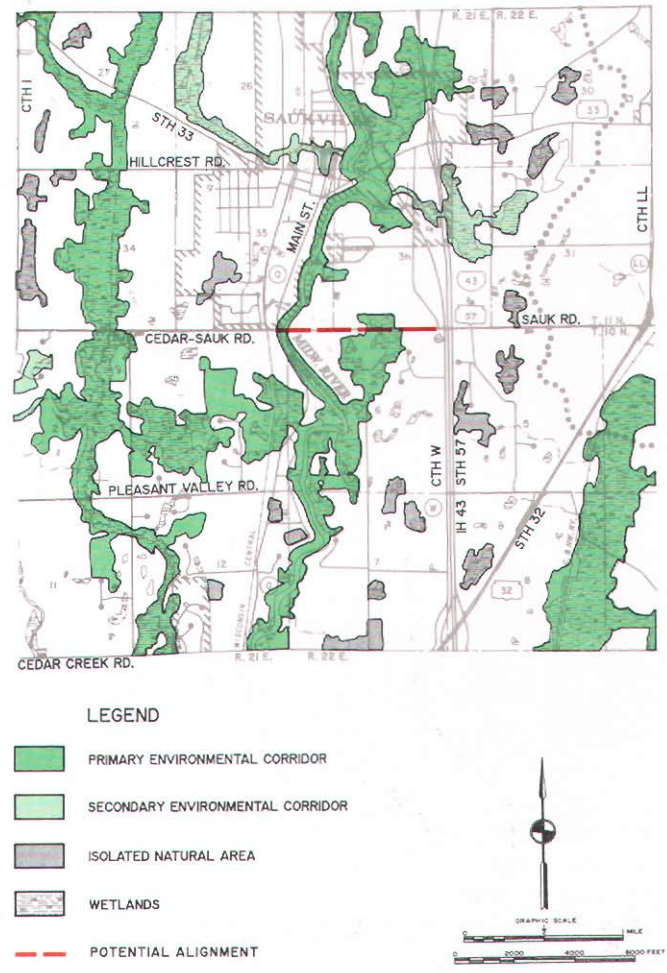
The Commission staff met with the Village Plan Commission on February 7, 1991. The Village of Saukville Plan Commission took no formal action at the meeting, but the discussion at the meeting indicated basic agreement with the

Commission staff's recommendation. The Plan Commission discussed the need to add to the Ozaukee County jurisdictional highway system plan the extension of Cold Springs Road between CTH O and CTH W, expressing a preference for a direct alignment. The Commission noted the need for an additional Milwaukee River crossing for emergency services, an alternative crossing in case of STH 33 closure, and potential relief of traffic on STH 33. The Plan Commission concluded that the proposed crossing at Cold Springs Road was preferable to potential alternatives of Cedar-Sauk Road and Center Road-Mink Ranch Roads, since Center Road-Mink Ranch Roads were too far removed from the Village and Cedar-Sauk Road would not serve the Village's industrial park. The Commission further noted that both new crossings, at Cold Springs Road and Cedar-Sauk Road, were considered by the Village to be needed in the long term and, as a result, the crossing at Cedar-Sauk Road should not be viewed as eliminating the need for a new river crossing at Cold Springs Road.

The Commission staff met with the Town of Saukville Plan Commission on February 12, 1991. The Town Plan Commission took formal action opposing the extension of Cold Springs Road at their meeting of March 12, 1991, as did the Town Board on March 19, 1991. The Plan Commission and Board cited concerns with respect to the ability of CTH W to accommodate additional traffic and suggested that, as alternatives, the extension of Cedar-Sauk Road be considered to provide an additional Milwaukee River crossing, and also that the widening of STH 33 to four traffic lanes be considered to provide additional traffic carrying capacity. At the February 12, 1991, meeting of the Town Plan Commission, that Commission's members and Town also residents of the Town in attendance at the meeting cited a number of concerns with respect to the extension of Cold Springs Road. The concerns included the impact of the extension on Milwaukee River flooding, the impact of additional traffic on the intersection of CTH W and STH 33, and the impact of additional traffic on CTH W traffic and on pedestrian traffic from abutting residences. Also, the land acquisition requirements of the extension of Cold Springs Road were cited, particularly with respect to the northerly alignment alternative.

Map 11

POTENTIAL ALIGNMENT FOR THE EXTENSION OF CEDAR-SAUK ROAD BETWEEN CTH O AND CTH W



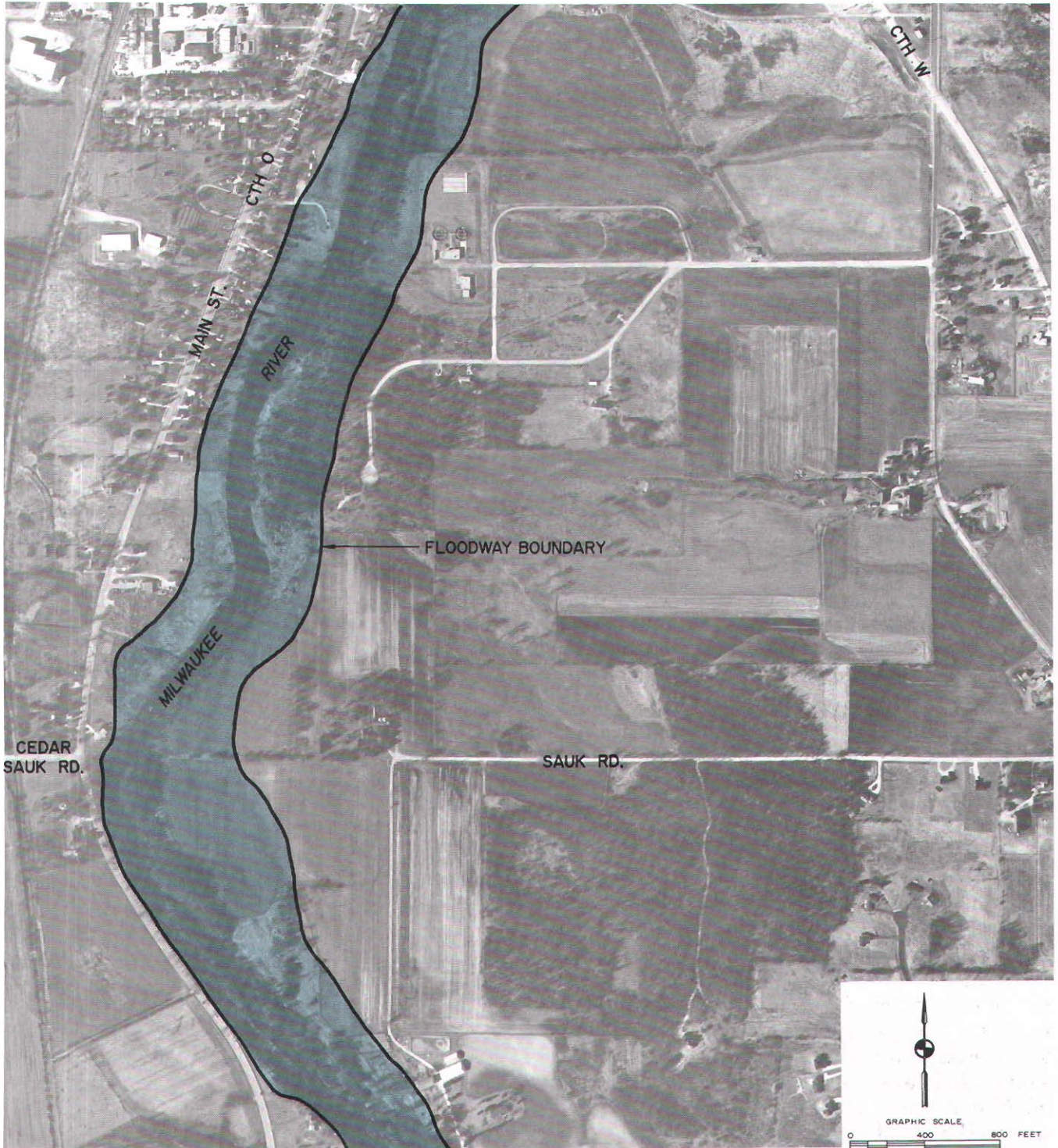
Source: SEWRPC.

After the meeting with the Town and Village Plan Commissions, the Commission staff evaluated the proposed alternative of a new Milwaukee River crossing on Cedar-Sauk Road between CTH O and CTH W. This alternative would extend Cedar-Sauk Road from CTH O easterly across the Milwaukee River to Sauk Road and require the improvement of Sauk Road to CTH W, as shown on Map 11.

Of the existing 0.75-mile segment of Sauk Road between the Milwaukee River and CTH W, approximately 0.48 mile, or 64 percent, is unpaved. A single alignment was selected for evaluation because, as shown in Map 12, the

Map 12

MILWAUKEE RIVER FLOODWAY IN THE VICINITY OF CEDAR-SAUK ROAD



Source: SEWRPC.

width of the floodway within several hundred feet both north and south of Cedar-Sauk Road is relatively constant. The floodway at the location of the extension of Cedar-Sauk Road is about 720 feet wide, which compares to about 1,450 feet at the potential Cold Springs Road extension.

The estimated construction cost of this alternative, assuming that the structure length is minimized by placing fill in the floodway, is \$2.6 million. This compares to the \$2.0 to \$2.7 million estimated construction cost of the extension of Cold Springs Road.

Comparison of the benefits of the Cold Springs Road extension to the alternative of the extension of Cedar-Sauk Road indicates that both would provide an alternative Milwaukee River crossing to STH 33 within approximately one mile of the existing STH 33 crossing serving the Saukville area. Both could function as an alternative if STH 33 were closed and would provide an alternative crossing for emergency vehicles. Also, both would provide some relief to STH 33 by serving traffic which would otherwise use STH 33, which currently experiences and may be expected to continue to experience, even upon the recommended improvement to four traffic lanes, traffic congestion. A Cold Springs Road extension, however, may be expected to provide somewhat greater benefits, furnishing a more direct routing for emergency vehicles. In addition, the Cold Springs Road extension alternative may be expected to provide somewhat greater traffic relief to STH 33, about 1,000 vehicles per average weekday compared to 500 vehicles per average weekday for the Cedar-Sauk Road extension alternative. In addition, the Cold Springs Road alternative would serve a major traffic generator in the Village and the Village's industrial park, whereas Cedar-Sauk Road would provide limited land use service. Thus, the benefits of the Cold Springs Road extension are somewhat greater than the benefits of the alternative of extending Cedar-Sauk Road.

The costs of the two alternatives are very similar. As has been noted, the estimated construction cost of the Cedar-Sauk Road extension alternative is \$2.6 million compared to \$2.0 to \$2.7 million for the Cold Springs Road extension alternative. An estimated \$2 million is the cost of the direct extension alternative which has been identified as preferred by the Village

of Saukville. Neither the direct extension of Cold Springs Road nor of Cedar-Sauk Road would require acquisition of any residences, businesses, or industries or entail the division of existing properties. Both alternatives may be expected to have impacts on slow moving farm equipment as both would direct traffic to a road over which such equipment currently travels. Both would entail adding traffic to a roadway which has a less than desirable cross-section; these segments of CTH W and Sauk Road have limited shoulders or no shoulders in some places.

Both alternatives would entail adding a numerically relatively small amount of traffic to an existing roadway, affecting abutting residences. The amount of traffic added, however, would represent a substantial percentage increase. The amount of traffic added to CTH W from the Cold Springs Road extension is an estimated 1,000 vehicles per average weekday. This may be compared to the existing 1,300 vehicles per average weekday on CTH W. The amount of traffic added to Sauk Road is an estimated 500 vehicles per average weekday, which compares to the existing traffic volume of less than 100 vehicles per average weekday. The number of residences which would be affected by the traffic is greater for the Cold Springs Road extension, about 26 homes abutting CTH W as compared to six residences abutting Sauk Road. Neither of the alternatives may be expected to result in any traffic problems upon their implementation. One perceived problem cited by residents was increased traffic congestion at the intersection of CTH W and STH 33 upon the extension of Cold Springs Road. However, the extension of Cold Springs Road may not be expected to result in an increase in traffic congestion, because it will not result in an increase in traffic at this location. It may be expected to transfer only a modest amount of traffic from STH 33 to CTH W. For both alternative extensions, the levels of traffic volume on the street affected are well within the design capacity of the roadways and, in fact, are relatively modest for arterial highways and, particularly, for county arterial highways in the urban area of Ozaukee County.

The Commission staff continued to recommend that the Ozaukee County jurisdictional highway system plan be amended to add Cold Springs Road between STH 33 and CTH O and its extension across the Milwaukee River to CTH W to

the arterial street system as a local arterial highway. The alignment identified at the system planning level for the Milwaukee River crossing should be a direct alignment identified as having the lowest cost and fewest adverse impacts. The extension of Cold Springs Road has somewhat greater benefits, but about the same cost, as an extension of Cedar-Sauk Road. It should be noted that the extension of Cold Springs Road is not a new proposal. It has been on the Village of Saukville's adopted comprehensive plan and was a proposal in the original Ozaukee County jurisdictional highway system plan adopted by the Ozaukee County Board in 1973. The implementation of this new Milwaukee River crossing probably will occur only upon agreement between the Village and Town of Saukville and Ozaukee County.

At their meeting of July 23, 1991, the Advisory Committee acted, on a 9 to 1 vote, to add Cold Springs Road between STH 33 and CTH O and its extension across the Milwaukee River between CTH O and CTH W to the recommended plan as a local trunk highway.

Need to Improve IH 43 between the Milwaukee-Ozaukee County Line and STH 167

The Advisory Committee requested that the widening to six lanes of IH 43 between the Milwaukee-Ozaukee County line and STH 167 be considered for addition to the adopted plan. The original regional transportation system plan adopted in 1966 had recommended this widening; it was reaffirmed in the original Ozaukee County jurisdictional highway system plan, adopted in 1973, and again in the reevaluation of the original regional transportation system plan completed in 1978. The last amendment to the Ozaukee County jurisdictional highway system plan, in 1983, which was a result of a study to determine the best way to meet transportation needs in the absence of the Stadium Freeway, removed this long-recommended widening from the plan as a result of state legislation. On July 1, 1983, state legislation was enacted prohibiting the use of federal and state funds for the widening of the north-south freeway (IH 43) between Bender Road and the Ozaukee-Sheboygan County line.

Between W. Bender Road and STH 167, IH 43 is a four-lane freeway with a design capacity of approximately 60,000 vehicles per average weekday. In 1989, IH 43 carried approximately

82,800 vehicles per average weekday between Bender Road and Good Hope Road; approximately 69,300 vehicles per average weekday between W. Good Hope Road and W. Brown Deer Road (STH 100) and approximately 54,200 vehicles per average weekday between W. Brown Deer Road (STH 100) and the Milwaukee-Ozaukee County line. Between the Milwaukee-Ozaukee County line and STH 167, IH 43 carried approximately 48,100 vehicles per average weekday. Between STH 167 and CTH C, the current average weekday traffic volume on IH 43 is 40,900 vehicles per average weekday. Thus, it may be concluded that the current average weekday traffic exceeds the design capacity between W. Bender Road and W. Brown Deer Road (STH 100) and is approaching the design capacity between W. Brown Deer Road (STH 100) and the Milwaukee-Ozaukee County line. North of the Milwaukee County line the existing average weekday traffic volume is below the design capacity of the freeway.

In the forecast design year 2010, IH 43 between W. Good Hope Road and W. Brown Deer Road (STH 100) may be expected to carry approximately 84,000 vehicles per average weekday. Between W. Brown Deer Road (STH 100) and the Milwaukee-Ozaukee County line it is expected to carry approximately 69,000 vehicles per average weekday. Between the Milwaukee-Ozaukee County line and STH 167, IH 43 is expected to carry approximately 60,000 vehicles per average weekday; between STH 167 and CTH C, IH 43 is expected to carry between approximately 47,700 and 52,300 vehicles per average weekday in the forecast design year 2010.

Thus, by the design year 2010, average weekday traffic volumes south of the Milwaukee-Ozaukee County line may be expected to exceed the design capacity of a four-lane rural freeway; between the Milwaukee-Ozaukee County line and STH 167, the forecast design year traffic may be expected to approximate the design capacity of the existing four-lane rural cross-section. Therefore, the need exists to provide six lanes on IH 43 between the Milwaukee-Ozaukee County line and STH 167. The Commission staff recommended that the current jurisdictional highway system plan be amended to include a capacity improvement to provide six traffic lanes on IH 43 between the Milwaukee-Ozaukee County line and STH 167 at an estimated cost of \$3.0 million. At their meeting of November 8,

1990, the Advisory Committee acted unanimously to add to the recommended plan the improvement of IH 43 to six traffic lanes from between the Milwaukee-Ozaukee County line and STH 167.

Need for a New Interchange between IH 43 and Highland Road

The Ozaukee County Highway Commissioner requested that the plan reevaluation consider the need for a new interchange between IH 43 and Highland Road. An interchange at this location was added to the adopted plan as part of the reevaluation of the 1978 regional transportation plan. The provision of such an interchange was recommended to provide the necessary access between IH 43 and existing and proposed development in the northeastern portion of the City of Mequon. It may be noted that the proposed interchange received strong public support at the public hearings held regarding the reevaluation of the transportation system plan for the Milwaukee Northwest Side/Ozaukee County study area in 1983. The interchange would, particularly, provide direct access to Concordia University and to the Milwaukee Area Technical College North Campus.

As previously noted, the Federal Highway Administration has an adopted policy regarding the justification and documentation necessary for requests to provide additional access to the existing interstate highway system. The most pertinent data necessary for the justification include the purpose of the proposed access, the distance to the community directly served, distance to adjacent interchanges, and description of alternatives considered. The purpose of the proposed interchange has been presented in the preceding paragraph. The proposed interchange is to be located in the northeast corner of the City of Mequon approximately two miles north of the IH 43-STH 167 interchange and two miles south of the IH 43-CTH C interchange. The proposed Highland Road interchange would be located approximately two miles from existing interchanges to the north and south and would meet urban interchange spacing standards of one or more miles. The alternative to the provision of this interchange is to make substantial improvements to selected nonfreeway arterials which would carry traffic to and from existing interchanges.

The provision of an interchange at Highland Road may be expected to result in lower future traffic volumes on Mequon Road (STH 167) from River Road to IH 43 and on Port Washington Road from STH 167 to CTH C. The forecast reduction in future traffic volume is about 2,000 to 3,000 vehicles per average weekday on this segment of Mequon Road and 3,000 to 4,000 vehicles per average weekday on this segment of Port Washington Road. Without the interchange, this segment of Mequon Road may be expected to carry traffic volumes by the year 2010 approaching its design capacity and will warrant widening to six traffic lanes. The estimated construction cost to widen the segment of Mequon Road between River Road and IH 43 is \$1.5 million. Also, without the interchange, Port Washington Road between STH 167 and Glen Oaks Lane will require widening to a six-lane divided roadway rather than a four-lane divided roadway. The estimated incremental cost of constructing six lanes rather than four lanes on Port Washington Road between STH 167 and Glen Oaks Lane is \$2.3 million. Finally, without the interchange, Port Washington Road between Highland Road and Pioneer Road will require widening to a four-lane divided roadway rather than requiring no improvement. The estimated construction cost to provide a four-lane divided roadway on Port Washington Road between Highland Road and Pioneer Road is \$4.3 million. Thus, the Highland Road interchange may be expected to abate the need for about \$8.1 million of potential roadway improvements by the year 2010.

The Highland Road interchange may be expected to result as well in additional traffic on selected arterial facilities, including about 6,000 to 7,000 vehicles per average weekday on IH 43 between STH 167 and Highland Road and about 2,000 vehicles per average weekday on Highland Road between IH 43 and River Road. However, this additional traffic does not result in any need for required improvements on these roadways by the year 2010.

The estimated construction cost of the Highland Road interchange is \$6.7 million. The Chicago & North Western Transportation Company tracks are parallel to IH 43 approximately 130 feet east of the northbound roadway of IH 43 at Highland Road, where Highland Road also crosses railway tracks. The proximity of the railway has a

substantial impact on the cost of providing an interchange at this location. Realignment of either the freeway or the railway will be required, or a portion of the northbound on- and off-ramps will have to be built on a structure which will provide 22 feet of clearance above the railway line.

Because of the substantial traffic diversion and the resultant potential to eliminate additional improvements on STH 167 and Port Washington Road, and because interchange spacing standards would be met, the Commission staff recommended that the current jurisdictional highway system plan, which recommends the provision of an interchange at Highland Road and IH 43, be reaffirmed. At their meeting of November 8, 1990, the Advisory Committee acted unanimously to reaffirm the inclusion in the recommended plan of an interchange on IH 43 at Highland Road, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

Jurisdictional Transfer of STH 143 to the County Trunk Highway System

The Ozaukee County Highway Commissioner requested that the staff reconsider the long-recommended transfer of STH 143 to the county trunk highway system, proposed in the currently adopted jurisdictional highway system plan.

To permit consideration of the current origins and destinations of the vehicle trips on STH 143, the Commission staff conducted a travel survey on STH 143 just north of STH 60 on Wednesday, October 17, 1990. The survey was conducted approximately two and one-half weeks after the opening of the STH 60 crossing of the Milwaukee River in the Village of Grafton to permit travel to return to normal routes. An estimated 24-hour total of 4,820 vehicles was carried on STH 143 at the survey station on the survey day in both directions. Only southbound motorists were surveyed because, based on typical travel patterns, it may be assumed that the northbound traffic would be the reverse of a trip made by a southbound motorist, at a different time of the day. The survey was conducted between the hours of 7:00 a.m. and 4:00 p.m. and southbound motorists were asked to complete and mail a postcard which would identify their trip origin and destination. A total of 1,130 postcards were distributed and 419, or 37 percent, were returned, a return rate considered to provide statistically valid results.

Based on survey responses, approximately 740 vehicle trips, or about 15 percent of the 4,820 total vehicle trips observed on STH 143, were trips which had neither trip end in Ozaukee County but, rather were travel through Ozaukee County between Milwaukee and Washington Counties. Such through traffic should clearly be carried by a state trunk highway. Approximately 1,000 vehicle trips, or about 20 percent of the 4,820 total vehicle trips observed on STH 143, represent trips with both trip ends in Ozaukee County. Such intracounty traffic should clearly be carried by a county or local trunk highway. The majority of the traffic, 65 percent, or 3,080 of the total 4,820 vehicle trips, was traffic between Ozaukee County and another county. The most important facilities carrying such traffic should be classified as state trunk highways. Approximately 2,680 vehicle trips, or about 87 percent of the 3,080 total vehicle trips on STH 143 between Ozaukee County and another county on the survey day, were trips between Ozaukee County and Washington County. State Trunk Highway 33 and STH 60 also provide state trunk highway connections between Ozaukee and Washington Counties. Approximately 380 vehicle trips, or about 12 percent of the 3,080 vehicle trips on the survey day on STH 143 between Ozaukee County and another county, were trips between Ozaukee County and Milwaukee County. Approximately 30 vehicle trips, or about 1 percent of the 3,080 total vehicle trips observed on STH 143, had one trip end in Ozaukee County and the other trip end in a county not adjacent to Ozaukee County.

The jurisdictional classification criteria were reviewed with respect to STH 143. The current average trip length of vehicle traffic on STH 143 in Ozaukee County, based on the survey, was about 14 miles. The current average trip length is less than the average trip length for classification as a state trunk highway, which is 16 and 21 miles for urban and rural facilities, respectively. The forecast average trip length in the forecast design year 2010 of about 18 miles is less than the rural facility trip length criterion for classification as a state trunk highway.

The existing average weekday traffic, 4,200 to 4,800 vehicles, and the forecast 2010 design year average weekday traffic volume of 5,000 to 5,500 vehicles both meet the criterion which classifies

a state trunk highway for a rural facility as carrying 4,500 vehicles per average weekday.

Other criteria include land use service, spacing, traffic mobility, and system continuity. State Trunk Highway 143 does not meet these criteria for classification as a state trunk highway. State Trunk Highway 143 does not connect and serve land uses of regional significance. State Trunk Highway 143 is located within two miles of STH 60 as STH 143 approaches the communities of Cedarburg and Grafton. State Trunk Highway 143 is not a necessary element of a state-wide or regionwide state trunk highway system to provide system continuity.

In summary, the traffic survey indicated that STH 143 should be considered for classification as a state trunk highway because the majority of traffic carried on the roadway, approximately 65 percent, was traffic between Ozaukee County and another county. The percentage of traffic which was through traffic, however, and which should clearly be carried on a state trunk highway, however, was modest, only about 15 percent. The remaining 20 percent was traffic that should be carried on a county or local trunk highway, or traffic with both trip ends within Ozaukee County. The criteria for classification as a state trunk highway were reapplied and it was determined that, with the exception of traffic volume, STH 143 did not meet the criteria for classification as a state trunk highway. Therefore, the Commission staff recommended that the adopted jurisdictional plan which proposes the transfer of STH 143 to the county trunk highway system be reaffirmed. At their meeting of November 8, 1990, the Advisory Committee acted, on a 10 to one vote, to reaffirm the jurisdictional transfer of STH 143 to the county trunk highway system, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

Consider the Planned Improvement of Wauwatosa Road between STH 167 and CTH C; of CTH N between CTH C and STH 143; of STH 143 between CTH N and STH 60; and of STH 60 between STH 143 and IH 43

The Ozaukee County Highway Commissioner requested that the plan reevaluation consider the need for the long-planned improvement of the Wauwatosa Road corridor from STH 167 to STH 60 and of the STH 60 corridor from STH 143 to IH 43. Comparison of the amount of

existing and forecast year 2010 traffic to roadway design capacity is shown on Map 13. Current traffic volumes already exceed the design capacity on nearly all these arterial facilities, including Wauwatosa Road and CTH N between STH 167 and Bridge Street; STH 60 between STH 143 and 1st Avenue, between Wisconsin and Grafton Avenues, and between the eastern Grafton corporate limits and IH 43. On the remaining segment of these facilities, CTH N between Bridge Street and STH 143, STH 143 between CTH N and STH 60, STH 60 between 1st Avenue and Wisconsin Avenue, and STH 60 between Grafton Avenue and the eastern Grafton corporate limits, existing average weekday traffic volumes are approaching, and anticipated forecast traffic volumes may be expected to exceed, design capacity.

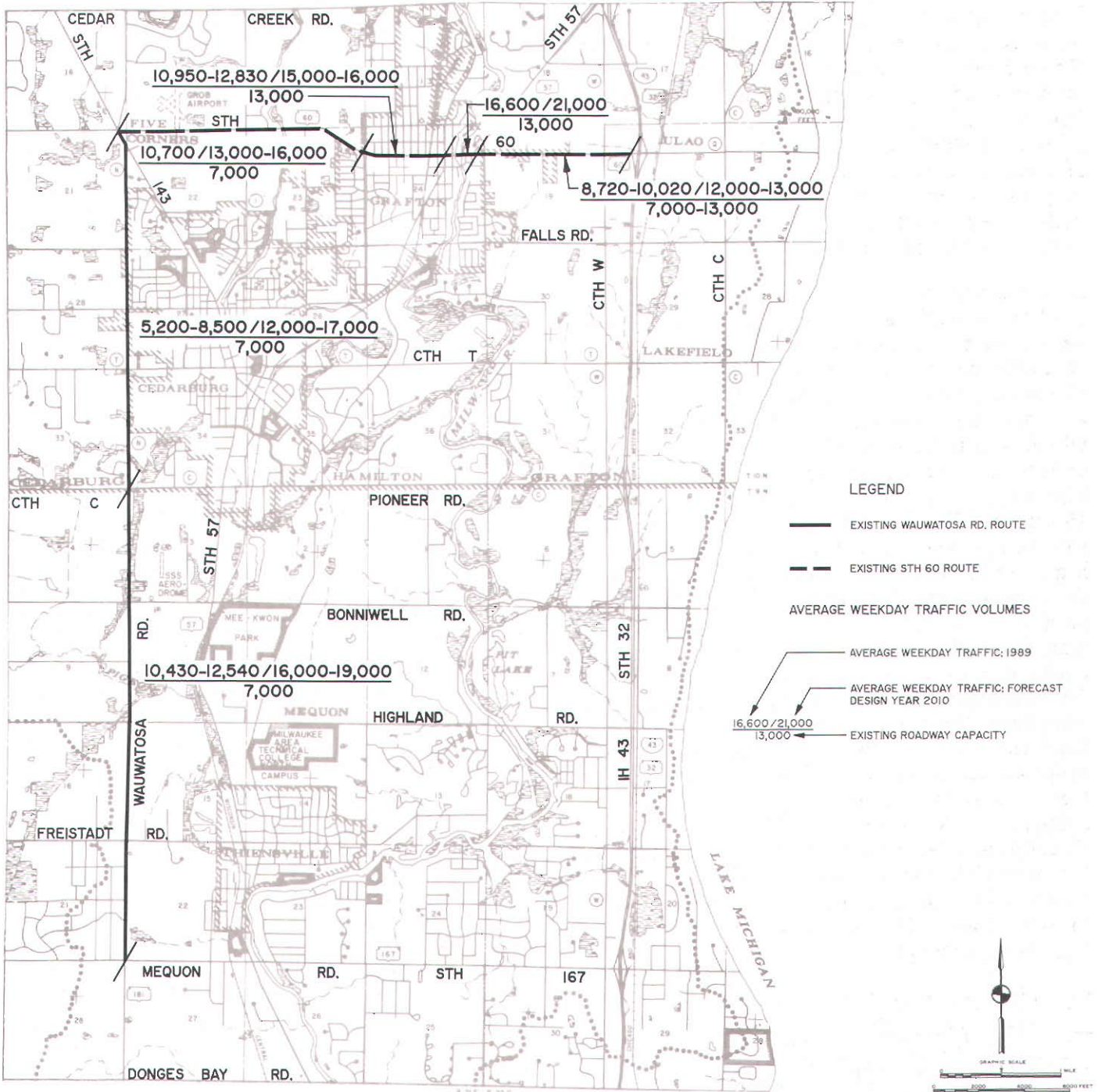
Because the existing traffic volumes exceed the existing design capacity over most of these facilities and forecast design year traffic volumes may be expected to exceed the existing design capacity over the remainder of the facilities, the Commission staff recommended that the currently adopted jurisdictional highway system plan, which has long proposed that these facilities be improved from two to four traffic lanes, be reaffirmed. At their meeting on November 8, 1990, the Advisory Committee acted unanimously to reaffirm the improvement of the Wauwatosa Road between STH 167 and STH 60 and of STH 60 between STH 143 and IH 43 to provide four traffic lanes, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

Need to Improve Port Washington Road (CTH W) between Milwaukee-Ozaukee County Line and Highland Road

The representative of the City of Mequon identified the need to improve Port Washington Road (CTH W) between the Milwaukee-Ozaukee County line and Highland Road. Because of the rapid urbanization of the Port Washington Road corridor within the City of Mequon, the Commission staff analyzed the need to provide additional capacity between the Milwaukee-Ozaukee County line and CTH C. This segment of Port Washington Road (CTH W) is currently a two-lane rural facility with a design capacity of 7,000 to 13,000 vehicles per average weekday. The existing average weekday traffic counts and the forecast design year 2010 traffic volumes are

Map 13

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY IN THE WAUWATOSA ROAD AND STH 60 CORRIDORS



Source: SEWRPC.

shown on Map 14. The forecast design year 2010 traffic volumes reflect not only the Commission's forecast households, population, and employment for the year 2010, but also the land use plan of the City of Mequon.

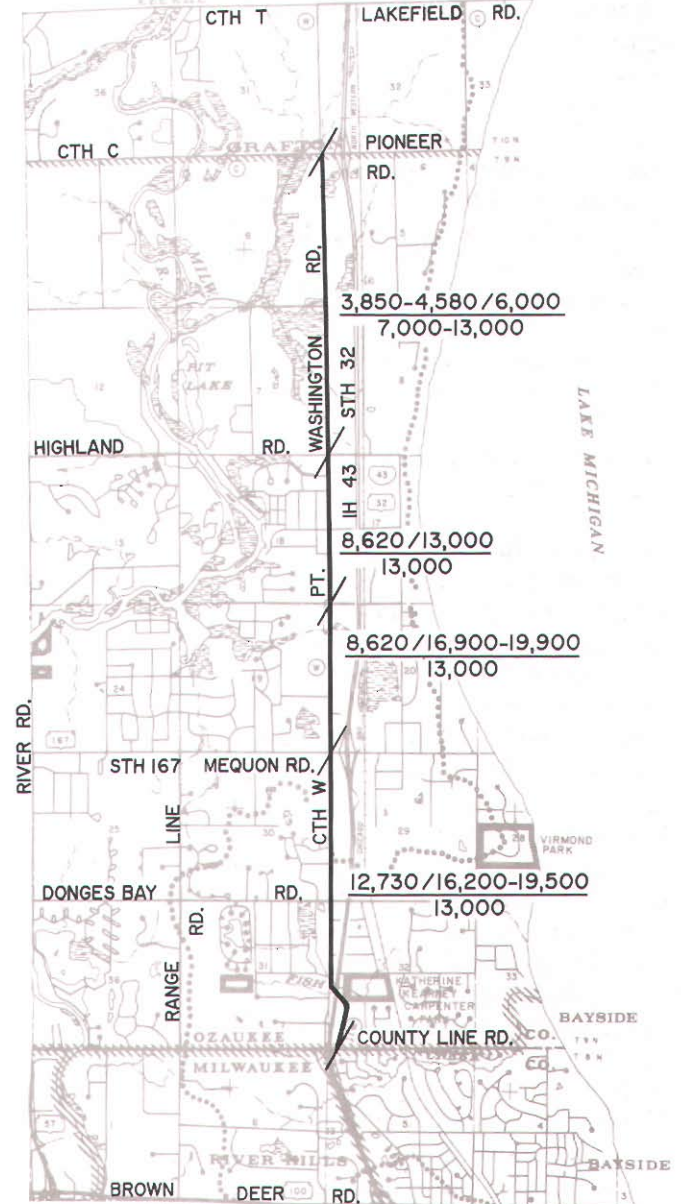
The current average weekday traffic volume of 12,730 vehicles on Port Washington Road (CTH W) south of STH 167 approaches the design capacity of 13,000 vehicles per average weekday and, thus, indicates a need for the immediate improvement of this segment of Port Washington Road (CTH W). In the forecast design year 2010, the average weekday traffic volumes may be expected to approach 17,000 vehicles per average weekday, warranting the provision of a four-lane divided urban facility with a design capacity of 25,000 vehicles per average weekday. Between STH 167 and CTH C, there is sufficient capacity to accommodate the existing average weekday traffic of 3,850 to 8,620 vehicles per average weekday. However, by the design year 2010, the forecast average weekday traffic volumes may be expected to approach or exceed the existing design capacity between STH 167 and Highland Road and require improvement to four traffic lanes. Between CTH C and Highland Road, the design capacity of the existing roadway may be expected to be sufficient to accommodate both the existing and forecast design year 2010 average weekday traffic volumes.

The provision of four traffic lanes on Port Washington Road (CTH W) between the Milwaukee-Ozaukee County line and Highland Road may be expected to entail the acquisition of approximately 22.1 acres, of which 0.4 acre is an isolated natural area containing about 0.1 acre of wetland. Three businesses and five residences may be expected to be displaced. The provision of four traffic lanes is estimated to cost \$14.2 million, including \$6.4 million to acquire the right-of-way.

The Commission staff recommended that the adopted plan be amended to add the improvement of Port Washington Road (CTH W) between the Milwaukee-Ozaukee County line and Highland Road to four traffic lanes to provide sufficient capacity to accommodate existing and forecast design year 2010 average weekday traffic volumes. At their meeting of November 8, 1990, the Advisory Committee acted unanimously to recommend the addition to the Ozaukee County jurisdictional highway

Map 14

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON PORT WASHINGTON ROAD (CTH W) IN THE CITY OF MEQUON



LEGEND

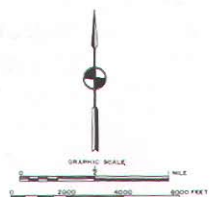
— EXISTING PORT WASHINGTON RD./CTH W ROUTE

AVERAGE WEEKDAY TRAFFIC VOLUMES

— AVERAGE WEEKDAY TRAFFIC: 1989

— AVERAGE WEEKDAY TRAFFIC: FORECAST DESIGN YEAR 2010

8,620/13,000
13,000 ← EXISTING DESIGN CAPACITY



Source: SEWRPC.

system plan of the improvement of Port Washington Road (CTH W) to four traffic lanes between the Milwaukee-Ozaukee County line and Highland Road.

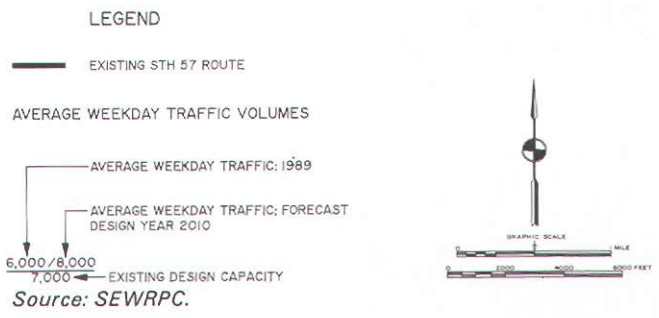
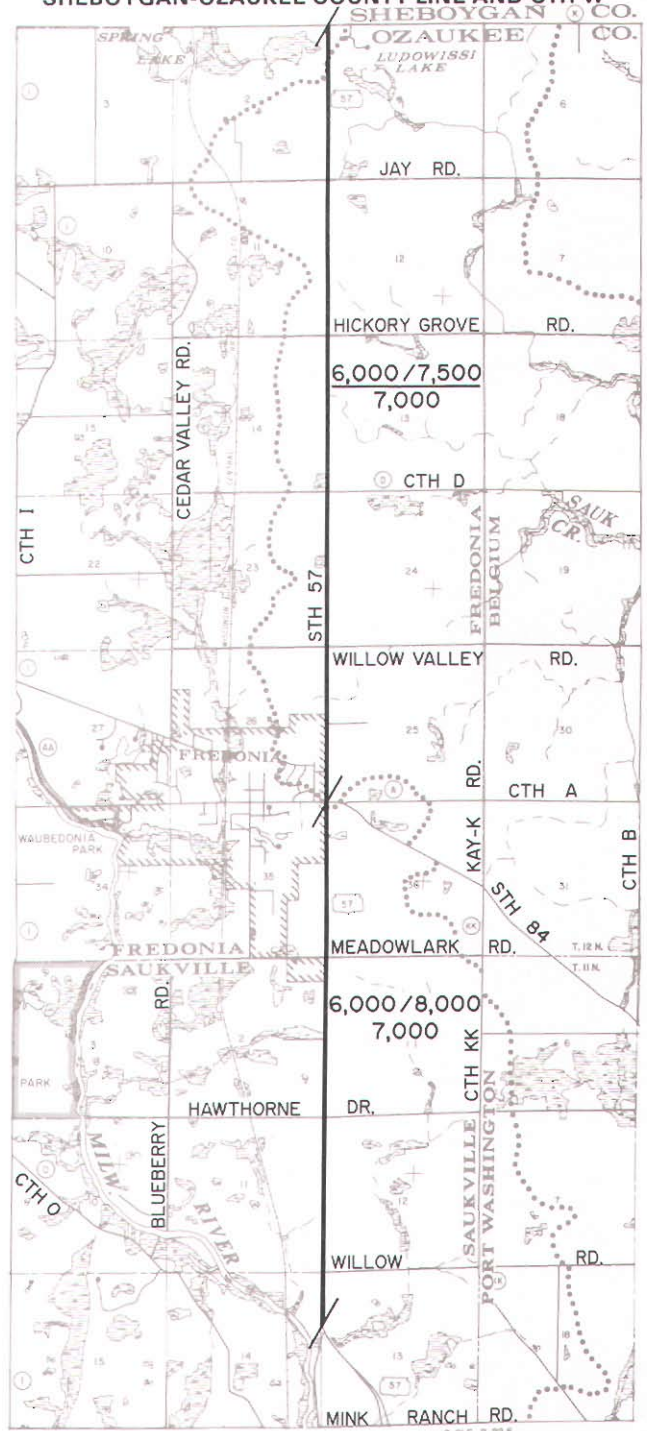
Need to Improve STH 57 between IH 43 and the Ozaukee-Sheboygan County Line

The Village of Saukville representative to the Advisory Committee requested that the need to improve STH 57 between IH 43 and the Ozaukee-Sheboygan County line to provide additional capacity be reviewed. This segment of STH 57 is currently a two-lane rural roadway with a design capacity of 7,000 vehicles per average weekday; it is currently a four-lane divided facility both north and south of the study segment. The amount of existing and forecast design year 2010 traffic is shown on Map 15. Current average weekday traffic volumes are approaching the design capacity of the roadway. Thus, the improvement of this facility from two to four lanes is warranted to provide the necessary capacity to meet both existing and future traffic needs.

The provision of four traffic lanes on STH 57 between IH 43 and the Ozaukee-Sheboygan County line is not expected to entail the acquisition of any right-of-way because the necessary right-of-way to implement this improvement is currently owned by the Wisconsin Department of Transportation. The only exception may be the acquisition of nominal amounts of right-of-way to accommodate the improvement of selected intersections. It should be noted that the Wisconsin Department of Transportation District Office has recommended this improvement to the Transportation Projects Commission for potential enumeration by the Wisconsin Legislature in the 1991-1993 biennial budget. The Department, anticipating the need to provide two additional lanes, has estimated the construction cost to implement this project to be \$9.4 million. The Commission staff estimated that the construction costs of implementing this improvement would be \$14.9 million, which includes not only the construction of two additional traffic lanes, but also the reconstruction of the two existing traffic lanes.

Because the existing average weekday traffic volumes approximate the existing design capacity and the forecast year 2010 average weekday traffic volumes exceed the existing design capacity of STH 57 between IH 43 and the Ozaukee-Sheboygan County line, the Commission staff recommended that the currently adopted jurisdictional highway system plan be

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON STH 57 BETWEEN THE SHEBOYGAN-OZAUKEE COUNTY LINE AND CTH W



amended to include the improvement of this segment of STH 57 from two lanes to four lanes. At their meeting of November 8, 1990, the Advisory Committee acted to unanimously to recommend the addition to the Ozaukee County jurisdictional highway system plan of the improvement of STH 57 to four traffic lanes between IH 43 and the Ozaukee-Sheboygan County line.

Need to Improve STH 33 between the Washington-Ozaukee County Line and STH 32

The Wisconsin Department of Transportation representative on the Advisory Committee requested that the plan reevaluation consider the need to improve STH 33 between the Washington-Ozaukee County line and STH 32 in the City of Port Washington. State Trunk Highway 33 is currently a two-lane roadway with a design capacity of 7,000 vehicles per average weekday between the Ozaukee-Washington County line and the west corporate limits of the Village of Saukville, a two-lane facility through the Village of Saukville with an existing design capacity of 13,000 vehicles per average weekday a two-lane facility between the Village of Saukville and the City of Port Washington with an existing design capacity of approximately 7,000 vehicles per average weekday, and a two-lane facility between the west corporate limits of the City of Port Washington and STH 32 with an existing design capacity of approximately 13,000 vehicles per average weekday. The amount of existing and forecast design year 2010 traffic is shown on Map 16 and is compared to roadway design capacity.

Between the Ozaukee-Washington County line and the west corporate limits of the Village of Saukville, the existing average weekday traffic volumes on STH 33 are less than existing design capacity. However, by the forecast design year, average weekday traffic volumes are expected to equal the existing design capacity of this segment of STH 33 and, thus, the improvement of this segment of STH 33 to provide four traffic lanes is warranted. On the segment of STH 33 within the Village of Saukville, the existing average weekday traffic volumes range from 4,900 vehicles per average weekday to 15,100 vehicles per average weekday. The higher average weekday traffic volume exceeds the existing design capacity of 13,000 vehicles per average weekday on this segment of STH 33. Thus, the provision of four traffic lanes is currently warranted within the Village of Saukville. Existing average weekday traffic volumes on the segment of STH 33 between IH 43 and CTH LL

range from 7,100 to 9,600 vehicles per average weekday and, thus, exceed the existing design capacity of this segment of STH 33 of 7,000 vehicles per average weekday. The improvement of this segment of STH 33 from a two-lane to a four-lane facility to provide additional capacity is thus warranted. Existing average weekday traffic volumes on the segment of STH 33 between CTH LL and STH 32 in the City of Port Washington range between 7,300 and 8,400 vehicles per average weekday. By the forecast design year 2010, the average weekday traffic volumes on this segment of STH 33 may be expected to be 14,300 vehicles per average weekday; thus, the provision of four lanes is warranted on this segment of STH 33 as well.

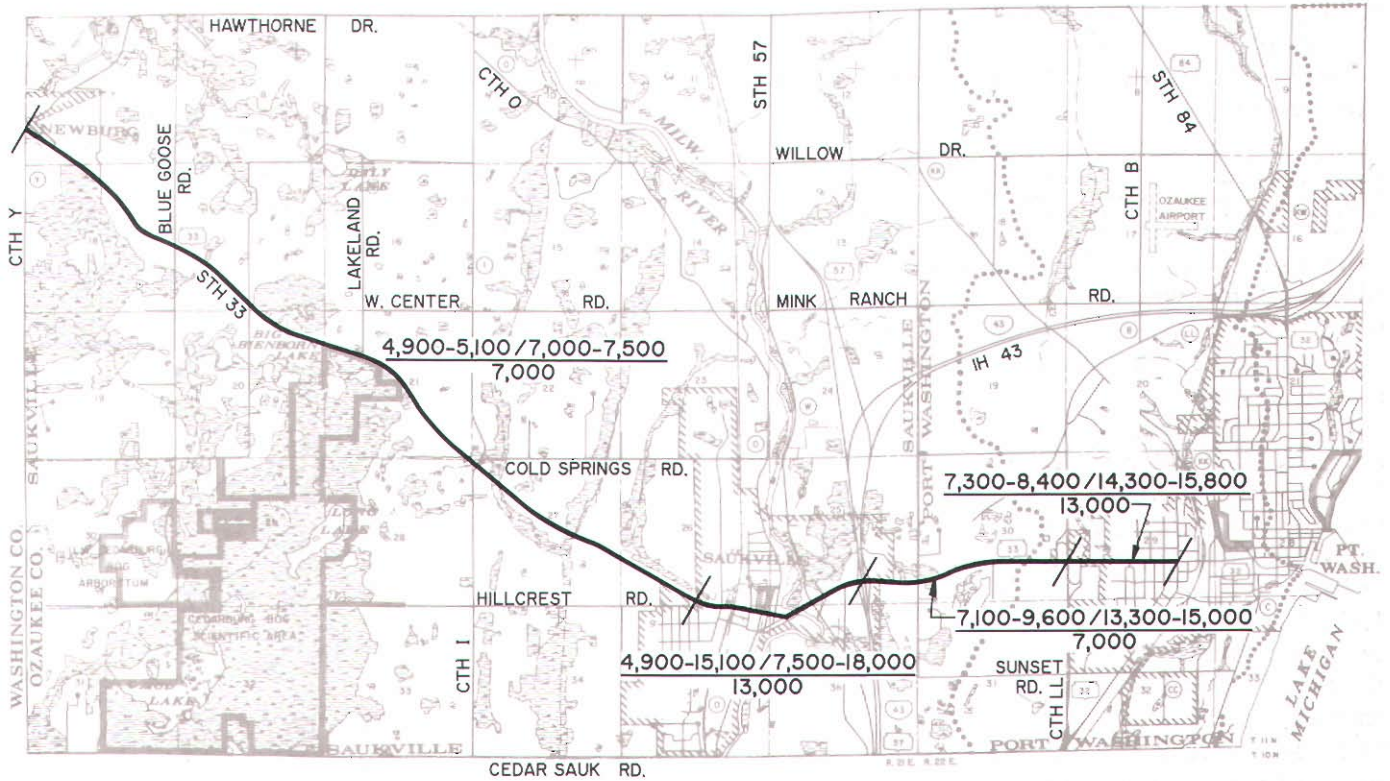
The conclusion that the provision of four lanes is warranted on STH 33 between IH 43 and STH 32 is further supported by a Commission staff study of the traffic impact of the removal of the STH 33 and CTH LL interchange.⁶ This study concluded that the forecast year 2010 traffic volumes on STH 33 would warrant the provision of four traffic lanes between IH 43 and STH 32, based on 1) the development of land abutting STH 33 immediately east of the STH 33 and CTH LL underway in 1989, 2) the anticipated conversion from rural to urban land uses of additional lands within the delineated sewer service area abutting STH 33 west of CTH LL by the year 2000, and 3) the Commission's forecast year 2010 population, employment, and households for the Region. The study further recommended that the interchange between STH 32 and CTH LL be replaced with an at-grade intersection because of the anticipated need to rebuild the existing structure to accommodate four traffic lanes underneath. It may be further noted that an amendment to the Washington County jurisdictional highway system plan to the year 2000 identified the need and recommended that improvement of STH 33 between USH 41 and the Washington-Ozaukee County line.

The provision of four traffic lanes over the entire corridor length may be expected to entail the acquisition of approximately 41.3 acres, of which 7.2 acres are primary environmental corridor

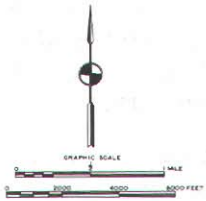
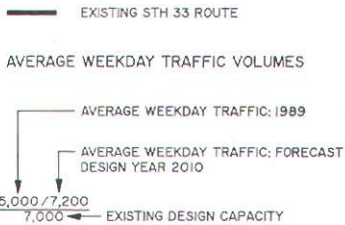
⁶*The findings and recommendations of this traffic impact study are documented in SEWRPC Memorandum Report No. 46, Traffic Impact Study of the Interchange of STH 33 and CTH LL, September 1989.*

Map 16

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON STH 33



LEGEND



Source: SEWRPC.

and 0.1 acre is isolated natural area. An additional 3.2 acres of wetland and 10.0 acres of prime agricultural land may be expected to be acquired. Two residences may be expected to be displaced. Within the Village of Saukville, the provision of four lanes may be accomplished with minor widening to add two feet of additional pavement to each side of the roadway and through the prohibition of parking. However, the existing structure over the Milwaukee River will need to be widened to provide four lanes. Within the City of Port Washington, the provision of four lanes may be accomplished by reconstruct-

ing the existing rural segment of roadway to a four-lane urban cross-section and the minor widening of the existing urban segment to add two feet of pavement to each side of the roadway, primarily through the prohibition of parking on the existing roadway. The provision of four lanes on this segment of STH 33 is estimated to cost \$14.3 million, including \$1.3 million to acquire the right-of-way.

Because the existing average weekday traffic volumes exceed the existing design capacity over the majority of the STH 33 corridor and because

forecast design year average weekday traffic volumes may be expected to exceed the existing design capacity over the remainder of the corridor, the Commission staff recommended that the currently adopted jurisdictional highway system plan be amended to include the improvement of STH 33 between the Ozaukee-Washington County line and of STH 32 from two lanes to four lanes to provide additional capacity. At its meeting on July 23, 1991, the Advisory Committee acted, on a 9 to 1 vote, to recommend the improvement of STH 33 between the Ozaukee-Washington County line and STH 32 to provide four traffic lanes.

Need to Improve STH 57 to Provide Additional Capacity between the Milwaukee-Ozaukee County Line and STH 167

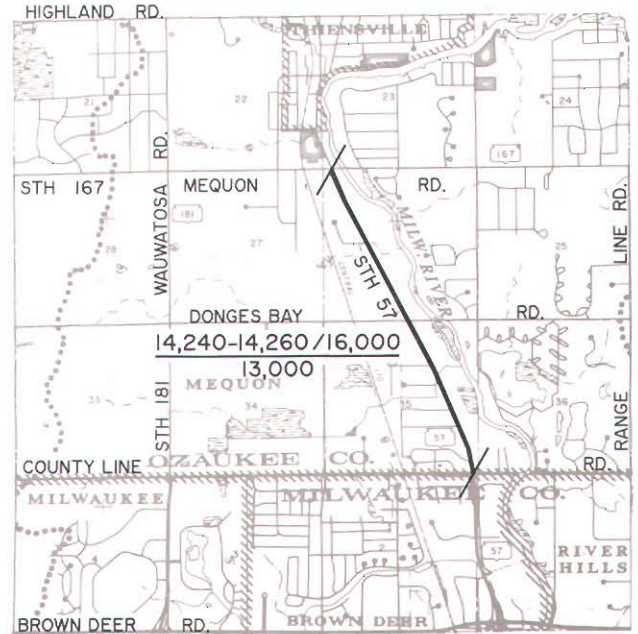
The representative of the City of Mequon requested that the jurisdictional highway system plan reevaluation consider the need to improve STH 57 to provide additional capacity between the Milwaukee-Ozaukee County line and STH 57. This segment of STH 57 is currently a two-lane roadway with a design capacity of approximately 13,000 vehicles per average weekday. Analysis of the amount and type of existing and forecast design year 2010 average weekday traffic carried by this facility, shown on Map 17, indicates that the current traffic volumes of approximately 14,200 vehicles per average weekday exceeds the existing design capacity of this facility, as does the forecast year 2010 traffic volume.

The provision of an undivided four-traffic-lane roadway over this segment of STH 57 may be expected to entail the displacement of two businesses and seven residences. The provision of four traffic lanes is estimated to cost \$7.3 million, including \$3.3 million to acquire the right-of-way.

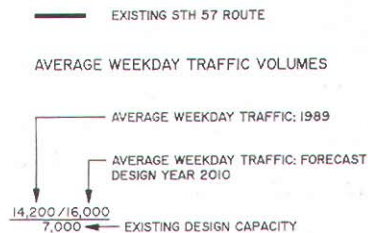
The current adopted plan does not recommend any improvement of STH 57; it determined that no improvement was feasible or desirable in the historic portions of Cedarburg, Grafton, and Thiensville and that, instead, Wauwatosa Road should be improved. The Village of Thiensville recently reconstructed the segment of STH 57 within the Village to two traffic lanes with all local funding. Thus, consideration of improving the segment of STH 57 between the Milwaukee-Ozaukee County line and STH 167 to four traffic lanes must recognize that the remainder of

Map 17

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON STH 57 BETWEEN THE MILWAUKEE-OZAUKEE COUNTY LINE AND STH 167



LEGEND



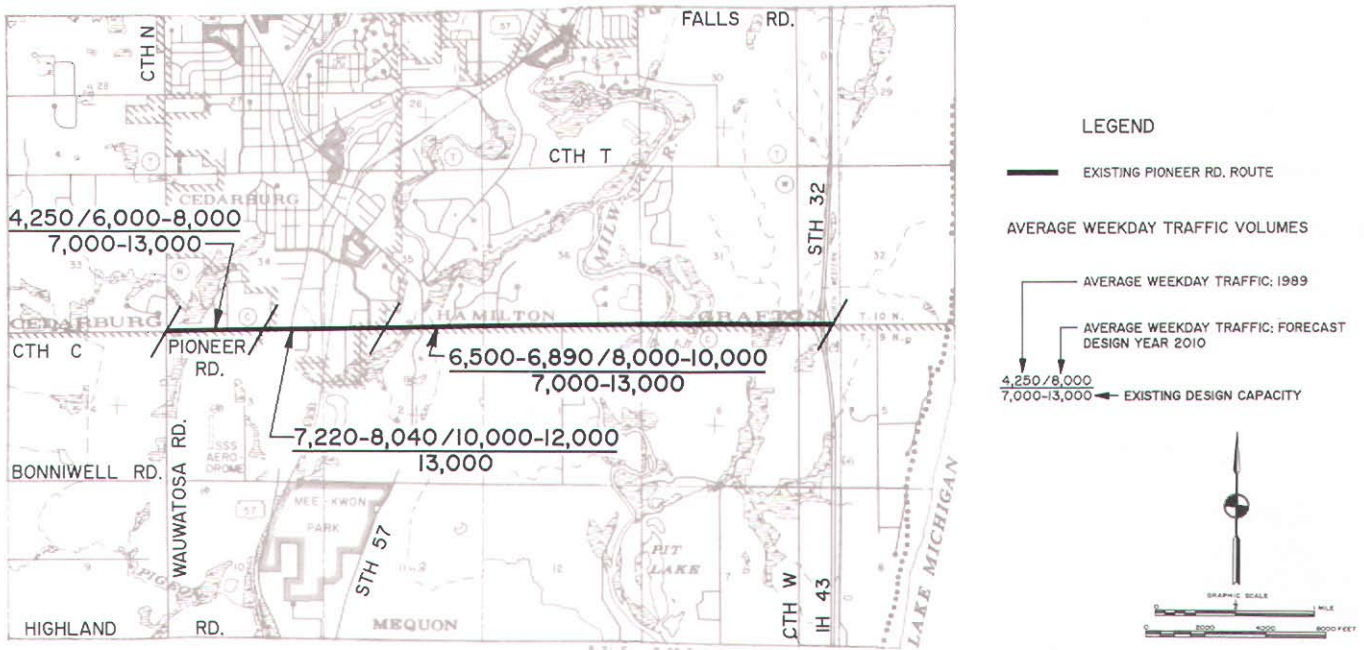
Source: SEWRPC.

STH 57 will remain two traffic lanes. The improvement of this segment of STH 57, however, can be justified because its existing and future traffic volumes would warrant such improvement, even with the improvement of Wauwatosa Road. An undivided four-lane section would provide a transition between the divided four-lane section to the south and the two-lane section to the north.

Therefore, the Commission staff recommended that the currently adopted jurisdictional highway system plan be amended to improve STH 57 from

Map 18

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON PIONEER ROAD BETWEEN WAUWATOSA ROAD AND IH 43



Source: SEWRPC.

two lanes to four lanes to provide additional capacity between the Milwaukee County-Ozaukee County line and STH 167. At its meeting of November 8, 1990, the Advisory Committee acted unanimously to recommend the improvement of STH 57 between the Milwaukee-Ozaukee County line and STH 167 to four traffic lanes.

Need to Improve Pioneer Road (CTH C) between Wauwatosa Road and IH 43

The Advisory Committee requested that the plan reevaluation consider the need to improve Pioneer Road (CTH C) between Wauwatosa Road and IH 43. Pioneer Road (CTH C) is currently a two-lane roadway with a design capacity of 7,000 to 13,000 vehicles per average weekday between Wauwatosa Road and the west corporate limits of the City of Cedarburg, 13,000 vehicles per average weekday within the City of Cedarburg, and 7,000 to 13,000 vehicles per average weekday between Cedarburg and IH 43. A comparison of existing and forecast design year 2010 average weekday traffic to the existing design capacity is shown on Map 18. Forecast average weekday traffic volume on Pioneer Road (CTH C), particularly between the west corporate limits of the City of Cedarburg and IH 43,

may be expected to approach the existing design capacity by the year 2010. Thus, consideration of the provision of four traffic lanes may be warranted.

Therefore, the Commission staff recommended that the currently adopted jurisdictional highway system plan be amended to include the future provision of four traffic lanes on Pioneer Road (CTH C) between Wauwatosa Road and IH 43. At its meeting of December 19, 1990, the Advisory Committee acted unanimously to recommend the improvement of Pioneer Road (CTH C) between Wauwatosa Road and IH 43 to four traffic lanes.

Need to Improve Freistadt Road between Wauwatosa Road and River Road

The Advisory Committee requested that the plan reevaluation consider the need to improve Freistadt Road between Wauwatosa Road and River Road. This segment of Freistadt Road is currently a two-lane roadway with a design capacity of 13,000 vehicles per average weekday. A comparison of existing and forecast design year 2010 average weekday traffic to the existing design capacity is shown on Map 19.

Both the existing and forecast average weekday traffic volumes on the segment of Freistadt Road between Wauwatosa Road and River Road are less than the existing design capacity of the roadway. Thus, no need for additional traffic lanes may be expected on this segment of Freistadt Road by the design year 2010. However, the conversion of this segment from its existing rural cross-section to an urban cross-section may be desirable. This conversion may be expected to enhance traffic safety and operations by permitting through traffic to utilize the parking lanes to bypass turning vehicles.

The conversion of Freistadt Road to an urban cross-section between Wauwatosa Road and River Road may not be expected to require the acquisition of any right-of-way and is estimated to cost \$1.8 million.

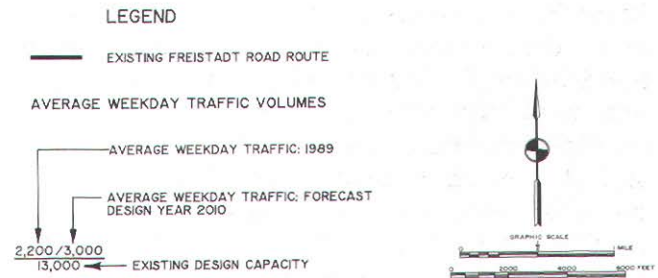
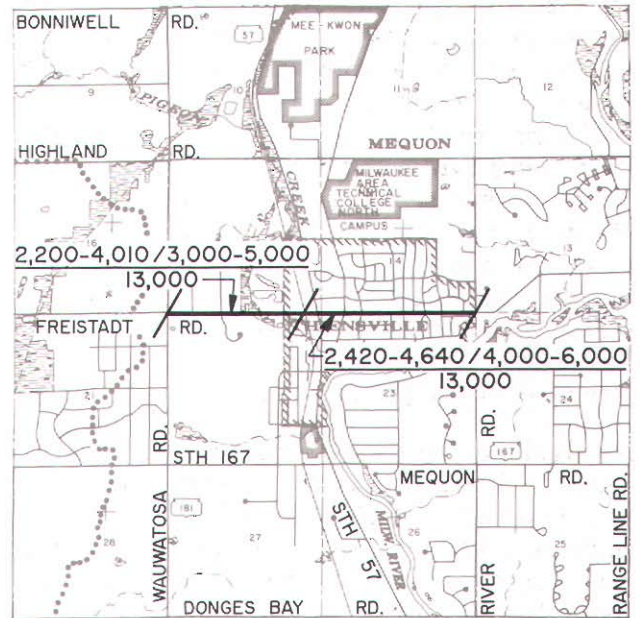
Because the design capacity of the existing roadway may be expected to be adequate to accommodate both the existing average weekday traffic volumes and forecast design year 2010 average weekday traffic volumes on Freistadt Road between Wauwatosa Road and River Road, the Commission staff recommended that the currently adopted jurisdictional highway system plan be reaffirmed with respect to the provision of two traffic lanes on this facility. At their meeting of December 19, 1990, the Advisory Committee acted unanimously to reaffirm the provision of two traffic lanes on Freistadt Road between Wauwatosa Road and River Road, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

Planned Jurisdiction of Freistadt Road, Highland Road, and River Road Reconsidered

The Ozaukee County Highway Commissioner requested that the planned jurisdiction of Freistadt Road, Highland Road, and River Road be reconsidered. Freistadt Road is currently a local arterial and is proposed under the currently adopted plan to remain a local arterial between the Ozaukee-Washington County line and River Road. Highland Road is currently a local arterial and is proposed under the currently adopted plan to be converted to a county trunk arterial between Granville Road and IH 43. River Road is currently a local arterial between the Milwaukee-Ozaukee County line and STH 167 and between Freistadt Road and Highland Road and is proposed under the currently adopted plan to remain a local arterial between the Milwaukee-Ozaukee County line and Pioneer Road.

Map 19

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON FREISTADT ROAD BETWEEN WAUWATOSA ROAD AND RIVER ROAD



Source: SEWRPC.

Analysis of the jurisdictional classification criteria, including existing and forecast year 2010 average weekday traffic, trip length, and land use service, indicates that Freistadt Road generally meets the criteria for classification as a local trunk highway. The only exceptions are that it marginally meets the trip length criterion for classification as a county trunk highway west of Wauwatosa Road and the traffic volume criteria for classification as a county trunk highway east of Wauwatosa Road. Therefore, the Commission staff recommended that the current jurisdictional highway plan be reaf-

firmed with respect to the planned jurisdiction of Freistadt Road between the Ozaukee-Washington County line and River Road.

Analysis of the jurisdictional classification criteria with respect to Highland Road indicates that Highland Road generally meets the criteria for classification as a county trunk highway, including trip length, traffic volumes, and land use service. The adopted plan recommends that a new interchange be provided on IH 43 at Highland Road, which is a key element of the land use service criterion. Highland Road also directly serves Concordia University and the Milwaukee Area Technical College North Campus. Therefore, the Commission staff recommended that the current jurisdictional highway plan be reaffirmed with respect to the planned jurisdiction of Highland Road between the Ozaukee-Washington County line and IH 43.

Analysis of the jurisdictional classification criteria with respect to River Road, assuming the two long-planned River Road connections are implemented, indicates that River Road generally meets the criteria for classification as a local trunk highway between STH 167 and Highland Road. With respect to land use service, River Road meets the criteria for classification as a local arterial. With respect to traffic volume and trip length, River Road approaches, but does not meet, the criteria for classification as a county trunk highway. Therefore, the Commission staff recommended that the current jurisdictional highway plan be reaffirmed with respect to the planned jurisdiction of River Road between the Milwaukee-Ozaukee County line and Pioneer Road. At their meeting of December 19, 1990, the Advisory Committee acted unanimously to reaffirm the jurisdictional transfer of Highland Road to the county trunk highway system between Granville Road and IH 43 and to retain Freistadt Road and River Road on the local trunk highway system, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

Alternative Routing of STH 32 in the City of Port Washington Central Business District

The representative of the City of Port Washington requested that consideration be given to an alternative routing for the long-planned one-way street pair for STH 32 through the City of Port Washington central business district. The representative indicated that, although the City of

Port Washington Plan Commission supports the one-way street pair concept, the Plan Commission requested that consideration be given to routing over existing streets rather than using the long-planned extension of Swing Street between Washington Street and Jackson Street. The Plan Commission requested that the one-way pair of streets be operated only between Jackson Street and Grand Avenue (STH 32).

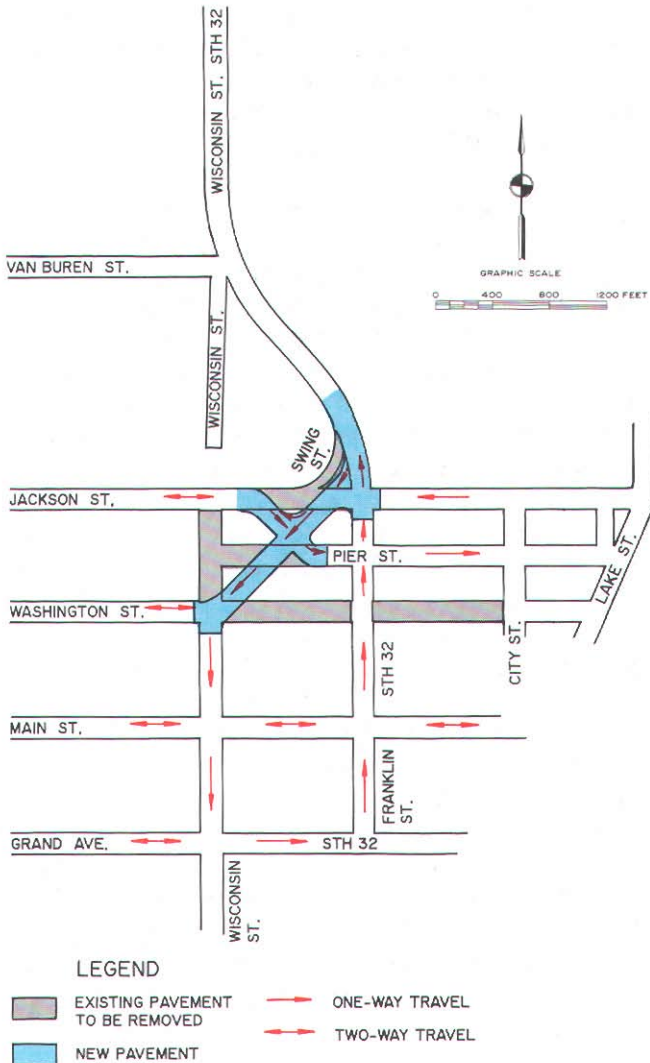
The existing route of STH 32 through the City of Port Washington's central business district utilizes E. Grand Avenue, Franklin Street, and Wisconsin Street. These facilities provide two traffic lanes with parking and, thus, have a design capacity of 13,000 vehicles per average weekday. In 1989 the average weekday traffic on E. Grand Avenue just west of Wisconsin Street was 11,900 vehicles per average weekday, on Franklin Street just north of E. Grand Avenue the average weekday traffic volume was 11,300, and on Wisconsin Street just north of Van Buren Street the average weekday traffic was 10,700 vehicles. Thus, the existing average weekday traffic volumes on STH 32 through the City of Port Washington central business district are approaching the design capacity of the roadway. The forecast design year 2010 average weekday traffic volumes on these segments are 13,000, 14,000, and 13,000, respectively. Thus, by the design year 2010 it may be expected that the average weekday traffic volumes will be equal to, or exceed, the design capacity of these roadways.

One potential way to increase the design capacity of STH 32 through the central business district would be through the prohibition of on-street parking. It may be expected that such prohibition would increase the design capacity from 13,000 vehicles per average weekday to 17,000 vehicles per average weekday. It may be further anticipated that such a prohibition would meet substantial local opposition.

Another alternative way to provide additional capacity for STH 32 through the central business district would be the creation of a one-way pair of streets. Shown in Figure 3 is the long-planned one-way street system for the City of Port Washington central business district. It may be noted that this one-way street system would require the extension of Swing Street between Washington Street and Jackson Street. Shown in Figure 4 is an alternative to the long-planned one-way street system in the central

Figure 3

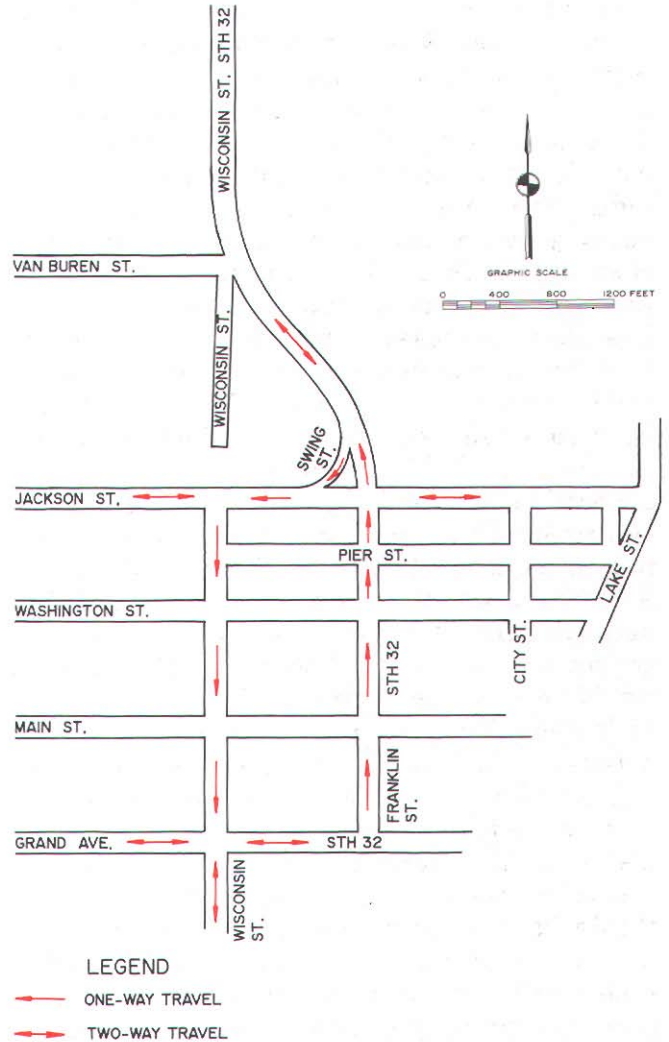
LONG-PLANNED ONE-WAY STREET SYSTEM IN THE CITY OF PORT WASHINGTON CENTRAL BUSINESS DISTRICT



Source: SEWRPC.

Figure 4

ALTERNATIVE ONE-WAY STREET SYSTEM IN THE CITY OF PORT WASHINGTON CENTRAL BUSINESS DISTRICT PROPOSED BY THE CITY OF PORT WASHINGTON PLAN COMMISSION



Source: SEWRPC.

business district, as requested by the City of Port Washington Plan Commission. The benefits of operating a one-way street system include a redistribution of traffic to relieve congestion, with a corresponding reduction in travel time. There is a modest increase in the design capacity of a facility as a result of the elimination of conflicts between left-turning traffic and opposing through vehicles. Finally, traffic safety is increased through a reduction in the number of

conflicts between left-turning vehicles and through traffic and there is also a reduction in the number of vehicular-pedestrian conflicts. The primary disadvantage of the operation of a one-way pair of streets is the related indirection of travel. Such indirection may, as well, result in a modest increase in travel times, although this increase may be offset by the reduction in travel time experienced from uncongested traffic operations.

The traffic impacts under each of the one-way street alternatives may be expected to be virtually the same, with the exception of Wisconsin Street between Washington Street and Jackson Street and Jackson Street between Wisconsin Street and Franklin Street. Under the long-planned one-way street alternative, Wisconsin Street between Washington Street and Jackson Street would be abandoned. Traffic on Jackson Street between Wisconsin Street and Franklin Street may be expected to increase nominally as a result of the additional circulation posed by the indirection connected with the operation of a one-way pair of streets and the abandonment of Washington Street between Wisconsin Street and Franklin Street. Under the one-way street alternative proposed by the Plan Commission, it may be anticipated that southbound STH 32 traffic would be added to Wisconsin Street between Washington Street and Jackson Street. Southbound STH 32 traffic would remain on the connection between Franklin Street and Wisconsin Street. Thus, the prohibition of parking on this segment of STH 32 would remain desirable. Substantial additional traffic would be added to Jackson Street between Swing Street and Wisconsin Street, as southbound STH 32 traffic would now use this segment. While this segment of Jackson Street could be one-way westbound or a two-way facility, its operation as a one-way westbound facility would eliminate the conflict between left-turning vehicles and opposing traffic at the intersection of Jackson and Wisconsin Streets. Because the westbound traffic on the Jackson Street approach to this intersection will be primarily southbound STH 32 traffic, such a vehicular conflict may be expected to be high. The primary difference between the alternatives is related to the cost of implementing the long-planned one-way street alternative related to extending Swing Street between Washington Street and Jackson Street and the attendant abandonment of several short street segments, as shown in Figure 3.

Because of the potential future substantial benefit of implementing a one-way street system through the central business district in the City of Port Washington, including the ability to provide sufficient capacity for forecast design year 2010 average weekday traffic volumes without the prohibition of on-street parking on STH 32, the Commission staff recommended that the currently adopted jurisdictional highway

system plan with regard to the provision of a one-way pair in the City of Port Washington central business district be reaffirmed. The southbound routing could be either over Franklin and Jackson Streets, or over Swing Street extended. At their meeting of May 22, 1991, the Advisory Committee acted unanimously to reaffirm the provision of a one-way pair of streets in the City of Port Washington central business district, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

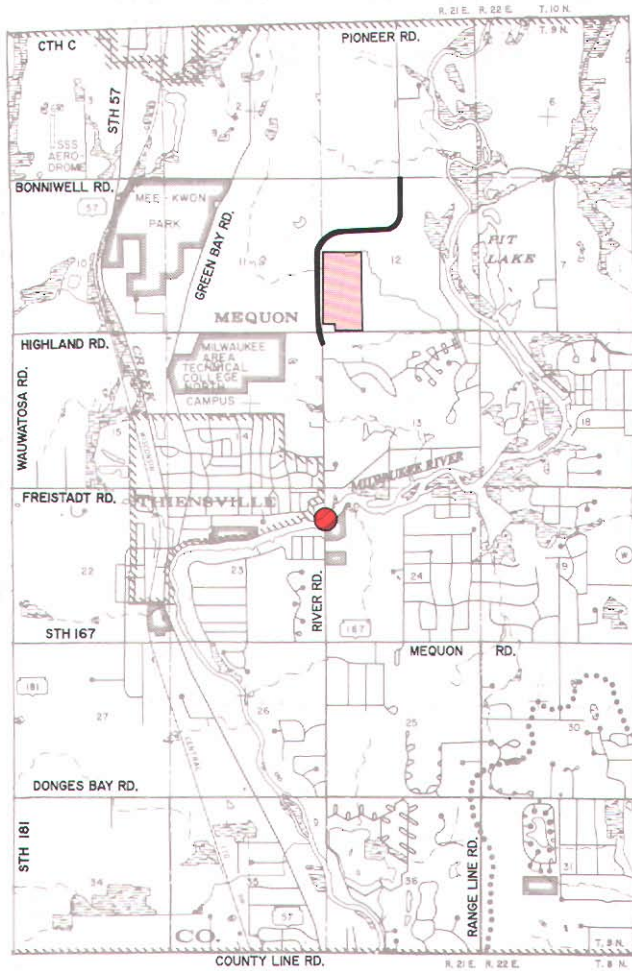
Planned Extension of River Road between Highland Road and Bonniwell Road and the Planned Construction of the River Road

Structure over the Milwaukee River Reconsidered
The City of Mequon representative requested that the plan reevaluation reconsider the planned extension of River Road between Highland Road and Bonniwell Road and the planned construction of the structure over the Milwaukee River at River Road. River Road is currently a local arterial between the Milwaukee-Ozaukee County line and STH 167 and between Freistadt Road and Highland Road in the City of Mequon. These segments are proposed under the currently adopted plan to remain as local arterials. The construction of the planned connection between River Road at Highland Road and Riverland Road at Bonniwell Road, along with the construction of the structure over the Milwaukee River at River Road, may be expected to provide traffic congestion relief to adjacent parallel north-south arterial facilities, particularly STH 57, to provide improved arterial spacing within the City to support existing and future development, and to eliminate indirection of travel.




City of Mequon officials are particularly concerned about the impact of the long-planned connection between Highland Road and Bonniwell Road on the development of the proposed Rotary Park, whose location is shown on Map 20. It may be noted that, although the alignment shown on the currently adopted jurisdictional highway system plan for the long-planned connection would bisect the park diagonally, the alignment shown on the plan is not intended to define the roadway centerline but, rather, to define a corridor in which the roadway would be constructed. The centerline of the long-proposed connection would be defined during a preliminary engineering study. Also shown on

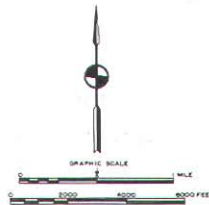
Map 20

SITE OF THE PROPOSED ROTARY PARK IN THE CITY OF MEQUON



LEGEND

-  POTENTIAL ALTERNATIVE RIVER ROAD ALIGNMENT
-  SITE OF PROPOSED ROTARY PARK
-  PROPOSED SITE OF STRUCTURE OVER THE MILWAUKEE RIVER



Source: SEWRPC.

Map 20 is one potential alternative alignment for the long-proposed connection which would avoid the taking of any lands of the proposed Rotary Park. Further, it may be expected that careful design of the roadway, particularly adjacent to the park, may be expected to minimize its impacts upon any activity within the park. Such careful design may include the acquisition of additional right-of-way and the construction of the roadway on an alignment

offset to the west from the right-of-way centerline. An earthen berm could be constructed on the additional land acquired between the roadway and the boundary of Rotary Park. This earthen berm would perform two functions: first, to provide a visual screen between the park and traffic on the roadway, and second, to provide a noise screen between the park and the roadway.

The provision of a two-lane rural roadway to connect Highland Road at River Road and Bonniwell Road at Riverland Road may be expected to entail the acquisition of approximately 16.6 acres, of which about two acres would be secondary environmental corridor and about 10 acres would be primary agricultural lands. It is estimated that cost to provide this connection would be \$1.3 million, including approximately \$0.3 million to acquire the right-of-way. Construction of the structure over the Milwaukee River at River Road, including the reconstruction of the approach roadways, may be expected to entail the acquisition of approximately 2.4 acres, of which approximately 0.4 acre would be primary environmental corridor. The cost of providing the structure is estimated to be \$2.7 million, including approximately \$2.0 million to acquire the necessary right-of-way.

The construction of the long-planned connection between Highland Road at River Road and Bonniwell Road at Riverland Road and the construction of the structure over the Milwaukee River at River Road may be expected to provide substantial traffic relief to adjacent parallel north-south arterials and to provide an additional arterial in support of growth within the City of Mequon at the desired spacing for a local arterial. The Commission staff recommended that the currently adopted jurisdictional highway system plan be reaffirmed with respect to these improvements. At its meeting of December 19, 1990, the Advisory Committee acted unanimously to reaffirm the River Road connections between Highland Road and Bonniwell Road and across the Milwaukee River in the City of Mequon, as recommended in the adopted Ozaukee County jurisdictional highway system plan.

Need to Improve Donges Bay Road between Wauwatosa Road and Cedarburg Road and to Extend Industrial Drive between Mequon Road and Donges Bay Road

The Advisory Committee requested that the plan reevaluation consider the need to improve

Donges Bay Road between Wauwatosa Road and Cedarburg Road. Donges Bay Road is currently being reconstructed between Wauwatosa Road and Cedarburg Road. The segment between Wauwatosa Road and the Wisconsin Central, Ltd., railway tracks is being reconstructed as a rural two-lane cross-section with paved shoulders; the segment between the Wisconsin Central Limited railway tracks and Cedarburg Road is being reconstructed to an urban cross-section with 44 feet of pavement from face-of-curb to face-of-curb. The roadway reconstruction was completed in the spring of 1991. This segment of Donges Bay Road will remain a two-lane roadway with a design capacity of 13,000 vehicles per average weekday. A comparison of existing and forecast design year 2010 average weekday traffic to the existing design capacity is shown on Map 21.

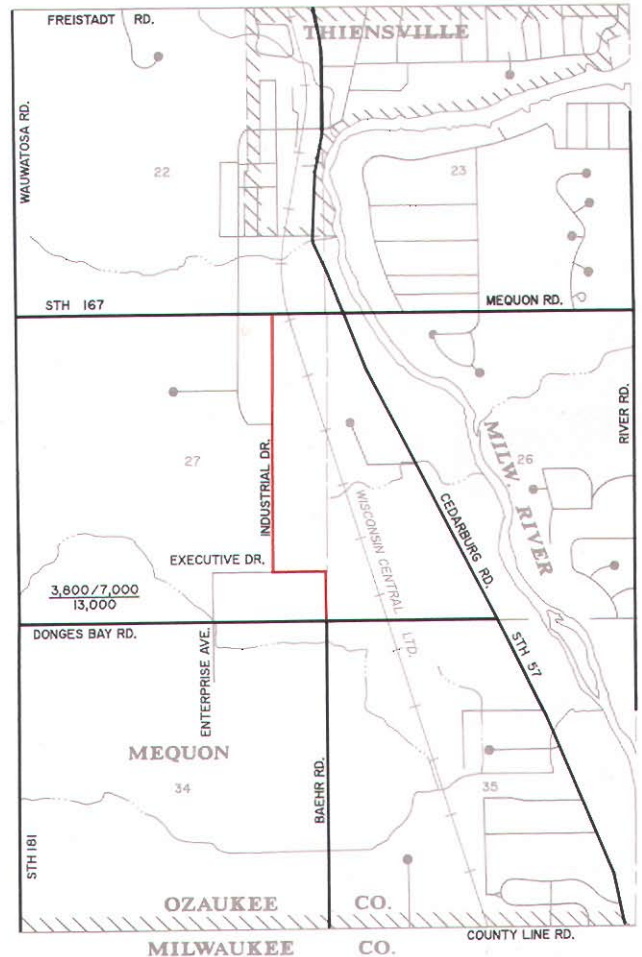
Both the existing and forecast average weekday traffic volumes on the segment of Donges Bay Road between Wauwatosa Road and Cedarburg Road are less than the existing design capacity of the roadway. Thus, no need for additional traffic lanes may be expected on this segment of Donges Bay Road by the design year 2010.

Because the design capacity of the existing roadway may be expected to be adequate for both the existing average weekday traffic volumes, and the forecast design year 2010 average weekday traffic volumes on Donges Bay Road between Wauwatosa Road and Cedarburg Road, the Commission staff recommended that the currently adopted jurisdictional highway system plan be reaffirmed with respect to the provision of two traffic lanes on this facility.

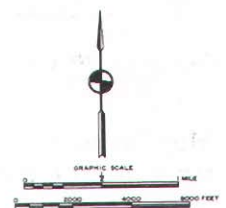
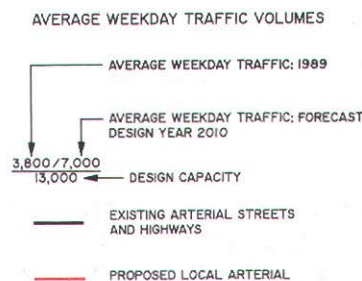
The Advisory Committee also requested that the plan reevaluation consider the addition to the plan of Industrial Drive and its extension to Donges Bay Road as a local trunk highway. As shown on Map 21, current plans for the City of Mequon industrial park include a connection between Industrial Drive and Donges Bay Road via Executive Drive and Baehr Road extended. Analyses of the amount and type of forecast year traffic anticipated to be carried by Industrial Drive and of the land use served and the spacing of arterials in the area as well indicate that Industrial Drive meets the criteria for a local trunk highway. Therefore, the Commission staff recommended that the jurisdictional highway system plan be amended to recommend addition of Industrial Drive, Executive Drive

Map 21

COMPARISON OF EXISTING 1989 AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON DONGES BAY ROAD IN OZAUKEE COUNTY



LEGEND



Source: SEWRPC.

between Industrial Drive and Baehr Road, and Baehr Road between Executive Drive and Donges Bay Road as local arterial highways. At its meeting of December 19, 1990, the Advisory Committee acted unanimously to reaffirm the

provision of two traffic lanes on Donges Bay Road between Wauwatosa Road and Cedarburg Road (STH 57), as recommended in the adopted Ozaukee County jurisdictional highway system plan and the addition of Industrial Drive between Executive Drive and STH 167, Executive Drive between Industrial Drive and Baehr Road, and Baehr Road between Executive Drive and Donges Bay Road to the arterial system as local trunk highways.

Jurisdiction of STH 57 between STH 167 and STH 60

The City of Cedarburg and Wisconsin Department of Transportation representatives on the Advisory Committee suggested a change in the planned jurisdiction of STH 57 between STH 167 and STH 60. The current jurisdictional highway system plan recommends that this current routing of STH 57 continue to be a state trunk highway.

Analysis indicates that in 1984 the average length of trips using STH 57 between STH 167 and STH 60 ranged from seven to 13 miles and, therefore, did not meet the average trip length criterion of 16 miles necessary for its classification as a state trunk highway. Of the nearly eight-mile-long segment of STH 57 concerned, the trip length criterion for classification as a County trunk highway of 10 to 16 miles was met on only the three-mile-long segment between Western Avenue in the City of Cedarburg and Highland Road in the City of Mequon. The trip length on the remainder of the facility under consideration averaged less than 10 miles.

Analysis of the land uses served by STH 57 indicated that commercial, recreational, industrial, and institutional land uses, including the commercial center in the downtown area of the City of Cedarburg, Mee-Kwon County Park, the Cedarburg industrial park, and the Milwaukee Area Technical College North Campus, were of countywide importance and, thus, should be served by a county trunk highway. Many of the land uses specifically identified were also located on the segment between Western Avenue and Highland Road.

The jurisdictional transfer of Wauwatosa Road and CTH N between STH 167 and STH 143 to the state trunk highway system is proposed under the currently adopted jurisdictional highway system plan; this transfer was reaffirmed in the current review of that plan. The existing

route of STH 57 between STH 167 and STH 60 is generally located less than one mile east of this proposed state trunk highway. Thus, neither minimum spacing criterion of one mile for classification as a county trunk highway nor of two miles for classification as a state trunk highway would be met by STH 57 between STH 60 and STH 167.

The criterion for operational characteristics for classification as a state trunk highway, an average travel speed ranging from 30 to 70 miles per hour, was not met on the existing STH 57 route, which has a posted speed limit of 25 miles per hour within the City of Cedarburg, Village of Grafton, and Village of Thiensville, and an overall travel speed of about 28 miles per hour. The existing route does marginally meet the overall travel speed criterion of 25 to 50 miles per hour for classification as a county trunk highway, but it falls into the mid-range of the criterion for classification as a local trunk highway, 20 to 40 miles per hour. The existing route does not meet the criteria for classification as a state or county trunk highway with respect to access control, since neither full nor partial control is provided along the route. Finally, this segment of the existing routing of STH 57 is not necessary to provide interregional or regional state trunk highway system continuity, such continuity is provided through the area by IH 43.

The only state trunk highway criterion which is met by the existing routing of STH 57 is the existing and design year 2010 traffic volumes carried by this segment of STH 57. Existing average weekday traffic volumes range from 8,900 to 20,500 vehicles on STH 57 between STH 167 and STH 60, although only in the City of Cedarburg do these volumes exceed 14,000 vehicles per average weekday. Forecast year 2010 average weekday traffic volumes of 8,000 to 21,000 vehicles per average weekday, the forecasts assuming the improvement of Wauwatosa Road and CTH N and STH 60 to four traffic lanes and the concomitant diversion of traffic from the existing route of STH 57. The criterion for classification as a state trunk highway is a minimum average weekday traffic volume of 6,500 vehicles.

Thus, the segment of STH 57 between STH 167 and STH 60 meets the criteria of only one of the five operational characteristics, average weekday

traffic volumes, and does not meet the trip service and land use service criteria for classification as a state trunk highway. This segment of STH 57 meets one of the five operational characteristics, average weekday traffic volumes, for classification as a county trunk highway and meets the land use service criterion for classification as a county trunk highway. However, less than half of this segment of STH 57 meets the trip service criteria for classification as a county trunk highway. This segment of STH 57, therefore, does meet all the criteria for classification as a local trunk highway.

Returning this segment of highway to local jurisdiction would be in concert with the express desire of the communities of Cedarburg, Grafton, and Thiensville to maintain the current roadway cross-section through their communities. In this respect, the Village of Thiensville in 1986 elected to use local funds for the reconstruction of STH 57 through the Village, rather than state and federal funds, in order to ensure the retention of a minimal roadway cross-section through the Village.

At the time this issue was raised by the Advisory Committee, three potential alternative routes for the location of STH 57 between its junctions with STH 60 and STH 167 were identified by members of the Committee. These alternatives are shown on Map 22. With respect to Alternative Route No. 1, neither the existing route of STH 57 between STH 167 and Pioneer Road (CTH C) nor Pioneer Road (CTH C) between STH 57 and IH 43 meet the criteria for classification as a state trunk highway. This alternative route alignment would not be expected to alter any conditions which would then warrant the reclassification of these facilities. Thus, this alternative was not recommended for further consideration.

Under Alternative Route No. 2, nearly 4.1 miles of indirection would be added to STH 57 between STH 167 and IH 43. This alternative was not recommended for further consideration.

The third alternative route proposed by the Committee for consideration would make use of IH 43 and would provide the most direct alignment between STH 57 at STH 167 and STH 57 at its existing interchange with IH 43 and STH 32. This alternative alignment may be expected to provide the best service to the longer trips which are intended to use state trunk highways.

Accordingly, the Commission staff recommended that the currently adopted jurisdictional highway system plan be amended to transfer STH 57 between STH 60 and STH 167 to the local arterial system. Other jurisdictional transfers required to maintain state and county trunk highway system continuity necessary as part of this recommended transfer are shown on Map 23. Map 23 compares existing jurisdictional classification and planned jurisdictional classification under the adopted plan and the recommended amended plan.

It may be noted that this realignment of STH 57 should be considered an interim realignment. It may be expected that the transfer of STH 57 between W. State Street and the Milwaukee-Ozaukee County line in Milwaukee County to the local or county trunk highway system will be considered during a reevaluation of the Milwaukee jurisdictional highway system plan. If this transfer is accomplished, the southerly terminus of STH 57 would be at its interchange with IH 43 northeast of the Village of Saukville in Ozaukee County. Then STH 57 would be deleted from the state trunk highway system from that point in Ozaukee County south to the Milwaukee-Ozaukee County line and in Milwaukee County as far south as W. State Street.

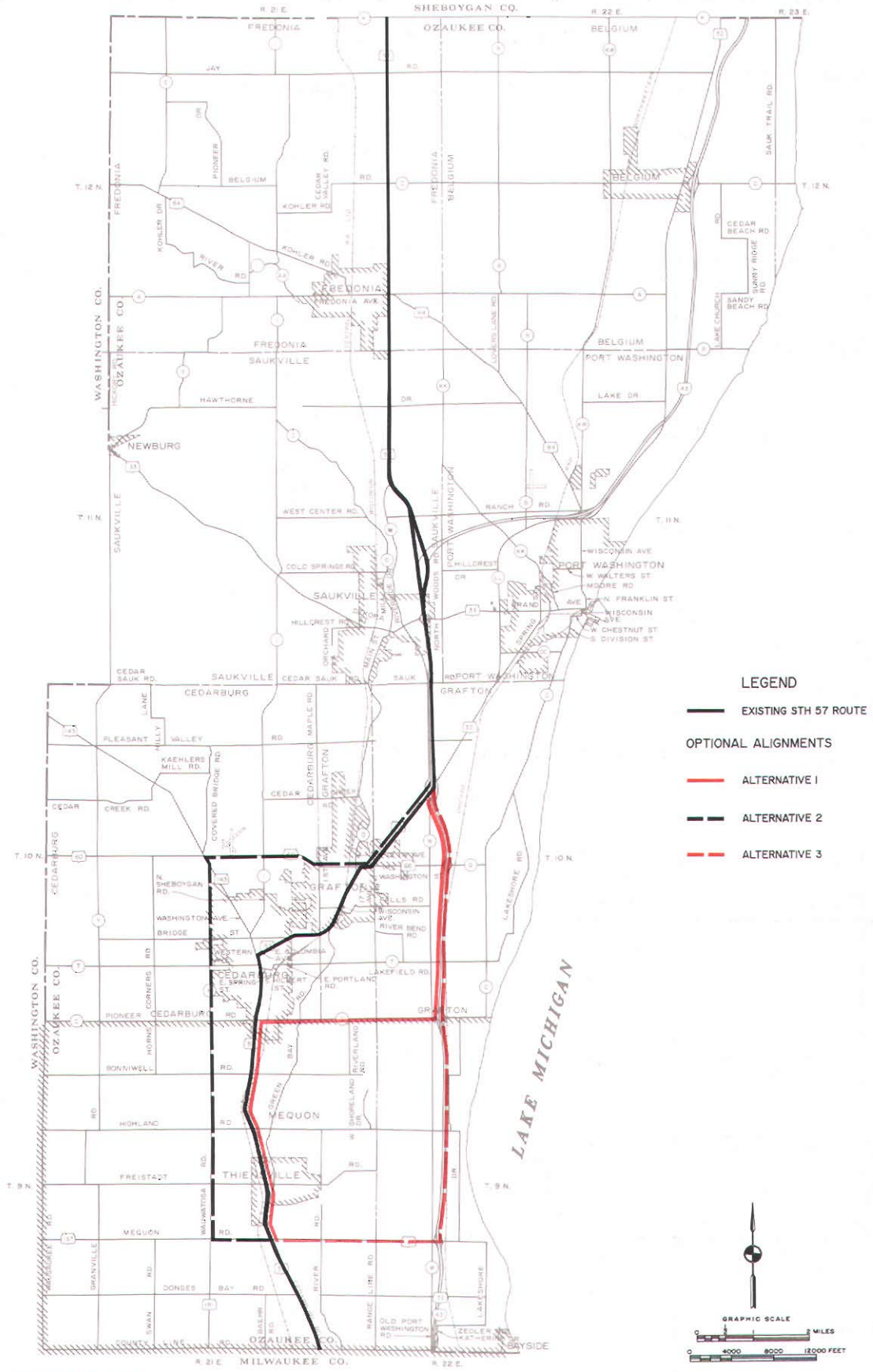
At their meeting of May 22, 1991, the Advisory Committee acted, on an 8 to 1 vote, to amend the Ozaukee County jurisdictional highway system plan to transfer STH 57 between STH 167 and STH 60 and also between STH 60 and IH 43 to the local trunk highway system and the county trunk highway system, respectively. This includes the jurisdictional transfers to preserve state and county trunk highway system continuity necessitated by the transfer of STH 57. At their meeting of July 23, 1991, the Advisory Committee acted unanimously to recommend that, upon the transfer of the existing route of STH 57 between STH 167 and IH 43, STH 57 be routed with STH 167 from its current intersection with STH 167 easterly to IH 43, and over IH 43 northerly to its current intersection with IH 43.

Provision of Additional Traffic Lanes on STH 57 between Bridge Street and 1st Avenue

At the request of the City of Cedarburg representative to the Advisory Committee, the Commission staff evaluated the need to amend the adopted plan to recommend providing four traffic lanes on STH 57 between Bridge Street

Map 22

ALTERNATIVE ALIGNMENTS FOR THE CONTINUATION OF STH 57 BETWEEN STH 167 AND STH 60

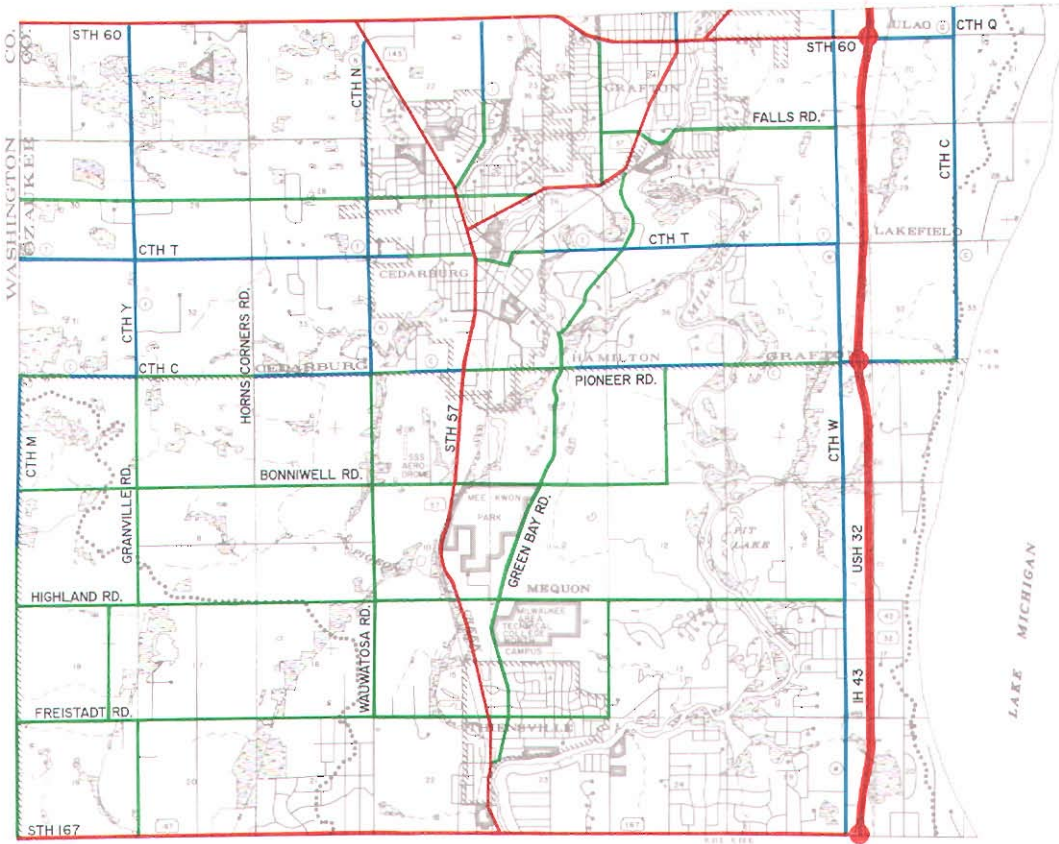


Source: SEWRPC.

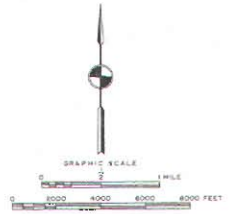
Map 23

COMPARISON OF EXISTING, CURRENTLY ADOPTED PLAN, AND RECOMMENDED AMENDED PLAN JURISDICTIONAL CLASSIFICATIONS RESULTING FROM THE RECOMMENDED TRANSFER OF STH 57 TO THE LOCAL ARTERIAL SYSTEM BETWEEN STH 60 AND STH 167

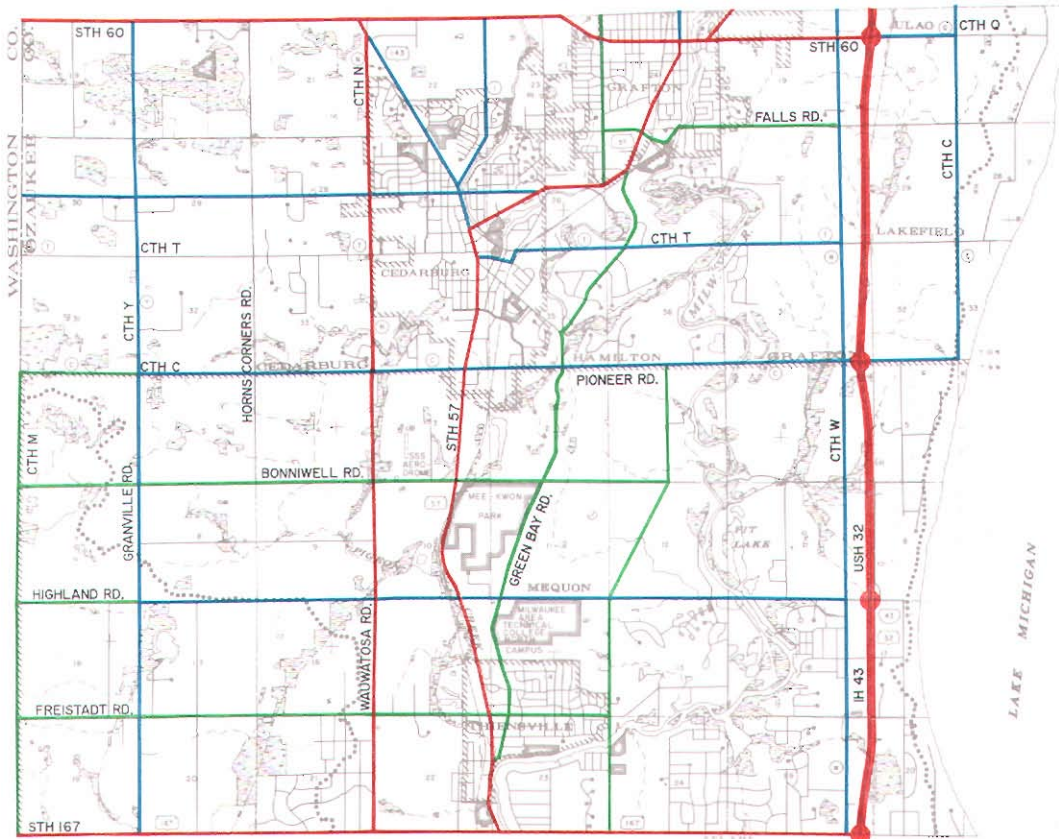
EXISTING JURISDICTIONAL CLASSIFICATION



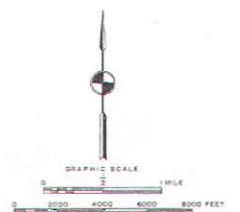
- LEGEND**
 ARTERIAL STREET AND HIGHWAY SYSTEM JURISDICTIONAL CLASSIFICATION
- STATE TRUNK FREEWAY
 - STATE TRUNK NONFREEWAY
 - COUNTY TRUNK
 - LOCAL TRUNK
 - FREEWAY-NONFREEWAY INTERCHANGE



CURRENTLY ADOPTED PLAN JURISDICTIONAL CLASSIFICATION

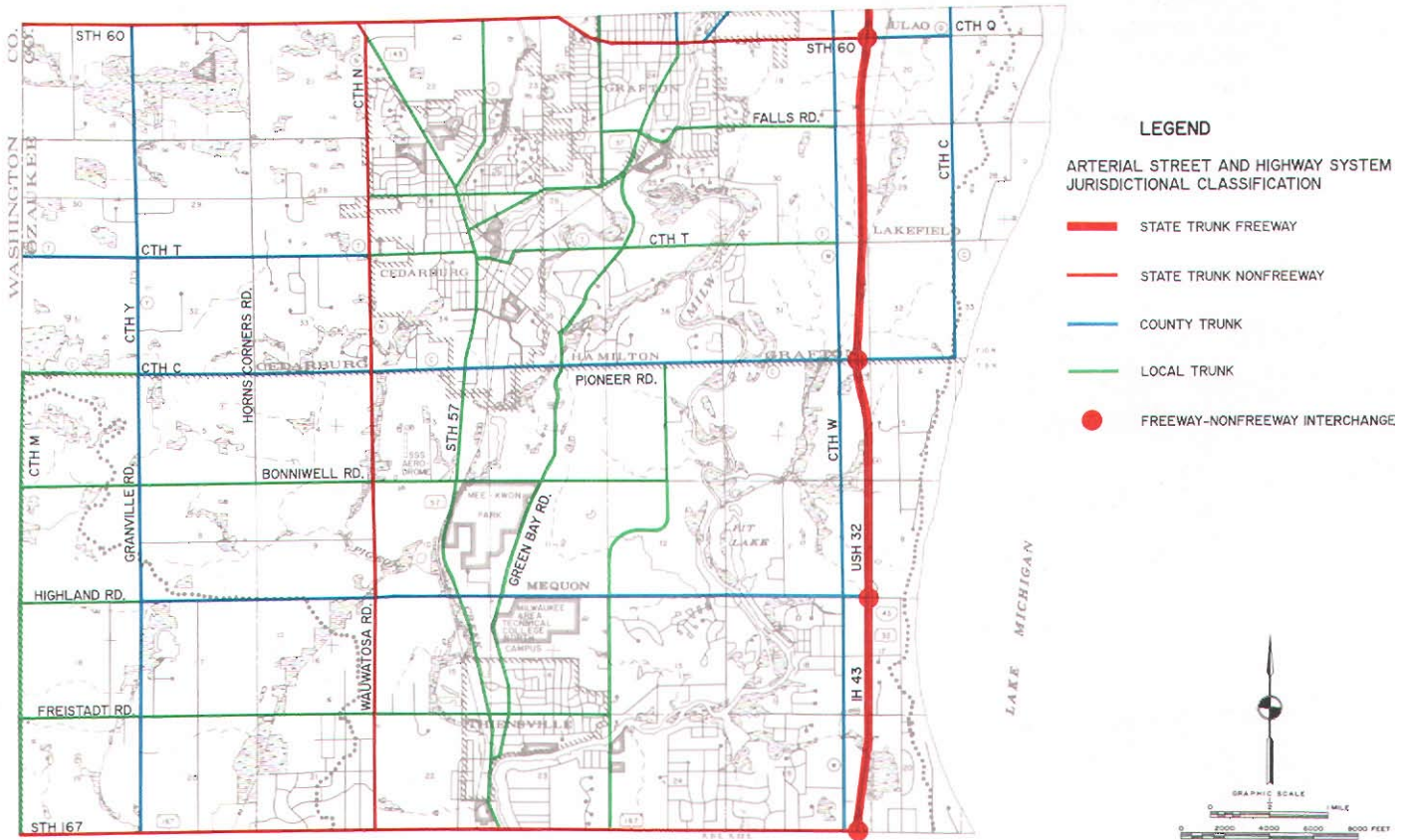


- LEGEND**
 ARTERIAL STREET AND HIGHWAY SYSTEM JURISDICTIONAL CLASSIFICATION
- STATE TRUNK FREEWAY
 - STATE TRUNK NONFREEWAY
 - COUNTY TRUNK
 - LOCAL TRUNK
 - FREEWAY-NONFREEWAY INTERCHANGE



Map 23 (continued)

RECOMMENDED AMENDED PLAN JURISDICTIONAL CLASSIFICATION



Source: SEWRPC.

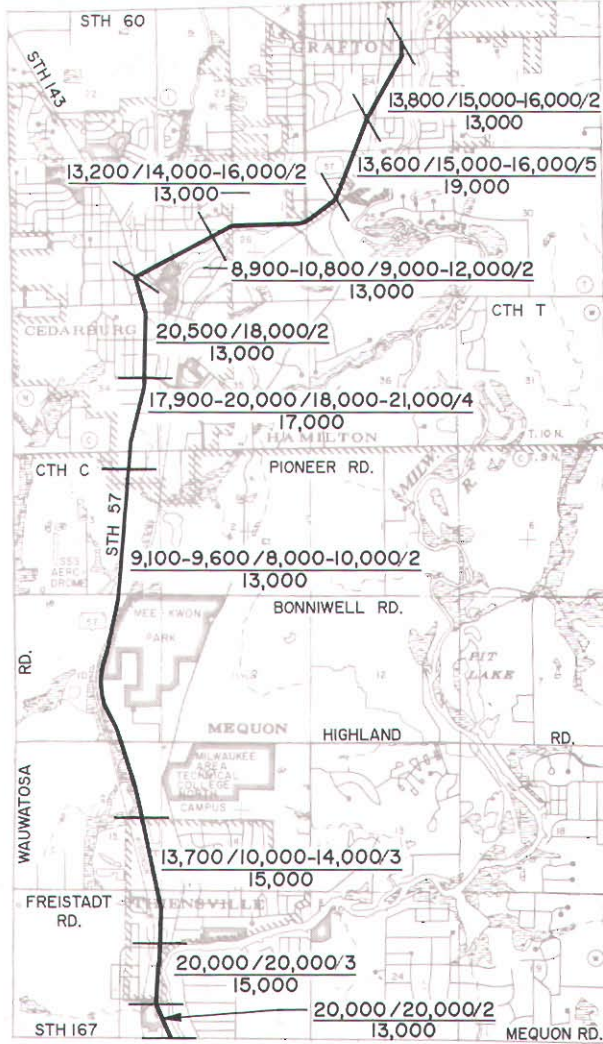
and 1st Avenue. The representative indicated that the City was uncertain as to the need for this improvement because the adopted plan recommends that additional roadway capacity be provided in this corridor on Wauwatosa Road and CTH N and because the communities of Cedarburg and Thiensville have indicated that roadway capacity will not be increased to accommodate additional traffic on STH 57 in their communities. Map 24 displays the existing and forecast year 2010 average weekday traffic volumes on the segment of STH 57 between Bridge Street and 1st Avenue, as well as other segments of STH 57 between STH 167 and STH 60. The year 2010 forecasts are prepared within the context of the year 2010 regional land use plan and the adopted regional transportation system plan and, as a result, assume that no improvement will be made to the segment of STH 57 between STH 60 and STH 167 but that

Wauwatosa Road will be improved to a high standard four-lane divided roadway between STH 167 and STH 60.

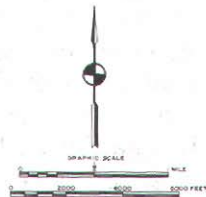
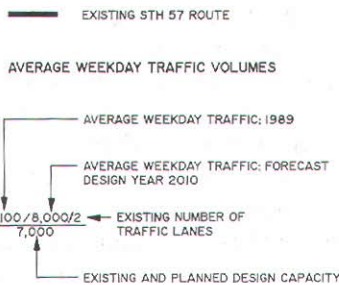
On this segment of STH 57 the traffic forecasts of between 8,000 and 21,000 vehicles per average weekday in the year 2010 are about the same as existing average weekday traffic estimates of 9,000 to 21,000 vehicles per average weekday. It should be noted that the traffic forecasts indicate that average weekday traffic volumes through the historic portions of the communities of Cedarburg, Grafton, and Thiensville may be expected to continue to exceed roadway design capacity over the next 20 years. With respect to the segment of STH 57 between 1st Avenue and Bridge Street, the traffic forecasts indicate that average weekday traffic volumes may be expected to increase modestly from 13,000 vehicles per average weekday to between 14,000

Map 24

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON STH 57 BETWEEN STH 60 AND STH 167



LEGEND



Source: SEWRPC.

and 16,000 vehicles per average weekday by the year 2010. The design capacity of this segment of STH 57 approximates 13,000 vehicles per average weekday and, as a result, average weekday traffic volume currently equals, and may be expected by the year 2010 to exceed, design capacity. This segment of STH 57 is located between a segment of STH 57 which has been improved to a four-lane undivided roadway with a center two-way left-turn lane at its eastern end, and at its western end the two facilities of Bridge Street and STH 57, each with two traffic lanes. The traffic on the western end of this segment of STH 57, between 1st Avenue and Bridge Street, of about 13,200 vehicles per average weekday divides between STH 57 at about 8,900 vehicles per average weekday and Bridge Street at approximately 3,500 vehicles per average weekday.

The widening of this segment of STH 57 between Bridge Street and 1st Avenue may be expected to resolve an existing and future traffic congestion problem of existing and forecast future average weekday traffic volumes exceeding design capacity of the roadway. The widening should not be expected to direct additional traffic to congested segments of STH 57 in Cedarburg, Grafton, and Thiensville not recommended to be improved. The widening to provide four traffic lanes would represent an extension to the east of the existing five-lane section and would not be inconsistent with maintaining a two-lane section east of Bridge Street since, as already noted, the traffic volume on the segment of STH 57 between Bridge Street and 1st Avenue divides between Bridge Street and the route of STH 57. The estimated cost of improving this segment of STH 57 to an undivided four-traffic-lane roadway is \$1.1 million, and it can be constructed within the existing 66-foot right-of-way. Therefore, the Commission staff recommended that the jurisdictional plan be amended to recommend that four traffic lanes be provided on STH 57 between Bridge Street and 1st Avenue. At their meeting of May 22, 1991, the Advisory Committee acted unanimously to recommend the improvement of STH 57 to four traffic lanes between Bridge Street and 1st Avenue.

Need to Improve STH 60 between the Ozaukee-Washington County Line and STH 143

In addition to the issues identified by the Advisory Committee for staff analysis and

evaluation, the staff itself identified a potential need to improve STH 60 between the Ozaukee-Washington County line and STH 143. This segment of STH 60 is currently a two-lane rural facility with a design capacity of 7,000 vehicles per average weekday. The existing average weekday traffic counts and the forecast design year 2010 traffic volumes are compared to the design capacity of the existing roadway on Map 25. It may be noted that the existing roadway provides sufficient capacity to accommodate the existing average weekday traffic of 5,150 vehicles per average weekday. However, by the design year 2010, the forecast average weekday traffic volumes may be expected to range between 7,000 and 8,000 vehicles per average and, thus, exceed the existing design capacity and require improvement to four traffic lanes.

The provision of four traffic lanes on STH 60 between the Ozaukee-Washington County line and STH 143 may be expected to entail the acquisition of approximately 22.1 acres of land for right-of-way, of which 1.5 acres are secondary environmental corridor and 2.1 acres are isolated natural areas. This roadway improvement would also entail the acquisition of 2.6 acres of wetlands within the previously identified environmental corridors. No businesses or residences are expected to be displaced. The provision of four traffic lanes is estimated to cost \$4.0 million, including \$0.3 million to acquire the right-of-way.

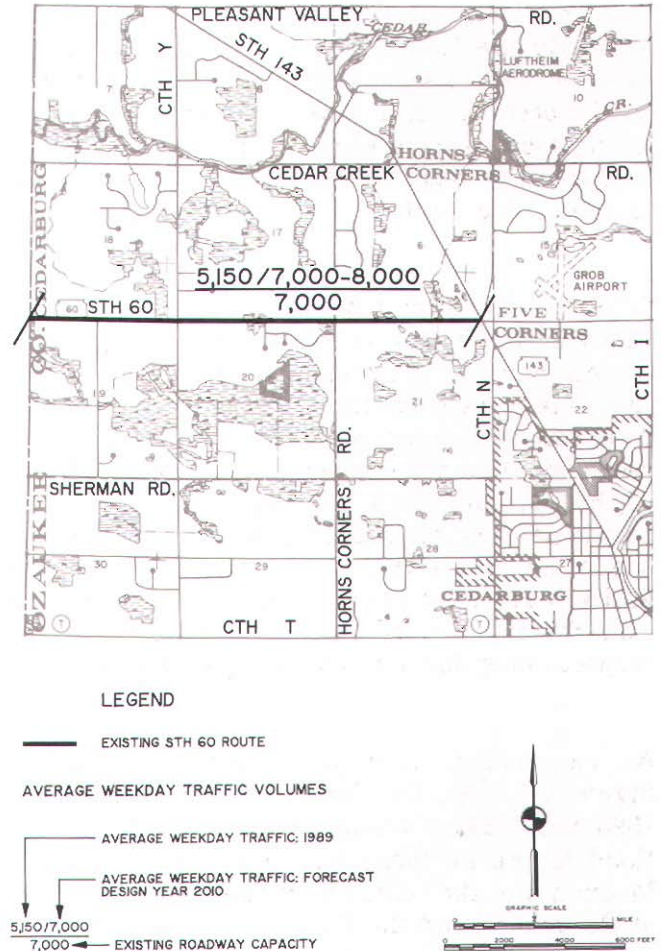
The Commission staff recommended that the adopted plan be amended to add the improvement of STH 60 between the Ozaukee-Washington County line and STH 143 to four lanes to provide sufficient capacity to accommodate forecast design year 2010 average weekday traffic volumes. At their meeting of May 22, 1991, the Advisory Committee acted unanimously to recommend the improvement of STH 60 to four traffic lanes between the Ozaukee-Washington County line and STH 143.

PROVISION OF A CONTINUOUS COUNTY TRUNK HIGHWAY SYSTEM

At the request of the Ozaukee County Highway Commissioner, the Commission staff reexamined the need and desirability of providing a continuous county trunk highway system

Map 25

COMPARISON OF CURRENT AND FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUMES TO EXISTING ROADWAY DESIGN CAPACITY ON STH 60 BETWEEN THE WASHINGTON-OZAUKEE COUNTY LINE AND STH 143



Source: SEWRPC.

through incorporated cities and villages in Ozaukee County. If each of the jurisdictional highway systems, state, county, local, is to function as an integrated subsystem, then the responsibility for the operation and maintenance of each of the individual facilities constituting the subsystem, as well as the design and construction of these facilities, must ultimately rest with the level and agency of government having the greatest basic interest in these facilities. It is, therefore, considered desirable, if not essential, that the county trunk highway system be

made continuous throughout the County and its incorporated municipalities. In addition to introducing undesirable discontinuities into the county trunk highway system, and thereby violating principles of sound system management, the connecting street concept would create inequities in the distribution of maintenance costs. These inequities would result in the shift from the County to the local units of government of nearly the full burden of maintaining facilities designed to serve heavy volumes of through traffic between land uses of countywide importance, such as general aviation airports, county parks, large truck terminals, and commercial and industrial centers.

In addition, the proper functioning of an entire highway route requires that sufficient roadway design capacity is provided on each segment of the route to meet existing and anticipated traffic. This can best be accomplished if the County is responsible for the entire route of a county trunk highway, and may not occur if individual municipalities are responsible for segments of the route. Similarly, to properly function, the entire route must have appropriate accommodation for truck traffic and be consistent with respect to regulations, such as speed limits.

An example of a discontinuous county trunk highway in Ozaukee County is CTH C, which in 1990 was routed along Pioneer Road. Pioneer Road is the northern boundary of the City of Mequon and the southern boundary of the Town of Cedarburg and the Town of Grafton and also passes through the City of Cedarburg. Pioneer Road has long been recommended to be part of the county highway system. In 1990, about 3.7 miles, or about 46 percent of this facility, was under the jurisdiction of Ozaukee County; about 0.5 mile, or about 6 percent, was under the jurisdiction of the City of Cedarburg; and the remaining 3.8 miles, or 48 percent, was under the jurisdiction of the City of Mequon. The problem of discontinuity is further exacerbated by the fact that the longest segment of Pioneer Road under any one jurisdiction is about 1.3 miles, as shown on Map 26.

Several potential disadvantages of a discontinuous county trunk highway such as Pioneer Road

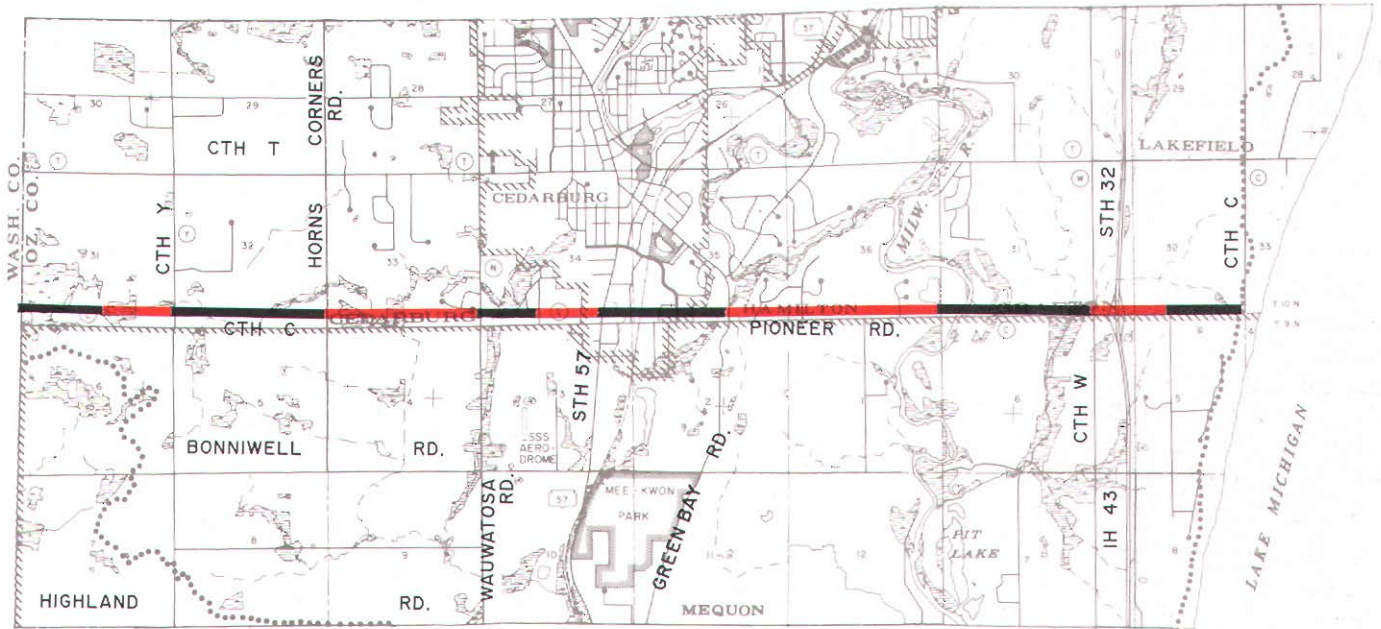
include: 1) the potential imposition of differing regulations by the responsible unit of government on its segment of the facility, including regulations relating to the prohibition of trucking and parking, as well as speed limits, 2) the potential for each municipality to construct different roadway cross-sections, 3) the potential for each municipality to hold differing perspectives on the need for roadway improvement, 4) the inability to effect improvements on facilities located along the boundary lines of municipalities, and 5) the potential for snow removal and minor maintenance to be inefficient and accomplished inconsistently along the route, depending on the importance of the facility to the residents of each municipality.

The ultimate responsibility for a facility should rest with a single unit of government in order to ensure continuous, uniformly desirable operating conditions along the entire length of that facility. All operations or actions that will have a long-term effect on traffic capacity and level of service should be encompassed within this responsibility. The Commission staff therefore recommended that the county trunk highway system be made continuous through all incorporated areas within the County. Such a policy would ensure that county trunk highways are constructed and maintained with adequate capacity, desirable operating conditions are maintained, and that responsible control of access provided and preserved.

The County would have the option of contracting with the cities and villages concerned for maintenance on county trunk highways on a full cost reimbursement basis. The County would not, however, participate in the maintenance of sidewalks or driveways, the care of new trees planted under permit, the care of ornamental flowers and shrubs, nor in the maintenance of sprinkler systems or related water service. It is also recommended that the County assume more direct administration of the following operational control devices on county trunk highway facilities: 1) issuance of driveway permits, 2) control of advertising signs, 3) maintenance of road signage, 4) establishment of speed zoning, 5) issuance of special permits, 6) prohibition of parking as required to provide necessary traffic capacity, and 7) installation of traffic control

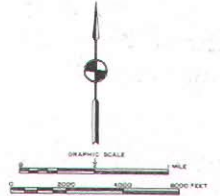
Map 26

EXISTING JURISDICTION OF PIONEER ROAD (CTH C) IN THE TOWNS OF CEDARBURG AND GRAFTON AND THE CITIES OF CEDARBURG AND MEQUON



LEGEND

- OZAUKEE COUNTY JURISDICTION
- LOCAL MUNICIPALITY JURISDICTION



Source: SEWRPC.

signals. The County may, at its option, delegate the administration of these operational controls to the local municipalities. Such delegation would normally parallel the contracting for maintenance service.

Implementation of these recommendations would not only provide for a more equitable distribution of the burden of maintaining arterial facilities of areawide importance, but would also place the operational control of these facilities on the level and agency of government that has the greatest interest in, and the resources available for, these facilities. At their

meeting of July 23, 1991, the Advisory Committee acted unanimously to reaffirm the provision of a continuous county trunk highway system through incorporated urban areas as recommended in the adopted Ozauxee County jurisdictional highway system plan.

PROVISION OF CONTINUOUS STATE TRUNK HIGHWAY SYSTEM

The currently adopted jurisdictional highway system plan proposed the abolition of the connecting street system, noting that if each of

the jurisdictional highway systems is to function as an integrated subsystem, then the responsibility for the operation and maintenance of each of the individual facilities constituting the subsystems, as well as the design and construction of these facilities, must ultimately rest with the level and agency of government having the greatest basic interest in those facilities. As a result, it was considered essential that the state and county trunk highway systems be made continuous throughout the County and its incorporated municipalities. With respect to the state trunk highway system, the attainment of this subsystem continuity and the attendant unification of operation and maintenance and design and construction responsibilities, dictate the need to abandon the connecting street concept. The connecting street concept violates the principles of sound system management because it may introduce undesirable discontinuities with respect to operations and maintenance activities. For these reasons both the county trunk highway system and the state trunk highway system should be continuous throughout the County and its incorporated municipalities.

REVIEW OF THE CURRENTLY ADOPTED SCENIC DRIVE SYSTEM AND IDENTIFICATION OF RUSTIC ROADS

At the request of the Ozaukee County Highway Commissioner, the Commission staff reviewed the scenic drive system identified in the current jurisdictional highway system plan. This long-recommended scenic drive system is shown on Map 27. The system was defined to provide a network of facilities for pleasure driving, bicycling, and hiking. A scenic drive is defined as a marked and signed route connecting or traversing particularly pleasing landscapes, including areas of topographic, vegetative, and geologic interest and/or sites of scientific, cultural, or historic interest. Because of the need for continuity, the facilities constituting the scenic drive network may include certain relatively high-volume, high-speed arterials as well as low-volume, low-speed nonarterial streets and highways. Consequently, portions of an overall system of scenic drives may have to be improved for traffic safety and capacity purposes, although such improvements would require particularly sensitive design in order to preserve the inherent scenic quality.

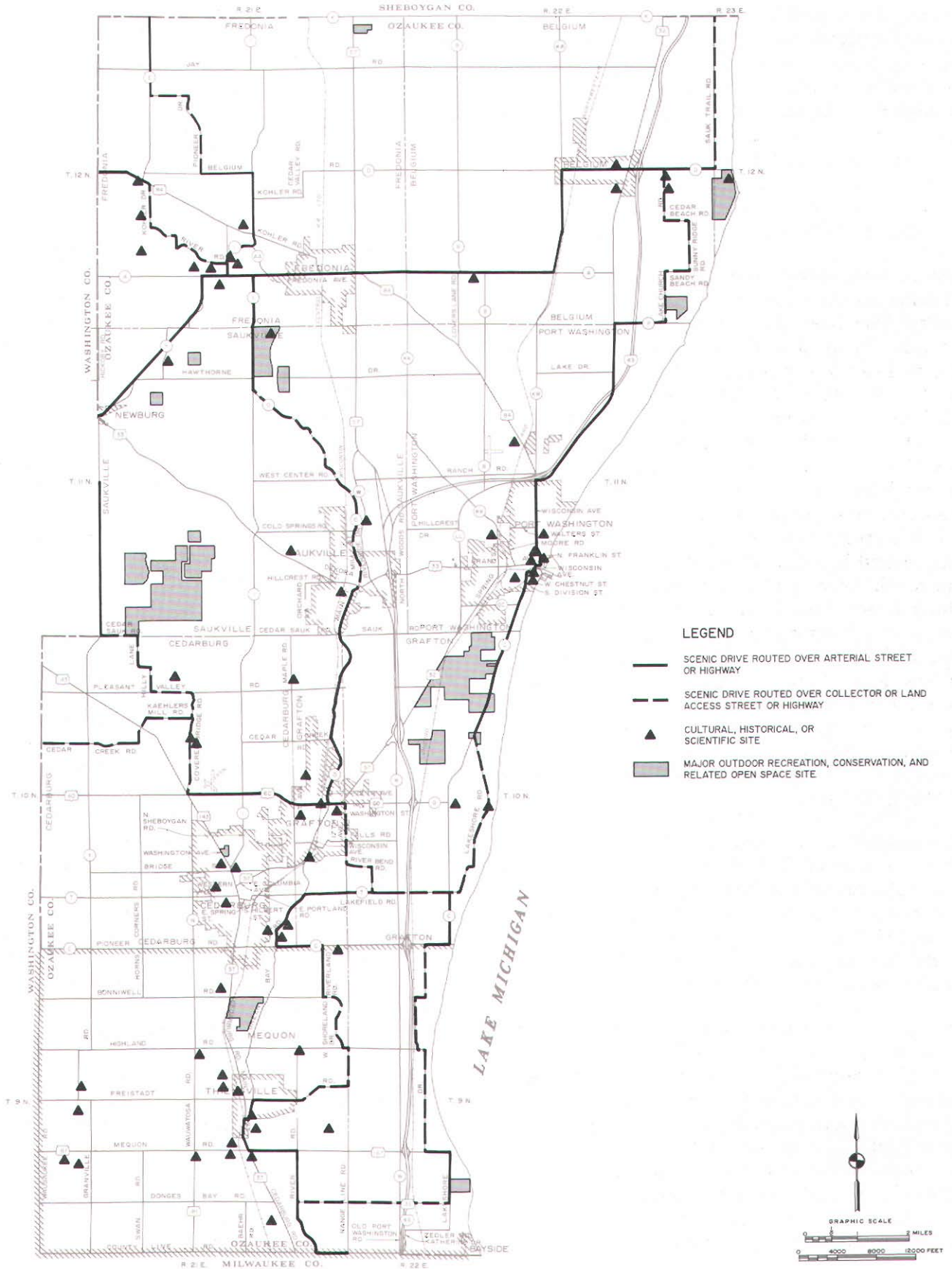
Also at the request of the County Highway Commissioner, the Commission staff evaluated the long-recommended scenic drive system in Ozaukee County for potential designation of segments of that system as rustic roads.⁷ In this respect, the staff was specifically requested to evaluate the 7.8-mile segment of CTH C between CTH CC and IH 43. The 2.7-mile segment of CTH C between CTH CC and Lakeshore Road, and the 1.5-mile segment of CTH C between Lakefield Road and Lakeshore Drive were part of the original recommended system of scenic drives proposed in the adopted jurisdictional highway system plan.

Rustic roads are defined as low-volume land access highway facilities possessing outstanding scenic, natural, and cultural features along its borders which set the facility apart from other facilities as unique and distinct. Preservation of the rustic characteristics of a facility typically precludes major improvements for traffic safety or capacity purposes and limits the speed limit to 45 miles per hour. Rustic roads typically possess less than desirable cross-sections, and less than desirable horizontal and vertical curvature. Rustic roads are different from scenic drives in that: 1) scenic drives are defined as an interconnected system, rather than as individual segments, 2) scenic drives may include high traffic-volume and arterial facilities, and 3) scenic drives may be improved to high standard facility cross-sections and other characteristics.

It is recommended that the long-proposed scenic drive system within Ozaukee County be reaffirmed, with one modification. The modification would route the scenic drive system over STH 57 between STH 60 in the Village of Grafton and over Green Bay Road in the Village of Thiensville, rather than over segments of Green Bay

⁷*Enabling legislation for the rustic roads system was first enacted by the Wisconsin Legislature in 1973 after the adoption of the original Ozaukee County jurisdictional highway system plan.*

LONG-RECOMMENDED SCENIC DRIVE SYSTEM IN THE CURRENTLY ADOPTED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

Road and other facilities. This modification would permit more direct service of Mee-Kwon County Park and of more cultural, historical, and scientific sites. This recommended scenic drive system, as shown on Map 28, would connect eight of the 11 existing county or state parks within Ozaukee County, as well as 15 of the 17 sites of cultural, historical, and scientific interest within the County. Each of the 17 sites, as well as each of the major outdoor recreation, conservation, and related open space sites, is identified in Tables 5, 6, and 7.

The recommended scenic drive system within Ozaukee County would consist of three basic drives. The first drive would extend northerly roughly along the Milwaukee River from the Milwaukee County line and the City of Mequon to the Village of Fredonia. At the Village of Fredonia, the drive would separate into three branches. The first branch would extend westerly along the main stem of the Milwaukee River to the West Bend and Paradise Valley areas in Washington County and join the Kettle Moraine Scenic Drive just west of the City of West Bend. The second branch would extend westerly along the north branch of the Milwaukee River and Stony Creek, joining the Kettle Moraine Scenic Drive, which extends northerly to the Greenbush area and the Old Wade House state historic site at New Fane, Fond du Lac County. This branch would eventually lead westerly to Mayville and the Horicon Marsh. The third branch would extend northerly from the Village of Fredonia through the Random Lake and Cascade areas of Sheboygan County.

The second scenic drive would extend westerly from the City of Cedarburg along Cedar Creek to the Slinger area in Washington County, where it would join the existing Kettle Moraine Scenic Drive, with a branch extending from Covered Bridge County Park to the scenic drive leading west from Fredonia to West Bend.

The third scenic drive would extend northerly along the shoreline of Lake Michigan from the City of Mequon through the City of Port Washington, past Harrington Beach State Park and into Sheboygan County to the Terry Andrae State Park. This drive would be connected to the previous drives via a route between the Village of Fredonia and the Harrington Beach State Park and by a route connecting the City of Cedarburg with the Lake Michigan shore.

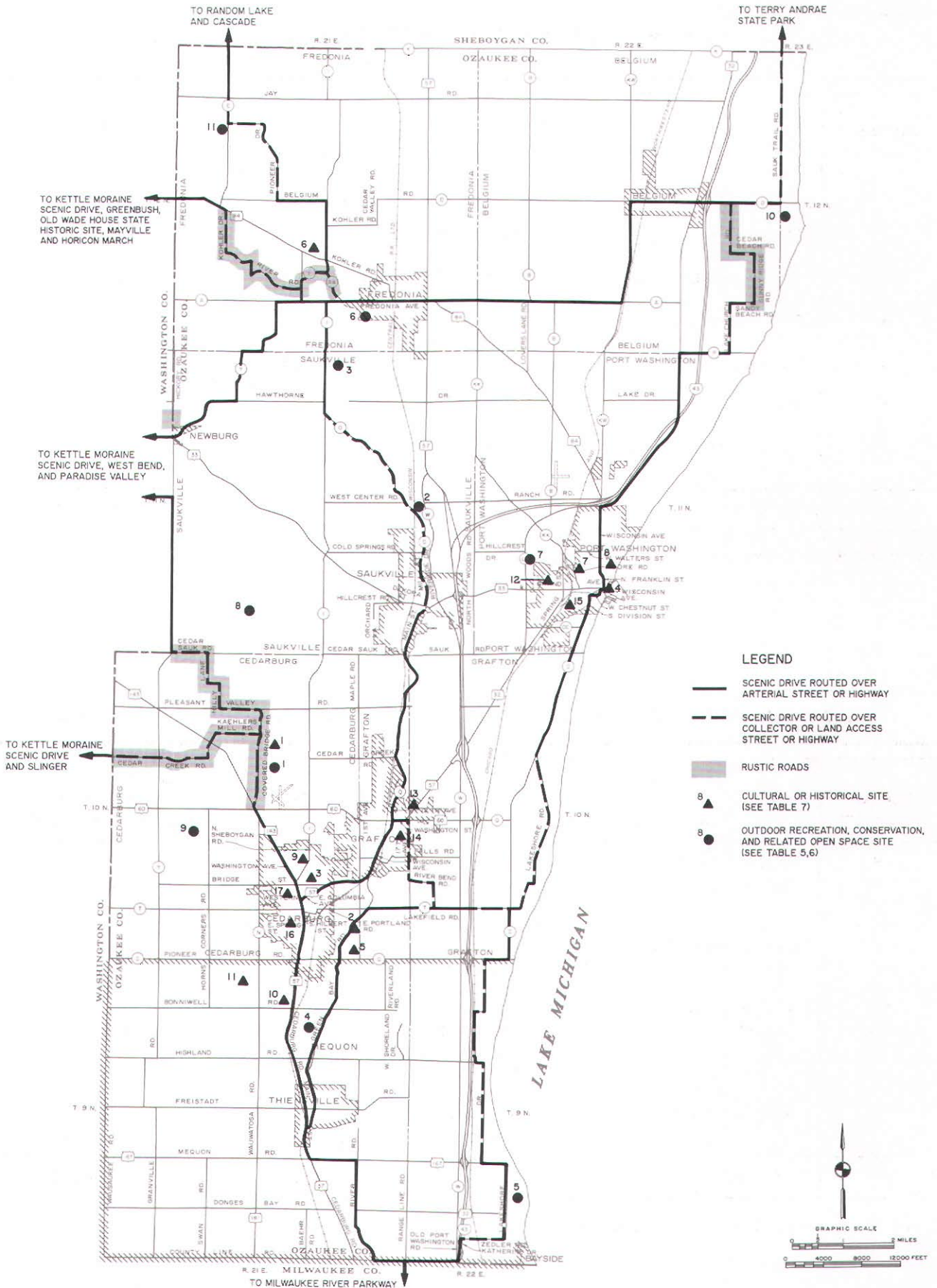
Each segment of the proposed scenic drive system, Hickory Road between the Village of Newburg north corporate limit and Newark Road and the entire stretch of CTH C between CTH CC and IH 43, was reviewed for potential designation as rustic roads.

Three segments of the scenic drive system were identified for potential designation as rustic roads. These segments are shown on Map 28 and listed in Table 8. Each of these facilities is a low-volume facility. The proposed rustic road segments in the Towns of Cedarburg and Fredonia are located primarily within primary environmental corridors, paralleling Cedar Creek and the Milwaukee River, respectively, thus offering unique and distinctive vistas. The proposed rustic road segments in the Towns of Cedarburg and Fredonia connect with either a county trunk or state trunk highway at either end.

The Sunny Ridge Road segment of the proposed rustic road in the Town of Belgium offers an uninterrupted vista of Lake Michigan across land devoted to agricultural use. The roadway itself is truly rustic, with a gravel surface. This facility connects with a county trunk highway at its north end.

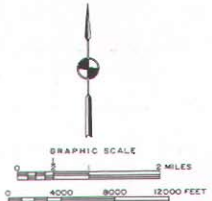
The 0.52-mile segment of Hickory Road between the Village of Newburg north corporate limits and Highview Road is under the jurisdiction of the Town of Saukville. This segment, with a pavement width of 20 to 22 feet and no shoulders, has a straight horizontal alignment and a relatively flat vertical alignment. It is a low-volume facility, functioning as a local access road and not scheduled for major improvement. A game farm abuts the west side of this segment of Hickory Road and the lands on the east side of this segment are in agricultural uses. The current zoning is for agriculture or conservancy; thus, the abutting lands may be expected to retain their natural, unspoiled character. The lands of the game farm are heavily wooded and may be considered an outstanding natural feature. Nevertheless, because this segment of Hickory Road is only about one-half mile in length, substantially less than the desired minimum length of two miles, and does not connect with a major highway at either end, it may be considered an unlikely candidate for a rustic road. If, however, Town of Farmington and Washington County officials designate the segment of Hickory Road between Highview

RECOMMENDED SCENIC DRIVE SYSTEM IN OZAUKEE COUNTY: 2010



LEGEND

- SCENIC DRIVE ROUTED OVER ARTERIAL STREET OR HIGHWAY
- - - SCENIC DRIVE ROUTED OVER COLLECTOR OR LAND ACCESS STREET OR HIGHWAY
- ▨ RUSTIC ROADS
- ▲ CULTURAL OR HISTORICAL SITE (SEE TABLE 7)
- OUTDOOR RECREATION, CONSERVATION, AND RELATED OPEN SPACE SITE (SEE TABLE 5.6)



Source: SEWRPC.

Table 5
OZAUKEE COUNTY PARKS AND PARKWAYS: 1985

Number on Map 28	Site Name	Location	Size (acres)	Located within One-Half Mile of Recommended Scenic Drive
1	Covered Bridge Park	T10N, R21E, Section 10	12	Yes
2	Ehlers Park	T11N, R21E, Sections 23, 24	7	No
3	Hawthorne Hills Park	T11N, R21E, Section 3	285	Yes
4	Mee-Kwon Park	T9N, R21E, Sections 10, 11	239	Yes
5	Virmond Park	T9N, R22E, Section 28	66	Yes
6	Waubedonia Park	T12N, R21E, Sections 27, 28, 34	42	Yes
7	Wayside Park	T11N, R22E, Section 29	1	No
--	7 sites	--	652	5 sites included

Source: Ozaukee County Park Commission and SEWRPC.

Table 6
WISCONSIN DEPARTMENT OF NATURAL RESOURCES LANDS IN OZAUKEE COUNTY: 1985

Number on Map 28	Site Name	Location	Size (acres)	Located within One-Half Mile of Recommended Scenic Drive
8	Cedarburg Bog Scientific Area	T11N, R21E, Sections 20, 21, 28, 29, 31, 32	1,430	Yes
9	Cedarburg Habitat Preservation	T10N, R21E, Section 20	21	No
10	Harrington Beach State Park	T12N, R22E, Section 24 and T12N, R23E, Section 19	636	Yes
11	Scattered Wetlands	T12N, R21E, Sections 7, 8	80	Yes
--	4 sites	--	2,167	3 sites included

Source: Wisconsin Department of Natural Resources and SEWRPC.

Table 7

LIST OF HISTORIC SITES IN OZAUKEE COUNTY LISTED
ON THE NATIONAL REGISTER OF HISTORIC PLACES: 1986

Number on Map 28	Site Name	Location	Located within One-Half Mile of Recommended Scenic Drive
1	Covered Bridge	T10N, R21E, Section 10	Yes
2	Concordia Mill ^a	T10N, R21E, Section 35	Yes
3	Cedarburg Mill	T10N, R21E, Section 27	Yes
4	Dodge House ^b	T11N, R22E, Section 28	Yes
5	Hamilton Historic District	T10N, R21E, Section 35	Yes
6	Stony Hill School	T12N, R21E, Section 28	Yes
7	Ozaukee County Courthouse	T11N, R22E, Section 28	Yes
8	St. Mary's Roman Catholic Church	T11N, R22E, Section 28	Yes
9	Hilgen and Wittenberg Woolen Mill ^c	T10N, R21E, Section 27	Yes
10	Jonathan Clark House	T9N, R21E, Section 3	Yes
11	John Reichert Farmhouse ^d	T9N, R21E, Section 4	No
12	Harry W. Bolens House	T11N, R22E, Section 29	No
13	Grafton Flour Mill	T10N, R21E, Section 24	Yes
14	Cedarburg Woolen Company Worsted Mill ^e	T10N, R21E, Section 24	Yes
15	Hoffman House Hotel	T11N, R22E, Section 28	Yes
16	Wayside House ^f	T10N, R21E, Section 34	Yes
17	Washington Avenue Historic District	T10N, R21E, Section 27	Yes
--	17 sites	--	15 sites included

^aAlso known as Concordia Grist Mill.

^bAlso known as Pebble House.

^cAlso known as Cedar Creek Settlement Site and Cedarburg Woolen Mills.

^dAlso known as Wheary House.

^eAlso known as Grafton Woolen Mill.

^fAlso known as Hilgen-Schuetzte House.

Source: The State Historical Society of Wisconsin and SEWRPC.

Table 8

RECOMMENDED RUSTIC ROADS IN OZAUKEE COUNTY

Route	Limits	Length (miles)	Municipality
Kohler Road to River Drive to CTH I to CTH AA	STH 84 to STH 84	4.2	Town of Fredonia
Cedar-Sauk Road to Horns Corners Road to Hilly Lane to Lofty Lane to Pleasant Valley Road to Cedar Creek Road to Horns Corners Road to Kaehlers Mill Road	CTH Y to CTH Y	5.8	Town of Cedarburg
Lake Church Road to Cedar Beach Road to Sunny Ridge Road	CTH D to Sandy Beach Road	2.5	Town of Belgium
Hickory Road ^a	Village of Newburg north corporate limit to Highview Road	0.52	Town of Saukville

^aThis facility is recommended for potential designation as a rustic road if the segment of Hickory Road in the Town of Farmington in Washington County is also designated.

Source: SEWRPC.

Road and Newark Road as a rustic road, continuation of the rustic road to the Village of Newburg north corporate limits may be considered. Thus, the Commission staff would recommend the consideration of this facility for potential designation as a rustic road if the Hickory Road segment in the Town of Farmington is also so designated.

The review of CTH C between CTH CC and IH 43 for potential designation as a rustic road is shown in Table 9. It was concluded that this segment of CTH C may not be expected to meet the rustic road designation criteria. It is neither a low-volume or land access facility; the roadway's existing physical characteristics of pavement and shoulder width and horizontal and vertical curvature may not be considered less than desirable or typical and, therefore, rustic. Also, urban development has occurred in areas along the roadway and the adjacent areas are zoned for further urban development along most of the roadway.

Therefore, the Commission staff recommended that, in order to attain the necessary intercommunity and intercounty continuity in the scenic drives; to assure the proper relationship of the

scenic drives and rustic roads to the natural resource base; to assure uniformity in the marking and signing of the scenic drives and rustic roads; and, most importantly, to assure the attainment of an equitable fiscal policy for the maintenance of the scenic drives and rustic roads, the functional classification categories established under the Ozaukee County jurisdictional highway system study be expanded to include as a special category recommended scenic drives and rustic roads. The Commission staff further recommended that, pursuant to Trans-RR Section 1.04 of the Wisconsin Administrative Code, those portions of the designated scenic drive system, as shown in Table 8, which meet the established rules and standards for identification, use, and preservation as rustic roads be submitted to the state Rustic Roads Board for approval and inclusion in the state rustic roads system upon approval by Ozaukee County and the affected local unit of government.

At their meeting on July 23, 1991, the Advisory Committee acted unanimously to reaffirm the provision of a scenic drive system as recommended in the adopted Ozaukee County jurisdictional highway system plan and to recommend

Table 9

SUMMARY OF QUALIFICATIONS FOR DESIGNATION OF CTH C BETWEEN CTH CC AND IH 43 AS A RUSTIC ROAD

Rustic Road Designation Criteria ^a	CTH C Characteristics
<p>Outstanding natural features along its borders such as rugged natural terrain, native wildlife and native vegetation; or includes open areas with rustic or agricultural vistas which, singly or in combination, set this road apart from other roads as being something unique and distinct</p>	<p>Lake Michigan, an outstanding natural feature, does not border the study segment of CTH C, but is visible from a number of locations having a total estimated length of 1.1 miles. While this feature may be considered distinct and unique, its value is diminished by frequent interruptions caused by topographic changes and urban development</p>
	<p>The study segment is bordered by agricultural lands over about 72 percent of its length, with the remainder bordered by primary environmental corridor and a variety of urban land uses, including business, industrial, and residential. None of these features should be considered distinct or unique</p>
<p>A low-volume local access public road which serves the adjacent property owners and those wishing to travel by automobile, bicycle, or hiking, for purposes of enjoying its rustic features. This would generally preclude designating as a rustic road any road serving as a collector or arterial</p>	<p>Current average weekday traffic volumes on the study segment range between 1,100 and 2,000; design year average weekday traffic volumes may be expected to range between 1,500 and 2,800 vehicles per average weekday. Thus, the traffic volumes should not be considered low</p>
	<p>Based on the manner in which it currently functions, the study segment is classified as a major collector by the Wisconsin Department of Transportation. The currently adopted jurisdictional highway system plan functionally classifies the study segment as an arterial on the basis of the manner in which it may be expected to function in the future. Thus, the study segment does not function as a land access facility</p>
<p>Not scheduled or anticipated for major improvement which would change its rustic characteristics</p>	<p>The roadway cross-section has a pavement width of 22 feet with three- to four-foot-wide shoulders on a predominantly straight, flat alignment. Thus, no major improvements for either traffic capacity or safety are considered necessary</p>
<p>Preferably has no high-density development along it, but the development as exists at the time the road is designated shall be compatible with the surroundings and shall not detract from the rustic, natural, and unspoiled character and visual impact of the road area. The land adjacent to the rustic road preferably is zoned to be compatible with the maintenance or preservation of its rustic character and low-density development</p>	<p>Based on existing zoning ordinances, as much as 66 percent of the lands bordering the study segment may eventually be in urban land uses, while 34 percent would remain in agricultural uses. Of the urban land uses, about 31 percent is zoned for a minimum lot size of two acres, while the remaining 69 percent is zoned for a minimum lot size of one acre. Development of the lands bordering the study segment as currently zoned may be expected to reduce the vistas of Lake Michigan currently available</p>
<p>Preferably has a minimum length of two miles and, where feasible, provides a completed closure or loop or connects to major highways at both ends of the route</p>	<p>The study segment, at 7.8 miles in length, exceeds the desirable minimum length of two miles. The study segment currently joins IH 43 on the south end and CTH CC on the north end. However, CTH CC has long been planned for transfer from the county arterial system to the local arterial system. Thus, while it would remain part of the arterial system, as a local arterial it should not be considered a major highway</p>

^aSee Wisconsin Administrative Code, Chapter TRANS-RR-1, Section 1.04.

to amend the adopted jurisdictional highway system plan to include rustic roads as a part of a special-function category of "scenic drives."

RECOMMENDED JURISDICTIONAL HIGHWAY SYSTEM PLAN TO BE TAKEN TO PUBLIC HEARING

The second-generation Ozaukee County jurisdictional highway system plan as recommended to be taken to public hearing by the Technical Coordinating and Advisory Committee on Jurisdictional Highway System Planning for Ozaukee County is shown on Map 29. The plan envisions a system of arterial facilities in Ozaukee County that can meet existing and probable future traffic demands effectively and efficiently. The plan identifies the location and configuration of the various facilities constituting the arterial system and recommends the number of traffic lanes required on each segment of the system. The plan also recommends the level of government which should be responsible for the construction, operation, and maintenance of each facility making up the arterial system.

The major capacity improvements recommended under the new plan are shown on Map 30 and listed in Table 10. These improvements include widenings of existing facilities to provide additional traffic lanes and the construction of new arterial facilities. The recommended changes in jurisdictional responsibility are shown on Map 31 and are listed in Table 11.

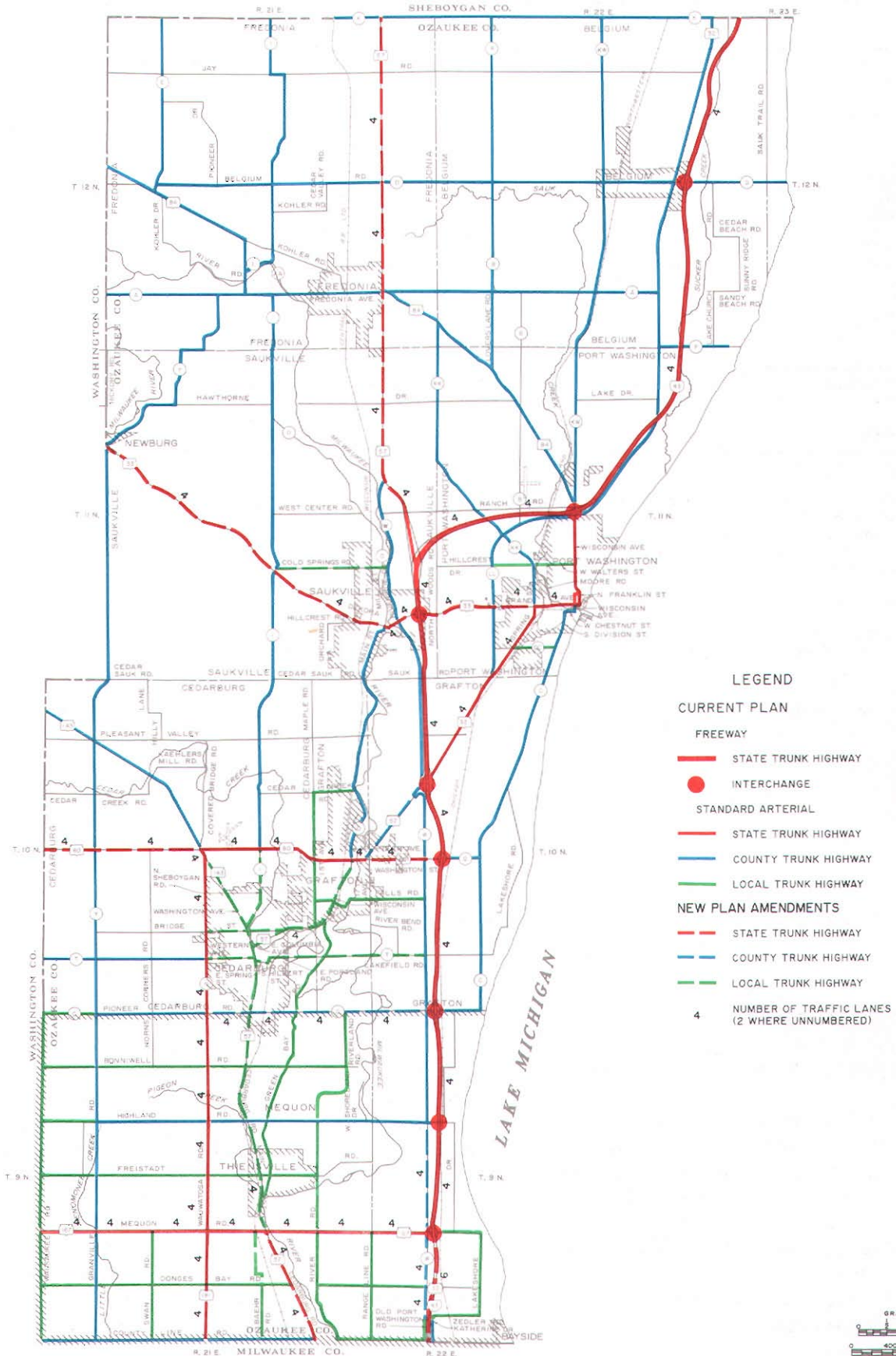
The preliminary recommended arterial system would consist of about 313 miles of streets and highways, or about 33 percent of the 964-mile total street and highway system expected to serve Ozaukee County by the year 2010. The recommended state trunk highway element of the preliminary plan would consist of 80 miles of arterial facilities, or about 25 percent of the 313-mile planned arterial system. The recommended county trunk highway element of the plan would consist of about 162 miles of arterial facilities, or about 52 percent of the 313-mile planned arterial system. The recommended local trunk highway element of the plan would consist of about 71 miles of arterial facilities, or about 23 percent of the 313-mile planned arterial system. Table 12 presents a summary of the mileage of the planned arterial street and highway system by proposed jurisdiction, state, county, and local, within each unit of govern-

ment within Ozaukee County. It may be noted that, under the preliminary plan, the total mileage of state trunk highways in the County would decrease from about 101 miles to about 80 miles, or by about 21 percent. The total mileage of county trunk highways would increase from 138 to 162 miles, or by about 17 percent. The total local trunk highway mileage would decrease from 82 to 71 miles, or by about 13 percent.

Of the total 313 miles of the arterial system in Ozaukee county under the preliminary plan, 257 miles, or 82 percent, would require only preservation or resurfacing and reconstruction; 50 miles, or 16 percent, would require improvement or widening to provide additional traffic lanes; and six miles, or 2 percent, would consist of new facilities. Of the 50 miles of proposed improvement projects, 41 miles, or 82 percent, would be on the planned state trunk highway system; eight miles, or 16 percent, would be on the planned county trunk highway system; and one mile, or less than 2 percent, would be on the planned local trunk highway system. None of the six miles of proposed new arterial facilities would be on the state trunk highway system; two miles, or 33 percent, would be on the county trunk highway system; and four miles, or 67 percent, would be on the local arterial system.

Table 13 presents an estimate of the total costs of the preliminary recommended arterial system plan for Ozaukee County. Typical per mile construction, reconstruction, and resurfacing costs were prepared for a range of typical cross sections, as shown in Appendix A of this report. These costs were applied on a segment-by-segment basis to estimate the costs of resurfacing and of implementing the improvement and expansion projects contained in the plan. Adjustments were made to the estimated improvement and expansion project costs for known atypical conditions, such as the need for wetland impact mitigation. This estimate assumes that all facilities requiring only preservation will be resurfaced once by the plan design year 2010. In addition, it is assumed that all improvements on existing new locations will be implemented by the year 2010. The estimated costs are presented by recommended jurisdiction, state, county, or local. The estimated cost of the recommended system to the year 2010, including right-of-way acquisition, is \$156 million, including \$91 mil-

RECOMMENDED PRELIMINARY OZAUKEE COUNTY JURISDICTIONAL
HIGHWAY SYSTEM PLAN TO BE TAKEN TO PUBLIC HEARING



Source: SEWRPC.

Table 10

CAPACITY IMPROVEMENTS RECOMMENDED UNDER THE PRELIMINARY OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN

Jurisdiction	Facility	Termini	Description	Included in First-Generation Plan	Implementation Priority ^a	
Existing Location (additional traffic lanes)	State					
	IH 43	Milwaukee-Ozaukee County line to STH 167	Widen from four to six traffic lanes	No	Low	
	STH 32	Spring Street to Franklin Street	Widen from two to four traffic lanes	Yes	High	
	STH 33	Washington-Ozaukee County line to Spring Street	Widen from two to four traffic lanes	No	Medium/low	
	STH 57	IH 43 to Sheboygan-Ozaukee County line	Widen from two to four traffic lanes	Yes	Medium/high	
	STH 57	Milwaukee-Ozaukee County line to STH 167	Widen from two to four traffic lanes	Yes	Medium	
	STH 60	STH 143 to IH 43	Widen from two to four traffic lanes	Yes	High	
	STH 60	Washington-Ozaukee County line to STH 143	Widen from two to four traffic lanes	No	Low	
	STH 143	CTH N to STH 60	Widen from two to four traffic lanes	Yes	High	
	STH 167	Washington-Ozaukee County line to Wauwatosa Road	Widen from two to four traffic lanes	Yes	Medium	
	County	CTH N/Wauwatosa Road	STH 143 to STH 167	Widen from two to four traffic lanes	Yes	High
	CTH C/Pioneer Road	CTH N to IH 43	Widen from two to four traffic lanes	No	Medium/high	
	CTH W	Milwaukee-Ozaukee County line to Highland Road	Widen from two to four traffic lanes	No	Medium/high	
Local	STH 57	Bridge Road to 1st Avenue	Widen from two to four traffic lanes	No	High	
New Location (on new alignment)	State					
	County					
	IH 43	Highland Road	Construct new interchange	No	Medium	
	Belgium-Kohler Road Extension	CTH I to Cedar Valley Road	Construct two lanes on new alignment	Yes	Low	
	Granville Road Extension	Freistadt Road to Highland Road	Construct two lanes on new alignment	Yes	Low	
	Local	Walters Street Extension	CTH LL to Grant Street at the City of Port Washington west city limits	Construct two lanes on new alignment	Yes	Low
	Maple Road Extension	Cedar Creek Road to Rose Street at the Village of Grafton north city limits	Construct two lanes on new alignment	Yes	Low	
	River Road Extension	Bonnivell Road to Highland Road	Construct two lanes on new alignment	Yes	Low	
River Road Extension	Freistadt Road to Grace Avenue	Construct two lanes on new alignment	Yes	Medium		
Cold Springs Road	CTH O to CTH W	Construct new bridge	No	High		

^aThe proposed implementation priority is dependent upon the need for the improvement to meet current traffic demand; the need for the improvement to meet future traffic demand and the anticipated timing of that demand; and the need for the improvement to provide an integrated traffic route.

Source: SEWRPC.

lion for state trunk highways, \$44 million for county trunk highways, and \$21 million for local arterials.

PUBLIC REACTION TO PRELIMINARY JURISDICTIONAL HIGHWAY SYSTEM PLAN

The preliminary draft of the new jurisdictional highway system plan for Ozaukee County as approved by the Advisory Committee was presented for public review and comment at a public informational meeting and hearing held on October 23, 1991, at the Webster Transitional School, Cedarburg, Wisconsin. Prior to this hearing, the Commission prepared and distributed SEWRPC Newsletter, Vol. 31, No. 5 (Sep-

tember-October 1991). The newsletter described the original jurisdictional highway system plan for Ozaukee County and the amendments to the plan proposed on a preliminary basis by the Advisory Committee. The capacity improvements recommended under the proposed new jurisdictional highway system plan were described, together with the recommended relative priority of those improvements, as were the proposed jurisdictional transfers. The estimated cost of the new plan was presented, along with a review of potential funding sources. The minutes of the public hearing were published by the Ozaukee County Highway Committee. An additional hearing on the plan was held by the Village of Saukville, focusing on a specific recommendation of the plan, the extension of Cold Springs Road across the Milwaukee River.

CAPACITY IMPROVEMENTS RECOMMENDED UNDER THE PRELIMINARY AMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN

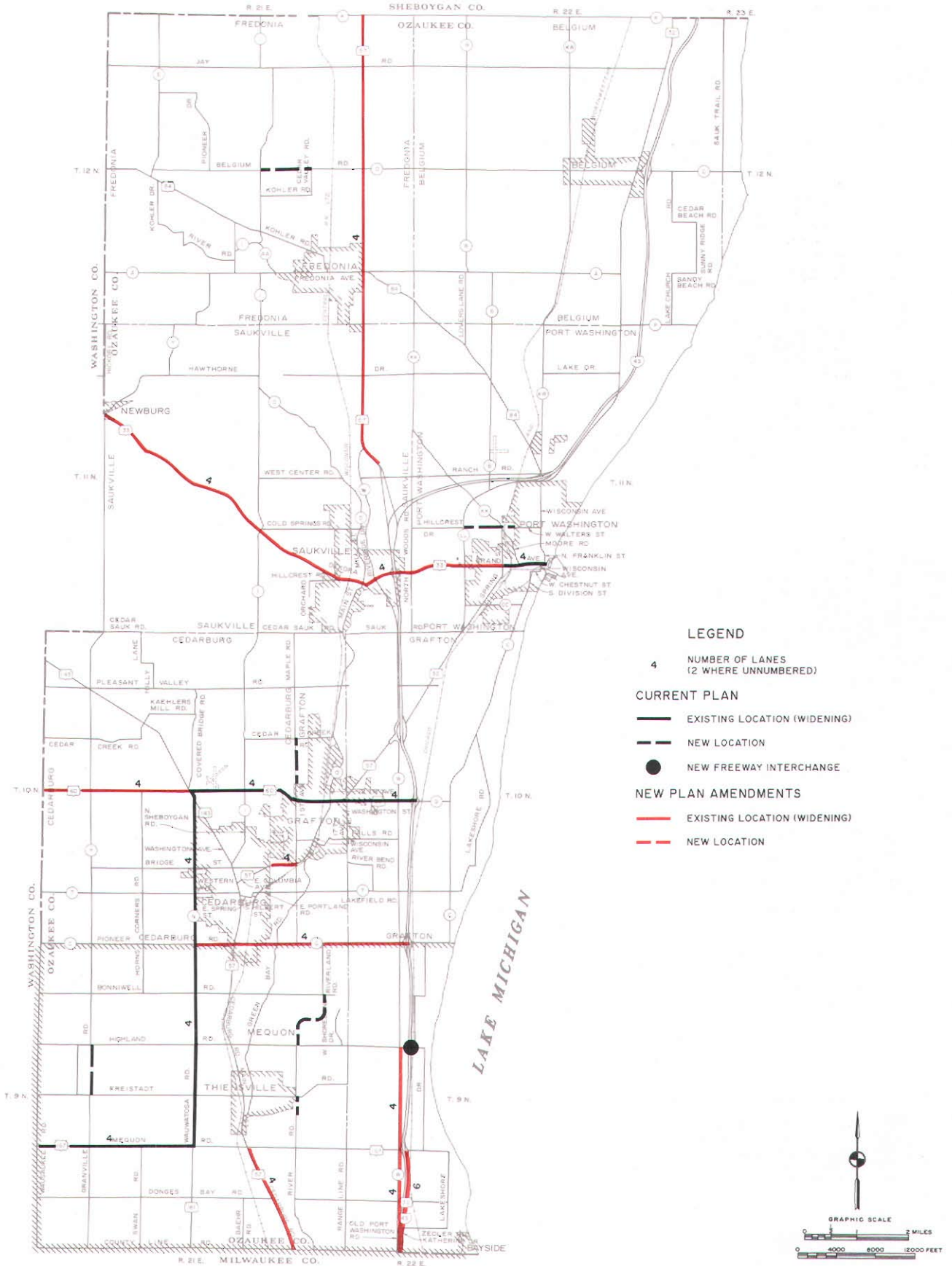


Table 11

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY UNDER THE PRELIMINARY AMENDED COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN^a

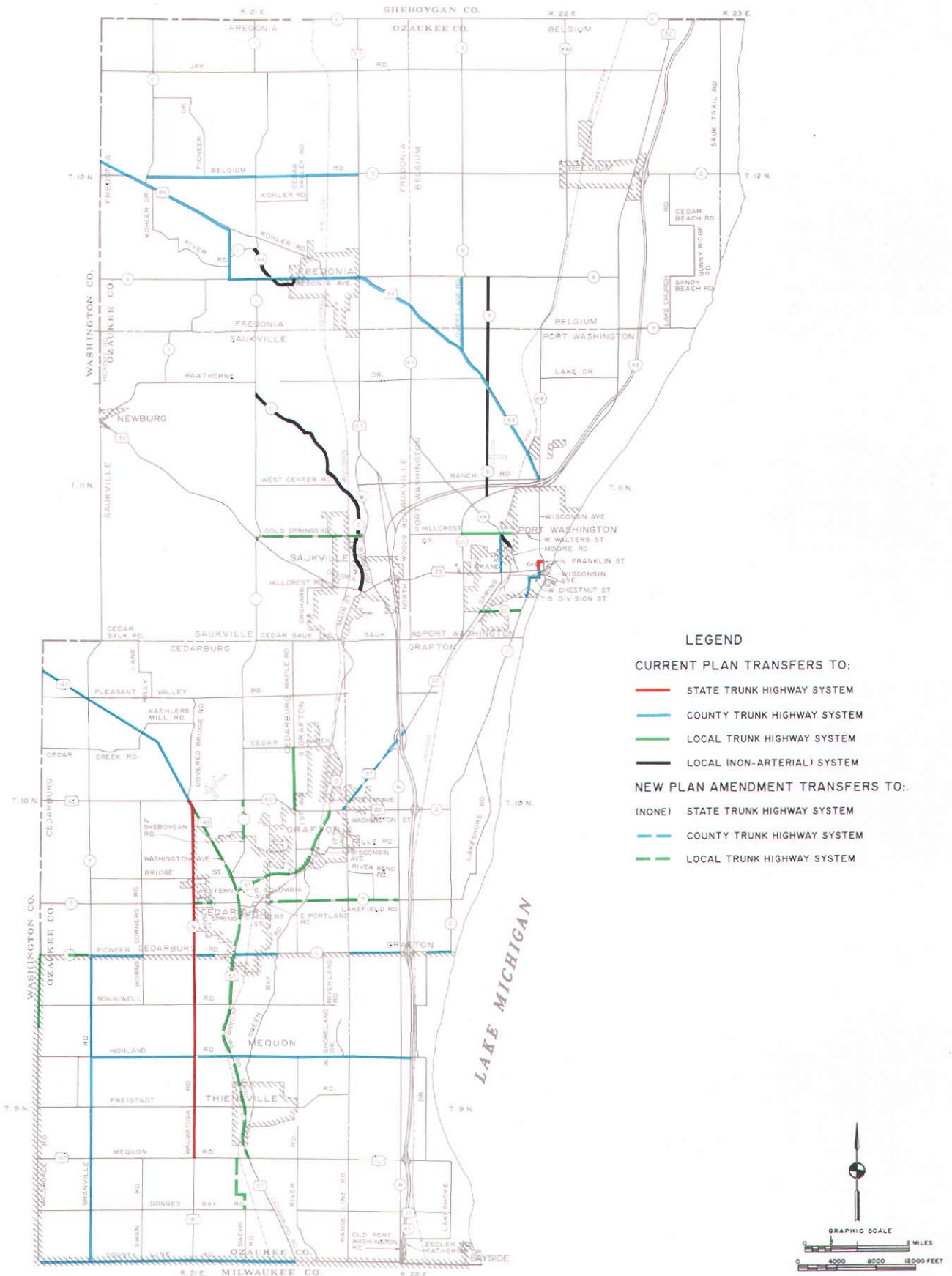
Civil Division	Planned	Existing	Facility	From	To	Distance (miles)	Included in First-Generation Plan
Town of Belgium	County trunk highway	State trunk highway	STH 84	Town of Fredonia	Town of Port Washington	0.71	Yes
	County trunk highway	Local trunk highway	Lovers Lane Road	CTH A	Town of Port Washington	1.01	Yes
	Local nonarterial	County trunk highway	CTH B	CTH A	Town of Port Washington	1.00	Yes
Town of Cedarburg	State trunk highway	County trunk highway	CTH N	STH 143	Pioneer Road	1.77	Yes
	County trunk highway	State trunk highway	STH 143	STH 60	Washington-Ozaukee County line	3.90	Yes
	Local trunk highway	New facility	Maple Road extension	Cedar Creek Road	Village of Grafton	0.44	Yes
	Local trunk highway	State trunk highway	STH 57	City of Cedarburg	Town of Grafton	0.48	No
	Local trunk highway	State trunk highway	STH 143	CTH N	City of Cedarburg	0.36	Yes
	Local trunk highway	County trunk highway	CTH C	Granville Road	CTH M	0.50	Yes
	Local trunk highway	County trunk highway	CTH I	City of Cedarburg	STH 60	0.65	No
	Local trunk highway	County trunk highway	CTH T	Town of Grafton	City of Cedarburg	0.50	No
Town of Fredonia	County trunk highway	New facility	Belgium-Kohler Road extension	CTH I	Cedar Valley Road	1.00	Yes
	County trunk highway	State trunk highway	STH 84	Washington-Ozaukee County line	Village of Fredonia	4.84	Yes
	County trunk highway	State trunk highway	STH 84	Village of Fredonia	Town of Belgium	1.17	Yes
	County trunk highway	Local trunk highway	Belgium-Kohler Road	CTH E	CTH I	2.08	Yes
	Local nonarterial	Local trunk highway	Belgium-Kohler Road	Cedar Valley Road	STH 57	1.00	Yes
Town of Grafton	County trunk highway	State trunk highway	STH 57	IH 43	Village of Grafton	1.85	No
	Local trunk highway	New facility	Maple Road extension	Cedar Creek Road	Village of Grafton	0.44	Yes
	Local trunk highway	County trunk highway	CTH T	Town of Cedarburg	CTH W	1.98	No
	Local trunk highway	County trunk highway	CTH Q	IH 43	CTH C	0.67	No
Town of Port Washington	County trunk highway	State trunk highway	STH 84	City of Port Washington	Town of Belgium	3.82	Yes
	County trunk highway	Local trunk highway	Lovers Lane Road	STH 84	Town of Belgium	0.41	Yes
	County trunk highway	Local trunk highway	Spring Street	City of Port Washington	CTH KK	0.15	Yes
	Local trunk highway	New facility	Walters Street	CTH LL	City of Port Washington	1.00	Yes
	Local nonarterial	County trunk highway	CTH CC	CTH C	STH 32	0.52	Yes
	Local nonarterial	County trunk highway	CTH B	CTH LL	Town of Belgium	3.26	Yes
Town of Saukville	Local trunk highway	Local nonarterial	Cold Springs Road extension	CTH O	CTH W	0.15	No
	Local trunk highway	Local nonarterial	Cold Springs Road	STH 33	CTH O	1.60	No
	Local nonarterial	County trunk highway	CTH O	CTH I	Village of Saukville	3.91	Yes
Village of Fredonia	County trunk highway	State trunk highway	STH 84	STH 57	CTH AA	1.42	Yes
	Local nonarterial	County trunk highway	CTH AA	STH 84	STH 84	0.79	Yes
Village of Grafton	Local trunk highway	State trunk highway	STH 57	Town of Grafton	Town of Grafton	1.84	No
Village of Saukville	Local trunk highway	Local nonarterial	Cold Springs Road	West Village limits of Village of Saukville	East Village limits of Village of Saukville	0.35	No
	Local nonarterial	County trunk highway	CTH O	STH 33	Town of Saukville	0.92	No
Village of Thiensville	Local trunk highway	State trunk highway	STH 57	City of Mequon	City of Mequon	1.29	No
City of Cedarburg	State trunk highway	County trunk highway	CTH N	Pioneer Road	STH 143	1.08	Yes
	County trunk highway	Local trunk highway	Pioneer Road	STH 57	Town of Cedarburg	0.53	Yes
	Local trunk highway	State trunk highway	STH 57	Pioneer Road	Columbia Road	1.21	No
	Local trunk highway	State trunk highway	STH 57	Washington Avenue	Keup Road	0.74	No
	Local trunk highway	State trunk highway	STH 57	City of Mequon	Pioneer Road	0.23	No
	Local trunk highway	State trunk highway	STH 143	STH 57	Town of Cedarburg	1.53	No
	Local trunk highway	County trunk highway	CTH I	STH 143	Town of Cedarburg	0.87	No
	Local trunk highway	County trunk highway	CTH T	Webster Avenue	Evergreen Boulevard	0.16	Yes
City of Mequon	State trunk highway	New interchange	IH 43	Highland Road	Highland Road	--	No
	State trunk highway	Local trunk highway	Wauwatosa Road	STH 167	Pioneer Road	3.95	No
	County trunk highway	New facility	Granville Road extension	Freistadt Road	Highland Road	1.00	Yes
	County trunk highway	Local trunk highway	County Line Road	Wasaukee Road	STH 57	2.42	Yes
	County trunk highway	Local trunk highway	Granville Road	County Line Road	Freistadt Road	2.98	Yes
	County trunk highway	Local trunk highway	Granville Road	Highland Road	Pioneer Road	2.00	Yes
	County trunk highway	Local trunk highway	Highland Road	Granville Road	IH 43	6.27	Yes
	County trunk highway	Local trunk highway	Pioneer Road	Granville Road	IH 43	3.16	Yes
	Local trunk highway	New facility	River Road	Highland Road	Bonniwell Road	1.20	Yes
	Local trunk highway	New facility	River Road	Grace Avenue	Freistadt Road	0.17	Yes
	Local trunk highway	New facility	Industrial Drive/Executive Drive/Baehr Road	STH 167	Donges Bay Road	0.65	No
	Local trunk highway	State trunk highway	STH 57	STH 167	City of Cedarburg	2.56	No
	Local trunk highway	Local nonarterial	Industrial Drive	STH 167	End of street	0.54	No
City of Port Washington	State trunk highway	Local trunk highway	Wisconsin Street	Jackson Street	Grand Avenue	0.20	No
	State trunk highway	Local trunk highway	Swing Street	Franklin Street	Jackson Street	0.02	No
	State trunk highway	Local trunk highway	Jackson Street	Swing Street	Franklin Street	0.08	No
	County trunk highway	Local trunk highway	Chestnut Street	Division Street	Wisconsin Street	0.20	Yes
	County trunk highway	Local trunk highway	Division Street	Town of Port Washington	Chestnut Street	0.41	Yes
	County trunk highway	Local trunk highway	Spring Street	STH 33	CTH KK	0.60	Yes
	County trunk highway	Local trunk highway	Wisconsin Street	Chestnut Street	Grand Avenue	0.12	Yes
	Local trunk highway	County trunk highway	CTH CC	STH 32	CTH C	0.28	Yes
	Local nonarterial	County trunk highway	CTH KK	Spring Street	Town of Port Washington	0.04	Yes

^a The jurisdictional transfers should all be initiated as soon as possible because the transfers will promote implementation of the recommended plan improvement.

Source: SEWRPC.

Map 31

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY
IN OZAUKEE COUNTY RECOMMENDED UNDER THE PRELIMINARY PLAN



Source: SEWRPC.

Table 12

ARTERIAL STREET MILEAGE BY JURISDICTION UNDER THE OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN AS AMENDED

Civil Division	State Trunk Highway	County Trunk Highway	Local Trunk Highway	Total
City of Cedarburg	1.08	0.68	7.01	8.77
City of Mequon	21.74	23.91	42.37	88.02
City of Port Washington	4.32	2.77	0.78	7.87
Village of Belgium	0.00	2.96	0.00	2.96
Village of Fredonia	0.42	1.42	0.00	1.84
Village of Grafton	1.86	0.73	4.84	7.43
Village of Newburg	0.17	0.41	0.00	0.58
Village of Saukville	2.94	2.24	0.35	5.53
Village of Thiensville	0.00	0.00	3.66	3.66
Town of Belgium	6.22	29.89	0.00	36.11
Town of Cedarburg	6.60	17.97	4.27	28.84
Town of Fredonia	5.62	26.63	0.00	32.25
Town of Grafton	9.68	18.86	4.64	33.18
Town of Port Washington	8.12	18.71	1.52	28.35
Town of Saukville	11.27	14.32	1.60	27.19
Total	80.04	161.50	71.04	312.58

Source: SEWRPC.

Table 13

ESTIMATED COST TO THE YEAR 2010 OF THE PRELIMINARY AMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN

Item	Planned Arterial Mileage: Year 2010			
	State	County	Local	Total
Preservation	39.4	151.2	66.5	256.1
Improvement ^a	40.7	8.3	0.5	49.5
Expansion ^b	0.0	2.0	4.0	6.0
Total	80.1	161.5	71.0	312.6

	Estimated Construction Cost (includes right-of-way)			
Preservation	\$12,840,000	\$17,880,000	\$ 9,290,000	\$ 40,010,000
Improvement ^a	72,330,000	23,160,000	780,000	96,270,000
Expansion ^b	6,000,000	2,400,000	10,940,000	19,340,000
Total	\$91,170,000	\$43,440,000	\$21,010,000	\$155,620,000

^aWidening to provide additional traffic lanes on existing arterials.

^bConstruction of new facilities.

Source: SEWRPC.

This additional hearing was held on October 10, 1991, at the Village Hall, Saukville, Wisconsin. The minutes of this public hearing were published by the Village of Saukville.

A record of the first public hearing on the plan and also of the Village of Saukville public hearing on the Cold Springs Road extension, including transcripts of the hearings, attendance records, written comments submitted both before and after the hearings, and pertinent newspaper articles, was distributed to, and reviewed by, the Advisory Committee. A total of 58 people attended the October 23, 1991, informational hearing and meeting on the plan, with 26 people speaking at the hearing. Approximately 90 people attended the October 10, 1991, Village of Saukville hearing, with 54 people speaking at the hearing.

The record of the public hearings on the preliminary plan indicates that comments were made with respect to only four of the proposals in the preliminary draft of the new plan. Specifically, comments were made with respect to the proposed widening to four traffic lanes of STH 57 between IH 43 and the Ozaukee County-Sheboygan County line, the proposed transfer of STH 57 between STH 167 and STH 60 from state to local jurisdiction, the proposed widening of STH 33 to four traffic lanes within the Village of Saukville, and the proposed extension of Cold Springs Road over the Milwaukee River between CTH O and CTH W.

Only comments in support were made concerning the proposed improvement of STH 57 to four traffic lanes between IH 43 and the Ozaukee County-Sheboygan County line. The comments noted the safety problems on the existing two-lane roadway, the substantial amount of existing industry to be served by the proposed improvement, and the substantial truck traffic carried by STH 57.

Conditional support was voiced by representatives of the Village of Grafton with respect to the proposed transfer of STH 57 between STH 167 and STH 60 from state to local jurisdiction. Conditions that the Village indicated should be placed upon any jurisdictional transfer included that, prior to transfer, the Wisconsin Department of Transportation be required to improve STH 57 to four traffic lanes between 1st Avenue and Bridge Street; that STH 57 in the Village of Grafton be upgraded to an urban cross-section

with curb, gutter and storm sewer; that the pavement of STH 57 be returned to good condition; and that traffic signals be reconditioned as necessary, particularly the signals at Falls Road. A representative of a business in the Village of Thiensville expressed opposition to the proposed transfer, noting that a substantial number of tourism-oriented businesses were located on STH 57 in the Village of Thiensville and City of Cedarburg, and that removal of the STH 57 signing may result in difficulties for tourists to find their way to these businesses. It was added that if the proposed jurisdictional transfer of STH 57 is implemented that there should be a commitment to providing signing of the former route of STH 57 as "Old" or "Historic" 57.

The record of the public hearings on the preliminary plan indicates that comments were made both in support of, and in opposition to, the proposed improvement of STH 33 to four traffic lanes within the Village of Saukville. Comments made in support noted the increasing traffic volumes on STH 33, and considered the modest widening of the existing curb-to-curb pavement from 44 feet to a desirable 48 feet as an appropriate way to address the increasing traffic volume and congestion on STH 33. Comments made in opposition to the widening were principally concerned with the potential disruption of historic buildings along STH 33 in the Village. Concern was also expressed with respect to the noise and other impacts of the heavy traffic carried by STH 33 in the Village. It was also noted that the widening to four traffic lanes would probably require the replacement of the historic existing two-lane bridge on STH 33 over the Milwaukee River.

The record of the public hearings on the preliminary plan also indicates that comments were made both in support of, and in opposition to, the proposed extension of Cold Springs Road over the Milwaukee River between CTH O and CTH W. Comments in support of the proposed Cold Springs Road extension noted the need for a second bridge in the Saukville area as an alternative route if the STH 33 bridge is closed and the need for a second bridge to provide adequate emergency services in the Saukville area. Comments in support also noted that planned growth of the Saukville area required the provision of additional highway capacity over the Milwaukee River in the Saukville area and the need to divert traffic from STH 33

through the Village. Finally, many of those expressing support for the Cold Springs Road extension suggested that the extension not end at CTH W, as proposed in the preliminary plan, but be extended to connect to a new interchange with IH 43 and STH 57.

Comments made in opposition to the proposed Cold Springs Road extension between CTH O and CTH W expressed concern with respect to the traffic, particularly heavy truck traffic, that would be generated on CTH W as a result. Those expressing opposition cited the impacts of the bridge construction and the additional total vehicle and truck traffic on residences and on Schowalter Park, located along CTH W, and on wetlands and wildlife habitat areas along the Milwaukee River. Those expressing opposition also noted that CTH W often experienced flooding problems in the spring and that the bridge construction could exacerbate the existing flooding problem. Potential safety problems related to increased traffic on CTH W were noted, particularly with respect to truck traffic. The lack of shoulders on segments of CTH W was noted, along with the presence of wide, slow-moving farm equipment on CTH W. The potential problems of handling traffic at the intersection of STH 33 and CTH W were also noted. A number of those expressing opposition suggested that an extension of Center Road/Mink Ranch Road over the Milwaukee River be considered as an alternative to the extension of Cold Springs Road. Also, the connection of the Cold Springs Road extension to a new interchange with STH 57 and IH 43 rather than to CTH W was suggested.

ADVISORY COMMITTEE REACTION TO PUBLIC COMMENTS

Based upon review of the public reaction to the preliminary plan, the Advisory Committee at a meeting on February 25, 1992, took the following actions to complete a recommended plan:

- The proposed transfer of jurisdiction of STH 57 between STH 167 and STH 60 from state to local jurisdiction was retained by the Advisory Committee in the final recommended jurisdictional highway system plan. State Trunk Highway 57 between IH 43 and the Milwaukee-Ozaukee County line clearly does not meet the criteria for classification as a state trunk highway,

including the criteria for trip service, land use service, operating characteristics, traffic mobility, and access control. This segment of STH 57 in Ozaukee County largely serves local, as opposed to through, traffic. In addition, the land uses served by this segment of STH 57 are generally of local or countywide importance as opposed to regional or statewide importance. The criteria of operating characteristics, traffic mobility, and access control are also not met since the segment is extensively zoned for a 25 mile per hour speed limit, and has little access control. In addition, the conversion of this segment of highway to local jurisdiction is in concert with the past expressed desires of the communities of Cedarburg, Grafton, and Thiensville to maintain the current roadway cross-section through these communities. In this respect, the Village of Thiensville in 1986 elected to use Village funds, rather than state and federal funds, for the reconstruction of STH 57 through the Village, in order to ensure the retention of a minimal roadway cross-section through the Village.

The only statement of opposition at the public hearing regarding the recommended STH 57 jurisdictional transfer was that from a business owner in the Thiensville area. The opposition was based upon concern over difficulties tourists might have finding businesses on the present STH 57 in the Thiensville, Cedarburg, and Grafton areas. The Advisory Committee noted that the local option existed to sign the present route of STH 57 as "Business STH 57" after STH 57 was relocated. The Village of Grafton noted several conditions that the Village would ask the state to meet prior to transfer of jurisdiction. The Advisory Committee noted that the conditions cited by the Village of Grafton, including improvement of pavement surface, reconstruction to urban cross-section, completion of planned additional traffic lanes, and traffic signal rehabilitation, are all actions recommended to be completed by the State under the jurisdictional plan before jurisdictional transfer.

The Advisory Committee recommended, as part of the intergovernmental agreement which must be reached prior to the transfer

of STH 57 to local jurisdiction, that the state complete necessary improvements and that appropriate signage to guide tourists to the business areas of Thiensville, Grafton, and Cedarburg be designed and implemented. This signage could include special guide signs directing traffic from IH 43 and from the new state trunk highway recommended to be routed over Wauwatosa Road. Also, special signing of the former route of STH 57 as "Business STH 57" could be provided between STH 60 and STH 167.

- The proposed improvement of STH 33 to provide four traffic lanes within the Village of Saukville was retained in the final recommended jurisdictional highway system plan by the Advisory Committee. This proposed improvement of STH 33 to four traffic lanes within the Village is an integral part of a recommendation in the plan to improve STH 33 to four traffic lanes between the Washington-Ozaukee County line and STH 32 in the City of Port Washington. Traffic volumes in 1989 approached and exceeded the design capacity of the present two-lane STH 33 between Main Street and CTH W within the Village of Saukville and between IH 43 and CTH LL in the Towns of Saukville and Port Washington. Forecast year 2010 traffic volumes exceed the existing design capacity of STH 33 over its entire length within Ozaukee County between the Ozaukee-Washington County line and STH 32. Opposition to the proposed improvement of STH 33 to four traffic lanes within the Village of Saukville, as expressed at the public hearing, was due primarily to concerns over potential disruption, including the potential need to acquire and remove historic buildings along STH 33 in the Village.

The Committee noted that within the Village of Saukville the provision of four traffic lanes on STH 33 may be accomplished with minor widening of the existing 44-foot-wide roadway section to a 48-foot cross-section. This would require adding two feet of additional pavement to each side of the roadway. In addition, on-street parking would need to be prohibited during peak traffic hours in the peak direction. The existing structure over the Milwaukee River would need to be replaced with a structure

providing four traffic lanes. The needed widening is relatively modest and could be accomplished without acquiring any existing structures along STH 33 in the Village.

- Of all recommendations in the preliminary plan, the proposed extension of Cold Springs Road over the Milwaukee River generated the most public comment, both in support and in opposition. The comments in opposition, in particular, expressed concern about the effects on CTH W of the proposed extension. The potential increases in traffic, particularly truck traffic, were cited. The potential for the extension to be subject to flooding at its junction with CTH W and to exacerbate the existing flooding problems along CTH W was mentioned. The comments in support of the Cold Springs Road extension noted the need for an additional bridge and roadway capacity across the Milwaukee River to accommodate economic development in the Saukville area, to provide an alternative Milwaukee River crossing in case of the closure of other bridges in the area, to provide for emergency services, and to provide capacity relief to STH 33 within the Village of Saukville. Both those stating opposition to the Cold Springs Road extension and those stating support suggested that, rather than extending Cold Springs Road from CTH O to CTH W, the extension of Cold Springs Road should be a direct extension to a new interchange with IH 43 and STH 57.

In preparing the preliminary plan taken to public hearing, the Advisory Committee considered many alternatives with respect to providing an additional bridge and roadway capacity across the Milwaukee River in the Saukville area. The need for additional capacity on STH 33 was established and it was concluded that additional cross-river capacity would also be needed. The necessary additional river crossing at three possible siting locations was investigated: Cold Springs Road, Cedar-Sauk Road, and Center Road/Mink Ranch Road. Also studied was the direct connection of these three alternative extensions to a new interchange with IH 43 and/or STH 57. The Advisory Committee concluded that a direct connection to IH 43 and/or STH 57 could not be recommended. Analyses of a direct

freeway connection indicated that the amount of traffic using the potential new freeway interchange would not warrant the substantial capital cost of an interchange, estimated at \$9.5 to \$11.2 million for an extension of Cold Springs Road, \$8.4 million for an extension of Mink Ranch Road, and \$7.1 million for an extension Cedar-Sauk Road. Also, the new interchange would violate good interchange design spacing standards with respect to existing interchanges with IH 43 at STH 33 and at STH 57.

The Advisory Committee therefore recommended the provision of an additional bridge across the Milwaukee River in the Saukville area without its connection to an interchange on IH 43. As already noted, three alternative extensions were considered: Cold Springs Road, Cedar-Sauk Road, and Center Road/Mink Ranch Road. Each of these alternatives would entail directing traffic to roadways along which residences are located. Each of these alternatives may also be expected to have some implications for flooding problems in the Saukville area, with a Cold Springs Road extension probably having the greatest impact. The capital cost of the three alternatives was comparable, that is, the capital costs all approximated \$3 million. The principal advantage of the Cold Springs Road extension alternative was that it was best located to serve the developing areas west of the Milwaukee River, which require additional roadway capacity, and was best located to provide access to the Village of Saukville industrial park.

The Advisory Committee considered one additional alternative with respect to the Cold Springs Road extension following the public hearing. This alternative was designed to address many of the concerns raised at the public hearing with respect to the Cold Springs Road extension, and particularly the concern over the traffic which would be diverted to CTH W between Cold Springs Road and STH 33. This alternative, which is depicted on Map 32, would extend Cold Springs Road from CTH O over the Milwaukee River and over CTH W as well. No intersection would be provided between the Cold Springs Road extension

and CTH W. Cold Springs Road would be extended to and along IH 43 to an existing intersection with STH 33 at Foster Street. At this point, STH 33 is a four traffic lane divided roadway and has sufficient capacity to support existing and forecast traffic volumes on STH 33 as well as increased traffic on an extended Cold Springs Road.

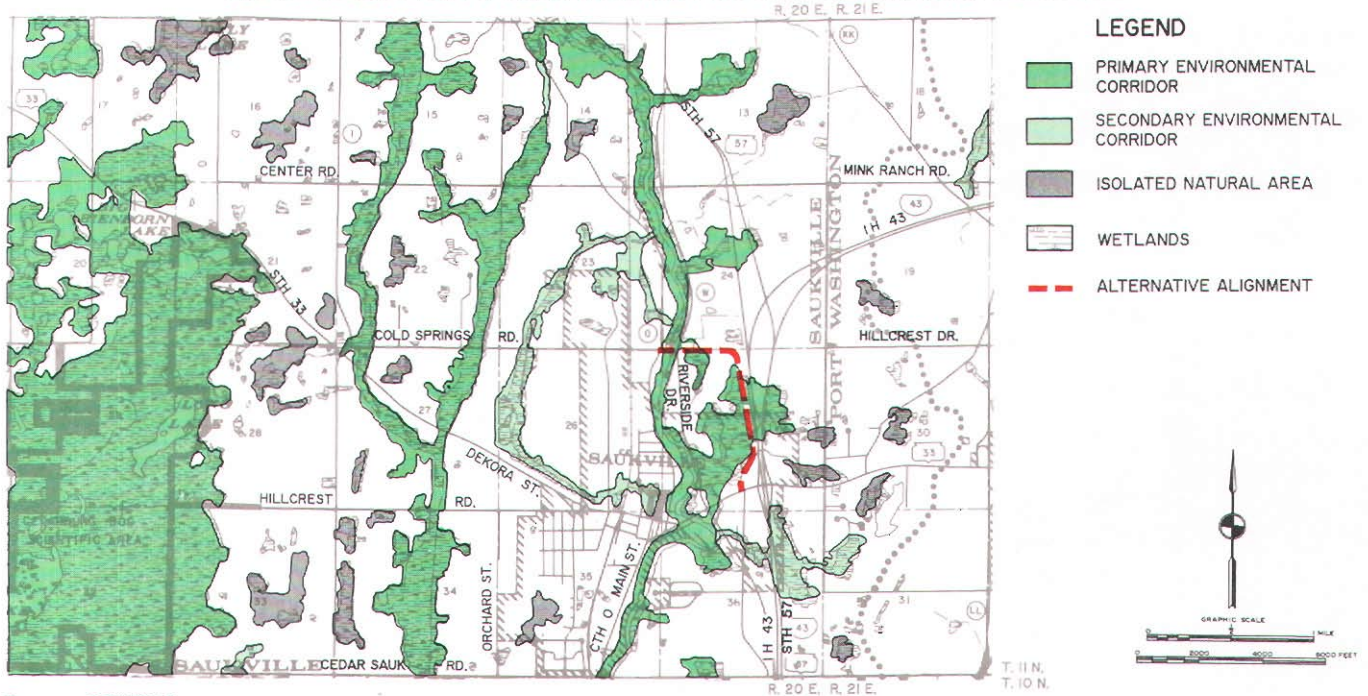
This new Cold Springs Road extension alternative would provide a convenient direct route between IH 43/STH 57 and the Village of Saukville industrial park and also traffic relief to STH 33. It would not require construction of a new freeway interchange and would not entail the very high capital costs and the interchange spacing problems connected with a new interchange. It could be constructed so that it would not impact the flooding problems associated with STH 33 or CTH W. The capital cost of this alternative Cold Springs Road extension is estimated at \$4.8 million, which is approximately \$1.7 million more than the cost of simply extending Cold Springs Road from CTH O to CTH W and improving CTH W between CTH W and STH 33. It is, however, substantially less than the estimated cost of \$9.5 to \$11.2 million entailed in extending Cold Springs Road to a new interchange with IH 43/STH 57. The principal disadvantage of the new Cold Springs Road extension alternative is that it would be located, as shown on Map 32, within a primary environmental corridor and wetland which would probably require mitigation of any wetland losses. An estimate of such mitigation costs is included in the estimated cost of the alternative.

When compared to the alternative which proposed the direct extension of Cold Springs Road to CTH W, the provision of emergency services to residents along CTH W may be modestly diminished under this alternative because of a modest increase in travel distance and time. Although not recommended a part of this alternative, a more direct connection to CTH W could be provided.

The Advisory Committee recommended that the Cold Springs Road extension be retained on the final recommended jurisdictional highway system plan and that the alignment shown on the final plan

Map 32

ALTERNATIVE ALIGNMENT FOR THE EXTENSION OF COLD SPRINGS ROAD
ACROSS THE MILWAUKEE RIVER FROM CTH O TO STH 33 SUBSEQUENT TO
THE OCTOBER 1991 PUBLIC HEARING ON THE PRELIMINARY NEW PLAN



Source: SEWRPC.

follow the alignment proposed under the new alternative developed following the public hearing.

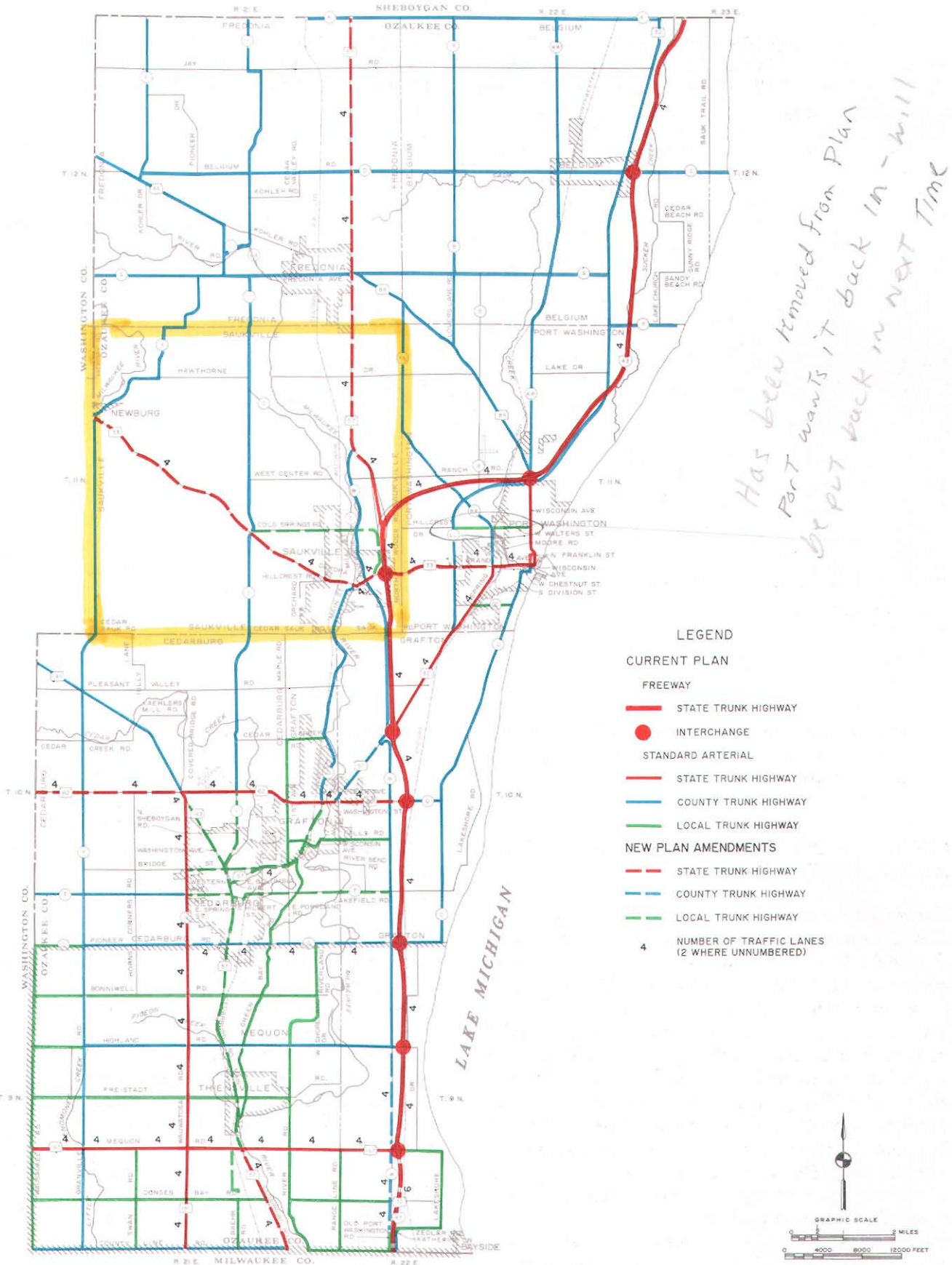
FINAL RECOMMENDED JURISDICTIONAL HIGHWAY SYSTEM PLAN

The second-generation Ozaukee County jurisdictional highway system plan as recommended by the Technical Coordinating and Advisory Committee on Jurisdictional Highway System Planning for Ozaukee County is shown on Map 33. The plan envisions a system of arterial facilities in Ozaukee County that can meet existing and probable future traffic demands effectively and efficiently. The plan identifies the location and configuration of the various facilities constituting the arterial system and recommends the number of traffic lanes required on each segment of the system. The plan also recommends the level of government which should be responsible for the construction, operation, and maintenance of each facility making up the arterial system.

The major capacity improvements recommended under the new plan are shown on Map 34 and listed in Table 14. These improvements include widenings of existing facilities to provide additional traffic lanes and the construction of new arterial facilities. The recommended changes in jurisdictional responsibility are shown on Map 35 and are listed in Table 15.

The final recommended arterial system would consist of about 314 miles of streets and highways, or about 33 percent of the 965-mile total street and highway system expected to serve Ozaukee County by the year 2010. The recommended state trunk highway element of the preliminary plan would consist of 80 miles of arterial facilities, or about 25 percent of the 314-mile planned arterial system. The recommended county trunk highway element of the plan would consist of about 162 miles of arterial facilities, or about 52 percent of the 314-mile planned arterial system. The recommended local trunk highway element of the plan would consist of about 72 miles of arterial facilities, or about

FINAL RECOMMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

23 percent of the 314-mile planned arterial system. Table 16 presents a summary of the mileage of the planned arterial street and highway system in each unit of government within Ozaukee County by proposed jurisdiction: state, county, and local. It may be noted that, under the preliminary plan, the total mileage of state trunk highways in the County would decrease from about 101 miles to about 80 miles, or by about 21 percent. The total mileage of county trunk highways would increase from 138 to 162 miles, or by about 17 percent. The total local trunk highway mileage would decrease from 82 to 72 miles, or by about 12 percent.

Of the total 314 miles of the arterial system in Ozaukee county under the preliminary plan, 257 miles, or 82 percent, would require only preservation or resurfacing and reconstruction; 50 miles, or 16 percent, would require improvement or widening to provide additional traffic lanes; and seven miles, or 2 percent, would consist of new facilities. Of the 50 miles of proposed improvement projects, 41 miles, or 82 percent, would be on the planned state trunk highway system; eight miles, or 16 percent, would be on the planned county trunk highway system; and one mile, or less than 2 percent, would be on the planned local trunk highway system. None of the seven miles of proposed new arterial facilities would be on the state trunk highway system; two miles, or 29 percent, would be on the county trunk highway system; and five miles, or 71 percent, would be on the local arterial system.

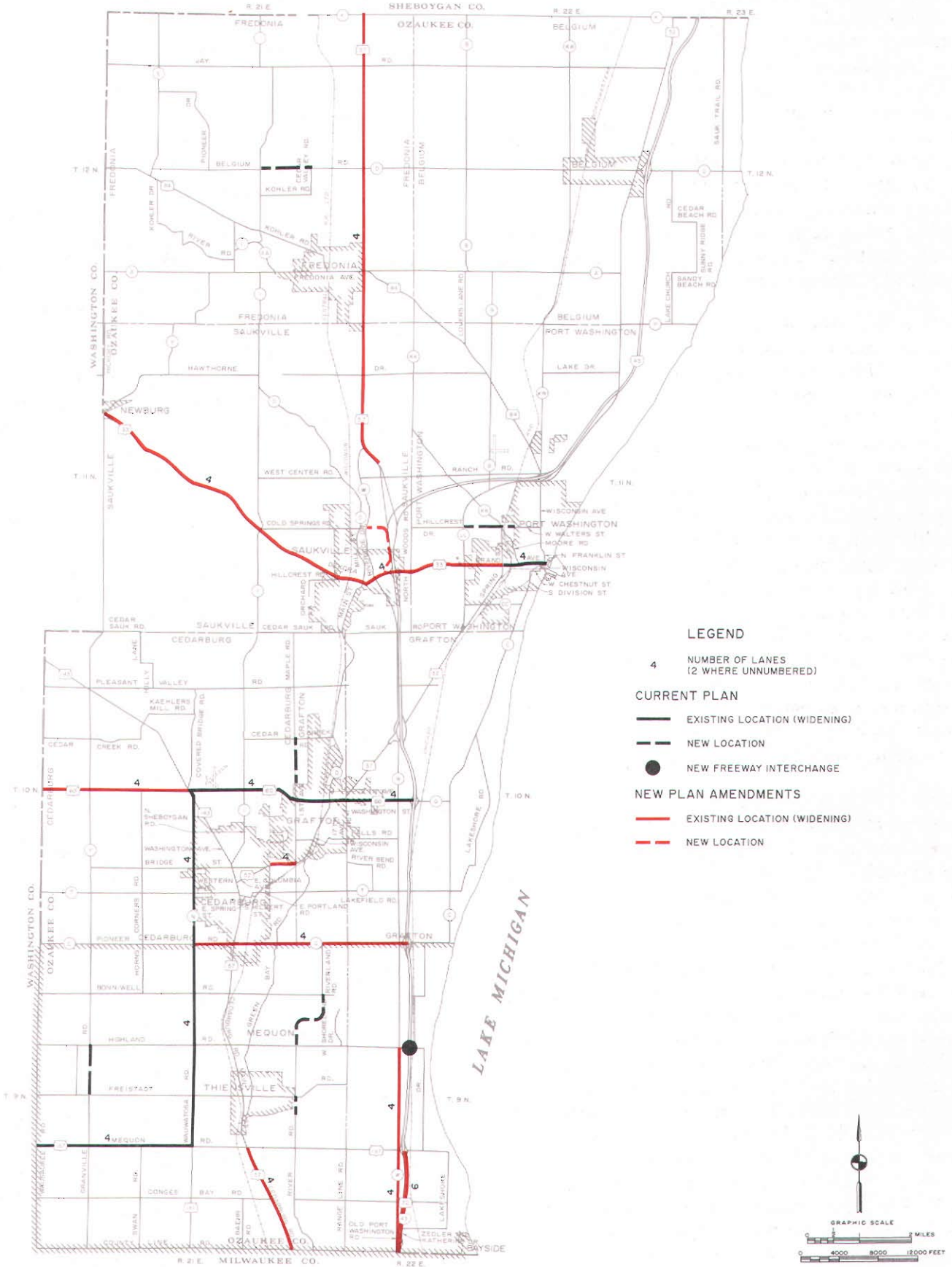
About 2.71 million miles of travel may be expected to occur on an average weekday on all streets and highways within Ozaukee County by the year 2010. Of this total, 2.45 million vehicle miles of travel, or 90 percent, may be expected to occur on the recommended arterial street system, with the remainder on local, collector, and land access streets. Figures 5 and 6 indicate the relative amount of total travel anticipated under the recommended plan expected to be carried on each element of the total street and highway system within Ozaukee County. The recommended state trunk highway system may be expected to carry 1.61 million of the total 2.45 million vehicle miles of travel anticipated to occur on the arterial system on an average weekday within Ozaukee County by the year 2010. Thus, approximately 26 percent of the total arterial street and highway system mileage may be expected to carry about 66 percent of the total

arterial travel demand. The recommended county trunk highway system may be expected to carry an additional 0.46 million vehicle miles of travel. Thus, an additional 52 percent of the total arterial street and highway mileage may be expected to carry an additional 19 percent of the total arterial travel demand. The remaining 0.38 million vehicle miles of travel, or 15 percent of the total arterial travel, may be expected to be carried on the proposed local arterial system. It should be noted that the nonarterial portion of the total street and highway system in Ozaukee County, the local, collector, and land access streets, may be expected to carry only about 0.26 million vehicle miles on an average weekday by the year 2010, or about 10 percent of the vehicle miles of travel on the total street and highway system of the County. Thus, the nonarterial street system, representing about 68 percent of the mileage of the total street and highway system, may be expected to carry only 10 percent of the total travel demand in the year 2010.

Based upon the foregoing analyses, it may be concluded that the plan properly identifies all the streets and highways in Ozaukee County which are now, and may be expected to be in the plan design year 2010, the principal carriers of heavy traffic. In addition, the plan properly assigns to the state the responsibility for those facilities which may be expected to carry the heaviest volumes of through traffic and which will entail the most substantial need for, and costs of, improvement. The plan similarly assigns the responsibility for the next most important arterial facilities to the County. Implementation of the plan may be expected to promote a desirable land use pattern in the County, to abate traffic congestion, to reduce travel time and costs, to reduce accident exposure, and to help concentrate appropriate governmental resources and capabilities on corresponding areas of need. This assures the most effective use of public resources in the provision of highway transportation.

Table 17 presents an estimate of the total costs of the preliminary recommended arterial system plan for Ozaukee County. This estimate assumes that all facilities requiring only preservation will be resurfaced once by the plan design year 2010. In addition, it is assumed that all improvements on existing new locations will be implemented by the year 2010. The estimated costs are presented by recommended jurisdiction, state,

**CAPACITY IMPROVEMENTS RECOMMENDED UNDER THE FINAL
NEW OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**



Source: SEWRPC.

Table 14

**CAPACITY IMPROVEMENTS UNDER THE FINAL NEW
OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Jurisdiction	Facility	Termini	Description	Included in First-Generation Plan	Implementation Priority ^a	
Existing Location (additional traffic lanes)	State	IH 43	Milwaukee-Ozaukee County line to STH 167	Widen from four to six traffic lanes	No	Low
	State	STH 32	Spring Street to Franklin Street	Widen from two to four traffic lanes	Yes	High
	State	STH 33	Washington-Ozaukee County line to Spring Street	Widen from two to four traffic lanes	No	Medium/low
	State	STH 57	IH 43 to Sheboygan-Ozaukee County line	Widen from two to four traffic lanes	Yes	Medium/high
	State	STH 57	Milwaukee-Ozaukee County line to STH 167	Widen from two to four traffic lanes	Yes	Medium
	State	STH 60	STH 143 to IH 43	Widen from two to four traffic lanes	Yes	High
	State	STH 60	Washington-Ozaukee County line to STH 143	Widen from two to four traffic lanes	No	Low
	State	STH 143	CTH N to STH 60	Widen from two to four traffic lanes	Yes	High
	State	STH 167	Washington-Ozaukee County line to Wauwatosa Road	Widen from two to four traffic lanes	Yes	Medium
	County	CTH N/Wauwatosa Road	STH 143 to STH 167	Widen from two to four traffic lanes	Yes	High
	County	CTH C/Pioneer Road	CTH N to IH 43	Widen from two to four traffic lanes	No	Medium/high
	County	CTH W	Milwaukee-Ozaukee County line to Highland Road	Widen from two to four traffic lanes	No	Medium/high
	Local	STH 57	Bridge Road to 1st Avenue	Widen from two to four traffic lanes	No	High
New Location (on new alignment)	State	IH 43	Highland Road	Construct new interchange	No	Medium
	County	Belgium-Kohler Road Extension	CTH I to Cedar Valley Road	Construct two lanes on new alignment	Yes	Low
	County	Granville Road Extension	Freistadt Road to Highland Road	Construct two lanes on new alignment	Yes	Low
	Local	Walters Street Extension	CTH LL to Grant Street at the City of Port Washington west city limits	Construct two lanes on new alignment	Yes	Low
	Local	Maple Road Extension	Cedar Creek Road to Rose Street at the Village of Grafton north city limits	Construct two lanes on new alignment	Yes	Low
	Local	River Road Extension	Bonniwell Road to Highland Road	Construct two lanes on new alignment	Yes	Low
	Local	River Road Extension	Freistadt Road to Grace Avenue	Construct two lanes on new alignment	Yes	Medium
	Local	Cold Springs Road	CTH O to STH 33	Construct two lanes on new alignment	No	High

^aThe proposed implementation priority is dependent upon the need for the improvement to meet current traffic demand; the need for the improvement to meet future traffic demand and the anticipated timing of that demand; and the need for the improvement to provide an integrated traffic route.

Source: SEWRPC.

county, or local. The estimated cost of the recommended system to the year 2010, including right-of-way acquisition, is \$158 million, including \$91 million for state trunk highways, \$43 million for county trunk highways, and \$24 million for local arterials.

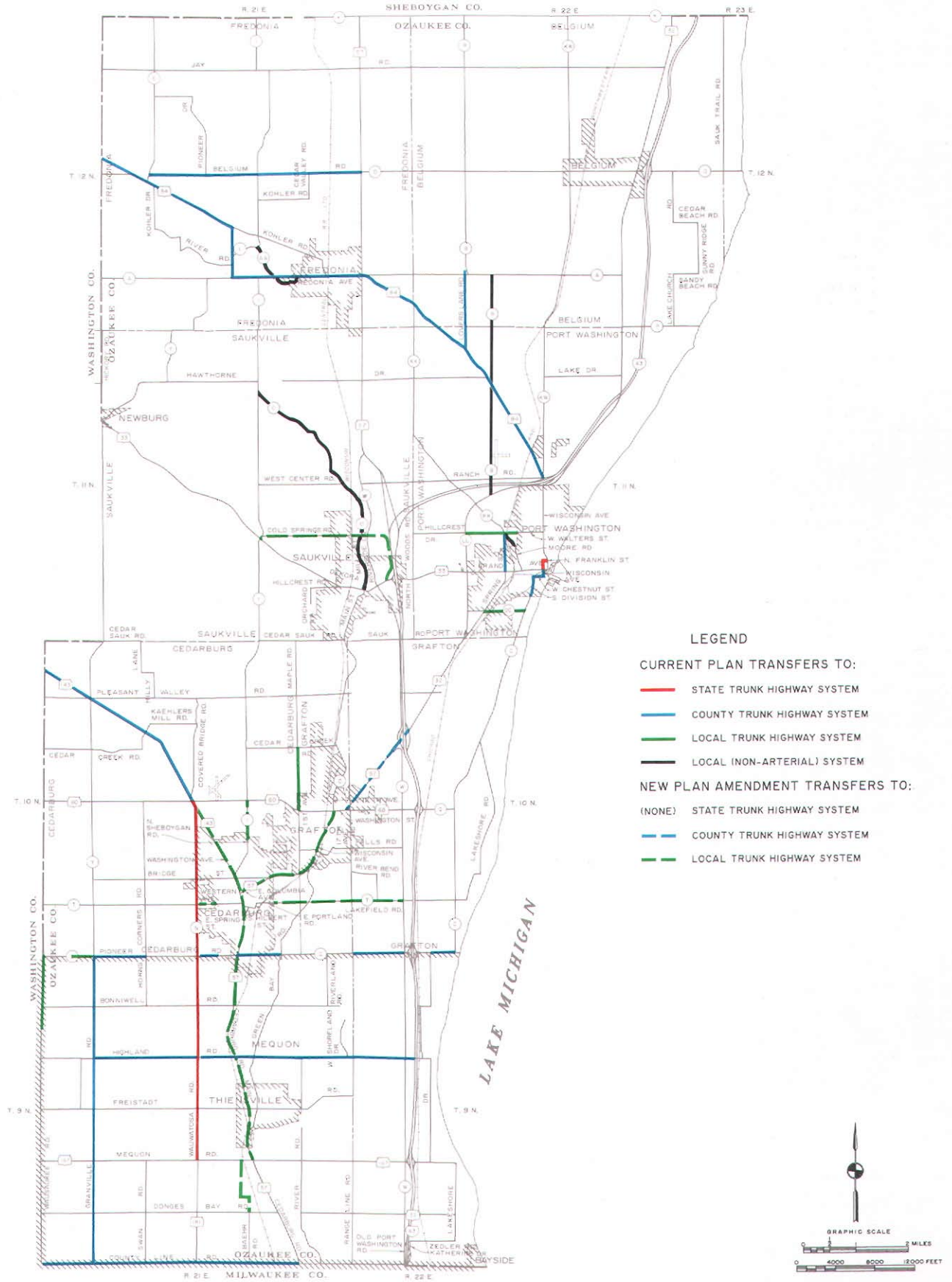
Table 18 presents an estimate of the total annual cost of implementing the state trunk highway element of the preliminary plan on a 20-year schedule. The estimated total annual cost is \$4.6 million over a 20-year implementation period. Table 18 also presents an estimate of the future funding that may be available on an average annual basis for the improvement and reconstruction of state trunk highways in Ozaukee County. Since the potential funding includes discretionary federal and state funding, any estimate of future funding is necessarily uncertain. Annual funding provided for state trunk highway improvements

in Ozaukee County over the past six years has ranged from \$0.5 million to \$6.8 million per year, or an annual average of \$2.7 million. If it is assumed that the historic average annual funding level will increase by about 70 percent annually, which is the increase in federal highway funds authorized to the State of Wisconsin under the Federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the estimated state trunk highway funding will be sufficient to fund plan implementation costs over a 20-year schedule of completion.

Table 18 also presents an estimate of the total annual cost of implementing the county trunk highway element of the plan on a 20-year schedule. The estimated total annual cost is \$2.2 million over a 20-year implementation period. A potential source of funding for the improvement of county arterials in rural and urban areas is

Map 35

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY IN OZAUKEE COUNTY
RECOMMENDED UNDER THE FINAL NEW OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

Table 15

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY UNDER THE NEW OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN^a

Civil Division	Planned	Existing	Facility	From	To	Distance (miles)	Included in First-Generation Plan
Town of Belgium	County trunk highway	State trunk highway	STH 84	Town of Fredonia	Town of Port Washington	0.71	Yes
	County trunk highway	Local trunk highway	Lovers Lane Road	CTH A	Town of Port Washington	1.01	Yes
	Local nonarterial	County trunk highway	CTH B	CTH A	Town of Port Washington	1.00	Yes
Town of Cedarburg	State trunk highway	County trunk highway	CTH N	STH 143	Pioneer Road	1.77	Yes
	County trunk highway	State trunk highway	STH 143	STH 60	Washington-Ozaukee County line	3.90	Yes
	Local trunk highway	New facility	Maple Road extension	Cedar Creek Road	Village of Grafton	0.44	Yes
	State trunk highway	State trunk highway	STH 57	City of Cedarburg	Town of Grafton	0.48	No
	Local trunk highway	State trunk highway	STH 143	CTH N	City of Cedarburg	0.36	Yes
	Local trunk highway	County trunk highway	CTH C	Granville Road	CTH M	0.50	Yes
	Local trunk highway	County trunk highway	CTH I	City of Cedarburg	STH 60	0.65	No
	Local trunk highway	County trunk highway	CTH T	Town of Grafton	City of Cedarburg	0.50	No
	Local trunk highway	County trunk highway	CTH T	Town of Grafton	City of Cedarburg	0.33	No
Town of Fredonia	County trunk highway	New facility	Belgium-Kohler Road extension	CTH I	Cedar Valley Road	1.00	Yes
	County trunk highway	State trunk highway	STH 84	Washington-Ozaukee County line	Village of Fredonia	4.84	Yes
	County trunk highway	State trunk highway	STH 84	Village of Fredonia	Town of Belgium	1.17	Yes
	County trunk highway	Local trunk highway	Belgium-Kohler Road	CTH E	CTH I	2.08	Yes
	County trunk highway	Local trunk highway	Belgium-Kohler Road	Cedar Valley Road	STH 57	1.00	Yes
Town of Grafton	Local nonarterial	County trunk highway	CTH AA	CTH I	STH 84	0.74	Yes
	County trunk highway	State trunk highway	STH 57	IH 43	Village of Grafton	1.85	No
	Local trunk highway	New facility	Maple Road extension	Cedar Creek Road	Village of Grafton	0.44	Yes
Town of Port Washington	Local trunk highway	County trunk highway	CTH T	Town of Cedarburg	CTH W	1.98	No
	Local trunk highway	County trunk highway	CTH Q	IH 43	CTH C	0.67	No
	County trunk highway	State trunk highway	STH 84	City of Port Washington	Town of Belgium	3.82	Yes
	Local trunk highway	Local trunk highway	Lovers Lane Road	STH 84	Town of Belgium	0.41	Yes
Town of Saukville	County trunk highway	Local trunk highway	Spring Street	City of Port Washington	CTH KK	0.15	Yes
	Local trunk highway	New facility	Walters Street	CTH LL	City of Port Washington	1.00	Yes
	Local nonarterial	County trunk highway	CTH CC	CTH C	STH 32	0.52	Yes
	Local nonarterial	County trunk highway	CTH B	CTH LL	Town of Belgium	3.26	Yes
	Local nonarterial	County trunk highway	CTH KK	Spring Street	City of Port Washington	0.28	Yes
	Local nonarterial	County trunk highway	CTH O	CTH O	STH 33	0.86	No
Village of Fredonia	Local trunk highway	Local nonarterial	Cold Springs Road extension	STH 33	CTH O	1.60	No
	Local trunk highway	Local nonarterial	Cold Springs Road	CTH I	Village of Saukville	3.91	Yes
	Local nonarterial	County trunk highway	CTH O	CTH I	Village of Saukville	3.91	Yes
Village of Grafton	County trunk highway	State trunk highway	STH 84	STH 57	CTH AA	1.42	Yes
	Local nonarterial	County trunk highway	CTH AA	STH 84	STH 84	0.79	Yes
Village of Saukville	Local trunk highway	State trunk highway	STH 57	Town of Grafton	Town of Grafton	1.84	No
Village of Thiensville	Local trunk highway	Local nonarterial	Cold Springs Road	West Village limits of Village of Saukville	East Village limits of Village of Saukville	0.35	No
	Local trunk highway	New facility	Cold Springs Road	North Village limits of Village of Saukville	STH 33	0.52	No
	Local nonarterial	County trunk highway	CTH O	STH 33	Town of Saukville	0.92	No
City of Cedarburg	Local trunk highway	State trunk highway	STH 57	City of Mequon	City of Mequon	1.29	No
City of Cedarburg	State trunk highway	County trunk highway	CTH N	Pioneer Road	STH 143	1.08	Yes
	County trunk highway	Local trunk highway	Pioneer Road	STH 57	Town of Cedarburg	0.53	Yes
	Local trunk highway	State trunk highway	STH 57	Pioneer Road	Columbia Road	1.21	No
	Local trunk highway	State trunk highway	STH 57	Washington Avenue	Keup Road	0.74	No
	Local trunk highway	State trunk highway	STH 57	City of Mequon	Pioneer Road	0.23	No
	Local trunk highway	State trunk highway	STH 143	STH 57	Town of Cedarburg	1.53	No
	Local trunk highway	County trunk highway	CTH I	STH 143	Town of Cedarburg	0.87	No
	Local trunk highway	County trunk highway	CTH T	Webster Avenue	Evergreen Boulevard	0.16	Yes
	State trunk highway	New interchange	IH 43	Highland Road	Freistadt Road	3.95	No
	State trunk highway	Local trunk highway	Wauwatosa Road	STH 167	Highland Road	1.00	Yes
County trunk highway	New facility	Granville Road extension	Freistadt Road	Pioneer Road	2.42	Yes	
County trunk highway	Local trunk highway	County Line Road	Wasaukee Road	STH 57	2.98	Yes	
County trunk highway	Local trunk highway	Granville Road	County Line Road	Freistadt Road	2.00	Yes	
County trunk highway	Local trunk highway	Granville Road	Highland Road	Pioneer Road	6.27	Yes	
County trunk highway	Local trunk highway	Highland Road	Granville Road	IH 43	3.16	Yes	
County trunk highway	Local trunk highway	Pioneer Road	Granville Road	IH 43	3.16	Yes	
Local trunk highway	New facility	River Road	Highland Road	Bonniwell Road	1.20	Yes	
Local trunk highway	New facility	River Road	Grace Avenue	Freistadt Road	0.17	Yes	
Local trunk highway	New facility	Industrial Drive/Executive Drive/Baehr Road	STH 167	Donges Bay Road	0.65	No	
Local trunk highway	State trunk highway	STH 57	STH 167	City of Cedarburg	2.56	No	
Local trunk highway	Local nonarterial	Industrial Drive	STH 167	End of street	0.54	No	
City of Port Washington	State trunk highway	Local trunk highway	Wisconsin Street	Jackson Street	Grand Avenue	0.20	No
	State trunk highway	Local trunk highway	Swing Street	Franklin Street	Jackson Street	0.02	No
	State trunk highway	Local trunk highway	Jackson Street	Swing Street	Franklin Street	0.08	No
	County trunk highway	Local trunk highway	Chestnut Street	Division Street	Wisconsin Street	0.20	Yes
	County trunk highway	Local trunk highway	Division Street	Town of Port Washington	Chestnut Street	0.41	Yes
	County trunk highway	Local trunk highway	Spring Street	STH 33	CTH KK	0.60	Yes
	County trunk highway	Local trunk highway	Wisconsin Street	Chestnut Street	Grand Avenue	0.12	Yes
	Local trunk highway	County trunk highway	CTH CC	STH 32	CTH C	0.28	Yes
	Local nonarterial	County trunk highway	CTH KK	Spring Street	Town of Port Washington	0.04	Yes

^aThe jurisdictional transfers should all be initiated as soon as possible because the transfers will promote implementation of the recommended plan improvement.

Source: SEWRPC.

Table 16

**ARTERIAL STREET MILEAGE BY JURISDICTION UNDER THE FINAL
NEW OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Civil Division	State Trunk Highway	County Trunk Highway	Local Trunk Highway	Total
City of Cedarburg	1.08	0.68	7.01	8.77
City of Mequon	21.74	23.91	42.37	88.02
City of Port Washington	4.32	2.77	0.78	7.87
Village of Belgium	0.00	2.96	0.00	2.96
Village of Fredonia	0.42	1.42	0.00	1.84
Village of Grafton	1.86	0.73	4.84	7.43
Village of Newburg	0.17	0.41	0.00	0.58
Village of Saukville	2.94	2.24	0.88	6.06
Village of Thiensville	0.00	0.00	3.66	3.66
Town of Belgium	6.22	29.89	0.00	36.11
Town of Cedarburg	6.60	17.97	4.27	28.84
Town of Fredonia	5.62	26.63	0.00	32.25
Town of Grafton	9.68	18.86	4.64	33.18
Town of Port Washington	8.12	18.71	1.52	28.35
Town of Saukville	11.27	14.32	2.42	28.01
Total	80.04	161.50	72.39	313.93

Source: SEWRPC.

Table 17

**ESTIMATED COST TO THE YEAR 2010 OF THE PRELIMINARY
AMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Item	Planned Arterial Mileage: Year 2010			
	State	County	Local	Total
Preservation	39.4	151.2	66.6	257.2
Improvement ^a	40.7	8.3	0.5	49.5
Expansion ^b	0.0	2.0	5.3	7.3
Total	80.1	161.5	72.4	314.0

	Estimated Construction Cost (includes right-of-way)			
Preservation	\$12,840,000	\$17,880,000	\$ 9,090,000	\$ 39,810,000
Improvement ^a	72,330,000	23,160,000	780,000	96,270,000
Expansion ^b	6,000,000	2,400,000	13,740,000	22,140,000
Total	\$91,170,000	\$43,440,000	\$23,610,000	\$158,220,000

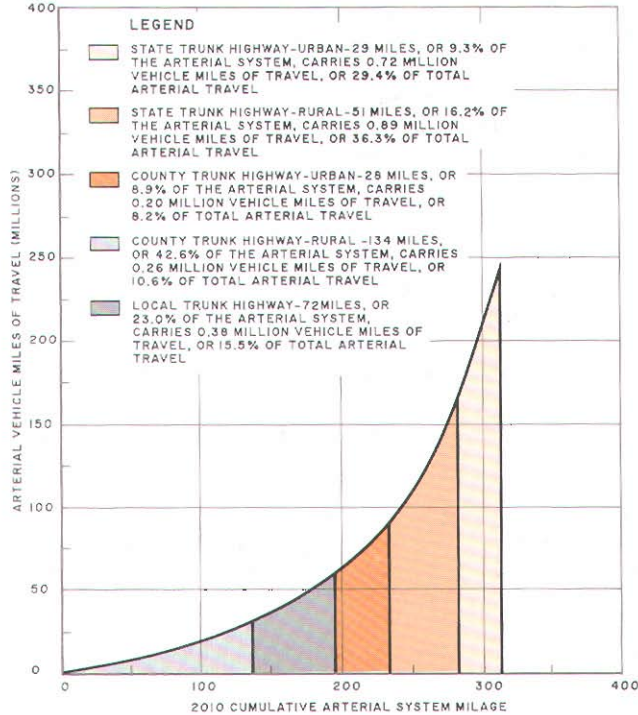
^aWidening to provide additional traffic lanes on existing arterials.

^bConstruction of new facilities.

Source: SEWRPC.

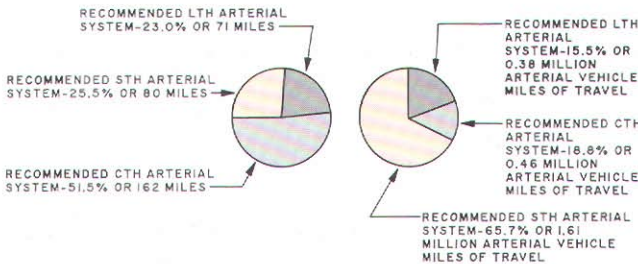
Figure 5

RELATIONSHIP BETWEEN ARTERIAL VEHICLE MILES OF TRAVEL AND ARTERIAL SYSTEM MILEAGE UNDER THE RECOMMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN: 2010



DISTRIBUTION OF MILEAGE ON THE STATE, COUNTY, AND LOCAL TRUNK HIGHWAY ARTERIAL SYSTEM: 2010

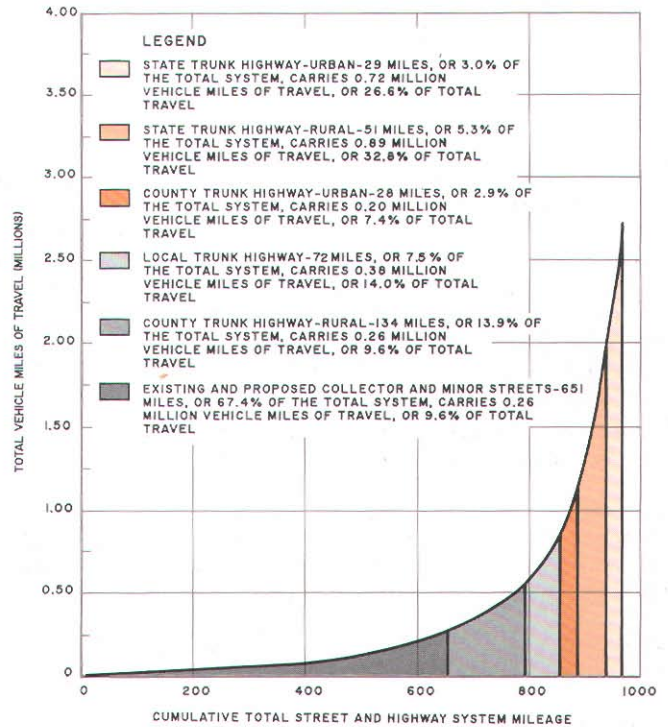
DISTRIBUTION OF ARTERIAL VEHICLE MILES OF TRAVEL ON THE STATE, COUNTY, AND LOCAL TRUNK HIGHWAY ARTERIAL SYSTEM: 2010



Source: SEWRPC.

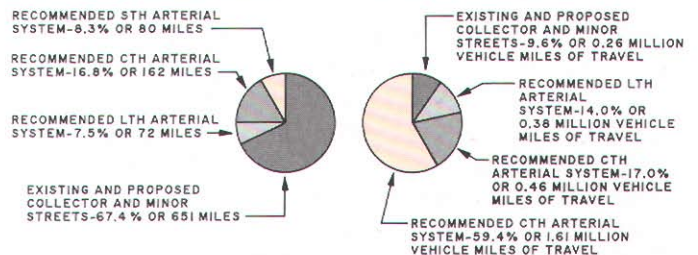
Figure 6

RELATIONSHIP BETWEEN TOTAL VEHICLE MILES OF TRAVEL AND TOTAL SYSTEM MILEAGE UNDER THE RECOMMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN: 2010



DISTRIBUTION OF MILEAGE ON THE TOTAL STREET AND HIGHWAY SYSTEM: 2010

DISTRIBUTION OF VEHICLE MILES OF TRAVEL ON THE TOTAL STREET AND HIGHWAY SYSTEM: 2010



Source: SEWRPC.

the Federal Surface Transportation Program funds and the State County Highway Improvement Program funds. Another potential source of funding is state reimbursement of county transportation costs. Such reimbursement currently is established at 30 percent of county transportation costs and 24 percent of city, village, and town transportation costs. For analytical purposes, it has been assumed that the Federal Surface Transportation Program and State Highway Improvement Program

allocations will remain stable in constant dollars at their currently authorized level and that the state reimbursement of county transportation costs will also remain stable at the current percentages. It may thus be estimated that \$1.1 million annually in state and federal funds would be available to the County on a 20-year completion schedule. Thus, the county funding required would approximate \$1.1 million per year, expressed in constant dollars, over a 20-year completion schedule.

Table 18

ESTIMATED ANNUAL COST AND LOCAL FUNDING REQUIRED BY LEVEL OF GOVERNMENT OF THE FINAL NEW OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN

Level of Government	Total Cost of Plan as Amended	Annual Cost		Estimated Annual Nonlocal Funding		Historic Average Annual Local Street Construction Expenditures ^c
		20-Year Schedule	Federal and State Aids ^b	State Aid Payments to Local Government ^a	Estimated Annual Local Funding Required	
				20-Year Schedule	20-Year Schedule	
State	\$ 91,170,000	\$4,560,000	\$4,560,000	\$ --	\$ --	\$ --
County	43,440,000	2,170,000	550,000	500,000	1,120,000	287,000
Local	23,610,000	1,180,000	770,000	100,000	310,000	152,000
Total	\$158,220,000	\$7,910,000	\$5,880,000	\$600,000	\$1,430,000	\$439,000

^aAnnual state aid payments assumed are based on current reimbursement formula of 30 percent of local transportation costs for counties and 24 percent of local transportation costs of cities, villages, and towns.

^bFederal and state aids to the County assume for county trunk arterial highways and local arterial highways \$1.21 million annually of Federal Surface Transportation Program funds and \$110,000 of State Highway Improvement Program funds. Federal and state aids assumed for state trunk highways is based on an assumed 70 percent increase in the average annual expenditures over the years 1984 to 1990 due to increased funding levels from the new Federal Surface Transportation Act.

^cAverage local expenditures for years 1986 through 1988 as reported to Wisconsin Department of Revenue. Reduced by 30 percent for the County and 24 percent for cities, villages, and towns to reflect state aid payment.

Source: SEWRPC.

Table 18 also provides an estimate of the total costs of the local arterial element of the plan to the cities, villages, and towns within Ozaukee County. On a 20-year schedule, the local arterial total costs are estimated to be \$1.2 million per year. The principal sources of state and federal funding for local arterials are Federal Surface Transportation Program funds, State Highway Improvement funds, and state reimbursement of local transportation costs. Assuming full use of estimated available state and federal aids, the estimated required local funding is \$0.3 million per year on a 20-year completion schedule.

The estimated required annual county and local funding for plan implementation is compared in Table 18 to the estimated average annual expenditures by county and local government in Ozaukee County for arterial street and highway construction in the years 1986 through 1988. The estimated county and local funding required for plan implementation on a 20-year schedule of

\$1.4 million annually substantially exceeds the reported historic annual expenditure of \$0.4 million for road construction by county and local governments.

Potential funding sources to meet the estimated county and local costs of implementing the jurisdictional highway system plan were identified. One funding alternative is the property tax, which funds a substantial share of the county and the local highway construction costs in the County. As already noted, the estimated county and local costs of plan implementation on a 20-year completion schedule is \$1.4 million, expressed in constant 1991 dollars. The equalized property value in Ozaukee County in 1990 was approximately \$2.9 billion, not including the value of property in tax incremental financing districts. To fully fund local and county costs of the plan, discounting for the purpose of this analysis costs currently incurred, would require

a property tax levy for arterial highway improvements of \$0.48 per \$1,000 over the 20-year completion schedule. This may be compared to the total county property tax rate in Ozaukee County in 1990 of \$3.71 per \$1,000 and the range of city, village, and town tax rates of \$0.81 to \$9.65 per \$1,000.

Another alternative funding source would be a "wheel tax," which is an addition to the state vehicle registration fee of \$25. State law permits such an additional fee to be levied by counties; the fees collected may be shared by counties with local municipalities. In addition, cities, villages, and towns are permitted to levy an additional wheel tax fee. The revenue that could be collected in Ozaukee County through additional automobile and truck registration fees of \$20, a fee which would result in a total \$45 state and county vehicle registration fee, would be \$1 million in 1990 dollars for the current level of 51,000 automobile and light truck registrations in Ozaukee County, and about \$1.3 million in the year 2010 based on the year 2010 forecast of 65,000 vehicle registrations. A \$20 wheel tax would generate about 82 percent of the total funding necessary to implement the plan on a 20-year schedule of completion.

Another alternative, but one which would require legislation, is an "add-on" motor fuel tax at the county level. The 1990 state motor fuel tax is \$0.209 per gallon and the federal motor fuel tax is \$0.14 per gallon. An add-on motor fuel tax of \$0.05 could be expected to generate about \$1.9 million annually within Ozaukee County under current conditions and, if indexed to general price inflation and vehicle motor fuel efficiency, may be expected to generate about \$2.3 million annually in the year 2010, expressed in constant 1990 dollars.⁸ This would represent about 150 percent of the total annual local and county funds necessary to implement the plan on a 20-year completion schedule.

⁸*This estimate assumes that the tax is generated statewide by an add-on motor fuel tax to be distributed to local governments on the basis of vehicle registration within their jurisdiction. Vehicle registrations may be expected to represent a reasonable index of the relative amount of motor fuel purchased and used within a subarea of the State.*

Another alternative would be the use of a sales tax to fund capital expenditures within Ozaukee County, including those associated with highways. Ozaukee County currently levies a 0.5 percent sales tax, the maximum permitted under state law, with the dollars generated directed to the County's general fund. Such a tax may be expected to generate about \$2.8 million per year expressed in constant 1990 dollars. Assuming such sales tax revenues would increase with the number of households within the County, the revenue in the year 2010 may be expected to about \$3.5 million, expressed in constant 1990 dollars. If dedicated for highway purposes, the 0.5 percent sales tax would provide 225 percent of the required county and local funding for capital expenditures for highways on a 20-year schedule of completion.

Another funding alternative would be the use of special assessments or impact fees. Impact fees are fees required from new land development that results in the need for additional transportation improvements. Generally, such fees can be imposed only if the improvement needed is directly a result of the new development. A similar type of funding source is a special assessment. Under this type of funding, those who benefit from an improvement can be assessed a portion of the improvement costs based upon the benefit received. Such a funding mechanism generally works well on local land access and collector streets, as each abutting property owner receives a similar benefit of access to the street system. However, for arterial streets, special assessments are difficult to apply because much of the benefit accrues primarily to through traffic and not to abutting property owners. To estimate the funding that may be developed from impact fees or special assessments would entail detailed land use and traffic studies on a quarter, sub-area, or facility basis. It should be noted that such fees and assessments may have implications for the promotion of economic development, as they would entail fees required of new development. Such fees are typically applied only in those parts of the nation in which the entire metropolitan area is experiencing rapid growth.

The analysis of plan costs and potential funding by level of government indicates for the 20-year plan implementation potential funding shortfalls at the state, county, and municipal levels. Therefore, timely implementation of the plan

may require that Ozaukee County and its municipalities work to reach consensus with respect to a specific funding mechanism to meet the growing highway needs in the County.

The Advisory Committee guiding the recently completed regional transportation authority study for southeastern Wisconsin, documented in SEWRPC Memorandum Report No. 38, A Regional Transportation Authority Feasibility Study for Southeastern Wisconsin, recommended that a regional transportation authority be created for the seven-county Southeastern Wisconsin Region. The regional transportation authority is recommended to have responsibilities to raise non-property tax based revenues and distribute these revenues to existing county and local highway agencies. It is further recommended that the regional transportation authority funding levels be sufficient to implement the agreed-upon regional plan, meeting the shortfall from current expenditures and also funding highway improvements so as to remove current expenditures from property taxes. Thus, if the Legislature and Governor of the State and the Region's counties and local governments act to create a regional transportation authority as recommended, sufficient funding may be provided to not only meet the identified \$1.0 million shortfall in county and local arterial costs in Ozaukee County, but also to remove the current \$0.4 million expenditure in Ozaukee County from property taxes.

PLAN IMPLEMENTATION

Federal Government

U. S. Department of Transportation, Federal Highway Administration: It is recommended that the U. S. Department of Transportation, Federal Highway Administration:

1. Acknowledge the recommended amended jurisdictional highway system plan for Ozaukee county.
2. Utilize the plan as a guide in the administration and granting of federal aids for highway improvement within the County.

State Level

Wisconsin Department of Transportation: It is recommended that the Wisconsin Department of Transportation:

1. Endorse the recommended jurisdictional highway system plan and integrate the plan into the state long-range highway system plan, including the addition to the state trunk highway system of Wauwatosa Road, the new Highland Road interchange, and the recommended improvements of STH 57, STH 33, STH 60, and STH 167.
2. Seek, in cooperation with the Ozaukee County Board and appropriate local officials, the implementation of the jurisdictional transfers with respect to the state, county, and local trunk systems, as recommended in the jurisdictional highway system plan.
3. Proceed with preliminary engineering, right-of-way acquisition, and facility construction to implement the recommended jurisdictional highway system plan, including the improvements of Wauwatosa Road, STH 57, STH 167, STH 60, STH 33, and the Highland Road interchange.

Regional Level

Southeastern Wisconsin Regional Planning Commission: It is recommended that the Southeastern Wisconsin Regional Planning Commission act to adopt formally the recommended jurisdictional highway system plan as an integral part of the master plan for the Region, constituting an amendment to the regional transportation plan and to the Ozaukee County jurisdictional highway system plan.

County Level

Ozaukee County: It is recommended that the Ozaukee County Board, upon recommendation of the Ozaukee County Highway Committee:

1. Adopt the recommended jurisdictional highway system plan as a guide to highway facility development within the County.
2. Seek, in cooperation with the Wisconsin Department of Transportation and local units of government, the implementation of the jurisdictional transfers with respect to the state, county, and local trunk systems, as recommended in the jurisdictional highway system plan.

3. Proceed with preliminary engineering, right-of-way acquisition, and facility construction as necessary to implement the recommended jurisdictional highway system plan.
 4. Establish, with the approval of the municipalities as they are affected, a modified "official" map, pursuant to Section 80.64 of the Wisconsin Statutes, identifying the location and necessary right-of-way of all planned state and county trunk highways.
 5. By resolution, petition the Wisconsin Department of Transportation to proceed with the planned improvements of STH 57, STH 167, Wauwatosa Road, STH 60, STH 33, and the Highland Road interchange, including as necessary the conduct of preliminary engineering; their identification as candidate major projects; and their enumeration, scheduling, and funding for construction.
4. The city common councils, village boards, and town boards within Ozaukee county should seek, in cooperation with the Ozaukee County Board and the Wisconsin Department of Transportation, the implementation of the jurisdictional transfers with respect to the state, county, and local trunk systems as recommended in the jurisdictional highway system plan.
 5. The city councils, village boards, and town boards should, by resolution, petition the Wisconsin Department of Transportation to proceed with the planned improvements of Wauwatosa Road, STH 57, STH 167, STH 60, STH 33, and the Highland Road interchange, including the conduct of necessary preliminary engineering; identification as necessary of the improvements as candidate major projects; and their enumeration, scheduling, and funding for construction.

SUMMARY

Adoption and implementation of the Ozaukee County jurisdictional highway system plan recommended in this report would provide the County with an integrated highway transportation system which will effectively serve the existing, and promote a desirable future, land use pattern, meet the anticipated future travel demand at an adequate level of service; abate traffic congestion; reduce travel time and costs between component parts of the County and the Region; and reduce accident exposure. It would serve to help concentrate appropriate resources and capabilities on corresponding areas of need, assuring a more effective use of the total public resources in the provision of highway transportation, and provide a sound basis for the establishment of long-range fiscal policies and for the systematic programming of arterial street and highway improvements within Ozaukee county. It would also provide a basis for the more efficient planning and design of the total arterial street and highway system, for the efficient multi-jurisdictional management of that system, and for the attainment of the intergovernmental coordination necessary to the cooperative development of the system. Finally, it should provide a more equitable distribution of highway improvement, maintenance, and operating costs among the various levels and agencies of government concerned.

Local Level

1. The city common councils, village boards, and town boards within Ozaukee County should act to adopt the recommended jurisdictional highway system plan as a guide to highway system development within their areas of jurisdiction. It is further suggested that the respective local planning commissions adopt and integrate the recommended jurisdictional highway system plan into the local master plans and certify such adoption to their local governing body.
2. The city common councils, village boards, and town boards within Ozaukee County should act to approve an official Ozaukee County map prepared in conformance with the recommended jurisdictional highway system plan, and establish local official maps, including thereon the state, county, and local trunk highway facilities.
3. The city common councils, village boards, and town boards within Ozaukee County should proceed with preliminary engineering, right-of-way acquisition, and facility construction to implement the recommended jurisdictional highway system plan.

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APPENDICES

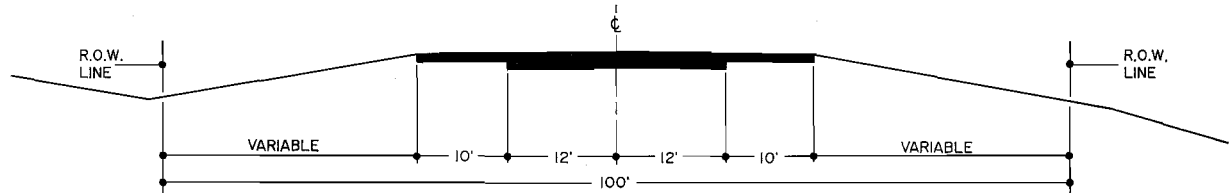
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Appendix A

TYPICAL RURAL AND URBAN STREET AND HIGHWAY CROSS-SECTIONS

RURAL AREA CROSS-SECTIONS

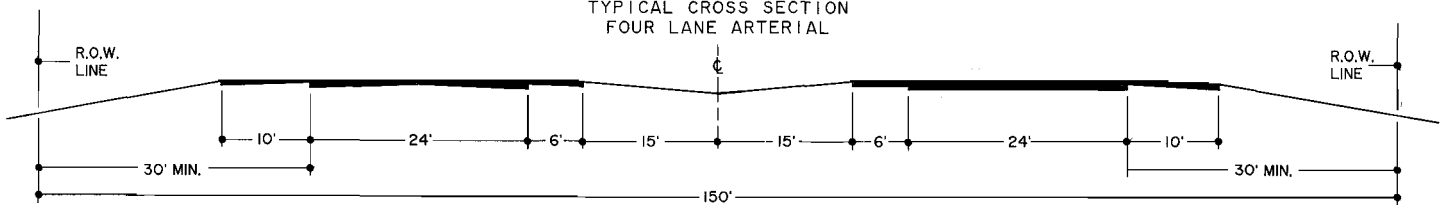
TYPICAL CROSS SECTION
TWO LANE ARTERIAL



ESTIMATED COST PER MILE:
CONSTRUCTION = \$1,100,000
RESURFACE = \$ 92,000

DESIGN CAPACITY:
7,000 VEHICLES PER AVERAGE WEEKDAY

TYPICAL CROSS SECTION
FOUR LANE ARTERIAL

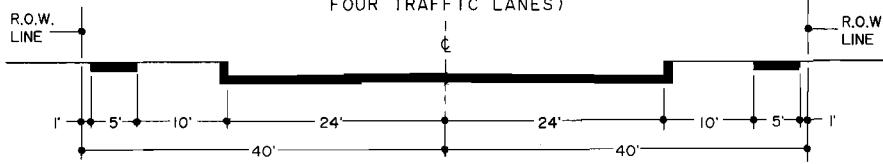


ESTIMATED COST PER MILE:
CONSTRUCTION = \$1,400,000
RESURFACE = \$ 195,000

DESIGN CAPACITY:
22,000 VEHICLES PER AVERAGE WEEKDAY

URBAN AREA CROSS-SECTIONS

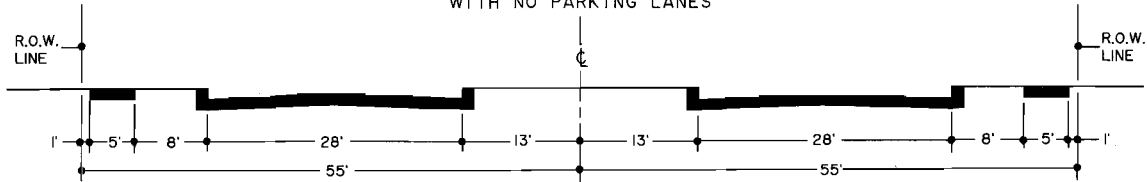
TYPICAL CROSS SECTION
FOUR LANE UNDIVIDED ARTERIAL
(TWO TRAFFIC LANES AND
TWO PARKING LANES OR
FOUR TRAFFIC LANES)



ESTIMATED COST PER MILE:
CONSTRUCTION = \$1,500,000
RESURFACE = \$ 185,000

DESIGN CAPACITY:
13,000 VEHICLES PER AVERAGE WEEKDAY
(TWO TRAFFIC LANES)
17,000 VEHICLES PER AVERAGE WEEKDAY
(FOUR TRAFFIC LANES)

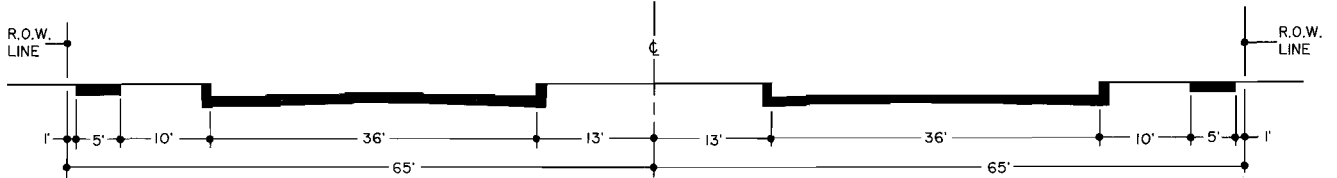
TYPICAL CROSS SECTION
FOUR LANE DIVIDED ARTERIAL
WITH NO PARKING LANES



ESTIMATED COST PER MILE:
CONSTRUCTION = \$1,600,000
RESURFACE = \$ 195,000

DESIGN CAPACITY:
25,000 VEHICLES PER AVERAGE WEEKDAY

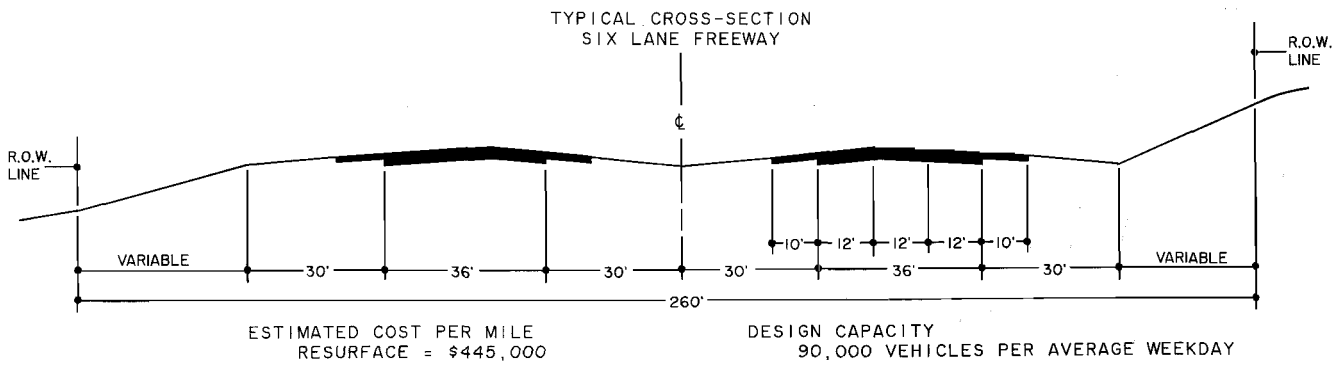
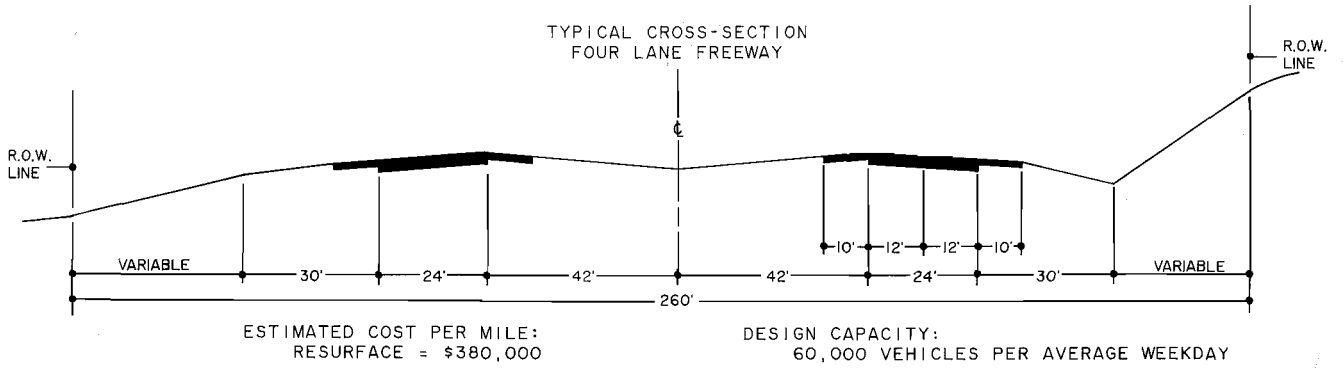
TYPICAL CROSS SECTION
SIX LANE ARTERIAL
(FOUR TRAFFIC LANES AND
TWO PARKING LANES OR
SIX TRAFFIC LANES)



ESTIMATED COST PER MILE:
CONSTRUCTION = \$1,800,000
RESURFACE = \$ 260,000

DESIGN CAPACITY:
35,000 VEHICLES PER AVERAGE WEEKDAY
(SIX TRAFFIC LANES)

URBAN CROSS-SECTIONS (continued)



Source: SEWRPC.